SMD Multilayer Chip Power Inductor

ASMPH-1008

Pb | RoHS/RoHS II Compliant



2.5 x 2.0 x 0.9mm

FEATURES:

- High DC bias current due to trench technology
- Much lower profile than any other series
- Monolithic structure for high reliability
- Excellent solderability and heat resistance
- Magnetically shielded structure to eliminate cross coupling

APPLICATIONS:

ASMPH family is a miniature type of multilayer power inductors constructed using low loss ferite material to support high-speed switching frequencies.The compact size and high efficiency is ideal for DC/DC converter applications in space limited boards.

- Switching mode regulators for smart phones and cameras.
- Buck converters for RFIC, RFPA and Audio Codec modules.
- Boost converters for flash drivers.
- Wireless cards, DVD players and other electronic devices.

ELECTRICAL SPECIFICATIONS:

Operating Temperature: -55˚C to +125˚C

Storage Temperature: -10˚C to +40˚C and RH 70% (Max.)

Part Number ASMPH-1008- Inductance Code	Inductance	Tolerance	DCR	SRF Min.	Temperature Rise Current (max)	Saturation Current (Typ)
Units	µH	%	Ω ± 25%	MHz	mA	mA
Symbol	L	M=±20% N=±30%	DCR	SRF	I_{rms}	I_{sat}
ASMPH-1008-R47	0.47	M, N	0.04	105	1800	1500
ASMPH-1008-1R0	1.0	M, N	0.06	70	1600	1400
ASMPH-1008-1R5	1.5	M, N	0.07	65	1500	1200
ASMPH-1008-2R2	2.2	M, N	0.08	55	1300	850
ASMPH-1008-3R3	3.3	M, N	0.10	30	1200	450
ASMPH-1008-4R7	4.7	M, N	0.11	25	1100	320

Unless otherwise specified, the standard atmospheric conditions for measurement/test as:
a. Ambient Temperature: 20±15˚C
b. Relative Humidity: 65±20%
c. Air Pressure: 86 kPa to 106 kPa

Inductance (L): HP4291B+HP16192A or Equivalent, tested at 1MHz, -20dBm or 50mV.
Direct Current Resistance (DCR): Milliohmeter-HP4338B or Equivalent
Self-Resonant Frequency (SRF): HP4291B+HP16192A or Equivalent, -20dBm or 50mV.
Temperature Rise current (Irms): Electric Power, Electric current meter, Thermometer.
Irms is the value of DC current as chip surface temperature rose just 40°C against chip initial surface temperature.
Saturation Current (Isat): HP6632B system DC power supply, HP4291B+HP16192A+HP16200A or equivalent.
Isat is the value of DC current as inductance decreased just 30% against initial value

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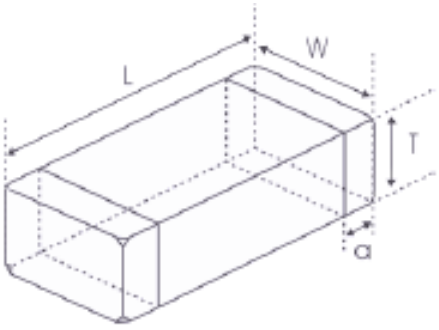
2.5 x 2.0 x 0.9mm

PART IDENTIFICATIONS:

ASMPH-1008-□□-□

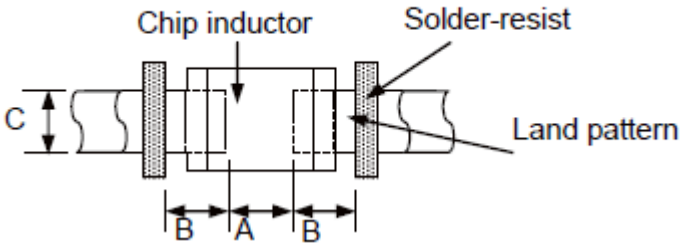
Inductance Code	Tolerance	Packaging
Please refer to the table above	M=±20% N=±30%	T: Tape and Reel (3kpcs / reel)

OUTLINE DRAWING:



L	W	T	a
2.5±0.2	2.0 (+0.3, -0.1)	0.9±0.1	0.5±0.3

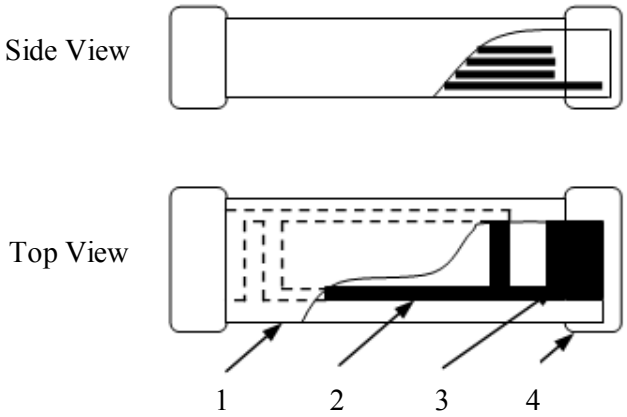
Recommended Land Pattern

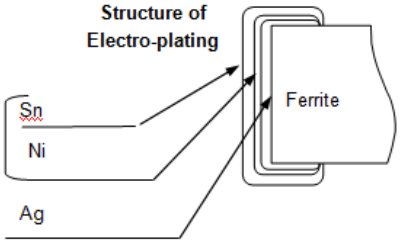


A	B	C
1.0~1.4	0.6~1.0	1.8~2.2

Dimension: mm

MATERIALS:





	Part Name	Material
1	**Base Material**	**Ferrite**
2	**Internal Conductor**	**Ag**
3	**Pull out Electrode**	**Ag**
4	**Terminal Electrode**	**Ag (Inner layer)** **Ni-Sn (Outer layer)**

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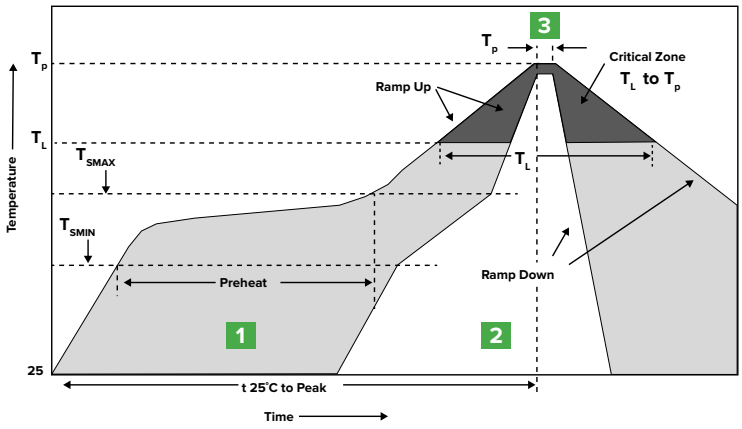
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REFLOW PROFILE:

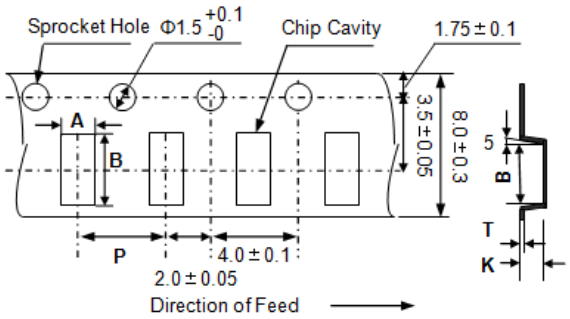


Zone	Description	Temperature	Times
1	Preheat	T_{SMIN} ~ T_{SMAX} 150°C ~ 200°C	60 ~ 120 sec.
2	Reflow	T_L 217°C	60 ~ 90 sec.
3	Peak heat	T_P 260°C ± 5°C	10 sec. MAX
Solder Paste Sn/3.0Ag/0.5Cu Allowed Reflow time 2x Max.			

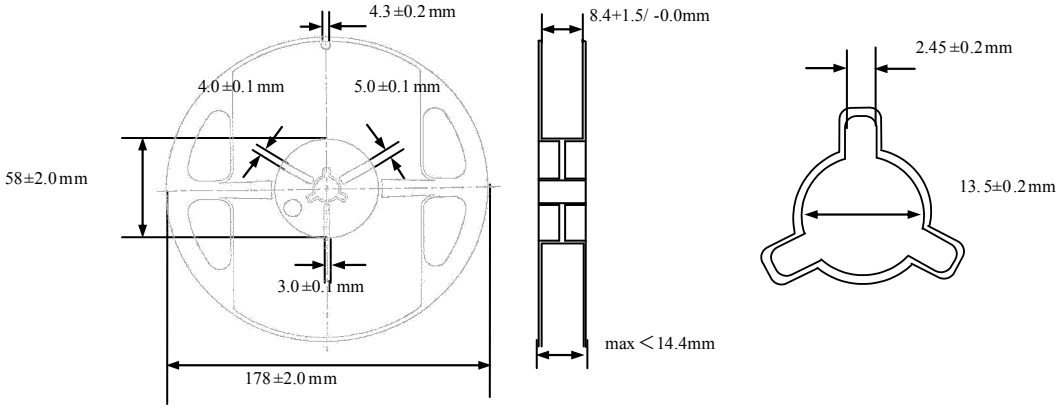
TAPE & REEL:

Packing

T: 3,000pcs / reel



A	B	P	K max	T max
2.30±0.1	2.80±0.1	4.0±0.1	1.45	0.3



Dimension: mm

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