

P/N : RS3-21001D1A

Description : RJ45 1X1 Tab Up  
T/H, Slim, Sink  
10/100 Base-T  
Contact Area : Gold Flash  
LED:L-Green;R-Yellow

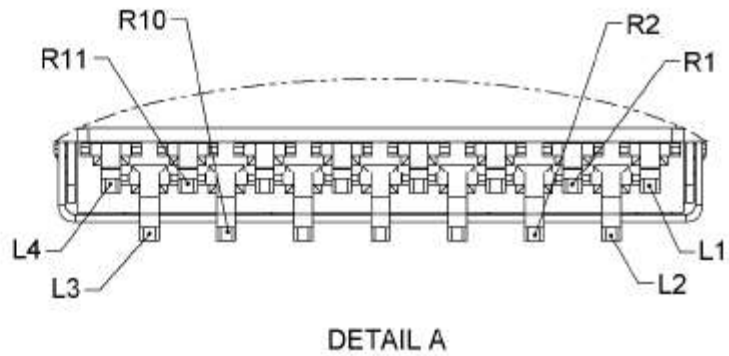
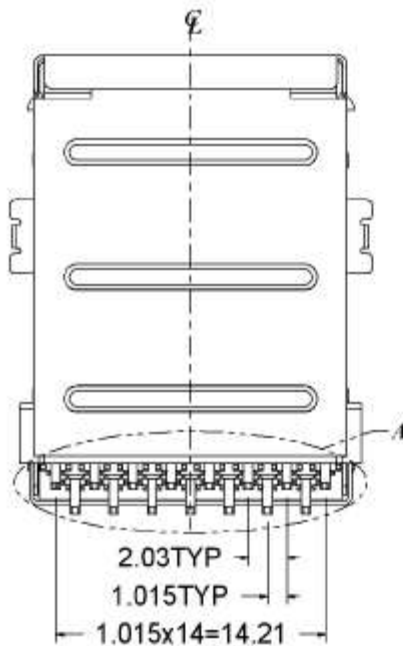
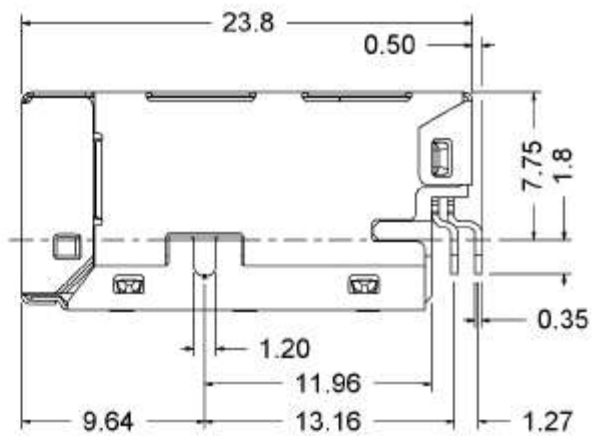
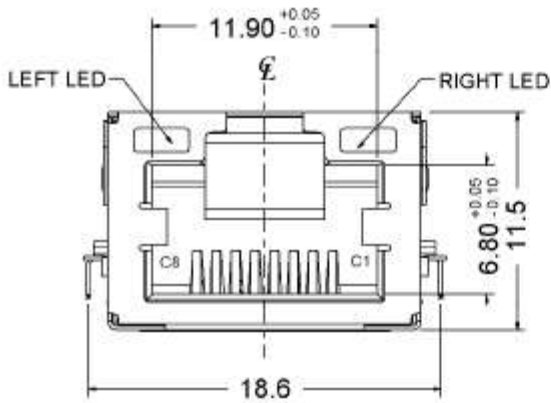
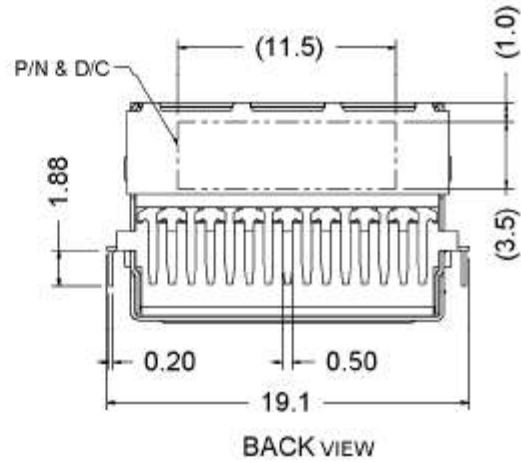
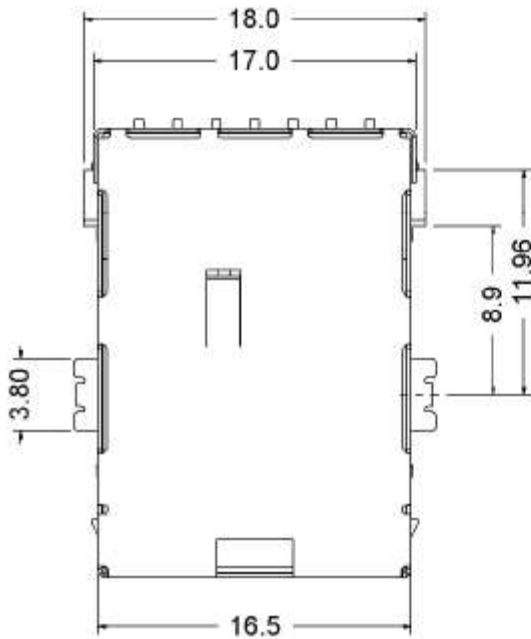
**Spec No.**      **Update Date**  
RS3005-00      2010/6/21

