



深圳市持胜科技有限公司

Shenzhenshi chisheng Technology Co., Ltd.

天线承认书

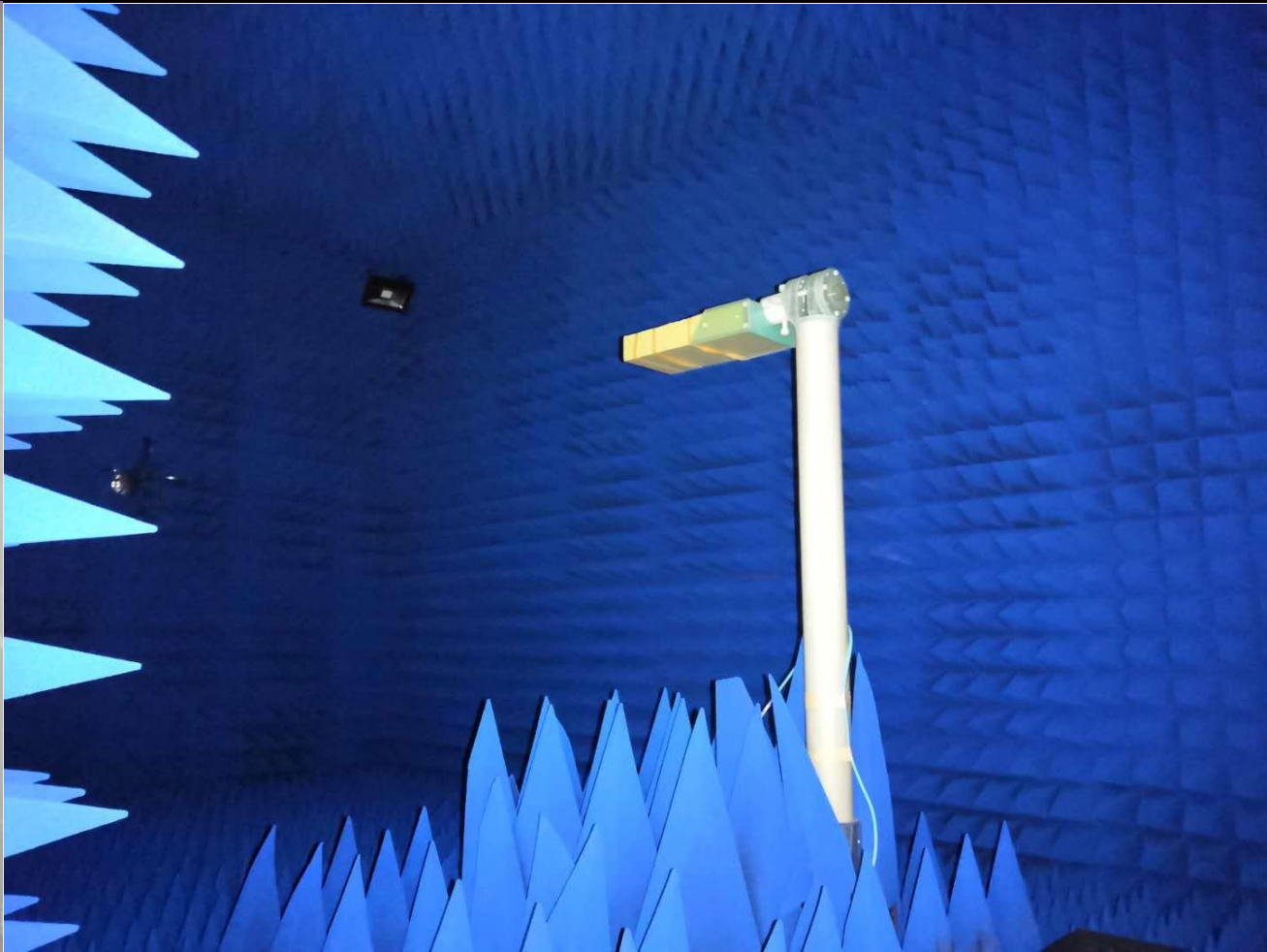
Client : Shenzhen Maction Electronic Co., Ltd.

