

Chip Shielded Wirewound Power Inductors

**Token Offers Wirewound Power Inductor
0.0050Ω Low DCR Value (TPSLF)**

▶ Preview

Token has once again extended its TPSLF family of low-profile, wire wound, high-current inductors with a new device that offers the lowest direct current resistance (DCR) available in a compact (6.2mm x 6.2mm), (7.4mm x 7.4mm), (10.1mm x 10.1mm), (12.5mm x 12.5mm) package with a low 3.0mm, 3.5mm, 4.5mm, 5.1mm, 5.5mm, 6.5mm, and 7.5mm height profile.

Token TPSLF Wirewound Power Inductors feature RoHS-compliant and a 100 percent Pb-free, magnetically shielded, composite construction that reduces buzz noise to ultra-low levels.

The TPSLF series is a high-performance, space-saving and power-saving solution for DC-DC converter applications for products such as Game machine, HDD, Notebook PC, Projector, PDA, mobile devices, notebook computers, desktop computers, and servers. Other applications include low-profile, and high-current power supplies.

Selection Guide for Chip Inductors :

- TPSLF6028: Inductance 10.00μH ~ 330.00μH; DCR 0.150Ω ~ 4.940Ω; IDC 1.10A ~ 0.19A.
- TPSLF7032: Inductance 1.00μH ~ 1000.00μH; DCR 0.019Ω ~ 7.020Ω; IDC 3.12A ~ 0.10A.
- TPSLF7045: Inductance 1.00μH ~ 1000.00μH; DCR 0.023Ω ~ 4.100Ω; IDC 2.88A ~ 0.17A.
- TPSLF10145: Inductance 10.00μH ~ 1500.00μH; DCR 0.0364Ω ~ 3.400Ω; IDC 3.00A ~ 0.22A.
- TPSLF12555: Inductance 6.00μH ~ 1500.00μH; DCR 0.0164Ω ~ 1.730Ω; IDC 3.60A ~ 0.29A.
- TPSLF12565: Inductance 2.00μH ~ 220.00μH; DCR 0.0117Ω ~ 0.273Ω; IDC 10.00A ~ 1.00A.
- TPSLF12575: Inductance 1.20μH ~ 220.00μH; DCR 0.0050Ω ~ 0.258Ω; IDC 13.00A ~ 1.30A.

Features :

- Magnetically shielded construction.
- Large Current and Low DCR.
- Compact and thin.

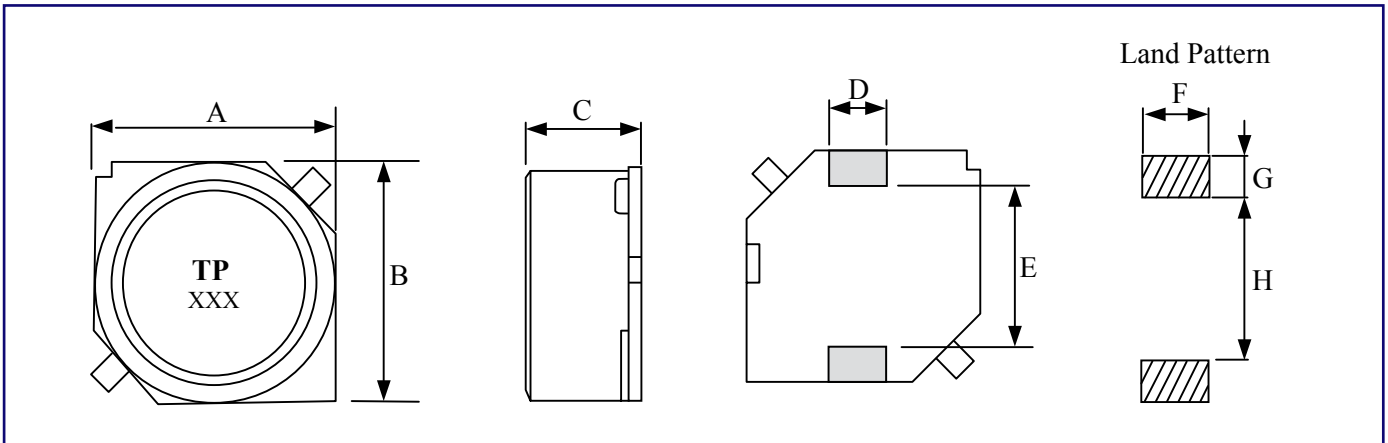
Applications :

- Computers, DC-DC converter, VCR Camera.



