

Manufacturer: Shenzhen Pipijia technology Co., LTD

Address: 1716 Shangyou Mansion, Yousong Village, Longhua Street, Longhua District, Shenzhen

SPECIFICATIONS

DESCRIPTION: Bluetooth antenna

CUSTOMER PART No:

OUR MODEL NO: **PBX3216MP01**

DATE: 2020/12/22

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: CHIP2450-3216 Specification		DOCUMENT NO.	SPEC REV.
		3216	P1

PBX3216MP01 Specification

Operating Temp. : -40°C~+85°C

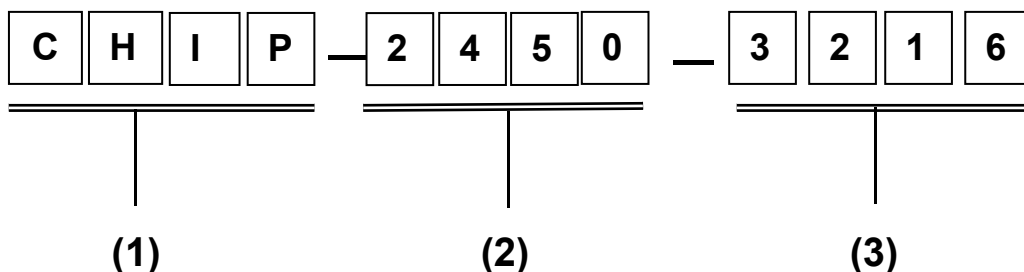
1. FEATURES:

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

2. APPLICATIONS:

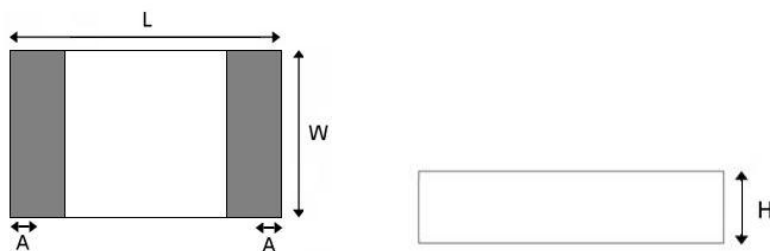
- Bluetooth, Wireless LAN, Mobile TV
- Home RF System, etc

3. PRODUCT IDENTIFICATION



- (1) Product type: Multilayer chip Antenna
(2) Center Frequency: 2450MHz
(3) External Dimensions (L×W) (mm): 3.2*1.6

