

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

Conformity to RoHS Directive

MLF Series MLF1005L

Various digital devices are required to be further downsized yet remain highly functional, and to excel in low power consumption, and parts mounted on the devices are also required to have lower resistance.

The MLF1005L type is a new line of inductors that have been developed to meet such requirements: their resistance has been lowered by up to 35% in comparison with that of the existing MLF1005 type.

In addition, the new inductors use similar magnetic shielding, which enables their high-density mounting.

FEATURES

- The resistance of the MLF1005L type has been lowered by up to 35% in comparison with that of the existing MLF1005 type.
- Magnetically shielded 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.

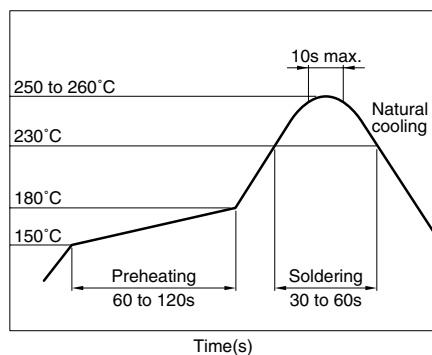
APPLICATIONS

Signal processing modules such as cellular phones and tuners

SPECIFICATIONS

Operating temperature range	-40 to +85°C
Storage temperature range	-40 to +85°C

RECOMMENDED SOLDERING CONDITION REFLOW SOLDERING



PRODUCT IDENTIFICATION

MLF	1005	L	R10	K	T
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Dimensions L×W

1005	1.0×0.5×0.5
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(3) Material code

L	Low-resistance type
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(4) Inductance value

R10	0.1μH
1R0	1.0μH

(5) Inductance tolerance

K	±10%
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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

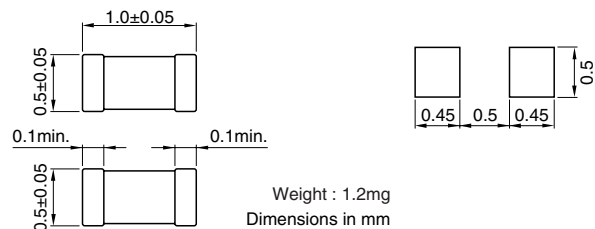
- Before soldering, be sure to preheat components.
The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
- After mounting components onto the printed circuit board, do not apply stress through board bending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

• 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

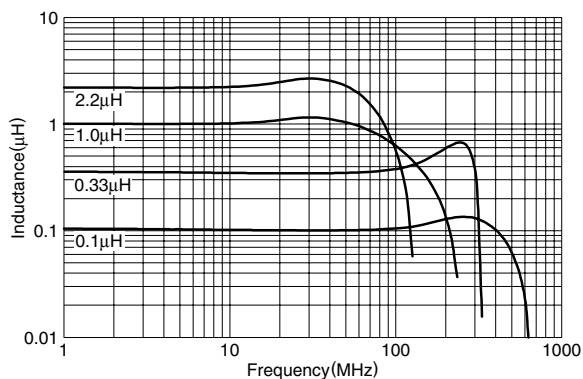


ELECTRICAL CHARACTERISTICS

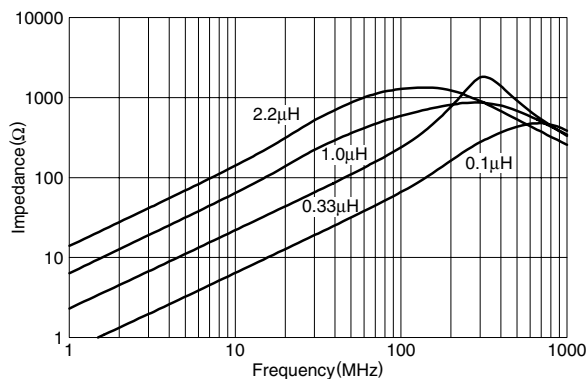
Part No.	Inductance (μH)	Inductance tolerance	Test frequency L, Q (MHz)	Test current L, Q (mA)	Q min.	Self-resonant frequency (MHz)min.	DC resistance (Ω)max.	Rated current (mA)max.
MLF1005LR10KT	0.1	±10%	25	1.0	10	450	0.51	150
MLF1005LR12KT	0.12	±10%	25	1.0	10	400	0.59	140
MLF1005LR15KT	0.15	±10%	25	1.0	10	350	0.63	130
MLF1005LR18KT	0.18	±10%	25	1.0	10	320	0.76	120
MLF1005LR22KT	0.22	±10%	25	1.0	10	290	0.79	110
MLF1005LR27KT	0.27	±10%	25	1.0	10	260	0.91	100
MLF1005LR33KT	0.33	±10%	25	1.0	10	230	1.05	90
MLF1005LR39KT	0.39	±10%	10	1.0	25	210	0.41	50
MLF1005LR47KT	0.47	±10%	10	1.0	25	190	0.42	50
MLF1005LR56KT	0.56	±10%	10	1.0	25	170	0.47	45
MLF1005LR68KT	0.68	±10%	10	1.0	25	150	0.55	40
MLF1005LR82KT	0.82	±10%	10	1.0	25	130	0.59	35
MLF1005L1R0KT	1.0	±10%	10	1.0	25	120	0.64	35
MLF1005L1R2KT	1.2	±10%	10	1.0	25	110	0.79	35
MLF1005L1R5KT	1.5	±10%	10	1.0	25	100	0.95	30
MLF1005L1R8KT	1.8	±10%	10	1.0	25	90	1.05	20
MLF1005L2R2KT	2.2	±10%	10	1.0	25	80	1.15	15

TYPICAL ELECTRICAL CHARACTERISTICS

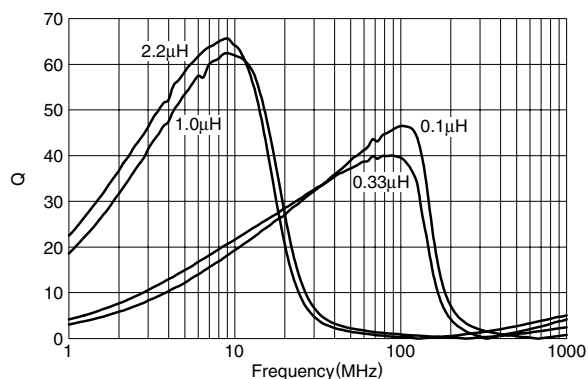
INDUCTANCE vs. FREQUENCY CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



Q vs. FREQUENCY CHARACTERISTICS



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