

SPECIFICATIONS

CUSTOMER: _____

DESCRIPTION: _____ Bipolar antenna

CUSTOMER PART No: _____

OUR MODEL NO: _____ PBX3216MA01

DATE: _____

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: $X=\pm$ $X.X=\pm$ $X.XX=$ ANGLES $=\pm$ HOLEDIA $=\pm$		 PengBanXingYe ShenZhen Technology Co. , Ltd	
SCALE: N/A	UNIT: mm	THESE 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: XD		
DESIGNED BY: Sera	APPROVED BY: XD		
TITLE: CHIP2450-3216 Specification		DOCUMENT NO.	SPEC REV.
		3216	P1

PBX3216MA01 Specification

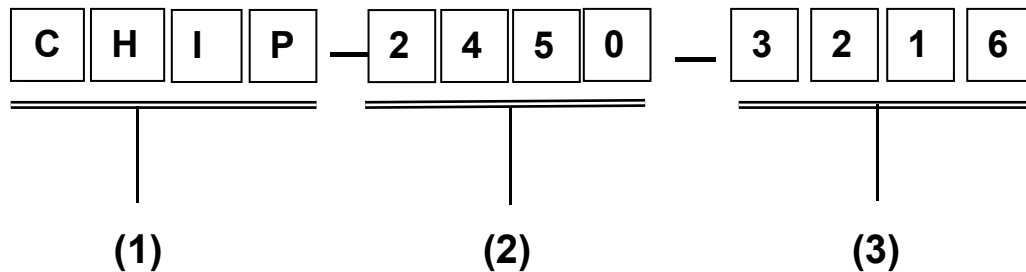
Operating Temp. : -40℃~+85℃

1. FEATURES:

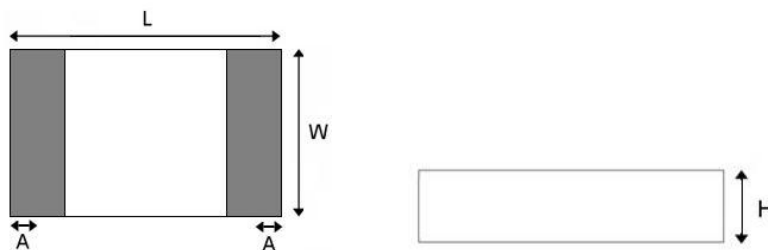
- Light weight, compact
- Wide bandwidth, low cost
- Built-in antenna with high gain

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	0.52±0.1	0.4±0.1

UNLESS OTHER SPECIFIED TOLERANCES ON:

X=± X.X=± X.XX=

A N G L E S = ± H O L E D I A = ±



PengBanXingYe ShenZhen Technology Co. , Ltd

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: XD

DESIGNED BY: Sera

APPROVED BY: XD

THESE 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: CHIP2450-3216 Specification

DOCUMENT
NO.

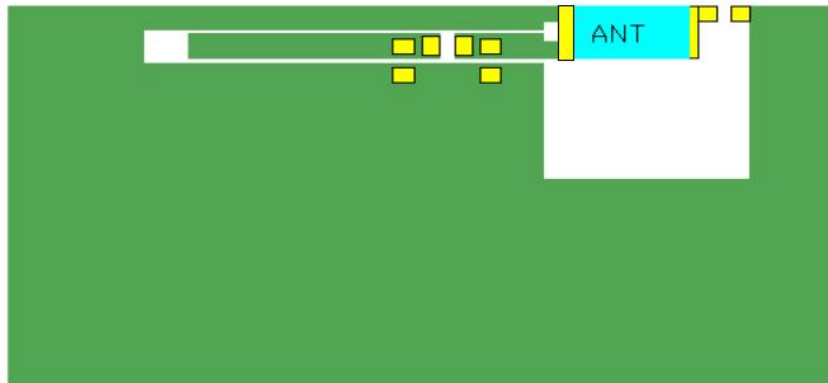
3216

SPEC REV.

