

# HIGH CURRENT SHIELDED POWER INDUCTOR

ASPI-7318

MSL Level:1



RoHS  
Compliant



7.3 x 6.8 x 3.0 mm

## 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:

Abracon 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	50	30
ASPI-7318-R15	0.15	N	2.5	45	26
ASPI-7318-R20	0.20	N	3.0	41	24
ASPI-7318-R22	0.22	N	3.1	34	22
ASPI-7318-R33	0.33	M	3.9	28	20
ASPI-7318-R47	0.47	M	4.2	24	17.5
ASPI-7318-R56	0.56	M	5.3	23	15.5
ASPI-7318-R68	0.68	M	5.5	22	15.5
ASPI-7318-R82	0.82	M	8.0	19	13
ASPI-7318-1R0	1.0	M	10.0	17	11
ASPI-7318-1R5	1.5	M	15	15	9
ASPI-7318-2R2	2.2	M	20	12	8
ASPI-7318-2R5	2.5	M	22	11	8
ASPI-7318-3R3	3.3	M	30	10	6
ASPI-7318-4R7	4.7	M	40	8	5
ASPI-7318-5R6	5.6	M	54	7.5	5
ASPI-7318-6R8	6.8	M	60	7	4.5
ASPI-7318-8R2	8.2	M	68	6	4
ASPI-7318-100	10.0	M	105	5.5	3
ASPI-7318-220	22.0	M	230	3	2

## 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:  $\pm 20\%$  \*

N:  $\pm 30\%$  \*

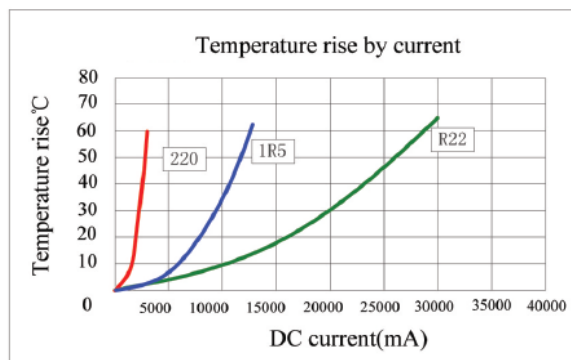
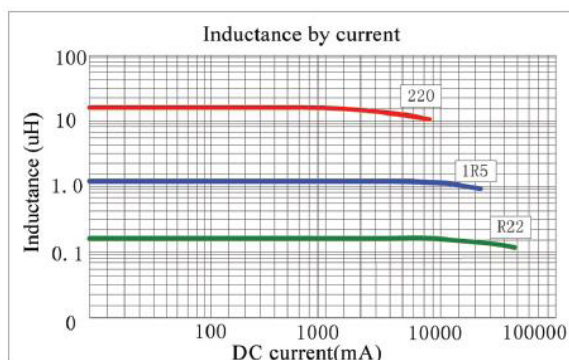
### Packaging

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

\*N for L = 0.1 ~ 0.22 $\mu$ H

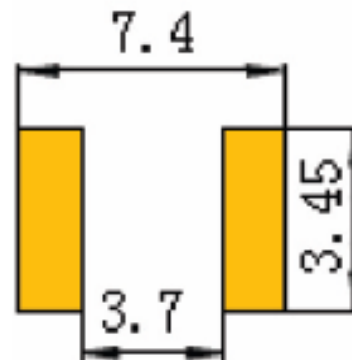
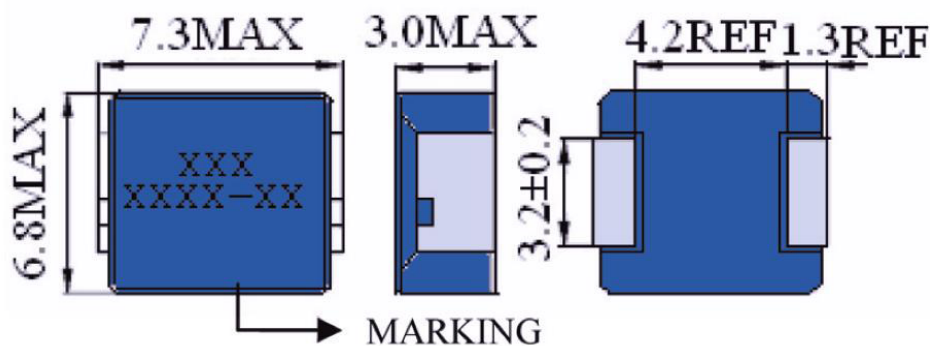
\*M for L = 0.33 ~ 22 $\mu$ H

