

SENNHEISER ACAEBT Antenna Report

Antenna model: HDT567-R-MAIN-R3

Date : 2023.03.31

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Test Equipment

Passive	
Antenna Type:	PIFA
Antenna Model:	HDT567-R-MAIN-R3
Antenna Gain	Free Space 2.04 dBi
Test Equipment	E5071C ENA Vector Network Analyzer – Keysight / Calibration Date: 2022/05/30
Test chamber	ETS-lindgren_AMS-8500 Antenna Measurement System/Calibration Date: 2022/04/15
Testers	Oscar Chu 朱恩凱
Test Software	ETS-Lindgren EMQuest

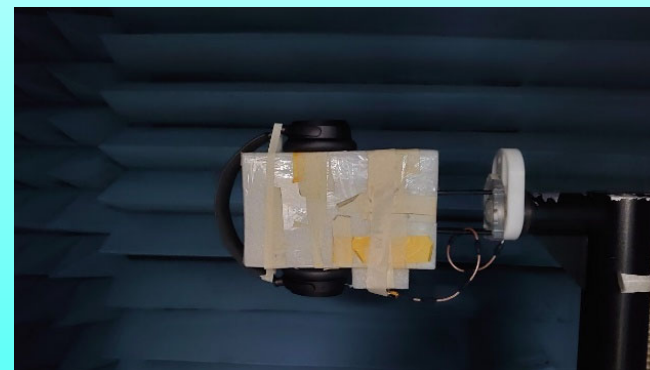
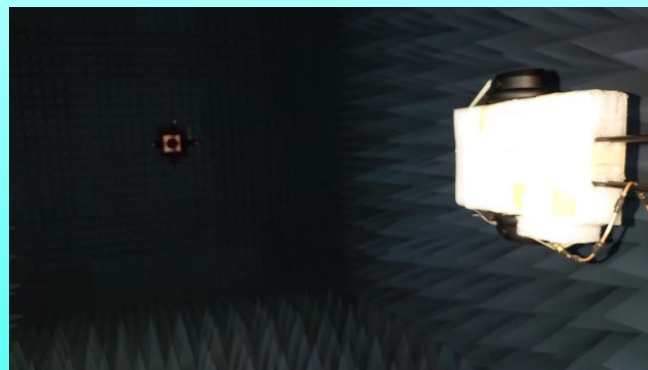
Antenna Efficiency Measurement Setup



Switch

Agilent Network Analyzers

Free Space

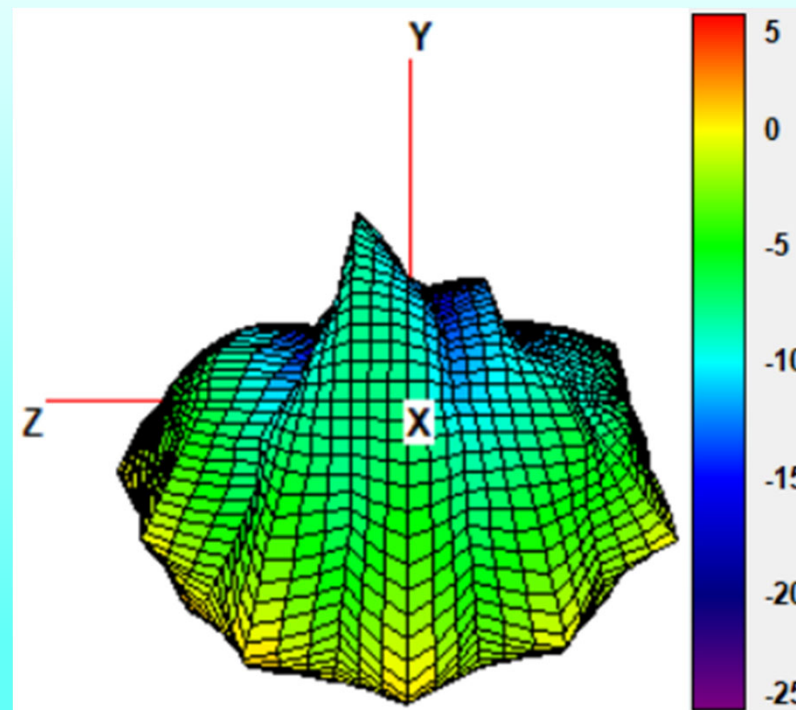
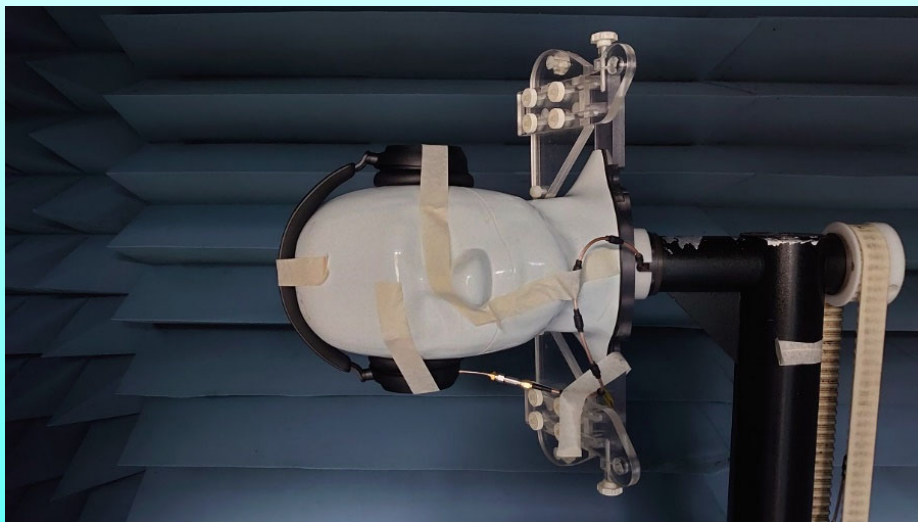


