

ACA-5010-A1-MF-S

1. Explanation of Part Number :


AC A - 5010 A1 - MF - S -
 (1) (2) (3) (4) (5) (6) (7)

- (1) Product Type : Chip Antenna
- (2) Center Frequency/Band Code : A -2.45GHz
- (3) Size Code : 5.0mm(length) x 1.0mm(width)
- (4) Design Revision Code : A1= Rev. 1
- (5) Series No. : MF=MONOPOLE PCB type
- (6) Special Code : S= RoHS Compliant
- (7) Suffix For Special Requirements

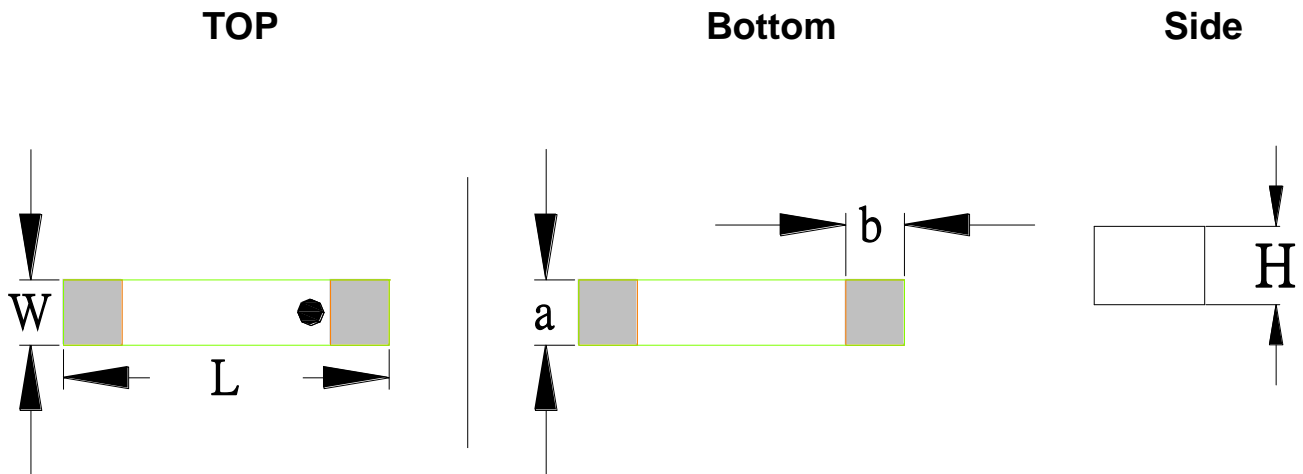
2. Electrical Specification :

| ITEM | SPECIFICATION |
|-----------------------|-------------------|
| Frequency Band | 2400-2500MHz |
| Return Loss | Less than -10 |
| Polarization | Linear |
| Impedance | 50 ohm Typ. |
| Operating temperature | -45 ~85 °C |
| Dimension | 5.0 x 1.0 x 1.6mm |

* Test condition : Test board size 5*1 mm
Matching circuit may be required

| | | | | |
|--|-------------------|---|---------------------|------------------------|
| UNLESS OTHER SPECIFIED TOLERANCES ON : X=N/R X.X=N/R X.XX =N/R ANGLES=N/R HOLEDIA=N/R | |  INPAQ TECHNOLOGY CO., LTD. | | |
| SCALE : N/R | UNIT : mm | THIS DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF INPAQ TECHNOLOGY CO.,LTD.AND SHALL NOT BE REPRODUCED OR USED AS THE BASIS FOR THE MANUFACTURE OR SALE OF APPARATUS OR DEVICES WITHOUT PERMISSION | | |
| DRAWN BY : 黃建棠 | CHECKED BY : 鄭榮謀 | | | |
| DESIGNED BY : 彭少君 | APPROVED BY : 謝立庭 | | | |
| TITLE : ACA-5010-A1-MF-S Specification | | DOCUMENT NO. | ENS000122120 | SPEC REV. A1 |

3. Physical Dimension :



| Chip Antenna | L | W | H | a | b |
|------------------|---------|---------|---------|-------|---------|
| ACA-5010-A1-MF-S | 5.0±0.2 | 1.0±0.2 | 1.6±0.2 | 1±0.2 | 0.9±0.2 |

