

Shenzhen Guangyuanfa Electronic Co., Ltd.

Antenna Test Report

Customer name		Project Name	
Time	2025/4/7	Report version	A1
Debugging engineer	Zhou Xuefeng	Contact information	15768707879



History

Version	Report Date	Revision Description	Prepared by
A1	2024. 1. 26	Antenna Test Report	Zhou Xuefeng

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Introduction to Project Debugging

Model				
Antenna type	FPC			
Frequency band and antenna material	Main antenna	Frequency band		Material
		2G	/	/
		3G	/	
		LTE	/	
	Other antennas	Diversity	/	/
		WIFI/BT	2400MHz-6000MHz	FPC
Performance requirements	Carry out as per the customer's requirements			



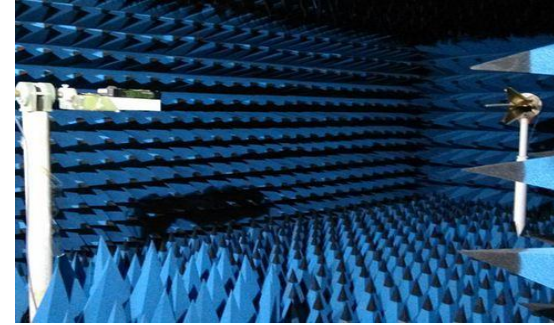
Test equipment Instructions



24-probe microwave anechoic chamber



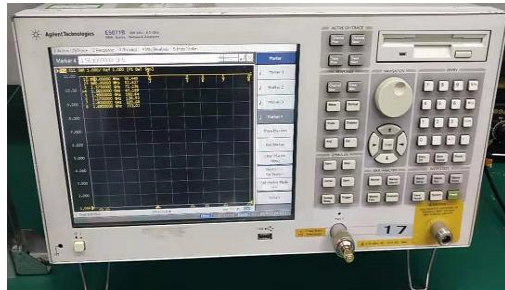
CMW500



7*4*3M ETS microwave anechoic chamber



Agilent 8960



Agilent E5071B



High and low temperature test chamber



MT8820C

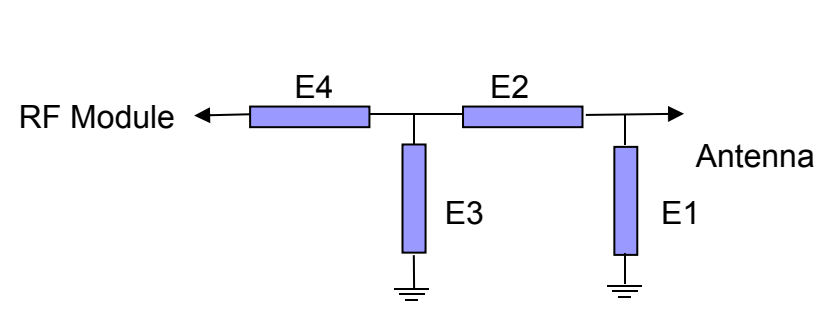


HP8753ES

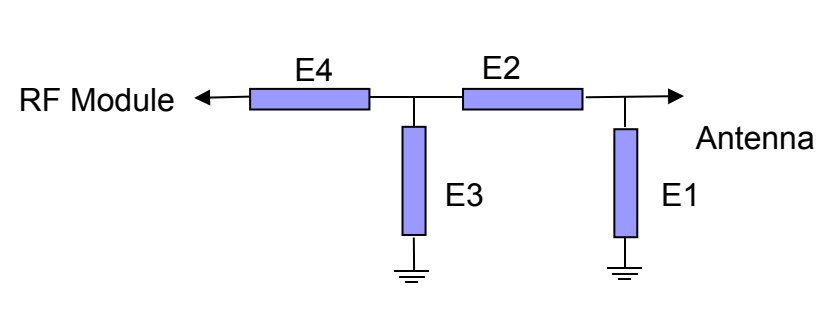
Test system	Test environment	Active testing	Passive testing
ETS Darkroom 24-probe OTA anechoic chamber	Temperature: $22^{\circ}\text{C} \pm 3^{\circ}\text{C}$ Humidity: $50\% \pm 15\%$	Support 2G/3G/4G Support NB-IoT/CAT-M/BT/ WIFI	700MHz—6G

