APPROVAL SHEET

To：

Customer P/N：

SINGATRON P/N： 2TJ05-A00937263-5

Description： RJ45 Tab up over USB 3.0 stack
Through Hole
10/100/1000 Base-T
Contact Area : 30μ" Gold
LED:L-Green/Orange;R-Yellow

HF **Halogen Free**

RoHS

Spec No.	Update Date	Revision
05-0153-00	1/23/2014	A

Approved	Checked	Prepared

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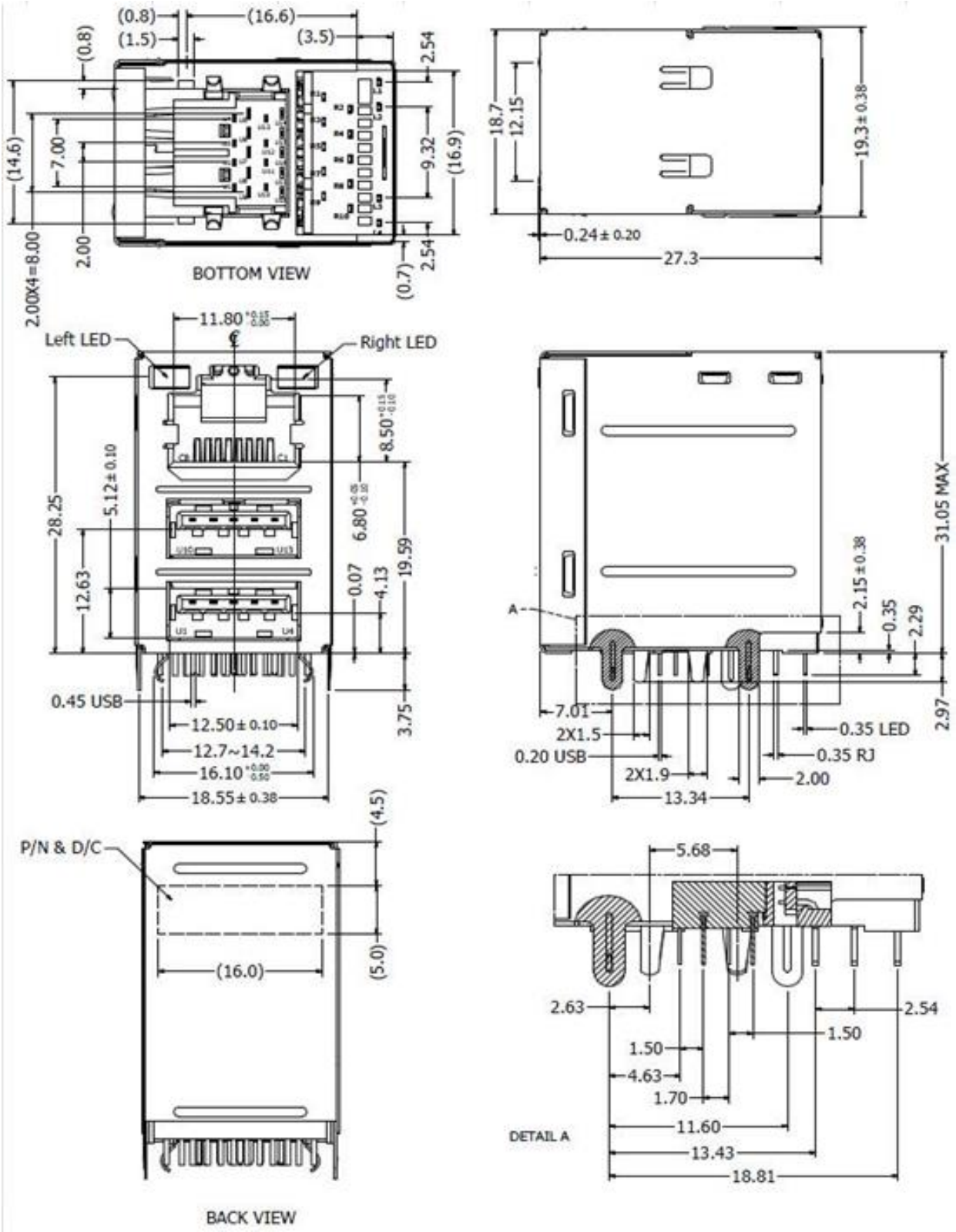
13925 Magnolia Ave
Chino, CA 91710. USA

