SPEED TECHNOLOGY

SPEED Communication Technology Limited

Approval sheet of Adonis Internal Antenna

Customer/Project		Adonis 2P	Frequency Band		2.4-2.48GHz
SCT P/N		F-0L-81-0005-001-KA	Version		Rev5.0
Date		2025-05-28			
Material Code					
SPEED					
Checked by	RF	林宏锋	Design by	RF	赖县强
	ME	周胜中		ME	张锦鸿
	QC	蓝溢淼	Remark		
Customer					
Date					
Confirmed by		RF			
		ME			
Remark					

Manufacturer：Huizhou Speed AutoIN Technology Co., Ltd.

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Contents

1. Indication

This report summarizes the electrical performance results of the proposed internal antenna to support the Adonis program. The antenna is in the form of a welded cable + connector to the FPCB

2. Matching Circuit Description

The matching circuit that is the customer provides with us.

3. Measurement Data

3.1 Return Loss

Return loss measurements (S11) were performed using Agilent E5071 Network Analyzer and the previously described test fixture. A ferrite-loaded coaxial cable was used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

Freq (MHz)	2400MHz	2480MHz
Return Loss	-5.91	-9.98

Tested by Agilent E5071C Network Analyzer

3.2 Gain & Radiation Patterns

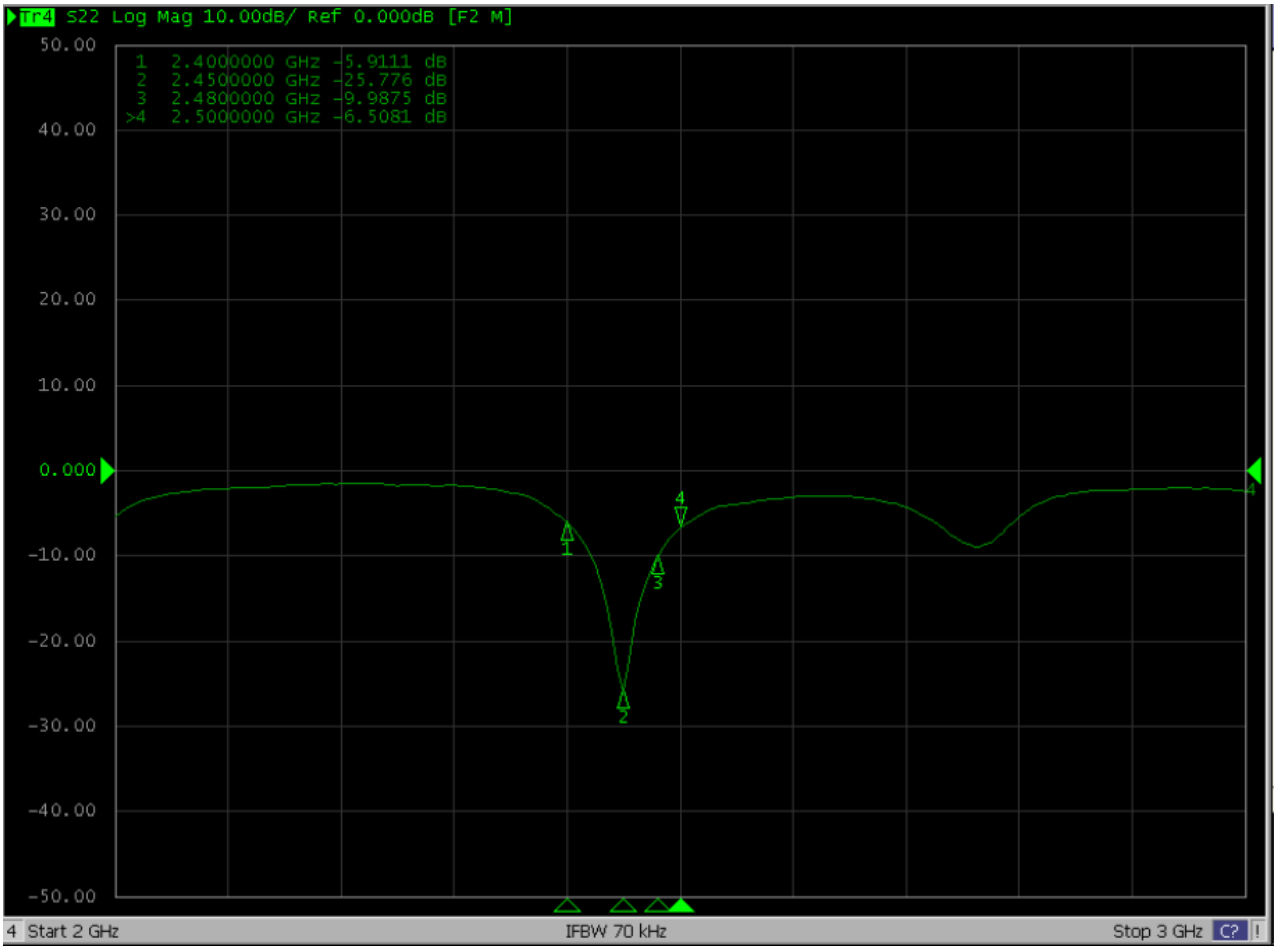
The gain and efficiency of the antenna was measured in the Speed Communication Technology anechoic chamber. The chamber provides less than –40 dB reflectivity from 800 MHz through 6 GHz and 25cm diameter spherical quite zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