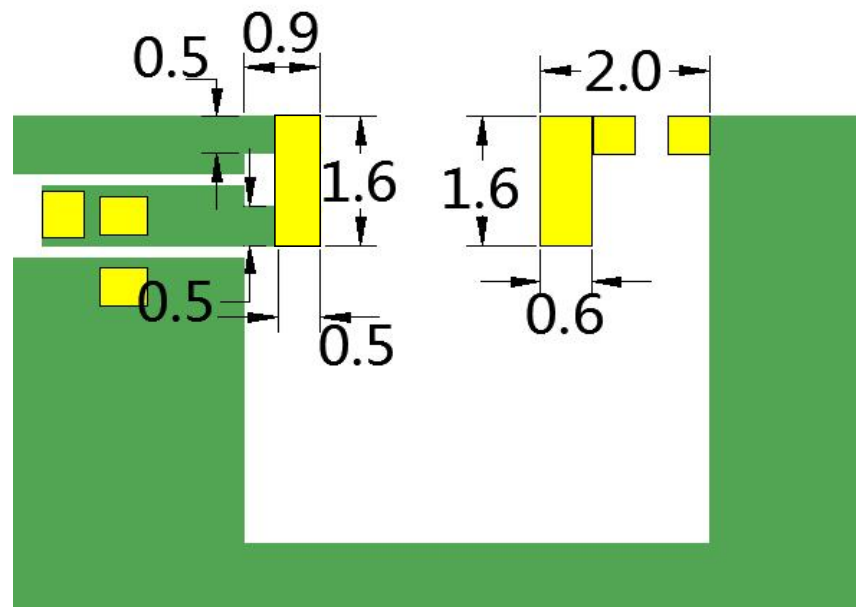
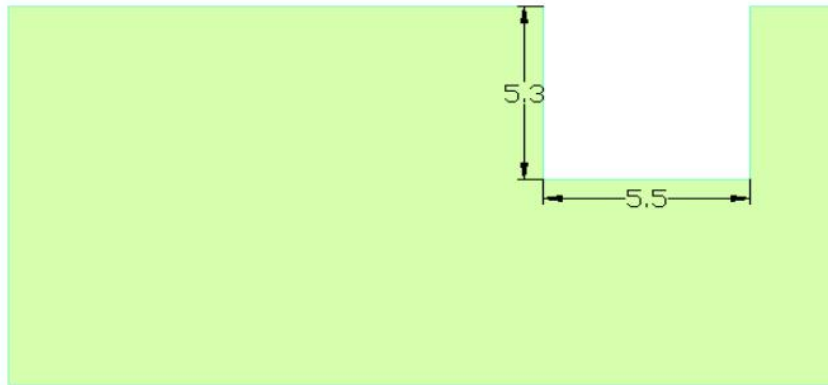
P1

Test plate reference size:

Company: mm



- Antenna
- PAD
- Copper laying on the bottom layer
- Top layer copper laying



UNLESS OTHER SPECIFIED TOLERANCES ON:

$X \pm$ $X.X \pm$ $X.XX =$

ANGLES = $\pm$ HOLES DIA = $\pm$

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: XD

DESIGNED BY: Sera

APPROVED BY: XD



PengBanXingYe ShenZhen Technology Co. , Ltd

THESE 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: CHIP2450-3216 Specification

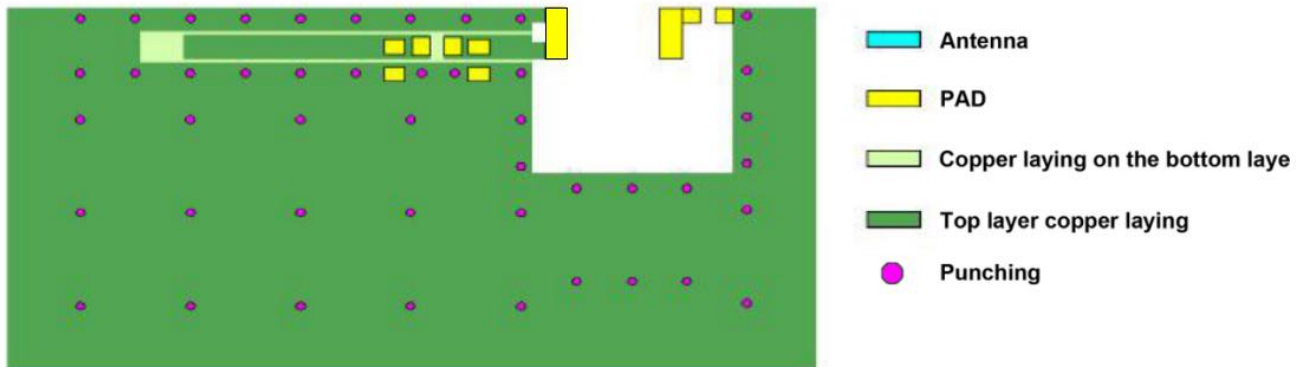
DOCUMENT
NO.

