

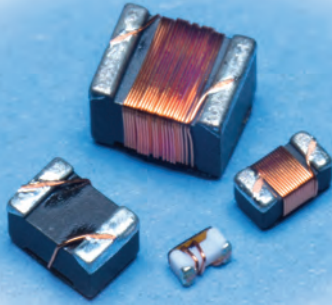


high Q inductor



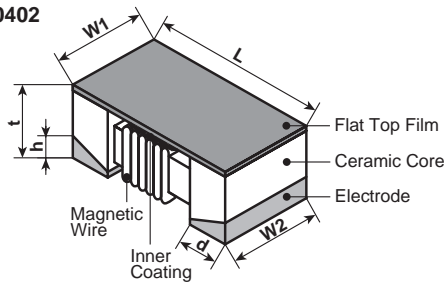
features

- 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 Qualified

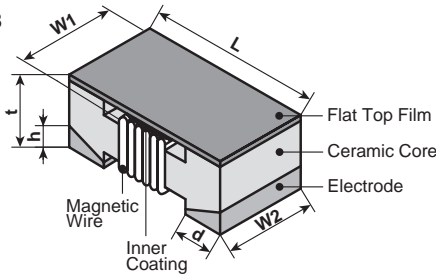


dimensions and construction

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)	.053±.004 (1.35±0.1)	.051±.008 (1.3±0.2)	.016±.006 (0.40±0.15)	.018±.004 (0.45±0.1)
		.063±.008 (1.6±0.2) (470nH-820nH)				
KQ1008	.098±.008 (2.5±0.2)	.087±.008 (2.2±0.2)	.079±.004 (2.0±0.1)	.071 ^{+0.008} ₋₀ (1.8 ^{+0.2} ₋₀)	.018±.006 (0.45±0.15)	.018±.004 (0.45±0.1)

inductors

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.

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

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high Q inductor

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							
KQT0402T**2N2*		2.2							
KQT0402T**2N4*		2.4							
KQT0402T**2N7*		2.7			8000	0.068	960		
KQT0402T**3N3*		3.3							
KQT0402T**3N6*		3.6			7200	0.066	840		
KQT0402T**3N9*		3.9							
KQT0402T**4N3*		4.3							
KQT0402T**4N7*		4.7			6000	0.091	800		
KQT0402T**5N1*		5.1							
KQT0402T**5N6*		5.6			5800	0.083	760		
KQT0402T**6N2*		6.2							
KQT0402T**6N8*		6.8							
KQT0402T**7N5*		7.5		4800	0.086	680			
KQT0402T**8N2*		8.2							
KQT0402T**8N7*		8.7		5800	0.104	680			
KQT0402T**9N0*		9.0							
KQT0402T**9N5*		9.5		4200	0.150	650			
KQT0402T**10N*		10							
KQT0402T**11N*		11		4160	0.104	680			
KQT0402T**12N*		12							
KQT0402T**13N*		13		3900	0.195	480			
KQT0402T**15N*		15							
KQT0402T**16N*		16		3680	0.120	640			
KQT0402T**18N*		18							
KQT0402T**19N*		19		3600	0.180	560			
KQT0402T**20N*		20							
KQT0402T**22N*		22		3450	0.172	560			
KQT0402T**23N*		23							
KQT0402T**24N*		24		3100	0.200	500			
KQT0402T**27N*		27							
KQT0402T**30N*		30		3040	0.202	480			
KQT0402T**33N*		33							
KQT0402T**34N*		34		3000	0.250	450			
KQT0402T**36N*		36							
KQT0402T**39N*		39		2800	0.323	400			
KQT0402T**40N*		40							
KQT0402T**43N*		43		2720	0.214	400			
KQT0402T**47N*	47								
KQT0402T**51N*	51	2700	0.322	400					
KQT0402T**56N*	56								
KQT0402T**68N*	68	2480	0.298	400					
KQT0402T**82N*	82								
KQT0402T**R10*	100	2400	0.393	340					
KQT0402T**R12*	120								
		2320	0.560	320					
		2300	0.550	300					
		2240	0.620	320					
		2200	0.810	300					
		2100	0.830	150					
			0.835	240					
		2800	1.170	200					
		2000	1.120	200					
		1800	1.810	140					
		1600	2.090	130					
		1500	2.320	120					