UNLESS OTHER SPECIFIED TOLERANCES ON :
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 ANGLES=N/R HOLEDIA=N/R



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UNIT : mm

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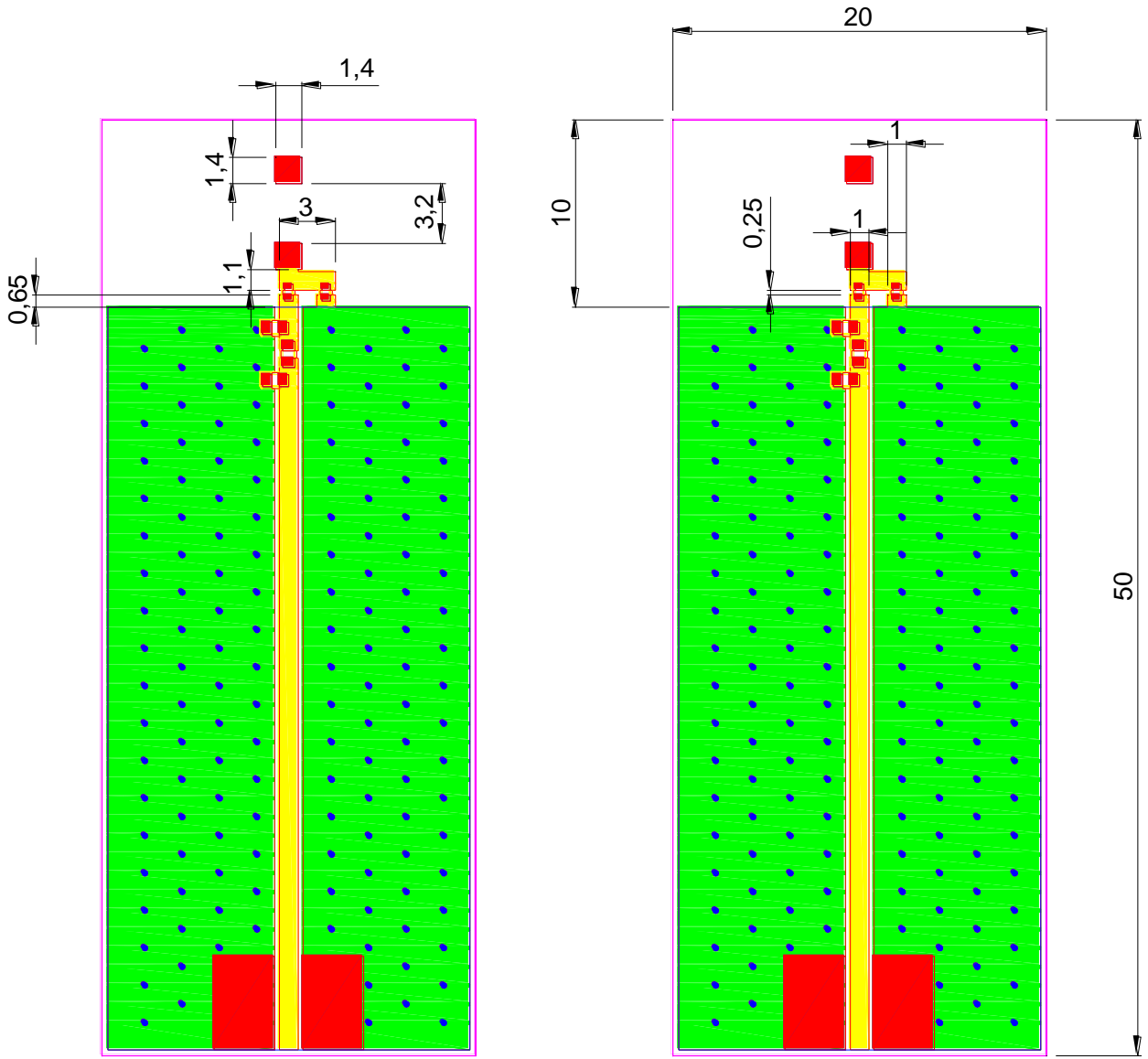
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4. Recommend PCB Layout :



