

# 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
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Customer Acknowledges Signature	
Date	

UNLESS OTHER SPECIFIED TOLERANCES ON:

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



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

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# PBX5021DA01 Specification

Operating Temp. : -40°C~+85°C

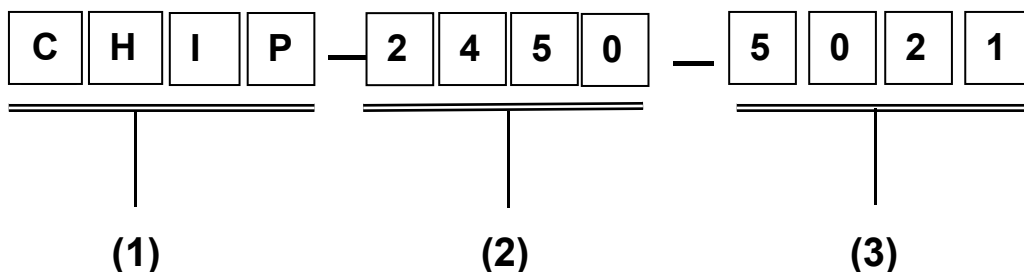
## 1. FEATURES:

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

## 2. APPLICATIONS:

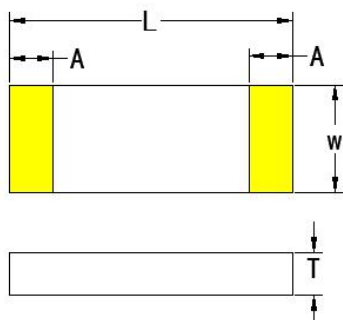
- Bluetooth, Wireless LAN, Mobile TV
- Home RF System, etc

## 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
<b>CHIP-5021</b>	5.0±0.2	2.15±0.2	0.45±0.1	1.15±0.1

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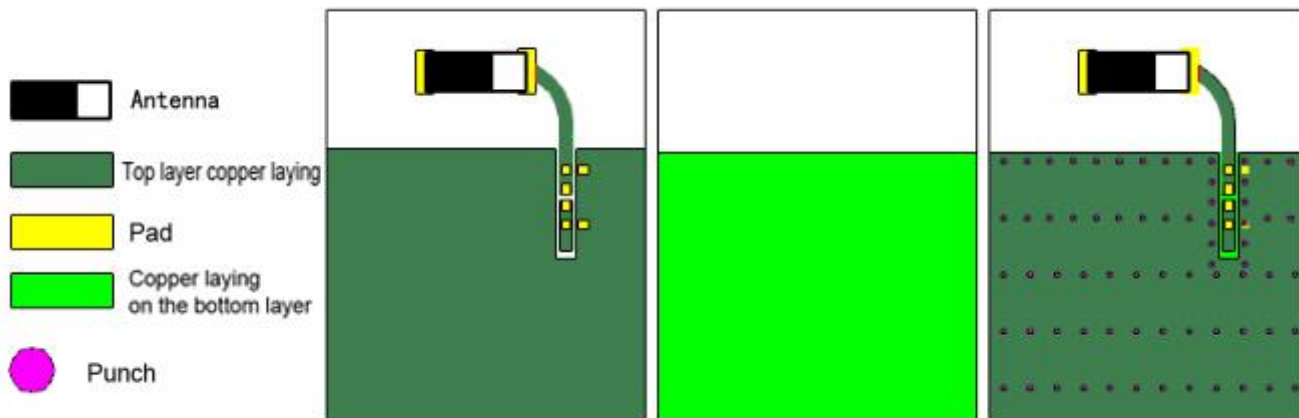
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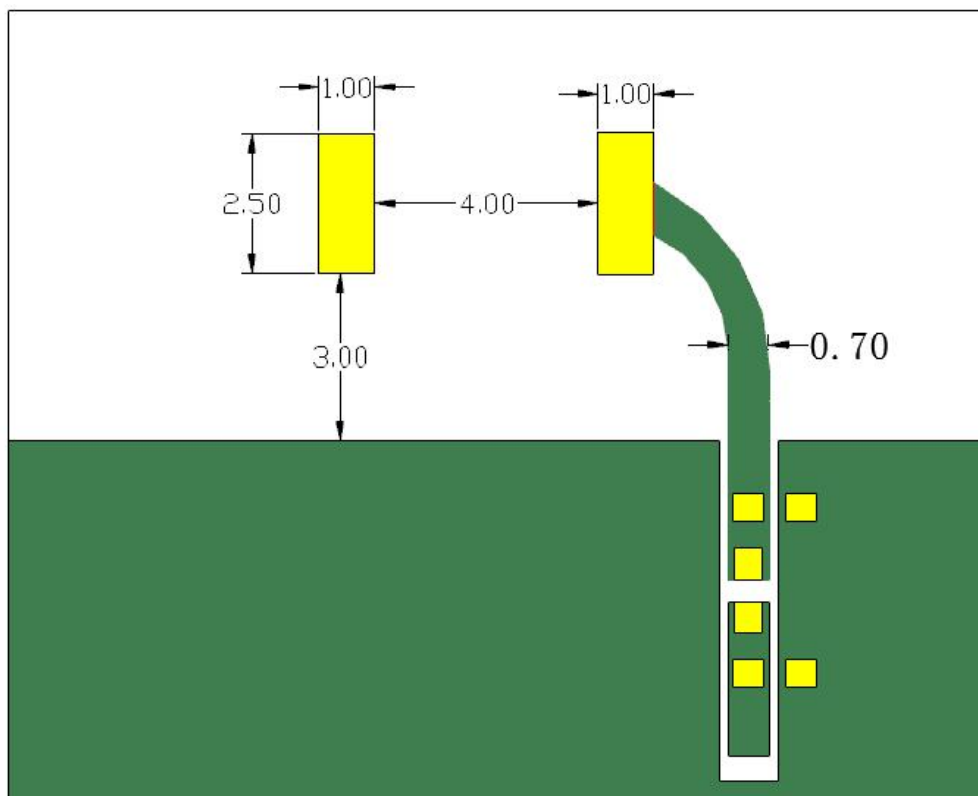
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Test plate reference size:

Company: mm



**PBX5021DA01 Size of solder pad:**



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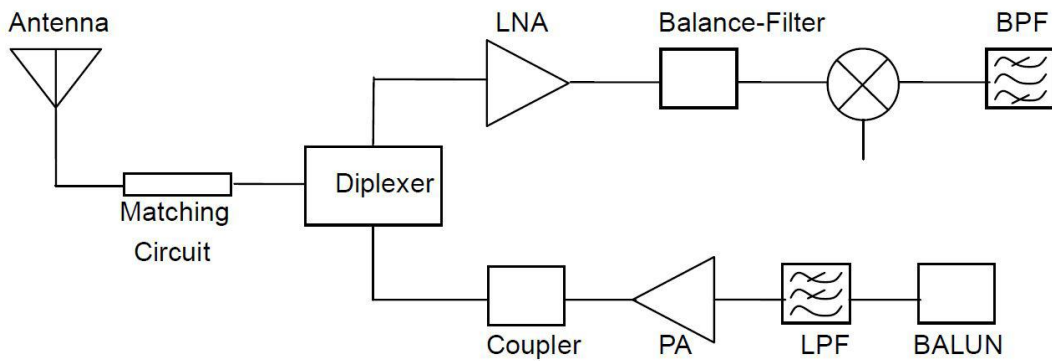
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### APPLICATION GUIDE



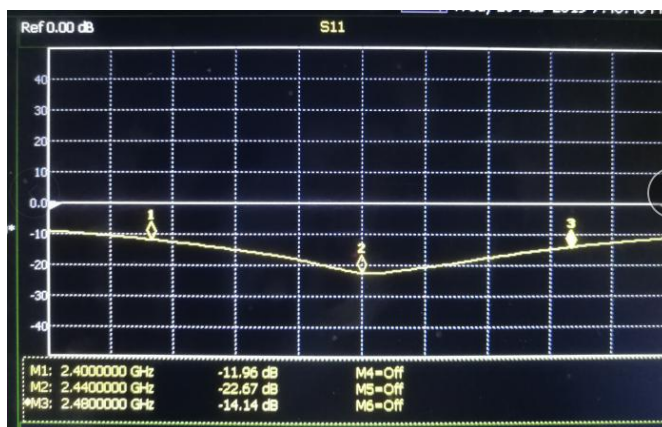
### 5. SPECIFICATIONS:

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



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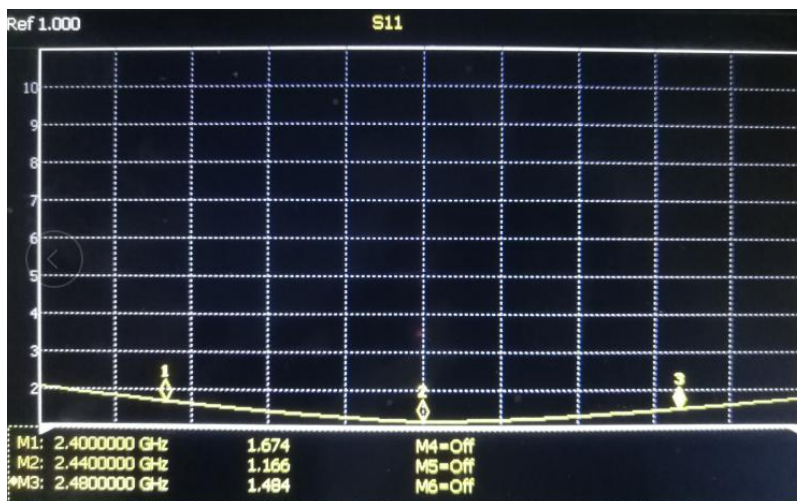
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### Standing Wave Ratio



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

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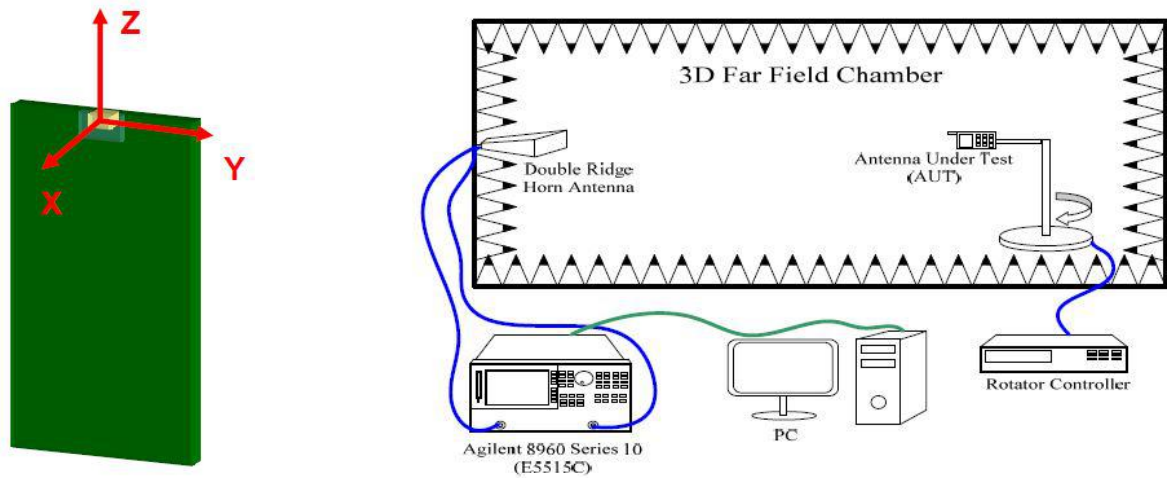
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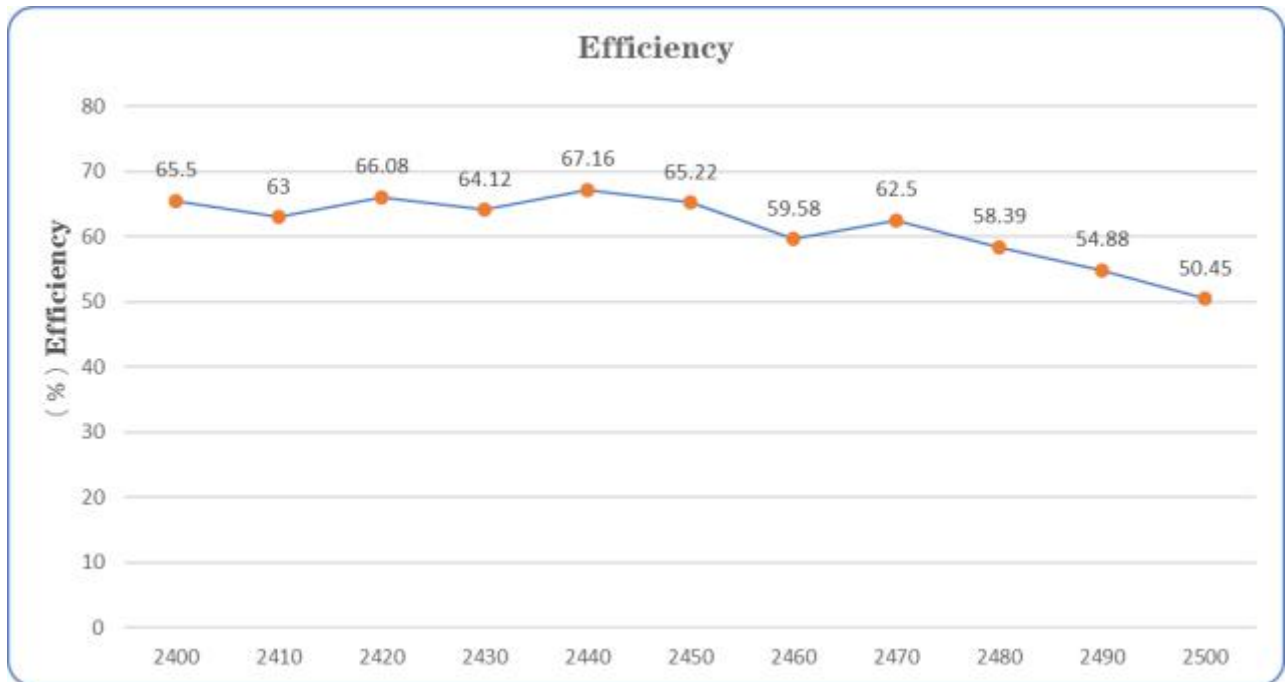
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### Radiation Pattern

