

# 产品规格承认书

## SPECIFICATIONS

客户:

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

产品名称:

DESCRIPTION: Monopole Antenna

客户型号:

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

产品型号:

OUR MODEL NO: PBX5021DA01

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	LiuFei	Audit	LiuFei	Making	LiuXiaoMei
----------	--------	-------	--------	--------	------------

Customer Acknowledges Signature	
Date	

UNLESS OTHER SPECIFIED TOLERANCES ON:

X=±      X.X=±      X.XX=±  
 ANGLES = ±      HOLE DIA = ±



PengBanXingYe ShenZhen Technology Co. , Ltd

SCALE: N/A      UNIT: mm  
 DRAWN BY : Sera      CHECKED BY: ZL  
 DESIGNED BY: Sera      APPROVED BY: XL

THE SE DRAWINGS 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

TITLE: CHIP 2450-5021

DOCUMENT  
NO.

5021

SPEC REV.  
P1

PAGE 1 OF 11

# PBX5021DA01 Specification

Operating Temp. : -40°C~+85°C

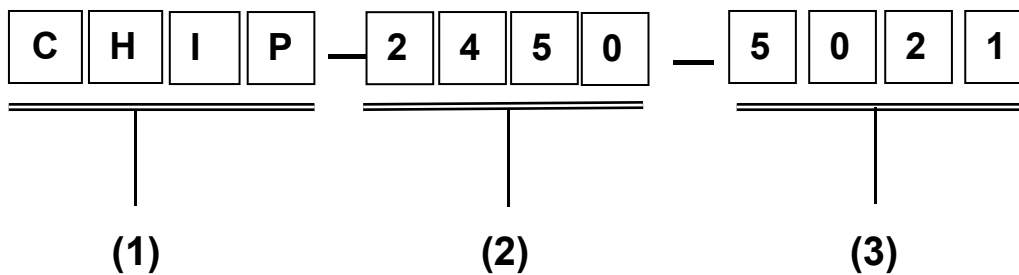
## 1. FEATURES:

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

## 2. APPLICATIONS:

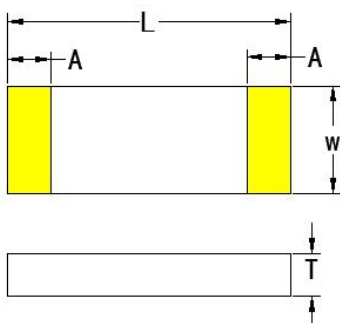
- Bluetooth, Wireless LAN, Mobile TV
- Home RF System, etc

## 3. PRODUCT IDENTIFICATION



- (1) Product type: Multilayer chip Antenna  
 (2) Center Frequency: 2450MHz  
 (3) External Dimensions (L×W) (mm): 5.0\*2.1

