

Version:
July 31, 2017

DIRECT

Electronics Tech.

(TPSPC)

Large Current Power Inductors

Web: www.direct-token.com

Email: rfq@direct-token.com

Direct Electronics Industry Co., Ltd.

China: 12F, Zhong Xing Industry Bld., Chuang Ye Road,
Nan Shan District, Shen Zhen City,
Guang Dong, China 518054
Tel: +86 755 26055363; Fax: +86 755 26055365

Taiwan: No.137, Sec. 1, Zhongxing Rd., Wugu District,
New Taipei City, Taiwan, R.O.C. 24872
Tel: +886 2981 0109 Fax: +886 2988 7487

▶ Product Introduction

Get High Efficiency and Low Core Loss Inductor Solutions in Direct (TPSPC) series.

Features :

- Low Core Loss And High Efficiency Performance.
- Closed Magnetic Field Construction For High Density Board Assembly.
- Excellent high frequency characteristics.

Applications :

- TV, VCR, Switching power sources, NC machines.
- Computes systems and Measuring instruments.

Direct (TPSPC) series designed for lowering costs and saving board space in applications by eliminating the need for separate board level shielding for the chip inductors. Direct Electronics has added those new generation portable products in new ranges of low-profile wirewound chip inductors, TPSPC1055, TPSPC1060, TPSPC1260, and TPSPC2111, for use in DC-DC converter applications to increase flexibility of maximum height measurements with extended electrical characteristics.

Winding chip coils the TPSPC series offer low DC resistance and large rated current. This is vital for DC-DC converter applications as it prevents energy dissipation from the chip inductor, improving the converter's overall efficiency. It is designed to provide a good balance of height and performance within chip power miniature inductor offering and enables flexibility and efficiency.

The new ranges deliver a good size/performance ratio with low DC resistances from 5ohm and 55ohm. Their low-profile size packaging is designed to save space. A wide range of inductances is also available: 0.15 μ H to 38 μ H. The parts come with high rated currents, up to 12A, and feature magnetic shielding as standard. Operating temperature range is -55 $^{\circ}$ C to +125 $^{\circ}$ C.

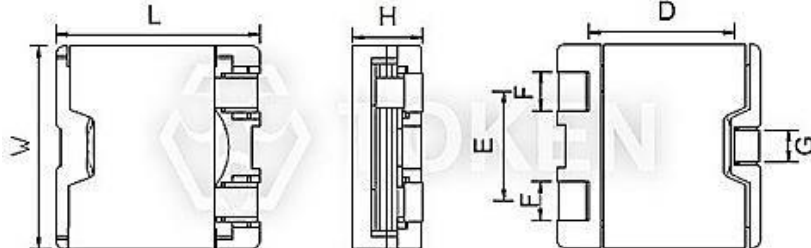
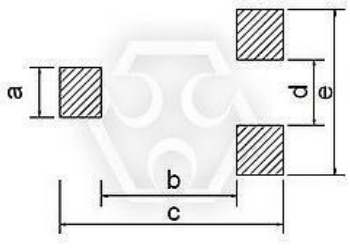
Direct will also produce devices outside these specifications to meet specific customer requirements and custom parts are available on request. Please contact our sales or link to Direct official website "[SMD Power Inductors](#)" for more information.



► **Dimensions**

Dimensions & Configurations (Unit: mm) (TPSPC)

ITEM	W Max.	L Max.	H Max.	a	b	c	d	e
TPSPC1055	11.0	7.0	6.0	3.0	5.8	11	2.2	5.2
TPSPC1060	12.0	8.0	7.0	3.0	5.8	12	2.2	5.2
TPSPC1260	13.5	10.0	6.5	3.0	6.6	14	3.6	6.6
TPSPC2111	23.0	16.0	12.0	3.0	12	23	10	14.5

 <p>SMD wirewound power inductor (TPSPC) Structure size</p>	 <p>SMD wirewound power inductor (TPSPC) Pad size</p>
---	--

▶ 1055

Electrical Specification (TPSPC1055)

Part No	Inductance (μH)	Tolerance	Test Freq (KHz/V)	DCR (mΩ) Max.	Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
TPSPC1055-R15	0.15	M、N	100/1	6	8	16
TPSPC1055-R30	0.30	M、N	100/1	8	8	16
TPSPC1055-R68	0.68	M、N	100/1	10	5	13
TPSPC1055-R80	0.80	M、N	100/1	10	5	13
TPSPC1055-1R0	1.0	M、N	100/1	12	5	13
TPSPC1055-1R2	1.2	M、N	100/1	13	5	12
TPSPC1055-1R4	1.4	M、N	100/1	15	4	10
TPSPC1055-2R2	2.2	M、N	100/1	20	4	10
TPSPC1055-3R2	3.2	M、N	100/1	16	3	8
TPSPC1055-4R0	4.0	M、N	100/1	20	3	6
TPSPC1055-5R6	5.6	M、N	100/1	25	2.5	7
TPSPC1055-6R8	6.8	M、N	100/1	30	2.5	6
TPSPC1055-8R2	8.2	M、N	100/1	30	2	5
TPSPC1055-100	10	M、N	100/1	35	2	5

Remark:

- Rated DC current: it is either the inductance is 20% lower than its initial value. In D.C. saturation characteristics of Temperature Raise becomes $\Delta t=40^{\circ}\text{C}$ ($T_a=20^{\circ}\text{C}$), whichever is lower.