Description of the matching circuit

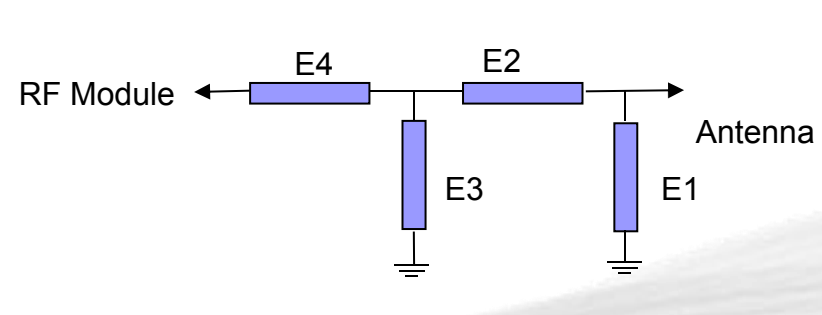
The antenna matching has not been changed



	Element	Value
Main antenna	E1 (0402)	N/A
	E2 (0402)	0 Ω
	E3 (0402)	N/A
	E4 (0402)	0 Ω



	Element	Value
GWB antenna	E1 (0402)	N/A
	E2 (0402)	0 Ω
	E3 (0402)	N/A
	E4 (0402)	0 Ω



