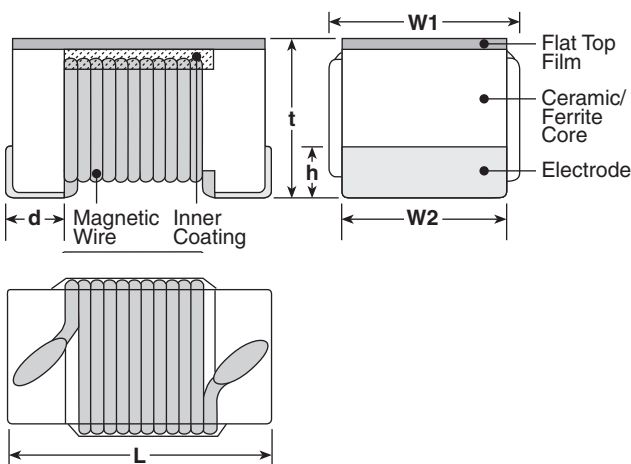


features

- 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			7200		0.066	840	
KQT0402T**3N6*		3.6							
KQT0402T**3N9*		3.9							
KQT0402T**4N3*		4.3							
KQT0402T**4N7*		4.7			6000		0.091	800	
KQT0402T**5N1*		5.1							
KQT0402T**5N6*		5.6			5800		0.083	760	
KQT0402T**6N2*		6.2							
KQT0402T**6N8*		6.8			4800		0.086	680	
KQT0402T**7N5*		7.5							
KQT0402T**8N2*		8.2		5800	0.104		680		
KQT0402T**8N7*		8.7							
KQT0402T**9N0*		9.0		4200	0.150		650		
KQT0402T**9N5*		9.5							
KQT0402T**10N*		10		4160	0.104		680		
KQT0402T**11N*		11							
KQT0402T**12N*		12		4000	0.150		650		
KQT0402T**13N*		13							
KQT0402T**15N*		15		3900	0.195		480		
KQT0402T**16N*		16							
KQT0402T**18N*		18		3680	0.120		640		
KQT0402T**19N*		19							
KQT0402T**20N*		20		3600	0.180		560		
KQT0402T**22N*		22							
KQT0402T**23N*		23		3280	0.172		500		
KQT0402T**24N*		24							
KQT0402T**27N*		27		3100	0.200		480		
KQT0402T**30N*		30							
KQT0402T**33N*		33		3040	0.202		480		
KQT0402T**34N*		34							
KQT0402T**36N*		36		3000	0.250		450		
KQT0402T**39N*		39							
KQT0402T**40N*		40		2800	0.323		400		
KQT0402T**43N*		43							
KQT0402T**47N*	47	2720	0.214	400					
KQT0402T**51N*	51								
KQT0402T**56N*	56	2700	0.322	400					
KQT0402T**68N*	68								
KQT0402T**82N*	82	2480	0.298	400					
KQT0402T**R10*	100								
KQT0402T**R12*	120	2400	0.354	340					
		2320	0.560	320					
		2300	0.550	300					
		2240	0.620	320					
		2200	0.810	300					
		2100	0.830	150					
		2800	1.170	200					
		2000	1.120	140					
		1800	1.810	130					
		1600	2.090	130					
		1500	2.320	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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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			20		5800	0.08	
KQ0603TTE4N3*	F	4.3						0.063	
KQ0603TTE4N7*	G	4.7			27		4800	0.116	
KQ0603TTE5N1*	Y	5.1						0.115	
KQ0603TTE6N8*	2	6.8			28		4600	0.11	
KQ0603TTE7N5*	H	7.5						0.106	
KQ0603TTE8N2*	A	8.2		31	4800	0.12			
KQ0603TTE8N7*	J	8.7				0.109			
KQ0603TTE9N5*	B	9.5		33	4000	0.125			
KQ0603TTE10N*	3	10				0.13			
KQ0603TTE11N*	K	11		35	3300	0.086			
KQ0603TTE12N*	4	12				0.13			
KQ0603TTE15N*	5	15		34	3100	0.17			
KQ0603TTE16N*	L	16				0.104			
KQ0603TTE18N*	6	18		35	3000	0.17			
KQ0603TTE22N*	7	22				0.19			
KQ0603TTE23N*	S	23	38	2700	0.15				
KQ0603TTE24N*	M	24			0.135				
KQ0603TTE27N*	8	27	37	2800	0.22				
KQ0603TTE30N*	N	30			0.144				
KQ0603TTE33N*	9	33	40	2300	0.22				
KQ0603TTE36N*	P	36			0.25				
KQ0603TTE39N*	0	39	38	2000	0.28				
KQ0603TTE43N*	Q	43			0.30				
KQ0603TTE47N*	1	47	40	1900	0.31				
KQ0603TTE51N*	T	51			0.34				
KQ0603TTE56N*	2	56	37	1700	0.49				
KQ0603TTE68N*	3	68			0.54				
KQ0603TTE72N*	4	72	34	1400	0.58				
KQ0603TTE82N*	5	82			0.61				
KQ0603TTER10*	6	100	32	1350	0.65				
KQ0603TTER11*	7	110			1.4				
KQ0603TTER12*	8	120	25	1300	2.2				
KQ0603TTER15*	9	150			2.3				
KQ0603TTER18*	0	180	24	1200	2.5				
KQ0603TTER20*	U	200			2.4				
KQ0603TTER21*	V	210	30	1000	2.3				
KQ0603TTER22*	1	220			3.17				
KQ0603TTER25*	W	250	24	900	3.0				
KQ0603TTER27*	2	270			3.7				
KQ0603TTER30*	X	300	30	840	1.21				
KQ0603TTER33*	3	330			1.26				
KQ0603TTER39*	4	390	50	700	190				
KQ0603TTER47*	5	470			170				
KQ0603TTER51*	V	510	J: $\pm 5\%$ K: $\pm 10\%$	50	610	1.26	170		