Antenna Efficiency

Free Space

Merry BHC567_Gain_FS_2000~3000MHz											
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-2.27	-2.28	-2.26	-2.23	-2.19	-2.20	-2.15	-2.10	-2.04	-1.93	-1.95
Peak EIRP (dBm)	1.54	1.47	1.48	1.61	1.69	1.75	1.83	1.94	2.04	2.25	2.31
Directivity (dBi)	3.81	3.75	3.74	3.84	3.88	3.95	3.98	4.04	4.08	4.18	4.26
Efficiency (dB)	-2.27	-2.28	-2.26	-2.23	-2.19	-2.20	-2.15	-2.10	-2.04	-1.93	-1.95
Efficiency (%)	59.35	59.19	59.46	59.86	60.34	60.25	60.88	61.70	62.51	64.08	63.87
Gain (dBi)	1.54	1.47	1.48	1.61	1.69	1.75	1.83	1.94	2.04	2.25	2.31
NHPRP $\pm\pi/4$ (dBm)	-3.71	-3.71	-3.68	-3.64	-3.61	-3.62	-3.58	-3.54	-3.50	-3.41	-3.44
NHPRP $\pm\pi/6$ (dBm)	-5.19	-5.19	-5.15	-5.09	-5.04	-5.03	-4.98	-4.93	-4.89	-4.80	-4.84
NHPRP $\pm\pi/8$ (dBm)	-6.35	-6.35	-6.31	-6.24	-6.18	-6.17	-6.11	-6.05	-6.01	-5.91	-5.96
Upper Hem. PRP (dBm)	-4.98	-5.02	-5.03	-5.03	-5.03	-5.04	-5.02	-4.95	-4.87	-4.72	-4.68
Lower Hem. PRP (dBm)	-5.60	-5.57	-5.52	-5.46	-5.39	-5.39	-5.32	-5.27	-5.24	-5.18	-5.26

Radiation Pattern



Measurements description

Conducted Measurements

Conducted measurements were done using R&S Vector Network Analyzer and the conducted power of the earbuds was obtained.

Antenna Radiation Pattern Measurements

Radiation Pattern Measurements
Radiation measurements were in the ETS-lindgren anechoic chamber using R&S CMW500 Wireless Connectivity tester and ETS-Lindgren EMQuest software. Radiation patterns, TRP and EIRP were obtained.

Antenna Gain Calculation

The antenna gain was calculated as a difference between the measured EIRP and conducted power.