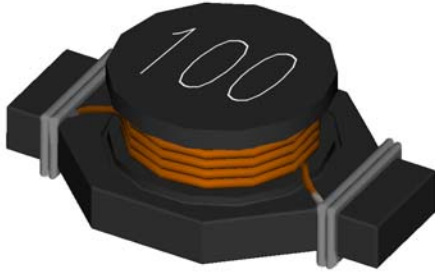


SMD Power Inductor –PDH



Applications

- Notebook computers.
- Handheld communications.
- LCD televisions.
- Power supply for VTRs.
- DC/DC converters, etc.

Features

- Miniature surface mount design.
- High power, High saturation inductors.
- Very low resistance.
- Maximum power density.
- Ideal inductors for DC-DC conversion.
- Available on tape and reel for auto surface mounting.

Inductance and rated current ranges

- PDH1813 0.47 μ H~100 μ H 6.0~0.47A
- PDH3316 0.47 μ H~100 μ H 10.6~1.2A
- PDH4920 0.47 μ H~100 μ H 16.0~1.4A
- PDH5022 0.47 μ H~100 μ H 19.2~2.0A

Product Identification

PDH 1813 M I 101

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

(1)Type: SMD Power Inductors

(2) Dimensions(mm): 1813=9.0×6.1, 3316=13.2×9.9, 4920=19.4×13.3, 5022=22.2×15.0

(3) Tolerance: M=20%, P=+40%-20%

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

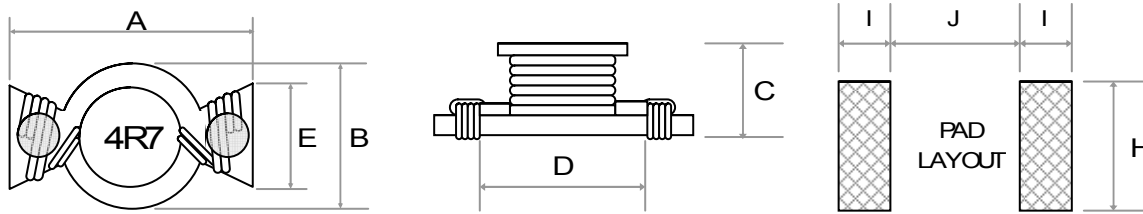
(5) Inductance: 1R1=1.1 μ H, 470=47 μ H, 101 =100mH



Characteristics:

- Saturation Rated Current (I sat): The current when the inductance becomes 30% 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: -20~80°C.

Dimension



Unit: mm

Codes	A max	B max	C max	D	E	H	I	J
PDH1813	9.0	6.1	5.0	5.8	3.0	5.0	2.0	5.0
PDH3316	13.2	9.9	6.0	9.5	4.5	6.5	2.3	9.0
PDH4920	19.4	13.3	6.8	12.7	6.6	8.0	3.8	11.7
PDH5022	22.2	15.0	7.8	14.6	7.7	10.0	4.3	13.5

Electrical Characteristics

PDH 1813/ 3316 / 4920 / 5022 TYPE

Part No.	Tol.	L (μH)	DC Resistance (Max) (mΩ)				Rated DC Current (A) Max							
							I rms				I sat			
			1813	3316	4920	5022	1813	3316	4920	5022	1813	3316	4920	5022
R47	P	0.47	10.	5.0	3.0	2.0	6.0	10.6	16.0	19.2	7.7	11.4	25.1	51.7
1R0	P	1.00	18	7.0	4.0	3.0	4.4	9.3	12.5	17.3	5.3	9.9	15.3	37.8
1R5	P	1.50	20	9.0	6.0	4.0	4.2	8.3	10.0	13.4	4.5	7.9	12.0	28.9
2R2	M	2.20	37	11	8.0	5.0	3.1	7.2	9.2	12.0	3.5	6.1	10.2	23.7
3R3	M	3.30	43	13	9.0	6.0	2.9	6.5	8.0	11.0	3.0	5.1	9.3	20.2
4R7	M	4.70	55	17	12	10	2.2	5.5	6.5	8.6	2.6	4.2	7.7	15.6
6R8	M	6.80	90	21	19	15	1.7	5.0	5.8	8.3	2.2	3.6	6.2	14.1
100	M	10.0	111	28	27	20	1.5	4.3	4.3	6.8	1.9	3.3	5.2	11.5
150	M	15.0	175	41	32	30	1.2	3.5	3.9	5.5	1.5	2.4	4.3	9.1
220	M	22.0	255	62	50	40	1.0	2.8	3.1	4.5	1.2	2.0	3.7	7.6
330	M	33.0	367	92	69	60	0.82	2.1	2.4	3.7	0.99	1.7	3.0	6.1
470	M	47.0	474	139	109	74	0.72	1.7	1.9	3.1	0.87	1.4	2.4	5.2
680	M	68.0	750	179	156	120	0.58	1.5	1.6	2.4	0.67	1.2	2.0	4.3
101	M	100	1110	271	206	170	0.47	1.2	1.4	2.0	0.53	0.95	1.8	3.6

