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Multilayer Ferrite Chip Beads

SB/PB/UP/NB/GB Series

[SB Series for General Purpose / PB Series for Large Current/UP Series for Ultra High Current Use/NB Series for Data Line, Digital Signals, etc./GB Series for Medium Current]

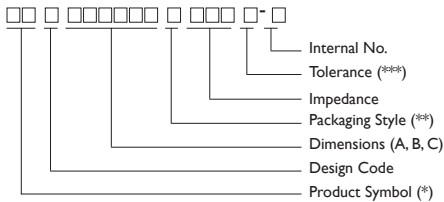


OUTLINE

Yageo offers hundreds of multi-layered ferrite chip beads with various sizes, frequency characteristics, and a board range of impedance values to provide powerful solutions for EMI problems.

Three formulas of ferrite comprise several types of EMI suppression chip beads that are classified into 5 categories - SB, GB, PB, UP, and NB series.

PRODUCT IDENTIFICATION



* SB, PB, UP, NB, GB

** T : Tape and Reel; B : Bulk

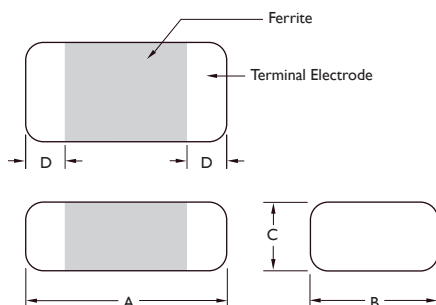
*** Y = $\pm 25\%$; M = $\pm 20\%$

■ YAGEO will start to release lead-free that meet SONY SS-00259's criteria, and Internal No. will be changed to "N" as identification.

Ex. SBY100505T-121Y-N

SHAPES AND DIMENSIONS

Dimensions : mm



TYPE		A	B	C	D
SB/PB/NB	100505	1.0 ± 0.10	0.50 ± 0.10	0.5 ± 0.10	0.25 ± 0.10
SB/PB/UP/NB/GB	160808	1.6 ± 0.20	0.80 ± 0.2	0.8 ± 0.2	0.3 ± 0.2
SB/PB/UP/NB/GB	201209	2.0 ± 0.20	1.25 ± 0.20	0.9 ± 0.20	0.5 ± 0.3
SB/PB/UP/NB/GB	321611	3.2 ± 0.20	1.60 ± 0.20	1.1 ± 0.20	0.5 ± 0.3
SB/GB	321616	3.2 ± 0.20	1.60 ± 0.20	1.6 ± 0.20	0.5 ± 0.3
SB/GB	322513	3.2 ± 0.20	2.50 ± 0.20	1.3 ± 0.20	0.5 ± 0.3
SB/PB/GB	451616	4.5 ± 0.25	1.60 ± 0.20	1.6 ± 0.20	0.5 ± 0.3
SB/PB/GB	453215	4.5 ± 0.25	3.20 ± 0.20	1.5 ± 0.20	0.5 ± 0.3

SB SERIES, FOR GENERAL USE

APPLICATIONS

I/O Ports, DC Power Lines, and Signal Lines

Computer and Peripheral Products

Consumer Electronic Products

FEATURES

Standard type used to suppress lower-frequency, lower current signals.

Impedance over a Broad Frequency Range

Suitable for Flow and Reflow Soldering

Available in 8 Sizes

ELECTRICAL CHARACTERISTICS

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.	PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
SBY100505T-060Y-S	6	0.05	500	SBK201209T-751Y-S	750	0.50	200
SBY100505T-100Y-S	10	0.05	500	SBK201209T-102Y-S	1000	0.50	200
SBY100505T-400Y-S	40	0.30	300	SBK201209T-152Y-S	1500	0.60	200
SBY100505T-800Y-S	80	0.40	200	SBK201209T-202Y-S	2000	0.80	100
SBY100505T-121Y-S	120	0.50	200	SBK201209T-222Y-S	2200	1.00	100
SBY100505T-241Y-S	240	0.50	200	SBK201209T-252Y-S	2500	1.00	100
SBY100505T-481Y-S	480	0.80	200	SBK201209T-272Y-S	2700	1.50	100
SBY100505T-601Y-S	600	1.00	200	SBY321611T-190Y-S	19	0.05	600
SBY100505T-102Y-S	1000	1.50	100	SBY321611T-260Y-S	26	0.05	600
SBY100505T-152Y-S	1500	2.00	60	SBY321611T-320Y-S	32	0.05	600
SBK160808T-110Y-S	11	0.05	500	SBY321611T-500Y-S	50	0.10	500
SBK160808T-190Y-S	19	0.08	500	SBY321611T-600Y-S	60	0.10	500
SBK160808T-300Y-S	30	0.10	400	SBK321611T-700Y-S	70	0.10	500
SBK160808T-400Y-S	40	0.10	400	SBK321611T-900Y-S	90	0.15	500
SBK160808T-600Y-S	60	0.10	300	SBK321611T-121Y-S	120	0.15	500
SBK160808T-800Y-S	80	0.15	300	SBK321611T-151Y-S	150	0.15	500
SBK160808T-121Y-S	120	0.25	300	SBK321611T-201Y-S	200	0.20	400
SBK160808T-221Y-S	220	0.30	200	SBK321611T-401Y-S	400	0.20	400
SBK160808T-301Y-S	300	0.40	200	SBK321611T-501Y-S	500	0.20	400
SBK160808T-451Y-S	450	0.50	200	SBK321611T-601Y-S	600	0.30	400
SBK160808T-601Y-S	600	0.50	200	SBK321611T-102Y-S	1000 *	0.40	200
SBK160808T-751Y-S	750	0.70	200	SBK321611T-122Y-S	1200 *	0.40	200
SBK160808T-102Y-S	1000	0.70	200	SBK321611T-152Y-S	1500 *	0.45	200
SBK160808T-152Y-S	1500	1.00	50	SBK321611T-202Y-S	2000 **	0.60	200
SBK160808T-222Y-S	2200	1.20	50	SBK321611T-272Y-S	2700 **	0.60	200
SBK160808T-272Y-S	2700	1.30	50	SBY321616T-250Y-S	25	0.10	500
SBY201209T-070Y-S	7	0.10	600	SBY321616T-600Y-S	60	0.20	500
SBY201209T-090Y-S	9	0.10	600	SBK321616T-700Y-S	70	0.20	500
SBY201209T-110Y-S	11	0.10	600	SBY322513T-320Y-S	32	0.20	500
SBY201209T-170Y-S	17	0.10	600	SBY322513T-600Y-S	60	0.20	500
SBY201209T-320Y-S	32	0.10	600	SBY322513T-900Y-S	90	0.20	500
SBK201209T-600Y-S	60	0.15	500	SBY451616T-500Y-S	50	0.20	600
SBK201209T-700Y-S	70	0.15	500	SBY451616T-600Y-S	60	0.20	600
SBK201209T-800Y-S	80	0.15	500	SBY451616T-800Y-S	80	0.20	600
SBK201209T-121Y-S	120	0.25	300	SBY451616T-101Y-S	100	0.30	500
SBK201209T-151Y-S	150	0.25	300	SBK451616T-151Y-S	150	0.30	500
SBK201209T-221Y-S	220	0.30	300	SBK451616T-171Y-S	170	0.30	500
SBK201209T-301Y-S	300	0.30	300	SBY453215T-700Y-S	70	0.30	500
SBK201209T-401Y-S	400	0.30	300	SBY453215T-121Y-S	120	0.30	500
SBK201209T-501Y-S	500	0.40	300	Note : * at 50MHz			** at 30MHz
SBK201209T-601Y-S	600	0.40	300				



LEAD-FREE & ROHS COMPLIANCE

PART NO.	IMPEDANCE	RDC	RATED CURRENT	PART NO.	IMPEDANCE	RDC	RATED CURRENT
	($\Omega \pm 25\%$)	(Ω) Max.	(mA) Max.		($\Omega \pm 25\%$)	(Ω) Max.	(mA) Max.
SBY100505T-060□-N	6	0.05	500	SBK160808T-501□-N	500	0.5	200
SBY100505T-100□-N	10	0.05	500	SBK160808T-601□-N	600	0.5	200
SBY100505T-300□-N	30	0.3	300	SBK160808T-751□-N	750	0.7	200
SBY100505T-400□-N	40	0.3	300	SBK160808T-102□-N	1000	0.7	200
SBY100505T-470□-N	47	0.4	200	SBK160808T-122□-N	1200	1	50
SBY100505T-600□-N	60	0.4	200	SBK160808T-152□-N	1500	1	50
SBY100505T-700□-N	70	0.4	200	SBK160808T-202□-N	2000	1.2	50
SBY100505T-750□-N	75	0.4	200	SBK160808T-222□-N	2200	1.2	50
SBY100505T-800□-N	80	0.4	200	SBK160808T-252□-N	2500	1.3	50
SBY100505T-121□-N	120	0.5	200	SBK160808T-272□-N	2700	1.3	50
SBY100505T-151□-N	150	0.5	200	SBY201209T-070□-N	7	0.1	600
SBY100505T-221□-N	220	0.5	200	SBY201209T-090□-N	9	0.1	600
SBY100505T-241□-N	240	0.5	200	SBY201209T-100□-N	10	0.1	600
SBY100505T-301□-N	300	0.8	200	SBY201209T-110□-N	11	0.1	600
SBY100505T-481□-N	480	0.8	200	SBY201209T-170□-N	17	0.1	600
SBY100505T-601□-N	600	1	200	SBY201209T-190□-N	19	0.1	600
SBY100505T-102□-N	1000	1.5	100	SBY201209T-220□-N	22	0.1	600
SBY100505T-152□-N	1500	2	60	SBY201209T-260□-N	26	0.1	600
SBK160808T-050□-N	5	0.05	500	SBY201209T-280□-N	28	0.1	600
SBK160808T-060□-N	6	0.05	500	SBY201209T-300□-N	30	0.1	600
SBK160808T-070□-N	7	0.05	500	SBY201209T-310□-N	31	0.1	600
SBK160808T-100□-N	10	0.05	500	SBY201209T-320□-N	32	0.1	600
SBK160808T-110□-N	11	0.05	500	SBY201209T-390□-N	39	0.1	500
SBK160808T-150□-N	15	0.08	500	SBY201209T-400□-N	40	0.1	500
SBK160808T-170□-N	17	0.08	500	SBY201209T-470□-N	47	0.1	500
SBK160808T-190□-N	19	0.08	500	SBY201209T-500□-N	50	0.1	500
SBK160808T-220□-N	22	0.1	400	SBY201209T-560□-N	56	0.15	500
SBK160808T-250□-N	25	0.1	400	SBK201209T-600□-N	60	0.15	500
SBK160808T-260□-N	26	0.1	400	SBK201209T-700□-N	70	0.15	500
SBK160808T-300□-N	30	0.1	400	SBK201209T-750□-N	75	0.15	500
SBK160808T-310□-N	31	0.1	400	SBK201209T-800□-N	80	0.15	500
SBK160808T-400□-N	40	0.1	400	SBK201209T-900□-N	90	0.15	500
SBK160808T-470□-N	47	0.1	300	SBK201209T-101□-N	100	0.25	300
SBK160808T-500□-N	50	0.1	300	SBK201209T-121□-N	120	0.25	300
SBK160808T-600□-N	60	0.1	300	SBK201209T-151□-N	150	0.25	300
SBK160808T-680□-N	68	0.15	300	SBK201209T-201□-N	200	0.3	300
SBK160808T-700□-N	70	0.15	300	SBK201209T-221□-N	220	0.3	300
SBK160808T-750□-N	75	0.15	300	SBK201209T-241□-N	240	0.3	300
SBK160808T-800□-N	80	0.15	300	SBK201209T-301□-N	300	0.3	300
SBK160808T-900□-N	90	0.2	300	SBK201209T-331□-N	330	0.3	300
SBK160808T-101□-N	100	0.2	300	SBK201209T-401□-N	400	0.3	300
SBK160808T-121□-N	120	0.25	400	SBK201209T-431□-N	430	0.4	300
SBK160808T-151□-N	150	0.3	200	SBK201209T-451□-N	450	0.4	300
SBK160808T-181□-N	180	0.3	200	SBK201209T-471□-N	470	0.4	300
SBK160808T-201□-N	200	0.3	200	SBK201209T-501□-N	500	0.4	300
SBK160808T-121□-N	220	0.3	200	SBK201209T-601□-N	600	0.4	300
SBK160808T-241□-N	240	0.4	200	SBK201209T-751□-N	750	0.5	200
SBK160808T-301□-N	300	0.4	200	SBK201209T-102□-N	1000	0.5	200
SBK160808T-331□-N	330	0.5	200	SBK201209T-122□-N	1200	0.6	200
SBK160808T-451□-N	450	0.5	200	SBK201209T-152□-N	1500	0.6	200
SBK160808T-471□-N	470	0.5	200	SBK201209T-202□-N	2000	0.8	100



LEAD-FREE & ROHS COMPLIANCE

PART NO.	IMPEDANCE	RDC	RATED CURRENT	PART NO.	IMPEDANCE	RDC	RATED CURRENT
	($\Omega \pm 25\%$)	(Ω) Max.	(mA) Max.		($\Omega \pm 25\%$)	(Ω) Max.	(mA) Max.
SBK201209T-222□-N	2200	1	100	SBK321611T-401□-N	400	0.2	400
SBK201209T-252□-N	2500	1	100	SBK321611T-471□-N	470	0.2	400
SBK201209T-272□-N	2700	1.5	100	SBK321611T-501□-N	500	0.2	400
SBY321611T-080□-N	8	0.05	600	SBK321611T-601□-N	600	0.3	400
SBY321611T-090□-N	9	0.05	600	SBK321611T-102□-N	1000	0.4	200
SBY321611T-110□-N	11	0.05	600	SBK321611T-122□-N	1200	0.4	200
SBY321611T-190□-N	19	0.05	600	SBK321611T-152□-N	1500	0.45	200
SBY321611T-260□-N	26	0.05	600	SBK321611T-202□-N	2000	0.6	200
SBY321611T-300□-N	30	0.05	600	SBY321616T-250□-N	25	0.1	500
SBY321611T-310□-N	31	0.05	600	SBY321616T-600□-N	60	0.2	500
SBY321611T-320□-N	32	0.05	600	SBK321616T-700□-N	70	0.2	500
SBY321611T-470□-N	47	0.1	500	SBY322513T-320□-N	32	0.2	500
SBY321611T-500□-N	50	0.1	500	SBY322513T-600□-N	60	0.2	500
SBY321611T-600□-N	60	0.1	500	SBY322513T-900□-N	90	0.2	500
SBK321611T-700□-N	70	0.1	500	SBY451616T-500□-N	50	0.2	600
SBK321611T-750□-N	75	0.15	500	SBY451616T-600□-N	60	0.2	600
SBK321611T-800□-N	80	0.15	500	SBY451616T-800□-N	80	0.2	600
SBK321611T-900□-N	90	0.15	500	SBY451616T-900□-N	90	0.3	500
SBK321611T-101□-N	100	0.15	500	SBY451616T-101□-N	100	0.3	500
SBK321611T-121□-N	120	0.15	500	SBK451616T-151□-N	150	0.3	500
SBK321611T-151□-N	150	0.15	500	SBK451616T-171□-N	170	0.3	500
SBK321611T-201□-N	200	0.2	400	SBY453215T-700□-N	70	0.3	500
SBK321611T-221□-N	220	0.2	400	SBY453215T-121□-N	120	0.3	500
SBK321611T-301□-N	300	0.2	400				



PB SERIES, FOR HIGH CURRENT USE

APPLICATIONS

High current DC power lines for USB interface circuitry, personal computers, electronic games, hard disk drives, and other general electronic equipment.

FEATURES

Suitable for High Current Applications
 Small Package Size-EIA STD 0402/0603/0805/1206/1806 and 1812
 Nickel Barrier Terminations Provide Excellent Solder Heat Resistance
 Current Rating up to 6 AMPS (Max) (High Current Handling Capacity)
 Low DCR
 Suitable for Flow and Reflow Soldering
 Available in 6 Sizes

ELECTRICAL CHARACTERISTICS

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
PBY100505T-100Y-S	10	0.03	1000
PBY160808T-110Y-S	11	0.02	4000
PBY160808T-250Y-S	25	0.03	3000
PBY160808T-400Y-S	40	0.035	3000
PBY160808T-600Y-S	60	0.04	3000
PBY160808T-121Y-S	120	0.08	2500
PBY160808T-151Y-S	150	0.085	2000
PBY160808T-181Y-S	180	0.09	2000
PBY160808T-201Y-S	200	0.095	2000
PBY160808T-301Y-S	300	0.10	2000
PBY160808T-501Y-S	500	0.15	1500
PBY160808T-601Y-S	600	0.20	1000
PBY160808T-102Y-S	1000	0.25	800
PBY201209T-110Y-S	11	0.01	6000
PBY201209T-170Y-S	17	0.02	5000
PBY201209T-300Y-S	30	0.015	5000
PBY201209T-500Y-S	50	0.025	3000
PBY201209T-600Y-S	60	0.03	3000
PBY201209T-800Y-S	80	0.04	3000
PBY201209T-121Y-S	120	0.04	3000
PBY201209T-201Y-S	200	0.05	2500
PBY201209T-301Y-S	300	0.08	2000
PBY201209T-601Y-S	600	0.10	2000
PBY201209T-102Y-S	1000	0.12	1500
PBY321611T-190Y-S	19	0.015	6000
PBY321611T-320Y-S	32	0.015	4000
PBY321611T-500Y-S	50	0.02	4000
PBY321611T-800Y-S	80	0.025	3000
PBY321611T-101Y-S	100	0.03	2500
PBY321611T-121Y-S	120	0.03	2500
PBY321611T-221Y-S	220	0.05	2000
PBY321611T-301Y-S	300	0.06	2000
PBY321611T-601Y-S	600	0.10	1800
PBY321611T-102Y-S	1000 *	0.15	1200
PBY321611T-122Y-S	1200 *	0.18	1000
PBY321611T-152Y-S	1500 *	0.20	800
PBY322513T-600Y-S	60	0.025	4000
PBY322513T-900Y-S	90	0.025	3000
PBY451616T-500Y-S	50	0.020	6000
PBY451616T-600Y-S	60	0.020	5000
PBY451616T-800Y-S	80	0.025	4000
PBY451616T-900Y-S	90	0.04	4000
PBY451616T-151Y-S	150	0.100	2000
PBY453215T-700Y-S	70	0.03	6000
PBY453215T-121Y-S	120	0.03	4000
PBY453215T-151Y-S	150	0.03	4000
PBY453215T-601Y-S	600	0.1	2000

Note : * at 50MHz

LEAD-FREE & ROHS COMPLIANCE

PART NO.	IMPEDANCE	RDC	RATED CURRENT	PART NO.	IMPEDANCE	RDC	RATED CURRENT
	($\Omega \pm 25\%$)	(Ω) Max.	(mA) Max.		($\Omega \pm 25\%$)	(Ω) Max.	(mA) Max.
PBY100505T-100□-N	10	0.03	1000	PBY201209T-151□-N	150	0.05	2500
PBY160808T-100□-N	10	0.02	4000	PBY201209T-181□-N	180	0.05	2500
PBY160808T-110□-N	11	0.02	4000	PBY201209T-201□-N	200	0.05	2500
PBY160808T-190□-N	19	0.03	3000	PBY201209T-221□-N	220	0.08	2000
PBY160808T-200□-N	20	0.03	3000	PBY201209T-301□-N	300	0.08	2000
PBY160808T-220□-N	22	0.03	3000	PBY201209T-331□-N	330	0.08	2000
PBY160808T-250□-N	25	0.03	3000	PBY201209T-401□-N	400	0.1	2000
PBY160808T-300□-N	30	0.03	3000	PBY201209T-471□-N	470	0.1	2000
PBY160808T-310□-N	31	0.035	3000	PBY201209T-501□-N	500	0.1	2000
PBY160808T-400□-N	40	0.035	3000	PBY201209T-601□-N	600	0.1	2000
PBY160808T-470□-N	47	0.04	3000	PBY201209T-102□-N	1000	0.12	1500
PBY160808T-500□-N	50	0.04	3000	PBY321611T-080□-N	8	0.015	6000
PBY160808T-560□-N	56	0.04	3000	PBY321611T-110□-N	11	0.015	6000
PBY160808T-600□-N	60	0.04	3000	PBY321611T-190□-N	19	0.015	6000
PBY160808T-680□-N	68	0.05	2500	PBY321611T-260□-N	26	0.015	6000
PBY160808T-700□-N	70	0.05	2500	PBY321611T-300□-N	30	0.015	4000
PBY160808T-750□-N	75	0.05	2500	PBY321611T-310□-N	31	0.015	4000
PBY160808T-800□-N	80	0.05	2500	PBY321611T-320□-N	32	0.015	4000
PBY160808T-900□-N	90	0.05	2500	PBY321611T-420□-N	42	0.015	4000
PBY160808T-101□-N	100	0.05	2500	PBY321611T-500□-N	50	0.02	4000
PBY160808T-121□-N	120	0.08	2500	PBY321611T-600□-N	60	0.02	4000
PBY160808T-151□-N	150	0.085	2000	PBY321611T-680□-N	68	0.02	4000
PBY160808T-181□-N	180	0.09	2000	PBY321611T-700□-N	70	0.02	4000
PBY160808T-201□-N	200	0.095	2000	PBY321611T-800□-N	80	0.025	3000
PBY160808T-221□-N	220	0.1	2000	PBY321611T-900□-N	90	0.03	3000
PBY160808T-301□-N	300	0.12	1500	PBY321611T-101□-N	100	0.03	2000
PBY160808T-331□-N	330	0.12	1500	PBY321611T-121□-N	120	0.03	2000
PBY160808T-401□-N	400	0.12	1500	PBY321611T-151□-N	150	0.04	2000
PBY160808T-471□-N	470	0.12	1500	PBY321611T-201□-N	200	0.05	2000
PBY160808T-501□-N	500	0.15	1200	PBY321611T-221□-N	220	0.05	2000
PBY160808T-601□-N	600	0.2	1000	PBY321611T-301□-N	300	0.06	2000
PBY160808T-102□-N	1000	0.25	800	PBY321611T-401□-N	400	0.1	2000
PBY201209T-070□-N	7	0.01	6000	PBY321611T-501□-N	500	0.1	2000
PBY201209T-110□-N	11	0.01	6000	PBY321611T-601□-N	600	0.1	2000
PBY201209T-170□-N	17	0.02	5000	PBY321611T-102□-N	1000	0.15	1200
PBY201209T-190□-N	19	0.02	4000	PBY321611T-122□-N	1200	0.18	1000
PBY201209T-220□-N	22	0.02	4000	PBY321611T-152□-N	1500	0.2	800
PBY201209T-280□-N	28	0.02	4000	PBY322513T-600□-N	60	0.025	4000
PBY201209T-300□-N	30	0.02	4000	PBY322513T-900□-N	90	0.025	3000
PBY201209T-310□-N	31	0.02	4000	PBY451616T-190□-N	19	0.02	6000
PBY201209T-390□-N	39	0.02	3000	PBY451616T-400□-N	40	0.02	6000
PBY201209T-400□-N	40	0.02	3000	PBY451616T-500□-N	50	0.02	6000
PBY201209T-420□-N	42	0.025	3000	PBY451616T-600□-N	60	0.02	5000
PBY201209T-500□-N	50	0.025	3000	PBY451616T-700□-N	70	0.025	5000
PBY201209T-600□-N	60	0.03	3000	PBY451616T-750□-N	75	0.025	5000
PBY201209T-700□-N	70	0.04	3000	PBY451616T-800□-N	80	0.025	4000
PBY201209T-750□-N	75	0.04	3000	PBY451616T-101□-N	100	0.1	2000
PBY201209T-800□-N	80	0.04	3000	PBY451616T-151□-N	150	0.1	2000
PBY201209T-900□-N	90	0.04	3000	PBY451616T-191□-N	190	0.1	2000
PBY201209T-101□-N	100	0.04	3000	PBY451616T-601□-N	600	0.1	2000
PBY201209T-121□-N	120	0.04	3000	PBY451616T-102□-N	1000	0.1	2000



LEAD-FREE & ROHS COMPLIANCE

PART NO.	IMPEDANCE	RDC	RATED
	($\Omega \pm 25\%$)	(Ω) Max.	CURRENT (mA) Max.
PBY451616T-132□-N	1300	0.1	2000
PBY453215T-700□-N	70	0.03	6000
PBY453215T-800□-N	80	0.03	4000
PBY453215T-900□-N	90	0.03	4000
PBY453215T-121□-N	120	0.03	4000
PBY453215T-125□-N	125	0.03	4000
PBY453215T-151□-N	150	0.03	4000

UPB SERIES, FOR ULTRA HIGH CURRENT USE

APPLICATIONS

Preventing of Electronics Magnet Interference in Power Line of PC, Printer, & CD ROM
High Frequency Filtering of Medium Speed Clocks and Video Signals

FEATURES

High Current Performance
Low D.C. Resistance Minute mΩ Typically
Impedance Character of Broad Frequency

ELECTRICAL CHARACTERISTICS

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
UPB160808T-110Y-S	11	0.015	4500
UPB160808T-170Y-S	17	0.015	4500
UPB160808T-250Y-S	25	0.015	4500
UPB160808T-300Y-S	30	0.015	4500
UPB201209T-110Y-S	11	0.015	5000
UPB201209T-150Y-S	15	0.015	5000
UPB201209T-190Y-S	19	0.015	5000
UPB201209T-260Y-S	26	0.015	5000
UPB201209T-300Y-S	30	0.015	5000
UPB201209T-330Y-S	33	0.015	5000
UPB201209T-400Y-S	40	0.015	5000
UPB201209T-500Y-S	50	0.015	5000
UPB201209T-600Y-S	60	0.020	4500
UPB201212T-600Y-S	60	0.02	5000
UPB201212T-700Y-S	70	0.02	5000
UPB201212T-800Y-S	80	0.02	5000
UPB201212T-101Y-S	100	0.025	5000
UPB201212T-121Y-S	120	0.025	5000
UPB321611T-110Y-S	11	0.012	6000
UPB321611T-190Y-S	19	0.012	6000
UPB321611T-260Y-S	26	0.012	6000
UPB321611T-300Y-S	30	0.012	6000
UPB321611T-400Y-S	40	0.012	6000
UPB321611T-500Y-S	50	0.012	6000
UPB321611T-600Y-S	60	0.012	6000
UPB321611T-800Y-S	80	0.012	6000
UPB321611T-101Y-S	100	0.012	6000
UPB321611T-121Y-S	120	0.012	6000
UPB321611T-151Y-S	150	0.020	4500
UPB321616T-600Y-S	60	0.012	6000
UPB323215T-700Y-S	70	0.01	9000



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	IMPEDANCE	DC RESISTANCE	RATED CURRENT
	at 100MHz ($\Omega \pm 25\%$)	(Ω) Max.	(mA) Max.
UPB160808T-110 □ -N	11	0.015	4500
UPB160808T-170 □ -N	17	0.015	4500
UPB160808T-250 □ -N	25	0.015	4500
UPB160808T-300 □ -N	30	0.015	4500
UPB201209T-110 □ -N	11	0.012	5000
UPB201209T-150 □ -N	15	0.012	5000
UPB201209T-190 □ -N	19	0.012	5000
UPB201209T-260 □ -N	26	0.012	5000
UPB201209T-300 □ -N	30	0.012	5000
UPB201209T-330 □ -N	33	0.012	5000
UPB201209T-400 □ -N	40	0.015	5000
UPB201209T-500 □ -N	50	0.015	5000
UPB201209T-600 □ -N	60	0.02	4500
UPB201209T-700 □ -N	70	0.02	4500
UPB201209T-800 □ -N	80	0.02	4500
UPB201212T-600 □ -N	60	0.02	5000
UPB201212T-700 □ -N	70	0.02	5000
UPB201212T-800 □ -N	80	0.02	5000
UPB201212T-101 □ -N	100	0.025	5000
UPB201212T-121 □ -N	120	0.025	5000
UPB321611T-110 □ -N	11	0.012	6000
UPB321611T-190 □ -N	19	0.012	6000
UPB321611T-260 □ -N	26	0.012	6000
UPB321611T-300 □ -N	30	0.012	6000
UPB321611T-320 □ -N	32	0.012	6000
UPB321611T-400 □ -N	40	0.012	6000
UPB321611T-500 □ -N	50	0.012	6000
UPB321611T-600 □ -N	60	0.012	6000
UPB321611T-800 □ -N	80	0.012	6000
UPB321611T-101 □ -N	100	0.012	6000
UPB321611T-121 □ -N	120	0.012	6000
UPB321611T-151 □ -N	150	0.02	4500
UPB451616T-600 □ -N	60	0.012	7000
UPB453215T-700 □ -N	70	0.01	9000
UPB453215T-900 □ -N	90	0.01	9000

NOTE : □ -tolerance Y= $\pm 25\%$ / T= $\pm 30\%$

1. Operating temperature range -55°C~125°C

2. Rate current: Applied the current to coils, the temperature rise shall not be more than 30°C

"-N" FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)



NB SERIES, FOR HIGH SPEED SIGNALS USE

APPLICATIONS

High-Speed Circuits for Computer & Peripheral Equipments and Communication Devices

Cellular Phone

Suitable for Circuits with Unstable Ground

FEATURES

Exhibiting High Impedance with Sharp Increase at High-Speed Signal Frequencies with Minimal Diminishing the Desired Wave Form

Suitable for Flow and Reflow Soldering

Available in 4 Sizes

ELECTRICAL CHARACTERISTICS

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
NBQ100505T-060Y-S	6	0.10	300
NBQ100505T-100Y-S	10	0.20	200
NBQ100505T-400Y-S	40	0.40	150
NBQ100505T-800Y-S	80	0.60	100
NBQ100505T-121Y-S	120	0.80	50
NBQ160808T-060Y-S	6	0.05	500
NBQ160808T-100Y-S	10	0.07	400
NBQ160808T-400Y-S	40	0.30	300
NBQ160808T-600Y-S	60	0.30	300
NBQ160808T-800Y-S	80	0.40	300
NBQ160808T-121Y-S	120	0.40	300
NBQ160808T-241Y-S	240	0.40	200
NBQ160808T-301Y-S	300	0.50	200
NBQ160808T-481Y-S	480	0.60	150
NBQ160808T-601Y-S	600	0.60	100
NBQ160808T-102Y-S	1000	0.70	100
NBQ160808T-122Y-S	1200	0.70	100
NBQ160808T-152Y-S	1500	0.80	100
NBQ160808T-182Y-S	1800	0.95	100
NBQ160808T-222Y-S	2200	1.0	50
NBQ160808T-252Y-S	2500	1.0	50
NBQ201209T-060Y-S	6	0.07	800
NBQ201209T-110Y-S	11	0.10	700
NBQ201209T-260Y-S	26	0.15	600
NBQ201209T-320Y-S	32	0.15	600
NBQ201209T-600Y-S	60	0.15	500
NBQ201209T-750Y-S	75	0.15	500
NBQ201209T-900Y-S	90	0.15	500
NBQ201209T-121Y-S	120	0.20	400
NBQ201209T-151Y-S	150	0.20	400
NBQ201209T-171Y-S	170	0.30	400
NBQ201209T-221Y-S	220	0.30	300
NBQ201209T-301Y-S	300	0.30	300
NBQ201209T-401Y-S	400	0.35	300
NBQ201209T-501Y-S	500	0.35	200
NBQ201209T-601Y-S	600	0.35	200
NBQ201209T-102Y-S	1000	0.40	200
NBQ201209T-122Y-S	1200	0.45	200
NBQ201209T-152Y-S	1500	0.45	200
NBQ201209T-222Y-S	2200	0.50	200
NBQ201209T-272Y-S	2700	0.60	200
NBQ321611T-320Y-S	32	0.15	600
NBQ321611T-600Y-S	60	0.15	500
NBQ321611T-800Y-S	80	0.15	500
NBQ321611T-900Y-S	90	0.15	500
NBQ321611T-121Y-S	120	0.20	400
NBQ321611T-151Y-S	150	0.20	400
NBQ321611T-201Y-S	200	0.25	300
NBQ321611T-221Y-S	220	0.30	300
NBQ321611T-351Y-S	350	0.30	300
NBQ321611T-401Y-S	400	0.30	300
NBQ321611T-601Y-S	600	0.35	300
NBQ321611T-122Y-S	1200	0.40	200
NBQ321611T-152Y-S	1500	0.45	200



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
NBQ100505T-060 □ -N	6	0.1	300
NBQ100505T-100 □ -N	10	0.2	200
NBQ100505T-220 □ -N	22	0.4	150
NBQ100505T-400 □ -N	40	0.4	150
NBQ100505T-600 □ -N	60	0.6	100
NBQ100505T-800 □ -N	80	0.6	100
NBQ100505T-121 □ -N	120	0.8	50
NBQ100505T-221 □ -N	220	1.4	50
NBQ160808T-060 □ -N	6	0.05	500
NBQ160808T-100 □ -N	10	0.07	400
NBQ160808T-300 □ -N	30	0.2	300
NBQ160808T-400 □ -N	40	0.2	300
NBQ160808T-470 □ -N	47	0.2	300
NBQ160808T-500 □ -N	50	0.25	300
NBQ160808T-600 □ -N	60	0.25	300
NBQ160808T-680 □ -N	68	0.25	300
NBQ160808T-700 □ -N	70	0.25	300
NBQ160808T-750 □ -N	75	0.25	300
NBQ160808T-800 □ -N	80	0.25	300
NBQ160808T-101 □ -N	100	0.3	300
NBQ160808T-121 □ -N	120	0.3	300
NBQ160808T-131 □ -N	130	0.3	300
NBQ160808T-141 □ -N	140	0.3	300
NBQ160808T-151 □ -N	150	0.3	200
NBQ160808T-161 □ -N	160	0.3	200
NBQ160808T-221 □ -N	220	0.35	200
NBQ160808T-241 □ -N	240	0.35	200
NBQ160808T-301 □ -N	300	0.4	200
NBQ160808T-471 □ -N	470	0.5	200
NBQ160808T-481 □ -N	480	0.5	200
NBQ160808T-601 □ -N	600	0.5	200
NBQ160808T-102 □ -N	1000	0.6	100
NBQ160808T-122 □ -N	1200	0.6	100
NBQ160808T-152 □ -N	1500	0.7	100
NBQ160808T-182 □ -N	1800	0.8	100
NBQ160808T-222 □ -N	2200	1	50
NBQ160808T-252 □ -N	2500	1.5	50
NBQ201209T-050 □ -N	5	0.07	800
NBQ201209T-060 □ -N	6	0.07	800
NBQ201209T-070 □ -N	7	0.1	700
NBQ201209T-110 □ -N	11	0.1	700
NBQ201209T-260 □ -N	26	0.15	600
NBQ201209T-300 □ -N	30	0.15	600
NBQ201209T-320 □ -N	32	0.15	600
NBQ201209T-400 □ -N	40	0.15	500
NBQ201209T-600 □ -N	60	0.15	500
NBQ201209T-750 □ -N	75	0.15	500
NBQ201209T-900 □ -N	90	0.15	500
NBQ201209T-101 □ -N	100	0.2	400
NBQ201209T-121 □ -N	120	0.2	400
NBQ201209T-151 □ -N	150	0.2	400
NBQ201209T-171 □ -N	170	0.3	400



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
NBQ201209T-201 □ -N	200	0.3	300
NBQ201209T-221 □ -N	220	0.3	300
NBQ201209T-301 □ -N	300	0.3	300
NBQ201209T-401 □ -N	400	0.3	300
NBQ201209T-421 □ -N	420	0.3	300
NBQ201209T-501 □ -N	500	0.35	200
NBQ201209T-601 □ -N	600	0.35	200
NBQ201209T-751 □ -N	750	0.4	200
NBQ201209T-102 □ -N	1000	0.4	200
NBQ201209T-122 □ -N	1200	0.45	200
NBQ201209T-152 □ -N	1500	0.45	200
NBQ201209T-202 □ -N	2000	0.5	200
NBQ201209T-222 □ -N	2200	0.5	200
NBQ201209T-252 □ -N	2500	0.6	200
NBQ201209T-272 □ -N	2700	0.6	200
NBQ321611T-170 □ -N	17	0.15	600
NBQ321611T-190 □ -N	19	0.15	600
NBQ321611T-320 □ -N	32	0.15	600
NBQ321611T-600 □ -N	60	0.15	500
NBQ321611T-800 □ -N	80	0.15	500
NBQ321611T-900 □ -N	90	0.15	500
NBQ321611T-121 □ -N	120	0.2	400
NBQ321611T-151 □ -N	150	0.2	400
NBQ321611T-201 □ -N	200	0.25	300
NBQ321611T-221 □ -N	220	0.3	300
NBQ321611T-351 □ -N	350	0.3	300
NBQ321611T-401 □ -N	400	0.3	300
NBQ321611T-601 □ -N	600	0.35	300
NBQ321611T-122 □ -N	1200	0.4	200
NBQ321611T-152 □ -N	1500	0.45	200

NOTE : □ -tolerance Y=±25% / T=±30%

1. Operating temperature range -55°C~125°C

2. Rate current: Applied the current to coils, the temperature rise shall not be more than 30°C

"-N" FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)



GB SERIES, FOR MID CURRENT USE

APPLICATIONS

* Computers * Modems * CD-ROMs * Hard Drives
* Televisions * Wireless Device

FEATURES

This series exhibits a low DC resistance across a wide range of impedances.
Low DC resistance characteristics make the chip beads suitable for use on signal lines handling larger currents.

ELECTRICAL CHARACTERISTICS

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.	PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
GBK160808T-110Y-S	11	0.03	1000	GBY321611T-190Y-S	19	0.03	1000
GBK160808T-190Y-S	19	0.05	1000	GBY321611T-260Y-S	26	0.03	1000
GBK160808T-300Y-S	30	0.06	800	GBY321611T-320Y-S	32	0.03	1000
GBK160808T-400Y-S	40	0.06	800	GBY321611T-500Y-S	50	0.06	800
GBK160808T-600Y-S	60	0.06	600	GBY321611T-600Y-S	60	0.06	800
GBK160808T-800Y-S	80	0.10	600	GBK321611T-700Y-S	70	0.06	800
GBK160808T-121Y-S	120	0.15	600	GBK321611T-900Y-S	90	0.10	800
GBK160808T-221Y-S	220	0.18	400	GBK321611T-121Y-S	120	0.10	800
GBK160808T-301Y-S	300	0.25	400	GBK321611T-151Y-S	150	0.10	800
GBK160808T-451Y-S	450	0.30	400	GBK321611T-201Y-S	200	0.15	600
GBK160808T-601Y-S	600	0.30	400	GBK321611T-401Y-S	400	0.15	600
GBK160808T-751Y-S	750	0.45	300	GBK321611T-501Y-S	500	0.15	600
GBK160808T-102Y-S	1000	0.45	300	GBK321611T-601Y-S	600	0.20	500
GBY201209T-070Y-S	7	0.06	1000	GBK321611T-102Y-S	1000 *	0.25	400
GBY201209T-090Y-S	9	0.06	1000	GBK321611T-122Y-S	1200 *	0.25	400
GBY201209T-110Y-S	11	0.06	1000	GBK321611T-202Y-S	2000 **	0.35	400
GBY201209T-170Y-S	17	0.06	1000	GBY321616T-250Y-S	25	0.10	1000
GBY201209T-320Y-S	32	0.06	1000	GBY321616T-600Y-S	60	0.10	1000
GBK201209T-600Y-S	60	0.10	800	GBK321616T-700Y-S	70	0.10	1000
GBK201209T-700Y-S	70	0.10	800	GBY322513T-320Y-S	32	0.10	1000
GBK201209T-800Y-S	80	0.10	800	GBY322513T-600Y-S	60	0.10	1000
GBK201209T-121Y-S	120	0.15	600	GBY322513T-900Y-S	90	0.10	1000
GBK201209T-151Y-S	150	0.15	600	GBY451616T-500Y-S	50	0.10	1000
GBK201209T-221Y-S	220	0.18	600	GBY451616T-600Y-S	60	0.10	1000
GBK201209T-301Y-S	300	0.18	600	GBY451616T-800Y-S	80	0.10	1000
GBK201209T-401Y-S	400	0.18	600	GBY451616T-101Y-S	100	0.18	800
GBK201209T-501Y-S	500	0.25	500	GBK451616T-151Y-S	150	0.18	800
GBK201209T-601Y-S	600	0.25	500	GBK451616T-171Y-S	170	0.18	800
GBK201209T-751Y-S	750	0.30	400	GBY453215T-700Y-S	70	0.18	800
GBK201209T-102Y-S	1000	0.30	400	GBY453215T-121Y-S	120	0.18	800
GBK201209T-152Y-S	1500	0.40	400				
GBK201209T-202Y-S	2000	0.55	400				

Note : * at 50MHz ** at 30MHz



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
GBK160808T-110 □ -N	11	0.03	1000
GBK160808T-190 □ -N	19	0.05	1000
GBK160808T-300 □ -N	30	0.06	800
GBK160808T-320 □ -N	32	0.06	800
GBK160808T-400 □ -N	40	0.06	800
GBK160808T-500 □ -N	50	0.06	600
GBK160808T-600 □ -N	60	0.06	600
GBK160808T-800 □ -N	80	0.1	600
GBK160808T-101 □ -N	100	0.15	600
GBK160808T-121 □ -N	120	0.15	600
GBK160808T-181 □ -N	180	0.18	400
GBK160808T-221 □ -N	220	0.18	400
GBK160808T-301 □ -N	300	0.25	400
GBK160808T-451 □ -N	450	0.3	400
GBK160808T-471 □ -N	470	0.3	400
GBK160808T-601 □ -N	600	0.3	400
GBK160808T-751 □ -N	750	0.45	300
GBK160808T-102 □ -N	1000	0.45	300
GBK160808T-152 □ -N	1500	0.7	150
GBY201209T-070 □ -N	7	0.06	1000
GBY201209T-090 □ -N	9	0.06	1000
GBY201209T-110 □ -N	11	0.06	1000
GBY201209T-170 □ -N	17	0.06	1000
GBY201209T-300 □ -N	30	0.06	1000
GBY201209T-320 □ -N	32	0.06	1000
GBY201209T-330 □ -N	33	0.1	800
GBY201209T-400 □ -N	40	0.1	800
GBK201209T-600 □ -N	60	0.1	800
GBK201209T-700 □ -N	70	0.1	800
GBK201209T-800 □ -N	80	0.1	800
GBK201209T-101 □ -N	100	0.15	600
GBK201209T-121 □ -N	120	0.15	600
GBK201209T-151 □ -N	150	0.15	600
GBK201209T-221 □ -N	220	0.18	600
GBK201209T-301 □ -N	300	0.18	600



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
GBK201209T-401 □ -N	400	0.18	600
GBK201209T-501 □ -N	500	0.25	500
GBK201209T-601 □ -N	600	0.25	500
GBK201209T-751 □ -N	750	0.3	400
GBK201209T-102 □ -N	1000	0.3	400
GBK201209T-152 □ -N	1500	0.4	400
GBK201209T-202 □ -N	2000	0.55	400
GBY321611T-190 □ -N	19	0.03	1000
GBY321611T-260 □ -N	26	0.03	1000
GBY321611T-320 □ -N	32	0.03	1000
GBY321611T-500 □ -N	50	0.06	800
GBY321611T-600 □ -N	60	0.06	800
GBK321611T-700 □ -N	70	0.06	800
GBK321611T-900 □ -N	90	0.1	800
GBK321611T-121 □ -N	120	0.1	800
GBK321611T-151 □ -N	150	0.1	800
GBK321611T-201 □ -N	200	0.15	600
GBK321611T-301 □ -N	300	0.15	600
GBK321611T-401 □ -N	400	0.15	600
GBK321611T-501 □ -N	500	0.15	600
GBK321611T-601 □ -N	600	0.2	500
GBK321611T-102 □ -N	1000	0.25	400
GBK321611T-122 □ -N	1200	0.25	400
GBK321611T-202 □ -N	2000	0.35	400
GBY321611T-250 □ -N	25	0.1	1000
GBY321611T-600 □ -N	60	0.1	1000
GBK321611T-700 □ -N	70	0.1	1000
GBY322513T-320 □ -N	32	0.1	1000
GBY322513T-600 □ -N	60	0.1	1000
GBY322513T-900 □ -N	90	0.1	1000
GBY451616T-500 □ -N	50	0.1	1000
GBY451616T-600 □ -N	60	0.1	1000
GBY451616T-800 □ -N	80	0.1	1000
GBY451616T-101 □ -N	100	0.18	800



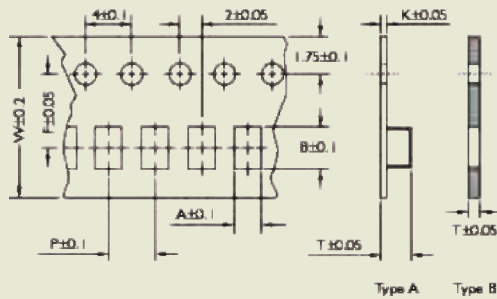
ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	IMPEDANCE	DC RESISTANCE	RATED CURRENT
	at 100MHz ($\Omega \pm 25\%$)	(Ω) Max.	(mA) Max.
GBK451616T-151 □ -N	150	0.18	800
GBK451616T-171 □ -N	170	0.18	800
GBY453215T-700 □ -N	70	0.18	800
GBY453215T-121 □ -N	120	0.18	800



TAPE DIMENSIONS

Dimensions : mm



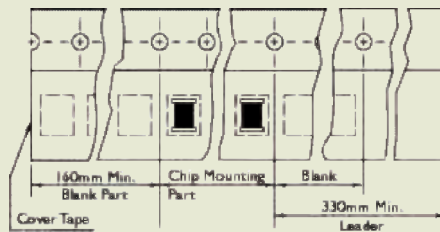
TYPE		A	B	T	W	P	F	K	TAPE TYPE
SB/PB/NB	100505	0.65	1.15	0.60	8.0	2.0	3.5	-	B
SB/PB/UP/NB/GB	160808	1.10	1.85	0.95	8.0	4.0	3.5	-	B
SB/PB/UP/NB/GB	201209	1.42	2.25	0.22	8.0	4.0	3.5	1.04	A
SB/PB/UP/NB/GB	321611	1.88	3.50	0.22	8.0	4.0	3.5	1.27	A
SB/GB	321616	1.88	3.53	0.22	8.0	4.0	3.5	1.80	A
SB/GB	322513	2.77	3.42	0.22	8.0	4.0	3.5	1.55	A
SB/PB/GB	451616	1.93	4.95	0.24	12.0	4.0	5.5	1.93	A
SB/PB/GB	453215	3.66	4.95	0.24	12.0	8.0	5.5	1.85	A

TAPE MATERIAL

Carrier Tape : Polystyrene (for 201209, 201211, 321611, etc.)

Paper (for 160808, 100505)

Cover Type : Polyethylene

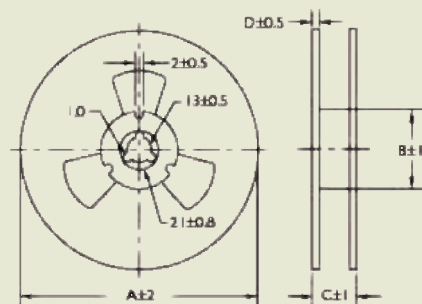


PACKAGING QUANTITY

TYPE	BULK	QUANTITY/REEL
SB/PB/NB 100505	✓	10000
SB/PB/UP/NB/GB 160808	✓	4000
SB/PB/UP/NB/GB 201209	✓	4000
SB/PB/UP/NB/GB 321611	✓	3000
SB/GB 321616	✓	2000
SB/GB 322513	✓	2500
SB/PB/GB 451616	✓	2000
SB/PB/GB 453215	✓	1000

REEL DIMENSIONS

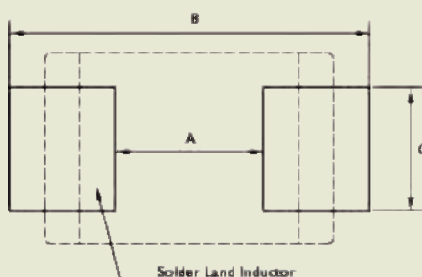
Dimensions : mm



TYPE	A	B	C	D
SB/PB/NB 100505	178	60	10	2
SB/PB/UP/NB/GB 160808	178	60	10	2
SB/PB/UP/NB/GB 201209	178	60	10	2
SB/PB/UP/NB/GB 321611	178	60	10	2
SB/GB 321616	178	60	10	2
SB/GB 322513	178	60	10	2
SB/PB/GB 451616	178	60	14	2
SB/PB/GB 453215	178	60	14	2

RECOMMENDED PATTERN

Dimensions : mm



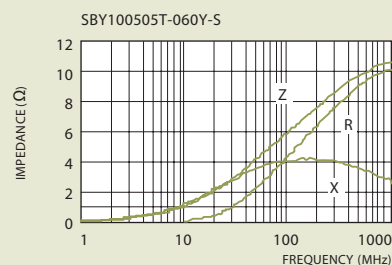
TYPE	A	B	C
SB/PB/NB 100505	0.4	1.2 ~ 1.4	0.4
SB/PB/UP/NB/GB 160808	0.8	2.4 ~ 3.4	0.6
SB/PB/UP/NB/GB 201209	1.2	3.0 ~ 4.0	1.0
SB/PB/UP/NB/GB 321611	2.0	4.2 ~ 5.2	1.2
SB/GB 321616	2.0	4.2 ~ 5.2	1.2
SB/GB 322513	2.0	5.5 ~ 6.5	1.8
SB/PB/GB 451616	3.0	5.5 ~ 6.5	1.2
SB/PB/GB 453215	3.0	5.5 ~ 6.5	2.4

* Don't apply narrower pattern than listed above to PB/Y and upb
Narrow pattern might cause excessive heat or open circuit.

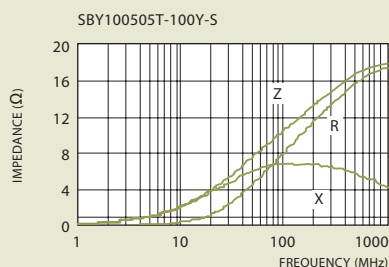


TYPICAL ELECTRICAL CHARACTERISTICS

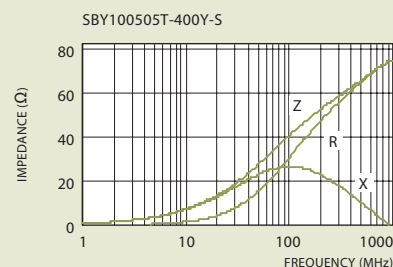
Test Instruments : HP4291A Impedance / Material Analyzer



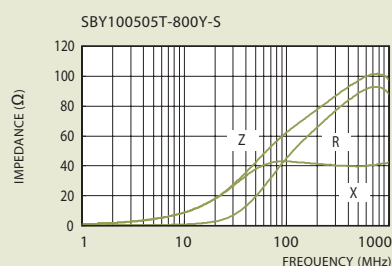
RDC<0.05Ω Rated Current: 500mA



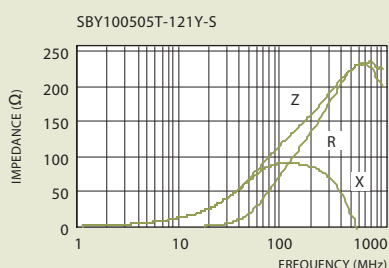
RDC<0.05Ω Rated Current: 500mA



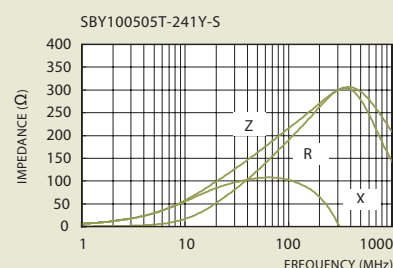
RDC<0.30Ω Rated Current: 300mA



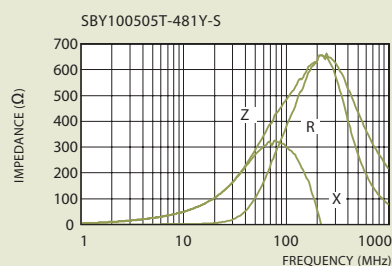
RDC<0.40Ω Rated Current: 200mA



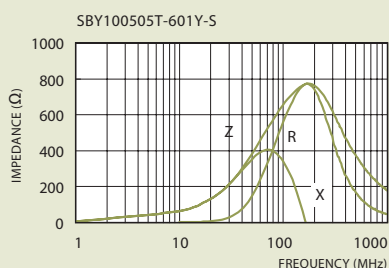
RDC<0.50Ω Rated Current: 200mA



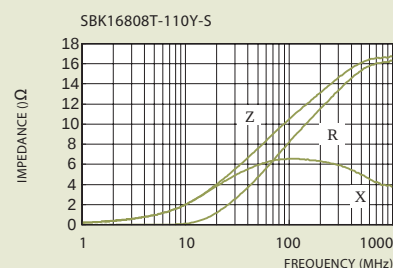
RDC<0.5Ω Rated Current: 200mA



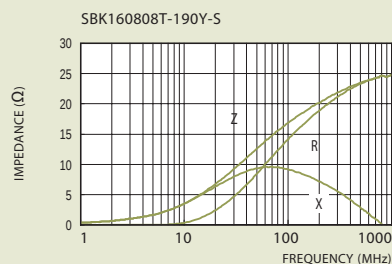
RDC<0.80Ω Rated Current: 200mA



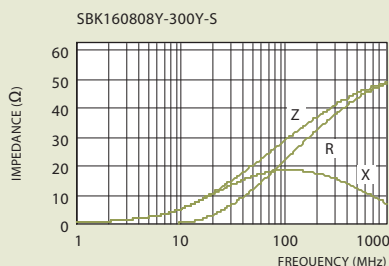
RDC<1.00Ω Rated Current: 200mA



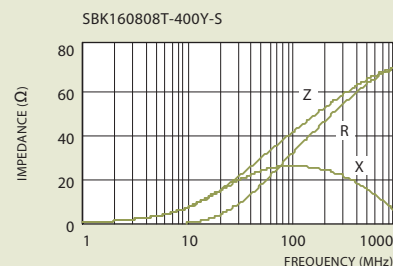
RDC<0.05Ω Rated Current: 500mA



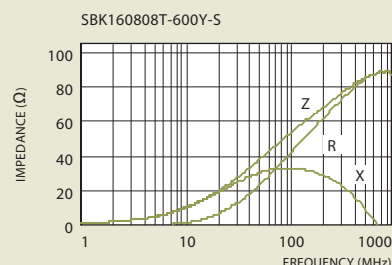
RDC<0.80Ω Rated Current: 500mA



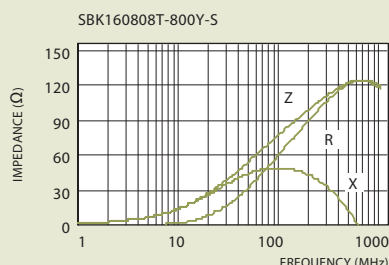
RDC<0.10Ω Rated Current: 400mA



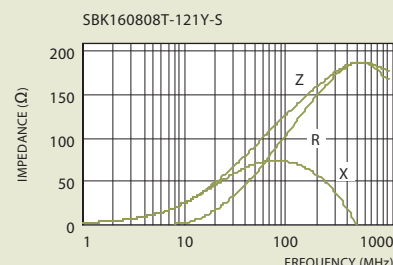
RDC<0.10Ω Rated Current: 400mA



RDC<0.10Ω Rated Current: 300mA



RDC<0.15Ω Rated Current: 300mA

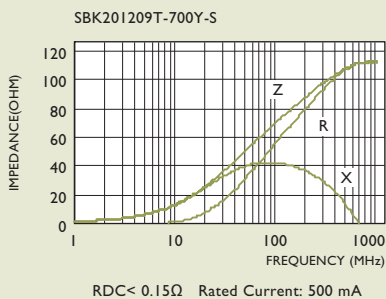
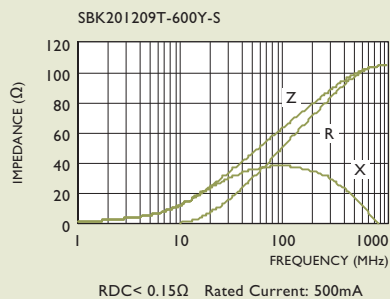
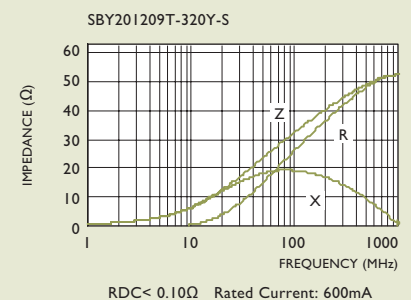
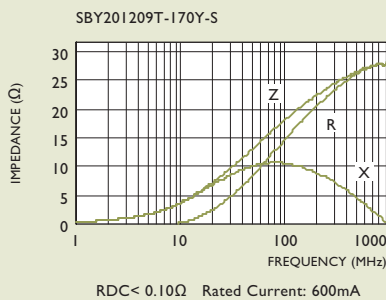
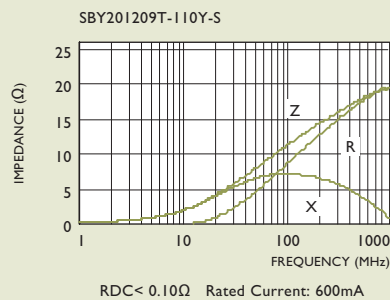
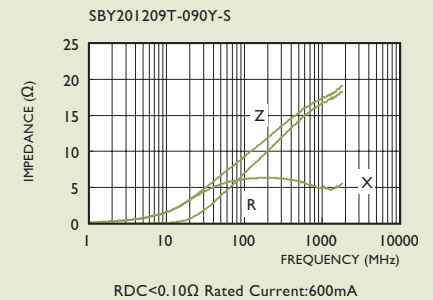
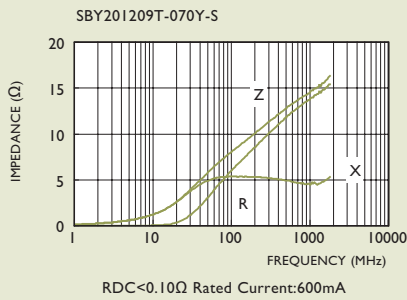
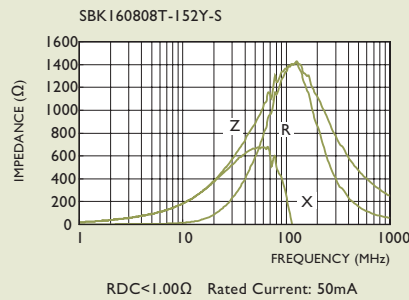
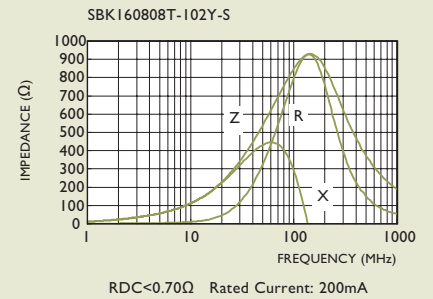
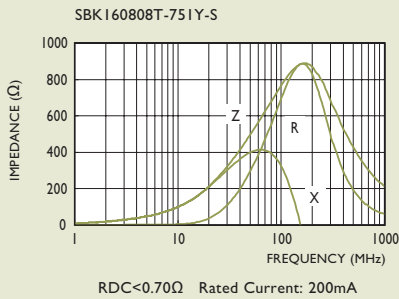
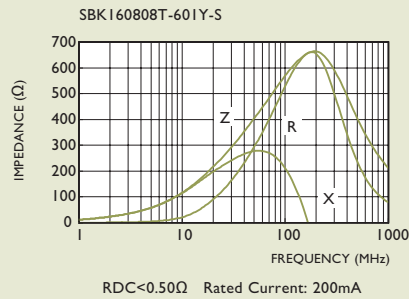
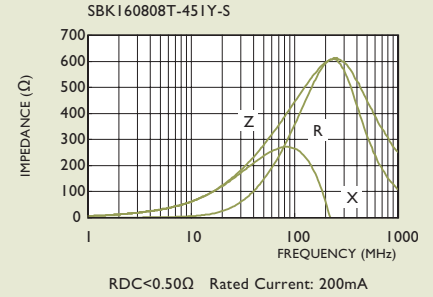
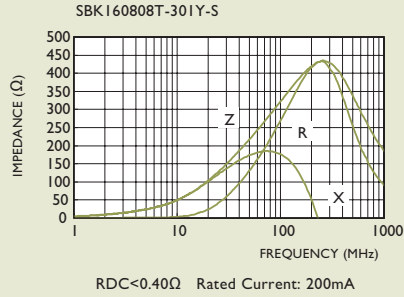
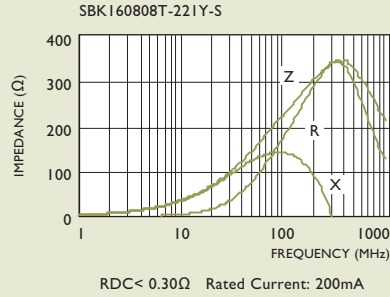


RDC<0.25Ω Rated Current: 300mA



TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer

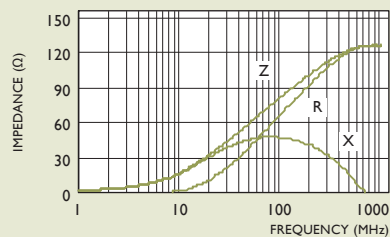




TYPICAL ELECTRICAL CHARACTERISTICS

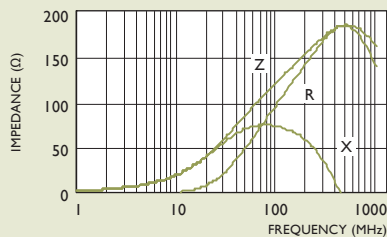
Test Instruments : HP4291A Impedance / Material Analyzer

