

# LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



3.0 x 3.0 x 1.2mm

ASPI-0312FS



RoHS  
Compliant

## FEATURES:

- Small size and low profile: 1.2mm
- 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-0312FS Series
Operating Temperature & Humidity	-40°C to +125°C (Including self generated heat)
Storage Temperature & Humidity:	-40°C to +125°C

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-0312FS-1R0	1.0	N	50	±20%	1.50	1.49
ASPI-0312FS-1R5	1.5	N	60		1.36	1.40
ASPI-0312FS-2R2	2.2	M	70		1.10	1.20
ASPI-0312FS-2R7	2.7	M	90		1.00	1.00
ASPI-0312FS-3R3	3.3	M	100		0.91	1.05
ASPI-0312FS-4R7	4.7	M	130		0.77	0.98
ASPI-0312FS-6R8	6.8	M	190		0.67	0.74
ASPI-0312FS-100	10.0	M	290		0.54	0.63
ASPI-0312FS-150	15.0	M	450		0.44	0.48
ASPI-0312FS-220	22.0	M	630		0.37	0.42
ASPI-0312FS-330	33.0	M	1030		0.31	0.33
ASPI-0312FS-470	47.0	M	1450		0.25	0.28

### Test Conditions

1. Inductance is measured in HP-4285A Precision LCR Meter.
2. RDC is measured in HP 4338B 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-0312FS-  - 

Inductance Code
Please refer to the Electrical Spec Table

Tolerance
N: ±30%*
M: ±20%*

Packaging
T2: Tape and Reel (2kpcs / reel)

\*N for L = 1.0 and 1.5μH

\*M for L = 2.2 ~ 47μH

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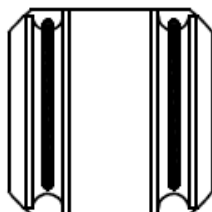
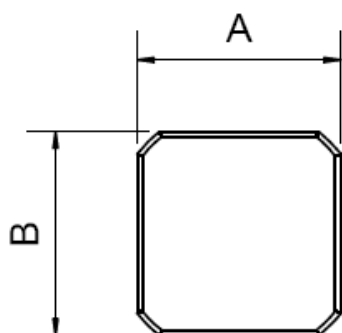
3.0 x 3.0 x 1.2mm

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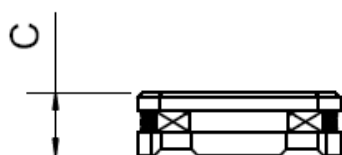


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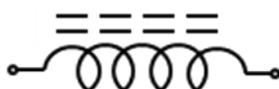
## ➤ OUTLINE DRAWING:



A	B	C Max.
3.0±0.1	3.0±0.1	1.2

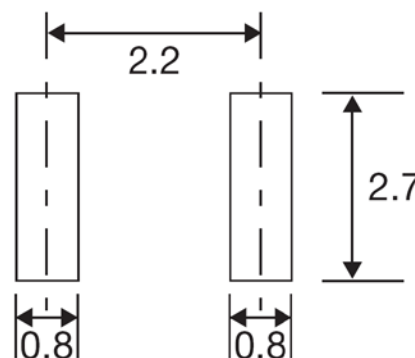


### Circuit Schematic



**No Polarity**

### Recommended Land Pattern



**Dimension: mm**

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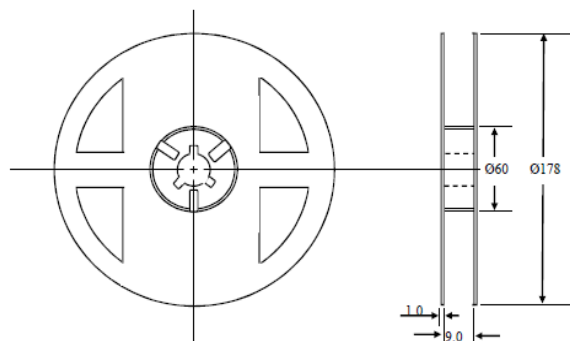
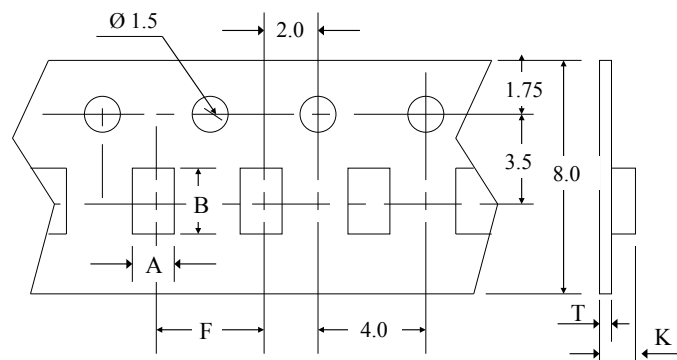


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## TAPE & REEL:

T2: 2,000pcs / reel

A	3.15
B	3.15
K	1.40
F	4
T	0.25



Dimension: mm

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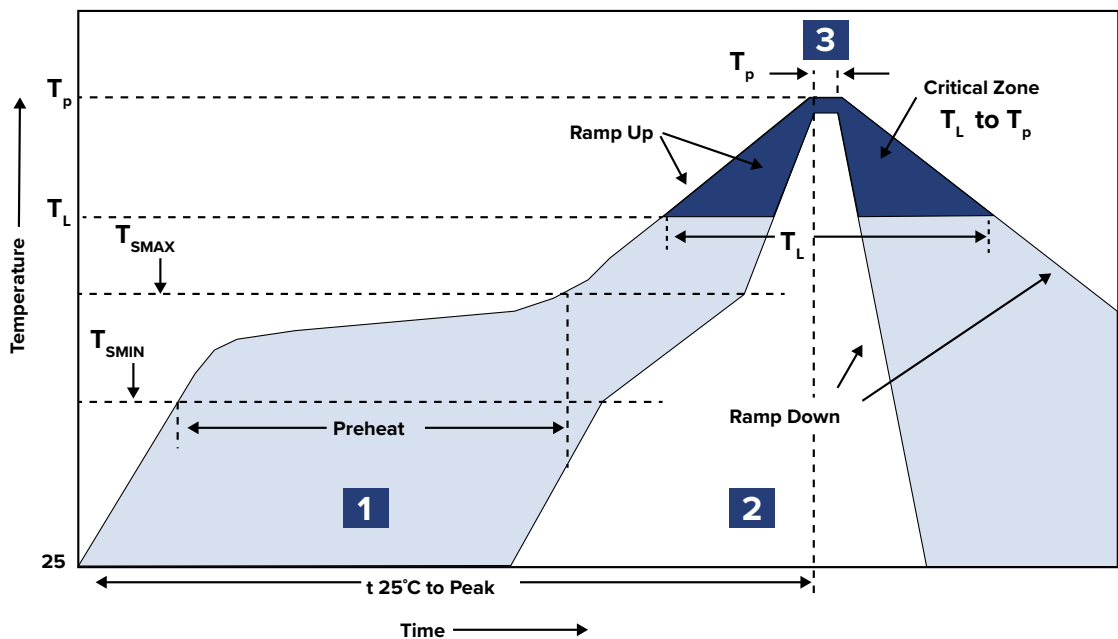
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## REFLOW PROFILE:



Zone	Description	Temperature	Time
1	Preheat / Soak	$T_{S\text{MAX}}$ 150°C	60 ~ 100 sec.
2	Reflow	$T_L$ 200°C	20 sec. MAX
3	Peak heat	$T_P$ 260°C	10 sec. MAX

Dimension: mm

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REVISED: 11-26-19

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