

APPROVAL SHEET

To :

Customer P/N :

SINGATRON P/N : 2TJ25-010009R13-5

Description : RJ45 1X1 Tab Up

SMT

10/100/1000 Base-T

Contact Area : 30 μ " Gold

LED:without LED



Spec No.
25-14003-00

Update Date
9/24/2014

Revision
B

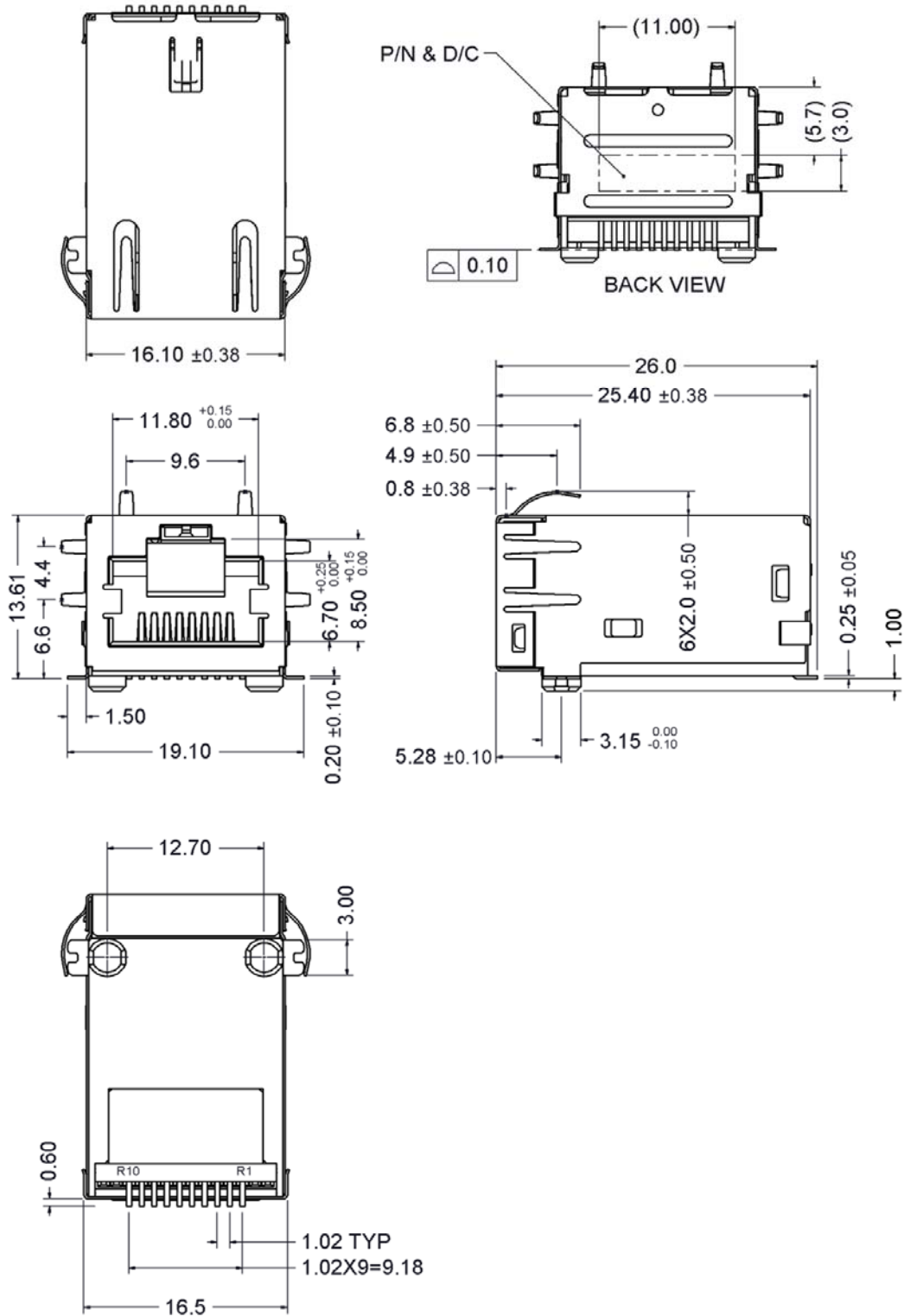
Approved	Checked	Prepared

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

1. MECHANICAL DIMENSION

1.1 Product Dimension

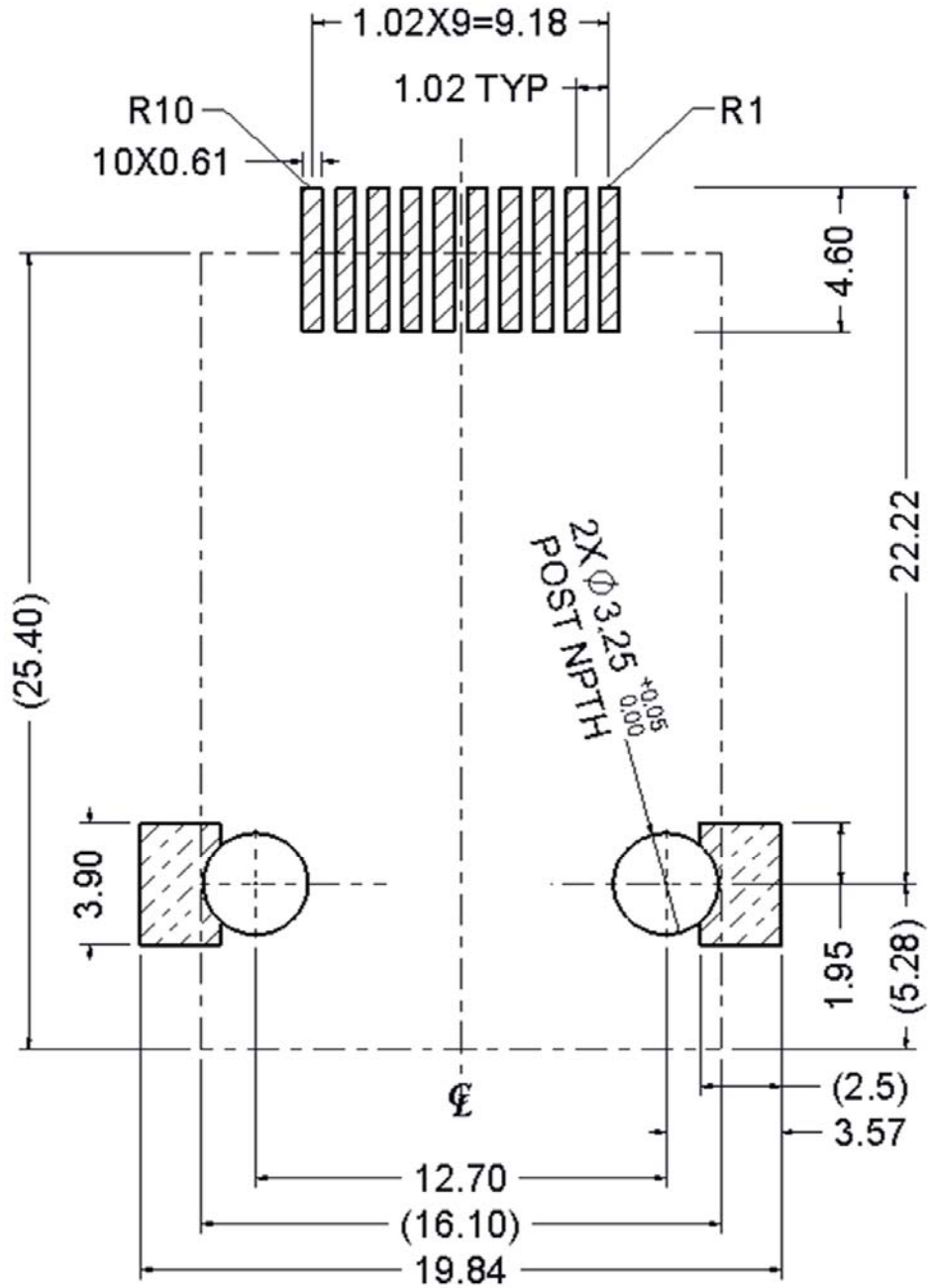
General Tolerance :	X.X : ± 0.38
	X.XX : ± 0.25