3216

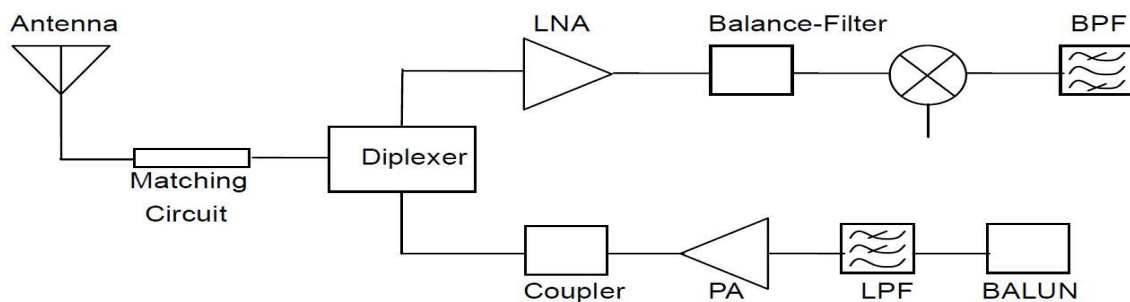
SPEC REV.

P1

Hole punching reference diagram



APPLICATION GUIDE



5. SPECIFICATIONS:

Test Item	Specifications
Bandwidth	2400-2483MHz
Polarization mode	Linear polarization
* Maximum gain	2.67dBi
* Efficiency	72.3%
Input Impedance	50Ω

* Test condition: Test board size 90*40 mm

Matching circuit: Pi matching circuit will be required

UNLESS OTHER SPECIFIED TOLERANCES ON:

X=± X.X=± X.XX=

ANGLES = ± HOLEDIA = ±

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: XD

DESIGNED BY: Sera

APPROVED BY: XD



PengBanXingYe ShenZhen Technology Co. , Ltd

THESE 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: CHIP2450-3216 Specification

DOCUMENT NO.

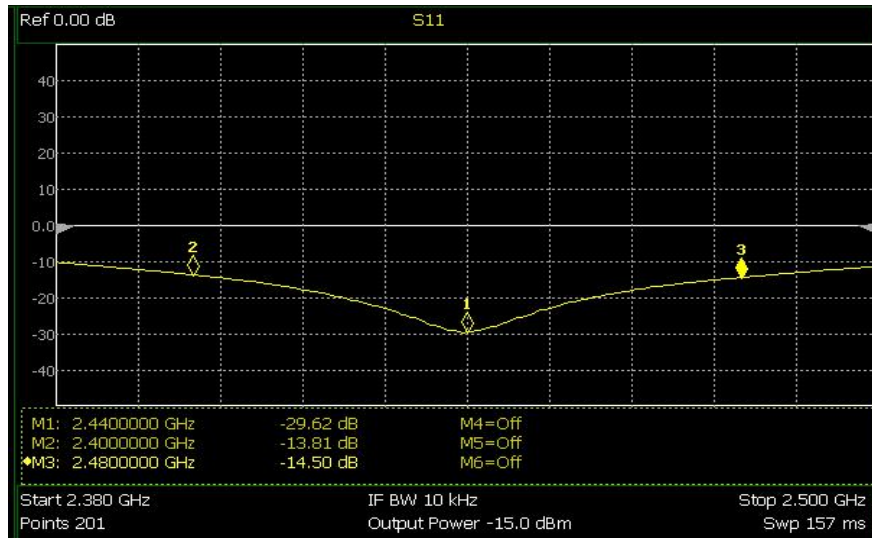
3216

SPEC REV.

