APPROVAL SHEET

To :

Customer P/N :

Singatron P/N : 2TJS32-AD-0001

Description : RJ45 multiport 2X1

Through Hole

2.5G Base-T

Contact Area : 30μ" Min. Gold

LED : L-Yellow; R-Green

Light Pipe

RoHS

Spec No.	Update Date	Revision
S3219048-00	8/2/2019	B

Approved	Checked	Prepared

SINGATRON U.S.A.
13925 MAGNOLIA AVE
CHINO, CA 91710 USA

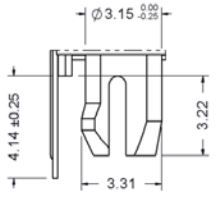
Revision History

Issue Date	Revision	Comments	Operator
5/24/2019	A	Initial Release .	Carl
8/2/2019	B	Operating temperature changed from 0~70 ℃ to -40~85 ℃.	William

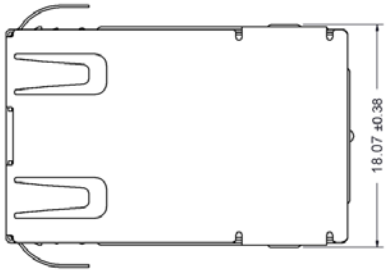
1. MECHANICAL DIMENSION

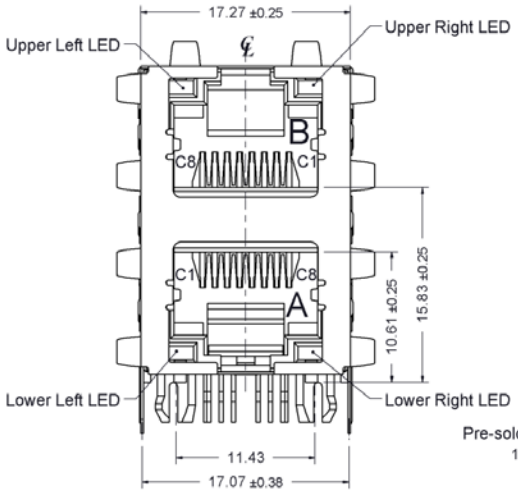
Product Dimension

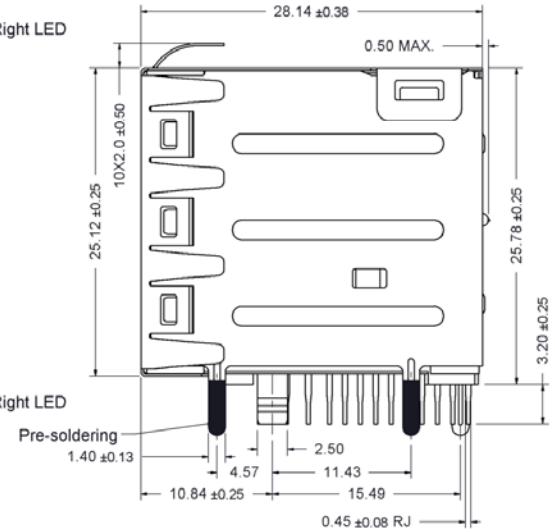
Unit:mm	General Tolerance :	X.X : ± 0.38 X.XX : ± 0.20

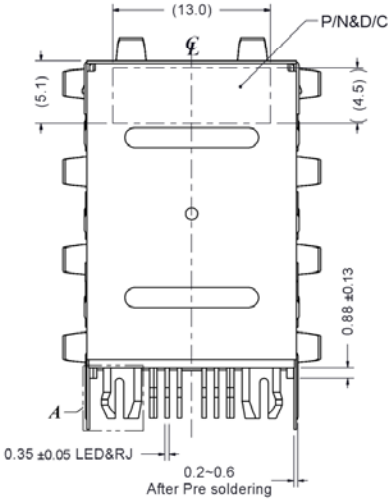


DETAIL A
SCALE 4 : 1

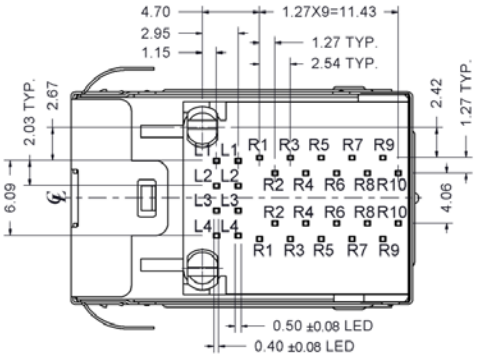








BACK VIEW



Recommended PCB Layout. Component side of board

All dimension units are "mm".

