Wire Wound Magnetically Shielded SMD Power Inductor



6.0 x 6.0 x 4.5mm

ASPI-6045S

RoHS/RoHS II 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:

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

ELECTRICAL SPECIFICATIONS:

Abracon P/N:	ASPI-6045S Series
Operating Temperature	-40ºC to +125ºC
Storage Temperature	-10ºC to +40ºC and 70% R.H.

Part Number ASPI-6045S- Inductance Code	Inductance	L Tolerance	DC Resistance (±30%)	Saturation Current	Temperature Rise Current	Min. Self resonant frequency	Marking
Units	µH	–	Ω	A	A	MHz	–
Symbol	L	N, M	DCR	Isat	Irms	SRF	–
ASPI-6045S-R82	0.82	N	0.008	10.35	5.90	140	R82
ASPI-6045S-1R0	1	N	0.011	9.85	5.14	100	1R0
ASPI-6045S-1R2	1.2	N	0.01	8.35	5.40	100	1R2
ASPI-6045S-1R5	1.5	N	0.012	8.80	4.95	65	1R5
ASPI-6045S-1R8	1.8	N	0.012	7.60	4.95	74	1R8
ASPI-6045S-2R2	2.2	N	0.014	6.75	4.60	52	2R2
ASPI-6045S-2R3	2.3	N	0.021	6.00	3.50	60	2R3
ASPI-6045S-2R7	2.7	N	0.015	5.75	4.30	38	2R7
ASPI-6045S-3R0	3	N	0.02	5.60	3.80	35	3R0
ASPI-6045S-3R3	3.3	N	0.021	5.90	3.70	32	3R3
ASPI-6045S-3R6	3.6	N	0.021	5.25	3.70	28	3R6
ASPI-6045S-4R3	4.3	M	0.023	4.45	3.50	23	4R3
ASPI-6045S-4R7	4.7	M	0.026	4.97	3.30	24	4R7
ASPI-6045S-5R1	5.1	M	0.026	4.40	3.30	23	5R1
ASPI-6045S-5R6	5.6	M	0.029	4.15	3.15	23	5R6
ASPI-6045S-6R2	6.2	M	0.031	4.43	3.00	26	6R2
ASPI-6045S-6R8	6.8	M	0.031	3.90	3.00	20	6R8
ASPI-6045S-7R5	7.5	M	0.034	3.50	2.90	18	7R5
ASPI-6045S-8R2	8.2	M	0.043	3.90	2.60	21	8R2
ASPI-6045S-9R1	9.1	M	0.043	3.35	2.60	17	9R1
ASPI-6045S-100	10	M	0.048	3.20	2.45	15	100
ASPI-6045S-120	12	M	0.058	2.80	2.20	13	120
ASPI-6045S-150	15	M	0.068	2.50	2.05	12	150
ASPI-6045S-180	18	M	0.081	2.20	1.85	10	180
ASPI-6045S-220	22	M	0.089	2.05	1.80	10	220
ASPI-6045S-270	27	M	0.102	1.90	1.65	9.2	270
ASPI-6045S-300	30	M	0.132	1.70	1.50	7.8	300
ASPI-6045S-330	33	M	0.137	1.65	1.45	7.8	330
ASPI-6045S-360	36	M	0.173	1.62	1.40	7.8	360
ASPI-6045S-390	39	M	0.18	1.50	1.25	7.8	390
ASPI-6045S-430	43	M	0.2	1.63	1.20	7.7	430
ASPI-6045S-470	47	M	0.2	1.40	1.20	6.4	470
ASPI-6045S-510	51	M	0.207	1.35	1.15	6.4	510

ABRACON LLC
The Power of Linking Together
5101 Hidden Creek Lane Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sale please visit:
www.abracon.com

