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SPECIFICATIONS

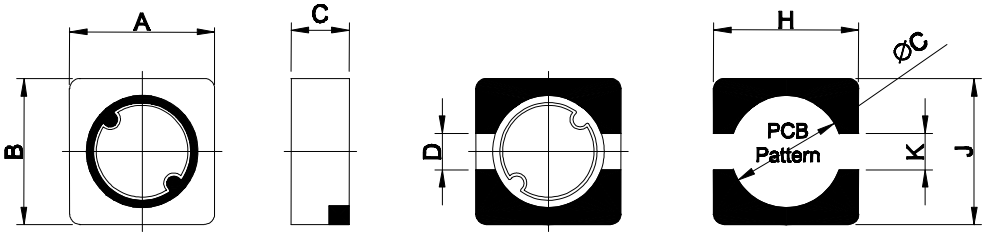
Shielded SMD Power Inductor

PCF-Serie

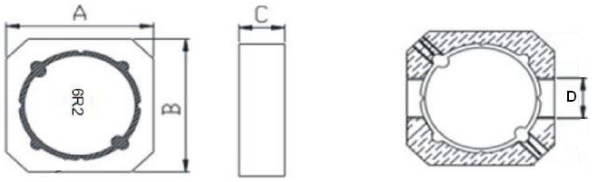
Version July 2020

Shielded SMD Power Inductor

PCF 4010/4020/4030/5010/5020/5030/7040



PCF6020/6030



■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.

  4030/6020/6030: The DC current when the inductance becomes 35% lowers than its initial value. (Ta=25°C)
- Operating temperature range: -40～+125°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
PCF6020	6.0±0.2	6.0±0.2	2.00	2.0	6.6	6.6	2.0	4.6
PCF6030	6.0±0.2	6.0±0.2	3.00	2.0	6.6	6.6	2.0	4.6
PCF7040	7.0±0.4	7.0±0.4	4.30	1.8	8.0	8.0	1.6	6.0

■Inductance and rated current ranges

PCF4010	1.0～100μH	1.60～0.140A
PCF4020	1.0～270μH	1.80～0.090A
PCF4030	1.5～560μH	1.90～0.090A
PCF5010	1.2～820μH	1.77～0.077A
PCF5020	1.0～820μH	2.70～0.120A
PCF5030	1.0～560μH	4.00～0.014A
PCF6020	1.3～150μH	3.20～0.350A
PCF6030	2.2～150μH	3.00～0.350A
PCF7040	0.36～1000μH	9.24～0.180A

- 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: 5.0x5.0x1.2 5020: 5.0x5.0x2.0 5030: 5.0x5.0x3.0 6020: 6.0x6.0x2.0 6030: 6.0x6.0x3.0 7040: 7.0x7.0x4.3	M: ±20% N: ±30%	T: Tape and Reel	1R0: 1.0μH 470: 47μH 101: 100μH

■Electrical Characteristics

PCF4010 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.	Marking Code
PCF4010□T1R0	1.0	M, N	100KHz, 0.25V	0.060	1.600	A
PCF4010□T1R5	1.5	M, N	100KHz, 0.25V	0.077	1.240	B
PCF4010□T2R2	2.2	M, N	100KHz, 0.25V	0.125	1.200	C
PCF4010□T3R3	3.3	M, N	100KHz, 0.25V	0.187	0.890	D
PCF4010□T4R7	4.7	M, N	100KHz, 0.25V	0.240	0.710	E
PCF4010□T5R6	5.6	M, N	100KHz, 0.25V	0.320	0.620	F
PCF4010□T6R8	6.8	M, N	100KHz, 0.25V	0.350	0.570	G
PCF4010□T8R2	8.2	M, N	100KHz, 0.25V	0.470	0.520	H
PCF4010□T100	10	M	1KHz, 0.25V	0.570	0.470	I
PCF4010□T120	12	M	1KHz, 0.25V	0.750	0.430	J
PCF4010□T150	15	M	1KHz, 0.25V	0.810	0.380	K
PCF4010□T180	18	M	1KHz, 0.25V	1.060	0.350	L
PCF4010□T220	22	M	1KHz, 0.25V	1.150	0.320	M
PCF4010□T270	27	M	1KHz, 0.25V	1.670	0.290	N
PCF4010□T330	33	M	1KHz, 0.25V	1.840	0.280	O
PCF4010□T390	39	M	1KHz, 0.25V	2.310	0.250	P
PCF4010□T470	47	M	1KHz, 0.25V	2.630	0.220	Q
PCF4010□T560	56	M	1KHz, 0.25V	2.860	0.200	R
PCF4010□T680	68	M	1KHz, 0.25V	3.940	0.180	S
PCF4010□T820	82	M	1KHz, 0.25V	4.900	0.160	T
PCF4010□T101	100	M	1KHz, 0.25V	5.740	0.140	U

