

# ASPI-1040HI-R16M-T05 Datasheet

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DiGi Electronics Part Number	ASPI-1040HI-R16M-T05-DG
Manufacturer	<a href="#">Abracon LLC</a>
Manufacturer Product Number	ASPI-1040HI-R16M-T05
Description	FIXED IND 160NH 40A 0.65MOHM SMD
Detailed Description	160 nH Unshielded Molded Inductor 40 A 0.65mOhm Max Nonstandard



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## Purchase and inquiry

Manufacturer Product Number:

ASPI-1040HI-R16M-T05

Series:

ASPI-1040HI

Type:

Molded

Inductance:

160 nH

Current Rating (Amps):

40 A

Shielding:

Unshielded

Q @ Freq:

-

Ratings:

-

Inductance Frequency - Test:

100 kHz

Package / Case:

Nonstandard

Size / Dimension:

0.439" L x 0.394" W (11.15mm x 10.00mm)

Manufacturer:

Abracon LLC

Product Status:

Obsolete

Material - Core:

Ferrite

Tolerance:

±20%

Current - Saturation (Isat):

75A

DC Resistance (DCR):

0.65mOhm Max

Frequency - Self Resonant:

-

Operating Temperature:

-55°C ~ 125°C

Mounting Type:

Surface Mount

Supplier Device Package:

-

Height - Seated (Max):

0.167" (4.25mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.8000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99

# Molding Type Power Inductor

ASPI-1040HI


**RoHS**  
Compliant


11.5 x 10.0 x 4.0 mm

## FEATURES:

- High saturation current.
- Low loss due to low DC resistance.
- Frequency application up to 3MHz.
- Low profile with max thickness 4.0mm.
- 100% lead free and meet RoHS standard.
- Suitable for reflow soldering.
- High reliable SMD package

## APPLICATIONS:

- DC/DC converters in Notebook, Netbook, desktop and server
- Low profile, high current power supplies.

## STANDARD SPECIFICATIONS

Abracon P/N:	ASPI-1040HI Series
Operating Temperature & Humidity:	-55°C to +125°C (Including self generated heat)
Storage Temperature & Humidity:	<35°C, 35% to 65% RH

Part Number	Inductance	Tolerance	DCR Max	Saturation Current	Temperature Rise Current
Units	μH	%	mΩ	A	A
Symbol	L	M		Isat	Irms
ASPI-1040HI-R22	0.22	M	1.0	60	35
ASPI-1040HI-R30	0.3	M	1.1	45	35
ASPI-1040HI-R36	0.36	M	1.2	45	30
ASPI-1040HI-R47	0.47	M	1.7	40	30
ASPI-1040HI-R56	0.56	M	1.8	33	25
ASPI-1040HI-R68	0.68	M	2.4	30	23
ASPI-1040HI-R80	0.8	M	2.7	29	23
ASPI-1040HI-1R0	1	M	3.3	28	19
ASPI-1040HI-1R5	1.5	M	4.2	24	16
ASPI-1040HI-2R2	2.2	M	7.0	16.5	12
ASPI-1040HI-3R3	3.3	M	11.8	16	11
ASPI-1040HI-4R7	4.7	M	20	13	9
ASPI-1040HI-6R8	6.8	M	25	12	8.5
ASPI-1040HI-8R2	8.2	M	27	9	8
ASPI-1040HI-100	10	M	30	8.5	7.8
ASPI-1040HI-150	15	M	45	7	6.5
ASPI-1040HI-220	22	M	66	5.5	5
ASPI-1040HI-330	33	M	92	5	4.4
ASPI-1040HI-470	47	M	145	3.5	3.3
ASPI-1040HI-680	68	M	195	3	2.5

## Test Conditions

100KHz, 1V

Isat: Based on inductance change ( $\Delta L/L_0 : \leq -30\%$ )Irms: Based on temperature rise ( $\Delta T : 40^\circ\text{C TYP.}$ )

