

**Customer:** \_\_\_\_\_  
**Customer P/N:** \_\_\_\_\_  
**JWD P/N:** LT-4532B Series  
**Spec No.:** \_\_\_\_\_  
**Version No.:** V0.1  
**Description:** Pulse Transformer  
 \_\_\_\_\_  
 1G/2.5G/10G Base-T Available  
 \_\_\_\_\_  
 IEEE802.3af/IEEE802.3at Support  
 \_\_\_\_\_

Customer Approval		JWD Company Approval	
Inspected By:		Issued By:	Mingrui, Song
Checked By:		Checked By:	/
Approved By:		Approved By:	Focus
Approved Date:		Issued Date:	2022/11/12

Please Return One Copy to Us After Approved,TKS! (承认后请回寄一份,谢谢)

**Remark:**

1. Before use, please confirm whether this product is suitable for your design, Scientific only ensure products meet this specification.
2. This specification data change must be confirmed by both parties,any individual modification is invalid.
3. If customer placed orders without signing back this specification, it is regarded as recognition.

**四川经纬达科技集团有限公司**

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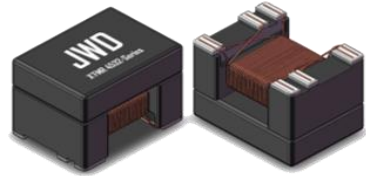
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### Revision History

Revision	Changed Date	Request By	Change Content
V0.1	2022/11/12	Mingrui, Song	新版发行

## 1 Features And Benefits

-  LAN interfaces of various devices including network devices, communication equipment, digital consumer electronics, etc
-  Compliant With Ethernet 1/2.5/5/10GBase-T
-  Improved Return Loss And Cross Talk Properties
-  NON-PoE、IEEE802.3af(15W)、IEEE802.3at(30W) available
-  High-Quality Product That Uses Auto Winding
-  Operating temperature -40°C to +85°C
-  1200Vrms/1mA/60s Hi-pot Support
-  Super Small Size - available in 4532 Size
-  RoHS Compliant



## 2 Electrical Specifications @ 25°C

1G Base-T Series

Part Number	OCL	DCR (Ω)	Insertion Loss (dB)		Return Loss (dB)		PoE Rating
	Min		Max		Min		
	100KHz,0.1V	Max	0.5-1MHz	1-125MHz	0.5-1MHz	1-125MHz	
LT-4532B-201MGN	200 @8mA	3.00	-1.2	-0.2-0.002*f <sup>1.4</sup>	-1.2	-10+20log(f/80)	NON-PoE
LT-4532B-201MGF	200 @10.5mA	3.00					PoE AF
LT-4532B-351MGN	350 @8mA	6.00					NON-PoE
LT-4532B-351MGF	350 @10.5mA	6.00					PoE AF
LT-4532B-181MGT	180 @15mA	6.00					PoE AT

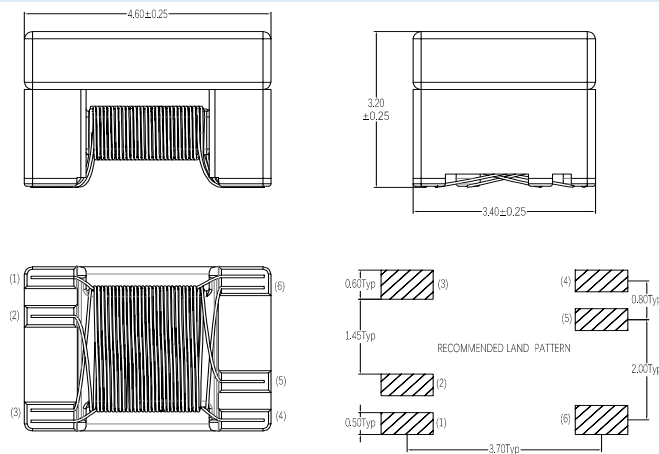
2.5G/5G Base-T Series

Part Number	OCL	DCR (Ω)	Insertion Loss (dB)		Return Loss (dB)		PoE Rating
	Min		Max		Min		
	100KHz,0.1V	Max	1-100MHz	100-250 MHz	1-100 MHz	100-250 MHz	
LT-4532B-201MQN	200 @8mA	3.00	-1.0	-2.0	-16	-16+10log(f/40)	NON-PoE
LT-4532B-201MQF	200 @10.5mA	3.00					PoE AF
LT-4532B-181MQT	180 @15mA	3.00					PoE AT

