⚜TDK

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

Conformity to RoHS Directive

MLZ Series MLZ1608

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 10.0µH) and low inductance goods (0.1 to 0.47µH) have been newly added.
• Significantly reduced Rdc.
• An inductance value of 0.1 to 10.0µH was realized using the 1608 form. 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.
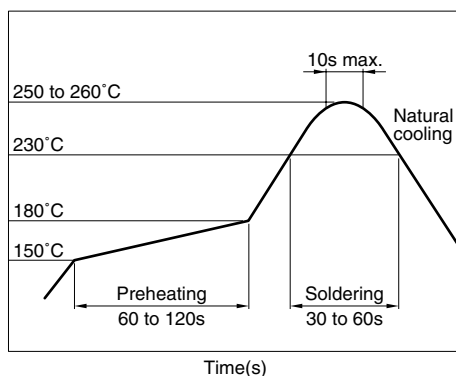
APPLICATIONS
Choke coil to use for DVC, DSC, MD, power supply circuit such as various module.

SPECIFICATIONS

Operating temperature range	−55 to +125°C
Storage temperature range	−55 to +125°C[Unit of products]

RECOMMENDED SOLDERING CONDITION
REFLOW SOLDERING

Time(s)

PRODUCT IDENTIFICATION

MLZ　1608　A　1R0　M　T
(1)　(2)　(3)　(4)　(5)　(6)

(1) Series name

(2) Dimensions L×W

1608	1.6×0.8mm

(3) Material code

(4) Inductance value

R10	0.1µH
1R0	1.0 µH
100	10.0 µH

(5) Management symbol

M	STD
W	IDC-UP

(6) Packaging style

T	Taping [reel]

PACKAGING STYLE AND QUANTITIES

| Packaging style	Quantity
Taping	4000 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.

• 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.

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SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN

1.6±0.15
0.8±0.15
0.3±0.2   0.3±0.2
0.8±0.15

2.0
0.8
0.8

Dimensions in mm

Weight: 4mg
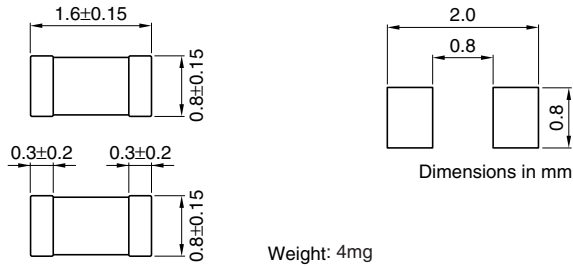
ELECTRICAL CHARACTERISTICS

| Part No.	Inductance (µH)	Inductance tolerance	Test frequency L (MHz)	Test current L (mA)	Self-resonant frequency (MHz)typ.	DC resistance (Ω)±30%	Rated current (mA)
MLZ1608DR10MT	0.10	±20%	25	1.0	600	0.14	700
MLZ1608DR22MT	0.22	±20%	25	1.0	400	0.27	550
MLZ1608DR47MT	0.47	±20%	25	1.0	260	0.42	400
MLZ1608A1R0MT	1.0	±20%	10	1.0	170	0.17	150
MLZ1608A2R2MT	2.2	±20%	10	1.0	120	0.30	100
MLZ1608E4R7MT	4.7	±20%	2	0.1	70	0.50	60
MLZ1608E100MT	10.0	±20%	2	0.1	50	0.90	40
MLZ1608A1R0WT	1.0	±20%	10	1.0	170	0.15	190
MLZ1608A2R2WT	2.2	±20%	10	1.0	120	0.25	130
MLZ1608M4R7WT	4.7	±20%	2	0.1	70	0.50	120
MLZ1608M100WT	10.0	±20%	2	0.1	50	1.05	90

