SP10 Series Shielded Power Inductors

Features

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

Applications

- Power supplies
- Noise filtering and filter chokes
- DC-DC converters,etc.
- Other various electronic appliances

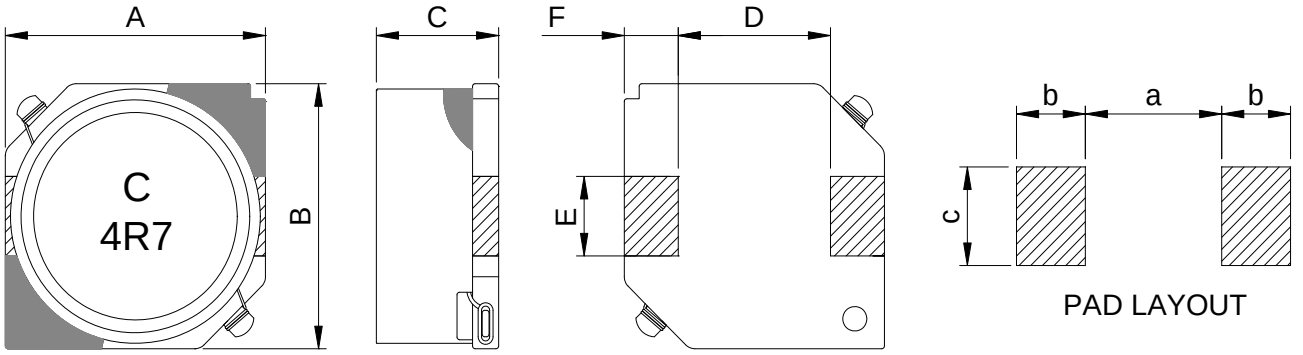
Environmental Data

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

Packaging

- Supplied in tape and reel packaging,
2400pcs(SP10-060028),1500pcs(SP10-060045),
1500pcs(SP10-070032),1000pcs(SP10-070045),
750pcs(SP10-101045),500pcs(SP10-101065),
500pcs(SP10-125065),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.
SP10-060028	6.2	6.2	3.0	3.0	2.0	1.5	3.0	2.0	2.2
	0.244	0.244	0.118	0.118	0.079	0.059	0.118	0.079	0.087
SP10-060045	6.2	6.2	4.8	3.0	2.0	1.5	3.0	2.0	2.2
	0.244	0.244	0.189	0.118	0.079	0.059	0.118	0.079	0.087
SP10-070032	7.2	7.2	3.4	4.0	2.0	1.5	4.0	2.0	2.2
	0.284	0.284	0.134	0.158	0.079	0.059	0.158	0.079	0.087
SP10-070045	7.2	7.2	4.8	4.0	2.0	1.5	4.0	2.0	2.2
	0.284	0.284	0.189	0.158	0.079	0.059	0.158	0.079	0.087
SP10-101045	10.4	10.4	4.8	6.0	3.0	2.05	5.6	2.5	3.2
	0.41	0.41	0.189	0.237	0.118	0.08	0.22	0.098	0.126
SP10-101065	10.4	10.4	6.8	6.0	3.0	2.05	5.6	2.5	3.2
	0.41	0.41	0.268	0.237	0.118	0.08	0.22	0.098	0.126
SP10-125065	12.8	12.8	6.85	8.5	3.0	2.0	8.5	2.6	3.2
	0.504	0.504	0.27	0.335	0.118	0.079	0.335	0.102	0.126

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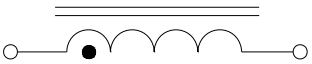
Electrical Schematic



Part Number Description

SP10 - 060028 4R7 M
① ② ③ ④

① Type
② Dimensions
③ Inductance value
④ Tolerance code

Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (Ω)±20%	Isat (A)Max.	Irms (A)Max.	Marking
SP10-0600284R7M	4.7	0.036	1.60	2.50	C4R7
SP10-0600286R8M	6.8	0.052	1.50	2.20	C6R8
SP10-060028100M	10	0.068	1.30	1.80	C100
SP10-060028150M	15	0.100	1.00	1.40	C150
SP10-060028220M	22	0.120	0.77	1.30	C220
SP10-060028330M	33	0.180	0.69	1.10	C330
SP10-060028470M	47	0.270	0.59	0.92	C470
SP10-060028680M	68	0.390	0.50	0.78	C680
SP10-060028101M	100	0.620	0.42	0.64	C101

Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (Ω)±30%	Isat (A)Max.	Irms (A)Max.	Marking
SP10-0600451R5N	1.5	0.016	4.00	4.10	C1R5
SP10-0600452R2N	2.2	0.018	3.30	3.80	C2R2
SP10-0600453R3N	3.3	0.022	2.80	3.40	C3R3
SP10-0600454R7N	4.7	0.027	2.40	3.20	C4R7
SP10-0600456R8N	6.8	0.033	2.00	2.80	C6R8
SP10-060045100M	10	0.039	1.60	2.70	C100
SP10-060045150M	15	0.060	1.30	2.20	C150
SP10-060045220M	22	0.082	1.10	1.80	C220

- Tolerance of Inductance:K= ±10%,M= ±20%,N= ±30%.
- Test frequency and voltage:100KHz,0.1Vrms.
- All test data referenced to 25℃ ambient.
- Saturation current(Isat) will cause L0 to drop approximately 10%(SP10-060028 is 30%).
- Heat rated current(Irms) will cause the coil temperature rise approximate Δt of 40℃.