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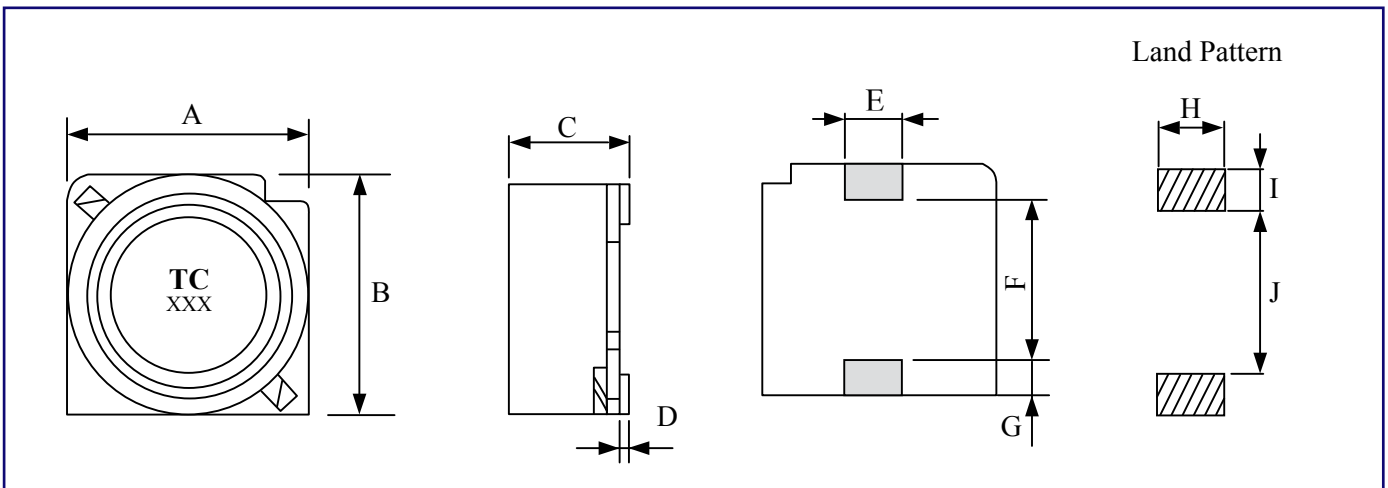
▶ (TPSLF6028, TPSLF7032, TPSLF7045, TPSLF10145) Dimensions & Configurations (Unit: mm)



Type	A(max)	B(max)	C(max)	D±0.2	E(max)	F	G	H
TPSLF6028	6.2	6.2	3.0	1.8	3.0	2.2	1.8	2.5
TPSLF7032	7.4	7.4	3.5	2.0	5.4	3.0	2.0	4.4
TPSLF7045	7.4	7.4	5.1	2.0	5.4	3.0	2.0	4.4
TPSLF10145	10.1	10.1	4.5	2.0	6.0	3.0	2.5	5.6

Note: Design as Customer's Requested Specifications.

▶ (TPSLF12555, TPSLF12565, TPSLF12575) Dimensions & Configurations (Unit: mm)



Type	A±0.3	B±0.3	C±0.3	D(Ref)	E(Ref)	F(Ref)	G(Ref)	H	I	J
TPSLF12555	12.5	12.5	5.5	0.1	3.0	8.3	2.0	3.2	2.5	8.6
TPSLF12565	12.5	12.5	6.5	0.1	3.0	8.3	2.0	3.2	2.5	8.6
TPSLF12575	12.5	12.5	7.5	0.1	3.0	8.3	2.0	3.2	2.5	8.6

Note: Design as Customer's Requested Specifications.

