

Antenna Specification

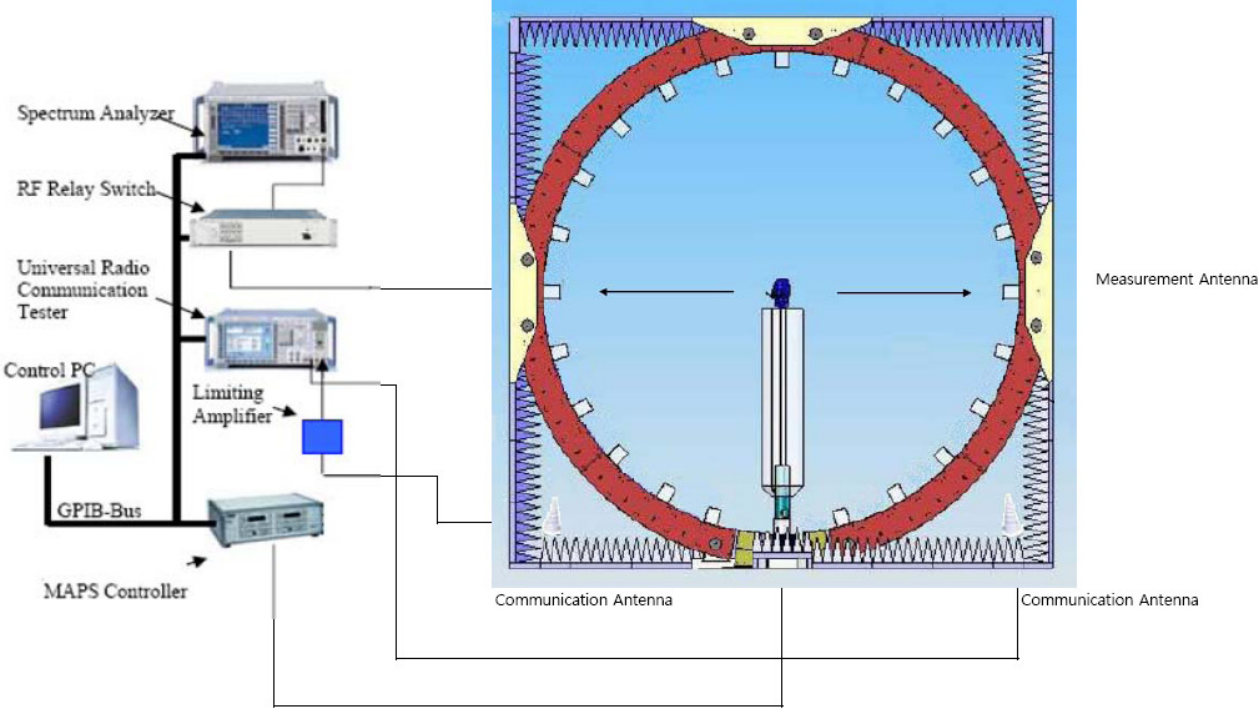
1 Basic Specifications

No.	Specification	Descriptions	Notes
1	Antenna Name/ EUT Name	Wireless ergonomic PC keyboard	
2	Brand	Newidea	
3	Operation Frequency	2.4~2.483GHz	
4	Antenna Efficiency (%)	Keyboard: 14.64% Dongle: 2.43%	
5	Gain (dBi)	Keyboard: -3.67dBi Dongle: -12.49dBi	

2 OTA Measurements System Configuration

2.1 Test Configuration

Great-Circle-Cut method is used to measure the antenna 3D GAIN of EUT in OTA qualified anechoic chamber. Equipment Under Test (EUT) geometry centre vertical projection at the centre of platform, the distance from EUT to measurement antenna is 5m



F-1. OTA Measurement System Configuration

3 Equipment List

Type of Equipment	Model Number	Manufacture
Network Analyzer	E5071C S/N MY46523591	Keysight
Quad-Ridge Horn Antenna 700 MHz-10 GHz	EMCO 3164-08 S/N 161915	ETS-Lindgren L.P.
MAPS Controller	EMCENTER S/N 160485	ETS-Lindgren L.P.

