

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
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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.

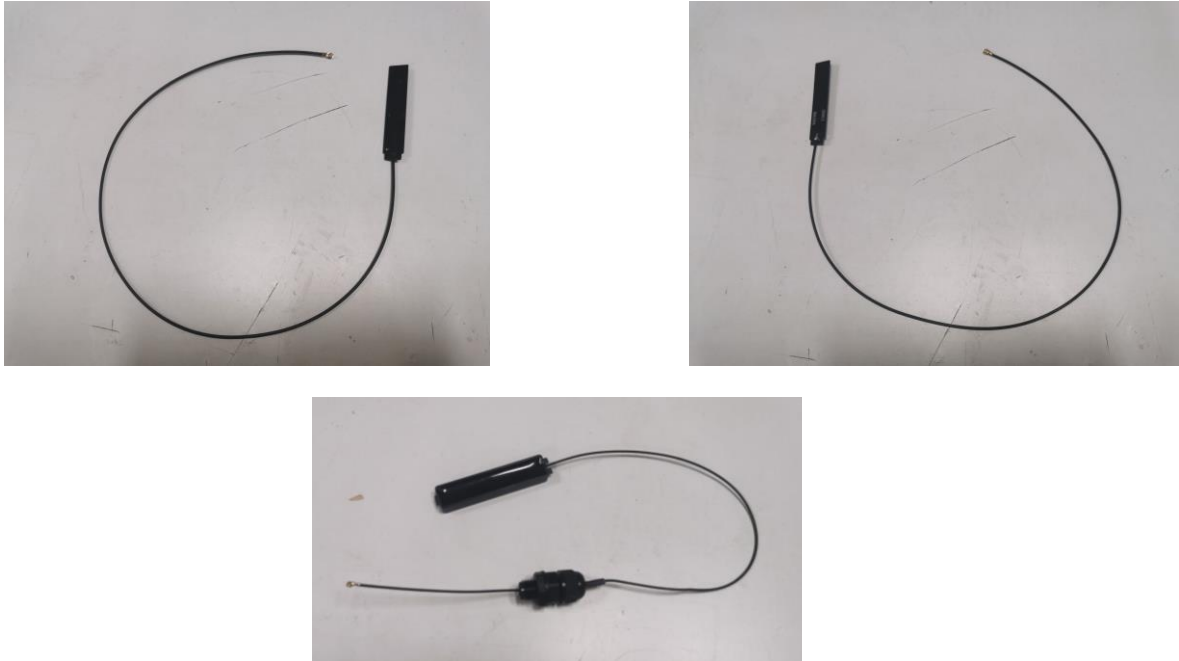


Figure 1: Proposed Antenna

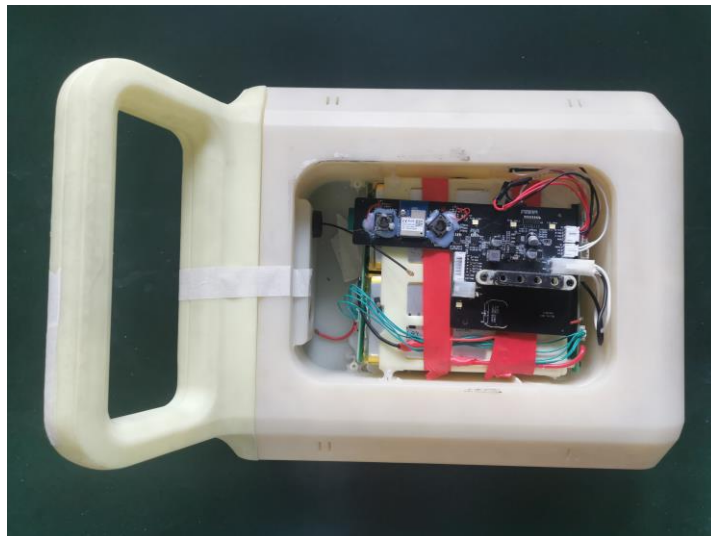


Figure 2: Assembly machine

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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

