

# APPROVAL SHEET

To :

Customer P/N :

UDE P/N : BS-R250210

Description : RJ45 1X1 Tab Up

SMT

10/100 Base-T

Contact Area : 50 $\mu$ " Gold

LED:L-Green;R-Yellow



Spec No.  
BS-0210

Update Date  
2011/8/19

Approved	Checked	Prepared



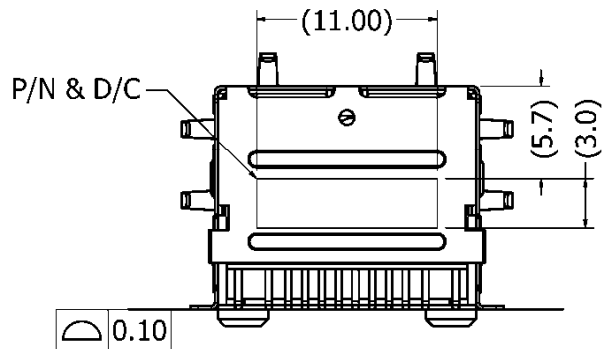
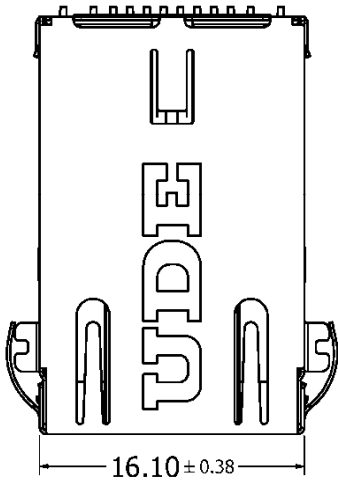
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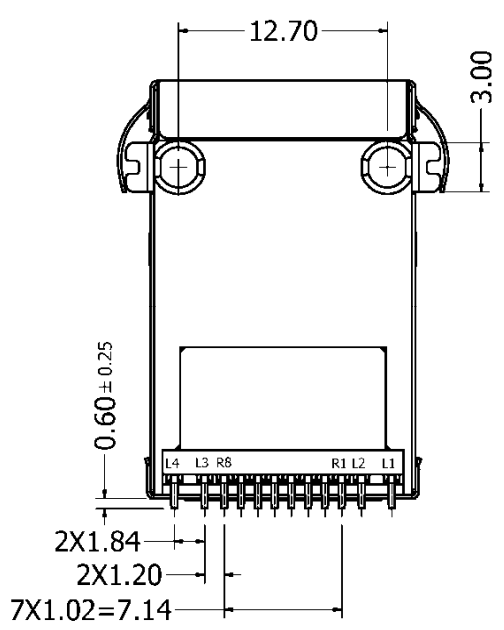
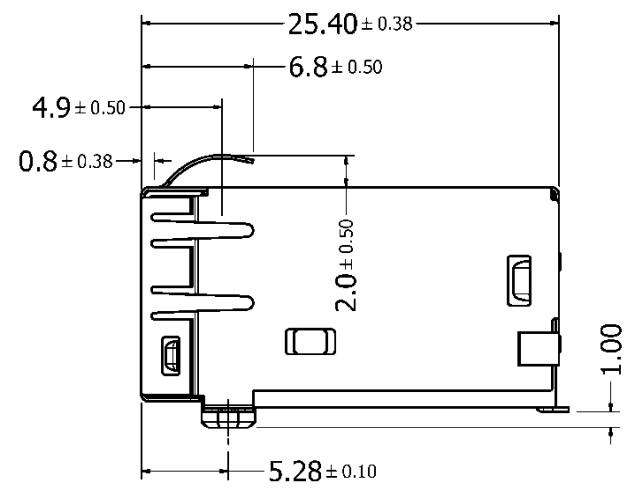
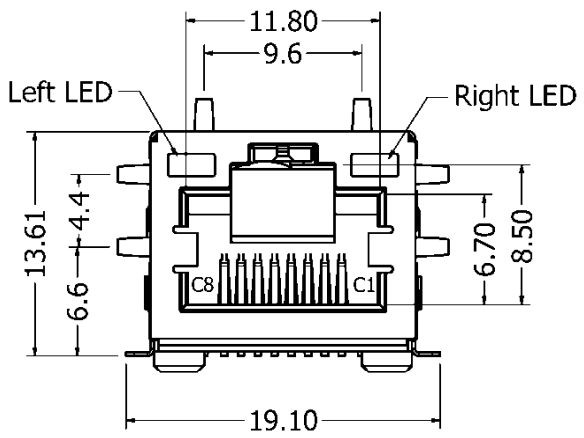
# 1. MECHANICAL DIMENSION

