

# Specification for Approval

Customer:

Customer P/N:

EEC P/N:

LT-4532B-201MQN

Spec No.:

Version No.:

V0.1

Description:

Pulse Transformer

2.5G/5G Base-T Available

| Customer Approval |  | EEC Approval |             |
|-------------------|--|--------------|-------------|
|                   |  |              |             |
| Inspected By:     |  | Issued By:   | Fuming Chen |
| Checked By:       |  | Checked By:  | Jerry Gu    |
| Approved By:      |  | Approved By: | Focus Wang  |
| Approved Date:    |  | Issued Date: | 2023/6/12   |

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.



绵阳敦源电子科技有限公司

Mianyang Dunyuan Electronics Technology Co.,Ltd

地址：四川省绵阳市高新区综合保税区

ADD: Comprehensive Bonded Zone, High-Tech Industrial Development Zone Mianyang, SiChuan

## Specification for Approval

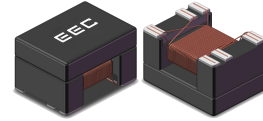
## Revision History

[illegible]

|                   |                 |           |                   |
|-------------------|-----------------|-----------|-------------------|
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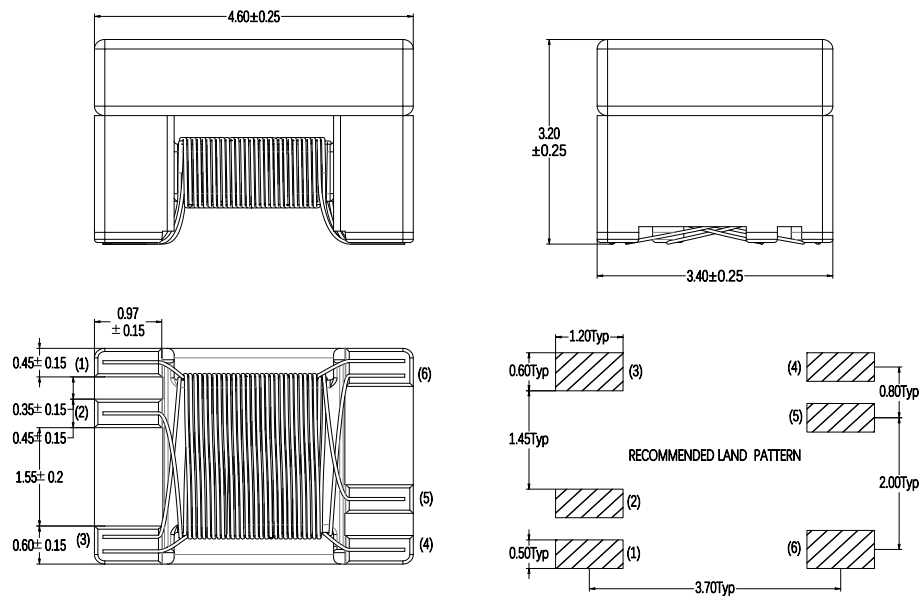
**1 Features And Benefits**

- 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 +105°C
- 1200Vrms/1mA/60s Hi-pot Support
- Super Small Size - available in 4532 Size
- RoHS Compliant

**2 Electrical Specifications @ 25°C**

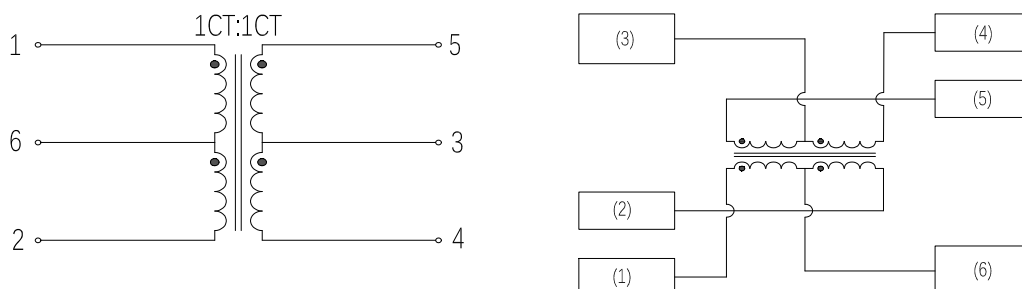
2.5G/5G Base-T Series

| Part Number     | OCL<br>( $\mu$ H) | DCR<br>( $\Omega$ ) | Insertion Loss<br>(dB) |             | Return Loss<br>(dB) |                 | PoE<br>Rating |
|-----------------|-------------------|---------------------|------------------------|-------------|---------------------|-----------------|---------------|
|                 | Min               | Max                 | Max                    |             | Min                 |                 |               |
|                 | 100KHz,0.1V       |                     | 1-100MHz               | 100-250 MHz | 1-100 MHz           | 100-250 MHz     |               |
| LT-4532B-201MQN | 200 @8mA          | 3.00                | -1                     | -2.0        | -16                 | -16+10log(f/40) | NON-PoE       |

