

# GPS+GSM Combination Antenna

Model: JCB011



1 Part Number

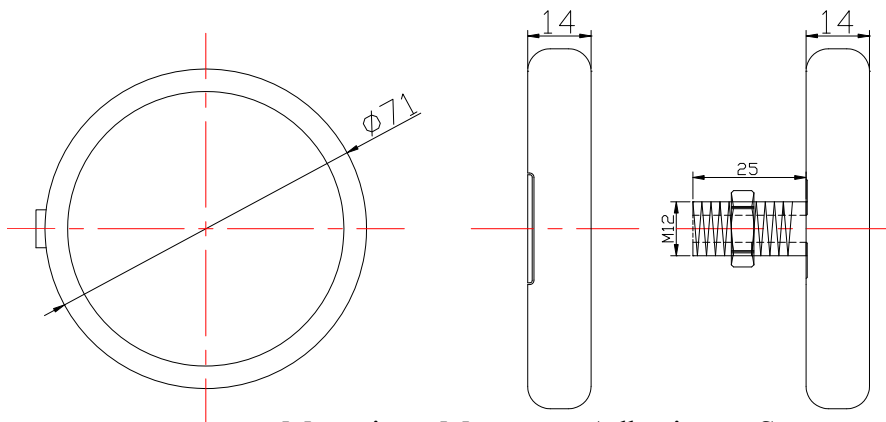
JC B 011

Serial Number

B: GPS+GSM Combination Antenna

JC: Jiashan Jinchang Electron CO.,LTD

2 Dimension (Unit: mm)



Mounting : Magnet or Adhesive or Screw



3 Electrical Characteristics

3.1 Dielectric Antenna

Form 1

| No. | Item             | Specifications | Post Environmental Tolerance |
|-----|------------------|----------------|------------------------------|
| 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 Tolerance |
|-----|-----------------------------|--|------------------------------|
| 1   | LNA Gain                    | 28±2 dB                                | ±2.5 dB                      |
| 2   | Noise Figure                | 1.5 dB                                 | —                            |
| 3   | Filter Out Band Attenuation | 12dB Min f0+50MHz<br>16dB Min f0-50MHz | ±1.0 dB                      |
| 4   | DC Voltage                  | 2.2~5 V                                |                              |
| 5   | DC Current                  | 5~15 mA                                |                              |

3.3 GSM Antenna

Form 3

| No. | Item          | Specifications   |
|-----|---------------|--|
| 1   | Frequency     | 824~894 MHz/1710~1990 MHz<br>880~960 MHz/1710~1990 MHz |
| 2   | V.S.W.R (5m)  | ≤2.0 : 1   |
| 3   | Gain (Zenith) | 2 dBi  |
| 4   | Impedance     | 50 Ω   |

3.4 Mechanical

Form 4

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



#### 4 Reliability

Condition: Temperature:  $40 \pm 5^{\circ}\text{C}$

Load:  $\text{DC}=5\text{V} \pm 0.5\text{V}$

Quantity: 2000pcs

Sustained Time: 480h

#### 5 Environmental Specifications

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

Condition: Temperature range  $25 \pm 3^{\circ}\text{C}$

Relative Humidity range 55~75%RH

Operating Temperature range  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Storage Temperature range  $-40^{\circ}\text{C} \sim +100^{\circ}\text{C}$

##### 5.1 Moisture Proof

The device should satisfy the electrical characteristics specified in form 1~2 after exposed to the temperature  $40 \pm 2^{\circ}\text{C}$  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  $-40^{\circ}\text{C} \pm 5^{\circ}\text{C}$  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.

#### 6 Weatherproof

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