Approved	Checked	Prepared

# 1. MECHANICAL DIMENSION

## 1.1 Product Dimension

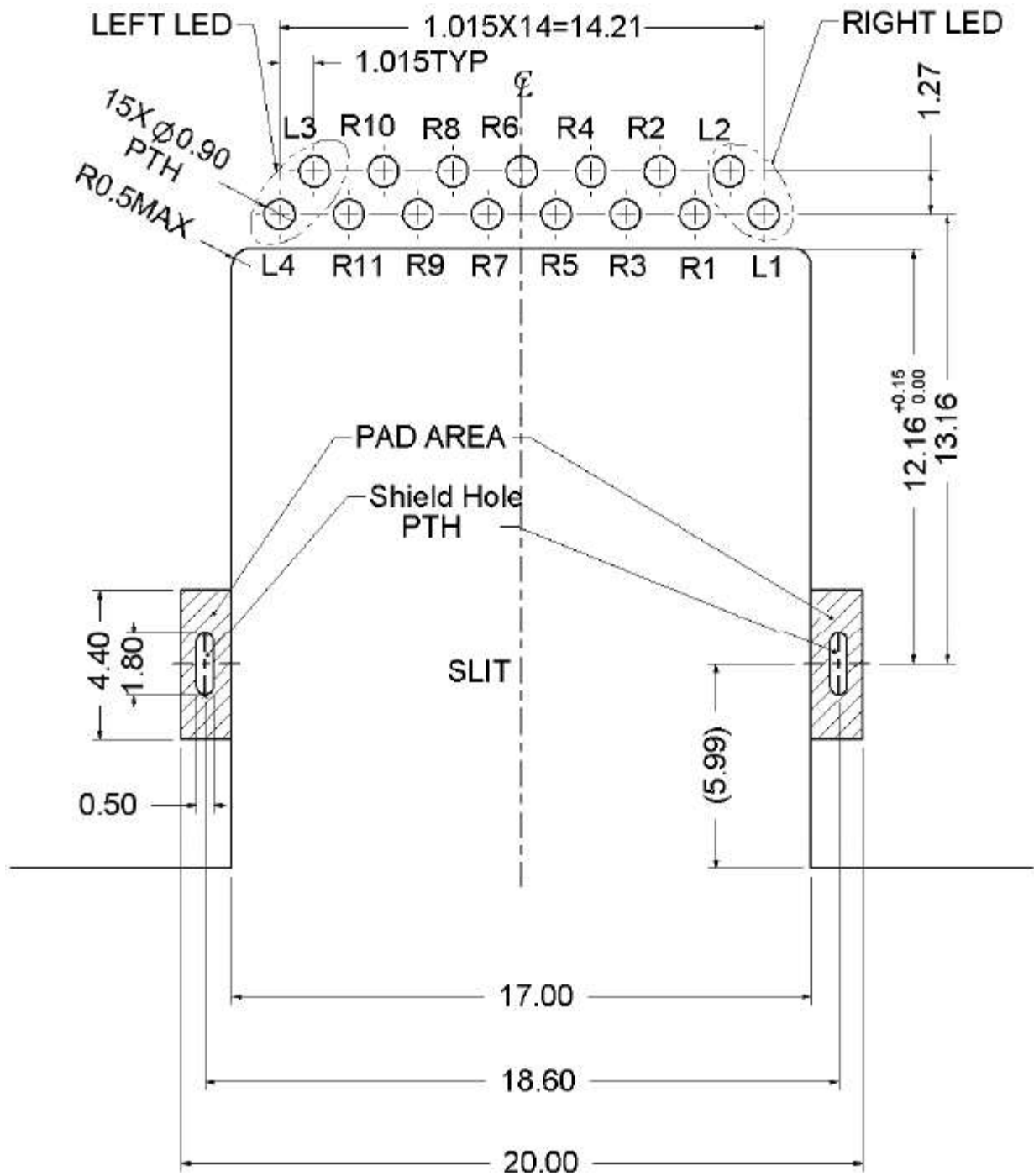
General Tolerance : X.X : ± 0.38  
 X.XX : ± 0.25



