

Inductors

For High Frequency SMD

MLG Series MLG1005 Type

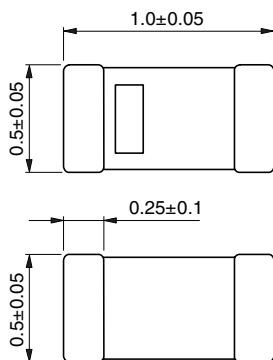
FEATURES

- Nominal inductance values are supported from 1 to 270nH.
- Provides high Q characteristics.
- Advanced monolithic structure is formed using a multilayering and sintering process with ceramic and conductive materials for high-frequency.
- The products contain no lead and also support lead-free soldering.

APPLICATIONS

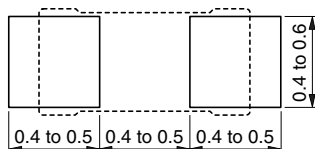
For high-frequency applications including mobile phones, portable phones, cordless phones, pagers and personal handy-phone systems (PHS).

SHAPES AND DIMENSIONS



Weight: 1mg

RECOMMENDED PC BOARD PATTERN



Dimensions in mm



SPECIFICATIONS

Operating temperature range	-55 to +125°C
Storage temperature range	-55 to +125°C [Unit of products]

PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	10000 pieces/reel

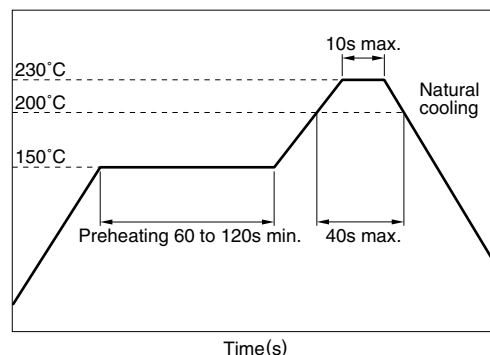
HANDLING AND PRECAUTIONS

- Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
- After mounting components onto the printed circuit board, do not apply stress through board bending or mishandling.
- When hand soldering, apply the soldering iron to the printed circuit board only. Temperature of the iron tip should not exceed 300°C. Soldering time should not exceed 3 seconds.

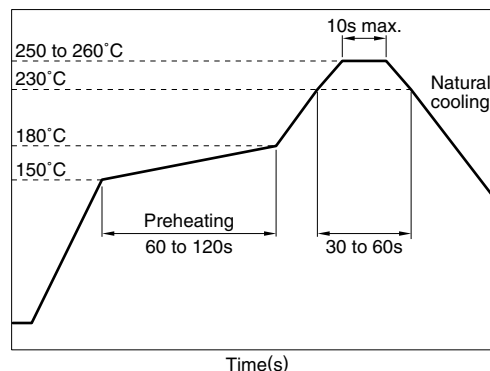
PRODUCT IDENTIFICATION

MLG	1005	S	2N2	S	T
(1)	(2)	(3)	(4)	(5)	(6)
(1) Series name					
(2) Dimensions					
1005			1.0×0.5mm (L×W)		
(3) Material code					
(4) Inductance value					
2N2			2.2nH		
12N			12nH		
39N			39nH		
(5) Inductance tolerance					
C			±0.2nH		
S			±0.3nH		
J			±5%		
(6) Packaging style					
T			Taping (reel)		

RECOMMENDED SOLDERING CONDITIONS(REFLOW) EUTECTIC SOLDERING



LEAD-FREE SOLDERING



• Please contact our Sales office when your application are considered the following:
The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

• All specifications are subject to change without notice.

