

Shielded SMD Power Inductor—PS



Applications

- Portable telephones.
- Personal computers.
- Other various electronic appliances.
- DC/DC converters, etc.

Features

- With magnetic shielded against radiation.
- PS1608 can help achieve significantly longer battery life in handheld communication devices.
- PS3316 / 5022 designed for the higher current requirements of portable computers.
- PS1608 used ceramic base with gold-plating.
- PS3316 / 5022 used LCP plastic base.

Inductance and rated current ranges

- PS1608 1.0~10000 μ H 3.0~0.02A
- PS3316 1.0~47 μ H 5.0~0.17A
- PS5022 10~1000 μ H 3.9~0.53A
- Test equipment:

L: HP4284A LCR meter @100KHz 0.1V .

Q: HP4284A LCR meter @200 or 100 KHz 0.1V

DC R tested by Milli-ohm meter or equivalent.

SRF: HP4291B RF Impedance Analyzer.

Electrical specifications at 25°C .

Product Identification

PS 1608 M I 101

(1) (2) (3) (4) (5)

(1)Type: Shielded SMD Power Inductors

(2)Dimensions(mm):1608=6.60×4.45×2.92;

3316=12.95×9.4×5.08;

5022=18.54×15.24×7.62

(3)Tolerance: M=20%, K=10%

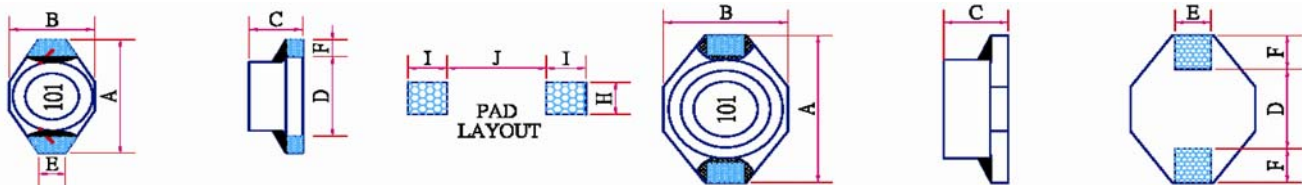
(4)Packaging style: T (Tape and Reel)

(5)Inductance: 1R1=1.1 μ H, 470=47 μ H, 101 =100mH

Characteristics:

- Saturation Rated Current (I sat): The DC current when the inductance becomes 90% lower than its initial value. (Ta=25°C)
- Temperature Rise Current (I rms): The actual current when temperature of coil becomes Δ 40°C. (Ta=25°C)
- Operating Temperature range: -40~85°C.

Dimensions



PS1608

PS3316 / 5022

Unit: mm

Codes	A (max)	B (max)	C (max)	D	E	F	H	I	J
PS1608	6.60	4.45	2.92	4.32	1.27	1.02	3.56	1.40	4.06
PS3316	12.95	9.40	5.08	7.62	2.54	2.54	2.79	2.92	7.37
PS5022	18.54	15.24	7.62	12.70	2.54	2.54	2.79	2.92	12.45

Electrical Characteristics

1608 TYPE

Part No.	L (μ H)	Q min	DCR max (Ω)	SRF ref (MHz)	I rms (A)
PS1608MT1R0	1.0	30	0.040	250	3.0
PS1608MT1R5	1.5	30	0.045	125	2.8
PS1608MT2R2	2.2	40	0.050	120	1.8
PS1608MT3R3	3.3	40	0.055	120	1.6
PS1608MT4R7	4.7	40	0.060	105	1.4
PS1608MT6R8	6.8	40	0.065	50	1.2
PS1608MT100	10	40	0.075	38	1.0
PS1608MT150	15	40	0.090	33	0.80
PS1608MT220	22	40	0.110	25	0.70
PS1608MT330	33	40	0.190	20	0.60
PS1608MT470	47	40	0.230	20	0.50
PS1608MT680	68	40	0.290	15	0.40
PS1608KT101	100	40	0.480	10	0.30
PS1608KT151	150	40	0.590	9.0	0.26
PS1608KT221	220	40	0.900	6.0	0.22
PS1608KT331	330	40	1.400	5.0	0.20
PS1608KT471	470	40	1.800	4.0	0.19
PS1608KT681	680	40	2.200	3.0	0.18
PS1608KT102	1000	40	3.400	2.0	0.15
PS1608KT152	1500	50	4.200	2.0	0.12
PS1608KT222	2200	50	8.500	2.0	0.10
PS1608KT332	3300	50	11.00	1.0	0.08
PS1608KT472	4700	50	13.90	1.0	0.06
PS1608KT682	6800	50	25.00	1.0	0.04
PS1608KT103	10000	50	32.80	0.8	0.02

- Q tested Frequency: 1.0~10 μ H 200KHz 0.1V; 15~10000 μ H 100KHz 0.1V

3316 TYPE

Part No.	L (μ H)	DCR max (Ω)	SRF ref (MHz)	I sat (A)	I rms (A)
PS3316MT1R0	1.0	0.021	140	5.6	5.0
PS3316MT1R5	1.5	0.022	120	5.2	4.5
PS3316MT2R2	2.2	0.032	80	5.0	3.8
PS3316MT3R3	3.3	0.039	70	3.9	3.3
PS3316MT4R7	4.7	0.054	40	3.2	2.7
PS3316MT6R8	6.8	0.075	38	2.8	2.2
PS3316MT100	10	0.101	35	2.4	2.0
PS3316MT150	15	0.150	25	2.0	1.5
PS3316MT220	22	0.207	19	1.6	1.3
PS3316MT330	33	0.334	15	1.4	1.1
PS3316MT470	47	0.472	13	1.0	0.8
PS3316MT680	68	0.660	10	0.9	0.7
PS3316MT101	100	1.110	7	0.8	0.6
PS3316MT151	150	1.550	6	0.6	0.5
PS3316MT221	220	2.000	5	0.5	0.37
PS3316MT102	1000	8.300	2	0.32	0.17

5022 TYPE

Part No.	L (μ H)	DCR max (Ω)	SRF ref (MHz)	I sat (A)	I rms (A)
PS5022MT100	10	0.040	30	8.0	3.9
PS5022MT150	15	0.048	20	7.00	3.4
PS5022MT220	22	0.059	18	6.00	3.1
PS5022MT330	33	0.075	14	5.00	2.8
PS5022MT470	47	0.097	10	4.00	2.4
PS5022MT680	68	0.138	9.0	3.00	2.0
PS5022MT101	100	0.207	7.0	2.40	1.7
PS5022MT151	150	0.293	6.0	2.10	1.3
PS5022MT221	220	0.470	5.0	1.90	1.1
PS5022MT331	330	0.780	4.0	1.10	0.86
PS5022MT471	470	1.080	3.0	1.10	0.73
PS5022MT681	680	1.400	2.5	0.96	0.64
PS5022MT102	1000	2.010	2.0	0.80	0.53