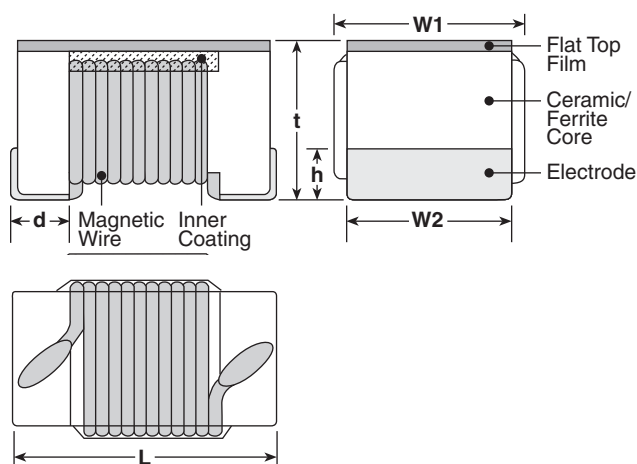


features

- 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 ^{+.02} ₋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 (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			19		9600	0.070	1040	
KQT0402T**2N0*		2.0								
KQT0402T**2N2*		2.2								
KQT0402T**2N4*		2.4			18		8000	0.068	960	
KQT0402T**2N7*		2.7			17			0.120	700	
KQT0402T**3N3*		3.3		H: ±3% J: ±5% K: ±10%	19		7200	0.066	840	
KQT0402T**3N6*		3.6			18		6000	0.091	800	
KQT0402T**3N9*		3.9								
KQT0402T**4N3*		4.3			20		5800	0.083	760	
KQT0402T**4N7*		4.7								
KQT0402T**5N1*		5.1					4800	0.086	680	
KQT0402T**5N6*		5.6			22					
KQT0402T**6N2*		6.2			5800		0.104	680		
KQT0402T**6N8*		6.8			20				4400	
KQT0402T**7N5*		7.5			20		4200	0.150	650	
KQT0402T**8N2*		8.2			22		4160	0.104	680	
KQT0402T**8N7*		8.7			20		4000	0.150	650	
KQT0402T**9N0*		9.0			21		3900	0.195	480	
KQT0402T**9N5*		9.5			24		3680	0.120	640	
KQT0402T**10N*		10					3600			
KQT0402T**11N*		11			25		3450	0.180	560	
KQT0402T**12N*		12			24		3280	0.172		
KQT0402T**13N*		13			25		3100	0.200	500	
KQT0402T**15N*		15			24			0.230		
KQT0402T**16N*		16			25		3040	0.202	480	
KQT0402T**18N*		18			25		3000	0.250	450	
KQT0402T**19N*		19			24		2800	0.323	400	
KQT0402T**20N*		20			25		2720	0.214		
KQT0402T**22N*		22			24		2700	0.322		
KQT0402T**23N*		23			25		2480	0.298		
KQT0402T**24N*		24			24		2400	0.354		
KQT0402T**27N*		27			25			0.393		
KQT0402T**30N*		30			24		2320	0.550	340	
KQT0402T**33N*		33			25			0.560	320	
KQT0402T**34N*		34			25		2300	0.550	300	
KQT0402T**36N*		36			24		2240	0.620	320	
KQT0402T**39N*		39			25		2200	0.810	300	
KQT0402T**40N*		40			20		2100	0.830	150	
KQT0402T**43N*		43			25			0.835	240	
KQT0402T**47N*		47			22		2800	1.170	200	
KQT0402T**51N*		51			22		2000	1.120		
KQT0402T**56N*		56			22		1800	1.810	140	
KQT0402T**68N*		68			22		1600	2.090	130	
KQT0402T**82N*		82			22		1500	2.320	120	
KQT0402T**R10*		100			22					
KQT0402T**R12*		120								

