TDK

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

Conformity to RoHS Directive

MLF Series MLF1608-J

FEATURES

- As multilayer chip inductor using ferrite material, it is the first narrow tolerance(±5%) small inductor in the industry.
- This inductor is complete by E-12 series to 0.1-12μH.
- 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

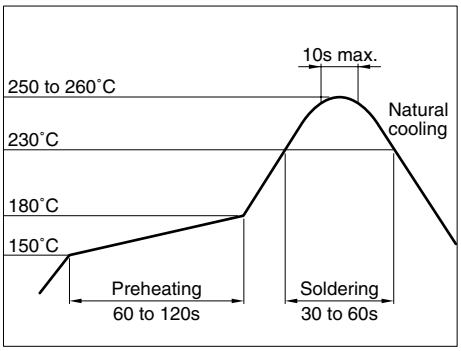
Signal processing such as cellular phone, car audio, tuner, DVC.

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	1608	D	R10	J	T
(1)	(2)	(3)	(4)	(5)	(6)

(1) Series name

(2) Dimensions L×W

1608	1.6×0.8×0.8mm

(3) Material code

(4) Inductance value

R10	0.1μH
1R0	1.0μH
100	10μH

(5) Inductance tolerance

J	±5%

(6) Packaging style

T	Taping [reel]

PACKAGING STYLE AND QUANTITIES

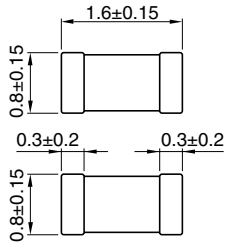
Packaging style	Quantity
Taping	4000 pieces/reel

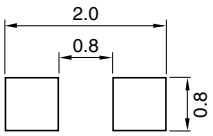
HANDLING AND PRECAUTIONS

- 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.

- 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.)

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN





Dimensions in mm
Net weight : 4mg

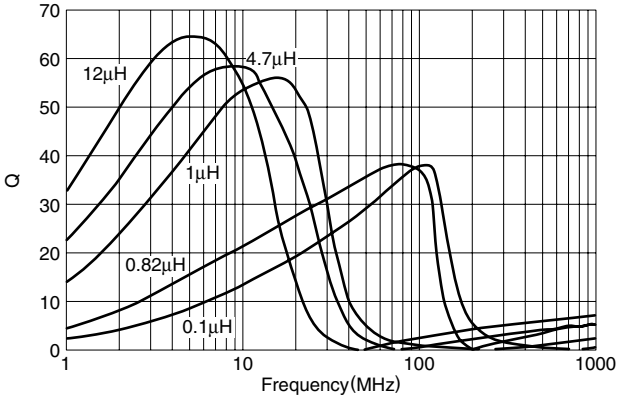
ELECTRICAL CHARACTERISTICS

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.
MLF1608DR10J	0.1	±5%	25	1.0	15	450	0.35	200
MLF1608DR12J	0.12	±5%	25	1.0	15	400	0.40	200
MLF1608DR15J	0.15	±5%	25	1.0	15	350	0.45	200
MLF1608DR18J	0.18	±5%	25	1.0	15	320	0.50	150
MLF1608DR22J	0.22	±5%	25	1.0	15	290	0.55	150
MLF1608DR27J	0.27	±5%	25	1.0	15	260	0.60	150
MLF1608DR33J	0.33	±5%	25	1.0	15	230	0.75	100
MLF1608DR39J	0.39	±5%	25	1.0	15	210	0.85	100
MLF1608DR47J	0.47	±5%	25	1.0	15	190	0.95	100
MLF1608DR56J	0.56	±5%	25	1.0	15	170	1.05	100
MLF1608DR68J	0.68	±5%	25	1.0	15	150	1.25	70
MLF1608DR82J	0.82	±5%	25	1.0	15	130	1.40	70
MLF1608A1R0J	1.0	±5%	10	1.0	35	120	0.50	50
MLF1608A1R2J	1.2	±5%	10	1.0	35	110	0.65	50
MLF1608A1R5J	1.5	±5%	10	1.0	35	100	0.70	50
MLF1608A1R8J	1.8	±5%	10	1.0	35	90	0.85	50
MLF1608A2R2J	2.2	±5%	10	1.0	35	80	1.00	30
MLF1608A2R7J	2.7	±5%	10	1.0	35	70	1.15	30
MLF1608A3R3J	3.3	±5%	10	1.0	35	65	1.30	30
MLF1608A3R9J	3.9	±5%	10	1.0	35	60	1.45	30
MLF1608A4R7J	4.7	±5%	10	1.0	35	55	1.60	30
MLF1608E5R6J	5.6	±5%	4	0.1	35	45	1.10	15
MLF1608E6R8J	6.8	±5%	4	0.1	35	40	1.30	15
MLF1608E8R2J	8.2	±5%	4	0.1	35	35	1.50	10
MLF1608E100J	10.0	±5%	2	0.1	30	30	1.70	10
MLF1608E120J	12.0	±5%	2	0.1	30	25	1.80	10

