SPECIFICATION

TCDN Series (Rev. 1.0)

Applications

* DC/DC converters, etc
* Power supply for VTRs
* OA equipment
* LCD televisions/ Notebook PCs
* Portable communication devices

Features

* RoHS compliant
* Available in magnetic shielding
* Low DC resistance
* Suitable for large currents
* Ideal for DC-DC converter inductor applications
* Available on tape and reel for automatic surface mounting

Operating & Storage Condition

* Operating Temp :Stand Type:-40 to +85°C
* Storage Temp : Stand Type -40 to +85°C
* Storage Life Time :12 Months @25°C,RH 65%

Product Identification

TCDN	53	-	4R7	M
1	2		3	4

1. Product Code
2. Size Code
3. Inductance: 4.7uH
4. Tolerance: M=±20%, N=±30%

Test Equipment

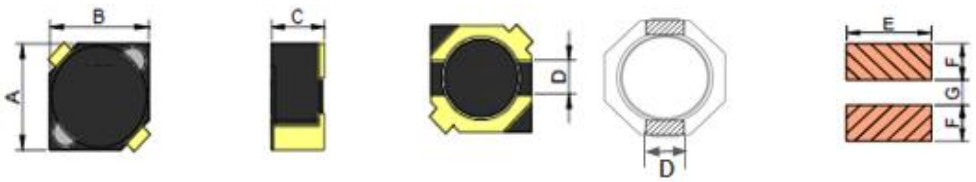
* HP4284A,HP42841A-L,IDC,Q,RDC
* HP8753D NETWORK ANALYZER-SRF

Standard Atmospheric Conditions

* Ambient Temp : 20+/-15℃
* Relative Humidity : 65+/-20%

Dimension & Recommended PAD Layout: [mm]

Top View	Side View	Bottom View	Pad Layout



Size Code	A(±0.3)	B(±0.3)	C(max.)	D(ref)	E(ref.)	F(ref.)	G(ref.)
32	3.8	3.8	1.9	1.2	4.2	1.6	1.2
42	4.7	4.7	2.0	1.5	5.3	1.9	1.5
43	4.7	4.7	3.0	1.5	5.3	1.9	1.5
52	5.7	5.7	2.0	2.0	6.3	2.1	2.0
53	5.7	5.7	3.0	2.0	6.3	2.1	2.0
62	6.7	6.7	2.0	2.0	7.3	2.6	2.0
63	6.7	6.7	3.0	2.0	7.3	2.6	2.0
64	6.7	6.7	4.0	2.0	7.3	2.6	2.0
83	8.0	8.0	3.0	2.5	2.8	2.0	6.1
84	8.0	8.0	4.0	2.5	2.8	2.0	6.1
85	8.0	8.0	4.5	2.5	2.8	2.0	6.1
86	8.0	8.0	6.0	2.5	2.8	2.0	6.1

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Electrical Characteristics

L Code	L (uH)	DCR (Ω) max. / IDC (A) max.															
		32		42		43		52		53		62		63		64	
1R0	1.0	0.045	1.60	0.045	1.72									0.016	4.10		
1R2	1.2					0.024	2.56									0.014	4.20
1R5	1.5	0.050	1.55											0.018	3.50		
1R8	1.8					0.028	2.20										
2R2	2.2	0.070	1.20	0.075	1.32	0.031	2.04	0.034	2.60	0.018	2.60	0.043	2.60	0.021	3.00	0.018	4.00
2R5	2.5									0.018	2.60						
2R7	2.7			0.105	1.28	0.043	1.60										
3R0	3.0									0.024	2.40			0.024	3.00		
3R3	3.3	0.080	1.10	0.110	1.04	0.049	1.57	0.047	2.07	0.030	2.20	0.056	2.40	0.026	2.70	0.020	3.50
3R8	3.8																
3R9	3.9			0.155	0.88	0.065	1.44							0.027	2.60	0.023	3.10
4R1	4.1							0.057	1.95								
4R2	4.2																
4R7	4.7	0.110	0.90	0.162	0.84	0.072	1.32	0.060	1.90	0.036	2.10	0.073	2.10	0.032	2.50	0.024	3.00
5R0	5.0													0.033	2.40	0.025	2.90
5R2	5.2																
5R3	5.3																
5R4	5.4							0.076	1.60								
5R6	5.6			0.170	0.80	0.101	1.17			0.040	1.90						
6R0	6.0													0.035	2.25		
6R2	6.2							0.096	1.40	0.045	1.80					0.027	2.50
6R8	6.8	0.170	0.73	0.180	0.76	0.109	1.12	0.096	1.30			0.099	1.80	0.040	2.10		
7R0	7.0																
7R3	7.3													0.054	2.10		
7R4	7.4															0.031	2.30
8R2	8.2			0.190	0.68	0.118	1.04			0.053	1.60						
8R6	8.6													0.058	1.85		
8R7	8.7															0.034	2.20
8R9	8.9							0.116	1.25								
100	10.0	0.210	0.55	0.200	0.61	0.128	1.00	0.124	1.20	0.065	1.30	0.156	1.50	0.065	1.70	0.038	2.00
120	12.0			0.210	0.56	0.132	0.84	0.153	1.10	0.076	1.20			0.070	1.55	0.053	1.70
150	15.0	0.290	0.45	0.240	0.50	0.149	0.76	0.196	0.97	0.103	1.10	0.244	1.20	0.084	1.40	0.057	1.60
180	18.0			0.338	0.48	0.166	0.72	0.210	0.85	0.110	1.00			0.095	1.32	0.092	1.50
220	22.0	0.430	0.40	0.397	0.41	0.235	0.70	0.290	0.80	0.122	0.90	0.388	0.95	0.128	1.20	0.096	1.30
270	27.0			0.441	0.35	0.261	0.58	0.330	0.75	0.175	0.85			0.142	1.05	0.109	1.20
330	33.0	0.680	0.32	0.694	0.32	0.378	0.56	0.386	0.65	0.189	0.75	0.531	0.82	0.165	0.97	0.124	1.10
390	39.0			0.709	0.30	0.384	0.50	0.520	0.57	0.212	0.70			0.210	0.86	0.138	1.00
470	47.0	1.000	0.26	0.922	0.28	0.587	0.48	0.595	0.54	0.250	0.62	0.775	0.65	0.238	0.80	0.155	0.95
560	56.0			1.080	0.26	0.624	0.41	0.665	0.50	0.305	0.58			0.277	0.73	0.202	0.85
680	68.0	1.100	0.22	1.300	0.24	0.699	0.35	0.840	0.43	0.355	0.52			0.304	0.65	0.234	0.75
820	82.0			1.550	0.22	0.915	0.32	0.978	0.41	0.463	0.46			0.390	0.60	0.324	0.70
101	100.0	1.750	0.15	1.730	0.20	1.020	0.29	1.200	0.36	0.520	0.42			0.535	0.54	0.358	0.65
121	120.0			2.390	0.18	1.270	0.27	1.500	0.33	0.560	0.40			0.750	0.51	0.470	0.59
151	150.0			2.670	0.15	1.350	0.24	1.710	0.31	0.680	0.35			0.950	0.47	0.580	0.54
181	180.0			4.000	0.14	1.540	0.22	2.240	0.28	0.930	0.32			1.200	0.41	0.690	0.49
221	220.0					1.720	0.20	2.440	0.23	1.150	0.30			1.500	0.37	0.890	0.43
271	270.0					1.950	0.16	3.380	0.21	1.560	0.27			1.700	0.33	1.290	0.40
331	330.0					2.660	0.14	4.340	0.18	1.980	0.25			2.150	0.28	1.700	0.37
391	390.0					2.830	0.13			2.500	0.22			2.250	0.27	1.750	0.34
471	470.0									2.700	0.20			3.150	0.21	2.200	0.32

