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

# SPECIFICATIONS

CUSTOMER: _____

DESCRIPTION: Geomagnetic Antenna

CUSTOMER PART NO: _____

OUR MODEL NO: **PBX1608MA06**

DATE: _____

PLEASE RETURN TO US ONE COPY OF "SPECIFICATION FOR APPROVAL"

WITH YOUR APPROVED SIGNATURES

| | | | |
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| DESIGNED BY: Sera | APPROVED BY: XD | | |
| TITLE：CHIP2450-1608 Specification | | DOCUMENT NO. | 1608 | SPEC REV. P1 |

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

# PBX1608MA06 Specification

Operating Temp. : -40℃~+85℃

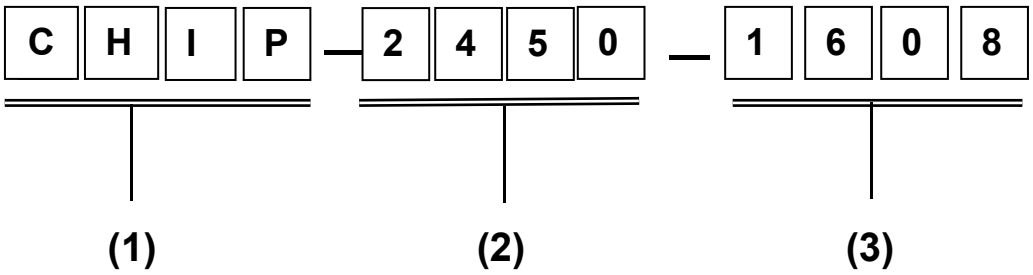
## 1. FEATURES:

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

## 2. APPLICATIONS:

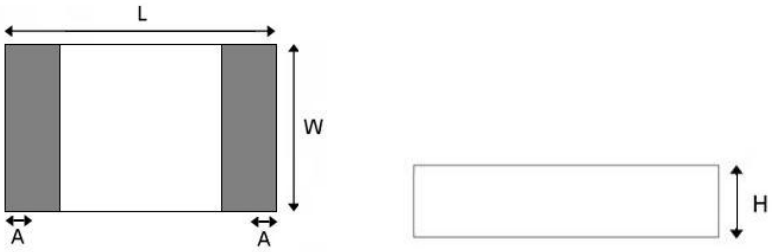
- Bluetooth, Wireless LAN, Mobile TV
- Home RF System, etc

## 3. PRODUCT IDENTIFICATION




(1) Product type: Multilayer chip Antenna
(2) Center Frequency: 2450MHz
(3) External Dimensions (L×W) (mm): 1.6*0.8