## 1.1 Product Dimension

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



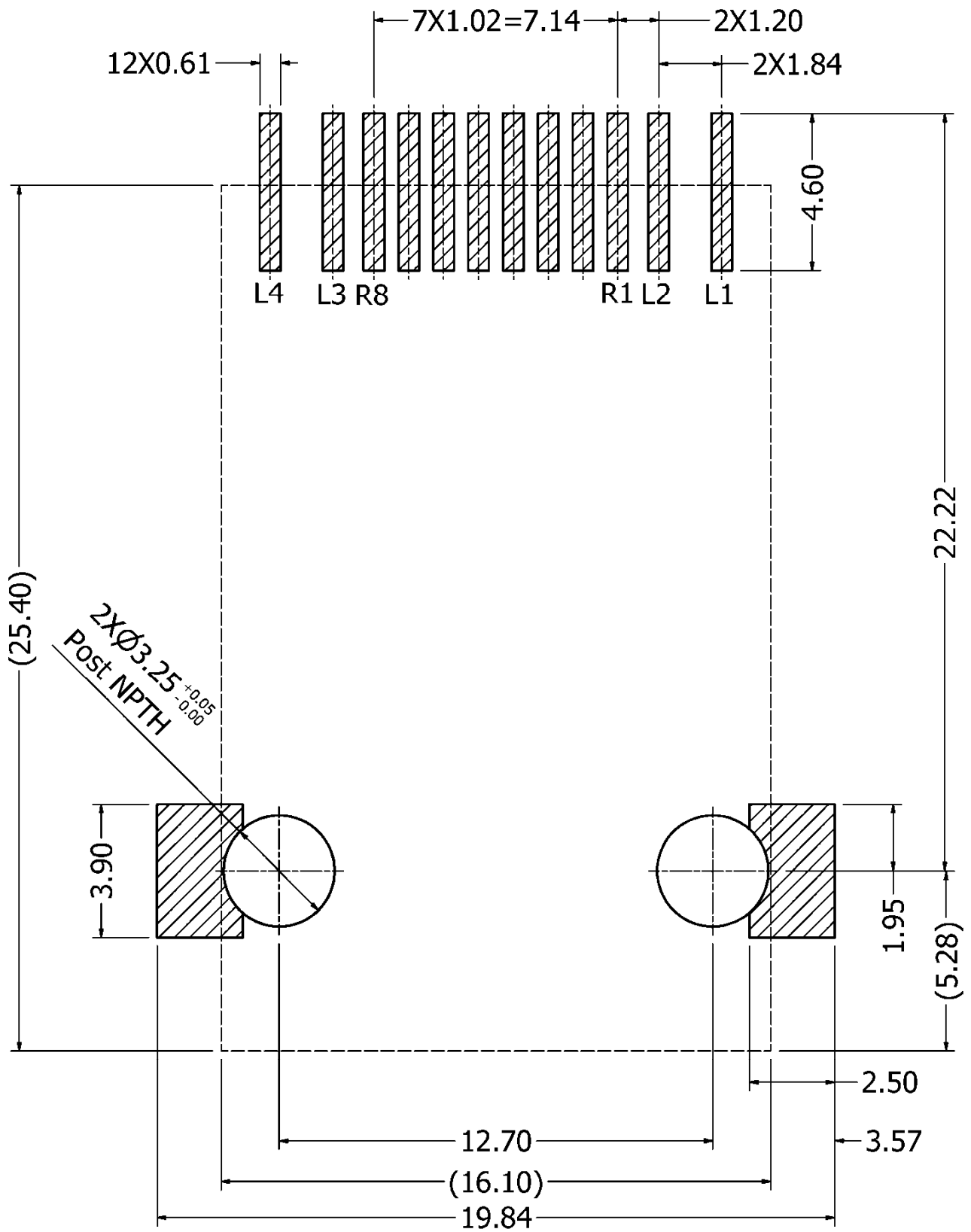
Back View



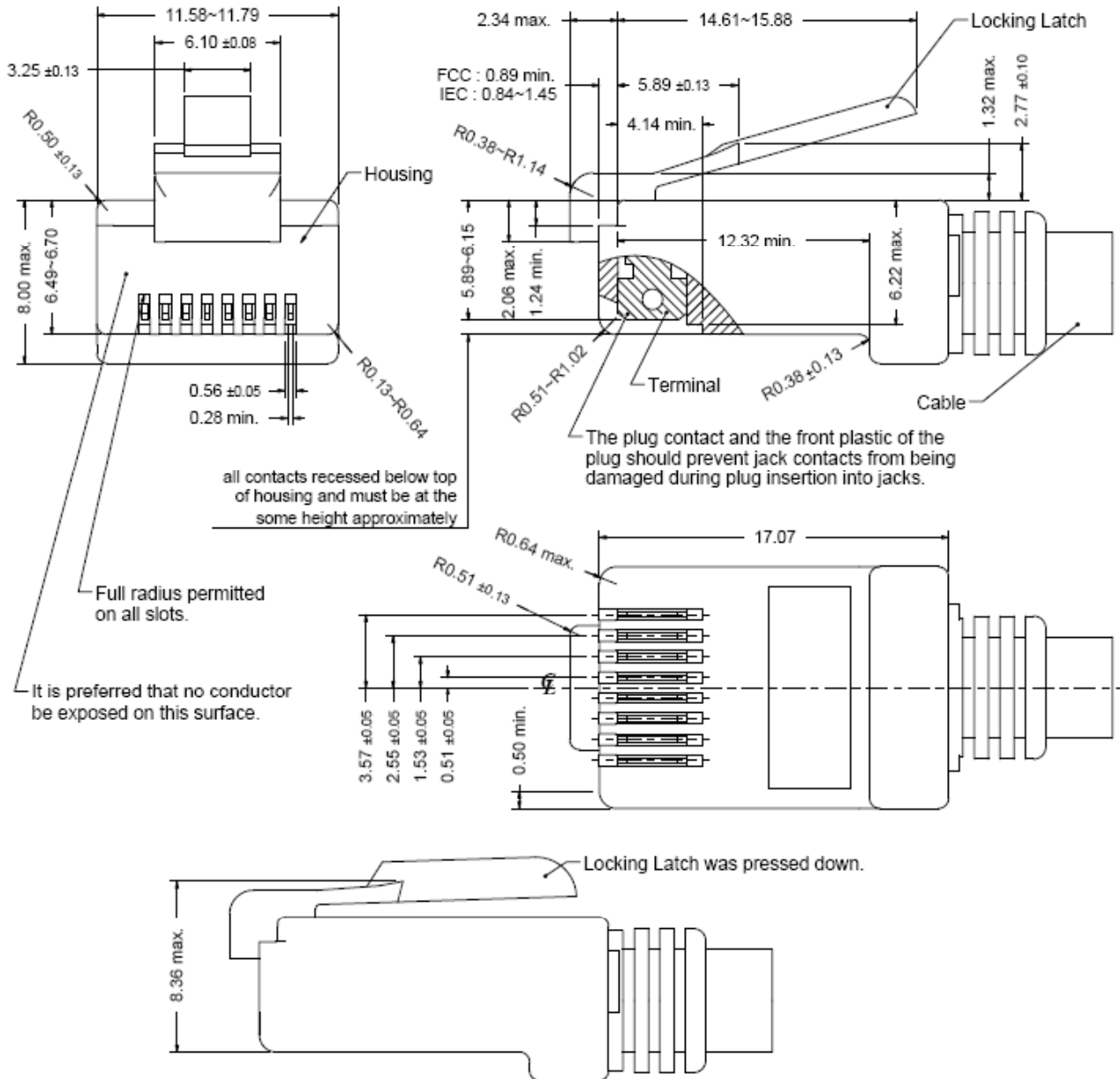
### 1.2 Recommended PCB Layout

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 : 50 $\mu$ " Gold

2.2.1.2 Input Terminal : Brass, Thickness=0.25mm

Solder Tail : 100 $\mu$ " min. Mt. 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 Shield : Stainless, Thickness=0.20mm