SBK201209T-800Y-S



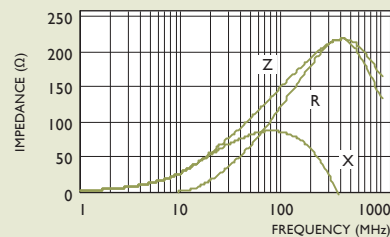
RDC < 0.15Ω Rated Current: 500mA

SBK201209T-121Y-S



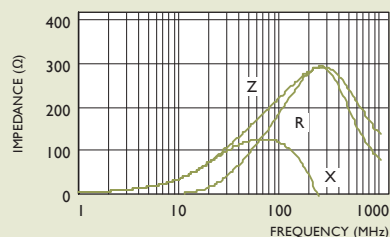
RDC < 0.25Ω Rated Current: 300mA

SBK201209T-151Y-S



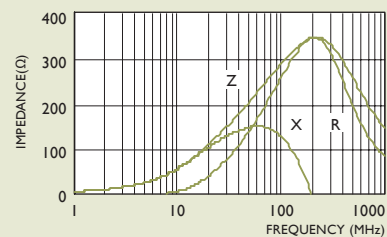
RDC < 0.25Ω Rated Current: 300mA

SBK201209T-221Y-S



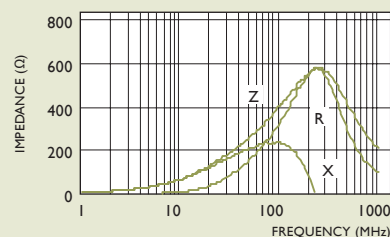
RDC < 0.30 Ω Rated Current: 300mA

SBK201209T-301Y-S



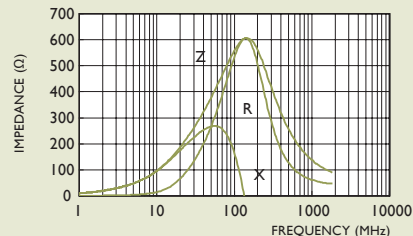
RDC < 0.30 Ω Rated Current: 300mA

SBK201209T-401Y-S



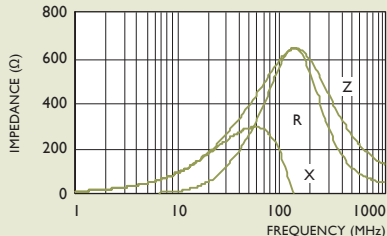
RDC < 0.30 Ω Rated Current: 300mA

SBK201209T-501Y-S



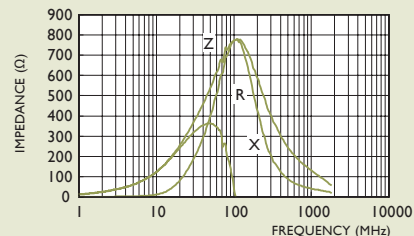
RDC < 0.40 Ω Rated Current: 300mA

SBK201209T-601Y-S



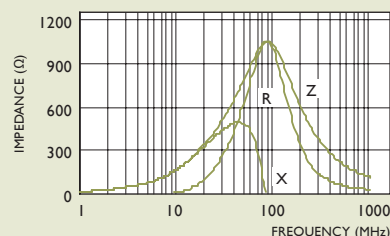
RDC < 0.40 Ω Rated Current: 300mA

SBK201209T-751Y-S



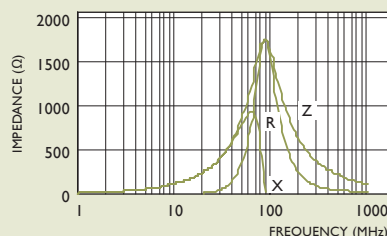
RDC < 0.50 Ω Rated Current: 200mA

SBK201209T-102Y-S



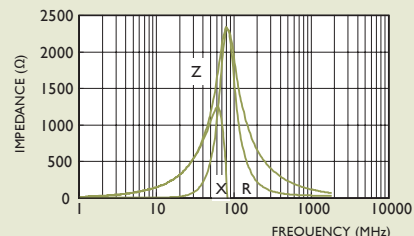
RDC < 0.50Ω Rated Current: 200mA

SBK201209T-152Y-S



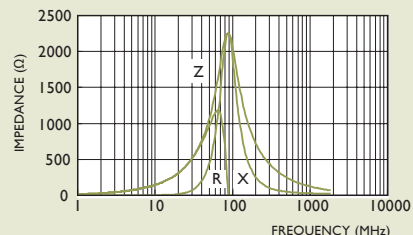
RDC < 0.60Ω Rated Current: 200mA

SBK201209T-202Y-S



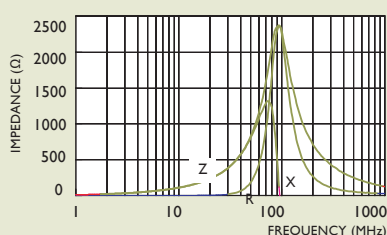
RDC < 0.80 Ω Rated Current: 100mA

SBK201209T-222Y-S



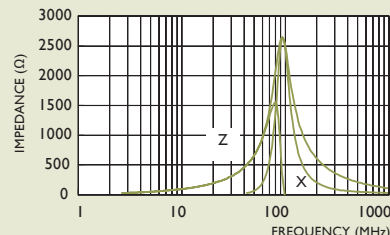
RDC < 1.00 Ω Rated Current: 100mA

SBK201209T-252Y-S



RDC < 1.00Ω Rated Current: 600mA

SBK201209T-272Y-S

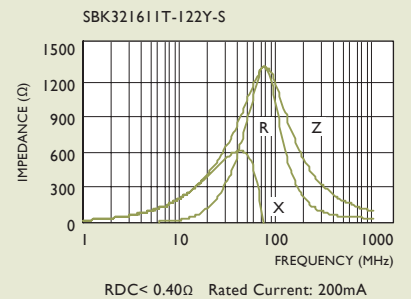
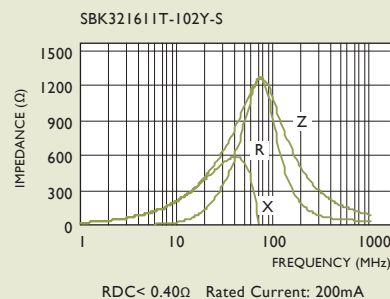
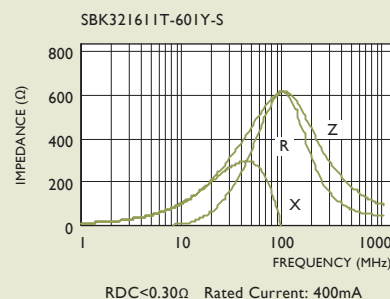
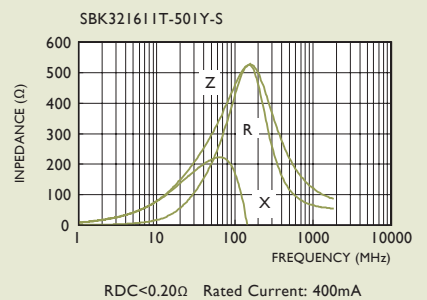
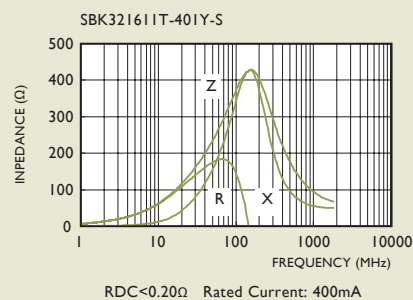
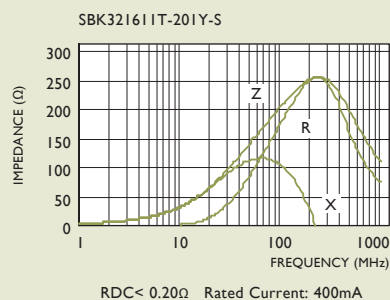
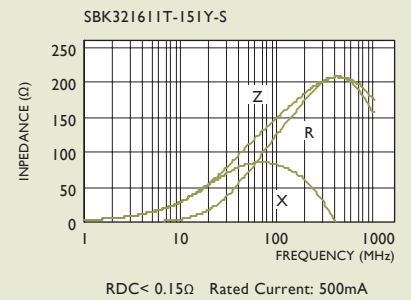
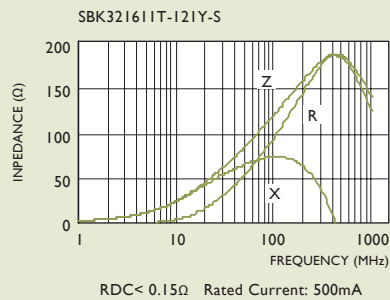
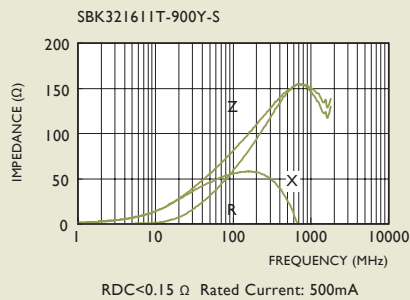
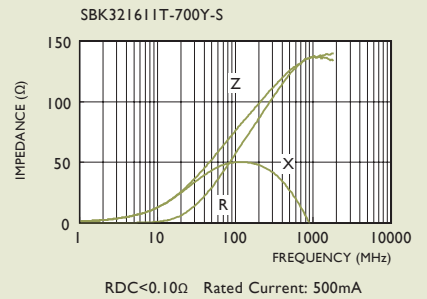
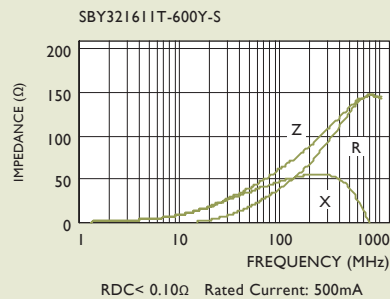
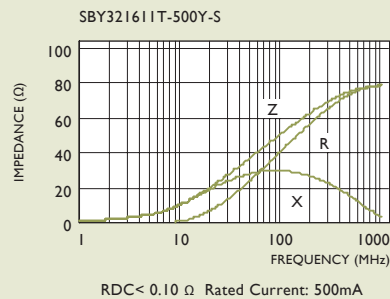
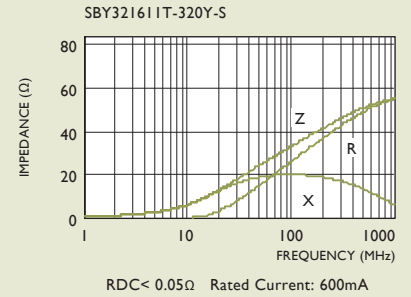
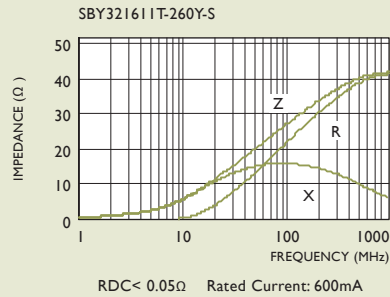
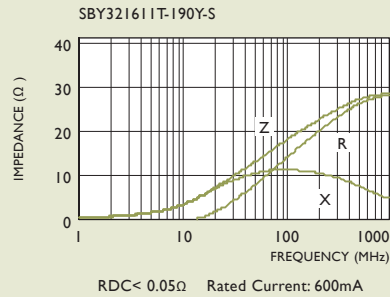


RDC < 1.50 Ω Rated Current: 600mA



TYPICAL ELECTRICAL CHARACTERISTICS

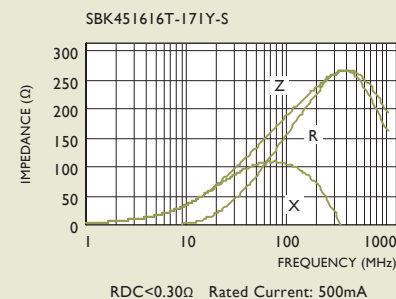
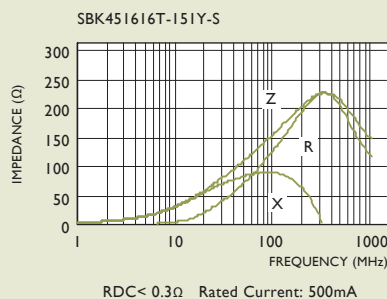
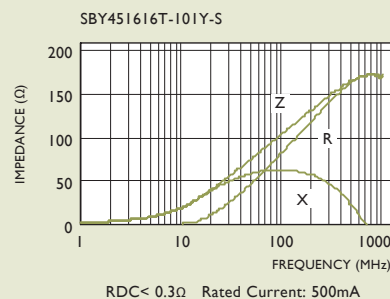
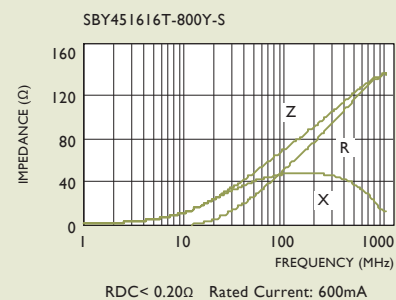
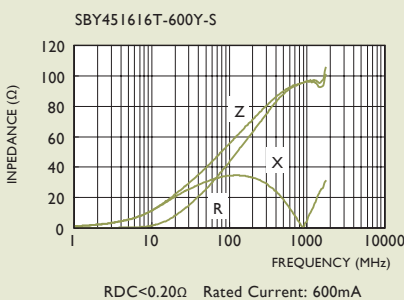
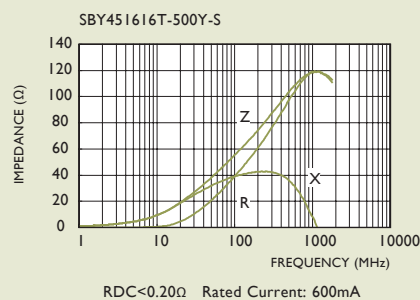
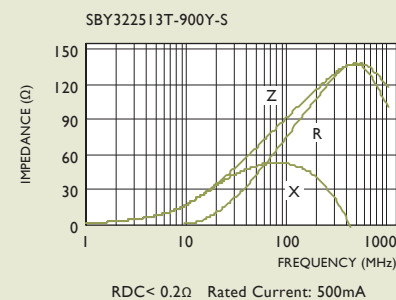
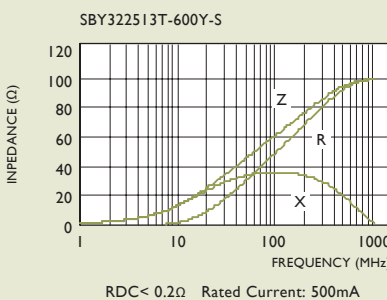
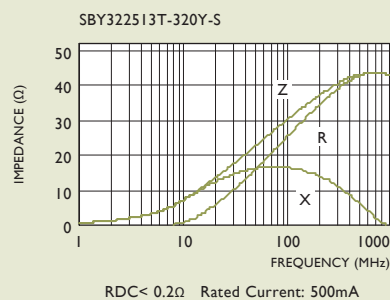
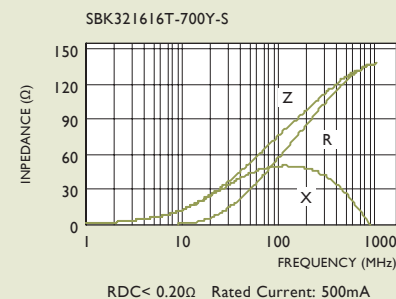
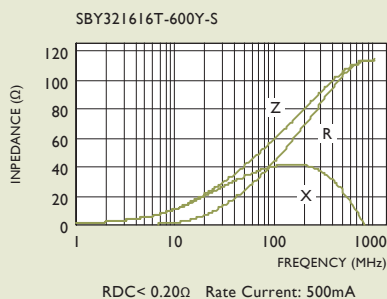
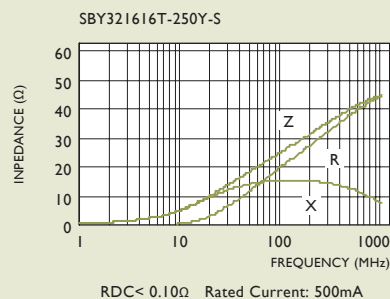
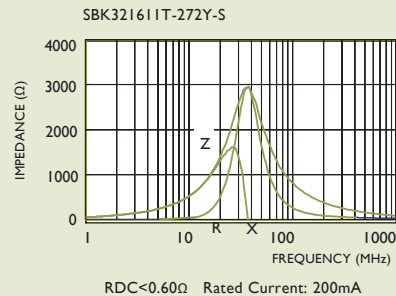
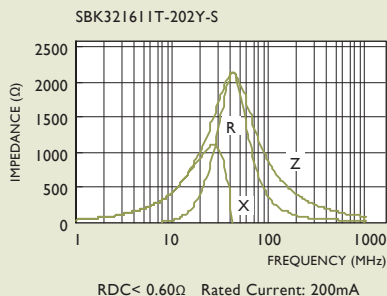
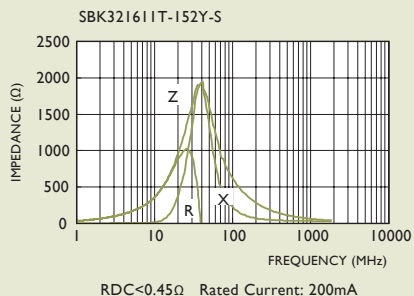
Test Instruments : HP4291A Impedance / Material Analyzer





TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer

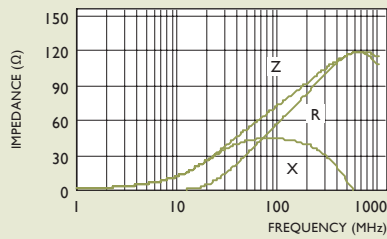




TYPICAL ELECTRICAL CHARACTERISTICS

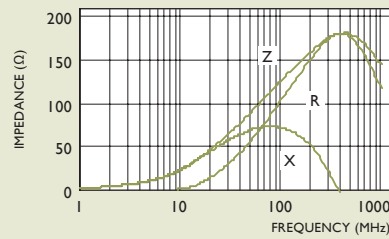
Test Instruments : HP4291A Impedance / Material Analyzer

SBY453215T-700Y-S



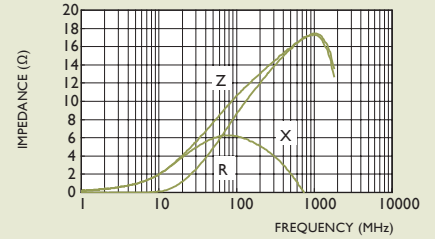
RDC < 0.3Ω Rated Current: 500mA

SBY453215T-121Y-S



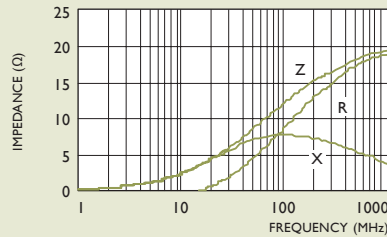
RDC < 0.3Ω Rated Current: 500mA

PBY100505T-100Y-S



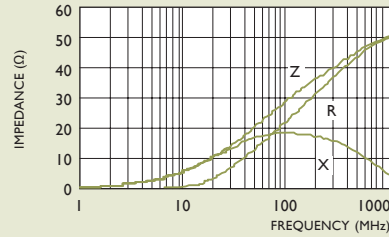
RDC < 0.03Ω Rated Current: 1000mA

PBY160808T-110Y-S



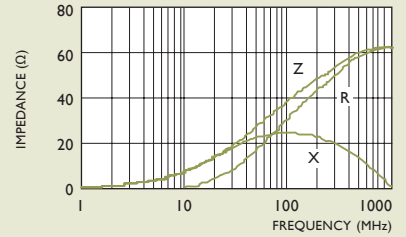
RDC < 0.020Ω Rated Current: 4000mA

PBY160808T-250Y-S



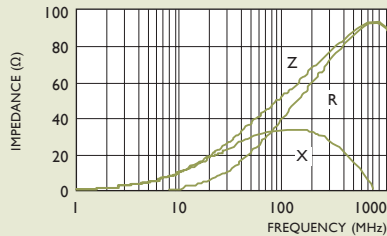
RDC < 0.03Ω Rated Current: 3000mA

PBY160808T-400Y-S



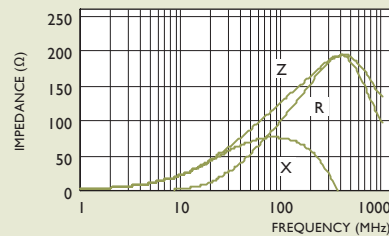
RDC < 0.035Ω Rated Current: 3000mA

PBY160808T-600Y-S



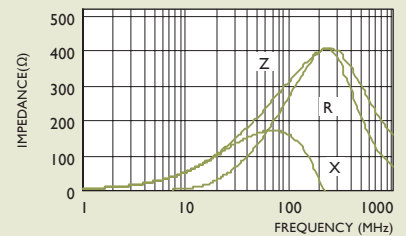
RDC < 0.04Ω Rated Current: 3000mA

PBY160808T-121Y-S



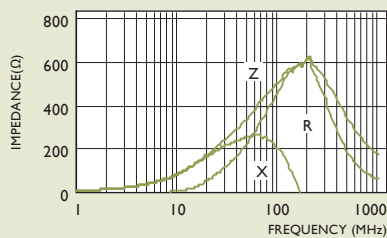
RDC < 0.08Ω Rated Current: 2500mA

PBY160808T-301Y-S



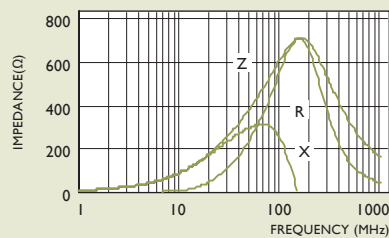
RDC < 0.10Ω Rated Current: 2000mA

PBY160808T-501Y-S



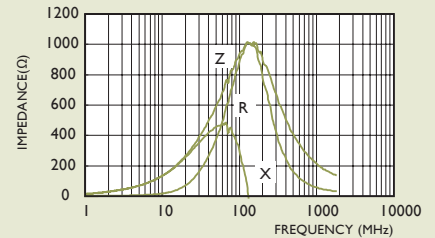
RDC < 0.15Ω Rated Current: 1500mA

PBY160808T-601Y-S



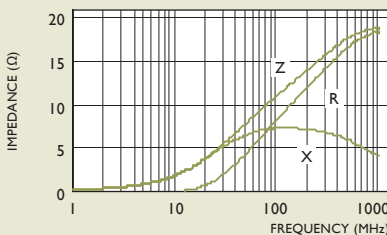
RDC < 0.20Ω Rated Current: 1000mA

PBY160808T-102Y-S



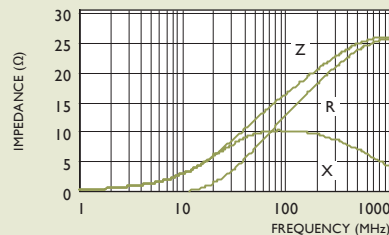
RDC < 0.25Ω Rated Current: 800mA

PBY201209T-110Y-S



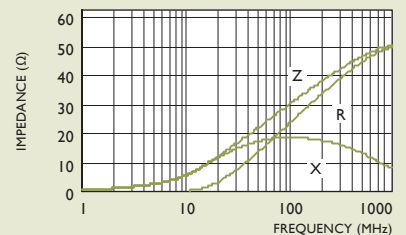
RDC < 0.01Ω Rated Current: 6000mA

PBY201209T-170Y-S



RDC < 0.02Ω Rated Current: 5000mA

PBY201209T-300Y-S

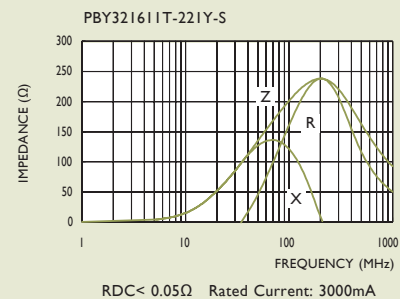
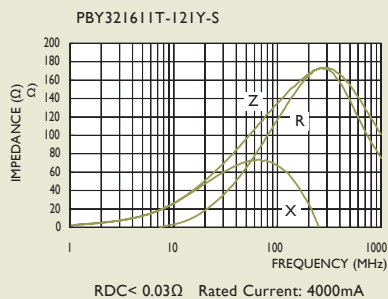
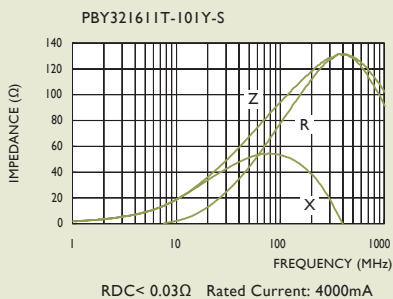
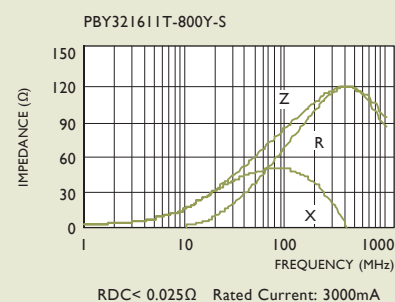
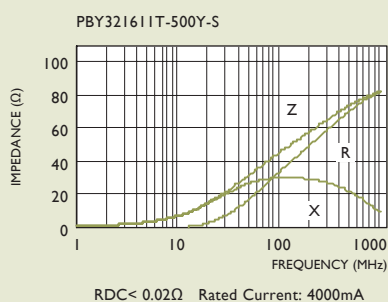
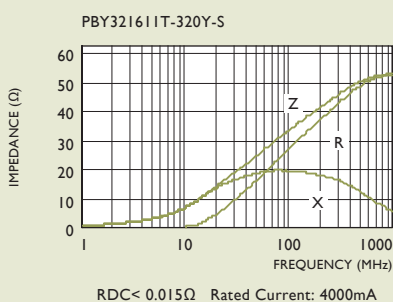
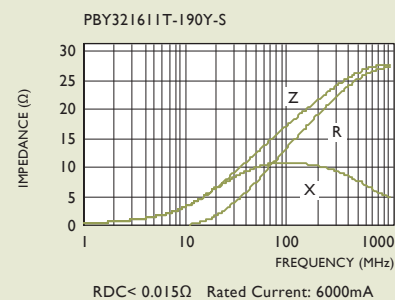
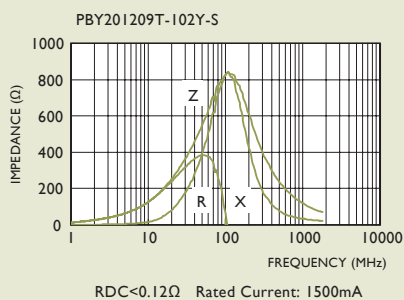
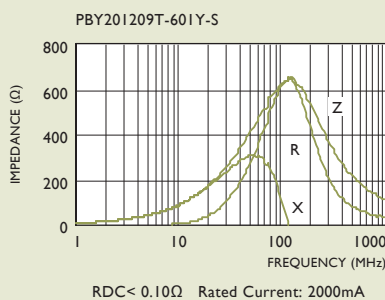
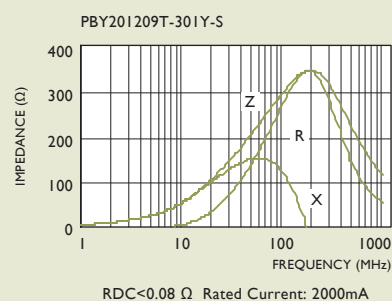
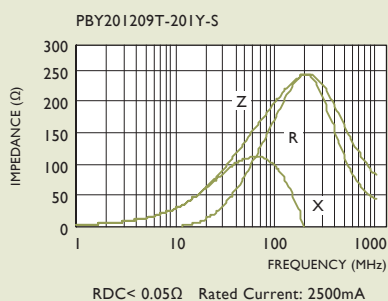
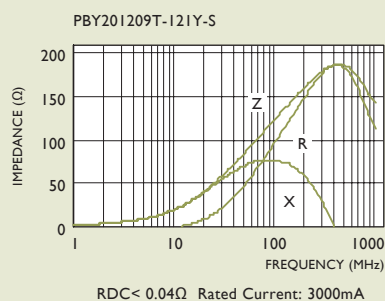
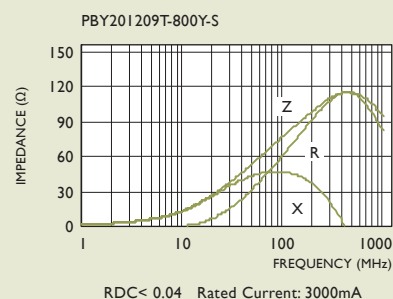
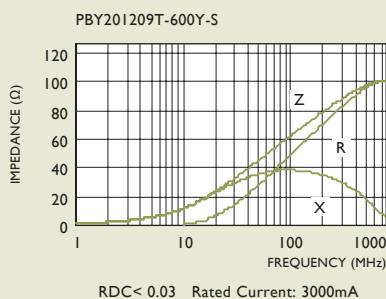
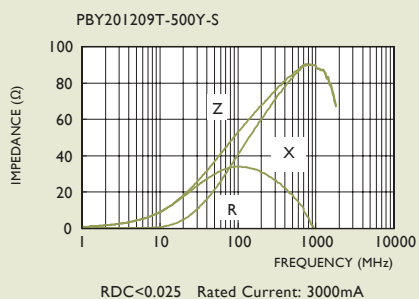


RDC < 0.15Ω Rated Current: 4000mA



TYPICAL ELECTRICAL CHARACTERISTICS

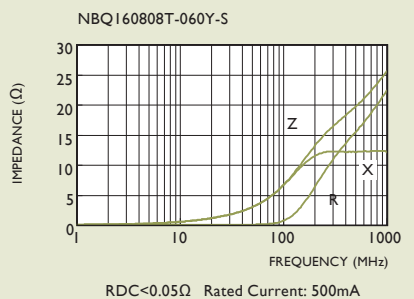
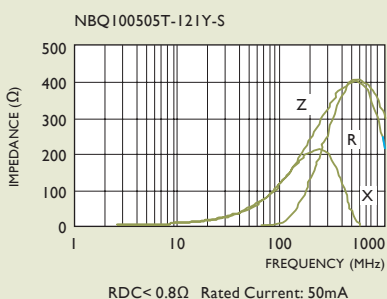
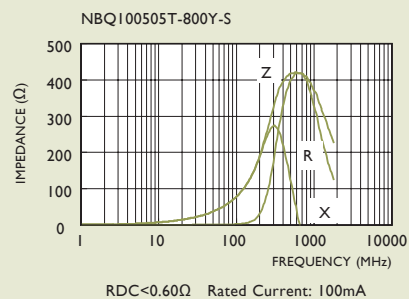
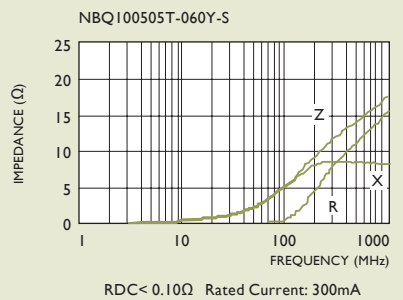
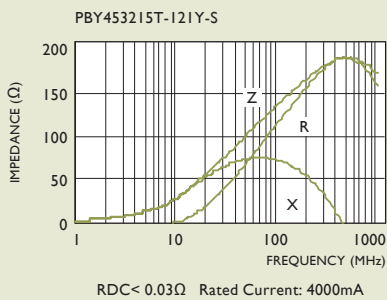
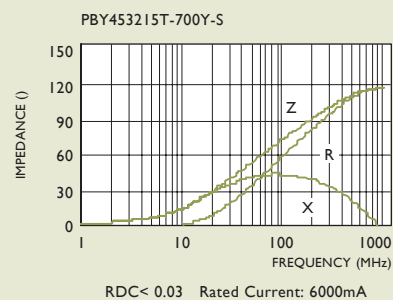
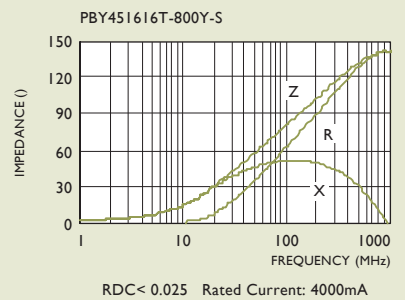
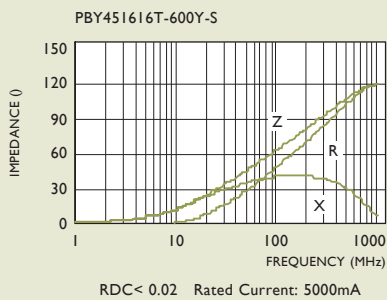
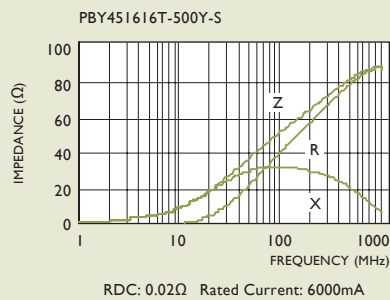
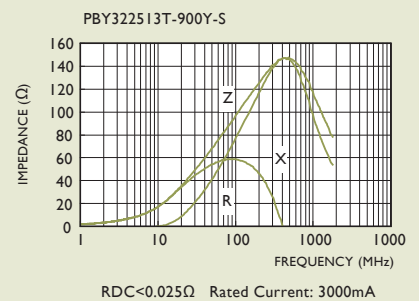
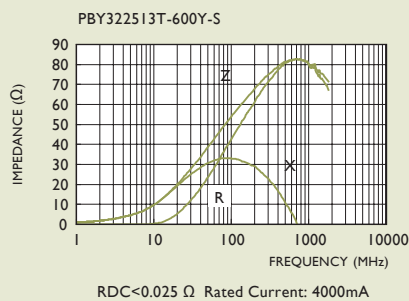
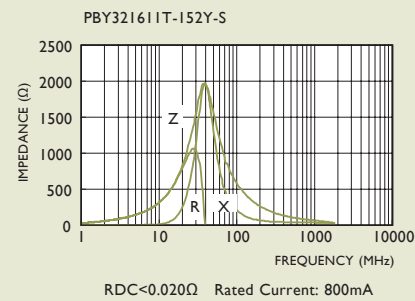
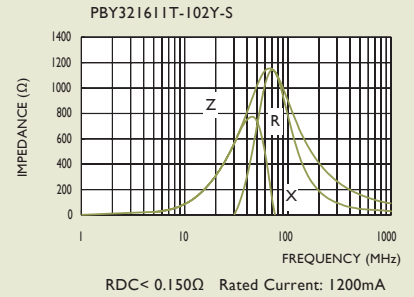
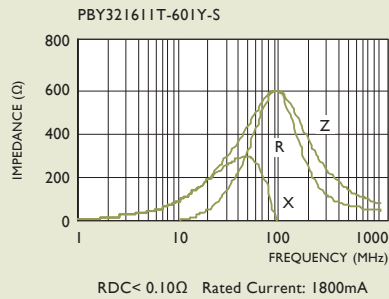
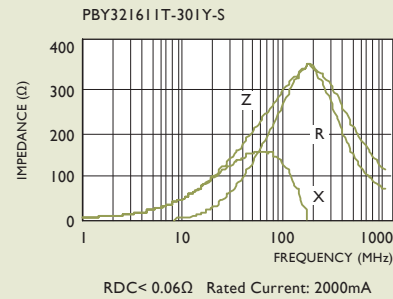
Test Instruments : HP4291A Impedance / Material Analyzer





TYPICAL ELECTRICAL CHARACTERISTICS

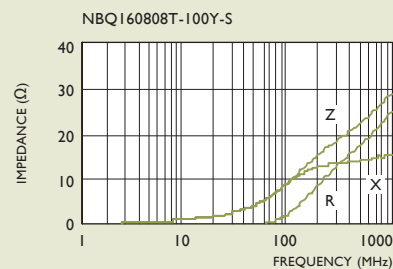
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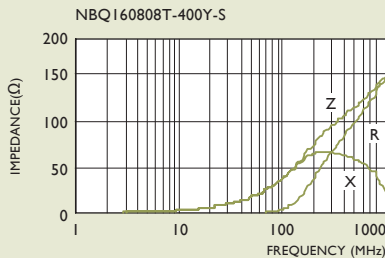


TYPICAL ELECTRICAL CHARACTERISTICS

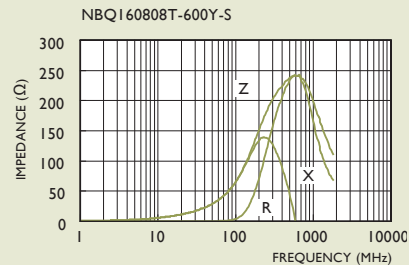
Test Instruments : HP4291A Impedance / Material Analyzer



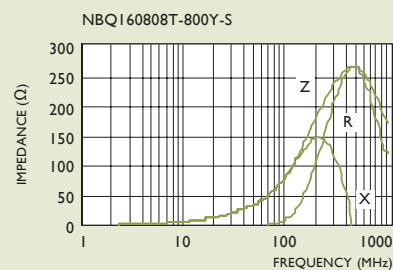
RDC < 0.07 Ω Rated Current: 400mA



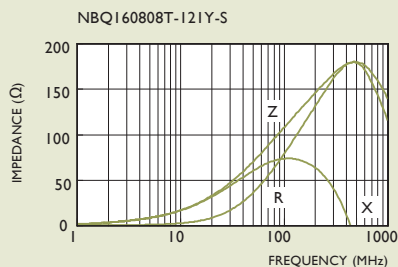
RDC < 0.2 Ω Rate Current: 300mA



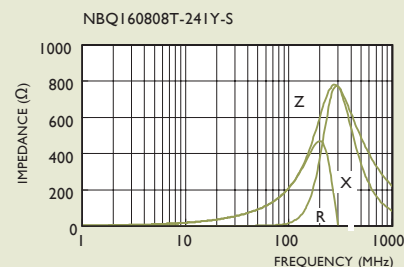
RDC < 0.25 Ω Rated Current: 300mA



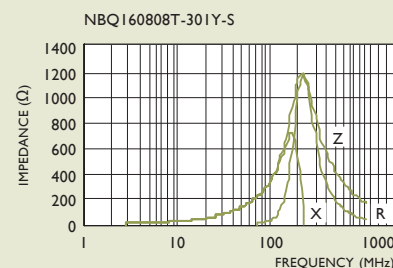
RDC < 0.25 Ω Rated Current: 300mA



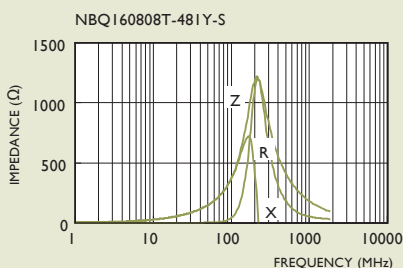
RDC < 0.30 Ω Rated Current: 300mA



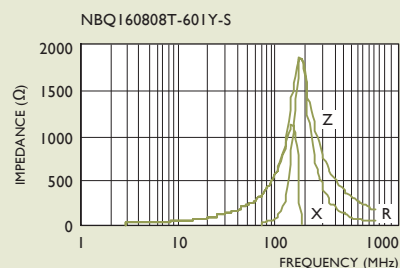
RDC < 0.35 Ω Rated Current: 200mA



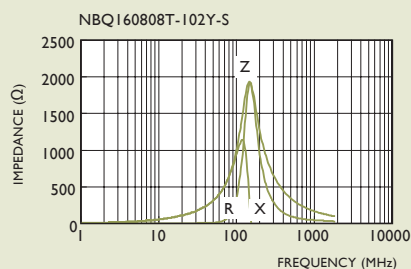
RDC < 0.4 Ω Rated Current: 200mA



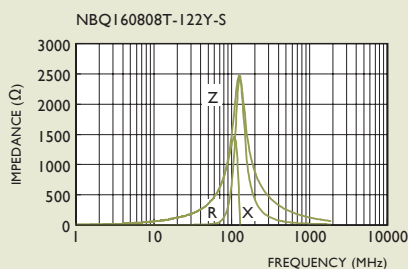
RDC < 0.50 Ω Rated Current: 200mA



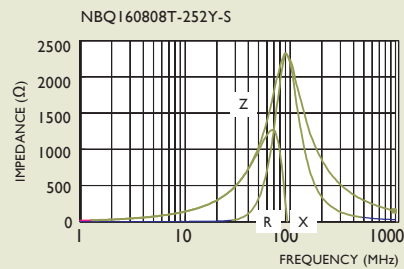
RDC < 0.5 Ω Rated Current: 200mA



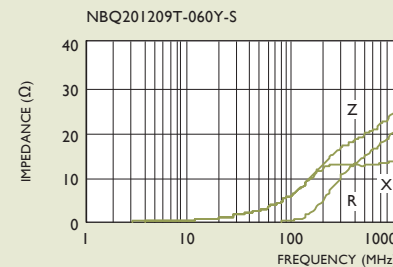
RDC < 0.6 Ω Rated Current: 100mA



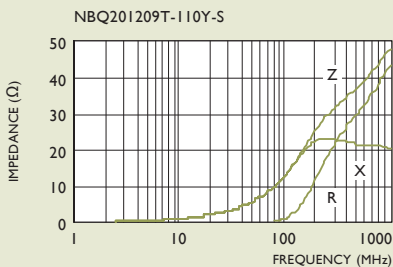
RDC < 0.60 Ω Rated Current: 100mA



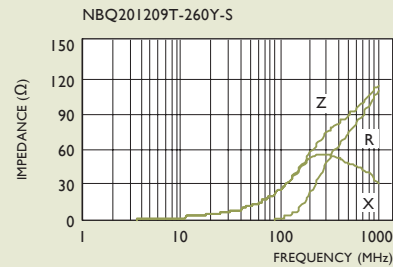
RDC < 0.10 Ω Rated Current: 50mA



RDC < 0.07 Ω Rated Current: 800mA



RDC < 0.1 Ω Rated Current: 700mA

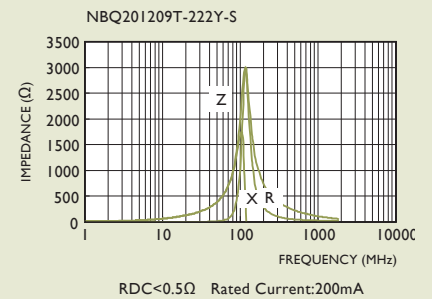
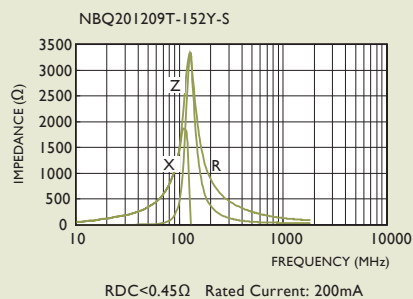
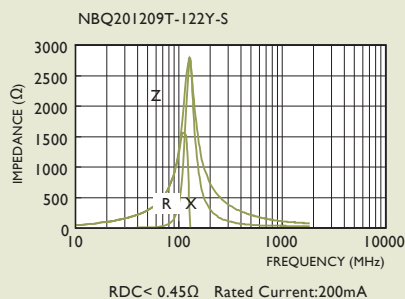
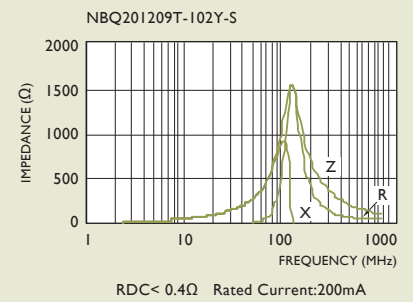
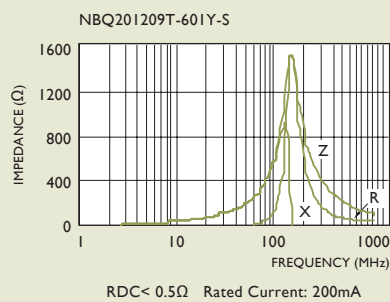
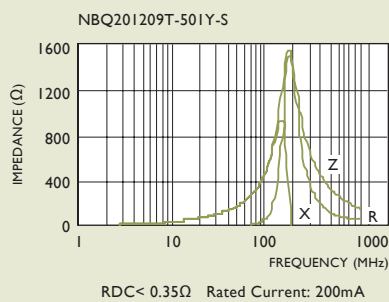
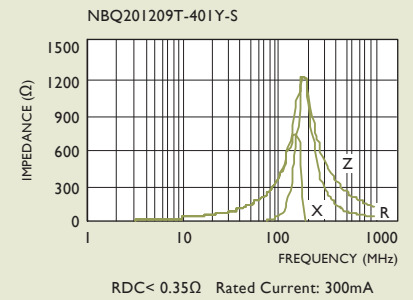
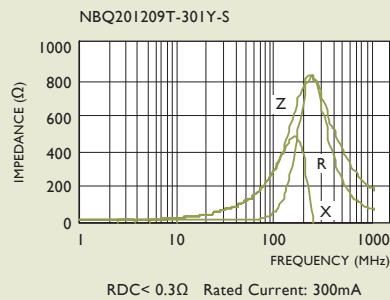
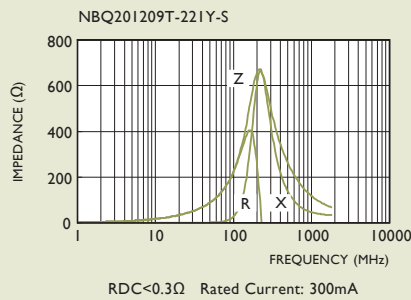
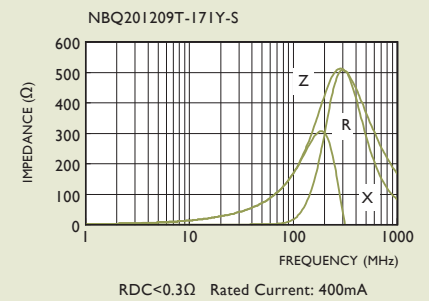
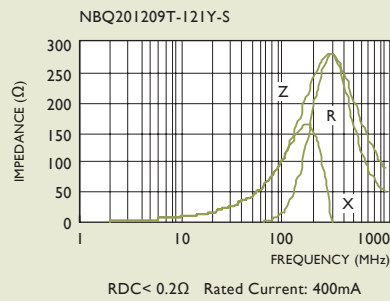
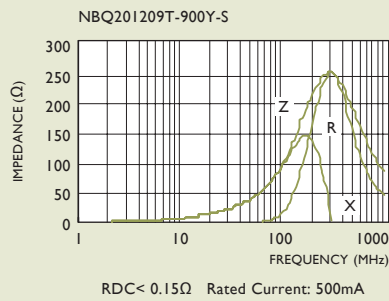
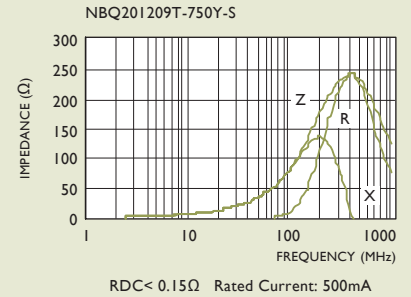
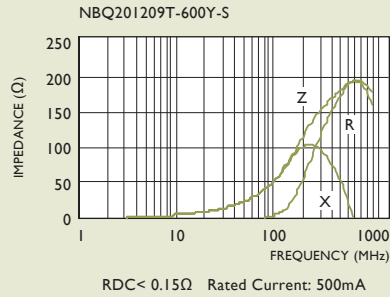
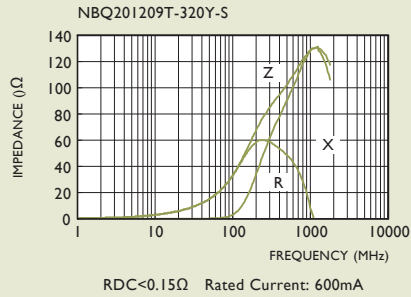


RDC < 0.15 Ω Rated Current: 600mA



TYPICAL ELECTRICAL CHARACTERISTICS

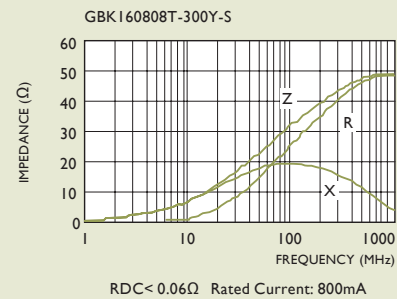
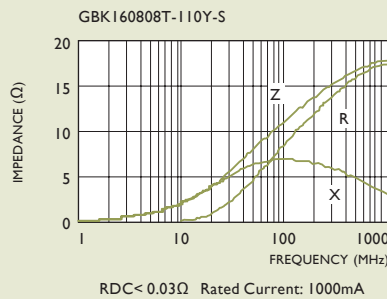
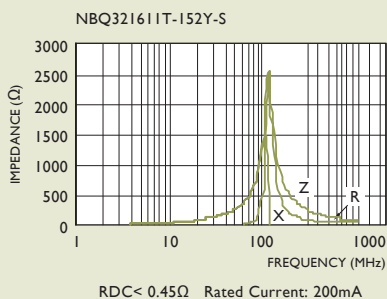
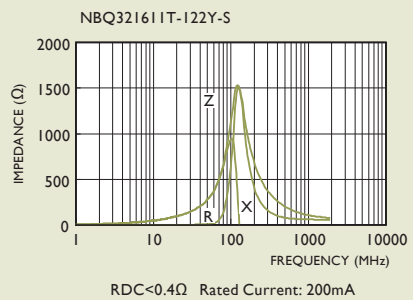
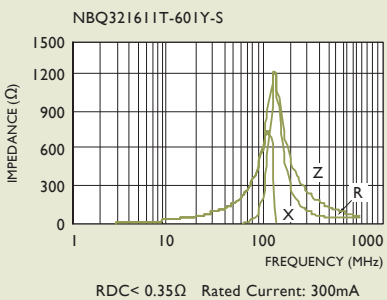
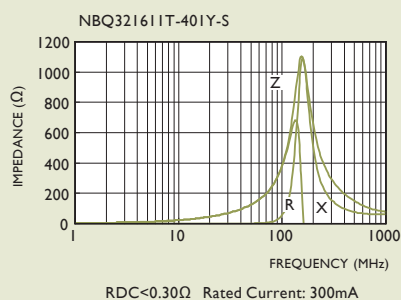
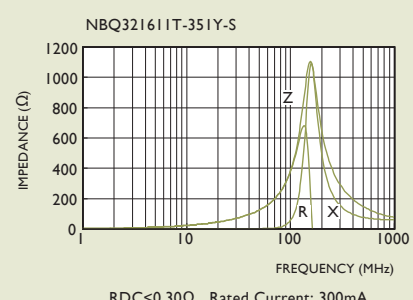
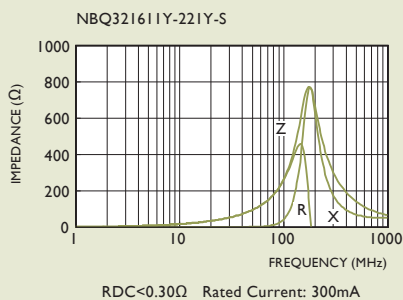
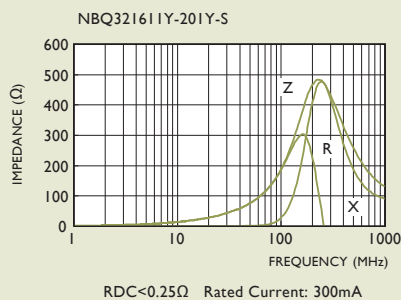
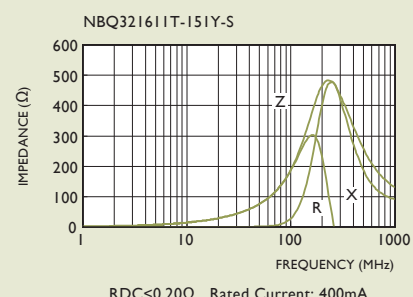
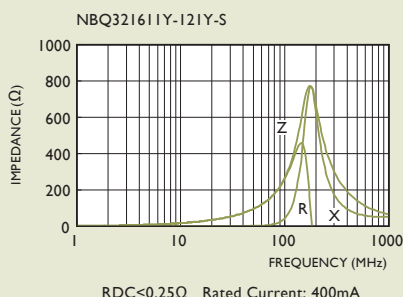
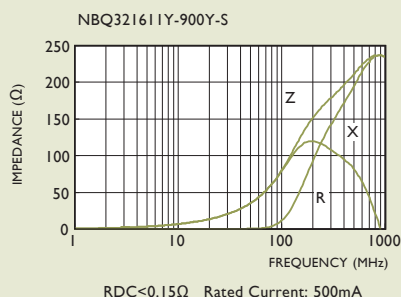
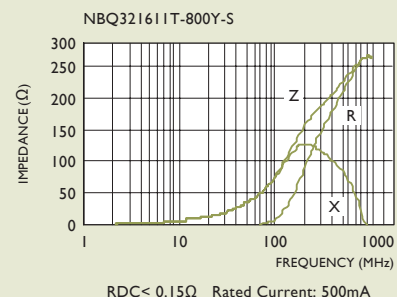
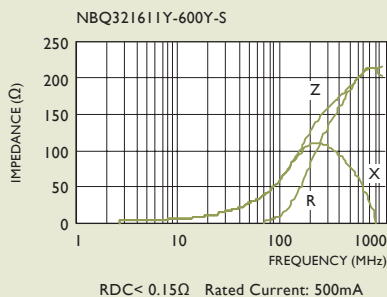
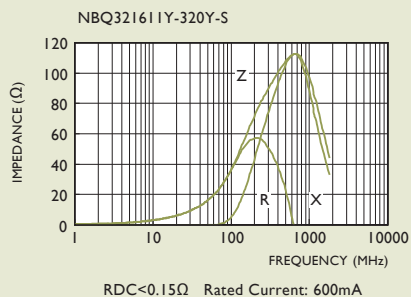
Test Instruments : HP4291A Impedance / Material Analyzer





TYPICAL ELECTRICAL CHARACTERISTICS

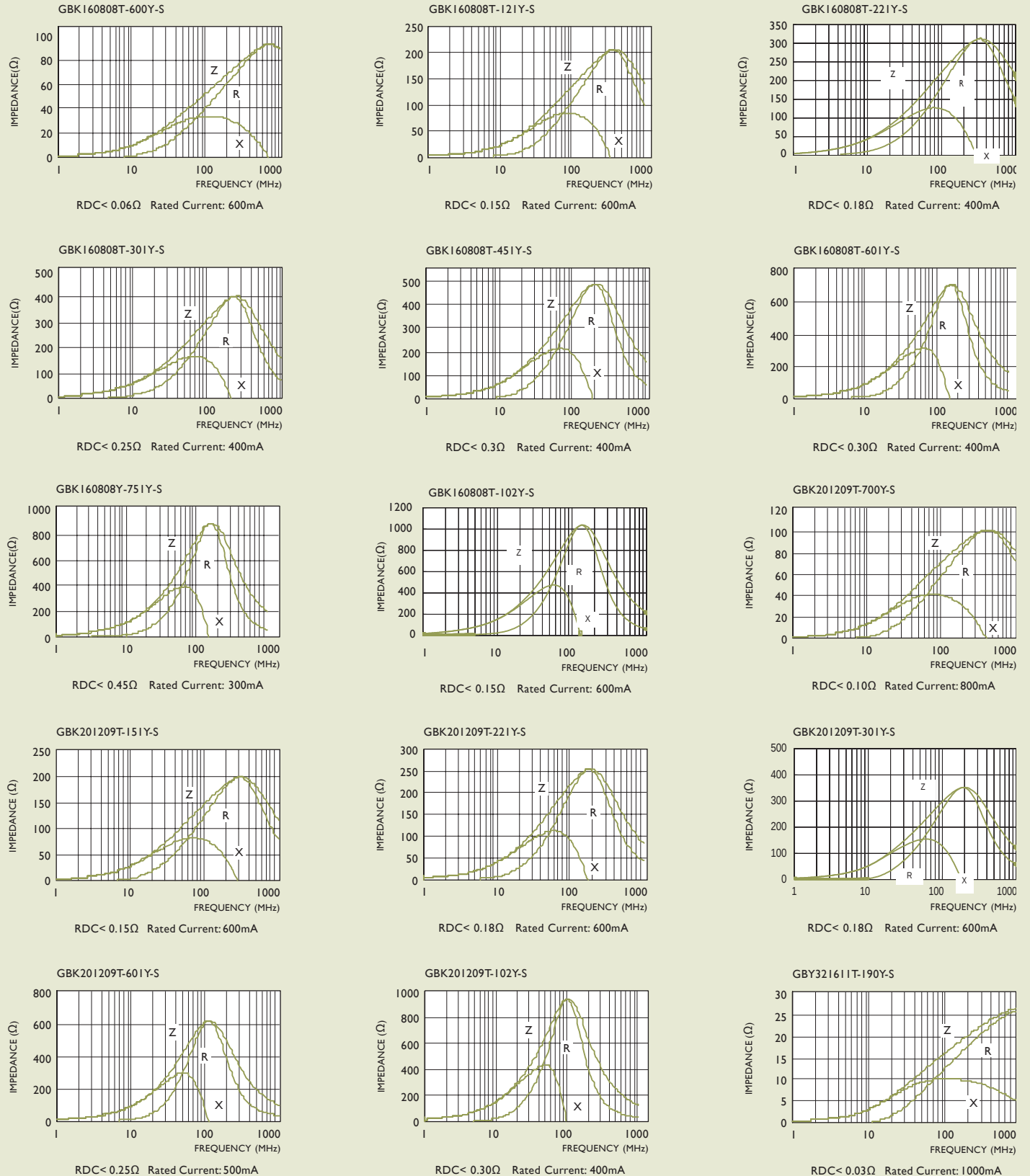
Test Instruments : HP4291A Impedance / Material Analyzer





TYPICAL ELECTRICAL CHARACTERISTICS

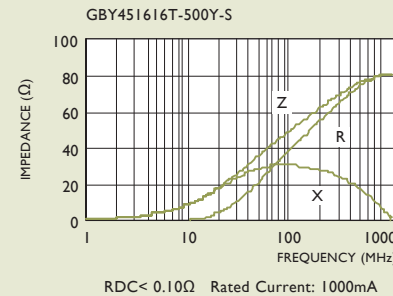
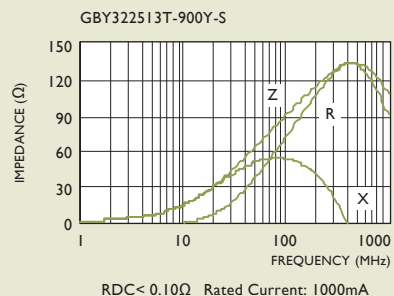
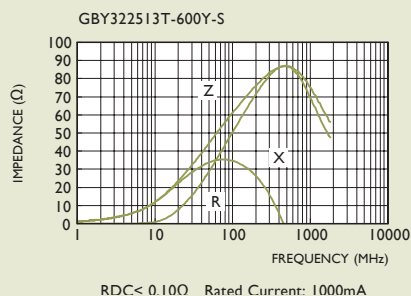
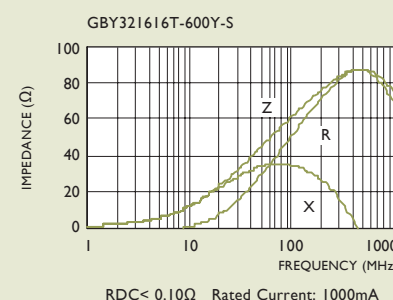
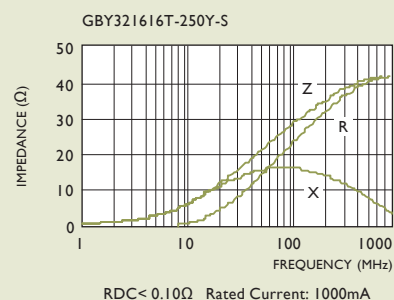
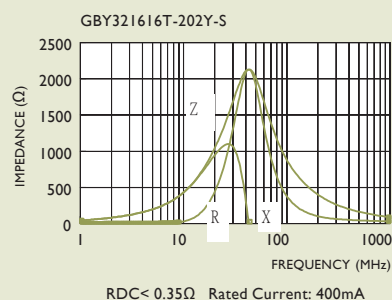
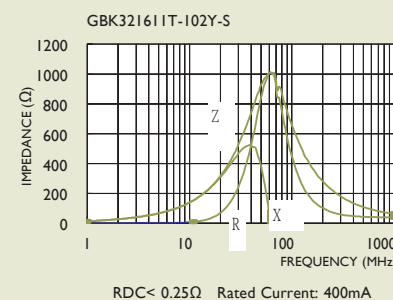
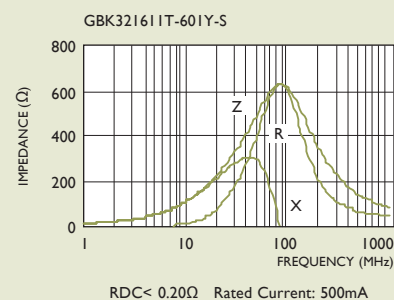
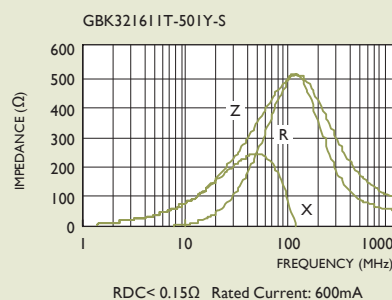
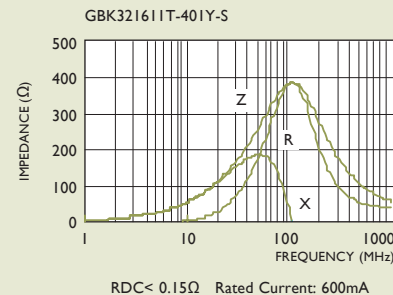
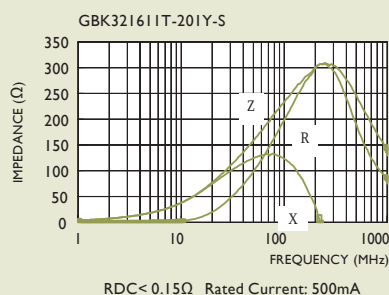
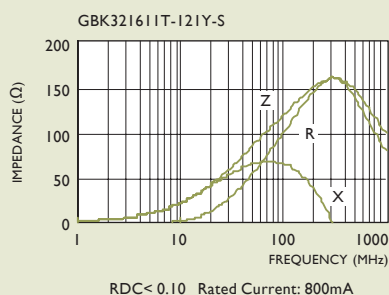
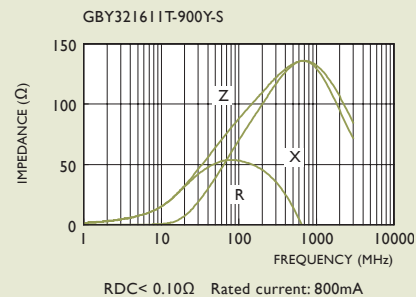
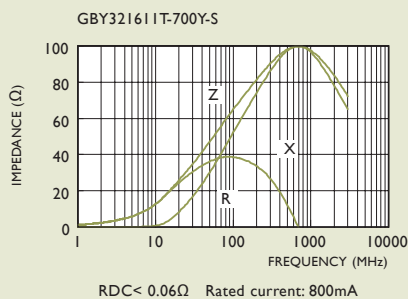
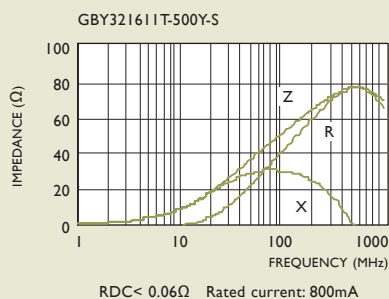
Test Instruments : HP4291A Impedance / Material Analyzer





TYPICAL ELECTRICAL CHARACTERISTICS

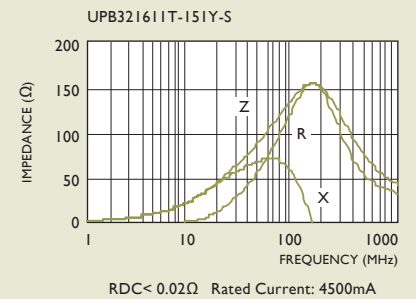
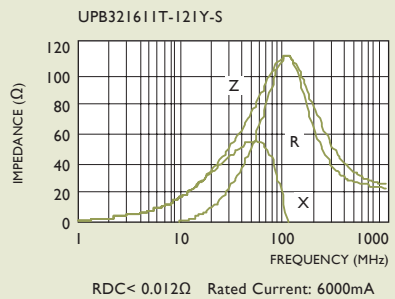
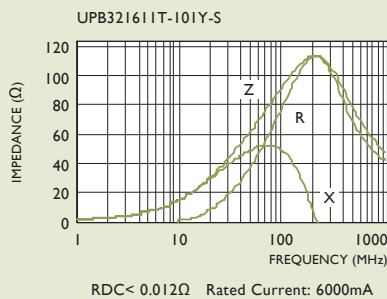
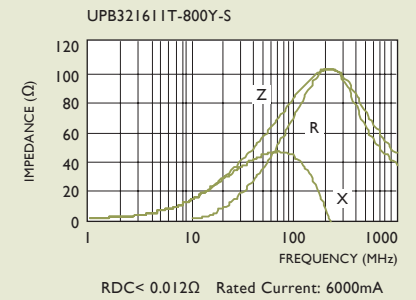
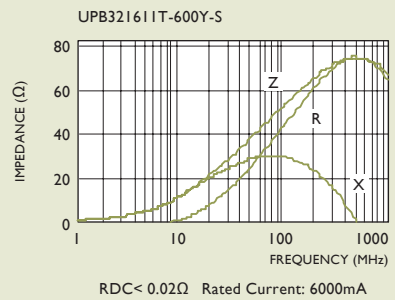
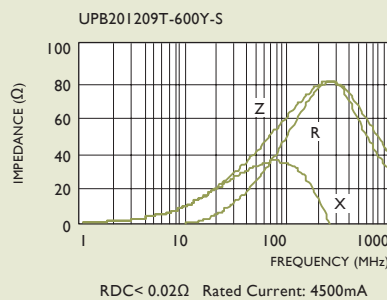
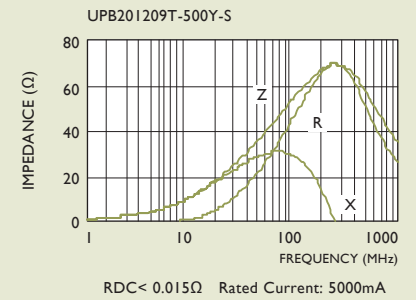
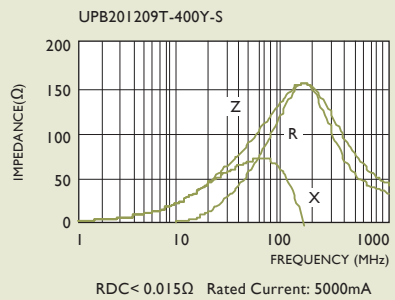
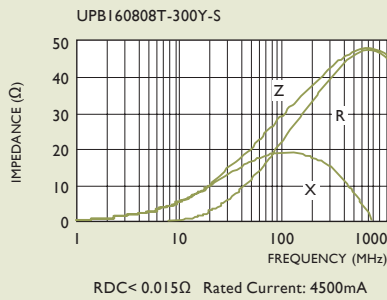
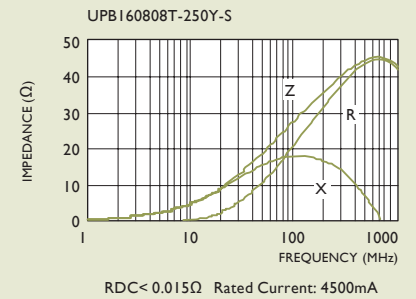
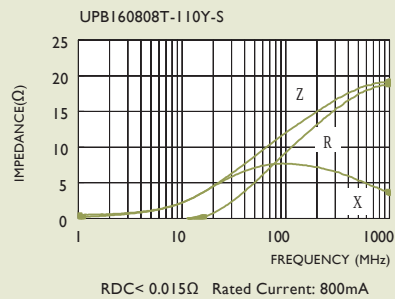
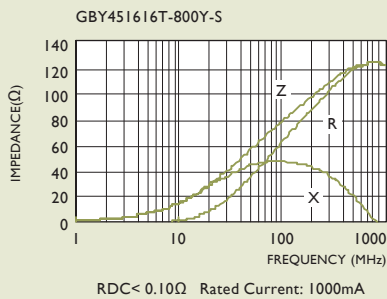
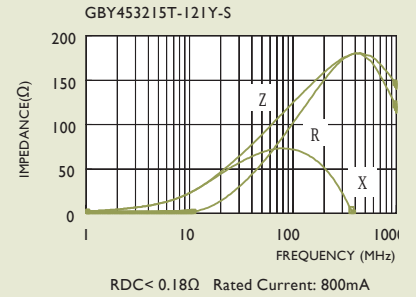
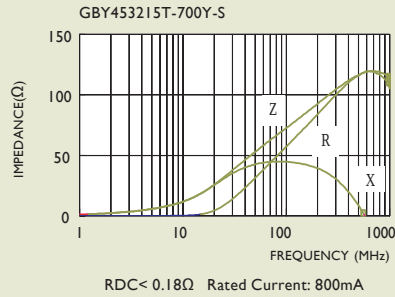
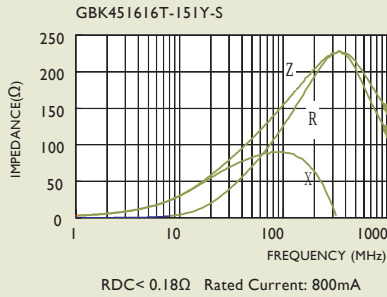
Test Instruments : HP4291A Impedance / Material Analyzer





TYPICAL ELECTRICAL CHARACTERISTICS

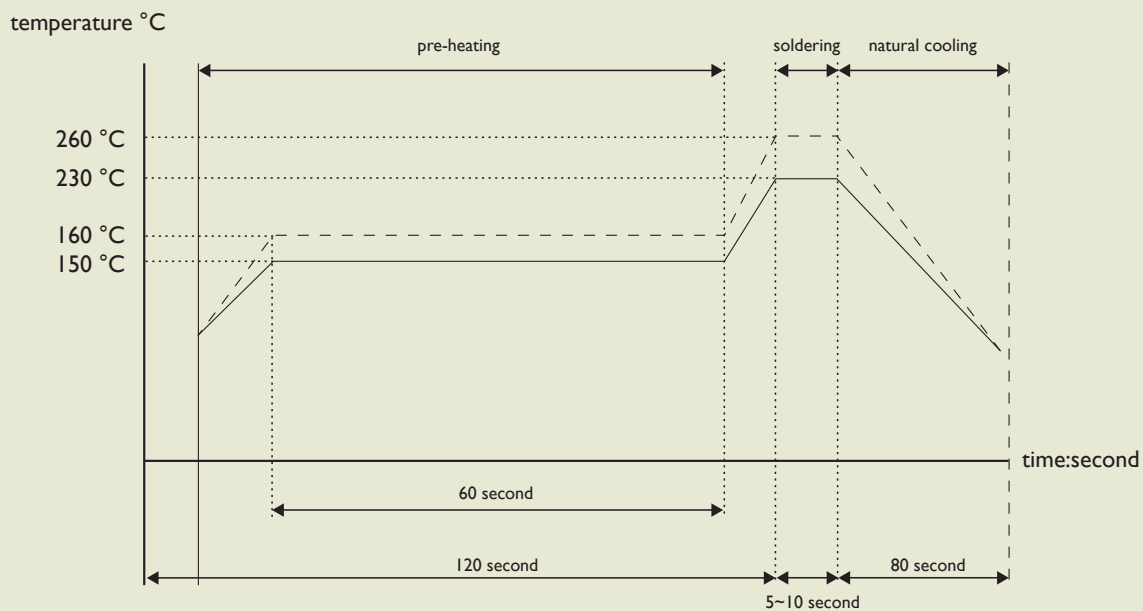
Test Instruments : HP4291A Impedance / Material Analyzer





RECOMMEND SOLDERING CONDITIONS

for:CL/ CLH/ SQV/ SMD power inductors/ SMD Chip Beads/ SMD Filters, Transformers, Current Sensors



for: lead solder —————

for: lead-free solder - - - - -

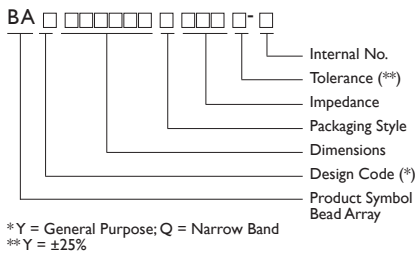
Multilayer Ferrite Chip Beads

BA Series

[Bead Array For High Density Circuit Design]



PRODUCT IDENTIFICATION

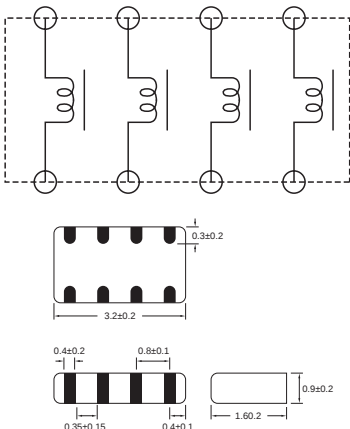


■ YAGEO will start to release lead-free that meet SONY SS-00259's criteria, and Internal No. will be changed to "N" as identification.