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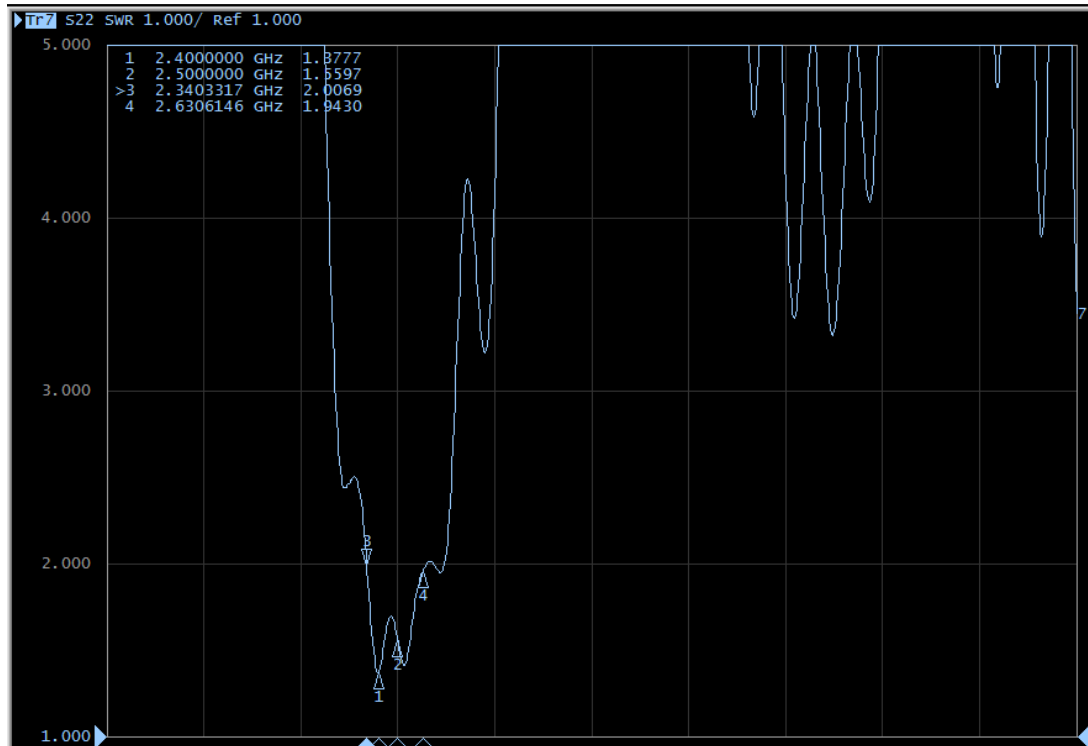


Figure 4: Bluetooth SWR

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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

