

SPEED TECHNOLOGY

SPEED Communication Technology Limited

Approval sheet of ZHONGQING Antenna

Customer/Project	ZIMA	Frequency Band	WIFI		
SCT P/N		Version	S01		
Date	2023-3-16				
Material Code	F-0G-C6-0005-000-00				
SPEED					
Checked by	RF	ERICGUO	Design by	RF	李金泽
	ME	ERICGUO		ME	杜凯
	QC	TAOZHUTAO	Remark		
Customer					
Date					
Confirmed by	RF				
	ME				
Remark					

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1. Indication

This report summarizes the electrical performance structure drawings confirmed by the customers of ZIMA project. The antenna is an assembly Inside the Temperature and humidity machine (see Figure1). The gain and efficiency of the antenna was measured in the WIFI test chamber. The chamber provides less than -40 dB reflectivity from 600MHz through 6GHz.

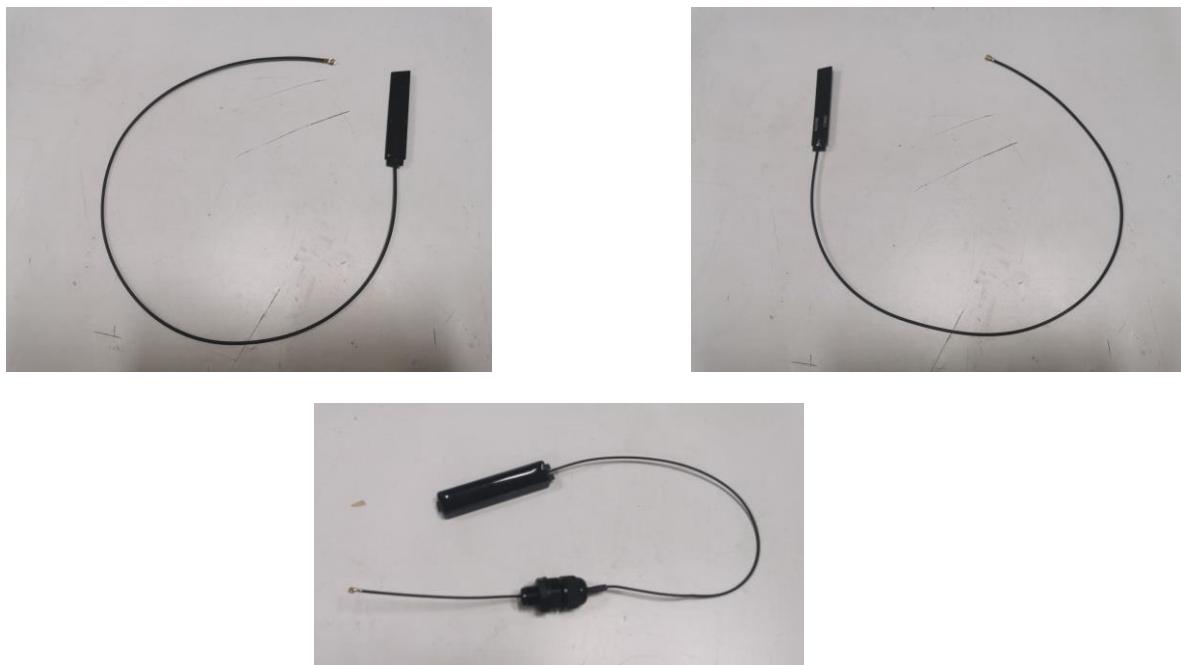


Figure 1: Proposed Antenna

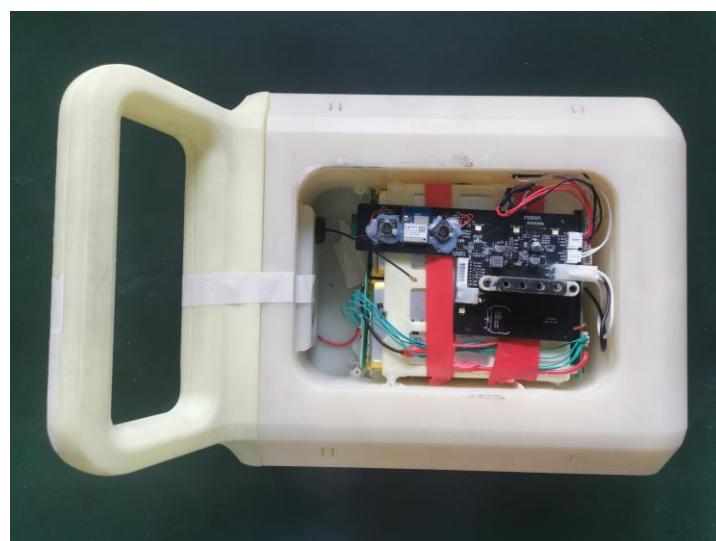


Figure 2: Assembly machine

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Description of the Phobos antenna information					
