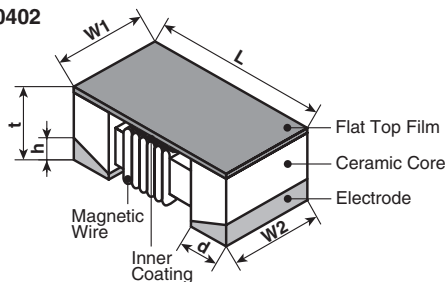


features

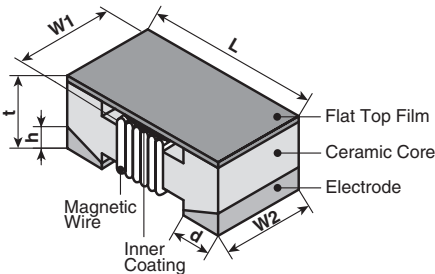
- Surface mount
- Operating temperature: -40°C ~ +125°C
- Flat top suitable for high speed pick-and-place components
- Excellent high frequency applications
- High Q factors and self-resonant frequency values
- Products with lead-free terminations meet EU RoHS requirements
- AEC-Q200 Qualified

dimensions and construction

0402



0603, 0805, 1008



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 ^{+0.008} ₋₀ (1.8 ^{+0.2} ₋₀)	.018±.006 (0.45±0.15)	.018±.004 (0.45±0.1)

ordering information

KQ	1008	T	TE	10N	J
Type	Size Code	Termination Material	Packaging	Nominal Inductance	Tolerance
KQ KQT	0402 0603 0805 1008	T: Sn	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)	3 digits: 10N: 10nH R10: 0.1µH 1R0: 1.0µH	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: ± 0.1 nH C: ± 0.2 nH	16	250	11000	0.045	1360
KQT0402T**1N9*		1.9					9600	0.070	1040
KQT0402T**2N0*		2.0			8000				
KQT0402T**2N2*		2.2					7200	0.120	700
KQT0402T**2N4*		2.4			6000				
KQT0402T**2N7*		2.7					5800	0.083	760
KQT0402T**3N3*		3.3			4800				
KQT0402T**3N6*		3.6					5800	0.104	680
KQT0402T**3N9*		3.9			4400				
KQT0402T**4N3*		4.3					4200	0.150	650
KQT0402T**4N7*		4.7		4000	0.195	480			
KQT0402T**5N1*		5.1					3900	0.120	640
KQT0402T**5N6*		5.6		3680	0.180	560			
KQT0402T**6N2*		6.2					3600	0.172	500
KQT0402T**6N8*		6.8		3100	0.200	480			
KQT0402T**7N5*		7.5					2800	0.230	450
KQT0402T**8N2*		8.2		2720	0.250	400			
KQT0402T**8N7*		8.7					2700	0.322	340
KQT0402T**9N0*		9.0		2480	0.298	320			
KQT0402T**9N5*		9.5					2400	0.354	300
KQT0402T**10N*		10		2400	0.393	320			
KQT0402T**11N*		11					2320	0.550	300
KQT0402T**12N*		12		2300	0.550	300			
KQT0402T**13N*		13					2240	0.620	320
KQT0402T**15N*		15		2200	0.810	300			
KQT0402T**16N*		16					2100	0.830	150
KQT0402T**18N*		18		2100	0.835	240			
KQT0402T**19N*		19					2800	1.170	200
KQT0402T**20N*		20		2000	1.120	140			
KQT0402T**22N*		22					1800	1.810	130
KQT0402T**23N*		23		1600	2.090	130			
KQT0402T**24N*		24					1500	2.320	120
KQT0402T**27N*		27							
KQT0402T**30N*		30							
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 tolerance character (B, C, G, H, J, K, M)