* Measuring Freq: 100KHz 0.25V ; M:±20%,P:+40%-20%

Test equipment:

L: HP4284A LCR meter.

DCR: Milli-ohm meter.

Electrical specifications at 25°C.

SMD Power Inductor –PD



Applications

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

Features

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

Inductance and rated current ranges

- PD1608 1.0 μ H~1000 μ H 2.9~0.07A
- PD3388 10 μ H~1000 μ H 2.0~0.05A
- PD3316 1.0 μ H~1000 μ H 6.8~0.30A
- PD3340 10 μ H~1000 μ H 3.5~0.10A
- PD5022 1.0 μ H~1000 μ H 8.6~0.56A
- Test equipment:
L: HP4284A LCR meter @ 100KHz 0.1V
DCR Resistance: Milli-ohm meter or equivalent.
SRF: HP4291B RF Impedance Analyzer.
Electrical Specifications at 25 $^{\circ}$ C.

Product Identification

PD 1608 M I 101

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

(1)Type: SMD Power Inductors

(2)Dimensions(mm):1608=6.60×4.45×2.92, 3308=12.95×9.40×3.50

5022=18.54×15.24×7.11, 3316=12.95×9.40×5.21

3340=12.95×9.40×11.43

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

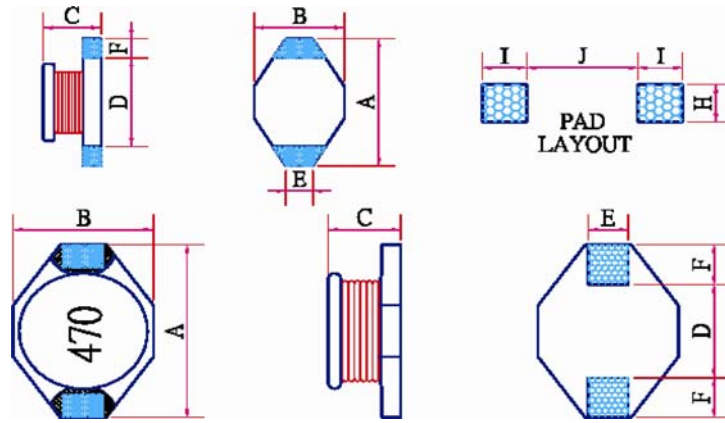
(4) Packaging style: T (Tape and Reel)

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

Characteristics:

- Saturation Rated Current (I sat): The current when the inductance becomes 10%lower then its initial value. (Ta=25 $^{\circ}$ C)
- Temperature Rise Current (I rms): The actual current when temperature of coil becomes Δ 40 $^{\circ}$ C. (Ta=25 $^{\circ}$ C)
- Operating temperature range: -20~80 $^{\circ}$ C.

