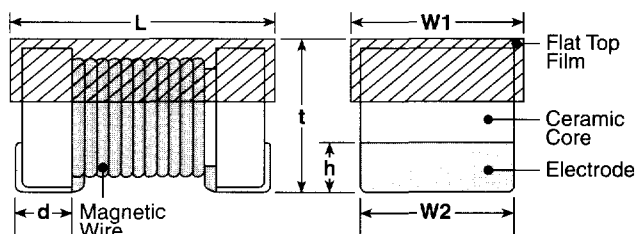


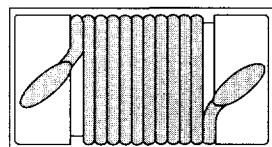
features

- Surface mount
- Flat top suitable for high speed pick-and-place components
- Excellent high frequency applications
- High Q factors and self-resonant frequency values
- Marking: Black body color with white marking (0603, 0805, 1008)
White body color with no marking (0402)

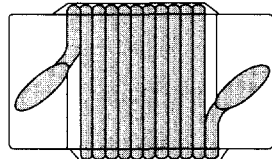
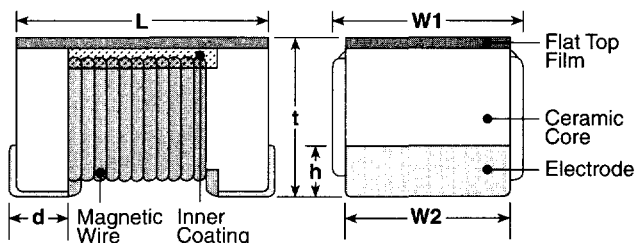
dimensions and construction



Size Code	Dimensions inches (mm)					
	L	W1	W2	t	h	d
0402	.04±.004 (1.1±0.09)	.022±.031 (0.55±0.8)	.02±.004 (0.5±0.1)	.022±.004 (0.55±0.1)	.006±.004 (0.15±0.1)	.01±.004 (0.25±0.1)
0603	.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)
0805	.079±.008 (2.0±0.2)	.059±.008 (1.5±0.2)	.053±.004 (1.35±0.1)	.051±.008 (1.3±0.2)	.016±.006 (0.40±0.15)	.018±.004 (0.45±0.1)
1008	.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)



0402



0603, 0805, 1008

ordering information

Old Part #	KQ	1008		TE	10N	J
New Part #	KQ	1008	L	TE	10N	J
	Type	Size Code	Termination Material	Packaging	Nominal Resistance	Tolerance
		0402 0603 0805 1008	L: SnPb T: Sn	TE: 7" embossed plastic TD: 7" paper tape	10N: 10nH R10: 0.1µH 1R0: 1.0µH	G: ±2% 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.

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)		
KQ0402*TD1N0**	-	1.0	250	J: ±5% K: ±10%	16	6000	6000	0.045	1360		
KQ0402*TD2N0**		2.0						1040			
KQ0402*TD2N2**		2.2						960			
KQ0402*TD3N3**		3.3						840			
KQ0402*TD3N6**		3.6									
KQ0402*TD3N9**		3.9			5800	0.083	800				
KQ0402*TD5N1**		5.1					760				
KQ0402*TD5N6**		5.6					680				
KQ0402*TD6N2**		6.2									
KQ0402*TD7N5**		7.5									
KQ0402*TD8N2**		8.2			4400	0.104		680			
KQ0402*TD9N0**		9.0									
KQ0402*TD10N**		10			3900	0.195	480				
KQ0402*TD11N**		11									
KQ0402*TD12N**		12			3680	0.120	640				
KQ0402*TD15N**		15									
KQ0402*TD19N**		19			3280	0.172	560				
KQ0402*TD23N**		23					3040	0.202	480		
KQ0402*TD27N**		27									
KQ0402*TD36N**		36									
KQ0402*TD40N**	40	2720	0.214	400							
KQ0402*TD47N**	47										
KQ0402*TD56N**	56	2480	0.298	400							
KQ0603*TE1N6**	C	1.6	250	J: ±5% K: ±10%	24	250	12500	0.03	700		
KQ0603*TE1N8**	0	1.8			16			0.045			
KQ0603*TE3N6**	E	3.6			22			6900		0.063	
KQ0603*TE3N9**	1	3.9								0.08	
KQ0603*TE4N3**	F	4.3								5900	0.063
KQ0603*TE4N7**	G	4.7									
KQ0603*TE6N8**	2	6.8			20			5800		0.116	
KQ0603*TE7N5**	H	7.5								0.11	
KQ0603*TE8N7**	J	8.7			27			4800		0.106	
KQ0603*TE10N**	3	10								4600	0.109
KQ0603*TE11N**	K	11			28			4800	0.13		
KQ0603*TE12N**	4	12							31	4800	0.13
KQ0603*TE15N**	5	15			33			4000			0.086
KQ0603*TE16N**	L	16							35	4000	0.13
KQ0603*TE18N**	6	18			34			3300			0.17
KQ0603*TE22N**	7	22							35	3100	0.104
KQ0603*TE24N**	M	24			38			3000			0.17
KQ0603*TE27N**	8	27							37	2650	0.19
KQ0603*TE30N**	N	30			40			2800			0.22
KQ0603*TE33N**	9	33							37	2250	0.144
KQ0603*TE36N**	P	36	40	2300	0.22						
KQ0603*TE39N**	0	39			38	2080	0.25	600			
KQ0603*TE43N**	Q	43	40	2200							
			39	2000	0.28						

