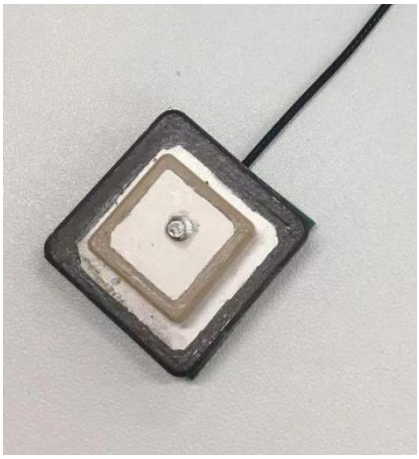
SUNNYWAY

# SWG023



## PN: SW21019IB93

## Features

- Antenna for 1227.6 MHz、1246MHz、1575.42MHz、1602MHz.
- High gain.
- Impedance 50 Ohm.

## Applications:

- Solution for global public constellations: GPS/GLONASS/GALILEO/IRNSS.

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# 1. Electrical Specification

| Standards | GPS/GLONASS/GALILEO/IRNSS | | | |
|---|---|---|---|---|
| Frequency range (MHz ) | 1227 | 1246 | 1575 | 1602 |
| Peak Gain (dBi ) | -1.79 | -0.93 | -0.31 | -1.65 |
| Average Gain (dB ) | -6.4 | -4.9 | -4.0 | -6.5 |
| VSWR | 1.3 | 1.3 | 1.4 | 1.4 |
| Return Loss | -17.9 | -17.1 | -15.2 | -15.3 |
| Efficiency (%) | 22.7 | 32.4 | 40.1 | 22.2 |
| Polarization mode | Circular polarization | | Circular polarization | |
| Radiation pattern | Hemispherical | | Hemispherical | |
| Voltage Range (V) | 1.8~3.6 | | 1.8~3.6 | |
| Active Gain (dB) | 28±1dB | | 28±1dB | |
| Noise Figure (dB) | 1.5 | | 1.5 | |

**Note**：Test based on 41 mm wire length

# 2. Mechanical and Environmental Specification

| | |
|---|---|
| Mounting Type | Adhesive |
| Adhesive Type | 3M9448A |
| Connector Type | IPEX MHF1 |
| Antenna size(mm) | 25 x25 +15x15x11.15mm (H) |
| Material | Ceramic |
| Cable length(mm) | 41.00mm |
| Operating Temperature (˚C) | -40 ˚C ~ +85 ˚C |
| Storage Temperature(˚C) | -40 ˚C ~ +85 ˚C |

# 3. Antenna parameters

## 3.1 General Data

| FRE ( MHz ) | 1227 | 1246 | 1575 | 1602 |
|---|---|---|---|---|
| VSWR | 1.3 | 1.3 | 1.4 | 1.4 |
| Return Loss | -17.9 | -17.1 | -15.2 | -15.3 |
| Eff (%) | 22.7 | 32.4 | 40.1 | 22.2 |
| Average Gain(dB) | -6.4 | -4.9 | -4.0 | -6.5 |

