

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

Conformity to RoHS Directive

MLZ Series MLZ1005W

The MLZ Series is a new line of multilayer choke coils for decoupling with the industry's best DC superimposition characteristics and lowest DC resistance*. TDK has developed this coil using its proprietary ferrite material technique and dense electrodes.

The MLZ Series exerts an excellent effect mainly on the decoupling of power circuits. It also exerts an effect on audio lines because of its low DC resistance.

The MLZ1005 series is now available in addition to the MLZ1608/2012 series.

* The MLZ Series was regarded as having the industry's best DC superimposition characteristics and lowest DC resistance according to research conducted in September 2010.

FEATURES

- MLZ1005 series products have the best DC superimposition characteristics 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

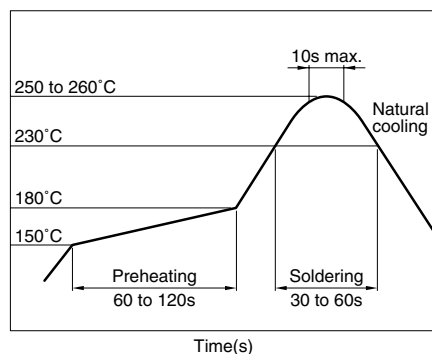
Modules such as digital cellular phone and camera module, Netbooks, note PCs, DSCs, DVCs, video games, portable memory audio devices, navigation systems, PNDs, TVs, W-LANs, solid state drives

SPECIFICATIONS

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

RECOMMENDED SOLDERING CONDITION

REFLOW SOLDERING



• 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.

PRODUCT IDENTIFICATION

MLZ	1005	M	1R0	W	T
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Dimensions L×W

1005	1.0×0.5×0.5mm
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(3) Material code

(4) Inductance value

R47	0.47μH
1R0	1.0μH

(5) Management symbol

W	IDC-UP
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(6) Packaging style

T	Taping [reel]
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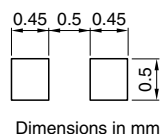
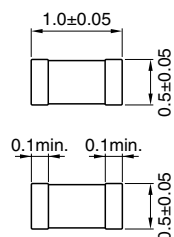
PACKAGING STYLE AND QUANTITIES

Packaging style	Quantity
Taping	10000 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.

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



Dimensions in mm



Weight: 1.2mg

ELECTRICAL CHARACTERISTICS

Classification	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)
IDC-UP	MLZ1005MR47WT	0.47	±20%	2	0.1	260	0.20	120	500
	MLZ1005MR68WT	0.68	±20%	2	0.1	210	0.30	110	450
	MLZ1005M1R0WT	1.00	±20%	2	0.1	170	0.35	100	450
	MLZ1005M1R5WT	1.50	±20%	2	0.1	140	0.50	80	350
	MLZ1005M2R2WT	2.20	±20%	2	0.1	120	0.55	60	350

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

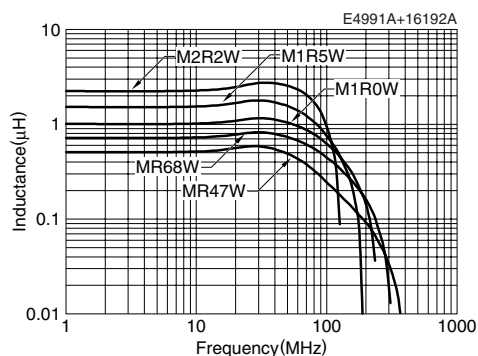
*2 Current assumed when temperature has risen to 20°C (reference value). The maximum operating temperature at this time is 105°C.