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

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high Q inductor

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			22		6900
KQ0603TTE3N3*	X	3.3			20		5900			
KQ0603TTE3N6*	E	3.6						27		5800
KQ0603TTE3N9*	1	3.9			28		4800			
KQ0603TTE4N3*	F	4.3						31		4600
KQ0603TTE4N7*	G	4.7			33		4800			
KQ0603TTE5N1*	Y	5.1						35		4000
KQ0603TTE6N8*	2	6.8			34		3300			
KQ0603TTE7N5*	H	7.5						35		3100
KQ0603TTE8N2*	A	8.2			38		3000			
KQ0603TTE8N7*	J	8.7						37		2700
KQ0603TTE9N5*	B	9.5			40		2650			
KQ0603TTE10N*	3	10						37		2250
KQ0603TTE11N*	K	11			40		2300			
KQ0603TTE12N*	4	12						38		2080
KQ0603TTE15N*	5	15			40		2200			
KQ0603TTE16N*	L	16						39		2000
KQ0603TTE18N*	6	18		38	1900	0.17				
KQ0603TTE22N*	7	22				37	1700	0.19		
KQ0603TTE23N*	S	23		34	1400			0.15		
KQ0603TTE24N*	M	24				32	1350	0.22		
KQ0603TTE27N*	8	27		32	1300			0.22		
KQ0603TTE30N*	N	30				25	1200	0.25		
KQ0603TTE33N*	9	33		24	1000			0.28		
KQ0603TTE36N*	P	36				24	900	0.30		
KQ0603TTE39N*	0	39		30	840			0.31		
KQ0603TTE43N*	Q	43				30	800	0.34		
KQ0603TTE47N*	1	47	30	700	0.49					
KQ0603TTE51N*	T	51			30	640	0.54			
KQ0603TTE56N*	2	56	30	610			0.58			
KQ0603TTE68N*	3	68			30	560	0.61			
KQ0603TTE72N*	4	72	30	590			0.65			
KQ0603TTE82N*	5	82			30	590	1.4			
KQ0603TTER10*	6	100	30	590			2.2			
KQ0603TTER11*	7	110			30	590	2.3			
KQ0603TTER12*	8	120	30	590			2.5			
KQ0603TTER15*	9	150			30	590	2.4			
KQ0603TTER18*	0	180	30	590			2.3			
KQ0603TTER20*	U	200			30	590	3.17			
KQ0603TTER21*	V	210	30	590			3.0			
KQ0603TTER22*	1	220			30	590	3.7			
KQ0603TTER25*	W	250	30	590			1.21			
KQ0603TTER27*	2	270			30	590	1.26			
KQ0603TTER30*	X	300	30	590			2.09			
KQ0603TTER33*	3	330			30	590	1.89			
KQ0603TTER39*	4	390	30	590			1.89			
KQ0603TTER47*	5	470			30	590	1.89			
KQ0603TTER51*	V	510	30	590			1.89			
KQ0603TTER56*	6	560			30	590	1.89			
KQ0603TTER62*	W	620	30	590			1.89			

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

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inductors



high Q inductor

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				55	500	2600		0.22	500		
KQ0805TTE22N*	6	22						2500		0.25			
KQ0805TTE27N*	7	27						2050		0.27			
KQ0805TTE33N*	8	33						2000		0.29			
KQ0805TTE39N*	9	39	200	60	50	1650	0.34	500					
KQ0805TTE43N*	4	43				1550	0.31						
KQ0805TTE47N*	0	47				1450	0.38						
KQ0805TTE56N*	1	56				1300	0.42						
KQ0805TTE68N*	2	68				1200	0.46						
KQ0805TTE82N*	3	82				1100	0.51						
KQ0805TTER10*	4	100	150	G: ±2% J: ±5% K: ±10%	50	920	0.56	400					
KQ0805TTER12*	5	120				870	0.64						
KQ0805TTER15*	6	150				250	850		0.70				
KQ0805TTER16*	H	160							48	650	1.0		
KQ0805TTER17*	J	170									600	1.4	310
KQ0805TTER18*	7	180									560	1.5	290
KQ0805TTER19*	D	190				375	1.76				250		
KQ0805TTER20*	E	200				340	1.9				230		
KQ0805TTER21*	F	210				25	J: ±5% K: ±10%				23	188	2.2
KQ0805TTER22*	8	220							200	2.3			
KQ0805TTER23*	K	230	215	2.35	180								
KQ0805TTER24*	L	240	50	J: ±5% K: ±10% M: ±20%	50			4100	0.08	1000			
KQ0805TTER25*	G	250						3300	0.09				
KQ0805TTER27*	9	270						3000	0.10				
KQ0805TTER33*	0	330						2500	0.11				
KQ0805TTER39*	1	390				2400	0.12						
KQ0805TTER47*	2	470				1600	0.13						
KQ0805TTER56*	3	560	1600	0.14									
KQ0805TTER68*	4	680	50	J: ±5% K: ±10% M: ±20%	50	4100	0.08	1000					
KQ0805TTER72*	A	720				3300	0.09						
KQ0805TTER82*	5	820				3000	0.10						
KQ1008TTE10N*	10N	10				2500	0.11						
KQ1008TTE12N*	12N	12				2400	0.12						
KQ1008TTE15N*	15N	15				1600	0.13						
KQ1008TTE18N*	18N	18				1600	0.14						
KQ1008TTE22N*	22N	22											
KQ1008TTE27N*	27N	27											
KQ1008TTE33N*	33N	33											