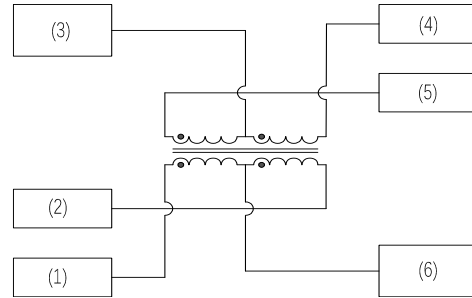
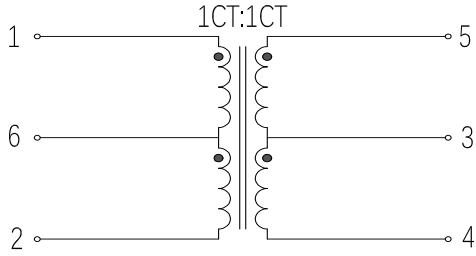
10G Base-T Series

Part Number	OCL	DCR (Ω)	Insertion Loss (dB)				Return Loss (dB)					PoE Rating
	Min		Max				Min					
	100KHz,0.1V	Max	1-200 MHz	200-300 MHz	300-400 MHz	400-500 MHz	1-100 MHz	100-200 MHz	200-300 MHz	300-400 MHz	400-500 MHz	
LT-4532B-121MMN	120 @8mA	2.00	-1.2	-1.5	-2	-3	-18	-16	-12	-10	-8	NON-PoE
LT-4532B-121MMF	120 @10.5mA	2.00										PoE AF
LT-4532B-121MMT	120 @15mA	2.00										PoE AT