PCF4020 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.	Marking Code
PCF4020□T1R0	1.0	M, N	100KHz, 0.25V	0.030	1.800	A
PCF4020□T2R2	2.2	M, N	100KHz, 0.25V	0.058	1.500	B
PCF4020□T3R3	3.3	M, N	100KHz, 0.25V	0.064	1.300	C
PCF4020□T4R7	4.7	M, N	100KHz, 0.25V	0.146	1.100	D
PCF4020□T6R8	6.8	M, N	100KHz, 0.25V	0.238	0.900	E
PCF4020□T8R2	8.2	M, N	100KHz, 0.25V	0.272	0.800	T
PCF4020□T100	10	M	1KHz, 0.25V	0.299	0.700	F
PCF4020□T150	15	M	1KHz, 0.25V	0.472	0.610	G
PCF4020□T220	22	M	1KHz, 0.25V	0.592	0.520	H
PCF4020□T270	27	M	1KHz, 0.25V	0.630	0.440	I
PCF4020□T330	33	M	1KHz, 0.25V	1.075	0.430	J
PCF4020□T470	47	M	1KHz, 0.25V	1.309	0.340	K
PCF4020□T680	68	M	1KHz, 0.25V	2.613	0.250	L
PCF4020□T820	82	M	1KHz, 0.25V	2.950	0.200	M
PCF4020□T101	100	M	1KHz, 0.25V	3.255	0.190	N
PCF4020□T151	150	M	1KHz, 0.25V	3.550	0.120	O
PCF4020□T221	220	M	1KHz, 0.25V	4.900	0.090	P
PCF4020□T271	270	M	1KHz, 0.25V	6.000	0.090	Q

■Electrical Characteristics

PCF4030 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.	Marking Code
PCF4030□T1R5	1.5	M, N	100KHz, 0.25V	0.015	1.900	A
PCF4030□T2R2	2.2	M, N	100KHz, 0.25V	0.020	1.670	B
PCF4030□T3R3	3.3	M, N	100KHz, 0.25V	0.032	1.440	C
PCF4030□T4R7	4.7	M, N	100KHz, 0.25V	0.045	0.970	D
PCF4030□T6R8	6.8	M, N	100KHz, 0.25V	0.065	0.870	E
PCF4030□T8R2	8.2	M, N	100KHz, 0.25V	0.091	0.770	F
PCF4030□T100	10	M	1KHz, 0.25V	0.105	0.700	G
PCF4030□T120	12	M	1KHz, 0.25V	0.119	0.670	H
PCF4030□T150	15	M	1KHz, 0.25V	0.140	0.540	I
PCF4030□T180	18	M	1KHz, 0.25V	0.175	0.500	J
PCF4030□T220	22	M	1KHz, 0.25V	0.201	0.480	K
PCF4030□T270	27	M	1KHz, 0.25V	0.227	0.400	L
PCF4030□T330	33	M	1KHz, 0.25V	0.287	0.350	M
PCF4030□T390	39	M	1KHz, 0.25V	0.341	0.330	N
PCF4030□T470	47	M	1KHz, 0.25V	0.430	0.320	O
PCF4030□T560	56	M	1KHz, 0.25V	0.471	0.300	P
PCF4030□T680	68	M	1KHz, 0.25V	0.532	0.270	Q
PCF4030□T820	82	M	1KHz, 0.25V	0.675	0.230	R
PCF4030□T101	100	M	1KHz, 0.25V	0.850	0.210	S
PCF4030□T121	120	M	1KHz, 0.25V	1.110	0.200	T
PCF4030□T151	150	M	1KHz, 0.25V	1.230	0.170	U
PCF4030□T181	180	M	1KHz, 0.25V	1.560	0.150	V
PCF4030□T221	220	M	1KHz, 0.25V	1.800	0.140	W
PCF4030□T271	270	M	1KHz, 0.25V	2.200	0.130	X
PCF4030□T331	330	M	1KHz, 0.25V	2.640	0.120	Y
PCF4030□T391	390	M	1KHz, 0.25V	3.200	0.100	Z
PCF4030□T471	470	M	1KHz, 0.25V	3.820	0.100	1
PCF4030□T561	560	M	1KHz, 0.25V	4.620	0.090	2

