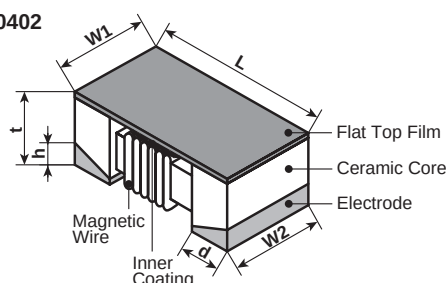


features

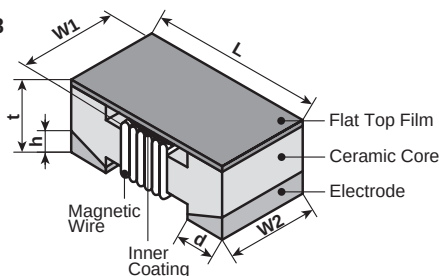
- Surface mount
- Operating temperature: -40°C ~ +125°C
- Flat top suitable for high speed pick-and-place components
- Excellent high frequency applications
- High Q factors and self-resonant frequency values
- Products with lead-free terminations meet EU RoHS requirements
- AEC-Q200 Qualified

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 ^{+.008} ₋₀ (1.8 ^{+.02} ₋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: ±0.1nH C: ±0.2nH	16	250	11000	0.045	1360
KQT0402T**1N9*		1.9					9600	0.070	1040
KQT0402T**2N0*		2.0			19				
KQT0402T**2N2*		2.2					18	7200	0.120
KQT0402T**2N4*		2.4			17				
KQT0402T**2N7*		2.7					19	5800	0.083
KQT0402T**3N3*		3.3		20	4800				
KQT0402T**3N6*		3.6					22	5800	0.104
KQT0402T**3N9*		3.9		20	4400				
KQT0402T**4N3*		4.3					22	4160	0.104
KQT0402T**4N7*		4.7		20	4000				
KQT0402T**5N1*		5.1					21	3900	0.195
KQT0402T**5N6*		5.6		24	3680				
KQT0402T**6N2*		6.2					24	3450	0.180
KQT0402T**6N8*		6.8		25	3280				
KQT0402T**7N5*		7.5					24	3100	0.200
KQT0402T**8N2*		8.2		25	3040				
KQT0402T**8N7*		8.7					25	3000	0.250
KQT0402T**9N0*		9.0		24	2800				
KQT0402T**9N5*		9.5					25	2720	0.214
KQT0402T**10N*		10		24	2700				
KQT0402T**11N*		11					24	2480	0.298
KQT0402T**12N*		12		25	2400				
KQT0402T**13N*		13					24	2320	0.560
KQT0402T**15N*		15		25	2300				
KQT0402T**16N*		16					24	2240	0.620
KQT0402T**18N*		18		25	2200				
KQT0402T**19N*		19					20	2100	0.830
KQT0402T**20N*		20		25	2800				
KQT0402T**22N*		22					25	2000	1.170
KQT0402T**23N*		23		22	1800				
KQT0402T**24N*		24					22	1600	2.090
KQT0402T**27N*		27		22	1500				
KQT0402T**30N*		30					22	1500	2.320
KQT0402T**33N*		33		22	1500				
KQT0402T**34N*		34					22	1500	2.320
KQT0402T**36N*		36		22	1500				
KQT0402T**39N*		39					22	1500	2.320
KQT0402T**40N*		40		22	1500				
KQT0402T**43N*		43					22	1500	2.320
KQT0402T**47N*		47		22	1500				
KQT0402T**51N*		51					22	1500	2.320
KQT0402T**56N*		56		22	1500				
KQT0402T**68N*		68					22	1500	2.320
KQT0402T**82N*		82		22	1500				
KQT0402T**R10*		100					22	1500	2.320
KQT0402T**R12*		120		22	1500				