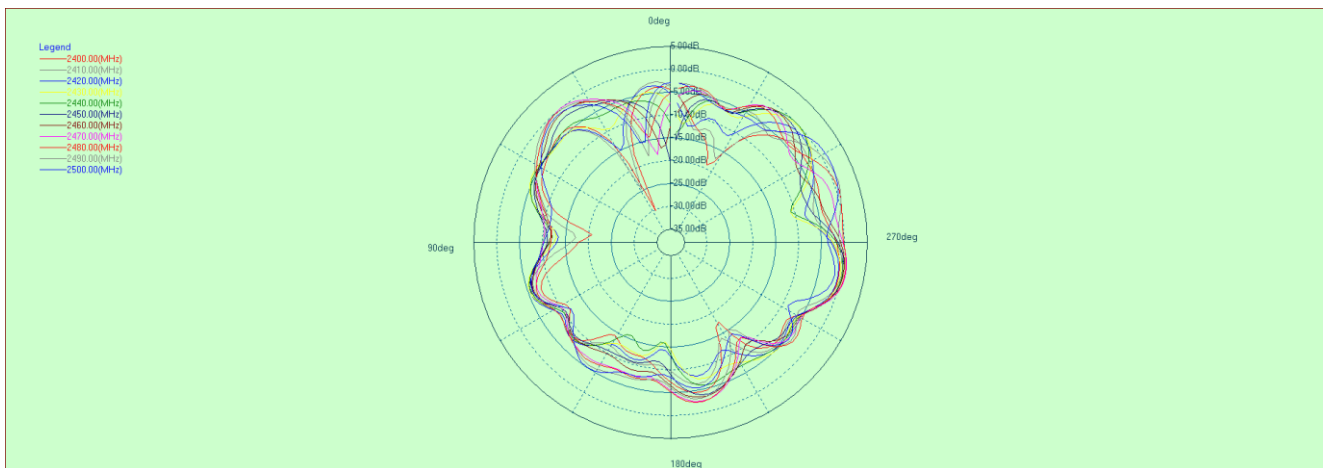


Figure 5: Theta=90°

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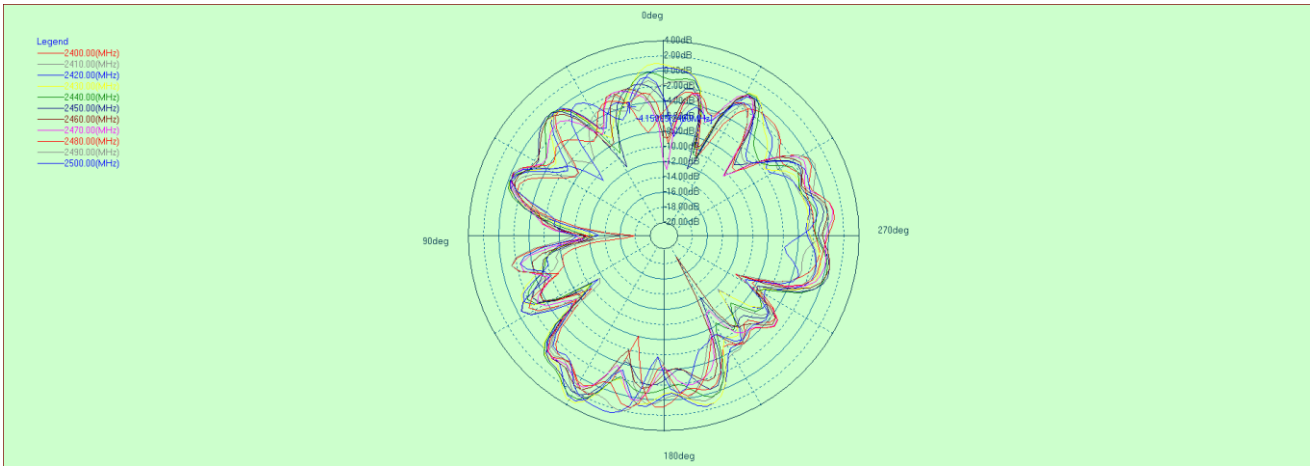


