

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: **PBX2012MA08**

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	
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Customer Acknowledges Signature	
Date	

UNLESS OTHER SPECIFIED TOLERANCES ON:

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

SCALE: N/A

DRAWN BY: Sera

DESIGNED BY: Sera



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## PBX2012MA08 Specification

Operating Temp. : -40°C~+85°C

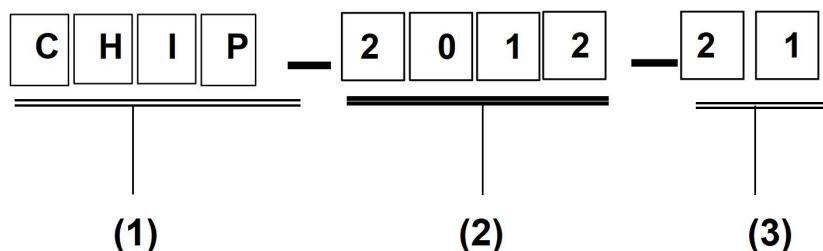
### 1. FEATURES:

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

### 2. APPLICATIONS:

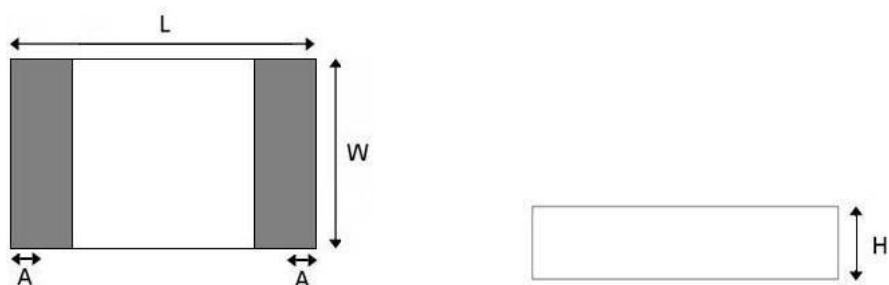
- Bluetooth, Wireless LAN, Mobile TV
- Home RF System, etc

### 3. PRODUCT IDENTIFICATION



(1) Product type: Multilayer chip Antenna  
 (2) 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

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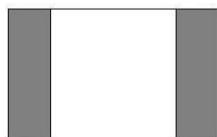
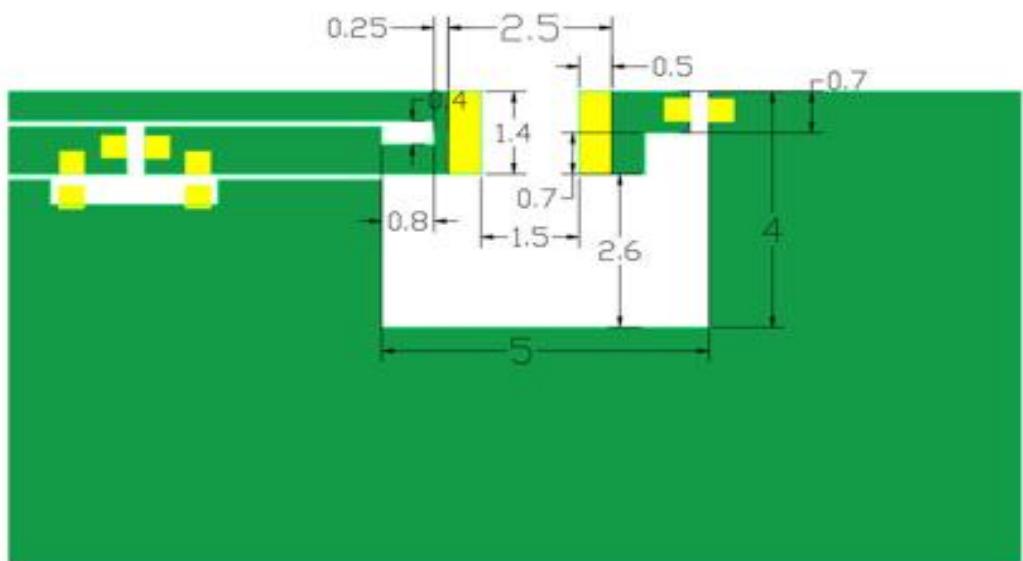
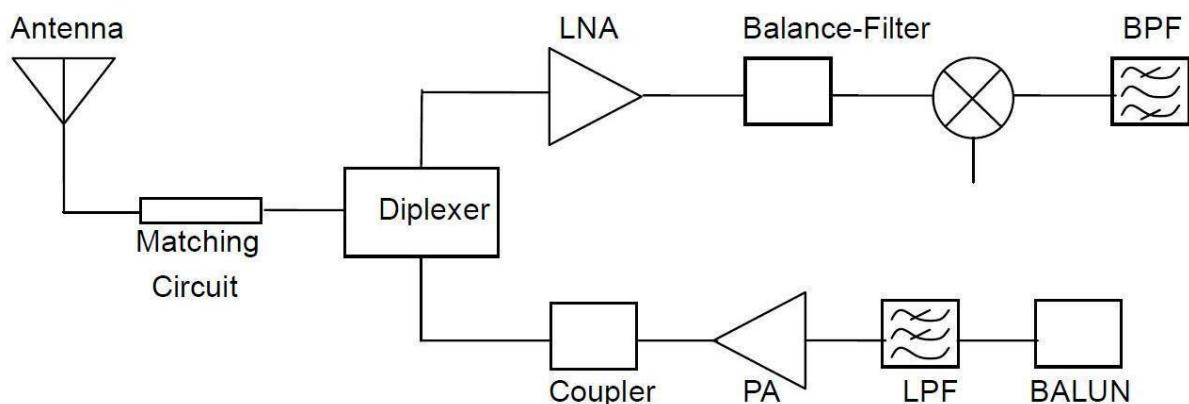
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**TERMINAL-CONFIGURATION****EVALUATION BOARD****APPLICATION GUIDE**

