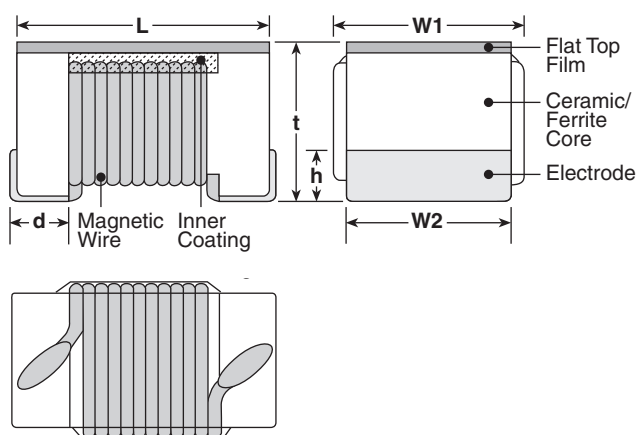


features

- 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)
- Products with lead-free terminations meet EU RoHS requirements

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 ⁺⁰⁰⁸ ₋₀ (1.8 ^{+0.2} ₋₀)	.018±.006 (0.45±0.15)	.018±.004 (0.45±0.1)

ordering information

New Part #	KQ	1008	T	TE	10N	J
Type	KQ KQT	Size Code 0402 0603 0805 1008	Termination Material T: Sn	Packaging 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)	Nominal Resistance 10N: 10nH R10: 0.1μH 1R0: 1.0μH	Tolerance 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	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	1040	
KQT0402T**2N0*		2.0								
KQT0402T**2N2*		2.2					8000	0.068	960	
KQT0402T**2N4*		2.4			18			0.120	700	
KQT0402T**2N7*		2.7		H: ±3% J: ±5% K: ±10%	17		7200	0.066	840	
KQT0402T**3N3*		3.3			19					
KQT0402T**3N6*		3.6			6000		0.091	800		
KQT0402T**3N9*		3.9								
KQT0402T**4N3*		4.3			18		5800	0.083	760	
KQT0402T**4N7*		4.7			20					
KQT0402T**5N1*		5.1			4800		0.086	680		
KQT0402T**5N6*		5.6								
KQT0402T**6N2*		6.2			22		5800	0.104	680	
KQT0402T**6N8*		6.8					4400			
KQT0402T**7N5*		7.5			20		4200	0.150	650	
KQT0402T**8N2*		8.2					4160			
KQT0402T**8N7*		8.7			20		4000	0.150	650	
KQT0402T**9N0*		9.0					3900			
KQT0402T**9N5*		9.5			21		3680	0.120	640	
KQT0402T**10N*		10					3600			
KQT0402T**11N*		11			24		3450	0.180	560	
KQT0402T**12N*		12					3280			
KQT0402T**13N*		13			25		3100	0.200	500	
KQT0402T**15N*		15					3040	0.202		
KQT0402T**16N*		16			24		3000	0.250	450	
KQT0402T**18N*		18					2800	0.323		
KQT0402T**19N*		19			25		2720	0.214	400	
KQT0402T**20N*		20					2700	0.322		
KQT0402T**22N*		22					2480	0.298		
KQT0402T**23N*		23			24		2400	0.354		340
KQT0402T**24N*		24					2320	0.560		
KQT0402T**27N*		27			25		2300	0.550	320	
KQT0402T**30N*		30					2240	0.620	300	
KQT0402T**33N*		33			24		2200	0.810	300	
KQT0402T**34N*		34					2100	0.830	150	
KQT0402T**36N*		36					2800	0.835	240	
KQT0402T**39N*		39			25		2000	1.170	200	
KQT0402T**40N*		40					1800	1.800		
KQT0402T**43N*		43			20		1600	2.090	130	
KQT0402T**47N*		47					1500	2.320	120	
KQT0402T**51N*		51			22					
KQT0402T**56N*		56								
KQT0402T**68N*		68								
KQT0402T**82N*		82								
KQT0402T**R10*		100								
KQT0402T**R12*		120								

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

** Add packaging code

For complete environmental specifications, please refer to pages 222-223.

