



Shenzhen unity wireless technology co., ltd

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acknowledgement

customer name: _____

Customer part number: _____

Customer Project: _____

Zhongcheng Material Catalog: 01.08.0001 _____

product description: 3216 双极 陶瓷天线 Bipolar Ceramic Antenna

Date : 2022-9-19

R&D confirmati on	MD:	signature:
	RF:	

Customer Re-sign

departmen t	Project Engineering Department:	signature:
	purchase department:	

Catalogue

一、Cover	1
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1. Frequency

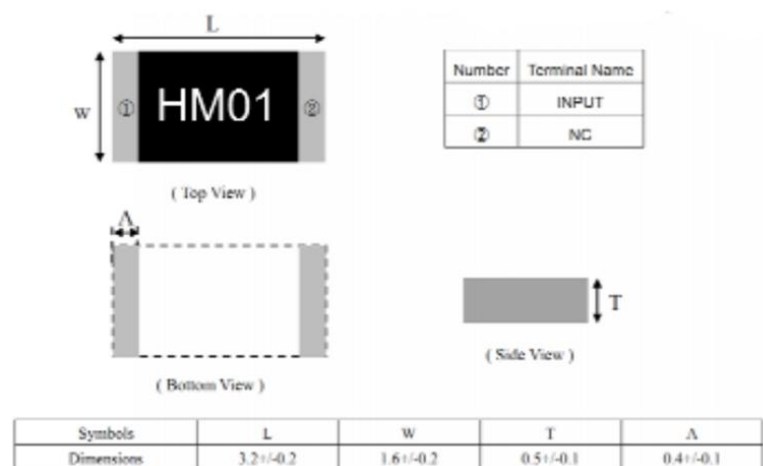
2400-2500 MHz

2. Applications

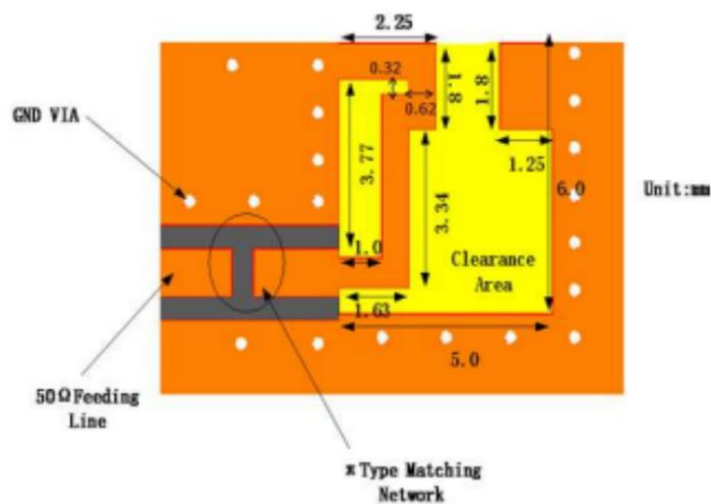
For Miniaturized Bluetooth System

3. Dimensions (Unit : mm)

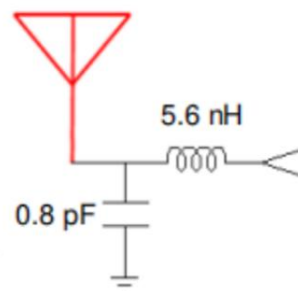
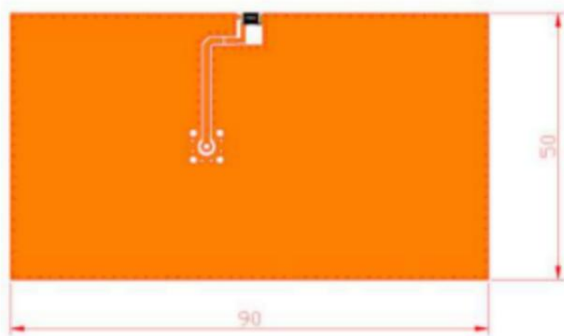
1). Over View :



2). PCB Layout (Unit : mm) :



