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

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: **PBX2012MC03**

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		Audit		Making	

Customer Acknowledges Signature	
Date	

PBX2012C03 Specification

Operating Temp. : -40℃~+85℃

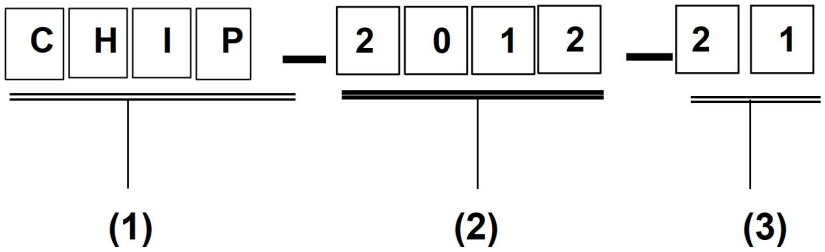
1. FEATURES:

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

2. APPLICATIONS:

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

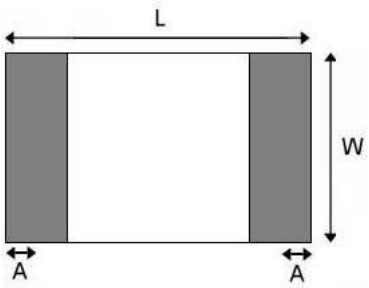
3. PRODUCT IDENTIFICATION



(1) Product type: Multilayer chip Antenna

(2) External Dimensions (L×W) (mm): 2.0*1.2

4. SHAPE AND DIMENSIONS:



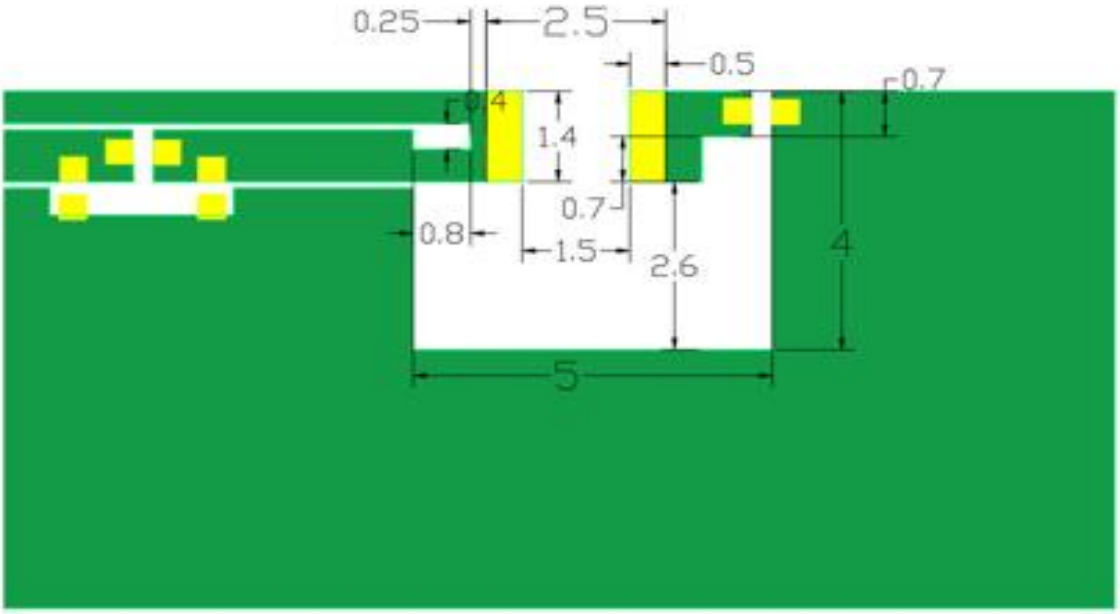
SHAPE AND DIMENSIONS

L	W	H	A
2.0±0.2	1.2±0.2	0.55±0.1	0.4±0.1

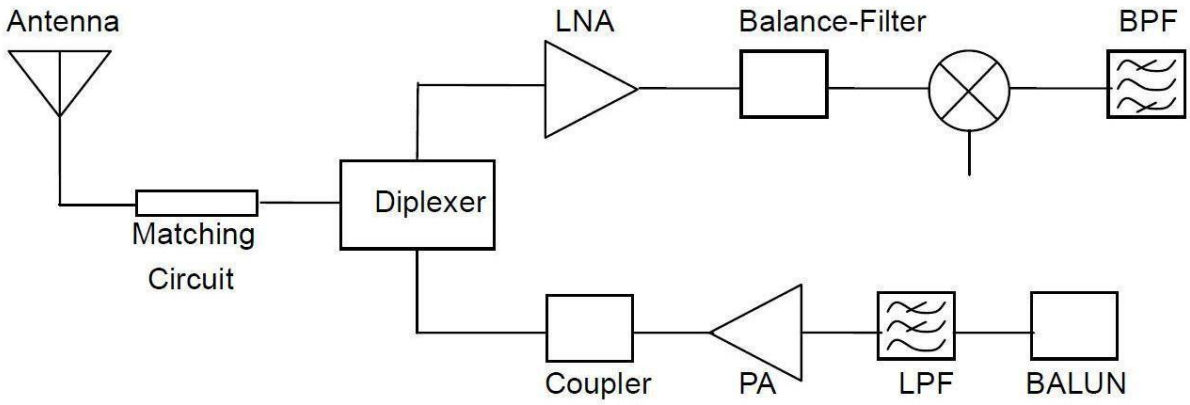
UNLESS OTHER SPECIFIED TOLERANCES ON: X=± X.X=± X.XX= ANGLES =± HOLEDIA =±		PENGBANXING PengBanXingYe ShenZhen Technology Co. , Ltd
