

# 产品规格承认书

## SPECIFICATIONS

客户:

CUSTOMER: \_\_\_\_\_

产品名称:

DESCRIPTION: \_\_\_\_\_ Bipolar antenna

客户型号:

CUSTOMER PART NO: \_\_\_\_\_

产品型号:

OUR MODEL NO: \_\_\_\_\_ **PBX1608MC01**

日期:

DATE: \_\_\_\_\_

确认签字, 盖章后请返回承认书一份

PLEASE RETURN TO US ONE COPY OF “SPECIFICATION FOR APPROVAL”

WITH YOUR APPROVED SIGNATURES

|          |        |       |        |        |            |
|----------|--------|-------|--------|--------|------------|
| Approved | LiuFei | Audit | LiuFei | Making | LiuXiaoMei |
|----------|--------|-------|--------|--------|------------|

|                                 |  |
|---------------------------------|--|
| Customer Acknowledges Signature |  |
| Date                            |  |

## PBX1608MC01 Specification

### 1. Features:

- Stable and reliable in performances
- Low profile, compact size
- RoHS compliance
- SMT processes compatible



### 2. APPLICATIONS:

- ISM 2.4 GHz applications
- ZigBee/BLE applications
- Bluetooth earphone systems
- Hand-held devices when WiFi/Bluetooth functions are needed, e.g., Smart phones
- IEEE802.11 b/g/n
- Wireless PCMCIA cards or USB dongles

### 3. Part Number Information

AN      1608      S      24      LS  
**A**          **B**          **C**          **D**          **E**

|          |                              |                     |
|----------|------------------------------|---------------------|
| <b>A</b> | <b>Patch ceramic antenna</b> | <b>Antenna</b>      |
| <b>B</b> | <b>Size</b>                  | <b>1.5X0.8mm</b>    |
| <b>C</b> | <b>Type of antenna</b>       | <b>S: Bipolar</b>   |
| <b>D</b> | <b>Frequency</b>             | <b>2.4 ~ 2.5GHz</b> |
| <b>E</b> | <b>Product type</b>          | <b>LS</b>           |

#### 4. Product dimensions:

##### 1608 Bipolar antenna

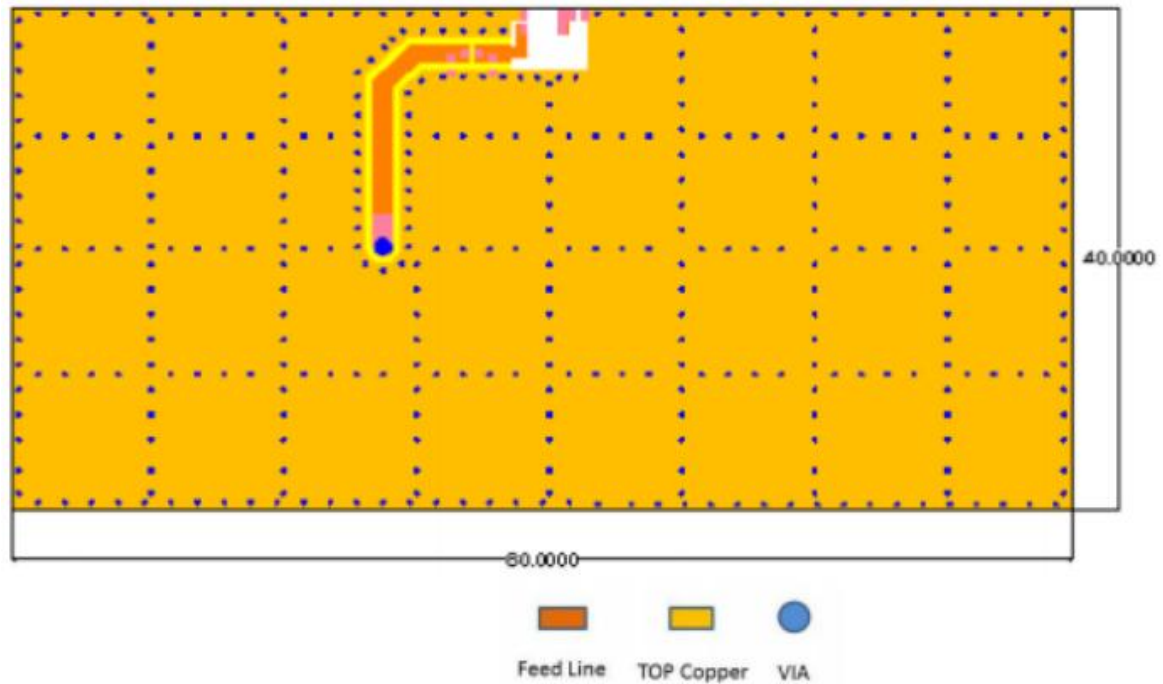
| Figure                                                                            | Symbol                               | Dimension (mm)  |
|-----------------------------------------------------------------------------------|--------------------------------------|-----------------|
|  | L (Long)                             | $1.5 \pm 0.10$  |
|                                                                                   | W (Wide)                             | $0.8 \pm 0.10$  |
|                                                                                   | T (Thickness)                        | $0.50 \pm 0.10$ |
|                                                                                   | <sup>A</sup><br>(Width of electrode) | $0.2 \pm 0.10$  |

