

# APPROVAL SHEET

To : \_\_\_\_\_

Spec No. : \_\_\_\_\_ Date : \_\_\_\_\_

UDE P/N Customer P/N  
RB1-125BHQ1A \_\_\_\_\_

Description : RJ45 1x1 Tab Down  
w/ Transformer 10/100Base-T w/LED  
for POE Application

RoHS Compliant

|              | Approved | Checked | Prepared |
|--------------|----------|---------|----------|
| Name<br>Date |          |         |          |

# UDE

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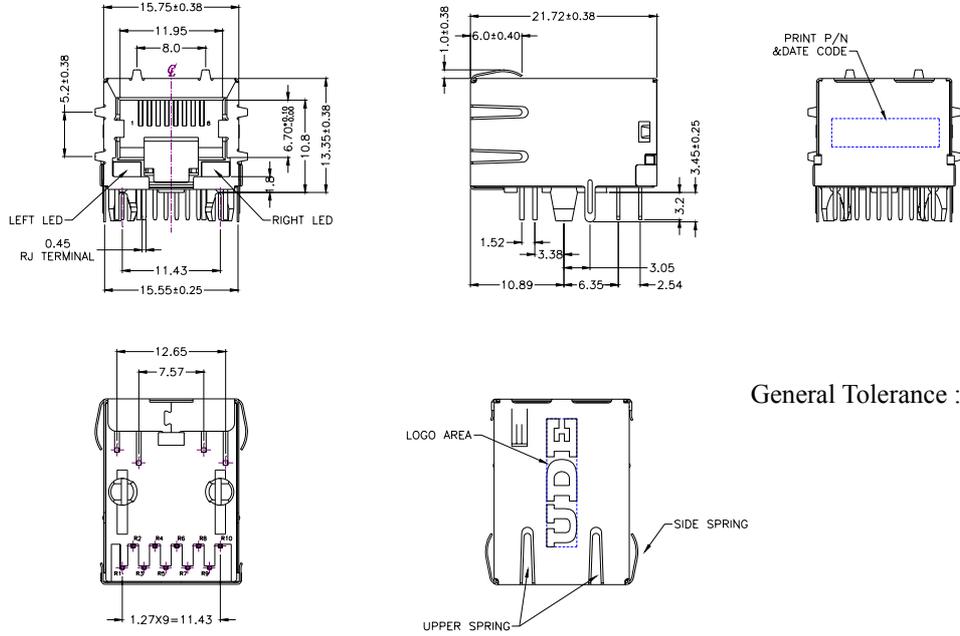
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Rev : **XA**

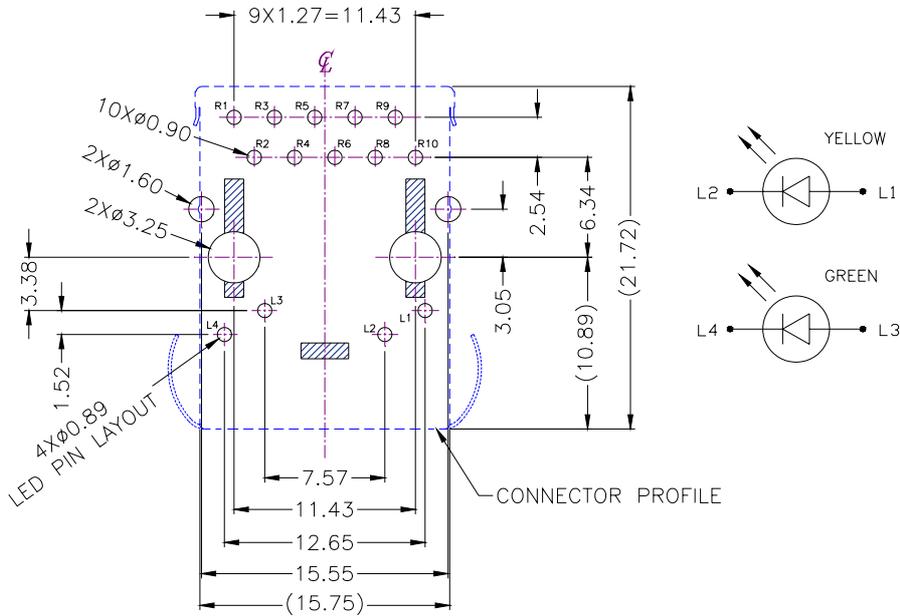
Update Date : 2007/11/16

1. MECHANIC DIMENSIONS  
1.1 Dimensions



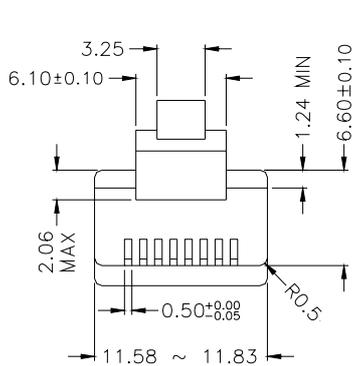
General Tolerance : .X : ±0.25  
.XX : ±0.13

