

APPROVAL SHEET

To :

Customer P/N :

UDE P/N : L22T005-4

Description : 5G Base -T

Single Port LAN Filter

Meet IEEE 802.3bt type4 standard



RoHSHF

Halogen
Free

Spec No.
LZ0235-00

Update Date
2020/10/22

Revision
C

Approved	Checked	Prepared



湧德電子 股份有限公司
UDE Corp.

桃園市(33852) 蘆竹區內溪路 68 巷13號

No.13, Ln. 68, Neixi Rd., Luzhu Dist., Taoyuan City (33852), Taiwan

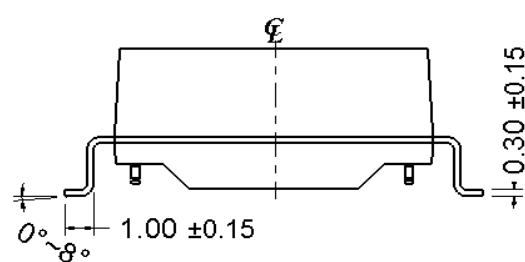
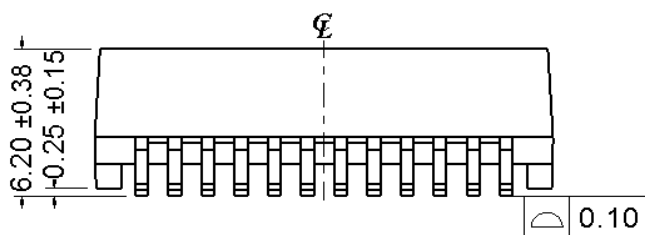
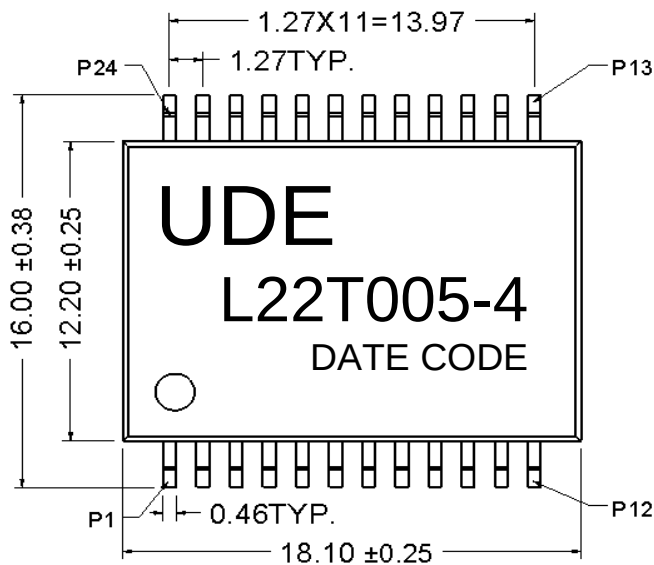
TEL: 886-3-3242000 FAX: 886-3-3246611

