

# SMD SHIELDED POWER INDUCTOR

**ASPI - 0315S**



**RoHS**  
Compliant



3.8 x 3.8 x 1.8mm

## FEATURES:

- Compact size and very thin: 3.8X3.8X1.8mm
- Magnetically shielded, surface mount inductor
- Large DC current & low DC resistance
- Mighty temperature deflection prevents damage during solder reflow

## APPLICATIONS:

- PDA's flash memory
- Step-up, step-down converters
- Communication systems, XDSL, PBX base stations
- Power source circuits, DC/DC converters, DC/AC inverters
- Hard disk, notebook computer

## ELECTRICAL SPECIFICATIONS:

|                        |                   |
|------------------------|-------------------|
| ABRACON P/N:           | ASP I-0315 S-xx x |
| Operating Temperature: | -40°C to +85°C    |
| Storage Temperature:   | -55°C to +125°C   |

### Electrical Characteristics

| Part Number    | L (μH)<br>±20% | R <sub>DC</sub> (W)<br>Max | I <sub>DC</sub> (A)<br>Max |
|----------------|----------------|----------------------------|----------------------------|
| ASPI-0315S-3R3 | 3.3            | 0.085                      | 1.10                       |
| ASPI-0315S-3R9 | 3.9            | 0.081                      | 0.75                       |
| ASPI-0315S-4R7 | 4.7            | 0.105                      | 0.90                       |
| ASPI-0315S-5R6 | 5.6            | 0.102                      | 0.62                       |
| ASPI-0315S-6R8 | 6.8            | 0.170                      | 0.73                       |
| ASPI-0315S-8R2 | 8.2            | 0.140                      | 0.51                       |
| ASPI-0315S-100 | 10             | 0.210                      | 0.55                       |
| ASPI-0315S-120 | 12.0           | 0.205                      | 0.42                       |
| ASPI-0315S-150 | 15.0           | 0.295                      | 0.45                       |
| ASPI-0315S-180 | 18             | 0.327                      | 0.34                       |
| ASPI-0315S-220 | 22             | 0.430                      | 0.40                       |
| ASPI-0315S-270 | 27             | 0.470                      | 0.28                       |
| ASPI-0315S-330 | 33             | 0.675                      | 0.32                       |
| ASPI-0315S-390 | 39             | 0.700                      | 0.24                       |
| ASPI-0315S-470 | 47             | 0.775                      | 0.21                       |
| ASPI-0315S-101 | 100            | 3.690                      | 0.22                       |
| ASPI-0315S-151 | 150            | 3.500                      | 0.11                       |
| ASPI-0315S-221 | 220            | 5.46                       | 0.13                       |
| ASPI-0315S-331 | 330            | 9.45                       | 0.32                       |

### Testing Condition:

100kHz, 0.1V

IDC: Inductance decreases to 65% of initial value or ?T of coil increased by 30°C

### Test Equipment:

- 1) Test L: ZENTECH 3305 Automatic components Analyzer
- 2) Test RDC: HM 2541A Low-Ohm Auto Sorter
- 3) Test IDC: ZENTECH 3302 Automatic Components Analyzer + ZENTECH 1320 BIAS CURRENT.

## OPTIONS AND PART IDENTIFICATION:

ASPI-0315S -  -  -

### Inductance Code

Please refer to the table on page 2

### Tolerance %

M: ±20 %

### Packaging

T: Tape and Reel



# SMD SHIELDED POWER INDUCTOR

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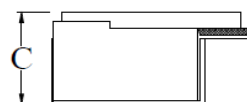
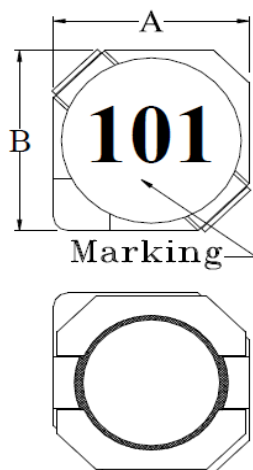


