

深圳市广源发电子有限公司

Shenzhen Guangyuanfa Electronic Co., Ltd.

Antenna Test Report

Customer	LINGDU	Item	M330
Time	2023/7/18	Report version	AO
Commissioning engineer	Xuefeng Zhou	Contact	157 6870 7879



Shenzhen Guangyuanfa Electronic Co., Ltd.

History

Version	Report Date	Revision Description	Prepared by
A0	2023. 7. 8	Antenna Test Report	Xuefeng Zhou
A1			
A2			

Catalog

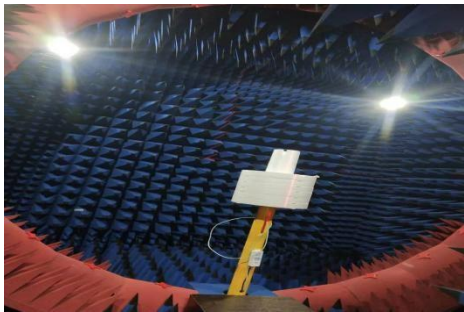
- 1: Introduction to project commissioning**
- 2: Test Equipment Description**
- 3: Matching Circuit Description**
- 4: Antenna OTA data**
- 5: Antenna Postion**
- 6: More**

Introduction to project commissioning

Model	M330			
Antenna type	FPC			
Band and Antenna Material	main antenna	Band		Material
		2G	/	/
		3G	/	
		LTE	/	
	others	separation	/	/
		WIFI	2.4G	FPC
requirements	Execute according to customer requirements			



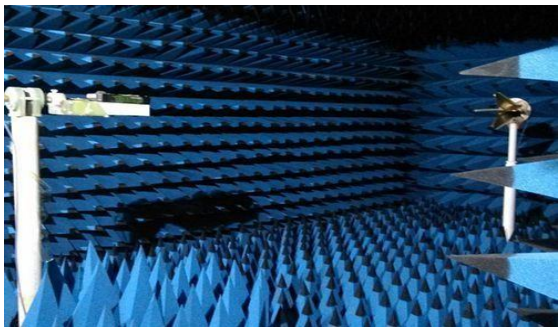
Test Equipment Description



24 probe microwave anechoic chamber



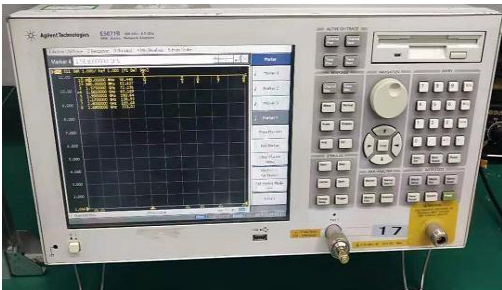
CMW500



7*4*3M ETS microwave anechoic chamber



Agilent 8960



Agilent E5071B



High and low temperature test box



MT8820C

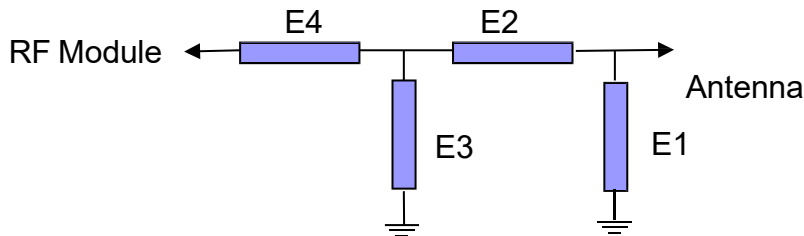


HP8753ES

test system	test environment	active test	inactive test
24 probe microwave anechoic chamber	Temperature: 22°C±3°C Humidity: 50%±15%	Support 2G/3G/4G Support NB-IoT/CAT-M/BT/WIFI	700MHz——6G

