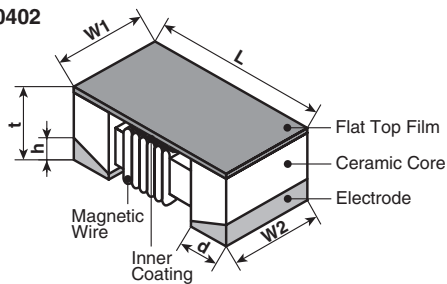


features

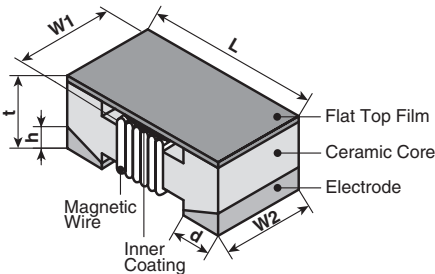
- Surface mount
- Operating temperature: -40°C ~ +125°C
- Flat top suitable for high speed pick-and-place components
- Excellent high frequency applications
- High Q factors and self-resonant frequency values
- Products with lead-free terminations meet EU RoHS requirements
- AEC-Q200 Qualified

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)

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: $\pm 0.1\text{nH}$ C: $\pm 0.2\text{nH}$	16	250	11000	0.045	1360			
KQT0402T**1N9*		1.9					19	9600	0.070	1040		
KQT0402T**2N0*		2.0			18			8000	0.068	960		
KQT0402T**2N2*		2.2					17		0.120	700		
KQT0402T**2N4*		2.4			19			7200	0.066	840		
KQT0402T**2N7*		2.7					18	6000	0.091	800		
KQT0402T**3N3*		3.3						20	5800	0.083	760	
KQT0402T**3N6*		3.6							22	4800	0.086	680
KQT0402T**3N9*		3.9								5800	0.104	
KQT0402T**4N3*		4.3								20		4400
KQT0402T**4N7*		4.7		22		4200					0.104	680
KQT0402T**5N1*		5.1				20				4160	0.150	650
KQT0402T**5N6*		5.6		21						4000	0.195	480
KQT0402T**6N2*		6.2				24				3900	0.120	640
KQT0402T**6N8*		6.8		25	3680					0.200	560	
KQT0402T**7N5*		7.5			3600							
KQT0402T**8N2*		8.2			3100		0.230	500				
KQT0402T**8N7*		8.7					3040	0.202	480			
KQT0402T**9N0*		9.0			3000		0.250	450				
KQT0402T**9N5*		9.5					2800	0.323	400			
KQT0402T**10N*		10			24		2720	0.214				
KQT0402T**11N*		11					25	2700		0.322		
KQT0402T**12N*		12			24			2480		0.298		
KQT0402T**13N*		13				25	2400	0.354				
KQT0402T**15N*		15		24	2320		0.550	340				
KQT0402T**16N*		16			25	2300	0.560	320				
KQT0402T**18N*		18		24		2240	0.620	320				
KQT0402T**19N*		19			25	2200	0.810	300				
KQT0402T**20N*		20		20		2100	0.830	150				
KQT0402T**22N*		22			25		0.835	240				
KQT0402T**23N*		23		22		2800	1.170	200				
KQT0402T**24N*		24			2000	1.120						
KQT0402T**27N*		27		22	1800	1.810	140					
KQT0402T**30N*		30			1600	2.090	130					
KQT0402T**33N*		33		22	1500	2.320	120					
KQT0402T**34N*		34										
KQT0402T**36N*		36										
KQT0402T**39N*		39										
KQT0402T**40N*		40										
KQT0402T**43N*		43										
KQT0402T**47N*	47											
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			0.055	
KQ0603TTE3N6*	E	3.6					6900	0.063	
KQ0603TTE3N9*	1	3.9						0.08	
KQ0603TTE4N3*	F	4.3			5900		0.063		
KQ0603TTE4N7*	G	4.7					5800	0.116	
KQ0603TTE5N1*	Y	5.1			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		4800		0.125			
KQ0603TTE10N*	3	10			31	0.13			
KQ0603TTE11N*	K	11		33	0.086				
KQ0603TTE12N*	4	12		35	0.13				
KQ0603TTE15N*	5	15			0.17				
KQ0603TTE16N*	L	16		34	0.104				
KQ0603TTE18N*	6	18		35	0.17				
KQ0603TTE22N*	7	22		38	0.19				
KQ0603TTE23N*	S	23	37	2700	0.15				
KQ0603TTE24N*	M	24		2650	0.135				
KQ0603TTE27N*	8	27	40	2800	0.22				
KQ0603TTE30N*	N	30	37	2250	0.144				
KQ0603TTE33N*	9	33	40	2300	0.22				
KQ0603TTE36N*	P	36	38	2080	0.25				
KQ0603TTE39N*	0	39	40	2200					
KQ0603TTE43N*	Q	43	39	2000	0.28				
KQ0603TTE47N*	1	47	200	38	200	1900	0.30		
KQ0603TTE51N*	T	51					0.31		
KQ0603TTE56N*	2	56					37	0.34	
KQ0603TTE68N*	3	68	150	34	150	1700	0.49		
KQ0603TTE72N*	4	72				1400	0.54		
KQ0603TTE82N*	5	82					1400	0.58	
KQ0603TTER10*	6	100	32	1300	1300	1350	0.61		
KQ0603TTER11*	7	110				1300	0.65		
KQ0603TTER12*	8	120	1400	1.4	1400	1400	1.4		
KQ0603TTER15*	9	150				1300	2.2		
KQ0603TTER18*	0	180	100	25	100	1200	2.3		
KQ0603TTER20*	U	200					1200	2.5	
KQ0603TTER21*	V	210	1000	24	100	900		2.4	
KQ0603TTER22*	1	220					840	2.3	
KQ0603TTER25*	W	250	800	3.0	800	700		3.17	
KQ0603TTER27*	2	270					800	3.0	800
KQ0603TTER30*	X	300	700	3.7	700	640			
KQ0603TTER33*	3	330					640	1.21	640
KQ0603TTER39*	4	390	610	1.26	610	560			
KQ0603TTER47*	5	470					560	2.09	560
KQ0603TTER51*	V	510	590	1.89	590	590			
KQ0603TTER56*	6	560					590	1.89	590
KQ0603TTER62*	W	620	590	1.89	590	590			

