

Bells frog Headset RF Antenna Report

MERRY Sounds Excellent

*Presented by : Merry Team
Date : 2024.11*

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Test Equipment

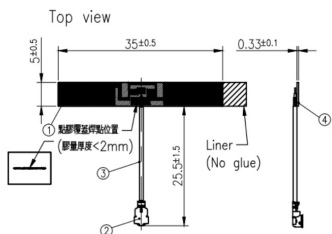
Asset Name (Eng)	Manufacturer	Model	Serial No.	Date of Calibration	Due Date of Calibration	Location
Agilent Network Analyzer - E5071C	Agilent	E5071C	MY46104190	2024/5/30	2025/5/29	HwaYa OTA Chamber 3
Test Software	ETS EMQuest					

Test Methods

The Antenna Gain Test is performed according to The ANSI/IEEE Std 149 12.3.1 Antenna Gain (Small size ($< 42\text{cm}$) Linear Polarization Antennas), using a two-axis support device and one fixed measurement antenna. The EUT is positioned along the required MAPS centerline fixture holder. The EUT is then stepped between 0 and 180 degrees along the theta axis in 15-degree increments. At each theta position, the phi axis is stepped from 0-360 degrees in 15-degree increments. Data is recorded using the Network analyzer for both theta and phi polarizations at each position. Depending on the protocol, an appropriate filter is used in the EMQuest software to process the data. Upon completion of the test, test results (angular dependent EIRP) is calculated at each measurement point and the required value is automatically calculated. This test procedure is repeated for frequency and configuration as required.

Antenna Efficiency & Gain

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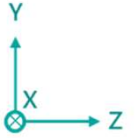
Model	Merry_HDT577_HS-_3D_Gain_FS_2400-2500MHz_Continuous										
Test / Position	3D Gain / FS										
Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-2.96	-2.96	-3.03	-3.17	-3.32	-3.40	-3.38	-3.37	-3.25	-3.18	-3.09
Peak EIRP (dBm)	2.35	2.66	2.91	3.00	3.03	3.02	3.04	2.98	2.99	2.89	2.69
Directivity (dBi)	5.31	5.62	5.93	6.17	6.35	6.43	6.42	6.35	6.24	6.07	5.79
Efficiency (dB)	-2.96	-2.96	-3.03	-3.17	-3.32	-3.40	-3.38	-3.37	-3.25	-3.18	-3.09
Efficiency (%)	50.59	50.60	49.83	48.21	46.55	45.66	45.89	46.03	47.30	48.14	49.04
Gain (dBi)	2.35	2.66	2.91	3.00	3.03	3.02	3.04	2.98	2.99	2.89	2.69

Antenna Model name : 09D4000000V

(with head)

