

# LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR



6.0 x 6.0 x 4.5mm

ASPI-0645



RoHS  
Compliant

## FEATURES:

- Small size and low profile: 4.5mm
- 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-0645 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-0645-1R0	1.0	N	10	±30%	10.00	6.50
ASPI-0645-1R3	1.3	N	11		8.60	6.00
ASPI-0645-1R8	1.8	N	12		7.20	5.30
ASPI-0645-2R3	2.3	N	13		6.40	5.00
ASPI-0645-3R0	3.0	N	17		6.00	4.80
ASPI-0645-3R3	3.3	N	17		5.10	4.50
ASPI-0645-4R5	4.5	M	23		±20%	4.80
ASPI-0645-4R7	4.7	M	23	4.70		3.70
ASPI-0645-6R3	6.3	M	26	3.90		3.60
ASPI-0645-6R8	6.8	M	34	3.80		3.50
ASPI-0645-8R2	8.2	M	36	3.20		3.10
ASPI-0645-100	10	M	45	3.10		3.00
ASPI-0645-150	15	M	62	2.50		2.50
ASPI-0645-220	22	M	95	2.10		2.10
ASPI-0645-330	33	M	136	1.70		1.70
ASPI-0645-470	47	M	195	1.40		1.40
ASPI-0645-560	56	M	230	1.20		1.20
ASPI-0645-680	68	M	300	1.10		1.10
ASPI-0645-101	100	M	430	0.90		0.90
ASPI-0645-221	220	M	900	0.55		0.50

## 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-0645--

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

**Tolerance**  
N: ±30%\*  
M: ±20%\*

**Packaging**  
T1: Tape and Reel (1kpcs / reel)

\*N for L = 1.0 ~ 3.3μH

\*M for L = 4.5 ~ 220μH

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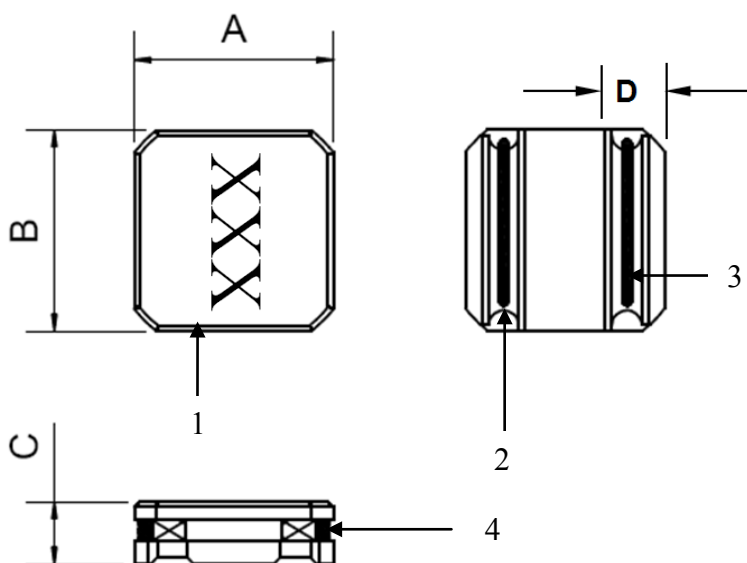
6.0 x 6.0 x 4.5mm

ASPI-0645



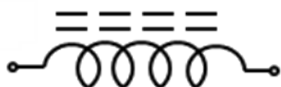
**RoHS**  
Compliant

## OUTLINE DRAWING:



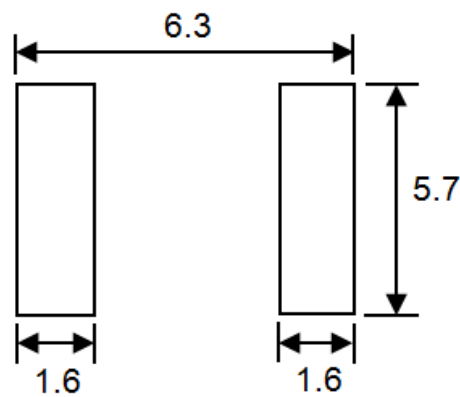
A	B	C Max.	D Typ.
6.0±0.2	6.0±0.2	4.5	1.50

