

[illegible]

# ACA-5020-A2-MC-S Specification

## 1. APPLIATION:

WLAN 802.11b/g, Bluetooth, etc...

## 2. Explanation of part number:

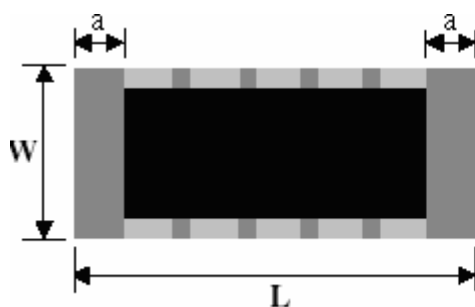
$\frac{AC}{(1)} \quad \frac{A}{(2)} - \frac{5020}{(3)} \quad \frac{A2}{(4)} - \frac{MC}{(5)} - \frac{S}{(6)} - \bar{(7)}$

- (1) Product Type : Chip Antenna
- (2) Center Frequency/Band Code : A--2.45G group
- (3) Size Code: 5.0mm(length) x 2.0mm(width)
- (4) Design Revision Code: A2= Rev. 2
- (5) MC= MONOPOLE Ceramics Type
- (6) Special Code: S=RoHS Compliant
- (7) Suffix For Special Requirements

## 3. ELECTRICAL SPECIFICATION:


Electrical Specification	
Frequency Range	2.4GHz~2.5GHz
Polarization	Linear
Patten	Omni-Directional
Reef Impedance	50 ohm
Gain	0 dBi (Peak)
Size	5.0mmX2.0mmX0.72mm
VSWR	$\leq 2.0$

## 4. DIMENSIONS:

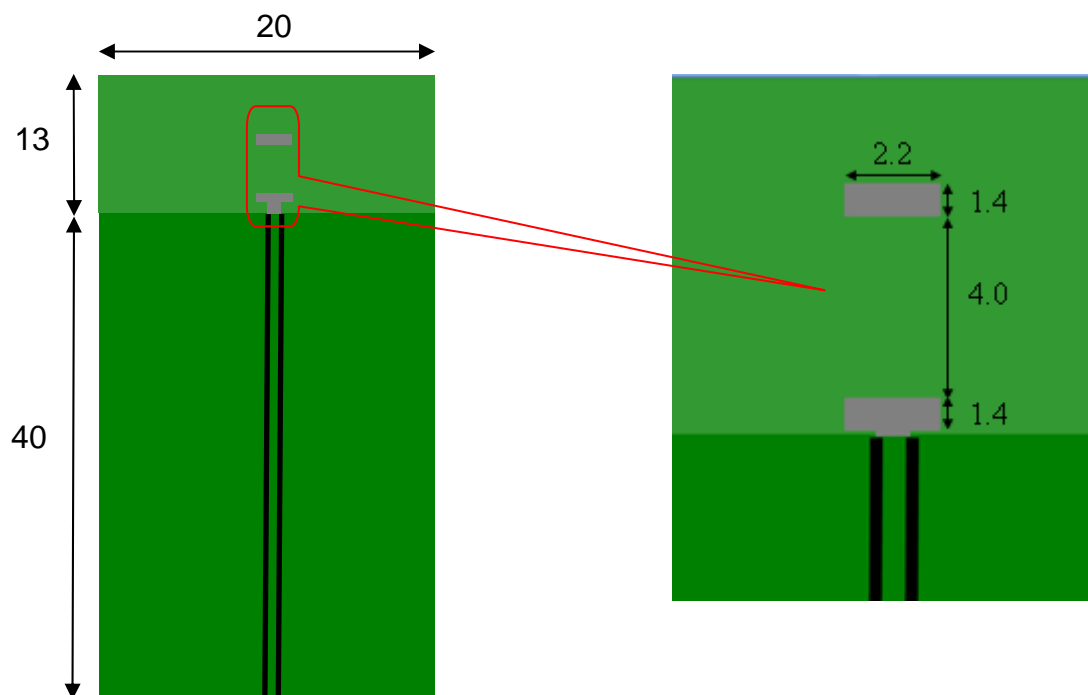


Unit : mm

Mark	L	W	H	a
Dimensions	5.0±0.2	2.0±0.2	0.72±0.2	0.50±0.2

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DESIGNED BY : 陳威仁 <i>Allen</i>		APPROVED BY : 謝立庭 <i>Li</i>		
TITLE : ACA-5020-A2-MC-S Specification		DOCUMENT NO.	ENS000015390	SPEC REV. A2