3.3 Peak gain & Efficiency

AUT	Frequency (MHz)	Efficiency（%）	Peak Gain(dBi)
Antenna	2400	11.26	-4.44
	2410	13.37	-3.81
	2420	14.72	-3.48
	2430	16.52	-3.05
	2440	19.47	-2.24
	2450	21.88	-1.70
	2460	24.20	-1.21
	2470	22.36	-1.70
	2480	20.56	-1.97

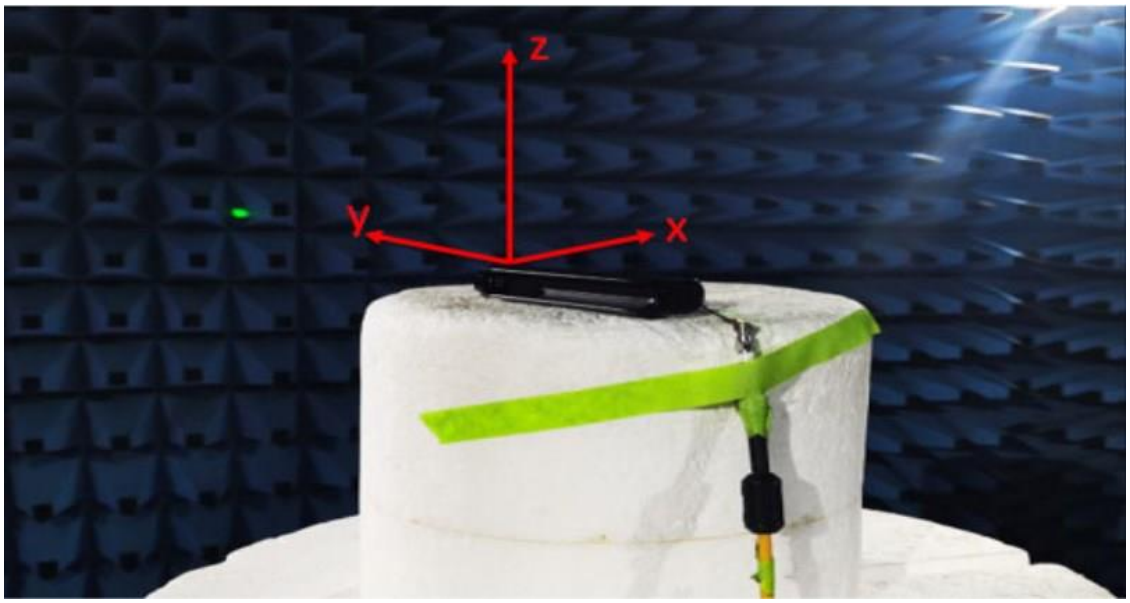
4. Attachment

4.1 S11 Parameter