4 Test Result

4.1 Test summary

product	Maximum Gain Data			
	Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
Keyboard	2465	-8.35	14.64	-3.67
USB dongle	2465	-16.14	2.43	-12.49

4.2 Keyboard Test Results

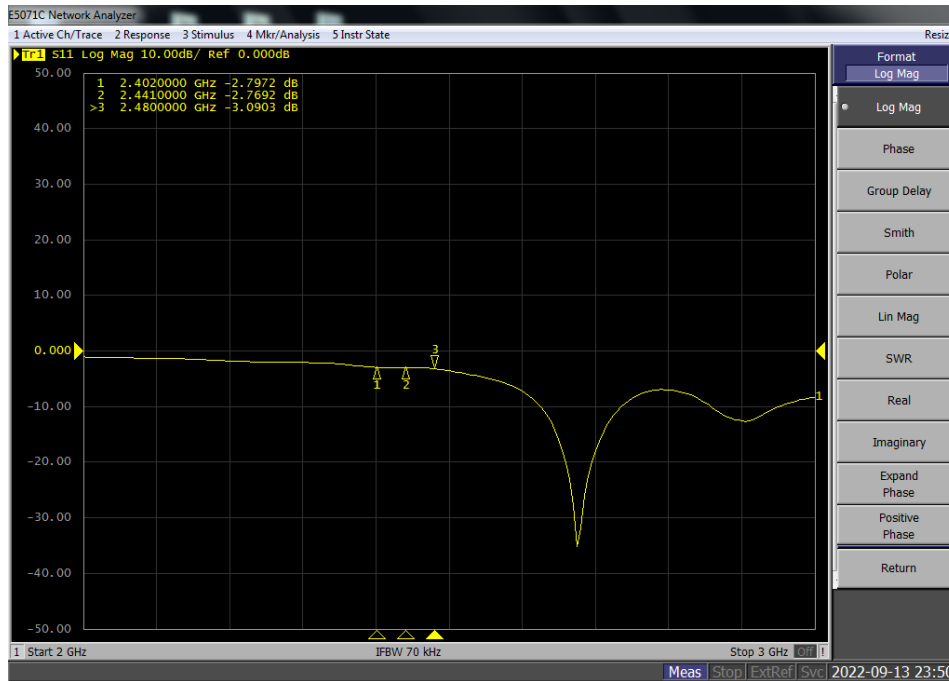
Free Space			
Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
2400	-9.31	11.71	-4.60
2402	-9.34	11.64	-4.58
2405	-9.35	11.62	-4.63
2410	-9.52	11.16	-4.80
2415	-9.59	10.99	-4.82
2420	-9.55	11.08	-4.78
2425	-9.36	11.58	-4.57
2430	-9.25	11.88	-4.47
2435	-9.19	12.06	-4.48
2440	-9.13	12.22	-4.48
2441	-9.14	12.20	-4.49
2445	-9.10	12.30	-4.48
2450	-8.97	12.68	-4.35
2455	-8.78	13.25	-4.08
2460	-8.58	13.88	-3.98
2465	-8.35	14.64	-3.67
2470	-8.45	14.29	-3.83
2475	-8.51	14.11	-3.88
2480	-8.68	13.55	-4.13
2482	-8.64	13.68	-4.16
2485	-8.53	14.03	-3.99

4.3 USB dongle test result

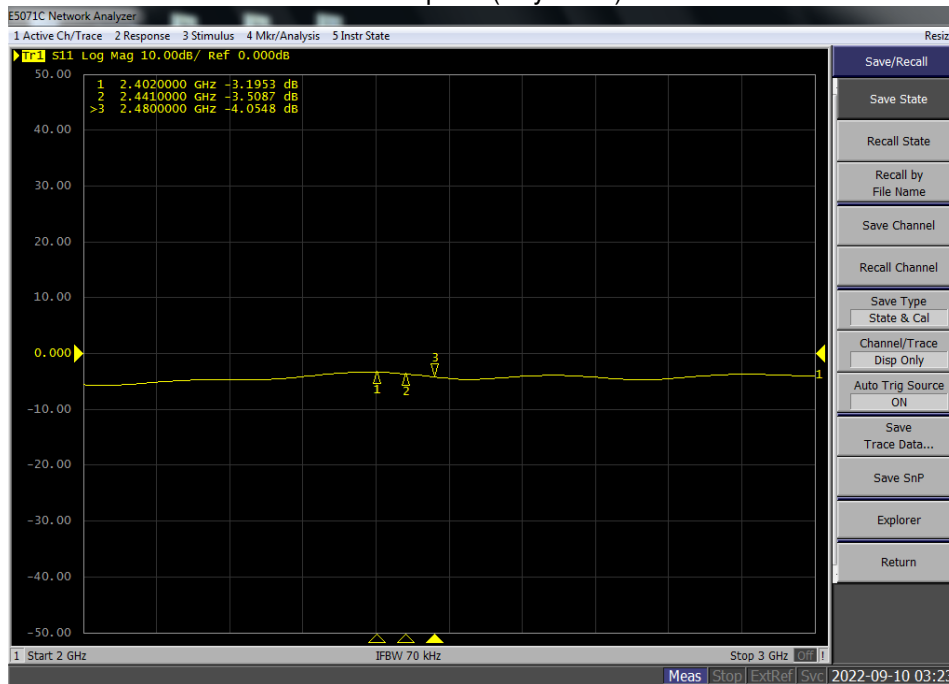
Free Space			
Frequency (MHz)	Efficiency (dB)	Efficiency (%)	Gain (dBi)
2400	-16.50	2.24	-13.14
2402	-16.46	2.26	-12.95
2405	-16.66	2.16	-13.34
2410	-16.75	2.12	-13.24
2415	-16.70	2.14	-13.05
2420	-16.65	2.16	-12.97
2425	-16.45	2.26	-12.78
2430	-16.55	2.22	-12.97
2435	-16.44	2.27	-12.72
2440	-16.38	2.30	-12.90
2441	-16.36	2.31	-12.82
2445	-16.40	2.29	-12.78
2450	-16.34	2.32	-12.72
2455	-16.31	2.34	-12.63
2460	-16.23	2.38	-12.65
2465	-16.14	2.43	-12.49
2470	-16.37	2.30	-12.95
2475	-16.35	2.32	-12.60
2480	-16.39	2.30	-12.76
2482	-16.34	2.32	-12.67
2485	-16.18	2.41	-12.28