1.2 PCB Layout

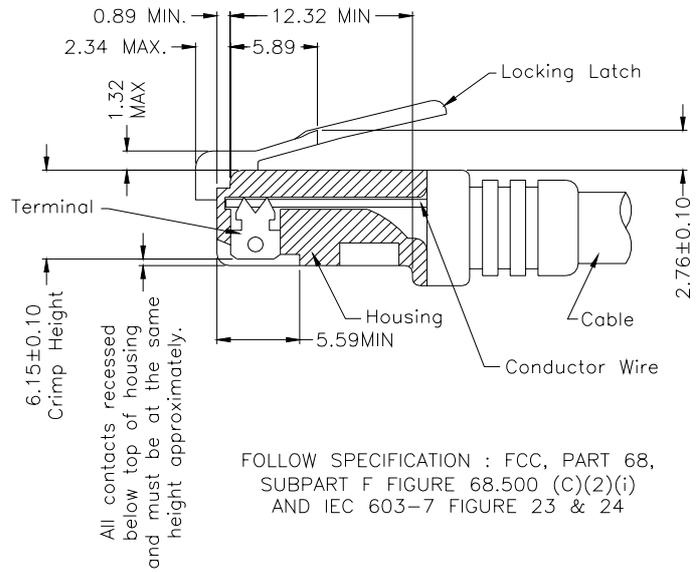


RECOMMENDED PCB LAYOUT  
COMPONENT SIDE  
ALL DIMENSION TOLERANCE ARE ±0.05mm  
UNLESS OTHERWISE SPECIFIED

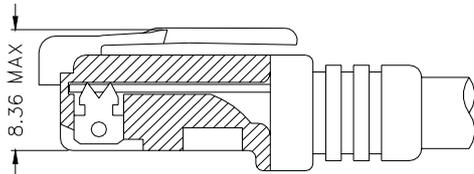
### 1.3 RJ PLUG SPECIFICATION



- \* There must be no damage to housing or locking latch. There must be no nicks or cuts in cable.
- \* Durability : 750 cycles generally



FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(i) AND IEC 603-7 FIGURE 23 & 24



FOLLOW SPECIFICATION : FCC, PART 68, SUBPART F FIGURE 68.500 (C)(2)(ii)

STANDARD MODULAR PLUG ASSEMBLY

## 2. REQUIREMENTS

### 2.1. Design and Construction

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

### 2.2. Materials

#### 2.2.1. Terminal Parts :

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

Finish : ( a ) Contact Area : Gold Flash

( b ) Solder tail Area : 100μ" min. Tin

( c ) Underplating : 50~100μ" Nickel over all

2.2.1.2. Input Terminal : Brass , Thickness=0.35mm

Finish : 100μ" min. Tin over 50~100μ" min. Nickel

2.2.1.3. Link Terminal : Brass , Thickness=0.25mm

Finish : 100μ" min. Tin over 50~100μ" min. Nickel

#### 2.2.2. Plastic Parts :

2.2.2.1. Housing : High temp. Thermoplastic, Black

UL FILE No. : E47960

Grade : TE250F6

Flame Class : UL94 V-0

2.2.2.2. Coil Case : High temp. Thermoplastic, Black

|            |  |           |           |  |        |       |
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|------------|--|-----------|-----------|--|--------|-------|

