

**MOLDED CHIP INDUCTOR  
SERIES IC1812**

**FEATURES**

- Highly reliable in environments of sudden temperature changes and humidity
- Large electrodes and strong terminals allow more secure bonding to solder pads
- Good for flow, reflow soldering, or soldering irons

**ELECTRICAL CHARACTERISTICS**

- Inductance range      0.10μH to 1000μH
- Tolerance                ± 20% for values under 1.0μH  
                                  ± 10% for values at or above 1.0μH  
                                  Special tolerances are available on special order.
- Rated current            Based on current flow and temperature rise of 20°C max.
- Test procedure         L & Q are measured with HP-4191A & HP-4192A
- \*Suffix E                Identifies parts that will be passed through a second soldering reflow process at 215°C

**PHYSICAL CHARACTERISTICS**

- Operating temp.        -55°C to +105°C
- Construction            Wire wound, epoxy molding
- Soldering heat         240°C for 10 seconds resistance
- Solderability            Preheat: 120°C for 4 minutes  
                                  Solder temperature 215°C  
                                  Dwelling time: 3 seconds  
                                  95% of terminals are covered with solder
- Terminal                 Lead frame
- Terminal strength      3 lbs pull test
- Resistance to solvents Conforms to MIL-STD-202E
- Marking                 On part: Inductance  
                                  On reel: Part number, Quantity, Production date
- Packaging                500 pieces per reel
- Reel specifications     178 mm paper or plastic reel with embossed carrier tape 12 mm width, 4 mm pitch

**DIMENSIONS IN MILLIMETERS**

- Body length A            4.5 mm ± 0.2 mm
- Body width B             3.2 mm ± 0.2 mm
- Body height C            3.2 mm ± 0.2 mm
- Terminal length D        0.7 mm to 1.3 mm
- Terminal width E         1.1 mm to 1.8 mm

**SPECIFICATIONS**

| Part Number    | L (μH) | Tol (%) | Q Min | Test Freq (MHz) | SRF Min (MHz) | DCR Max (Ω) | Rated Current (mA) |
|----------------|--------|---------|-------|-----------------|---------------|-------------|--------------------|
| IC1812-R10M    | 0.10   | ±20     | 28    | 25.2            | 700           | 0.44        | 450                |
| IC1812-R12M    | 0.12   |         | 30    |                 | 500           | 0.22        | 450                |
| IC1812-R15M    | 0.15   |         | 30    |                 | 450           | 0.25        | 450                |
| IC1812-R18M    | 0.18   |         | 30    |                 | 400           | 0.28        | 450                |
| IC1812-R22M    | 0.22   |         | 30    |                 | 350           | 0.32        | 450                |
| IC1812-R27M    | 0.27   |         | 30    |                 | 320           | 0.36        | 450                |
| IC1812-R33M    | 0.33   |         | 30    |                 | 300           | 0.40        | 450                |
| IC1812-R39M    | 0.39   |         | 30    |                 | 350           | 0.45        | 450                |
| IC1812-R47M    | 0.47   |         | 30    |                 | 220           | 0.50        | 450                |
| IC1812-R56M    | 0.56   |         | 30    |                 | 180           | 0.55        | 450                |
| IC1812-R68M    | 0.68   |         | 30    |                 | 160           | 0.60        | 450                |
| IC1812-R82M    | 0.82   |         | 30    |                 | 140           | 0.67        | 450                |
| IC1812-1R0K    | 1.0    | ±10     | 50    | 7.96            | 100           | 0.50        | 450                |
| IC1812-1R2K    | 1.2    |         | 50    |                 | 80            | 0.55        | 430                |
| IC1812-1R5K    | 1.5    |         | 50    |                 | 70            | 0.60        | 410                |
| IC1812-1R8K    | 1.8    |         | 50    |                 | 60            | 0.65        | 390                |
| IC1812-2R2K    | 2.2    |         | 50    |                 | 55            | 0.70        | 380                |
| IC1812-2R7K    | 2.7    |         | 50    |                 | 50            | 0.75        | 370                |
| IC1812-3R3K    | 3.3    |         | 50    |                 | 45            | 0.80        | 355                |
| IC1812-3R9K    | 3.9    |         | 50    |                 | 40            | 0.90        | 330                |
| IC1812-4R7K    | 4.7    |         | 50    |                 | 35            | 1.0         | 315                |
| IC1812-5R6K    | 5.6    |         | 50    |                 | 33            | 1.1         | 300                |
| IC1812-6R8K    | 6.8    |         | 50    |                 | 27            | 1.2         | 285                |
| IC1812-8R2K    | 8.2    |         | 50    |                 | 25            | 1.4         | 270                |
| IC1812-100K    | 10     |         | 50    | 2.52            | 20            | 1.6         | 250                |
| IC1812-120K    | 12     |         | 50    |                 | 18            | 2.0         | 225                |
| IC1812-150K    | 15     |         | 50    |                 | 17            | 2.5         | 200                |
| IC1812-180K    | 18     |         | 50    |                 | 15            | 2.8         | 190                |
| IC1812-220K    | 22     |         | 50    |                 | 13            | 3.2         | 180                |
| IC1812-270K    | 27     |         | 50    |                 | 12            | 3.6         | 170                |
| IC1812-330K    | 33     |         | 50    |                 | 11            | 4.0         | 160                |
| IC1812-390K    | 39     |         | 50    |                 | 10            | 4.5         | 150                |
| IC1812-470K    | 47     |         | 50    |                 | 10            | 5.0         | 140                |
| IC1812-560K    | 56     |         | 50    |                 | 9             | 5.5         | 135                |
| IC1812-680K    | 68     |         | 50    |                 | 9             | 6.0         | 130                |
| IC1812-820K    | 82     |         | 50    |                 | 8             | 7.0         | 120                |
| IC1812-101K    | 100    |         | 40    | 0.796           | 7             | 8.0         | 110                |
| IC1812-121K    | 120    |         | 40    |                 | 6             | 8.0         | 110                |
| IC1812-151K    | 150    |         | 40    |                 | 5             | 9.0         | 105                |
| IC1812-181K    | 180    |         | 40    |                 | 5             | 9.5         | 102                |
| IC1812-221K    | 220    |         | 40    |                 | 4             | 10.0        | 100                |
| IC1812-271K    | 270    |         | 30    |                 | 3             | 18.0        | 92                 |
| IC1812-271K-E* | 270    |         | 30    |                 | 3             | 18.0        | 92                 |
| IC1812-331K    | 330    |         | 30    |                 | 3             | 20.0        | 85                 |
| IC1812-391K    | 390    |         | 30    |                 | 3             | 23.0        | 80                 |
| IC1812-471K    | 470    |         | 30    |                 | 3             | 26.0        | 62                 |
| IC1812-561K    | 560    |         | 30    |                 | 2             | 30.0        | 50                 |
| IC1812-681K    | 680    |         | 30    |                 | 2             | 40.0        | 50                 |
| IC1812-821K    | 820    |         | 30    |                 | 2             | 45.0        | 30                 |
| IC1812-102K    | 1000   |         | 30    |                 | 2             | 50.0        | 30                 |

