

# SMT Unshielded Wire-wound Power Inductor

## SMT Unshielded Wire-wound Power Inductors Compact Low Profile to 0.8 mm (TPUD)

### ▶ Preview

Token TPUD wire-wound series are 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 inductors unshielded (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 for more information.

### Features :

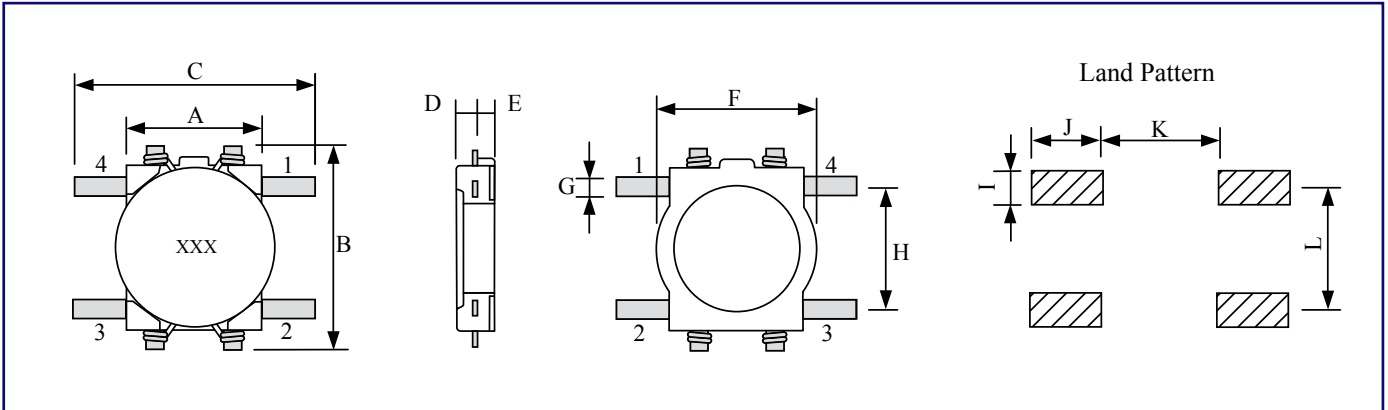
- Open Magnetic circuit construction.
- Low Profile.

### Applications :

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



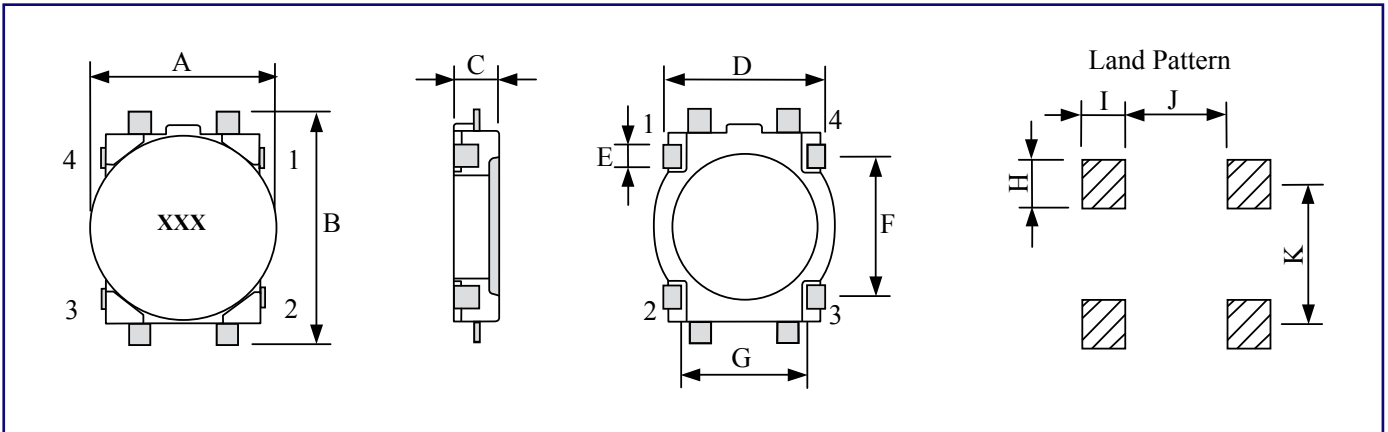
## ▶ (TPUD4006/4008) Dimensions & Configurations



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

Note: Design as Customer's Requested Specifications.