■Electrical Characteristics

PCF5010 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
PCF5010□T1R0	1.0	M, N	100KHz, 0.25V	0.044	1.800
PCF5010□T1R2	1.2	M, N	100KHz, 0.25V	0.050	1.770
PCF5010□T1R5	1.5	M, N	100KHz, 0.25V	0.069	1.710
PCF5010□T2R0	2.0	M, N	100KHz, 0.25V	0.100	1.440
PCF5010□T2R2	2.2	M, N	100KHz, 0.25V	0.110	1.400
PCF5010□T3R3	3.3	M, N	100KHz, 0.25V	0.140	1.140
PCF5010□T3R5	3.5	M, N	100KHz, 0.25V	0.150	1.100
PCF5010□T4R7	4.7	M, N	100KHz, 0.25V	0.190	0.950
PCF5010□T5R6	5.6	M, N	100KHz, 0.25V	0.193	0.900
PCF5010□T6R2	6.2	M, N	100KHz, 0.25V	0.200	0.840
PCF5010□T6R8	6.8	M, N	100KHz, 0.25V	0.200	0.800
PCF5010□T8R2	8.2	M, N	100KHz, 0.25V	0.300	0.750
PCF5010□T100	10	M	1KHz, 0.25V	0.350	0.660
PCF5010□T120	12	M	1KHz, 0.25V	0.430	0.620
PCF5010□T150	15	M	1KHz, 0.25V	0.440	0.590
PCF5010□T180	18	M	1KHz, 0.25V	0.750	0.570
PCF5010□T220	22	M	1KHz, 0.25V	0.820	0.560
PCF5010□T330	33	M	1KHz, 0.25V	1.160	0.430
PCF5010□T470	47	M	1KHz, 0.25V	1.590	0.340
PCF5010□T680	68	M	1KHz, 0.25V	2.140	0.290
PCF5010□T820	82	M	1KHz, 0.25V	2.720	0.250
PCF5010□T101	100	M	1KHz, 0.25V	3.550	0.220
PCF5010□T121	120	M	1KHz, 0.25V	4.890	0.200
PCF5010□T151	150	M	1KHz, 0.25V	5.200	0.190
PCF5010□T181	180	M	1KHz, 0.25V	7.550	0.170
PCF5010□T221	220	M	1KHz, 0.25V	7.760	0.150
PCF5010□T271	270	M	1KHz, 0.25V	10.13	0.145
PCF5010□T331	330	M	1KHz, 0.25V	11.23	0.140
PCF5010□T471	470	M	1KHz, 0.25V	16.86	0.098
PCF5010□T561	560	M	1KHz, 0.25V	22.78	0.097
PCF5010□T681	680	M	1KHz, 0.25V	24.87	0.085
PCF5010□T821	820	M	1KHz, 0.25V	28.09	0.077

