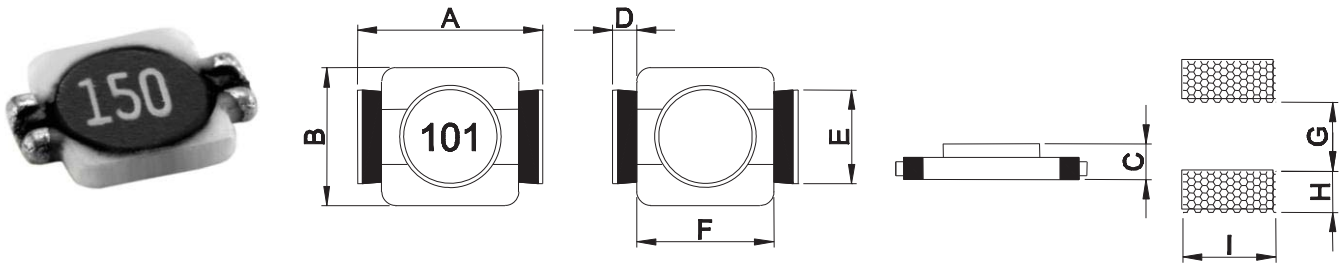


Viking Tech Corporation

SMD Mini Power Inductor



■ Dimensions

Unit: mm

Type	A	B	C	D	E	F	G	H	I
MPI0610	6.5 max.	5.3±0.3	1.0±0.2	0.9	3.0	4.5	4.0	1.5	3.4
MPI0612	6.5 max.	5.3±0.3	1.2 max.	0.9	3.0	4.5	4.0	1.5	3.4
MPI0620	6.5±0.5	5.3±0.3	2.0 max.	0.9	3.0	4.5	4.0	1.5	3.4

■ Features

- Very low profile.
- Constructed enclosed in a rugged to provide optimum pick and place operations.
- High inductance & high current ultra low profile power inductors.

■ Applications

- LCD Televisions
- Personal Computers
- Handheld Communication
- DC/DC Converters, etc.

■ Inductance and rated current ranges

- MPI0610 1.2~330μH 2.1~0.13A
- MPI0612 1.2~100μH 1.8~0.235A
- MPI0620 1.0~1000μH 2.5~0.08A
- Test equipment:
L: HP4192A LCR meter Zentech301A
DCR: Milli-ohm meter
- Electrical specifications at 25°C

■ Characteristics

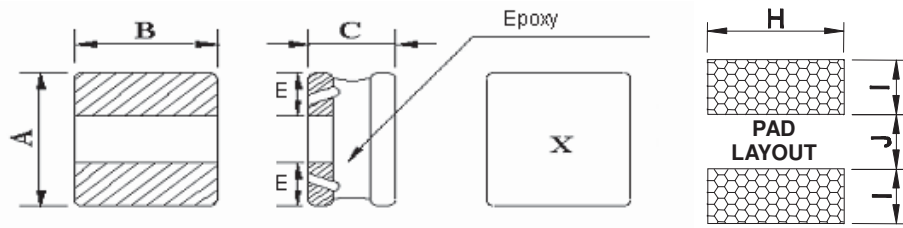
- Rated Current (IDC): The DC current when the inductance becomes 10% lower than its initial value. (Ta=25°C)
- Operating temperature range: -40~+100°C

■ Product Identification

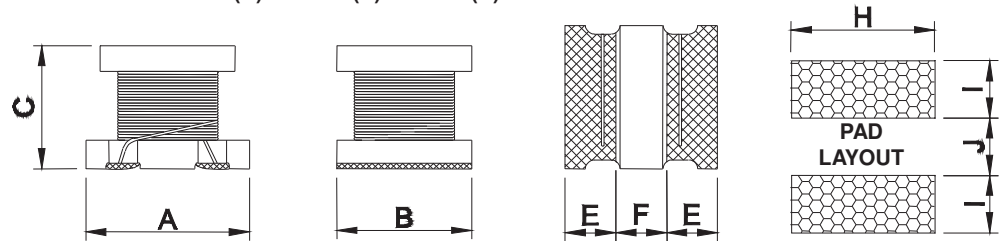
MPI	0610	M	T	101
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	0610: 6.5×5.3×1.0 0612: 6.5×5.3×1.2 0620: 6.5×5.3×2.0	M: ±20%	T: Tape and Reel	1R0: 1.0μH 470: 47μH 101: 100μH

SMD Power Inductor

VLH252010E / 252012E



VLH252510/322515(C) / 322520(C) / 453226(C) / 575047C



Dimensions

Unit: mm

Type	A	B	C	E	F	H	I	J
252010E	2.5±0.2	2.0±0.2	1.02 max	0.8 ref	-	2.0	0.85	0.8
252012E	2.5±0.2	2.0±0.2	1.20 max	0.8 ref	-	2.0	0.85	0.8
252510	2.5±0.2	2.5±0.2	1.05 max	0.9 ref	0.7 ref	2.5	1.2	0.8
322515(C)	3.2±0.3	2.5±0.2	1.55±0.3	1.05±0.3	1.05±0.3	2.0	1.5	1.0
322520(C)	3.2±0.3	2.5±0.2	2.0±0.3	0.7min.	0.7min.	2.0	1.5	1.0
453226(C)	4.5±0.3	3.2±0.2	2.6±0.4	1.0min.	1.0min.	3.0	2.0	1.2
575047C	5.7±0.3	5.0±0.3	4.7±0.3	1.3min.	1.7min.	5.0	2.0	2.0

Features

- The miniature chip inductors are wound on a special ferrite core.
- VLH322515/322520/453226 are low DC resistance.
- VLH322520C/453226C/565047C are low DC resistance, high current capacity, and high impedance characteristics. They are excellent for using as a choke coil in DC power supply circuits.

Applications

- Pagers, Cordless Phone
- High Frequency Communication Products
- Personal Computers
- Disk Drives And Computer Peripherals
- DC Power Supply Circuits

Characteristics for 252010E/ 252012E/252510/322515C

- Rated DC Current(I sat): The current when the inductance becomes 30% typical its initial value (Ta=25°C)
- Temperature Rise Current(I rms): The actual current when the temperature of coil becomes Δ T40°C.. (Ta=25°C)
- Operating temperature range: -40~105°C

Inductance and rated current ranges

- VLH252010E	1.00~22μH	2.20~0.50A
- VLH252012E	1.00~22μH	2.80~0.55A
- VLH252510	1.00~22μH	2.30~0.51A
- VLH322515	1.00~100μH	1.00~0.1A
- VLH322520	1.00~560μH	0.445~0.04A
- VLH453226	1.00~2200μH	0.50~0.03A
- VLH322515C	0.47~120μH	3.40~0.17A
- VLH322520C	1.00~560μH	1.00~0.06A
- VLH453226C	1.00~470μH	1.08~0.09A
- VLH575047C	0.12~10000μH	6.00~0.05A

- Test equipment:

L&Q: HP4285A Precision LCR meter

DCR: Milli-ohm meter

- Electrical specifications at 25°C

Characteristics except 252010E/252012E/252510/322515C

- Rated DC Current: The current when the inductance becomes 10% lower than its initial value or the current when the temperature of coil increases Δ T20°C. The smaller one is defined as Rated DC Current. (Ta=25°C)
- Operating temperature range: -40~105°C

Product Identification

VLH	453226	C	-	101	K
Product Type	Dimensions (AxBxC)	Use	Appearance	Inductance	Inductance Tolerance
	252010: 2.5x2.0x1.02 252012: 2.5x2.0x1.2 252510: 2.5x2.5x1.05 322515: 3.2x2.5x1.55 322520: 3.2x2.5x2.0 453226: 4.5x3.2x2.6 575047: 5.7x5.0x4.7	C: Choke Use : General Use	- : Standard E: Epoxy	1R0: 1.0 μ H 470: 47 μ H 101: 100 μ H	J: \pm 5% K: \pm 10% M: \pm 20% N: \pm 30%

Electrical Characteristics

VLH252010E Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max..	I rms(A) max.	I sat(A) max.	Marking Code
1R0	1.0	M	1MHz, 0.1V	0.121	2.20	2.20	A
1R5	1.5	M	1MHz, 0.1V	0.193	1.80	1.90	B
2R2	2.2	M	1MHz, 0.1V	0.232	1.68	1.60	C
3R3	3.3	M	1MHz, 0.1V	0.372	1.34	1.20	D
4R7	4.7	M	1MHz, 0.1V	0.548	1.00	1.00	E
5R6	5.6	M	1MHz, 0.1V	0.626	0.90	0.90	F
6R8	6.8	M	1MHz, 0.1V	0.778	0.90	0.90	G
100	10	M	1MHz, 0.1V	1.036	0.80	0.70	H
220	22	M	1MHz, 0.1V	2.391	0.50	0.50	I

VLH252012E Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	I rms(A) max.	I sat(A) max.	Marking Code
1R0	1.0	M	1MHz, 0.1V	0.137	2.20	2.80	A
1R5	1.5	M	1MHz, 0.1V	0.190	1.86	2.20	B
2R2	2.2	M	1MHz, 0.1V	0.285	1.70	1.80	C
3R3	3.3	M	1MHz, 0.1V	0.454	1.20	1.30	D
4R7	4.7	M	1MHz, 0.1V	0.659	1.04	1.10	E
5R6	5.6	M	1MHz, 0.1V	0.685	1.00	1.10	F
6R8	6.8	M	1MHz, 0.1V	0.988	0.94	0.94	G
100	10	M	1MHz, 0.1V	1.190	0.84	0.82	H
220	22	M	1MHz, 0.1V	2.743	0.54	0.55	I

VLH252510- Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) typical.	I rms(A) typical	I sat(A) typical
1R0	1.0	M	1MHz, 0.1V	0.085	1.90	2.30
1R5	1.5	M	1MHz, 0.1V	0.115	1.50	1.90
2R2	2.2	M	1MHz, 0.1V	0.168	1.20	1.50
3R3	3.3	M	1MHz, 0.1V	0.239	1.10	1.30
4R7	4.7	M	1MHz, 0.1V	0.316	0.90	1.10
5R6	5.6	M	1MHz, 0.1V	0.420	0.83	0.98
6R8	6.8	M	1MHz, 0.1V	0.487	0.80	0.90
8R2	8.2	M	1MHz, 0.1V	0.548	0.71	0.84
100	10	M	1MHz, 0.1V	0.610	0.68	0.79
220	22	M	1MHz, 0.1V	1.552	0.40	0.51

Electrical Characteristics

VLH322515- Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.	SRF (MHz) min.
1R0	1.0	N	1MHz, 0.1V	0.078	1.000	100
1R5	1.5	N	1MHz, 0.1V	0.068	1.200	100
2R2	2.2	M	1MHz, 0.1V	0.126	0.790	64
3R3	3.3	M	1MHz, 0.1V	0.180	0.700	50
4R7	4.7	M	1MHz, 0.1V	0.195	0.650	43
100	10	K	1MHz, 0.1V	0.420	0.450	26
150	15	K	1MHz, 0.1V	0.750	0.300	22
220	22	K	1MHz, 0.1V	1.000	0.250	19
330	33	K	1MHz, 0.1V	1.400	0.200	17
470	47	K	1MHz, 0.1V	2.200	0.170	13
680	68	K	1MHz, 0.1V	3.200	0.130	9
101	100	K	1MHz, 0.1V	4.500	0.100	8

VLH322520- Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	1MHz, 0.1V	0.50	0.445
1R2	1.2	M	1MHz, 0.1V	0.60	0.425
1R5	1.5	K, M	1MHz, 0.1V	0.60	0.400
1R8	1.8	K, M	1MHz, 0.1V	0.70	0.390
2R2	2.2	K, M	1MHz, 0.1V	0.80	0.370
2R7	2.7	K, M	1MHz, 0.1V	0.90	0.320
3R3	3.3	K, M	1MHz, 0.1V	1.00	0.300
3R9	3.9	K, M	1MHz, 0.1V	1.10	0.290
4R7	4.7	K, M	1MHz, 0.1V	1.20	0.270
5R6	5.6	K, M	1MHz, 0.1V	1.30	0.250
6R8	6.8	K, M	1MHz, 0.1V	1.50	0.240
8R2	8.2	K, M	1MHz, 0.1V	1.60	0.225
100	10	J, K	1MHz, 0.1V	1.80	0.190
120	12	J, K	1MHz, 0.1V	2.00	0.180
150	15	J, K	1MHz, 0.1V	2.20	0.170
180	18	J, K	1MHz, 0.1V	2.50	0.165
220	22	J, K	1MHz, 0.1V	2.80	0.150
270	27	J, K	1MHz, 0.1V	3.10	0.125
330	33	J, K	1MHz, 0.1V	3.50	0.115
390	39	J, K	1MHz, 0.1V	3.90	0.110
470	47	J, K	1MHz, 0.1V	4.30	0.100
560	56	J, K	1MHz, 0.1V	4.90	0.085
680	68	J, K	1MHz, 0.1V	5.50	0.080
820	82	J, K	1MHz, 0.1V	6.20	0.070
101	100	J, K	1MHz, 0.1V	7.00	0.080
121	120	J, K	1MHz, 0.1V	8.00	0.075
151	150	J, K	1MHz, 0.1V	9.30	0.070
181	180	J, K	1MHz, 0.1V	10.20	0.065
221	220	J, K	1MHz, 0.1V	11.80	0.065
271	270	J, K	1MHz, 0.1V	12.50	0.065
331	330	J, K	1MHz, 0.1V	15.00	0.065
391	390	J, K	1MHz, 0.1V	22.00	0.050
471	470	J, K	1KHz, 0.1V	25.00	0.045
561	560	J, K	1KHz, 0.1V	28.00	0.040

Electrical Characteristics

VLH453226- Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	1MHz, 0.1V	0.20	0.500
1R2	1.2	M	1MHz, 0.1V	0.20	0.500
1R5	1.5	M	1MHz, 0.1V	0.30	0.500
1R8	1.8	M	1MHz, 0.1V	0.30	0.500
2R2	2.2	M	1MHz, 0.1V	0.30	0.500
2R7	2.7	M	1MHz, 0.1V	0.32	0.500
3R3	3.3	M	1MHz, 0.1V	0.35	0.500
3R9	3.9	M	1MHz, 0.1V	0.38	0.500
4R7	4.7	K, M	1MHz, 0.1V	0.40	0.500
5R6	5.6	K, M	1MHz, 0.1V	0.47	0.500
6R8	6.8	K, M	1MHz, 0.1V	0.50	0.450
8R2	8.2	K, M	1MHz, 0.1V	0.56	0.450
100	10	J, K	1MHz, 0.1V	0.56	0.400
120	12	J, K	1MHz, 0.1V	0.62	0.380
150	15	J, K	1MHz, 0.1V	0.73	0.360
180	18	J, K	1MHz, 0.1V	0.82	0.340
220	22	J, K	1MHz, 0.1V	0.94	0.320
270	27	J, K	1MHz, 0.1V	1.10	0.300
330	33	J, K	1MHz, 0.1V	1.20	0.270
390	39	J, K	1MHz, 0.1V	1.40	0.240
470	47	J, K	1MHz, 0.1V	1.50	0.220
560	56	J, K	1MHz, 0.1V	1.70	0.200
680	68	J, K	1MHz, 0.1V	1.90	0.180
820	82	J, K	1MHz, 0.1V	2.20	0.170
101	100	J, K	1MHz, 0.1V	2.50	0.160
121	120	J, K	1MHz, 0.1V	3.00	0.150
151	150	J, K	1MHz, 0.1V	3.70	0.130
181	180	J, K	1MHz, 0.1V	4.50	0.120
221	220	J, K	1MHz, 0.1V	5.40	0.110
271	270	J, K	1MHz, 0.1V	6.80	0.100
331	330	J, K	1MHz, 0.1V	8.20	0.095
391	390	J, K	1MHz, 0.1V	9.70	0.090
471	470	J, K	1KHz, 0.1V	11.80	0.080
561	560	J, K	1KHz, 0.1V	14.50	0.070
681	680	J, K	1KHz, 0.1V	17.00	0.065
821	820	J, K	1KHz, 0.1V	20.50	0.060
102	1000	J, K	1KHz, 0.1V	25.00	0.050
122	1200	J, K	1KHz, 0.1V	30.00	0.045
152	1500	J, K	1KHz, 0.1V	37.00	0.040
182	1800	J, K	1KHz, 0.1V	45.00	0.035
222	2200	J, K	1KHz, 0.1V	50.00	0.030

■ Electrical Characteristics

VLH322515C- Type

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	Isat (A) max.	Irms (A) max.	SRF (MHz) min.
R47	0.47	N	1MHz, 0.1V	0.030	3.40	2.55	100
1R0	1.0	N	1MHz, 0.1V	0.045	2.30	2.05	100
1R5	1.5	N	1MHz, 0.1V	0.057	1.75	1.75	70
2R2	2.2	N	1MHz, 0.1V	0.076	1.55	1.60	70
3R3	3.3	N	1MHz, 0.1V	0.120	1.25	1.20	50
4R7	4.7	N	1MHz, 0.1V	0.180	1.00	1.00	40
6R8	6.8	N	1MHz, 0.1V	0.240	0.85	0.85	40
100	10	M	1MHz, 0.1V	0.380	0.75	0.70	30
150	15	M	1MHz, 0.1V	0.570	0.60	0.52	20
220	22	M	1MHz, 0.1V	0.810	0.50	0.45	20
330	33	M	1MHz, 0.1V	1.150	0.38	0.39	13
470	47	M	1MHz, 0.1V	1.780	0.33	0.31	11
680	68	M	1MHz, 0.1V	2.280	0.28	0.275	11
101	100	M	1MHz, 0.1V	2.700	0.18	0.250	8
121	120	M	1MHz, 0.1V	4.380	0.17	0.200	8

VLH322520C- Type

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	1MHz, 0.1V	0.078	1.000
2R2	2.2	M	1MHz, 0.1V	0.126	0.790
3R3	3.3	M	1MHz, 0.1V	0.165	0.500
4R7	4.7	M	1MHz, 0.1V	0.195	0.450
6R8	6.8	M	1MHz, 0.1V	0.330	0.450
100	10	M	1MHz, 0.1V	0.572	0.300
220	22	K, M	1MHz, 0.1V	0.923	0.250
470	47	K, M	1MHz, 0.1V	1.690	0.170
101	100	J, K	1MHz, 0.1V	4.550	0.100
151	150	J, K	1MHz, 0.1V	9.100	0.080
221	220	J, K	1MHz, 0.1V	10.92	0.070
331	330	J, K	1MHz, 0.1V	13.00	0.060
391	390	J, K	1MHz, 0.1V	22.10	0.060
471	470	J, K	1MHz, 0.1V	24.70	0.060
561	560	J, K	1MHz, 0.1V	28.60	0.060

VLH453226C- Type

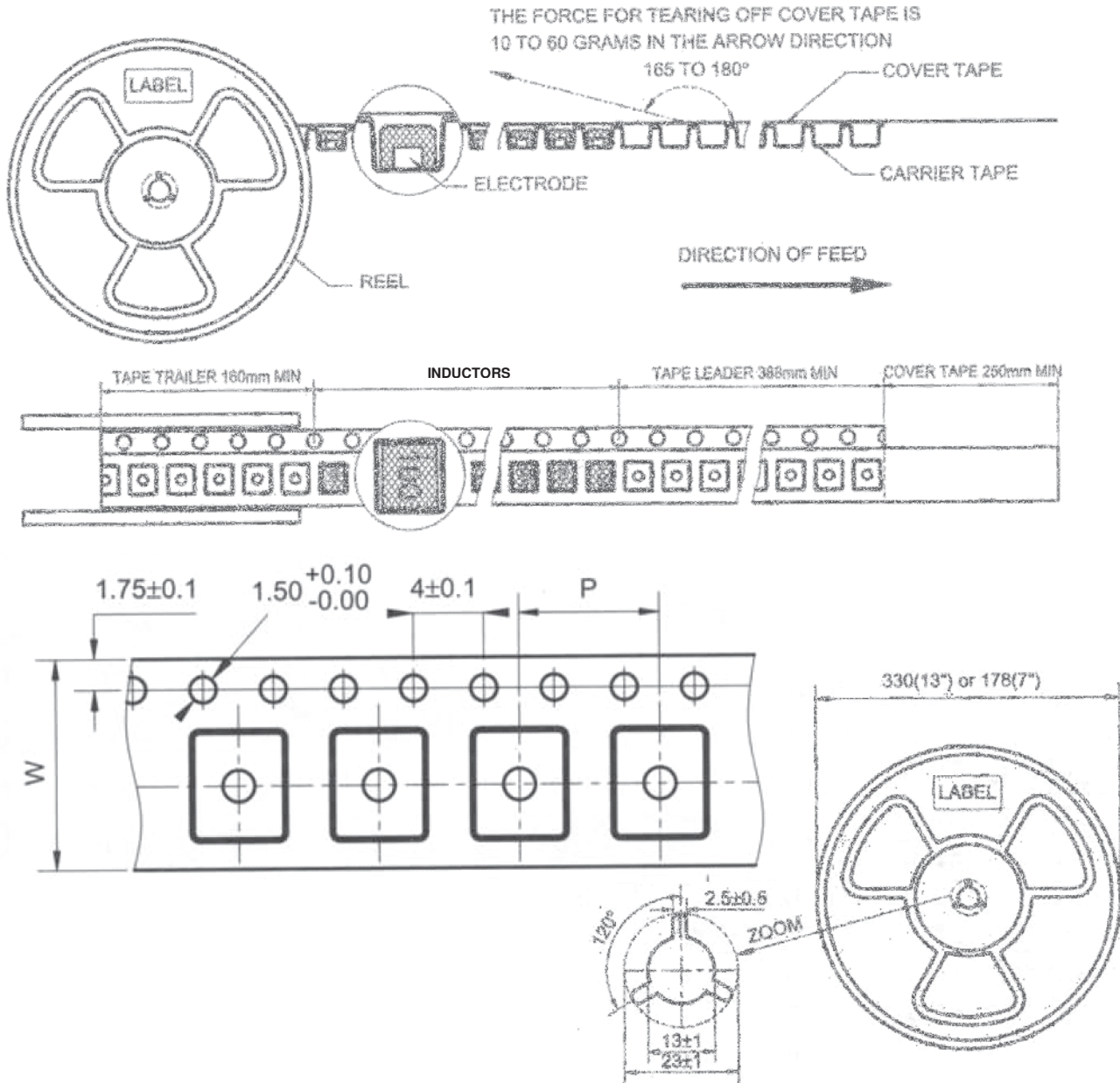
Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	1MHz, 0.1V	0.08	1.080
1R5	1.5	M	1MHz, 0.1V	0.09	1.000
2R2	2.2	M	1MHz, 0.1V	0.11	0.900
3R3	3.3	M	1MHz, 0.1V	0.13	0.800
4R7	4.7	K, M	1MHz, 0.1V	0.15	0.750
6R8	6.8	K, M	1MHz, 0.1V	0.20	0.720
100	10	J, K	1MHz, 0.1V	0.24	0.650
150	15	J, K	1MHz, 0.1V	0.32	0.570
220	22	J, K	1MHz, 0.1V	0.60	0.420
330	33	J, K	1MHz, 0.1V	1.00	0.310
470	47	J, K	1MHz, 0.1V	1.10	0.280
680	68	J, K	1MHz, 0.1V	1.70	0.220
101	100	J, K	1MHz, 0.1V	2.20	0.190
151	150	J, K	1MHz, 0.1V	3.50	0.130
221	220	J, K	1MHz, 0.1V	4.00	0.110
331	330	J, K	1MHz, 0.1V	6.80	0.100
471	470	J, K	1KHz, 0.1V	8.50	0.090

■ Electrical Characteristics

VLH575047C- Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
R12	0.12	M	1MHz, 0.1V	0.0098	6.000
R27	0.27	M	1MHz, 0.1V	0.0140	5.300
R47	0.47	M	1MHz, 0.1V	0.0182	4.800
1R0	1.0	M	1MHz, 0.1V	0.0270	4.000
1R5	1.5	M	1MHz, 0.1V	0.0310	3.700
2R2	2.2	M	1MHz, 0.1V	0.0410	3.200
3R3	3.3	M	1MHz, 0.1V	0.0500	2.900
4R7	4.7	M	1MHz, 0.1V	0.0574	2.700
6R8	6.8	M	1MHz, 0.1V	0.1040	2.000
100	10	K, M	1MHz, 0.1V	0.1300	1.700
150	15	K, M	1MHz, 0.1V	0.210	1.400
220	22	K, M	1MHz, 0.1V	0.266	1.200
270	27	K, M	1MHz, 0.1V	0.300	1.000
330	33	K, M	1MHz, 0.1V	0.448	0.900
470	47	K, M	1MHz, 0.1V	0.560	0.800
680	68	K, M	1MHz, 0.1V	0.938	0.640
101	100	K, M	100KHz, 0.1V	1.204	0.560
151	150	K, M	100KHz, 0.1V	2.660	0.420
221	220	K, M	100KHz, 0.1V	3.360	0.320
331	330	K, M	100KHz, 0.1V	6.160	0.270
471	470	K, M	100KHz, 0.1V	7.560	0.240
681	680	K, M	100KHz, 0.1V	11.34	0.190
102	1000	K, M	10KHz, 0.1V	14.42	0.150
222	2200	K, M	10KHz, 0.1V	30.10	0.100
472	4700	K, M	10KHz, 0.1V	61.04	0.070
103	10000	K, M	10KHz, 0.1V	140.0	0.050

Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel	
	W	P	7"	13"
252010E	8	4	2000	-
252012E	8	4	2000	-
252510	8	4	2000	-
322515	8	4	2000	-
322520	12	8	1000	-
453226	12	8	500	-
575047	16	12	-	1000

SMD Power Inductor Environmental Specifications

General

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

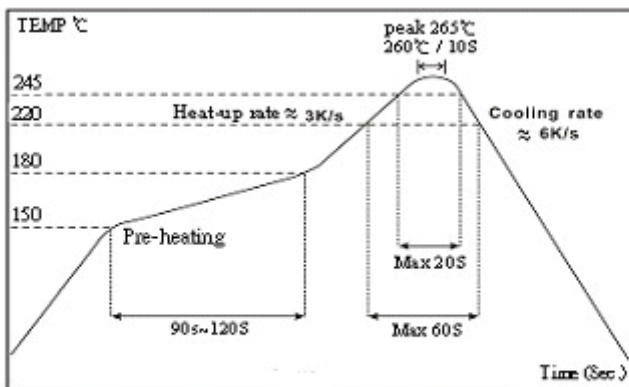
Environmental test

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

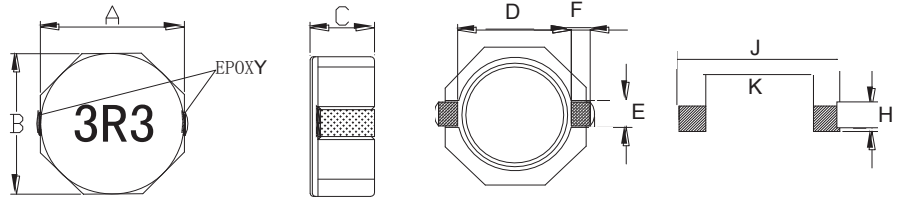
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
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°C . Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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)



Shielded SMD Power Inductor



Dimensions

Unit: mm

Codes	A	B	C max.	D ref	E ref	F ref	H	J	K
SDRH0830	8.0±0.3	8.0±0.3	3.0	6.3	2.5	1.2	2.8	10.1	6.1
SDRH0840	8.0±0.3	8.0±0.3	4.0	6.3	2.5	1.2	2.8	10.1	6.1
SDRH0845	8.0±0.3	8.0±0.3	4.5	6.3	2.5	1.2	2.8	10.1	6.1

Features

- Magnetically shielded construction
- ROHS compliance

Inductance and rated current ranges

- SDRH0830 1.0~100μH 6.5~0.75A
- SDRH0840 1.8~100μH 6.5~0.88A
- SDRH0845 1.0~100μH 8.5~1.30A
- Test equipment:
L: HP4284A LCR meter
DCR: Milli-ohm meter
- Electrical specifications at 25°C

Applications

- LCD TV
- DC to DC Converters
- Notebook PC

Characteristics

- Rated DC Current : The current when the inductance becomes 35% lower than its initial value.
- Operating temperature: -40~85°C

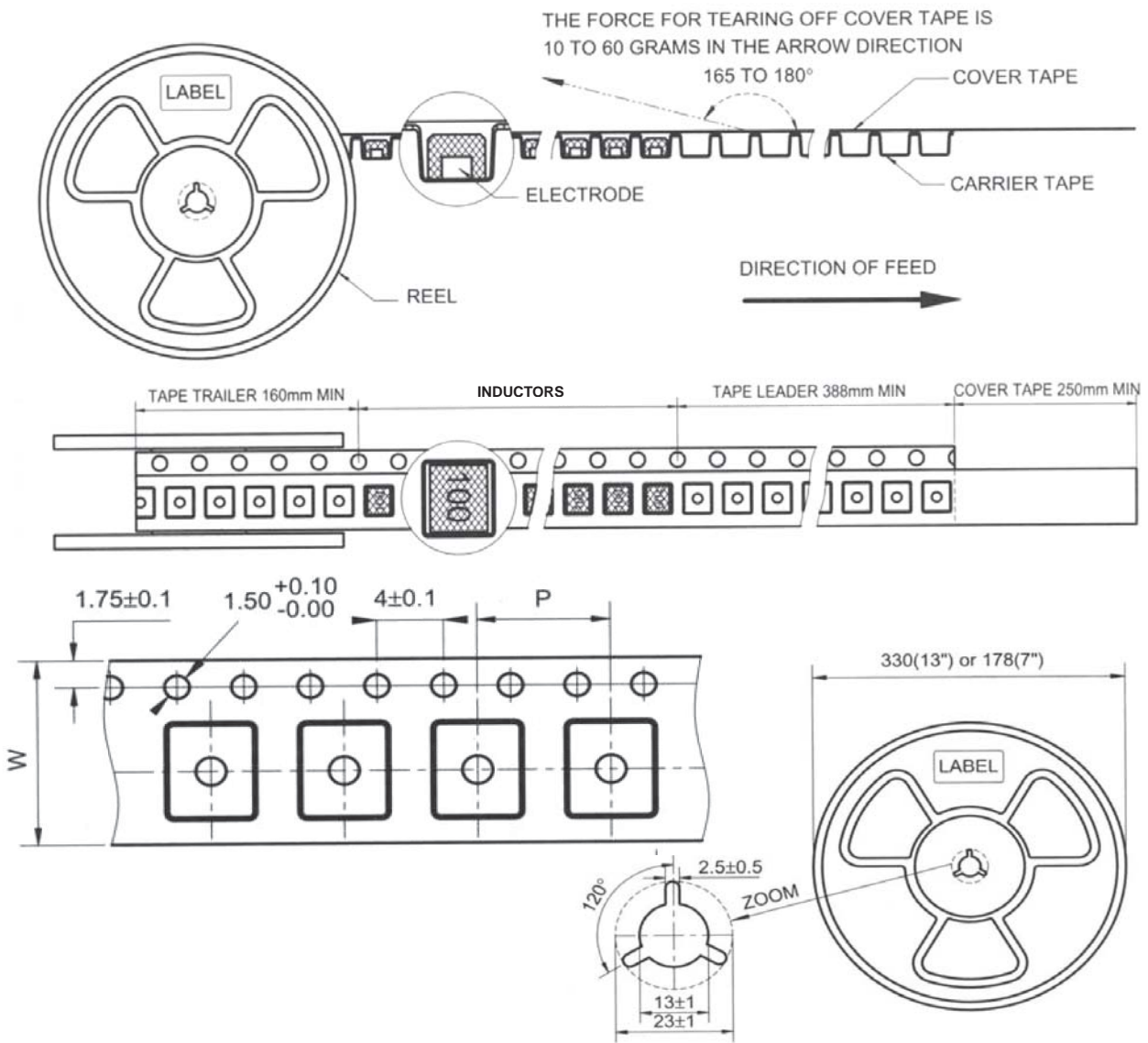
Product Identification

SDRH	0830	N	T	101
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	0830: 8.0x8.0x3.0 0840: 8.0x8.0x4.0 0845: 8.0x8.0x4.5	N: ±30%	T: Tape and Reel	1R0: 1.0μH 470: 47μH 101: 100μH

Electrical Characteristics

Codes	L (μ H)	Tolerance	Test Condition		DCR (m Ω) max.			IDC (A) max.		
			0830	0840 0845	0830	0840	0845	0830	0840	0845
1R0	1.0	N	100KHz, 0.25V	100KHz, 0.1V	11.0	-	9.50	6.50	-	9.00
1R2	1.2	N	100KHz, 0.25V	100KHz, 0.1V	-	-	12.2	-	-	8.00
1R5	1.5	N	100KHz, 0.25V	100KHz, 0.1V	-	-	13.0	-	-	7.80
1R8	1.8	N	100KHz, 0.25V	100KHz, 0.1V	-	15.6	-	-	7.00	-
2R0	2.0	N	100KHz, 0.25V	100KHz, 0.1V	-	-	14.0	-	-	7.00
2R2	2.2	N	100KHz, 0.25V	100KHz, 0.1V	-	-	15.0	-	-	6.80
2R5	2.5	N	100KHz, 0.25V	100KHz, 0.1V	15.6	17.5	16.0	4.50	6.50	6.60
3R3	3.3	N	100KHz, 0.25V	100KHz, 0.1V	18.2	-	17.0	4.00	-	6.20
3R5	3.5	N	100KHz, 0.25V	100KHz, 0.1V	-	24.0	-	-	5.00	-
3R9	3.9	N	100KHz, 0.25V	100KHz, 0.1V	-	-	19.0	-	-	5.90
4R7	4.7	N	100KHz, 0.25V	100KHz, 0.1V	24.7	29.0	22.0	3.40	4.60	5.60
6R0	6.0	N	100KHz, 0.25V	100KHz, 0.1V	-	32.0	-	-	4.20	-
6R8	6.8	N	100KHz, 0.25V	100KHz, 0.1V	-	-	25.0	-	-	4.40
7R3	7.3	N	100KHz, 0.25V	100KHz, 0.1V	39.0	-	-	2.80	-	-
100	10	N	100KHz, 0.25V	100KHz, 0.1V	47.0	48.0	36.0	2.50	3.00	4.00
150	15	N	100KHz, 0.25V	100KHz, 0.1V	69.0	67.0	53.0	1.90	2.75	2.90
180	18	N	100KHz, 0.25V	100KHz, 0.1V	-	-	72.0	-	-	2.70
220	22	N	100KHz, 0.25V	100KHz, 0.1V	99.0	105	75.0	1.60	2.30	2.60
270	27	N	100KHz, 0.25V	100KHz, 0.1V	-	-	100	-	-	2.25
330	33	N	100KHz, 0.25V	100KHz, 0.1V	156	157	125	1.30	1.75	2.20
470	47	N	100KHz, 0.25V	100KHz, 0.1V	195	189	150	1.15	1.52	1.80
680	68	N	100KHz, 0.25V	100KHz, 0.1V	286	290	240	0.92	1.30	1.50
101	100	N	100KHz, 0.25V	100KHz, 0.1V	430	410	360	0.75	1.05	1.30

■ Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
SDRH0830	24	12	1000
SDRH0840	24	12	1000
SDRH0845	24	12	1000

SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: $25\pm 3^{\circ}\text{C}$; Humidity: <80% relative humidity. Recommended product should be used within six months from the time of delivery.
Storage temperature range	Temperature range: -40°C to $+125^{\circ}\text{C}$.

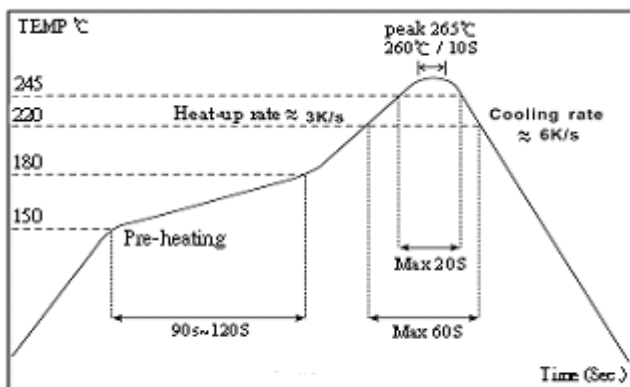
Environmental test

Test Items	Specifications	Test Conditions / Test Methods
High temperature Storage test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Temperature $85\pm 2^{\circ}\text{C}$, Time: 48 ± 2 hours, Tested after 1 hour at room temperature.
Low temperature Storage test		Temperature $-25\pm 2^{\circ}\text{C}$, Time: 48 ± 2 hours, Tested after 1 hour at room temperature.
Humidity test		Temperature $40\pm 2^{\circ}\text{C}$, 90~95% relative humidity Time: 96 ± 2 hours, apply rated current, Tested after 1 hour at room temperature.
Thermal shock test		First -25°C 30minutes then 25°C 10 minutes last 85°C 30 minutes, as 1 cycle. Go through 5 cycles. Tested after 1 hour at room temperature.