Ex. SBY321609T-300Y-N

SHAPES AND DIMENSIONS

Parts Dimensions : 3.20 x 1.60 x 0.90 mm



APPLICATIONS

• Computers • LCD Monitor • Hard Disk Drives • CD-ROMs • Motherboard

FEATURES

These multi-layered chip bead arrays are surface mounting EMI components.

Four lines in one chip for suppressing noise

suitable for high density circuit design.

ELECTRICAL CHARACTERISTICS

PART NO.	IMPEDANCE at 100MHz ($\Omega \pm 25\%$)	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
BAY321609T-300Y-S	30	0.4	350
BAY321609T-600Y-S	60	0.4	250
BAY321609T-121Y-S	120	0.8	150
BAY321609T-241Y-S	240	0.8	150
BAY321609T-301Y-S	300	0.8	150
BAY321609T-471Y-S	470	1	100
BAY321609T-601Y-S	600	1.5	100
BAY321609T-102Y-S	1000	1.7	50
BAQ321609T-600Y-S	60	0.8	150
BAQ321609T-121Y-S	120	0.8	150
BAQ321609T-221Y-S	220	0.8	150
BAQ321609T-471Y-S	470	1	150
BAQ321609T-601Y-S	600	1.5	100
BAQ321609T-102Y-S	1000	1.8	100

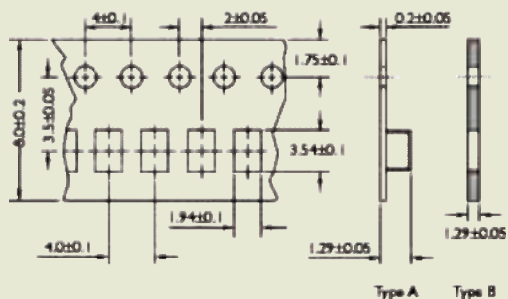
ELECTRICAL CHARACTERISTICS: LEAD-FREE & ROHS COMPLIANCE!!

PART NO.	TEST FREQ (MHZ)	IMPEDANCE ($\Omega \pm 25\%$)	RDC (Ω) Max.	RATED CURRENT (mA) Max.
BAY321609T-300Y-N	100	30	0.4	350
BAY321609T-600Y-N	100	60	0.4	250
BAY321609T-800Y-N	100	80	0.8	150
BAY321609T-121Y-N	100	120	0.8	150
BAY321609T-151Y-N	100	150	0.8	150
BAY321609T-181Y-N	100	180	0.8	150
BAY321609T-221Y-N	100	220	0.8	150
BAY321609T-241Y-N	100	240	0.8	150
BAY321609T-301Y-N	100	300	0.8	150
BAY321609T-471Y-N	100	470	1	100
BAY321609T-601Y-N	100	600	1.5	100
BAY321609T-102Y-N	100	1000	1.7	50



TAPE DIMENSIONS

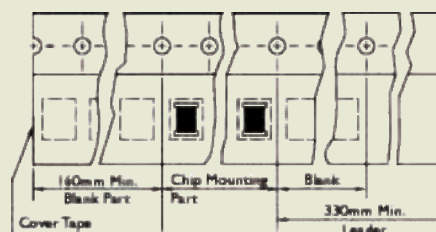
Dimensions : mm



TAPE MATERIAL

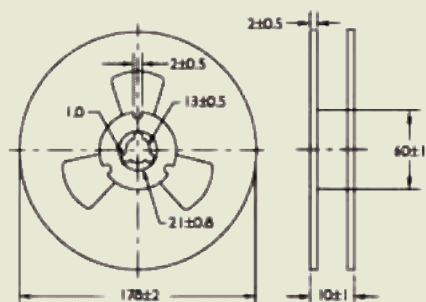
Carrier Tape : Polystyrene for 321609

Cover Type : Polystyrene



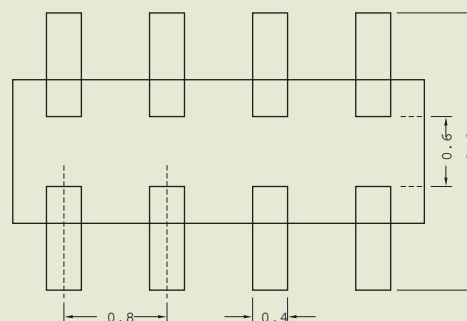
REEL DIMENSIONS

Dimensions : mm



RECOMMENDED PATTERN

Dimensions : mm

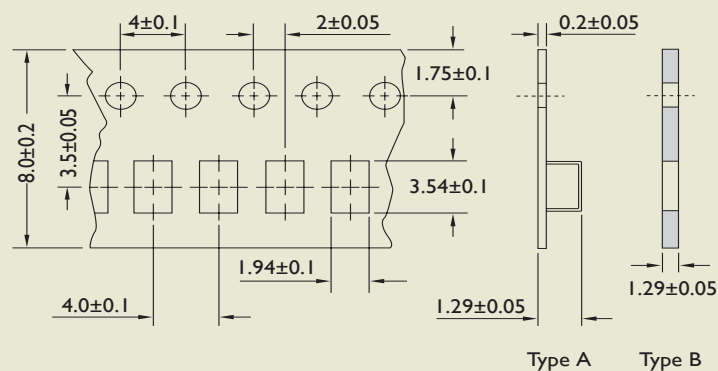


PACKAGING QUANTITY

TYPE	QUANTITY/REEL
BAY321609	3000
BAQ321609	3000

TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer





SB/PB/UP/NB/GB/BA SERIES RELIABILITY TEST

I-1 MECHANICAL PERFORMANCE

NO.	ITEM	SPECIFICATION	TEST CONDITIONS
I-1-1	Flexure Strength	Appearance : No Damage Z Change : within $\pm 20\%$ RDC : within Specification	Test device shall be soldered on the substrate. Substrate Dimension : $100 \times 40 \times 1.6\text{mm}$ Deflection : 2.0mm Keeping Time : 30Sec. * For 100505, substrate dimension is $100 \times 40 \times 0.8\text{mm}$.
I-1-2	Vibration		Test device shall be soldered on the substrate. Oscillation Frequency : 10 to 55 to 10Hz for 1Min. Amplitude : 1.5mm Time : 2Hrs. for each Axis (X,Y & Z), Total 6Hrs.
I-1-3	Resistance to Soldering Heat	Appearance : No Damage	Pre-heating : 150°C , 1Min. Solder Composition : Sn/Pb = 63/37 Solder Temperature : $260 \pm 5^\circ\text{C}$ Immersion Time : $10 \pm 1\text{Sec.}$
I-1-4	Solderability	The electrodes shall be at least 90% covered with new solder coating.	Pre-heating : 150°C , 1Min. Solder Composition : Sn/Pb = 63/37 Solder Temperature : $230 \pm 5^\circ\text{C}$ Immersion Time : $4 \pm 1\text{Sec.}$
I-1-5	Terminal Strength Test	100505 Series : $\geq 0.2\text{kg}$ 160808 Series : $\geq 0.5\text{kg}$ 201209 Series : $\geq 1.0\text{kg}$ Other Series : $\geq 2.0\text{kg}$	Test device shall be soldered on the substrate. 

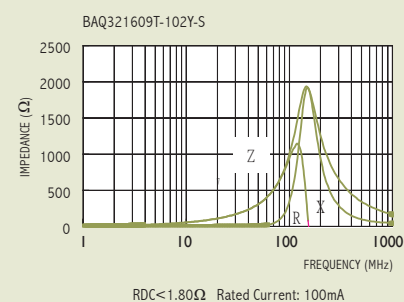
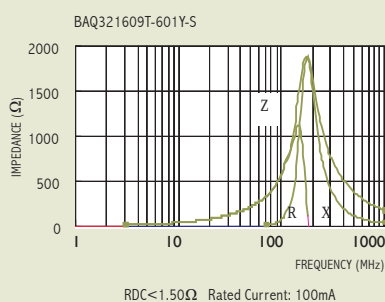
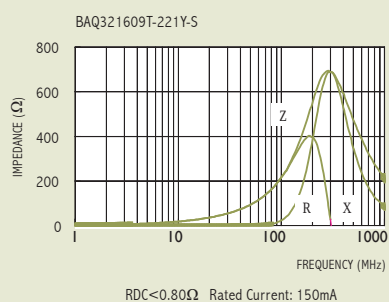
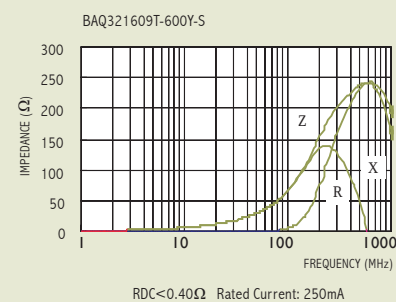
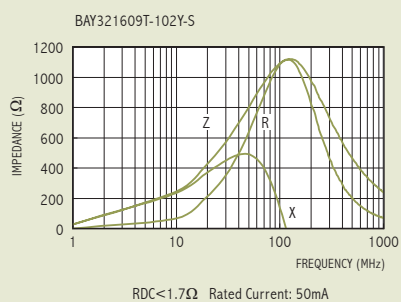
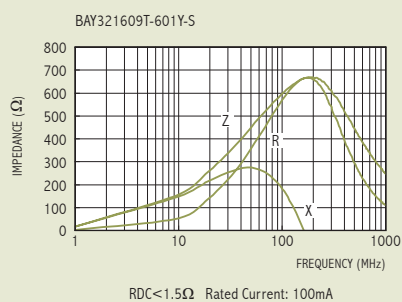
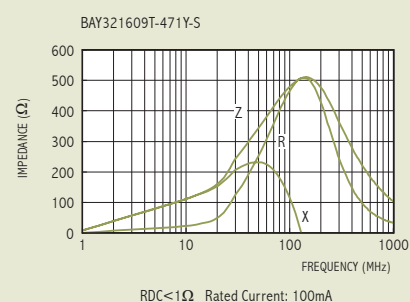
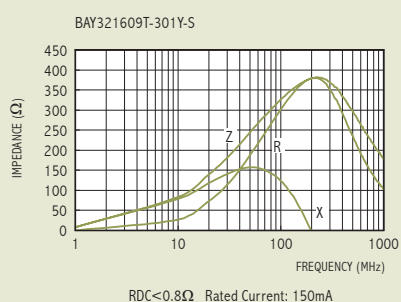
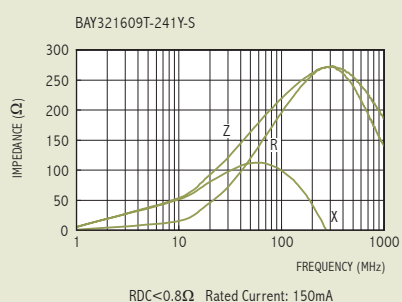
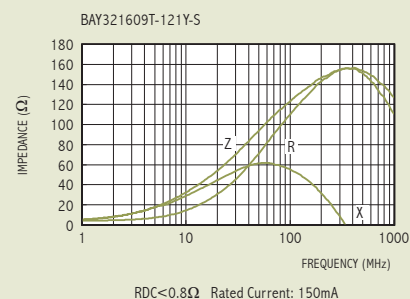
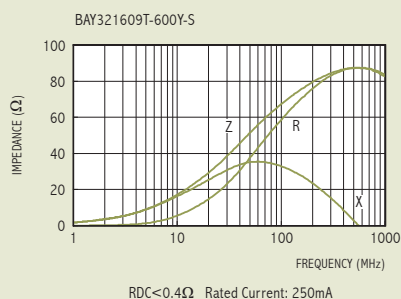
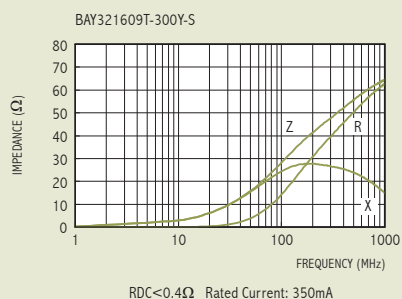
I-2 ENVIRONMENTAL PERFORMANCE

NO.	ITEM	SPECIFICATION	TEST CONDITIONS															
I-2-1	Temperature Cycle	Appearance : No Damage Z Change : within ±20% RDC : within Specification	One Cycle <table><tr><th>Step</th><th>Temperature (°C)</th><th>Time (Min.)</th></tr><tr><td>1</td><td>-55 ± 3</td><td>30</td></tr><tr><td>2</td><td>25 ± 2</td><td>3</td></tr><tr><td>3</td><td>125 ± 3</td><td>30</td></tr><tr><td>4</td><td>25 ± 2</td><td>3</td></tr></table> Total : 100 Cycles Measured after Exposure in the Room Condition for 24Hrs.	Step	Temperature (°C)	Time (Min.)	1	-55 ± 3	30	2	25 ± 2	3	3	125 ± 3	30	4	25 ± 2	3
Step	Temperature (°C)	Time (Min.)																
1	-55 ± 3	30																
2	25 ± 2	3																
3	125 ± 3	30																
4	25 ± 2	3																
I-2-2	Humidity Resistance		Temperature : 40 ±2°C Relative Humidity : 90 ~ 95% Time : 1000Hrs. Measured after Exposure in the Room Condition for 24Hrs.															
I-2-3	High Temperature Resistance		Temperature : 125 ± 3°C Relative Humidity : 0% Applied Current : Rated Current Time : 1000Hrs. Measured after Exposure in the Room Condition for 24Hrs.															
I-2-4	Low Temperature Resistance		Temperature : -55 ± 3°C Relative Humidity : 0% Time : 1000Hrs. Measured after Exposure in the Room Condition for 24Hrs.															



MULTILAYER FERRITE BEAD ARRAY - BA SERIES

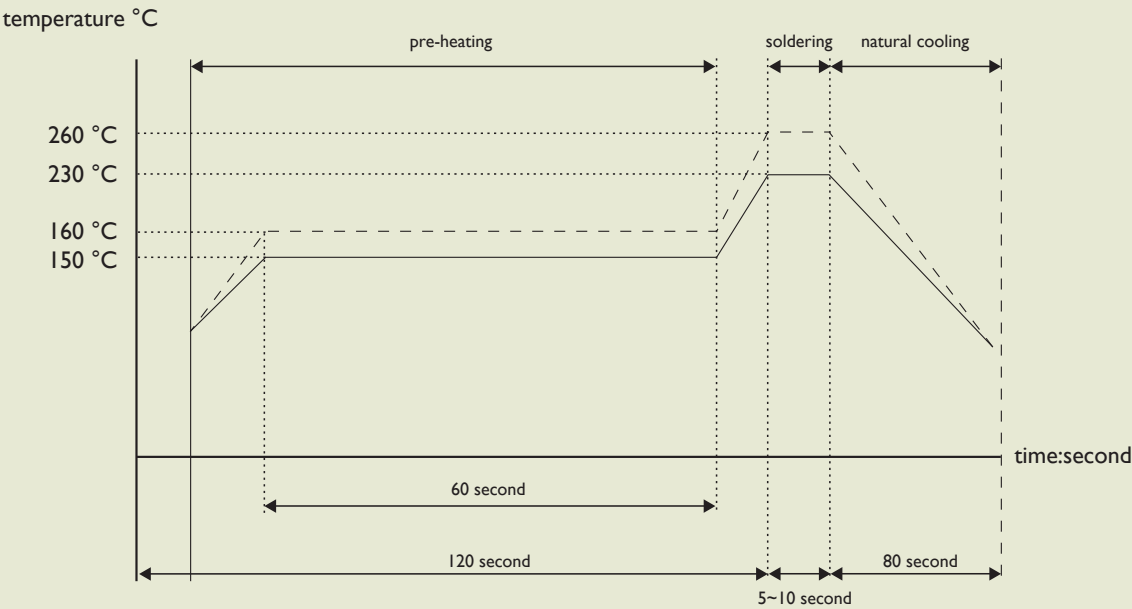
Test Instruments : HP4291A Impedance / Material Analyzer





RECOMMEND SOLDERING CONDITIONS

for:CL/ CLH/ SQV/ SMD power inductors/ SMD Chip Beads/ SMD Filters,Transformers, Current Sensors



for: lead solder _____
for: lead-free solder



ELECTRICAL CHARACTERISTICS

PART NO.	IMPEDANCE (Ω)	IMPEDANCE (Ω)	DC RESISTANCE
	Min. at 25MHz	Min. at 100MHz	(Ω) Max.
FB423226-Y7-S	24	40	0.6
FB784729-Y7-S	48	72	0.9
FB863226-Y7-S	48	72	0.9
FB865626-Y7-S	30	60 ± 20%	

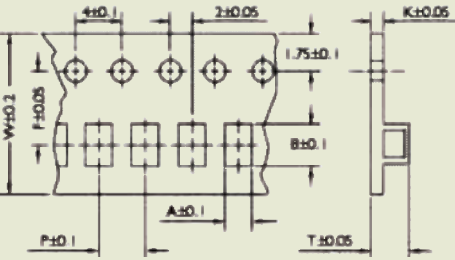
ELECTRICAL CHARACTERISTICS: LEAD-FREE & ROHS COMPLIANCE

PART NO.	Z (Ω)	Z (Ω)	TEST FREQ (MHz)
FB423226T-Y7-N	24-0	36-0	25/100
FB784729T-Y7-N	24-0	36-0	25/100
FB863226T-Y7-N	24-0	36-0	25/100
FB865656T-Y7-N	30-0	60 ± 20%	25/100

NOTE:
I.Operation temperature range -25°C~85°C
“-N” FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

TAPE DIMENSIONS

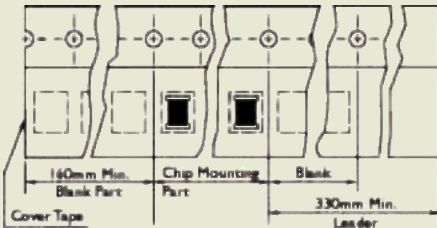
Dimensions : mm



TYPE	A	B	T	W	P	F	K
FB423226-S	3.64	5.30	3.10	12	8	5.5	0.3
FB784729-S	5.24	8.77	3.69	16	8	7.5	0.3
FB863226-S	3.28	9.35	3.06	16	8	7.5	0.3
FB865626-S	6.30	9.30	3.10	16	8	7.5	0.27

TAPE MATERIAL

Carrier Tape : Polystyrene Cover Type : Polyethyiene



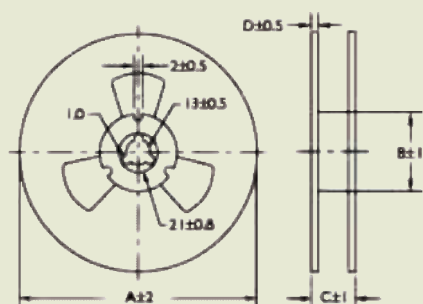
PACKAGING QUANTITY

TYPE	BULK	QUANTITY/REEL
FB423226-Y7	√	500
FB784729-Y7	√	500
FB863226-Y7	√	500
FB865626-Y7	√	2400



REEL DIMENSIONS

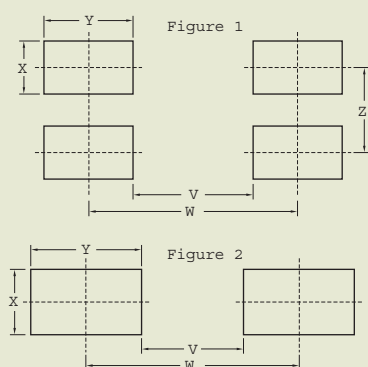
Dimensions : mm



TYPE	A	B	C	D
FB423226	178	60	16	1.5
FB784729	178	60	20	1.5
FB863226	178	60	20	1.5
FB865626	330	100	21	2

RECOMMENDED PATTERN

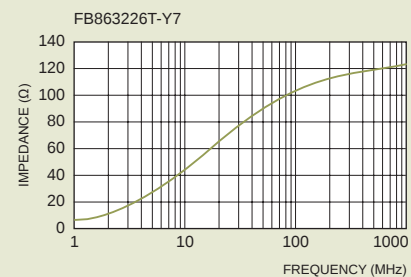
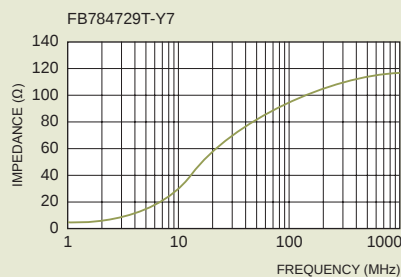
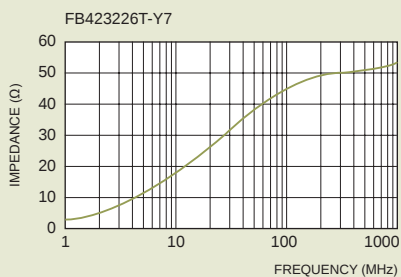
Dimensions : mm



TYPE	V	W	X	Y	Z	FIGURE
FB423226	1.0	4.0	1.8	3.0	-	2
FB784729	5.0	8.0	1.8	3.0	-	2
FB863226	4.5	7.5	1.8	3.0	-	2
FB865626		7.5	1.8	3.0	2.54	1

TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance/Material Analyzer





FB SERIES RELIABILITY TEST

I-1 MECHANICAL PERFORMANCE

NO.	ITEM	SPECIFICATION	TEST CONDITIONS
I-1-1	Vibration	Appearance : No Damage	Test device shall be soldered on the substrate.
		Z Change : within $\pm 20\%$	Oscillation Frequency : 10 to 55 to 10Hz for 1Min.
		RDC : within Specification	Amplitude : 1.5mm
			Time : 2Hrs. for each Axis (X,Y & Z), Total 6Hrs.

I-2 ENVIRONMENTAL PERFORMANCE

NO.	ITEM	SPECIFICATION	TEST CONDITIONS		
I-2-1	Temperature Cycle	Appearance : No Damage Z Change : within ±20% RDC : within Specification	One Cycle		
			Step	Temperature (°C)	Time (Min.)
			1	-55 ± 3	30
			2	25 ± 2	3
			3	125 ± 3	30
			4	25 ± 2	3
			Total : 100 Cycles		
Measured after Exposure in the Room Condition for 24Hrs.					
I-2-2	Humidity Resistance	Temperature : 40 ± 2°C			
		Relative Humidity : 90 ~ 95%			
		Time : 1000Hrs.			
		Measured after Exposure in the Room Condition for 24Hrs.			
I-2-3	High Temperature Resistance	Temperature : 125 ± 3°C			
		Relative Humidity : 0%			
		Time : 1000Hrs.			
		Measured after Exposure in the Room Condition for 24Hrs.			
I-2-4	Low Temperature Resistance	Temperature : -55 ± 3°C			
		Relative Humidity : 0%			
		Time : 1000Hrs.			
		Measured after Exposure in the Room Condition for 24Hrs.			

SBC Series

EMI PC Beads

APPLICATIONS

The PC Beads mainly used in the PC board of personal computers, microcomputers and relative devices to filter the EMI from the outside.

OUTLINE

Yageo EMI PC Beads provide a powerful function of EMI/RFI attenuation for electronic equipment. Multiple single turn printed circuit beads or multi-turn printed circuit beads are available in three sizes with B material.

With tinned copper jumper wires, these beads could complete the desired winding configuration on the printed circuit boards.

FEATURES

Jumped wires are oxygen free and high conductivity copper with 95/5 tin/lead coating.

Compact and High Performance

Easy Installation

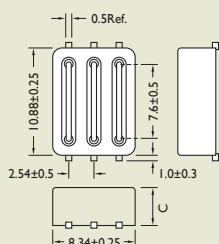
ELECTRICAL CHARACTERISTICS

PART NO.	TYPICAL IMPEDANCE AT 100MHZ (Ω)					
	B-#1	B-#2	B-#3	B-#4	B-#5	B-#6
SBC0810F6H-	65 ⁻⁰	100 ⁻⁰	120 ⁻⁰	155 ⁻⁰	170 ⁻⁰	270 ⁻⁰
SBC1010F8H-	65 ⁻⁰	100 ⁻⁰	120 ⁻⁰	155 ⁻⁰	170 ⁻⁰	270 ⁻⁰
SBC1310F10H-	65 ⁻⁰	100 ⁻⁰	120 ⁻⁰	155 ⁻⁰	170 ⁻⁰	270 ⁻⁰

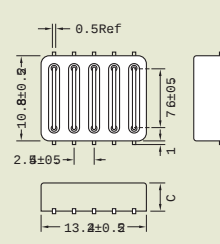
Dimensions : mm

SHAPES AND DIMENSIONS

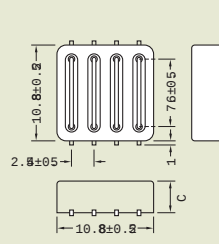
SBC0810F6H-B# □



SBC1310F10H-B# □



SBC1010F8H-B# □



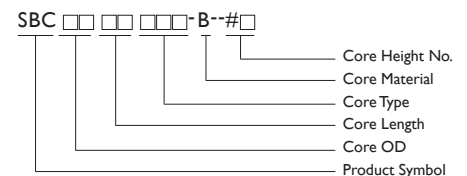
SBC0810F6H-Series
SBC1010F8H-Series
SBC1310F10H-Series



SBC0508F6HT-B



PRODUCT IDENTIFICATION



NOTE:
YAGEO will add "-N" after original P/N as identification.

EX. SBC0810F6H-B# □-N

TYPE	A	B	C
SBC0810F6H-B# □	8.34	10.9	-#1 3.81 -#2 5.08
SBC1010F8H-B# □	10.88	10.9	-#3 6.35 -#4 7.62
SBC1310F10H-B# □	13.42	10.9	-#5 8.09 -#6 10.15

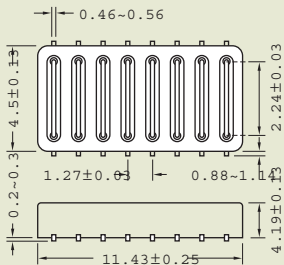
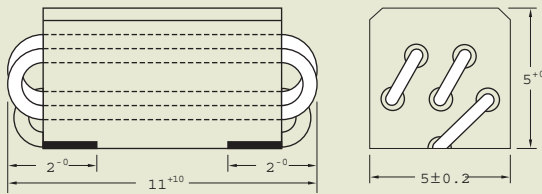


SHAPE AND DIMENSIONS

Dimensions : mm

SBC0508F6HT-B

SBC1105FI6HT-B246

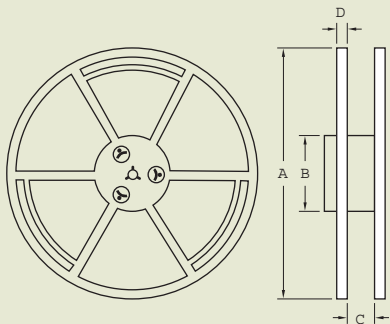
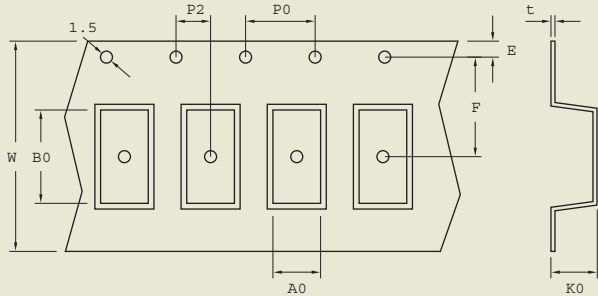


ELECTRICAL CHARACTERISTICS

PART NO.	IMPEDANCE	TEST FREQUENCY (MHz)	IMPEDANCE (Ω)	TEST FREQUENCY (MHz)	DC RESISTANCE (mΩ) Max.
SBC0508F6HT-B	340 ⁰	25	600 ± 25%	100	7.5
SBC1105FI6HT-B246	-	-	80 ⁰	100	10

TAPE DIMENSIONS

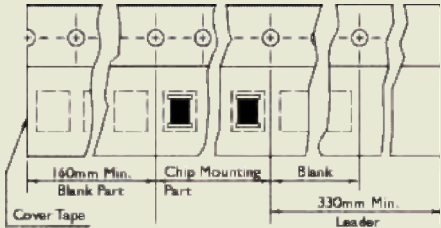
REEL DIMENSIONS



TAPE MATERIAL

Carrier Tape : Black Conductive Polystyrene - Alloy

Cover Type : Black Conductive Polystyrene - Alloy



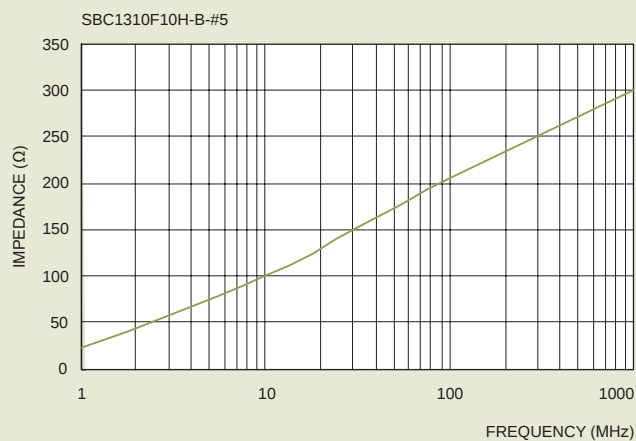
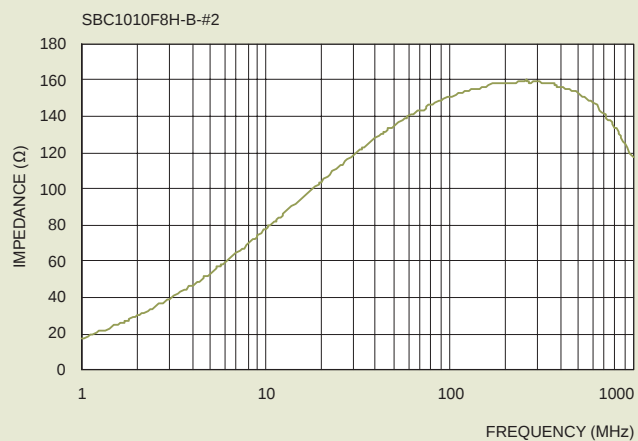
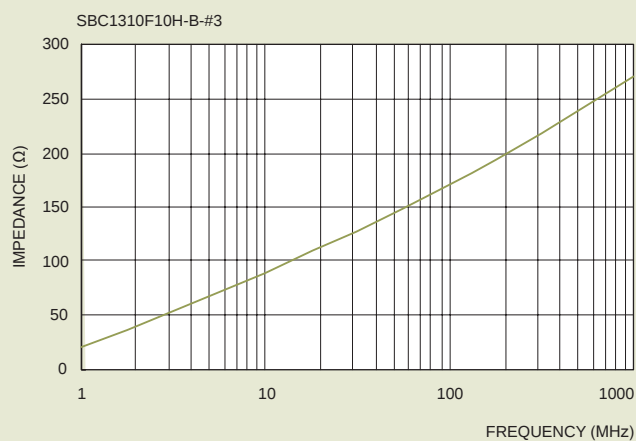
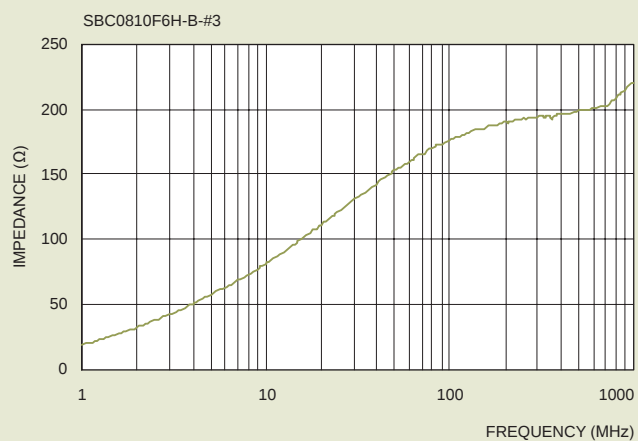
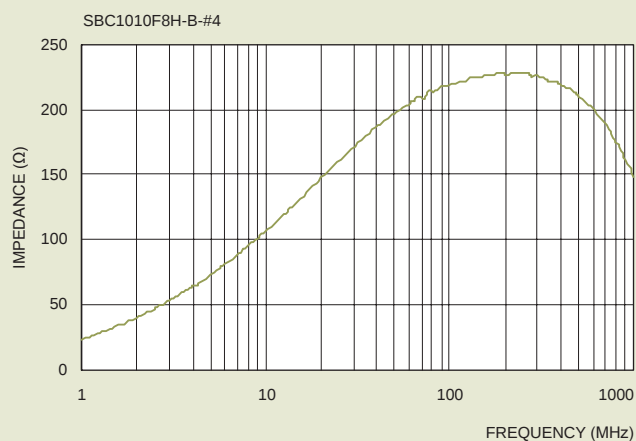
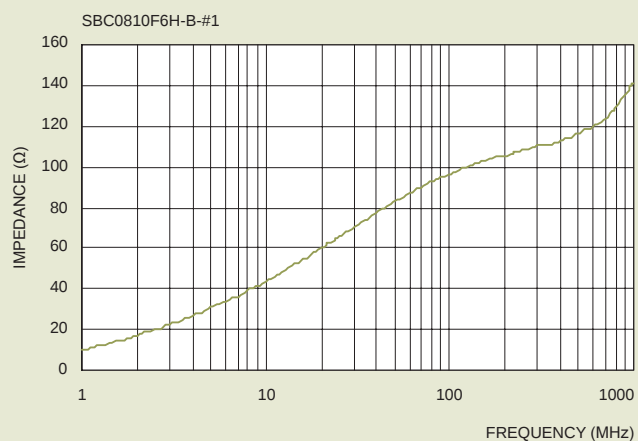
Dimensions : mm

TYPE	TAPE DIMENSIONS									REEL DIMENSIONS			QUANTITY
	W	E	F	P0	P2	A0	B0	K0	T	A	B	C	REEL/CARTON
SBC0508F6HT-B	24	1.75	11.5	4	2	5.3	10.9	5.1	0.35	330	100	24.4	1000/10000
SBC1105FI6HT-B246	24	1.75	11.5	4	2	7.5	11.7	4.7	0.35	330	100	24.4	1000/10000



TYPICAL ELECTRICAL CHARACTERISTIC

Test Instruments : HP4291A RF Impedance Analyzer

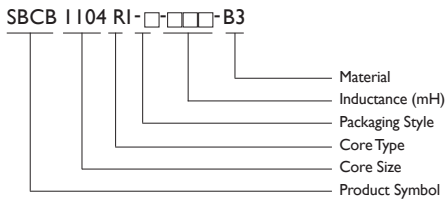


Data Line EMI Filter

SBCB Series



PRODUCT IDENTIFICATION

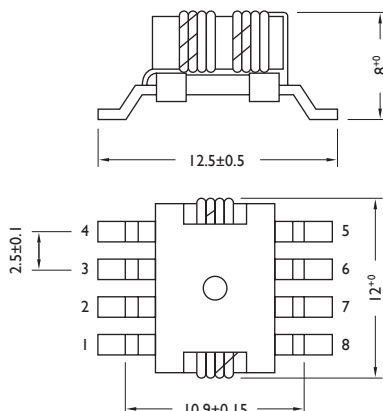


■ Packaging: T: Tape and Reel

■ NOTE: YAGEO will add "-N" after original P/N as identification. EX. SBCBI104RIT-330-B3-N

SHAPES AND DIMENSIONS

Dimensions : mm



APPLICATIONS

Attenuating Noise of Analog and Digital Signals for Telecommunication Devices

Prevention of Interference from Amateur Radios, CB Stations, or High Frequency Welders, etc.

OUTLINE

These surface mount filters are specially designed to virtually eliminate the problem of conducted EMI in data line applications. They provide both differential and common mode noise attenuation.

These components contain tremendous electrode straight, solder heat resistance and outstanding solderability. These products are designed for flow, reflow and wave soldering required for surface mounting applications.

FEATURES

These components are compatible with auto insertion equipment and easy installed for PC board.

With Four Lines for Voice and Data Line

Compact and High Performance

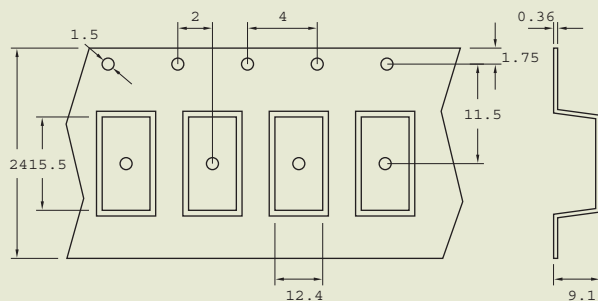
ELECTRIAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H)	TEST FREQUENCY (KHz) 0.6V	DC RESISTANCE (Ω) Max.
SBCBI104RIT-330-B3	25 ~ 50	100	0.07



TAPE DIMENSIONS

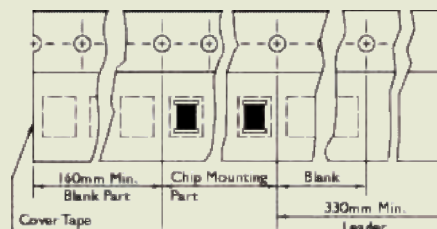
Dimensions : mm



TAPE MATERIAL

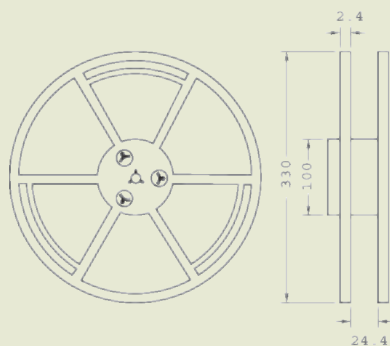
Carrier Tape : Black Conductive Polystyrene - Alloy

Cover Type : Black Conductive Polystyrene - Alloy



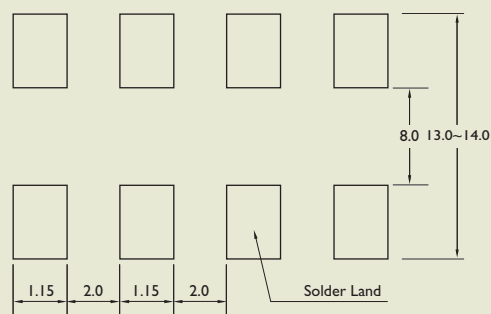
REEL DIMENSIONS

Dimensions : mm



RECOMMENDED PATTERN

Dimensions : mm



PACKAGING QUANTITY

TYPE

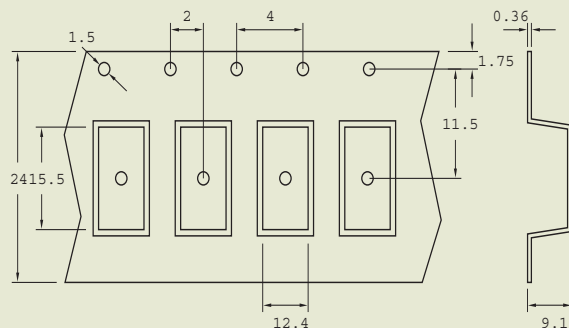
QUANTITY/REEL

SBCBI104

350

TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4192A LF Impedance Analyzer





SBCBI I04 SERIES RELIABILITY TEST

I-1 MECHANICAL PERFORMANCE

NO.	ITEM	SPECIFICATION	TEST CONDITIONS
I-1-1	Vibration	Appearance : No Damage L Change : within $\pm 10\%$ Q Change : within $\pm 30\%$ RDC : within Specification	Test device shall be soldered on the substrate. Oscillation Frequency : 10 to 55 to 10Hz for 1Min. Amplitude : 1.5mm Time : 2Hrs. for each Axis (X,Y & Z), Total 6Hrs.
I-1-2	Resistance to Soldering Heat	Appearance : No Damage	Pre-heating : 150°C , 1Min. Solder Composition : Sn/Pb = 63/37 Solder Temperature : $260 \pm 5^{\circ}\text{C}$ Immersion Time : $10 \pm 1\text{Sec}$.
I-1-3	Solderability	The electrodes shall be at least 90% covered with new solder coating.	Pre-heating : 150°C , 1Min. Solder Composition : Sn/Pb = 63/37 Solder Temperature : $230 \pm 5^{\circ}\text{C}$ Immersion Time : $4 \pm 1\text{Sec}$.

I-2 ENVIRONMENTAL PERFORMANCE

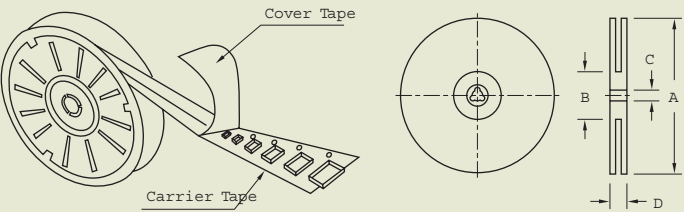
NO.	ITEM	SPECIFICATION	TEST CONDITIONS															
I-2-1	Temperature Shock	Appearance : No Damage L Change : within ±10% L Change : within ±30% RDC : within Specification	10 Cycles (Air to Air) Cycles shall Consist of : 30Min. Exposure to -55°C 30Min. Exposure to 125°C 15Sec. Max. Transition between Temperatures Measured after Exposure in the Room Condition for 24Hrs.															
I-2-2	Temperature Cycle		One Cycle <table><tr><th>Step</th><th>Temperature (°C)</th><th>Time (Min.)</th></tr><tr><td>1</td><td>-25 ± 3</td><td>30</td></tr><tr><td>2</td><td>25 ± 2</td><td>3</td></tr><tr><td>3</td><td>85 ± 3</td><td>30</td></tr><tr><td>4</td><td>25 ± 2</td><td>3</td></tr></table> Total : 100 Cycles Measured after Exposure in the Room Condition for 24Hrs.	Step	Temperature (°C)	Time (Min.)	1	-25 ± 3	30	2	25 ± 2	3	3	85 ± 3	30	4	25 ± 2	3
Step	Temperature (°C)	Time (Min.)																
1	-25 ± 3	30																
2	25 ± 2	3																
3	85 ± 3	30																
4	25 ± 2	3																
I-2-3	Humidity Resistance		Temperature : 40 ± 2°C Relative Humidity : 90 ~ 95% Time : 1000Hrs. Measured after Exposure in the Room Condition for 24Hrs.															
I-2-4	High Temperature Resistance		Temperature : 85 ± 3°C Relative Humidity : 20% Applied Current : Rated Current Time : 1000Hrs. Measured after Exposure in the Room Condition for 24Hrs.															
I-2-5	Low Temperature Resistance		Temperature : -25 ± 3°C Relative Humidity : 0% Time : 1000Hrs. Measured after Exposure in the Room Condition for 24Hrs.															

EMC Common Mode Filter

YAGEO will add "-N" after original P/N as identification. EX.SBCB656030T-900-S -N

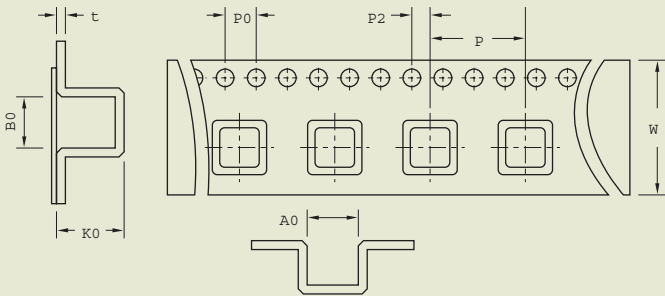


PACKAGING



SBCB656030-S

Pcs/Reel	1000
A	330mm
B	100mm
C	13.0mm
D	21.0mm

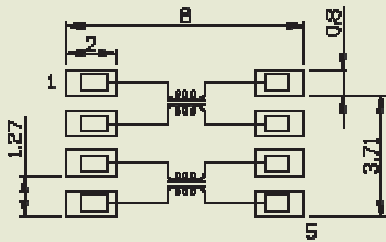


SBCB656030-S

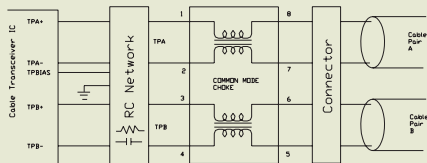
A0	6.6
B0	6.15
K0	3.5
P	12
P0	4.0
P2	2.0
W	16.0
t	0.35

RECOMMENDED PATTERN

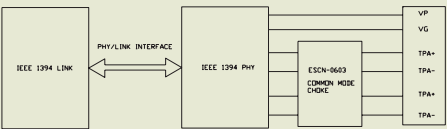
Recommended Pattern



Twisted Pair Cable interface



IEEE 1394 Port





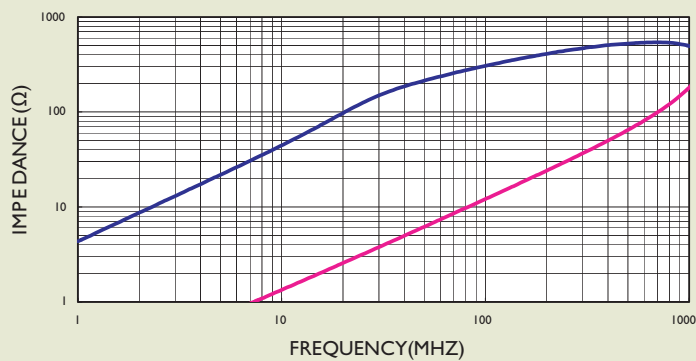
ELECTRICAL CHARACTERISTICS

Model no.	Rated Current (ma) Max.	DC Resistance (Ω /Line)Max.	Withstand Voltage
SBCB656030T - □□□ - □	500	0.12	80V DC

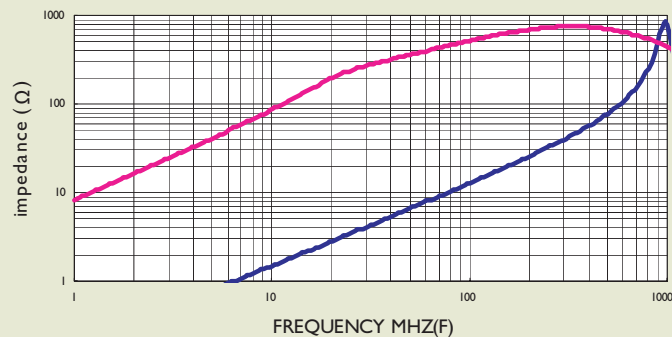
ELECTRICAL CHARACTERISTICS

Part Number	Impedance(Ω) Common Mode		Impedance(Ω) Normal Mode	
	@10Mhz(Ω)Min	@100Mhz(Ω)Min	@10Mhz(Ω)Min	@100Mhz(Ω)Min
SBCB656030T-900-S	9	60	2	9
SBCB656030T-181-S	15	150	3	16
SBCB656030T-301-S	20	200	3	20
SBCB656030T-601-S	25	480	3	15

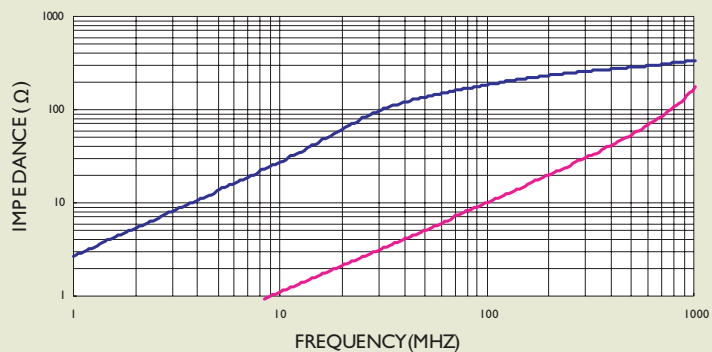
SBCB656030T-301-S



SBCB656030T-601-S



SBCB656030T-181-S

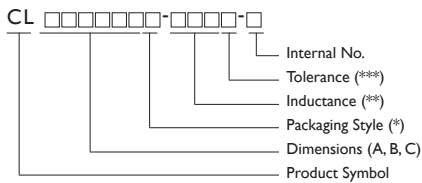


Multilayer Chip Inductors

CL Series



PRODUCT IDENTIFICATION



* B: Bulk ; T: Tape and Reel

** Example : $47N = 47nH$

$$R_{I0} = 0.1\mu H \quad I_{R0} = 1.0\mu H$$

*** K = $\pm 10\%$ M = $\pm 20\%$

■ YAGEO will start to release lead-free that meet SONY SS-00259's criteria, and Internal No. will be changed to "N" as identification.

Ex. CL160808T-10NM-N

APPLICATIONS

Personal computers, HDDs, or other various electronic appliances.

Any general circuit of portable equipment in which compact size and high mounting densities are required.

OUTLINE

Yageo's SMD multi-layered ferrite chip inductors provide a cost-effective solution for densely packed PC board designs. CL series comes in 4 sizes and is suitable for low frequency applications

FEATURES

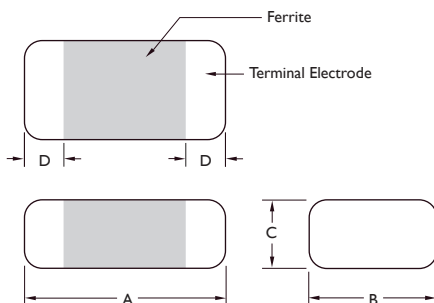
High mounting density of compact circuit due to crosstalk elimination that results from a closed magnetic flux in a ferrite material.

Suitable for Flow and Re-flow Soldering

Available in 4 Sizes

SHAPES AND DIMENSIONS

Dimensions : mm



TYPE	A	B	C	D
CL160808	1.6 ± 0.20	0.80 ± 0.15	0.80 ± 0.15	0.3 ± 0.2
CL201209	2.0 ± 0.20	1.25 ± 0.20	0.90 ± 0.20	0.5 ± 0.3
CL201212	2.0 ± 0.20	1.25 ± 0.20	1.25 ± 0.20	0.5 ± 0.3
CL321611	3.2 ± 0.20	1.60 ± 0.20	1.10 ± 0.20	0.5 ± 0.3



ELECTRICAL CHARACTERISTICS CL060808 (0603) SERIES

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm$ %)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
CL160808T-10NM-S	0.010	20%	15	50	300	0.20	50
CL160808T-33NM-S	0.033	20%	15	50	270	0.20	50
CL160808T-47NM-S	0.047	20%	15	50	260	0.30	50
CL160808T-56NM-S	0.056	20%	15	50	255	0.30	50
CL160808T-68NM-S	0.068	20%	15	50	250	0.30	50
CL160808T-82NM-S	0.082	20%	15	50	245	0.30	50
CL160808T-R10 □ -S	0.10	20 or 10%	25	25	240	0.50	50
CL160808T-R12 □ -S	0.12	20 or 10%	25	25	205	0.50	50
CL160808T-R15 □ -S	0.15	20 or 10%	25	25	180	0.60	50
CL160808T-R18 □ -S	0.18	20 or 10%	25	25	165	0.60	50
CL160808T-R22 □ -S	0.22	20 or 10%	25	25	150	0.80	50
CL160808T-R27 □ -S	0.27	20 or 10%	25	25	136	0.80	50
CL160808T-R33 □ -S	0.33	20 or 10%	25	25	125	0.85	35
CL160808T-R39 □ -S	0.39	20 or 10%	25	25	110	1.00	35
CL160808T-R47 □ -S	0.47	20 or 10%	25	25	105	1.35	35
CL160808T-R56 □ -S	0.56	20 or 10%	25	25	95	1.50	35
CL160808T-R68 □ -S	0.68	20 or 10%	25	25	85	1.70	35
CL160808T-R82 □ -S	0.82	20 or 10%	25	25	75	2.10	35
CL160808T-1R0 □ -S	1.0	20 or 10%	35	10	65	0.60	25
CL160808T-1R2 □ -S	1.2	20 or 10%	35	10	60	0.80	25
CL160808T-1R5 □ -S	1.5	20 or 10%	35	10	55	0.80	25
CL160808T-1R8 □ -S	1.8	20 or 10%	35	10	50	0.95	25
CL160808T-2R2 □ -S	2.2	20 or 10%	35	10	45	1.10	15
CL160808T-2R7 □ -S	2.7	20 or 10%	35	10	40	1.30	15
CL160808T-3R3 □ -S	3.3	20 or 10%	35	10	38	1.50	15
CL160808T-3R9 □ -S	3.9	20 or 10%	35	10	36	1.70	15
CL160808T-4R7 □ -S	4.7	20 or 10%	35	10	33	2.10	15
CL160808T-5R6 □ -S	5.6	20 or 10%	35	4	22	1.50	5
CL160808T-6R8 □ -S	6.8	20 or 10%	35	4	20	1.70	5
CL160808T-8R2 □ -S	8.2	20 or 10%	30	4	18	2.10	5
CL160808T-100 □ -S	10	20 or 10%	30	2	17	2.55	5



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	L,Q Test Freq (MHZ)	Q Min	SRF (MHZ)Min.	RDC (Ω)Max.	IDC (mA)Max	TOLERANCE ($\pm$ %)
CL160808T-10N □-N	0.01	50MHZ,200mV	15	300	0.2	50	20,15
CL160808T-33N □-N	0.033	50MHZ,200mV	15	270	0.2	50	20,15
CL160808T-47N □-N	0.047	50MHZ,200mV	15	260	0.3	50	20,15
CL160808T-56N □-N	0.056	50MHZ,200mV	15	255	0.3	50	20,15
CL160808T-68N □-N	0.068	50MHZ,200mV	15	250	0.3	50	20,15
CL160808T-82N □-N	0.082	50MHZ,200mV	15	245	0.3	50	20,15
CL160808T-R10 □-N	0.1	25MHZ,200mV	25	240	0.5	50	20,15,10
CL160808T-R12 □-N	0.12	25MHZ,200mV	25	205	0.5	50	20,15,10
CL160808T-R15 □-N	0.15	25MHZ,200mV	25	180	0.6	50	20,15,10
CL160808T-R18 □-N	0.18	25MHZ,200mV	25	165	0.6	50	20,15,10
CL160808T-R22 □-N	0.22	25MHZ,200mV	25	150	0.8	50	20,15,10
CL160808T-R27 □-N	0.27	25MHZ,200mV	25	136	0.8	50	20,15,10
CL160808T-R33 □-N	0.33	25MHZ,200mV	25	125	0.85	35	20,15,10
CL160808T-R39 □-N	0.39	25MHZ,200mV	25	110	1	35	20,15,10
CL160808T-R47 □-N	0.47	25MHZ,200mV	25	105	1.35	35	20,15,10
CL160808T-R56 □-N	0.56	25MHZ,200mV	25	95	1.5	35	20,15,10
CL160808T-R68 □-N	0.68	25MHZ,200mV	25	85	1.7	35	20,15,10
CL160808T-R82 □-N	0.82	25MHZ,200mV	25	75	2.1	35	20,15,10
CL160808T-1R0 □-N	1	10MHZ,200mV	35	65	0.6	25	20,15,10
CL160808T-1R2 □-N	1.2	10MHZ,200mV	35	60	0.8	25	20,15,10
CL160808T-1R5 □-N	1.5	10MHZ,200mV	35	55	0.8	25	20,15,10
CL160808T-1R8 □-N	1.8	10MHZ,200mV	35	50	0.95	25	20,15,10
CL160808T-2R2 □-N	2.2	10MHZ,200mV	35	45	1.1	15	20,15,10
CL160808T-2R7 □-N	2.7	10MHZ,200mV	35	40	1.3	15	20,15,10
CL160808T-3R3 □-N	3.3	10MHZ,200mV	35	38	1.5	15	20,15,10
CL160808T-3R9 □-N	3.9	10MHZ,200mV	35	36	1.7	15	20,15,10
CL160808T-4R7 □-N	4.7	10MHZ,200mV	35	33	2.1	15	20,15,10
CL160808T-5R6 □-N	5.6	4MHZ,200mV	35	22	1.5	5	20,15,10
CL160808T-6R8 □-N	6.8	4MHZ,200mV	35	20	1.7	5	20,15,10
CL160808T-8R2 □-N	8.2	4MHZ,100mV	30	18	2.1	5	20,15,10
CL160808T-100 □-N	10	2MHZ,100mV	30	17	2.55	5	20,15,10
CL160808T-120 □-N	12	2MHZ,60mV	30	15	2.6	3	20,15,10
CL160808T-150 □-N	15	1MHZ,60mV	20	14	1.7	1	20,15,10
CL160808T-180 □-N	18	1MHZ,60mV	20	13	1.8	1	20,15,10
CL160808T-220 □-N	22	1MHZ,60mV	20	11	2.1	1	20,15,10
CL160808T-270 □-N	27	1MHZ,60mV	20	10	2.7	1	20,15,10
CL160808T-330 □-N	33	1MHZ,60mV	20	9	2.9	1	20,15,10

NOTE: □-tolerance K= $\pm$ 10% / L= $\pm$ 15% / M= $\pm$ 20%

1. Operating temperature range -25°C~85°C

2.IDC:Applied the current to coils,the inductance shall be less than 10% initial value.

