

# SMD SHIELDED POWER INDUCTOR



ASPI-6045S

6.0 x 6.0 x 4.5mm

ASPI-6045S



**RoHS**  
Compliant

## FEATURES:

- Shielded magnetics, low radiation
- Large Terminal surface for good PCB bonding
- Low DCR, High Energy storage, suitable for large currents
- Ideal for a variety of DC-DC converter inductor applications

## APPLICATIONS:

- Portable communication equipment
- OA equipment
- LCD, DVD, modem, set-top box
- DC/DC converters

## ELECTRICAL SPECIFICATIONS:

Abracon P/N:	ASPI-6045S Series
Operating Temperature:	-25°C to +120°C
Storage Temperature:	-10°C to +40°C and 70% R.H.

Part Number	Inductance	L Tolerance	Inductance Test Condition	DC Resistance (±30%)	Current	Temperature Rise Current	Min. Self-resonant frequency	Marking
Units	µH	—	—	Ω	A	A	MHz	—
Symbol	L	—	—	DCR	Isat	Irms	SRF	—
ASPI-6045S-R82N	0.82	N	100KHz,1V	0.008	10.35	5.90	140	R82
ASPI-6045S-1R2N	1.2	N	100KHz,1V	0.010	8.35	5.40	100	1R2
ASPI-6045S-1R8N	1.8	N	100KHz,1V	0.012	7.60	4.95	74	1R8
ASPI-6045S-2R2N	2.2	N	100KHz,1V	0.014	6.75	4.60	52	2R2
ASPI-6045S-2R7N	2.7	N	100KHz,1V	0.015	5.75	4.30	38	2R7
ASPI-6045S-3R6N	3.6	N	100KHz,1V	0.021	5.25	3.70	28	3R6
ASPI-6045S-4R3N	4.3	N	100KHz,1V	0.023	4.45	3.50	23	4R3
ASPI-6045S-5R1N	5.1	N	100KHz,1V	0.026	4.40	3.30	23	5R1
ASPI-6045S-5R6M	5.6	M	100KHz,1V	0.029	4.15	3.15	23	5R6
ASPI-6045S-6R8M	6.8	M	100KHz,1V	0.031	3.90	3.00	20	6R8
ASPI-6045S-7R5M	7.5	M	100KHz,1V	0.034	3.50	2.90	18	7R5
ASPI-6045S-9R1M	9.1	M	100KHz,1V	0.043	3.35	2.60	17	9R1
ASPI-6045S-100M	10	M	100KHz,1V	0.048	3.20	2.45	15	100
ASPI-6045S-120M	12	M	100KHz,1V	0.058	2.80	2.20	13	120
ASPI-6045S-150M	15	M	100KHz,1V	0.068	2.50	2.05	12	150
ASPI-6045S-180M	18	M	100KHz,1V	0.081	2.20	1.85	10	180
ASPI-6045S-220M	22	M	100KHz,1V	0.089	2.05	1.80	10	220
ASPI-6045S-270M	27	M	100KHz,1V	0.102	1.90	1.65	9.2	270
ASPI-6045S-300M	30	M	100KHz,1V	0.132	1.70	1.50	7.8	300
ASPI-6045S-330M	33	M	100KHz,1V	0.137	1.65	1.45	7.8	330
ASPI-6045S-390M	39	M	100KHz,1V	0.180	1.50	1.25	7.8	390
ASPI-6045S-470M	47	M	100KHz,1V	0.200	1.40	1.20	6.4	470
ASPI-6045S-510M	51	M	100KHz,1V	0.207	1.35	1.15	6.4	510
ASPI-6045S-560M	56	M	100KHz,1V	0.221	1.30	1.10	6.4	560
ASPI-6045S-620M	62	M	100KHz,1V	0.235	1.25	1.10	6.4	620
ASPI-6045S-680M	68	M	100KHz,1V	0.289	1.20	1.00	6.4	680
ASPI-6045S-750M	75	M	100KHz,1V	0.305	1.15	0.95	5.0	750
ASPI-6045S-820M	82	M	100KHz,1V	0.341	1.05	0.90	4.9	820
ASPI-6045S-910M	91	M	100KHz,1V	0.359	1.00	0.85	4.9	910
ASPI-6045S-101M	100	M	100KHz,1V	0.433	0.95	0.80	4.2	101
ASPI-6045S-121M	120	M	100KHz,1V	0.484	0.85	0.70	4.2	121
ASPI-6045S-221M	220	M	100KHz,1V	0.834	0.69	0.59	3.5	221
ASPI-6045S-331M	330	M	100KHz,1V	1.269	0.57	0.47	2.8	331

Tolerance: N=±30%, M=±20%

### Test conditions

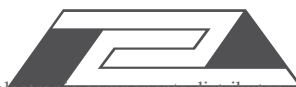
- Ambient Temperature: 20±15°C
- Relative Humidity: 65%±20%
- Air Pressure: 86KPa to 106KPa

Inductance (L): ZM2355 LCR meter or equivalent  
 Direct Current Resistance (DCR): HIOKI 3540 or equivalent

Saturation Current (Isat): Saturation current meter  
 Definition of saturation current (Isat): DC current at which the inductance drops approximate 30% from its value without current.