5 Pattern Plots

Return Los

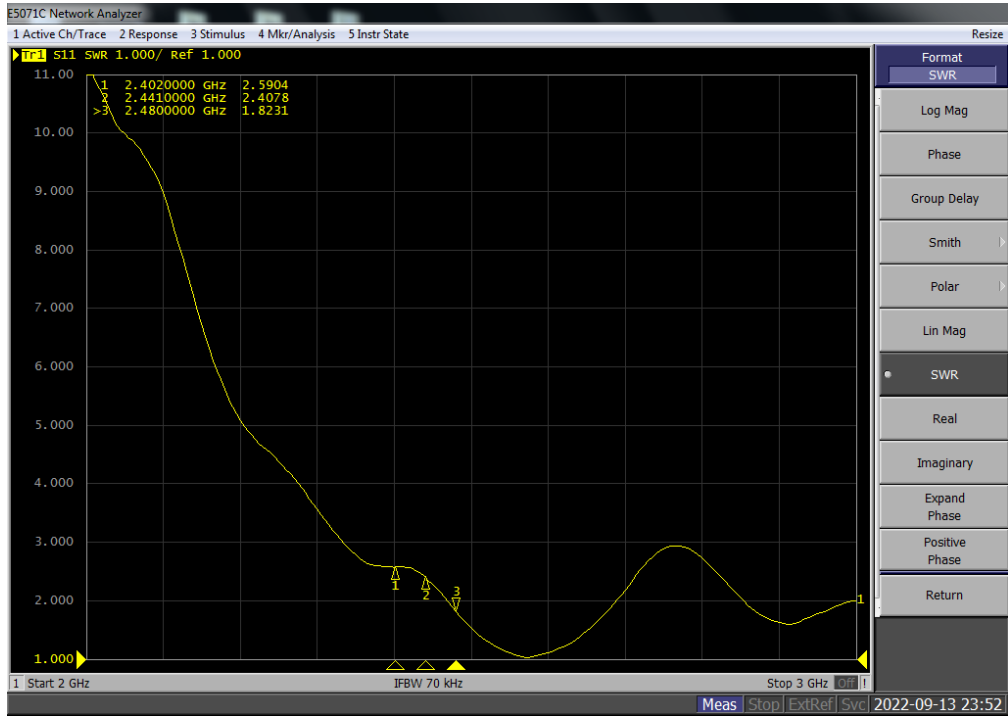


Free Space (Keyboard)

