SANTAFE
TECHNOLOGIES

PROFESSIONAL RF ANTENNA
DESIGN & SOLUTIONS
PARTNER

ANTENNA TESTING REPORT

SIGMANU DEVICE

12 / 2 / 2022

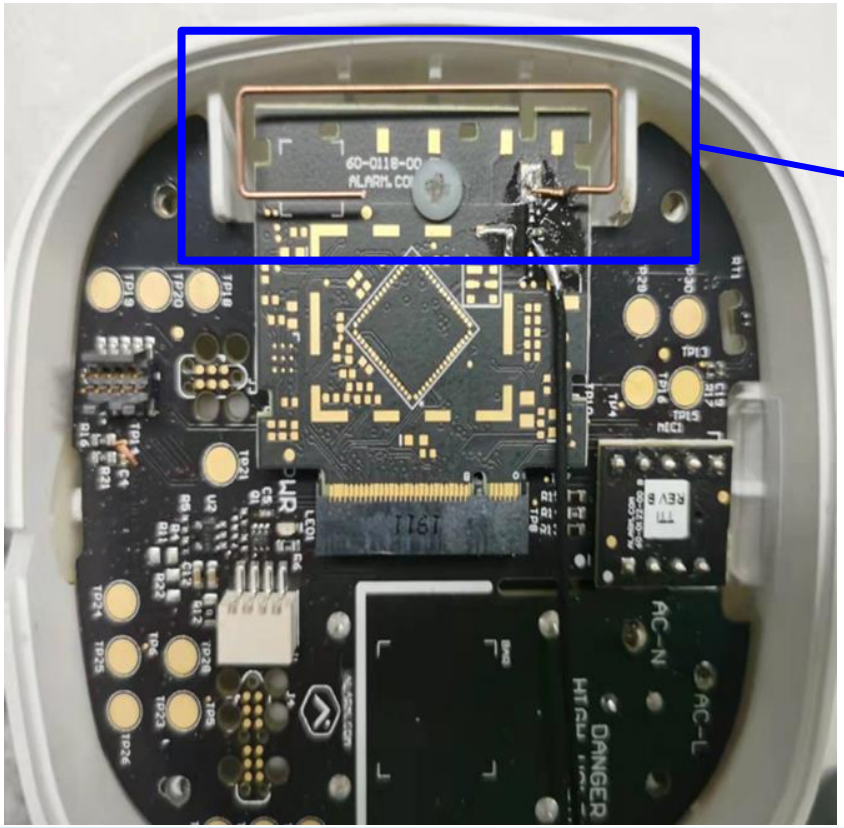
Content of This Report

A. Antenna Specification
B. Antenna Location
C. Testing setup & equipment
D. Return Loss & VSWR
E. Antenna Efficiency & Peak gain each tested frequency
F. 3D pattern of each tested frequency
G. Recommended of the antenna matching circuit
H. Antenna drawing

A. ANTENNA SPECIFICATION

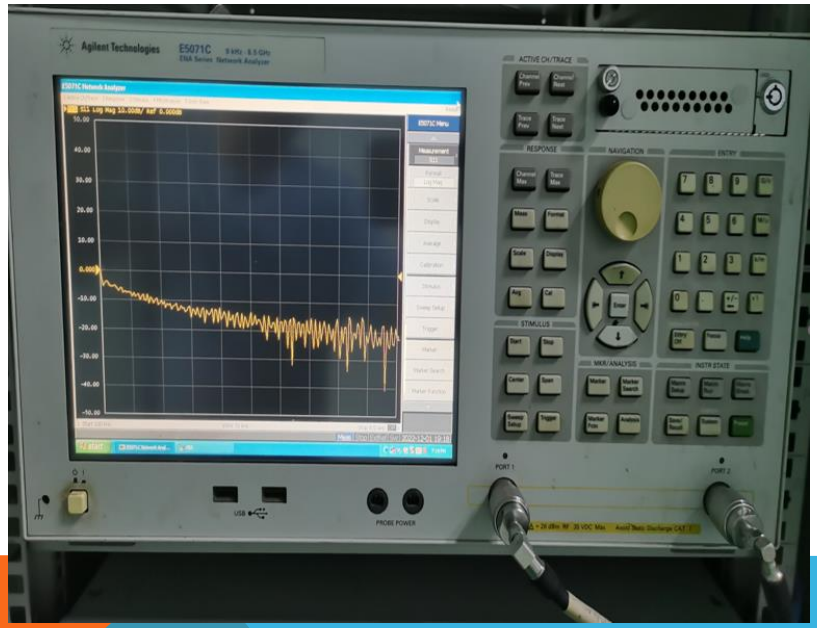
Item	Specification
Antenna Frequency	868MHz & 908 ~ 924MHz
Antenna Type	Monopole
Antenna Material	Copper wire
Device Model	SigmaNU

