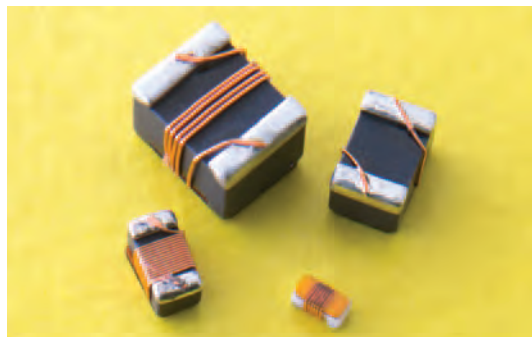


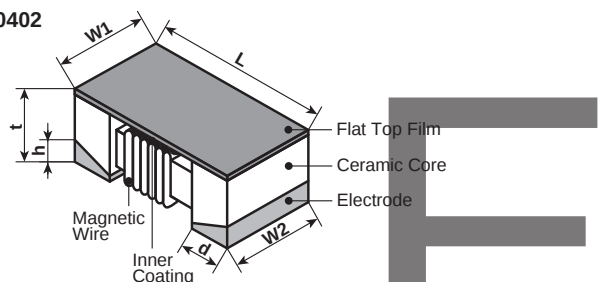


features

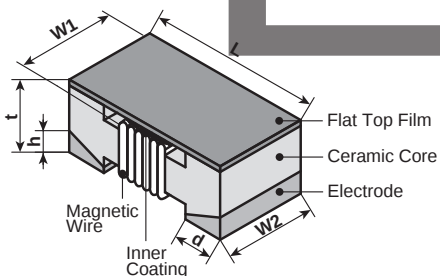
- Surface mount
- Operating temperature: -40°C ~ +125°C
- Flat top suitable for high speed pick-and-place components
- Excellent high frequency applications
- High Q factors and self-resonant frequency values
- Products with lead-free terminations meet EU RoHS requirements
- AEC-Q200 Tested

dimensions and construction

0402



0603, 0805, 1008



Size Code	Dimensions inches (mm)					
	L	W1	W2	t	h	d
KQT0402	.039±.004 (1.0±0.1)	.02±.004 (0.5±0.1)	.02±.004 (0.5±0.1)	.022±.004 (0.55±0.1)	.006±.004 (0.15±0.1)	.01±.004 (0.25±0.1)
KQ0603	.063±.004 (1.6±0.1)	.039±.004 (1.0±0.1)	.033±.004 (0.85±0.1)	.035±.004 (0.9±0.1)	.01±.006 (0.25±0.15)	.014±.004 (0.35±0.1)
KQ0805	.079±.008 (2.0±0.2)	.059±.008 (1.5±0.2) (3.3nH-390nH) .063±.008 (1.6±0.2) (470nH-820nH)	.053±.004 (1.35±0.1)	.051±.008 (1.3±0.2)	.016±.006 (0.40±0.15)	.018±.004 (0.45±0.1)
KQ1008	.098±.008 (2.5±0.2)	.087±.008 (2.2±0.2)	.079±.004 (2.0±0.1)	.071 ^{+.008} ₋₀ (1.8 ^{+.02} ₋₀)	.018±.006 (0.45±0.15)	.018±.004 (0.45±0.1)

ordering information

KQ	1008	T	TE	10N	J
Type	Size Code	Termination Material	Packaging	Nominal Inductance	Tolerance
KQ KQT	0402 0603 0805 1008	T: Sn	TP: 2mm pitch paper (0402: 10,000 pieces/reel) TD: 7" paper tape (0402: 2,000 pieces/reel) TE: 7" embossed plastic (0603, 0805, 1008: 2,000 pieces/reel)	3 digits: 10N: 10nH R10: 0.1μH 1R0: 1.0μH	B: ±0.1nH C: ±0.2nH G: ±2% H: ±3% J: ±5% K: ±10% M: ±20%

For further information
on packaging, please
refer to Appendix A.