Unit : mm

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 ANGLES=N/R HOLEDIA=N/R

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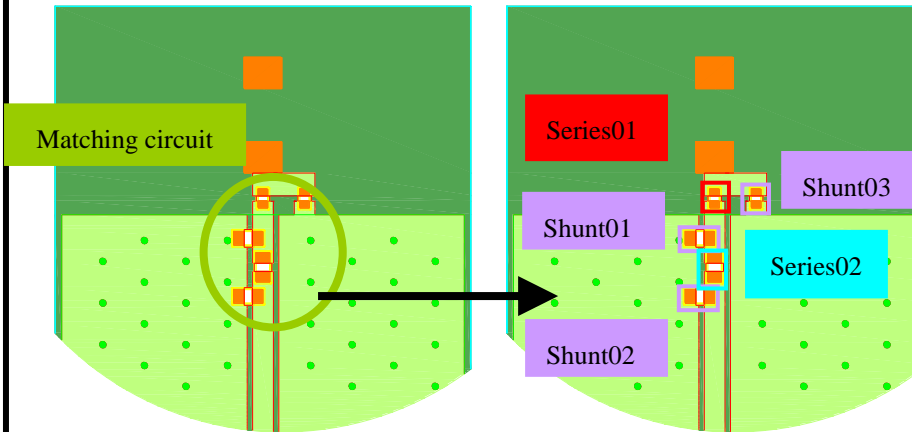
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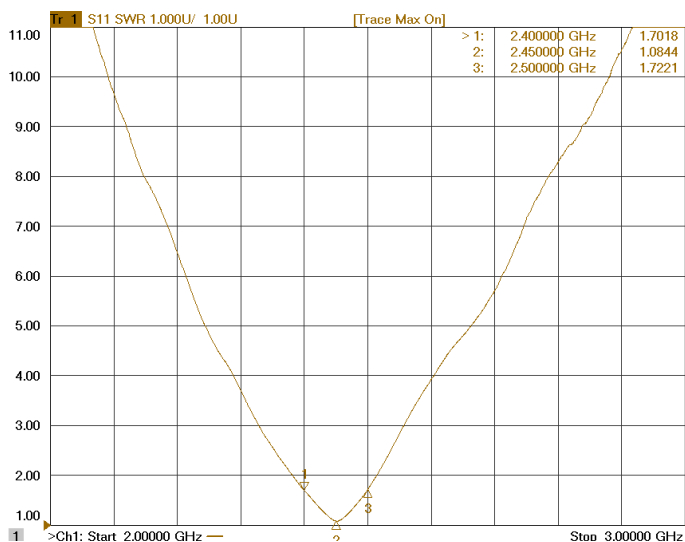
Matching Circuit on Demoboard :



| Circuit Symbol | Size | Description |
|----------------|------|-------------|
| Series01 | 0201 | 6.8nH |
| Series02 | 0402 | 1.2nH |
| Shunt01 | 0402 | N/A |
| Shunt02 | 0402 | 0.7pF |
| Shunt03 | 0201 | N/A |

5. Electrical Characteristics :

VSWR



| Frequency (MHz) | VSWR |
|-----------------|------|
| 2400 | 1.70 |
| 2450 | 1.08 |
| 2500 | 1.72 |

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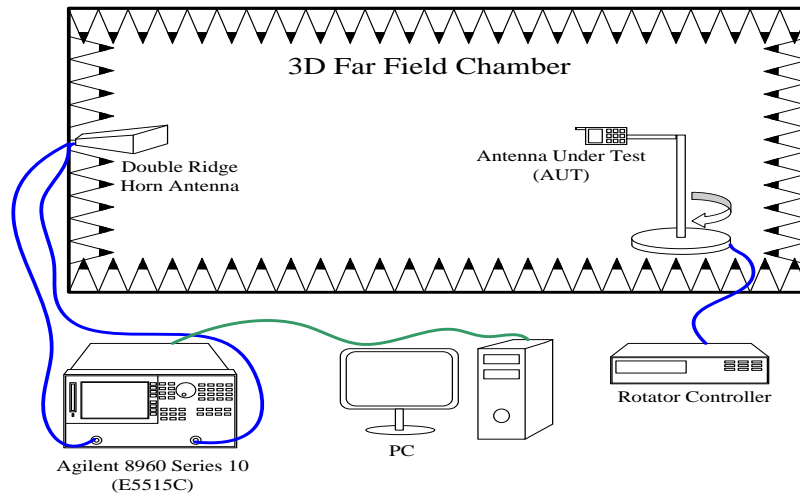
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Radiation Pattern :