<http://www.ude-corp.com/>

1. MECHANICAL DIMENSION

1.1 Product Dimension

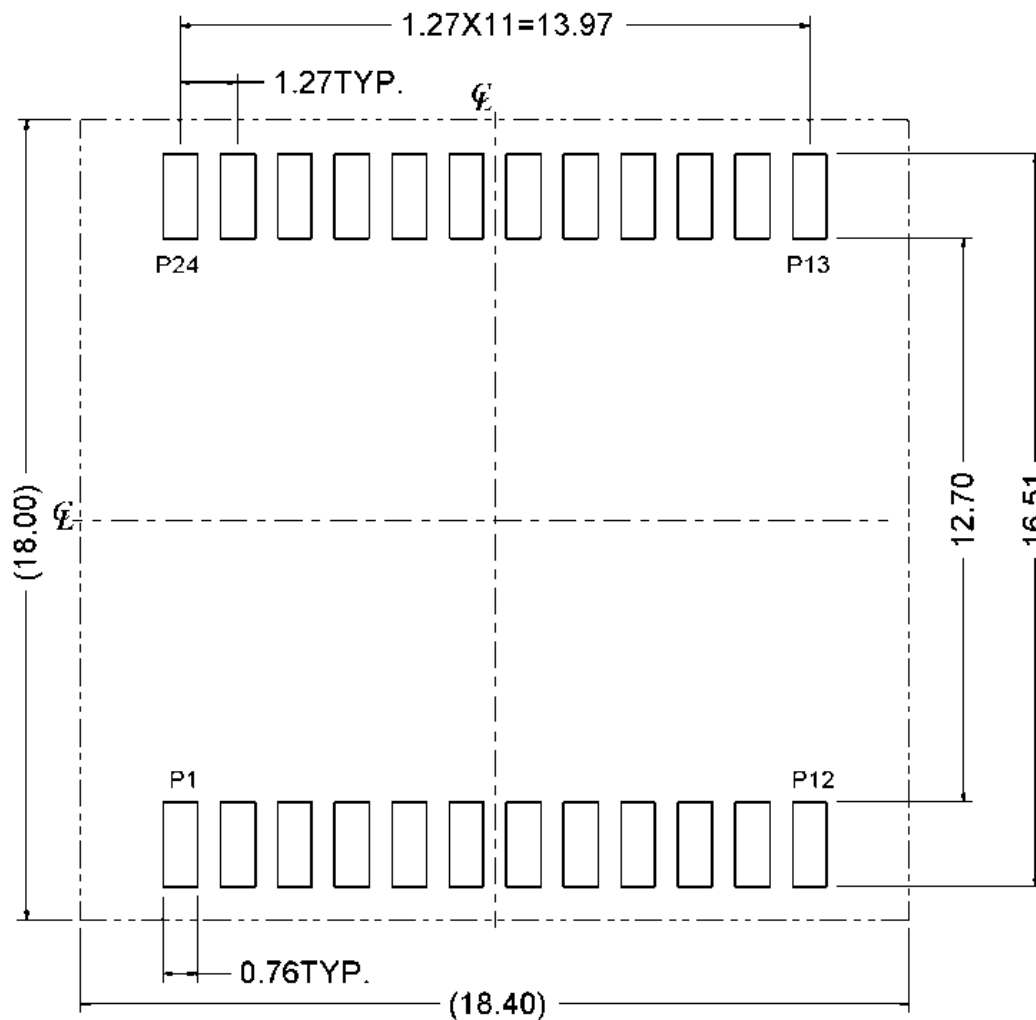
General Tolerance : X.X : ± 0.25
 X.XX : ± 0.13