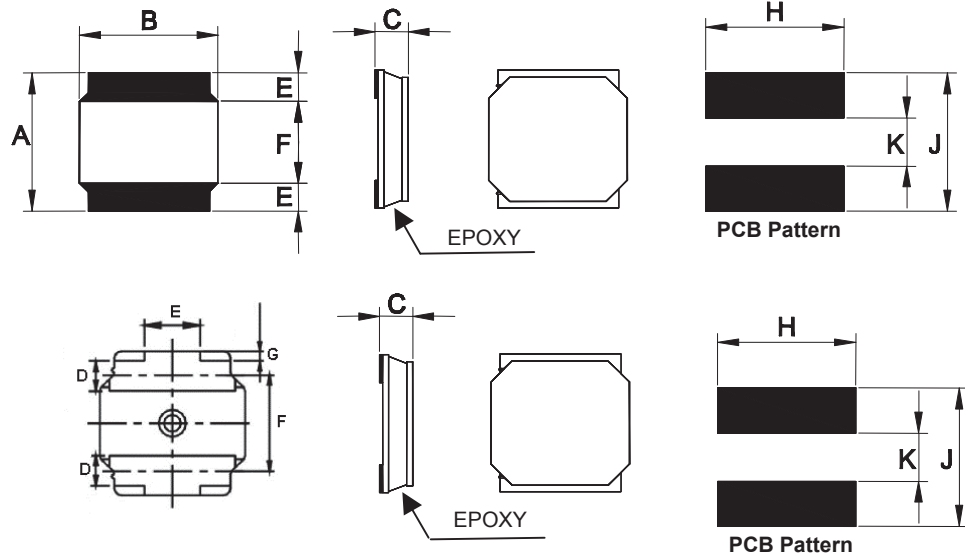
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at $245\pm 5^{\circ}\text{C}$ for 3 seconds.
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 $130\sim 150^{\circ}\text{C}$. Immersing to $260\pm 5^{\circ}\text{C}$ for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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):



SMD Power Inductor



Dimensions

Unit: mm

Type	A	B	C max.	D	E	F	G	H	J	K
SDIA0310	3.0±0.2	3.0±0.2	1.0	-	0.9±0.2	1.9±0.2	-	2.7	3.0	0.8
SDIA0312	3.0±0.2	3.0±0.2	1.25	-	0.9±0.2	1.9±0.2	-	2.7	3.0	0.8
SDIA0315	3.0±0.2	3.0±0.2	1.5	-	0.9±0.2	1.9±0.2	-	2.7	3.0	0.8
SDIA0410	4.0±0.2	4.0±0.2	1.0	-	1.1±0.2	2.5±0.2	-	3.7	4.0	1.2
SDIA0418	4.0±0.2	4.0±0.2	1.8	-	1.1±0.2	2.5±0.2	-	3.7	4.0	1.2
SDIA0520	5.0±0.2	5.0±0.2	2.0	2.3±0.3	1.25±0.2	3.6±0.2	0.3±0.2	4.7	5.0	1.5
SDIA0528	5.0±0.2	5.0±0.2	2.8	2.3±0.3	1.25±0.2	3.6±0.2	0.3±0.2	4.7	5.0	1.5
SDIA0610	6.0±0.2	6.0±0.2	1.0	2.3±0.3	1.35±0.2	4.0±0.2	0.3±0.2	5.7	6.3	1.6
SDIA0612	6.0±0.2	6.0±0.2	1.2	2.3±0.3	1.35±0.2	4.0±0.2	0.3±0.2	5.7	6.3	1.6
SDIA0620	6.0±0.2	6.0±0.2	2.0	2.3±0.3	1.35±0.2	4.0±0.2	0.3±0.2	5.7	6.3	1.6
SDIA0628	6.0±0.2	6.0±0.2	2.8	2.3±0.3	1.35±0.2	4.0±0.2	0.3±0.2	5.7	6.3	1.6
SDIA0645	6.0±0.2	6.0±0.2	4.5	2.3±0.3	1.35±0.2	4.0±0.2	0.3±0.2	5.7	6.3	1.6
SDIA0840	8.0±0.2	8.0±0.2	4.2	-	1.6±0.3	5.6±0.3	-	7.5	7.4	1.8

Features

- Small and Low profile inductor
- It corresponds to high current
- Shield structure magnetically
- Strong structure against a shock-proof

Applications

- LCD Display etc.
- For Small DC to DC Converters
- PDA.

Characteristics

- Rated DC Current : The current when the inductance becomes 30% lower than its initial value.
- Operating temperature range: -40~85°C

Inductance and rated current ranges

- SDIA0310 1.5~22μH 1.20~0.35A
- SDIA0312 1.5~47μH 1.36~0.25A
- SDIA0315 2.2~47μH 1.48~0.32A
- SDIA0410 1.0~47μH 1.80~0.24A
- SDIA0418 1.0~220μH 4.00~0.27A
- SDIA0520 2.2~10μH 5.20~2.40A
- SDIA0528 2.2~470μH 6.00~0.40A
- SDIA0610 4.7~10μH 1.80~1.40A
- SDIA0612 2.2~10μH 3.10~1.40A
- SDIA0620 1.0~10μH 6.80~1.90A
- SDIA0628 0.9~100μH 6.60~0.62A
- SDIA0645 1.0~100μH 8.50~0.80A
- SDIA0840 0.9~100μH 11.0~1.00A
- Test equipment:
L: HP4284A LCR meter
DCR: Milli-ohm meter
- Electrical specifications at 25°C

Product Identification

SDIA	0312	M	T	470
Product Type	Dimensions (AxC)	Inductor Tolerance	Packaging Style	Inductance
	0310: 3.0x1.0 0312: 3.0x1.25 0315: 3.0x1.5 0410: 4.0x1.0 0418: 4.0x1.8 0520: 5.0x2.0 0528: 5.0x2.8 0610: 6.0x1.0 0612: 6.0x1.2 0620: 6.0x2.0 0628: 6.0x2.8 0645: 6.0x4.5 0840: 8.0x4.0	M: $\pm 20\%$ N: $\pm 30\%$	T: Tape and Reel	1R0: 1.0 μ H 470: 47 μ H 101: 100 μ H

Electrical Characteristics

SDIA0310 / 0312 / 0315 / 0410 Type

Codes	L (μ H)	Tolerance		Test Condition	DCR (Ω) max.				IDC (A) max.			
		0310 0312 0315	0410		0310	0312	0315	0410	0310	0312	0315	0410
1R0	1.0	N	N	100KHz, 0.25V	-	-	0.045	0.100	-	-	1.80	1.80
1R5	1.5	N	N	100KHz, 0.25V	0.080	0.060	-	-	1.20	1.360	-	-
2R2	2.2	N	N	100KHz, 0.25V	0.095	0.080	0.060	0.150	1.10	1.100	1.48	1.15
3R3	3.3	N	M	100KHz, 0.25V	0.140	0.100	0.080	0.180	0.87	0.910	1.21	1.10
4R7	4.7	N	M	100KHz, 0.25V	0.190	0.130	0.120	0.210	0.75	0.770	1.02	0.90
6R8	6.8	N	M	100KHz, 0.25V	0.300	-	-	0.300	0.61	-	-	0.74
100	10	N	M	1KHz, 0.25V	0.450	0.290	0.230	0.380	0.50	0.540	0.70	0.56
150	15	N	M	1KHz, 0.25V	-	-	-	0.510	-	-	-	0.47
220	22	N	M	1KHz, 0.25V	1.030	0.630	0.520	0.870	0.35	0.375	0.47	0.36
330	33	N	M	1KHz, 0.25V	-	1.030	0.840	1.540	-	0.310	0.39	0.28
470	47	N	M	1KHz, 0.25V	-	1.450	1.340	1.810	-	0.250	0.32	0.24

Electrical Characteristics

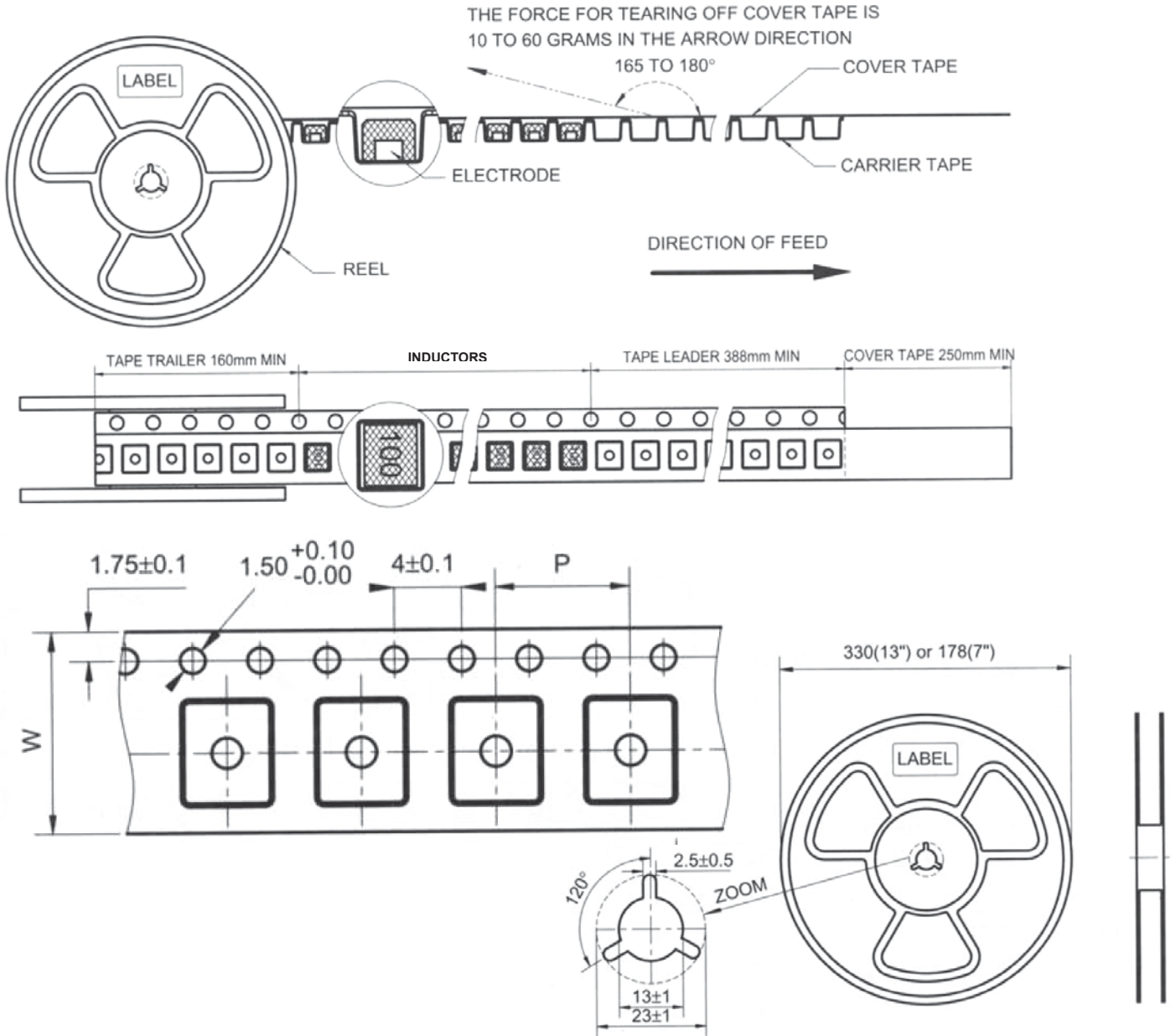
SDIA0418 / 0520 / 0528 / 0610 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.				IDC (A) max.			
				0418	0520	0528	0610	0418	0520	0528	0610
1R0	1.0	N	100KHz, 0.25V	0.030	-	-	-	4.0	-	-	-
2R2	2.2	N	100KHz, 0.25V	0.060	0.049	0.042	-	2.7	5.2	6.0	-
3R3	3.3	M, N	100KHz, 0.25V	0.070	0.074	-	-	2.0	4.0	-	-
4R7	4.7	M, N	100KHz, 0.25V	0.090	0.098	0.077	0.230	1.7	3.6	4.5	1.8
6R8	6.8	M, N	100KHz, 0.25V	0.110	0.137	-	0.450	1.45	2.9	-	1.6
100	10	M, N	1KHz, 0.25V	0.180	0.205	0.163	0.400	1.20	2.4	3.0	1.4
150	15	M, N	1KHz, 0.25V	0.250	-	-	-	0.94	-	-	-
220	22	M, N	1KHz, 0.25V	0.360	-	0.400	-	0.80	-	1.9	-
330	33	M, N	1KHz, 0.25V	0.530	-	-	-	0.65	-	-	-
470	47	M, N	1KHz, 0.25V	0.650	-	0.854	-	0.57	-	1.5	-
680	68	M, N	1KHz, 0.25V	1.000	-	-	-	0.47	-	-	-
101	100	M, N	1KHz, 0.25V	1.500	-	-	-	0.40	-	-	-
151	150	M, N	1KHz, 0.25V	2.500	-	-	-	0.31	-	-	-
221	220	M, N	1KHz, 0.25V	4.000	-	-	-	0.27	-	-	-
471	470	M, N	1KHz, 0.25V	-	-	7.800	-	-	-	0.4	-

SDIA0612 / 0620 / 0628 / 0645 / 0840 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.					IDC (A) max.				
				0612	0620	0628	0645	0840	0612	0620	0628	0645	0840
0R9	0.9	N	100KHz, 0.25V	-	-	0.013	-	-	-	-	6.60	-	-
1R0	1.0	N	100KHz, 0.25V	-	0.026	-	0.014	--	-	6.80	-	8.50	-
1R3	1.3	N	100KHz, 0.25V	-	-	-	0.016	-	-	-	-	8.00	-
1R5	1.5	N	100KHz, 0.25V	-	-	0.016	-	--	-	-	5.00	-	-
1R8	1.8	N	100KHz, 0.25V	-	-	-	0.018	-	-	-	-	7.00	-
2R2	2.2	N	100KHz, 0.25V	0.133	0.049	0.020	-	0.017	3.10	4.70	4.20	-	7.33
2R3	2.3	N	100KHz, 0.25V	-	-	-	0.021	-	-	-	-	6.00	-
3R0	3.0	N	100KHz, 0.25V	-	-	0.023	0.024	-	-	-	3.60	5.00	-
3R3	3.3	M, N	100KHz, 0.25V	-	-	-	-	0.022	-	-	-	-	5.93
4R5	4.5	M	100KHz, 0.25V	-	-	-	0.031	-	-	-	-	4.00	-
4R7	4.7	M, N	100KHz, 0.25V	0.220	0.086	0.031	-	0.023	1.90	2.80	2.70	-	4.70
6R0	6.0	N	100KHz, 0.25V	-	-	0.040	-	-	-	-	2.50	-	-
6R3	6.3	M	100KHz, 0.25V	-	-	-	0.038	-	-	-	-	3.80	-
6R8	6.8	M, N	100KHz, 0.25V	0.280	0.111	-	-	0.033	1.60	2.60	-	-	4.00
100	10	M, N	1KHz, 0.25V	0.430	0.178	0.065	0.047	0.044	1.40	1.90	1.90	3.00	3.40
120	12	M, N	1KHz, 0.25V	-	-	-	-	0.055	-	-	-	-	3.05
150	15	M, N	1KHz, 0.25V	-	-	0.095	0.077	0.065	-	-	1.60	2.30	2.70
220	22	M, N	1KHz, 0.25V	-	-	0.135	0.115	0.086	-	-	1.30	1.90	2.20
330	33	M, N	1KHz, 0.25V	-	-	0.220	0.145	0.130	-	-	1.10	1.50	1.90
470	47	M, N	1KHz, 0.25V	-	-	0.300	0.220	0.200	-	-	0.95	1.30	1.50
680	68	M, N	1KHz, 0.25V	-	-	0.420	0.330	0.300	-	-	0.76	1.00	1.20
101	100	M, N	1KHz, 0.25V	-	-	0.600	0.500	0.380	-	-	0.62	0.80	1.00

■ Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel	
	W	P	7"	13"
SDIA0310	12	8	1000	-
SDIA0312	12	8	1000	-
SDIA0315	12	8	1000	-
SDIA0410	12	8	1000	3500
SDIA0418	12	8	-	3000
SDIA0520	12	8	-	2000
SDIA0528	12	8	-	2000
SDIA0610	12	8	1000	-
SDIA0612	12	8	1000	3500
SDIA0620	12	8	-	2000
SDIA0628	12	8	-	2000
SDIA0645	12	8	-	1000
SDIA0840	16	12	-	1000

■ SMT Power Inductor Environmental Specifications

General

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

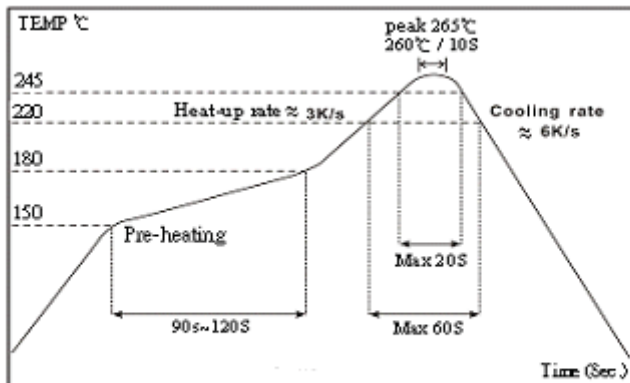
Environmental test

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

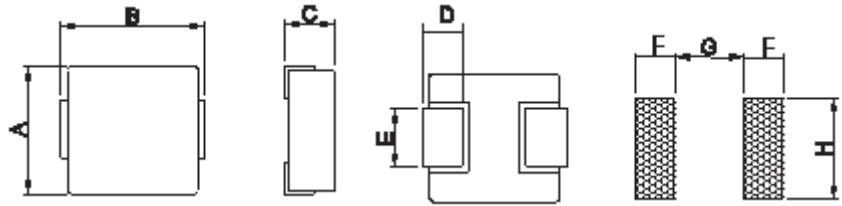
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
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°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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):



SMD Flat Wire Coils



Features

- Large current adaptable
- Footprint compatible with most standard
- Lower temperature rise at large current
- Low profile, low DCR
- Available on tape and reel for auto surface mounting

Applications

- Laptop / Desktop / Notebook Computers
- Terminals / Portable Servers / Workstation
- DC/DC Converter in Distributed Power Systems or VRM Applications
- Thin Type On-board Power Supply Module for Exchanger

Characteristics

- Saturation Rated Current would cause inductance to drop approximately 25%(0420 drop approximately 30%)
- Temperature Rise Current would cause an approximately ΔT of 40°C
- All test data is referred to 25°C ambient

Dimensions

Unit: mm

Type	A	B	C max.	D	E	F	G	H
SDB0420	4.1±0.5	4.5±0.5	2.1	0.8±0.5	1.5±0.5	1.5	2.5	2.2
SDB0520	5.0±0.5	5.5±0.5	2.0	1.2±0.5	1.5±0.5	2.0	3.0	2.5
SDB0530	5.0±0.5	5.5±0.5	3.0	1.2±0.5	1.5±0.5	2.0	3.0	2.5
SDB0620	6.8 max	7.5 max	2.0	1.6±0.5	2.9±0.5	2.5	3.7	3.5
SDB0625	6.8 max	7.5 max	2.5	1.6±0.5	2.9±0.5	2.5	3.7	3.5
SDB0630	6.8 max	7.5 max	3.0	1.6±0.5	2.9±0.5	2.5	3.7	3.5
SDB0650	6.8 max	7.5 max	5.0	1.6±0.5	2.9±0.5	2.5	3.7	3.5
SDB1040	10.4 max	11.5 max	4.0	2.0±0.5	2.9±0.5	3.5	6.0	4.0
SDB1340	13.0 max	14.2 max	4.0	2.3±0.5	3.8±0.5	2.9	7.9	5.0
SDB1350	13.0 max	14.2 max	5.0	2.3±0.5	3.8±0.5	2.9	7.9	5.0
SDB1365	13.0 max	14.2 max	6.5	2.3±0.5	3.8±0.5	2.9	7.9	5.0

Inductance and rated current ranges

- SDB0420 0.10μH~3.3μH @Saturation Current: 22~4A
- SDB0520 0.10μH~4.7μH @Saturation Current: 45~5A
- SDB0530 0.10μH~4.7μH @Saturation Current: 27~8.2A
- SDB0620 0.10μH~4.7μH @Saturation Current: 40~8A
- SDB0625 0.10μH~10μH @Saturation Current: 50~7A
- SDB0630 0.10μH~10μH @Saturation Current: 60~7A
- SDB0650 0.56μH~10μH @Saturation Current: 12~4.5A
- SDB1040 0.19μH~47μH @Saturation Current: 90~3.0A
- SDB1340 0.10μH~10μH @Saturation Current: 84~14A
- SDB1350 0.10μH~10μH @Saturation Current: 118~16A
- SDB1365 0.10μH~10μH @Saturation Current: 120~15.5A

– Test equipment:

L: HP4284A LCR meter

DCR: Milli-ohm meter

– Electrical specifications at 25°C

– Operating temperature rang: -55°C~+155°C

Product Identification

SDB	0630	M	T	100
Product Type	Dimensions (AxC)	Inductor Tolerance	Packaging Style	Inductance
	0420: 4.1×2.1 0520: 5.0×2.0 0530: 5.0×3.0 0620: 6.8×2.0 0625: 6.8×2.5 0630: 6.8×3.0 0650: 6.8×5.0 1040: 10.4×4.0 1340: 13.0×4.0 1350: 13.0×5.0 1365: 13.0×6.5	M: ±20%	T: Tape and Reel	R10: 0.10μH 1R0: 1.0μH 100: 10μH

Electrical Characteristics

SDB0420 Type

Codes	Inductance (μH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R10	0.10	M	100KHz, 0.25V	4.0	22.0	12.0
R22	0.22	M	100KHz, 0.25V	6.6	12.5	9.0
R47	0.47	M	100KHz, 0.25V	14	9.5	7.0
R56	0.56	M	100KHz, 0.25V	16	8.5	6.5
1R0	1.0	M	100KHz, 0.25V	27	7.0	4.5
1R5	1.5	M	100KHz, 0.25V	46	6.0	4.0
2R2	2.2	M	100KHz, 0.25V	58	5.0	3.0
3R3	3.3	M	100KHz, 0.25V	87	4.0	2.5

SDB0520 Type

Codes	Inductance (μH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R10	0.10	M	100KHz, 0.25V	3.9	45.0	17.0
R22	0.22	M	100KHz, 0.25V	5.2	22.0	15.0
R33	0.33	M	100KHz, 0.25V	8.2	25.0	12.0
R47	0.47	M	100KHz, 0.25V	9.4	21.0	11.5
R68	0.68	M	100KHz, 0.25V	12.4	15.0	10.0
1R0	1.0	M	100KHz, 0.25V	20.0	16.0	7.0
2R2	2.2	M	100KHz, 0.25V	50.1	12.5	4.2
3R3	3.3	M	100KHz, 0.25V	85.5	8.5	3.3
4R7	4.7	M	100KHz, 0.25V	116.6	5.0	2.8

■ Electrical Characteristics

SDB0530 Type

Codes	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R10	0.10	M	100KHz, 0.25V	3.16	27.0	23.0
R22	0.22	M	100KHz, 0.25V	4.52	21.0	15.5
R33	0.33	M	100KHz, 0.25V	5.56	19.0	13.7
R47	0.47	M	100KHz, 0.25V	7.04	16.0	12.2
R68	0.68	M	100KHz, 0.25V	8.96	13.5	10.2
R82	0.82	M	100KHz, 0.25V	11.9	13.0	9.3
1R0	1.0	M	100KHz, 0.25V	13.7	12.0	9.2
1R5	1.5	M	100KHz, 0.25V	20.7	11.0	7.2
2R2	2.2	M	100KHz, 0.25V	29.2	10.0	5.8
3R3	3.3	M	100KHz, 0.25V	54.7	8.5	5.0
4R7	4.7	M	100KHz, 0.25V	77.5	8.2	3.5

SDB0620 Type

Codes	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R10	0.10	M	100KHz, 0.25V	3.5	40.00	18.00
R15	0.15	M	100KHz, 0.25V	5.2	38.00	15.00
R22	0.22	M	100KHz, 0.25V	5.7	26.00	14.00
R33	0.33	M	100KHz, 0.25V	7.0	18.00	12.00
R47	0.47	M	100KHz, 0.25V	9.3	18.00	11.00
R68	0.68	M	100KHz, 0.25V	13.9	17.00	9.00
R82	0.82	M	100KHz, 0.25V	15.9	17.00	8.00
1R0	1.0	M	100KHz, 0.25V	18.3	14.00	7.00
1R5	1.5	M	100KHz, 0.25V	34.0	11.50	4.00
2R2	2.2	M	100KHz, 0.25V	46.0	13.00	3.75
3R3	3.3	M	100KHz, 0.25V	60.1	10.00	3.25
4R7	4.7	M	100KHz, 0.25V	78.0	8.00	3.00

SDB0625 Type

Codes	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R10	0.10	M	100KHz, 0.25V	1.7	50.0	30.0
R22	0.22	M	100KHz, 0.25V	3.2	34.0	21.0
R33	0.33	M	100KHz, 0.25V	4.1	22.0	18.0
R47	0.47	M	100KHz, 0.25V	6.5	21.0	13.5
R68	0.68	M	100KHz, 0.25V	9.4	18.0	11.0
R82	0.82	M	100KHz, 0.25V	11.8	17.0	10.0
1R0	1.0	M	100KHz, 0.25V	14.2	16.0	9.0
1R5	1.5	M	100KHz, 0.25V	21.2	15.0	7.5
2R2	2.2	M	100KHz, 0.25V	34.0	14.0	6.5
3R3	3.3	M	100KHz, 0.25V	51.6	13.0	5.0
4R7	4.7	M	100KHz, 0.25V	63.0	10.0	4.5
6R8	6.8	M	100KHz, 0.25V	95.0	9.0	3.5
8R2	8.2	M	100KHz, 0.25V	106.0	8.0	3.0
100	10	M	100KHz, 0.25V	129.0	7.0	2.5

■ Electrical Characteristics

SDB0630 Type

Codes	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R10	0.10	M	100KHz, 0.25V	1.7	60.0	32.5
R22	0.22	M	100KHz, 0.25V	2.8	40.0	23.0
R33	0.33	M	100KHz, 0.25V	3.9	30.0	20.0
R47	0.47	M	100KHz, 0.25V	4.2	26.0	17.5
R68	0.68	M	100KHz, 0.25V	5.5	25.0	15.5
R82	0.82	M	100KHz, 0.25V	8.0	24.0	13.0
1R0	1.0	M	100KHz, 0.25V	10.0	22.0	11.0
1R5	1.5	M	100KHz, 0.25V	15.0	18.0	9.0
2R2	2.2	M	100KHz, 0.25V	20.0	14.0	8.0
3R3	3.3	M	100KHz, 0.25V	30.0	13.5	6.0
4R7	4.7	M	100KHz, 0.25V	40.0	10.0	5.5
6R8	6.8	M	100KHz, 0.25V	60.0	8.0	4.5
8R2	8.2	M	100KHz, 0.25V	68.0	7.5	4.0
100	10	M	100KHz, 0.25V	105.0	7.0	3.0

SDB0650 Type

Codes	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R56	0.56	M	100KHz, 0.25V	3.6	12.0	20.0
R68	0.68	M	100KHz, 0.25V	4.5	11.5	18.0
R82	0.82	M	100KHz, 0.25V	4.9	13.0	16.5
1R0	1.0	M	100KHz, 0.25V	6.5	15.0	13.0
1R5	1.5	M	100KHz, 0.25V	9.0	12.0	12.0
2R2	2.2	M	100KHz, 0.25V	13.6	10.0	10.0
3R3	3.3	M	100KHz, 0.25V	20.9	8.0	8.0
4R7	4.7	M	100KHz, 0.25V	30.3	7.0	6.5
5R6	5.6	M	100KHz, 0.25V	34.4	7.0	6.0
6R8	6.8	M	100KHz, 0.25V	44.6	5.5	5.5
8R2	8.2	M	100KHz, 0.25V	50.7	5.0	5.0
100	10	M	100KHz, 0.25V	71.3	4.5	4.5

Electrical Characteristics

SDB1040 Type

Codes	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R19	0.19	M	100KHz, 0.25V	0.95	90.0	40.0
R36	0.36	M	100KHz, 0.25V	1.40	60.0	31.5
R47	0.47	M	100KHz, 0.25V	1.60	38.0	26.0
R56	0.56	M	100KHz, 0.25V	1.80	49.0	27.5
1R0	1.0	M	100KHz, 0.25V	4.10	36.0	17.5
1R5	1.5	M	100KHz, 0.25V	5.80	27.5	15.0
2R2	2.2	M	100KHz, 0.25V	9.00	25.6	12.0
3R3	3.3	M	100KHz, 0.25V	11.80	18.6	10.0
4R7	4.7	M	100KHz, 0.25V	16.50	17.0	9.5
5R6	5.6	M	100KHz, 0.25V	19.30	16.0	8.5
6R8	6.8	M	100KHz, 0.25V	23.30	13.5	8.0
100	10	M	100KHz, 0.25V	36.50	12.0	6.8
150	15	M	100KHz, 0.25V	65.00	7.0	3.5
220	22	M	100KHz, 0.25V	120.0	3.0	2.0
330	33	M	100KHz, 0.25V	200.0	2.8	1.8
470	47	M	100KHz, 0.25V	210.0	3.0	1.2

SDB1340 Type

Codes	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R10	0.10	M	100KHz, 0.25V	0.96	84.0	43.0
R15	0.15	M	100KHz, 0.25V	1.20	75.0	41.0
R22	0.22	M	100KHz, 0.25V	1.30	65.0	38.5
R33	0.33	M	100KHz, 0.25V	1.50	62.0	36.5
R47	0.47	M	100KHz, 0.25V	2.00	55.0	32.0
R60	0.60	M	100KHz, 0.25V	2.20	51.0	29.0
R68	0.68	M	100KHz, 0.25V	2.50	49.0	28.0
R82	0.82	M	100KHz, 0.25V	3.00	44.0	25.0
1R0	1.0	M	100KHz, 0.25V	3.50	40.0	24.0
1R5	1.5	M	100KHz, 0.25V	5.50	35.0	19.0
1R8	1.8	M	100KHz, 0.25V	7.00	30.0	16.5
2R2	2.2	M	100KHz, 0.25V	8.00	29.0	16.0
3R3	3.3	M	100KHz, 0.25V	12.00	27.0	12.0
4R7	4.7	M	100KHz, 0.25V	15.00	24.0	10.0
5R6	5.6	M	100KHz, 0.25V	19.00	19.0	9.5
6R8	6.8	M	100KHz, 0.25V	22.00	18.0	9.0
8R2	8.2	M	100KHz, 0.25V	28.00	16.0	8.5
100	10	M	100KHz, 0.25V	34.00	14.0	7.0

Electrical Characteristics

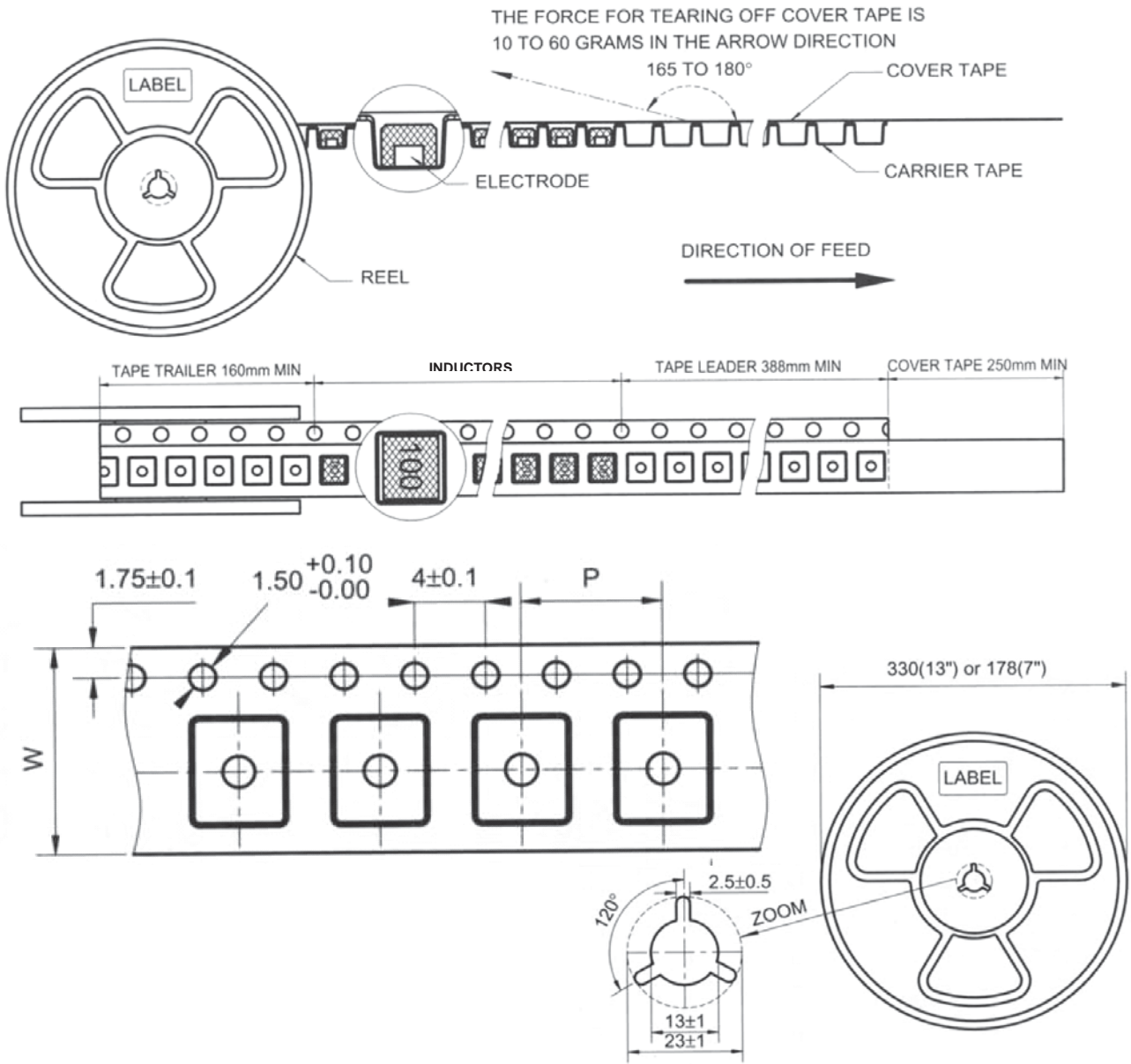
SDB1350 Type

Codes	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R10	0.10	M	100KHz, 0.25V	6.0	118.0	55.0
R22	0.22	M	100KHz, 0.25V	0.8	110.0	51.0
R33	0.33	M	100KHz, 0.25V	1.1	80.0	42.0
R47	0.47	M	100KHz, 0.25V	1.3	65.0	38.0
R56	0.56	M	100KHz, 0.25V	1.5	55.0	36.0
R68	0.68	M	100KHz, 0.25V	1.7	54.0	34.0
R82	0.82	M	100KHz, 0.25V	2.3	53.0	31.0
1R0	1.0	M	100KHz, 0.25V	2.5	50.0	29.0
1R5	1.5	M	100KHz, 0.25V	4.1	48.0	23.0
1R8	1.8	M	100KHz, 0.25V	4.9	40.0	19.0
2R2	2.2	M	100KHz, 0.25V	5.5	32.0	20.0
3R3	3.3	M	100KHz, 0.25V	9.2	32.0	15.0
4R7	4.7	M	100KHz, 0.25V	15.0	27.0	12.0
5R6	5.6	M	100KHz, 0.25V	16.5	22.0	11.5
6R8	6.8	M	100KHz, 0.25V	18.5	21.0	11.0
7R8	7.8	M	100KHz, 0.25V	20.5	18.0	10.0
8R2	8.2	M	100KHz, 0.25V	22.5	18.0	9.5
100	10	M	100KHz, 0.25V	25.5	16.0	9.0

SDB1365 Type

Codes	Inductance (uH)	Tolerance	Test Condition	DCR (mΩ) Max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
R10	0.10	M	100KHz, 0.25V	0.5	120.0	60.0
R15	0.15	M	100KHz, 0.25V	0.6	118.0	55.0
R22	0.22	M	100KHz, 0.25V	0.7	112.0	53.0
R30	0.30	M	100KHz, 0.25V	0.8	72.0	48.0
R33	0.33	M	100KHz, 0.25V	0.9	65.0	46.0
R40	0.40	M	100KHz, 0.25V	1.0	64.0	44.0
R47	0.47	M	100KHz, 0.25V	1.2	63.0	41.0
R56	0.56	M	100KHz, 0.25V	1.4	62.0	37.0
R68	0.68	M	100KHz, 0.25V	1.6	60.0	35.0
R82	0.82	M	100KHz, 0.25V	1.9	50.0	33.0
1R0	1.0	M	100KHz, 0.25V	2.0	49.0	32.0
1R2	1.2	M	100KHz, 0.25V	2.5	48.0	30.0
1R5	1.5	M	100KHz, 0.25V	3.0	45.0	27.0
1R8	1.8	M	100KHz, 0.25V	3.2	41.0	24.0
2R2	2.2	M	100KHz, 0.25V	4.2	40.0	22.0
3R3	3.3	M	100KHz, 0.25V	6.8	35.0	18.0
4R7	4.7	M	100KHz, 0.25V	8.7	32.0	13.5
5R6	5.6	M	100KHz, 0.25V	10.0	32.0	13.5
6R8	6.8	M	100KHz, 0.25V	14.0	16.5	11.5
8R2	8.2	M	100KHz, 0.25V	15.5	16.0	10.5
100	10	M	100KHz, 0.25V	17.2	15.5	10.0

Tape and Reel specifications



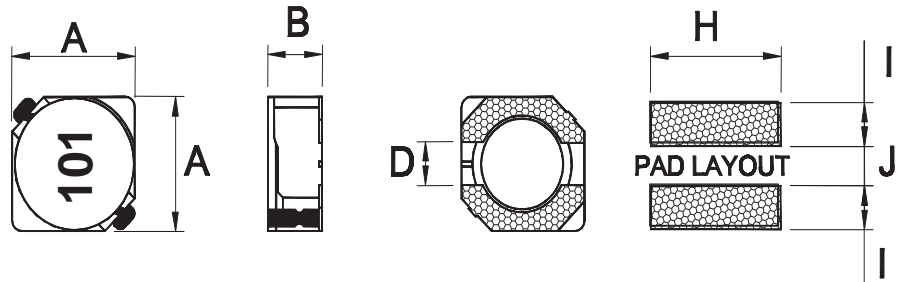
Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
SDB0420	12	8	3500
SDB0520	12	8	3000
SDB0530	12	8	2500
SDB0620	16	12	2000
SDB0625	16	12	2000
SDB0630	16	12	1500
SDB0650	16	12	800
SDB1040	24	16	1000
SDB1340	24	16	1000
SDB1350	24	16	500
SDB1365	24	16	500

■ General Characteristics

Item	Requirement	Test Method															
Solderability	More than 90% of the terminal electrode should be covered with solder	230±5°C for 4±1 seconds															
Solder Heat Resistance	Inductance within±20% of initial value No disconnection or short circuit The appearance shall not break	260±5°C for 10±1 seconds															
Heat Resistance		Temperature: 125±5°C Time: 500 hours Tested after 2 hour at room temperature															
Cold Resistance		Temperature: -40±5°C Time: 500 hours Tested after 2 hour at room temperature															
Thermal Shock		One cycle:															
		<table border="1"> <thead> <tr> <th>Step</th> <th>Temperature(°C)</th> <th>Time (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40±5°C</td> <td>30</td> </tr> <tr> <td>2</td> <td>Room temperature</td> <td>3</td> </tr> <tr> <td>3</td> <td>125±5°C</td> <td>30</td> </tr> <tr> <td>4</td> <td>Room temperature</td> <td>3</td> </tr> </tbody> </table>	Step	Temperature(°C)	Time (min.)	1	-40±5°C	30	2	Room temperature	3	3	125±5°C	30	4	Room temperature	3
		Step	Temperature(°C)	Time (min.)													
	1	-40±5°C	30														
2	Room temperature	3															
3	125±5°C	30															
4	Room temperature	3															
Humidity Resistance	Temperature: 40±2°C, 90~95% relative humidity Time: 500 hours Tested after 2 hour at room temperature																
Vibration Test	Inductance within±5% of initial value The appearance shall not break	After vibration for 1hour, in each of three orientations at sweep vibration (10~55~10Hz) with 1.52mm P-P amplitudes															

Shielded SMD Power Inductor



Features

- Directly connected electrode on ferrite core
- Available in magnetically shielded
- Low DC resistance
- Suitable for large current
- Available on tape and reel for auto surface mounting

Applications

- Power Supply For VTRs
- OA Equipment
- Notebook PCs
- Portable Communication Equipment
- DC/DC Converters, etc.

