ANTENNA DATA SHEET

DESCRIPTION: **Chip antenna**

MODEL NO: **PBX1608MA02**

Peak Antenna: **2.78dBi**

Manufacturer：Shenzhen Pengban Industrial Technology Co., LTD
Add：Room 605, Building 4, 1970 Science and Technology Park, Minzhi Community,
Minzhi Sub-district, Longhua District, Shenzhen City

UNLESS OTHER SPECIFIED TOLERANCES ON： X=± X.X=± X.XX= ANGLES =± HOLEDIA =±		pb PENGBANXING Shenzhen Pengban Industrial Technology Co., LTD
SCALE：N/A	**UNIT：mm**	**THESEDRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF PBXY TECHNOLOGY Limited AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION**
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TITLE：CHIP2450-1608 Specification	**DOCUMENT NO.** 1608	**SPEC REV.** **P1**

PBX1608MA02 Specification

Operating Temp. : -40℃~+85℃

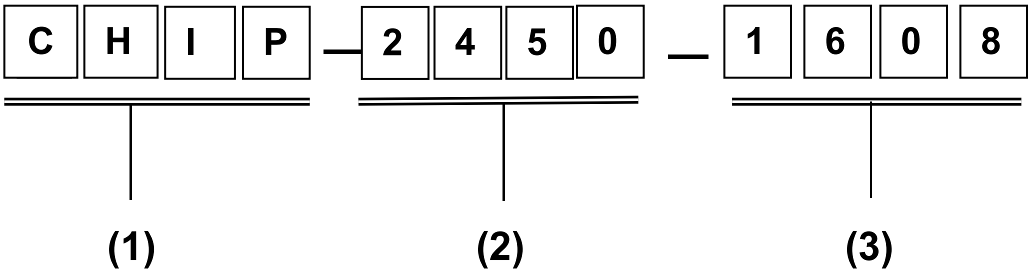
1. FEATURES:

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

2. APPLICATIONS:

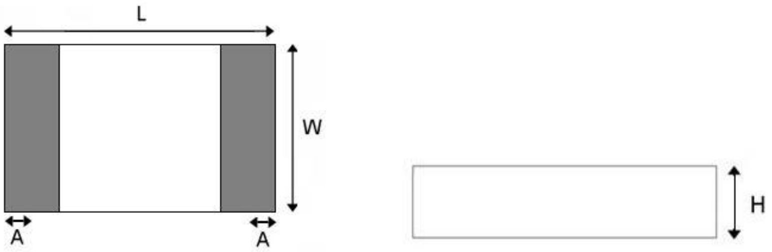
- Bluetooth, Wireless LAN, Mobile TV
- Home RF System, etc

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
1.6±0.2	0.8±0.2	0.8±0.2	0.3±0.1

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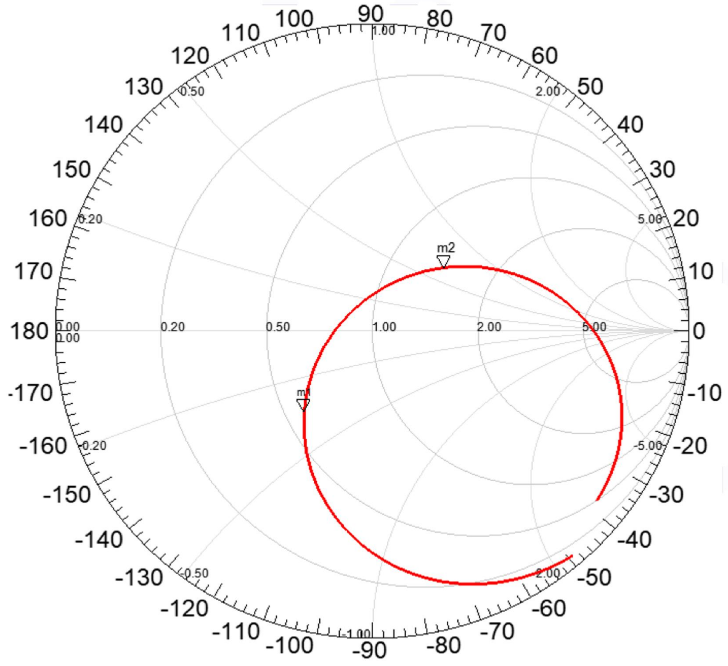
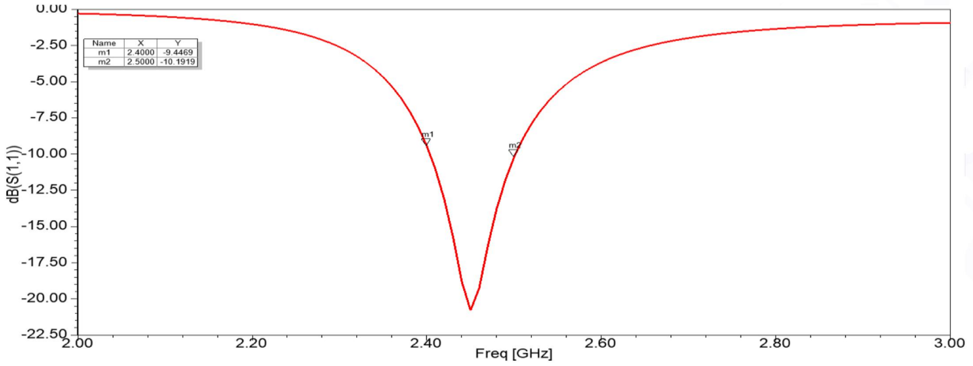
Electrical Characteristics

