Characteristics

Ⅰ Rated DC Current: The DC current when the inductance becomes 10% lower than its initial value or DC current when temperature of coil is increased to 40 ℃ (Ta-25℃) The smaller one is defined as Rated DC Current.
Ⅱ Operating temperature range: -40～125° C

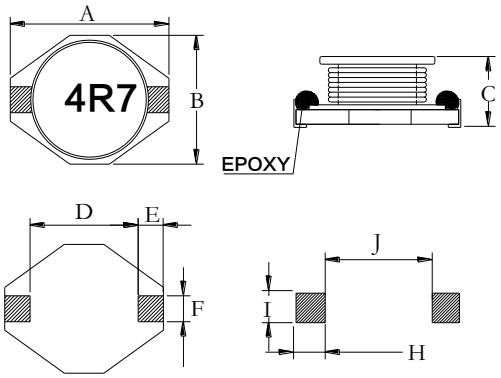
Features

Ⅰ High power, High saturation inductors
Ⅱ Ideal inductors for DC-DC converters in notebook computer, PDAs, Step-up or step-down converters, flash memory programmers, etc.
Ⅲ PD1608 used ceramic base with gold-platings.
Ⅳ The others used LCP plastic base

Applications

Ⅰ Power Supply For VTRs..
Ⅱ LCD Televisions
Ⅲ Personal Computers.
Ⅳ Handheld Communication
Ⅴ DC/DC Converters, etc.

Dimensions



Unit: mm

Type	A max.	B max.	C max.	D	E	F	H	I	J
PD1608	6.60	4.45	2.92	4.32	1.27	1.02	3.56	1.40	4.06
PD3308	12.95	9.40	3.00	7.62	2.54	2.54	2.79	2.92	7.37
PD3316	12.95	9.40	5.21	7.62	2.54	2.54	2.79	2.92	7.37
PD3340	12.95	9.40	11.43	7.62	2.54	2.54	2.79	2.92	7.37
PD5022	18.54	15.24	7.11	12.7	2.54	2.54	2.79	2.92	12.45

Ordering Information

Example:

PD	1608	M	T	101
(1)	(2)	(3)	(4)	(5)
Series Name	Dimensions (AxBxC)	Inductance Tolerance	Packaging Code	Inductance

(1)Type: PD SERIES

(2)Dimensions(AxBxC) : 1608: 6.60×4.45×2.92,3308: 12.95×9.40×3.00

3316: 12.95×9.40×5.21,3340: 12.95×9.40×11.43,5022: 18.54×15.24×7.11

(3)Inductance Tolerance: M: ± 20%

(4)Packaging Code: T: Taping Reel

(5)Inductance : 1R0= 1.0μH,470= 47μH,101= 100μH

Reference Standards

JISC 5201-1

Inductance and rated current ranges

PD1608	1.0μH～1000μH	2.9～0.10A
PD3308	1.0μH～1000μH	5.15～0.10A
PD3316	0.68μH～1000μH	11～0.30A
PD3340	0.47μH～1000μH	40～0.8A
PD5022	1.0μH～1000μH	20～1.0A
Test equipment: L: HP4284A LCR meter ,DCR: Milli-ohm meter		
Electrical specifications at 25° C		

