

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 :

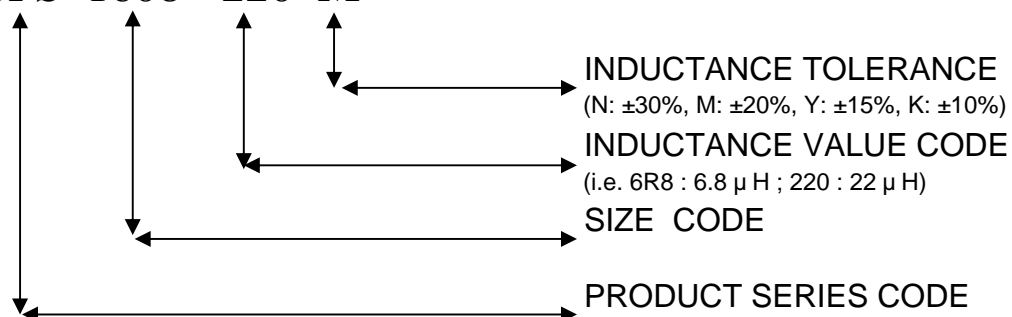
L: HP4284A LCR meter or equivalent.

DCR: Milli-ohm meter or equivalent.

Electrical specifications at 25 .

Part Numbering System

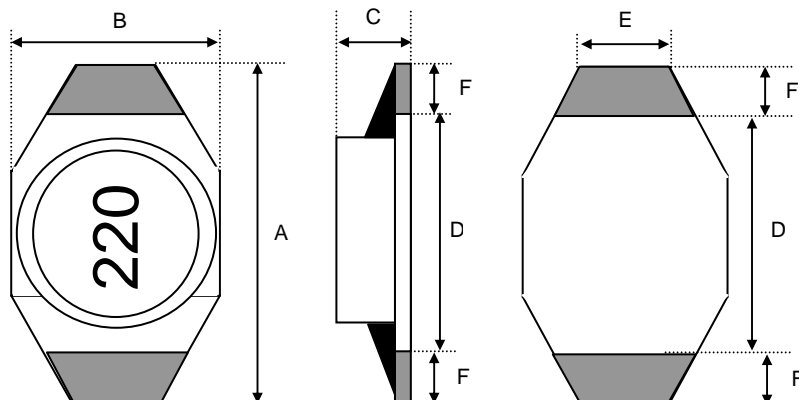
SPS 1608 - 220 M



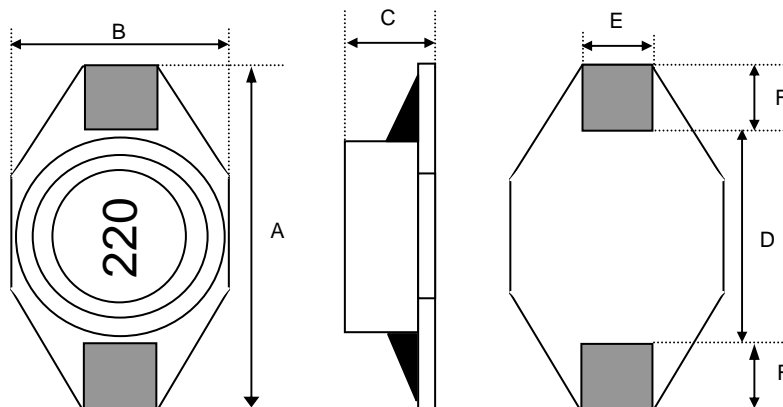
5. SPS Series (Shielded Type)

Dimensions (mm)

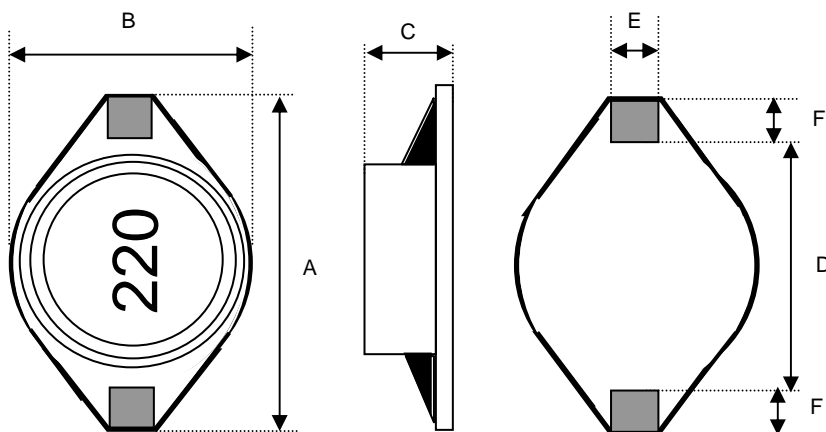
SPS1608



SPS3316



SPS5022



PCB Pattern
(For SPS1608, 3316, 5022)

