SMT Shielded Power Inductors - TCRH Series / 贴片闭磁式功率电感

SMT Shielded Power Inductor Features

Magnetically shielded construction
Compact and thin
Large Current and Low DCR

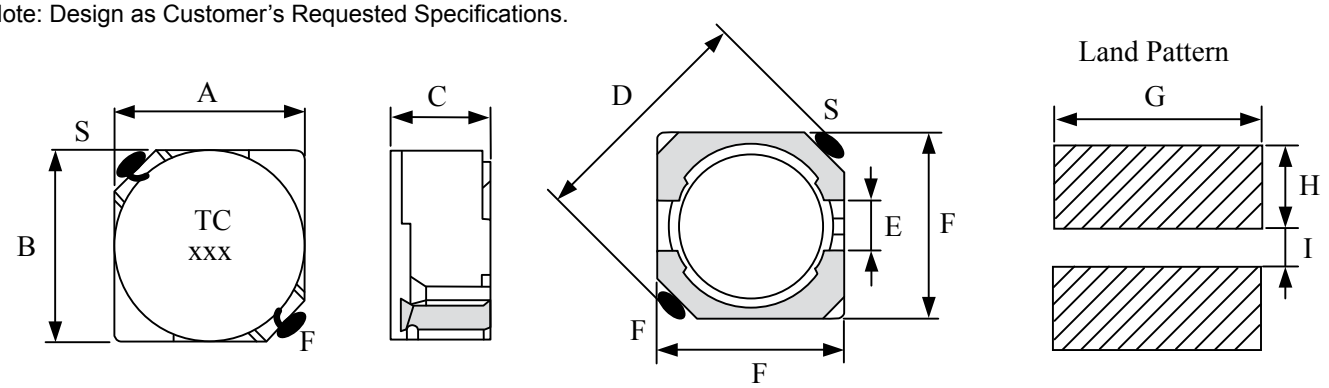
Applications

DC-DC converter of portable equipment.
Camcorder, LCD television set, Digital camera, P.D.A., Notebook.

TCRH Inductor Dimensions & Configurations (Unit In mm)

Type	A±0.3	B±0.3	C(max)	D(max)	E(Ref.)	F(Ref.)	G	H	I
TCRH4D18	4.7	4.7	2.0	6.9	1.5	4.5	5.3	1.90	1.5
TCRH4D28	4.7	4.7	3.0	6.9	1.5	4.5	5.3	1.90	1.5
TCRH5D18	5.7	5.7	2.0	8.2	2.0	5.5	6.3	2.15	2.0
TCRH5D28	5.7	5.7	3.0	8.2	2.0	5.5	6.3	2.15	2.0
TCRH6D28	6.7	6.7	3.0	9.5	2.0	6.5	7.3	2.65	2.0
TCRH6D38	6.7	6.7	4.0	9.5	2.0	6.5	7.3	2.65	2.0

Note: Design as Customer's Requested Specifications.



Electrical Characteristics for TCRH4D18 Series Inductors

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A) (max)
TCRH4D18 - 1R0N	1.00	100	0.045	1.72
TCRH4D18 - 2R2N	2.20	100	0.075	1.32
TCRH4D18 - 2R7N	2.70	100	0.105	1.28
TCRH4D18 - 3R3N	3.30	100	0.110	1.04
TCRH4D18 - 3R9N	3.90	100	0.155	0.88
TCRH4D18 - 4R7N	4.70	100	0.162	0.84
TCRH4D18 - 5R6N	5.60	100	0.170	0.80
TCRH4D18 - 6R8N	6.80	100	0.200	0.76
TCRH4D18 - 8R2N	8.20	100	0.245	0.68
TCRH4D18 - 100M	10.00	100	0.200	0.61
TCRH4D18 - 120M	12.00	100	0.210	0.56
TCRH4D18 - 150M	15.00	100	0.240	0.50
TCRH4D18 - 180M	18.00	100	0.338	0.48
TCRH4D18 - 220M	22.00	100	0.397	0.41
TCRH4D18 - 270M	27.00	100	0.441	0.35
TCRH4D18 - 330M	33.00	100	0.694	0.32
TCRH4D18 - 390M	39.00	100	0.709	0.30

