

# SPECIFICATION

SPEC. NO. :           DG1904047                REV :           X1          

DATE :           19-Apr-2019          

PRODUCT NAME :           RJ45 + USB Stack 2.0 W/LED & W/Surge            
          Protection 1000 Base-T Transformer          

PRODUCT NO :           RUA1JA-4RT7-DC0-0R (RoHS Compliant)          

东莞立德精密工业有限公司

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|             | <b>APPROVED</b> | <b>CHECKED</b>          | <b>PREPARED</b> | <b>DCC ISSUE</b> |
|-------------|-----------------|-------------------------|-----------------|------------------|
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LDQR-RD-072 Rev.01

Product Number: RUA1JA-4RT7-DC0-0R (RoHS Compliant)

Product Description : RJ45 + USB Stack 2.0 W/LED & W/Surge Protection 1000 Base-T Transformer

## 1 SCOPE

### 1.1 Content

1.1.1 This specification covers performance, tests and quality requirements for RJ45 + USB Stack 2.0 W/LED & W/Surge Protection 1000 Base-T Transformer.

## 2 APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, latest edition of the specification applies. In the event of conflict between requirements of this specification and product drawing, product drawing shall take precedence.

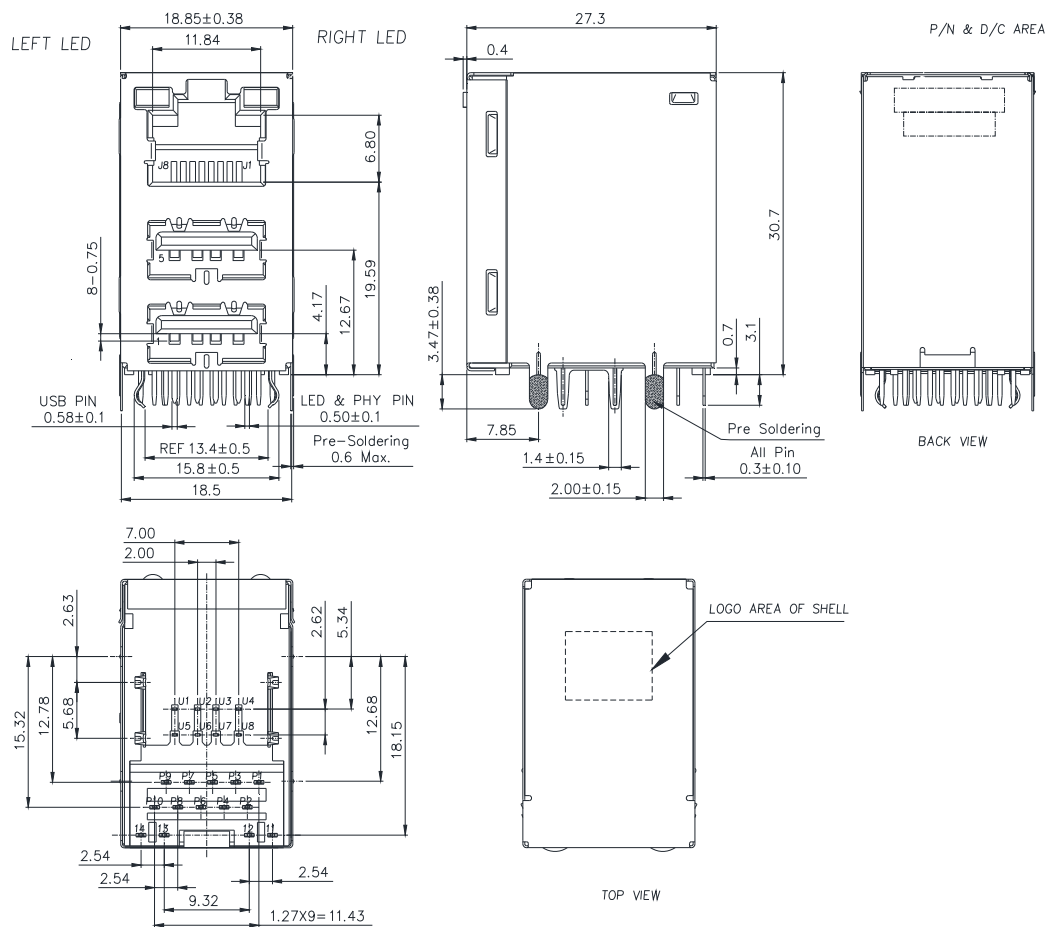
### 2.1 Commercial standards, specifications and report