B. ANTENNA LOCATION & PHOTO



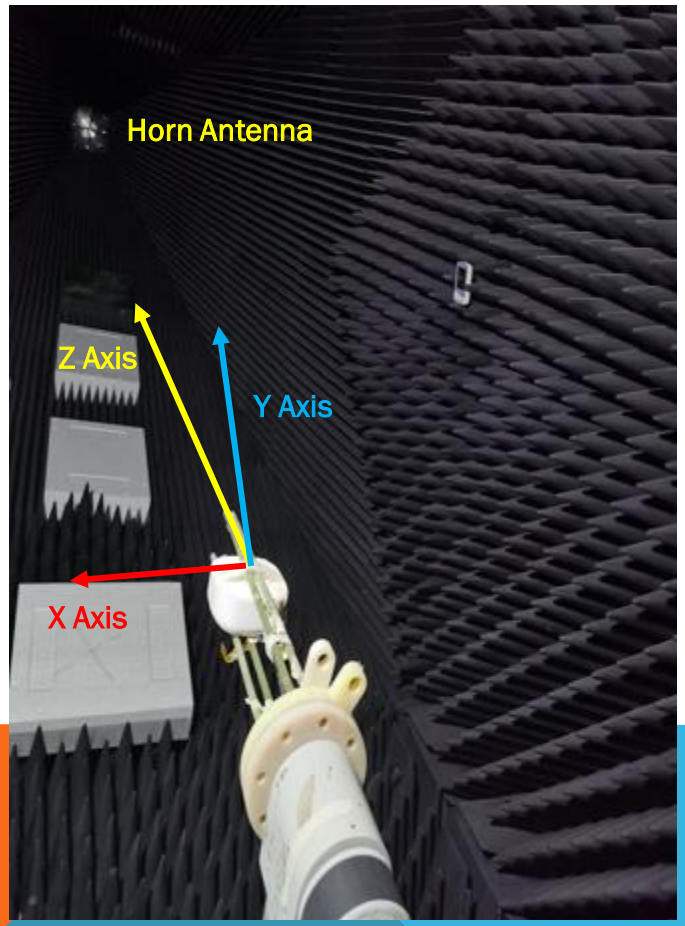
C. TESTING SETUP & EQUIPMENT

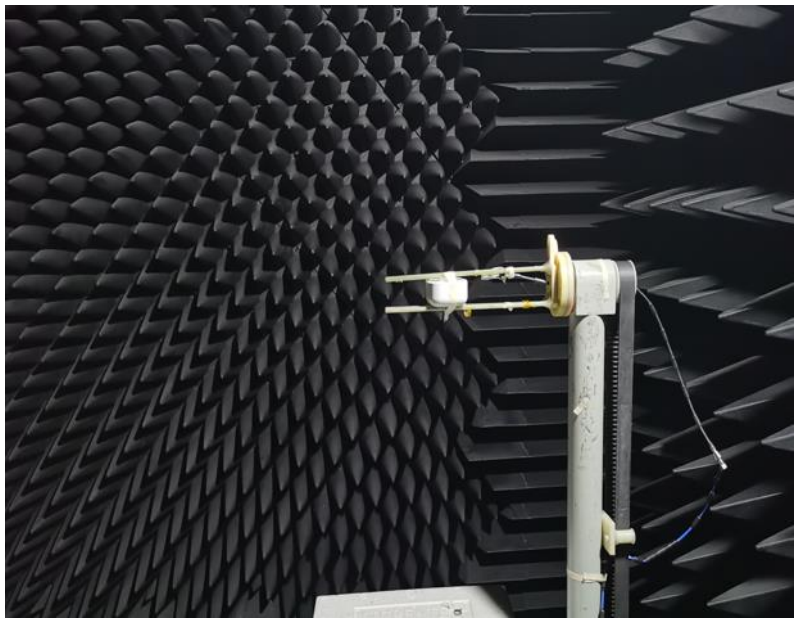
1. Testing address: 337 No. 557, Daguan RD., Dayuan Dist., Taoyuan City, Taiwan
2. Testing equipment: Agilent E5071C
3. Lab. calibration date: every 25th of each month / Testing date: 12 / 2 / 2022