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$X = \pm$	$X.X = \pm$	$X.XX = \pm$
<b>ANGLES</b> = $\pm$	<b>HOLE DIA</b> = $\pm$	

SCALE: N/A

DRAWN BY : Sera

DESIGNED BY: Sera

UNIT: mm

CHECKED BY: XD

APPROVED BY: XD



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## 5. SPECIFICATIONS:

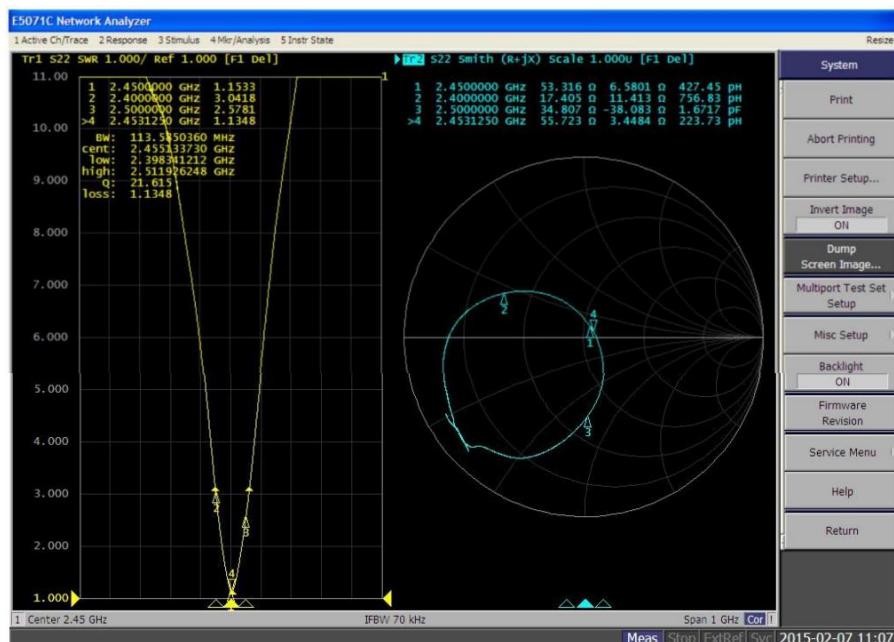
Test Item	Specifications
Bandwidth	2400-2500MHz
Polarization mode	Linear polarization
* Maximum gain	2.8dBi
* Efficiency	72.30%
Input Impedance	50Ω

