

**RFCBA040302IMAB301**

## History List

[illegible]

## 1.Explanation of part number :

| RF               | CBA                 | 0403                                                                          | 02                                                    | I                                                                                                                                      | M                                                                                     | A                                                                                                                                                                                                                                       | B                                            | 3                                                                                                                                                     | 01                  |
|------------------|---------------------|-------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Type Code        | Product Code        | Connector Dimension (Unit: mm)                                                | Cable Length (unit: cm)                               | Connector Brand                                                                                                                        | Type of Connector                                                                     | Application                                                                                                                                                                                                                             | Project status                               | Wire Diameter                                                                                                                                         | Project             |
| Walsin RF Device | CBA: Cable Assembly | Per 2 digits of length, width<br>e.g.:0403<br>Length<br>4.7mm, Width<br>3.0mm | 2 digits for cable length<br>e.g.: 02<br>Length 2.7cm | 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>B: Reverse Male</b><br>F: Female<br>M: Male<br><b>N: None</b> | <b>0: 0GHz</b><br><b>3: 3GHz</b><br><b>5: 5 GHz</b><br><b>6: 6GHz</b><br>A: 2.4GHz<br>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><b>N: NFC</b><br><b>T:LTE band</b><br><b>W: WCDMA band</b> | B: MP<br><b>T:During Test</b><br>X: Pile Run | 0:None<br>1: 0.81<br>2: 1.32<br>3: 1.13<br>4:Low Loss<br>1.13<br>5: 0.50<br>6:RG316<br>7: 1.37<br>8:RG178<br>9:Low Loss<br>1.37<br>A:RG174<br>B:RG178 | 01~99 series number |

## 2.Electrical Specification :

| Item                  | Specification    |
|-----------------------|------------------|
| Frequency Range       | 2.4 ~ 2.5 GHz    |
| Return Loss           | -3dB(Max)        |
| VSWR                  | 6 max.           |
| Peak Gain             | -0.80 dBi        |
| Polarization          | Linear           |
| Radiation Pattern     | Omni-directional |
| Impedance             | 50Ω              |
| 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