"-N"FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)



ELECTRICAL CHARACTERISTICS CL201209, CL201212 (0805) SERIES

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm$ %)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
CL201209T-47NM-S	0.047	20%	20	50	320	0.20	300
CL201209T-68NM-S	0.068	20%	20	50	280	0.20	300
CL201209T-82NM-S	0.082	20%	20	50	255	0.20	300
CL201209T-R10 $\square$ -S	0.10	20 or 10%	25	25	235	0.30	250
CL201209T-R12 $\square$ -S	0.12	20 or 10%	25	25	220	0.30	250
CL201209T-R15 $\square$ -S	0.15	20 or 10%	25	25	200	0.40	250
CL201209T-R18 $\square$ -S	0.18	20 or 10%	25	25	185	0.40	250
CL201209T-R22 $\square$ -S	0.22	20 or 10%	25	25	170	0.50	250
CL201209T-R27 $\square$ -S	0.27	20 or 10%	25	25	150	0.50	250
CL201209T-R33 $\square$ -S	0.33	20 or 10%	25	25	145	0.55	250
CL201209T-R39 $\square$ -S	0.39	20 or 10%	25	25	135	0.65	250
CL201209T-R47 $\square$ -S	0.47	20 or 10%	25	25	125	0.65	250
CL201209T-R56 $\square$ -S	0.56	20 or 10%	25	25	115	0.75	150
CL201209T-R68 $\square$ -S	0.68	20 or 10%	25	25	105	0.80	150
CL201209T-R82 $\square$ -S	0.82	20 or 10%	25	25	100	1.00	150
CL201209T-1R0 $\square$ -S	1.0	20 or 10%	45	10	75	0.40	50
CL201209T-1R2 $\square$ -S	1.2	20 or 10%	45	10	65	0.50	50
CL201209T-1R5 $\square$ -S	1.5	20 or 10%	45	10	60	0.50	50
CL201209T-1R8 $\square$ -S	1.8	20 or 10%	45	10	55	0.60	50
CL201209T-2R2 $\square$ -S	2.2	20 or 10%	45	10	50	0.65	30
CL201212T-2R7 $\square$ -S	2.7	20 or 10%	45	10	45	0.75	30
CL201212T-3R3 $\square$ -S	3.3	20 or 10%	45	10	41	0.80	30
CL201212T-3R9 $\square$ -S	3.9	20 or 10%	45	10	38	0.90	30
CL201212T-4R7 $\square$ -S	4.7	20 or 10%	45	10	35	1.00	30
CL201212T-5R6 $\square$ -S	5.6	20 or 10%	45	4	32	0.90	15
CL201212T-6R8 $\square$ -S	6.8	20 or 10%	45	4	29	1.00	15
CL201212T-8R2 $\square$ -S	8.2	20 or 10%	45	4	26	1.10	15
CL201212T-100 $\square$ -S	10	20 or 10%	45	2	24	1.10	15
CL201212T-120 $\square$ -S	12	20 or 10%	45	2	22	1.20	15
CL201212T-150 $\square$ -S	15	20 or 10%	30	1	19	0.80	5
CL201212T-180 $\square$ -S	18	20 or 10%	30	1	18	0.90	5
CL201212T-220 $\square$ -S	22	20 or 10%	30	1	16	1.10	5



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	L,Q Test Freq (MHZ)	Q Min	SRF (MHZ)Min.	RDC (Ω)Max.	IDC (mA)Max	TOLERANCE ($\pm$ %)
CL201209T-22N □ -N	0.022	50MHZ,200mV	20	320	0.2	300	20,15
CL201209T-33N □ -N	0.033	50MHZ,200mV	20	320	0.2	300	20,15
CL201209T-47N □ -N	0.047	50MHZ,200mV	20	320	0.2	300	20,15
CL201209T-56N □ -N	0.056	50MHZ,200mV	20	320	0.2	300	20,15
CL201209T-68N □ -N	0.068	50MHZ,200mV	20	280	0.2	300	20,15
CL201209T-82N □ -N	0.082	50MHZ,200mV	20	255	0.2	300	20,15
CL201209T-R10 □ -N	0.1	25MHZ,200mV	25	235	0.3	250	20,15,10
CL201209T-R12 □ -N	0.12	25MHZ,200mV	25	220	0.3	250	20,15,10
CL201209T-R15 □ -N	0.15	25MHZ,200mV	25	200	0.4	250	20,15,10
CL201209T-R18 □ -N	0.18	25MHZ,200mV	25	185	0.4	250	20,15,10
CL201209T-R22 □ -N	0.22	25MHZ,200mV	25	170	0.5	250	20,15,10
CL201209T-R27 □ -N	0.27	25MHZ,200mV	25	150	0.5	250	20,15,10
CL201209T-R33 □ -N	0.33	25MHZ,200mV	25	145	0.55	250	20,15,10
CL201209T-R39 □ -N	0.39	25MHZ,200mV	25	135	0.65	250	20,15,10
CL201209T-R47 □ -N	0.47	25MHZ,200mV	25	125	0.65	250	20,15,10
CL201209T-R56 □ -N	0.56	25MHZ,200mV	25	115	0.75	150	20,15,10
CL201209T-R68 □ -N	0.68	25MHZ,200mV	25	105	0.8	150	20,15,10
CL201209T-R82 □ -N	0.82	25MHZ,200mV	25	100	1	150	20,15,10
CL201209T-1R0 □ -N	1	10MHZ,200mV	45	75	0.4	50	20,15,10
CL201209T-1R2 □ -N	1.2	10MHZ,200mV	45	65	0.5	50	20,15,10
CL201209T-1R5 □ -N	1.5	10MHZ,200mV	45	60	0.5	50	20,15,10
CL201209T-1R8 □ -N	1.8	10MHZ,200mV	45	55	0.6	50	20,15,10
CL201209T-2R2 □ -N	2.2	10MHZ,200mV	45	50	0.65	30	20,15,10
CL201212T-2R7 □ -N	2.7	10MHZ,200mV	45	45	0.75	30	20,15,10
CL201212T-3R3 □ -N	3.3	10MHZ,200mV	45	41	0.8	30	20,15,10
CL201212T-3R9 □ -N	3.9	10MHZ,200mV	45	38	0.9	30	20,15,10
CL201212T-4R7 □ -N	4.7	10MHZ,200mV	45	35	1	30	20,15,10
CL201212T-5R6 □ -N	5.6	4MHZ,200mV	45	32	0.9	15	20,15,10
CL201212T-6R8 □ -N	6.8	4MHZ,200mV	45	29	1	15	20,15,10
CL201212T-8R2 □ -N	8.2	4MHZ,200mV	45	26	1.1	15	20,15,10
CL201212T-100 □ -N	10	2MHZ,60mV	45	24	1.1	15	20,15,10
CL201212T-120 □ -N	12	2MHZ,60mV	45	22	1.2	15	20,15,10
CL201212T-150 □ -N	15	1MHZ,60mV	30	19	0.8	5	20,15,10



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	L,Q Test Freq (MHZ)	Q (MHZ)Min.	SRF (Ω)Max.	RDC (mA)Max	IDC ($\pm$ %)	TOLERANCE
CL201212T-180 □ -N	18	1MHZ,60mV	30	18	0.9	5	20,15,10
CL201212T-220 □ -N	22	1MHZ,60mV	30	16	1.1	5	20,15,10
CL201212T-330 □ -N	33	1MHZ,60mV	30	13	1.25	5	20,15,10

NOTE: □-tolerance K= $\pm 10\%$ / L= $\pm 15\%$ / M= $\pm 20\%$

1.Operating temperature range -25°C~85°C

2.IDC:Applied the current to coils,the inductance shall be less than 10% initial value.

"-N"FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)



ELECTRICAL CHARACTERISTICS CL321611 (1206) SERIES

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm$ %)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
CL321611T-47NM-S	0.047	20%	20	50	320	0.15	300
CL321611T-68NM-S	0.068	20%	20	50	280	0.25	300
CL321611T-82NM-S	0.082	20%	20	50	250	0.25	300
CL321611T-R10 $\square$ -S	0.10	20 or 10%	25	25	235	0.25	250
CL321611T-R12 $\square$ -S	0.12	20 or 10%	25	25	220	0.30	250
CL321611T-R15 $\square$ -S	0.15	20 or 10%	25	25	200	0.30	250
CL321611T-R18 $\square$ -S	0.18	20 or 10%	25	25	185	0.40	250
CL321611T-R22 $\square$ -S	0.22	20 or 10%	25	25	170	0.40	250
CL321611T-R27 $\square$ -S	0.27	20 or 10%	25	25	150	0.50	250
CL321611T-R33 $\square$ -S	0.33	20 or 10%	25	25	145	0.60	250
CL321611T-R39 $\square$ -S	0.39	20 or 10%	25	25	135	0.50	200
CL321611T-R47 $\square$ -S	0.47	20 or 10%	25	25	125	0.60	200
CL321611T-R56 $\square$ -S	0.56	20 or 10%	25	25	115	0.70	150
CL321611T-R68 $\square$ -S	0.68	20 or 10%	25	25	105	0.80	150
CL321611T-R82 $\square$ -S	0.82	20 or 10%	25	25	100	0.90	150
CL321611T-IR0 $\square$ -S	1.0	20 or 10%	45	10	75	0.40	100
CL321611T-IR2 $\square$ -S	1.2	20 or 10%	45	10	65	0.50	100
CL321611T-IR5 $\square$ -S	1.5	20 or 10%	45	10	60	0.50	80
CL321611T-IR8 $\square$ -S	1.8	20 or 10%	45	10	55	0.50	70
CL321611T-2R2 $\square$ -S	2.2	20 or 10%	45	10	50	0.60	60
CL321611T-2R7 $\square$ -S	2.7	20 or 10%	45	10	45	0.60	60
CL321611T-3R3 $\square$ -S	3.3	20 or 10%	45	10	41	0.70	60
CL321611T-3R9 $\square$ -S	3.9	20 or 10%	45	10	38	0.80	50
CL321611T-4R7 $\square$ -S	4.7	20 or 10%	45	10	35	0.90	50
CL321611T-5R6 $\square$ -S	5.6	20 or 10%	45	4	32	0.70	25
CL321611T-6R8 $\square$ -S	6.8	20 or 10%	45	4	29	0.80	25
CL321611T-8R2 $\square$ -S	8.2	20 or 10%	45	4	26	0.90	25
CL321611T-100 $\square$ -S	10	20 or 10%	45	2	24	1.00	25
CL321611T-120 $\square$ -S	12	20 or 10%	45	2	22	1.00	15
CL321611T-150 $\square$ -S	15	20 or 10%	35	1	19	0.70	5
CL321611T-180 $\square$ -S	18	20 or 10%	35	1	18	0.75	5
CL321611T-220 $\square$ -S	22	20 or 10%	35	1	16	0.90	5
CL321611T-270 $\square$ -S	27	20 or 10%	35	1	14	0.90	5
CL321611T-330 $\square$ -S	33	20 or 10%	35	1	13	1.05	5



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	L,Q TEST FREQ (MHz)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE ($\pm$ %)
CL32161 IT-47N □ -N	0.047	50MHZ,200mV	20	320	0.15	300	20,15
CL32161 IT-56N □ -N	0.056	50MHZ,200mV	20	280	0.25	300	20,15
CL32161 IT-68N □ -N	0.068	50MHZ,200mV	20	280	0.25	300	20,15
CL32161 IT-82N □ -N	0.082	50MHZ,200mV	20	250	0.25	300	20,15
CL32161 IT-R10 □ -N	0.1	25MHZ,200mV	25	235	0.25	250	20,15,10
CL32161 IT-R12 □ -N	0.12	25MHZ,200mV	25	220	0.3	250	20,15,10
CL32161 IT-R15 □ -N	0.15	25MHZ,200mV	25	200	0.3	250	20,15,10
CL32161 IT-R18 □ -N	0.18	25MHZ,200mV	25	185	0.4	250	20,15,10
CL32161 IT-R22 □ -N	0.22	25MHZ,200mV	25	170	0.4	250	20,15,10
CL32161 IT-R27 □ -N	0.27	25MHZ,200mV	25	150	0.5	250	20,15,10
CL32161 IT-R33 □ -N	0.33	25MHZ,200mV	25	145	0.6	250	20,15,10
CL32161 IT-R39 □ -N	0.39	25MHZ,200mV	25	135	0.5	200	20,15,10
CL32161 IT-R47 □ -N	0.47	25MHZ,200mV	25	125	0.6	200	20,15,10
CL32161 IT-R56 □ -N	0.56	25MHZ,200mV	25	115	0.7	150	20,15,10
CL32161 IT-R68 □ -N	0.68	25MHZ,200mV	25	105	0.8	150	20,15,10
CL32161 IT-R82 □ -N	0.82	25MHZ,200mV	25	100	0.9	150	20,15,10
CL32161 IT-IR0 □ -N	1	10MHZ,200mV	45	75	0.4	100	20,15,10
CL32161 IT-IR2 □ -N	1.2	10MHZ,200mV	45	65	0.5	100	20,15,10
CL32161 IT-IR5 □ -N	1.5	10MHZ,200mV	45	60	0.5	80	20,15,10
CL32161 IT-IR8 □ -N	1.8	10MHZ,200mV	45	55	0.5	70	20,15,10
CL32161 IT-2R2 □ -N	2.2	10MHZ,200mV	45	50	0.6	60	20,15,10
CL32161 IT-2R7 □ -N	2.7	10MHZ,200mV	45	45	0.6	60	20,15,10
CL32161 IT-3R3 □ -N	3.3	10MHZ,200mV	45	41	0.7	60	20,15,10
CL32161 IT-3R9 □ -N	3.9	10MHZ,200mV	45	38	0.8	50	20,15,10
CL32161 IT-4R7 □ -N	4.7	10MHZ,200mV	45	35	0.9	50	20,15,10
CL32161 IT-5R6 □ -N	5.6	4MHZ,200mV	45	32	0.7	25	20,15,10
CL32161 IT-6R8 □ -N	6.8	4MHZ,200mV	45	29	0.8	25	20,15,10
CL32161 IT-8R2 □ -N	8.2	4MHZ,200mV	45	26	0.9	25	20,15,10
CL32161 IT-100 □ -N	10	2MHZ,60mV	45	24	1	25	20,15,10
CL32161 IT-120 □ -N	12	2MHZ,60mV	45	22	1	15	20,15,10
CL32161 IT-150 □ -N	15	1MHZ,60mV	35	19	0.7	5	20,15,10
CL32161 IT-180 □ -N	18	1MHZ,60mV	35	18	0.75	5	20,15,10
CL32161 IT-220 □ -N	22	1MHZ,60mV	35	16	0.9	5	20,15,10
CL32161 IT-270 □ -N	27	1MHZ,60mV	35	14	0.9	5	20,15,10
CL32161 IT-330 □ -N	33	1MHZ,60mV	35	13	1.05	5	20,15,10

NOTE: □-tolerance K= $\pm 10\%$ / L= $\pm 15\%$ / M= $\pm 20\%$

1.Operating temperature range -25°C~85°C

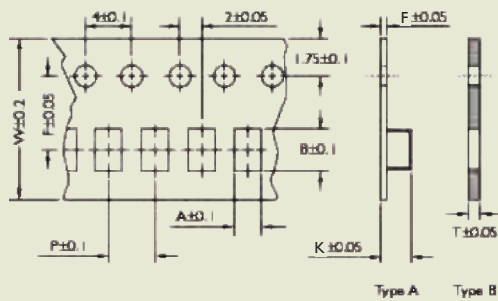
2.IDC:Applied the current to coils,the inductance shall be less than 10% initial value.

"-N"FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)



TAPE DIMENSIONS

Dimensions : mm

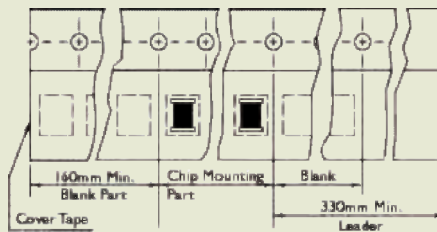


TYPE	A	B	T	W	P	F	K	TAPE TYPE
CL160808	1.05	1.8	0.95	8.0	4.0	3.5	-	B
CL201209	1.42	2.30	0.22	8.0	4.0	3.5	1.04	A
CL201212	1.35	2.25	0.22	8.0	4.0	3.5	1.35	A
CL321611	1.88	3.50	0.22	8.0	4.0	3.5	1.27	A

TAPE MATERIAL

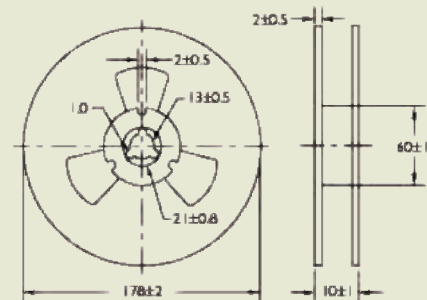
Carrier Tape : Polystyrene (for 201209, 201212, 321611 Series), Paper (for 160808)

Cover Tape : Polyethyene



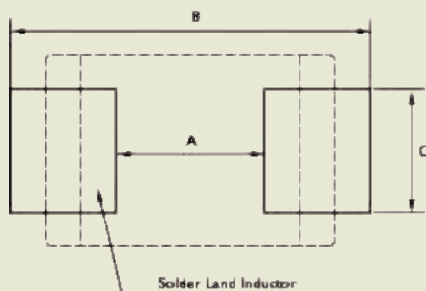
REEL DIMENSIONS

Dimensions : mm



RECOMMENDED PATTERN

Dimensions : mm



TYPE	A	B	C
CL160808	0.8	2.4 ~ 3.4	0.6
CL201209	1.2	3.0 ~ 4.0	1.0
CL201212	1.2	3.0 ~ 4.0	1.0
CL321611	2.0	4.2 ~ 5.2	1.2

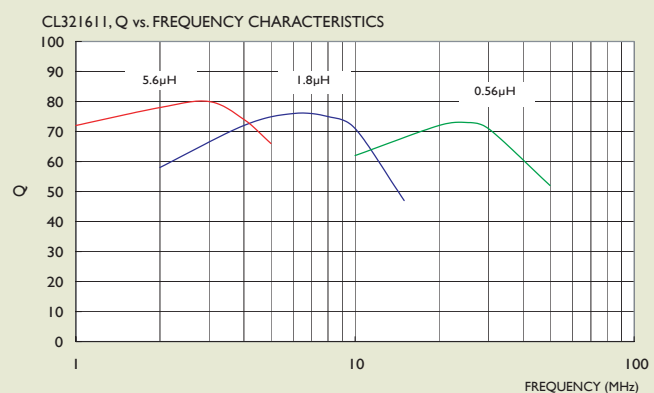
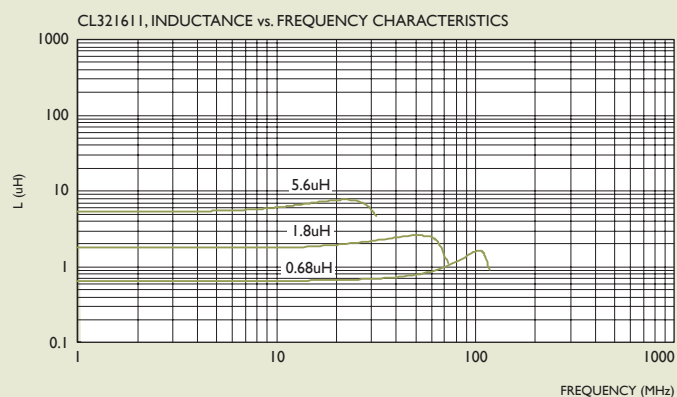
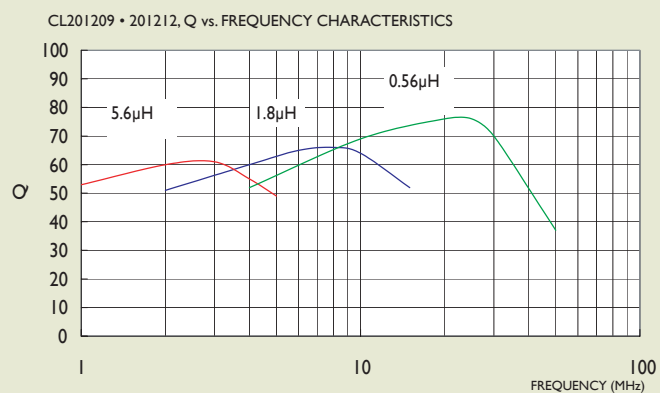
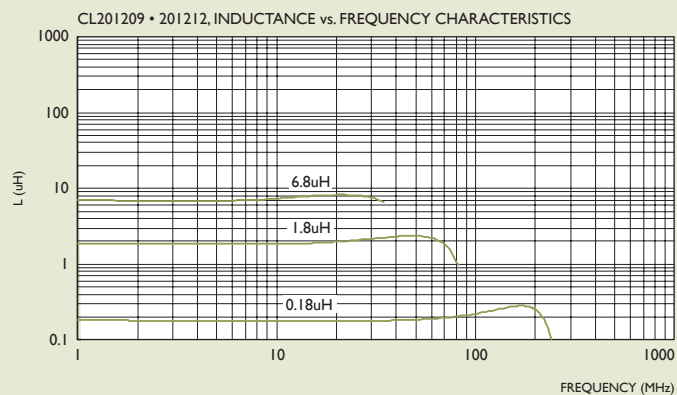
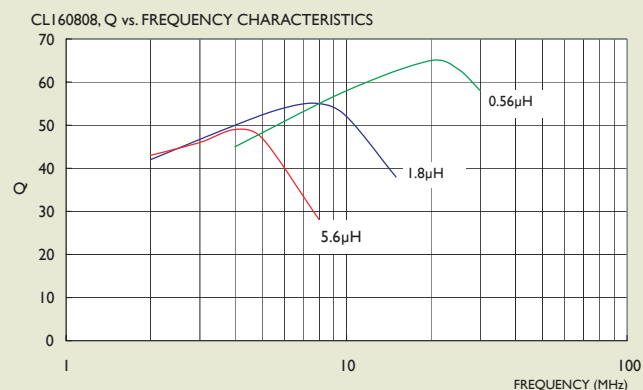
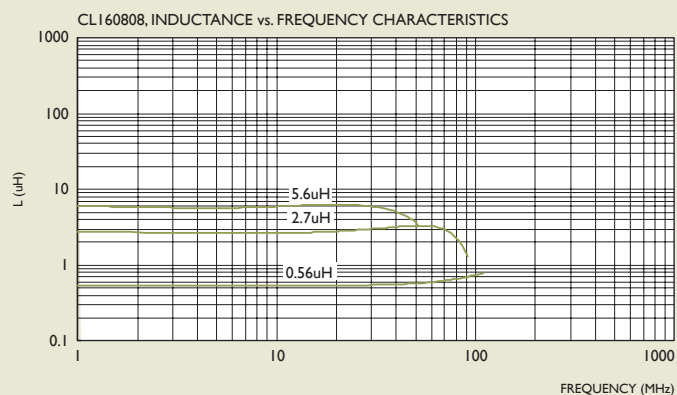
PACKAGING QUANTITY

TYPE	BULK	QUANTITY/REEL
CL160808	√	4000
CL201209	√	4000
CL201212	√	3000
CL321611	√	3000



TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer

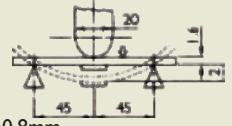




CL SERIES RELIABILITY TEST

I-1 MECHANICAL PERFORMANCE

NO.	ITEM	SPECIFICATION	TEST CONDITIONS
I-1-1	Flexure Strength	Appearance : No Damage L Change : within $\pm 10\%$ Q Change : within $\pm 30\%$	Test device shall be soldered on the substrate. Substrate Dimension : 100 x 40 x 1.6mm Deflection : 2.0mm Keeping Time : 30Sec. * For 100505, substrate dimension is 100 x 40 x 0.8mm.
I-1-2	Vibration		Test device shall be soldered on the substrate. Oscillation Frequency : 10 to 55 to 10Hz for 1Min. Amplitude : 1.5mm Time : 2Hrs. for each Axis (X,Y & Z), Total 6Hrs.
I-1-3	Resistance to Soldering Heat	Appearance : No Damage	Pre-heating : 150°C, 1Min. Solder Composition : Sn/Pb = 63/37 Solder Temperature : 260 $\pm$ 5°C Immersion Time : 10 $\pm$ 1Sec.
I-1-4	Solderability	The electrodes shall be at least 90% covered with new solder coating.	Pre-heating : 150°C, 1Min. Solder Composition : Sn/Pb = 63/37 Solder Temperature : 230 $\pm$ 5°C Immersion Time : 4 $\pm$ 1Sec.



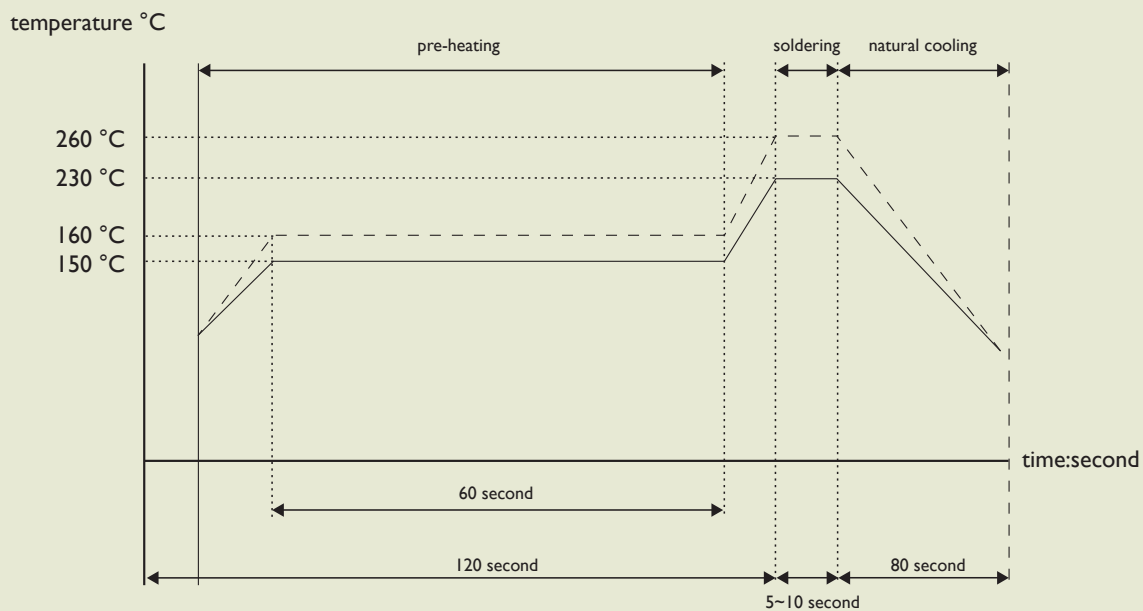
I-2 ENVIRONMENTAL PERFORMANCE

NO.	ITEM	SPECIFICATION	TEST CONDITIONS															
I-2-1	Temperature Cycle	Appearance : No Damage L Change : within ±10% Q Change : within ±30%	One Cycle <table><tr><th>Step</th><th>Temperature (°C)</th><th>Time (Min.)</th></tr><tr><td>1</td><td>-25 ± 3</td><td>30</td></tr><tr><td>2</td><td>25 ± 2</td><td>3</td></tr><tr><td>3</td><td>85 ± 3</td><td>30</td></tr><tr><td>4</td><td>25 ± 2</td><td>3</td></tr></table> Total : 100 Cycles Measured after Exposure in the Room Condition for 24Hrs.	Step	Temperature (°C)	Time (Min.)	1	-25 ± 3	30	2	25 ± 2	3	3	85 ± 3	30	4	25 ± 2	3
Step	Temperature (°C)	Time (Min.)																
1	-25 ± 3	30																
2	25 ± 2	3																
3	85 ± 3	30																
4	25 ± 2	3																
I-2-2	Humidity Resistance		Temperature : 40 ± 2°C Relative Humidity : 90 ~ 95% Time : 1000Hrs. Measured after Exposure in the Room Condition for 24Hrs.															
I-2-3	High Temperature Resistance		Temperature : 85 ± 3°C Relative Humidity : 20% Applied Current : Rated Current Time : 1000Hrs. Measured after Exposure in the Room Condition for 24Hrs.															
I-2-4	Low Temperature Resistance		Temperature : -25 ± 3°C Relative Humidity : 0% Time : 1000Hrs. Measured after Exposure in the Room Condition for 24Hrs.															



RECOMMEND SOLDERING CONDITIONS

for:CL/ CLH/ SQV/ SMD power inductors/ SMD Chip Beads/ SMD Filters, Transformers, Current Sensors



for: lead solder

for: lead-free solder

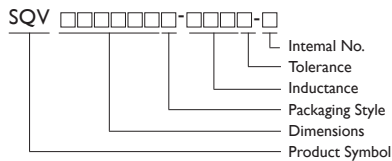
Miniature Surface Mount Chip Inductors

SQV Series

For High Q Application



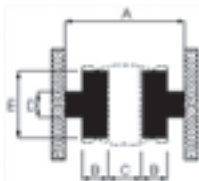
PRODUCT IDENTIFICATION



- Packaging : T: Tape and Reel
- Tolerance : J = $\pm 5\%$; K = $\pm 10\%$; M = $\pm 20\%$
- YAGEO will start to release lead-free that meet SONY SS-00259's criteria, and Internal No. will be changed to "N" as identification.
Ex. SQV322520T-220J-N

RECOMMENDED PATTERN

Dimensions : mm



TYPE	A	B	C	D	E
SQV322520	5.5	1.0	1.3	1.0	2.0
SQV453226	7.5	1.5	1.5	1.5	3.0

SQV Series comes in 2 sizes and provides wide inductance range , high Q value at high frequencies and low DC resistance

APPLICATIONS

Personal, Cordless Phone

High Freq. Communication Products

GPS (Global Position System)

Personal Computers

Note : SQV Series is not suitable for wave soldering

FEATURES

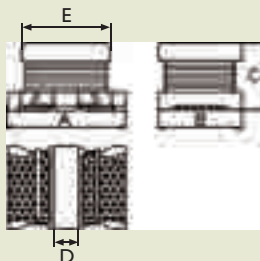
This miniature chip inductors wound on a special ferrite core.

High Q value at high frequencies and low DC resistance.

Wide Inductance Range

SHAPES AND DIMENSIONS

Dimensions : mm



TYPE	A	B	C	D	E
SQV322520	3.2 $\pm$ 0.3	2.5 $\pm$ 0.2	2.0 $\pm$ 0.2	1.3 TYP	2.5 $\pm$ 0.2
SQV453226	4.5 $\pm$ 0.3	3.2 $\pm$ 0.2	2.6 $\pm$ 0.2	1.0 Min	3.6 $\pm$ 0.2



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μH)		QUALITY FACTOR			DC RESISTANCE (Ω) Max.	SRF (MHz) Min.	IDC (mA) Max.
	NOMINAL	TOLERANCE	TEST	SPEC.	TEST			
	VALUE	(±%)	FREQUENCY	Min.	FREQUENCY			
SQV322520T-R10 □ -S	0.10	20	1MHz	20	25.2MHz	0.25	200	700
SQV322520T-R18 □ -S	0.18	20	1MHz	20	25.2MHz	0.25	200	650
SQV322520T-R27 □ -S	0.27	20	1MHz	25	25.2MHz	0.25	200	600
SQV322520T-R39 □ -S	0.39	20	1MHz	25	25.2MHz	0.25	200	530
SQV322520T-R56 □ -S	0.56	20	1MHz	30	25.2MHz	0.25	160	530
SQV322520T-R68 □ -S	0.68	20	1MHz	30	25.2MHz	0.25	160	470
SQV322520T-R82 □ -S	0.82	20	1MHz	30	25.2MHz	0.25	120	450
SQV322520T-1R0 □ -S	1.0	20	1MHz	20	1MHz	0.50	100	445
SQV322520T-1R2 □ -S	1.2	20	1MHz	20	1MHz	0.60	100	425
SQV322520T-1R5 □ -S	1.5	10/20	1MHz	20	1MHz	0.60	75	400
SQV322520T-1R8 □ -S	1.8	10/20	1MHz	20	1MHz	0.70	60	390
SQV322520T-2R2 □ -S	2.2	10/20	1MHz	20	1MHz	0.80	50	370
SQV322520T-2R7 □ -S	2.7	10/20	1MHz	20	1MHz	0.90	43	320
SQV322520T-3R3 □ -S	3.3	10/20	1MHz	20	1MHz	1.0	38	300
SQV322520T-3R9 □ -S	3.9	10/20	1MHz	20	1MHz	1.1	35	290
SQV322520T-4R7 □ -S	4.7	10/20	1MHz	20	1MHz	1.2	31	270
SQV322520T-5R6 □ -S	5.6	10/20	1MHz	20	1MHz	1.3	28	250
SQV322520T-6R8 □ -S	6.8	10/20	1MHz	20	1MHz	1.5	25	240
SQV322520T-8R2 □ -S	8.2	10/20	1MHz	20	1MHz	1.6	23	225
SQV322520T-100 □ -S	10	5/10	1MHz	35	1MHz	1.8	20	190
SQV322520T-120 □ -S	12	5/10	1MHz	35	1MHz	2.0	18	180
SQV322520T-150 □ -S	15	5/10	1MHz	35	1MHz	2.2	16	170
SQV322520T-180 □ -S	18	5/10	1MHz	35	1MHz	2.5	15	165
SQV322520T-220 □ -S	22	5/10	1MHz	35	1MHz	2.8	14	150
SQV322520T-270 □ -S	27	5/10	1MHz	35	1MHz	3.1	13	125
SQV322520T-330 □ -S	33	5/10	1MHz	40	1MHz	3.5	12	115
SQV322520T-390 □ -S	39	5/10	1MHz	40	1MHz	3.9	11	110
SQV322520T-470 □ -S	47	5/10	1MHz	40	1MHz	4.3	11	100
SQV322520T-560 □ -S	56	5/10	1MHz	40	1MHz	4.9	10.0	85
SQV322520T-680 □ -S	68	5/10	1MHz	40	1MHz	5.5	9.0	80
SQV322520T-820 □ -S	82	5/10	1MHz	40	1MHz	6.2	8.5	70
SQV322520T-101 □ -S	100	5/10	1MHz	40	796KHz	7.0	8.0	80
SQV322520T-121 □ -S	120	5/10	1MHz	40	796KHz	8.0	7.5	75
SQV322520T-151 □ -S	150	5/10	1MHz	40	796KHz	9.3	7.0	70
SQV322520T-181 □ -S	180	5/10	1MHz	40	796KHz	10.2	6.0	65
SQV322520T-221 □ -S	220	5/10	1MHz	40	796KHz	11.8	5.5	65
SQV322520T-271 □ -S	270	5/10	1MHz	40	796KHz	12.5	5.0	65
SQV322520T-331 □ -S	330	5/10	1MHz	40	796KHz	13.0	5.0	65
SQV322520T-391 □ -S	390	5/10	1MHz	50	796KHz	22.0	5.0	50
SQV322520T-471 □ -S	470	5/10	1KHz	50	796KHz	25.0	5.0	45
SQV322520T-561 □ -S	560	5/10	1KHz	50	796KHz	28.0	5.0	40



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	L/Q TEST FREQ	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	Rated Current (A) Max.	TOLERANCE ($\pm$ %)
SQV322520T-R10 □ -N	0.1	1MHz/25.2MHz	20	200	0.025	0.7	M
SQV322520T-IR0 □ -N	1	1MHz/1MHz	20	100	0.5	0.445	M
SQV322520T-IR2 □ -N	1.2	1MHz/1MHz	20	100	0.6	0.425	K,M
SQV322520T-IR5 □ -N	1.5	1MHz/1MHz	20	75	0.6	0.4	K,M
SQV322520T-IR8 □ -N	1.8	1MHz/1MHz	20	60	0.7	0.39	K,M
SQV322520T-2R2 □ -N	2.2	1MHz/1MHz	20	50	0.8	0.37	K,M
SQV322520T-2R7 □ -N	2.7	1MHz/1MHz	20	43	0.9	0.32	K,M
SQV322520T-3R3 □ -N	3.3	1MHz/1MHz	20	38	1	0.3	K,M
SQV322520T-3R9 □ -N	3.9	1MHz/1MHz	20	35	1.1	0.29	K,M
SQV322520T-4R7 □ -N	4.7	1MHz/1MHz	20	31	1.2	0.27	K,M
SQV322520T-5R6 □ -N	5.6	1MHz/1MHz	20	28	1.3	0.25	K,M
SQV322520T-6R8 □ -N	6.8	1MHz/1MHz	20	25	1.5	0.24	K,M
SQV322520T-8R2 □ -N	8.2	1MHz/1MHz	20	23	1.6	0.225	K,M
SQV322520T-100 □ -N	10	1MHz/1MHz	35	20	1.8	0.19	J,K,M
SQV322520T-120 □ -N	12	1MHz/1MHz	35	18	2	0.18	J,K,M
SQV322520T-150 □ -N	15	1MHz/1MHz	35	16	2.2	0.17	J,K,M
SQV322520T-180 □ -N	18	1MHz/1MHz	35	15	2.5	0.165	J,K,M
SQV322520T-220 □ -N	22	1MHz/1MHz	35	14	2.8	0.15	J,K,M
SQV322520T-270 □ -N	27	1MHz/1MHz	35	13	3.1	0.125	J,K,M
SQV322520T-330 □ -N	33	1MHz/1MHz	40	12	3.5	0.115	J,K,M
SQV322520T-390 □ -N	39	1MHz/1MHz	40	11	3.9	0.11	J,K,M
SQV322520T-470 □ -N	47	1MHz/1MHz	40	11	4.3	0.1	J,K,M
SQV322520T-560 □ -N	56	1MHz/1MHz	40	10	4.9	0.085	J,K,M
SQV322520T-680 □ -N	68	1MHz/1MHz	40	9	5.5	0.08	J,K,M
SQV322520T-820 □ -N	82	1MHz/1MHz	40	8.5	6.2	0.07	J,K,M
SQV322520T-101 □ -N	100	1MHz/796KHz	40	8	7	0.08	J,K,M
SQV322520T-121 □ -N	120	1MHz/796KHz	40	7.5	8	0.075	J,K,M
SQV322520T-151 □ -N	150	1MHz/796KHz	40	7	9.3	0.07	J,K,M
SQV322520T-181 □ -N	180	1MHz/796KHz	40	6	10.2	0.065	J,K,M
SQV322520T-221 □ -N	220	1MHz/796KHz	40	5.5	11.8	0.065	J,K,M
SQV322520T-271 □ -N	270	1MHz/796KHz	40	5	12.5	0.065	J,K,M
SQV322520T-331 □ -N	330	1MHz/796KHz	40	5	13	0.065	J,K,M
SQV322520T-391 □ -N	390	1MHz/796KHz	50	5	22	0.05	J,K,M
SQV322520T-471 □ -N	470	1KHz/796KHz	50	5	25	0.045	J,K,M
SQV322520T-561 □ -N	560	1KHz/796KHz	50	5	28	0.04	J,K,M

NOTE: □-tolerance J= $\pm$ 5% / K= $\pm$ 10% / M= $\pm$ 20%

1. Operating temperature range -25°C~85°C

2. Rated Current: Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.

3. L/Q Test OSC @1V

"-N" FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μH)		QUALITY FACTOR			DC RESISTANCE (Ω) Max.	SRF (MHz) Min.	IDC (mA) Max.
	NOMINAL	TOLERANCE	TEST	SPEC.	TEST			
	VALUE	(±%)	FREQUENCY	Min.	FREQUENCY			
SQV453226T-1R0 □ -S	1.0	20	1MHz	20	1MHz	0.20	120	500
SQV453226T-1R2 □ -S	1.2	20	1MHz	20	1MHz	0.20	100	500
SQV453226T-1R5 □ -S	1.5	20	1MHz	20	1MHz	0.30	85	500
SQV453226T-1R8 □ -S	1.8	20	1MHz	20	1MHz	0.30	75	500
SQV453226T-2R2 □ -S	2.2	20	1MHz	20	1MHz	0.30	62	500
SQV453226T-2R7 □ -S	2.7	20	1MHz	20	1MHz	0.32	53	500
SQV453226T-3R3 □ -S	3.3	20	1MHz	20	1MHz	0.35	47	500
SQV453226T-3R9 □ -S	3.9	20	1MHz	20	1MHz	0.38	41	500
SQV453226T-4R7 □ -S	4.7	10/20	1MHz	30	1MHz	0.40	38	500
SQV453226T-5R6 □ -S	5.6	10/20	1MHz	30	1MHz	0.47	33	500
SQV453226T-6R8 □ -S	6.8	10/20	1MHz	30	1MHz	0.50	31	450
SQV453226T-8R2 □ -S	8.2	10/20	1MHz	30	1MHz	0.56	27	450
SQV453226T-100 □ -S	10	5/10	1MHz	35	1MHz	0.56	23	400
SQV453226T-120 □ -S	12	5/10	1MHz	35	1MHz	0.62	21	380
SQV453226T-150 □ -S	15	5/10	1MHz	35	1MHz	0.73	19	360
SQV453226T-180 □ -S	18	5/10	1MHz	35	1MHz	0.82	17	340
SQV453226T-220 □ -S	22	5/10	1MHz	35	1MHz	0.94	15	320
SQV453226T-270 □ -S	27	5/10	1MHz	35	1MHz	1.1	14	300
SQV453226T-330 □ -S	33	5/10	1MHz	35	1MHz	1.2	12	270
SQV453226T-390 □ -S	39	5/10	1MHz	35	1MHz	1.4	11	240
SQV453226T-470 □ -S	47	5/10	1MHz	35	1MHz	1.5	10	220
SQV453226T-560 □ -S	56	5/10	1MHz	35	1MHz	1.7	9.3	200
SQV453226T-680 □ -S	68	5/10	1MHz	35	1MHz	1.9	8.4	180
SQV453226T-820 □ -S	82	5/10	1MHz	35	1MHz	2.2	7.5	170
SQV453226T-101 □ -S	100	5/10	1MHz	40	796KHz	2.5	6.8	160
SQV453226T-121 □ -S	120	5/10	1MHz	40	796KHz	3.0	6.2	150
SQV453226T-151 □ -S	150	5/10	1MHz	40	796KHz	3.7	5.5	130
SQV453226T-181 □ -S	180	5/10	1MHz	40	796KHz	4.5	5.0	120
SQV453226T-221 □ -S	220	5/10	1MHz	40	796KHz	5.4	4.5	110
SQV453226T-271 □ -S	270	5/10	1MHz	40	796KHz	6.8	4.0	100
SQV453226T-331 □ -S	330	5/10	1MHz	40	796KHz	8.2	3.6	95
SQV453226T-391 □ -S	390	5/10	1MHz	40	796KHz	9.7	3.3	90
SQV453226T-471 □ -S	470	5/10	1KHz	40	796KHz	11.8	3.0	80
SQV453226T-561 □ -S	560	5/10	1KHz	40	796KHz	14.5	2.7	70
SQV453226T-681 □ -S	680	5/10	1KHz	40	796KHz	17.5	2.5	65
SQV453226T-821 □ -S	820	5/10	1KHz	40	796KHz	20.5	2.2	60
SQV453226T-102 □ -S	1000	5/10	1KHz	40	252KHz	25.0	2.0	50
SQV453226T-122 □ -S	1200	5/10	1KHz	40	252KHz	30.0	1.8	45
SQV453226T-152 □ -S	1500	5/10	1KHz	40	252KHz	37.0	1.6	40
SQV453226T-182 □ -S	1800	5/10	1KHz	40	252KHz	45.0	1.5	35
SQV453226T-222 □ -S	2200	5/10	1KHz	40	252KHz	50.0	1.3	30

- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Inductance tolerance : J=±5% K=±10% M=±20%
- Test Equipment : L&Q : HP4192A. LF Impedance Analyzer
SRF : HP4291A RF Impedance Analyzer
DCR : CH502BC/HP4338B



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	L/Q TEST FREQ	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	Rated Current (A) Max.	TOLERANCE ($\pm$ %)
SQV453226T-1R0 □ -N	1	1MHz/1MHz	20	120	0.2	0.5	M
SQV453226T-1R2 □ -N	1.2	1MHz/1MHz	20	100	0.2	0.5	M
SQV453226T-1R5 □ -N	1.5	1MHz/1MHz	20	85	0.3	0.5	M
SQV453226T-1R8 □ -N	1.8	1MHz/1MHz	20	75	0.3	0.5	M
SQV453226T-2R2 □ -N	2.2	1MHz/1MHz	20	62	0.3	0.5	M
SQV453226T-2R7 □ -N	2.7	1MHz/1MHz	20	53	0.32	0.5	M
SQV453226T-3R3 □ -N	3.3	1MHz/1MHz	20	47	0.35	0.5	M
SQV453226T-3R9 □ -N	3.9	1MHz/1MHz	20	41	0.38	0.5	M
SQV453226T-4R7 □ -N	4.7	1MHz/1MHz	30	38	0.4	0.5	K,M
SQV453226T-5R6 □ -N	5.6	1MHz/1MHz	30	33	0.47	0.5	K,M
SQV453226T-6R8 □ -N	6.8	1MHz/1MHz	30	31	0.5	0.45	K,M
SQV453226T-8R2 □ -N	8.2	1MHz/1MHz	30	27	0.56	0.45	K,M
SQV453226T-100 □ -N	10	1MHz/1MHz	35	23	0.56	0.4	J,K,M
SQV453226T-120 □ -N	12	1MHz/1MHz	35	21	0.62	0.38	J,K,M
SQV453226T-150 □ -N	15	1MHz/1MHz	35	19	0.73	0.36	J,K,M
SQV453226T-180 □ -N	18	1MHz/1MHz	35	17	0.82	0.34	J,K,M
SQV453226T-220 □ -N	22	1MHz/1MHz	35	15	0.94	0.32	J,K,M
SQV453226T-270 □ -N	27	1MHz/1MHz	35	14	1.1	0.3	J,K,M
SQV453226T-330 □ -N	33	1MHz/1MHz	35	12	1.2	0.27	J,K,M
SQV453226T-390 □ -N	39	1MHz/1MHz	35	11	1.4	0.24	J,K,M
SQV453226T-470 □ -N	47	1MHz/1MHz	35	10	1.5	0.22	J,K,M
SQV453226T-560 □ -N	56	1MHz/1MHz	35	9.3	1.7	0.2	J,K,M
SQV453226T-680 □ -N	68	1MHz/1MHz	35	8.4	1.9	0.18	J,K,M
SQV453226T-820 □ -N	82	1MHz/1MHz	35	7.5	2.2	0.17	J,K,M
SQV453226T-101 □ -N	100	1MHz/0.796MHz	40	6.8	2.5	0.16	J,K,M
SQV453226T-121 □ -N	120	1MHz/0.796MHz	40	6.2	3	0.15	J,K,M
SQV453226T-151 □ -N	150	1MHz/0.796MHz	40	5.5	3.7	0.13	J,K,M
SQV453226T-181 □ -N	180	1MHz/0.796MHz	40	5	4.5	0.12	J,K,M
SQV453226T-221 □ -N	220	1MHz/0.796MHz	40	4.5	5.4	0.11	J,K,M
SQV453226T-271 □ -N	270	1MHz/0.796MHz	40	4	6.8	0.1	J,K,M
SQV453226T-331 □ -N	330	1MHz/0.796MHz	40	3.6	8.2	0.095	J,K,M
SQV453226T-391 □ -N	390	1MHz/0.796MHz	40	3.3	9.7	0.09	J,K,M
SQV453226T-471 □ -N	470	1KHz/0.796MHz	40	3	11.8	0.08	J,K,M
SQV453226T-561 □ -N	560	1KHz/0.796MHz	40	2.7	14.5	0.07	J,K,M
SQV453226T-681 □ -N	680	1KHz/0.796MHz	40	2.5	17.5	0.065	J,K,M
SQV453226T-821 □ -N	820	1KHz/0.796MHz	40	2.2	20.5	0.06	J,K,M
SQV453226T-102 □ -N	1000	1KHz/0.252MHz	40	2	25	0.05	J,K,M
SQV453226T-122 □ -N	1200	1KHz/0.252MHz	40	1.8	30	0.045	J,K,M
SQV453226T-152 □ -N	1500	1KHz/0.252MHz	40	1.6	37	0.04	J,K,M
SQV453226T-182 □ -N	1800	1KHz/0.252MHz	40	1.5	45	0.035	J,K,M
SQV453226T-222 □ -N	2200	1KHz/0.252MHz	40	1.3	50	0.03	J,K,M

NOTE: □-tolerance J= $\pm 5\%$ / K= $\pm 10\%$ / M= $\pm 20\%$

1. Operating temperature range -25°C~85°C

2. Rated Current: Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.

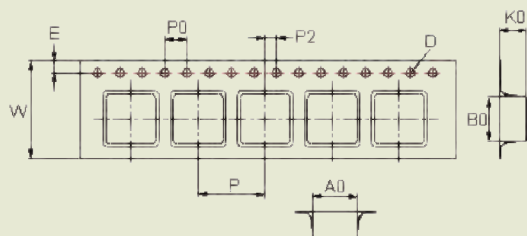
3. L/Q Test OSC @1V

"-N" FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)



TAPE DIMENSIONS

Dimensions : mm

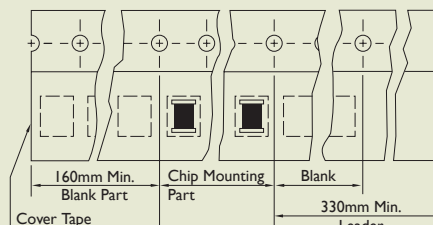


TAPE MATERIAL

Dimensions : mm

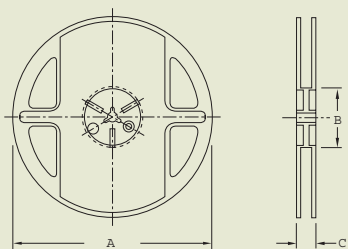
Carrier Tape : Polystyrene

Cover Type : Polyethylene



REEL DIMENSIONS

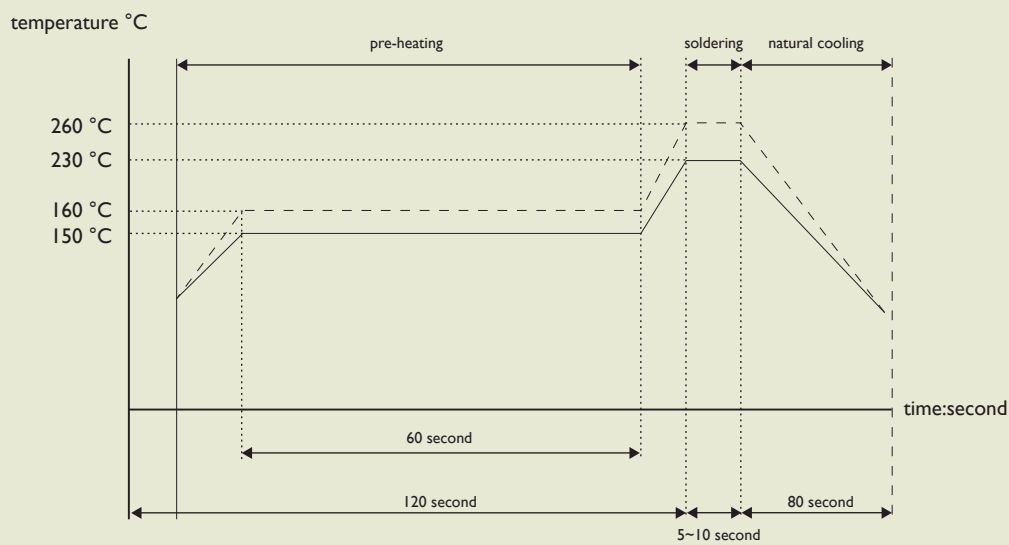
Dimensions : mm



TYPE	TAPE DIMENSIONS									REEL DIMENSIONS				QUANTITY
	A0	B0	K0	D	E	W	P	P0	P2	A	B	C	D	PCS/REEL
SQV322520	2.90	3.60	2.25	1.5	1.75	8	4	4	2	178	60	9	1.5	2000
SQV453226	3.60	4.90	3.00	1.5	1.75	12	8	4	2	178	60	13.2	1.5	500

RECOMMEND SOLDERING CONDITIONS

for:CL/ CLH/ SQV/ SMD power inductors/ SMD Chip Beads/ SMD Filters,Transformers, Current Sensors



for: lead solder —————

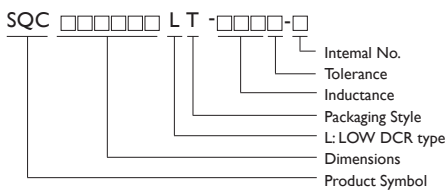
for: lead-free solder

High Current and Low DC Resistance



SQC □ □ □ □ □ □ - □ □ □ □ - □

Internal No.
Tolerance
Inductance
Packaging Style
Dimensions
Product Symbol



- SQC_LT : Low DCR Type

Note : SQC Series inductors with lead-free terminals which meet SONY SS-00259's criteria for lead-free product in Q2 of 2006 and internal No. will be change to "N" as identification. EX. SQC321618T-R12□ -N

Available in 4 sizes.

A	B	C	D
1.5	4.5	1.75	1.0

TYPE	A	B	C	D	E
SQC322520	5.5	1.0	1.3	1.0	2.0
SQC423556	7.5	1.5	1.5	1.5	3.0

A	B	C	D
8.0	3.0	2.0	3.5

TYPE	A	B	C	D	E
SQC321618	3.2 ± 0.3	1.6 ± 0.2	1.8 ± 0.2	0.7Min.	2.3±0.2
SQC322520	3.2 ± 0.3	2.5 ± 0.2	2.0 ± 0.2	1.3TYP.	2.5±0.2
SQC453226	4.5 ± 0.3	3.2 ± 0.2	2.6 ± 0.2	1.0Min.	3.6±0.2
SQC575047	5.7 ± 0.3	5.0 ± 0.3	4.7 ± 0.3	1.7Min.	5.0±0.3



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H)	TOLERANCE (%)	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
SQC321618T-R12 □ -S	0.12	20	I	250	0.112	970
SQC321618T-R22 □ -S	0.22	20	I	250	0.140	850
SQC321618T-R47 □ -S	0.47	20	I	180	0.210	700
SQC321618T-1R0 □ -S	1.0	20	I	100	0.364	510
SQC321618T-2R2 □ -S	2.2	20	I	50	0.533	430
SQC321618T-4R7 □ -S	4.7	10/20	I	31	0.845	340
SQC321618T-100 □ -S	10	5/10	I	20	1.690	230
SQC321618T-220 □ -S	22	5/10	I	14	3.900	160
SQC321618T-470 □ -S	47	5/10	I	10	10.40	100
SQC321618T-101 □ -S	100	5/10	I	7	15.60	80

- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Test Equipment : L : HP4192A. LF Impedance Analyzer
SRF : HP4291A RF Impedance Analyzer
DCR : CHEN HWA 502 BC

ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H)	TOLERANCE (%)	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
SQC322520T-1R0 □ -S	1.0	20	I	96	0.09	1000
SQC322520T-2R2 □ -S	2.2	20	I	64	0.13	600
SQC322520T-4R7 □ -S	4.7	20	I	43	0.20	450
SQC322520T-100 □ -S	10	20	I	26	0.44	300
SQC322520T-220 □ -S	22	10/20	I	19	0.71	250
SQC322520T-470 □ -S	47	10/20	I	15	1.30	170
SQC322520T-101 □ -S	100	10/20	I	10	3.50	100
SQC322520T-221 □ -S	220	10/20	I	6.8	8.40	70
SQC322520T-331 □ -S	330	10/20	I	5.6	10.0	60
SQC322520T-391 □ -S	390	10/20	I	5.0	17.0	60
SQC322520T-471 □ -S	470	10/20	0.001	5.0	19.0	60
SQC322520T-561 □ -S	560	10/20	0.001	5.0	22.0	60

- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Inductance tolerance : J=±5% K=±10% M=±20%
- Test Equipment : L : HP4192A. LF Impedance Analyzer
SRF : HP4291A RF Impedance Analyzer
DCR : CHEN HWA 502 BC



ELECTRICAL CHARACTERISTICS (LOW DCR TYPE)

PART NO.	INDUCTANCE (μ H)	TOLERANCE (%)	TEST FREQUENCY (MHz)	DC RESISTANCE (Ω) Max.	SRF (MHz) Min.	RATED CURRENT (mA) Max.
SQC322520LT-R15 □ -S	0.15	20	I	0.028	400	1450
SQC322520LT-R27 □ -S	0.27	20	I	0.034	250	1250
SQC322520LT-R47 □ -S	0.47	20	I	0.042	150	1100
SQC322520LT-1R0 □ -S	1.0	20	I	0.060	100	1000
SQC322520LT-2R2 □ -S	2.2	20	I	0.097	64	790
SQC322520LT-4R7 □ -S	4.7	20	I	0.15	43	650
SQC322520LT-100 □ -S	10	10/20	I	0.30	26	450

- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Test Equipment : L : HP4192A, LF Impedance Analyzer
SRF : HP4292A LF Impedance Analyzer
DCR : CHEN HWA 502 BC

ELECTRICAL CHARACTERISTICS : LEAD FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (A) Max.	TOLERANCE
SQC321618T-R12 □ -N	0.12	IV 1MHz	250	0.112+0	0.97	M
SQC321618T-R22 □ -N	0.22	IV 1MHz	250	0.140+0	0.85	M
SQC321618T-R47 □ -N	0.47	IV 1MHz	180	0.210+0	0.7	M
SQC321618T-1R0 □ -N	1	IV 1MHz	100	0.364+0	0.51	M
SQC321618T-2R2 □ -N	2.2	IV 1MHz	50	0.533+0	0.43	K,M
SQC321618T-4R7 □ -N	4.7	IV 1MHz	31	0.845+0	0.34	J,K,M
SQC321618T-100 □ -N	10	IV 1MHz	20	1.69+0	0.23	J,K,M
SQC321618T-220 □ -N	22	IV 1MHz	14	3.90+0	0.16	J,K,M
SQC321618T-470 □ -N	47	IV 1MHz	10	10.4+0	0.1	J,K,M
SQC321618T-101 □ -N	100	IV 1MHz	7	15.6+0	0.08	J,K,M
SQC322520T-1R0 □ -N	1	0.1V 1MHz	96	0.09±30%	1	M
SQC322520T-2R2 □ -N	2.2	0.1V 1MHz	64	0.13±30%	0.6	M
SQC322520T-3R3 □ -N	3.3	0.1V 1MHz	60	0.15±30%	0.6	K,M
SQC322520T-3R9 □ -N	3.9	0.1V 1MHz	50	0.16±30%	0.5	M
SQC322520T-4R7 □ -N	4.7	0.1V 1MHz	43	0.20±30%	0.45	M
SQC322520T-6R8 □ -N	6.8	0.1V 1MHz	30	0.26±30%	0.4	M
SQC322520T-100 □ -N	10	0.1V 1MHz	26	0.44±30%	0.3	K,M
SQC322520T-220 □ -N	22	0.1V 1MHz	19	0.71±30%	0.25	K,M
SQC322520T-330 □ -N	33	0.1V 1MHz	15	1.1±30%	0.2	K,M
SQC322520T-470 □ -N	47	0.1V 1MHz	15	1.30±30%	0.17	K,M
SQC322520T-560 □ -N	56	0.1V 1MHz	12	2.30±30%	0.15	K,M
SQC322520T-101 □ -N	100	0.1V 1MHz	10	3.50±30%	0.1	K,M
SQC322520T-221 □ -N	220	0.1V 1MHz	6.8	8.40±30%	0.07	K,M
SQC322520T-331 □ -N	330	0.1V 1MHz	5.6	10±30%	0.06	K,M
SQC322520T-391 □ -N	390	0.1V 1MHz	5	17±30%	0.06	K,M
SQC322520T-471 □ -N	470	0.1V 1KHz	5	19±30%	0.06	K,M
SQC322520T-561 □ -N	560	0.1V 1KHz	5	22±30%	0.06	K,M

NOTE : □ -tolerance J±5% / K=±10% / M=±20%

1. Operating temperature range -25°C~85°C

2. Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.

“-N” FOR COMPLETELY LEAD TYPE (INCLUDING FERRITE BODY & SOLDER)



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H)	TOLERANCE (%)	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
SQC453226T-1R0 □ -S	1.0	20	1	100	0.08	1080
SQC453226T-1R5 □ -S	1.5	20	1	85	0.09	1000
SQC453226T-2R2 □ -S	2.2	20	1	60	0.11	900
SQC453226T-3R3 □ -S	3.3	20	1	47	0.13	800
SQC453226T-4R7 □ -S	4.7	10/20	1	35	0.15	750
SQC453226T-6R8 □ -S	6.8	10/20	1	30	0.20	720
SQC453226T-100 □ -S	10	5/10	1	23	0.24	650
SQC453226T-150 □ -S	15	5/10	1	20	0.32	570
SQC453226T-220 □ -S	22	5/10	1	15	0.60	420
SQC453226T-330 □ -S	33	5/10	1	12	1.0	310
SQC453226T-470 □ -S	47	5/10	1	10	1.1	280
SQC453226T-680 □ -S	68	5/10	1	8.4	1.7	220
SQC453226T-101 □ -S	100	5/10	1	6.8	2.2	190
SQC453226T-151 □ -S	150	5/10	1	5.5	3.5	130
SQC453226T-221 □ -S	220	5/10	1	4.5	4.0	110
SQC453226T-331 □ -S	330	5/10	1	3.6	6.8	100
SQC453226T-471 □ -S	470	5/10	0.001	3.0	8.5	90

- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Test Equipment : L : HP4192A. LF Impedance Analyzer
SRF : HP4291A RF Impedance Analyzer
DCR : CHEN HWA 502 BC

ELECTRICAL CHARACTERISTICS : LEAD FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC resistance (Ω) Max.	RATED Current (A) Max.	TOLERANCE
SQC453226T-1R0 □ -N	1	1V 1MHz	100	0.08+0	1.08	M
SQC453226T-1R5 □ -N	1.5	1V 1MHz	85	0.09+0	1	M
SQC453226T-2R2 □ -N	2.2	1V 1MHz	60	0.11+0	0.9	M
SQC453226T-3R3 □ -N	3.3	1V 1MHz	47	0.13+0	0.8	M
SQC453226T-4R7 □ -N	4.7	1V 1MHz	35	0.15+0	0.75	K,M
SQC453226T-6R8 □ -N	6.8	1V 1MHz	30	0.20+0	0.75	K,M
SQC453226T-100 □ -N	10	1V 1MHz	23	0.24+0	0.65	J,K,M
SQC453226T-150 □ -N	15	1V 1MHz	20	0.32+0	0.57	J,K,M
SQC453226T-220 □ -N	22	1V 1MHz	15	0.60+0	0.42	J,K,M
SQC453226T-330 □ -N	33	1V 1MHz	12	1.00+0	0.31	J,K,M
SQC453226T-470 □ -N	47	1V 1MHz	10	1.10+0	0.28	J,K,M
SQC453226T-680 □ -N	68	1V 1MHz	8.4	1.70+0	0.22	J,K,M
SQC453226T-101 □ -N	100	1V 1MHz	6.8	2.20+0	0.19	J,K,M
SQC453226T-151 □ -N	150	1V 1MHz	5.5	3.50+0	0.13	J,K,M
SQC453226T-221 □ -N	220	1V 1MHz	4.5	4.00+0	0.11	J,K,M
SQC453226T-331 □ -N	330	1V 1MHz	3.6	6.80+0	0.1	J,K,M
SQC453226T-471 □ -N	470	1V 1MHz	3	8.50+0	0.09	J,K,M

NOTE : □ -tolerance J $\pm$ 5% / K $\pm$ 10% / M $\pm$ 20%

1. Operating temperature range -25°C~85°C

2. Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.

