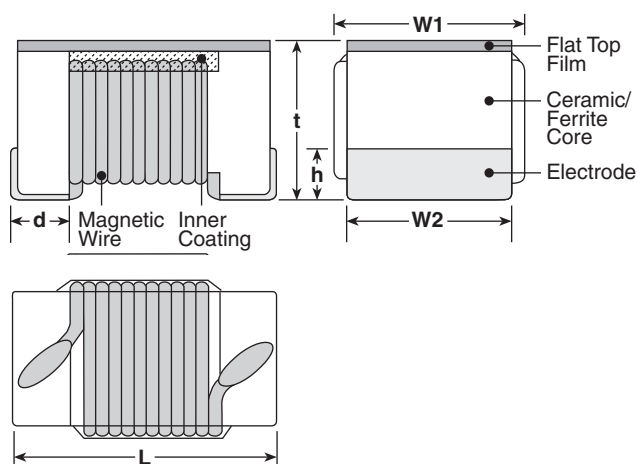


features

- 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			9600		0.070	1040					
KQT0402T**2N0*		2.0							8000	0.068 0.120	960 700		
KQT0402T**2N2*		2.2										7200	0.066
KQT0402T**2N4*		2.4		6000									
KQT0402T**2N7*		2.7			5800		0.083	760					
KQT0402T**3N3*		3.3							4800	0.086	680		
KQT0402T**3N6*		3.6										5800	0.104
KQT0402T**3N9*		3.9		4400									
KQT0402T**4N3*		4.3			4160		0.104	680					
KQT0402T**4N7*		4.7							4000	0.150	650		
KQT0402T**5N1*		5.1										3900	0.195
KQT0402T**5N6*		5.6		3680									
KQT0402T**6N2*		6.2			3450		0.180	560					
KQT0402T**6N8*		6.8							3280	0.172	560		
KQT0402T**7N5*		7.5										3100	0.200
KQT0402T**8N2*		8.2		3040									
KQT0402T**8N7*		8.7			3000		0.250	450					
KQT0402T**9N0*		9.0							2800	0.323	400		
KQT0402T**9N5*		9.5										2720	0.214
KQT0402T**10N*		10		2700									
KQT0402T**11N*		11			2480		0.298	400					
KQT0402T**12N*		12							2400	0.354	340		
KQT0402T**13N*		13										2320	0.560
KQT0402T**15N*		15		2300									
KQT0402T**16N*		16			2240		0.620	320					
KQT0402T**18N*		18							2200	0.810	300		
KQT0402T**19N*		19										2100	0.830
KQT0402T**20N*		20		2800									
KQT0402T**22N*		22			2000		1.120	200					
KQT0402T**23N*		23							1800	1.810	140		
KQT0402T**24N*		24										1600	2.090
KQT0402T**27N*		27		1500									
KQT0402T**30N*		30			22								
KQT0402T**33N*		33											
KQT0402T**34N*		34											
KQT0402T**36N*		36											
KQT0402T**39N*		39											
KQT0402T**40N*		40											
KQT0402T**43N*		43											
KQT0402T**47N*		47											
KQT0402T**51N*		51											
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

