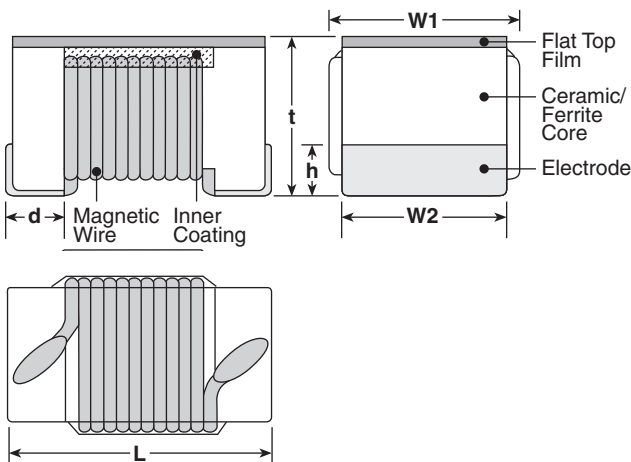


features

- 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
- Marking: White body color with no marking (0402)
Black body color with white marking (0603, 0805, 1008)
- Products with lead-free terminations meet EU RoHS requirements
- AEC-Q200 Qualified

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 Inductance 3 digits: 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: ± 0.1 nH C: ± 0.2 nH	16	250	11000	0.045	1360
KQT0402T**1N9*		1.9					9600	0.070	1040
KQT0402T**2N0*		2.0							
KQT0402T**2N2*		2.2							
KQT0402T**2N4*		2.4			8000		0.068	960	
KQT0402T**2N7*		2.7							
KQT0402T**3N3*		3.3			19		0.066	840	
KQT0402T**3N6*		3.6							
KQT0402T**3N9*		3.9							
KQT0402T**4N3*		4.3							
KQT0402T**4N7*		4.7			18		0.091	800	
KQT0402T**5N1*		5.1							
KQT0402T**5N6*		5.6			20		0.083	760	
KQT0402T**6N2*		6.2							
KQT0402T**6N8*		6.8							
KQT0402T**7N5*		7.5							
KQT0402T**8N2*		8.2		22	0.104		680		
KQT0402T**8N7*		8.7							
KQT0402T**9N0*		9.0		20	0.150		650		
KQT0402T**9N5*		9.5							
KQT0402T**10N*		10		21	0.195		480		
KQT0402T**11N*		11							
KQT0402T**12N*		12		24	0.120		640		
KQT0402T**13N*		13							
KQT0402T**15N*		15							
KQT0402T**16N*		16							
KQT0402T**18N*		18		25	0.200		500		
KQT0402T**19N*		19							
KQT0402T**20N*		20		25	0.230		480		
KQT0402T**22N*		22							
KQT0402T**23N*		23		24	0.250		450		
KQT0402T**24N*		24							
KQT0402T**27N*		27		25	0.323		400		
KQT0402T**30N*		30							
KQT0402T**33N*		33		24	0.354		340		
KQT0402T**34N*		34							
KQT0402T**36N*		36							
KQT0402T**39N*		39							
KQT0402T**40N*		40		25	0.550		320		
KQT0402T**43N*		43							
KQT0402T**47N*	47	20	0.620	300					
KQT0402T**51N*	51								
KQT0402T**56N*	56	25	0.810	150					
KQT0402T**68N*	68								
KQT0402T**82N*	82	22	0.835	240					
KQT0402T**R10*	100								
KQT0402T**R12*	120	1800	1.170	200					
		2000	1.120	140					
		1600	1.810	130					
		1500	2.090	120					

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

** Add packaging code

For complete environmental specifications, please refer to www.koaspeer.com

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12/16/11

applications and ratings (continued)

Inductors

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)
KQ0603TTE1N6*	C	1.6	250	J: $\pm 5\%$ K: $\pm 10\%$	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					5900	0.08	
KQ0603TTE4N3*	F	4.3						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		34	3300		0.17		
KQ0603TTE16N*	L	16					0.104		
KQ0603TTE18N*	6	18		35	3100		0.17		
KQ0603TTE22N*	7	22					0.19		
KQ0603TTE23N*	S	23	38	3000	0.15				
KQ0603TTE24N*	M	24			0.135				
KQ0603TTE27N*	8	27	40	2800	0.22				
KQ0603TTE30N*	N	30			0.144				
KQ0603TTE33N*	9	33	40	2300	0.22				
KQ0603TTE36N*	P	36			0.25				
KQ0603TTE39N*	0	39	40	2200	2000	0.28			
KQ0603TTE43N*	Q	43				0.25			
KQ0603TTE47N*	1	47	39	1900	1700	0.30			
KQ0603TTE51N*	T	51				0.31			
KQ0603TTE56N*	2	56	37	1400	1350	0.34			
KQ0603TTE68N*	3	68				0.49			
KQ0603TTE72N*	4	72	34	1300	1300	0.54			
KQ0603TTE82N*	5	82				0.58			
KQ0603TTER10*	6	100	32	1400	1400	0.61			
KQ0603TTER11*	7	110				0.65			
KQ0603TTER12*	8	120				1.4			
KQ0603TTER15*	9	150				1.4			
KQ0603TTER18*	0	180	25	1300	1200	2.2			
KQ0603TTER20*	U	200				2.3			
KQ0603TTER21*	V	210	24	1000	900	2.5			
KQ0603TTER22*	1	220				2.4			
KQ0603TTER25*	W	250	30	800	800	2.3			
KQ0603TTER27*	2	270				3.17			
KQ0603TTER30*	X	300	30	700	700	3.0			
KQ0603TTER33*	3	330				3.7			
KQ0603TTER39*	4	390	50	J: $\pm 5\%$ K: $\pm 10\%$	50	640			
KQ0603TTER47*	5	470				1.21			
KQ0603TTER51*	V	510				610	1.26	170	

