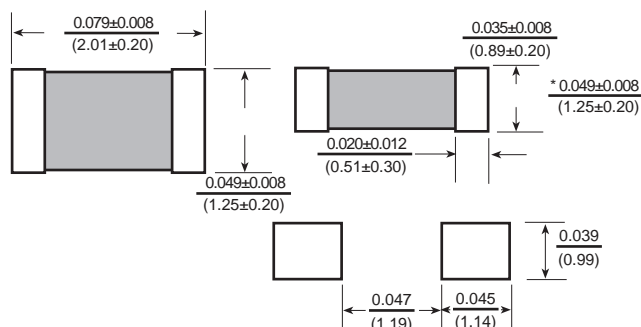


# MLC10 Multilayer Chip Inductors



## 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.