

(II) MULTILAYER CHIP INDUCTORS

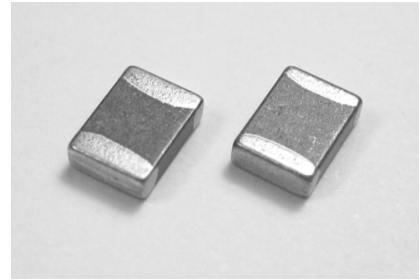
1. MTIS Series (Ferrite Type)

Range of Size: (1608(0603)~3216(1206))

Test Equipment : E4991A IMPEDANCE ANALYZER

Operating Temperature : -40 ~+85

The max. rated current: the DC current value having temp. increased 40 after thro. DC current 2 hours at ambient temp.

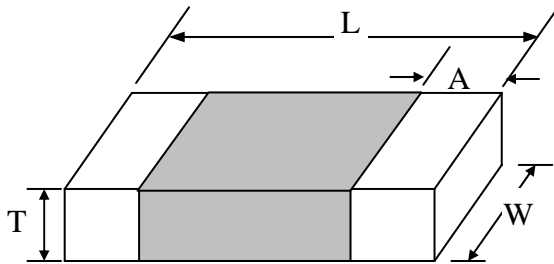


Features

- > Multilayer chip inductors use magnetic material and multilayer technology in producing revolutionary inductors which do not use any wire windings. Ferrite paste and electric conductor paste are alternately layered and sintered into a completely monolithic structure to form an inductor with a perfectly closed magnetic circuit and an excellent magnetic shield.
- > Excellent solderability and high heat resistance for either flow or reflow soldering.
- > High reliability due to an entirely monolithic structure.
- > No cross coupling between inductors due to magnetic shield. Ideal for high density installation.

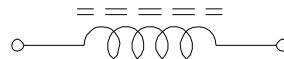
General Dimensions and Configuration

SHAPE:



Unit: mm

EQUIVALENT CIRCUIT DIAGRAM:



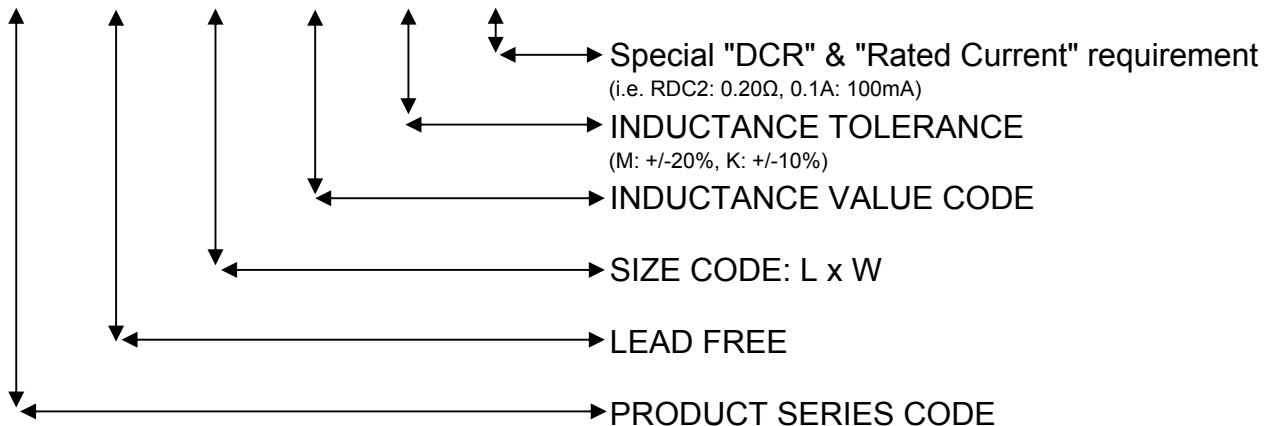
DIMENSIONS:

| SHAPE | L (m/m) | W (m/m) | T (m/m) | A (m/m) | Net Weight (mg) |
|------------|----------|-----------|-------------------------|-----------|-----------------|
| 1608(0603) | 1.6±0.15 | 0.80±0.15 | 0.80±0.15 | 0.20~0.60 | 5.80 |
| 2012(0805) | 2.0±0.20 | 1.25±0.20 | 0.85±0.20 (1.25±0.20)** | 0.20~0.80 | 12.00 (18.10)** |
| 3216(1206) | 3.2±0.20 | 1.60±0.20 | 1.10±0.30 (1.60±0.30)** | 0.40~1.00 | 28.00 (39.00)** |