C-1. TESTING SETUP & EQUIPMENT

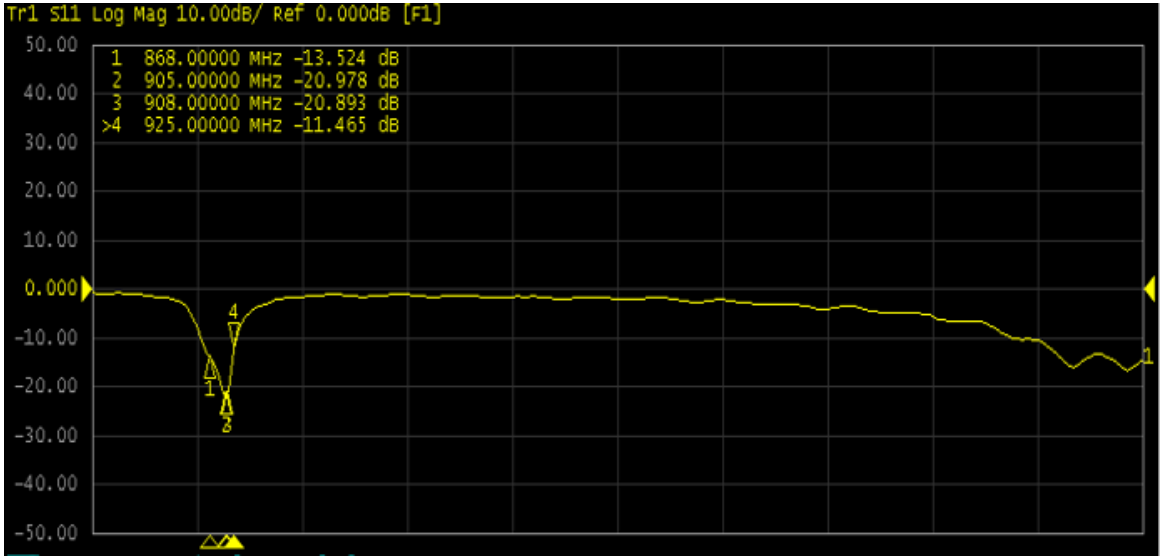
1. Setup Photo



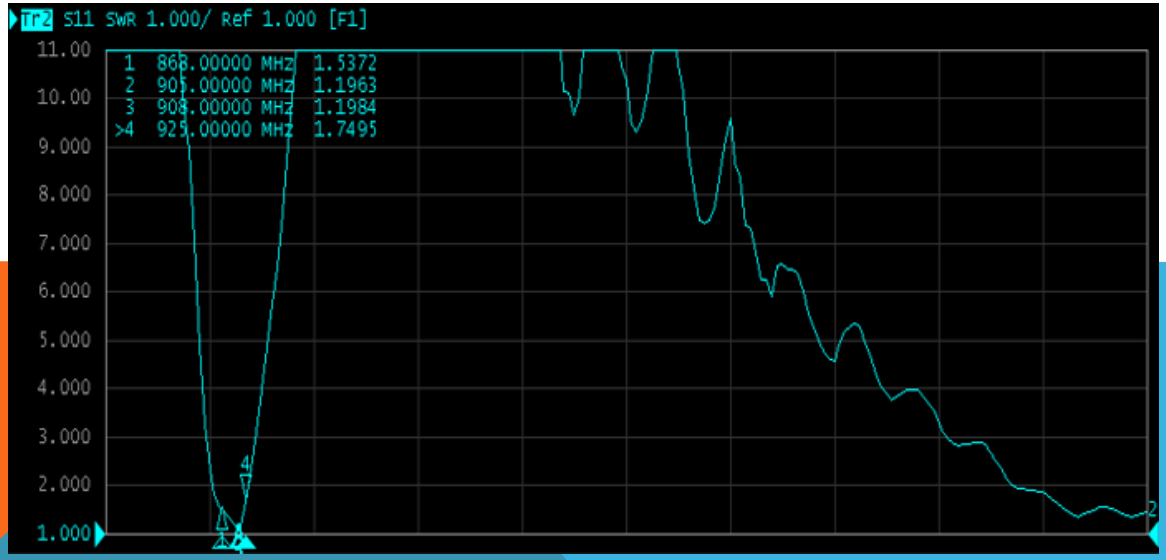


Device installed on the rotation arm

D. VSWR & RETURN LOSS



Return Loss



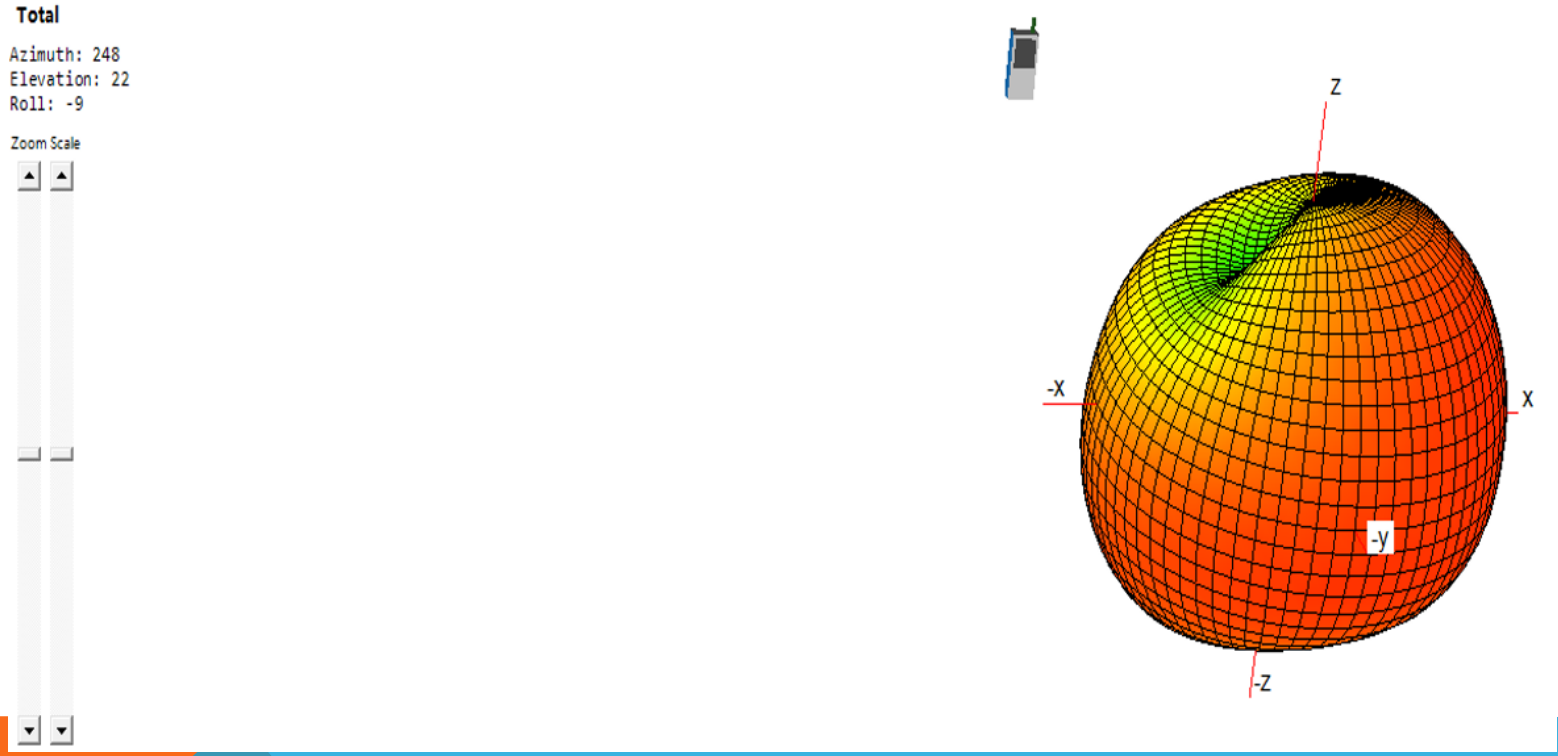
VSWR

E. ANTENNA EFFICIENCY & PEAK GAIN OF EACH TESTED FREQUENCY

Frequency	Efficiency	Peak Gain
865	46.31%	-0.64
868	**47.18%**	**-0.45**
870	49.49%	-0.43
875	49.12%	-0.37
905	53.45%	-0.90
908	**52.05%**	**-0.96**
910	48.12%	-1.08
915	43.19%	-1.13
920	40.58%	-1.75
925	39.41%	-1. 86

