

**安 徽 蓝 讯 通 信 技 术 有 限 公 司**

**Anhui Lan-Xun Communication Technology Co., Ltd**

## **Datasheet of Ceramic Component**

**Product : Chip Antenna**

**Frequency : 2400-2500 MHz**

**P/N : LX.ANT-3216-2450-001**

\*Contents in this sheet are subject to change without prior notice.

## Antenna Size : 3216

### 1. Features

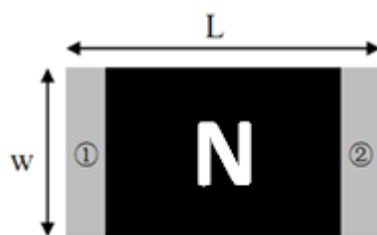
Antenna Frequency for 2400-2500 MHz

### 2. Applications

For Miniaturized Bluetooth System

### 3. Shapes & Dimensions(mm)

#### 1). Component :



( Top View )

Number	Terminal Name
①	INPUT
②	NC



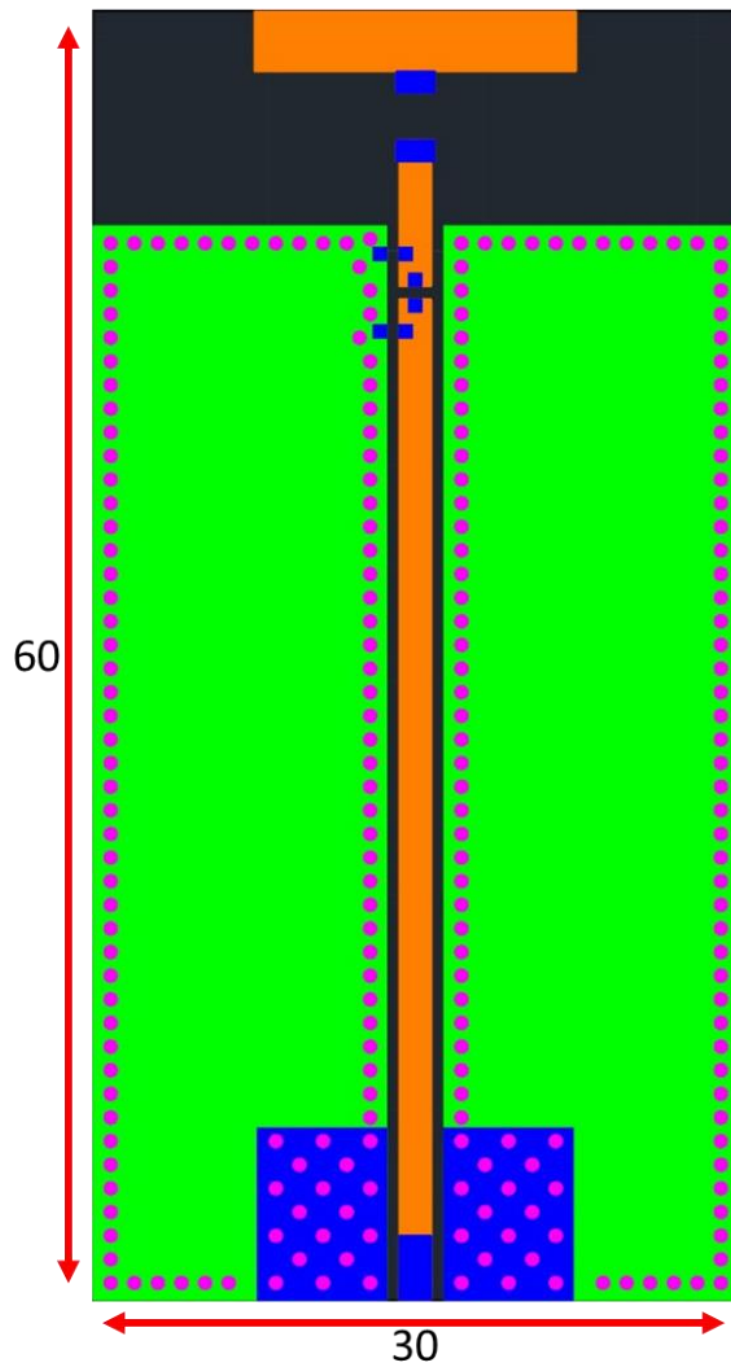
( Bottom View )

