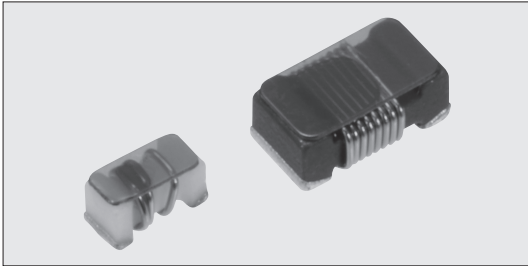
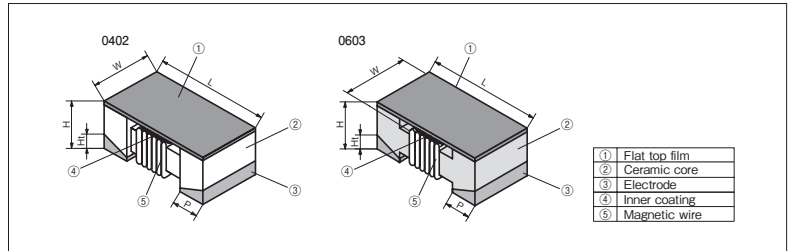


KQC Air-Core Chip Inductors (High Q/High Current type)



Body color : White (0402)
: Black (0603)

Construction



Features

- Lower DC resistance and higher allowable DC current than the existing model.
- High Q than the existing model.
- Suitable for reflow soldering.
- Products meet EU-RoHS requirements.

Applications

- Terminals of mobile communication equipment etc. and high frequency and power amp. circuits.
- Suitable for circuits that need high Q of mobile communication equipment.

Dimensions

Type	Dimensions (mm)					Weight (g) (1000pcs)
	L±0.1	W	H±0.1	Ht	P±0.1	
KQC0402	1.0	0.5±0.1	0.55	0.15±0.10	0.2	1
KQC0603	1.6	1.05±0.2	0.7	0.20±0.15	0.37	5

Type Designation

Product Code	Style	Terminal Surface Material	Taping	Nominal Inductance	Inductance Tolerance
Example KQC	0603	T	TE	12N	J
	0402: 1.0×0.5mm 0603: 1.6×1.0mm	T : Sn	TP : 2mm pitch paper (0402) TD : 4mm pitch paper (0402) TE : 4mm pitch plastic embossed (0603) BK : Bulk	3 digits	B : ±0.1nH C : ±0.2nH G : ±2% J : ±5%

Contact us when you have control request for environmental hazardous material other than the substance specified by EU-RoHS.

For further information on taping, please refer to APPENDIX C on the back pages.

Performance

Test Items	Performance Requirements Maximum $\Delta L/L$ Maximum $\Delta Q/Q$		Test Methods
	Limit	Typical	
Resistance to soldering heat	$\Delta L/L : \pm 5\%$, $\Delta Q/Q : \pm 10\%$ No significant abnormality in appearance.	$\Delta L/L : \pm 1.2\%$ $\Delta Q/Q : \pm 2.7\%$	260°C±5°C, 10s±1s
Rapid change of temperature	$\Delta L/L : \pm 5\%$, $\Delta Q/Q : \pm 10\%$ No significant abnormality in appearance.	$\Delta L/L : \pm 1.9\%$ $\Delta Q/Q : \pm 3.9\%$	-40°C (30min.) / +125°C (30min.) 100 cycles
Low temperature exposure	$\Delta L/L : \pm 5\%$, $\Delta Q/Q : \pm 10\%$ No significant abnormality in appearance.	$\Delta L/L : \pm 2.0\%$ $\Delta Q/Q : \pm 4.1\%$	-40°C±2°C, 1000h
High temperature exposure	$\Delta L/L : \pm 5\%$, $\Delta Q/Q : \pm 10\%$ No significant abnormality in appearance.	$\Delta L/L : \pm 1.8\%$ $\Delta Q/Q : \pm 3.3\%$	125°C±2°C, 1000h
Moisture endurance	$\Delta L/L : \pm 5\%$, $\Delta Q/Q : \pm 10\%$ No significant abnormality in appearance.	$\Delta L/L : \pm 1.7\%$ $\Delta Q/Q : \pm 3.3\%$	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

Precautions for Use

- The pattern size of pad may affect Q values, so confirm the characteristics beforehand by actual machines.

Ratings

Operating temperature range : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (Self-heating is included.)

※That the operating temperature upper limit temperature of the coil winding portions (ambient temperature+self-heating) is $(+125^{\circ}\text{C})$ or less.