## 5. RECOMMENDED PCB LAYOUT: (unit: mm)




## 6. APPEARANCE CONFIGURATION :

Top Layer:



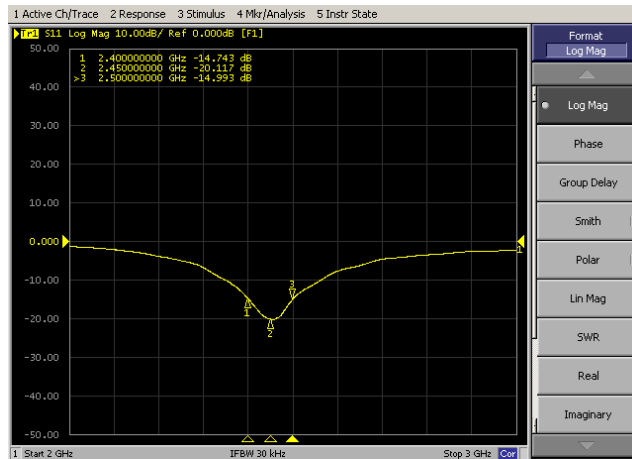
Bottom Layer:



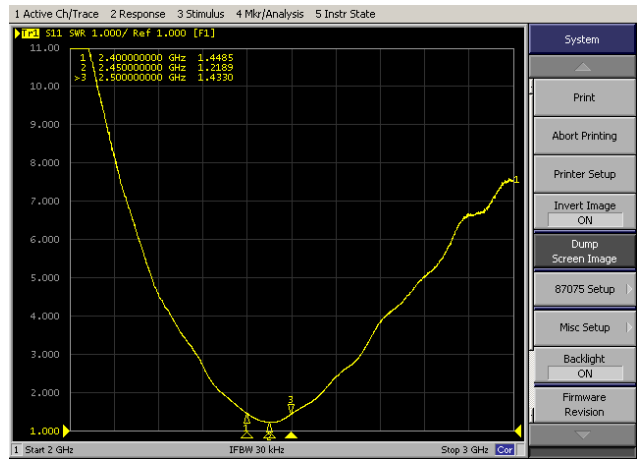
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DESIGNED BY : 陳威仁 <i>Allen</i>		APPROVED BY : 謝立庭 <i>LT</i>		
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## 7. ELECTRICAL CHARACTERISTICS

### Return Loss



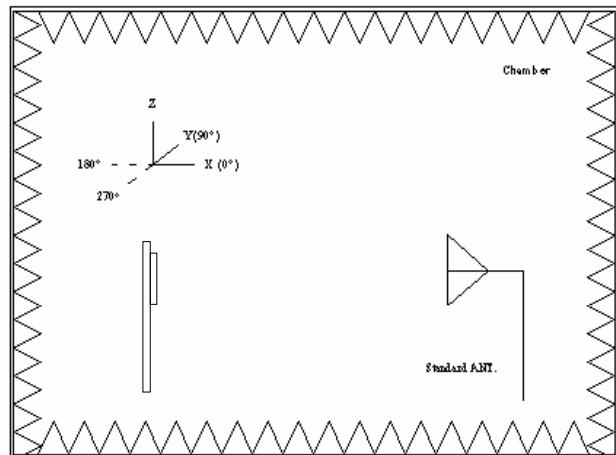
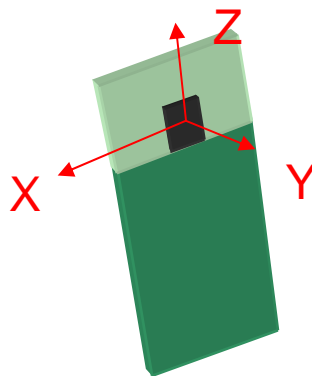
### VSWR