SCALE：N/A	UNIT：mm	THESEDRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF PBXY TECHNOLOGY Limited AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION
DRAWN BY : Sera	CHECKED BY: XD	
DESIGNED BY: Sera	APPROVED BY: XD	
TITLE：CHIP2450-2012 Specification	DOCUMENT NO. 2012	SPEC REV. P1

TERMINAL-CONFIGURATION

EVALUATION BOARD



APPLICATION GUIDE



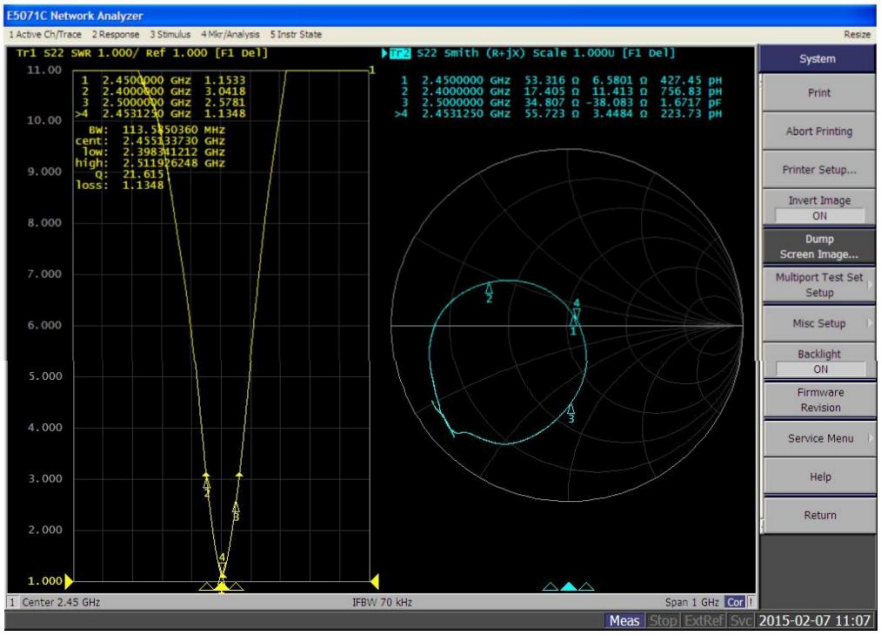
UNLESS OTHER SPECIFIED TOLERANCES ON： X=± X.X=± X.XX= ANGLES =± HOLEDIA =±		PENGBANXING PengBanXingYe ShenZhen Technology Co. , Ltd	
SCALE：N/A	UNIT：mm	THESEDRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF PBXY TECHNOLOGY Limited AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DRAWN BY : Sera	CHECKED BY: XD		
DESIGNED BY: Sera	APPROVED BY: XD		
TITLE：CHIP2450-2012 Specification		DOCUMENT NO.	2012	SPEC REV. P1

