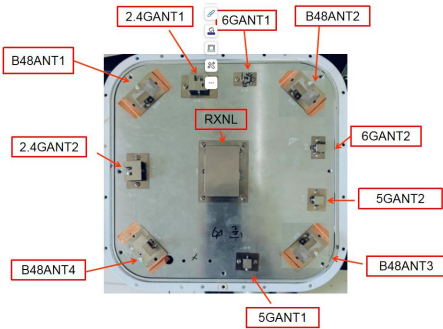


VLG TECHNOLOGY

ShenZhen VLG Wireless TECHNOLOGY CO.,LTD

Product Specification

Customer/Project	pBS31480W7 Antenna	Frequency Band	B48、2.4G、5.8G、6G、RXNL、GPS		
VLG SCT P/N	V2195-044-A-01	Version	R:A		
Design	Junzhou Liu	Quality		Confirm by	
Mechanical design	Pengang Li	PM			
Date	2024-07-03				
Customer Project /SCT P/N	Customer Project: pBS31480W7 Antenna				
	SCT P/N:				
Customer Confirmation					
VLG Communication Technology					
Research and Development project Customer Satisfaction Survey					
RF	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Basic satisfaction	<input type="checkbox"/> Not satisfied		
ME	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Basic satisfaction	<input type="checkbox"/> Not satisfied		
PM	<input type="checkbox"/> Satisfactory	<input type="checkbox"/> Basic satisfaction	<input type="checkbox"/> Not satisfied		
Recommendation note:					
Product Features:					
					
Form Number: VLG/QRF7.3-24/A4			Duration of preservation :2 years		

www.vlg.com.cn

VLG has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

Index

1、Product Specifications.....	3
2、Electrical Performance.....	3
2.1 Performance Requirements	3
2.2 VSWR Test.....	3
2.3 Gain Test	4
2.3.1 Test Environment	4
2.3.2 Test Instrument	4
2.3.3 Test Results	4
3、Annex.....	8
3.1 Product Features.....	8
3.2 VSWR.....	11
3.3 Antenna Pattern.....	20
4、Antenna structure diagram.....	6

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

1、Product Specifications

The report mainly provides the test status of various electrical performance parameters of the pBS7430-B48 Antenna. The operating frequency of the antenna is shown in Table 1.

2、Electrical Performance

2.1 Performance Requirements

Table 1 Electrical performance index of B39 antenna

frequency range (MHz)	B48、2.4G、5.8G、6G、RXNL、GPS
VSWR	≤ 2.5
Isolation (dB)	≥ 20
Impedance (Ω)	50
inefficiency (%)	60%
Gain (dBi)	≥ 4

2.2 Test

This antenna is debugged with the board of pBS7430-B48 Antenna provided by the customer. Figure 2 shows the state of the antenna installed on the test fixture, and various electrical performance tests are carried out with this fixture.

2.2.1 VSWR Test Settings

E5071C Network analyzer → 50 Ω Cable → 120mm long copper tube → Test fixture.

2.2.2 VSWR

The following is the value of the standing wave ratio at the edge frequency of the operating band of the pBS7430-B48 Antenna. The antenna efficiency, gain, standing wave ratio, isolation, direction diagram and other related waveforms obtained from the test are shown in the attachment.

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

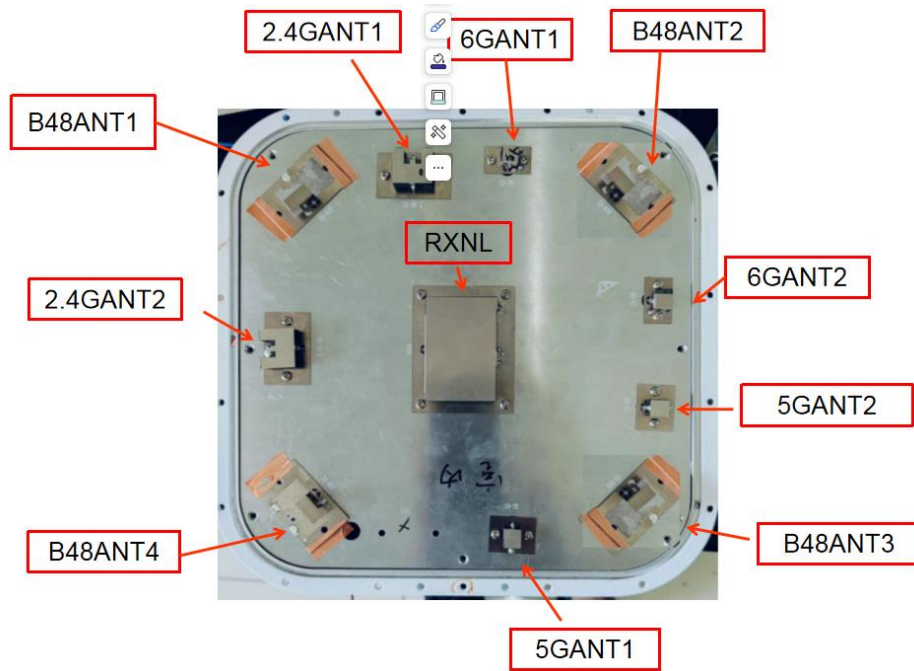


Figure 2 Test fixture

2.3 Gain Test

2.3.1 Test Environment

VLG Microwave Anechoic Chamber : ETS-AMS8500, Test Frequency:400 MHz—8.5GHz。

2.3.2 Test Instrument

HP8753ES Network analyze、Computer、Transmitting Turntable、Receiving Antenna。

2.3.3 Test Results

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

Confidential Information

B48 GEfficiency and Gain

Frequency Hz	Efficiency %	Gain dBi
3300000000	78%	5.40
3350000000	76%	5.78
3400000000	80%	5.94
3450000000	77%	5.48
3500000000	77%	5.89
3550000000	77%	5.97
3600000000	75%	5.82
3650000000	74%	4.94
3700000000	74%	5.01

