

# SMD POWER INDUCTOR

## FEATURES/APPLICATIONS

- Carrier tape packing use for SMT.
- High rated current & Low DCR, Quadrate; Width: 6.2mm ~ 12mm, Height: 3.0mm ~ 8.0mm.
- Magnetically shielded construction.
- Suitable for reflow SMT craft soldering.
- Lead free products, RoHS compliant.
- Widely use in DC-DC converter / Portable camera / LCD Monitor / Notebook / Network telecommunications / Power supply for portable communication equipment etc.

## SHAPE AND DIMENSIONS (unit: mm)

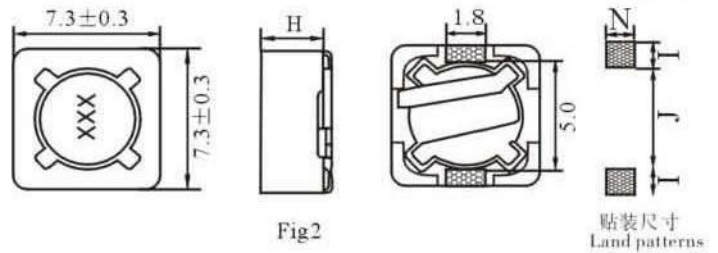
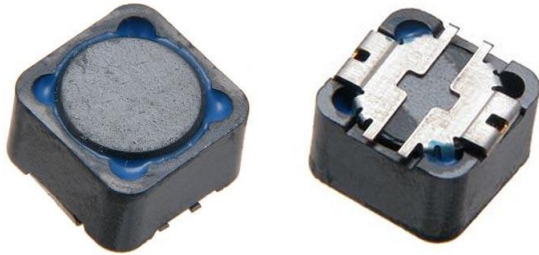


Fig 2

貼裝尺寸  
Land patterns

TYPE	H (max)	N	I	J	Fig
D SP073	3.4	2.2	1.6	4.8	2
D SP074	4.5	2.2	1.6	4.8	2
D SP124	4.5	5.4	2.9	7.0	3
D SP125	6.0	5.4	2.9	7.0	3
D SP127	8.0	5.4	2.9	7.0	3

