

# APPROVAL SHEET

To :

Customer P/N :

UDE P/N : 25-000939R13-1

Description : RJ45 1X1 Tab Up  
SMT

10/100/1000 Base-T

Contact Area : 30 $\mu$ " Gold

LED:L-Green/Orange;R-Yellow



Spec No.  
25-0030-00

Update Date  
2012/12/25

Revision  
A

Approved	Checked	Prepared



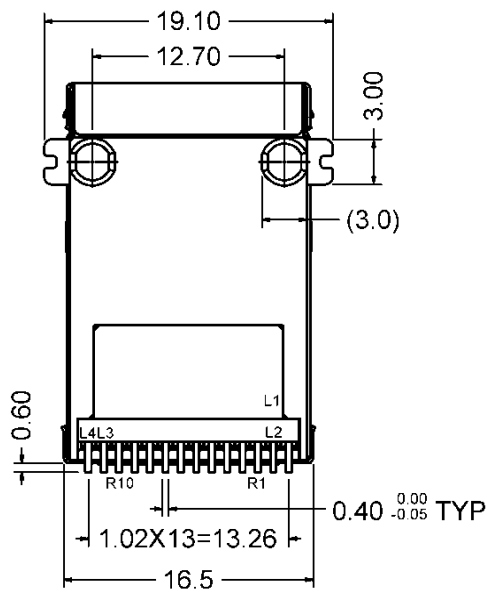
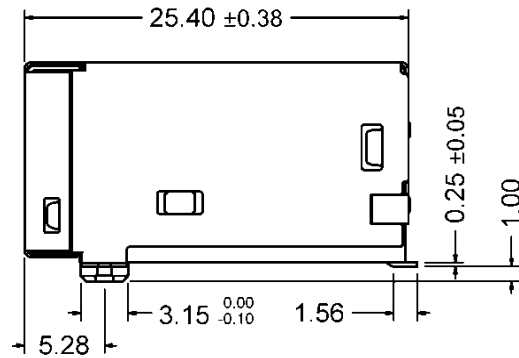
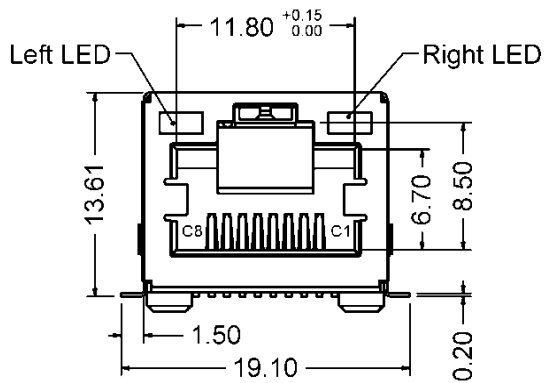
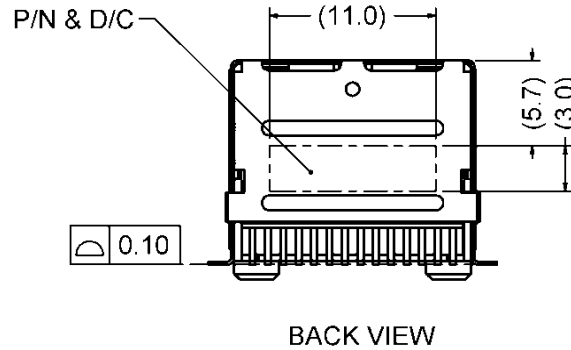
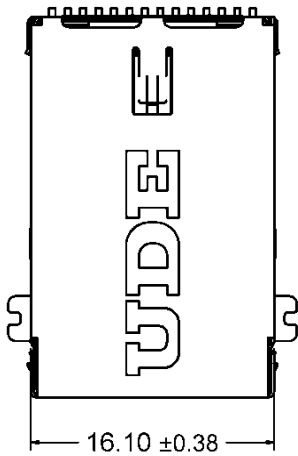
湧德電子 股份有限公司  
UDE Corp.

