

Version:
June 27, 2017



TOKEN

(TPUDF)

PowerWirewound Inductors

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▶ Product Introduction

Token (TPUDF) unshielded Power inductor serves as a high-performing, space-saving and power-saving solution.

Features :

- The surface mount inductors are designed for the smallest Possible size and high performance.
- They are with high Energy storage and very low resistance making them the Ideal inductors for DC-DC conversion in the following Application.

Applications :

- VGA display card, Notebook computers, PDAs, Step-up and Setp-down converters, Flash memory programmers, etc.

Token SMD unshielded Power Wirewound Inductors (TPUDF) provide full range inductance. (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 μH to 1000.00 μH . 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 μH to 1000.00 μH 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 $+85^{\circ}\text{C}$.

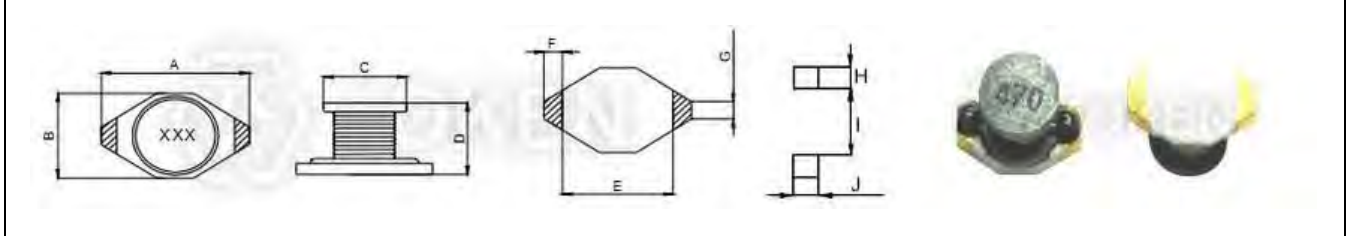
Token SMT unshielded wire wound inductors TPUDF series conforms to the RoHS directive and Lead-free. Custom parts are available on request for tighter tolerances. Application of specific designs also available including different inductance and frequency specifications adjusted to requirements. Please contact our sales or link to Token official website "[SMD Power Inductors](#)" for more information.



► **Dimensions**

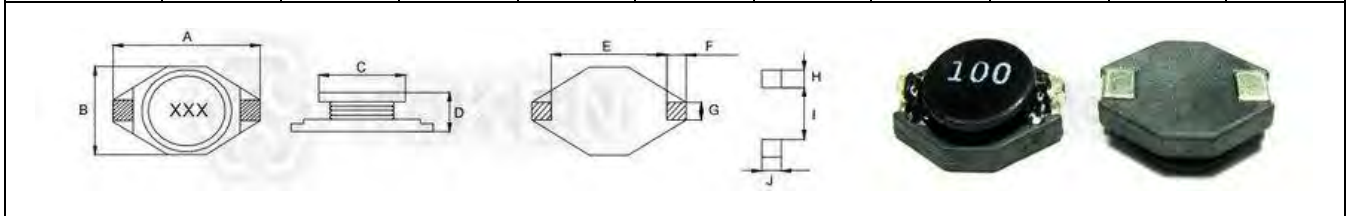
Dimensions & Configurations (Unit: mm) (TPUDF1608)

| Part NO | A Max. | B Max. | C Max. | D Max. | E Ref. | F Ref. | G Ref. | H Ref. | I Ref. | J Ref. |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| TPUDF1608 | 6.60 | 4.45 | 3.94 | 2.92 | 4.32 | 1.02 | 1.27 | 1.40 | 4.06 | 3.56 |



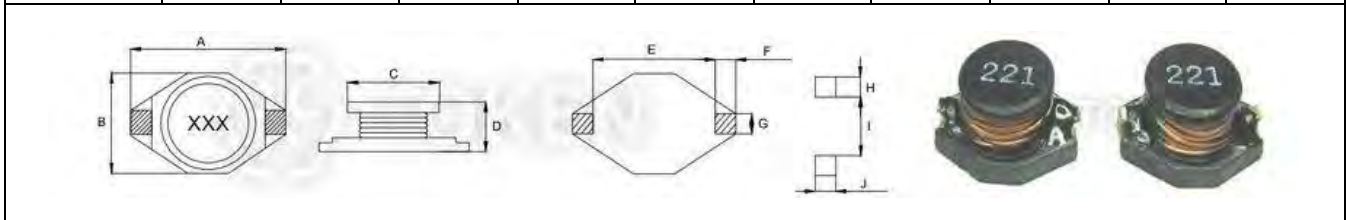
Dimensions & Configurations (Unit: mm) (TPUDF3308)

| Part NO | A Max. | B Max. | C Max. | D Max. | E Ref. | F Ref. | G Ref. | H Ref. | I Ref. | J Ref. |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| TPUDF3308 | 12.95 | 9.40 | 8.38 | 3.00 | 7.62 | 2.54 | 2.54 | 2.92 | 7.37 | 2.79 |



