

5. SPS Series (Shielded Type)

Applications

- GPS receiver module.
- Smart Home Systems.
- Other various electronic appliances.

Features

- Available in magnetically shielded.
- SPS1608 used ceramic base with gold-plating.
- SPS3316 / 5022 designed for the higher current requirements of portable computers.



Inductance and Rated Current ranges

Part Series	Inductances range	Rated Current range
* SPS1608	1.0~10000 μ H	3.00~0.02A (Irms) ; 1.40~0.02A (Isat)
* SPS3316	1.0~1000 μ H	5.80~0.35A (Irms) ; 5.60~0.32A (Isat)
* SPS5022	1.0~1000 μ H	20.00~0.90A (Irms) ; 20.00~0.80A (Isat)

(Dimension data (Refer to Fig. 1))

Part Series	Inductances range	Rated Current range
* SPS0804	5.0~470 μ H	1.70~0.16A
* SPS0805	2.2~1000 μ H	2.50~0.15A
* SPS1005	1.0~3300 μ H	5.80~0.18A

(Dimension data (Refer to Fig. 2))

Part Series	Inductances range	Rated Current range
* SPS0603	1.5~1000 μ H	2.20~0.10A
* SPS0604	1.5~1000 μ H	2.80~0.12A

(Dimension data (Refer to Fig. 3))

Part Series	Inductances range	Rated Current range
* SPS6028	1.0~1000 μ H	3.80~0.11A (Irms) ; 3.00~0.09A (Isat)
* SPS6038	1.0~1000 μ H	3.70~0.14A (Irms) ; 4.00~0.13A (Isat)
* SPS7032	3.3~1000 μ H	2.40~0.15A (Irms) ; 2.20~0.14A (Isat)
* SPS7045	1.0~680 μ H	5.20~0.40A (Irms) ; 6.00~0.20A (Isat)

(Dimension data (Refer to Fig. 4))

Part Series	Inductances range	Rated Current range
* SPS1205	2.5~820 μ H	5.00~0.30A
* SPS1206	2.5~1500 μ H	6.20~0.20A
* SPS1208	2.5~1500 μ H	7.80~0.36A

(Dimension data (Refer to Fig. 5))

Part Series	Inductances range	Rated Current range
* SPS1240	1.0~1000 μ H	9.30~0.42A (Irms) ; 9.20~0.40A (Isat)
* SPS1260	1.0~1000 μ H	9.40~0.68A (Irms) ; 10.00~0.60A (Isat)
* SPS1280	1.1~1000 μ H	10.20~0.68A (Irms) ; 14.00~0.80A (Isat)

(Dimension data (Refer to Fig. 6))

5. SPS Series (Shielded Type)

Characteristics

Test Frequency : 1KHz

- a). SPS1240, SPS1608, SPS3316, SPS5022: @100KHz 0.1V
- b). SPS1260: 1.0 μ H~8.2 μ H @100KHz 0.1V, 10 μ H~1000 μ H@1KHz 1V
- c). SPS1280: 1.1 μ H~8.2 μ H @100KHz 1V, 10 μ H~1000 μ H@1KHz 1V

Operating temperature range : -40 ~+125 .

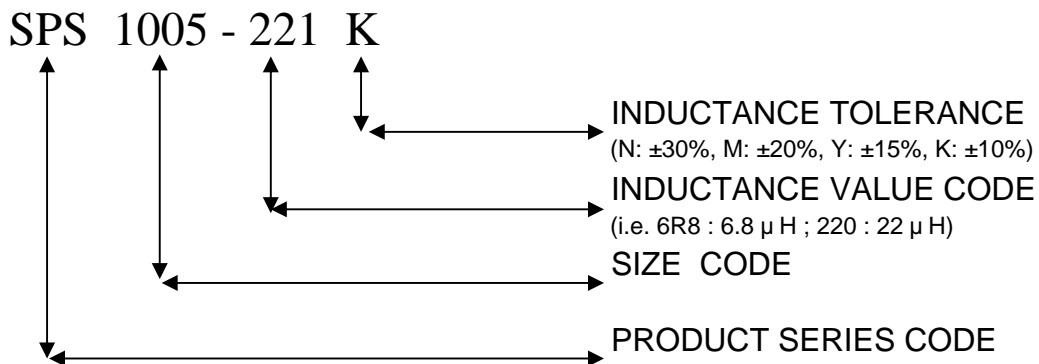
Test equipment :

L: HP4284A LCR meter or equivalent.

