

SPEED TECHNOLOGY

SPEED Communication Technology Limited

Approval sheet of ZHONGQING Antenna

Customer/Project	MARS	Frequency Band	WIFI		
SCT P/N		Version	T16		
Date	2022-10-9				
Material Code	F-0G-C6-0002-000-00				
SPEED					
Checked by	RF	ERICGUO	Design by	RF	刘健烨
	ME	ERICGUO		ME	邓润溪
	QC	TAOZHUTAO	Remark		
Customer					
Date					
Confirmed by	RF				
	ME				
Remark					


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Description of the MARS antenna information						
1	Antenna shape		FPC+WIRE+IPAX 1			
2	Antenna type		WIFI			
3	Material		MARS (NBA3001)			
4	Frequency	HZ	:WiFi2.4G 2400M-2500M			
5	Peak Gain	DBI	≥ 4			
6	Efficiency	%	≥ 35			
7	Impedance	Ω	:50 Ω			
8	Wire length	MM	47			
9	Color		Black			
10	Edition		T16			
11	Other attributes			NO		
12	Manufacturer		SPEED			
13	Manufacturer model					

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2. Measurement Data

2.1 WIFI Antenna

VSWR measurements (S_{11}) were performed using Agilent 5071C Network Analyzer. The testing was performed in free space. This section summarizes the electrical performance structure drawings confirmed by the customers, 2400MHz ~ 2500MHz WIFI antenna.