4. SHAPE AND DIMENSIONS:

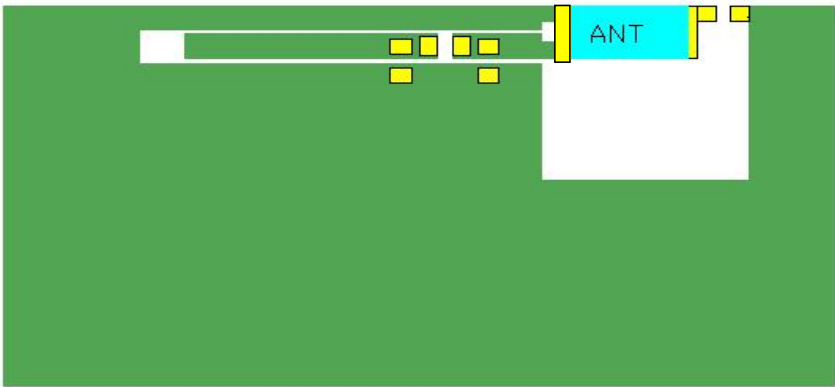


L	W	H	A
3.2±0.2	1.6±0.2	0.52±0.1	0.4±0.1

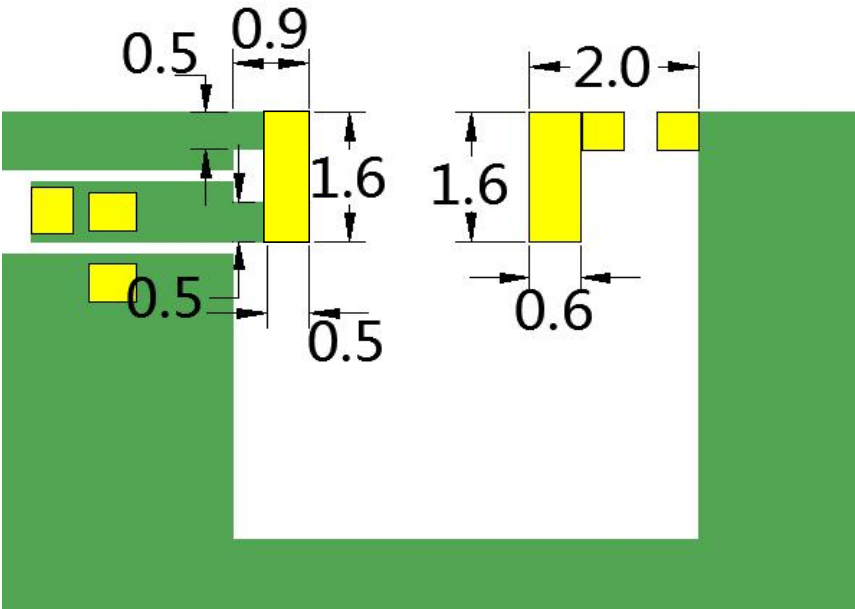
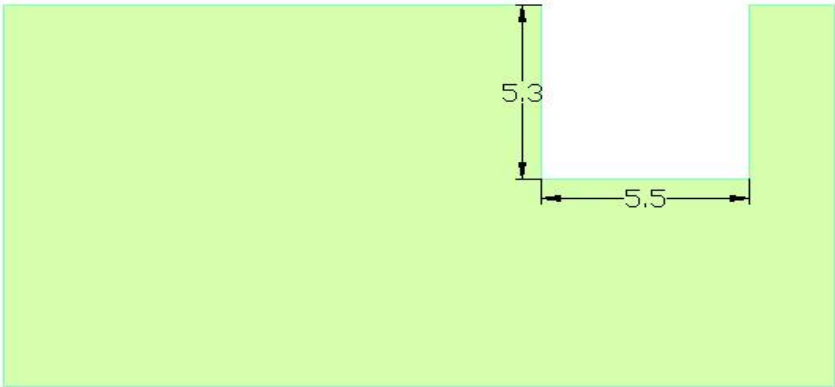
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Test board reference size:

Unit:mm

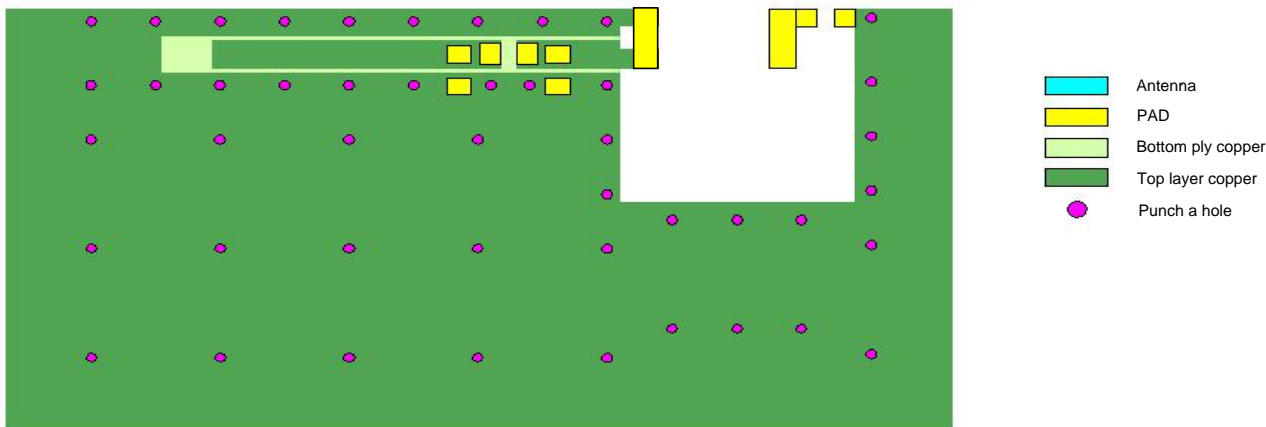


- Antenna
- PAD
- Bottom ply copper
- Top layer copper

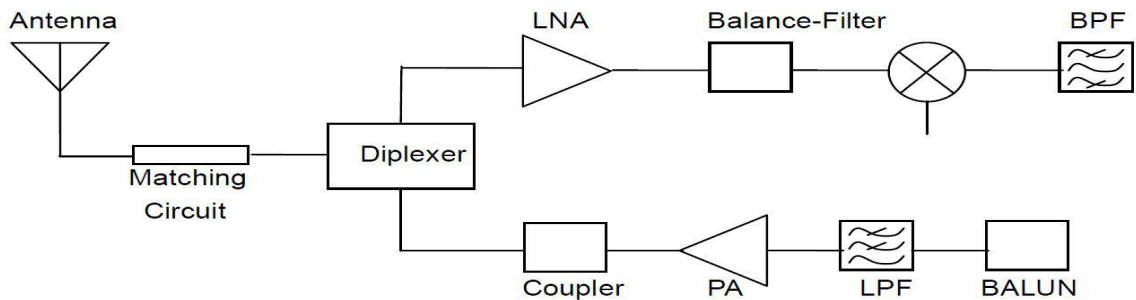


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Reference diagram of punching



APPLICATION GUIDE



5. SPECIFICATIONS:

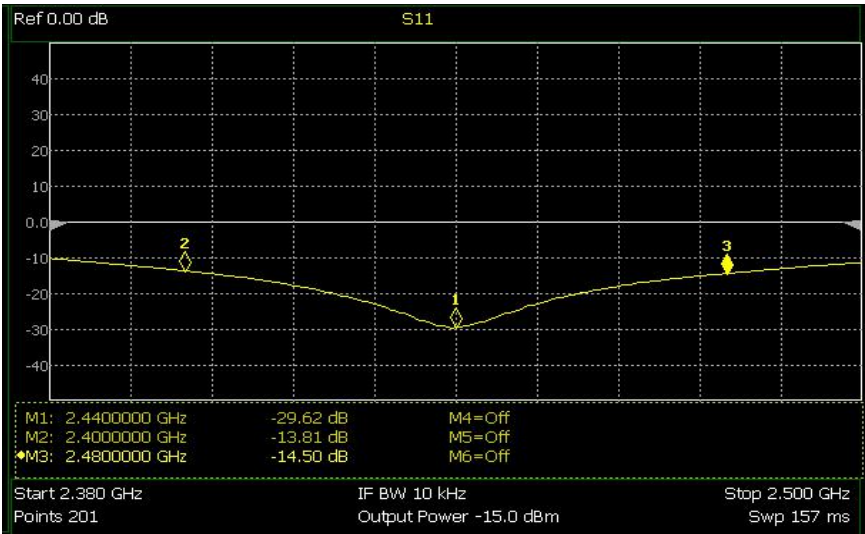
Item of test	Specifications
Bandwidth	2402-2480 MHz
Mode of polarization	Linear polarization
*Maximum gain	2.67dBi
* Efficiency	72.30%
Input impedance	50Ω

Test condition: Test board size 90 40 mm
Matching circuit: Pi matching circuit will be required

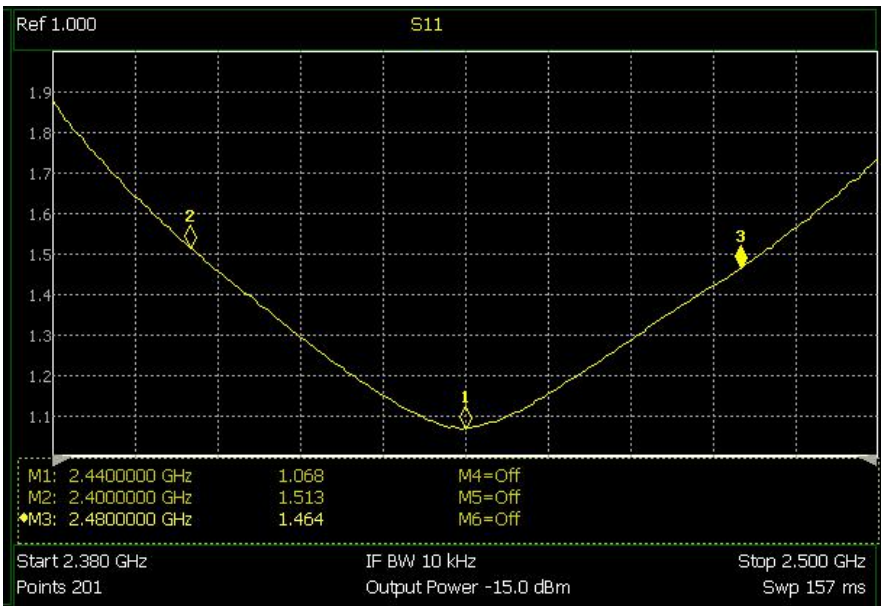
UNLESS OTHER SPECIFIED TOLERANCES ON: X=± X.X=± X.XX=± A N G L E S = ± H O L E D I A = ±		THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF PBXY TECHNOLOGY Limited AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION		
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6. Electrical Characteristics :