▶ (TPSLF6028) Electrical Characteristics

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A) (max)
TPSLF6028 - 100M	10.00	1	0.150	1.10
TPSLF6028 - 120M	12.00	1	0.200	1.00
TPSLF6028 - 150M	15.00	1	0.230	0.90
TPSLF6028 - 180M	18.00	1	0.270	0.80
TPSLF6028 - 220M	22.00	1	0.340	0.74
TPSLF6028 - 270M	27.00	1	0.380	0.66
TPSLF6028 - 330M	33.00	1	0.450	0.59
TPSLF6028 - 390M	39.00	1	0.490	0.54
TPSLF6028 - 470M	47.00	1	0.690	0.50
TPSLF6028 - 560M	56.00	1	0.780	0.46
TPSLF6028 - 680M	68.00	1	1.070	0.42
TPSLF6028 - 820M	82.00	1	1.210	0.38
TPSLF6028 - 101M	100.00	1	1.390	0.34
TPSLF6028 - 121M	120.00	1	1.900	0.31
TPSLF6028 - 151M	150.00	1	2.180	0.28
TPSLF6028 - 181M	180.00	1	2.770	0.26
TPSLF6028 - 221M	220.00	1	3.120	0.23
TPSLF6028 - 271M	270.00	1	4.380	0.22
TPSLF6028 - 331M	330.00	1	4.940	0.19

Note: Test Freq.: 1KHz / 0.25V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.

▶ (TPSLF7032) Electrical Characteristics

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A)(max)
TPSLF7032 - 1R0M	1.00	1	0.019	3.12
TPSLF7032 - 1R5M	1.50	1	0.023	2.85
TPSLF7032 - 1R8M	1.80	1	0.028	2.66
TPSLF7032 - 2R2M	2.20	1	0.028	2.66
TPSLF7032 - 2R7M	2.70	1	0.030	2.40
TPSLF7032 - 3R3M	3.30	1	0.035	2.26
TPSLF7032 - 4R7M	4.70	1	0.043	1.96
TPSLF7032 - 5R6M	5.60	1	0.050	1.80
TPSLF7032 - 6R8M	6.80	1	0.055	1.76
TPSLF7032 - 8R2M	8.20	1	0.065	1.50
TPSLF7032 - 100M	10.00	1	0.080	1.34
TPSLF7032 - 120M	12.00	1	0.090	1.23
TPSLF7032 - 150M	15.00	1	0.120	1.09
TPSLF7032 - 180M	18.00	1	0.130	0.99
TPSLF7032 - 220M	22.00	1	0.150	0.90
TPSLF7032 - 270M	27.00	1	0.210	0.81
TPSLF7032 - 330M	33.00	1	0.250	0.72
TPSLF7032 - 390M	39.00	1	0.310	0.67
TPSLF7032 - 470M	47.00	1	0.350	0.60
TPSLF7032 - 560M	56.00	1	0.430	0.55
TPSLF7032 - 680M	68.00	1	0.520	0.50
TPSLF7032 - 820M	82.00	1	0.600	0.46
TPSLF7032 - 101M	100.00	1	0.790	0.41
TPSLF7032 - 121M	120.00	1	0.804	0.35
TPSLF7032 - 151M	150.00	1	1.100	0.30
TPSLF7032 - 181M	180.00	1	1.250	0.28
TPSLF7032 - 221M	220.00	1	1.560	0.25
TPSLF7032 - 271M	270.00	1	1.830	0.24
TPSLF7032 - 331M	330.00	1	2.900	0.23
TPSLF7032 - 391M	390.00	1	3.300	0.22
TPSLF7032 - 471M	470.00	1	3.600	0.21
TPSLF7032 - 561M	560.00	1	4.100	0.19
TPSLF7032 - 681M	680.00	1	4.600	0.18
TPSLF7032 - 821M	820.00	1	5.900	0.12
TPSLF7032 - 102M	1000.00	1	7.020	0.10

Note: Test Freq.: 1KHz / 0.25V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.