Taping code and Q'ty/Reel : 0402 : TP (10,000pcs) · TD (2,000pcs), 0603 : TE (2,000pcs)

Type	Nominal Inductance (nH)	L Measuring Frequency (MHz)	Inductance Tolerance	Quality Factor Min.	Q Measuring Frequency (MHz)	Self Resonant Frequency (GHz) Min.	DC Resistance (Ω) Max.	Allowable DC Current (A) Max.		
KQC0402T□ 1N4B	1.4	250	B : $\pm 0.1\text{nH}$	25	250	11.0	0.019	1.40		
KQC0402T□ 1N5B	1.5									
KQC0402T□ 1N6B	1.6									
KQC0402T□ 1N7B	1.7									
KQC0402T□ 2N5C	2.5									
KQC0402T□ 2N7C	2.7		C : $\pm 0.2\text{nH}$	27		0.028	1.20			
KQC0402T□ 3N0C	3.0									
KQC0402T□ 3N3C	3.3									
KQC0402T□ 3N9C	3.9									
KQC0402T□ 4N3C	4.3									
KQC0402T□ 4N7C	4.7	250	J : $\pm 5\%$	35	250	6.0	0.020	2.25		
KQC0402T□ 6N2C	6.2									
KQC0603 TTE 1N2J	1.2									
KQC0603 TTE 2N7J	2.7									
KQC0603 TTE 4N7J	4.7									
KQC0603 TTE 5N6J	5.6									
KQC0603 TTE 7N5J	7.5									
KQC0603 TTE 8N2J	8.2									
KQC0603 TTE 10N□	10					G : $\pm 2\%$ J : $\pm 5\%$	35	2.5	0.036	1.00
KQC0603 TTE 12N□	12									
KQC0603 TTE 15N□	15									
KQC0603 TTE 18N□	18									
KQC0603 TTE 22N□	22									
KQC0603 TTE 27N□	27	250	J : $\pm 5\%$	35	2.5	0.045	0.90			
KQC0603 TTE 10N□	10									
KQC0603 TTE 12N□	12									
KQC0603 TTE 15N□	15									
KQC0603 TTE 18N□	18									
KQC0603 TTE 22N□	22									
KQC0603 TTE 27N□	27	250	J : $\pm 5\%$	35	2.5	0.065	1.25			
KQC0603 TTE 10N□	10									
KQC0603 TTE 12N□	12									
KQC0603 TTE 15N□	15									
KQC0603 TTE 18N□	18									
KQC0603 TTE 22N□	22									
KQC0603 TTE 27N□	27	250	J : $\pm 5\%$	35	2.5	0.090	1.20			
KQC0603 TTE 10N□	10									
KQC0603 TTE 12N□	12									
KQC0603 TTE 15N□	15									
KQC0603 TTE 18N□	18									
KQC0603 TTE 22N□	22									
KQC0603 TTE 27N□	27	250	J : $\pm 5\%$	35	2.5	0.100	1.10			
KQC0603 TTE 10N□	10									
KQC0603 TTE 12N□	12									
KQC0603 TTE 15N□	15									
KQC0603 TTE 18N□	18									
KQC0603 TTE 22N□	22									
KQC0603 TTE 27N□	27	250	J : $\pm 5\%$	35	2.5	0.120	1.00			
KQC0603 TTE 10N□	10									
KQC0603 TTE 12N□	12									
KQC0603 TTE 15N□	15									
KQC0603 TTE 18N□	18									
KQC0603 TTE 22N□	22									

The codes for taping enter □. Please refer to the column of type designation.

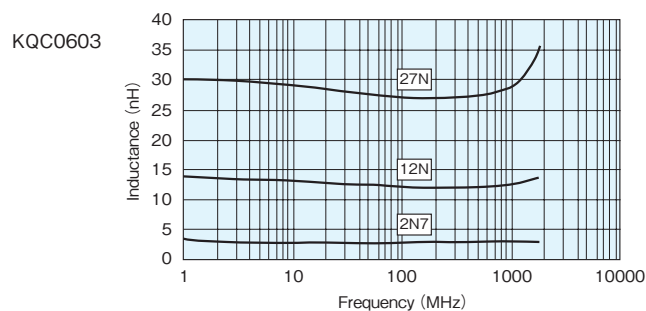
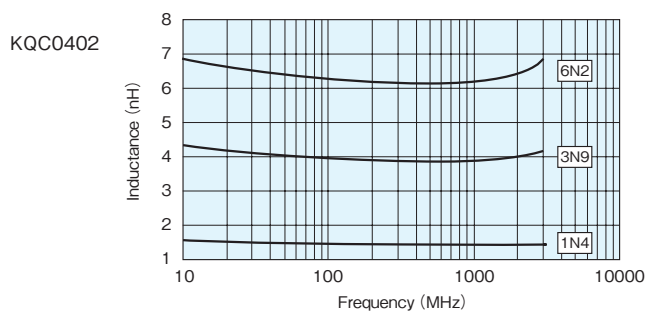
The code for inductance tolerance (G, J) enters □.

Characteristics

Test equipment : Agilent 4991A Impedance analyzer (KQC0402)

Agilent 4291A Impedance analyzer (KQC0603)

L-Frequency Characteristics



Q-Frequency Characteristics