## 4. SHAPE AND DIMENSIONS:




| L | W | H | A |
|---|---|---|---|
| 1. 60±0. 20 | 0. 80±0. 20 | 0. 80±0. 20 | 0. 30±0. 10 |

| | | | |
|---|---|---|---|
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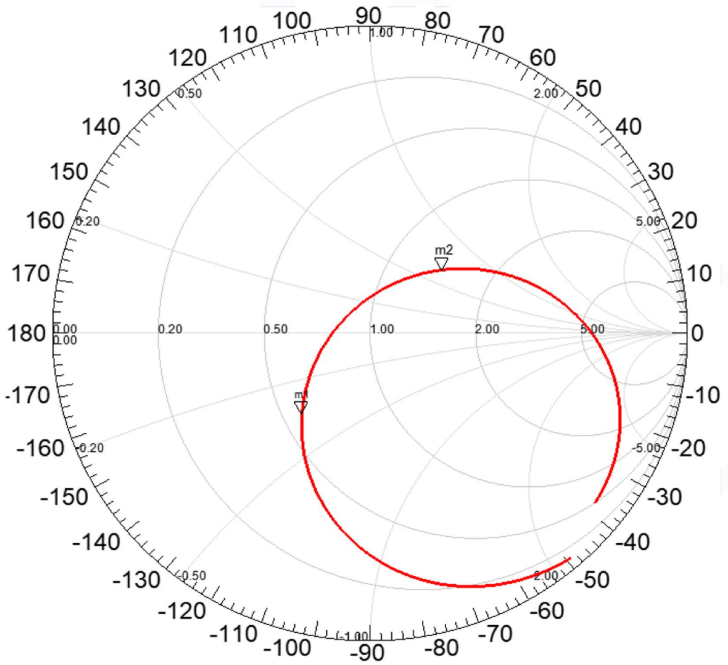
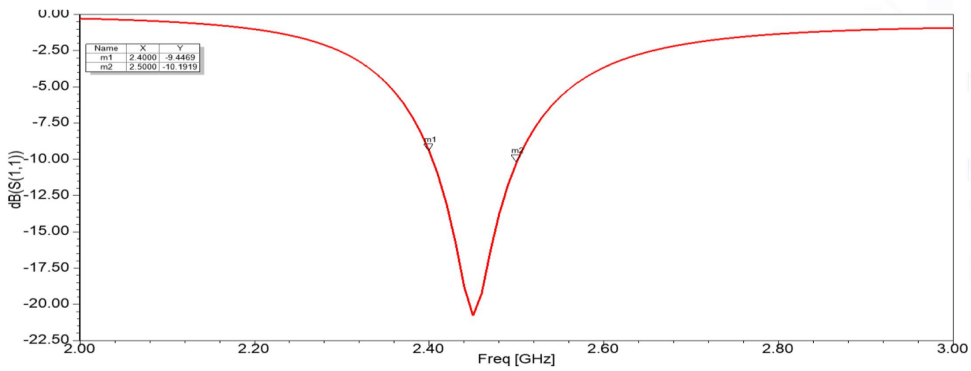
## Electrical Characteristics

| | Feature | Specification |
|---|---|---|
| 1 | Central frequency | 2.45GHz |
| 2 | Bandwidth | >150MHz |
| 3 | Peak gain | 2.78 dBi |