* 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		6900	0.055	
KQ0603TTE3N6*	E	3.6						0.063	
KQ0603TTE3N9*	1	3.9						0.08	
KQ0603TTE4N3*	F	4.3					5900	0.063	
KQ0603TTE4N7*	G	4.7			20		5800	0.116	
KQ0603TTE5N1*	Y	5.1						0.115	
KQ0603TTE6N8*	2	6.8			27		4800	0.11	
KQ0603TTE7N5*	H	7.5						0.106	
KQ0603TTE8N2*	A	8.2			28		4600	0.12	
KQ0603TTE8N7*	J	8.7					0.109		
KQ0603TTE9N5*	B	9.5					4800	0.125	
KQ0603TTE10N*	3	10						0.13	
KQ0603TTE11N*	K	11			33		4000	0.086	
KQ0603TTE12N*	4	12						0.13	
KQ0603TTE15N*	5	15			35			0.17	
KQ0603TTE16N*	L	16						34	
KQ0603TTE18N*	6	18			35		3100	0.17	
KQ0603TTE22N*	7	22		38	3000		0.19		
KQ0603TTE23N*	S	23		37	2700		0.15		
KQ0603TTE24N*	M	24			2650		0.135		
KQ0603TTE27N*	8	27		40	2800		0.22	600	
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		38			200		
KQ0603TTE51N*	T	51	0.31						
KQ0603TTE56N*	2	56	37	1700	0.34				
KQ0603TTE68N*	3	68	34		150	0.49	400		
KQ0603TTE72N*	4	72		0.54					
KQ0603TTE82N*	5	82	1400	0.58					
KQ0603TTER10*	6	100		1350		0.61	300		
KQ0603TTER11*	7	110	32	1300	0.65				
KQ0603TTER12*	8	120		1400	1.4	160			
KQ0603TTER15*	9	150	100	25	100	1300	2.2	140	
KQ0603TTER18*	0	180				1200	2.3	130	
KQ0603TTER20*	U	200					2.5		
KQ0603TTER21*	V	210				24	1000	2.4	120
KQ0603TTER22*	1	220		900	2.3		170		
KQ0603TTER25*	W	250		840	3.17		110		
KQ0603TTER27*	2	270		30	800		3.0	100	
KQ0603TTER30*	X	300			700	3.7	80		
KQ0603TTER33*	3	330			640	1.21	190		
KQ0603TTER39*	4	390			610	1.26	170		
KQ0603TTER47*	5	470	50	50	560	2.09	130		
KQ0603TTER51*	V	510			590	1.89	150		
KQ0603TTER56*	6	560							
KQ0603TTER62*	W	620							

* Add tolerance character (B, 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)		
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				0.34				
KQ0805TTE43N*	4	43				1650	0.31				
KQ0805TTE47N*	0	47			1550	0.34					
KQ0805TTE56N*	1	56			1450	0.38					
KQ0805TTE68N*	2	68	200	G: ±2% J: ±5% K: ±10%	65		1300	0.42			
KQ0805TTE82N*	3	82					1200	0.46			
KQ0805TTER10*	4	100			50		1100	0.51		400	
KQ0805TTER12*	5	120					920	0.56			
KQ0805TTER15*	6	150									
KQ0805TTER16*	H	160				870	0.64				
KQ0805TTER17*	J	170	250								
KQ0805TTER18*	7	180					850	0.70			
KQ0805TTER19*	D	190									
KQ0805TTER20*	E	200			48		650	1.0	350		
KQ0805TTER21*	F	210									
KQ0805TTER22*	8	220				600	1.4	310			
KQ0805TTER23*	K	230		560		1.5	290				
KQ0805TTER24*	L	240	50	J: ±5% K: ±10%		100	375	1.76		250	
KQ0805TTER25*	G	250					25	23		50	340
KQ0805TTER27*	9	270			188				2.2		190
KQ0805TTER33*	0	330			200				2.3		
KQ0805TTER39*	1	390			215				2.35		
KQ0805TTER47*	2	470	50								
KQ0805TTER56*	3	560	50	J: ±5% K: ±10% M: ±20%	50	4100	0.08	1000			
KQ0805TTER68*	4	680				350	3300		0.09		
KQ0805TTER72*	A	720					3000		0.10		
KQ0805TTER82*	5	820			2500		0.11				
KQ1008TTE10N*	10N	10			2400		0.12				
KQ1008TTE12N*	12N	12			1600	0.13					
KQ1008TTE15N*	15N	15			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.