All dimension tolerances are ±0.05mm unless otherwise specified.

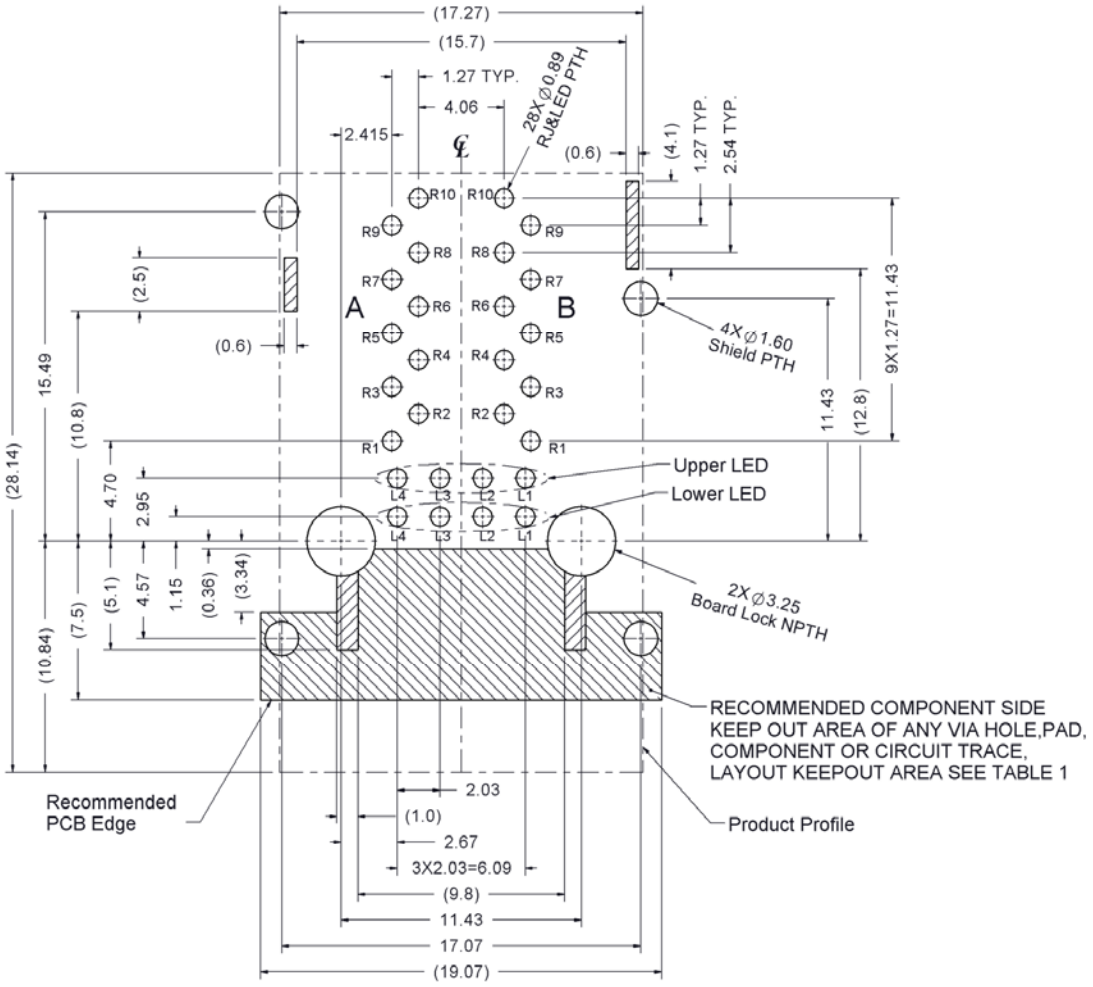
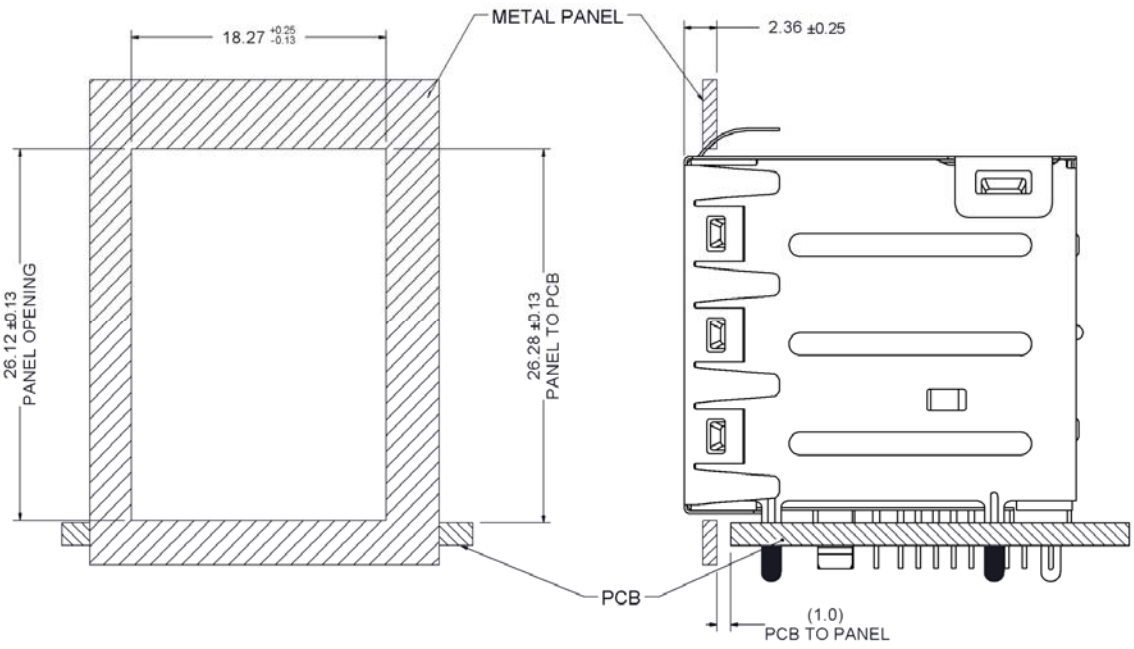