Note:

- Test equipments L: Agilent HP4284A Precision LCR meter.
- Test equipments SRF: Agilent 4291B RF Impedance Analyzer.
- Test equipments DCR: CHEN HWA 502BC OHM METER.
- Electrical specifications at 25°C. Operating temperature: -55 to 125°C.

▶ 1060

Electrical Specification (TPSPC1060)

Part No	Inductance (μH)	Tolerance	Test Freq (KHz/V)	DCR (mΩ) Max.	Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
TPSPC1060-220	22	M、N	100/1	50	2.5	5
TPSPC1060-380	38	M、N	100/1	55	2.5	4

Remark:

- Rated DC current: it is either the inductance is 20% lower than its initial value. In D.C. saturation characteristics of Temperature Raise becomes $\Delta t=40^{\circ}\text{C}$ ($T_a=20^{\circ}\text{C}$), whichever is lower.

Note:

- Test equipments L: Agilent HP4284A Precision LCR meter.
- Test equipments SRF: Agilent 4291B RF Impedance Analyzer.
- Test equipments DCR: CHEN HWA 502BC OHM METER.
- Electrical specifications at 25°C. Operating temperature: -55 to 125°C.



▶ 1260

Electrical Specification (TPSPC1260)

Part No	Inductance (μH)	Tolerance	Test Freq (KHz/V)	DCR (mΩ) Max.	Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
TPSPC1260-R33	0.33	M、N	100/1	5	9	20
TPSPC1260-R47	0.47	M、N	100/1	8	8	16
TPSPC1260-R80	0.80	M、N	100/1	10	5	14
TPSPC1260-1R0	1.0	M、N	100/1	12	5	14
TPSPC1260-1R5	1.5	M、N	100/1	14	4	12
TPSPC1260-1R8	1.8	M、N	100/1	15	4	10
TPSPC1260-2R2	2.2	M、N	100/1	18	4	10
TPSPC1260-2R5	2.5	M、N	100/1	20	3	8
TPSPC1260-3R2	3.2	M、N	100/1	22	3	8
TPSPC1260-4R0	4.0	M、N	100/1	15	3	7
TPSPC1260-5R6	5.6	M、N	100/1	18	2.5	7
TPSPC1260-6R0	6.0	M、N	100/1	20	2.5	6.5
TPSPC1260-7R2	7.2	M、N	100/1	20	2.5	6
TPSPC1260-8R2	8.2	M、N	100/1	20	2	5
TPSPC1260-9R2	9.2	M、N	100/1	22	2	5
TPSPC1260-100	10	M、N	100/1	22	2	5

Remark:

- Rated DC current: it is either the inductance is 20% lower than its initial value. In D.C. saturation characteristics of Temperature Raise becomes $\Delta t=40^{\circ}\text{C}(T_a=20^{\circ}\text{C})$, whichever is lower.

Note:

- Test equipments L: Agilent HP4284A Precision LCR meter.
- Test equipments SRF: Agilent 4291B RF Impedance Analyzer.
- Test equipments DCR: CHEN HWA 502BC OHM METER
- Electrical specifications at 25°C. Operating temperature: -55 to 125°C.

▶ 2111

Electrical Specification (TPSPC2111)

Part No	Inductance (μH)	Tolerance	Test Freq (KHz/V)	DCR (mΩ) Max.	Heat Rating Current DC Amps. Idc (A)	Saturation Current DC Amps. Isat (A)
TPSPC2111-8R2	8.2	M、N	100/1	12	12	18
TPSPC2111-160	16.0	M、N	100/1	20	12	18

Remark:

- Rated DC current: it is either the inductance is 20% lower than its initial value. In D.C. saturation characteristics of Temperature Raise becomes $\Delta t=40^{\circ}\text{C}(T_a=20^{\circ}\text{C})$, whichever is lower.

Note:

- Test equipments L: Agilent HP4284A Precision LCR meter.
- Test equipments SRF: Agilent 4291B RF Impedance Analyzer.
- Test equipments DCR: CHEN HWA 502BC OHM METER.
- Electrical specifications at 25°C. Operating temperature: -55 to 125°C.



▶ **Order Codes**

Order Codes (TPSPC)

TPSPC1055	-	R15		M	
Part Number		Inductance		Tolerance	
TPSPC1055		R15	0.15μH	J	± 5%
TPSPC1060		1R0	1.00μH	K	± 10%
TPSPC1260		470	47.00μH	L	± 15%
TPSPC2111		101	100.00μH	M	± 20%
				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. Direct'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

Direct 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. Direct 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

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

Find Your Solution - rfq@token.com.tw

Selecting the correct inductor solution will not only save you time, but it will give you a competitive edge. At Direct, 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

