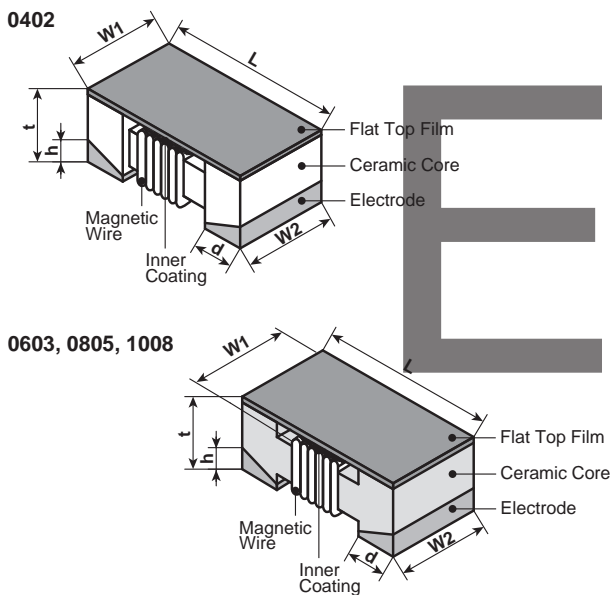


**features**

- 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**



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 <sup>+0.008</sup> <sub>-0</sub> (1.8 <sup>+0.2</sup> <sub>-0</sub> )	.018±.006 (0.45±0.15)	.018±.004 (0.45±0.1)