## 4. SHAPE AND DIMENSIONS:



Unit:mm	L	W	A	T
CHIP-5021	5.0±0.2	2.15±0.2	0.45±0.1	1.15±0.1

UNLESS OTHER SPECIFIED TOLERANCES ON:  
 X=±      X.X=±      X.XX=  
 ANGLES = ±      HOLE DIA = ±



PengBanXingYe ShenZhen Technology Co. , Ltd

SCALE: N/A      UNIT: mm  
 DRAWN BY : Sera      CHECKED BY: ZL  
 DESIGNED BY: Sera      APPROVED BY: XL

THE SE DRAWINGS 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

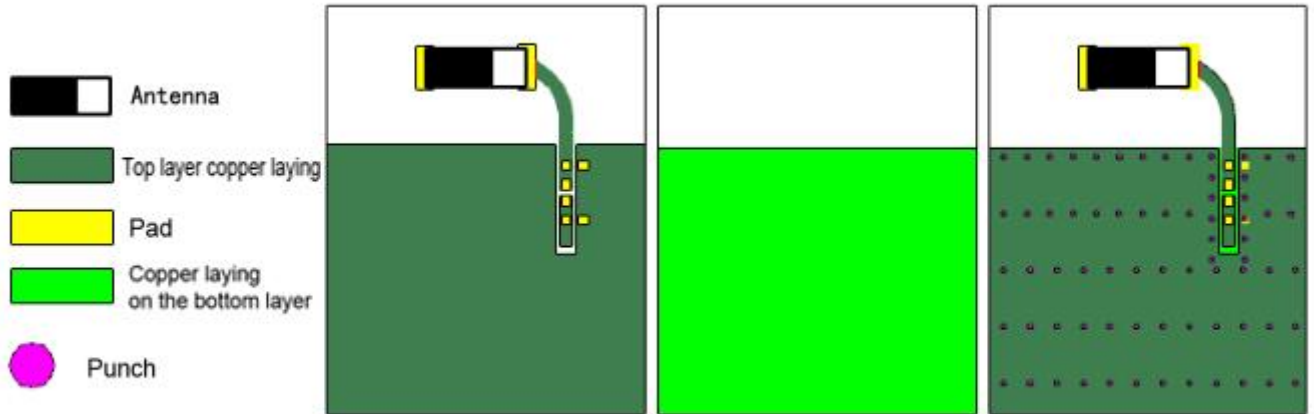
TITLE: CHIP 2450-5021

DOCUMENT NO.      5021

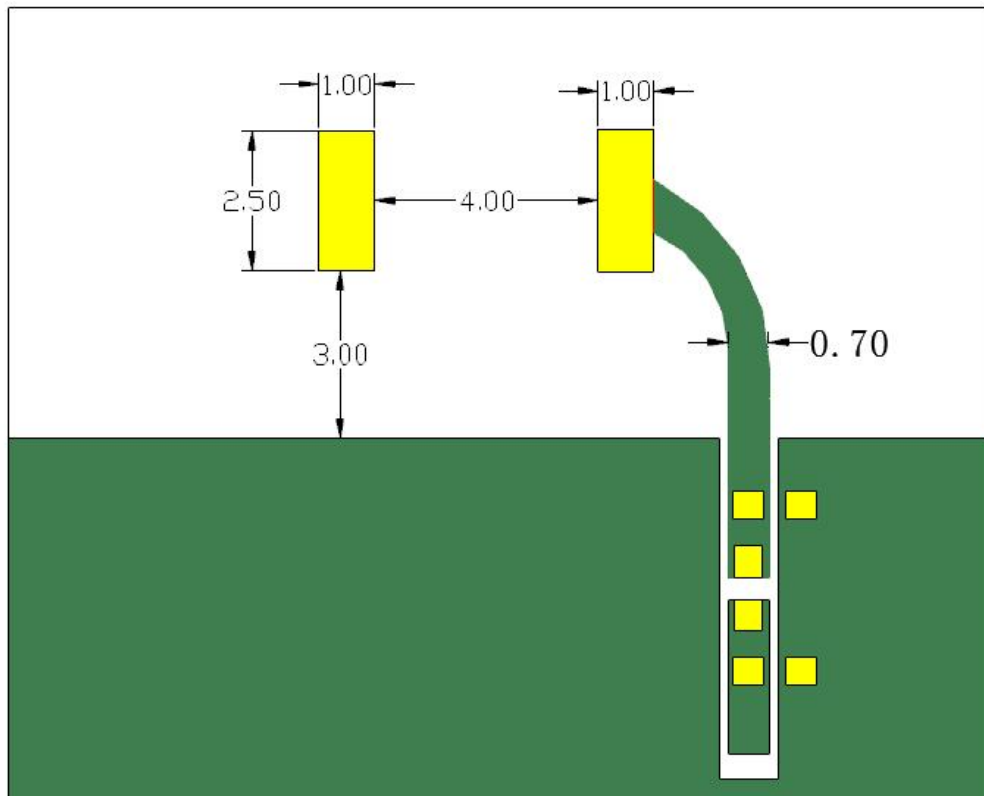
SPEC REV.      P1

**Test plate reference size:**


**Company: mm**



**PBX5021DA01 Size of solder pad:**



UNLESS OTHER SPECIFIED TOLERANCES ON:  
 $X = \pm$        $X.X = \pm$        $X.XX =$   
**ANGLES =  $\pm$**       **HOLE DIA =  $\pm$**

