

SMD Inductors(Coils) For Power Line(Multilayer, Magnetic Shielded)

Conformity to RoHS Directive

MLZ Series MLZ2012

This is a multilayered inductor primarily designed for choking power lines. With one of the best resistance performance in the industry, this product delivers a significantly lower DC resistance value compared to our previous products. This reduces the loss at the power supply and contributes to power conservation.

FEATURES

- IDC-UP goods (1.0 to 10.0 μ H) and low inductance goods (0.1 to 0.47 μ H) have been newly added.
- Significantly reduced Rdc.
- An inductance value of 4.7 μ H was realized at a thickness of 0.85mm. This contributes to space saving.
- Automatic mounting in tape and reel package.
- The products contain no lead and also support lead-free soldering.
- It is a product conforming to RoHS directive.

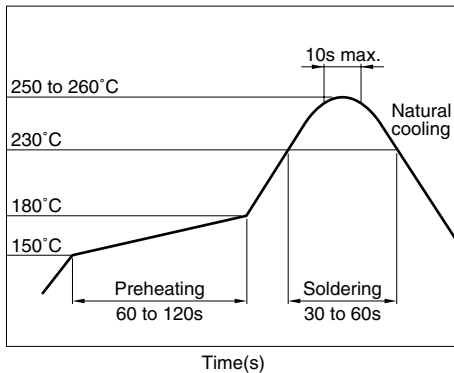
APPLICATIONS

Choke coil to use for DVC, DSC, MD, power supply circuit such as various module.

SPECIFICATIONS

| | |
|-----------------------------|---------------|
| Operating temperature range | -55 to +125°C |
| Storage temperature range | -55 to +125°C |

RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



PRODUCT IDENTIFICATION

| | | | | | |
|-----|------|-----|-----|-----|-----|
| MLZ | 2012 | A | 1R0 | M | T |
| (1) | (2) | (3) | (4) | (5) | (6) |

(1) Series name

(2) Dimensions L×W

| | |
|------|------------|
| 2012 | 2.0×1.25mm |
|------|------------|

(3) Material code

(4) Inductance value

| | |
|-----|--------------|
| R10 | 0.1 μ H |
| 1R0 | 1.0 μ H |
| 100 | 10.0 μ H |

(5) Management symbol

| | |
|---|--------|
| M | STD |
| W | IDC-UP |

(6) Packaging style

| | |
|---|---------------|
| T | Taping [reel] |
|---|---------------|

PACKAGING STYLE AND QUANTITIES

| Packaging style | Thickness T(mm) | Quantity |
|-----------------|-----------------|------------------|
| Taping | 0.85 | 4000 pieces/reel |
| | 1.25 | 2000 pieces/reel |

HANDLING AND PRECAUTIONS

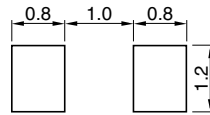
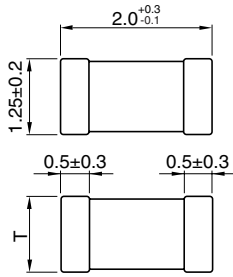
- Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
- After mounting components onto the printed circuit board, do not apply stress through board bending or mishandling.
- The inductance value may change due to magnetic saturation if the current exceeds the rated maximum.
- Do not expose the inductors to stray magnetic fields.
- Avoid static electricity discharge during handling.
- When hand soldering, apply the soldering iron to the printed circuit board only. Temperature of the iron tip should not exceed 350°C. Soldering time should not exceed 3 seconds.

• Conformity to RoHS Directive: This means that, in conformity with EU Directive 2002/95/EC, lead, cadmium, mercury, hexavalent chromium, and specific bromine-based flame retardants, PBB and PBDE, have not been used, except for exempted applications.

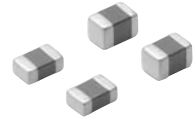
• Please contact our Sales office when your application are considered the following:
The device's failure or malfunction may directly endanger human life (e.g. application for automobile/aircraft/medical/nuclear power devices, etc.)

