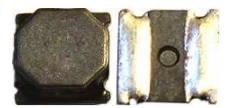


# LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



4.0 x 4.0 x 1.8mm/  
4.0 x 4.0 x 1.88mm

ASPI-0418FS



**RoHS**  
Compliant

## FEATURES:

- Small size and low profile: 1.88mm max.
- Small DCR and high rated current
- High reliability to mechanical strength
- 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:

|                                    |   |
|------------------------------------|---|
| Abrakon P/N:                       | ASPI-0418FS 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-0418FS-R82 | 0.82       | N                    | 16   | ±30%          | 4.20               | 4.00                     |
| ASPI-0418FS-1R0 | 1.0        | N                    | 19   |               | 4.70               | 3.70                     |
| ASPI-0418FS-1R2 | 1.2        | N                    | 21   |               | 4.00               | 3.50                     |
| ASPI-0418FS-1R5 | 1.5        | N                    | 27   |               | 3.50               | 3.10                     |
| ASPI-0418FS-2R2 | 2.2        | M                    | 37   | ±20%          | 3.00               | 2.90                     |
| ASPI-0418FS-2R7 | 2.7        | M                    | 43   |               | 2.40               | 2.30                     |
| ASPI-0418FS-3R3 | 3.3        | M                    | 55   |               | 2.30               | 2.20                     |
| ASPI-0418FS-4R7 | 4.7        | M                    | 70   |               | 2.00               | 1.90                     |
| ASPI-0418FS-6R8 | 6.8        | M                    | 98   |               | 1.60               | 1.50                     |
| ASPI-0418FS-100 | 10         | M                    | 150  |               | 1.40               | 1.30                     |
| ASPI-0418FS-150 | 15         | M                    | 220  |               | 1.10               | 1.00                     |
| ASPI-0418FS-220 | 22         | M                    | 290  |               | 0.95               | 0.90                     |
| ASPI-0418FS-330 | 33         | M                    | 460  |               | 0.75               | 0.70                     |
| ASPI-0418FS-470 | 47         | M                    | 650  |               | 0.62               | 0.60                     |
| ASPI-0418FS-680 | 68         | M                    | 940  |               | 0.50               | 0.50                     |
| ASPI-0418FS-101 | 100        | M                    | 1330 |               | 0.45               | 0.42                     |
| ASPI-0418FS-151 | 150        | M                    | 2000 | 0.35          | 0.32               |                          |
| ASPI-0418FS-221 | 220        | M                    | 2960 | 0.30          | 0.28               |                          |

### 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

ASPI-0418FS--

**Inductance Code**  
Please refer to the Electrical Spec Table

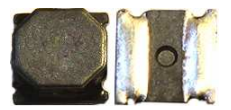
**Tolerance**  
N: ±30%\*  
M: ±20%\*

**Packaging**  
T3: Tape and Reel (3kpcs / reel)

\*N for L = 0.82 ~ 1.5μH  
\*M for L = 2.2 ~ 220μH



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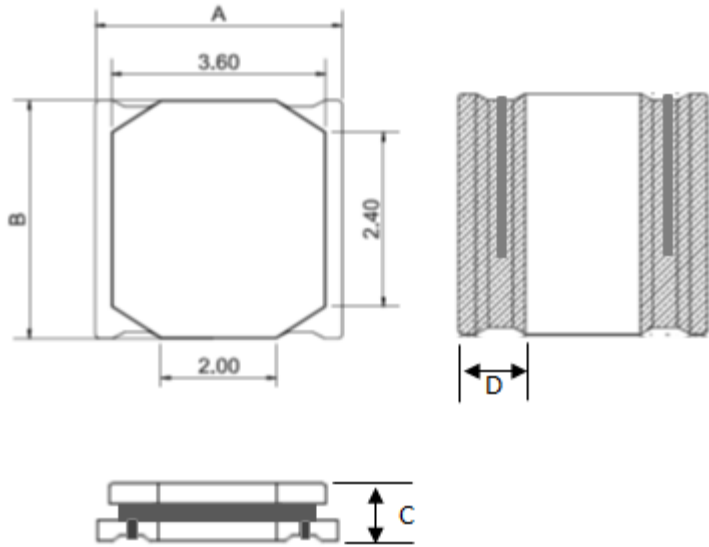
ASPI-0418FS



**RoHS**  
Compliant

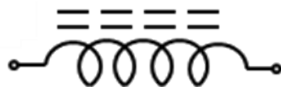
## OUTLINE DRAWING:

Mechanical Dimensions (Effective date: 11/21/2012)