applications and ratings

Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency (MHz)	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)	
KQT0402T**1N0*	—	1.0	250	B: ±0.1nH C: ±0.2nH	16	250	11000	0.045	1360	
KQT0402T**1N9*		1.9					9600	0.070	1040	
KQT0402T**2N0*		2.0			19					
KQT0402T**2N2*		2.2			8000		0.068	960		
KQT0402T**2N4*		2.4					18	0.120	700	
KQT0402T**2N7*		2.7			17		7200			
KQT0402T**3N3*		3.3		H: ±3% J: ±5% K: ±10%	19			0.066	840	
KQT0402T**3N6*		3.6			6000					
KQT0402T**3N9*		3.9			18			0.091	800	
KQT0402T**4N3*		4.3			5800					
KQT0402T**4N7*		4.7			20			0.083	760	
KQT0402T**5N1*		5.1			22		4800			0.086
KQT0402T**5N6*		5.6					5800	0.104		
KQT0402T**6N2*		6.2			20		4400		0.150	650
KQT0402T**6N8*		6.8			22		4200	0.104		
KQT0402T**7N5*		7.5			20		4160		0.150	650
KQT0402T**8N2*		8.2			21		4000	0.195		
KQT0402T**8N7*		8.7			24		3900		0.120	640
KQT0402T**9N0*		9.0					3680			
KQT0402T**9N5*		9.5			25		3600	0.180	560	
KQT0402T**10N*		10					3450			0.172
KQT0402T**11N*		11			24		3280	0.200	500	
KQT0402T**12N*		12					3100	0.230		
KQT0402T**13N*		13			25		3040	0.202	480	
KQT0402T**15N*		15					3000	0.250		450
KQT0402T**16N*		16			24		2800	0.323	400	
KQT0402T**18N*		18					2720	0.214		
KQT0402T**19N*		19			25		2700	0.322	340	
KQT0402T**20N*		20					2480	0.298		
KQT0402T**22N*		22			24		2400	0.354	320	
KQT0402T**23N*		23					2320	0.560		
KQT0402T**24N*		24			25		2300	0.550	300	
KQT0402T**27N*		27					2240	0.620	320	
KQT0402T**30N*		30			20		2200	0.810	300	
KQT0402T**33N*		33					2100	0.830	150	
KQT0402T**34N*		34			25		2100	0.835	240	
KQT0402T**36N*		36					2800	1.170	200	
KQT0402T**39N*		39			22		2000	1.120		
KQT0402T**40N*		40					1800	1.810	140	
KQT0402T**43N*		43			22		1600	2.090	130	
KQT0402T**47N*		47					1500	2.320	120	
KQT0402T**51N*		51								
KQT0402T**56N*		56								
KQT0402T**68N*		68								
KQT0402T**82N*		82								
KQT0402T**R10*		100								
KQT0402T**R12*		120								

* Add tolerance character (B, C, G, H, J, K, M)

** Add packaging code

applications and ratings (continued)

Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency (MHz)	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)
KQ0603TTE1N6*	C	1.6	250	J: ±5% K: ±10%	24	250	12500	0.03	700
KQ0603TTE1N8*	0	1.8			16			0.045	
KQ0603TTE3N3*	X	3.3			22		6900	0.055	
KQ0603TTE3N6*	E	3.6						0.063	
KQ0603TTE3N9*	1	3.9						0.08	
KQ0603TTE4N3*	F	4.3					5900	0.063	
KQ0603TTE4N7*	G	4.7			20		5800	0.116	
KQ0603TTE5N1*	Y	5.1						0.115	
KQ0603TTE6N8*	2	6.8			27		4800	0.11	
KQ0603TTE7N5*	H	7.5						0.106	
KQ0603TTE8N2*	A	8.2		28	4600		0.12		
KQ0603TTE8N7*	J	8.7					0.109		
KQ0603TTE9N5*	B	9.5		31	4800		0.125		
KQ0603TTE10N*	3	10					0.13		
KQ0603TTE11N*	K	11		33	4000		0.086		
KQ0603TTE12N*	4	12					0.13		
KQ0603TTE15N*	5	15		35	3300		0.17		
KQ0603TTE16N*	L	16					0.104		
KQ0603TTE18N*	6	18		35	3100		0.17		
KQ0603TTE22N*	7	22					0.19		
KQ0603TTE23N*	S	23	38	2700	0.15				
KQ0603TTE24N*	M	24			0.135				
KQ0603TTE27N*	8	27	40	2800	0.22				
KQ0603TTE30N*	N	30			0.144				
KQ0603TTE33N*	9	33	37	2250	0.22				
KQ0603TTE36N*	P	36			0.22				
KQ0603TTE39N*	0	39	40	2300	0.25				
KQ0603TTE43N*	Q	43			0.25				
KQ0603TTE47N*	1	47	38	2000	0.28				
KQ0603TTE51N*	T	51			0.30				
KQ0603TTE56N*	2	56	37	1900	0.31				
KQ0603TTE68N*	3	68			0.34				
KQ0603TTE72N*	4	72	34	1700	0.49				
KQ0603TTE82N*	5	82			0.54				
KQ0603TTER10*	6	100	32	150	1400	0.58			
KQ0603TTER11*	7	110			1350	0.61			
KQ0603TTER12*	8	120	32	1300	0.65				
KQ0603TTER15*	9	150			1400	1.4			
KQ0603TTER18*	0	180	25	1300	2.2				
KQ0603TTER20*	U	200			2.3				
KQ0603TTER21*	V	210	24	1200	2.5				
KQ0603TTER22*	1	220			2.4				
KQ0603TTER25*	W	250	24	1000	2.3				
KQ0603TTER27*	2	270			2.4				
KQ0603TTER30*	X	300	30	100	3.17				
KQ0603TTER33*	3	330			800	3.0			
KQ0603TTER39*	4	390	30	700	3.7				
KQ0603TTER47*	5	470			640	1.21			
KQ0603TTER51*	V	510	30	50	610	1.26			
KQ0603TTER56*	6	560			560	2.09			
KQ0603TTER62*	W	620	30	50	590	1.89			

* Add tolerance character (B, C, G, H, J, K, M)

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applications and ratings (continued)

Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency (MHz)	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)
KQ0603TTER68*	7	680	50	J: ±5% K: ±10%	30	50	540	1.97	140
KQ0603TTER72*	C	720					530	2.04	130
KQ0603TTER75*	X	750					490	3.09	110
KQ0603TTER82*	8	820					480	2.95	120
KQ0603TTER91*	Y	910					440	5.13	90
KQ0603TTE1R0*	9	1000					400	5.45	80
KQ0603TTE1R2*	0	1200							
KQ0805TTE3N3*	0	3.3	250	J: ±5% K: ±10%	50	1500	6000	0.08	600
KQ0805TTE6N8*	1	6.8				1000	5500	0.11	
KQ0805TTE8N2*	2	8.2					4700	0.12	
KQ0805TTE12N*	3	12					4000	0.15	
KQ0805TTE15N*	4	15					3400	0.17	
KQ0805TTE18N*	5	18					3300	0.20	
KQ0805TTE20N*	Y	20							
KQ0805TTE22N*	6	22	200	J: ±5% K: ±10%	55		2600	0.22	500
KQ0805TTE27N*	7	27					2500	0.25	
KQ0805TTE33N*	8	33					2050	0.27	
KQ0805TTE39N*	9	39					2000	0.29	
KQ0805TTE43N*	4	43					1650	0.34	
KQ0805TTE47N*	0	47			60		1550	0.31	
KQ0805TTE56N*	1	56					1450	0.38	
KQ0805TTE68N*	2	68	150	G: ±2% J: ±5% K: ±10%			1300	0.42	400
KQ0805TTE82N*	3	82			65		1200	0.46	
KQ0805TTER10*	4	100					1100	0.51	
KQ0805TTER12*	5	120					920	0.56	
KQ0805TTER15*	6	150							
KQ0805TTER16*	H	160							
KQ0805TTER17*	J	170							
KQ0805TTER18*	7	180	100		50		870	0.64	350
KQ0805TTER19*	D	190							
KQ0805TTER20*	E	200							
KQ0805TTER21*	F	210							
KQ0805TTER22*	8	220							
KQ0805TTER23*	K	230							
KQ0805TTER24*	L	240							
KQ0805TTER25*	G	250							
KQ0805TTER27*	9	270			48				
KQ0805TTER33*	0	330					600	1.4	
KQ0805TTER39*	1	390	50	J: ±5% K: ±10%			560	1.5	290
KQ0805TTER47*	2	470			33	100	375	1.76	
KQ0805TTER56*	3	560					340	1.9	
KQ0805TTER68*	4	680					188	2.2	
KQ0805TTER72*	A	720			23	50	200	2.3	
KQ0805TTER82*	5	820					215	2.35	
KQ1008TTE10N*	10N	10	50	J: ±5% K: ±10% M: ±20%	50	500	4100	0.08	1000
KQ1008TTE12N*	12N	12					3300	0.09	
KQ1008TTE15N*	15N	15					3000	0.10	
KQ1008TTE18N*	18N	18					2500	0.11	
KQ1008TTE22N*	22N	22					2400	0.12	
KQ1008TTE27N*	27N	27			55	350	1600	0.13	
KQ1008TTE33N*	33N	33			60		1600	0.14	

