

# 产品规格承认书

## SPECIFICATIONS

客户:

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

产品名称:

DESCRIPTION: \_\_\_\_\_ Ceramic Antenna

客户型号:

CUSTOMER PART No: \_\_\_\_\_

产品型号:

OUR MODEL NO: \_\_\_\_\_ **PBX3216DA01**

日期:

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

确认签字, 盖章后请返回承认书一份

PLEASERETRUV TO US ONE COPY OF “SPECIFICATION FOR APPROVAL”

WITY YOUR APPROVED SIGNATURES

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

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

|                                                                                                    |                 |                                                                                                                                                                                                       |           |
|----------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| UNLESS OTHER SPECIFIED TOLERANCES ON:<br>X=±      X.X=±      X.XX=±<br>ANGLES = ±      HOLEDIA = ± |                 |  PengBanXingYeShenZhen Technology Co. , Ltd                                                                        |           |
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| DESIGNED BY: Sera                                                                                  | APPROVED BY: XD |                                                                                                                                                                                                       |           |
| TITLE: CHIP2450-3216 Specification                                                                 |                 | DOCUMENT NO.                                                                                                                                                                                          | SPEC REV. |
|                                                                                                    |                 | 3216                                                                                                                                                                                                  | P1        |

**PBX3216DA01 Specification**

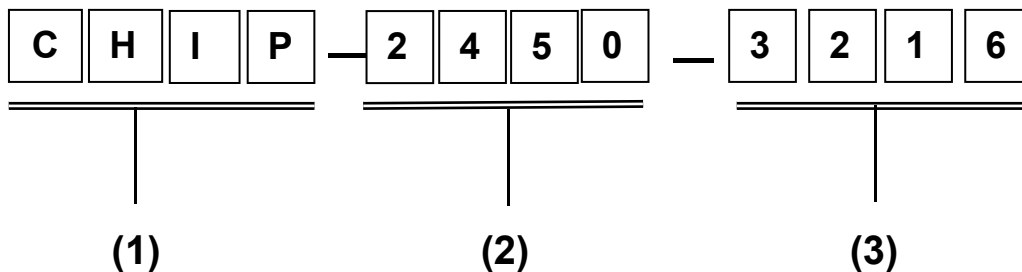
Operating Temp. : -40℃~+85℃

**1. FEATURES:**

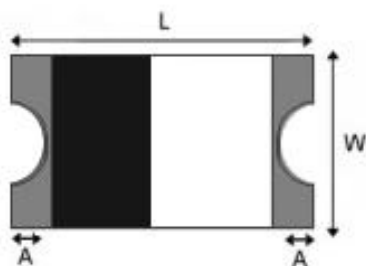
- Light weight, compact
- Wide bandwidth, low cost
- Built-in antenna with high gain