Table1

Layout / Layer	Trace	component	Grounding	Test Point	Via Hole	PTH	NPTH
Component side	X	X	O	X	X	X	O
Inner layer	O	NA	O	NA	O	X	O
Bottom side	O	O	O	O	O	X	O

X--Forbid; O--OK; NA--Not Applicable.

Recommended Panel cutout



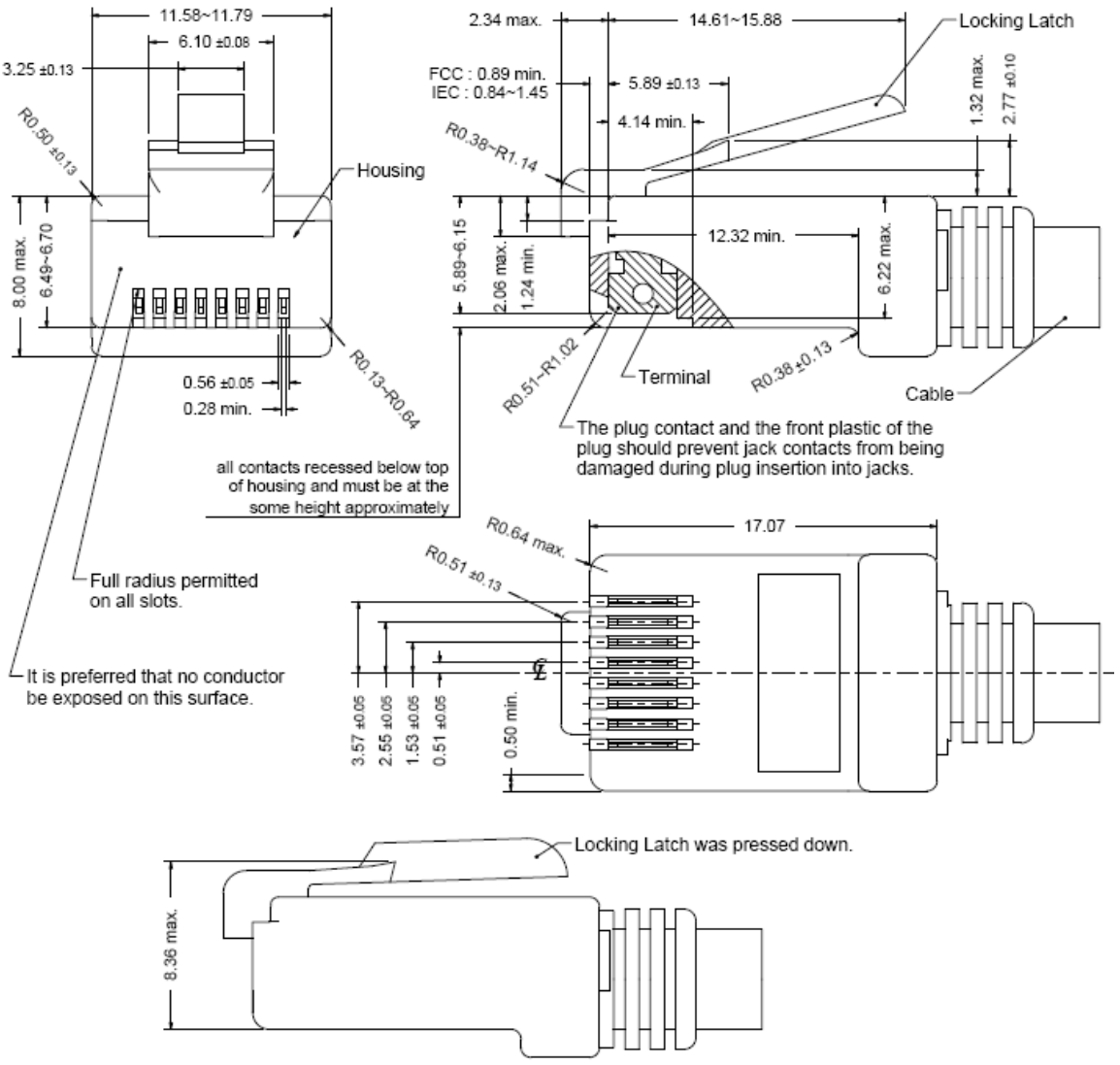
2. Packing Information

50 pcs finished goods per tray

4 trays(200 pcs finished goods) per inner box

4 Inner boxes(800 pcs finished goods) per master carton

3. Standard RJ45 Plug Specification



- All dimensions follow :
  FCC subpart F, 68,500, Figure (C)(2)(i) & (C)(2)(ii) & (C)(3)(i)
  IEC 60603-7
- All plugs must be meeting the requirements of plug Go & No-Go gauge.
  Gauge follow : FCC subpart F, 68,500, Figure (C)(4)(i) & (C)(5)(i)
- There must be no damage to Housing and Locking Latch.
- There must be no nicks and cuts in cable.
- Durability : 750 cycles generally

4. REQUIREMENTS

Design and Construction

Product shall be of design, construction and physical dimensions specified on applicable.

Material

Terminal Parts (Underplating : 50μ"min Nickel overall)

RJ Terminal : Phosphor Bronze, Thickness=0.25mm

Finish : Contact Area : 30u" Min. Gold

Input Terminal : Brass, Thickness=0.35mm

Finish : 100μ" min. matte Tin

Link Terminal : Brass, Thickness=0.35mm

Finish : 100μ" min. matte Tin

Cap. Terminal : Phosphor Bronze, Thickness=0.35mm

Finish : 100μ" min. matte Tin

LED Terminal : Brass, Thickness=0.35mm

Finish : 100μ" min. matte Tin

Plastic Parts <UL94V-0>

Housing : PA6T, Black

Case : PA6T, Black

RJ IM : PA6T, Black

Bottom Holder : PA6T, Black

Light Pipe : PC, Transparent

Shield Parts

Front Shield : Stainless steel, Thickness=0.20mm

Back Shield : Stainless steel, Thickness=0.20mm, Pre-soldering

5. Operating and Storage Temperature

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

Storage Temperature : -40°C to +85°C

6. RJ45 specifications

Insulation Resistance : 500MΩ min.

Insertion force with the latch depressed : 20N max.

Removal force with the latch depressed : 20N max.

Locking Force of Plug Latch : 50N min. @ 60+/-5 sec.