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

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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	350														
KQ0805TTER16*	H	160							48	100	50	650	1.0									
KQ0805TTER17*	J	170												33	50	375	1.76					
KQ0805TTER18*	7	180																23	340	1.9		
KQ0805TTER19*	D	190																			188	2.2
KQ0805TTER20*	E	200																				
KQ0805TTER21*	F	210			50	500	4100	0.08														
KQ0805TTER22*	8	220							3000	0.10												
KQ0805TTER23*	K	230									2500	0.11										
KQ0805TTER24*	L	240											2400	0.12								
KQ0805TTER25*	G	250													1600	0.13						
KQ0805TTER27*	9	270															50	500	3300	0.09		
KQ0805TTER33*	0	330	3000	0.10																		
KQ0805TTER39*	1	390			2500	0.11																
KQ0805TTER47*	2	470					2400	0.12														
KQ0805TTER56*	3	560							1600	0.13												
KQ0805TTER68*	4	680									50	500	4100	0.08								
KQ0805TTER82*	5	820													3300	0.09						
KQ1008TTE10N*	10N	10	50	500													3000	0.10				
KQ1008TTE12N*	12N	12			2500	0.11																
KQ1008TTE15N*	15N	15					2400	0.12														
KQ1008TTE18N*	18N	18							1600	0.13												
KQ1008TTE22N*	22N	22									50	500	3300	0.09								
KQ1008TTE27N*	27N	27													3000	0.10						

* 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			500		1.05		
KQ1008TTER33*	R33	330			450		1.12		
KQ1008TTER39*	R39	390			415		1.19		
KQ1008TTER47*	R47	470			375		1.33		
KQ1008TTER56*	R56	560			360		1.40		
KQ1008TTER62*	R62	620			350		1.47		
KQ1008TTER68*	R68	680			320		1.54		
KQ1008TTER75*	R75	750			320		1.61		
KQ1008TTER82*	R82	820			290		1.68		
KQ1008TTER91*	R91	910			250		1.75		
KQ1008TTE1R0*	1R0	1000			200		1.6		
KQ1008TTE1R2*	1R2	1200			160		1.7		
KQ1008TTE1R5*	1R5	1500			140		1.9		
KQ1008TTE1R8*	1R8	1800			110		2.2		
KQ1008TTE2R2*	2R2	2200			90		2.3		
KQ1008TTE2R7*	2R7	2700			80		2.7		
KQ1008TTE3R3*	3R3	3300			70		2.8		
KQ1008TTE3R9*	3R9	3900			65		3.1		
KQ1008TTE4R7*	4R7	4700			60		3.1		
KQ1008TTE5R6*	5R6	5600			50		3.1		
KQ1008TTE6R8*	6R8	6800	40	3.1					
KQ1008TTE8R2*	8R2	8200	30	3.1					
KQ1008TTE100*	100	10000	20	3.1					
			15	3.1					

* 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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