



## Middy antenna Measurement Report

CEB005L

CEB005R

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Manufacturing name:

Dongguan Dongcheng Tymphany Acoustic Technology Co., Ltd.

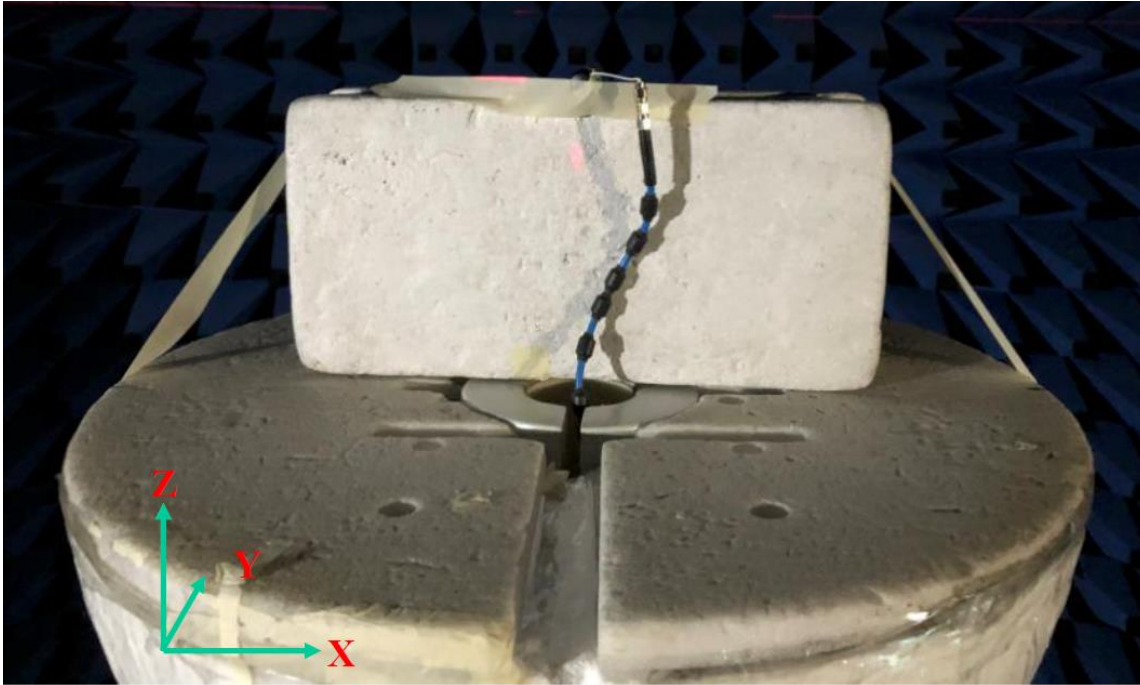
Address:

135 Shijie Keji East Road, Dongguan City, Guangdong Province, China

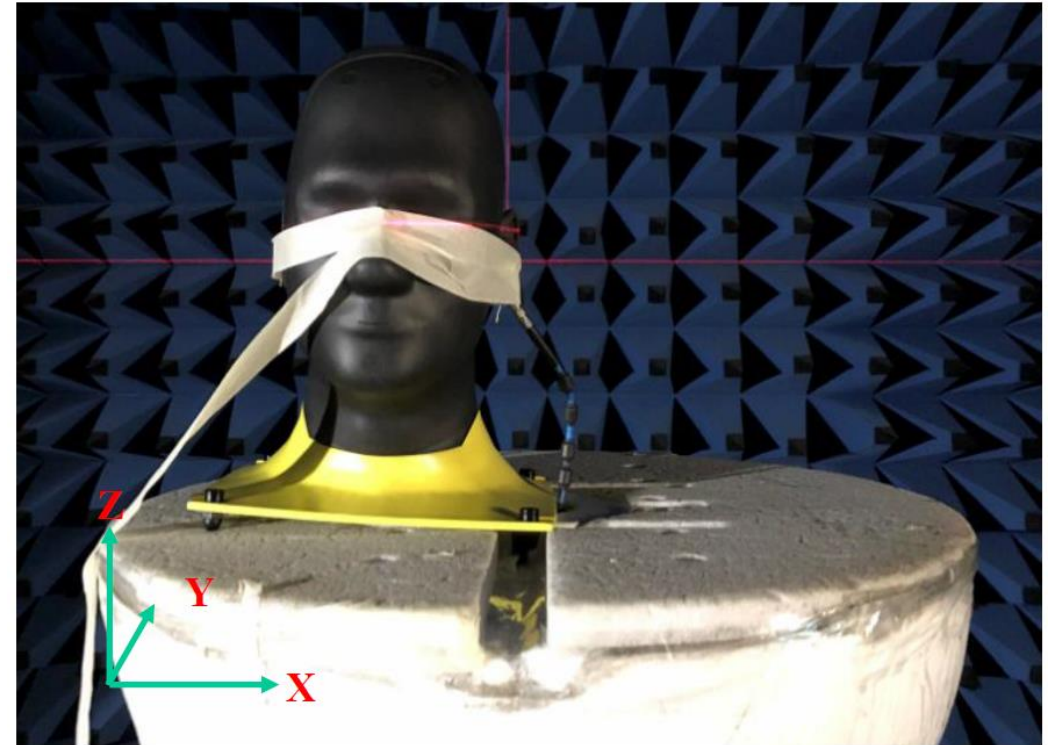


# Measurement Setup

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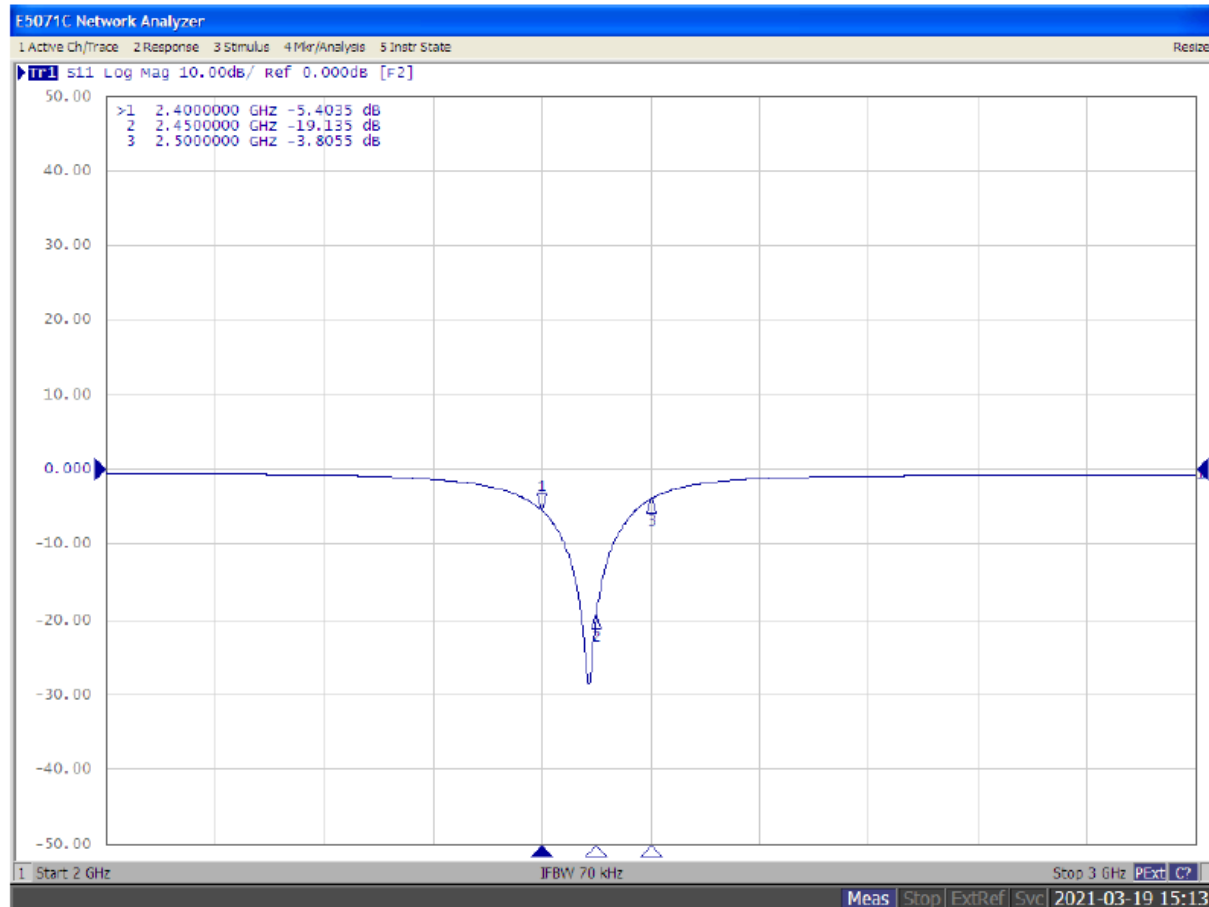