* Add tolerance character (C, G, H, J, K, M)

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applications and ratings (continued)

Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency (MHz)	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)		
KQ1008TTE39N*	39N	39	50	J: ±5%,K:±10% M:±20%	60	350	1500	0.15	1000		
KQ1008TTE47N*	47N	47						0.16			
KQ1008TTE56N*	56N	56			65		1300	0.18			
KQ1008TTE68N*	68N	68						0.20			
KQ1008TTE82N*	82N	82			60		1000	0.22			
KQ1008TTER10*	R10	100		0.56		650					
KQ1008TTER12*	R12	120	25	G: ±2% J: ±5% K: ±10%	45		100	950	0.63		
KQ1008TTER15*	R15	150				850		0.70	580		
KQ1008TTER18*	R18	180				750		0.77	620		
KQ1008TTER22*	R22	220				700		0.84	500		
KQ1008TTER27*	R27	270				600		0.91	500		
KQ1008TTER33*	R33	330				570		1.05	450		
KQ1008TTER39*	R39	390				500		1.12	470		
KQ1008TTER47*	R47	470				450		1.19			
KQ1008TTER56*	R56	560				415		1.33	400		
KQ1008TTER62*	R62	620				375		1.40	300		
KQ1008TTER68*	R68	680						1.47	400		
KQ1008TTER75*	R75	750				360		1.54	360		
KQ1008TTER82*	R82	820				350		1.61	400		
KQ1008TTER91*	R91	910				35		50	320	1.68	380
KQ1008TTE1R0*	1R0	1000							290	1.75	370
KQ1008TTE1R2*	1R2	1200				250			1.6	310	
KQ1008TTE1R5*	1R5	1500				200			1.7	300	
KQ1008TTE1R8*	1R8	1800						160	1.9	270	
KQ1008TTE2R2*	2R2	2200	7.9		22	25	2.2	250			
KQ1008TTE2R7*	2R7	2700					2.3				
KQ1008TTE3R3*	3R3	3300					110	2.7			
KQ1008TTE3R9*	3R9	3900			20	100	2.8	230			
KQ1008TTE4R7*	4R7	4700					90		3.1		
KQ1008TTE5R6*	5R6	5600			15	7.9	80	2.5	240		
KQ1008TTE6R8*	6R8	6800					70	2.8	200		
KQ1008TTE8R2*	8R2	8200					65	3.0	170		
KQ1008TTE100*	100	10000					60	3.4	150		