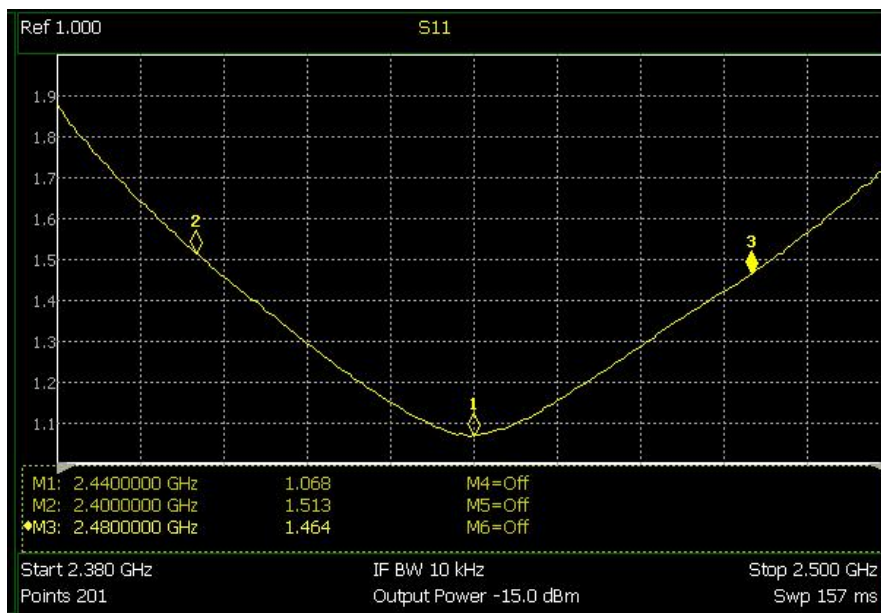
P1

6. Electrical Characteristics :

Return loss



Standing wave ratio



Mark	Frequency	VSWR
1	2400 MHz	1.513
2	2440 MHz	1.068
3	2480 MHz	1.464

UNLESS OTHER SPECIFIED TOLERANCES ON:

X=± X.X=± X.XX=

ANGLES = ± HOLEDIA = ±

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: XD

DESIGNED BY: Sera

APPROVED BY: XD

TITLE: CHIP2450-3216 Specification



PengBanXingYe ShenZhen Technology Co. , Ltd

THESE 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

DOCUMENT NO.

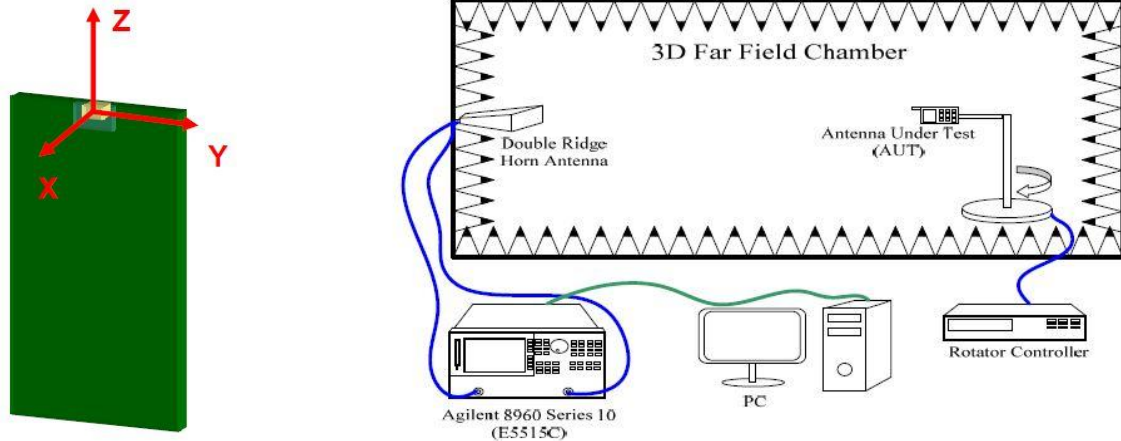
3216

SPEC REV.

