

# 产品规格承认书

## SPECIFICATIONS

客户:

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

产品名称:

DESCRIPTION: \_\_\_\_\_

客户型号:

CUSTOMER PART No: \_\_\_\_\_ WIFI ANT

产品型号:

OUR MODEL NO: **PBX3216DA01**

日期:

DATE: \_\_\_\_\_ 2020/12/22


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

|    |  |    |    |    |     |
|----|--|----|----|----|-----|
| 核准 |  | 审核 | 刘飞 | 制作 | 刘小美 |
|----|--|----|----|----|-----|

|        |  |
|--------|--|
| 客户承认签印 |  |
| 日期     |  |

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| TITLE: CHIP2450-3216 Specification   | DOCUMENT NO.      3216      SPEC REV. P1  |

## PBX3216DA01 Specification

Operating Temp. : -40°C~+85°C

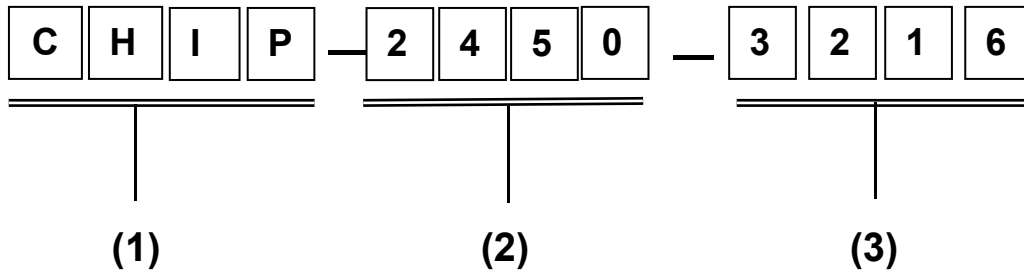
### 1. FEATURES:

- Light weight, compact
- Wide bandwidth, low cost
- Built-in antenna with high gain

### 2. APPLICATIONS:

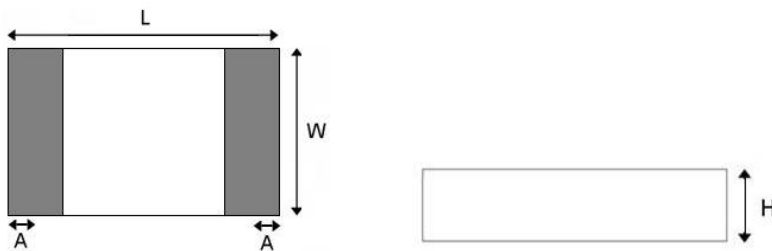
- Bluetooth, Wireless LAN, Mobile TV
- Home RF System, etc

### 3. PRODUCT IDENTIFICATION




- (1) Product type: Multilayer chip Antenna  
 (2) Center Frequency: 2450MHz  
 (3) External Dimensions (L×W) (mm): 3.2\*1.6

### 4. SHAPE AND DIMENSIONS:

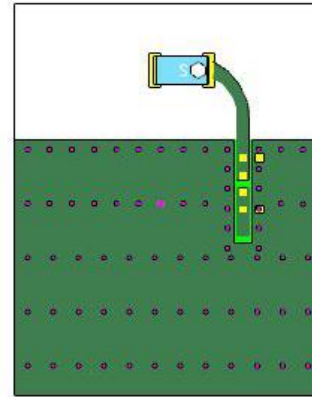
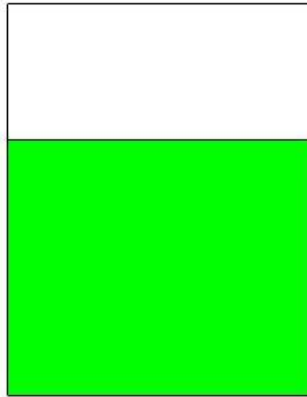
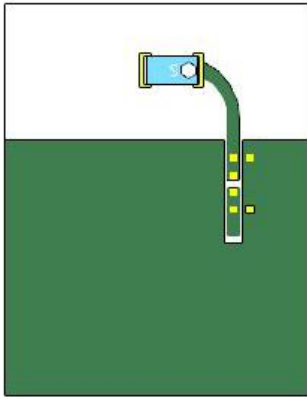


| L       | W       | H        | A       |
|---------|---------|----------|---------|
| 3.2±0.2 | 1.6±0.2 | 0.52±0.1 | 0.4±0.1 |

