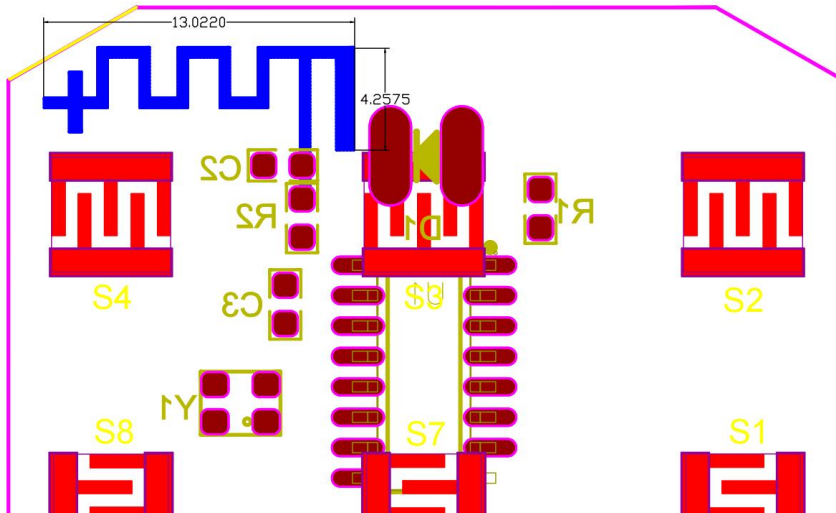


RE-FX Antenna Specifications

Manufacturer : Shenzhen Sperll Optoelectronic Technology Co., Ltd.

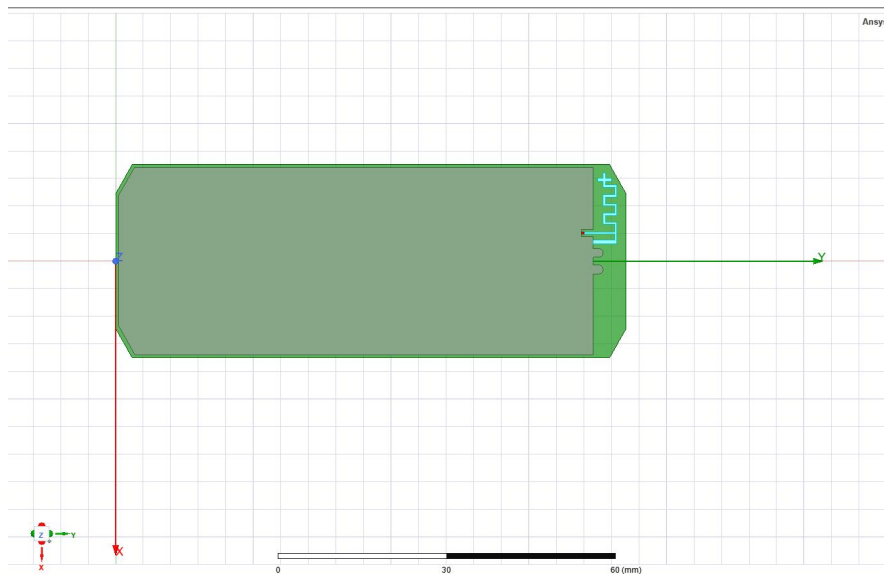
Address : 4th Floor, Building 3, NO.1059 Songbai Road, Nanshan District, Shenzhen, China