** Add packaging code

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			0.055	
KQ0603TTE3N6*	E	3.6					6900	0.063	
KQ0603TTE3N9*	1	3.9						0.08	
KQ0603TTE4N3*	F	4.3			5900		0.063		
KQ0603TTE4N7*	G	4.7					5800	0.116	
KQ0603TTE5N1*	Y	5.1			0.115				
KQ0603TTE6N8*	2	6.8			27		0.11		
KQ0603TTE7N5*	H	7.5			28		0.106		
KQ0603TTE8N2*	A	8.2		4800		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			0.17				
KQ0603TTE16N*	L	16		34	0.104				
KQ0603TTE18N*	6	18		35	0.17				
KQ0603TTE22N*	7	22		38	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		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	0.30			
KQ0603TTE51N*	T	51		37		1900	0.31		
KQ0603TTE56N*	2	56	37	1700	0.34				
KQ0603TTE68N*	3	68			34	0.49			
KQ0603TTE72N*	4	72	150	0.54					
KQ0603TTE82N*	5	82		1400	0.58				
KQ0603TTER10*	6	100	1350		0.61				
KQ0603TTER11*	7	110		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	130				
KQ0603TTER21*	V	210	1000			2.5			
KQ0603TTER22*	1	220		24	120				
KQ0603TTER25*	W	250	100			2.4			
KQ0603TTER27*	2	270		900	2.3				
KQ0603TTER30*	X	300	840		3.17				
KQ0603TTER33*	3	330		800	3.0				
KQ0603TTER39*	4	390	700		3.7				
KQ0603TTER47*	5	470		30	50	640	1.21	190	
KQ0603TTER51*	V	510	610			1.26	170		
KQ0603TTER56*	6	560		560	2.09	130			
KQ0603TTER62*	W	620	590		1.89	150			

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

Inductors

applications and ratings (continued)

inductors

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)							
KQ0603TTER68*	7	680	50	J: $\pm 5\%$ K: $\pm 10\%$	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														
KQ0805TTE3N3*	0	3.3	250	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										
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				50	250		850	0.70						
KQ0805TTER16*	H	160							48	650	1.0	350				
KQ0805TTER17*	J	170									600		1.4	310		
KQ0805TTER18*	7	180							560	1.5	290					
KQ0805TTER19*	D	190				33	100	375	1.76	250						
KQ0805TTER20*	E	200						340	1.9	230						
KQ0805TTER21*	F	210				25	J: $\pm 5\%$ K: $\pm 10\%$	23	50	188	2.2	190				
KQ0805TTER22*	8	220								200	2.3					
KQ0805TTER23*	K	230								215	2.35		180			
KQ0805TTER24*	L	240								50	J: $\pm 5\%$ K: $\pm 10\%$ M: $\pm 20\%$	50	500	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	55	350	2400	0.12										
KQ1008TTE10N*	10N	10			1600	0.13										
KQ1008TTE12N*	12N	12	60	1600	0.14											

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

Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

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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)
KQ1008TTE39N*	39N	39	50	J: ±5%, K: ±10% M: ±20%	60	350	1500	0.15	1000
KQ1008TTE47N*	47N	47			65		1300	0.16	
KQ1008TTE56N*	56N	56			60		1000	0.18	
KQ1008TTE68N*	68N	68			60		950	0.20	
KQ1008TTE82N*	82N	82			60		1000	0.22	
KQ1008TTER10*	R10	100	25	G: ±2% J: ±5% K: ±10%	45	100	850	0.56	650
KQ1008TTER12*	R12	120					950	0.63	
KQ1008TTER15*	R15	150					850	0.70	
KQ1008TTER18*	R18	180					750	0.77	580
KQ1008TTER22*	R22	220					700	0.84	
KQ1008TTER27*	R27	270					600	0.91	500
KQ1008TTER33*	R33	330					570	1.05	
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	
KQ1008TTER68*	R68	680					360	1.47	400
KQ1008TTER75*	R75	750					350	1.54	
KQ1008TTER82*	R82	820					350	1.61	400
KQ1008TTER91*	R91	910					320	1.68	
KQ1008TTE1R0*	1R0	1000	7.9		35	50	290	1.75	370
KQ1008TTE1R2*	1R2	1200					250	1.6	
KQ1008TTE1R5*	1R5	1500					200	1.7	300
KQ1008TTE1R8*	1R8	1800					160	1.9	
KQ1008TTE2R2*	2R2	2200					140	2.2	250
KQ1008TTE2R7*	2R7	2700	110	2.3					
KQ1008TTE3R3*	3R3	3300	25		20	7.9	100	2.7	230
KQ1008TTE3R9*	3R9	3900					90	2.8	
KQ1008TTE4R7*	4R7	4700					80	3.1	210
KQ1008TTE5R6*	5R6	5600					70	2.5	
KQ1008TTE6R8*	6R8	6800					65	2.8	200
KQ1008TTE8R2*	8R2	8200	60	3.0					
KQ1008TTE100*	100	10000			15	7.9	60	3.4	150