UL FILE No. : E47960

Grade : TE250F6

Flame Class : UL94 V-0

2.2.2.3. Cover : Thermoplastic , PBT , Black

UL FILE No. : E59481

Grade : PBT-4830

Flame Class : UL94 V-0

2.2.3. Shell Parts :

2.2.3.1. Shell : Stainless, Thickness=0.20mm

Grounding Leg : Pre-soldering

2.3. Operating and Storage Temperature

2.3.1. Operating Temperature : 0 TO +70

2.3.2. Storage Temperature : -40 TO +85

2.4. RJ45 specifications:

2.4.1. Insulation Resistance: 500MΩMin

2.4.2. Dielectric Withstanding Voltage: 1000VAC Min

2.5. Performance and Test Description

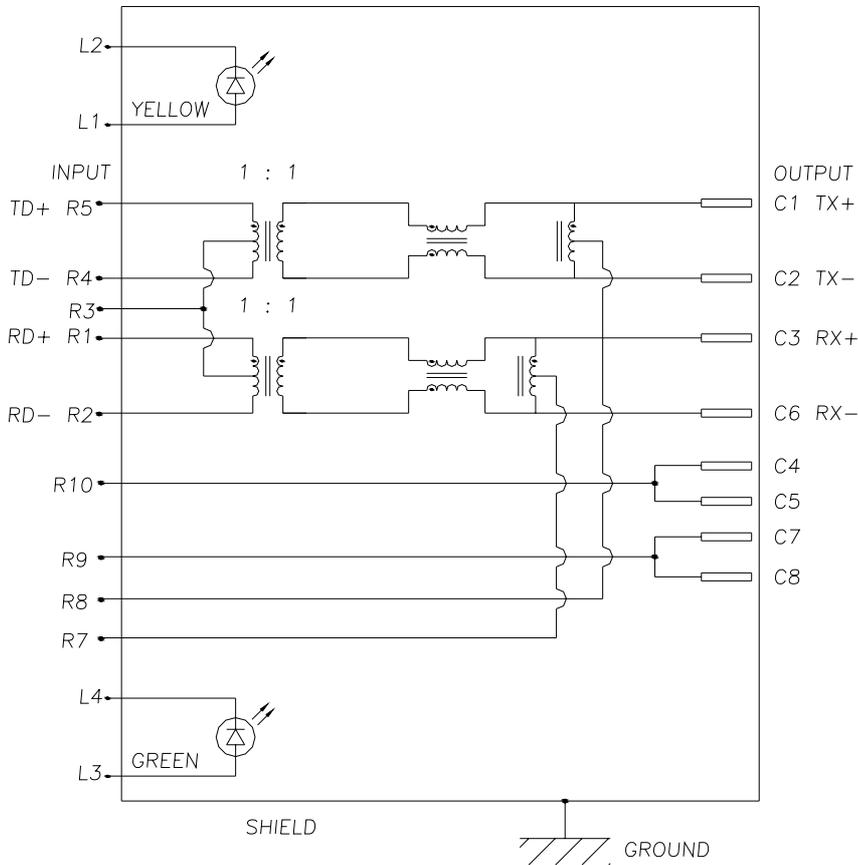
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

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 : 1~30 MHz -18dB MIN. load 100Ω  
 30~60 MHz -16dB MIN. load 100Ω  
 60~80 MHz -12dB 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(R5-R4), Input(R1-R2) : 350μH MIN.

#### 3.6 HiPot TEST

Input(R5-R4) to Output(C1-C2) : 1200VAC, 60sec

Input(R1-R2) to Output(C3-C6) : 1200VAC, 60sec

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Product Number: RB1-125BHQ1A

4.ORDER INFORMATION

R B 1 - 1 X X X XXX X  
A B C D E

A: LED Code

|   | Left LED |         | Right LED |         |
|---|----------|---------|-----------|---------|
|   | -L3/+L4  | +L3/-L4 | -L1/+L2   | +L1/-L2 |
| 0 | w/o      | w/o     | w/o       | w/o     |
| 1 | Green    |         | Yellow    |         |
| 2 |          | Green   |           | Yellow  |
| 3 | Green    |         | Green     | Yellow  |
| 4 | Yellow   |         | Green     |         |
| 5 |          | Green   | Yellow    | Green   |
| 6 | Green    | Orange  | Yellow    |         |
| 7 | Yellow   |         | Green     | Orange  |
| 8 | Yellow   |         | Orange    | Green   |
| 9 | Green    | Orange  | Green     |         |
| C | Green    |         | Green     |         |

B : Spring & Logo Code

|      |     | SPRING              |         |                       |                     |                       |
|------|-----|---------------------|---------|-----------------------|---------------------|-----------------------|
|      |     | W/ ALL<br>DIM A=1.0 | W/O ALL | TOP ONLY<br>DIM A=1.0 | W/ ALL<br>DIM A=2.0 | TOP ONLY<br>DIM A=2.0 |
| LOGO | W/O | 0                   | 1       | 2                     | 3                   | 4                     |
|      | W/  | 5                   | 6       | 7                     | 8                   | 9                     |

C : Board Lock , Post & Side Leg Code

| Board Lock<br>Post<br>Side Leg | None Green Product |      | Green Product |      |
|--------------------------------|--------------------|------|---------------|------|
|                                | Board Lock         | Post | Board Lock    | Post |
| Rear Side Leg                  | 1                  | 4    | B             | F    |
| Front Side Leg                 | 2                  | 5    | C             | G    |

D : Schematic type

HQ1 : HQ1 Circuit

E : Terminal Contact Area Plating Code

A : Gold Flash

|            |  |           |           |  |        |       |
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Dipping temperature profile

(Note) The measuring point for the specified temperature shall be on the soldered part of the leads

