



**SUNNYWAY**

# **SWF004**

**PN: SW19010IB77**



**Sunnyway Technology**

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## 1. Electrical Specifications

Standards	LoRa 470-510MHz
Frequency range(MHz)	470~510MHz
Peak Gain(dBi)	-3.0~-2dBi
Average Gain(dB)	-5.5~-4.5dB
VSWR	<5.0
Return Loss	<-3.5
Efficiency(%)	28~35%
Polarization mode	Linear
Radiation pattern	Omni-Directional
Output impedance ( $\Omega$ )	50
Max. Input Power(W)	25

## 2. Mechanical and Environmental Specification

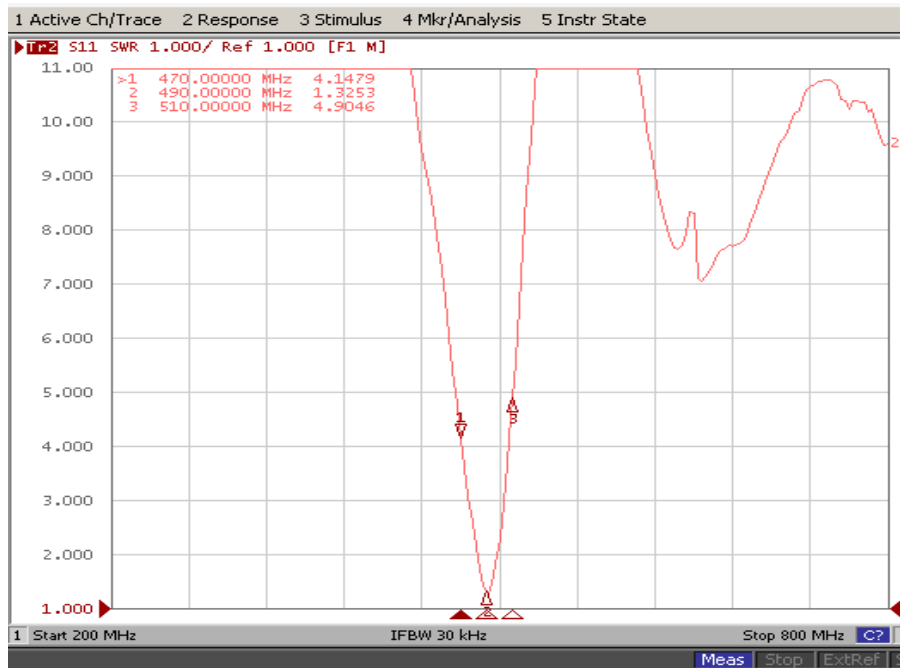
Mounting Type	Adhesive
Adhesive Type	3M9471
Connector Type	U.FL Standard
Antenna size(mm)	45.4mm (L) x 15.6mm (W) x0.12mm (H)
Material	FPC