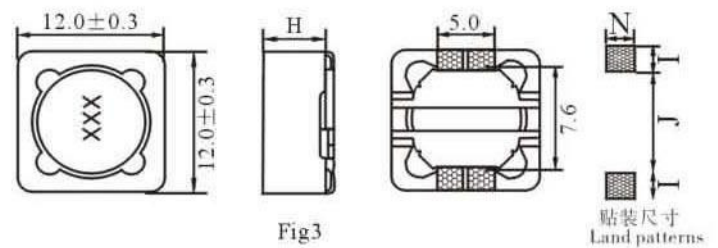


Fig 3

貼裝尺寸  
Land patterns

## Electrical Characteristics D SP073 Series

Part NO.	Test Condition	Inductance [ $\mu$ H]	Tolerance [%]	DC Resistance [ $\Omega$ ] Max	Rated Current [A] Max
D SP073/0010.0	100KHz / 0.1V	10	$\pm 20$	0.072	1.68
D SP073/0012.0	100KHz / 0.1V	12	$\pm 20$	0.098	1.52
D SP073/0015.0	100KHz / 0.1V	15	$\pm 20$	0.130	1.33
D SP073/0018.0	100KHz / 0.1V	18	$\pm 20$	0.140	1.20
D SP073/0022.0	100KHz / 0.1V	22	$\pm 20$	0.190	1.07
D SP073/0027.0	100KHz / 0.1V	27	$\pm 20$	0.210	0.96
D SP073/0033.0	100KHz / 0.1V	33	$\pm 20$	0.240	0.91
D SP073/0039.0	100KHz / 0.1V	39	$\pm 20$	0.320	0.77
D SP073/0047.0	100KHz / 0.1V	47	$\pm 20$	0.360	0.76
D SP073/0056.0	100KHz / 0.1V	56	$\pm 20$	0.470	0.68
D SP073/0068.0	100KHz / 0.1V	68	$\pm 20$	0.520	0.61
D SP073/0082.0	100KHz / 0.1V	82	$\pm 20$	0.690	0.57
D SP073/0100.0	100KHz / 0.1V	100	$\pm 20$	0.790	0.50
D SP073/0120.0	100KHz / 0.1V	120	$\pm 20$	0.890	0.49
D SP073/0150.0	100KHz / 0.1V	150	$\pm 20$	1.270	0.43
D SP073/0180.0	100KHz / 0.1V	180	$\pm 20$	1.450	0.38
D SP073/0220.0	100KHz / 0.1V	220	$\pm 20$	1.650	0.35
D SP073/0270.0	100KHz / 0.1V	270	$\pm 20$	2.310	0.32
D SP073/0330.0	100KHz / 0.1V	330	$\pm 20$	2.620	0.28
D SP073/0390.0	100KHz / 0.1V	390	$\pm 20$	2.940	0.26
D SP073/0470.0	100KHz / 0.1V	470	$\pm 20$	4.180	0.24
D SP073/0560.0	100KHz / 0.1V	560	$\pm 20$	4.670	0.22
D SP073/0680.0	100KHz / 0.1V	680	$\pm 20$	5.730	0.19
D SP073/0820.0	100KHz / 0.1V	820	$\pm 20$	6.540	0.18
D SP073/1000.0	100KHz / 0.1V	1000	$\pm 20$	9.440	0.16

## Electrical Characteristics D SP074 Series

Part NO.	Test Condition	Inductance [ $\mu$ H]	Tolerance [%]	DC Resistance [ $\Omega$ ] Max	Rated Current [A] Max
D SP074/0010.0	100KHz / 0.1V	10	$\pm 20$	0.05	1.84
D SP074/0012.0	100KHz / 0.1V	12	$\pm 20$	0.06	1.71
D SP074/0015.0	100KHz / 0.1V	15	$\pm 20$	0.08	1.47
D SP074/0018.0	100KHz / 0.1V	18	$\pm 20$	0.09	1.31
D SP074/0022.0	100KHz / 0.1V	22	$\pm 20$	0.11	1.23
D SP074/0027.0	100KHz / 0.1V	27	$\pm 20$	0.15	1.12
D SP074/0033.0	100KHz / 0.1V	33	$\pm 20$	0.17	0.96
D SP074/0039.0	100KHz / 0.1V	39	$\pm 20$	0.23	0.91
D SP074/0047.0	100KHz / 0.1V	47	$\pm 20$	0.26	0.88
D SP074/0056.0	100KHz / 0.1V	56	$\pm 20$	0.35	0.75
D SP074/0068.0	100KHz / 0.1V	68	$\pm 20$	0.38	0.69
D SP074/0082.0	100KHz / 0.1V	82	$\pm 20$	0.43	0.61
D SP074/0100.0	100KHz / 0.1V	100	$\pm 20$	0.61	0.6
D SP074/0120.0	100KHz / 0.1V	120	$\pm 20$	0.66	0.52
D SP074/0150.0	100KHz / 0.1V	150	$\pm 20$	0.88	0.46
D SP074/0180.0	100KHz / 0.1V	180	$\pm 20$	0.98	0.42
D SP074/0220.0	100KHz / 0.1V	220	$\pm 20$	1.17	0.36
D SP074/0270.0	100KHz / 0.1V	270	$\pm 20$	1.64	0.34
D SP074/0330.0	100KHz / 0.1V	330	$\pm 20$	1.86	0.32
D SP074/0390.0	100KHz / 0.1V	390	$\pm 20$	2.85	0.29
D SP074/0470.0	100KHz / 0.1V	470	$\pm 20$	3.01	0.26
D SP074/0560.0	100KHz / 0.1V	560	$\pm 20$	3.62	0.23
D SP074/0680.0	100KHz / 0.1V	680	$\pm 20$	4.63	0.22
D SP074/0820.0	100KHz / 0.1V	820	$\pm 20$	5.20	0.20
D SP074/1000.0	100KHz / 0.1V	1000	$\pm 20$	6.00	0.18