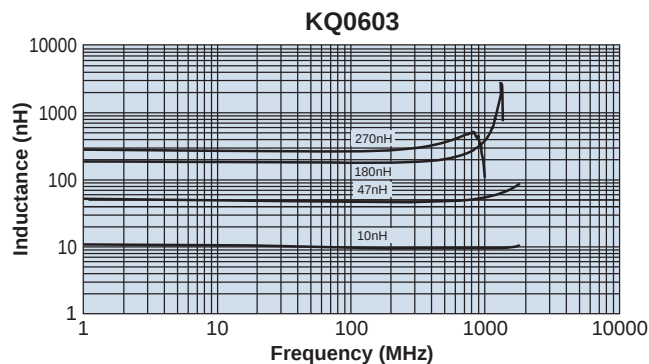
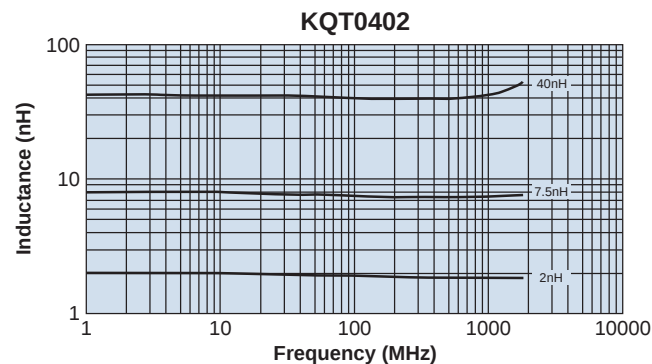
* Add tolerance character (C, G, H, J, K, M)

Operating Temperature Range: -40°C ~ +125°C

The operating temperature range of the coil (ambient temperature + self heating) must remain at +125°C or less

environmental applications

L-Frequency Characteristics

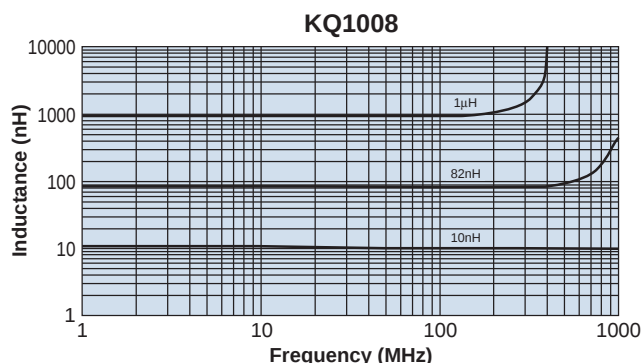
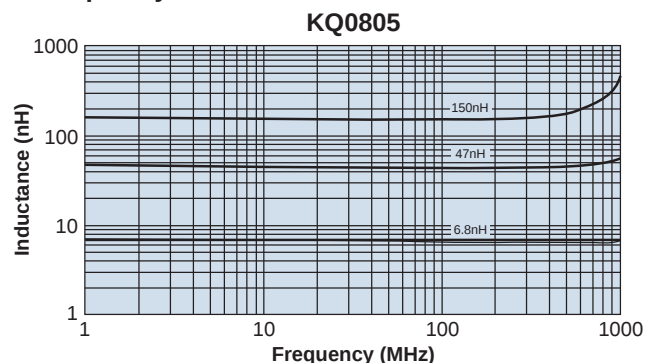