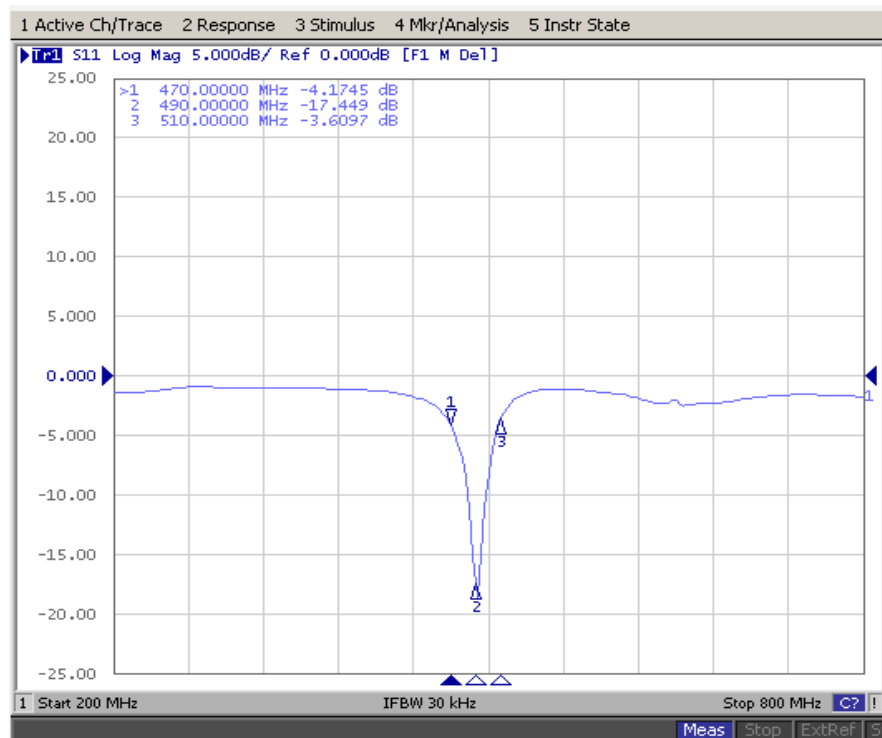
Cable length(mm)	252mm
Operating Temperature (°C)	- 40 °C ~ + 85 °C
Storage Temperature(°C)	- 40 °C ~ + 85 °C

### 3. Antenna parameters

FRE (MHz)	470	490	510
<b>VSWR</b>	4.1	1.3	4.9
<b>Returnn Loss</b>	-4.1	-17.4	-3.6
<b>Eff(%)</b>	28.3	34.3	35.4
<b>Average Gain(dB)</b>	-5.5	-4.6	-4.5



