

# ULTRA MINIATURE SHIELDED POWER INDUCTOR

ASPI-0316S



RoHS  
Compliant



3.2 x 3.2 x 1.5mm

## FEATURES:

- Small size and low profile: 1.5mm
- 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-0316S
Operating Temperature & Humidity :	-25°C to +100°C (Including self generated heat)
Storage Temperature & Humidity:	-10°C to +40°C, 30% to 70% RH

Part Number	Inductance	Tolerance	DCR Max	DCR Typ	Saturation Current	Temperature Rise Current
Units	μH	%	mΩ	mΩ	A	A
Symbol	L	M, N			Isat*	Irms*
ASPI-0316S-1R0	1.0	N	70	60	1.90	1.90
ASPI-0316S-1R5	1.5	N	88	70	1.50	1.60
ASPI-0316S-1R8	1.8	N	97	77	1.30	1.50
ASPI-0316S-2R2	2.2	N	111	89	1.20	1.30
ASPI-0316S-2R7	2.7	N	123	98	1.20	1.26
ASPI-0316S-3R3	3.3	N	138	110	1.20	1.12
ASPI-0316S-3R9	3.9	N	145	116	1.00	1.09
ASPI-0316S-4R7	4.7	N	199	159	0.95	0.95
ASPI-0316S-5R6	5.6	N	217	174	0.85	0.91
ASPI-0316S-6R8	6.8	N	284	227	0.75	0.79
ASPI-0316S-8R2	8.2	N	304	243	0.75	0.74
ASPI-0316S-100	10	M	391	313	0.60	0.65
ASPI-0316S-120	12	M	448	359	0.55	0.55
ASPI-0316S-220	22	M	773	619	0.45	0.48
ASPI-0316S-330	33	M	1283	1027	0.35	0.29

### 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 ( $\Delta L/L_0 : \leq -35\%$ )
4. Irms : Based on temperature rise ( $\Delta T : 40^\circ\text{C TYP.}$ )
5. Test Freq: 100KHz, 1Vrms

## OPTIONS AND PART IDENTIFICATION

ASPI-0316S-   -

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

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

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

\*N for L = 1.0~8.2μH

\*M for L = 10 ~ 33μH



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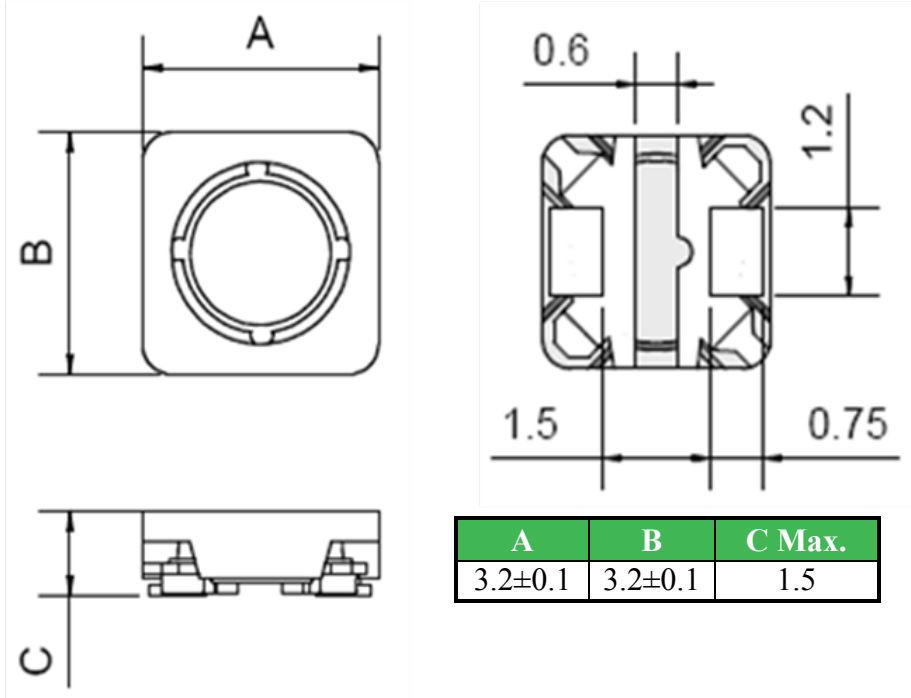
**RoHS**  
Compliant