• All specifications are subject to change without notice.

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



Dimensions in mm



| T(Thickness) | Weight(mg) |
|--------------|------------|
| 0.85±0.2 | 10 |
| 1.25±0.2 | 14 |

ELECTRICAL CHARACTERISTICS

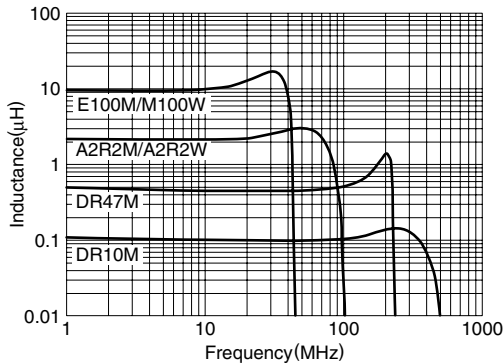
| Part No. | Inductance (μH) | Inductance tolerance | Thickness (mm) | Test frequency L (MHz) | Test current L (mA) | Self-resonant frequency (MHz)typ. | DC resistance (Ω)±30% | Rated current (mA) |
|---------------|-----------------|----------------------|----------------|------------------------|---------------------|-----------------------------------|-----------------------|--------------------|
| MLZ2012DR10MT | 0.10 | ±20% | 0.85 | 25 | 1.0 | 500 | 0.07 | 1000 |
| MLZ2012DR22MT | 0.22 | ±20% | 0.85 | 25 | 1.0 | 330 | 0.13 | 800 |
| MLZ2012DR47MT | 0.47 | ±20% | 1.25 | 25 | 1.0 | 230 | 0.18 | 550 |
| MLZ2012A1R0MT | 1.0 | ±20% | 0.85 | 10 | 1.0 | 160 | 0.12 | 220 |
| MLZ2012A2R2MT | 2.2 | ±20% | 0.85 | 10 | 1.0 | 120 | 0.20 | 160 |
| MLZ2012E4R7MT | 4.7 | ±20% | 0.85 | 2 | 0.1 | 70 | 0.30 | 80 |
| MLZ2012E100MT | 10.0 | ±20% | 1.25 | 2 | 0.1 | 50 | 0.40 | 60 |
| MLZ2012A1R0WT | 1.0 | ±20% | 0.85 | 10 | 1.0 | 160 | 0.10 | 280 |
| MLZ2012A2R2WT | 2.2 | ±20% | 0.85 | 10 | 1.0 | 120 | 0.15 | 210 |
| MLZ2012M4R7WT | 4.7 | ±20% | 0.85 | 2 | 0.1 | 70 | 0.30 | 180 |
| MLZ2012M100WT | 10.0 | ±20% | 1.25 | 2 | 0.1 | 50 | 0.47 | 150 |

- Test equipment

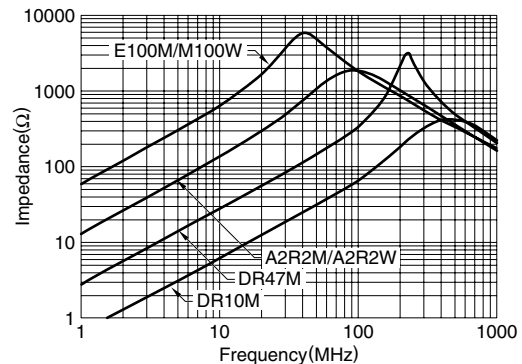
Inductance: Ag4294A-16034G

TYPICAL ELECTRICAL CHARACTERISTICS

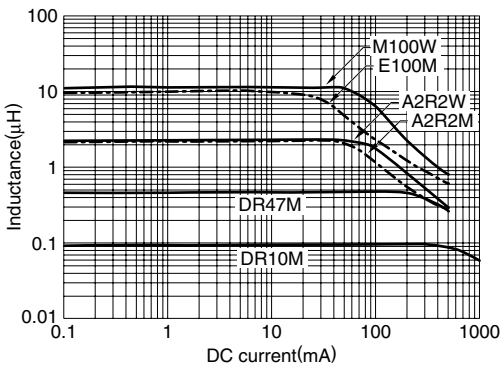
INDUCTANCE vs. FREQUENCY CHARACTERISTICS



