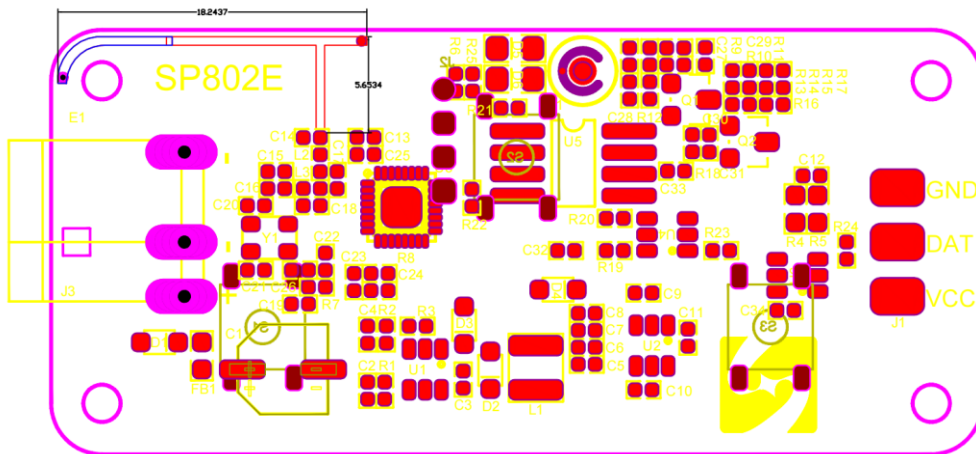


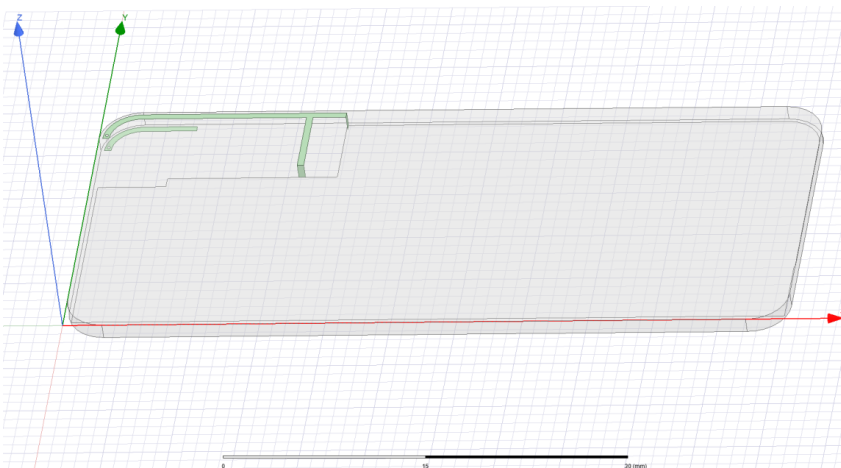
SP80XE Antenna Specifications

1. Antenna location and size (mm) :

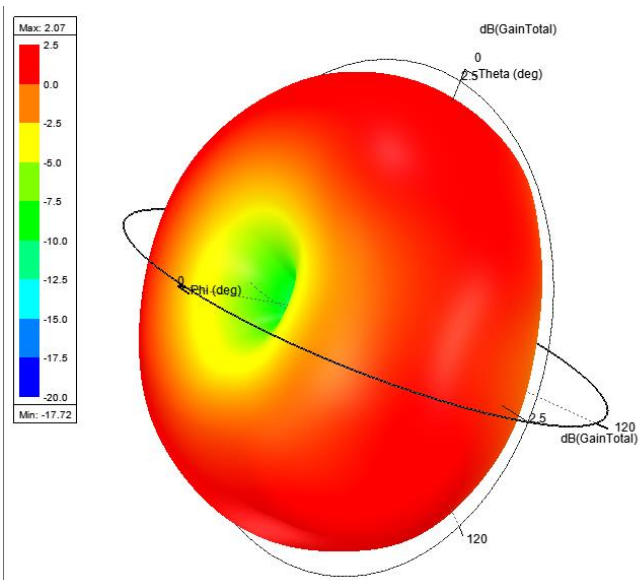


2. Antenna simulation Report:

1) Antenna Simulation Model :

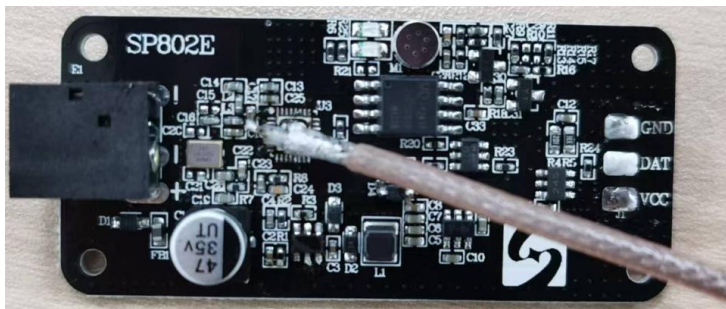


2) 3D Polar plot:

