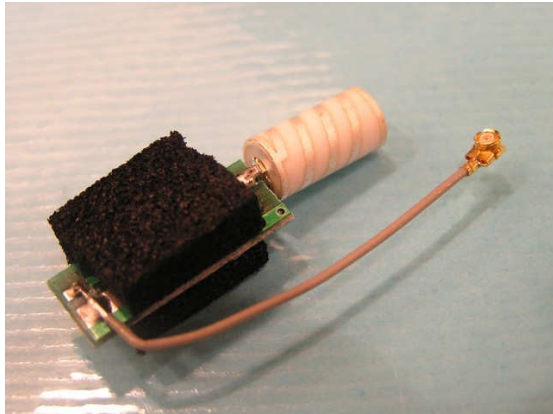


# GSM Antenna Module

## MODEL: IA-100



- Operation temperature: -35°C to +85°C
- Frequency range: 880~960 / 1710~1880MHz
- 32.5mm (L) x 7.6mm (W) x 6mm (H)

This product specifications are applied to the helical antenna composed of helix on the dielectric material and conducting mechanism used for the wireless communication system. **Please contact us when using this product for any other applications than described in the above.**

### 1.Specifications

#### Electrical

- ✧ Operation Frequency
  - 880MHz~960MHz
  - 1710MHz~1880MHz
- ✧ VSWR at free space
  - 2.9 @ 880 MHz
  - 3.4 @ 960 MHz
  - 1.8 @ 1710 MHz
  - 2.5 @ 1880 MHz
- ✧ Impedance
  - 50Ω
- ✧ Power Handling
  - Input power 1.5 Watt max.
- ✧ Radiation Pattern
  - Attached drawings for reference

#### Mechanical

- Attached drawing for reference

### 2.Environmental Conditions

- ✧ Operation Temperature

At the temperature range from -35°C~+85°C, the device shall satisfy the electrical specifications.

The device is subjected to 90%~95% relative humidity at  $40^{\circ}\text{C}\pm 2^{\circ}\text{C}$  for  $96+2/-0$  h.

Then dry out at  $25^{\circ}\text{C}\pm 5^{\circ}\text{C}$  and less than 65% relative humidity for  $2+2/-0$  h. After dry out the device shall satisfy the electrical specifications.

✧ Vibration Resistance

The device is subjected to vibration of sweep in each of three mutually perpendicular planes. Frequency shall be varied within 10Hz~55Hz with 1.5mm double amplitude. Sweep time of frequency shall be 120 min. the device shall satisfy the electrical specifications after the test.

✧ Drop Test

Without electrical and mechanical performance change after 5 drops under 1.5 m height.

### 3、Soldering Conditions

✧ Reflow Soldering

The maximum temperature and time of soldering is as figure shown. The soldering condition should be within the oblique line area. In case the soldering is repeated, the maximum time should be accumulated time. And standard reflow soldering condition is shown in figure. The temperature in figure should be the temperature at in-out terminal of device.

✧ Mechanical Soldering

Pre-heating Temperature	:120 $^{\circ}\text{C}$
Pre-heating Time	:60s.~300s.
Soldering Temperature	: $340^{\circ}\text{C}\pm 5^{\circ}\text{C}$
Soldering Time	:5s. max. per each terminal

### 4、Notices

✧ Environment Conditions

This product is designed for use of electrical equipment in the environment (temperature, humidity, atmospheric pressure and etc.) specified in this approval drawing: it may not be used in the following environments or under the following conditions:

- Ambient air containing corrosive gas( $\text{Cl}_2$ ,  $\text{H}_2\text{S}$ ,  $\text{NH}_3$ ,  $\text{SO}_x$ ,  $\text{NO}_x$ , etc.)
- Ambient air containing volatile or combustible gas.
- In liquid (water, oil, chemical solution, organic solvents, etc.)
- In environments with a high concentration of airborne particles.
- In direct sunlight.
- Other environments similar to the above conditions.

✧ Contact the manufacturer before using the product in any of the above environments or under any of the above condition

✧ Limitation of Applications

Please contact us before using our products for the applications listed below which require especially high reliability for the prevention of defects which might directly cause damage to the third party's life, body or property.

