

# LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR

ASPI-0615FS



RoHS/RoHS II Compliant



6.0 x 6.0 x 2.0mm

## FEATURES:

- Small size and low profile: 2.0mm
- 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:

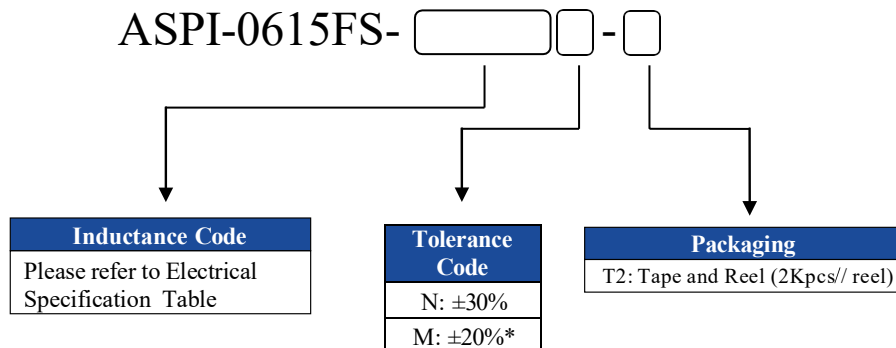
|                                    |                                                 |
|------------------------------------|-------------------------------------------------|
| Abrakon P/N:                       | ASPI-0615FS Series                              |
| Operating Temperature & Humidity : | -40°C to +125°C (Including self generated heat) |
| Storage Temperature & Humidity:    | -40°C to +125°C                                 |

| Part Number<br>ASPI-0615FS-<br>Inductance Code | Inductance | Inductance<br>Tolerance | DCR | DCR<br>Tolerance | Saturation<br>Current | Temperature<br>Rise Current |
|------------------------------------------------|------------|-------------------------|-----|------------------|-----------------------|-----------------------------|
| Units                                          | H          | %                       | mΩ  | %                | A                     | A                           |
| Symbol                                         | L          | M, N                    | DCR |                  | Isat                  | Irms                        |
| ASPI-0615FS-R50                                | 0.5        | N                       | 9   | ±30%             | 7.00                  | 5.20                        |
| ASPI-0615FS-R80                                | 0.8        | N                       | 12  |                  | 6.00                  | 4.10                        |
| ASPI-0615FS-1R5                                | 1.5        | N                       | 17  |                  | 4.00                  | 3.60                        |
| ASPI-0615FS-2R2                                | 2.2        | N                       | 24  |                  | 3.50                  | 2.90                        |
| ASPI-0615FS-3R3                                | 3.3        | M                       | 30  | ±20%             | 2.80                  | 2.80                        |
| ASPI-0615FS-4R7                                | 4.7        | M                       | 43  |                  | 2.40                  | 2.20                        |
| ASPI-0615FS-5R6                                | 5.6        | M                       | 55  |                  | 2.20                  | 2.00                        |
| ASPI-0615FS-6R8                                | 6.8        | M                       | 60  |                  | 2.00                  | 1.80                        |
| ASPI-0615FS-100                                | 10         | M                       | 90  |                  | 1.90                  | 1.50                        |
| ASPI-0615FS-150                                | 15         | M                       | 120 |                  | 1.30                  | 1.20                        |
| ASPI-0615FS-220                                | 22         | M                       | 170 |                  | 1.10                  | 1.00                        |
| ASPI-0615FS-330                                | 33         | M                       | 310 |                  | 0.90                  | 0.90                        |
| ASPI-0615FS-470                                | 47         | M                       | 370 |                  | 0.80                  | 0.80                        |

