



**THE DATASHEET OF
ASMCI-0603-100M-T**



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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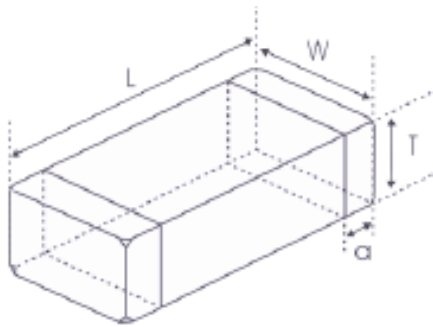
RoHS
Compliant

PART IDENTIFICATIONS:

ASMCI-0603 - - -

| Inductance Code | Tolerance | Packaging |
|---------------------------------|--------------------------------|------------------------------------|
| Please refer to the table above | M: $\pm 20\%$ N: $\pm 30\%$ | T: Tape and Reel (4kpcs / reel) |

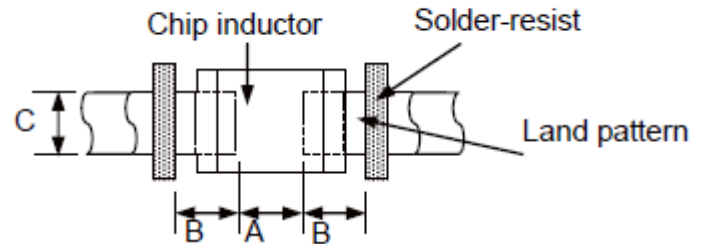
OUTLINE DRAWING:



| 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

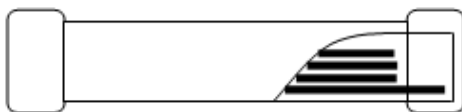


| A | B | C |
|-----------|-----------|-----------|
| 0.60~0.80 | 0.60~0.80 | 0.60~0.80 |

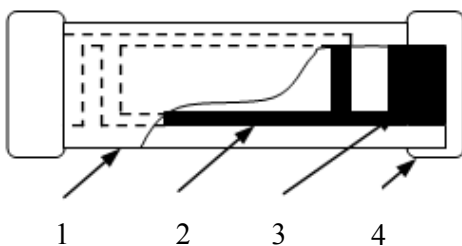
Dimension: mm

MATERIALS:

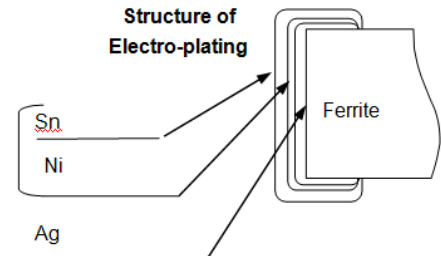
Side View



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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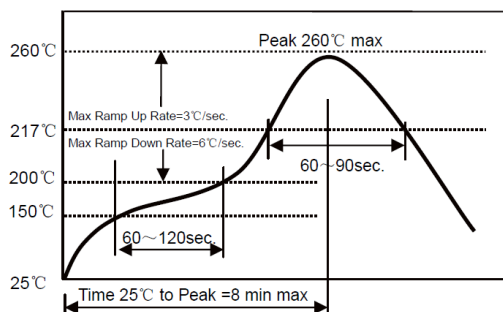
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REFLOW PROFILE:

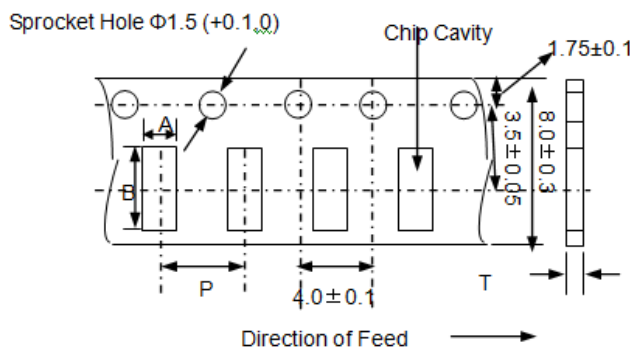


- Δ Preheat condition: 150 ~200°C /60~120sec.
- Δ Allowed time above 217°C: 60~90sec.
- Δ Max temp: 260°C
- Δ Max time at max temp: 10sec.
- Δ Solder paste: Sn/3.0Ag/0.5Cu
- Δ Allowed Reflow time: 2x max

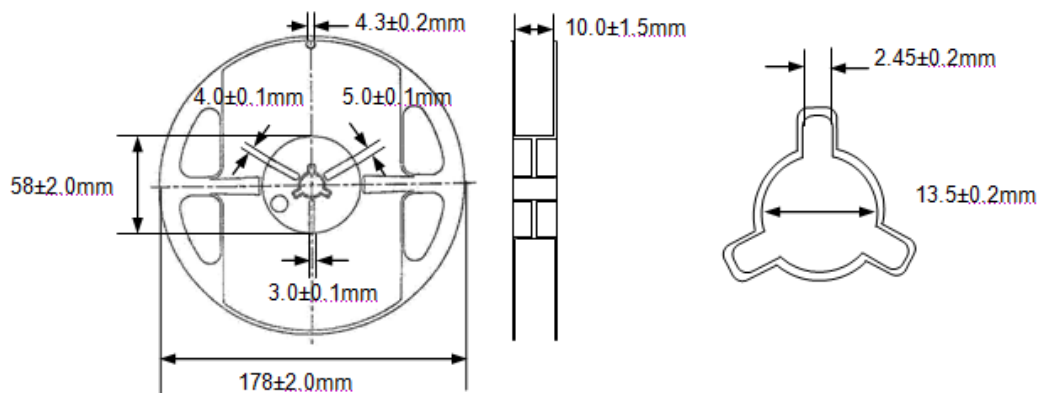
TAPE & REEL:

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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