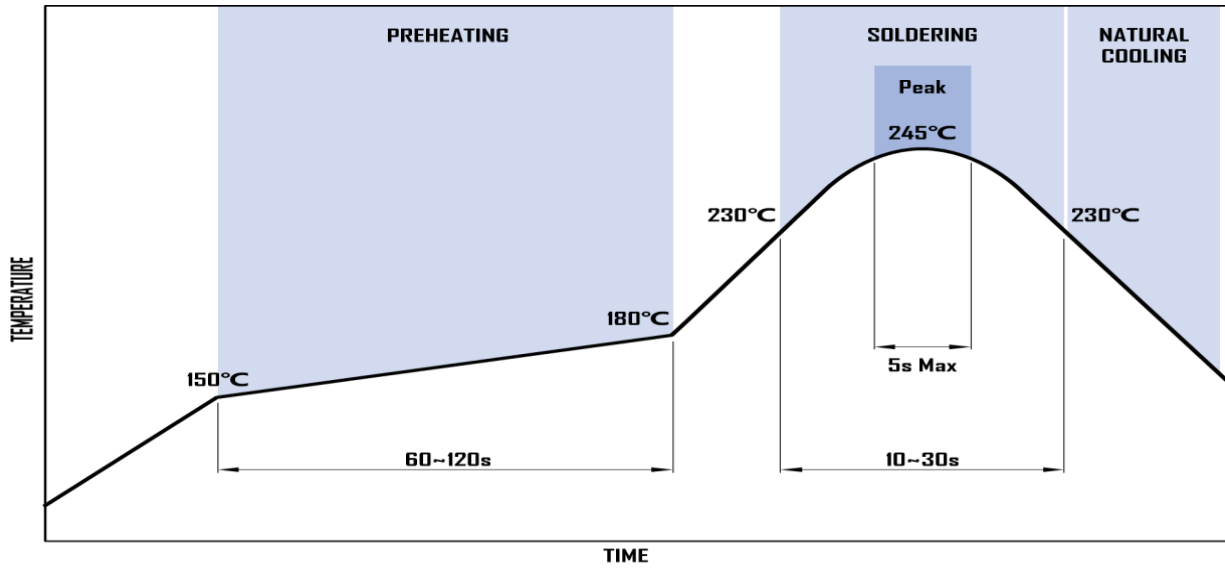
## 3 Dimensions (mm)& recommend layout



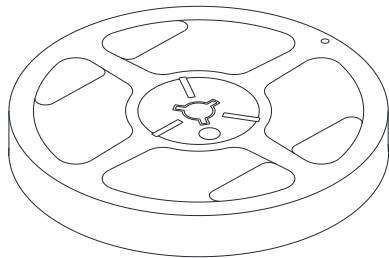
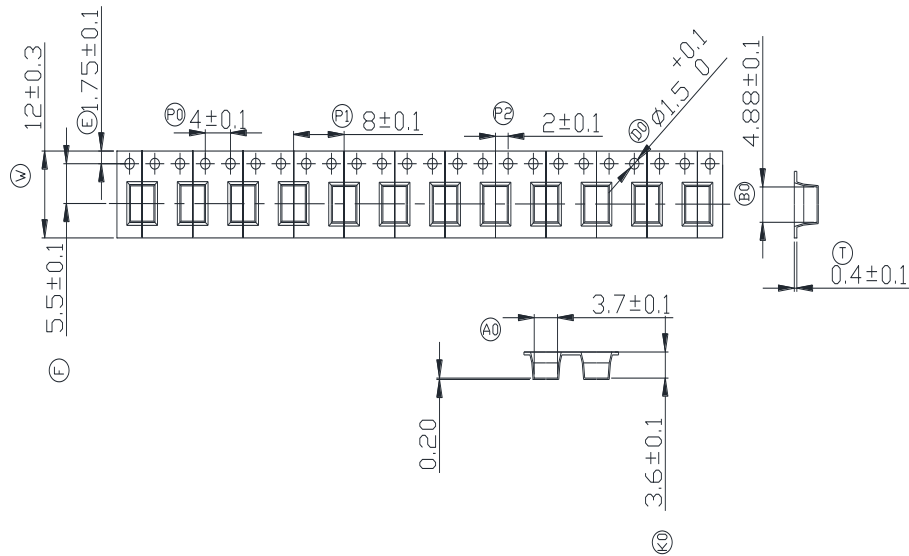
## 4 Schematics



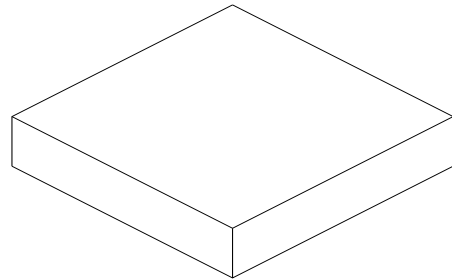
## 5 Recommended Reflow Profile



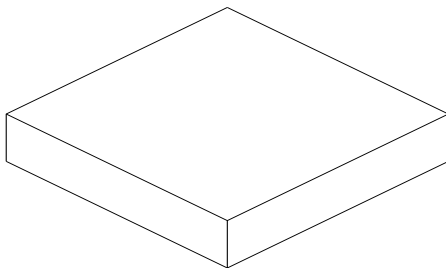
## 6 Packaging specification



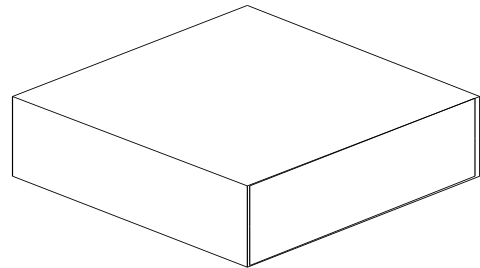
Four Reel



One Inner Carton



Five Inner Carton



One Export Carton












Package Quantity:  
 One Reel=2000 Pcs  
 One Inner Carton=2000\*4=8000 Pcs  
 One Export Carton=8000\*5=40000 Pcs

