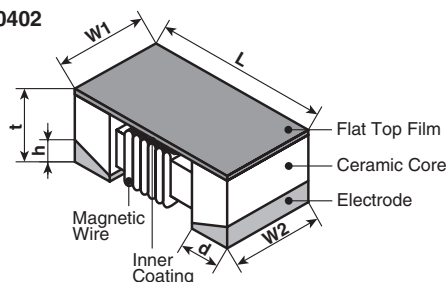


features

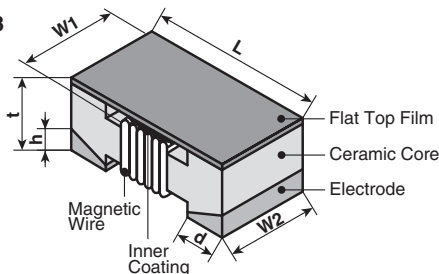
- Surface mount
- Operating temperature: -40°C ~ +125°C
- Flat top suitable for high speed pick-and-place components
- Excellent high frequency applications
- High Q factors and self-resonant frequency values
- Products with lead-free terminations meet EU RoHS requirements
- AEC-Q200 Qualified

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 ^{+.008} ₋₀ (1.8 ^{+.02} ₋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: ±0.1nH C: ±0.2nH	16	250	11000	0.045	1360
KQT0402T**1N9*		1.9					9600	0.070	1040
KQT0402T**2N0*		2.0			19				
KQT0402T**2N2*		2.2					18	0.120	700
KQT0402T**2N4*		2.4			17				
KQT0402T**2N7*		2.7		19			6000	0.091	800
KQT0402T**3N3*		3.3			20				
KQT0402T**3N6*		3.6		22			4800	0.086	680
KQT0402T**3N9*		3.9			20				
KQT0402T**4N3*		4.3		22			4160	0.104	680
KQT0402T**4N7*		4.7			20				
KQT0402T**5N1*		5.1		21			3900	0.195	480
KQT0402T**5N6*		5.6			24				
KQT0402T**6N2*		6.2		25			3450	0.180	560
KQT0402T**6N8*		6.8			24				
KQT0402T**7N5*		7.5		25			3100	0.230	450
KQT0402T**8N2*		8.2			24				
KQT0402T**8N7*		8.7		25			3000	0.250	340
KQT0402T**9N0*		9.0			24				
KQT0402T**9N5*		9.5		25			2720	0.214	300
KQT0402T**10N*		10			24				
KQT0402T**11N*		11		25			2480	0.298	300
KQT0402T**12N*		12			24				
KQT0402T**13N*		13		25			2320	0.560	200
KQT0402T**15N*		15			24				
KQT0402T**16N*		16		25			2240	0.810	130
KQT0402T**18N*		18			20				
KQT0402T**19N*		19		25			2100	0.835	120
KQT0402T**20N*		20			22				
KQT0402T**22N*		22		22			2000	1.120	130
KQT0402T**23N*		23			22				
KQT0402T**24N*		24		22			1600	2.090	120
KQT0402T**27N*		27			22				
KQT0402T**30N*		30		22			1500	2.320	120
KQT0402T**33N*		33			22				
KQT0402T**34N*		34		22			1500	2.320	120
KQT0402T**36N*		36			22				
KQT0402T**39N*		39		22			1500	2.320	120
KQT0402T**40N*		40			22				
KQT0402T**43N*		43		22			1500	2.320	120
KQT0402T**47N*		47			22				
KQT0402T**51N*		51		22			1500	2.320	120
KQT0402T**56N*		56			22				
KQT0402T**68N*		68		22			1500	2.320	120
KQT0402T**82N*		82			22				
KQT0402T**R10*		100		22			1500	2.320	120
KQT0402T**R12*		120			22				

