

Inductors for Decoupling Circuits Multilayer/For Current • Magnetic Shielded

Conformity to RoHS Directive

MLZ Series MLZ2012H

The MLZ-H Series includes multilayer choke coils for decoupling power circuits.

TDK developed ferrite material, which has improved DC superimposition characteristics, allowing for the rated current to be equivalent to the wound coil. The DC superimposition characteristics of this series have been improved by up to 250% over the MLZ-W Series, which previously was in the top class in the industry. In addition, low ohmic electrodes are used making it possible to be compatible with large currents equivalent to the wound coil.

FEATURES

- Improved by up to 250% for large currents over the MLZ-W Series, which was previously in the top class in the industry.
- Magnetically sealed configuration allowing for high-density mounting.
- Does not contain lead and is compatible with lead-free soldering.
- It is a product conforming to RoHS directive.

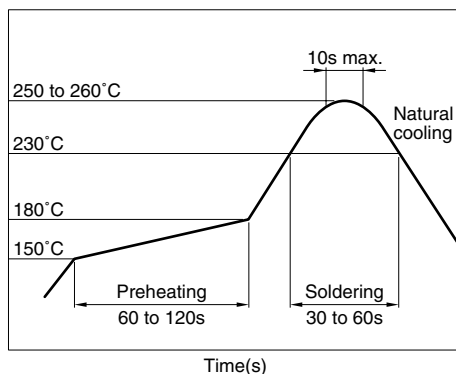
APPLICATIONS

Decoupling coil for power lines of DSCs, DVCs, PCs, TVs, etc.

SPECIFICATIONS

Operating temperature range	-55 to +125°C [Including self-temperature rise]
Storage temperature range	-55 to +125°C(After mount)

RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



PRODUCT IDENTIFICATION

MLZ	2012	M	100	H	T	☐ ☐ ☐
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Series name

(2) Dimensions L×W

2012	2.0×1.25×1.25mm
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(3) Management symbol

(4) Inductance

1R0	1.0 μH
100	10.0 μH

(5) Characteristic type

H	Super High-current
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(6) Packaging style

T	Taping [reel]
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(7) TDK internal code

PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	2000 pieces/reel

HANDLING AND PRECAUTIONS

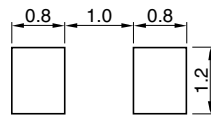
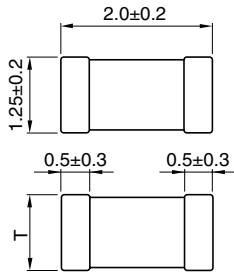
- Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
- After mounting components onto the printed circuit board, do not apply stress through board bending 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 is 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



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*1 (mA)	Rated current*2 (mA)
MLZ2012M1R0HT	1.0	±20%	2	0.1	150	0.10	700	800
MLZ2012M2R2HT	2.2	±20%	2	0.1	100	0.16	400	600
MLZ2012M4R7HT	4.7	±20%	2	0.1	60	0.34	300	400
MLZ2012M100HT	10	±20%	2	0.1	40	0.68	200	300

*1 Current assumed when inductance ratio has decreased by 50% max..

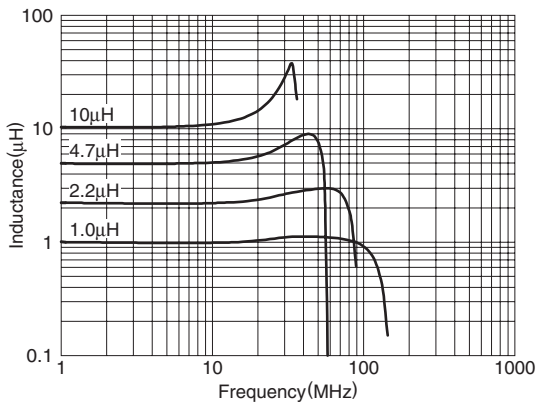
*2 Current assumed when temperature has risen to 20°C max. (reference value). The maximum operating temperature at this time is 105°C.