1. MECHANICAL DIMENSION

1.1 Product Dimension

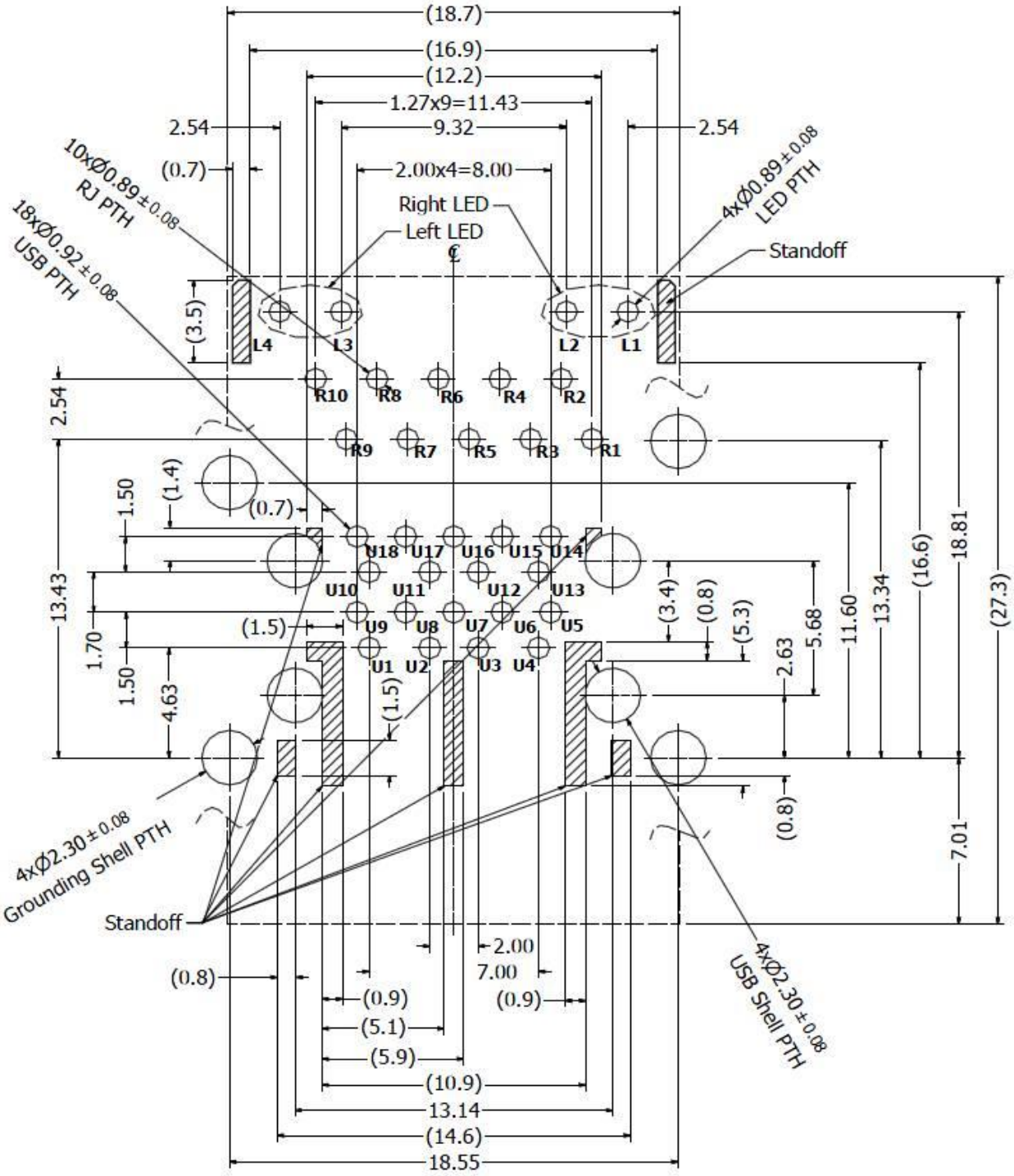
General Tolerance :	X.X : ± 0.38 X.XX : ± 0.25