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 Chamber Definition

Efficiency & Peak Gain :

| Frequency (MHz) | Peak Gain (dBi) | Efficiency (%) |
|-----------------|-----------------|----------------|
| 2400 | 3.62 | 47.01 |
| 2410 | 3.61 | 47.4 |
| 2420 | 3.54 | 50.07 |
| 2430 | 3.59 | 52.6 |
| 2440 | 3.54 | 54.19 |
| 2450 | 3.48 | 55.89 |
| 2460 | 3.38 | 53.92 |
| 2470 | 3.34 | 50.57 |
| 2480 | 3.27 | 47.64 |
| 2490 | 3.2 | 47.51 |
| 2500 | 3.19 | 45.6 |

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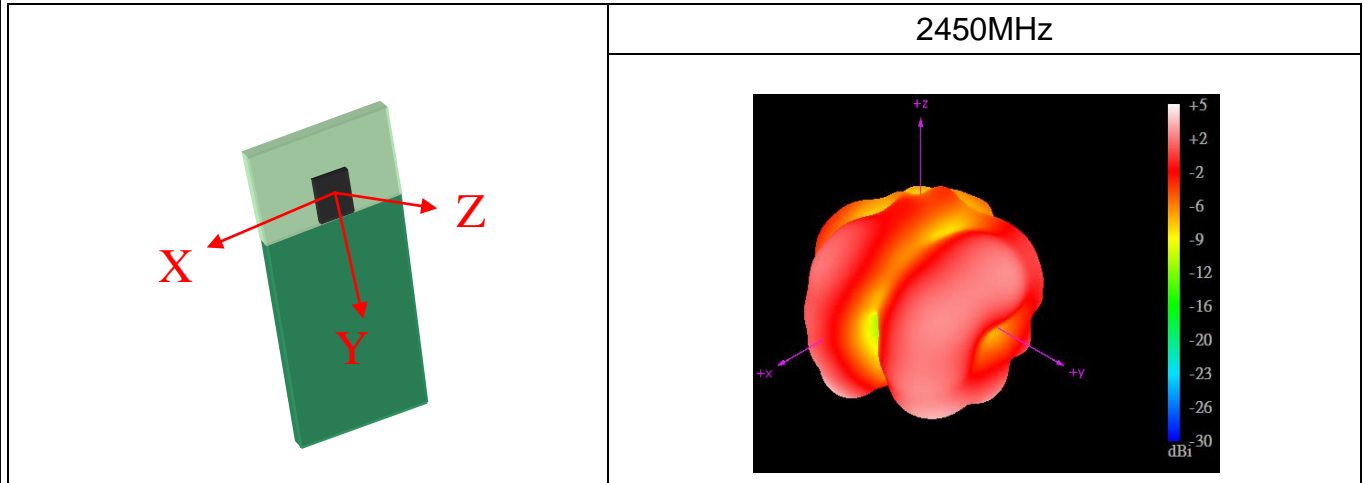
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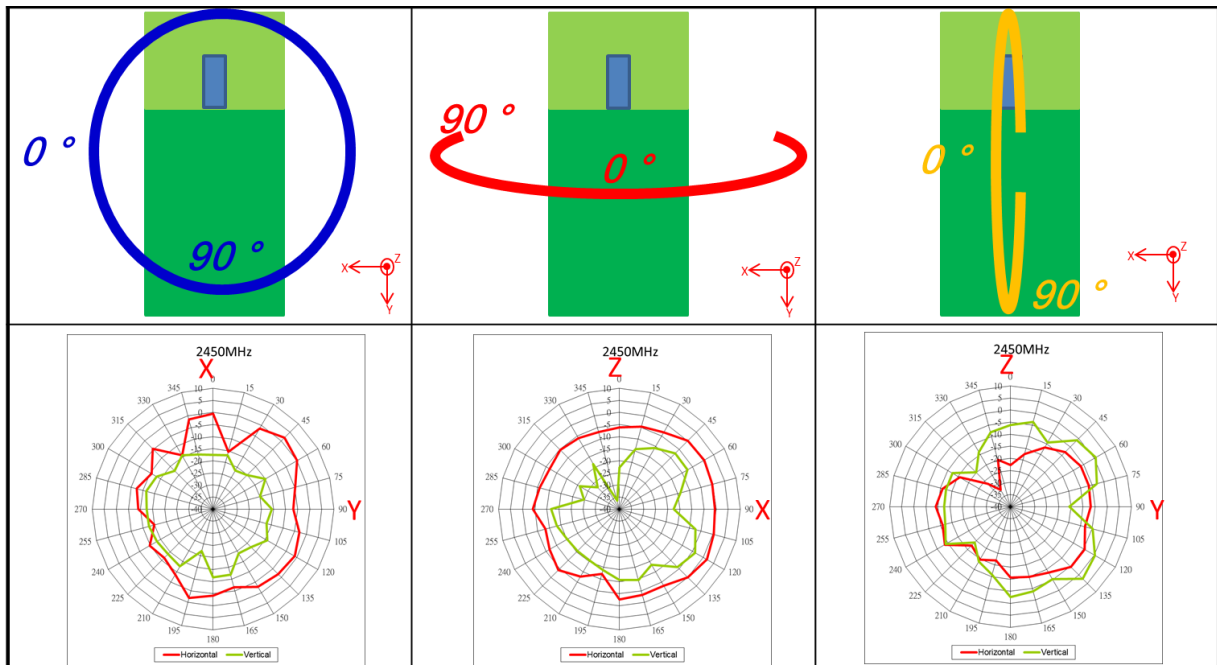
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3D radiation pattern :



