

SP04 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
- Noise filtering and filter chokes
- DC-DC converters, etc.
- Buck, boost, forward, and resonant converters

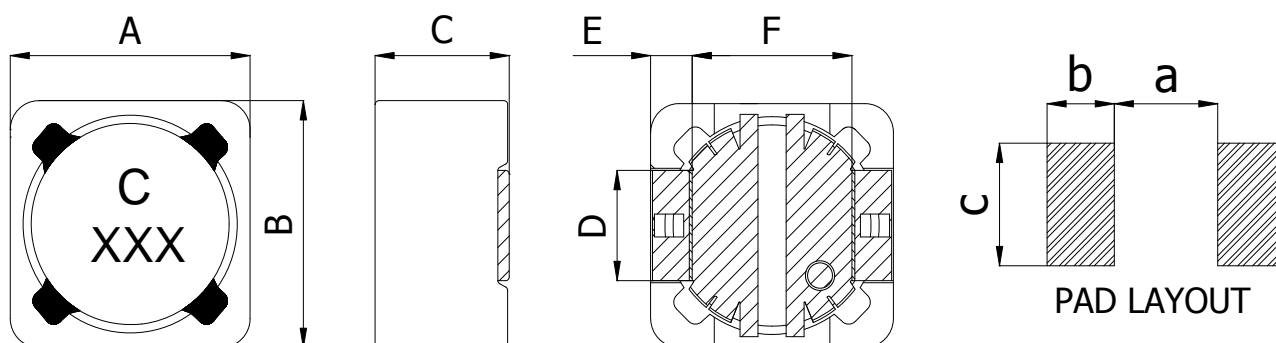
Environmental Data

- Storage temperature range: -40°C to +125°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

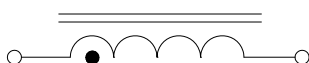
- Supplied in tape and reel packaging, 1200pcs(SP04-0703), 1000pcs(SP04-0704), per 13-inch reel

Mechanical Dimension (Unit: mm/inches)



Type	A	B	C	D	E	F	a	b	c
			Max.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.
SP04-0703	7.3±0.3	7.3±0.3	3.55	2.0	1.25	4.7	3.5	2.5	3.25
	0.288±0.012	0.288±0.012	0.14	0.079	0.049	0.185	0.138	0.098	0.128
SP04-0704	7.3±0.3	7.3±0.3	4.35	2.0	1.25	4.7	3.5	2.5	3.25
	0.288±0.012	0.288±0.012	0.172	0.079	0.049	0.185	0.138	0.098	0.128

Electrical Schematic



Part Number Description

SP04 - 0703 1R0 N

① ② ③ ④

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

SP04 Series Shielded Power Inductors

Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (mΩ)Typ.	DCR (mΩ)Max.	Isat (A)Typ.	Irms (A)Typ.	Marking
SP04-07031R0N	1.0	10.2	13.2	7.97	5.28	C1R0
SP04-07031R5N	1.5	13.0	16.9	6.52	4.67	C1R5
SP04-07032R2N	2.2	16.5	21.5	5.52	4.15	C2R2
SP04-07033R3M	3.3	25.9	33.7	4.22	3.31	C3R3
SP04-07034R7M	4.7	29.7	38.6	3.78	3.09	C4R7
SP04-07036R8M	6.8	43.5	56.5	3.12	2.55	C6R8
SP04-07038R2M	8.2	59.2	76.9	2.66	2.19	C8R2
SP04-0703100M	10	65.6	85.2	2.47	2.08	C100
SP04-0703150M	15	84.4	110	2.05	1.83	C150
SP04-0703220M	22	107	139	1.67	1.62	C220
SP04-0703330M	33	166	216	1.35	1.31	C330
SP04-0703470M	47	241	323	1.14	1.08	C470
SP04-0703680M	68	358	465	0.96	0.89	C680
SP04-0703820M	82	384	499	0.89	0.86	C820
SP04-0703101M	100	527	685	0.79	0.73	C101
SP04-0703151M	150	851	1106	0.65	0.58	C151
SP04-0703221M	220	1050	1365	0.53	0.52	C221
SP04-0703331M	330	1590	2067	0.44	0.42	C331
SP04-0703471M	470	2360	3068	0.37	0.35	C471
SP04-0703681M	680	3470	4511	0.31	0.29	C681
SP04-0703821M	820	3930	5109	0.28	0.27	C821
SP04-0703102K	1000	4340	5642	0.25	0.26	C102

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

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Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (mΩ)Typ.	DCR (mΩ)Max.	Isat (A)Typ.	Irms (A)Typ.	Marking
SP04-07041R0N	1.0	9.9	12.9	10.2	5.39	C1R0
SP04-07041R5N	1.5	11.8	15.4	8.35	4.94	C1R5
SP04-07042R2N	2.2	12.6	14.4	7.06	4.76	C2R2
SP04-07043R3M	3.3	18.3	23.8	5.40	3.94	C3R3
SP04-07044R7M	4.7	25.4	33.0	4.37	3.34	C4R7
SP04-07046R8M	6.8	41.8	54.3	3.67	2.60	C6R8
SP04-07048R2M	8.2	44.1	57.3	3.40	2.53	C8R2
SP04-0704100M	10	48.9	63.6	3.17	2.41	C100
SP04-0704150M	15	63.7	82.8	2.48	2.11	C150
SP04-0704220M	22	92.5	120	2.13	1.75	C220
SP04-0704330M	33	143	186	1.73	1.41	C330
SP04-0704470M	47	216	281	1.41	1.15	C470
SP04-0704680M	68	265	345	1.19	1.03	C680
SP04-0704820M	82	345	449	1.11	0.91	C820
SP04-0704101M	100	383	498	0.99	0.86	C101
SP04-0704151M	150	591	768	0.81	0.69	C151
SP04-0704221M	220	907	1179	0.66	0.56	C221
SP04-0704331M	330	1410	1833	0.54	0.45	C331
SP04-0704471M	470	1740	2262	0.46	0.40	C471
SP04-0704681M	680	2580	3354	0.38	0.33	C681
SP04-0704821M	820	2930	3809	0.35	0.31	C821
SP04-0704102K	1000	3890	5057	0.31	0.27	C102

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