



**SUNNYWAY**

## **SWE039**

**PN: SW20287EB56**

### **Features:**



- Frequency bands from 698~960MHz ,1710~2170MHz.
- 4G / 3G/ 2G/NB-IoT Wide band Antenna.
- Sustained High Efficiency and Performance.
- Small size.
- Impedance 50 Ohm.

### **Applications:**

- Application of 4G/3G/2G/NB-IoT equipment
- Portable Devices
- Remote monitoring
- Network Devices
- Gateways
- others

**Sunnyway Technology**

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## 1. Electrical Specifications

Standards	4G&3G&2G&NB-IoT	
	698~960MHz	1710~2170MHz
Frequency range (MHz)	698~960MHz	1710~2170MHz
Peak Gain (dBi)	-4.5~4.0	0~4.0
Average Gain (dB)	-10.0~-1.8	-6.4~-3.6
VSWR	< 5.0	< 10.0
Return Loss(dB)	< -3.5	< -1.5
Efficiency (%)	10.0~66.0	23.0~44.0
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-Male Standard (Straight)
Antenna size(mm)	51.5X $\varnothing$ 8mm
Material	ABS
Operating Temperature ( $^{\circ}$ C)	- 40 $^{\circ}$ C ~ + 85 $^{\circ}$ C
Storage Temperature( $^{\circ}$ C)	- 40 $^{\circ}$ C ~ + 85 $^{\circ}$ C