Free Space

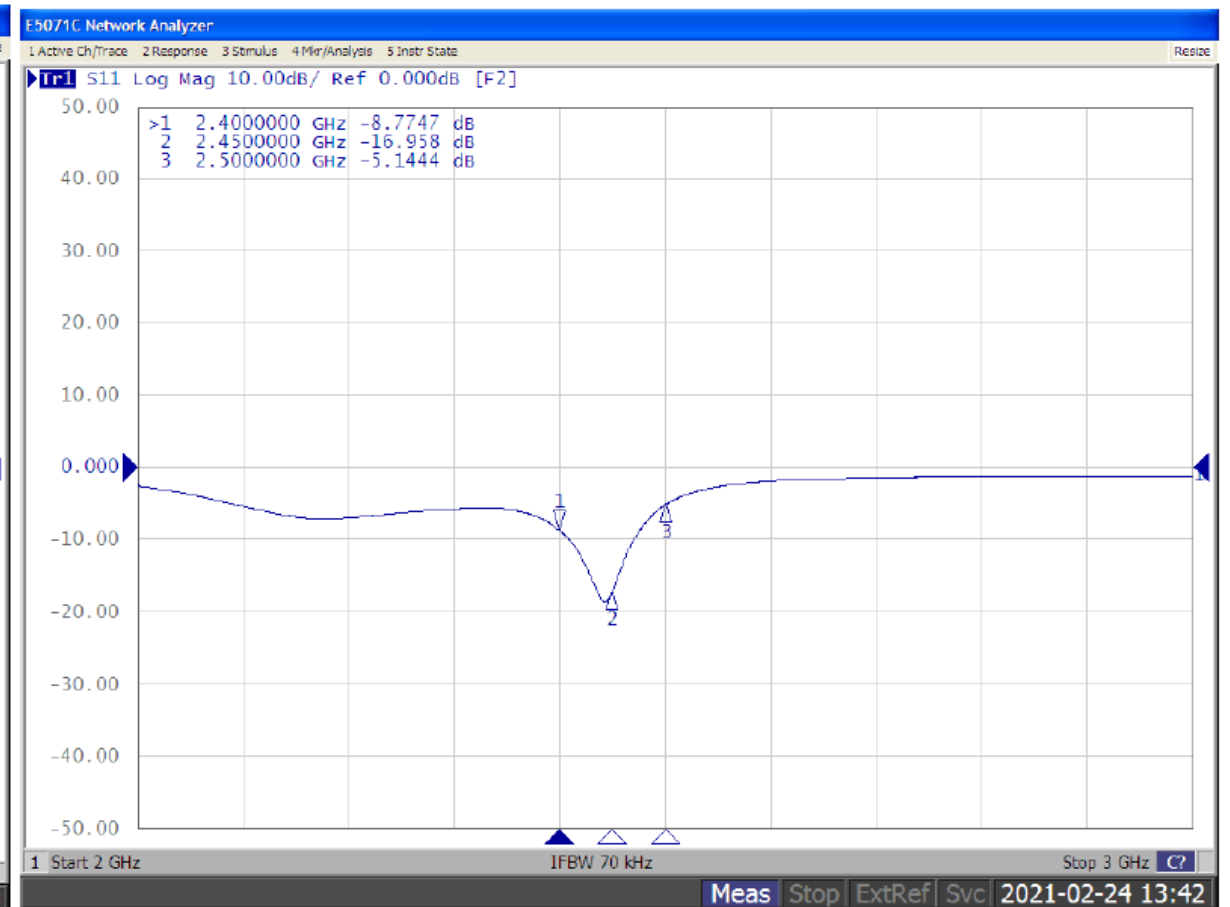


Phantom Head

# Return Loss – Free Space



Left Side



Right Side

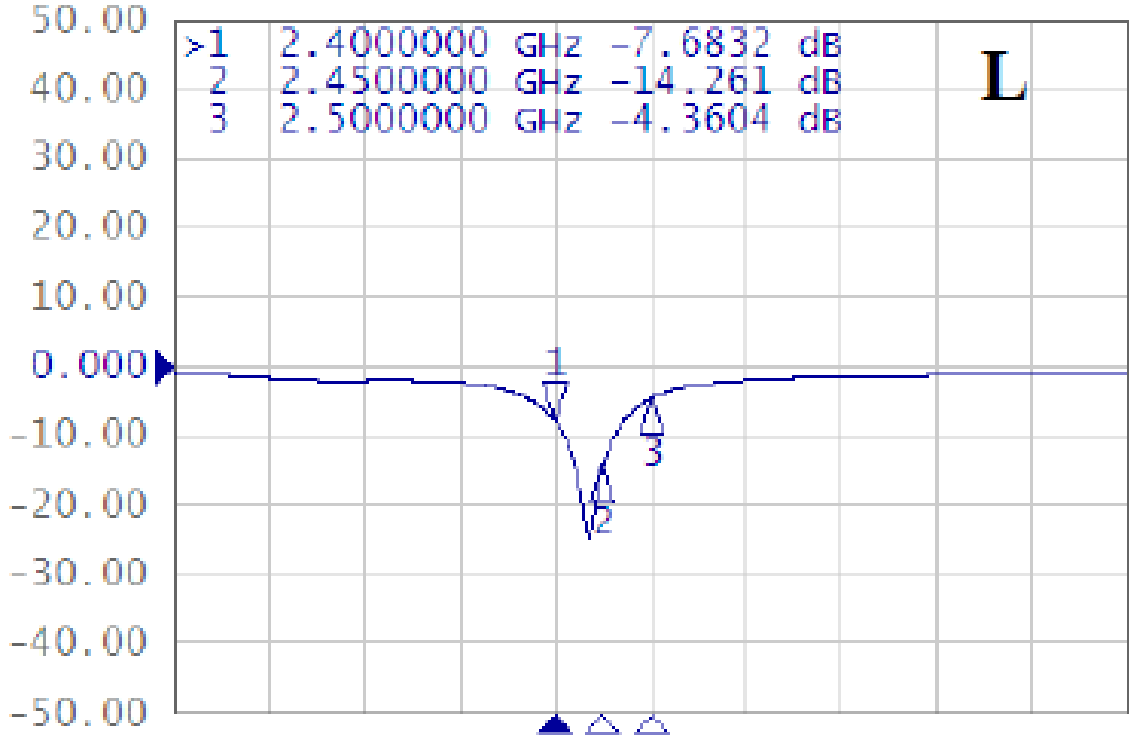