\* 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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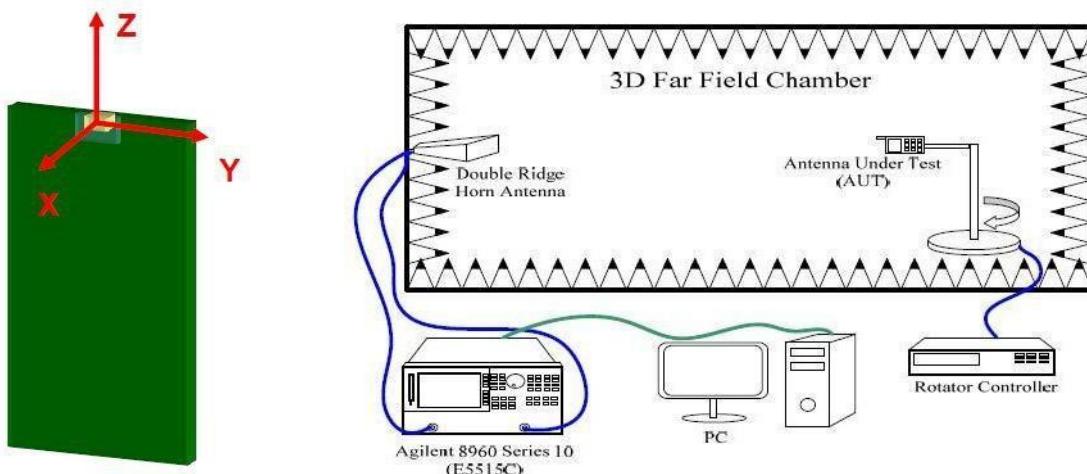
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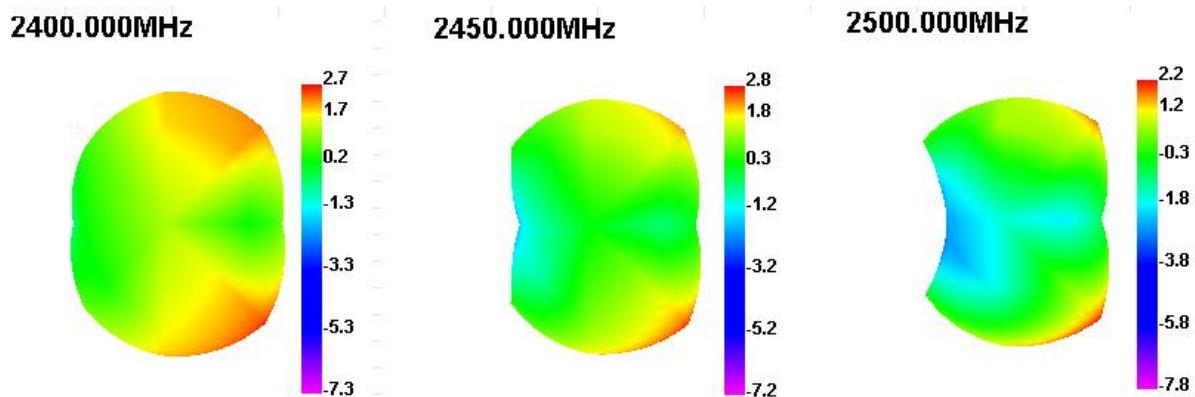
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## Radiation Pattern

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.



### ◎ 3D Gain Pattern (2400 MHz-2500MHz)



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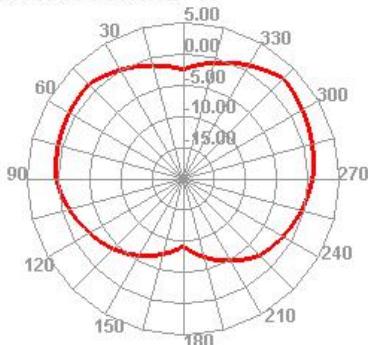
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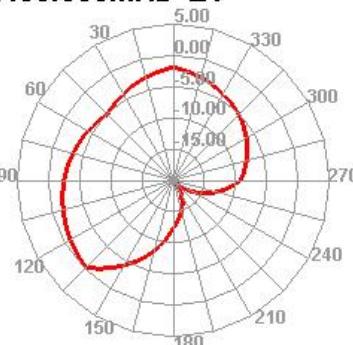
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## ◎ 2D Gain Pattern (2400 MHz-2500MHz)

