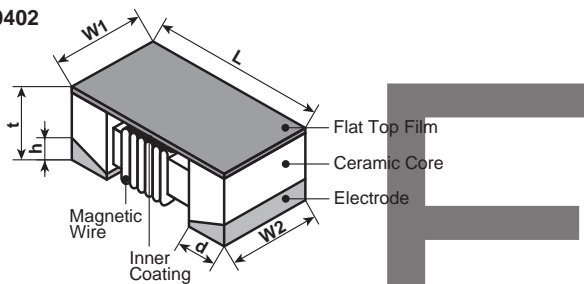


features

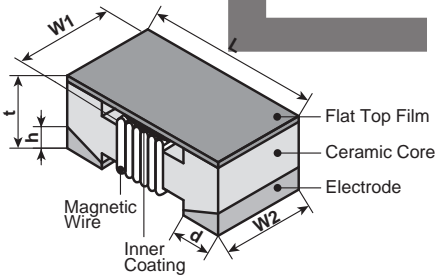
- Surface mount
- Operating temperature: -40°C ~ +125°C
- Flat top suitable for high speed pick-and-place components
- Excellent high frequency applications
- High Q factors and self-resonant frequency values
- Products with lead-free terminations meet EU RoHS requirements
- AEC-Q200 Tested

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)	.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.

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					19	9600	0.070
KQT0402T**2N0*		2.0			18			8000	0.068
KQT0402T**2N2*		2.2					17		0.120
KQT0402T**2N4*		2.4			19			7200	0.066
KQT0402T**2N7*		2.7					18		6000
KQT0402T**3N3*		3.3			20			5800	
KQT0402T**3N6*		3.6					22		4800
KQT0402T**3N9*		3.9			20			5800	0.104
KQT0402T**4N3*		4.3					22	4400	0.150
KQT0402T**4N7*		4.7		20	4200	0.104		680	
KQT0402T**5N1*		5.1			21	4160	0.150	650	
KQT0402T**5N6*		5.6		24		4000	0.195	480	
KQT0402T**6N2*		6.2			24	3900	0.120	640	
KQT0402T**6N8*		6.8		25		3680		0.180	560
KQT0402T**7N5*		7.5			24	3600	0.172		
KQT0402T**8N2*		8.2		25		3450	0.200	500	
KQT0402T**8N7*		8.7			24	3280	0.230	480	
KQT0402T**9N0*		9.0		25		3100	0.202	450	
KQT0402T**9N5*		9.5			24	3000	0.250	400	
KQT0402T**10N*		10		25		2800	0.323		
KQT0402T**11N*		11			24	2720	0.214	340	
KQT0402T**12N*		12		25		2700	0.322		
KQT0402T**13N*		13			24	2480	0.298	320	
KQT0402T**14N*		14		25		2400	0.354		
KQT0402T**15N*		15			24	2320	0.393	300	
KQT0402T**16N*		16		25		2300	0.550	320	
KQT0402T**18N*		18			24	2240	0.560	300	
KQT0402T**19N*		19		25		2200	0.620	320	
KQT0402T**20N*		20			20	2100	0.810	150	
KQT0402T**22N*		22		25		2100	0.830	240	
KQT0402T**23N*		23			24	2800	0.835	200	
KQT0402T**24N*		24		22		2000	1.170		
KQT0402T**27N*		27			22	1800	1.120	140	
KQT0402T**30N*		30		22		1600	1.810	130	
KQT0402T**33N*		33			22	1500	2.090	120	
KQT0402T**34N*		34		22		1500	2.320	120	
KQT0402T**36N*		36			22	1500	2.320	120	
KQT0402T**39N*		39		22		1500	2.320	120	
KQT0402T**40N*		40			22	1500	2.320	120	
KQT0402T**43N*	43	22	1500	2.320		120			
KQT0402T**47N*	47		22	1500	2.320	120			
KQT0402T**51N*	51	22		1500	2.320	120			
KQT0402T**56N*	56		22	1500	2.320	120			
KQT0402T**68N*	68	22		1500	2.320	120			
KQT0402T**82N*	82		22	1500	2.320	120			
KQT0402T**R10*	100	22		1500	2.320	120			
KQT0402T**R12*	120		22	1500	2.320	120			