# Return Loss – Phantom Head

E5071C Network Analyzer

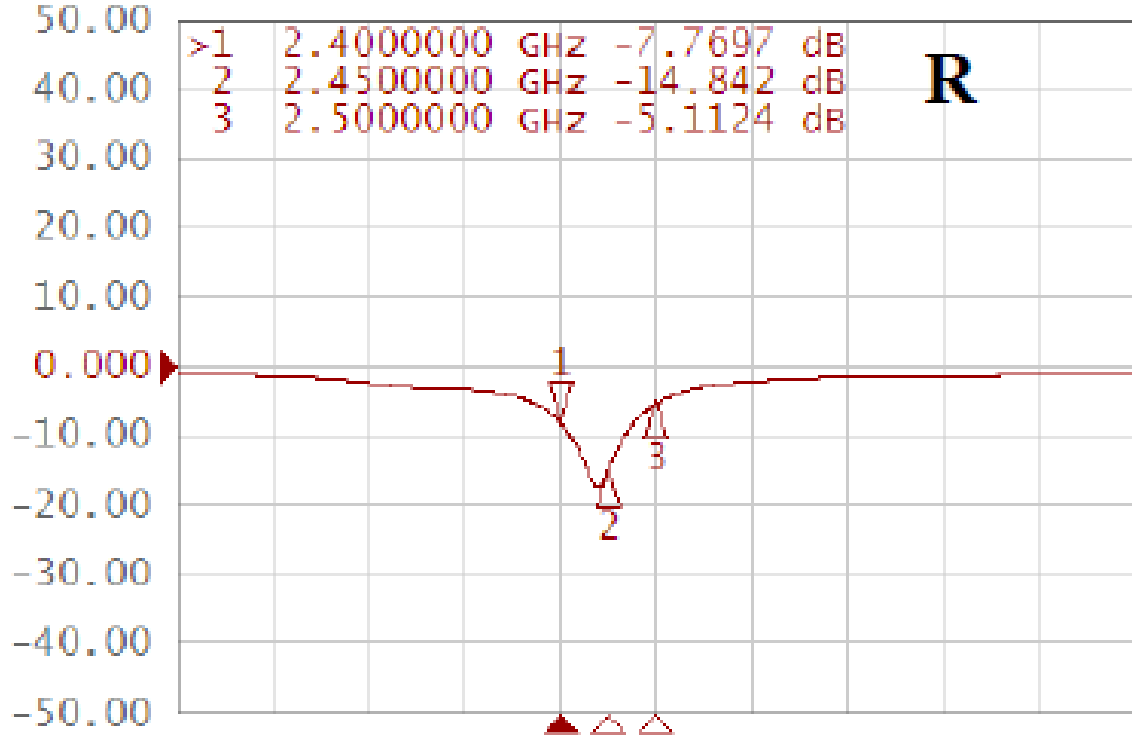
1 Active Ch/Trace 2 Response 3 Stimulus 4 Mkr/Analysis 5 Instr State