**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 | 0.75±0.1 | 0.4±0.1 |

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X=±      X.X=±      X.XX=

ANGLES = ±      HOLEDIA = ±

SCALE: N/A

UNIT: mm

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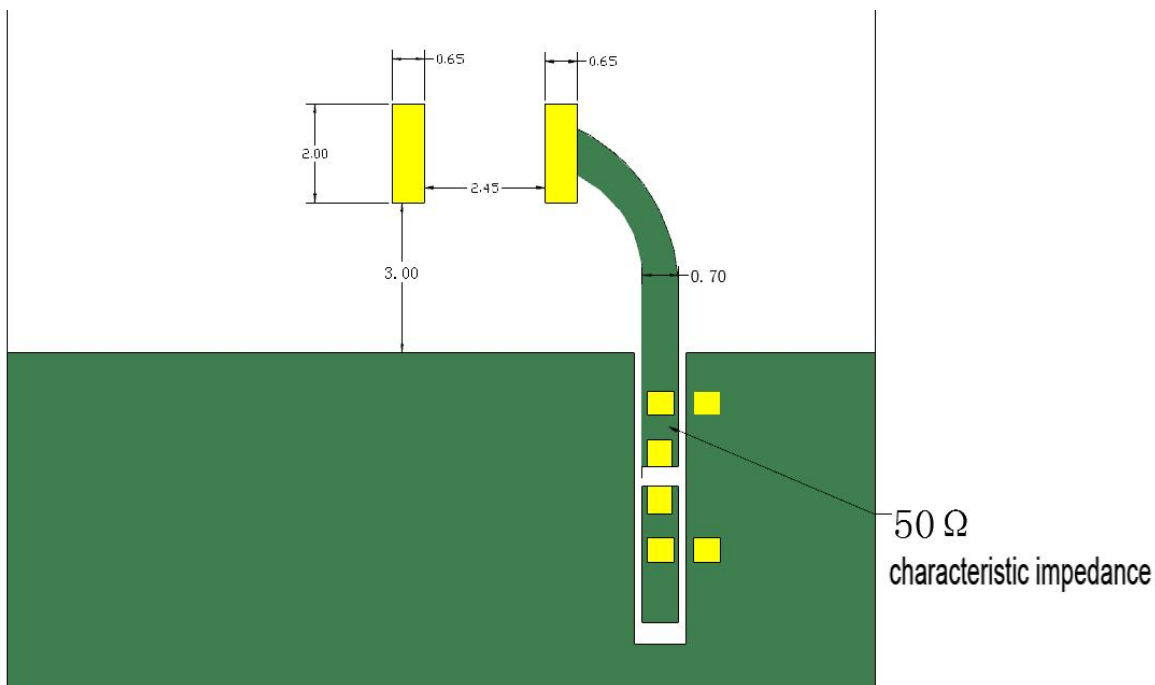
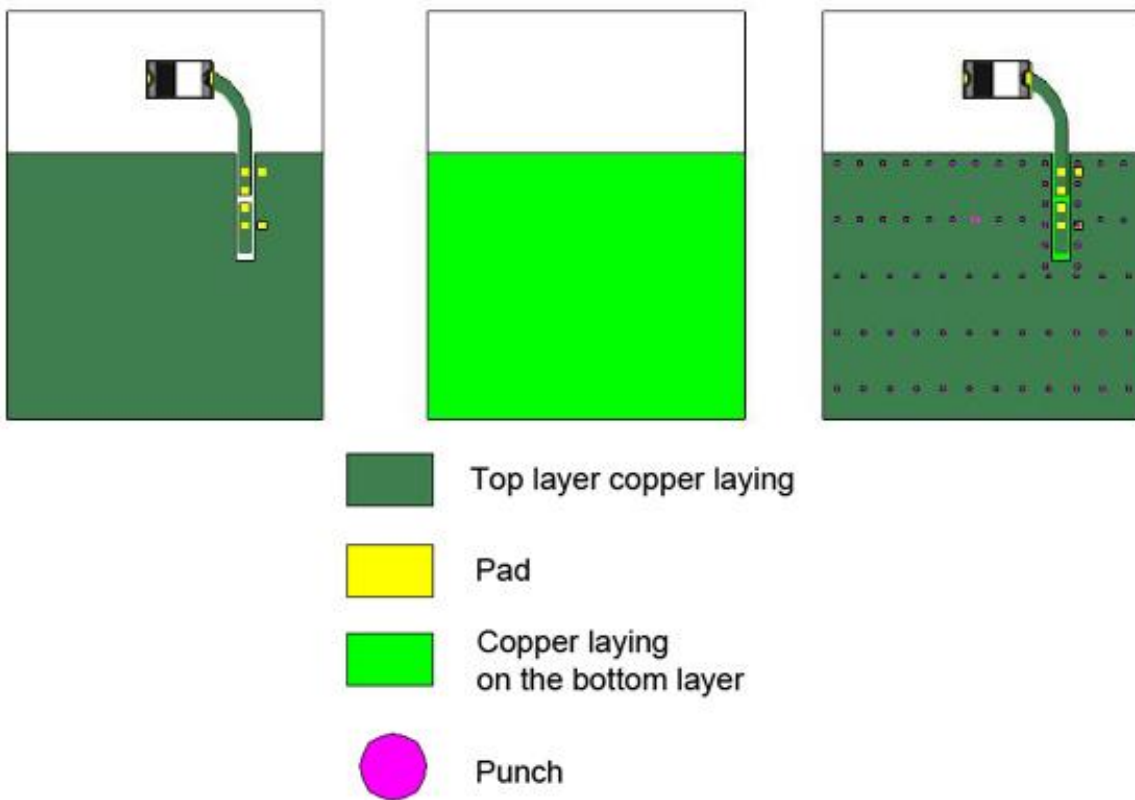
3216

