

TCDL Series (Rev. 1.0)



Features

- * RoHS compliant
- * Available in magnetic shielding
- * Low DC resistance
- * Suitable for large currents
- * Ideal for DC-DC converter inductor applications

Product Identification

TCDL 7030 - 100 M
1 2 3 4

1. Product Code
2. Size Code
3. Inductance: 10uH
4. Tolerance: M=±20%, N=±30%

Dimension & Recommended PAD Layout: [mm]

	Top View	Side View	Bottom View	PAD Layout				
Size Code	A(±0.5)	B(±0.5)	C(max.)	E(typ.)	F(typ.)	H(ref.)	I(ref.)	J(ref.)
6045	6.2±0.3	6.0±0.2	4.8	0.8	2	2.2	7.0	4.0
7030	7.5	7.5	3.0	1.0	2.5	2.8	8.4	5.4
7040	7.5	7.5	4.0	1.0	2.5	2.8	8.4	5.4
7045	7.5	7.5	4.5	1.0	2.5	2.8	8.4	5.4
7060	7.5	7.5	6.0	1.0	2.5	2.8	8.4	5.4

Applications

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

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%

Test Equipment

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

Standard Atmospheric Conditions

- * Ambient Temp : 20+/-15°C
- * Relative Humidity : 65±20%

TCDL Series (Rev. 1.0)

Electrical Characteristics

P/N	Inductance (uH)	Tolerance	DCR (mΩ) ±30%	Isat. (A) max.	Irms. (A) max.
TCDL6045-1R0N	1.0	N	11	6.70	4.80
TCDL6045-1R5N	1.5	N	13	5.50	4.50
TCDL6045-2R2N	2.2	N	15	4.20	4.10
TCDL6045-3R3N	3.3	N	19	3.50	3.70
TCDL6045-4R7N	4.7	N	23	3.10	3.30
TCDL6045-6R8N	6.8	N	27	2.50	3.10
TCDL6045-100M/N	10.0	M/N	35	2.60	2.10
TCDL6045-150M/N	15.0	M/N	60	2.30	1.70
TCDL6045-220M/N	22.0	M/N	75	1.80	1.40
TCDL6045-330M/N	33.0	M/N	100	1.60	1.10
TCDL6045-470M/N	47.0	M/N	130	1.40	0.97
TCDL6045-680M/N	68.0	M/N	200	1.10	0.81
TCDL6045-101M/N	100.0	M/N	320	0.86	0.61
TCDL6045-331M/N	330.0	M/N	1500	0.47	0.45
TCDL6045-471M/N	470.0	M/N	1680	0.27	0.27
TCDL6045-222M/N	2200.0	M/N	1750	0.10	0.08
TCDL7030-1R0N	1.0	N	9.2±20%	9.00	6.50
TCDL7030-2R2N	2.2	N	19.2±20%	5.50	4.60
TCDL7030-2R7N	2.7	N	20.5±20%	5.30	4.40
TCDL7030-3R3N	3.3	N	22.5±20%	4.10	4.20
TCDL7030-4R7M/N	4.7	M/N	30.0±20%	3.30	3.50
TCDL7030-5R0N	5.0	N	30.0±20%	3.30	3.50
TCDL7030-6R8N	6.8	N	40.0±20%	3.10	3.10
TCDL7030-8R0N	8.0	N	52.0±20%	3.00	2.60
TCDL7030-100M/N	10.0	M/N	70.0±20%	2.90	2.00
TCDL7030-220M/N	22.0	M/N	140.0±20%	2.00	1.70
TCDL7030-330M/N	33.0	M/N	171.0±20%	1.70	1.20
TCDL7030-470M/N	47.0	M/N	261.0±20%	1.50	1.00
TCDL7030-101M/N	100.0	M/N	571.0±20%	1.00	0.85

* Test Freq.: @100KHz / 0.1V

* 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)

* Tolerance: M= ±20%, N= ±30%



TCDL Series (Rev. 1.0)