Characteristics

- Rated DC Current: The current when the inductance becomes 35% lower than its initial value or the current when the temperature of coil increases to $\Delta 40^{\circ}\text{C}$. The smaller one is defined as Rated DC Current. ($T_a=25^{\circ}\text{C}$)
- Operating temperature range: $-40\sim 100^{\circ}\text{C}$

Dimensions

Unit: mm

Type	A	B max.	D	H	I	J
SCDS3D18	3.8 ± 0.3	2.0	1.1	4.6	1.65	1.0
SCDS4D18	4.7 ± 0.3	2.0	1.5	5.3	1.90	1.5
SCDS4D22	4.7 ± 0.3	2.4	1.5	5.3	1.90	1.5
SCDS4D28	4.7 ± 0.3	3.0	1.5	5.3	1.90	1.5
SCDS5D18	5.7 ± 0.3	2.0	2.0	6.3	2.15	2.0
SCDS5D28	5.7 ± 0.3	3.0	2.0	6.3	2.15	2.0
SCDS6D28	6.7 ± 0.3	3.0	2.0	7.3	2.65	2.0
SCDS6D38	6.7 ± 0.3	4.0	2.0	7.3	2.65	2.0

Inductance and rated current ranges

– SCDS3D18	1.0~220 μH	2.40~0.13A
– SCDS4D18	1.0~220 μH	1.72~0.13A
– SCDS4D22	1.5~150 μH	2.00~0.21A
– SCDS4D28	1.2~220 μH	2.56~0.21A
– SCDS5D18	2.2~470 μH	2.30~0.18A
– SCDS5D28	2.2~680 μH	2.60~0.18A
– SCDS6D28	1.0~330 μH	6.15~0.35A
– SCDS6D38	1.0~330 μH	5.60~0.39A

– Test equipment:

L: HP4284A Precision LCR meter

DCR: Milli-ohm meter

Product Identification

SCDS	5D28	N	T	101
Product Type	Dimensions (AxAxB)	Inductor Tolerance	Packaging Style	Inductance
	3D18: 3.8x3.8x2.0 4D18: 4.7x4.7x2.0 4D22: 4.7x4.7x2.4 4D28: 4.7x4.7x3.0 5D18: 5.7x5.7x2.0 5D28: 5.7x5.7x3.0 6D28: 6.7x6.7x3.0 6D38: 6.7x6.7x4.0	M: $\pm 20\%$ N: $\pm 30\%$	T: Tape and Reel	1R0: 1.0 μH 470: 47 μH 101: 100 μH

Electrical Characteristics

SCDS3D18 / 4D18 / 4D22 / 4D28 Type

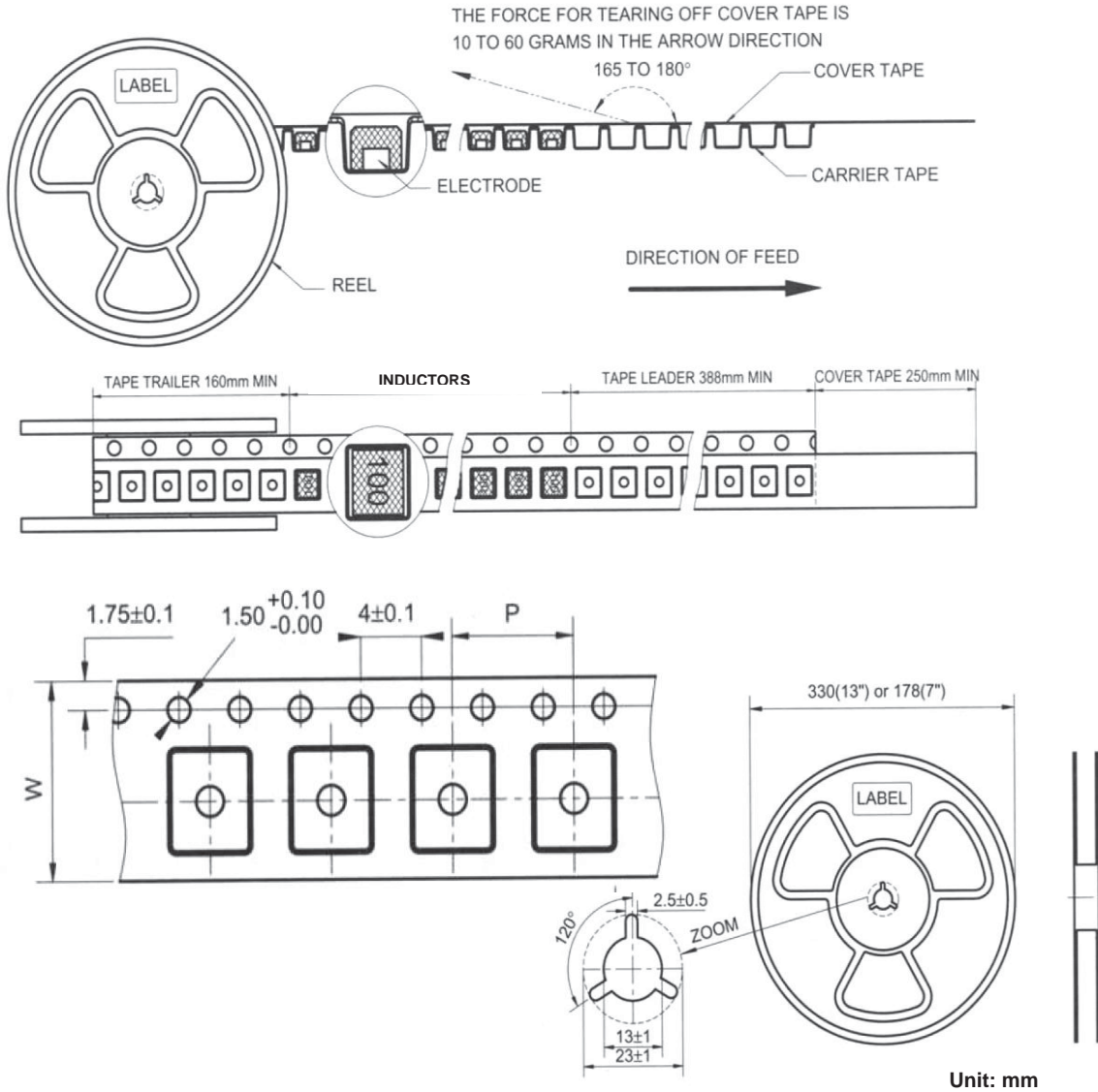
Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.				IDC (A) max.			
				3D18	4D18	4D22	4D28	3D18	4D18	4D22	4D28
1R0	1.0	N	100KHz, 0.1V	0.050	0.045	-	-	2.40	1.72	-	-
1R2	1.2	N	100KHz, 0.1V	-	0.048	-	0.024	-	1.65	-	2.56
1R5	1.5	N	100KHz, 0.1V	0.056	0.050	0.018	-	1.55	1.60	2.00	-
1R8	1.8	N	100KHz, 0.1V	-	0.058	0.021	0.028	-	1.35	1.90	2.20
2R2	2.2	N	100KHz, 0.1V	0.072	0.075	0.025	0.031	1.20	1.32	1.80	2.04
2R7	2.7	N	100KHz, 0.1V	-	0.105	-	0.043	-	1.28	-	1.60
3R3	3.3	N	100KHz, 0.1V	0.085	0.110	0.035	0.049	1.10	1.04	1.40	1.57
3R9	3.9	N	100KHz, 0.1V	-	0.155	0.040	0.065	-	0.88	1.30	1.44
4R7	4.7	N	100KHz, 0.1V	0.105	0.162	0.056	0.072	0.90	0.84	1.10	1.32
5R6	5.6	N	100KHz, 0.1V	-	0.170	0.062	0.101	-	0.80	1.05	1.17
6R8	6.8	N	100KHz, 0.1V	0.170	0.200	0.088	0.109	0.73	0.76	1.00	1.12
8R2	8.2	N	100KHz, 0.1V	-	0.245	0.097	0.118	-	0.68	0.90	1.04
100	10	N	100KHz, 0.1V	0.210	0.200	0.102	0.128	0.55	0.61	0.80	1.00
120	12	N	100KHz, 0.1V	0.275	0.210	0.110	0.132	0.50	0.56	0.75	0.84
150	15	N	100KHz, 0.1V	0.295	0.240	0.127	0.149	0.45	0.50	0.68	0.76
180	18	N	100KHz, 0.1V	-	0.338	0.169	0.166	-	0.48	0.60	0.72
220	22	N	100KHz, 0.1V	0.430	0.397	0.200	0.235	0.40	0.41	0.54	0.70
270	27	N	100KHz, 0.1V	0.557	0.441	0.283	0.261	0.38	0.35	0.51	0.58
330	33	N	100KHz, 0.1V	0.675	0.694	0.326	0.378	0.32	0.32	0.48	0.56
390	39	N	100KHz, 0.1V	-	0.709	0.451	0.384	-	0.30	0.43	0.50
470	47	N	100KHz, 0.1V	0.964	0.922	0.500	0.587	0.27	0.28	0.38	0.48
560	56	N	100KHz, 0.1V	1.330	1.080	0.555	0.625	0.22	0.26	0.36	0.41
680	68	N	100KHz, 0.1V	-	1.300	0.634	0.699	-	0.24	0.33	0.35
820	82	N	100KHz, 0.1V	-	1.560	0.794	0.915	-	0.22	0.30	0.32
101	100	N	100KHz, 0.1V	2.600	1.730	0.880	1.020	0.16	0.20	0.25	0.29
121	120	N	100KHz, 0.1V	-	2.390	1.140	1.270	-	0.18	0.23	0.27
151	150	N	100KHz, 0.1V	-	2.670	1.350	1.360	-	0.15	0.21	0.24
181	180	N	100KHz, 0.1V	-	4.000	-	1.540	-	0.14	-	0.22
221	220	N	100KHz, 0.1V	4.770	4.300	-	2.000	0.13	0.13	-	0.21

Electrical Characteristics

SCDS5D18 / 5D28 / 6D28 / 6D38 Type

Codes	L (μ H)	Tolerance		Test Condition	DCR (Ω) max.				IDC (A) max.			
		5D18 5D28 6D28	6D38		5D18	5D28	6D28	6D38	5D18	5D28	6D28	6D38
1R0	1.0	N	N	10KHz, 0.1V	-	-	0.012	0.016	-	-	6.15	5.60
2R2	2.2	N	N	10KHz, 0.1V	0.039	0.018	0.018	0.019	2.30	2.60	4.00	4.40
2R6	2.6	N	-	10KHz, 0.1V	0.046	0.018	-	-	2.20	2.60	-	-
3R0	3.0	N	-	10KHz, 0.1V	-	0.024	0.024	-	-	2.40	3.00	-
3R3	3.3	N	M,N	10KHz, 0.1V	0.048	0.035	0.026	0.020	2.00	2.40	2.80	3.50
3R9	3.9	N	-	10KHz, 0.1V	-	-	0.027	-	-	-	2.60	-
4R1	4.1	N	-	10KHz, 0.1V	0.057	-	-	-	1.80	-	-	-
4R2	4.2	N	-	10KHz, 0.1V	-	0.031	-	-	-	2.20	-	-
4R7	4.7	N	N	10KHz, 0.1V	0.072	0.037	0.029	-	1.77	2.00	2.50	-
5R0	5.0	N	M,N	10KHz, 0.1V	-	-	0.031	0.024	-	-	2.40	2.75
5R3	5.3	N	-	10KHz, 0.1V	-	0.038	0.033	-	-	1.90	2.30	-
5R4	5.4	N	-	10KHz, 0.1V	0.076	-	-	-	1.60	-	-	-
5R6	5.6	N	-	10KHz, 0.1V	-	0.040	-	-	-	1.85	-	-
6R0	6.0	N	-	10KHz, 0.1V	-	-	0.035	-	-	-	2.25	-
6R2	6.2	N	M,N	10KHz, 0.1V	0.096	0.045	-	0.027	1.40	1.80	-	2.50
6R8	6.8	N	-	10KHz, 0.1V	0.110	0.050	0.052	-	1.30	1.82	2.20	-
7R3	7.3	N	-	10KHz, 0.1V	-	-	0.054	-	-	-	2.10	-
7R4	7.4	N	M,N	10KHz, 0.1V	-	-	-	0.031	-	-	-	2.30
8R2	8.2	N	-	10KHz, 0.1V	-	0.053	-	-	-	1.60	-	-
8R6	8.6	N	-	10KHz, 0.1V	-	-	0.058	-	-	-	1.85	-
8R7	8.7	N	M,N	10KHz, 0.1V	-	-	-	0.034	-	-	-	2.20
8R9	8.9	N	-	10KHz, 0.1V	0.116	-	-	-	1.25	-	-	-
100	10	N	M,N	10KHz, 0.1V	0.124	0.065	0.065	0.038	1.20	1.30	1.70	2.00
120	12	N	M,N	10KHz, 0.1V	0.153	0.076	0.070	0.053	1.10	1.20	1.55	1.70
150	15	N	M,N	10KHz, 0.1V	0.196	0.103	0.084	0.057	0.97	1.10	1.40	1.60
180	18	N	M,N	10KHz, 0.1V	0.210	0.110	0.095	0.092	0.85	1.00	1.32	1.50
220	22	N	M,N	10KHz, 0.1V	0.290	0.122	0.128	0.096	0.80	0.90	1.20	1.30
270	27	N	M,N	10KHz, 0.1V	0.330	0.175	0.142	0.109	0.75	0.85	1.05	1.20
330	33	N	M,N	10KHz, 0.1V	0.386	0.189	0.165	0.124	0.65	0.75	0.97	1.10
390	39	N	M,N	10KHz, 0.1V	0.520	0.212	0.210	0.138	0.57	0.70	0.86	1.00
470	47	N	M,N	10KHz, 0.1V	0.595	0.260	0.238	0.155	0.54	0.62	0.80	0.95
560	56	N	M,N	10KHz, 0.1V	0.665	0.305	0.277	0.202	0.50	0.58	0.73	0.85
680	68	N	M,N	10KHz, 0.1V	0.840	0.355	0.304	0.234	0.43	0.52	0.65	0.75
820	82	N	M,N	10KHz, 0.1V	0.978	0.463	0.390	0.324	0.41	0.46	0.60	0.70
101	100	N	M,N	10KHz, 0.1V	1.200	0.520	0.535	0.368	0.35	0.42	0.54	0.65
151	150	N	M,N	10KHz, 0.1V	2.000	0.810	0.640	0.483	0.25	0.40	0.40	0.60
221	220	N	-	10KHz, 0.1V	3.280	1.250	1.350	-	0.20	0.32	0.35	-
331	330	N	M,N	10KHz, 0.1V	-	1.650	2.000	1.250	-	0.28	0.35	0.39
471	470	N	-	10KHz, 0.1V	6.560	3.560	-	-	0.18	0.22	-	-
561	560	N	-	10KHz, 0.1V	-	4.230	-	-	-	0.20	-	-
681	680	N	-	10KHz, 0.1V	-	4.500	-	-	-	0.18	-	-

■ Tape and Reel specifications



Type	Tape size		Parts Per Reel
	W	P	13"
SCDS3D18	12	8	2000
SCDS4D18	12	8	2000
SCDS4D22	12	8	2000
SCDS4D28	12	8	2000
SCDS5D18	12	8	2000
SCDS5D28	16	8	2000
SCDS6D28	16	12	1500
SCDS6D38	16	12	1000

■ SMT Power Inductor Environmental Specifications

General

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

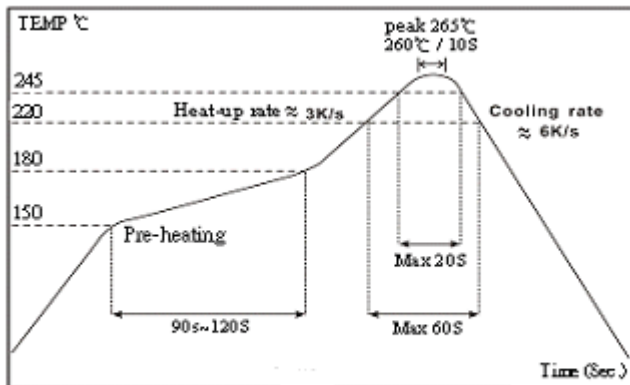
Environmental test

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

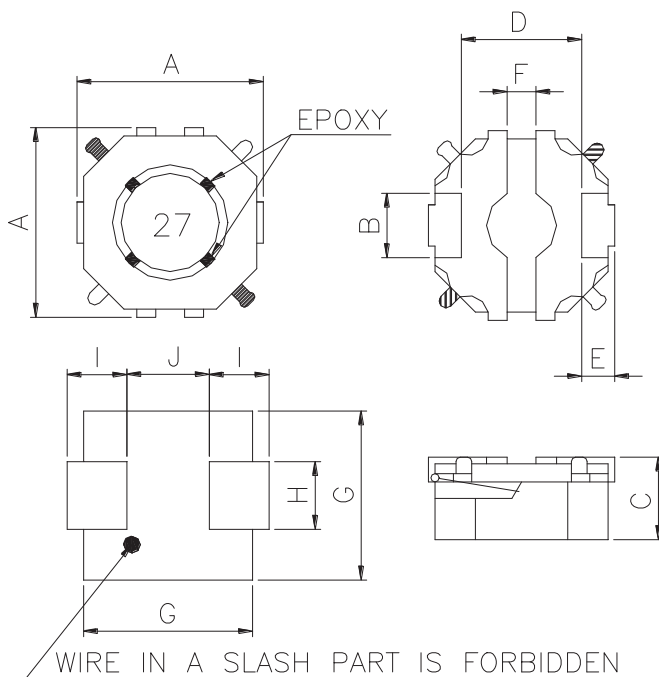
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solder ability test	Terminal area must have 90% minimum solder coverage.	Dip pads in flux then dip in solder pot (SnCuNi) at 245±5°C for 3 seconds.
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°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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)



Shielded SMD Power Inductor



Features

- New designed terminal for low cost
- Low profile and high current
- Magnetically shielded construction
- Ideal for digital equipment and hand phone of new generation.

Applications

- DSD, DVC, PDA Products
- Hand Phone Of New Generation
- Hard Disk Drives

Characteristics

- Saturation Rated Current: The current when the inductance becomes 30% lower than its initial value. (Ta=20°C)
- Temperature Rise Current: The current when temperature of coil increases up to Max. Δt=40°C. (Ta=20°C)
- Operating temperature range: -40~85°C

Dimensions

Unit: mm

Type	A	B	C max.	D	E	F	G	H	I	J
SCDB2D12	3.0±0.2	1.0	1.2	2.0	0.5	0.5	3.2	1.2	1.1	1.8
SCDB2D15	3.0±0.2	1.0	1.5	2.0	0.5	0.5	3.2	1.2	1.1	1.8
SCDB2D18	3.0±0.2	1.0	1.8	2.0	0.5	0.5	3.2	1.2	1.1	1.8

Inductance and rated current ranges

- SCDB2D12 1.2~22μH 0.85~0.22A
- SCDB2D15 2.2~33μH 1.00~0.25A
- SCDB2D18 2.2~47μH 1.10~0.23A
- Test equipment:
L: HP4284A Precision LCR meter
DCR: Milli-ohm meter

Product Identification

SCDB	2D12	M	T	101
Product Type	Dimensions	Inductor Tolerance	Packaging Style	Inductance
	2D12: 3x3x1.2 2D15: 3x3x1.5 2D18: 3x3x1.8	M: ±20% N: ±30%	T: Tape and Reel	1R1: 1.1μH 470: 47μH 101: 100μH

Electrical Characteristics

SCDB2D12 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.		I rms (A) max.
					20°C	100°C	
1R2	1.2	N	100KHz, 0.1V	0.117	0.85	0.70	1.05
2R2	2.2	N	100KHz, 0.1V	0.182	0.70	0.60	0.90
3R3	3.3	N	100KHz, 0.1V	0.260	0.60	0.50	0.82
4R7	4.7	N	100KHz, 0.1V	0.312	0.50	0.40	0.72
5R6	5.6	N	100KHz, 0.1V	0.442	0.46	0.35	0.67
6R8	6.8	N	100KHz, 0.1V	0.520	0.43	0.30	0.62
8R2	8.2	N	100KHz, 0.1V	0.560	0.38	0.28	0.58
100	10	M	100KHz, 0.1V	0.780	0.33	0.25	0.55
220	22	M	100KHz, 0.1V	1.650	0.22	-	-

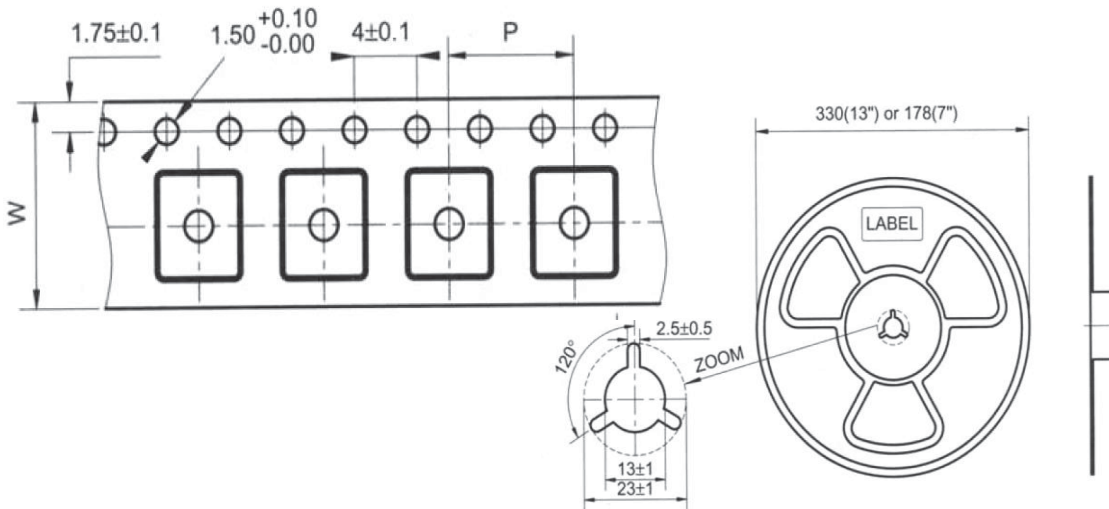
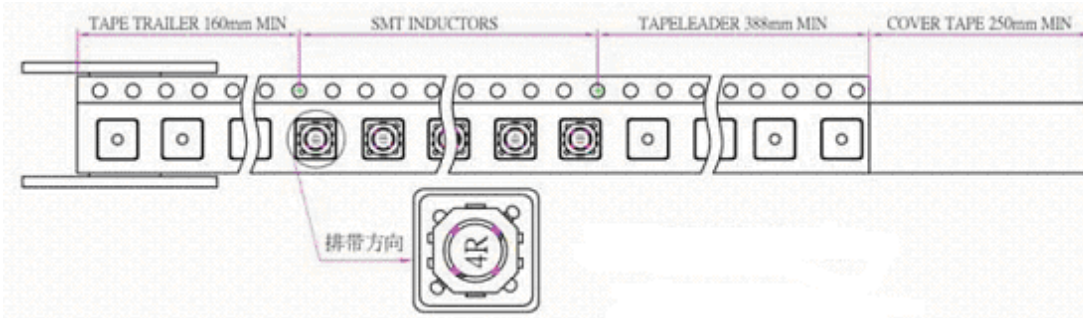
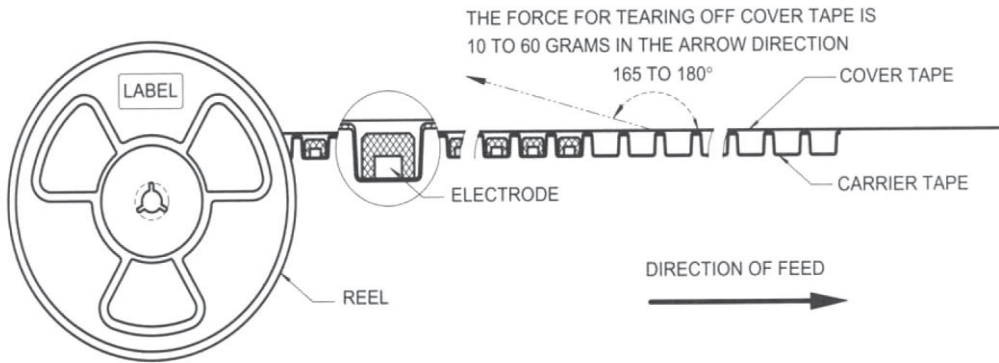
SCDB2D15 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.		I rms (A) max.
					20°C	100°C	
2R2	2.2	N	100KHz, 0.1V	0.150	1.00	0.80	1.00
3R3	3.3	N	100KHz, 0.1V	0.234	0.90	0.70	0.90
4R7	4.7	N	100KHz, 0.1V	0.338	0.80	0.60	0.85
5R6	5.6	N	100KHz, 0.1V	0.364	0.70	0.55	0.80
6R8	6.8	N	100KHz, 0.1V	0.416	0.60	0.52	0.77
8R2	8.2	N	100KHz, 0.1V	0.572	0.55	0.48	0.72
100	10	M	100KHz, 0.1V	0.624	0.50	0.45	0.70
120	12	M	100KHz, 0.1V	0.702	0.45	0.40	0.65
150	15	M	100KHz, 0.1V	0.949	0.40	0.35	0.50
180	18	M	100KHz, 0.1V	1.090	0.35	0.30	0.40
220	22	M	100KHz, 0.1V	1.250	0.30	0.25	0.30
330	33	M	100KHz, 0.1V	2.200	0.25	-	0.25

SCDB2D18 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.		I rms (A) max.
					20°C	100°C	
2R2	2.2	N	100KHz, 0.1V	0.117	1.10	0.90	1.10
3R3	3.3	N	100KHz, 0.1V	0.143	1.00	0.80	1.00
4R7	4.7	N	100KHz, 0.1V	0.221	0.80	0.70	0.90
5R6	5.6	N	100KHz, 0.1V	0.247	0.75	0.60	0.85
6R8	6.8	N	100KHz, 0.1V	0.312	0.70	0.55	0.82
8R2	8.2	N	100KHz, 0.1V	0.351	0.60	0.50	0.78
100	10	M	100KHz, 0.1V	0.468	0.55	0.48	0.75
120	12	M	100KHz, 0.1V	0.533	0.50	0.45	0.65
150	15	M	100KHz, 0.1V	0.598	0.45	0.40	0.55
180	18	M	100KHz, 0.1V	0.715	0.40	0.33	0.50
220	22	M	100KHz, 0.1V	0.975	0.38	0.30	0.45
270	27	M	100KHz, 0.1V	1.105	0.33	0.25	0.40
330	33	M	100KHz, 0.1V	1.222	0.30	0.23	0.33
390	39	M	100KHz, 0.1V	1.625	0.25	0.20	0.28
470	47	M	100KHz, 0.1V	1.820	0.23	0.18	0.25

■ Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
SCDB2D12	12	8	4000
SCDB2D15	12	8	4000
SCDB2D18	12	8	3500

SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: $25\pm 3^{\circ}\text{C}$; Humidity: <80% relative humidity. Recommended product should be used within six months from the time of delivery.

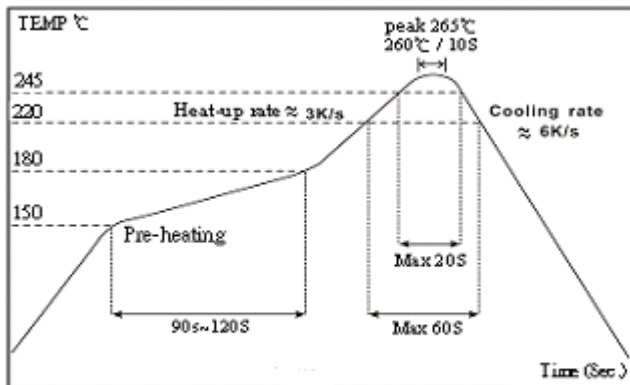
Environmental test

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

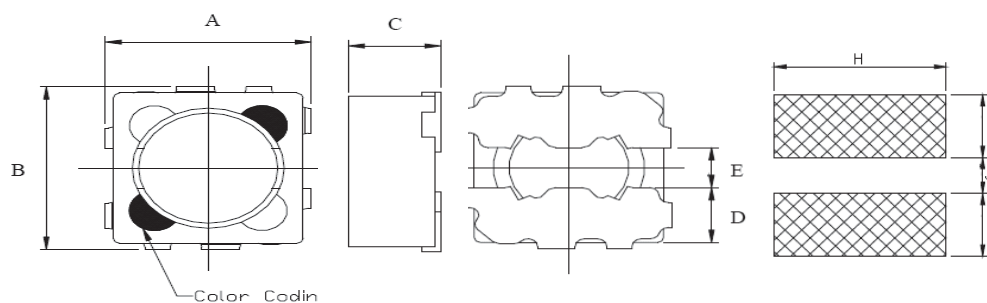
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at $245\pm 5^{\circ}\text{C}$ for 3 seconds.
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 $130\sim 150^{\circ}\text{C}$. Immersing to $260\pm 5^{\circ}\text{C}$ for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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):



Shielded SMD Power Inductor



Features

- low profile, low RDC, lower resistance and high current handling capacities
- Flat bottom surface ensures secure, reliable mounting
- Magnetically shielded structure that ensures the high-density mounting configurations.

Applications

- PDA, DSC, PDA And Other Electronic Equipments
- Hard Disk Drives
- Low Profile/ Low Resistance Specifically Suitable For Portable Telephones

Characteristics

- Saturation Rated Current(I_{DC}): The current when the inductance becomes 10% or 35% lower than its initial value.
- Temperature Rise Current(I_{rms}): For a 25°C rise above 25°C ambient.
- Operating temperature range: -25~105°C

Dimensions

Unit: mm

Type	A	B	C max.	D	E	H	I	J
SCDA2D10	3.2±0.2	3.2±0.2	1.05	1.1	0.8	3.6	1.4	0.8
SCDA2D15	3.2±0.2	3.2±0.2	1.6	1.1	0.8	3.6	1.4	0.8
SCDA2D18	3.2±0.2	3.2±0.2	1.8	1.1	0.8	3.6	1.4	0.8
SCDA3D12	4.2±0.2	4.2±0.2	1.25	1.3	1.4	4.6	1.6	1.4
SCDA3D15	4.2±0.2	4.2±0.2	1.6	1.3	1.4	4.6	1.6	1.4
SCDA3D18	4.2±0.2	4.2±0.2	1.8	1.3	1.4	4.6	1.6	1.4

Inductance and rated current ranges

- SCDA2D10 1.2~47μH 1.40~0.18A
- SCDA2D15L 1.0~18μH 1.40~0.30A
- SCDA2D15H 0.47~100μH 3.40~0.24A
- SCDA2D18L 1.0~27μH 1.36~0.22A
- SCDA2D18H 1.0~33μH 3.00~0.47A
- SCDA3D12 1.0~33μH 3.00~0.42A
- SCDA3D15 0.5~47μH 3.90~0.34A
- SCDA3D18 1.0~100μH 3.20~0.26A

– Test equipment:

L: HP4284A Precision LCR meter

DCR: Milli-ohm meter

– Electrical specifications at 25°C

Product Identification

SCDA	2D15	M	T	L	101
Product Type	Dimensions (AxBxC)	Inductance Tolerance	Packaging Style	Design Code	Inductance
	2D10: 3.2x3.2x1.05 2D15: 3.2x3.2x1.6 2D18: 3.2x3.2x1.8 3D12: 4.2x4.2x1.25 3D15: 4.2x4.2x1.6 3D18: 4.2x4.2x1.8	M: ±20% N: ±30%	T: Tape and Reel	: Standard L: Low Resistance H: High Current	1R1: 1.1μH 470: 47μH 101: 100μH

Electrical Characteristics

SCDA2D10 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) Typ.	IDC (A) Typ.		I rms (A) Typ.	Color Code
					L drop 10%	L drop 35%		
1R2	1.2	N,M	1KHz, 1V	0.070	1.00	1.40	1.50	Black
1R5	1.5	N,M	1KHz, 1V	0.087	1.00	1.36	1.40	Brown
1R8	1.8	N,M	1KHz, 1V	0.097	0.90	1.24	1.35	Red
2R2	2.2	N,M	1KHz, 1V	0.136	0.80	0.97	1.10	Orange
2R7	2.7	N,M	1KHz, 1V	0.127	0.76	0.94	1.10	Yellow
3R3	3.3	N,M	1KHz, 1V	0.175	0.68	0.88	1.00	Green
3R9	3.9	N,M	1KHz, 1V	0.200	0.62	0.84	0.90	Blue
4R7	4.7	N,M	1KHz, 1V	0.274	0.60	0.82	0.85	Violet
5R6	5.6	N,M	1KHz, 1V	0.319	0.54	0.72	0.75	Gray
6R8	6.8	N,M	1KHz, 1V	0.330	0.46	0.60	0.70	White
8R2	8.2	N,M	1KHz, 1V	0.420	0.44	0.58	0.65	Black
100	10	M	1KHz, 1V	0.470	0.42	0.54	0.60	Brown
120	12	M	1KHz, 1V	0.675	0.32	0.44	0.55	Red
150	15	M	1KHz, 1V	0.800	0.30	0.40	0.50	Orange
180	18	M	1KHz, 1V	0.890	0.30	0.38	0.45	Yellow
220	22	M	1KHz, 1V	1.110	0.26	0.32	0.40	Green
270	27	M	1KHz, 1V	1.600	0.24	0.30	0.34	Black
330	33	M	1KHz, 1V	1.600	0.22	0.28	0.34	Blue
470	47	M	1KHz, 1V	2.430	0.18	0.22	0.24	Black

SCDA3D12 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) Typ.	IDC (A) Typ.		I rms (A) Typ.	Color Code
					L drop 10%	L drop 35%		
1R0	1.0	N,M	1KHz, 1V	0.045	2.30	3.00	2.00	Black
1R2	1.2	N,M	1KHz, 1V	0.048	2.20	2.80	1.90	Brown
1R5	1.5	N,M	1KHz, 1V	0.055	1.90	2.40	1.80	Red
1R8	1.8	N,M	1KHz, 1V	0.073	1.80	2.30	1.75	Orange
2R2	2.2	N,M	1KHz, 1V	0.083	1.70	2.10	1.75	Yellow
2R7	2.7	N,M	1KHz, 1V	0.109	1.40	1.70	1.44	Green
3R3	3.3	N,M	1KHz, 1V	0.118	1.30	1.70	1.40	Blue
3R9	3.9	N,M	1KHz, 1V	0.143	1.26	1.60	1.30	Violet
4R7	4.7	N,M	1KHz, 1V	0.159	1.24	1.58	1.20	Gray
5R6	5.6	N,M	1KHz, 1V	0.213	1.00	1.30	1.00	White
6R8	6.8	N,M	1KHz, 1V	0.224	1.00	1.30	0.96	Black
8R2	8.2	N,M	1KHz, 1V	0.252	0.92	1.14	0.94	Brown
100	10	M	1KHz, 1V	0.327	0.86	1.06	0.90	Red
120	12	M	1KHz, 1V	0.363	0.80	0.98	0.82	Orange
150	15	M	1KHz, 1V	0.516	0.60	0.80	0.64	Yellow
180	18	M	1KHz, 1V	0.625	0.56	0.76	0.60	Green
220	22	M	1KHz, 1V	0.732	0.46	0.64	0.52	Blue
330	33	M	1KHz, 1V	1.165	0.42	0.50	0.42	Violet