	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





Name	X	Y
m1	2.4000	-9.4469
m2	2.5000	-10.1919

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ANGLES =± HOLEDIA =±

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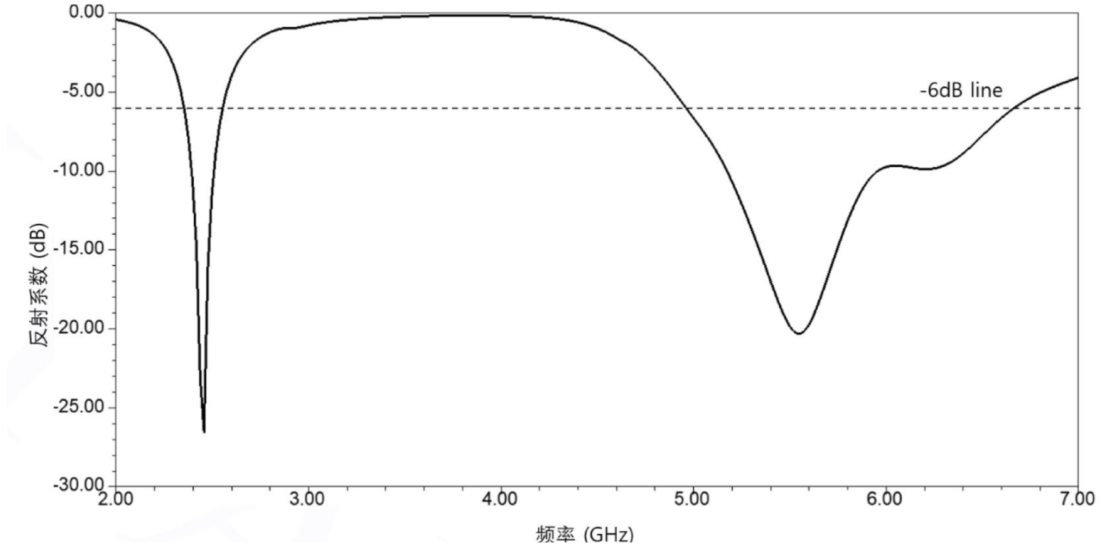
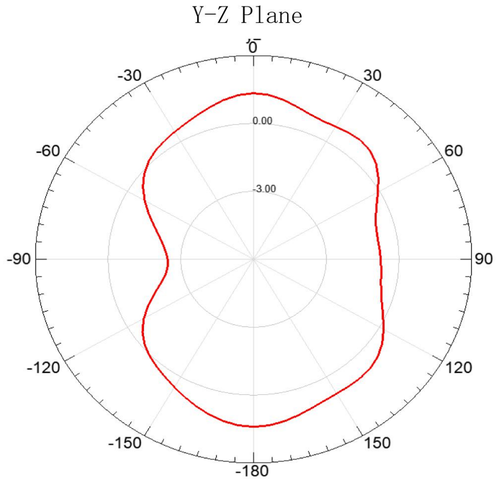
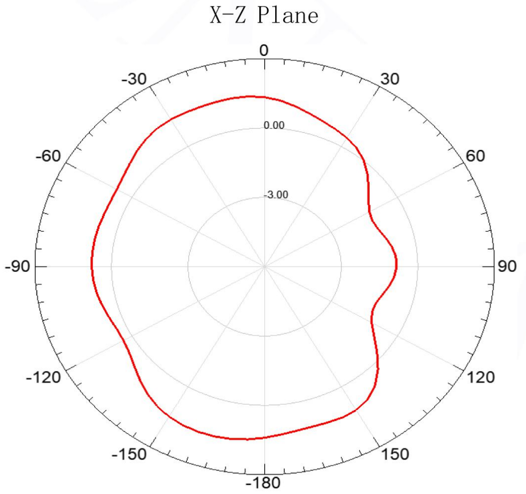