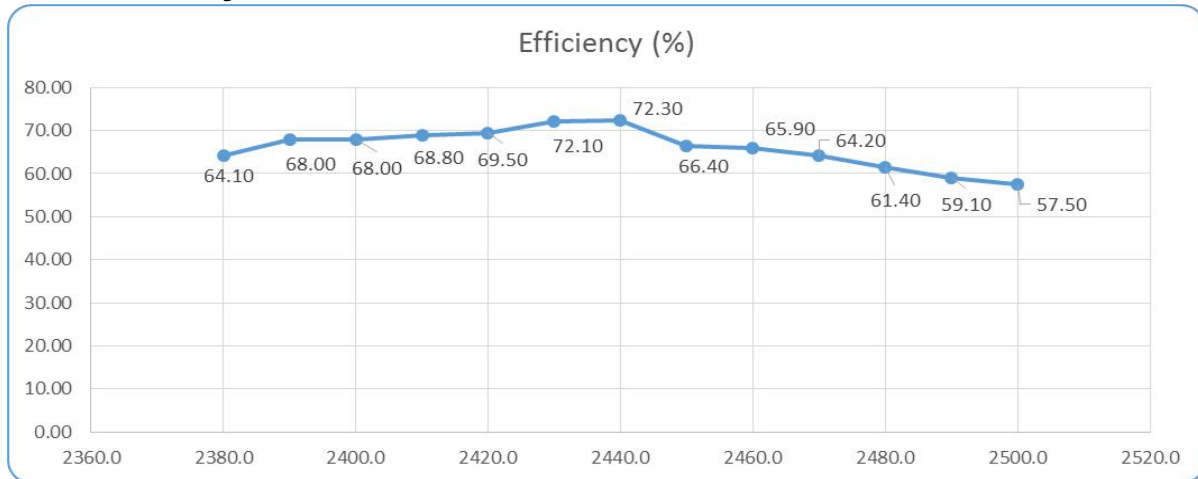
P1

Radiation Pattern

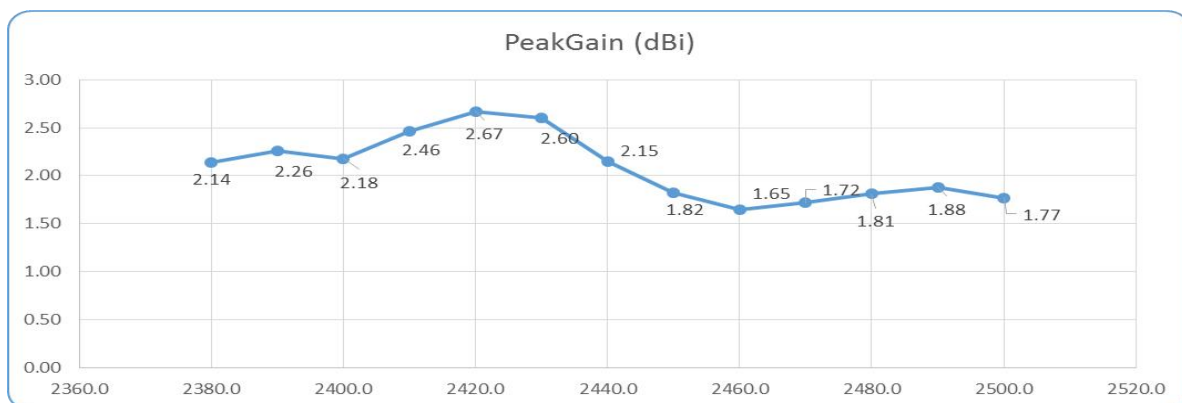
The Gain pattern is measured in FAR-field chamber. DUT is placed on the table of rotator,a standard horn antenna and Vector Network Analyzer is used to collect data.