#### 5. Electrical Specification:

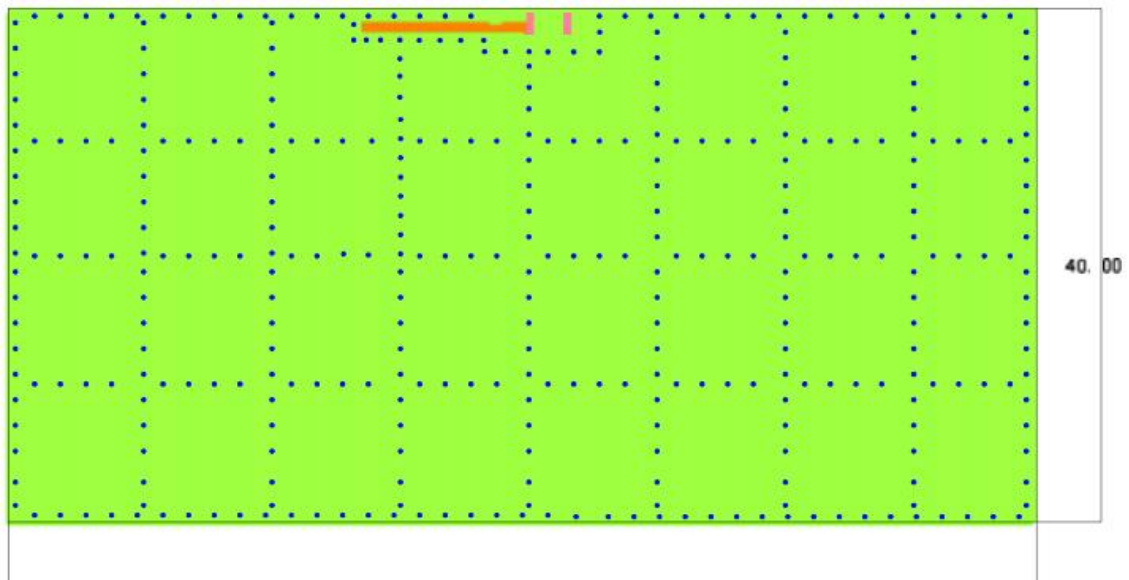
| Specification                 |                      |      |
|-------------------------------|----------------------|------|
| Part Number                   | AN1608S24LS          |      |
| Central Frequency             | 2450                 | MHz  |
| Bandwidth                     | 120 (Min.)           | MHz  |
| Return Loss                   | -6.5 (Max)           | dB   |
| Peak Gain                     | 1.9                  | dBi  |
| Impedance                     | 50                   | Ohm  |
| Operating Temperature         | -40 <sup>~</sup> +85 | C    |
| Maximum Power                 | 4                    | W    |
| Resistance to Soldering Heats | 10 ( @ 260C)         | sec. |
| Polarization                  | Linear               |      |
| Azimuth Beamwidth             | Omni-directional     |      |
| Termination                   | Ni / Sn (Leadless)   |      |

Remark : Bandwidth & Peak Gain was measured under evaluation board of next page

## 6. 1608 Bipolar antennas are recommended PCB



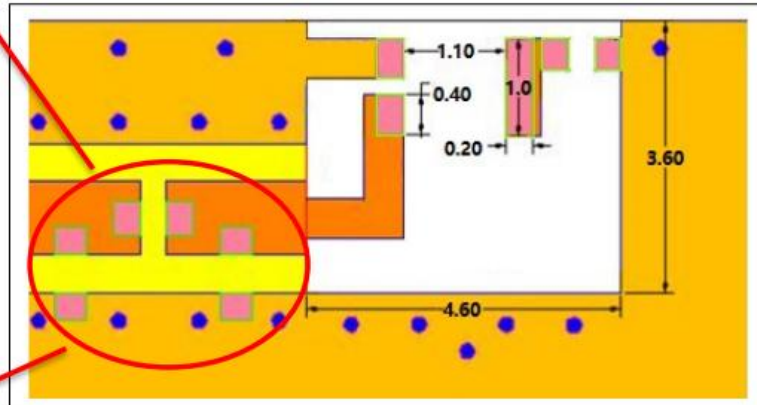
### 2<sup>nd</sup> Evaluation Board Dimension