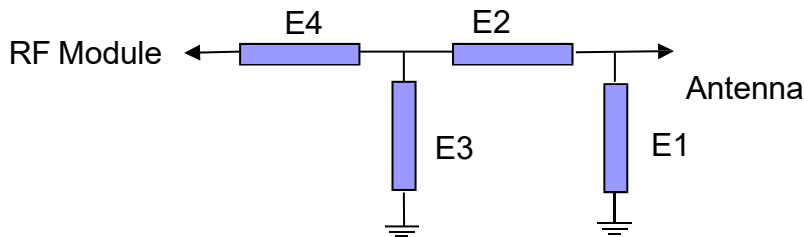
Matching Circuit Description

Antenna matching no change



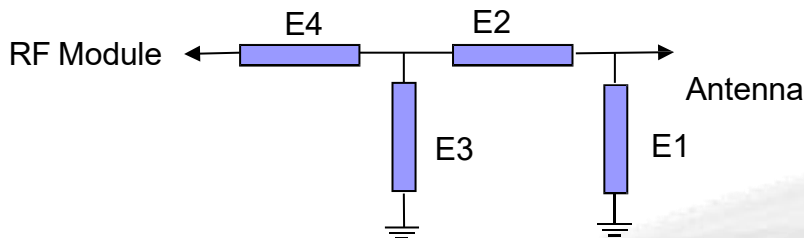
main antenna

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



GWB antenna

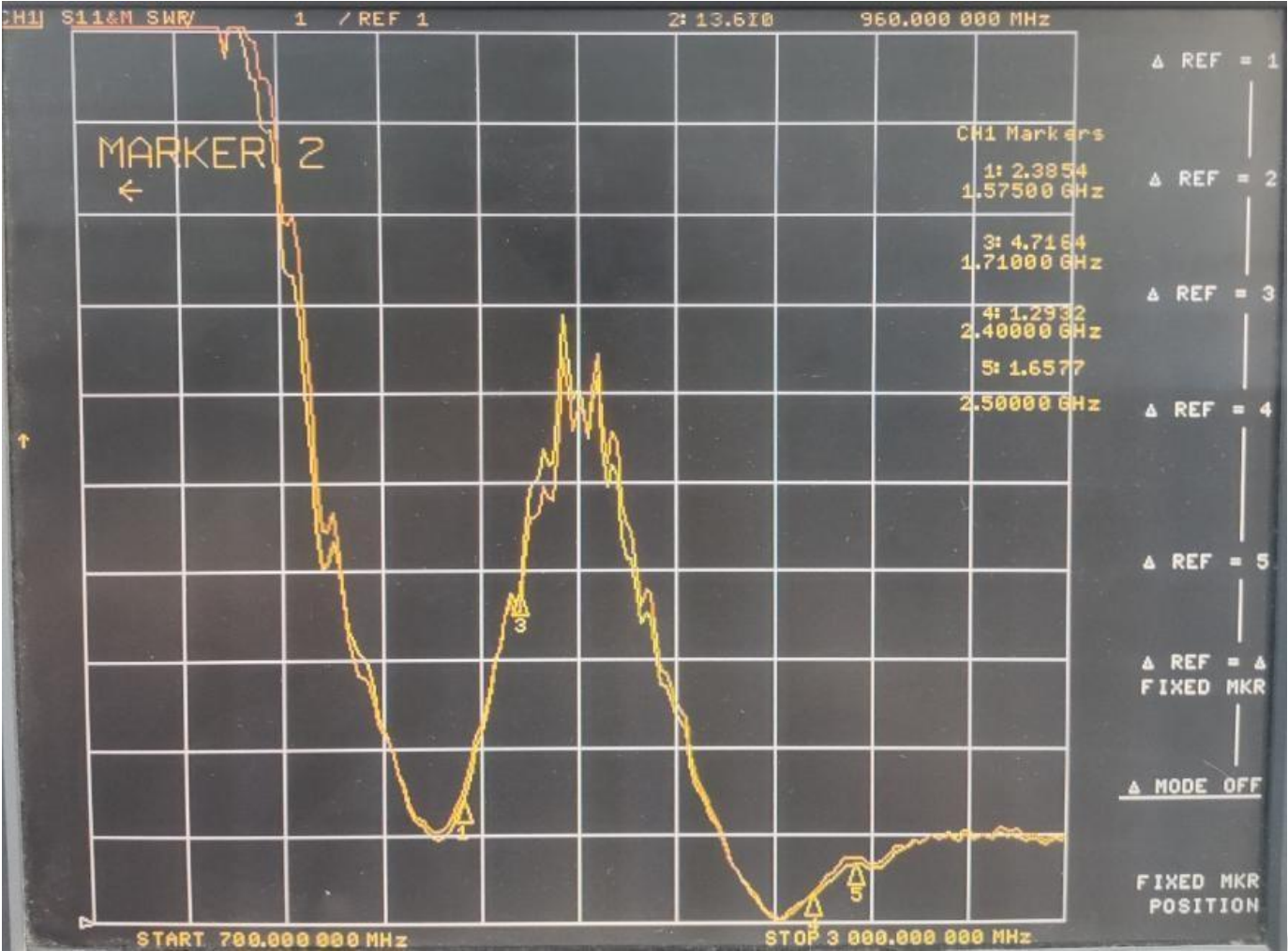
	Element	Value
	E1 (0402)	N/A
	E2 (0402)	0 Ω
	E3 (0402)	N/A
	E4 (0402)	0 Ω



