

INPAQ Antenna Report

Antenna model: HDT565

Testing Date: 2023.11.24

Report Date : 2023.11.27

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Test Equipment

Passive	
Antenna Type:	FPC antenna
Antenna Model:	HDT565
Antenna Gain	Free Space L Earbud : 1.20 dBi R Earbud : 1.42 dBi
Test Equipment	E5071C ENA Vector Network Analyzer – Keysight
Test chamber	ETS-lindgren_AMS-8500 Antenna Measurement
Testers	Frankie Chang
Test Software	ETS-Lindgren EMQuest
manufacturer	Inpaq
Manufacturer Address.	No. 90, Keyi St., Zhunan Township, Miaoli County 350402, Taiwan (R.O.C.)

TEST INSTRUMENTS

TYPE OF EQUIPMENT	MODEL	MANUFACTURER	CALIBRATION DATE	CALIBRATION DUE DATE
Measurement Software	EM-Quest 1.16	ETS-Lindgren	N/A	N/A
Vector Network Analyzer Customer provided unit	5071C S/N: MY46214689	Keysight	2023/2/10	2024/2/9

Antenna Efficiency

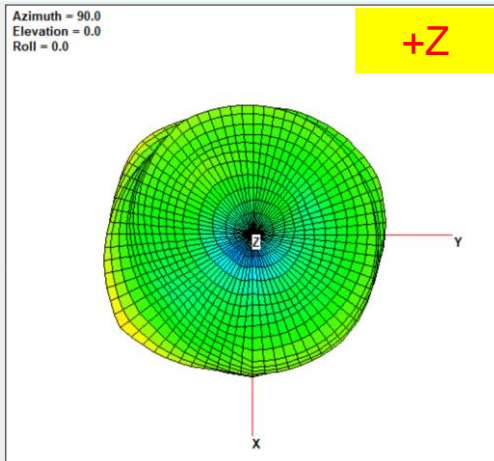
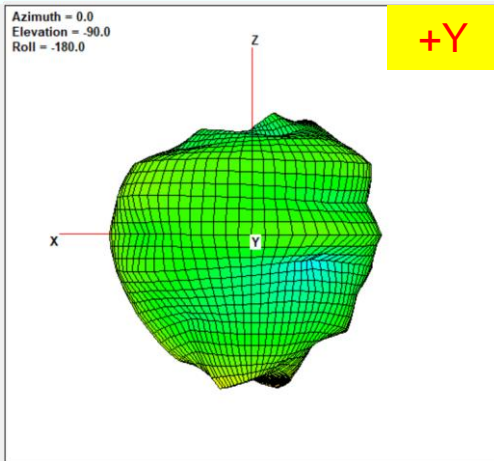
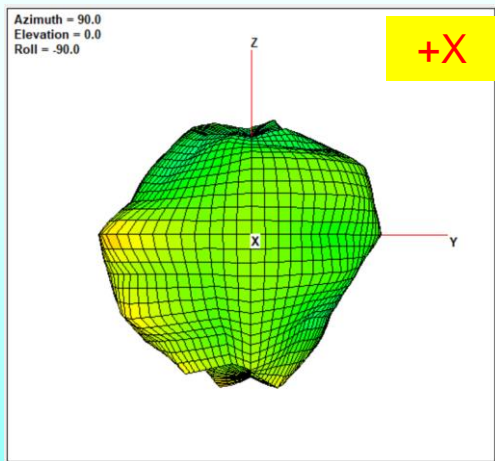
Free Space

Merry HDT565 L FS_2000~3000MHz									
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480
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
Tot. Rad. Pwr. (dBm)	-5.33	-5.36	-5.29	-5.19	-4.98	-4.82	-4.61	-4.48	-4.35
Peak EIRP (dBm)	0.24	0.15	0.11	0.11	0.16	0.29	0.57	0.89	1.20
Directivity (dBi)	5.58	5.51	5.39	5.30	5.14	5.11	5.19	5.37	5.56
Efficiency (dB)	-5.33	-5.36	-5.29	-5.19	-4.98	-4.82	-4.61	-4.48	-4.35
Efficiency (%)	29.28	29.10	29.60	30.27	31.80	32.96	34.57	35.68	36.72
Gain (dBi)	0.24	0.15	0.11	0.11	0.16	0.29	0.57	0.89	1.20

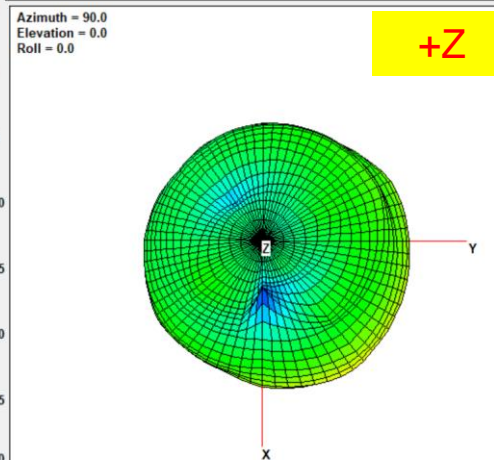
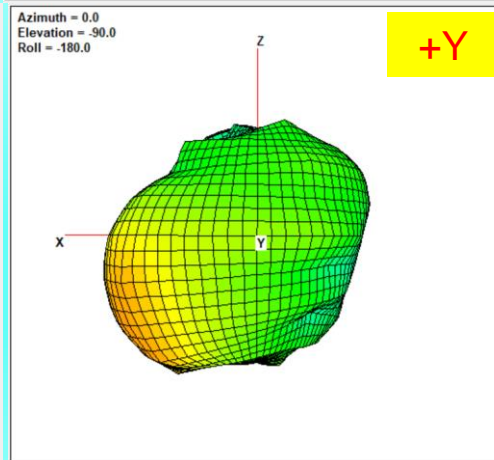
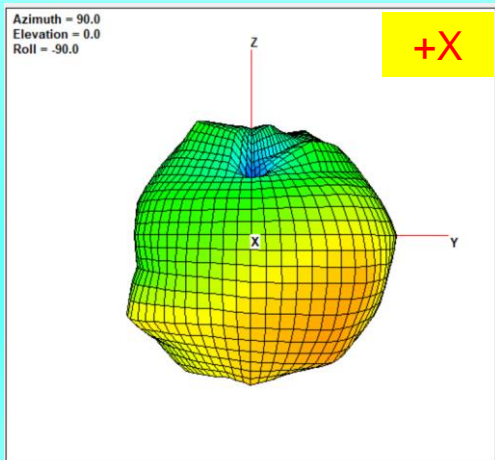
Merry HDT565 R FS_2000~3000MHz									
Frequency (MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480
Point Values									
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	-6.13	-5.91	-5.69	-5.48	-5.18	-5.04	-4.88	-4.82	-4.73
Peak EIRP (dBm)	0.86	0.96	1.06	1.11	1.22	1.25	1.15	1.30	1.42
Directivity (dBi)	6.99	6.88	6.75	6.59	6.41	6.29	6.03	6.13	6.15
Efficiency (dB)	-6.13	-5.91	-5.69	-5.48	-5.18	-5.04	-4.88	-4.82	-4.73
Efficiency (%)	24.36	25.62	26.97	28.28	30.31	31.32	32.51	32.92	33.63
Gain (dBi)	0.86	0.96	1.06	1.11	1.22	1.25	1.15	1.30	1.42

Radiation Pattern

L



R



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.