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# **(TPUD) Low-Profile Wirewound Power Inductors**

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## ▶ Product Introduction

### SMD unshielded wire-wound power inductors compact low profile to 0.8 mm.

#### Features :

- Open Magnetic circuit construction.
- Low Profile.

#### Applications :

- LCD Driver, Cellular Phone.
- Small DC/DC Converter.
- Transformers.

Token (TPUD) wire-wound inductor is designed for the smallest possible size and high performance with high energy storage and very low resistance. Those devices are ideal power inductors for notebook, DC-DC converter, digital camera and scanner, LCD Driver, and CD-Rom.

Utilize open Magnetic circuit construction and advance winding technology in manufacturing low profile (TPUD) series. The maximum height of TPUD4006/4008 is only 0.8/1.0 mm, TPUD4011/4013 1.2/1.45 mm, and TPUD5011/5013 1.2/1.5 mm.



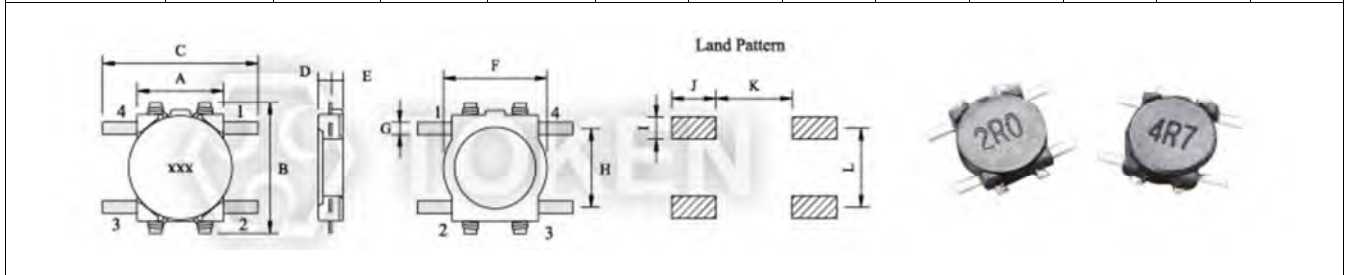
The performance of the power components directly affects the overall efficiency of the supply in DC-DC converters and power supplies, so it is of vital importance. The TPUD5013 features low DC resistance, down to 0.081 ohm, and high rated current; up to 1.25 A is supported. Depending on version, the inductance values of these surface mount inductors range from 2.2 uH to 100 uH.

Token power unshielded inductors (TPUD) series conform to the RoHS directive and Lead-free. Custom parts are available for tighter tolerances on request. 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](http://www.token.com.tw)" for more information.

## Dimensions

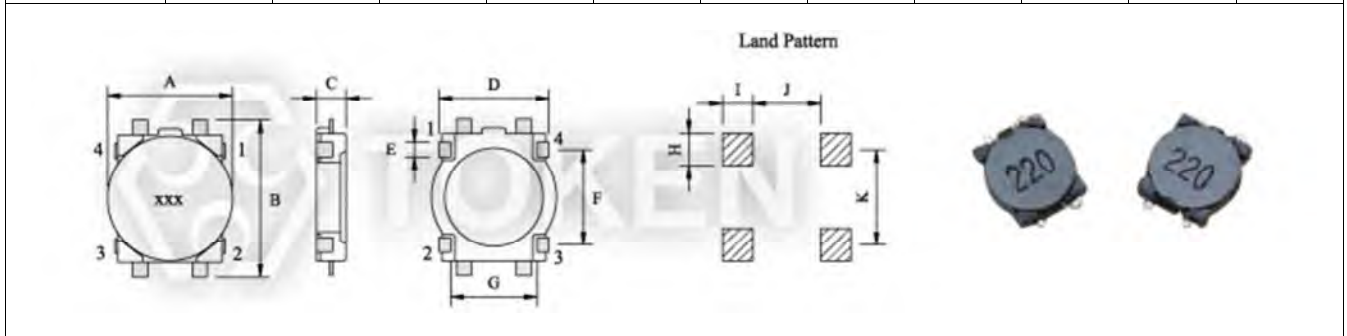
### Dimensions & Configurations (Unit: mm) (TPUD4006/4008)

Type	A	B Max.	C Max.	D Max.	E	F	G	H	I	J	K	L
TPUD4006	3.5	5.8	6.3	0.8	0.4	4.1	0.5	3.2	0.9	1.5	4.0	3.2
TPUD4008	3.5	5.8	6.3	1.0	0.4	4.1	0.5	3.2	0.9	1.5	4.0	3.2