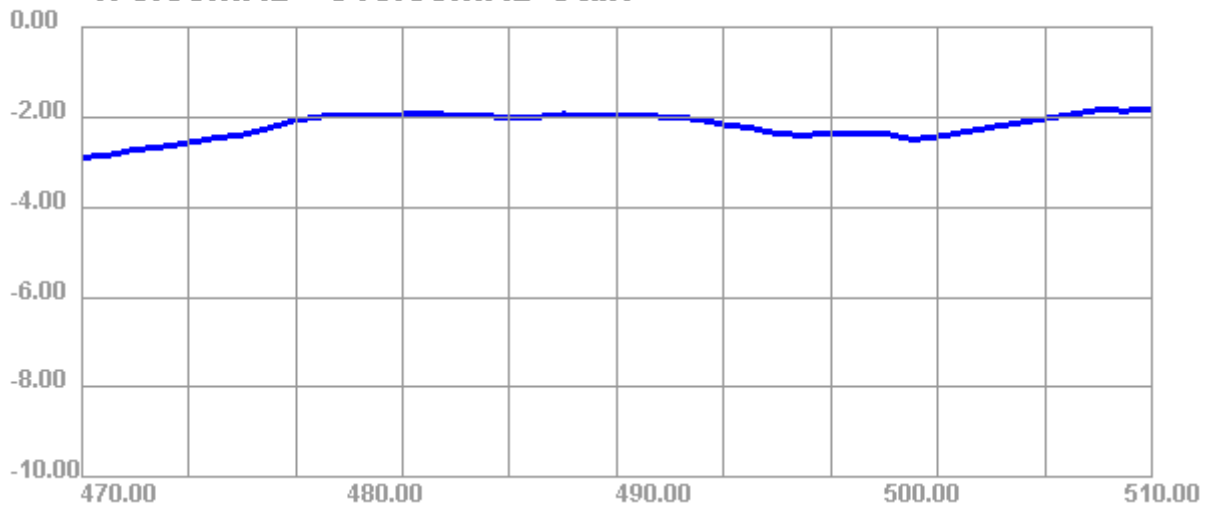
## VSWR



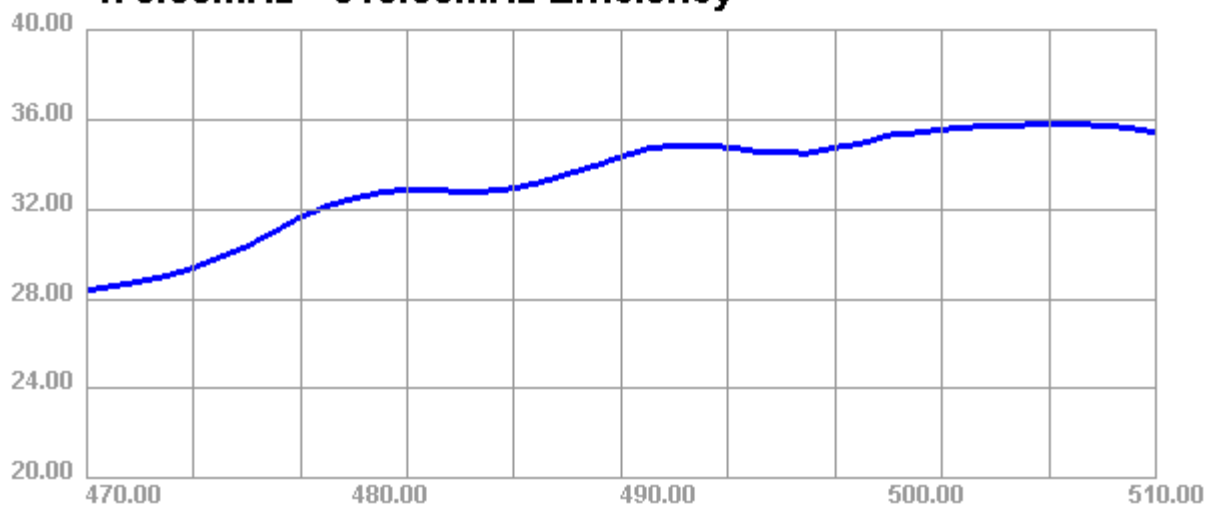
## Return Loss



### 470.00MHz - 510.00MHz Gain

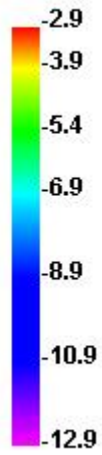
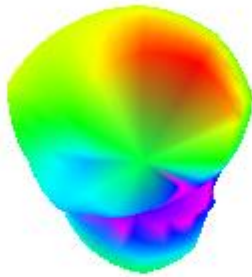


### 470.00MHz - 510.00MHz Efficiency

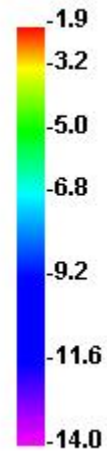
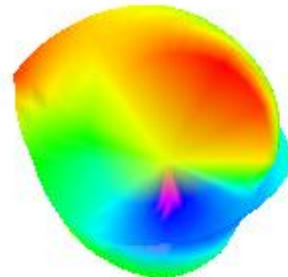


## Directional pattern

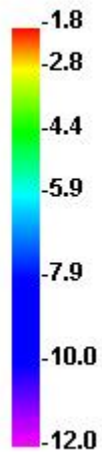
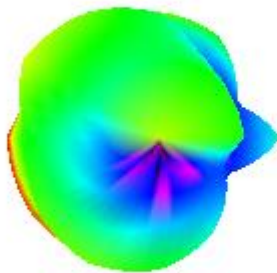
**470.000MHz**