2.4GEfficiency and Gain

Frequency Hz	Efficiency %	Gain dBi
2400000000	66%	3.67
2410000000	68%	3.63
2420000000	68%	3.66
2430000000	69%	3.86
2440000000	71%	4.06
2450000000	74%	4.40
2460000000	75%	4.60
2470000000	76%	4.72
2480000000	77%	4.79

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

Confidential Information

24900000000	78%	4.87
25000000000	77%	4.76

5G Efficiency and Gain

Frequency Hz	Efficiency %	Gain dBi
5150000000	72%	6.00
5200000000	68%	5.28
5250000000	68%	4.81
5300000000	68%	5.19
5350000000	70%	5.57
5400000000	69%	5.58
5450000000	68%	5.31
5500000000	69%	5.04
5550000000	69%	5.00
5600000000	66%	5.09
5650000000	65%	5.06
5700000000	67%	5.28
5750000000	68%	5.79
5800000000	69%	6.22
5850000000	68%	6.33

6G Efficiency and Gain

Freq(MHz)	Efficiency(%)	Gain(dBi)
5925	67.71	6.36
5975	71.11	6.70
6025	71.85	6.61
6075	71.85	6.64
6125	70.96	6.15
6175	66.50	5.80

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

Confidential Information

6225	67.95	5.93
6275	65.19	5.67
6325	67.95	5.68
6375	68.32	5.49
6425	67.48	5.77
6475	68.01	5.59
6525	65.75	5.66
6575	65.58	5.85
6625	65.80	5.74
6675	65.21	5.65
6725	64.79	5.50
6775	64.52	5.32
6825	66.00	5.18
6875	63.64	5.29
6925	66.20	5.02
6975	65.92	5.73
7025	63.65	5.36
7075	63.45	5.55
7125	61.03	5.13

RXNL Efficiency and Gain

Frequency Hz	Efficiency %	Gain dBi	Frequency Hz	Efficiency %	Gain dBi
1700000000	64%	5.63	2750000000	84%	9.31
1750000000	60%	6.44	2800000000	81%	9.12
1800000000	58%	5.17	2850000000	76%	8.72
1850000000	63%	5.13	2900000000	76%	8.62
1900000000	64%	4.77	2950000000	76%	8.25
1950000000	66%	4.42	3000000000	73%	7.54
2000000000	64%	4.09	3050000000	69%	7.02
2050000000	67%	4.52	3100000000	67%	7.25

www.vlg.com.cn

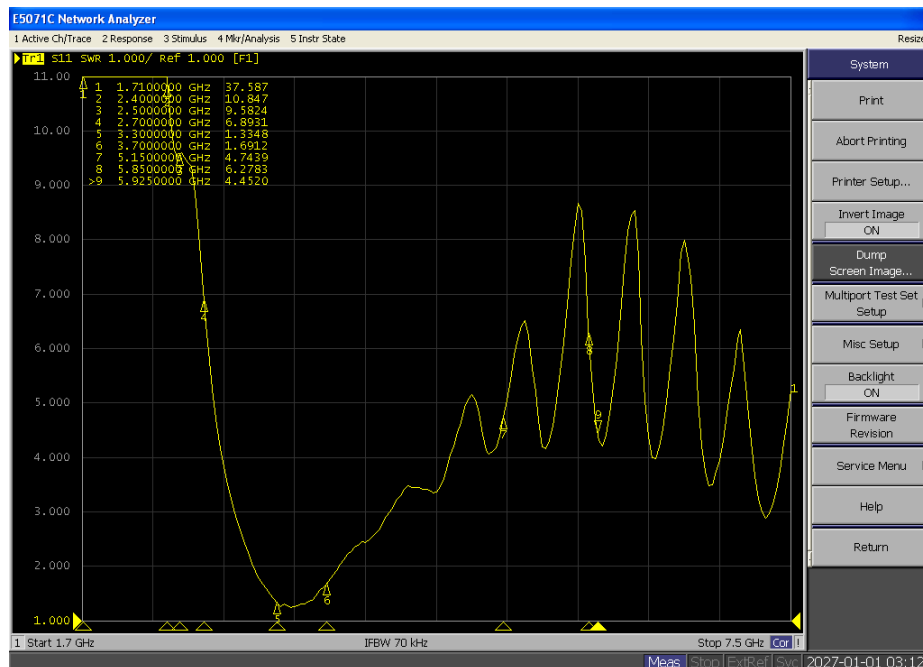
VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