- Aircraft equipment

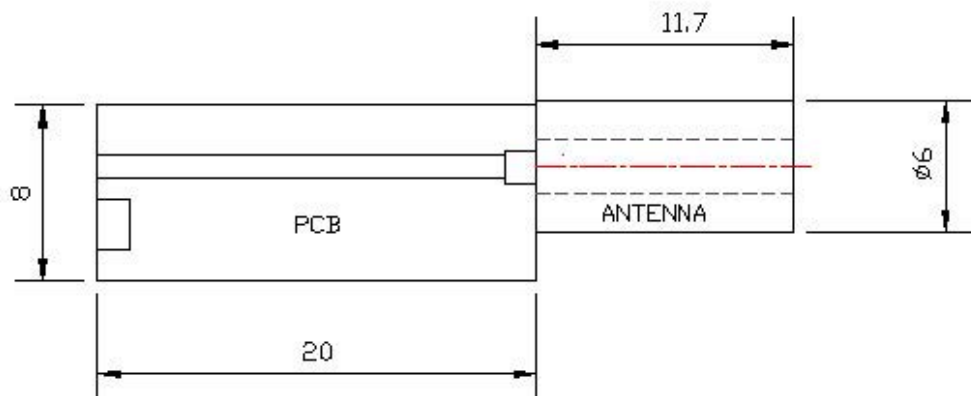
- Undersea equipment
- Medical equipment
- Transportation equipment
- Disaster prevention / crime prevention equipment
- Data-processing equipment
- Application of similar complexity and / or with reliability

Requirements to the applications listed in the above

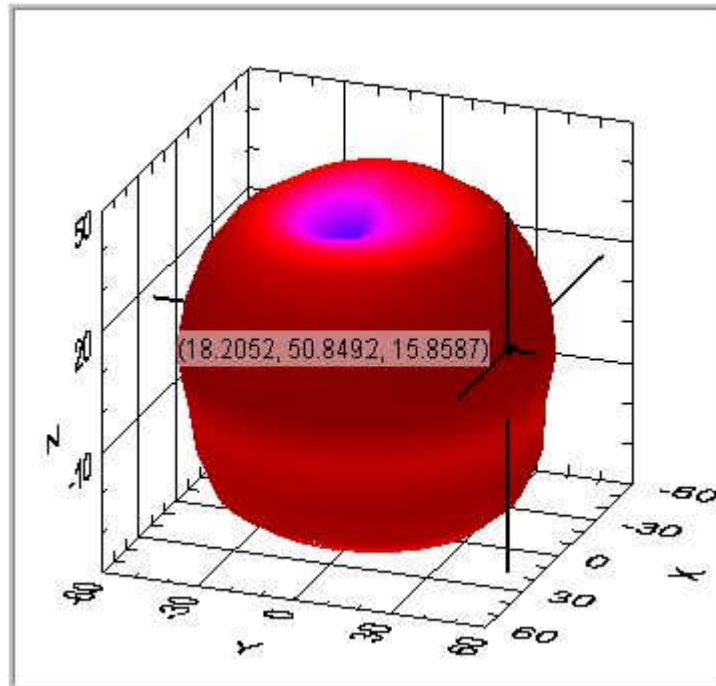
- ✧ Please make sure that your product has been evaluated and confirmed against your specifications when our product is mounted to your product.
- ✧ All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
- ✧ Please return one duplicate of this product specification to us with your receipt signature. If the duplicate is not returned within two months, this product specification will be deemed to have been received by you.
- ✧ We consider it not appropriate to include other terms and conditions for transaction warranty in product such terms and conditions as warranty clause, product liability clause, terms and conditions unless they are based on the governmental regulation or they are stated in a separate contract agreement.
- ✧ This product design has been protected under the patents of China ZL200520028400-x and Taiwan M274657