• Test equipment

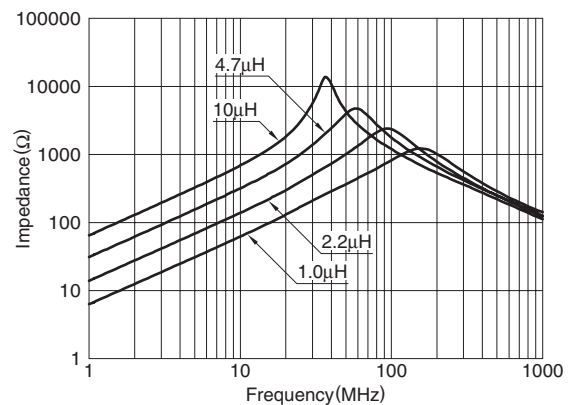
Inductance: Ag-4294A+16034G

TYPICAL ELECTRICAL CHARACTERISTICS

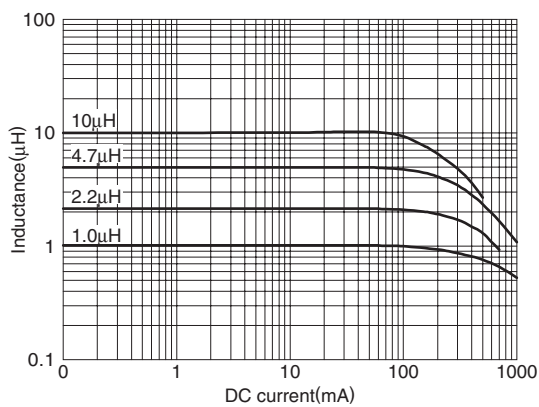
INDUCTANCE vs. FREQUENCY CHARACTERISTICS



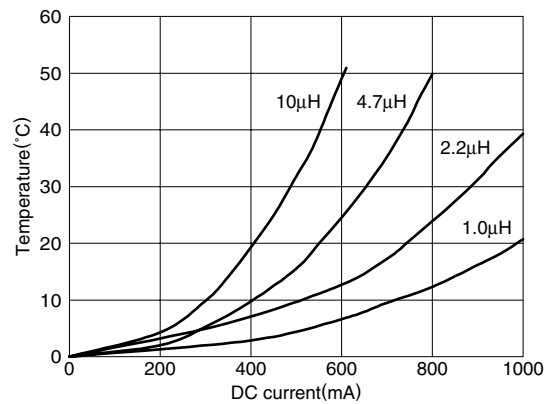
IMPEDANCE vs. FREQUENCY CHARACTERISTICS



INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS

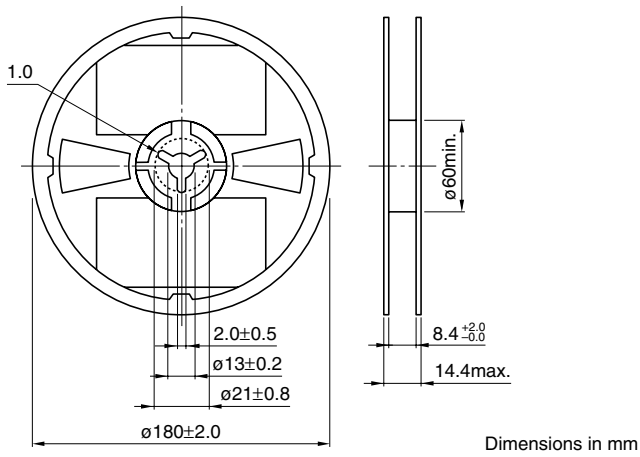


TEMPERATURE CHARACTERISTICS



PACKAGING STYLES

REEL DIMENSIONS



TAPE DIMENSIONS

t=1.25mm

