# 产品规格承认书

# **SPECIFICATIONS**

客户:

	CUSTOMER:						
	产品名称:						
	DESCRIPTIO	N:		地磁天线			
	客户型号:	ADT NO.					
	产品型号:	AKI NU:					
		NO:	PB	K1608MA	02		
	日期:		<u> </u>	<u> </u>			
	DATE:						
硝	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						
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	核准		审核	刘飞	制作	刘小美	
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		日期					
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	D BY: Sera	APPROVED		THE BASIS FOR DEVICES WITHOU		ACTURE OR SALE OF APP	ARATUS OR
TITLE: (	CHIP2450-1608	Specification		DOCUMENT NO.		1608	SPEC REV.
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### **PBX1608MA02 Specification**

Operating Temp. : -40 ℃~+85 ℃

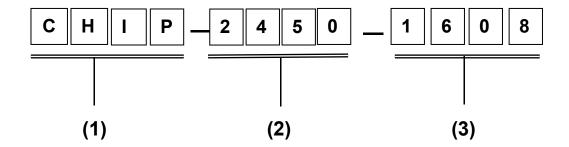
#### 1. FEATURES:

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

#### 2. APPLICATIONS:

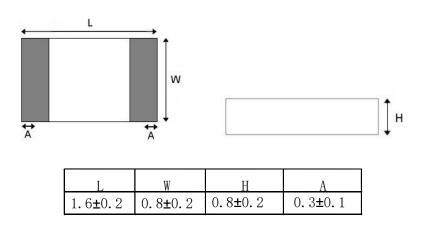
- Bluetooth, Wireless LAN, Mobile TV
- Home RF System, etc

#### 3. PRODUCT IDENTIFICATION



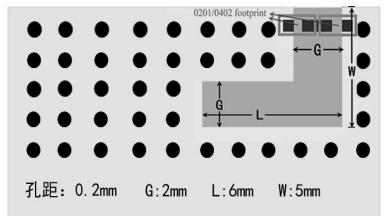
- (1) Product type: Multilayer chip Antenna
- (2) Center Frequency: 2450MHz
- (3) External Dimensions (L×W) (mm): 1.6\*0.8

#### 4. SHAPE AND DIMENSIONS:

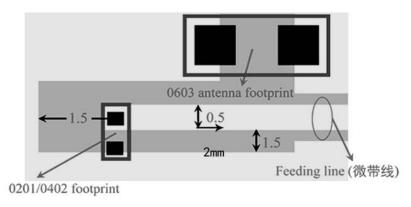


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●天线位于 PCB 板内部或中间位置时(长条式耳机): (单位: mm)

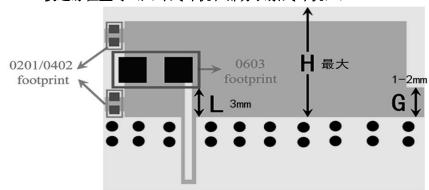






天线最优放置于中间区域,净空区周围最优需要至少一排过孔。

●天线位于 PCB 板边缘位置时(入耳式耳机和部分长条式耳机):

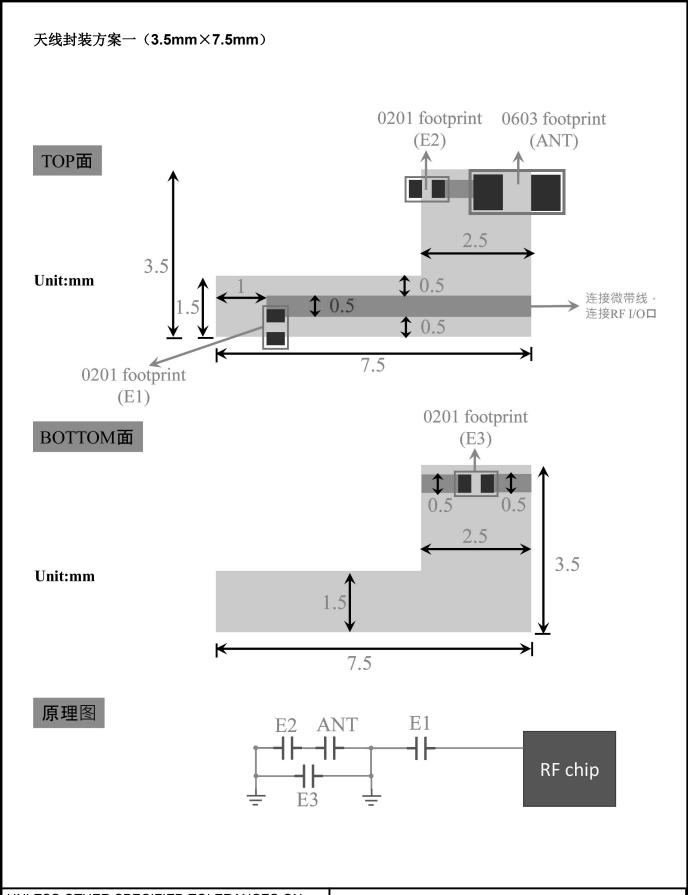


天线最优放置于 PCBA 的边缘; 天线及其走线设置在单层。

#### 设计标准:

- 1. 图中的尺寸仅作为参考;实际尺寸会根据不同版型进行优化。
- 2. 净空区周围最优需要至少一排过孔,孔径 0.3mm,与 PCBA 上的其它回路或物料进行隔离。