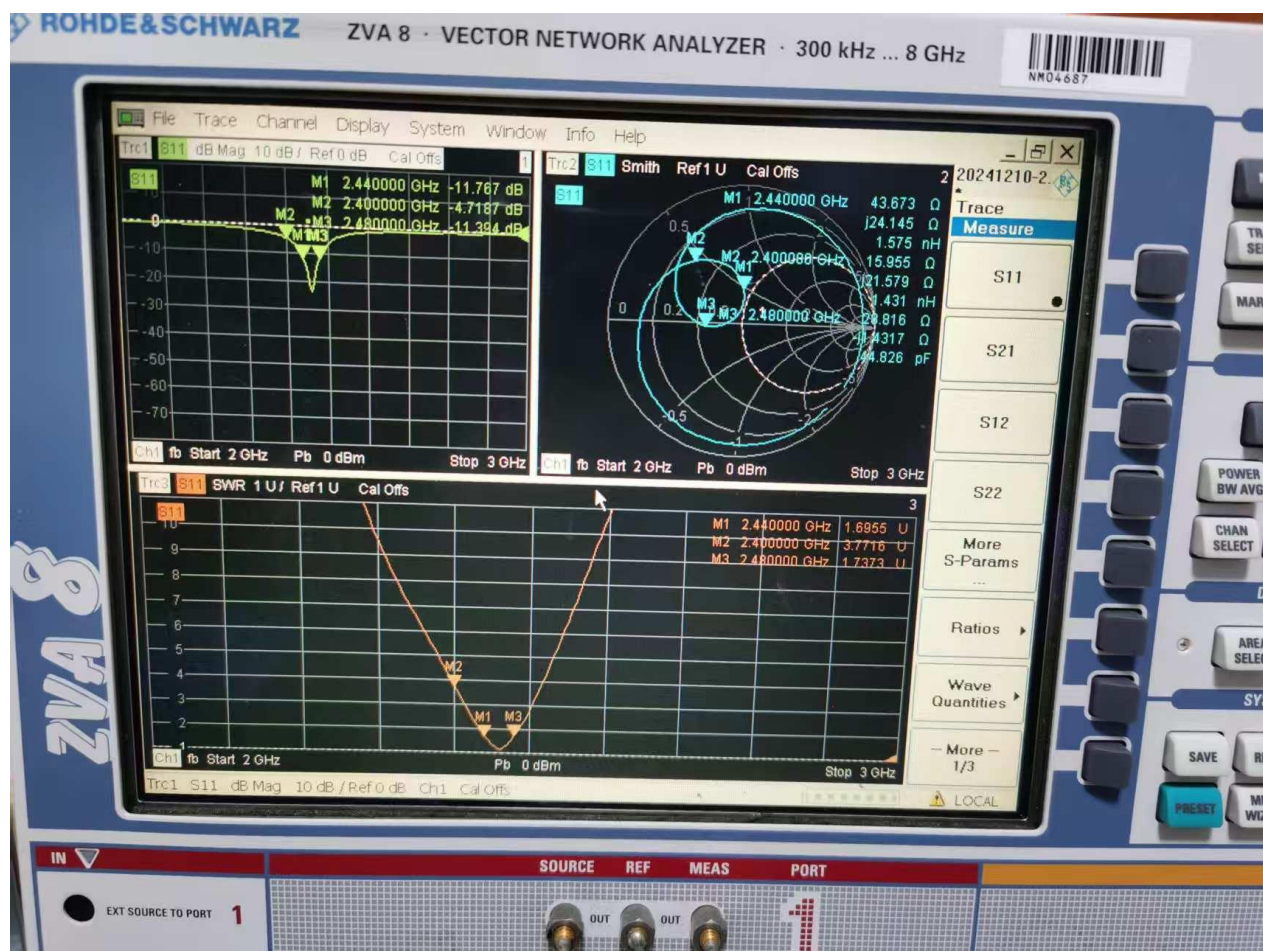


3. Test Report:

1) Appearance :



2) Antenna Smithchart ,VSWR and Return Loss:



4. Basic Characteristics:

A. Electrical Characteristics:	
Frequency	2400~2500 MHz
S.W.R.	≤ 2.0 @ around 2440 MHz, may rise to ≤ 2.8 at the edges of the frequency band
Max. Gain	2.07 dBi @ around 2440 MHz, approximately 1.4 dBi at 2400 MHz and 2500 MHz
Efficiency	45% - 52% @ around 2440 MHz, about 40% at 2400 MHz and 42% at 2500 MHz
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（%）	38.5	40.2	42.0	43.5	45.0	44.2	43.8	42.5	41.00	39.5	38.0
Gain（dBi）	1.60	1.70	1.80	1.9	2.07	1.92	1.85	1.72	1.65	1.55	1.42