SCALE : N/A

UNIT : mm



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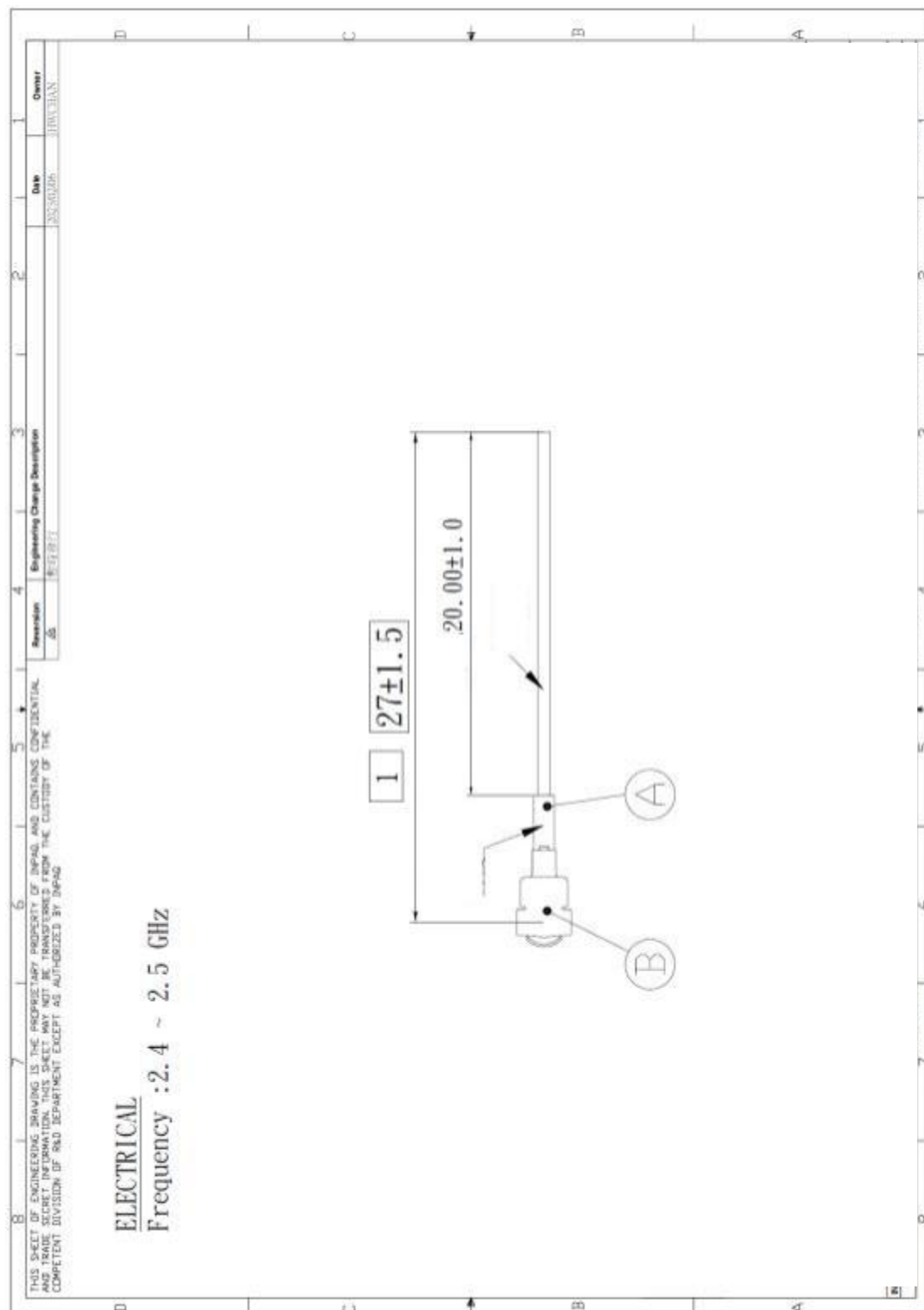
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### 3. Antenna Drawing :



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

ANGLES = N/A      HOLEDIA = N/A

SCALE : N/A      UNIT : mm



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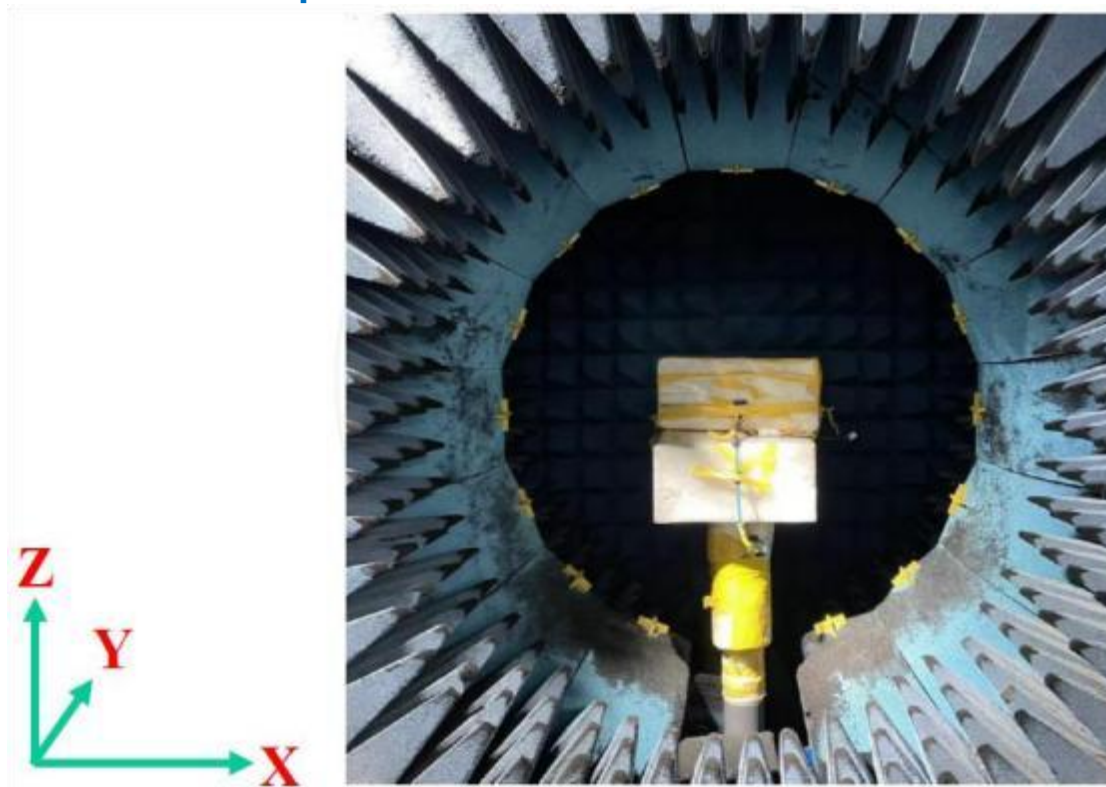
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## 4. Performance Report :