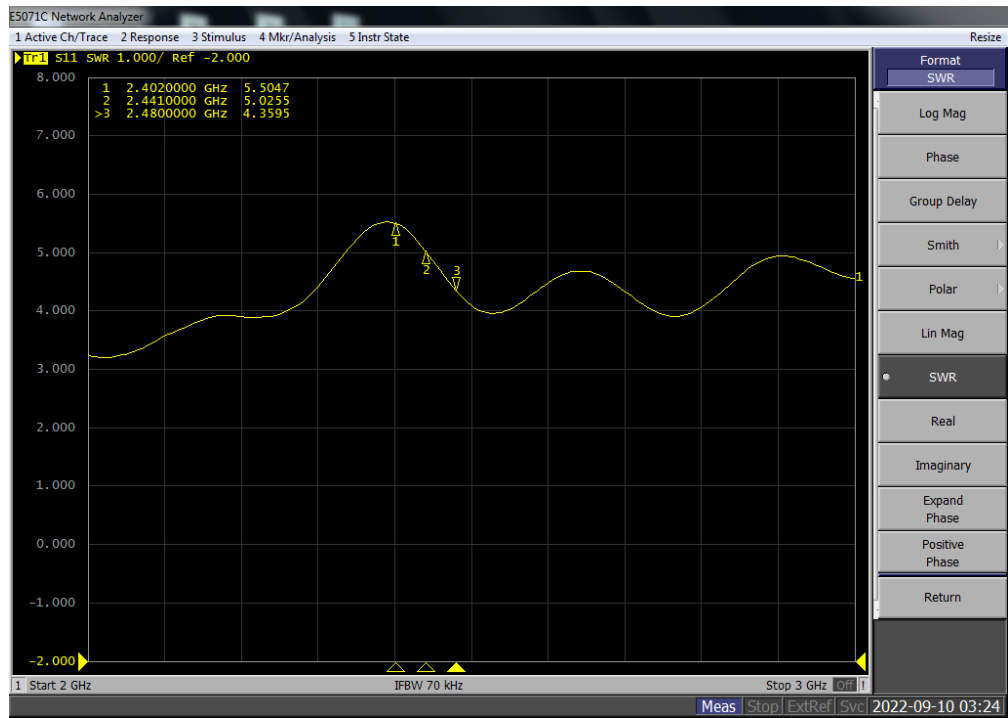


Free Space (USB Dongle)

VSWR

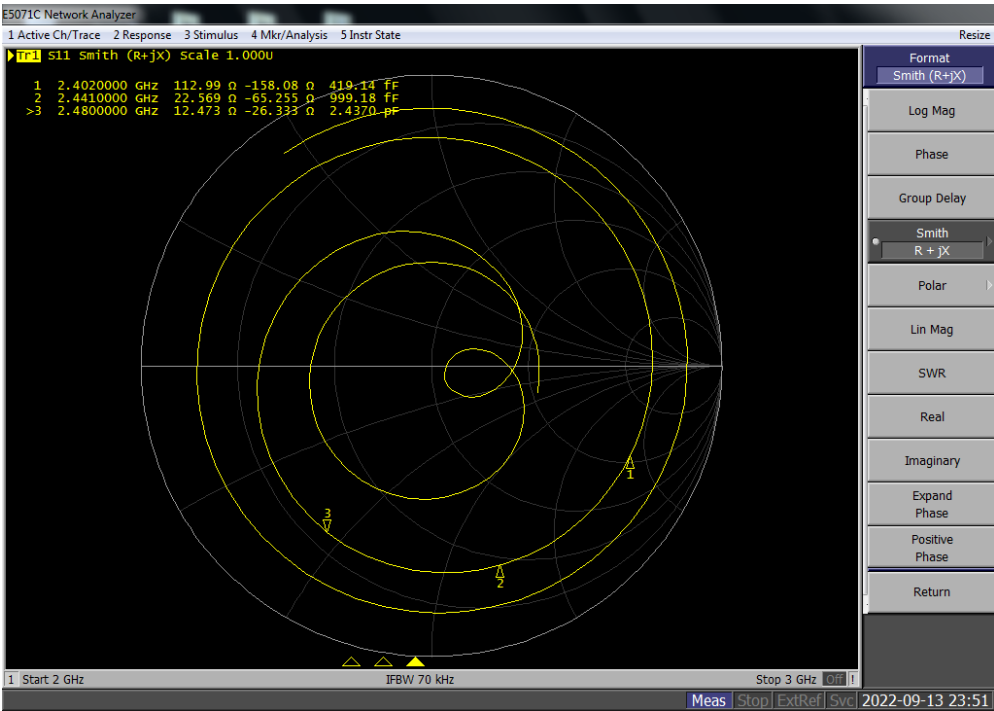


Free Space (Keyboard)

