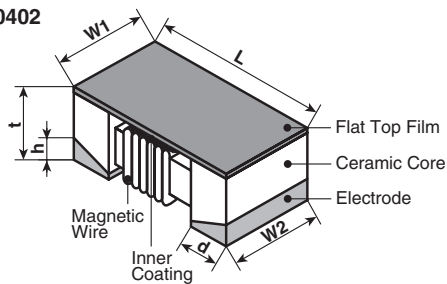


features

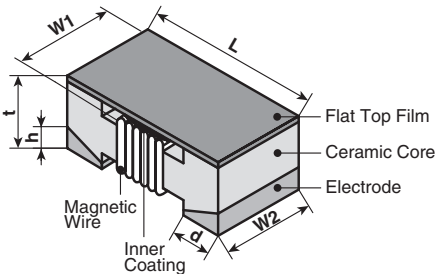
- Surface mount
- Operating temperature: -40°C ~ +125°C
- Flat top suitable for high speed pick-and-place components
- Excellent high frequency applications
- High Q factors and self-resonant frequency values
- Products with lead-free terminations meet EU RoHS requirements
- AEC-Q200 Qualified

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: $\pm 0.1\text{nH}$ C: $\pm 0.2\text{nH}$	16	250	11000	0.045	1360			
KQT0402T**1N9*		1.9					19	9600	0.070	1040		
KQT0402T**2N0*		2.0			18			8000	0.068	960		
KQT0402T**2N2*		2.2					17		0.120	700		
KQT0402T**2N4*		2.4			19			7200	0.066	840		
KQT0402T**2N7*		2.7					18	6000	0.091	800		
KQT0402T**3N3*		3.3						20	5800	0.083	760	
KQT0402T**3N6*		3.6							22	4800	0.086	680
KQT0402T**3N9*		3.9								5800	0.104	
KQT0402T**4N3*		4.3								20		4400
KQT0402T**4N7*		4.7		22		4200					0.104	680
KQT0402T**5N1*		5.1				20				4160	0.150	650
KQT0402T**5N6*		5.6		21						4000	0.195	480
KQT0402T**6N2*		6.2				24				3900	0.120	640
KQT0402T**6N8*		6.8		25	3680					0.200	560	
KQT0402T**7N5*		7.5			3600							
KQT0402T**8N2*		8.2			3100		0.230	500				
KQT0402T**8N7*		8.7					3040	0.202	480			
KQT0402T**9N0*		9.0			25		3000	0.250	450			
KQT0402T**9N5*		9.5					2800	0.323	400			
KQT0402T**10N*		10			24		2800	0.214				
KQT0402T**11N*		11					25	2720		0.322		
KQT0402T**12N*		12			24			2700		0.298		
KQT0402T**13N*		13				25	2480	0.354				
KQT0402T**15N*		15		24	2400		0.393	340				
KQT0402T**16N*		16			25	2320	0.550	320				
KQT0402T**18N*		18		24		2300	0.550	300				
KQT0402T**19N*		19			25	2240	0.620	320				
KQT0402T**20N*		20		20		2200	0.810	300				
KQT0402T**22N*		22			25	2100	0.830	150				
KQT0402T**23N*		23		0.835			240					
KQT0402T**24N*		24		22	2800	1.170	200					
KQT0402T**27N*		27			2000	1.120						
KQT0402T**30N*		30		22	1800	1.810	140					
KQT0402T**33N*		33			1600	2.090	130					
KQT0402T**34N*		34		22	1500	2.320	120					
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	4000	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	1900	0.30		
KQ0603TTE51N*	T	51					0.31		
KQ0603TTE56N*	2	56					37	0.34	
KQ0603TTE68N*	3	68	1700	34	150	0.49			
KQ0603TTE72N*	4	72				0.54			
KQ0603TTE82N*	5	82	1400	32	150	0.58			
KQ0603TTER10*	6	100				1350	0.61		
KQ0603TTER11*	7	110	1300	32	150	0.65			
KQ0603TTER12*	8	120				1400	1.4		
KQ0603TTER15*	9	150	1400	2.2	140				
KQ0603TTER18*	0	180	1300	25	100	1200	2.3		
KQ0603TTER20*	U	200					2.5		
KQ0603TTER21*	V	210	1000	24	100	900	2.4		
KQ0603TTER22*	1	220					2.3		
KQ0603TTER25*	W	250	840	24	100	800	3.17		
KQ0603TTER27*	2	270					3.0		
KQ0603TTER30*	X	300	700	30	50	640	3.7		
KQ0603TTER33*	3	330					1.21		
KQ0603TTER39*	4	390	610	30	50	610	1.26		
KQ0603TTER47*	5	470					2.09		
KQ0603TTER51*	V	510	590	30	50	590	1.89		
KQ0603TTER56*	6	560					1.89		
KQ0603TTER62*	W	620	590	1.89	150				