RoHS  
Compliant

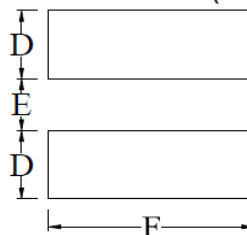


3.8 x 3.8 x 1.8mm

## OUTLINE DRAWING:



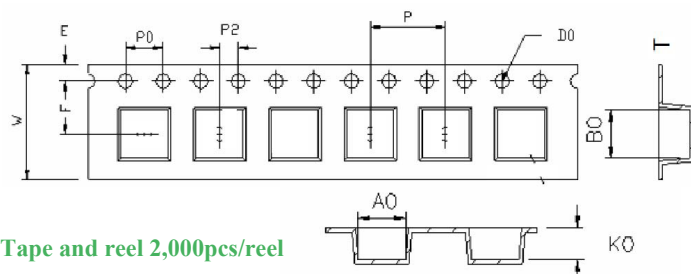
LAND PATTERNS(mm)



| A       | B       | C(Max.) | D(Ref.) | E(Ref.) | F(Ref.) |
|---------|---------|---------|---------|---------|---------|
| 3.8±0.3 | 3.8±0.3 | 1.8     | 1.6     | 1.2     | 4.5     |

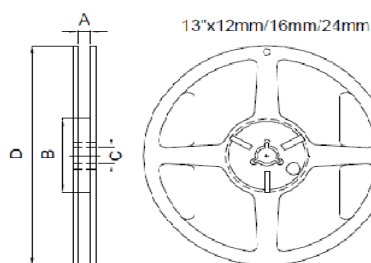
Dimensions: mm

## TAPE & REEL:



Tape and reel 2,000pcs/reel

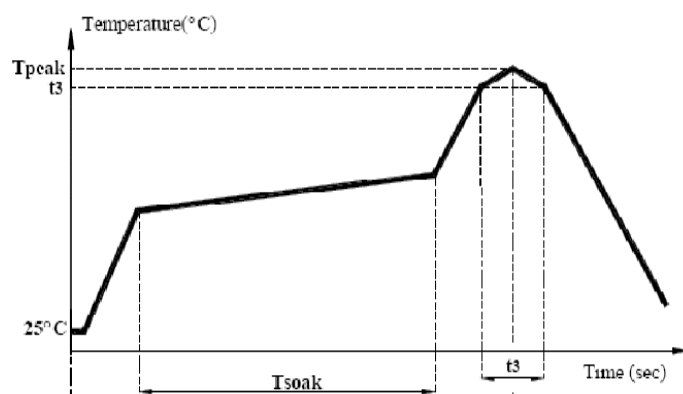
| A0        | B0        | K0        | F         | E           |
|-----------|-----------|-----------|-----------|-------------|
| 4.3 ± 0.1 | 4.2 ± 0.1 | 2.0 ± 0.1 | 5.5 ± 0.1 | 1.75 ± 0.1  |
| W         | P         | P0        | P2        | T           |
| 12 ± 0.3  | 8.0 ± 0.1 | 4.0 ± 0.1 | 2.0 ± 0.1 | 0.35 ± 0.05 |



Dimensions:  
mm

| A          | B         | C          | D         |
|------------|-----------|------------|-----------|
| 12.5 ± 0.5 | 100 ± 0.5 | 13.2 ± 0.3 | 330 ± 1.0 |

## REFLOW PROFILE:



| Item                                       | Mark  | Product        |
|--------------------------------------------|-------|----------------|
| Temperature rise gradient                  |       | 3°C/sec (max)  |
| Heating time                               | Tsoak | 50s ~ 150s     |
| Heating temperature                        |       | 120°C~180°C    |
| Time over 217°C                            | t1    | 90 sec         |
| Time within 5°C of actual peak temperature | t3    | 10~30 sec      |
| Peak temperature                           | Tpeak | 255 ~ 260 °C   |
| Time 25°C to peak Temperature              |       | 6 minutes max. |

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