 PengBanXingYe ShenZhen Technology Co. , Ltd

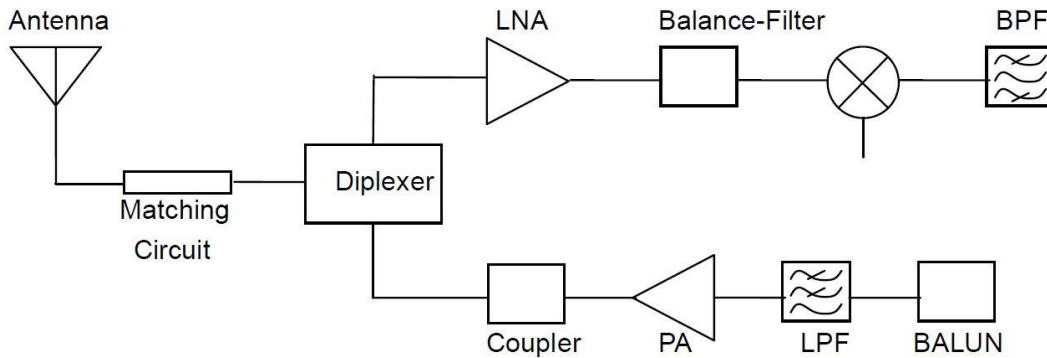
**SCALE: N/A**      **UNIT: mm**  
**DRAWN BY : Sera**      **CHECKED BY: ZL**  
**DESIGNED BY: Sera**      **APPROVED BY: XL**

THE SE DRAWINGS 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

**TITLE: CHIP 2450-5021**

<b>DOCUMENT NO.</b>	<b>5021</b>	<b>SPEC REV.</b>
		<b>P1</b>

**APPLICATION GUIDE**



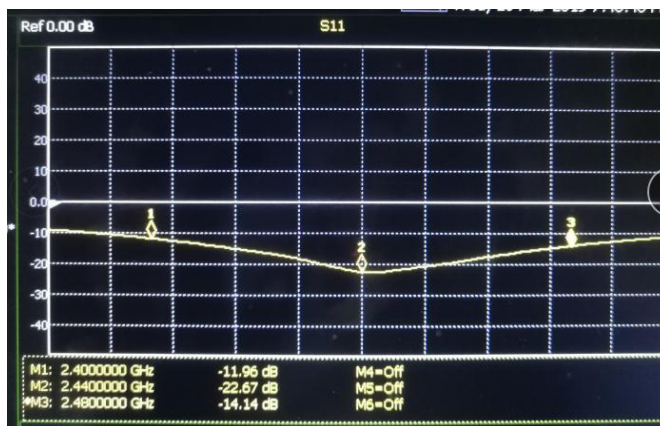
**5. SPECIFICATIONS:**

Test Item	Specifications
Bandwidth	2400-2500MHz
Polarization mode	Line polarization
*Maximum gain	2.73dBi
*Efficiency	67.16%
Input impedance	50Ω
Maximum power	5W

\* Test condition: Test board size 86\*50 mm  
 Matching circuit: Pi matching circuit will be required

**6. Electrical Characteristics :**

**Return loss**



UNLESS OTHER SPECIFIED TOLERANCES ON:

X=±      X.X=±      X.XX=  
 ANGLES = ±      HOLE DIA = ±



PengBanXingYe ShenZhen Technology Co. , Ltd

SCALE: N/A      UNIT: mm  
 DRAWN BY : Sera      CHECKED BY: ZL  
 DESIGNED BY: Sera      APPROVED BY: XL

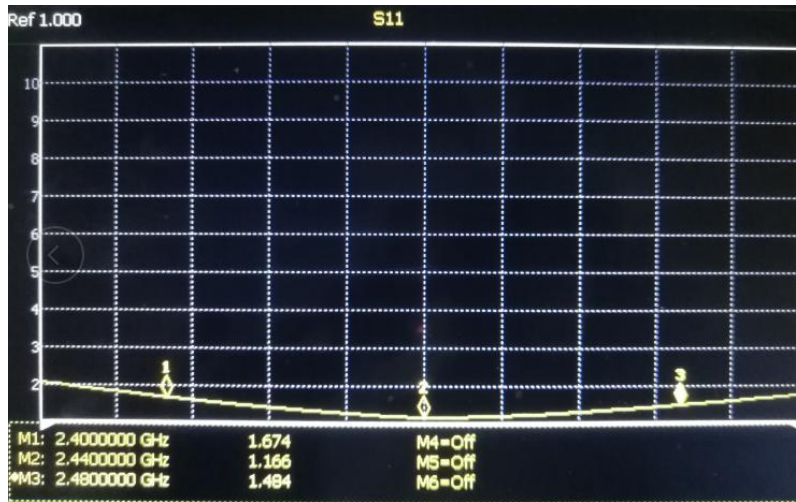
THE SE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF PBXY TECHNOLOGY Limited AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION

TITLE: CHIP 2450-5021

DOCUMENT NO.      5021      SPEC REV. P1



### Standing Wave Ratio



Mark	Frequency	VSWR
1	2400 MHz	1.674
2	2440 MHz	1.166
3	2480 MHz	1.484

UNLESS OTHER SPECIFIED TOLERANCES ON:

X=±      X.X=±      X.XX=  
 ANGLES = ±      HOLE DIA = ±

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: ZL

DESIGNED BY: Sera

APPROVED BY: XL



PengBanXingYe ShenZhen Technology Co. , Ltd

THE SE DRAWINGS 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

TITLE: CHIP 2450-5021

DOCUMENT NO.

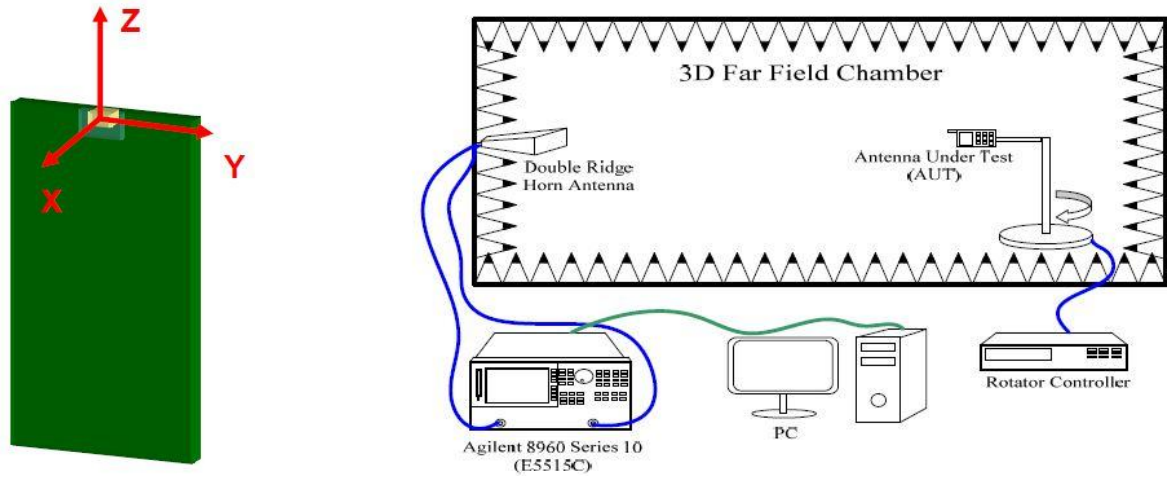
5021

SPEC REV.

