

# PRIMEWORLD LIMITED

## TXL03 RANGE OF RADIAL INDUCTORS



### **TECHNICAL DESCRIPTION:**

**Primeworld** TXL03--- range of radial inductors are manufactured in three different mechanical outlines, (**R, S, T**), providing a wide range of inductance values with peak energy storage, ( $1/2 LI^2$ ) capabilities of 40uJ, 55uJ, and 75uJ, respectively.

Windings are enamelled copper wire, wound on a drum shaped bobbin core, terminated on to tinned copper leads. The inductor is moulded in flame retardant glass filled nylon 66 providing an environmental and mechanical protection.

The TXL03 range is designed for use in power supplies, dc/dc converters and inverters, EMI/RFI noise suppression, and smoothing choke applications.

### **RATINGS AND CHARACTERISTICS:**

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

**Rated current:** See tables for TXL03--- range

**Inductance:** See tables for TXL03--- range

**DC Resistance:** See tables for TXL03--- range

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

**Maximum temperature range:**

Operating: -25 to +105 °C

Storage: -55 to 125 °C

**Mass:**

Size R: 2.5g max

Size S: 5g max

Size T: 7.5g 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:**

1Kg (10N) 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.<br>- Missing or double marking.  |
| Package | - Dimensions out of tolerance.<br>- Broken or damaged plastic.<br>- Contamination by oil, flux, etc.<br>- Voids, holes or cracks.   |
| Leads   | - Broken, twisted, cracked or loose leads.<br>- More than 5% non-plated surface in the soldering area.<br>- Blistering, peeling or other surface defects exposing base material.<br>- Lead dimensions out of tolerance.<br>- Contamination by oil, flux, etc. |
| Packing | - Inconsistent mechanical strength.<br>- Incorrect labelling and sealing.<br>- Incorrect quantity and type.   |

**Inductance: 100%**

**Limits:**

+/- 20% for L < 10uH @ 100KHz, 0.1V ac rms.  
+/- 10% for L > 10uH @ 10KHz, 0.1V ac rms.

**DC resistance: 100%**

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

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Derwent, Sawbridgeworth Road, Hatfield Heath, Bishop's Stortford, HERTS, CM22 7DR

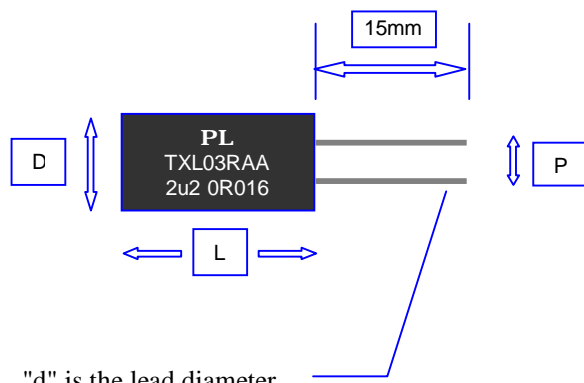
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**TXL03-- RANGE:**

	NOMINAL	DC	CONTINUOUS	DC
CODE	INDUCTANCE	RESISITANCE	DC CURRENT	CURRENT (A)
SIZE...R_	(uH) @ 1KHz	(OHM) MAX	(A) @ 40 o C	@ 90% Lnom
TXL03RAA	2.2	0.016	3.95	6.03
TXL03RAB	3.3	0.020	3.51	4.92
TXL03RAC	4.7	0.024	3.21	4.13
TXL03RAD	6.8	0.030	2.89	3.43
TXL03RAE	10	0.037	2.60	2.83
TXL03RAF	15	0.047	2.31	2.31
TXL03RAG	22	0.060	2.04	1.91
TXL03RAH	33	0.080	1.77	1.56
TXL03RAI	47	0.198	1.13	1.30
TXL03RAJ	68	0.245	1.01	1.08
TXL03RAK	100	0.332	0.87	0.89
TXL03RAL	150	0.503	0.71	0.73
TXL03RAM	220	0.699	0.60	0.60
TXL03RAP	330	1.251	0.45	0.49
TXL03RAQ	470	1.583	0.40	0.41
TXL03RAR	680	1.904	0.36	0.34
TXL03RAS	820	2.300	0.33	0.31
TXL03RAW	1000	2.689	0.30	0.28
TXL03RAX	1500	4.697	0.23	0.23
TXL03RAY	2200	6.321	0.20	0.19
TXL03RAZ	3300	8.709	0.17	0.16
SIZE...S_				
TXL03SAA	2.2	0.017	4.48	6.82
TXL03SAB	3.3	0.021	4.05	5.57
TXL03SAC	4.7	0.026	3.70	4.66
TXL03SAD	6.8	0.031	3.38	3.88
TXL03SAE	10	0.037	3.07	3.20
TXL03SAF	15	0.048	2.70	2.61
TXL03SAG	22	0.058	2.46	2.16
TXL03SAH	33	0.071	2.22	1.76
TXL03SAI	47	0.095	1.92	1.47
TXL03SAJ	68	0.114	1.75	1.23
TXL03SAK	100	0.141	1.57	1.01
TXL03SAL	150	0.180	1.39	0.83
TXL03SAM	220	0.249	1.19	0.68
TXL03SAP	330	0.607	0.76	0.56
TXL03SAQ	470	0.766	0.68	0.47
TXL03SAR	680	0.971	0.60	0.39
TXL03SAS	820	1.132	0.56	0.35
TXL03SAW	1000	1.300	0.52	0.32
TXL03SAX	1500	2.159	0.40	0.26
TXL03SAY	2200	2.824	0.35	0.22
TXL03SAZ	3300	3.846	0.30	0.18

	NOMINAL	DC	CONTINUOUS	DC
CODE	INDUCTANCE	RESISITANCE	DC CURRENT	CURRENT (A)
SIZE...T__	(uH) @ 1KHz	(OHM) MAX	(A) @ 40 o C	@ 90% Lnom
TXL03TAA	2.2	0.016	5.55	8.10
TXL03TAB	3.3	0.020	5.01	6.62
TXL03TAC	4.7	0.024	4.59	5.54
TXL03TAD	6.8	0.030	4.09	4.61
TXL03TAE	10	0.036	3.71	3.80
TXL03TAF	15	0.044	3.35	3.10
TXL03TAG	22	0.054	3.05	2.56
TXL03TAH	33	0.066	2.75	2.09
TXL03TAI	47	0.079	2.52	1.75
TXL03TAJ	68	0.099	2.25	1.46
TXL03TAK	100	0.123	2.02	1.20
TXL03TAL	150	0.160	1.77	0.98
TXL03TAM	220	0.201	1.58	0.81
TXL03TAP	330	0.343	1.21	0.66
TXL03TAQ	470	0.431	1.08	0.55
TXL03TAR	680	0.562	0.94	0.46
TXL03TAS	820	0.646	0.88	0.42
TXL03TAW	1000	0.823	0.78	0.38
TXL03TAX	1500	1.461	0.59	0.31
TXL03TAY	2200	1.913	0.51	0.26
TXL03TAZ	3300	2.641	0.44	0.21

**Mechanical Data**



"d" is the lead diameter

SIZE	L	D	P	d
R	12	8	3.5	0.6
S	16	10	4	0.8
T	16	12	6	0.8

**ALL DIMENSIONS ARE IN mm**

**TOLERANCE +/- 5%**

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