

# SMD Multilayer Chip Inductor for Choke



1.60 x 0.8 x 0.8mm

ASMCI-0603



RoHS  
Compliant

## FEATURES:

- Monolithic structure designed for high reliability
- Excellent solderability and heat resistance
- Magnetic shield designed to eliminate cross coupling
- High DC current and low DCR

## APPLICATIONS:

Choke circuits in DC power line for PC, mobile phones, digital cameras, camcorder, and music players.

## ELECTRICAL SPECIFICATIONS:

**Operating Temperature:** -40°C to +85°C

**Storage Temperature:** -10°C to +40°C, 70% RH max

Part Number ASMCI-0603- Inductance Code	Inductance	Tolerance	DCR	SRF Min.	Max. Rated Current
Units	μH	%	Ω ± 30%	MHz	mA
Symbol	L	M=±20%, N=±30%	DCR	SRF	Ir
ASMCI-0603-R10	0.1	M, N	0.14	240	700
ASMCI-0603-R22	0.22	M, N	0.27	150	550
ASMCI-0603-R47	0.47	M, N	0.42	105	400
ASMCI-0603-1R0	1.0	M, N	0.20	75	190
ASMCI-0603-2R2	2.2	M, N	0.40	50	140
ASMCI-0603-4R7	4.7	M, N	0.60	35	100
ASMCI-0603-100	10	M, N	0.90	20	50

### Test Conditions

- Ambient Temperature: 20± 15°C
- Relative Humidity: 65%±20%
- Air Pressure: 86KPa to 106KPa

**Inductance (L):** High Accuracy RF Impedance/Material Analyzer-HP4291B+HP16192A or Equivalent, 1MHz, -20dBm or 50mV.

**Direct Current Resistance (DCR):** High Accuracy Milliohmeter-HP4338B or Equivalent

**Self-Resonant Frequency (SRF):** High Accuracy RF Impedance/Material Analyzer HP4291B+HP16192A or Equivalent, -20dBm or 50mV.

**Rated current (Ir):** HP6632B system DC power supply, HP4291B+HP16192A+HP16200A or equivalent.

Definition of Rated Current (Ir): Ir is the value of DC current as inductance L (μH) decreased just 50% against initial value.



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## PART IDENTIFICATIONS:

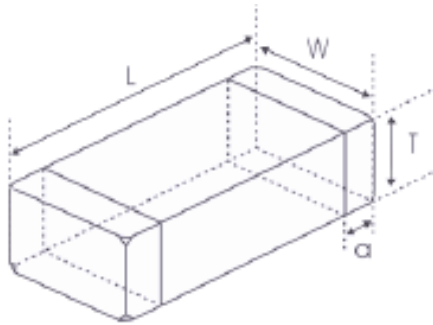
ASMCI-0603 -  -

Inductance Code
Please refer to the table above

Tolerance
M: $\pm 20\%$
N: $\pm 30\%$

Packaging
T: Tape and Reel (4kpcs / reel)

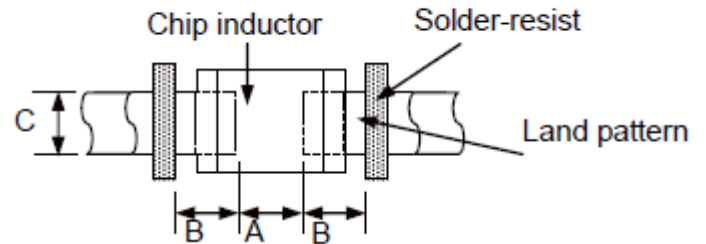
## OUTLINE DRAWING:



L	W	T	a
1.60 $\pm$ 0.15 [0.063 $\pm$ 0.006]	0.8 $\pm$ 0.15 [0.031 $\pm$ 0.006]	0.8 $\pm$ 0.15 [0.031 $\pm$ 0.006]	0.3 $\pm$ 0.2 [0.012 $\pm$ 0.008]

Dimension: mm [inch]