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



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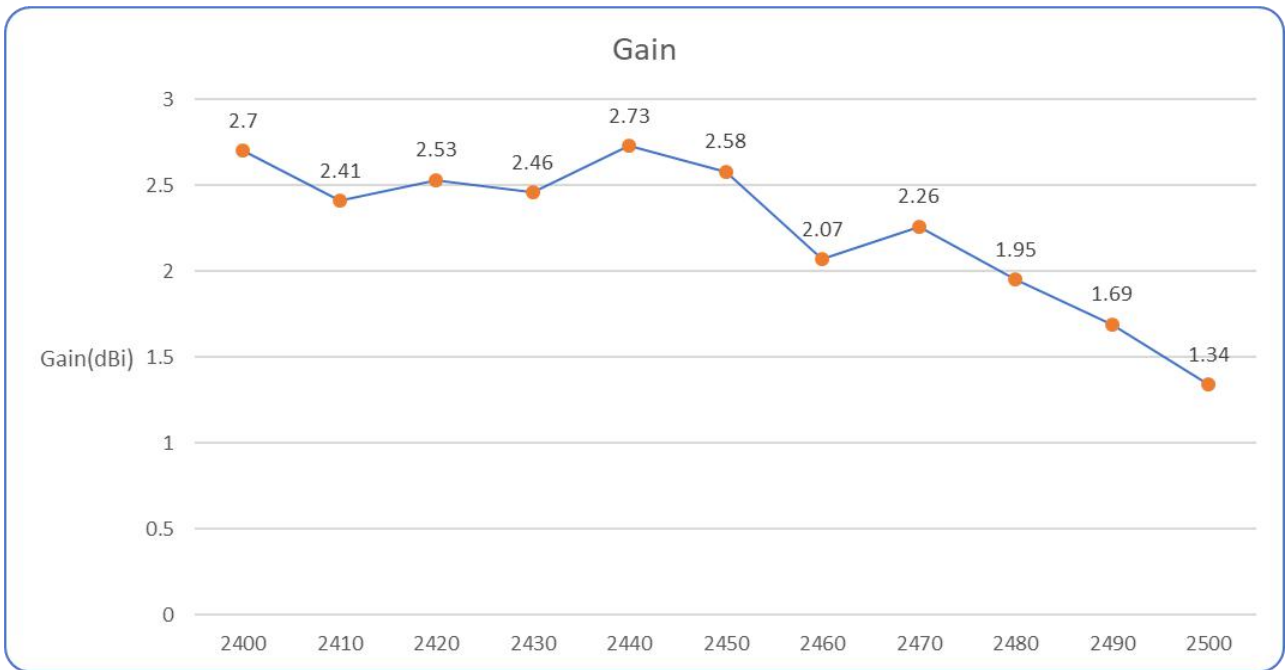
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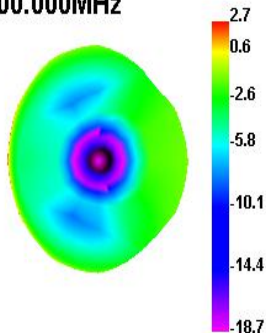