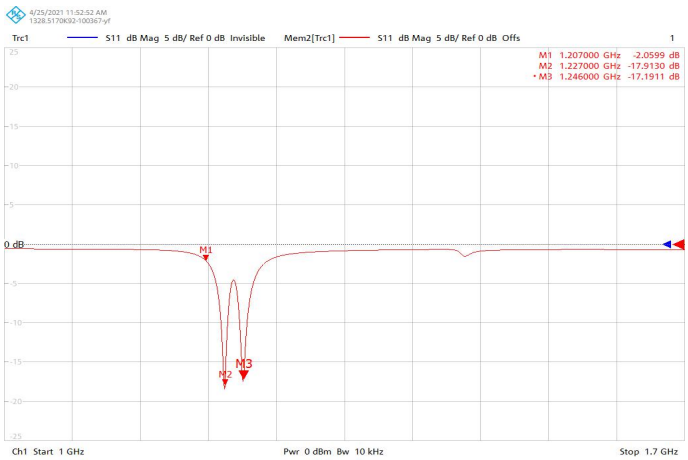
## 3.2 VSWR

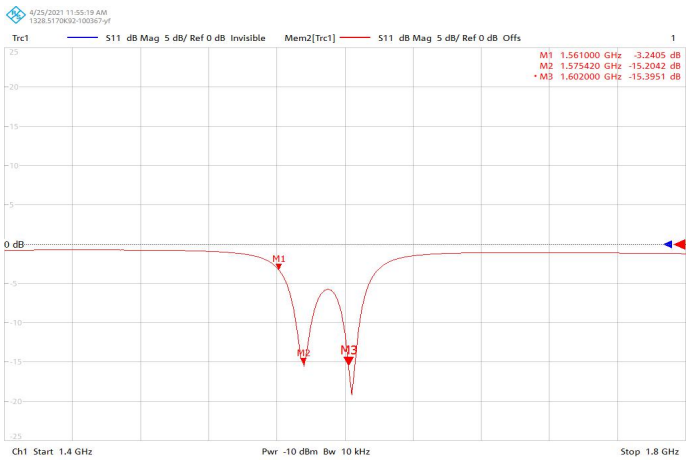




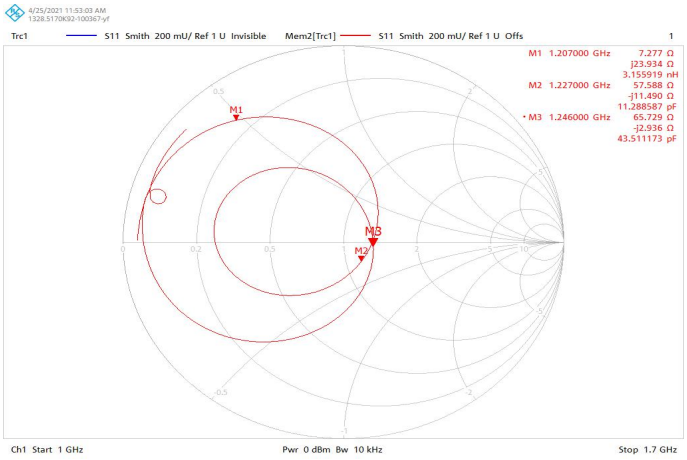


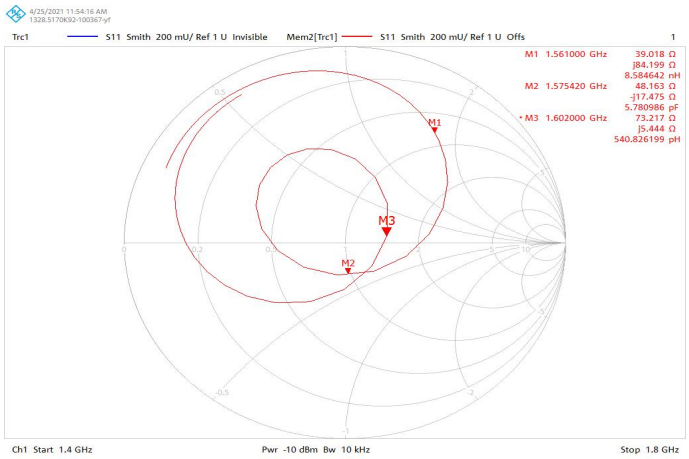
