

APPROVAL SHEET

To :

Customer P/N :

Singatron P/N : 2TJRB2-AD-0001

Description : RJ45 1X2 Tab Down

Through Hole

2.5G Base-T

Contact Area : Gold Flash

LED : L-Green; R-Yellow



Spec No.
RB219029-00

Update Date
8/2/2019

Revision
A

Approved	Checked	Prepared

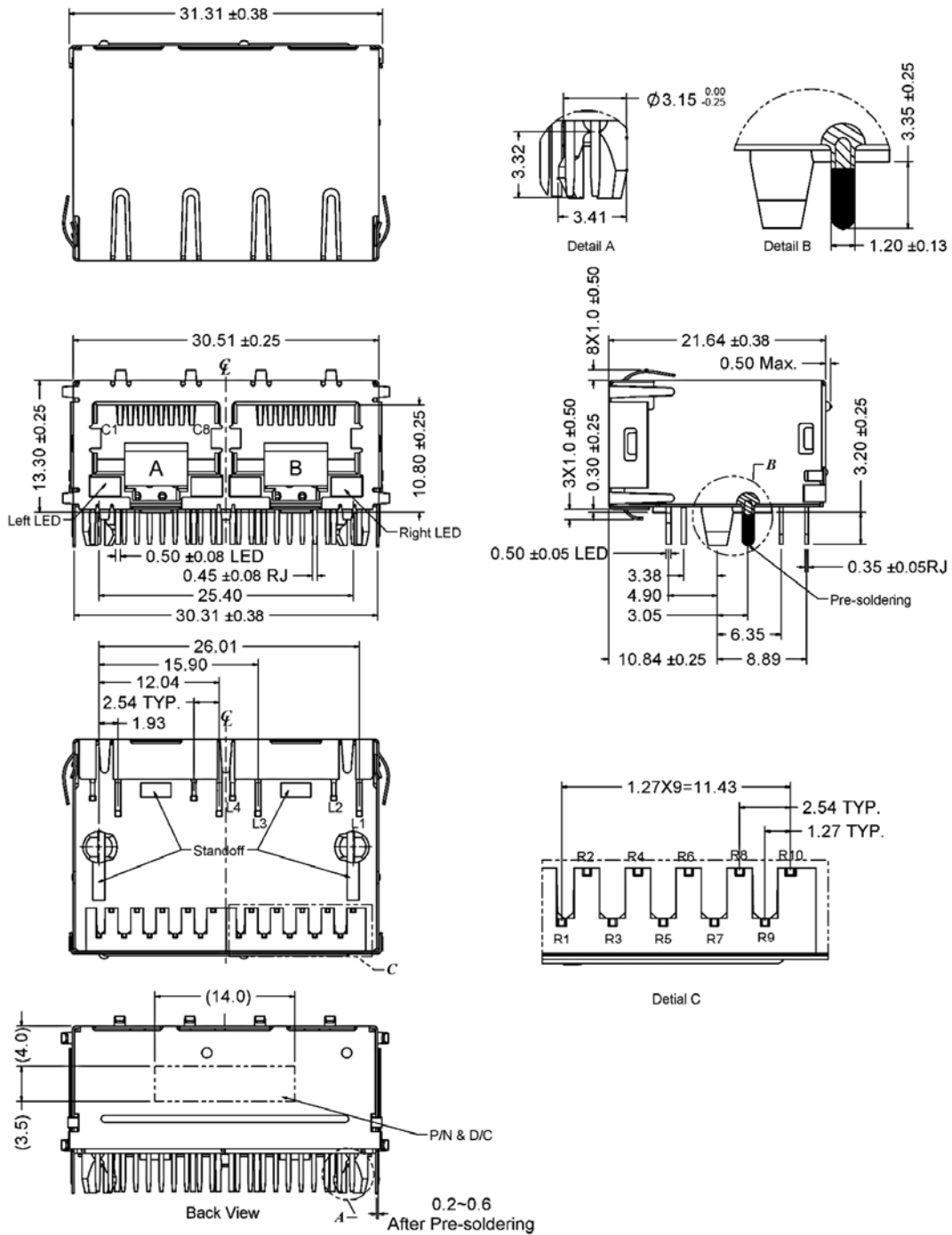
SINGATRON U.S.A.
13925 MAGNOLIA AVE
CHINO, CA 91710 USA

1. MECHANICAL DIMENSION

Product Dimension

Unit:mm

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



Recommended PCB Layout. Component side of board

All dimension units are "mm".

All dimension tolerances are ±0.05mm unless otherwise specified.

