Data Sheet

Customer:	
Product:	**Shielded SMD Power Inductor – PCDR Series**
Sizes.:	**0628/0728/0730/0732/0745/1045/1255/1265/1275**
Issued Date:	**14-May-25**
Edition:	**REV.B7**

RoHS Compliant

HONG KONG HELISTO INDUSTRIAL LIMITED
香港海利斯特实业有限公司

SHENZHEN HELISTO TECHNOLOGYCOLTD
深圳市海利斯特科技有限公司

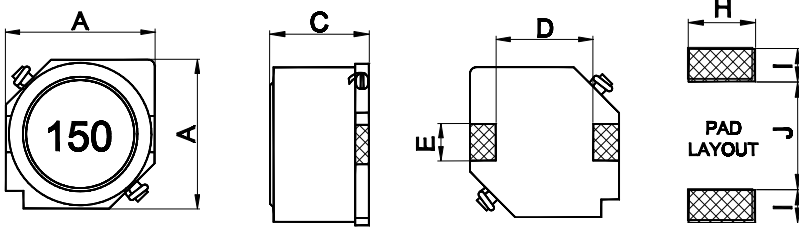
ADD:5/F., A Block, Hongdu Industrial Park, Fanshen Road, 45 Area, Baoan, Shenzhen, China
TEL:+86-755-29741555 29749555
FAX:+86-755-29742111
E-mail:donnyhai@helisto.com
www.Helisto.com

Produced by (QC)	Checked (QC)	Approved by (QC)	Prepared by (Sales)	Accepted by (Customer)
14-May-25	14-May-25	14-May-25	14-May-25	
Mandy Chang	*Ben Chang*	*Ben Chang*		

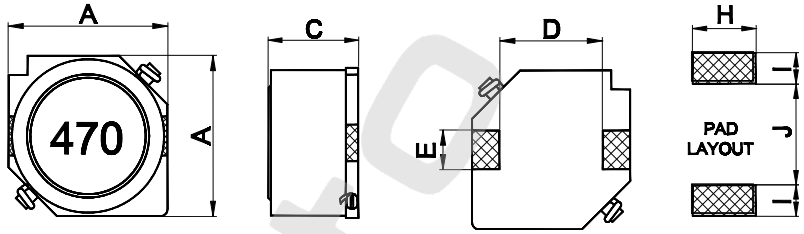
Shielded SMD Power Inductor



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 ▵ 40°C. (Ta=25°C)
- Operating temperature range: -40～125°C

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	1.0～1000μH	2.1～0.12A
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	1.0～1500μH	4.0～0.10A
PCDR1045	1.0～1500μH	7.8～0.22A
PCDR1255	6.0～1500μH	3.6～0.29A
PCDR1265	2.0～150μH	10～1.00A
PCDR1275	1.2～330μH	13～1.10A