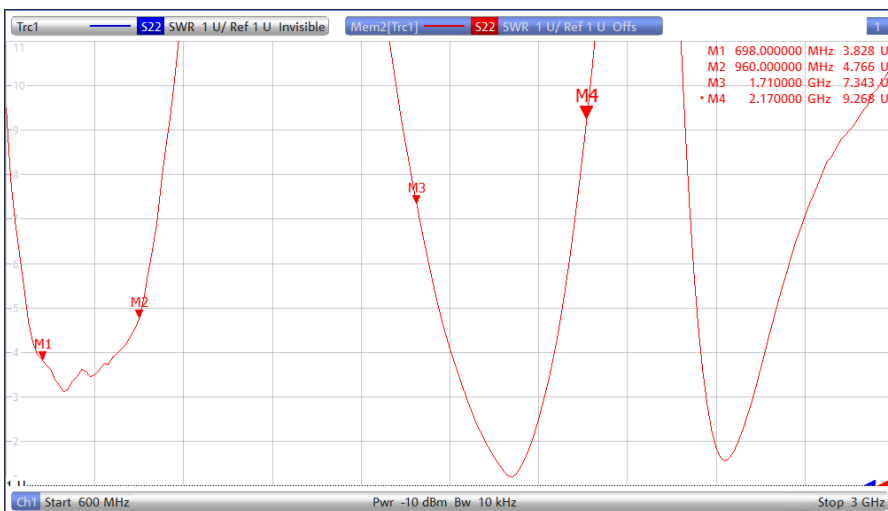


# 3. Antenna parameters

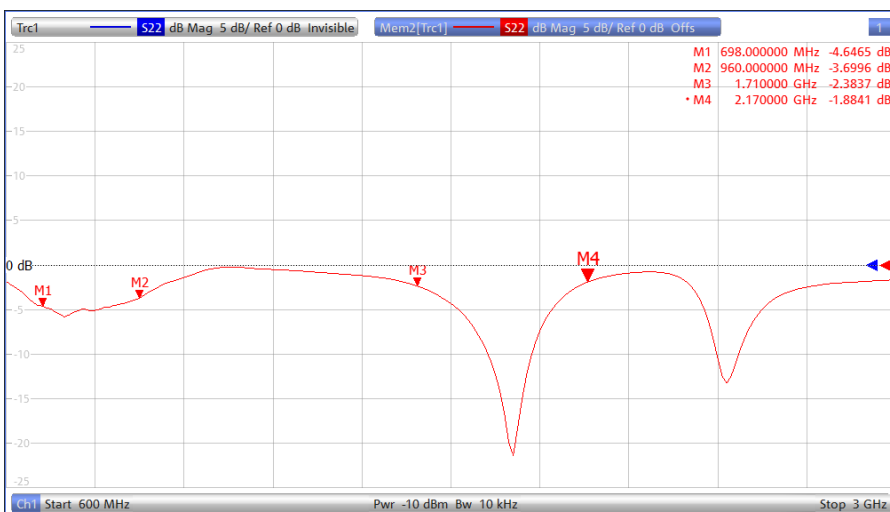
## 3.1 General Data

FRE (MHz)	698	960	1710	2170
VSWR	3.8	4.7	7.3	9.2
Return Loss	-4.6	-3.6	-2.3	-1.8
Eff (%)	10.0	44.1	24.6	23.6
Average Gain (dB)	-10.0	-3.5	-6.1	-6.3