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

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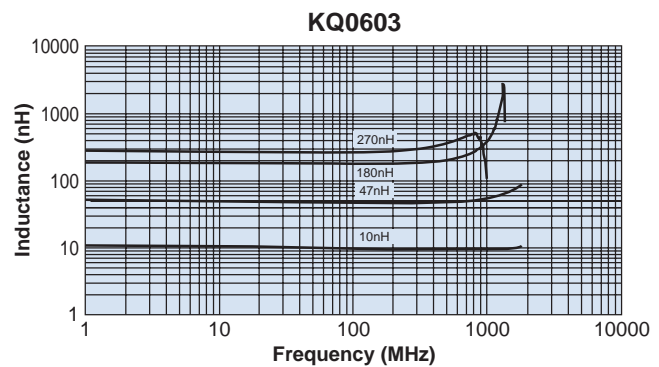
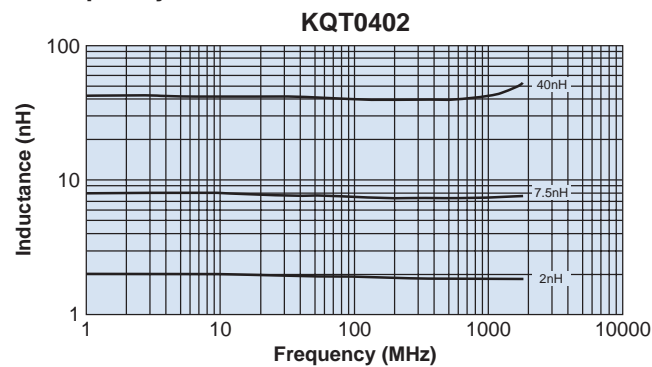
applications and ratings (continued)

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			65			0.16			
KQ1008TTE56N*	56N	56						0.18			
KQ1008TTE68N*	68N	68						0.20			
KQ1008TTE82N*	82N	82						60		1000	0.22
KQ1008TTER10*	R10	100	950	0.56							
KQ1008TTER12*	R12	120	25	G: ±2% J: ±5% K: ±10%	45	100	850	0.70	580		
KQ1008TTER15*	R15	150					750	0.77	620		
KQ1008TTER18*	R18	180					700	0.84	500		
KQ1008TTER22*	R22	220					600	0.91	500		
KQ1008TTER27*	R27	270					570	1.05	450		
KQ1008TTER33*	R33	330					500	1.12	470		
KQ1008TTER39*	R39	390					450	1.19	400		
KQ1008TTER47*	R47	470					415	1.33	400		
KQ1008TTER56*	R56	560					375	1.40	300		
KQ1008TTER62*	R62	620						1.47	400		
KQ1008TTER68*	R68	680						360	1.54	360	
KQ1008TTER75*	R75	750						350	1.61	400	
KQ1008TTER82*	R82	820						320	1.68	380	
KQ1008TTER91*	R91	910					35	50	290	1.75	370
KQ1008TTE1R0*	1R0	1000							250	1.6	310
KQ1008TTE1R2*	1R2	1200	200	1.7	300						
KQ1008TTE1R5*	1R5	1500	28	160	1.9	270					
KQ1008TTE1R8*	1R8	1800		2.2	250						
KQ1008TTE2R2*	2R2	2200	22	25	140	2.3	230				
KQ1008TTE2R7*	2R7	2700			110	2.7					
KQ1008TTE3R3*	3R3	3300			100	2.8					
KQ1008TTE3R9*	3R9	3900	20	7.9	90	3.1	210				
KQ1008TTE4R7*	4R7	4700			80	2.5	240				
KQ1008TTE5R6*	5R6	5600	15	7.9	70	2.8	200				
KQ1008TTE6R8*	6R8	6800			65	3.0	170				
KQ1008TTE8R2*	8R2	8200			60	3.4	150				
KQ1008TTE100*	100	10000									