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

Product Identification

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 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	IDC (A) max.
PCDR0628□T1R0	1.0	M	1KHz, 0.5V	0.024	2.10
PCDR0628□T1R5	1.5	M	1KHz, 0.5V	0.025	2.00
PCDR0628□T1R8	1.8	M	1KHz, 0.5V	0.026	1.95
PCDR0628□T2R2	2.2	M	1KHz, 0.5V	0.022	1.90
PCDR0628□T2R8	2.8	M	1KHz, 0.5V	0.025	1.80
PCDR0628□T3R5	3.5	M	1KHz, 0.5V	0.030	1.70
PCDR0628□T4R1	4.1	M	1KHz, 0.5V	0.035	1.65
PCDR0628□T4R7	4.7	M	1KHz, 0.5V	0.036	1.60
PCDR0628□T6R8	6.8	M	1KHz, 0.5V	0.052	1.50
PCDR0628□T8R2	8.2	M	1KHz, 0.5V	0.061	1.35
PCDR0628□T100	10	M	1KHz, 0.5V	0.068	1.30
PCDR0628□T120	12	M	1KHz, 0.5V	0.081	1.10
PCDR0628□T150	15	M	1KHz, 0.5V	0.100	1.00
PCDR0628□T180	18	M	1KHz, 0.5V	0.129	0.87
PCDR0628□T220	22	M	1KHz, 0.5V	0.120	0.77
PCDR0628□T270	27	M	1KHz, 0.5V	0.179	0.71
PCDR0628□T330	33	M	1KHz, 0.5V	0.180	0.69
PCDR0628□T390	39	M	1KHz, 0.5V	0.239	0.61
PCDR0628□T470	47	M	1KHz, 0.5V	0.270	0.59
PCDR0628□T560	56	M	1KHz, 0.5V	0.330	0.51
PCDR0628□T680	68	M	1KHz, 0.5V	0.390	0.50
PCDR0628□T820	82	M	1KHz, 0.5V	0.459	0.43
PCDR0628□T101	100	M	1KHz, 0.5V	0.620	0.42
PCDR0628□T121	120	M	1KHz, 0.5V	0.659	0.33
PCDR0628□T151	150	M	1KHz, 0.5V	0.919	0.30
PCDR0628□T181	180	M	1KHz, 0.5V	1.049	0.28
PCDR0628□T221	220	M	1KHz, 0.5V	1.219	0.25
PCDR0628□T271	270	M	1KHz, 0.5V	1.598	0.22
PCDR0628□T331	330	M	1KHz, 0.5V	1.789	0.21
PCDR0628□T391	390	M	1KHz, 0.5V	2.289	0.20
PCDR0628□T471	470	M	1KHz, 0.5V	2.698	0.18
PCDR0628□T561	560	M	1KHz, 0.5V	3.198	0.16
PCDR0628□T681	680	M	1KHz, 0.5V	4.310	0.15
PCDR0628□T821	820	M	1KHz, 0.5V	4.698	0.13
PCDR0628□T102	1000	M	1KHz, 0.5V	5.790	0.12

PCDR0728 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	IDC (A) max.
PCDR0728□T3R3	3.3	M	1KHz, 0.5V	0.037	1.60
PCDR0728□T4R7	4.7	M	1KHz, 0.5V	0.045	1.50
PCDR0728□T6R8	6.8	M	1KHz, 0.5V	0.059	1.30
PCDR0728□T100	10	M	1KHz, 0.5V	0.083	1.10
PCDR0728□T150	15	M	1KHz, 0.5V	0.130	0.88
PCDR0728□T220	22	M	1KHz, 0.5V	0.180	0.75
PCDR0728□T330	33	M	1KHz, 0.5V	0.240	0.65
PCDR0728□T470	47	M	1KHz, 0.5V	0.340	0.54
PCDR0728□T560	56	M	1KHz, 0.5V	0.420	0.50

■Electrical Characteristics

PCDR0730 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	IDC (A) max.
PCDR0730□T3R3	3.3	M	1KHz, 0.5V	0.023	1.80
PCDR0730□T4R7	4.7	M	1KHz, 0.5V	0.036	1.60
PCDR0730□T6R8	6.8	M	1KHz, 0.5V	0.041	1.50
PCDR0730□T100	10	M	1KHz, 0.5V	0.053	1.30
PCDR0730□T150	15	M	1KHz, 0.5V	0.084	1.00
PCDR0730□T220	22	M	1KHz, 0.5V	0.110	0.86
PCDR0730□T330	33	M	1KHz, 0.5V	0.160	0.65
PCDR0730□T470	47	M	1KHz, 0.5V	0.240	0.57
PCDR0730□T560	56	M	1KHz, 0.5V	0.280	0.53
PCDR0730□T680	68	M	1KHz, 0.5V	0.310	0.49
PCDR0730□T101	100	M	1KHz, 0.5V	0.450	0.35