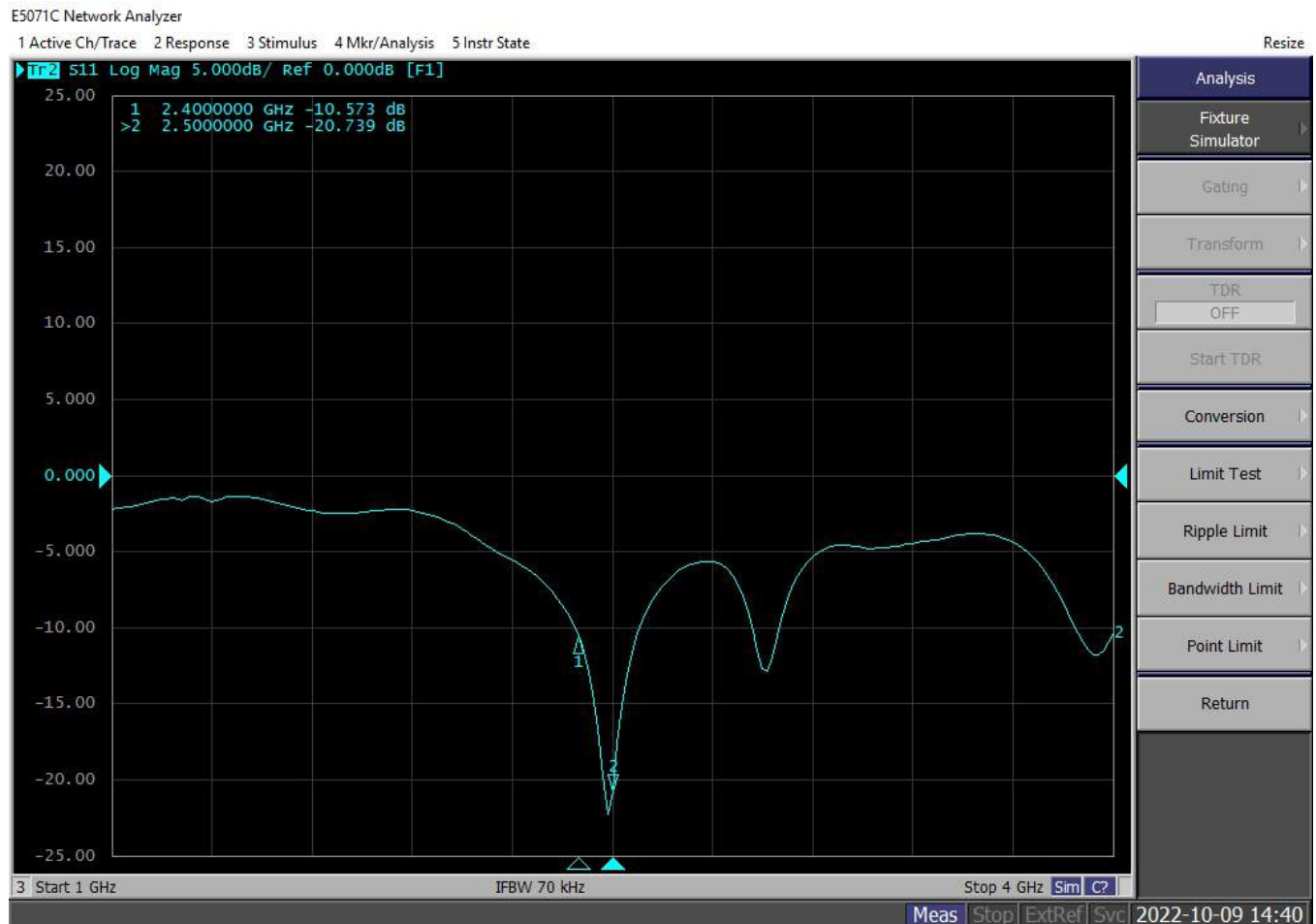


Figure 3: WIFI RETURN LOSS

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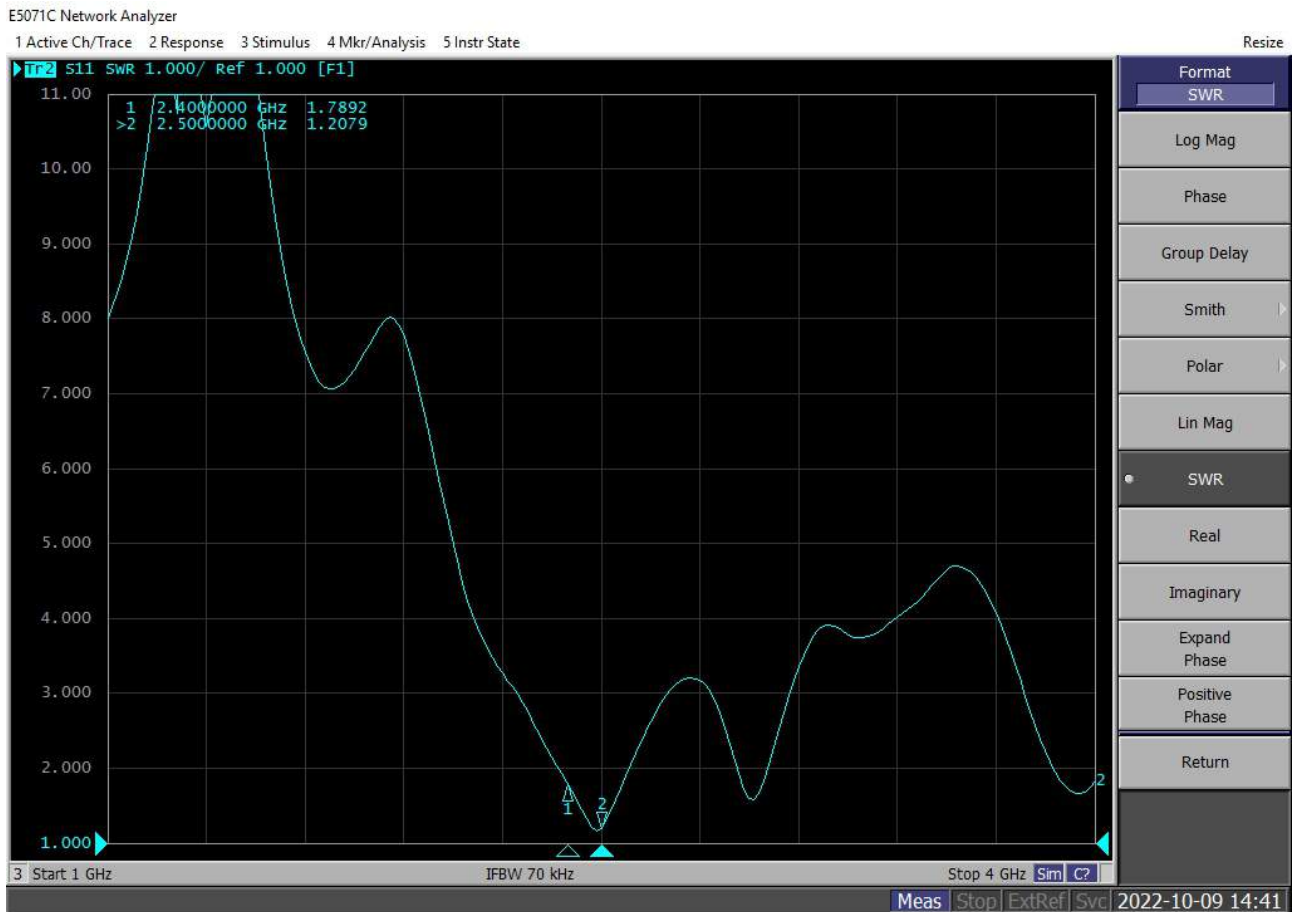