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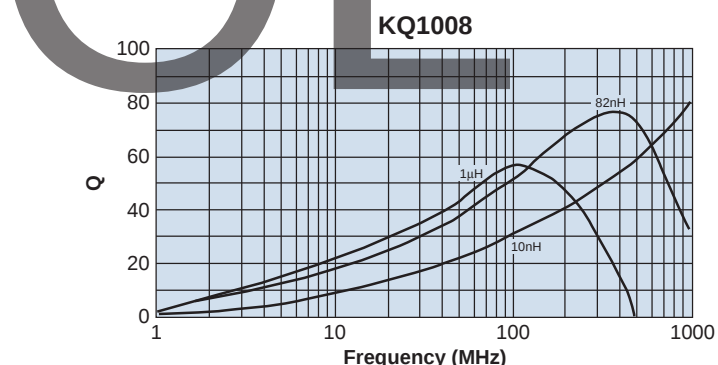
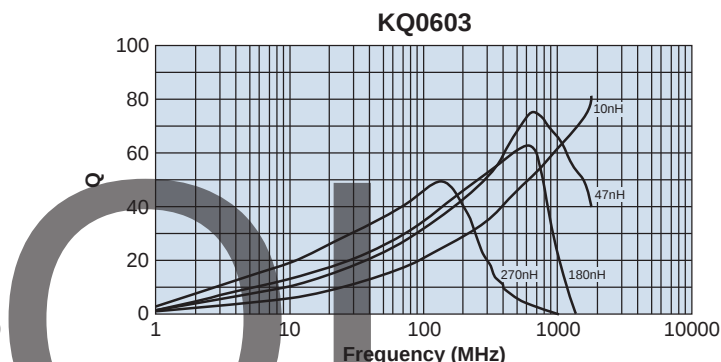
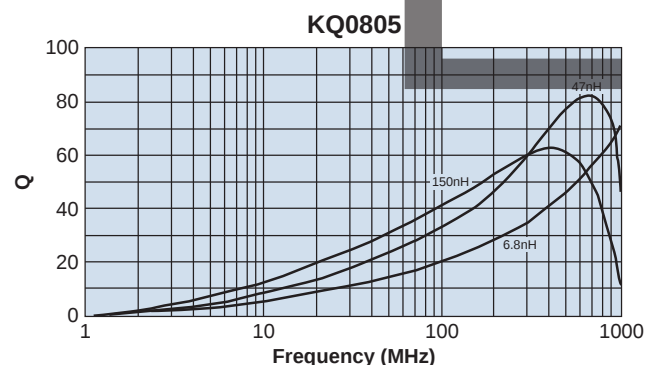
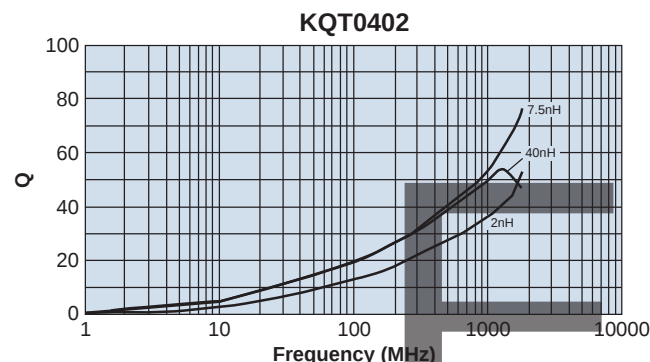
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environmental applications (continued)

L-Frequency Characteristics



Q-Frequency Characteristics



Test equipment: HP4291A impedance analyzer

Performance Characteristics

Parameter	Requirements Maximum Limit	$\Delta L/L$ $\Delta Q/Q$ Typical	Test Method
Resistance to Soldering Heat	No significant abnormality in appearance $\Delta L/L$: $\pm 5\%$, $\Delta Q/Q$: $\pm 10\%$	$\Delta L/L$: $\pm 2.7\%$ $\Delta Q/Q$: $\pm 6.6\%$	$260^\circ\text{C} \pm 5^\circ\text{C}$, 10s $\pm$ 1s
Rapid Change of Temperature	No significant abnormality in appearance $\Delta L/L$: $\pm 5\%$, $\Delta Q/Q$: $\pm 10\%$	$\Delta L/L$: $\pm 2.1\%$ $\Delta Q/Q$: $\pm 5.3\%$	-40°C (30min.)/ $+125^\circ\text{C}$ (30min.) 100 cycles
Low Temperature Exposure	No significant abnormality in appearance $\Delta L/L$: $\pm 5\%$, $\Delta Q/Q$: $\pm 10\%$	$\Delta L/L$: $\pm 1.8\%$ $\Delta Q/Q$: $\pm 2.8\%$	$-40^\circ\text{C} \pm 2^\circ\text{C}$, 1000h
High Temperature Exposure	No significant abnormality in appearance $\Delta L/L$: $\pm 5\%$, $\Delta Q/Q$: $\pm 10\%$	$\Delta L/L$: $\pm 1.8\%$ $\Delta Q/Q$: $\pm 5.3\%$	$125^\circ\text{C} \pm 2^\circ\text{C}$, 1000h
Moisture Exposure	No significant abnormality in appearance $\Delta L/L$: $\pm 5\%$, $\Delta Q/Q$: $\pm 10\%$	$\Delta L/L$: $\pm 0.9\%$ $\Delta Q/Q$: $\pm 6.9\%$	$40^\circ\text{C} \pm 2^\circ\text{C}$, 90%~95%RH, 1000h
Resistance to Solvent	No damage and marking shall remain legible	—	Accordance with MIL-STD 202F Method 215