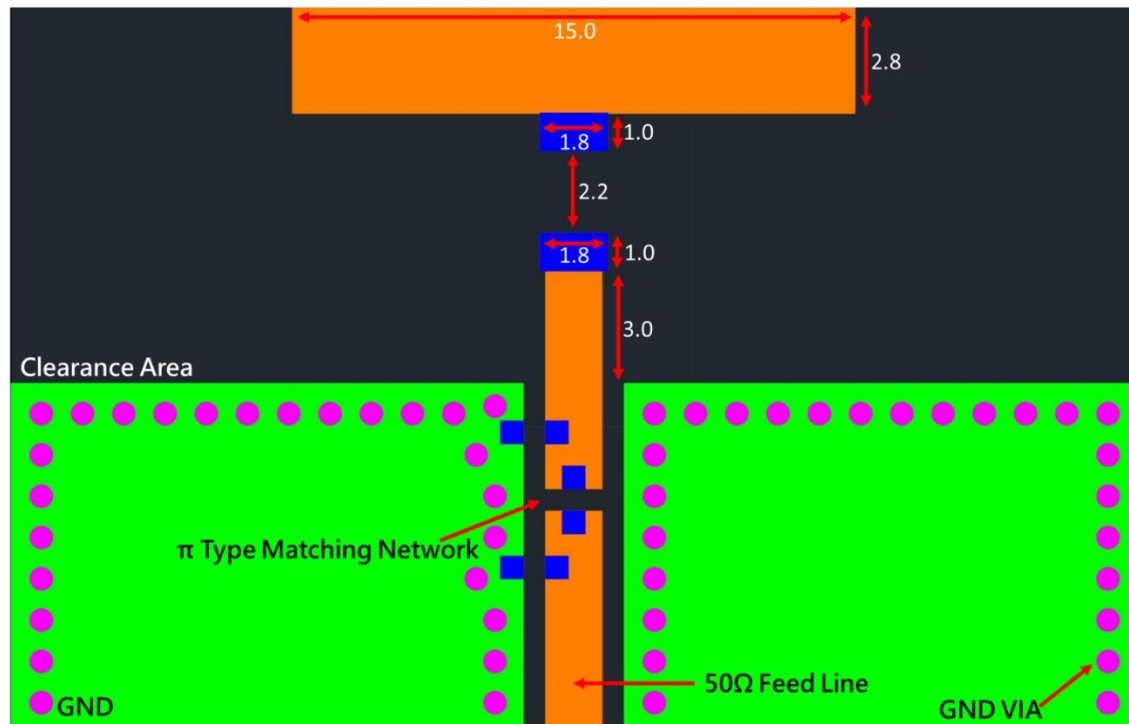


( Side View )

