

APPROVAL SHEET

To :

Customer P/N :

UDE P/N : L22N001-4

Description : 10G BASE -T
SINGLE PORT Transformer
POE 100W



Spec No.
LZ0108-00

Update Date
2016/11/29

Revision
B

Approved	Checked	Prepared



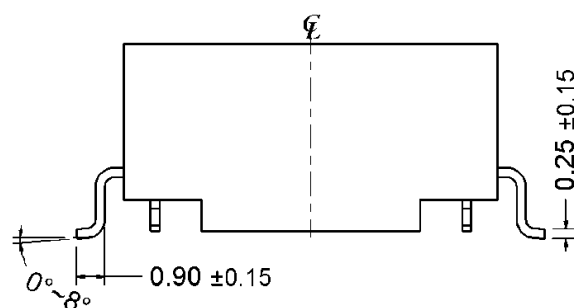
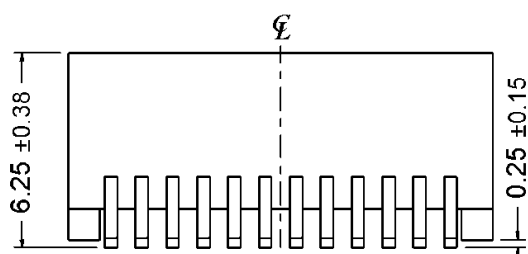
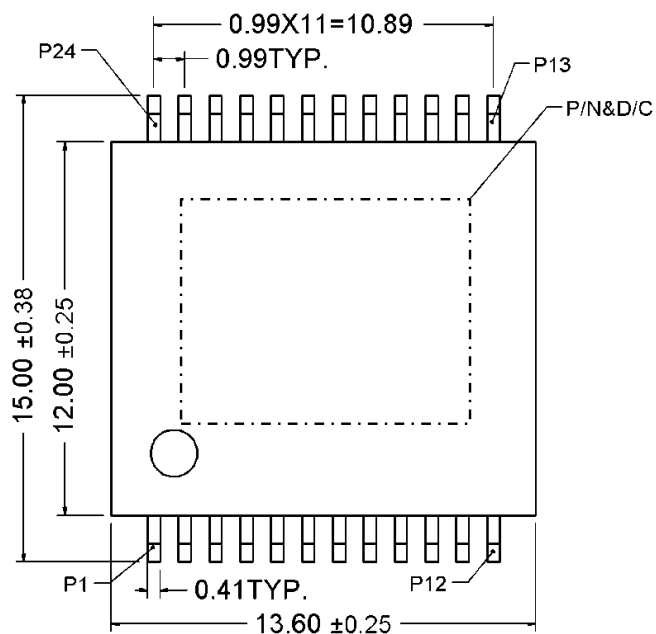
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1. MECHANICAL DIMENSION

1.1 Product Dimension

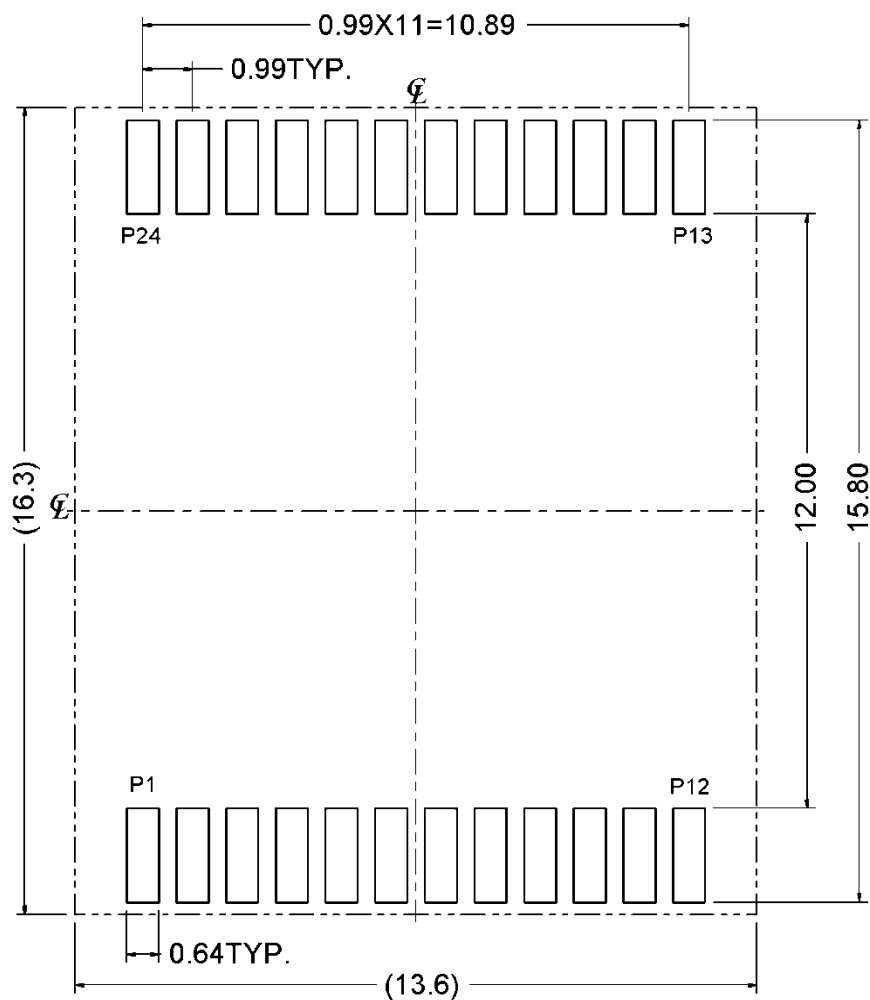
General Tolerance : X.X : ± 0.25
X.XX : ± 0.13