### 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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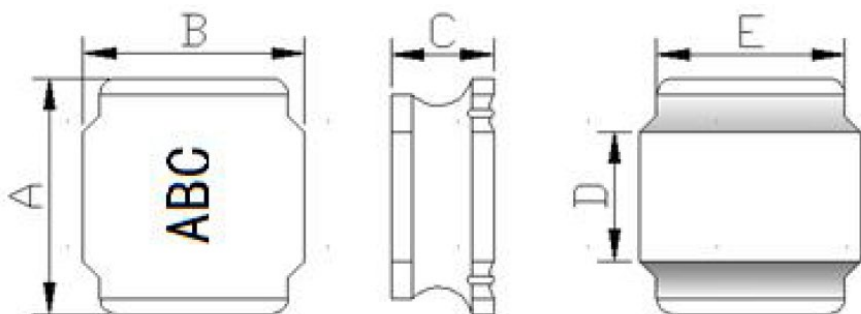


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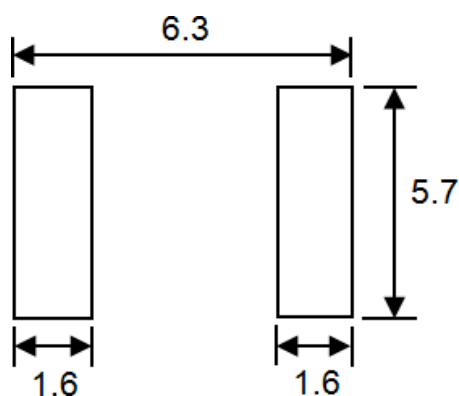


6.0 x 6.0 x 2.0mm

## OUTLINE DRAWING:



| A       | B       | C       | D Typ. |
|---------|---------|---------|--------|
| 6.0±0.2 | 6.0±0.2 | 2.0±0.2 | 1.50   |



**Recommended Land Pattern**

**Dimension: mm**

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6.0 x 6.0 x 2.0mm

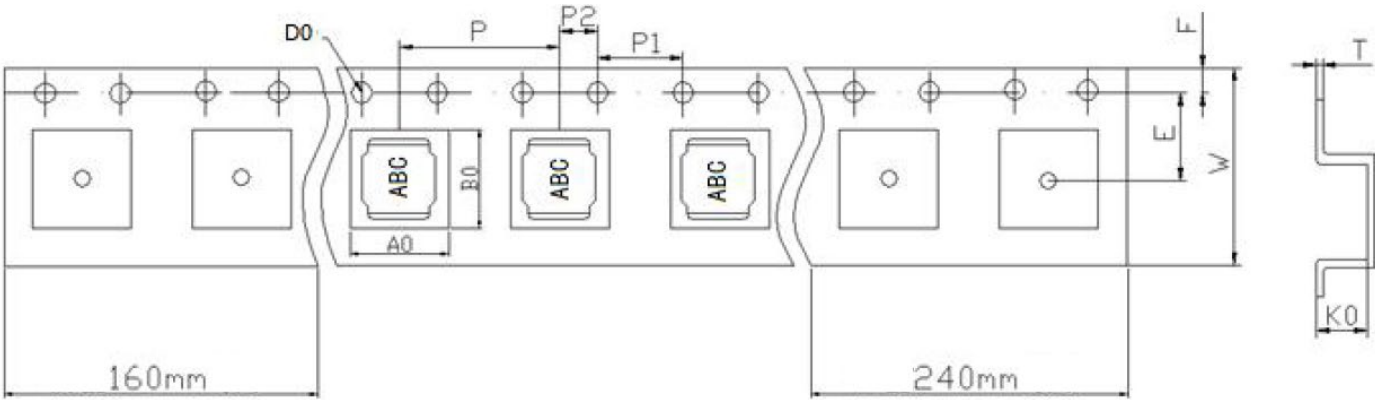
ASPI-0615FS



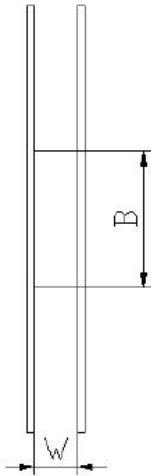
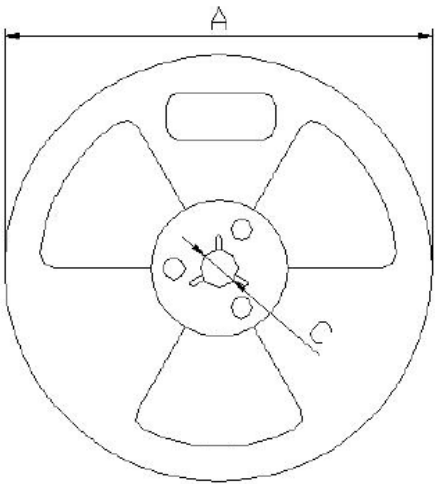
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## TAPE & REEL:

T2: 2,000pcs / reel



| Dim         | W        | A0      | B0      | K0      | P       | E       | F        | D0      | P0      | P2      | T         |
|-------------|----------|---------|---------|---------|---------|---------|----------|---------|---------|---------|-----------|
| ASPI-0615FS | 12.0±0.3 | 6.3±0.1 | 6.3±0.1 | 2.2±0.1 | 8.0±0.1 | 7.5±0.1 | 1.75±0.1 | 1.5±0.1 | 4.0±0.1 | 2.0±0.1 | 0.35±0.05 |



|   |          |
|---|----------|
| A | 330±0.5  |
| B | 100±0.5  |
| C | 13.5±0.5 |
| W | 12.5±0.5 |

Dimension: mm

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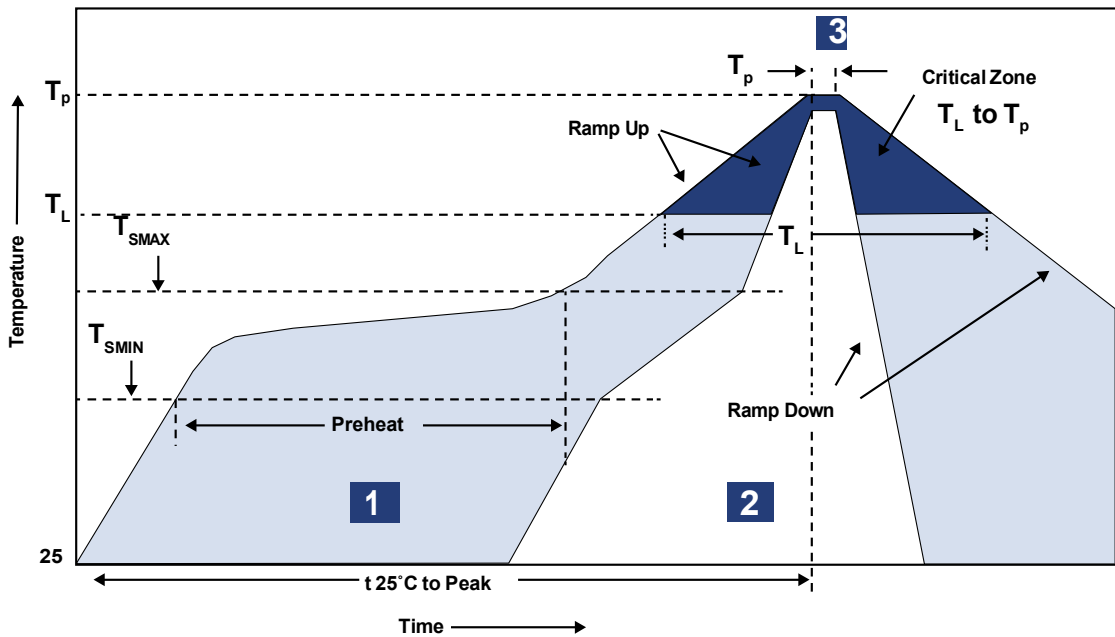
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## REFLOW PROFILE:



| Zone | Description    | Temperature         | Time          |
|------|----------------|---------------------|---------------|
| 1    | Preheat / Soak | $T_{SMAX}$<br>150°C | 60 ~ 100 sec. |
| 2    | Reflow         | $T_L$<br>200°C      | 20 sec. MAX   |
| 3    | Peak heat      | $T_P$<br>260°C      | 10 sec. MAX   |

Dimension: mm

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