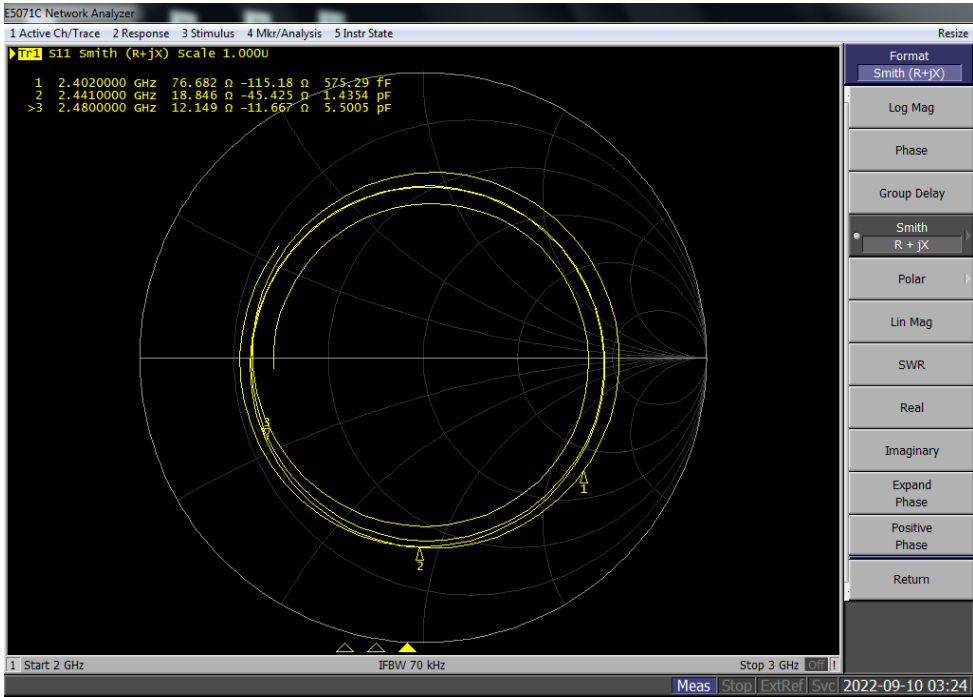


Free Space (USB Dongle)

Stimulus



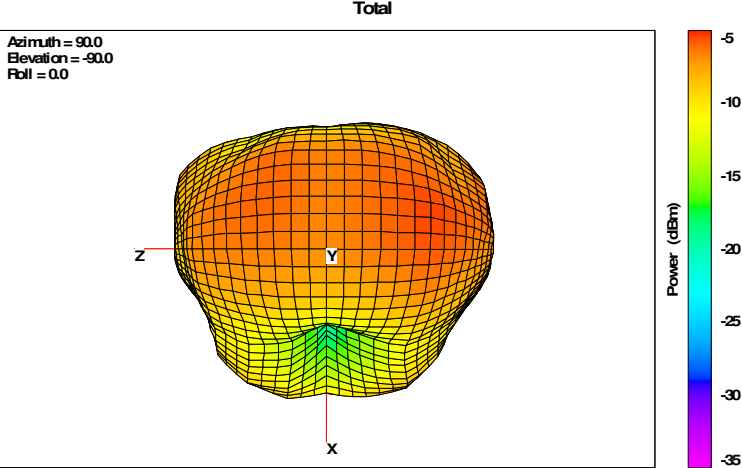
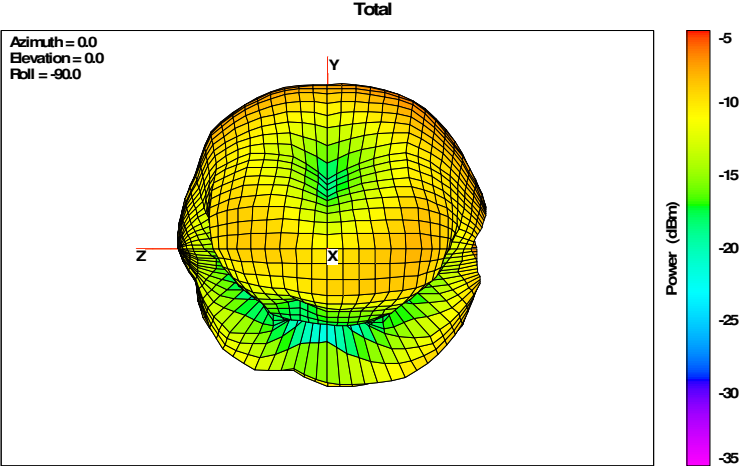
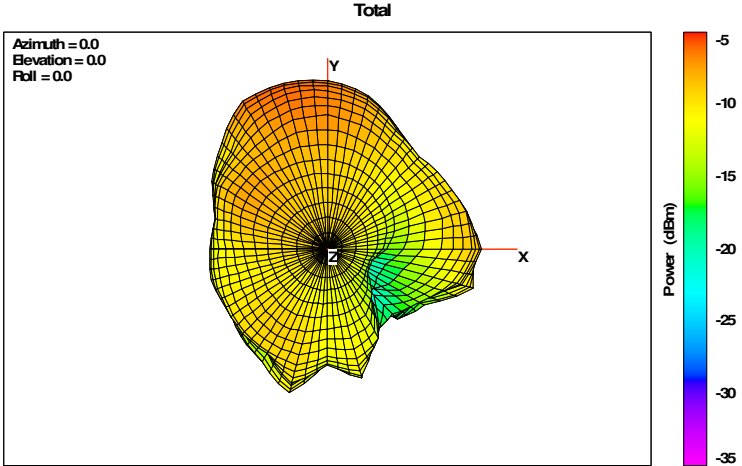
Free Space (Keyboard)