Inductors

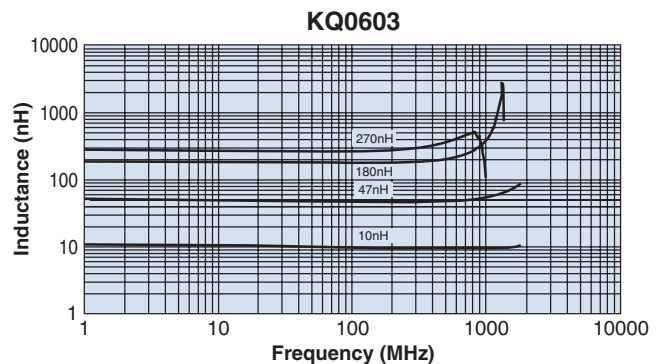
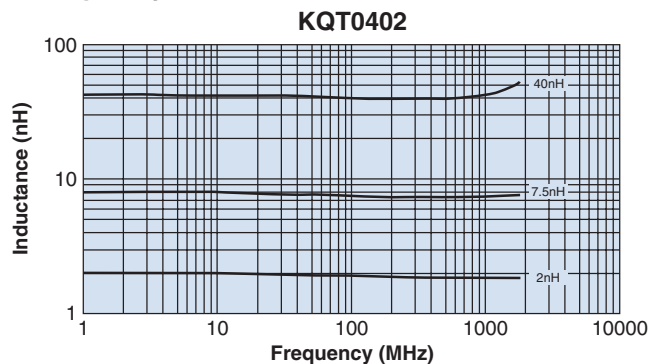
* Add tolerance character (C, G, H, J, K, M)

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

L-Frequency Characteristics

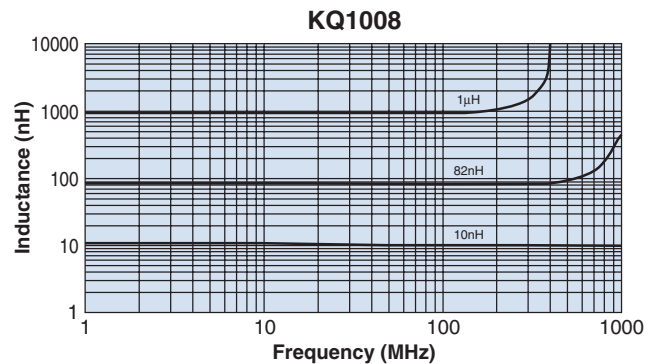
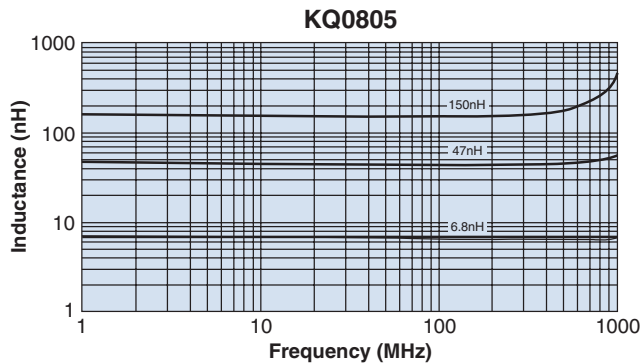


