

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# **SMD Multilayer Chip Power Inductor**

# ASMPH-0805





#### > 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:** -40°C to +85°C

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

Part Number ASMPH-0805- Inductance Code	Inductance	Tolerance	DCR	SRF Min.	Temperature Rise Current (max)	Saturation Current (Typ)
Units	μН	%	$\Omega \pm 25\%$	MHz	mA	mA
Symbol	L	M=±20% N=±30%	DCR	SRF	$I_{rms}$	I <sub>sat</sub>
ASMPH-0805-R47	0.47	M, N	0.08	100	1500	1200
ASMPH-0805-1R0	1.0	M, N	0.11	60	1300	1150
ASMPH-0805-1R5	1.5	M, N	0.16	50	1100	800
ASMPH-0805-2R2	2.2	M, N	0.20	40	900	500
ASMPH-0805-3R3	3.3	M, N	0.20	30	900	350
ASMPH-0805-4R7	4.7	M, N	0.25	30	800	280

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

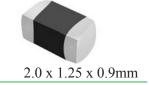




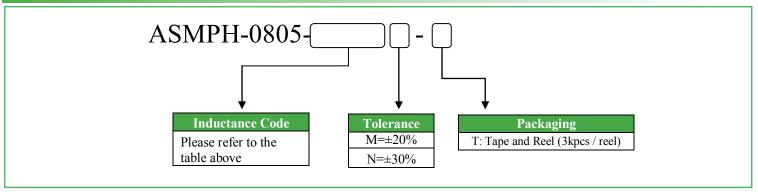
# **SMD Multilayer Chip Power Inductor**

ASMPH-0805

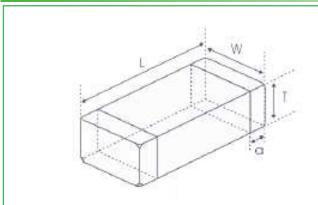




## > PART IDENTIFICATIONS:

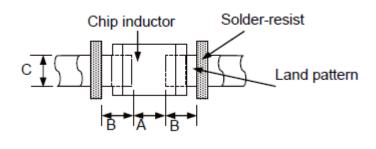


# **OUTLINE DRAWING:**



L	W	T	a
2.0 (+0.3, -0.1)	1.25±0.2	0.9±0.1	0.5±0.3

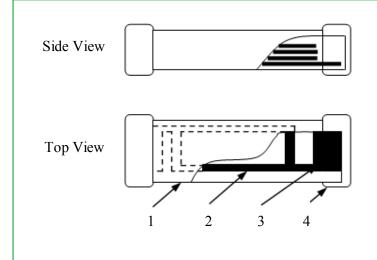
### **Recommended Land Pattern**

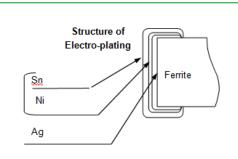


A	В	C	
0.8~1.2	0.8~1.2	0.9~1.6	

**Dimension: mm** 

# > MATERIALS:





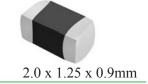
	Part Name	Material
1	Base Material	Ferrite
2	Internal Conductor	Ag
3	Pull out Electrode	Ag
4	Terminal Electrode	Ag (Inner layer) Ni-Sn (Outer layer)



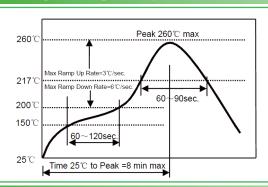
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ASMPH-0805



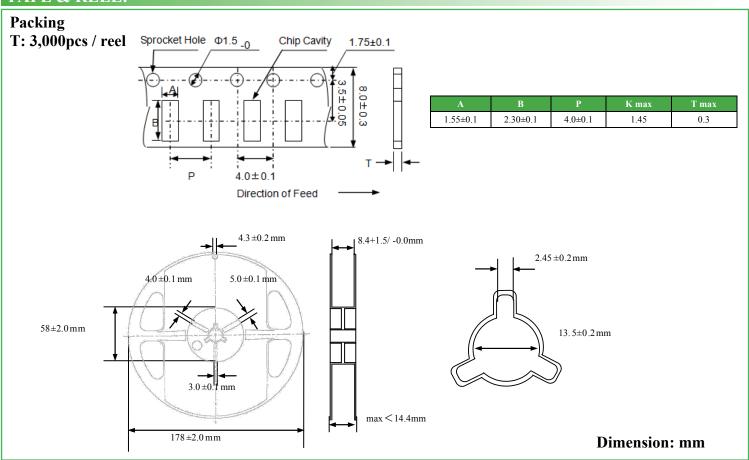


#### **▶** REFLOW PROFILE:



Preheat Condition	150 to 200 °C; 60 to 120 sec.
Allowed time above 217 °C	60 to 90 sec.
Max temperature	260 °C
Max time at max temperature	10 sec.
Solder paste	Sn/3.0Ag/0.5Cu
Allowed Reflow time	2x max.

### > TAPE & REEL:



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