Inductors

**ordering information**

<b>KQ</b>	<b>1008</b>	<b>T</b>	<b>TE</b>	<b>10N</b>	<b>J</b>
<b>Type</b>	<b>Size Code</b>	<b>Termination Material</b>	<b>Packaging</b>	<b>Nominal Inductance</b>	<b>Tolerance</b>
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			8000				
KQT0402T**2N2*		2.2					7200	0.120	700
KQT0402T**2N4*		2.4			6000				
KQT0402T**2N7*		2.7					5800	0.083	760
KQT0402T**3N3*		3.3			4800				
KQT0402T**3N6*		3.6					5800	0.104	680
KQT0402T**3N9*		3.9			4400				
KQT0402T**4N3*		4.3					4200	0.104	680
KQT0402T**4N7*		4.7		4000	0.150	650			
KQT0402T**5N1*		5.1					3900	0.195	480
KQT0402T**5N6*		5.6		3680	0.120	640			
KQT0402T**6N2*		6.2					3600	0.180	560
KQT0402T**6N8*		6.8		3280	0.172	500			
KQT0402T**7N5*		7.5					3100	0.200	480
KQT0402T**8N2*		8.2		3040	0.202	450			
KQT0402T**8N7*		8.7					3000	0.250	400
KQT0402T**9N0*		9.0		2800	0.323	340			
KQT0402T**9N5*		9.5					2720	0.214	320
KQT0402T**10N*		10		2700	0.322	300			
KQT0402T**11N*		11					2480	0.298	240
KQT0402T**12N*		12		2400	0.354	200			
KQT0402T**13N*		13					2320	0.560	150
KQT0402T**14N*		14		2300	0.550	140			
KQT0402T**15N*		15					2240	0.620	130
KQT0402T**16N*		16		2200	0.810	120			
KQT0402T**17N*		17					2100	0.830	120
KQT0402T**18N*		18		2100	0.835	120			
KQT0402T**19N*		19					2800	1.170	120
KQT0402T**20N*		20		2000	1.120	120			
KQT0402T**21N*		21					1800	1.810	120
KQT0402T**22N*		22		1600	2.090	120			
KQT0402T**23N*		23					1500	2.320	120
KQT0402T**24N*		24		1500	2.320	120			
KQT0402T**25N*		25					1500	2.320	120
KQT0402T**26N*		26		1500	2.320	120			
KQT0402T**27N*		27					1500	2.320	120
KQT0402T**28N*		28		1500	2.320	120			
KQT0402T**29N*		29					1500	2.320	120
KQT0402T**30N*	30	1500	2.320	120					
KQT0402T**31N*	31				1500	2.320	120		
KQT0402T**32N*	32	1500	2.320	120					
KQT0402T**33N*	33				1500	2.320	120		
KQT0402T**34N*	34	1500	2.320	120					
KQT0402T**35N*	35				1500	2.320	120		
KQT0402T**36N*	36	1500	2.320	120					
KQT0402T**37N*	37				1500	2.320	120		
KQT0402T**38N*	38	1500	2.320	120					
KQT0402T**39N*	39				1500	2.320	120		
KQT0402T**40N*	40	1500	2.320	120					
KQT0402T**41N*	41				1500	2.320	120		
KQT0402T**42N*	42	1500	2.320	120					
KQT0402T**43N*	43				1500	2.320	120		
KQT0402T**44N*	44	1500	2.320	120					
KQT0402T**45N*	45				1500	2.320	120		
KQT0402T**46N*	46	1500	2.320	120					
KQT0402T**47N*	47				1500	2.320	120		
KQT0402T**48N*	48	1500	2.320	120					
KQT0402T**49N*	49				1500	2.320	120		
KQT0402T**50N*	50	1500	2.320	120					
KQT0402T**51N*	51				1500	2.320	120		
KQT0402T**52N*	52	1500	2.320	120					
KQT0402T**53N*	53				1500	2.320	120		
KQT0402T**54N*	54	1500	2.320	120					
KQT0402T**55N*	55				1500	2.320	120		
KQT0402T**56N*	56	1500	2.320	120					
KQT0402T**57N*	57				1500	2.320	120		
KQT0402T**58N*	58	1500	2.320	120					
KQT0402T**59N*	59				1500	2.320	120		
KQT0402T**60N*	60	1500	2.320	120					
KQT0402T**61N*	61				1500	2.320	120		
KQT0402T**62N*	62	1500	2.320	120					
KQT0402T**63N*	63				1500	2.320	120		
KQT0402T**64N*	64	1500	2.320	120					
KQT0402T**65N*	65				1500	2.320	120		
KQT0402T**66N*	66	1500	2.320	120					
KQT0402T**67N*	67				1500	2.320	120		
KQT0402T**68N*	68	1500	2.320	120					
KQT0402T**69N*	69				1500	2.320	120		
KQT0402T**70N*	70	1500	2.320	120					
KQT0402T**71N*	71				1500	2.320	120		
KQT0402T**72N*	72	1500	2.320	120					
KQT0402T**73N*	73				1500	2.320	120		
KQT0402T**74N*	74	1500	2.320	120					
KQT0402T**75N*	75				1500	2.320	120		
KQT0402T**76N*	76	1500	2.320	120					
KQT0402T**77N*	77				1500	2.320	120		
KQT0402T**78N*	78	1500	2.320	120					
KQT0402T**79N*	79				1500	2.320	120		
KQT0402T**80N*	80	1500	2.320	120					
KQT0402T**81N*	81				1500	2.320	120		
KQT0402T**82N*	82	1500	2.320	120					
KQT0402T**83N*	83				1500	2.320	120		
KQT0402T**84N*	84	1500	2.320	120					
KQT0402T**85N*	85				1500	2.320	120		
KQT0402T**86N*	86	1500	2.320	120					
KQT0402T**87N*	87				1500	2.320	120		
KQT0402T**88N*	88	1500	2.320	120					
KQT0402T**89N*	89				1500	2.320	120		
KQT0402T**90N*	90	1500	2.320	120					
KQT0402T**91N*	91				1500	2.320	120		
KQT0402T**92N*	92	1500	2.320	120					
KQT0402T**93N*	93				1500	2.320	120		
KQT0402T**94N*	94	1500	2.320	120					
KQT0402T**95N*	95				1500	2.320	120		
KQT0402T**96N*	96	1500	2.320	120					
KQT0402T**97N*	97				1500	2.320	120		
KQT0402T**98N*	98	1500	2.320	120					
KQT0402T**99N*	99				1500	2.320	120		
KQT0402T**100N*	100	1500	2.320	120					
KQT0402T**R10*	100				1500	2.320	120		
KQT0402T**R12*	120	1500	2.320	120					

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

Inductors

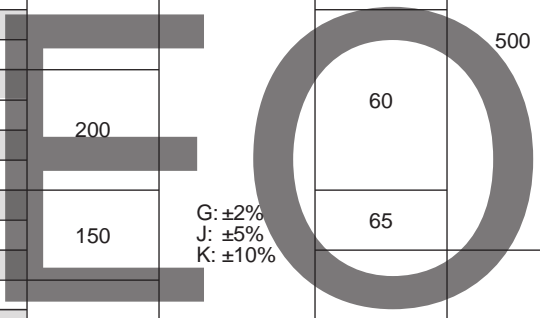
**applications and ratings (continued)**