◎ Maximum gain

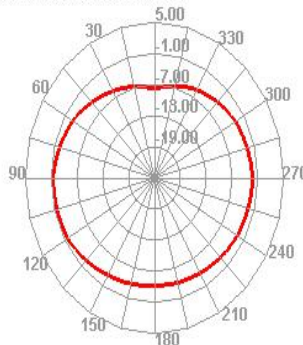


◎ 3D Gain Pattern (2400 MHz)

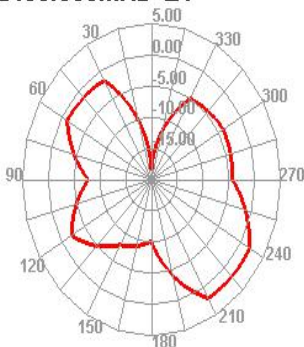
2400.000MHz



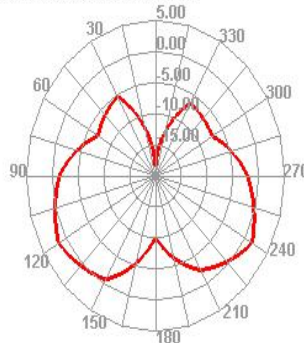
2400.000MHz H



2400.000MHz E1



2400.000MHz E2



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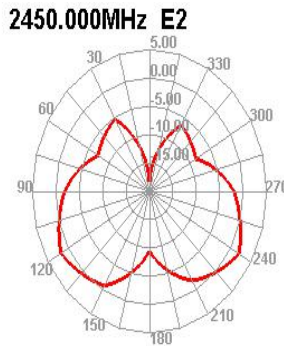
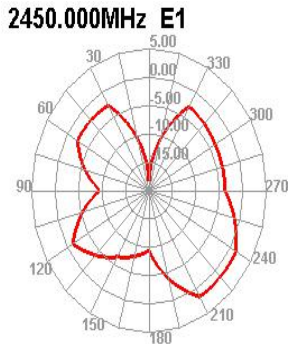
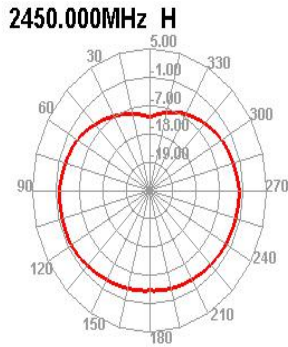
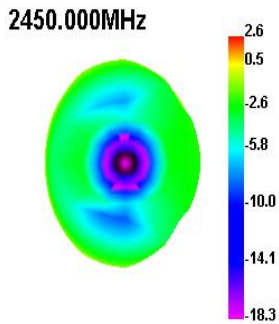
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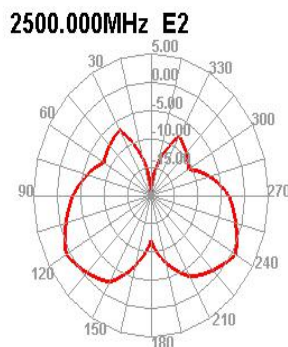
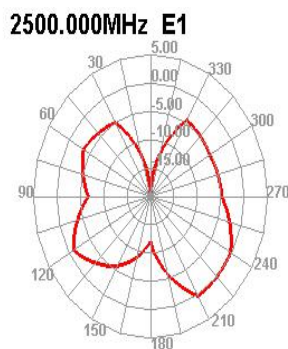
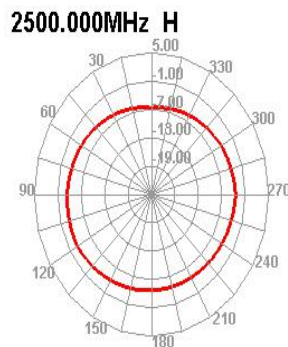
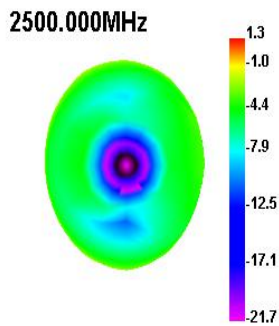
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◎ 3D Gain Pattern (2450 MHz)



