

ULTRA LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



3.0 x 3.0 x 1.0mm

ASPI-0310FS



RoHS
Compliant

FEATURES:

- Small size and low profile: 1.0mm
- Small DCR and high rated current
- 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.

ELECTRICAL SPECIFICATIONS:

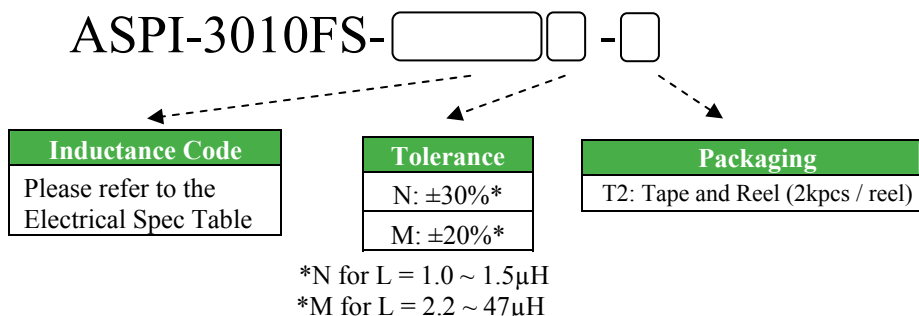
| | |
|------------------------------------|---|
| Abracon P/N: | ASPI-0310FS Series |
| Operating Temperature & Humidity : | -25°C to +120°C (Including self generated heat) |
| Storage Temperature & Humidity: | -10°C to +40°C, 30% to 70% RH |

| Part Number | Inductance | Inductance Tolerance | DCR | DCR Tolerance | Saturation Current | Temperature Rise Current |
|-----------------|------------|----------------------|------|---------------|--------------------|--------------------------|
| Units | μH | % | mΩ | % | A | A |
| Symbol | L | M, N | DCR | | Isat | Irms |
| ASPI-0310FS-1R0 | 1.0 | N | 50 | ±25% | 2.30 | 2.30 |
| ASPI-0310FS-1R2 | 1.2 | N | 62 | ±30% | 1.90 | 2.10 |
| ASPI-0310FS-1R5 | 1.5 | N | 70 | | 1.65 | 2.00 |
| ASPI-0310FS-2R2 | 2.2 | M | 80 | ±20% | 1.45 | 1.90 |
| ASPI-0310FS-3R3 | 3.3 | M | 130 | | 1.05 | 1.80 |
| ASPI-0310FS-4R7 | 4.7 | M | 175 | | 0.85 | 1.70 |
| ASPI-0310FS-6R8 | 6.8 | M | 260 | | 0.70 | 1.30 |
| ASPI-0310FS-100 | 10.0 | M | 350 | | 0.60 | 0.90 |
| ASPI-0310FS-150 | 15.0 | M | 510 | | 0.50 | 0.80 |
| ASPI-0310FS-220 | 22.0 | M | 780 | | 0.40 | 0.70 |
| ASPI-0310FS-330 | 33.0 | M | 1100 | | 0.32 | 0.50 |
| ASPI-0310FS-470 | 47.0 | M | 1600 | | 0.28 | 0.35 |

Test Conditions

1. Inductance is measured in HP-4285A Precision LCR Meter.
2. RDC is measured in DU-5011 milli ohm meter.(or equivalent).
3. Isat : Based on inductance change ($\Delta L/L_0 : \leq -30\%$)
4. Irms : Based on temperature rise ($\Delta T : 40^\circ\text{C TYP.}$)
5. Test Freq: 100KHz, 1Vrms

OPTIONS AND PART IDENTIFICATION



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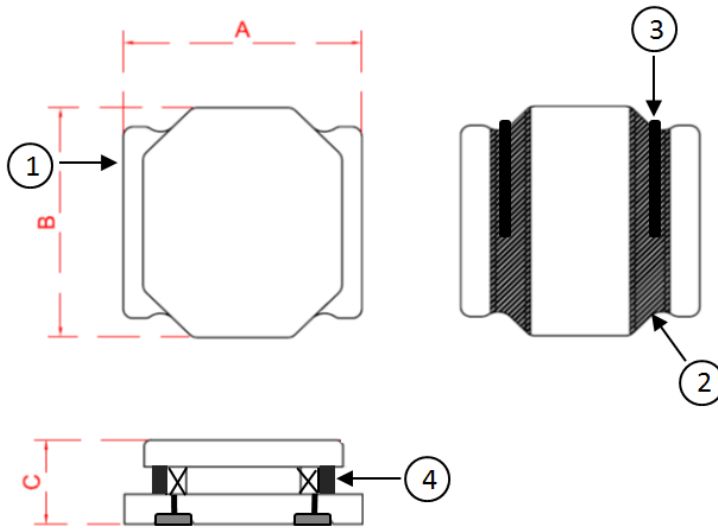
ASPI-0310FS