Electrical Characteristics

PD1608 Type

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	100KHz, 0.1V	0.05	2.90
1R5	1.5	M	100KHz, 0.1V	0.06	2.60
2R2	2.2	M	100KHz, 0.1V	0.07	2.30
3R3	3.3	M	100KHz, 0.1V	0.08	2.00
4R7	4.7	M	100KHz, 0.1V	0.09	1.50
6R8	6.8	M	100KHz, 0.1V	0.13	1.20
8R2	8.2	M	100KHz, 0.1V	0.16	1.15
100	10	M	100KHz, 0.1V	0.16	1.10
150	15	M	100KHz, 0.1V	0.23	0.90
220	22	M	100KHz, 0.1V	0.37	0.70
330	33	M	100KHz, 0.1V	0.51	0.58
470	47	M	100KHz, 0.1V	0.64	0.50
680	68	M	100KHz, 0.1V	0.86	0.40
101	100	M	100KHz, 0.1V	1.27	0.31
151	150	M	100KHz, 0.1V	2.00	0.27
221	220	M	100KHz, 0.1V	3.11	0.22
331	330	M	100KHz, 0.1V	3.80	0.18
471	470	M	100KHz, 0.1V	5.06	0.16
681	680	M	100KHz, 0.1V	9.20	0.14
102	1000	M	100KHz, 0.1V	13.8	0.10

PD3308 Type

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	100KHz, 0.1V	0.024	5.15
4R7	4.7	M	100KHz, 0.1V	0.036	4.20
6R8	6.8	M	100KHz, 0.1V	0.060	3.90
8R2	8.2	M	100KHz, 0.1V	0.080	2.42
100	10	M	100KHz, 0.1V	0.110	2.40
150	15	M	100KHz, 0.1V	0.120	2.30
220	22	M	100KHz, 0.1V	0.180	1.80
330	33	M	100KHz, 0.1V	0.250	1.60
470	47	M	100KHz, 0.1V	0.320	1.30
680	68	M	100KHz, 0.1V	0.540	1.10
101	100	M	100KHz, 0.1V	0.690	0.87
151	150	M	100KHz, 0.1V	0.94	0.74
221	220	M	100KHz, 0.1V	1.600	0.56
331	330	M	100KHz, 0.1V	2.150	0.50
471	470	M	100KHz, 0.1V	3.300	0.40
681	680	M	100KHz, 0.1V	4.400	0.33
821	820	M	100KHz, 0.1V	5.800	0.15
102	1000	M	100KHz, 0.1V	8.400	0.10

PD3316 Type

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω max.	IDC (A) max.
R68	0.68	M	100KHz, 0.1V	0.008	11.0
1R0	1.0	M	100KHz, 0.1V	0.009	9.00
1R2	1.2	M	100KHz, 0.1V	0.010	8.50
1R5	1.5	M	100KHz, 0.1V	0.010	8.00
1R8	1.8	M	100KHz, 0.1V	0.011	7.50
2R2	2.2	M	100KHz, 0.1V	0.012	7.00
2R7	2.7	M	100KHz, 0.1V	0.014	6.50
3R3	3.3	M	100KHz, 0.1V	0.015	6.40
4R7	4.7	M	100KHz, 0.1V	0.018	5.40
5R6	5.6	M	100KHz, 0.1V	0.025	4.70
6R8	6.8	M	100KHz, 0.1V	0.027	4.60
8R2	8.2	M	100KHz, 0.1V	0.036	4.00
100	10	M	100KHz, 0.1V	0.038	3.80
120	12	M	100KHz, 0.1V	0.044	3.20
150	15	M	100KHz, 0.1V	0.046	3.00
180	18	M	100KHz, 0.1V	0.066	2.70
220	22	M	100KHz, 0.1V	0.085	2.60
270	27	M	100KHz, 0.1V	0.095	2.10
330	33	M	100KHz, 0.1V	0.100	2.00
390	39	M	100KHz, 0.1V	0.130	1.70
470	47	M	100KHz, 0.1V	0.140	1.60
560	56	M	100KHz, 0.1V	0.190	1.50
680	68	M	100KHz, 0.1V	0.200	1.40
820	82	M	100KHz, 0.1V	0.260	1.25
101	100	M	100KHz, 0.1V	0.280	1.20
121	120	M	100KHz, 0.1V	0.360	1.02
151	150	M	100KHz, 0.1V	0.400	1.00
181	180	M	100KHz, 0.1V	0.540	0.82
221	220	M	100KHz, 0.1V	0.610	0.80
271	270	M	100KHz, 0.1V	0.840	0.62
331	330	M	100KHz, 0.1V	1.020	0.60
391	390	M	100KHz, 0.1V	1.250	0.52
471	470	M	100KHz, 0.1V	1.270	0.50
561	560	M	100KHz, 0.1V	1.850	042
681	680	M	100KHz, 0.1V	2.020	0.40
821	820	M	100KHz, 0.1V	2.530	0.35
102	1000	M	100KHz, 0.1V	3.000	0.30