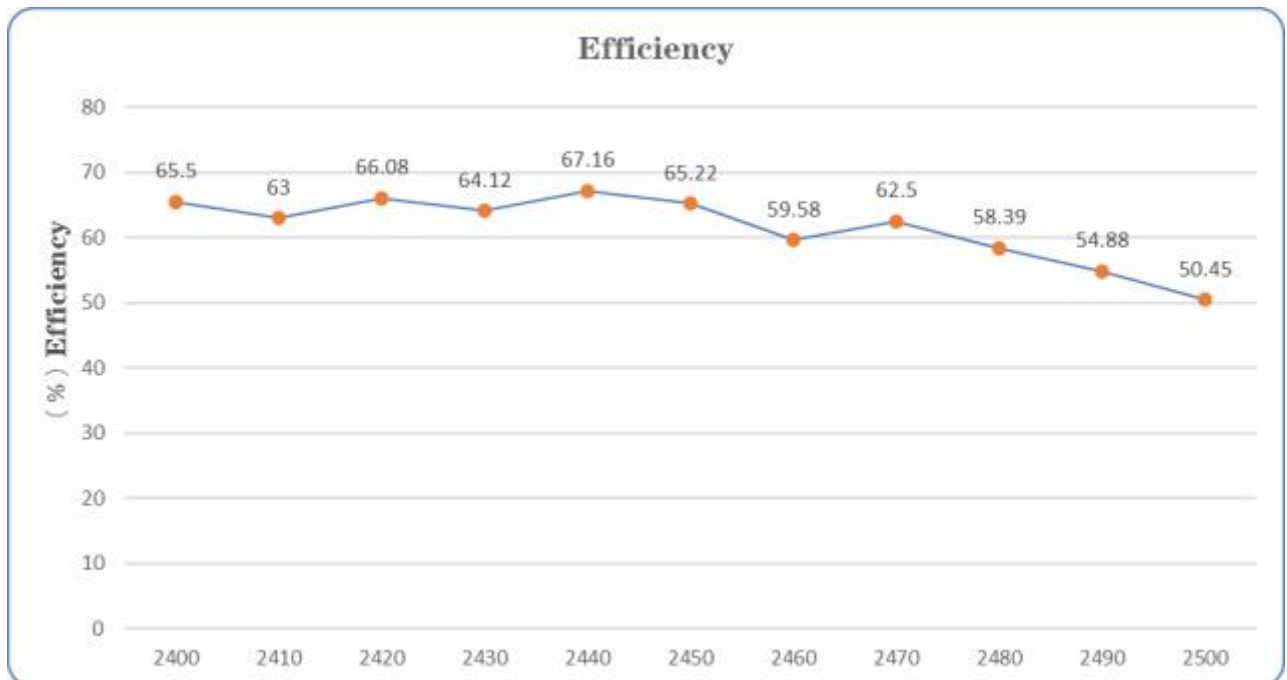
P1

### 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.



### Efficiency



UNLESS OTHER SPECIFIED TOLERANCES ON:

X=±      X.X=±      X.XX=  
 ANGLES = ±      HOLE DIA = ±



PengBanXingYe ShenZhen Technology Co. , Ltd

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: ZL

DESIGNED BY: Sera

APPROVED BY: XL

THE SE DRAWINGS 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

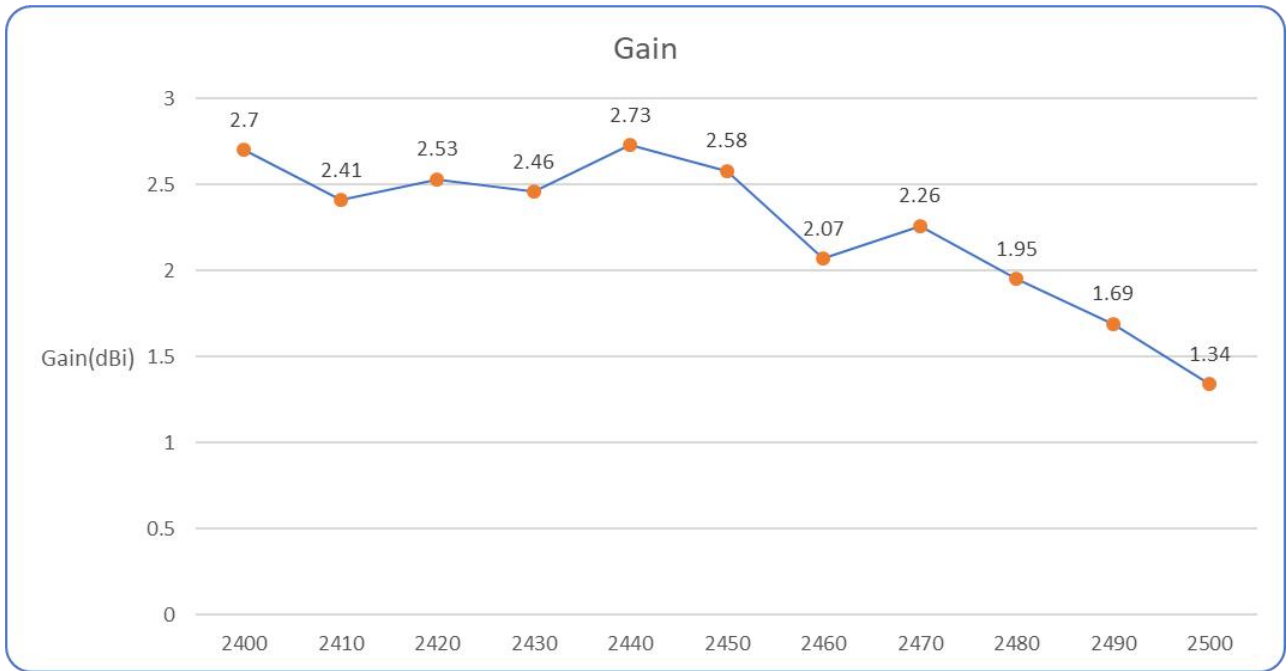
TITLE: CHIP 2450-5021

DOCUMENT NO.

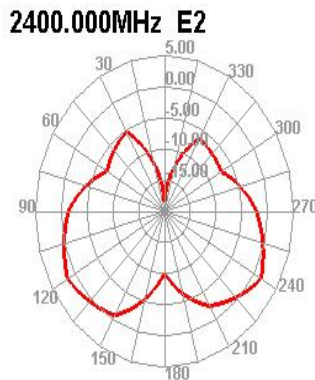
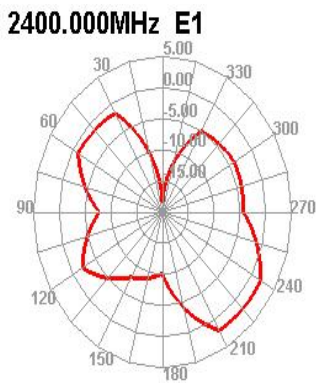
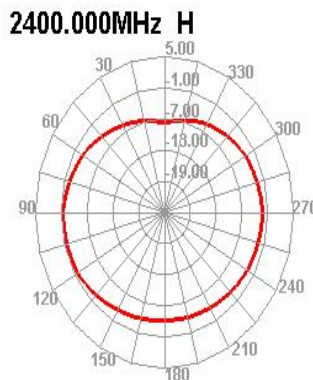
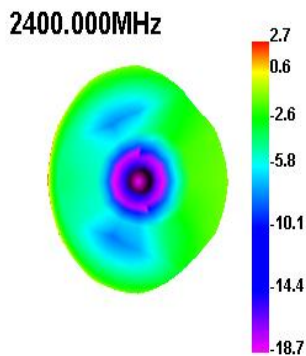
5021

SPEC REV. P1

◎ Maximum gain



◎ 3D Gain Pattern (2400 MHz)



UNLESS OTHER SPECIFIED TOLERANCES ON:  
 $X = \pm$        $X.X = \pm$        $X.XX =$   
**ANGLES =  $\pm$**       **HOLE DIA =  $\pm$**