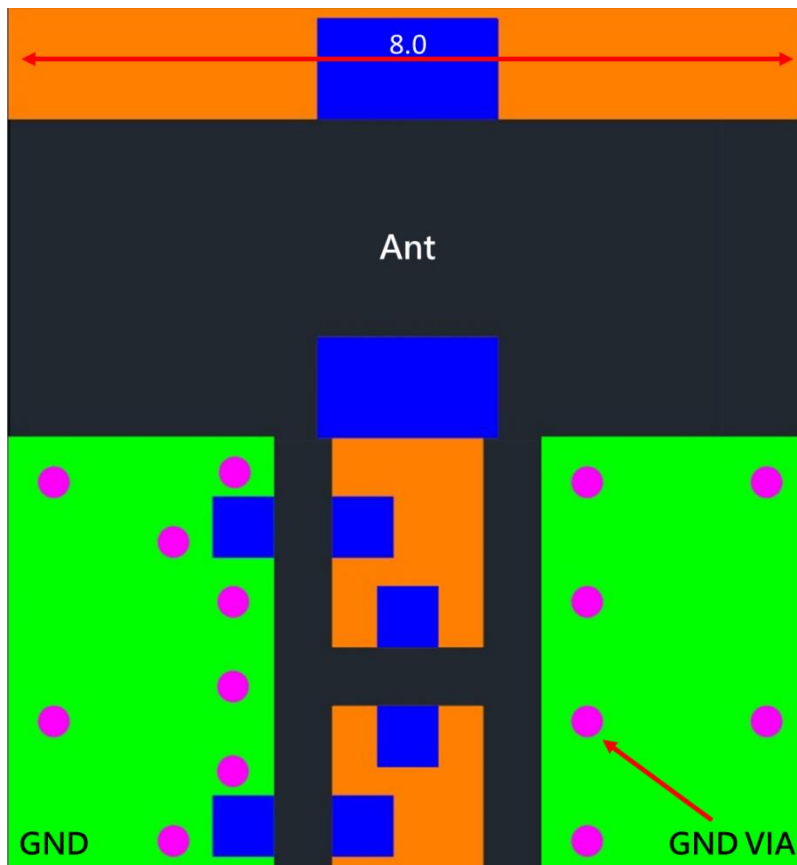
Symbols	L	W	T	A
Dimensions	3.2+/-0.2	1.6+/-0.2	0.5+/-0.1	0.4+/-0.1

## 2). PCB Top View (Unit : mm) :





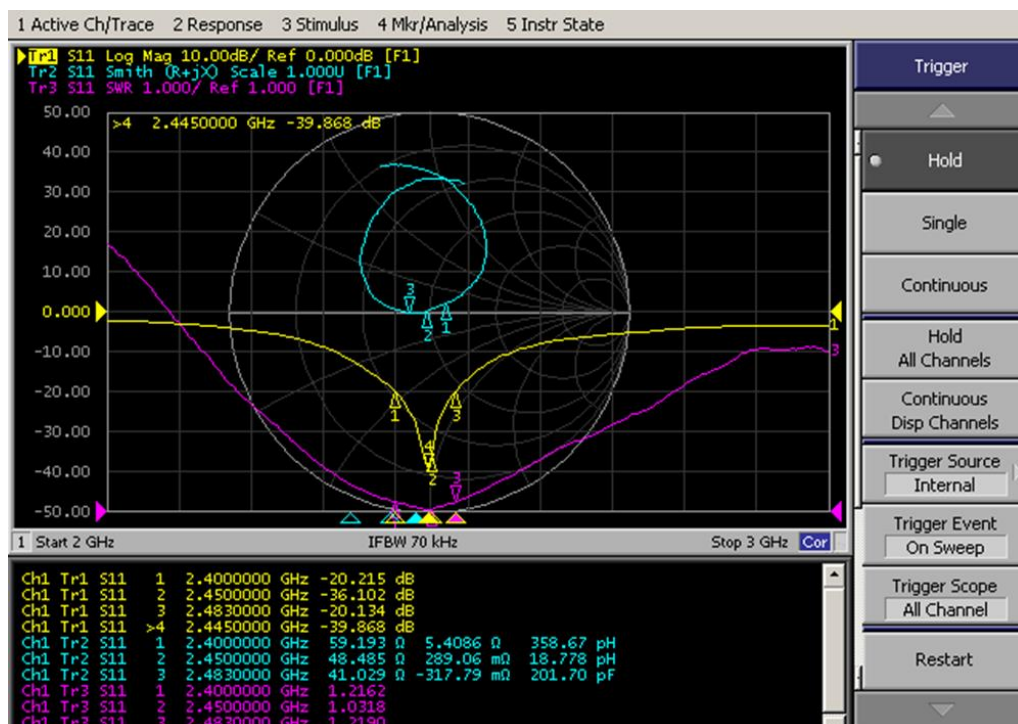
3). Suggest PCB Layout (Unit : mm) :