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TITLE: CHIP2450-1608 Specification		NO.	1000	P1

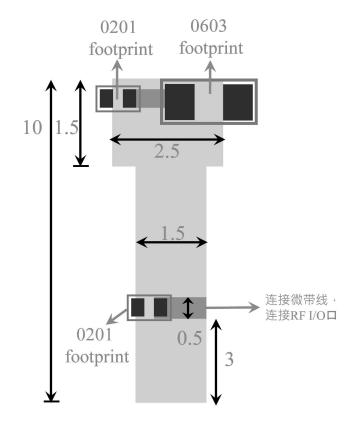
# 天线封装方案二(4.5mm×6mm) 0201 0603 footprint footprint TOP面 4.5 Unit:mm **1** 0.5 \$ 0.5 **1** 0.5 0201 6 footprint 0201 BOTTOM面 footprint 4.5 Unit:mm 6

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TITLE: CHIP2450-1608 Specification		NO.	1008	P1

### 天线封装方案三(1.5mm×10mm)

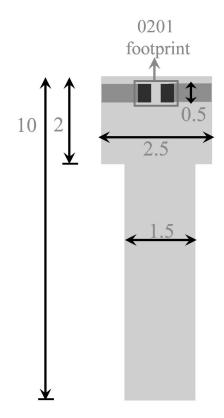
TOP面

Unit:mm



BOTTOM面

Unit:mm

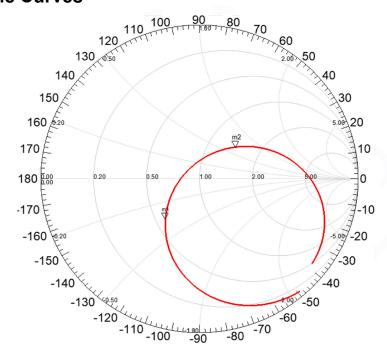


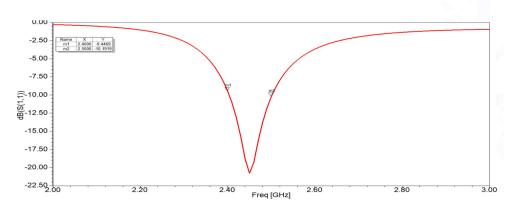
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TITLE: CHIP2450-1606 Specification		NO.	1000	P1

## **Electrical Characteristics**

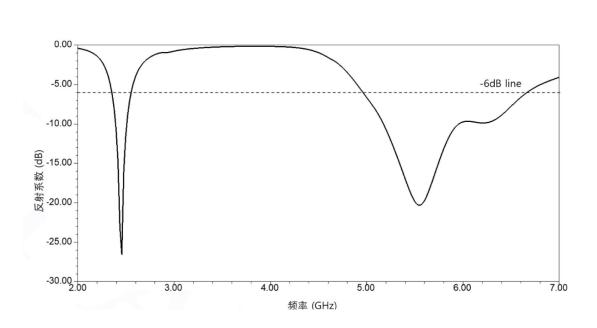
	Feature	Specification
1	Central frequency	2.45GHz
2	Bandwidth	>150MHz
3	Peak gain	2.78 dBi
4	VSWR	<2
5	Polarization	Linear
6	Azimuth beamwidth	Omnidirectional
7	Impedance	50 Ω

### **Characteristic Curves**

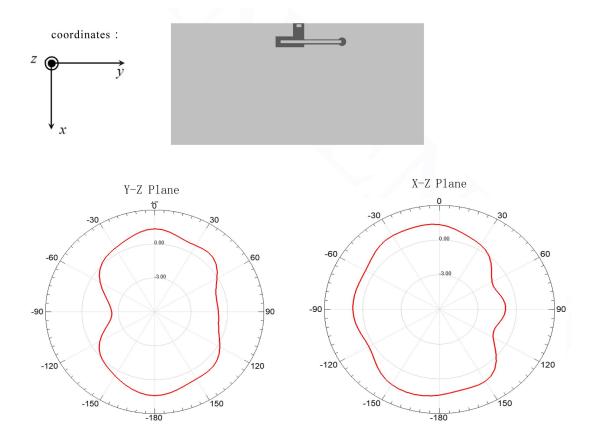




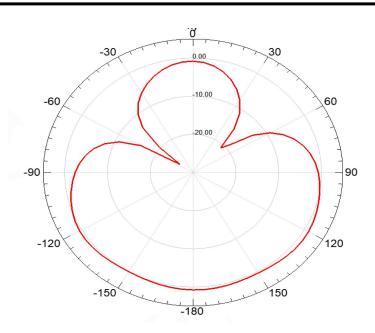
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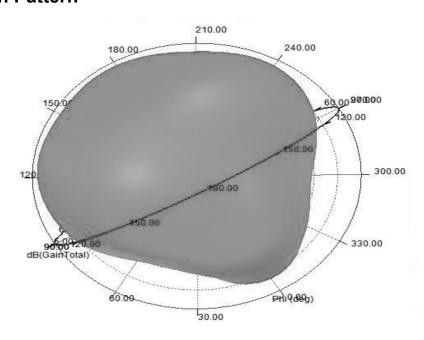
# **Radiation Pattern**



