APPROVAL SHEET

To：

Customer P/N：

UDE P/N： L22N013-0

Description： 5G BASE –T
Single Port LAN Filter

RoHS

Spec No.	Update Date	Revision
LZ0109-00	2017/3/27	B

Approved	Checked	Prepared

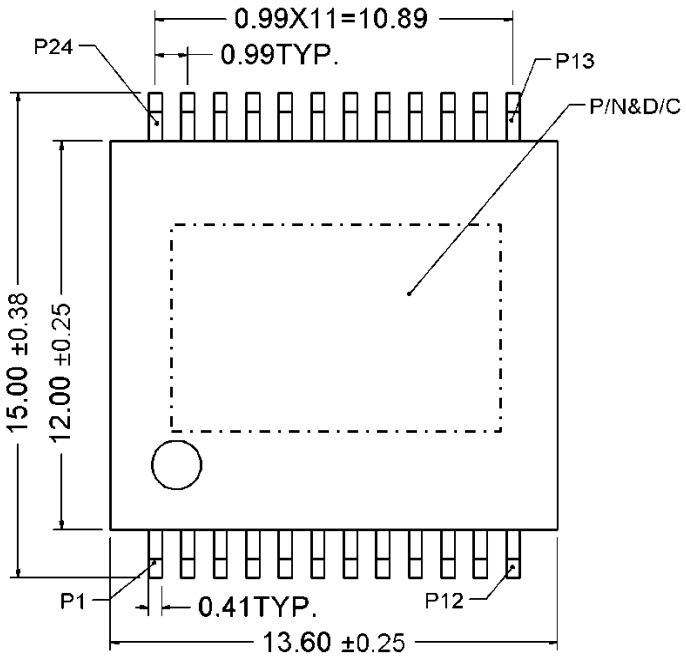
UDE

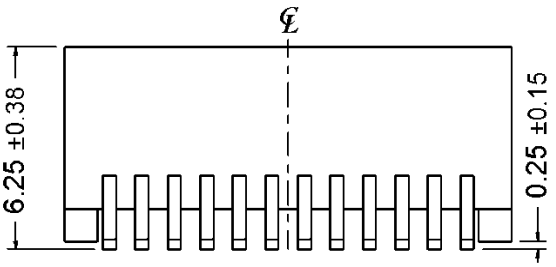
湧德電子 股份有限公司 UDE Corp.
桃園市(33852) 蘆竹區內溪路 68 巷13號
No.13, Ln. 68, Neixi Rd., Luzhu Dist., Taoyuan City (33852), Taiwan
TEL: 886-3-3242000 FAX: 886-3-3246611
http://www.ude-corp.com/