8F-1, No.58, Tongde 11th St., Taoyuan City, Taoyuan County (330), Taiwan  
桃園縣桃園市(330)同德十一街58號 8F之1  
TEL:+886-3-3568600 FAX:+886-3-3560611  
<http://www.ude-corp.com/>

# 1. MECHANICAL DIMENSION

## 1.1 Product Dimension

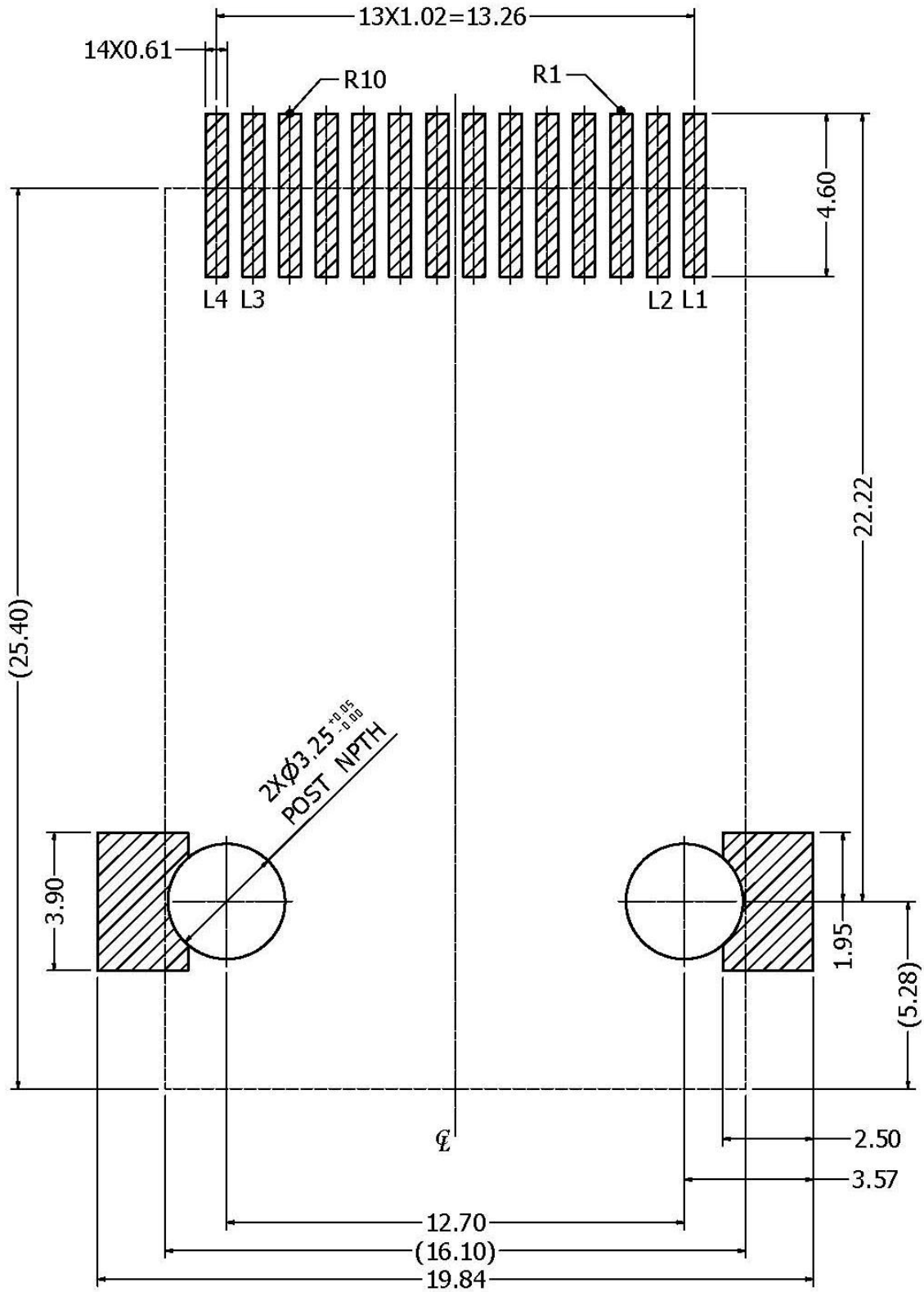
General Tolerance : X.X : ± 0.38  
 X.XX : ± 0.25