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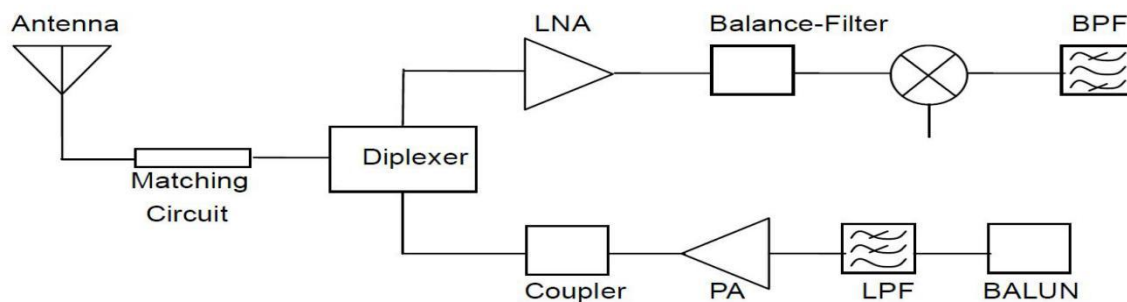
P1

**Test plate reference size:** (Note: Please Point the white end of the antenna towards the chip)

**Company:** mm



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

**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                    | 2.6              | dBi      |
| 5   | Impedance                    | 50               | $\Omega$ |
| 6   | Operating Temperature        | -40~+85          | °C       |
| 7   | Maximum Power                | 5                | W        |
| 8   | Resistance to soldering heat | 10 (@260°C)      | Sec.     |
| 9   | Polarization                 | Linear           |          |
| 10  | Azimuth Beam width           | Omni-directional |          |
| 11  | Termination                  | Sn (leadless)    |          |

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SCALE: N/A

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## 6. Electrical Characteristics :



| Frequency (MHz) | 2400  | 2450  | 2500  |
|-----------------|-------|-------|-------|
| Avg. Gain (dBi) | -1.83 | -1.86 | -2.97 |
| Peck Gain (dBi) | 2.6   | 2.58  | 1.34  |
| Efficiency (%)  | 65.5  | 65.22 | 50.45 |

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ANGLES = ± HOLEDIA = ±

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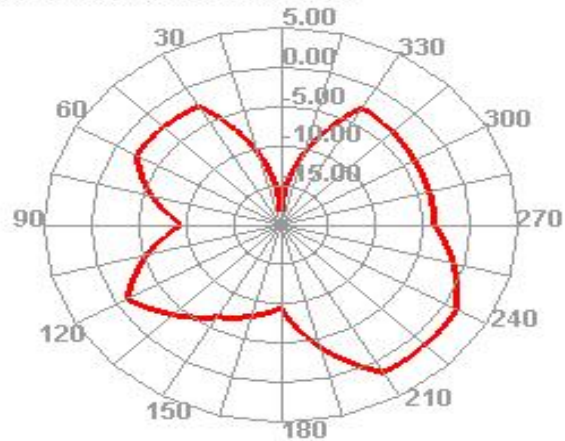
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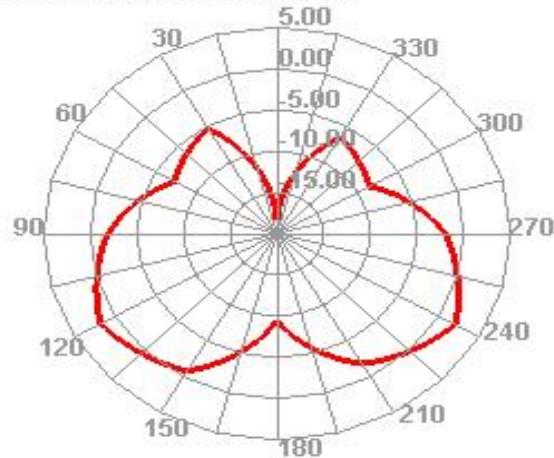
## X-Y Plane