Free Space (USB Dongle)

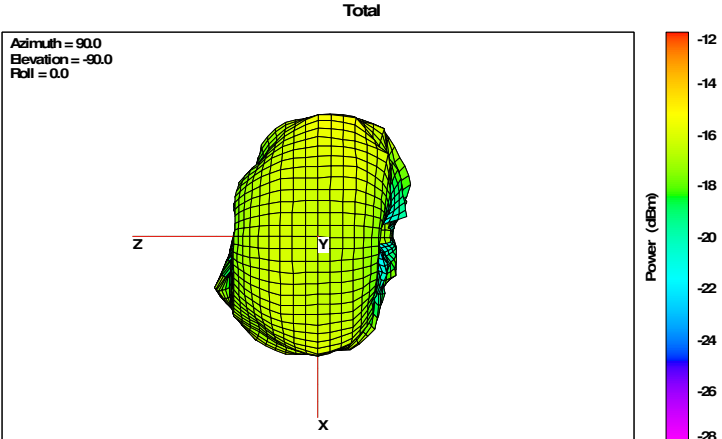
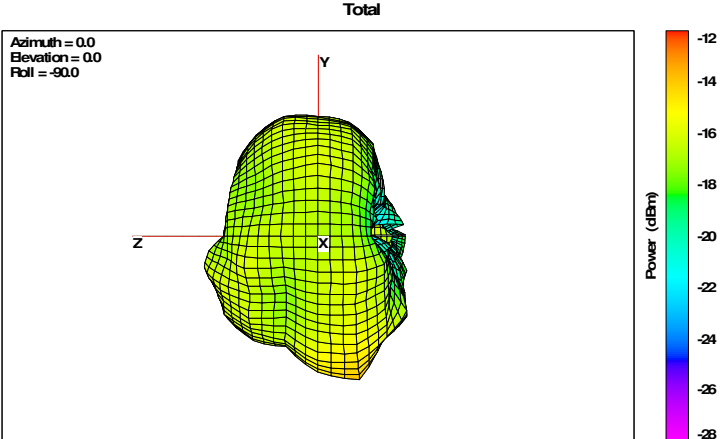
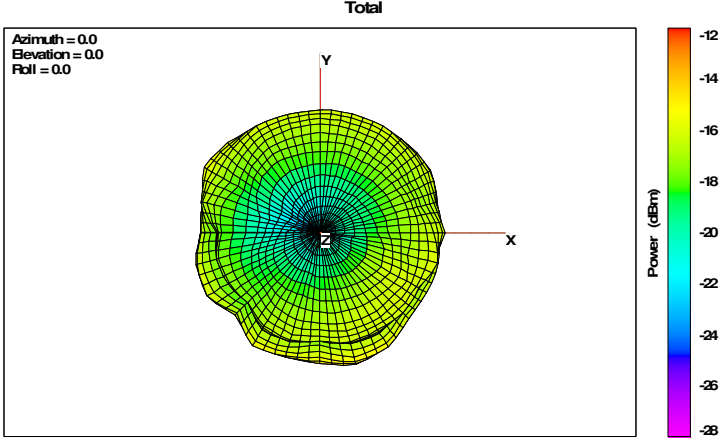
6 3-D Antenna Pattern

