SP05 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.
- Buck,boost,forward,and resonant converters

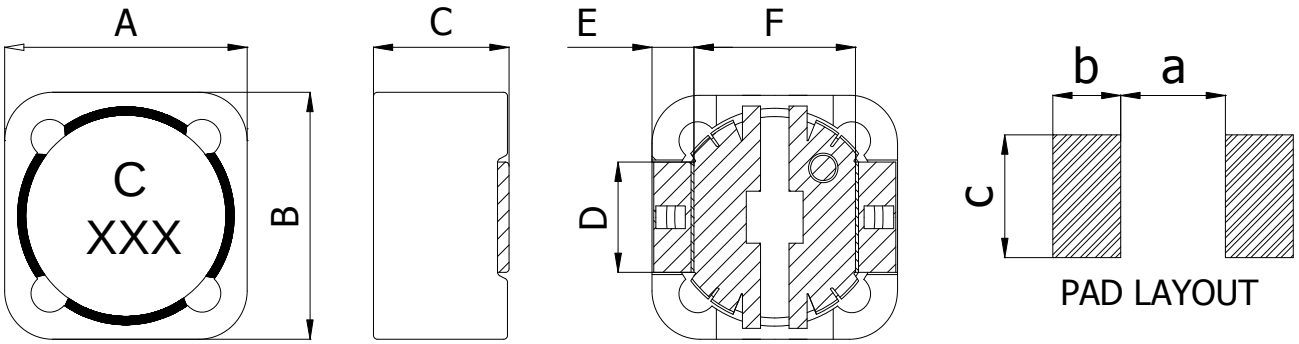
Environmental Data

- 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

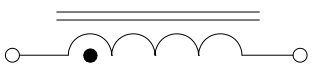
- Supplied in tape and reel packaging,
  500pcs(SP05-1206),400pcs(SP05-1208),per 13-inch reel

Mechanical Dimension(Unit:mm/inches)



Type	A	B	C	D	E	F	a	b	c
			Max.	Nom.	Nom.	Nom.	Nom.	Nom.	Nom.
SP05-1206	12.3±0.3	12.3±0.3	6.0	4.9	2.0	7.9	6.1	3.85	5.5
	0.484±0.012	0.484±0.012	0.236	0.193	0.079	0.311	0.24	0.151	0.217
SP05-1208	12.3±0.3	12.3±0.3	8.0	4.9	2.0	7.9	6.1	3.85	5.5
	0.484±0.012	0.484±0.012	0.315	0.193	0.079	0.311	0.24	0.151	0.217

Electrical Schematic



Part Number Description

SP05 - 1206 1R0 N
① ② ③ ④

① Type
② Dimensions
③ Inductance value
④ Tolerance code

SP05 Series Shielded Power Inductors

Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (mΩ)Typ.	DCR (mΩ)Max.	Isat (A)Typ.	Irms (A)Typ.	Marking
SP05-12061R0N	1.0	2.4	3.1	23.6	15.0	C1R0
SP05-12061R5N	1.5	2.9	3.8	18.3	13.8	C1R5
SP05-12062R2N	2.2	4.5	5.9	15.0	10.9	C2R2
SP05-12063R3M	3.3	6.3	8.2	12.7	9.26	C3R3
SP05-12064R7M	4.7	10.5	13.7	9.71	7.18	C4R7
SP05-12066R8M	6.8	12.3	16.0	8.68	6.64	C6R8
SP05-12068R2M	8.2	17.6	22.9	7.86	5.54	C8R2
SP05-1206100M	10	18.9	24.6	7.17	5.35	C100
SP05-1206150M	15	29.8	38.7	5.69	4.27	C150
SP05-1206180M	18	37.7	49.0	5.32	3.81	C180
SP05-1206220M	22	39.6	51.5	4.71	3.70	C220
SP05-1206330M	33	50.5	65.7	3.84	3.28	C330
SP05-1206470M	47	74	96	3.24	2.71	C470
SP05-1206560M	56	102	133	3.00	2.31	C560
SP05-1206680M	68	101	131	2.70	2.22	C680
SP05-1206820M	82	128	166	2.39	2.05	C820
SP05-1206101M	100	170	221	2.20	1.78	C101
SP05-1206151M	150	248	322	1.81	1.48	C151
SP05-1206221M	220	384	499	1.51	1.19	C221
SP05-1206331M	330	482	627	1.22	1.06	C331
SP05-1206471M	470	718	933	1.02	0.87	C471
SP05-1206681M	680	1100	1430	0.85	0.70	C681
SP05-1206821M	820	1490	1937	0.77	0.60	C821
SP05-1206102K	1000	1690	2197	0.70	0.57	C102
SP05-1206472K	4700	7530	9789	0.32	0.268	C472
SP05-1206124K	120000	150000	195000	0.069	0.060	C124

- 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 30% typical.
- Heat rated current(Irms) will cause the coil temperature rise approximately Δt of 40℃.

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Electrical Characteristic

Part Number	Inductance L0(uH)	DCR (mΩ)Typ.	DCR (mΩ)Max.	Isat (A)Typ.	Irms (A)Typ.	Marking
SP05-12081R0N	1.0	3.13	4.07	40.0	15.5	C1R0
SP05-12081R5N	1.5	3.41	4.43	31.1	13.5	C1R5
SP05-12082R2N	2.2	4.02	5.23	25.5	12.5	C2R2
SP05-12083R3M	3.3	5.67	7.37	21.5	10.5	C3R3
SP05-12084R7M	4.7	9.17	11.92	16.5	8.25	C4R7
SP05-12086R8M	6.8	11.6	15.1	13.3	7.34	C6R8
SP05-12088R2M	8.2	15.7	20.4	12.2	6.32	C8R2
SP05-1208100M	10	17.2	22.4	11.2	6.04	C100
SP05-1208150M	15	24.7	32.1	9.66	5.03	C150
SP05-1208220M	22	39.1	50.8	7.57	4.00	C220
SP05-1208330M	33	60.0	78.0	6.22	3.23	C330
SP05-1208470M	47	71.9	93.5	5.28	2.95	C470
SP05-1208680M	68	105	137	4.44	2.44	C680
SP05-1208820M	82	143	186	4.06	2.09	C820
SP05-1208101M	100	163	212	3.64	1.96	C101
SP05-1208151M	150	247	321	3.01	1.59	C151
SP05-1208221M	220	376	489	2.43	1.29	C221
SP05-1208331M	330	574	746	2.01	1.04	C331
SP05-1208471M	470	861	1119	1.68	0.85	C471
SP05-1208681M	680	1080	1404	1.39	0.76	C681
SP05-1208821M	820	1470	1911	1.27	0.65	C821
SP05-1208102K	1000	1660	2158	1.14	0.61	C102

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