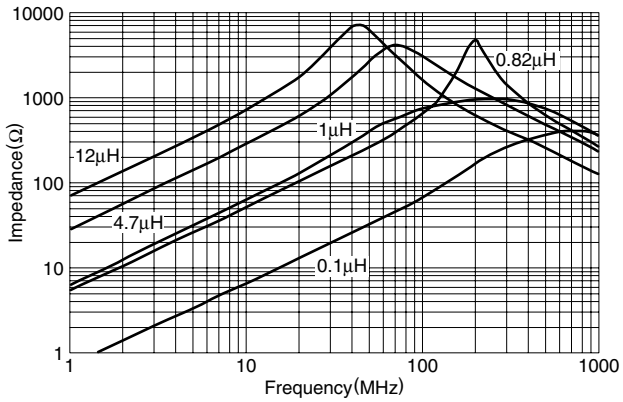
• Test equipment
Inductance, Q: Ag4294A-16034G

TYPICAL ELECTRICAL CHARACTERISTICS

Q vs. FREQUENCY CHARACTERISTICS



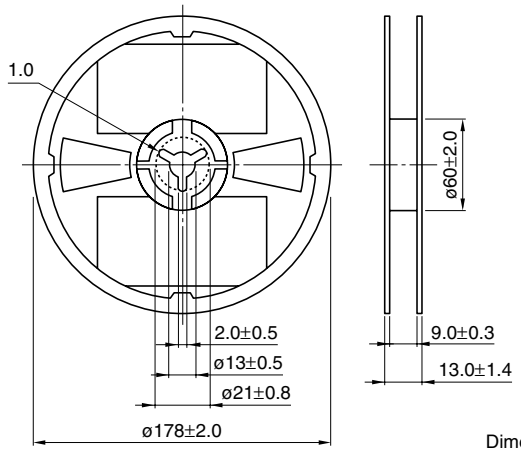
IMPEDANCE vs. FREQUENCY CHARACTERISTICS



• All specifications are subject to change without notice.

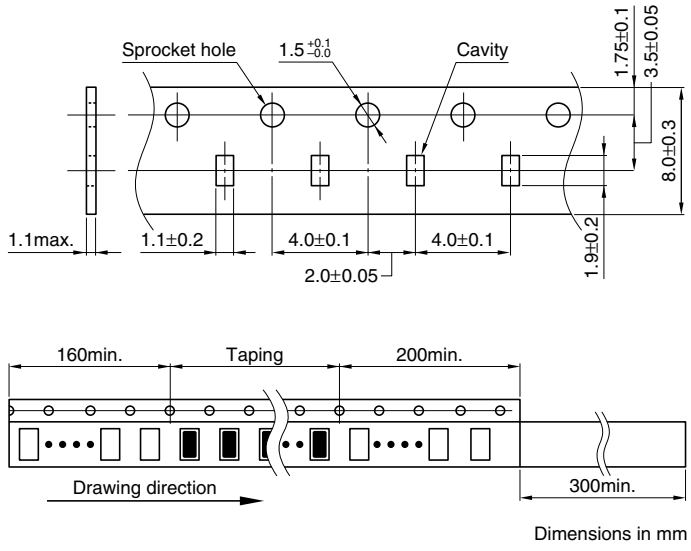
PACKAGING STYLES

REEL DIMENSIONS



Dimensions in mm

TAPE DIMENSIONS



Dimensions in mm