

# APPROVAL SHEET

**2400~2500 MHz Working Frequency**

**P/N: RFPCA441010EMABY01**

**Antenna Type : PIFA**

Customer : \_\_\_\_\_  
Approval No. : \_\_\_\_\_  
Issue Date : \_\_\_\_\_

\*Contents in this sheet are subject to change without prior notice.

品名：RFPCA441010EMABY01

## History List

[illegible]

## 1.Explanation of part number :

| RF               | PCA          | 4410                                                                        | 10                                                            | E                                                                                                                                      | M                                                                       | A                                                                                                                                                                                                                                                                                                                          | B                                     | Y                                                                                  | 01                  |
|------------------|--------------|-----------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------|---------------------|
| Type Code        | Product Code | PCB Dimension (Unit: mm)                                                    | Cable Length (unit: cm)                                       | Connector Brand                                                                                                                        | Type of Connector                                                       | Application                                                                                                                                                                                                                                                                                                                | Project status                        | Wire Diameter                                                                      | Project             |
| Walsin RF Device | PCB Antenna  | Per 2 digits of length, width<br>e.g.: 4410<br>Length 44.0 mm, Width 10.0mm | 2 digits for cable length<br>e.g.: 10<br>Cable Length 10.0 cm | A: N<br>C:MCX<br>D:IPEX III<br>E: IPEX IV<br>F: IPEX A13<br>H: Hirose<br>I: IPEX<br>M: MMCX<br>S: SMA<br>T: TNC<br>U:MURATA<br>N: None | A: Reverse Female<br>B: Reverse Male<br>F: Female<br>M: Male<br>N: None | 0: 0GHz<br>3: 3GHz<br>5: 5 GHz<br>6: 6GHz<br>A: 2.4GHz ISM band<br>B: GSM 900/1800 dual band<br>G: GPS band<br>L: 2.4/5.2/5.8 GHz tri-band<br>M: LTE+Sub-6G+5G LTE :<br>617~960/1710~2690MHz<br>Sub-6G : 3300~4200MHz<br>5G : 5150~7150MHz<br>N79 : 4.4~5GHz<br>N: NFC<br>S: UWB(6~7GHz)<br>T:LTE band<br>M:LTE+Sub-6G +5G | B: MP<br>T:During Test<br>X: Pile Run | 0:None<br>1:Ø0.81<br>3:Ø1.13<br>6:RG316<br>7:Ø1.37<br>8:RG178<br>Y: Ø0.81 Low Loss | 01~99 series number |

## 2.Electrical Specification :

| Item                  | Specification    |
|-----------------------|------------------|
| Frequency Range       | 2400 ~ 2500 MHz  |
| Impedance             | 50 Ohm Nominal   |
| VSWR                  | 2.0 (Max)        |
| Peak Gain             | 3.19 dBi         |
| Radiation             | Omni-directional |
| Polarization          | Linear Vertical  |
| Admitted Power        | 1W               |
| Operation Temperature | -20℃ ~ +65℃      |

UNLESS OTHER SPECIFIED TOLERANCES ON :  
X = N/A      X.X = N/A      X.XX = N/A  
ANGLES = N/A      HOLEDIA = N/A



INPAQ TECHNOLOGY CO., LTD.