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

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)		
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									
KQ0805TTE3N3*	0	3.3	250	J: ±5% K: ±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	2000	0.29		
KQ0805TTE43N*	4	43						1650	0.34		
KQ0805TTE47N*	0	47						1550	0.34		
KQ0805TTE56N*	1	56						1450	0.38		
KQ0805TTE68N*	2	68	150	G: ±2% J: ±5% K: ±10%	65	1300	0.42	400			
KQ0805TTE82N*	3	82				1200	0.46				
KQ0805TTER10*	4	100				1100	0.51				
KQ0805TTER12*	5	120				920	0.56				
KQ0805TTER15*	6	150				50	250		870	0.64	
KQ0805TTER16*	H	160							850	0.70	
KQ0805TTER17*	J	170									
KQ0805TTER18*	7	180									
KQ0805TTER19*	D	190				100	48				650
KQ0805TTER20*	E	200							600	1.4	310
KQ0805TTER21*	F	210	560	1.5	290						
KQ0805TTER22*	8	220	375	1.76	250						
KQ0805TTER23*	K	230	340	1.9	230						
KQ0805TTER24*	L	240	25	J: ±5% K: ±10%	23			50	188	2.2	190
KQ0805TTER25*	G	250							200	2.3	
KQ0805TTER27*	9	270							215	2.35	
KQ0805TTER33*	0	330									
KQ0805TTER39*	1	390	50	J: ±5% K: ±10% M: ±20%	50	500	4100	0.08	1000		
KQ0805TTER47*	2	470					3300	0.09			
KQ0805TTER56*	3	560					3000	0.10			
KQ0805TTER68*	4	680					2500	0.11			
KQ0805TTER72*	A	720					2400	0.12			
KQ0805TTER82*	5	820					1600	0.13			
KQ1008TTE10N*	10N	10					1600	0.14			

Inductors

* 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		
KQ1008TTER22*	R22	220					700	0.84		
KQ1008TTER27*	R27	270					600	0.91		
KQ1008TTER33*	R33	330					570	1.05		
KQ1008TTER39*	R39	390					500	1.12		
KQ1008TTER47*	R47	470					450	1.19		
KQ1008TTER56*	R56	560					415	1.33		
KQ1008TTER62*	R62	620					375	1.40		
KQ1008TTER68*	R68	680					375	1.47		
KQ1008TTER75*	R75	750					360	1.54		
KQ1008TTER82*	R82	820					350	1.61		
KQ1008TTER91*	R91	910					320	1.68		
KQ1008TTE1R0*	1R0	1000	7.9	G: ±2% J: ±5% K: ±10%	35	50	290	1.75	250	
KQ1008TTE1R2*	1R2	1200					250	1.6		
KQ1008TTE1R5*	1R5	1500					200	1.7		
KQ1008TTE1R8*	1R8	1800					28	160		1.9
KQ1008TTE2R2*	2R2	2200					28	160		2.2
KQ1008TTE2R7*	2R7	2700	25	35	7.9	15	140	2.3	230	
KQ1008TTE3R3*	3R3	3300					110	2.7		
KQ1008TTE3R9*	3R9	3900					100	2.8		
KQ1008TTE4R7*	4R7	4700					90	3.1		
KQ1008TTE5R6*	5R6	5600					80	2.5		
KQ1008TTE6R8*	6R8	6800	15	7.9	7.9	15	70	2.8	200	
KQ1008TTE8R2*	8R2	8200					65	3.0		
KQ1008TTE100*	100	10000					60	3.4		

