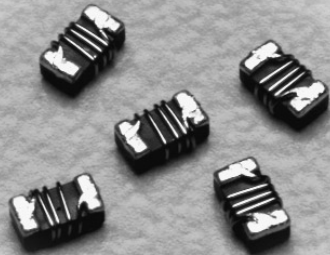


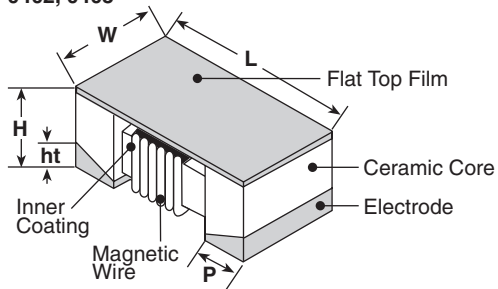
features

- Low DC resistance and high allowable DC current
- Low profile style 0.027 inches (0.7mm) typical
- Suitable for reflow soldering
- Marking: Black body color with no marking
- Products with lead-free terminations meet RoHS requirements

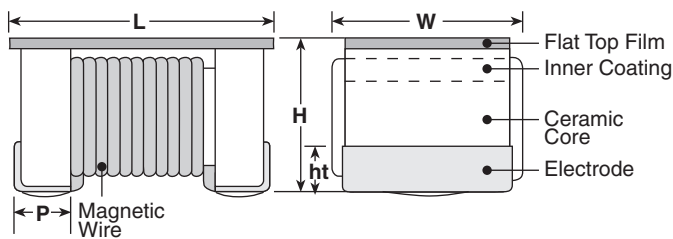


dimensions and construction

0402, 0403



0603



Size Code	Dimensions inches (mm)				
	L	W	H	Ht	P
0402	.039±.004 (1.0±0.1)	.020±.004 (0.5±0.1)	.022±.004 (0.55±0.1)	.006±.004 (0.15±0.1)	.008±.004 (0.2±0.1)
	0403	.039±.004 (1.0±0.1)	.030±.008 (1.0±0.2)	.031±.004 (0.8±0.1)	.006±.004 (0.15±0.1)
0603	.063±.004 (1.6±0.1)	.041±.008 (1.05±0.2)	.028±.004 (0.7±0.1)	.008±.006 (0.2±0.15)	.015±.004 (0.37±0.1)

UNDER DEVELOPMENT

ordering information

New Part #	KQC	0603	T	TE	12N	J
	Type	Size Code	Termination Material	Packaging	Nominal Resistance	Tolerance
		0402 0403 0603	T: Sn	TE: 4mm pitch embossed plastic (0403, 0603) TD: 4mm pitch paper (0402)		B: ±0.1nH C: ±0.2nH G: ±2% J: ±5%

For further information on packaging, please refer to Appendix A.

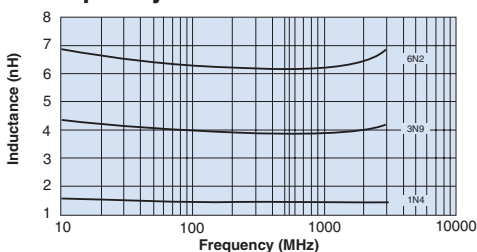
applications and ratings

Part Designation	Nominal Inductance (nH)	L Measuring Frequency	Inductance Tolerance	Q Quality Factor Minimum	Q Measuring Frequency (MHz)	Self Resonant Frequency Minimum (GHz)	DC Resistance Maximum (Ω)	Allowable DC Current Maximum (A)				
UNDER DEVELOPMENT	KQC0402TTD1N4*	250	B: $\pm 0.1\text{nH}\%$	25	250	11.0	0.019	1.40				
	KQC0402TTD1N5*					10.0						
	KQC0402TTD1N6*					9.6						
	KQC0402TTD1N7*					8.5						
	KQC0402TTD2N5*					8.0						
	KQC0402TTD2N7*					7.2						
	KQC0402TTD3N0*		C: $\pm 0.2\text{nH}$	29		6.6	0.028	1.20				
	KQC0402TTD3N3*					7.3						
	KQC0402TTD3N9*					7.0						
	KQC0402TTD4N3*					6.6						
	KQC0402TTD4N7*					5.6						
	KQC0402TTD6N2*					0.036			1.00			
UNDER DEVELOPMENT	KQC0403TTE1N0*	250	J: $\pm 5\%$	25	250	16.0	0.020	1.80				
	KQC0403TTE2N4*					14.0	0.030	1.50				
	KQC0403TTE3N6*					10.0	0.040	1.40				
	KQC0403TTE3N9*					8.0	0.035	1.60				
	KQC0403TTE4N3*			6.0								
	KQC0403TTE5N6*			30		5.8	0.050	1.30				
	KQC0403TTE6N8*					5.5	0.045	1.50				
	KQC0403TTE8N5*			35		5.0	0.055	1.20				
	KQC0403TTE10N*					4.5	0.065	1.00				
	KQC0403TTE12N*			30		4.2	0.090	0.80				
	KQC0403TTE15N*					3.8	0.100	0.50				
	KQC0403TTE18N*			3.5		0.120	0.40					
	UNDER DEVELOPMENT			KQC0603TTE1N2*		250	J: $\pm 5\%$	18	250	6.0	0.020	2.25
				KQC0603TTE2N7*							0.025	2.00
KQC0603TTE4N7*		5.5	0.035	1.80								
KQC0603TTE5N6*			4.0	0.045	1.50							
KQC0603TTE7N5*				3.0	0.065					1.25		
KQC0603TTE8N2*		35	0.055		1.40							
KQC0603TTE10N*			G: $\pm 2\%$ J: $\pm 5\%$	0.065	1.25							
KQC0603TTE12N*		2.5		0.090	1.20							
KQC0603TTE15N*			0.100	1.10								
KQC0603TTE18N*		0.100	1.10									
KQC0603TTE22N*		0.120	1.00									
KQC0603TTE27N*		0.120	1.00									