PengBanXingYe ShenZhen Technology Co. , Ltd

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: ZL

DESIGNED BY: Sera

APPROVED BY: XL

THE SE DRAWINGS 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

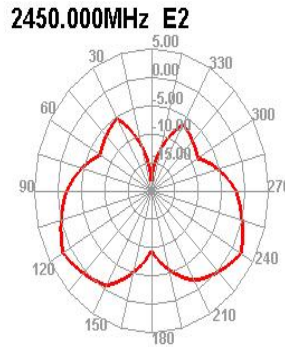
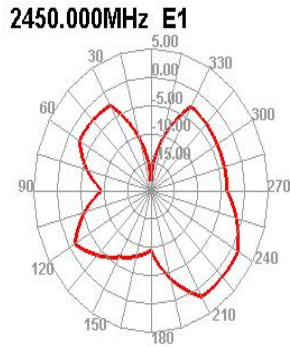
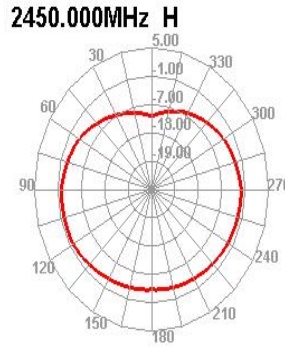
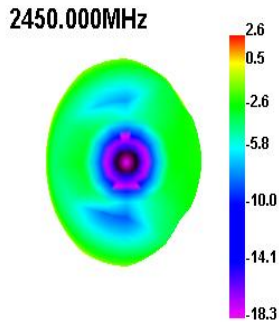
TITLE: CHIP 2450-5021

DOCUMENT NO.

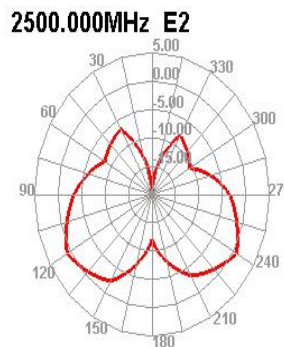
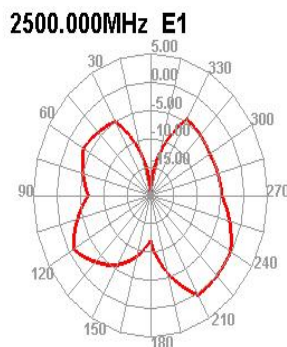
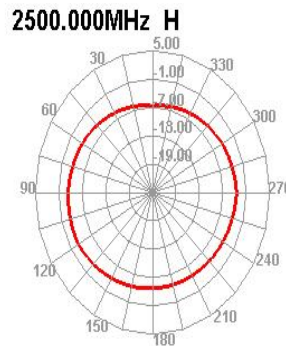
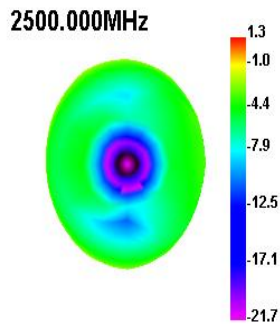
5021

SPEC REV. P1

◎ 3D Gain Pattern (2450 MHz)



◎ 3D Gain Pattern (2500 MHz)



UNLESS OTHER SPECIFIED TOLERANCES ON:  
 X=±      X.X=±      X.XX=  
 ANGLES = ±      HOLE DIA = ±



PengBanXingYe ShenZhen Technology Co. , Ltd

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: ZL

DESIGNED BY: Sera

APPROVED BY: XL

THE SE DRAWINGS 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

TITLE: CHIP 2450-5021

DOCUMENT  
NO.