Resize

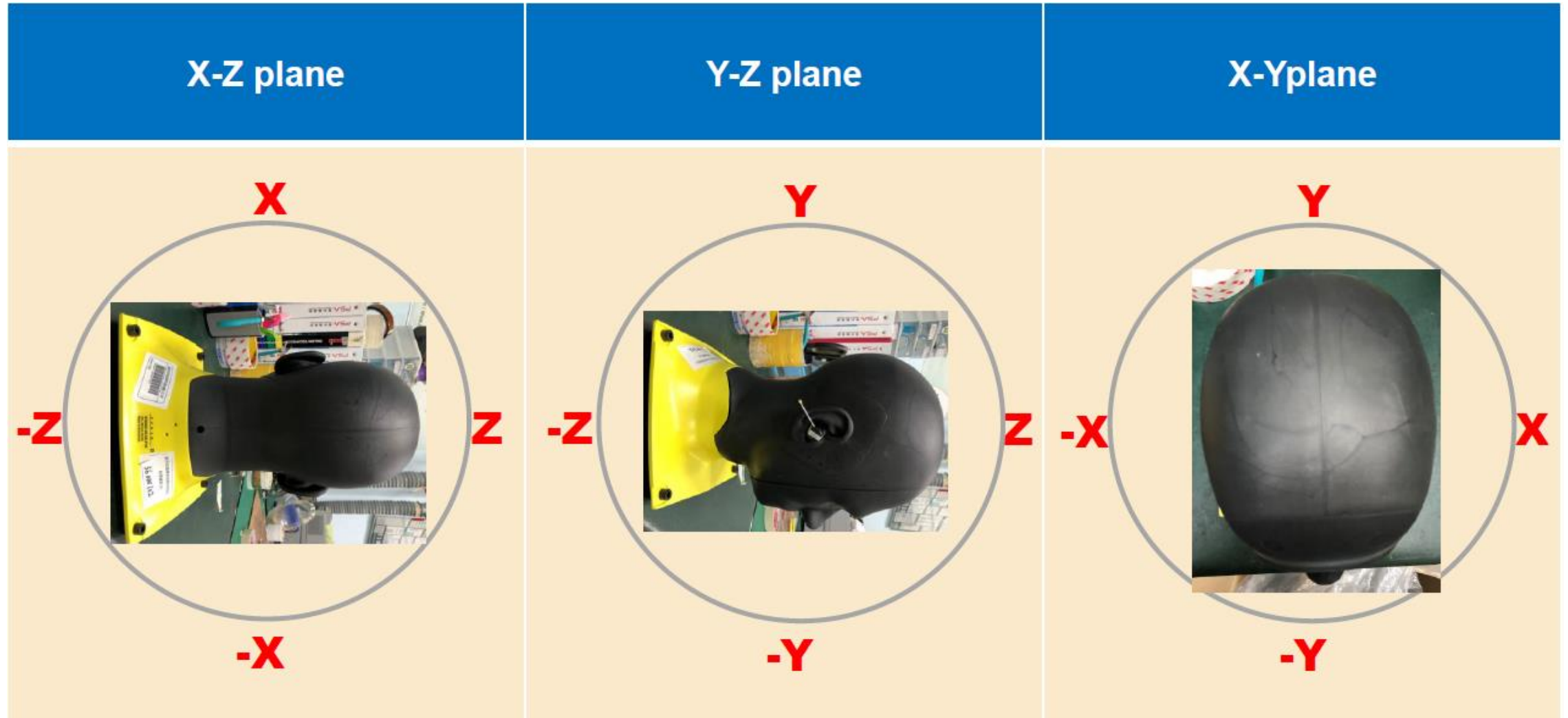
Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F2]



Tr2 S33 Log Mag 10.00dB/ Ref 0.000dB [F2]

