

Sample Acknowledgement

Confirmation of products

Customer name Customer	Shenzhen Innios Technology Co., Ltd.							
Project name Project Name	S3	Version Version	DH1	Date Date	2026-6-3			
Item number Project NO.	03. 03. 0001. 0006	Customer part number Customer NO.	ANT_2. 4G_5G					
Frequency band Frequency Range	2400~2500MHz 5000~6000MHz	Remark Notes						
Antenna gain:	1.0dBi (2.4G) 0.8dBi (5G)							
Antenna type	PCB antenna							
Antenna dimensions:	18.7mmx8.0mm							

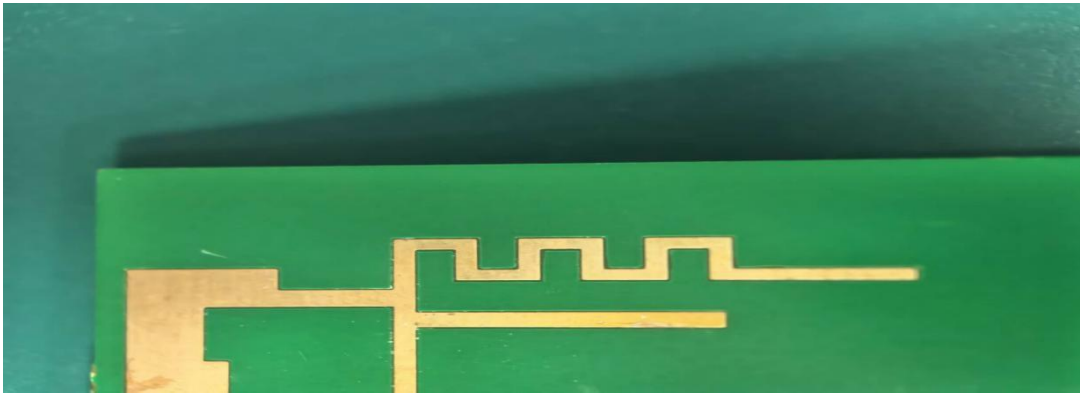
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1. Specifications

The report mainly provides the performance parameter test of Innios S3, and the antenna is PCB antenna:



2. Electrical Performance

2-1 Antenna matching circuit The design of the antenna matching circuit is to use the matching on the original motherboard to make the whole machine achieve the best RF performance in the working frequency band.