▶ (TPSLF7045) Electrical Characteristics

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) (max)	IDC (A)(max)
TPSLF7045 - 1R0M	1.00	1	0.023	2.88
TPSLF7045 - 1R2M	1.20	1	0.025	2.85
TPSLF7045 - 1R5M	1.50	1	0.027	2.61
TPSLF7045 - 2R2M	2.20	1	0.030	2.46
TPSLF7045 - 3R3M	3.30	1	0.035	2.28
TPSLF7045 - 4R7M	4.70	1	0.041	2.08
TPSLF7045 - 5R6M	5.60	1	0.044	2.00
TPSLF7045 - 6R8M	6.80	1	0.047	1.94
TPSLF7045 - 8R2M	8.20	1	0.048	1.80
TPSLF7045 - 100M	10.00	1	0.050	1.68
TPSLF7045 - 120M	12.00	1	0.070	1.54
TPSLF7045 - 150M	15.00	1	0.080	1.39
TPSLF7045 - 180M	18.00	1	0.090	1.26
TPSLF7045 - 220M	22.00	1	0.110	1.13
TPSLF7045 - 270M	27.00	1	0.150	1.02
TPSLF7045 - 330M	33.00	1	0.170	0.84
TPSLF7045 - 390M	39.00	1	0.180	0.80
TPSLF7045 - 470M	47.00	1	0.200	0.76
TPSLF7045 - 560M	56.00	1	0.280	0.64
TPSLF7045 - 680M	68.00	1	0.320	0.60
TPSLF7045 - 820M	82.00	1	0.350	0.57
TPSLF7045 - 101M	100.00	1	0.400	0.50
TPSLF7045 - 121M	120.00	1	0.440	0.47
TPSLF7045 - 151M	150.00	1	0.730	0.40
TPSLF7045 - 181M	180.00	1	0.780	0.39
TPSLF7045 - 221M	220.00	1	0.940	0.33
TPSLF7045 - 271M	270.00	1	1.250	0.31
TPSLF7045 - 331M	330.00	1	1.400	0.27
TPSLF7045 - 391M	390.00	1	1.520	0.27
TPSLF7045 - 471M	470.00	1	1.700	0.25
TPSLF7045 - 561M	560.00	1	2.390	0.22
TPSLF7045 - 681M	680.00	1	2.500	0.20
TPSLF7045 - 821M	820.00	1	3.000	0.18
TPSLF7045 - 102M	1000.00	1	4.100	0.17

Note: Test Freq.: 1KHz / 0.25V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.

▶ (TPSLF10145) Electrical Characteristics

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) ($\pm 20\%$)	IDC (A) (max)
TPSLF10145 - 100M	10.00	1	0.0364	3.00
TPSLF10145 - 150M	15.00	1	0.0472	2.40
TPSLF10145 - 220M	22.00	1	0.0591	2.10
TPSLF10145 - 330M	33.00	1	0.0815	1.60
TPSLF10145 - 470M	47.00	1	0.100	1.40
TPSLF10145 - 680M	68.00	1	0.140	1.20
TPSLF10145 - 101M	100.00	1	0.200	1.00
TPSLF10145 - 151M	150.00	1	0.350	0.79
TPSLF10145 - 221M	220.00	1	0.470	0.65
TPSLF10145 - 331M	330.00	1	0.680	0.54
TPSLF10145 - 471M	470.00	1	1.030	0.47
TPSLF10145 - 681M	680.00	1	1.600	0.38
TPSLF10145 - 102M	1000.00	1	2.800	0.32
TPSLF10145 - 152M	1500.00	1	3.400	0.22

Note: Test Freq.: 1KHz / 0.25V.

Operating Temp.: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$.

Inductance drop=10% typ. at IDC.