## 3.3 Return Loss



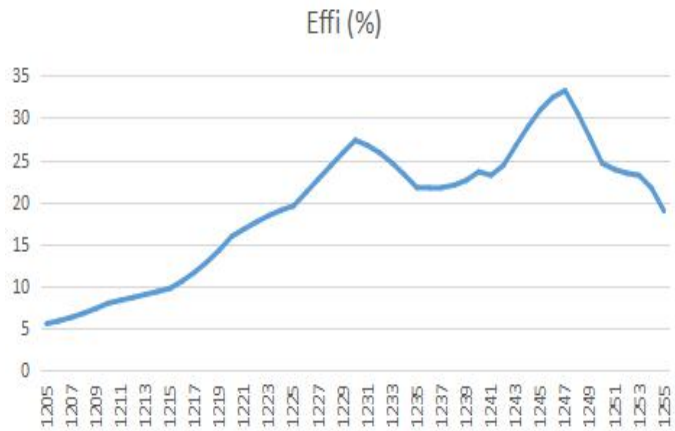



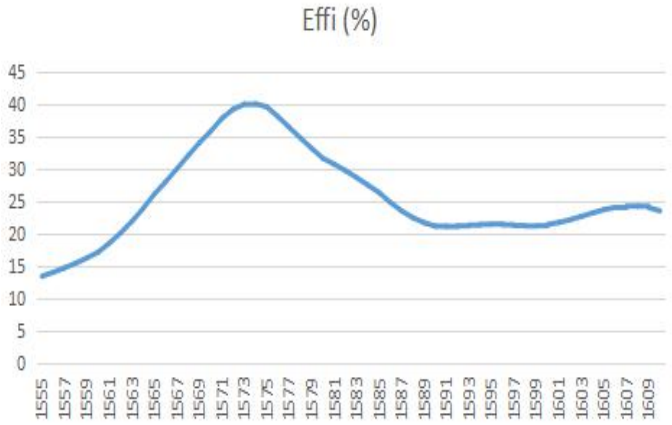
## 3.4 Smith



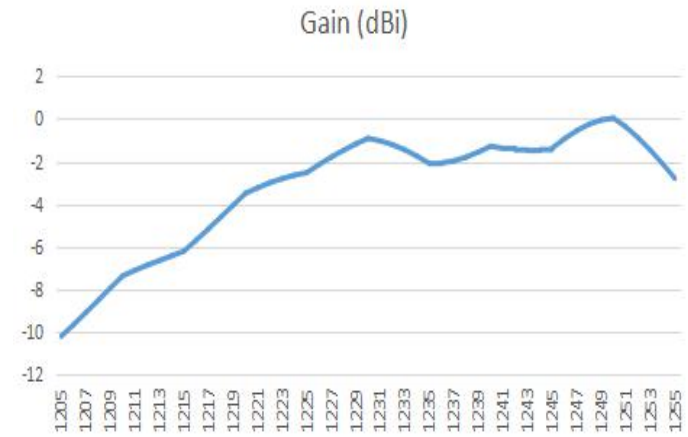



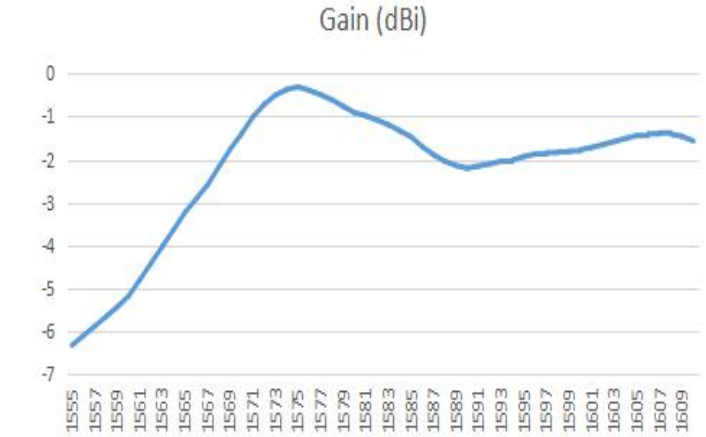