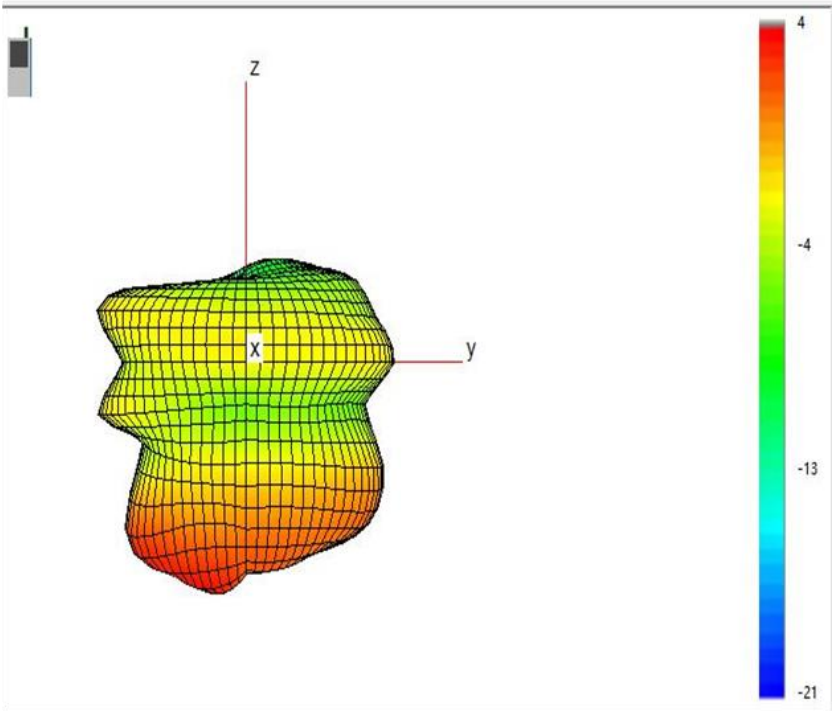
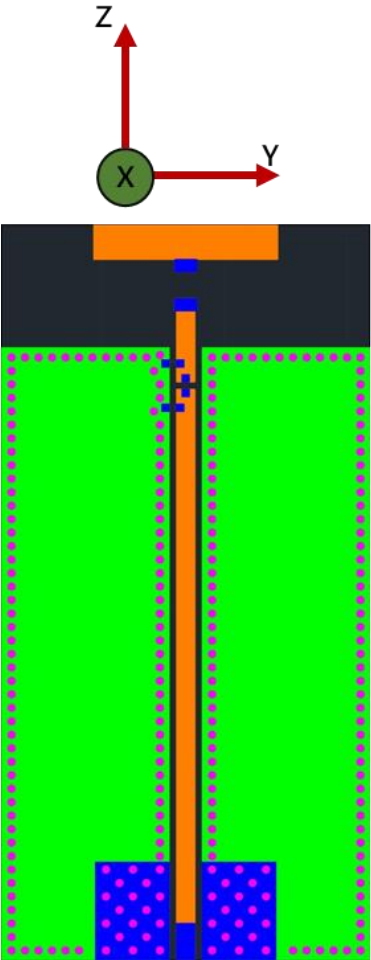
#### 4. Electrical Characteristics

Specification		
Part Number	W1	
Central Frequency	2450	MHz
Bandwidth	100 (Min.)	MHz
Return Loss	-10 (Max)	dB
Peak Gain	3.64	dBi
Impedance	50	$\Omega$
Operating Temperature	-40~+85	$^{\circ}\text{C}$
Maximum Power	1	W
Resistance to Soldering Heats	10 ( @ 260 $^{\circ}\text{C}$ )	sec.
Polarization	Linear	
Azimuth Beamwidth	Omni-directional	
Termination	Cu / Sn (Leadless)	