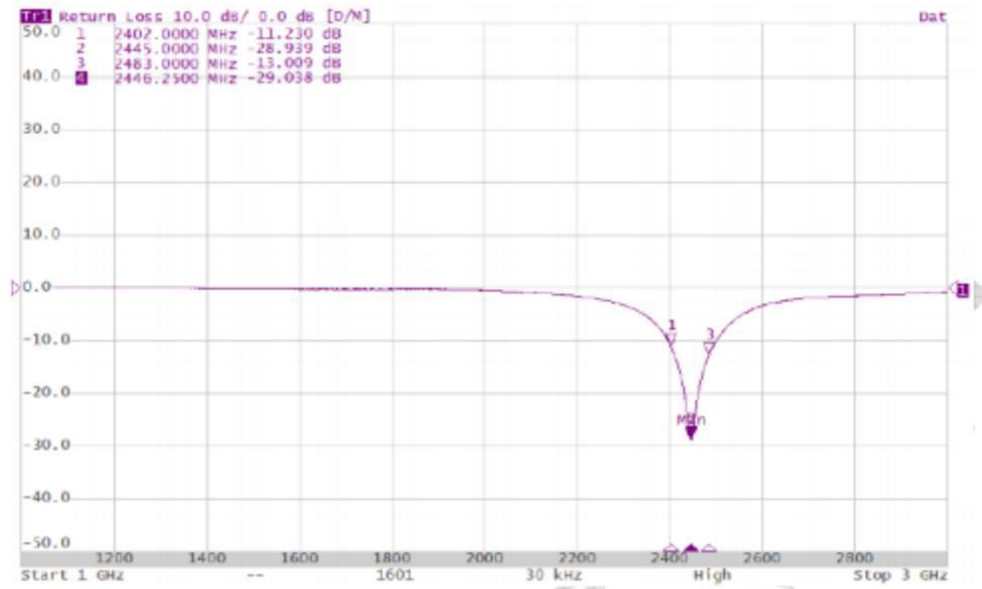
4. Evaluation Board Size and Matching Circuits



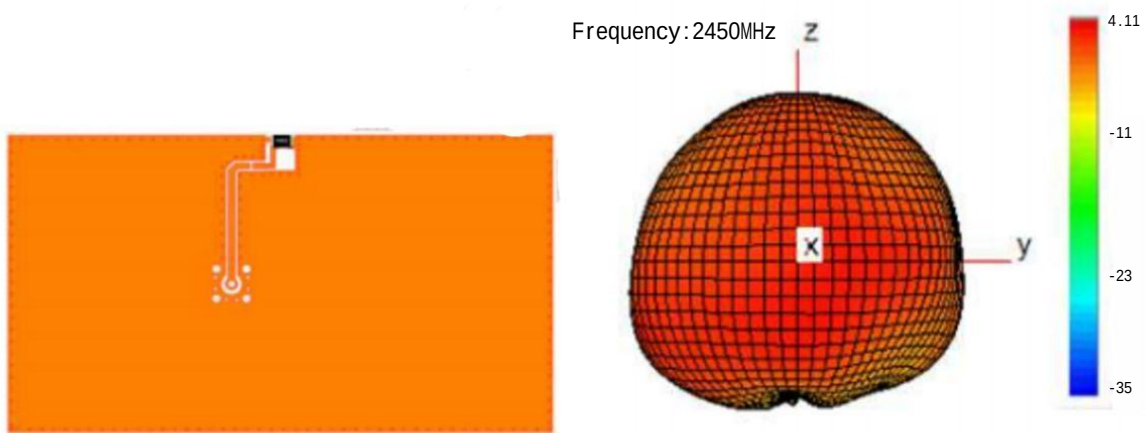
5. Electrical Characteristics

Part Number	HM3216ANT2450-HM01
Central Frequency	2450 MHZ
V. S. W. R	100 (typ.) MHZ
V. S. W. R	≤ 2.0
Peak Gain	4.11 dBi
Impedance	50 ohm
Polarization	Linear
Azimuth Beamwidth	Omni-directional

