

# WiFi + GPS Combinational External Antenna



AEACBK046014-C2WG



ESD Sensitive



Ø46.6 x 14.5 mm  
RoHS/RoHS II Compliant

MSL = N/A: NOT APPLICABLE

## FEATURES

- IP67 Dust and Waterproof
- 1574.42MHz/2450MHz/5500MHz frequencies
- LNA Gain up to 20dBi+/-2dB
- VSWR ≤ 1.5/2.5 for GPS/WiFi
- RHCP/Linear polarization for GPS/WiFi

## APPLICATIONS

- GPS/GLONASS
- WiFi/Bluetooth/Zigbee,
- ISM devices
- Use on outdoor and indoor assets
- M2M
- Telematics
- Commercial vehicles/ Fleet management
- Remote Technology/Monitoring

## ELECTRICAL SPECIFICATIONS

| Parameters            | Min. | Typ.           | Max. | Units | Note                               |
|-----------------------|------|----------------|------|-------|------------------------------------|
| Frequency             |      | 1575.42 ± 3MHz |      | MHz   |                                    |
| Bandwidth             |      | CF ± 4MHz      |      | MHz   |                                    |
| VSWR                  |      |                | 1.5  |       |                                    |
| Polarization          |      | RHCP           |      |       | (Right Hand Circular Polarization) |
| Impedance             |      | 50             |      | Ω     |                                    |
| Gain                  |      | 0              |      | dBi   | (Zenith)                           |
| Operating Temperature | -40  |                | +85  | °C    |                                    |
| Input Power           |      |                | 10   | W     |                                    |

## LOW NOISE AMPLIFIER (LNA)

| Parameters   | Min. | Typ.   | Max. | Units | Note |
|--------------|------|--------|------|-------|------|
| DC Voltage   |      | 3.3    |      | V     |      |
| Gain         |      | 20±2dB |      | dB    |      |
| Output VSWR  |      |        | 2.0  |       |      |
| Noise Figure |      |        | 1.5  | dB    |      |
| DC current   |      |        | 10   | mA    |      |

## Wifi ANTENNA

| Parameters            | Min. | Typ.                  | Max. | Units | Note     |
|-----------------------|------|-----------------------|------|-------|----------|
| Frequency Range       |      | 2400~2483.5/4800~5825 |      | MHz   |          |
| VSWR                  |      |                       | 2.5  |       |          |
| Polarization Model    |      | Linear                |      |       |          |
| Impedance             |      | 50                    |      | Ω     |          |
| Gain                  |      | 2                     |      | dBi   | (Zenith) |
| Operating Temperature | -40  |                       | +85  | °C    |          |
| Input Power           |      |                       | 10   | W     |          |

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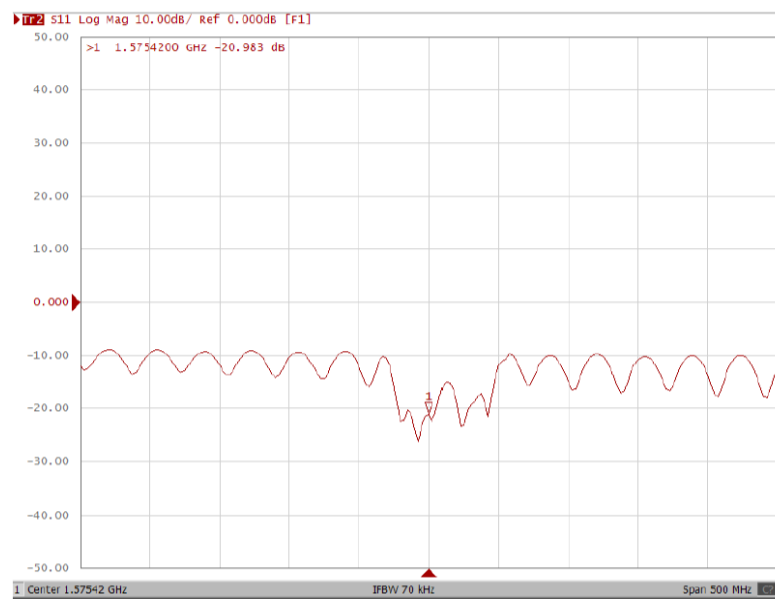