2450.000MHz E1



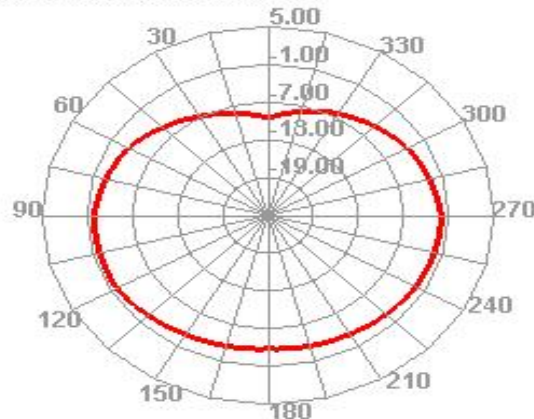
## X-Y Plane

2450.000MHz E2



## X-Y Plane

2450.000MHz H



UNLESS OTHER SPECIFIED TOLERANCES ON:

X=± X.X=± X.XX=

ANGLES = ± HOLEDIA = ±

SCALE: N/A

UNIT: mm

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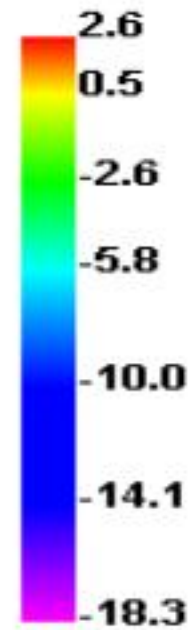
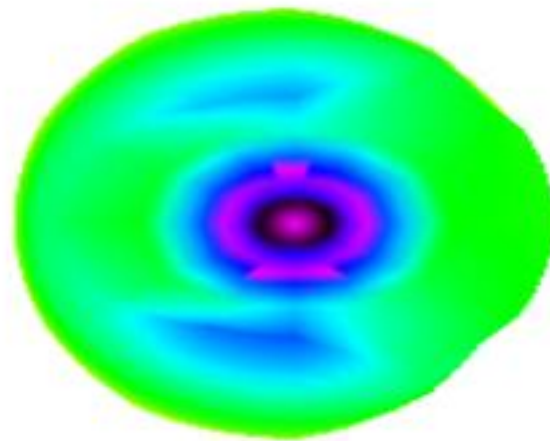
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P1

### 3D Radiation Pattern

**2450.000MHz**



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**ANGLES = ±      HOLEDIA = ±**

**SCALE: N/A**

**UNIT: mm**

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## 7. Environmental Characteristics