■Electrical Characteristics

PCF 5020 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
PCF5020□T1R0	1.0	M, N	100KHz, 0.25V	0.030	2.700
PCF5020□T1R2	1.2	M, N	100KHz, 0.25V	0.044	2.150
PCF5020□T2R0	2.0	M, N	100KHz, 0.25V	0.046	1.900
PCF5020□T2R2	2.2	M, N	100KHz, 0.25V	0.059	1.630
PCF5020□T2R7	2.7	M, N	100KHz, 0.25V	0.060	1.550
PCF5020□T3R3	3.3	M, N	100KHz, 0.25V	0.062	1.500
PCF5020□T3R5	3.5	M, N	100KHz, 0.25V	0.073	1.340
PCF5020□T4R1	4.1	M, N	100KHz, 0.25V	0.081	1.200
PCF5020□T4R7	4.7	M, N	100KHz, 0.25V	0.087	1.140
PCF5020□T5R6	5.6	M, N	100KHz, 0.25V	0.093	1.000
PCF5020□T6R8	6.8	M, N	100KHz, 0.25V	0.105	0.950
PCF5020□T8R2	8.2	M, N	100KHz, 0.25V	0.139	0.900
PCF5020□T100	10	M	1KHz, 0.25V	0.150	0.760
PCF5020□T120	12	M	1KHz, 0.25V	0.170	0.660
PCF5020□T150	15	M	1KHz, 0.25V	0.210	0.630
PCF5020□T220	22	M	1KHz, 0.25V	0.275	0.560
PCF5020□T330	33	M	1KHz, 0.25V	0.455	0.440
PCF5020□T390	39	M	1KHz, 0.25V	0.540	0.380
PCF5020□T470	47	M	1KHz, 0.25V	0.730	0.350
PCF5020□T560	56	M	1KHz, 0.25V	0.800	0.320
PCF5020□T680	68	M	1KHz, 0.25V	0.935	0.300
PCF5020□T101	100	M	1KHz, 0.25V	1.500	0.230
PCF5020□T121	120	M	1KHz, 0.25V	1.910	0.220
PCF5020□T151	150	M	1KHz, 0.25V	2.680	0.210
PCF5020□T181	180	M	1KHz, 0.25V	3.045	0.200
PCF5020□T221	220	M	1KHz, 0.25V	3.520	0.195
PCF5020□T271	270	M	1KHz, 0.25V	4.380	0.193
PCF5020□T331	330	M	1KHz, 0.25V	5.560	0.190
PCF5020□T471	470	M	1KHz, 0.25V	7.820	0.180
PCF5020□T561	560	M	1KHz, 0.25V	9.790	0.170
PCF5020□T821	820	M	1KHz, 0.25V	15.00	0.120

■Electrical Characteristics

PCF5030 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
PCF5030□T1R0	1.0	M, N	100KHz, 0.25V	0.015	4.000
PCF5030□T1R1	1.1	M, N	100KHz, 0.25V	0.020	3.870
PCF5030□T1R2	1.2	M, N	100KHz, 0.25V	0.022	3.800
PCF5030□T2R0	2.0	M, N	100KHz, 0.25V	0.027	2.920
PCF5030□T2R2	2.2	M, N	100KHz, 0.25V	0.029	2.410
PCF5030□T3R3	3.3	M, N	100KHz, 0.25V	0.034	2.360
PCF5030□T4R7	4.7	M, N	100KHz, 0.25V	0.045	1.870
PCF5030□T5R6	5.6	M, N	100KHz, 0.25V	0.052	1.600
PCF5030□T6R8	6.8	M, N	100KHz, 0.25V	0.068	1.510
PCF5030□T8R2	8.2	M, N	100KHz, 0.25V	0.084	1.380
PCF5030□T100	10	M	1KHz, 0.25V	0.090	1.330
PCF5030□T120	12	M	1KHz, 0.25V	0.125	1.080
PCF5030□T150	15	M	1KHz, 0.25V	0.142	1.050
PCF5030□T180	18	M	1KHz, 0.25V	0.160	0.950
PCF5030□T220	22	M	1KHz, 0.25V	0.208	0.860
PCF5030□T270	27	M	1KHz, 0.25V	0.222	0.750
PCF5030□T330	33	M	1KHz, 0.25V	0.257	0.720
PCF5030□T470	47	M	1KHz, 0.25V	0.352	0.620
PCF5030□T680	68	M	1KHz, 0.25V	0.525	0.510
PCF5030□T101	100	M	1KHz, 0.25V	0.801	0.430
PCF5030□T121	120	M	1KHz, 0.25V	0.850	0.340
PCF5030□T151	150	M	1KHz, 0.25V	1.100	0.260
PCF5030□T181	180	M	1KHz, 0.25V	1.190	0.240
PCF5030□T221	220	M	1KHz, 0.25V	1.530	0.200
PCF5030□T331	330	M	1KHz, 0.25V	2.030	0.190
PCF5030□T391	390	M	1KHz, 0.25V	3.000	0.160
PCF5030□T471	470	M	1KHz, 0.25V	3.500	0.150
PCF5030□T561	560	M	1KHz, 0.25V	4.450	0.140