## Test Report

## ■ Experimental Setup



Antenna Solution Detail



UNLESS OTHER SPECIFIED TOLERANCES ON :  
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ANGLES = N/A

HOLEDIA = N/A

SCALE : N/A

UNIT : mm



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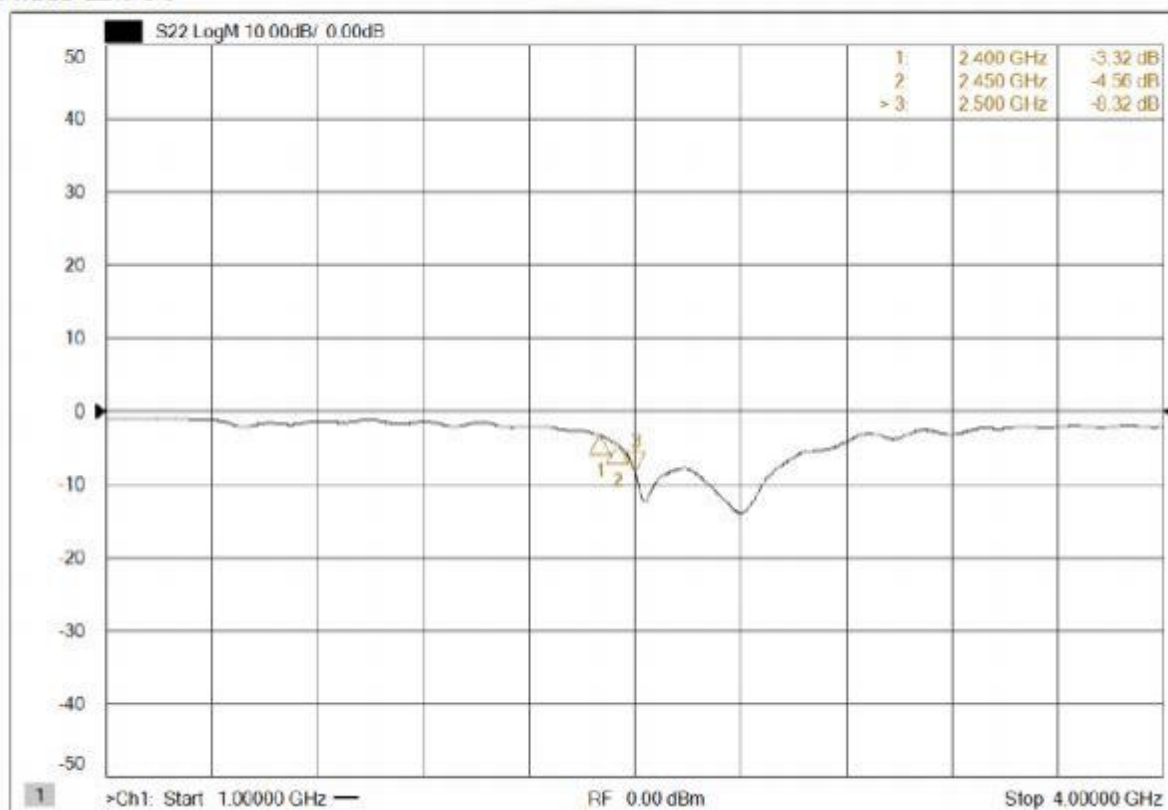
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## ELECTRICAL CHARACTERISTICS