© Efficiency



Maximum gain



UNLESS OTHER SPECIFIED TOLERANCES ON:

X=± X.X=± X.XX=±
 ANGLES = ± HOLEDIA = ±

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: XD

DESIGNED BY: Sera

APPROVED BY: XD

TITLE: CHIP2450-3216 Specification



PengBanXingYe ShenZhen Technology Co. , Ltd

THESE 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

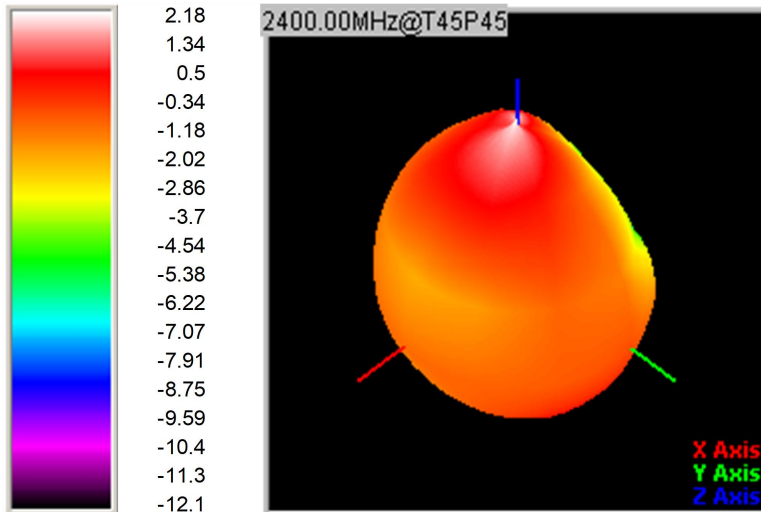
DOCUMENT NO.

3216

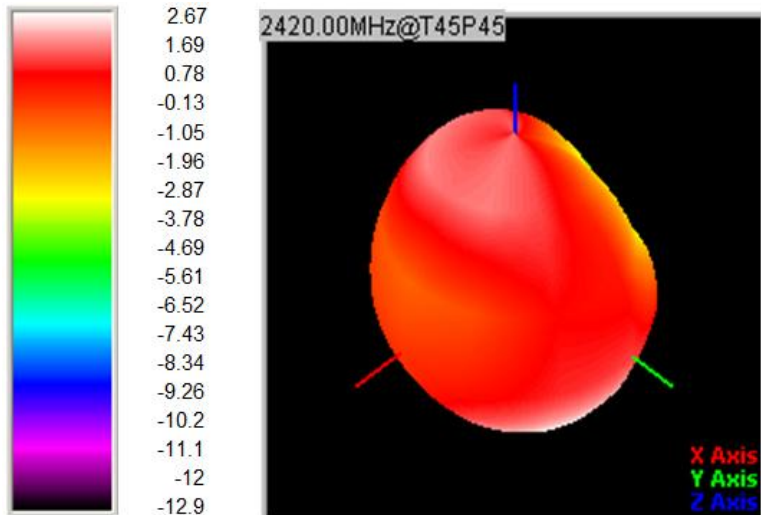
SPEC REV.

P1

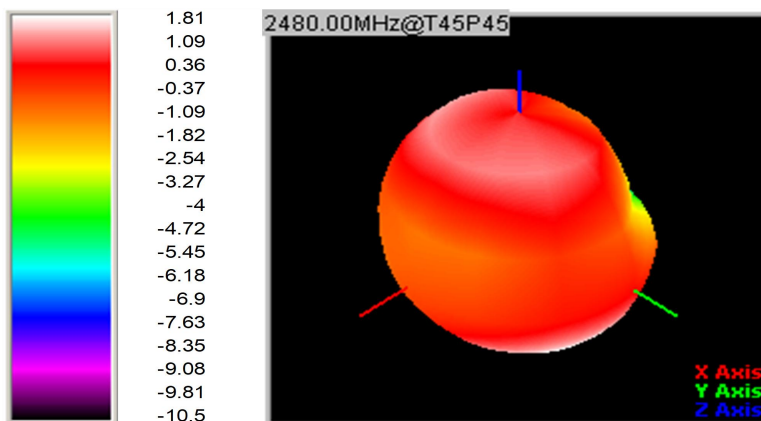
◎ 3D Gain Pattern (2400 MHz)



◎ 3D Gain Pattern (2420 MHz)



◎ 3D Gain Pattern (2480 MHz)



UNLESS OTHER SPECIFIED TOLERANCES ON:

X=± X.X=± X.XX=

ANGLES = ± HOLEDIA = ±

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: XD

DESIGNED BY: Sera

APPROVED BY: XD



PengBanXingYe ShenZhen Technology Co. , Ltd

THESE 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: CHIP2450-3216 Specification

DOCUMENT
NO.