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12/31/10

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: $\pm 5\%$ K: $\pm 10\%$	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: $\pm 2\%$ 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			1650	0.34																							
KQ0805TTE43N*	4	43			1550	0.34																							
KQ0805TTE47N*	0	47	60	50	1450	0.38	400																						
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			870	0.64																							
KQ0805TTER15*	6	150	100	G: $\pm 2\%$ J: $\pm 5\%$ K: $\pm 10\%$	50	250	0.70	400																					
KQ0805TTER16*	H	160							50	250	850	0.70	400																
KQ0805TTER17*	J	170												50	250	850	0.70	400											
KQ0805TTER18*	7	180																	50	250	850	0.70	400						
KQ0805TTER19*	D	190																						50	250	850	0.70	400	
KQ0805TTER20*	E	200																											50
KQ0805TTER21*	F	210			50	250	850	0.70																					
KQ0805TTER22*	8	220							50	250	850	0.70	400																
KQ0805TTER23*	K	230												50	250	850	0.70	400											
KQ0805TTER24*	L	240																	50	250	850	0.70	400						
KQ0805TTER25*	G	250																						50	250	850	0.70	400	
KQ0805TTER27*	9	270																											50
KQ0805TTER33*	0	330	50	250	850	0.70	400																						
KQ0805TTER39*	1	390						50	250	850	0.70	400																	
KQ0805TTER47*	2	470											50	250	850	0.70	400												
KQ0805TTER56*	3	560																50	250	850	0.70	400							
KQ0805TTER68*	4	680																					50	250	850	0.70	400		
KQ0805TTER82*	5	820																										50	250
KQ1008TTE10N*	10N	10	50	J: $\pm 5\%$ K: $\pm 10\%$ M: $\pm 20\%$	50	500	4100																						
KQ1008TTE12N*	12N	12					50	500	3300	0.09																			
KQ1008TTE15N*	15N	15									50	500	3000	0.10															
KQ1008TTE18N*	18N	18													50	500	2500	0.11											
KQ1008TTE22N*	22N	22																	50	500	2400	0.12							
KQ1008TTE27N*	27N	27																					50	500	1600	0.13			
KQ0805TTER47*	2	470			33	100																					375	1.76	250
KQ0805TTER56*	3	560			25	J: $\pm 5\%$ K: $\pm 10\%$	23	50	340	1.9																	230		
KQ0805TTER68*	4	680							188	2.2	190																		
KQ0805TTER82*	5	820	215	2.35					180																				

* Add tolerance character (C, G, H, J, K, M) For complete environmental specifications, please refer to www.koaspeer.com
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applications and ratings (continued)

Inductors

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)	
KQ1008TTE33N*	33N	33	50	J: ±5% K: ±10% M: ±20%	60	350	1600	0.14	1000	
KQ1008TTE39N*	39N	39					1500	0.15		
KQ1008TTE47N*	47N	47					1300	0.18		
KQ1008TTE56N*	56N	56			65		1000	0.20		
KQ1008TTE68N*	68N	68					950	0.22		
KQ1008TTE82N*	82N	82					850	0.56		
KQ1008TTER10*	R10	100	25	G: ±2% J: ±5% K: ±10%	60	100	0.63	650		
KQ1008TTER12*	R12	120					750	0.70		
KQ1008TTER15*	R15	150					700	0.77		
KQ1008TTER18*	R18	180					600	0.84		
KQ1008TTER22*	R22	220					570	0.91		
KQ1008TTER27*	R27	270			45		50	500	1.05	500
KQ1008TTER33*	R33	330						450	1.12	470
KQ1008TTER39*	R39	390						415	1.19	400
KQ1008TTER47*	R47	470						375	1.33	300
KQ1008TTER56*	R56	560						360	1.40	400
KQ1008TTER62*	R62	620						350	1.47	360
KQ1008TTER68*	R68	680						320	1.54	380
KQ1008TTER75*	R75	750						290	1.68	370
KQ1008TTER82*	R82	820						250	1.75	310
KQ1008TTER91*	R91	910						200	1.6	300
KQ1008TTE1R0*	1R0	1000			35		50	160	1.7	270
KQ1008TTE1R2*	1R2	1200						220	1.9	250
KQ1008TTE1R5*	1R5	1500						140	2.2	250
KQ1008TTE1R8*	1R8	1800						110	2.3	230
KQ1008TTE2R2*	2R2	2200						100	2.7	210
KQ1008TTE2R7*	2R7	2700			22		25	90	2.8	210
KQ1008TTE3R3*	3R3	3300						80	3.1	240
KQ1008TTE3R9*	3R9	3900						70	2.5	240
KQ1008TTE4R7*	4R7	4700			20		7.9	65	2.8	200
KQ1008TTE5R6*	5R6	5600						60	2.5	170
KQ1008TTE6R8*	6R8	6800	60	3.4		150				
KQ1008TTE8R2*	8R2	8200	15	7.9	60	3.4	150			
KQ1008TTE100*	100	10000			60	3.4	150			

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

environmental applications

Performance Characteristics

Parameter	Requirements Maximum Δ L/L		Test Method
	Limit	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

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12/31/10