## Electrical Characteristics D SP124 Series

Part NO.	Test Condition	Inductance [ $\mu$ H]	Tolerance [%]	DC Resistance [ $\Omega$ ] Max	Rated Current [A] Max
D SP124/0003.9	100KHz / 0.1V	3.9	$\pm 30$	0.015	6.50
D SP124/0004.7	100KHz / 0.1V	4.7	$\pm 30$	0.018	5.70
D SP124/0006.8	100KHz / 0.1V	6.8	$\pm 30$	0.023	4.90
D SP124/0010.0	100KHz / 0.1V	10	$\pm 20$	0.028	4.50
D SP124/0012.0	100KHz / 0.1V	12	$\pm 20$	0.038	4.00
D SP124/0015.0	100KHz / 0.1V	15	$\pm 20$	0.050	3.20
D SP124/0018.0	100KHz / 0.1V	18	$\pm 20$	0.057	3.10
D SP124/0022.0	100KHz / 0.1V	22	$\pm 20$	0.066	2.90
D SP124/0027.0	100KHz / 0.1V	27	$\pm 20$	0.080	2.80
D SP124/0033.0	100KHz / 0.1V	33	$\pm 20$	0.097	2.70
D SP124/0039.0	100KHz / 0.1V	39	$\pm 20$	0.132	2.10
D SP124/0047.0	100KHz / 0.1V	47	$\pm 20$	0.150	1.90
D SP124/0056.0	100KHz / 0.1V	56	$\pm 20$	0.190	1.80
D SP124/0068.0	100KHz / 0.1V	68	$\pm 20$	0.220	1.50
D SP124/0082.0	100KHz / 0.1V	82	$\pm 20$	0.260	1.30
D SP124/0100.0	100KHz / 0.1V	100	$\pm 20$	0.308	1.20
D SP124/0120.0	100KHz / 0.1V	120	$\pm 20$	0.380	1.10
D SP124/0150.0	100KHz / 0.1V	150	$\pm 20$	0.530	0.95
D SP124/0180.0	100KHz / 0.1V	180	$\pm 20$	0.620	0.85
D SP124/0220.0	100KHz / 0.1V	220	$\pm 20$	0.700	0.80
D SP124/0270.0	100KHz / 0.1V	270	$\pm 20$	0.876	0.60
D SP124/0330.0	100KHz / 0.1V	330	$\pm 20$	0.990	0.50
D SP124/0470.0	100KHz / 0.1V	470	$\pm 20$	1.500	0.53
D SP124/1000.0	100KHz / 0.1V	1000	$\pm 20$	2.800	0.36