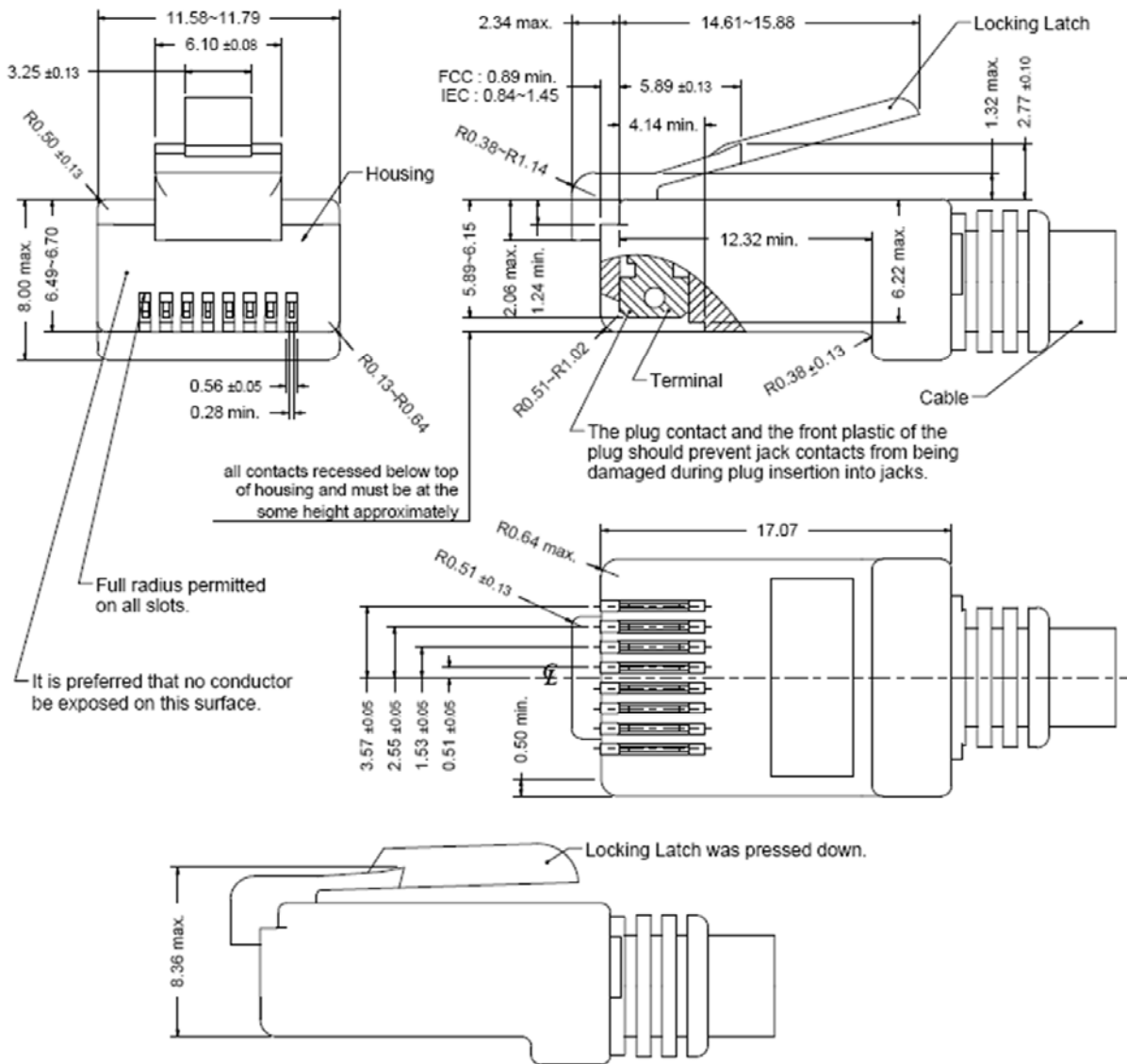
1.3 Recommended PCB Layout

Component Side of Board

All dimension tolerance are $\pm 0.05\text{mm}$ unless otherwise specified



1.4 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 Lctch.
- There must be no nicks and cuts in cable.
- Durability : 750 cycles generally

2. REQUIREMENTS

2.1 Design and Construction

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

2.2 Material

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

2.2.1.1 RJ Terminal : PH. Bronze, Thickness=0.30mm

Finish : Contact Area : 30 μ " Gold

2.2.1.2 Input Terminal : Brass, Thickness=0.25mm

Solder Tail : 100 μ " min. Mt. Tin

2.2.2 Plastic Parts <UL94V-0>

2.2.2.1 Housing : PA6T, Black

2.2.2.2 Case : PA6T, Black

2.2.2.3 Cover: PA6T, Black

2.2.3 Shield Parts

2.2.3.1 Shield : Stainless Steel, Thickness=0.20mm

Finish : Soldering Area : 2 μ " Gold

2.3 Operating and Storage Temperature

Operating Temperature : 0°C to +70°C

Storage Temperature : -40°C to +85°C

2.4 RJ45 specifications

Insulation Resistance : 500MΩ min.

