

# 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:

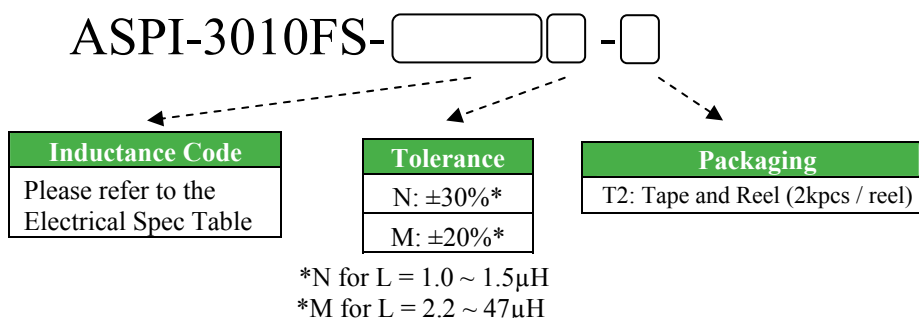
|                                    |   |
|------------------------------------|---|
| Abracon P/N:                       | ASPI-0310FS Series                              |
| Operating Temperature & Humidity : | -25°C to +120°C (Including self generated heat) |
| Storage Temperature & Humidity:   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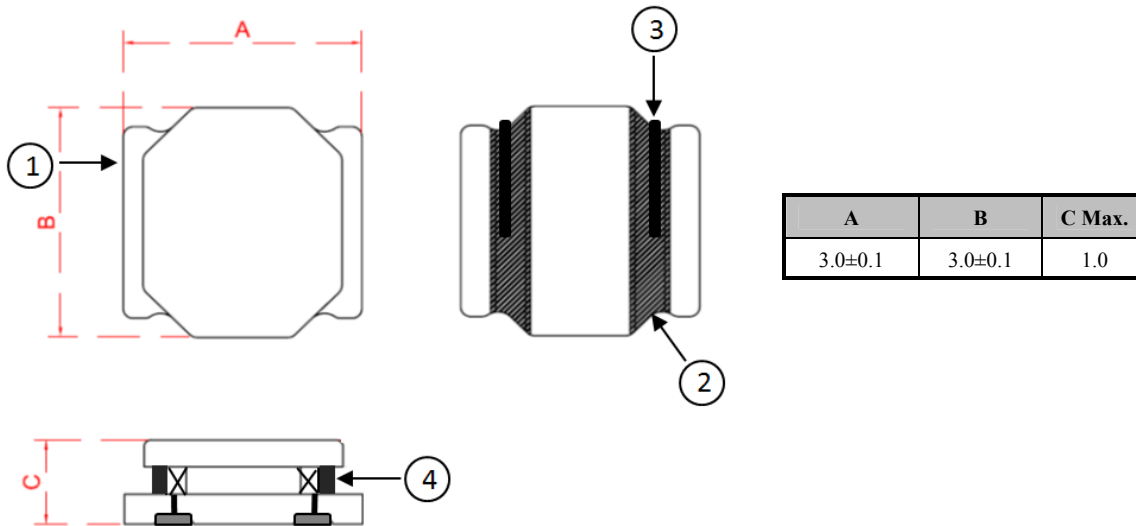
ASPI-0310FS



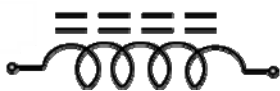
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## OUTLINE DRAWING:

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

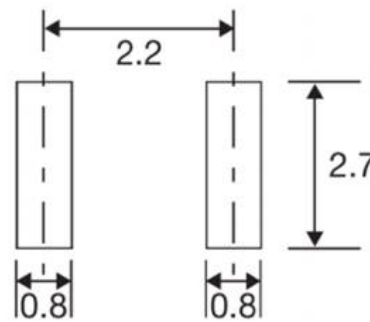


### Circuit Schematic



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      |

# ULTRA LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



3.0 x 3.0 x 1.0mm

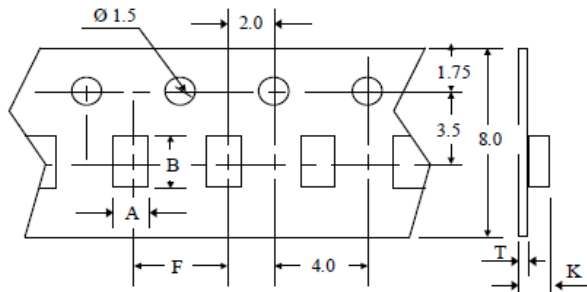
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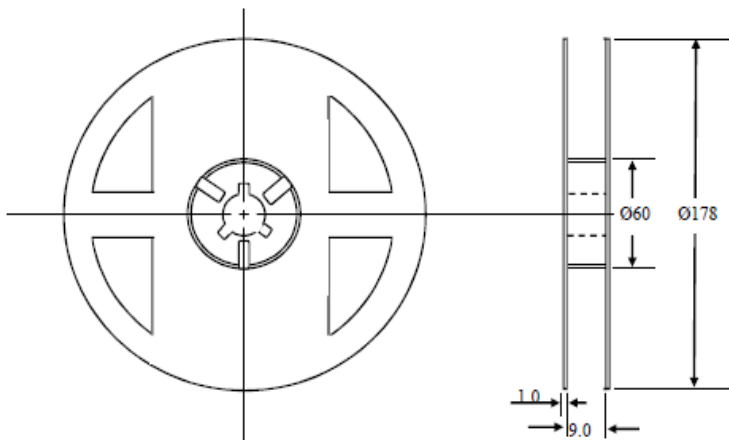
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## TAPE & REEL:

T2: 2,000pcs / reel

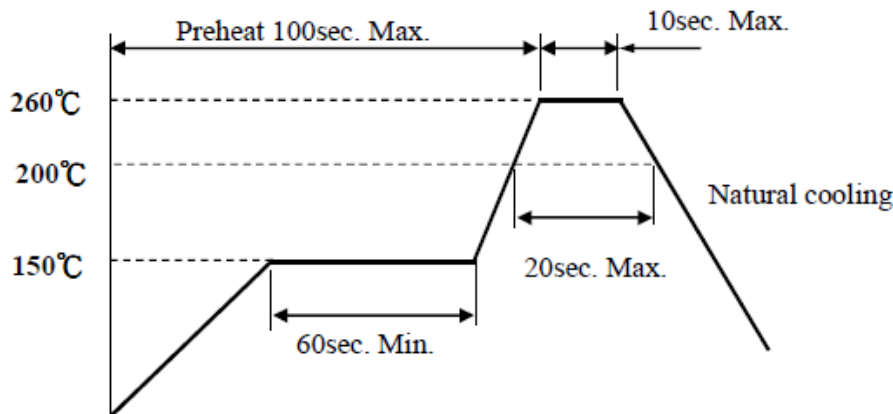


|   |      |
|---|------|
| A | 3.15 |
| B | 3.15 |
| K | 1.40 |
| F | 4    |
| T | 0.25 |



Dimension: mm

## REFLOW PROFILE:



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