

SMD POWER INDUCTORS WITH FERRITE POWDER SHIELDING



AVAILABLE SAMPLE SETS:

- » Set 1:
containing each 6 values of TPI3015CT, TPI4018CT and TPI5040T (lower Inductance values)
- » Set 2:
containing each 6 values of TPI3015CT, TPI4018CT and TPI5040T (higher Inductance values)
- » Set 3:
containing each 6 values of TPI2515CT, TPI3010CT and TPI4018CT (low profile box)
- » Set 4:
containing each 6 values of TPI3010CT, TPI3015CT and TPI4025T (medium sizes)
- » Set 5:
containing each 6 values of TPI6045CT, RN8040-L and RN1060-L (large sizes)

Please contact us for availability and pricing!

APPLICATIONS

- » For small DC/DC converters
- » Portable devices, smart card readers
- » Industrial and automotive applications, etc.

TPI/RN/SN series of ABC are shielded SMD power inductors which use a mix of ferrite-powder and epoxy for shielding. To achieve this, a ferrite material with low permeability (Ni-Zn) is grinded to very fine particles and is evenly mixed with a curing epoxy. After the copper wire is wound around the ferrite core, and the terminals are welded to it in a fully automated process, this ferrite-powder-epoxy mix is applied on top of the winding. This process results in a significantly better shielding against electromagnetic emission and interference compared to unshielded inductors.

Due to the evenly spread air gaps the shielding is effective in horizontal and vertical direction. While the shielding effect reaches about 60-70% compared with „full“ shielded inductors, this series offer space and cost savings.

These so-called „semi shielded“ inductors are optimized for use as power and filter chokes in DC/DC converters and offer low copper losses as well as high saturation currents.

FEATURES

- » Small and low profile inductors
- » It corresponds to high current
- » Simple and original magnetic shield structure
- » Temperature rise: 40°C typ.
- » Operating temperature range: -25°C ... +120°C
- » RoHS compliant

PRODUCT SERIES – AVAILABLE FROM MASS PRODUCTION

SHAPE	SERIES	SIZE [mm]	INDUCTANCE [µH]	IDC 1 [A]**	IDC 2 [A]***	DCR [mΩ]*
	SN3015-L	3.00 × 3.00 × 1.50	1.00 ... 100.0	0.27 ... 2.35	0.29 ... 2.35	40 ... 2433
	TPI2410CT	2.40 × 2.40 × 1.00	0.68 ... 22.0	0.40 ... 2.60	0.40 ... 2.50	60 ... 1470
	TPI2510CT	2.50 × 2.00 × 1.00	0.47 ... 10.0	0.56 ... 2.50	0.55 ... 2.65	38 ... 712

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SHAPE	SERIES	SIZE [mm]	INDUCTANCE [μ H]	IDC 1 [A]**	IDC 2 [A]***	DCR [$m\Omega$]*
	TPI2512CT	2.50 × 2.00 × 1.20	0.47 ... 10.0	0.73 ... 2.75	0.59 ... 2.15	47 ... 630
	TPI2515CT	2.50 × 2.00 × 1.50	0.47 ... 10.0	0.80 ... 3.30	0.75 ... 2.80	38 ... 712
	TPI3010CT	3.00 × 3.00 × 1.00	1.00 ... 100.0	0.15 ... 2.30	0.18 ... 2.30	63 ... 5000
	TPI3012CT	3.00 × 3.00 × 1.20	1.00 ... 47.0	0.23 ... 1.90	0.35 ... 1.71	45 ... 1250
	TPI3015CT	3.00 × 3.00 × 1.50	1.00 ... 100.0	0.25 ... 2.30	0.30 ... 2.30	28 ... 2100
	TPI4018CT	4.00 × 4.00 × 1.30	0.82 ... 220.0	0.30 ... 4.20	0.28 ... 4.00	16 ... 2960
	TPI4025CT	4.00 × 4.00 × 2.50	1.00 ... 220.0	0.20 ... 3.00	0.20 ... 3.00	12 ... 2300
	TPI5020CT	5.00 × 5.00 × 2.00	1.00 ... 33.0	0.80 ... 4.00	0.90 ... 3.60	21 ... 430
	TPI5040CT	5.00 × 5.00 × 4.00	1.50 ... 47.0	1.10 ... 6.00	0.90 ... 3.60	15 ... 270
	TPI6020CT	6.00 × 6.00 × 2.00	0.50 ... 47.0	0.80 ... 7.00	0.80 ... 5.20	9 ... 370
	TPI6028CT	6.00 × 6.00 × 2.80	0.90 ... 100.0	0.65 ... 6.70	0.66 ... 4.60	13 ... 600
	TPI6045CT	6.00 × 6.00 × 4.50	1.00 ... 220.0	0.55 ... 8.60	0.50 ... 6.50	10 ... 920
	RN6045-F	6.00 × 6.00 × 4.50	1.00 ... 100.0	0.80 ... 8.50	0.70 ... 4.20	13.9 ... 494
	RN8040-L	8.00 × 8.00 × 4.00	0.50 ... 100.0	1.00 ... 12.0	1.00 ... 10.00	5.7 ... 310
	RN1060-L	9.80 × 10.00 × 6.00	1.50 ... 470.0	0.80 ... 13.0	0.80 ... 10.0	7.6 ... 731

* typ., except for RN6045 = DCR max.

** IDC1 based on inductance change $\Delta L/L$

*** IDC2 based on temperature rise ΔT 40°C max.