Insertion force with the latch depressed : 22N max

Removal force with the latch depressed : 44N max

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

Durability : 2500 cycles

2.5 Performance and Test Description

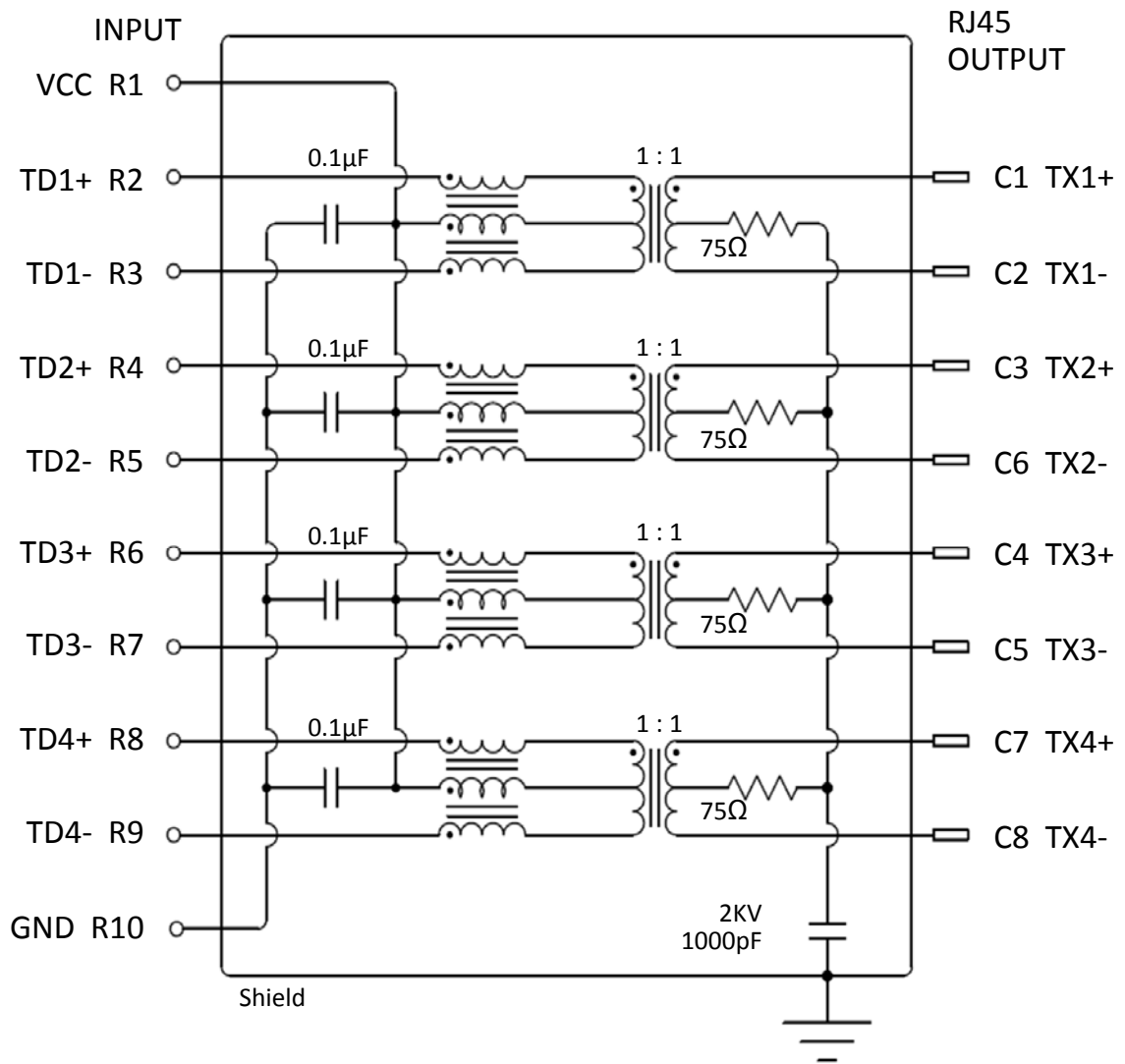
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

2.6 Packaging and Packing

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

3. ELECTRICAL CHARACTERISTICS

3.1 Schematic



3.2 Transmitter filter & Receiver filter

Type : Balance low pass 100Ω impedance

Insertion loss : 1~100 MHz -1.0dB max.