* Add termination material character (L, T)
** Add tolerance character (G, J, K, M)

For complete environmental specifications, please refer to pages 122-123.

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)	
KQ0603*TE47N**	1	47	200	G: ±2% J: ±5%	38	200	2000	0.28	600	
KQ0603*TE56N**	2	56			37		1900	0.31		
KQ0603*TE68N**	3	68			150	34	1700	0.34	400	
KQ0603*TE72N**	4	72						0.49		
KQ0603*TE82N**	5	82	32			150	1400	0.54		
KQ0603*TER10**	6	100					1350	0.58	300	
KQ0603*TER11**	7	110	25		100	1300	0.61	160		
KQ0603*TER12**	8	120				1400	1.4			
KQ0603*TER15**	9	150	100		25	100	1300	2.2	140	
KQ0603*TER18**	0	180					1200	2.5	120	
KQ0603*TER22**	1	220	100	24	100	900	2.3	170		
KQ0603*TER27**	2	270				800	3.0	100		
KQ0603*TER33**	3	330	100	30	100	700	3.7	80		
KQ0603*TER39**	4	390								
KQ0805*TE3N3**	0	3.3	250	J: ±5% K: ±10% M: ±20%	50	1500	6000	0.08	600	
KQ0805*TE6N8**	1	6.8				1000	5500	0.11		
KQ0805*TE8N2**	2	8.2					4700	0.12		
KQ0805*TE12N**	3	12				4000	0.15			
KQ0805*TE15N**	4	15			55	3400	0.17	500		
KQ0805*TE18N**	5	18				3300	0.20			
KQ0805*TE22N**	6	22			60	500	2600	0.22	500	
KQ0805*TE27N**	7	27					2500	0.25		
KQ0805*TE33N**	8	33			200	60	500	2050	0.27	500
KQ0805*TE39N**	9	39						2000	0.29	
KQ0805*TE47N**	0	47	150	65	250	1650	0.31	400		
KQ0805*TE56N**	1	56				1550	0.34			
KQ0805*TE68N**	2	68	150	65	250	1450	0.38	400		
KQ0805*TE82N**	3	82				1300	0.42			
KQ0805*TER10**	4	100	100	50	250	1200	0.46	400		
KQ0805*TER12**	5	120				1100	0.51			
KQ0805*TER15**	6	150	100	50	250	920	0.56	350		
KQ0805*TER18**	7	180				870	0.64			
KQ0805*TER22**	8	220	100	48	250	850	0.70	310		
KQ0805*TER27**	9	270				650	1.0			
KQ0805*TER33**	0	330	50	33	100	600	1.4	290		
KQ0805*TER39**	1	390				560	1.5			
KQ0805*TER47**	2	470	25	23	50	375	1.76	250		
KQ0805*TE56**	3	560				340	1.9			
KQ0805*TE68**	4	680	25	23	50	188	2.2	190		
KQ0805*TE82**	5	820				215	2.35			

* Add termination material character (L, T)
 ** Add tolerance character (G, J, K, M)

For complete environmental specifications, please refer to pages 122-123.

applications and ratings (continued)

