

深圳市凌度汽车电子有限公司

Shenzhen Lingdu Automotive Electronics Co., Ltd

Antenna specification

Project Title		Antenna Version	V03
Data	2024/6/2	Report Version	A1
Engineer		Telephone	

History

Version	Report Date	Revision Description	Prepared by
A1	2024. 6. 2	Antenna specification	

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Introduction to project debugging

Project Title				
Antenna type	onboard			
Frequency band and antenna material	Antenna	Frequency		material
		BLE	2. 4G-2. 48G	FR4
demand	Execute according to project requirements			

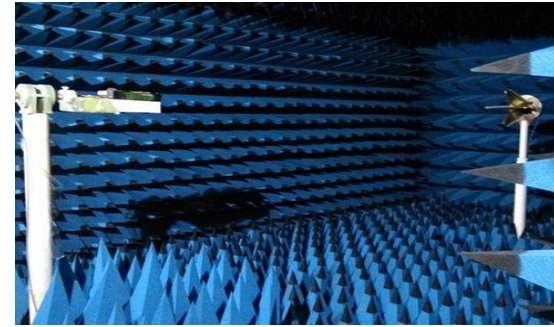
Test equipment description



24probe anechoic chamber



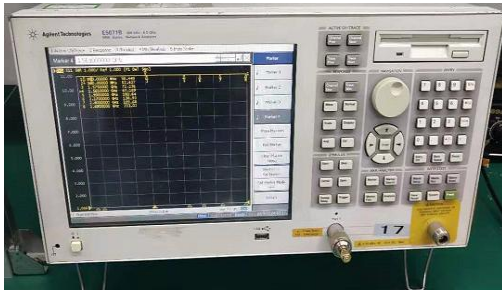
CMW500



7*4*3M ETS anechoic chamber



Agilent 8960



Agilent E5071B



high-low temperature chamber

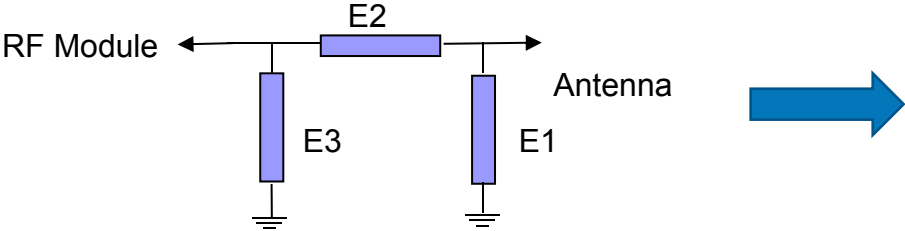


MT8820C

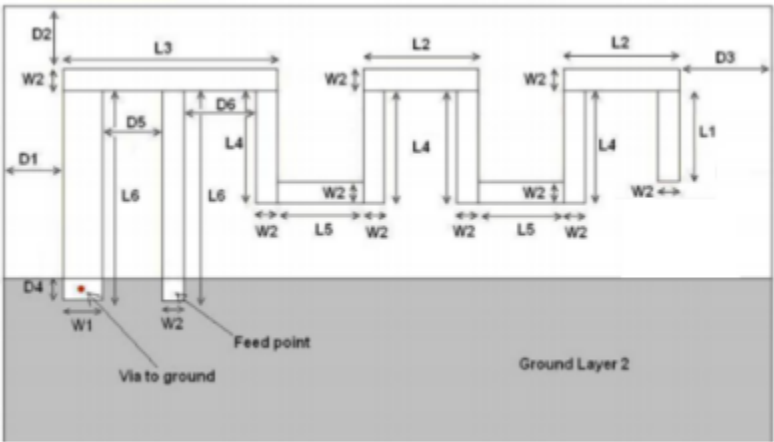


HP8753ES

Matching circuit specification

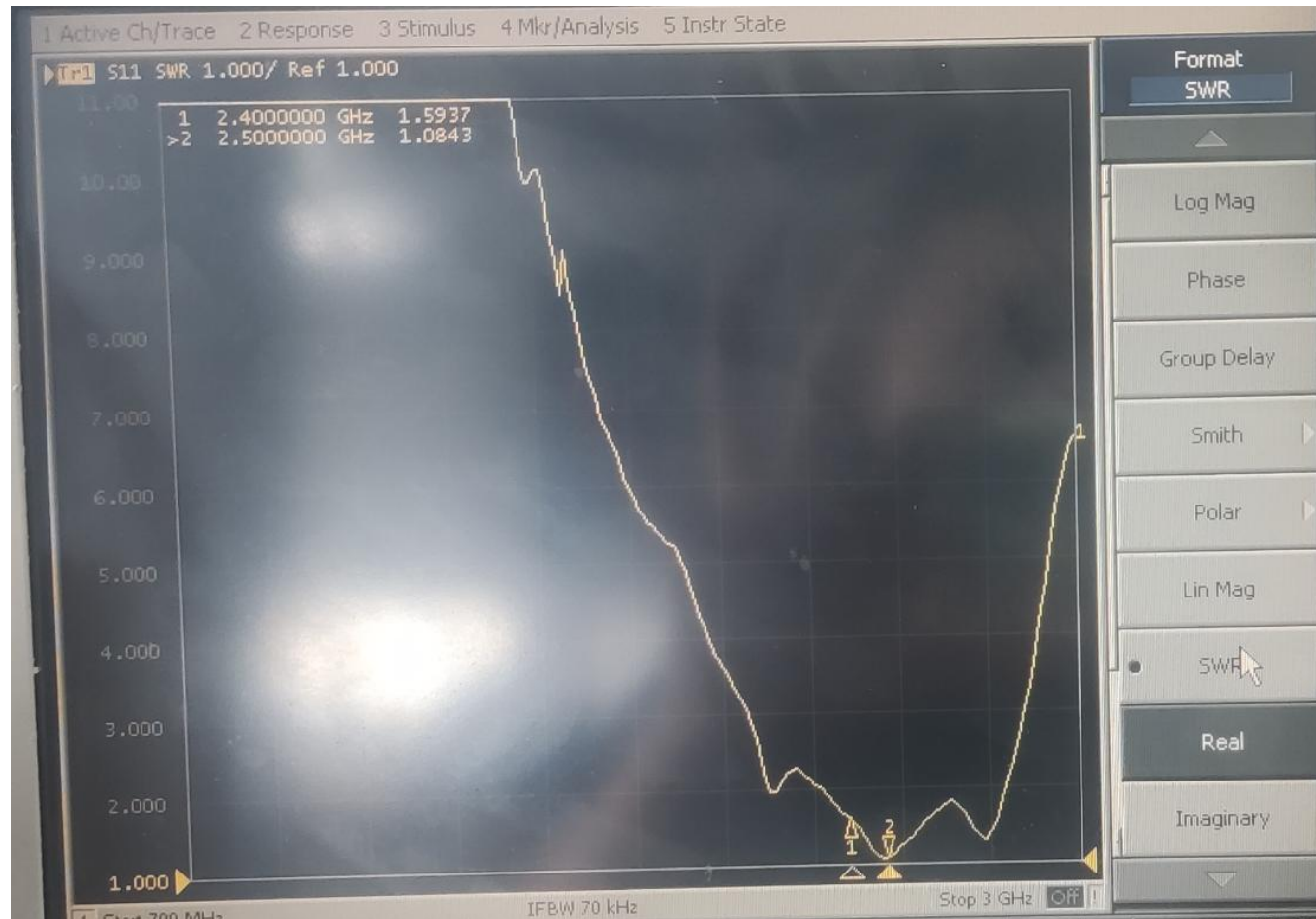


BLE	Element	Value
	E1 (0402)	0.5PF
	E2 (0402)	0R
	E3 (0402)	N/A



L1	2.39mm
L2	2.70mm
L3	5.00mm
L4	2.64mm
L5	2.00mm
L6	4.90mm
W1	0.90mm
W2	0.50mm
D1	0.50mm
D2	0.30mm
D3	0.30mm
D4	0.50mm
D5	1.40mm
D6	1.70mm