**Please refer to the detailed figures shown in the MTIS2012/3216 series tables.

Part Numbering Systems

MTI S 3216-6R8 K 0.1A



1. MTIS Series (Ferrite Type) (Size: 3216 (1206))**Electrical Characteristics**

| Part No. | Inductance(μ H) Tolerance | Q (Min.) | Test Freq. L,Q (MHz) | Self-Resonant Freq.(MHz) Min. | DC Resistance (Max.) | Rated Current mA (Max.) | Thickness (m/m) |
|-------------------|-----------------------------------|-------------|-------------------------|----------------------------------|-------------------------|----------------------------|--------------------|
| MTIS3216-47NM | 0.047 \pm 20% | 20 | 50 | 320 | 0.15 | 300 | 1.10 \pm 0.30 |
| MTIS3216-68NM | 0.068 \pm 20% | 20 | 50 | 280 | 0.25 | 300 | 1.10 \pm 0.30 |
| MTIS3216-82NM | 0.082 \pm 20% | 20 | 50 | 255 | 0.25 | 300 | 1.10 \pm 0.30 |
| MTIS3216-R10K , M | 0.10 \pm 10% , \pm 20% | 20 | 25 | 235 | 0.25 | 250 | 1.10 \pm 0.30 |
| MTIS3216-R12K , M | 0.12 \pm 10% , \pm 20% | 20 | 25 | 220 | 0.30 | 250 | 1.10 \pm 0.30 |
| MTIS3216-R15K , M | 0.15 \pm 10% , \pm 20% | 20 | 25 | 200 | 0.30 | 250 | 1.10 \pm 0.30 |
| MTIS3216-R18K , M | 0.18 \pm 10% , \pm 20% | 20 | 25 | 185 | 0.40 | 250 | 1.10 \pm 0.30 |
| MTIS3216-R22K , M | 0.22 \pm 10% , \pm 20% | 20 | 25 | 170 | 0.40 | 250 | 1.10 \pm 0.30 |
| MTIS3216-R27K , M | 0.27 \pm 10% , \pm 20% | 20 | 25 | 150 | 0.50 | 250 | 1.10 \pm 0.30 |
| MTIS3216-R33K , M | 0.33 \pm 10% , \pm 20% | 20 | 25 | 145 | 0.60 | 250 | 1.10 \pm 0.30 |
| MTIS3216-R39K , M | 0.39 \pm 10% , \pm 20% | 25 | 25 | 135 | 0.50 | 250 | 1.10 \pm 0.30 |
| MTIS3216-R47K , M | 0.47 \pm 10% , \pm 20% | 25 | 25 | 125 | 0.60 | 200 | 1.10 \pm 0.30 |
| MTIS3216-R56K , M | 0.56 \pm 10% , \pm 20% | 25 | 25 | 115 | 0.70 | 200 | 1.10 \pm 0.30 |
| MTIS3216-R68K , M | 0.68 \pm 10% , \pm 20% | 25 | 25 | 105 | 0.80 | 150 | 1.10 \pm 0.30 |
| MTIS3216-R82K , M | 0.82 \pm 10% , \pm 20% | 25 | 25 | 100 | 0.90 | 150 | 1.10 \pm 0.30 |
| MTIS3216-1R0K , M | 1.0 \pm 10% , \pm 20% | 45 | 10 | 75 | 0.40 | 100 | 1.10 \pm 0.30 |
| MTIS3216-1R2K , M | 1.2 \pm 10% , \pm 20% | 45 | 10 | 65 | 0.50 | 100 | 1.10 \pm 0.30 |
| MTIS3216-1R5K , M | 1.5 \pm 10% , \pm 20% | 45 | 10 | 60 | 0.50 | 50 | 1.10 \pm 0.30 |
| MTIS3216-1R8K , M | 1.8 \pm 10% , \pm 20% | 45 | 10 | 55 | 0.50 | 50 | 1.10 \pm 0.30 |
| MTIS3216-2R2K , M | 2.2 \pm 10% , \pm 20% | 45 | 10 | 50 | 0.60 | 50 | 1.10 \pm 0.30 |
| MTIS3216-2R7K , M | 2.7 \pm 10% , \pm 20% | 45 | 10 | 45 | 0.60 | 50 | 1.10 \pm 0.30 |
| MTIS3216-3R3K , M | 3.3 \pm 10% , \pm 20% | 45 | 10 | 41 | 0.70 | 50 | 1.10 \pm 0.30 |
| MTIS3216-3R9K , M | 3.9 \pm 10% , \pm 20% | 45 | 10 | 38 | 0.80 | 50 | 1.10 \pm 0.30 |
| MTIS3216-4R7K , M | 4.7 \pm 10% , \pm 20% | 45 | 10 | 35 | 0.90 | 50 | 1.10 \pm 0.30 |
| MTIS3216-5R6K , M | 5.6 \pm 10% , \pm 20% | 50 | 4 | 32 | 0.70 | 25 | 1.10 \pm 0.30 |
| MTIS3216-6R8K , M | 6.8 \pm 10% , \pm 20% | 50 | 4 | 29 | 0.80 | 25 | 1.10 \pm 0.30 |
| MTIS3216-8R2K , M | 8.2 \pm 10% , \pm 20% | 50 | 4 | 26 | 0.90 | 25 | 1.10 \pm 0.30 |
| MTIS3216-100K , M | 10 \pm 10% , \pm 20% | 50 | 2 | 24 | 1.00 | 25 | 1.10 \pm 0.30 |
| MTIS3216-120K , M | 12 \pm 10% , \pm 20% | 50 | 2 | 22 | 1.05 | 15 | 1.10 \pm 0.30 |
| MTIS3216-150K , M | 15 \pm 10% , \pm 20% | 35 | 1 | 19 | 0.70 | 5 | 1.10 \pm 0.30 |
| MTIS3216-180K , M | 18 \pm 10% , \pm 20% | 35 | 1 | 18 | 0.70 | 5 | 1.10 \pm 0.30 |
| MTIS3216-220K , M | 22 \pm 10% , \pm 20% | 35 | 1 | 16 | 0.90 | 5 | 1.10 \pm 0.30 |
| MTIS3216-270K , M | 27 \pm 10% , \pm 20% | 35 | 1 | 14 | 0.90 | 5 | 1.10 \pm 0.30 |
| MTIS3216-330K , M | 33 \pm 10% , \pm 20% | 35 | 1 | 13 | 1.05 | 5 | 1.10 \pm 0.30 |
| MTIS3216-390K , M | 39 \pm 10% , \pm 20% | 40 | 2 | 11 | 3.00 | 10 | 1.60 \pm 0.30 |
| MTIS3216-470K , M | 47 \pm 10% , \pm 20% | 40 | 2 | 10 | 3.40 | 10 | 1.60 \pm 0.30 |

1. MTIS Series (Ferrite Type) (Size: 3216 (1206))

Rating Curves