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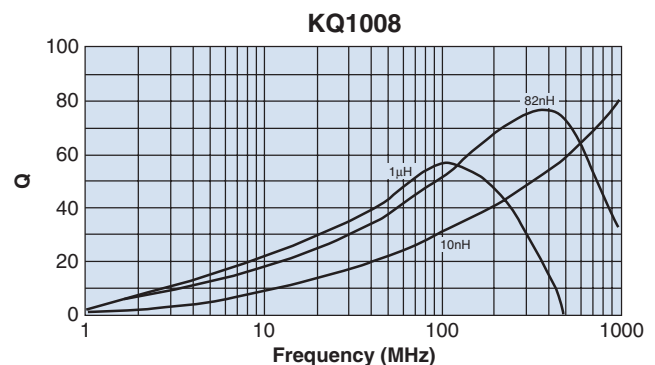
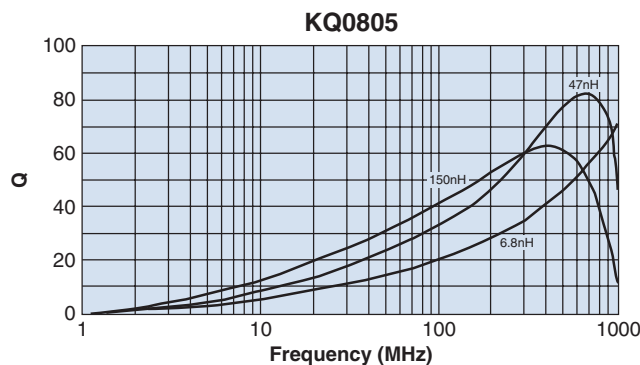
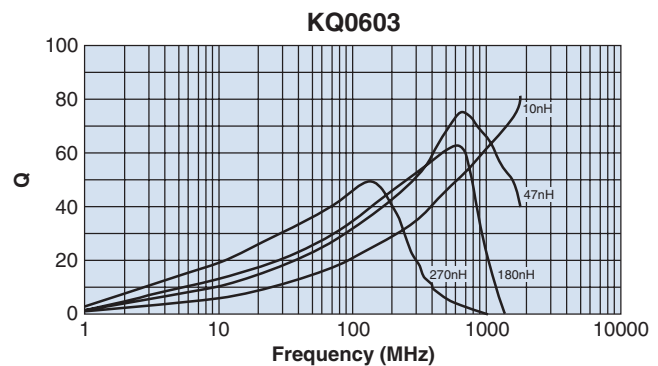
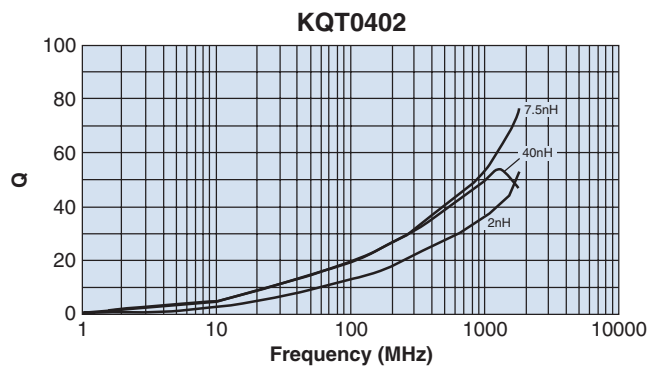
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environmental applications (continued)