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

** Add packaging code

Inductors

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			0.055	
KQ0603TTE3N6*	E	3.6					6900	0.063	
KQ0603TTE3N9*	1	3.9					5900	0.08	
KQ0603TTE4N3*	F	4.3			20		0.063		
KQ0603TTE4N7*	G	4.7					5800	0.116	
KQ0603TTE5N1*	Y	5.1					5800	0.115	
KQ0603TTE6N8*	2	6.8			27		0.11		
KQ0603TTE7N5*	H	7.5			28		0.106		
KQ0603TTE8N2*	A	8.2		4800		0.12			
KQ0603TTE8N7*	J	8.7		4600		0.109			
KQ0603TTE9N5*	B	9.5		31	0.125				
KQ0603TTE10N*	3	10			4800	0.13			
KQ0603TTE11N*	K	11			33	0.086			
KQ0603TTE12N*	4	12		35	0.13				
KQ0603TTE15N*	5	15		34	0.17				
KQ0603TTE16N*	L	16		35	0.104				
KQ0603TTE18N*	6	18		38	0.17				
KQ0603TTE22N*	7	22		37	0.19				
KQ0603TTE23N*	S	23	37	0.15					
KQ0603TTE24N*	M	24	40	0.135					
KQ0603TTE27N*	8	27	37	0.22					
KQ0603TTE30N*	N	30	40	0.144					
KQ0603TTE33N*	9	33	40	0.22					
KQ0603TTE36N*	P	36	38	0.25					
KQ0603TTE39N*	0	39	40	0.25					
KQ0603TTE43N*	Q	43	39	0.28					
KQ0603TTE47N*	1	47	200	200	2000	0.28	600		
KQ0603TTE51N*	T	51			38	1900		0.30	
KQ0603TTE56N*	2	56			37	1900		0.31	
KQ0603TTE68N*	3	68	150	150	1700	0.34	400		
KQ0603TTE72N*	4	72				34		0.49	
KQ0603TTE82N*	5	82				34		0.54	
KQ0603TTER10*	6	100	150	150	1400	0.58	300		
KQ0603TTER11*	7	110			1350	0.61			
KQ0603TTER12*	8	120			32	1300		0.65	
KQ0603TTER15*	9	150	100	100	1400	1.4	160		
KQ0603TTER18*	0	180			1300	2.2	140		
KQ0603TTER20*	U	200			25	1200	2.3	130	
KQ0603TTER21*	V	210	24	2.5	120				
KQ0603TTER22*	1	220		1000	2.4		170		
KQ0603TTER25*	W	250		900	2.3	170			
KQ0603TTER27*	2	270	50	50	840	3.17	110		
KQ0603TTER30*	X	300			800	3.0	100		
KQ0603TTER33*	3	330			700	3.7	80		
KQ0603TTER39*	4	390	50	50	640	1.21	190		
KQ0603TTER47*	5	470			610	1.26	170		
KQ0603TTER51*	V	510			560	2.09	130		
KQ0603TTER56*	6	560	50	50	590	1.89	150		
KQ0603TTER62*	W	620			590	1.89	150		

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

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	60	200	1650	0.34								
KQ0805TTE43N*	4	43			1550	0.34								
KQ0805TTE47N*	0	47			1450	0.38								
KQ0805TTE56N*	1	56			1300	0.42								
KQ0805TTE68N*	2	68	150	G: ±2% J: ±5% K: ±10%	65	1200	0.46	400						
KQ0805TTE82N*	3	82				1100	0.51							
KQ0805TTER10*	4	100				920	0.56							
KQ0805TTER12*	5	120				870	0.64							
KQ0805TTER15*	6	150				50	250		850	0.70				
KQ0805TTER16*	H	160							100	48	650	1.0	350	
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	23	50	188			2.2			190			
KQ0805TTER22*	8	220			200			2.3						
KQ0805TTER23*	K	230			215			2.35				180		
KQ0805TTER24*	L	240												
KQ0805TTER25*	G	250	50	J: ±5% K: ±10%	33	100	600	1.4			1000			
KQ0805TTER27*	9	270					560	1.5	290					
KQ0805TTER33*	0	330					375	1.76	250					
KQ0805TTER39*	1	390					340	1.9	230					
KQ0805TTER47*	2	470					188	2.2	190					
KQ0805TTER56*	3	560					200	2.3	180					
KQ0805TTER68*	4	680					215	2.35	180					
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					1600	0.13						
KQ1008TTE33N*	33N	33					60	350		1600	0.14			