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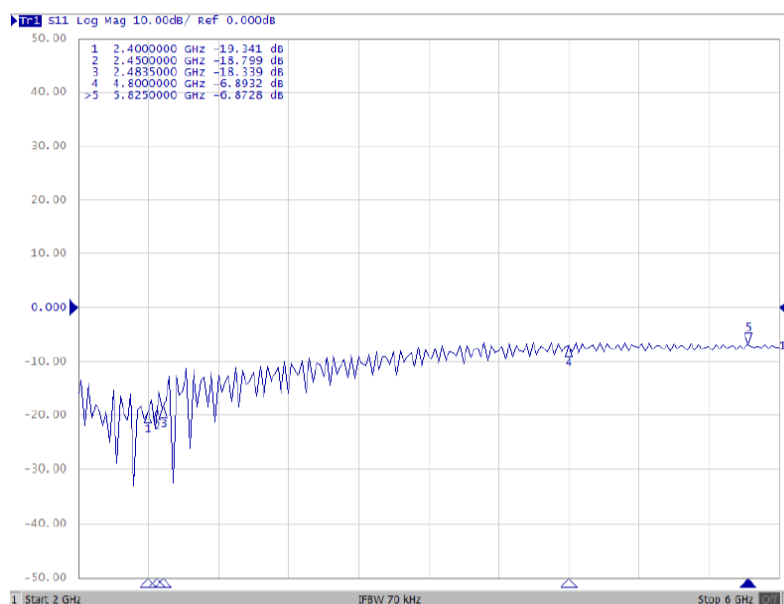
## RETURN - LOSS CHARACTERISTICS

