

# ULTRA LOW PROFILE SHIELDED SMD CHIP POWER INDUCTOR

ASPI-0310FS



**RoHS**  
Compliant



3.0 x 3.0 x 1.0mm

## 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:

Abracon P/N:	ASPI-0310FS Series
Operating Temperature & Humidity:	-30°C to +100°C, 5% to 85% RH. Please avoid moisture due to the humidity.
Storage Temperature & Humidity:	-20°C to +60°C, 5% to 85% RH. Please avoid moisture due to the humidity.

Part Number	Inductance	DCR	Saturation Current	Temperature Rise Current	Marking
Units	$\mu\text{H}\pm 20\%$	$\text{m}\Omega\pm 20\%$	A	A	—
Symbol	L	DCR	$I_{\text{sat}}^*$	$I_{\text{rms}}^*$	—
ASPI-0310FS-1R0N*	1.0 ( $\pm 25\%$ )	50 ( $\pm 25\%$ )	1.55	1.55	1R0
ASPI-0310FS-2R2M	2.2	95	1.10	1.10	2R2
ASPI-0310FS-3R3M	3.3	140	0.90	0.95	3R3
ASPI-0310FS-4R7M	4.7	190	0.77	0.90	4R7
ASPI-0310FS-6R8M	6.8	300	0.63	0.70	6R8
ASPI-0310FS-100M	10.0	450	0.54	0.67	100
ASPI-0310FS-150M	15.0	650	0.43	0.50	150
ASPI-0310FS-220M	22.0	1030	0.35	0.40	220
ASPI-0310FS-330M	33.0	1100	0.26	0.35	330
ASPI-0310FS-470M	47.0	1800	0.23	0.25	470

\* The tolerance of L and DCR for 1R0 is  $\pm 25\%$ .

\*\*The rated current is subject to change depending upon the temperature cooling condition.

### Test Conditions

Inductance: 100kHz, 0.3V,  $T_a = 20^\circ\text{C}$

DCR:  $T_a = 20^\circ\text{C}$

$I_{\text{sat}}$ :  $\Delta L/L$  (initial)  $\geq -30\%$

$I_{\text{rms}}$ :  $\Delta T \leq 40^\circ\text{C}$

## OPTIONS AND PART IDENTIFICATION

ASPI-0310FS-  -

### Inductance Code

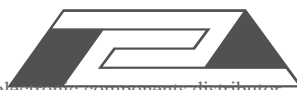
Please refer to the table above

### Packaging

T: Tape and Reel  
(1kpcs / reel)

T4: Tape and Reel  
(4kpcs / reel)

ABRACON IS  
ISO9001:2008  
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CORPORATION

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30332 Esperanza, Rancho Santa Margarita, California 92688

tel 949-546-8000 | fax 949-546-8001 | [www.abracon.com](http://www.abracon.com)

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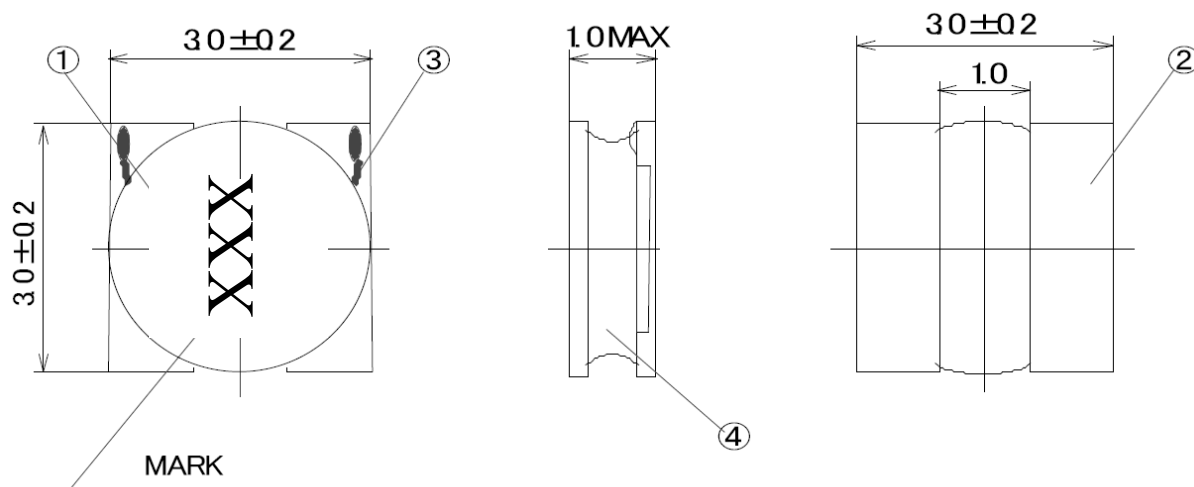
ASPI-0310FS



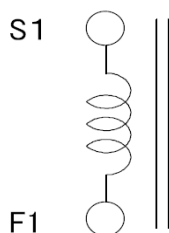
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## OUTLINE DRAWING:

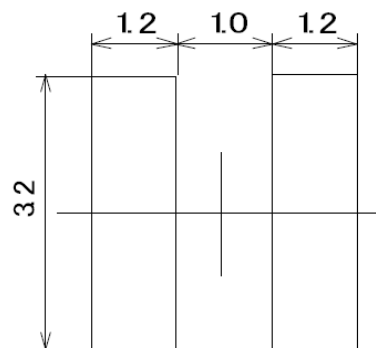
### Mechanical Dimensions



### Circuit Schematic



### Recommended Land Pattern



No	Part Name	Material
1	Drum core	Ni-Zn Ferrite
2	Terminals	Copper alloy, Sn
3	Coil	Cu/UEW
4	Adhesive	Epoxy base resin
	Magnetic powder	Ni-Zn Ferrite

Dimension: mm

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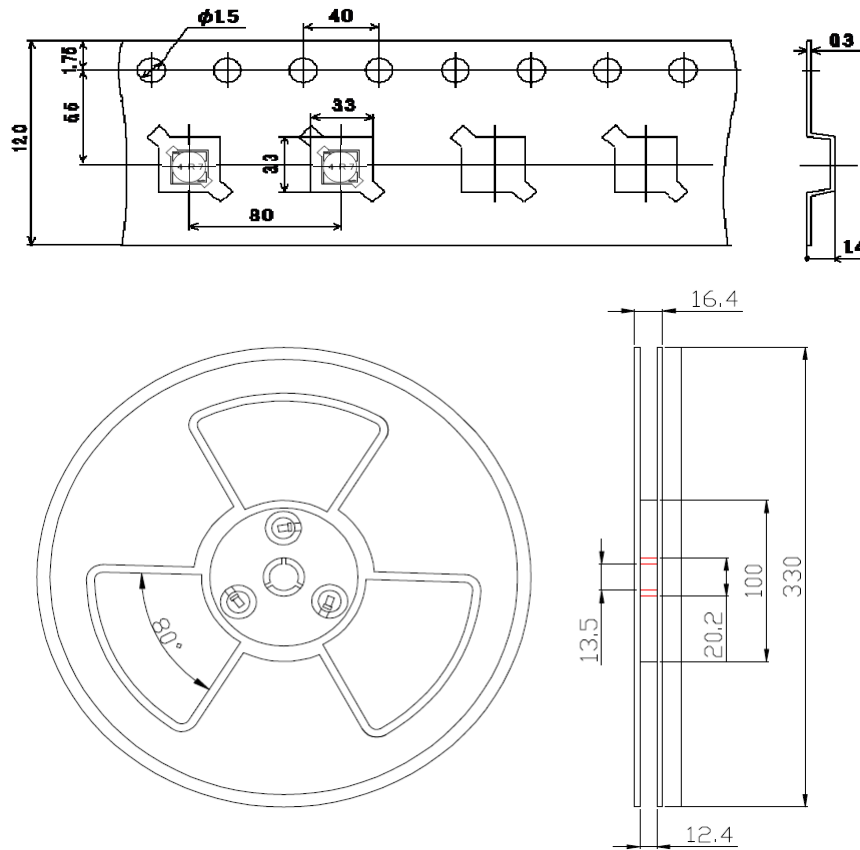
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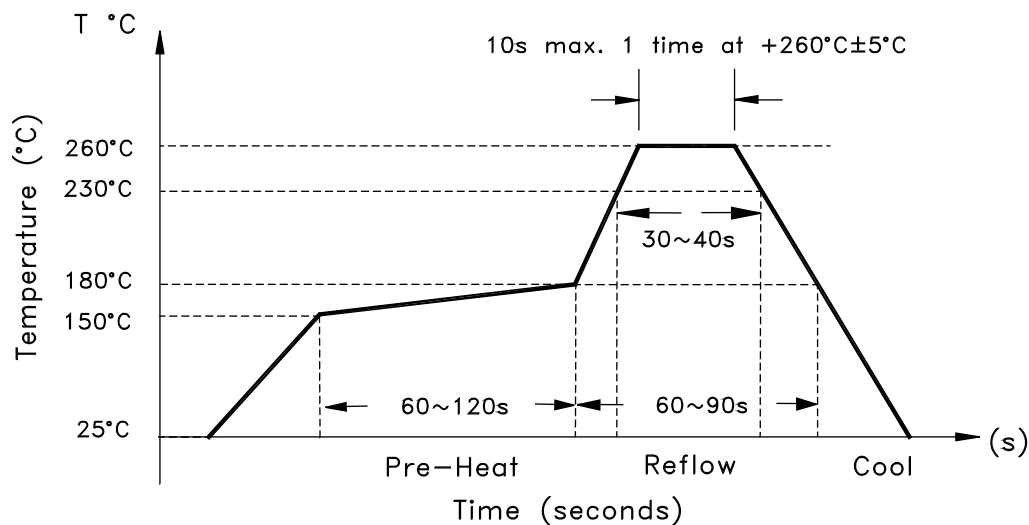
## TAPE & REEL:

T: 1,000pcs / reel  
T4: 4,000pcs / reel



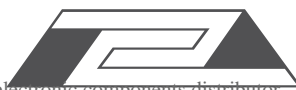
Dimension: mm

## REFLOW PROFILE:



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