**490.000MHz**

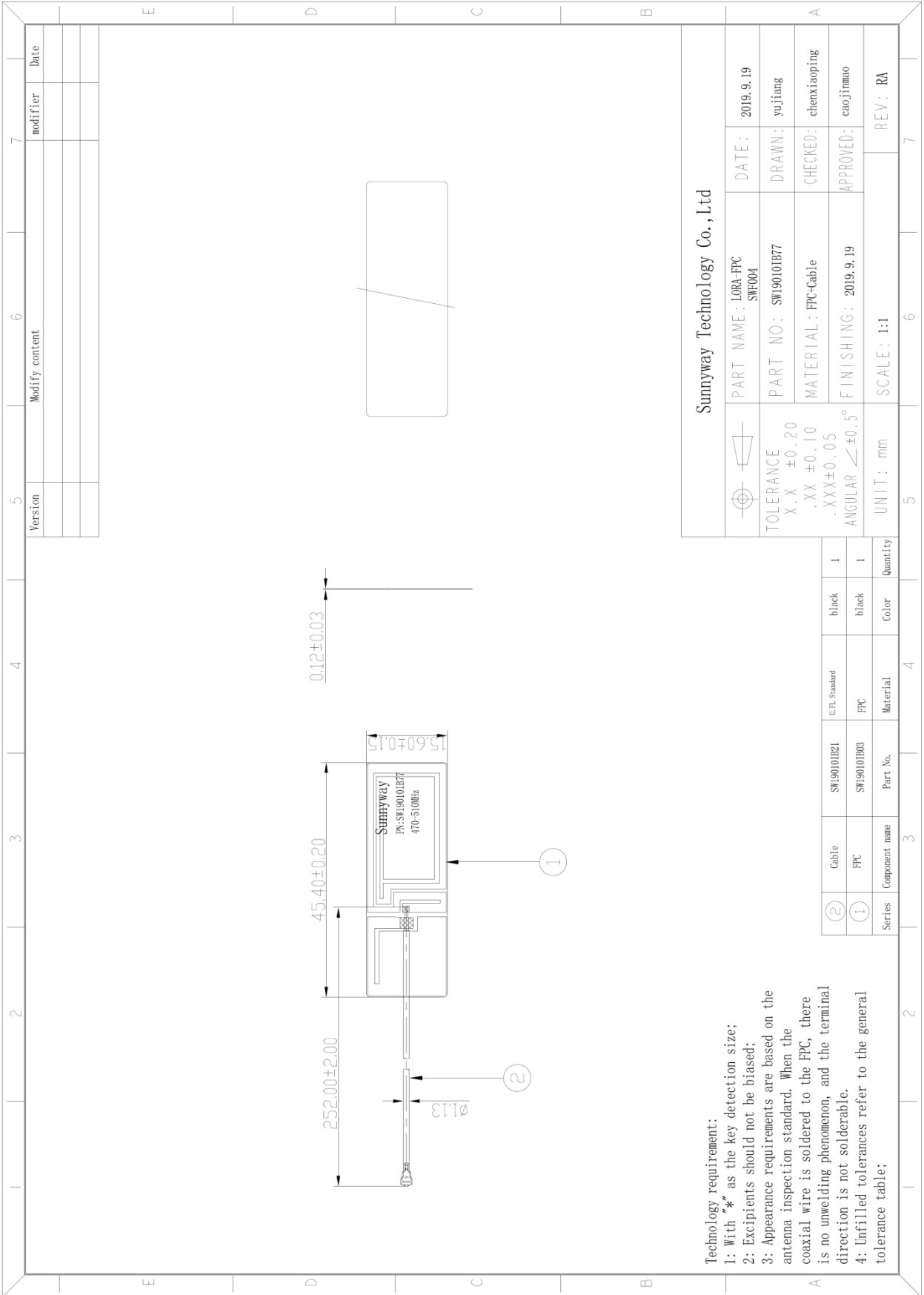


**510.000MHz**





# 4. Antenna Drawings



Sunnyway Technology Co., Ltd			
	PART NAME: LORA-FPC SWF004	DATE: 2019.9.19	
TOLERANCE X, X ±0.20 .XX ±0.10 .XXX±0.05 ANGULAR <±0.5°	PART NO: SW19010IB77	DRAWN: yujiang	
	MATERIAL: FPC-Cable	CHECKED: chenxiaoping	
	FINISHING: 2019.9.19	APPROVED: caojinmao	
UNIT: mm	SCALE: 1:1	REV: RA	