Return loss



Standing wave ratio

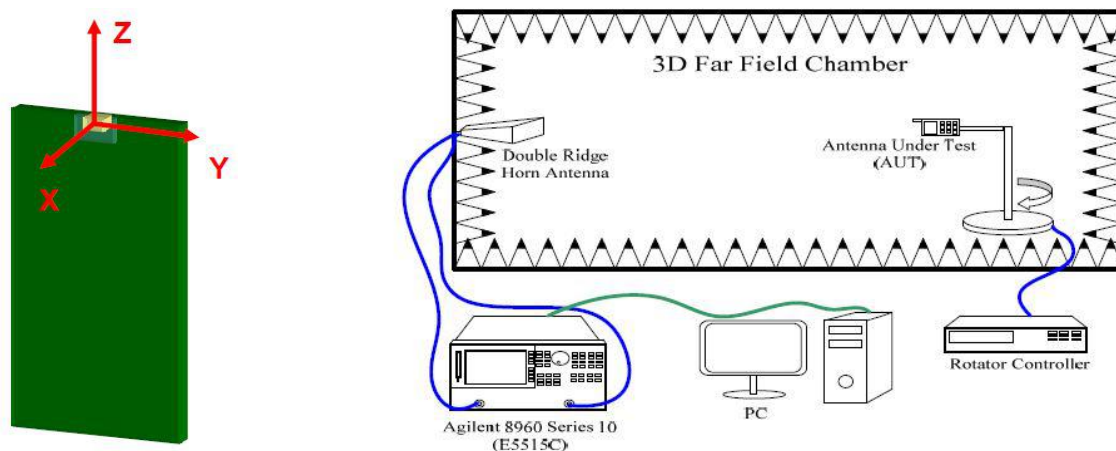


Mark	Frequency	VSWR
1	2400 MHz	1.513
2	2440 MHz	1.068
3	2480 MHz	1.464

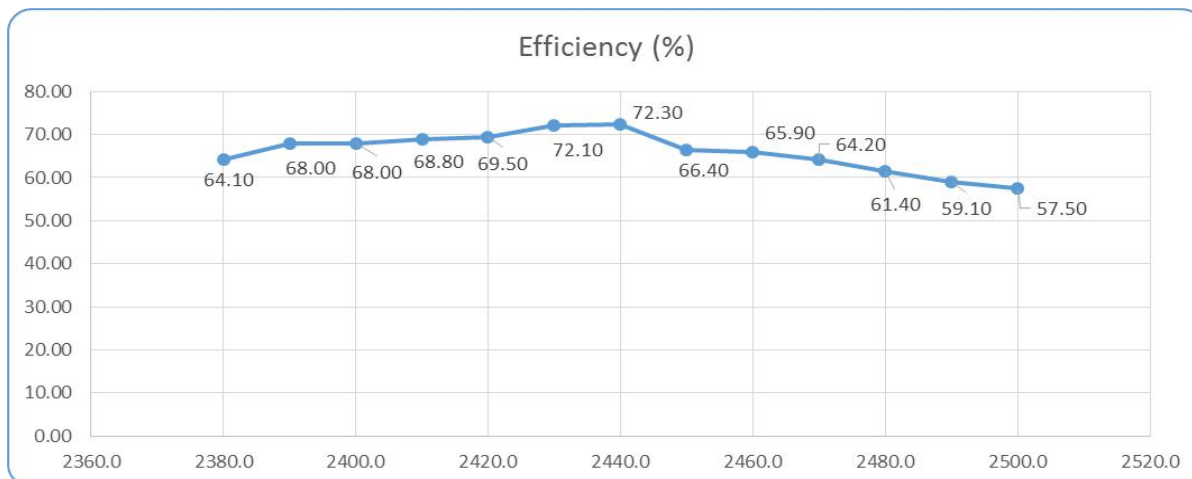
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Radiation Pattern

