



# **SWE022**

**PN: SW19053EB56**



**Sunnyway Technology**

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## 1. Electrical Specifications

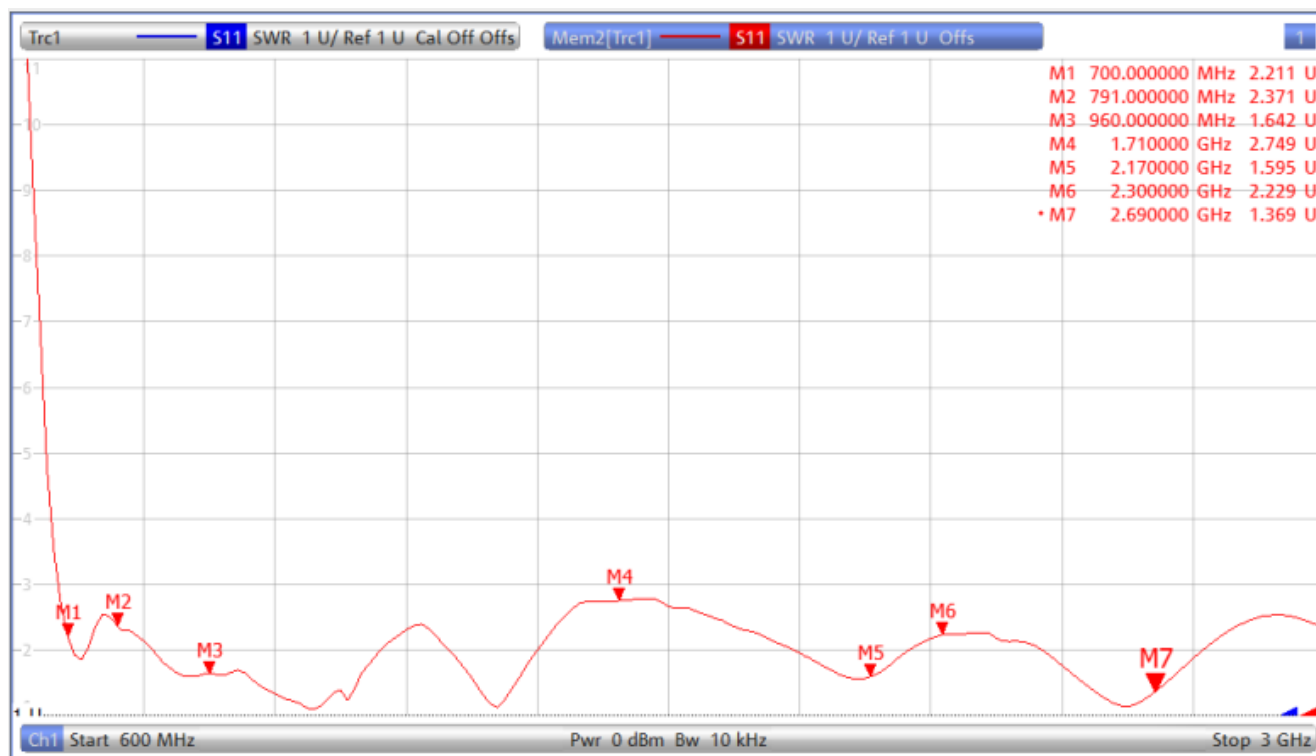
|                               |                  |                  |
|-------------------------------|------------------|------------------|
| Standards                     | 4G&3G&2G         |                  |
| Frequency range (MHz)         | 698~960MHz       | 1710~2690MHz     |
| Peak Gain (dBi)               | 1.0~5.0dBi       | -1.0~3.8dBi      |
| Average Gain (dB)             | -3.4~-0.5dB      | -5.2~-1.3dB      |
| VSWR                          | < 2.5            | < 3.0            |
| Return Loss                   | < -7.5           | < -6.5           |
| Efficiency (%)                | 45~90%           | 30~75%           |
| Polarization mode             | Linear           | Linear           |
| Radiation pattern             | Omni-Directional | Omni-Directional |
| Output impedance ( $\Omega$ ) | 50               | 50               |
| Max. Input Power(W)           | 25               | 25               |