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Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A) (max)
TCRH4D18 - 470M	47.00	100	0.922	0.28
TCRH4D18 - 560M	56.00	100	1.080	0.26
TCRH4D18 - 680M	68.00	100	1.300	0.24
TCRH4D18 - 820M	82.00	100	1.550	0.22
TCRH4D18 - 101M	100.00	100	1.730	0.20
TCRH4D18 - 121M	120.00	100	2.390	0.18
TCRH4D18 - 151M	150.00	100	2.670	0.15
TCRH4D18 - 181M	180.00	100	4.000	0.14

Note: Test Freq.: 100KHz / 0.1V.
Operating Temp.: -40°C ~ +85°C.
Inductance drop=35% typ. at IDC.

Electrical Characteristics for TCRH4D28 Series Inductors

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A) (max)
TCRH4D28 - 1R2N	1.20	100	0.0236	2.56
TCRH4D28 - 1R8N	1.80	100	0.0275	2.20
TCRH4D28 - 2R2N	2.20	100	0.0313	2.04
TCRH4D28 - 2R7N	2.70	100	0.0433	1.60
TCRH4D28 - 3R3N	3.30	100	0.0492	1.57
TCRH4D28 - 3R9N	3.90	100	0.0648	1.44
TCRH4D28 - 4R7N	4.70	100	0.0720	1.32
TCRH4D28 - 5R6N	5.60	100	0.1009	1.17
TCRH4D28 - 6R8N	6.80	100	0.1089	1.12
TCRH4D28 - 8R2N	8.20	100	0.1175	1.04
TCRH4D28 - 100M	10.00	100	0.1283	1.00
TCRH4D28 - 120M	12.00	100	0.1316	0.84
TCRH4D28 - 150M	15.00	100	0.1490	0.76
TCRH4D28 - 180M	18.00	100	0.1660	0.72
TCRH4D28 - 220M	22.00	100	0.2350	0.70
TCRH4D28 - 270M	27.00	100	0.2610	0.58
TCRH4D28 - 330M	33.00	100	0.3780	0.56
TCRH4D28 - 390M	39.00	100	0.3837	0.50
TCRH4D28 - 470M	47.00	100	0.5870	0.48
TCRH4D28 - 560M	56.00	100	0.6245	0.41
TCRH4D28 - 680M	68.00	100	0.6990	0.35
TCRH4D28 - 820M	82.00	100	0.9148	0.32
TCRH4D28 - 101M	100.00	100	1.020	0.29
TCRH4D28 - 121M	120.00	100	1.270	0.27
TCRH4D28 - 151M	150.00	100	1.350	0.24
TCRH4D28 - 181M	180.00	100	1.540	0.22
TCRH4D28 - 221M	220.00	100	1.720	0.20
TCRH4D28 - 271M	270.00	100	1.950	0.16
TCRH4D28 - 331M	330.00	100	2.660	0.14
TCRH4D28 - 391M	390.00	100	2.830	0.13

Note: Test Freq.: 100KHz / 0.1V.
Operating Temp.: -40°C ~ +85°C.
Inductance drop=35% typ. at IDC.