6. Return Loss (S11)

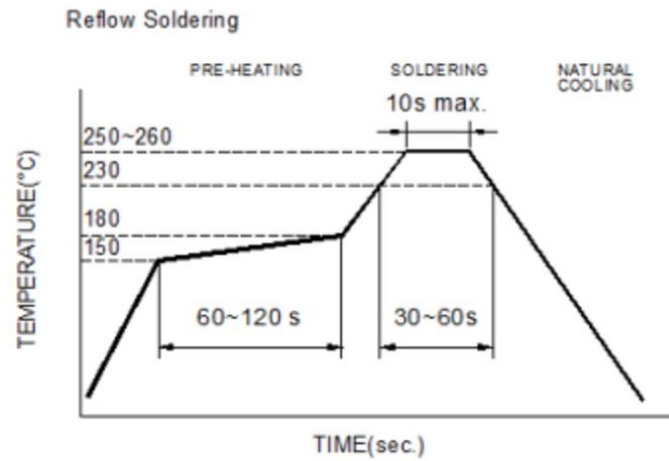


7. Radiation Pattern & Efficiency



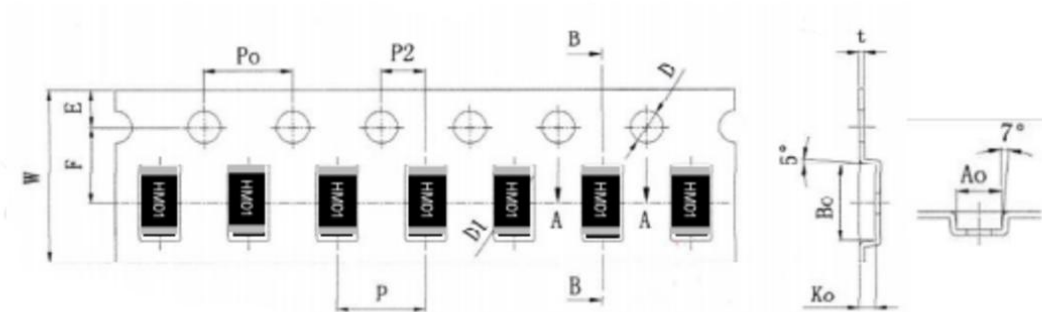
Frequency (MHz)	2400	2450	2500
Efficiency (dB)	-2.08	-1.94	-2.15
Efficiency (%)	62	64	61
Gain (dBi)	3.43	4.11	3.67

8. Reflow Soldering Standard Condition



9. Packaging and Dimensions

● Plastic Tape



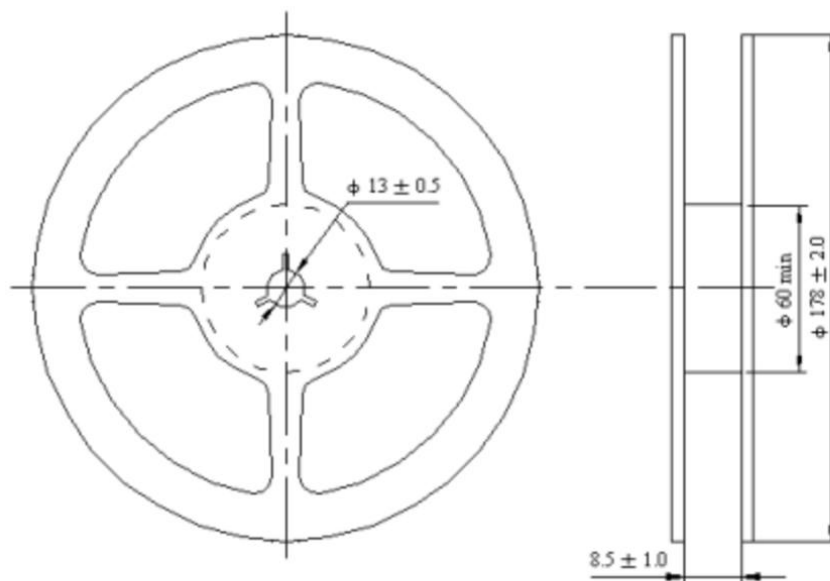
外觀	規格	公差
W	8.00	±0.10
P	4.00	±0.10
E	1.75	±0.10
F	3.50	±0.05
P2	2.00	±0.05
D	1.50	+0.10 -0.00
D1	1.00	±0.10
Po	4.00	±0.10
10Po	40.00	±0.20

外觀	規格	公差
Ao	1.85	±0.10
Bo	3.50	±0.10
Ko	0.73	±0.10
t	0.23	±0.05

- Remarks for Package

Reserve a length of 150~200mm for the trailer of the carrier and 250~300 mm for the leader of the carrier and further 250mm of cover tape at the leading part of the carrier.

- Reel (6000 pcs/Reel)



- Storage Period

Oxidizable Material, 12 months in vacuum sealed bag, please repack within 168 hours by re-seal the package treatment after using.