DCR: Milli-ohm meter or equivalent.

Electrical specifications at 25 .

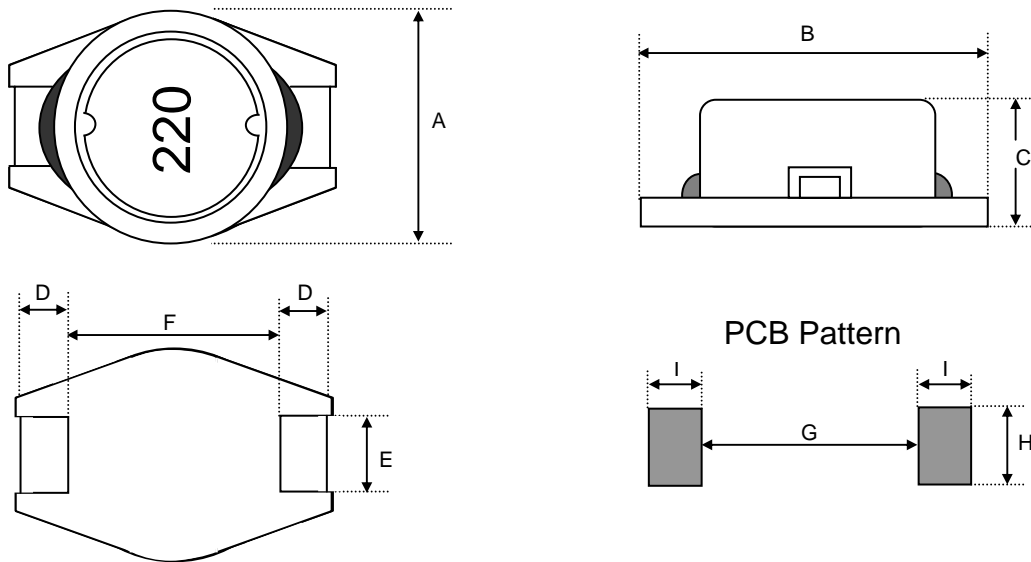
Part Numbering System



5. SPS Series (Shielded Type)

Dimensions (mm)