Confidential Information

2100000000	68%	5.02	3150000000	65%	7.40
2150000000	66%	5.76	3200000000	65%	7.32
2200000000	66%	5.79	3250000000	66%	7.36
2250000000	73%	5.94	3300000000	66%	7.46
2300000000	81%	6.36	3350000000	66%	6.93
2350000000	79%	6.79	3400000000	69%	6.43
2400000000	79%	6.89	3450000000	69%	6.55
2450000000	81%	6.74	3500000000	76%	6.97
2500000000	82%	6.87	3550000000	74%	7.30
2550000000	81%	7.03	3600000000	75%	7.51
2600000000	86%	7.23	3650000000	74%	7.77
2650000000	88%	7.76	3700000000	71%	7.45
2700000000	85%	8.71			

3、Annex

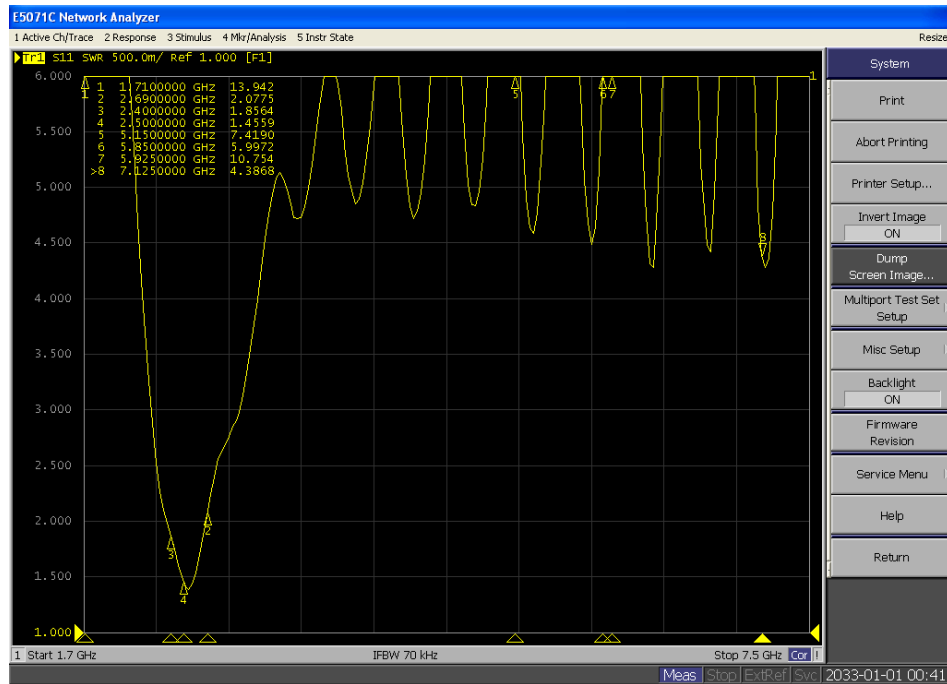
3.1 VSWR



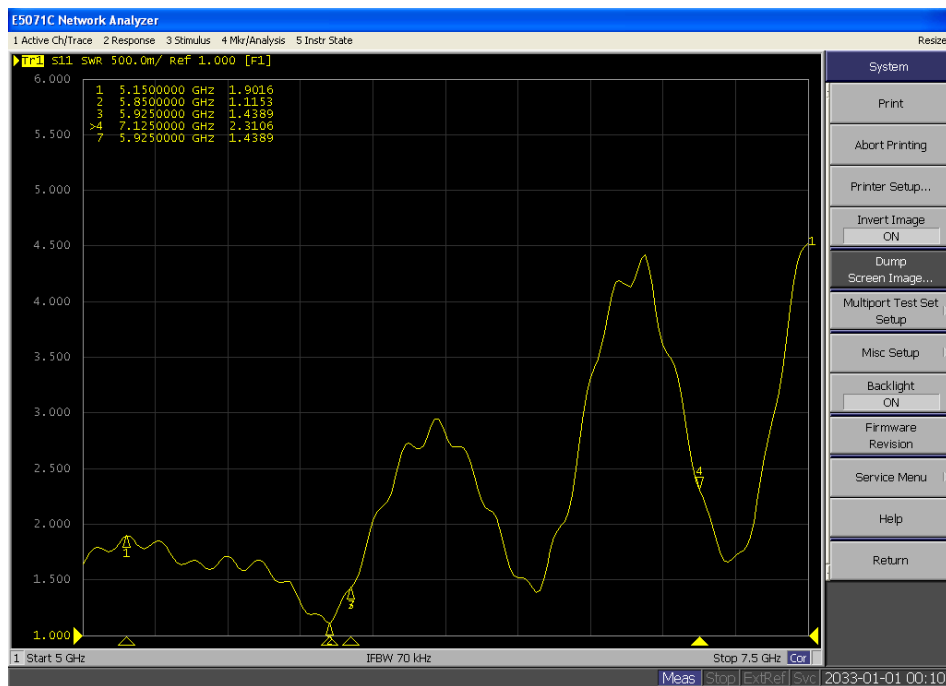
B48 Antenna VSWR

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



