

# LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



6.0 x 6.0 x 1.2mm

ASPI-0612FS



RoHS/RoHS II Compliant

## FEATURES:

- Small size and low profile: 1.2mm
- Small DCR and high rated current
- High reliability to mechanical strength
- Magnetically shielded by magnetic powder molding
- Suitable for RoHS reflow profile

## APPLICATIONS:

- DC/DC converter for LCD display of notebook PC
- Portable communication equipment
- Digital cameras

## ELECTRICAL SPECIFICATIONS:

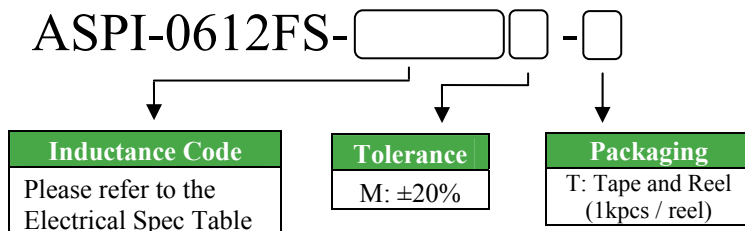
|                                    |                                                   |
|------------------------------------|---------------------------------------------------|
| Abracon P/N:                       | ASPI-0612FS Series                                |
| Operating Temperature & Humidity : | -40°C to +105°C (Including self temperature rise) |
| Storage Temperature & Humidity:    | -5°C to +40°C and RH 70% (Max.) in Tape & Reel    |

| Part Number<br>ASPI-0612FS-<br>Inductance Code | Inductance | Inductance<br>Tolerance | DCR Typ | DCR Max | Saturation<br>Current | Temperature<br>Rise Current |
|------------------------------------------------|------------|-------------------------|---------|---------|-----------------------|-----------------------------|
| Units                                          | μH         | %                       | mΩ      | mΩ      | A                     | A                           |
| Symbol                                         | L          | M                       | DCR Typ | DCR Max | Isat                  | Irms                        |
| ASPI-0612FS-2R2                                | 2.2        | M                       | 65      | 78      | 2.40                  | 1.80                        |
| ASPI-0612FS-2R5                                | 2.5        | M                       | 90      | 117     | 2.10                  | 1.80                        |
| ASPI-0612FS-3R3                                | 3.3        | M                       | 105     | 137     | 1.80                  | 1.70                        |
| ASPI-0612FS-4R7                                | 4.7        | M                       | 125     | 163     | 1.60                  | 1.55                        |
| ASPI-0612FS-5R3                                | 5.3        | M                       | 125     | 163     | 1.50                  | 1.55                        |
| ASPI-0612FS-6R8                                | 6.8        | M                       | 165     | 215     | 1.30                  | 1.35                        |
| ASPI-0612FS-100                                | 10         | M                       | 200     | 260     | 1.00                  | 1.20                        |
| ASPI-0612FS-150                                | 15         | M                       | 295     | 384     | 0.80                  | 0.80                        |
| ASPI-0612FS-220                                | 22         | M                       | 775     | 930     | 0.76                  | 0.65                        |
| ASPI-0612FS-330                                | 33         | M                       | 580     | 754     | 0.59                  | 0.55                        |
| ASPI-0612FS-470                                | 47         | M                       | 965     | 1255    | 0.52                  | 0.46                        |
| ASPI-0612FS-680                                | 68         | M                       | 1160    | 1508    | 0.44                  | 0.41                        |
| ASPI-0612FS-101                                | 100        | M                       | 1670    | 2171    | 0.35                  | 0.32                        |

## Test Conditions

1. Isat : Based on inductance change ( $\Delta L/L_o$ : -30%)
2. Irms : Based on temperature rise ( $\Delta T$ : 40°C)
3. Test Freq: 100KHz, 1Vrms

## OPTIONS AND PART IDENTIFICATION



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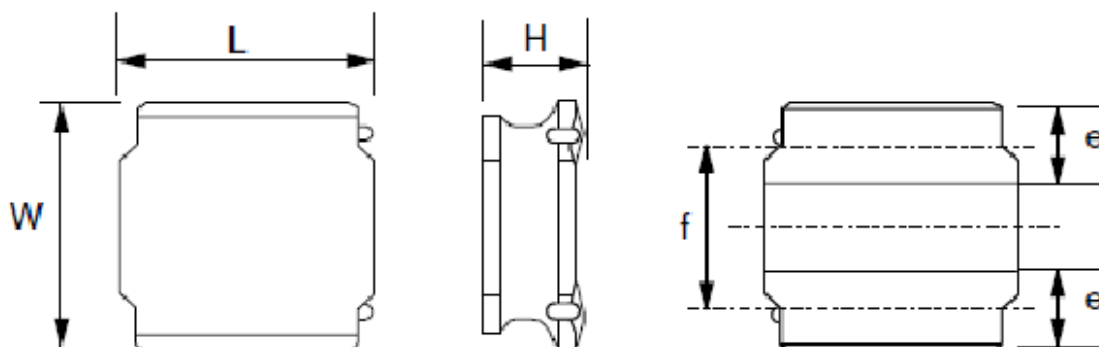
6.0 x 6.0 x 1.2mm