## Electrical Characteristics D SP125 Series

Part NO.	Test Condition	Inductance [ $\mu$ H]	Tolerance [%]	DC Resistance [ $\Omega$ ] Max	Rated Current [A] Max
D SP125/0001.3	100KHz / 0.1V	1.3	$\pm 30$	0.012	8.00
D SP125/0002.1	100KHz / 0.1V	2.1	$\pm 30$	0.014	7.00
D SP125/0003.1	100KHz / 0.1V	3.1	$\pm 30$	0.017	6.00
D SP125/0004.4	100KHz / 0.1V	4.4	$\pm 30$	0.020	5.00
D SP125/0005.8	100KHz / 0.1V	5.8	$\pm 30$	0.021	4.40
D SP125/0007.5	100KHz / 0.1V	7.5	$\pm 30$	0.024	4.20
D SP125/0010.0	100KHz / 0.1V	10	$\pm 20$	0.025	4.00
D SP125/0012.0	100KHz / 0.1V	12	$\pm 20$	0.027	3.50
D SP125/0015.0	100KHz / 0.1V	15	$\pm 20$	0.030	3.30
D SP125/0018.0	100KHz / 0.1V	18	$\pm 20$	0.034	3.00
D SP125/0022.0	100KHz / 0.1V	22	$\pm 20$	0.036	2.80
D SP125/0027.0	100KHz / 0.1V	27	$\pm 20$	0.051	2.30
D SP125/0033.0	100KHz / 0.1V	33	$\pm 20$	0.057	2.10
D SP125/0039.0	100KHz / 0.1V	39	$\pm 20$	0.068	2.00
D SP125/0047.0	100KHz / 0.1V	47	$\pm 20$	0.075	1.80
D SP125/0056.0	100KHz / 0.1V	56	$\pm 20$	0.110	1.70
D SP125/0068.0	100KHz / 0.1V	68	$\pm 20$	0.120	1.50
D SP125/0082.0	100KHz / 0.1V	82	$\pm 20$	0.140	1.40
D SP125/0100.0	100KHz / 0.1V	100	$\pm 20$	0.160	1.30
D SP125/0120.0	100KHz / 0.1V	120	$\pm 20$	0.170	1.10
D SP125/0150.0	100KHz / 0.1V	150	$\pm 20$	0.230	1.00
D SP125/0180.0	100KHz / 0.1V	180	$\pm 20$	0.290	0.90
D SP125/0220.0	100KHz / 0.1V	220	$\pm 20$	0.400	0.80
D SP125/0270.0	100KHz / 0.1V	270	$\pm 20$	0.460	0.75
D SP125/0330.0	100KHz / 0.1V	330	$\pm 20$	0.510	0.68
D SP125/0390.0	100KHz / 0.1V	390	$\pm 20$	0.690	0.65
D SP125/0470.0	100KHz / 0.1V	470	$\pm 20$	0.770	0.58
D SP125/0560.0	100KHz / 0.1V	560	$\pm 20$	0.860	0.54
D SP125/0680.0	100KHz / 0.1V	680	$\pm 20$	1.200	0.48
D SP125/0820.0	100KHz / 0.1V	820	$\pm 20$	1.340	0.43
D SP125/1000.0	100KHz / 0.1V	1000	$\pm 20$	1.530	0.40

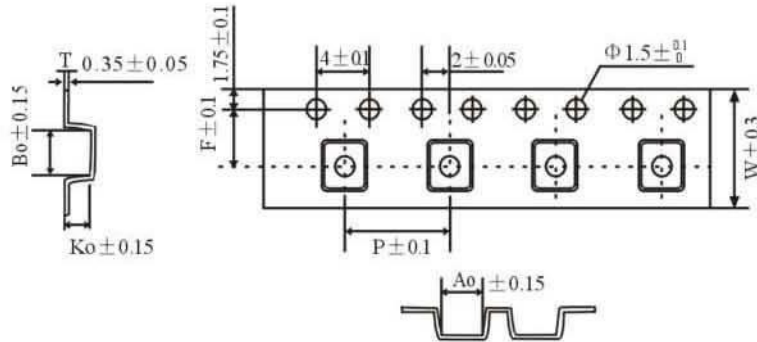
## Electrical Characteristics D SP127 Series