### Return Loss



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

ANGLES = N/A

HOLEDIA = N/A

SCALE : N/A

UNIT : mm



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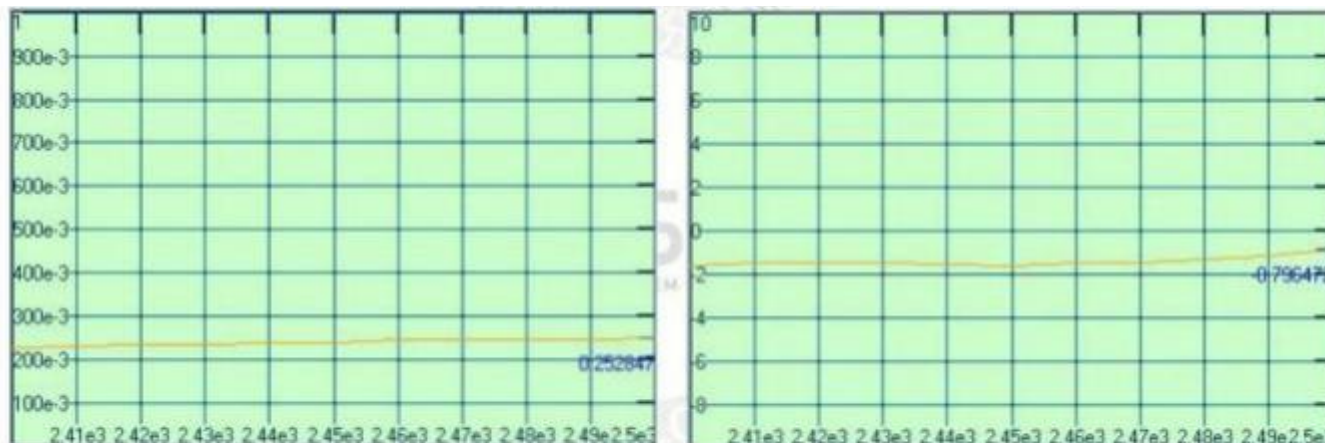
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## ■ Antenna Efficiency & Peak Gain

2400 ~ 2500 MHz



Maximum Efficiency at 2500 MHz : 25.28 %

Maximum Peak Gain at 2500 MHz : -0.80 dBi

### Antenna Efficiency and Peak Gain

| Frequency<br>(MHz) | Antenna           |                    |
|--------------------|-------------------|--------------------|
|                    | Efficiency<br>(%) | Peak gain<br>(dBi) |
| 2400               | 23.06             | -1.59              |
| 2450               | 24.09             | -1.55              |
| 2500               | 25.28             | -0.80              |