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## **3D Radiation Pattern**

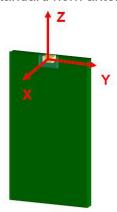


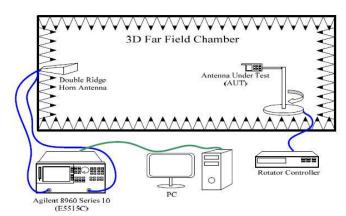
Frequency	2400MHz	2450MHz	2500MHz
Avg. gain	-1.92	-1.35	-1.56
Peak gain	1.79	2.78	2.66
Efficiency	74.55	80.25	76.98

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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.





#### **Environmental Characteristics**

#### (1) Reliability Test

Item	Condition	Specification
Thermal shock	1. $30\pm3$ minutes at $-40^{\circ}$ C $\pm5^{\circ}$ C, 2. Convert to $+105^{\circ}$ C (5 minutes) 3. $30\pm3$ minutes at $+105^{\circ}$ C $\pm5^{\circ}$ 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	<ol> <li>Humidity: 85% R.H.</li> <li>Temperature: 85±5° C</li> <li>Time: 1000 hours.</li> </ol>	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: $-40^{\circ}$ 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 : $260\pm5^{\circ}\!$	No apparent damage
Solderability	The dipped surface of the terminal shall be at least 95% covered with solder after dipped in solder bath of $245\pm5^\circ\!$	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:

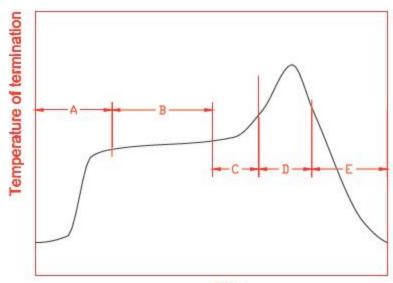
The temperature should be within -40~85°C and humidity should be less than 85% RH.

#### (3) Operating Temperature Range

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

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## 8. Recommended Reflow Soldering



#### Time

Α	1 <sup>st</sup> rising temperature	The normal to Preheating temperature	30s to 60s
В	Preheating	140°C to 160°C	60s to 120s
С	2 <sup>nd</sup> rising temperature	Preheating to 200°C	20s to 40s
D M		if 220°C	50s~60s
		if 230°C	40s∼50s
	Main heating	if 240°C	30s~40s
	5-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7-7	if 250°C	20s~40s
		if 260°C	20s~40s
E	Regular cooling	200°C to 100°C	1°C/s ~ 4°C/s
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<sup>\*</sup>reference: J-STD-020C

#### (1) Soldering Gun Procedure

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

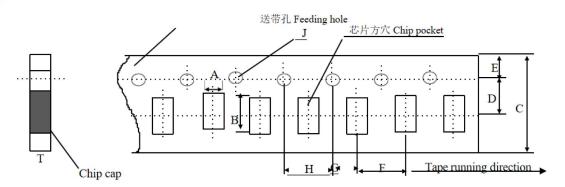
- (a) The tip temperature must be less than  $350^{\circ}\,$  C for the period within 3 seconds by using soldering gun under 30 W.
- (b) The soldering gun tip shall not touch this product directly.

#### (2) Soldering Volume

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

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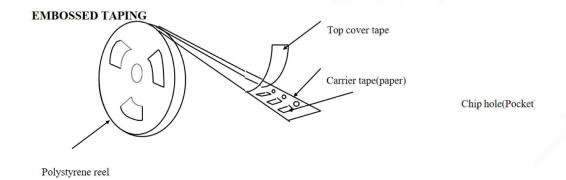
# Dimensions of paper taping:



Unit: mm

代号Code 纸带规格 papersize	A	В	С	D*	E	F	G*	Н	J	Т
D.+	1.10	1.90	8.00	3.50	1.75	4.00	2.00	4.00	1.50	1.10
尺寸	±0.10	±0.10	±0.10	±0.05	±0.10	±0.10	±0.10	±0.10	-0/+0.10	Max

Reel (4000 pcs/Reel)



# **Storage Period**

The guaranteed period for solderability is 6 months (Under deliver package condition). Temperature:  $5\sim40^{\circ}\text{C}$  /Relative Humidity:  $20\sim70\%$ 

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