1. Antenna location and size (mm) :

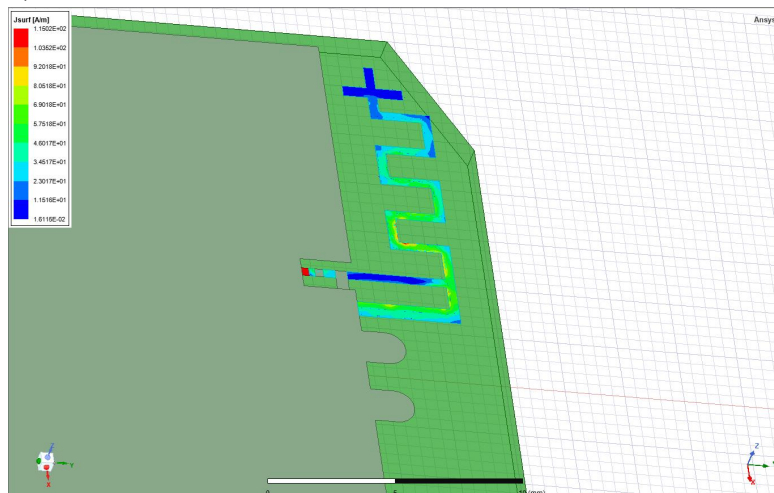


2. Antenna simulation Report:

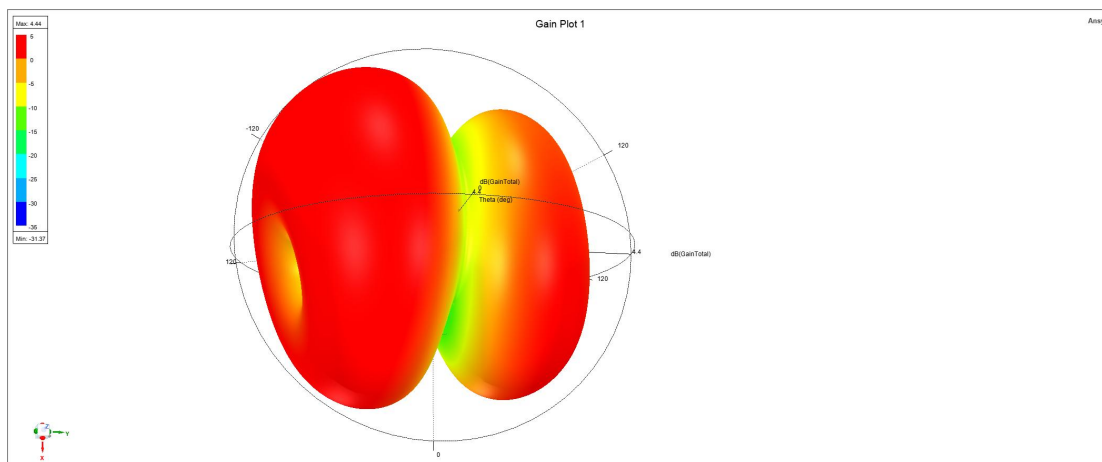
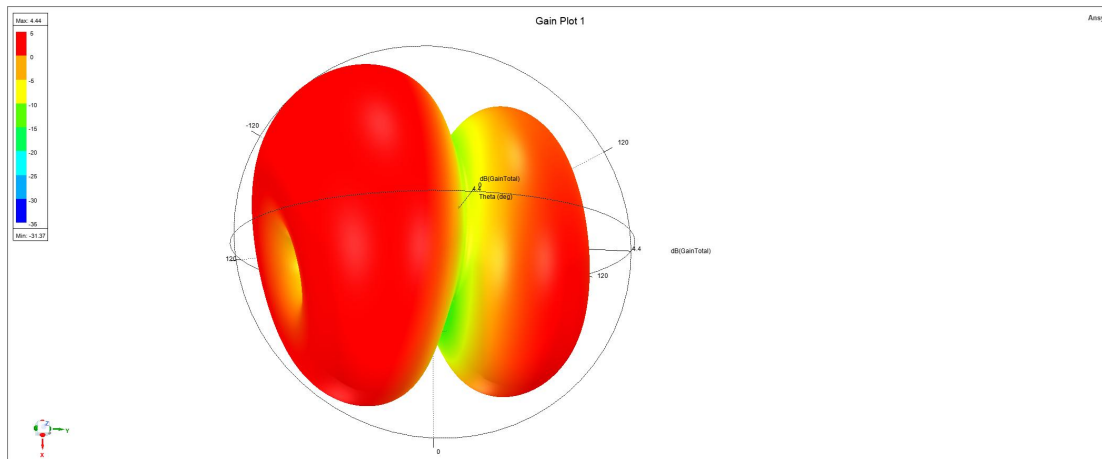
1) Antenna Simulation Model :