## 2. Mechanical and Environmental Specification

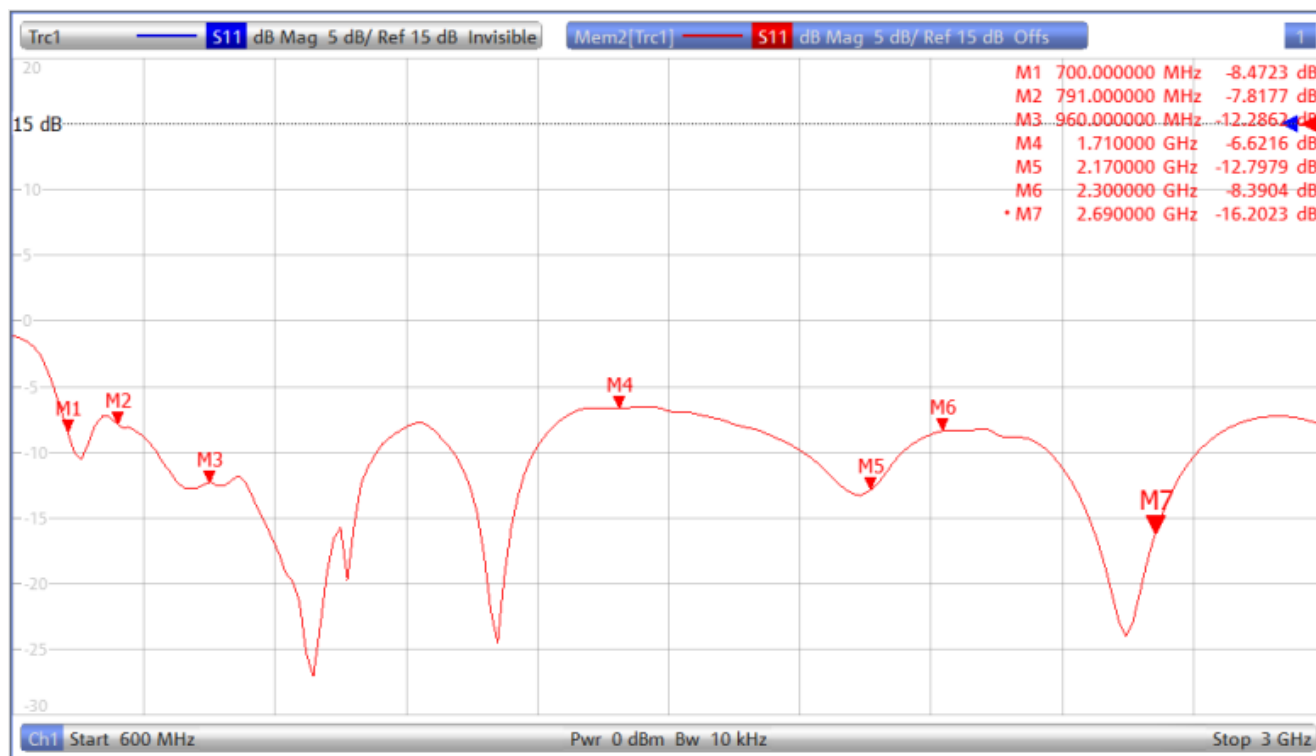
|                            |                   |
|----------------------------|-------------------|
| Mounting Type              | Connector Mount   |
| Connector Type             | SMA               |
| Antenna size(mm)           | 159 x 17.5mm      |
| Material                   | ABS               |
| Operating Temperature (°C) | - 40 °C ~ + 85 °C |
| Storage Temperature(°C)    | - 40 °C ~ + 85 °C |

### 3. Antenna parameters

| FRE (MHz)              | 700   | 791   | 960    | 1710  | 2170   | 2300  | 2690   |
|------------------------|-------|-------|--------|-------|--------|-------|--------|
| <b>VSWR</b>            | 2.21  | 2.37  | 1.64   | 2.74  | 1.59   | 2.22  | 1.36   |
| <b>Return Loss</b>     | -8.47 | -7.81 | -12.28 | -6.62 | -12.79 | -8.39 | -16.20 |
| <b>Eff (%)</b>         | 58.1  | 74.9  | 47.3   | 43.1  | 58.3   | 64.3  | 50.7   |
| <b>PEAK Gain (dBi)</b> | 0.98  | 4.67  | 1.71   | -0.18 | 3.16   | 3.21  | 1.01   |