1.2 Recommended PCB Layout

Component Side of Board

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



1.3 Order Information

L 2 2 N 001 - 4
 A B C D E F

A、 Filter

B、 SMD

C、 24Pin

D、 Normal

E、 Product Numbering

F、 POE 100W

2. FEATURES

2.1 Designed for Ethernet 10G BASE-T,full Single port applications.

2.2 Supports 4 pairs of category 5 UTP cable.

2.3 Cable interface for isolation and low common mode emissions.

2.4 Design to meet IEEE 802.3 with 1000mA balanced current.

2.5 Compliance with ROHS requirements.

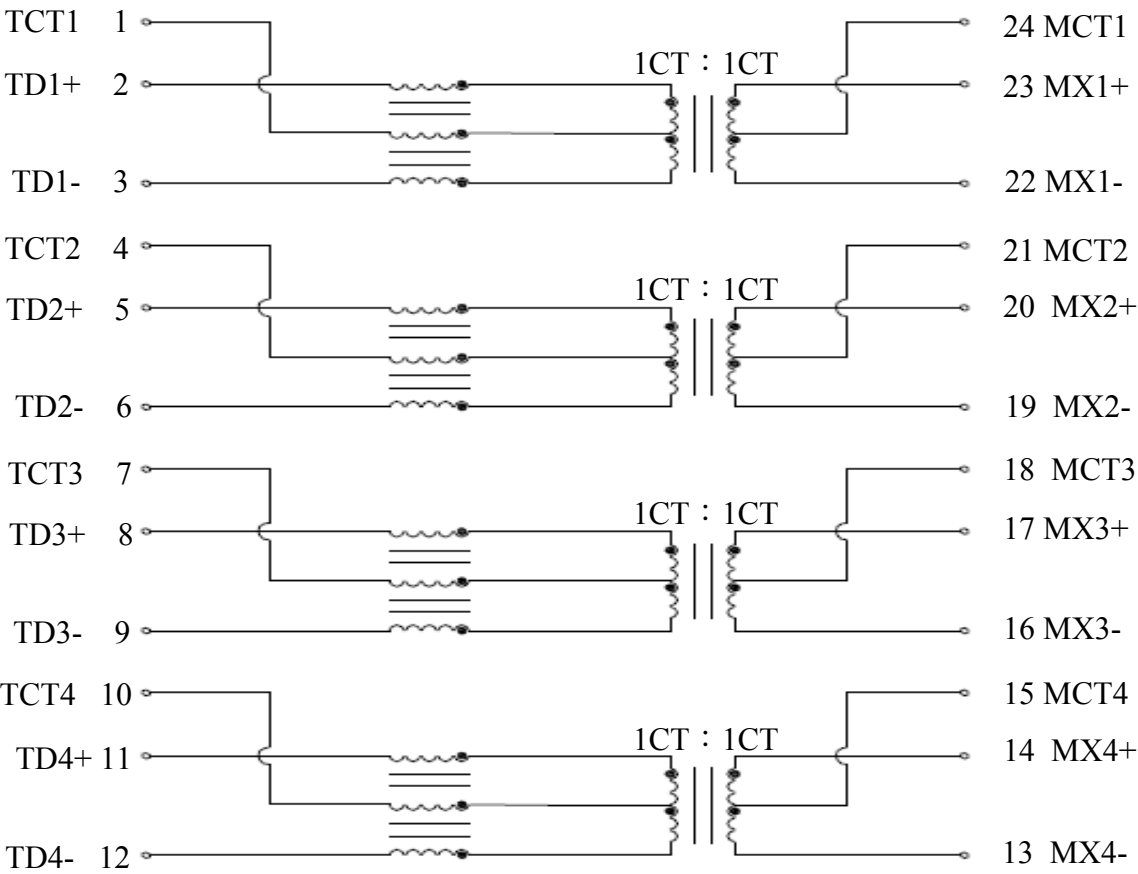
2.6 Operating and Storage Temperature

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°C

Type : Balance low pass 100Ω impedance

3.2.1 Insertion Loss

1MHZ	-0.8 dB Max
20MHZ	-0.8 dB Max
50MHZ	-1.0 dB Max
200MHZ	-1.2 dB Max
400MHZ	-2.0 dB Max
500MHZ	-3.0 dB Max

3.2.2 Return Loss

1MHz	-20 dB Min	load 100Ω
100MHz	-20 dB Min	load 100Ω