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						0.063	
KQ0603TTE3N9*	1	3.9					6900	0.08	
KQ0603TTE4N3*	F	4.3					5900	0.063	
KQ0603TTE4N7*	G	4.7			20		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			200		34	0.17	
KQ0603TTE16N*	L	16					34	0.104	
KQ0603TTE18N*	6	18					35	0.17	
KQ0603TTE22N*	7	22					38	0.19	
KQ0603TTE23N*	S	23	37	3000		0.15			
KQ0603TTE24N*	M	24		2700		0.135			
KQ0603TTE27N*	8	27		40		2650	0.22		
KQ0603TTE30N*	N	30		40		2800	0.22		
KQ0603TTE33N*	9	33	40	2250		0.144			
KQ0603TTE36N*	P	36		2300		0.22			
KQ0603TTE39N*	0	39		38	2080	0.25			
KQ0603TTE43N*	Q	43		40	2200				
KQ0603TTE47N*	1	47	150	39	2000	0.28			
KQ0603TTE51N*	T	51		38	200	1900	0.30		
KQ0603TTE56N*	2	56			37	0.31			
KQ0603TTE68N*	3	68			1700	0.34			
KQ0603TTE72N*	4	72	150			0.49			
KQ0603TTE82N*	5	82		34		0.54			
KQ0603TTER10*	6	100		32		400			
KQ0603TTER11*	7	110			1400	0.58			
KQ0603TTER12*	8	120	1350		0.61				
KQ0603TTER15*	9	150	1300		0.65				
KQ0603TTER18*	0	180	100	1400	1.4	160			
KQ0603TTER20*	U	200		25	200	1300	2.2	140	
KQ0603TTER21*	V	210			1200	2.3			
KQ0603TTER22*	1	220				2.5	130		
KQ0603TTER25*	W	250	1000			2.4			
KQ0603TTER27*	2	270		24		100	900	2.3	170
KQ0603TTER30*	X	300			840	3.17	110		
KQ0603TTER33*	3	330			800	3.0	100		
KQ0603TTER39*	4	390	50		30	700	3.7	80	
KQ0603TTER47*	5	470		640		1.21	190		
KQ0603TTER51*	V	510		610		1.26	170		
KQ0603TTER56*	6	560		560		2.09	130		
KQ0603TTER62*	W	620	50	50	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				500	60	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	G: ±2% J: ±5% K: ±10%	65	1650	0.34	400																				
KQ0805TTE43N*	4	43				1550	0.34																					
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				920	0.56																					
KQ0805TTER12*	5	120				100	50		250	870	0.64	350																
KQ0805TTER15*	6	150								850	0.70																	
KQ0805TTER16*	H	160								650	1.0		310															
KQ0805TTER17*	J	170	600	1.4	290																							
KQ0805TTER18*	7	180						560						1.5	230													
KQ0805TTER19*	D	190														375	1.76	250										
KQ0805TTER20*	E	200																	340	1.9	230							
KQ0805TTER21*	F	210																				188	2.2	190				
KQ0805TTER22*	8	220								200	2.3		180															
KQ0805TTER23*	K	230	215	2.35	180																							
KQ0805TTER24*	L	240				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					33		100			375	1.76					250										
KQ0805TTER72*	A	720												23	50				340	1.9	230							
KQ0805TTER82*	5	820														188	2.2					200	2.3	190				
KQ1008TTE10N*	10N	10						50		50	500														4100	0.08	1000	
KQ1008TTE12N*	12N	12	J: ±5% K: ±10% M: ±20%	350																								350
KQ1008TTE15N*	15N	15			2500	0.11																						
KQ1008TTE18N*	18N	18					2400		0.12																			
KQ1008TTE22N*	22N	22										1600	0.13															
KQ1008TTE27N*	27N	27												1600	0.14													
KQ1008TTE33N*	33N	33																										