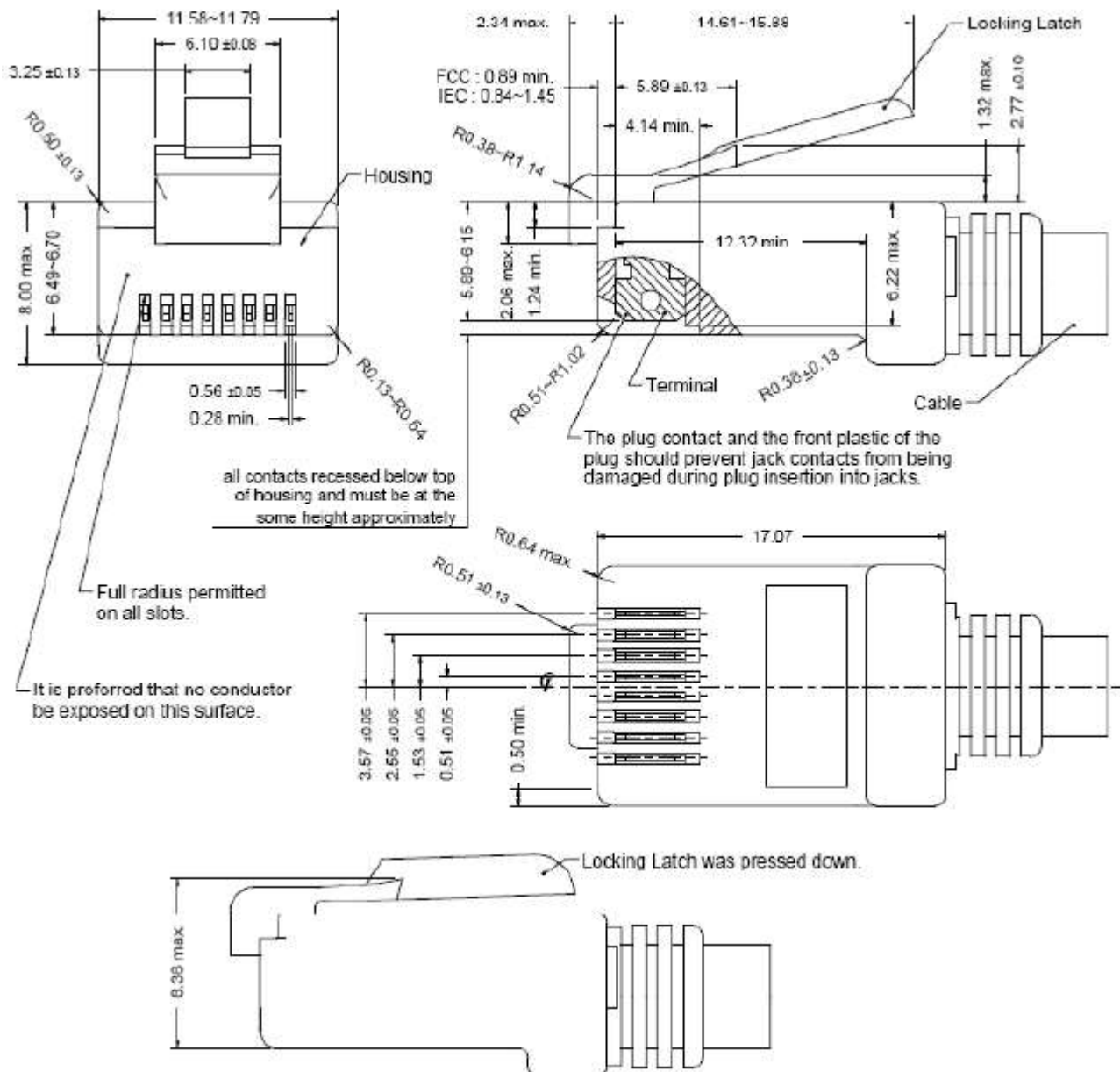
1.2 Recommended PCB Layout

Component Side of Board

All dimension tolerance are  $\pm 0.05\text{mm}$  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 Latch.
- 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 : 30 $\mu$ " min. Nickel overall)

