

# **SENNHEISER ACAEBT Antenna Report**

## **Antenna model: HDT567-R-MAIN-R3**

*Testing Date: 2023.03.29*

*Report Date : 2023.03.31*

# Content

- Test Equipment
- Antenna Efficiency Measurement Setup
- Antenna Efficiency
- Radiation Pattern
- Measurements description
- Antenna photo

# 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



Free Space

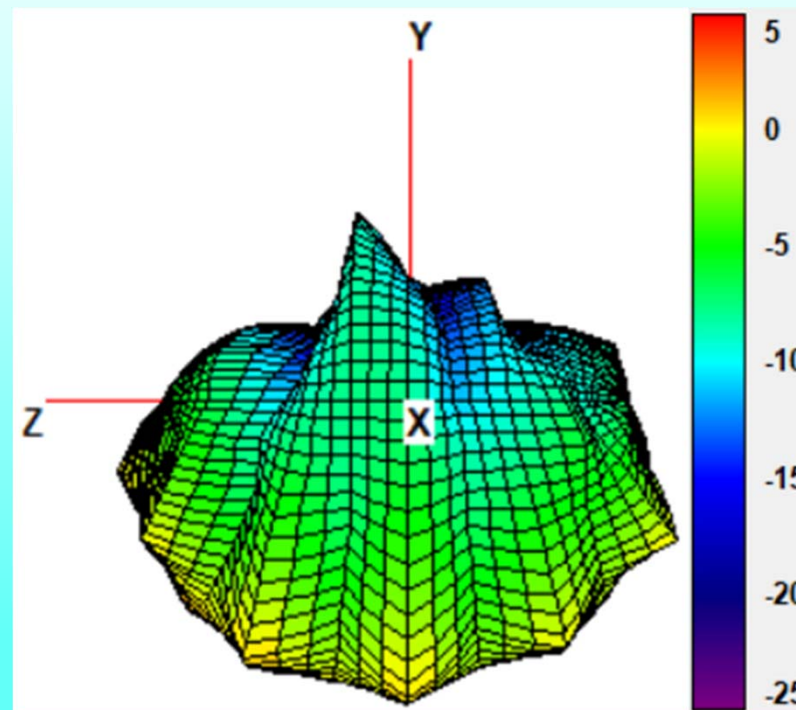
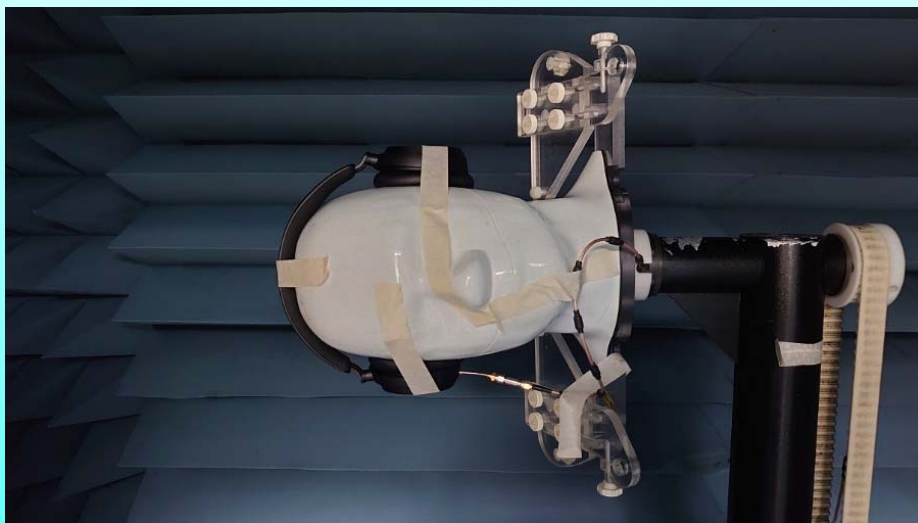


# Antenna Efficiency

## 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 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 earbud 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) in previous page.

# Antenna photo