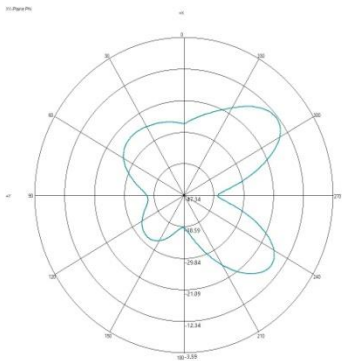
#### 5. Return Loss



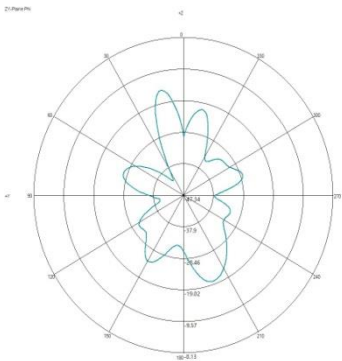
6. Radiation Pattern & Efficiency



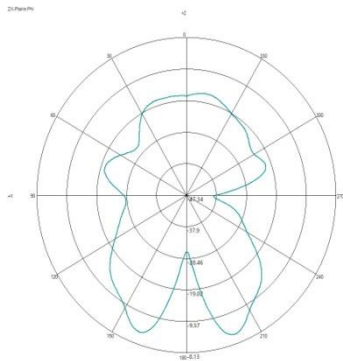
XY-Plane Total



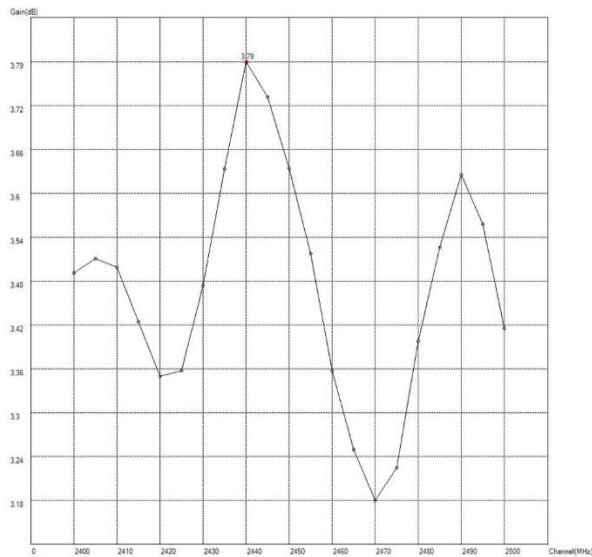
ZY-Plane Total



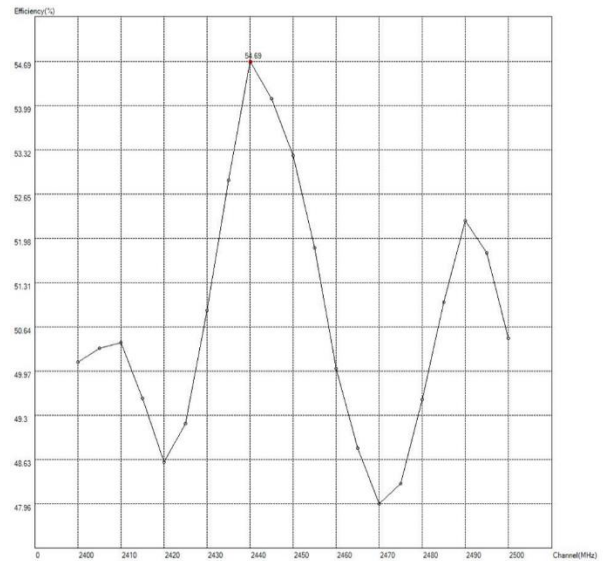
ZX-Plane Total



Gain-Plane



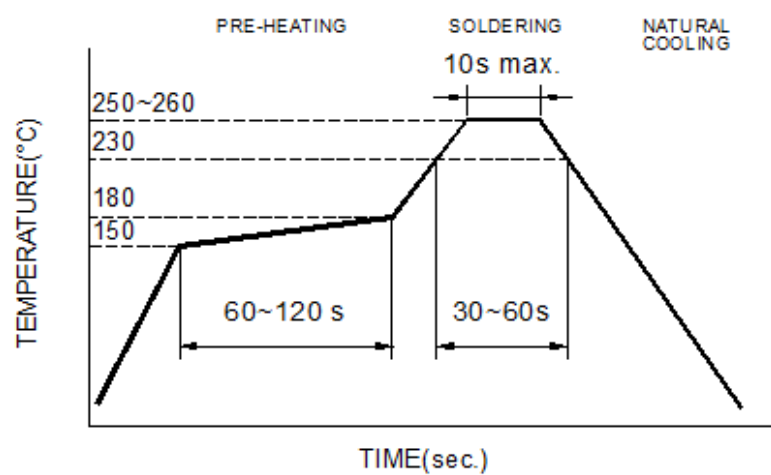
Efficiency-Plane



Frequency (MHz)	2400	2450	2500
Efficiency (dB)	-3.00	-2.73	-2.96
Efficiency (%)	50.11	53.26	50.47
Gain (dBi)	3.49	3.64	3.42