## 3.2 VSWR



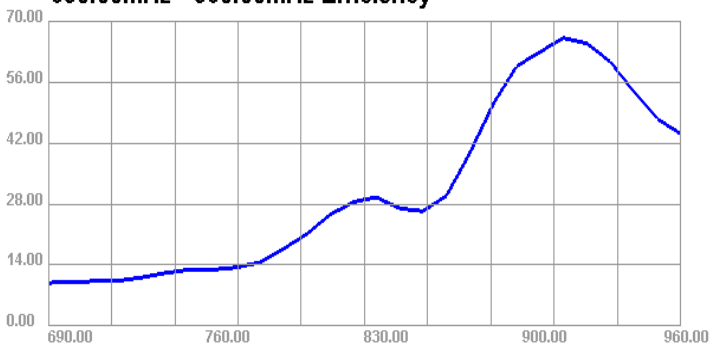
## 3.3 Return Loss



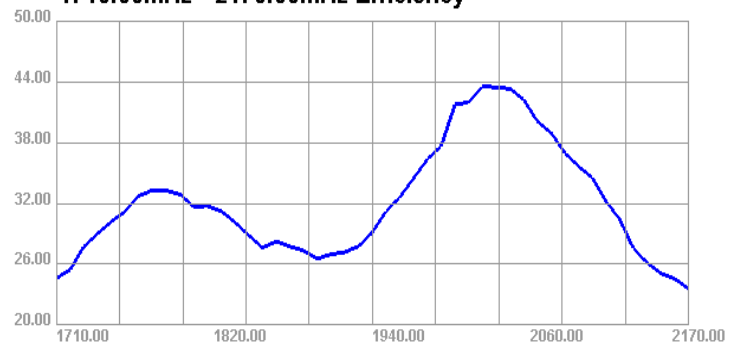


### 3.4 Efficiency

690.00MHz - 960.00MHz Efficiency

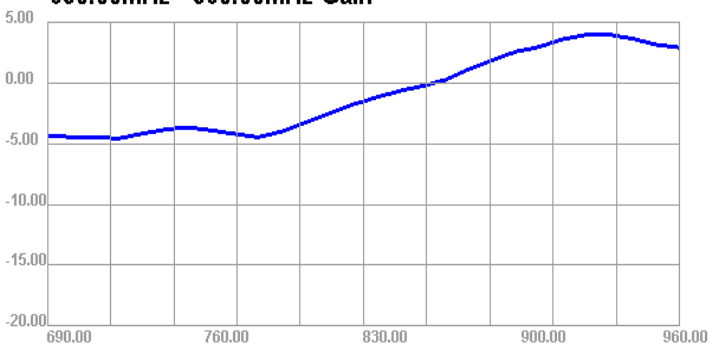


1710.00MHz - 2170.00MHz Efficiency

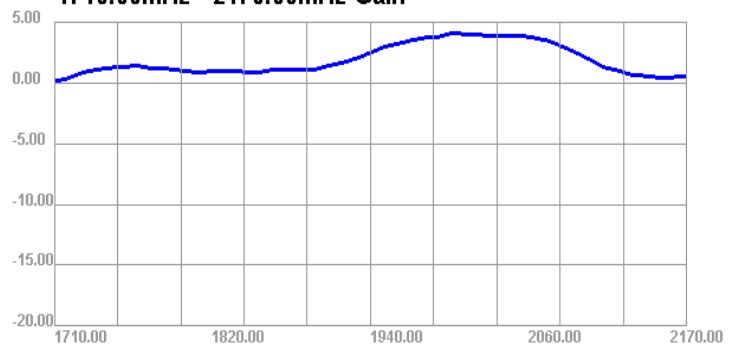


### 3.5 Gain

690.00MHz - 960.00MHz Gain

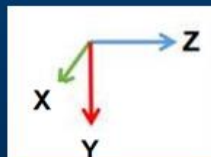


1710.00MHz - 2170.00MHz Gain



### 3.6 Directional pattern

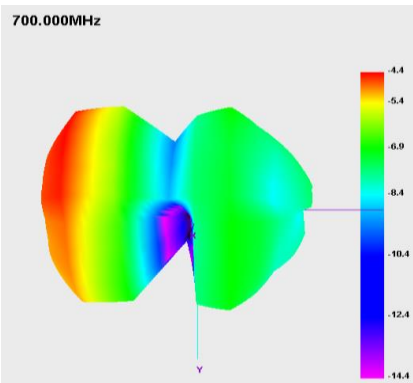
H plane: the tangent of XY  
E1 plane: the tangent of XZ  
E2 plane: the tangent of YZ