DIV antenna

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

Antenna Standing Wave

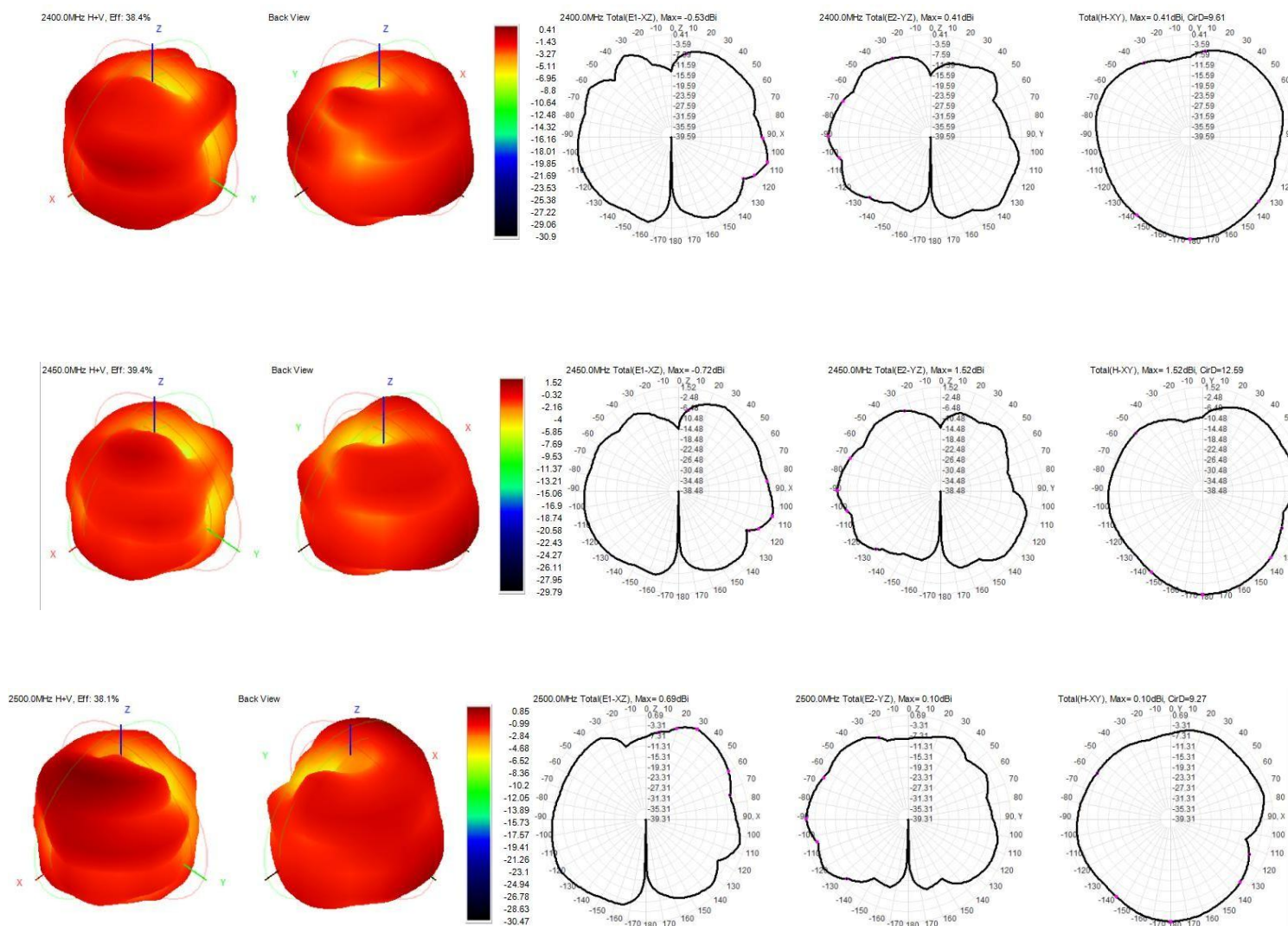


Antenna Passive Data

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)	0.41	0.56	0.84	1.23	1.39	1.52	1.42	1.33	0.89	0.67	0.85
Efficiency (%)	38.42	38.38	38.39	39.32	38.57	39.39	39.06	40.07	38.88	39.70	38.14

BAND	B			G			N		
CH	1	6	11	1	6	11	1	6	11
TRP (dBm)	12.19	12.42	13.01	12.03	12.01	12.06	11.49	12.25	12.28
TIS (dBm)			-81.28			-69.88			-69.43

Antenna 2D/3D Radiation Pattern



Antenna measurement

M330 Antenna Measurement (2.4G)

test phone: oppo find x3

Video Storage: 178M

download time: 54s

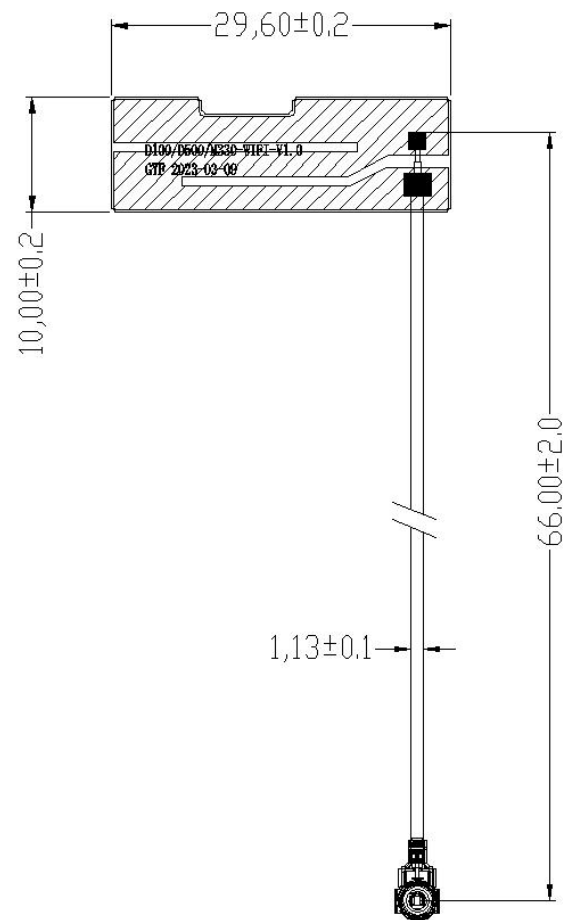
average speed: 3.2M/s

Office test: 10M no lag, no delay

Antenna FPC Size: 29.60*10.00*0.1mm

Coaxial cable: Wire diameter=1.13

Black, L=66mm the First generation RF IPEX



Antenna Position

WIFI Antenna



More

1. Please confirm whether the matching and environmental treatment methods in the report are acceptable, which will directly affect the performance of the antenna. If you have different opinions, please contact our company in time.
2. If your company replaces materials, components, updates software, changes environmental treatment, etc., please provide the latest state machine to our company to verify the performance in time.
3. If your driver needs to send a third party to verify the performance, it is best to provide the test machine to our company before sending it for testing; (because the consistency of the motherboard, environmental treatment, antenna assembly, etc. will affect the deviation of the antenna performance).

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Thanks.