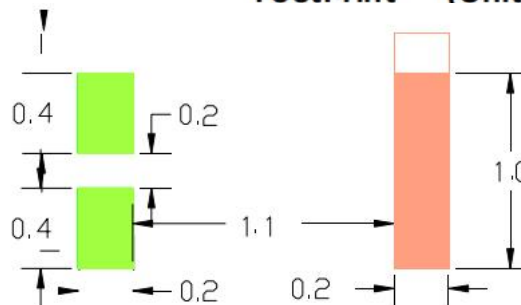
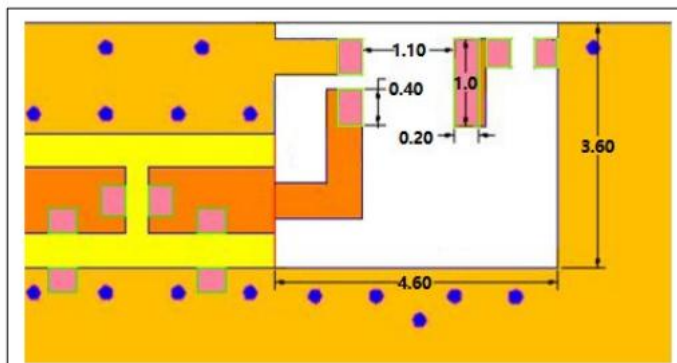
Matching elements are recommended using murata  $\pm 1\%$  inductance, capacitance.