5021

SPEC REV.  
P1



## 7. Environmental Characteristics

### (1) Reliability Test

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



PengBanXingYe ShenZhen Technology Co. , Ltd

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: ZL

DESIGNED BY: Sera

APPROVED BY: XL

THE SE DRAWINGS 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

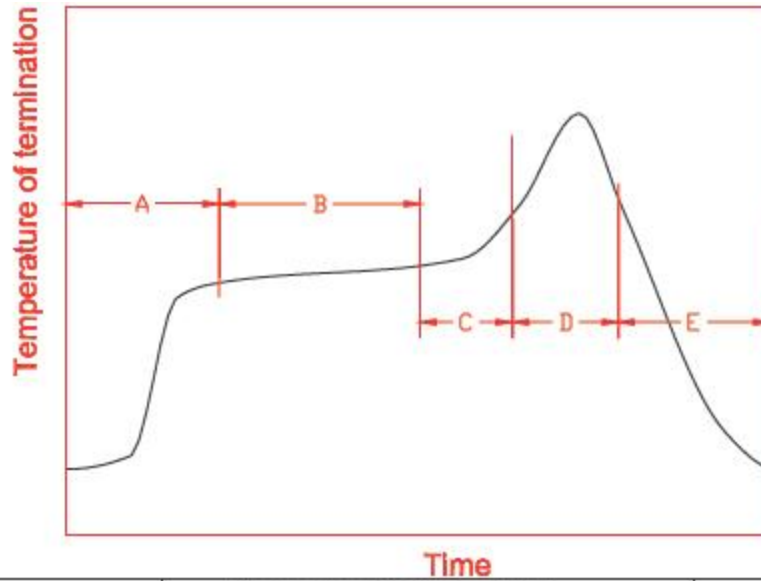
TITLE: CHIP 2450-5021

DOCUMENT  
NO.

5021

SPEC REV.  
P1

## 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
E	Regular cooling	if 260°C	20s~40s
		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.

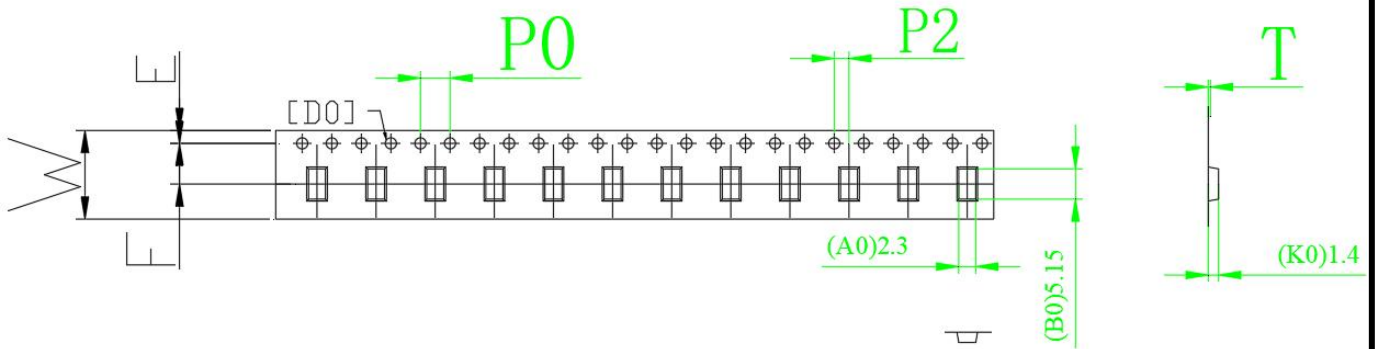
### (2) Soldering Volume

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

UNLESS OTHER SPECIFIED TOLERANCES ON: X=±      X.X=±      X.XX=		 PengBanXingYe ShenZhen Technology Co. , Ltd
ANGLES = ±      HOLE DIA = ±		
SCALE: N/A	UNIT: mm	THE SE DRAWINGS 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: ZL	
DESIGNED BY: Sera	APPROVED BY: XL	
TITLE: CHIP 2450-5021		DOCUMENT NO. <b>5021</b>
		SPEC REV. <b>P1</b>
PAGE 10 OF 11		

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

(1) Quantity/Reel: 3000pcs/Reel



ITEM	W	A0	B0	K0	K1	P	F	E	S0	D0	D1	P0	P2	T
DIM	12.00	2.30	5.15	1.40	0.00	8.00	5.50	1.75	52.40	1.50	0.00	4.00	2.00	0.30

UNLESS OTHER SPECIFIED TOLERANCES ON:  
 $X = \pm$        $X.X = \pm$        $X.XX =$   
**ANGLES =  $\pm$**       **HOLE DIA =  $\pm$**



PengBanXingYe ShenZhen Technology Co. , Ltd

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: ZL

DESIGNED BY: Sera

APPROVED BY: XL

THE SE DRAWINGS 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

TITLE: CHIP 2450-5021

DOCUMENT NO.

5021

SPEC REV. P1