



Shielded SMT Power Inductor SPRI2D18HP Series

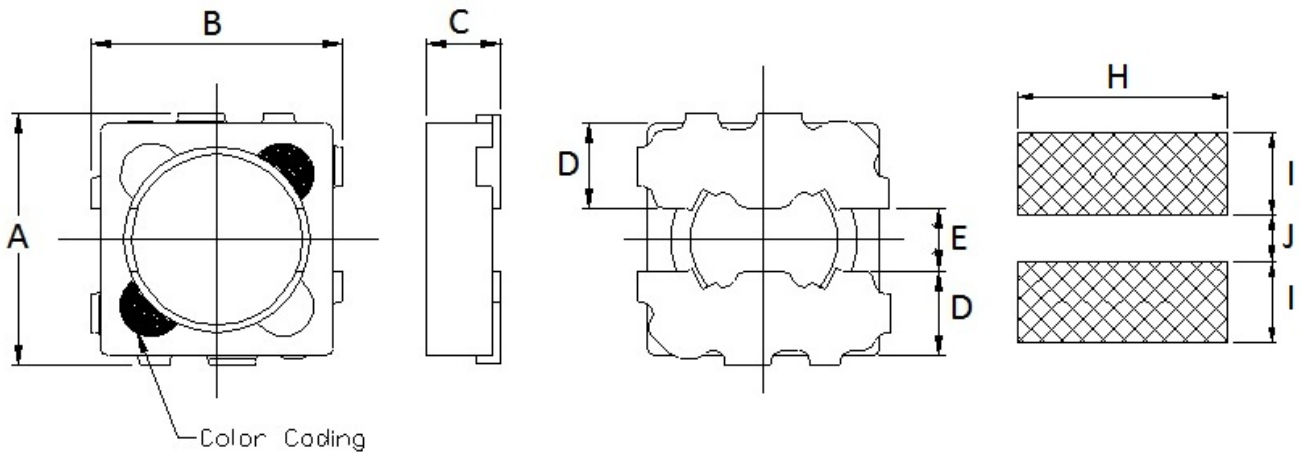
■ Feature

- Magnetically shielded structure that ensures the high-density mounting configuration.
- Flat bottom surface ensures secure, reliable mounting.

■ Application

- Low profile/ large current specifically suitable for Portable telephones, hard disk drives, PDA, DSC and other electronic equipments.

■ SHAPES AND DIMENSIONS



Unit	A	B	C max	D	E
mm	3.2 ±0.2	3.2 ±0.2	1.8	1.10	0.8
inch	0.126 ±0.008	0.126 ±0.008	0.071	0.043	0.031

H	I	J
3.60	1.40	0.80
0.142	0.055	0.031

Marking : Color Coding



■ PART NUMBER CODE

<u>SPRI</u>	<u>2D18</u>	<u>HP</u>	<u>6R8</u>	<u>M</u>	<u>A</u>
1	2	3	4	5	6

1. Series Name
2. Size Code
3. Type Code
4. Inductance (R=Decimal Point) Unit : uH
6R8 = 6.8uH
5. Inductance tolerance :
“M” ±20%; “N” ±30%.
6. Soldering : A=Lead free

■ ELECTRICAL CHARACTERISTICS

1. Test equipments
 - 1.1. L,Idc : Agilent/HP 4284A Precision LCR Meter , 1KHz with 1V.
 - 1.2. Rdc: Chroma Milli-ohm meter 16502 or equivalent. (Typ: ±30% tolerance)
 - 1.3. Idc for Inductance drop 10% or 35% from its value without current.
 - 1.4. Irms for a 25°C rise above 25°C ambient.
 - 1.5. Operating temperature range -25°C to 105°C



