



Shielded SMT Power Inductor SPRI2D10P Series

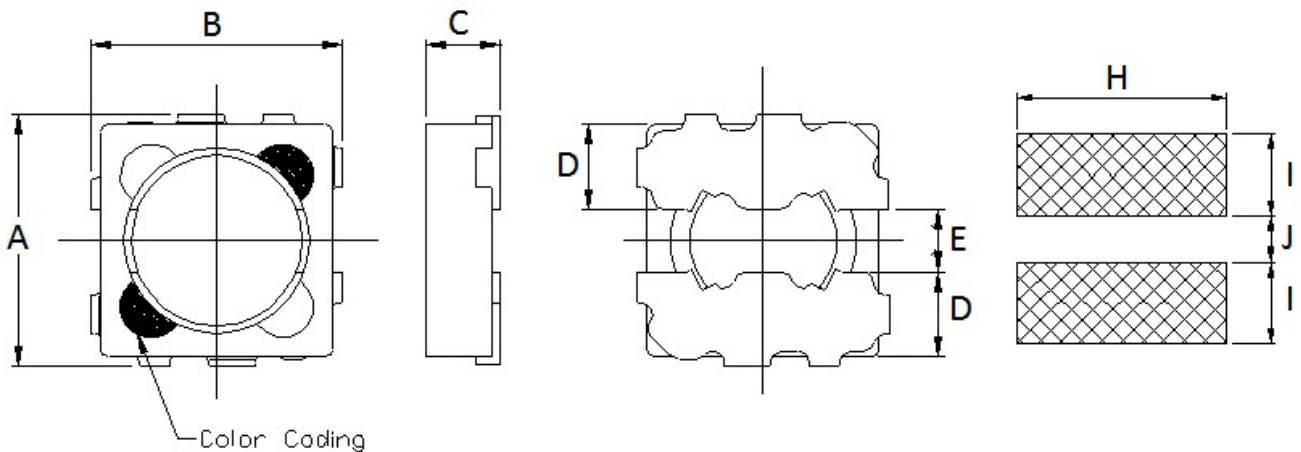
■ Feature

- Low profile, low Rdc, and high current handling capacities.
- 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	1.05	1.10	0.8
inch	0.126 ±0.008	0.126 ±0.008	0.041	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 2D10 P 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 or 40°C rise above 25°C ambient.
 - 1.5. Operating temperature range -40°C to 105°C