SCALE : N/A

UNIT : mm

DRAWN BY : 詹惠雯

CHECKED BY : 詹惠雯

DESIGNED BY : 黃瑞郎

APPROVED BY : 陳振榮

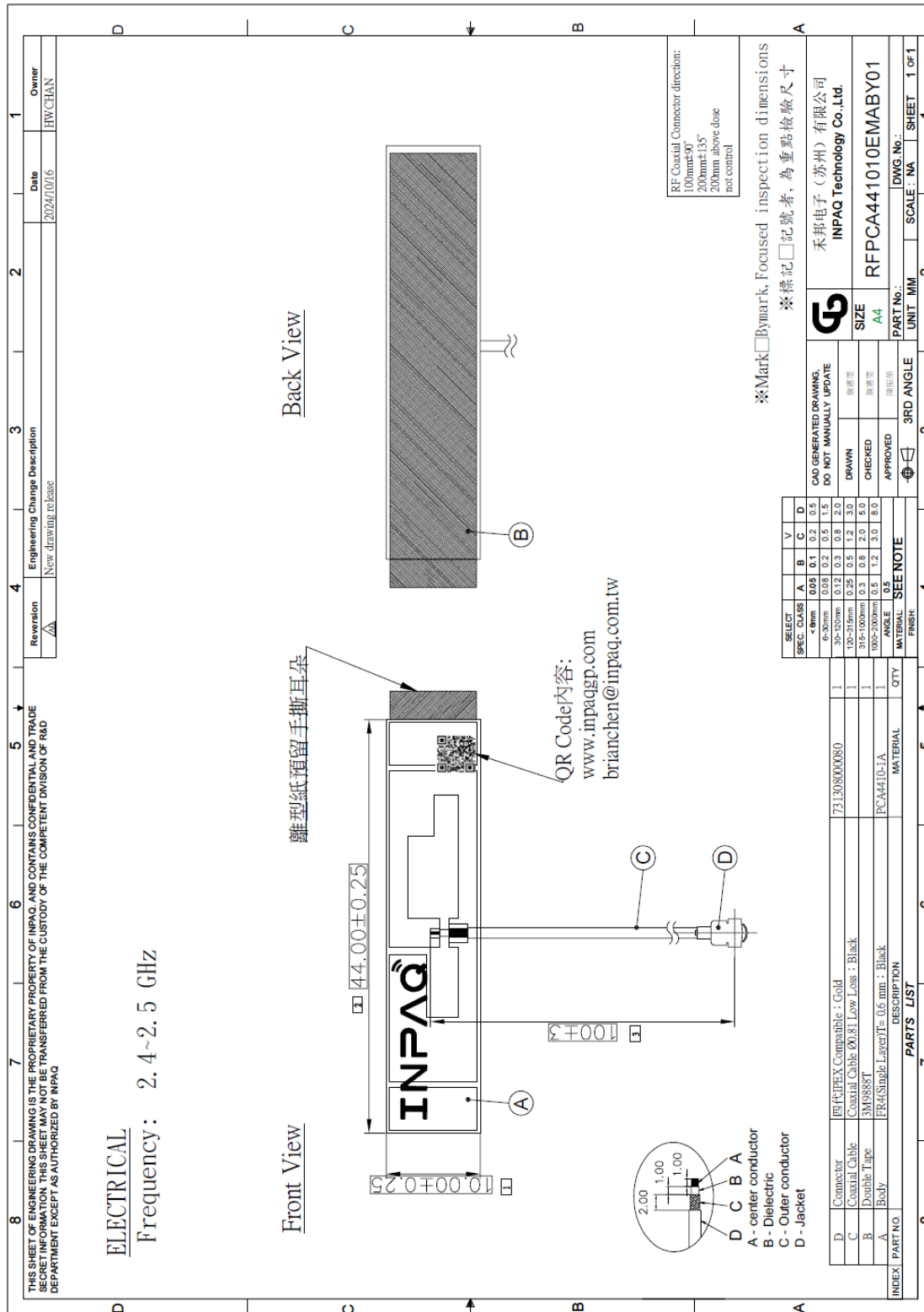
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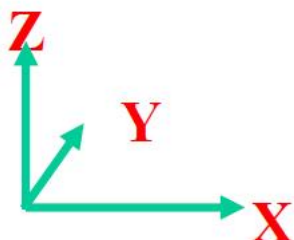
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## 3. Antenna Drawing :



# Test Report

## ■ ELECTRICAL CHARACTERISTICS



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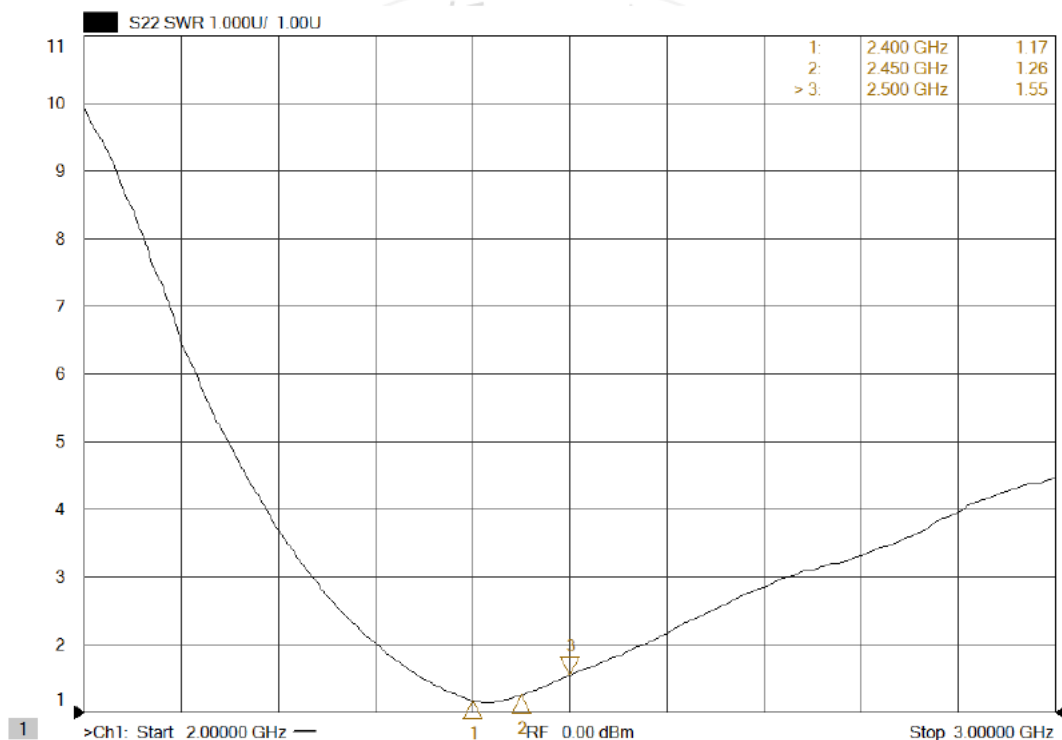
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## ELECTRICAL CHARACTERISTICS

