

## TXL04S RANGE OF DIFFERENTIAL MODE TOROIDAL INDUCTORS



### **TECHNICAL DESCRIPTION:**

Primeworld TXL04S range of differential mode, iron powder toroidal inductors are manufactured in one mechanical outline (**S**), providing a range of inductance values at different current levels for switching regulator, and differential mode noise suppression applications.

Windings are enamelled copper wire, wound on a 27mm diameter, iron powder toroidal core. Wound core is secured on to a flame retardant glass reinforced PET (*Rynite FR530*) base with a non-releasable tie. The base has an industrial standard footprint, with four asymmetric terminal pins. Winding is terminated to two of the diagonally opposite pins. Different termination arrangements and different core sizes can be made available upon request.

The TXL04S range is designed for use in power supplies, dc/dc converters and inverters, differential mode EMI/RFI noise suppression. TXL04S range is suitable in switching regulators operating up to 100KHz.

### **RATINGS AND CHARACTERISTICS:**

**Maximum Working Voltage:** 250V ac rms. 400V dc

**Rated current:** See tables for TXL04S-- range

**Inductance:** See tables for TXL04S-- range

**DC Resistance:** See tables for TXL04S-- range

**Climatic category:** 25/105/56

**Maximum temperature range:** Operating: -25 to +105 °C

Storage: -55 to 125 °C

**Mass:**

Size S: 45g max

**Vibration:** Frequency sweep of 10Hz to 55Hz with 0.35mm displacement for 6 hours. IEC68-2-6 Test Fc

**Requirement:** No visible damage, Inductance +/- 10%

**Bump:** 1000 bumps of each 16ms with acceleration of 98m/s. IEC68-2-29 Test Eb

**Requirement:** No visible damage, Inductance +/- 10%.

**Resistance to soldering heat:** Solder bath for 3s @ 350 °C, 6mm from body IEC68-2-20A Method 1B

**Solderability:** Maximum soldering time, 2.5s @ 235 °C Solder globule test, IEC 68-2-20Ta.

**Robustness of terminations:**

500g (5N) IEC 68-2-21 Test Ua Tensile

500g (5N) IEC 68-2-21 Test Ub Bending

**Requirement:** No visible damage to the body. No deviation in nominal inductance and dc resistance.

### INSPECTION REQUIREMENTS

**Visual inspection: Random Sample**

**Failure Criteria:**

Marking	- Non-legible marking. - Missing or double marking.
Package	- Dimensions out of tolerance. - Broken or damaged plastic. - Contamination by oil, flux, etc. - Voids, holes or cracks.
Leads	- Broken, cracked leads. - More than 10% non-plated surface in the soldering area. - Blistering, peeling or other surface defects exposing base material. - Contamination by oil, flux, etc.
Packing	- Inconsistent mechanical strength. - Incorrect labelling and sealing. - Incorrect quantity and type.

**Inductance: 100%**

**Limits:** +/-20%

**DC resistance: 100%**

**Limits:** +5% -10%.

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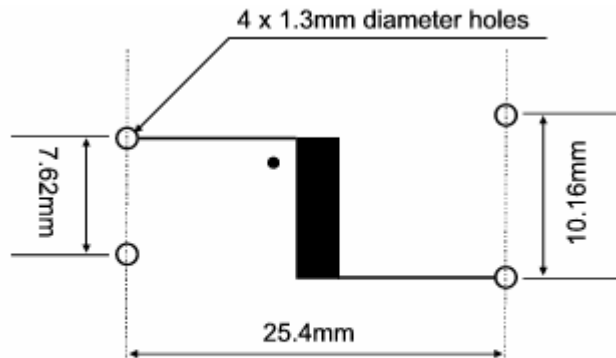
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**TXL04S- RANGE:**

	NOMINAL	DC	MAXIMUM	OPERATIONAL	OPERATIONAL
CODE	INDUCTANCE	RESISITANCE	DC CURRENT	DC CURRENT	DC CURRENT
TXL04___	$L_n$ ( $\mu$ H) @ 1KHz	(OHM) MAX	(A) @ 60° C	(A) @ 65% $L_n$	(A) @ 75% $L_n$
TXL04SAA	10	0.007	15.0	19.4	12.9
TXL04SAB	15	0.009	13.6	15.8	10.6
TXL04SAC	22	0.011	12.3	13.1	8.7
TXL04SAD	33	0.013	11.2	10.7	7.1
TXL04SAE	47	0.020	9.1	8.9	6.0
TXL04SAF	68	0.024	8.3	7.4	5.0
TXL04SBG	82	0.026	8.0	6.8	4.5
TXL04SAH	100	0.036	6.8	6.1	4.1
TXL04SBI	120	0.040	6.5	5.6	3.7
TXL04SAJ	150	0.056	5.5	5.0	3.3
TXL04SBK	220	0.086	4.4	4.1	2.8
TXL04SAM	240	0.090	4.3	4.0	2.6
TXL04SBN	270	0.095	4.2	3.7	2.5
TXL04SAP	330	0.136	3.5	3.4	2.3
TXL04SAQ	470	0.202	2.9	2.8	1.9
TXL04SBR	500	0.266	2.5	2.7	1.8
TXL04SAS	680	0.478	1.9	2.4	1.6
TXL04SAW	1000	0.935	1.3	1.9	1.3
TXL04SBX	1200	1.024	1.3	1.8	1.2

**Mechanical Data**



Seventh letter of component code indicates terminal orientation  
 Mounting detail: Top (components side) view - Letter A  
 Bottom (solder side) view - Letter B

SIZE	H	W	D
S	33	31	16

Pin dimensions: 1.2mm x 0.4mm    Pin length below base: 5mm    TOLERANCES +/- 10%

*Specifications and information contained in this data sheet are intended for guidance only. The Company's policy is one of continuous improvement and the right to change materials, designs, dimensions and descriptive matter, etc. at any time without notice is reserved. Primeworld shall not be liable for any loss, direct or consequential, which may result from the use of this information.*

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