PCF6020 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
PCF6020□T1R3	1.3	N	100KHz, 0.1V	0.031	3.200
PCF6020□T1R5	1.5	N	100KHz, 0.1V	0.035	3.100
PCF6020□T2R2	2.2	N	100KHz, 0.1V	0.040	2.700
PCF6020□T3R3	3.3	N	100KHz, 0.1V	0.060	2.100
PCF6020□T4R7	4.7	M	100KHz, 0.1V	0.070	1.800
PCF6020□T5R3	5.3	M	100KHz, 0.1V	0.075	1.700
PCF6020□T6R2	6.2	M	100KHz, 0.1V	0.085	1.600
PCF6020□T6R8	6.8	M	100KHz, 0.1V	0.090	1.500
PCF6020□T8R2	8.2	M	100KHz, 0.1V	0.125	1.450
PCF6020□T100	10	M	100KHz, 0.1V	0.150	1.250
PCF6020□T150	15	M	100KHz, 0.1V	0.220	1.100
PCF6020□T220	22	M	100KHz, 0.1V	0.320	0.900
PCF6020□T330	33	M	100KHz, 0.1V	0.450	0.800
PCF6020□T470	47	M	100KHz, 0.1V	0.600	0.700
PCF6020□T680	68	M	100KHz, 0.1V	0.900	0.500
PCF6020□T820	82	M	100KHz, 0.1V	1.000	0.450
PCF6020□T101	100	M	100KHz, 0.1V	1.200	0.420
PCF6020□T151	150	M	100KHz, 0.1V	1.800	0.350

■Electrical Characteristics

PCF6030 Type(□:Tolerance):