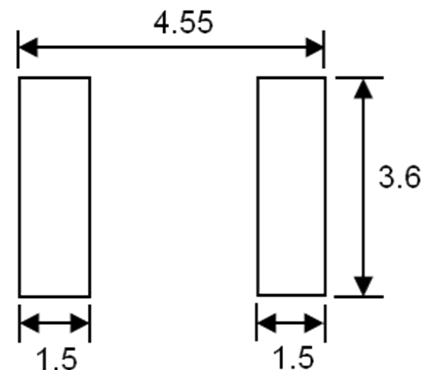
| A       | B       | C Max.                               | D   |
|---------|---------|--------------------------------------|-----|
| 4.0±0.2 | 4.0±0.2 | 1.88 for R82-2R7<br>1.80 for 3R3-221 | 1.3 |

### Circuit Schematic



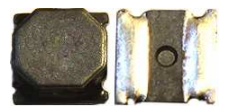
**No Polarity**

### Recommended Land Pattern



Dimension: mm

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4.0 x 4.0 x 1.88mm

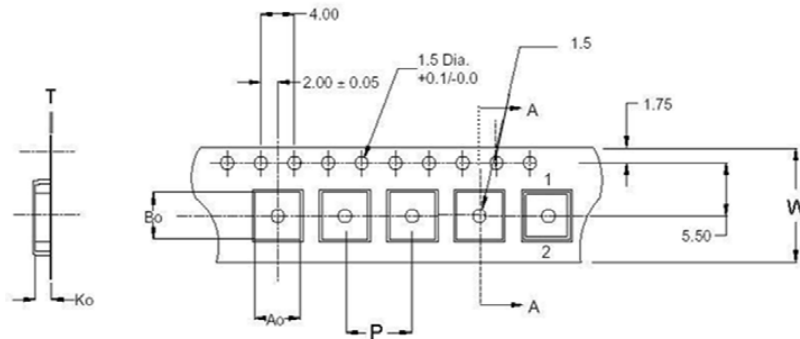
ASPI-0418FS



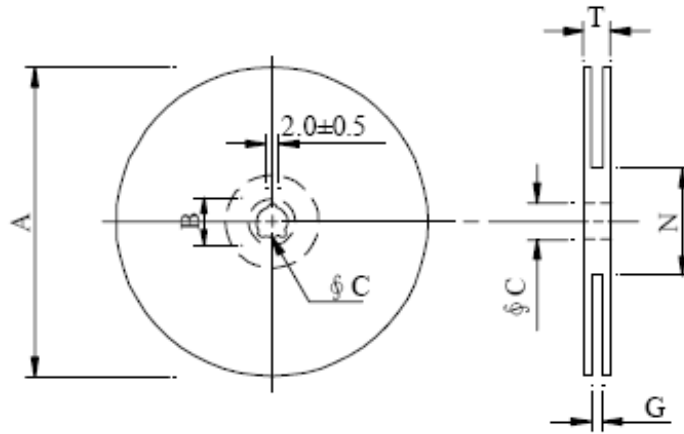
**RoHS**  
Compliant

## TAPE & REEL:

T3: 3,000pcs / reel



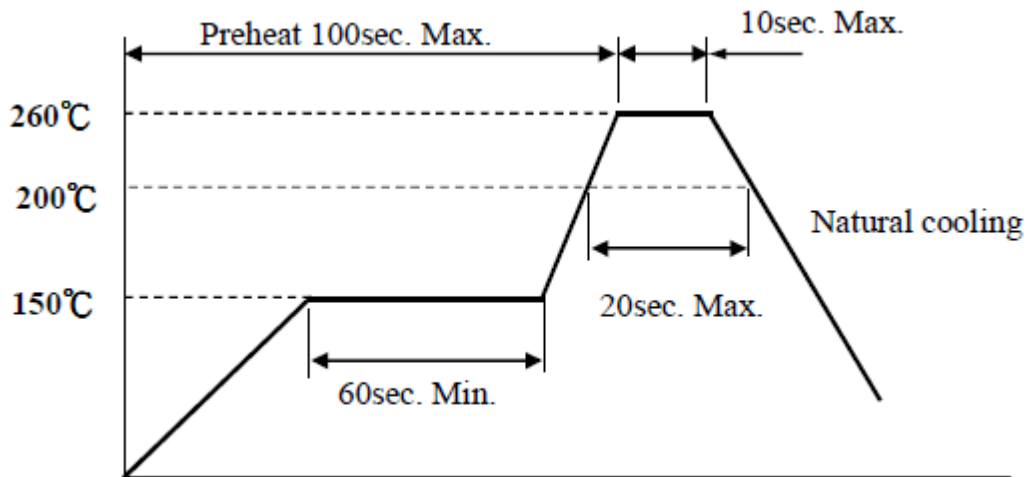
|    |      |
|----|------|
| Ao | 4.50 |
| Bo | 4.35 |
| Ko | 1.90 |
| W  | 12   |
| P  | 8    |
| T  | 0.3  |



|   |          |
|---|----------|
| A | 330      |
| B | 21.0±0.8 |
| C | 13.5±0.5 |
| G | 12.6     |
| N | 99.5     |
| T | 17.2     |

Dimension: mm

## REFLOW PROFILE:



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