• Test equipment
Inductance: Ag-4294A+16034G
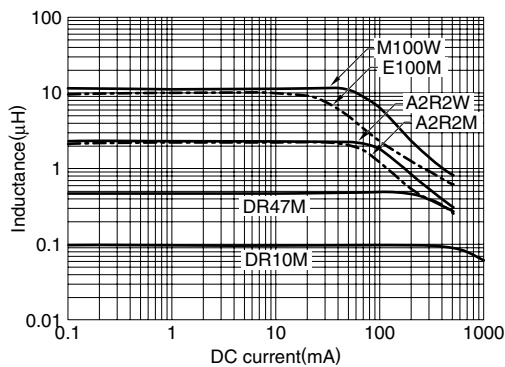
TYPICAL ELECTRICAL CHARACTERISTICS
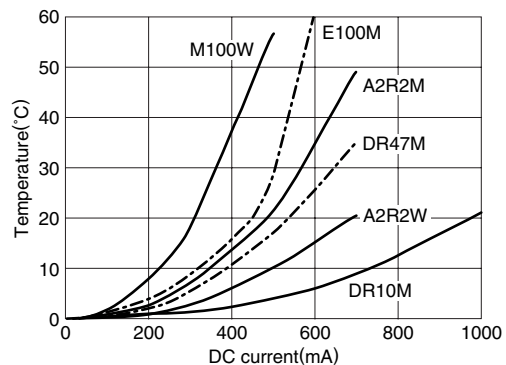### INDUCTANCE vs. FREQUENCY CHARACTERISTICS
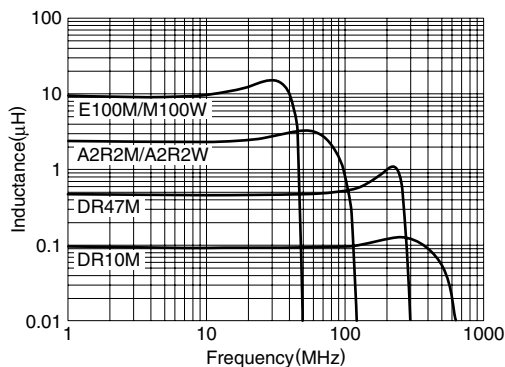
IMPEDANCE vs. FREQUENCY CHARACTERISTICS
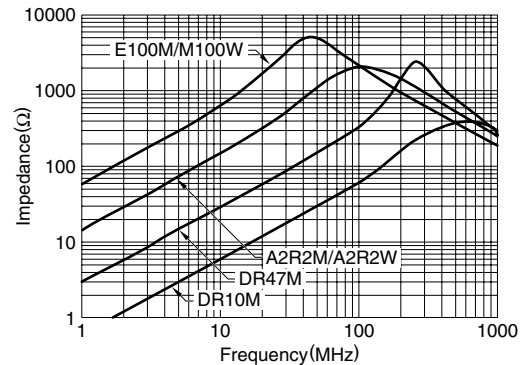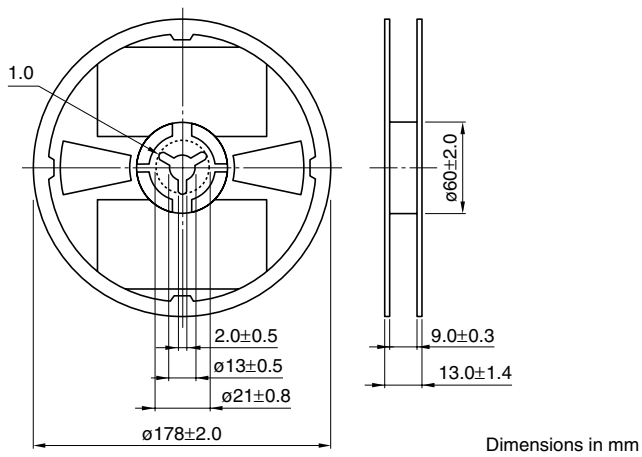
INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS

TEMPERATURE CHARACTERISTICS

• All specifications are subject to change without notice.

PACKAGING STYLES
REEL DIMENSIONS

1.0

2.0±0.5
ø13±0.5
ø21±0.8
ø178±2.0

ø60±2.0

9.0±0.3
13.0±1.4

Dimensions in mm

TAPE DIMENSIONS

Sprocket hole   1.5 +0.1 −0.0   Cavity

1.75±0.1
3.5±0.05
8.0±0.3
1.9±0.2

1.1max.   1.1±0.2   4.0±0.1   4.0±0.1
2.0±0.05

160min.   Taping   200min.

Drawing direction

300min.

Dimensions in mm