### GPS S11 Return Loss



## RETURN - LOSS CHARACTERISTICS

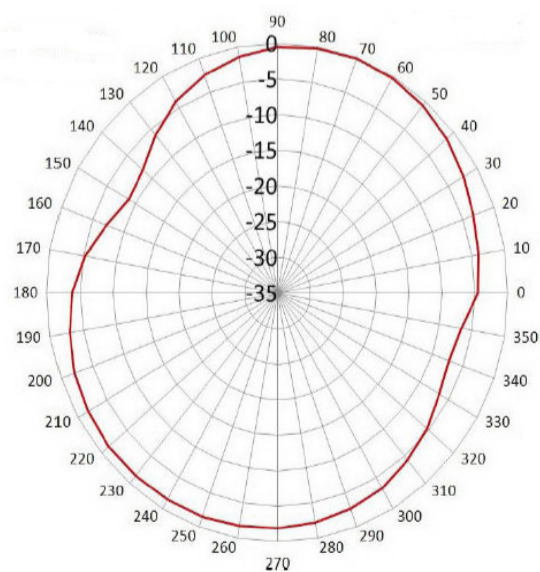
### WiFi S11 Return Loss



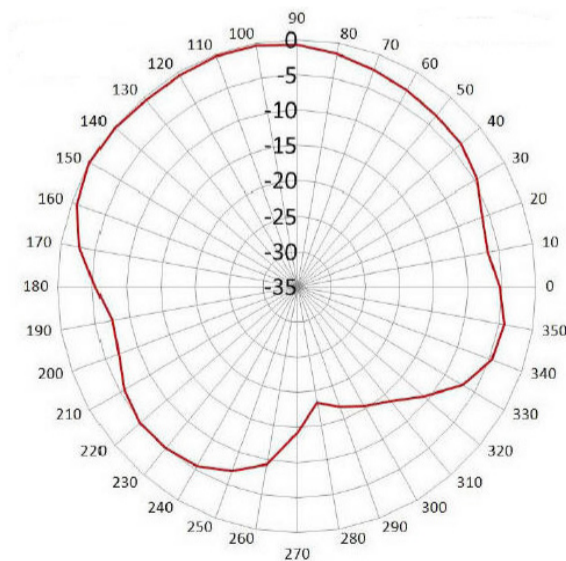
## RADIATION PATTERNS

### GPS Antenna 2D Patterns

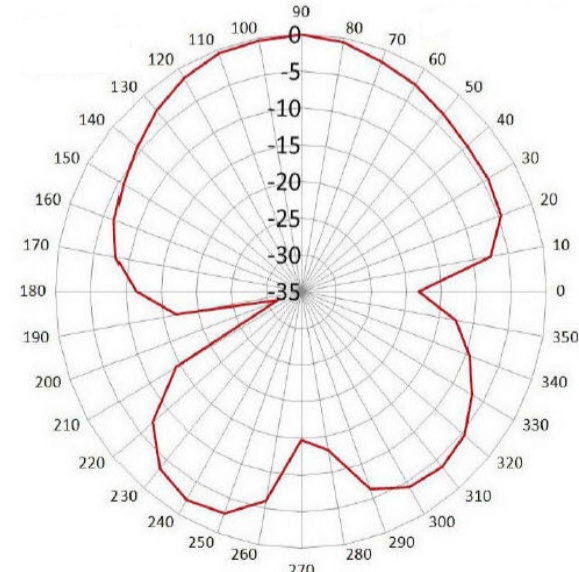
XY Plane



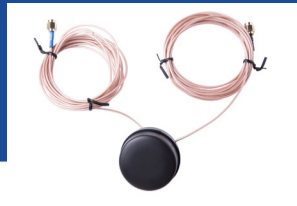
XZ Plane



YZ Plane



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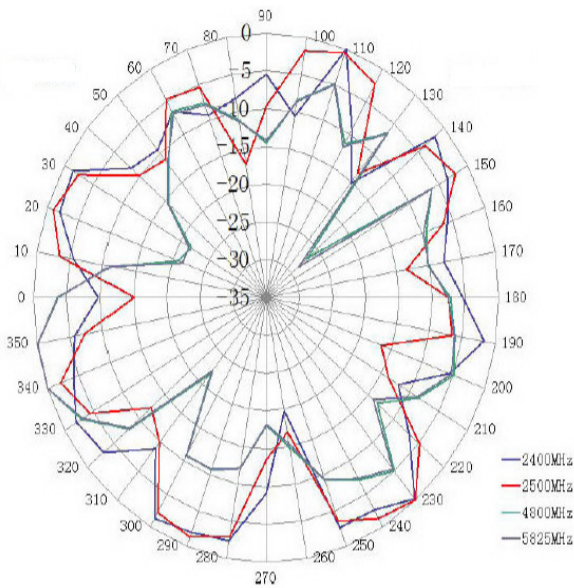
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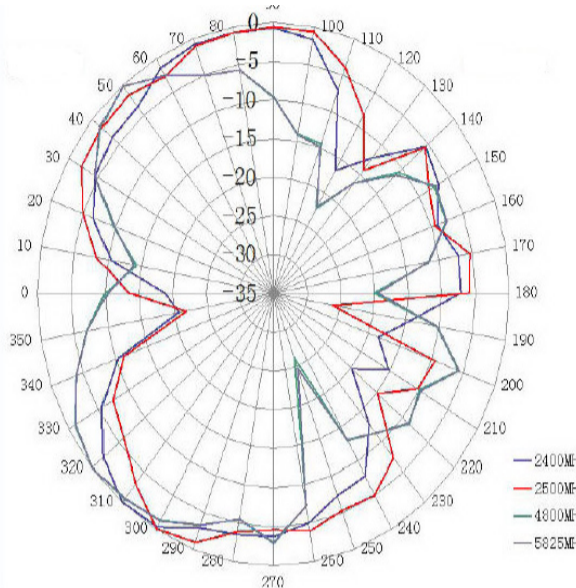
## RADIATION PATTERNS