6.1 Keyboard 3-D Antenna Pattern



Free Space

6.2 USB Dongle 3-D Antenna Pattern



Free Space

7 Antenna Dimension

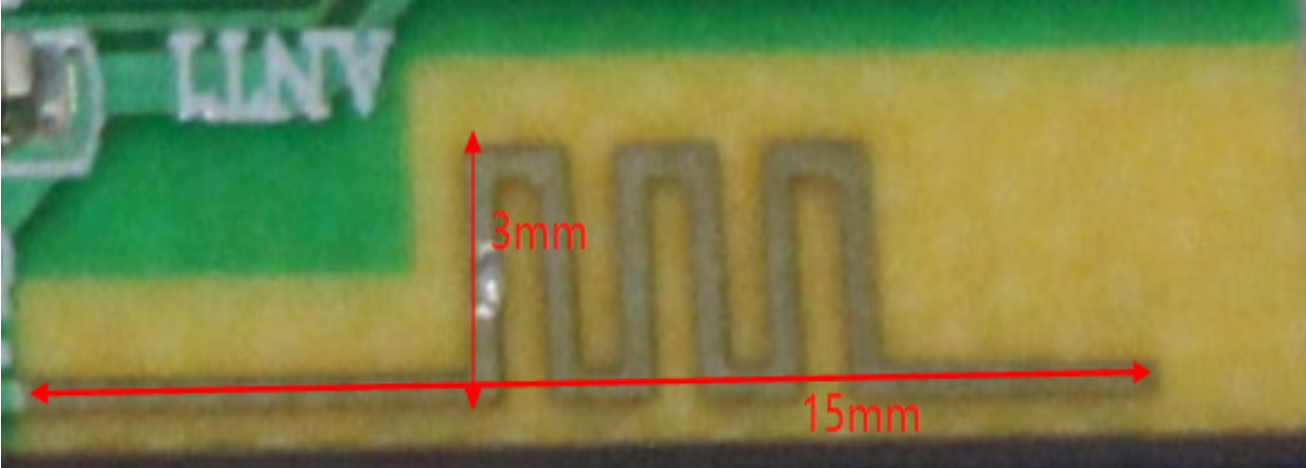


Photo of EUT (Keyboard)

