

SMT Unshielded Wire-wound Power Inductors

**SMT Unshielded Power Inductors (TPUDF)
Provide Full Range Inductance**

▶ **Preview**

Power inductor TPUDF series metalized drum core design utilizes board space and general use by Token's automatic wire wound technology and ferrite core.

The TPUDF wire-wound open magnetic circuit construction are particularly suitable for cost-critical mass applications and thanks to their surface-mounting capability. These material saving power inductors are ideal for applications such as storage chokes in DC/DC convertors as well as in the EMC sector.

The TPUDF series is designed for DC-DC converter applications and features reduced DC resistance and increased allowable current. In DC-DC converters and power supplies, the performance of the power components directly affects the overall efficiency of the supply, so it is of paramount importance.

The TPUDF series features wide inductance range from 1.00 uH to 1000.00 uH. The TPU5022DF version has an insertion height of 7.11 mm with low DC resistance down to 0.009 Ohm. Available inductance values for the new TPU5022DF are from 1.00 uH to 1000.00 uH with rated current up to 20.00 A. Thanks to its temperature stability, it can be used in ambient temperatures ranging from -40°C to +85°C.

Token SMT unshielded wire wound inductors TPUDF series conforms to the RoHS directive and Lead-free. Custom parts are available on request for tighter tolerances. Application of specific designs also available including different inductance and frequency specifications adjusted to requirements. Please contact our sales for more information.

Features :

- Open magnetic circuit construction.
- High Current, Low DCR.

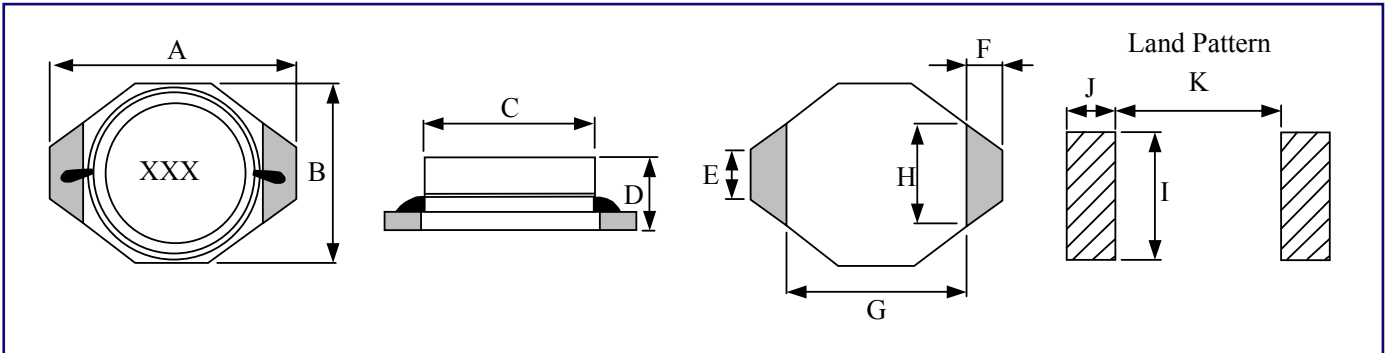
Applications :

- Notebook, Cellular Phone.
- DC/DC converter, PDA.



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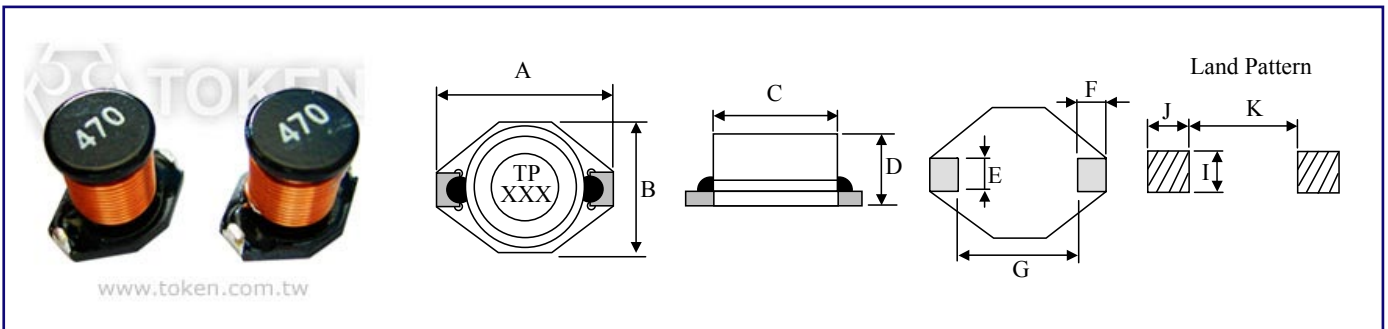
▶ (TPU1608DF) Dimensions & Configurations



Type	A(max)	B(max)	C ± 0.3	D(max)	E ± 0.3	F ± 0.3	G ± 0.3	H ± 0.3	I	J	K
TPU1608DF	6.60	4.45	4.00	2.92	1.27	1.02	4.32	2.50	3.56	1.40	4.06

Note: Design as Customer's Requested Specifications.