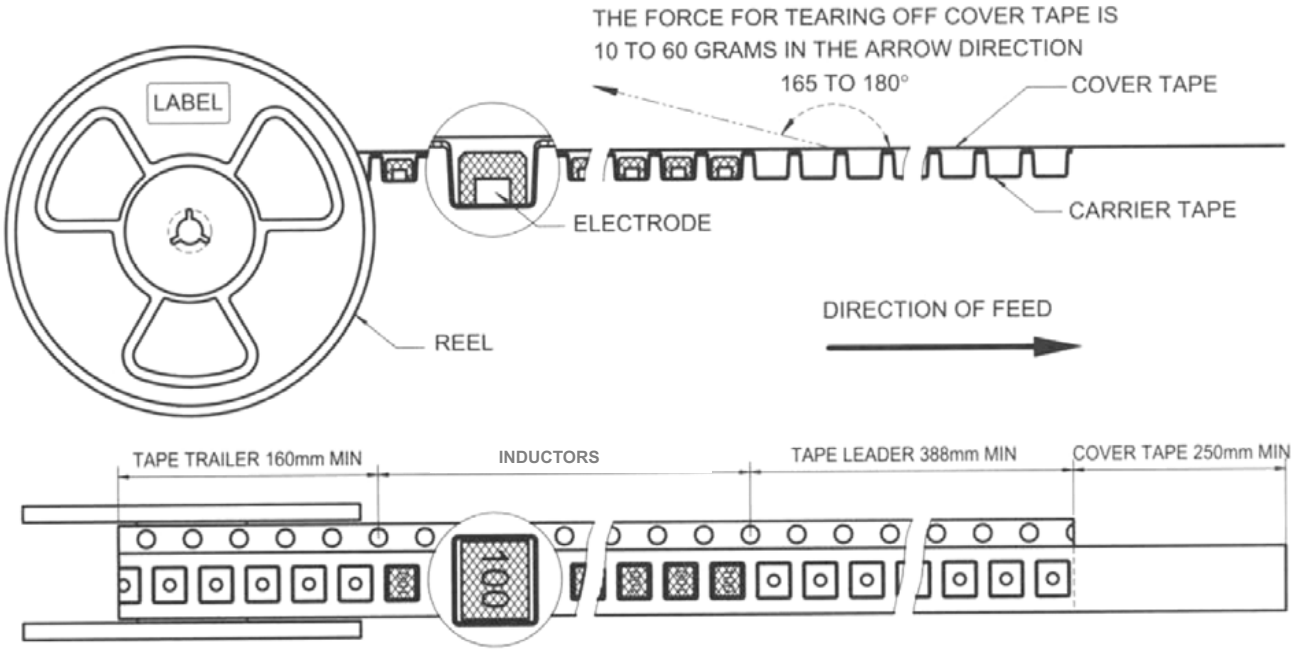
PD3340 Type

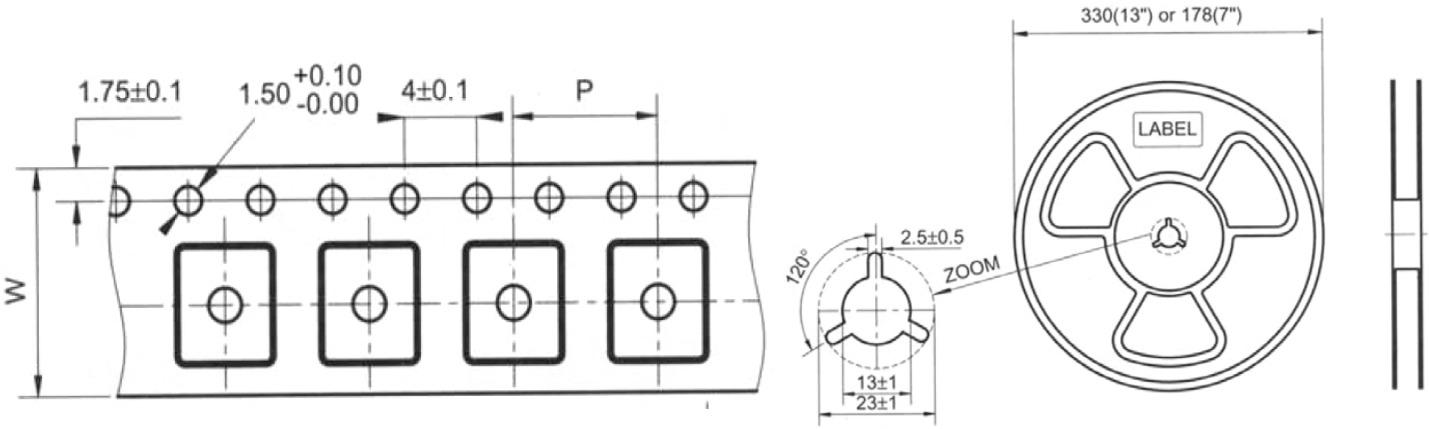
Codes	L (μH)	Tolerance	Test Condition	DCR (Ω max.	IDC (A) max.
R47	0.47	M	100KHz, 0.1V	0.008	40.0
R82	0.82	M	100KHz, 0.1V	0.009	34.7
1R2	1.2	M	100KHz, 0.1V	0.010	28.4
1R5	1.5	M	100KHz, 0.1V	0.010	25.7
2R2	2.2	M	100KHz, 0.1V	0.012	23.0
3R5	3.5	M	100KHz, 0.1V	0.015	21.0
4R7	4.7	M	100KHz, 0.1V	0.020	18.0
5R6	5.6	M	100KHz, 0.1V	0.022	16.0
6R8	6.8	M	100KHz, 0.1V	0.030	15.0
8R2	8.2	M	100KHz, 0.1V	0.033	10.0
100	10	M	100KHz, 0.1V	0.040	8.00
120	12	M	100KHz, 0.1V	0.042	7.20
150	15	M	100KHz, 0.1V	0.050	7.00
180	18	M	100KHz, 0.1V	0.052	5.70
220	22	M	100KHz, 0.1V	0.066	5.50
270	27	M	100KHz, 0.1V	0.072	4.20
330	33	M	100KHz, 0.1V	0.080	4.00
390	39	M	100KHz, 0.1V	0.092	3.90
470	47	M	100KHz, 0.1V	0.110	3.80
560	56	M	100KHz, 0.1V	0.150	3.20
680	68	M	100KHz, 0.1V	0.170	3.00
820	82	M	100KHz, 0.1V	0.200	2.60
101	100	M	100KHz, 0.1V	0.220	2.50
121	120	M	100KHz, 0.1V	0.320	2.20
151	150	M	100KHz, 0.1V	0.340	2.00
181	180	M	100KHz, 0.1V	0.420	1.80
221	220	M	100KHz, 0.1V	0.440	1.60
271	270	M	100KHz, 0.1V	0.600	1.30
331	330	M	100KHz, 0.1V	0.700	1.20
391	390	M	100KHz, 0.1V	0.850	1.10
471	470	M	100KHz, 0.1V	0.950	1.00
561	560	M	100KHz, 0.1V	1.100	1.00
681	680	M	100KHz, 0.1V	1.200	1.00
821	820	M	100KHz, 0.1V	1.500	0.82
102	1000	M	100KHz, 0.1V	2.000	0.80