2.1.1 MIL-STD-1344A

2.1.2 EIA-364

## 3 MECHANIC DIMENSIONS

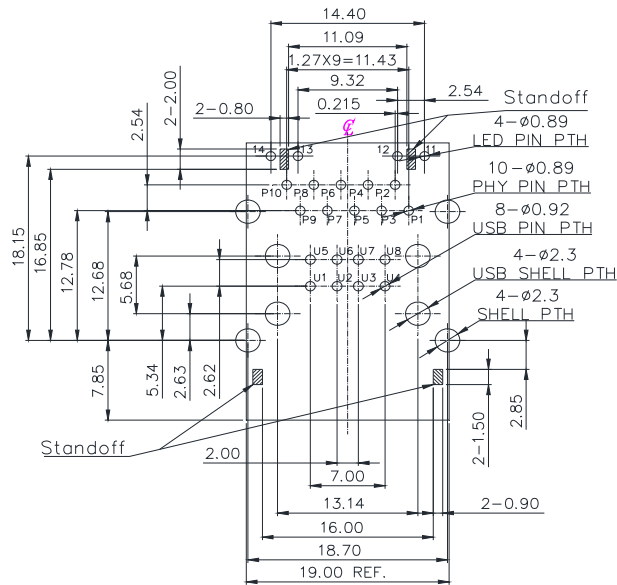
### 3.1 Dimensions



General Tolerance : .X :  $\pm 0.38$

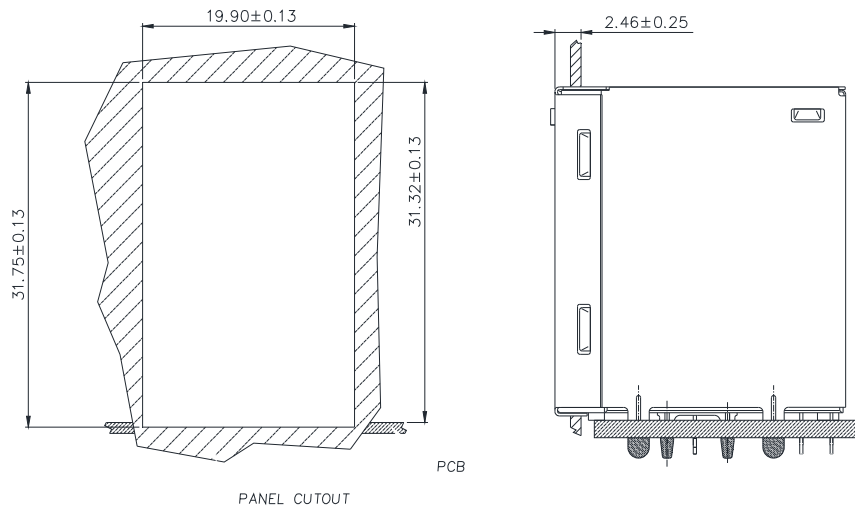
.XX :  $\pm 0.25$

## 3.2 Pin Assignment For PCB Layout

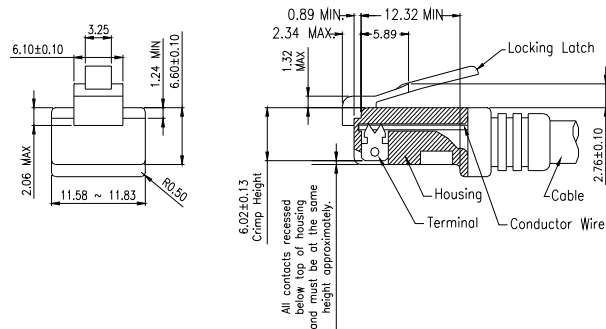


RECOMMENDED P.C.B. LAYOUT  
 TOP VIEW (COMPONENT SIDE) P.C.B. THICKNESS: 1.60mm  
 ALL DIMENSION TOLERANCE ARE  $\pm 0.05$   
 UNLESS OTHERWISE SPECIFIED