For SPS0804, 0805



For SPS1005

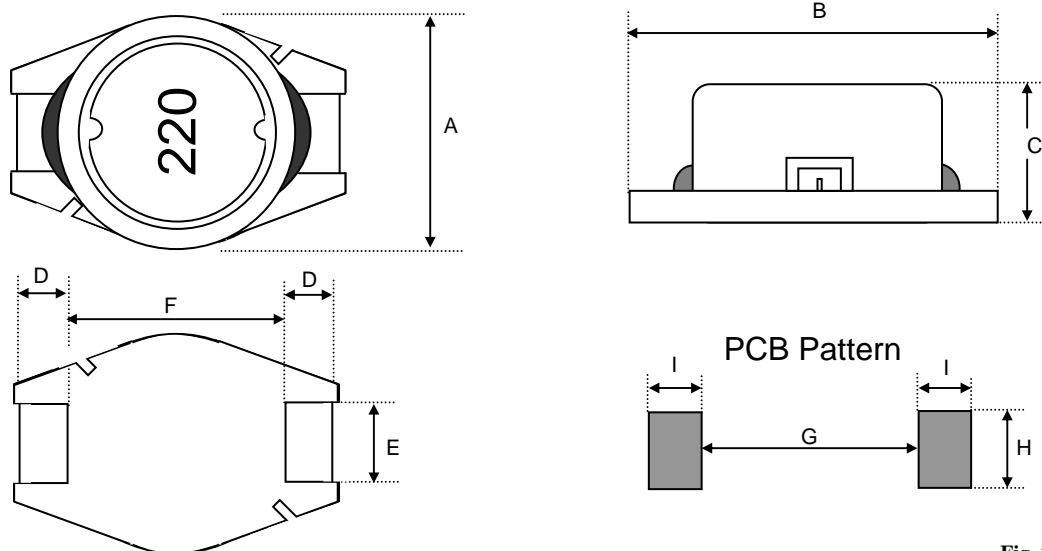


Fig. 2

Codes	A	B	C	D	E	F	G (ref.)	H (ref.)	I (ref.)
SPS0804	8.00±0.30	10.50±0.30	3.70±0.30	2.10±0.20	2.00±0.20	6.00±0.30	5.70	2.20	2.40
SPS0805	8.00±0.30	10.50±0.30	4.50±0.30	2.10±0.20	2.00±0.20	6.00±0.30	5.70	2.20	2.40
SPS1005	10.00±0.30	12.70±0.30	4.90±0.30	2.40±0.20	2.20±0.20	7.60±0.30	7.30	2.80	3.00

5. SPS Series (Shielded Type)

Electrical Characteristics

SPS 0804 / 0805 / 1005 TYPE

Inductance value code	L (μH)	Tol.	DC Resistance () Max.			Rated DC current (A) Max.		
			0804	0805	1005	0804	0805	1005
1R0	1.0	M	-	-	0.017	-	-	5.80
1R5	1.5	M	-	-	0.020	-	-	5.30
2R2	2.2	M	-	0.040	0.027	-	2.50	4.70
3R0	3.0	M	-	-	0.030	-	-	4.20
3R9	3.9	M	-	0.055	-	-	2.10	-
4R7	4.7	M	-	-	0.040	-	-	3.40
5R0	5.0	M	0.08	-	-	1.70	-	-
5R6	5.6	M	-	0.065	-	-	1.95	-
7R0	7.0	M	-	-	0.055	-	-	2.80
7R5	7.5	M	0.10	-	-	1.40	-	-
8R2	8.2	M	-	0.080	-	-	1.75	-
100	10	M	0.12	0.100	0.065	1.20	1.50	2.70
120	12	M	0.15	0.120	0.080	1.10	1.40	2.60
150	15	M	0.17	0.140	0.085	1.00	1.30	2.30
180	18	Y	0.19	0.160	0.090	0.90	1.20	2.20
220	22	Y	0.25	0.180	0.100	0.80	1.10	2.00
270	27	Y	0.27	0.200	0.120	0.70	1.00	1.90
330	33	Y	0.30	0.240	0.160	0.65	0.92	1.60
390	39	Y	0.38	0.260	0.180	0.60	0.84	1.50
470	47	Y,K	0.46	0.280	0.190	0.55	0.75	1.43
560	56	Y,K	0.60	0.380	0.210	0.50	0.68	1.40
680	68	Y,K	0.70	0.440	0.340	0.45	0.60	1.10
820	82	Y,K	0.80	0.550	0.380	0.40	0.54	1.00
101	100	K	0.95	0.600	0.420	0.37	0.50	0.90
121	120	K	1.00	0.750	0.460	0.35	0.45	0.85
151	150	K	1.30	0.900	0.520	0.30	0.40	0.78
181	180	K	1.45	1.050	0.700	0.28	0.35	0.70
221	220	K	1.90	1.180	0.800	0.24	0.30	0.65
271	270	K	2.15	1.400	1.100	0.22	0.27	0.54
331	330	K	2.80	1.800	1.200	0.19	0.24	0.50
391	390	K	3.30	-	1.400	0.17	-	0.48
471	470	K	3.60	2.250	1.600	0.16	0.20	0.44
561	560	K	-	3.000	1.800	-	0.18	0.42
681	680	K	-	3.400	2.300	-	0.17	0.36
821	820	K	-	4.000	2.600	-	0.16	0.34
102	1000	K	-	5.000	3.200	-	0.15	0.30
122	1200	K	-	-	3.600	-	-	0.28
152	1500	K	-	-	5.200	-	-	0.24
182	1800	K	-	-	5.700	-	-	0.22
222	2200	K	-	-	6.500	-	-	0.21
272	2700	K	-	-	8.600	-	-	0.19
332	3300	K	-	-	10.000	-	-	0.18

1. Test Frequency: 1 KHz

2a). Irms: base on temp. rise 40 Max.

2b). Isat: base on L/L0A = 10% Max.

3. Operating temperature range : -40 ~+125 .