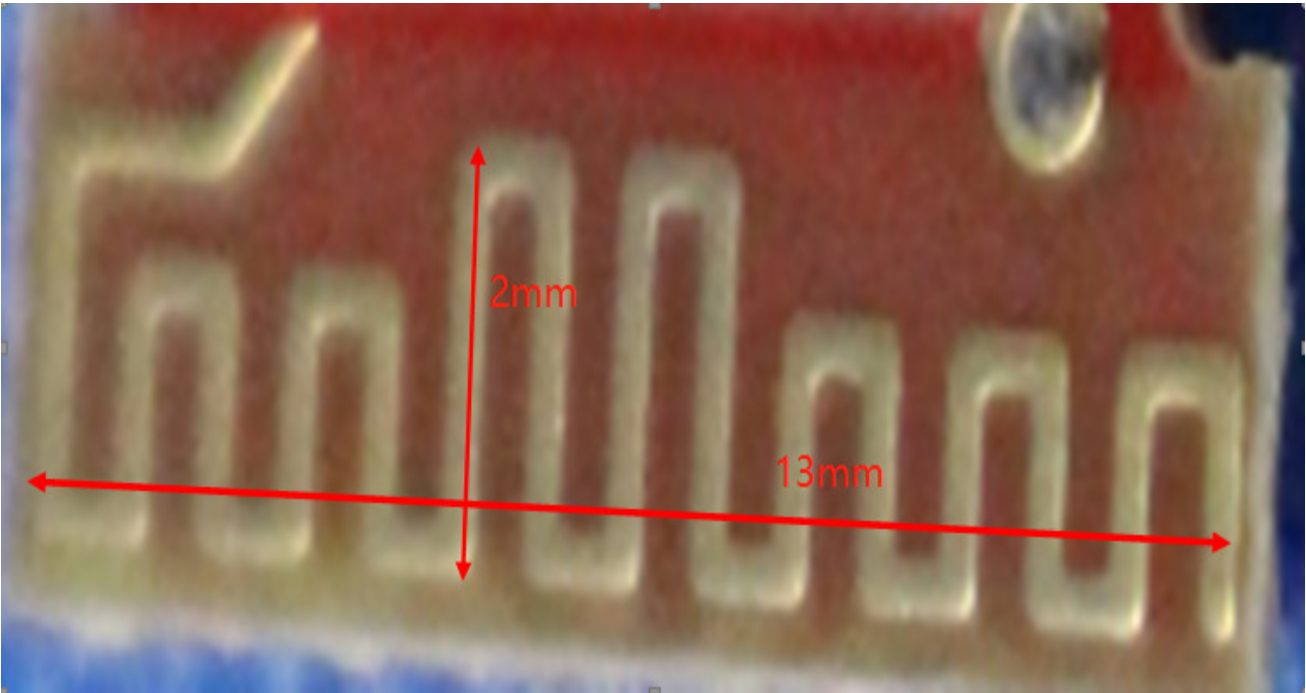
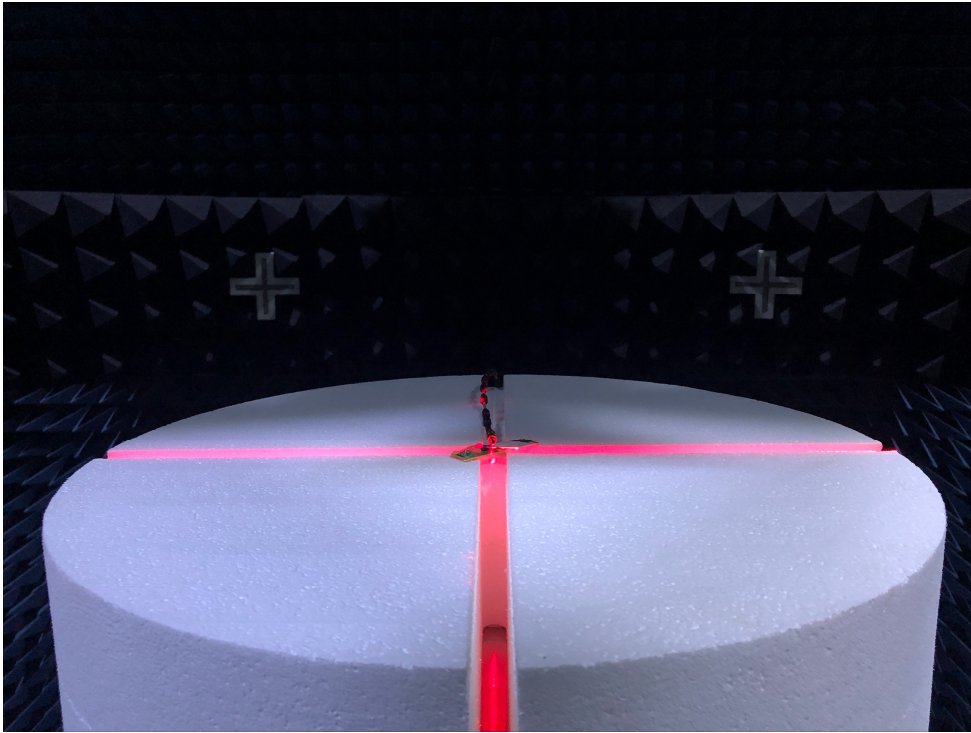
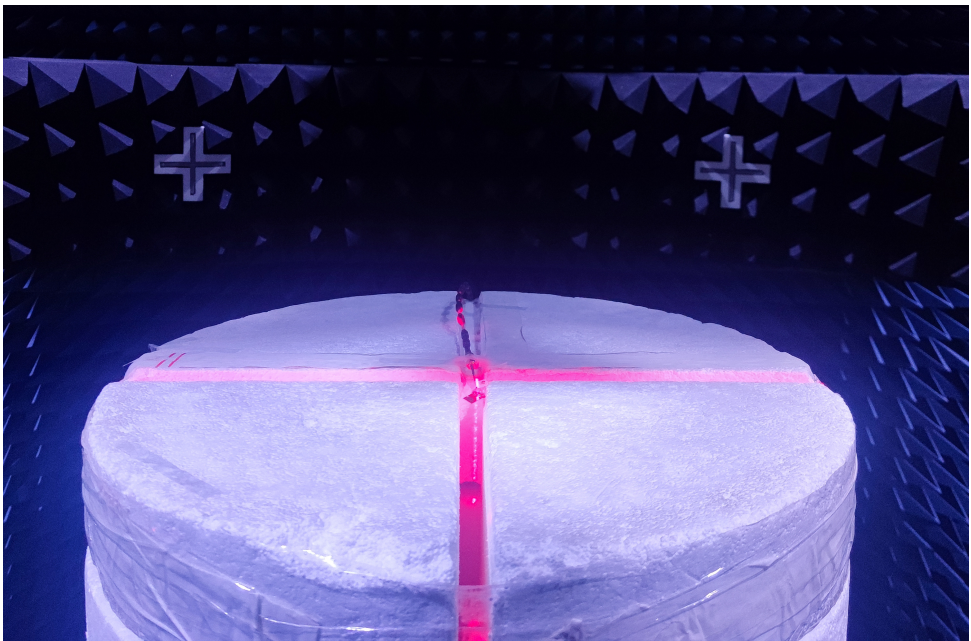


Photo of EUT (USB Dongle)

8 Setup photo



Free Space View (Keyboard)



Free Space View (USB Dongle)

- End of the Report -