1	Antenna shape		PCB+WIRE+IPAX 1		
2	Antenna type		WIFI		
3	Material		ZIMA (NBA3004)		
4	Frequency	HZ	:WIFI2.4G 2400M-2500M		
5	Peak Gain	DBI	≥ 3		
6	Efficiency	%	≥ 53		
7	Impedance	Ω	:50 Ω		
8	Wire length	MM	393.5 \pm 4 Black		
9	Feeder diameter	MM	1.37 Black		
10	Antenna Color		Black		
11	Edition		S01		
12	Other attributes			NO	
13	Manufacturer		SPEED		
14	Manufacturer model				

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2. Measurement Data

2.1 Bluetooth 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: Bluetooth RETURN LOSS

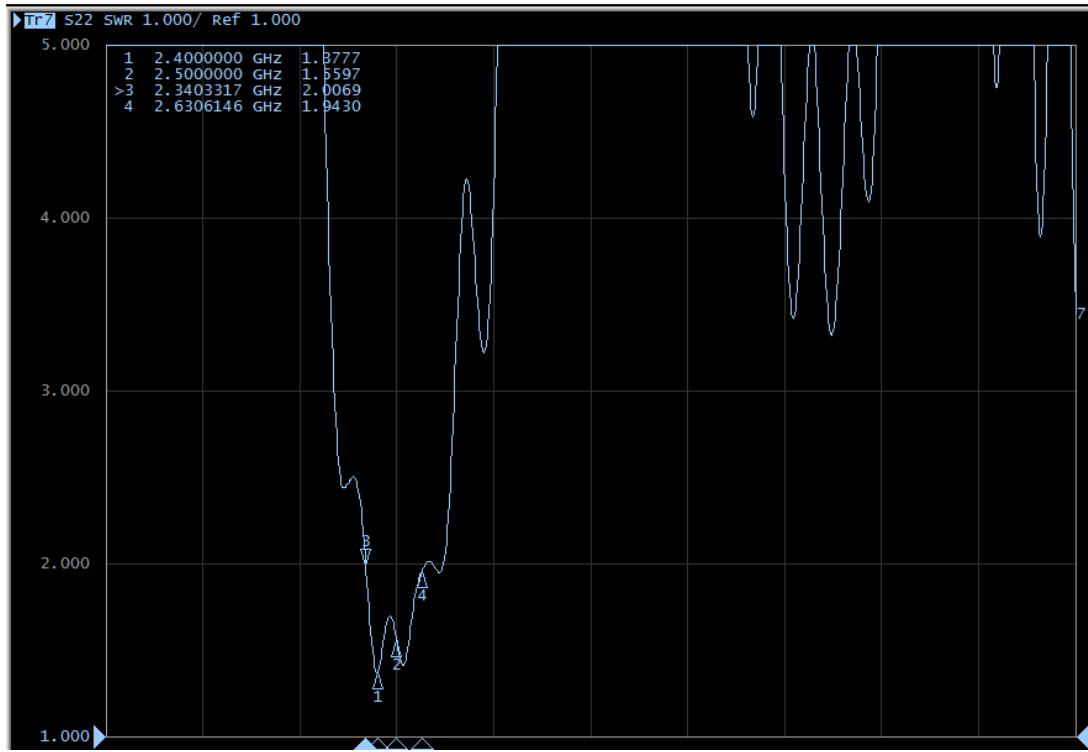


Figure 4: Bluetooth SWR

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2.2 Gain&Efficiency

Frequency (MHZ)	Efficiency (db)	Efficiency (%)	Peak Gain (dbi)
2400	-2.7	53.5	3.8
2410	-2.5	55.1	3.6
2420	-2.4	57.5	3.8
2430	-2.3	58.4	3.9
2440	-2.3	58.7	4.1
2450	-2.1	62.3	4.2
2460	-2.1	61.3	4.1
2470	-2.1	61.1	4.6
2480	-2.2	60.4	4.1
2490	-2.3	59.4	4
2500	-2.3	58.5	3.4