5. SPECIFICATIONS:

Test Item	Specifications
Bandwidth	2400-2500MHz
Polarization mode	Linear polarization
* Maximum gain	2.8dBi
* Efficiency	72.30%
Input Impedance	50Ω

* Test condition: Test board size 98*65 mm
Matching circuit: Pi matching circuit will be required

6. Electrical Characteristics:
VSWR



Mark	Frequency	VSWR
1	2400MHz	3.04
2	2450MHz	1.15
3	2500MHz	2.57

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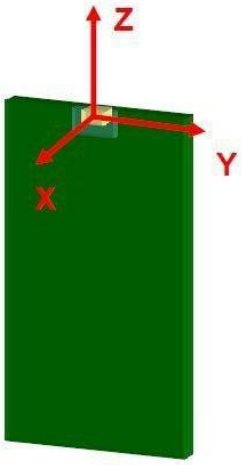
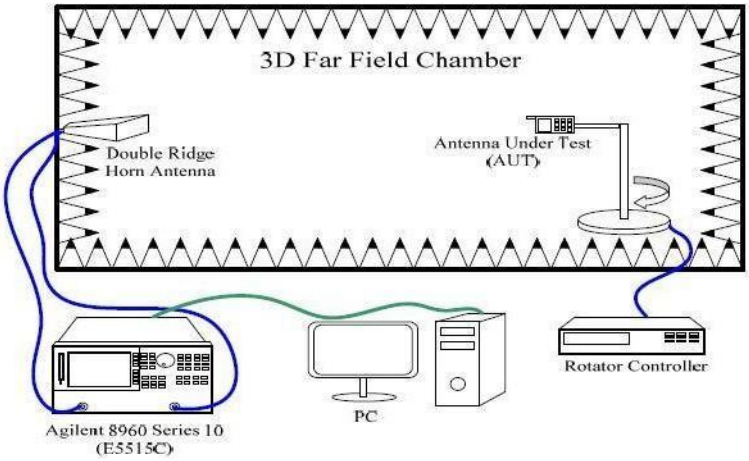
Radiation Pattern

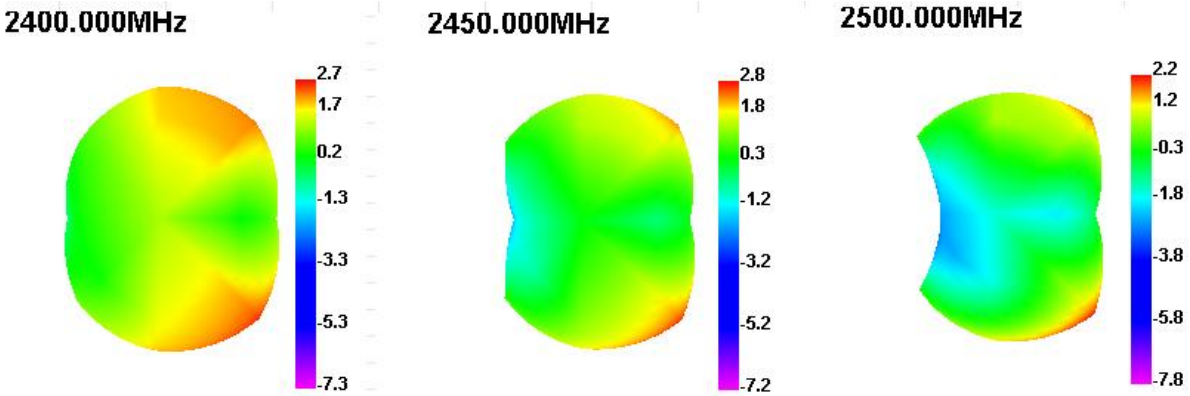
The Gain pattern is measured in INPAQ's FAR-field chamber. DUT is placed on the table of rotator,a standard horn antenna and Vector Network Analyzer is used to collect data.