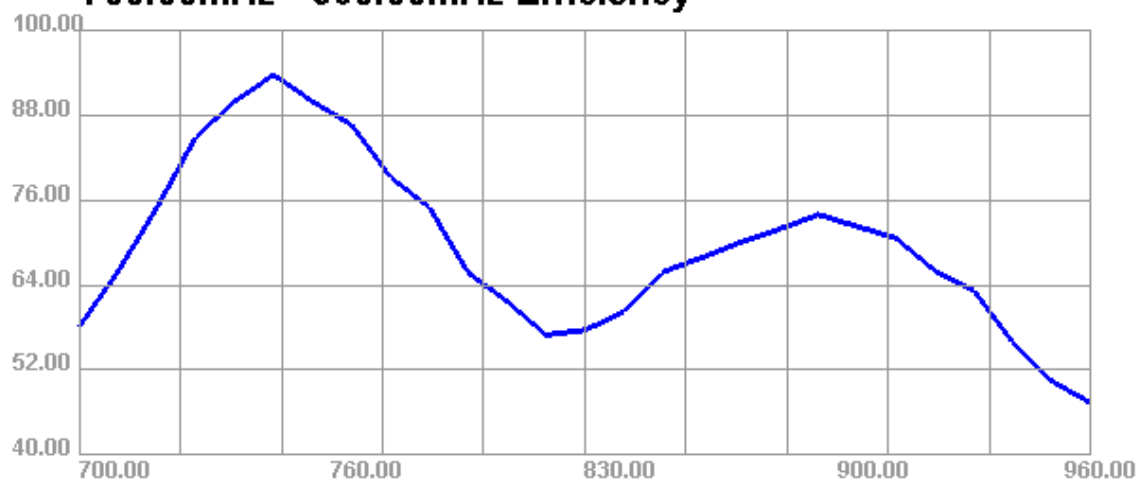


## VSWR

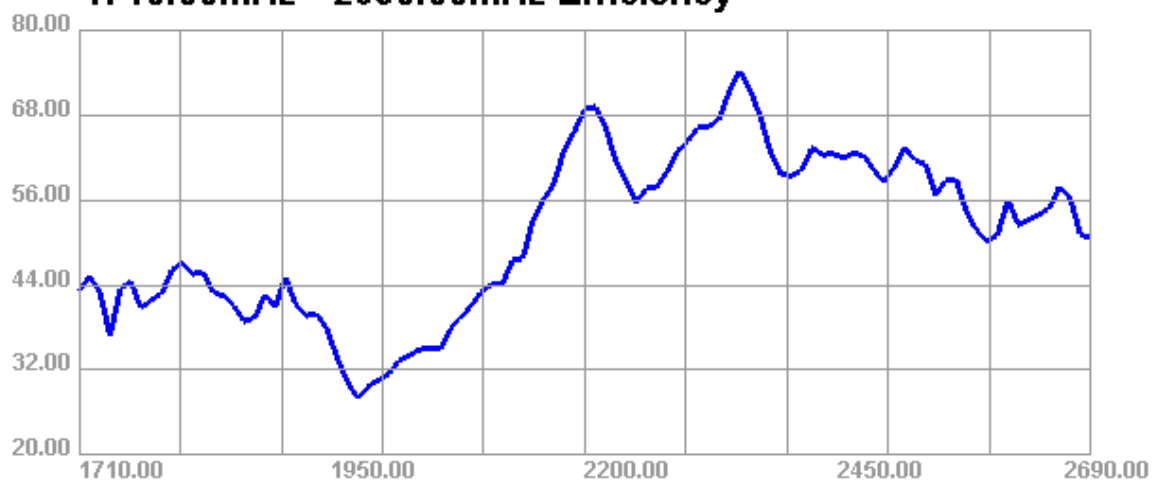