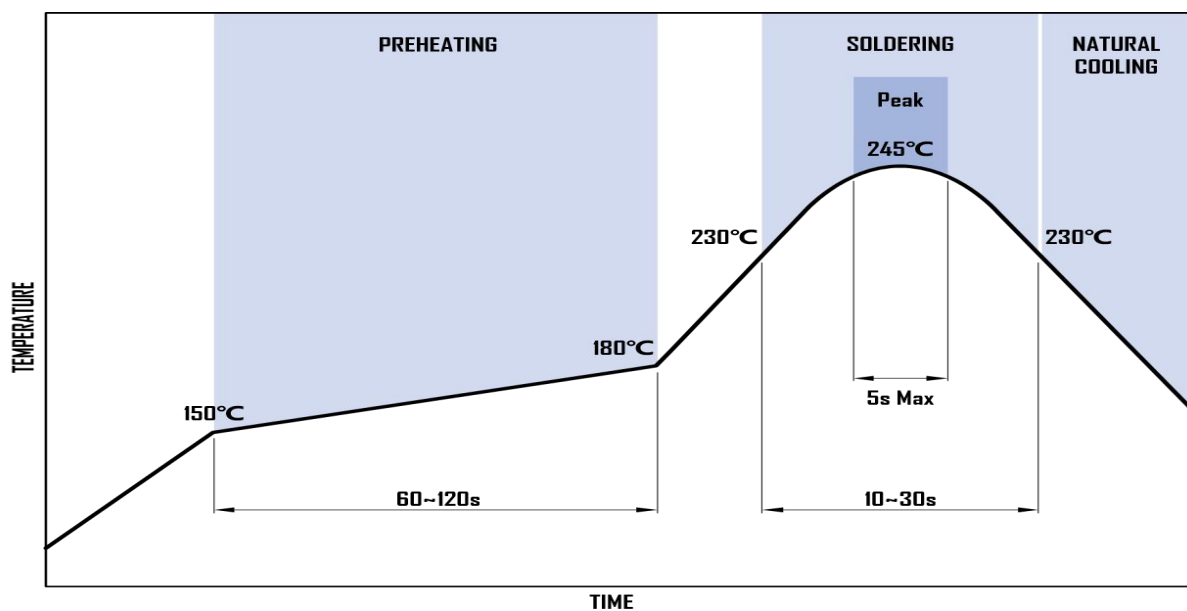
**3 Dimensions (mm)& recommend layout**

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## 4 Schematics

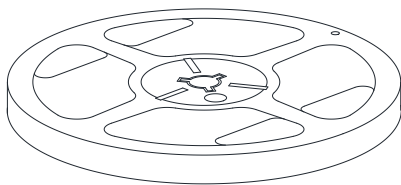
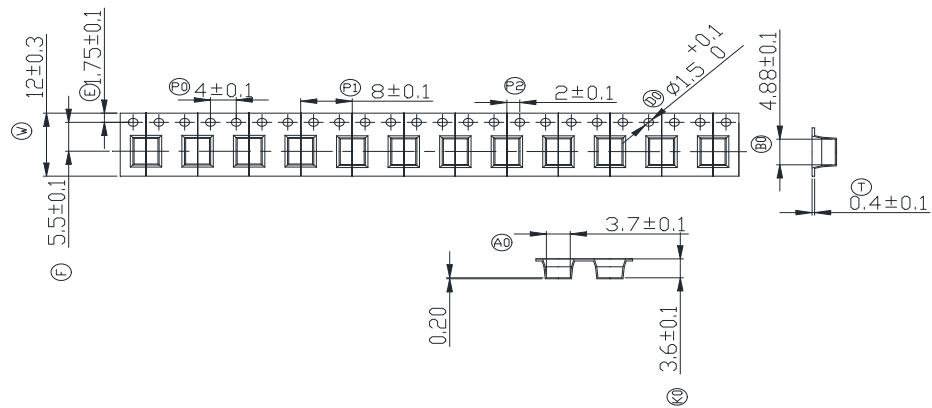


## 5 Recommended Reflow Profile

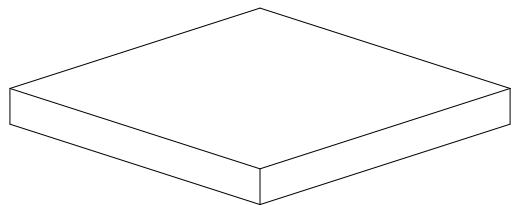


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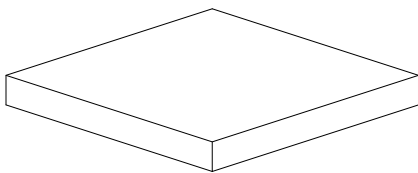
## 6 Packaging specification