Temperature rise current (Irms): Electric Power, Electric current meter, Thermometer

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6.0 x 6.0 x 4.5mm



**RoHS**  
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## OPTIONS AND PART IDENTIFICATION

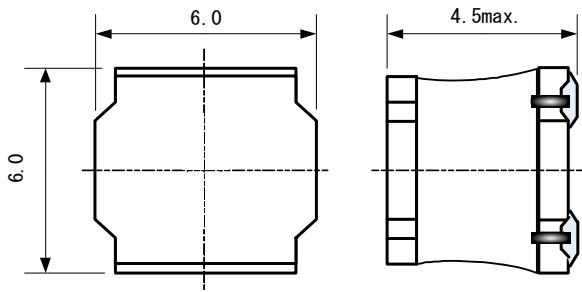
ASPI-6045S -  -

**Inductance Code**  
Please refer to the table on Page 2

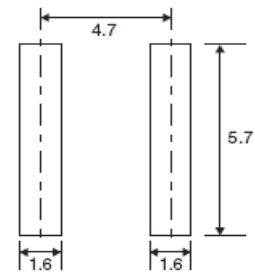
**Tolerance**  
M: ±20%  
or  
N: ±30%

**Packaging**  
Blank: Bulk  
T: Tape and Reel

## OUTLINE DRAWING:

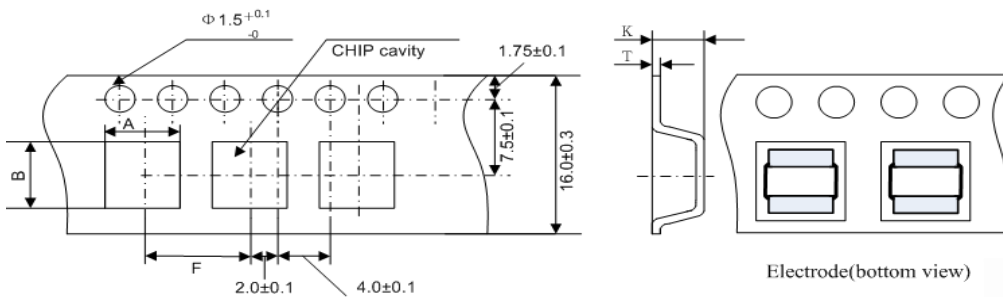


### Recommended Land Pattern

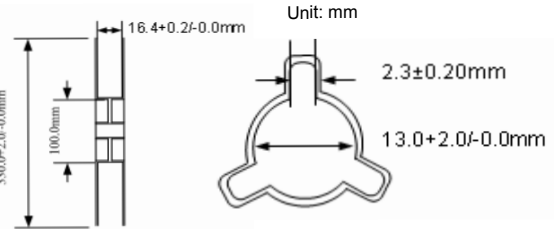


Dimension : mm  
Tolerance : ±0.3mm

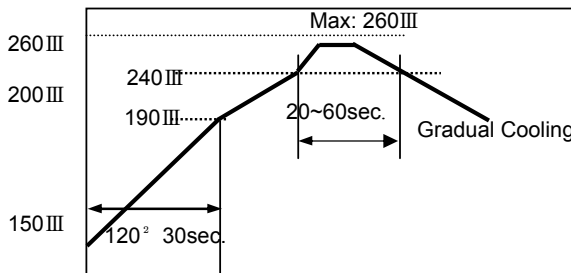
## TAPE & REEL:



A	B	F	K	T
6.20±0.10	6.25±0.10	8.0±0.10	4.7±0.10	0.40±0.03



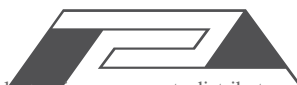
## REFLOW PROFILE:



1~2 °C/sec. Ramp  
Pre-heating: 150~190°C/120±30sec.  
Time above 240°C: 20~60sec  
Peak temperature: 260°C Max/10sec.  
Solder paste: Sn/3.0Ag/0.5Cu  
Max.2 times for re-flowing

**NOTE:** Abracon manufactured products are intended for general commercial and industrial use. For applications requiring high reliability and/or presenting extreme operating environment, written consent & authorization from Abracon is required.

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