PD5022 Type

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	100KHz, 0.1V	0.009	20.00
2R2	2.2	M	100KHz, 0.1V	0.014	16.00
3R3	3.3	M	100KHz, 0.1V	0.018	14.00
4R7	4.7	M	100KHz, 0.1V	0.019	13.00
5R6	5.6	M	100KHz, 0.1V	0.020	12.00
6R8	6.8	M	100KHz, 0.1V	0.022	10.60
8R2	8.2	M	100KHz, 0.1V	0.024	10.30
100	10	M	100KHz, 0.1V	0.031	10.00
120	12	M	100KHz, 0.1V	0.034	8.20
150	15	M	100KHz, 0.1V	0.036	8.00
180	18	M	100KHz, 0.1V	0.045	7.20
220	22	M	100KHz, 0.1V	0.047	7.00
270	27	M	100KHz, 0.1V	0.056	5.80
330	33	M	100KHz, 0.1V	0.066	5.50
390	39	M	100KHz, 0.1V	0.080	4.60
470	47	M	100KHz, 0.1V	0.095	4.50
560	56	M	100KHz, 0.1V	0.128	3.70
680	68	M	100KHz, 0.1V	0.130	3.50
820	82	M	100KHz, 0.1V	0.180	3.10
101	100	M	100KHz, 0.1V	0.190	3.00
121	120	M	100KHz, 0.1V	0.240	2.80
151	150	M	100KHz, 0.1V	0.250	2.60
181	180	M	100KHz, 0.1V	0.360	2.50
221	220	M	100KHz, 0.1V	0.380	2.40
271	270	M	100KHz, 0.1V	0.520	2.00
331	330	M	100KHz, 0.1V	0.560	1.90
391	390	M	100KHz, 0.1V	0.720	1.50
471	470	M	100KHz, 0.1V	0.850	1.40
561	560	M	100KHz, 0.1V	1.080	1.30
681	680	M	100KHz, 0.1V	1.100	1.20
821	820	M	100KHz, 0.1V	1.600	1.03
102	1000	M	100KHz, 0.1V	1.800	1.00

Tape and Reel specifications





Type	Tape size		Parts Per Reel
	W	P	13 ″
PD1608	16	8	2000
PD3308	24	12	1000
PD3316	24	12	1000
PD3340	24	16	225
PD5022	32	20	250

Environmental Specifications of SMT Power Inductor

General

Items	Specifications
Shelf Storage conditions:	Temperature range: 25 ± 3℃ ; Humidity: <80% relative humidity. Recommended product should be used within six months from the time of delivery.

Environmental test

Test Items	Specifications	Test Conditions / Test Methods
High temperature Storage test	No case deformation or change in appearance. △L/L≦10%	Temperature 85 ± 2℃, Time: 48 ± 2 hours, Tested after 1hour at room temperature.
Low temperature Storage test		Temperature -25 ± 2℃, Time: 48 ± 2 hours, Tested after 1hour at room temperature.
Humidity test		Temperature 40 ± 2℃, 90~95% relative humidity Time: 96 ± 2 hours Tested after 1hour at room temperature.
Thermal shock test		First -25℃ 30minutes then 25℃ 10 minutes last 85℃ 30 minutes, as 1 cycle. Go through 5 cycles. Tested after 1 hour at room temperature.

Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245 ± 5℃ for 3seconds.
Resistance to Soldering Heat	No case deformation or change in appearance.	Flux should cover the whole of the sample before heating, then be preheated for about 2 minutes over temperature of 130~150℃ .Immersing to 260 ± 5 ℃ for 10 seconds.
Vibration test	No case deformation or change in appearance. △L/L≦10%	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance		Drop down with 981m/s 2 (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations..

The condition of reflow (recommendation):