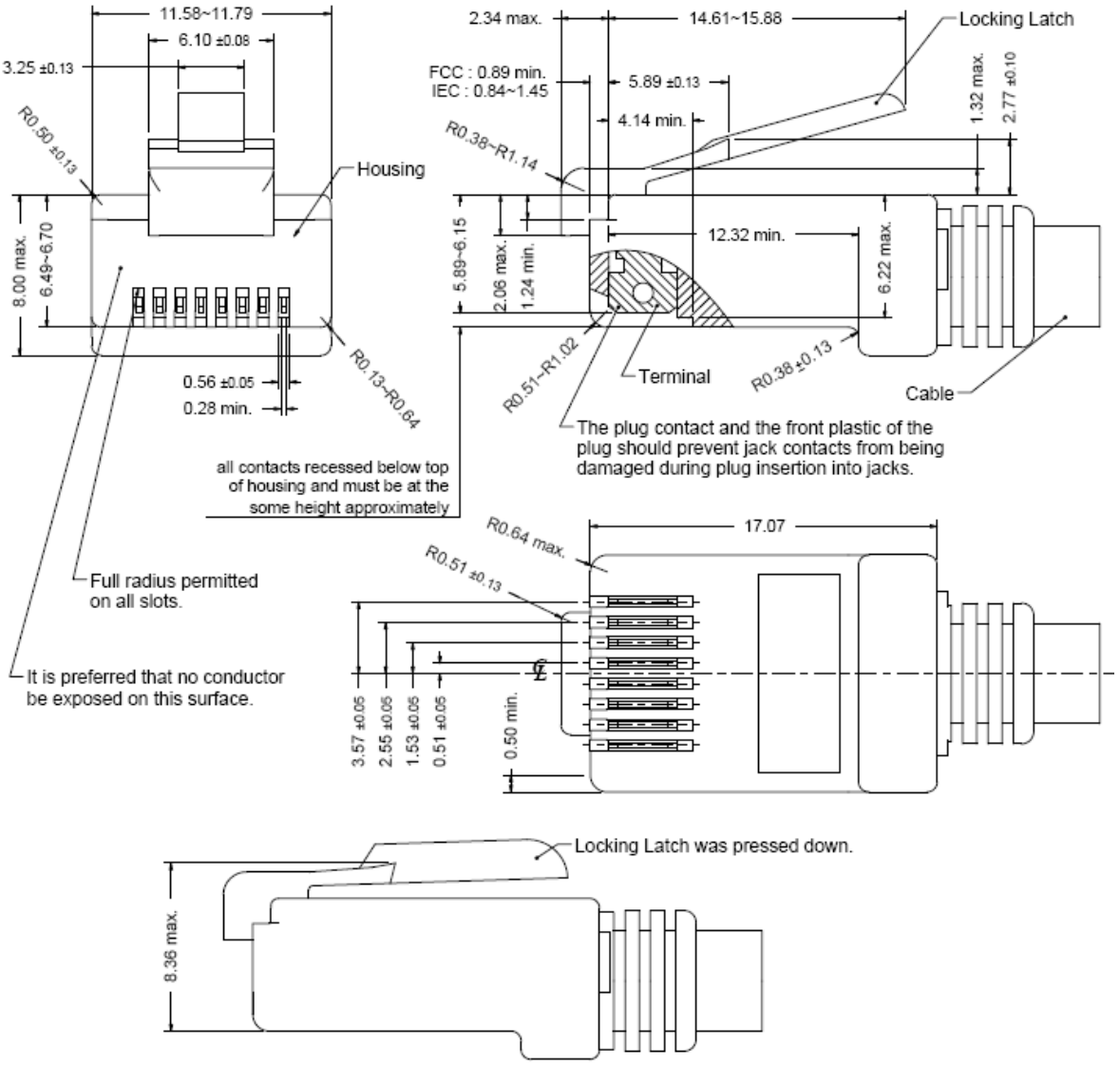
1.2 Recommened PCB Layout

Component Side of Board

All dimension tolerance are ±0.05mm unless otherwise specified



1.3 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.