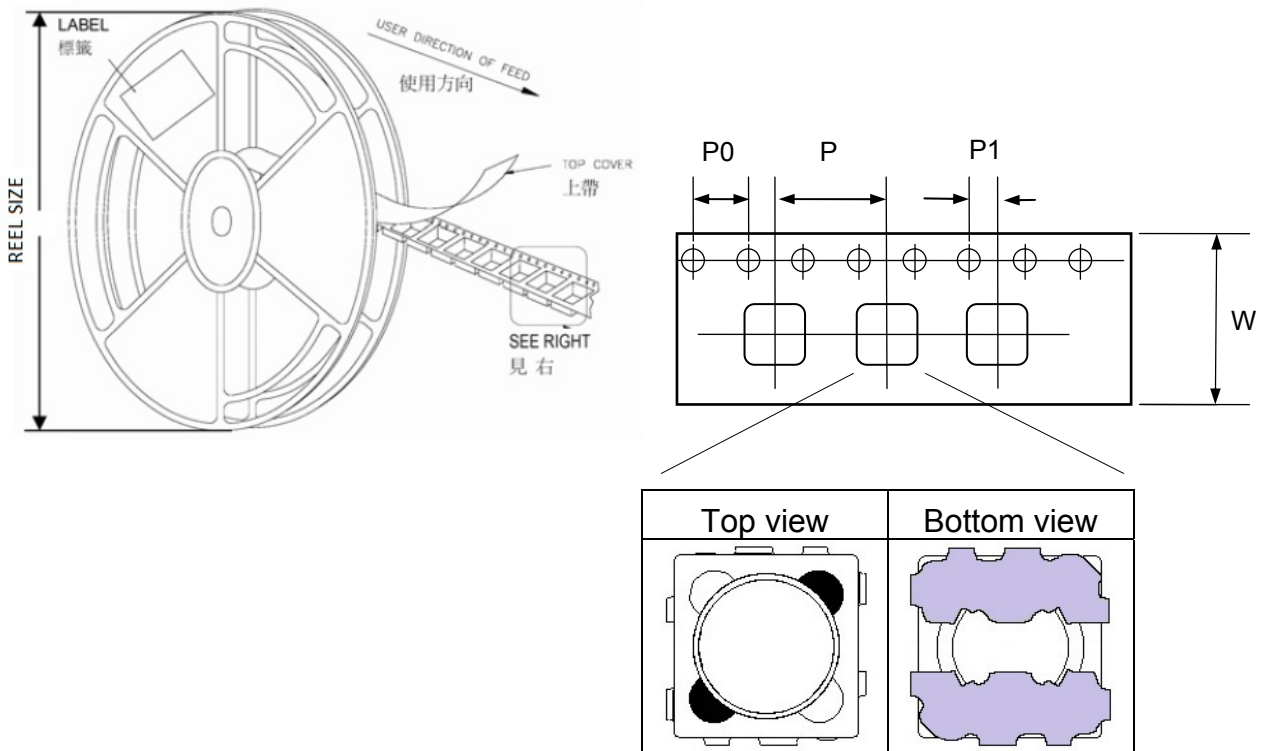
2. Part Number and Characteristics Table

Part Number	Inductance	Inductance	Rdc(Ω)	Idc Typ (mA)		Irms Typ (mA)	Color Coding
	(uH)/KHz	Tolerance	Typ	L ↓ 10%	L ↓ 35%	T ↑ 25°C	
SPRI2D18HP-1R0□A	1.0/1	M, N	0.045	2600	3000	2000	Black
SPRI2D18HP-1R5□A	1.5/1	M, N	0.070	2100	2400	1900	Orange
SPRI2D18HP-1R8□A	1.8/1	M, N	0.078	2000	2300	1760	Brown
SPRI2D18HP-2R2□A	2.2/1	M, N	0.090	1800	2140	1440	Red
SPRI2D18HP-2R7□A	2.7/1	M, N	0.103	1700	1900	1350	Black
SPRI2D18HP-3R3□A	3.3/1	M, N	0.103	1500	1800	1100	Orange
SPRI2D18HP-3R9□A	3.9/1	M, N	0.135	1500	1780	1050	Yellow
SPRI2D18HP-4R7□A	4.7/1	M, N	0.152	1400	1600	1000	Black
SPRI2D18HP-5R6□A	5.6/1	M, N	0.198	1200	1400	1000	Blue
SPRI2D18HP-6R8□A	6.8/1	M, N	0.223	1200	1400	950	Brown
SPRI2D18HP-100□A	10.0/1	M, N	0.360	920	1020	780	Red
SPRI2D18HP-120□A	12.0/1	M, N	0.410	840	980	680	Orange
SPRI2D18HP-150□A	15.0/1	M, N	0.622	800	900	620	Yellow
SPRI2D18HP-220□A	22.0/1	M, N	0.750	640	740	450	Black
SPRI2D18HP-270□A	27.0/1	M, N	1.100	520	600	440	Blue
SPRI2D18HP-330□A	33.0/1	M, N	1.125	470	520	420	Brown
SPRI2D18HP-470□A	47.0/1	M, N	1.820	390	430	400	Red
SPRI2D18HP-680□A	68.0/1	M, N	2.650	350	390	340	Orange
SPRI2D18HP-101□A	100.0/1	M, N	3.200	300	330	300	Black
SPRI2D18HP-221□A	220.0/1	M, N	10.45	180	200	180	Yellow
SPRI2D18HP-331□A	330.0/1	M, N	13	130	150	120	Green

When ordering, please specify tolerance and packaging codes. Ex: SPRI2D18HP-3R3MA ;
Tolerance : M = ±20% , N = ±30% ; Packaging: Clear tape and reel { standard }.