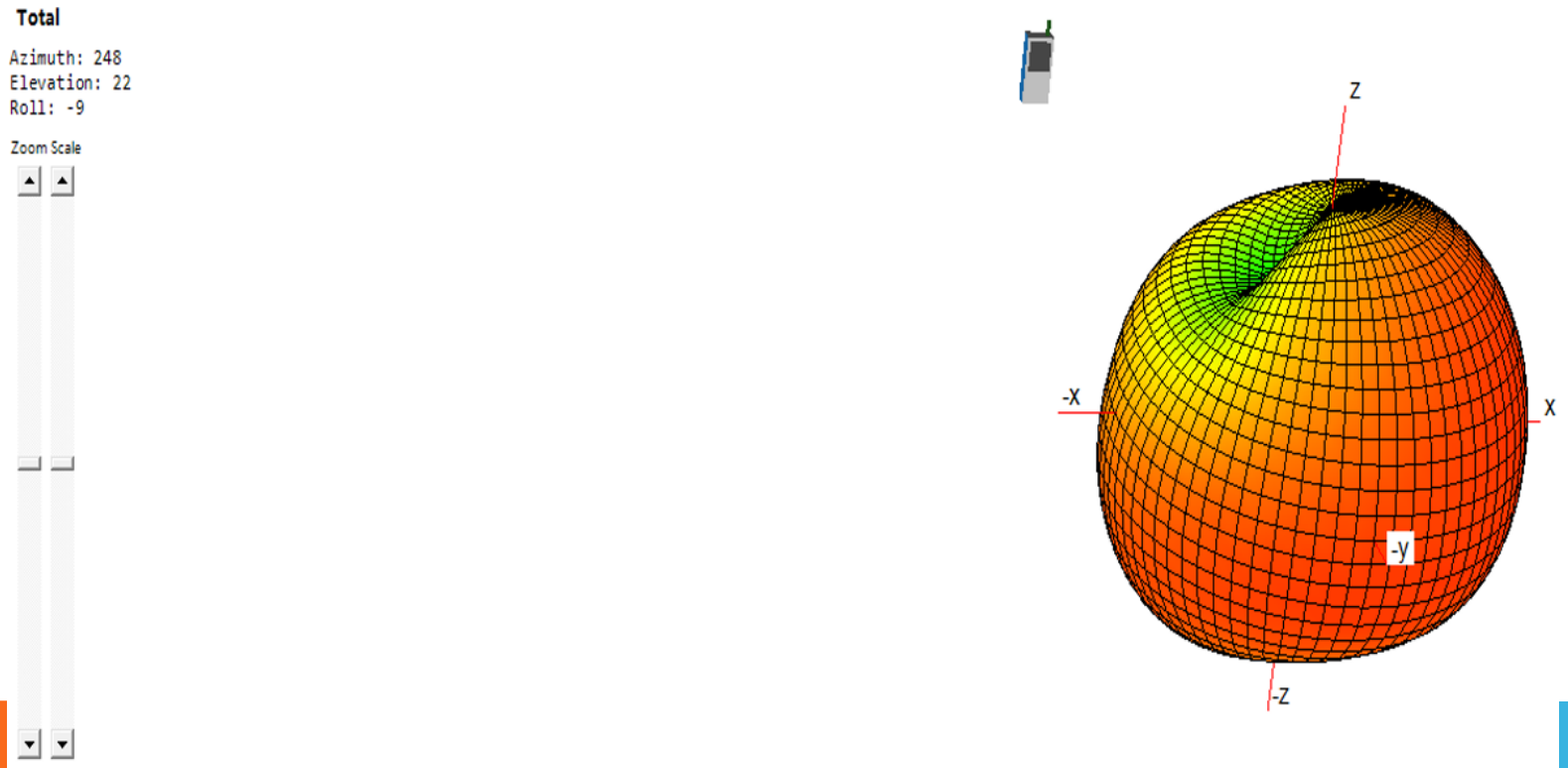
F. 3D PATTERN OF EACH TESTED FREQUENCY

865MHz



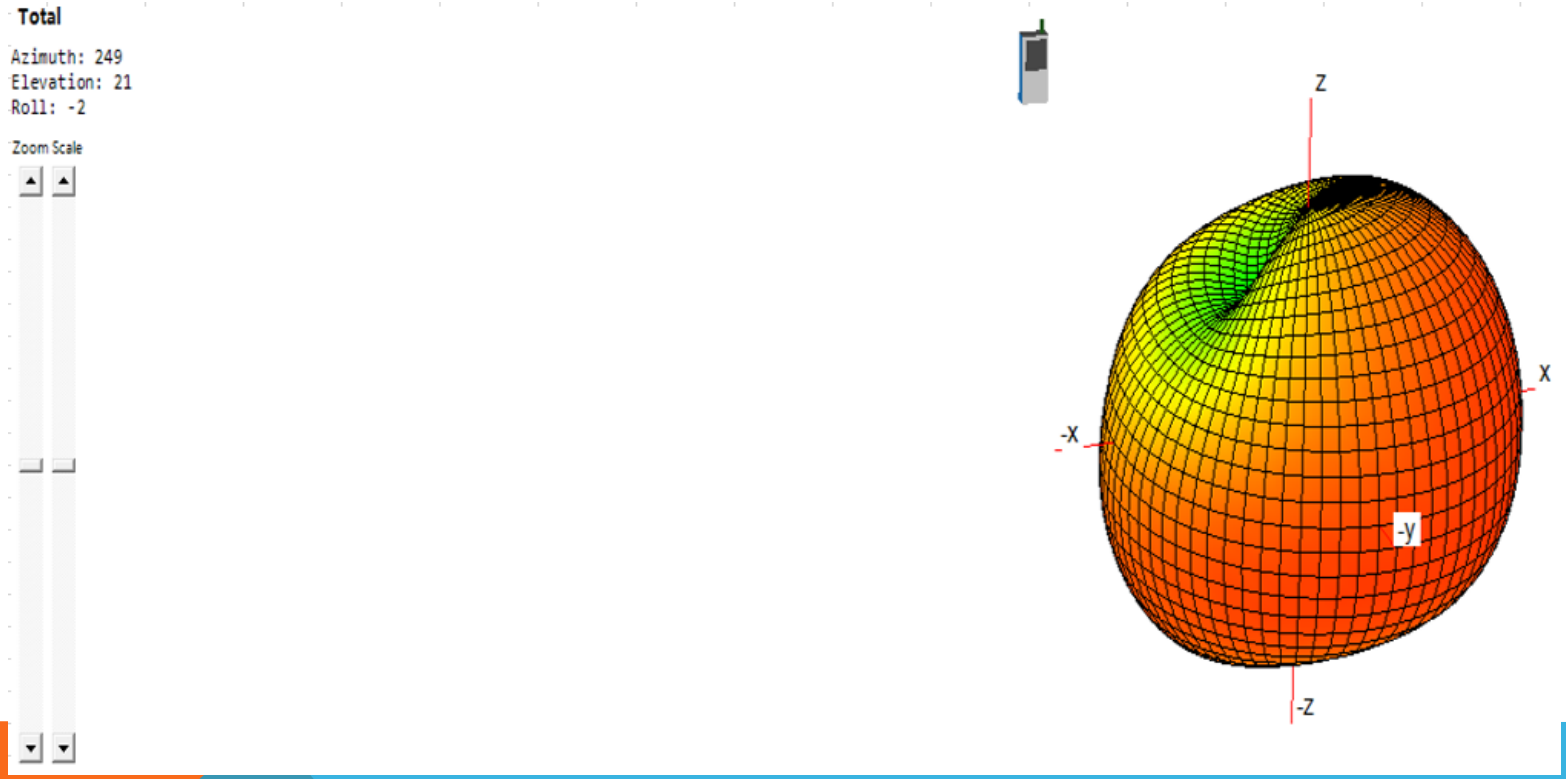
F. 3D PATTERN OF EACH TESTED FREQUENCY

868MHz



F. 3D PATTERN OF EACH TESTED FREQUENCY