“-N” FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm\%$)	TEST FREQUENCY	DC RESISTANCE (Ω) Max.	SRF (MHz) Min.	Rated Current (mA) Max.
SQC575047T-R12□-S	0.12	20	1MHz	0.0098	450	6000
SQC575047T-R27□-S	0.27	20	1MHz	0.0140	300	5300
SQC575047T-R47□-S	0.47	20	1MHz	0.0182	200	4800
SQC575047T-1R0□-S	1.0	20	1MHz	0.0270	150	4000
SQC575047T-1R5□-S	1.5	20	1MHz	0.0310	110	3700
SQC575047T-2R2□-S	2.2	20	1MHz	0.0410	80	3200
SQC575047T-3R3□-S	3.3	20	1MHz	0.0500	40	2900
SQC575047T-4R7□-S	4.7	20	1MHz	0.0574	30	2700
SQC575047T-6R8□-S	6.8	20	1MHz	0.1040	25	2000
SQC575047T-100□-S	10	10/20	1MHz	0.1300	20	1700
SQC575047T-150□-S	15	10/20	1MHz	0.210	17	1400
SQC575047T-220□-S	22	10/20	1MHz	0.266	15	1200
SQC575047T-330□-S	33	10/20	1MHz	0.448	12	900
SQC575047T-470□-S	47	10/20	1MHz	0.560	10	800
SQC575047T-680□-S	68	10/20	100kHz	0.938	7.6	640
SQC575047T-101□-S	100	10/20	100kHz	1.204	6.5	560
SQC575047T-151□-S	150	10/20	100kHz	2.660	5.0	420
SQC575047T-221□-S	220	10/20	100kHz	3.360	4.0	320
SQC575047T-331□-S	330	10/20	100kHz	6.160	3.1	270
SQC575047T-471□-S	470	10/20	100kHz	7.560	2.4	240
SQC575047T-681□-S	680	10/20	100kHz	11.34	1.9	190
SQC575047T-102□-S	1000	10/20	10kHz	14.42	1.7	150
SQC575047T-222□-S	2200	10/20	10kHz	30.10	1.2	100
SQC575047T-472□-S	4700	10/20	10kHz	61.04	0.8	70
SQC575047T-103□-S	10000	10/20	10kHz	140.0	0.5	50

- Inductance Range : 0.12 μ H to 10000 μ H.
- Rated Current : Self temperature rise shall be limited to 35°C Max. Inductance drop 10% typ.
- Operating temp : -25°C~85°C
- Soldering Heat : 230°C 10 sec after 150°C preheat cycle for 4 min.
- Inductance tolerance : J=±5% K=±10% M=±20%
- Test Equipment : L : HP4192A, LF Impedance Analyzer
SRF : HP4291A RF Impedance Analyzer
DCR : CHEN HWA 502 BC



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQ	SRF (MHz) Min.	RDC (Ω) Max.	Rated Current (mA) Max.	TOLERANCE
SQC575047T-R12 ☐ -N	0.12	IV 1MHz	450	0.0980	6000	M
SQC575047T-R27 ☐ -N	0.27	IV 1MHz	300	0.0140	5300	M
SQC575047T-R47 ☐ -N	0.47	IV 1MHz	200	0.0182	4800	M
SQC575047T-1R0 ☐ -N	1.00	IV 1MHz	150	0.0270	4000	M
SQC575047T-1R5 ☐ -N	1.5	IV 1MHz	110	0.0310	3700	M
SQC575047T-2R2 ☐ -N	2.2	IV 1MHz	80	0.0410	3200	M
SQC575047T-3R3 ☐ -N	3.3	IV 1MHz	40	0.0500	2900	M
SQC575047T-4R7 ☐ -N	4.7	IV 1MHz	30	0.0574	2700	M
SQC575047T-6R8 ☐ -N	6.8	IV 1MHz	25	0.1040	2000	M
SQC575047T-100 ☐ -N	10	IV 1MHz	20	0.1300	1700	K,M
SQC575047T-150 ☐ -N	15	IV 1MHz	17	0.210	1400	K,M
SQC575047T-220 ☐ -N	22	IV 1MHz	15	0.266	1200	K,M
SQC575047T-330 ☐ -N	33	IV 1MHz	12	0.448	900	K,M
SQC575047T-470 ☐ -N	47	IV 1MHz	10	0.560	800	K,M
SQC575047T-680 ☐ -N	68	IV 1MHz	7.6	0.938	640	K,M
SQC575047T-101 ☐ -N	100	IV 100KHz	6.5	1.204	560	K,M
SQC575047T-151 ☐ -N	150	IV 100KHz	5	2.660	420	K,M
SQC575047T-221 ☐ -N	220	IV 100KHz	4	3.360	320	K,M
SQC575047T-331 ☐ -N	330	IV 100KHz	3.1	6.160	270	K,M
SQC575047T-471 ☐ -N	470	IV 100KHz	2.4	7.560	240	K,M
SQC575047T-681 ☐ -N	680	IV 100KHz	1.9	11.34	190	K,M
SQC575047T-102 ☐ -N	1000	IV 10KHz	1.7	14.42	150	K,M
SQC575047T-222 ☐ -N	2200	IV 10KHz	1.2	30.10	100	K,M
SQC575047T-472 ☐ -N	4700	IV 10KHz	0.8	61.04	70	K,M
SQC575047T-103 ☐ -N	10000	IV 10KHz	0.5	140.0	50	K,M

NOTE: ☐ -tolerance K= $\pm 10\%$ / M= $\pm 20\%$

1. Operating temperature range -25°C~85°C

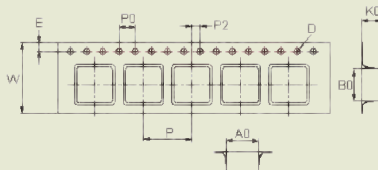
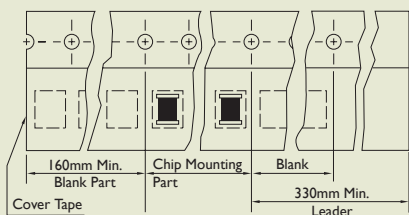
2. Rated Current: Self temperature rise shall be limited to 20°C Max. Inductance drop 10% typ. at last

"-N" FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)

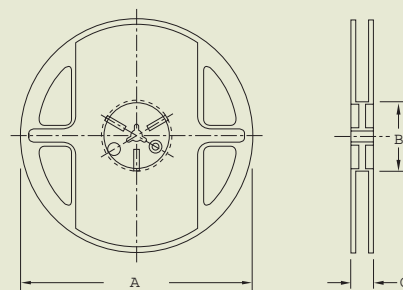
TAPE MATERIAL

Carrier Tape : Polystyrene

Cover Type : Polyethylene



REEL DIMENSIONS



Dimensions : mm

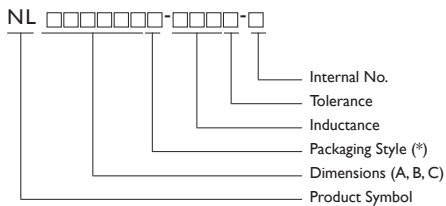
TYPE	TAPE DIMENSIONS							REEL DIMENSIONS						QUANTITY
	A0	B0	K0	D	E	W	P	P0	P2	A	B	C	D	/REEL
SQC321618	1.88	3.53	2.10	1.5	1.75	8	4	4	2	178	60	9	1.5	2000
SQC322520	2.90	3.60	2.25	1.5	1.75	8	4	4	2	178	60	9	1.5	2000
SQC453226	3.60	4.90	3.00	1.5	1.75	12	8	4	2	178	60	13.2	1.5	500
SQC575047	5.4	6.0	5.5	1.5	1.75	16	12	12	2	330	100	17	1.5	1000

Wound Chip Inductors

NL Series



PRODUCT IDENTIFICATION

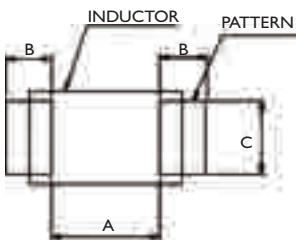


*T: Tape and Reel ; B: Bulk

- Tolerance : J = $\pm 5\%$; K = $\pm 10\%$
- YAGEO will start to release lead-free that meet SONY SS-00259's criteria, and Internal No. will be changed to "N" as identification.
Ex. NL322522T-R10K-N

RECOMMENDED PATTERN

Dimensions : mm



TYPE	A	B	C
NL322522	1.6	1.2	2.0
NL453232	3.0	1.5	2.8
NL565050	4.0	2.0	4.5

APPLICATIONS

Microtelevisions, liquid crystal televisions, video cameras, portable VCRs, car radios, car stereos, thin tape radios, television tuners, mobile telephones, radio and other electronic devices.

OUTLINE

These revolutionary, highly reliable wound chip inductors for automatic mounting have been developed in response to the trend toward high density in electronic equipment.

FEATURES

Very strong solderability by reflow soldering, soldering iron or wave soldering.

Highly accurate dimensions can be mounted automatically.

Terminals are highly resistant to pull forces.

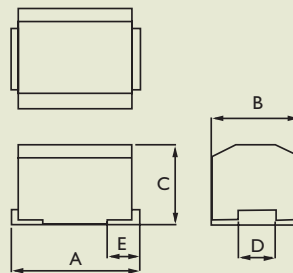
Highly resistant to mechanical shocks and pressure.

Highly reliable in environments of sudden temperature change and humidity.

Superior Q characteristics and the broadest L selections among peers

SHAPES AND DIMENSIONS

Dimensions : mm



TYPE	A	B	C	D	E
NL322522	3.2 ± 0.2	2.5 ± 0.2	2.2 ± 0.2	1.2 ± 0.4	0.6 ± 0.1
NL453232	4.5 ± 0.3	3.2 ± 0.3	3.2 ± 0.3	1.4 ± 0.4	0.9 ± 0.2
NL565050	5.6 ± 0.3	5.0 ± 0.3	5.0 ± 0.3	1.8 ± 0.3	1.3 ± 0.2



ELECTRICAL CHARACTERISTICS NL322522 SERIES

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm\%$)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
NL322522T-010K-S	0.010	10	15	100	2500	0.13	450
NL322522T-012K-S	0.012	10	17	100	2300	0.14	450
NL322522T-015K-S	0.015	10	19	100	2100	0.16	450
NL322522T-018K-S	0.018	10	21	100	1900	0.18	450
NL322522T-022K-S	0.022	10	23	100	1700	0.20	450
NL322522T-027K-S	0.027	10	23	100	1500	0.22	450
NL322522T-033K-S	0.033	10	25	100	1400	0.24	450
NL322522T-039K-S	0.039	10	25	100	1300	0.27	450
NL322522T-047K-S	0.047	10	26	100	1200	0.30	450
NL322522T-056K-S	0.056	10	26	100	1100	0.33	450
NL322522T-068K-S	0.068	10	27	100	1000	0.36	450
NL322522T-082K-S	0.082	10	27	100	900	0.40	450
NL322522T-R10K-S	0.10	10	28	100	700	0.44	450
NL322522T-R12K-S	0.12	10	30	25.20	500	0.22	450
NL322522T-R15K-S	0.15	10	30	25.20	450	0.25	450
NL322522T-R18K-S	0.18	10	30	25.20	400	0.28	450
NL322522T-R22K-S	0.22	10	30	25.20	350	0.32	450
NL322522T-R27K-S	0.27	10	30	25.20	320	0.36	450
NL322522T-R33K-S	0.33	10	30	25.20	300	0.40	450
NL322522T-R39K-S	0.39	10	30	25.20	250	0.45	450
NL322522T-R47K-S	0.47	10	30	25.20	220	0.50	450
NL322522T-R56K-S	0.56	10	30	25.20	180	0.55	450
NL322522T-R68K-S	0.68	10	30	25.20	160	0.60	450
NL322522T-R82K-S	0.82	10	30	25.20	140	0.65	450
NL322522T-1R0K-S	1.00	10	30	7.960	90	0.70	400
NL322522T-1R2K-S	1.20	10	30	7.960	85	0.75	390
NL322522T-1R5K-S	1.50	10	30	7.960	70	0.85	370
NL322522T-1R8K-S	1.80	10	30	7.960	60	0.90	350
NL322522T-2R2K-S	2.20	10	30	7.960	50	1.00	320
NL322522T-2R7K-S	2.70	10	30	7.960	45	1.10	290
NL322522T-3R3K-S	3.30	10	30	7.960	40	1.20	260
NL322522T-3R9K-S	3.90	10	30	7.960	37	1.30	250



ELECTRICAL CHARACTERISTICS NL322522 SERIES

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm\%$)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
NL322522T-4R7K-S	4.70	10	30	7.960	32	1.50	220
NL322522T-5R6K-S	5.60	10	30	7.960	30	1.60	200
NL322522T-6R8K-S	6.80	10	30	7.960	28	1.80	180
NL322522T-8R2K-S	8.20	10	30	7.960	25	2.00	170
NL322522T-100K-S	10	10	30	2.520	23	2.10	150
NL322522T-120K-S	12	10	30	2.520	20	2.50	140
NL322522T-150K-S	15	10	30	2.520	19	2.80	130
NL322522T-180K-S	18	10	30	2.520	17	3.30	120
NL322522T-220K-S	22	10	30	2.520	16	3.70	110
NL322522T-270K-S	27	10	30	2.520	14	5.00	80
NL322522T-330K-S	33	10	30	2.520	13	5.60	70
NL322522T-390K-S	39	10	30	2.520	12	6.40	65
NL322522T-470K-S	47	10	30	2.520	10	7.00	60
NL322522T-560K-S	56	10	30	2.520	9	8.00	55
NL322522T-680K-S	68	10	30	2.520	9	9.00	50
NL322522T-820K-S	82	10	30	2.520	8	10.0	45
NL322522T-101K-S	100	10	20	0.796	7	10.0	40
NL322522T-121K-S	120	10	20	0.796	7	11.0	70
NL322522T-151K-S	150	10	20	0.796	6	15.0	65
NL322522T-181K-S	180	10	20	0.796	6	17.0	60
NL322522T-221K-S	220	10	20	0.796	5	21.0	50
NL322522T-271K-S	270	10	20	0.796	6	22.0	45
NL322522T-331K-S	330	10	20	0.796	5	34.0	40

• S R F : HP4291A

• RDC : CH502BC / HP4338B

• IDC : HP4284A + HP42841A

• L/Q : HP4287A(0.10 μ H MAX)

• L / Q : HP4285A + HP16034E (0.12 μ H MIN)

• IDC: Δ L / L : -10%



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQ (MHz)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE ($\pm$ %)
NL322522T-010 □ -N	0.01	100	15	2500	0.13	450	10
NL322522T-012 □ -N	0.012	100	17	2300	0.14	450	10
NL322522T-015 □ -N	0.015	100	19	2100	0.16	450	10
NL322522T-018 □ -N	0.018	100	21	1900	0.18	450	10
NL322522T-022 □ -N	0.022	100	23	1700	0.2	450	10
NL322522T-027 □ -N	0.027	100	23	1500	0.22	450	10
NL322522T-033 □ -N	0.033	100	25	1400	0.24	450	10
NL322522T-039 □ -N	0.039	100	25	1300	0.27	450	10
NL322522T-047 □ -N	0.047	100	26	1200	0.3	450	10
NL322522T-056 □ -N	0.056	100	26	1100	0.33	450	10
NL322522T-068 □ -N	0.068	100	27	1000	0.36	450	10
NL322522T-082 □ -N	0.082	100	27	900	0.4	450	10
NL322522T-R10 □ -N	0.1	100	28	700	0.44	450	5,10,20
NL322522T-R12 □ -N	0.12	25.2	30	500	0.22	450	5,10,20
NL322522T-R15 □ -N	0.15	25.2	30	450	0.25	450	5,10,20
NL322522T-R18 □ -N	0.18	25.2	30	400	0.28	450	5,10,20
NL322522T-R22 □ -N	0.22	25.2	30	350	0.32	450	5,10,20
NL322522T-R27 □ -N	0.27	25.2	30	320	0.36	450	5,10,20
NL322522T-R33 □ -N	0.33	25.2	30	300	0.4	450	5,10,20
NL322522T-R39 □ -N	0.39	25.2	30	250	0.45	450	5,10,20
NL322522T-R47 □ -N	0.47	25.2	30	220	0.5	450	5,10,20
NL322522T-R56 □ -N	0.56	25.2	30	180	0.55	450	5,10,20
NL322522T-R68 □ -N	0.68	25.2	30	160	0.6	450	5,10,20
NL322522T-R82 □ -N	0.82	25.2	30	140	0.65	450	5,10,20
NL322522T-IR0 □ -N	1	7.96	30	90	0.7	400	5,10
NL322522T-IR2 □ -N	1.2	7.96	30	85	0.75	390	5,10
NL322522T-IR5 □ -N	1.5	7.96	30	70	0.85	370	5,10
NL322522T-IR8 □ -N	1.8	7.96	30	60	0.9	350	5,10
NL322522T-2R2 □ -N	2.2	7.96	30	50	1	320	5,10
NL322522T-2R7 □ -N	2.7	7.96	30	45	1.1	290	5,10
NL322522T-3R3 □ -N	3.3	7.96	30	40	1.2	260	5,10
NL322522T-3R9 □ -N	3.9	7.96	30	37	1.3	250	5,10
NL322522T-4R7 □ -N	4.7	7.96	30	32	1.5	220	5,10
NL322522T-5R6 □ -N	5.6	7.96	30	30	1.6	200	5,10
NL322522T-6R8 □ -N	6.8	7.96	30	28	1.8	180	5,10
NL322522T-8R2 □ -N	8.2	7.96	30	25	2	170	5,10
NL322522T-100 □ -N	10	2.52	30	23	2.1	150	5,10
NL322522T-120 □ -N	12	2.52	30	20	2.5	140	5,10
NL322522T-150 □ -N	15	2.52	30	19	2.8	130	5,10
NL322522T-180 □ -N	18	2.52	30	17	3.3	120	5,10
NL322522T-220 □ -N	22	2.52	30	16	3.7	110	5,10
NL322522T-270 □ -N	27	2.52	30	14	5	80	5,10
NL322522T-330 □ -N	33	2.52	30	13	5.6	70	5,10
NL322522T-390 □ -N	39	2.52	30	12	6.4	65	5,10
NL322522T-470 □ -N	47	2.52	30	10	7	60	5,10
NL322522T-560 □ -N	56	2.52	30	9	8	55	5,10
NL322522T-680 □ -N	68	2.52	30	9	9	50	5,10
NL322522T-820 □ -N	82	2.52	30	8	10	45	5,10
NL322522T-101 □ -N	100	0.796	20	7	10	40	5,10
NL322522T-121 □ -N	120	0.796	20	7	11	70	5,10
NL322522T-151 □ -N	150	0.796	20	6	15	65	5,10
NL322522T-181 □ -N	180	0.796	20	6	17	60	5,10
NL322522T-221 □ -N	220	0.796	20	5	21	50	5,10
NL322522T-271 □ -N	270	0.796	20	6	22	45	5,10
NL322522T-331 □ -N	330	0.796	20	5	34	40	5,10

NOTE: □-tolerance J= $\pm$ 5% / K= $\pm$ 10% / M= $\pm$ 20%

1. Operating temperature range -25°C~85°C

2. IDC: Applied the current to coils, the inductance shall be less than 10% initial value.

3. L, Q (010~R10) Test OSC@502mV / L, Q (R10~331) Test OSC@1V

"-N" FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)



ELECTRICAL CHARACTERISTICS NL453232 SERIES

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm\%$)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
NL453232T-R10M-S	0.10	20	28	25.20	700	0.44	450
NL453232T-R12M-S	0.12	20	30	25.20	500	0.22	450
NL453232T-R15M-S	0.15	20	30	25.20	450	0.25	450
NL453232T-R18M-S	0.18	20	30	25.20	400	0.28	450
NL453232T-R22M-S	0.22	20	30	25.20	350	0.32	450
NL453232T-R27M-S	0.27	20	30	25.20	320	0.36	450
NL453232T-R33M-S	0.33	20	30	25.20	300	0.40	450
NL453232T-R39M-S	0.39	20	30	25.20	250	0.45	450
NL453232T-R47M-S	0.47	20	30	25.20	220	0.50	450
NL453232T-R56M-S	0.56	20	30	25.20	180	0.55	450
NL453232T-R68M-S	0.68	20	30	25.20	160	0.60	450
NL453232T-R82M-S	0.82	20	30	25.20	140	0.67	450
NL453232T-1R0K-S	1.00	10	50	7.960	100	0.50	450
NL453232T-1R2K-S	1.20	10	50	7.960	80	0.55	430
NL453232T-1R5K-S	1.50	10	50	7.960	70	0.60	410
NL453232T-1R8K-S	1.80	10	50	7.960	60	0.65	390
NL453232T-2R2K-S	2.20	10	50	7.960	55	0.70	380
NL453232T-2R7K-S	2.70	10	50	7.960	50	0.75	370
NL453232T-3R3K-S	3.30	10	50	7.960	45	0.80	355
NL453232T-3R9K-S	3.90	10	50	7.960	40	0.90	330
NL453232T-4R7K-S	4.70	10	50	7.960	35	1.00	315
NL453232T-5R6K-S	5.60	10	50	7.960	33	1.10	300
NL453232T-6R8K-S	6.80	10	50	7.960	27	1.20	285
NL453232T-8R2K-S	8.20	10	50	7.960	25	1.40	270
NL453232T-100K-S	10	10	50	2.520	20	1.60	250
NL453232T-120K-S	12	10	50	2.520	18	2.00	225
NL453232T-150K-S	15	10	50	2.520	17	2.50	200
NL453232T-180K-S	18	10	50	2.520	15	2.80	190
NL453232T-220K-S	22	10	50	2.520	13	3.20	180
NL453232T-270K-S	27	10	50	2.520	12	3.60	170
NL453232T-330K-S	33	10	50	2.520	11	4.00	160
NL453232T-390K-S	39	10	50	2.520	10	4.50	150
NL453232T-470K-S	47	10	50	2.520	10	5.00	140
NL453232T-560K-S	56	10	50	2.520	9	5.50	135
NL453232T-680K-S	68	10	50	2.520	9	6.00	130
NL453232T-820K-S	82	10	50	2.520	8	7.00	120
NL453232T-101K-S	100	10	40	0.796	8	8.00	110
NL453232T-121K-S	120	10	40	0.796	6	8.00	110
NL453232T-151K-S	150	10	40	0.796	5	9.00	105
NL453232T-181K-S	180	10	40	0.796	5	9.50	102
NL453232T-221K-S	220	10	40	0.796	4	12.00	100
NL453232T-271K-S	270	10	30	0.796	4	18.00	92
NL453232T-331K-S	330	10	30	0.796	3.5	20.00	85
NL453232T-391K-S	390	10	30	0.796	3	23.00	80
NL453232T-471K-S	470	10	30	0.796	3	26.00	62
NL453232T-561K-S	560	10	30	0.796	3	30.00	50
NL453232T-681K-S	680	10	30	0.796	3	40.00	50
NL453232T-821K-S	820	10	30	0.796	2.5	45.00	30
NL453232T-102K-S	1000	10	30	0.796	2.5	50.00	30



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQ (MHz)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE ($\pm$ %)
NL453232T-R10 □ -N	0.1	25.2	28	700	0.44	450	5,10,20
NL453232T-R12 □ -N	0.12	25.2	30	500	0.22	450	5,10,20
NL453232T-R15 □ -N	0.15	25.2	30	450	0.25	450	5,10,20
NL453232T-R18 □ -N	0.18	25.2	30	400	0.28	450	5,10,20
NL453232T-R22 □ -N	0.22	25.2	30	350	0.32	450	5,10,20
NL453232T-R27 □ -N	0.27	25.2	30	320	0.36	450	5,10,20
NL453232T-R33 □ -N	0.33	25.2	30	300	0.4	450	5,10,20
NL453232T-R39 □ -N	0.39	25.2	30	250	0.45	450	5,10,20
NL453232T-R47 □ -N	0.47	25.2	30	220	0.5	450	5,10,20
NL453232T-R56 □ -N	0.56	25.2	30	180	0.55	450	5,10,20
NL453232T-R68 □ -N	0.68	25.2	30	160	0.6	450	5,10,20
NL453232T-R82 □ -N	0.82	25.2	30	140	0.67	450	5,10,20
NL453232T-IR0 □ -N	1	7.96	50	100	0.5	450	5,10
NL453232T-IR2 □ -N	1.2	7.96	50	80	0.55	430	5,10
NL453232T-IR5 □ -N	1.5	7.96	50	70	0.6	410	5,10
NL453232T-IR8 □ -N	1.8	7.96	50	60	0.65	390	5,10
NL453232T-2R2 □ -N	2.2	7.96	50	55	0.7	380	5,10
NL453232T-2R7 □ -N	2.7	7.96	50	50	0.75	370	5,10
NL453232T-3R3 □ -N	3.3	7.96	50	45	0.8	355	5,10
NL453232T-3R9 □ -N	3.9	7.96	50	40	0.9	330	5,10
NL453232T-4R7 □ -N	4.7	7.96	50	35	1	315	5,10
NL453232T-5R6 □ -N	5.6	7.96	50	33	1.1	300	5,10
NL453232T-6R8 □ -N	6.8	7.96	50	27	1.2	285	5,10
NL453232T-8R2 □ -N	8.2	7.96	50	25	1.4	270	5,10
NL453232T-100 □ -N	10	2.52	50	20	1.6	250	5,10
NL453232T-120 □ -N	12	2.52	50	18	2	225	5,10
NL453232T-150 □ -N	15	2.52	50	17	2.5	200	5,10
NL453232T-180 □ -N	18	2.52	50	15	2.8	190	5,10
NL453232T-220 □ -N	22	2.52	50	13	3.2	180	5,10
NL453232T-270 □ -N	27	2.52	50	12	3.6	170	5,10
NL453232T-330 □ -N	33	2.52	50	11	4	160	5,10
NL453232T-390 □ -N	39	2.52	50	10	4.5	150	5,10
NL453232T-470 □ -N	47	2.52	50	10	5	140	5,10
NL453232T-560 □ -N	56	2.52	50	9	5.5	135	5,10
NL453232T-680 □ -N	68	2.52	50	9	6	130	5,10
NL453232T-820 □ -N	82	2.52	50	8	7	120	5,10
NL453232T-101 □ -N	100	0.796	40	8	8	110	5,10
NL453232T-121 □ -N	120	0.796	40	6	8	110	5,10
NL453232T-151 □ -N	150	0.796	40	5	9	105	5,10
NL453232T-181 □ -N	180	0.796	40	5	9.5	102	5,10
NL453232T-221 □ -N	220	0.796	40	4	12	100	5,10
NL453232T-271 □ -N	270	0.796	30	4	18	92	5,10
NL453232T-331 □ -N	330	0.796	30	3.5	20	85	5,10
NL453232T-391 □ -N	390	0.796	30	3	23	80	5,10
NL453232T-471 □ -N	470	0.796	30	3	26	62	5,10
NL453232T-561 □ -N	560	0.796	30	3	30	50	5,10
NL453232T-681 □ -N	680	0.796	30	3	40	50	5,10
NL453232T-821 □ -N	820	0.796	30	2.5	45	30	5,10
NL453232T-102 □ -N	1000	0.796	30	2.5	50	30	5,10

NOTE: □ -tolerance J= $\pm 5\%$ /K= $\pm 10\%$ / M= $\pm 20\%$

1. Operating temperature range -25°C~85°C

2. IDC: Applied the current to coils, the inductance shall be less than 10% initial value.

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)



ELECTRICAL CHARACTERISTICS

Dimensions : mm

PART NO.	INDUCTANCE (mH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
NL565050T-122J-S	1.2	5, 10	30	0.252	1.5	17	75
NL565050T-152J-S	1.5	5, 10	30	0.252	1.4	20	70
NL565050T-182J-S	1.8	5, 10	30	0.252	1.3	30	60
NL565050T-222J-S	2.2	5, 10	30	0.252	1.2	35	55
NL565050T-272J-S	2.7	5, 10	30	0.252	1.1	55	45
NL565050T-332J-S	3.3	5, 10	30	0.252	1	60	40
NL565050T-392J-S	3.9	5, 10	30	0.252	1	70	38
NL565050T-472J-S	4.7	5, 10	30	0.252	0.9	78	36
NL565050T-562J-S	5.6	5, 10	30	0.252	0.8	85	33
NL565050T-682J-S	6.8	5, 10	30	0.252	0.7	110	30
NL565050T-822J-S	8.2	5, 10	30	0.252	0.6	125	28
NL565050T-103J-S	10	5, 10	20	0.0796	0.5	150	25

- L/Q : HP4285A+HP16034E
- S R F : HP4291A
- RDC : CH502BC / HP4338B

- IDC : HP4284A + HP42841A
- IDC : ΔL/L : -10%

ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μH)	TEST FREQ (MHz)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE (±%)
NL565050T-122 □ -N	1200	0.252	30	1.5	17	75	5,10
NL565050T-152 □ -N	1500	0.252	30	1.4	20	70	5,10
NL565050T-182 □ -N	1800	0.252	30	1.3	30	60	5,10
NL565050T-222 □ -N	2200	0.252	30	1.2	35	55	5,10
NL565050T-272 □ -N	2700	0.252	30	1.1	55	45	5,10
NL565050T-332 □ -N	3300	0.252	30	1	60	40	5,10
NL565050T-392 □ -N	3900	0.252	30	1	70	38	5,10
NL565050T-472 □ -N	4700	0.252	30	0.9	78	36	5,10
NL565050T-562 □ -N	5600	0.252	30	0.8	85	33	5,10
NL565050T-682 □ -N	6800	0.252	30	0.7	110	30	5,10
NL565050T-822 □ -N	8200	0.252	30	0.6	125	28	5,10
NL565050T-103 □ -N	10000	0.0796	20	0.5	150	25	5,10

NOTE: □-tolerance J= ±5% / K= ±10% / M=± 20%

1.Operating temperature range -25°C~85°C

2.IDC:Applied the current to coils,the inductance shall be less than 10% initial value.

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQ (MHZ)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE ($\pm$ %)	Color Code IST
NL201614T-R12 □ -N	0.12	25.2	25	500	0.2	600	5,10	WHT
NL201614T-R15 □ -N	0.15	25.2	25	450	0.25	600	5,10	BLK
NL201614T-R18 □ -N	0.18	25.2	25	410	0.3	570	5,10	BRN
NL201614T-R22 □ -N	0.22	25.2	25	350	0.35	550	5,10	RED
NL201614T-R27 □ -N	0.27	25.2	25	280	0.4	530	5,10	ORN
NL201614T-R33 □ -N	0.33	25.2	25	235	0.45	510	5,10	YEL
NL201614T-R39 □ -N	0.39	25.2	25	210	0.5	490	5,10	GRN
NL201614T-R47 □ -N	0.47	25.2	25	170	0.55	470	5,10	BLU
NL201614T-R56 □ -N	0.56	25.2	25	150	0.6	450	5,10	VIO
NL201614T-R68 □ -N	0.68	25.2	25	140	0.7	420	5,10	GRY
NL201614T-R82 □ -N	0.82	25.2	25	130	0.75	400	5,10	WHT
NL201614T-1R0 □ -N	1	7.96	15	115	0.8	350	5,10	BLK
NL201614T-1R2 □ -N	1.2	7.96	15	95	0.9	325	5,10	BRN
NL201614T-1R5 □ -N	1.5	7.96	15	85	1.05	300	5,10	RED
NL201614T-1R8 □ -N	1.8	7.96	15	80	1.2	270	5,10	ORN
NL201614T-2R2 □ -N	2.2	7.96	15	75	1.4	250	5,10	YEL
NL201614T-2R7 □ -N	2.7	7.96	15	70	1.6	230	5,10	GRN
NL201614T-3R3 □ -N	3.3	7.96	15	60	1.8	210	5,10	BLU
NL201614T-3R9 □ -N	3.9	7.96	15	55	2	190	5,10	VIO
NL201614T-4R7 □ -N	4.7	7.96	15	45	2.4	170	5,10	GRY
NL201614T-5R6 □ -N	5.6	7.96	15	40	2.7	150	5,10	WHT
NL201614T-6R8 □ -N	6.8	7.96	15	36	3.2	140	5,10	BLK
NL201614T-8R2 □ -N	8.2	7.96	15	33	3.6	120	5,10	BRN
NL201614T-100 □ -N	10	2.52	15	30	4.5	110	5,10	RED
NL201614T-120 □ -N	12	2.52	15	25	5.7	105	5,10	ORN
NL201614T-150 □ -N	15	2.52	15	23	6.5	90	5,10	YEL
NL201614T-180 □ -N	18	2.52	15	21	7	85	5,10	GRN
NL201614T-220 □ -N	22	2.52	15	20	8	78	5,10	BLU
NL201614T-270 □ -N	27	2.52	15	18	9	75	5,10	VIO
NL201614T-330 □ -N	33	2.52	15	17	10	70	5,10	GRY

NOTE: □-tolerance J= $\pm$ 5% /K= $\pm$ 10% / M= $\pm$ 20%

1. Operating temperature range -25°C~85°C

2. IDC: Applied the current to coils, the inductance shall be less than 10% initial value.

3. L/Q Test OSC@200mV

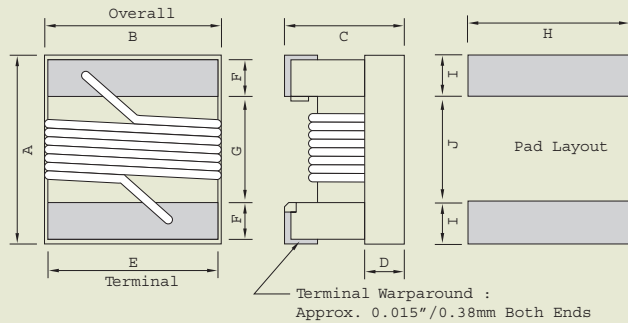
"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)



SHAPES AND DIMENSIONS NL2016I4 SERIES

Dimensions : mm

Ferrite body and wire wound construction provide highest current.



UNIT	A	B	C	D	E	F	G	H	I	J
	Max.	Max.	Max.	Ref.						
in	0.09	0.068	0.06	0.02	0.05	0.02	0.04	0.07	0.04	0.03
mm	2.29	1.73	1.52	0.51	1.27	0.51	1.02	1.78	1.02	0.76

ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm$ %)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.	COLOR CODING
NL2016I4T-R12 □-S	0.12	10/5	25	25.2	500	0.20	600	White
NL2016I4T-R15 □-S	0.15	10/5	25	25.2	450	0.25	600	Black
NL2016I4T-R18 □-S	0.18	10/5	25	25.2	410	0.30	570	Brown
NL2016I4T-R22 □-S	0.22	10/5	25	25.2	350	0.35	550	Red
NL2016I4T-R27 □-S	0.27	10/5	25	25.2	280	0.40	530	Orange
NL2016I4T-R33 □-S	0.33	10/5	25	25.2	235	0.45	510	Yellow
NL2016I4T-R39 □-S	0.39	10/5	25	25.2	210	0.50	490	Green
NL2016I4T-R47 □-S	0.47	10/5	25	25.2	170	0.55	470	Blue
NL2016I4T-R56 □-S	0.56	10/5	25	25.2	150	0.60	450	Violet
NL2016I4T-R68 □-S	0.68	10/5	25	25.2	140	0.70	420	Gray
NL2016I4T-R82 □-S	0.82	10/5	25	25.2	130	0.75	400	White
NL2016I4T-IR0 □-S	1.00	10/5	15	7.96	115	0.80	350	Black
NL2016I4T-IR2 □-S	1.20	10/5	15	7.96	95	0.90	325	Brown
NL2016I4T-IR5 □-S	1.50	10/5	15	7.96	85	1.05	300	Red
NL2016I4T-IR8 □-S	1.80	10/5	15	7.96	80	1.20	270	Orange
NL2016I4T-2R2 □-S	2.20	10/5	15	7.96	75	1.40	250	Yellow
NL2016I4T-2R7 □-S	2.70	10/5	15	7.96	70	1.60	230	Green
NL2016I4T-3R3 □-S	3.30	10/5	15	7.96	60	1.80	210	Blue
NL2016I4T-3R9 □-S	3.90	10/5	15	7.96	55	2.00	190	Violet
NL2016I4T-4R7 □-S	4.70	10/5	15	7.96	45	2.40	170	Gray
NL2016I4T-5R6 □-S	5.60	10/5	15	7.96	40	2.70	150	White
NL2016I4T-6R8 □-S	6.80	10/5	15	7.96	36	3.20	140	Black
NL2016I4T-8R2 □-S	8.20	10/5	15	7.96	33	3.60	120	Brown
NL2016I4T-100 □-S	10.0	10/5	15	2.52	30	4.50	110	Red
NL2016I4T-120 □-S	12.0	10/5	15	2.52	25	5.70	105	Orange
NL2016I4T-150 □-S	15.0	10/5	15	2.52	23	6.50	90	Yellow
NL2016I4T-180 □-S	18.0	10/5	15	2.52	21	7.00	85	Green
NL2016I4T-220 □-S	22.0	10/5	15	2.52	20	8.00	78	Blue
NL2016I4T-270 □-S	27.0	10/5	15	2.52	18	9.00	75	Violet
NL2016I4T-330 □-S	33.0	10/5	15	2.52	17	10.0	70	Gray

• When ordering, please specify tolerance and packaging codes. Ex : NL2016I4T-R12J-S

• Tolerance : J = $\pm$ 5% , K= $\pm$ 10%

• Packaging : Clear Tape and Reel (Standard)

• L/Q : Agilent/HP4291A+ Agilent/HPI6193A

• SRF : Agilent/HP4291A

• RDC : Digital Multimeter SC-7401

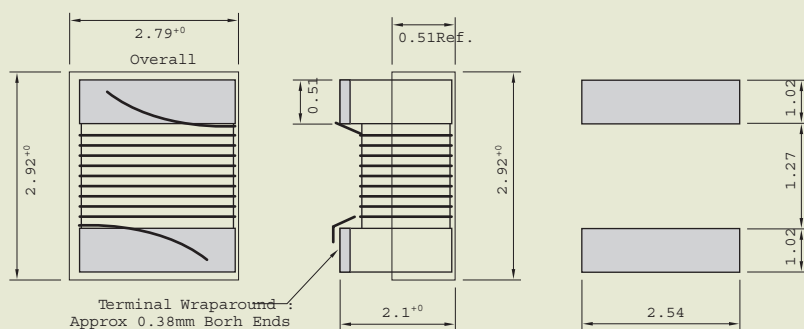
• Idc for inductance drop 10% from its value without current.

• Operating Temperature Range : -25°C to 85°C

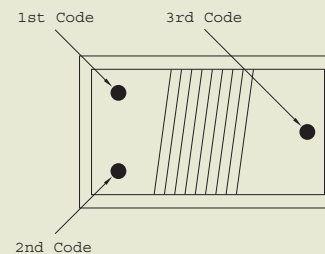


SHAPES AND DIMENSIONS NL252018 SERIES

Dimensions : mm



Color Coding



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE μH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.	COLOR CODING		
								1 st	2 nd	3 rd
NL252018T-5N0 □ -S	0.005	10	10	100	3000	0.25	2000	Black	Green	Black
NL252018T-10N □ -S	0.010	10	10	100	2500	0.25	1800	Brown	Black	Black
NL252018T-12N □ -S	0.012	10	15	100	2400	0.26	1700	Brown	Red	Black
NL252018T-15N □ -S	0.015	10	15	100	2300	0.28	1600	Brown	Green	Black
NL252018T-18N □ -S	0.018	10	15	100	2200	0.30	1550	Brown	Gray	Black
NL252018T-22N □ -S	0.022	5, 10	20	100	2100	0.35	1500	Red	Red	Black
NL252018T-27N □ -S	0.027	5, 10	20	100	2000	0.40	1450	Red	Violet	Black
NL252018T-33N □ -S	0.033	5, 10	30	100	1600	0.42	1400	Orange	Orange	Black
NL252018T-39N □ -S	0.039	5, 10	35	100	1500	0.45	1350	Orange	White	Black
NL252018T-47N □ -S	0.047	5, 10	35	100	1400	0.50	1300	Yellow	Violet	Black
NL252018T-56N □ -S	0.056	5, 10	35	100	1300	0.60	1250	Green	Blue	Black
NL252018T-68N □ -S	0.068	5, 10	35	100	1200	0.65	1240	Blue	Gray	Black
NL252018T-82N □ -S	0.082	5, 10	35	100	1100	0.75	1230	Gray	Red	Black
NL252018T-R10 □ -S	0.10	5, 10	35	100	800	0.80	1220	Brown	Black	Brown
NL252018T-R12 □ -S	0.12	5, 10	30	25.2	700	0.30	900	Brown	Red	Brown
NL252018T-R15 □ -S	0.15	5, 10	30	25.2	550	0.35	900	Brown	Green	Brown
NL252018T-R18 □ -S	0.18	5, 10	30	25.2	500	0.40	850	Brown	Gray	Brown
NL252018T-R22 □ -S	0.22	5, 10	30	25.2	450	0.50	840	Red	Red	Brown
NL252018T-R27 □ -S	0.27	5, 10	30	25.2	425	0.55	830	Red	Violet	Brown
NL252018T-R33 □ -S	0.33	5, 10	30	25.2	400	0.60	820	Orange	Orange	Brown
NL252018T-R39 □ -S	0.39	5, 10	30	25.2	375	0.65	810	Orange	White	Brown
NL252018T-R47 □ -S	0.47	5, 10	30	25.2	350	0.68	800	Yellow	Violet	Brown



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm$ %)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.	COLOR CODING		
								1 ST	2 ND	3 RD
NL252018T-R56 □-S	0.560	5, 10	30	25.2	325	0.75	800	Green	Blue	Brown
NL252018T-R68 □-S	0.680	5, 10	30	25.2	300	0.85	800	Blue	Gray	Brown
NL252018T-R82 □-S	0.820	5, 10	30	25.2	260	1.0	800	Gray	Red	Brown
NL252018T-1R0 □-S	1.000	5, 10	25	7.96	245	1.1	800	Brown	Black	Red
NL252018T-1R2 □-S	1.200	5, 10	25	7.96	230	1.2	790	Brown	Red	Red
NL252018T-1R5 □-S	1.500	5, 10	25	7.96	182	1.3	750	Brown	Green	Red
NL252018T-1R8 □-S	1.800	5, 10	25	7.96	135	1.45	750	Brown	Gray	Red
NL252018T-2R2 □-S	2.200	5, 10	25	7.96	105	1.55	750	Red	Red	Red
NL252018T-2R7 □-S	2.700	5, 10	25	7.96	70	1.7	740	Red	Violet	Red
NL252018T-3R3 □-S	3.300	5, 10	25	7.96	55	1.9	730	Orange	Orange	Red
NL252018T-3R9 □-S	3.900	5, 10	25	7.96	48	2.1	700	Orange	White	Red
NL252018T-4R7 □-S	4.7	5, 10	25	7.96	43	2.3	650	Yellow	Violet	Red
NL252018T-5R6 □-S	5.6	5, 10	20	7.96	42	2.5	640	Green	Blue	Red
NL252018T-6R8 □-S	6.8	5, 10	20	7.96	39	2.7	630	Blue	Gray	Red
NL252018T-8R2 □-S	8.2	5, 10	20	7.96	36	3.05	600	Gray	Red	Red
NL252018T-100 □-S	10	5, 10	15	2.52	33	3.5	600	Brown	Black	Orange
NL252018T-120 □-S	12	5, 10	15	2.52	30	3.8	550	Brown	Red	Orange
NL252018T-150 □-S	15	5, 10	15	2.52	26	4.4	430	Brown	Green	Orange
NL252018T-180 □-S	18	5, 10	15	2.52	24	4.8	400	Brown	Gray	Orange
NL252018T-220 □-S	22	5, 10	15	2.52	22	5.5	400	Red	Red	Orange
NL252018T-270 □-S	27	5, 10	15	2.52	21	6.3	360	Red	Violet	Orange
NL252018T-330 □-S	33	5, 10	15	2.52	20	7.1	350	Orange	Orange	Orange
NL252018T-390 □-S	39	5, 10	10	2.52	18	9.5	330	Orange	White	Orange
NL252018T-470 □-S	47	5, 10	10	2.52	17	11.1	300	Yellow	Violet	Orange
NL252018T-560 □-S	56	5, 10	10	2.52	16	12.1	270	Green	Blue	Orange
NL252018T-680 □-S	68	5, 10	10	2.52	15	16.6	250	Blue	Gray	Orange
NL252018T-820 □-S	82	5, 10	10	2.52	13	19	200	Gray	Red	Orange
NL252018T-101 □-S	100	5, 10	8	0.796	12	21	120	Brown	Black	Yellow

* UV Color : Blue / Core Color : Black

When ordering, please specify tolerance and packaging code. Ex : NL252018T-101J-S

Tolerance : □ J = 5% □ K = 10%

Packaging : Clear Tape and Reel (Standard)

L, Q, RDC : HP4287A

SRF : HP8753D / HP4291A RDC : Digital Multimeter SC-7401

Operating Temperature Range : -25°C to +85°C



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μH)	TEST FREQ (MHZ)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE (±%)	Color Code		
								1 ST	2 ND	3 RD
NL252018T-5N0 □ -N	0.005	100	10	3000	0.25	2000	10	BLK	GRN	BLK
NL252018T-10N □ -N	0.01	100	10	2500	0.25	1800	10	BRN	BLK	BLK
NL252018T-12N □ -N	0.012	100	15	2400	0.26	1700	10	BRN	RED	BLK
NL252018T-15N □ -N	0.015	100	15	2300	0.28	1600	10	BRN	GRN	BLK
NL252018T-18N □ -N	0.018	100	15	2200	0.3	1550	10	BRN	GRY	BLK
NL252018T-22N □ -N	0.022	100	20	2100	0.35	1500	5,10	RED	RED	BLK
NL252018T-27N □ -N	0.027	100	20	2000	0.4	1450	5,10	RED	VIO	BLK
NL252018T-33N □ -N	0.033	100	30	1600	0.42	1400	5,10	ORN	ORN	BLK
NL252018T-39N □ -N	0.039	100	35	1500	0.45	1350	5,10	ORN	WHT	BLK
NL252018T-47N □ -N	0.047	100	35	1400	0.5	1300	5,10	YEL	VIO	BLK
NL252018T-56N □ -N	0.056	100	35	1300	0.6	1250	5,10	GRN	BLU	BLK
NL252018T-68N □ -N	0.068	100	35	1200	0.65	1240	5,10	BLU	GRY	BLK
NL252018T-82N □ -N	0.082	100	35	1100	0.75	1230	5,10	GRY	RED	BLK
NL252018T-R10 □ -N	0.1	100	35	800	0.8	1220	5,10	BRN	BLK	BRN
NL252018T-R12 □ -N	0.12	25.2	30	700	0.3	900	5,10	BRN	RED	BRN
NL252018T-R15 □ -N	0.15	25.2	30	550	0.35	900	5,10	BRN	GRN	BRN
NL252018T-R18 □ -N	0.18	25.2	30	500	0.4	850	5,10	BRN	GRY	BRN
NL252018T-R22 □ -N	0.22	25.2	30	450	0.5	840	5,10	RED	RED	BRN
NL252018T-R27 □ -N	0.27	25.2	30	425	0.55	830	5,10	RED	VIO	BRN
NL252018T-R33 □ -N	0.33	25.2	30	400	0.6	820	5,10	ORN	ORN	BRN
NL252018T-R39 □ -N	0.39	25.2	30	375	0.65	810	5,10	ORN	WHT	BRN
NL252018T-R47 □ -N	0.47	25.2	30	350	0.68	800	5,10	YEL	VIO	BRN
NL252018T-R56 □ -N	0.56	25.2	30	325	0.75	800	5,10	GRN	BLU	BRN
NL252018T-R68 □ -N	0.68	25.2	30	300	0.85	800	5,10	BLU	GRY	BRN
NL252018T-R82 □ -N	0.82	25.2	30	260	1	800	5,10	GRY	RED	BRN
NL252018T-1R0 □ -N	1	7.96	25	245	1.1	800	5,10	BRN	BLK	RED
NL252018T-1R2 □ -N	1.2	7.96	25	230	1.2	790	5,10	BRN	RED	RED
NL252018T-1R5 □ -N	1.5	7.96	25	182	1.3	750	5,10	BRN	GRN	RED
NL252018T-1R8 □ -N	1.8	7.96	25	135	1.45	750	5,10	BRN	GRY	RED
NL252018T-2R2 □ -N	2.2	7.96	25	105	1.55	750	5,10	RED	RED	RED
NL252018T-2R7 □ -N	2.7	7.96	25	70	1.7	740	5,10	RED	VIO	RED
NL252018T-3R3 □ -N	3.3	7.96	25	55	1.9	730	5,10	ORN	ORN	RED
NL252018T-3R9 □ -N	3.9	7.96	25	48	2.1	700	5,10	ORN	WHY	RED
NL252018T-4R7 □ -N	4.7	7.96	25	43	2.3	650	5,10	YEL	VIO	RED
NL252018T-5R6 □ -N	5.6	7.96	20	42	2.5	640	5,10	GRN	BLU	RED
NL252018T-6R8 □ -N	6.8	7.96	20	39	2.7	630	5,10	BLU	GRY	RED
NL252018T-8R2 □ -N	8.2	7.96	20	36	3.05	600	5,10	GRY	RED	RED
NL252018T-100 □ -N	10	2.52	15	33	3.5	600	5,10	BRN	BLK	ORN
NL252018T-120 □ -N	12	2.52	15	30	3.8	550	5,10	BRN	RED	ORN
NL252018T-150 □ -N	15	2.52	15	26	4.4	430	5,10	BRN	GRN	ORN
NL252018T-180 □ -N	18	2.52	15	24	4.8	400	5,10	BRN	GRY	ORN
NL252018T-220 □ -N	22	2.52	15	22	5.5	400	5,10	RED	RED	ORN
NL252018T-270 □ -N	27	2.52	15	21	6.3	360	5,10	RED	VIO	ORN
NL252018T-330 □ -N	33	2.52	15	20	7.1	350	5,10	ORN	ORN	ORN
NL252018T-390 □ -N	39	2.52	10	18	9.5	330	5,10	ORN	WHT	ORN
NL252018T-470 □ -N	47	2.52	10	17	11.1	300	5,10	YEL	VIO	ORN
NL252018T-560 □ -N	56	2.52	10	16	12.1	270	5,10	GRN	BLU	ORN
NL252018T-680 □ -N	68	2.52	10	15	16.6	250	5,10	BLU	GRY	ORN
NL252018T-820 □ -N	82	2.52	10	13	19	200	5,10	GRY	RED	ORN
NL252018T-101 □ -N	100	0.796	8	12	21	120	5,10	BRN	BLK	YEL

NOTE: □ -tolerance J= ±5%K= ±10% / M=± 20%

1.Operating temperature range -25°C~85°C

2.IDC:Applied the current to coils,the inductance shall be less than 10% initial value.

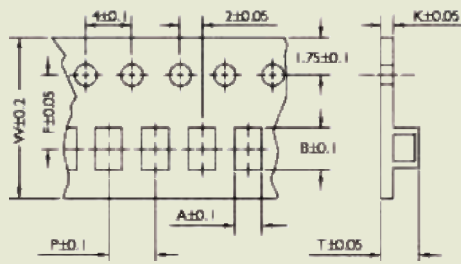
3.L/Q Test OSC@200mV

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)



TAPE DIMENSIONS

Dimensions : mm

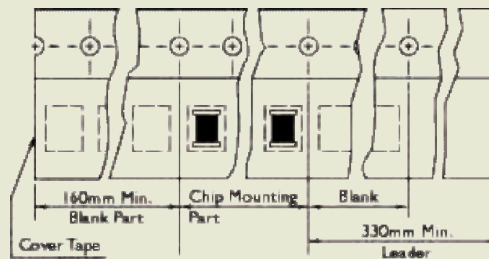


TYPE	A	B	T	W	P	F	K
NL201614	1.85	2.45	0.23	8	4	3.5	1.45
NL252018	2.7	2.95	2.25	8	4	3.5	0.25
NL322522	2.94	3.64	2.52	8	4	3.5	0.2
NL453232	3.64	5.14	3.6	12	8	5.5	0.3
NL565050	4.9	5.65	5.3	16.15	12.2	5.5	0.5

TAPE MATERIAL

Carrier Tape : Polystyrene

Cover Type : Polyethylene



REEL DIMENSIONS

Dimensions : mm

Figure 1

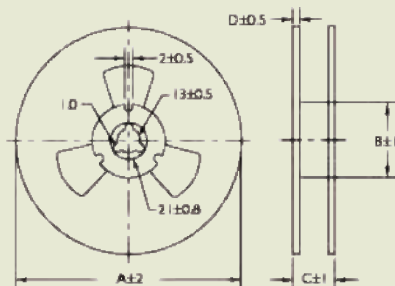
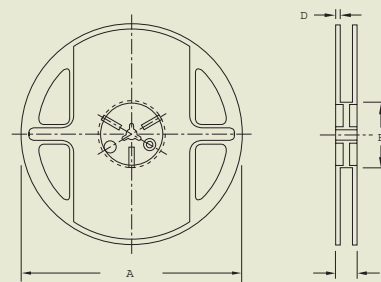


Figure 2

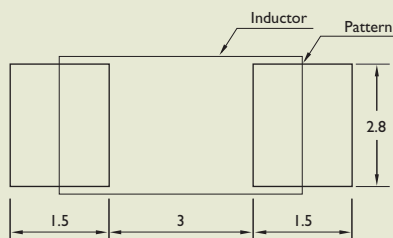


TYPE	FIGURE	A	B	C	D
NL201614	2	178	60	13	9
NL252018	2	178	60	12	1.5
NL322522	1	178	60	10	1.5
NL453232	1	250	80	14	1.5
NL565050	2	330	80	20	2

RECOMMENDED PATTERN

Dimensions : mm

NL45



PACKAGING QUANTITY

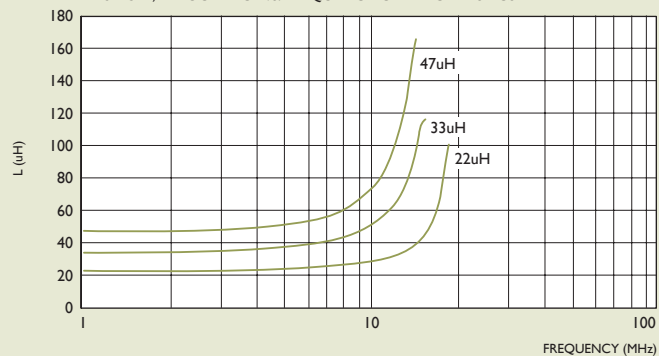
TYPE	BULK	QUANTITY/REEL
NL201614	√	2000
NL252018	√	2000
NL322522	√	2000
NL453232	√	500
NL565050	√	1000



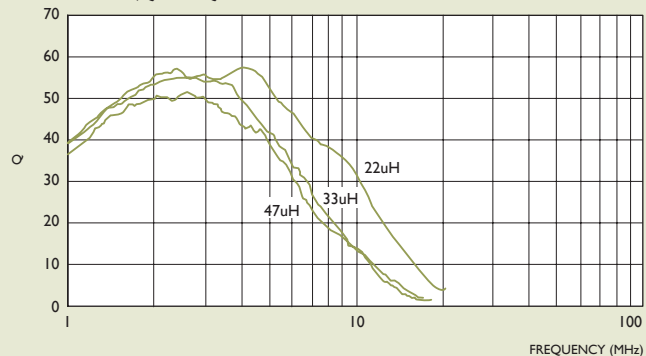
TYPICAL ELECTRICAL CHARACTERISTICS

Test Instruments : HP4291A Impedance / Material Analyzer

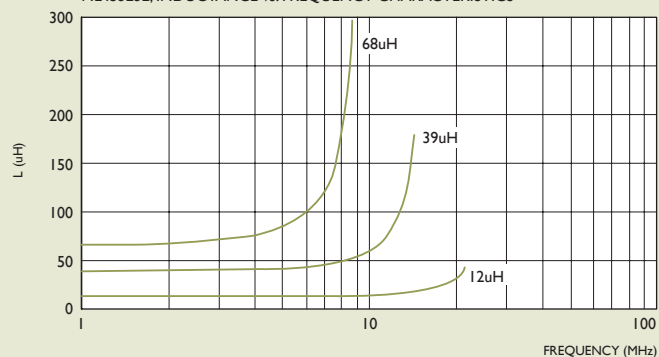
NL322522, INDUCTANCE vs. FREQUENCY CHARACTERISTICS



NL322522, Q vs. FREQUENCY CHARACTERISTICS



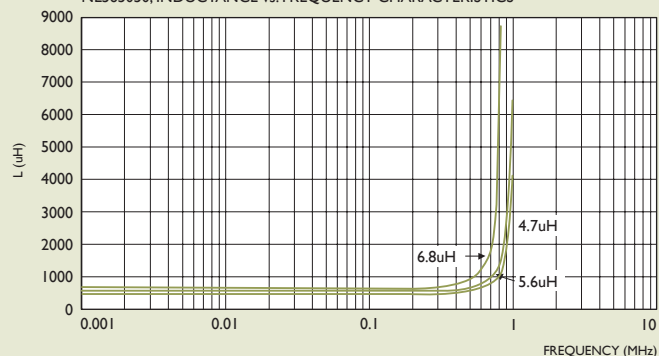
NL453232, INDUCTANCE vs. FREQUENCY CHARACTERISTICS



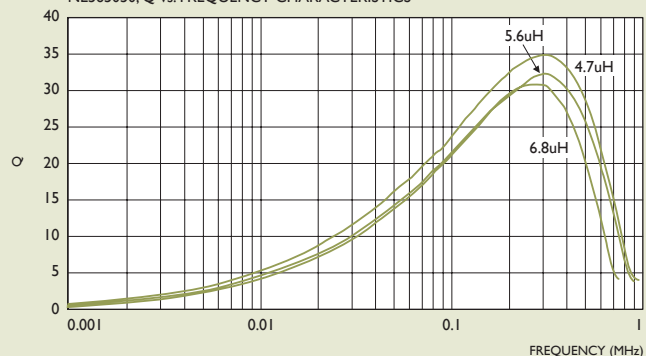
NL453232, Q vs. FREQUENCY CHARACTERISTICS



NL565050, INDUCTANCE vs. FREQUENCY CHARACTERISTICS



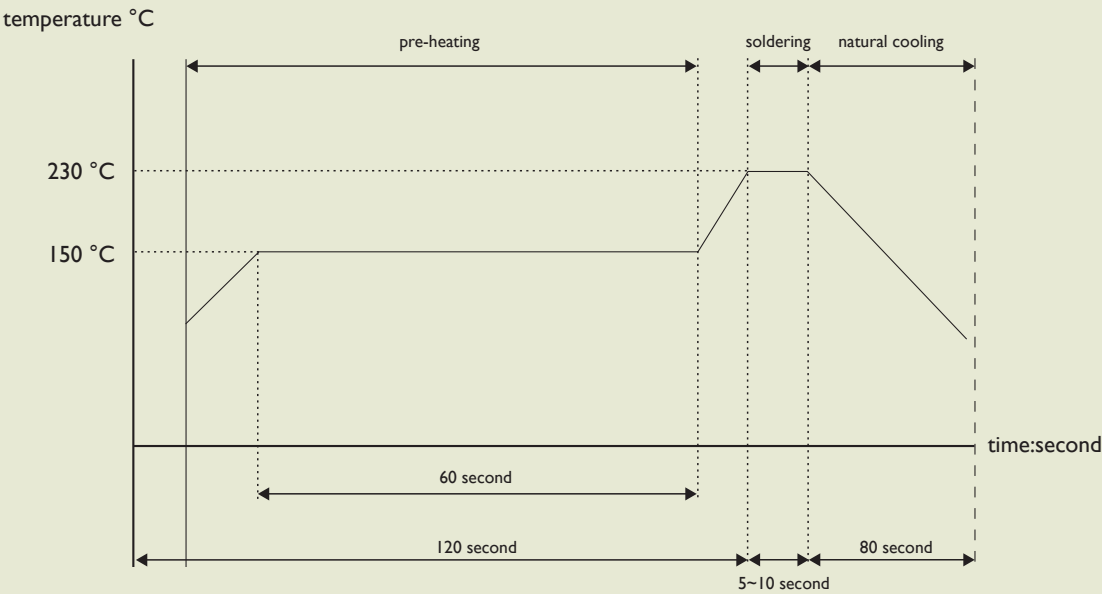
NL565050, Q vs. FREQUENCY CHARACTERISTICS





RECOMMEND SOLDERING CONDITIONS

for:CS/ CT/ LCN/ HC/ HQ/ CMM/ NL (open type)/ NLC (open type)/ LS



NLC Series

For High Current Application

Wound Chip Inductors

These revolutionary, highly reliable wound chip inductors for automatic mounting have been developed in response to the trend toward high density in electronic equipment.

With metal terminals and a body of heat resistant resin, these inductors offer many superior features.

APPLICATIONS

DC/DC converter such as DSC, LCD TV, game console, portable VCRs, conveyable telephone, and others.

FEATURES

Very strong solderability by reflow soldering and soldering iron

Highly accurate dimensions can be mounted automatically

Terminals are highly resistant to pull forces.

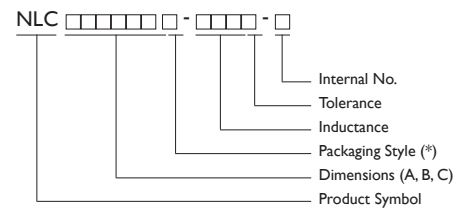
Highly resistant to mechanical shocks and pressure.

Highly reliable in environments of sudden temperature change and humidity.

Superior IDC for DC/DC converter.



PRODUCT IDENTIFICATION



■ Packaging : T :Tape and Reel

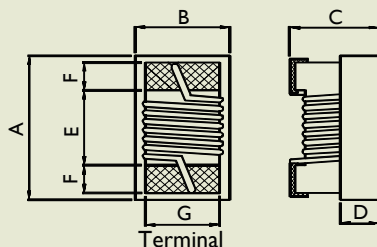
■ Tolerance : J=±5% ; K= ±10%

■ YAGEO will start to release lead-free that meet SONY SS-00259's criteria, and Internal No. will be changed to "N" as identification.