### (1) Reliability Test

| Item                        | Condition                                                                                                                                                                                                                                                                              | Specification                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Thermal shock               | 1. $30\pm 3$ minutes at $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$ ,<br>2. Convert to $+105^{\circ}\text{C}$ (5 minutes)<br>3. $30\pm 3$ minutes at $+105^{\circ}\text{C}\pm 5^{\circ}\text{C}$ ,<br>4. Convert to $-40^{\circ}\text{C}$ (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: $85\pm 5^{\circ}\text{C}$<br>3. Time: 1000 hours.                                                                                                                                                                                             | No apparent damage<br>Fulfill the electrical spec. after test. |
| High temperature resistance | 1. Temperature: $150^{\circ}\text{C}\pm 5^{\circ}\text{C}$<br>2. Time: 1000 hours.                                                                                                                                                                                                     | No apparent damage<br>Fulfill the electrical spec. after test. |
| Low temperature resistance  | 1. Temperature: $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$<br>2. Time: 1000 hours.                                                                                                                                                                                                     | No apparent damage<br>Fulfill the electrical spec. after test. |
| Soldering heat resistance   | 1. Solder bath temperature : $260\pm 5^{\circ}\text{C}$<br>2. Bathing time: $10\pm 1$ 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 $245\pm 5^{\circ}\text{C}$ for $3\pm 1$ seconds.                                                                                                                           | No apparent damage                                             |

### (2) Storage Condition

#### (a) At warehouse:

The temperature should be within  $0\sim 30^{\circ}\text{C}$  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  $-40\sim 85^{\circ}\text{C}$  and humidity should be less than 85% RH.

### (3) Operating Temperature Range

Operating temperature range :  $-40^{\circ}\text{C}$  to  $+105^{\circ}\text{C}$ .

UNLESS OTHER SPECIFIED TOLERANCES ON:

$X=\pm$        $X.X=\pm$        $X.XX=$   
**ANGLES** =  $\pm$       **HOLE DIA** =  $\pm$

SCALE: N/A

UNIT: mm

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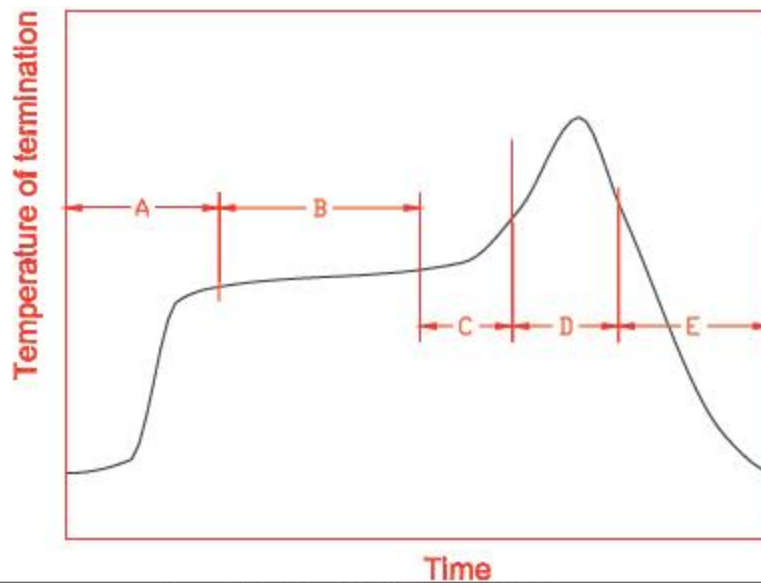
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## 8. Recommended Reflow Soldering



|   |                                    |                                      |               |
|---|------------------------------------|--------------------------------------|---------------|
| 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