Electrical Characteristics

SCDA3D15 Type

Codes	L (uH)	Tolerance	Test Condition	DCR (Ω) Typ.	IDC (A) Typ.		I rms (A) Typ.	Color Code
					L drop 10%	L drop 35%		
R50	0.5	N	1KHz, 1V	0.035	3.10	3.90	2.50	Black
1R0	1.0	N,M	1KHz, 1V	0.040	2.30	3.00	2.40	Black
1R2	1.2	N,M	1KHz, 1V	0.043	2.20	2.80	2.34	Brown
1R5	1.5	N,M	1KHz, 1V	0.050	2.00	2.60	2.30	Red
1R8	1.8	N,M	1KHz, 1V	0.055	1.66	2.30	2.10	Orange
2R2	2.2	N,M	1KHz, 1V	0.071	1.60	2.20	2.00	Yellow
2R7	2.7	N,M	1KHz, 1V	0.078	1.40	2.00	1.60	Green
3R3	3.3	N,M	1KHz, 1V	0.087	1.34	2.00	1.60	Blue
3R9	3.9	N,M	1KHz, 1V	0.100	1.20	1.80	1.50	Violet
4R7	4.7	N,M	1KHz, 1V	0.137	1.14	1.60	1.40	Gray
5R6	5.6	N,M	1KHz, 1V	0.147	1.06	1.46	1.20	White
6R8	6.8	N,M	1KHz, 1V	0.170	1.00	1.40	1.15	Black
8R2	8.2	N,M	1KHz, 1V	0.195	0.94	1.28	1.10	Brown
100	10	M	1KHz, 1V	0.228	0.90	1.16	1.02	Red
120	12	M	1KHz, 1V	0.275	0.88	1.08	0.90	Orange
150	15	M	1KHz, 1V	0.340	0.64	0.86	0.72	Yellow
180	18	M	1KHz, 1V	0.380	0.60	0.82	0.68	Green
220	22	M	1KHz, 1V	0.495	0.54	0.74	0.65	Blue
270	27	M	1KHz, 1V	0.735	0.50	0.70	0.55	Violet
330	33	M	1KHz, 1V	0.890	0.46	0.58	0.48	Gray
390	39	M	1KHz, 1V	1.000	0.40	0.56	0.42	White
470	47	M	1KHz, 1V	1.150	0.34	0.52	0.35	Black

SCDA3D18 Type

Codes	L (uH)	Tolerance	Test Condition	DCR (Ω) Typ.	IDC (A) Typ.		I rms (A) Typ.	Color Code
					L drop 10%	L drop 35%		
1R0	1.0	N,M	1KHz, 1V	0.038	2.60	3.20	2.40	Black
1R2	1.2	N,M	1KHz, 1V	0.044	2.40	3.00	2.20	Brown
1R5	1.5	N,M	1KHz, 1V	0.050	2.20	2.70	2.20	Red
1R8	1.8	N,M	1KHz, 1V	0.045	1.90	2.40	2.00	Orange
2R2	2.2	N,M	1KHz, 1V	0.062	1.80	2.20	1.90	Yellow
2R7	2.7	N,M	1KHz, 1V	0.068	1.70	2.10	1.80	Green
3R3	3.3	N,M	1KHz, 1V	0.080	1.50	1.88	1.65	Blue
3R9	3.9	N,M	1KHz, 1V	0.084	1.40	1.80	1.56	Violet
4R7	4.7	N,M	1KHz, 1V	0.099	1.22	1.46	1.40	Gray
5R6	5.6	N,M	1KHz, 1V	0.110	1.16	1.48	1.30	White
6R8	6.8	N,M	1KHz, 1V	0.128	1.02	1.26	1.20	Black
8R2	8.2	N,M	1KHz, 1V	0.146	1.000	1.24	1.15	Brown
100	10	M	1KHz, 1V	0.165	0.90	1.10	1.05	Red
120	12	M	1KHz, 1V	0.254	0.84	1.00	0.80	Orange
150	15	M	1KHz, 1V	0.320	0.74	0.88	0.72	Yellow
180	18	M	1KHz, 1V	0.360	0.70	0.84	0.68	Green
220	22	M	1KHz, 1V	0.418	0.60	0.74	0.65	Blue
270	27	M	1KHz, 1V	0.450	0.56	0.70	0.60	Violet
330	33	M	1KHz, 1V	0.620	0.46	0.58	0.58	Gray
390	39	M	1KHz, 1V	0.650	0.45	0.56	0.48	White
470	47	M	1KHz, 1V	0.790	0.43	0.52	0.45	Black
560	56	M	1KHz, 1V	0.862	0.38	0.48	0.40	Brown
680	68	M	1KHz, 1V	1.000	0.30	0.40	0.36	Red
101	100	M	1KHz, 1V	1.380	0.26	0.32	0.36	Yellow

Low Resistance Electrical Characteristics

SCDA2D15 Type

Codes	L (uH)	Tolerance	Test Condition	DCR (Ω) Typ.	IDC (A) Typ.		I rms (A) Typ.	Color Code
					L drop 10%	L drop 35%		
1R0	1.0	N,M	1KHz, 1V	0.038	1.04	1.40	1.80	Green
1R2	1.2	N,M	1KHz, 1V	0.041	1.00	1.30	1.74	Blue
1R5	1.5	N,M	1KHz, 1V	0.046	0.94	1.22	1.70	Violet
1R8	1.8	N,M	1KHz, 1V	0.058	0.92	1.16	1.64	Gray
2R2	2.2	N,M	1KHz, 1V	0.066	0.88	1.10	1.60	White
2R7	2.7	N,M	1KHz, 1V	0.070	0.74	0.93	1.45	Green
3R3	3.3	N,M	1KHz, 1V	0.091	0.68	0.90	1.24	Blue
3R9	3.9	N,M	1KHz, 1V	0.115	0.62	0.82	1.12	Violet
4R7	4.7	N,M	1KHz, 1V	0.132	0.60	0.74	1.10	Gray
5R6	5.6	N,M	1KHz, 1V	0.156	0.58	0.70	1.06	White
6R8	6.8	N,M	1KHz, 1V	0.166	0.42	0.62	1.00	Green
8R2	8.2	N,M	1KHz, 1V	0.230	0.40	0.58	0.90	Blue
100	10	M	1KHz, 1V	0.244	0.38	0.50	0.80	Violet
120	12	M	1KHz, 1V	0.324	0.36	0.44	0.70	Gray
150	15	M	1KHz, 1V	0.370	0.36	0.42	0.70	White
180	18	M	1KHz, 1V	0.489	0.30	0.38	0.62	Green

SCDA2D18 Type

Codes	L (uH)	Tolerance	Test Condition	DCR (Ω) Typ.	IDC (A) Typ.		I rms (A) Typ.	Color Code
					L drop 10%	L drop 35%		
1R0	1.0	N,M	1KHz, 1V	0.038	0.96	1.36	1.80	Green
1R2	1.2	N,M	1KHz, 1V	0.041	0.94	1.22	1.76	Blue
1R5	1.5	N,M	1KHz, 1V	0.048	0.90	1.14	1.70	Violet
1R8	1.8	N,M	1KHz, 1V	0.052	0.84	1.04	1.68	Gray
2R2	2.2	N,M	1KHz, 1V	0.055	0.75	0.95	1.64	White
2R7	2.7	N,M	1KHz, 1V	0.060	0.68	0.90	1.46	Green
3R3	3.3	N,M	1KHz, 1V	0.078	0.60	0.80	1.40	Blue
3R9	3.9	N,M	1KHz, 1V	0.090	0.58	0.80	1.22	Violet
4R7	4.7	N,M	1KHz, 1V	0.099	0.54	0.74	1.20	Gray
5R6	5.6	N,M	1KHz, 1V	0.110	0.50	0.66	1.12	White
6R8	6.8	N,M	1KHz, 1V	0.120	0.48	0.60	1.06	Green
8R2	8.2	N,M	1KHz, 1V	0.168	0.40	0.54	0.90	Blue
100	10	M	1KHz, 1V	0.190	0.36	0.46	0.88	Violet
120	12	M	1KHz, 1V	0.222	0.32	0.46	0.80	Gray
150	15	M	1KHz, 1V	0.285	0.30	0.40	0.72	White
180	18	M	1KHz, 1V	0.350	0.28	0.38	0.66	Green
220	22	M	1KHz, 1V	0.440	0.24	0.32	0.50	Blue
270	27	M	1KHz, 1V	0.490	0.22	0.28	0.42	Violet

High Current Electrical Characteristics

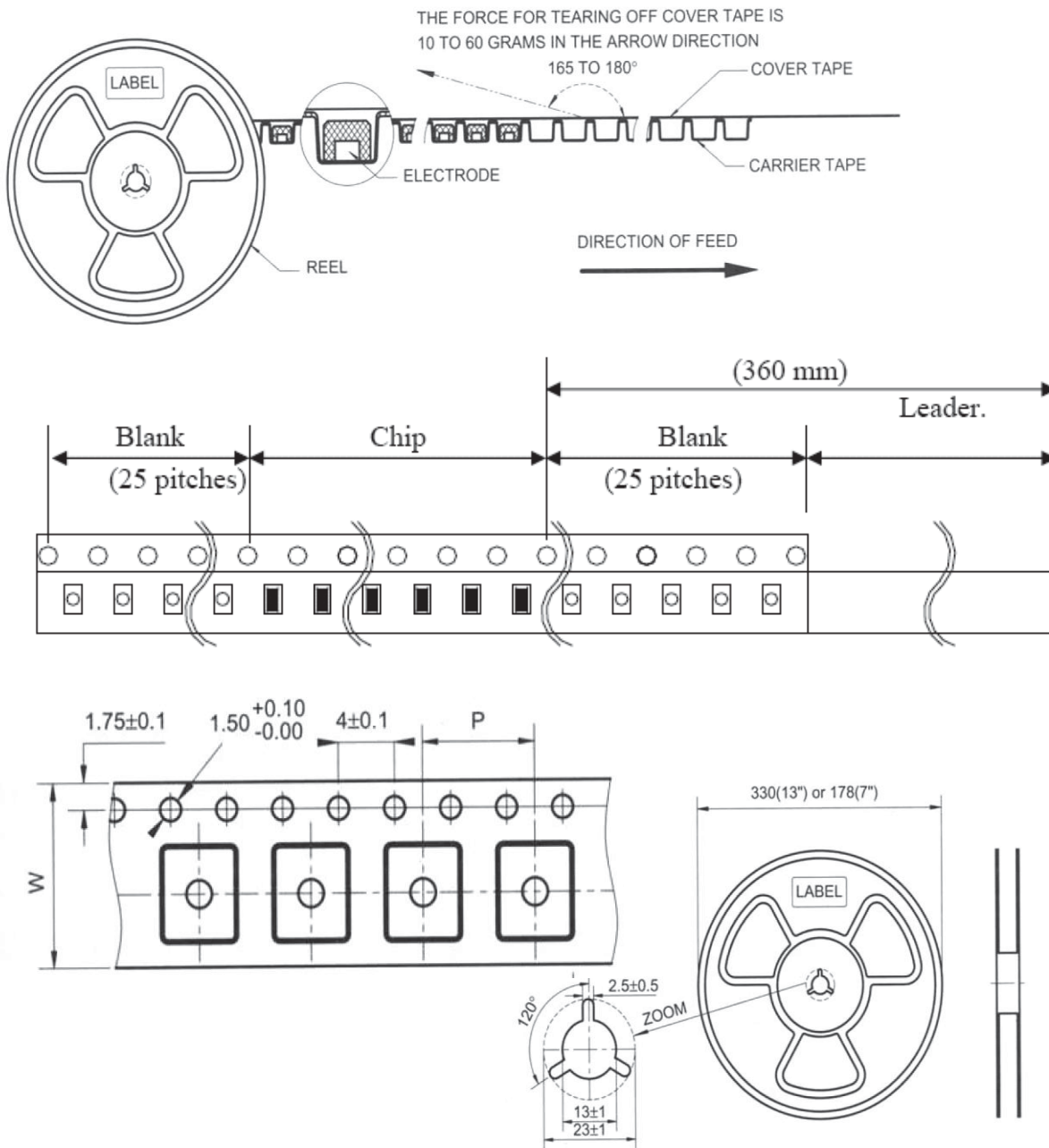
SCDA2D15 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) Typ.	IDC (A) Typ.		I rms (A) Typ.	Color Code
					L drop 10%	L drop 35%		
R47	0.47	N,M	1KHz, 1V	0.040	3.00	3.40	2.20	Black
1R0	1.0	N,M	1KHz, 1V	0.049	2.60	3.00	2.00	Black
1R2	1.2	N,M	1KHz, 1V	0.083	2.30	2.50	1.90	Brown
1R5	1.5	N,M	1KHz, 1V	0.090	2.10	2.50	1.50	Brown
2R2	2.2	N,M	1KHz, 1V	0.090	1.80	2.10	1.28	Red
3R3	3.3	N,M	1KHz, 1V	0.149	1.50	1.72	1.10	Orange
3R9	3.9	N,M	1KHz, 1V	0.158	1.40	1.56	1.02	Yellow
4R7	4.7	N,M	1KHz, 1V	0.197	1.30	1.50	0.96	Black
5R6	5.6	N,M	1KHz, 1V	0.232	1.20	1.30	0.94	Black
6R8	6.8	N,M	1KHz, 1V	0.266	1.10	1.30	0.84	Brown
100	10	M	1KHz, 1V	0.403	0.94	1.10	0.74	Red
150	15	M	1KHz, 1V	0.567	0.76	0.86	0.60	Orange
220	22	M	1KHz, 1V	0.905	0.60	0.68	0.46	Yellow
330	33	M	1KHz, 1V	1.486	0.44	0.48	0.40	Black
470	47	M	1KHz, 1V	1.814	0.40	0.44	0.26	Brown
680	68	M	1KHz, 1V	3.520	0.29	0.33	0.26	Orange
101	100	M	1KHz, 1V	3.840	0.24	0.28	0.24	Black

SCDA2D18 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) Typ.	IDC (A) Typ.		I rms (A) Typ.	Color Code
					L drop 10%	L drop 35%		
1R0	1.0	N,M	1KHz, 1V	0.045	2.60	3.00	2.00	Black
1R8	1.8	N,M	1KHz, 1V	0.078	2.00	2.30	1.76	Brown
2R2	2.2	N,M	1KHz, 1V	0.090	1.80	2.14	1.44	Red
3R3	3.3	N,M	1KHz, 1V	0.103	1.50	1.80	1.10	Orange
3R9	3.9	N,M	1KHz, 1V	0.115	1.50	1.78	1.05	Yellow
4R7	4.7	N,M	1KHz, 1V	0.152	1.40	1.60	1.00	Black
6R8	6.8	N,M	1KHz, 1V	0.223	1.20	1.40	0.95	Brown
100	10	M	1KHz, 1V	0.360	0.92	1.02	0.78	Red
120	12	M	1KHz, 1V	0.410	0.84	0.98	0.68	Orange
150	15	M	1KHz, 1V	0.622	0.80	0.90	0.62	Yellow
220	22	M	1KHz, 1V	0.750	0.64	0.74	0.45	Black
330	33	M	1KHz, 1V	1.125	0.47	0.52	0.42	Brown

■ Tape and Reel specifications



Type	Tape size		Parts Per Reel
	W	P	7"
SCDA2D10	12	8	1000
SCDA2D15	12	8	1000
SCDA2D18	12	8	1000
SCDA3D12	12	8	1000
SCDA3D15	12	8	1000
SCDA3D18	12	8	1000

SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: $25\pm 3^{\circ}\text{C}$; Humidity: <80% relative humidity. Recommended product should be used within six months from the time of delivery.

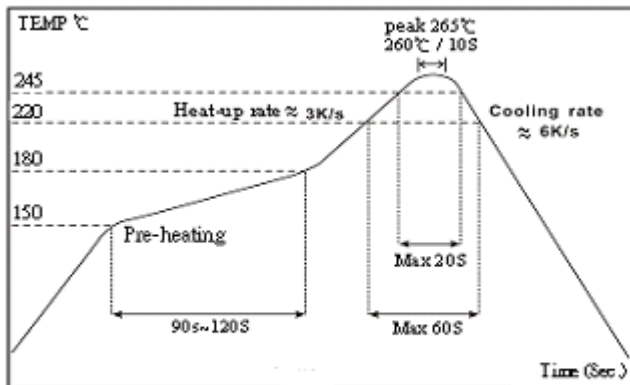
Environmental test

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

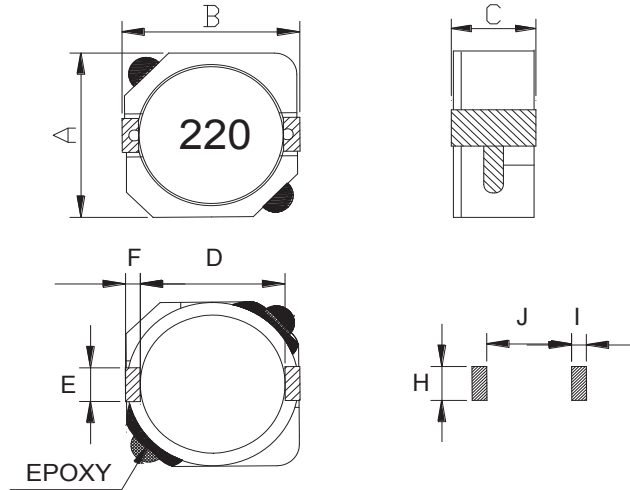
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at $245\pm 5^{\circ}\text{C}$ for 3 seconds.
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 $130\sim 150^{\circ}\text{C}$. Immersing to $260\pm 5^{\circ}\text{C}$ for 10 seconds.
Vibration test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	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):



Shielded SMD Power Inductor



Dimensions

Unit: mm

Type	A Max.	B Max.	C Max.	D	E	F	H	I	J
PSDB5D28	6.2	6.3	3.0	4.7	2.0	0.6	2.6	1.0	4.6
PSDB1003	10.3	10.4	3.1	7.7	3.0	1.2	3.2	1.6	7.3
PSDB1004	10.3	10.4	4.0	7.7	3.0	1.2	3.2	1.6	7.3
PSDB1005	10.3	10.4	5.0	7.7	3.0	1.2	3.2	1.6	7.3

Features

- Directly connected electrode on ferrite core
- High power, High saturation inductors
- Ideal inductors for DC/DC converters
- With magnetically shielded against radiation
- Available on tape and reel for automatic surface mounting.

Inductance and rated current ranges

- PSDB5D28 2.5~100μH 2.60~0.40A
- PSDB1003 2.2~470μH 5.60~0.48A
- PSDB1004 0.56~1000μH 10.0~0.32A
- PSDB1005 1.5~1000μH 10.5~0.35A

- Test equipment:
L: HP4284A LCR meter
DCR: Milli-ohm meter
- Electrical specifications at 25°C

Applications

- Power Supply for VTRs
- LCD Televisions
- Notebook PCs
- Portable Communication
- DC/DC Converters, etc.

Characteristics

- Rated DC current: The current when the inductance becomes 35% lower than its initial value or the actual current when the temperature of coil increases to $\Delta T=40^{\circ}\text{C}$. The smaller one is defined as Rated DC Current. ($T_a=25^{\circ}\text{C}$)
- Operating temperature range: $-40\sim 105^{\circ}\text{C}$

Product Identification

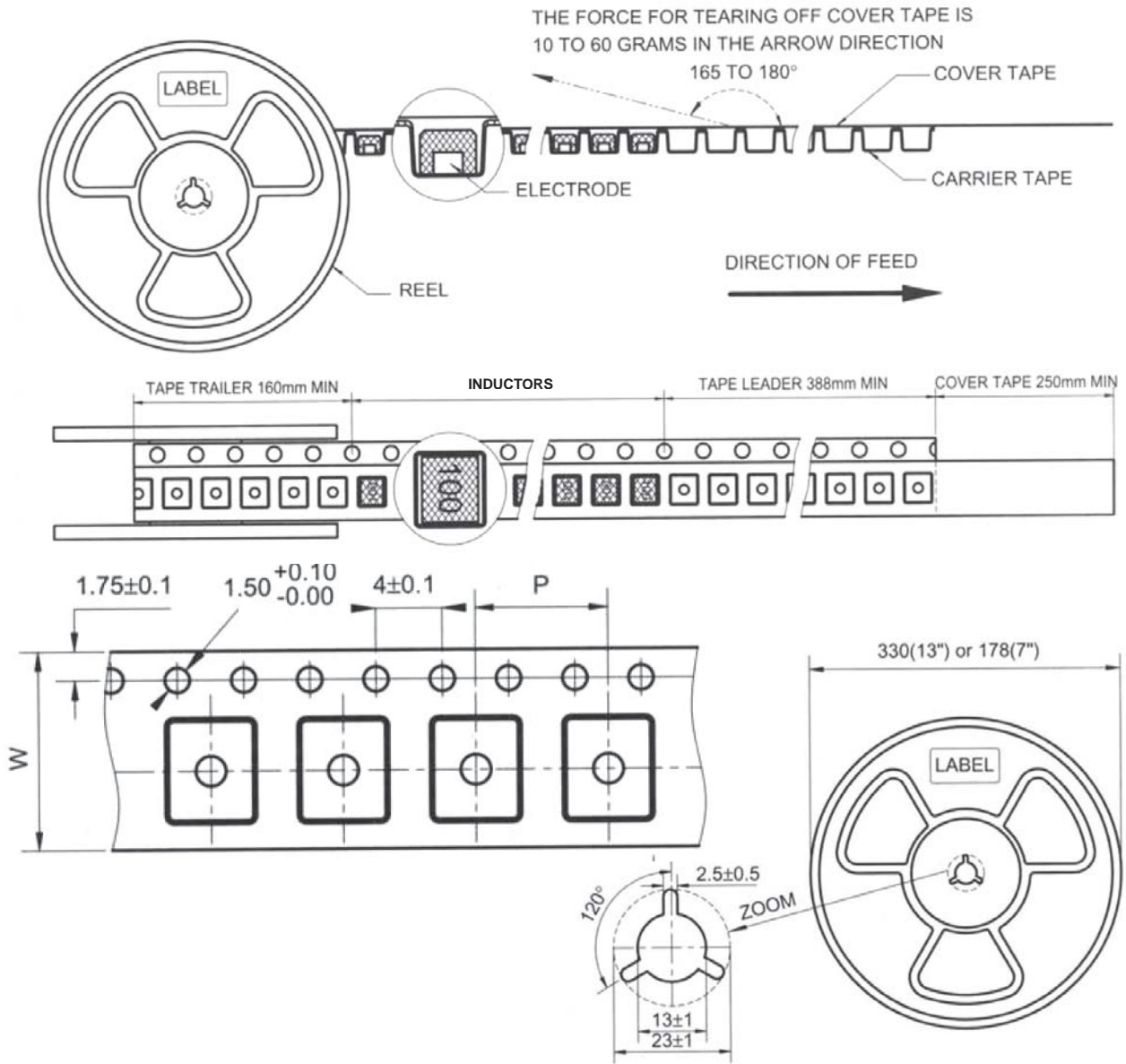
PSDB	5D28	N	T	101
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	5D28: 6.2×6.3×3.0 1003: 10.3×10.4×3.1 1004: 10.3×10.4×4.0 1005: 10.3×10.4×5.0	N: $\pm 30\%$	T: Tape and Reel	1R0: 1.0μH 470: 47μH 101: 100μH

Electrical Characteristics

PSDB5D28 / 1003 / 1004 / 1005 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (m Ω) max.				IDC (A) max.			
				5D28	1003	1004	1005	5D28	1003	1004	1005
R56	0.56	N	100KHz, 0.1V	-	-	8	-	-	-	10.0	-
1R0	1.0	N	100KHz, 0.1V	-	-	8	-	-	-	10.0	-
1R2	1.2	N	100KHz, 0.1V	-	-	8	-	-	-	10.0	-
1R3	1.3	N	100KHz, 0.1V	-	-	8	-	-	-	10.0	-
1R5	1.5	N	100KHz, 0.1V	-	-	8	6	-	-	10.0	10.5
1R8	1.8	N	100KHz, 0.1V	-	-	10	-	-	-	9.5	-
2R2	2.2	N	100KHz, 0.1V	-	23	11	7	-	5.60	8.00	9.25
2R5	2.5	N	100KHz, 0.1V	17.6	-	12	-	2.60	-	7.50	-
2R7	2.7	N	100KHz, 0.1V	-	-	12	-	-	-	7.50	-
3R3	3.3	N	100KHz, 0.1V	20.3	-	13	10	2.30	-	6.50	7.80
3R8	3.8	N	100KHz, 0.1V	-	-	17	-	-	-	6.00	-
4R0	4.0	N	100KHz, 0.1V	27.0	-	-	-	2.10	-	-	-
4R7	4.7	N	100KHz, 0.1V	-	-	21	12	-	-	5.70	6.40
5R0	5.0	N	100KHz, 0.1V	31.1	-	22	-	1.85	-	5.60	-
5R2	5.2	N	100KHz, 0.1V	-	43	22	-	-	4.83	5.50	-
5R6	5.6	N	100KHz, 0.1V	-	-	25	-	-	-	5.20	-
6R0	6.0	N	100KHz, 0.1V	41.9	-	-	-	1.70	-	-	-
6R8	6.8	N	100KHz, 0.1V	-	-	26	18	-	-	4.90	5.40
7R0	7.0	N	100KHz, 0.1V	-	-	27	-	-	-	4.80	-
8R0	8.0	N	100KHz, 0.1V	49.9	-	-	-	1.50	-	-	-
8R2	8.2	N	100KHz, 0.1V	-	50	33	20	-	3.54	4.60	4.85
100	10	N	100KHz, 0.1V	54.0	58	35	26	1.30	2.70	4.40	3.45
120	12	N	100KHz, 0.1V	71.6	72	46	33	1.20	2.25	3.92	3.40
150	15	N	100KHz, 0.1V	82.4	86	50	41	1.10	2.22	3.60	2.83
180	18	N	100KHz, 0.1V	101.5	116	70	46	1.05	1.90	3.00	2.62
220	22	N	100KHz, 0.1V	119.0	145	73	61	0.95	1.78	2.90	2.44
270	27	N	100KHz, 0.1V	146.0	176	83	69	0.85	1.63	2.80	2.24
330	33	N	100KHz, 0.1V	182.5	213	93	84	0.76	1.46	2.30	1.88
390	39	N	100KHz, 0.1V	209.5	270	120	106	0.68	1.32	2.20	1.70
470	47	N	100KHz, 0.1V	229.5	299	128	130	0.60	1.18	2.10	1.56
560	56	N	100KHz, 0.1V	305.0	335	171	149	0.55	1.10	1.80	1.39
680	68	N	100KHz, 0.1V	351.0	451	213	201	0.48	1.04	1.50	1.36
820	82	N	100KHz, 0.1V	418.5	513	250	227	0.45	0.94	1.40	1.20
101	100	N	100KHz, 0.1V	520.0	700	304	253	0.40	0.84	1.35	1.09
121	120	N	100KHz, 0.1V	-	765	400	303	-	0.76	1.20	1.00
151	150	N	100KHz, 0.1V	-	876	506	370	-	0.70	1.15	0.91
181	180	N	100KHz, 0.1V	-	-	631	419	-	-	1.03	0.84
221	220	N	100KHz, 0.1V	-	1050	756	500	-	0.58	0.92	0.75
271	270	N	100KHz, 0.1V	-	-	853	672	-	-	0.84	0.68
331	330	N	100KHz, 0.1V	-	-	1090	812	-	-	0.70	0.60
391	390	N	100KHz, 0.1V	-	-	-	953	-	-	-	0.57
471	470	N	100KHz, 0.1V	-	2170	1520	1289	-	0.48	0.54	0.50
561	560	N	100KHz, 0.1V	-	-	-	1430	-	-	-	0.47
681	680	N	100KHz, 0.1V	-	-	-	1599	-	-	-	0.43
821	820	N	100KHz, 0.1V	-	-	-	1768	-	-	-	0.39
102	1000	N	100KHz, 0.1V	-	-	3250	1989	-	-	0.32	0.35

■ Tape and Reel specifications



Unit:mm

Type	Tape size		Parts Per Reel
	W	P	13"
PSDB5D28	12	8	2000
PSDB1003	24	16	1000
PSDB1004	24	16	750
PSDB1005	24	16	750

SMD Power Inductor Environmental Specifications

General

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

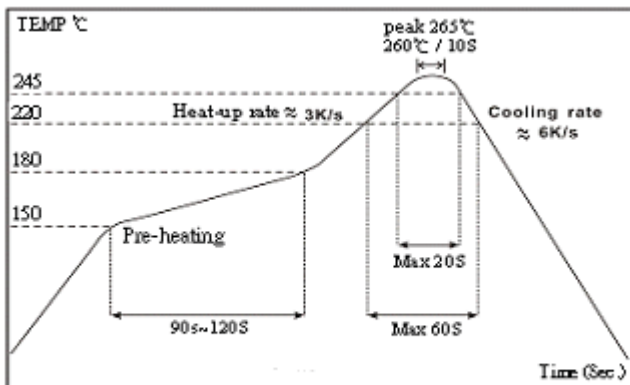
Environmental test

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

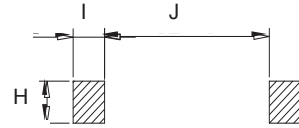
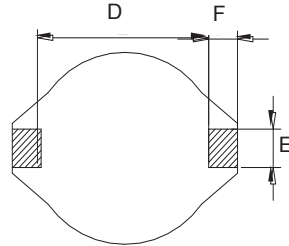
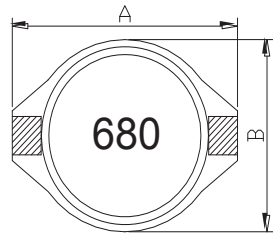
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
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°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	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):



Shielded SMD Power Inductor



Dimensions

Unit: mm

Type	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	5.21	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

Features

- With magnetically shielded against radiation
- PS1608 can help to achieve longer battery life significantly 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 1.4~0.02A
- PS3316 1.0~1000 μ H 5.6~0.32A
- PS5022 1.0~1000 μ H 20.0~0.80A
- Test equipment:
L: HP4284A LCR meter
DCR: Milli-ohm meter
- Electrical specifications at 25°C

Applications

- Portable Telephones
- Personal Computers
- Other Various Electronic Appliances
- DC/DC Converters, etc.

Characteristics

- Saturation Rated Current (I sat / IDC): The DC current when the inductance becomes 10%(1608 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: -40~85°C

Product Identification

PS	1608	M	T	101
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	1608: 6.60×4.45×2.92 3316: 12.95×9.4×5.21 5022: 18.54×15.24×7.62	M: \pm 20%	T: Tape and Reel	1R0: 1.0 μ H 470: 47 μ H 101: 100 μ H

Electrical Characteristics

PS1608 Type

Codes	L (μ H)	Tolerance	Test Condition		DCR (Ω) max.	SRF ref (MHz)	Q min.	IDC (A) max.	
			L	Q				I sat	I rms
1R0	1.0	M	100KHz, 0.1V	200KHz, 0.1V	0.040	250	30	1.40	3.00
1R5	1.5	M	100KHz, 0.1V	200KHz, 0.1V	0.045	125	30	0.93	2.30
2R2	2.2	M	100KHz, 0.1V	200KHz, 0.1V	0.050	120	40	0.92	1.80
3R3	3.3	M	100KHz, 0.1V	200KHz, 0.1V	0.055	120	40	0.75	1.60
4R7	4.7	M	100KHz, 0.1V	200KHz, 0.1V	0.060	105	40	0.58	1.40
6R8	6.8	M	100KHz, 0.1V	200KHz, 0.1V	0.065	50	40	0.58	1.20
100	10	M	100KHz, 0.1V	200KHz, 0.1V	0.075	38	40	0.37	1.00
150	15	M	100KHz, 0.1V	100KHz, 0.1V	0.090	33	40	0.31	0.80
220	22	M	100KHz, 0.1V	100KHz, 0.1V	0.11	25	40	0.30	0.70
330	33	M	100KHz, 0.1V	100KHz, 0.1V	0.19	20	40	0.24	0.60
470	47	M	100KHz, 0.1V	100KHz, 0.1V	0.23	20	40	0.24	0.50
680	68	M	100KHz, 0.1V	100KHz, 0.1V	0.29	15	40	0.17	0.40
101	100	M	100KHz, 0.1V	100KHz, 0.1V	0.48	10	40	0.13	0.30
151	150	M	100KHz, 0.1V	100KHz, 0.1V	0.59	9	40	0.10	0.26
221	220	M	100KHz, 0.1V	100KHz, 0.1V	0.90	6	40	0.10	0.22
331	330	M	100KHz, 0.1V	100KHz, 0.1V	1.40	5	40	0.07	0.20
471	470	M	100KHz, 0.1V	100KHz, 0.1V	1.80	4	40	0.06	0.19
681	680	M	100KHz, 0.1V	100KHz, 0.1V	2.20	3	40	0.06	0.18
102	1000	M	100KHz, 0.1V	100KHz, 0.1V	3.40	2	40	0.05	0.15
152	1500	M	100KHz, 0.1V	100KHz, 0.1V	4.20	2	50	0.04	0.12
222	2200	M	100KHz, 0.1V	100KHz, 0.1V	8.50	2	50	0.03	0.10
332	3300	M	100KHz, 0.1V	100KHz, 0.1V	11.0	1	50	0.02	0.08
472	4700	M	100KHz, 0.1V	100KHz, 0.1V	13.9	1	50	0.02	0.06
682	6800	M	100KHz, 0.1V	100KHz, 0.1V	25.0	1	50	0.02	0.04
103	10000	M	100KHz, 0.1V	100KHz, 0.1V	32.8	0.8	50	0.02	0.02

PS3316 Type

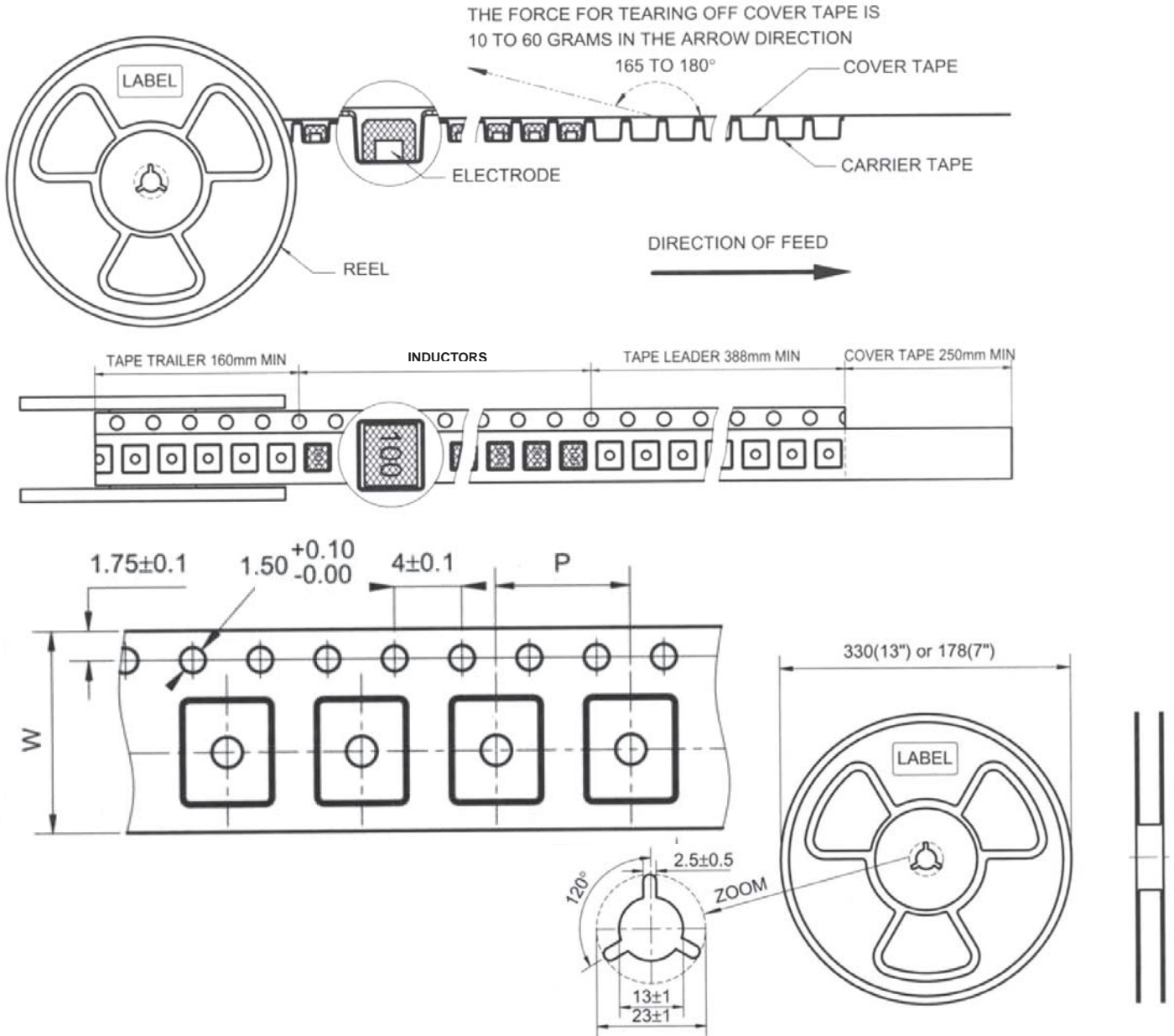
Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	100KHz, 0.1V	0.021	5.60
1R5	1.5	M	100KHz, 0.1V	0.022	5.20
2R2	2.2	M	100KHz, 0.1V	0.032	5.00
3R3	3.3	M	100KHz, 0.1V	0.039	3.90
4R7	4.7	M	100KHz, 0.1V	0.054	3.20
6R8	6.8	M	100KHz, 0.1V	0.075	2.80
100	10	M	100KHz, 0.1V	0.101	2.40
120	12	M	100KHz, 0.1V	0.140	2.10
150	15	M	100KHz, 0.1V	0.150	2.00
180	18	M	100KHz, 0.1V	0.200	1.70
220	22	M	100KHz, 0.1V	0.207	1.60
270	27	M	100KHz, 0.1V	0.300	1.50
330	33	M	100KHz, 0.1V	0.334	1.40
390	39	M	100KHz, 0.1V	0.460	1.10
470	47	M	100KHz, 0.1V	0.472	1.00
680	68	M	100KHz, 0.1V	0.660	0.90
101	100	M	100KHz, 0.1V	1.110	0.80
121	120	M	100KHz, 0.1V	1.300	0.62
151	150	M	100KHz, 0.1V	1.550	0.60
221	220	M	100KHz, 0.1V	2.000	0.50
271	270	M	100KHz, 0.1V	4.600	0.42
331	330	M	100KHz, 0.1V	5.600	0.35
391	390	M	100KHz, 0.1V	6.600	0.34
471	470	M	100KHz, 0.1V	7.600	0.33
102	1000	M	100KHz, 0.1V	8.300	0.32

■ Electrical Characteristics

PS5022 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	100KHz, 0.1V	0.024	20.00
2R2	2.2	M	100KHz, 0.1V	0.026	11.00
3R3	3.3	M	100KHz, 0.1V	0.029	10.00
3R9	3.9	M	100KHz, 0.1V	0.030	8.50
4R7	4.7	M	100KHz, 0.1V	0.032	8.40
5R6	5.6	M	100KHz, 0.1V	0.034	8.30
6R8	6.8	M	100KHz, 0.1V	0.036	8.20
8R2	8.2	M	100KHz, 0.1V	0.038	8.10
100	10	M	100KHz, 0.1V	0.040	8.00
120	12	M	100KHz, 0.1V	0.046	7.10
150	15	M	100KHz, 0.1V	0.048	7.00
180	18	M	100KHz, 0.1V	0.056	6.10
220	22	M	100KHz, 0.1V	0.059	6.00
270	27	M	100KHz, 0.1V	0.066	5.10
330	33	M	100KHz, 0.1V	0.075	5.00
390	39	M	100KHz, 0.1V	0.092	4.10
470	47	M	100KHz, 0.1V	0.097	4.00
560	56	M	100KHz, 0.1V	0.132	3.10
680	68	M	100KHz, 0.1V	0.138	3.00
820	82	M	100KHz, 0.1V	0.202	2.50
101	100	M	100KHz, 0.1V	0.207	2.40
121	120	M	100KHz, 0.1V	0.286	2.20
151	150	M	100KHz, 0.1V	0.293	2.10
181	180	M	100KHz, 0.1V	0.420	1.91
221	220	M	100KHz, 0.1V	0.470	1.90
271	270	M	100KHz, 0.1V	0.720	1.12
331	330	M	100KHz, 0.1V	0.780	1.10
391	390	M	100KHz, 0.1V	1.020	1.10
471	470	M	100KHz, 0.1V	1.080	1.10
561	560	M	100KHz, 0.1V	1.320	0.97
681	680	M	100KHz, 0.1V	1.400	0.96
821	820	M	100KHz, 0.1V	1.960	0.81
102	1000	M	100KHz, 0.1V	2.010	0.80

■ Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
PS1608	16	8	2000
PS3316	24	12	1000
PS5022	32	20	250

■ SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: $25\pm 3^{\circ}\text{C}$; Humidity: $<80\%$ relative humidity. Recommended product should be used within six months from the time of delivery.