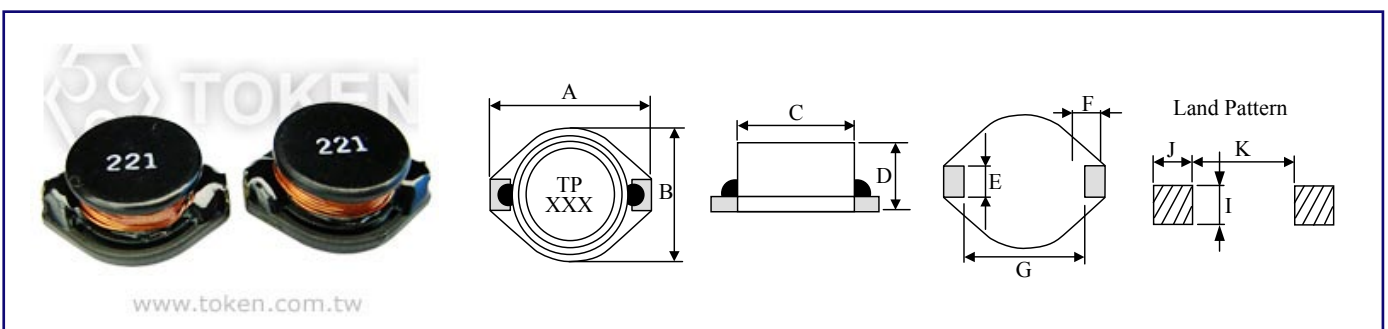
▶ (TPU3308DF, TPU3316DF, TPU3340DF) Dimensions & Configurations



Type	A(max)	B(max)	C ± 0.3	D(max)	E ± 0.3	F ± 0.3	G ± 0.3	I	J	K
TPU3308DF	12.95	9.40	8.38	3.00	2.54	2.54	7.62	2.79	2.92	7.37
TPU3316DF	12.95	9.40	8.38	5.21	2.54	2.54	7.62	2.79	2.92	7.37
TPU3340DF	12.95	9.40	8.38	11.43	2.54	2.54	7.62	2.79	2.92	7.37

Note: Design as Customer's Requested Specifications.

▶ (TPU3308DF, TPU3316DF, TPU3340DF) Dimensions & Configurations



Type	A(max)	B(max)	C ± 0.3	D(max)	E ± 0.3	F ± 0.3	G ± 0.3	I	J	K
TPU5022DF	18.54	15.24	12.70	7.11	2.54	2.54	12.70	2.79	2.92	12.45

Note: Design as Customer's Requested Specifications.

▶ (TPU1608DF) Electrical Characteristics

Part Number	Inductance(μ H)	Test Freq.(KHz)	DCR (Ω)(max)	IDC (A)(max)
TPU1608DF - 1R0M	1.00	100	0.050	2.90
TPU1608DF - 1R5M	1.50	100	0.050	2.60
TPU1608DF - 2R2M	2.20	100	0.070	2.30
TPU1608DF - 3R3M	3.30	100	0.080	2.00
TPU1608DF - 4R7M	4.70	100	0.090	1.50
TPU1608DF - 6R8M	6.80	100	0.130	1.20
TPU1608DF - 100M	10.00	100	0.160	1.10
TPU1608DF - 150M	15.00	100	0.230	0.90
TPU1608DF - 220M	22.00	100	0.370	0.70
TPU1608DF - 330M	33.00	100	0.510	0.58
TPU1608DF - 470M	47.00	100	0.640	0.50
TPU1608DF - 680M	68.00	100	0.860	0.40
TPU1608DF - 101M	100.00	100	1.270	0.31
TPU1608DF - 151M	150.00	100	2.000	0.27
TPU1608DF - 221M	220.00	100	3.110	0.22
TPU1608DF - 331M	330.00	100	3.800	0.18
TPU1608DF - 471M	470.00	100	5.060	0.16
TPU1608DF - 681M	680.00	100	9.200	0.14
TPU1608DF - 102M	1000.00	100	13.800	0.10

Note: Test Freq.: 100KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.

▶ (TPU3308DF) Electrical Characteristics

Part Number	Inductance(μ H)	Test Freq.(KHz)	DCR (Ω)(max)	IDC (A)(max)
TPU3308DF - 100M	10.00	100	0.110	2.40
TPU3308DF - 150M	15.00	100	0.150	2.00
TPU3308DF - 220M	22.00	100	0.230	1.60
TPU3308DF - 330M	33.00	100	0.300	1.40
TPU3308DF - 470M	47.00	100	0.390	1.00
TPU3308DF - 680M	68.00	100	0.660	0.90
TPU3308DF - 101M	100.00	100	0.840	0.70
TPU3308DF - 151M	150.00	100	1.200	0.60
TPU3308DF - 221M	220.00	100	1.900	0.50
TPU3308DF - 331M	330.00	100	2.700	0.40
TPU3308DF - 471M	470.00	100	4.000	0.30
TPU3308DF - 681M	680.00	100	5.300	0.20
TPU3308DF - 102M	1000.00	100	8.400	0.10

Note: Test Freq.: 100KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.