Part NO.	Test Condition	Inductance [ $\mu$ H]	Tolerance [%]	DC Resistance [ $\Omega$ ] Max	Rated Current [A] Max
D SP127/0001.2	100KHz / 0.1V	1.2	$\pm 30$	0.007	9.80
D SP127/0002.4	100KHz / 0.1V	2.4	$\pm 30$	0.012	8.00
D SP127/0003.5	100KHz / 0.1V	3.5	$\pm 30$	0.014	7.50
D SP127/0004.7	100KHz / 0.1V	4.7	$\pm 30$	0.016	6.80
D SP127/0006.1	100KHz / 0.1V	6.1	$\pm 30$	0.018	6.60
D SP127/0007.6	100KHz / 0.1V	7.6	$\pm 30$	0.020	5.90
D SP127/0010.0	100KHz / 0.1V	10	$\pm 20$	0.022	5.40
D SP127/0012.0	100KHz / 0.1V	12	$\pm 20$	0.025	4.90
D SP127/0015.0	100KHz / 0.1V	15	$\pm 20$	0.027	4.50
D SP127/0018.0	100KHz / 0.1V	18	$\pm 20$	0.039	3.90
D SP127/0022.0	100KHz / 0.1V	22	$\pm 20$	0.043	3.60
D SP127/0027.0	100KHz / 0.1V	27	$\pm 20$	0.046	3.40
D SP127/0033.0	100KHz / 0.1V	33	$\pm 20$	0.065	3.00
D SP127/0039.0	100KHz / 0.1V	39	$\pm 20$	0.073	2.75
D SP127/0047.0	100KHz / 0.1V	47	$\pm 20$	0.100	2.50
D SP127/0056.0	100KHz / 0.1V	56	$\pm 20$	0.110	2.35
D SP127/0068.0	100KHz / 0.1V	68	$\pm 20$	0.140	2.10
D SP127/0082.0	100KHz / 0.1V	82	$\pm 20$	0.160	1.95
D SP127/0100.0	100KHz / 0.1V	100	$\pm 20$	0.220	1.70
D SP127/0120.0	100KHz / 0.1V	120	$\pm 20$	0.250	1.60
D SP127/0150.0	100KHz / 0.1V	150	$\pm 20$	0.280	1.42
D SP127/0180.0	100KHz / 0.1V	180	$\pm 20$	0.350	1.30
D SP127/0220.0	100KHz / 0.1V	220	$\pm 20$	0.390	1.16
D SP127/0270.0	100KHz / 0.1V	270	$\pm 20$	0.560	1.06
D SP127/0330.0	100KHz / 0.1V	330	$\pm 20$	0.640	0.95
D SP127/0390.0	100KHz / 0.1V	390	$\pm 20$	0.700	0.88
D SP127/0470.0	100KHz / 0.1V	470	$\pm 20$	0.980	0.79
D SP127/0560.0	100KHz / 0.1V	560	$\pm 20$	1.070	0.73
D SP127/0680.0	100KHz / 0.1V	680	$\pm 20$	1.460	0.67
D SP127/0820.0	100KHz / 0.1V	820	$\pm 20$	1.640	0.60
D SP127/1000.0	100KHz / 0.1V	1000	$\pm 20$	1.820	0.55

**NOTES:**

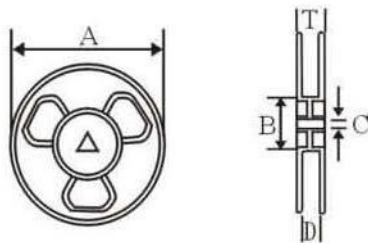
- Inductance instrument: HP4286A / CH1062A or LCR Meter equivalent
- Inductance testing condition: 100KHz / 1KHz
- DCR instrument: TH2512B or DCR test equipment equivalent
- Rated Current test: VR7210 & VR113H
- Rated Current definition: Inductance drop by 25% or temperature rise by 40°C, the lesser of the minimum as the rated current
- Temperature storage range: -25°C ~ 80°C; the relative humidity: RH65% ~ 85%

**Dimensions of tape (unit: mm)**



Type	Dimensions						Reel	Quantities
	Ao	Bo	W	P	F	Ko		PCS/reel
D SP073	7.60	7.60	16.00	12.00	7.50	4.00	330 * 16	1000
D SP074	7.60	7.60	16.00	12.00	7.50	5.00	330 * 16	1000
D SP124	12.60	12.60	24.00	16.00	11.50	5.10	330 * 24	500
D SP125	12.60	12.60	24.00	16.00	11.50	6.50	330 * 24	500
D SP127	12.60	12.60	24.00	16.00	11.50	8.40	330 * 24	500

**Dimensions of Reel (unit: mm)**



Type	A	B	C	D	T
16mm	330	100	13.5	16.4	20.4
24mm	330	100	13.5	24.4	28.4