Finish : Soldering Area : Gold Flash

### 2.3 Operating and Storage Temperature

Operating Temperature : -40°C to +85°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

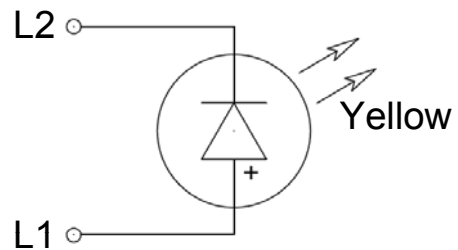
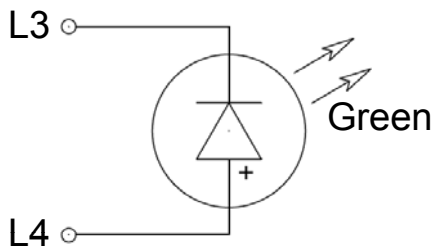
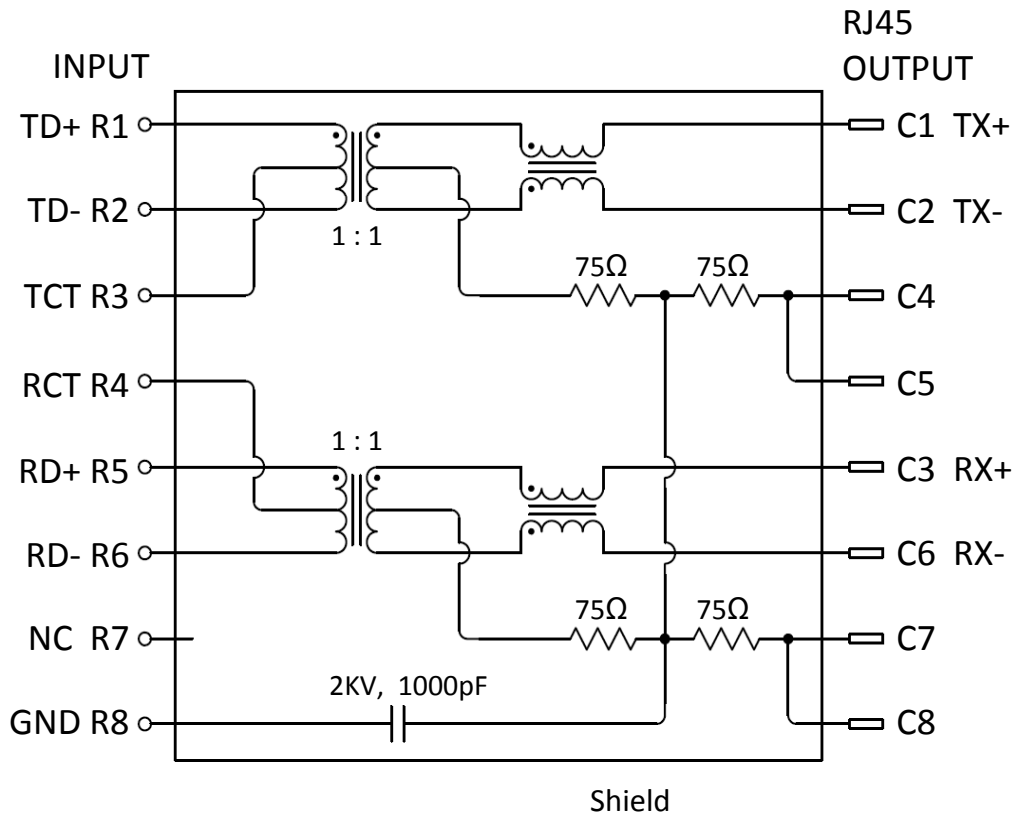
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

### 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)	$V_f @ I_f=20mA$	$I_r @ V_r=5V$
Green	565	1.7 ~ 2.6 V	10 $\mu$ A max.
Yellow	585	1.7 ~ 2.6 V	10 $\mu$ A max.