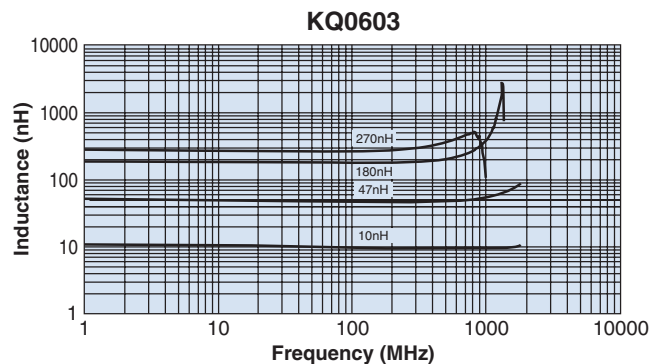
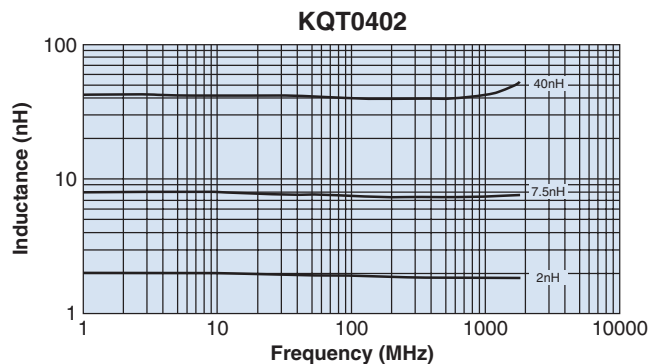
* Add tolerance character (C, G, H, J, K, M)

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

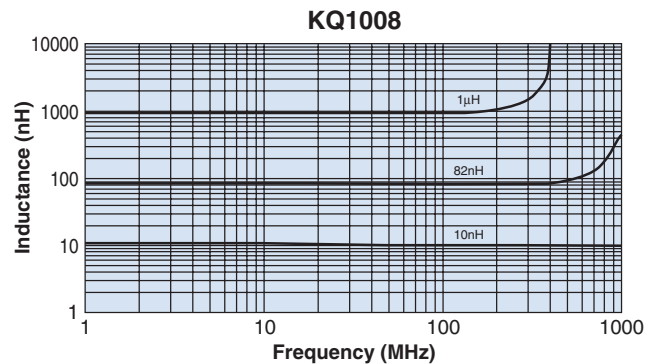
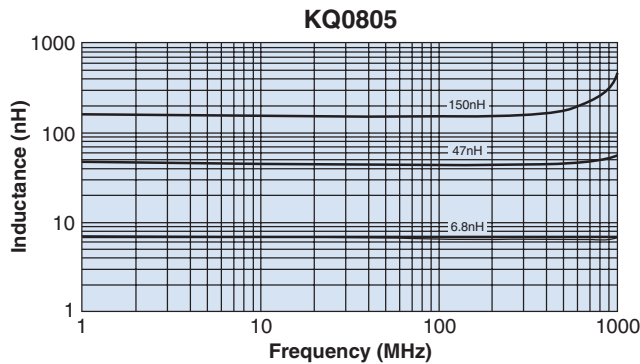