### VSWR



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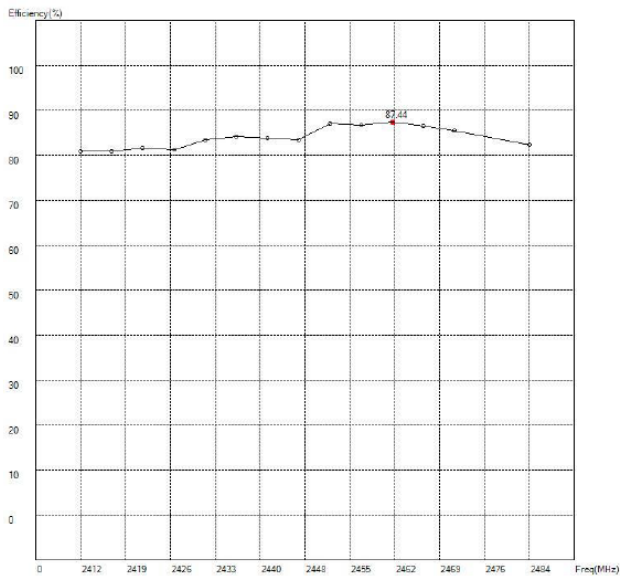
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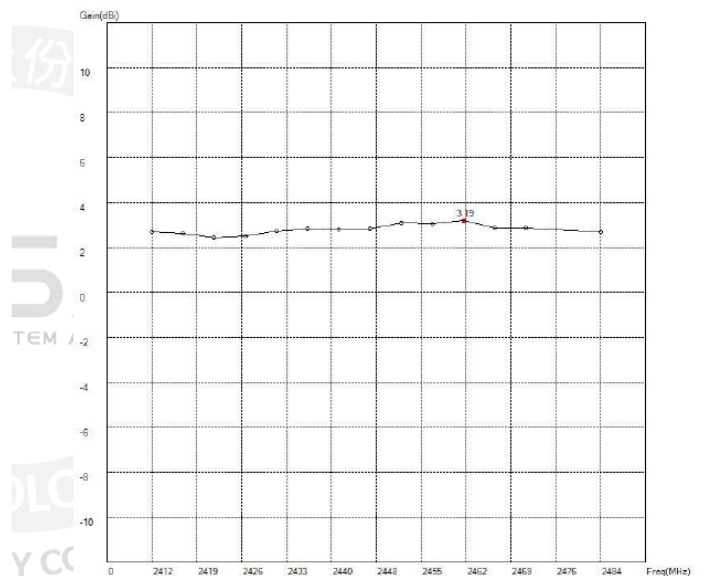
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## Antenna Efficiency & Peak Gain

### 2400-2500MHz



Maximum Efficiency at 2462 MHz : 87.44%



Peak Gain at 2462 MHz : 3.19dBi

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## Antenna Efficiency and Peak Gain

| CH. | Freq (MHz) | Gain (dBi) | Efficiency (%) |
|-----|------------|------------|----------------|
| 1   | 2412       | 2.69       | 80.95          |
| 2   | 2417       | 2.62       | 80.85          |
| 3   | 2422       | 2.53       | 81.69          |
| 4   | 2427       | 2.51       | 81.21          |
| 5   | 2432       | 2.74       | 83.45          |
| 6   | 2437       | 2.85       | 84.14          |
| 7   | 2442       | 2.80       | 83.91          |
| 8   | 2447       | 2.83       | 83.42          |
| 9   | 2452       | 3.09       | 87.03          |
| 10  | 2457       | 3.04       | 86.79          |
| 11  | 2462       | 3.19       | 87.44          |
| 12  | 2467       | 2.86       | 86.54          |
| 13  | 2472       | 2.88       | 85.41          |
| 14  | 2484       | 2.70       | 82.29          |