Durability : 2500 cycles

7. Performance and Test Description

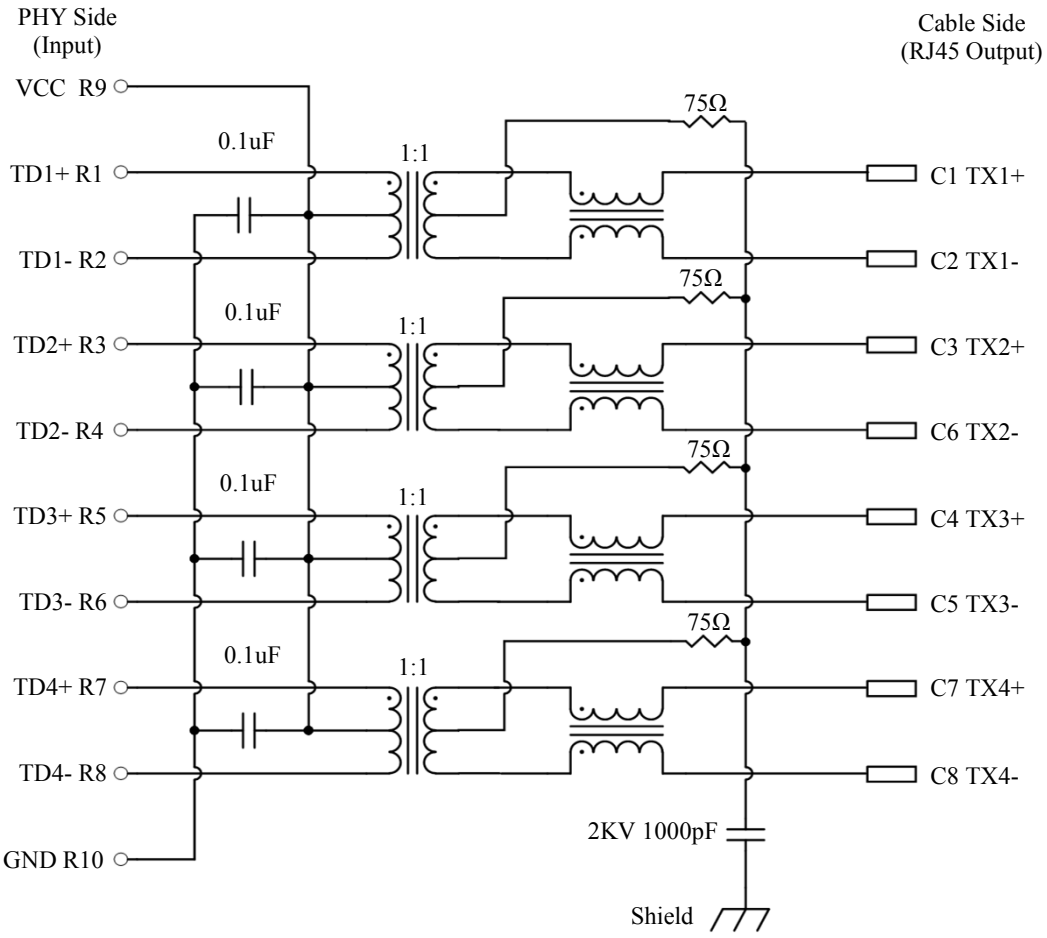
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table.

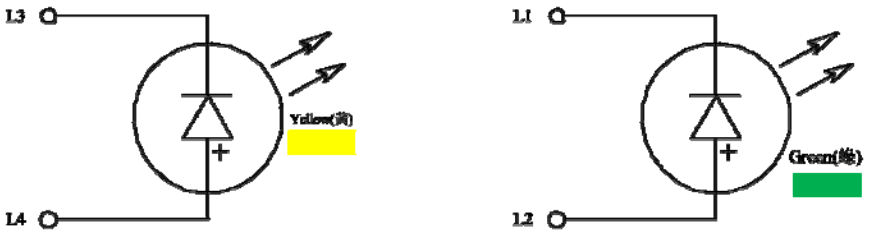
All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

8. Packaging and Packing

All parts shall be packaged and packed to protect against physical damage, corrosion and deterioration during shipment and storage.

9. ELECTRICAL CHARACTERISTCS @25℃





Emitting Color	λp (nm)	Vf @If=20mA	Ir @Vr=5V
Green	570	1.7 ~2.6 V	10μA max.
Yellow	588	1.7 ~2.6 V	10μA max.