### WiFi Antenna 2D Patterns

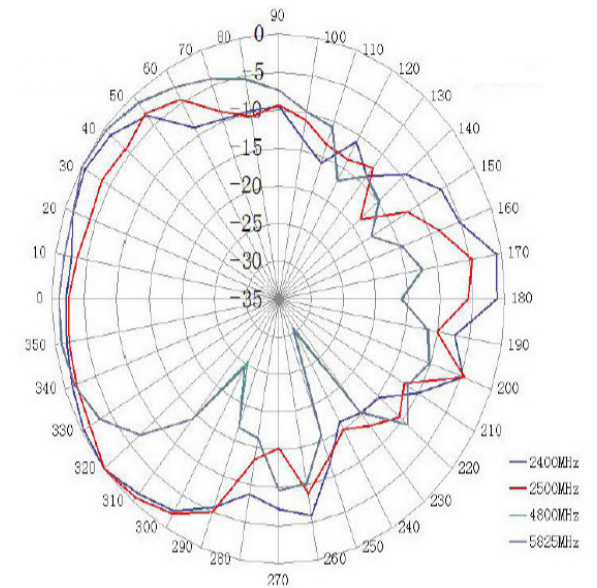
XY Plane



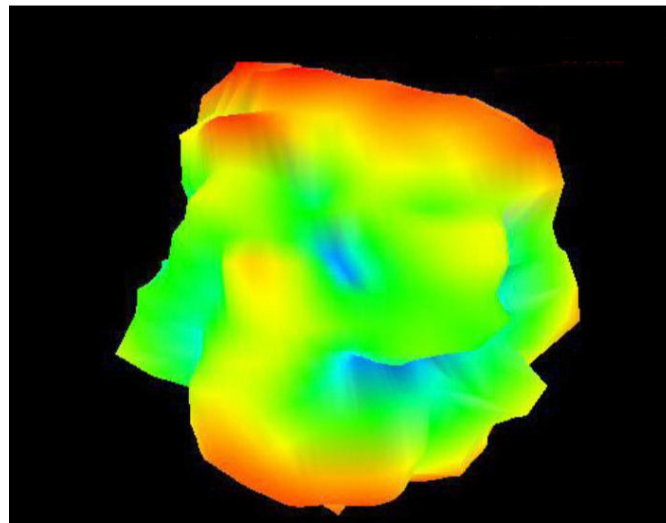
XZ Plane



YZ Plane

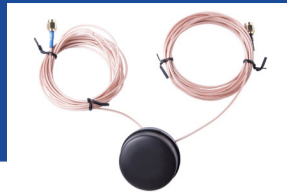


### WiFi Antenna 3D Pattern



|                 |      |       |       |
|-----------------|------|-------|-------|
| Frequency (MHz) | 2400 | 2450  | 2483  |
| Peak Gain (dBi) | -4.2 | -4.50 | -4.53 |
| Efficiency (%)  | 61   | 61    | 63    |

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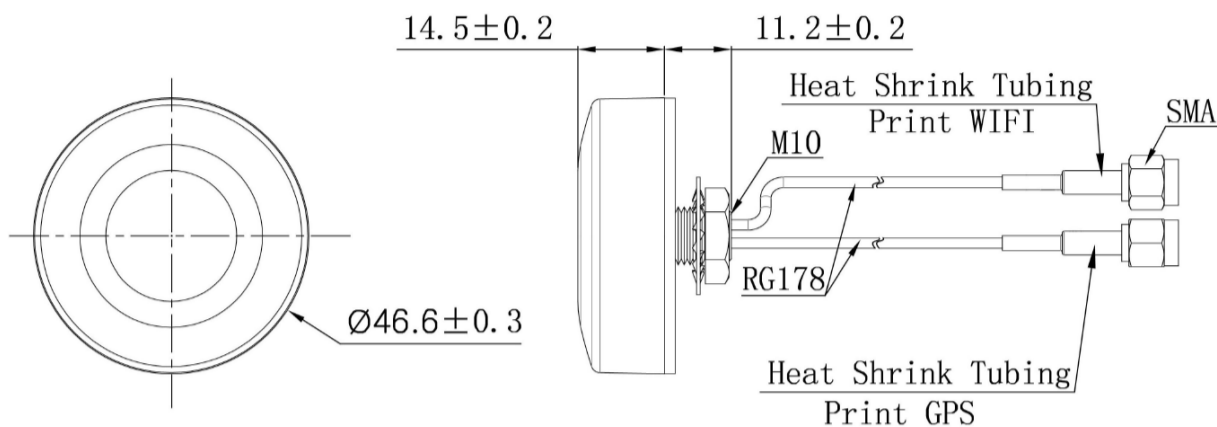
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## DIMENSIONS



Unit: mm

| Parameters      | Description    |
|-----------------|----------------|
| Cable Length    | 3.00 m         |
| RF Cable        | RG178          |
| RF Connector    | SMA and others |
| Radome Material | ABS            |
| Mounting Type   | Screw          |



## PACKAGING

Each 700 x 320 x 155 mm size carton includes 100 pcs antenna, 8kgs/carton.

Unit: mm