Inductors

\* 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		850	0.22	
KQ1008TTER10*	R10	100			60		750	0.56	
KQ1008TTER12*	R12	120	25	G: ±2% J: ±5% K: ±10%	45	100	0.63	650	
KQ1008TTER15*	R15	150					850		0.70
KQ1008TTER18*	R18	180					750		0.77
KQ1008TTER22*	R22	220					700		0.84
KQ1008TTER27*	R27	270					600		0.91
KQ1008TTER33*	R33	330					570		1.05
KQ1008TTER39*	R39	390					500		1.12
KQ1008TTER47*	R47	470					450		1.19
KQ1008TTER56*	R56	560					415		1.33
KQ1008TTER62*	R62	620					375		1.40
KQ1008TTER68*	R68	680					360		1.47
KQ1008TTER75*	R75	750					350		1.54
KQ1008TTER82*	R82	820	320	1.61					
KQ1008TTER91*	R91	910	320	1.68					
KQ1008TTE1R0*	1R0	1000	7.9	G: ±2% J: ±5% K: ±10%	35	50	290	1.75	250
KQ1008TTE1R2*	1R2	1200					250	1.6	
KQ1008TTE1R5*	1R5	1500					200	1.7	
KQ1008TTE1R8*	1R8	1800					160	1.9	
KQ1008TTE2R2*	2R2	2200					140	2.2	
KQ1008TTE2R7*	2R7	2700					110	2.3	
KQ1008TTE3R3*	3R3	3300					100	2.7	
KQ1008TTE3R9*	3R9	3900					100	2.8	
KQ1008TTE4R7*	4R7	4700					90	3.1	
KQ1008TTE5R6*	5R6	5600					80	2.5	
KQ1008TTE6R8*	6R8	6800	70	2.8					
KQ1008TTE8R2*	8R2	8200	15	7.9	65	3.0	170		
KQ1008TTE100*	100	10000			60	3.4	150		

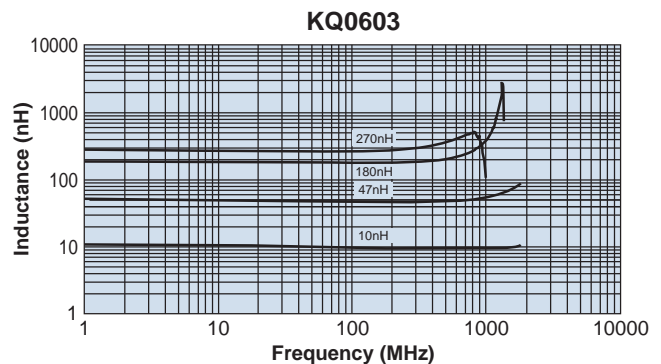
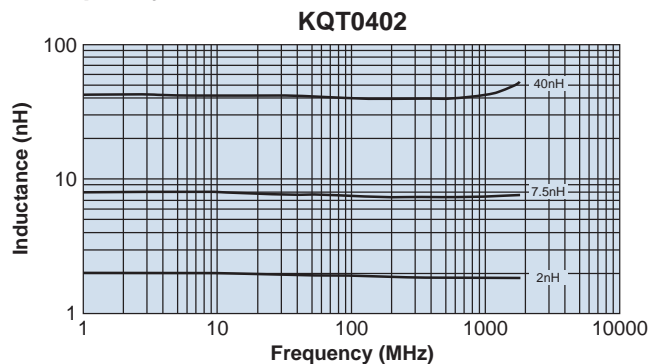
\* Add tolerance character (C, G, H, J, K, M)

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**

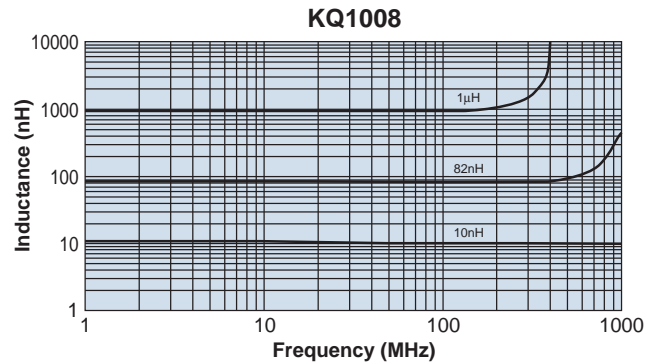
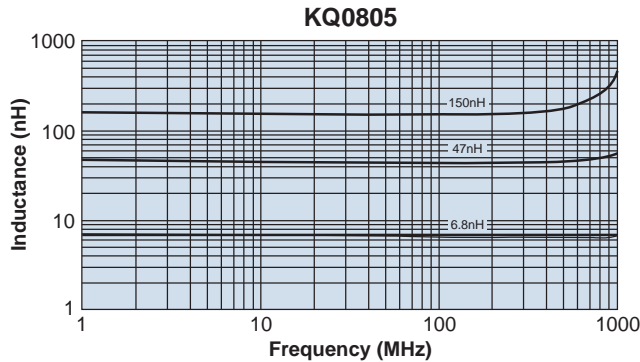