Transmitter filter & Receiver filter

Type : Balance low pass 100Ω impedance

Insertion loss :	1~50MHz	-0.5dB max.
	50~125MHz	-1.0dB max.
	125~200MHz	-2.0dB max.
Return loss :	1~40MHz	-20dB min.
	40~200MHz	-20+15*log(Freq MHz/40MHz) dB min.

Reflected CM to Diff Conversion(REF)

1MHz	-30dB min.
50MHz	-30dB min.
100MHz	-27dB min.
200MHz	-24dB min.

CM to DM Conversion(REF)

1-50MHZ	-35 dB min
125MHZ	-30 dB min
200MHZ	-25 dB min

Reflected Diff to CM Conversion(REF)

1-10MHZ	-48 dB min
10-200MHz	-48+19*log(Freq MHz/10MHz) dB min

CM to CM Attenuation (REF)

1-200MHZ	-25 dB min

Cross Talk

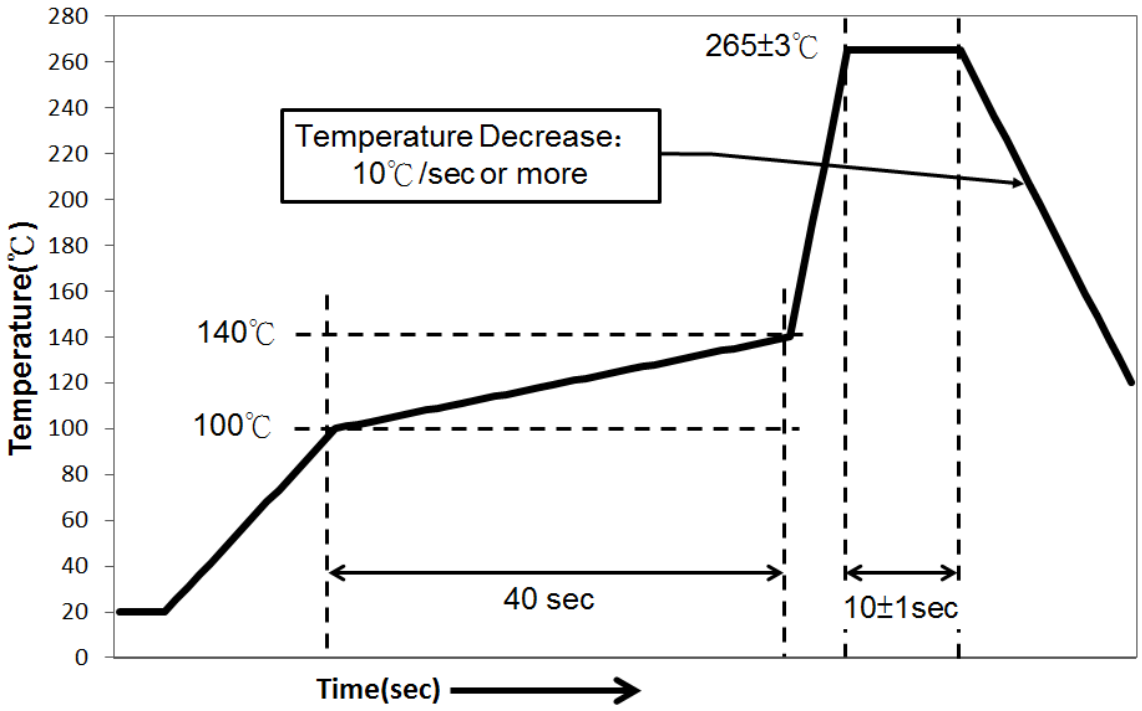
1~40MHz	-35dB min.
40~125MHz	-35+15log((Freq MHz/40MHz)) dB min.

Inductance (OCL) @ 100KHz, 0.1V, 8mA DC BIAS

Input(TD1+,TD1-) ; (TD2+,TD2-) ; (TD3+,TD3-) ; (TD4+,TD4-) : 180 μH min.

HiPot Test

PHY Side(input) To Cable Side(output) : 1500Vac 60s or 2250Vdc 60s

10. WAVE SOLDERING TEMPERATURE PROFILE

Note：
The measuring point for the specified temperature shall be on the soldered part of the lead.