

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

Conformity to RoHS Directive

MLF Series MLF2012-J

FEATURES

- As multilayer chip inductor using ferrite material, it is the first narrow tolerance($\pm 5\%$) small inductor in the industry.
- This inductor is complete by E-12 series to 0.1-12 μH .
- Inductance change by soldering is less than 1/3 from elegance conventionally.
- Maintains the same dimensions and electrical characteristics as that of the conventional MLF series.
- The products contain no lead and also support lead-free soldering.
- It is a product conforming to RoHS directive.

APPLICATIONS

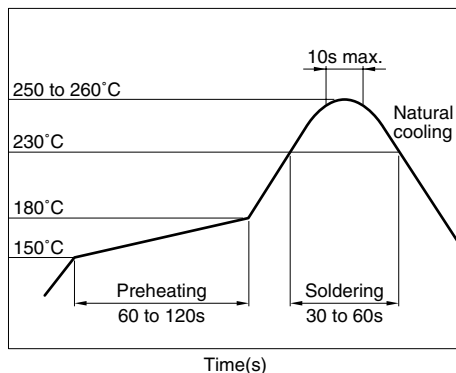
Signal processing such as car audio, automotive (intended) use, tuner.

SPECIFICATIONS

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

RECOMMENDED SOLDERING CONDITION

REFLOW SOLDERING



PRODUCT IDENTIFICATION

MLF	2012	A	1R0	J	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 μH
1R0	1.0 μH
100	10 μH

(5) Inductance tolerance

J	$\pm 5\%$
---	-----------

(6) Packaging style

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

PACKAGING STYLE AND QUANTITIES

Packaging style	Product's thickness T	Quantity
Taping	0.85mm	4000 pieces/reel
Taping	1.25mm	2000 pieces/reel

HANDLING AND PRECAUTIONS

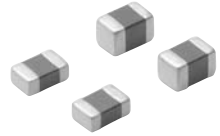
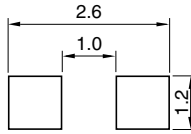
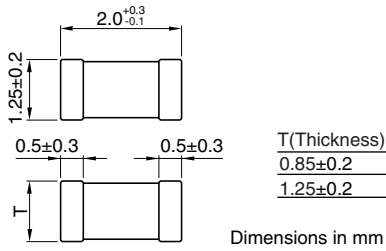
- Before soldering, be sure to preheat components. The preheating temperature should be set so that the temperature difference between the solder temperature and product temperature does not exceed 150°C.
- After mounting components onto the printed circuit board, do not apply stress through board bending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