UNLESS OTHER SPECIFIED TOLERANCES ON :  
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ANGLES = N/A

HOLEDIA = N/A

SCALE : N/A

UNIT : mm



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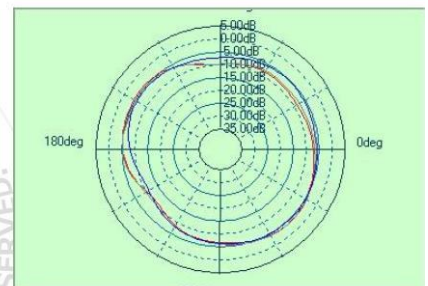
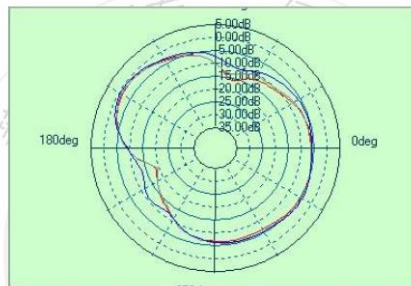
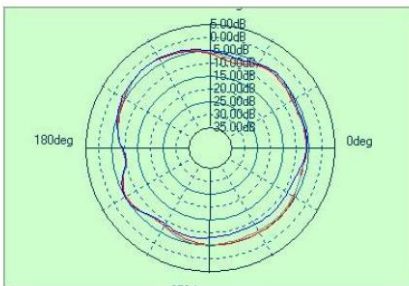
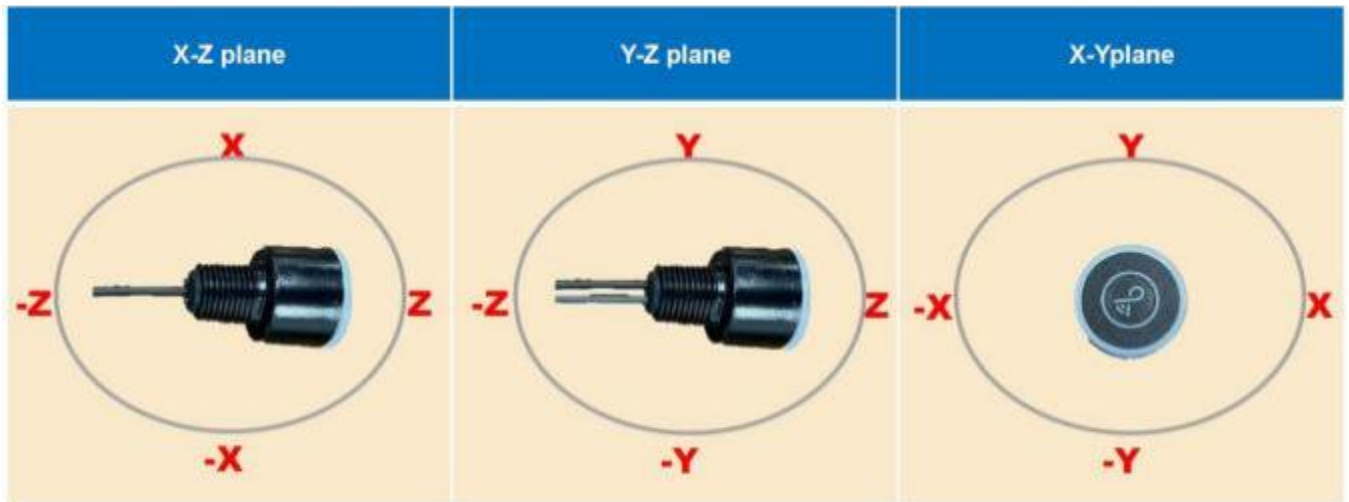
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## RADIATION PATTERN

2400 ~ 2500 MHz



| Frequency<br>[MHz] | ZX plane           |                  | ZY plane           |                  | XY plane           |                  |
|--------------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|
|                    | Max Value<br>[dBi] | Average<br>[dBi] | Max Value<br>[dBi] | Average<br>[dBi] | Max Value<br>[dBi] | Average<br>[dBi] |
| 2400               | -3.33              | -6.02            | -1.68              | -6.70            | -4.02              | -6.84            |
| 2450               | -3.23              | -5.90            | -1.60              | -6.50            | -3.81              | -6.67            |
| 2500               | -3.23              | -6.28            | -0.88              | -5.80            | -4.71              | -6.61            |

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