| 4 | VSWR | <2 |
| 5 | Polarization | Linear |
| 6 | Azimuth beamwidth | Omnidirectional |
| 7 | Impedance | 50 Ω |

## Characteristic Curves

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ANGLES =± HOLEDIA =±

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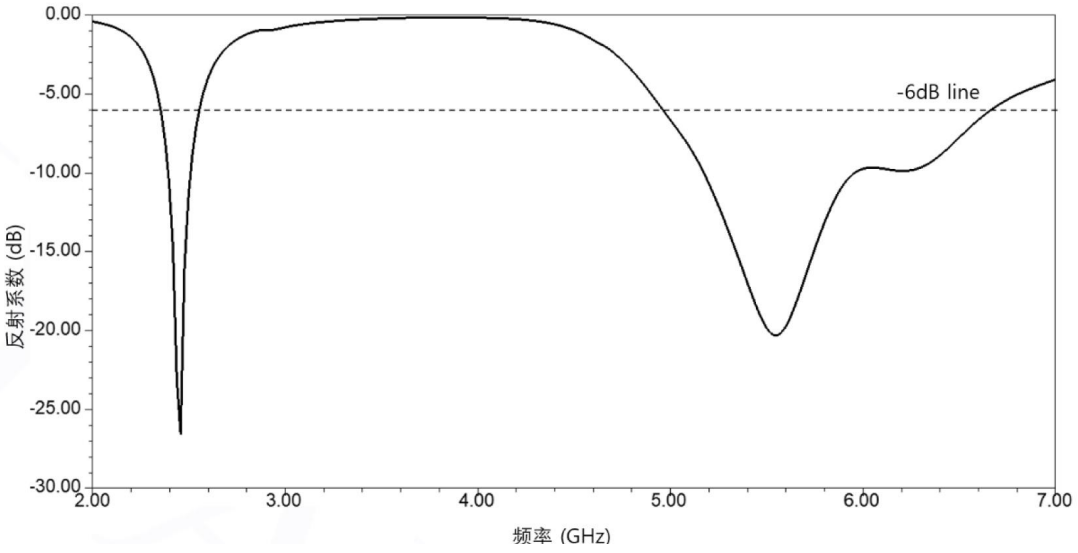
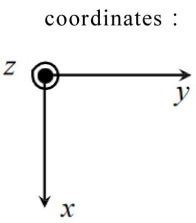
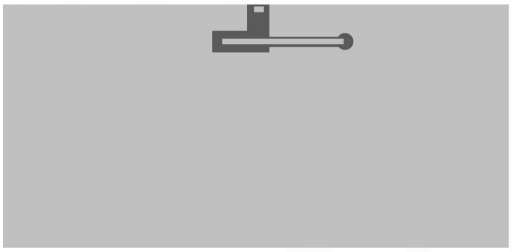
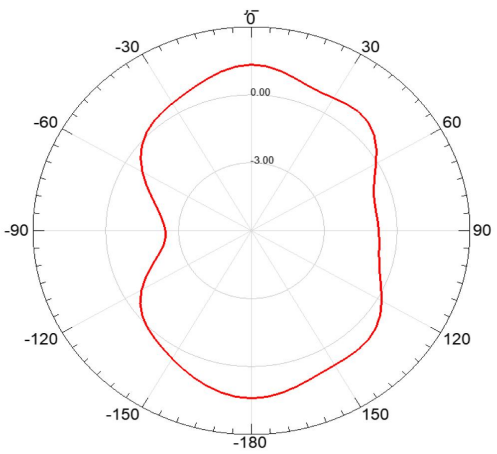
|---|---|---|---|