* Test Freq.: L≤8.2uH @100KHz / 0.25V (N=±30%); L>8.2uH @1KHz / 0.25V (M=±20%)
* IDC : This indicates the value of current when the inductance is 35% lower than it's initial value at D.C. superimposition or D.C.current when at ΔT=40°C,whichever is lower. (Ta=20°C)

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Electrical Characteristics

L Code	L (uH)	DCR (Ω) max. / IDC (A) max.							
		83		84		85		86	
1R0	1.0								
1R2	1.2								
1R5	1.5								
1R8	1.8			0.017	5.80	0.016	5.15	0.012	6.00
2R2	2.2	0.020	4.26	0.020	5.40	0.018	5.10	0.013	5.50
2R5	2.5	0.026	4.13	0.022	5.15	0.020	4.80	0.014	5.10
2R7	2.7								
3R0	3.0								
3R3	3.3	0.033	3.70	0.028	4.60	0.022	4.50	0.016	4.40
3R8	3.8								
3R9	3.9	0.059	3.00	0.029	4.30	0.030	4.00	0.016	4.10
4R1	4.1								
4R2	4.2								
4R7	4.7	0.062	2.60	0.032	4.05	0.033	3.87	0.017	4.00
5R0	5.0	0.068	2.60	0.035	3.60	0.038	3.45	0.018	3.80
5R2	5.2								
5R3	5.3								
5R4	5.4								
5R6	5.6								
6R0	6.0								
6R2	6.2								
6R8	6.8	0.085	2.50	0.036	3.00	0.044	3.10	0.022	3.10
7R0	7.0								
7R3	7.3								
7R4	7.4								
8R2	8.2								
8R6	8.6								
8R7	8.7								
8R9	8.9								
100	10.0	0.091	2.50	0.049	2.70	0.069	2.50	0.026	2.60
120	12.0								
150	15.0	0.137	1.61	0.075	2.30	0.075	2.35	0.036	2.30
180	18.0								
220	22.0	0.195	1.40	0.109	1.88	0.082	1.90	0.045	1.70
270	27.0								
330	33.0	0.319	1.16	0.163	1.52	0.125	1.62	0.065	1.50
390	39.0								
470	47.0	0.423	0.90	0.211	1.28	0.176	1.35	0.091	1.20
560	56.0								
680	68.0	0.559	0.75	0.304	1.10	0.247	1.20	0.130	1.00
820	82.0								
101	100.0	0.793	0.58	0.416	0.88	0.377	1.02	0.175	0.80
121	120.0	0.935	0.51	0.494	0.83	0.429	0.90	0.220	0.70

* Test Freq.: L≤8.2uH @100KHz / 0.25V (N=±30%); L>8.2uH @1KHz / 0.25V (M=±20%)
* IDC : This indicates the value of current when the inductance is 35% lower than it's initial value at D.C. superimposition or D.C.current when at ΔT=40°C,whichever is lower. (Ta=20°C)