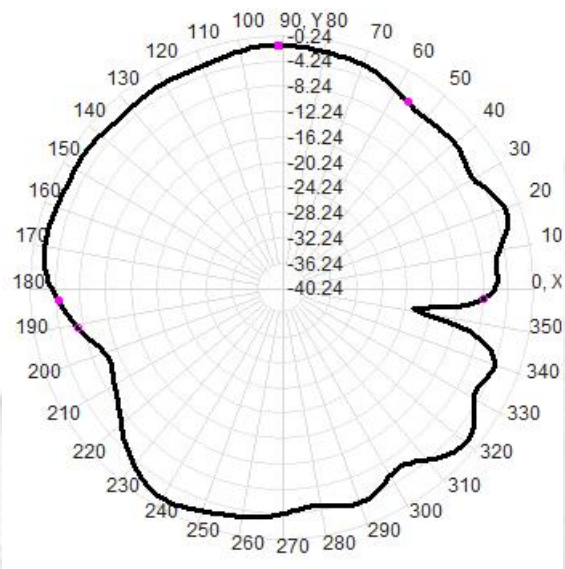
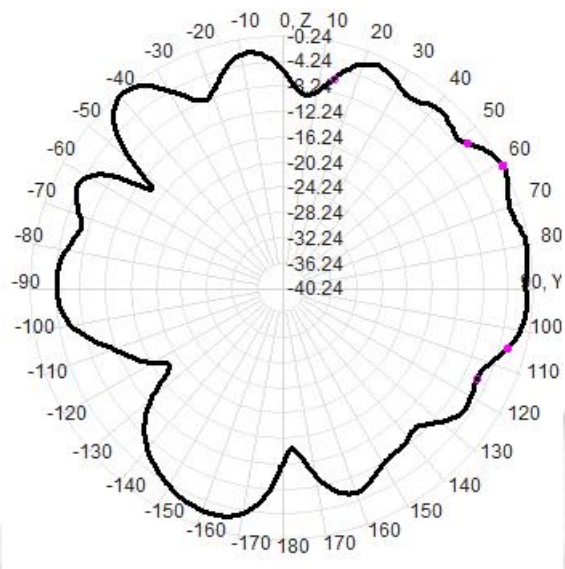
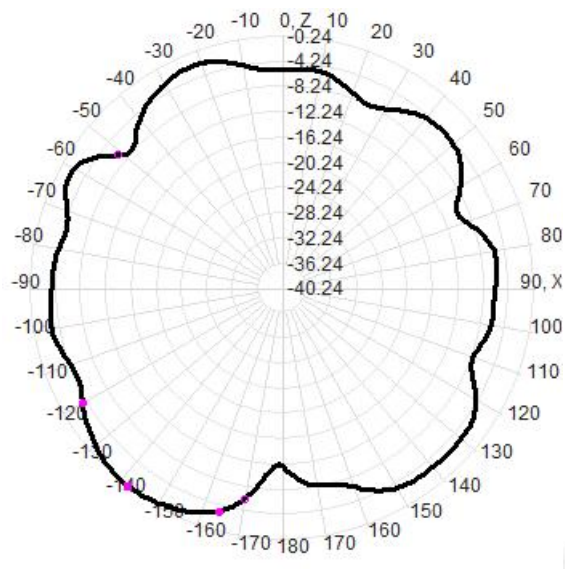
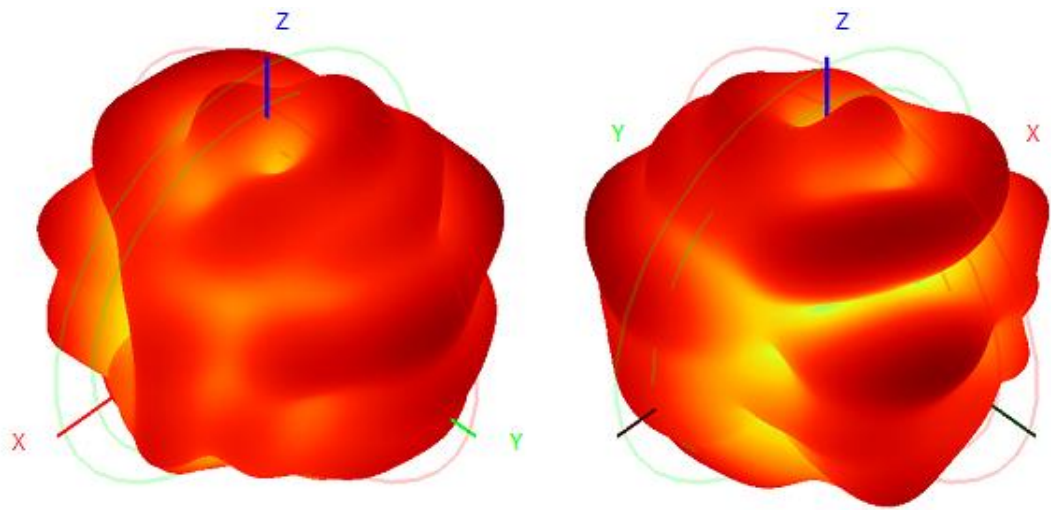
	Element	Value
DIV antenna	E1 (0402)	N/A
	E2 (0402)	0 Ω
	E3 (0402)	N/A
	E4 (0402)	0 Ω