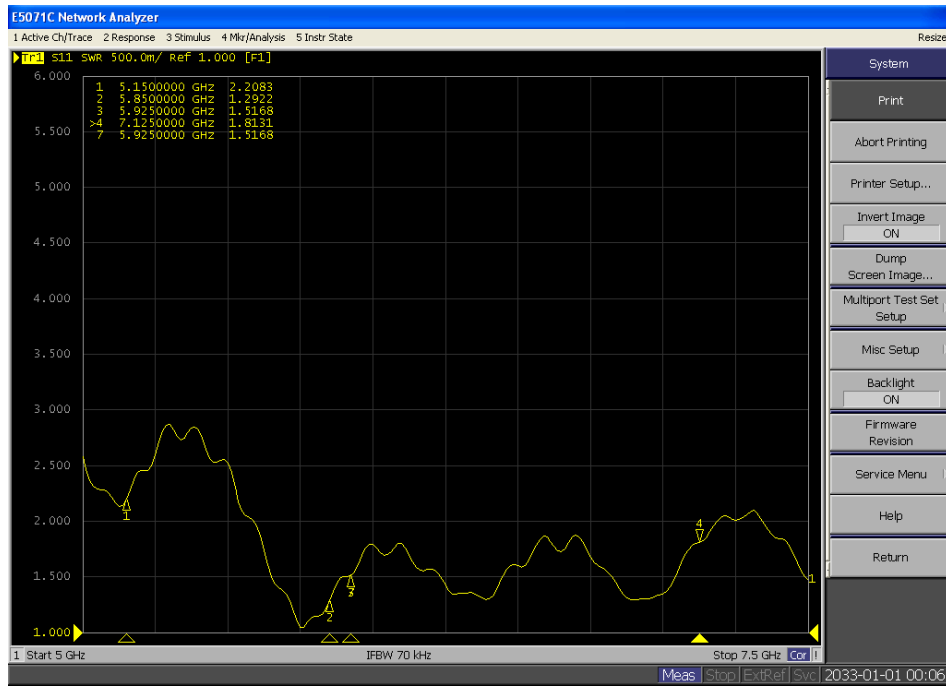
2.4G Antenna VSWR



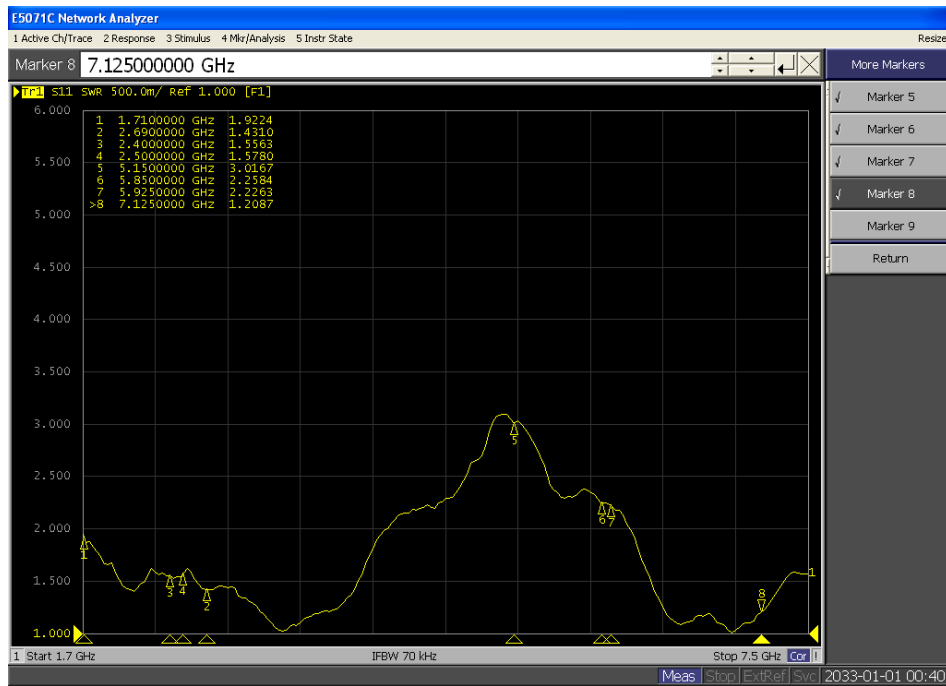
5G Antenna VSWR

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



6G Antenna VSWR

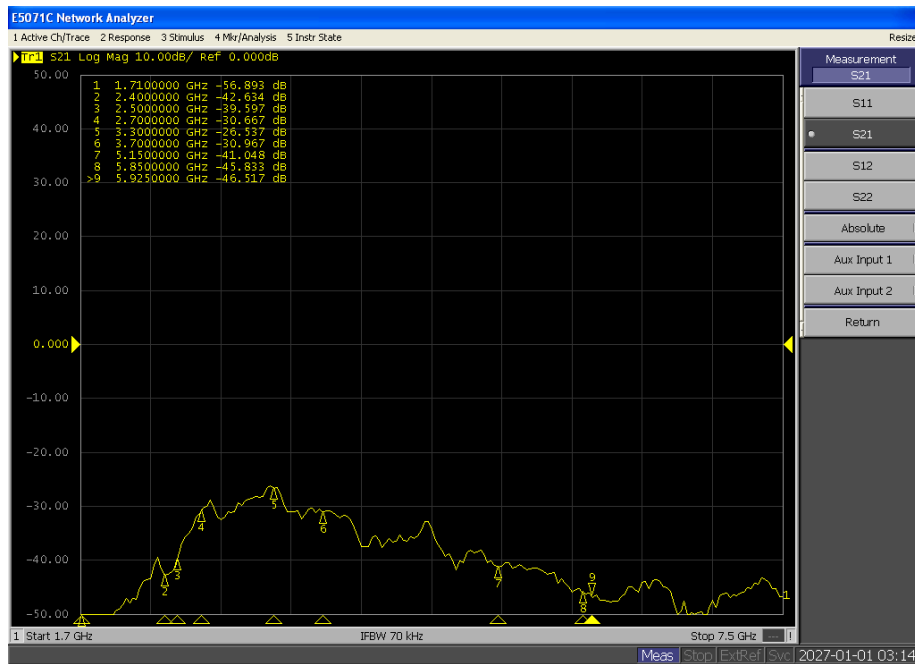


RXNL Antenna VSWR

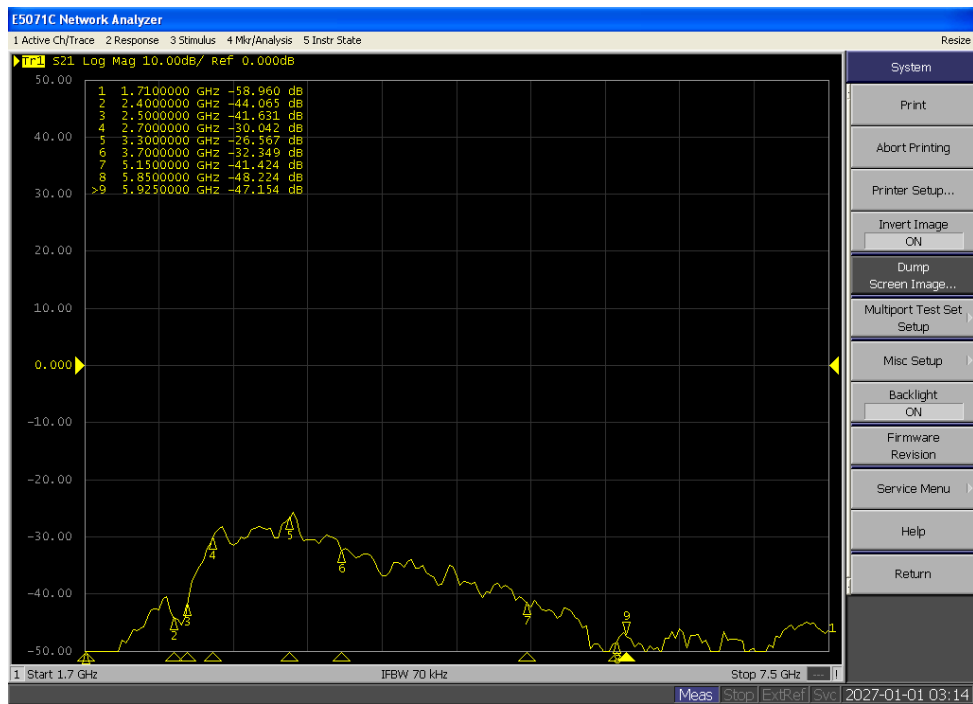
www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