2D radiation pattern :



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 ANGLES=N/R HOLEDIA=N/R



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6. Taping Package and Label Marking : (unit : mm)

(1) Quantity/Reel : 2000pcs/Reel

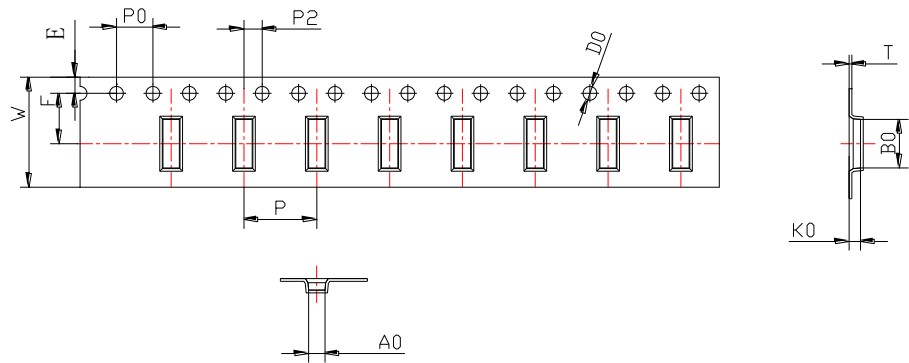
(2) Carrier tape dimensions

2.1 共同尺寸

| 外觀 | 規格 | 公差 |
|------|-------|--|
| W | 12.00 | ±0.30 |
| P | 8.00 | ±0.10 |
| E | 1.75 | ±0.10 |
| F | 5.50 | ±0.10 |
| P2 | 2.00 | ±0.10 |
| D | 1.50 | $\begin{matrix} +0.10 \\ -0.00 \end{matrix}$ |
| D1 | ---- | ±0.10 |
| Po | 4.00 | ±0.10 |
| 10Po | 40.00 | ±0.20 |

2.2 口袋尺寸

| 外觀 | 規格 | 公差 |
|----|------|-------|
| A0 | 1.80 | ±0.10 |
| A1 | ---- | ±0.10 |
| B0 | 5.30 | ±0.10 |
| B1 | ---- | ±0.10 |
| Ko | 1.25 | ±0.10 |
| t | 0.30 | ±0.05 |



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