



Shielded SMT Power Inductor SPRI2D18LP Series

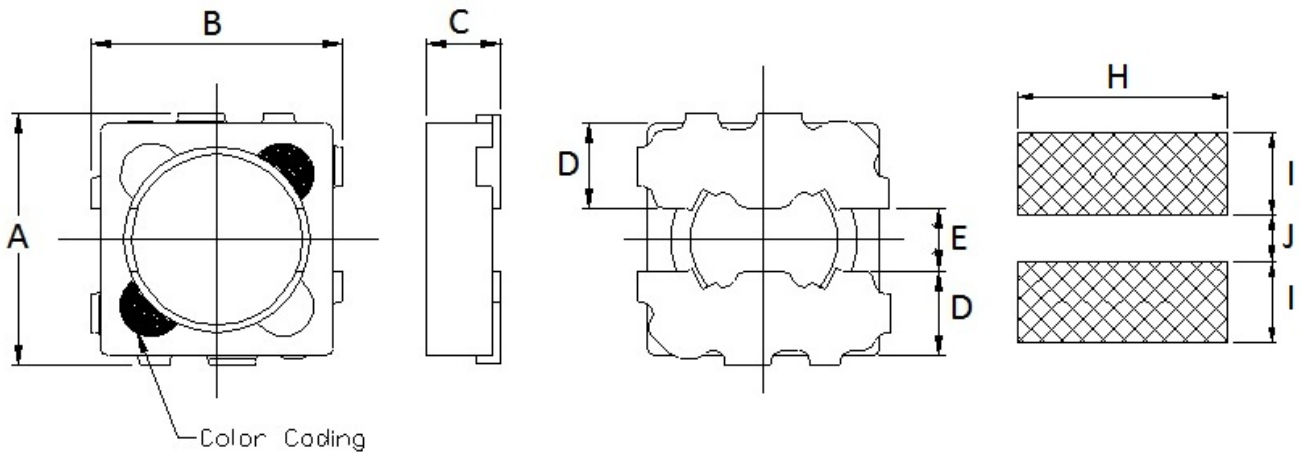
■ Feature

- 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

SPRI 2D18 LP 6R8 M A
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



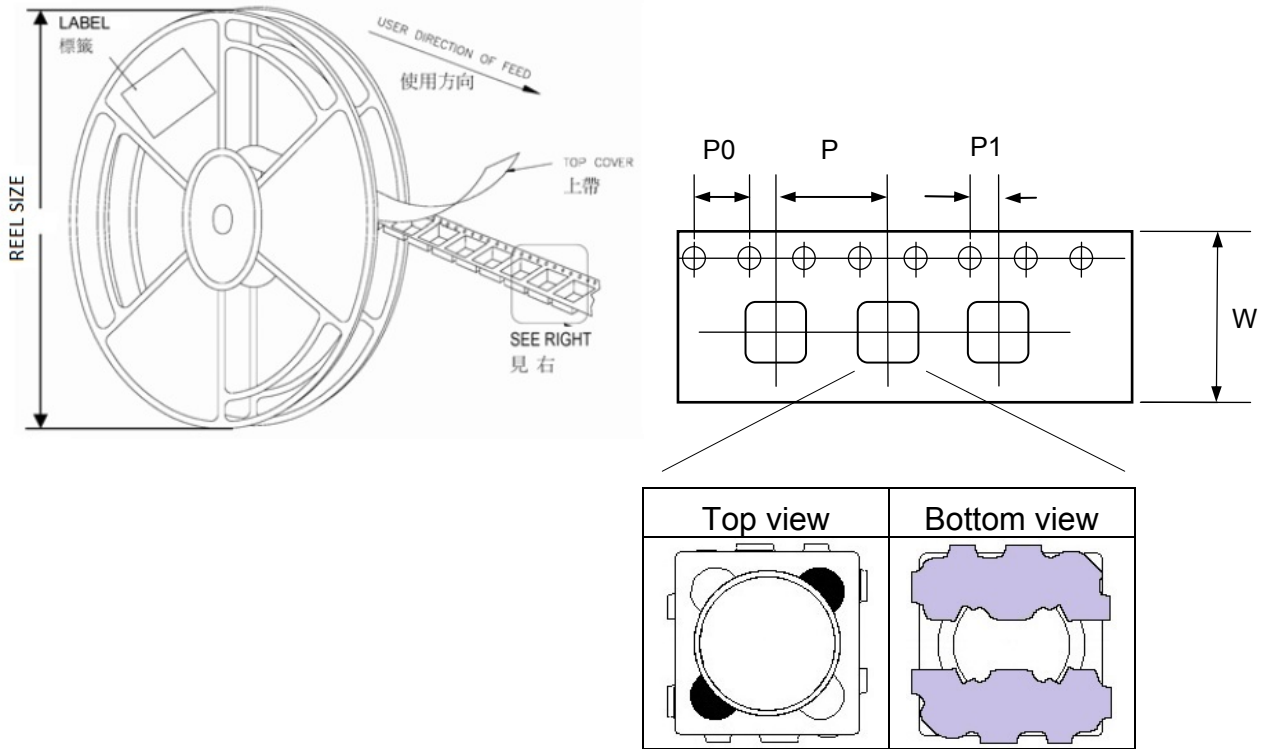
2. Part Number and Characteristics Table