Storage Temperature Range : < 30 degree C, Humidity : < 60%RH

test item	Test Conditions/Methods	specifications, norms
Weldability IEC 60068-2-58 GB/T2423. 28	*Tin groove temperature: $240 \pm 5^{\circ}\text{C}$ *soak period: 2 ± 0.5 秒 Solder: Sn96.5Ag3.0Gu0.5 lead-free solder used for welding.	At least 95% of the terminal electrodes on each surface must be covered with fresh solder.
Leaching (resistance) Dissolution (metalization) JIS C5101	c* Tin bath temperature: $260 \pm 5^{\circ}\text{C}$ *Leaching soaking time: 10 ± 1 seconds Solder composition: Sn96.5 Ag3.0 Cu0.5 for lead-free applications.	The metalization loss on the edge of each electrode must not exceed 25%.
Resist sweating heat IEC 60068-2-58 GB/T2423. 28	1*Preheating temperature: $120 - 150^{\circ}\text{C}$, 1 minute. *Solder temperature: $260 \pm 5^{\circ}\text{C}$ * Soaking time: 10 ± 1 seconds Solder composition: Sn96.5Ag3.0Gu0.5 (lead-free) Measurements were taken after storage at room temperature for 24 ± 2 hours.	No mechanical injury was observed. Electrical specifications shall meet the following requirements: temperature edge metallization loss in described rooms within electrical systems shall not exceed 25% per electrode.
IEC 60068-2-32 GB/T2423. 8 Customer specifications	Height: 50 cm drop * Test surface: concrete or rigid concrete surface steel. *Number of times: 6 times per unit; 2 times on each side per unit.	No mechanical injury was observed. Electrical specifications shall meet the following requirements: electrical characteristics shall be specified at room temperature.
vibrate GB/T 2423. 10	Frequency: 10Hz~55Hz~10Hz (1 min) *Total amplitude: 1.5 mm IEC 60068-2-6 *Test duration: 6 hours (three sessions of 2 hours each) in mutually perpendicular directions	No mechanical injury observed. The gas specification shall meet the following requirements: electrical characteristics shall be specified at room temperature.
e bonding strength finish IEC60068-2-21 GB/T 2423. 6	e: *Compression force: 5N (≤ 0.603); 10N (>0.603) * Test duration: 10 ± 1 seconds	No obvious damage or impairment finish

bend test IEC 60068-2-21 GB/T 2423. 29	The central portion of the base should be compressed using a pressure rod at a rate of approximately 1 mm/s until deflection reaches 2 mm, followed by maintaining the pressure for 10 ± 1 seconds. Measurements should be taken after maintaining the following conditions: room temperature for 24 ± 2 hours.	No mechanical injury was observed. Electrical specifications shall meet the following requirements: electrical characteristics shall be specified at room temperature.
temperature cycle IEC60068-2-14 GB/T 2423. 22	At $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 30 minutes. At room temperature for 10 - 15 minutes. At $+85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 30 minutes. At room temperature for 10 - 15 minutes. A total of 100 consecutive cycle measurements were saved after the room was prepared at a temperature of $24 \pm 2^{\circ}\text{C}$.	No mechanical injury was observed. Electrical specifications shall meet the following requirements: electrical characteristics shall be specified at room temperature.
high temperature IEC 60068-2-2 GB/T2423. 2	* temperature : $85 \pm 2^{\circ}\text{C}$. *Test duration: $500+24/-0$ hours. Measurements should be taken after maintaining the following conditions: room temperature for 24 ± 2 hours.	No mechanical injury was observed. Electrical specifications shall comply with the following requirements: electrical characteristic description.
Humidity (stable) conditions) IEC60068-2-3 GB/T 2423. 3	*Humidity: $85 \pm 5\%$ R. H. *Temperature: $85 \pm 2^{\circ}\text{C}$ * Time: $500+24/-0$ hours. Measure after saving	No mechanical injury was observed. Electrical specifications shall meet the following requirements: electrical characteristics shall be specified at room temperature.
low temperature。 IEC 60068-2-1 GB/T2423. 1	* temperature : $-40 \pm 2^{\circ}\text{C}$. *Test duration: Maintain the following conditions for $500+24/-0$ hours before measurement: room temperature for 24 ± 2 hours.	No mechanical injury was observed. Electrical specifications shall meet the following requirements: electrical characteristics shall be specified at room temperature.

Packaging specifications

Product part number: 01.08.0001

size of product: 3216 Ceramic antenna

一、labeling requirement (according to the customer name reference corresponding finished product label production requirements, no requirements, according to the ordinary label requirements)

The inner label is about 8cm long and 5.5cm wide

 众城无线 SHENZHEN UNITY WIRELESS TECHNOLOGY., LTD 深圳众城无线技术有限公司			
客户		规格型号	
订单号		送货数量	
客户料号		众城无线料号	
日期		生产批次	
TEL:0755-23285621		FAX:0755-23285621	

The outer label is about 8cm long and 5.5cm wide

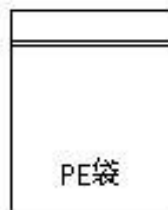
 众城无线 SHENZHEN UNITY WIRELESS TECHNOLOGY., LTD 深圳众城无线技术有限公司			
客户		规格型号	
订单号		送货数量	
客户料号		众城无线料号	
日期		生产批次	
TEL:0755-23285621		FAX:0755-23285621	

二、Packaging requirements

job description:

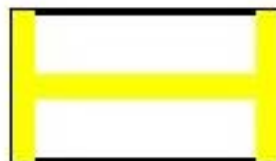
1. inner packing:

product According to the actual packing quantity PCS/satchel,
According to the actual packing quantity PCS/sack



2. external packing:

According to the actual packaging quantity /box



纸箱

matters need attention:

- Whether to add partition and pearl cotton;
- Labeling, such as ROHS;