2400MHZ	2450MHZ	2500MHZ
2.7dbi	2.8dbi	2.2dbi

◎ 3D Gain Pattern (2400 MHz-2500MHz)



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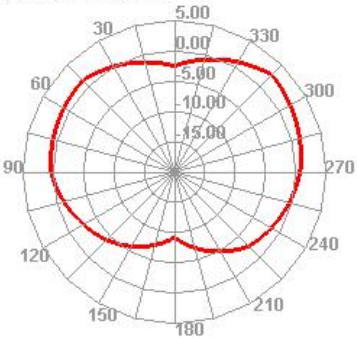
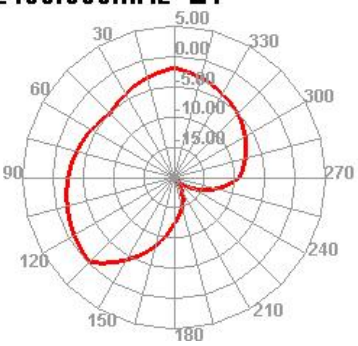
◎ 2D Gain Pattern (2400 MHz-2500MHz)

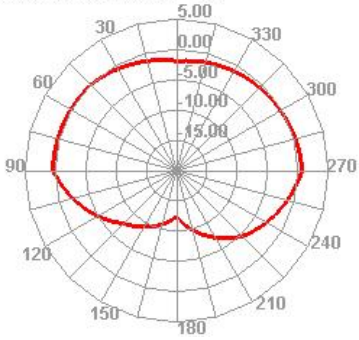
2400.000MHz H



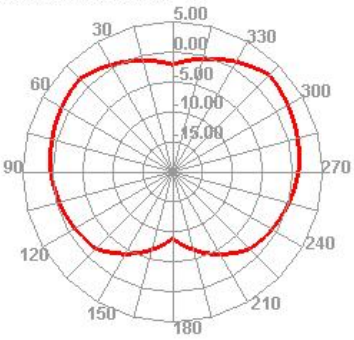
2400.000MHz E1



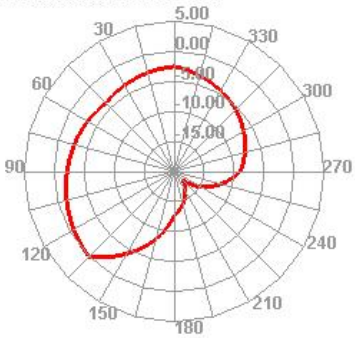
2400.000MHz E2



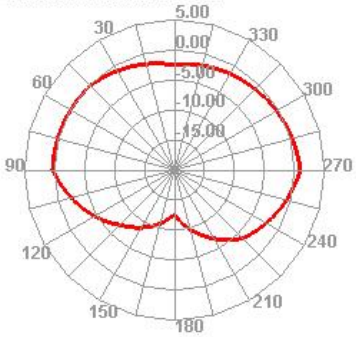
2450.000MHz H



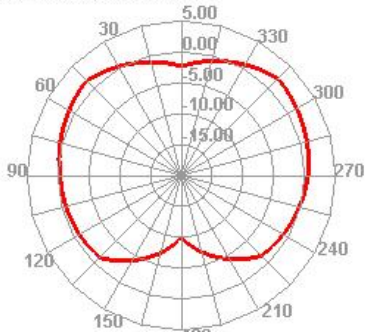
2450.000MHz E1



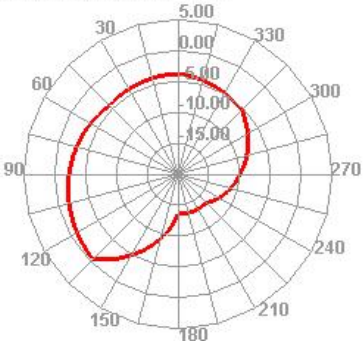
2450.000MHz E2



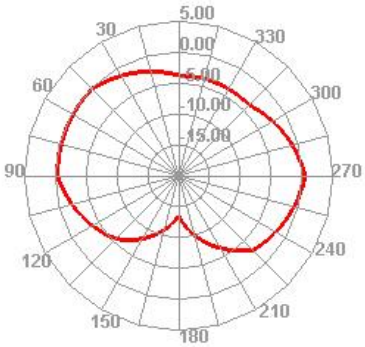
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



2D Frequency gain value

	XZ-Plane		YZ-Plane		XY-Plane	
Frequency MHz	Max. Value （dB）	Ave. Value (dB）	Max. Value (dB)	Ave. Value (dB）	Max. Value (dB)	Ave. Value (dB）
2400 MHz	-3.08	-9.26	-5.97	-9.85	-3.13	-9.56