## 3.3 PANEL CUTOUT



## 3.4 Recommend Plug Dim.



All dimensions follow :  
 FCC subpart F, 68,500, Figure (C)(2)(i)  
 IEC 60603-7

STANDARD MODULAR PLUG ASSEMBLY

## 3.5 USB Pin Define

|             |      |    |    |     |
|-------------|------|----|----|-----|
| PIN No.     | U1   | U2 | U3 | U4  |
|             | U5   | U6 | U7 | U8  |
| Signal Name | VBUS | D- | D+ | GND |

## 4 REQUIREMENTS

### 4.1 Design and Construction

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

### 4.2 Materials and Finish

#### 4.2.1 Contact :

##### 4.2.1.1 RJ Contact : Phosphor Bronze

Finish : ( a ) Contact Area : 15 $\mu$ "Au Min

( b ) Solder tail Area : 100 $\mu$ " Matted Tin.

( c ) Underplating : 50 $\mu$ " Min Nickel over all

##### 4.2.1.2 USB Contact : Phosphor Bronze

Finish : ( a ) Contact Area : 15 $\mu$ "Au Min

( b ) Solder tail Area: 100 $\mu$ " Matted Tin.

( c ) Underplating : 50 $\mu$ " Min Nickel over all

##### 4.2.1.3 RJ Footer : Brass

Finish : 100  $\mu$ " Matted Tin on 50 $\mu$ " Min Nickel over all

##### 4.2.1.4 LED Footer : Brass

Finish : 100  $\mu$ " Matted Tin on 50 $\mu$ " Min Nickel over all

#### 4.2.2 Plastic Part :

##### 4.2.2.1 Housing, Spacer : Thermoplastic, PBT, Black

#### 4.2.3 Shell

##### 4.2.3.1 Front Shell : Stainless Steel

##### 4.2.3.2 Back Shell : Stainless Steel

##### 4.2.3.3 USB Grounding Leg : Metal

Finish : 100 $\mu$ " Tin on 50 $\mu$ " Min Nickel over all

##### 4.2.3.4 Shell of Grounding Pin : pre-soldering Sn

#### 4.2.4 LED Lamp

| Emitting color | $\lambda_p$ (nm) | $V_f@I_f=20mA$ | $I_r@V_r=5V$ |
|----------------|------------------|----------------|--------------|
| Green          | 565              | 1.7-2.6        | 10 uA max    |
| Yellow         | 585              | 1.7-2.6        | 10 uA max    |
| Orange         | 610              | 1.7-2.6        | 10 uA max    |

### 4.3 Operating and Storage Temperature

4.3.1 Operating Temperature : 0 $^{\circ}$ C TO +70 $^{\circ}$ C

4.3.2 Storage Temperature : -40 $^{\circ}$ C TO +85 $^{\circ}$ C

## 4.4 Ratings

4.4.1 Voltage rating : 125 VAC

4.4.2 Current rating : 1.5 A

## 4.5 Mechanical Characteristics

4.5.1 Mating force: RJ 20N Max; USB 35N Max.

4.5.2 Unmating force: RJ 20N Max; USB 10N Min.

4.5.3 Durability: RJ 1000 Cycles; USB 1500 Cycles.

## 4.6 Reliability Test:

4.6.1 Resistance to soldering heat - High Temperature Resistance:  
265+5/-0°C , 3-5 seconds for 2 times.

4.6.2 Rework temperature: 350°C Max. 3~5seconds for 3 times.

## 4.7 Environmental Test:

4.7.1 Moisture Resistance : MSL level-1

4.7.2 Saving life: 1 year

4.7.3 Thermal shock cycle Test: Expose Sample connectors under the temperature changes between -40°C and 85°C for 25 cycles holding for 30minutes at the both extremes, in accordance with test method of SPEC.

4.7.4 Temperature life: Subject Sample connectors to temperature life at 85°C for 168 hours. EIA-364-22B, Class shall be satisfied.

4.7.5 Humidity test: Subject Sample connector, to relative humidity 85%RH and a temperature of 85°C for 168 hours. It shall be subjected to standard atmospheric. Class shall be satisfied. MIL-STD-1344A.method:1002.2.