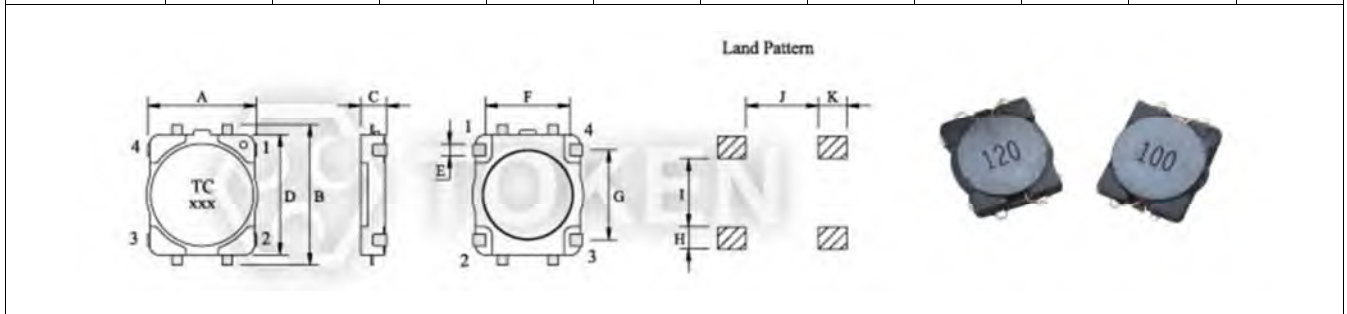
### Dimensions & Configurations (Unit: mm) (TPUD4011/4013)

Type	A Max.	B Max.	C Max.	D	E	F	G	H	I	J	K
TPUD4011	4.4	5.8	1.2	3.7	0.5	3.2	2.9	0.8	1.4	2.5	3.2
TPSD4011	4.9	4.9	1.2	3.7	0.5	3.2	2.9	0.8	1.4	2.5	3.2
TPUD4013	4.4	5.8	1.45	3.7	0.5	3.2	2.9	0.8	1.4	2.5	3.2



### Dimensions & Configurations (Unit: mm) (TPUD5011/5013)

Type	A Max.	B Max.	C Max.	D	E	F	G	H	I	J	K
TPUD5011	5.8	7.4	1.2	6.0	0.6	4.2	4.5	1.1	3.4	3.6	1.4
TPUD5013	5.8	7.4	1.5	6.0	0.6	4.2	4.5	1.1	3.4	3.6	1.4



▶ **TPUD4006**

**Electrical Characteristics (TPUD4006)**

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) Max.	IDC (A) Max.
TPUD4006 - 2R2M	2.20	100	0.116	0.95
TPUD4006 - 3R3M	3.30	100	0.174	0.77
TPUD4006 - 4R7M	4.70	100	0.216	0.75
TPUD4006 - 6R8M	6.80	100	0.296	0.62
TPUD4006 - 100M	10.00	100	0.457	0.50
TPUD4006 - 150M	15.00	100	0.676	0.40
TPUD4006 - 220M	22.00	100	1.066	0.30
TPUD4006 - 330M	33.00	100	1.647	0.24
TPUD4006 - 470M	47.00	100	2.843	0.18

Note:

- Test Freq.: 100KHz / 0.1V.
- Operating Temp.: -40°C ~ +85°C.
- Inductance drop=10% typ. at IDC.

▶ **TPUD4008**

**Electrical Characteristics (TPUD4008)**

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) Max.	IDC (A) Max.
TPUD4008-3R3M	3.30	100	0.160	0.85
TPUD4008-4R7M	4.70	100	0.194	0.80
TPUD4008-6R8M	6.80	100	0.276	0.65
TPUD4008-100M	10.00	100	0.335	0.57
TPUD4008-150M	15.00	100	0.508	0.45
TPUD4008-220M	22.00	100	0.766	0.37
TPUD4008-330M	33.00	100	1.162	0.28
TPUD4008-470M	47.00	100	1.658	0.22
TPUD4008-680M	68.00	100	2.534	0.18
TPUD4008-101M	100.00	100	3.304	0.17

Note:

- Test Freq.: 100KHz / 0.1V.
- Operating Temp.: -40°C ~ +85°C.
- Inductance drop=10% typ. at IDC.



▶ **TPUD4011**

**Electrical Characteristics (TPUD4011) Unshielded**

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) Max.	IDC (A) Max.
TPUD4011 - 2R2M	2.20	100	0.116	0.95
TPUD4011 - 3R3M	3.30	100	0.174	0.77
TPUD4011 - 4R7M	4.70	100	0.216	0.75
TPUD4011 - 6R8M	6.80	100	0.296	0.62
TPUD4011 - 100M	10.00	100	0.457	0.50
TPUD4011 - 150M	15.00	100	0.676	0.40
TPUD4011 - 220M	22.00	100	1.066	0.30
TPUD4011 - 330M	33.00	100	1.647	0.24
TPUD4011 - 470M	47.00	100	2.843	0.18

Note:

- Test Freq.: 100KHz / 0.1V.
- Operating Temp.: -40°C ~ +85°C.
- Inductance drop=10% typ. at IDC.

