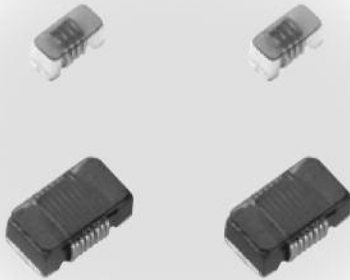


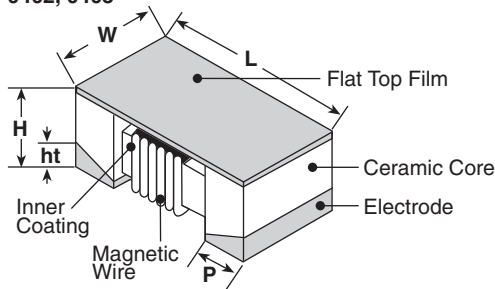
features

- Low DC resistance and high allowable DC current
- Low profile style 0.027 inches (0.7mm) typical
- Suitable for reflow soldering
- Marking: KQC0603: Black body color with no marking
KQC0402: White body color with no marking
- Products with lead-free terminations meet EU RoHS requirements



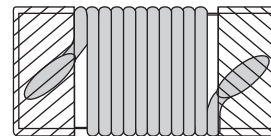
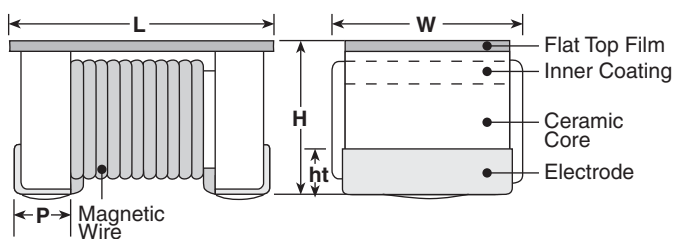
dimensions and construction

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



ordering information

| New Part # | 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 R10: 0.1µH 1R0: 1.0µH | 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) |
|------------------|-------------------------|-----------------------|------------------------------|--------------------------|-----------------------------|---------------------------------------|------------------------------------|----------------------------------|
| KQC0402T**1N4* | 1.4 | 250 | B: $\pm 0.1\text{nH}\%$ | 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: $\pm 0.2\text{nH}$ | 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 | | G: $\pm 2\%$ J: $\pm 5\%$ | 29 | | 7.0 | 0.036 | 1.00 |
| KQC0402T**4N3* | 4.3 | | | | | 6.6 | | |
| KQC0402T**4N7* | 4.7 | | | | | 5.6 | | |
| KQC0402T**6N2* | 6.2 | | | | | 0.045 | | |
| KQC0603TTE1N2* | 1.2 | 250 | J: $\pm 5\%$ | 18 | 250 | 6.0 | 0.020 | 2.25 |
| KQC0603TTE2N7* | 2.7 | | | | | 0.025 | 2.00 | |
| KQC0603TTE4N7* | 4.7 | | | | | 0.035 | 1.80 | |
| KQC0603TTE5N6* | 5.6 | | | | | 5.5 | 0.045 | 1.50 |
| KQC0603TTE7N5* | 7.5 | | | | | 4.0 | 0.065 | 1.25 |
| KQC0603TTE8N2* | 8.2 | | | | | 3.0 | 0.055 | 1.40 |
| KQC0603TTE10N* | 10 | | G: $\pm 2\%$ J: $\pm 5\%$ | 35 | | 0.065 | 1.25 | |
| KQC0603TTE12N* | 12 | | | | | 0.090 | 1.20 | |
| KQC0603TTE15N* | 15 | | | | | 0.100 | 1.10 | |
| KQC0603TTE18N* | 18 | | | | | 0.120 | 1.00 | |
| KQC0603TTE22N* | 22 | | | | | | | |
| KQC0603TTE27N* | 27 | | | | | | | |

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

** Add packaging character (TD, TP)

For complete environmental specifications, please refer to www.koaspeer.com

environmental applications

Performance Characteristics

| Parameter | Requirements Maximum $\Delta L/L$ | | Test Method |
|------------------------------|--|--|--|
| | Limit | Typical | |
| 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°C \pm 5°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°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°C \pm 2°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°C \pm 2°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°C \pm 2°C, 90%–95%RH, 1000h |
| Resistance to Solvent | No damage and marking shall remain legible | — | Accordance with MIL-STD 202F Method 215 |