* 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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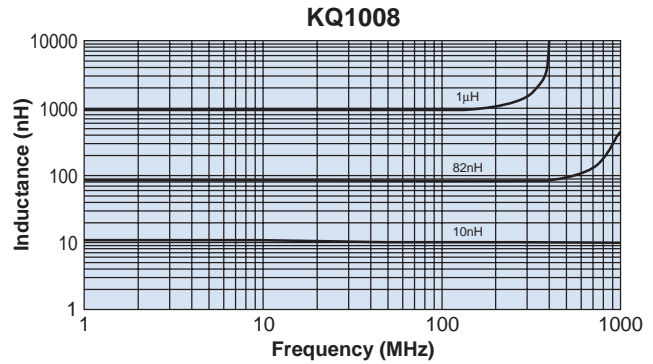
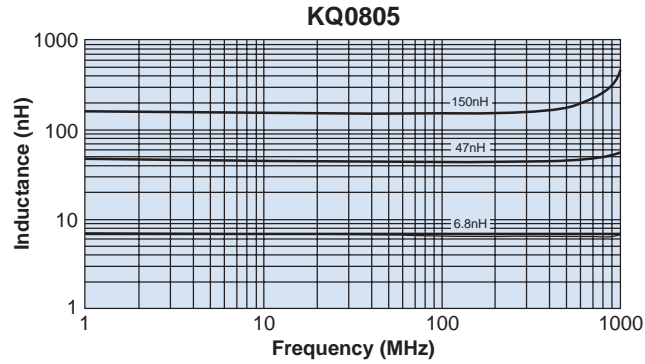
inductors



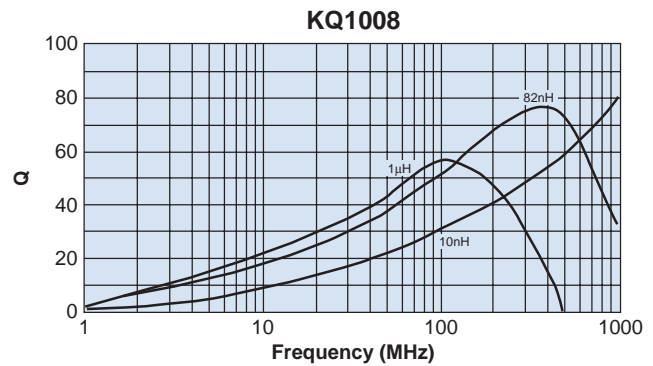
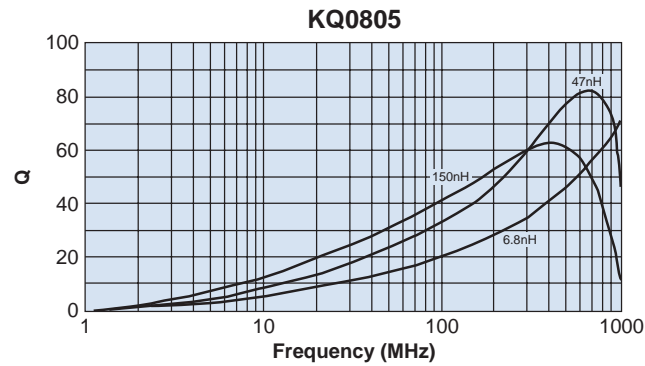
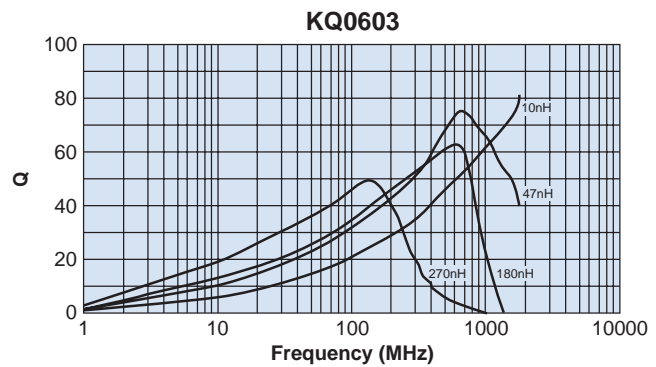
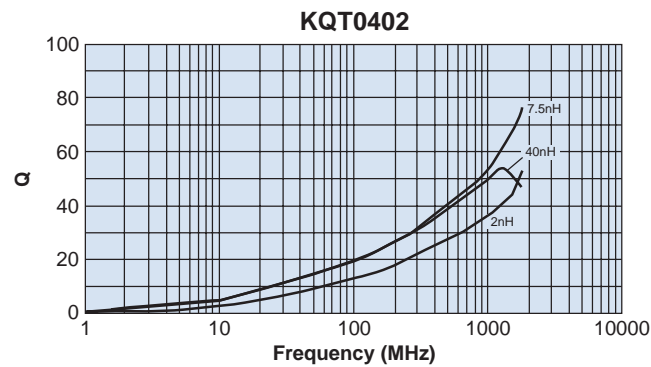
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environmental applications (continued)