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

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

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		1300	0.16	
KQ1008TTE56N*	56N	56			60		1000	0.18	
KQ1008TTE68N*	68N	68			60		950	0.20	
KQ1008TTE82N*	82N	82			60		1000	0.22	
KQ1008TTER10*	R10	100	25	G: ±2% J: ±5% K: ±10%	45	100	0.56	650	
KQ1008TTER12*	R12	120					0.63		
KQ1008TTER15*	R15	150					0.70	580	
KQ1008TTER18*	R18	180					0.77		
KQ1008TTER22*	R22	220					0.84		500
KQ1008TTER27*	R27	270					0.91		
KQ1008TTER33*	R33	330					1.05	450	
KQ1008TTER39*	R39	390					1.12		
KQ1008TTER47*	R47	470					1.19	470	
KQ1008TTER56*	R56	560					1.33		
KQ1008TTER62*	R62	620					1.40	400	
KQ1008TTER68*	R68	680					1.47		
KQ1008TTER75*	R75	750					1.54	360	
KQ1008TTER82*	R82	820					1.61		
KQ1008TTER91*	R91	910					1.68	380	
KQ1008TTE1R0*	1R0	1000	1.75						
KQ1008TTE1R2*	1R2	1200	1.6	310					
KQ1008TTE1R5*	1R5	1500	1.7						
KQ1008TTE1R8*	1R8	1800	1.9	270					
KQ1008TTE2R2*	2R2	2200	2.2						
KQ1008TTE2R7*	2R7	2700	2.3	250					
KQ1008TTE3R3*	3R3	3300	2.7						
KQ1008TTE3R9*	3R9	3900	2.8	230					
KQ1008TTE4R7*	4R7	4700	3.1						
KQ1008TTE5R6*	5R6	5600	2.5	240					
KQ1008TTE6R8*	6R8	6800	2.8						
KQ1008TTE8R2*	8R2	8200	3.0	170					
KQ1008TTE100*	100	10000	3.4						

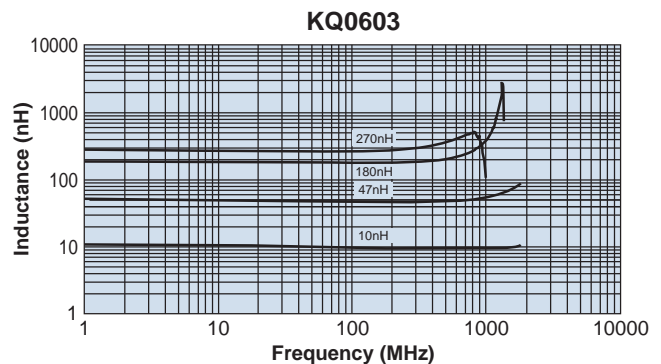
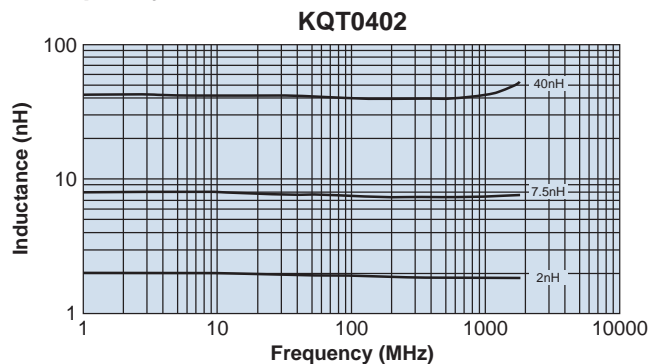
* Add tolerance character (C, G, H, J, K, M)

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

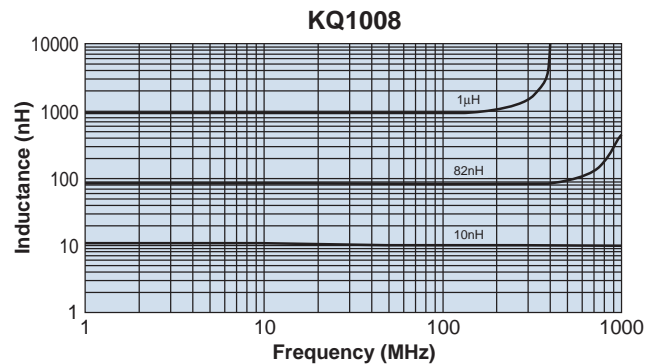
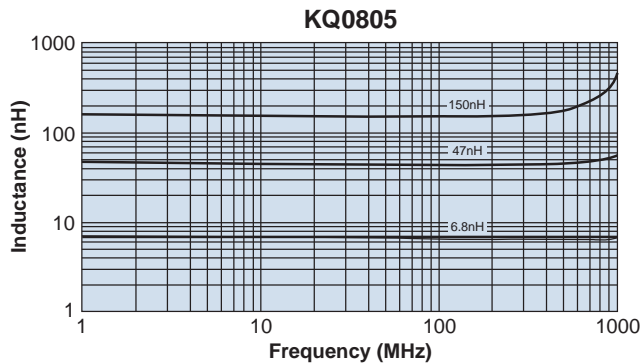