Max Voltage: 30VDC

# Molding Type Power Inductor



11.5 x 10.0 x 4.0 mm

ASPI-1040HI



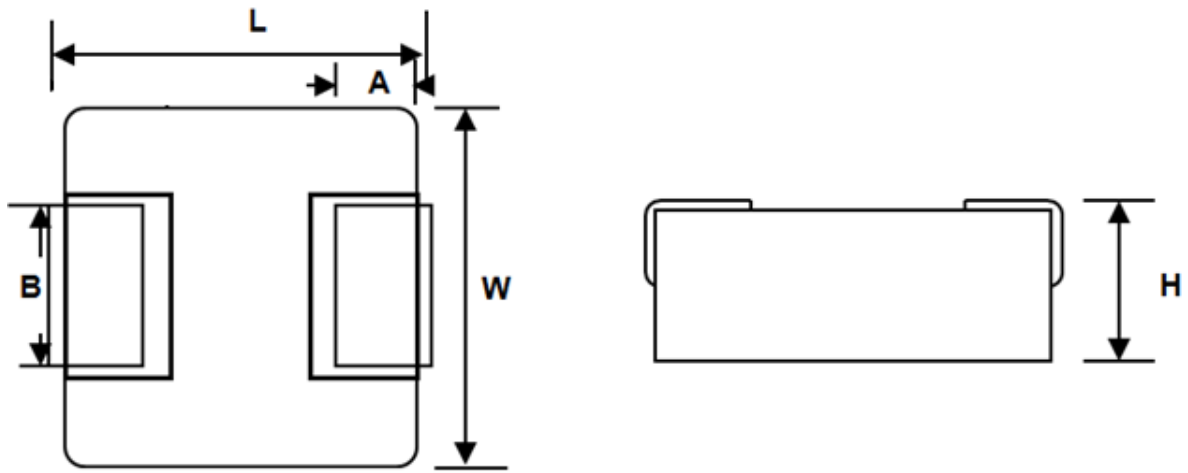
**RoHS**  
Compliant

## PART NUMBER IDENTIFICATION

ASPI-1040HI- [ ] [ ] - [ ]

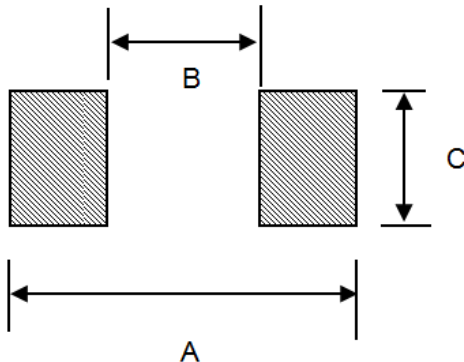
<b>Inductance Code</b>	<b>Tolerance</b>	<b>Packaging</b>
Please refer to the Electrical Spec Table	M: ±20%	T05: Tape and Reel (500pcs / reel)