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

Finish : Contact Area : Gold Flash

2.2.1.2 Input Terminal : Brass, Thickness=0.35mm

Finish : 100 $\mu$ " min. Tin

2.2.1.3 Case Terminal : Brass, Thickness=0.25mm

Finish : 100 $\mu$ " min. Tin

#### 2.2.2 Plastic Parts <UL94V-0>

2.2.2.1 Housing : High Temperature Thermoplastic, Black

2.2.2.2 Case : High Temperature Thermoplastic, Black

2.2.2.3 Cover : High Temperature Thermoplastic, Black

#### 2.2.3 Shield Parts

2.2.3.1 Front Shield : Stainless, Thickness=0.20mm, unplating

2.2.3.2 Bottom Shield : PH. Bronze, Thickness=0.20mm

Finish : Soldering Area : Gold Flash over 30 $\mu$ " min. Nickel overall

### 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

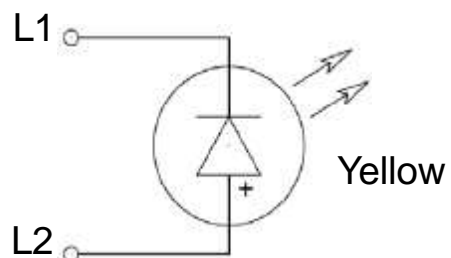
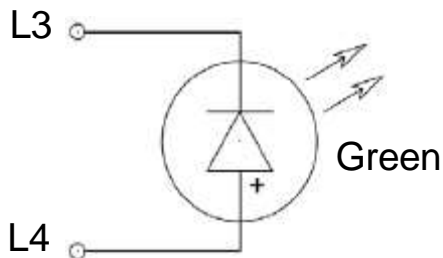
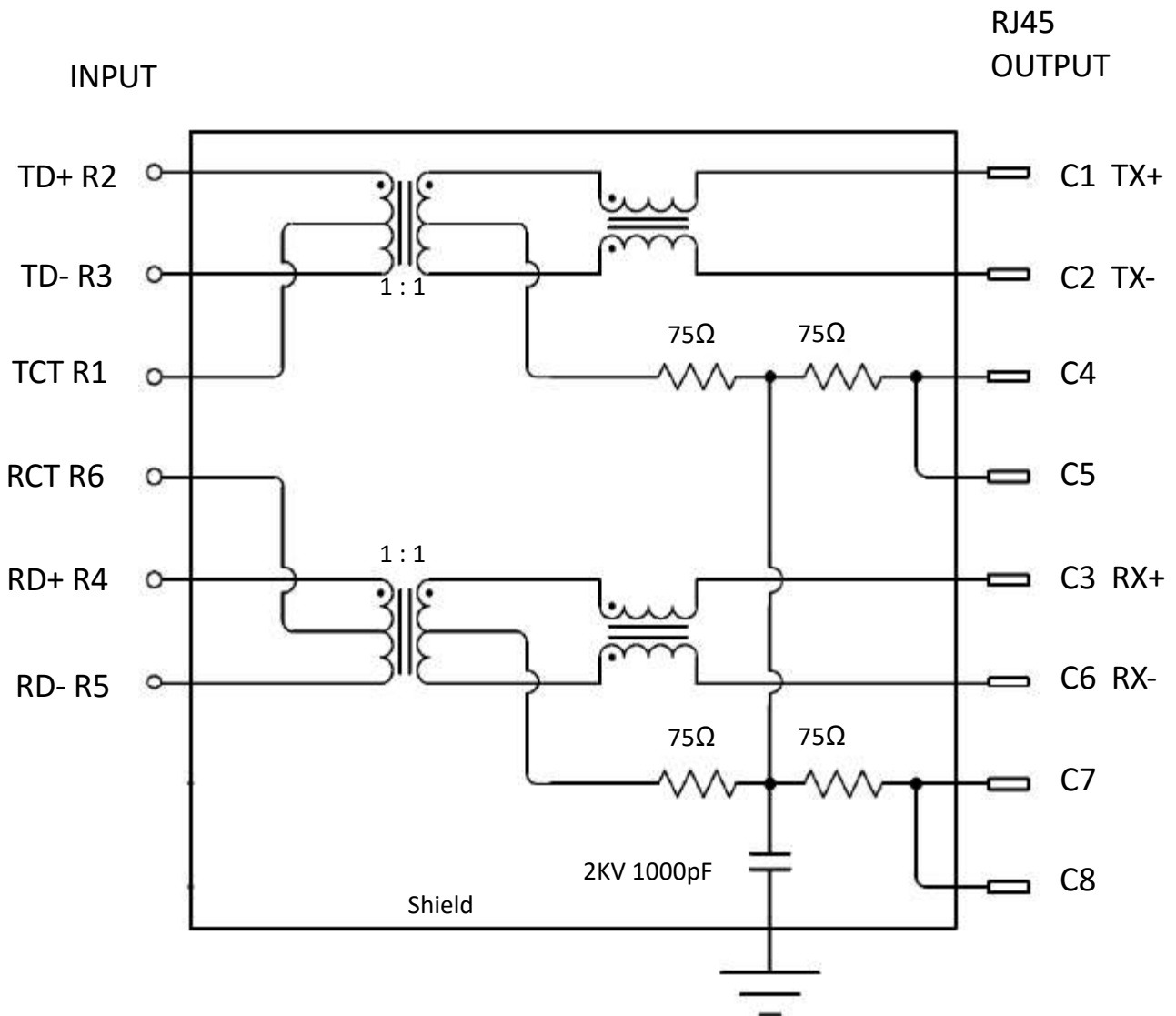
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

### 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



Emitting Color	$\lambda_p$ (nm)	$V_f$ @ $I_f=20\text{mA}$	$I_r$ @ $V_r=5\text{V}$
Green	565	-1.7 ~ 2.6 V	10 $\mu\text{A}$ max.
Yellow	585	-1.7 ~ 2.6 V	10 $\mu\text{A}$ 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