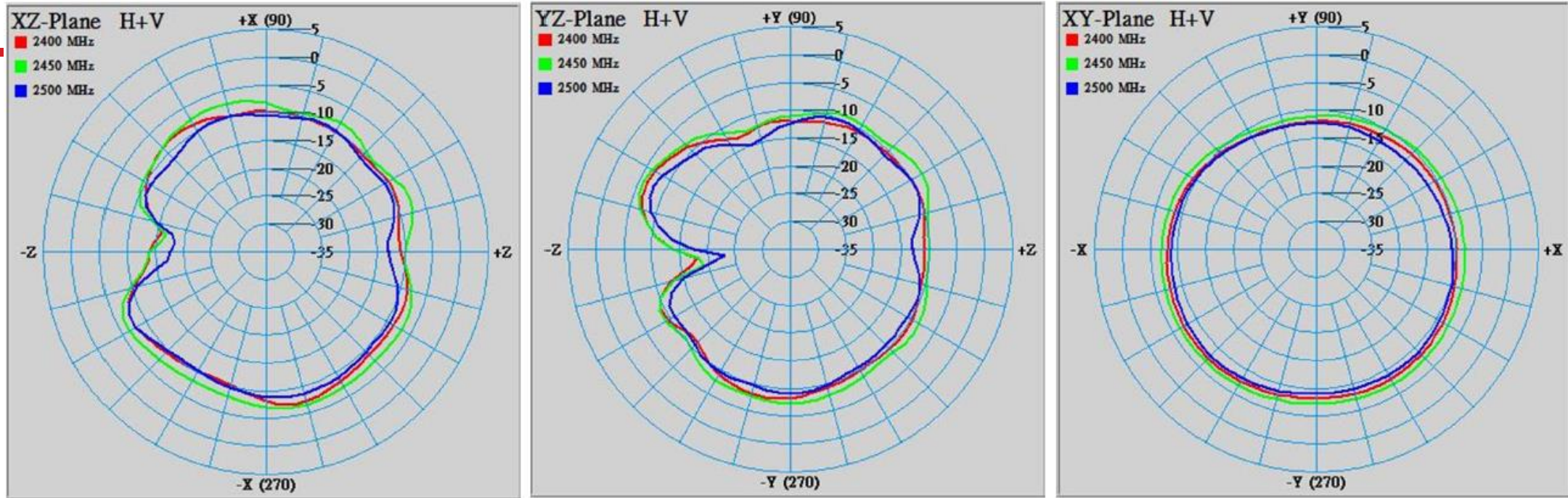


# 3 Views of Antenna



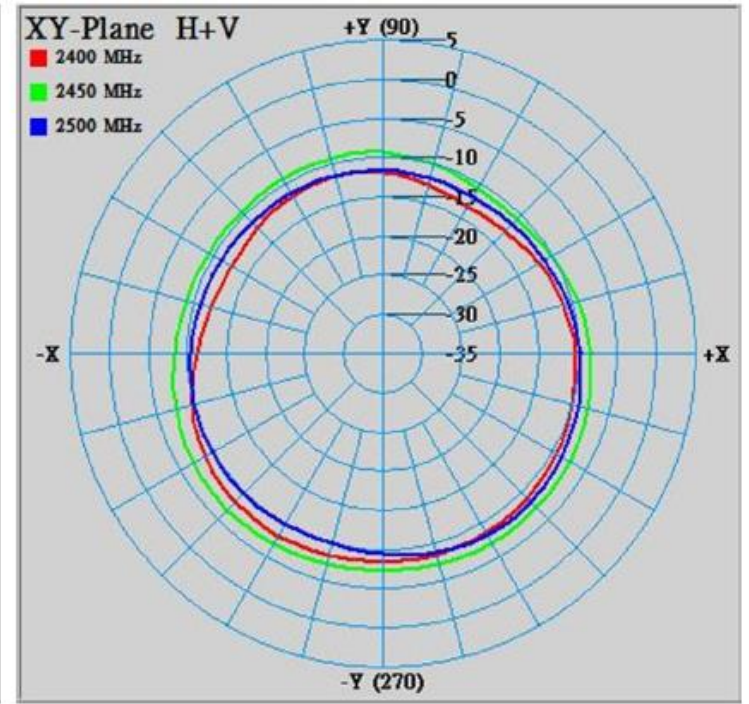
