

APPROVAL SHEET

To :

Customer P/N :

UDE P/N : L22N004-3

Description : 5G Base -T

Single Port LAN Filter

Meet IEEE802.3 bt type3 standard



Spec No.
LZ0140-00

Update Date
2020/5/21

Revision
E

Approved	Checked	Prepared



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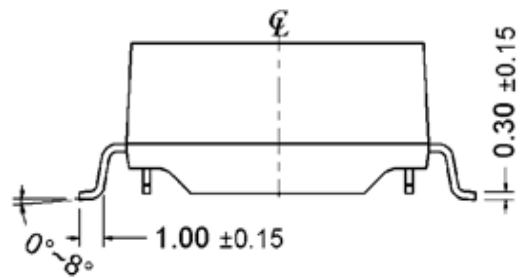
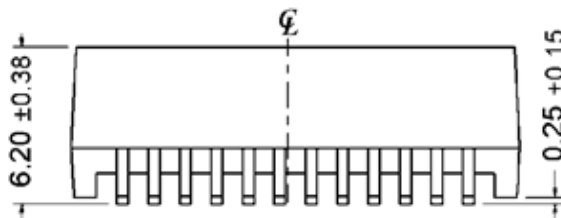
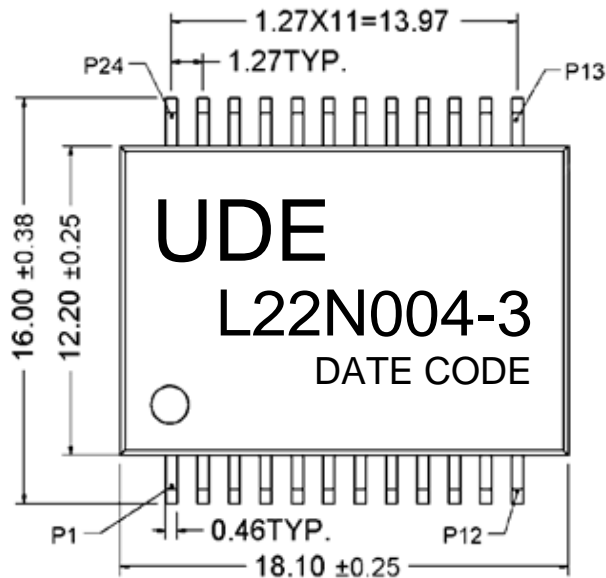
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1. MECHANICAL DIMENSION