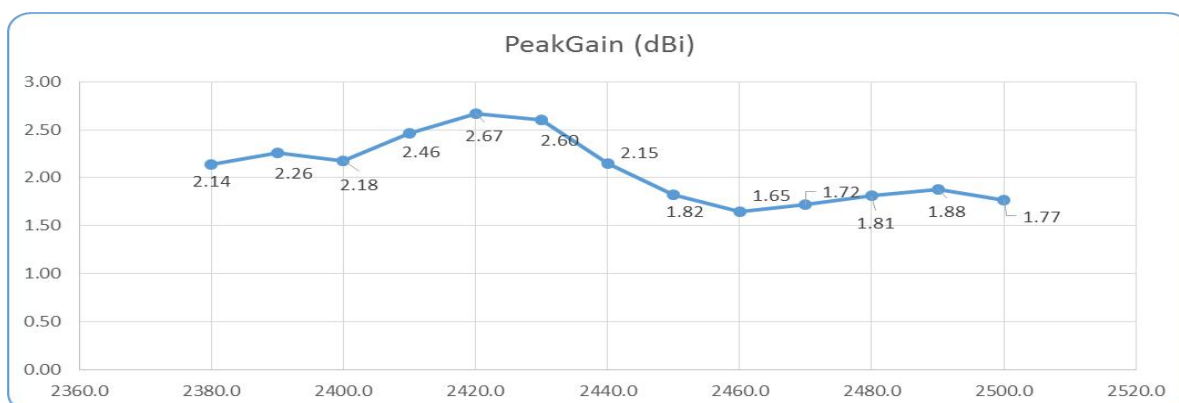
The Gain pattern is measured in FAR-field chamber. DUT is placed on the table of rotator, a standard horn antenna and Vector Network Analyzer is used to collect data.



© Efficiency



Maximum gain



UNLESS OTHER SPECIFIED TOLERANCES ON:

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ANGLES = \pm **HOLEDIA** = \pm

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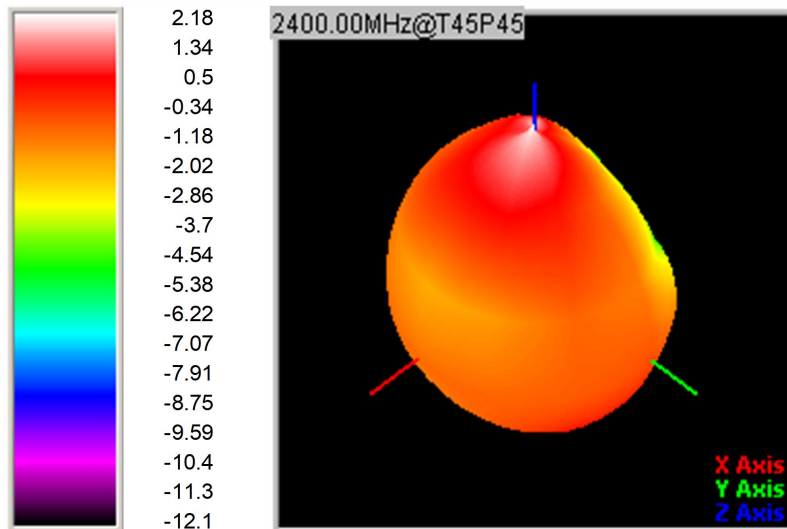
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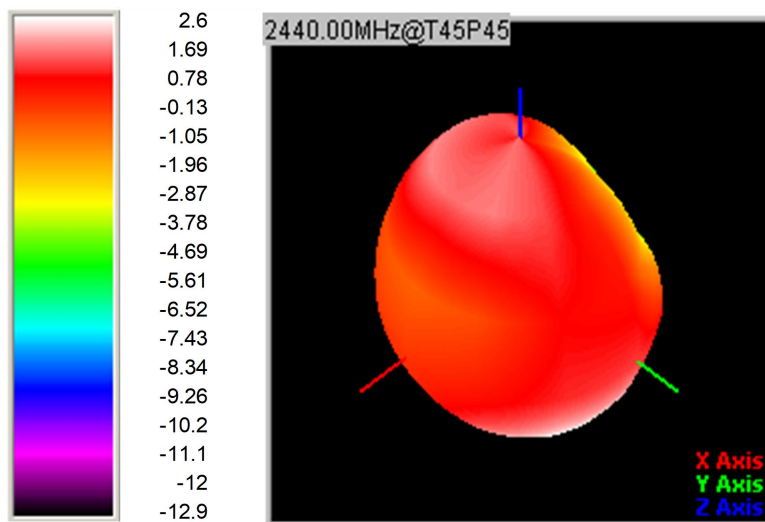
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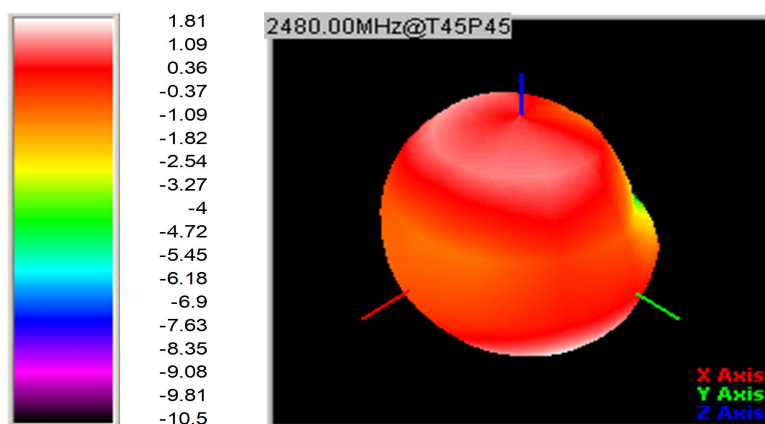
© 3D Gain Pattern (2400 MHz)