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ELECTRICAL CHARACTERISTICS

Inductance (nH)	Inductance tolerance	Q min.	Test frequency L, Q (MHz)	Self-resonant frequency (GHz)min.	DC resistance (Ω)max.	Rated current (mA)max.	Part No.
0.6	$\pm 0.2\text{nH}$	—	100	10	0.1	1000	MLG1005S0N6CT
0.7	$\pm 0.2\text{nH}$	—	100	10	0.1	1000	MLG1005S0N7CT
0.8	$\pm 0.2\text{nH}$	—	100	10	0.1	1000	MLG1005S0N8CT
0.9	$\pm 0.2\text{nH}$	—	100	10	0.1	1000	MLG1005S0N9CT
1	$\pm 0.2, 0.3\text{nH}$	7	100	10	0.1	1000	MLG1005S1N0□T
1.1	$\pm 0.2, 0.3\text{nH}$	7	100	10	0.1	1000	MLG1005S1N1□T
1.2	$\pm 0.2, 0.3\text{nH}$	7	100	10	0.1	1000	MLG1005S1N2□T
1.3	$\pm 0.2, 0.3\text{nH}$	7	100	8	0.1	1000	MLG1005S1N3□T
1.5	$\pm 0.2, 0.3\text{nH}$	7	100	8	0.1	1000	MLG1005S1N5□T
1.6	$\pm 0.2, 0.3\text{nH}$	7	100	7	0.15	1000	MLG1005S1N6□T
1.8	$\pm 0.2, 0.3\text{nH}$	7	100	8	0.15	900	MLG1005S1N8□T
2	$\pm 0.2, 0.3\text{nH}$	7	100	7	0.15	900	MLG1005S2N0□T
2.2	$\pm 0.2, 0.3\text{nH}$	7	100	6	0.15	900	MLG1005S2N2□T
2.4	$\pm 0.2, 0.3\text{nH}$	7	100	6	0.15	800	MLG1005S2N4□T
2.7	$\pm 0.2, 0.3\text{nH}$	7	100	5	0.15	800	MLG1005S2N7□T
3	$\pm 0.2, 0.3\text{nH}$	7	100	5	0.2	800	MLG1005S3N0□T
3.3	$\pm 0.2, 0.3\text{nH}$	8	100	5	0.2	800	MLG1005S3N3□T
3.6	$\pm 0.2, 0.3\text{nH}$	8	100	5	0.2	700	MLG1005S3N6□T
3.9	$\pm 0.2, 0.3\text{nH}$	8	100	5	0.2	700	MLG1005S3N9□T
4.3	$\pm 0.3\text{nH}$	8	100	4	0.2	700	MLG1005S4N3ST
4.7	$\pm 0.3\text{nH}$	8	100	4	0.25	700	MLG1005S4N7ST
5.1	$\pm 0.3\text{nH}$	8	100	3.5	0.25	600	MLG1005S5N1ST
5.6	$\pm 0.3\text{nH}$	8	100	3.5	0.25	600	MLG1005S5N6ST
6.2	$\pm 0.3\text{nH}$	8	100	3	0.3	600	MLG1005S6N2ST
6.8	$\pm 5\%$	8	100	3	0.3	600	MLG1005S6N8JT
7.5	$\pm 5\%$	8	100	3	0.3	500	MLG1005S7N5JT
8.2	$\pm 5\%$	8	100	3	0.35	500	MLG1005S8N2JT
9.1	$\pm 5\%$	8	100	2.5	0.35	500	MLG1005S9N1JT
10	$\pm 5\%$	8	100	2.5	0.4	500	MLG1005S10NJT
12	$\pm 5\%$	8	100	2	0.45	400	MLG1005S12NJT
15	$\pm 5\%$	8	100	1.8	0.6	400	MLG1005S15NJT
18	$\pm 5\%$	8	100	1.5	0.7	350	MLG1005S18NJT
22	$\pm 5\%$	8	100	1.3	0.8	350	MLG1005S22NJT
27	$\pm 5\%$	8	100	1.2	0.9	300	MLG1005S27NJT
33	$\pm 5\%$	8	100	1	1	300	MLG1005S33NJT
39	$\pm 5\%$	8	100	1	1.2	250	MLG1005S39NJT
47	$\pm 5\%$	8	100	0.7	1.4	250	MLG1005S47NJT
56	$\pm 5\%$	8	100	0.7	1.4	200	MLG1005S56NJT
68	$\pm 5\%$	8	100	0.6	1.5	200	MLG1005S68NJT
82	$\pm 5\%$	8	100	0.5	1.6	200	MLG1005S82NJT
100	$\pm 5\%$	8	100	0.5	2	200	MLG1005SR10JT
120	$\pm 5\%$	8	100	0.5	2.2	150	MLG1005SR12JT
150	$\pm 5\%$	8	100	0.45	3.5	150	MLG1005SR15JT
180	$\pm 5\%$	8	100	0.4	3.8	150	MLG1005SR18JT
220	$\pm 5\%$	8	100	0.35	4.2	100	MLG1005SR22JT
270	$\pm 5\%$	8	100	0.3	4.8	100	MLG1005SR27JT

* □: Please specify inductance tolerance, C ($\pm 0.2\text{nH}$) or S ($\pm 0.3\text{nH}$)

• Test equipment

Inductance Q : HP4291A+16193A

SRF: HP8720C

Rdc: YOKOGAWA TYPE7561

• Rated current : Value obtained when current flows and temperature has risen to under 20°C.