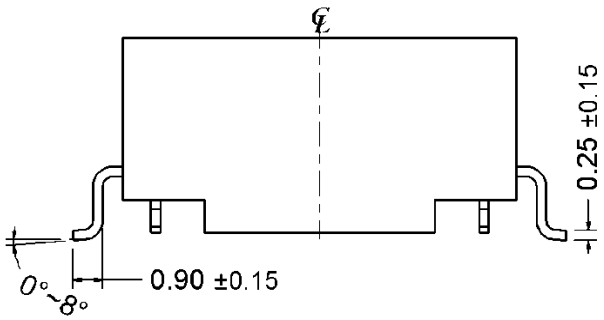
1. MECHANICAL DIMENSION

1.1 Product Dimension

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



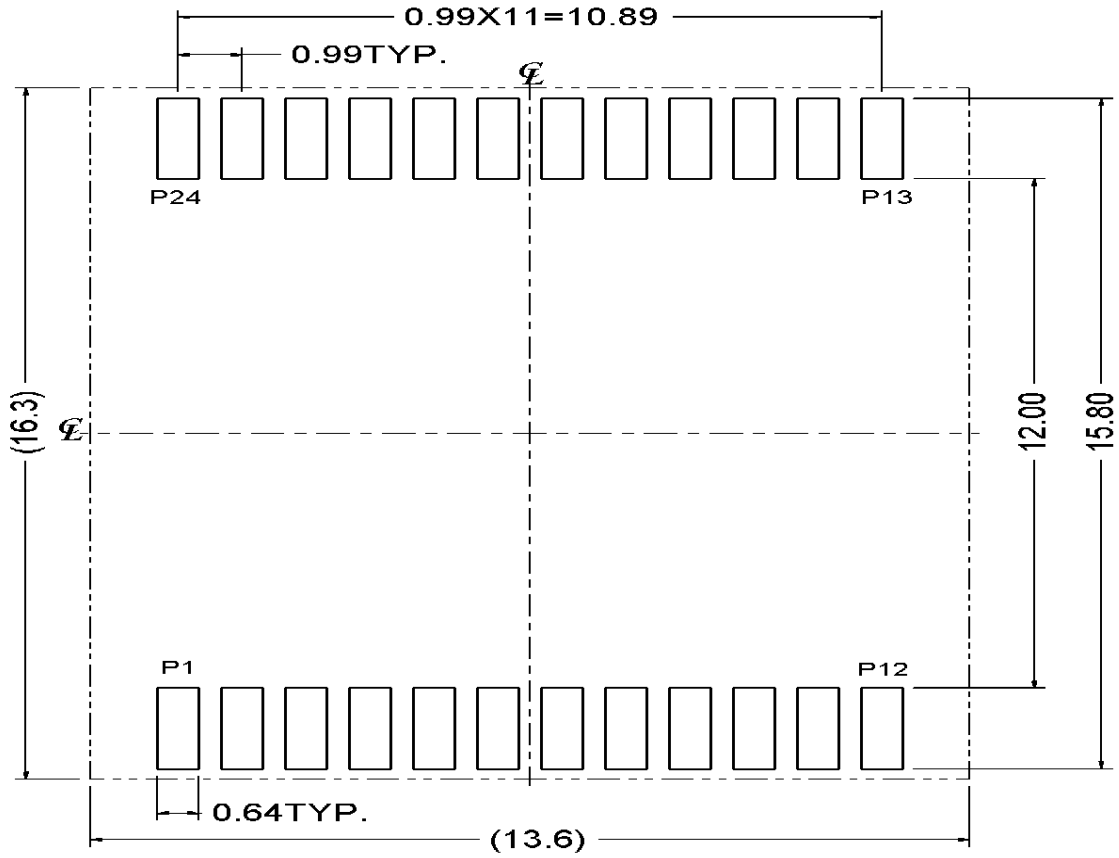




1.2 Recommened PCB Layout

Component Side of Board

All dimension tolerance are ±0.08mm unless otherwise specified



1.3 Order Information

L	2	2	N	013	-	0
A	B	C	D	E		F

A、 Filter

B、 SMD

C、 24Pin

D、 Normal

E、 Product Numbering

F、 Normal

2. FEATURES

2.1 Designed for Ethernet 5G BASE-T,full Single port applications.

2.2 Cable interface for isolation and low common mode emissions.

2.3 Compliant with IEEE 802.3 Specification.

2.4 Compliance with ROHS requirements.

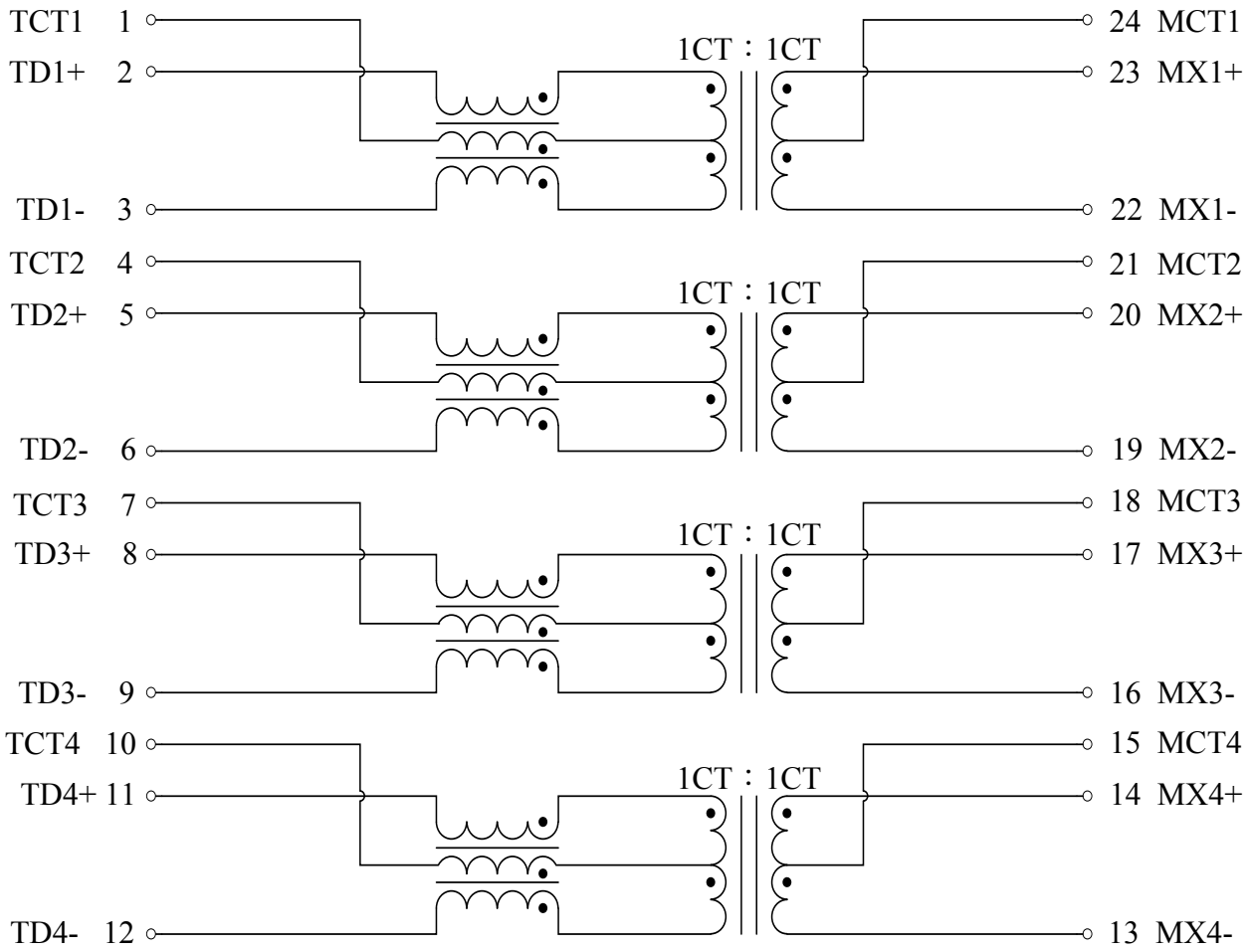
2.5 Operating and Storage Temperature

Operating Temperature : 0°C to +70°C

Storage Temperature : -25°C to +105°C

3. ELECTRICAL CHARACTERISTICS

3.1 Schematic



3.2 Electrical Specifications @25℃