## Recommended Land Pattern

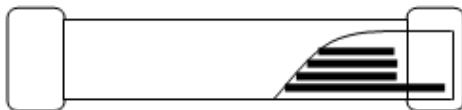


A	B	C
0.60~0.80	0.60~0.80	0.60~0.80

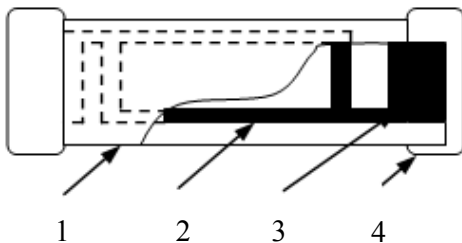
Dimension: mm

## MATERIALS:

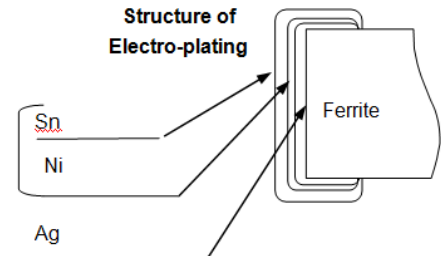
Side View



Top View



Structure of  
Electro-plating



	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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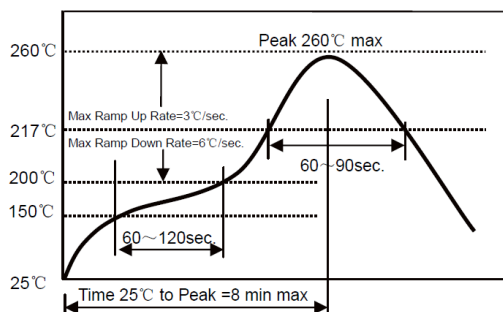
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## REFLOW PROFILE:

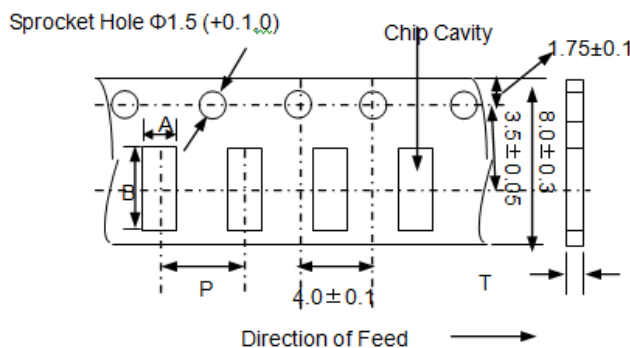


- Δ Preheat condition: 150 ~200°C /60~120sec.
- Δ Allowed time above 217°C: 60~90sec.
- Δ Max temp: 260°C
- Δ Max time at max temp: 10sec.
- Δ Solder paste: Sn/3.0Ag/0.5Cu
- Δ Allowed Reflow time: 2x max

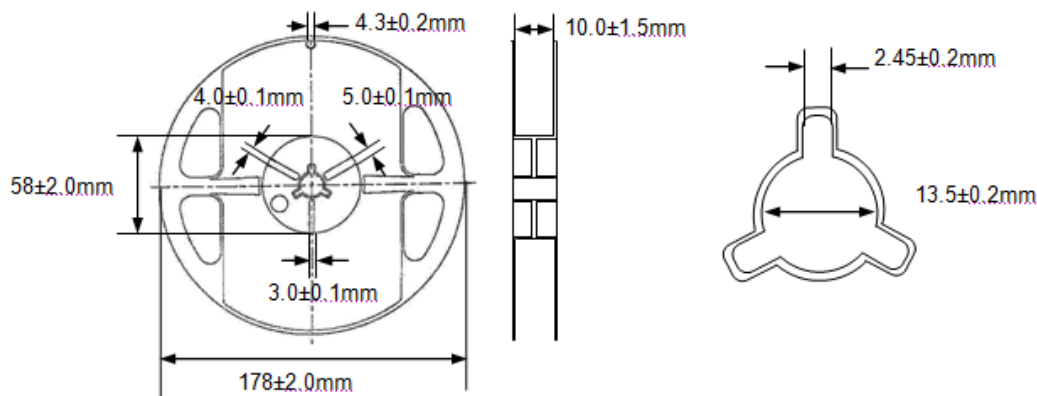
## TAPE & REEL:

### Packing

T: 4,000pcs / reel



A	B	P	T(max)
1.0±0.2	1.8±0.2	4.0±0.1	1.1



Dimension: mm

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