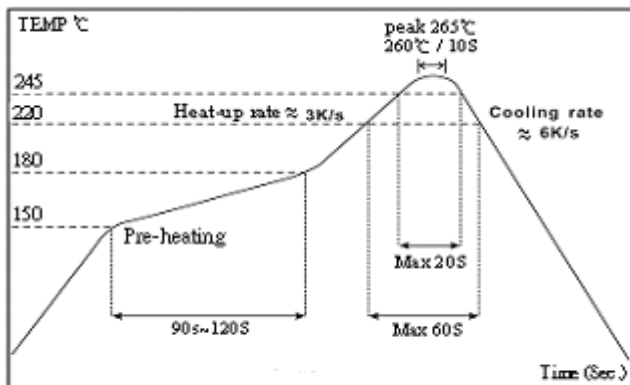
Environmental test

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

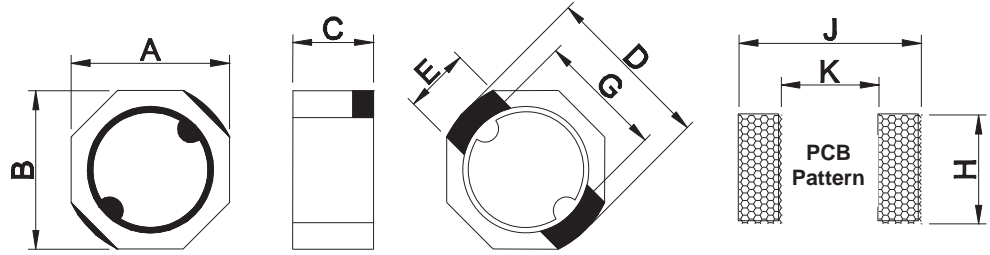
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at $245\pm 5^{\circ}\text{C}$ for 3 seconds.
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 $130\sim 150^{\circ}\text{C}$. Immersing to $260\pm 5^{\circ}\text{C}$ for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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):



Shielded SMD Power Inductor



Dimensions

Unit: mm

Type	A	B	C max.	D	E	G	H	K	J
PDRH0302	3.85±0.3	3.85±0.3	2.00	3.9±0.2	1.6	3.2	1.9	3.0	4.55
PDRH0303	3.85±0.3	3.85±0.3	3.00	3.9±0.2	1.6	3.2	1.9	3.0	4.55
PDRH0415	3.85±0.3	3.85±0.3	1.50	4.80max.	1.6	3.0	2.0	2.6	5.2
PDRH0502	5.30max.	5.30max.	2.00	5.7±0.4	1.6	4.2	1.9	3.9	5.7
PDRH0503	5.30max.	5.30max.	3.00	5.7±0.4	1.6	4.2	1.9	3.9	5.7
PDRH0603	5.90±0.2	5.90±0.2	3.00	6.4±0.3	2.4	4.7	2.7	4.4	6.5

Features

- Directly connected electrode on ferrite core
- Excellent property with high saturation for surface mounting

Applications

- OA Equipment
- Notebook PCs
- LCD Monitor
- Portable Terminal Equipment
- DC/DC Converters, etc.
- Power Supply for VTR

Characteristics

- Rated DC Current: The current when the inductance becomes 30% lower than its initial value.
- Operating temperature: -40~105°C

Inductance and rated current ranges

- PDRH0302 0.47~1800μH 1.84~0.036A
- PDRH0303 1.0~3300μH 1.90~0.026A
- PDRH0415 1.0~100μH 1.50~0.100A
- PDRH0502 0.47~820μH 2.33~0.120A
- PDRH0503 0.47~2500μH 4.82~0.045A
- PDRH0603 1.0~3300μH 4.70~0.078A
- Test equipment:
L: HP4284A LCR meter
DCR: Milli-ohm meter
- Electrical specifications at 25°C

Product Identification

PDRH	0303	M	T	101
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	0302: 3.85x3.85x2.0 0303: 3.85x3.85x3.0 0415: 3.85x3.85x1.5 0502: 5.3x5.3x2.0 0503: 5.3x5.3x3.0 0603: 5.9x5.9x3.0	M: ±20% N: ±30%	T: Tape and Reel	1R0: 1.0μH 470: 47μH 101: 100μH

Electrical Characteristics

PDRH 0302 / 0303 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.		IDC (A) max.	
				0302	0303	0302	0303
R47	0.47	N	100 KHz, 0.25V	0.017	-	1.84	-
1R0	1.0	N	100 KHz, 0.25V	0.030	0.009	1.80	1.90
1R2	1.2	N	100 KHz, 0.25V	0.043	0.010	1.70	1.75
1R5	1.5	N	100 KHz, 0.25V	0.052	0.013	1.60	1.45
1R8	1.8	N	100 KHz, 0.25V	0.056	-	1.55	-
2R0	2.0	N	100 KHz, 0.25V	0.057	0.016	1.51	1.25
2R2	2.2	N	100 KHz, 0.25V	0.058	0.025	1.50	1.15
2R4	2.4	N	100 KHz, 0.25V	0.059	-	1.41	-
2R5	2.5	N	100 KHz, 0.25V	0.059	0.018	1.40	1.05
2R7	2.7	N	100 KHz, 0.25V	0.060	0.020	1.35	1.00
3R3	3.3	N	100 KHz, 0.25V	0.064	0.030	1.30	0.96
3R5	3.5	N	100 KHz, 0.25V	0.127	0.025	1.30	0.95
3R9	3.9	N	100 KHz, 0.25V	-	0.033	-	0.87
4R7	4.7	N	100 KHz, 0.25V	0.146	0.039	1.10	0.78
5R6	5.6	N	100 KHz, 0.25V	0.176	0.044	0.95	0.74
6R2	6.2	N	100 KHz, 0.25V	0.220	-	0.91	-
6R8	6.8	N	100 KHz, 0.25V	0.238	0.051	0.90	0.68
8R2	8.2	N	100 KHz, 0.25V	0.272	0.065	0.80	0.57
100	10	M	1KHz, 0.25V	0.299	0.092	0.70	0.43
120	12	M	1KHz, 0.25V	0.350	0.100	0.62	0.38
150	15	M	1KHz, 0.25V	0.472	0.113	0.61	0.33
180	18	M	1KHz, 0.25V	0.552	0.125	0.58	0.30
220	22	M	1KHz, 0.25V	0.592	0.146	0.52	0.28
270	27	M	1KHz, 0.25V	0.630	0.176	0.44	0.26
330	33	M	1KHz, 0.25V	1.075	0.214	0.43	0.23
390	39	M	1KHz, 0.25V	1.269	0.225	0.37	0.21
470	47	M	1KHz, 0.25V	1.309	0.304	0.34	0.19
560	56	M	1KHz, 0.25V	1.960	0.324	0.29	0.170
680	68	M	1KHz, 0.25V	2.613	0.472	0.25	0.156
820	82	M	1KHz, 0.25V	2.950	0.539	0.20	0.142
101	100	M	1KHz, 0.25V	3.255	0.608	0.19	0.128
121	120	M	1KHz, 0.25V	3.350	0.757	0.15	0.116
151	150	M	1KHz, 0.25V	3.550	0.882	0.12	0.106
181	180	M	1KHz, 0.25V	4.000	1.130	0.10	0.095
221	220	M	1KHz, 0.25V	4.900	1.269	0.09	0.087
271	270	M	1KHz, 0.25V	5.300	1.570	0.085	0.080
331	330	M	1KHz, 0.25V	7.280	1.930	0.08	0.078
391	390	M	1KHz, 0.25V	8.200	2.360	0.078	0.073
471	470	M	1KHz, 0.25V	9.200	2.770	0.075	0.068
561	560	M	1KHz, 0.25V	11.00	3.520	0.072	0.065
681	680	M	1KHz, 0.25V	13.37	4.250	0.07	0.056
821	820	M	1KHz, 0.25V	16.50	4.830	0.068	0.050
102	1000	M	1KHz, 0.25V	19.55	6.260	0.065	0.047
122	1200	M	1KHz, 0.25V	25.50	7.860	0.045	0.043
152	1522	M	1KHz, 0.25V	36.15	9.980	0.038	0.039
182	1800	M	1KHz, 0.25V	57.62	12.17	0.036	0.036
272	2700	M	1KHz, 0.25V	-	16.12	-	0.029
332	3300	M	1KHz, 0.25V	-	22.04	-	0.026

■ Electrical Characteristics

PDRH0415 Type

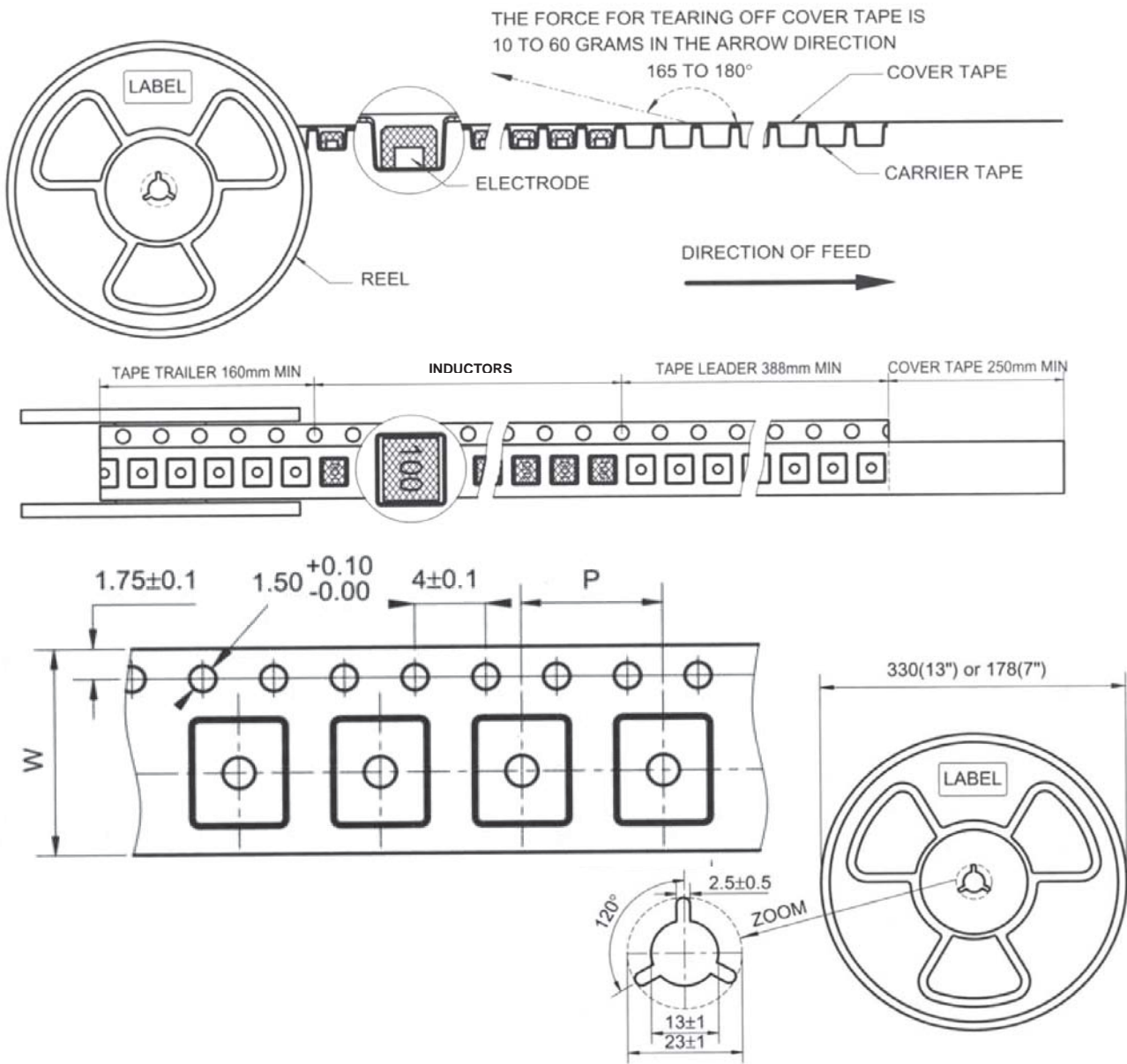
Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	N	100KHz, 0.1V	0.058	1.50
1R2	1.2	N	100KHz, 0.1V	0.070	1.40
2R2	2.2	N	100KHz, 0.1V	0.082	1.00
3R3	3.3	N	100KHz, 0.1V	0.105	0.92
3R9	3.9	N	100KHz, 0.1V	0.120	0.80
4R7	4.7	N	100KHz, 0.1V	0.150	0.76
5R6	5.6	N	100KHz, 0.1V	0.180	0.69
6R8	6.8	N	100KHz, 0.1V	0.220	0.62
8R2	8.2	N	100KHz, 0.1V	0.240	0.56
100	10	N	100KHz, 0.1V	0.255	0.50
150	15	N	100KHz, 0.1V	0.390	0.40
220	22	M	100KHz, 0.1V	0.610	0.32
330	33	M	100KHz, 0.1V	0.920	0.28
470	47	M	100KHz, 0.1V	1.130	0.20
680	68	M	100KHz, 0.1V	1.520	0.15
101	100	M	100KHz, 0.1V	2.120	0.10

Electrical Characteristics

PDRH 0502 / 0503 / 0603 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.			IDC (A) max.		
				0502	0503	0603	0502	0503	0603
R47	0.47	N	100KHz, 0.25V	0.015	0.010	-	2.33	4.82	-
R82	0.82	N	100KHz, 0.25V	-	-	0.013	-	-	4.80
1R0	1.0	N	100KHz, 0.25V	0.024	0.015	0.014	2.27	4.00	4.70
1R1	1.1	N	100KHz, 0.25V	-	0.020	-	-	3.87	-
1R2	1.2	N	100KHz, 0.25V	0.044	0.022	0.016	2.15	3.80	3.90
1R5	1.5	N	100KHz, 0.25V	0.045	0.026	0.018	2.00	3.00	3.52
1R8	1.8	N	100KHz, 0.25V	-	-	0.019	-	-	3.25
2R0	2.0	N	100KHz, 0.25V	0.046	0.027	0.022	1.90	2.92	2.95
2R2	2.2	N	100KHz, 0.25V	0.059	0.029	0.022	1.63	2.41	2.95
2R5	2.5	N	100KHz, 0.25V	-	-	0.024	-	-	2.75
3R0	3.0	N	100KHz, 0.25V	-	-	0.027	-	-	2.55
3R3	3.3	N	100KHz, 0.25V	0.073	0.040	0.030	1.34	1.95	2.45
3R5	3.5	N	100KHz, 0.25V	0.073	0.040	-	1.34	1.95	-
3R9	3.9	N	100KHz, 0.25V	-	0.042	0.034	-	1.93	2.35
4R1	4.1	N	100KHz, 0.25V	0.087	-	-	1.14	-	-
4R7	4.7	N	100KHz, 0.25V	0.087	0.052	0.042	1.14	1.60	2.25
5R6	5.6	N	100KHz, 0.25V	-	0.052	0.048	-	1.60	2.05
6R2	6.2	N	100KHz, 0.25V	-	0.062	-	-	1.55	-
6R8	6.8	N	100KHz, 0.25V	0.105	0.068	0.054	0.95	1.51	1.85
8R2	8.2	N	100KHz, 0.25V	0.139	0.084	0.058	0.90	1.38	1.65
100	10	M	1KHz, 0.25V	0.150	0.090	0.065	0.76	1.33	1.45
120	12	M	1KHz, 0.25V	-	0.120	0.082	-	1.06	1.35
150	15	M	1KHz, 0.25V	0.210	0.142	0.096	0.63	1.05	1.25
180	18	M	1KHz, 0.25V	0.270	0.192	0.110	0.60	0.90	1.15
220	22	M	1KHz, 0.25V	0.275	0.208	0.140	0.56	0.86	0.98
270	27	M	1KHz, 0.25V	0.452	0.222	0.170	0.48	0.75	0.90
330	33	M	1KHz, 0.25V	0.455	0.257	0.210	0.44	0.72	0.80
390	39	M	1KHz, 0.25V	-	0.320	0.240	-	0.64	0.72
470	47	M	1KHz, 0.25V	0.730	0.352	0.280	0.35	0.62	0.70
560	56	M	1KHz, 0.25V	-	0.459	0.340	-	0.53	0.66
680	68	M	1KHz, 0.25V	0.935	0.525	0.410	0.30	0.51	0.58
820	82	M	1KHz, 0.25V	1.300	0.770	0.490	0.27	0.48	0.52
101	100	M	1KHz, 0.25V	1.500	0.801	0.550	0.23	0.43	0.46
121	120	M	1KHz, 0.25V	1.910	0.850	0.700	0.22	0.34	0.42
151	150	M	1KHz, 0.25V	2.680	1.100	0.780	0.21	0.26	0.36
181	180	M	1KHz, 0.25V	3.040	1.190	0.960	0.20	0.24	0.34
221	220	M	1KHz, 0.25V	3.520	1.530	1.080	0.195	0.20	0.32
271	270	M	1KHz, 0.25V	4.380	-	1.360	0.193	-	0.28
331	330	M	1KHz, 0.25V	5.560	2.030	1.820	0.190	0.19	0.24
391	390	M	1KHz, 0.25V	6.850	3.000	2.050	0.185	0.16	0.22
471	470	M	1KHz, 0.25V	7.820	3.500	2.580	0.180	0.15	0.20
561	560	M	1KHz, 0.25V	-	4.080	3.160	-	0.14	0.18
681	680	M	1KHz, 0.25V	-	-	4.040	-	-	0.16
821	820	M	1KHz, 0.25V	15.00	-	4.900	0.120	-	0.14
102	1000	M	1KHz, 0.25V	-	-	6.000	-	-	0.13
122	1200	M	1KHz, 0.25V	-	8.500	7.600	-	0.070	0.12
152	1522	M	1KHz, 0.25V	-	10.00	9.440	-	0.065	0.10
182	1800	M	1KHz, 0.25V	-	13.15	11.70	-	0.062	0.098
222	2200	M	1KHz, 0.25V	-	19.00	13.40	-	0.050	0.095
252	2500	M	1KHz, 0.25V	-	20.00	-	-	0.045	-
272	2700	M	1KHz, 0.25V	-	-	17.30	-	-	0.086
332	3300	M	1KHz, 0.25V	-	-	22.10	-	-	0.078

Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
PDRH0302	12	8	3500
PDRH0303	12	8	2500
PDRH0415	12	8	2500
PDRH0502	12	8	3500
PDRH0503	12	8	2500
PDRH0603	12	8	2000

■ SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: $25\pm 3^{\circ}\text{C}$; Humidity: $<80\%$ relative humidity. Recommended product should be used within six months from the time of delivery.

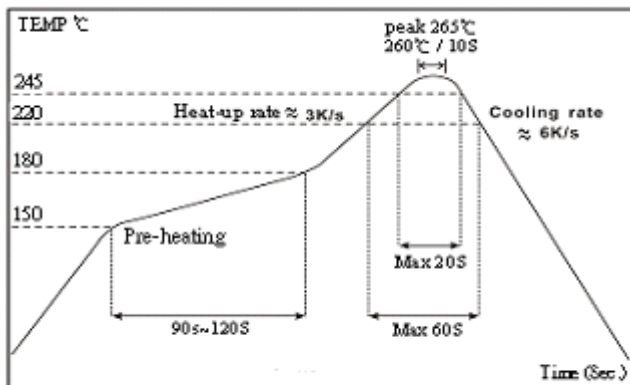
Environmental test

Test Items	Specifications	Test Conditions / Test Methods
High temperature Storage test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Temperature $85\pm 2^{\circ}\text{C}$, Time: 48 ± 2 hours, Tested after 1 hour at room temperature.
Low temperature Storage test		Temperature $-25\pm 2^{\circ}\text{C}$, Time: 48 ± 2 hours, Tested after 1 hour at room temperature.
Humidity test		Temperature $40\pm 2^{\circ}\text{C}$, 90~95% relative humidity Time: 96 ± 2 hours, apply rated current, Tested after 1 hour at room temperature.
Thermal shock test		First -25°C 30minutes then 25°C 10 minutes last 85°C 30 minutes, as 1 cycle. Go through 5 cycles. Tested after 1 hour at room temperature.

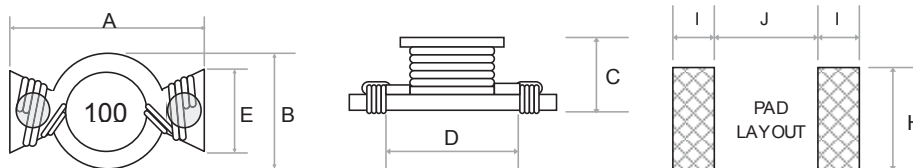
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at $245\pm 5^{\circ}\text{C}$ for 3 seconds.
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 $130\sim 150^{\circ}\text{C}$. Immersing to $260\pm 5^{\circ}\text{C}$ for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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):



SMD Power Inductor



Dimensions

Unit: mm

Type	A max.	B max.	C max.	D	E	H	I	J
PDH1608	7.50	5.20	3.20	4.60	2.5	4.00	2.0	4.00
PDH1813	8.89	6.40	5.00	5.80	3.0	3.00	2.0	5.00
PDH3316	13.21	9.91	6.35	9.50	4.5	6.50	2.5	8.64
PDH4920	19.40	13.30	6.80	12.7	6.6	8.00	3.8	11.70
PDH5022	22.35	16.26	8.00	16.0	8.0	8.64	4.3	14.35

Features

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

Inductance and rated current ranges

- PDH1608 0.47μH~22.0μH 7.7~0.70A
- PDH1813 0.18μH~180μH 11.9~0.50A
- PDH3316 0.18μH~100μH 20.0~1.20A
- PDH4920 0.47μH~100μH 25.1~1.80A
- PDH5022 0.78μH~470μH 30.0~0.80A
- Test equipment:
L: HP4284A LCR meter
DCR: Milli-ohm meter
- Electrical specifications at 25°C

Applications

- Notebook Computers
- Handheld Communications
- LCD Televisions
- Power Supply For VTRs
- DC/DC Converters, etc.

Characteristics

- Saturation Rated Current :The current when the inductance becomes 30% lower than its initial value.(Ta=25°C)
- Operating temperature range: -40~105°C

Product Identification

PDH	1813	M	T	101
Product Type	Dimensions (A×B×C)	Inductor Tolerance	Packaging Style	Inductance
	1608: 7.5×5.2×3.2 1813: 8.89×6.4×5.0 3316: 13.21×9.91×6.35 4920: 19.4×13.3×6.8 5022: 22.35×16.26×8.0	M: ±20% N: ±30% P: +40%-20%	T: Tape and Reel	1R0: 1.0μH 470: 47μH 101: 100μH

■ Electrical Characteristics

PDH1608 TYPE

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
R47	0.47	P	100KHz, 0.1V	0.025	7.7
1R0	1.0	M	100KHz, 0.1V	0.050	2.9
1R5	1.5	M	100KHz, 0.1V	0.050	2.6
2R2	2.2	M	100KHz, 0.1V	0.070	2.3
3R3	3.3	M	100KHz, 0.1V	0.080	2.0
4R7	4.7	M	100KHz, 0.1V	0.090	1.5
6R8	6.8	M	100KHz, 0.1V	0.130	1.2
100	10	M	100KHz, 0.1V	0.160	1.1
150	15	M	100KHz, 0.1V	0.230	0.9
220	22	M	100KHz, 0.1V	0.370	0.7

PDH1813 TYPE

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
R18	0.18	N	100KHz, 0.1V	0.005	11.9
R33	0.33	N	100KHz, 0.1V	0.007	11.7
R47	0.47	N	100KHz, 0.1V	0.008	10.8
R50	0.50	M	100KHz, 0.1V	0.009	8.00
R56	0.56	M	100KHz, 0.1V	0.010	7.70
1R0	1.0	M	100KHz, 0.1V	0.016	7.30
1R2	1.2	M	100KHz, 0.1V	0.017	5.30
2R2	2.2	M	100KHz, 0.1V	0.035	3.50
3R3	3.3	M	100KHz, 0.1V	0.040	3.00
3R9	3.9	M	100KHz, 0.1V	0.051	3.00
4R7	4.7	M	100KHz, 0.1V	0.054	2.60
5R6	5.6	M	100KHz, 0.1V	0.071	2.40
6R8	6.8	M	100KHz, 0.1V	0.080	2.20
8R2	8.2	M	100KHz, 0.1V	0.095	2.00
100	10	M	100KHz, 0.1V	0.111	1.90
120	12	M	100KHz, 0.1V	0.148	1.70
150	15	M	100KHz, 0.1V	0.170	1.50
180	18	M	100KHz, 0.1V	0.231	1.30
220	22	M	100KHz, 0.1V	0.250	1.20
270	27	M	100KHz, 0.1V	0.330	1.10
330	33	M	100KHz, 0.1V	0.350	0.99
390	39	M	100KHz, 0.1V	0.450	0.96
470	47	M	100KHz, 0.1V	0.470	0.87
560	56	M	100KHz, 0.1V	0.648	0.85
680	68	M	100KHz, 0.1V	0.730	0.68
820	82	M	100KHz, 0.1V	1.000	0.81
101	100	M	100KHz, 0.1V	1.110	0.53
181	180	M	100KHz, 0.1V	2.300	0.50

■ Electrical Characteristics

PDH3316 TYPE

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
R18	0.18	N	100KHz, 0.1V	0.002	20.00
R33	0.33	M	100KHz, 0.1V	0.002	20.00
R68	0.68	M	100KHz, 0.1V	0.005	13.00
1R0	1.0	M	100KHz, 0.1V	0.006	9.90
1R5	1.5	M	100KHz, 0.1V	0.008	7.90
2R2	2.2	M	100KHz, 0.1V	0.011	6.10
2R7	2.7	M	100KHz, 0.1V	0.012	5.50
3R3	3.3	M	100KHz, 0.1V	0.014	5.10
3R9	3.9	M	100KHz, 0.1V	0.017	4.45
4R7	4.7	M	100KHz, 0.1V	0.018	4.20
5R6	5.6	M	100KHz, 0.1V	0.020	4.05
6R8	6.8	M	100KHz, 0.1V	0.027	3.60
8R2	8.2	M	100KHz, 0.1V	0.026	3.35
100	10	M	100KHz, 0.1V	0.038	3.30
120	12	M	100KHz, 0.1V	0.040	3.00
150	15	M	100KHz, 0.1V	0.045	2.40
180	18	M	100KHz, 0.1V	0.061	2.25
220	22	M	100KHz, 0.1V	0.070	2.00
270	27	M	100KHz, 0.1V	0.090	1.85
330	33	M	100KHz, 0.1V	0.100	1.70
390	39	M	100KHz, 0.1V	0.120	1.55
470	47	M	100KHz, 0.1V	0.150	1.40
560	56	M	100KHz, 0.1V	0.173	1.35
680	68	M	100KHz, 0.1V	0.220	1.20
820	82	M	100KHz, 0.1V	0.252	1.00
101	100	M	100KHz, 0.1V	0.280	0.95

PDH4920 TYPE

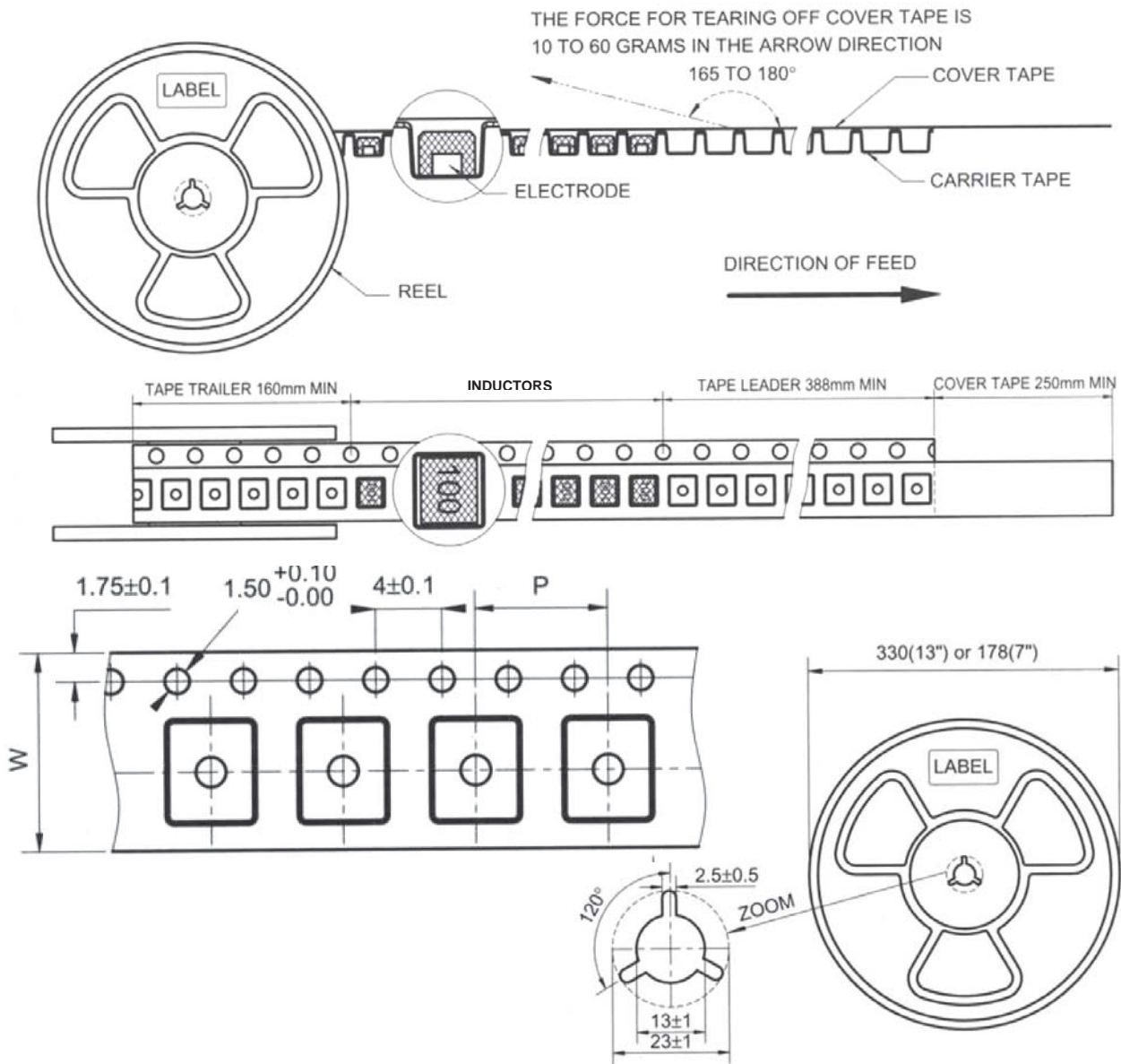
Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
R47	0.47	P	100KHz, 0.1V	0.003	25.1
1R0	1.0	P	100KHz, 0.1V	0.004	15.3
1R5	1.5	P	100KHz, 0.1V	0.006	12.0
2R2	2.2	M	100KHz, 0.1V	0.008	10.2
3R3	3.3	M	100KHz, 0.1V	0.009	9.3
4R7	4.7	M	100KHz, 0.1V	0.012	7.7
6R8	6.8	M	100KHz, 0.1V	0.019	6.2
100	10	M	100KHz, 0.1V	0.027	5.2
150	15	M	100KHz, 0.1V	0.032	4.3
220	22	M	100KHz, 0.1V	0.050	3.7
330	33	M	100KHz, 0.1V	0.069	3.0
470	47	M	100KHz, 0.1V	0.109	2.4
680	68	M	100KHz, 0.1V	0.156	2.0
101	100	M	100KHz, 0.1V	0.206	1.8

■ Electrical Characteristics

PDH5022 TYPE

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
R78	0.78	N	100KHz, 0.1V	0.003	30.0
1R5	1.5	M	100KHz, 0.1V	0.004	25.0
2R2	2.2	M	100KHz, 0.1V	0.006	20.0
3R3	3.3	M	100KHz, 0.1V	0.009	17.0
3R9	3.9	M	100KHz, 0.1V	0.010	15.0
4R7	4.7	M	100KHz, 0.1V	0.014	13.0
6R0	6.0	M	100KHz, 0.1V	0.017	12.0
7R8	7.8	M	100KHz, 0.1V	0.018	11.0
100	10	M	100KHz, 0.1V	0.026	10.0
150	15	M	100KHz, 0.1V	0.032	8.00
220	22	M	100KHz, 0.1V	0.043	7.00
330	33	M	100KHz, 0.1V	0.066	6.00
470	47	M	100KHz, 0.1V	0.096	5.00
680	68	M	100KHz, 0.1V	0.115	4.00
101	100	M	100KHz, 0.1V	0.165	3.00
221	220	M	100KHz, 0.1V	0.396	2.40
331	330	M	100KHz, 0.1V	0.588	1.00
471	470	M	100KHz, 0.1V	0.950	0.80

■ Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
PDH1608	16	8	1500
PDH1813	16	12	1000
PDH3316	24	16	750
PDH4920	32	20	350
PDH5022	44	20	250

SMD Power Inductor Environmental Specifications

General

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

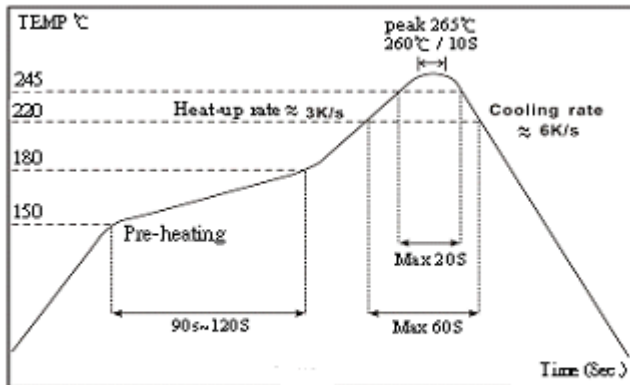
Environmental test

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

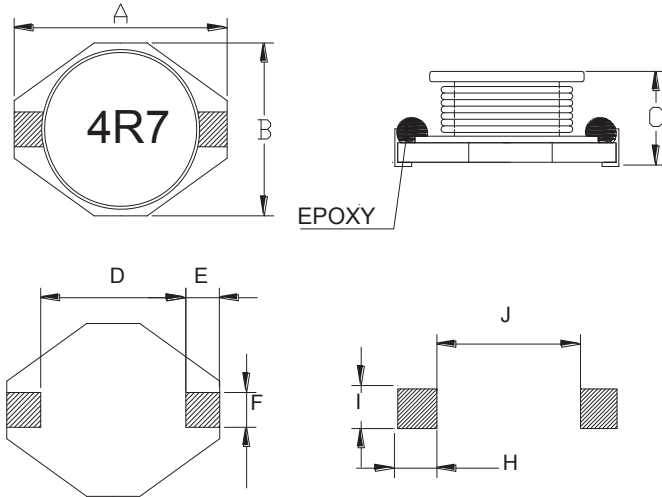
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
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°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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):