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(Freq MHz/10MHz) 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

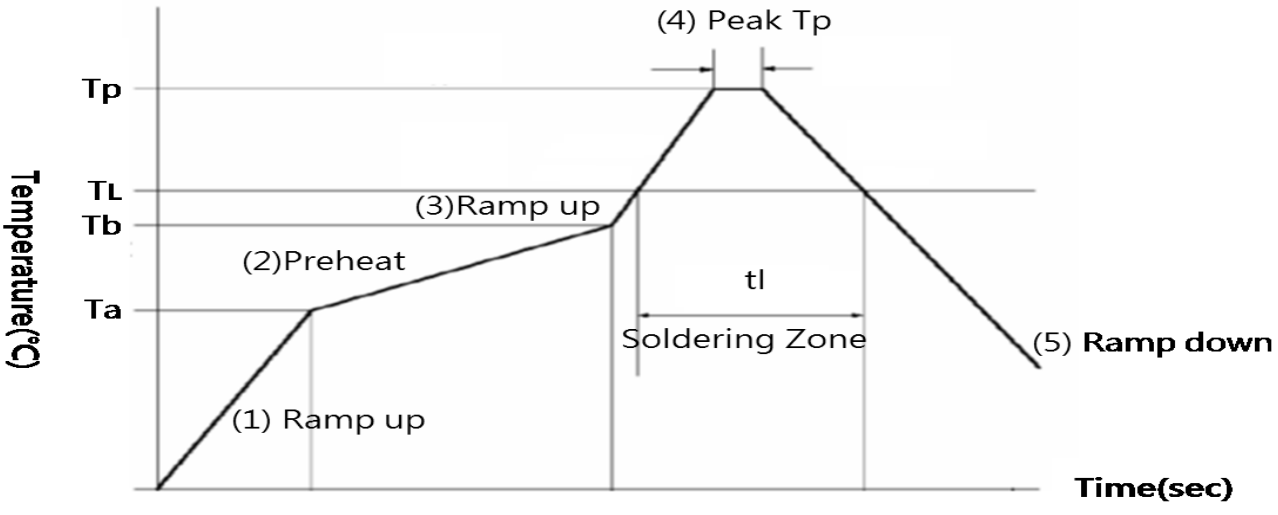
@ 1:1±5%

4. IR REFLOW TEMPERATURE PROFILE

Step#	Profile Feature	Condition/Duration
Step1	Ramp-up rate	3℃/sec max
Step2	Preheat：150~200℃	Ta-Tb：60-180sec
Step3	Ramp-up rate（TL to Tp）	3℃/sec max
	Temperature maintained above 217℃（TL）	tl：60-150sec
Step4	Measured Peak temperature of pin（Tp） Set Reflow Peak Temp.	260℃
	The Time of Actual Peak temperature	20-40sec
Step5	Ramp-down rate	6℃/sec max
Note1	All temperatures refer to topside of the package, measured on the package body surface	
Note2	Time 25℃ 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℃	260℃	260℃
1.6mm-2.5mm	260℃	260℃	260℃
>2.5mm	260℃	260℃	260℃



5. Revision History

Issue Date	Revision	Comments	Operator
2016/8/29	A	Initial Release .	Sandy
2017/3/27	B	Update specification description	Sandy