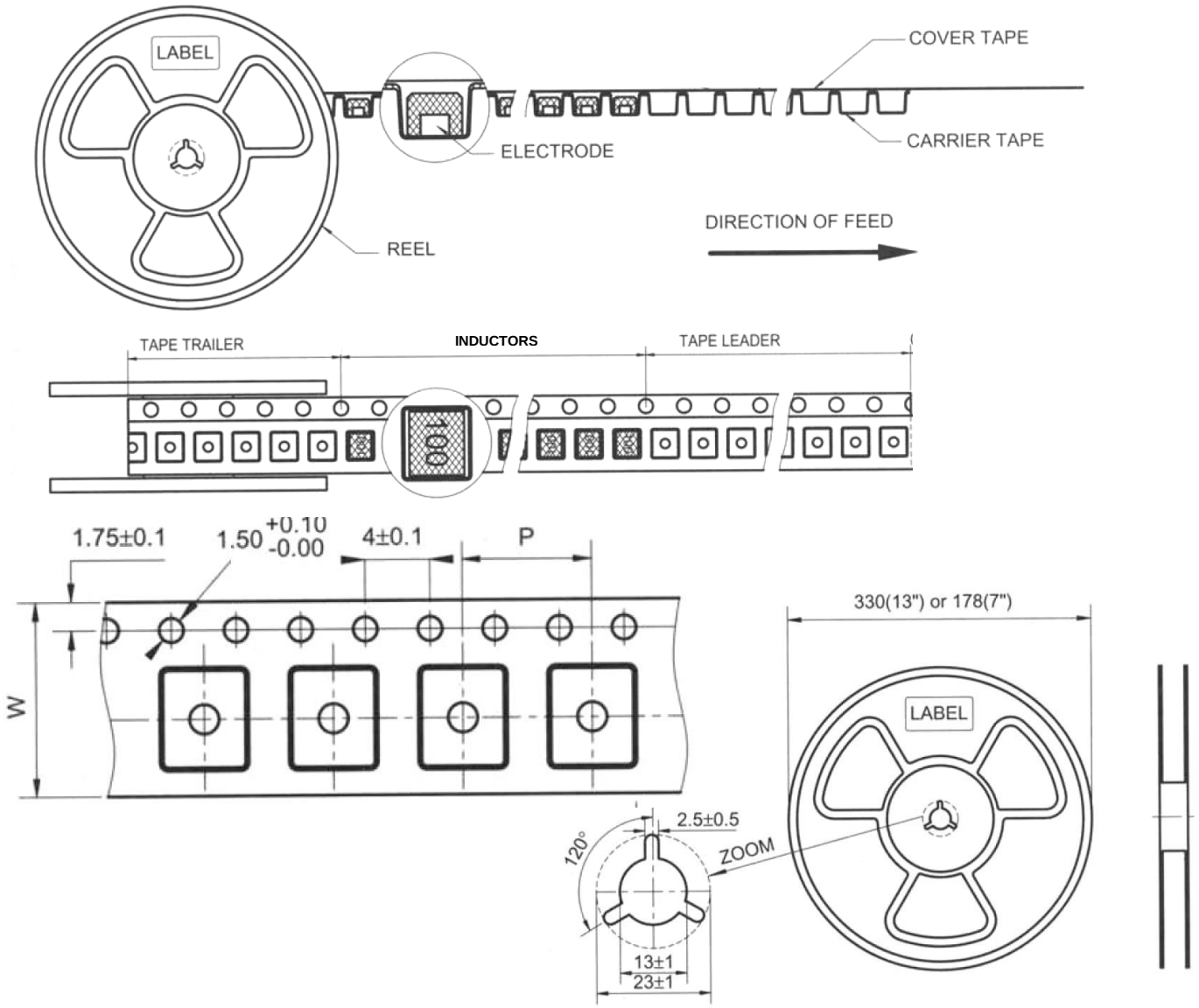
Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
PCF6030□T2R2	2.2	N	100KHz, 0.1V	0.030	3.000
PCF6030□T3R3	3.3	N	100KHz, 0.1V	0.036	2.800
PCF6030□T4R7	4.7	M	100KHz, 0.1V	0.045	2.600
PCF6030□T5R3	5.3	M	100KHz, 0.1V	0.045	2.500
PCF6030□T6R2	6.2	M	100KHz, 0.1V	0.070	1.800
PCF6030□T6R8	6.8	M	100KHz, 0.1V	0.072	1.700
PCF6030□T8R2	8.2	M	100KHz, 0.1V	0.080	1.600
PCF6030□T100	10	M	100KHz, 0.1V	0.085	1.400
PCF6030□T150	15	M	100KHz, 0.1V	0.120	1.200
PCF6030□T220	22	M	100KHz, 0.1V	0.160	1.100
PCF6030□T330	33	M	100KHz, 0.1V	0.220	1.000
PCF6030□T470	47	M	100KHz, 0.1V	0.300	0.800
PCF6030□T680	68	M	100KHz, 0.1V	0.400	0.560
PCF6030□T820	82	M	100KHz, 0.1V	0.480	0.500
PCF6030□T101	100	M	100KHz, 0.1V	0.560	0.450
PCF6030□T151	150	M	100KHz, 0.1V	1.000	0.350