870MHz



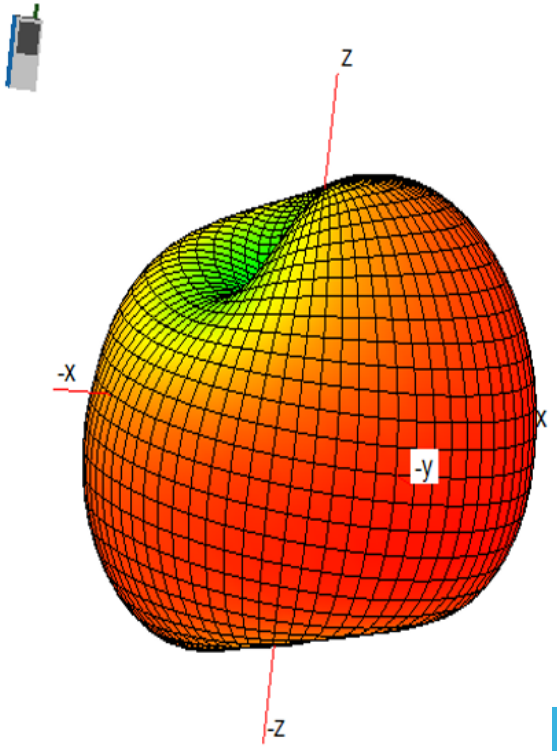
F. 3D PATTERN OF EACH TESTED FREQUENCY

875MHz

Total

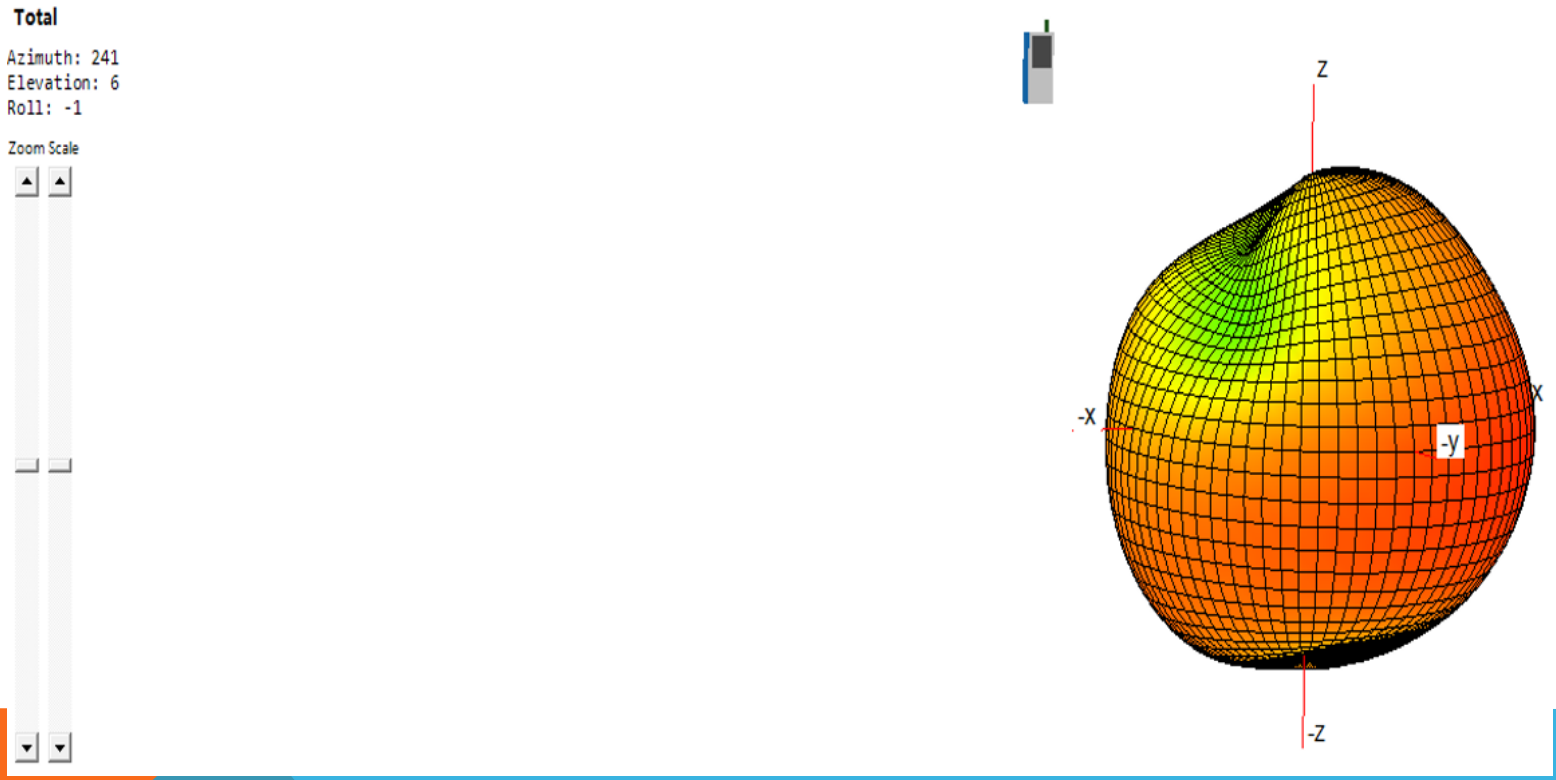
Azimuth: 245
Elevation: 8
Roll: -8

Zoom Scale