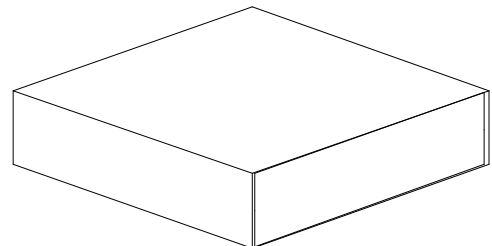
Four Reel



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

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## 7 Reliability test

| NO. | Test Item                                       | Standard Reference               | Test Condition                                                                                                                                                                                                                               |
|-----|-------------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | High temperature storage test                   | IPC/JEDEC J-STD-020D             | Temperature: $125\pm 2^{\circ}\text{C}$<br>Time: 168 hours<br>Measurement at $24\pm 4$ hours after test conclusion.                                                                                                                          |
| 2   | Low temperature test                            | IPC/JEDEC J-STD-020D             | Temperature: $-40\pm 2^{\circ}\text{C}$<br>Time: 168 hours<br>Measurement at $24\pm 4$ hours after test conclusion.                                                                                                                          |
| 3   | Constant temperature and constant humidity test | GB/T 2423.3<br>(IEC 60068-2-78)  | Temperature: $40\pm 2^{\circ}\text{C}$ / humidity: $93\pm 2\%\text{RH}$<br>Time: 168 hours<br>Measurement at $24\pm 4$ hours after test conclusion.                                                                                          |
| 4   | High temperature and high humidity test         | GB/T 2423.50                     | Temperature: $85\pm 2^{\circ}\text{C}$ / humidity: $85\pm 2\%\text{RH}$<br>Time: 168 hours<br>Measurement at $24\pm 4$ hours after test conclusion.                                                                                          |
| 5   | Thermal shock test                              | IPC/JEDEC J-STD-020D             | First $-40\pm 5^{\circ}\text{C}$ for $30\pm 2$ minutes, last $125^{\circ}\text{C}$ $30\pm 2$ minutes as 1 cycle.<br>Total 100 cycles.                                                                                                        |
| 6   | Salt spray test                                 | GB/T2423.17<br>(IEC 60068-2-11)  | Concentration : $(5\pm 0.1)\%$<br>PH : $6.5 \sim 7.2$<br>Temperature: $35 \pm 2^{\circ}\text{C}$<br>Time: 24 hours                                                                                                                           |
| 7   | Solder ability test                             | GB/T 2423.28<br>(IEC 60068-2-20) | Preheating: $150\pm 5^{\circ}\text{C}$ , 60 seconds<br>Immerse the terminal in flux for 5 seconds, then dip the terminal into a soldering bath of $245\pm 5^{\circ}\text{C}$ for $2\pm 0.5$ seconds.                                         |
| 8   | Drop test                                       | GB/T 2423.8<br>(IEC 60068-2-32)  | Floor should be hard, strong, concrete.<br>Height: 0.8m.<br>Test 6 surfaces, 3 ridges and 1 corner of Test-box.                                                                                                                              |
| 9   | Vibration test                                  | GB/T 4857.7                      | Apply frequency $10\sim 100\sim 10\text{Hz}$ $1.52\text{mm}\pm 10\%$ amplitude in each of perpendicular direction for 20 minutes. Total 12 cycles                                                                                            |
| 10  | Soldering resistance test                       | GB/T 2423.50                     | Preheating: $150\pm 5^{\circ}\text{C}$ , $60\sim 120$ seconds<br>dip the terminal into a soldering bath of $260\pm 5^{\circ}\text{C}$ for $10\pm 3$ seconds with 3 times.                                                                    |
| 11  | Terminal strength                               | MIL-STD-202                      | PCB specification: 100mm X 40mm. 4 layer board<br>Thickness: $1.60 + / - 0.2 \text{ mm}$<br>1、 $>0.05 \text{ inch}/2012\text{mm}$ : 9.8N (1kg)<br>2、 $\leq 0.05 \text{ inch}/2012\text{mm}$ : 4.9N (0.5kg)<br>Hold time: $60\pm 1 \text{ s}$ |
| 12  | Plate bending test                              | MIL-STD-202                      | PCB specification: 100mm X 40mm. 4 layer board<br>Thickness: $1.60 + / - 0.2 \text{ mm}$<br>Displacement: 2mm<br>Hold time: $60\pm 1 \text{ s}$                                                                                              |

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## 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.

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