Antenna standing wave

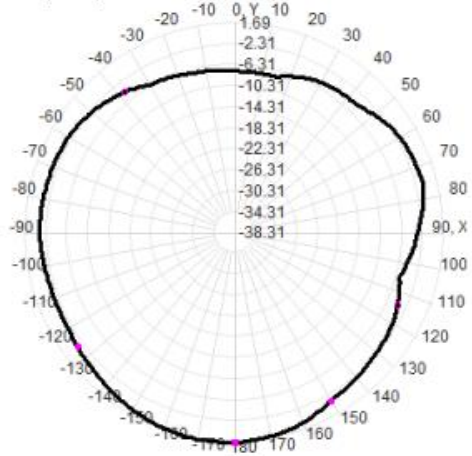


Antenna test data

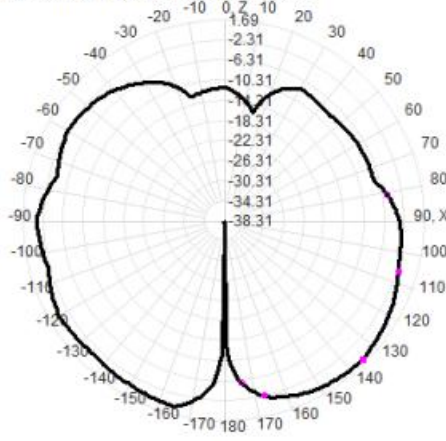
Frequency (MHz)	Efficiency (dBi)	Gain (dBi)	Efficiency (%)
2400	-2.81	1.10	52.31
2410	-2.75	1.21	51.14
2420	-2.65	1.29	52.43
2430	-2.55	1.25	52.15
2440	-2.54	1.22	52.57
2450	-2.46	1.51	53.15
2460	-2.49	1.64	53.38
2470	-2.45	1.69	53.93
2480	-2.58	1.43	52.21
2490	-2.60	1.28	52.18
2500	-2.69	1.46	52.45

2D/3D图

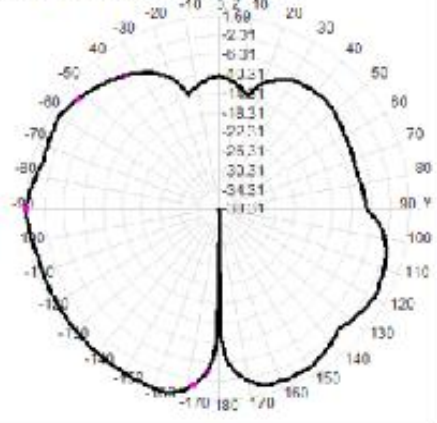
Total(H-XY), Max= 1.69dBi, CirD=9.36



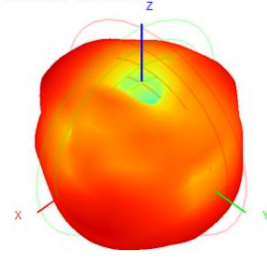
2470.0MHz Total(E1-XZ), Max= 0.62dBi



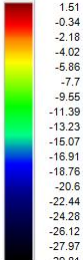
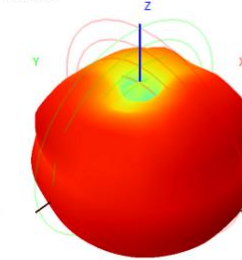
2470.0MHz Total(E2-YZ), Max= 1.69dBi



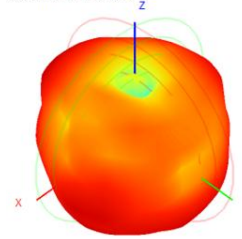
2460.0MHz H+V, Eff: 56.8%



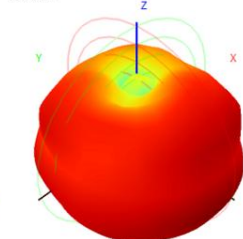
Back View



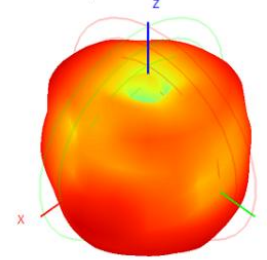
2460.0MHz H+V, Eff: 56.4%



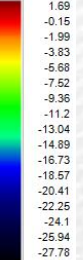
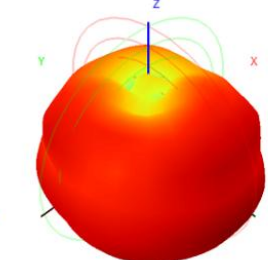
Back View