* 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: $\pm 5\%$ K: $\pm 10\%$	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: $\pm 5\%$ K: $\pm 10\%$	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	500	2000	0.29	
KQ0805TTE43N*	4	43						1650	0.34	
KQ0805TTE47N*	0	47						1550	0.34	
KQ0805TTE56N*	1	56						1450	0.38	
KQ0805TTE68N*	2	68	65	50	1300	0.42	400			
KQ0805TTE82N*	3	82			1200	0.46				
KQ0805TTER10*	4	100			1100	0.51				
KQ0805TTER12*	5	120			920	0.56				
KQ0805TTER15*	6	150			870	0.64				
KQ0805TTER16*	H	160								
KQ0805TTER17*	J	170								
KQ0805TTER18*	7	180								
KQ0805TTER19*	D	190			850	0.70				
KQ0805TTER20*	E	200								
KQ0805TTER21*	F	210								
KQ0805TTER22*	8	220								
KQ0805TTER23*	K	230								
KQ0805TTER24*	L	240								
KQ0805TTER25*	G	250	48	250	650	1.0	350			
KQ0805TTER27*	9	270			600	1.4	310			
KQ0805TTER33*	0	330			560	1.5	290			
KQ0805TTER39*	1	390			375	1.76	250			
KQ0805TTER47*	2	470			340	1.9	230			
KQ0805TTER56*	3	560			188	2.2	190			
KQ0805TTER68*	4	680	200	2.3						
KQ0805TTER72*	A	720	215	2.35						
KQ0805TTER82*	5	820	25	J: $\pm 5\%$ K: $\pm 10\%$	23	50	180			
KQ1008TTE10N*	10N	10	50	J: $\pm 5\%$ K: $\pm 10\%$ M: $\pm 20\%$	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			55	350	2400	0.12		
KQ1008TTE27N*	27N	27					1600	0.13		
KQ1008TTE33N*	33N	33					60	1600		0.14

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.

