

SP07 Series Shielded Power Inductors

Features

- Magnetic-resin shielded construction
- Frequency range up to 5MHz
- Alloy material core provides large saturation current
- Takes up less PCB real estate and save more power

Applications

- High current POL converters
- Low profile,high current power supplies
- DC-DC converters,etc.
- PAD,flat-screen TVs,set top box,movie cameras,servers,etc.

Environmental Data

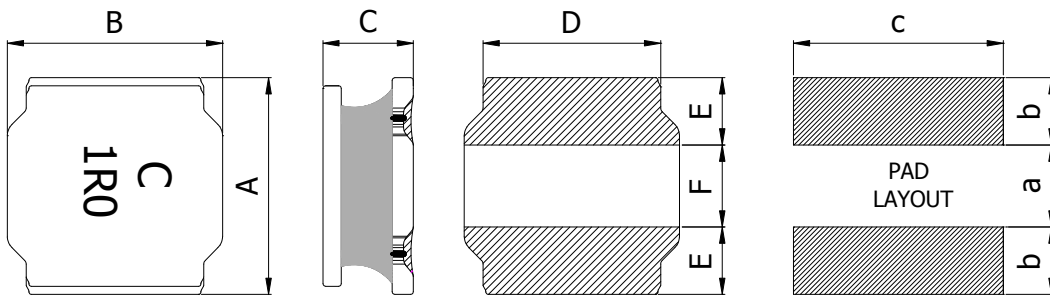
- Storage temperature range:-40°C to +85°C
- Operating temperature range:-40°C to +125°C (including coil's self-temperature rise)
- Solder reflow temperature:+260°C Max for 10 seconds Max
- Moisture sensitivity level:1
- RoHS&HF compliance



Packaging

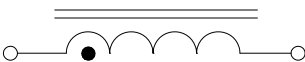
- Supplied in tape and reel packaging,
2000pcs(SP07-030012),per 7-inch reel,
3000pcs(SP07-030012),per 13-inch reel

Mechanical Dimension(Unit:mm/inches)



Type	A	B	C		E	F	a	b	c
			Max.	Nom.					
SP07-030012	3.0±0.2	3.0±0.2	1.2	2.6	0.75	1.5	1.5	0.8	3.2
	0.118±0.008	0.118±0.008	0.048	0.103	0.03	0.059	0.059	0.032	0.126
SP07-040020	4.0±0.2	4.0±0.2	2.0	3.1	0.95	2.1	1.9	1.1	3.7
	0.158±0.008	0.158±0.008	0.079	0.122	0.037	0.083	0.075	0.043	0.146

Electrical Schematic



Part Number Description

SP07 - 030012 1R5 M

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

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Electrical Characteristic

Part Number	Inductance	DCR	SRF	Isat		Irms		Marking
	L0(uH)	(Ω) \pm 30%	(MHz)Min.	(A) Max.	(A) Typ.	(A) Max.	(A) Typ.	
SP07-0300121R5M	1.5	0.064	37	3.40	4.10	2.50	2.90	1R5
SP07-0300122R2M	2.2	0.090	28	2.80	3.35	2.05	2.35	2R2
SP07-0300123R3M	3.3	0.129	25	2.20	2.60	1.70	2.00	3R3
SP07-0300124R7M	4.7	0.196	20	2.00	2.50	1.30	1.50	4R7
SP07-0300126R8M	6.8	0.290	16	1.60	1.90	1.10	1.25	6R8
SP07-030012100M	10	0.395	12	1.20	1.45	1.00	1.15	100

Electrical Characteristic

Part Number	Inductance	DCR	SRF	Isat		Irms		Marking
	L0(uH)	(Ω) \pm 30%	(MHz)Min.	(A) Max.	(A) Typ.	(A) Max.	(A) Typ.	
SP07-040020R22M	0.22	0.011	108	18.7	22.0	8.20	9.50	CR22
SP07-040020R47M	0.47	0.018	72	13.4	15.5	6.40	7.40	CR47
SP07-040020R68M	0.68	0.018	57	8.70	11.1	6.40	7.40	CR68
SP07-0400201R0M	1.0	0.022	37	8.70	11.1	5.80	6.70	C1R0
SP07-0400201R5M	1.5	0.030	30	7.70	9.60	5.20	6.00	C1R5
SP07-0400202R2M	2.2	0.040	25	6.10	7.60	4.30	5.00	C2R2
SP07-0400203R3M	3.3	0.060	19	4.70	5.90	3.45	4.00	C3R3
SP07-0400204R7M	4.7	0.090	17	4.00	4.90	2.85	3.30	C4R7
SP07-0400206R8M	6.8	0.130	13	3.00	4.20	2.40	2.80	C6R8
SP07-040020100M	10	0.180	11	2.80	3.50	2.00	2.35	C100

- Tolerance of Inductance:K= \pm 10%,M= \pm 20%,N= \pm 30%.
- Test frequency and voltage:100KHz,1Vrms.
- All test data referenced to 25°C ambient.
- Saturation current(Isat) will cause L0 to drop approximately 30%.
- Heat rated current(Irms) will cause the coil temperature rise approximate Δ t of 40°C.