200MHz	-16 dB Min	load 100Ω
300MHz	-12 dB Min	load 100Ω
400MHz	-9.5 dB Min	load 100Ω
500MHz	-7.5 dB Min	load 100Ω

3.2.3 Reflected CM to Diff Conversion (REF)

50MHZ	-30 dB Min
100MHZ	-27 dB Min
200MHZ	-24 dB Min
300MHZ	-22 dB Min
400MHZ	-21 dB Min
500MHZ	-20 dB Min

3.2.4 Reflected Diff to CM Conversion (REF)

1MHZ -48 dB Min

100MHZ -35 dB Min

400MHZ -24 dB Min

500MHZ -24 dB Min

3.2.5 CM to DM Conversion (REF)

50MHZ -48 dB Min

100MHZ -42 dB Min

200MHZ -36 dB Min

300MHZ -33 dB Min

400MHZ -30 dB Min

500MHZ -28 dB Min

3.2.6 CM to CM Attenuation

1MHZ -22 dB Min

500MHZ -20 dB Min

800MHZ -20 dB Min

1000MHZ -17 dB Min

3.2.7 Cross Talk

1MHZ -34 dB Min

350MHZ -23 dB Min

500MHZ -23 dB Min

3.3 Inductance

@ 100KHz, 0.1V, 15mA DC BIAS 150uHMin

3.4 HiPot Test

@ 1500 Vrms

3.5 Turns Ratio

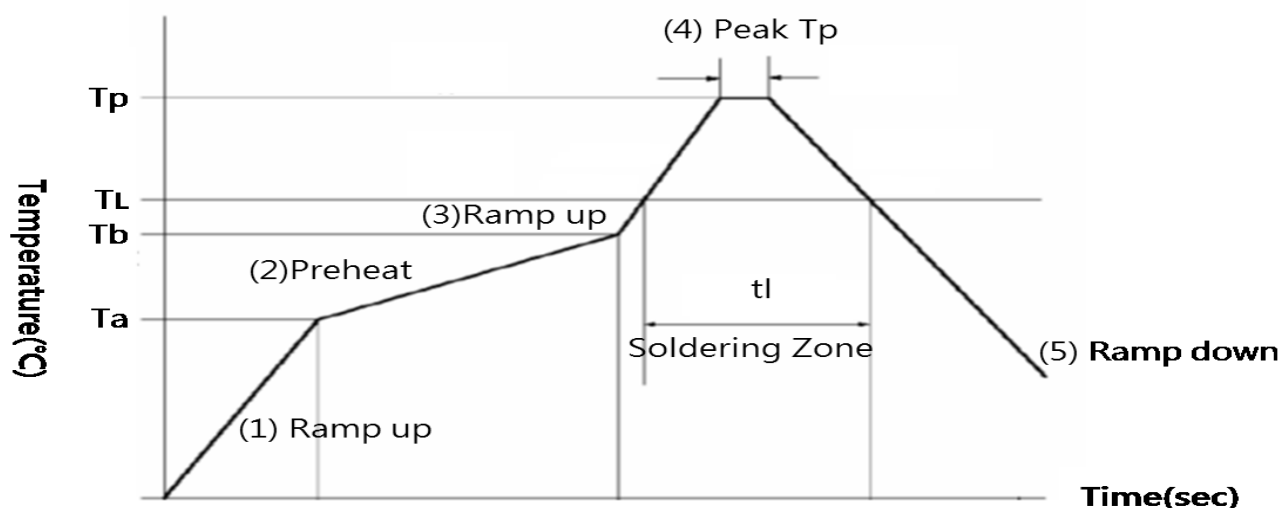
@ 1:1±5%

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

[illegible]