Ex. NLC252018T-1R0K-N

SHAPES AND DIMENSIONS

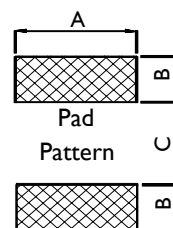
Dimensions : mm



TYPE	A	B	C	D	E	F	G
NLC252018	2.92 ⁺⁰	2.79 ⁺⁰	2.20 ⁺⁰	0.70Ref	1.52	0.51	2.03
NLC252018	3.70 ⁺⁰	2.90 ⁺⁰	2.60 ⁺⁰	0.90Ref	2.18	0.51	2.40

RECOMMENDED PATTERN

Dimensions : mm



TYPE	A	B	C
NLC252018	2.54	1.02	1.27
NLC322522	2.70	1.00	2.00



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm$ %)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.	COLOR CODING		
								1 ST	2 ND	3 RD
NLC252018T-1R0 □-S	1.0	10 / 5	25	7.96	300	0.34	1500	Brown	Black	Red
NLC252018T-1R5 □-S	1.5	10 / 5	25	7.96	270	0.42	1400	Brown	Green	Red
NLC252018T-2R2 □-S	2.2	10 / 5	25	7.96	140	0.50	1200	Red	Red	Red
NLC252018T-3R3 □-S	3.3	10 / 5	25	7.96	95	0.65	1000	Orange	Orange	Red
NLC252018T-4R7 □-S	4.7	10 / 5	25	7.96	90	0.80	800	Yellow	Violet	Red
NLC252018T-6R8 □-S	6.8	10 / 5	25	7.96	68	1.00	730	Blue	Gray	Red
NLC252018T-100 □-S	10	10 / 5	20	2.52	45	1.50	700	Brown	Black	Orange
NLC252018T-150 □-S	15	10 / 5	20	2.52	40	2.20	500	Brown	Green	Orange
NLC252018T-220 □-S	22	10 / 5	20	2.52	25	2.70	470	Red	Red	Orange
NLC252018T-330 □-S	33	10 / 5	20	2.52	25	4.00	400	Orange	Orange	Orange
NLC252018T-470 □-S	47	10 / 5	16	2.52	20	8.00	300	Yellow	Violet	Orange

• When ordering, please specify tolerance and packaging code.

Ex : NLC252018T-4R7J-S

• Tolerance : J = $\pm 5\%$; K = $\pm 10\%$

• Packaging : Clear Tape and Reel (Standard)

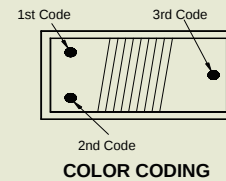
• L / Q : Agilent / HP4291 + Agilent / HP16193A

• SRF : Agilent / HP4291A

• RDC : Digital Multimeter CH502BC HP4338B

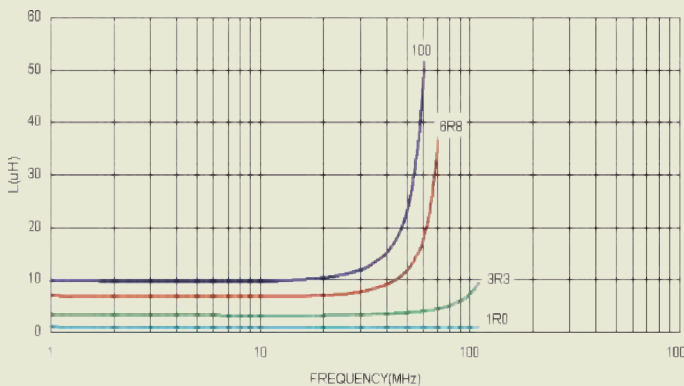
• Idc for inductance drop 10% from its value without current.

• Operating Temperature Range : -25°C to 85°C

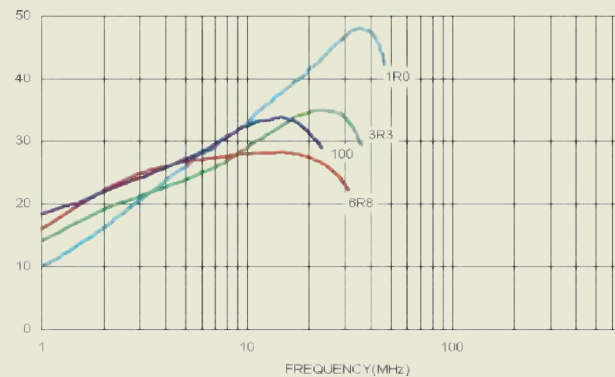


TEST INSTRUMENTS : HP4291A Impedance / Material Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency





ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQ (MHZ)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE ($\pm$ %)	Color Code		
								1 ST	2 ND	3 RD
NLC252018T-1R0 □ -N	1	7.96	25	300	0.34	1500	5,10	BRN	BLK	RED
NLC252018T-1R5 □ -N	1.5	7.96	25	270	0.42	1400	5,10	BRN	GRN	RED
NLC252018T-2R2 □ -N	2.2	7.96	25	140	0.5	1200	5,10	RED	RED	RED
NLC252018T-3R3 □ -N	3.3	7.96	25	95	0.65	1000	5,10	ORN	ORN	RED
NLC252018T-4R7 □ -N	4.7	7.96	25	90	0.8	800	5,10	YEL	VIO	RED
NLC252018T-6R8 □ -N	6.8	7.96	25	68	1	730	5,10	BLU	GRY	RED
NLC252018T-100 □ -N	10	2.52	20	45	1.5	700	5,10	BRN	BLK	ORN
NLC252018T-150 □ -N	15	2.52	20	40	2.2	500	5,10	BRN	GRN	ORN
NLC252018T-220 □ -N	22	2.52	20	25	2.7	470	5,10	RED	RED	ORN
NLC252018T-330 □ -N	33	2.52	20	25	4	400	5,10	ORN	ORN	ORN
NLC252018T-470 □ -N	47	2.52	16	20	8	300	5,10	YEL	VIO	ORN

NOTE: □ -tolerance J= $\pm$ 5% / K= $\pm$ 10% / M= $\pm$ 20%

1. Operating temperature range -25°C~85°C

2.IDC:Applied the current to coils,the inductance shall be less than 10% initial value.

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm$ %)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.	COLOR CODING		
								1 ST	2 ND	3 RD
NLC322522T-1R0 □ -S	1.0	5, 10	20	7.96	100	0.08	1500	Brown	Black	Red
NLC322522T-1R5 □ -S	1.5	5, 10	20	7.96	80	0.13	1125	Brown	Green	Red
NLC322522T-2R2 □ -S	2.2	5, 10	20	7.96	68	0.13	970	Red	Red	Red
NLC322522T-3R3 □ -S	3.3	5, 10	20	7.96	54	0.16	837	Orange	Orange	Red
NLC322522T-4R7 □ -S	4.7	5, 10	20	7.96	43	0.20	675	Yellow	Violet	Red
NLC322522T-6R8 □ -S	6.8	5, 10	20	7.96	33	0.27	600	Blue	Gray	Red
NLC322522T-100 □ -S	10	5, 10	15	2.52	28	0.36	520	Brown	Black	Orange
NLC322522T-150 □ -S	15	5, 10	15	2.52	19	0.56	480	Brown	Green	Orange
NLC322522T-220 □ -S	22	5, 10	15	2.52	16	0.77	310	Red	Red	Orange
NLC322522T-330 □ -S	33	5, 10	15	2.52	12	1.10	270	Orange	Orange	Orange
NLC322522T-470 □ -S	47	5, 10	15	2.52	10	1.64	210	Yellow	Violet	Orange
NLC322522T-680 □ -S	68	5, 10	15	2.52	9	2.80	189	Blue	Gray	Orange
NLC322522T-101 □ -S	100	5, 10	15	0.796	6	3.70	145	Brown	Black	Yellow
NLC322522T-151 □ -S	150	5, 10	15	0.796	5	6.10	120	Brown	Green	Yellow
NLC322522T-221 □ -S	220	5, 10	15	0.796	4	8.40	100	Red	Red	Yellow
NLC322522T-331 □ -S	330	5, 10	15	0.796	3.5	12.3	80	Orange	Orange	Yellow
NLC322522T-471 □ -S	470	5, 10	15	0.796	2.8	22.0	75	Yellow	Violet	Yellow
NLC322522T-681 □ -S	680	5, 10	15	0.796	2	28.0	65	Blue	Gray	Yellow

• When ordering, please specify tolerance and packaging code.

Ex : NLC322522T-4R7J-S

• Tolerance : J = $\pm 5\%$; K = $\pm 10\%$

• Packaging : Clear Tape and Reel (Standard)

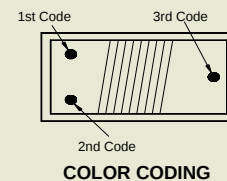
• L / Q : Agilent / HP4291A + Agilent / HP16193A(over 1MHz)
Agilent / HP4285A + Agilent / HP16193A(under 1MHz)

• SRF : Agilent / HP4291A

• RDC : Digital Multimeter HP4338B CH502BC

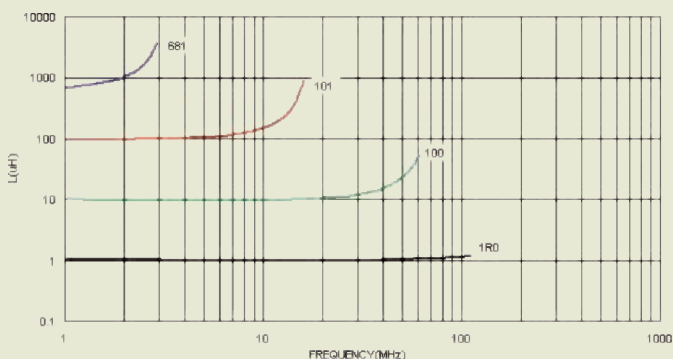
• Idc for inductance drop 10% from its value without current.

• Operating Temperature Range : -25°C to 85°C

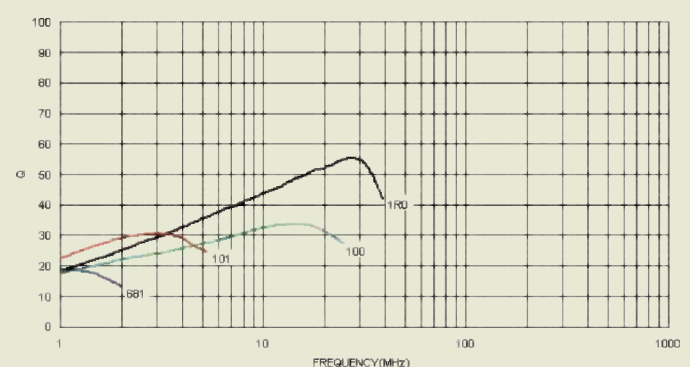


TEST INSTRUMENTS : HP4291A Impedance / Material Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency





ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQ (MHZ)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE ($\pm$ %)	Color Code		
								1 ST	2 ND	3 RD
NLC322522T-R47 $\square$ -N	0.47	25.2	40	450	0.07	1800	5,10	YEL	VIO	BRN
NLC322522T-1R0 $\square$ -N	1	7.96	20	100	0.08	1500	5,10	BRN	BLK	RED
NLC322522T-1R2 $\square$ -N	1.2	7.96	20	90	0.08	1400	5,10	BRN	RED	RED
NLC322522T-1R5 $\square$ -N	1.5	7.96	20	80	0.13	1125	5,10	BRN	GRN	RED
NLC322522T-1R8 $\square$ -N	1.8	7.96	20	70	0.13	970	5,10	BRN	GRY	RED
NLC322522T-2R2 $\square$ -N	2.2	7.96	20	68	0.13	970	5,10	RED	RED	RED
NLC322522T-2R7 $\square$ -N	2.7	7.96	20	62	0.15	900	5,10	RED	VIO	RED
NLC322522T-3R3 $\square$ -N	3.3	7.96	20	54	0.16	837	5,10	ORN	ORN	RED
NLC322522T-4R7 $\square$ -N	4.7	7.96	20	43	0.23	675	5,10	YEL	VIO	RED
NLC322522T-5R6 $\square$ -N	5.6	7.96	20	36	0.26	620	5,10	GRN	BLU	RED
NLC322522T-6R8 $\square$ -N	6.8	7.96	20	33	0.27	600	5,10	BLU	GRY	RED
NLC322522T-8R2 $\square$ -N	8.2	7.96	20	30	0.32	580	5,10	GRY	RED	RED
NLC322522T-100 $\square$ -N	10	2.52	15	28	0.36	520	5,10	BRN	BLK	ORN
NLC322522T-150 $\square$ -N	15	2.52	15	19	0.56	480	5,10	BRN	GRN	ORN
NLC322522T-180 $\square$ -N	18	2.52	15	17	0.67	330	5,10	BRN	GRY	ORN
NLC322522T-220 $\square$ -N	22	2.52	15	16	0.77	310	5,10	RED	RED	ORN
NLC322522T-270 $\square$ -N	27	2.52	15	13	1	280	5,10	RED	VIO	ORN
NLC322522T-330 $\square$ -N	33	2.52	15	12	1.1	270	5,10	ORN	ORN	ORN
NLC322522T-470 $\square$ -N	47	2.52	15	10	1.64	210	5,10	YEL	VIO	ORN
NLC322522T-680 $\square$ -N	68	2.52	15	9	2.8	189	5,10	BLU	GRY	ORN
NLC322522T-101 $\square$ -N	100	0.796	15	6	3.7	145	5,10	BRN	BLK	YEL
NLC322522T-151 $\square$ -N	150	0.796	15	5	6.1	120	5,10	BRN	GRN	YEL
NLC322522T-181 $\square$ -N	180	0.796	15	4	8	105	5,10	BRN	GRY	YEL
NLC322522T-221 $\square$ -N	220	0.796	15	4	8.4	100	5,10	RED	RED	YEL
NLC322522T-331 $\square$ -N	330	0.796	15	3.5	12.3	80	5,10	ORN	ORN	YEL
NLC322522T-391 $\square$ -N	390	0.796	15	2.8	17.6	75	5,10	YEL	VIO	YEL
NLC322522T-471 $\square$ -N	470	0.796	15	2.8	22	75	5,10	YEL	VIO	YEL
NLC322522T-561 $\square$ -N	560	0.796	15	2.5	23	65	5,10	GRN	BLU	YEL
NLC322522T-681 $\square$ -N	680	0.796	15	2	28	65	5,10	BLU	GRY	YEL

NOTE: $\square$ -tolerance J= $\pm$ 5% /K= $\pm$ 10% / M= $\pm$ 20%

1. Operating temperature range -25°C~85°C

2. IDC: Applied the current to coils, the inductance shall be less than 10% initial value.

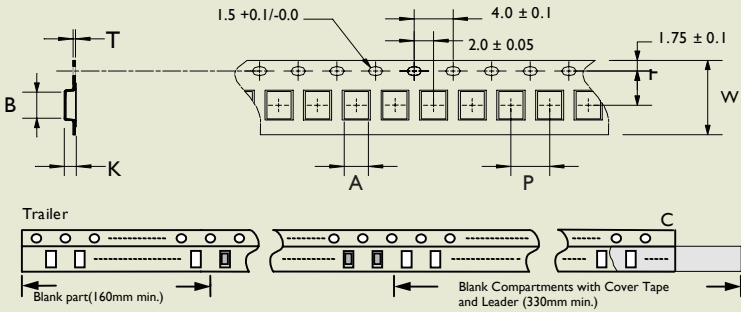
"-N" FOR COMPLETELY LEAD FREE TYPE (INCLUDING FERRITE BODY & SOLDER)



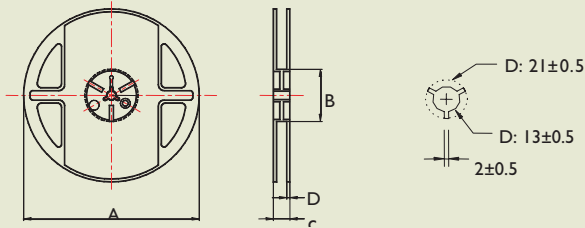
PACKAGING SPECIFICATIONS

Dimensions : mm

TAPE Dimensions



Reel Dimensions



Dimensions : mm

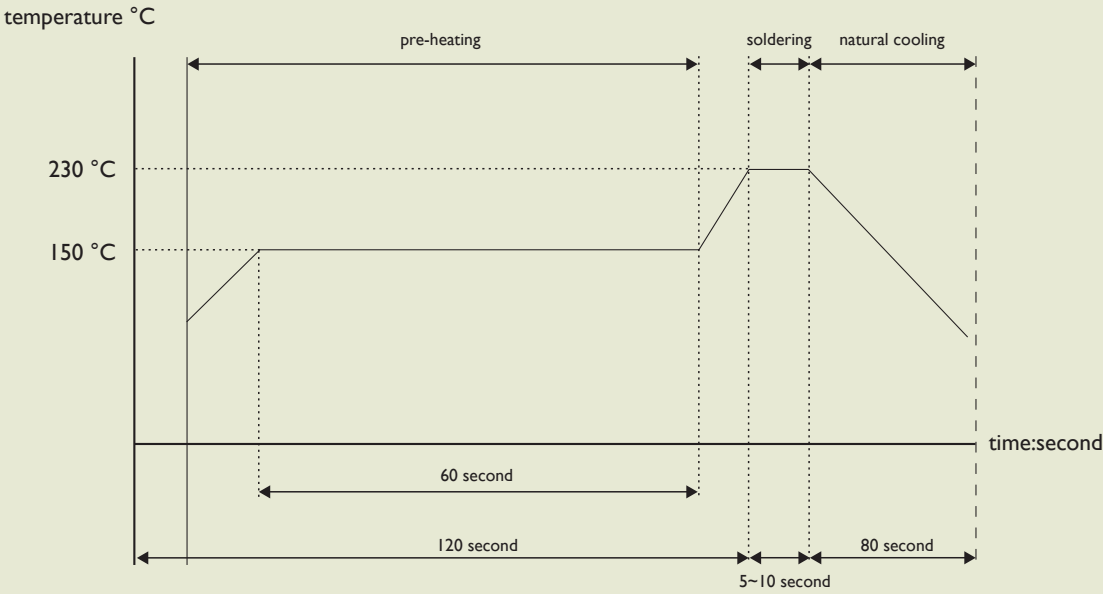
TYPE	TAPE DIMENSIONS						
	A	B	T	W	P	F	K
NLC252018	2.70	2.95	0.23	8	4	3.5	2.25
NLC322522	2.95	3.85	0.25	12	4	3.5	2.45

Dimensions : mm

REEL DIMENSIONS				Q'TY/REEL
A	B	C	D	
178	60	12	1.5	2000
178	60	16	1.4	2000

RECOMMEND SOLDERING CONDITIONS

for:CS/ CT/ LCN/ HC/ HQ/ CMM/ NL (open type)/ NLC (open type)/ LS



NLC Series

Molded Type / For High Current Application

Wound Chip Inductors

The characteristics of NLC series (molded type) features low RDC and high current handling capacities. These chip inductors are ideal for power supply applications such as PC, conveyable telephone, and so on.

APPLICATIONS

Portable Telephones

Personal computers

HHDs.

Other electronics appliances.

FEATURES

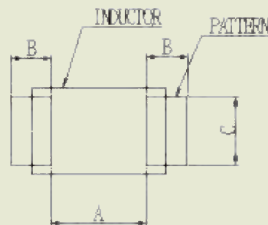
Low RDC, large current type

Best for power supply line.

Available in 2 sizes.

RECOMMENDED PATTERN

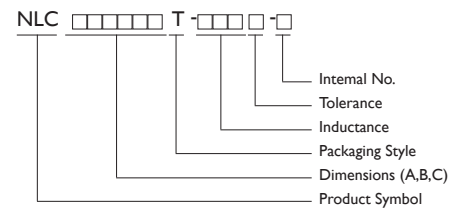
Dimensions : mm



TYPE	A	B	C
NLC453232	3.0	1.5	2.8
NLC565050	4.0	2.0	4.5

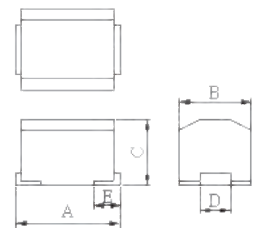


PRODUCT IDENTIFICATION



- Packaging : T : Tape and Reel ; B : Bulk
- Tolerance : J = $\pm 5\%$; K = $\pm 10\%$
- YAGEO will start to release lead-free that meet SONY SS-00259's criteria, and Internal No. will be changed to "N" as identification.
Ex. NLC453232T-1R0K-N

SHAPES AND DIMENSIONS



TYPE	A	B	C	D	E
NLC453232	4.5 $\pm$ 0.3	3.2 $\pm$ 0.3	3.2 $\pm$ 0.3	1.4 $\pm$ 0.4	0.9 $\pm$ 0.2
NLC565050	5.6 $\pm$ 0.3	5.0 $\pm$ 0.3	5.0 $\pm$ 0.3	1.8 $\pm$ 0.3	1.3 $\pm$ 0.2



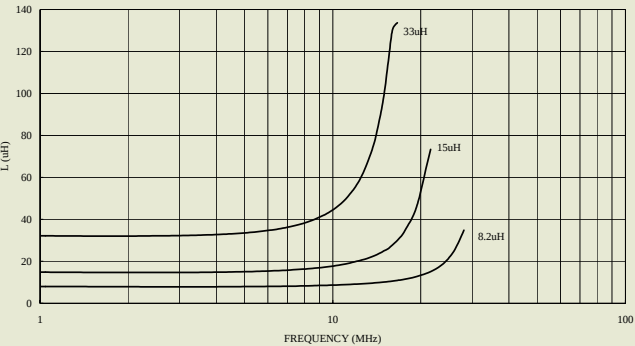
ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE	TOLERANCE	Q	TEST FREQUENCY	SRF	DC RESISTANCE	IDC
	(μH)	(±%)	Min.	(MHz)	(MHz) Min.	(Ω) Max.	(mA) Max.
NLC453232T-1R0K-S	1.0	10	10	7.96	200	0.11	1050
NLC453232T-1R2K-S	1.2	10	10	7.96	155	0.12	1000
NLC453232T-1R5K-S	1.5	10	10	7.96	130	0.15	950
NLC453232T-1R8K-S	1.8	10	10	7.96	100	0.16	900
NLC453232T-2R2K-S	2.2	10	10	7.96	80	0.18	850
NLC453232T-2R7K-S	2.7	10	10	7.96	55	0.20	800
NLC453232T-3R3K-S	3.3	10	10	7.96	45	0.22	750
NLC453232T-3R9K-S	3.9	10	10	7.96	40	0.24	700
NLC453232T-4R7K-S	4.7	10	10	7.96	35	0.27	650
NLC453232T-5R6K-S	5.6	10	10	7.96	30	0.30	650
NLC453232T-6R8K-S	6.8	10	10	7.96	28	0.35	600
NLC453232T-8R2K-S	8.2	10	10	7.96	25	0.40	600
NLC453232T-100K-S	10	10	10	2.52	22	0.50	550
NLC453232T-120K-S	12	10	10	2.52	21	0.60	500
NLC453232T-150K-S	15	10	10	2.52	20	0.70	450
NLC453232T-180K-S	18	10	10	2.52	18	0.80	400
NLC453232T-220K-S	22	10	10	2.52	17	0.90	370
NLC453232T-270K-S	27	10	10	2.52	15	1.20	330
NLC453232T-330K-S	33	10	10	2.52	14	1.40	300
NLC453232T-390K-S	39	10	10	2.52	12	1.60	280
NLC453232T-470K-S	47	10	10	2.52	11.5	1.90	260
NLC453232T-560K-S	56	10	10	2.52	10.5	2.20	240
NLC453232T-680K-S	68	10	10	2.52	9	2.60	220
NLC453232T-820K-S	82	10	10	2.52	8.5	3.50	200
NLC453232T-101K-S	100	10	20	0.796	7.0	4.00	180
NLC453232T-121K-S	120	10	20	0.796	6.5	4.50	160
NLC453232T-151K-S	150	10	20	0.796	6	6.50	140
NLC453232T-181K-S	180	10	20	0.796	5.5	7.50	120
NLC453232T-221K-S	220	10	20	0.796	5.0	9.00	120
NLC453232T-271K-S	270	10	20	0.796	4.5	11.0	100
NLC453232T-331K-S	330	10	20	0.796	4	13.0	90

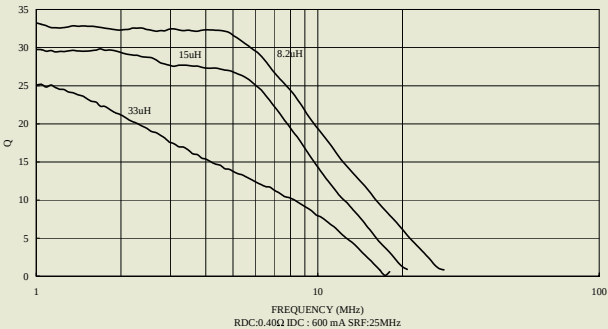
• Test Instruments: HP4286A RF Impedance Analyzer for L · Q · SRF Digital Multimeter CH502BC/ HP4338B for RDC
HP4286A LF Impedance Analyzer for L · Q · HP4284A+HP42841A for IDC

TEST INSTRUMENTS : HP4291A Impedance / Material Analyzer

Inductance vs. Frequency characteristics



Q vs. Frequency characteristics





ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μ H)	TOLERANCE ($\pm\%$)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
NLC565050T-1R0K-S	1.0	10	10	7.96	95	0.03	1800
NLC565050T-1R2K-S	1.2	10	10	7.96	70	0.035	1700
NLC565050T-1R5K-S	1.5	10	10	7.96	55	0.04	1600
NLC565050T-1R8K-S	1.8	10	10	7.96	47	0.05	1400
NLC565050T-2R2K-S	2.2	10	10	7.96	42	0.06	1300
NLC565050T-2R7K-S	2.7	10	10	7.96	37	0.07	1200
NLC565050T-3R3K-S	3.3	10	10	7.96	34	0.08	1120
NLC565050T-3R9K-S	3.9	10	10	7.96	32	0.09	1050
NLC565050T-4R7K-S	4.7	10	10	7.96	29	0.11	950
NLC565050T-5R6K-S	5.6	10	10	7.96	26	0.13	880
NLC565050T-6R8K-S	6.8	10	10	7.96	24	0.15	810
NLC565050T-8R2K-S	8.2	10	10	7.96	22	0.18	750
NLC565050T-100K-S	10	10	10	2.52	19	0.21	690
NLC565050T-120K-S	12	10	10	2.52	17	0.25	630
NLC565050T-150K-S	15	10	10	2.52	16	0.30	580
NLC565050T-180K-S	18	10	10	2.52	14	0.36	530
NLC565050T-220K-S	22	10	10	2.52	13	0.43	480
NLC565050T-270K-S	27	10	10	2.52	11.5	0.52	440
NLC565050T-330K-S	33	10	10	2.52	10.5	0.62	400
NLC565050T-390K-S	39	10	10	2.52	9.5	0.72	370
NLC565050T-470K-S	47	10	10	2.52	8.5	0.85	340
NLC565050T-560K-S	56	10	10	2.52	7.8	1.00	310
NLC565050T-680K-S	68	10	10	2.52	7	1.2	290
NLC565050T-820K-S	82	10	10	2.52	6.4	1.4	270
NLC565050T-101K-S	100	10	20	0.796	6	1.6	250
NLC565050T-121K-S	120	10	20	0.796	5.4	1.9	230
NLC565050T-151K-S	150	10	20	0.796	4.8	2.2	210
NLC565050T-181K-S	180	10	20	0.796	4.4	2.8	190
NLC565050T-221K-S	220	10	20	0.796	3.9	3.4	170
NLC565050T-271K-S	270	10	20	0.796	3.6	4.2	155
NLC565050T-331K-S	330	10	20	0.796	3.2	4.9	140
NLC565050T-391K-S	390	10	20	0.796	2.9	5.8	130
NLC565050T-471K-S	470	10	20	0.796	2.6	7	120
NLC565050T-561K-S	560	10	20	0.796	2.4	8.5	110
NLC565050T-681K-S	680	10	20	0.796	2.2	10	100
NLC565050T-821K-S	820	10	20	0.796	2	13	90
NLC565050T-102K-S	1000	10	20	0.252	1.8	15	85

Test Instruments : P4286A RF Impedance Analyzer for L · Q · SRF Digital Multimeter CH502BC / HP4338B for RDC
 HP4285A LF Impedance Analyzer for L · Q · HP4284A+HP42841A for IDC



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQ (MHz)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE ($\pm$ %)
NLC453232T-1R0 □ -N	1	7.96	10	200	0.11	1050	5,10
NLC453232T-1R2 □ -N	1.2	7.96	10	155	0.12	1000	5,10
NLC453232T-1R5 □ -N	1.5	7.96	10	130	0.15	950	5,10
NLC453232T-1R8 □ -N	1.8	7.96	10	100	0.16	900	5,10
NLC453232T-2R2 □ -N	2.2	7.96	10	80	0.18	850	5,10
NLC453232T-2R7 □ -N	2.7	7.96	10	55	0.2	800	5,10
NLC453232T-3R3 □ -N	3.3	7.96	10	45	0.22	750	5,10
NLC453232T-3R9 □ -N	3.9	7.96	10	40	0.24	700	5,10
NLC453232T-4R7 □ -N	4.7	7.96	10	35	0.27	650	5,10
NLC453232T-5R6 □ -N	5.6	7.96	10	30	0.3	650	5,10
NLC453232T-6R8 □ -N	6.8	7.96	10	28	0.35	600	5,10
NLC453232T-8R2 □ -N	8.2	7.96	10	25	0.4	600	5,10
NLC453232T-100 □ -N	10	2.52	10	22	0.5	550	5,10
NLC453232T-120 □ -N	12	2.52	10	21	0.6	500	5,10
NLC453232T-150 □ -N	15	2.52	10	20	0.7	450	5,10
NLC453232T-180 □ -N	18	2.52	10	18	0.8	400	5,10
NLC453232T-220 □ -N	22	2.52	10	17	0.9	370	5,10
NLC453232T-270 □ -N	27	2.52	10	15	1.2	330	5,10
NLC453232T-330 □ -N	33	2.52	10	14	1.4	300	5,10
NLC453232T-390 □ -N	39	2.52	10	12	1.6	280	5,10
NLC453232T-470 □ -N	47	2.52	10	11.5	1.9	260	5,10
NLC453232T-560 □ -N	56	2.52	10	10.5	2.2	240	5,10
NLC453232T-680 □ -N	68	2.52	10	9	2.6	220	5,10
NLC453232T-820 □ -N	82	2.52	10	8.5	3.5	200	5,10
NLC453232T-101 □ -N	100	0.796	20	7	4	180	5,10
NLC453232T-121 □ -N	120	0.796	20	6.5	4.5	160	5,10
NLC453232T-151 □ -N	150	0.796	20	6	6.5	140	5,10
NLC453232T-181 □ -N	180	0.796	20	5.5	7.5	120	5,10
NLC453232T-221 □ -N	220	0.796	20	5	9	120	5,10
NLC453232T-271 □ -N	270	0.796	20	4.5	11	100	5,10
NLC453232T-331 □ -N	330	0.796	20	4	13	90	5,10
NLC453232T-471 □ -N	470	0.796	20	3.5	19	70	5,10
NLC453232T-561 □ -N	560	0.796	20	2.5	21	60	5,10
NLC453232T-681 □ -N	680	0.796	20	2	30	60	5,10

NOTE: □-tolerance J= $\pm$ 5% / K= $\pm$ 10% / M= $\pm$ 20%

1. Operating temperature range -25°C~85°C

2.IDC:Applied the current to coils,the inductance shall be less than 10% initial value.

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μ H)	TEST FREQ (MHz)	Q Min.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE ($\pm$ %)
NLC565050T-1R0K-N	1	7.96	10	95	0.03	1800	10
NLC565050T-1R2K-N	1.2	7.96	10	70	0.035	1700	10
NLC565050T-1R5K-N	1.5	7.96	10	55	0.04	1600	10
NLC565050T-1R8K-N	1.8	7.96	10	47	0.05	1400	10
NLC565050T-2R2K-N	2.2	7.96	10	42	0.06	1300	10
NLC565050T-2R7K-N	2.7	7.96	10	37	0.07	1200	10
NLC565050T-3R3K-N	3.3	7.96	10	34	0.08	1120	10
NLC565050T-3R9K-N	3.9	7.96	10	32	0.09	1050	10
NLC565050T-4R7K-N	4.7	7.96	10	29	0.11	950	10
NLC565050T-5R6K-N	5.6	7.96	10	26	0.13	880	10
NLC565050T-6R8K-N	6.8	7.96	10	24	0.15	810	10
NLC565050T-8R2K-N	8.2	7.96	10	22	0.18	750	10
NLC565050T-100K-N	10	2.52	10	19	0.21	690	10
NLC565050T-120K-N	12	2.52	10	17	0.25	630	10
NLC565050T-150K-N	15	2.52	10	16	0.3	580	10
NLC565050T-180K-N	18	2.52	10	14	0.36	530	10
NLC565050T-220K-N	22	2.52	10	13	0.43	480	10
NLC565050T-270K-N	27	2.52	10	11.5	0.52	440	10
NLC565050T-330K-N	33	2.52	10	10.5	0.62	400	10
NLC565050T-390K-N	39	2.52	10	9.5	0.72	370	10
NLC565050T-470K-N	47	2.52	10	8.5	0.85	340	10
NLC565050T-560K-N	56	2.52	10	7.8	1	310	10
NLC565050T-680K-N	68	2.52	10	7	1.2	290	10
NLC565050T-820K-N	82	2.52	10	6.4	1.4	270	10
NLC565050T-101K-N	100	0.796	20	6	1.6	250	10
NLC565050T-121K-N	120	0.796	20	5.4	1.9	230	10
NLC565050T-151K-N	150	0.796	20	4.8	2.2	210	10
NLC565050T-181K-N	180	0.796	20	4.4	2.8	190	10
NLC565050T-221K-N	220	0.796	20	3.9	3.4	170	10
NLC565050T-271K-N	270	0.796	20	3.6	4.2	155	10
NLC565050T-331K-N	330	0.796	20	3.2	4.9	140	10
NLC565050T-391K-N	390	0.796	20	2.9	5.8	130	10
NLC565050T-471K-N	470	0.796	20	2.6	7	120	10
NLC565050T-561K-N	560	0.796	20	2.4	8.5	110	10
NLC565050T-681K-N	680	0.796	20	2.2	10	100	10
NLC565050T-821K-N	820	0.796	20	2	13	90	10
NLC565050T-102K-N	1000	0.252	20	1.8	15	85	10

NOTE: -tolerance K= $\pm$ 10%

1. Operating temperature range -25°C~85°C

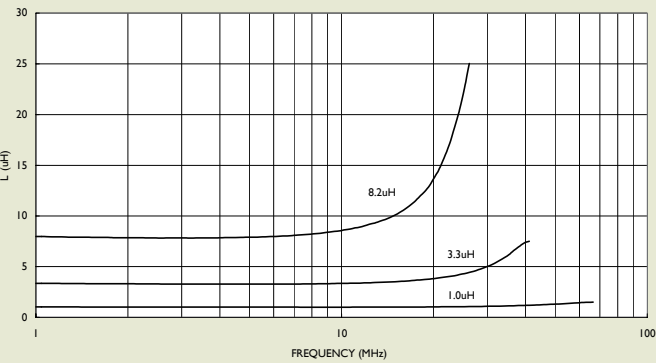
2.IDC:Applied the current to coils,the inductance shall be less than 10% initial value.

"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

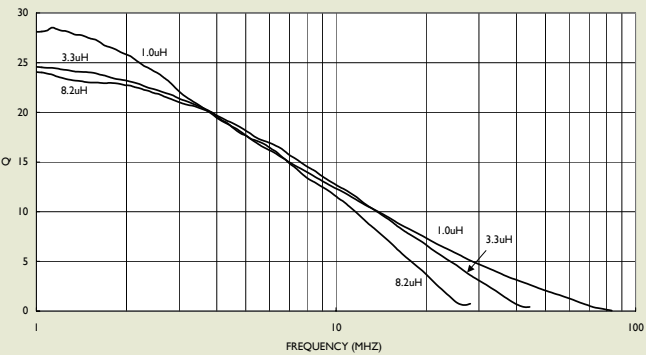


TEST INSTRUMENTS : HP4291A IMPEDANCE / MATERIAL ANALYZER

INDUCTANCE vs. FREQUENCY CHARACTERISTICS

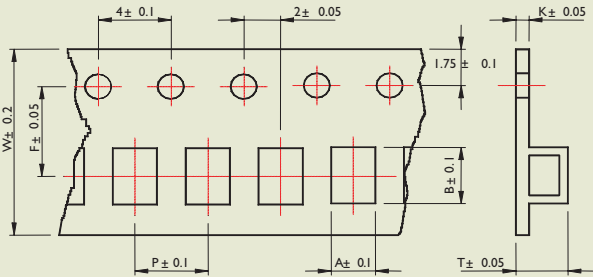


Q vs. FREQUENCY CHARACTERISTICS

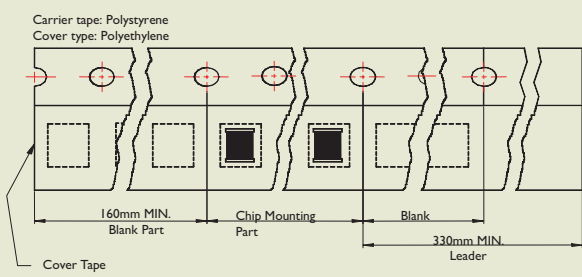


PACKAGING SPECIFICATIONS

Tape Dimensions



Tape Material



Reel Dimensions

Figure 1

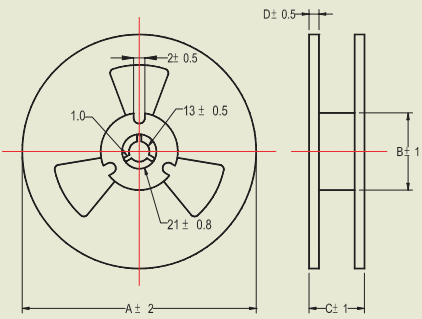
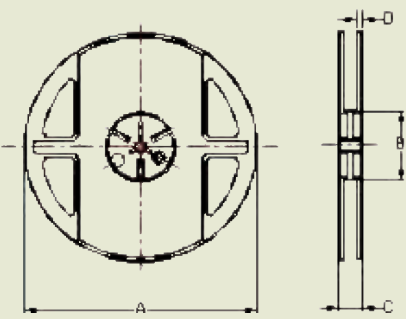


Figure 2



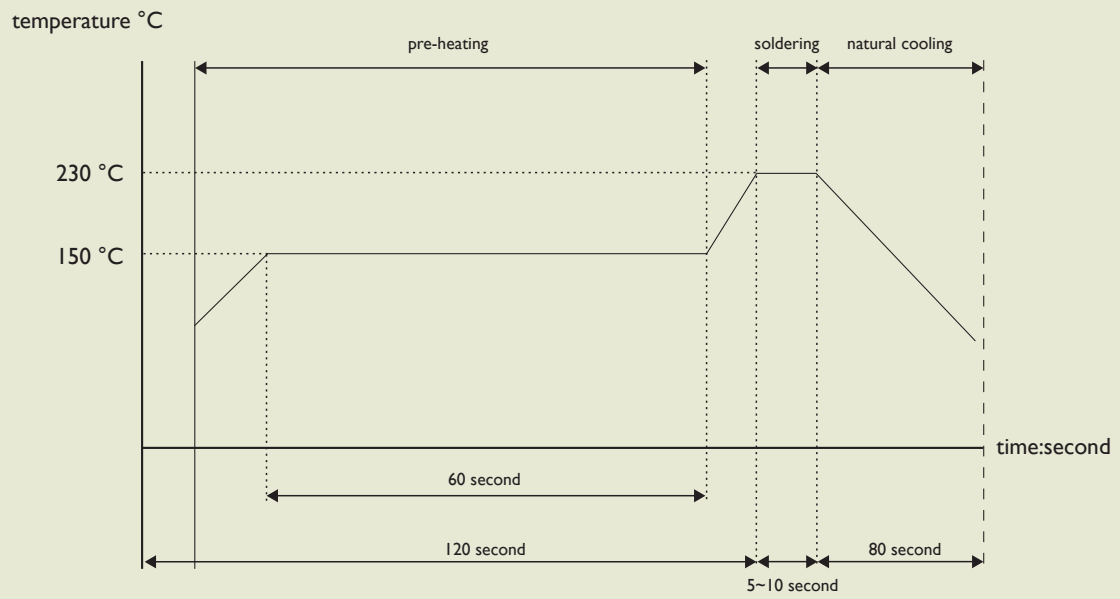
Dimensions : mm

TYPE	TAPE DIMENSIONS								REEL DIMENSIONS				Q'TY/REEL
	A	B	T	W	P	F	K	FIG	A	B	C	D	
NLC453232	3.3	5.00	3.50	12	8	5.5	0.3	2	178	60	16	1.4	500
NLC565050	5.35	6.10	5.50	16	12	7.5	0.35	1	330	100	22	2.3	1000



RECOMMEND SOLDERING CONDITIONS

for:CS/ CT/ LCN/ HC/ HQ/ CMM/ NL (open type)/ NLC (open type)/ LS



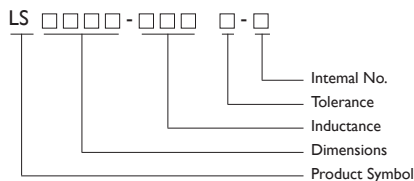
Wire Wound Ferrite Chip Inductors

LS Series

Open Type / For High Frequency & Low Loss Applications

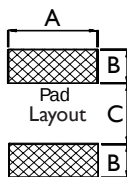


PRODUCT IDENTIFICATION



- Tolerance : J=±5% ; K= ±10%
- YAGEO will start to release lead-free that meet SONY SS-00259's criteria, and Internal No. will be changed to "N" as identification.
Ex. LS0603-R47 □-N

RECOMMENDED PATTERN



TYPE	A	B	C
LS0603	1.02	0.64	0.64
LS1008	2.54	1.02	1.27

LS Series is the latest combo open type ferrite wire wound chip inductor. Thw wire wound ferrite construction provides higher SRF, lower DCR and superior Q values than other ferrite chip in duc-tors.

APPLICATIONS

Telecom and datacom applications such as xDSL, Cable Modem, Set-top Box, CATV filter/ tuner, wireless LAN and so on.

FEATURES

Very strong solderability by reflow soldering and soldering iron or wave soldering.

Highly accurate dimensions can be mounted automatically.

Terminals are highly resistant to pull forces.

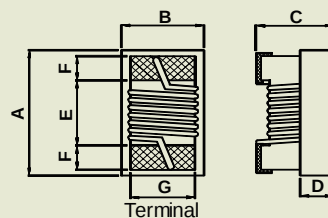
Highly resistant to mechanical shocks and pressure.

Highly reliable in environments of sudden temperature change and humidity.

Lowest DCR & better Q value in ferrite Series.

SHAPES AND DIMENSIONS

Dimensions : mm



TYPE	A	B	C	D	E	F	G
LS0603	1.8 ⁺⁰	1.25 ⁺⁰	1.02 ⁺⁰	0.38Ref	0.86	0.33	0.76
LS1008	2.92 ⁺⁰	2.79 ⁺⁰	2.20 ⁺⁰	0.70Ref	1.52	0.51	2.03



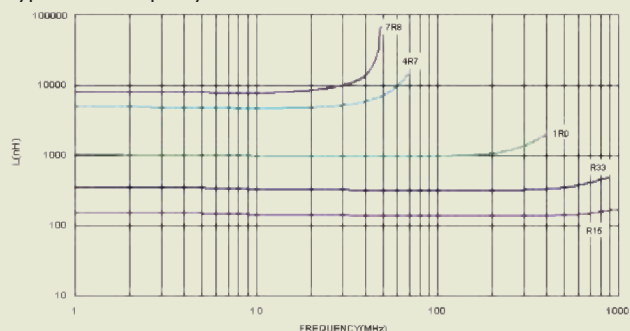
ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (nH)	TEST FREQ (MHz)	TOLERANCE (±%)	Q TYP-	SRF MIN (MHz)	RDC MAX (Ω)	IDC MAX (mA)	Color
LS0603-R47 □ -S	470	7.9	10/5	17	800	0.45	1100	Brown
LS0603-1R0 □ -S	1000	7.9	10/5	18	310	0.81	400	Blue
LS0603-2R2 □ -S	2200	7.9	10/5	19	250	1.35	500	Black
LS0603-4R7 □ -S	4700	7.9	10/5	19	95	2.80	400	Yellow
LS0603-6R8 □ -S	6800	7.9	10/5	19	55	3.30	400	Blue
LS0603-100 □ -S	10000	7.9	10/5	19	40	4.80	300	White

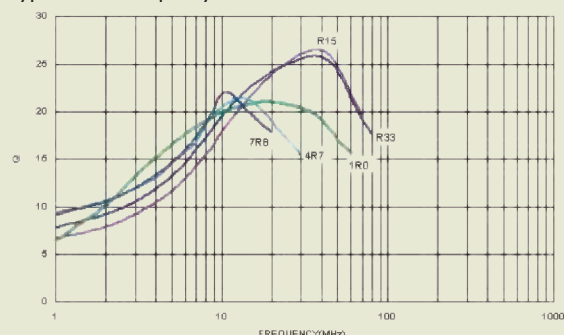
- Tolerance : J = ±5% , K = ±10%
- Packaging : Clear tape and reel (standard)
- L/Q : Agilent / HP4291A + Agilent / HP 16193A
- SRF : Agilent / HP4291A
- RDC : DIGITAL MULTIMETER SC-7401
- Idc for Inductance drop 10% from its value without current.
- Operating temperature range from -25°C to 85°C

TEST INSTRUMENTS : HP4291A Impedance / Material Analyzer

Typical L vs. Frequency



Typical Q vs. Frequency



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (μH)	TEST FREQ (MHz)	Q TYP-	SRF MIN (MHz)	RDC MAX (Ω)	IDC MAX (mA)	TOLERANCE (±%)	Color
LS0603-47N □ -N	0.047	7.9/7.9	17	1700	0.075	1500	5,10	BLK
LS0603-72N □ -N	0.072	7.9/7.9	17	1700	0.12	1500	5,10	BRN
LS0603-R10 □ -N	0.1	7.9/7.9	17	1650	0.13	1500	5,10	RED
LS0603-R12 □ -N	0.12	7.9/7.9	17	1400	0.15	1500	5,10	ORN
LS0603-R15 □ -N	0.15	7.9/7.9	17	1350	0.15	1450	5,10	YEL
LS0603-R18 □ -N	0.18	7.9/7.9	17	1350	0.15	1400	5,10	GRN
LS0603-R22 □ -N	0.22	7.9/7.9	17	1150	0.16	1350	5,10	BLU
LS0603-R24 □ -N	0.24	7.9/7.9	17	1050	0.19	1300	5,10	VIO
LS0603-R27 □ -N	0.27	7.9/7.9	17	1050	0.3	1050	5,10	GRY
LS0603-R33 □ -N	0.33	7.9/7.9	17	850	0.46	1200	5,10	WHT
LS0603-R39 □ -N	0.39	7.9/7.9	17	810	0.51	1200	5,10	BLK
LS0603-R47 □ -N	0.47	7.9/7.9	17	720	0.62	1050	5,10	BRN
LS0603-R56 □ -N	0.56	7.9/7.9	17	600	0.44	850	5,10	RED
LS0603-R68 □ -N	0.68	7.9/7.9	17	600	0.52	850	5,10	ORN
LS0603-R78 □ -N	0.78	7.9/7.9	17	460	0.83	850	5,10	YEL
LS0603-R82 □ -N	0.82	7.9/7.9	17	480	0.69	750	5,10	GRN
LS0603-1R0 □ -N	1	7.9/7.9	18	310	0.81	600	5,10	BLU
LS0603-1R2 □ -N	1.2	7.9/7.9	17	270	0.87	550	5,10	VIO
LS0603-1R5 □ -N	1.5	7.9/7.9	17	270	1.06	540	5,10	GRY



PART NO.	INDUCTANCE (μH)	TEST FREQ (MHz)	Q TYP-	SRF MIN (MHz)	RDC MAX (Ω)	IDC MAX (mA)	TOLERANCE (±%)	Color
LS0603-1R8 □ -N	1.8	7.9/7.9	17	230	1.1	520	5,10	WHT
LS0603-2R2 □ -N	2.2	7.9/7.9	17	150	1.2	500	5,10	BLK
LS0603-2R7 □ -N	2.7	7.9/7.9	17	105	1.5	480	5,10	BRN
LS0603-3R3 □ -N	3.3	7.9/7.9	17	84	1.5	440	5,10	RED
LS0603-3R9 □ -N	3.9	7.9/7.9	17	80	1.6	430	5,10	ORN
LS0603-4R7 □ -N	4.7	7.9/7.9	18	69	2.1	420	5,10	YEL
LS0603-5R6 □ -N	5.6	7.9/7.9	18	65	2.6	400	5,10	GRN
LS0603-6R8 □ -N	6.8	7.9/7.9	19	55	3.1	400	5,10	BLU
LS0603-7R8 □ -N	7.8	7.9/7.9	17	47	3.5	400	5,10	VIO
LS0603-8R2 □ -N	8.2	7.9/7.9	17	42	3.6	400	5,10	GRY
LS0603-100 □ -N	10	7.9/7.9	19	40	4.8	300	5,10	WHT

NOTE: □ -tolerance J= ±5% / K= ±10% / L= ±15% / M=± 20%
1.Operating temperature range -25°C~85°C
2.L /Q Test OSC @200mV
3.IDC for Inductance drop 10% from its value without current
"N" FOR Completely lead free type (Including Ferrite Body & Solder)

ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE (μH)	TOLERANCE (±%)	Q TYP			SRF (MHz) Min.	RDC (Ω) Max.	IDC MAX (mA)	Color Code		
			7.9MHz	25MHz	50MHz				1ST	2ND	3RD
LS1008-1R2 □ -S	1.2@7.9MHz	10/5	35	47	55	350	0.50	1200	Brown	Red	Red
LS1008-1R5 □ -S	1.5@7.9MHz	10/5	38	53	58	300	0.65	1200	Brown	Green	Red
LS1008-1R8 □ -S	1.8@7.9MHz	10/5	34	47	54	280	0.75	1050	Brown	Gray	Red
LS1008-2R2 □ -S	2.2@7.9MHz	10/5	34	43	48	250	0.90	950	Red	Red	Red
LS1008-2R7 □ -S	2.7@7.9MHz	10/5	38	49	51	200	1.00	950	Red	Violet	Red
LS1008-3R3 □ -S	3.3@7.9MHz	10/5	42	57	58	200	1.15	900	Orange	Orange	Red
LS1008-3R9 □ -S	3.9@7.9MHz	10/5	37	46	47	170	1.25	850	Orange	White	Red
LS1008-4R7 □ -S	4.7@7.9MHz	10/5	37	43	38	130	1.35	700	Yellow	Violet	Red
LS1008-5R6 □ -S	5.6@7.9MHz	10/5	36	40	29	110	1.45	700	Green	Blue	Red
LS1008-6R8 □ -S	6.8@7.9MHz	10/5	33	39	33	105	1.60	600	Blue	Gray	Red
LS1008-8R2 □ -S	8.2@7.9MHz	10/5	40	43	28	90	1.80	550	Gray	Red	Red
LS1008-100 □ -S	10.0@7.9MHz	10/5	40	41	25	85	2.40	500	Brown	Black	Orange

ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

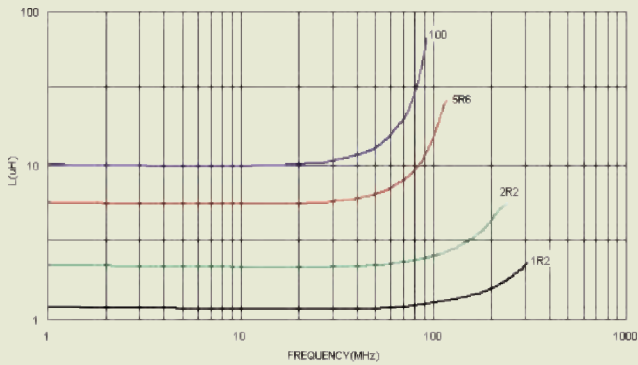
PART NO.	INDUCTANCE (μH)	TEST FREQ (MHz)	Q TYP.	SRF (MHz) Min.	RDC (Ω) Max.	IDC (mA) Max.	TOLERANCE (±%)	Color Code		
								1ST	2ND	3RD
LS1008-1R2 □ -N	1.2	7.9/50	55	350	0.5	1200	5,10	BRN	RED	RED
LS1008-1R5 □ -N	1.5	7.9/50	58	300	0.65	1200	5,10	BRN	GRN	RED
LS1008-1R8 □ -N	1.8	7.9/50	54	280	0.75	1050	5,10	BRN	GRY	RED
LS1008-2R2 □ -N	2.2	7.9/50	48	250	0.9	950	5,10	RED	RED	RED
LS1008-2R7 □ -N	2.7	7.9/50	51	200	1	950	5,10	RED	VIO	RED
LS1008-3R3 □ -N	3.3	7.9/50	58	200	1.15	900	5,10	ORN	ORN	RED
LS1008-3R9 □ -N	3.9	7.9/50	37	170	1.25	850	5,10	ORN	WHT	RED
LS1008-4R7 □ -N	4.7	7.9/7.9	37	130	1.35	700	5,10	YEL	VIO	RED
LS1008-5R6 □ -N	5.6	7.9/7.9	36	110	1.45	700	5,10	GRN	BLU	RED
LS1008-6R8 □ -N	6.8	7.9/7.9	33	105	1.6	600	5,10	BLU	GRY	RED
LS1008-8R2 □ -N	8.2	7.9/7.9	40	90	1.8	550	5,10	GRY	RED	RED
LS1008-100 □ -N	10	7.9/7.9	40	85	2.4	500	5,10	BRN	BLK	ORN
LS1008-150 □ -N	15	7.9/7.9	35	40	2.4	450	5,10	BRN	GRN	ORN

NOTE: □ -tolerance J= ±5% / K= ±10% /M=± 20%
1.Operating temperature range -25°C~85°C
2.L/Q Test OSC@200mV.
3.IDC for Inductance drop 10% from its value without current
"-N" FOR COMPLETELY LEAD FREE TYPE(INCLUDING FERRITE BODY & SOLDER)

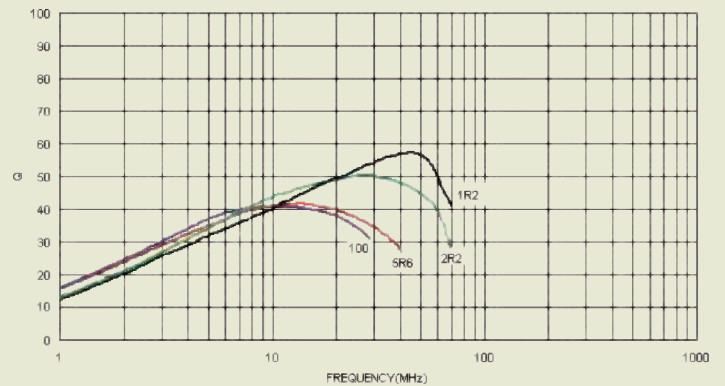


TEST INSTRUMENTS : HP4291A IMPEDANCE / MATERIAL ANALYZER

Typical L vs. Frequency

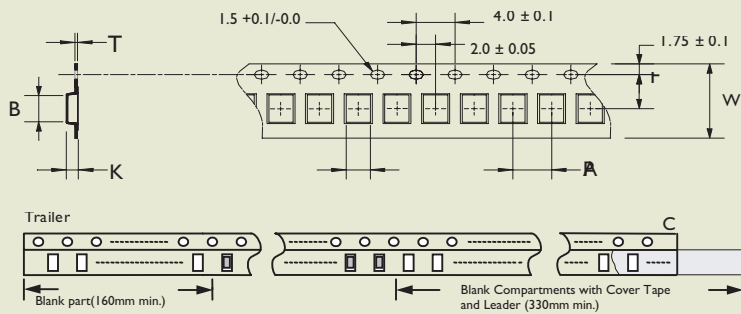


Typical Q vs. Frequency

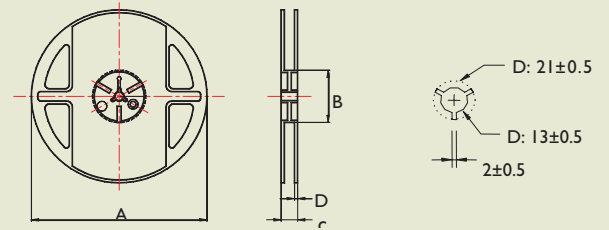


PACKAGING SPECIFICATIONS

Tape Dimensions



Reel Dimensions



Dimensions : mm

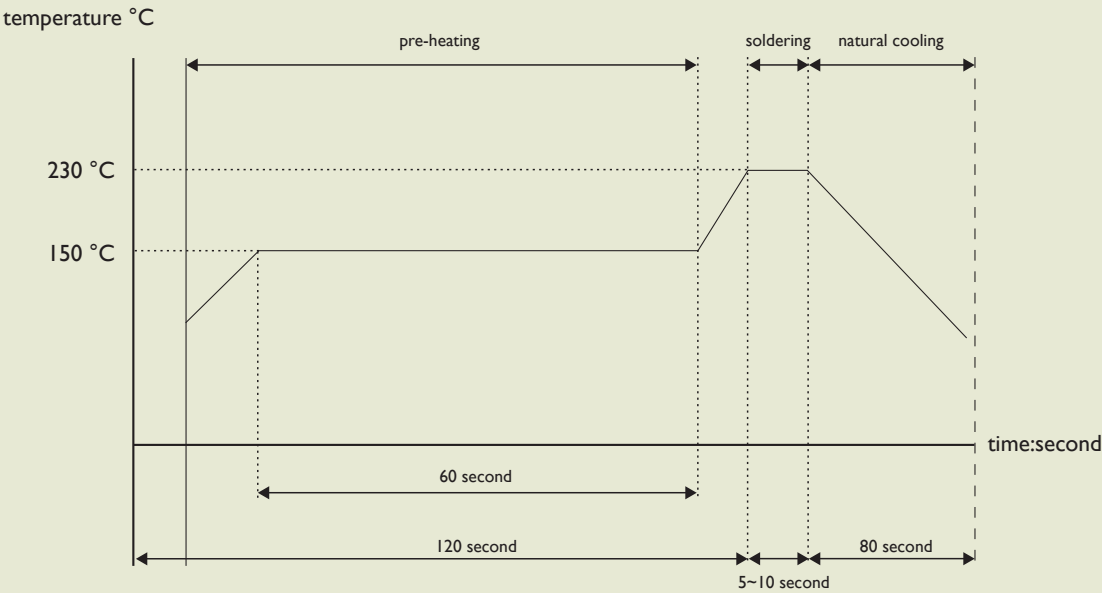
TYPE	TAPE DIMENSIONS						
	A	B	T	W	P	F	K
LS0603	1.15	1.83	0.23	8	4	3.5	1.00
LS1008	2.70	2.95	0.23	8	4	3.5	2.25

REEL DIMENSIONS				Q'TY/REEL
A	B	C	D	
178	60	12	1.5	4,000
178	60	12	1.5	2,000



RECOMMEND SOLDERING CONDITIONS

for:CS/ CT/ LCN/ HC/ HQ/ CMM/ NL (open type)/ NLC (open type)/ LS



CLH Series

Lead-free / For High Frequency Applications

Multilayer Chip Inductors High Frequency

APPLICATIONS

RF Resonance and Impedance Matching Circuit

RF and Wireless Communication

Information Technology Equipments, Computers, Telecommunications, Radar Detectors, Automotive Electronics, Cellular Phones, Pagers, PDAs, Keyless Remote Systems.

Use in L-C Filter Configurations

OUTLINE

Yageo high frequency multilayer ceramic chip inductor is formed without wound wire.

Monolithic laminated structure.

FEATURES

Meet SONY SS-00259's criteria for lead-free product.

Excellent Q Factor and SRF Characteristic

Cost Effective

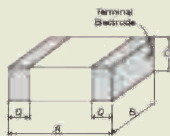
Small size of 1005/1608 is suitable for small portable equipment.