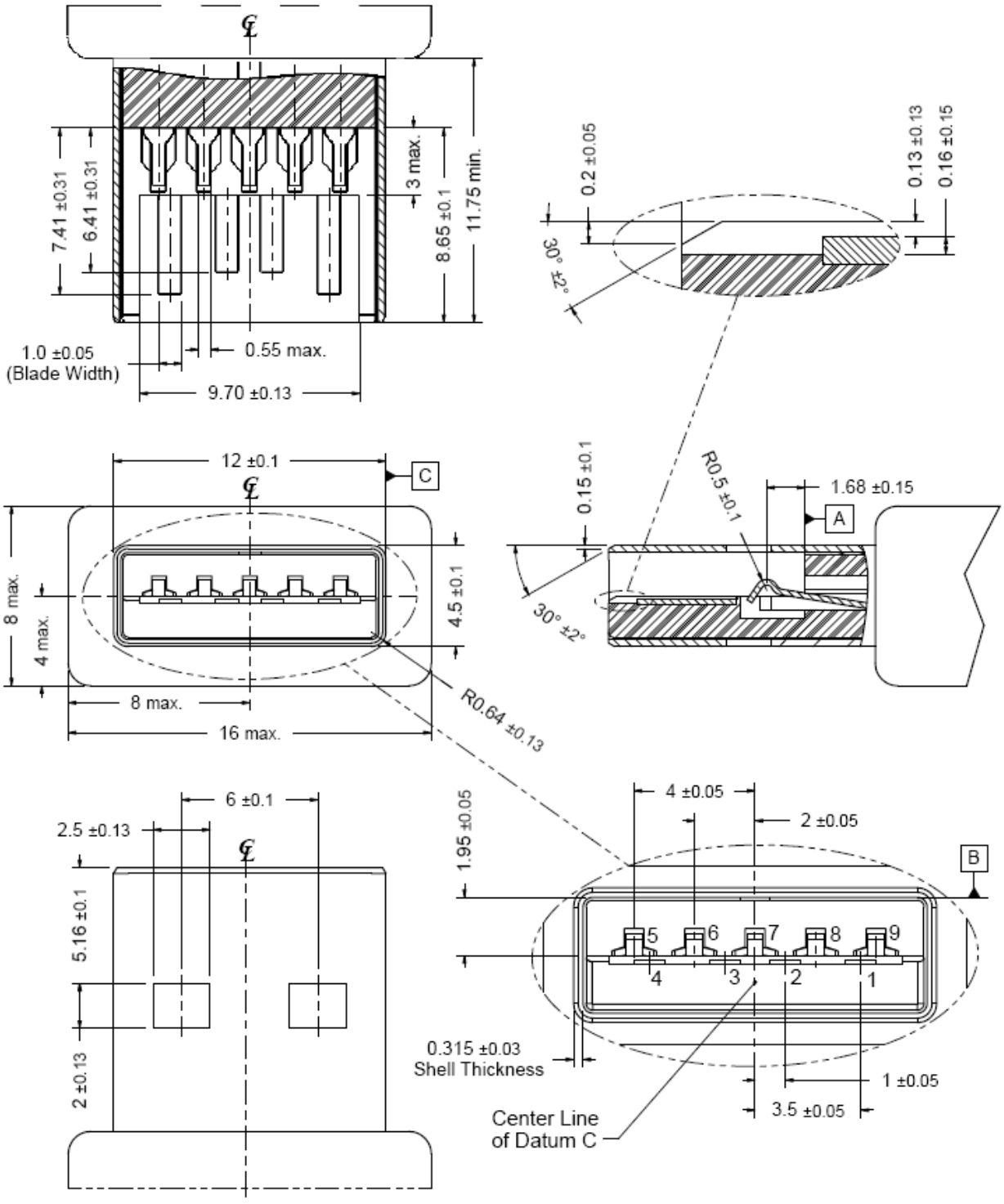
  Gauge follow : FCC subpart F, 68,500, Figure (C)(4)(i) & (C)(5)(i)

- There must be no damage to Housing and Locking Lctch.