### Attached Drawings

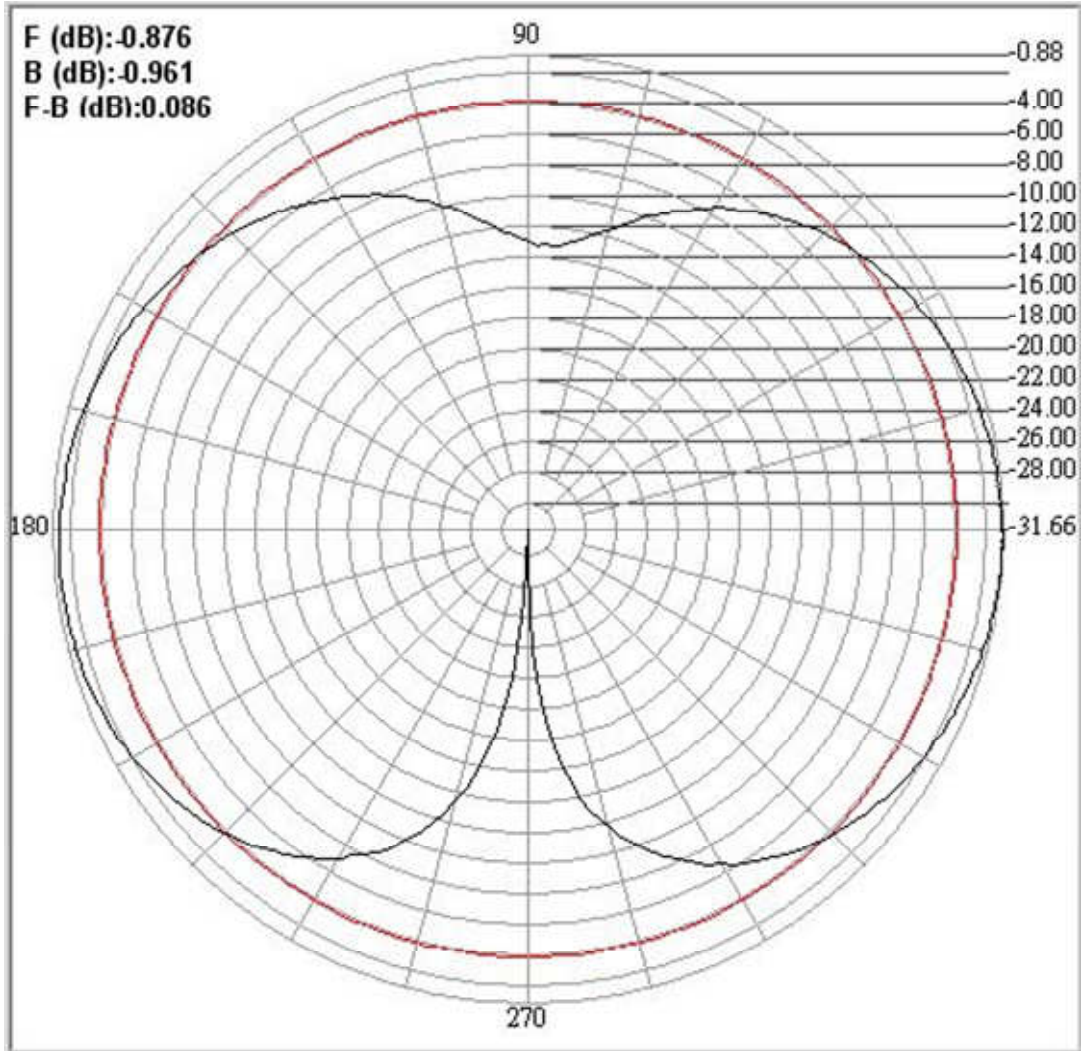
#### 一、 Mechanical Drawing



二、RADIATION PATTERNS



Job No.:ST-0408-900-1	Test Item:
Standard:	Instrument:
Test Distance:	Ant. Polar:H
Date:2006/4/8	Time:下午 05:02
Temp.(°C) / Hum.(%):25°C/80%	Test By:
Company:	Trade Name:
Model:	
Test Mode / Description:	



Center freq.(MHz): <b>900</b>	Plane : <b>E Plane</b>	
Max gain(dBi) : <b>-0.88</b>	Min gain(dBi) : <b>-31.66</b>	Avg gain(dBi) : <b>-2.75</b>
-3dB1(°) : <b>401.90</b>	-3dB2(°) : <b>312.80</b>	HPB(°) : <b>89.10</b>
Front (dB) : <b>-0.876</b>	Back (dB) : <b>-0.961</b>	F B Ratio (dB) : <b>0.086</b>