3.2 Antenna isolation



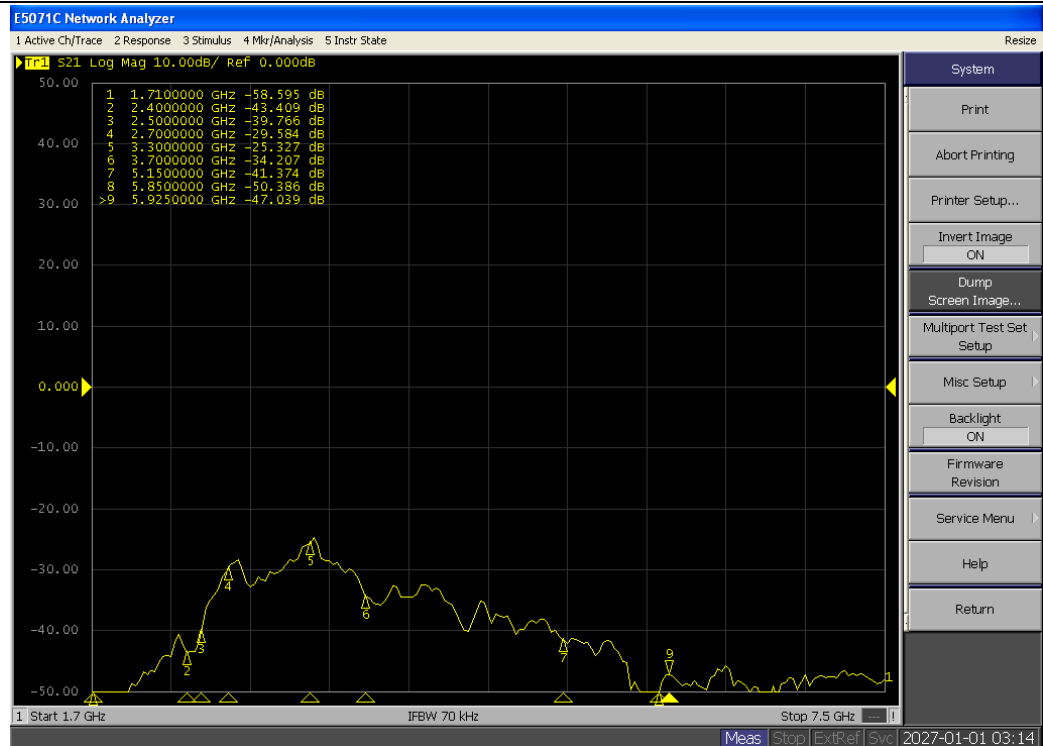
B48-ANT1-ANT2



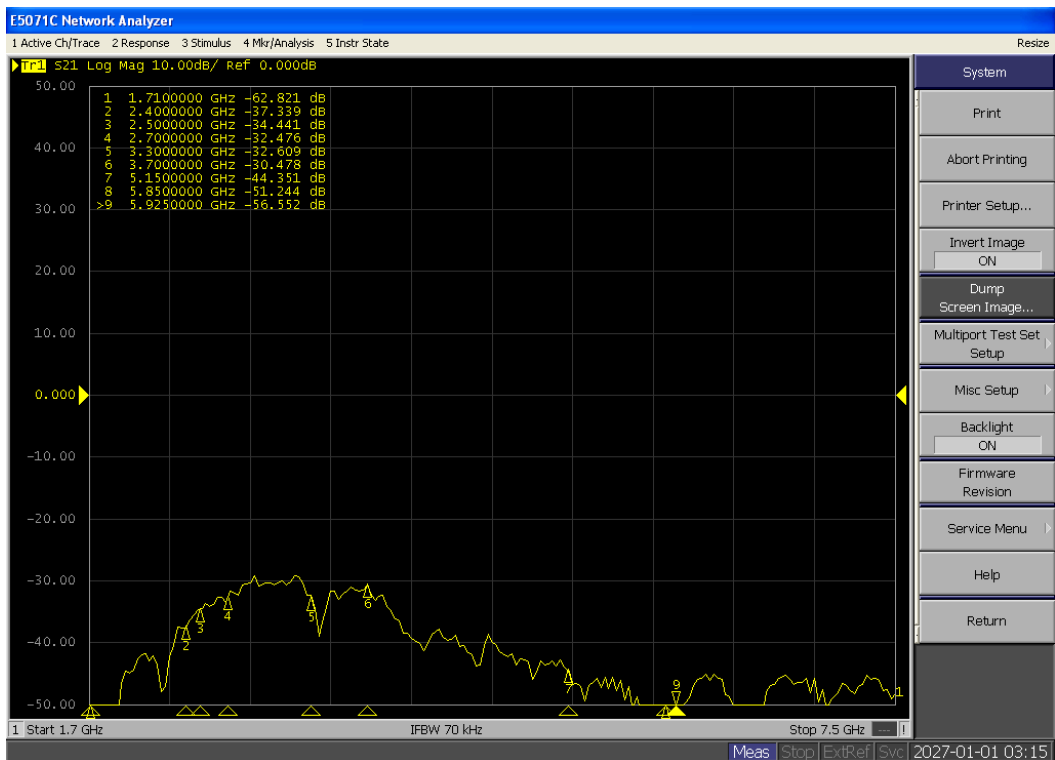
B48-ANT1-ANT3

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



B48-ANT1-ANT4



