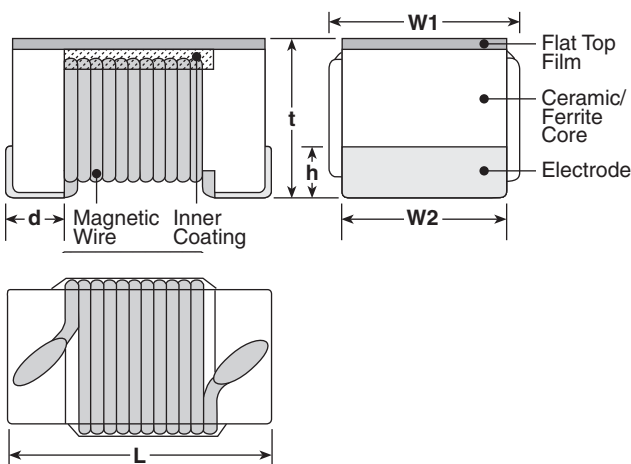


### features

- 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 <sup>+008</sup> <sub>-0</sub> (1.8 <sup>+0.2</sup> <sub>-0</sub> )	.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 ( $\Omega$ )	Allowable DC Current Maximum (mA)
KQT0402T**1N0*	—	1.0	250	B: $\pm 0.1$ nH C: $\pm 0.2$ 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							
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		3900	0.195		480		
KQT0402T**13N*		13							
KQT0402T**15N*		15		3680	0.120		640		
KQT0402T**16N*		16							
KQT0402T**18N*		18		3450	0.180		560		
KQT0402T**19N*		19							
KQT0402T**20N*		20		3280	0.172		500		
KQT0402T**22N*		22							
KQT0402T**23N*		23		3100	0.200		480		
KQT0402T**24N*		24							
KQT0402T**27N*		27		3040	0.202		450		
KQT0402T**30N*		30							
KQT0402T**33N*		33		3000	0.250		400		
KQT0402T**34N*		34							
KQT0402T**36N*		36		2800	0.323		340		
KQT0402T**39N*		39							
KQT0402T**40N*		40		2720	0.214		320		
KQT0402T**43N*		43							
KQT0402T**47N*	47	2700	0.322	300					
KQT0402T**51N*	51								
KQT0402T**56N*	56	2480	0.298	240					
KQT0402T**68N*	68								
KQT0402T**82N*	82	2400	0.354	150					
KQT0402T**R10*	100								
KQT0402T**R12*	120	2100	0.830	150					
		2800	1.170	200					
		2000	1.120	140					
		1800	1.810	130					
		1600	2.090	120					
		1500	2.320	120					

