

# ASPI-7318-1R0M-T Datasheet

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DiGi Electronics Part Number	ASPI-7318-1R0M-T-DG
Manufacturer	<a href="#">Abracon LLC</a>
Manufacturer Product Number	ASPI-7318-1R0M-T
Description	FIXED IND 1UH 11A 10 MOHM SMD
Detailed Description	1 $\mu$ H Shielded Drum Core, Wirewound Inductor 11 A 10mOhm Max Nonstandard



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## Purchase and inquiry

Manufacturer Product Number:

ASPI-7318-1R0M-T

Series:

ASPI-7318

Type:

Drum Core, Wirewound

Inductance:

1  $\mu$ H

Current Rating (Amps):

11 A

Shielding:

Shielded

Q @ Freq:

-

Ratings:

-

Inductance Frequency - Test:

200 kHz

Package / Case:

Nonstandard

Size / Dimension:

0.287" L x 0.268" W (7.30mm x 6.80mm)

Manufacturer:

Abracon LLC

Product Status:

Active

Material - Core:

Ferrite

Tolerance:

$\pm$ 20%

Current - Saturation (Isat):

17A

DC Resistance (DCR):

10mOhm Max

Frequency - Self Resonant:

-

Operating Temperature:

-55°C ~ 125°C

Mounting Type:

Surface Mount

Supplier Device Package:

-

Height - Seated (Max):

0.118" (3.00mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.4000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

# HIGH CURRENT SHIELDED POWER INDUCTOR

ASPI-7318

MSL Level:1

\*Not recommended for D.I. water wash

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	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.