Band: **2.4G/WF ANT**

Name: **A10/V533**



Testing Instrument	Agilent Technologies E5071B & R&S CMW500
Darkroom	Atenlab M3
Testers	KEVIEN
Temperature	25℃
Humidity	65% (RH)





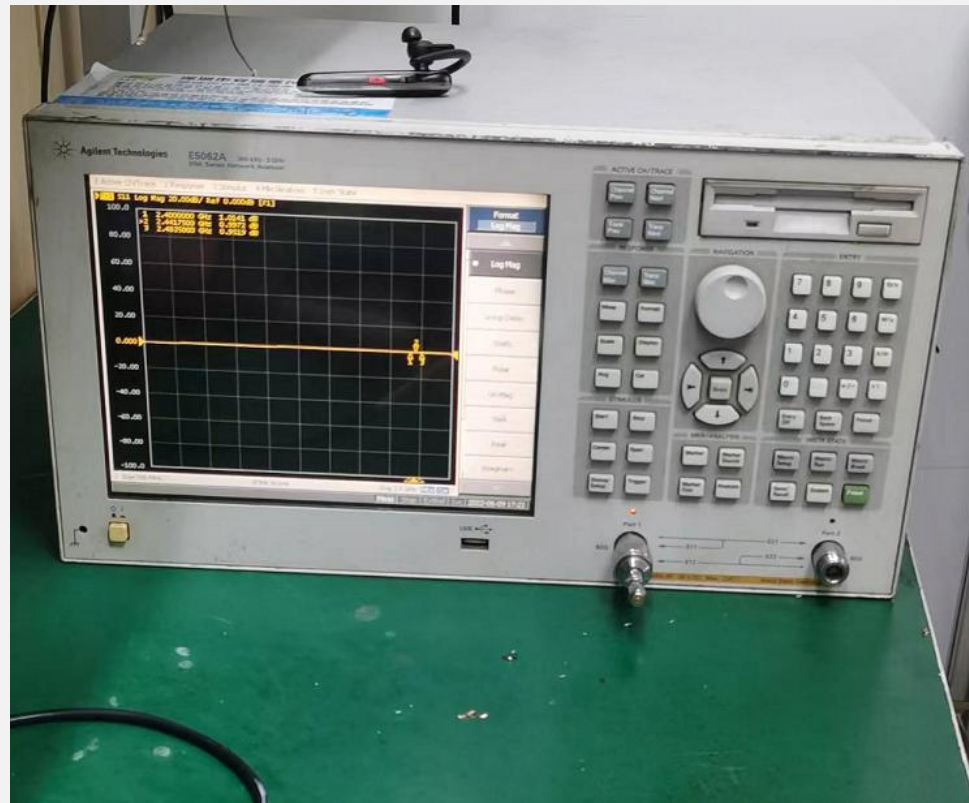
1. Test system description---S Parameter
2. Test system description--- Anechoic Chamber Test Setup
3. Test system description--- Test Instruments
4. Antenna
5. Test Result---Return Loss and Efficiency
6. Gain efficiency
7. schedule drawing

