

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	μH	%	$\text{m}\Omega$	%	A	A
Symbol	L	M, N	DCR		Isat	Irms
ASPI-0310FS-1R0	1.0	N	70	±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	±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°C to $+125^\circ\text{C}$ (Including self-generated heat)

Storage Temperature of component removed from packaging: -40°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

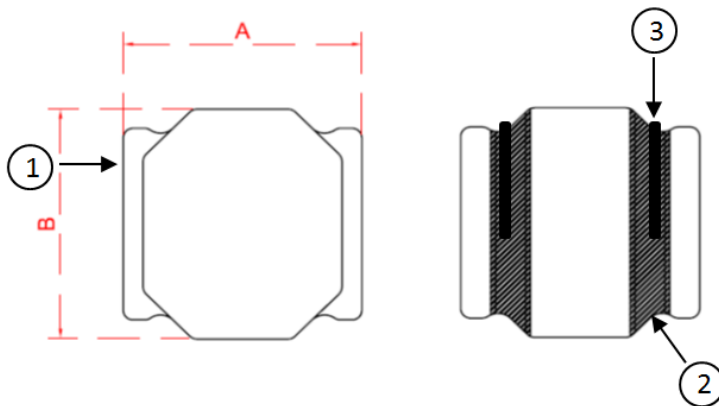
Tolerance
 N: $\pm 30\%^*$
 M: $\pm 20\%^*$

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

*N for L = 1.0 ~ 2.2 μ H

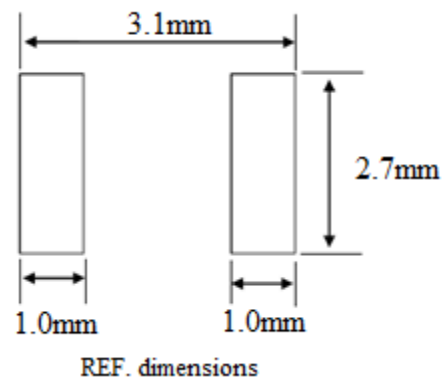
*M for L = 3.3 ~ 47 μ H

Mechanical Specifications



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

Recommended Land Pattern



No Polarity



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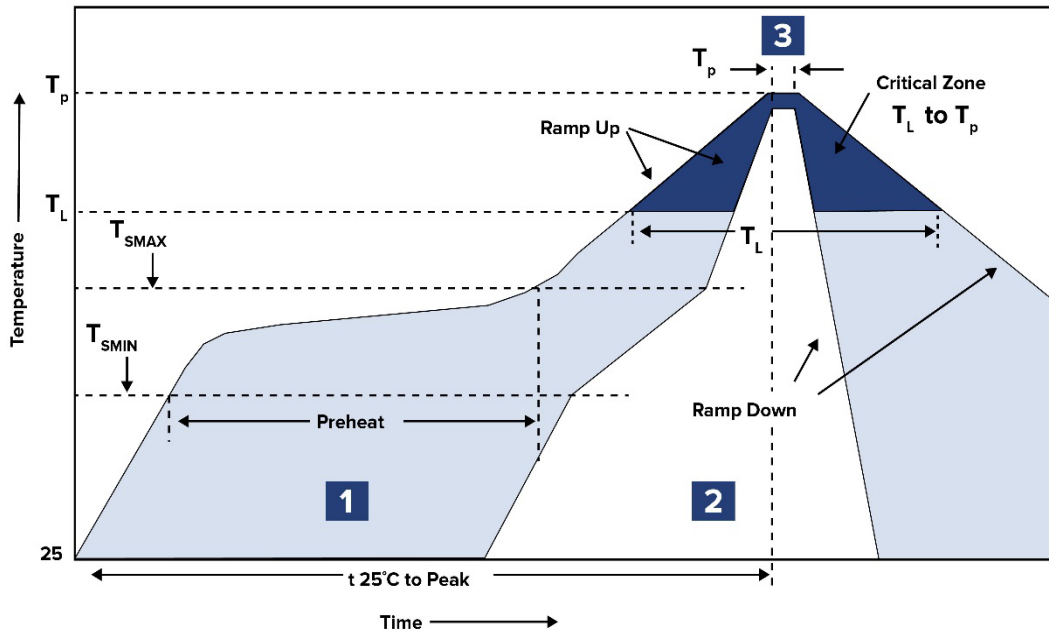


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Reflow Profile



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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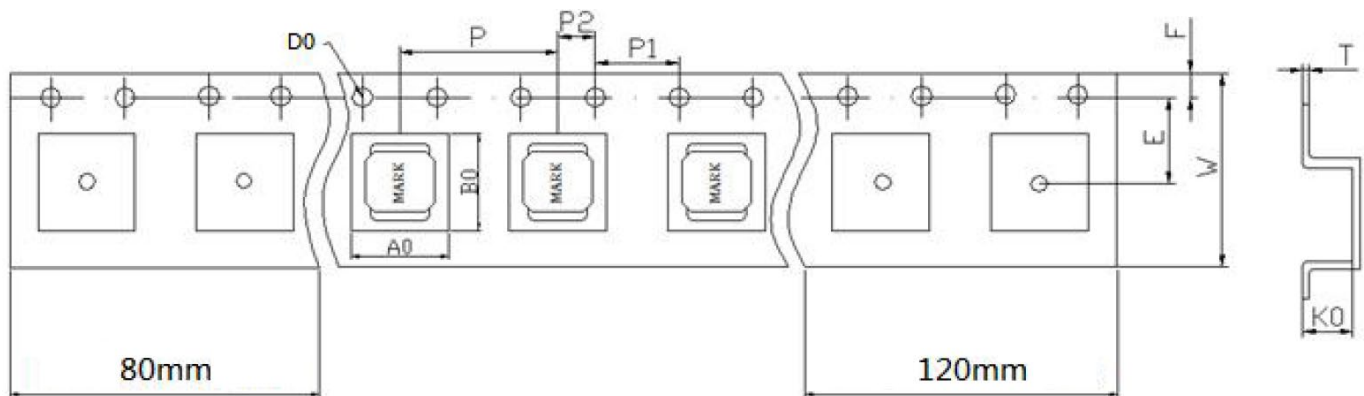
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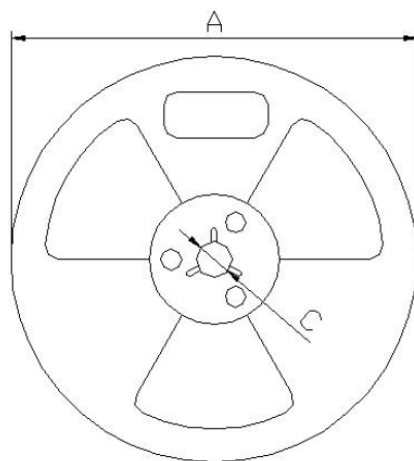
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Packaging

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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