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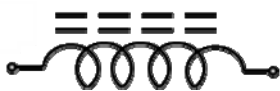
OUTLINE DRAWING:

Mechanical and Material Information 1 (Effective date: 11/10/2011)



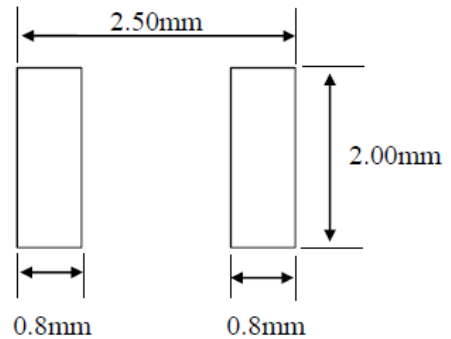
| A | B | C Max. |
|---------|---------|--------|
| 3.0±0.1 | 3.0±0.1 | 1.0 |

Circuit Schematic



No Polarity

Recommended Land Pattern



Dimension: mm

Materials

| No | Part Name | Material |
|----|-----------------|--------------------|
| 1 | Ferrite core | Ni-Zn Ferrite |
| 2 | Terminals | Ag/Ni/Sn |
| 3 | Coil | Cu/P180 Grd 1 |
| 4 | Adhesive | Silicon Base Resin |
| | Magnetic Powder | Ni-Zn Ferrite |

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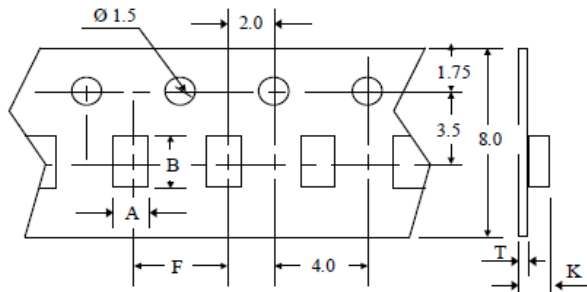
ASPI-0310FS



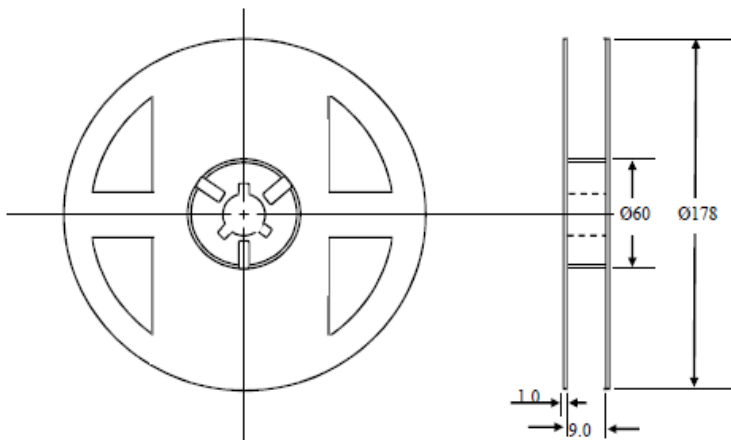
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TAPE & REEL:

T2: 2,000pcs / reel

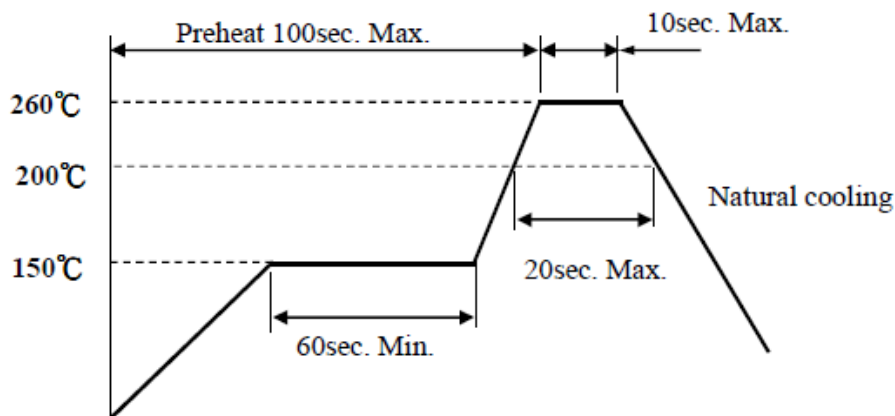


| | |
|---|------|
| A | 3.15 |
| B | 3.15 |
| K | 1.40 |
| F | 4 |
| T | 0.25 |



Dimension: mm

REFLOW PROFILE:



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Website :

Welcome to visit www.ameya360.com

Contact Us :

➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd
Minhang District, Shanghai , China

➤ Sales :

Direct +86 (21) 6401-6692

Email amall@ameya360.com

QQ 800077892

Skype [ameyasales1](#) [ameyasales2](#)

➤ Customer Service :

Email service@ameya360.com

➤ Partnership :

Tel +86 (21) 64016692-8333

Email mkt@ameya360.com