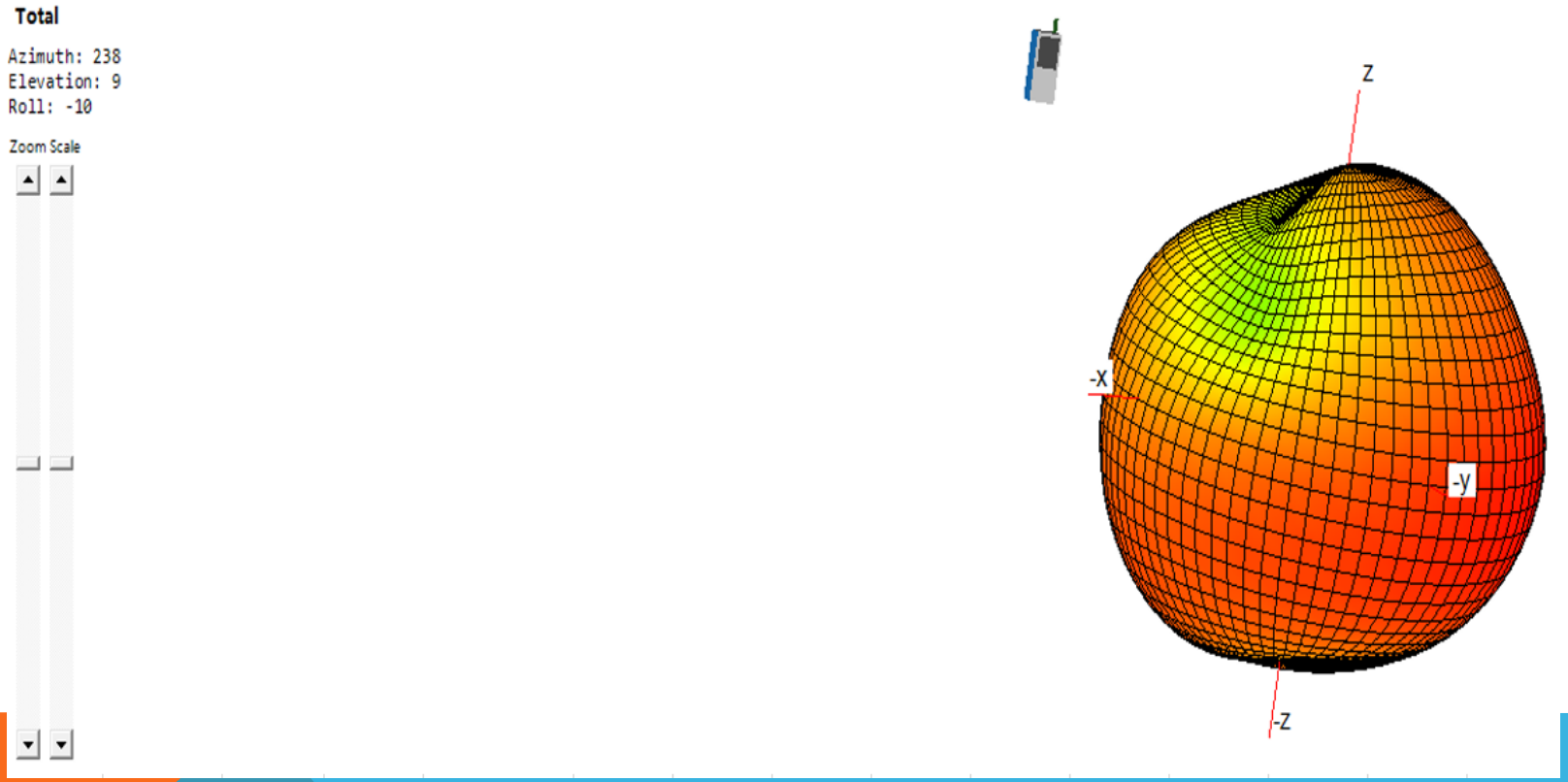
F. 3D PATTERN OF EACH TESTED FREQUENCY

905MHz



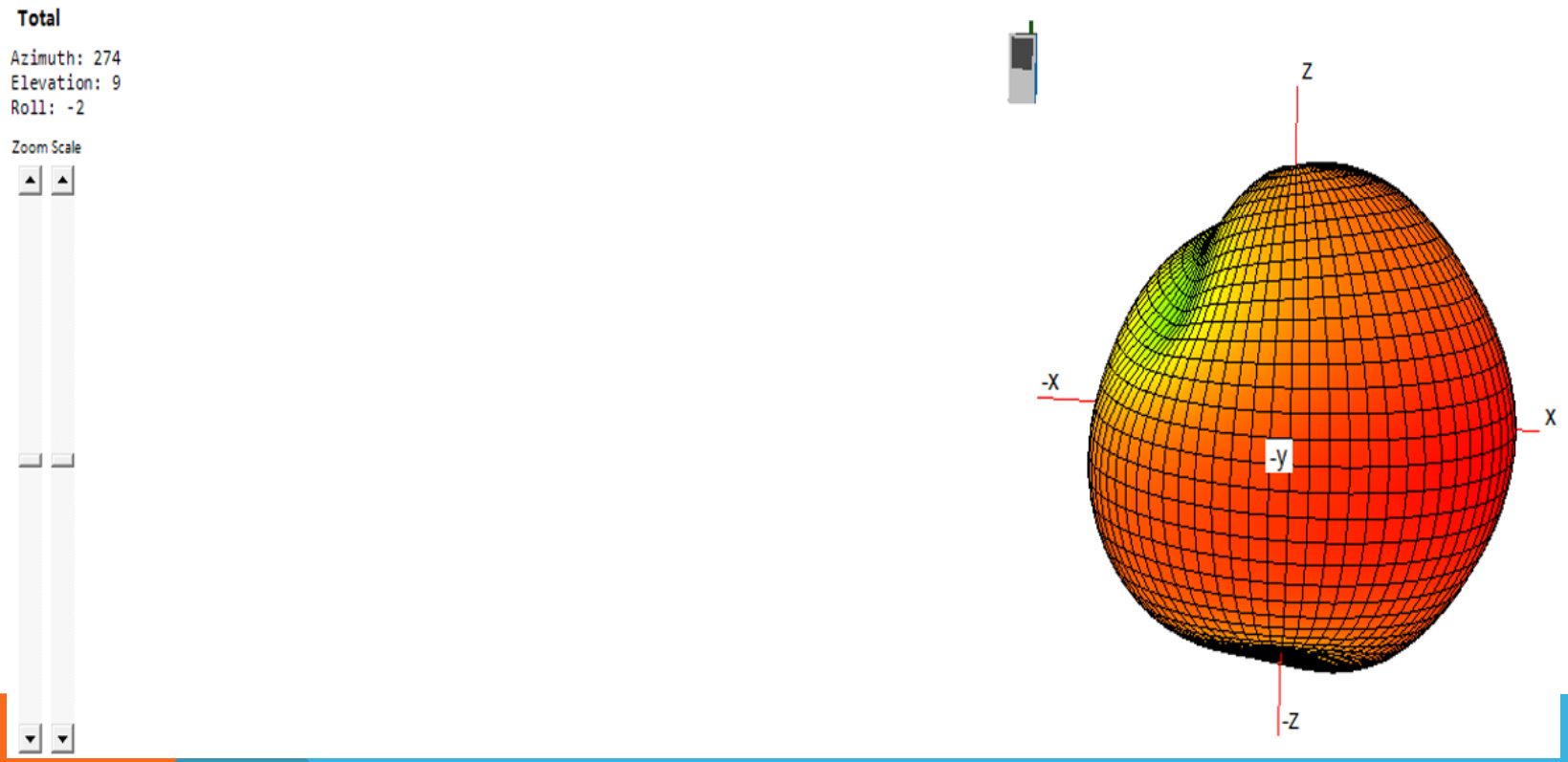
F. 3D PATTERN OF EACH TESTED FREQUENCY

908MHz



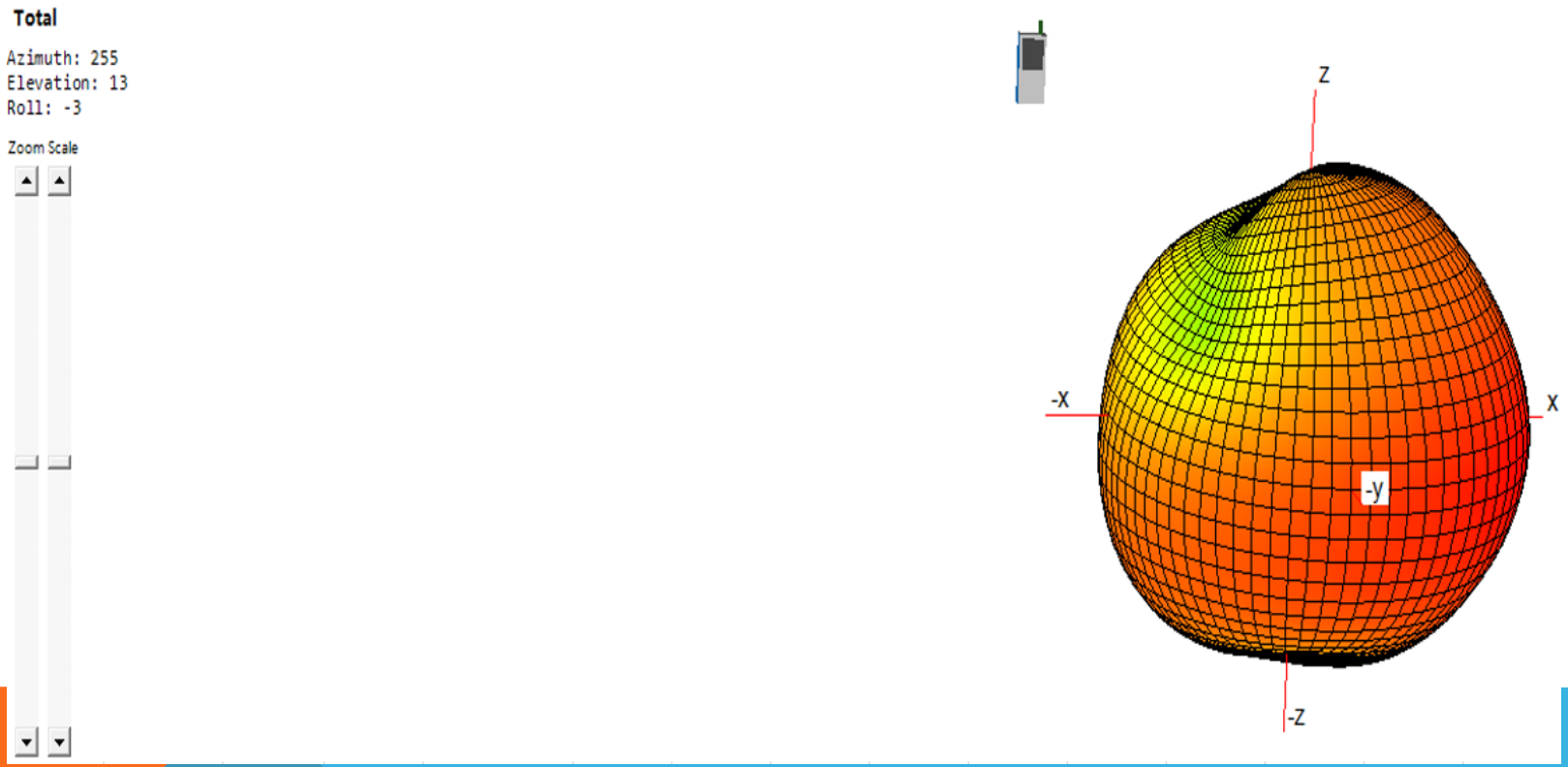
