Wire Wound Magnetically Shielded SMD Power Inductor

ASPI-2010 series

RoHS/RoHS II Compliant



2.0 x 1.6 x 1.0 mm

FEATURES:

- Small size and low profile: 1.0mm
- Small DCR and high rated current
- High reliability to mechanical stress
- Magnetically shielded by magnetic powder molding
- Suitable for RoHS reflow profile

APPLICATIONS:

- Mobile phones
- MP3 & 4 and other portable communication equipment
- Digital cameras.

ELECTRICAL SPECIFICATIONS:

Abracon P/N:	ASPI-2010 Series
Operating Temperature & Humidity :	-40˚C ~ +125˚C (including self heating)
Storage Temperature & Humidity:	-10˚C ~ +40˚C and 70% R.H. max.

Part Number ASPI-2010- Inductance Code	Inductance	L Tolerance	DC Resistance Typ	DC Resistance Max	Saturation Current Typ	Saturation Current Max	Temperature Rise Current Typ	Temperature Rise Current Max
Units	µH	—	Ω Typ	Ω Max	A Typ	A Max	A Typ	A Max
Symbol	L	M	DCR		Isat		Irms	
ASPI-2010-R47	0.47	M	0.049	0.059	2.30	2.85	2.35	2.60
ASPI-2010-R68	0.68	M	0.063	0.076	1.95	2.45	2.05	2.25
ASPI-2010-1R0	1.0	M	0.095	0.114	1.65	1.85	1.45	1.60
ASPI-2010-1R5	1.5	M	0.145	0.174	1.35	1.65	1.25	1.40
ASPI-2010-2R2	2.2	M	0.220	0.264	1.20	1.45	1.10	1.20
ASPI-2010-3R3	3.3	M	0.279	0.335	0.90	1.05	0.88	0.98
ASPI-2010-4R7	4.7	M	0.399	0.479	0.70	0.85	0.74	0.82
ASPI-2010-6R8	6.8	M	0.680	0.816	0.60	0.70	0.52	0.58

Test Conditions:

a. Ambient Temperature: 20± 15°C
b. Relative Humidity: 65%±20%
c. Air Pressure: 86KPa to 106KPa

Inductance (L): WK3260B LCR meter or equivalent, 1MHz
Direct Current Resistance (DCR): HIOKI 3540 or equivalent
Saturation Current (Isat): WK3260B LCR meter or equivalent
Isat: Based on inductance change (ΔL/Lo ≈ -30%)
Temperature rise current (Irms): Electric Power, Electric current meter, Thermometer
Irms: Based on temperature rise (ΔT : 40°C TYP.)