Electrical Characteristics for TCRH5D18 Series Inductors

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A) (max)
TCRH5D18 - 4R1N	4.10	10	0.057	1.95
TCRH5D18 - 5R4N	5.40	10	0.076	1.60
TCRH5D18 - 6R2N	6.20	10	0.096	1.40
TCRH5D18 - 8R9N	8.90	10	0.116	1.25
TCRH5D18 - 100M	10.00	10	0.124	1.20
TCRH5D18 - 120M	12.00	10	0.153	1.10
TCRH5D18 - 150M	15.00	10	0.196	0.97
TCRH5D18 - 180M	18.00	10	0.210	0.85
TCRH5D18 - 220M	22.00	10	0.290	0.80
TCRH5D18 - 270M	27.00	10	0.330	0.75
TCRH5D18 - 330M	33.00	10	0.386	0.65
TCRH5D18 - 390M	39.00	10	0.520	0.57
TCRH5D18 - 470M	47.00	10	0.595	0.54
TCRH5D18 - 560M	56.00	10	0.665	0.50
TCRH5D18 - 680M	68.00	10	0.840	0.43
TCRH5D18 - 820M	82.00	10	0.978	0.41
TCRH5D18 - 101M	100.00	10	1.200	0.36
TCRH5D18 - 121M	120.00	10	1.500	0.33
TCRH5D18 - 151M	150.00	10	1.710	0.31
TCRH5D18 - 181M	180.00	10	2.240	0.28
TCRH5D18 - 221M	220.00	10	2.440	0.23
TCRH5D18 - 271M	270.00	10	3.380	0.21
TCRH5D18 - 331M	330.00	10	4.340	0.18

Note: Test Freq.: 10KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=35% typ. at IDC.

Electrical Characteristics for TCRH5D28 Series Inductors

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A) (max)
TCRH5D28 - 2R6N	2.60	10	0.018	2.60
TCRH5D28 - 3R0N	3.00	10	0.024	2.40
TCRH5D28 - 4R2N	4.20	10	0.031	2.20
TCRH5D28 - 5R3N	5.30	10	0.038	1.90
TCRH5D28 - 6R2N	6.20	10	0.045	1.80
TCRH5D28 - 8R2N	8.20	10	0.053	1.60
TCRH5D28 - 100M	10.00	10	0.065	1.30
TCRH5D28 - 120M	12.00	10	0.076	1.20
TCRH5D28 - 150M	15.00	10	0.103	1.10
TCRH5D28 - 180M	18.00	10	0.110	1.00
TCRH5D28 - 220M	22.00	10	0.122	0.90
TCRH5D28 - 270M	27.00	10	0.175	0.85
TCRH5D28 - 330M	33.00	10	0.189	0.75
TCRH5D28 - 390M	39.00	10	0.212	0.70
TCRH5D28 - 470M	47.00	10	0.260	0.62
TCRH5D28 - 560M	56.00	10	0.305	0.58
TCRH5D28 - 680M	68.00	10	0.355	0.52
TCRH5D28 - 820M	82.00	10	0.463	0.46
TCRH5D28 - 101M	100.00	10	0.520	0.42
TCRH5D28 - 121M	120.00	10	0.560	0.40
TCRH5D28 - 151M	150.00	10	0.680	0.35
TCRH5D28 - 181M	180.00	10	0.930	0.32
TCRH5D28 - 221M	220.00	10	1.150	0.30
TCRH5D28 - 271M	270.00	10	1.560	0.27
TCRH5D28 - 331M	330.00	10	1.980	0.25
TCRH5D28 - 391M	390.00	10	2.500	0.22
TCRH5D28 - 471M	470.00	10	2.700	0.20
TCRH5D28 - 561M	560.00	10	3.120	0.18
TCRH5D28 - 681M	680.00	10	4.150	0.16

Note: Test Freq.: 10KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=35% typ. at IDC.

