

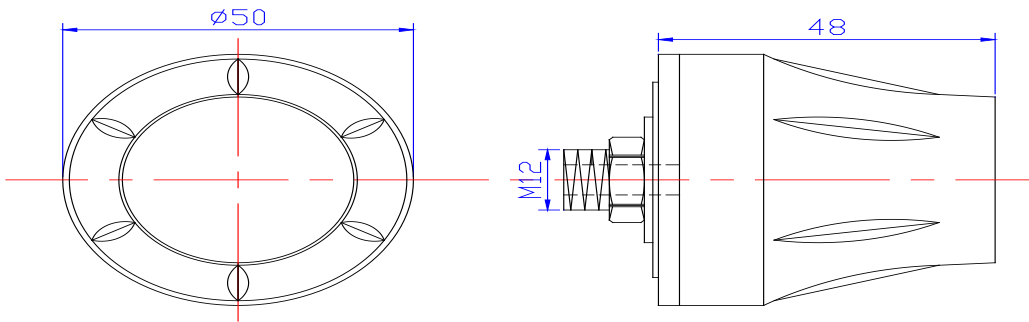
# GPS & WIFI Combination Antenna



1 Part Number

**GPSWIFI**

2 Dimension □ Unit □ mm □



3 Electrical Characteristics

3.1 Dielectric Antenna

Form 1

No.	Item	Specifications	Post Environmental
1	Center Frequency	1575.42 MHz	±3 MHz
2	Band Width	±5 MHz	±1 MHz
3	V.S.W.R (in BW)	1.5 : 1	—
4	Gain (Zenith)	3 dB	±0.5 dB
5	Polarization	RHCP	—
6	Impedance	50 Ω	—

3.2 LNA/Filter

Form 2

No.	Item	Specifications	Post Environmental
1	LNA Gain	28±2 dB	±2.5 dB
2	Noise Figure	1.5 dB	—
3	Filter Out Band Attenuation	12dB Min f0+50MHz 16dB Min f0-50MHz	±1.0 dB

4	DC Voltage	2.2~5 V
5	DC Current	5~15 mA

### 3.3 WiFi Antenna

#### Form 4

No.	Item	Specifications
1	Frequency	2400~2500 MHz
2	V.S.W.R (5m)	$\leq 2.0 : 1$
3	Gain (Zenith)	3 dBi
4	Impedance	50 $\Omega$

### 3.4 Mechanical

#### Form 5

No.	Item	Specification
1	Cable	RG174 3m/5m or others
2	Connector	SMA/SMB/MCX or others
3	Plastic Housing	Black
4	Mounting	Screw

### 3 Reliability

Condition: Temperature:  $40 \pm 5$  °C

Load: DC=5V $\pm$ 0.5 V

Quantity: 2000pcs

Sustained Time: 480h

### 4 Environmental Specifications

Post Environmental Tolerance (Refer to the form 1~2 )

Condition: Temperature range  $25 \pm 3$  °C

Relative Humidity range 55~75%RH

Operating Temperature range  $-40$  °C~ $+85$  °C

Storage Temperature range  $-40$  °C~ $+100$  °C

#### 5.1 Moisture Proof

The device should satisfy the electrical characteristics specified in form 1~2 after exposed to the temperature  $40 \pm 2$  °C and the relative humidity 90~95% RH for 96 hours and 1~2 hours recovery time under normal condition.

#### 5.2 Vibration Resist

The device should satisfy the electrical characteristics specified in form 1~2 after applied to the vibration of 10 to 55Hz with amplitude of 1.5mm for 2 hours each in X , Y and Z directions.

#### 5.3 Drop Shock

The device should satisfy the electrical characteristics specified in form 1~2 after dropping onto the hard wooden board from the height of 30cm for 3 times each facet of the 3 dimensions of the device.

#### 5.4 High Temperature Endurance

The device should satisfy the electrical characteristics specified in form 1~2 after exposed to temperature  $80\pm 5^{\circ}\text{C}$  for  $24\pm 2$  hours and 1~2 hours recovery time under normal temperature.

#### 5.5 Low Temperature Endurance

The device should also satisfy the electrical characteristics specified in form 1~2 after exposed to the temperature  $-40\pm 5^{\circ}\text{C}$  for  $24\pm 2$  hours and to 2 hours recovery time under normal temperature.

#### 5.6 Temperature Cycle Test

The device should also satisfy the electrical characteristics specified in form 1~2 after exposed to the low temperature  $-25^{\circ}\text{C}$  and high temperature  $+85^{\circ}\text{C}$  for  $30\pm 2$  min each by 5 cycles and 1 to 2 hours recovery time under normal temperature.

#### 5 Weatherproof

Put the antennas in 1m deep water for 12h, and find 100% waterproof.