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	
SPRI2D18LP-1R0□A	1.0/1	M, N	0.038	960	1360	1800	Green
SPRI2D18LP-1R2□A	1.2/1	M, N	0.041	940	1220	1760	Blue
SPRI2D18LP-1R5□A	1.5/1	M, N	0.048	900	1140	1700	Violet
SPRI2D18LP-1R8□A	1.8/1	M, N	0.052	840	1040	1680	Gray
SPRI2D18LP-2R2□A	2.2/1	M, N	0.055	840	980	1640	White
SPRI2D18LP-2R7□A	2.7/1	M, N	0.060	680	900	1460	Green
SPRI2D18LP-3R3□A	3.3/1	M, N	0.078	600	800	1400	Blue
SPRI2D18LP-3R9□A	3.9/1	M, N	0.090	580	800	1220	Violet
SPRI2D18LP-4R7□A	4.7/1	M, N	0.099	540	740	1200	Gray
SPRI2D18LP-5R6□A	5.6/1	M, N	0.110	500	660	1120	White
SPRI2D18LP-6R8□A	6.8/1	M, N	0.120	480	600	1060	Green
SPRI2D18LP-8R2□A	8.2/1	M, N	0.168	400	540	900	Blue
SPRI2D18LP-100□A	10/1	M	0.190	360	460	880	Violet
SPRI2D18LP-120□A	12/1	M	0.252	320	460	800	Gray
SPRI2D18LP-150□A	15/1	M	0.285	300	400	720	White
SPRI2D18LP-180□A	18/1	M	0.350	280	380	660	Green
SPRI2D18LP-220□A	22/1	M	0.440	240	320	500	Blue
SPRI2D18LP-270□A	27/1	M	0.490	220	280	420	Violet
SPRI2D18LP-330□A	33/1	M	0.780	200	260	380	Gray
SPRI2D18LP-470□A	47/1	M	0.880	170	220	300	Black
SPRI2D18LP-471□A	470/1	M, N	12.20	50	70	120	Gray

When ordering, please specify tolerance and packaging codes. Ex: SPRI2D18LP-100MA ;
 Tolerance : M = ±20% , N = ±30% ; Packaging: Clear tape and reel { standard }.



REEL DIMENSIONS AND PACKAGING QUANTITY

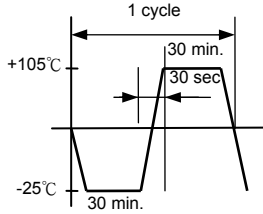


Unit: mm

TYPE	W	P	P0	P1	REEL SIZE	PCS / REEL
SPRI2D18LP	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.

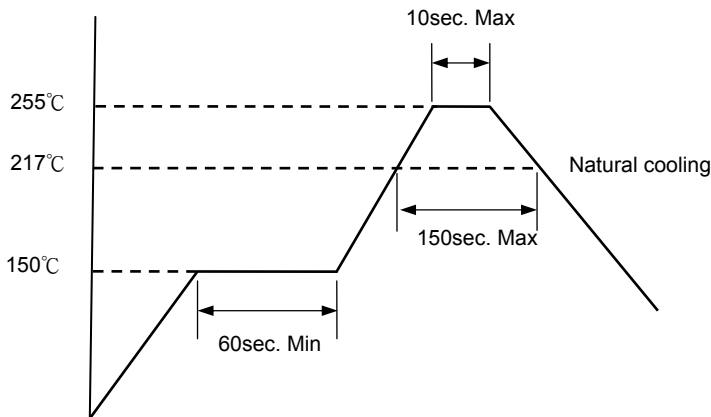


■ RECOMMENDED SOLDERING CONDITIONS

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.