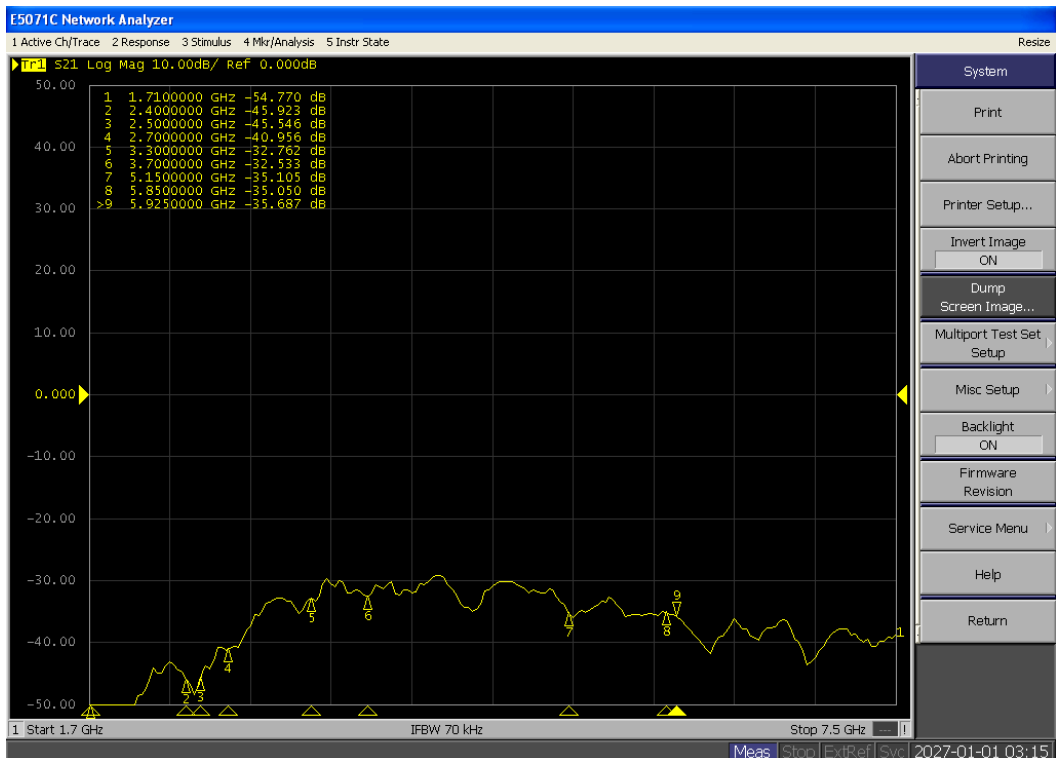
B48-2.4-ANT1

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



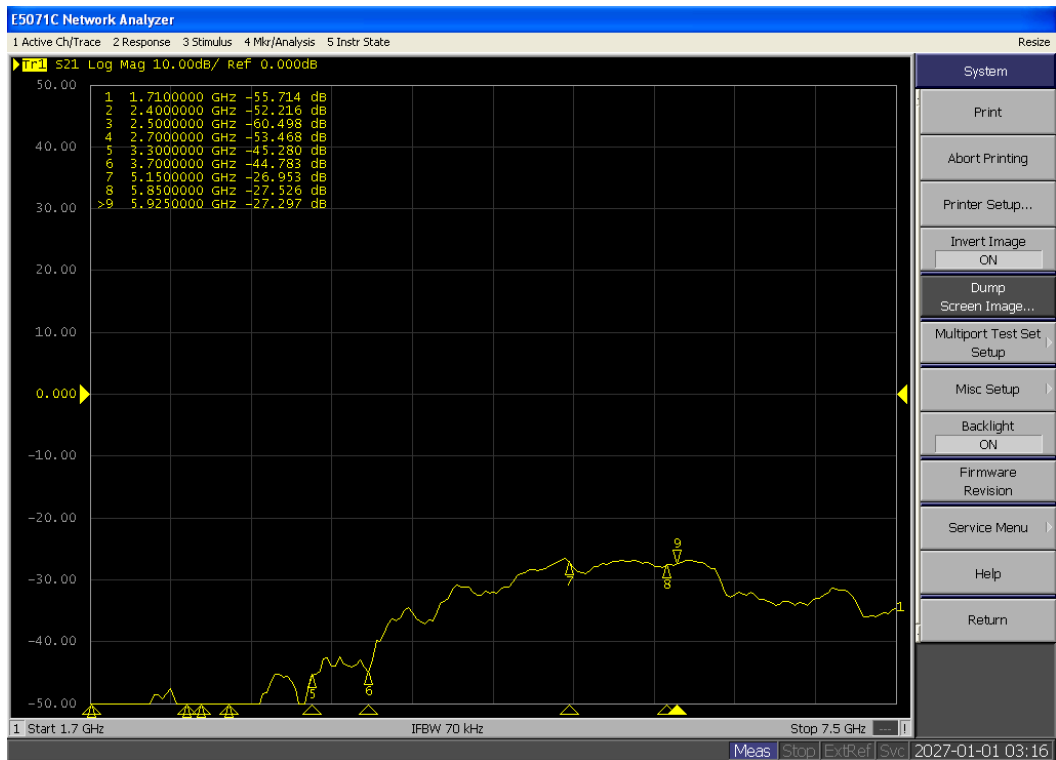
B48-2.4-ANT2



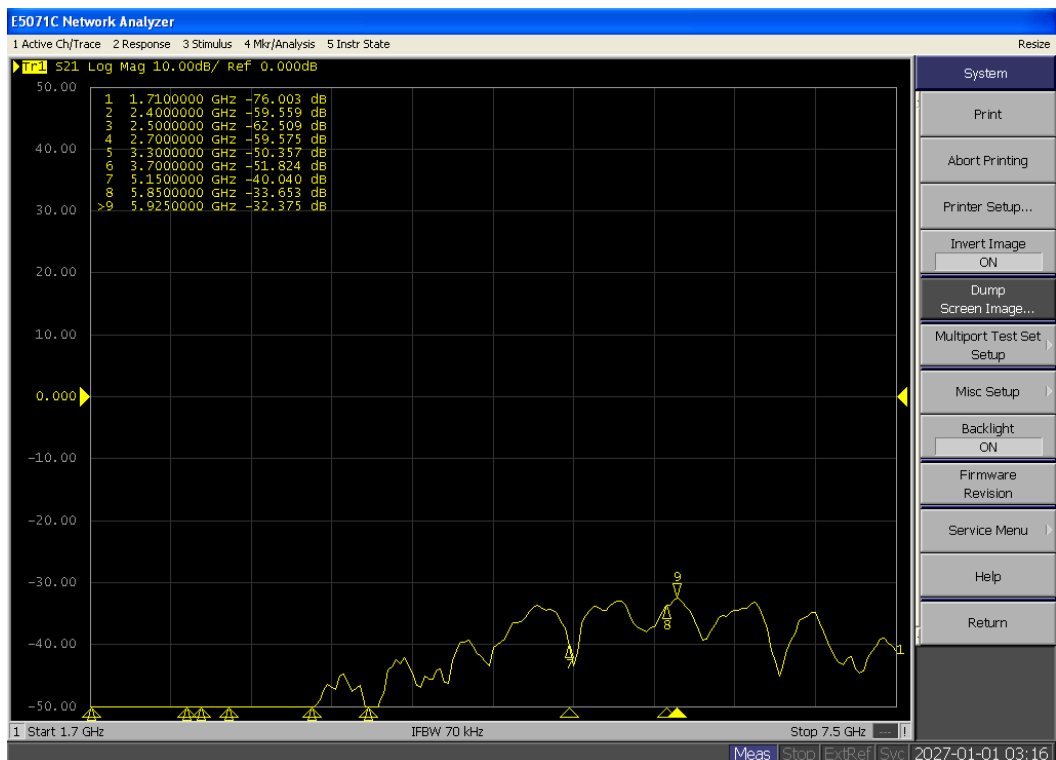
B48-5.8-ANT1