## 4.8 Performance and Test Description

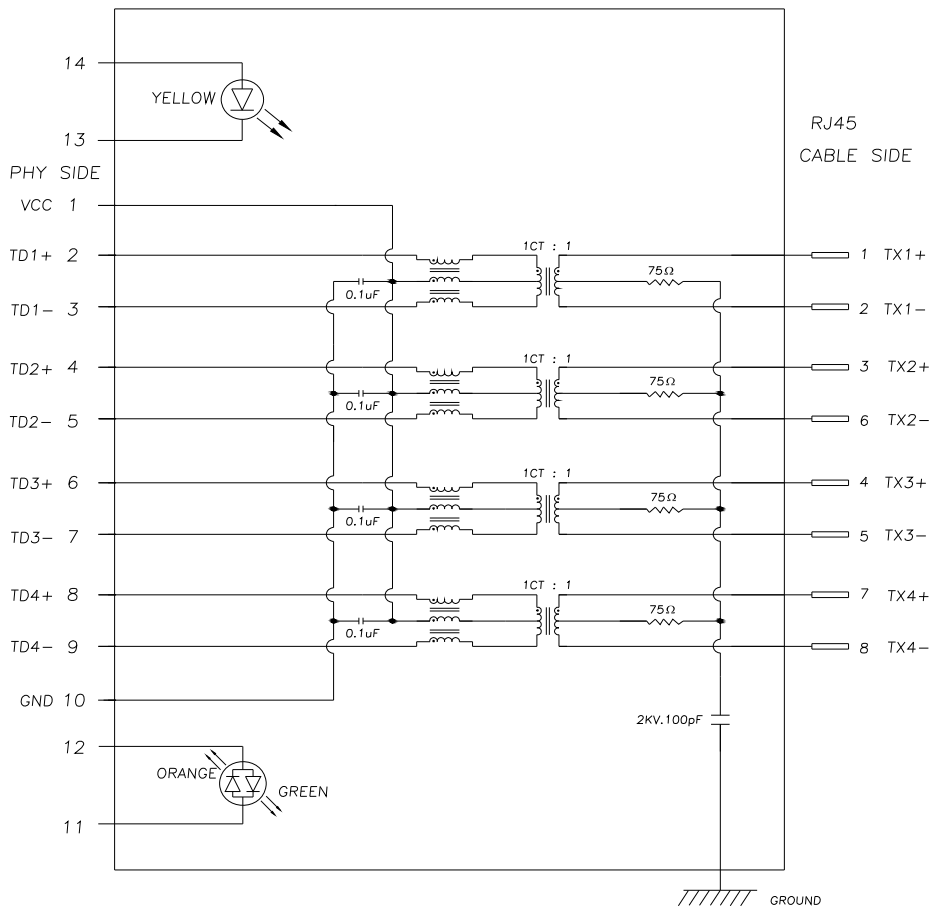
Product is designed to meet electrical, mechanical and environmental performance requirements. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

## 4.9 Packaging and Packing

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

## 5 ELECTRICAL CHARACTERISTICS

### 5.1 Schematic



5.2 Insertion loss : 1~100 MHz -1.0dB MAX

100~125 MHz -1.2dB MAX

Return loss : 1~30 MHz -18dB MIN. load 100Ω

30~60 MHz -16dB MIN. load 100Ω

60~80 MHz -12dB MIN. load 100Ω

80~100 MHz -10dB MIN. load 100Ω

5.3 Common Mode Rejection

@ 1~100 MHz -30dB MIN.

5.4 Cross Talk

@ 1~100 MHz -30dB MIN.

5.5 Primary Inductance @ 100KHz, 0.1V, 8mA DC BIAS

P(2-3), P(4-5), P(6-7), P(8-9) : 350μH MIN.