© 3D Gain Pattern (2440 MHz)



© 3D Gain Pattern (2480 MHz)



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7. Environmental Characteristics

(1) Reliability Test

Item	Condition	Specification
Thermal shock	1. 30 ± 3 minutes at $-40^{\circ}\text{C}\pm5^{\circ}\text{C}$, 2. Convert to $+105^{\circ}\text{C}$ (5 minutes) 3. 30 ± 3 minutes at $+105^{\circ}\text{C}\pm5^{\circ}\text{C}$, 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: $85\pm5^{\circ}\text{C}$ 3. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
High temperature resistance	1. Temperature: $150^{\circ}\text{C}\pm5^{\circ}\text{C}$ 2. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
Low temperature resistance	1. Temperature: $-40^{\circ}\text{C}\pm5^{\circ}\text{C}$ 2. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
Soldering heat resistance	1. Solder bath temperature : $260\pm5^{\circ}\text{C}$ 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 $245\pm5^{\circ}\text{C}$ for 3 ± 1 seconds.	No apparent damage

(2) Storage Condition

(a) At warehouse:

The temperature should be within $0\sim30^{\circ}\text{C}$ 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 $-40\sim85^{\circ}\text{C}$ and humidity should be less than 85% RH.

(3) Operating Temperature Range

Operating temperature range : -40°C to $+105^{\circ}\text{C}$.

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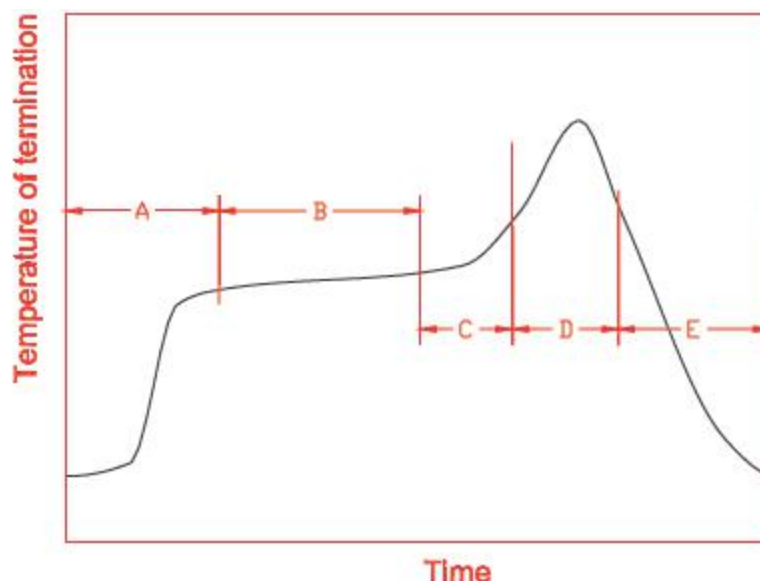
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8. Recommended Reflow Soldering