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Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (Ω)±20%	Isat (A)Max.	Irms (A)Max.	Marking
SP10-0700323R3M	3.3	0.023	1.90	1.90	C3R3
SP10-0700324R7M	4.7	0.036	1.70	1.70	C4R7
SP10-0700326R8M	6.8	0.041	1.60	1.60	C6R8
SP10-070032100M	10	0.053	1.40	1.40	C100
SP10-070032150M	15	0.075	1.10	1.10	C150
SP10-070032220M	22	0.110	0.96	0.96	C220
SP10-070032330M	33	0.160	0.75	0.75	C330
SP10-070032470M	47	0.240	0.67	0.67	C470
SP10-070032680M	68	0.310	0.59	0.59	C680
SP10-070032101M	100	0.450	0.45	0.45	C101
SP10-070032151M	150	0.650	0.37	0.37	C151
SP10-070032221M	220	1.050	0.29	0.29	C221
SP10-070032331M	330	1.670	0.22	0.22	C331
SP10-070032471M	470	2.050	0.20	0.20	C471
SP10-070032681M	680	3.150	0.16	0.16	C681
SP10-070032102M	1000	4.780	0.13	0.13	C102

Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (Ω)±20%	Isat (A)Max.	Irms (A)Max.	Marking
SP10-0700453R3M	3.3	0.020	2.50	2.30	C3R3
SP10-0700454R7M	4.7	0.030	2.00	2.10	C4R7
SP10-0700456R8M	6.8	0.039	1.70	1.74	C6R8
SP10-070045100M	10	0.036	1.30	1.68	C100
SP10-070045150M	15	0.052	1.10	1.53	C150
SP10-070045220M	22	0.061	0.90	1.34	C220
SP10-070045330M	33	0.096	0.82	1.09	C330
SP10-070045470M	47	0.125	0.75	0.92	C470
SP10-070045680M	68	0.175	0.60	0.77	C680
SP10-070045101M	100	0.250	0.50	0.65	C101
SP10-070045151M	150	0.340	0.40	0.55	C151
SP10-070045221M	220	0.520	0.33	0.45	C221
SP10-070045331M	330	0.740	0.25	0.37	C331
SP10-070045471M	470	1.050	0.22	0.31	C471
SP10-070045681M	680	1.480	0.20	0.27	C681
SP10-070045102M	1000	2.280	0.14	0.25	C102

- Tolerance of Inductance:K= ±10%,M= ±20%,N= ±30%.
- Test frequency and voltage:100KHz,0.1Vrms.
- All test data referenced to 25℃ 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℃.

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Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (Ω)±20%	Isat (A)Max.	Irms (A)Max.	Marking
SP10-1010453R3N	3.3	0.016	4.90	3.70	C3R3
SP10-1010455R6N	5.6	0.022	3.80	3.20	C5R6
SP10-101045100M	10	0.036	3.00	2.50	C100
SP10-101045150M	15	0.047	2.40	2.20	C150
SP10-101045220M	22	0.059	2.10	1.90	C220
SP10-101045330M	33	0.082	1.60	1.70	C330
SP10-101045470M	47	0.100	1.40	1.50	C470
SP10-101045680M	68	0.140	1.20	1.30	C680
SP10-101045101K	100	0.200	1.00	1.10	C101
SP10-101045151K	150	0.350	0.79	0.81	C151
SP10-101045221K	220	0.470	0.65	0.70	C221
SP10-101045331K	330	0.680	0.54	0.58	C331
SP10-101045471K	470	1.030	0.47	0.47	C471
SP10-101045681K	680	1.600	0.38	0.38	C681
SP10-101045102K	1000	2.800	0.32	0.29	C102
SP10-101045152K	1500	3.400	0.22	0.26	C152

Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (Ω)±30%	Isat (A)Max.	Irms (A)Max.	Marking
SP10-1010651R5N	1.5	0.007	10.7	6.80	C1R5
SP10-1010652R2N	2.2	0.009	8.90	6.30	C2R2
SP10-1010653R3N	3.3	0.010	7.80	5.80	C3R3
SP10-1010654R7N	4.7	0.012	6.10	4.70	C4R7
SP10-1010656R8N	6.8	0.014	4.60	4.30	C6R8
SP10-101065100M	10	0.019	4.10	3.80	C100
SP10-101065150M	15	0.027	3.10	3.10	C150
SP10-101065220M	22	0.045	2.70	2.40	C220

- Tolerance of Inductance:K= ±10%,M= ±20%,N= ±30%.
- Test frequency and voltage:1KHz,0.5Vrms.
- All test data referenced to 25℃ 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℃.

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Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (mΩ)±20%	Isat (A)Max.	Irms (A)Max.	Marking
SP10-1250652R0N	2.0	11.7	10.0	6.20	C2R0
SP10-1250654R2N	4.2	15.0	7.30	5.50	C4R2
SP10-1250657R0N	7.0	17.7	5.70	5.00	C7R0
SP10-125065100M	10	20.2	5.00	4.80	C100
SP10-125065150M	15	23.7	4.20	4.40	C150
SP10-125065220M	22	31.6	3.50	3.80	C220
SP10-125065330M	33	40.6	2.80	3.40	C330
SP10-125065470M	47	57.8	2.40	2.80	C470
SP10-125065680M	68	78.7	2.00	2.40	C680
SP10-125065101M	100	123	1.60	1.90	C101
SP10-125065151M	150	273	1.00	1.20	C151

- Tolerance of Inductance:K= ±10%,M= ±20%,N= ±30%.
- Test frequency and voltage:1KHz,0.5Vrms.
- All test data referenced to 25℃ 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℃.