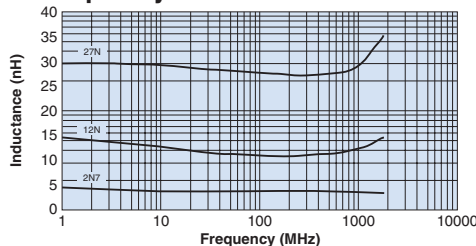
* Add tolerance character (B, C, J, G)

environmental applications

L-Frequency Characteristics - 0402



L-Frequency Characteristics - 0603

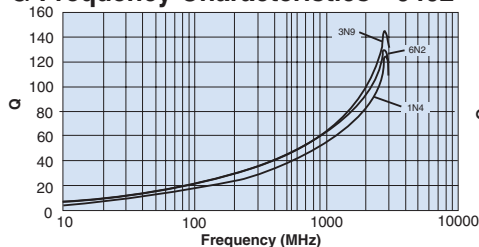


Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

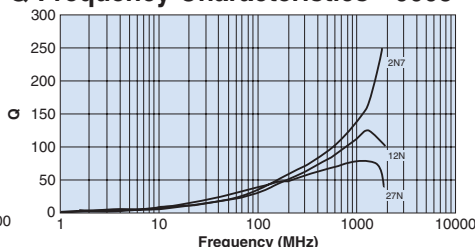
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environmental applications (continued)

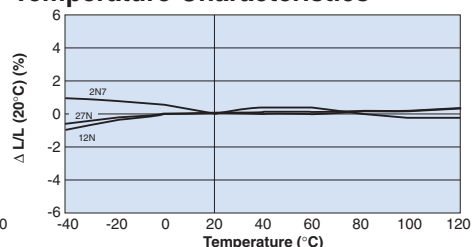
G-Frequency Characteristics - 0402



Q-Frequency Characteristics - 0603



Temperature Characteristics



Performance Characteristics

Parameter	Maximum ΔL	Test Method
Dielectric Withstanding Voltage	No evidence of flaming, fuming or breakdown	5 seconds @ AC 500V applied between both terminals and film
Insulation Resistance	1000M Ω and over	1 minute @ DC 100V measured between both terminals and film
Flammability	IEC 695-2-2	Withstands needle-flame test
Terminal Pull Strength	No evidence of damage	Terminals shall withstand a pull of 10N in a horizontal direction (KQ0402 and KQ0603 = 5N, KQ0805 and KQ1008 = 10N)
Terminal Bending Strength	No evidence of breakdown	Specimen shall be soldered on bend test board and force applied to the opposite side to cause a 10mm deflection (KQ0603 = 3mm deflection)
Vibration	$\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 10\%$	2 hours in each direction of X, Y, Z on PCB at a frequency range of 10 - 55 - 10Hz with 1.5mm amplitude
Dropping	No evidence of damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 10\%$	Dropping 1m on the ground of concrete, 1 time
Resistance to Solder Heat	No evidence of outer damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 10\%$	Immerse in solder @ $260^\circ \pm 5^\circ\text{C}$ for 10 seconds ± 1 second
Solderability	95% of the terminal should be covered with new solder	Immerse in solder @ $230^\circ \pm 5^\circ\text{C}$ for 3 seconds ± 0.5 second
Resistance to Solvents	No damage and marking must remain legible	Accordance with MIL-STD-202, Method 215
Low Temperature Storage	No evidence of damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 10\%$	Store @ $-40^\circ\text{C} \pm 2^\circ\text{C}$ for 1000 hours
High Temperature Storage	No evidence of damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 10\%$	Store @ $+125^\circ\text{C} \pm 2^\circ\text{C}$ for 1000 hours
Moisture Endurance	No evidence of damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 10\%$	$40^\circ\text{C} \pm 2^\circ\text{C}$, 90 - 95% RH, 1000 hours KQT0402: $60^\circ\text{C} \pm 2^\circ\text{C}$, 90 - 95% RH, 1000 hours
Load Life	No evidence of damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 10\%$	Biased to full rated current @ $+125^\circ\text{C}$, 1000 hours
High Temperature High Humidity	No evidence of damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 10\%$	Biased to 10% rated current @ $+85^\circ\text{C}$, 85% RH, 1000 hours
Thermal Shock	No evidence of damage $\Delta L/L$ within $\pm 5\%$ $\Delta Q/Q$ within $\pm 10\%$	100 cycles between $-40^\circ\text{C}/\text{hour}$ and $+125^\circ\text{C}/\text{hour}$
Temperature Characteristics	$\Delta L/L$ within $\pm 5\%$	$\Delta L/L$ to be measured at the temperatures between -40°C and $+125^\circ\text{C}$, reference to the inductance @ 20°C

Unless otherwise specified, measurements shall be performed within 2 hours after leaving test samples for more than one hour at the normal temperature and at the normal humidity.