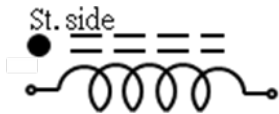
3.2 x 3.2 x 1.5mm

## OUTLINE DRAWING:

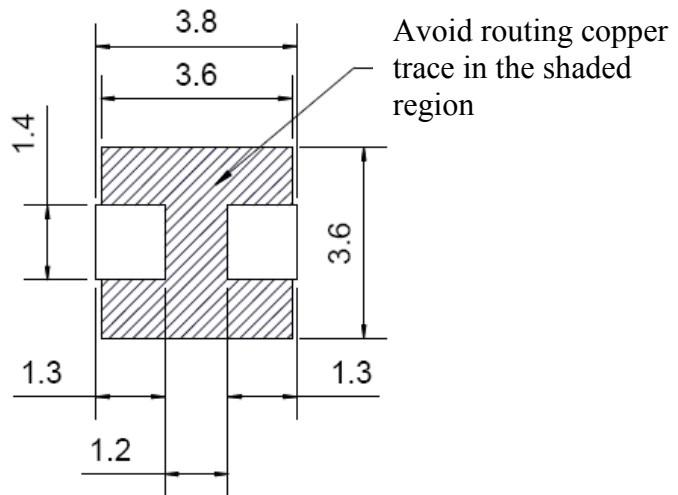
### Mechanical Dimensions



### Circuit Schematic



### Recommended Land Pattern



Dimension: mm

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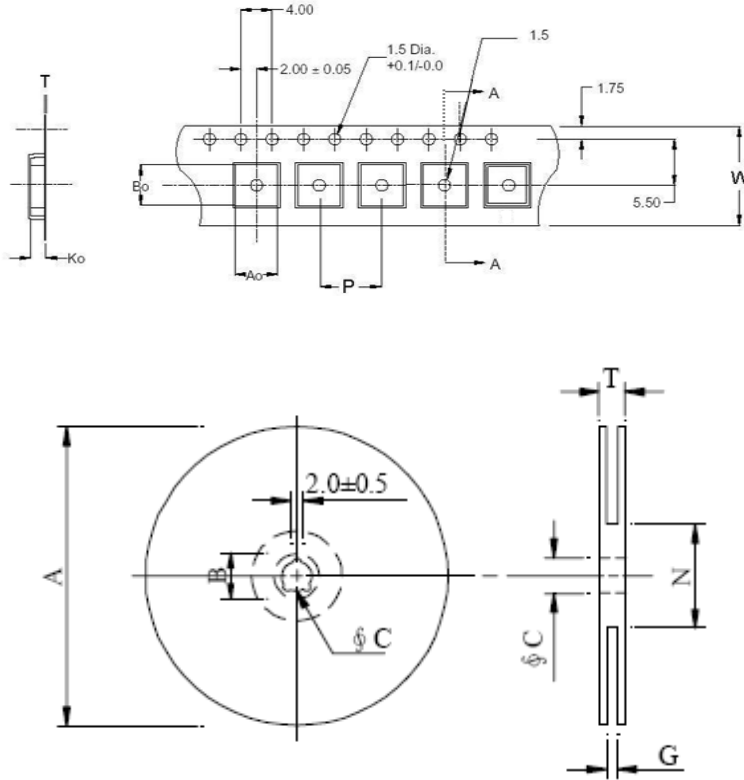
RoHS  
Compliant



3.2 x 3.2 x 1.5mm

## TAPE & REEL:

T3: 3,000pcs / reel

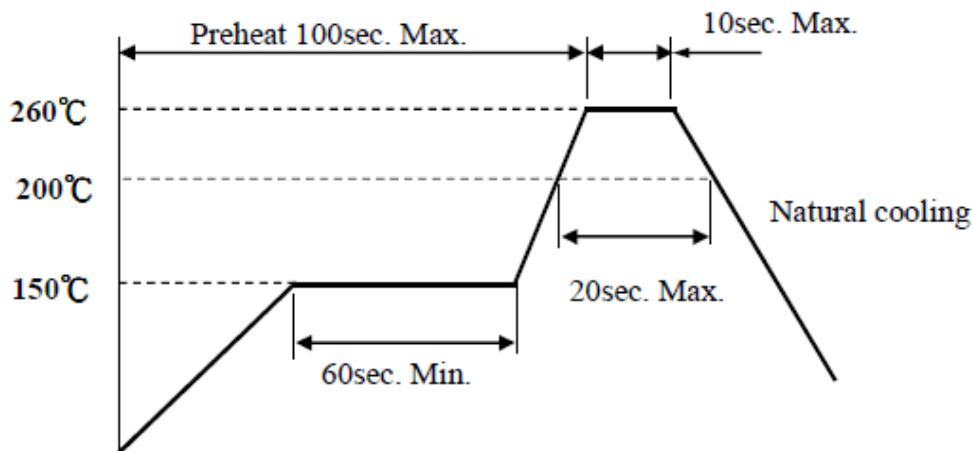


Ao	3.6
Bo	3.3
Ko	1.35
W	12
P	8
T	0.3

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:



**ATTENTION:** Abracon Corporation's products are COTS – Commercial-Off-The-Shelf products; suitable for Commercial, Industrial and, where designated, Automotive Applications. Abracon's products are not specifically designed for Military, Aviation, Aerospace, Life-dependant Medical applications or any application requiring high reliability where component failure could result in loss of life and/or property. For applications requiring high reliability and/or presenting an extreme operating environment, written consent and authorization from Abracon Corporation is required. Please contact Abracon Corporation for more information.

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