* 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		6900	0.055			
KQ0603TTE3N6*	E	3.6						0.063			
KQ0603TTE3N9*	1	3.9						0.08			
KQ0603TTE4N3*	F	4.3			20		5900	0.063			
KQ0603TTE4N7*	G	4.7						0.116			
KQ0603TTE5N1*	Y	5.1			27		5800	0.115			
KQ0603TTE6N8*	2	6.8						0.11			
KQ0603TTE7N5*	H	7.5		G: ±2% J: ±5% K: ±10%	28		4800	0.106			
KQ0603TTE8N2*	A	8.2						0.12			
KQ0603TTE8N7*	J	8.7			31		4600	0.109			
KQ0603TTE9N5*	B	9.5					4800	0.125			
KQ0603TTE10N*	3	10			33			0.13			
KQ0603TTE11N*	K	11			4000		0.086				
KQ0603TTE12N*	4	12					35			0.13	
KQ0603TTE15N*	5	15			34		3300	0.17			
KQ0603TTE16N*	L	16						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			40		2650	0.135			
KQ0603TTE27N*	8	27	200		37	200	2800	0.22	600		
KQ0603TTE30N*	N	30						0.144			
KQ0603TTE33N*	9	33			40		2300	0.22			
KQ0603TTE36N*	P	36			38		2080	0.25			
KQ0603TTE39N*	0	39					2200				
KQ0603TTE43N*	Q	43			40			0.28			
KQ0603TTE47N*	1	47			39		2000				
KQ0603TTE51N*	T	51			38		1900	0.30			
KQ0603TTE56N*	2	56						0.31			
KQ0603TTE68N*	3	68			37			0.34			
KQ0603TTE72N*	4	72	150		34	150	1700	0.49	400		
KQ0603TTE82N*	5	82						0.54			
KQ0603TTER10*	6	100			32		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			25		1300	2.2			
KQ0603TTER20*	U	200						1200		2.3	
KQ0603TTER21*	V	210			24					2.5	
KQ0603TTER22*	1	220			1000		2.4				
KQ0603TTER25*	W	250	100			24	100		2.3	120	
KQ0603TTER27*	2	270			900		3.17				
KQ0603TTER30*	X	300			30		840	3.0			
KQ0603TTER33*	3	330						800	3.7		
KQ0603TTER39*	4	390			30		700	1.21			
KQ0603TTER47*	5	470						640	1.26		
KQ0603TTER51*	V	510	J: ±5% K: ±10%	30		610	2.09				
KQ0603TTER56*	6	560					130				
KQ0603TTER62*	W	620				590	1.89				
							150				

* 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 (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		60			2000	0.29			
KQ0805TTE39N*	9	39					1650	0.34			
KQ0805TTE43N*	4	43					0.31				
KQ0805TTE47N*	0	47			1550	0.34					
KQ0805TTE56N*	1	56	200	G: ±2% J: ±5% K: ±10%	65		1450	0.38	400		
KQ0805TTE68N*	2	68					1300	0.42			
KQ0805TTE82N*	3	82					1200	0.46			
KQ0805TTER10*	4	100	50		250		1100	0.51			
KQ0805TTER12*	5	120					920	0.56			
KQ0805TTER15*	6	150					870	0.64			
KQ0805TTER16*	H	160									
KQ0805TTER17*	J	170					850	0.70			
KQ0805TTER18*	7	180									
KQ0805TTER19*	D	190									
KQ0805TTER20*	E	200									
KQ0805TTER21*	F	210				100	48		650	1.0	350
KQ0805TTER22*	8	220									
KQ0805TTER23*	K	230									
KQ0805TTER24*	L	240									
KQ0805TTER25*	G	250									
KQ0805TTER27*	9	270									
KQ0805TTER33*	0	330			600		1.4	310			
KQ0805TTER39*	1	390			560		1.5	290			
KQ0805TTER47*	2	470	50	J: ±5% K: ±10%	33	100	375	1.76	250		
KQ0805TTER56*	3	560	25		23	50	340	1.9	230		
KQ0805TTER68*	4	680					188	2.2	190		
KQ0805TTER72*	A	720					200	2.3			
KQ0805TTER82*	5	820					215	2.35		180	
KQ1008TTE10N*	10N	10					50	J: ±5% K: ±10% M: ±20%	50	500	4100
KQ1008TTE12N*	12N	12	3300	0.09							
KQ1008TTE15N*	15N	15	3000	0.10							
KQ1008TTE18N*	18N	18	2500	0.11							
KQ1008TTE22N*	22N	22	55	350	2400	0.12					
KQ1008TTE27N*	27N	27			1600	0.13					
KQ1008TTE33N*	33N	33			1600	0.14					