PCDR0732 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	IDC (A) max.
PCDR0732□T1R0	1.0	M	1KHz, 0.5V	0.019	2.20
PCDR0732□T2R2	2.2	M	1KHz, 0.5V	0.021	2.00
PCDR0732□T3R3	3.3	M	1KHz, 0.5V	0.023	1.90
PCDR0732□T3R9	3.9	M	1KHz, 0.5V	0.029	1.85
PCDR0732□T4R7	4.7	M	1KHz, 0.5V	0.036	1.70
PCDR0732□T5R6	5.6	M	1KHz, 0.5V	0.039	1.65
PCDR0732□T6R8	6.8	M	1KHz, 0.5V	0.041	1.60
PCDR0732□T8R2	8.2	M	1KHz, 0.5V	0.049	1.50
PCDR0732□T100	10	M	1KHz, 0.5V	0.053	1.40
PCDR0732□T120	12	M	1KHz, 0.5V	0.071	1.20
PCDR0732□T150	15	M	1KHz, 0.5V	0.075	1.10
PCDR0732□T180	18	M	1KHz, 0.5V	0.099	1.00
PCDR0732□T220	22	M	1KHz, 0.5V	0.110	0.96
PCDR0732□T270	27	M	1KHz, 0.5V	0.150	0.85
PCDR0732□T330	33	M	1KHz, 0.5V	0.160	0.75
PCDR0732□T390	39	M	1KHz, 0.5V	0.230	0.70
PCDR0732□T470	47	M	1KHz, 0.5V	0.240	0.67
PCDR0732□T560	56	M	1KHz, 0.5V	0.300	0.60
PCDR0732□T680	68	M	1KHz, 0.5V	0.310	0.59
PCDR0732□T820	82	M	1KHz, 0.5V	0.424	0.49
PCDR0732□T101	100	M	1KHz, 0.5V	0.450	0.45
PCDR0732□T121	120	M	1KHz, 0.5V	0.620	0.40
PCDR0732□T151	150	M	1KHz, 0.5V	0.650	0.37
PCDR0732□T181	180	M	1KHz, 0.5V	1.020	0.30
PCDR0732□T221	220	M	1KHz, 0.5V	1.050	0.29
PCDR0732□T271	270	M	1KHz, 0.5V	1.530	0.24
PCDR0732□T331	330	M	1KHz, 0.5V	1.670	0.22
PCDR0732□T391	390	M	1KHz, 0.5V	1.990	0.21
PCDR0732□T471	470	M	1KHz, 0.5V	2.050	0.20
PCDR0732□T561	560	M	1KHz, 0.5V	3.100	0.17
PCDR0732□T681	680	M	1KHz, 0.5V	3.150	0.16
PCDR0732□T821	820	M	1KHz, 0.5V	4.500	0.14
PCDR0732□T102	1000	M	1KHz, 0.5V	4.780	0.13

■Electrical Characteristics

PCDR0745 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	IDC (A) max.
PCDR0745□T1R0	1.0	M	1KHz, 0.5V	0.019	4.00
PCDR0745□T1R2	1.2	M	1KHz, 0.5V	0.019	3.20
PCDR0745□T3R3	3.3	M	1KHz, 0.5V	0.020	2.50
PCDR0745□T4R7	4.7	M	1KHz, 0.5V	0.029	2.00
PCDR0745□T6R8	6.8	M	1KHz, 0.5V	0.039	1.70
PCDR0745□T100	10	M	1KHz, 0.5V	0.036	1.30
PCDR0745□T150	15	M	1KHz, 0.5V	0.052	1.10
PCDR0745□T220	22	M	1KHz, 0.5V	0.061	0.90
PCDR0745□T330	33	M	1KHz, 0.5V	0.096	0.82
PCDR0745□T470	47	M	1KHz, 0.5V	0.125	0.75
PCDR0745□T560	56	M	1KHz, 0.5V	0.130	0.67
PCDR0745□T680	68	M	1KHz, 0.5V	0.200	0.60
PCDR0745□T820	82	M	1KHz, 0.5V	0.244	0.52
PCDR0745□T101	100	M	1KHz, 0.5V	0.250	0.50
PCDR0745□T151	150	M	1KHz, 0.5V	0.480	0.40
PCDR0745□T221	220	M	1KHz, 0.5V	0.850	0.33
PCDR0745□T331	330	M	1KHz, 0.5V	1.100	0.25
PCDR0745□T471	470	M	1KHz, 0.5V	1.050	0.22
PCDR0745□T681	680	M	1KHz, 0.5V	2.080	0.20
PCDR0745□T102	1000	M	1KHz, 0.5V	2.280	0.14
PCDR0745□T152	1500	M	1KHz, 0.5V	3.500	0.10