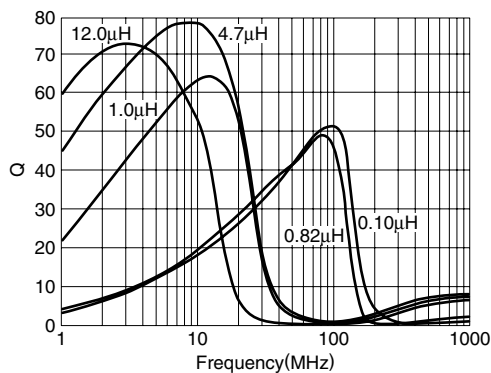
ELECTRICAL CHARACTERISTICS

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.	Thickness T (mm)
MLF2012DR10J	0.1	±5%	25	1.0	20	400	0.15	300	0.85±0.2
MLF2012DR12J	0.12	±5%	25	1.0	20	360	0.20	300	0.85±0.2
MLF2012DR15J	0.15	±5%	25	1.0	20	320	0.20	300	0.85±0.2
MLF2012DR18J	0.18	±5%	25	1.0	20	280	0.25	300	0.85±0.2
MLF2012DR22J	0.22	±5%	25	1.0	20	250	0.30	250	0.85±0.2
MLF2012DR27J	0.27	±5%	25	1.0	20	220	0.35	250	0.85±0.2
MLF2012DR33J	0.33	±5%	25	1.0	20	200	0.40	250	0.85±0.2
MLF2012DR39J	0.39	±5%	25	1.0	25	180	0.45	200	0.85±0.2
MLF2012DR47J	0.47	±5%	25	1.0	25	160	0.50	200	1.25±0.2
MLF2012DR56J	0.56	±5%	25	1.0	25	150	0.55	150	1.25±0.2
MLF2012DR68J	0.68	±5%	25	1.0	25	140	0.60	150	1.25±0.2
MLF2012DR82J	0.82	±5%	25	1.0	25	130	0.65	150	1.25±0.2
MLF2012A1R0J	1.00	±5%	10	1.0	45	120	0.30	80	0.85±0.2
MLF2012A1R2J	1.20	±5%	10	1.0	45	110	0.35	80	0.85±0.2
MLF2012A1R5J	1.50	±5%	10	1.0	45	100	0.40	80	0.85±0.2
MLF2012A1R8J	1.80	±5%	10	1.0	45	90	0.45	80	0.85±0.2
MLF2012A2R2J	2.20	±5%	10	1.0	45	80	0.50	50	0.85±0.2
MLF2012A2R7J	2.70	±5%	10	1.0	45	70	0.55	50	1.25±0.2
MLF2012A3R3J	3.30	±5%	10	1.0	45	60	0.60	50	1.25±0.2
MLF2012A3R9J	3.90	±5%	10	1.0	45	55	0.65	30	1.25±0.2
MLF2012A4R7J	4.70	±5%	10	1.0	45	50	0.70	30	1.25±0.2
MLF2012E5R6J	5.6	±5%	4	0.1	50	45	0.60	15	1.25±0.2
MLF2012E6R8J	6.8	±5%	4	0.1	50	40	0.65	15	1.25±0.2
MLF2012E8R2J	8.2	±5%	4	0.1	50	35	0.70	15	1.25±0.2
MLF2012E100J	10.0	±5%	2	0.1	50	30	0.80	15	1.25±0.2
MLF2012E120J	12.0	±5%	2	0.1	50	25	0.90	15	1.25±0.2

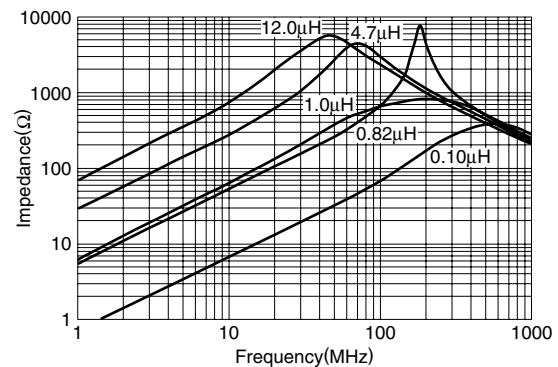
• Test equipment
Inductance, Q: Ag4294A-16034G

TYPICAL ELECTRICAL CHARACTERISTICS

Q vs. FREQUENCY CHARACTERISTICS

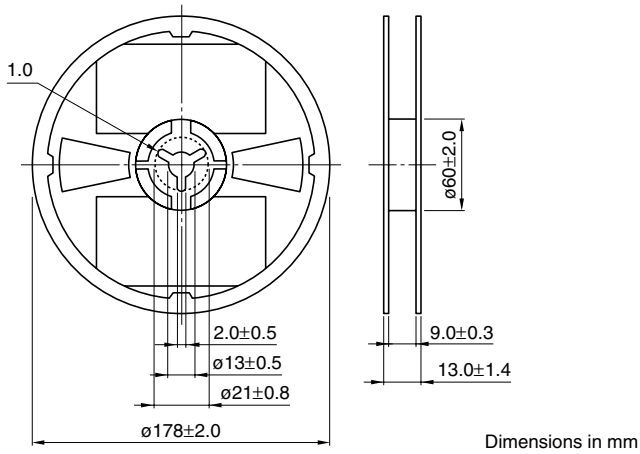


IMPEDANCE vs. FREQUENCY CHARACTERISTICS



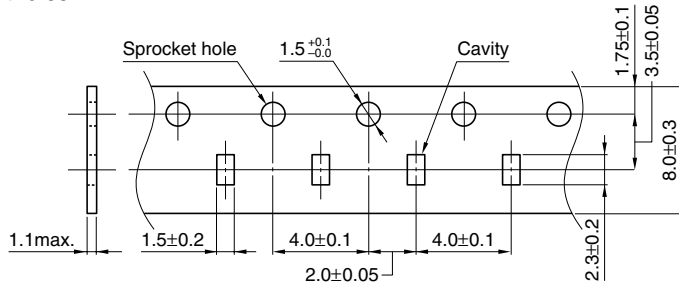
PACKAGING STYLES

REEL DIMENSIONS



TAPE DIMENSIONS

$t=0.85\text{mm}$



$t=1.25\text{mm}$