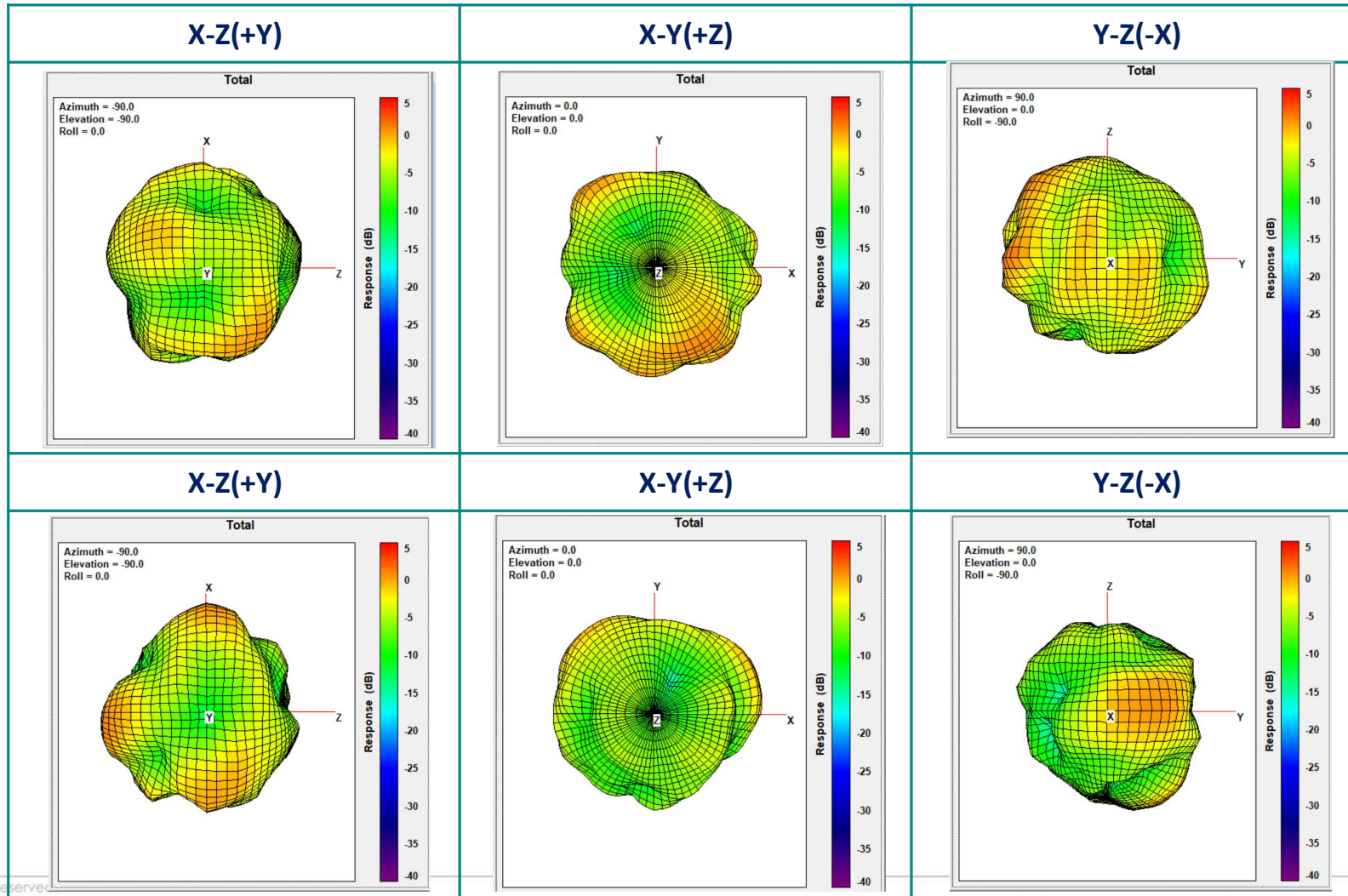
Model	Merry_HDT577_HS-Mic _3D_Gain_BH_2400-2500MHz_Continuous										
Test / Position	3D Gain / BH										
Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-4.55	-4.47	-4.44	-4.50	-4.54	-4.61	-4.73	-4.87	-4.92	-4.89	-4.86
Peak EIRP (dBm)	1.14	1.35	1.40	1.43	1.45	1.43	1.33	1.25	1.21	1.24	1.34
Directivity (dBi)	5.70	5.82	5.85	5.94	5.99	6.04	6.06	6.12	6.13	6.13	6.21
Efficiency (dB)	-4.55	-4.47	-4.44	-4.50	-4.54	-4.61	-4.73	-4.87	-4.92	-4.89	-4.86
Efficiency (%)	35.05	35.75	35.94	35.44	35.18	34.56	33.63	32.60	32.17	32.44	32.65
Gain (dBi)	1.14	1.35	1.40	1.43	1.45	1.43	1.33	1.25	1.21	1.24	1.34