PCDR1045 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	IDC (A) max.
PCDR1045□T1R0	1.0	M	1KHz, 0.5V	0.012	7.80
PCDR1045□T1R5	1.5	M	1KHz, 0.5V	0.014	5.80
PCDR1045□T2R2	2.2	M	1KHz, 0.5V	0.015	5.60
PCDR1045□T3R3	3.3	M	1KHz, 0.5V	0.016	5.10
PCDR1045□T3R9	3.9	M	1KHz, 0.5V	0.018	4.10
PCDR1045□T4R7	4.7	M	1KHz, 0.5V	0.020	3.70
PCDR1045□T5R6	5.6	M	1KHz, 0.5V	0.022	3.40
PCDR1045□T6R8	6.8	M	1KHz, 0.5V	0.025	3.20
PCDR1045□T8R2	8.2	M	1KHz, 0.5V	0.027	3.10
PCDR1045□T100	10	M	1KHz, 0.5V	0.036	3.00
PCDR1045□T120	12	M	1KHz, 0.5V	0.033	2.50
PCDR1045□T150	15	M	1KHz, 0.5V	0.047	2.40
PCDR1045□T180	18	M	1KHz, 0.5V	0.052	2.20
PCDR1045□T220	22	M	1KHz, 0.5V	0.059	2.10
PCDR1045□T270	27	M	1KHz, 0.5V	0.073	1.70
PCDR1045□T330	33	M	1KHz, 0.5V	0.082	1.60
PCDR1045□T390	39	M	1KHz, 0.5V	0.099	1.50
PCDR1045□T470	47	M	1KHz, 0.5V	0.100	1.40
PCDR1045□T560	56	M	1KHz, 0.5V	0.110	1.30
PCDR1045□T680	68	M	1KHz, 0.5V	0.140	1.20
PCDR1045□T820	82	M	1KHz, 0.5V	0.190	1.10
PCDR1045□T101	100	M	1KHz, 0.5V	0.200	1.00
PCDR1045□T121	120	M	1KHz, 0.5V	0.280	0.80
PCDR1045□T151	150	M	1KHz, 0.5V	0.350	0.79
PCDR1045□T181	180	M	1KHz, 0.5V	0.420	0.69
PCDR1045□T221	220	M	1KHz, 0.5V	0.470	0.65

■Electrical Characteristics

PCDR1045 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	IDC (A) max.
PCDR1045□T271	270	M	1KHz, 0.5V	0.620	0.55
PCDR1045□T331	330	M	1KHz, 0.5V	0.680	0.54
PCDR1045□T391	390	M	1KHz, 0.5V	0.900	0.49
PCDR1045□T471	470	M	1KHz, 0.5V	1.030	0.47
PCDR1045□T561	560	M	1KHz, 0.5V	1.300	0.40
PCDR1045□T681	680	M	1KHz, 0.5V	1.600	0.38
PCDR1045□T821	820	M	1KHz, 0.5V	1.800	0.33
PCDR1045□T102	1000	M	1KHz, 0.5V	2.800	0.32
PCDR1045□T152	1500	M	1KHz, 0.5V	3.400	0.22

PCDR1255 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	IDC (A) max.	
					I sat	I rms
PCDR1255□T6R0	6.0	N, M	1KHz, 0.5V	0.016	3.60	4.90
PCDR1255□T100	10	N, M	1KHz, 0.5V	0.022	3.40	4.30
PCDR1255□T150	15	N, M	1KHz, 0.5V	0.026	2.80	3.90
PCDR1255□T220	22	N, M	1KHz, 0.5V	0.034	2.30	3.40
PCDR1255□T330	33	N, M	1KHz, 0.5V	0.042	1.90	3.10
PCDR1255□T470	47	N, M	1KHz, 0.5V	0.062	1.60	2.50
PCDR1255□T560	56	N, M	1KHz, 0.5V	0.075	1.45	2.30
PCDR1255□T680	68	N, M	1KHz, 0.5V	0.083	1.30	2.20
PCDR1255□T101	100	N, M	1KHz, 0.5V	0.117	1.10	1.80
PCDR1255□T151	150	N, M	1KHz, 0.5V	0.190	0.88	1.40
PCDR1255□T221	220	N, M	1KHz, 0.5V	0.270	0.72	1.20
PCDR1255□T331	330	N, M	1KHz, 0.5V	0.410	0.59	1.00
PCDR1255□T471	470	N, M	1KHz, 0.5V	0.520	0.49	0.88
PCDR1255□T681	680	N, M	1KHz, 0.5V	0.760	0.43	0.73
PCDR1255□T102	1000	N, M	1KHz, 0.5V	1.120	0.34	0.60
PCDR1255□T152	1500	N, M	1KHz, 0.5V	1.7300	0.29	0.48

PCDR1265 Type(□:Tolerance):