## 7 Reliability test

NO.	Test Item	Standard Reference	Test Condition
1	High temperature storage test	IPC/JEDEC J-STD-020D	Temperature: 125±2°C Time: 168 hours Measurement at 24±4 hours after test conclusion.
2	Low temperature test	IPC/JEDEC J-STD-020D	Temperature: -40±2°C Time: 168 hours Measurement at 24±4 hours after test conclusion.
3	Constant temperature and constant humidity test	GB/T 2423.3(IEC 60068-2-78)	Temperature: 40±2°C / humidity:93±2%RH Time: 1000 hours Measurement at 24±4 hours after test conclusion.
4	High temperature and high humidity test	GB/T 2423.50	Temperature: 85±2°C / humidity:85±2%RH Time: 1000 hours Measurement at 24±4 hours after test conclusion.
5	Thermal shock test	IPC/JEDEC J-STD-020D	First -40±5°C for 30±2 minutes, last 125°C 30±2 minutes as 1 cycle. Total 100 cycles.
6	Salt spray test	GB/T2423.17(IEC 60068-2-11)	Concentration: (5±0.1)% PH: 6.5 ~ 7.2 Temperature: 35 ±2 °C Time: 24 hours
7	Solder ability test	GB/T 2423.28(IEC 60068-2-20)	Preheating: 150±5°C, 60 seconds Immerse the terminal in flux for 5 seconds then dip the terminal into a soldering bath of 245±5°C for 2±0.5 seconds.
8	Drop test	GB/T 2423.8(IEC 60068-2-32)	Floor should be hard, strong, concrete. Height: 0.8m. Test 6 surfaces, 3 ridges and 1 corner of Test-box.
9	Vibration test	GB/T 4857.7	Apply frequency 10~100~10Hz 1.52mm±10% amplitude in each of perpendicular direction for 20 minutes. Total 12 cycles
10	Soldering resistance test	GB/T 2423.50	Preheating: 150±5°C, 60~120 seconds dip the terminal into a soldering bath of 260±5°C for 10±3 seconds with 3 times.
11	Terminal strength	MIL-STD-202	PCB specification: 100mm X 40mm. 4 layer board Thickness: 1.60 + / - 0.2 mm 1、>0805 inch/2012mm : 9.8N (1kg) 2、<=0805 inch/2012mm: 4.9N (0.5kg) Hold time: 60±1 s
12	Plate bending test	MIL-STD-202	PCB specification: 100mm X 40mm. 4 layer board Thickness: 1.60 + / - 0.2 mm Displacement: 2mm Hold time: 60±1s



## REMINDERS

-  The best assembly quality guarantee period of product: 12 months (From shipment date)  
Storage condition : seal in packaging, (temperature: 5 to 40°C, humidity: 10 to 75% RH or less).
-  If taking out for use, the remaining products should be sealed in plastic bags and preserved in accordance with the above conditions, to avoid oxidation of electrodes and affect soldering status.
-  Do not use or store in locations where there are conditions such as gas corrosion (salt, acid, alkali, etc.).
-  Before soldering, be sure to preheat components.  
The preheating temperature should be set so that the temperature difference between the solder temperature and chip temperature does not exceed 150°C.
-  Always handle products with care to avoid damage.
-  Do not touch electrodes with bare hands directly, as oil secretions may inhibit soldering.  
Always ensure optimum conditions for soldering.
-  Soldering corrections after mounting should be within the range of the conditions determined in the specifications. If overheated, a short circuit, performance deterioration, or lifespan shortening may occur.
-  Use a wrist band to discharge static electricity in your body through the grounding wire.
-  Do not expose the products to magnets or magnetic fields.
-  Do not use for a purpose outside of the contents regulated in the delivery specifications.
-  Do not use for Automotive application.