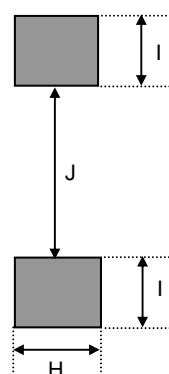


Fig. 1

Codes	A (max)	B (max)	C (max)	D	E	F	H	I	J
SPS1608	6.60	4.45	2.92	4.32	1.27	1.02	3.56	1.40	4.06
SPS3316	12.95	9.40	5.21	7.62	2.54	2.54	2.79	2.92	7.37
SPS5022	18.54	15.24	7.62	12.70	2.54	2.54	2.79	2.92	12.45

5. SPS Series (Shielded Type)

Electrical Characteristics**SPS 1608 / 3316 / 5022 TYPE**

Inductance value code	L (μ H)	Tol.	DC Resistance () Max.			Rated DC current (A) Max.					
						Irms			Isat		
			1608	3316	5022	1608	3316	5022	1608	3316	5022
1R0	1.0	M	0.040	0.021	0.024	3.00	5.80	20.00	1.40	5.60	20.00
1R5	1.5	M	0.045	0.022	-	2.30	5.30	-	0.93	5.20	-
2R2	2.2	M	0.050	0.032	0.026	1.80	5.20	14.00	0.92	5.00	11.00
3R3	3.3	M	0.055	0.039	0.029	1.60	4.00	12.00	0.75	3.90	10.00
3R9	3.9	M	-	-	0.030	-	-	11.00	-	-	8.50
4R7	4.7	M	0.060	0.054	0.032	1.40	3.50	11.00	0.58	3.20	8.40
5R6	5.6	M	-	-	0.034	-	-	11.00	-	-	8.30
6R8	6.8	M	0.065	0.075	0.036	1.20	3.10	10.00	0.58	2.80	8.20
8R2	8.2	M	-	-	0.038	-	-	10.00	-	-	8.10
100	10	M	0.075	0.101	0.040	1.00	3.00	8.00	0.37	2.40	8.00
120	12	M	-	0.140	0.046	-	2.60	7.50	-	2.10	7.10
150	15	M	0.090	0.150	0.048	0.80	2.50	7.00	0.31	2.00	7.00
180	18	M	-	0.200	0.056	-	2.40	6.50	-	1.70	6.10
220	22	M	0.110	0.207	0.059	0.70	2.00	6.50	0.30	1.60	6.00
270	27	M	-	0.300	0.066	-	2.00	5.00	-	1.50	5.10
330	33	M	0.190	0.334	0.075	0.60	1.80	5.00	0.24	1.40	5.00
390	39	M	-	0.460	0.092	-	1.50	4.50	-	1.10	4.10
470	47	M	0.230	0.472	0.097	0.50	1.40	4.20	0.24	1.00	4.00
560	56	M	-	-	0.132	-	-	4.00	-	-	3.10
680	68	M	0.290	0.660	0.138	0.40	1.20	4.00	0.17	0.90	3.00
820	82	M	-	-	0.202	-	-	3.00	-	-	2.50
101	100	M	0.480	1.110	0.207	0.30	1.00	2.80	0.13	0.80	2.40
121	120	M	-	1.300	0.286	-	1.00	2.60	-	0.62	2.20
151	150	M	0.590	1.550	0.293	0.26	0.80	2.30	0.10	0.60	2.10
181	180	M	-	-	0.420	-	-	2.00	-	-	1.91
221	220	M	0.900	2.000	0.470	0.22	0.70	2.00	0.10	0.50	1.90
271	270	M	-	4.600	0.720	-	0.62	1.65	-	0.42	1.12
331	330	M	1.400	5.600	0.780	0.20	0.50	1.55	0.07	0.35	1.10
391	390	M	-	6.600	1.020	-	0.50	1.50	-	0.34	1.10
471	470	M	1.800	7.600	1.080	0.19	0.50	1.50	0.06	0.33	1.10
561	560	M	-	-	1.320	-	-	1.20	-	-	0.97
681	680	M	2.200	9.000	1.400	0.18	0.50	1.10	0.06	0.31	0.96
821	820	M	-	-	1.960	-	-	0.95	-	-	0.81
102	1000	M	3.400	8.300	2.010	0.15	0.35	0.90	0.05	0.32	0.80
152	1500	M	4.200	-	-	0.12	-	-	0.04	-	-
222	2200	M	8.500	-	-	0.10	-	-	0.03	-	-
332	3300	M	11.000	-	-	0.08	-	-	0.02	-	-
472	4700	M	13.900	-	-	0.06	-	-	0.02	-	-
682	6800	M	25.000	-	-	0.04	-	-	0.02	-	-
103	10000	M	32.800	-	-	0.02	-	-	0.02	-	-

1. Test Frequency: 100 KHz 0.1V

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

2b). Isat: base on L/L0A = 10% Typ. (SPS1608: 30%)

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