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

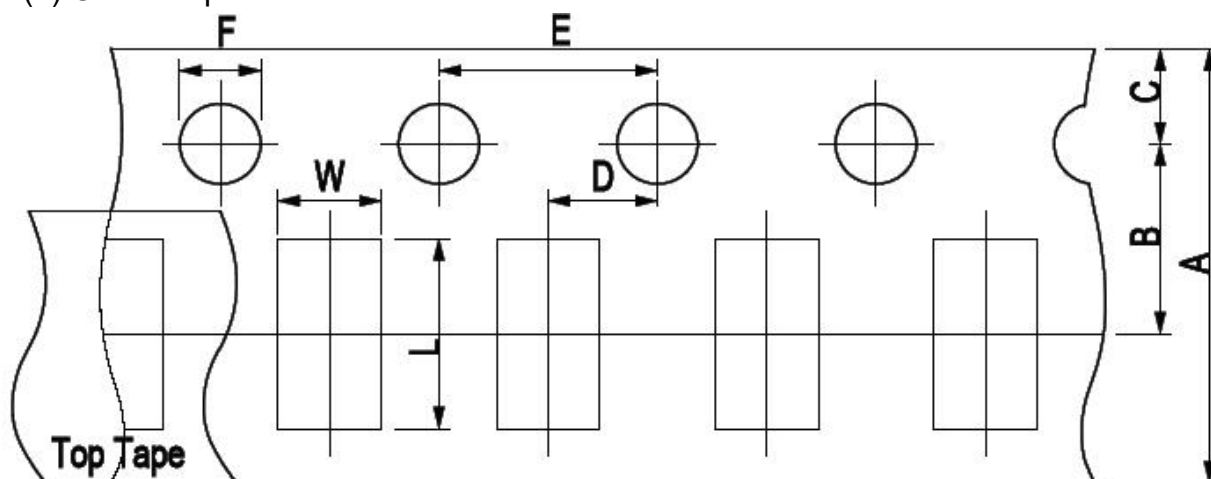
Note that excess of soldering volume will easily get crack the body of this product.

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

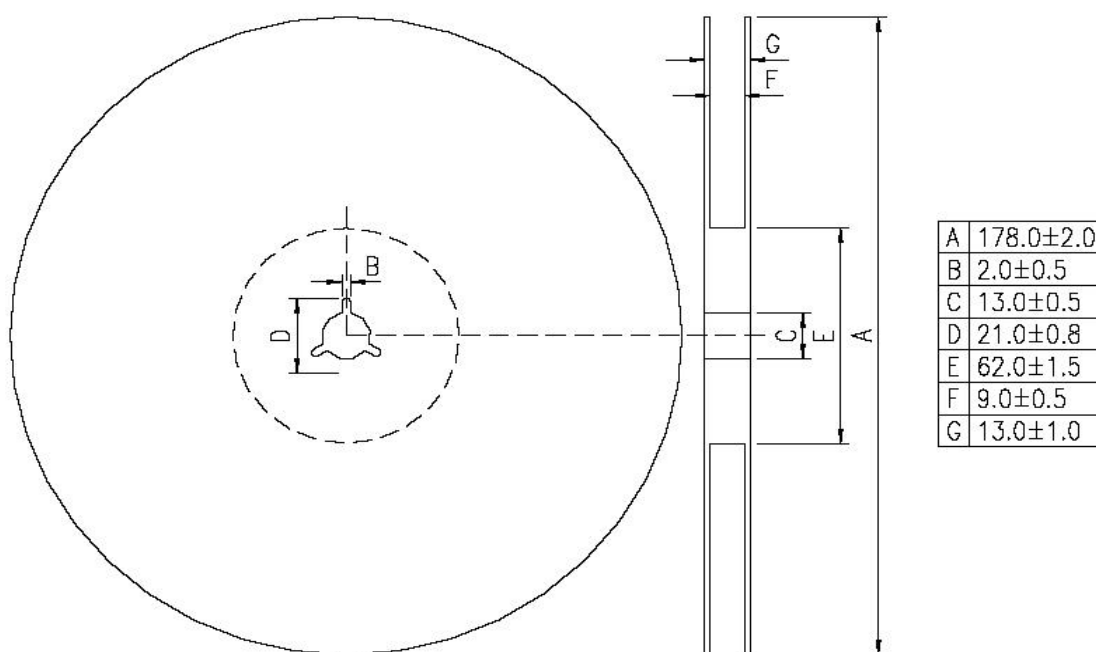
(1) Quantity/Reel: 5000pcs/Reel

(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



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