3216

SPEC REV.

P1

7. Environmental Characteristics

(1) Reliability Test

Item	Condition	Specification
Thermal shock	1. 30 ± 3 minutes at $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$, 2. Convert to $+105^{\circ}\text{C}$ (5 minutes) 3. 30 ± 3 minutes at $+105^{\circ}\text{C}\pm 5^{\circ}\text{C}$, 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: $85\pm 5^{\circ}\text{C}$ 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 ± 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 ± 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°C to $+105^{\circ}\text{C}$.

8. Recommended Reflow Soldering

UNLESS OTHER SPECIFIED TOLERANCES ON:

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



PengBanXingYe ShenZhen Technology Co. , Ltd

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: XD

DESIGNED BY: Sera

APPROVED BY: XD

THESE 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

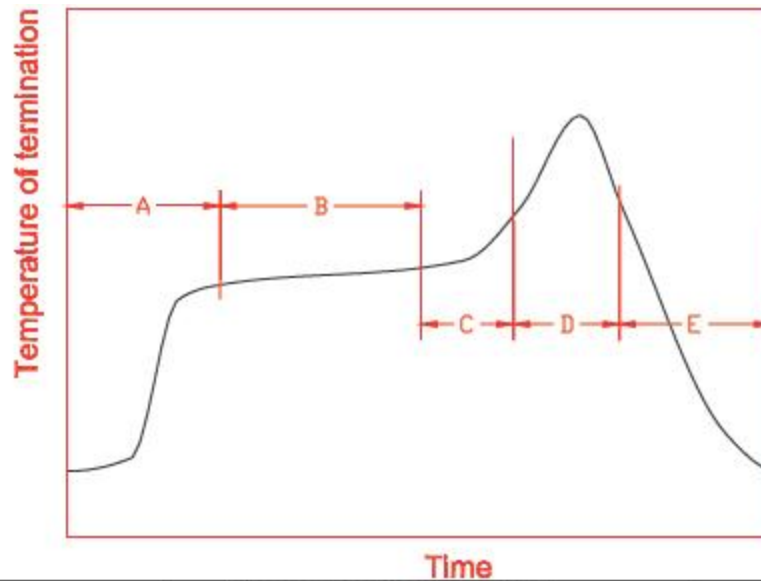
TITLE: CHIP2450-3216 Specification

DOCUMENT
NO.

3216

SPEC REV.

P1



A	1 st rising temperature	The normal to Preheating temperature	30s to 60s
B	Preheating	140°C to 160°C	60s to 120s
C	2 nd 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.

- The tip temperature must be less than 350° C for the period within 3 seconds by using soldering gun under 30 W.
- The soldering gun tip shall not touch this product directly.

(2) Soldering Volume

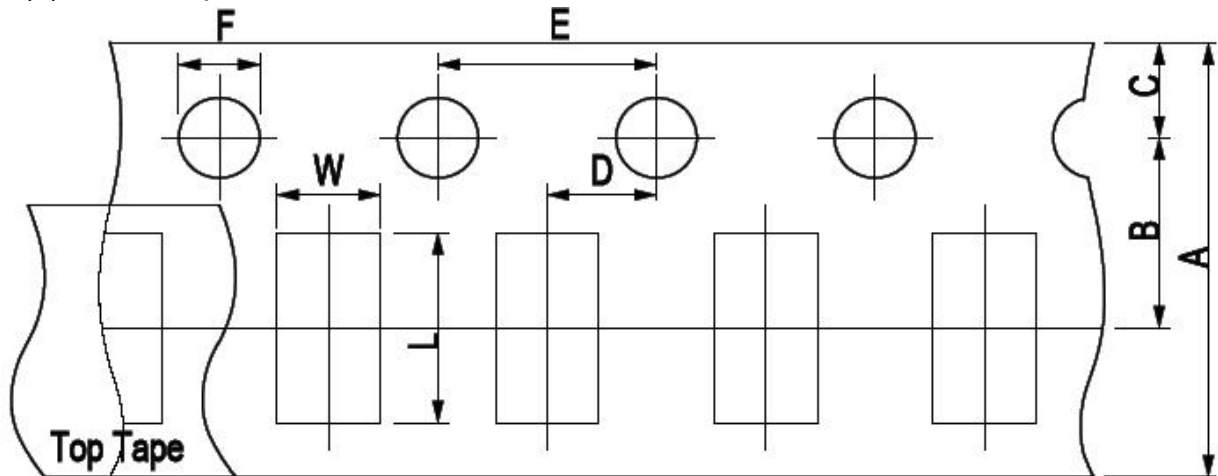
Note that excess of soldering volume will easily get crack the body of this product.