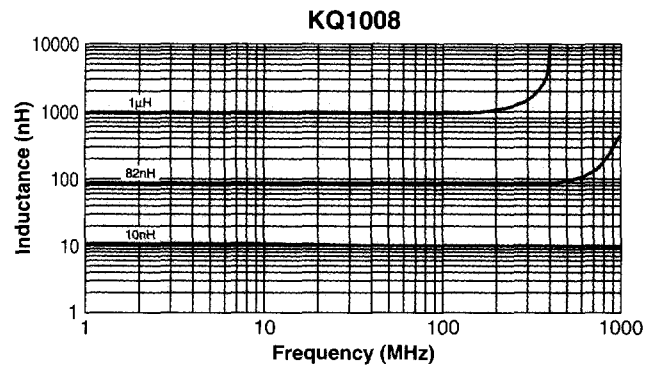
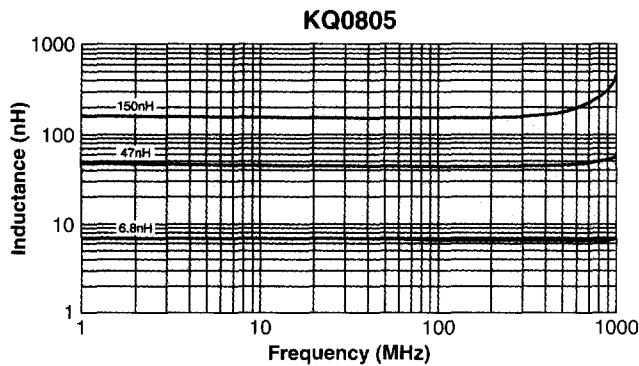
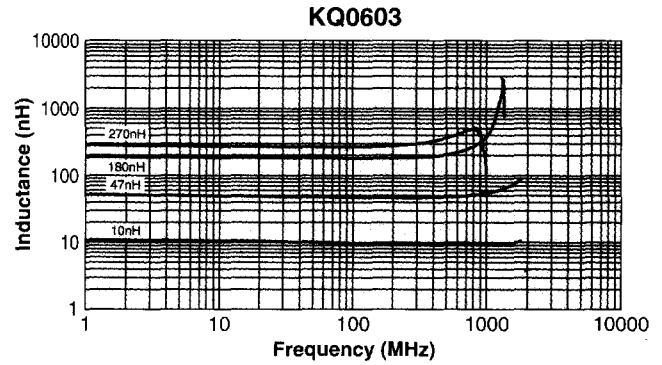
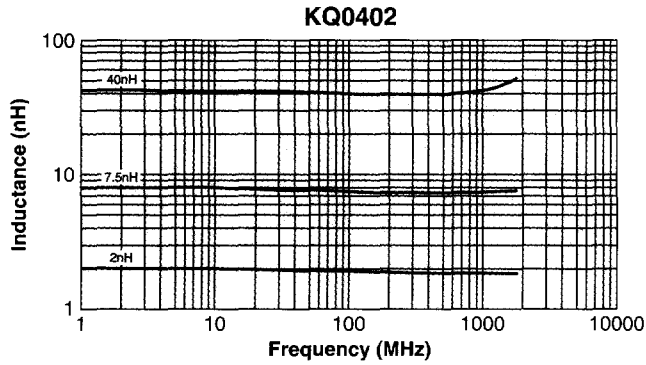
Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency (MHz)	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)		
KQ1008*TE10N**	10N	10	50	J: ±5% K: ±10% M: ±20%	50	500	4100	0.08	1000		
KQ1008*TE12N**	12N	12					3300	0.09			
KQ1008*TE15N**	15N	15					3000	0.10			
KQ1008*TE18N**	18N	18			55	350	2500	0.11			
KQ1008*TE22N**	22N	22					2400	0.12			
KQ1008*TE27N**	27N	27					1600	0.13			
KQ1008*TE33N**	33N	33					1500	0.14			
KQ1008*TE39N**	39N	39					1300	0.15			
KQ1008*TE47N**	47N	47					1500	0.16			
KQ1008*TE56N**	56N	56			65	350	1300	0.18			
KQ1008*TE68N**	68N	68					1000	0.20			
KQ1008*TE82N**	82N	82			25	G: ±2% J: ±5% K: ±10%	60	100		950	0.56
KQ1008*TER10**	R10	100	850	0.70							
KQ1008*TER12**	R12	120	750	0.77							
KQ1008*TER15**	R15	150	45	100			700	0.84	720		
KQ1008*TER18**	R18	180					600	0.91	690		
KQ1008*TER22**	R22	220					570	1.05	660		
KQ1008*TER27**	R27	270					500	1.12	630		
KQ1008*TER33**	R33	330					450	1.19	600		
KQ1008*TER39**	R39	390					415	1.33	580		
KQ1008*TER47**	R47	470	375	100			375	1.40	560		
KQ1008*TER56**	R56	560					1.47	540			
KQ1008*TER62**	R62	620					360	1.54	520		
KQ1008*TER68**	R68	680	35	50			350	1.61	500		
KQ1008*TER75**	R75	750					320	1.68	480		
KQ1008*TER82**	R82	820					290	1.75	460		
KQ1008*TE1R0**	1R0	1000	7.9				28	50	250	2.0	440
KQ1008*TE1R2**	1R2	1200							200	2.3	420
KQ1008*TE1R5**	1R5	1500							160	2.6	400
KQ1008*TE1R8**	1R8	1800			22	25	140	3.2	360		
KQ1008*TE2R2**	2R2	2200					110	3.4	350		
KQ1008*TE2R7**	2R7	2700					100	3.6	340		
KQ1008*TE3R3**	3R3	3300			20	7.9	90	4.0	330		
KQ1008*TE3R9**	3R9	3900					80	2.2	150		
KQ1008*TE4R7**	4R7	4700					70	2.5			
KQ1008*TE5R6**	5R6	5600			15	7.9	65	2.8			
KQ1008*TE6R8**	6R8	6800					60	3.2			
KQ1008*TE8R2**	8R2	8200									
KQ1008*TE100**	100	10000									