- There must be no nicks and cuts in cable.

- Durability : 750 cycles generally

1.4 Standard USB 3.0 Plug Specification



- All dimensions follow : Universal Serial Bus 3.0 Specification, Revision 1.0.
  Figure 5-2. USB 3.0 Standard Plug-A interface dimensions
- Non-dimensions geometry for reference only, subjece to change.
- Drawing for mating interface dimensions only.
  Views may not show realistic manufacturing condition.

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 : 30μ" min. Nickel overall)

2.2.1.1 RJ Terminal : PH. Bronze, Thickness=0.30mm
Finish : Contact Area : 30μ" Gold

2.2.1.2 USB 2.0 Terminal : Brass, Thickness=0.20mm
Finish : Contact Area : 30μ" Gold
Solder Tail : 100μ" min. Mt. Tin

2.2.1.3 USB 3.0 Terminal : Brass, Thickness=0.20mm
Finish : Contact Area : 30μ" Gold
Solder Tail : 100μ" min. Mt. Tin

2.2.1.4 Input Terminal : Brass, Thickness=0.35mm
Finish : 100μ" min. Mt. Tin

2.2.1.5 LED Terminal : Brass, Thickness=0.35mm
Finish : 100μ" min. Mt. Tin

2.2.2 Plastic Parts <UL94V-0>

2.2.2.1 RJ Housing : PBT, Black

2.2.2.2 Spacer : PBT, Black

2.2.2.3 USB Housing : PBT, Blue(300C)

2.2.2.4 USB Top Housing : PBT, Blue(300C)

2.2.2.5 USB Bottom Housing : PBT, Blue(300C)

2.2.2.6 USB Spacer : PA9T, Blue(300C)

2.2.2.7 USB Cover : PBT, Blue(300C)

2.2.3 Shield Parts

2.2.3.1 Front Shield : Stainless, Thickness=0.25mm, unplating

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

2.2.3.3 Grounding Spring : Brass, Thickness=0.20mm
Finish : 100μ" min. Tin

2.2.3.4 USB Shield : Stainless, Thickness=0.25mm, Pre-soldering

2.2.3.5 USB Tongue Shield : Stainless, Thickness=0.25mm

2.2.3.6 USB Back Shield : Stainless, Thickness=0.20mm

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 USB 3.0 specifications

Contact Current Rating: 1A

Contact Resistance: 30mΩ Max.

Insulation Resistance : 1000MΩ min.