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

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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						0.18		
KQ1008TTE68N*	68N	68								0.20
KQ1008TTE82N*	82N	82								
KQ1008TTER10*	R10	100	1000	0.56		650				
KQ1008TTER12*	R12	120		950	0.63					
KQ1008TTER15*	R15	150		45	100		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	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	380	
KQ1008TTE1R0*	1R0	1000					290	1.75	370	
KQ1008TTE1R2*	1R2	1200					250	1.6	310	
KQ1008TTE1R5*	1R5	1500		200	1.7		300			
KQ1008TTE1R8*	1R8	1800		160	1.9		270			
KQ1008TTE2R2*	2R2	2200			2.2		250			
KQ1008TTE2R7*	2R7	2700		140	2.3					
KQ1008TTE3R3*	3R3	3300		22	25		110	2.7	230	
KQ1008TTE3R9*	3R9	3900					100	2.8		
KQ1008TTE4R7*	4R7	4700					20	90	3.1	210
KQ1008TTE5R6*	5R6	5600	15			7.9		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			

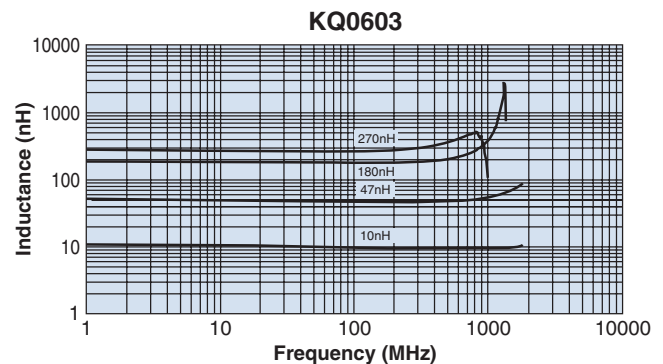
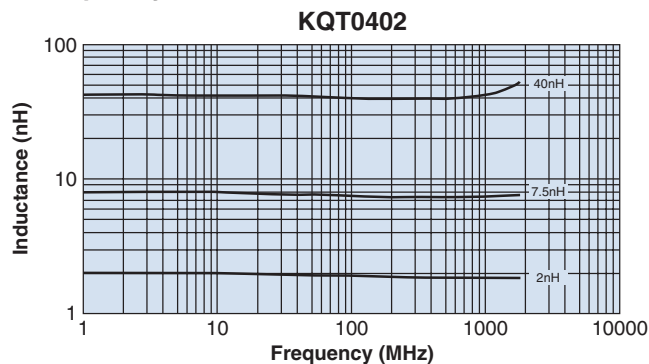
* Add tolerance character (C, G, H, J, K, M)

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

L-Frequency Characteristics

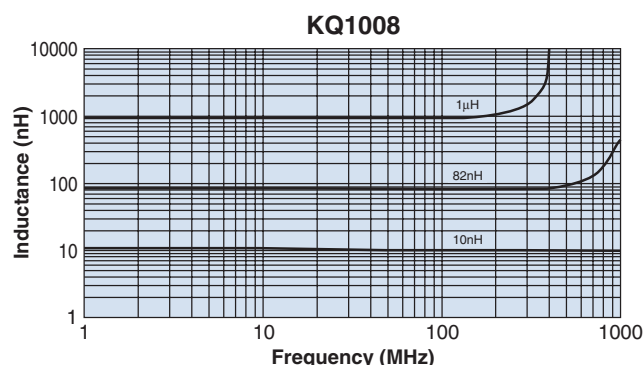
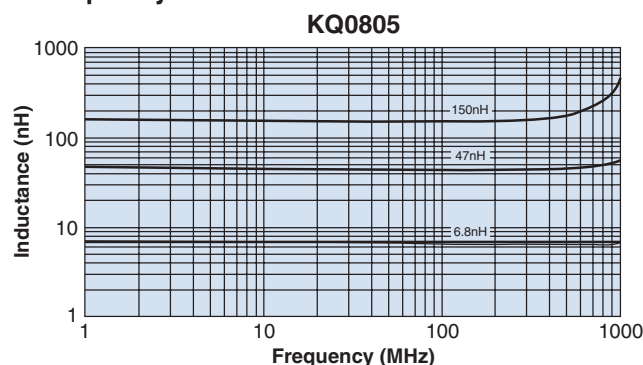