* Add tolerancing 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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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			27			0.115		
KQ0603TTE6N8*	2	6.8			4800		0.11			
KQ0603TTE7N5*	H	7.5					28			0.106
KQ0603TTE8N2*	A	8.2		G: ±2% J: ±5% K: ±10%			4600	0.12		
KQ0603TTE8N7*	J	8.7					4800	0.109		
KQ0603TTE9N5*	B	9.5		31			4800	0.125		
KQ0603TTE10N*	3	10						0.13		
KQ0603TTE11N*	K	11		33	4000		0.086			
KQ0603TTE12N*	4	12		35			0.13			
KQ0603TTE15N*	5	15		3300	0.17					
KQ0603TTE16N*	L	16			34		0.104			
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	200		37	200	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	1900		0.30	
KQ0603TTE51N*	T	51							0.31	
KQ0603TTE56N*	2	56			37		1700	0.34	400	
KQ0603TTE72N*	4	72			150			0.49		
KQ0603TTE82N*	5	82	1400	0.58			300			
KQ0603TTER10*	6	100	32		1350	0.61				
KQ0603TTER11*	7	110			1300	0.65				
KQ0603TTER12*	8	120	25	100	1400	1.4	160			
KQ0603TTER15*	9	150			1300	2.2	140			
KQ0603TTER18*	0	180	100		1200	2.3	130			
KQ0603TTER20*	U	200				24		2.5	120	
KQ0603TTER21*	V	210			1000			2.4		
KQ0603TTER22*	1	220			900			2.3	170	
KQ0603TTER25*	W	250			30	50	840	3.17	110	
KQ0603TTER27*	2	270					800	3.0	100	
KQ0603TTER30*	X	300					700	3.7	80	
KQ0603TTER33*	3	330			30		50	640	1.21	190
KQ0603TTER39*	4	390						610	1.26	170
KQ0603TTER47*	5	470	560	2.09				130		
KQ0603TTER51*	V	510	50	J: ±5% K: ±10%				590	1.89	150
KQ0603TTER56*	6	560								
KQ0603TTER62*	W	620								

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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)			
NEW	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					250	50	1500	6000	0.08	600
	KQ0805TTE3N3*	0	3.3							1000	5500	0.11	
	KQ0805TTE6N8*	1	6.8	4700	0.12								
	KQ0805TTE8N2*	2	8.2	4000	0.15								
	KQ0805TTE12N*	3	12	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	1650			0.34			
	KQ0805TTE43N*	4	43				0.31						
	KQ0805TTE47N*	0	47	1550			0.34						
	KQ0805TTE56N*	1	56	1450			0.38						
	KQ0805TTE68N*	2	68	65		250	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		850		0.70						
	KQ0805TTER17*	J	170	48				650	1.0	350			
	KQ0805TTER18*	7	180										
	KQ0805TTER19*	D	190										
	KQ0805TTER20*	E	200										
	KQ0805TTER21*	F	210										
	KQ0805TTER22*	8	220										
	KQ0805TTER23*	K	230										
	KQ0805TTER24*	L	240										
	KQ0805TTER25*	G	250										
	KQ0805TTER27*	9	270										
	KQ0805TTER33*	0	330										
	KQ0805TTER39*	1	390										
	KQ0805TTER47*	2	470	50	J: ±5% K: ±10%	33	100	375	1.76	250			
	KQ0805TTER56*	3	560	25		23	50	340	1.9	230			
	KQ0805TTER68*	4	680					188	2.2	190			
	KQ0805TTER82*	5	820					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							
	KQ1008TTE22N*	22N	22	55		350	2400		0.12				
	KQ1008TTE27N*	27N	27				1600		0.13				
	KQ1008TTE33N*	33N	33				1600		0.14				
	KQ1008TTE39N*	39N	39				1500		0.15				
	KQ1008TTE47N*	47N	47	65		0.16							

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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)
KQ1008TTE56N*	56N	56	50	G: ±2% J: ±5% K: ±10%	65	350	1300	0.18	1000
KQ1008TTE68N*	68N	68						0.20	
KQ1008TTE82N*	82N	82						0.22	
KQ1008TTER10*	R10	100	25		60	350	1000	0.56	650
KQ1008TTER12*	R12	120						0.63	
KQ1008TTER15*	R15	150						0.70	
KQ1008TTER18*	R18	180			45	100	850	0.77	580
KQ1008TTER22*	R22	220					750	0.84	620
KQ1008TTER27*	R27	270					700	0.91	500
KQ1008TTER33*	R33	330					600	1.05	500
KQ1008TTER39*	R39	390					570	1.12	450
KQ1008TTER47*	R47	470					500	1.19	470
KQ1008TTER56*	R56	560					450	1.33	400
KQ1008TTER62*	R62	620					415	1.40	300
KQ1008TTER68*	R68	680					375	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	28		50	200	1.7	300	
KQ1008TTE1R8*	1R8	1800				160	1.9	270	
KQ1008TTE2R2*	2R2	2200				140	2.2	250	
KQ1008TTE2R7*	2R7	2700	22		25	110	2.3	230	
KQ1008TTE3R3*	3R3	3300				100	2.7	210	
KQ1008TTE3R9*	3R9	3900				90	3.1	210	
KQ1008TTE4R7*	4R7	4700	20		7.9	80	2.5	240	
KQ1008TTE5R6*	5R6	5600				70	2.8	200	
KQ1008TTE6R8*	6R8	6800				65	3.0	170	
KQ1008TTE8R2*	8R2	8200	15			60	3.4	150	
KQ1008TTE100*	100	10000							

* 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

Performance Characteristics

Parameter	Requirements Maximum Limit	Δ L/L Δ Q/Q Typical	Test Method
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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