Dimensions



Unit: mm

Codes	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	3.50	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	18.84	15.24	7.11	12.7	2.54	2.54	2.79	2.92	12.45

Electrical Characteristics

PD1608 TYPE

Part No.	Tolerance	L (μH)	DCR (Ω)	SRF ref (MHz)	I sat (A)	I rms (A)
1R0	M	1.0	0.05	130	2.90	2.90
1R5	M	1.5	0.05	115	2.60	2.80
2R2	M	2.2	0.07	90	2.30	2.40
3R3	M	3.3	0.08	70	2.00	2.00
4R7	M	4.7	0.09	50	1.50	1.50
6R8	M	6.8	0.13	45	1.20	1.40
100	M	10	0.16	35	1.10	1.10
150	M	15	0.23	30	0.90	1.20
220	K	22	0.37	20	0.70	0.80
330	K	33	0.51	15	0.58	0.60
470	K	47	0.64	14	0.50	0.50
680	K	68	0.86	11	0.40	0.40
101	K	100	1.27	9.0	0.31	0.30
151	K	150	2.00	6.0	0.27	0.25
221	K	220	3.11	5.5	0.22	0.20
331	K	330	3.80	5.0	0.18	0.16
471	K	470	6.20	4.0	0.16	0.15
681	K	680	9.20	3.0	0.14	0.12
102	K	1000	13.8	2.0	0.10	0.07

PD3308 TYPE

Part No.	Tolerance	L (μH)	DCR (Ω)	SRF ref (MHz)	I sat (A)	I rms (A)
100	M	10	0.11	35	2.4	2.00
150	M	15	0.15	33	2.0	1.50
220	M	22	0.23	25	1.6	1.30
330	M	33	0.30	19	1.4	1.10
470	M	47	0.39	14	1.0	0.80
680	M	68	0.66	12	0.9	0.70
101	M	100	0.84	10	0.7	0.60
151	M	150	1.20	8.0	0.6	0.50
221	M	220	1.90	6.0	0.5	0.40
331	M	330	2.70	5.0	0.4	0.30
471	M	470	4.00	4.0	0.3	0.20
681	M	680	5.30	3.0	0.2	0.10
102	M	1000	8.40	2.5	0.1	0.05

Electrical Characteristics
PD3316 TYPE

Part No.	Tolerance	L (μ H)	DCR (Ω)	SRF ref (MHz)	I sat (A)	I rms (A)
1R0	M	1.0	0.009	100	9.00	6.80
1R5	M	1.5	0.010	90	8.00	6.40
2R2	M	2.2	0.012	80	7.00	6.10
3R3	M	3.3	0.015	65	6.40	5.40
4R7	M	4.7	0.018	45	5.40	4.80
6R8	M	6.8	0.027	38	4.60	4.40
100	M	10	0.038	30	3.80	3.90
150	M	15	0.046	27	3.00	3.10
220	M	22	0.085	19	2.60	2.70
330	M	33	0.100	15	2.00	2.10
470	M	47	0.140	12	1.60	1.80
680	M	68	0.200	10	1.40	1.50
101	M	100	0.280	9.0	1.20	1.30
151	M	150	0.400	6.0	1.00	1.00
221	M	220	0.610	5.0	0.80	0.80
331	M	330	1.020	4.5	0.60	0.60
471	M	470	1.270	3.5	0.50	0.50
681	M	680	2.020	2.5	0.40	0.40
102	M	1000	3.000	2.0	0.30	0.30

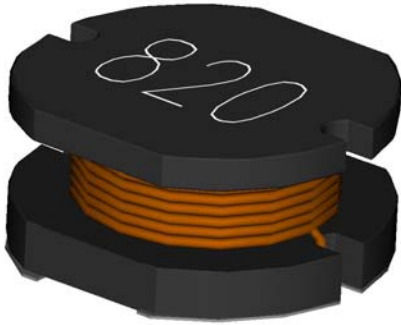
PD3340 TYPE

Part No.	Tolerance	L (μ H)	DCR (Ω)	SRF ref (MHz)	I sat (A)	I rms (A)
100	M	10	0.04	22	8.00	3.50
150	M	15	0.05	18	7.00	3.00
220	M	22	0.07	11	5.50	2.50
330	M	33	0.08	9.0	4.00	2.00
470	M	47	0.11	8.0	3.80	1.60
680	M	68	0.17	7.0	3.00	1.20
101	M	100	0.22	5.0	2.50	1.20
151	M	150	0.34	4.0	2.00	0.90
221	M	220	0.44	3.5	1.60	0.70
331	M	330	0.70	2.5	1.20	0.60
471	M	470	0.95	2.0	1.00	0.30
681	M	680	1.20	2.0	1.00	0.20
102	M	1000	2.00	1.5	0.80	0.10