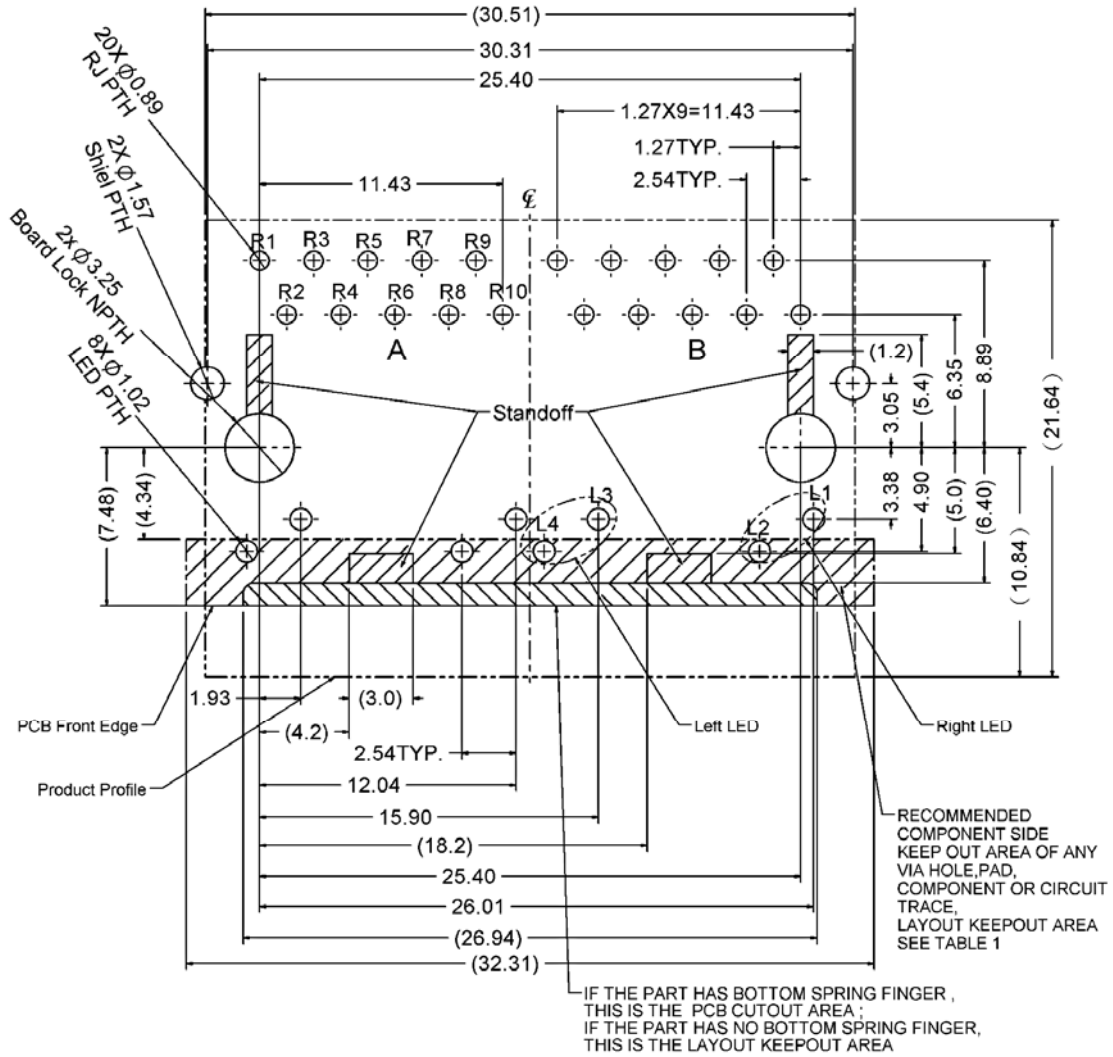
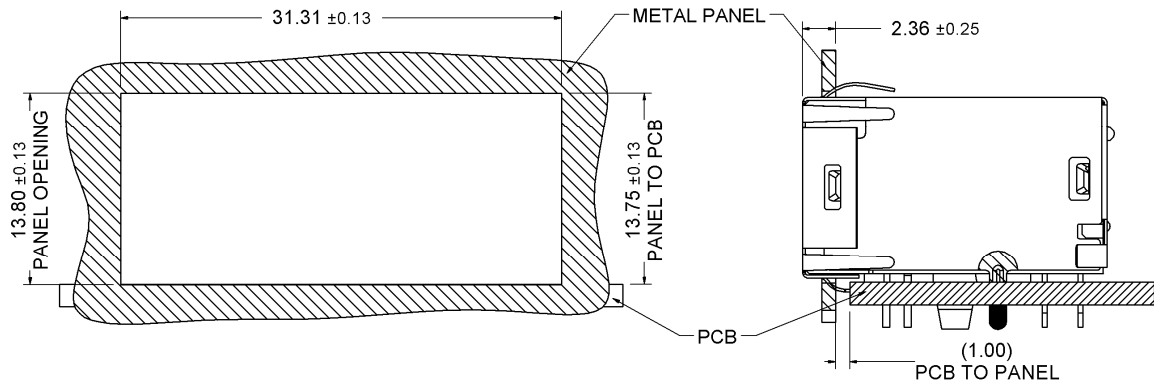


