

SP11 Series Shielded Power Inductors

Features

- Magnetically shielded construction
- Ideal inductors for DC-DC conversion
- Low profile with low DCR and high current
- Available on tape and reel for auto surface mounting

Applications

- Power supplies
- FPTV, Games, AV equipment
- DC-DC converters, etc.
- Other various electronic appliances

Environmental Data

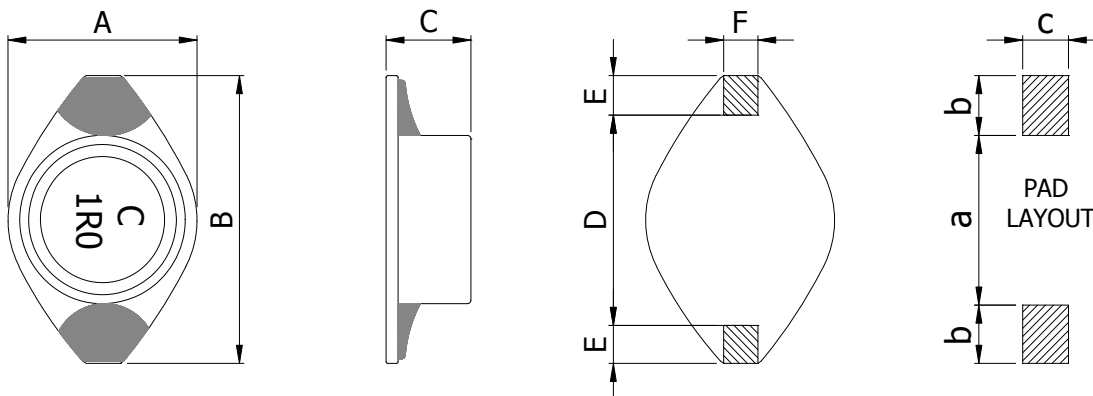
- Storage temperature range: -40°C to +85°C
- Operating temperature range: -40°C to +125°C (including coil's self-temperature rise)
- Solder reflow temperature: +260°C Max for 10 seconds Max
- Moisture sensitivity level: 1
- RoHS&HF compliance



Packaging

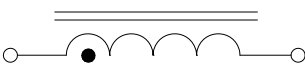
- Supplied in tape and reel packaging, 1000pcs(SP11-130051), 350pcs(SP09-185076), per 13-inch reel

Mechanical Dimension (Unit: mm/inches)



Type	A	B	C	D	E	F	a	b	c
	Max.	Max.	Max.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.
SP11-130051	9.40	12.95	5.08	7.62	2.54	2.54	7.37	2.92	2.79
	0.37	0.51	0.20	0.30	0.10	0.10	0.29	0.115	0.11
SP11-185076	15.24	18.54	7.62	12.70	2.54	2.54	12.45	2.92	2.79
	0.60	0.73	0.30	0.50	0.10	0.10	0.49	0.115	0.11

Electrical Schematic



Part Number Description

SP11 - 130051 1R0 N

① ② ③ ④

- ① Type
- ② Dimensions
- ③ Inductance value
- ④ Tolerance code

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Electrical Characteristic

Part Number	Inductance L0(uH)	SRF (MHz)Typ.	DCR (Ω)Max.	Isat (A)Max.	Irms (A)Max.	Marking
SP11-1300511R0N	1.0	140	0.021	5.6	5.0	C1R0
SP11-1300511R5N	1.5	120	0.022	5.2	4.5	C1R5
SP11-1300512R2N	2.2	80	0.032	5.0	3.8	C2R2
SP11-1300513R3N	3.3	70	0.039	3.9	3.3	C3R3
SP11-1300514R7N	4.7	40	0.054	3.2	2.7	C4R7
SP11-1300516R8N	6.8	38	0.075	2.8	2.2	C6R8
SP11-130051100M	10	35	0.101	2.4	2.0	C100
SP11-130051150M	15	25	0.150	2.0	1.5	C150
SP11-130051220M	22	19	0.207	1.6	1.3	C220
SP11-130051330M	33	15	0.334	1.4	1.1	C330
SP11-130051470M	47	13	0.472	1.0	0.8	C470

Electrical Characteristic

Part Number	Inductance L0(uH)	SRF (MHz)Typ.	DCR (Ω)Max.	Isat (A)Max.	Irms (A)Max.	Marking
SP11-185076100M	10	30	0.040	8.0	3.9	C100
SP11-185076150M	15	20	0.048	7.0	3.4	C150
SP11-185076220M	22	18	0.059	6.0	3.1	C220
SP11-185076330M	33	14	0.075	5.0	2.8	C330
SP11-185076470M	47	10	0.097	4.0	2.4	C470
SP11-185076680M	68	9.0	0.138	3.0	2.0	C680
SP11-185076101M	100	7.0	0.207	2.4	1.7	C101
SP11-185076151K	150	6.0	0.293	2.1	1.3	C151
SP11-185076221K	220	5.0	0.470	1.9	1.1	C221
SP11-185076331K	330	4.0	0.780	1.20	0.86	C331
SP11-185076471K	470	3.0	1.08	1.10	0.73	C471
SP11-185076681K	680	2.5	1.40	0.96	0.64	C681
SP11-185076102K	1000	2.0	2.01	0.80	0.53	C102

- Tolerance of Inductance:K= $\pm 10\%$,M= $\pm 20\%$,N= $\pm 30\%$.
- Test frequency and voltage:100KHz,0.1Vrms.
- All test data referenced to 25°C ambient.
- Saturation current(Isat) will cause L0 to drop approximately 10%.
- Heat rated current(Irms) will cause the coil temperature rise approximate Δt of 40°C.