

# Low Profile Shielded SMD Chip Power Inductor



**ASPI-0310FS**

Request Samples



Check Inventory



3.0 x 3.0 x 1.0mm  
**RoHS/RoHS II Compliant**  
MSL Level = 1

## Features

- Small size and low profile: 1.0mm
- 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

Part Number ASPI-0310FS- Inductance Code	Inductance	Inductance Tolerance	DCR (Typ)	DCR Tolerance	Saturation Current	Temperature Rise Current
Units	$\mu\text{H}$	%	$\text{m}\Omega$	%	A	A
Symbol	L	M, N	DCR		Isat	Irms
ASPI-0310FS-1R0	1.0	N	70	$\pm 30\%$	2.30	2.30
ASPI-0310FS-1R2	1.2	N	75		1.90	2.10
ASPI-0310FS-1R5	1.5	N	79		1.65	2.00
ASPI-0310FS-2R2	2.2	M	80		1.45	1.90
ASPI-0310FS-3R3	3.3	M	170	$\pm 20\%$	1.05	1.80
ASPI-0310FS-4R7	4.7	M	175		0.85	1.70
ASPI-0310FS-6R8	6.8	M	260		0.70	1.30
ASPI-0310FS-100	10.0	M	350		0.60	0.90
ASPI-0310FS-150	15.0	M	725		0.50	0.80
ASPI-0310FS-220	22.0	M	780		0.40	0.70
ASPI-0310FS-330	33.0	M	1440		0.32	0.50
ASPI-0310FS-470	47.0	M	1800		0.28	0.35

## 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

**Operating Temperature:**  $-40^\circ\text{C}$  to  $+125^\circ\text{C}$  (Including self-generated heat)

**Storage Temperature of component removed from packaging:**  $-40^\circ\text{C}$  to  $+125^\circ\text{C}$ .

**ASPI-0310FS is RoHS/RoHS II Compliant and Pb free.**

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## Part Identification

ASPI-0310FS---

### Inductance Code

Please refer to the  
Electrical Spec Table

### Tolerance

N:  $\pm 30\%^*$

M:  $\pm 20\%^*$

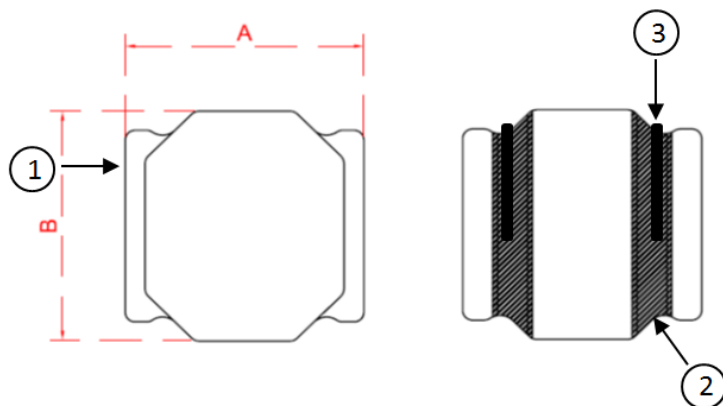
\*N for L = 1.0 ~ 2.2 $\mu$ H

\*M for L = 3.3 ~ 47 $\mu$ H

### Packaging

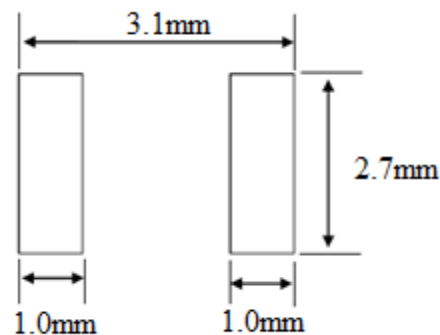
T2: Tape and Reel (2kpcs / reel)

