



## Shielded SMT Power Inductor SPRI2D15LP Series

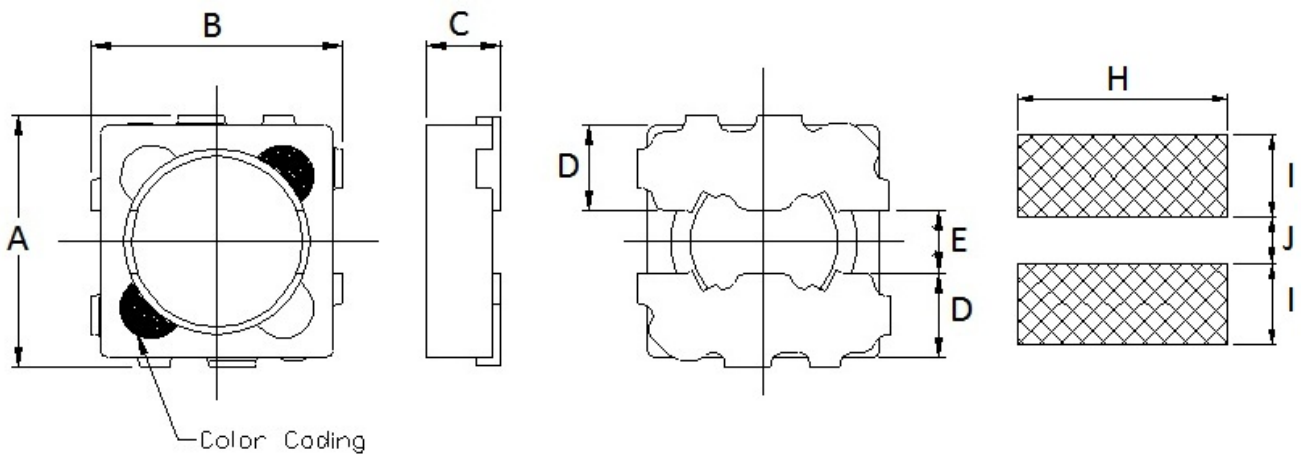
### ■ Feature

- 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	1.6	1.10	0.8
inch	0.126 ±0.008	0.126 ±0.008	0.063	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   2D15   LP   330   M   A  
1        2        3        4        5        6

1. Series Name
2. Size Code
3. Type Code
4. Inductance (R=Decimal Point)   Unit : uH  
330 = 33uH
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 from -25°C to 105°C



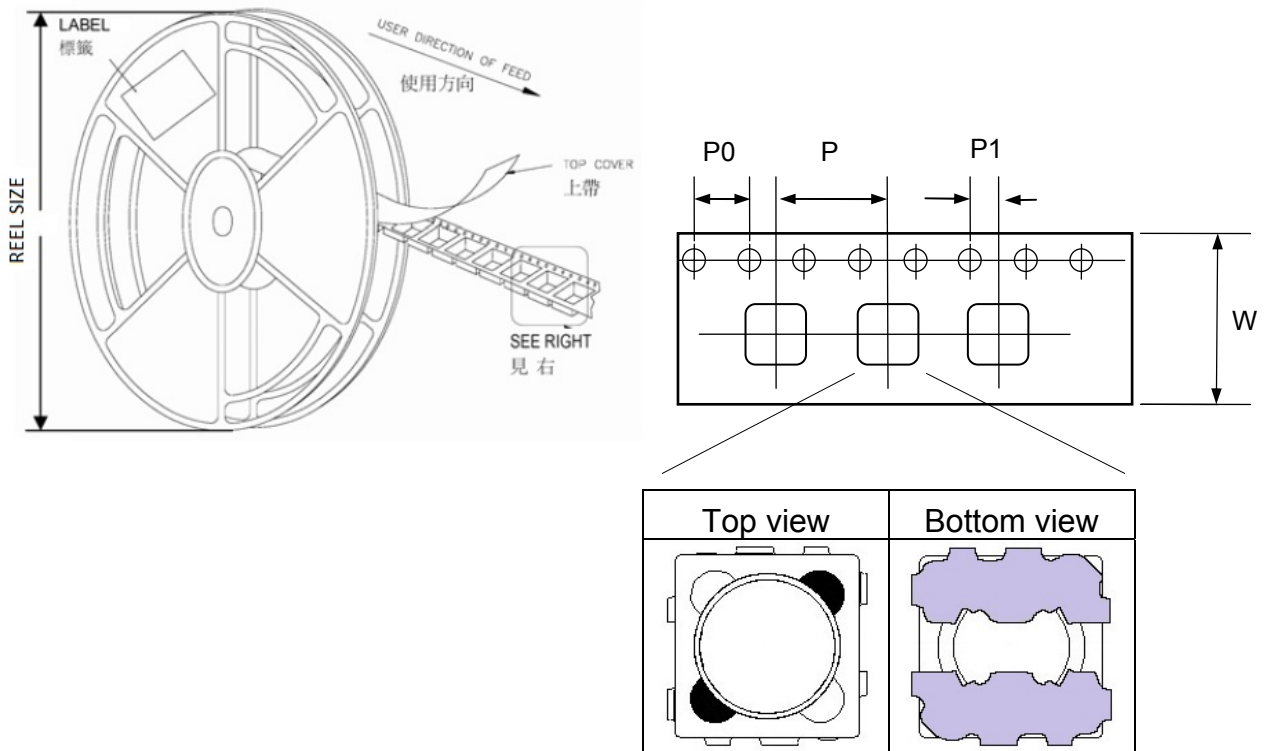
## 2. Part Number and Characteristics Table