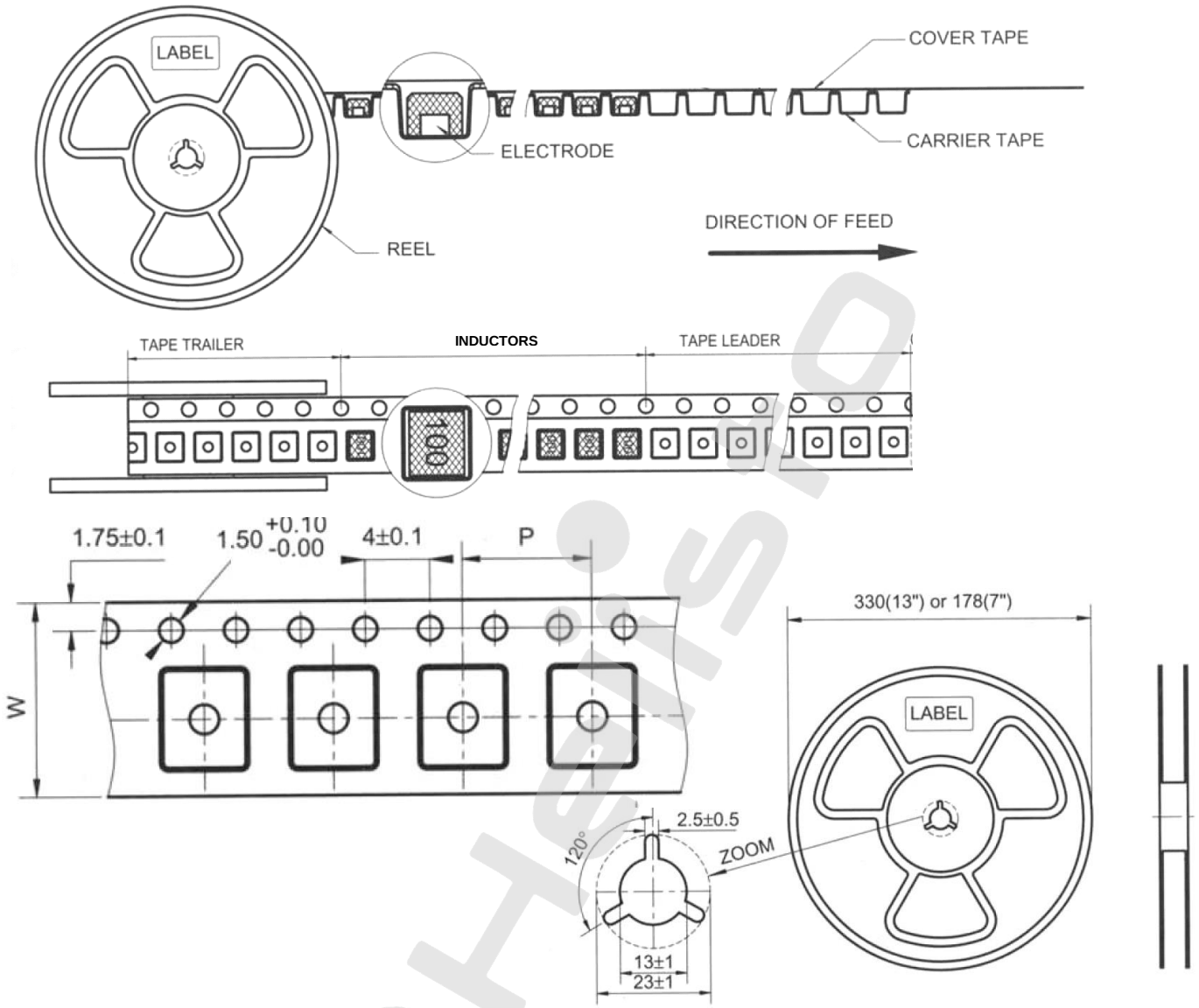
Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	IDC (A) max.	
					I sat	I rms
PCDR1265□T2R0	2.0	N	1KHz, 0.5V	0.012	10.0	8.00
PCDR1265□T4R2	4.2	N	1KHz, 0.5V	0.015	7.30	5.80
PCDR1265□T7R0	7.0	M	1KHz, 0.5V	0.018	5.70	4.50
PCDR1265□T100	10	M	1KHz, 0.5V	0.020	5.00	4.50
PCDR1265□T150	15	M	1KHz, 0.5V	0.024	4.20	4.40
PCDR1265□T220	22	M	1KHz, 0.5V	0.032	3.50	2.80
PCDR1265□T330	33	M	1KHz, 0.5V	0.041	2.80	2.20
PCDR1265□T470	47	M	1KHz, 0.5V	0.058	2.40	1.90
PCDR1265□T560	56	M	1KHz, 0.5V	0.075	2.20	1.70
PCDR1265□T680	68	M	1KHz, 0.5V	0.079	2.00	1.60
PCDR1265□T101	100	M	1KHz, 0.5V	0.123	1.60	1.30
PCDR1265□T121	120	M	1KHz, 0.5V	0.184	1.30	1.00
PCDR1265□T151	150	M	1KHz, 0.5V	0.273	1.00	0.80