2.3 Directional Diagram

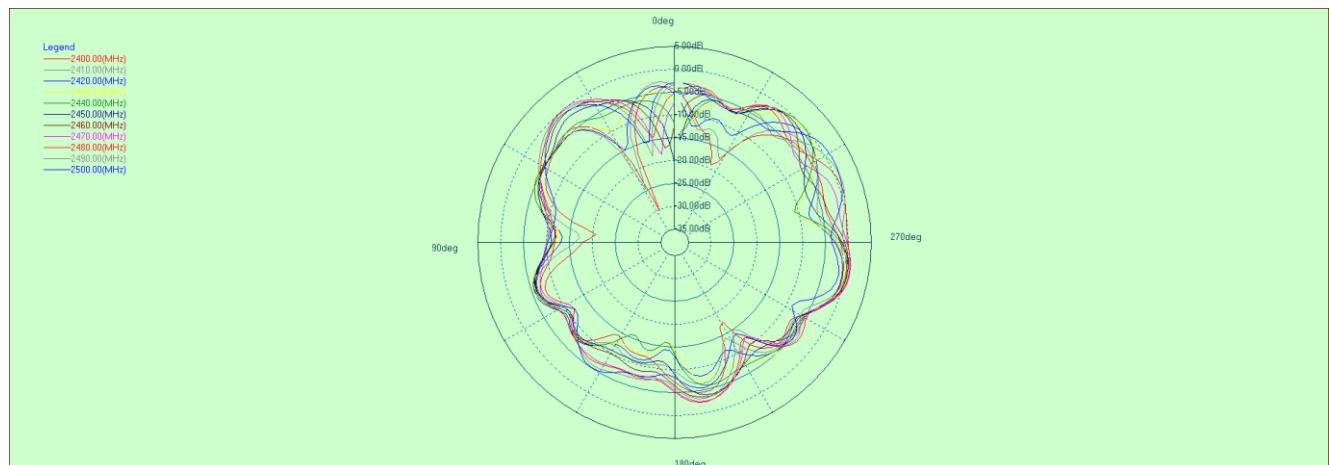
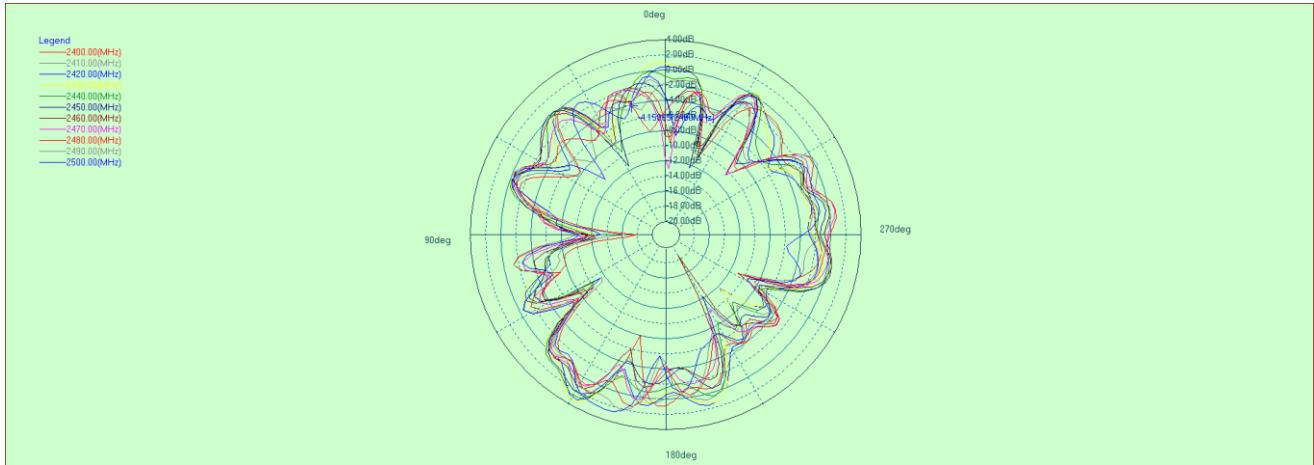