1.1 Product Dimension

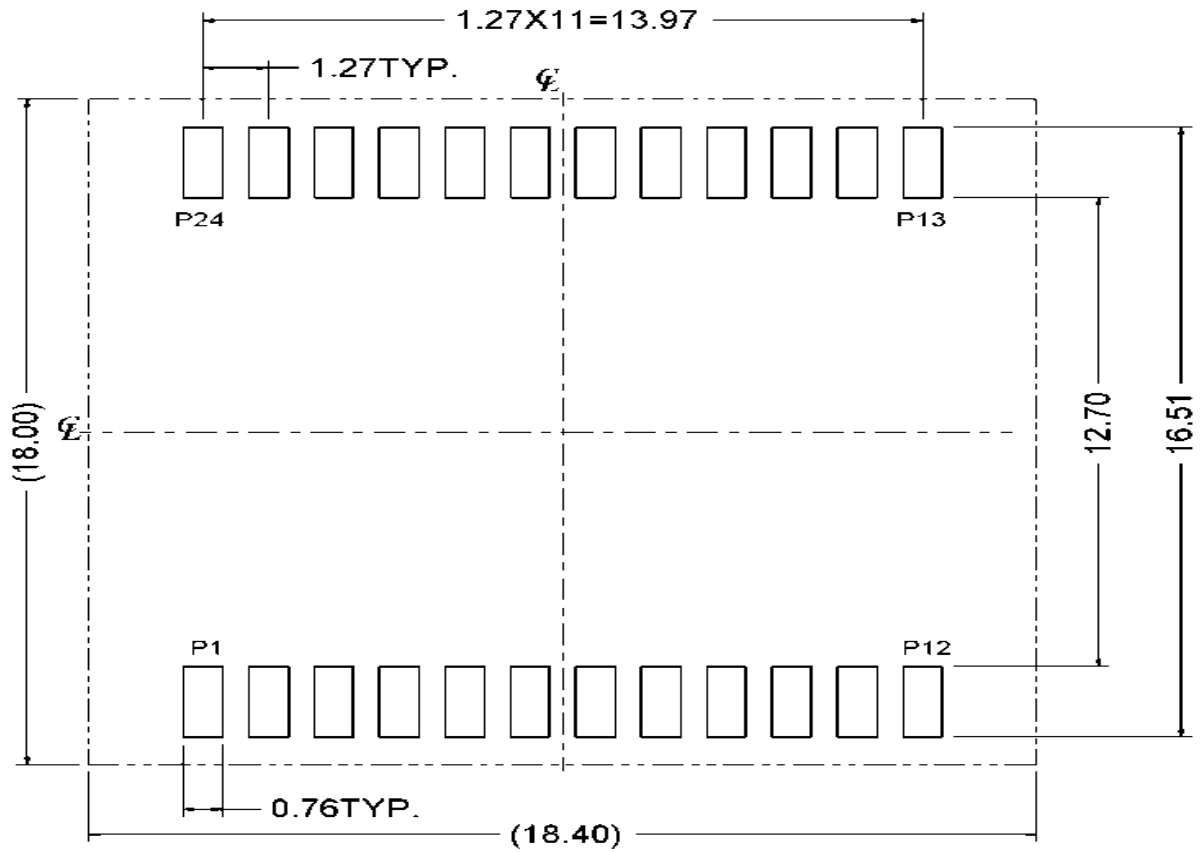
General Tolerance : X.X : ± 0.25
 X.XX : ± 0.13



1.2 Recommended PCB Layout

Component Side of Board

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



1.3 Order Information

L 2 2 N 004 - 3
 A B C D E F

- A、 Filter
- B、 SMD
- C、 24PIN
- D、 Normal
- E、 Product Numbering
- F、 PoE Plus

2. SPECIFICATION

- 2.1 Designed for Ethernet 5G Base-T,full Single port applications.
- 2.2 Supports 4 pairs of category 5e or greater cable.
- 2.3 Cable interface for isolation and low common mode emissions.
- 2.4 Designed to meet IEEE 802.3bt type3 with 720mA balanced current.
- 2.5 Compliant with RoHS&Halogen Free requirements.