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

\*\* Add packaging code

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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 ( $\Omega$ )	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		0.055		
KQ0603TTE3N6*	E	3.6						6900	
KQ0603TTE3N9*	1	3.9					0.08		
KQ0603TTE4N3*	F	4.3					5900	0.063	
KQ0603TTE4N7*	G	4.7			0.116				
KQ0603TTE5N1*	Y	5.1					5800	0.115	
KQ0603TTE6N8*	2	6.8			27			0.11	
KQ0603TTE7N5*	H	7.5					4800	0.106	
KQ0603TTE8N2*	A	8.2		28	0.12				
KQ0603TTE8N7*	J	8.7			4600		0.109		
KQ0603TTE9N5*	B	9.5		4800			0.125		
KQ0603TTE10N*	3	10			31		0.13		
KQ0603TTE11N*	K	11		33			0.086		
KQ0603TTE12N*	4	12			35		0.13		
KQ0603TTE15N*	5	15		34			0.17		
KQ0603TTE16N*	L	16			3300		0.104		
KQ0603TTE18N*	6	18		3100			0.17		
KQ0603TTE22N*	7	22			38		0.19		
KQ0603TTE23N*	S	23	3000	0.15					
KQ0603TTE24N*	M	24		37	0.135				
KQ0603TTE27N*	8	27	40		0.22				
KQ0603TTE30N*	N	30		37	0.144				
KQ0603TTE33N*	9	33	40		0.22				
KQ0603TTE36N*	P	36		38	0.25				
KQ0603TTE39N*	0	39	40			2000			
KQ0603TTE43N*	Q	43		39	0.28				
KQ0603TTE47N*	1	47	38		200	1900	0.30		
KQ0603TTE51N*	T	51		37			0.31		
KQ0603TTE56N*	2	56	37		0.34				
KQ0603TTE68N*	3	68		34	1700	1400	0.49		
KQ0603TTE72N*	4	72	5				82	1350	0.54
KQ0603TTE82N*	5	82		32	150	1300			0.61
KQ0603TTER10*	6	100	1400				1.4	1400	0.65
KQ0603TTER11*	7	110		1300	1.4	1400			1.4
KQ0603TTER12*	8	120	1400				1.4	1400	1.4
KQ0603TTER15*	9	150		25	100	1200			2.2
KQ0603TTER18*	0	180	1300				2.2	1200	2.3
KQ0603TTER20*	U	200		2.3	130				
KQ0603TTER21*	V	210	2.5			120			
KQ0603TTER22*	1	220		1000	2.4				
KQ0603TTER25*	W	250	900			2.3			
KQ0603TTER27*	2	270		24	100		840	3.17	
KQ0603TTER30*	X	300	800			3.0			
KQ0603TTER33*	3	330		700	3.7				
KQ0603TTER39*	4	390	30			50	640	1.21	
KQ0603TTER47*	5	470		610	1.26				
KQ0603TTER51*	V	510	170						

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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 ( $\Omega$ )	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			60	500	1650	0.34					
KQ0805TTE43N*	4	43					1550	0.34					
KQ0805TTE47N*	0	47					1450	0.38					
KQ0805TTE56N*	1	56					1300	0.42					
KQ0805TTE68N*	2	68	65	500	1200	0.46	400						
KQ0805TTE82N*	3	82			1100	0.51							
KQ0805TTER10*	4	100	150	G: $\pm 2\%$ J: $\pm 5\%$ K: $\pm 10\%$	50	920	0.56	400					
KQ0805TTER12*	5	120				870	0.64						
KQ0805TTER15*	6	150				250	500		850	0.70			
KQ0805TTER16*	H	160							48	500	650	1.0	350
KQ0805TTER17*	J	170									600	1.4	
KQ0805TTER18*	7	180							560	1.5	290		
KQ0805TTER19*	D	190							33	100	375	1.76	250
KQ0805TTER20*	E	200									340	1.9	
KQ0805TTER21*	F	210							23	50	188	2.2	190
KQ0805TTER22*	8	220									215	2.35	
KQ0805TTER23*	K	230	50	500	4100	0.08	1000						
KQ0805TTER24*	L	240			3300	0.09							
KQ0805TTER25*	G	250			3000	0.10							
KQ0805TTER27*	9	270			350	500		2500	0.11				
KQ0805TTER33*	0	330						2400	0.12				
KQ0805TTER39*	1	390			55	350		1600	0.13				
KQ0805TTER47*	2	470						50	J: $\pm 5\%$ K: $\pm 10\%$	25	820	215	2.35
KQ0805TTER56*	3	560	25	J: $\pm 5\%$ K: $\pm 10\%$	23	50	188	2.2	190				
KQ0805TTER68*	4	680	25	J: $\pm 5\%$ K: $\pm 10\%$	23	50	188	2.2	190				
KQ0805TTER82*	5	820	25	J: $\pm 5\%$ K: $\pm 10\%$	23	50	188	2.2	190				
KQ1008TTE10N*	10N	10	50	J: $\pm 5\%$ K: $\pm 10\%$ M: $\pm 20\%$	50	500	4100	0.08	1000				
KQ1008TTE12N*	12N	12					3300	0.09					
KQ1008TTE15N*	15N	15					3000	0.10					
KQ1008TTE18N*	18N	18			350	500	2500	0.11					
KQ1008TTE22N*	22N	22					2400	0.12					
KQ1008TTE27N*	27N	27			55	350	1600	0.13					