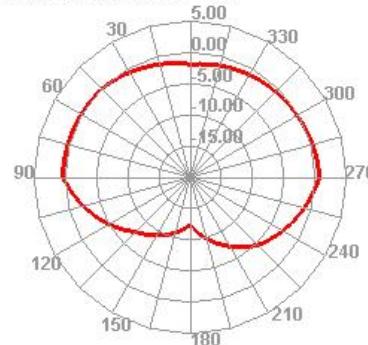
2400.000MHz H



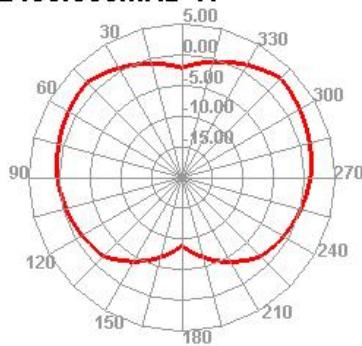
2400.000MHz E1



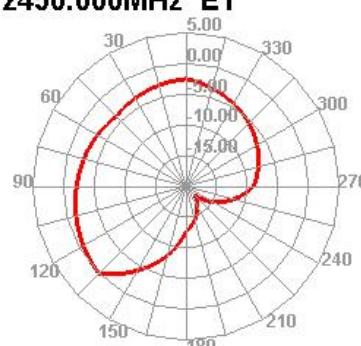
2400.000MHz E2



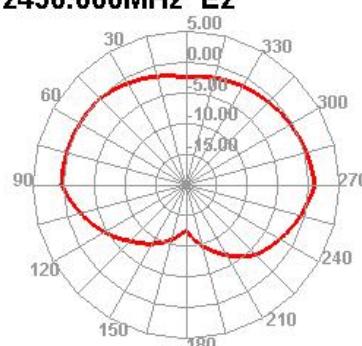
2450.000MHz H



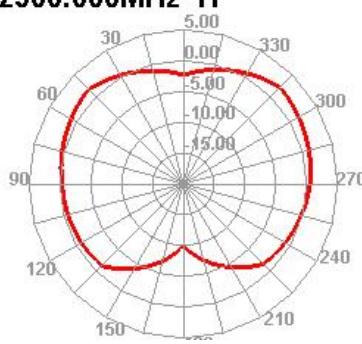
2450.000MHz E1



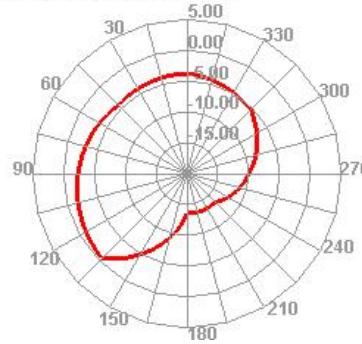
2450.000MHz E2



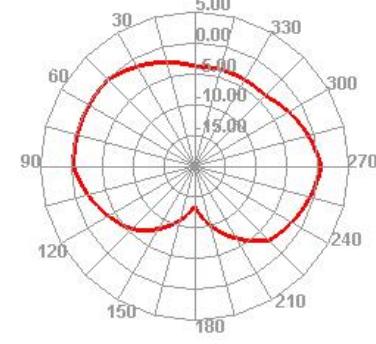
2500.000MHz H



2500.000MHz E1



2500.000MHz E2



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<b>ANGLES</b> = $\pm$	<b>HOLES</b> = $\pm$	<b>DIAMETER</b> = $\pm$

SCALE: N/A

DRAWN BY : Sera

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UNIT: mm

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## Environmental Characteristics

### (1) Reliability Test

Item	Condition	Specification
Thermal shock	1. $30 \pm 3$ minutes at $-40^\circ C \pm 5^\circ C$ , 2. Convert to $+105^\circ C$ (5 minutes) 3. $30 \pm 3$ minutes at $+105^\circ C \pm 5^\circ C$ , 4. Convert to $-40^\circ C$ (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: $85 \pm 5^\circ C$ 3. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
High temperature resistance	1. Temperature: $150^\circ C \pm 5^\circ C$ 2. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
Low temperature resistance	1. Temperature: $-40^\circ C \pm 5^\circ C$ 2. Time: 1000 hours.	No apparent damage Fulfill the electrical spec. after test.
Soldering heat resistance	1. Solder bath temperature : $260 \pm 5^\circ C$ 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 $245 \pm 5^\circ C$ for $3 \pm 1$ seconds.	No apparent damage

### (2) Storage Condition

#### (a) At warehouse:

The temperature should be within  $0 \sim 30^\circ C$  and humidity should be less than 60% RH

The product should be used within 1 year from the time of delivery.

