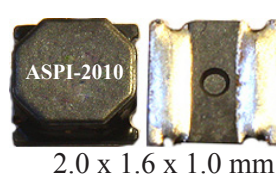




**THE DATASHEET OF  
ASPI-2012-150M-T**



# Wire Wound Magnetically Shielded SMD Power Inductor



ASPI-2010 series



RoHS/RoHS II Compliant

## 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:

- Ambient Temperature: 20± 15°C
- Relative Humidity: 65%±20%
- 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

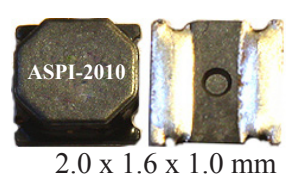
Isat: Based on inductance change ( $\Delta L/L_0 \approx -30\%$ )

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

Irms: Based on temperature rise ( $\Delta T : 40^\circ\text{C TYP.}$ )



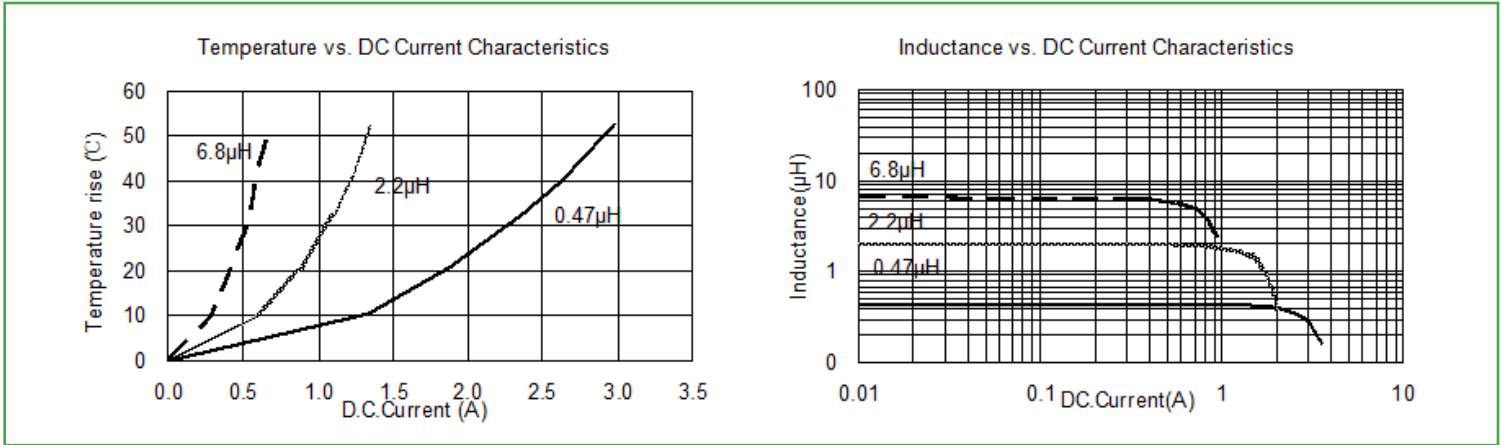
# Wire Wound Magnetically Shielded SMD Power Inductor