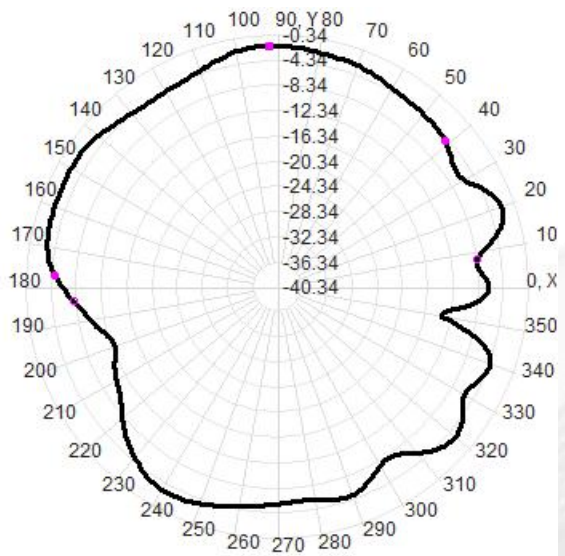
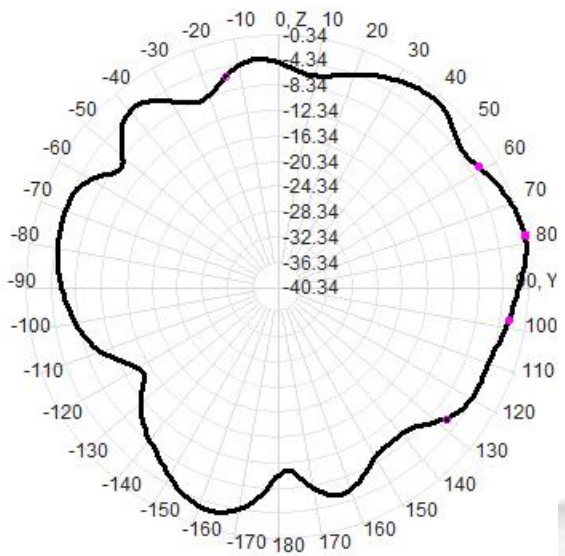
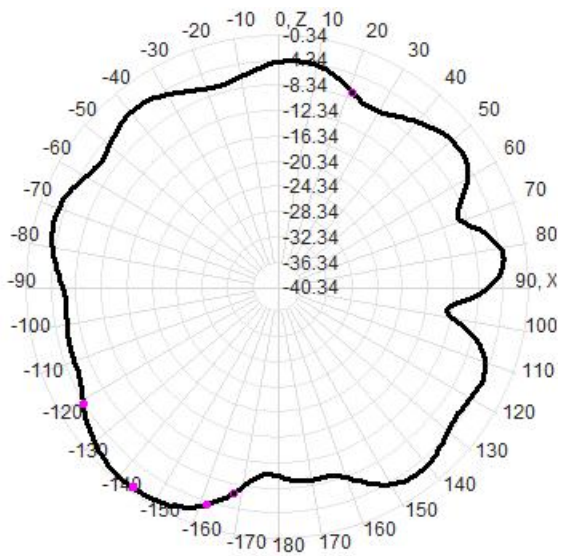
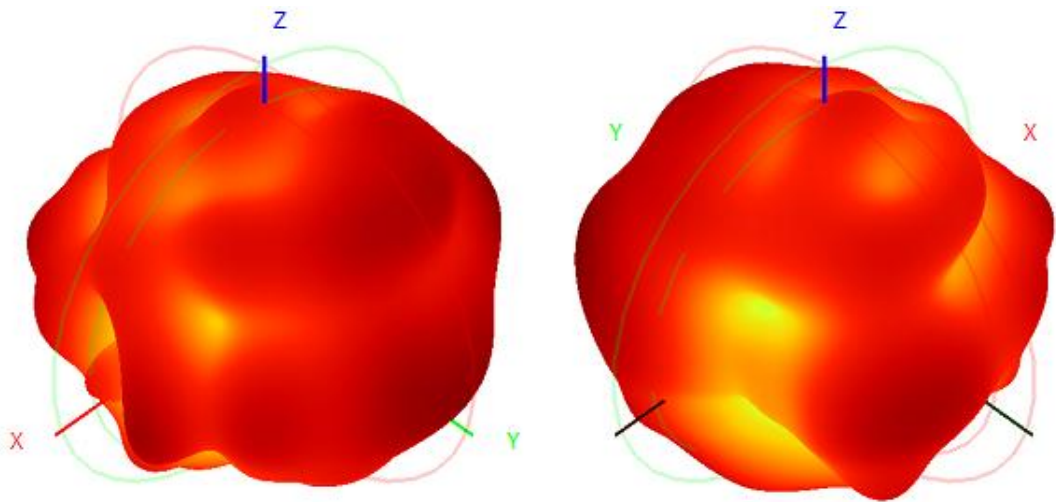
Machine No. 1