PD5022 TYPE

Part No.	Tolerance	L (μ H)	DCR (Ω)	SRF ref (MHz)	I sat (A)	I rms (A)
1R0	M	1.0	0.009	80	20	8.60
2R2	M	2.2	0.014	80	16	7.10
3R3	M	3.3	0.018	60	14	6.20
5R6	M	5.6	0.020	40	12	5.30
100	M	10	0.031	30	10	4.30
150	M	15	0.036	22	8.0	4.00
220	M	22	0.047	20	7.0	3.50
330	M	33	0.066	15	5.5	3.00
470	M	47	0.086	9.0	4.5	2.60
680	M	68	0.130	8.0	3.5	2.30
101	M	100	0.190	7.0	3.0	1.80
151	M	150	0.250	6.0	2.6	1.50
221	M	220	0.380	5.0	2.4	1.20
331	M	330	0.560	4.0	1.9	1.00
471	M	470	0.850	3.0	1.4	0.82
681	M	680	1.100	2.5	1.2	0.72
102	M	1000	1.800	2.0	1.0	0.56

SMD Power Inductor—PCD



Inductance and rated current ranges

- PCD0302 1.0~330 μ H 2.20~0.12A
- PCD0403 1.0~68 μ H 2.56~0.37A
- PCD0502 1.2~470 μ H 3.50~0.16A
- PCD0503 1.0~470 μ H 4.50~0.20A
- PCD0504 10~220 μ H 1.44~0.35A
- PCD0703 10~330 μ H 1.44~0.28A
- PCD0705 10~470 μ H 2.30~0.34A
- PCD1004 10~560 μ H 2.38~0.32A
- PCD1005 10~820 μ H 2.60~0.24A

- Test equipment:

L: HP4284A or HP4285A LCR meter.

DCR tested by Milli-ohm meter.

Electrical specifications at 25 $^{\circ}$ C.

Applications

- Power supply for VTRs.
- LCD televisions.
- Personal computers.
- Handhold communication.
- DC/DC converters, etc.

Features

- High power, High saturation inductors.
- Silver Plated Type, Low cost design.
- Ideal inductors for DC-DC conversion.
- Available on tape and reel for auto surface mounting.

Product Identification

PCD 1005 M I 101

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

(1)Type: SMD Power Inductors

(2)Dimensions(mm):0302=3.5×3.0×2.0, 0403=4.5×4.0×3.2,

0502=5.8×5.2×2.5, 0503=5.8×5.2×3.0,

0504=5.8×5.2×4.5, 0703=7.8×7.0×3.5,

0705=7.8×7.0×5.0, 1004=10×9.0×4.0,

1005=10×9.0×5.4

(3)Tolerance: M=20%, L=15%, K=10%

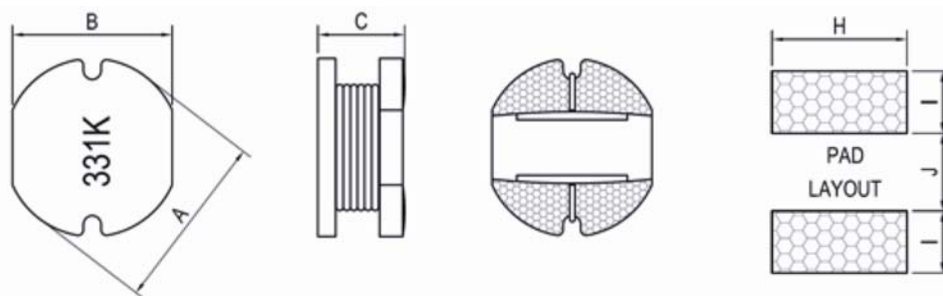
(4)Packaging style: T (Tape and Reel)

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

Characteristics:

- Rated DC Current: The DC current when the inductance decreases to 90% of its initial value or DC current when temperature of coil is increased to 30 $^{\circ}$ C. (Ta=25 $^{\circ}$ C)
The smaller one is defined as Rated DC Current.
- Operating Temperature: -20~80 $^{\circ}$ C.