REVISED: 06/22/2016
ABRACON IS ISO9001-2008 CERTIFIED

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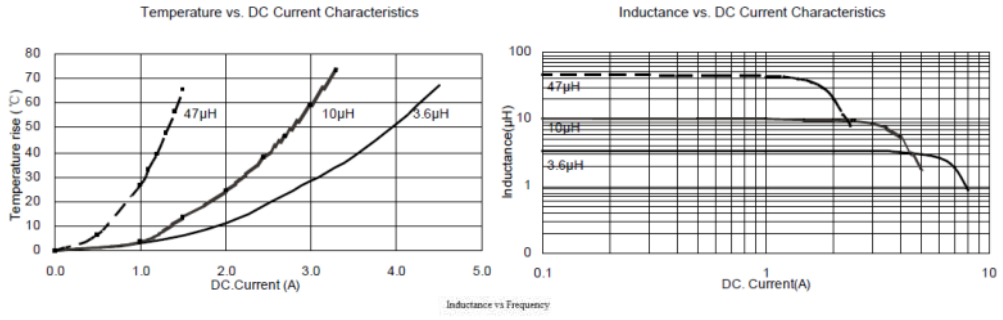
Part Number ASPI-6045S- Inductance Code	Inductance	L Tolerance	DC Resistance (±30%)	Saturation Current	Temperature Rise Current	Min. Self resonant frequency	Marking
Units	µH	—	Ω	A	A	MHz	—
Symbol	L	—	DCR	Isat	Irms	SRF	—
ASPI-6045S-560	56	M	0.221	1.30	1.10	6.4	560
ASPI-6045S-620	62	M	0.235	1.25	1.10	6.4	620
ASPI-6045S-680	68	M	0.289	1.20	1.00	6.4	680
ASPI-6045S-750	75	M	0.305	1.15	0.95	5	750
ASPI-6045S-820	82	M	0.341	1.05	0.90	4.9	820
ASPI-6045S-910	91	M	0.359	1.00	0.85	4.9	910
ASPI-6045S-101	100	M	0.433	0.95	0.80	4.2	101
ASPI-6045S-121	120	M	0.484	0.85	0.77	4.2	121
ASPI-6045S-151	150	M	0.58	0.80	0.70	4.2	151
ASPI-6045S-221	220	M	0.834	0.70	0.59	3.5	221
ASPI-6045S-331	330	M	1.27	0.57	0.57	2.8	331

Test Conditions:

a. Ambient Temperature: 20± 15°C
b. Relative Humidity: 65%±20%
c. 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
Isat: Based on inductance change (Δ L/Lo :Δ -30%)
Temperature rise current (Irms): Electric Power, Electric current meter, Thermometer
Irms: Based on temperature rise (Δ T : 40°C TYP.)

ELECTRICAL CHARACTERISTICS CURVES



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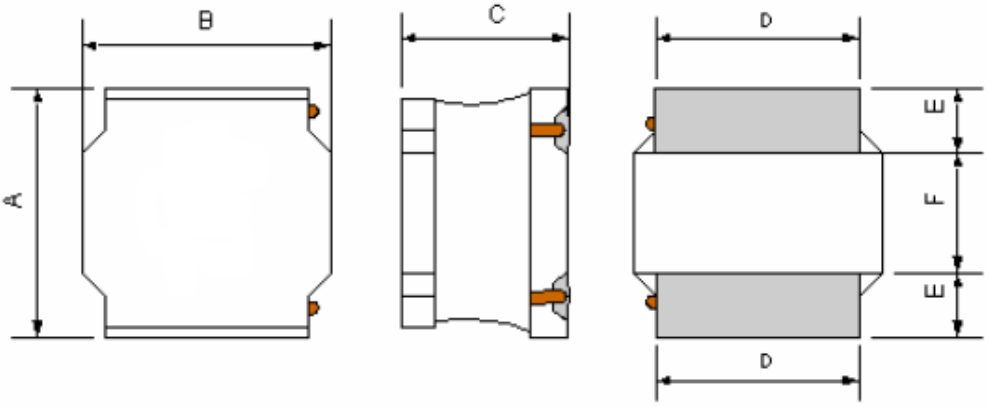
PART IDENTICATION:

ASPI-6045S - ☐☐ - ☐

Inductance Code	Tolerance	Packaging
Please refer to the table above	M: ±20% * N: ±30% *	T: Tape and Reel (1,500kpcs / reel)

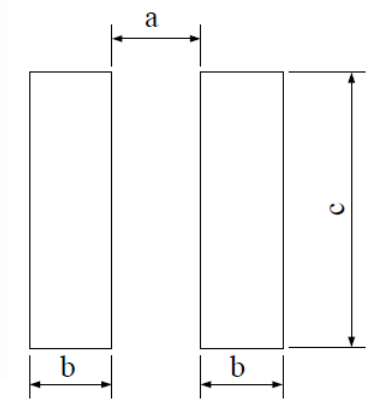
*M for 4.3µH~330µH
*N for 0.82µH~3.6µH

OUTLINE DIMENSIONS:



A	B	C Max.	D	E	F	a Typ.	b Typ.	c Typ.
6.0±0.3	6.0±0.3	4.5Max.	4.9±0.3	1.55±0.3	2.9±0.3	2.8Typ.	1.7Typ.	5.7Typ

Recommended Land Pattern



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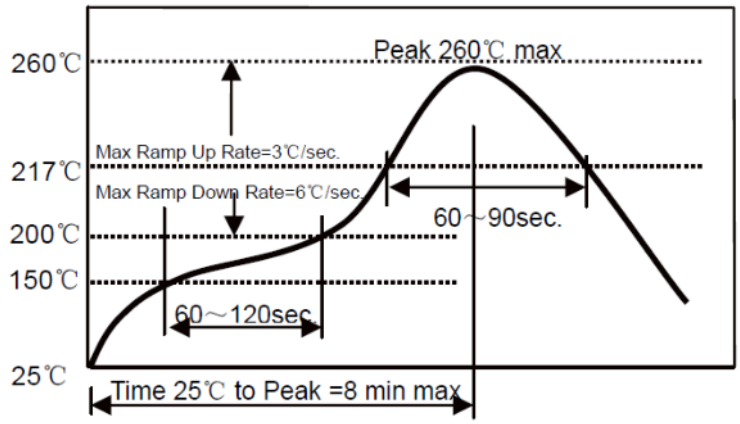


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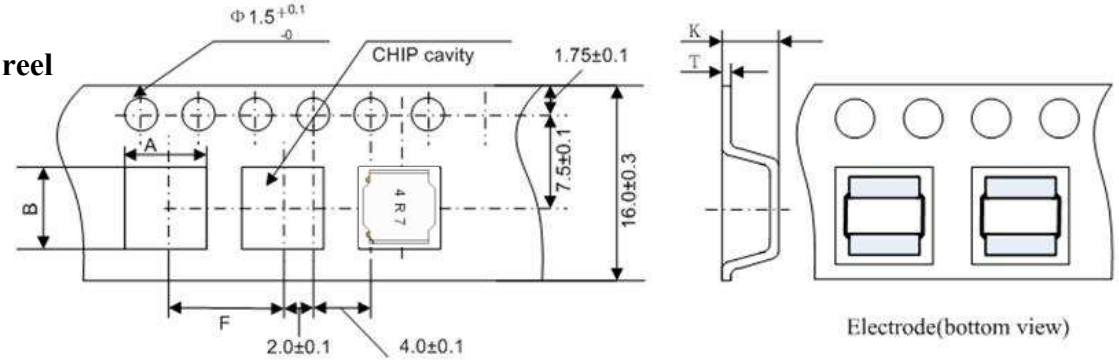
REFLOW PROFILE



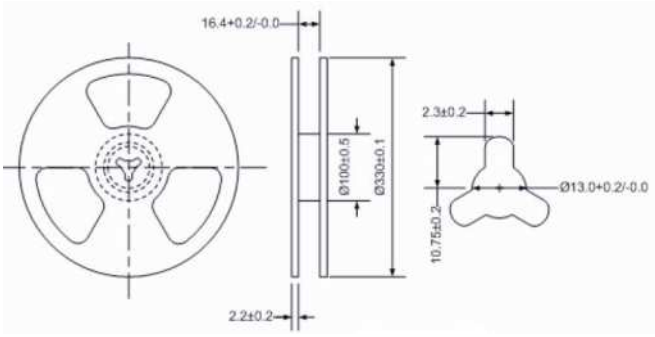
- Δ 1~2 ℃/sec. Ramp
- Δ Pre-heating: 150~190°C /120±30sec.
- Δ Time above 240°C: 20~60sec
- Δ Peak temperature: 260°C Max/10sec.
- Δ Solder paste: Sn/3.0Ag/0.5Cu
- Δ Max.2 times for re-flowing

TAPE & REEL:

Packing
T: 1,500pcs / 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



Storage Conditions

a. To maintain the solderability of terminal electrodes and to keep the packing material in good condition, temperature and humidity in the storage area should be controlled.
b. Recommended conditions: -10°C ~ 40 °C, 70% RH (Max.)
c. Even under ideal storage conditions, solderability of products electrodes may decrease as time passes. For this reason, product should be used with one year from the time of delivery.
d. In case of storage over 6 months, solderability shall be checked before actual usage.

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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