# HIGH CURRENT SHIELDED POWER INDUCTOR



7.3 x 6.8 x 3.0 mm

ASPI-7318



RoHS  
Compliant

## ➤ OPTIONS AND PART IDENTIFICATION:

ASPI-7318-  -

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

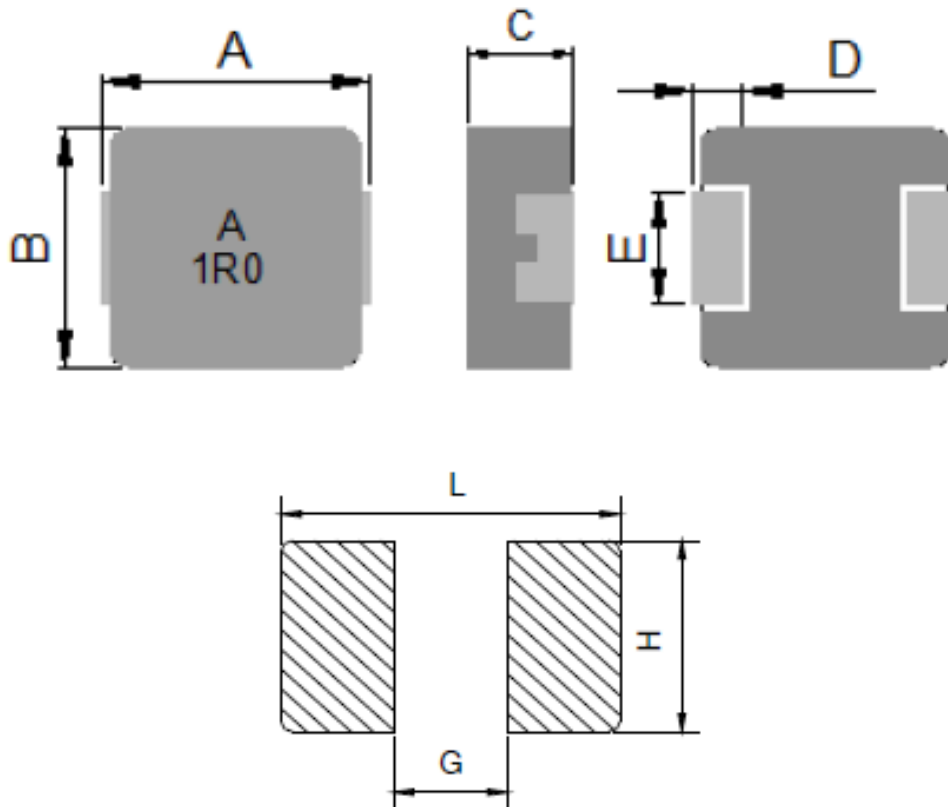
**Tolerance**  
M: ±20% \*  
N: ±30% \*

**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.

# HIGH CURRENT SHIELDED POWER INDUCTOR

ASPI-7318

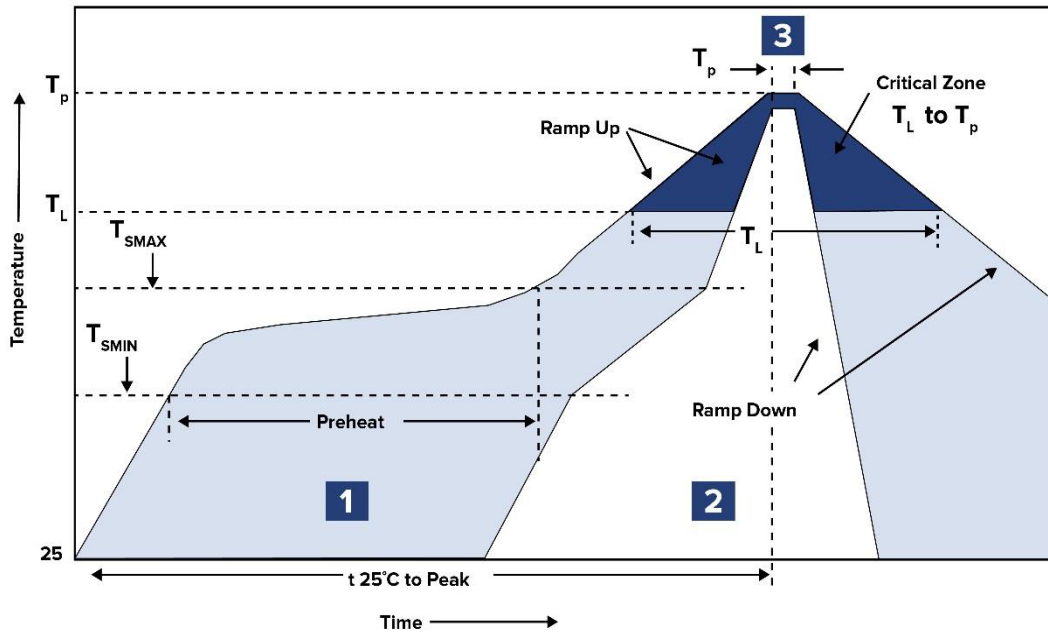


RoHS  
Compliant



7.3 x 6.8 x 3.0 mm

## 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

# HIGH CURRENT SHIELDED POWER INDUCTOR



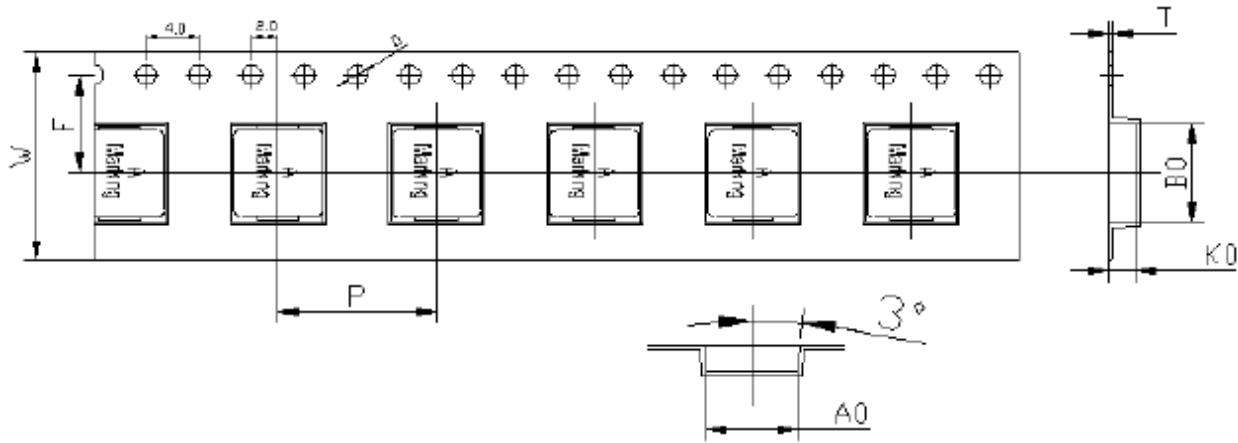
7.3 x 6.8 x 3.0 mm

**ASPI-7318**

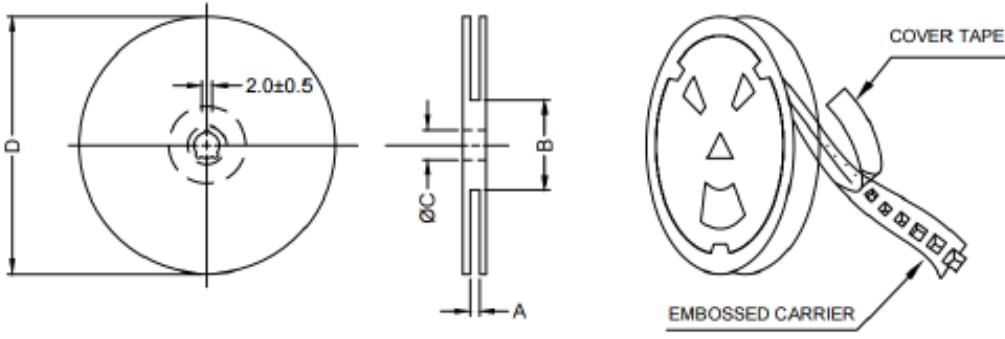


▷ **TAPE AND REEL:**

**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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