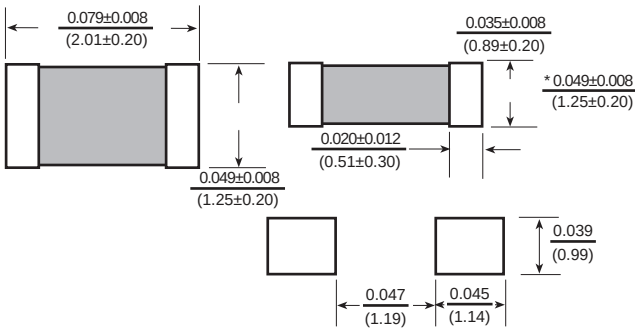
# MLC10 Multilayer Chip Inductors




**Dimensions:** Inches / (mm)

## Electrical

**Q vs. Frequency Characteristics:** Measured on Impedance Analyzer HPA4195A.

**Inductance vs. Temperature Characteristics:** Measured on LCR Meter HP4285A.

**Impedance vs. Frequency Characteristics:** Measured on Impedance Analyzer HPA4195A.

**Inductance Vs. DC Current Characteristics:** Measured on LCR Meter HPA4285A.

**Tolerance:** For 20% use M, 10% use K, and 5% use J as part number suffix.

## Mechanical

**Solderability:** 90% terminal coverage. Preheat: 120 ± 20°C for 60 sec. Solder: H63A. Solder Temp.: 230 ± 5°C. Flux: rosin. Dip time: 4 ± 1 sec.

## Environmental

**Thermal Shock:** Inductance shall be within ±5% of initial value. Q shall be within ± 30% of initial value within temp. range of -40°C to + 85°C for 30 min. each for > 100 cycles.

**Humidity Resistance:** Same results as above. Temp. 4°C. Humidity: 95% RH. Time: 1000 hrs.

**High Temp Resistance:** Same results as above. Temp: 85°C. Time: 1000 hrs.

**Low Temp Resistance:** Same results as above. Temp: -45°C. Time: 1000 hrs.

**Operating Temp.:** -25°C to +85°C.

**Storage Temp.:** -40°C to +85°C.

## Physical

**Packaging:** .022µH - 2.2µH,
4000 pieces per reel.
2.7µH - 27µH
3000 pieces per 7 inch reel.

| Allied Part Number | Inductance (µh) | Tolerance (%) | Q Min. | Test Freq. (MHz) | SRF Min. (MHz) | DCR Max. (Ω) | IDC Max. (mA) |
|---|---|---|---|---|---|---|---|
| MLC10-R022M-RC | .022 | 20 | 20 | 50 | 320 | 0.20 | 300 |
| MLC10-R033M-RC | .033 | 20 | 20 | 50 | 320 | 0.20 | 300 |
| MLC10-R047M-RC | .047 | 20 | 20 | 50 | 320 | 0.20 | 300 |
| MLC10-R056M-RC | .056 | 20 | 20 | 50 | 320 | 0.20 | 300 |
| MLC10-R068M-RC | .068 | 20 | 20 | 50 | 280 | 0.20 | 300 |
| MLC10-R082M-RC | .082 | 20 | 20 | 50 | 255 | 0.20 | 300 |
| MLC10-R10M-RC | .10 | 20 | 25 | 25 | 235 | 0.30 | 250 |
| MLC10-R12M-RC | .12 | 20 | 25 | 25 | 220 | 0.30 | 250 |
| MLC10-R15M-RC | .15 | 20 | 25 | 25 | 200 | 0.40 | 250 |
| MLC10-R18M-RC | .18 | 20 | 25 | 25 | 185 | 0.40 | 250 |
| MLC10-R22M-RC | .22 | 20 | 25 | 25 | 170 | 0.50 | 250 |
| MLC10-R27M-RC | .27 | 20 | 25 | 25 | 150 | 0.50 | 250 |
| MLC10-R33M-RC | .33 | 20 | 25 | 25 | 145 | 0.55 | 250 |
| MLC10-R39M-RC | .39 | 20 | 25 | 25 | 135 | 0.65 | 250 |
| MLC10-R47M-RC | .47 | 20 | 25 | 25 | 125 | 0.65 | 250 |
| MLC10-R56M-RC | .56 | 20 | 25 | 25 | 115 | 0.75 | 150 |
| MLC10-R68M-RC | .68 | 20 | 25 | 25 | 105 | 0.80 | 150 |
| MLC10-R82M-RC | .82 | 20 | 25 | 25 | 100 | 1.00 | 150 |
| MLC10-1R0K-RC | 1.0 | 10 | 45 | 10 | 75 | 0.40 | 50 |
| MLC10-1R2K-RC | 1.2 | 10 | 45 | 10 | 65 | 0.50 | 50 |
| MLC10-1R5K-RC | 1.5 | 10 | 45 | 10 | 60 | 0.50 | 50 |
| MLC10-1R8K-RC | 1.8 | 10 | 45 | 10 | 55 | 0.60 | 50 |
| MLC10-2R2K-RC | 2.2 | 10 | 45 | 10 | 50 | 0.65 | 30 |
| MLC10-2R7K-RC * | 2.7 | 10 | 45 | 10 | 45 | 0.75 | 30 |
| MLC10-3R3K-RC * | 3.3 | 10 | 45 | 10 | 41 | 0.80 | 30 |
| MLC10-3R9K-RC * | 3.9 | 10 | 45 | 10 | 38 | 0.90 | 30 |
| MLC10-4R7K-RC * | 4.7 | 10 | 45 | 10 | 35 | 1.00 | 30 |
| MLC10-5R6K-RC * | 5.6 | 10 | 45 | 4 | 32 | 0.90 | 15 |
| MLC10-6R8K-RC * | 6.8 | 10 | 45 | 4 | 29 | 1.00 | 15 |
| MLC10-8R2K-RC * | 8.2 | 10 | 45 | 4 | 26 | 1.10 | 15 |
| MLC10-100K-RC * | 10 | 10 | 45 | 2 | 24 | 1.10 | 15 |
| MLC10-120K-RC * | 12 | 10 | 45 | 2 | 22 | 1.20 | 15 |
| MLC10-150K-RC * | 15 | 10 | 30 | 1 | 19 | 0.80 | 5 |
| MLC10-180K-RC * | 18 | 10 | 30 | 1 | 18 | 0.90 | 5 |
| MLC10-220K-RC * | 22 | 10 | 30 | 1 | 16 | 1.10 | 5 |
| MLC10-270K-RC * | 27 | 10 | 30 | 1 | 13 | 1.25 | 5 |

*See dimensional difference.
Available in tighter tolerances.
All specifications subject to change without notice.