

ULTRA LOW PROFILE UNSHIELDED SMD CHIP POWER INDUCTOR

ASPI-0309



RoHS
Compliant



3.0 x 3.0 x 0.8mm

FEATURES:

- Ideal for design development
- Low DCR
- High reliability to mechanical stress
- Magnetically shielded by magnetic powder molding
- Suitable for RoHS reflow profile

APPLICATIONS:

- Mobile phones
- MP3 & 4 and other portable communication equipment
- Digital cameras
- Engineering tests

ELECTRICAL SPECIFICATIONS:

| | |
|------------------------------------|---|
| Abracon P/N: | ASPI-0309 Series |
| Operating Temperature & Humidity : | -30°C to +100°C, 5% to 85% RH. Please avoid moisture due to the humidity. |
| Storage Temperature & Humidity: | -20°C to +60°C, 5% to 85% RH. Please avoid moisture due to the humidity. |

| Part Number | Inductance | DCR | Saturation Current | Temperature Rise Current | Marking |
|----------------|-----------------------|--------------------------|--------------------|--------------------------|---------|
| Units | $\mu\text{H}\pm 20\%$ | $\text{m}\Omega\pm 20\%$ | A | A | - |
| Symbol | L | DCR | Isat* | Irms* | - |
| ASPI-0309-2R2M | 2.2 | 170 | 0.98 | 1.00 | E |
| ASPI-0309-3R3M | 3.3 | 260 | 0.78 | 0.82 | G |
| ASPI-0309-4R7M | 4.7 | 340 | 0.65 | 0.72 | H |
| ASPI-0309-100M | 10 | 640 | 0.43 | 0.55 | M |
| ASPI-0309-220M | 22 | 1930 | 0.30 | 0.29 | P |
| ASPI-0309-330M | 33 | 2600 | 0.25 | 0.25 | Q |
| ASPI-0309-470M | 47 | 3300 | 0.21 | 0.22 | R |

*The rated current is subject to change depending upon the temperature cooling condition.

Test Conditions

Inductance: 100kHz, 0.3V, Ta=20°C
 DCR: Ta=20°C
 Isat: $\Delta L/L$ (initial) \geq -30%
 Irms: $\Delta T \leq 40^\circ\text{C}$

OPTIONS AND PART IDENTIFICATION

ASPI- 0309 - -

Inductance Code

Please refer to the table above

Packaging

T: Tape and Reel
(1kpcs / reel)

T4: Tape and Reel
(4kpcs / reel)

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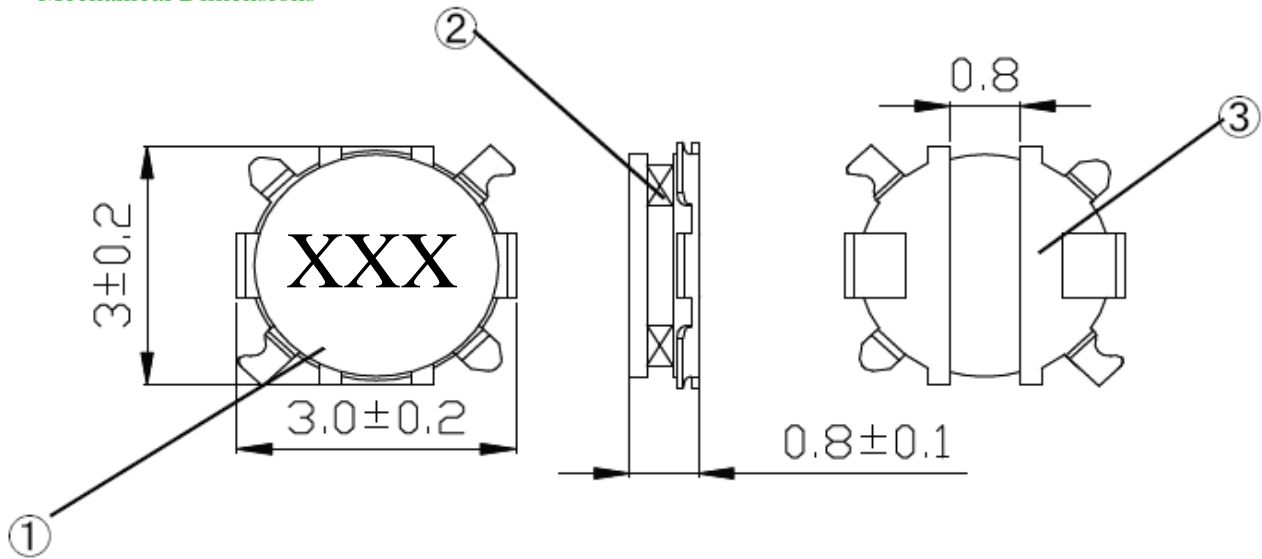
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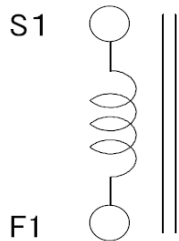
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OUTLINE DRAWING:

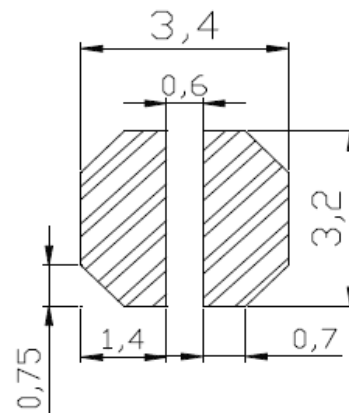
Mechanical Dimensions



Circuit Schematic



Recommended Land Pattern



| No | Part Name | Material |
|----|------------------|----------------------------------|
| 1 | Drum core | Ni-Zn Ferrite |
| 2 | Coil | Cu/Class H Polyurethane Enameled |
| 3 | Terminals/Solder | Copper Alloy/Pb free solder + |

Dimension: mm

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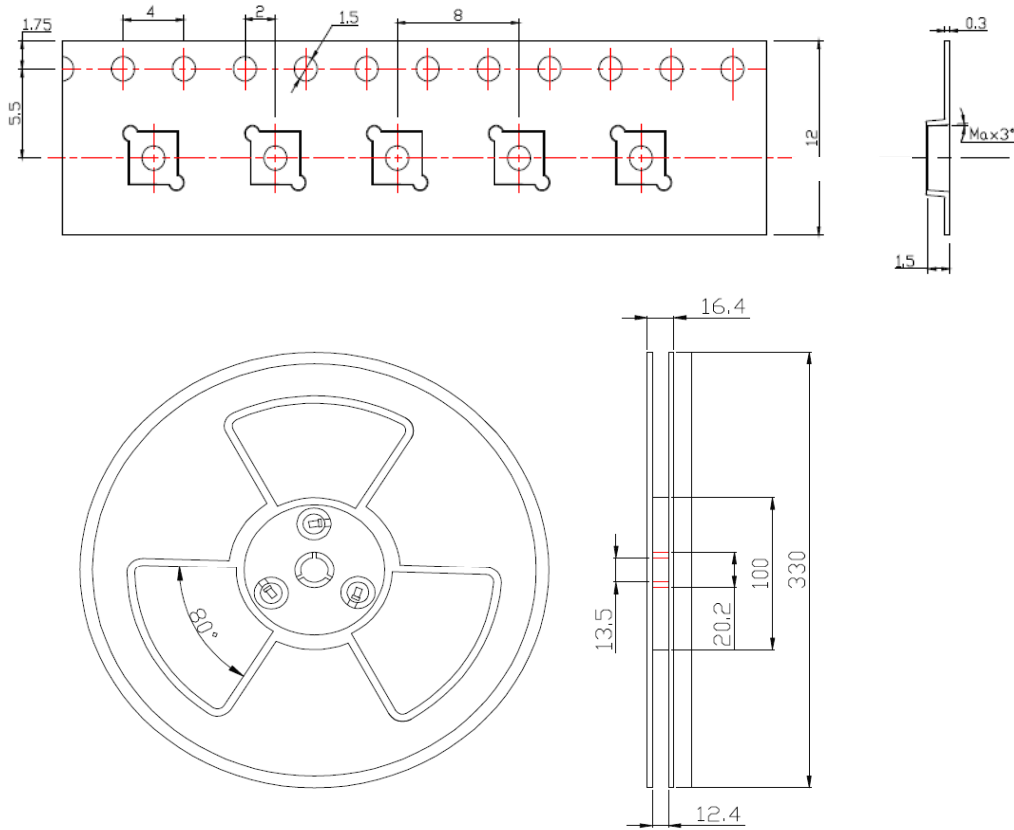
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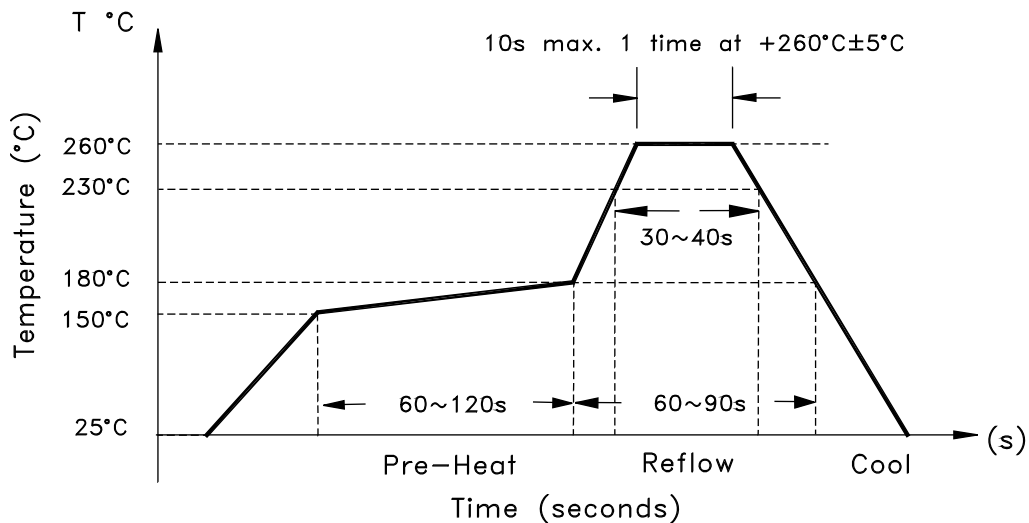
TAPE & REEL:

T: 1,000pcs / reel
T4: 4,000pcs / reel



Dimension: mm

REFLOW PROFILE:



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