ABRACON IS ISO9001:2008 CERTIFIED

Wire Wound Magnetically Shielded SMD Power Inductor

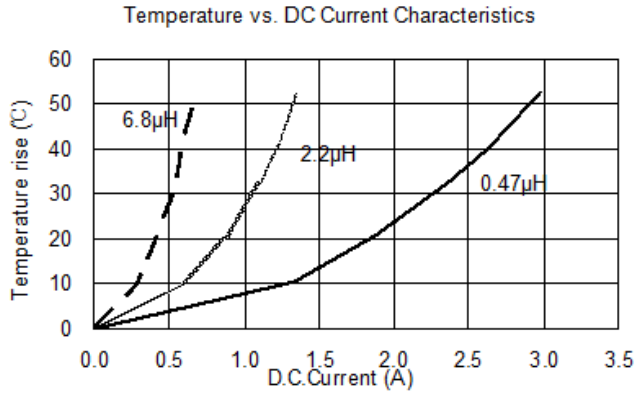


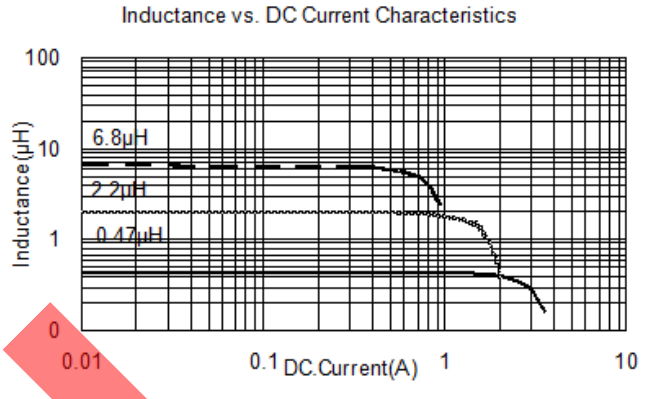
2.0 x 1.6 x 1.0 mm

ASPI-2010 series

RoHS/RoHS II Compliant

ELECTRICAL CHARACTERISTICS CURVES



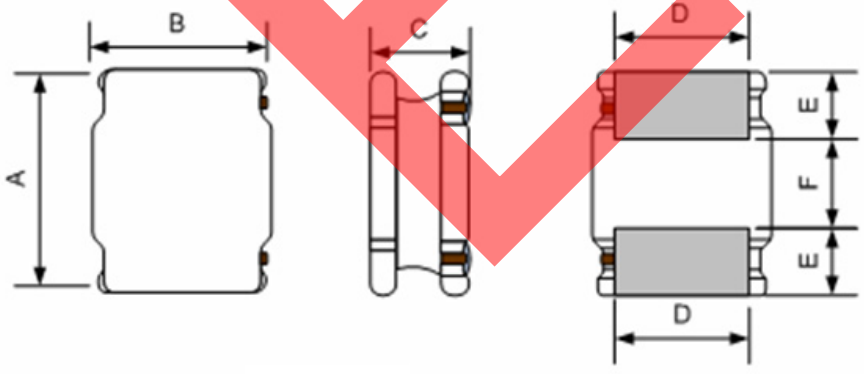


PART IDENTIFICATION:

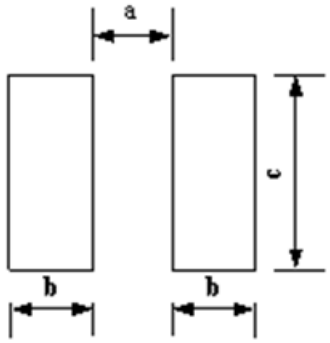
ASPI-2010- □□ - □

Inductance Code	Tolerance	Packaging
Please refer to the table above	M: ±20%	T: Tape and Reel (2kpcs / reel)

OUTLINE DIMENSION:



Recommended Land Pattern



A	B	C Max.	D	E	F	a Typ.	b Typ.	c Typ.
2.0±0.2	1.6±0.2	1.0	1.2±0.2	0.60±0.2	0.80±0.2	0.70	0.70	1.70

Dimensions: mm

EOL

Wire Wound Magnetically Shielded SMD Power Inductor

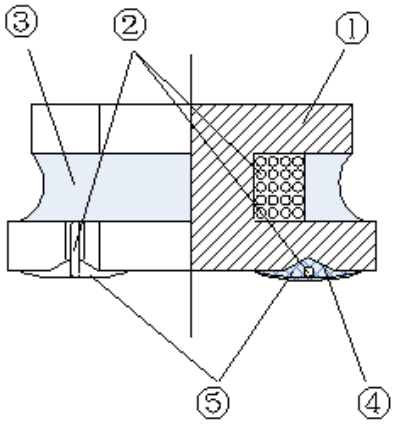
ASPI-2010 series

RoHS/RoHS II Compliant



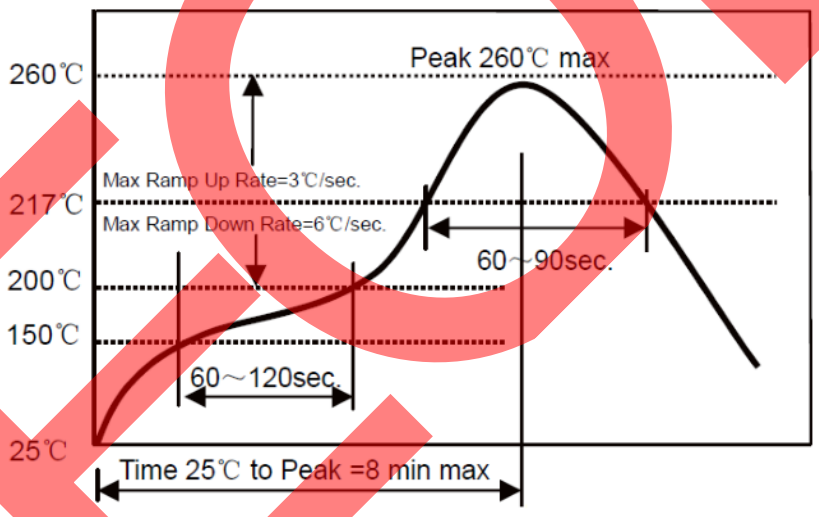
2.0 x 1.6 x 1.0 mm

MATERIAL:



No	Components	Material
1	Ferrite Core	Ni-Zn Ferrite
2	Wire	Polyurethane System enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Plating Electrodes	Plating: Ag/Ni/Sn
5	Outer Electrodes	Top surface solder coating: Sn96.5%/Ag3%/Cu0.5%

REFLOW PROFILE:



Δ Preheat condition: 150 ~200˚C /60~120sec.
Δ Allowed time above 217˚C: 60~90sec.
Δ Max temp: 260˚C
Δ Max time at max temp: 5sec.
Δ Solder paste: Sn/3.0Ag/0.5Cu
Δ Allowed Reflow time: 2x max

EOL

30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com

Wire Wound Magnetically Shielded SMD Power Inductor



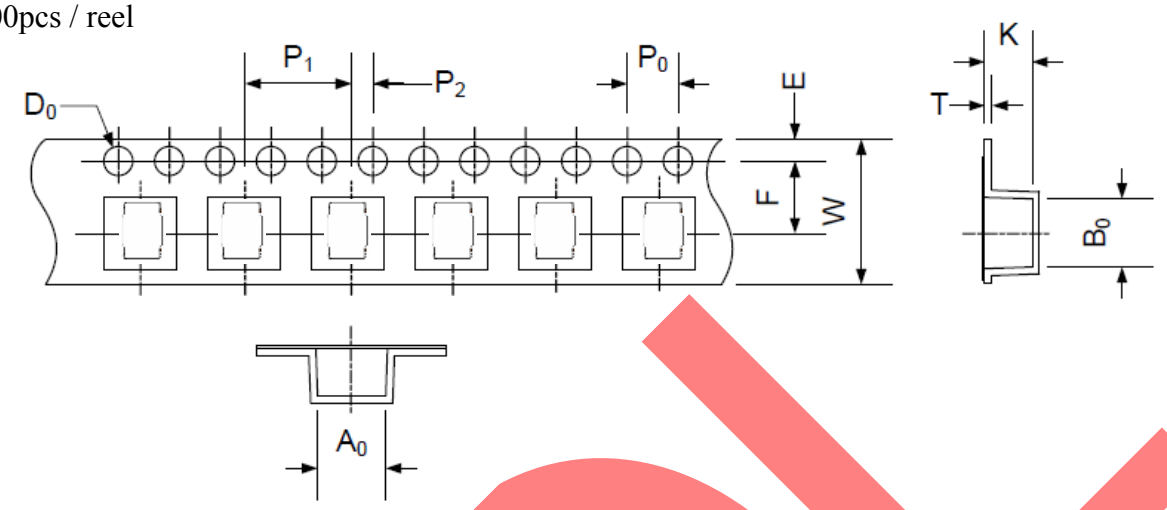
2.0 x 1.6 x 1.0 mm

ASPI-2010 series

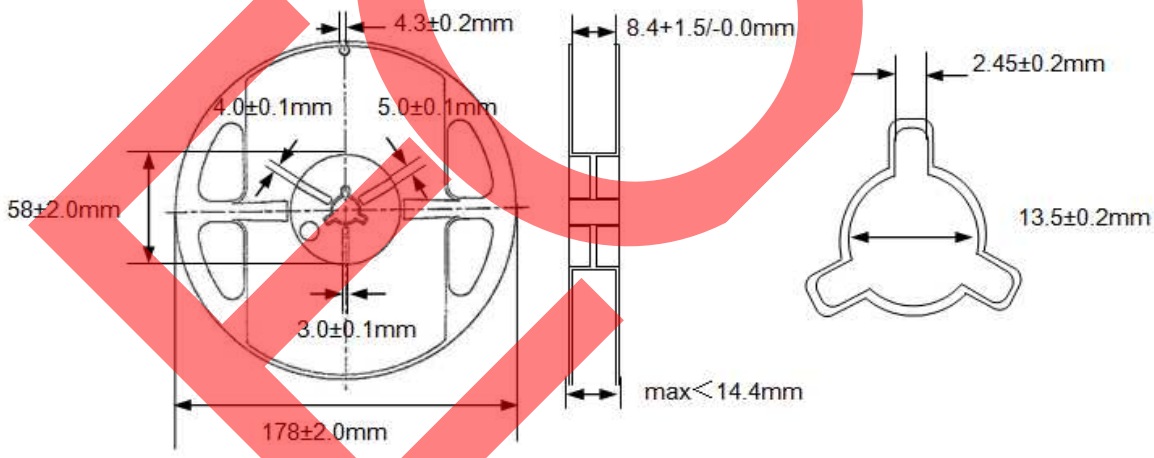
RoHS/RoHS II Compliant

TAPE & REEL:

T: 2,000pcs / reel



Ao	Bo	W	E	F	Po	P_1	P_2	Do	T	K
1.90±0.05	2.20±0.05	8.0±0.1	1.75±0.1	3.5±0.05	4.0±0.1	4.0±0.1	2.0±0.05	1.5+0.1/-0.0	0.25±0.02	1.20±0.05



EOL

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 within 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.

30332 Esperanza, Rancho Santa Margarita, California 92688
tel 949-546-8000 | fax 949-546-8001 | www.abracon.com