L-Frequency Characteristics



Q-Frequency Characteristics



Test equipment: HP4291A impedance analyzer

Performance Characteristics

Parameter	Requirements Maximum Limit	Δ L/L Δ Q/Q Typical	Test Method
Resistance to Soldering Heat	No significant abnormality in appearance Δ L/L: $\pm 5\%$, Δ Q/Q: $\pm 10\%$	Δ L/L: $\pm 2.7\%$ Δ Q/Q: $\pm 6.6\%$	260°C \pm 5°C, 10s \pm 1s
Rapid Change of Temperature	No significant abnormality in appearance Δ L/L: $\pm 5\%$, Δ Q/Q: $\pm 10\%$	Δ L/L: $\pm 2.1\%$ Δ Q/Q: $\pm 5.3\%$	-40°C (30min.)/ +125°C (30min.) 100 cycles
Low Temperature Exposure	No significant abnormality in appearance Δ L/L: $\pm 5\%$, Δ Q/Q: $\pm 10\%$	Δ L/L: $\pm 1.8\%$ Δ Q/Q: $\pm 2.8\%$	-40°C \pm 2°C, 1000h
High Temperature Exposure	No significant abnormality in appearance Δ L/L: $\pm 5\%$, Δ Q/Q: $\pm 10\%$	Δ L/L: $\pm 1.8\%$ Δ Q/Q: $\pm 5.3\%$	125°C \pm 2°C, 1000h
Moisture Exposure	No significant abnormality in appearance Δ L/L: $\pm 5\%$, Δ Q/Q: $\pm 10\%$	Δ L/L: $\pm 0.9\%$ Δ Q/Q: $\pm 6.9\%$	40°C \pm 2°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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[NIN-FC2R7JTRF](#) [NPIS27H102MTRF](#) [C1206C101J1GAC](#) [C1608C0G1E472JT000N](#) [C2012C0G2A472J](#) [2220J2K00101JCT](#)
[KHC201E225M76N0T00](#) [LRC-LRF1206LF-01R025FTR1K](#) [1812J1K00222JCT](#) [1812J2K00102KXT](#) [1812J2K00222KXT](#)
[1812J2K00472KXT](#) [2-1622820-7-CUT-TAPE](#) [2220J3K00102KXT](#) [2225J2500824KXT](#) [CCR07CG103KM](#) [CGA2B2C0G1H010C](#)
[CGA2B2C0G1H040C](#) [CGA2B2C0G1H050C](#) [CGA2B2C0G1H060D](#) [CGA2B2C0G1H070D](#) [CGA2B2C0G1H151J](#) [CGA2B2C0G1H1R5C](#)
[CGA2B2C0G1H2R2C](#) [CGA2B2C0G1H3R3C](#) [CGA2B2C0G1H680J](#) [CGA2B2C0G1H6R8D](#) [CGA2B2X8R1H221K](#) [CGA2B2X8R1H472K](#)
[CGA3E1X7R1C474K](#)