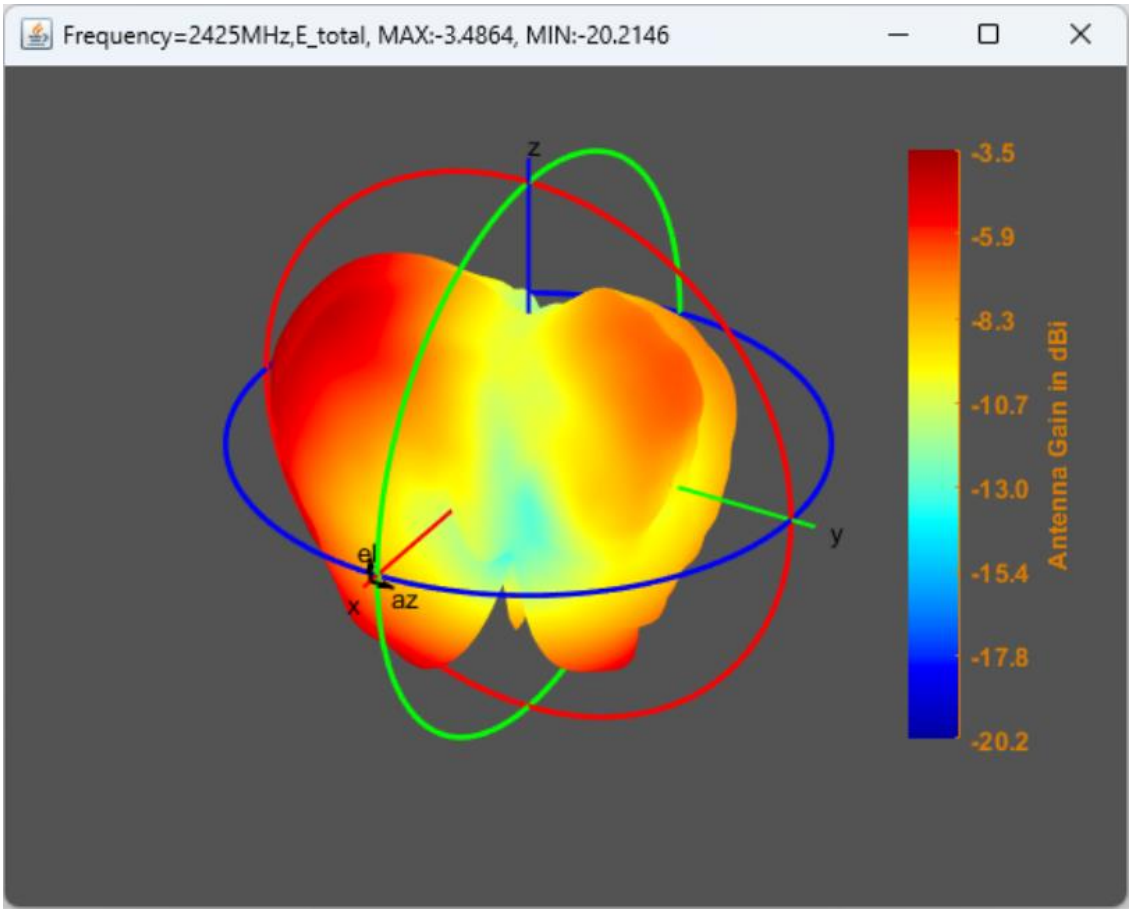


Return Loss

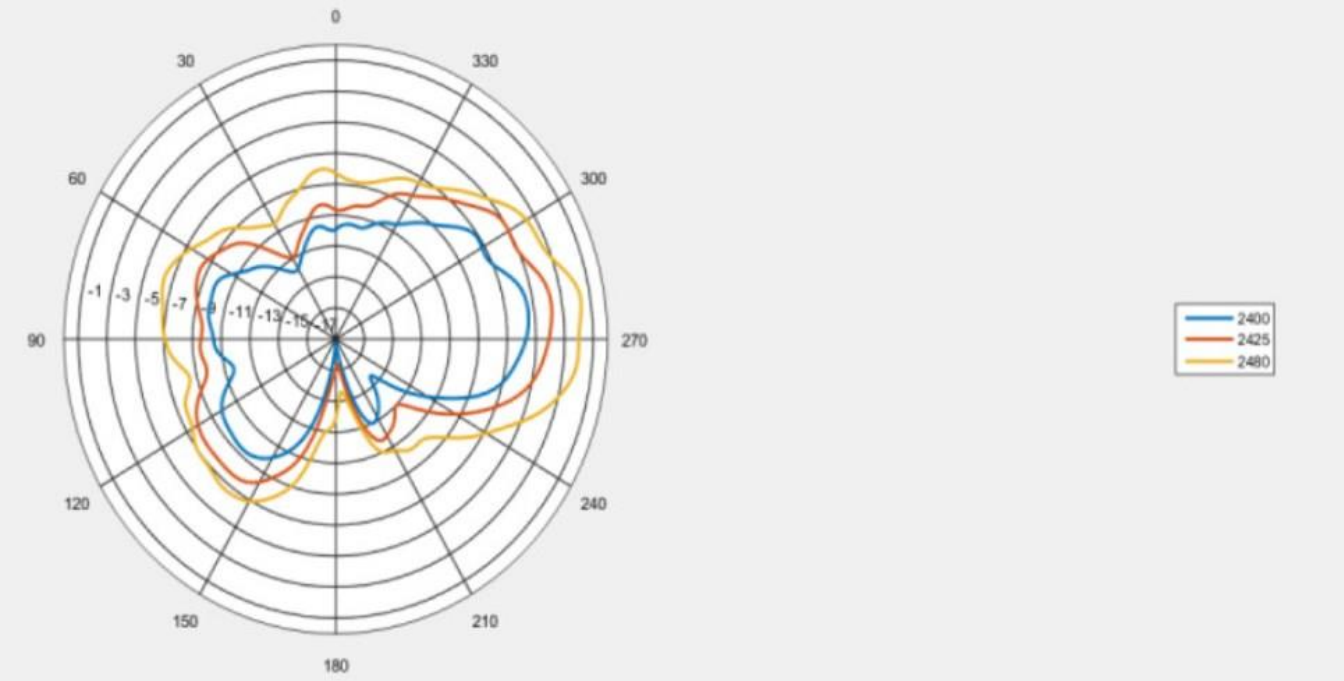
4.2 Radiation Pattern



Coordinate



3D Pattern



5. Test setup in the production line

Test method: VSWR test

Marker and value range:

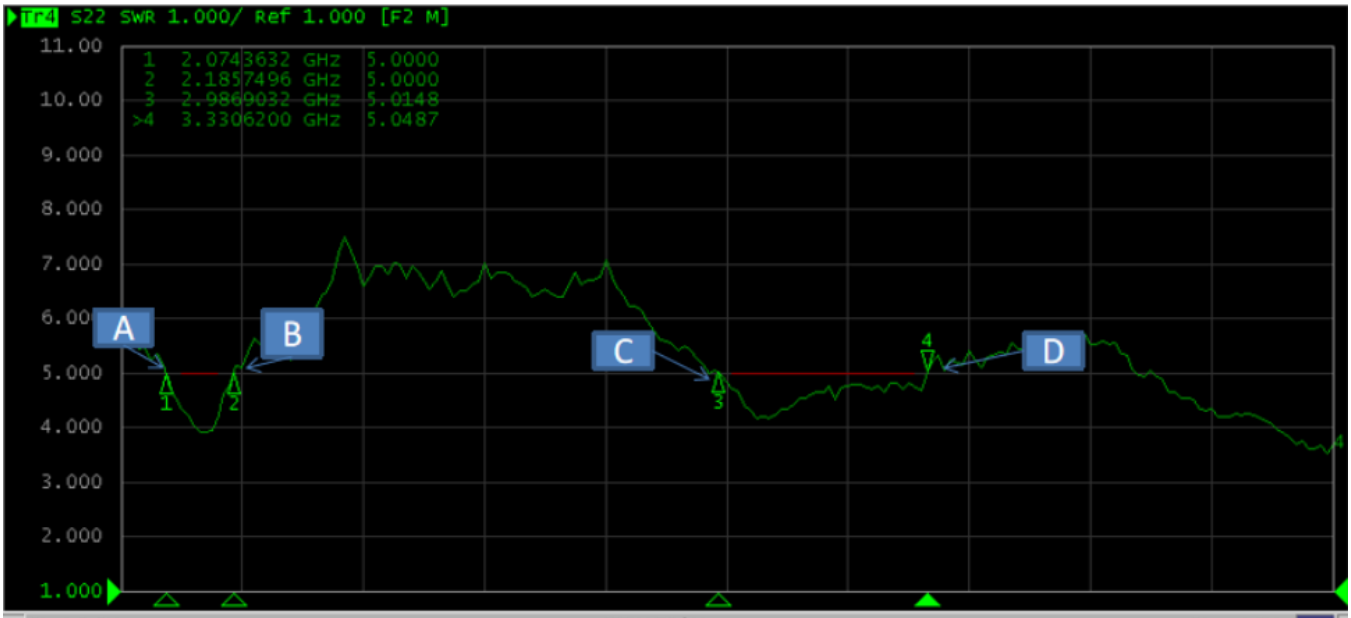
Marker1：2.074GHz 5.00± 0.5

Marker2：2.185GHz 5.00± 0.5

Marker3：2.986GHz 5.00± 0.5

Marker4：3.330GHz 5.00± 0.5

管控点	规格中值	管控公差
A	2074MHz	±20MHz
B	2185MHz	±20MHz
C	2986MHz	±20MHz
D	3330MHz	±20MHz



	Type	Begin Stimulus	End Stimulus	Begin Response	End Response
1	MIN	2.094000000 GHz	2.166000000 GHz	5	5
2	MIN	3.007000000 GHz	3.310000000 GHz	5	5
3					

6. Antenna drawing