11/30/17

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		
KQ1008TTER18*	R18	180					0.77		
KQ1008TTER22*	R22	220					0.84		
KQ1008TTER27*	R27	270					0.91		
KQ1008TTER33*	R33	330					1.05		
KQ1008TTER39*	R39	390					1.12		
KQ1008TTER47*	R47	470					1.19		
KQ1008TTER56*	R56	560					1.33		
KQ1008TTER62*	R62	620					1.40		
KQ1008TTER68*	R68	680					1.47		
KQ1008TTER75*	R75	750					1.54		
KQ1008TTER82*	R82	820					1.61		
KQ1008TTER91*	R91	910					1.68		
KQ1008TTE1R0*	1R0	1000	7.9		35	50	1.75	370	
KQ1008TTE1R2*	1R2	1200					1.6		
KQ1008TTE1R5*	1R5	1500					1.7		
KQ1008TTE1R8*	1R8	1800					1.9		
KQ1008TTE2R2*	2R2	2200					2.2		
KQ1008TTE2R7*	2R7	2700	22		25	2.3	250		
KQ1008TTE3R3*	3R3	3300				2.7			
KQ1008TTE3R9*	3R9	3900				2.8			
KQ1008TTE4R7*	4R7	4700	20		7.9	3.1	210		
KQ1008TTE5R6*	5R6	5600				2.5			
KQ1008TTE6R8*	6R8	6800				2.8			
KQ1008TTE8R2*	8R2	8200	15		7.9	3.0	170		
KQ1008TTE100*	100	10000				3.4			

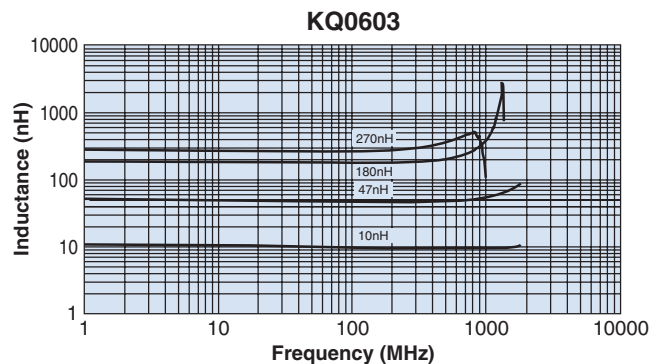
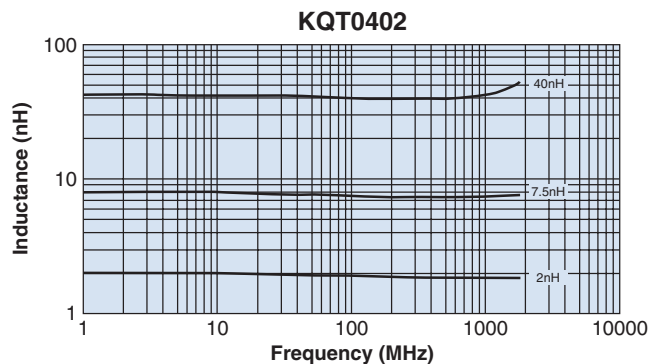
* Add tolerance character (C, G, H, J, K, M)

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

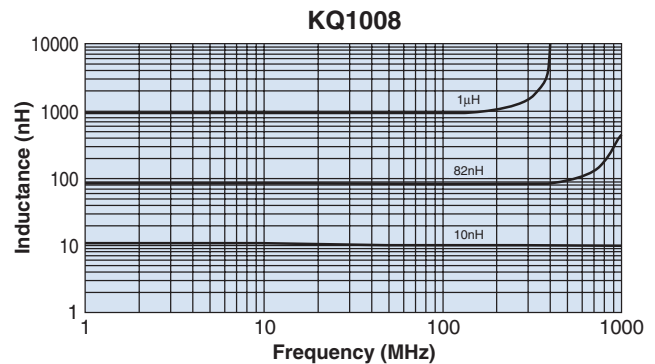
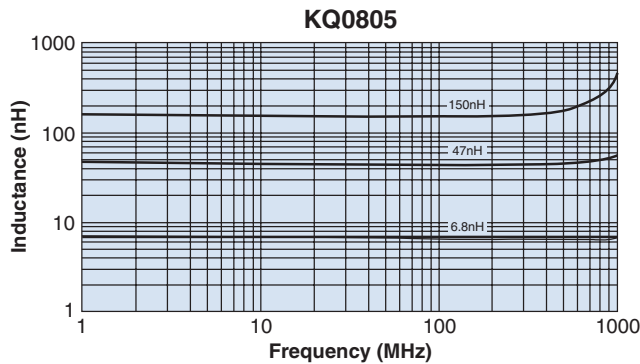


Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

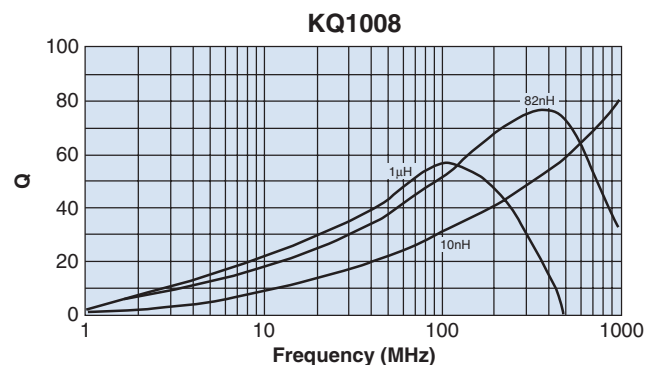
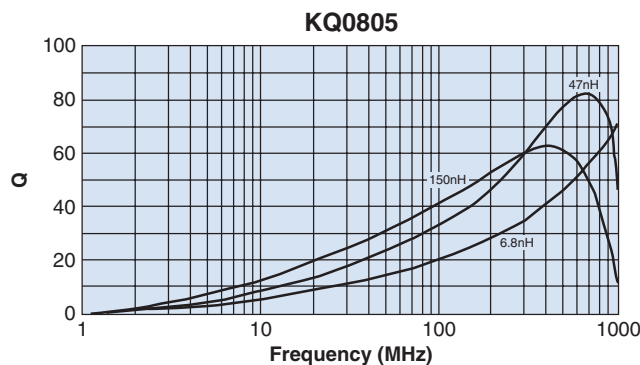
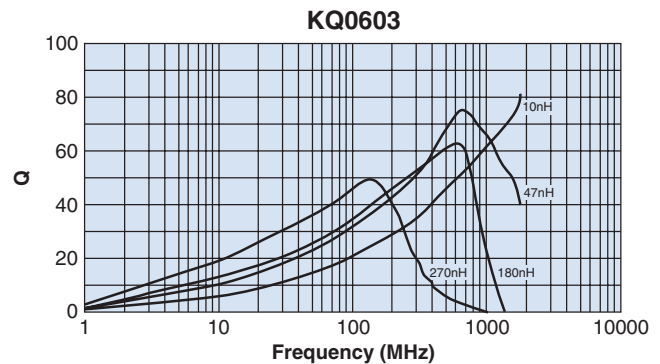
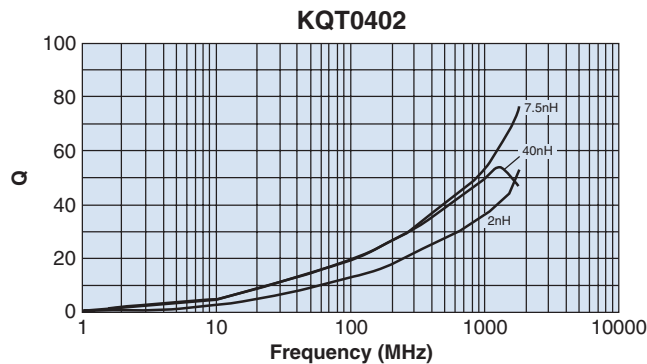
12/19/17

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	Test Method
		Typical	Typical	
Resistance to Soldering Heat	No significant abnormality in appearance Δ L/L: ±5%, Δ Q/Q: ±10%	Δ L/L: ±2.7%	Δ Q/Q: ±6.6%	260°C ± 5°C, 10s ± 1s
Rapid Change of Temperature	No significant abnormality in appearance Δ L/L: ±5%, Δ Q/Q: ±10%	Δ L/L: ±2.1%	Δ Q/Q: ±5.3%	-40°C (30min.)/ +125°C (30min.) 100 cycles
Low Temperature Exposure	No significant abnormality in appearance Δ L/L: ±5%, Δ Q/Q: ±10%	Δ L/L: ±1.8%	Δ Q/Q: ±2.8%	-40°C ± 2°C, 1000h
High Temperature Exposure	No significant abnormality in appearance Δ L/L: ±5%, Δ Q/Q: ±10%	Δ L/L: ±1.8%	Δ Q/Q: ±5.3%	125°C ± 2°C, 1000h
Moisture Exposure	No significant abnormality in appearance Δ L/L: ±5%, Δ Q/Q: ±10%	Δ L/L: ±0.9%	Δ Q/Q: ±6.9%	40°C ± 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