Dielectric Withstanding Voltage : 500Vac @1min

Insertion force : 35 N max at a max. rate of 12.5mm per minute

Extraction force : 10 N min and 8 N after the specified insertion/extraction

Durability : 1500 cycles for standard class

2.6 Performance and Test Description

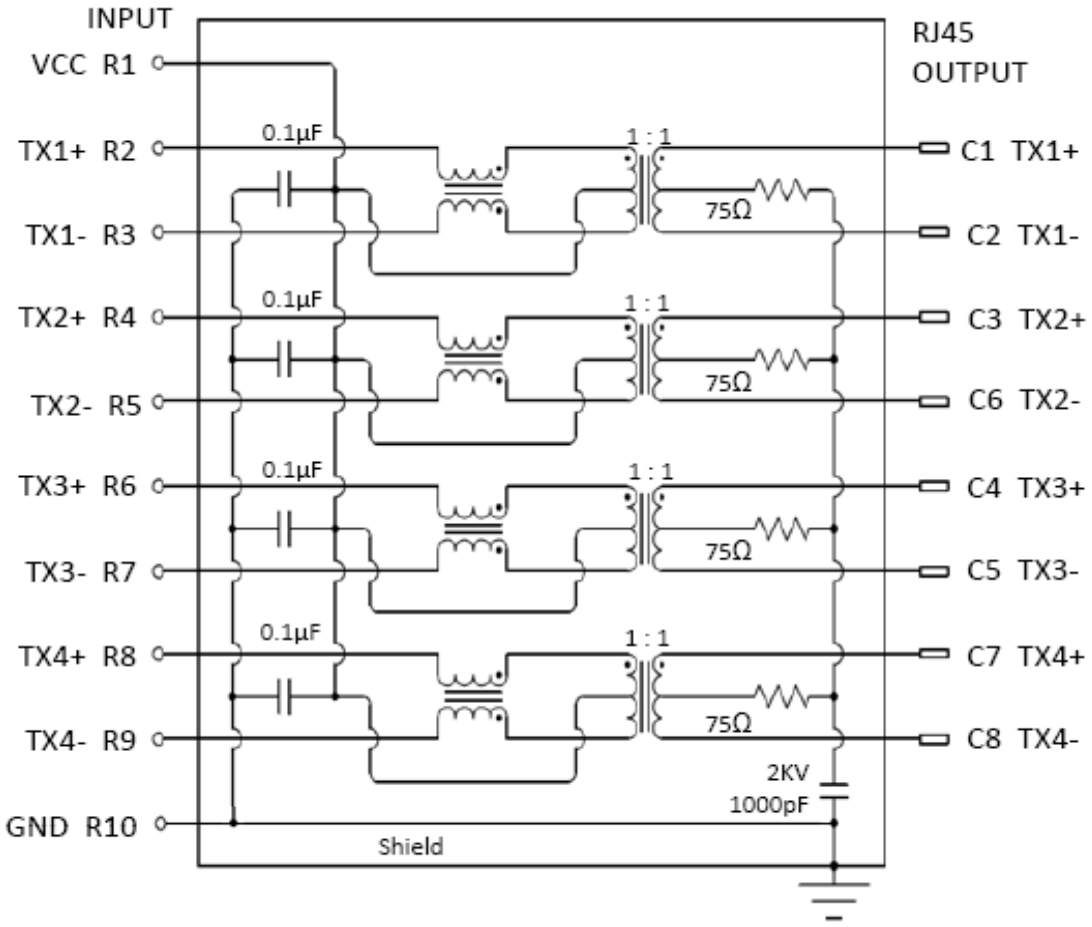
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

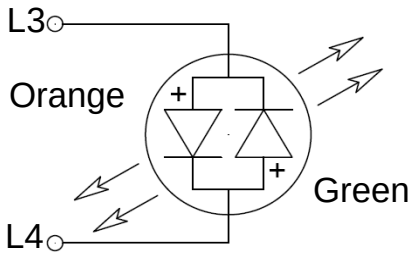
2.7 Packaging and Packing

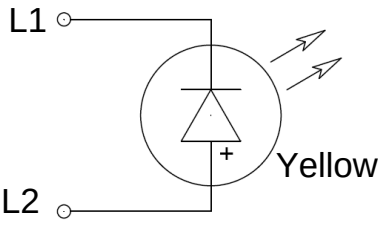
All parts shall be packaged and packed to protect against physical damage、corrosion and deterioration during shipment and storage.

3. ELECTRICAL CHARACTERISTICS

3.1 Schematic







Emitting Color	λp (nm)	Vf @If=20mA	Ir @Vr=5V
Green	565	1.7 ~2.6 V	10µA max.
Yellow	585	1.7 ~2.6 V	10µA max.
Orange	610	1.7 ~2.6 V	10µA max.

3.2 Transmitter filter & Receiver filter

Type : Balance low pass 100Ω impedance

Insertion loss :	1~100 MHz	-1.0dB max.	
Return loss :	1~30 MHz	-18dB min.	load 100Ω
	30~60MHz	-16dB min.	load 100Ω
	60~80MHz	-12dB min.	load 100Ω
	80~100MHz	-10dB min.	load 100Ω

3.3 Common Mode Rejection

@ 1~100 MHz -30dB min.