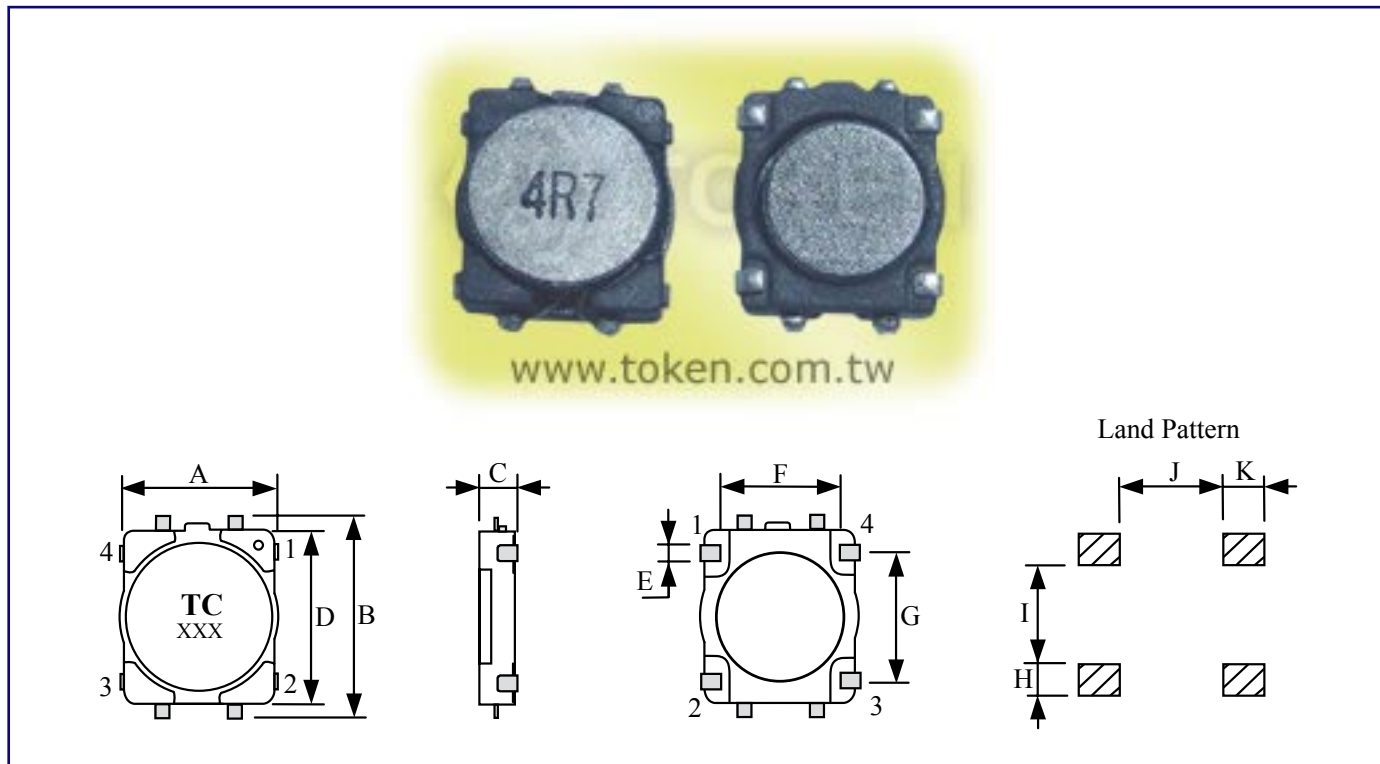
## ▶ (TPUD4011/4013) Dimensions & Configurations



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
TPUD4013	4.4	5.8	1.45	3.7	0.5	3.2	2.9	0.8	1.4	2.5	3.2

Note: Design as Customer's Requested Specifications.

## ▶ (TPSH0301) Electrical Characteristics



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

Note: Design as Customer's Requested Specifications.

## ▶ (TPUD4006) Electrical Characteristics

Part Number	Inductance ( $\mu\text{H}$ )	Test Freq. (KHz)	DCR ( $\Omega$ ) (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.:  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ .

Inductance drop=10% typ. at IDC.

## ▶ (TPUD4008) Electrical Characteristics

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

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.

## ▶ (TPUD4013) Electrical Characteristics

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

Part Number	Inductance( $\mu$ H)	Test Freq.(KHz)	DCR ( $\Omega$ )(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 - 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.

## ▶ (TPUD4006, TPUD4008, TPUD5011, TPUD5013) How to Order

TPUD4006

①

4R7

②

M

③

① Part Number: TPUD4006, TPUD4008  
TPUD5011, TPUD5013

② Inductance

Code	Inductance
4R7	4.70μH
100	10.00μH
101	100.00μH

③ Tolerance

Code	Tolerance
M	20%
N	30%

## ▶ (TPUD4011, TPUD4013) How to Order

TPUD4011

①

100

②

M

③

① Part Number: TPUD4011, TPUD4013

② Inductance

Code	Inductance
3R3	3.30μH
100	10.00μH
101	100.00μH

③ Tolerance

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

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