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

(1) Quantity/Reel: 5000pcs/Reel

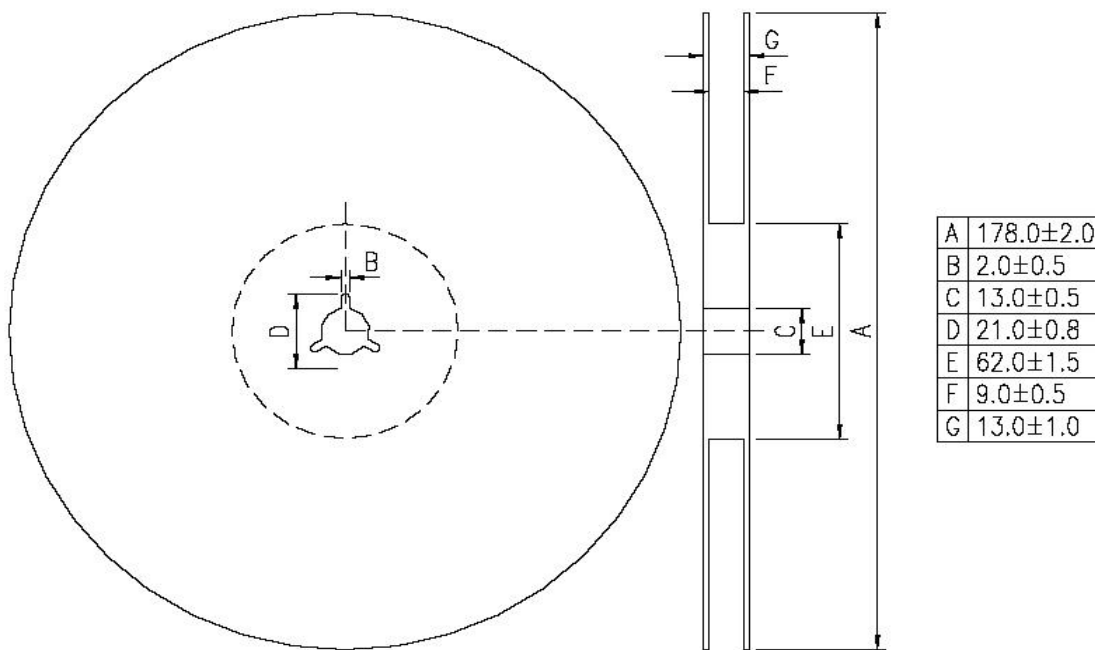
UNLESS OTHER SPECIFIED TOLERANCES ON: X=± X.X=± X.XX=± ANGLES = ± HOLEDIA = ±		 PengBanXingYe ShenZhen Technology Co. , Ltd	
SCALE: N/A	UNIT: mm	THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF PBXY TECHNOLOGY Limited AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION	
DRAWN BY : Sera	CHECKED BY: XD		
DESIGNED BY: Sera	APPROVED BY: XD		
TITLE: CHIP2450-3216 Specification		DOCUMENT NO.	3216
			SPEC REV. P1

(2) Carrier tape dimensions



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

(3) Taping reel dimensions



UNLESS OTHER SPECIFIED TOLERANCES ON:

X=± X.X=± X.XX=

ANGLES = ± HOLEDIA = ±

SCALE: N/A

UNIT: mm

DRAWN BY : Sera

CHECKED BY: XD

DESIGNED BY: Sera

APPROVED BY: XD



PengBanXingYe ShenZhen Technology Co. , Ltd

THESE 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: CHIP2450-3216 Specification

DOCUMENT NO.

3216

SPEC REV.

P1