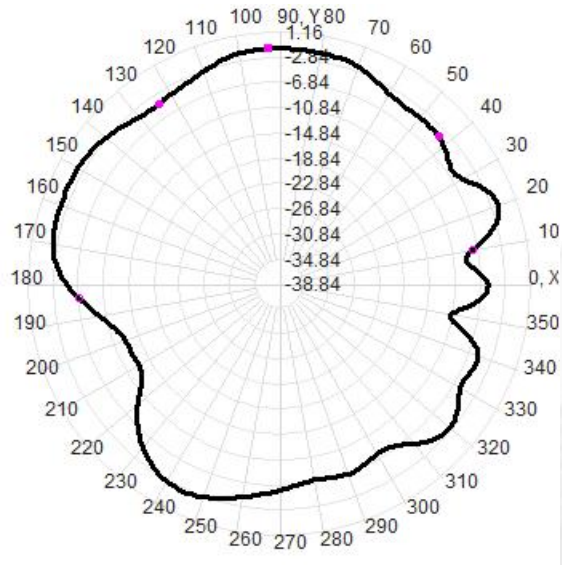
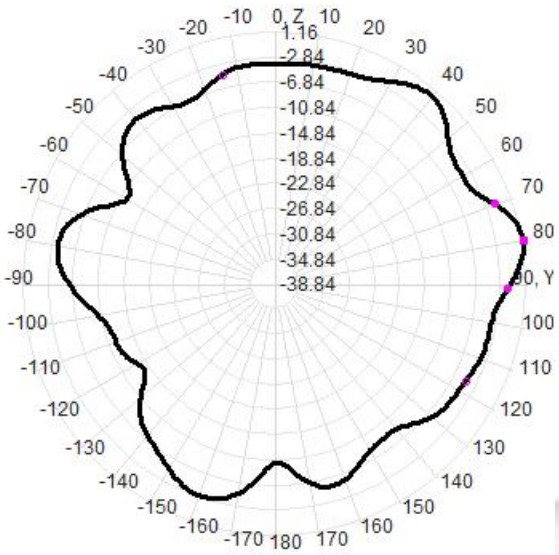
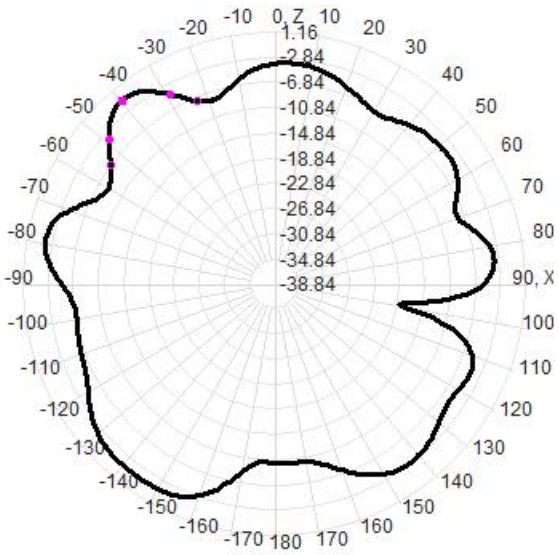
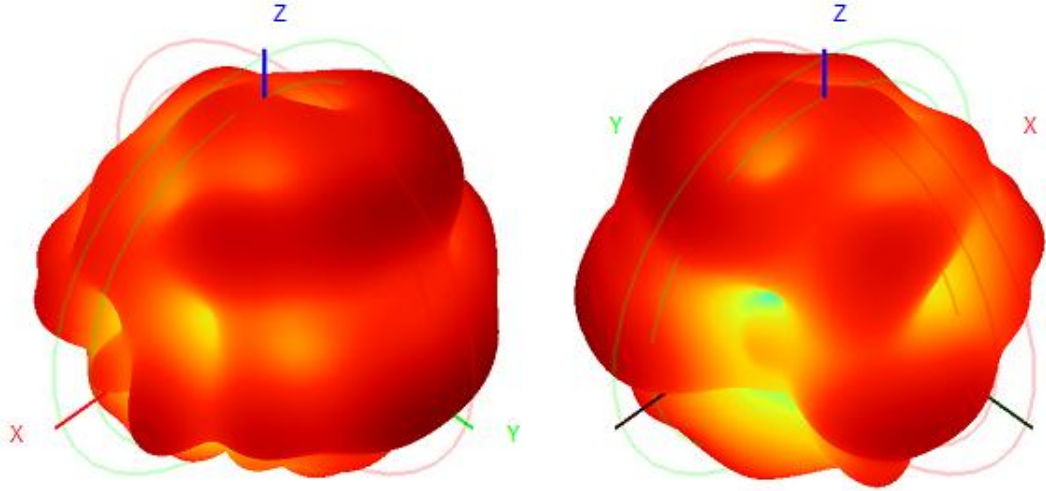
Frequency ID	1	2	3	4	5	6	7	8	9	10	11
Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	2.78	2.57	2.41	3.13	3.13	3.04	2.78	2.64	2.65	2.66	2.63
Efficiency (%)	41.26	40.08	39.42	44.30	43.70	42.21	40.41	40.11	42.21	41.81	42.86