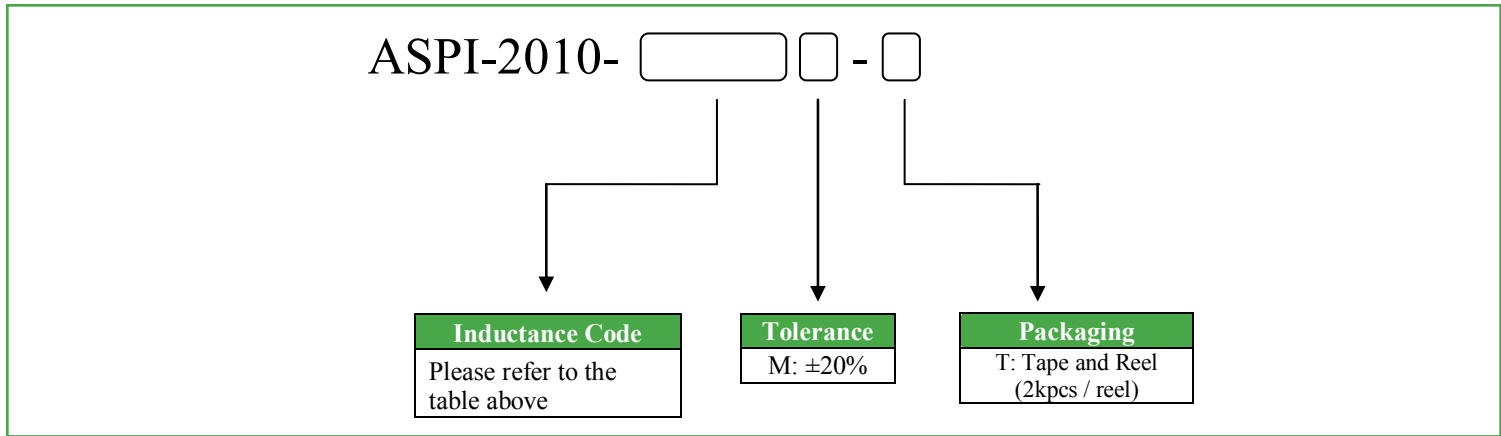
ASPI-2010 series

RoHS/RoHS II Compliant

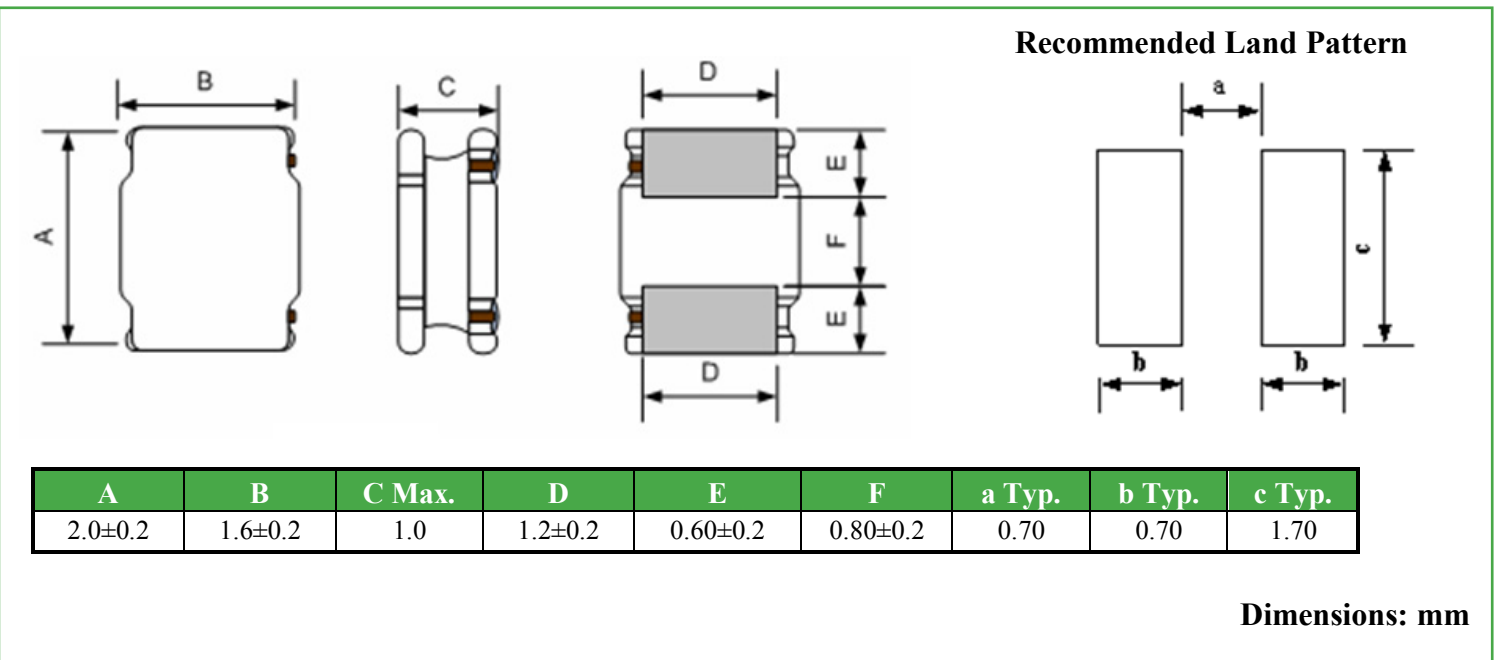
## ELECTRICAL CHARACTERISTICS CURVES



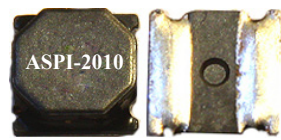
## PART IDENTIFICATION:



## OUTLINE DIMENSION:



# Wire Wound Magnetically Shielded SMD Power Inductor

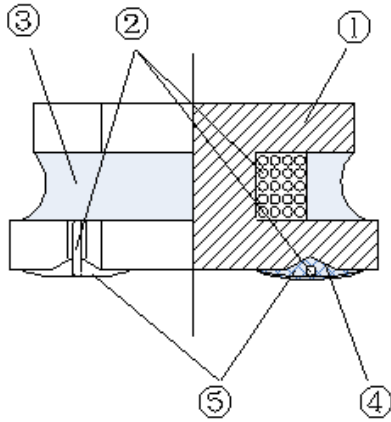


ASPI-2010 series



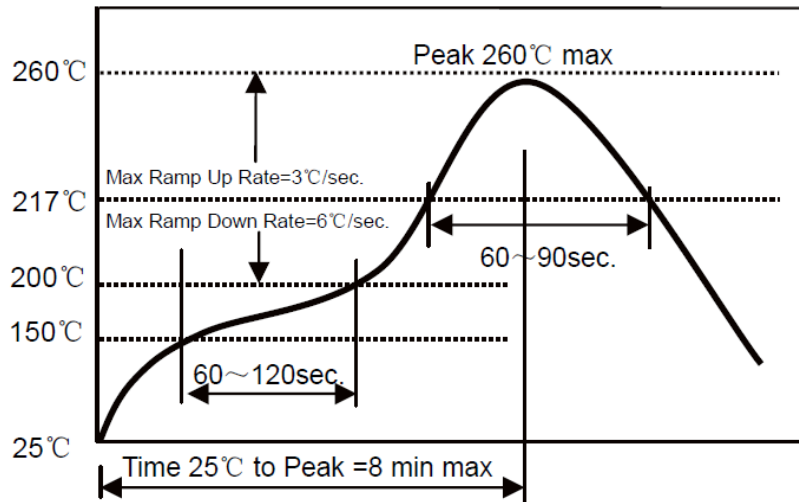
RoHS/RoHS II Compliant

## MATERIAL:



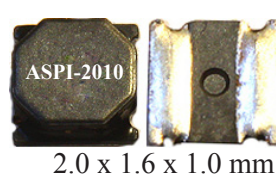
No	Components	Material
1	Ferrite Core	Ni-Zn Ferrite
2	Wire	Polyurethane System enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Plating Electrodes	Plating: Ag/Ni/Sn
5	Outer Electrodes	Top surface solder coating: Sn96.5%/Ag3%/Cu0.5%

## REFLOW PROFILE:



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

# Wire Wound Magnetically Shielded SMD Power Inductor



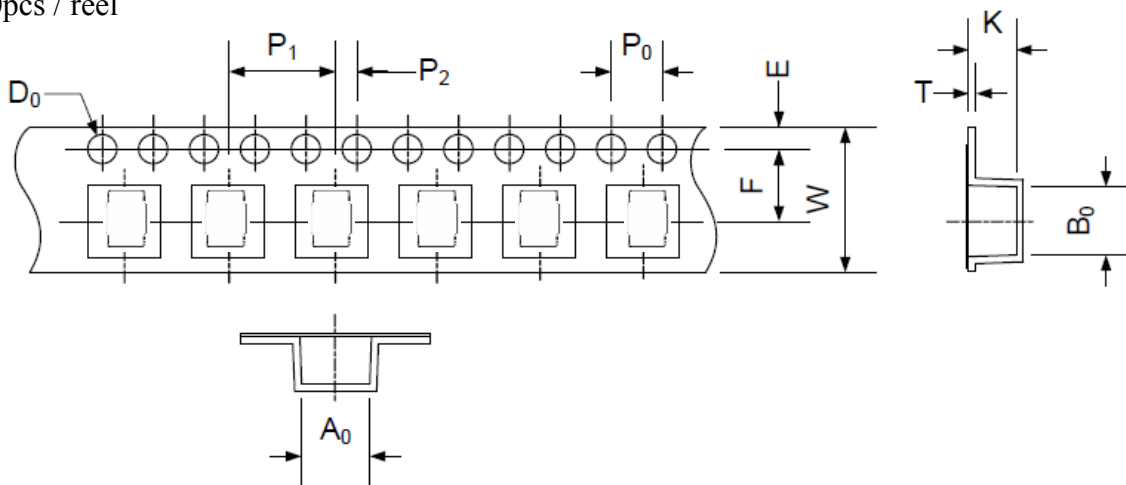
ASPI-2010 series



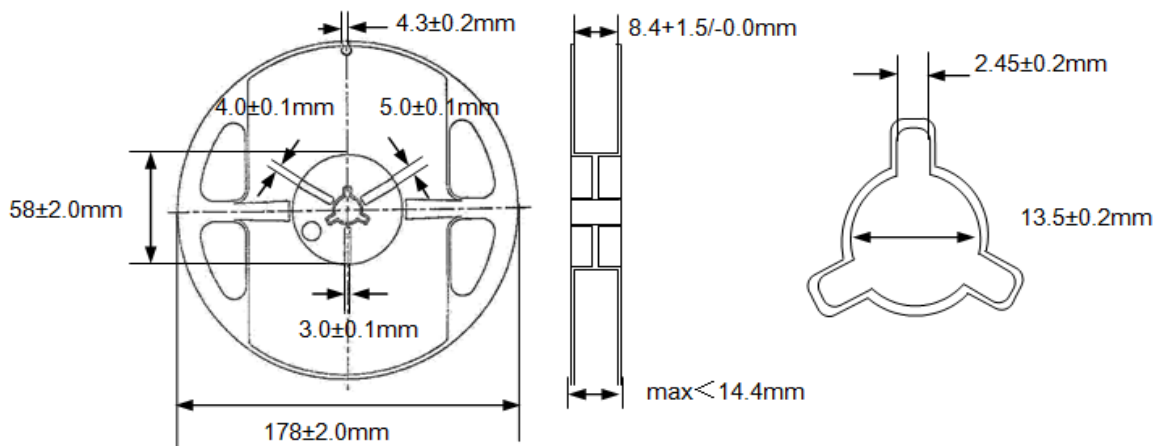
RoHS/RoHS II Compliant

## TAPE & REEL:

T: 2,000pcs / reel



Ao	Bo	W	E	F	Po	P1	P2	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



### Storage Conditions

- 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.
- Recommended conditions: -10°C ~ +40 °C, 70% RH (Max.)
- 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.
- 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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