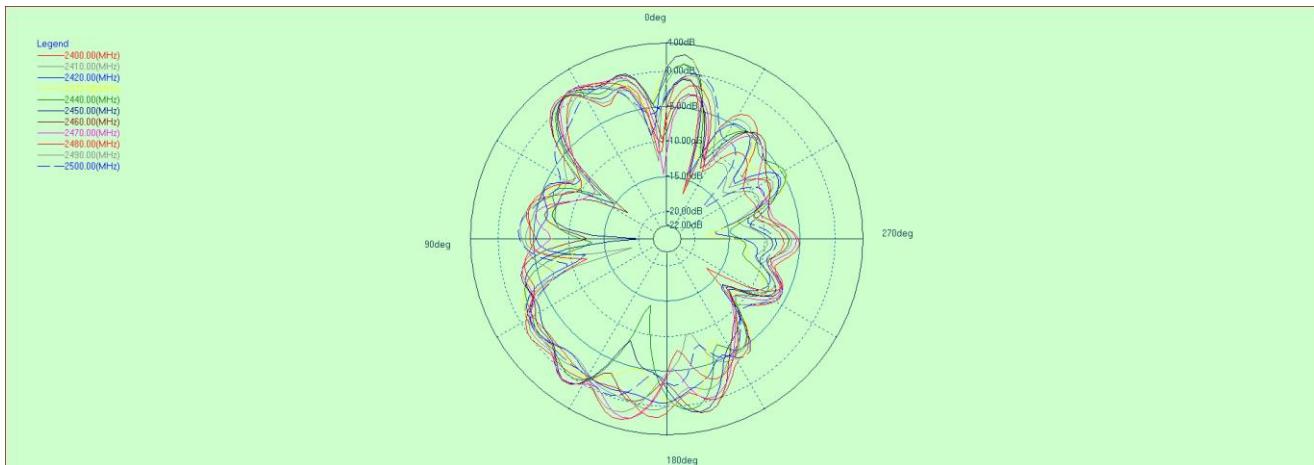
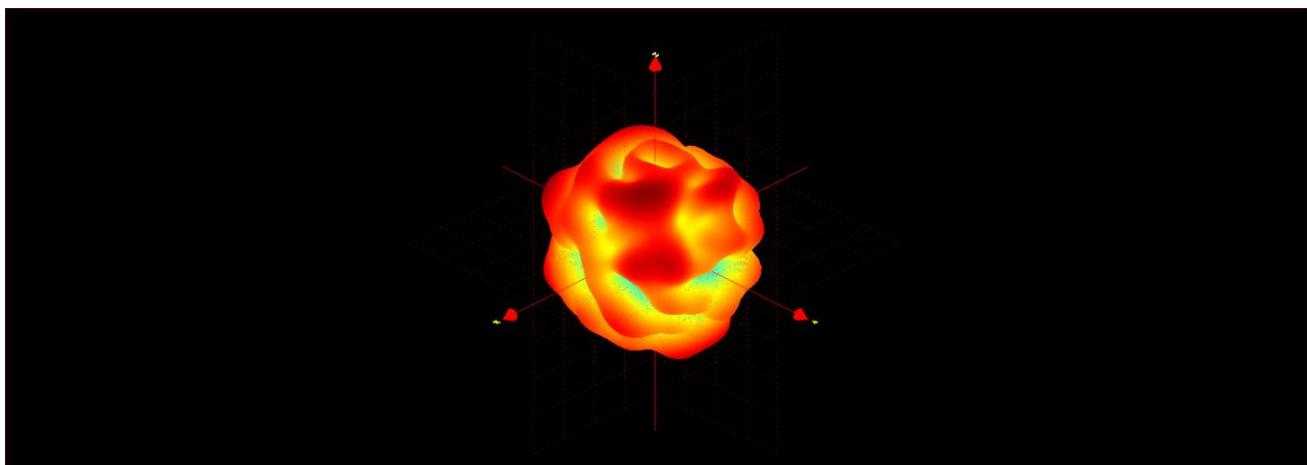