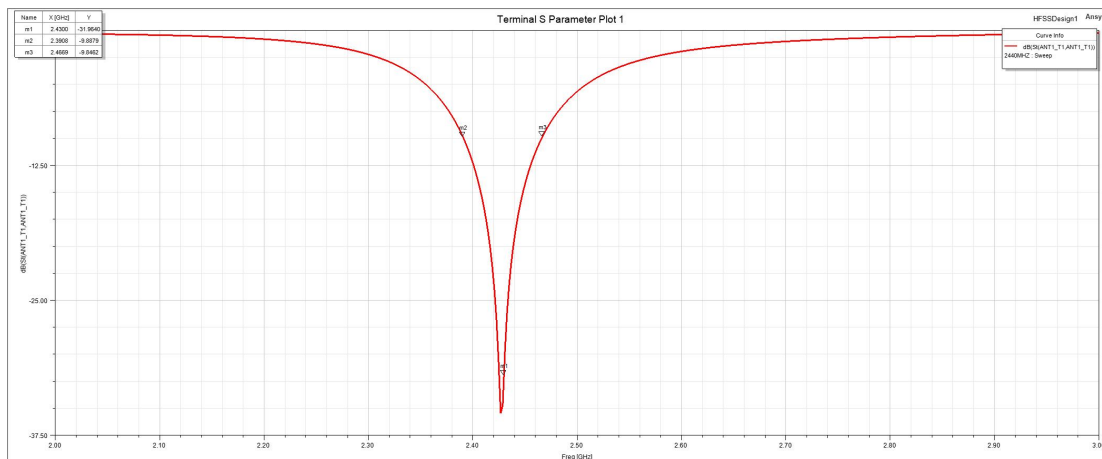
2) Antenna Surface Current Distribution :



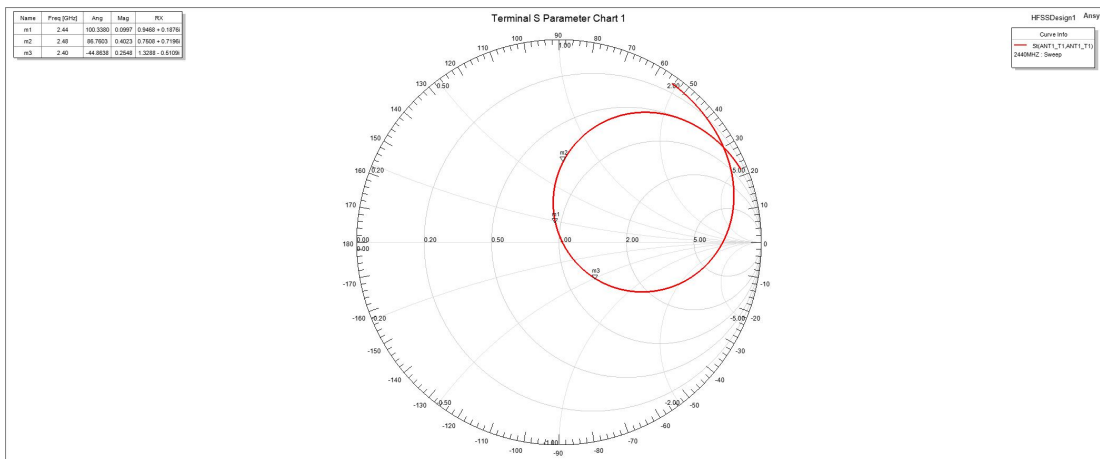
3) Antenna 3D Radiation Pattern (2500MHz)