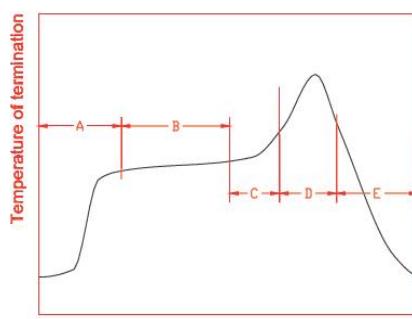
#### (b) On board :

The temperature should be within  $-40 \sim 85^\circ C$  and humidity should be less than 85% RH.

### (3) Operating Temperature Range

Operating temperature range :  $-40^\circ C$  to  $+105^\circ C$ .

## Recommended Reflow Soldering



A	1 <sup>st</sup> rising temperature	The normal to Preheating temperature	30s to 60s
B	Preheating	$140^\circ C$ to $160^\circ C$	60s to 120s
C	2 <sup>nd</sup> rising temperature	Preheating to $200^\circ C$	20s to 40s
D	Main heating	if $220^\circ C$	50s~60s
		if $230^\circ C$	40s~50s
		if $240^\circ C$	30s~40s
		if $250^\circ C$	20s~40s
		if $260^\circ C$	20s~40s
E	Regular cooling	$200^\circ C$ to $100^\circ C$	$1^\circ C/s \sim 4^\circ C/s$

\*reference: J-STD-020C

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**ANGLES** =  $\pm$       **HOLE DIA** =  $\pm$

**SCALE:** N/A

**UNIT:** mm

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## (1) Soldering Gun Procedure

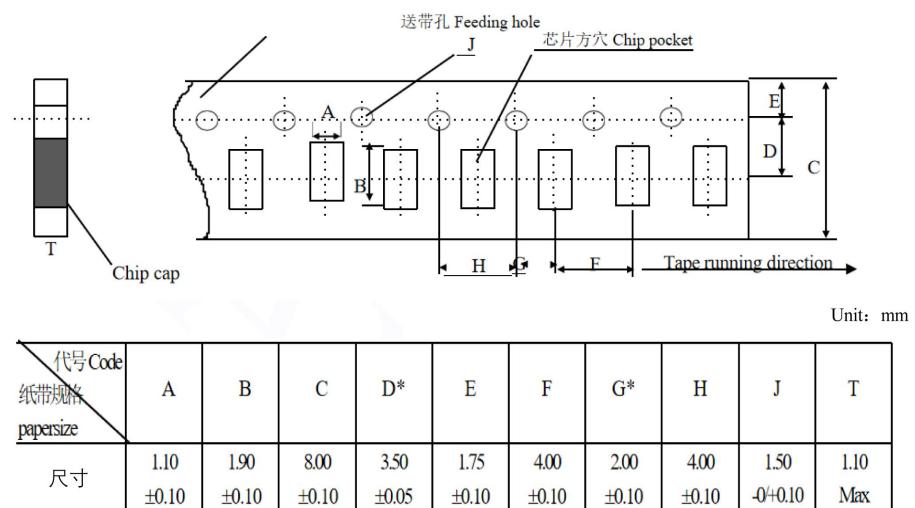
Note the follows, in case of using solder gun for replacement.

- (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.

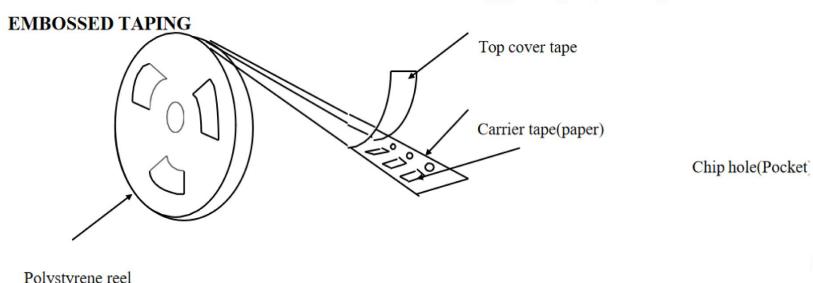
## (2) Soldering Volume

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

## Dimensions of paper taping :



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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