Electrical Characteristics

P/N	Inductance (μ H)	Tolerance	DCR ($m\Omega$) $\pm 20\%$	Isat. (A) max.	Irms. (A) max.
TCDL7040-1R0N	1.0	N	5.4	8.30	8.00
TCDL7040-1R5N	1.5	N	7.2	7.20	6.80
TCDL7040-2R0N	2.0	N	8.0	7.00	6.50
TCDL7040-2R2N	2.2	N	8.0	7.00	6.50
TCDL7040-3R3N	3.3	N	11.2	5.50	5.40
TCDL7040-4R7N	4.7	N	14.1	4.90	4.60
TCDL7040-5R6M/N	5.6	M/N	16.0	4.60	4.10
TCDL7040-6R8M/N	6.8	M/N	22.2	3.90	3.50
TCDL7040-8R2M/N	8.2	M/N	30.0	3.50	3.00
TCDL7040-100M/N	10.0	M/N	34.6	3.20	2.80
TCDL7040-150M/N	15.0	M/N	47.0	2.50	2.30
TCDL7040-180M/N	18.0	M/N	57.5	2.30	2.25
TCDL7040-220M/N	22.0	M/N	58.0	2.20	2.10
TCDL7040-330M/N	33.0	M/N	95.0	1.80	2.00
TCDL7040-470M/N	47.0	M/N	165.0	1.35	1.30
TCDL7040-820M/N	82.0	M/N	312.0	1.20	0.85
TCDL7040-101M/N	100.0	M/N	400.0	1.10	0.82
TCDL7040-121M/N	120.0	M/N	469.0	1.00	0.75
TCDL7040-151M/N	150.0	M/N	685.0	0.92	0.65
TCDL7045-1R0N	1.0	N	6.5	9.00	8.00
TCDL7045-2R2N	2.2	N	8.6	7.30	6.50
TCDL7045-3R3N	3.3	N	10.2	5.80	5.50
TCDL7045-4R7M/N	4.7	M/N	14.5	5.40	5.20
TCDL7045-6R8M/N	6.8	M/N	19.2	4.30	4.00
TCDL7045-100M/N	10.0	M/N	28.9	3.50	3.50
TCDL7045-180M/N	18.0	M/N	51.4	2.80	2.70
TCDL7045-220M/N	22.0	M/N	54.3	2.60	2.40
TCDL7045-330M/N	33.0	M/N	82.4	2.10	2.00
TCDL7045-470M/N	47.0	M/N	110.0	1.80	1.60
TCDL7045-680M/N	68.0	M/N	165.0	1.40	1.40
TCDL7045-101M/N	100.0	M/N	330.0	1.20	1.10
TCDL7045-221M/N	220.0	M/N	800.0	0.80	0.70
TCDL7045-331M/N	330.0	M/N	1130.0	0.70	0.55

* Test Freq.: @100KHz / 0.1V

* 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 $\Delta T=40^{\circ}\text{C}$, whichever is lower. ($T_a=20^{\circ}\text{C}$)* Tolerance: M= $\pm 20\%$, N= $\pm 30\%$

TCDL Series (Rev. 1.0)

Electrical Characteristics

P/N	Inductance (uH)	Tolerance	DCR (mΩ) ±20%	Isat. (A) max.	Irms. (A) max.
TCDL7060-2R0N	2.0	N	8.6	10.50	6.60
TCDL7060-2R2N	2.2	N	8.6	10.50	6.60
TCDL7060-3R3N	3.3	N	12.2	7.50	5.35
TCDL7060-4R7M/N	4.7	M/N	16.8	7.00	4.70
TCDL7060-5R2N	5.2	N	18.3	6.30	4.55
TCDL7060-6R2N	6.2	N	21.0	5.80	4.30
TCDL7060-6R8M/N	6.8	M/N	22.0	5.30	4.10
TCDL7060-100M/N	10.0	M/N	26.9	4.50	3.70
TCDL7060-150M/N	15.0	M/N	32.6	3.60	3.30
TCDL7060-220M/N	22.0	M/N	50.8	3.00	2.60
TCDL7060-330M/N	33.0	M/N	92.5	2.50	2.00
TCDL7060-470M/N	47.0	M/N	150.0	2.00	1.45
TCDL7060-680M/N	68.0	M/N	290.0	1.80	1.00
TCDL7060-820M/N	82.0	M/N	410.0	1.60	0.85
TCDL7060-101M/N	100.0	M/N	510.0	1.40	0.80
TCDL7060-121M/N	120.0	M/N	560.0	1.30	0.75
TCDL7060-151M/N	150.0	M/N	650.0	1.20	0.72
TCDL7060-181M/N	180.0	M/N	710.0	1.10	0.68
TCDL7060-221M/N	220.0	M/N	770.0	0.90	0.55

* Test Freq.: @100KHz / 0.1V

* 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)

* Tolerance: M= ±20%, N= ±30%

