HS-WL-ADPT-USBC Antenna Report

Testing Date: 2024.05.23
Report Date : 2024.05.24

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Test Equipment

| Passive	
Antenna Type	monopole
Antenna Model	31VM56300C01
Antenna Gain	Free Space Dongle= -3.13dBi
Test Equipment	E5071C ENA Vector Network Analyzer – Keysight / Calibration date: 2023/7/21 Calibration due date: 2024/7/20
Test chamber	ETS-Lindgren AMS-8500
Testers	Leo WN Chen
Test Software	ETS EMQuest

Antenna Efficiency Measurement Setup
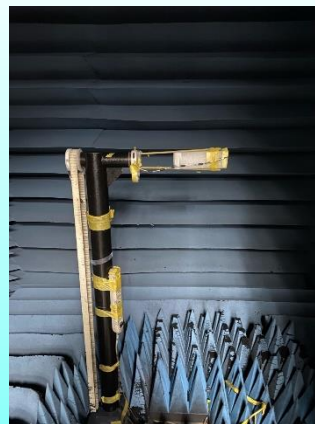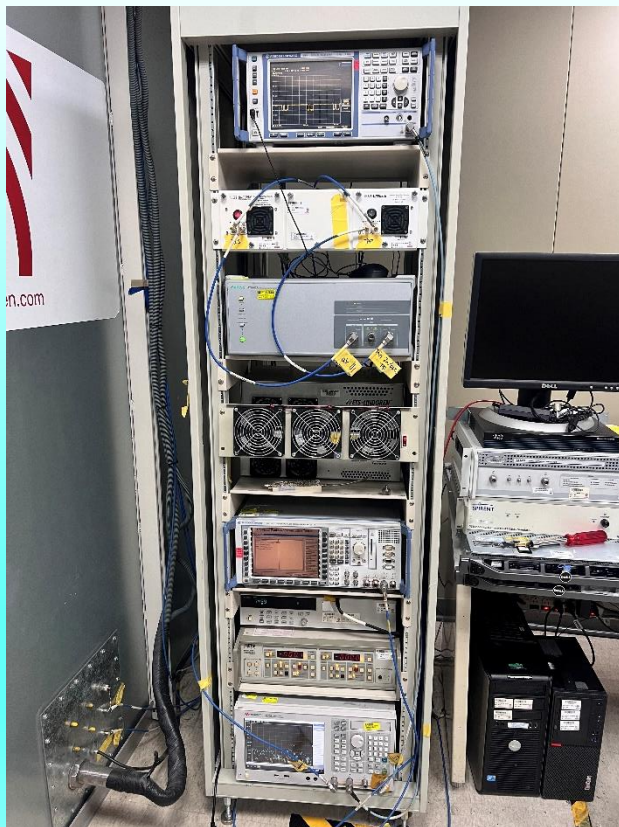
Free Space

Antenna Efficiency

Free Space

Merry MX563 Lemonade 2400~2500MHz											
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Directivity (dBi)	3.84	3.90	3.94	3.92	3.94	3.89	3.59	3.27	3.03	3.08	3.16
Efficiency (dB)	-6.97	-7.13	-7.34	-7.64	-7.94	-8.28	-8.41	-8.53	-8.57	-8.81	-9.08
Efficiency (%)	20.09	19.35	18.46	17.23	16.07	14.86	14.42	14.04	13.89	13.14	12.37
Gain (dBi)	-3.13	-3.23	-3.40	-3.71	-4.00	-4.39	-4.82	-5.26	-5.55	-5.73	-5.92

Radiation Pattern
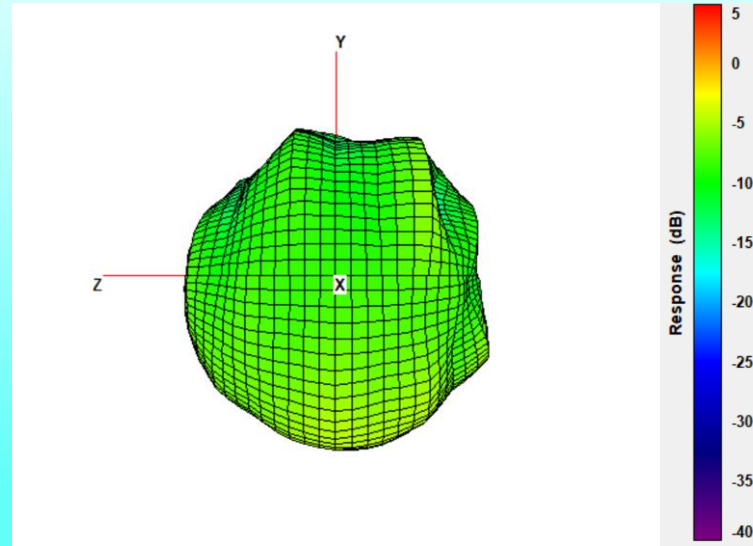
Measurements description

Conducted Measurements

Conducted measurements was done using Network Analyzer – Keysight, the Return Loss of the Antenna was obtained to ensure the efficiency over the operation frequency.

Antenna Radiation Patten Measurements

Radiation Pattern

Measurements was done in the ETS-lindgren anechoic chamber through radiation, the dongle was set to continuous radiation and the AMS-8500 receive the RF power in 360degree angel with rotation of EUT.

Antenna Gain Calculation

The antenna gain was calculated as the difference between the measured Peak EIRP(dBm) and Ant. port input pwr(dBm)