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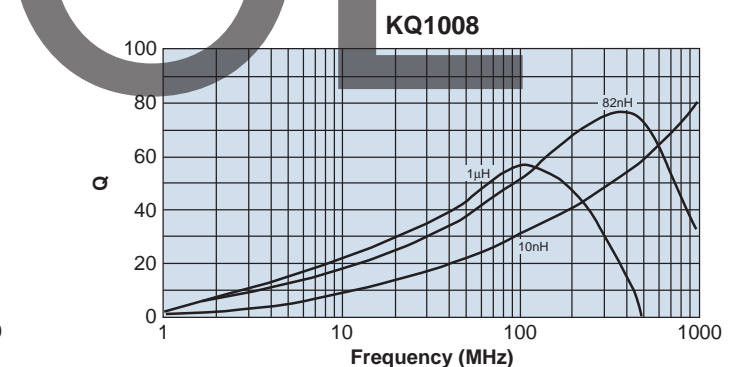
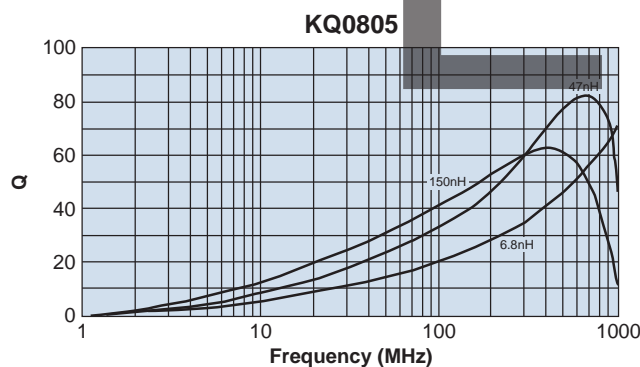
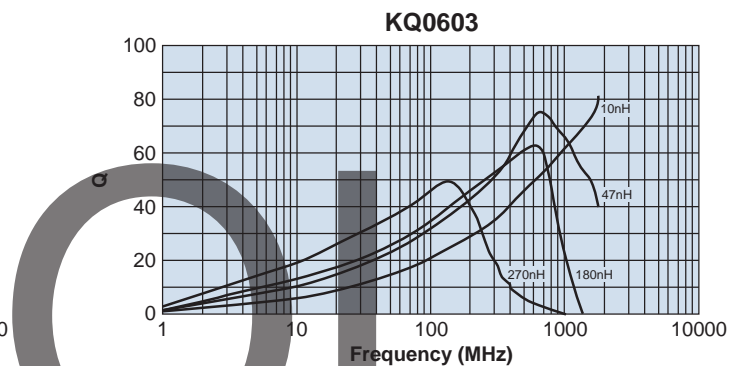
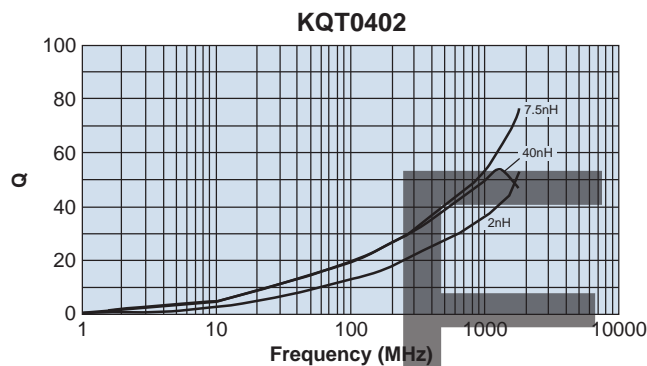
12/19/17

environmental applications (continued)

L-Frequency Characteristics



Q-Frequency Characteristics



Test equipment: HP4291A impedance analyzer

Performance Characteristics

Parameter	Requirements Maximum $\Delta L/L$ $\Delta Q/Q$		Test Method
	Limit	Typical	
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°C \pm 5°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°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°C \pm 2°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°C \pm 2°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°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

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

11/30/17