## 3.5 Efficiency



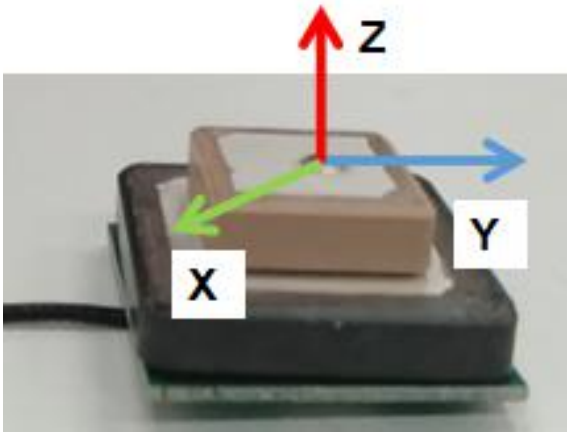



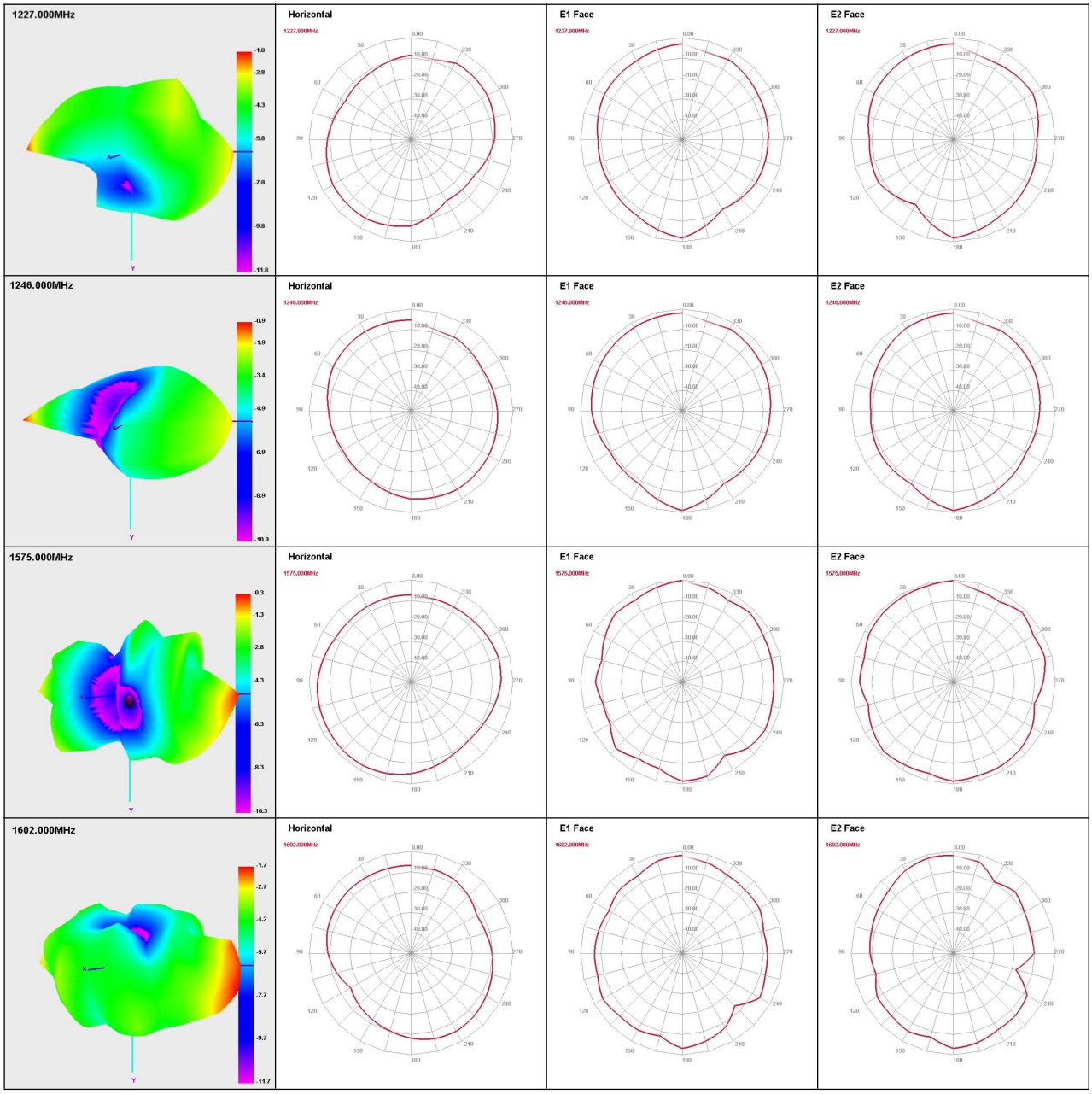

## 3.6 Gain



## 3.7 Directional Pattern



## 4. Antenna Drawing(Unit:mm)