Figure 4: WIFI SWR

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2.2 Gain

Frequency (MHZ)	Efficiency (db)	Efficiency (%)	Peak Gain (dbi)
2400	-3.48	44.9	4.88
2410	-3.68	42.8	4.68
2420	-3.93	40.4	4.43
2430	-3.94	40.3	4.42
2440	-3.7	42.7	4.66
2450	-3.63	43.4	4.73
2460	-3.8	41.7	4.56
2470	-3.82	41.5	4.54
2480	-3.94	40.4	4.42
2490	-4	39.8	4.36
2500	-4.14	38.5	4.22

2.3 Directional Diagram

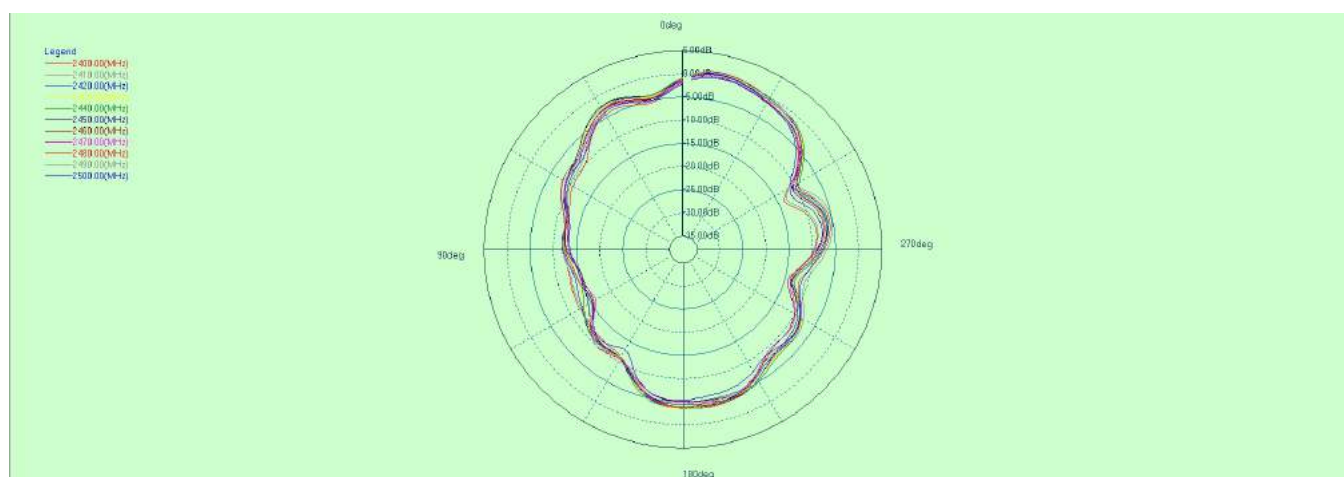


Figure 5: $\Theta = 90^\circ$

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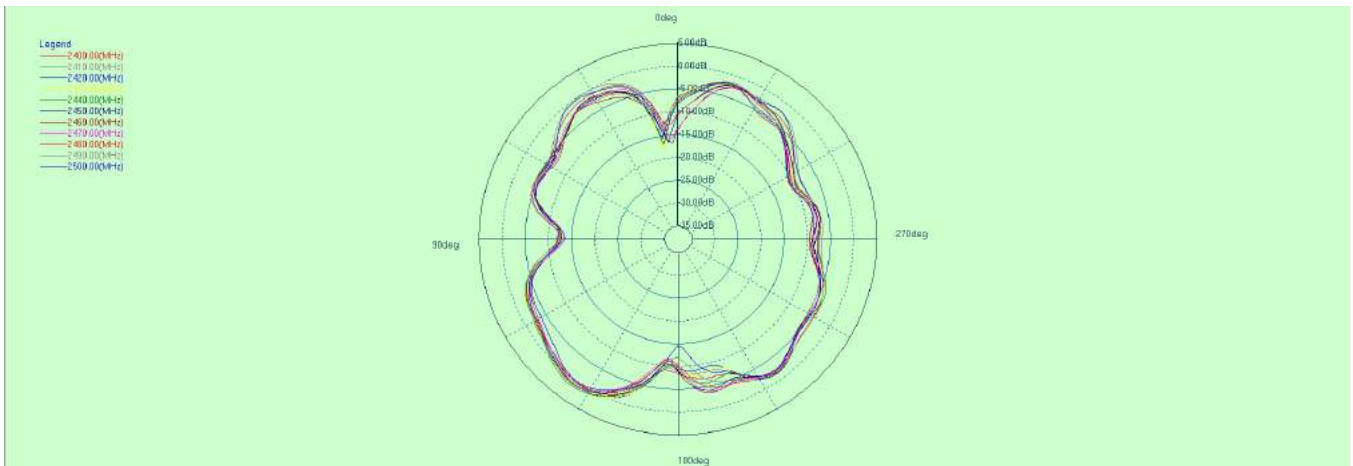