\* Add tolerance character (C, G, H, J, K, M) For complete environmental specifications, please refer to [www.koaspeer.com](http://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	2.5		170				
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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# Mouser Electronics

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## KOA Speer:

[KQ0402LTD8N2J](#) [KQT0402TTD2N0J](#) [KQ0603LTE9N5G](#) [KQ0603TTER43G](#) [KQT0402LTD39NJ](#) [KQ0805LTE82NG](#)  
[KQ1008LTE2R2G](#) [KQ1008LTE4R7J](#) [KQ1008LTER10J](#) [KQ1008LTE1R0J](#) [KQ1008LTE2R2J](#) [KQ1008LTER10K](#)  
[KQ1008LTER22G](#) [KQ1008LTER33J](#) [KQ1008LTER22J](#) [KQ0603LTE3N6J](#) [KQ1008LTE3R9G](#) [KQ1008LTER15J](#)  
[KQ0805LTER10G](#) [KQ1008LTER68K](#) [KQ1008LTER27G](#) [KQT0402LTD1N0J](#) [KQ1008LTE56NJ](#) [KQ0603LTE43NG](#)  
[KQ0603LTER10G](#) [KQ0603LTE1N6J](#) [KQ1008LTER12G](#) [KQ0603TER12J](#) [KQT0402LTD10NJ](#) [KQ1008LTE2R7J](#)  
[KQ1008LTE82NJ](#) [KQ1008LTE12NJ](#) [KQ0603LTE82NG](#) [KQT0402LTD27NJ](#) [KQ0603LTE18NG](#) [KQ1008LTE2R7G](#)  
[KQT0402LTD12NJ](#) [KQ0603LTER18G](#) [KQ0603LTE12NG](#) [KQ1008LTE6R8G](#) [KQ1008LTE1R2J](#) [KQ0603LTE56NG](#)  
[KQT0402LTD2N2J](#) [KQT0402LTD3N3J](#) [KQ0603LTE10NG](#) [KQ0603LTER11G](#) [KQ0805LTER22J](#) [KQ0603LTER33G](#)  
[KQ1008LTE1R5J](#) [KQ0805LTE47NJ](#) [KQ0603LTE22NG](#) [KQ0805LTE68NG](#) [KQ1008LTE47NJ](#) [KQ1008LTER56G](#)  
[KQ1008LTE10NJ](#) [KQ1008LTE39NK](#) [KQ0805LTER18J](#) [KQ1008LTE1R8J](#) [KQT0402LTD3N9J](#) [KQT0402TTD1N0J](#)  
[KQ0805LTER12J](#) [KQ1008LTE10NM](#) [KQ1008LTE15NK](#) [KQ1008LTE18NK](#) [KQ1008LTER75J](#) [KQ0603LTE10NJ](#)  
[KQ0603LTE22NJ](#) [KQ0603LTE47NJ](#) [KQ0603LTE82NJ](#) [KQ0603LTE72NG](#) [KQ1008LTER82K](#) [KQT0402LTD19NJ](#)  
[KQ1008LTE3R9J](#) [KQ1008LTER18J](#) [KQ0603LTE30NG](#) [KQ0603LTE36NG](#) [KQ0603LTE12NJ](#) [KQ0603LTE3N9J](#)  
[KQ1008LTER47J](#) [KQ1008LTE3R3J](#) [KQ0805LTE8N2J](#) [KQ1008LTER22K](#) [KQ1008LTER68J](#) [KQT0402LTD11NJ](#)  
[KQ0603LTE15NJ](#) [KQ1008LTE22NK](#) [KQ0603LTE68NG](#) [KQ0603LTE8N7G](#) [KQ1008LTE8R2G](#) [KQ0805LTER39G](#)  
[KQ1008LTER27J](#) [KQ1008LTER82G](#) [KQ1008LTE5R6G](#) [KQ1008LTE10NK](#) [KQ1008LTE82NG](#) [KQT0402LTD23NJ](#)  
[KQ1008LTE47NK](#) [KQ0603LTE18NJ](#) [KQ0603LTER15G](#) [KQ1008LTE1R5G](#)