Supports Operating Frequency up to 6GHz with Nominal Inductance Values from 1.0nH To 330nH

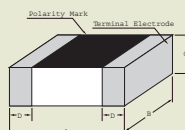
SHAPES AND DIMENSIONS

Dimensions : mm

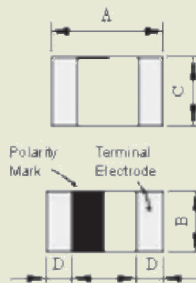
CLH1608-W series
CLH2012-S series



CLH1005-S series
CLH1608-S series

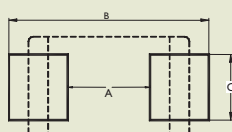


CLH1005-H series
CLH1608-H series



TYPE	A	B	C	D
CLH1005	1.00 ± 0.10	0.50 ± 0.10	0.50 ± 0.10	0.25 ± 0.10
CLH1608	1.60 ± 0.15	0.80 ± 0.15	0.80 ± 0.15	0.30 ± 0.20
CLH2012	2.00 ± 0.20	1.25 ± 0.20	0.90 ± 0.20	0.50 ± 0.30

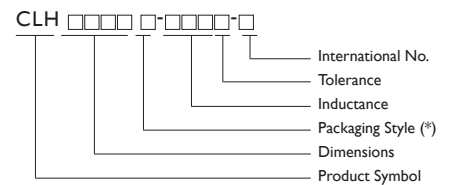
RECOMMENDED PATTERN



A	B	C
0.4	1.2~1.4	0.4
0.8	2.4~3.4	0.6
1.2	3.0~4.0	1.0



PRODUCT IDENTIFICATION



* B: Bulk ; T: Tape and Reel

CLH1005-H



CLH1005-S

CLH1608-H



CLH1608-W
CLH2012-S

CLH1608-S



ELECTRICAL CHARACTERISTICS CLHI005T (0402) SERIES: LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE at 100MHz (nH)	TOLERANCE	Q Min. at 100MHz	Q TYPICAL		SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
				at 100MHz	at 800MHz			
CLHI005T-1N0 □ -N	1.0	S	8	9	28	10,000	0.12	300
CLHI005T-1N2 □ -N	1.2	S	8	9	28	10,000	0.12	300
CLHI005T-1N5 □ -N	1.5	S	8	10	28	9,000	0.13	300
CLHI005T-1N8 □ -N	1.8	S	8	10	28	8,700	0.14	300
CLHI005T-2N2 □ -N	2.2	S	8	10	29	8,100	0.16	300
CLHI005T-2N7 □ -N	2.7	S	8	11	30	7,700	0.17	300
CLHI005T-3N3 □ -N	3.3	S, K	8	11	30	6,300	0.19	300
CLHI005T-3N9 □ -N	3.9	S, K	8	11	31	6,100	0.22	300
CLHI005T-4N7 □ -N	4.7	S, K	8	11	31	5,400	0.24	300
CLHI005T-5N6 □ -N	5.6	S, K	8	11	31	5,100	0.27	300
CLHI005T-6N8 □ -N	6.8	J, K	8	11	33	4,550	0.32	250
CLHI005T-8N2 □ -N	8.2	J, K	8	12	32	4,100	0.40	250
CLHI005T-10N □ -N	10	J, K	8	12	32	3,900	0.45	250
CLHI005T-12N □ -N	12	J, K	8	12	31	3,000	0.50	250
CLHI005T-15N □ -N	15	J, K	8	12	30	2,600	0.60	250
CLHI005T-18N □ -N	18	J, K	8	12	29	2,350	0.65	200
CLHI005T-22N □ -N	22	J, K	8	12	28	2,000	0.80	200
CLHI005T-27N □ -N	27	J, K	8	12	27	1,900	0.90	200
CLHI005T-33N □ -N	33	J, K	8	10	25	1,700	1.00	200
CLHI005T-39N □ -N	39	J, K	8	10	25	1,600	1.20	150
CLHI005T-47N □ -N	47	J, K	8	9	22	1300	1.30	150
CLHI005T-56N □ -N	56	J, K	8	10	21	1250	2.00	150
CLHI005T-68N □ -N	68	J, K	8	10	15	1000	2.20	100
CLHI005T-82N □ -N	82	J, K	8	9	13	900	2.50	100
CLHI005T-R10 □ -N	100	J, K	8	9	10	850	2.50	100

Note : Tolerance : □-S = ±0.3nH J = ±5% K = ±10%

Test Conditions : L/Q- Agilent E4991A Fixture :Agilent 16197A

SRF - HP8753D

RDC - HP4338B / CH502BC



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE at 100MHz (nH)	TOLERANCE	Q Min. at 100MHz	Q TYPICAL		SRF (MHz) Typical	DC RESISTANCE (Ω) Max.	IDC (mA) MAX.
				at 100MHz	at 800MHz			
CLH1005T-1N0 □ -H	1.0	S	8	9	28	10000	0.12	300
CLH1005T-1N2 □ -H	1.2	S	8	9	28	10000	0.12	300
CLH1005T-1N5 □ -H	1.5	S	8	10	28	9000	0.13	300
CLH1005T-1N8 □ -H	1.8	S	8	10	28	8700	0.14	300
CLH1005T-2N2 □ -H	2.2	S	8	10	29	8100	0.16	300
CLH1005T-2N7 □ -H	2.7	S	8	11	30	7700	0.17	300
CLH1005T-3N3 □ -H	3.3	S, K	8	11	30	6300	0.19	300
CLH1005T-3N9 □ -H	3.9	S, K	8	11	31	6100	0.22	300
CLH1005T-4N7 □ -H	4.7	S, K	8	11	31	5400	0.24	300
CLH1005T-5N6 □ -H	5.6	S, K	8	11	31	5100	0.27	300
CLH1005T-6N8 □ -H	6.8	J, K	8	11	33	4550	0.32	250
CLH1005T-8N2 □ -H	8.2	J, K	8	12	32	4100	0.40	250
CLH1005T-10N □ -H	10	J, K	8	12	32	3900	0.45	250
CLH1005T-12N □ -H	12	J, K	8	12	31	3000	0.50	250
CLH1005T-15N □ -H	15	J, K	8	12	30	2600	0.60	250
CLH1005T-18N □ -H	18	J, K	8	12	29	2350	0.65	200
CLH1005T-22N □ -H	22	J, K	8	12	28	2000	0.80	200
CLH1005T-27N □ -H	27	J, K	8	12	27	1900	0.90	200
CLH1005T-33N □ -H	33	J, K	8	10	25	1700	1.00	200
CLH1005T-39N □ -H	39	J, K	8	10	25	1600	1.20	150
CLH1005T-47N □ -H	47	J, K	8	10	22	1300	1.30	150
CLH1005T-56N □ -H	56	J, K	8	10	21	1250	2.00	150
CLH1005T-68N □ -H	68	J, K	8	10	19	1000	2.20	100
CLH1005T-82N □ -H	82	J, K	8	10	16	900	2.50	100
CLH1005T-R10 □ -H	100	J, K	8	10	10	850	2.50	100

Note : Tolerance : □-S = $\pm 0.3\text{nH}$ J = $\pm 5\%$ K = $\pm 10\%$

Test Conditions : L/Q- HP4291A+HP16192A

SRF - HP4291A+HP16192A OR HP8753D

RDC - HP4338B / CH502BC

IDC - HP4291A / HP6632A



ELECTRICAL CHARACTERISTICS CLHI608T (0603) SERIES

PART NO.	INDUCTANCE at 100MHz (nH)	TOLERANCE	Q Min. at 100MHz	Q TYPICAL		SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.
				at 100MHz	at 800MHz			
CLHI608T-1N0 □ -N	1.0	S	8	12	60	10,000	0.10	500
CLHI608T-1N2 □ -N	1.2	S	8	13	60	10,000	0.10	500
CLHI608T-1N5 □ -N	1.5	S	8	13	57	8,000	0.10	500
CLHI608T-1N8 □ -N	1.8	S	8	13	51	8,000	0.10	500
CLHI608T-2N2 □ -N	2.2	S	8	13	46	7,200	0.10	500
CLHI608T-2N7 □ -N	2.7	S	10	13	46	6,200	0.10	500
CLHI608T-3N3 □ -N	3.3	S, K	10	13	47	5,200	0.12	500
CLHI608T-3N9 □ -N	3.9	S, K	10	13	47	5,000	0.14	500
CLHI608T-4N7 □ -N	4.7	S, K	10	13	41	4,750	0.16	500
CLHI608T-5N6 □ -N	5.6	S, K	10	13	41	4,100	0.18	500
CLHI608T-6N8 □ -N	6.8	J, K	10	13	44	3750	0.22	500
CLHI608T-8N2 □ -N	8.2	J, K	10	13	44	3300	0.24	500
CLHI608T-10N □ -N	10	J, K	12	13	45	3,000	0.26	300
CLHI608T-12N □ -N	12	J, K	12	15	46	2,600	0.28	300
CLHI608T-15N □ -N	15	J, K	12	15	48	2,500	0.32	300
CLHI608T-18N □ -N	18	J, K	12	15	48	2,400	0.35	300
CLHI608T-22N □ -N	22	J, K	12	17	45	2,000	0.40	300
CLHI608T-27N □ -N	27	J, K	12	17	43	1,900	0.45	300
CLHI608T-33N □ -N	33	J, K	12	18	39	1,600	0.55	300
CLHI608T-39N □ -N	39	J, K	12	18	37 ***	1400	0.60	300
CLHI608T-47N □ -N	47	J, K	12	18	35 ***	1,300	0.70	300
CLHI608T-56N □ -N	56	J, K	12	18	32 ***	1100	0.75	300
CLHI608T-62N □ -N	62	J, K	12	18	34 ***	1050	0.85	300
CLHI608T-68N □ -N	68	J, K	12	18	34 ***	1050	0.85	300
CLHI608T-82N □ -N	82	J, K	12	18	32 ***	900	1.00	300
CLHI608T-R10 □ -N	100	J, K	12	18	20 ***	770	1.20	300
CLHI608T-R12 □ -N	120 *	J, K	8 *	14 *	20 **	850	2.3	250
CLHI608T-R15 □ -N	150 *	J, K	8 *	15 *	16 **	550	2.4	250
CLHI608T-R18 □ -N	180 *	J, K	8 *	15 *	16 **	520	2.7	250

Note : * at 50MHz ** at 300MHz *** at 500MHz

Tolerance : □ - S = ±0.3nH J = ±5% K = ±10%

Test L/Q : HP4291A+HP16192A

Conditions : SRF: HP4291A+HP16192A

RDC: HP4338B / CH502BC

IDC: HP4291A + HP6632A



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE	TOLERANCE	Q Min.	Q TYPICAL(MHz)					SRF	DC	IDC	
	at 100MHz (nH)		AT 50MHz	100MHz	AT 50	100	300	500	800	(MHZ)TYPICAL	RESISTANCE (Ω) Max.	(mA) MAX
CLH1608T-1N0S-H	1.0	S		8		12			43	10000	0.10	500
CLH1608T-1N2S-H	1.2	S		8		13			44	10000	0.10	500
CLH1608T-1N5S-H	1.5	S		8		13			45	8000	0.10	500
CLH1608T-1N8S-H	1.8	S		8		13			46	8000	0.10	500
CLH1608T-2N2S-H	2.2	S		8		13			46	7200	0.10	500
CLH1608T-2N7S-H	2.7	S		10		13			46	6200	0.10	500
CLH1608T-3N3 □ -H	3.3	S, K		10		13			47	5200	0.12	500
CLH1608T-3N9 □ -H	3.9	S, K		10		13			47	5000	0.14	500
CLH1608T-4N7 □ -H	4.7	S, K		10		13			41	4750	0.16	500
CLH1608T-5N6 □ -H	5.6	S, K		10		13			41	4100	0.18	500
CLH1608T-6N8 □ -H	6.8	J, K		10		13			44	3750	0.22	500
CLH1608T-8N2 □ -H	8.2	J, K		10		13			44	3300	0.24	500
CLH1608T-10N □ -H	10	J, K		12		13			45	3000	0.26	300
CLH1608T-12N □ -H	12	J, K		12		15			46	2600	0.28	300
CLH1608T-15N □ -H	15	J, K		12		15			48	2500	0.32	300
CLH1608T-18N □ -H	18	J, K		12		15			48	2400	0.35	300
CLH1608T-22N □ -H	22	J, K		12		17			45	2000	0.40	300
CLH1608T-27N □ -H	27	J, K		12		17			43	1900	0.45	300
CLH1608T-33N □ -H	33	J, K		12		18			39	1600	0.55	300
CLH1608T-39N □ -H	39	J, K		12		18		37		1400	0.60	300
CLH1608T-47N □ -H	47	J, K		12		18		35		1300	0.70	300
CLH1608T-56N □ -H	56	J, K		12		18		32		1100	0.75	300
CLH1608T-62N □ -H	62	J, K		12		18		32		1050	0.85	300
CLH1608T-68N □ -H	68	J, K		12		18		32		1050	0.85	300
CLH1608T-82N □ -H	82	J, K		12		18		30		900	1.00	300
CLH1608T-R10 □ -H	100	J, K		12		18		20		770	1.20	300
CLH1608T-R12 □ -H	*120	J, K	8			14		20		850	2.30	250
CLH1608T-R15 □ -H	*150	J, K	8			15		16		550	2.40	250
CLH1608T-R18 □ -H	*180	J, K	8			15		16		520	2.70	250

Note : * at 50MHz

Tolerance : □ - S = $\pm 0.3\text{nH}$ J = $\pm 5\%$ K = $\pm 10\%$

Test L/Q - HP4291A+HP16192A

Conditions : SRF - HP4291A+HP16192A

RDC - Digital Multimeter SC-7401

IDC - HP4291A+HP6632A



ELECTRICAL CHARACTERISTICS

PART NO.	INDUCTANCE at 100MHz (nH)	TOLERANCE	Q Min. AT 50MHz	Q TYPICAL(MHz)						SRF (MHZ) TYPICAL	DC RESISTANCE (Ω) Max.	IDC (mA) MAX
				100MHz	AT 50	100	300	500	800			
CLH1608T-1N0S-W	1.0	S		8		12			43	10000	0.10	500
CLH1608T-1N2S-W	1.2	S		8		13			44	10000	0.10	500
CLH1608T-1N5S-W	1.5	S		8		13			45	8000	0.10	500
CLH1608T-1N8S-W	1.8	S		8		13			46	8000	0.10	500
CLH1608T-2N2S-W	2.2	S		8		13			46	7200	0.10	500
CLH1608T-2N7S-W	2.7	S		10		13			46	6200	0.10	500
CLH1608T-3N3 □ -W	3.3	S, K		10		13			47	5200	0.12	500
CLH1608T-3N9 □ -W	3.9	S, K		10		13			47	5000	0.14	500
CLH1608T-4N7 □ -W	4.7	S, K		10		13			41	4750	0.16	500
CLH1608T-5N6 □ -W	5.6	S, K		10		13			41	4100	0.18	500
CLH1608T-6N8 □ -W	6.8	J, K		10		13			44	3750	0.22	500
CLH1608T-8N2 □ -W	8.2	J, K		10		13			44	3300	0.24	500
CLH1608T-10N □ -W	10	J, K		12		13			45	3000	0.26	300
CLH1608T-12N □ -W	12	J, K		12		15			46	2600	0.28	300
CLH1608T-15N □ -W	15	J, K		12		15			48	2500	0.32	300
CLH1608T-18N □ -W	18	J, K		12		15			48	2400	0.35	300
CLH1608T-22N □ -W	22	J, K		12		17			45	2000	0.40	300
CLH1608T-27N □ -W	27	J, K		12		17			43	1900	0.45	300
CLH1608T-33N □ -W	33	J, K		12		18			39	1600	0.55	300
CLH1608T-39N □ -W	39	J, K		12		18		37		1400	0.60	300
CLH1608T-47N □ -W	47	J, K		12		18		35		1300	0.70	300
CLH1608T-56N □ -W	56	J, K		12		18		32		1100	0.75	300
CLH1608T-62N □ -W	62	J, K		12		18		32		1050	0.85	300
CLH1608T-68N □ -W	68	J, K		12		18		32		1050	0.85	300
CLH1608T-82N □ -W	82	J, K		12		18		30		900	1.00	300
CLH1608T-R10 □ -W	100	J, K		12		18		20		770	1.20	300
CLH1608T-R12 □ -W	*120	J, K	8		14		20			850	2.30	250
CLH1608T-R15 □ -W	*150	J, K	8		15		16			550	2.40	250
CLH1608T-R18 □ -W	*180	J, K	8		15		16			520	2.70	250

Note : * at 50MHz

Tolerance : □- S = ±0.3nH J = ±5% K = ±10%

Test L/Q - HP4291A+HPI6192A

Conditions : SRF - HP4291A+HPI6192A

 RDC - Digital Multimeter SC-7401

 IDC - HP4291A+HP6632A



ELECTRICAL CHARACTERISTICS CLH2012T (0805) SERIES : LEAD FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE at 100MHz (nH)	TOLERANCE	Q Min.	Q TYPICAL			SRF (MHz)Typical	DC RESISTANCE (Ω) Max.	IDC (mA) Max.
				at 50MHz	at 100MHz	at 100MHz	at 800MHz		
CLH2012T-1N0 □ -N	1.0	S		10		13	40	> 6000	300
CLH2012T-1N2 □ -N	1.2	S		10		13	40	> 6000	300
CLH2012T-1N5 □ -N	1.5	S		10		13	40	> 6000	300
CLH2012T-1N8 □ -N	1.8	S		10		13	45	> 6000	300
CLH2012T-2N2 □ -N	2.2	S		10		13	48	> 6000	300
CLH2012T-2N7 □ -N	2.7	S		12		13	48	> 6000	300
CLH2012T-3N3 □ -N	3.3	S, K		12		15	56	> 6000	300
CLH2012T-3N9 □ -N	3.9	S, K		12		15	54	5400	300
CLH2012T-4N7 □ -N	4.7	S, K		12		15	50	4500	300
CLH2012T-5N6 □ -N	5.6	S, K		12		15	53	4000	300
CLH2012T-6N8 □ -N	6.8	J, K		15		15	51	3650	300
CLH2012T-8N2 □ -N	8.2	J, K		15		15	53	3000	300
CLH2012T-10N □ -N	10	J, K		15		16	45	2500	300
CLH2012T-12N □ -N	12	J, K		15		16	48	2450	300
CLH2012T-15N □ -N	15	J, K		15		17	48	2000	300
CLH2012T-18N □ -N	18	J, K		15		17	43	1750	300
CLH2012T-22N □ -N	22	J, K		15		17	40	1700	300
CLH2012T-27N □ -N	27	J, K		15		18	38	1550	300
CLH2012T-33N □ -N	33	J, K		15		19	35	1350	300
CLH2012T-39N □ -N	39	J, K		18		21	37	1300	300
CLH2012T-47N □ -N	47	J, K		18		21	38	1200	300
CLH2012T-56N □ -N	56	J, K		18		21	31	1150	300
CLH2012T-68N □ -N	68	J, K		18		21	28	1000	300
CLH2012T-82N □ -N	82	J, K		18		22	16	850	300
CLH2012T-R10 □ -N	100	J, K		18		23		730	300
CLH2012T-R12 □ -N	120 *	J, K	13		16	22		650	300
CLH2012T-R15 □ -N	150 *	J, K	13		16	22		550	300
CLH2012T-R18 □ -N	180 *	J, K	13		16	23		500	300
CLH2012T-R22 □ -N	220 *	J, K	12		14	20		450	300
CLH2012T-R27 □ -N	270 *	J, K	12		14	20		400	200
CLH2012T-R33 □ -N	330 *	J, K	12		14	22		380	200

Note : * at 50MHz

Tolerance : □ - S = ±0.3nH

J = ±5%

K = ±10%

Test Conditions :

Agilent E4991A

Agilent 16197A

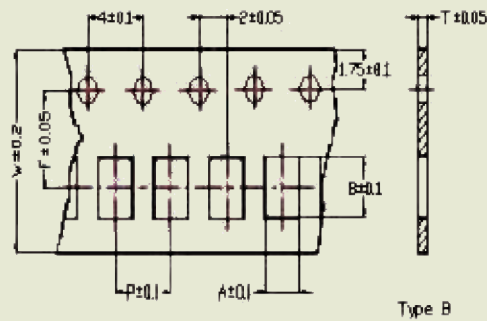
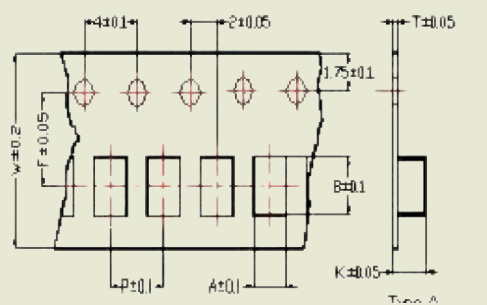
SRF - HP8753D

RDC - HP4338B/CH502BC

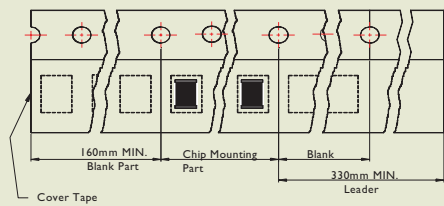


PACKAGING SPECIFICATIONS

Tape Dimensions

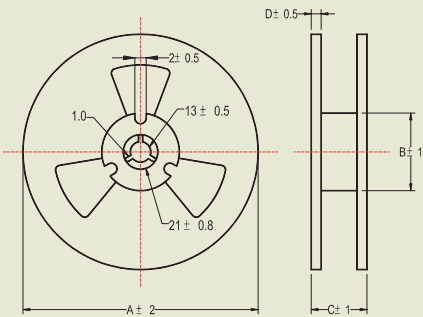


Tape Materia



Carrier tape: Polystyrene for 2012
Paper for 1608, 1005
Cover type : Polystyrene

Reel Dimensions

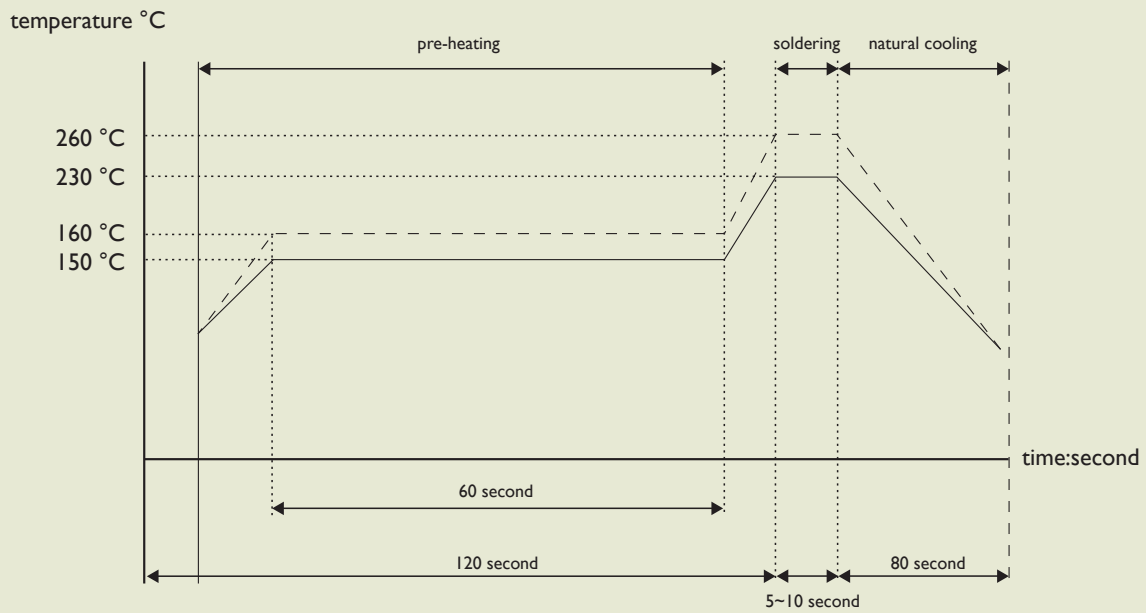


Dimensions : mm																
TYPE	Tape Dimensions								Reel Dimensions				Reel Dimensions			Quantity
	Tape	A	B	T	W	P	F	K	A	B	C	D	A	B	C	
CLH1005	B	0.65	1.15	0.60	8	2	3.5		17860	12	1.50.	4	1.2 ~ 1.4	0.4	10000	
CLH1608	B	1.00	1.80	0.95	8	4	3.5		17860	12	1.50.	8	2.4 ~ 3.4	0.6	4000	
CLH2012	A	1.42	2.25	0.22	8	4	3.5	1.04	17860	12	1.51.	2	3.0 ~ 4.0	1.0	4000	



RECOMMEND SOLDERING CONDITIONS

for:CL/ CLH/ SQV/ SMD power inductors/ SMD Chip Beads/ SMD Filters, Transformers, Current Sensors



for: lead solder —————

for: lead-free solder - - - - -

Lead-free / For RF Signals



CS

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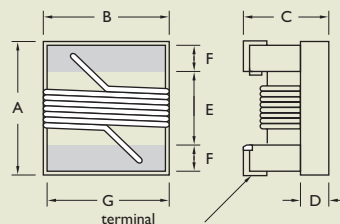
Internal No.
Tolerance
Inductance
Dimensions
Product Symbol

- ## RECOMMENDED PATTERN

The diagram illustrates a pad layout with a central rectangular area labeled "Pad Layout". This central area is flanked by two cross-hatched rectangular regions, one above and one below. The top cross-hatched region is labeled "A" above it and "B" to its right. The bottom cross-hatched region is labeled "B" to its right. The vertical distance between the top and bottom cross-hatched regions is labeled "C" to the right of the central "Pad Layout" area.

TYPE	A	B	C
CS0402	0.66	0.36	0.46
CS0603	1.02	0.64	0.64
CS0805	1.78	1.02	0.76
CS1008	2.54	1.02	1.27

SHAPES AND DIMENSIONS



TYPE	A	B	C	D	E	F	G
CS0402	1.19 ⁺⁰	0.7 ⁺⁰	0.66 ⁺⁰	0.25Ref	0.56	0.23	0.51
CS0603	1.80 ⁺⁰	1.12 ⁺⁰	1.02 ⁺⁰	0.35Ref	0.86	0.33	0.76
CS0805	2.29 ⁺⁰	1.73 ⁺⁰	1.52 ⁺⁰	0.50Ref	1.02	0.44	1.27
CS1008	2.92 ⁺⁰	2.79 ⁺⁰	2.03 ⁺⁰	0.70Ref	1.52	0.51	2.03



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	Inductance	Tolerance	900MHz				SRF Min		RDC MAX	Irms Max
	(nH)	(±%)	Min	L typ	Q typ	L typ	Q typ	(GHz)		(mA)
CS0402-1N0 □ -N	1.0	10/5	16	1.02	77	1.02	69	12.70	0.045	1360
CS0402-1N9 □ -N	1.9	10/5	16	1.72	68	1.74	82	11.30	0.070	1040
CS0402-2N0 □ -N	2.0	10/5	16	1.93	54	1.93	75	11.10	0.070	1040
CS0402-2N2 □ -N	2.2	10/5	19	2.19	59	2.23	100	10.80	0.070	960
CS0402-2N4 □ -N	2.4	10/5	15	2.24	51	2.27	68	10.50	0.068	790
CS0402-2N7 □ -N	2.7	10/5	16	2.58	42	2.60	61	10.40	0.120	640
CS0402-3N3 □ -N	3.3	10/5	19	3.10	65	3.12	87	7.00	0.066	840
CS0402-3N6 □ -N	3.6	10/5	19	3.56	45	3.62	71	6.80	0.066	840
CS0402-3N9 □ -N	3.9	10/5	19	3.89	50	4.00	75	6.00	0.066	840
CS0402-4N3 □ -N	4.3	10/5	18	4.19	47	4.30	71	6.00	0.091	700
CS0402-4N7 □ -N	4.7	10/5	15	4.55	48	4.68	68	4.77	0.130	640
CS0402-5N1 □ -N	5.1	10/5	20	5.15	56	5.25	82	4.80	0.083	800
CS0402-5N6 □ -N	5.6	10/5	20	5.16	54	5.28	81	4.80	0.083	760
CS0402-6N2 □ -N	6.2	10/5	20	6.16	52	6.37	76	4.80	0.083	760
CS0402-6N8 □ -N	6.8	10/5	20	6.56	63	6.93	78	4.80	0.083	680
CS0402-7N5 □ -N	7.5	10/5	22	7.91	60	8.22	88	4.80	0.10	680
CS0402-8N2 □ -N	8.2	10/5	22	8.50	57	8.85	84	4.40	0.10	680
CS0402-8N7 □ -N	8.7	10/5	18	8.78	54	9.21	73	4.10	0.20	480
CS0402-9N0 □ -N	9.0	10/5	22	9.07	62	9.53	78	4.16	0.10	680
CS0402-9N5 □ -N	9.5	10/5	18	9.42	54	9.98	69	4.00	0.20	480
CS0402-10N □ -N	10.0	10/5	21	9.8	50	10.10	67	3.90	0.20	480
CS0402-11N □ -N	11.0	10/5	24	10.7	52	11.20	78	3.68	0.12	640
CS0402-12N □ -N	12.0	10/5	24	11.9	53	12.70	71	3.60	0.12	640
CS0402-13N □ -N	13.0	10/5	24	13.4	51	14.63	57	3.45	0.21	440
CS0402-15N □ -N	15.0	10/5	24	14.6	55	15.50	77	3.28	0.17	560
CS0402-16N □ -N	16.0	10/5	24	16.6	46	18.86	47	3.10	0.22	560
CS0402-18N □ -N	18.0	10/5	25	18.3	57	20.28	62	3.10	0.23	420
CS0402-19N □ -N	19.0	10/5	24	19.1	50	21.10	67	3.04	0.20	480
CS0402-20N □ -N	20.0	10/5	25	20.7	52	23.66	53	3.00	0.25	420
CS0402-22N □ -N	22.0	10/5	25	23.2	53	26.75	53	2.80	0.30	400
CS0402-23N □ -N	23.0	10/5	22	23.8	49	26.90	64	2.72	0.30	400
CS0402-24N □ -N	24.0	10/5	25	25.1	51	29.50	50	2.70	0.30	400
CS0402-27N □ -N	27.0	10/5	24	28.7	49	33.50	63	2.48	0.30	400
CS0402-30N □ -N	30.0	10/5	25	31.1	46	38.50	39	2.35	0.30	400
CS0402-33N □ -N	33.0	10/5	24	34.9	31	41.74	32	2.35	0.40	400
CS0402-36N □ -N	36.0	10/5	24	39.5	44	48.40	53	2.32	0.44	320
CS0402-39N □ -N	39.0	10/5	25	41.7	47	50.23	45	2.10	0.55	200
CS0402-40N □ -N	40.0	10/5	24	39.0	44	47.40	33	2.24	0.44	320
CS0402-43N □ -N	43.0	10/5	25	45.8	46	61.55	34	2.03	0.81	100
CS0402-47N □ -N	47.0	10/5	20	50.0	38	-	-	2.10	0.83	150
CS0402-51N □ -N	51.0	10/5	25	56.6	40	-	-	1.75	0.82	100
CS0402-56N □ -N	56.0	10/5	22	62.8	42	-	-	1.76	0.97	100
CS0402-68N □ -N	68.0	10/5	22	78.2	36	-	-	1.62	1.12	100
CS0402-82N □ -N	82.0	10/5	20	-	-	-	-	1.26	1.55	50
CS0402-R10 □ -N	100.0	10/5	20	-	-	-	-	1.16	2.00	30

1. When ordering, please specify tolerance and packaging code. Ex : CS0402-10NJ-N

Tolerance : G = ±2% , J = ±5% , K = ±10% , M = ±20% Packaging : Clear Tape and Reel (Standard)

2. L, Q : Agilent / HP4291A+Agilent / HP16193A @250MHz

3. SRF : Agilent/HP8753D / Agilent/HP8722ES

4. RDC : Digital Multimeter SC-7401

5. I_{rms} for a 15°C rise above 25°C ambient



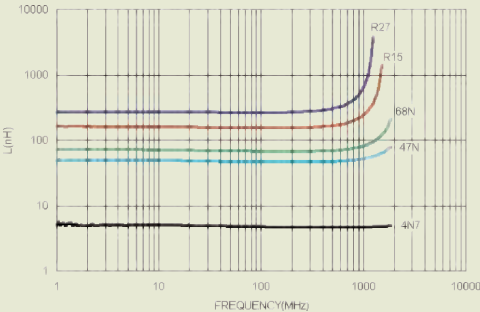
ELECTRICAL CHARACTERISTICS CS0603 SERIES : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (nH)	TOLERANCE (±%)	TEST FREQUENCY (MHz)	Q Min.	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.	900MHz		1.7 GHz		COLOR CODING
								L TYPE	Q TYPE	L TYPE	Q TYPE	
CS0603-1N6 □-N	1.6	10/5	250	24	12500	0.030	700	1.67	49	1.65	63	Red
CS0603-1N8 □-N	1.8	10/5	250	16	12500	0.045	700	1.63	35	1.66	50	Black
CS0603-3N6 □-N	3.6	10/5	250	22	5900	0.063	700	3.72	53	3.71	65	Red
CS0603-3N9 □-N	3.9	10/5	250	22	6900	0.080	700	3.95	49	3.96	67	Brown
CS0603-4N3 □-N	4.3	10/5	250	22	5900	0.063	700	4.32	50	4.33	70	Orange
CS0603-4N7 □-N	4.7	10/5	250	20	5800	0.116	700	4.72	47	4.75	57	Violet
CS0603-5N1 □-N	5.1	10/5	250	20	5700	0.140	700	4.93	47	4.95	56	Green
CS0603-5N6 □-N	5.6	10/5	250	20	5800	0.170	700	5.53	56	5.86	77	Yellow
CS0603-6N3 □-N	6.3	10/5	250	20	5700	0.140	700	5.5	47	6.1	60	White
CS0603-6N8 □-N	6.8	10/5	250	27	5800	0.110	700	6.75	60	7.1	81	Red
CS0603-7N5 □-N	7.5	10/5	250	28	4800	0.106	700	7.70	60	7.82	65	Brown
CS0603-8N2 □-N	8.2	10/5	250	28	4700	0.109	700	8.30	60	8.50	60	White
CS0603-8N7 □-N	8.7	10/5	250	28	4600	0.109	700	8.86	62	9.32	58	Yellow
CS0603-9N5 □-N	9.5	10/5	250	28	5400	0.135	700	9.70	59	9.92	61	Blue
CS0603-10N □-N	10	10/5/2	250	31	4800	0.130	700	10	66	10.6	83	Orange
CS0603-11N □-N	11	10/5/2	250	33	4000	0.086	700	11	53	11.5	56	Gray
CS0603-12N □-N	12	10/5/2	250	35	4000	0.130	700	12.3	72	13.5	83	Yellow
CS0603-15N □-N	15	10/5/2	250	35	4000	0.170	700	15.4	64	16.8	89	Green
CS0603-16N □-N	16	10/5/2	250	34	3300	0.104	700	16.2	55	17.3	52	White
CS0603-18N □-N	18	10/5/2	250	35	3100	0.170	700	18.7	70	21.4	69	Blue
CS0603-22N □-N	22	10/5/2	250	38	3000	0.190	700	22.8	73	26.1	71	Violet
CS0603-24N □-N	24	10/5/2	250	37	2650	0.135	700	24.5	45	28.7	39	Black
CS0603-27N □-N	27	10/5/2	250	40	2800	0.220	600	29.2	74	34.6	65	Gray
CS0603-30N □-N	30	10/5/2	250	37	2250	0.144	600	31.4	47	39.9	28	Brown
CS0603-33N □-N	33	10/5/2	250	40	2300	0.220	600	36	67	49.5	42	White
CS0603-36N □-N	36	10/5/2	250	38	2080	0.250	600	39.4	47	52.7	24	Red
CS0603-39N □-N	39	10/5/2	250	40	2200	0.250	600	42.7	60	60.2	40	Black
CS0603-43N □-N	43	10/5/2	250	39	2000	0.280	600	47	44	64.9	21	Orange
CS0603-47N □-N	47	10/5/2	200	38	2000	0.280	600	52.2	62	77.2	35	Brown
CS0603-56N □-N	56	10/5/2	200	38	1900	0.310	600	62.5	56	97	26	Red
CS0603-68N □-N	68	10/5/2	200	37	1700	0.340	600	80.5	54	168	21	Orange
CS0603-72N □-N	72	10/5/2	150	34	1700	0.490	400	82	53	135	20	Yellow
CS0603-82N □-N	82	10/5/2	150	34	1700	0.540	400	96.2	54	177	21	Green
CS0603-R10 □-N	100	10/5/2	150	34	1400	0.580	400	124	49	-	-	Blue
CS0603-R11 □-N	110	10/5/2	150	32	1350	0.610	300	138	43	-	-	Violet
CS0603-R12 □-N	120	10/5/2	150	32	1300	0.750	300	166	39	-	-	Gray
CS0603-R15 □-N	150	10/5/2	150	28	990	0.920	280	250	25	-	-	White
CS0603-R18 □-N	180	10/5/2	100	25	990	1.250	240	305	22	-	-	Black
CS0603-R22 □-N	220	10/5/2	100	25	900	2.100	200	-	-	-	-	Brown
CS0603-R27 □-N	270	10/5/2	100	24	900	2.300	170	-	-	-	-	Red
CS0603-R33 □-N	330	10/5/2	100	25	900	3.890	100	-	-	-	-	Orange
CS0603-R39 □-N	390	10/5/2	100	25	700	4.350	100	-	-	-	-	Yellow

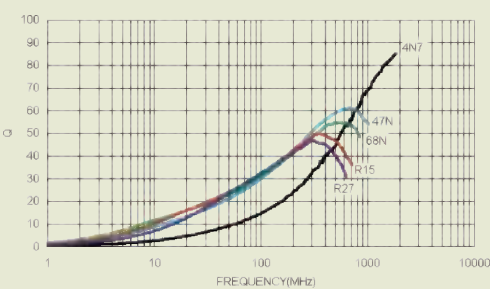
- When ordering, please specify tolerance and packaging code. Ex : CS0603-R12J -N
 - Packaging : Clear Tape and Reel (Standard)
 - SRF : HP8753D / HP4291A
 - Irms for a 15°C rise above 25°C ambient.
- Tolerance : G = ±2% , J = ±5% , K = ±10%
 - L, Q : Agilent / HP4291A + Agilent / HP16193A
 - RDC : CH502BC HP4338B
 - Operating Temperature Range from -40°C to 125°C

TEST INSTRUMENTS : HP4291A MATERIAL / IMPEDANCE ANALYZER

Typical L vs. Frequency



Typical Q vs. Frequency





ELECTRICAL CHARACTERISTICS CS0805 SERIES : LEAD-FREE & ROHS COMPLIANCE

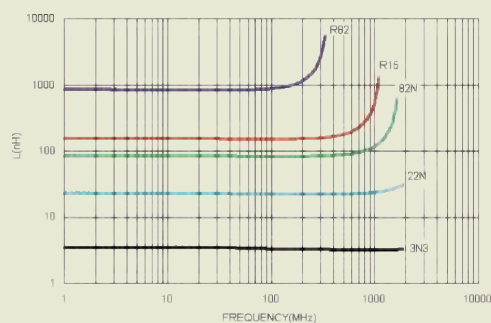
PART NO.	INDUCTANCE (nH)	TOLERANCE (±%)	TEST FREQUENCY (MHz)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.	COLOR CODING
CS0805-2N8 □ -N	2.8	10/5	250	80	1500	7900	0.06	800	Gray
CS0805-3N0 □ -N	3.0	10/5	250	65	1500	7900	0.06	800	White
CS0805-3N3 □ -N	3.3	10/5	250	50	1500	7900	0.08	600	Black
CS0805-5N6 □ -N	5.6	10/5	250	65	1000	5500	0.08	600	Orange
CS0805-6N8 □ -N	6.8	10/5	250	50	1000	5500	0.11	600	Brown
CS0805-7N5 □ -N	7.5	10/5	250	50	1000	4500	0.14	600	Green
CS0805-8N2 □ -N	8.2	10/5	250	50	1000	4700	0.12	600	Red
CS0805-12N □ -N	12	10/5/2	250	50	500	4000	0.15	600	Orange
CS0805-15N □ -N	15	10/5/2	250	50	500	3400	0.17	600	Yellow
CS0805-18N □ -N	18	10/5/2	250	50	500	3300	0.20	600	Green
CS0805-22N □ -N	22	10/5/2	250	55	500	2600	0.22	500	Blue
CS0805-24N □ -N	24	10/5/2	250	50	500	2000	0.22	500	Gray
CS0805-27N □ -N	27	10/5/2	250	55	500	2500	0.25	500	Violet
CS0805-33N □ -N	33	10/5/2	250	60	500	2050	0.27	500	Gray
CS0805-36N □ -N	36	10/5/2	250	55	500	1700	0.27	500	Orange
CS0805-39N □ -N	39	10/5/2	250	60	500	2000	0.29	500	White
CS0805-43N □ -N	43	10/5/2	200	60	500	1650	0.34	500	Yellow
CS0805-47N □ -N	47	10/5/2	200	60	500	1650	0.31	500	Black
CS0805-56N □ -N	56	10/5/2	200	60	500	1550	0.34	500	Brown
CS0805-68N □ -N	68	10/5/2	200	60	500	1450	0.38	500	Red
CS0805-82N □ -N	82	10/5/2	150	65	500	1300	0.42	400	Orange
CS0805-91N □ -N	91	10/5/2	150	65	500	1200	0.48	400	Black
CS0805-R10 □ -N	100	10/5/2	150	65	500	1200	0.46	400	Yellow
CS0805-R11 □ -N	110	10/5/2	150	50	250	1000	0.48	400	Brown
CS0805-R12 □ -N	120	10/5/2	150	50	250	1100	0.51	400	Green
CS0805-R15 □ -N	150	10/5/2	100	50	250	920	0.56	400	Blue
CS0805-R18 □ -N	180	10/5/2	100	50	250	870	0.64	400	Violet
CS0805-R20 □ -N	200	10/5/2	100	50	250	860	0.68	400	Red
CS0805-R22 □ -N	220	10/5/2	100	50	250	850	0.70	400	Gray
CS0805-R24 □ -N	240	10/5/2	100	44	250	690	1.00	350	Red
CS0805-R25 □ -N	250	10/5/2	100	45	250	660	1.20	350	Yellow
CS0805-R27 □ -N	270	10/5/2	100	48	250	650	1.00	350	White
CS0805-R33 □ -N	330	10/5/2	100	48	250	600	1.40	310	Black
CS0805-R39 □ -N	390	10/5/2	100	48	250	560	1.50	290	Brown
CS0805-R47 □ -N	470	10/5/2	50	33	100	375	1.76	250	Violet
CS0805-R56 □ -N	560	10/5/2	25	23	50	340	1.90	230	Orange
CS0805-R62 □ -N	620	10/5/2	25	23	50	220	2.20	210	White
CS0805-R68 □ -N	680	10/5/2	25	23	50	188	2.20	190	Green
CS0805-R82 □ -N	820	10/5/2	25	23	50	215	2.35	180	Blue
CS0805-1R0 □ -N	1000	10/5/2	25	20	50	100	2.50	170	Violet

- When ordering, please specify tolerance and packaging code. Ex : CS0805-R12J -N
- Packaging : Clear Tape and Reel (Standard)
- SRF : HP8753D / HP4291A
- Irms for a 15°C rise above 25°C ambient.

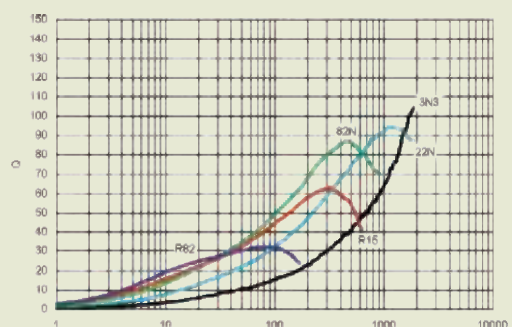
- Tolerance : G = ±2% , J = ±5% , K = ±10% ,
- L, Q : Agilent / HP4291A + Agilent / HP16193A
- RDC : CH502BC HP4338B
- Operating Temperature Range from -40°C to 125°C

TEST INSTRUMENTS : HP4291A MATERIAL / IMPEDANCE ANALYZER

Typical L vs Frequency



Typical Q vs Frequency

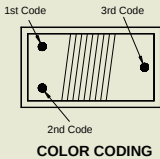




ELECTRICAL CHARACTERISTICS CSI008 SERIES : LEAD-FREE & ROHS COMPLIANCE

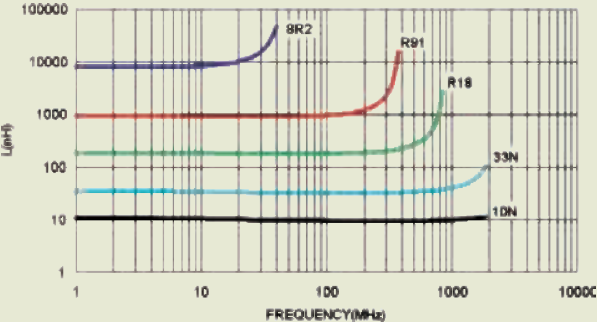
PART NO.	INDUCTANCE (nH)	TOLERANCE (±%)	TEST FREQUENCY (MHz)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.	COLOR CODING		
									1 st	2 nd	3 rd
CSI008-10N □ -N	10	10/5/2	50	50	500	4100	0.08	1000	Brown	Black	Black
CSI008-12N □ -N	12	10/5/2	50	50	500	3300	0.09	1000	Brown	Red	Black
CSI008-15N □ -N	15	10/5/2	50	50	500	2500	0.10	1000	Brown	Green	Black
CSI008-18N □ -N	18	10/5/2	50	50	350	2500	0.11	1000	Brown	Gray	Black
CSI008-22N □ -N	22	10/5/2	50	55	350	2400	0.12	1000	Red	Red	Black
CSI008-27N □ -N	27	10/5/2	50	55	350	1600	0.13	1000	Red	Violet	Black
CSI008-33N □ -N	33	10/5/2	50	60	350	1600	0.14	1000	Orange	Orange	Black
CSI008-39N □ -N	39	10/5/2	50	60	350	1500	0.15	1000	Orange	White	Black
CSI008-47N □ -N	47	10/5/2	50	65	350	1500	0.16	1000	Yellow	Violet	Black
CSI008-56N □ -N	56	10/5/2	50	65	350	1300	0.18	1000	Green	Blue	Black
CSI008-68N □ -N	68	10/5/2	50	65	350	1300	0.20	1000	Blue	Gray	Black
CSI008-82N □ -N	82	10/5/2	50	60	350	1000	0.22	1000	Gray	Red	Black
CSI008-R10 □ -N	100	10/5/2	25	60	350	1000	0.56	650	Brown	Black	Brown
CSI008-R12 □ -N	120	10/5/2	25	60	350	950	0.63	650	Brown	Red	Brown
CSI008-R15 □ -N	150	10/5/2	25	45	100	850	0.70	580	Brown	Green	Brown
CSI008-R18 □ -N	180	10/5/2	25	45	100	750	0.77	620	Brown	Gray	Brown
CSI008-R22 □ -N	220	10/5/2	25	45	100	700	0.84	500	Red	Red	Brown
CSI008-R27 □ -N	270	10/5/2	25	45	100	600	0.91	500	Red	Violet	Brown
CSI008-R33 □ -N	330	10/5/2	25	45	100	570	1.05	450	Orange	Orange	Brown
CSI008-R39 □ -N	390	10/5/2	25	45	100	500	1.12	470	Orange	White	Brown
CSI008-R47 □ -N	470	10/5/2	25	45	100	450	1.19	470	Yellow	Violet	Brown
CSI008-R56 □ -N	560	10/5/2	25	45	100	415	1.33	400	Green	Blue	Brown
CSI008-R62 □ -N	620	10/5/2	25	45	100	375	1.40	300	Blue	Red	Brown
CSI008-R68 □ -N	680	10/5/2	25	45	100	375	1.47	400	Blue	Gray	Brown
CSI008-R75 □ -N	750	10/5/2	25	45	100	360	1.54	360	Violet	Green	Brown
CSI008-R82 □ -N	820	10/5/2	25	45	100	350	1.61	400	Gray	Red	Brown
CSI008-R91 □ -N	910	10/5/2	25	35	50	320	1.68	380	White	Brown	Brown
CSI008-1R0 □ -N	1000	10/5/2	25	35	50	290	1.75	370	Brown	Black	Red
CSI008-1R2 □ -N	1200	10/5/2	7.9	35	50	250	2.0	310	Brown	Red	Red
CSI008-1R5 □ -N	1500	10/5/2	7.9	28	50	200	2.3	330	Brown	Green	Red
CSI008-1R8 □ -N	1800	10/5/2	7.9	28	50	160	2.6	300	Brown	Gray	Red
CSI008-2R2 □ -N	2200	10/5/2	7.9	28	50	160	2.8	280	Red	Red	Red
CSI008-2R7 □ -N	2700	10/5/2	7.9	22	25	140	3.2	290	Red	Violet	Red
CSI008-3R3 □ -N	3300	10/5/2	7.9	22	25	110	3.4	290	Orange	Orange	Red
CSI008-3R9 □ -N	3900	10/5/2	7.9	20	25	100	3.6	260	Orange	White	Red
CSI008-4R7 □ -N	4700	10/5/2	7.9	20	25	90	4.0	260	Yellow	Violet	Red
CSI008-5R6 □ -N	5600	10/5/2	7.9	18	7.9	45	4.0	240	Green	Blue	Red
CSI008-6R8 □ -N	6800	10/5/2	7.9	18	7.9	40	4.9	200	Blue	Gray	Red
CSI008-8R2 □ -N	8200	10/5/2	7.9	18	7.9	25	6.0	170	Gray	Red	Red
CSI008-100 □ -N	10000	10/5/2	7.9	18	7.9	25	8.0	150	Brown	Black	Orange

- When ordering, please specify tolerance and packaging code. Ex : CS0805-R12J -N
 - Packaging : Clear Tape and Reel (Standard)
 - SRF : HP8753D / HP4291A
 - Irms for a 15°C rise above 25°C ambient.
- Tolerance : G = ±2% , J = ±5% , K = ±10% ,
 - L, Q : Agilent / HP4291A + Agilent / HP16193A
 - RDC : CH502BC HP4338B
 - Operating Temperature Range from -40°C to 125°C

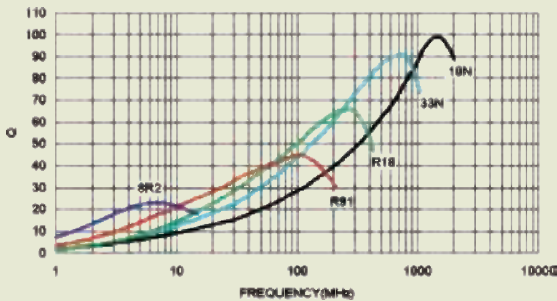


TEST INSTRUMENTS : HP4291A IMPEDANCE / MATERIAL ANALYZER

Typical L vs Frequency



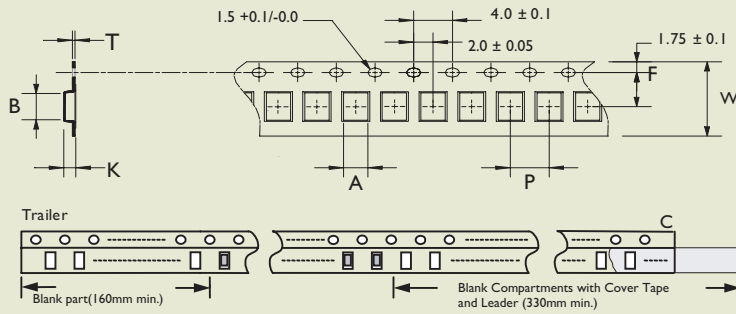
Typical Q vs Frequency



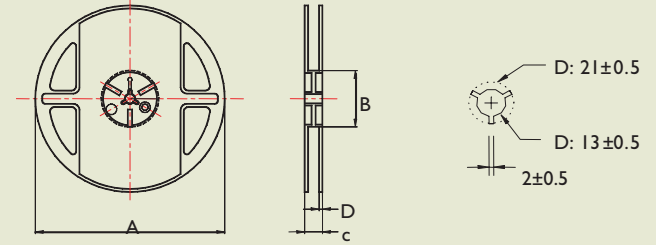


PACKAGING SPECIFICATIONS

Tape Dimensions



Reel Dimensions

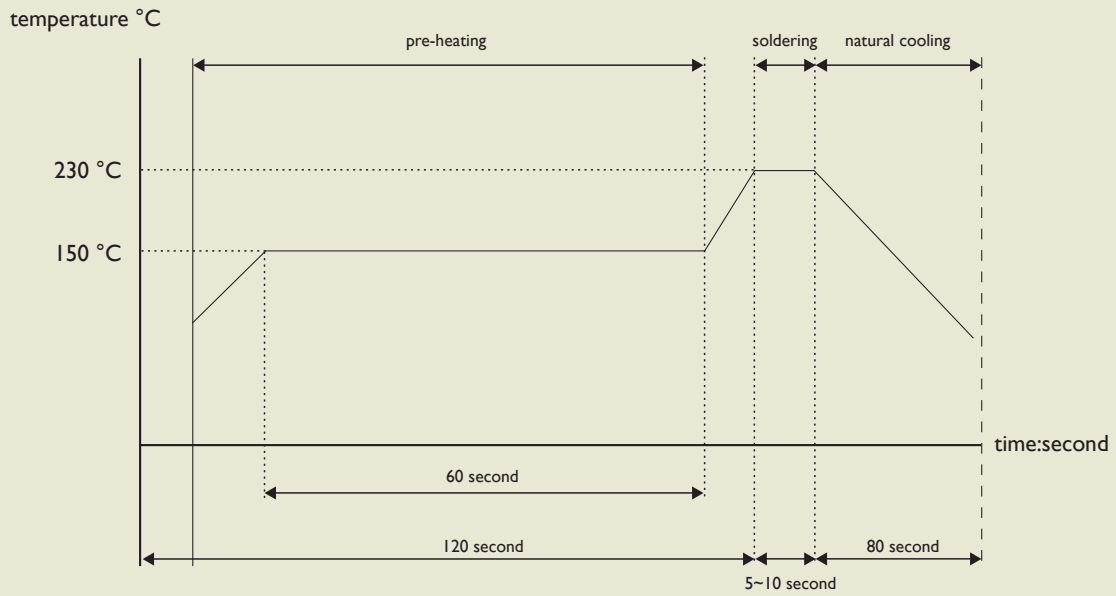


Dimensions : mm

TYPE	TAPE DIMENSIONS							REEL DIMENSIONS				QUANTITY/REEL
	A	B	T	W	P	F	K	A	B	C	D	
CS0402	0.7	1.2	0.23	8	4	3.5	0.62	178	60	12	1.5	4000
CS0603	1.15	1.83	0.23	8	4	3.5	1.00	178	60	12	1.5	4000
CS0805	1.85	2.45	0.23	8	4	3.5	1.45	178	60	12	1.5	2000
CS1008	2.70	2.95	0.23	8	4	3.5	2.25	178	60	12	1.5	2000

RECOMMEND SOLDERING CONDITIONS

for:CS/ CT/ LCN/ HC/ HQ/ CMM/ NL (open type)/ NLC (open type)/ LS



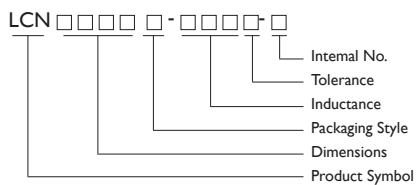
Wound Chip Inductors High Frequency

LCN Series

Lead-free / For RF Signals / Customer Design



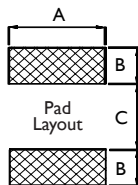
PRODUCT IDENTIFICATION



- Packaging: T: Tape and Reel
- Tolerance : G=±2%, J=±5%, K=±10%

RECOMMENDED PATTERN

Dimensions : mm



TYPE	A	B	C
LCN0402	0.66	0.36	0.46
LCN0603	1.02	0.64	0.64
LCN0805	1.78	1.02	0.76
LCN1008	2.54	1.02	1.27
LCN1206	2.70	1.00	2.00

Due to technical expertise of accurately winding skill, these chip inductors are designed as filtering, impedance matching, resonance and choke circuits for RF designer. The standard series as well as customer design to meet your needs of telecom & wireless products.

APPLICATIONS

RF products for cellular phone, GPS receiver, Base Station, Repeater, Wireless LAN/ Mouse/ Keyboard/ earphone, remote control, security system and other RF modules.

FEATURES

Meet SONY SS-00259's criteria for lead-free product. RoHS compliance.

Ceramic body and wire wound construction provide highest SRFs.

These ultra-compact inductors provided exceptional Q values, even at high frequencies.

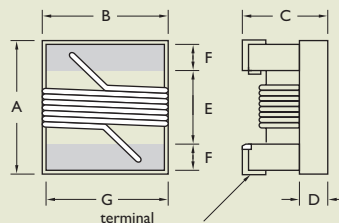
Their ceramic construction delivers the highest possible SRFs as well as excellent Q values.

The non-magnetic coil form also assures the utmost in thermal stability, predictability and batch consistency.

"LCN" series has been designed especially for the needs of customer design.

SHAPES AND DIMENSIONS

Dimensions : mm



TYPE	A	B	C	D	E	F	G
LCN0402	1.19 ⁺⁰	0.64 ⁺⁰	0.66 ⁺⁰	0.25Ref	0.56	0.23	0.51
LCN0603	1.80 ⁺⁰	1.12 ⁺⁰	1.02 ⁺⁰	0.35Ref	0.86	0.33	0.76
LCN0805	2.29 ⁺⁰	1.73 ⁺⁰	1.52 ⁺⁰	0.50Ref	1.02	0.44	1.27
LCN1008	2.92 ⁺⁰	2.79 ⁺⁰	2.03 ⁺⁰	0.70Ref	1.52	0.51	2.03
LCN1206	3.70 ⁺⁰	2.80 ⁺⁰	2.20 ⁺⁰	0.90Ref	2.18	0.51	2.30



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	Inductance (nH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	SRF Min (MHz)	RDC MAX (Ω)	Irms Max (mA)
LCN0402T-1N5 □ -N	1.5	250	10/5	15	11300	0.050	1040
LCN0402T-2N0 □ -N	2.0	250	10/5	16	11100	0.070	1040
LCN0402T-2N2 □ -N	2.2	250	10/5	19	10800	0.070	960
LCN0402T-3N3 □ -N	3.3	250	10/5/3/2	19	7000	0.100	840
LCN0402T-3N6 □ -N	3.6	250	10/5/3/2	19	6800	0.100	840
LCN0402T-3N9 □ -N	3.9	250	10/5/3/2	19	6000	0.100	840
LCN0402T-5N1 □ -N	5.1	250	10/5/3/2	20	4800	0.130	800
LCN0402T-5N6 □ -N	5.6	250	10/5/3/2	20	4800	0.130	760
LCN0402T-6N2 □ -N	6.2	250	10/5/3/2	20	4800	0.150	760
LCN0402T-7N5 □ -N	7.5	250	10/5/3/2	22	4800	0.150	680
LCN0402T-8N2 □ -N	8.2	250	10/5/3/2	22	4400	0.150	680
LCN0402T-9N0 □ -N	9.0	250	10/5/3/2	22	4160	0.200	680
LCN0402T-10N □ -N	10	250	10/5/3/2	21	3900	0.200	480
LCN0402T-11N □ -N	11	250	10/5/3/2	24	3680	0.230	640
LCN0402T-12N □ -N	12	250	10/5/3/2	24	3600	0.230	640
LCN0402T-15N □ -N	15	250	10/5/3/2	24	3280	0.230	560
LCN0402T-19N □ -N	19	250	10/5/3/2	24	3040	0.270	480
LCN0402T-23N □ -N	23	250	10/5/3/2	22	2720	0.300	400
LCN0402T-27N □ -N	27	250	10/5/3/2	24	2480	0.350	400
LCN0402T-33N □ -N	33	250	10/5/3/2	24	2350	0.440	320
LCN0402T-36N □ -N	36	250	10/5/3/2	24	2320	0.440	320
LCN0402T-40N □ -N	40	250	10/5/3/2	24	2240	0.540	320
LCN0402T-47N □ -N	47	250	10/5/3/2	20	2100	0.830	150

1. When ordering, please specify tolerance and packaging code. Ex : LCN0402T-10NJ-N

Tolerance : G = ±2% , H = ±3% , J = ±5% , K = ±10% Packaging : Clear Tape and Reel (Standard)

2.L, Q : Agilent / HP4291A+Agilent / HP16193A

3.SRF : Agilent/HP8753D / Agilent/HP4291A

4.RDC : Digital Multimeter SC-7401

5.Irms for a 15°C rise above 25°C ambient



ELECTRICAL CHARACTERISTICS LCN0603 SERIES : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE	TOLERANCE	Q	SRF	DC	RATED	900MHz		1.7 GHz		COLOR
	at 250MHz	(%)	Min.	(MHz)	RESISTANCE	CURRENT	L	Q	L	Q	
	(nH)			Min.	(Ω) Max.	(mA) Max.	TYPE	TYPE	TYPE	TYPE	
LCN0603T-1N6 □ -N	1.6	10 / 5	24	12500	0.030	700	1.6	49	1.58	63	Red
LCN0603T-1N8 □ -N	1.8	10 / 5	16	12500	0.045	700	1.6	35	1.66	50	Black
LCN0603T-3N6 □ -N	3.6	10 / 5	22	5900	0.063	700	3.72	53	3.71	65	Red
LCN0603T-3N9 □ -N	3.9	10 / 5	22	6900	0.080	700	3.95	49	3.96	67	Brown
LCN0603T-4N3 □ -N	4.3	10 / 5	22	5900	0.063	700	4.32	50	4.33	70	Orange
LCN0603T-4N7 □ -N	4.7	10 / 5	20	5800	0.116	700	4.72	47	4.75	57	Violet
LCN0603T-5N1 □ -N	5.1	10 / 5	20	5700	0.140	700	4.93	47	4.95	56	Green
LCN0603T-6N3 □ -N	6.3	10 / 5	20	5700	0.140	700	5.5	47	6.1	60	White
LCN0603T-6N8 □ -N	6.8	10 / 5	27	5800	0.110	700	6.75	60	7.1	81	Red
LCN0603T-7N5 □ -N	7.5	10 / 5	28	4800	0.106	700	7.70	60	7.82	65	Brown
LCN0603T-8N2 □ -N	8.2	10 / 5	28	4700	0.109	700	8.30	60	8.50	60	White
LCN0603T-8N7 □ -N	8.7	10 / 5	28	4600	0.109	700	8.86	62	9.32	58	Yellow
LCN0603T-9N5 □ -N	9.5	10 / 5	28	5400	0.135	700	9.70	59	9.92	61	Blue
LCN0603T-10N □ -N	10	10 / 5 / 2	31	4800	0.130	700	10	66	10.6	83	Orange
LCN0603T-11N □ -N	11	10 / 5 / 2	33	4000	0.086	700	11	53	11.5	56	Gray
LCN0603T-12N □ -N	12	10 / 5 / 2	35	4000	0.130	700	12.3	72	13.5	83	Yellow
LCN0603T-15N □ -N	15	10 / 5 / 2	35	4000	0.170	700	15.4	64	16.8	89	Green
LCN0603T-16N □ -N	16	10 / 5 / 2	34	3300	0.104	700	16.2	55	17.3	52	White
LCN0603T-18N □ -N	18	10 / 5 / 2	35	3100	0.170	700	18.7	70	21.4	69	Blue
LCN0603T-22N □ -N	22	10 / 5 / 2	38	3000	0.190	700	22.8	73	26.1	71	Violet
LCN0603T-24N □ -N	24	10 / 5 / 2	37	2650	0.135	700	24.5	45	28.7	39	Black
LCN0603T-27N □ -N	27	10 / 5 / 2	40	2800	0.220	600	29.2	74	34.6	65	Gray
LCN0603T-30N □ -N	30	10 / 5 / 2	37	2250	0.144	600	31.4	47	39.9	28	Brown
LCN0603T-33N □ -N	33	10 / 5 / 2	40	2300	0.220	600	36	67	49.5	42	White
LCN0603T-36N □ -N	36	10 / 5 / 2	38	2080	0.250	600	39.4	47	52.7	24	Red
LCN0603T-39N □ -N	39	10 / 5 / 2	40	2200	0.250	600	42.7	60	60.2	40	Black
LCN0603T-43N □ -N	43	10 / 5 / 2	39	2000	0.280	600	47	44	64.9	21	Orange
LCN0603T-47N □ -N	47 *	10 / 5 / 2	38	2000	0.280	600	52.2	62	77.2	35	Brown
LCN0603T-56N □ -N	56 *	10 / 5 / 2	38	1900	0.310	600	62.5	56	97	26	Red
LCN0603T-68N □ -N	68 *	10 / 5 / 2	37	1700	0.340	600	80.5	54	168	21	Orange
LCN0603T-72N □ -N	72 **	10 / 5 / 2	34	1700	0.490	400	82	53	135	20	Yellow
LCN0603T-82N □ -N	82 **	10 / 5 / 2	34	1700	0.540	400	96.2	54	177	21	Green
LCN0603T-R10 □ -N	100 **	10 / 5 / 2	34	1400	0.580	400	124	49			Blue
LCN0603T-R11 □ -N	110 **	10 / 5 / 2	32	1350	0.610	300	138	43			Violet
LCN0603T-R12 □ -N	120 **	10 / 5 / 2	32	1300	0.750	300	166	39			Gray
LCN0603T-R15 □ -N	150 **	10 / 5 / 2	28	990	0.920	280	250	25			White
LCN0603T-R18 □ -N	180 ***	10 / 5 / 2	25	990	1.250	240	305	22			Black
LCN0603T-R22 □ -N	220 ***	10 / 5 / 2	25	900	2.100	200	480	8			Brown
LCN0603T-R27 □ -N	270 ***	10 / 5 / 2	24	900	2.300	170	980	4			Red

Note : * at 200MHz ** at 150MHz *** at 100MHz

• Tolerance : G = $\pm 2\%$, J = $\pm 5\%$, K = $\pm 10\%$

• Packaging : Clear Tape and Reel (Standard)