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						1000		0.18
KQ1008TTE68N*	68N	68								0.20
KQ1008TTE82N*	82N	82								0.22
KQ1008TTER10*	R10	100	0.56	650						
KQ1008TTER12*	R12	120	950		0.63					
KQ1008TTER15*	R15	150	45		100	850	0.70	580		
KQ1008TTER18*	R18	180				750	0.77	620		
KQ1008TTER22*	R22	220				700	0.84	500		
KQ1008TTER27*	R27	270		600		0.91	500			
KQ1008TTER33*	R33	330		570		1.05	450			
KQ1008TTER39*	R39	390		500		1.12	470			
KQ1008TTER47*	R47	470		450		1.19				
KQ1008TTER56*	R56	560		415		1.33	400			
KQ1008TTER62*	R62	620		375		1.40	300			
KQ1008TTER68*	R68	680				1.47	400			
KQ1008TTER75*	R75	750		360		1.54	360			
KQ1008TTER82*	R82	820		350		1.61	400			
KQ1008TTER91*	R91	910		35		50	320	1.68	380	
KQ1008TTE1R0*	1R0	1000					290	1.75	370	
KQ1008TTE1R2*	1R2	1200					250	1.6	310	
KQ1008TTE1R5*	1R5	1500	200		1.7		300			
KQ1008TTE1R8*	1R8	1800	160		1.9		270			
KQ1008TTE2R2*	2R2	2200		2.2	250					
KQ1008TTE2R7*	2R7	2700	22	25		140	2.3			
KQ1008TTE3R3*	3R3	3300			110	2.7	230			
KQ1008TTE3R9*	3R9	3900			100	2.8				
KQ1008TTE4R7*	4R7	4700	20	25	90	3.1	210			
KQ1008TTE5R6*	5R6	5600			15	7.9	80	2.5	240	
KQ1008TTE6R8*	6R8	6800	70	2.8			200			
KQ1008TTE8R2*	8R2	8200	65	3.0			170			
KQ1008TTE100*	100	10000	60	3.4			150			

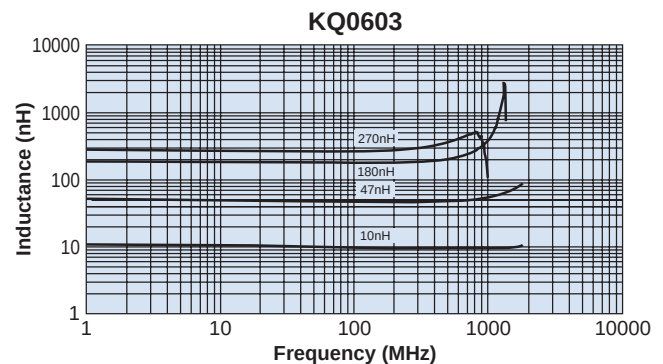
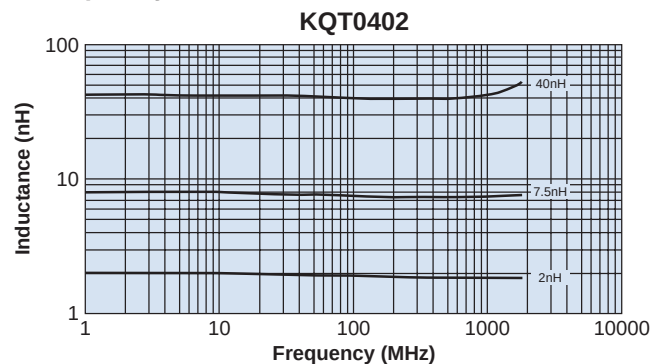
* Add tolerance character (C, G, H, J, K, M)

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

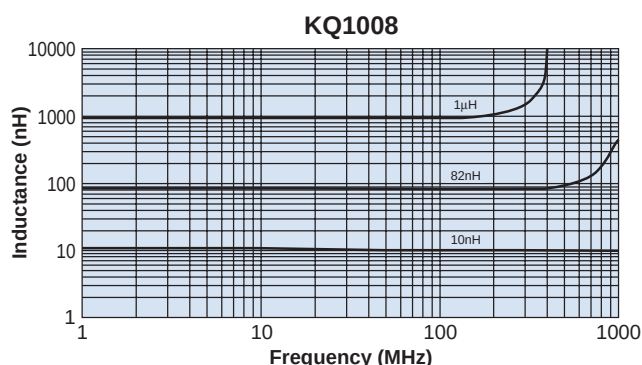
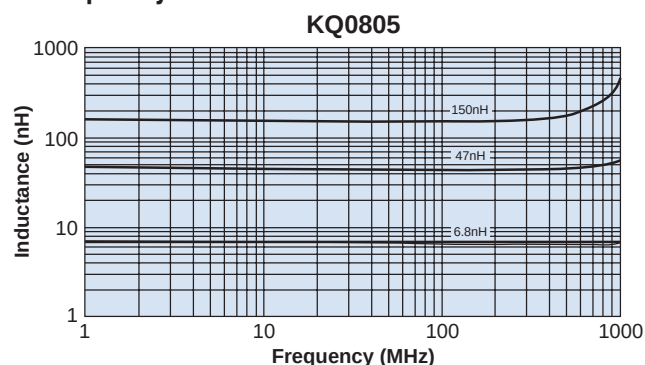


Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

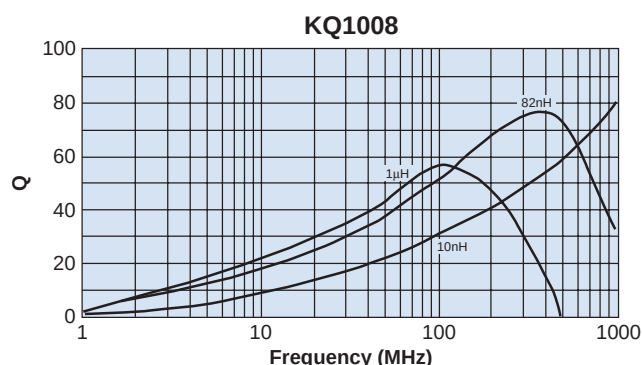
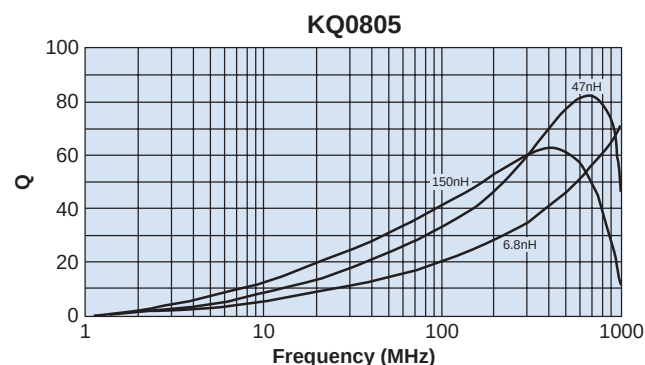
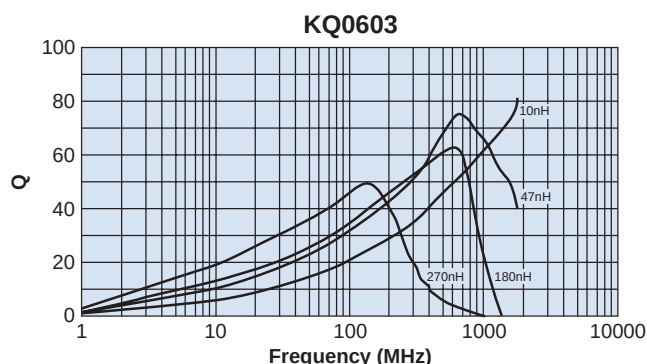
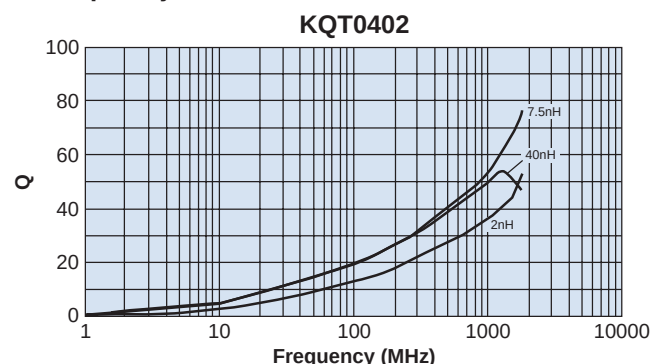
12/19/17

environmental applications (continued)

L-Frequency Characteristics



Q-Frequency Characteristics



Test equipment: HP4291A impedance analyzer

Performance Characteristics

Parameter	Requirements Maximum Limit	$\Delta L/L$ $\Delta Q/Q$ Typical	Test Method
Resistance to Soldering Heat	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 2.7\%$ $\Delta Q/Q: \pm 6.6\%$	$260^\circ\text{C} \pm 5^\circ\text{C}$, 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.)/ $+125^\circ\text{C}$ (30min.) 100 cycles
Low Temperature Exposure	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 1.8\%$ $\Delta Q/Q: \pm 2.8\%$	$-40^\circ\text{C} \pm 2^\circ\text{C}$, 1000h
High Temperature Exposure	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 1.8\%$ $\Delta Q/Q: \pm 5.3\%$	$125^\circ\text{C} \pm 2^\circ\text{C}$, 1000h
Moisture Exposure	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 0.9\%$ $\Delta Q/Q: \pm 6.9\%$	$40^\circ\text{C} \pm 2^\circ\text{C}$, 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