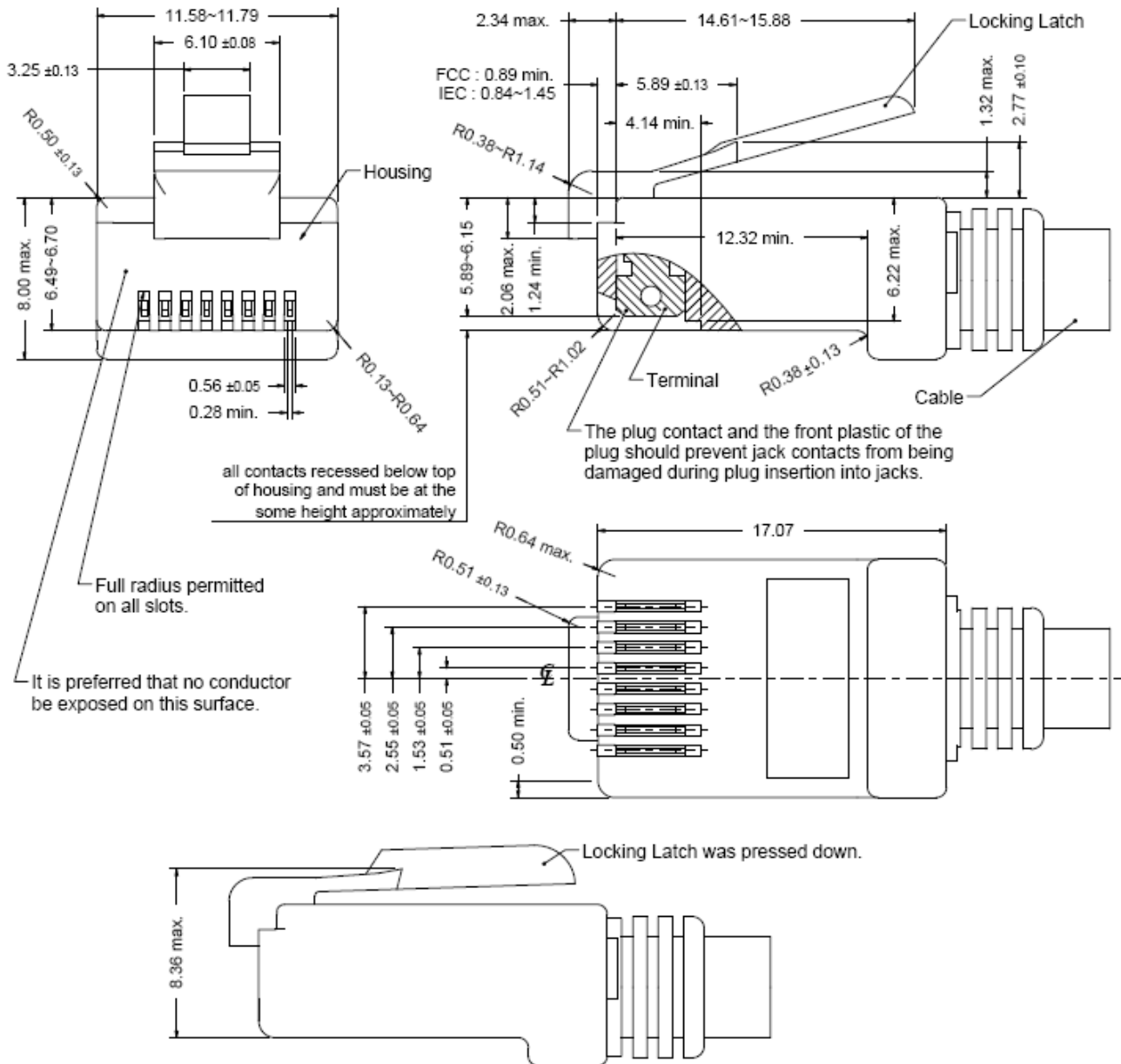
### 1.3 Recommended PCB Layout

#### Component Side of Board

All dimension tolerance are  $\pm 0.05\text{mm}$  unless otherwise specified



### 1.4 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

## 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 : 30 $\mu$ " 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