Figure 6: $\Phi=90^\circ$

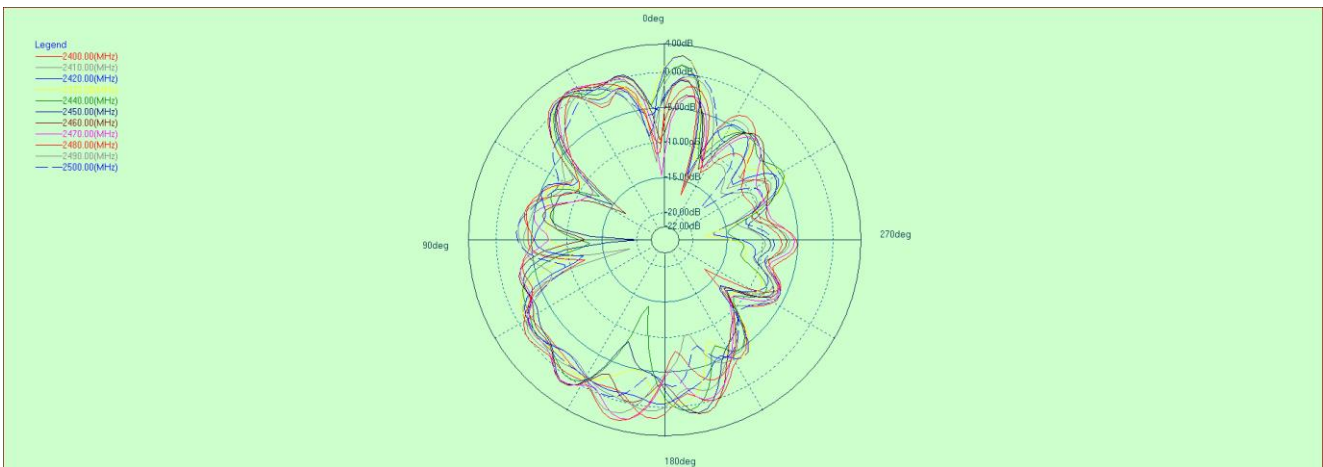


Figure 7: $\Phi=0^\circ$

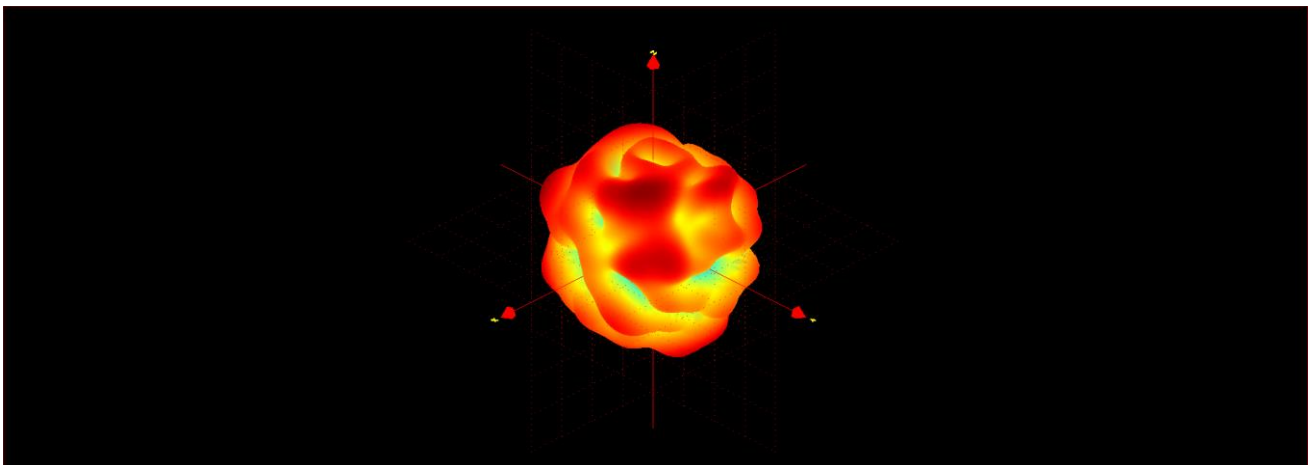
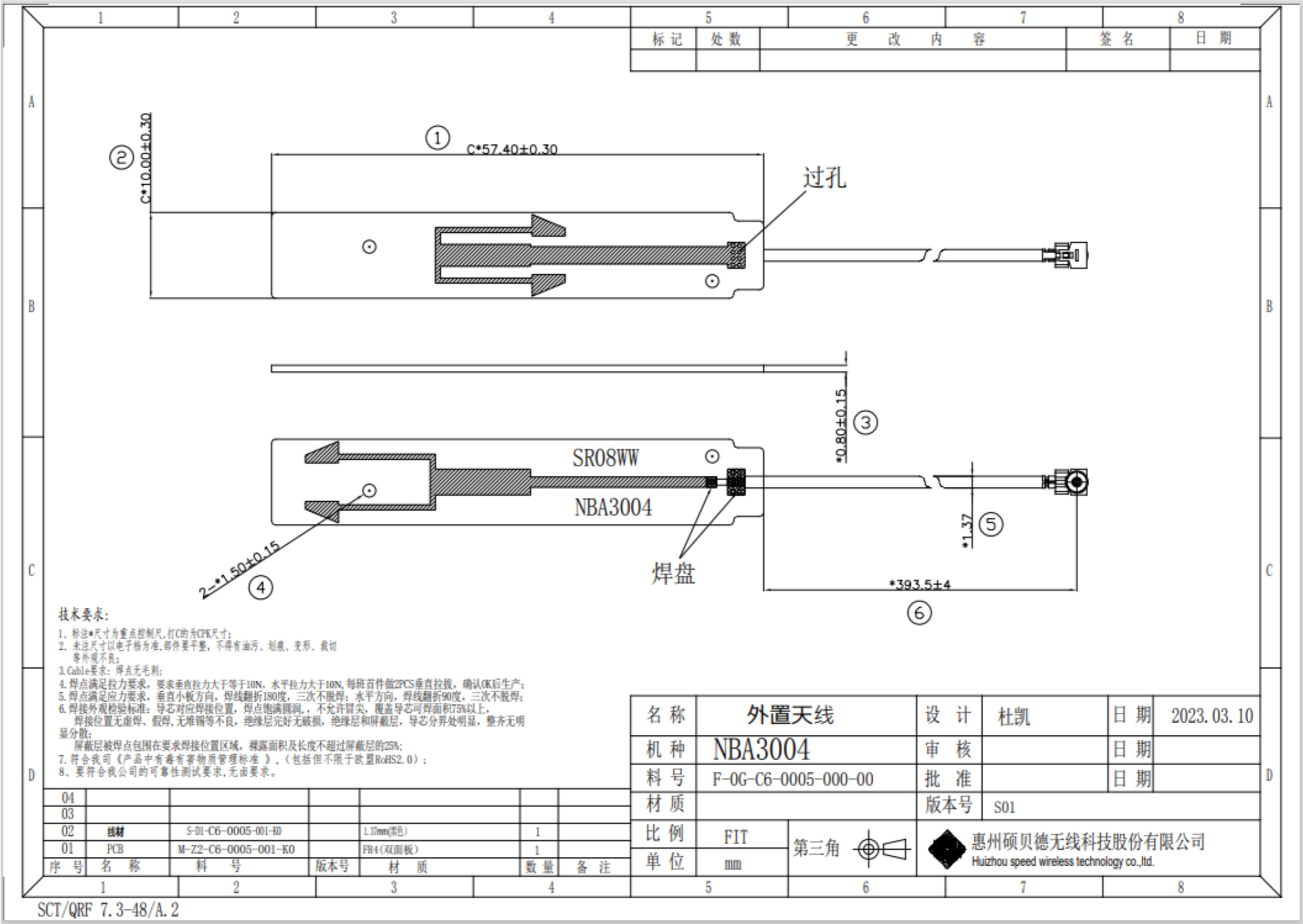


Figure 7: 3D model

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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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