## ➤ INDUCTANCE AND TEMPERATURE CURVE



## ➤ OUTLINE DRAWING:

### Recommended Land Pattern



Dimension: mm



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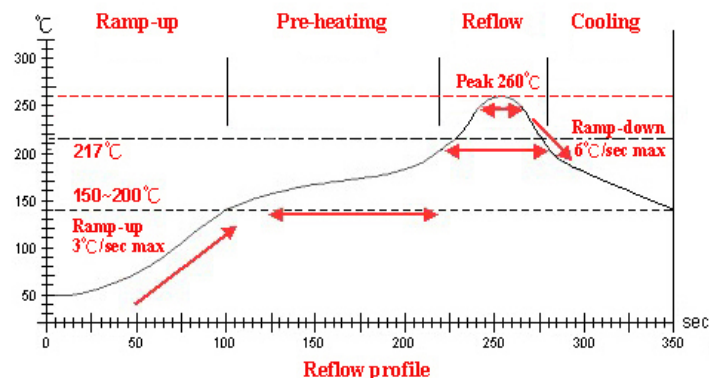


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7.3 x 6.8 x 3.0 mm

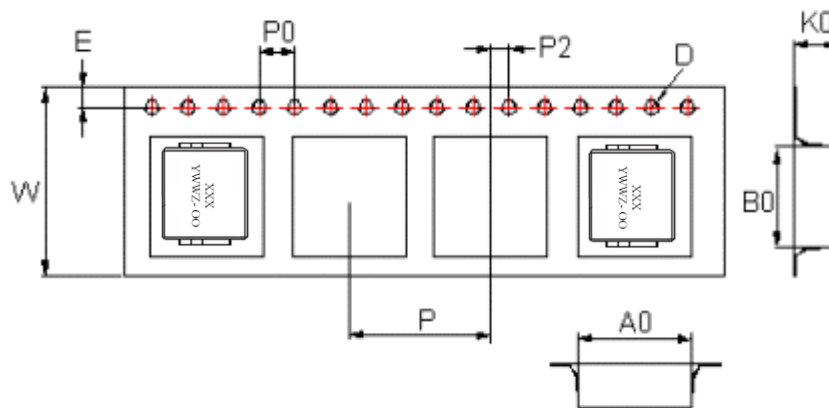
## REFLOW PROFILE:



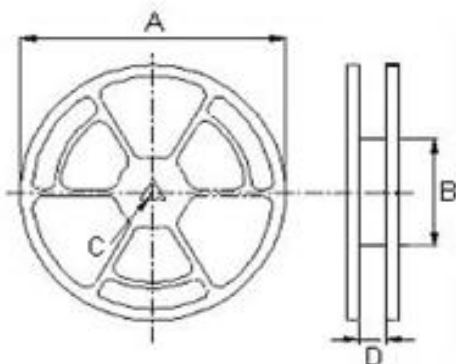
Item	Ramp-up	Pre-heating	Reflow	Peak Temp	Cooling
Temperature Scope	R.T ~ 150°C	150°C ~ 200°C	217°C	260±5°C	Peak Temperature ~ 150°C
Time spec.	-	60 ~ 180 sec	60 ~ 150 sec	20 ~ 40 sec	-

## TAPE & REEL:

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



A <sub>0</sub>	B <sub>0</sub>	K <sub>0</sub>	D	E	W	P	P <sub>0</sub>	P <sub>2</sub>
6.9 ref.	7.6 ref.	3.4 ref.	1.5 ref.	1.75 ref.	16 ref.	12 ref.	4 ref.	2 ref.



A	B	C	D
330	100 ref.	13 ref.	16 ref.

Dimension: mm

**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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