* Add termination material character (L, T)
 ** Add tolerance character (G, J, K, M)

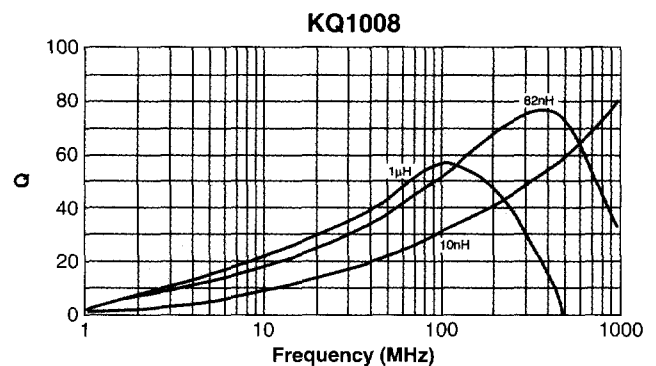
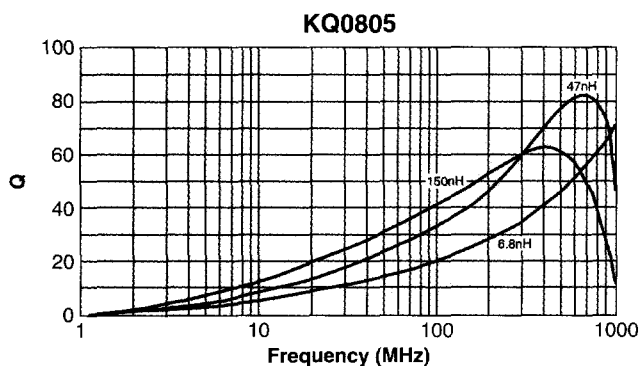
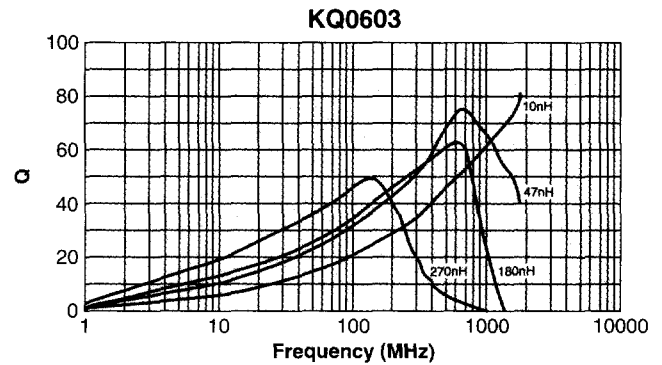
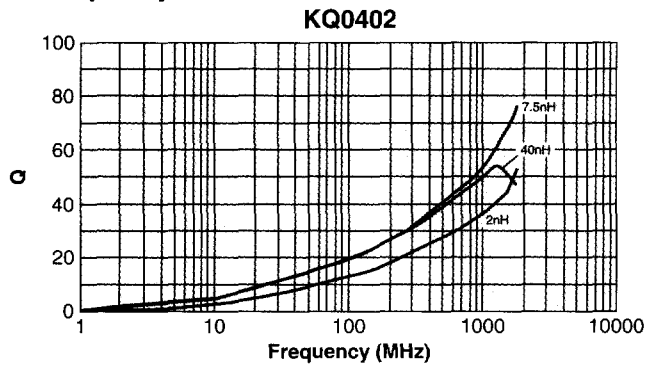
For complete environmental specifications, please refer to pages 122-123.