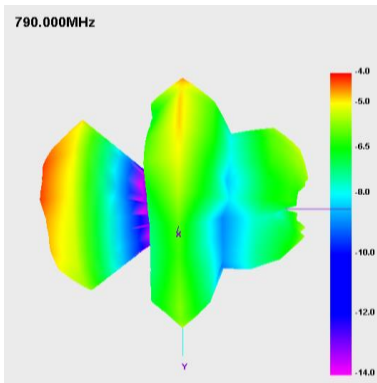
Theta = 0  
Phi = 0



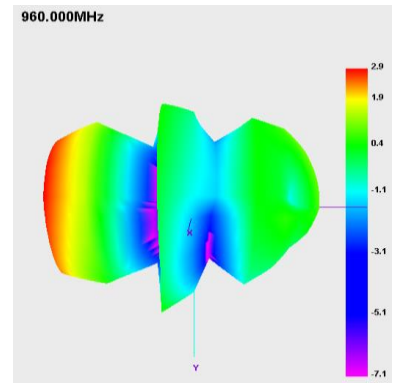
700.000MHz



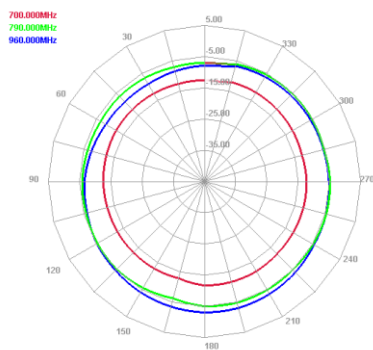
790.000MHz



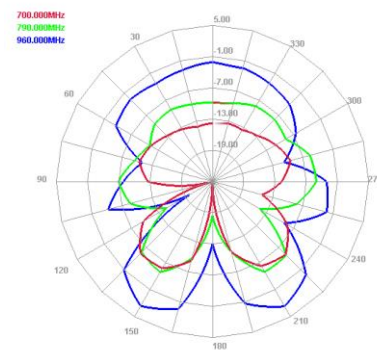
960.000MHz



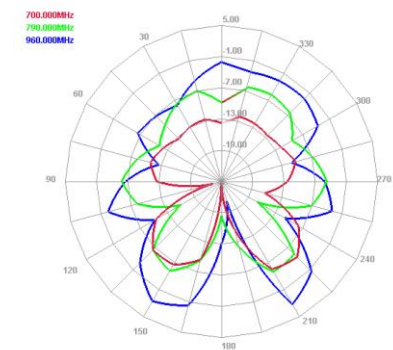
Horizontal



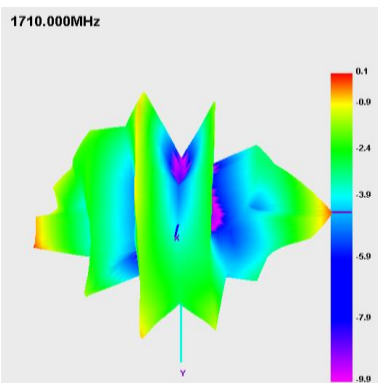
E1 Face



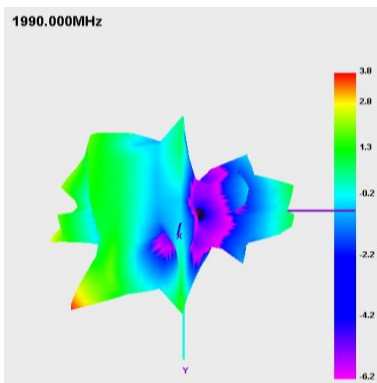
E2 Face



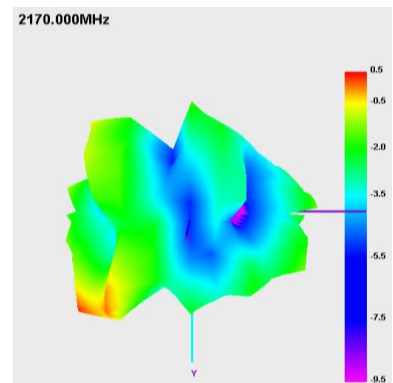
1710.000MHz



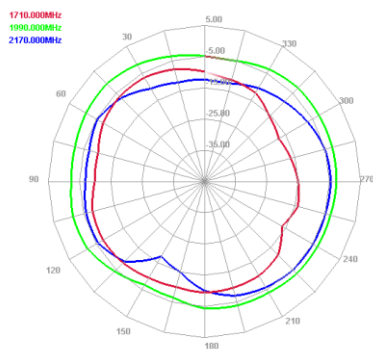
1990.000MHz



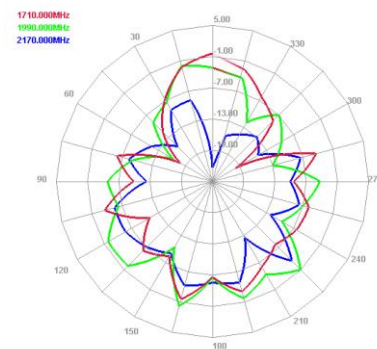
2170.000MHz



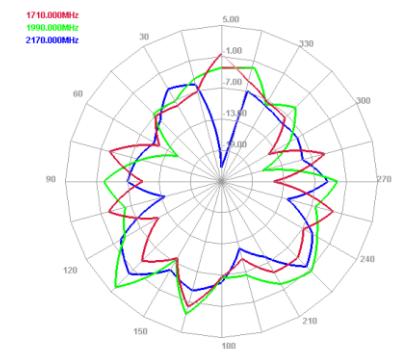
Horizontal



E1 Face

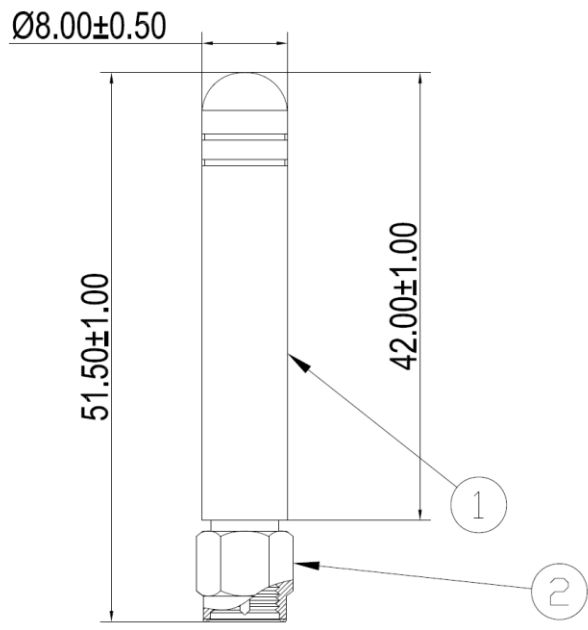


E2 Face





## 4. Antenna Drawing



2	SMA	SMA-J	Yellow	1
1	noumenon	ABS	black	1
Series	Component name	Specification	Color	Quantity