▶ (TPSLF12555) Electrical Characteristics

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) ($\pm 20\%$)	IDC (A)(max)
TPSLF12555 - 6R0N	6.00	1	0.0164	3.60
TPSLF12555 - 100M	10.00	1	0.0215	3.40
TPSLF12555 - 150M	15.00	1	0.0259	2.80
TPSLF12555 - 220M	22.00	1	0.0338	2.30
TPSLF12555 - 330M	33.00	1	0.0415	1.90
TPSLF12555 - 470M	47.00	1	0.0618	1.60
TPSLF12555 - 680M	68.00	1	0.0832	1.30
TPSLF12555 - 101M	100.00	1	0.117	1.10
TPSLF12555 - 151M	150.00	1	0.190	0.88
TPSLF12555 - 221M	220.00	1	0.270	0.72
TPSLF12555 - 331M	330.00	1	0.410	0.59
TPSLF12555 - 471M	470.00	1	0.520	0.49
TPSLF12555 - 681M	680.00	1	0.760	0.43
TPSLF12555 - 102M	1000.00	1	1.120	0.34
TPSLF12555 - 152M	1500.00	1	1.730	0.29

Note: Test Freq.: 1KHz / 0.25V.

Operating Temp.: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$.

Inductance drop=10% typ. at IDC.

▶ (TPSLF12565) Electrical Characteristics

Part Number	Inductance (μ H)	Test Freq. (KHz)	DCR (Ω) ($\pm 20\%$)	IDC (A) (max)
TPSLF12565 - 2R0N	2.00	1	0.0117	10.00
TPSLF12565 - 4R2N	4.20	1	0.0150	7.30
TPSLF12565 - 7R0N	7.00	1	0.0177	5.70
TPSLF12565 - 100M	10.00	1	0.0202	5.00
TPSLF12565 - 150M	15.00	1	0.0237	4.20
TPSLF12565 - 220M	22.00	1	0.0316	3.50
TPSLF12565 - 330M	33.00	1	0.0406	2.80
TPSLF12565 - 470M	47.00	1	0.0578	2.40
TPSLF12565 - 680M	68.00	1	0.0787	2.00
TPSLF12565 - 101M	100.00	1	0.123	1.60
TPSLF12565 - 221M	220.00	1	0.273	1.00

Note: Test Freq.: 1KHz / 0.25V.

Operating Temp.: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$.

Inductance drop=10% typ. at IDC.

▶ (TPSLF12575) Electrical Characteristics

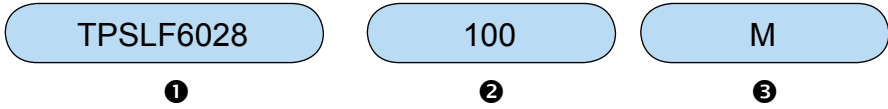
Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) ($\pm 20\%$)	IDC (A) (max)
TPSLF12575 - 1R2N	1.20	1	0.0050	13.00
TPSLF12575 - 2R7N	2.70	1	0.0094	10.00
TPSLF12575 - 3R9N	3.90	1	0.0104	9.00
TPSLF12575 - 5R6N	5.60	1	0.0116	7.80
TPSLF12575 - 6R8N	6.80	1	0.0131	7.20
TPSLF12575 - 100M	10.00	1	0.0156	5.50
TPSLF12575 - 150M	15.00	1	0.0184	4.70
TPSLF12575 - 220M	22.00	1	0.0263	4.00
TPSLF12575 - 330M	33.00	1	0.0395	3.20
TPSLF12575 - 470M	47.00	1	0.0528	2.70
TPSLF12575 - 680M	68.00	1	0.0778	2.00
TPSLF12575 - 101M	100.00	1	0.125	1.90
TPSLF12575 - 151M	150.00	1	0.175	1.50
TPSLF12575 - 221M	220.00	1	0.258	1.30

Note: Test Freq.: 1KHz / 0.25V.

Operating Temp.: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$.

Inductance drop=10% typ. at IDC.

▶ How to Order



❶ Part Number: TPSLF6028, TPSLF7032
 TPSLF7045, TPSLF10145
 TPSLF12555, TPSLF12565
 TPSLF12575

❷ Inductance

Code	Inductance
100	10.00μH
120	12.00μH
150	15.00μH

❸ Tolerance

Code	Tolerance
M	20%
N	30%

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