SMD Power Inductor



Features

- High power, High saturation inductors
- Ideal inductors for DC-DC converters 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

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

Applications

- Portable Telephones
- Personal Computers
- DC/DC Converters, etc.
- Other Various Electronic Appliances

Inductance and rated current ranges

- PD1608 1.0 μ H~1000 μ H 2.9~0.10A
- PD3308 1.0 μ H~1000 μ H 5.15~0.10A
- PD3316 0.68 μ H~1000 μ H 11~0.30A
- PD3340 0.47 μ H~1000 μ H 40~0.8A
- PD5022 1.0 μ H~1000 μ H 20~1.0A

Characteristics

- Saturation Rated Current: The current when the inductance becomes 10% lower than its initial value. (Ta=25°C)
- Operating temperature range: -40~125°C

– Test equipment:

L: HP4284A LCR meter

DCR: Milli-ohm meter

– Electrical specifications at 25°C

Product Identification

PD	1608	M	T	101
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	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	M: \pm 20%	T: Tape and Reel	1R0: 1.0 μ H 470: 47 μ H 101: 100 μ H

■ Electrical Characteristics

PD1608 Type

Codes	L (μ H)	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 (μ H)	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

Electrical Characteristics

PD3316 Type

Codes	L (μ H)	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	0.42
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

Electrical Characteristics

PD3340 Type

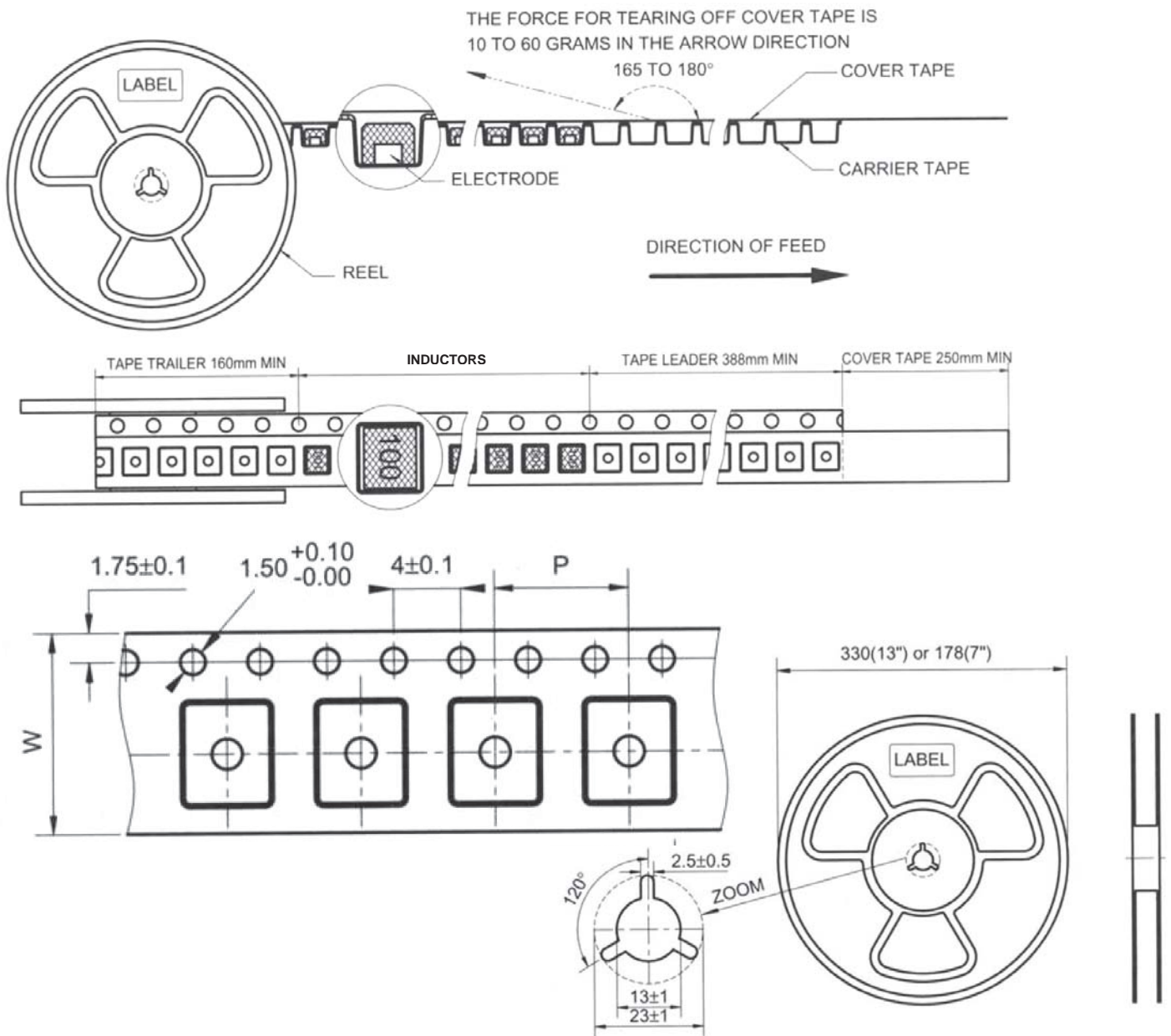
Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
R47	0.47	M	100KHz, 0.1V	0.008	40.0
R82	0.82	M	100KHz, 0.1V	0.009	34.7
1R2	1.2	M	100KHz, 0.1V	0.010	28.4
1R5	1.5	M	100KHz, 0.1V	0.010	25.7
2R2	2.2	M	100KHz, 0.1V	0.012	23.0
3R5	3.5	M	100KHz, 0.1V	0.015	21.0
4R7	4.7	M	100KHz, 0.1V	0.020	18.0
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

Electrical Characteristics

PD5022 Type

Codes	L (μ H)	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



Unit: mm

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

SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: $25\pm 3^{\circ}\text{C}$; Humidity: <80% relative humidity. Recommended product should be used within six months from the time of delivery.

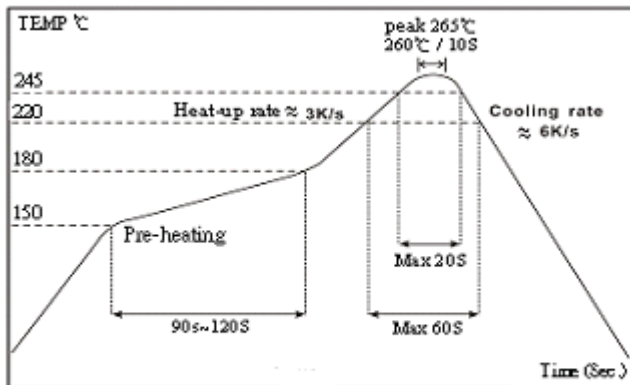
Environmental test

Test Items	Specifications	Test Conditions / Test Methods
High temperature Storage test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Temperature $85\pm 2^{\circ}\text{C}$, Time: 96 ± 2 hours, Tested after 1 hour at room temperature.
Low temperature Storage test		Temperature $-25\pm 2^{\circ}\text{C}$, Time: 96 ± 2 hours, Tested after 1 hour at room temperature.
Humidity test		Temperature $40\pm 2^{\circ}\text{C}$, 90~95% relative humidity Time: 96 ± 2 hours, Tested after 1 hour at room temperature.
Thermal shock test		First -25°C 30minutes then 25°C 10 minutes last 85°C 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 solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at $245\pm 5^{\circ}\text{C}$ for 3 seconds.
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 $130\sim 150^{\circ}\text{C}$. Immersing to $260\pm 5^{\circ}\text{C}$ for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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.

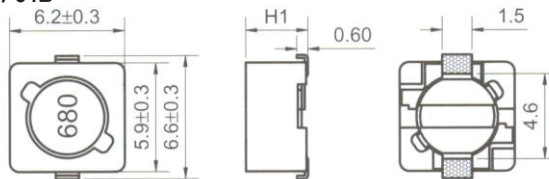
The condition of reflow (recommendation):



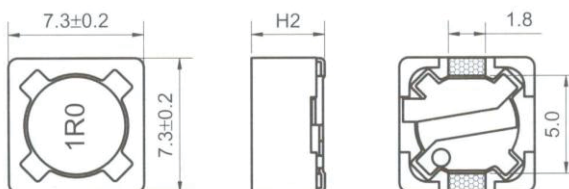
Shielded SMD Power Inductor



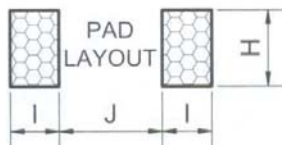
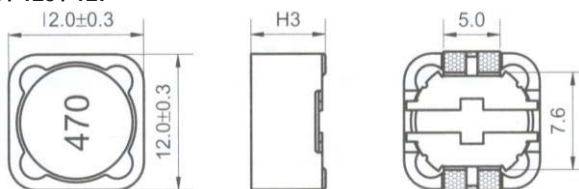
PCS62B / 64B



PCS73 / 74



PCS124 / 125 / 127



Features

- High power, High saturation inductors
- With magnetically shielded against radiation
- Directly connected electrode on ferrite core
- Highly accurate dimensions for surface mounting

Applications

- Power Supply for VTRs.
- LCD Televisions
- Personal Computers
- Handheld Communication Equipment
- DC/DC Converters, etc.

Characteristics except PCSH127

- Rated DC Current: The DC current at which the inductance becomes 25% lower than its initial value or when $\Delta t=40^{\circ}\text{C}$, whichever is lower. ($T_a=25^{\circ}\text{C}$)
- Operating temperature range: $-40\sim 85^{\circ}\text{C}$

Characteristics for PCSH127

- Rated DC Current: The DC current at which the inductance becomes 30% lower than its initial value. ($T_a=25^{\circ}\text{C}$)
- Operating temperature range: $-40\sim 105^{\circ}\text{C}$

Inductance and rated current ranges

- | | | |
|---------|---------------------------------------|--------------------------|
| PCS62B | 2.9 $\mu\text{H}\sim 330\mu\text{H}$ | 1.94 $\sim 0.19\text{A}$ |
| PCS64B | 10 $\mu\text{H}\sim 1000\mu\text{H}$ | 1.35 $\sim 0.14\text{A}$ |
| PCS73 | 1.0 $\mu\text{H}\sim 1000\mu\text{H}$ | 7.97 $\sim 0.16\text{A}$ |
| PCS74 | 1.0 $\mu\text{H}\sim 1000\mu\text{H}$ | 8.0 $\sim 0.18\text{A}$ |
| PCS124 | 1.5 $\mu\text{H}\sim 330\mu\text{H}$ | 8.75 $\sim 0.5\text{A}$ |
| PCS125 | 1.3 $\mu\text{H}\sim 1000\mu\text{H}$ | 8.0 $\sim 0.4\text{A}$ |
| PCS127 | 1.2 $\mu\text{H}\sim 1000\mu\text{H}$ | 9.8 $\sim 0.55\text{A}$ |
| PCSH127 | 4.7 $\mu\text{H}\sim 1000\mu\text{H}$ | 15.9 $\sim 1.14\text{A}$ |

- Test equipment:

L: HP4284A or HP4285A LCR meter

DCR: Milli-ohm meter

- Electrical specifications at 25°C

Dimensions

Unit: mm

Type	H1 max.	H2 max.	H3 max.	H	I	J
PCS62B	3.0	-	-	1.9	1.4	4.6
PCS64B	5.0	-	-	1.9	1.4	4.6
PCS73	-	3.4	-	2.2	1.6	4.8
PCS74	-	4.5	-	2.2	1.6	4.8
PCS124	-	-	4.5	5.4	2.9	7.0
PCS125	-	-	6.0	5.4	2.9	7.0
PCS127	-	-	8.0	5.4	2.9	7.0
PCSH127			8.0	5.4	2.9	7.0

Product Identification

PCS	62B	M	T	101
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
PCS :Standard PCSH :High Current	62B: 6.2×6.6×3.0 64B: 6.2×6.6×5.0 73: 7.3×7.3×3.4 74: 7.3×7.3×4.5 124: 12×12×4.5 125: 12×12×6.0 127: 12×12×8.0	M: ±20% P: +40%-20%	T: Tape and Reel	1R1: 1.1μH 470: 47μH 101: 100μH

Standard Electrical Characteristics

PCS62B / 64B / 73 / 74 Type

Codes	L (μH)	Tolerance	RDC (Ω) max.				IDC (A) max.			
			62B	64B	73	74	62B	64B	73	74
1R0	1.0	M	-	-	0.016	0.020	-	-	7.970	8.000
1R5	1.5	M	-	-	0.023	0.018	-	-	5.500	7.000
2R2	2.2	M	-	-	0.027	0.028	-	-	4.500	6.000
2R9	2.9	M	0.070	-	-	-	1.940	-	-	-
3R3	3.3	M	0.075	-	0.031	0.032	1.800	-	4.000	4.800
3R9	3.9	M	-	-	0.041	0.035	-	-	3.800	4.400
4R0	4.0	M	0.080	-	-	-	1.630	-	-	-
4R7	4.7	M	0.090	-	0.048	0.038	1.55	-	3.500	4.000
5R5	5.5	M	0.100	-	-	-	1.400	-	-	-
5R6	5.6	M	-	-	0.056	0.040	-	-	3.000	3.500
6R8	6.8	M	-	-	0.062	0.045	-	-	2.000	3.000
100	10	M	0.150	0.120	0.072	0.049	1.100	1.350	1.680	1.840
120	12	M	0.200	0.130	0.098	0.058	1.000	1.220	1.520	1.710
150	15	M	0.230	0.180	0.130	0.081	0.900	1.110	1.330	1.470
180	18	M	0.270	0.240	0.140	0.091	0.800	1.020	1.200	1.310
220	22	M	0.340	0.270	0.190	0.110	0.740	0.910	1.070	1.230
270	27	M	0.380	0.300	0.210	0.150	0.660	0.820	0.960	1.120
330	33	M	0.450	0.330	0.240	0.170	0.590	0.740	0.910	0.960
390	39	M	0.490	0.370	0.320	0.230	0.540	0.690	0.770	0.910
470	47	M	0.690	0.520	0.360	0.260	0.500	0.620	0.760	0.880
560	56	M	0.780	0.560	0.470	0.350	0.460	0.580	0.680	0.750
680	68	M	1.070	0.630	0.520	0.380	0.420	0.510	0.610	0.690
820	82	M	1.210	0.710	0.690	0.430	0.380	0.460	0.570	0.610
101	100	M	1.390	1.030	0.790	0.610	0.340	0.420	0.500	0.600
121	120	M	1.900	1.150	0.890	0.660	0.310	0.380	0.490	0.520
151	150	M	2.180	1.680	1.270	0.880	0.280	0.350	0.430	0.460
181	180	M	2.770	1.870	1.450	0.980	0.260	0.320	0.390	0.420
221	220	M	3.120	2.080	1.650	1.170	0.230	0.290	0.350	0.360
271	270	M	4.380	2.370	2.310	1.640	0.220	0.260	0.320	0.340
331	330	M	4.940	2.670	2.620	1.860	0.190	0.230	0.280	0.320
391	390	M	-	2.940	2.940	2.850	-	0.220	0.260	0.290
471	470	M	-	3.930	4.180	3.010	-	0.200	0.240	0.260
561	560	M	-	5.430	4.670	3.620	-	0.180	0.220	0.230
681	680	M	-	7.320	5.730	4.630	-	0.170	0.190	0.220
821	820	M	-	8.240	6.540	5.200	-	0.150	0.180	0.200
102	1000	M	-	9.260	9.440	6.000	-	0.140	0.160	0.180

Measuring Freq:

PCS62B: 2.9~5.5μH @100KHz 0.25V; 10~330μH @1KHz 0.25V
 PCS64B: 10~1000μH @1KHz 0.25V
 PCS73: 1.0~1000μH @1KHz 0.25V
 PCS74: 1.0~1000μH @1KHz 0.25V

Standard Electrical Characteristics

PCS124 / 125 / 127 Type

Codes	L (μH)	Tolerance	DCR (Ω) max.			IDC (A) max.		
			124	125	127	124	125	127
1R2	1.2	M	-	-	0.007	-	-	9.80
1R3	1.3	M	-	0.012	-	-	8.00	-
1R5	1.5	M	0.008	-	-	8.75	-	-
2R1	2.1	M	-	0.014	-	-	7.00	-
2R2	2.2	M	-	0.014	0.010	-	7.00	8.50
2R4	2.4	M	-	-	0.012	-	-	8.00
2R5	2.5	M	0.013	-	-	8.00	-	-
2R7	2.7	M	-	-	0.012	-	-	8.00
3R1	3.1	M	-	0.017	-	-	6.00	-
3R3	3.3	M	0.015	0.014	0.013	6.50	6.75	7.80
3R5	3.5	M	-	-	0.014	-	-	7.50
3R9	3.9	M	0.015	-	-	6.50	-	-
4R4	4.4	M	-	0.020	-	-	5.00	-
4R7	4.7	M	0.018	0.018	0.016	5.70	6.20	6.80
5R6	5.6	M	-	-	0.014	-	-	6.70
5R8	5.8	M	-	0.021	-	-	4.40	-
6R1	6.1	M	-	-	0.018	-	-	6.60
6R8	6.8	M	0.023	0.023	0.014	4.90	5.90	6.40
7R5	7.5	M	-	0.024	-	-	4.20	-
7R6	7.6	M	-	-	0.020	-	-	5.90
8R2	8.2	M	0.026	-	-	4.60	-	-
100	10	M	0.028	0.025	0.022	4.50	4.00	5.40
120	12	M	0.038	0.027	0.024	4.00	3.50	4.90
150	15	M	0.050	0.030	0.027	3.20	3.30	4.50
180	18	M	0.057	0.034	0.039	3.10	3.00	3.90
220	22	M	0.066	0.036	0.043	2.90	2.80	3.60
270	27	M	0.080	0.051	0.046	2.80	2.30	3.40
330	33	M	0.097	0.057	0.065	2.70	2.10	3.00
390	39	M	0.132	0.068	0.073	2.10	2.00	2.75
470	47	M	0.150	0.075	0.100	1.90	1.80	2.50
560	56	M	0.190	0.110	0.110	1.80	1.70	2.35
680	68	M	0.220	0.120	0.140	1.50	1.50	2.10
820	82	M	0.260	0.140	0.160	1.30	1.40	1.95
101	100	M	0.308	0.160	0.220	1.20	1.30	1.70
121	120	M	0.380	0.170	0.250	1.10	1.10	1.60
151	150	M	0.530	0.230	0.280	0.95	1.00	1.42
181	180	M	0.620	0.290	0.350	0.85	0.90	1.30
221	220	M	0.700	0.400	0.390	0.80	0.80	1.16
271	270	M	0.876	0.460	0.560	0.60	0.75	1.06
331	330	M	0.990	0.510	0.640	0.50	0.68	0.95
391	390	M	-	0.690	0.700	-	0.65	0.88
471	470	M	-	0.770	0.980	-	0.58	0.79
561	560	M	-	0.860	1.070	-	0.54	0.73
681	680	M	-	1.200	1.460	-	0.48	0.67
821	820	M	-	1.340	1.640	-	0.43	0.60
102	1000	M	-	1.530	1.820	-	0.40	0.55

Measuring Freq:

PCS124: 1.5~330 μH @100KHz 0.25V

PCS125: 1.3~7.5 μH @100KHz 0.25V; 10~1000 μH @1KHz 0.25V

PCS127: 1.2~7.6 μH @100KHz 0.25V; 10~1000 μH @1KHz 0.25V

■ High Current Electrical Characteristics

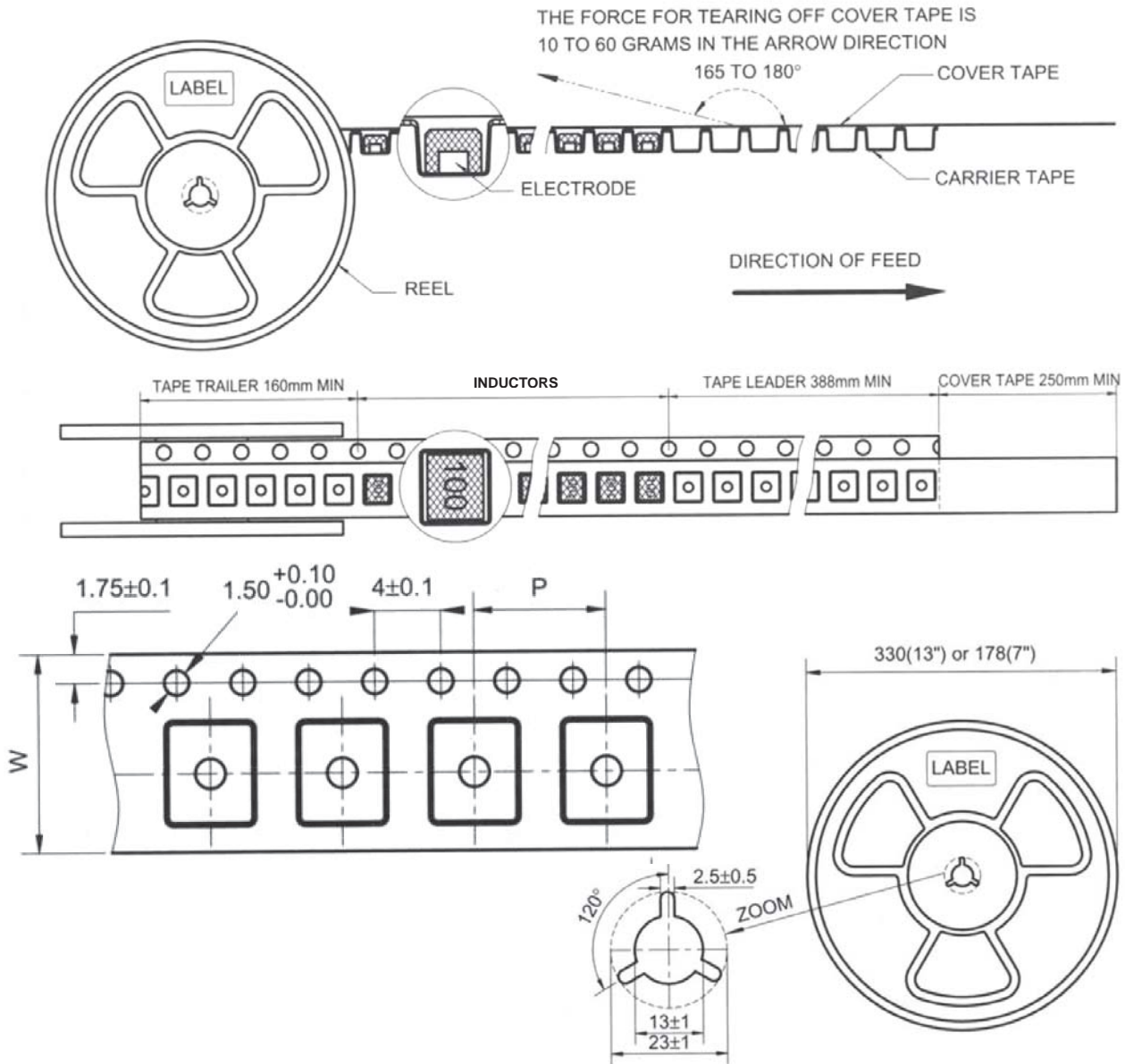
PCSH127 Type

Codes	L (uH)	Tolerance	DCR (Ω) Max	IDC (A) Max
4R7	4.7	M	0.016	15.9
6R8	6.8	M	0.021	13.3
8R2	8.2	M	0.023	12.2
100	10	M	0.024	11.2
150	15	M	0.031	9.00
220	22	M	0.040	7.57
330	33	M	0.070	6.22
470	47	M	0.080	5.28
680	68	M	0.105	4.26
820	82	M	0.143	3.80
101	100	M	0.163	3.52
151	150	M	0.247	3.01
221	220	M	0.376	2.36
331	330	M	0.574	2.00
471	470	M	0.861	1.64
681	680	M	1.080	1.38
821	820	M	1.470	1.26
102	1000	M	1.660	1.14

■ Measuring Freq:

PCSH127: 4.7~1000μH @100KHz 0.25V

■ Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
PCS62B	16	12	1500
PCS64B	16	12	1000
PCS73	16	12	1000
PCS74	16	12	1000
PCS124	24	16	500
PCS125	24	16	400
PCS127	24	16	400
PCSH127	24	16	500

■ SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: 25±3°C; Humidity: <80% relative humidity. Recommended product should be used within six months from the time of delivery.
Storage temperature range	Temperature range: -40°C to +85°C.

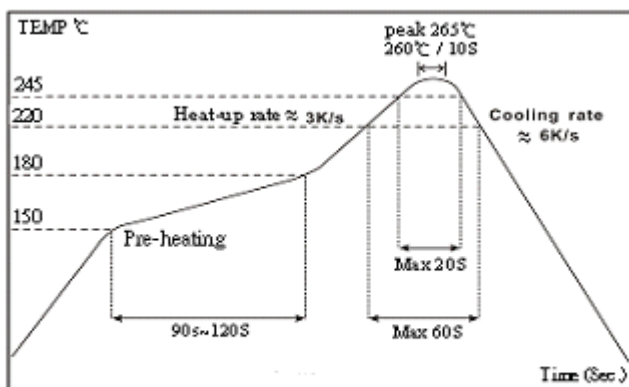
Environmental test

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

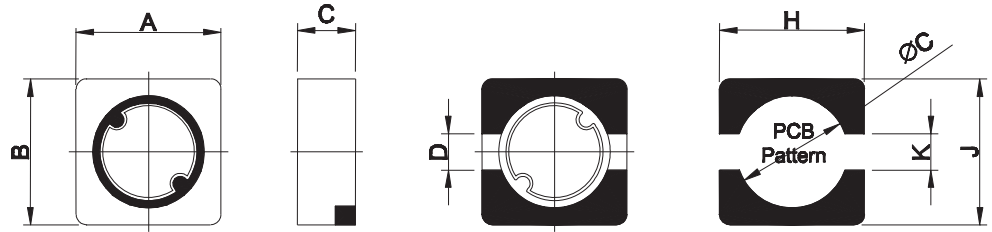
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solder ability test	Terminal area must have 90% minimum solder coverage.	Dip pads in flux then dip in solder pot (SnCuNi) at 245±5°C for 3 seconds.
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°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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)



Shielded SMD Power Inductor



Features

- Directly connected electrode on ferrite core
- Available in magnetically shielded
- Low DC resistance
- Suitable for large current
- Available on tape and reel for auto surface mounting

Applications

- Power Supply For VTRs
- OA Equipment.
- Notebook PCs
- Portable Communication Equipment
- DC/DC Converters, etc.

Characteristics

- Rated Current:
4010/4020/5010/5020/5030/6915/6919/7040: The DC current when the inductance becomes 30% lower than its initial value.
- 4030/1015/1040/1062: The DC current when the inductance becomes 35% lower than its initial value. (Ta=25°C)
- Operating temperature range: -40~+105°C

Dimensions

Unit: mm

Type	A	B	C max.	D	H	J	K	ΦC
PCF4010	3.8±0.3	3.8±0.3	1.25	1.2	4.4	4.4	1.1	3.0
PCF4020	3.8±0.3	3.8±0.3	2.00	1.2	4.4	4.4	1.1	3.0
PCF4030	3.8±0.3	3.8±0.3	3.00	1.2	4.4	4.4	1.1	3.0
PCF5010	5.0±0.3	5.0±0.3	1.20	2.0	5.9	5.9	1.9	4.2
PCF5020	5.0±0.3	5.0±0.3	2.00	2.0	5.9	5.9	1.9	4.2
PCF5030	5.0±0.3	5.0±0.3	3.00	2.0	5.9	5.9	1.9	4.2
PCF6915	6.9±0.3	6.9±0.3	1.50	2.5	7.3	7.3	2.0	5.3
PCF6919	6.9±0.3	6.9±0.3	1.90	2.5	7.3	7.3	2.0	5.3
PCF7040	7.0±0.4	7.0±0.4	4.30	1.8	8.0	8.0	1.6	6.0
PCF1015	10.0±0.3	10.0±0.3	1.50	2.5	10.6	10.6	2.3	8.0
PCF1040	10.0±0.3	10.0±0.3	4.00	2.5	10.6	10.6	2.3	8.0
PCF1062	10.0±0.3	10.0±0.3	6.70	2.5	10.6	10.6	2.3	8.0

Inductance and rated current ranges

- PCF4010 1.0~180μH 1.60~0.110A
- PCF4020 0.47~1800μH 1.84~0.036A
- PCF4030 1.5~560μH 1.90~0.090A
- PCF5010 1.2~1000μH 1.77~0.067A
- PCF5020 1.0~820μH 2.70~0.120A
- PCF5030 1.0~2500μH 4.00~0.045A
- PCF6915 1.0~820μH 3.28~0.100A
- PCF6919 1.0~1500μH 3.52~0.095A
- PCF7040 0.36~1000μH 9.24~0.180A
- PCF1015 1.0~2200μH 4.10~0.100A
- PCF1040 0.56~1000μH 12.6~0.280A
- PCF1062 0.56~470μH 10.18~0.340A

- Test equipment:
L: HP4284A LCR meter
DCR: Milli-ohm meter
- Electrical specifications at 25°C

Product Identification

PCF	4010	M	T	101
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	4010: 3.8×3.8×1.25 4020: 3.8×3.8×2.0 4030: 3.8×3.8×3.0 5010: 5.0×5.0×1.2 5020: 5.0×5.0×2.0 5030: 5.0×5.0×3.0 6915: 6.9×6.9×1.5 6919: 6.9×6.9×1.9 7040: 7.0×7.0×4.3 1015: 10×10×1.5 1040: 10×10×4.0 1062: 10×10×6.7	M: ±20% N: ±30%	T: Tape and Reel	1R1: 1.1μH 470: 47μH 101: 100μH

Electrical Characteristics

PCF4010 / 4020 / 4030 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.			IDC (A) max.		
				4010	4020	4030	4010	4020	4030
R47	0.47	N	100KHz, 0.25V	-	0.017	-	-	1.840	-
1R0	1.0	M, N	100KHz, 0.25V	0.060	0.030	-	1.600	1.800	-
1R2	1.2	M, N	100KHz, 0.25V	0.065	0.043	-	1.400	1.700	-
1R5	1.5	M, N	100KHz, 0.25V	0.077	0.052	0.015	1.240	1.600	1.900
1R8	1.8	M, N	100KHz, 0.25V	0.093	-	0.018	1.220	-	1.760
2R2	2.2	M, N	100KHz, 0.25V	0.125	0.058	0.020	1.200	1.500	1.670
2R4	2.4	M, N	100KHz, 0.25V	0.139	-	0.022	0.980	-	1.650
2R5	2.5	M, N	100KHz, 0.25V	-	0.059	-	-	1.400	-
2R7	2.7	M, N	100KHz, 0.25V	-	0.059	0.028	-	1.400	1.450
3R3	3.3	M, N	100KHz, 0.25V	0.187	0.064	0.032	0.890	1.300	1.440
3R5	3.5	M, N	100KHz, 0.25V	0.210	0.127	-	0.850	1.300	-
3R6	3.6	M, N	100KHz, 0.25V	-	-	0.035	-	-	1.430
3R9	3.9	M, N	100KHz, 0.25V	0.220	0.135	0.037	0.780	1.120	1.320
4R3	4.3	M, N	100KHz, 0.25V	-	-	0.043	-	-	1.000
4R7	4.7	M, N	100KHz, 0.25V	0.240	0.146	0.045	0.710	1.100	0.970
5R1	5.1	M, N	100KHz, 0.25V	-	-	0.046	-	-	0.940
5R6	5.6	M, N	100KHz, 0.25V	0.320	0.176	-	0.620	0.950	-
6R2	6.2	M, N	100KHz, 0.25V	-	0.220	-	-	0.910	-
6R8	6.8	M, N	100KHz, 0.25V	0.350	0.238	0.065	0.570	0.900	0.870
7R5	7.5	M, N	100KHz, 0.25V	-	-	0.079	-	-	0.820
8R2	8.2	M, N	100KHz, 0.25V	0.470	0.272	0.071	0.520	0.800	0.770
100	10	M	1KHz, 0.25V	0.570	0.299	0.105	0.470	0.700	0.700
120	12	M	1KHz, 0.25V	0.750	-	0.119	0.430	-	0.670
150	15	M	1KHz, 0.25V	0.810	0.472	0.140	0.380	0.610	0.540
180	18	M	1KHz, 0.25V	1.060	-	0.175	0.350	-	0.500
220	22	M	1KHz, 0.25V	1.150	0.592	0.201	0.320	0.520	0.480
270	27	M	1KHz, 0.25V	1.670	0.630	0.227	0.290	0.440	0.400
330	33	M	1KHz, 0.25V	1.840	1.075	0.287	0.280	0.430	0.350
390	39	M	1KHz, 0.25V	2.310	-	0.341	0.250	-	0.330
470	47	M	1KHz, 0.25V	2.630	1.309	0.430	0.220	0.340	0.320
560	56	M	1KHz, 0.25V	2.860	-	0.471	0.200	-	0.300
680	68	M	1KHz, 0.25V	3.940	2.613	0.532	0.180	0.250	0.270
820	82	M	1KHz, 0.25V	4.900	2.950	0.675	0.160	0.200	0.230
101	100	M	1KHz, 0.25V	5.740	3.255	0.850	0.140	0.190	0.210
121	120	M	1KHz, 0.25V	7.310	-	1.110	0.130	-	0.200
151	150	M	1KHz, 0.25V	9.080	3.550	1.230	0.120	0.120	0.170
181	180	M	1KHz, 0.25V	9.500	-	1.560	0.110	-	0.150
221	220	M	1KHz, 0.25V	-	4.900	1.800	-	0.090	0.140
271	270	M	1KHz, 0.25V	-	-	2.200	-	-	0.130
331	330	M	1KHz, 0.25V	-	7.280	2.640	-	0.080	0.120
391	390	M	1KHz, 0.25V	-	-	3.200	-	-	0.100
471	470	M	1KHz, 0.25V	-	-	3.820	-	-	0.100
561	560	M	1KHz, 0.25V	-	-	4.620	-	-	0.090
681	680	M	1KHz, 0.25V	-	13.370	-	-	0.070	-
102	1000	M	1KHz, 0.25V	-	19.550	-	-	0.065	-
152	1500	M	1KHz, 0.25V	-	36.150	-	-	0.038	-
182	1800	M	1KHz, 0.25V	-	57.620	-	-	0.036	-

Electrical Characteristics

PCF5010 / 5020 / 5030 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.			IDC (A) max.		
				5010	5020	5030	5010	5020	5030
1R0	1.0	M, N	100KHz, 0.25V	-	0.030	0.015	-	2.700	4.000
1R1	1.1	M, N	100KHz, 0.25V	-	-	0.020	-	-	3.870
1R2	1.2	M, N	100KHz, 0.25V	0.050	0.044	0.022	1.770	2.150	3.800
1R5	1.5	M, N	100KHz, 0.25V	0.069	-	-	1.710	-	-
2R0	2.0	M, N	100KHz, 0.25V	0.100	0.046	0.027	1.440	1.900	2.920
2R2	2.2	M, N	100KHz, 0.25V	0.110	0.059	0.029	1.400	1.630	2.410
3R3	3.3	M, N	100KHz, 0.25V	0.140	0.062	0.034	1.140	1.500	2.360
3R5	3.5	M, N	100KHz, 0.25V	0.150	0.073	-	1.100	1.340	-
4R1	4.1	M, N	100KHz, 0.25V	-	0.081	-	-	1.200	-
4R7	4.7	M, N	100KHz, 0.25V	0.190	0.087	0.045	0.950	1.140	1.870
5R6	5.6	M, N	100KHz, 0.25V	0.193	0.093	0.052	0.900	1.000	1.600
6R2	6.2	M, N	100KHz, 0.25V	0.200	-	-	0.840	-	-
6R8	6.8	M, N	100KHz, 0.25V	0.200	0.105	0.068	0.800	0.950	1.510
8R2	8.2	M, N	100KHz, 0.25V	0.300	0.139	0.084	0.750	0.900	1.380
100	10	M	1KHz, 0.25V	0.350	0.150	0.090	0.660	0.760	1.330
120	12	M	1KHz, 0.25V	0.430	0.170	-	0.620	0.660	-
150	15	M	1KHz, 0.25V	0.440	0.210	0.142	0.590	0.630	1.050
180	18	M	1KHz, 0.25V	0.750	-	-	0.570	-	-
220	22	M	1KHz, 0.25V	0.820	0.275	0.208	0.560	0.560	0.860
270	27	M	1KHz, 0.25V	-	-	0.222	-	-	0.750
330	33	M	1KHz, 0.25V	1.160	0.455	0.257	0.430	0.440	0.720
390	39	M	1KHz, 0.25V	-	0.540	-	-	0.380	-
470	47	M	1KHz, 0.25V	1.590	0.730	0.352	0.340	0.350	0.620
560	56	M	1KHz, 0.25V	-	0.800	-	-	0.320	-
680	68	M	1KHz, 0.25V	2.140	0.935	0.525	0.290	0.300	0.510
820	82	M	1KHz, 0.25V	2.720	-	-	0.250	-	-
101	100	M	1KHz, 0.25V	3.550	1.500	0.801	0.220	0.230	0.430
121	120	M	1KHz, 0.25V	4.890	1.910	0.850	0.200	0.220	0.340
151	150	M	1KHz, 0.25V	5.200	2.680	1.100	0.190	0.210	0.260
181	180	M	1KHz, 0.25V	7.550	3.045	1.190	0.170	0.200	0.240
221	220	M	1KHz, 0.25V	7.760	3.520	1.530	0.150	0.195	0.200
271	270	M	1KHz, 0.25V	10.13	4.380	-	0.145	0.193	-
331	330	M	1KHz, 0.25V	11.23	5.560	2.030	0.140	0.190	0.190
391	390	M	1KHz, 0.25V	-	-	3.000	-	-	0.160
471	470	M	1KHz, 0.25V	16.86	7.820	3.500	0.098	0.180	0.150
561	560	M	1KHz, 0.25V	22.78	9.790	4.450	0.097	0.170	0.140
681	680	M	1KHz, 0.25V	24.87	-	-	0.085	-	-
821	820	M	1KHz, 0.25V	28.09	15.00	-	0.077	0.120	-
102	1000	M	1KHz, 0.25V	45.07	-	-	0.067	-	-
122	1200	M	1KHz, 0.25V	-	-	8.500	-	-	0.070
152	1500	M	1KHz, 0.25V	-	-	10.00	-	-	0.065
182	1800	M	1KHz, 0.25V	-	-	13.15	-	-	0.062
222	2200	M	1KHz, 0.25V	-	-	19.00	-	-	0.050
252	2500	M	1KHz, 0.25V	-	-	20.00	-	-	0.045