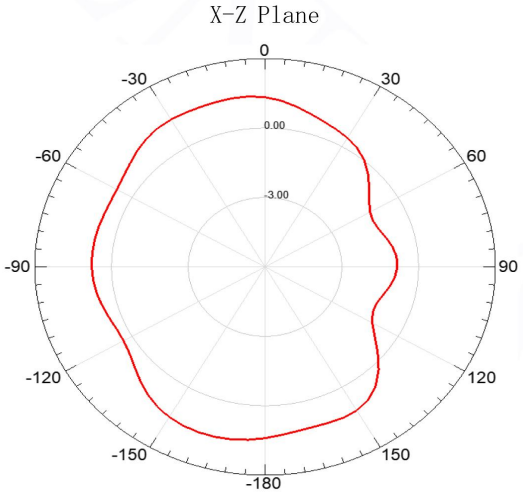



## Radiation Pattern



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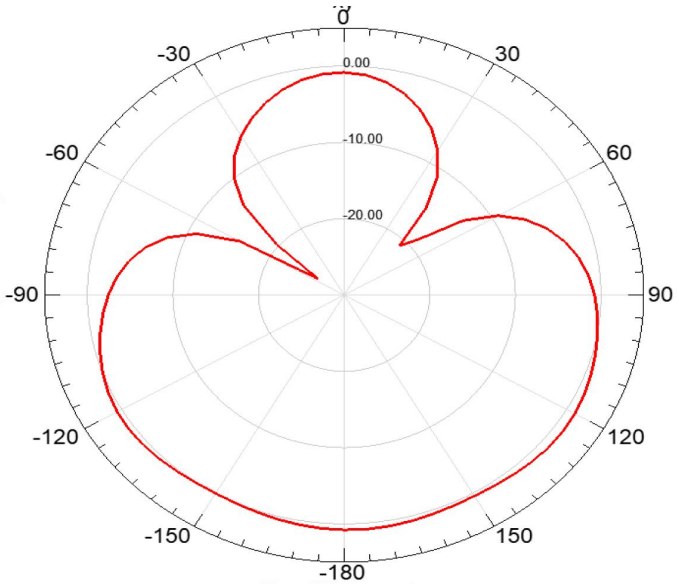
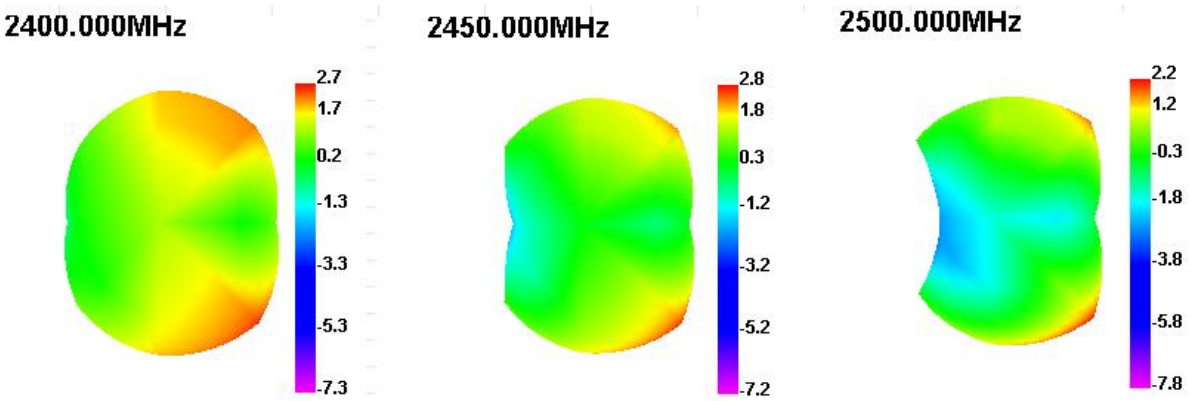
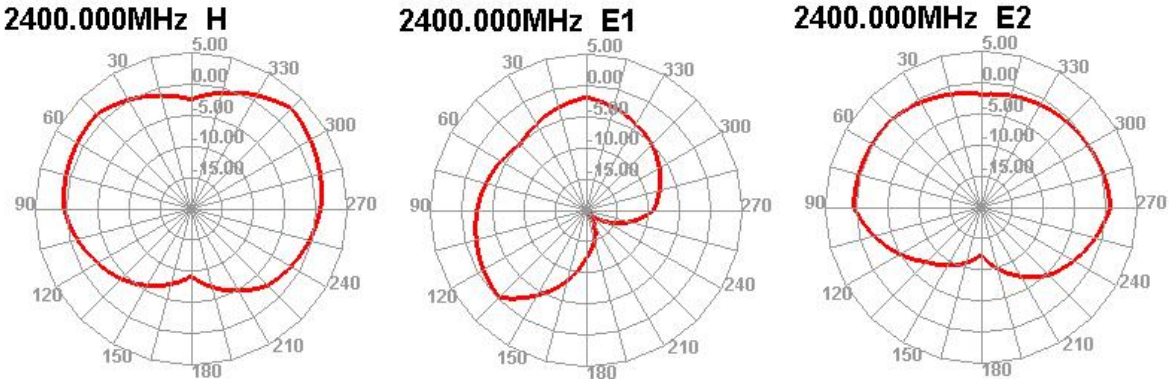