2.6 Operating and Storage Temperature

Operating Temperature : 0°C to +70°C

Storage Temperature : -25°C to +105°C

2.7 Packing Information

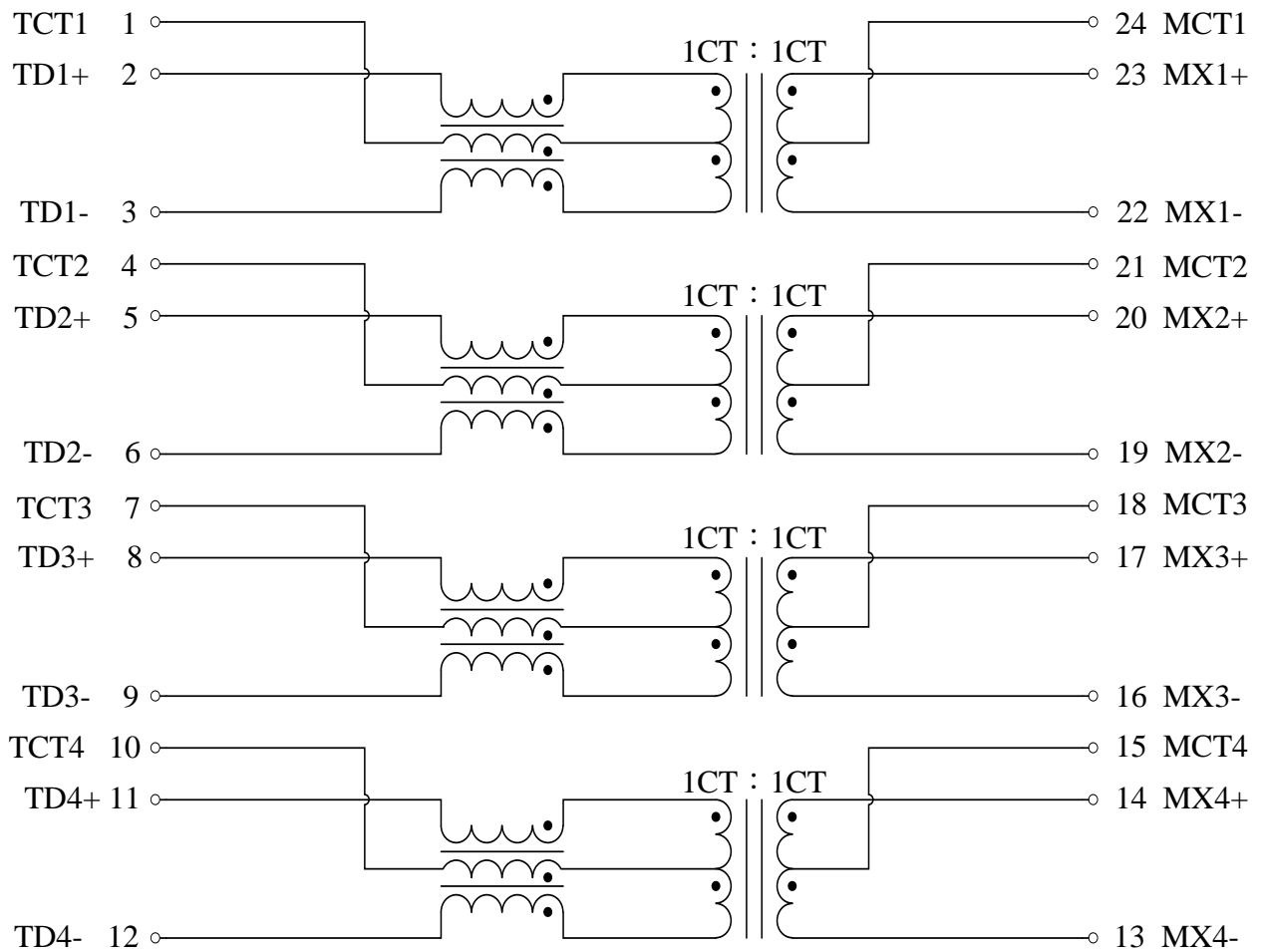
400 pcs finished goods per reel

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

125-200MHZ -2.0 dB Max

200-250MHZ -2.5 dB Max

3.2.2 Return Loss

1-50MHz -20 dB Min load 100Ω

50-250MHz -20+15*log(Freq MHz/40MHz) 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

250MHZ -23 dB Min

3.2.4 CM to DM Conversion(REF)

1-50MHZ -35 dB Min

125MHZ -30 dB Min

200MHZ -27 dB Min

250MHZ -23 dB Min

3.2.5 Reflected Diff to CM Conversion (REF)

1-10MHZ -48 dB Min

10-250MHZ $-48+19*\log(\text{Freq MHz}/10\text{MHz})$ dB Min

3.2.6 CM to CM Attenuation

1-200MHZ -25 dB Min

200-250MHZ -20 dB Min

3.2.7 Cross Talk

1-125MHZ -30 dB Min

125-250MHZ -25 dB Min

3.3 Inductance

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

3.6 HiPot Test

@ 1500 Vrms

3.7 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 mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >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