Radiation pattern



FreeSpace

With Head



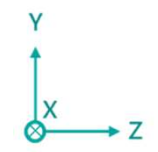
Dongle Antenna Efficiency & Gain

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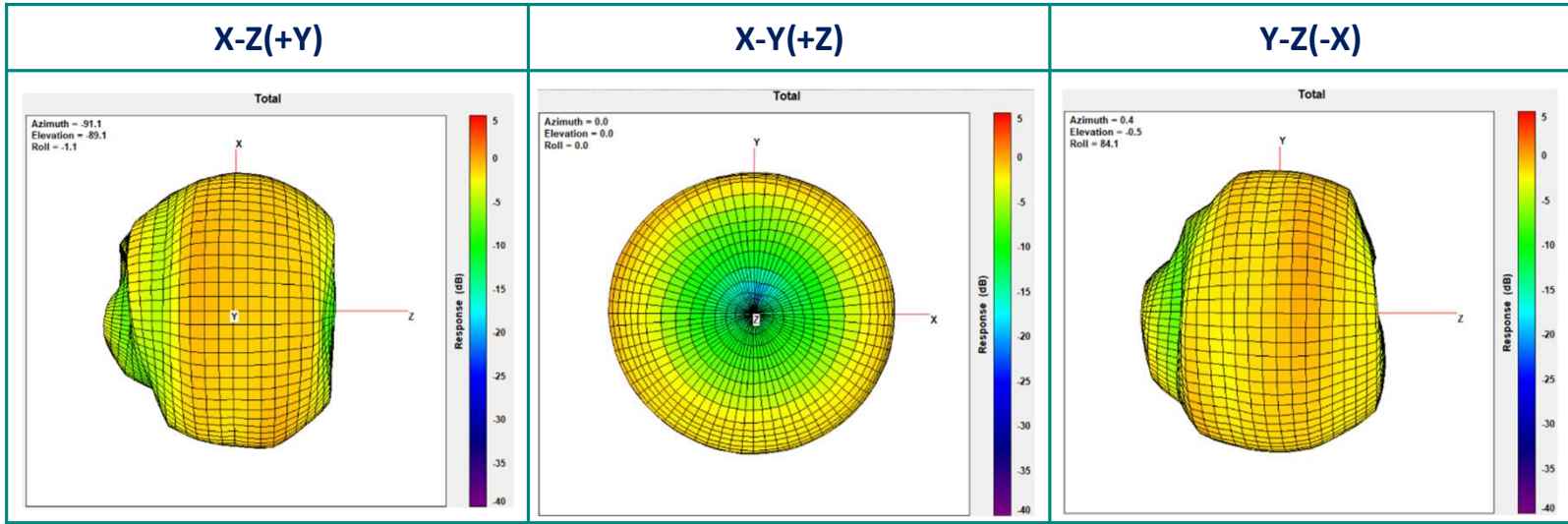
Model	Merry_HDT577_Dongle_3D_Gain_FS_2300-2600MHz_Continuous										
Test / Position	3D Gain / FS										
Frequency	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-1.90	-1.91	-1.92	-1.98	-1.99	-2.00	-2.09	-2.14	-2.17	-2.11	-2.10
Peak EIRP (dBm)	0.97	0.91	0.89	0.81	0.74	0.60	0.46	0.34	0.30	0.26	0.31
Directivity (dBi)	2.87	2.82	2.81	2.79	2.72	2.60	2.55	2.49	2.47	2.36	2.41
Efficiency (dB)	-1.90	-1.91	-1.92	-1.98	-1.99	-2.00	-2.09	-2.14	-2.17	-2.11	-2.10
Efficiency (%)	64.56	64.39	64.28	63.42	63.29	63.03	61.80	61.06	60.70	61.57	61.70
Gain (dBi)	0.97	0.91	0.89	0.81	0.74	0.60	0.46	0.34	0.30	0.26	0.31

Antenna Model name : 51TX57700002Z

Dongle Radiation pattern



FreeSpace



Thank You

Delivering Fidelity Sound to Enrich Human's Life