**Clearance area ( Size=4.6\*3.6mm)**

50 ohm transmission Line



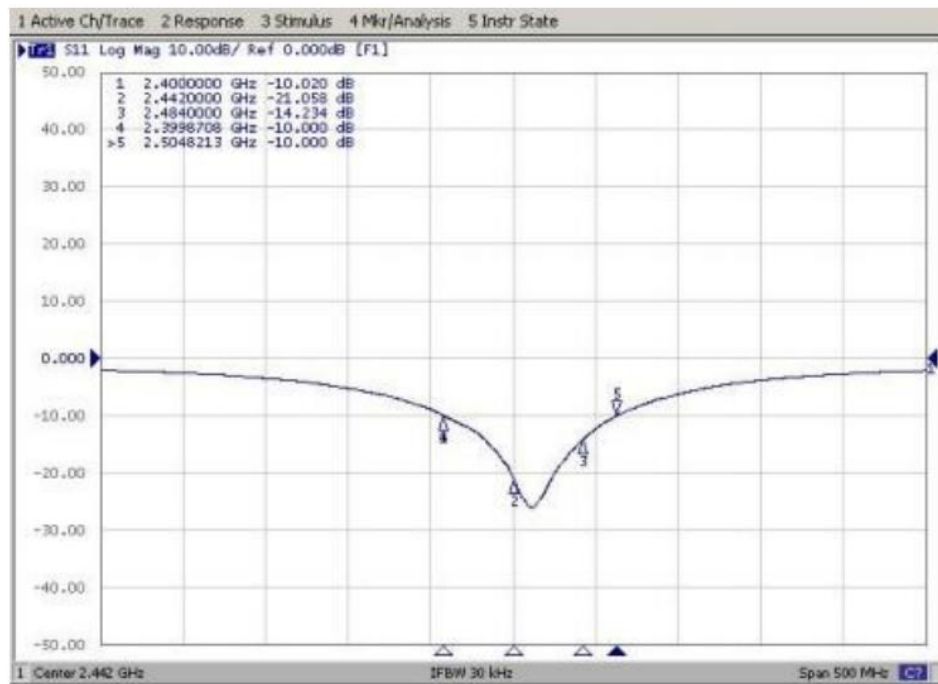
Matching Circuit

**FootPrint (Unit : mm)****2 Layout Dimensions in Clearance area( Size=8.0\*3.0mm)**

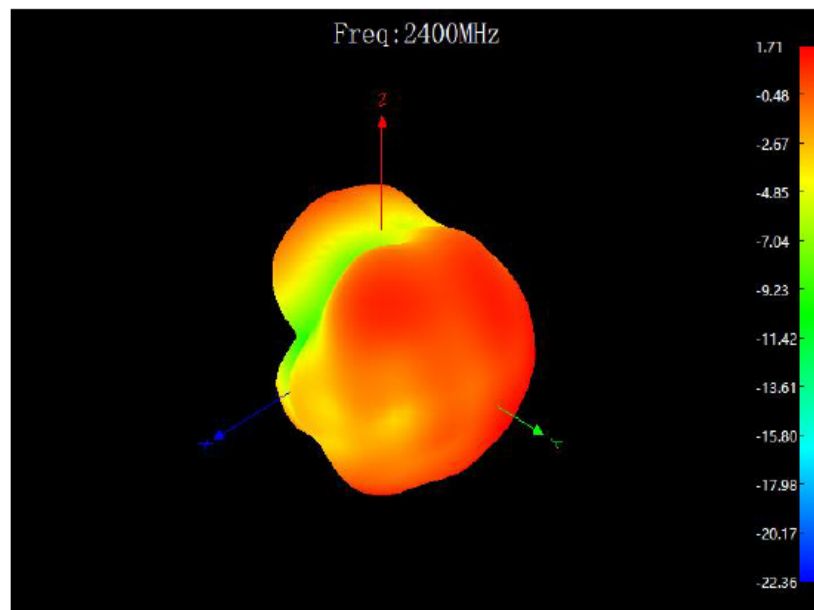
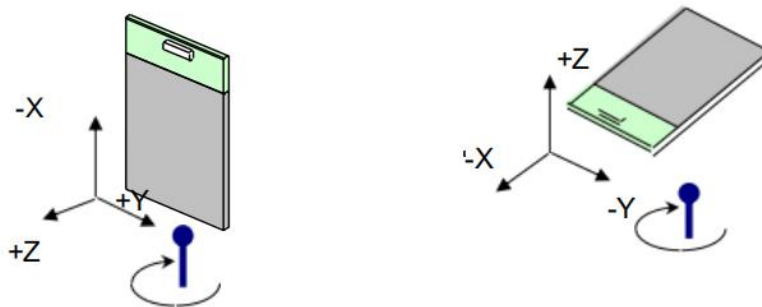
Address : Room 608,Building 4,1970 Science and Technology Town,Minzhi Street,Longhua District,Shenzhen.

## 7. Measurement Results

### Return Loss



### 7.2 Radiation Pattern



Address : Room 608,Building 4,1970 Science and Technology Town,Minzhi Street,Longhua District,Shenzhen.

## 8. Raliability and Test Condictions

| Test item                                                                  | Test condition / Test method                                                                                                                                                                                                                                                                         | Specification                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solderability<br>JIS C 0050-4.6<br>JESD22-B102D                            | *Solder bath temperature : $235 \pm 5^{\circ}\text{C}$<br>*Immersion time : $2 \pm 0.5$ sec<br>Solder : Sn3Ag0.5Cu for lead-free                                                                                                                                                                     | At least 95% of a surface of each terminal electrode must be covered by fresh solder.                                                                                                                                                                                       |
| Leaching<br>(Resistance to dissolution of metallization)<br>IEC 60068-2-58 | *Solder bath temperature : $260 \pm 5^{\circ}\text{C}$<br>*Leaching immersion time : $30 \pm 0.5$ sec<br>Solder : SN63A                                                                                                                                                                              | Loss of metallization on the edges of each electrode shall not exceed 25%.                                                                                                                                                                                                  |
| Bending test<br>JIS C 0051- 7.4.1                                          | 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 1mm/s and then pressure shall be maintained for $5 \pm 1$ sec.<br>Measurement to be made after keeping at room temperature for $24 \pm 2$ hours | No mechanical damage.<br>Electrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature range within $-40 \sim 85^{\circ}\text{C}$ .                                                                               |
| Resistance to soldering heat<br>JIS C 0050-5.4                             | *Preheating temperature : $120 \sim 150^{\circ}\text{C}$ ,<br>1 minute.<br>*Solder temperature : $270 \pm 5^{\circ}\text{C}$<br>*Immersion time : $10 \pm 1$ sec<br>Solder : Sn3Ag0.5Cu for lead-free<br>Measurement to be made after keeping at room temperature for $24 \pm 2$ hrs                 | No mechanical damage.<br>Electrical specification shall satisfy the descriptions in electrical characteristics under the operational temperature range within $-40 \sim 85^{\circ}\text{C}$ .<br>Loss of metallization on the edges of each electrode shall not exceed 25%. |

## 9. Soldering and Mounting