## 3.2 Transmitter filter &amp; Receiver filter

Type : Balance low pass 100Ω impedance

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

Return loss : 1~10 MHz -20dB min. load 100Ω

30MHz -16dB min. load 100Ω

60~80MHz -12dB min. load 100Ω

## 3.3 Common Mode Rejection :

1~50 MHz -30dB min.

50~130 MHz -20dB min.

## 3.4 Cross Talk : 1~10 MHz -40dB min.

30~60 MHz -35dB min.

60~100 MHz -30dB min.

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

Input(R1-R2), Input(R5-R6) : 350μH min.

## 3.6 Hi-Pot Test

Input(R1-R2) To Output(C1-C2) : 1500Vac 60s or 2250Vdc 60s

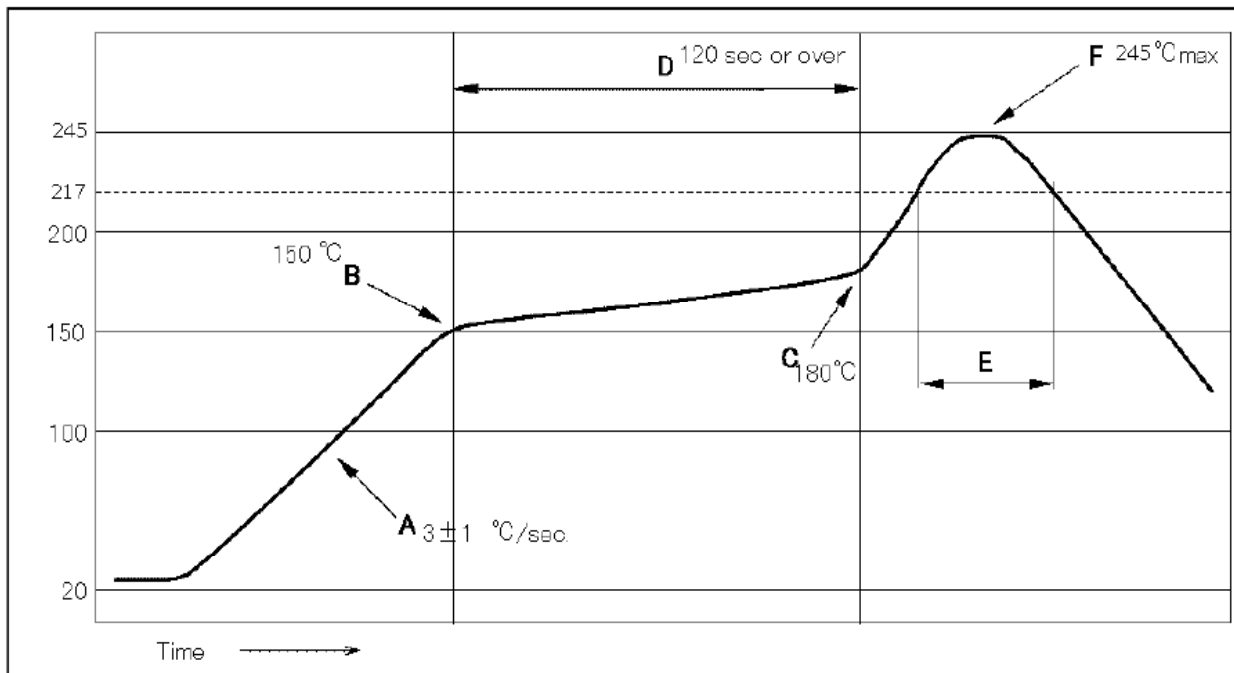
Input(R5-R6) To Output(C3-C6) : 1500Vac 60s or 2250Vdc 60s



#### 4. 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	245°C max



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