Table1

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



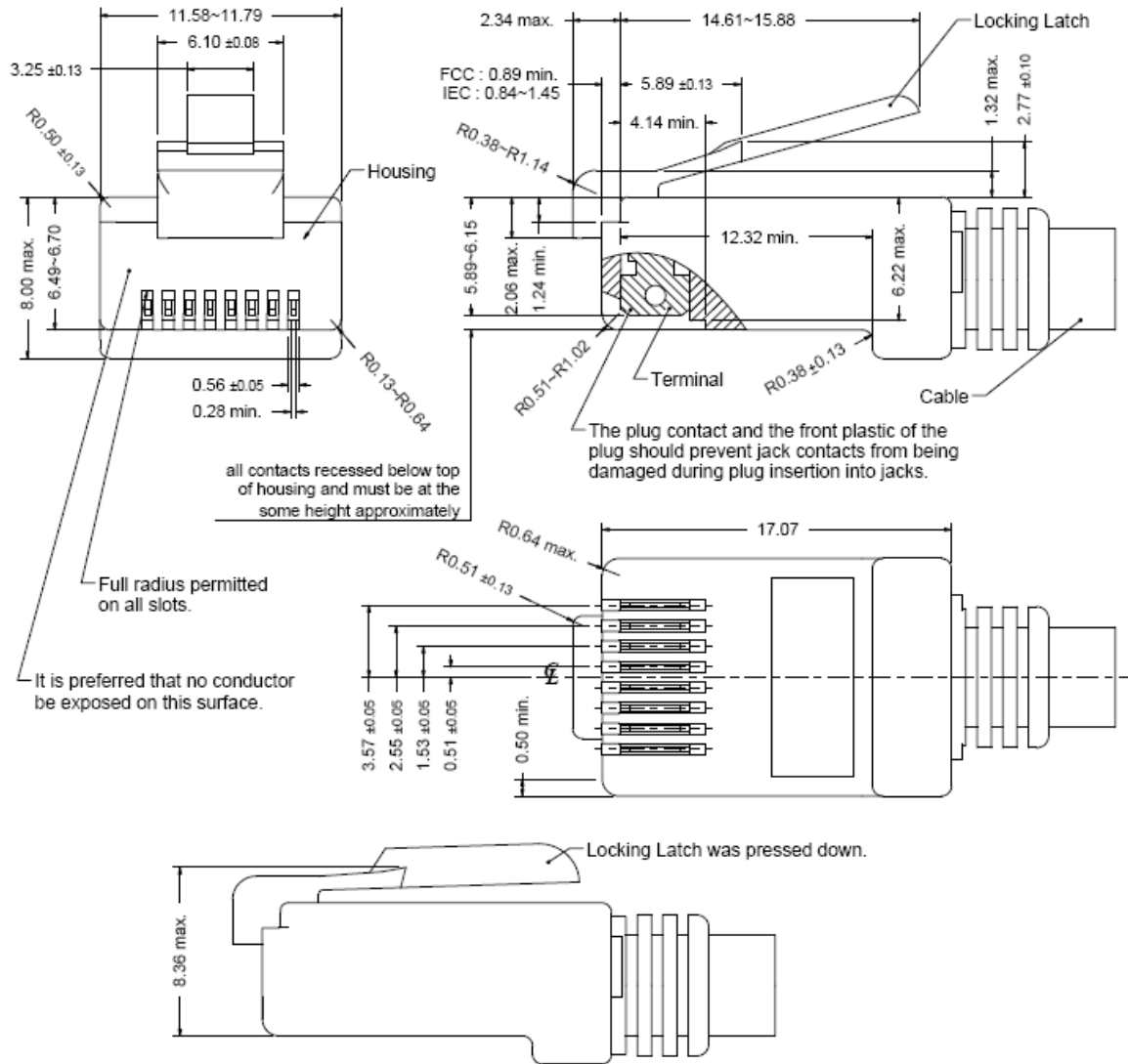
2. Packing Information

30 pcs finished goods per tray

7 trays(210 pcs finished goods) per inner box

4 Inner boxes(840 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 : 50 μ " min. Nickel overall)

RJ Terminal : Phosphor Bronze, Thickness=0.30mm

Finish : Contact Area : Gold Flash

Input Terminal : Brass, Thickness=0.35mm

Finish : 100 μ " min. Bright Tin

Case Terminal : Brass, Thickness=0.30mm

Finish : 100 μ " min. Bright Tin

Plastic Parts <UL94V-0>

Housing : PA6T, Black

Case : PA6T, Black

Shield Parts : 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 : 750 cycles

