

# HIGH CURRENT SHIELDED POWER INDUCTOR



7.3 x 6.8 x 3.0 mm

ASPI-7318

MSL Level:1

\*Not recommended for D.I. water wash



RoHS  
Compliant

## FEATURES:

- 100%lead (Pb) free.
- Lowest DCR/uH, in this package size.
- Frequency range up to 5.0MHz
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction.

## APPLICATIONS:

- Notebook/Desktop/Server applications.
- Low profile, high current power supplies.
- Battery powered devices.
- DC/DC converter for Field Programmable Gate Array(FPGA)

## ELECTRICAL SPECIFICATIONS:

Abrakon P/N:	ASPI-7318-xxx
Operating Temperature :	-55°C to +125°C
Storage Temperature	Less than +25°C, Humidity<75% RH.

Part Number ASPI-7318- Inductance Code	L (μH)	Tolerance (M, N)	R <sub>DC</sub> Max	I <sub>sat</sub> Typ (A)	I <sub>rms</sub> Typ (A)
			mΩ		
ASPI-7318-R10	0.10	N	1.7	60	32.5
ASPI-7318-R15	0.15	N	1.9	45	27
ASPI-7318-R20	0.20	N	2.5	41	24
ASPI-7318-R22	0.22	N	2.8	40	23
ASPI-7318-R33	0.33	M	3.9	32	20
ASPI-7318-R47	0.47	M	4.0	26	17.5
ASPI-7318-R56	0.56	M	5.0	25.5	16.0
ASPI-7318-R68	0.68	M	5.5	25	15.5
ASPI-7318-R82	0.82	M	8.0	24	13.0
ASPI-7318-1R0	1.0	M	10.0	22	11.0
ASPI-7318-1R5	1.5	M	15	18	9.0
ASPI-7318-2R2	2.2	M	20	14	8.0
ASPI-7318-2R5	2.5	M	22	13	7.0
ASPI-7318-3R3	3.3	M	30	13.5	6.0
ASPI-7318-4R7	4.7	M	40	10	5.5
ASPI-7318-5R6	5.6	M	48	9.0	5.0
ASPI-7318-6R8	6.8	M	60	8	4.5
ASPI-7318-8R2	8.2	M	68	7.5	4.0
ASPI-7318-100	10.0	M	85	6.0	3.5
ASPI-7318-220	22.0	M	190	3.5	2.0

## Test Conditions

1. Inductance tested at 200kHz, 0.25V, 0A; Tolerance M=±20%; N=±30%
2. All test data is in reference to 25°C ambient.
3. Isat will cause the inductance value to drop approximately 20%
4. Irms will cause an approximate ΔT of 40°C
5. The part temperature (ambient + temp. rise) should not exceed 125°C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Please contact Abracon for the availability of other inductance values.

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## ➤ OPTIONS AND PART IDENTIFICATION:

ASPI-7318-  -

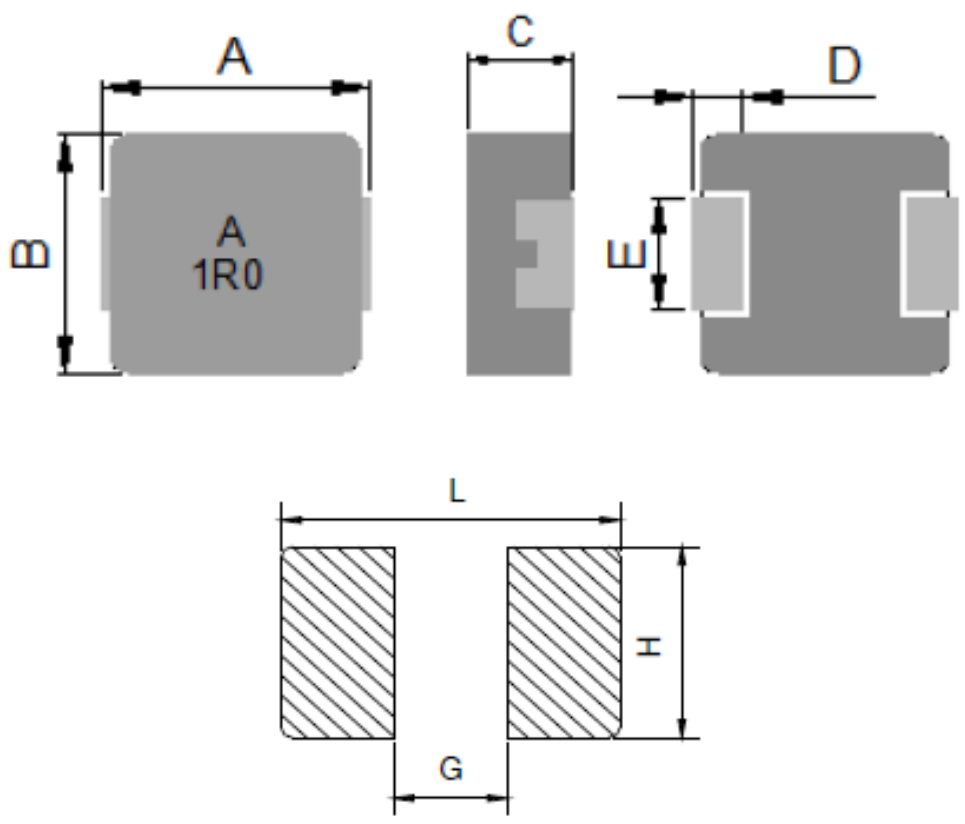
**Inductance Code**  
Please refer to the Electrical Spec Table

**Tolerance**  
M: ±20% \*  
N: ±30% \*

**Packaging**  
T: Tape and Reel  
(1,000pcs / reel)

\*N for L = 0.1 ~ 0.22μH  
\*M for L = 0.33 ~ 22μH

## ➤ OUTLINE DRAWING:



A	B	C	D	E	L	G	H
7.3 ± 0.3	6.6 ± 0.3	2.8 ± 0.2	1.8 ± 0.3	3.0 ± 0.3	8.4 ref.	2.5 ref.	3.5 ref.

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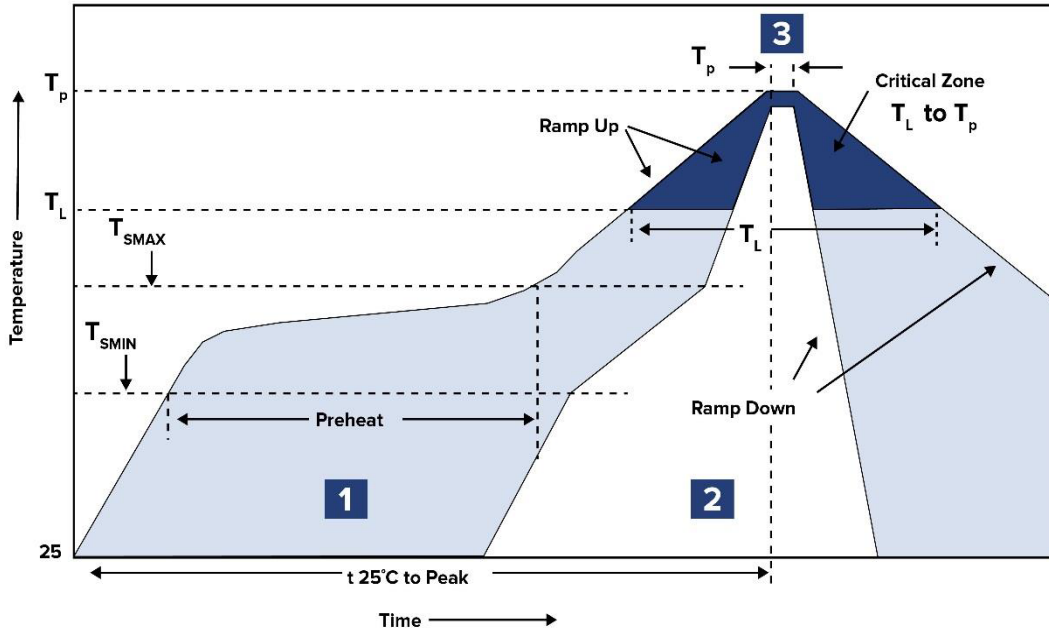