1.2 Recommended PCB Layout

Component Side of Board

All dimension tolerance are $\pm 0.08\text{mm}$ unless otherwise specified



1.3 Order Information

L 2 2 I 005 - 4
A B C D E F

A、Filter

B、SMD

C、24PIN

D、Operating Temperature :-40°C to +85°C

E、Product Numbering

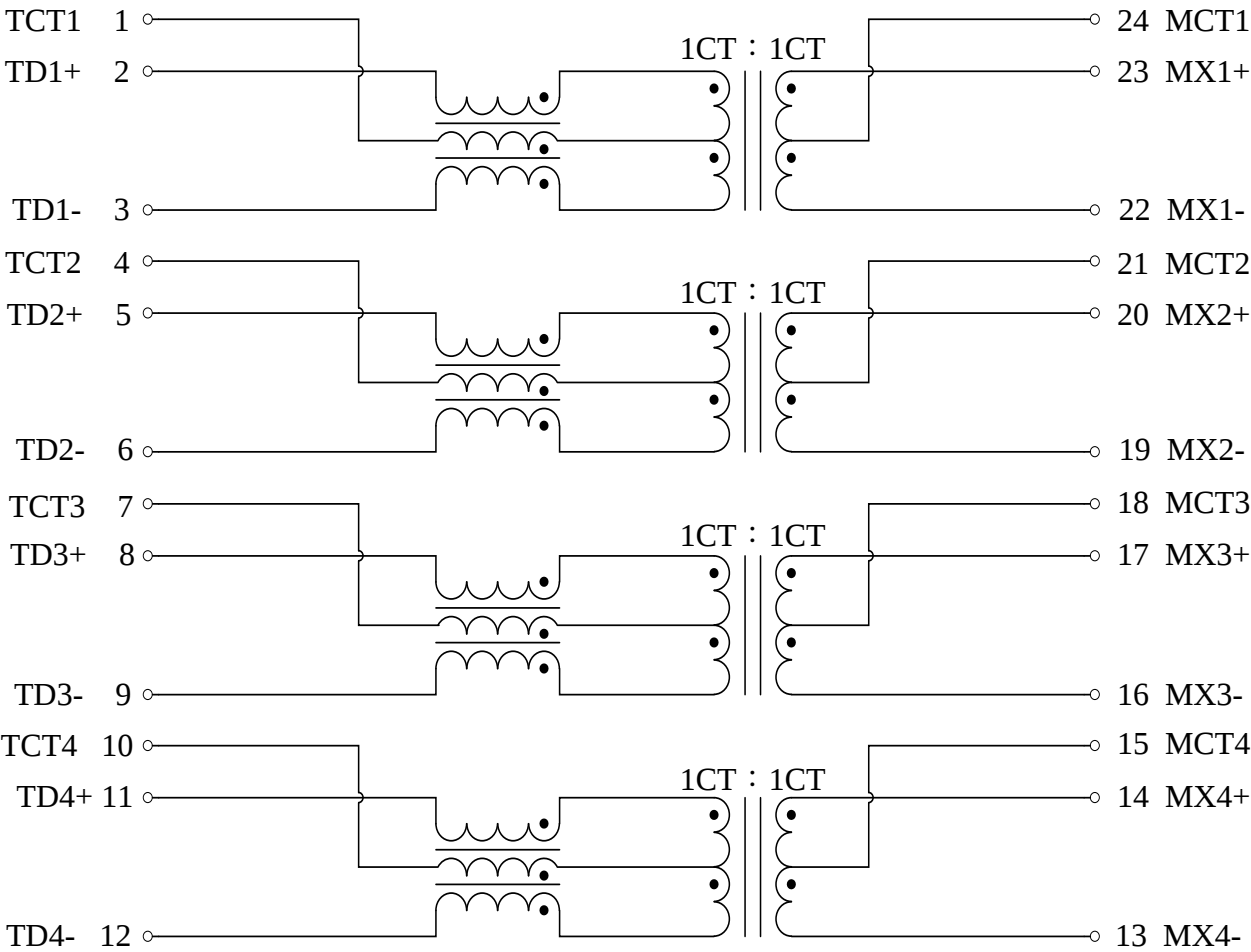
F、PoE+ +

2. SPECIFICATION

- 2.1 Designed for Ethernet 5G Base-T,full Single port applications.
- 2.2 Supports 4 pairs of category 6 or greater cable.
- 2.3 Cable interface for isolation and low common mode emissions.
- 2.4 Designed to meet IEEE 802.3bt type4 with 1000mA balanced current.
- 2.5 Compliant with RoHS&Halogen Free requirements.
- 2.6 Operating and Storage Temperature
 - Operating Temperature : -40°C to +85°C
 - Storage Temperature : -40°C to +85°C
- 2.7 Packing Information
 - 400 pcs finished goods per reel
 - 3 reels(1200 pcs finished goods) per inner box
 - 2 Inner boxes(2400 pcs finished goods) per master carton