## 3D Radiation Pattern




## 2D Gain Pattern (2400 MHz-2500MHz)




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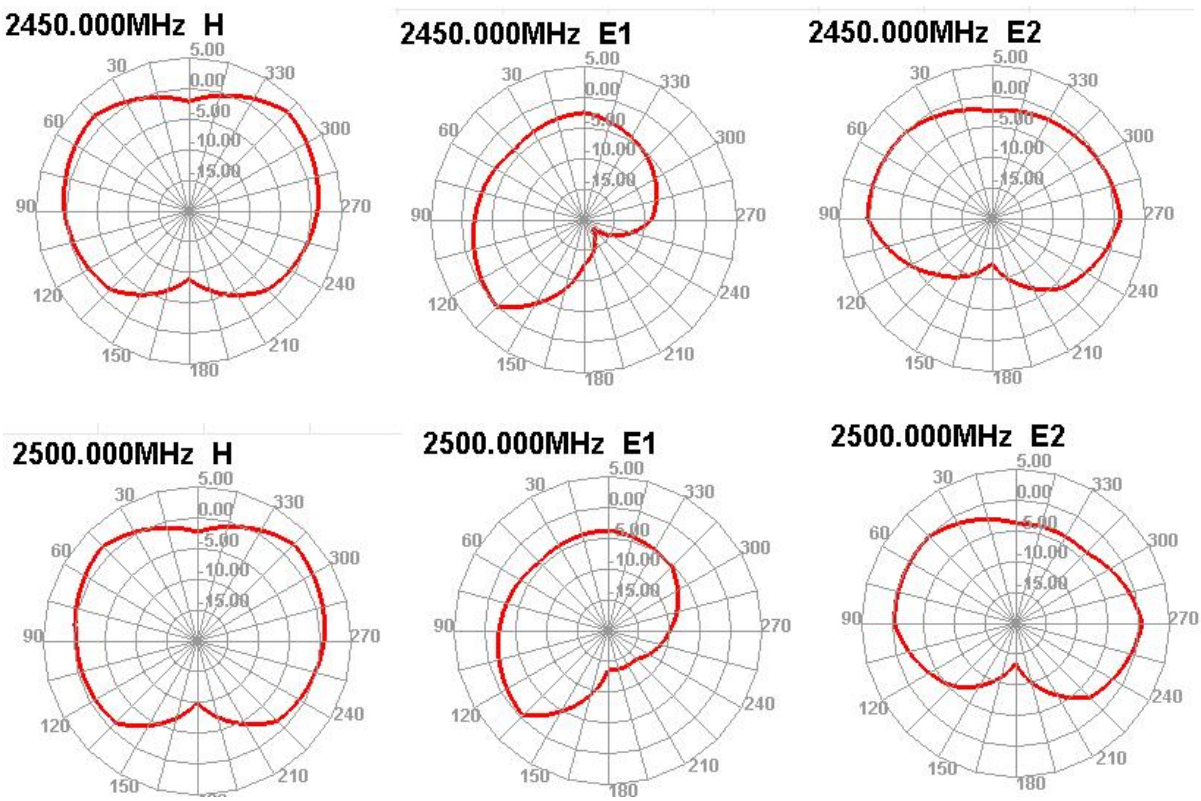
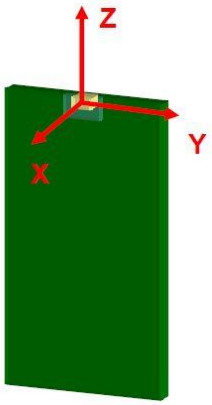
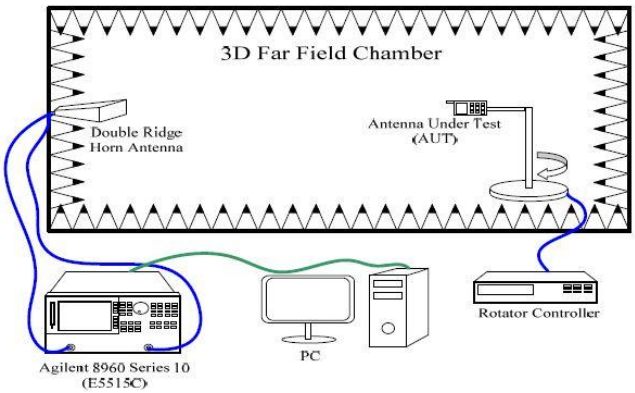



## Radiation Pattern

The Gain pattern is measured in FAR-field chamber. DUT is placed on the table of rotator,a standard horn antenna and Vector Network Analyzer is used to collect data.



# 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℃<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℃ for 3±1 seconds. | No apparent damage |

## (2) Storage Condition

### (a) At warehouse:

The temperature should be within 0 ~ 30℃ 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℃ and humidity should be less than 85% RH.

## (3) Operating Temperature Range

Operating temperature range : -40℃ to +105℃.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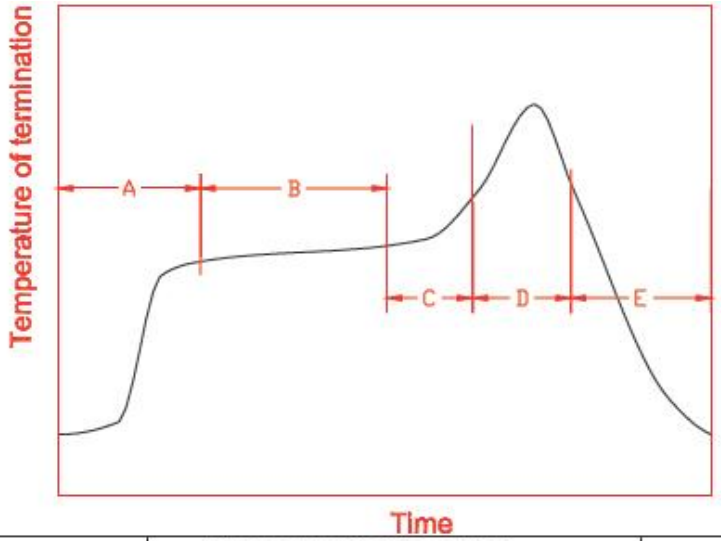
## 8. Recommended Reflow Soldering