1. Test system description---S Parameter

1.1. Test Setup

1.1.1 VNA Test Setup

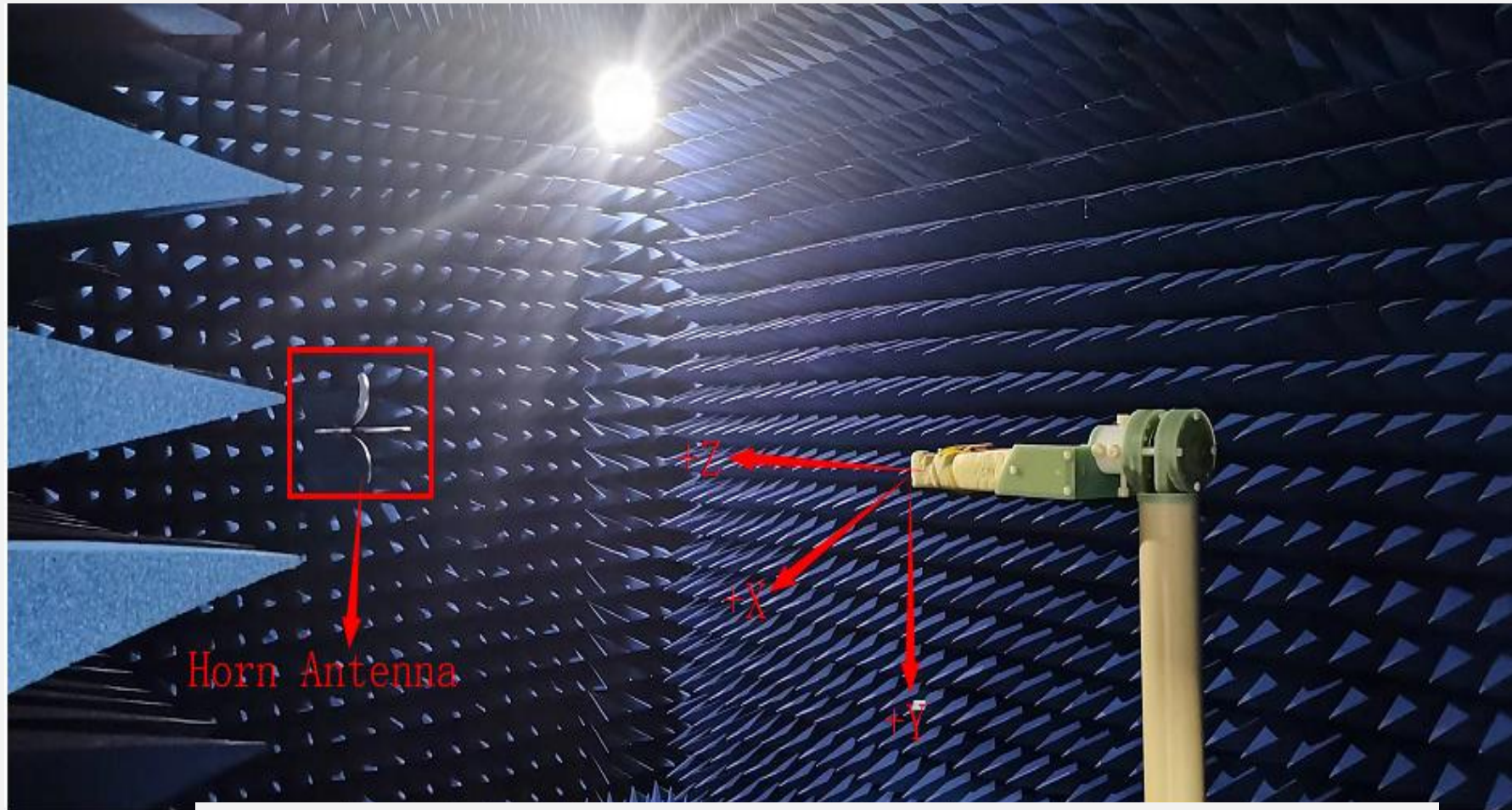
S parameter measurements (S_{11}) were performed using an Keysight 5071B Network Analyzer and previously described tests fixtures. The isolation between antennas is also tested. The testing was performed with apparatus in free space.