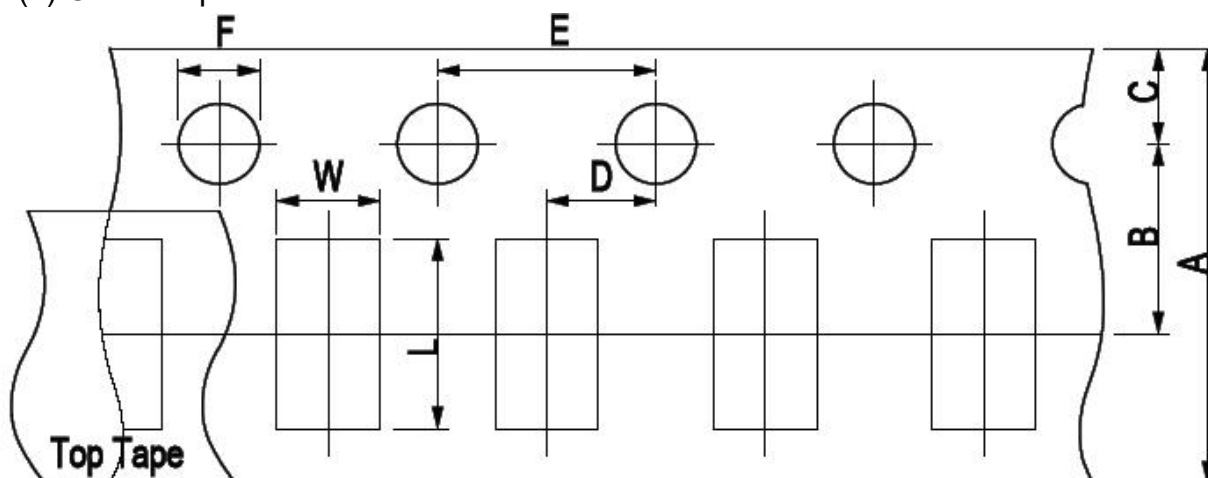
Note that excess of soldering volume will easily get crack the body of this product.

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

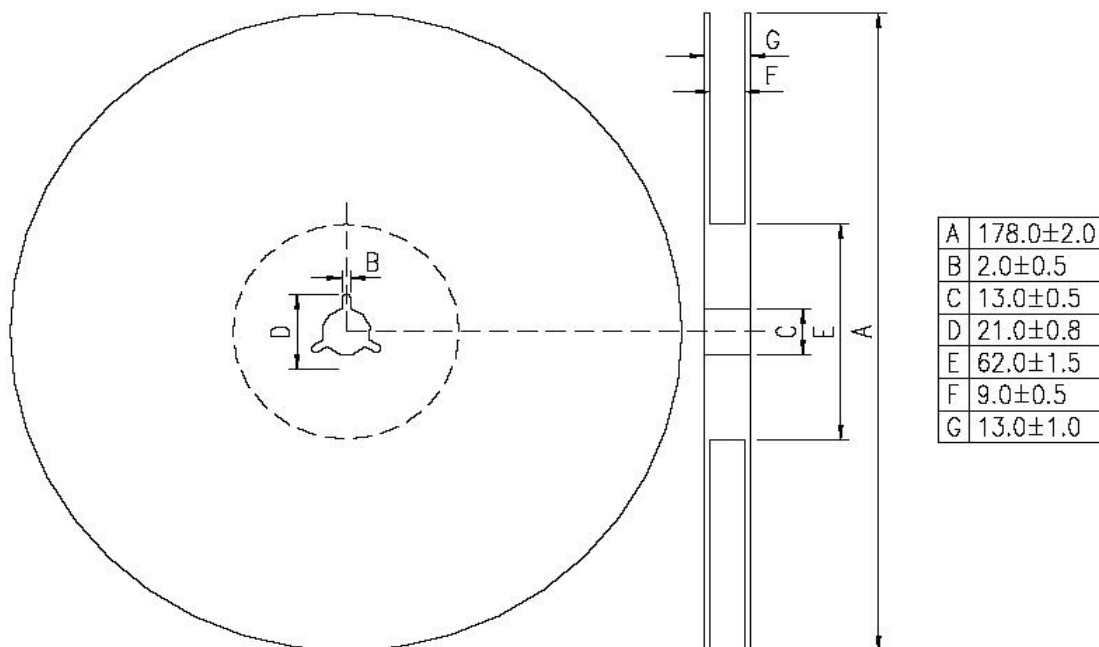
(1) Quantity/Reel: 5000pcs/Reel

(2) Carrier tape dimensions



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

(3) Taping reel dimensions



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 $X = \pm$        $X.X = \pm$        $X.XX =$ ANGLES =  $\pm$       HOLEDIA =  $\pm$ 

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