4) Antenna S11 Parameter

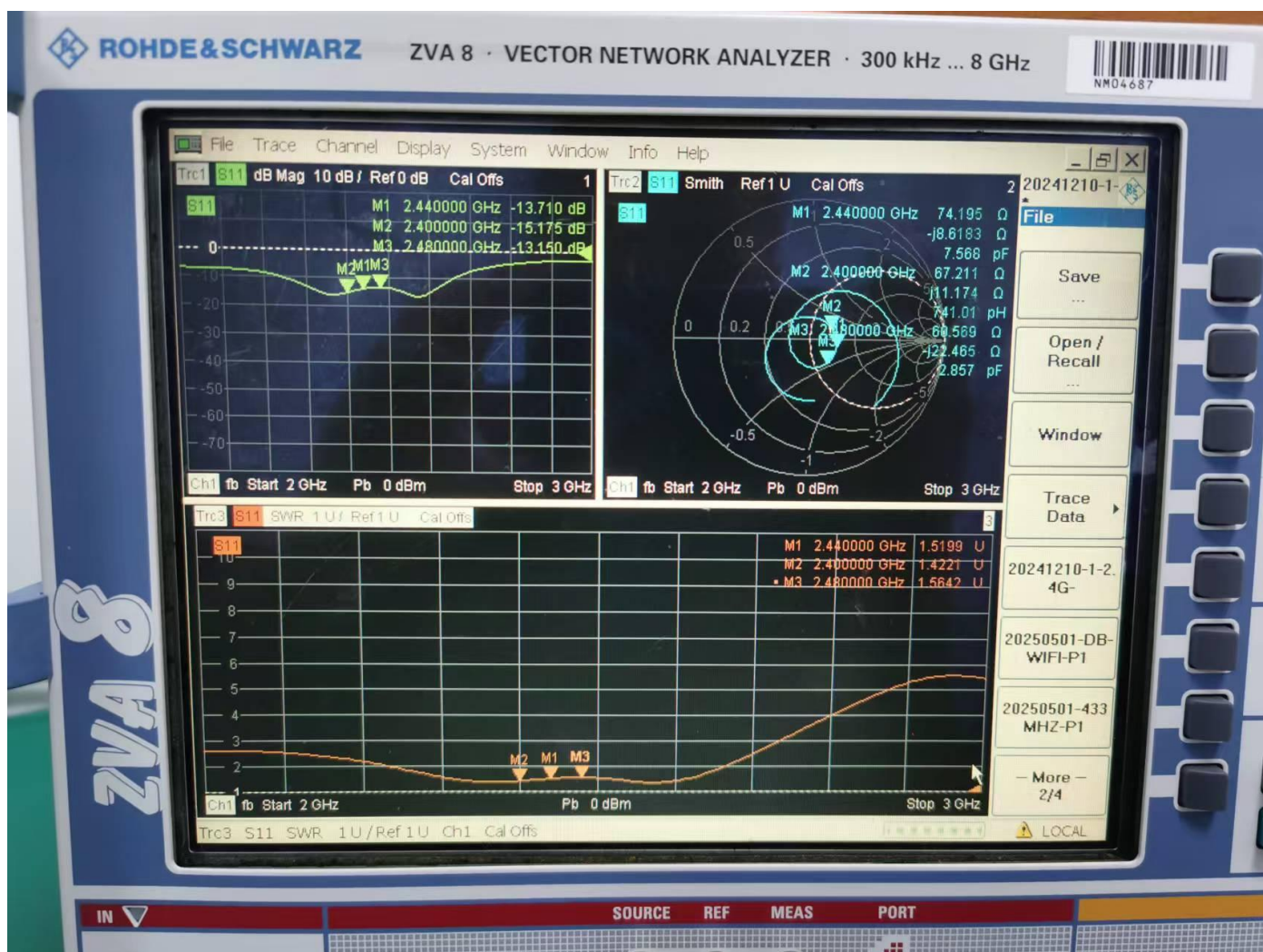


5) Antenna Impedance Plot



3.Test Report:

1) Antenna Smithchart ,VSWR and Return Loss:



4.Basic Characteristics:

A.Electrical Characteristics:	
Frequency	2400~2500 MHz
S.W.R.	<= 2.0
Max.Gain	4.44dBi

Efficiency	80% - 84%
Polarization	Linear
Impedance	50 Ohm
B.Material & Mechanical Characteristics:	
Material of Radiator	PCB
Cable Type	NONE
Connector Type	NONE
Pull Test	/
C.Environmental:	
Operation Temperature	-20℃~+60℃
Storage Temperature	-40℃~+80℃

5.Gain and Efficiency:

frequency（GHz）	2.4	2.41	2.42	2.43	2.44	2.45	2.46	2.47	2.48	2.49	2.5
efficiency（%）	80.43	80.83	81.22	81.61	81.98	82.34	82.69	83.03	83.36	83.67	83.98
Gain（dBi）	4.41	4.42	4.42	4.43	4.43	4.44	4.44	4.44	4.44	4.44	4.44