2. Test system description--- Anechoic Chamber Test Setup

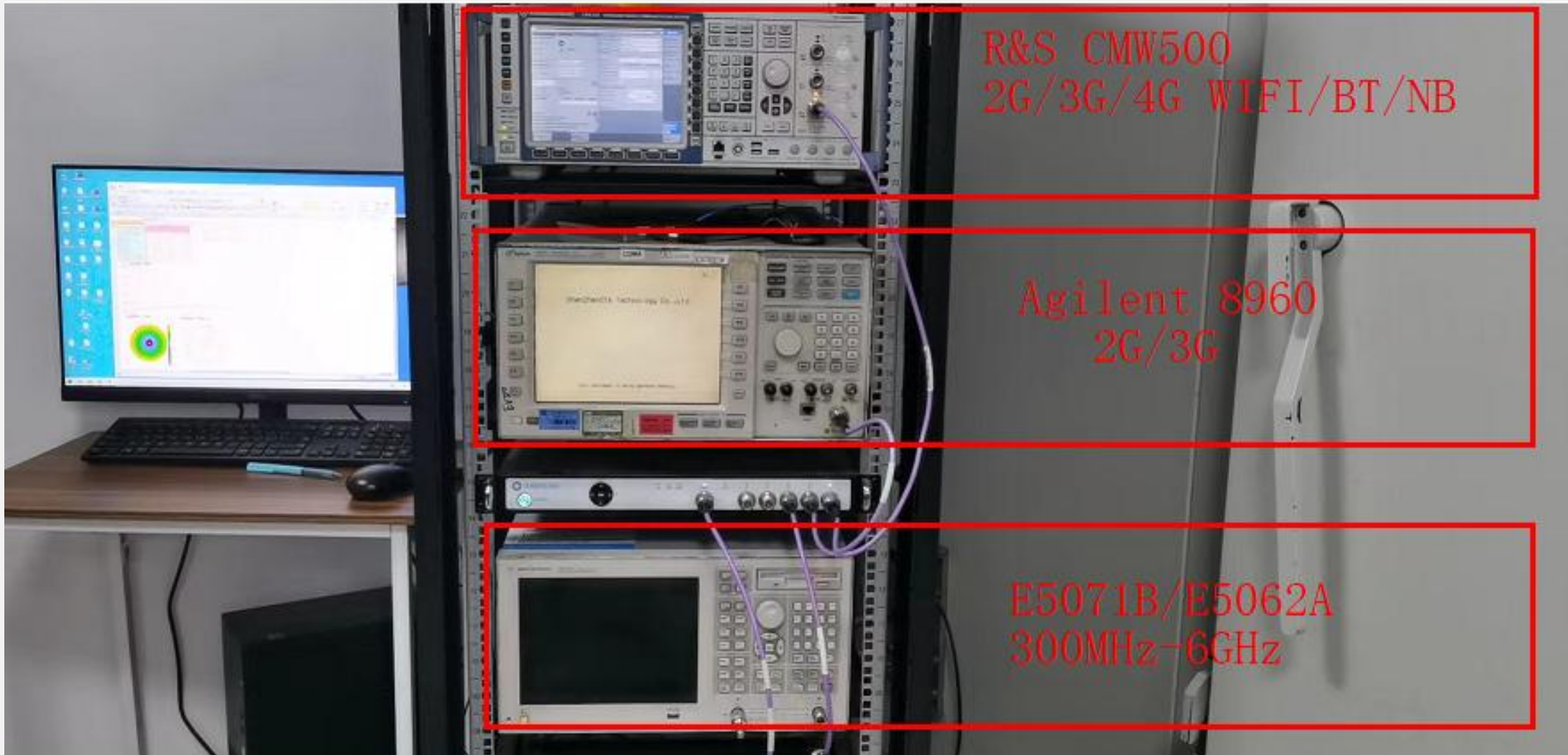
1.1.1 Anechoic Chamber Test Setup

The gain of the antenna was measured in the anechoic chamber(ETS-3D). The chamber provides less than -30 dB reflectivity from 400 MHz through 9 GHz. The chamber size is: 7m*4m*3m. The measurement results are calibrated using a leaky wave horn standard. We can measure the antenna gain and efficiency accurately.



3. Test system description--- Test Instruments

1.1.3 Instruments



5. Test Result---Return Loss and Efficiency

S11 (GM5) :