REEL DIMENSIONS AND PACKAGING QUANTITY

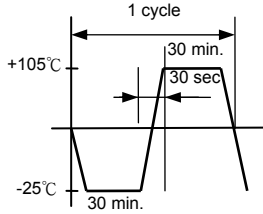


Unit: mm

TYPE	W	P	P0	P1	REEL SIZE	PCS / REEL
SPRI2D18HP	12	8	4	2	180 mm (7")	1000



■ RELIABILITY AND TEST CONDITION

Item (項目)	Required Characteristics (要求)	Test Method/Condition (測試方法)
Solderability	The metalized area must have 90% minimum solder coverage.	Dip pads in flux and dip in solder pot (96.5 Sn/3.5 Ag solder) at 255°C ±5°C.
Resistance to soldering heat	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be reflowed onto a PC board using 96.5 Sn/3.5 Ag solder paste. Solder process shall be at a maximum temperature of 260°C. For 96.5 Sn/3.5 Ag solder paste:>217°C for 90 seconds
High temperature resistance	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be subjected to temperature 105±2°C for 50±12 hours. Measure the test items after leaving the inductors at room temperature and humidity for 2 hours.
Static Humidity	Inductors must not have a shorted or open winding.	Inductors shall be subjected to temperature 85±2°C and 90 to 95%RH for ten 24hours. Measure the test items after leaving the inductors at room temperature and humidity for 2 hours.
Component adhesion (push test)	Inductors shall be subjected to 0.5Kg	Inductors shall be reflow soldered (255°C ±5°C for 10 seconds) to a tinned copper substrate. A force gauge shall be applied to the side of the component. The device must withstand the stated force without a failure of the termination.
Low temperature storage	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be subjected to temperature -25±2°C for 48±12 hours. Measure the test items after leaving the inductors at room temperature and humidity for 1 to 2 hours.
Resistance to solvent	There must be no case deformation, change in dimensions, or obliteration of marking.	Inductors must withstand 6 minutes of alcohol or water.
Thermal shock	There must be no case deformation or change in dimensions. Inductance must not change more than the stated tolerance.	Inductors shall be subjected to 10 cycles to the following temperature cycle:  Measure the test items after leaving the inductors at room temperature and humidity for 2 hours.

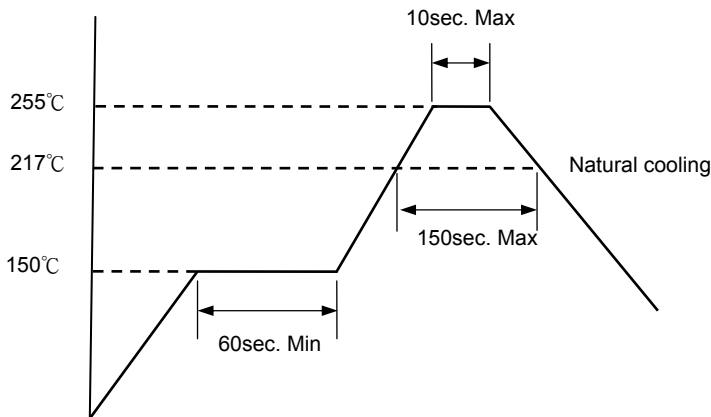


■ RECOMMENDED SOLDERING CONDITIONS

Please use this product by reflow soldering

1. Recommended Reflow Pattern

Reflow : until two times



2. Iron Soldering

Use a solder iron of less than 30W when soldering, do not allow the soldering iron tip directly touch the Ceramic body outside of terminal electrode.

5 seconds max. at 260°C.

3. Attention in Case of Using

In case of using product, please avoid following matters:

Splashing water or salt water

Dew condenses

Toxic gas (Hydrogen sulfide, Sulfurous acid, Chlorine, Ammonia)

Vibrations or shocks which exceed the specified condition

Please be careful for the stress to this product by board flexure or something after the mounting.

4. Other

Operating temperature range : Ferrite Series : -25~+105°C

Storage condition : Temperature 20°~25°C, Relative Humidity 40%~60%

Recommended wire wound inductors should be used within 6 months from the time of delivery.