Part Number	Inductance	Inductance	Rdc( $\Omega$ )	Idc Typ (mA)		Irms Typ (mA)	Color Coding
	( $\mu$ H)/KHz	Tolerance	Typ	L $\downarrow$ 10%	L $\downarrow$ 35%	T $\uparrow$ 25 $^{\circ}$ C	
SPRI2D15LP-1R0 $\square$ A	1.0/1	M, N	0.038	1040	1400	1800	Green
SPRI2D15LP-1R2 $\square$ A	1.2/1	M, N	0.041	1000	1300	1740	Blue
SPRI2D15LP-1R5 $\square$ A	1.5/1	M, N	0.046	940	1220	1700	Violet
SPRI2D15LP-1R8 $\square$ A	1.8/1	M, N	0.058	920	1160	1640	Gray
SPRI2D15LP-2R2 $\square$ A	2.2/1	M, N	0.066	880	1100	1600	White
SPRI2D15LP-2R7 $\square$ A	2.7/1	M, N	0.070	740	930	1450	Green
SPRI2D15LP-3R3 $\square$ A	3.3/1	M, N	0.091	680	900	1240	Blue
SPRI2D15LP-3R9 $\square$ A	3.9/1	M, N	0.115	620	820	1120	Violet
SPRI2D15LP-4R7 $\square$ A	4.7/1	M, N	0.132	600	740	1100	Gray
SPRI2D15LP-5R6 $\square$ A	5.6/1	M, N	0.156	580	700	1060	White
SPRI2D15LP-6R8 $\square$ A	6.8/1	M, N	0.166	420	620	1000	Green
SPRI2D15LP-8R2 $\square$ A	8.2/1	M, N	0.230	400	580	900	Blue
SPRI2D15LP-100 $\square$ A	10.0/1	M	0.244	380	500	800	Violet
SPRI2D15LP-120 $\square$ A	12.0/1	M	0.324	360	440	700	Gray
SPRI2D15LP-150 $\square$ A	15.0/1	M	0.370	360	420	700	White
SPRI2D15LP-180 $\square$ A	18.0/1	M	0.489	300	380	620	Green
SPRI2D15LP-220 $\square$ A	22.0/1	M	0.560	260	340	480	Blue
SPRI2D15LP-330 $\square$ A	33/1	M	0.990	230	280	470	Violet
SPRI2D15LP-470 $\square$ A	47/1	M	1.540	190	230	390	Gray
SPRI2D15LP-331 $\square$ A	330/1	M, N	10.30	70	90	150	Yellow

When ordering, please specify tolerance and packaging codes. Ex: SPRI2D15LP-330MA ;  
Tolerance : M =  $\pm$ 20% , N =  $\pm$ 30% ; Packaging: Clear tape and reel { standard }.



## REEL DIMENSIONS AND PACKAGING QUANTITY

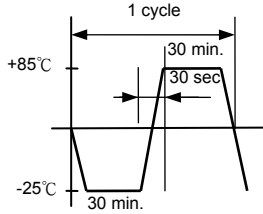


Unit: mm

TYPE	W	P	P0	P1	REEL SIZE	PCS / REEL
SPRI2D15LP	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 85±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.

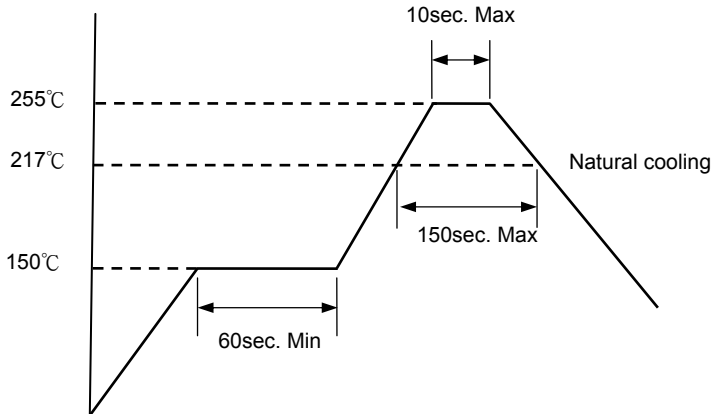


## ■ RECOMMENDED SOLDERING CONDITIONS

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.