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

2/27/07

applications and ratings (continued)

	Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)
NEW	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			20		5900	0.063	
	KQ0603TTE4N7*	G	4.7					5800	0.116	
	KQ0603TTE5N1*	Y	5.1			27			0.115	
	KQ0603TTE6N8*	2	6.8		28	4800		0.11		
	KQ0603TTE7N5*	H	7.5					0.106		
	KQ0603TTE8N2*	A	8.2			4600		0.12		
	KQ0603TTE8N7*	J	8.7		0.109					
	KQ0603TTE9N5*	B	9.5		4800	0.125				
	KQ0603TTE10N*	3	10			0.13				
	KQ0603TTE11N*	K	11		4000	0.086				
	KQ0603TTE12N*	4	12			0.13				
	KQ0603TTE15N*	5	15			0.17				
	KQ0603TTE16N*	L	16		3300	0.104				
	KQ0603TTE18N*	6	18		3100	0.17				
	KQ0603TTE22N*	7	22		3000	0.19				
	KQ0603TTE23N*	S	23		2700	0.15				
	KQ0603TTE24N*	M	24		2650	0.135				
	KQ0603TTE27N*	8	27		2800	0.22		600		
	KQ0603TTE30N*	N	30	2250	0.144					
	KQ0603TTE33N*	9	33	2300	0.22					
	KQ0603TTE36N*	P	36	2080	0.25					
	KQ0603TTE39N*	0	39	2200						
	KQ0603TTE43N*	Q	43	2000		0.28				
	KQ0603TTE47N*	1	47							
	KQ0603TTE51N*	T	51	38	200	1900	0.30		400	
	KQ0603TTE56N*	2	56				0.31			
	KQ0603TTE68N*	3	68	37	1700	0.34				
	KQ0603TTE72N*	4	72	34		150	0.49	300		
	KQ0603TTE82N*	5	82		0.54					
	KQ0603TTER10*	6	100	32	150	1400	0.58	160		
	KQ0603TTER11*	7	110			1350	0.61			
	KQ0603TTER12*	8	120	25	100	1300	0.65	140		
	KQ0603TTER15*	9	150				1300		2.2	
	KQ0603TTER18*	0	180	24	100	1200	2.3	130		
	KQ0603TTER20*	U	200				2.5			
KQ0603TTER21*	V	210	30	50	1000	2.4	120			
KQ0603TTER22*	1	220				900		2.3		
KQ0603TTER25*	W	250	30	50	840	3.17	110			
KQ0603TTER27*	2	270				800		3.0		
KQ0603TTER30*	X	300	30	50	700	3.7	80			
KQ0603TTER33*	3	330				640		1.21		
KQ0603TTER39*	4	390	50	J: ±5% K: ±10%	50	610	1.26	170		
KQ0603TTER47*	5	470				610	1.26			
KQ0603TTER51*	V	510								

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

For complete environmental specifications, please refer to pages 222-223.

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12/01/08

applications and ratings (continued)

Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)
KQ0603TTER56*	6	560	50	J: ±5% K: ±10%	30	50	560	2.09	130
KQ0603TTER62*	W	620					590	1.89	150
KQ0603TTER68*	7	680					540	1.97	140
KQ0603TTER75*	X	750					530	2.04	130
KQ0603TTER82*	8	820					490	3.09	110
KQ0603TTER91*	Y	910					480	2.95	120
KQ0603TTE1R0*	9	1000					440	5.13	90
KQ0603TTE1R2*	0	1200					400	5.45	80
KQ0805TTE3N3*	0	3.3					250	G: ±2% J: ±5% K: ±10%	50
KQ0805TTE6N8*	1	6.8	1000	5500	0.11				
KQ0805TTE8N2*	2	8.2	4700	0.12					
KQ0805TTE12N*	3	12	500	4000	0.15	500			
KQ0805TTE15N*	4	15		3400	0.17				
KQ0805TTE18N*	5	18		3300	0.20				
KQ0805TTE20N*	Y	20		55	2600				0.22
KQ0805TTE22N*	6	22	2500		0.25				
KQ0805TTE27N*	7	27	60		2050				0.27
KQ0805TTE33N*	8	33			2000	0.29			
KQ0805TTE39N*	9	39			1650	0.34			
KQ0805TTE43N*	4	43			1550	0.34			
KQ0805TTE47N*	0	47	65		1450	0.38	400		
KQ0805TTE56N*	1	56		1300	0.42				
KQ0805TTE68N*	2	68		1200	0.46				
KQ0805TTE82N*	3	82	150	50	1100	0.51	400		
KQ0805TTER10*	4	100			920	0.56			
KQ0805TTER12*	5	120			870	0.64			
KQ0805TTER15*	6	150		250	850	0.70			
KQ0805TTER16*	H	160			48	650	1.0		350
KQ0805TTER17*	J	170				600	1.4		
KQ0805TTER18*	7	180				560	1.5		
KQ0805TTER19*	D	190		375		1.76	250		
KQ0805TTER20*	E	200		23	50	340	1.9		230
KQ0805TTER21*	F	210				188	2.2		190
KQ0805TTER22*	8	220				215	2.35		180
KQ0805TTER23*	K	230	50			500	4100		0.08
KQ0805TTER24*	L	240		3300	0.09				
KQ0805TTER25*	G	250		3000	0.10				
KQ0805TTER27*	9	270		2500	0.11				
KQ0805TTER33*	0	330	50	J: ±5% K: ±10% M: ±20%	50	350	600		1.4
KQ0805TTER39*	1	390					560	1.5	290
KQ0805TTER47*	2	470					375	1.76	250
KQ0805TTER56*	3	560					340	1.9	230
KQ0805TTER68*	4	680	188				2.2	190	
KQ0805TTER82*	5	820	25	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	