RoHS  
Compliant



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## REFLOW PROFILE:



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	$T_L$ 217°C	60 ~ 150 sec.
3	Peak heat	$T_P$ 260°C±5°C	10 sec. MAX

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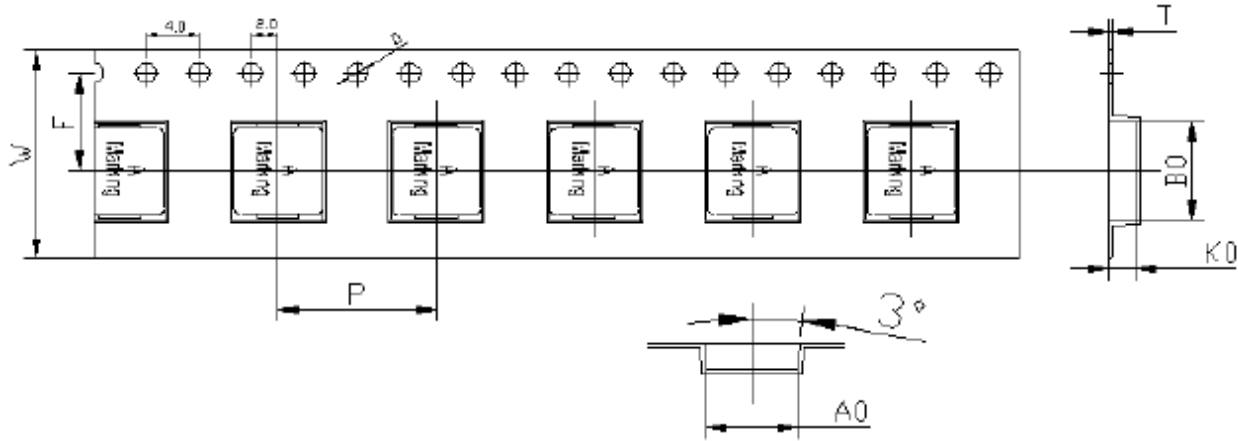


## TAPE AND REEL:

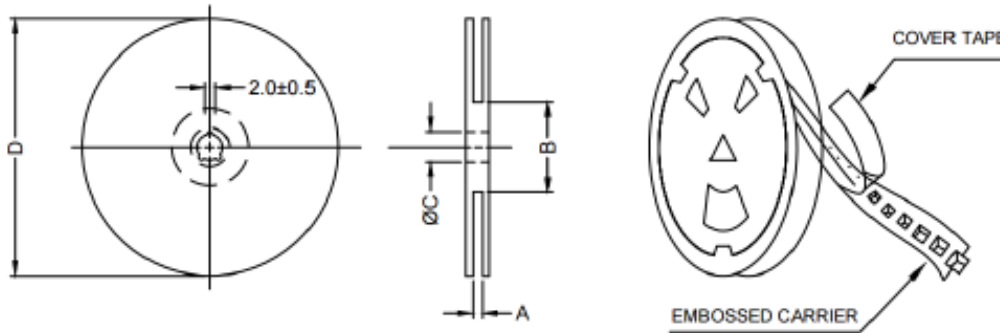
T= tape and reel (1,000pcs/reel)

Inner Box: 2,000 pcs

Carton: 8,000 pcs



A <sub>0</sub>	B <sub>0</sub>	K <sub>0</sub>	F	W	P	t	D
7.0±0.1	7.7±0.1	3.3±0.1	7.5±0.1	16±0.3	12±0.1	0.35±0.05	1.5±0.1



Type	A	B	C	D
13" x 16mm	16.4+2/-0	100±2	13+0.5/-0.2	330

Dimension: mm

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