**Electrical Characteristics (TPSD4011) Shielded**

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) Max.	IDC (A) Max.
TPSD4011 - 3R3N	3.30	100	0.12	1.0
TPSD4011 - 4R7N	4.70	100	0.18	0.8
TPSD4011 - 6R8M	6.80	100	0.22	0.7
TPSD4011 - 100M	10.00	100	0.31	0.6
TPSD4011 - 150M	15.00	100	0.48	0.5
TPSD4011 - 220M	22.00	100	0.71	0.4
TPSD4011 - 330M	33.00	100	1.1	0.3

Note:

- Test Freq.: 100KHz / 0.1V.
- Operating Temp.: -40°C ~ +85°C.
- Inductance drop=10% typ. at IDC.





▶ **TPUD4013**

**Electrical Characteristics (TPUD4013)**

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) Max.	IDC (A) Max.
TPUD4013 - 3R3M	3.30	100	0.160	0.85
TPUD4013 - 4R7M	4.70	100	0.194	0.80
TPUD4013 - 6R8M	6.80	100	0.276	0.65
TPUD4013 - 100M	10.00	100	0.335	0.57
TPUD4013 - 150M	15.00	100	0.508	0.45
TPUD4013 - 220M	22.00	100	0.766	0.37
TPUD4013 - 330M	33.00	100	1.162	0.28
TPUD4013 - 470M	47.00	100	1.658	0.22
TPUD4013 - 680M	33.00	100	2.534	0.18
TPUD4013 - 101M	47.00	100	3.304	0.17

Note:

- Test Freq.: 100KHz / 0.1V.
- Operating Temp.: -40°C ~ +85°C.
- Inductance drop=10% typ. at IDC.

▶ **TPUD5011**

**Electrical Characteristics (TPUD5011)**

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) Max.	IDC (A) Max.
TPUD5011 - 3R3M	3.30	100	0.109	0.94
TPUD5011 - 4R7M	4.70	100	0.156	0.80
TPUD5011 - 6R8M	6.80	100	0.216	0.65
TPUD5011 - 100M	10.00	100	0.275	0.53
TPUD5011 - 150M	15.00	100	0.438	0.40
TPUD5011 - 220M	22.00	100	0.663	0.36
TPUD5011 - 330M	33.00	100	0.975	0.32
TPUD5011 - 470M	47.00	100	1.380	0.26
TPUD5011 - 680M	68.00	100	1.700	0.23
TPUD5011 - 101M	100.00	100	2.800	0.20

Note:

- Test Freq.: 100KHz / 0.1V.
- Operating Temp.: -40°C ~ +85°C.
- Inductance drop=10% typ. at IDC.



## ▶ TPUD5013

### Electrical Characteristics (TPUD5013)

Part Number	Inductance (μH)	Test Freq. (KHz)	DCR (Ω) Max.	IDC (A) Max.
TPUD5013 - 3R3M	3.30	100	0.081	1.25
TPUD5013 - 4R7M	4.70	100	0.106	1.20
TPUD5013 - 6R8M	6.80	100	0.144	0.90
TPUD5013 - 100M	10.00	100	0.187	0.85
TPUD5013 - 150M	15.00	100	0.300	0.57
TPUD5013 - 220M	22.00	100	0.431	0.54
TPUD5013 - 330M	33.00	100	0.637	0.38
TPUD5013 - 470M	47.00	100	0.875	0.35

**Note:**

- Test Freq.: 100KHz / 0.1V.
- Operating Temp.: -40°C ~ +85°C.
- Inductance drop=10% typ. at IDC.

## ▶ Order Codes

### Order Codes (TPUD4006, TPUD4008, TPUD5011, TPUD5013)

TPUD4006	-	4R7		M	
Part Number		Inductance		Tolerance	
TPUD4006		4R7	4.70μH	M	20%
TPUD4008		100	10.00μH	N	30%
TPUD5011		101	100.00μH		
TPUD5013					

### Order Codes (TPUD4011, TPSD4011, TPUD4013)

TPUD4011	-	100		M	
Part Number		Inductance		Tolerance	
TPUD4011		3R3	3.30μH	K	10%
TPSD4011		100	10.00μH	L	15%
TPUD4013		101	100.00μH	M	20%
				N	30%

Note: TPSD4011 Closed Magnetic Field Construction ◦



## ► 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- [rfq@token.com.tw](mailto:rfq@token.com.tw)

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 - [rfq@token.com.tw](mailto:rfq@token.com.tw)

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**