Electrical Characteristics for TCRH6D28 Series Inductors

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A) (max)
TCRH6D28 - 3R0N	3.00	10	0.024	3.00
TCRH6D28 - 3R9N	3.90	10	0.027	2.60
TCRH6D28 - 5R0N	5.00	10	0.031	2.40
TCRH6D28 - 6R0N	6.00	10	0.035	2.25
TCRH6D28 - 7R3N	7.30	10	0.054	2.10
TCRH6D28 - 8R6N	8.60	10	0.058	1.85
TCRH6D28 - 100M	10.00	10	0.065	1.70
TCRH6D28 - 120M	12.00	10	0.070	1.55
TCRH6D28 - 150M	15.00	10	0.084	1.40
TCRH6D28 - 180M	18.00	10	0.095	1.32
TCRH6D28 - 220M	22.00	10	0.128	1.20
TCRH6D28 - 270M	27.00	10	0.142	1.05
TCRH6D28 - 330M	33.00	10	0.165	0.97
TCRH6D28 - 390M	39.00	10	0.210	0.86
TCRH6D28 - 470M	47.00	10	0.238	0.80
TCRH6D28 - 560M	56.00	10	0.277	0.73
TCRH6D28 - 680M	68.00	10	0.304	0.65
TCRH6D28 - 820M	82.00	10	0.390	0.60
TCRH6D28 - 101M	100.00	10	0.535	0.54
TCRH6D28 - 121M	120.00	10	0.750	0.51
TCRH6D28 - 151M	150.00	10	0.950	0.47
TCRH6D28 - 181M	180.00	10	1.200	0.41
TCRH6D28 - 221M	220.00	10	1.500	0.37
TCRH6D28 - 271M	270.00	10	1.700	0.33
TCRH6D28 - 331M	330.00	10	2.150	0.28
TCRH6D28 - 391M	390.00	10	2.250	0.27
TCRH6D28 - 471M	470.00	10	3.150	0.21
TCRH6D28 - 561M	560.00	10	3.750	0.20
TCRH6D28 - 681M	680.00	10	5.150	0.20

Note: Test Freq.: 10KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=35% typ. at IDC.

Electrical Characteristics for TCRH6D38 Series Inductors

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A) (max)
TCRH6D38 - 3R3N	3.30	10	0.020	3.50
TCRH6D38 - 5R0N	5.00	10	0.024	2.90
TCRH6D38 - 6R2N	6.20	10	0.027	2.50
TCRH6D38 - 7R4N	7.40	10	0.031	2.30
TCRH6D38 - 8R7N	8.70	10	0.034	2.20
TCRH6D38 - 100M	10.00	10	0.038	2.00
TCRH6D38 - 120M	12.00	10	0.053	1.70
TCRH6D38 - 150M	15.00	10	0.057	1.60
TCRH6D38 - 180M	18.00	10	0.092	1.50
TCRH6D38 - 220M	22.00	10	0.096	1.30
TCRH6D38 - 270M	27.00	10	0.109	1.20
TCRH6D38 - 330M	33.00	10	0.124	1.10
TCRH6D38 - 390M	39.00	10	0.138	1.00
TCRH6D38 - 470M	47.00	10	0.155	0.95
TCRH6D38 - 560M	56.00	10	0.202	0.85
TCRH6D38 - 680M	68.00	10	0.234	0.75
TCRH6D38 - 820M	82.00	10	0.324	0.70
TCRH6D38 - 101M	100.00	10	0.358	0.65
TCRH6D38 - 121M	120.00	10	0.470	0.59
TCRH6D38 - 151M	150.00	10	0.580	0.54
TCRH6D38 - 181M	180.00	10	0.690	0.49
TCRH6D38 - 221M	220.00	10	0.890	0.43
TCRH6D38 - 271M	270.00	10	1.290	0.40
TCRH6D38 - 331M	330.00	10	1.700	0.37
TCRH6D38 - 391M	390.00	10	1.750	0.34
TCRH6D38 - 471M	470.00	10	2.200	0.32
TCRH6D38 - 561M	560.00	10	2.850	0.29
TCRH6D38 - 681M	680.00	10	3.200	0.25
TCRH6D38 - 821M	820.00	10	4.050	0.22
TCRH6D38 - 102M	1000.00	10	5.700	0.20

Note: Test Freq.: 10KHz / 0.1V.
Operating Temp.: -40°C ~ +85°C.
Inductance drop=35% typ. at IDC

How to Order

TCRH4D18	-	1R0		M
❶		❷		❸

❶ SMT Shielded Power Inductor : TCRH4D18, TCRH4D28, TCRH5D18, TCRH5D28, TCRH6D28, TCRH6D38.

❷ Inductance

Code	Inductance
1R0	1.00μH
120	12.00μH
121	120.00μH

❸ Tolerance

Code	Tolerance
K	10%
L	15%
M	20%
N	30%