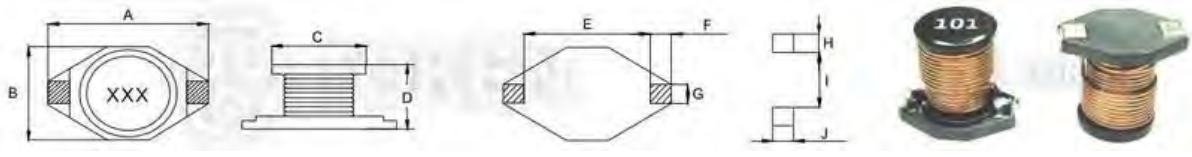
Dimensions & Configurations (Unit: mm) (TPUDF3316)

| Part NO | A Max. | B Max. | C Max. | D Max. | E Ref. | F Ref. | G Ref. | H Ref. | I Ref. | J Ref. |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| TPUDF3316 | 12.95 | 9.40 | 8.38 | 5.12 | 7.62 | 2.54 | 2.54 | 2.92 | 7.37 | 2.79 |



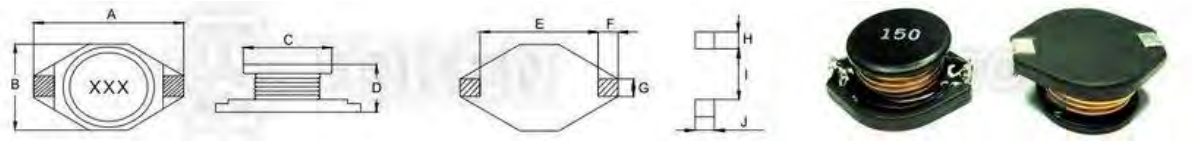
Dimensions & Configurations (Unit: mm) (TPUDF3340)

| Part NO | A Max. | B Max. | C Max. | D Max. | E Ref. | F Ref. | G Ref. | H Ref. | I Ref. | J Ref. |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| TPUDF3340 | 12.95 | 9.40 | 8.38 | 11.43 | 7.62 | 2.54 | 2.54 | 2.92 | 7.37 | 2.92 |



Dimensions & Configurations (Unit: mm) (TPUDF5022)

| Part NO | A Max. | B Max. | C Max. | D Max. | E Ref. | F Ref. | G Ref. | H Ref. | I Ref. | J Ref. |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| TPUDF5022 | 18.45 | 15.24 | 12.70 | 7.11 | 12.70 | 2.54 | 2.54 | 2.92 | 12.45 | 2.79 |



▶ TPUDF

Electrical Characteristics (TPUDF)