Radiation Pattern





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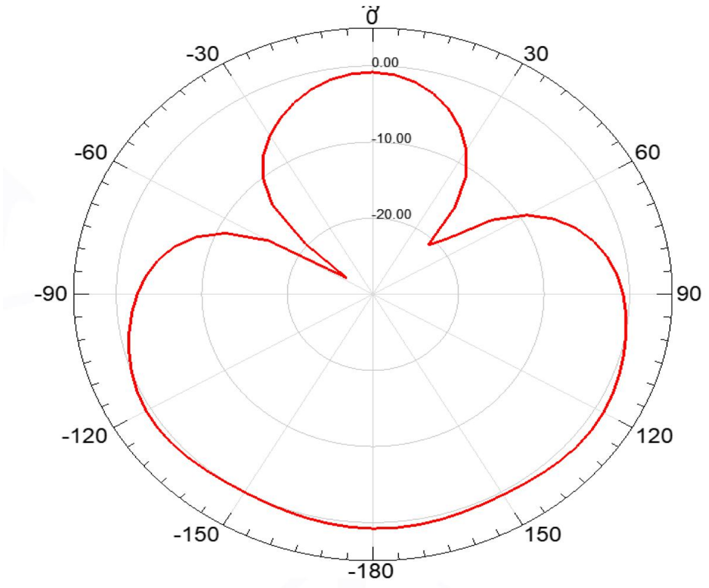
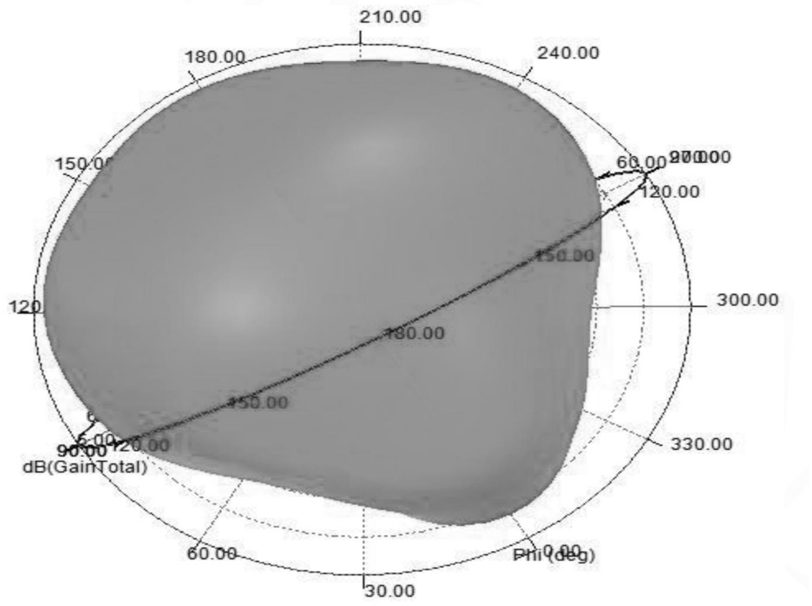


3D Radiation Pattern



Frequency	2400MHz	2450MHz	2500MHz
Avg. gain	-1.92	-1.35	-1.56
Peak gain	1.79	2.78	2.66
Efficiency	74.55	80.25	76.98

UNLESS OTHER SPECIFIED TOLERANCES ON：
X＝± **X.X**＝± **X.XX**＝
ANGLES＝± **HOLEDIA**＝±

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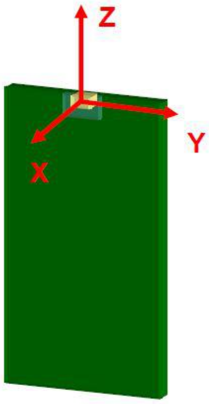
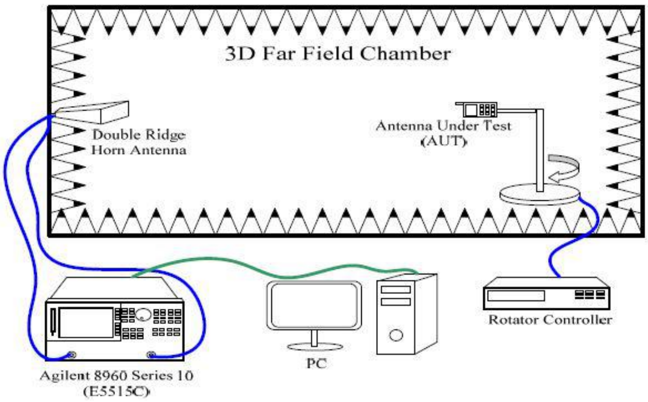
Radiation Pattern