Electrical Characteristics

PCF6915 / 6919 / 7040 Type

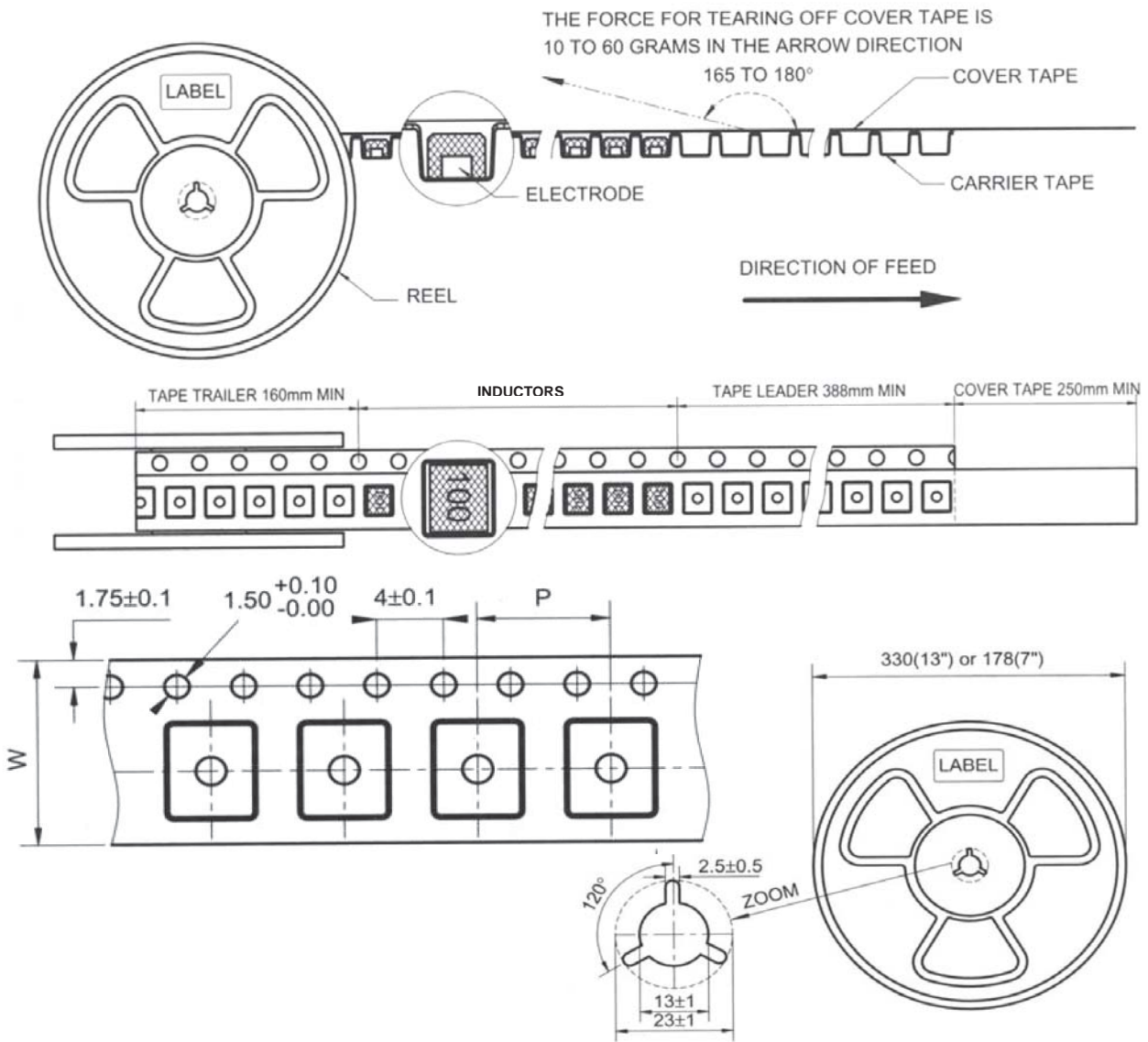
Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.			IDC (A) max.		
				6915	6919	7040	6915	6919	7040
R36	0.36	N	100KHz, 0.25V	-	-	0.005	-	-	9.24
R56	0.56	N	100KHz, 0.25V	-	-	0.006	-	-	8.50
R80	0.80	N	100KHz, 0.25V	-	-	0.009	-	-	5.80
1R0	1.0	M, N	100KHz, 0.25V	0.050	0.035	0.040	3.28	3.52	2.10
1R2	1.2	M, N	100KHz, 0.25V	-	-	0.040	-	-	2.10
1R5	1.5	M, N	100KHz, 0.25V	0.067	-	0.040	2.53	-	2.10
1R8	1.8	M, N	100KHz, 0.25V	-	0.052	0.040	-	3.05	2.09
2R0	2.0	M, N	100KHz, 0.25V	0.085	-	-	2.06	-	-
2R2	2.2	M, N	100KHz, 0.25V	-	0.071	0.0410	-	2.50	2.08
2R5	2.5	M, N	100KHz, 0.25V	-	-	0.0410	-	-	2.08
2R7	2.7	M, N	100KHz, 0.25V	0.110	-	-	1.87	-	-
3R0	3.0	M, N	100KHz, 0.25V	-	0.086	-	-	2.15	-
3R3	3.3	M, N	100KHz, 0.25V	0.130	-	0.0410	1.58	-	2.07
3R9	3.9	M, N	100KHz, 0.25V	0.160	0.110	-	1.46	2.01	-
4R3	4.3	M, N	100KHz, 0.25V	-	-	0.041	-	-	2.06
4R7	4.7	M, N	100KHz, 0.25V	0.200	0.130	0.042	1.30	1.95	2.05
5R6	5.6	M, N	100KHz, 0.25V	0.230	0.150	0.043	1.22	1.82	2.04
6R8	6.8	M, N	100KHz, 0.25V	0.280	0.170	0.044	1.16	1.67	2.04
8R2	8.2	M, N	100KHz, 0.25V	0.310	0.190	-	1.13	1.52	-
100	10	M	1KHz, 0.25V	0.330	0.240	0.049	1.03	1.39	2.00
120	12	M	1KHz, 0.25V	0.460	0.290	0.058	0.87	1.22	1.90
150	15	M	1KHz, 0.25V	0.530	0.380	0.081	0.80	1.09	1.60
180	18	M	1KHz, 0.25V	0.620	0.440	0.091	0.73	1.03	1.48
220	22	M	1KHz, 0.25V	0.700	0.490	0.110	0.71	0.95	1.32
270	27	M	1KHz, 0.25V	0.910	0.640	0.150	0.65	0.84	1.26
330	33	M	1KHz, 0.25V	1.150	0.740	0.170	0.57	0.80	1.10
390	39	M	1KHz, 0.25V	1.380	0.910	0.230	0.50	0.75	1.05
470	47	M	1KHz, 0.25V	1.540	1.020	0.260	0.48	0.69	1.00
560	56	M	1KHz, 0.25V	1.860	1.260	0.350	0.45	0.63	0.85
680	68	M	1KHz, 0.25V	2.320	1.570	0.380	0.41	0.56	0.78
820	82	M	1KHz, 0.25V	2.540	1.890	0.430	0.37	0.51	0.74
101	100	M	1KHz, 0.25V	3.200	2.120	0.610	0.32	0.47	0.70
121	120	M	1KHz, 0.25V	4.240	2.550	0.660	0.29	0.42	0.60
151	150	M	1KHz, 0.25V	4.770	3.370	0.880	0.27	0.37	0.52
181	180	M	1KHz, 0.25V	6.040	3.730	0.980	0.24	0.32	0.46
221	220	M	1KHz, 0.25V	7.950	4.540	1.170	0.22	0.29	0.40
271	270	M	1KHz, 0.25V	10.51	5.970	1.640	0.19	0.25	0.36
331	330	M	1KHz, 0.25V	11.63	7.740	1.860	0.18	0.23	0.32
391	390	M	1KHz, 0.25V	12.97	9.920	2.850	0.16	0.21	0.28
471	470	M	1KHz, 0.25V	16.87	12.95	3.010	0.15	0.18	0.26
561	560	M	1KHz, 0.25V	22.30	14.36	3.620	0.13	0.16	0.24
681	680	M	1KHz, 0.25V	25.11	18.52	4.630	0.12	0.14	0.22
821	820	M	1KHz, 0.25V	28.41	20.23	5.200	0.10	0.13	0.20
102	1000	M	1KHz, 0.25V	-	28.25	6.000	-	0.11	0.18
122	1200	M	1KHz, 0.25V	-	31.85	-	-	0.10	-
152	1500	M	1KHz, 0.25V	-	36.72	-	-	0.095	-

Electrical Characteristics

PCF1015 / 1040 / 1062 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.			IDC (A) max.		
				1015	1040	1062	1015	1040	1062
R56	0.56	N	100KHz, 0.25V	-	0.006	0.006	-	12.60	10.18
R80	0.80	N	100KHz, 0.25V	-	0.006	-	-	12.00	-
1R0	1.0	M, N	100KHz, 0.25V	0.038	0.008	0.007	4.10	10.30	9.52
1R5	1.5	M, N	100KHz, 0.25V	0.042	0.0081	0.008	4.00	10.00	9.50
1R6	1.6	M, N	100KHz, 0.25V	-	-	0.008	-	-	9.50
1R8	1.8	M, N	100KHz, 0.25V	0.047	-	0.008	3.50	-	6.30
2R2	2.2	M, N	100KHz, 0.25V	-	0.010	0.009	-	8.00	5.82
2R4	2.4	M, N	100KHz, 0.25V	-	-	0.009	-	-	5.71
2R5	2.5	M, N	100KHz, 0.25V	-	0.011	-	-	7.50	-
2R7	2.7	M, N	100KHz, 0.25V	0.059	0.012	-	3.40	7.00	-
3R3	3.3	M, N	100KHz, 0.25V	0.063	0.012	0.010	3.00	6.60	5.18
3R8	3.8	M, N	100KHz, 0.25V	-	0.013	0.010	-	6.00	5.09
4R3	4.3	M, N	100KHz, 0.25V	-	-	0.011	-	-	5.08
4R7	4.7	M, N	100KHz, 0.25V	0.086	0.022	0.015	2.60	5.70	5.00
5R2	5.2	M, N	100KHz, 0.25V	-	0.022	0.016	-	5.50	3.25
5R6	5.6	M, N	100KHz, 0.25V	0.098	0.024	0.016	2.20	5.15	3.20
6R8	6.8	M, N	100KHz, 0.25V	0.110	0.026	0.017	2.10	4.90	2.80
7R0	7.0	M, N	100KHz, 0.25V	-	0.027	-	-	4.80	-
8R2	8.2	M, N	100KHz, 0.25V	0.130	0.032	-	1.90	4.45	-
100	10	M	1KHz, 0.25V	0.160	0.035	0.028	1.80	4.40	2.15
120	12	M	1KHz, 0.25V	0.190	0.040	-	1.48	3.65	-
150	15	M	1KHz, 0.25V	0.250	0.050	-	1.25	3.60	-
180	18	M	1KHz, 0.25V	0.290	0.060	-	1.22	2.95	-
220	22	M	1KHz, 0.25V	0.300	0.073	-	1.20	2.90	-
250	25	M	1KHz, 0.25V	-	0.080	-	-	2.60	-
270	27	M	1KHz, 0.25V	0.400	-	-	0.93	-	-
330	33	M	1KHz, 0.25V	0.460	0.093	-	0.89	2.30	-
390	39	M	1KHz, 0.25V	0.570	-	0.050	0.81	-	1.30
470	47	M	1KHz, 0.25V	0.630	0.128	0.073	0.80	2.10	1.20
560	56	M	1KHz, 0.25V	0.780	-	-	0.72	-	-
680	68	M	1KHz, 0.25V	0.990	0.213	-	0.64	1.50	-
820	82	M	1KHz, 0.25V	1.170	-	-	0.61	-	-
101	100	M	1KHz, 0.25V	1.30	0.304	0.130	0.60	1.35	0.77
121	120	M	1KHz, 0.25V	1.63	0.340	0.175	0.51	1.18	0.73
151	150	M	1KHz, 0.25V	2.02	0.506	0.185	0.43	1.15	0.69
181	180	M	1KHz, 0.25V	2.29	0.530	-	0.41	0.98	-
221	220	M	1KHz, 0.25V	2.96	0.756	-	0.36	0.92	-
271	270	M	1KHz, 0.25V	3.57	0.782	-	0.33	0.72	-
331	330	M	1KHz, 0.25V	4.50	1.090	-	0.30	0.70	-
391	390	M	1KHz, 0.25V	-	1.102	-	-	0.55	-
471	470	M	1KHz, 0.25V	6.16	1.292	0.520	0.25	0.45	0.34
561	560	M	1KHz, 0.25V	7.63	1.572	-	0.24	0.40	-
681	680	M	1KHz, 0.25V	9.06	1.882	-	0.21	0.35	-
821	820	M	1KHz, 0.25V	11.3	2.382	-	0.19	0.32	-
102	1000	M	1KHz, 0.25V	12.8	2.692	-	0.17	0.28	-
122	1200	M	1KHz, 0.25V	16.5	-	-	0.16	-	-
152	1500	M	1KHz, 0.25V	21.3	-	-	0.14	-	-
182	1800	M	1KHz, 0.25V	27.8	-	-	0.12	-	-
222	2200	M	1KHz, 0.25V	32.0	-	-	0.10	-	-

■ Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
PCF4010	12	8	3500
PCF4020	12	8	3500
PCF4030	12	8	2500
PCF5010	12	8	4000
PCF5020	12	8	3500
PCF5030	12	8	2000
PCF6915	16	12	2000
PCF6919	16	12	2000
PCF7040	16	12	1000
PCF1015	16	12	2000
PCF1040	24	16	900
PCF1062	24	16	500

SMT Power Inductor Environmental Specifications

General

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

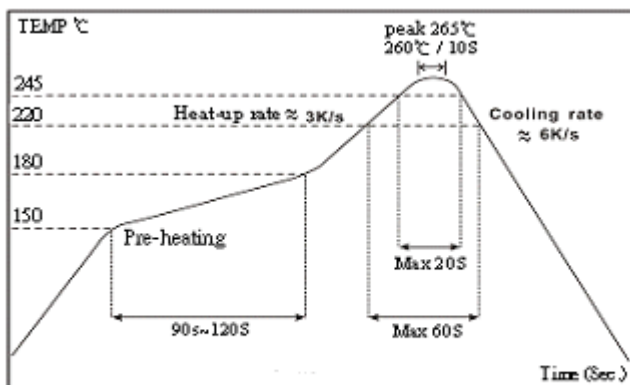
Environmental test

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

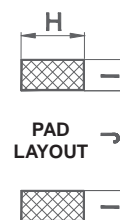
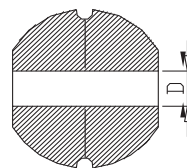
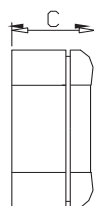
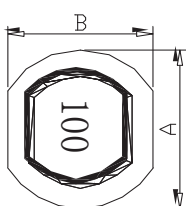
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
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°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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):



SMD Power Inductor



Dimensions

Unit:

mm

Type	A	B	C	D	H	I	J
PCDS63B	6.2±0.30	5.6±0.30	3.2±0.30	1.70	5.50	2.25	1.70
PCDS74B	7.8±0.50	7.0±0.50	4.5±0.50	1.90	7.50	4.00	2.00
PCDS105B	10.0±0.50	9.0±0.50	5.0±0.50	2.50	9.50	5.00	2.50
PCDS125B	12.6±0.50	11.6±0.50	5.4±0.50	3.00	12.00	6.00	3.00

Features

- Silver Plated Type, Low cost design
- High power, High saturation inductors
- Ideal inductors for DC/DC converters
- With magnetically shielded against radiation
- Available on tape and reel for automatic surface mounting

Inductance and rated current ranges

– PCDS63B	10~68μH	1.00~0.42A
– PCDS74B	4.7~820μH	3.15~0.16A
– PCDS105B	4.7~470μH	2.50~0.33A
– PCDS125B	10~820μH	2.65~0.36A

- Test equipment:
L: HP4284A LCR meter
DCR: Milli-ohm meter
- Electrical specifications at 25°C

Applications

- Power Supply for VTRs
- LCD Televisions
- Notebook PCs
- Portable Communication
- DC/DC Converters, etc.

Characteristics

- Rated DC current: The current when the inductance becomes 25% lower than its initial value or the actual current when the temperature of coil increases to Δ 40°C. The smaller one is defined as Rated DC Current. (Ta=25°C)
- Operating temperature range: -40~85°C

Product Identification

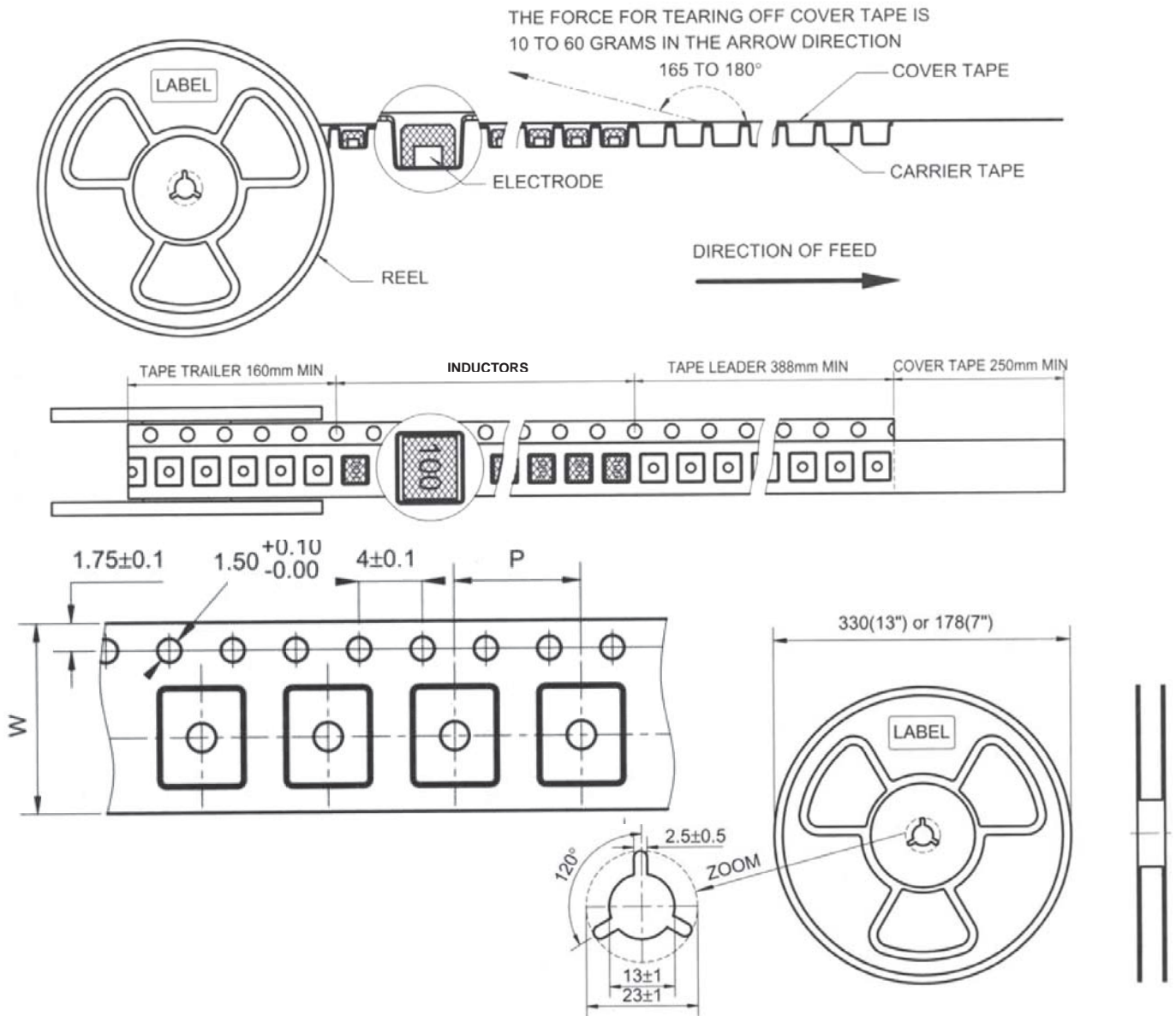
PCDS	63B	M	T	470
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	63B: 6.2×5.6×3.2 74B: 7.8×7.0×4.5 105B: 10.0×9.0×5.0 125B: 12.6×11.6×5.4	M: ±20% N: ±30%	T: Tape and Reel	4R7: 4.7μH 470: 47μH 101: 100μH

Electrical Characteristics

PCDS63B / 74B / 105B / 125B Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.				IDC (A) max.			
				63B	74B	105B	125B	63B	74B	105B	125B
4R7	4.7	N	100KHz, 0.25V	-	0.03	0.013	-	-	3.15	2.50	-
100	10	M	100KHz, 0.25V	0.14	0.07	0.06	0.05	1.00	1.65	2.06	2.65
120	12	M	100KHz, 0.25V	0.16	0.07	0.07	0.05	0.94	1.57	1.94	2.50
150	15	M	100KHz, 0.25V	0.18	0.08	0.07	0.06	0.86	1.39	1.72	2.45
180	18	M	100KHz, 0.25V	0.25	0.10	0.08	0.06	0.78	1.29	1.58	2.40
220	22	M	100KHz, 0.25V	0.32	0.13	0.08	0.07	0.76	1.12	1.42	2.20
270	27	M	100KHz, 0.25V	0.36	0.16	0.10	0.08	0.64	1.06	1.32	2.00
330	33	M	100KHz, 0.25V	0.41	0.18	0.11	0.10	0.61	0.97	1.16	1.80
390	39	M	100KHz, 0.25V	0.47	0.18	0.12	0.11	0.53	0.91	1.10	1.65
470	47	M	100KHz, 0.25V	0.51	0.27	0.14	0.12	0.50	0.80	1.00	1.50
560	56	M	100KHz, 0.25V	0.72	0.29	0.19	0.15	0.46	0.76	0.93	1.38
680	68	M	100KHz, 0.25V	0.82	0.33	0.21	0.17	0.42	0.68	0.85	1.26
820	82	M	100KHz, 0.25V	-	0.43	0.28	0.20	-	0.62	0.79	1.14
101	100	M	1KHz, 0.25V	-	0.49	0.34	0.25	-	0.55	0.72	1.05
121	120	M	1KHz, 0.25V	-	0.68	0.37	0.28	-	0.49	0.63	0.95
151	150	M	1KHz, 0.25V	-	0.94	0.51	0.40	-	0.44	0.55	0.85
181	180	M	1KHz, 0.25V	-	1.00	0.57	0.48	-	0.40	0.50	0.77
221	220	M	1KHz, 0.25V	-	1.18	0.78	0.52	-	0.36	0.47	0.70
271	270	M	1KHz, 0.25V	-	1.30	0.87	0.70	-	0.33	0.41	0.63
331	330	M	1KHz, 0.25V	-	1.35	1.20	0.80	-	0.26	0.37	0.57
391	390	M	1KHz, 0.25V	-	1.44	1.34	1.08	-	0.24	0.35	0.52
471	470	M	1KHz, 0.25V	-	1.65	1.50	1.20	-	0.22	0.33	0.48
561	560	M	1KHz, 0.25V	-	2.34	-	1.34	-	0.20	-	0.44
681	680	M	1KHz, 0.25V	-	2.60	-	1.78	-	0.18	-	0.40
821	820	M	1KHz, 0.25V	-	3.00	-	2.00	-	0.16	-	0.36

■ Tape and Reel specifications



Unit:mm

Type	Tape size		Parts Per Reel
	W	P	13"
PCDS63B	12	8	1500
PCDS74B	16	12	1000
PCDS105B	24	12	750
PCDS125B	24	16	500

SMD Power Inductor Environmental Specifications

General

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

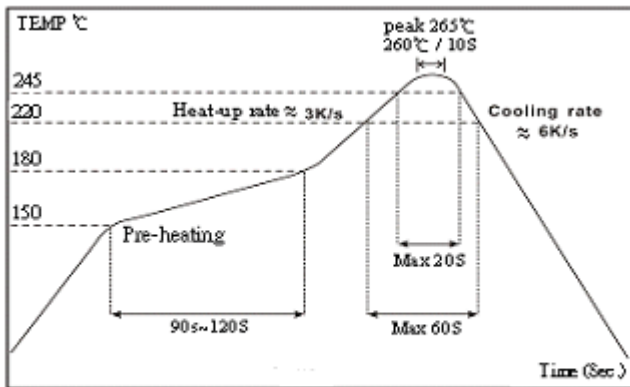
Environmental test

Test Items	Specifications	Test Conditions / Test Methods
High temperature Storage test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Temperature 85±2°C, Time: 48±2 hours, Tested after 1 hour at room temperature.
Low temperature Storage test		Temperature -40±2°C, Time: 48±2 hours, Tested after 1 hour at room temperature.
Humidity test		Temperature 40±2°C, 90~95% relative humidity Time: 96±2 hours Tested after 1 hour at room temperature.
Thermal shock test		First -25°C 30minutes then 25°C 10 minutes last 85°C 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 solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
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°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	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.

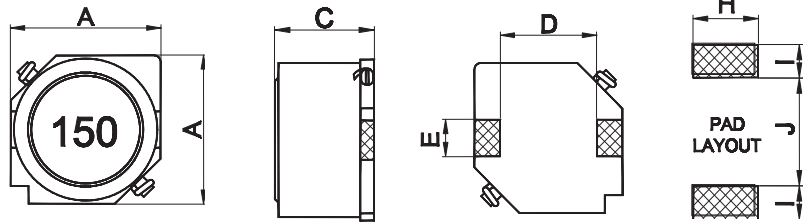
The condition of reflow (recommendation):



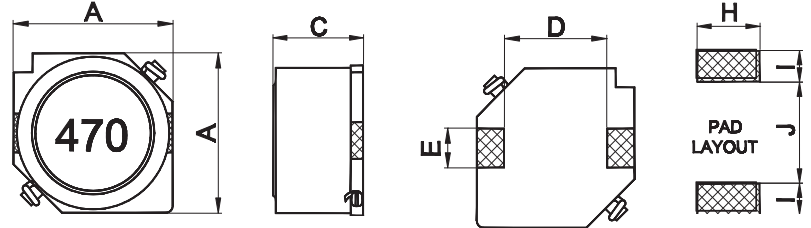
Shielded SMD Power Inductor



PCDR 0728 / 0730 / 0732 / 0745 / 1045



PCDR 0628 / 1255 / 1265 / 1275



Features

- Compact, low profile with low DCR and large current
- With magnetically shielded against radiation
- Flat bottom surface allows reliable mounting onto the board
- Available on tape and reel for auto surface mounting

Applications

- Portable Telephones
- Personal Computers
- DC/DC Converters, etc.
- Other Various Electronic Appliances

Characteristics

- Saturation Rated Current (I sat): The current when the inductance becomes 30% lower than its nominal value. (Ta=25°C)
- Temperature Rated Current (I rms): The actual current when the temperature of coil becomes to Δ 40°C. (Ta=25°C)
- Operating temperature range: -40~105°C

Product Identification

Dimensions

Unit:mm

Type	A	C	D	E	H	I	J
PCDR0628	6.0±0.20	2.8±0.20	4.00	2.00	2.20	1.50	4.00
PCDR0728	7.0±0.20	2.8±0.20	4.00	2.00	2.20	1.50	4.00
PCDR0730	7.0±0.20	3.0±0.20	4.00	2.00	2.20	1.50	4.00
PCDR0732	7.0±0.20	3.2±0.20	4.00	2.00	2.20	1.50	4.00
PCDR0745	7.0±0.20	4.5±0.30	4.00	2.00	2.20	1.50	4.00
PCDR1045	10.1±0.30	4.5±0.30	6.00	3.00	3.20	2.50	5.60
PCDR1255	12.5±0.30	5.5±0.35	8.60	3.00	3.20	2.50	8.60
PCDR1265	12.5±0.30	6.5±0.35	8.60	3.00	3.20	2.50	8.60
PCDR1275	12.5±0.30	7.5±0.35	8.60	3.00	3.20	2.50	8.60

Inductance and rated current ranges

- PCDR0628 4.7~100μH 1.6~0.42A
- PCDR0728 3.3~56μH 1.6~0.5A
- PCDR0730 3.3~100μH 1.8~0.35A
- PCDR0732 1.0~1000μH 2.2~0.13A
- PCDR0745 1.0~1000μH 4.0~0.14A
- PCDR1045 1.0~1500μH 7.8~0.22A
- PCDR1255 6.0~1500μH 3.6~0.29A
- PCDR1265 2.0~150μH 10~1.00A
- PCDR1275 1.2~220μH 13~1.30A

- Test equipment:
L: HP4284A LCR meter
DCR: Milli-ohm meter
- Electrical specifications at 25°C

PCDR	0628	M	T	101
Product Type	Dimensions (AxC)	Inductor Tolerance	Packaging Style	Inductance
	0628: 6.0×2.8 0728: 7.0×2.8 0730: 7.0×3.0 0732: 7.0×3.2 0745: 7.0×4.5 1045: 10.1×4.5 1255: 12.5×5.5 1265: 12.5×6.5 1275: 12.5×7.5	M: ±20% N: ±30%	T: Tape and Reel	1R0: 1.0μH 470: 47μH 101: 100μH

Electrical Characteristics

PCDR0628 / 0728 / 0730 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) \pm 20%			IDC (A) max.					
				0628	0728	0730	I sat			I rms		
							0628	0728	0730	0628	0728	0730
3R3	3.3	M	1KHz, 0.5V	-	0.037	0.023	-	1.60	1.80	-	1.60	1.80
4R7	4.7	M	1KHz, 0.5V	0.036	0.045	0.036	1.60	1.50	1.60	2.50	1.50	1.60
6R8	6.8	M	1KHz, 0.5V	0.052	0.059	0.041	1.50	1.30	1.50	2.20	1.30	1.50
100	10	M	1KHz, 0.5V	0.068	0.083	0.053	1.30	1.10	1.30	1.80	1.10	1.30
150	15	M	1KHz, 0.5V	0.100	0.130	0.084	1.00	0.88	1.00	1.40	0.88	1.00
220	22	M	1KHz, 0.5V	0.120	0.180	0.110	0.77	0.75	0.86	1.30	0.75	0.86
330	33	M	1KHz, 0.5V	0.180	0.240	0.160	0.69	0.65	0.65	1.10	0.65	0.65
470	47	M	1KHz, 0.5V	0.270	0.340	0.240	0.59	0.54	0.57	0.92	0.54	0.57
560	56	M	1KHz, 0.5V	0.330	0.420	0.280	0.51	0.50	0.53	0.85	0.45	0.60
680	68	M	1KHz, 0.5V	0.390	-	0.310	0.50	-	0.49	0.78	-	0.49
101	100	M	1KHz, 0.5V	0.620	-	0.450	0.42	-	0.35	0.64	-	0.35

Electrical Characteristics

PCDR0732 / 0745 / 1045 Type

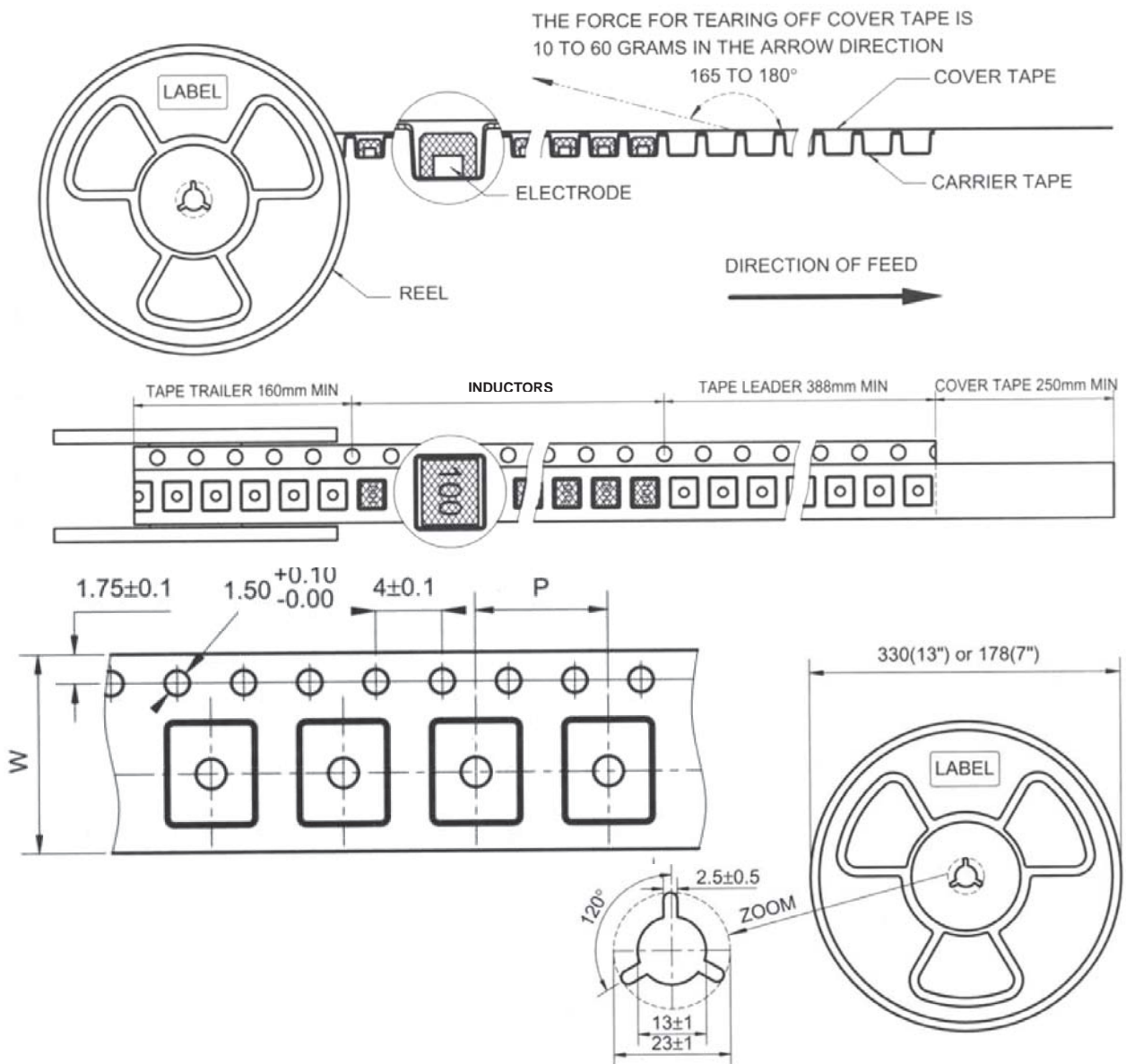
Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) \pm 20%			IDC (A) max.		
				0732	0745	1045	0732	0745	1045
1R0	1.0	M	1KHz, 0.5V	0.019	0.019	0.012	2.20	4.00	7.80
1R2	1.2	M	1KHz, 0.5V	-	0.019	-	-	3.20	-
1R5	1.5	M	1KHz, 0.5V	-	-	0.014	-	-	5.80
2R2	2.2	M	1KHz, 0.5V	0.021	-	0.015	2.00	-	5.60
3R3	3.3	M	1KHz, 0.5V	0.023	0.020	0.016	1.90	2.50	5.10
3R9	3.9	M	1KHz, 0.5V	0.029	-	0.018	1.85	-	4.10
4R7	4.7	M	1KHz, 0.5V	0.036	0.030	0.020	1.70	2.00	3.70
5R6	5.6	M	1KHz, 0.5V	0.039	-	0.022	1.65	-	3.40
6R8	6.8	M	1KHz, 0.5V	0.041	0.039	0.025	1.60	1.70	3.20
8R2	8.2	M	1KHz, 0.5V	0.049	-	0.027	1.50	-	3.10
100	10	M	1KHz, 0.5V	0.053	0.036	0.036	1.40	1.30	3.00
120	12	M	1KHz, 0.5V	0.071	-	0.033	1.20	-	2.50
150	15	M	1KHz, 0.5V	0.075	0.052	0.047	1.10	1.10	2.40
180	18	M	1KHz, 0.5V	0.099	-	0.052	1.00	-	2.20
220	22	M	1KHz, 0.5V	0.110	0.061	0.059	0.96	0.90	2.10
270	27	M	1KHz, 0.5V	0.150	-	0.073	0.85	-	1.70
330	33	M	1KHz, 0.5V	0.160	0.096	0.082	0.75	0.82	1.60
390	39	M	1KHz, 0.5V	0.230	-	0.099	0.70	-	1.50
470	47	M	1KHz, 0.5V	0.240	0.125	0.100	0.67	0.75	1.40
560	56	M	1KHz, 0.5V	0.300	0.130	0.110	0.60	0.67	1.30
680	68	M	1KHz, 0.5V	0.310	0.175	0.140	0.59	0.60	1.20
820	82	M	1KHz, 0.5V	0.424	0.244	0.190	0.49	0.52	1.10
101	100	M	1KHz, 0.5V	0.450	0.250	0.200	0.45	0.50	1.00
121	120	M	1KHz, 0.5V	0.620	-	0.280	0.40	-	0.80
151	150	M	1KHz, 0.5V	0.650	0.340	0.350	0.37	0.40	0.79
181	180	M	1KHz, 0.5V	1.020	-	0.420	0.30	-	0.69
221	220	M	1KHz, 0.5V	1.050	0.520	0.470	0.29	0.33	0.65
271	270	M	1KHz, 0.5V	1.530	-	0.620	0.24	-	0.55
331	330	M	1KHz, 0.5V	1.670	0.740	0.680	0.22	0.25	0.54
391	390	M	1KHz, 0.5V	1.990	-	0.900	0.21	-	0.49
471	470	M	1KHz, 0.5V	2.050	1.050	1.030	0.20	0.22	0.47
561	560	M	1KHz, 0.5V	3.100	-	1.300	0.17	-	0.40
681	680	M	1KHz, 0.5V	3.150	1.480	1.600	0.16	0.20	0.38
821	820	M	1KHz, 0.5V	4.500	-	1.800	0.14	-	0.33
102	1000	M	1KHz, 0.5V	4.780	2.280	2.800	0.13	0.14	0.32
152	1500	M	1KHz, 0.5V	-	-	3.400	-	-	0.22