• Test equipment

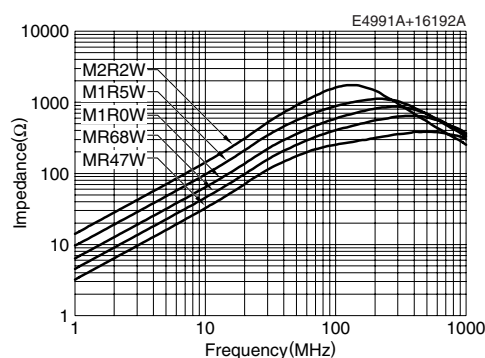
Inductance: Ag-4294A+16034G

TYPICAL ELECTRICAL CHARACTERISTICS

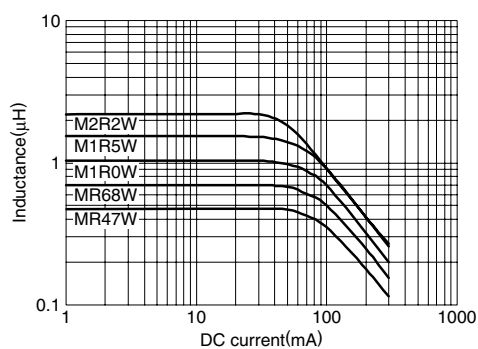
INDUCTANCE vs. FREQUENCY CHARACTERISTICS



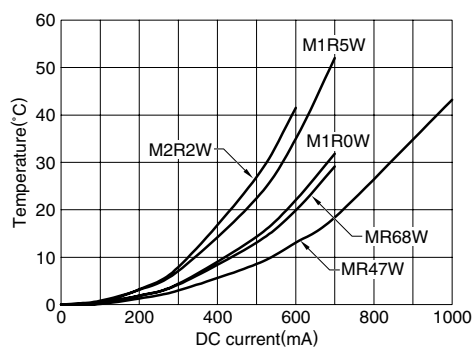
IMPEDANCE vs. FREQUENCY CHARACTERISTICS



INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS

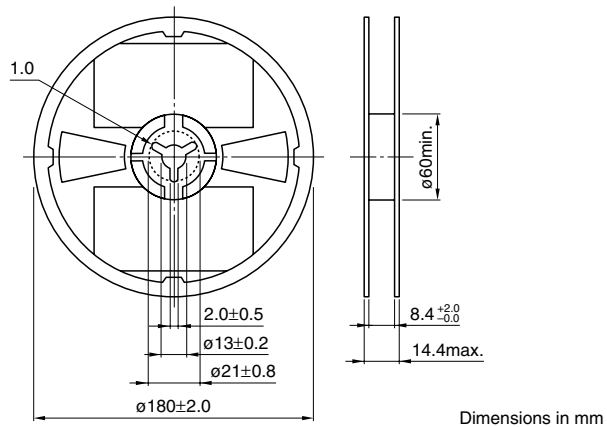


TEMPERATURE CHARACTERISTICS

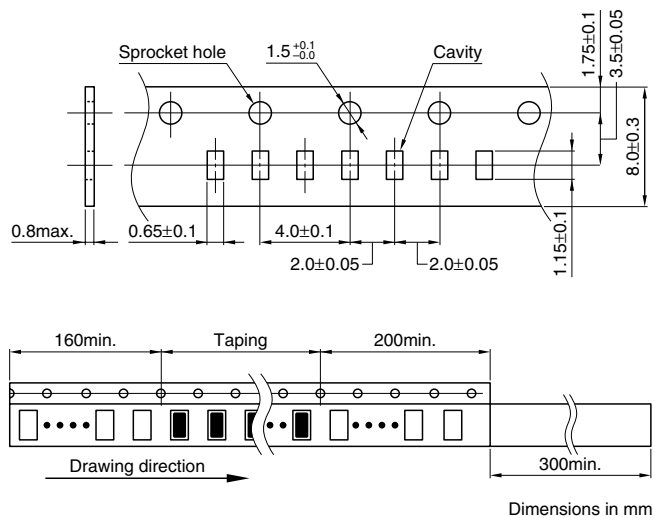


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PACKAGING STYLES REEL DIMENSIONS



TAPE DIMENSIONS



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