Figure 6: $\Phi = 90^\circ$

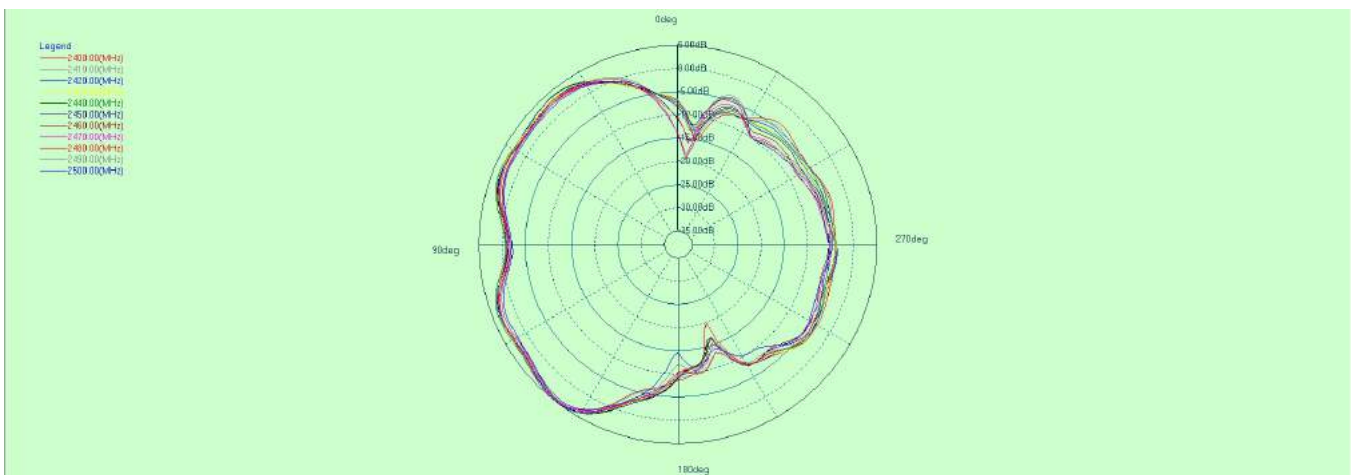


Figure 7: $\Phi = 0^\circ$

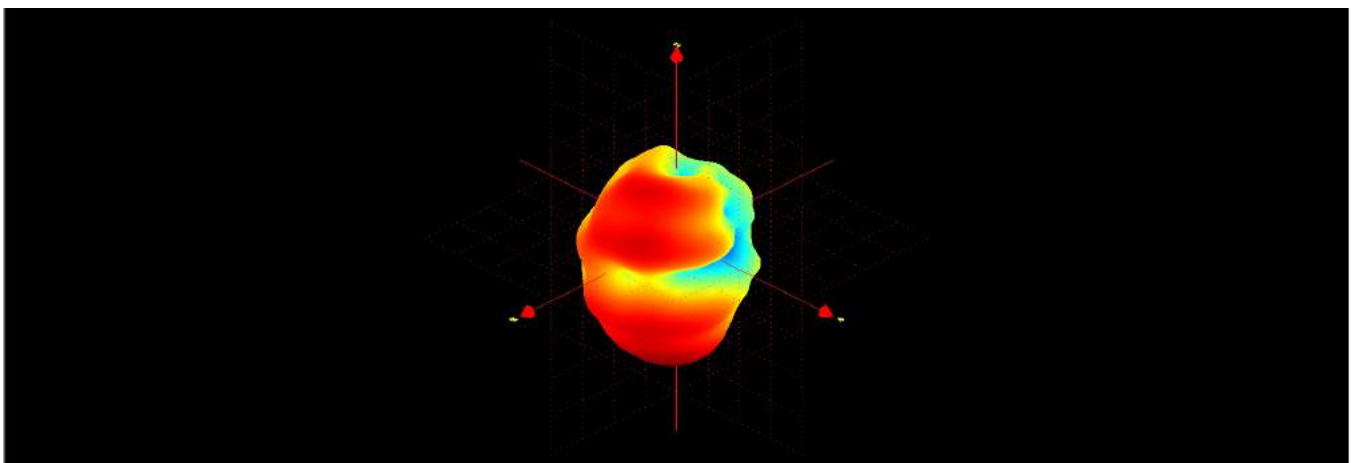


Figure 7: 3d model

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4. Suggestions and Conclusion

This report summarizes the electrical performance structure drawings confirmed by the customers of MARS project. Speed is looking forward to getting your approval. Thanks for your cooperation.

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