▶ (TPU3316DF) Electrical Characteristics

Part Number	Inductance(μ H)	Test Freq.(KHz)	DCR (Ω)(max)	IDC (A)(max)
TPU3316DF - 1R0M	1.00	100	0.009	9.00
TPU3316DF - 1R5M	1.50	100	0.010	8.00
TPU3316DF - 2R2M	2.20	100	0.012	7.00
TPU3316DF - 3R3M	3.30	100	0.015	6.40
TPU3316DF - 4R7M	4.70	100	0.018	5.40
TPU3316DF - 6R8M	6.80	100	0.027	4.60
TPU3316DF - 100M	10.00	100	0.038	3.80
TPU3316DF - 150M	15.00	100	0.046	3.00
TPU3316DF - 220M	22.00	100	0.085	2.60
TPU3316DF - 330M	33.00	100	0.100	2.00
TPU3316DF - 470M	47.00	100	0.140	1.60
TPU3316DF - 680M	68.00	100	0.200	1.40
TPU3316DF - 101M	100.00	100	0.280	1.20
TPU3316DF - 151M	150.00	100	0.400	1.00
TPU3316DF - 221M	220.00	100	0.610	0.80
TPU3316DF - 331M	330.00	100	1.020	0.60
TPU3316DF - 471M	470.00	100	1.270	0.50
TPU3316DF - 681M	680.00	100	2.020	0.40
TPU3316DF - 102M	1000.00	100	3.000	0.30

Note: Test Freq.: 100KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.

▶ (TPU3340DF) Electrical Characteristics

Part Number	Inductance(μ H)	Test Freq.(KHz)	DCR (Ω)(max)	IDC (A)(max)
TPU3340DF - 100M	10.00	100	0.040	8.00
TPU3340DF - 150M	15.00	100	0.050	7.00
TPU3340DF - 220M	22.00	100	0.066	5.50
TPU3340DF - 330M	33.00	100	0.080	4.00
TPU3340DF - 470M	47.00	100	0.110	3.80
TPU3340DF - 680M	68.00	100	0.170	3.00
TPU3340DF - 101M	100.00	100	0.220	2.50
TPU3340DF - 151M	150.00	100	0.340	2.00
TPU3340DF - 221M	220.00	100	0.440	1.60
TPU3340DF - 331M	330.00	100	0.700	1.20
TPU3340DF - 471M	470.00	100	0.950	1.00
TPU3340DF - 681M	680.00	100	1.200	1.00
TPU3340DF - 102M	1000.00	100	2.000	0.80

Note: Test Freq.: 100KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.

▶ (TPU5022DF) Electrical Characteristics

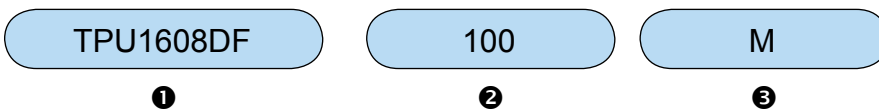
Part Number	Inductance(μ H)	Test Freq.(KHz)	DCR (Ω)(max)	IDC (A)(max)
TPU5022DF - 1R0M	1.00	100	0.009	20.00
TPU5022DF - 2R2M	2.20	100	0.014	16.00
TPU5022DF - 3R3M	3.30	100	0.015	14.00
TPU5022DF - 5R6M	5.60	100	0.020	12.00
TPU5022DF - 100M	10.00	100	0.031	10.00
TPU5022DF - 150M	15.00	100	0.036	8.00
TPU5022DF - 220M	22.00	100	0.047	7.00
TPU5022DF - 330M	33.00	100	0.066	5.50
TPU5022DF - 470M	47.00	100	0.086	4.50
TPU5022DF - 680M	68.00	100	0.130	3.50
TPU5022DF - 101M	100.00	100	0.190	3.00
TPU5022DF - 151M	150.00	100	0.250	2.60
TPU5022DF - 221M	220.00	100	0.380	2.40
TPU5022DF - 331M	330.00	100	0.560	1.90
TPU5022DF - 471M	470.00	100	0.850	1.40
TPU5022DF - 681M	680.00	100	1.100	1.20
TPU5022DF - 102M	1000.00	100	1.800	1.00

Note: Test Freq.: 100KHz / 0.1V.

Operating Temp.: -40°C ~ +85°C.

Inductance drop=10% typ. at IDC.

▶ (TPU1608DF, TPU3308DF, TPU3316DF, TPU3340DF, TPU5022DF) How to Order



❶ Part Number: TPU1608DF, TPU3308DF
TPU3316DF, TPU3340DF, TPU5022DF

❷ Inductance

Code	Inductance
1R0	1.00 μ H
100	10.00 μ H
101	100.00 μ H
102	1000.00 μ H

❸ Tolerance

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

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