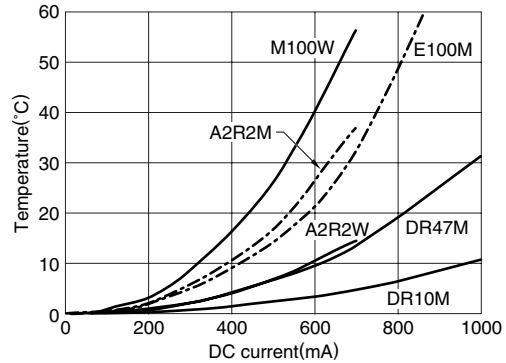
IMPEDANCE vs. FREQUENCY CHARACTERISTICS



INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



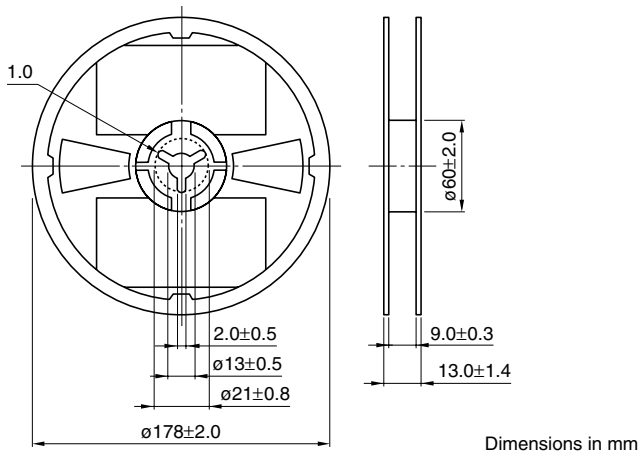
TEMPERATURE CHARACTERISTICS



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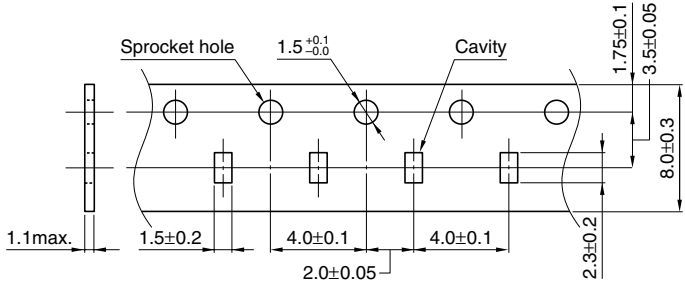
PACKAGING STYLES

REEL DIMENSIONS

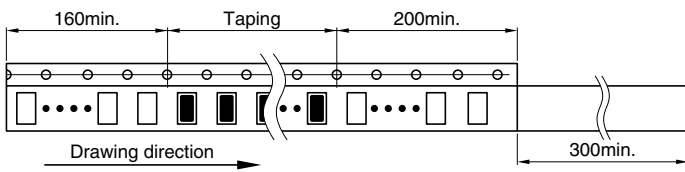
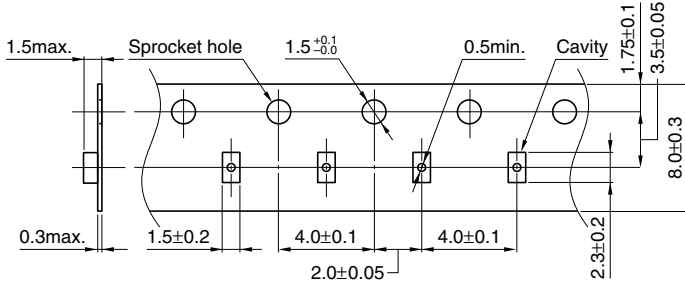


TAPE DIMENSIONS

t=0.85mm



t=1.25mm



Dimensions in mm

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