LTC ANT S11 parameter Summary

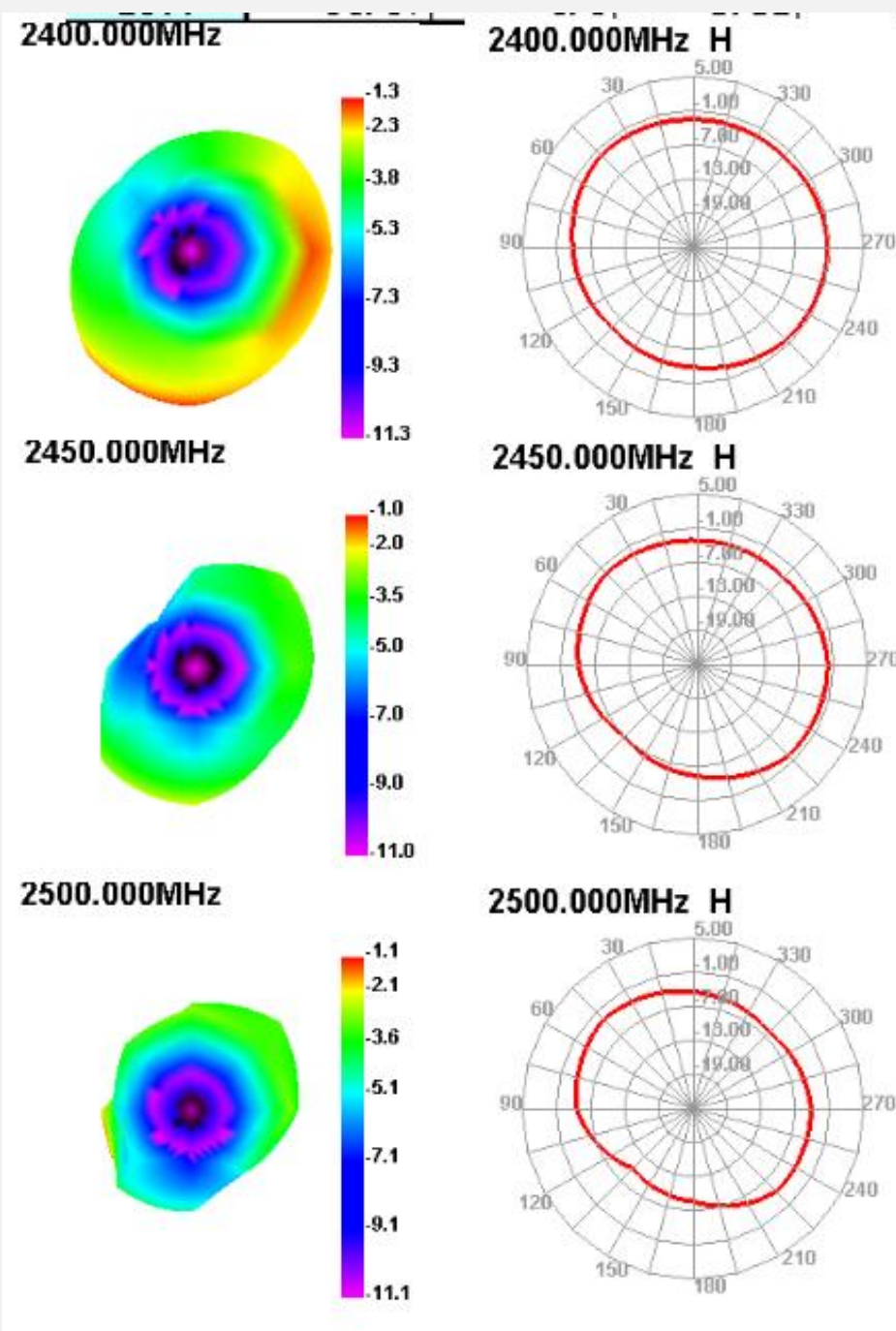
Band	2400-2500 (MHz)		
	2400	2450	2483
R. L (dB)	-8.7	-15.5	-19.1
VSWR	2.1	1.4	1.2



6. Gain efficiency

Data (GM5) :

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)
2400	46.14	-3.36	-1.28	-3.43
2410	42.39	-3.73	-1.51	-3.66
2420	39.91	-3.99	-1.54	-3.69
2430	38.23	-4.18	-1.48	-3.63
2440	38.65	-4.13	-1.3	-3.45
2450	39.7	-4.01	-1.02	-3.17
2460	38.09	-4.19	-1.14	-3.29
2470	34.35	-4.64	-1.38	-3.53
2480	35.45	-4.5	-1.12	-3.27
2490	35.77	-4.46	-1.02	-3.17
2500	34.67	-4.6	-1.12	-3.27



7.schedule drawing (工程图)



A10/V533流媒体机型天线料号：CS2208线长90mm 1代端子