3. Test of VSWR

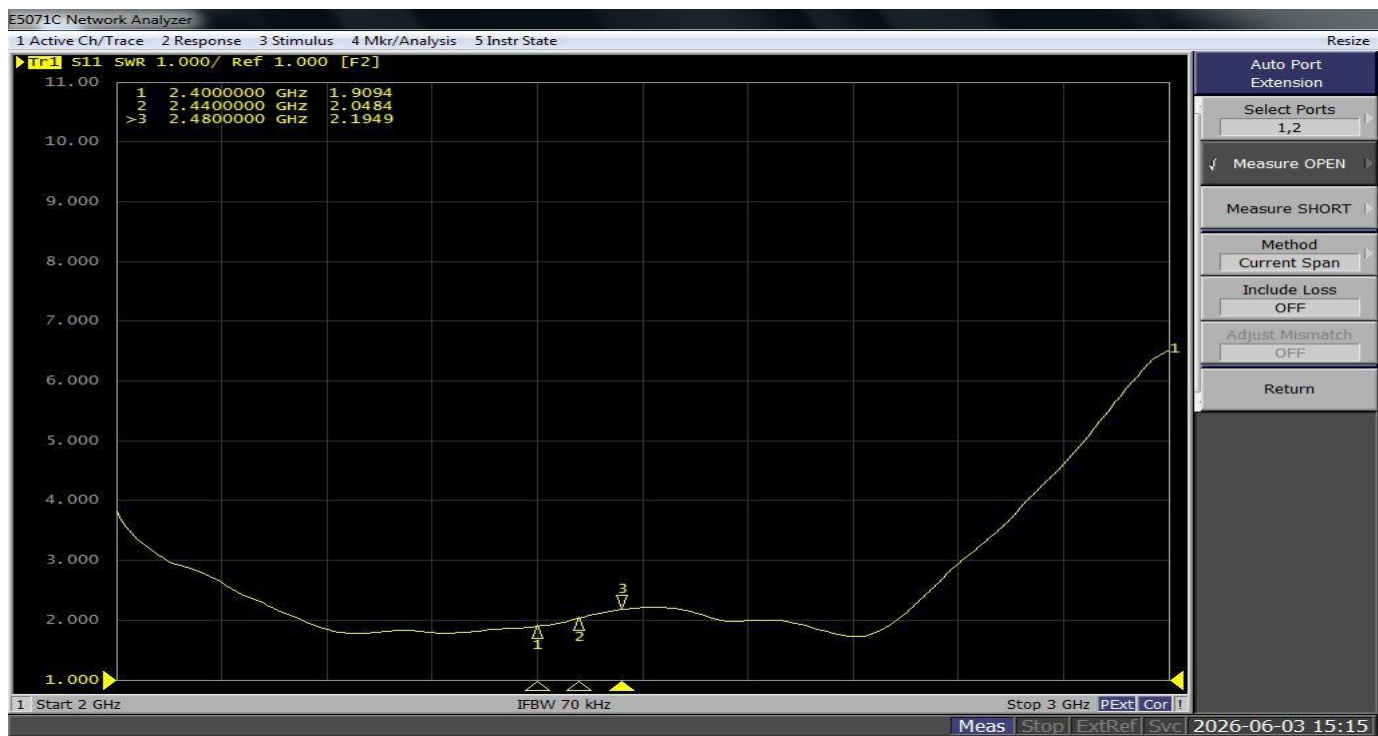
3-1 Settings for the Test

The VSWR test device is connected as follows: E5071B network analyzer → 50 ohm coaxial Cable → 100mm long copper tube → test fixture. Treatment of test fixture: use a hard cable to lead out SMA-J connector from the 50 ohm test point of the antenna on the PCBA of the whole machine, connect it with the copper tube sleeved with the choke, and then connect other devices in turn.

3-2 Voltage Standing Wave Ratio Test

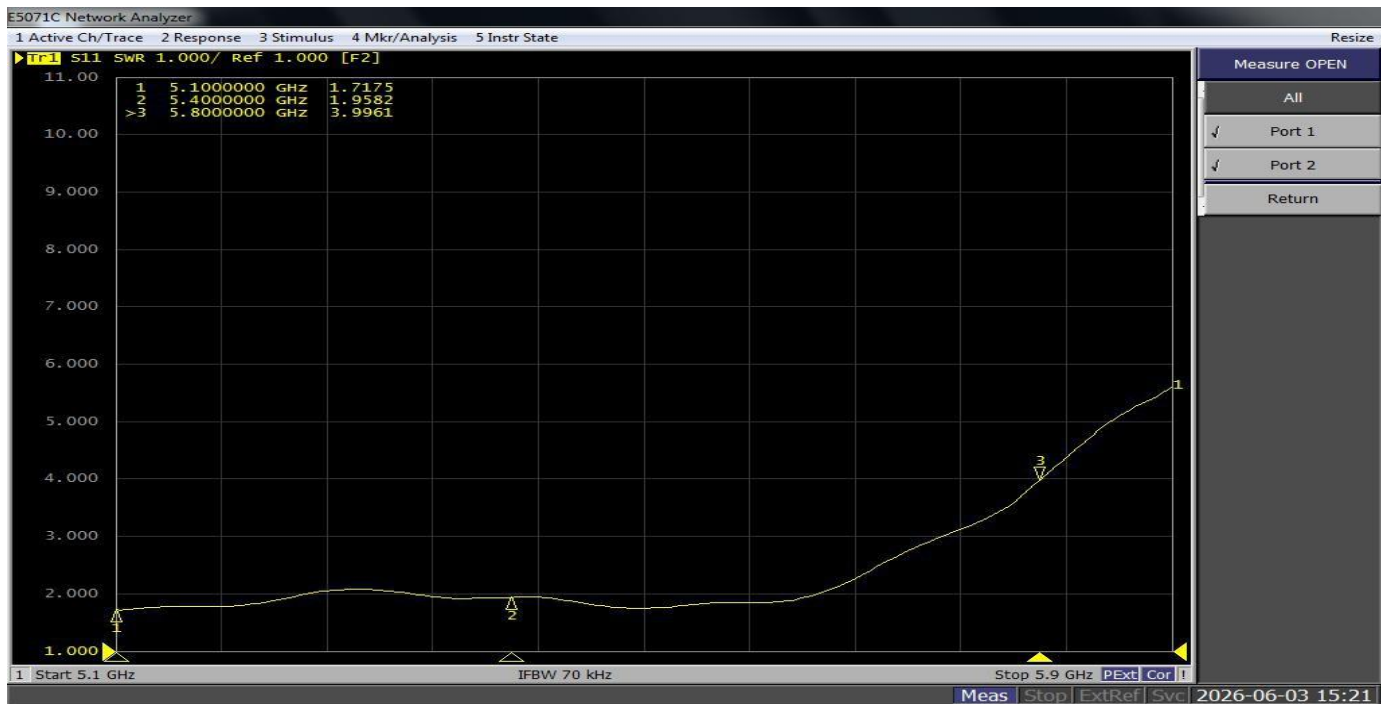
The following table shows the VSWR values of the edge frequency points of the operating frequency band of the 2.4G external antenna, and the related waveforms of the VS WR obtained from the test are shown in the annex:

