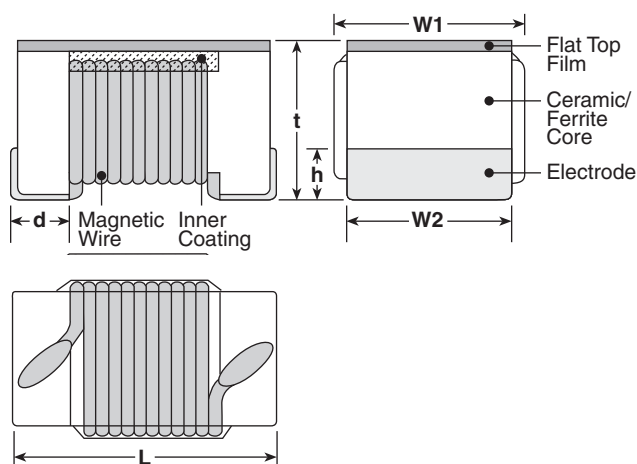


features

- 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			4400					
KQT0402T**7N5*		7.5			20		4200	0.150	650	
KQT0402T**8N2*		8.2					4160	0.104	680	
KQT0402T**8N7*		8.7			20		4000	0.150	650	
KQT0402T**9N0*		9.0			22		3900	0.195	480	
KQT0402T**9N5*		9.5			24		3680	0.120	640	
KQT0402T**10N*		10					3600			
KQT0402T**11N*		11					3450	0.180	560	
KQT0402T**12N*		12			25		3280	0.172		
KQT0402T**13N*		13					3100	0.200	500	
KQT0402T**15N*		15						0.230		
KQT0402T**16N*		16			24		3040	0.202	480	
KQT0402T**18N*		18					3000	0.250	450	
KQT0402T**19N*		19			25		2800	0.323	400	
KQT0402T**20N*		20					2720	0.214		
KQT0402T**22N*		22					2700	0.322		
KQT0402T**23N*		23			24		2480	0.298		
KQT0402T**24N*		24					2400	0.354		
KQT0402T**27N*		27						0.393		
KQT0402T**30N*		30			24		2320	0.550	340	
KQT0402T**33N*		33						0.560	320	
KQT0402T**34N*		34			25		2300	0.550	300	
KQT0402T**36N*		36					2240	0.620	320	
KQT0402T**39N*		39					2200	0.810	300	
KQT0402T**40N*		40			20		2100	0.830	150	
KQT0402T**43N*		43						0.835	240	
KQT0402T**47N*		47			25		2800	1.170	200	
KQT0402T**51N*		51					2000	1.120		
KQT0402T**56N*		56			22		1800	1.810	140	
KQT0402T**68N*		68					1600	2.090	130	
KQT0402T**82N*		82					1500	2.320	120	
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 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						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	3300	
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			
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	1900	0.30		
KQ0603TTE51N*	T	51					0.31		
KQ0603TTE56N*	2	56	37			0.34			
KQ0603TTE68N*	3	68	150		34	1700	0.49		
KQ0603TTE72N*	4	72		0.54					
KQ0603TTE82N*	5	82		1400		0.58			
KQ0603TTER10*	6	100		1350		0.61			
KQ0603TTER11*	7	110		32	1300	0.65			
KQ0603TTER12*	8	120			1400	1.4			
KQ0603TTER15*	9	150			1300	2.2			
KQ0603TTER18*	0	180			1200	2.3			
KQ0603TTER20*	U	200	25	1000	2.4				
KQ0603TTER21*	V	210			2.5				
KQ0603TTER22*	1	220		24	900	2.3			
KQ0603TTER25*	W	250			840	3.17			
KQ0603TTER27*	2	270	30		800	3.0			
KQ0603TTER30*	X	300			700	3.7			
KQ0603TTER33*	3	330		640	1.21				
KQ0603TTER39*	4	390		610	1.26				
KQ0603TTER47*	5	470	50	50	560	2.09			
KQ0603TTER51*	V	510			590	1.89			
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					J: ±2% J: ±5% K: ±10%	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		500	3400	0.17	500						
KQ0805TTE15N*	4	15			3300	0.20							
KQ0805TTE18N*	5	18			2600	0.22							
KQ0805TTE20N*	Y	20			2500	0.25							
KQ0805TTE22N*	6	22	60	2050	0.27	500							
KQ0805TTE27N*	7	27		2000	0.29								
KQ0805TTE33N*	8	33		1650	0.34								
KQ0805TTE39N*	9	39		1550	0.34								
KQ0805TTE43N*	4	43	200	65	250	1450	0.38	400					
KQ0805TTE47N*	0	47				1300	0.42						
KQ0805TTE56N*	1	56				1200	0.46						
KQ0805TTE68N*	2	68				1100	0.51						
KQ0805TTE82N*	3	82	150	50	48	920	0.56	350					
KQ0805TTER10*	4	100				870	0.64						
KQ0805TTER12*	5	120				850	0.70						
KQ0805TTER15*	6	150				650	1.0						
KQ0805TTER16*	H	160	100	J: ±5% K: ±10%	23	50	600	1.4	310				
KQ0805TTER17*	J	170					560	1.5	290				
KQ0805TTER18*	7	180					375	1.76	250				
KQ0805TTER19*	D	190					340	1.9	230				
KQ0805TTER20*	E	200					188	2.2	190				
KQ0805TTER21*	F	210					215	2.35	180				
KQ0805TTER22*	8	220					50	J: ±5% K: ±10% M: ±20%	50	4100	0.08	1000	
KQ0805TTER23*	K	230								3300	0.09		
KQ0805TTER24*	L	240	3000	0.10									
KQ0805TTER25*	G	250	2500	0.11									
KQ0805TTER27*	9	270	2400	0.12									
KQ0805TTER33*	0	330	1600	0.13									
KQ0805TTER39*	1	390	1600	0.14									
KQ0805TTER47*	2	470	1500	0.15									
KQ0805TTER56*	3	560	50	J: ±5% K: ±10% M: ±20%	33	100	0.16						
KQ0805TTER68*	4	680	25				23	50	375	1.76	250		
KQ0805TTER82*	5	820	340						1.9	230			
KQ1008TTE10N*	10N	10	188						2.2	190			
KQ1008TTE12N*	12N	12	215						2.35	180			
KQ1008TTE15N*	15N	15	4100						0.08	1000			
KQ1008TTE18N*	18N	18	3300						0.09				
KQ1008TTE22N*	22N	22	3000						0.10				
KQ1008TTE27N*	27N	27	2500	0.11									
KQ1008TTE33N*	33N	33	2400	0.12									
KQ1008TTE39N*	39N	39	1600	0.13									
KQ1008TTE47N*	47N	47	1600	0.14									

* 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)

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	1000	1000	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
KQ1008TTE1R0*	1R0	1000	290		1.75	370			
KQ1008TTE1R2*	1R2	1200	28		250	1.6	310		
KQ1008TTE1R5*	1R5	1500			200	1.7	300		
KQ1008TTE1R8*	1R8	1800	28		160	1.9	270		
KQ1008TTE2R2*	2R2	2200				2.2			
KQ1008TTE2R7*	2R7	2700	22		25	140	2.3	250	
KQ1008TTE3R3*	3R3	3300				110	2.7		
KQ1008TTE3R9*	3R9	3900	20			100	2.8	230	
KQ1008TTE4R7*	4R7	4700			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

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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