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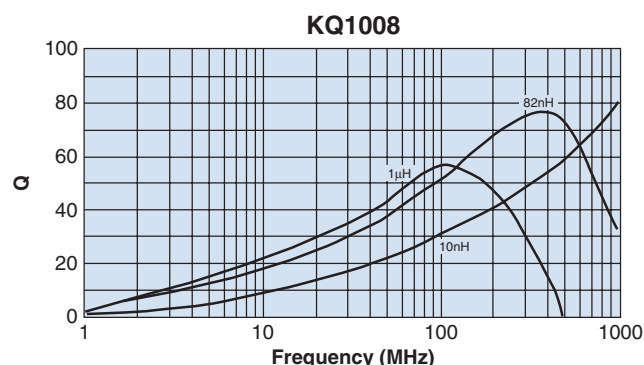
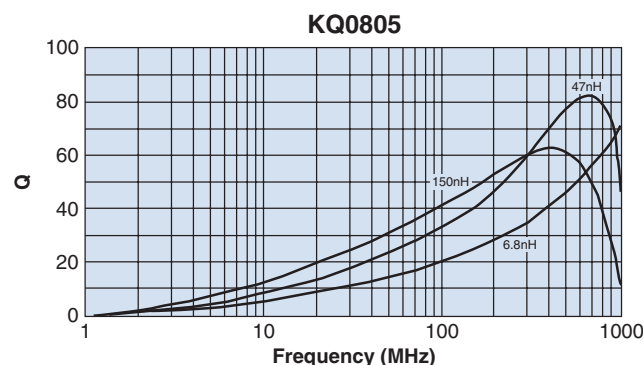
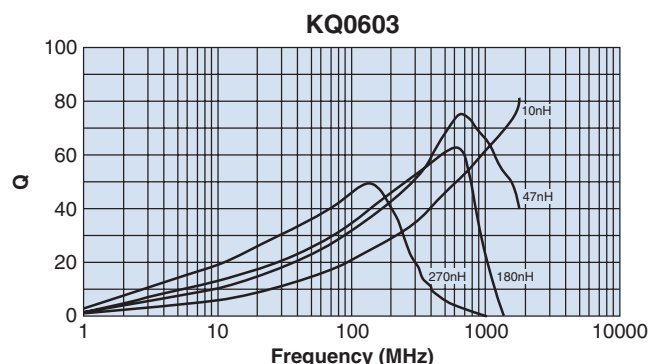
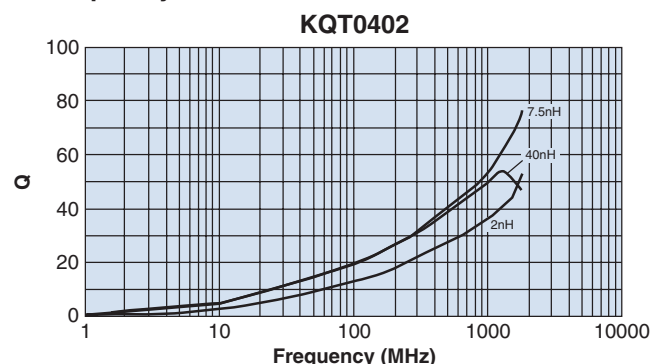
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environmental applications (continued)

L-Frequency Characteristics



Q-Frequency Characteristics



Test equipment: HP4291A impedance analyzer

Performance Characteristics

Parameter	Requirements Maximum Limit	$\Delta L/L$ $\Delta Q/Q$ Typical	Test Method
Resistance to Soldering Heat	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 2.7\%$ $\Delta Q/Q: \pm 6.6\%$	$260^\circ\text{C} \pm 5^\circ\text{C}$, 10s ± 1 s
Rapid Change of Temperature	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 2.1\%$ $\Delta Q/Q: \pm 5.3\%$	-40°C (30min.)/ $+125^\circ\text{C}$ (30min.) 100 cycles
Low Temperature Exposure	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 1.8\%$ $\Delta Q/Q: \pm 2.8\%$	$-40^\circ\text{C} \pm 2^\circ\text{C}$, 1000h
High Temperature Exposure	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 1.8\%$ $\Delta Q/Q: \pm 5.3\%$	$125^\circ\text{C} \pm 2^\circ\text{C}$, 1000h
Moisture Exposure	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 0.9\%$ $\Delta Q/Q: \pm 6.9\%$	$40^\circ\text{C} \pm 2^\circ\text{C}$, 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](#)
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[KQ1008TTER18G](#) [KQ1008TTER10G](#) [KQ1008TTE2R7G](#) [KQ1008TTE10NJ](#) [KQ1008TTE100G](#) [KQ1008TTER91G](#)
[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](#)
[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](#)