### 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) : 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



## 4. ORDER INFORMATION

R S 3 - 2 1 00 1D1 A  
A B C D

## A. LED Code :

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

## B. Mechanical Code :

w/o Logo, w/o spring

## C. Schematics Code :

1D1 : 1D1 circuit

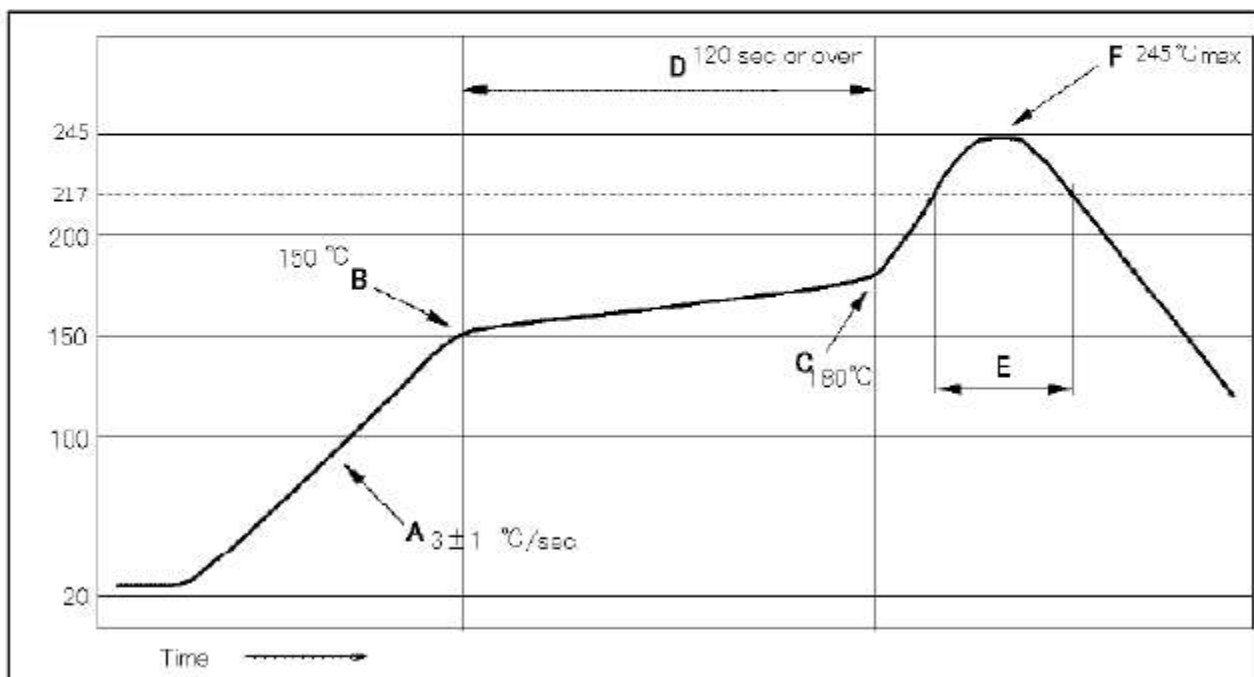
## D. Plating Code :

Underplating	30 $\mu$ " min. Nickel overall	
Solder Tail	100 $\mu$ " min. Bright Tin	100 $\mu$ " min. Matted Tin
Contact Area	<u><b>A : Gold Flash</b></u> C : 6 $\mu$ " gold B : 10 $\mu$ " gold D : 15 $\mu$ " gold F : 30 $\mu$ " gold G : 50 $\mu$ " gold <sub>8</sub>	1 : Gold Flash 6 : 6 $\mu$ " gold 2 : 15 $\mu$ " gold 3 : 30 $\mu$ " gold 4 : 50 $\mu$ " gold

## 5. IR REFLOW TEMPERATURE PROFILE

Temperature condition of reflow soldering

Contents	Soldering Condition
A: Increasing speed	$3 \pm 1$ °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	245 °C max



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