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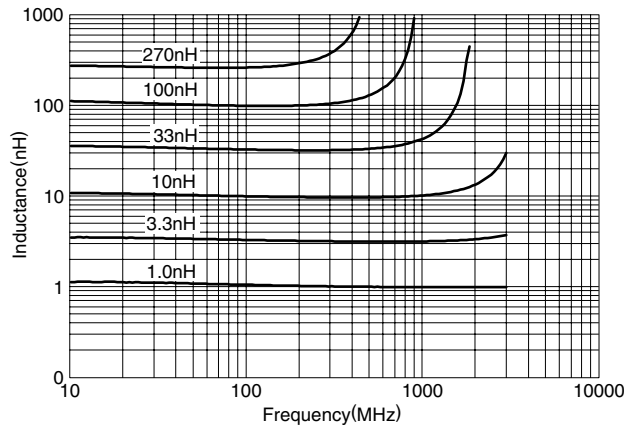
L, Q vs. FREQUENCY CHARACTERISTICS

Part No.	Inductance(nH)typ.					Q typ.				
	800MHz	900MHz	1.8GHz	2.0GHz	2.4GHz	800MHz	900MHz	1.8GHz	2.0GHz	2.4GHz
MLG1005S0N6	0.54	0.54	0.54	0.54	0.54	27	30	47	49	55
MLG1005S0N7	0.63	0.63	0.62	0.62	0.62	28	29	47	49	55
MLG1005S0N8	0.74	0.74	0.74	0.74	0.74	29	30	48	49	57
MLG1005S0N9	0.82	0.82	0.82	0.82	0.82	29	31	49	50	57
MLG1005S1N0	1	1	1	1	1	29	31	49	50	57
MLG1005S1N1	1.1	1.1	1.1	1.11	1.11	29	31	49	50	58
MLG1005S1N2	1.2	1.2	1.2	1.2	1.2	29	31	49	50	57
MLG1005S1N3	1.29	1.19	1.19	1.29	1.2	29	31	49	50	57
MLG1005S1N5	.5	1.5	1.5	1.5	1.5	29	31	49	50	57
MLG1005S1N6	1.5	1.5	1.53	1.53	1.55	29	31	47	49	55
MLG1005S1N8	1.7	1.7	1.7	1.7	1.7	29	30	44	45	52
MLG1005S2N0	1.9	1.9	1.9	1.9	1.9	29	30	45	46	51
MLG1005S2N2	2.1	2.1	2.1	2.1	2.1	29	30	45	47	53
MLG1005S2N4	2.3	2.3	2.4	2.4	2.4	29	31	45	46	52
MLG1005S2N7	2.5	2.5	2.6	2.6	2.7	30	32	46	47	52
MLG1005S3N0	2.8	2.8	2.9	3	3.1	31	33	48	49	55
MLG1005S3N3	3.1	3.2	3.3	3.3	3.5	31	33	47	48	53
MLG1005S3N6	3.4	3.4	3.6	3.6	3.8	31	33	45	47	50
MLG1005S3N9	3.7	3.7	3.8	3.9	4	31	33	44	45	50
MLG1005S4N3	4.1	4.1	4.3	4.4	4.6	31	32	47	49	53
MLG1005S4N7	4.4	4.5	4.5	4.8	5.1	31	32	46	47	51
MLG1005S5N1	4.9	4.9	5.4	5.5	6	31	32	43	44	45
MLG1005S5N6	5.4	5.4	5.8	5.9	6.3	30	32	42	43	46
MLG1005S6N2	6	6	6.7	6.9	7.6	30	32	42	43	43
MLG1005S6N8	6.6	6.6	7.4	7.6	8.4	30	32	41	41	41
MLG1005S7N5	7.3	7.4	8.6	8.9	10.3	30	32	41	41	39
MLG1005S8N2	8	8.1	9.3	9.7	11.1	30	32	41	40	37
MLG1005S9N1	8.9	9	10.7	11.2	13.3	30	32	40	39	35
MLG1005S10N	10	10	12	13	16	30	31	37	36	31
MLG1005S12N	12	12	16	17	—	29	30	32	31	22
MLG1005S15N	15	16	22	24	—	28	29	28	26	15
MLG1005S18N	18	19	29	—	—	28	29	25	22	—
MLG1005S22N	23	24	44	—	—	27	27	19	—	—
MLG1005S27N	30	31	—	—	—	23	23	—	—	—
MLG1005S33N	37	40	—	—	—	23	23	—	—	—
MLG1005S39N	47	—	—	—	—	21	21	—	—	—
MLG1005S47N	63	—	—	—	—	20	18	—	—	—
MLG1005S56N	—	—	—	—	—	18	16	—	—	—
MLG1005S68N	—	—	—	—	—	—	—	—	—	—
MLG1005S82N	—	—	—	—	—	—	—	—	—	—
MLG1005SR10	—	—	—	—	—	—	—	—	—	—
MLG1005SR12	—	—	—	—	—	—	—	—	—	—
MLG1005SR15	—	—	—	—	—	—	—	—	—	—
MLG1005SR18	—	—	—	—	—	—	—	—	—	—
MLG1005SR22	—	—	—	—	—	—	—	—	—	—
MLG1005SR27	—	—	—	—	—	—	—	—	—	—

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TYPICAL ELECTRICAL CHARACTERISTICS
INDUCTANCE vs. FREQUENCY CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS