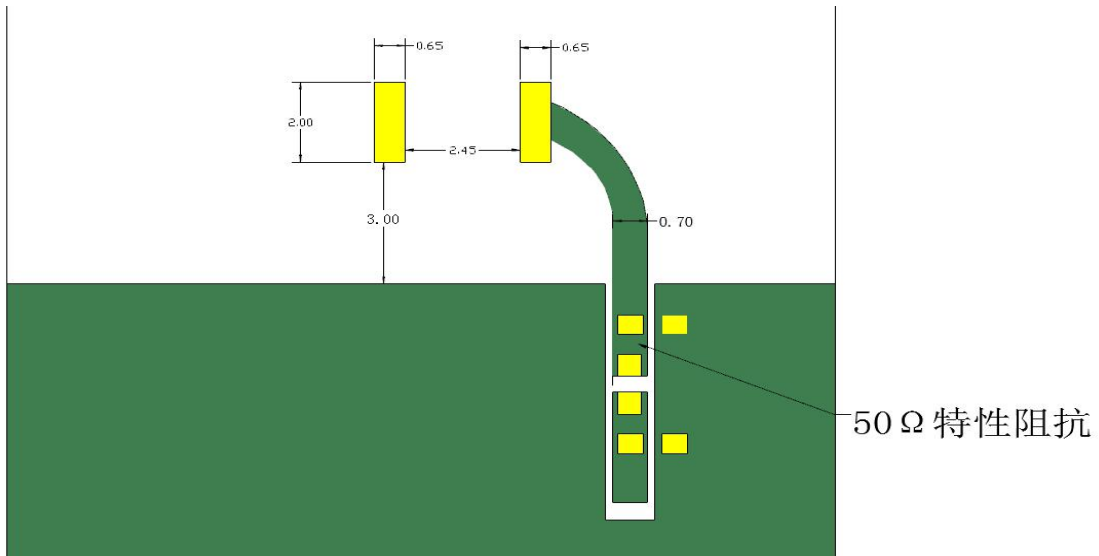
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| DESIGNED BY: Sera   | APPROVED BY: XD |   |      |                 |
| TITLE: CHIP2450-3216 Specification  |                 | DOCUMENT NO.  | 3216 | SPEC REV.<br>P1 |


测试板参考尺寸:

单位: mm

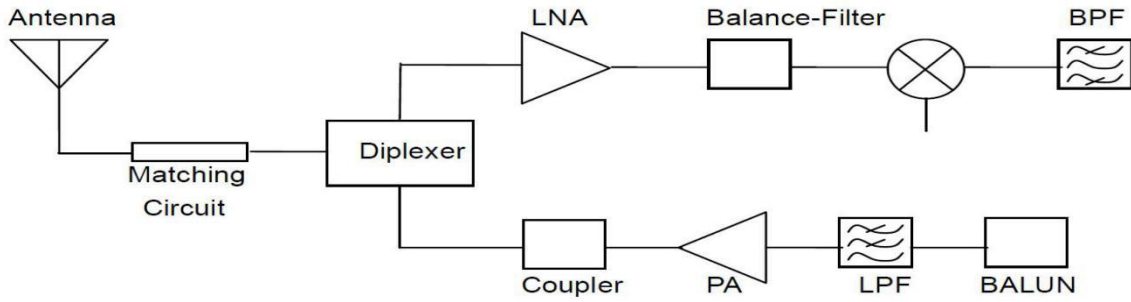


-  CHIP2450-3216-SRF07
-  顶层铺铜
-  焊盘
-  底层铺铜
-  打孔



|  |                 |   |
|--|-----------------|---|
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**APPLICATION GUIDE**



**5. SPECIFICATIONS:**

|     |                              |                               |                    |
|-----|------------------------------|-------------------------------|--------------------|
| No. | Product number               | PBX3216DA01                   |                    |
| 1   | Central Frequency            | 2440                          | MHz                |
| 2   | Bandwidth                    | 100 (Min.)                    | MHz                |
| 3   | Return Loss                  | -11.96 (Max.)                 | dB                 |
| 4   | Peak Gain                    | 2.73                          | dBi                |
| 5   | Impedance                    | 50                            | $\Omega$           |
| 6   | Operating Temperature        | -40~+85                       | $^{\circ}\text{C}$ |
| 7   | Maximum Power                | 5                             | W                  |
| 8   | Resistance to soldering heat | 10 (@260 $^{\circ}\text{C}$ ) | Sec.               |
| 9   | Polarization                 | Linear                        |                    |
| 10  | Azimuth Beam width           | Omni-directional              |                    |
| 11  | Termination                  | Sn (leadless)                 |                    |

UNLESS OTHER SPECIFIED TOLERANCES ON:

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|                                    |              |      | P1        |

## 6. Electrical Characteristics :



| Frequency (MHz) | 2400  | 2450  | 2500  |
|-----------------|-------|-------|-------|
| Avg. Gain (dBi) | -1.83 | -1.86 | -2.97 |
| Peck Gain (dBi) | 2.7   | 2.58  | 1.34  |
| Efficiency (%)  | 65.5  | 65.22 | 50.45 |

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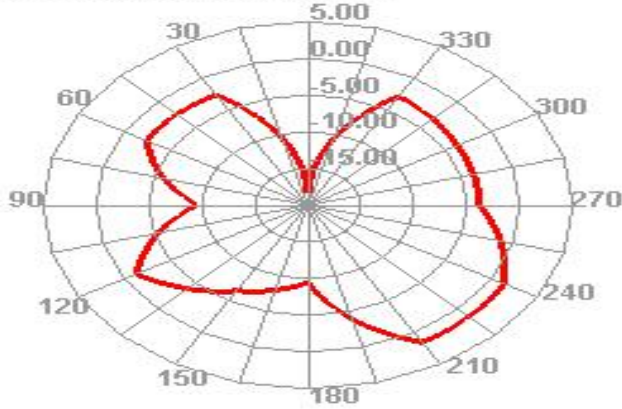
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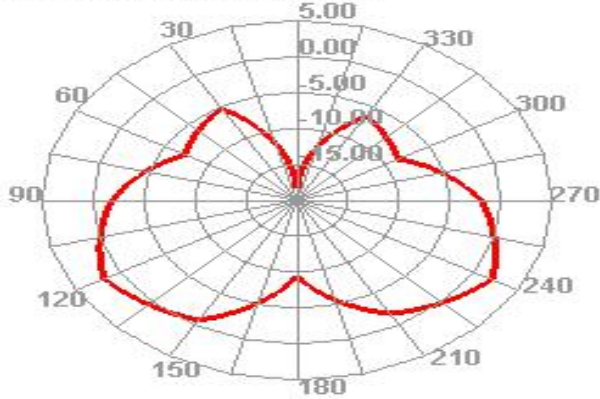
**X-Y Plane**

**2450.000MHz E1**



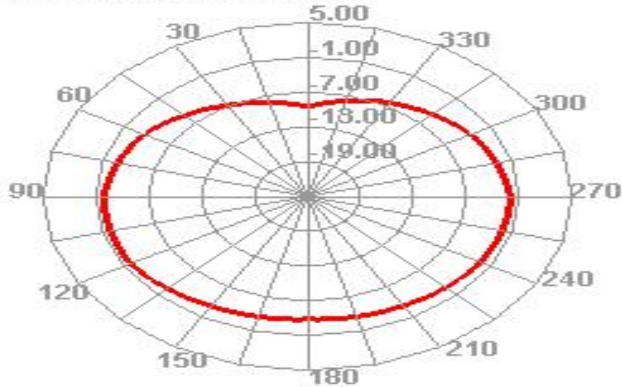
**X-Y Plane**


**2450.000MHz E2**



**X-Y Plane**

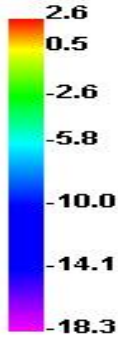
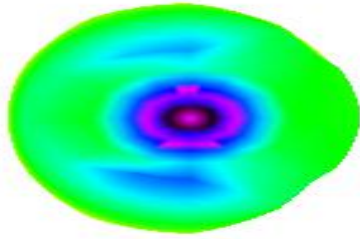
**2450.000MHz H**




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### 3D Radiation Pattern

2450.000MHz



|  |                 |   |                 |
|--|-----------------|---|-----------------|
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## 7. Environmental Characteristics

### (1) Reliability Test

| Item                        | Condition  | Specification  |
|-----------------------------|--|--|
| Thermal shock               | 1. 30±3 minutes at -40° C±5° C,<br>2. Convert to +105° C (5 minutes)<br>3. 30±3 minutes at +105° C±5° C,<br>4. Convert to -40° C (5 minutes)<br>5. Total 100 continuous cycles | No apparent damage<br>Fulfill the electrical spec. after test. |
| Humidity resistance         | 1. Humidity: 85% R.H.<br>2. Temperature: 85±5° C<br>3. Time: 1000 hours.   | No apparent damage<br>Fulfill the electrical spec. after test. |
| High temperature resistance | 1. Temperature: 150° C±5° C<br>2. Time: 1000 hours.  | No apparent damage<br>Fulfill the electrical spec. after test. |
| Low temperature resistance  | 1. Temperature: -40° C±5° C<br>2. Time: 1000 hours.  | No apparent damage<br>Fulfill the electrical spec. after test. |
| Soldering heat resistance   | 1. Solder bath temperature : 260±5°C<br>2. Bathing time: 10±1 seconds  | No apparent damage   |
| Solderability               | The dipped surface of the terminal shall be at least 95% covered with solder after dipped in solder bath of 245±5°C for 3±1 seconds.   | No apparent damage   |

### (2) Storage Condition

#### (a) At warehouse:

The temperature should be within 0 ~ 30°C and humidity should be less than 60% RH.


The product should be used within 1 year from the time of delivery.

#### (b) On board:

The temperature should be within -40~85°C and humidity should be less than 85% RH.

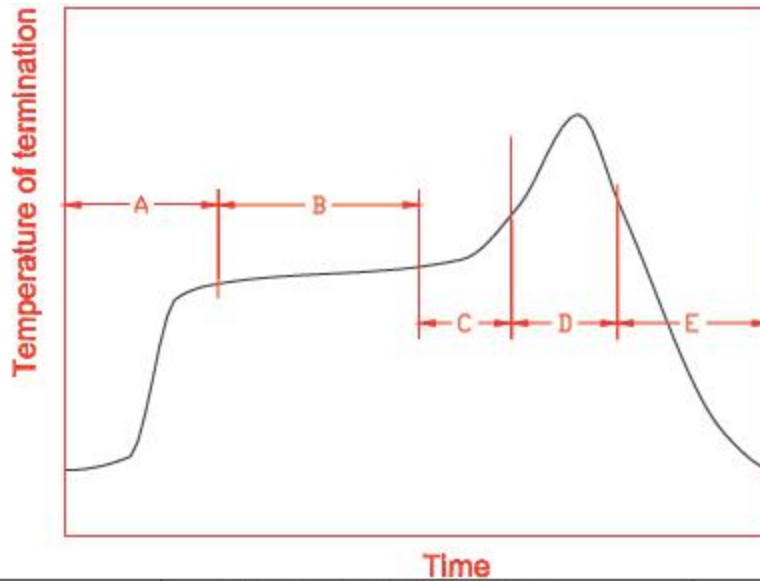
### (3) Operating Temperature Range

Operating temperature range : -40°C to +105°C.

|   |                 |   |      |                 |
|---|-----------------|---|------|-----------------|
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## 8. Recommended Reflow Soldering



|   |                                    |                                      |               |
|---|------------------------------------|--------------------------------------|---------------|
| A | 1 <sup>st</sup> rising temperature | The normal to Preheating temperature | 30s to 60s    |
| B | Preheating                         | 140°C to 160°C                       | 60s to 120s   |
| C | 2 <sup>nd</sup> rising temperature | Preheating to 200°C                  | 20s to 40s    |
| D | Main heating                       | if 220°C                             | 50s~60s       |
|   |                                    | if 230°C                             | 40s~50s       |
|   |                                    | if 240°C                             | 30s~40s       |
|   |                                    | if 250°C                             | 20s~40s       |
|   |                                    | if 260°C                             | 20s~40s       |
| E | Regular cooling                    | 200°C to 100°C                       | 1°C/s ~ 4°C/s |


\*reference: J-STD-020C

### (1) Soldering Gun Procedure

Note the follows, in case of using solder gun for replacement.

- (a) The tip temperature must be less than 350° C for the period within 3 seconds by using soldering gun under 30 W.
- (b) The soldering gun tip shall not touch this product directly.

### (2) Soldering Volume

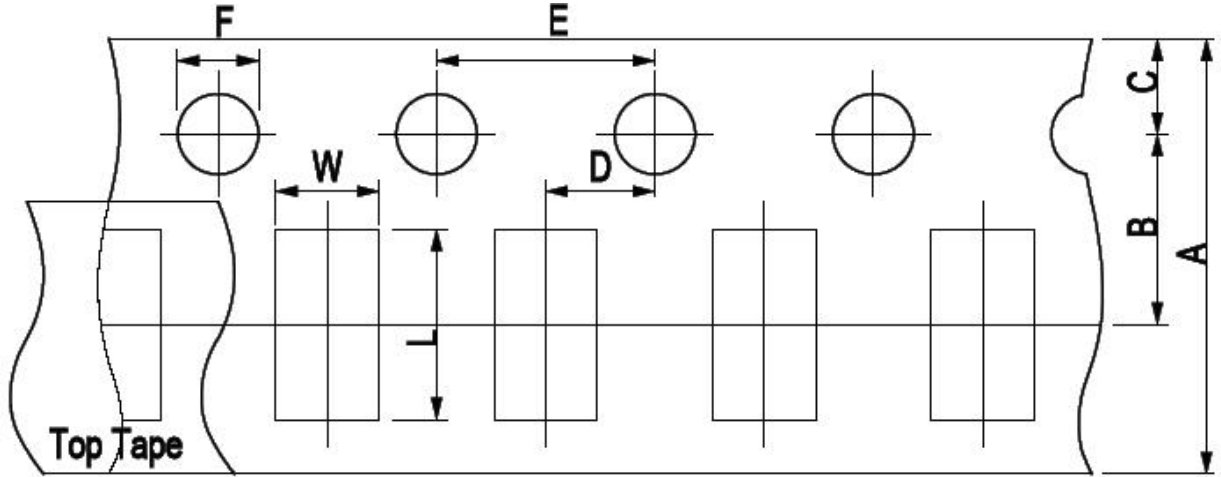
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Note that excess of soldering volume will easily get crack the body of this product.

**9. Taping Package and Label Marking:** (unit: mm)

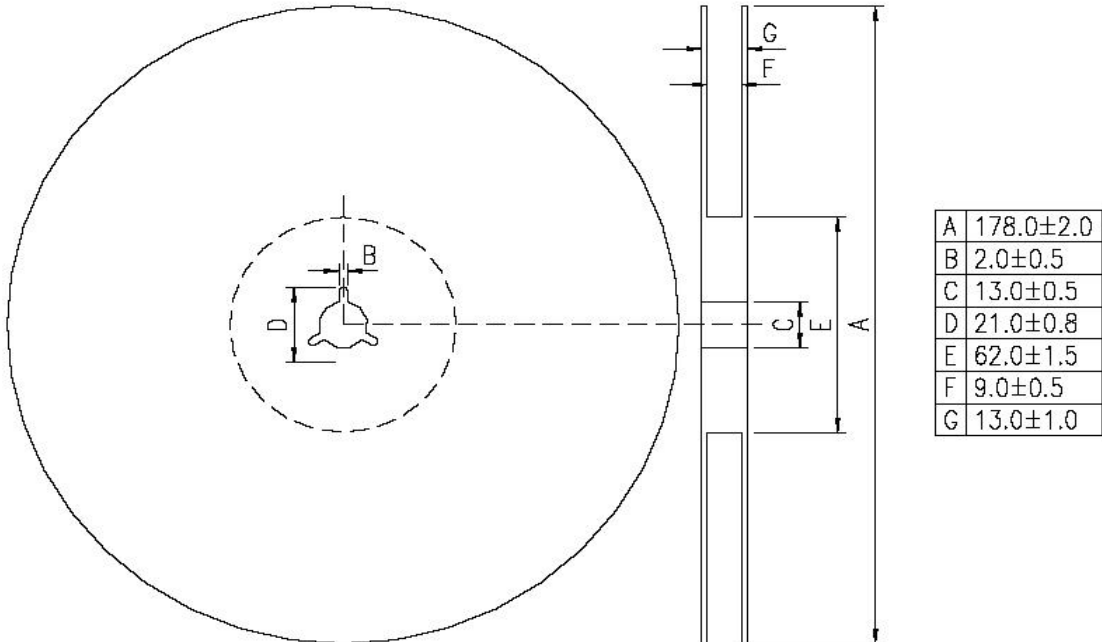
(1) Quantity/Reel: 5000pcs/Reel

(2) Carrier tape dimensions



| Type    | A        | B         | C        | D         | E        | F        | L        | W        |
|---------|----------|-----------|----------|-----------|----------|----------|----------|----------|
| 2450-21 | 8.00±0.3 | 3.50±0.05 | 1.75±0.1 | 2.00±0.05 | 4.00±0.1 | 1.50±0.1 | 2.30±0.1 | 1.55±0.1 |

(3) Taping reel dimensions



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