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

For complete environmental specifications, please refer to pages 222-223.

applications and ratings (continued)

Part Designation	Marking	Nominal Inductance (nH)	L Measuring Frequency	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (MHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (mA)		
KQ1008TTE22N*	22N	22	50	J: ±5% K: ±10% M: ±20%	55	350	2400	0.12	1000		
KQ1008TTE27N*	27N	27			60		1600	0.13			
KQ1008TTE33N*	33N	33					1500	0.14			
KQ1008TTE39N*	39N	39			65			0.15			
KQ1008TTE47N*	47N	47					1300	0.16			
KQ1008TTE56N*	56N	56			1000			0.18			
KQ1008TTE68N*	68N	68					950	0.20			
KQ1008TTE82N*	82N	82			60			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			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
KQ1008TTE1R8*	1R8	1800			28	160	1.9	270			
KQ1008TTE2R2*	2R2	2200					22	25	2.2	250	
KQ1008TTE2R7*	2R7	2700			140	2.7			230		
KQ1008TTE3R3*	3R3	3300			110						
KQ1008TTE3R9*	3R9	3900			20	100			2.8		
KQ1008TTE4R7*	4R7	4700				90	3.1	210			
KQ1008TTE5R6*	5R6	5600			15	7.9	80	2.1	240		
KQ1008TTE6R8*	6R8	6800					70	2.3	200		
KQ1008TTE8R2*	8R2	8200					65	2.5	170		
KQ1008TTE100*	100	10000					60	2.9	150		

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

For complete environmental specifications, please refer to pages 222-223.

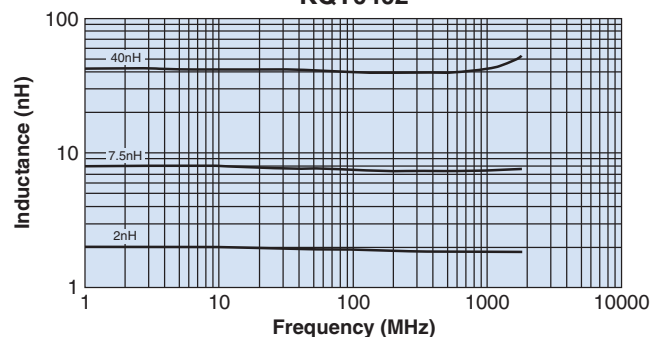
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