5.6 Hi-Pot TEST

PRIMARY TO SECONDARY: 2250 VDC

## 6 ORDER INFORMATION

R U A 1 J A - 4 RT 7 - D C 0 - 0 R  
 A B C D E F G H I J

A: W/Shell; Shell Symmetry

B: W/O All Spring & W/USB Port

C: LED Polarity Code

A—LED Positive Polarity

D: LED Color

4—Left LED: Yellow Right LED: Green/Orange

E: Schematic Code

RT—RT Type of the Circuit

F: Contact plating

7—15 $\mu$ "Au Min

G: 8P10C Input Pin Dim: 3.1mm

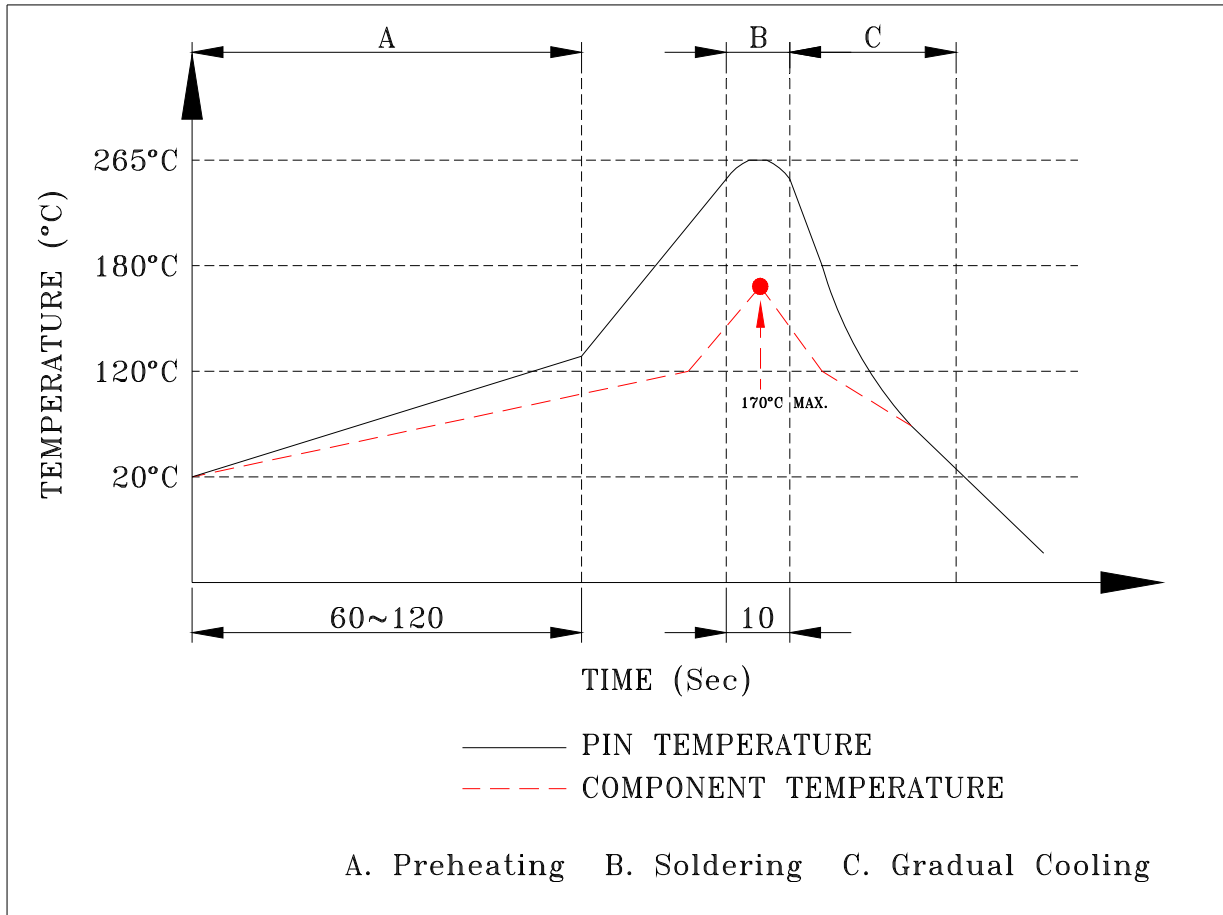
H: Plastic Material: PBT

I: Packing type

0—Tray

J: R—RoHS Compliant

## 7 Profile of Wave Solder



### SUGGESTED WAVE SOLDER CURVE

- (1) Tip temperature :  $265+5/-0^{\circ}\text{C}$
- (2) Tip temperature time : 3~5sec



单击下面可查看定价，库存，交付和生命周期等信息

[>>LUXSHARE](#)