L-Frequency Characteristics



Q-Frequency Characteristics



Test equipment: HP4291A impedance analyzer

Performance Characteristics

Parameter	Requirements Maximum Limit	Δ L/L	Δ Q/Q	Test Method
		Typical	Typical	
Resistance to Soldering Heat	No significant abnormality in appearance Δ L/L: $\pm 5\%$, Δ Q/Q: $\pm 10\%$	Δ L/L: $\pm 2.7\%$ Δ Q/Q: $\pm 6.6\%$		260°C \pm 5°C, 10s \pm 1s
Rapid Change of Temperature	No significant abnormality in appearance Δ L/L: $\pm 5\%$, Δ Q/Q: $\pm 10\%$	Δ L/L: $\pm 2.1\%$ Δ Q/Q: $\pm 5.3\%$		-40°C (30min.)/ +125°C (30min.) 100 cycles
Low Temperature Exposure	No significant abnormality in appearance Δ L/L: $\pm 5\%$, Δ Q/Q: $\pm 10\%$	Δ L/L: $\pm 1.8\%$ Δ Q/Q: $\pm 2.8\%$		-40°C \pm 2°C, 1000h
High Temperature Exposure	No significant abnormality in appearance Δ L/L: $\pm 5\%$, Δ Q/Q: $\pm 10\%$	Δ L/L: $\pm 1.8\%$ Δ Q/Q: $\pm 5.3\%$		125°C \pm 2°C, 1000h
Moisture Exposure	No significant abnormality in appearance Δ L/L: $\pm 5\%$, Δ Q/Q: $\pm 10\%$	Δ L/L: $\pm 0.9\%$ Δ Q/Q: $\pm 6.9\%$		40°C \pm 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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[KQT0402TTD3N6J](#) [KQ1008TTE27NJ](#) [KQT0402TTD3N9J](#) [KQ1008TTER47G](#) [KQT0402TTD3N3J](#) [KQ1008TTER82G](#)
[KQ1008TTER68G](#) [KQ0603TTE7N5G](#) [KQ1008TTER62G](#) [KQ0603TTE72NG](#) [KQT0402TTD2N2J](#) [KQ1008TTER22G](#)
[KQ0603TTE68NG](#) [KQ1008TTER27G](#) [KQ1008TTE2R2G](#) [KQ1008TTER15G](#) [KQ1008TTE22NJ](#) [KQ1008TTER12G](#)
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[KQ1008TTE1R8G](#) [KQ1008TTE1R0G](#) [KQ1008TTE1R5G](#) [KQ1008TTE12NJ](#) [KQ1008TTER75G](#) [KQT0402TTD23NJ](#)
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[KQ1008TTE82NG](#) [KQ1008TTE8R2G](#) [KQ0603TTE24NG](#) [KQ0603TTE36NG](#) [KQ0603TTE12NG](#) [KQ0603TTE12NJ](#)
[KQ0603TTE3N6J](#) [KQ1008TTE68NG](#) [KQ0603TTE3N9J](#) [KQ0603TTE1N8J](#) [KQ0603TTE1N6J](#) [KQ0603TTER33G](#)
[KQ0603TTER39G](#) [KQ0603TTE16NG](#) [KQ0603TTE33NG](#) [KQ0603TTE82NG](#) [KQ0603TTER27G](#) [KQ0603TTER22G](#)
[KQT0402TTD8N2J](#) [KQ0603TTE8N7G](#) [KQ0603TTE39NG](#) [KQT0402TTD9N0J](#) [KQ0805TTE47NJ](#) [KQ0805TTER82G](#)
[KQ0603TTE27NG](#) [KQ1008TTE47NJ](#) [KQT0402TTD5N6J](#) [KQ0603TTE15NJ](#) [KQ0603TTE15NG](#) [KQT0402TTD40NJ](#)
[KQ0603TTE11NG](#) [KQ0805TTE15NJ](#) [KQ0805TTER47G](#) [KQ0805TTE27NJ](#) [KQ0805TTE39NJ](#) [KQ1008TTE39NJ](#)
[KQT0402TTD7N5J](#) [KQ0603LTE3N3J](#) [KQ0805TTE2N8J](#) [KQ0603TTE82NJ](#) [KQ0603TTER15J](#) [KQ0603TTER18J](#)
[KQ0805TTE82NJ](#) [KQ0805TTER56J](#) [KQT0402TTD2N0C](#) [KQ0805TTER22K](#)