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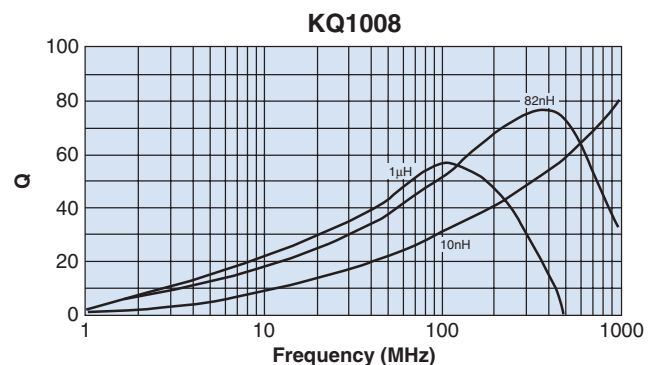
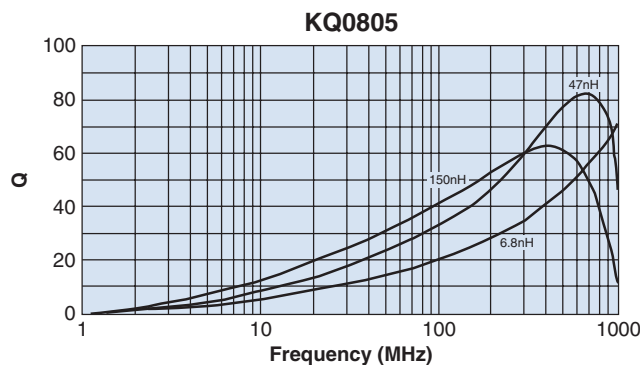
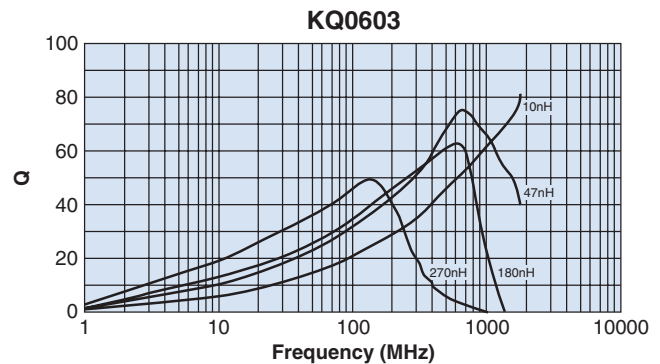
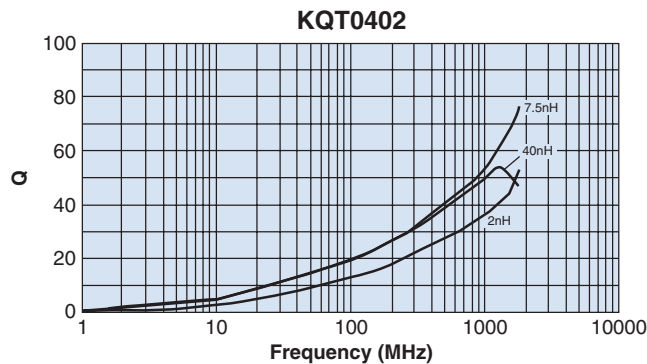
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environmental applications (continued)

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: ±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:

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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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[KQ1008TTE18NJ](#) [KQ1008TTER56G](#) [KQT0402TTD27NJ](#) [KQ1008TTER33G](#) [KQ1008TTER39G](#) [KQ1008TTE1R2G](#)
[KQ1008TTE1R8G](#) [KQ1008TTE1R0G](#) [KQ1008TTE1R5G](#) [KQ1008TTE12NJ](#) [KQ1008TTER75G](#) [KQT0402TTD23NJ](#)
[KQ1008TTE6R8G](#) [KQ0603TTE30NG](#) [KQ0805TTE56NG](#) [KQ0603TTE10NG](#) [KQ0603TTER15G](#) [KQ0603TTER11G](#)
[KQ0603TTER10G](#) [KQ0603TTER18G](#) [KQ0603TTER12G](#) [KQ0603TTE22NG](#) [KQ0603TTE18NJ](#) [KQ0603TTE18NG](#)
[KQ1008TTE82NG](#) [KQ1008TTE8R2G](#) [KQ0603TTE24NG](#) [KQ0603TTE36NG](#) [KQ0603TTE12NG](#) [KQ0603TTE12NJ](#)
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[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](#)