◎ 3D Gain Pattern (2500 MHz)



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## 7. 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°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±5°C for 3±1 seconds.	No apparent damage

### (2) Storage Condition

#### (a) At warehouse:

The temperature should be within 0 ~ 30°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 -40~85°C and humidity should be less than 85% RH.

### (3) Operating Temperature Range

Operating temperature range : -40°C to +105°C.

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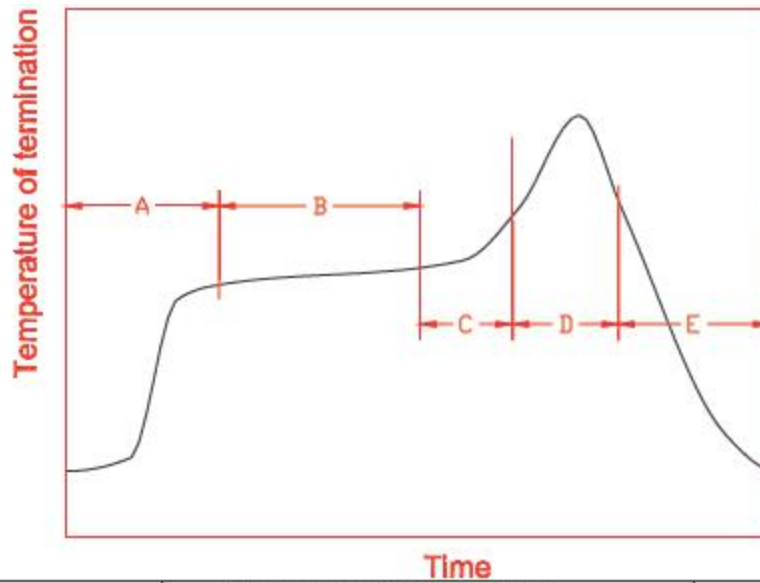
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## 8. Recommended Reflow Soldering



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.

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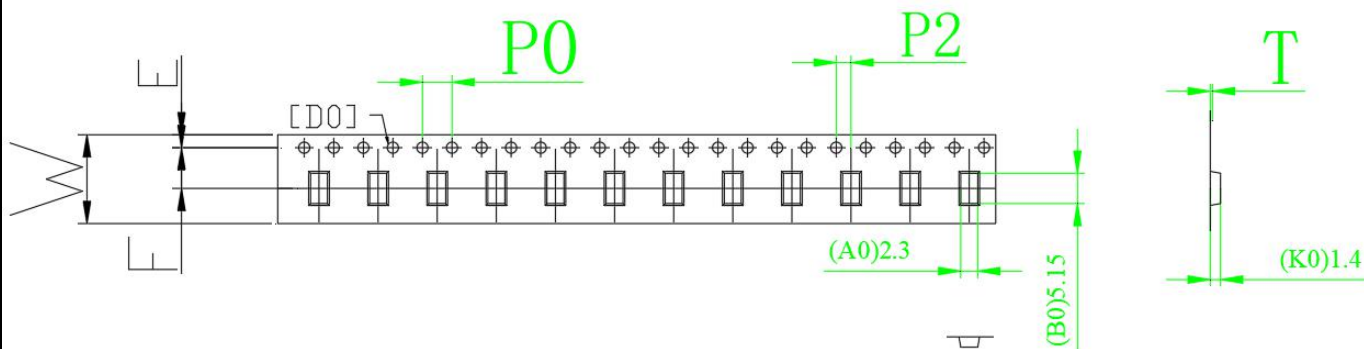
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### 9. Taping Package and Label Marking: (unit: mm)

(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

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