Return loss : 1~40 MHz -18dB min. load 100Ω

40~80MHz -12dB min. load 100Ω

80~100MHz -10dB min. load 100Ω

3.3 Common Mode Rejection

@ 1~100 MHz -30dB min.

3.4 Cross Talk

@ 1~40 MHz -35dB min.

@ 40~100 MHz -33dB min.

3.5 Inductance @ 100KHz, 0.1V, 8mA DC BIAS

Input(R2-R3), Input(R4-R5), Input(R6-R7), Input(R8-R9) : 350 μH min.

3.6 HiPot Test

Input(R2-R3) To Output(C1-C2) : 1500Vac 60s or 2250Vdc 60s

Input(R4-R5) To Output(C3-C6) : 1500Vac 60s or 2250Vdc 60s

Input(R6-R7) To Output(C4-C5) : 1500Vac 60s or 2250Vdc 60s

Input(R8-R9) To Output(C7-C8) : 1500Vac 60s or 2250Vdc 60s

4. ORDER INFORMATION

2 TJ 25 - 010 00 9R1 3 - 5
 A B C D E

A. Mechanical Code :

with all Spring

B. LED Code :

without LED. <Refer to Schematic of LED>

C. Schematics Code :

9R1 : 9R1 circuit

D. Plating Code :

Solder Tail : 100μ" min. Matted Tin

Contact Area - 1 : Gold Flash

6 : 6 microinches Gold plating

5 : 10 microinches Gold plating

2 : 15 microinches Gold plating

3 : 30 microinches Gold plating

4 : 50 microinches Gold plating

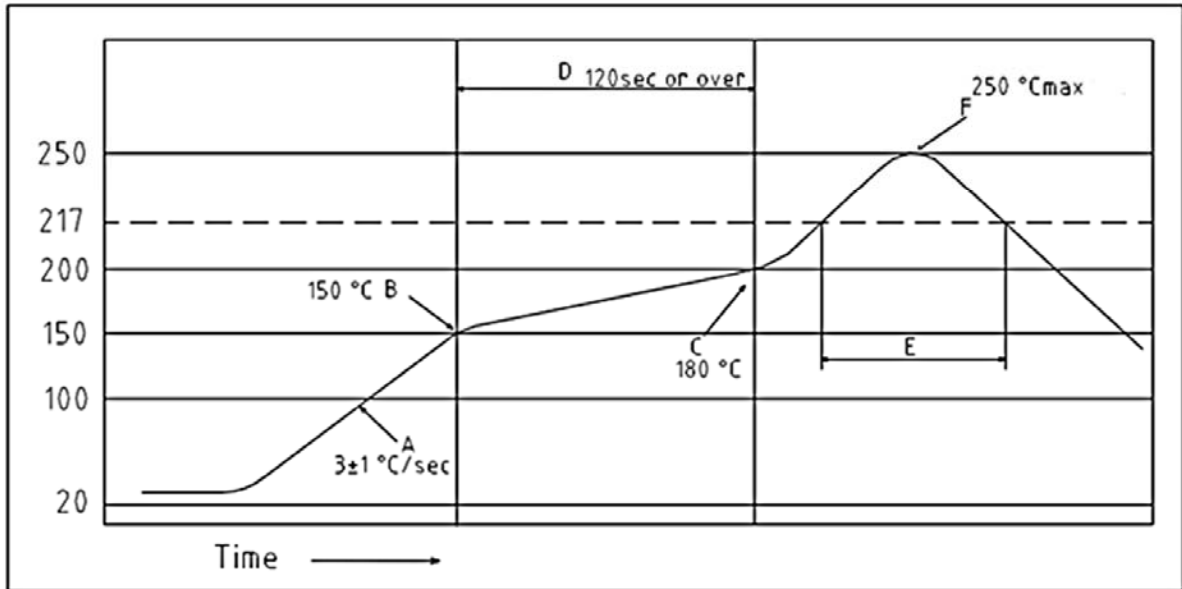
E. Packing & Logo Code :

Packing with T/R, No logo

5. IR REFLOW TEMPERATURE PROFILE

Temperature condition of reflow soldering

Contents	Soldering Condition
A: Increasing speed	3±1 °C/sec
B: Pre-heat starting Temp	150 °C
C: Pre-heat ending Temp	180 °C
D: Pre-heat interval	120 sec or over
E: Over 217 °C time	60~150 sec
F: Peak Temperature	250°C max



Type of lead-free solder should be 96.5Sn-3.0Ag-0.5Cu or 99.3Sn-0.7Cu.