ASPI-0612FS

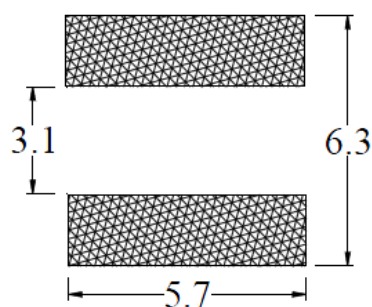


RoHS/RoHS II Compliant

## OUTLINE DRAWING:



### Recommended Land Pattern



|          |                 |
|----------|-----------------|
| <b>L</b> | <b>6.0±0.2</b>  |
| <b>W</b> | <b>6.0±0.2</b>  |
| <b>H</b> | <b>1.2 Max</b>  |
| <b>e</b> | <b>1.35±0.2</b> |
| <b>F</b> | <b>4.0±0.2</b>  |

Dimension: mm

### Materials

| Part Name | Material                     |
|-----------|------------------------------|
| Core      | Ferrite                      |
| Terminal  | Ni/Cu/Ag alloy with Sn       |
| Wire      | H class enameled copper wire |
| Coating   | Magnetic epoxy resin         |

# LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



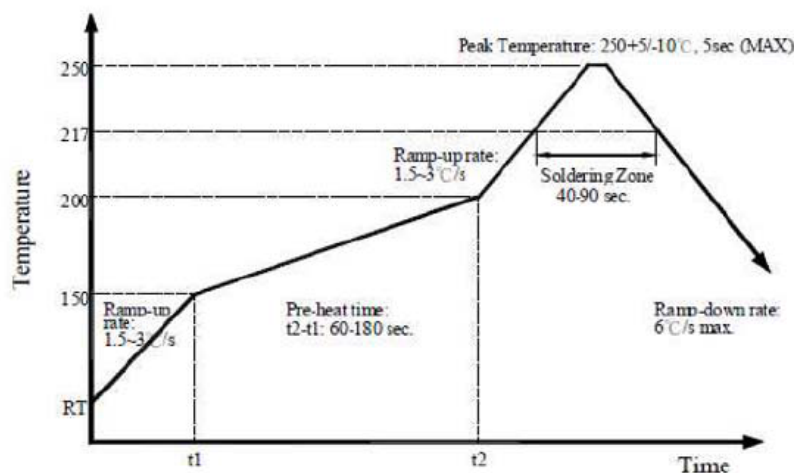
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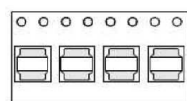
RoHS/RoHS II Compliant

## REFLOW PROFILE:

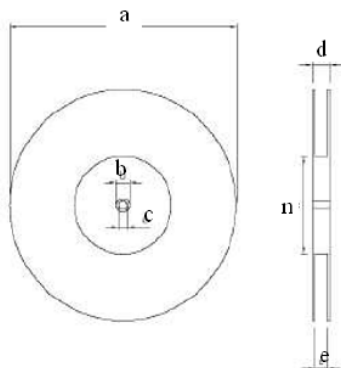
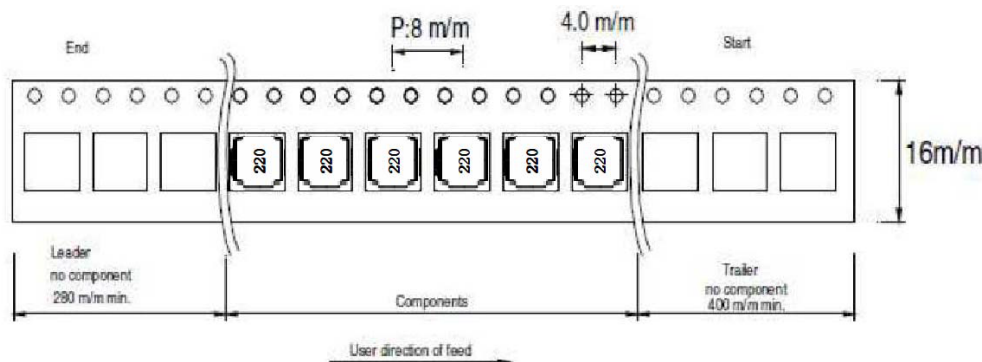


## TAPE & REEL:

T: 1,000pcs / reel



Bottom View



| a           | b          | c          | d        | e        | n      |
|-------------|------------|------------|----------|----------|--------|
| 178.0 ± 2.0 | 21.0 ± 0.8 | 13.0 ± 0.8 | 20.5 Typ | 18.0 Max | 50 Min |

### Storage Conditions

Even under ideal storage conditions, solderability of products electrodes may decrease as time passes. For this reason, product should be used with 6 months from the time of delivery. In case of storage over 6 months, solderability shall be checked before actual usage.

**Dimension: mm**

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