Electrical Characteristics

PCDR1255 / 1265 / 1275 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) \pm 20%			IDC (A) max.					
							I sat			I rms		
				1255	1265	1275	1255	1265	1275	1255	1265	1275
1R2	1.2	N	1KHz, 0.5V	-	-	0.0069	-	-	13.00	-	-	8.20
2R0	2.0	N	1KHz, 0.5V	-	0.0117	0.0080	-	10.0	11.00	-	6.20	-
2R7	2.7	N	1KHz, 0.5V	-	-	0.0094	-	-	10.00	-	-	7.00
3R3	3.3	N	1KHz, 0.5V	-	-	0.0100	-	-	9.50	-	-	-
3R9	3.9	N	1KHz, 0.5V	-	-	0.0104	-	-	9.00	-	-	6.70
4R2	4.2	N	1KHz, 0.5V	-	0.0150	-	-	7.30	-	-	5.50	-
5R6	5.6	N	1KHz, 0.5V	-	-	0.0116	-	-	7.80	-	-	6.30
6R0	6.0	N	1KHz, 0.5V	0.0164	-	-	3.60	-	-	4.90	-	-
6R8	6.8	N	1KHz, 0.5V	-	-	0.0131	-	-	7.20	-	-	5.90
7R0	7.0	M	1KHz, 0.5V	-	0.0177	-	-	5.70	-	-	5.00	-
100	10	M	1KHz, 0.5V	0.0215	0.0202	0.0156	3.40	5.00	5.50	4.30	4.80	5.40
150	15	M	1KHz, 0.5V	0.0259	0.0237	0.0184	2.80	4.20	4.70	3.90	4.40	5.00
220	22	M	1KHz, 0.5V	0.0338	0.0316	0.0263	2.30	3.50	4.00	3.40	3.80	4.00
330	33	M	1KHz, 0.5V	0.0415	0.0406	0.0395	1.90	2.80	3.20	3.10	3.40	3.40
390	39	M	1KHz, 0.5V	-	-	0.0440	-	-	3.00	-	-	-
470	47	M	1KHz, 0.5V	0.0618	0.0578	0.0528	1.60	2.40	2.70	2.50	2.80	3.00
560	56	M	1KHz, 0.5V	0.0750	0.0750	0.0670	1.45	2.20	2.30	2.30	2.50	2.60
680	68	M	1KHz, 0.5V	0.0832	0.0787	0.0778	1.30	2.00	2.00	2.20	2.40	2.40
101	100	M	1KHz, 0.5V	0.1170	0.1230	0.1250	1.10	1.60	1.90	1.80	1.90	1.90
121	120	M	1KHz, 0.5V	-	0.1850	-	-	1.30	-	-	1.50	-
151	150	M	1KHz, 0.5V	0.1900	0.2730	0.1750	0.88	1.00	1.60	1.40	1.20	1.60
221	220	M	1KHz, 0.5V	0.2700	-	0.2580	0.72	-	1.30	1.20	-	1.30
331	330	M	1KHz, 0.5V	0.4100	-	-	0.59	-	-	1.00	-	-
471	470	M	1KHz, 0.5V	0.5200	-	-	0.49	-	-	0.88	-	-
681	680	M	1KHz, 0.5V	0.7600	-	-	0.43	-	-	0.73	-	-
102	1000	M	1KHz, 0.5V	1.1200	-	-	0.34	-	-	0.60	-	-
152	1500	M	1KHz, 0.5V	1.7300	-	-	0.29	-	-	0.48	-	-

■ Tape and Reel specifications



Unit:mm

Type	Tape size		Parts Per Reel
	W	P	13"
PCDR0628	16	12	1000
PCDR0728	16	12	1000
PCDR0730	16	12	1000
PCDR0732	16	12	1000
PCDR0745	16	12	1000
PCDR1045	24	16	750
PCDR1255	24	16	500
PCDR1265	24	16	500
PCDR1275	24	16	350

SMD Power Inductor Environmental Specifications

General

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

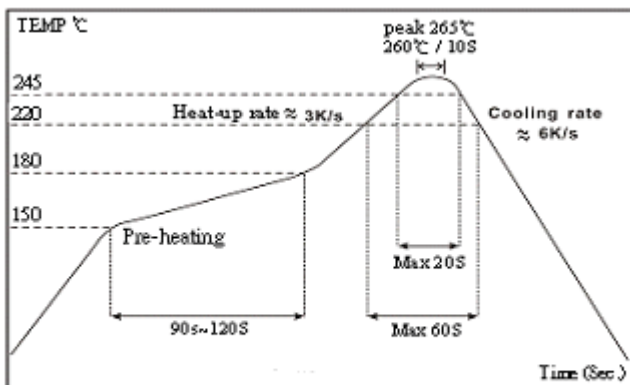
Environmental test

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

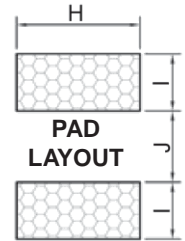
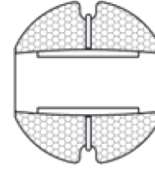
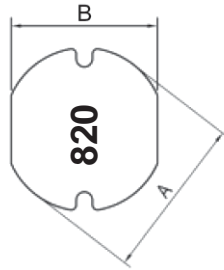
Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
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°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	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):



SMD Power Inductor



Dimensions

Unit: mm

Type	A	B	C	H	I	J
PCD0301	3.5±0.3	3.0±0.3	1.15±0.3	3.50	1.60	0.8
PCD0302	3.5±0.3	3.0±0.3	2.1±0.3	3.50	1.60	0.8
PCD0403	4.5±0.3	4.0±0.3	3.2±0.3	4.50	1.75	1.5
PCD0502	5.8±0.3	5.2±0.3	2.5±0.3	5.50	2.15	1.7
PCD0503	5.8±0.3	5.2±0.3	3.0±0.3	5.50	2.15	1.7
PCD0504	5.8±0.3	5.2±0.3	4.5±0.3	5.50	2.15	1.7
PCD0703	7.8±0.3	7.0±0.3	3.5±0.5	7.50	3.00	2.0
PCD0705	7.8±0.3	7.0±0.3	5.0±0.5	7.50	3.00	2.0
PCD1004	10.0±0.4	9.0±0.3	4.0±0.5	9.50	3.75	2.5
PCD1005	10.0±0.4	9.0±0.3	5.4±0.5	9.50	3.75	2.5
PCD1006	10.0±0.4	9.0±0.3	7.5 max.	9.50	3.75	2.5

Features

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

Applications

- Power Supply For VTRs.
- LCD Televisions
- Personal Computers
- Handheld Communication
- DC/DC Converters, etc.

Characteristics

- 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°C. (Ta=25°C).

The smaller one is defined as Rated DC Current.

- Operating temperature range: -40~105°C

Inductance and rated current ranges

- PCD0301 1.0~390μH 1.40~0.10A
- PCD0302 1.0~330μH 2.20~0.0.09A
- PCD0403 1.0~1000μH 2.70~0.109A
- PCD0502 1.0~470μH 4.00~0.15A
- PCD0503 1.0~1000μH 4.50~0.13A
- PCD0504 1.0~1000μH 5.00~0.26A
- PCD0703 1.0~1000μH 1.64~0.20A
- PCD0705 1.0~1000μH 3.40~0.30A
- PCD1004 1.0~560μH 8.70~0.32A
- PCD1005 1.2~1000μH 8.63~0.20A
- PCD1006 1.0~1000μH 9.50~0.46A

- Test equipment:

L: HP4284A LCR meter

DCR: Milli-ohm meter

- Electrical specifications at 25°C

Product Identification

PCD	1005	M	T	101
Product Type	Dimensions (AxBxC)	Inductor Tolerance	Packaging Style	Inductance
	0301: 3.5×3.0×1.15 0302: 3.5×3.0×2.1 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 1006: 10×9.0×7.5	K: ±10% M: ±20%	T: Tape and Reel	1R0: 1.0μH 470: 47μH 101: 100μH

Electrical Characteristics

PCD0301 Type

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
1R0	1.0	M	100KHz, 0.25V	0.060	1.40
1R5	1.5	M	100KHz, 0.25V	0.081	1.30
1R8	1.8	M	100KHz, 0.25V	0.098	1.24
2R2	2.2	M	100KHz, 0.25V	0.240	1.20
2R7	2.7	M	100KHz, 0.25V	0.135	1.04
3R3	3.3	M	100KHz, 0.25V	0.270	1.00
3R9	3.9	M	100KHz, 0.25V	0.188	0.79
4R7	4.7	M	100KHz, 0.25V	0.400	0.90
5R6	5.6	M	100KHz, 0.25V	0.450	0.65
6R8	6.8	M	100KHz, 0.25V	0.500	0.56
8R2	8.2	M	100KHz, 0.25V	0.650	0.50
100	10	M	1KHz, 0.25V	0.750	0.45
120	12	M	1KHz, 0.25V	0.850	0.43
150	15	M	1KHz, 0.25V	1.200	0.39
180	18	M	1KHz, 0.25V	1.300	0.32
220	22	M	1KHz, 0.25V	1.500	0.28
270	27	M	1KHz, 0.25V	2.200	0.26
330	33	M	1KHz, 0.25V	2.800	0.25
470	47	M	1KHz, 0.25V	4.000	0.21
560	56	M	1KHz, 0.25V	4.500	0.20
680	68	M	1KHz, 0.25V	5.000	0.18
820	82	M	1KHz, 0.25V	6.500	0.16
101	100	M	1KHz, 0.25V	7.500	0.15
221	220	M	1KHz, 0.25V	14.00	0.13
331	330	M	1KHz, 0.25V	22.00	0.11
391	390	M	1KHz, 0.25V	26.00	0.10

Electrical Characteristics

PCD 0302 / 0403 / 0502 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.			IDC (A) max.		
				0302	0403	0502	0302	0403	0502
1R0	1.0	M	100KHz, 0.25V	0.045	0.049	0.021	2.200	2.700	4.000
1R2	1.2	M	100KHz, 0.25V	0.050	0.053	0.050	2.100	2.540	4.200
1R4	1.4	M	100KHz, 0.25V	0.050	0.056	-	2.000	2.500	-
1R5	1.5	M	100KHz, 0.25V	0.055	0.061	0.060	1.700	2.240	4.000
1R8	1.8	M	100KHz, 0.25V	0.070	0.064	0.065	1.650	2.330	3.700
2R2	2.2	M	100KHz, 0.25V	0.085	0.072	0.070	1.600	2.250	3.500
2R7	2.7	M	100KHz, 0.25V	0.100	0.079	0.080	1.400	2.160	3.200
3R3	3.3	M	100KHz, 0.25V	0.120	0.086	0.100	1.040	2.000	2.700
3R9	3.9	M	100KHz, 0.25V	0.130	0.094	0.120	1.000	1.840	2.400
4R7	4.7	M	100KHz, 0.25V	0.170	0.109	0.140	1.000	1.620	2.000
5R6	5.6	M	100KHz, 0.25V	0.185	0.126	0.150	0.950	1.480	1.800
6R8	6.8	M	100KHz, 0.25V	0.200	0.131	0.160	0.950	1.430	1.500
8R2	8.2	M	100KHz, 0.25V	0.250	0.147	0.170	0.900	1.370	1.400
100	10	K, M	1KHz, 0.25V	0.320	0.182	0.200	0.760	1.040	1.300
120	12	K, M	1KHz, 0.25V	0.350	0.210	0.230	0.685	0.970	1.100
150	15	K, M	1KHz, 0.25V	0.460	0.235	0.250	0.635	0.850	1.050
180	18	K, M	1KHz, 0.25V	0.520	0.338	0.300	0.525	0.740	1.000
220	22	K, M	1KHz, 0.25V	0.660	0.378	0.350	0.500	0.680	0.900
270	27	K, M	1KHz, 0.25V	0.760	0.522	0.400	0.405	0.620	0.850
330	33	K, M	1KHz, 0.25V	0.920	0.540	0.500	0.380	0.560	0.750
390	39	K, M	1KHz, 0.25V	1.120	0.587	0.550	0.355	0.520	0.700
470	47	K, M	1KHz, 0.25V	1.270	0.844	0.650	0.330	0.440	0.600
560	56	K, M	1KHz, 0.25V	1.500	0.937	0.760	0.290	0.420	0.550
680	68	K, M	1KHz, 0.25V	2.000	1.117	0.950	0.260	0.370	0.500
820	82	K, M	1KHz, 0.25V	2.440	1.140	1.200	0.230	0.340	0.450
101	100	K, M	1KHz, 0.25V	2.850	1.190	1.400	0.200	0.300	0.400
121	120	K, M	1KHz, 0.25V	3.400	1.400	1.750	0.180	0.256	0.350
151	150	K, M	1KHz, 0.25V	4.470	1.800	2.000	0.160	0.212	0.250
181	180	K, M	1KHz, 0.25V	5.110	1.920	2.600	0.150	0.200	0.250
221	220	K, M	1KHz, 0.25V	7.310	2.030	3.000	0.140	0.180	0.200
271	270	K, M	1KHz, 0.25V	8.500	2.890	3.700	0.100	0.174	0.180
331	330	K, M	1KHz, 0.25V	10.19	3.760	4.300	0.090	0.168	0.170
391	390	K, M	1KHz, 0.25V	-	4.260	6.000	-	0.160	0.160
471	470	K, M	1KHz, 0.25V	-	5.140	6.700	-	0.158	0.150
561	560	K, M	1KHz, 0.25V	-	6.370	-	-	0.148	-
681	680	K, M	1KHz, 0.25V	-	9.240	-	-	0.128	-
821	820	K, M	1KHz, 0.25V	-	13.40	-	-	0.110	-
102	1000	K, M	1KHz, 0.25V	-	15.60	-	-	0.109	-

Electrical Characteristics

PCD0503 / 0504 / 0703 Type

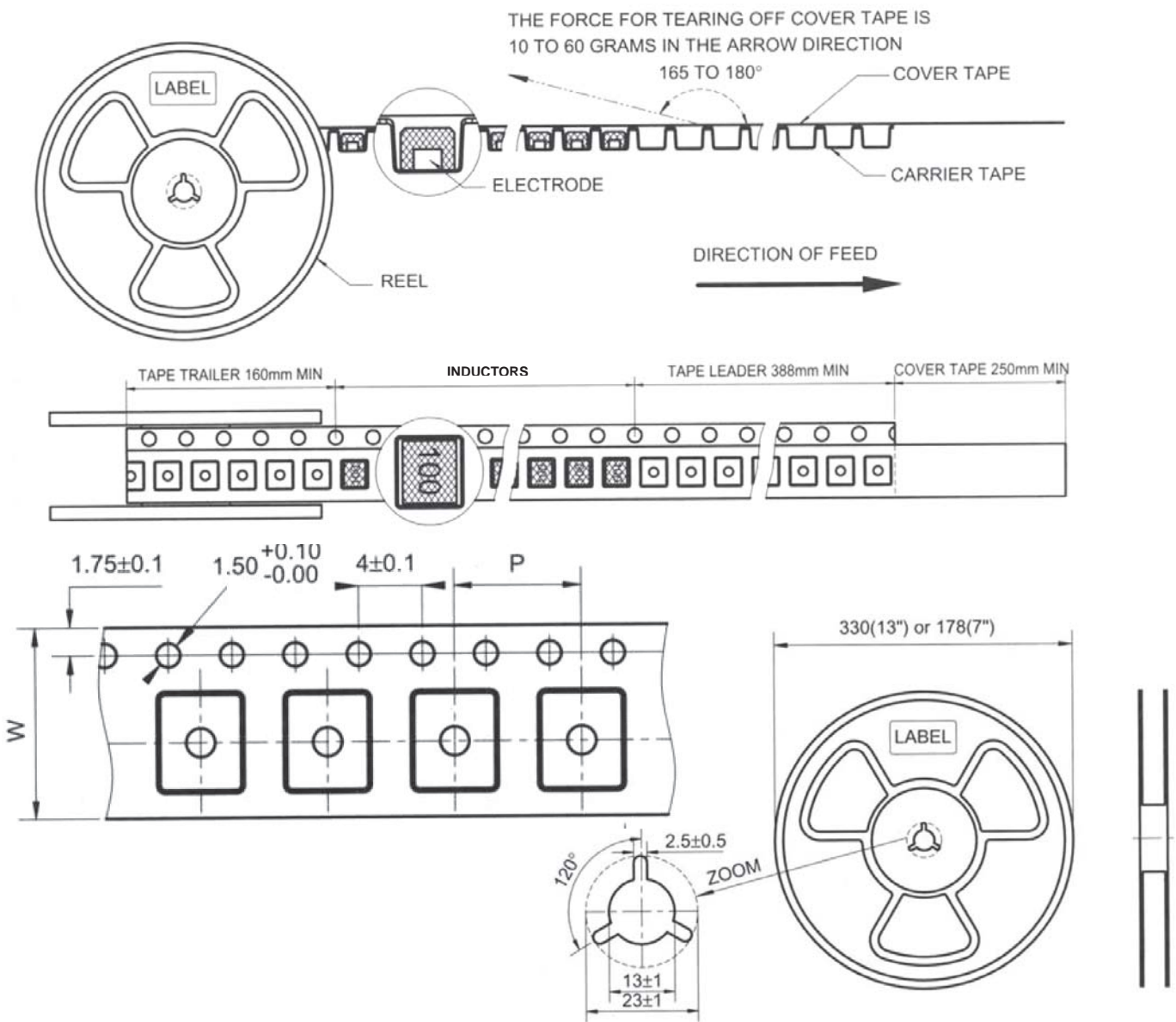
Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.			IDC (A) max.		
				0503	0504	0703	0503	0504	0703
1R0	1.0	M	100KHz, 0.25V	0.03	0.010	0.018	4.50	5.00	1.64
1R2	1.2	M	100KHz, 0.25V	0.03	0.012	-	4.20	4.77	-
1R5	1.5	M	100KHz, 0.25V	0.03	0.013	0.020	4.10	4.50	1.60
1R8	1.8	M	100KHz, 0.25V	0.03	0.016	-	3.70	4.25	-
2R2	2.2	M	100KHz, 0.25V	0.03	0.017	-	3.50	4.20	-
2R7	2.7	M	100KHz, 0.25V	0.04	0.025	-	3.20	4.00	-
3R3	3.3	M	100KHz, 0.25V	0.05	0.034	0.025	2.80	2.50	1.59
3R9	3.9	M	100KHz, 0.25V	0.06	0.035	-	2.60	2.20	-
4R7	4.7	M	100KHz, 0.25V	0.07	0.035	0.039	2.50	2.00	1.54
5R6	5.6	M	100KHz, 0.25V	0.08	0.042	-	2.40	1.82	-
6R8	6.8	M	100KHz, 0.25V	0.09	0.060	0.040	2.20	1.69	1.49
8R2	8.2	M	100KHz, 0.25V	0.10	0.060	0.080	2.00	1.56	1.46
100	10	K, M	1KHz, 0.25V	0.13	0.100	0.080	1.80	1.44	1.44
120	12	K, M	1KHz, 0.25V	0.16	0.120	0.090	1.75	1.40	1.39
150	15	K, M	1KHz, 0.25V	0.19	0.140	0.104	1.70	1.30	1.24
180	18	K, M	1KHz, 0.25V	0.21	0.150	0.111	1.60	1.23	1.12
220	22	K, M	1KHz, 0.25V	0.28	0.180	0.129	1.50	1.11	1.07
270	27	K, M	1KHz, 0.25V	0.32	0.200	0.153	1.40	0.97	0.94
330	33	K, M	1KHz, 0.25V	0.38	0.230	0.170	1.10	0.88	0.85
390	39	K, M	1KHz, 0.25V	0.42	0.320	0.217	1.00	0.80	0.74
470	47	K, M	1KHz, 0.25V	0.43	0.370	0.252	0.90	0.72	0.68
560	56	K, M	1KHz, 0.25V	0.50	0.420	0.282	0.85	0.68	0.64
680	68	K, M	1KHz, 0.25V	0.68	0.460	0.332	0.80	0.61	0.59
820	82	K, M	1KHz, 0.25V	0.82	0.600	0.406	0.65	0.58	0.54
101	100	K, M	1KHz, 0.25V	1.10	0.700	0.481	0.60	0.52	0.51
121	120	K, M	1KHz, 0.25V	1.20	0.930	0.536	0.58	0.48	0.49
151	150	K, M	1KHz, 0.25V	1.50	1.100	0.755	0.43	0.40	0.40
181	180	K, M	1KHz, 0.25V	1.80	1.380	1.022	0.41	0.38	0.36
221	220	K, M	1KHz, 0.25V	2.00	1.570	1.200	0.38	0.35	0.31
271	270	K, M	1KHz, 0.25V	2.90	1.600	1.306	0.35	0.34	0.29
331	330	K, M	1KHz, 0.25V	3.30	1.820	1.495	0.28	0.32	0.28
391	390	K, M	1KHz, 0.25V	3.70	-	1.700	0.26	-	0.27
471	470	K, M	1KHz, 0.25V	4.90	2.760	2.100	0.20	0.30	0.26
561	560	K, M	1KHz, 0.25V	5.00	3.100	2.660	0.19	0.29	0.25
681	680	K, M	1KHz, 0.25V	6.00	4.050	3.000	0.18	0.28	0.23
821	820	K, M	1KHz, 0.25V	6.60	5.560	3.630	0.15	0.27	0.21
102	1000	K, M	1KHz, 0.25V	8.00	5.740	4.760	0.13	0.26	0.20

Electrical Characteristics

PCD0705 / 1004 / 1005 / 1006 Type

Codes	L (μ H)	Tolerance	Test Condition	DCR (Ω) max.				IDC (A) max.			
				0705	1004	1005	1006	0705	1004	1005	1006
1R0	1.0	M	100KHz, 0.25V	0.013	0.012	-	0.008	3.40	8.70	-	9.50
1R2	1.2	M	100KHz, 0.25V	-	0.014	0.009	-	-	8.00	8.63	-
1R5	1.5	M	100KHz, 0.25V	0.016	0.016	0.010	-	3.30	7.48	8.00	-
1R8	1.8	M	100KHz, 0.25V	0.020	0.018	-	0.011	3.20	6.80	-	8.60
2R2	2.2	M	100KHz, 0.25V	0.023	0.020	0.014	0.012	3.00	5.40	6.80	7.20
2R5	2.5	M	100KHz, 0.25V	0.026	-	-	-	2.90	-	-	-
2R7	2.7	M	100KHz, 0.25V	-	0.024	-	-	-	3.20	-	-
3R3	3.3	M	100KHz, 0.25V	0.028	0.028	0.018	0.016	2.80	2.85	3.05	6.80
3R9	3.9	M	100KHz, 0.25V	-	0.030	-	0.017	-	2.80	-	6.35
4R7	4.7	M	100KHz, 0.25V	0.045	0.038	0.020	0.019	2.70	2.75	2.90	5.45
5R6	5.6	M	100KHz, 0.25V	0.048	0.040	-	0.024	2.65	2.70	-	4.30
6R8	6.8	M	100KHz, 0.25V	0.058	0.042	0.040	0.035	2.50	2.65	2.75	3.52
8R2	8.2	M	100KHz, 0.25V	0.070	0.048	0.050	0.045	2.40	2.60	2.70	3.51
100	10	K, M	1KHz, 0.25V	0.070	0.053	0.060	0.060	2.30	2.38	2.60	3.50
120	12	K, M	1KHz, 0.25V	0.080	0.061	0.070	0.070	2.00	2.13	2.45	3.40
150	15	K, M	1KHz, 0.25V	0.090	0.070	0.080	0.080	1.80	1.87	2.27	3.10
180	18	K, M	1KHz, 0.25V	0.100	0.081	0.090	0.090	1.60	1.73	2.15	3.00
220	22	K, M	1KHz, 0.25V	0.110	0.090	0.100	0.100	1.50	1.60	1.95	2.60
270	27	K, M	1KHz, 0.25V	0.120	0.100	0.110	0.110	1.30	1.44	1.76	2.40
330	33	K, M	1KHz, 0.25V	0.130	0.120	0.120	0.120	1.20	1.26	1.50	2.30
390	39	K, M	1KHz, 0.25V	0.160	0.151	0.140	0.140	1.10	1.20	1.37	2.10
470	47	K, M	1KHz, 0.25V	0.180	0.170	0.170	0.170	1.40	1.10	1.28	1.95
560	56	K, M	1KHz, 0.25V	0.240	0.199	0.190	0.190	0.94	1.01	1.17	1.85
680	68	K, M	1KHz, 0.25V	0.280	0.223	0.220	0.220	0.85	0.91	1.11	1.65
820	82	K, M	1KHz, 0.25V	0.370	0.252	0.250	0.250	0.78	0.85	1.00	1.50
101	100	K, M	1KHz, 0.25V	0.430	0.344	0.350	0.350	0.72	0.74	0.97	1.40
121	120	K, M	1KHz, 0.25V	0.470	0.396	0.400	0.400	0.66	0.69	0.89	1.30
151	150	K, M	1KHz, 0.25V	0.640	0.544	0.470	0.470	0.58	0.61	0.78	1.20
181	180	K, M	1KHz, 0.25V	0.710	0.621	0.630	0.630	0.51	0.56	0.72	1.00
221	220	K, M	1KHz, 0.25V	0.960	0.721	0.730	0.730	0.49	0.53	0.66	0.95
271	270	K, M	1KHz, 0.25V	1.110	0.949	0.970	0.970	0.42	0.45	0.57	0.90
331	330	K, M	1KHz, 0.25V	1.260	1.100	1.150	1.150	0.40	0.42	0.52	0.80
391	390	K, M	1KHz, 0.25V	1.770	1.245	1.300	1.300	0.36	0.38	0.48	0.75
471	470	K, M	1KHz, 0.25V	1.960	1.526	1.480	1.480	0.34	0.35	0.42	0.65
561	560	K, M	1KHz, 0.25V	2.280	1.904	1.900	1.900	0.32	0.32	0.33	0.60
681	680	K, M	1KHz, 0.25V	2.480	-	2.250	2.250	0.30	-	0.28	0.50
821	820	K, M	1KHz, 0.25V	3.400	-	2.550	2.550	0.30	-	0.24	0.48
102	1000	K, M	1KHz, 0.25V	4.200	-	3.490	3.000	0.30	-	0.20	0.46

■ Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
PCD0301	12	8	3000
PCD0302	12	8	2000
PCD0403	12	8	1500
PCD0502	12	8	2000
PCD0503	12	8	1500
PCD0504	12	8	1500
PCD0703	16	12	1000
PCD0705	16	12	1000
PCD1004	24	16	1000
PCD1005	24	16	500
PCD1006	24	16	500

■ SMT Power Inductor Environmental Specifications

General

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

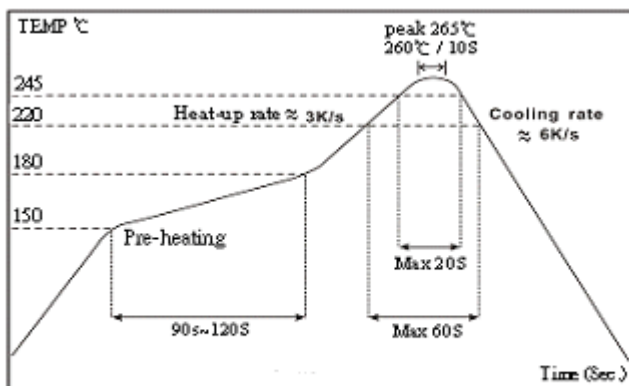
Environmental test

Test Items	Specifications	Test Conditions / Test Methods
High temperature Storage test	No case deformation or change in appearance. $\Delta L/L \leq 10\%$	Temperature 85±2°C, Time: 48±2 hours, Tested after 1hour at room temperature.
Low temperature Storage test		Temperature -25±2°C, Time: 48±2 hours, Tested after 1hour at room temperature.
Humidity test		Temperature 40±2°C, 90~95% relative humidity Time: 96±2 hours Tested after 1hour at room temperature.
Thermal shock test		First -25°C 30minutes then 25°C 10 minutes last 85°C 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
Solder ability test	Terminal area must have 90% minimum solder coverage.	Dip pads in flux then dip in solder pot (SnCuNi) at 245±5°C for 3 seconds.
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°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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)



Electrical Characteristics

MPI0610 Type

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	I DC (A) max.
1R2	1.2	M	100KHz, 0.1V	0.08	2.10
1R5	1.5	M	100KHz, 0.1V	0.10	1.90
2R2	2.2	M	100KHz, 0.1V	0.12	1.60
3R3	3.3	M	100KHz, 0.1V	0.16	1.30
4R7	4.7	M	100KHz, 0.1V	0.20	1.10
6R8	6.8	M	100KHz, 0.1V	0.32	0.90
100	10	M	100KHz, 0.1V	0.41	0.80
150	15	M	100KHz, 0.1V	0.65	0.65
220	22	M	100KHz, 0.1V	0.85	0.50
330	33	M	100KHz, 0.1V	1.30	0.40
470	47	M	100KHz, 0.1V	1.80	0.35
680	68	M	100KHz, 0.1V	2.50	0.30
101	100	M	100KHz, 0.1V	3.50	0.25
151	150	M	100KHz, 0.1V	6.50	0.18
221	220	M	100KHz, 0.1V	8.50	0.16
331	330	M	100KHz, 0.1V	15.0	0.13

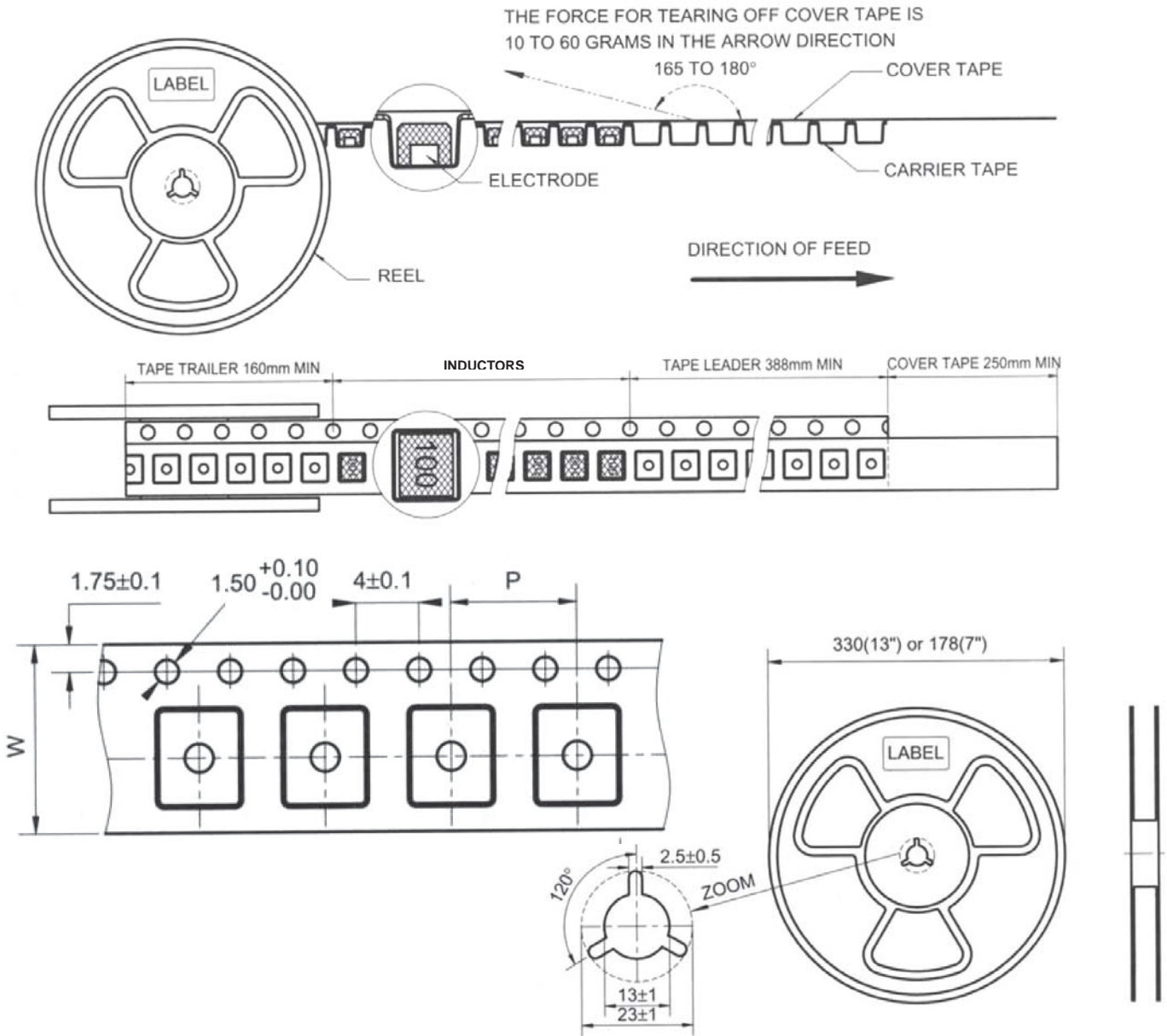
MPI0612 Type

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	I DC (A) max.
1R2	1.2	M	100KHz, 0.1V	0.060	1.80
2R2	2.2	M	100KHz, 0.1V	0.125	1.20
3R3	3.3	M	100KHz, 0.1V	0.155	0.96
4R7	4.7	M	100KHz, 0.1V	0.206	0.90
6R8	6.8	M	100KHz, 0.1V	0.240	0.80
100	10	M	100KHz, 0.1V	0.370	0.70
150	15	M	100KHz, 0.1V	0.460	0.60
180	18	M	100KHz, 0.1V	0.580	0.56
220	22	M	100KHz, 0.1V	0.668	0.50
270	27	M	100KHz, 0.1V	0.950	0.45
330	33	M	100KHz, 0.1V	1.100	0.42
390	39	M	100KHz, 0.1V	1.280	0.38
470	47	M	100KHz, 0.1V	1.380	0.34
560	56	M	100KHz, 0.1V	1.700	0.30
680	68	M	100KHz, 0.1V	2.100	0.28
820	82	M	100KHz, 0.1V	2.700	0.26
101	100	M	100KHz, 0.1V	3.100	0.235

MPI0620 Type

Codes	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	I DC (A) max.
1R0	1.0	M	100KHz, 0.1V	0.04	2.50
1R5	1.5	M	100KHz, 0.1V	0.06	2.20
2R2	2.2	M	100KHz, 0.1V	0.07	1.80
3R3	3.3	M	100KHz, 0.1V	0.10	1.40
4R7	4.7	M	100KHz, 0.1V	0.12	1.20
6R8	6.8	M	100KHz, 0.1V	0.19	1.10
100	10	M	100KHz, 0.1V	0.30	1.00
150	15	M	100KHz, 0.1V	0.40	0.80
220	22	M	100KHz, 0.1V	0.54	0.60
330	33	M	100KHz, 0.1V	0.74	0.50
470	47	M	100KHz, 0.1V	1.10	0.45
680	68	M	100KHz, 0.1V	1.60	0.35
101	100	M	100KHz, 0.1V	2.30	0.30
151	150	M	100KHz, 0.1V	3.20	0.25
221	220	M	100KHz, 0.1V	5.70	0.20
331	330	M	100KHz, 0.1V	8.20	0.16
471	470	M	100KHz, 0.1V	10.8	0.14
681	680	M	100KHz, 0.1V	17.2	0.12
102	1000	M	100KHz, 0.1V	22.6	0.08

■ Tape and Reel specifications



Unit: mm

Type	Tape size		Parts Per Reel
	W	P	13"
MPI0610	16	8	2000
MPI0612	16	8	2000
MPI0620	16	8	2000

SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: $25\pm 3^{\circ}\text{C}$; 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. $\Delta L/L \leq 10\%$	Temperature $85\pm 2^{\circ}\text{C}$, Time: 48 ± 2 hours, Tested after 1 hour at room temperature.
Low temperature Storage test		Temperature $-25\pm 2^{\circ}\text{C}$, Time: 48 ± 2 hours, Tested after 1 hour at room temperature.
Humidity test		Temperature $40\pm 2^{\circ}\text{C}$, 90~95% relative humidity Time: 96 ± 2 hours Tested after 1 hour at room temperature.
Thermal shock test		First -25°C 30minutes then 25°C 10 minutes last 85°C 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 solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at $245\pm 5^{\circ}\text{C}$ for 3 seconds.
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 $130\sim 150^{\circ}\text{C}$. Immersing to $260\pm 5^{\circ}\text{C}$ for 10 seconds.
Vibration test	No case deformation or change in appearance.	Apply frequency 10~55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance	$\Delta L/L \leq 10\%$	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):