2450 MHz	-1.76	-6.70	-5.69	-8.43	-1.79	-8.17
2500 MHz	-2.19	-6.66	-3.33	-8.05	-1.23	-7.86

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.

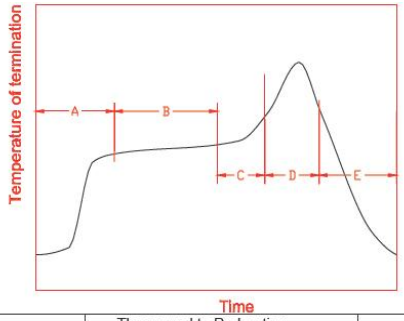
(b) On board :

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℃.

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

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(1) Soldering Gun Procedure

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

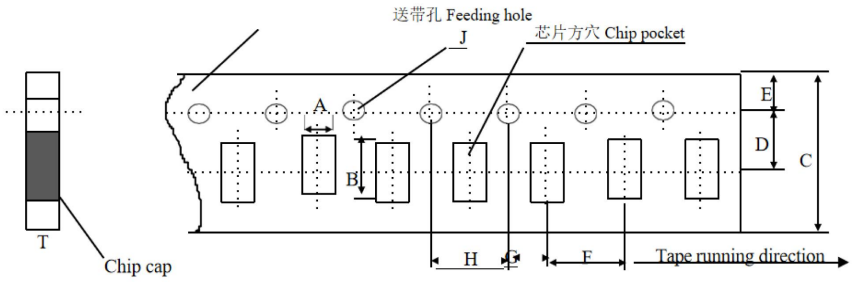
(a) The tip temperature must be less than 350° C for the period within 3 seconds by using soldering gun under 30 W.

(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.

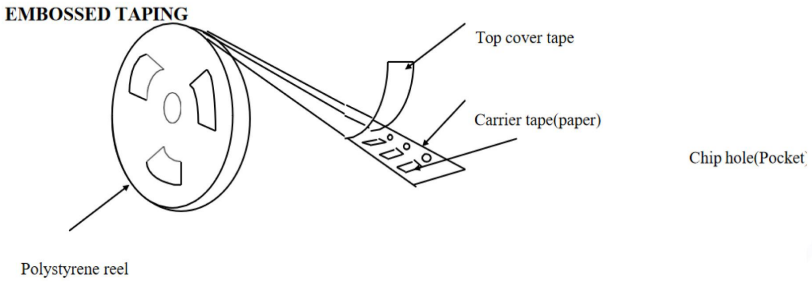
Dimensions of paper taping :



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°C /Relative Humidity:20~70%

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