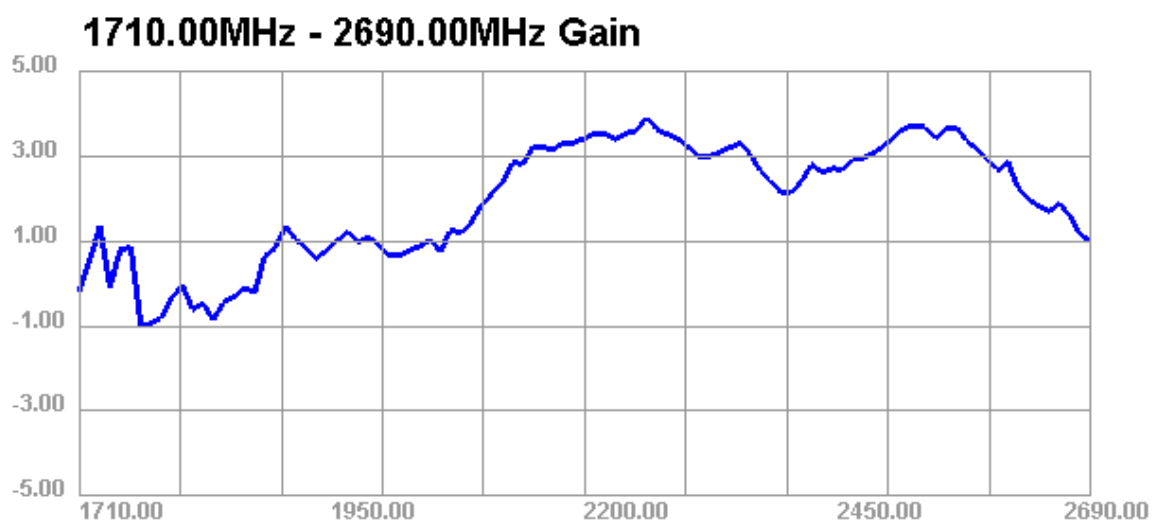
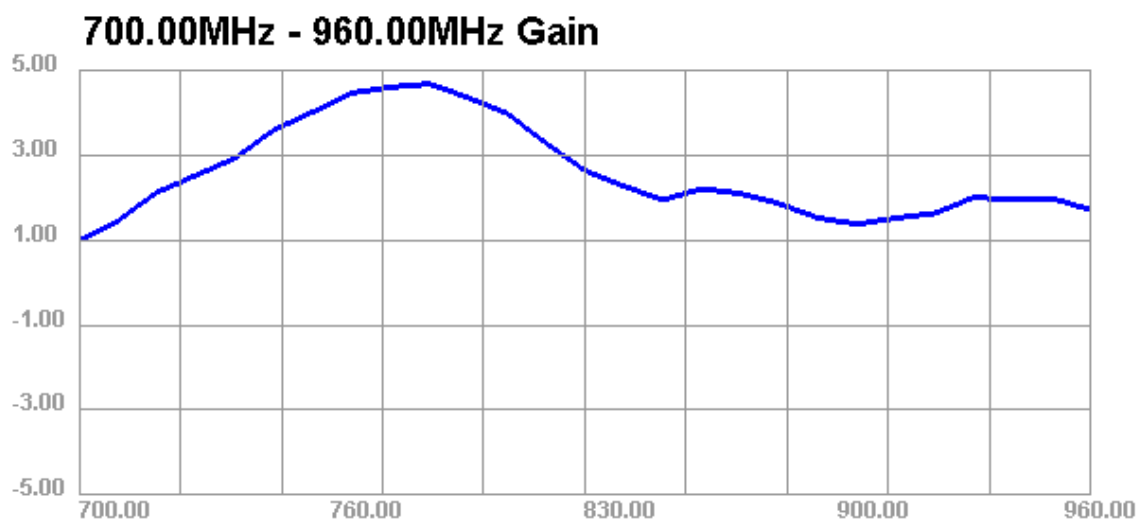
## Return Loss