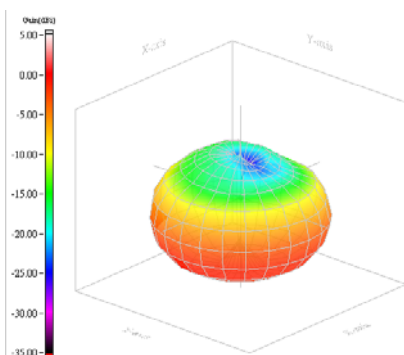
## 8. RADIATION PATTERN

The Gain pattern was measuring in INPAQ's FAR-field chamber. DUT will be placed on the table of rotator, a standard horn antenna and Vector Network Analyzer was using to collected data. (Please contact to INPAQ for more detail)

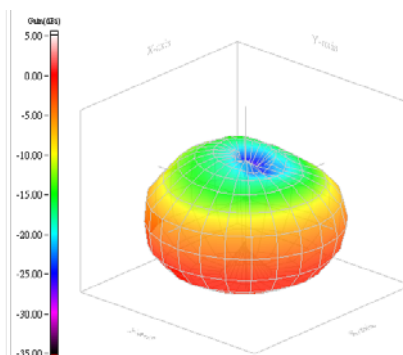
### Measuring factors definition



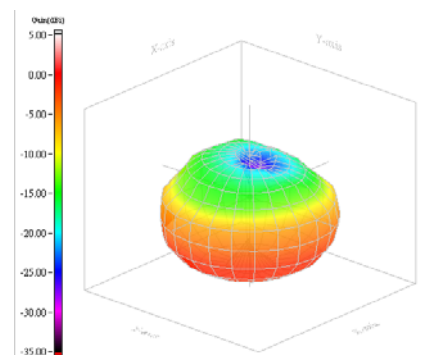
2400MHZ



2450MHZ



2500MHZ



UNLESS OTHER SPECIFIED TOLERANCES ON :

X = ± X.X = ± X.XX =

ANGLES = ± HOLE DIA = ±

SCALE : UNIT : mm

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DOCUMENT NO.

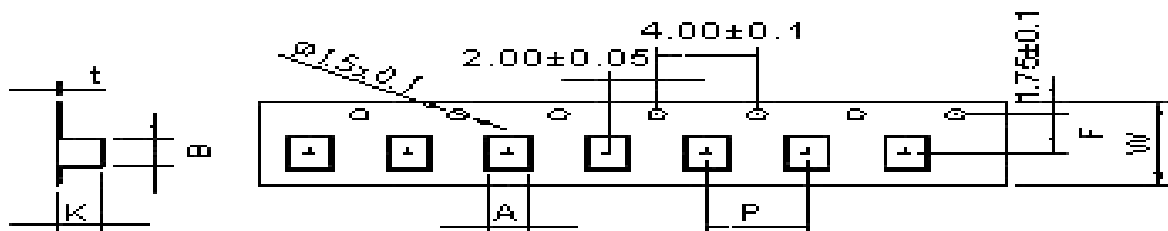
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## 9. Taping Package And Label Marking:

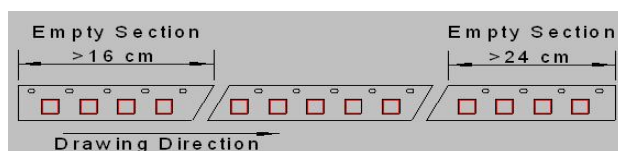
(1) Quantity/Reel: 3000pcs/Reel

(2) Plastic Tape: (unit: mm)