2.2.2.3 Cover: High Temperature Thermoplastic

#### 2.2.3 Shield Parts

2.2.3.1 Shield : Stainless, Thickness=0.20mm

Finish : Soldering Area : 2 $\mu$ " Gold

### 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

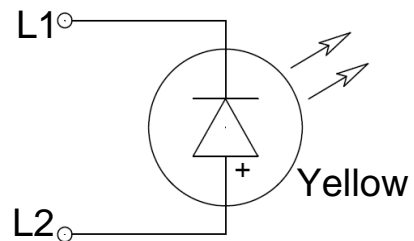
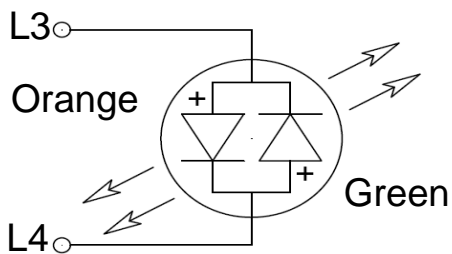
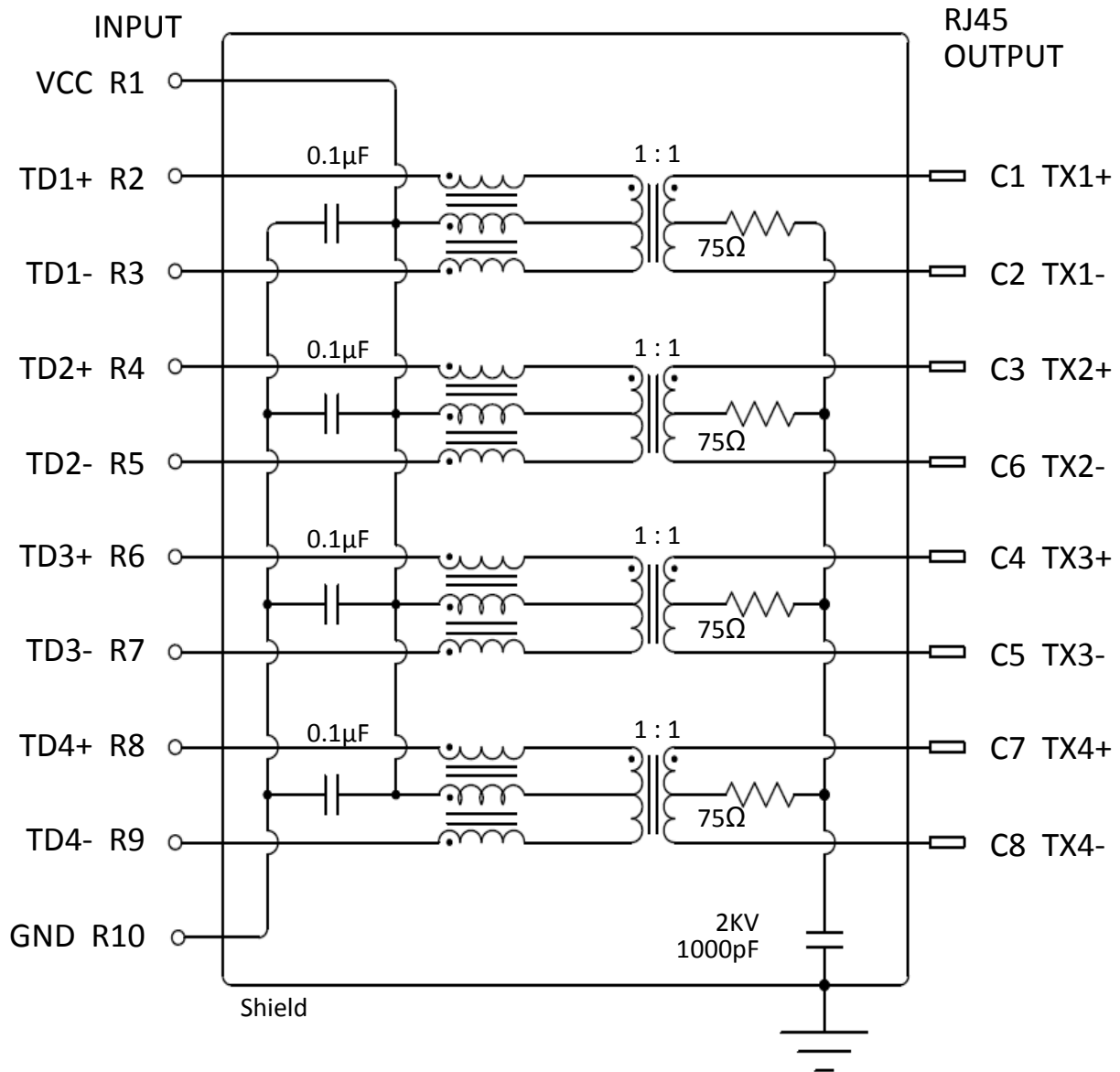
Product is designed to meet electrical, mechanical and environmental performance requirements specified in below table. All tests are performed at ambient environmental conditions per MIL-STD-1344A and EIA-364 unless otherwise specified.

### 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.
Orange	610	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

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

2 5 -  $\frac{000}{A}$   $\frac{93}{B}$   $\frac{9R1}{C}$   $\frac{3}{D}$  -  $\frac{1}{E}$

## A. Mechanical Code :

Without all Spring

## B. LED Code :

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

## C. Schematics Code :

9R1 : 9R1 circuit

## D. Plating Code :

Solder Tail : 100 $\mu$ " min. Matted Tin

Contact Area - 1 : Gold Flash

6 : 6 microinches Gold plating

5 : 10 microinches Gold plating

2 : 15 microinches Gold plating

**3 : 30 microinches Gold plating**

4 : 50 microinches Gold plating

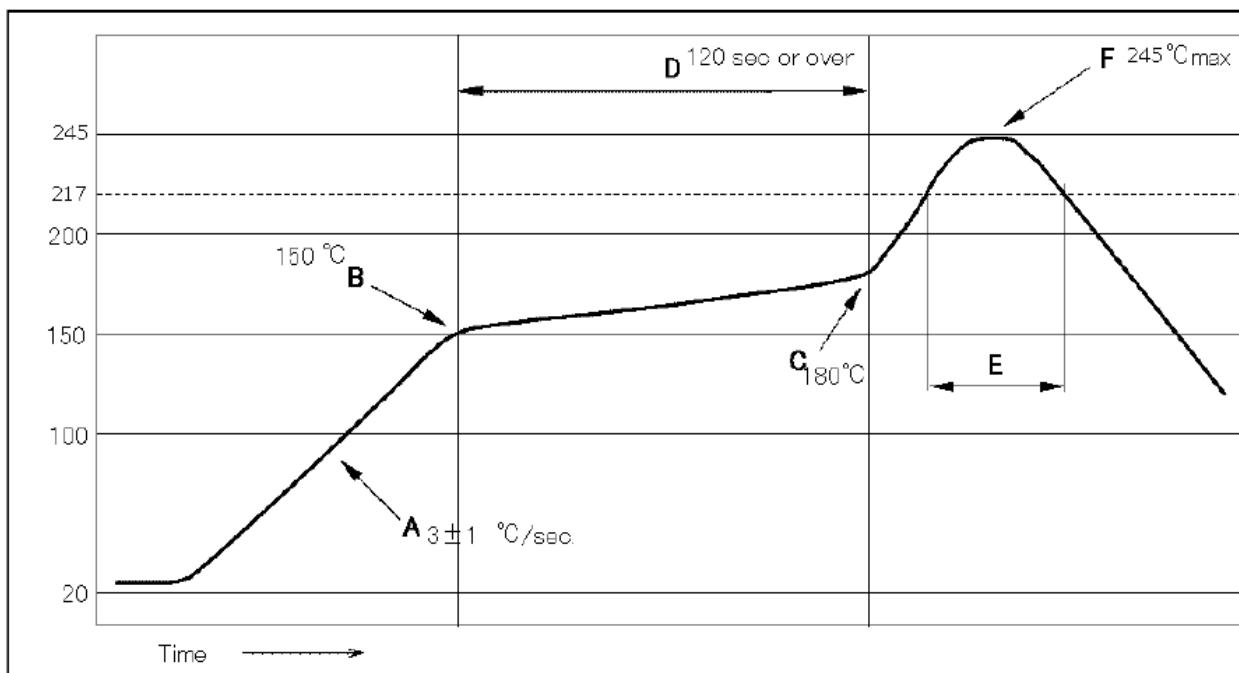
## E. Packing &amp; Logo Code :

Packing with Tray, with UDE logo

### 5. 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.