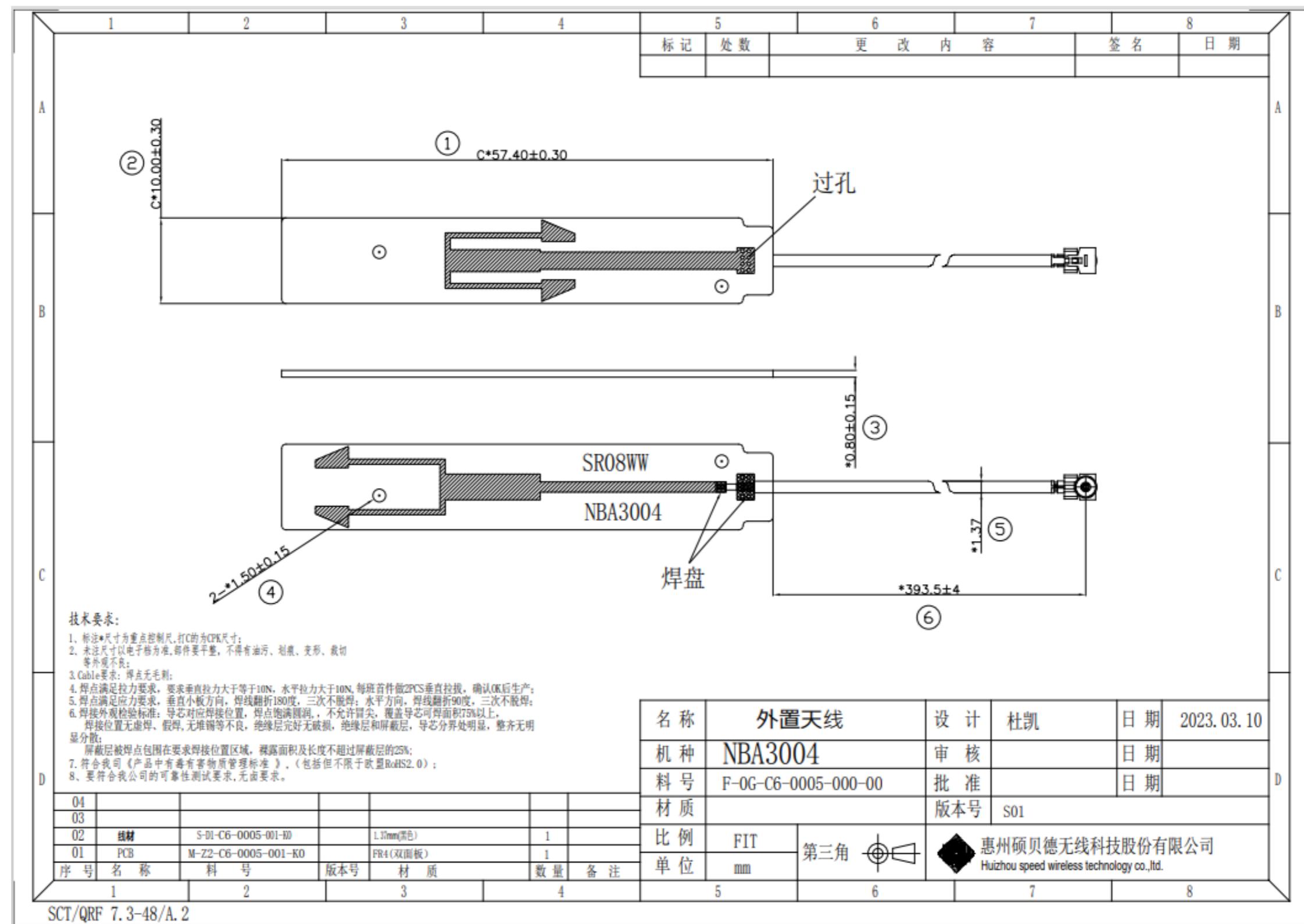
Figure 5: Theta=90°

**Figure 6: $\Phi=90^\circ$** **Figure 7: $\Phi=0^\circ$** **Figure 7: 3D model**

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3. Appearance drawin



4. Suggestions and Conclusion

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

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