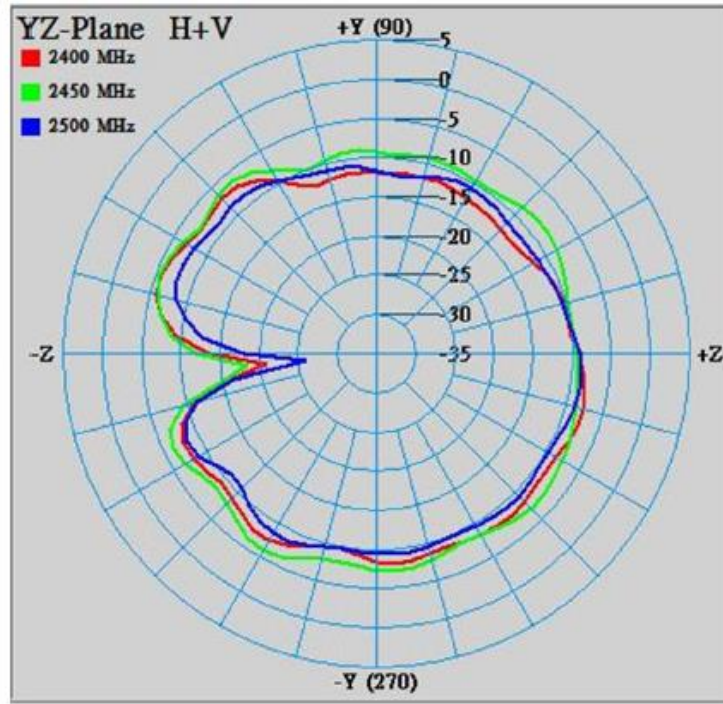
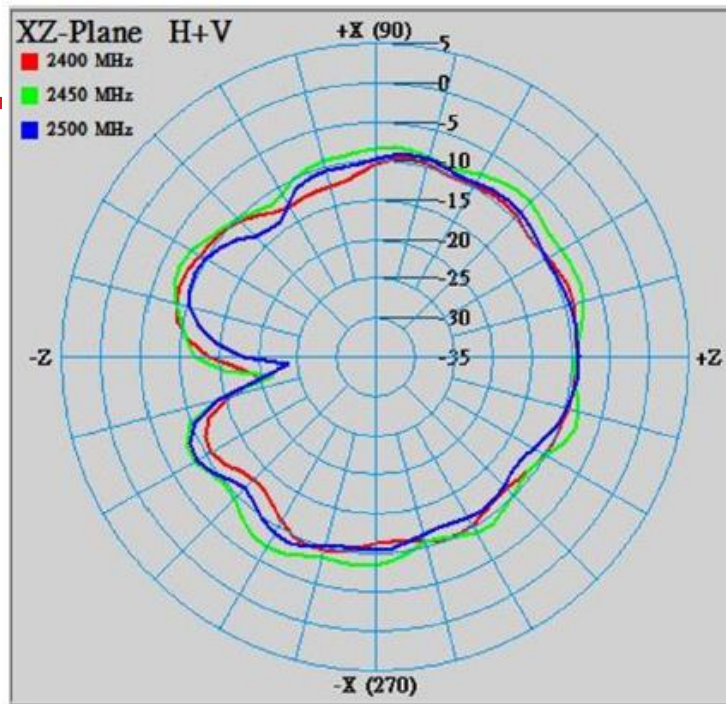