## OUTLINE DRAWING:



A	B	L	W	H
2.0 ±0.5	3.0 ±0.5	11.5 max	10 ±0.3	4 max

### Recommended Land Pattern



A	B	C
13.6	5.4	4.1

Dimension: mm

# Molding Type Power Inductor

ASPI-1040HI-R16M-T05 Abracon LLC FIXED IND 160NH 40A 0.65MOHM SMD

ASPI-1040HI

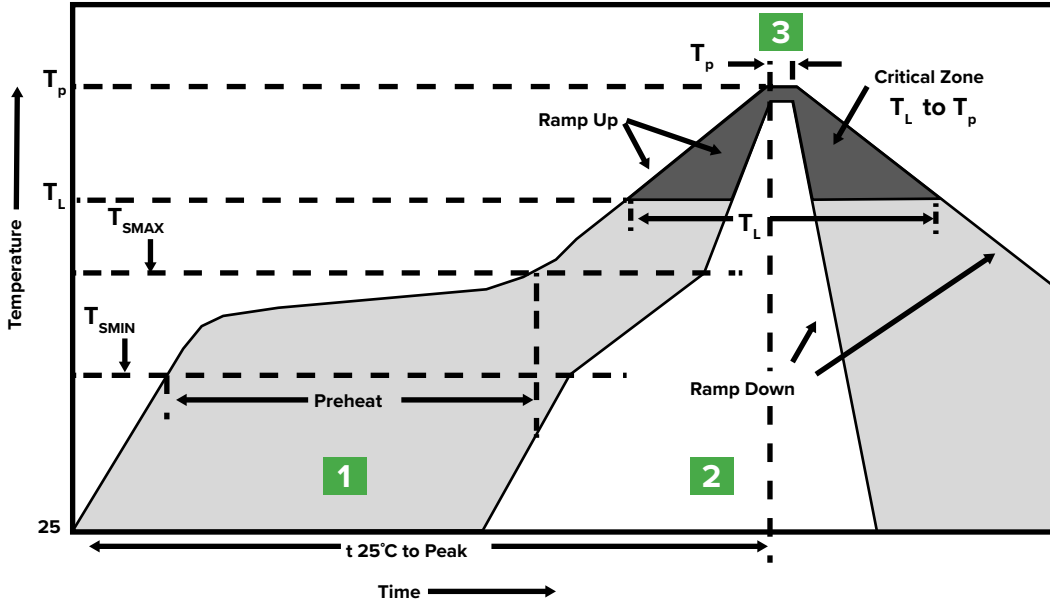


RoHS  
Compliant



11.5 x 10.0 x 4.0 mm

## REFLOW PROFILE



Zone	Description	Temperature	Time
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 180°C	60 ~ 120 sec.
2	Reflow	$T_L$ 230°C	40 sec.
3	Peak heat	$T_P$ 250°C±5°C	10 sec. MAX

# Molding Type Power Inductor

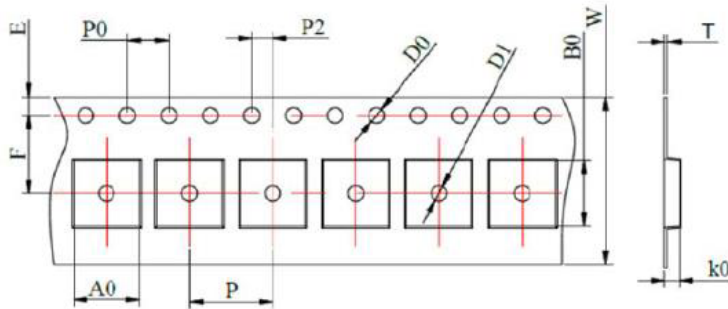
ASPI-1040HI


**RoHS**  
Compliant

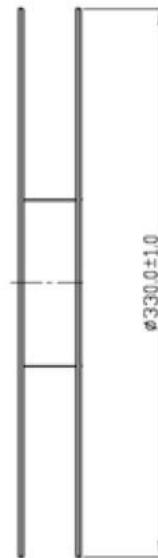
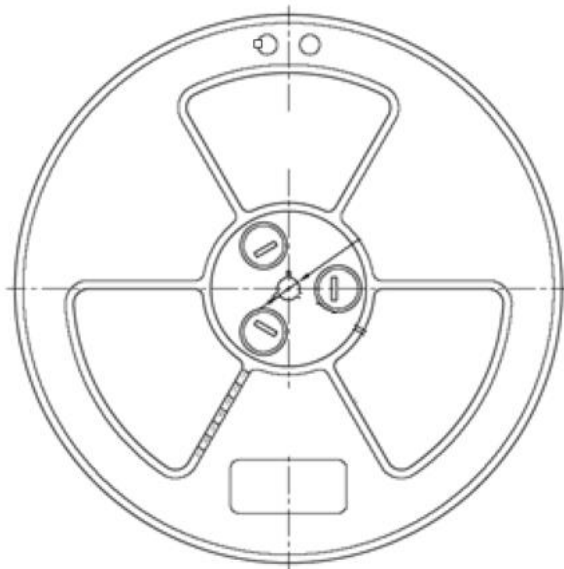

11.5 x 10.0 x 4.0 mm

## TAPE & REEL:

**T05:** 500 pcs/reel  
**Carton:** 4000 pcs/carton



<b>W</b>	<b>24 ± 0.3</b>
<b>P</b>	<b>16 ± 0.1</b>
<b>P0</b>	<b>4 ± 0.1</b>
<b>P2</b>	<b>2 ± 0.05</b>
<b>D0</b>	<b>1.5 ± 0.1</b>
<b>D1</b>	<b>1.5 ± 0.1</b>
<b>T</b>	<b>0.35 ± 0.05</b>
<b>A0</b>	<b>10.4 ± 0.1</b>
<b>B0</b>	<b>11.5 ± 0.1</b>
<b>K0</b>	<b>4.3 ± 0.1</b>
<b>E</b>	<b>1.75 ± 0.1</b>
<b>F</b>	<b>11.5 ± 0.1</b>


**Dimension: mm**

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