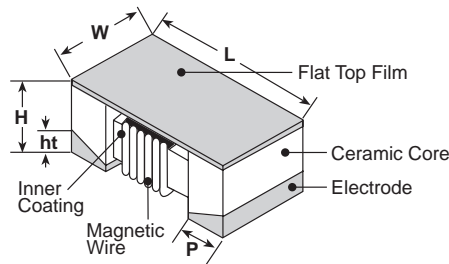


features

- Low DC resistance and high allowable DC current
- Low profile style 0.027 inches (0.7mm) typical
- Suitable for reflow soldering
- Products with lead-free terminations meet EU RoHS requirements

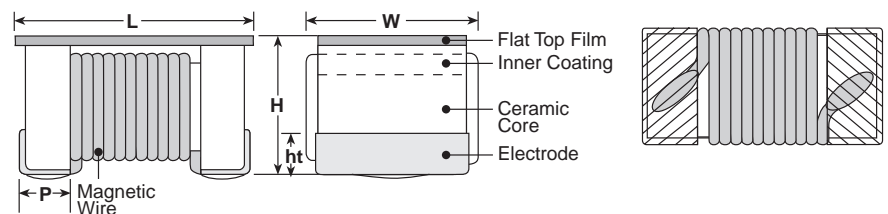
dimensions and construction

0402, 0403

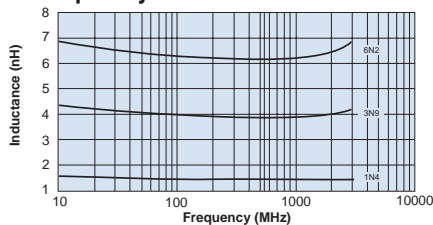


Size Code	Dimensions inches (mm)				
	L	W	H	Ht	P
0402	.039±.004 (1.0±0.1)	.020±.004 (0.5±0.1)	.022±.004 (0.55±0.1)	.006±.004 (0.15±0.1)	.008±.004 (0.2±0.1)
0603	.063±.004 (1.6±0.1)	.041±.008 (1.05±0.2)	.028±.004 (0.7±0.1)	.008±.006 (0.2±0.15)	.015±.004 (0.37±0.1)

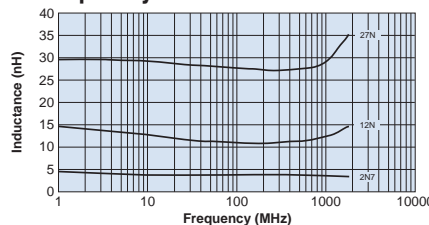
0603



L-Frequency Characteristics - 0402

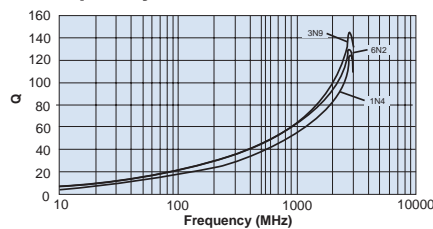


L-Frequency Characteristics - 0603

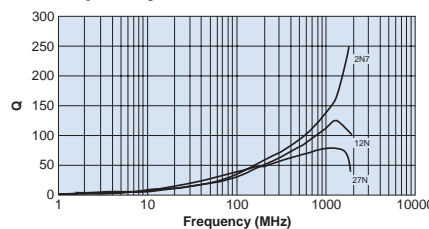


Test equipment:
Agilent 4991 A Impedance analyzer (KQC0402)
Agilent 4291 A Impedance analyzer (KQC0603)

Q-Frequency Characteristics - 0402



Q-Frequency Characteristics - 0603



ordering information

KQC	0603	T	TE	12N	J
Type	Size Code	Termination Material	Packaging	Nominal Inductance	Tolerance
	0402 0603	T: Sn	TP: 2mm pitch paper (0402: 10,000 pieces/reel) TE: 4mm pitch embossed plastic (0603: 2,000 pieces/reel) TD: 4mm pitch paper (0402: 2,000 pieces/reel)	3 digits 10N: 10nH 1N2: 1.2nH	B: ±0.1nH C: ±0.2nH G: ±2% J: ±5%

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

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

11/30/17

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)		
KQC0402T**1N4*	1.4	250	B: ± 0.1 nH	25	250	11.0	0.019	1.40		
KQC0402T**1N5*	1.5					10.0				
KQC0402T**1N6*	1.6					9.6				
KQC0402T**1N7*	1.7					8.5				
KQC0402T**2N5*	2.5		C: ± 0.2 nH	27		8.0	0.028	1.20		
KQC0402T**2N7*	2.7					7.2				
KQC0402T**3N0*	3.0					6.6				
KQC0402T**3N3*	3.3					7.3				
KQC0402T**3N9*	3.9					7.0				
KQC0402T**4N3*	4.3					30			0.036	6.6
KQC0402T**4N7*	4.7		5.6							
KQC0402T**6N2*	6.2		0.045	0.90						
KQC0603TTE1N2*	1.2		250	J: $\pm 5\%$			18	250		6.0
KQC0603TTE2N7*	2.7					0.025			2.00	
KQC0603TTE4N7*	4.7	5.5			0.035	1.80				
KQC0603TTE5N6*	5.6									
KQC0603TTE7N5*	7.5									
KQC0603TTE8N2*	8.2	4.0			0.045	1.50				
KQC0603TTE10N*	10									
KQC0603TTE12N*	12									
KQC0603TTE15N*	15	3.0		0.065	1.25					
KQC0603TTE18N*	18					0.055	1.40			
KQC0603TTE22N*	22					0.065	1.25			
KQC0603TTE27N*	27					2.5	0.090		1.20	
KQC0603TTE27N*	27	0.100		1.10						
KQC0603TTE27N*	27					0.120	1.00			

* Add tolerance character (B, C, J, G) ** Add packaging character (TD, TP)

Operating Temperature Range: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$

The operating temperature range of the coil (ambient temperature + self heating) must remain at $+125^{\circ}\text{C}$ or less

environmental applications

Performance Characteristics

Parameter	Requirements Maximum Limit	$\Delta L/L$ $\Delta Q/Q$ Typical	Test Method
Resistance to Soldering Heat	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 1.2\%$ $\Delta Q/Q: \pm 2.7\%$	$260^{\circ}\text{C} \pm 5^{\circ}\text{C}$, 10s \pm 1s
Rapid Change of Temperature	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 1.9\%$ $\Delta Q/Q: \pm 3.9\%$	-40°C (30min.)/ $+125^{\circ}\text{C}$ (30min.) 100 cycles
Low Temperature Exposure	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 2.0\%$ $\Delta Q/Q: \pm 4.1\%$	$-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 1000h
High Temperature Exposure	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 1.8\%$ $\Delta Q/Q: \pm 3.3\%$	$125^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 1000h
Moisture Exposure	No significant abnormality in appearance $\Delta L/L: \pm 5\%$, $\Delta Q/Q: \pm 10\%$	$\Delta L/L: \pm 1.7\%$ $\Delta Q/Q: \pm 3.3\%$	$40^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 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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11/30/17