Main antenna VSWR			
Freq(MHz)	2400	2450	2500
Free Space	1.90	2.04	2.19



The following table shows the VSWR values of the edge frequency points of the operating band of the 5G external antenna, and the related waveforms of the VSWR obtained from the test are shown in the annex:

Main antenna VSWR			
Freq(MHz)	5100	5500	5800
Free Space	1.71	1.95	3.99



4. Active Test Settings

4-1 The Site of the Test

GTS microwave anechoic chamber: the test frequency range is 400MHz-6GHz, the quiet zone range is 40 cm circumference, and the reflectivity is less than -90 dB.

4-2 Test Results

The maximum radiation power and the maximum receiving sensitivity reflect the maximum power radiation value and the best receiving performance of the antenna in the whole radiation space. TRP and TIS reflect the average radiation power and average receiving sensitivity of the antenna, that is, reflect the overall receiving performance of the antenna.

The following S3 PCB antenna test data:

2.4G Antenna Efficiency Test Results (%)		
Frequency (MHz)	Efficiency	Gain (dB)
2400	59.59	1
2410	60.17	1.15
2420	61.64	1.04
2430	61.86	0.9
2440	61.34	0.73
2450	61.35	0.71
2460	60.52	0.81
2470	61.41	1.08
2480	62.57	1.35
2490	62.62	1.4
2500	62.42	1.35

5G antenna efficiency test results (%)		
Frequency (MHz)	Efficiency	Gain (dB)
5100	55.86	0.8
5120	56.82	0.94
5140	56.3	0.72
5160	54.22	0.45
5180	53.46	0.81
5200	55.29	0.97
5220	56.43	0.46
5240	56.77	0.46
5260	57.45	0.9
5280	56.33	1.04
5300	57.42	1.19
5320	56.78	1.05
5340	55.91	0.72
5360	58.04	1.75
5380	57.26	1.6
5400	56.3	1.36
5420	58.49	1.25
5440	57.87	0.88
5460	56.66	0.88
5480	55.68	0.85
5500	52.5	0.58
5520	50.94	0.1
5540	51.45	1.37
5560	49.7	2.04
5580	55.68	1.56
5600	45.46	1.12
5620	42.36	0.69
5640	40.24	0.28
5660	49.7	0.32
5680	40.11	0.01
5700	40.24	-0.1
5720	39.89	0.12
5740	39.93	0.74
5760	39.98	0.34
5780	40.21	0.44
5800	40.55	0.51

5. Environmental Treatment

The panel and the motherboard are adequately grounded.

6. Product Drawings