| Inductance (μH) | | TPUDF1608 | | TPUDF3308 | | TPUDF3316 | | TPUDF3340 | | TPUDF5022 | |
|-----------------|--------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|
| Marking | L (μH) | DCR (Ω) Max. | IDC (A) | DCR (Ω) Max. | IDC (A) | DCR (Ω) Max. | IDC (A) | DCR (Ω) Max. | IDC (A) | DCR (Ω) Max. | IDC (A) |
| 1R0 | 1.0 | 0.05 | 2.90 | | | 0.009 | 9.0 | | | 0.009 | 20.0 |
| 1R5 | 1.5 | 0.05 | 2.60 | | | 0.010 | 8.0 | | | | |
| 2R2 | 2.2 | 0.07 | 2.30 | | | 0.012 | 7.0 | | | 0.014 | 16.0 |
| 3R3 | 3.3 | 0.08 | 2.00 | | | 0.015 | 6.4 | | | 0.020 | 12.0 |
| 3R9 | | | | | | | | | | | |
| 4R7 | 4.7 | 0.09 | 1.50 | | | 0.018 | 5.4 | | | | |
| 5R6 | | | | | | | | | | 0.020 | 12.0 |
| 6R8 | 6.8 | 0.13 | 1.20 | | | 0.027 | 4.6 | | | | |
| 8R2 | | | | | | | | | | | |
| 100 | 10 | 0.16 | 1.10 | 0.11 | 2.4 | 0.038 | 3.8 | 0.040 | 8.0 | 0.031 | 10.0 |
| 150 | 15 | 0.23 | 0.90 | 0.15 | 2.0 | 0.046 | 3.0 | 0.05 | 7.00 | 0.036 | 8.0 |
| 220 | 22 | 0.37 | 0.70 | 0.23 | 1.6 | 0.085 | 2.6 | 0.066 | 5.50 | 0.047 | 7.0 |
| 270 | | | | | | | | | | | |
| 300 | | | | | | | | | | | |
| 330 | 33 | 0.51 | 0.58 | 0.30 | 1.4 | 0.10 | 2.0 | 0.080 | 4.00 | 0.066 | 5.5 |
| 390 | | | | | | | | | | | |
| 470 | 47 | 0.64 | 0.50 | 0.39 | 1.0 | 0.14 | 1.6 | 0.110 | 3.80 | 0.086 | 4.5 |
| 560 | | | | | | | | | | | |
| 680 | 68 | 0.86 | 0.40 | 0.66 | 0.9 | 0.20 | 1.4 | 0.17 | 3.00 | 0.13 | 3.5 |
| 820 | | | | | | | | | | | |
| 101 | 100 | 1.27 | 0.31 | 0.84 | 0.7 | 0.28 | 1.2 | 0.22 | 2.5 | 0.19 | 3.0 |
| 151 | 150 | 2.00 | 0.27 | 1.2 | 0.6 | 0.4 | 1.0 | 0.34 | 2.00 | 0.25 | 2.6 |
| 181 | | | | | | | | | | | |
| 221 | 220 | 2.65 | 0.22 | 1.9 | 0.5 | 0.61 | 0.8 | 0.440 | 1.60 | 0.38 | 2.4 |
| 271 | | | | | | | | | | | |
| 331 | 330 | 3.80 | 0.18 | 2.7 | 0.4 | 1.02 | 0.6 | 0.7 | 1.20 | 0.56 | 1.9 |
| 391 | | | | | | | | | | | |
| 471 | 470 | 5.06 | 0.16 | 4.0 | 0.3 | 1.27 | 0.5 | 0.95 | 1.00 | 0.85 | 1.4 |
| 561 | | | | | | | | | | | |
| 681 | 680 | | | 5.3 | 0.2 | 2.02 | 0.4 | 1.200 | 1.00 | 1.10 | 1.2 |
| 102 | 1000 | 13.80 | 0.10 | 2.000 | 0.80 | 1.80 | 1.0 | | | | |

Note:

- Test Freq. L: 1.0 μH~82μH (100KHz / 0.25V), 100μH Above (1KHz / 0.3V).
- IDC : The current when the inductance becomes 10% lower than its nominal value.(ta=20°C).



Order Codes

Order Codes (TPUDF)

| TPUDF1608 | - | 1R0 | | M | |
|-------------|---|------------|-----------|-----------|-----|
| Part Number | | Inductance | | Tolerance | |
| TPUDF1608 | | 1R0 | 1.00μH | J | 5% |
| TPUDF3308 | | 100 | 10.00μH | K | 10% |
| TPUDF3316 | | 101 | 100.00μH | L | 15% |
| TPUDF3340 | | 102 | 1000.00μH | M | 20% |
| TPUDF5022 | | | | P | 25% |
| | | | | N | 30% |

► General Information

How to Quickly Search Inductor for all of the Characteristics?

Quickly Search Inductor Finder

Searching and comparing data sheets of inductor manufacturers can be time consuming. Token's Parameter Sorting Search Mode allows selection of inductors based on different parameters.

By entering just the inductance value,

By sorting parameter to narrow down searching range,

Or by enter keyword / part number / size dimensions L*W*H to partial or exact searching.

Leading-Edge Technology

Token Electronics brand passive component specializes in standard and custom solutions offering the latest in state-of-the-art low profile high power density inductor components. Token provides cost-effective, comprehensive solutions that meet the evolving needs of technology-driven markets. In working closely with the industry leaders in chipset and core development, we remain at the forefront of innovation and new technology to deliver the optimal mix of packaging, high efficiency and unbeatable reliability. Our designs utilize high frequency, low core loss materials, new and custom core shapes in combination with innovative construction and packaging to provide designers with the highest performance parts available on the market.

Find Inductor Solutions Faster

Find Your Inductor - wt.moc.nekot@qfr

Only timely and accurate information can help manage the changing needs of your customers. The Token Inductor Finder puts you only a click away from all of the inductor information you need.

Find Your Solution - wt.moc.nekot@qfr

Selecting the correct inductor solution will not only save you time, but it will give you a competitive edge. At Token, we are committed to helping you find the most efficient alternative for your power design. Our inductor and power supply design experts can help you make that selection.

Please forward us:

- A brief description of your particular application's requirements.
- Details of an existing solution that you'd like to replace, enhance or find an alternative.
- Inquiries for feasibility to tailor a power transformer or inductor to your specific application.

We can also help you with any additional technical information you might need relating to any of our products.

Ask Us Today