### Circuit Schematic



No Polarity

### Recommended Land Pattern



Dimension: mm

### Materials

No	Part Name	Material
1	Ferrite core	Ni-Zn Ferrite
2	Terminals	Ag/Ni/Sn
3	Coil	Cu/P180 Grd 1
4	Adhesive	Silicon Base Resin
	Magnetic Powder	Ni-Zn Ferrite



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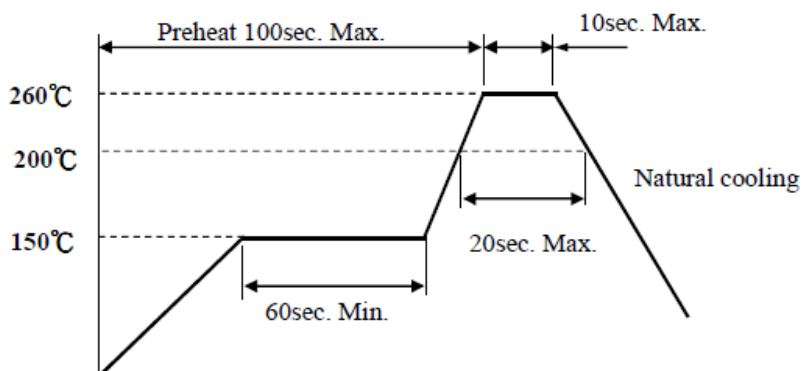
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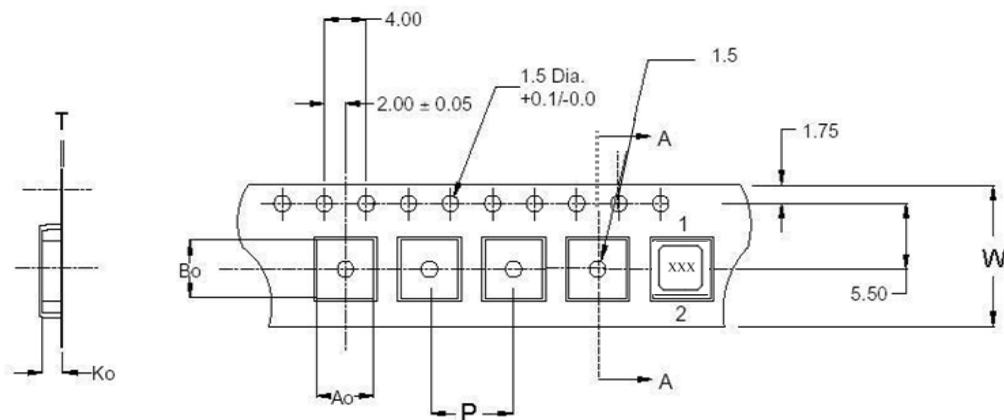


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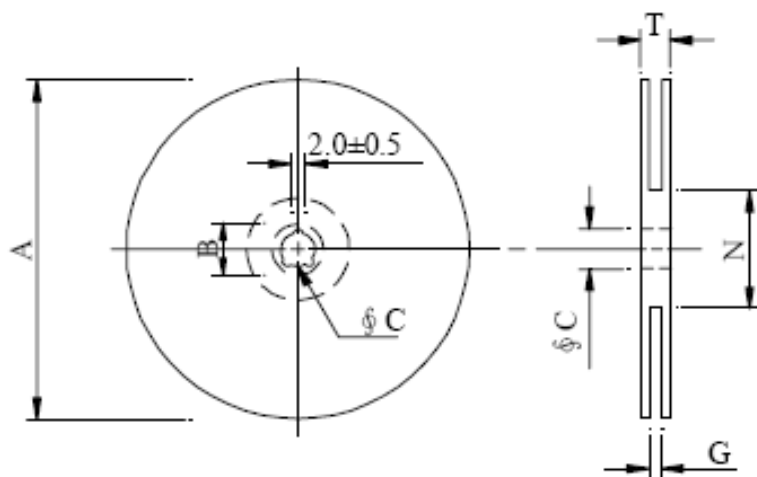
## REFLOW PROFILE:



## TAPE & REEL: T1: 1,000pcs / reel



Ao	6.40
Bo	6.40
Ko	4.70
W	16.00
P	12.00
T	0.40

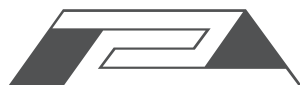


A	330
B	21.0±0.8
C	13.5±0.5
G	16.6
N	99.5
T	21

Dimension: mm

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