■Electrical Characteristics

PCF7040 Type(□:Tolerance):

Part No	L (μH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
PCF7040□TR36	0.36	N	100KHz, 0.25V	0.005	9.24
PCF7040□TR56	0.56	N	100KHz, 0.25V	0.006	8.50
PCF7040□TR80	0.80	N	100KHz, 0.25V	0.009	5.80
PCF7040□T1R0	1.0	M, N	100KHz, 0.25V	0.040	2.10
PCF7040□T1R2	1.2	M, N	100KHz, 0.25V	0.040	2.10
PCF7040□T1R5	1.5	M, N	100KHz, 0.25V	0.040	2.10
PCF7040□T1R8	1.8	M, N	100KHz, 0.25V	0.040	2.09
PCF7040□T2R2	2.2	M, N	100KHz, 0.25V	0.041	2.08
PCF7040□T2R5	2.5	M, N	100KHz, 0.25V	0.041	2.08
PCF7040□T3R3	3.3	M, N	100KHz, 0.25V	0.041	2.07
PCF7040□T4R3	4.3	M, N	100KHz, 0.25V	0.041	2.06
PCF7040□T4R7	4.7	M, N	100KHz, 0.25V	0.042	2.05
PCF7040□T5R6	5.6	M, N	100KHz, 0.25V	0.043	2.04
PCF7040□T6R8	6.8	M, N	100KHz, 0.25V	0.044	2.04
PCF7040□T8R2	8.2	M, N	100KHz, 0.25V	0.047	2.02
PCF7040□T100	10	M	1KHz, 0.25V	0.049	2.00
PCF7040□T120	12	M	1KHz, 0.25V	0.058	1.90
PCF7040□T150	15	M	1KHz, 0.25V	0.081	1.60
PCF7040□T180	18	M	1KHz, 0.25V	0.091	1.48
PCF7040□T220	22	M	1KHz, 0.25V	0.110	1.32
PCF7040□T270	27	M	1KHz, 0.25V	0.150	1.26
PCF7040□T330	33	M	1KHz, 0.25V	0.170	1.10
PCF7040□T390	39	M	1KHz, 0.25V	0.230	1.05
PCF7040□T470	47	M	1KHz, 0.25V	0.260	1.00
PCF7040□T560	56	M	1KHz, 0.25V	0.350	0.85
PCF7040□T680	68	M	1KHz, 0.25V	0.380	0.78
PCF7040□T820	82	M	1KHz, 0.25V	0.430	0.74
PCF7040□T101	100	M	1KHz, 0.25V	0.610	0.70
PCF7040□T121	120	M	1KHz, 0.25V	0.660	0.60
PCF7040□T151	150	M	1KHz, 0.25V	0.880	0.52
PCF7040□T181	180	M	1KHz, 0.25V	0.980	0.46
PCF7040□T221	220	M	1KHz, 0.25V	1.170	0.40
PCF7040□T271	270	M	1KHz, 0.25V	1.640	0.36
PCF7040□T331	330	M	1KHz, 0.25V	1.860	0.32
PCF7040□T391	390	M	1KHz, 0.25V	2.850	0.28
PCF7040□T471	470	M	1KHz, 0.25V	3.010	0.26
PCF7040□T561	560	M	1KHz, 0.25V	3.620	0.24
PCF7040□T681	680	M	1KHz, 0.25V	4.630	0.22
PCF7040□T821	820	M	1KHz, 0.25V	5.200	0.20
PCF7040□T102	1000	M	1KHz, 0.25V	6.000	0.18

■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
PCF6020	16	12	1500
PCF6030	16	12	1500
PCF7040	16	12	1000

■SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: 15~28℃; Humidity: <80% relative humidity. Recommended product should be used within one year from the time of delivery.

Environmental test

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

Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solderability test	Terminal area must have 90% minimum 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.

The condition of reflow (recommendation):