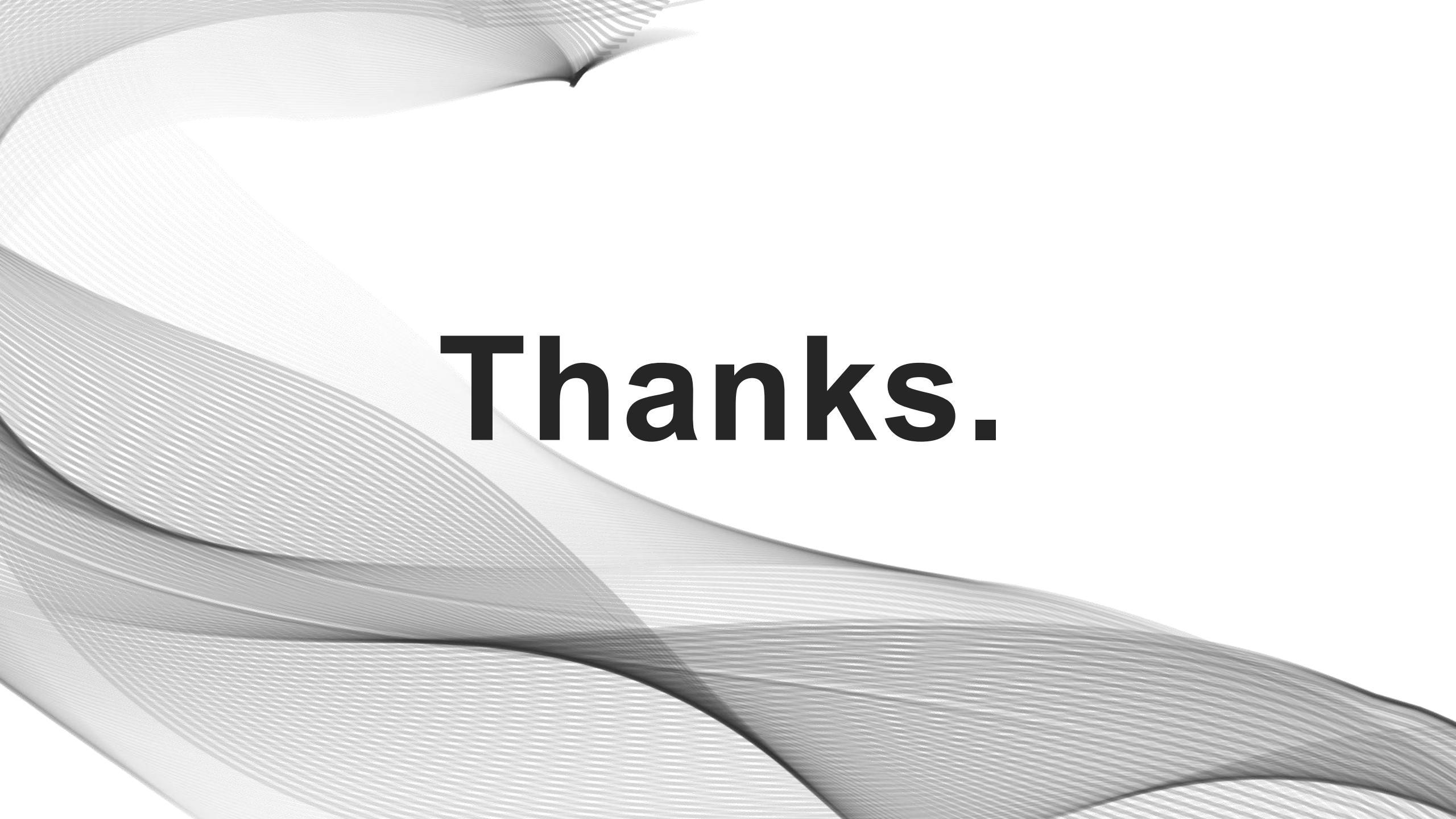


2470.0MHz H+V, Eff: 56.9%



Back View





Thanks.