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, 2. Convert to +105° C (5 minutes) 3. 30±3 minutes at +105° C±5° C, 4. Convert to -40° C (5 minutes) 5. Total 100 continuous cycles	No apparent damage Fulfill the electrical spec. after test.
Humidity resistance	1. Humidity: 85% R.H. 2. Temperature: 85±5° C 3. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
High temperature resistance	1. Temperature: 150° C±5° C 2. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
Low temperature resistance	1. Temperature: -40° C±5° C 2. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
Soldering heat resistance	1. Solder bath temperature : 260±5℃ 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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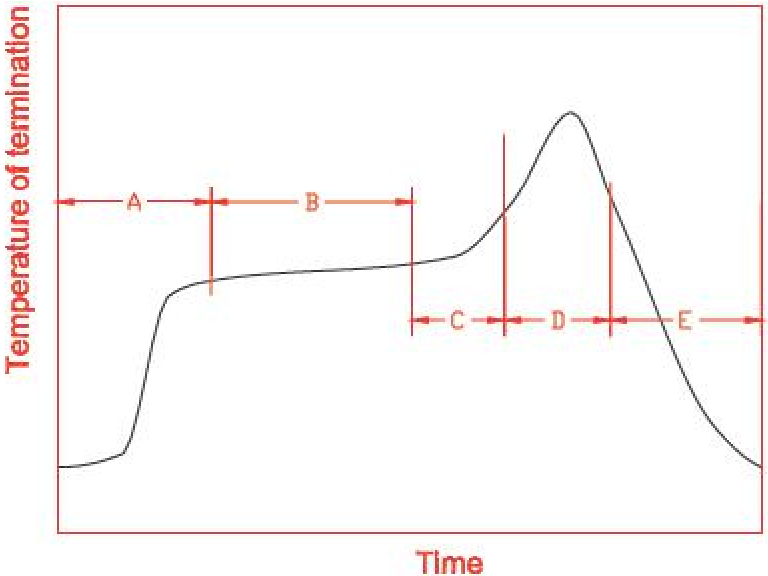
8. Recommended Reflow Soldering



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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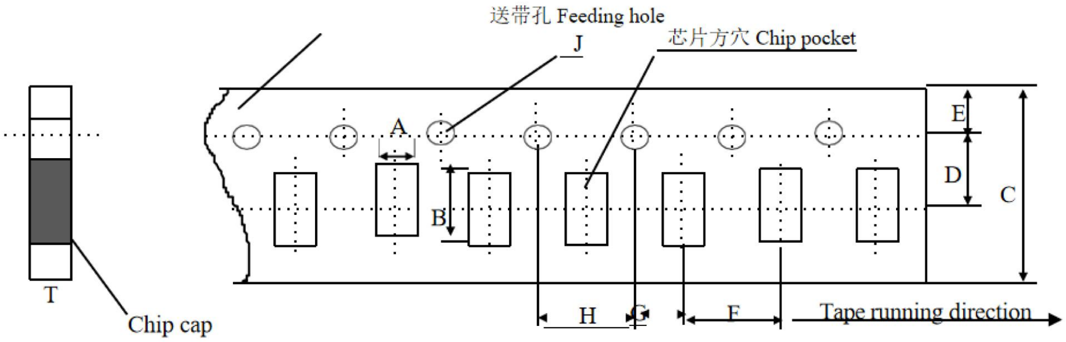
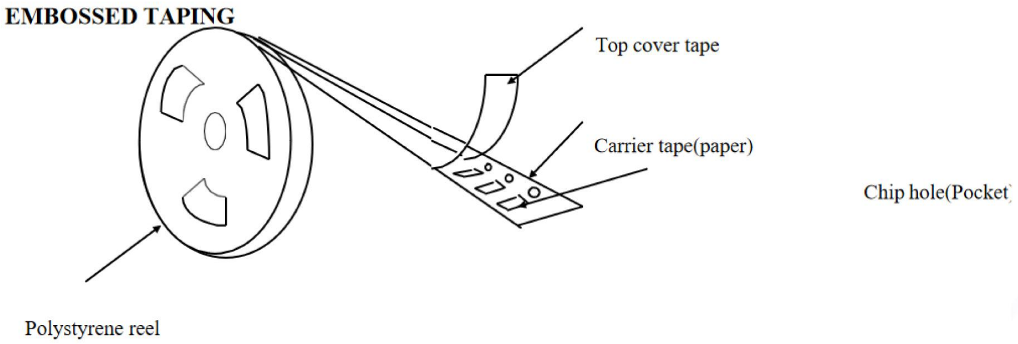
Dimensions of paper taping:



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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