F. 3D PATTERN OF EACH TESTED FREQUENCY

910MHz



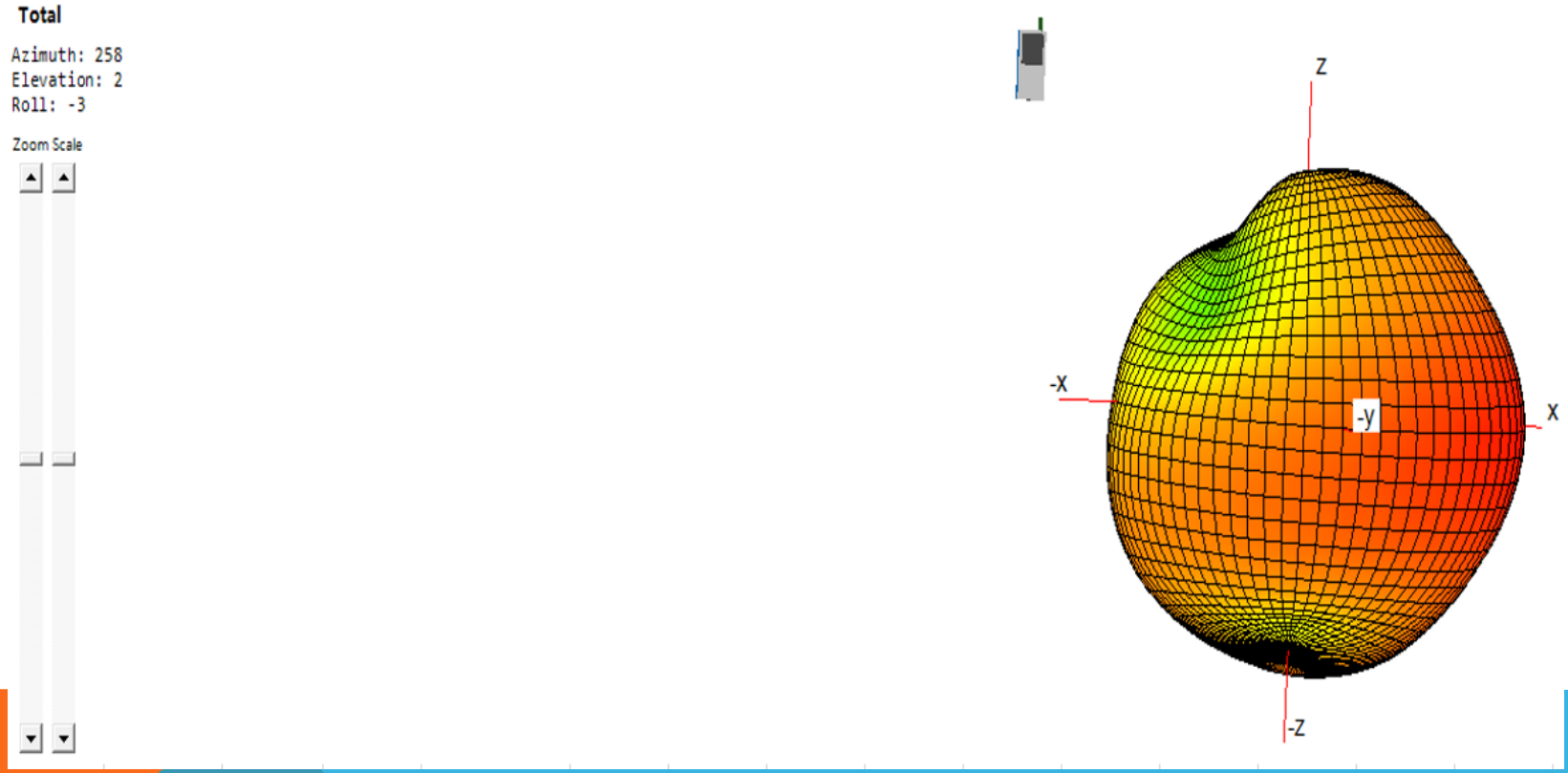
F. 3D PATTERN OF EACH TESTED FREQUENCY

915MHz



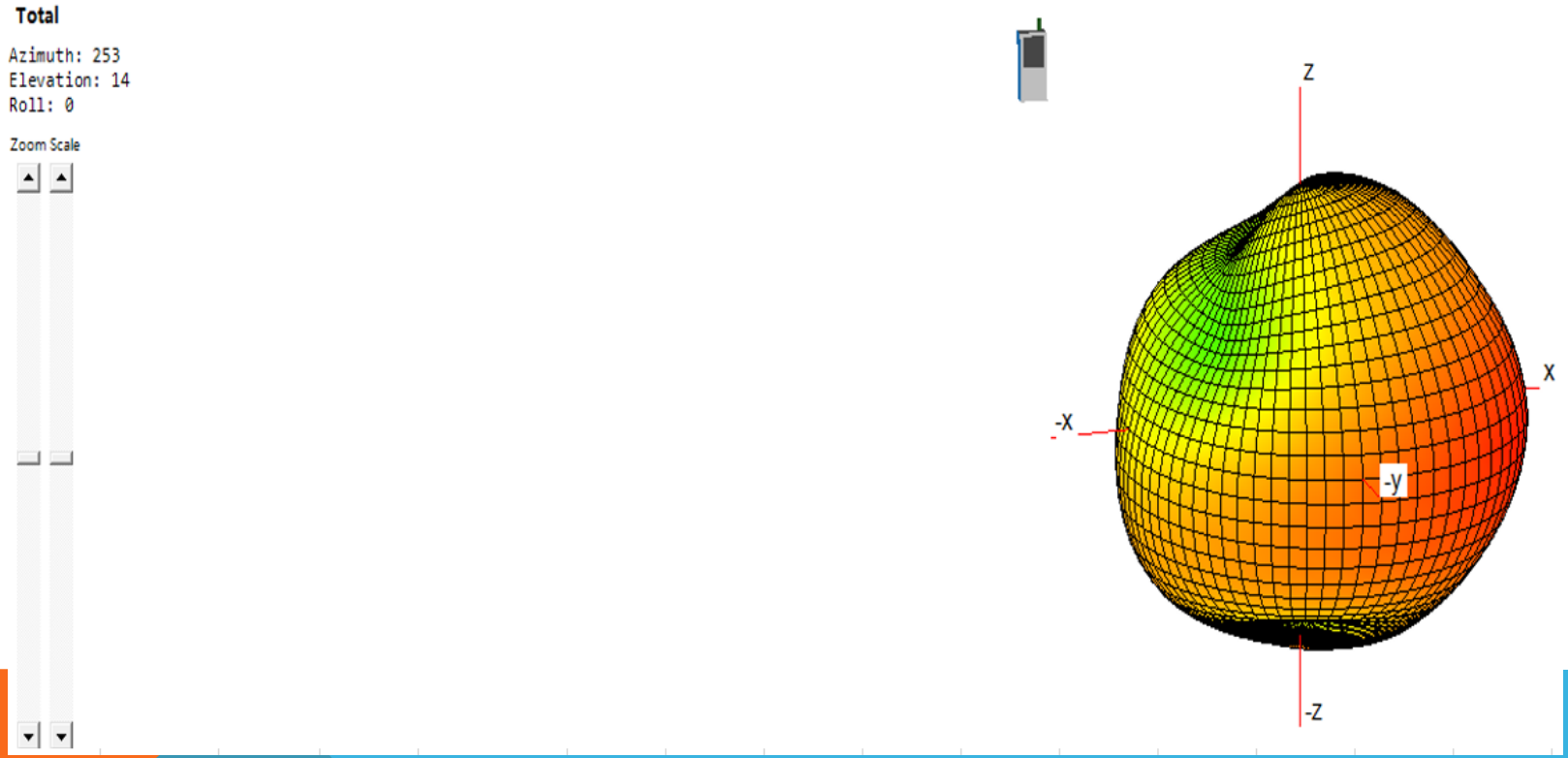
F. 3D PATTERN OF EACH TESTED FREQUENCY