3. ELECTRICAL CHARACTERISTICS

3.1 Schematic



3.2 Electrical Specifications @25°C

Type : Balance low pass 100Ω impedance

3.2.1 Insertion Loss

1-50MHz -0.5 dB Max

50-125MHz -1.0 dB Max

125-300MHz -2.0 dB Max

3.2.2 Return Loss

1-50MHz -20 dB Min load 100Ω

50-200MHz -20+8*log(f/50MHz) dB Min load 100Ω

200-300MHz -15+30*log(f/200MHz) dB Min load 100Ω

3.2.3 Reflected CM to Diff Conversion (REF)

1MHz -30 dB Min

50MHz -30 dB Min

100MHz -27 dB Min

200MHz -24 dB Min

300MHz -22 dB Min

3.2.4 CM to DM Conversion(REF)

1-50MHz -35 dB Min

125MHz -30 dB Min

200MHz -27 dB Min

300MHz -24 dB Min

3.2.5 Reflected Diff to CM Conversion (REF)

1-10MHz -48 dB Min

10-300MHz $-48+19*\log(\text{Freq MHz}/10\text{MHz})$ dB Min

3.2.6 CM to CM Attenuation

1-200MHz -25 dB Min

200-300MHz -20 dB Min

3.2.7 Cross Talk

1-125MHz -30 dB Min

125-300MHz -25 dB Min

3.3 Inductance

@ 100KHz, 0.1V, 8mA DC BIAS 160uHMin

3.4 HiPot Test

@ 1500 Vrms

3.5 Turns Ratio

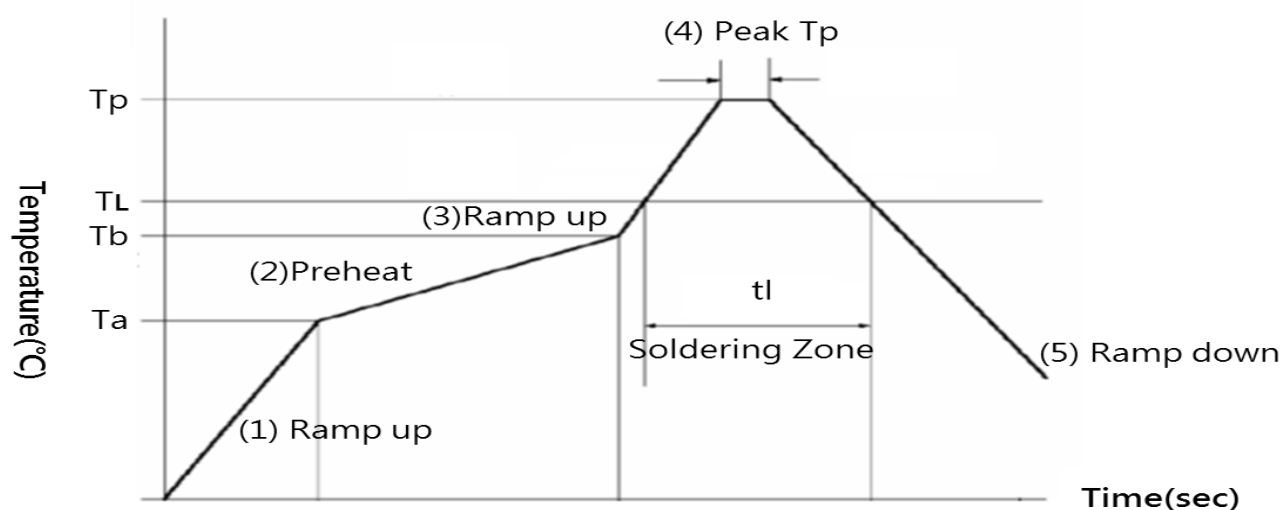
@ 1:1±5%

4. IR REFLOW TEMPERATURE PROFILE

Step#	Profile Feature	Condition/Duration
Step1	Ramp-up rate	3°C/sec max
Step2	Preheat : 150~200°C	Ta-Tb : 60-180sec
Step3	Ramp-up rate (TL to Tp)	3°C/sec max
	Temperature maintained above 217°C (TL)	tl : 60-150sec
Step4	Measured Peak temperature of pin (Tp) Set Reflow Peak Temp.	260°C
	The Time of Actual Peak temperature	20-40sec
Step5	Ramp-down rate	6°C/sec max
Note1	All temperatures refer to topside of the package, measured on the package body surface	
Note2	Time 25°C to peak temperature : 8 minutes max.	
Note3	It is not allowed to make a forced cooling in temperature falling range.	
Note4	The applicable condition refer to IPC/JEDEC J-STD-020D standard	

Table 1 Pb-Free Process-Classification Temperatures (Tp)

Package Thickness	Volume mm3 <350	Volume mm3 350-2000	Volume mm3 >2000
<1.6mm	260°C	260°C	260°C
1.6mm-2.5mm	260°C	260°C	260°C
>2.5mm	260°C	260°C	260°C



5. Revision History			
Issue Date	Revision	Comments	Operator
2017/10/9	A	Initial Release .	Sandy
2020/5/9	B	Delete MSL level and modify pin description	AiAi
2020/10/22	C	Change Storage Temperature	AiAi