## Mechanical Specifications



A	B	C Max.
3.0 $\pm$ 0.1	3.0 $\pm$ 0.1	1.0

### Recommended Land Pattern



REF. dimensions

No Polarity

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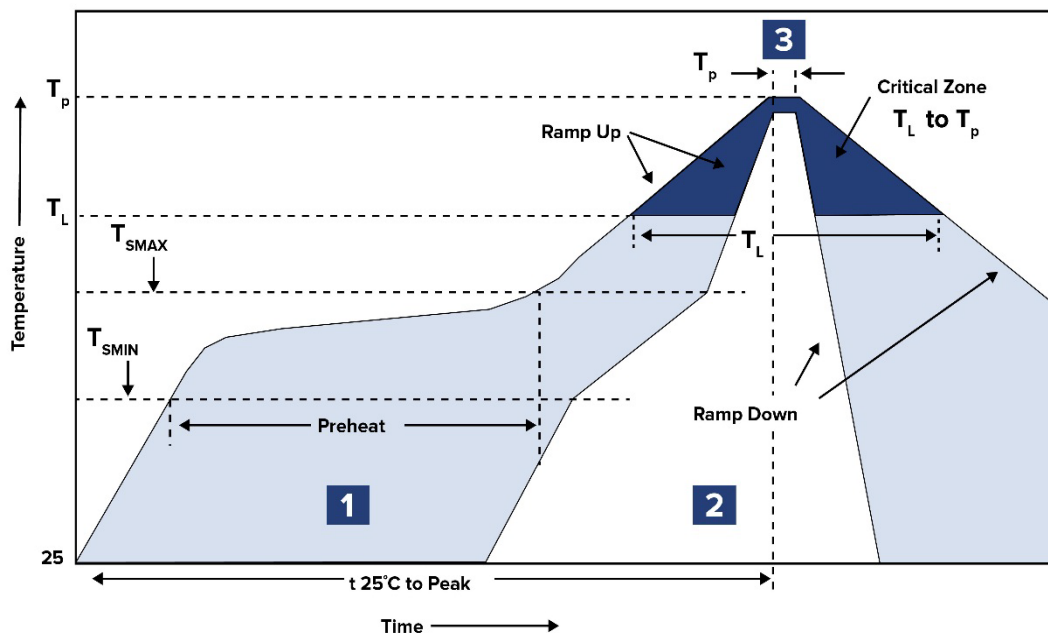


Check Inventory



3.0 x 3.0 x 1.0mm  
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## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMAX}$ 150°C	60 ~ 100 sec.
2	Reflow	$T_L$ 200°C	20 sec. MAX
3	Peak heat	$T_p$ 260°C	10 sec. MAX

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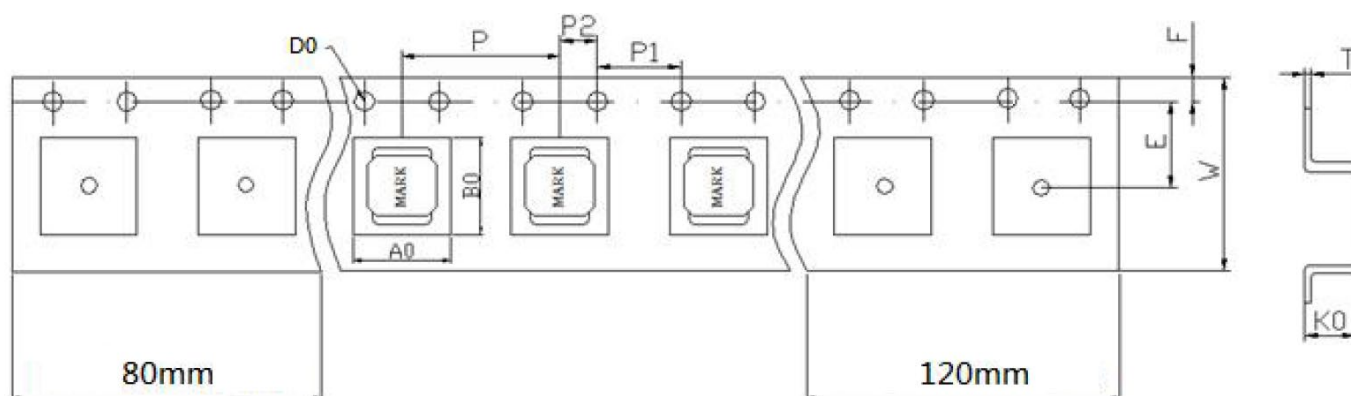
Check Inventory



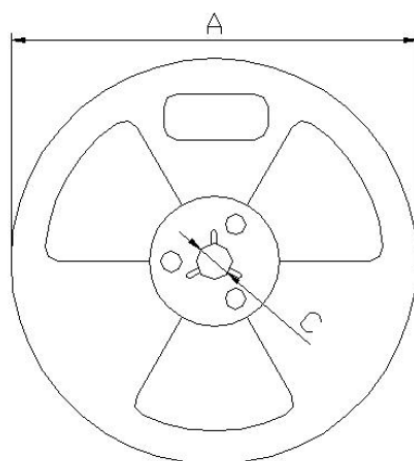
**3.0 x 3.0 x 1.0mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Packaging

**T: 2,000pcs / reel**



Item	W	A0	B0	K0	P	E	F	D0	P0	P2	T
Dim.	8.00±0.3	3.2±0.1	3.2±0.1	1.32±0.1	4.0±0.1	3.5±0.1	1.75±0.1	1.50±0.1	4.00±0.1	2.00±0.1	0.30±0.05



A	180 ±0.5
B	100 ±0.5
C	13.5 ±0.5
W	8.5 ±0.5

**Dimension: mm**

**ATTENTION:** Abracon LLC's products are Commercial-Off-The-Shelf (COTS, which are designed, intended and validated for use in commercial, industrial and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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