11/22/08

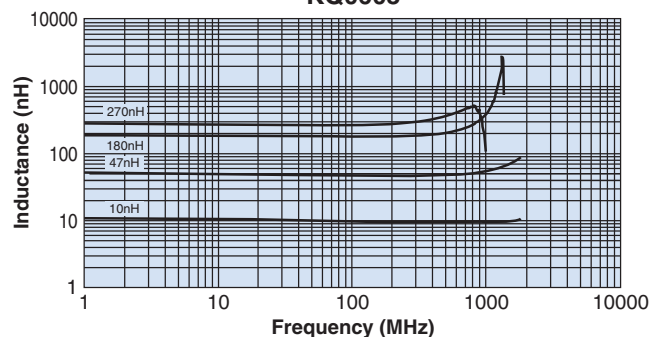
environmental applications

L-Frequency Characteristics

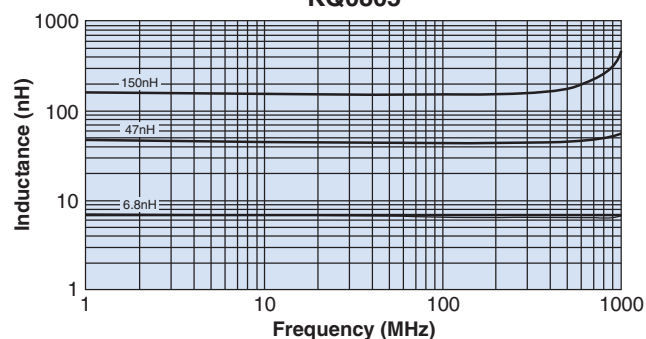
KQT0402



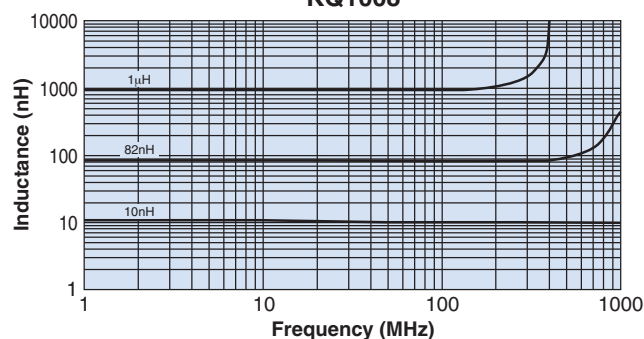
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KQ0805

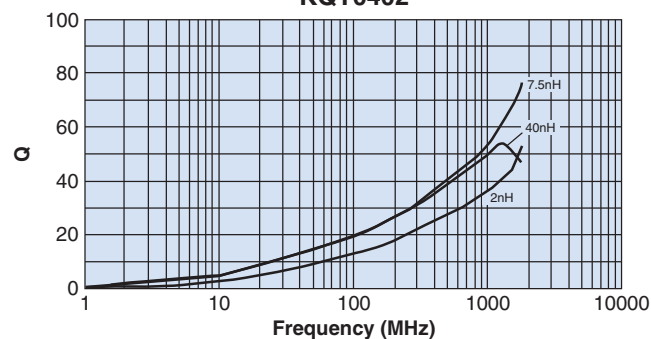


KQ1008

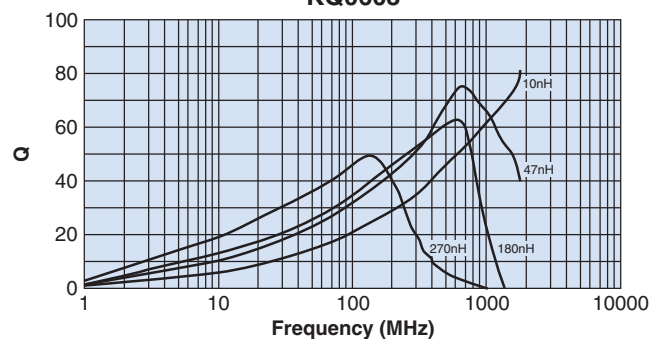


Q-Frequency Characteristics

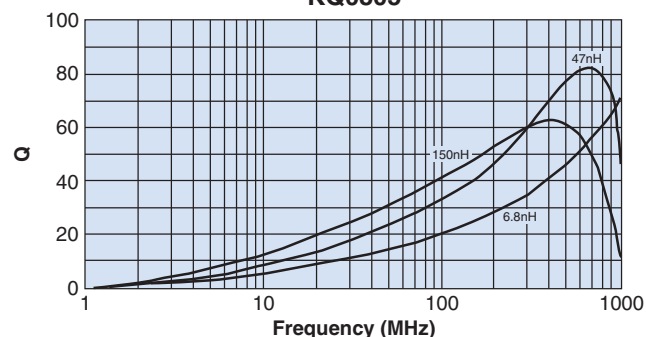
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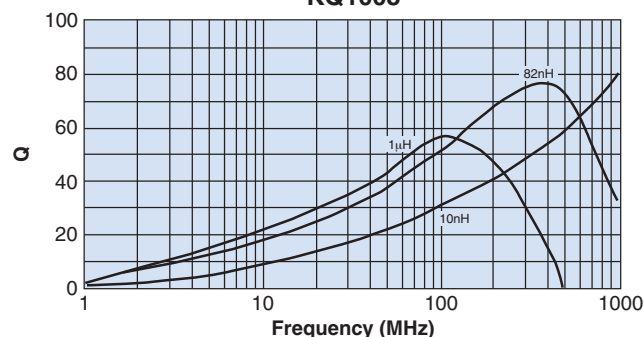
KQ0603



KQ0805



KQ1008



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.

12/28/04

environmental applications (continued)

Performance Characteristics

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