3.4 Cross Talk

@ 1~100 MHz -30dB 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

2TJ05	-	A00	93	726	3	-	5
		A	B	C	D		E

A. Mechanical Code :

without Spring

B. LED Code :

L-Green/Orange;R-Yellow. <Refer to Schematic of LED>

C. Schematics Code :

726 : 726 circuit

D. Plating Code :

Solder Tail : 100μ" min. Matted Tin

Contact Area - 1 : Gold Flash

6 : 5 microinches Gold plating

5 : 10 microinches Gold plating

2 : 15 microinches Gold plating

3 : 30 microinches Gold plating

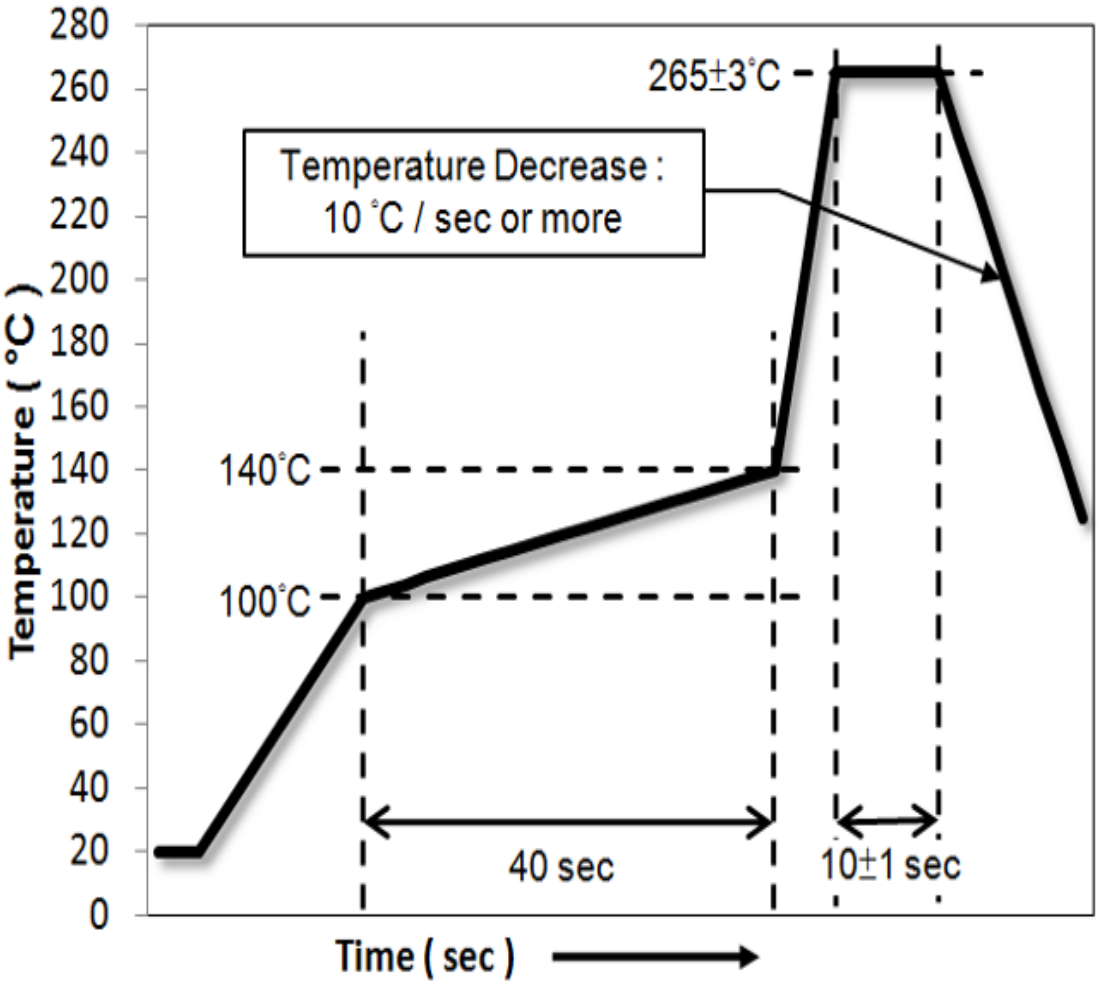
4 : 50 microinches Gold plating

E. Packing & Logo Code :

Packing with Tray, w/o logo

5. DIPPING TEMPERATURE PROFILE

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



6. Revision History

Issue Date	Revision	Comments	Operator
1/23/2014	A	Initial Release .	Leaf