920MHz

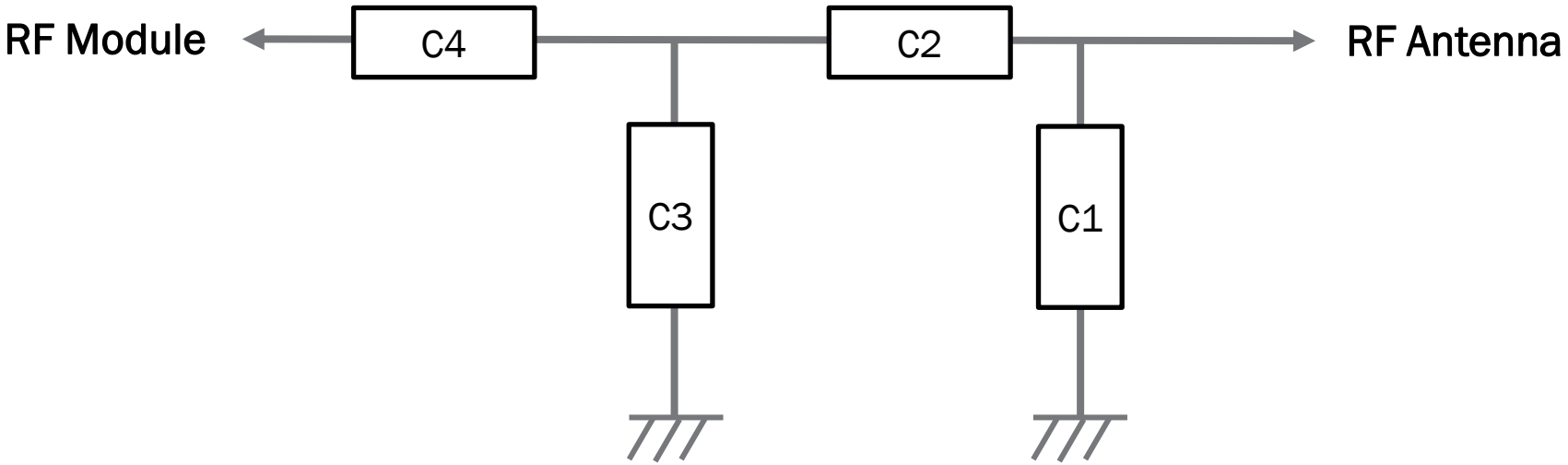


F. 3D PATTERN OF EACH TESTED FREQUENCY

925MHz



G. RECOMMENDED ANTENNA MATCHING CIRCUIT



Component	Value
C1	4.7nH
C2	0Ω
C3	NA
C4	0Ω

H. ANTENNA DRAWING