2. Part Number and Characteristics Table

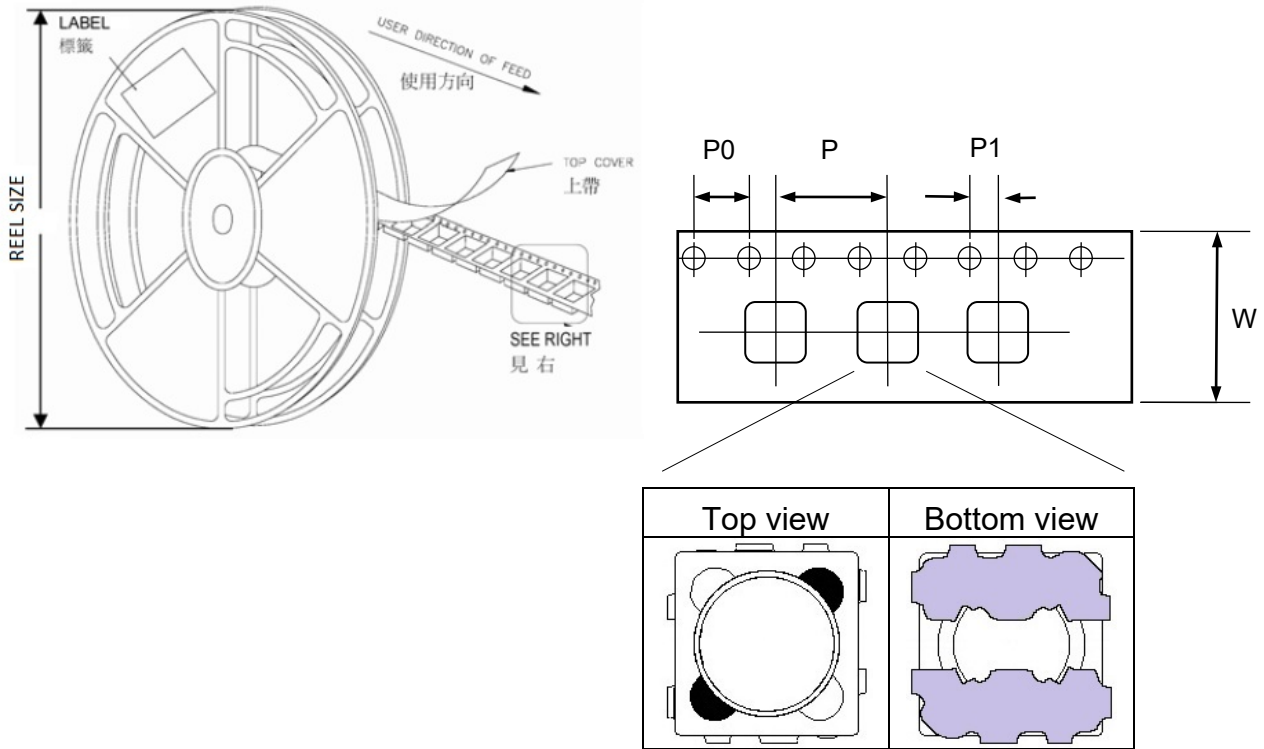
Part Number	Inductance	Inductance	Rdc(Ω)	Idc Typ (mA)		Irms Typ (mA)		Color Coding
	(uH) /KHz	Tolerance	Typ	L ↓ 10%	L ↓ 35%	T ↑ 25℃	T ↑ 40℃	
SPRI2D10P-R33□A	0.33	M, N	0.030	1800	2400	2800	3400	Orange
SPRI2D10P-R68□A	0.68	M, N	0.055	1100	1500	2000	3000	White
SPRI2D10P-1R0□A	1.00	M, N	0.065	1100	1500	1800	2600	Gray
SPRI2D10P-1R2□A	1.20	M, N	0.070	1000	1400	1500	2250	Black
SPRI2D10P-1R5□A	1.50	M, N	0.087	1000	1360	1400	2000	Brown
SPRI2D10P-1R8□A	1.80	M, N	0.097	900	1240	1350	1750	Red
SPRI2D10P-2R2□A	2.20	M, N	0.136	800	970	1100	1500	Orange
SPRI2D10P-2R7□A	2.70	M, N	0.127	760	940	1100	1600	Yellow
SPRI2D10P-3R3□A	3.30	M, N	0.175	680	880	1000	1500	Green
SPRI2D10P-3R9□A	3.90	M, N	0.200	620	840	900	1200	Blue
SPRI2D10P-4R7□A	4.70	M, N	0.274	600	820	850	1150	Violet
SPRI2D10P-5R6□A	5.60	M, N	0.319	540	720	750	1100	Gray
SPRI2D10P-6R8□A	6.80	M, N	0.330	460	600	700	1000	White
SPRI2D10P-8R2□A	8.20	M, N	0.420	440	580	650	850	Black
SPRI2D10P-100□A	10.0	M	0.470	420	540	600	750	Brown
SPRI2D10P-120□A	12.0	M	0.675	320	440	550	700	Red
SPRI2D10P-150□A	15.0	M	0.800	300	400	500	600	Orange
SPRI2D10P-180□A	18.0	M	0.890	300	380	450	550	Yellow
SPRI2D10P-220□A	22.0	M	1.100	260	320	400	500	Green
SPRI2D10P-270□A	27.0	M	1.600	240	300	340	450	Black
SPRI2D10P-330□A	33.0	M	1.600	220	280	340	450	Blue
SPRI2D10P-470□A	47.0	M	2.430	180	220	240	330	Black

When ordering, please specify tolerance and packaging codes. Ex: SPRI2D10P-3R3MA;

Tolerance : M = ±20% , N = ±30% ; Packaging: Clear tape and reel { standard }.



REEL DIMENSIONS AND PACKAGING QUANTITY

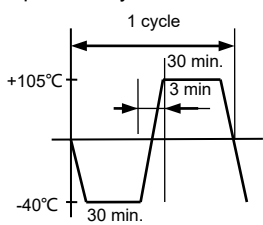


Unit: mm

TYPE	W	P	P0	P1	REEL SIZE	PCS / REEL
SPRI2D10P	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 -40±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.

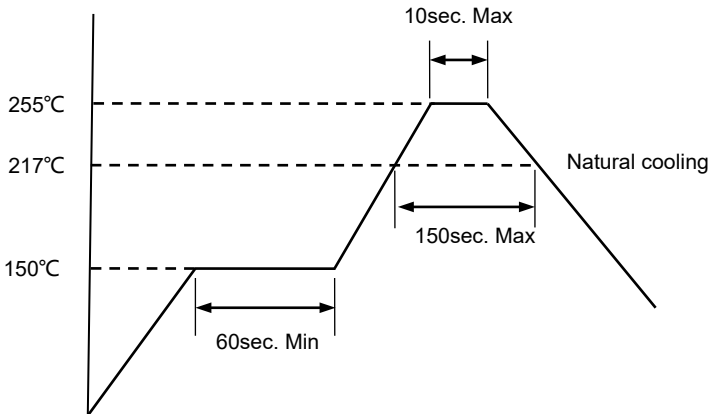


■ RECOMMENDED SOLDERING CONDITIONS

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 : -40~+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.