7. Performance and Test Description

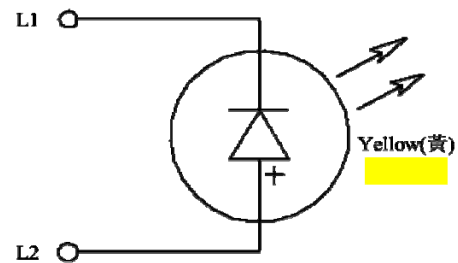
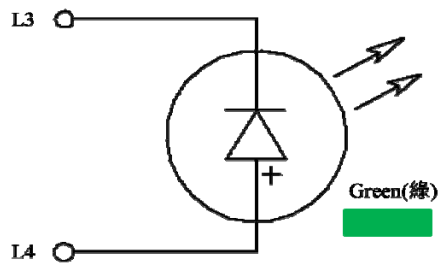
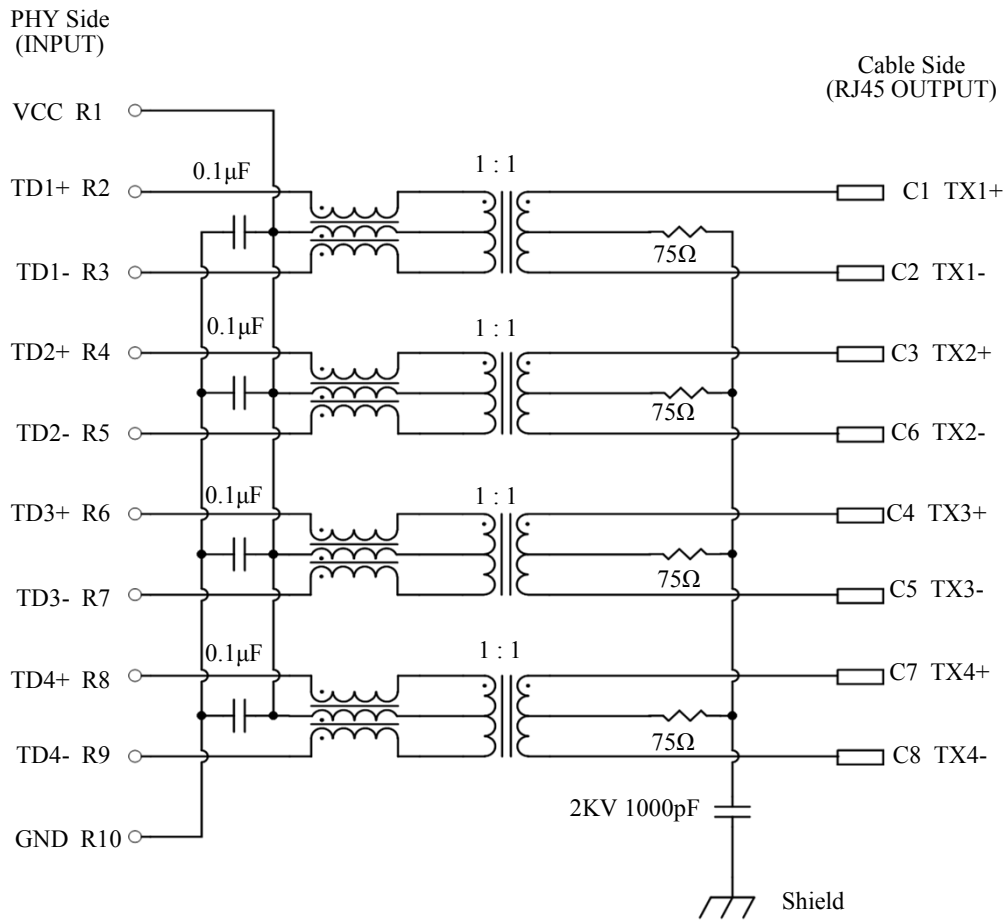
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table.

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 CHARACTERISTICS @25°C



Emitting Color	λ_p (nm)	$V_f @ I_f=20mA$	$I_r @ V_r=5V$
Green	570	1.7 ~2.6 V	10 μ A max.
Yellow	588	1.7 ~2.6 V	10 μ A 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
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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.