| | | | |
|---|---|---|---|
| A | 1st rising temperature | The normal to Preheating temperature | 30s to 60s |
| B | Preheating | 140℃ to 160℃ | 60s to 120s |
| C | 2nd rising temperature | Preheating to 200℃ | 20s to 40s |
| D | Main heating | if 220℃ | 50s～60s |
| | | if 230℃ | 40s～50s |
| | | if 240℃ | 30s～40s |
| | | if 250℃ | 20s～40s |
| | | if 260℃ | 20s～40s |
| E | Regular cooling | 200℃ to 100℃ | 1℃/s ～ 4℃/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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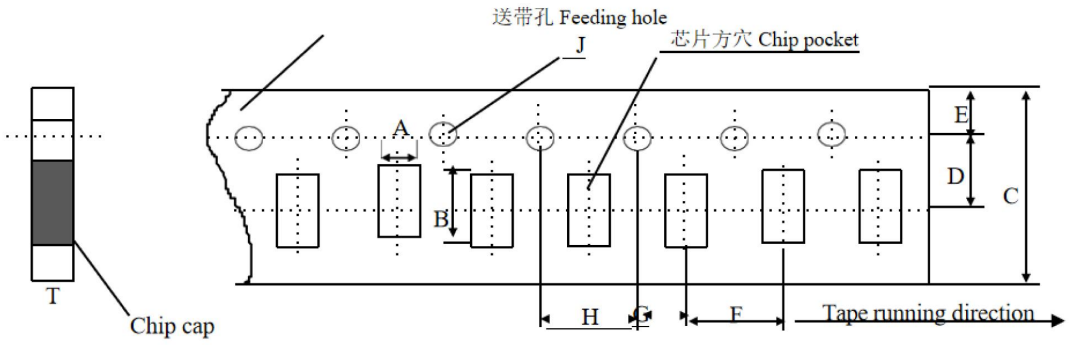
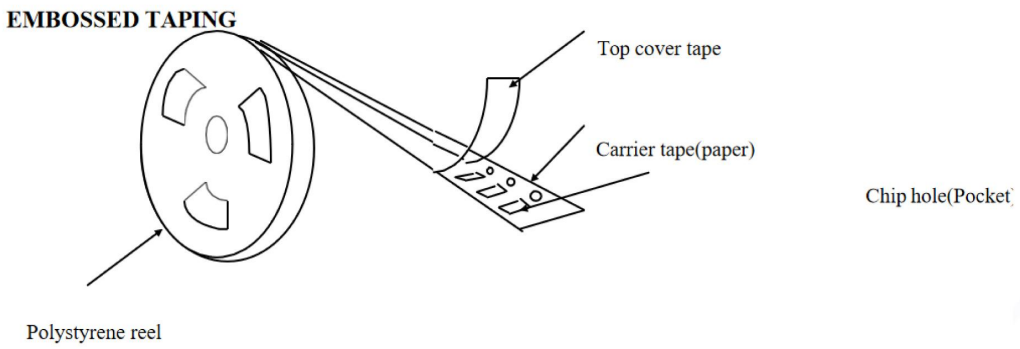
## Dimensions of paper taping:




Unit：mm

| 代号Code / 纸带规格 papersize | A | B | C | D* | E | F | G* | H | J | T |
|---|---|---|---|---|---|---|---|---|---|---|
| 尺寸 | 1.10 ±0.10 | 1.90 ±0.10 | 8.00 ±0.10 | 3.50 ±0.05 | 1.75 ±0.10 | 4.00 ±0.10 | 2.00 ±0.10 | 4.00 ±0.10 | 1.50 -0/+0.10 | 1.10 Max |

Reel（4000 pcs/Reel）




## Storage Period

The guaranteed period for solderability is 6 months (Under deliver package condition).
Temperature:5~40℃ /Relative Humidity:20~70%

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