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Mouser Electronics

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[KQ0402LTD11NJ](#) [KQ0402LTD19NJ](#) [KQ0402LTD47NJ](#) [KQT0402TTD36NJ](#) [KQ0603TTE6N8G](#) [KQ1008TTE15NJ](#)
[KQT0402TTD3N6J](#) [KQ1008TTE27NJ](#) [KQT0402TTD3N9J](#) [KQ1008TTER47G](#) [KQT0402TTD3N3J](#) [KQ1008TTER82G](#)
[KQ1008TTER68G](#) [KQ0603TTE7N5G](#) [KQ1008TTER62G](#) [KQ0603TTE72NG](#) [KQT0402TTD2N2J](#) [KQ1008TTER22G](#)
[KQ0603TTE68NG](#) [KQ1008TTER27G](#) [KQ1008TTE2R2G](#) [KQ1008TTER15G](#) [KQ1008TTE22NJ](#) [KQ1008TTER12G](#)
[KQ1008TTER18G](#) [KQ1008TTER10G](#) [KQ1008TTE2R7G](#) [KQ1008TTE10NJ](#) [KQ1008TTE100G](#) [KQ1008TTER91G](#)
[KQ1008TTE18NJ](#) [KQ1008TTER56G](#) [KQT0402TTD27NJ](#) [KQ1008TTER33G](#) [KQ1008TTER39G](#) [KQ1008TTE1R2G](#)
[KQ1008TTE1R8G](#) [KQ1008TTE1R0G](#) [KQ1008TTE1R5G](#) [KQ1008TTE12NJ](#) [KQ1008TTER75G](#) [KQT0402TTD23NJ](#)
[KQ1008TTE6R8G](#) [KQ0603TTE30NG](#) [KQ0805TTE56NG](#) [KQ0603TTE10NG](#) [KQ0603TTER15G](#) [KQ0603TTER11G](#)
[KQ0603TTER10G](#) [KQ0603TTER18G](#) [KQ0603TTER12G](#) [KQ0603TTE22NG](#) [KQ0603TTE18NJ](#) [KQ0603TTE18NG](#)
[KQ1008TTE82NG](#) [KQ1008TTE8R2G](#) [KQ0603TTE24NG](#) [KQ0603TTE36NG](#) [KQ0603TTE12NG](#) [KQ0603TTE12NJ](#)
[KQ0603TTE3N6J](#) [KQ1008TTE68NG](#) [KQ0603TTE3N9J](#) [KQ0603TTE1N8J](#) [KQ0603TTE1N6J](#) [KQ0603TTER33G](#)
[KQ0603TTER39G](#) [KQ0603TTE16NG](#) [KQ0603TTE33NG](#) [KQ0603TTE82NG](#) [KQ0603TTER27G](#) [KQ0603TTER22G](#)
[KQT0402TTD8N2J](#) [KQ0603TTE8N7G](#) [KQ0603TTE39NG](#) [KQT0402TTD9N0J](#) [KQ0805TTE47NJ](#) [KQ0805TTER82G](#)
[KQ0603TTE27NG](#) [KQ1008TTE47NJ](#) [KQT0402TTD5N6J](#) [KQ0603TTE15NJ](#) [KQ0603TTE15NG](#) [KQT0402TTD40NJ](#)
[KQ0603TTE11NG](#) [KQ0805TTE15NJ](#) [KQ0805TTER47G](#) [KQ0805TTE27NJ](#) [KQ0805TTE39NJ](#) [KQ1008TTE39NJ](#)
[KQT0402TTD7N5J](#) [KQ0603LTE3N3J](#) [KQ0805TTE2N8J](#) [KQ0603TTE82NJ](#) [KQ0603TTER15J](#) [KQ0603TTER18J](#)
[KQ0805TTE82NJ](#) [KQ0805TTER56J](#) [KQT0402TTD2N0C](#) [KQ0805TTER22K](#)