Dimension



Unit: mm

Codes	A	B	C	H	I	J
PCD0302	3.5±0.3	3.0±0.3	2.0±0.30	2.83	1.45	0.7
PCD0403	4.5±0.3	4.0±0.3	3.2±0.30	4.50	1.75	1.5
PCD0502	5.8±0.3	5.2±0.3	2.5±0.30	5.50	2.15	1.7
PCD0503	5.8±0.3	5.2±0.3	3.0±0.30	5.50	2.15	1.7
PCD0504	5.8±0.3	5.2±0.3	4.5±0.35	5.50	2.15	1.7
PCD0703	7.8±0.3	7.0±0.3	3.5±0.50	7.50	3.00	2.0
PCD0705	7.8±0.3	7.0±0.3	5.0±0.50	7.50	3.00	2.0
PCD1004	10.0±0.3	9.0±0.3	4.0±0.50	9.50	3.75	2.5
PCD1005	10.0±0.4	9.0±0.4	5.4±0.40	9.50	3.75	2.5

Electrical Characteristics

0703 / 0705 / 1004 / 1005 TYPE

Part No.	L (μ H)	DC Resistance (Ω) Max				Rated DC current (A) Max			
		0703	0705	1004	1005	0703	0705	1004	1005
100	10	0.0803	0.07	0.053	0.06	1.44	2.30	2.38	2.60
120	12	0.0897	0.08	0.061	0.07	1.39	2.00	2.13	2.45
150	15	0.1040	0.09	0.070	0.08	1.24	1.80	1.87	2.27
180	18	0.1110	0.10	0.081	0.09	1.12	1.60	1.73	2.15
220	22	0.1290	0.11	0.088	0.10	1.07	1.50	1.60	1.95
270	27	0.1530	0.12	0.100	0.11	0.94	1.30	1.44	1.76
330	33	0.1700	0.13	0.120	0.12	0.85	1.20	1.26	1.50
390	39	0.2170	0.16	0.151	0.14	0.74	1.10	1.20	1.37
470	47	0.2520	0.18	0.170	0.17	0.68	1.10	1.10	1.28
560	56	0.2820	0.24	0.199	0.19	0.64	0.94	1.01	1.17
680	68	0.3320	0.28	0.223	0.22	0.59	0.85	0.91	1.11
820	82	0.4060	0.37	0.252	0.25	0.54	0.78	0.85	1.00
101	100	0.4810	0.43	0.344	0.35	0.51	0.72	0.74	0.97
121	120	0.5360	0.47	0.396	0.40	0.49	0.66	0.69	0.89
151	150	0.7550	0.64	0.544	0.47	0.40	0.58	0.61	0.78
181	180	1.0220	0.71	0.621	0.63	0.36	0.51	0.56	0.72
221	220	1.2000	0.96	0.721	0.73	0.31	0.49	0.53	0.66
271	270	1.3060	1.11	0.949	0.97	0.29	0.42	0.45	0.57
331	330	1.4950	1.26	1.100	1.15	0.28	0.40	0.42	0.52
391	390	-	1.77	1.245	1.30	-	0.36	0.38	0.48
471	470	-	1.96	1.526	1.48	-	0.34	0.35	0.42
561	560	-	-	1.904	1.90	-	-	0.32	0.33
681	680	-	-	-	2.25	-	-	-	0.28
821	820	-	-	-	2.55	-	-	-	0.24

- Measuring Freq:
10~82 μ H @2.52MHz 0.25V ; 100~330 μ H @1KHz 0.25V
- Tolerance of inductance:
PCD0703 10~470 μ H (K) \pm 10%
PCD0705 10~470 μ H (K) \pm 10%
PCD1004 10~47 μ H(M) \pm 20% ; 56 μ H~560 μ H(K) \pm 10%
PCD1005 10~39 μ H(M) \pm 20% ; 47 μ H~820 μ H(K) \pm 10%