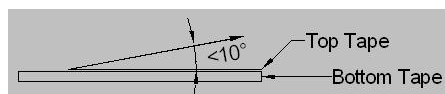
Type	W	A	B	K	t	F	P
5020	12±0.3	2.3±0.2	5.3±0.2	Max. 1.0	0.3±0.1	5.50±0.2	4.00±0.2

(3) Tape Packing



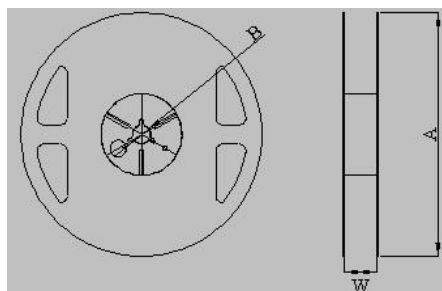
(4) Cover Tape Reel Off Force:

$$5g \cdot f \leq \text{Peel-Off Force} \leq 70g \cdot f$$




(5) Reel Dimensions: (unit: mm)

Reel Material: Polystyrene



W	A	B
12±0.5	178±1.0	13±0.5

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## 10. Environmental Performance

### (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 24 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: 500 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 75% RH.


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

#### (b) On board:

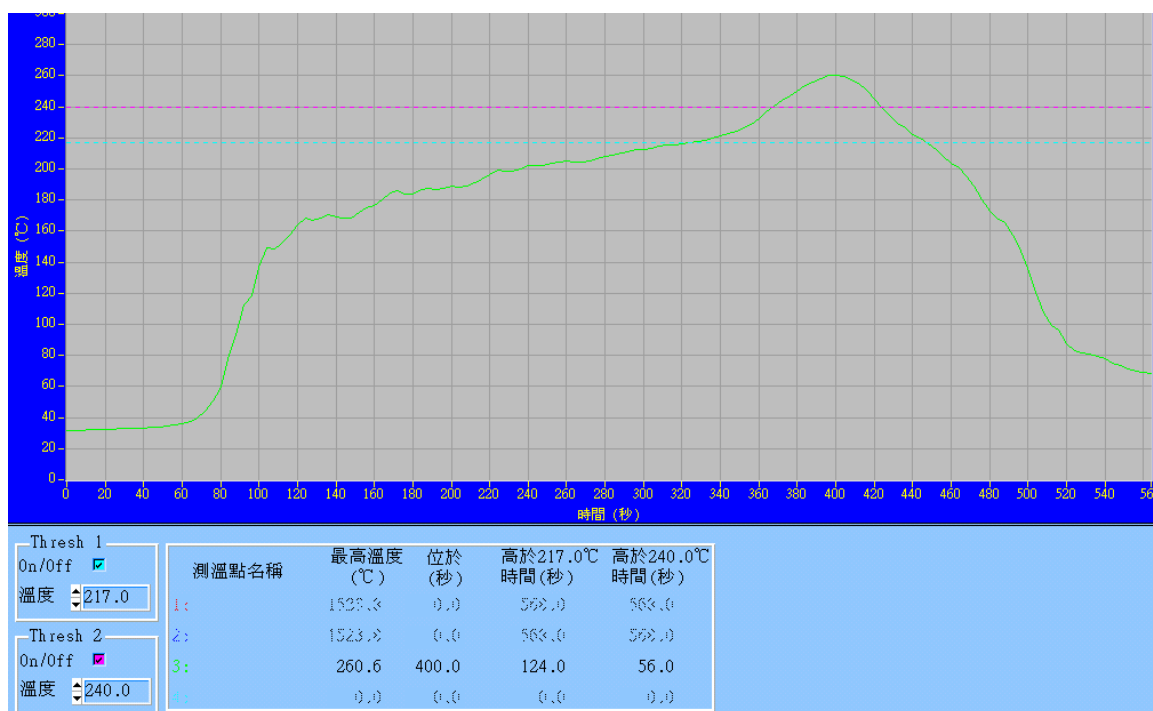
The temperature should be within -40~85°C and humidity should be less than 85% RH.

### (3) Operating temperature range

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

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## 11. Recommendable reflow soldering




### (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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