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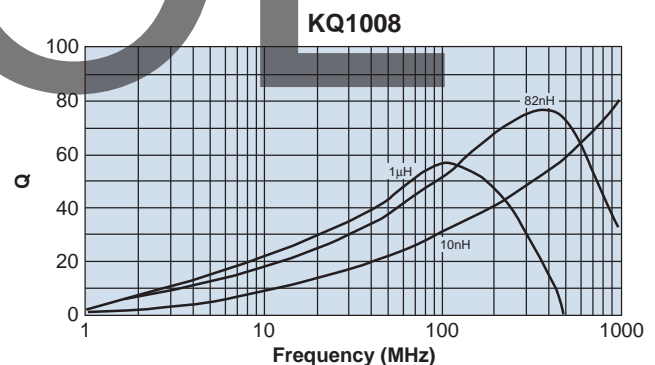
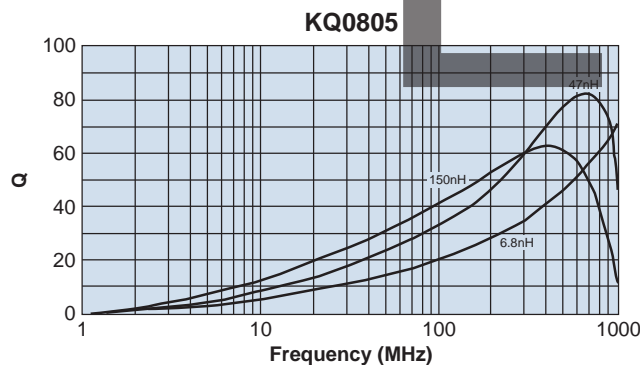
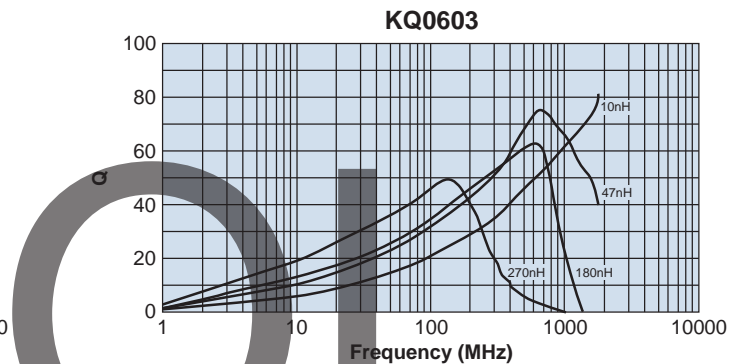
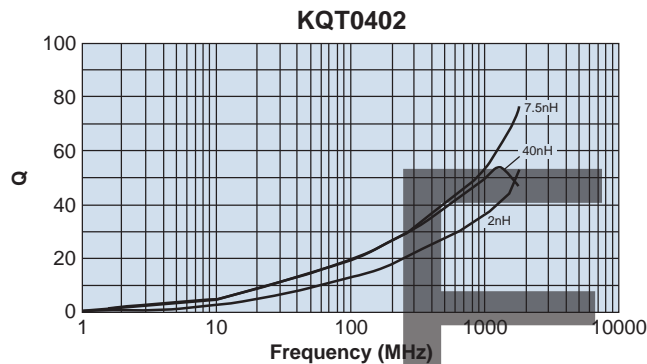
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**environmental applications** (continued)

**L-Frequency Characteristics**



**Q-Frequency Characteristics**



Test equipment: HP4291A impedance analyzer

**Performance Characteristics**

Parameter	Requirements Maximum $\Delta L/L$ $\Delta Q/Q$		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

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