Electrical Characteristics

0302 / 0403 / 0502 / 0503 / 0504 TYPE

Part No.	L (μH)	DC Resistance (Ω) Max					Rated DC current (A) Max				
		0302	0403	0502	0503	0504	0302	0403	0502	0503	0504
1R0	1.0	0.045	0.0487	-	0.03	-	2.20	2.56	-	4.50	-
1R2	1.2	0.050	-	0.050	0.03	-	2.10	-	4.20	4.20	-
1R4	1.4	-	0.0562	-	-	-	-	2.52	-	-	-
1R5	1.5	0.055	-	0.060	0.03	-	1.70	-	4.00	4.10	-
1R8	1.8	0.070	0.0637	0.065	0.03	-	1.65	1.95	3.70	3.70	-
2R2	2.2	0.085	0.0712	0.070	0.03	-	1.60	1.75	3.50	3.50	-
2R7	2.7	0.100	0.0787	0.080	0.04	-	1.40	1.58	3.20	3.20	-
3R3	3.3	0.120	0.0862	0.100	0.05	-	1.04	1.44	2.70	2.80	-
3R9	3.9	0.125	0.0937	0.120	0.06	-	1.00	1.33	2.40	2.60	-
4R7	4.7	0.135	0.1087	0.140	0.07	-	1.00	1.15	2.00	2.50	-
5R6	5.6	0.145	0.1257	0.150	0.08	-	0.95	0.99	1.80	2.40	-
6R8	6.8	0.200	0.1312	0.160	0.09	-	0.95	0.95	1.50	2.20	-
8R2	8.2	0.250	0.1462	0.170	0.10	-	0.92	0.84	1.40	2.00	-
100	10	0.320	0.1820	0.200	0.13	0.10	0.90	1.05	1.30	1.80	1.44
120	12	0.350	0.2100	0.230	0.16	0.12	0.85	0.97	1.10	1.75	1.40
150	15	0.460	0.2350	0.250	0.19	0.14	0.75	0.85	1.05	1.70	1.30
180	18	0.520	0.3380	0.300	0.21	0.15	0.70	0.74	1.00	1.60	1.23
220	22	0.650	0.3780	0.350	0.28	0.18	0.60	0.68	0.90	1.50	1.11
270	27	0.750	0.5220	0.400	0.32	0.20	0.55	0.62	0.85	1.40	0.97
330	33	0.920	0.5400	0.500	0.38	0.23	0.50	0.56	0.75	1.10	0.88
390	39	1.120	0.5870	0.550	0.42	0.32	0.48	0.52	0.70	1.00	0.80
470	47	1.270	0.844	0.650	0.52	0.37	0.45	0.44	0.60	0.90	0.72
560	56	1.500	0.9370	0.750	0.50	0.42	0.30	0.42	0.55	0.85	0.68
680	68	2.000	1.1170	0.950	0.68	0.46	0.26	0.37	0.50	0.80	0.61
820	82	2.150	-	1.200	0.82	0.60	0.23	-	0.45	0.65	0.58
101	100	2.850	-	1.400	1.10	0.70	0.20	-	0.40	0.60	0.52
121	120	3.400	-	1.750	1.20	0.93	0.18	-	0.35	0.58	0.48
151	150	4.200	-	2.000	1.50	1.10	0.16	-	0.25	0.43	0.40
181	180	4.500	-	2.600	1.80	1.38	0.15	-	0.22	0.41	0.38
221	220	5.700	-	3.000	2.00	1.57	0.14	-	0.20	0.38	0.35
271	270	8.500	-	3.700	2.90	-	0.10	-	0.18	0.35	-
331	330	9.500	-	4.300	3.30	-	0.09	-	0.17	0.28	-
391	390	-	-	6.000	3.70	-	-	-	0.16	0.26	-
471	470	-	-	6.700	4.90	-	-	-	0.15	0.20	-

- **Measuring Freq:**
1.0~8.2μH @7.96MHz 0.25V ; 10~82μH @2.52MHz 0.25V ; 100~470μH @1KHz 0.25V
- **Tolerance of inductance:**
PCD0302 1.0~18μH (M)±20% ; 22μH~330μH(K)±10%.
PCD0403 1.0~27μH (M)±20% ; 33μH~68μH(K)±10%.
PCD0502 1.2~18μH (M)±20% ; 22μH~470μH(K)±10%.
PCD0503 1.0~18μH (M)±20% ; 22μH~470μH(K)±10%.
PCD0504 10~27μH (M)±20% ; 33μH~220μH(K)±10%.