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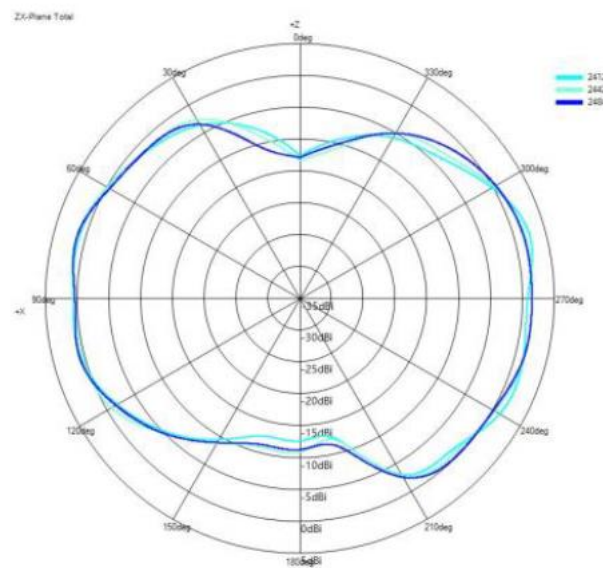
# RADIATION PATTERN

## 2400-2500MHz

### X-Z Plane

### Phi=0.00deg

### Gain . dB



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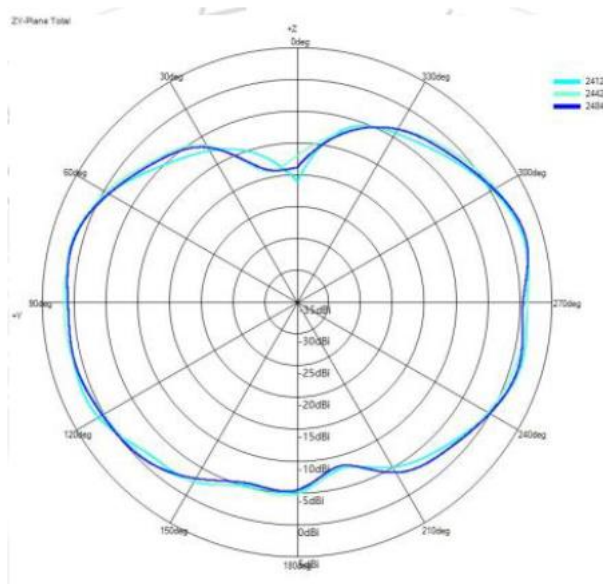
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## Y-Z Plane

Phi=90.00deg

Gain . dB



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ANGLES = N/A      HOLEDIA = N/A



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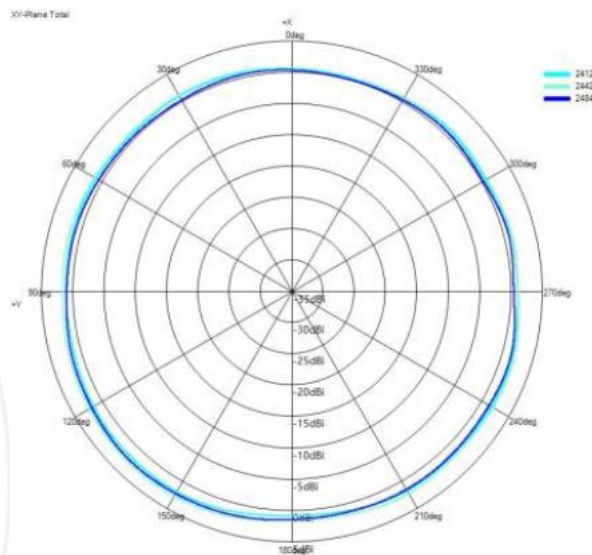
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## X-Y Plane

Theta=90.00deg

Gain . dB



|                 | ZX plane        |               | ZY plane        |               | XY plane        |               |
|-----------------|-----------------|---------------|-----------------|---------------|-----------------|---------------|
| Frequency [MHz] | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] | Max Value [dBi] | Average [dBi] |
| 2412            | 2.48            | -1.59         | 1.96            | -1.37         | 1.95            | 1.27          |
| 2442            | 1.79            | -1.46         | 2.13            | -1.20         | 2.80            | 1.65          |
| 2484            | 1.53            | -1.50         | 2.28            | -1.34         | 2.44            | 1.16          |

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