### 700.00MHz - 960.00MHz Efficiency



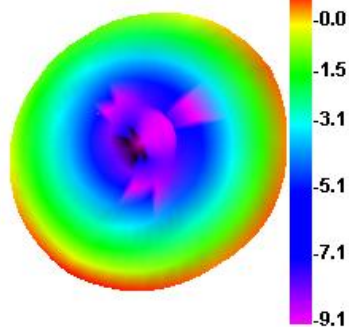
### 1710.00MHz - 2690.00MHz Efficiency



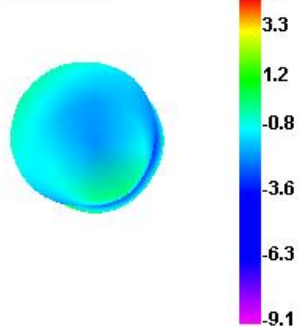


## Directional pattern

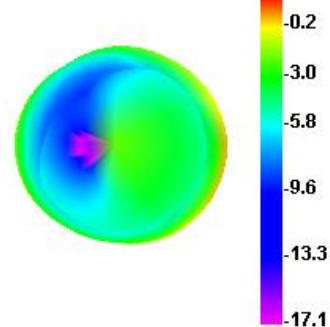
700.000MHz



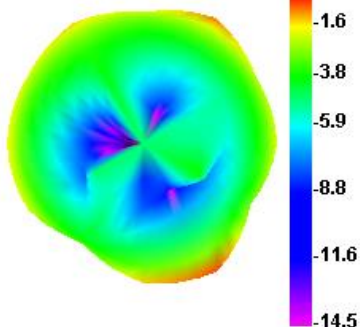
790.000MHz



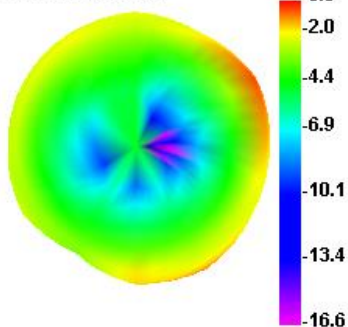
960.000MHz



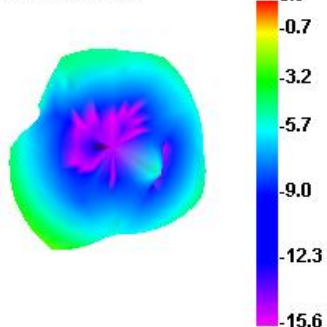
1710.000MHz



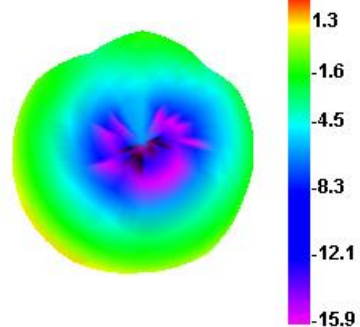
1800.000MHz



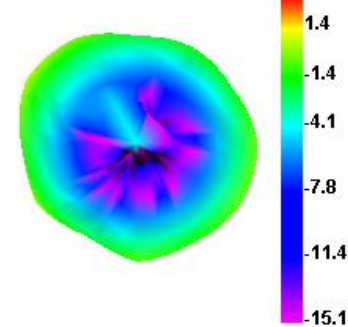
2000.000MHz



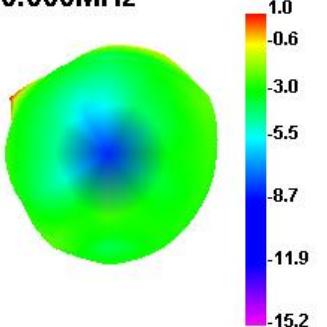
2170.000MHz



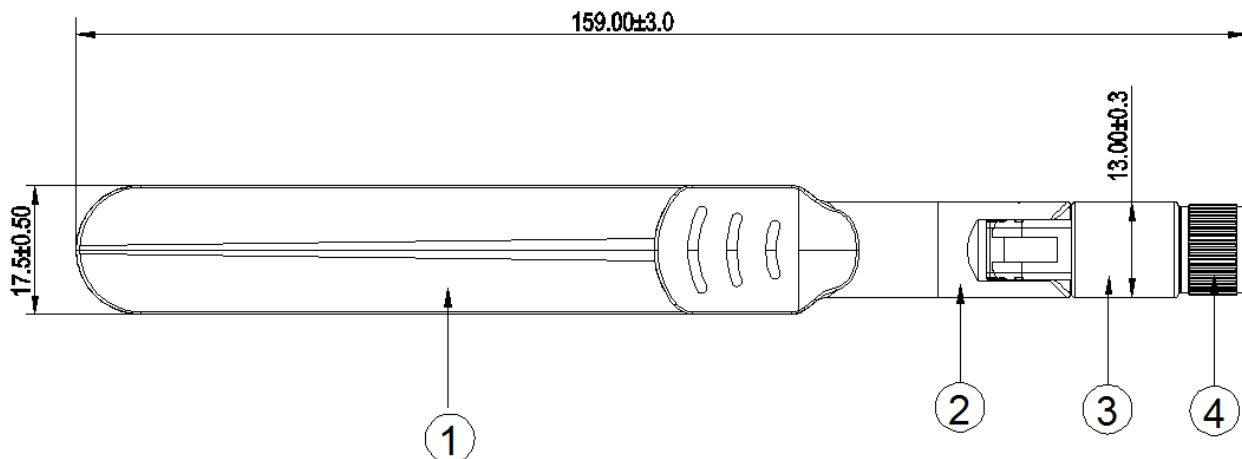
2300.000MHz



2690.000MHz



## 4. Antenna Drawings



|        |                |               |       |          |
|--------|----------------|---------------|-------|----------|
| 4      | SMA            | SMA-J         | black | 1        |
| 3      | Lower Firmware | ABS           | black | 1        |
| 2      | Upper firmware | ABS           | black | 1        |
| 1      | noumenon       | ABS           | black | 1        |
| Series | Component name | Specification | Color | Quantity |