• L/Q : Agilent / HP4291A+Agilent / HP16193A

• SRF : Agilent/HP8753D / Agilent/HP4291A

• RDC : CH502BC HP4338B

• Irms for a 15°C rise above 25°C ambient

• Operating Temperature Range from -40°C to 125°C



ELECTRICAL CHARACTERISTICS LCN0805 SERIES : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE at 250MHz (nH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	DC RESISTANCE (Ω) Max.	RATED CURRENT (mA) Max.	COLOR CODING
LCN0805T-2N8 □ -S	2.8	10 / 5	70	1500	7900	0.06	800	Gray
LCN0805T-3N0 □ -S	3.0	10 / 5	65	1500	7900	0.06	800	White
LCN0805T-3N3 □ -N	3.3	10 / 5	50	1500	7900	0.08	600	Black
LCN0805T-5N6 □ -N	5.6	10 / 5	65	1000	5500	0.08	600	Orange
LCN0805T-6N8 □ -N	6.8	10 / 5	50	1000	5500	0.11	600	Brown
LCN0805T-7N5 □ -N	7.5	10 / 5	50	1000	4500	0.14	600	Green
LCN0805T-8N2 □ -N	8.2	10 / 5	50	1000	4700	0.12	600	Red
LCN0805T-10N □ -N	10	10 / 5 / 2	60	500	4200	0.10	600	Blue
LCN0805T-12N □ -N	12	10 / 5 / 2	50	500	4000	0.15	600	Orange
LCN0805T-15N □ -N	15	10 / 5 / 2	50	500	3400	0.17	600	Yellow
LCN0805T-18N □ -N	18	10 / 5 / 2	50	500	3300	0.20	600	Green
LCN0805T-22N □ -N	22	10 / 5 / 2	55	500	2600	0.22	500	Blue
LCN0805T-24N □ -N	24	10 / 5 / 2	50	500	2000	0.22	500	Gray
LCN0805T-27N □ -N	27	10 / 5 / 2	55	500	2500	0.25	500	Violet
LCN0805T-33N □ -N	33	10 / 5 / 2	60	500	2050	0.27	500	Gray
LCN0805T-36N □ -N	36	10 / 5 / 2	55	500	1700	0.27	500	Orange
LCN0805T-39N □ -N	39	10 / 5 / 2	60	500	2000	0.29	500	White
LCN0805T-43N □ -N	43 *	10 / 5 / 2	60	500	1650	0.34	500	Yellow
LCN0805T-47N □ -N	47 *	10 / 5 / 2	60	500	1650	0.31	500	Black
LCN0805T-56N □ -N	56 *	10 / 5 / 2	60	500	1550	0.34	500	Brown
LCN0805T-68N □ -N	68 *	10 / 5 / 2	60	500	1450	0.38	500	Red
LCN0805T-82N □ -N	82 **	10 / 5 / 2	65	500	1300	0.42	400	Orange
LCN0805T-91N □ -N	91 **	10 / 5 / 2	65	500	1200	0.48	400	Black
LCN0805T-R10 □ -N	100 **	10 / 5 / 2	65	500	1200	0.46	400	Yellow
LCN0805T-R11 □ -N	110 **	10 / 5 / 2	50	250	1000	0.48	400	Brown
LCN0805T-R12 □ -N	120 **	10 / 5 / 2	50	250	1100	0.51	400	Green
LCN0805T-R15 □ -N	150 ***	10 / 5 / 2	50	250	920	0.56	400	Blue
LCN0805T-R18 □ -N	180 ***	10 / 5 / 2	50	250	870	0.64	400	Violet
LCN0805T-R20 □ -N	200 ***	10 / 5 / 2	50	250	860	0.68	400	Red
LCN0805T-R22 □ -N	220 ***	10 / 5 / 2	50	250	850	0.70	400	Gray
LCN0805T-R24 □ -N	240 ***	10 / 5 / 2	44	250	690	1.00	350	Red
LCN0805T-R25 □ -N	250 ***	10 / 5 / 2	45	250	660	1.20	350	Yellow
LCN0805T-R27 □ -N	270 ***	10 / 5 / 2	48	250	650	1.30	350	White
LCN0805T-R33 □ -N	330 ***	10 / 5 / 2	48	250	600	1.65	310	Black
LCN0805T-R39 □ -N	390 ***	10 / 5 / 2	25	250	400	1.80	290	Brown
LCN0805T-R47 □ -N	470 ****	10 / 5 / 2	33	100	400	2.00	250	Violet
LCN0805T-R56 □ -N	560 ****	10 / 5 / 2	20	50	200	2.10	230	Orange
LCN0805T-R68 □ -N	680 ****	10 / 5 / 2	18	50	130	2.30	190	Green
LCN0805T-R82 □ -N	820 ****	10 / 5 / 2	15	50	100	2.50	180	Blue

Note : * at 200MHz ** at 150MHz *** at 100MHz **** at 50MHz ***** at 25MHz

- Tolerance : G = ±2% , J = ±5% , K = ±10%
- Packaging : Clear Tape and Reel (Standard)
- L/Q : Agilent / HP4291A+Agilent / HP16193A
- SRF : Agilent/HP8753D / Agilent/HP4291A
- RDC : CH502BC HP4338B
- Irms for a 15°C rise above 25°C ambient
- Operating Temperature Range from -40°C to 125°C



ELECTRICAL CHARACTERISTICS LCN1008 SERIES : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE at 50MHz (nH)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz) Min.	Rdc Max (Ω)	Irms Max (mA)	COLOR CODING		
								1 st	2 nd	3 rd
LCN1008T-10N □ -N	10	10 / 5 / 2	50	500	4100	0.08	1000	Brown	Black	Black
LCN1008T-12N □ -N	12	10 / 5 / 2	50	500	3300	0.09	1000	Brown	Red	Black
LCN1008T-15N □ -N	15	10 / 5 / 2	50	500	2500	0.10	1000	Brown	Green	Black
LCN1008T-18N □ -N	18	10 / 5 / 2	50	350	2500	0.11	1000	Brown	Gray	Black
LCN1008T-22N □ -N	22	10 / 5 / 2	55	350	2400	0.12	1000	Red	Red	Black
LCN1008T-27N □ -N	27	10 / 5 / 2	55	350	1600	0.13	1000	Red	Violet	Black
LCN1008T-33N □ -N	33	10 / 5 / 2	60	350	1600	0.14	1000	Orange	Orange	Black
LCN1008T-39N □ -N	39	10 / 5 / 2	60	350	1500	0.15	1000	Orange	White	Black
LCN1008T-47N □ -N	47	10 / 5 / 2	65	350	1500	0.16	1000	Yellow	Violet	Black
LCN1008T-56N □ -N	56	10 / 5 / 2	65	350	1300	0.18	1000	Green	Blue	Black
LCN1008T-68N □ -N	68	10 / 5 / 2	65	350	1300	0.20	1000	Blue	Gray	Black
LCN1008T-82N □ -N	82	10 / 5 / 2	60	350	1000	0.22	1000	Gray	Red	Black
LCN1008T-R10 □ -N	100 *	10 / 5 / 2	60	350	1000	0.56	650	Brown	Black	Brown
LCN1008T-R12 □ -N	120 *	10 / 5 / 2	60	350	950	0.63	650	Brown	Red	Brown
LCN1008T-R15 □ -N	150 *	10 / 5 / 2	45	100	850	0.70	580	Brown	Green	Brown
LCN1008T-R18 □ -N	180 *	10 / 5 / 2	45	100	750	0.77	620	Brown	Gray	Brown
LCN1008T-R22 □ -N	220 *	10 / 5 / 2	45	100	700	0.84	500	Red	Red	Brown
LCN1008T-R27 □ -N	270 *	10 / 5 / 2	45	100	600	0.91	500	Red	Violet	Brown
LCN1008T-R33 □ -N	330 *	10 / 5 / 2	45	100	570	1.05	450	Orange	Orange	Brown
LCN1008T-R39 □ -N	390 *	10 / 5 / 2	45	100	500	1.12	470	Orange	White	Brown
LCN1008T-R47 □ -N	470 *	10 / 5 / 2	45	100	450	1.19	470	Yellow	Violet	Brown
LCN1008T-R56 □ -N	560 *	10 / 5 / 2	45	100	415	1.33	400	Green	Blue	Brown
LCN1008T-R62 □ -N	620 *	10 / 5 / 2	45	100	375	1.40	300	Blue	Red	Brown
LCN1008T-R68 □ -N	680 *	10 / 5 / 2	45	100	375	1.47	400	Blue	Gray	Brown
LCN1008T-R75 □ -N	750 *	10 / 5 / 2	45	100	360	1.54	360	Violet	Green	Brown
LCN1008T-R82 □ -N	820 *	10 / 5 / 2	45	100	350	1.61	400	Gray	Red	Brown
LCN1008T-R91 □ -N	910 *	10 / 5 / 2	35	50	320	1.68	380	White	Brown	Brown
LCN1008T-IR0 □ -N	1000 *	10 / 5 / 2	35	50	220	1.75	370	Brown	Black	Red
LCN1008T-IR2 □ -N	1200 **	10 / 5 / 2	35	50	186	2.0	310	Brown	Red	Red
LCN1008T-IR5 □ -N	1500 **	10 / 5 / 2	28	50	200	2.3	330	Brown	Green	Red
LCN1008T-IR8 □ -N	1800 **	10 / 5 / 2	25	50	170	2.6	300	Brown	Gray	Red
LCN1008T-2R2 □ -N	2200 **	10 / 5 / 2	20	50	110	2.8	280	Red	Red	Red
LCN1008T-2R7 □ -N	2700 **	10 / 5 / 2	15	25	140	3.2	290	Red	Violet	Red
LCN1008T-3R3 □ -N	3300 **	10 / 5 / 2	15	25	100	3.4	290	Orange	Orange	Red
LCN1008T-3R9 □ -N	3900 **	10 / 5 / 2	15	25	100	3.6	260	Orange	White	Red
LCN1008T-4R7 □ -N	4700 **	10 / 5 / 2	13	25	90	4.0	260	Yellow	Violet	Red
LCN1008T-5R6 □ -N	5600 **	10 / 5 / 2	16	7.9	20	4.0	240	Green	Yellow	Red
LCN1008T-6R8 □ -N	6800 **	10 / 5 / 2	18	7.9	40	4.9	200	Yellow	Gray	Red
LCN1008T-8R2 □ -N	8200 **	10 / 5 / 2	18	7.9	25	6.0	170	Gray	Red	Red

Note : * at 25MHz ** at 7.9MHz

• When ordering, please specify tolerance and packaging code. Ex : LCN1008T -R82J -N

• Tolerance : G =±2% , J =±5% , K =±10%

• Packaging : Clear Tape and Reel (Standard)

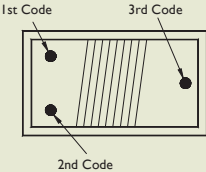
• L/Q : Agilent / HP4291A+Agilent / HPI6193A

• SRF : Agilent/HP8753D / Agilent/HP4291A

• RDC : CH502BC HP4338B

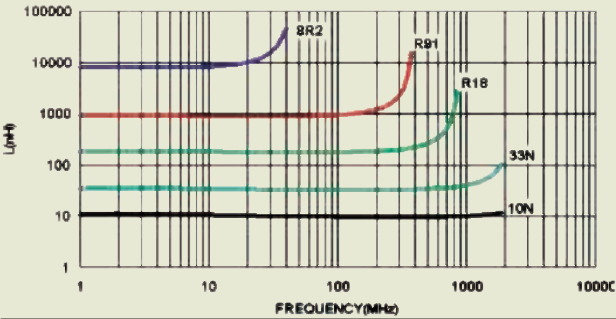
• Irms for a 15°C rise above 25°C ambient

• Operating Temperature Range from -40°C to 125°C

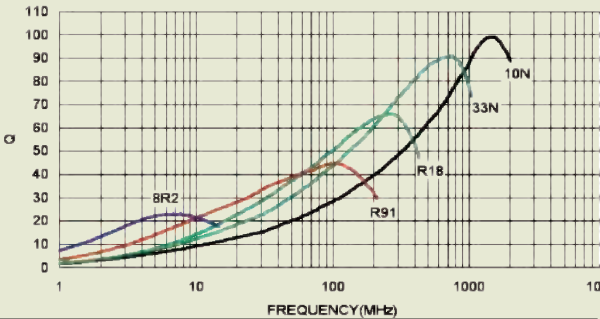


TEST INSTRUMENTS : HP4291A MATERIAL / IMPEDANCE ANALYZER

Typical L vs Frequency



Typical Q vs Frequency



COLOR CODING



ELECTRICAL CHARACTERISTICS CSI008 SERIES : LEAD-FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE (nH)	TEST FREQUENCY (MHz)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz)	RDC MAX (Ω)	IRMS (mA) Max.	COLOR CODING		
									1 st	2 nd	3 rd
LCN1206T-3N3 □ -N	3.3	100	10/5	30	300	6200	0.05	1000	Black	Orange	Black
LCN1206T-6N8 □ -N	6.8	100	10/5	30	300	5500	0.07	1000	Black	Blue	Black
LCN1206T-10N □ -N	10	100	10/5/2	40	300	4000	0.08	1000	Brown	Black	Black
LCN1206T-12N □ -N	12	100	10/5/2	40	300	3200	0.08	1000	Brown	Red	Black
LCN1206T-15N □ -N	15	100	10/5/2	40	300	3200	0.10	1000	Brown	Green	Black
LCN1206T-18N □ -N	18	100	10/5/2	50	300	2800	0.10	1000	Brown	Gray	Black
LCN1206T-22N □ -N	22	100	10/5/2	50	300	2200	0.10	1000	Red	Red	Black
LCN1206T-27N □ -N	27	100	10/5/2	50	300	1800	0.11	1000	Red	Violet	Black
LCN1206T-33N □ -N	33	100	10/5/2	55	300	1800	0.11	1000	Orange	Orange	Black
LCN1206T-39N □ -N	39	100	10/5/2	55	300	1800	0.12	1000	Orange	White	Black
LCN1206T-47N □ -N	47	100	10/5/2	55	300	1500	0.13	1000	Yellow	Violet	Black
LCN1206T-56N □ -N	56	100	10/5/2	55	300	1450	0.14	1000	Green	Blue	Black
LCN1206T-68N □ -N	68	100	10/5/2	55	300	1200	0.26	900	Blue	Gray	Black
LCN1206T-82N □ -N	82	100	10/5/2	55	300	1200	0.21	900	Gray	Red	Black
LCN1206T-R10 □ -N	100	100	10/5/2	55	300	1100	0.26	850	Brown	Black	Brown
LCN1206T-R12 □ -N	120	100	10/5/2	60	300	1100	0.26	800	Brown	Red	Brown
LCN1206T-R15 □ -N	150	100	10/5/2	60	300	950	0.31	750	Brown	Green	Brown
LCN1206T-R18 □ -N	180	50	10/5/2	60	300	900	0.43	700	Brown	Gray	Brown
LCN1206T-R22 □ -N	220	50	10/5/2	60	300	760	0.50	670	Red	Red	Brown
LCN1206T-R27 □ -N	270	50	10/5/2	55	300	730	0.56	630	Red	Violet	Brown
LCN1206T-R33 □ -N	330	50	10/5/2	45	150	650	0.62	590	Orange	Orange	Brown
LCN1206T-R39 □ -N	390	50	10/5/2	45	150	600	0.75	530	Orange	White	Brown
LCN1206T-R47 □ -N	470	50	10/5/2	45	150	550	1.30	490	Yellow	Violet	Brown
LCN1206T-R56 □ -N	560	35	10/5/2	45	150	470	1.34	460	Green	Blue	Brown
LCN1206T-R62 □ -N	620	35	10/5/2	45	150	470	1.58	460	Blue	Red	Brown
LCN1206T-R68 □ -N	680	35	10/5/2	45	150	450	1.58	430	Blue	Gray	Brown
LCN1206T-R75 □ -N	750	35	10/5/2	45	150	440	2.25	320	Violet	Green	Brown
LCN1206T-R82 □ -N	820	35	10/5/2	45	150	420	1.82	400	Gray	Red	Brown
LCN1206T-R91 □ -N	910	35	10/5/2	45	150	410	2.95	310	White	Brown	Brown
LCN1206T-1R0 □ -N	1000	35	10/5/2	45	150	400	2.80	320	Brown	Black	Red
LCN1206T-1R2 □ -N	1200	35	10/5/2	45	150	380	3.20	300	Brown	Red	Red

• When ordering, please specify tolerance and packaging code. Ex : LCN1206T -R12J -N

• Packaging : Clear Tape and Reel (Standard)

• SRF : Agilent / HP8753D / Agilent HP4291A

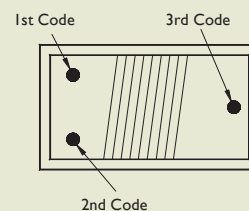
• Irms for a 15°C rise above 25°C ambient.

• Tolerance : G = ±2% , J = ±5% , K = ±10% ,

• L, Q : Agilent / HP4291A + Agilent / HP16193A

• RDC : CH502BC HP4338B

• Operating Temperature Range from -40°C to 125°C

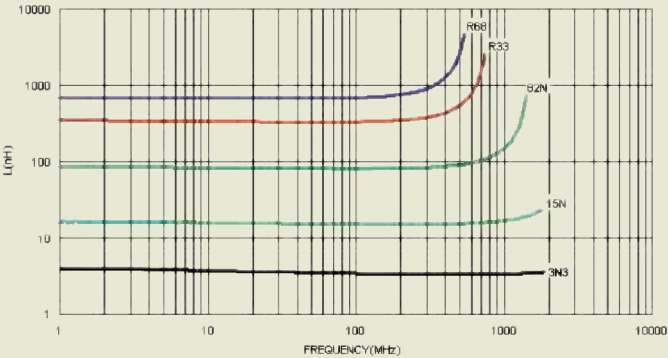


COLOR CODING

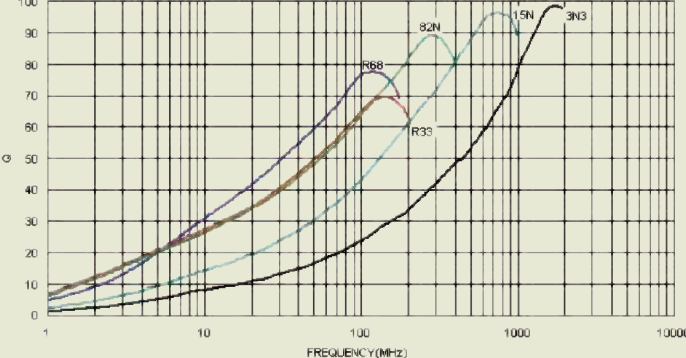


TEST INSTRUMENTS : HP4291A MATERIAL / IMPEDANCE ANALYZER

Typical L vs Frequency

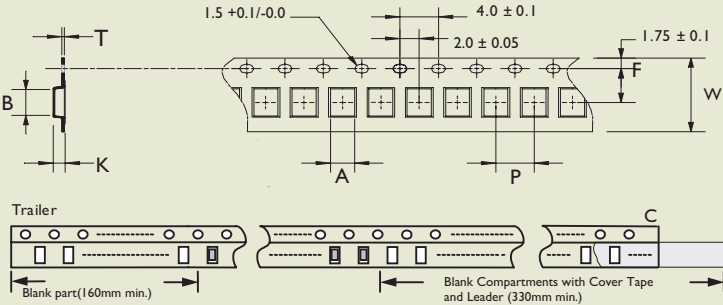


Typical Q vs Frequency

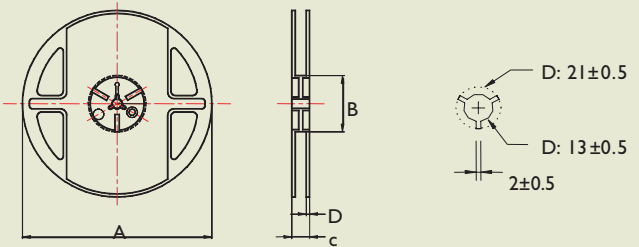


PACKAGING SPECIFICATIONS

Tape Dimensions



Reel Dimensions



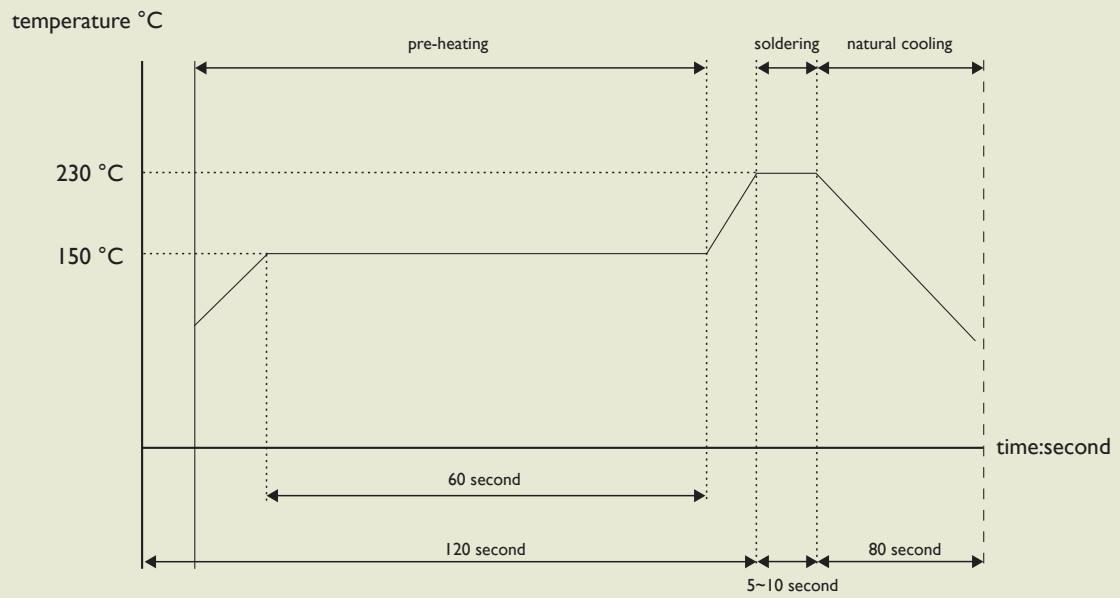
Dimensions : mm

TYPE	TAPE DIMENSIONS							REEL DIMENSIONS				QUANTITY/REEL
	A	B	T	W	P	F	K	A	B	C	D	
LCN0402	0.6	1.25	0.23	8	4	3.5	0.8	178	60	12	1.5	4000
LCN0603	1.15	1.83	0.23	8	4	3.5	1.00	178	60	12	1.5	4000
LCN0805	1.85	2.45	0.23	8	4	3.5	1.45	178	60	12	1.5	2500
LCN1008	2.70	2.95	0.23	8	4	3.5	2.25	178	60	12	1.5	2000
LCN1206	2.95	3.85	0.25	12	4	5.5	2.45	178	60	16	1.4	2000



RECOMMEND SOLDERING CONDITIONS

for:CS/ CT/ LCN/ HC/ HQ/ CMM/ NL (open type)/ NLC (open type)/ LS



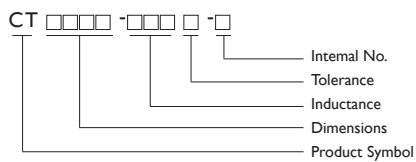
Wire Wound Ceramic Chip Inductors

CT Series

Lead-free / Open Type Wire Wound Chip Inductors



PRODUCT IDENTIFICATION



Tolerance :G=±2%, J=±5%, K=±10%

Due to technical expertise of accurately wounding skill, these chip inductors are designed as filtering, impedance matching, resonance and choke circuits for RF designer. The stand series as well as customer design to meet your needs of telecom & wireless products.

APPLICATIONS

RF products for cellular phone, GPS receiver, Base Station, Repeater, Wireless LAN/ Mouse/ Keyboard/ earphone, remote control, security system and other RF modules.

FEATURES

Meet SONY SS-00259's criteria for lead-free product.

Ceramic body and wire wound construction provide highest SRFs.

These ultra-compact inductors provided exceptional Q values, even at high frequencies.

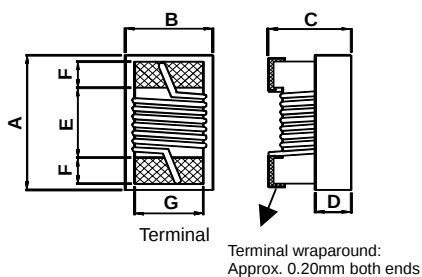
Their ceramic construction delivers the highest possible SRFs as well as excellent Q values.

The non-magnetic coil form also assures the utmost in thermal stability, predictability and batch consistency.

At just 1.02mm high, CT0805 is the lowest profile SMD inductor among 0805 series.

SHAPES AND DIMENSIONS

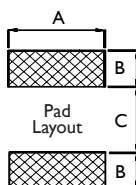
Dimensions : mm



TYPE	A	B	C	D	E	F	G
CT0805	2.35 ⁺⁰	1.73 ⁺⁰	1.02 ⁺⁰	0.35Ref	1.02	0.44	1.27

RECOMMENDED PATTERN

Dimensions : mm



TYPE	A	B	C
CT0805	1.78	1.02	0.76



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	Inductance (nH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF Min (MHz)	RDC MAX (Ω)	Irms Max (mA)	Color
CT0805-1N8 □ -N	1.8	250	10	55	1500	9400	0.03	800	Black
CT0805-3N9 □ -N	3.9	250	10	50	1000	6100	0.06	800	Brown
CT0805-4N7 □ -N	4.7	250	10/5	50	1000	5500	0.06	800	Red
CT0805-6N8 □ -N	6.8	250	10/5	50	1000	5500	0.08	800	Orange
CT0805-8N2 □ -N	8.2	250	10/5	50	1000	4800	0.08	800	Yellow
CT0805-10N □ -N	10	250	10/5/2	55	750	3300	0.08	800	Green
CT0805-12N □ -N	12	250	10/5/2	55	750	3800	0.10	800	Blue
CT0805-15N □ -N	15	250	10/5/2	50	500	2950	0.10	800	Violet
CT0805-18N □ -N	18	250	10/5/2	50	500	3100	0.13	800	Gray
CT0805-22N □ -N	22	250	10/5/2	50	500	2900	0.15	800	White
CT0805-27N □ -N	27	250	10/5/2	50	500	2450	0.23	600	Black
CT0805-33N □ -N	33	250	10/5/2	55	500	2350	0.28	600	Brown
CT0805-39N □ -N	39	250	10/5/2	55	500	2200	0.33	600	Red
CT0805-47N □ -N	47	200	10/5/2	50	500	2000	0.39	600	Orange
CT0805-56N □ -N	56	200	10/5/2	50	500	1850	0.39	500	Yellow
CT0805-68N □ -N	68	200	10/5/2	50	500	1500	0.40	500	Green
CT0805-82N □ -N	82	150	10/5/2	50	500	1500	0.44	500	Blue
CT0805-R10 □ -N	100	150	10/5/2	50	500	1200	0.64	400	Violet
CT0805-R12 □ -N	120	150	10/5/2	40	250	1150	0.68	300	Gray
CT0805-R15 □ -N	150	150	10/5/2	40	250	1050	0.80	300	White
CT0805-R18 □ -N	180	150	10/5/2	40	250	950	0.90	300	Black
CT0805-R22 □ -N	220	150	10/5/2	40	250	900	0.98	300	Brown
CT0805-R27 □ -N	270	150	10/5/2	40	250	850	1.30	300	Red
CT0805-R33 □ -N	330	100	10/5/2	40	250	800	1.45	300	Orange
CT0805-R39 □ -N	390	100	10/5/2	35	250	700	1.60	300	Yellow
CT0805-R47 □ -N	470	50	10/5/2	25	100	600	1.80	300	Green
CT0805-R56 □ -N	560	25	10/5/2	18	50	550	1.90	300	Blue
CT0805-R62 □ -N	620	25	10/5/2	18	50	450	2.00	300	Violet
CT0805-R68 □ -N	680	25	10/5/2	18	50	420	2.10	300	Gray
CT0805-R75 □ -N	750	25	10/5/2	18	50	400	2.20	300	White
CT0805-R82 □ -N	820	25	10/5/2	18	50	400	2.50	300	Black
CT0805-1R0 □ -N	1000	25	10/5	17	50	330	3.10	300	Brown

• When ordering, please specify tolerance and packaging code. Ex : CT0805-1R0J-N

• Tolerance : G = ±2% , J = ±5% , K = ±10%

• Packaging : Clear Tape and Reel (Standard)

• L/Q : Agilent / HP4291A+Agilent / HP16193A

• SRF : Agilent/HP8753D / Agilent/HP4291A

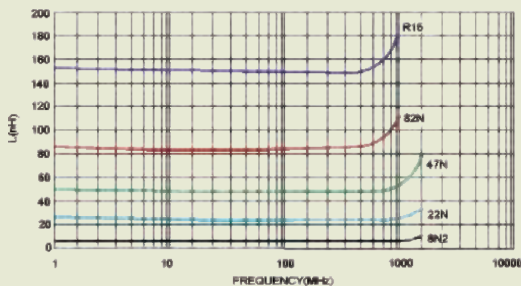
• RDC : CH502BC HP4338B

• Irms for a 15°C rise above 25°C ambient

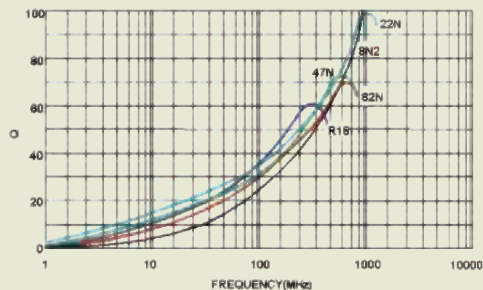
• Operating Temperature Range from -40°C to 125°C

TEST INSTRUMENTS : HP4291A MATERIAL / IMPEDANCE ANALYZER

Typical L vs Frequency



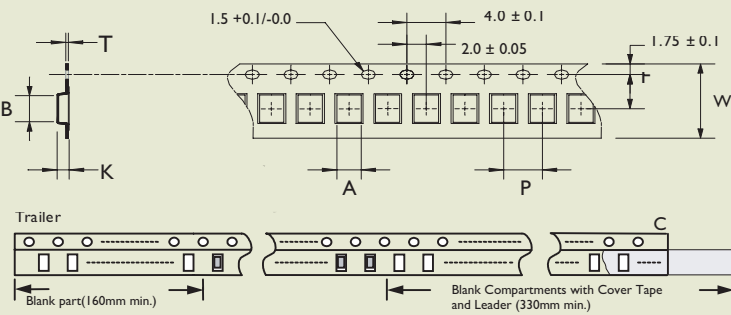
Typical Q vs Frequency



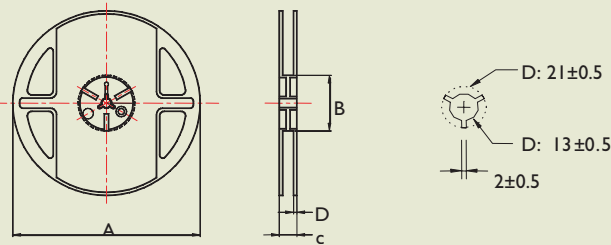


PACKAGING SPECIFICATIONS

Tape Dimensions



Reel Dimensions

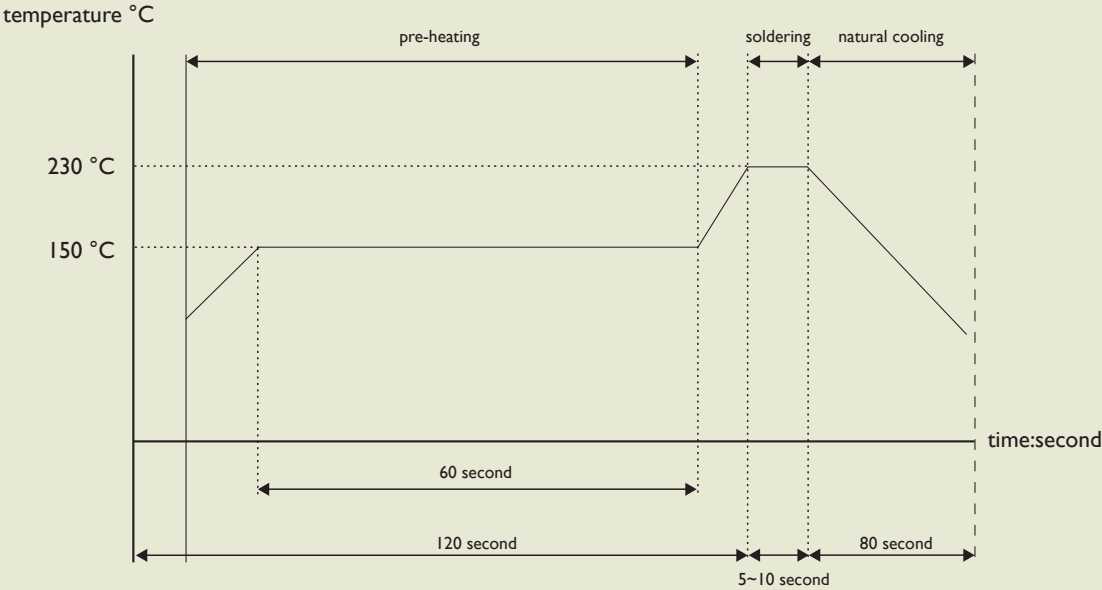


Dimensions : mm

TYPE	TAPE DIMENSIONS							REEL DIMENSIONS				QUANTITY/REEL
	A	B	T	W	P	F	K	A	B	C	D	
CT0805	1.85	2.45	0.23	8	4	3.5	1.00	178	60	12	1.5	2000

RECOMMEND SOLDERING CONDITIONS

for:CS/ CT/ LCN/ HC/ HQ/ CMM/ NL (open type)/ NLC (open type)/ LS



HC Series

Lead-free / For High Current

Wire Wound Ceramic Chip Inductors

Due to technical expertise of accurately winding skill, these chip inductors are designed as filtering, impedance matching, resonance and choke circuits for RF designer. The stand series as well as customer design to meet your needs of telecom & wireless products.

APPLICATIONS

RF products for cellular phone, GPS receiver, Base Station, Repeater, Wireless LAN/ Mouse/ Keyboard/ earphone, remote control, security system and other RF modules.

FEATURES

Meet SONY SS-00259's criteria for lead-free product.

Ceramic body and wire wound construction provide highest SRFs.

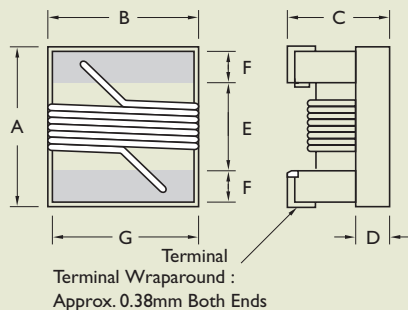
These ultra-compact inductors provided exceptional Q values, even at high frequencies.

Their ceramic construction delivers the highest possible SRFs as well as excellent Q values.

The non-magnetic coil form also assures the utmost in thermal stability, predictability and batch consistency.

The high current rating and low loss to fit the RF applications.

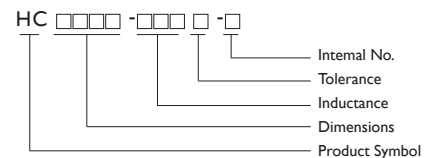
SHAPES AND DIMENSIONS



TYPE	A	B	C	D	E	F	G
HC0603	1.80 ⁺⁰	1.12 ⁺⁰	1.02 ⁺⁰	0.35Ref	0.86	0.33	0.76



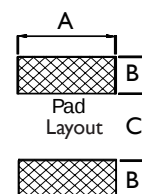
PRODUCT IDENTIFICATION



• Tolerance : G=±2%, J=±5%, K=±10%

RECOMMENDED PATTERN

Dimensions : mm



TYPE	A	B	C
HC0603	1.02	0.64	0.64



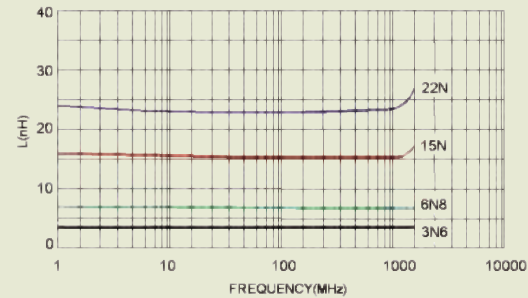
ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	Inductance (nH)	Test Frequency (Mhz)	Tolerance (±%)	Q Min	Test Frequency (Mhz)	SRF Min (Mhz)	RDC MAX (Ω)	Irms Max (mA)	Color
HC0603-1N6 □ -N	1.6	250	10/5	24	250	12500	0.030	2400	Black
HC0603-3N6 □ -N	3.6	250	10/5	24	250	5900	0.048	2300	Brown
HC0603-3N9 □ -N	3.9	250	10/5	25	250	5900	0.054	2200	Red
HC0603-6N8 □ -N	6.8	250	10/5	35	250	5800	0.054	2100	Orange
HC0603-7N5 □ -N	7.5	250	10/5	35	250	3700	0.059	2100	Yellow
HC0603-10N □ -N	10.0	250	10/5/2	38	250	3700	0.071	2000	Green
HC0603-12N □ -N	12.0	250	10/5/2	38	250	3000	0.075	2000	Blue
HC0603-15N □ -N	15.0	250	10/5/2	38	250	2800	0.080	1900	Violet
HC0603-18N □ -N	18.0	250	10/5/2	40	250	2800	0.099	1900	Gray
HC0603-22N □ -N	22.0	250	10/5/2	42	250	2400	0.099	1800	White
HC0603-24N □ -N	24.0	250	10/5/2	42	250	2400	0.105	1800	Black

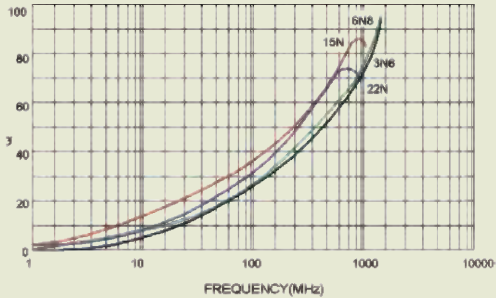
- Tolerance : G =±2% , J =±5% , K =±10%
- Packaging : Clear Tape and Reel (Standard)
- L/Q : Agilent / HP4291A+Agilent / HP16193A
- SRF : Agilent/HP8753D
- RDC : Digital Multimeter SC-7401
- Irms for a 15°C rise above 25°C ambient
- Operating Temperature Range from -40°C to 125°C

TEST INSTRUMENTS : HP4291A MATERIAL / IMPEDANCE ANALYZER

Typical L vs Frequency

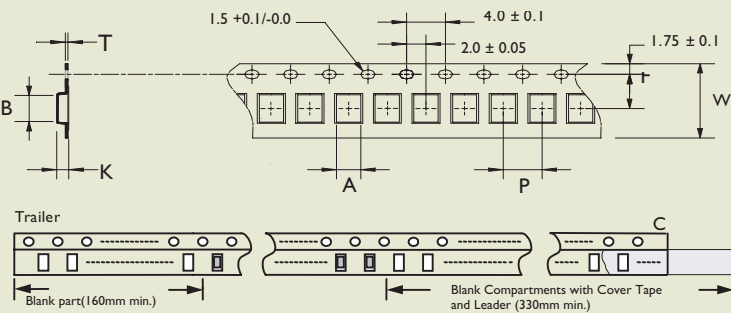


Typical Q vs Frequency

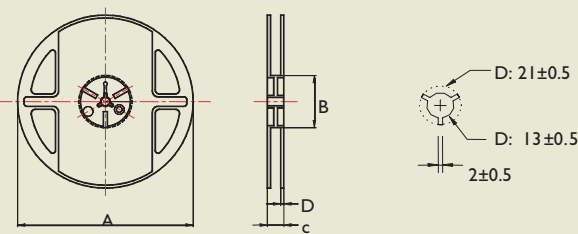


PACKAGING SPECIFICATIONS

Tape Dimensions



Reel Dimensions



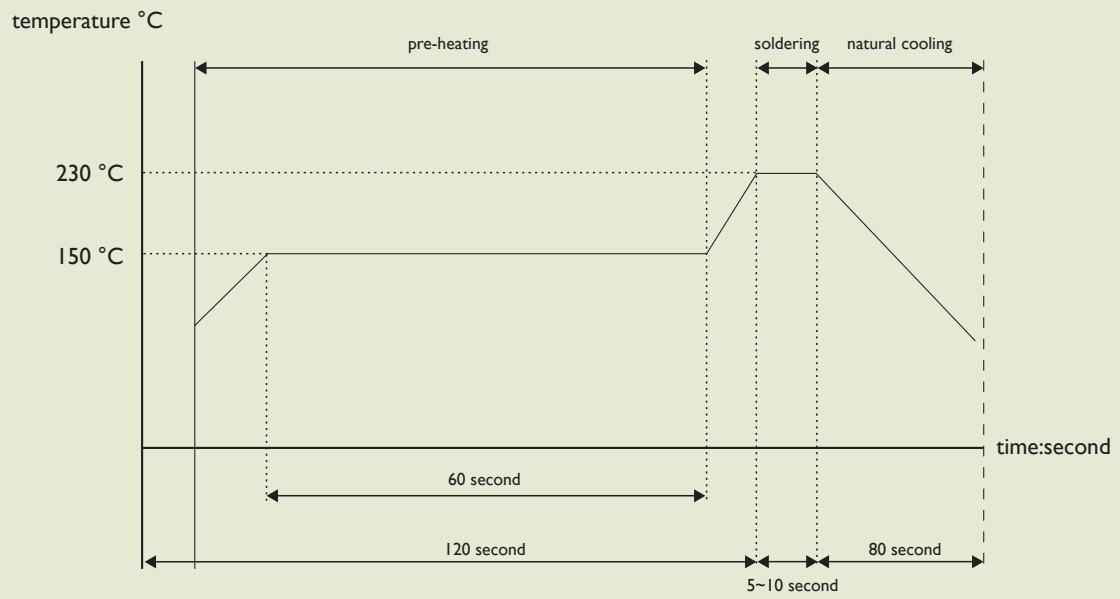
Dimensions : mm

TYPE	TAPE DIMENSIONS							REEL DIMENSIONS				QUANTITY/REEL
	A	B	T	W	P	F	K	A	B	C	D	
HC0603	1.15	1.83	0.23	8	4	3.5	1.00	178	60	12	1.5	4000



RECOMMEND SOLDERING CONDITIONS

for: CS/ CT/ LCN/ HC/ HQ/ CMM/ NL (open type)/ NLC (open type)/ LS



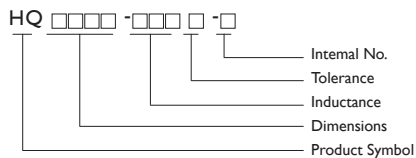
Wire Wound Ceramic Chip Inductors

HQ Series

Lead-free / High Q



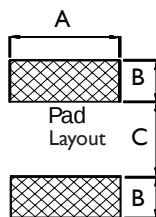
PRODUCT IDENTIFICATION



• Tolerance :G=±2%, J=±5%, K=±10%

RECOMMENDED PATTERN

Dimensions : mm



TYPE	A	B	C
HQ0805	1.78	1.02	0.76
HQ1008	2.54	1.02	1.27

Due to technical expertise of accurately winding skill, these chip inductors are designed as filtering, impedance matching, resonance and choke circuits for RF designer. The stand series as well as customer design to meet your needs of telecom & wireless products.

APPLICATIONS

RF products for cellular phone, GPS receiver, Base Station, Repeater, Wireless LAN/ Mouse/ Keyboard/ earphone, remote control, security system and other RF modules.

FEATURES

Meet SONY SS-00259's criteria for lead-free product.

Ceramic body and wire wound construction provide highest SRFs.

These ultra-compact inductors provided exceptional Q values, even at high frequencies.

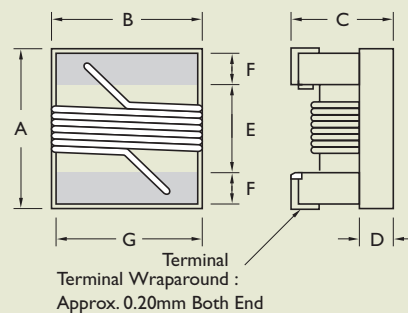
Their ceramic construction delivers the highest possible SRFs as well as excellent Q values.

The non-magnetic coil form also assures the utmost in thermal stability, predictability and batch consistency.

The high current rating and low loss to fit the RF applications.

SHAPES AND DIMENSIONS

Dimensions : mm



TYPE	A	B	C	D	E	F	G
HQ0805	2.29 ⁺⁰	1.73 ⁺⁰	1.52 ⁺⁰	0.50Ref	1.02	0.44	1.27
HQ1008	2.92 ⁺⁰	2.79 ⁺⁰	2.03 ⁺⁰	0.70Ref	1.52	0.51	2.03



ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

PART NO.	Inductance (nH)	Test Frequency (MHz)	Tolerance (±%)	Q Min	Test Frequency (MHz)	SRF Min (MHz)	RDC MAX (Ω)	Irms Max (mA)	Color
HQ0805-2N5 □ -N	2.5	250	10/5	80	1500	6000	0.020	1600	Black
HQ0805-5N6 □ -N	5.6	250	10/5	98	1500	6000	0.035	1600	Brown
HQ0805-6N2 □ -N	6.2	250	10/5	88	1000	4750	0.035	1600	Red
HQ0805-12N □ -N	12.0	250	10/5	80	1000	3000	0.045	1600	Orange
HQ0805-16N □ -N	16.0	250	10/5/2	72	500	2950	0.060	1500	Yellow
HQ0805-18N □ -N	18.0	250	10/5/2	75	500	2550	0.060	1400	Green
HQ0805-20N □ -N	20.0	250	10/5/2	70	500	2050	0.055	1400	Blue
HQ0805-27N □ -N	27.0	250	10/5/2	75	500	2000	0.070	1300	Violet
HQ0805-30N □ -N	30.0	250	10/5/2	65	500	1950	0.095	1200	Gray
HQ0805-39N □ -N	39.0	250	10/5/2	65	500	1600	0.110	1100	White
HQ0805-48N □ -N	48.0	200	10/5/2	65	500	1400	0.095	1200	Black
HQ0805-51N □ -N	51.0	200	10/5/2	65	500	1400	0.120	1000	Brown

• When ordering, please specify tolerance and packaging code. Ex :HQ0805-12NJ-N

• Tolerance : G =±2% , J =±5% , K =±10%

• Packaging : Clear Tape and Reel (Standard)

• L/Q : Agilent / HP4291A+Agilent / HP16193A

• SRF : Agilent/HP8753D / Agilent/HP4291A

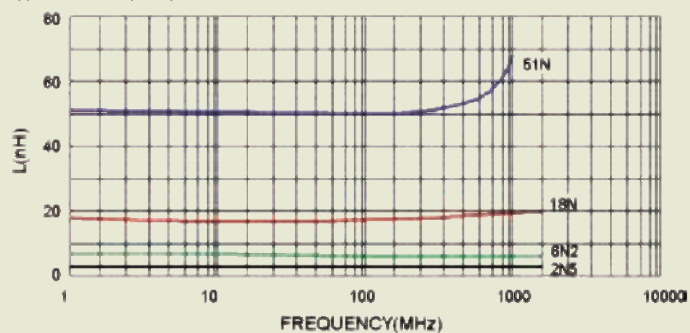
• RDC : Digital Multimeter SC-7401

• Irms for a 15°C rise above 25°C ambient

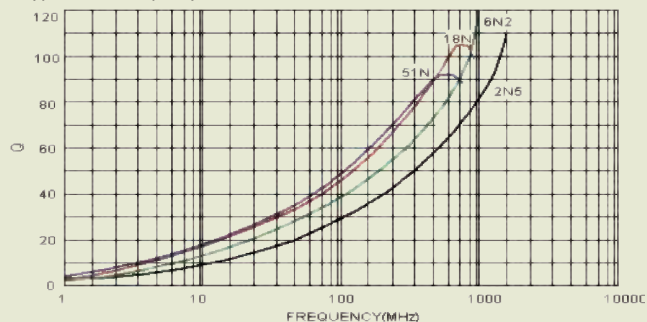
• Operating Temperature Range from -40°C to 125°C

TEST INSTRUMENTS : HP4291A MATERIAL / IMPEDANCE ANALYZER

Typical L vs Frequency



Typical Q vs Frequency

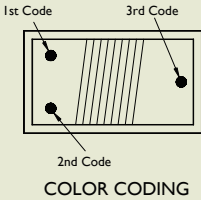




ELECTRICAL CHARACTERISTICS : LEAD-FREE & ROHS COMPLIANCE

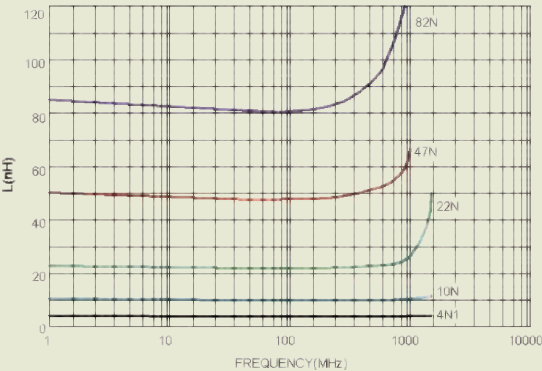
PART NO.	INDUCTANCE (nH)	TEST FREQUENCY (MHz)	TOLERANCE (±%)	Q Min.	TEST FREQUENCY (MHz)	SRF (MHz)	Rdc Max (Ω)	Irms Max (mA)	COLOR CODING		
									1 st	2 nd	3 rd
HQ1008-4N1 □ -N	4.1	50	10/5	75	1500	6000	0.05	1600	Black	Yellow	Black
HQ1008-10N □ -N	10.0	50	10/5	60	500	3600	0.06	1600	Brown	Black	Black
HQ1008-12N □ -N	12.0	50	10/5/2	70	500	2800	0.06	1500	Brown	Red	Black
HQ1008-18N □ -N	18.0	50	10/5/2	62	350	2700	0.07	1400	Brown	Gray	Black
HQ1008-22N □ -N	22.0	50	10/5/2	62	350	2050	0.07	1400	Red	Red	Black
HQ1008-33N □ -N	33.0	50	10/5/2	75	350	1700	0.09	1300	Orange	Orange	Black
HQ1008-39N □ -N	39.0	50	10/5/2	75	350	1300	0.09	1300	Orange	White	Black
HQ1008-47N □ -N	47.0	50	10/5/2	75	350	1450	0.12	1200	Yellow	Violet	Black
HQ1008-56N □ -N	56.0	50	10/5/2	75	350	1230	0.12	1200	Green	Blue	Black
HQ1008-68N □ -N	68.0	50	10/5/2	80	350	1150	0.13	1100	Blue	Gray	Black
HQ1008-82N □ -N	82.0	50	10/5/2	80	350	1060	0.16	1100	Gray	Red	Black
HQ1008-R10 □ -N	100.0	50	10/5/2	62	350	820	0.16	1000	Brown	Black	Brown
HQ1008-R15 □ -N	150.0	50	10/5/2	55	350	800	0.23	1000	Brown	Green	Brown

- When ordering, please specify tolerance and packaging code. Ex : HQ1008-R10J-N
- Tolerance : G =±2% , J =±5% , K =±10%
- Packaging : Clear Tape and Reel (Standard)
- L/Q : Agilent / HP4291A+Agilent / HP16193A
- SRF : Agilent/HP8753D / Agilent/HP4291A
- RDC : Digital Multimeter SC-7401
- I rms for a 15°C rise above 25°C ambient
- Operating Temperature Range from -40°C to 125°C

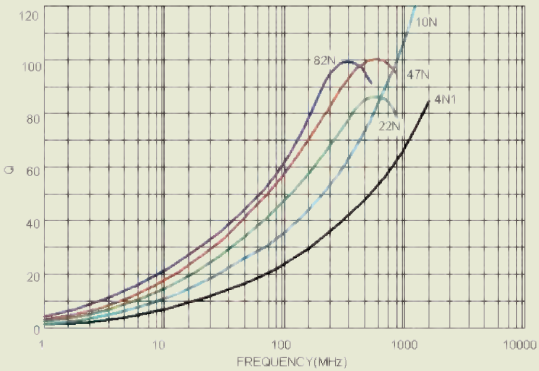


TEST INSTRUMENTS : HP4291A MATERIAL / IMPEDANCE ANALYZER

Typical L vs Frequency

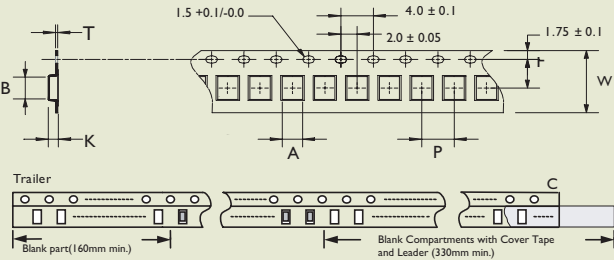


Typical Q vs Frequency

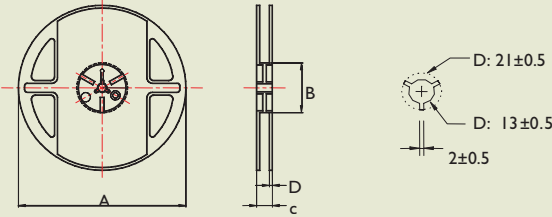


PACKAGING SPECIFICATIONS

Tape Dimensions



Reel Dimensions



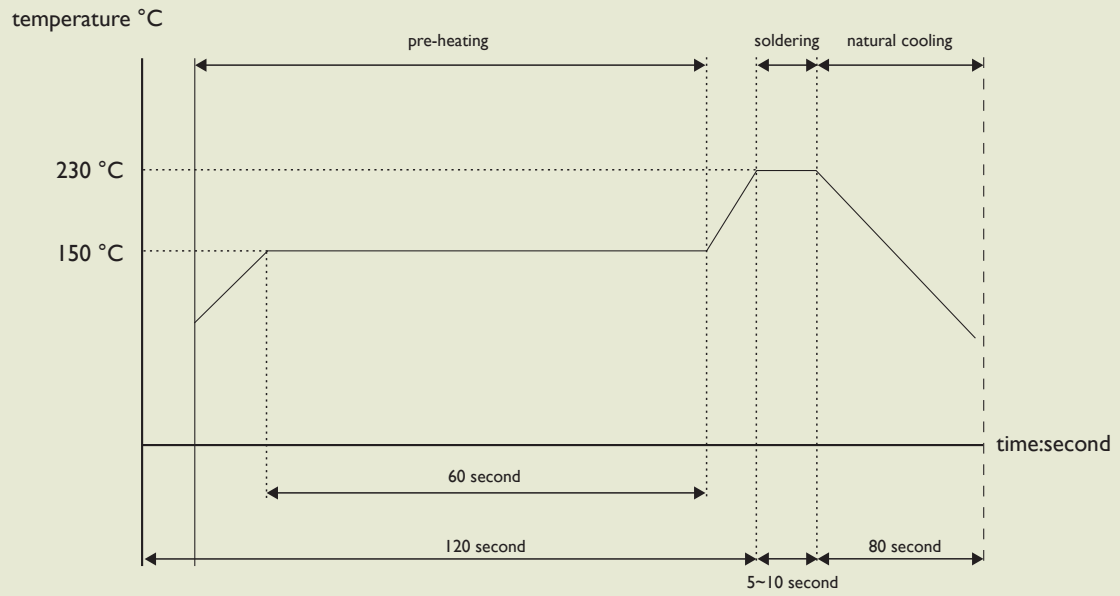
Dimensions : mm

TYPE	TAPE DIMENSIONS							REEL DIMENSIONS				QUANTITY/REEL
	A	B	T	W	P	F	K	A	B	C	D	
HQ0805	1.85	2.45	0.23	8	4	3.5	1.45	178	60	12	1.5	2000
HQ1008	2.70	2.95	0.23	8	4	3.5	2.25	178	60	12	1.5	2000



RECOMMEND SOLDERING CONDITIONS

for:CS/ CT/ LCN/ HC/ HQ/ CMM/ NL (open type)/ NLC (open type)/ LS



DIP Power Inductors

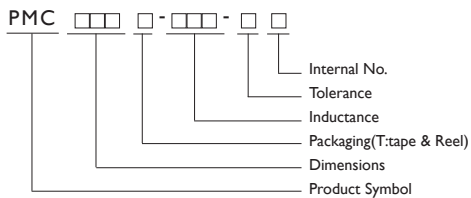
PMC Series



FEATURES

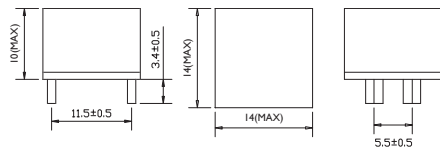
Magnetic shielded construction for high density board assembly
 High performance excellent DC current characteristics
 Large energy storage capacity
 Up to 40 amps continuous
 Custom designs available

PRODUCT IDENTIFICATION

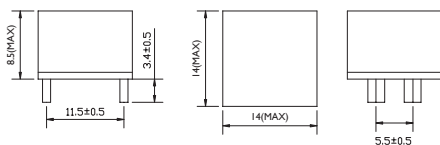


SHAPE AND DIMENSIONS

PMCI29 Dimensions : mm



PMCI27



ELECTRICAL CHARACTERISTICS : LEAD FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE at (μH)	TOLERANCE (±%)	TEST FREQUENCY (KHZ)	SER (KHZ) MIN.	DC RESISTANCE (mΩ) MAX	RATED CURRENT (A) MIN
PMCI29B-R30M-N	0.30	20%	100		0.8	60
PMCI29B-R50M-N	0.50	20%	100		1.0	40
PMCI29B-R60M-N	0.60	20%	100		1.0	40
PMCI29B-R90M-N	0.90	20%	100		1.8	30
PMCI29B-1R2M-N	1.20	20%	100		2.0	30
PMCI29B-1R5M-N	1.50	20%	100		2.2	25
PMCI29B-2R2M-N	2.20	20%	100		3.0	20
PMCI29B-3R3M-N	3.30	20%	100		3.0	15
PMCI29B-4R7M-N	4.70	20%	100		5.0	15
PMCI27B-R60M-N	0.60	20%	100		1.0	30
PMCI27B-1R0M-N	1.00	20%	100		2.0	30
PMCI27B-1R5M-N	1.50	20%	100		2.0	25
PMCI27B-2R2M-N	2.20	20%	100		3.0	20
PMCI27B-3R3M-N	3.30	20%	100		4.5	20

Note: * at 25MHZ ** at 7.9MHZ

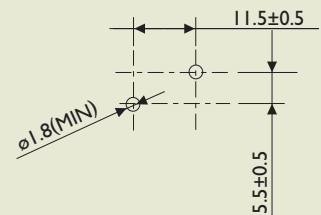
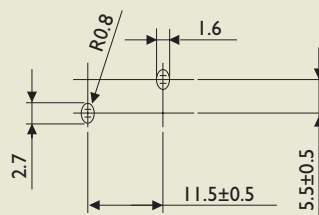
When ordering please specify tolerance and packaging code.

Ex : PMCI29- R60M- S Tolerance: M±20%, L±15%, K±10% Packaging: Clear Tape and Reel (Standard)

L Q : HP4287A SRF : HP8753D/E4991A RDC: Digital Multimeter SC-7401

Operating Temperature °C Range -40°C to +125°C

LAY OUT



SPMC Series

SMT Power Inductors

FEATURES

Magnetic shielded construction for high density board assembly
 High performance excellent DC current characteristics
 Large energy storage capacity
 Up to 40 amps continuous
 Custom designs available

ELECTRICAL CHARACTERISTICS : LEAD FREE & ROHS COMPLIANCE

PART NO.	INDUCTANCE at (μH)	TOLERANCE (±%)	TEST FREQUENCY (KHZ)	SER (KHZ) MIN.	DC RESISTANCE (mΩ) MAX	RATED CURRENT (A) MIN
SPMC129T-R47M-N	0.47	20%	100		5.0	40
SPMC129T-R50M-N	0.50	20%	100		3.0	40
SPMC129T-1R0M-N	1.00	20%	100		2.8	30
SPMC129T-1R2M-N	1.20	20%	100		2.0	30
SPMC129T-1R5M-N	1.50	20%	100		2.0	25
SPMC129T-4R7M-N	1.70	20%	100		1.0	18
SPMC127T-R50M-N	0.50	20%	100		1.5	35
SPMC127T-R60M-N	0.60	20%	100		1.2	30
SPMC127T-1R0M-N	1.00	20%	100		2.0	30
SPMC127T-1R5M-N	1.50	20%	100		3.3	20
SPMC127T-4R7M-N	4.70	20%	100		8.0	15
SPMC125T-R50M-N	0.50	20%	100		1.8	30
SPMC125T-R60M-N	0.60	20%	100		1.8	30
SPMC125T-R80M-N	0.80	20%	100		2.0	30

Note: * at 25MHZ ** at 7.9MHZ

When ordering please specify tolerance and packaging code.

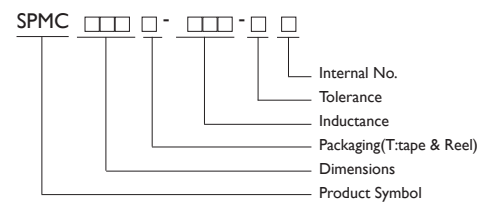
Ex : PMC129- R60M-S Tolerance: M±20%, L±15%, K±10% Packaging: Clear Tape and Reel (Standard)

L Q : HP4287A SRF : HP8753D/E4991A RDC: Digital Multimeter SC-7401

Operating Temperature °C Range -40°C to +125°C

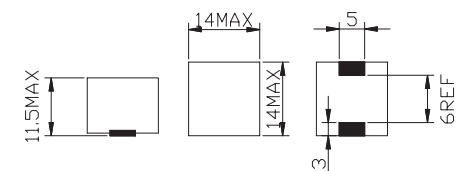


PRODUCT IDENTIFICATION

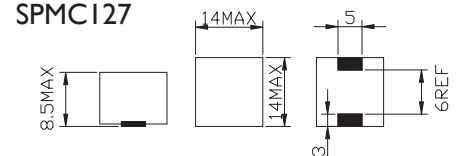


SHAPE AND DIMENSIONS

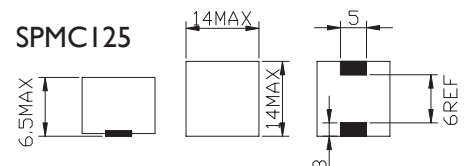
SPMC129 Dimensions : mm



SPMC127



SPMC125

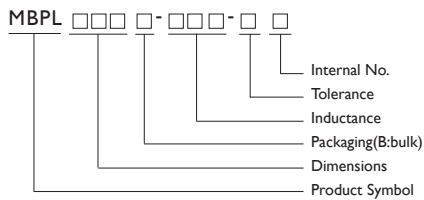


DIP Power Inductors

MBPL Series

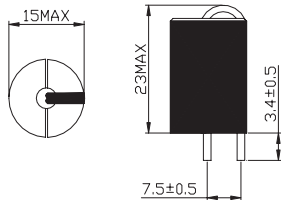


PRODUCT IDENTIFICATION

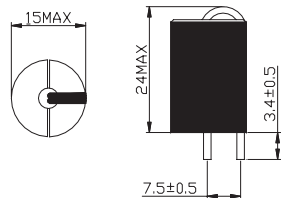


SHAPE AND DIMENSIONS

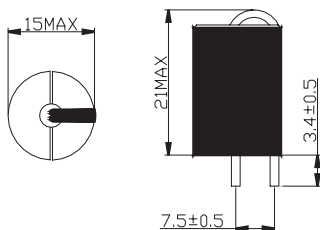
MBPL1319



MBPL1220



MBPL1217



Dimensions : mm

FEATURES

Magnetic shielded construction for high density board assembly

High performance excellent DC current characteristics

Large energy storage capacity

Up to 40 amps continuous

Custom designs available

ELECTRICAL CHARACTERISTICS MBPL SERIES

PART NO.	INDUCTANCE at (μH)	TOLERANCE (±%)	TEST FREQUENCY (KHZ)	SER (KHZ) MIN.	DC RESISTANCE (mΩ) MAX	RATED CURRENT (A) MIN
MBPL1319B-R30M-N	0.30	20%	100		0.5	60
MBPL1319B-R60M-N	0.60	20%	100		1.0	60
MBPL1319B-R90M-N	0.90	20%	100		1.0	40
MBPL1319B-IR2M-N	1.20	20%	100		1.0	35
MBPL1220B-IR2M-N	1.20	20%	100		1.8	30
MBPL1220B-IR5M-N	1.50	20%	100		1.8	40
MBPL1217B-R30M-N	0.30	20%	100		0.7	45
MBPL1217B-R60M-N	0.60	20%	100		1.5	40
MBPL1217B-R90M-N	0.90	20%	100		1.5	30

Note: * at 25MHZ ** at 7.9MHZ

When ordering please specify tolerance and packaging code.

Ex : PMC129- R60M-S Tolerance: M±20%, L±15%, K±10% Packaging: Clear Tape and Reel (Standard)

L Q : HP4287A SRF : HP8753D/E4991A RDC: Digital Multimeter SC-7401

Operating Temperature °C Range -40°C to +125°C