# 2D Radiation – Free space L



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	-7.08	-9.45	-6.51	-9.91	-7.36	-9.14
2450	-6.41	-8.23	-5.75	-8.92	-6.60	-8.11
2500	-7.80	-10.29	-7.92	-10.81	-8.03	-9.84

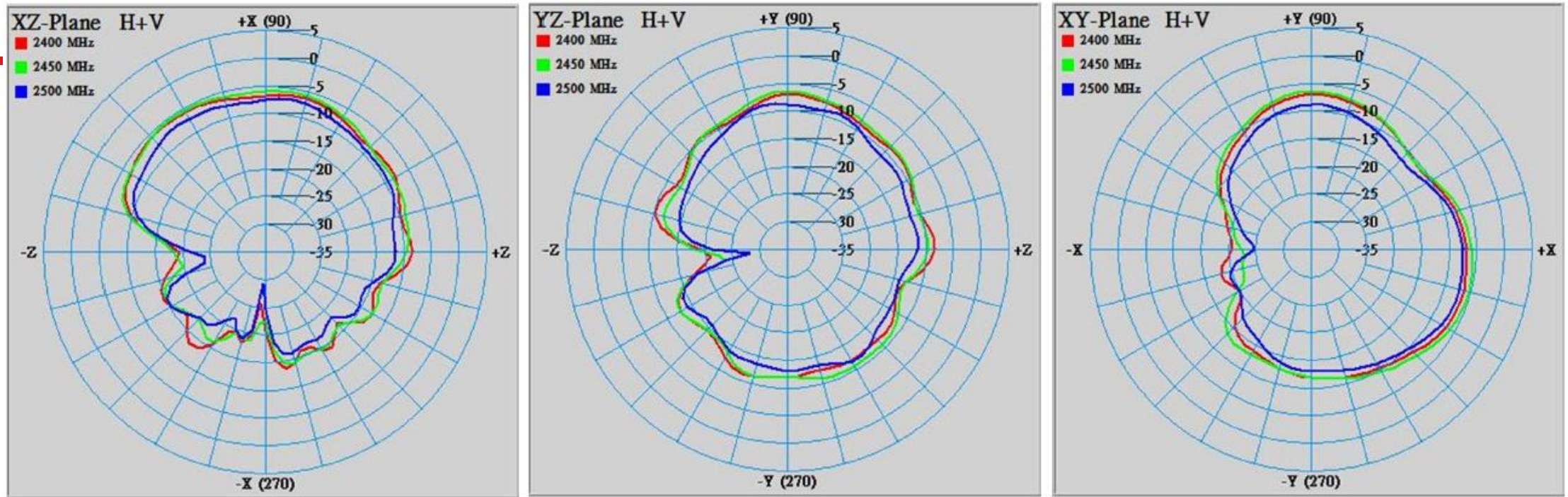
# 2D Radiation – Free space R



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	-8.39	-10.42	-5.70	-9.15	-8.18	-10.22
2450	-7.07	-8.90	-5.59	-8.06	-6.86	-8.29
2500	-8.61	-10.44	-7.81	-9.91	-8.17	-10.15



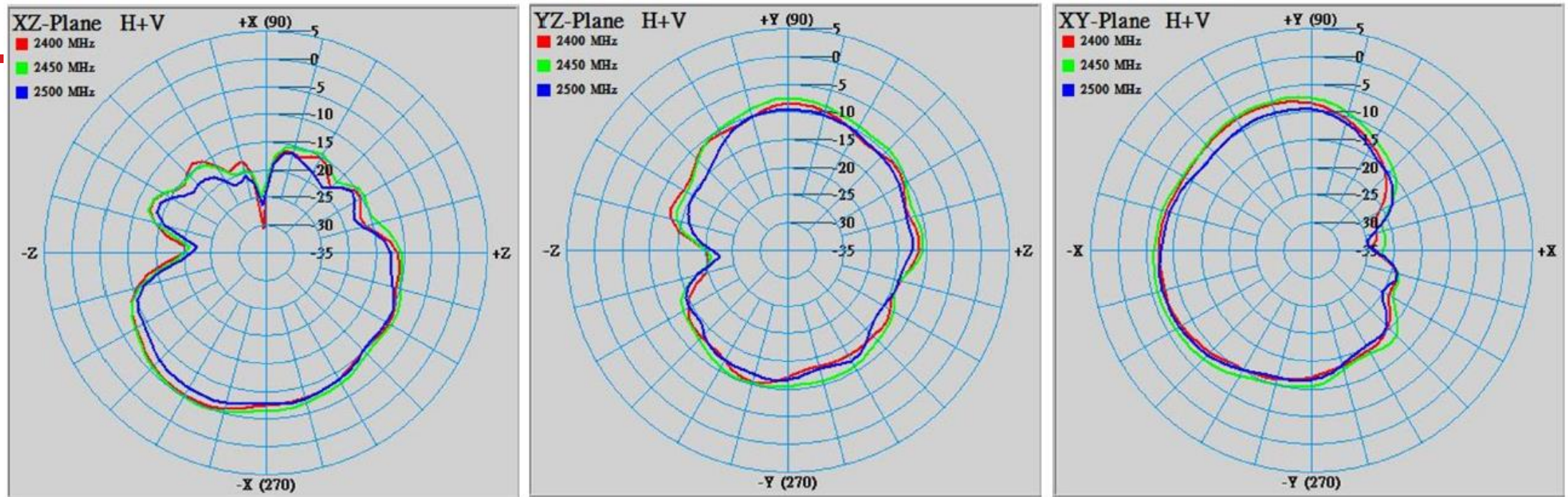
# 2D Radiation – Phantom Head L



	ZX plane		ZY plane		XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	-5.70	-9.67	-6.93	-10.57	-6.38	-10.07
2450	-5.38	-9.47	-6.43	-10.37	-5.48	-9.45
2500	-7.07	-11.09	-8.59	-12.16	-7.20	-11.36



# 2D Radiation – Phantom Head R



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	-5.38	-10.40	-8.49	-11.89	-7.46	-10.48
2450	-4.84	-9.89	-7.55	-10.96	-6.12	-9.53
2500	-6.77	-11.35	-9.52	-12.57	-7.03	-10.99

# Antenna Efficiency and Gain

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	單體測試		上人頭測試	
	L	R	L	R
Maximum Efficiency (%)	<b>15.61</b>	<b>15.32</b>	<b>10.93</b>	<b>10.32</b>
Maximum Gain (dBi)	<b>-4.77</b>	<b>-3.68</b>	<b>-5.23</b>	<b>-4.41</b>



# Antenna size/photo

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