environmental applications

L-Frequency Characteristics



Q-Frequency Characteristics



Test equipment: HP4291A impedance analyzer

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

environmental applications (continued)

Performance Characteristics

Parameter	Maximum Δ L	Test Method
Dielectric Withstanding Voltage	No evidence of flaming, fuming or breakdown	5 seconds @ AC 500V applied between both terminals and film
Insulation Resistance	1000M Ω and over	1 minute @ DC 100V measured between both terminals and film
Flammability	IEC 695-2-2	Withstands needle-flame test
Terminal Pull Strength	No evidence of damage	Terminals shall withstand a pull of 10N in a horizontal direction (KQ0402 and KQ0603 = 5N, KQ0805 and KQ1008 = 10N)
Terminal Bending Strength	No evidence of breakdown	Specimen shall be soldered on bend test board and force applied to the opposite side to cause a 10mm deflection (KQ0603 = 3mm deflection)
Vibration	Δ L/L within $\pm 5\%$ Δ Q/Q within $\pm 10\%$	2 hours in each direction of X, Y, Z on PCB at a frequency range of 10 - 55 - 10Hz with 1.5mm amplitude
Dropping	No evidence of damage Δ L/L within $\pm 5\%$ Δ Q/Q within $\pm 10\%$	Dropping 1m on the ground of concrete, 1 time
Resistance to Solder Heat	No evidence of outer damage Δ L/L within $\pm 5\%$ Δ Q/Q within $\pm 10\%$	Immerse in solder @ $260^\circ \pm 5^\circ\text{C}$ for 10 seconds ± 1 second
Solderability	95% of the terminal should be covered with new solder	Immerse in solder @ $230^\circ \pm 5^\circ\text{C}$ for 3 seconds ± 0.5 second
Resistance to Solvents	No damage and marking must remain legible	Accordance with MIL-STD-202, Method 215
Low Temperature Storage	No evidence of damage Δ L/L within $\pm 5\%$ Δ Q/Q within $\pm 10\%$	Store @ $-40^\circ\text{C} \pm 2^\circ\text{C}$ for 1000 hours
High Temperature Storage	No evidence of damage Δ L/L within $\pm 5\%$ Δ Q/Q within $\pm 10\%$	Store @ $+125^\circ\text{C} \pm 2^\circ\text{C}$ for 1000 hours
Moisture Endurance	No evidence of damage Δ L/L within $\pm 5\%$ Δ Q/Q within $\pm 10\%$	$40^\circ\text{C} \pm 2^\circ\text{C}$, 90 - 95% RH, 1000 hours
Load Life	No evidence of damage Δ L/L within $\pm 5\%$ Δ Q/Q within $\pm 10\%$	Biased to full rated current @ $+125^\circ\text{C}$, 1000 hours
High Temperature High Humidity	No evidence of damage Δ L/L within $\pm 5\%$ Δ Q/Q within $\pm 10\%$	Biased to 10% rated current @ $+85^\circ\text{C}$, 85% RH, 1000 hours
Thermal Shock	No evidence of damage Δ L/L within $\pm 5\%$ Δ Q/Q within $\pm 10\%$	100 cycles between $-40^\circ\text{C}/\text{hour}$ and $+125^\circ\text{C}/\text{hour}$
Temperature Characteristics	Δ L/L within $\pm 5\%$	Δ L/L to be measured at the temperatures between -40°C and $+125^\circ\text{C}$, reference to the inductance @ 20°C

Unless otherwise specified, measurements shall be performed within 2 hours after leaving test samples for more than one hour at the normal temperature and at the normal humidity.

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