Machine No. 2

Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Gain (dBi)	2.45	2.15	2.06	2.14	2.26	2.78	3.08	3.21	3.13	3.01	3.45
Efficiency (%)	40.00	41.32	41.08	40.53	40.39	41.18	41.37	41.75	41.45	40.79	40.95







5.8G active OTA test data

Machine No. 1

BAND	802.11a		
CH	36	60	161
TRP (dBm)	13.49	13.58	13.06
TIS (dBm)	-70.91	-70.86	-71.97

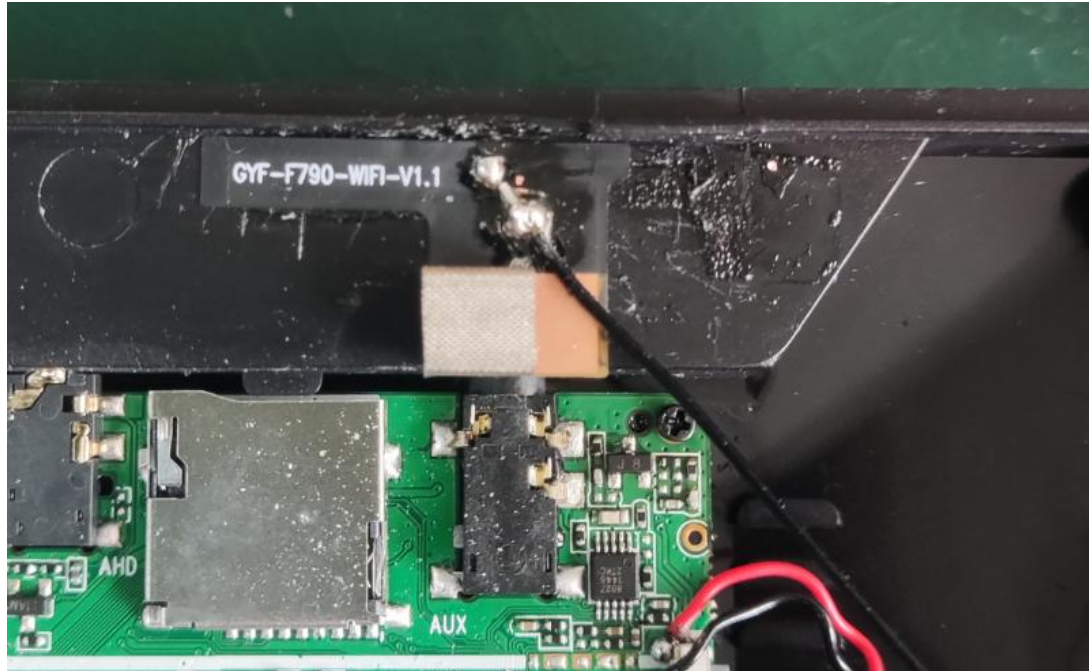
Machine No. 2

BAND	802.11a		
CH	36	60	161
TRP (dBm)	13.18	13.35	12.96
TIS (dBm)	-70.85	-70.28	-71.65



Antenna position

Machine No. 1



Machine No. 2





Thanks.



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