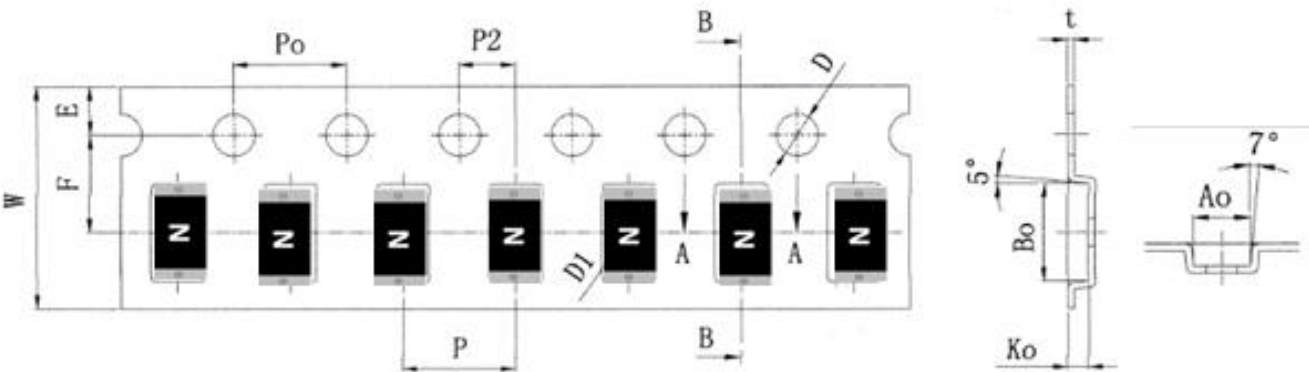
## 7. Reflow Soldering Standard Condition

Reflow Soldering



8. Packaging and Dimensions 3.2\*1.6mm

◆ Plastic Tape



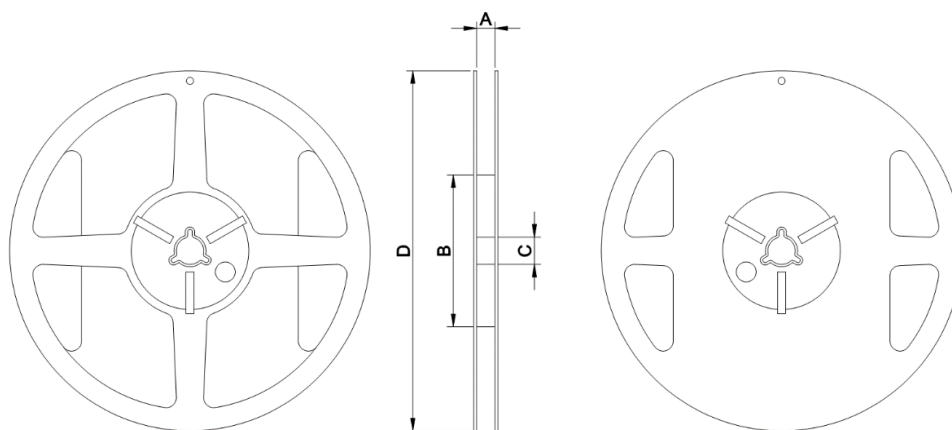
外觀	規格	公差
W	8.00	±0.10
P	4.00	±0.10
E	1.75	±0.10
F	3.50	±0.05
P2	2.00	±0.05
D	1.50	+0.10 -0.00
D1	1.00	±0.10
Po	4.00	±0.10
10Po	40.00	±0.20

外觀	規格	公差
Ao	1.85	±0.10
Bo	3.50	±0.10
Ko	0.73	±0.10
t	0.23	±0.05



**◆ Remarks for Package**

Reserve a length of 150~200mm for the trailer of the carrier and 250~300 mm for the leader of the carrier and further 250mm of cover tape at the leading part of the carrier.

**◆ Reel (5000 pcs/Reel)**

Tape Width(mm)	A(mm)	B(mm)	C(mm)	D(mm)	Chip/Reel(pcs)
8	9.0±0.5	60±2	13.5±0.5	178±2	3000

**◆ Storage Period**

Oxidizable Material, 12 months in vacuum sealed bag, please repack within 168 hours by re-seal the package treatment after using.

Storage Temperature Range : <30 degree C, Humidity : <60%RH

## 9. Dependability Test

Test item	Test condition / Test method	Specification
Solderability IEC 60068-2-58 GB/T2423.28	*Solder bath temperature: $240\pm5^{\circ}\text{C}$ *Immersion time: $2\pm0.5$ sec Solder: Sn96.5Ag3.0Gu0.5 for lead-free.	At least 95% of a surface of each terminal electrode must be covered by fresh solder.
Leaching (Resistance to dissolution of metallization) JIS C5101	*Solder bath temperature: $260\pm5^{\circ}\text{C}$ *Leaching immersion time: $10\pm1$ sec Solder : Sn96.5 Ag3.0 Gu0.5 for lead-free.	Loss of metallization on the edges of each electrode shall not exceed 25%.
Resistance to soldering heat IEC 60068-2-58 GB/T2423.28	*Preheating temperature: $120\sim150^{\circ}\text{C}$ , 1 minute. *Solder temperature: $260\pm5^{\circ}\text{C}$ *Immersion time: $10\pm1$ sec Solder: Sn96.5Ag3.0Gu0.5 for lead-free Measurement to be made after keeping at room temperature for $24\pm2$ hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature. Loss of metallization on the edges of each electrode shall not exceed 25%.
Drop Test IEC 60068-2-32 GB/T2423.8 Customer's specification.	*Height : 50 cm *Test Surface: Rigid surface of concrete or steel. *Times : 6 surfaces for each units ; 2 times for each side.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Vibration IEC 60068-2-6 GB/T 2423.10	*Frequency : 10Hz~55Hz~10Hz(1min) *Total amplitude : 1.5mm *Test times: 6hrs.(Two hrs each in three mutually perpendicular directions)	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Adhesive Strength of Termination IEC60068-2-21 GB/T 2423.6	*Pressurizing force : $5\text{N}(\leq 0603)$ ; $10\text{N}(>0603)$ *Test time: $10\pm1$ sec	No remarkable damage or removal of the termination.

Bending test IEC 60068-2-21 GB/T 2423.29	The middle part of substrate shall be pressurized by means of the pressurizing rod at a rate of about 1 mm/s per second until the deflection becomes 2mm and then pressure shall be maintained for 10±1 sec. Measurement to be made after keeping at room temperature for 24±2 hours.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Temperature cycle IEC60068-2-14 GB/T 2423.22	30 minutes at -40°C±2°C. 10~15 minutes at room temperature. 30minutes at +85°C±2°C. 10~15 minutes at room temperature. Total 100 continuous cycles Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
High temperature IEC 60068-2-2 GB/T2423.2	*Temperature: 85±2°C. *Test duration: 500+24/-0 hours. Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics.
Humidity (steady conditions) IEC60068-2-3 GB/T 2423.3	*Humidity : 85±5%R.H. *Temperature: 85±2°C. *Time : 500+24/-0 hrs. Measurement to be made after keeping at room temperature for 24±2 hrs ※ 200hrs measuring the first data then 300hrs data.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.
Low temperature IEC 60068-2-1 GB/T2423.1	*Temperature: -40±2°C. *Test duration: 500+24/-0 hours Measurement to be made after keeping at room temperature for 24±2 hrs.	No mechanical damage. Electrical specification shall satisfy the descriptions in electrical characteristics at the room temperature.