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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		0.11		
KQ0603TTE7N5*	H	7.5			28		4800	0.106	
KQ0603TTE8N2*	A	8.2		0.12					
KQ0603TTE8N7*	J	8.7		4600			0.109		
KQ0603TTE9N5*	B	9.5		4800			0.125		
KQ0603TTE10N*	3	10			0.13				
KQ0603TTE11N*	K	11		33	4000		0.086		
KQ0603TTE12N*	4	12		35			0.13		
KQ0603TTE15N*	5	15					0.17		
KQ0603TTE16N*	L	16		34			3300	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			
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	200	2000	0.28	
KQ0603TTE51N*	T	51					1900	0.30	
KQ0603TTE56N*	2	56				0.31			
KQ0603TTE68N*	3	68			37	0.34			
KQ0603TTE72N*	4	72	34	150	1700	0.49			
KQ0603TTE82N*	5	82				0.54			
KQ0603TTER10*	6	100			1400	0.58			
KQ0603TTER11*	7	110			1350	0.61			
KQ0603TTER12*	8	120	32		1300	0.65			
KQ0603TTER15*	9	150			1400	1.4			
KQ0603TTER18*	0	180	100	25	100	1300	2.2	140	
KQ0603TTER20*	U	200				1200	2.3	130	
KQ0603TTER21*	V	210					2.5	120	
KQ0603TTER22*	1	220				1000	2.4		
KQ0603TTER25*	W	250		24		900	2.3	170	
KQ0603TTER27*	2	270				840	3.17	110	
KQ0603TTER30*	X	300			30	800	3.0	100	
KQ0603TTER33*	3	330				700	3.7	80	
KQ0603TTER39*	4	390		640		1.21	190		
KQ0603TTER47*	5	470		610		1.26	170		
KQ0603TTER51*	V	510		50	50	560	2.09	130	
KQ0603TTER56*	6	560				590	1.89	150	
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			400			
	KQ0805TTE43N*	4	43			1550	0.31						
	KQ0805TTE47N*	0	47			1450	0.34						
	KQ0805TTE56N*	1	56			1300	0.38						
	KQ0805TTE68N*	2	68	65	1100	0.42	350						
	KQ0805TTE82N*	3	82		1200	0.46							
	KQ0805TTER10*	4	100		1100	0.51							
	KQ0805TTER12*	5	120		920	0.56							
	KQ0805TTER15*	6	150	100	50	250	870	0.64	400				
	KQ0805TTER16*	H	160				48	850		0.70			
	KQ0805TTER17*	J	170					650		1.0	350		
	KQ0805TTER18*	7	180					600		1.4			
	KQ0805TTER19*	D	190					560		1.5			
	KQ0805TTER20*	E	200					375		1.76			
	KQ0805TTER21*	F	210		340			1.9					
	KQ0805TTER22*	8	220		23		50	188	2.2	190			
	KQ0805TTER23*	K	230			215		2.35	180				
	KQ0805TTER24*	L	240			4100		0.08			1000		
	KQ0805TTER25*	G	250			3300		0.09					
	KQ0805TTER27*	9	270		3000	0.10							
	KQ0805TTER33*	0	330	2500	0.11								
	KQ0805TTER39*	1	390	2400	0.12								
	KQ0805TTER47*	2	470	1600	0.13								
	KQ0805TTER56*	3	560	1600	0.14								
	KQ0805TTER68*	4	680	1500	0.15								
	KQ0805TTER82*	5	820		0.16								
	KQ1008TTE10N*	10N	10	50	J: ±5% K: ±10% M: ±20%	50	500			1000			
KQ1008TTE12N*	12N	12											
KQ1008TTE15N*	15N	15											
KQ1008TTE18N*	18N	18											
KQ1008TTE22N*	22N	22	55			350	2500	0.11					
KQ1008TTE27N*	27N	27					2400	0.12					
KQ1008TTE33N*	33N	33					1600	0.13					
KQ1008TTE39N*	39N	39					1600	0.14					
KQ1008TTE47N*	47N	47	60		1500	0.15							
			65			0.16							

* 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					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			45	100	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
KQ1008TTE1R0*	1R0	1000	290						1.75	370
KQ1008TTE1R2*	1R2	1200	250						1.6	310
KQ1008TTE1R5*	1R5	1500	28				200		1.7	300
KQ1008TTE1R8*	1R8	1800			160	1.9	270			
KQ1008TTE2R2*	2R2	2200			2.2	250				
KQ1008TTE2R7*	2R7	2700	22		140		2.3			
KQ1008TTE3R3*	3R3	3300			25	110	2.7	230		
KQ1008TTE3R9*	3R9	3900				100	2.8			
KQ1008TTE4R7*	4R7	4700	90			3.1	210			
KQ1008TTE5R6*	5R6	5600	15			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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