■Electrical Characteristics

PCDR1275 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) ±20%	IDC (A) max.	
					I sat	I rms
PCDR1275□T1R2	1.2	N, M	1KHz, 0.5V	0.007	13.00	10.40
PCDR1275□T2R0	2.0	N, M	1KHz, 0.5V	0.008	11.00	8.80
PCDR1275□T2R7	2.7	N, M	1KHz, 0.5V	0.009	10.00	8.00
PCDR1275□T3R3	3.3	N, M	1KHz, 0.5V	0.010	9.50	7.60
PCDR1275□T3R9	3.9	N, M	1KHz, 0.5V	0.010	9.00	7.20
PCDR1275□T5R6	5.6	N, M	1KHz, 0.5V	0.012	7.80	6.20
PCDR1275□T6R8	6.8	N, M	1KHz, 0.5V	0.013	7.20	5.90
PCDR1275□T100	10	M	1KHz, 0.5V	0.016	5.50	4.40
PCDR1275□T150	15	M	1KHz, 0.5V	0.018	4.70	3.70
PCDR1275□T220	22	M	1KHz, 0.5V	0.026	4.00	3.50
PCDR1275□T330	33	M	1KHz, 0.5V	0.039	3.20	3.40
PCDR1275□T390	39	M	1KHz, 0.5V	0.044	3.00	3.10
PCDR1275□T470	47	M	1KHz, 0.5V	0.053	2.70	3.00
PCDR1275□T560	56	M	1KHz, 0.5V	0.069	2.30	1.80
PCDR1275□T680	68	M	1KHz, 0.5V	0.078	2.00	2.40
PCDR1275□T820	82	M	1KHz, 0.5V	0.110	1.95	1.50
PCDR1275□T101	100	M	1KHz, 0.5V	0.125	1.90	1.50
PCDR1275□T151	150	M	1KHz, 0.5V	0.175	1.60	1.30
PCDR1275□T181	180	M	1KHz, 0.5V	0.200	1.45	1.20
PCDR1275□T221	220	M	1KHz, 0.5V	0.258	1.30	1.00
PCDR1275□T331	330	M	1KHz, 0.5V	0.370	1.10	0.88

■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

Environmental test

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

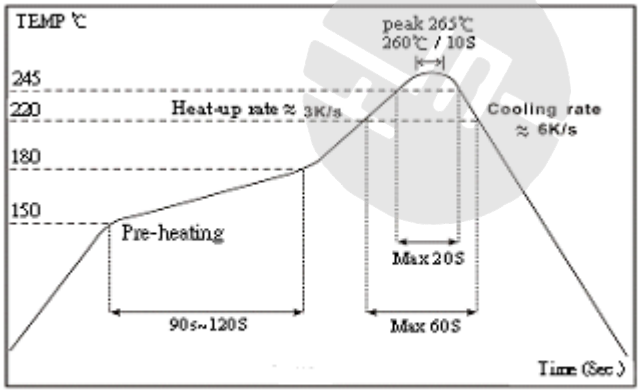
Mechanical test

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

■Storage Temperature: 5℃~25℃ ; Humidity: 25%~80%

■Shelf life: 1 years Max

The condition of reflow (recommendation):



REVISION HISTORY

REVISION	DATE	CHANGE NOTIFICATION	DESCRIPTION
Version B6	Apr 14 ,2025		-Modify Storage conditions.
Version B7	May 14 ,2025		-Add tolerance specifications for PCDR1255 N/M precision types.