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



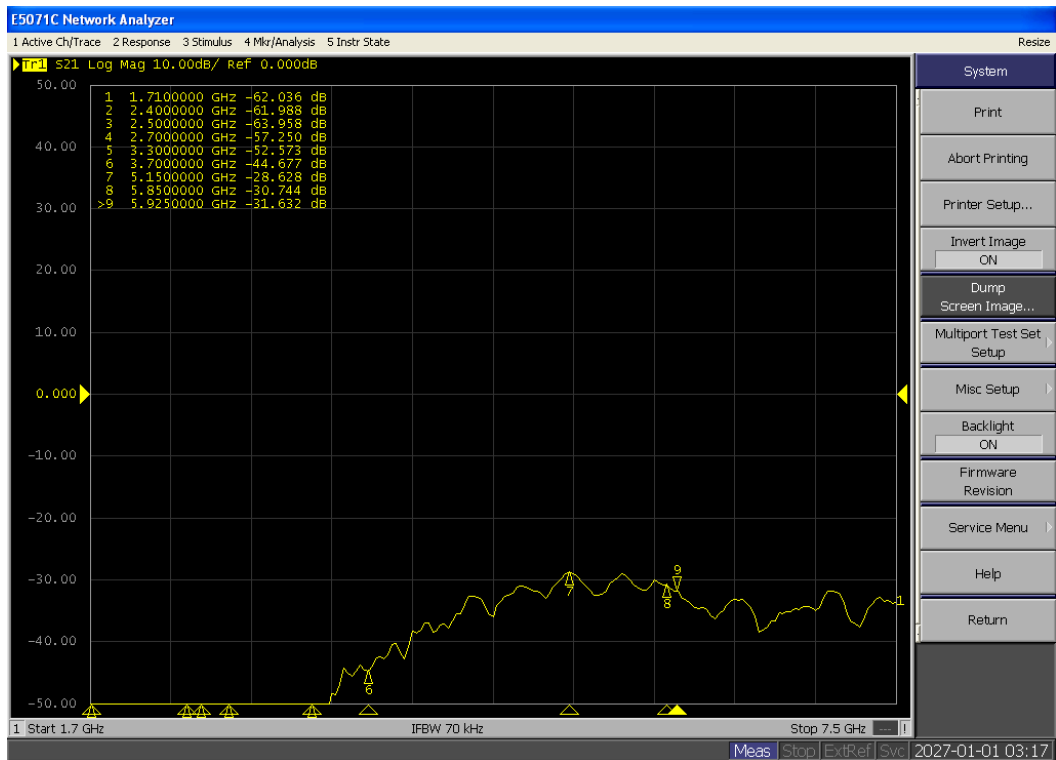
B48-5.8-ANT2



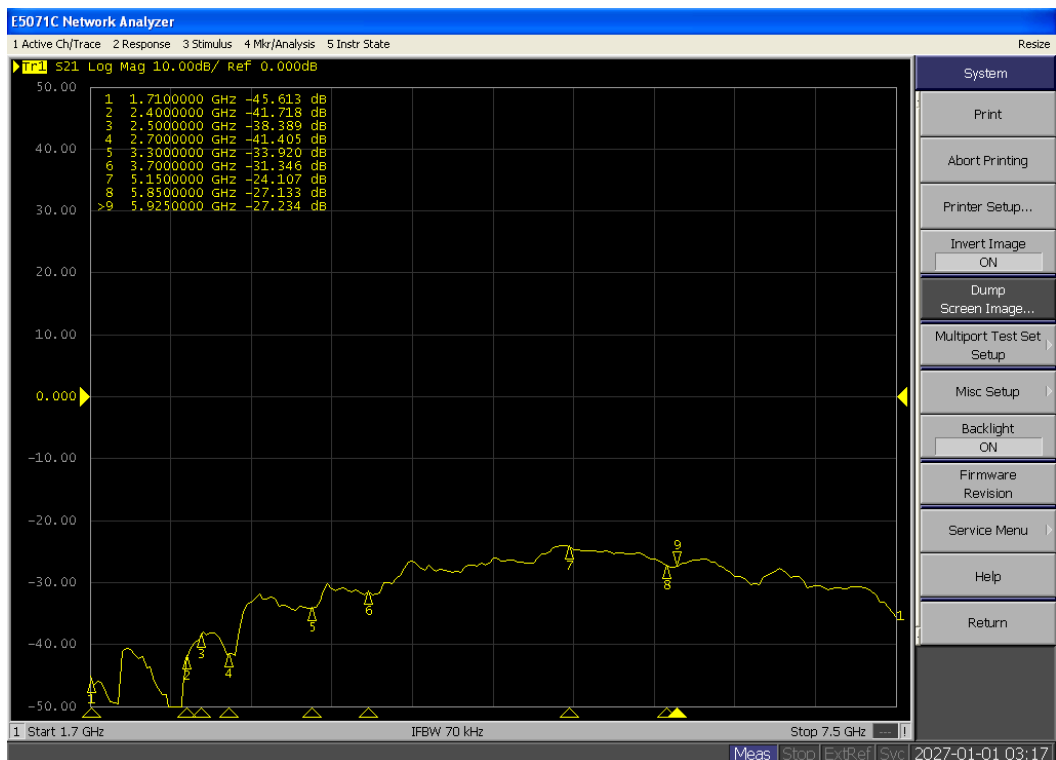
B48-6G-ANT1

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



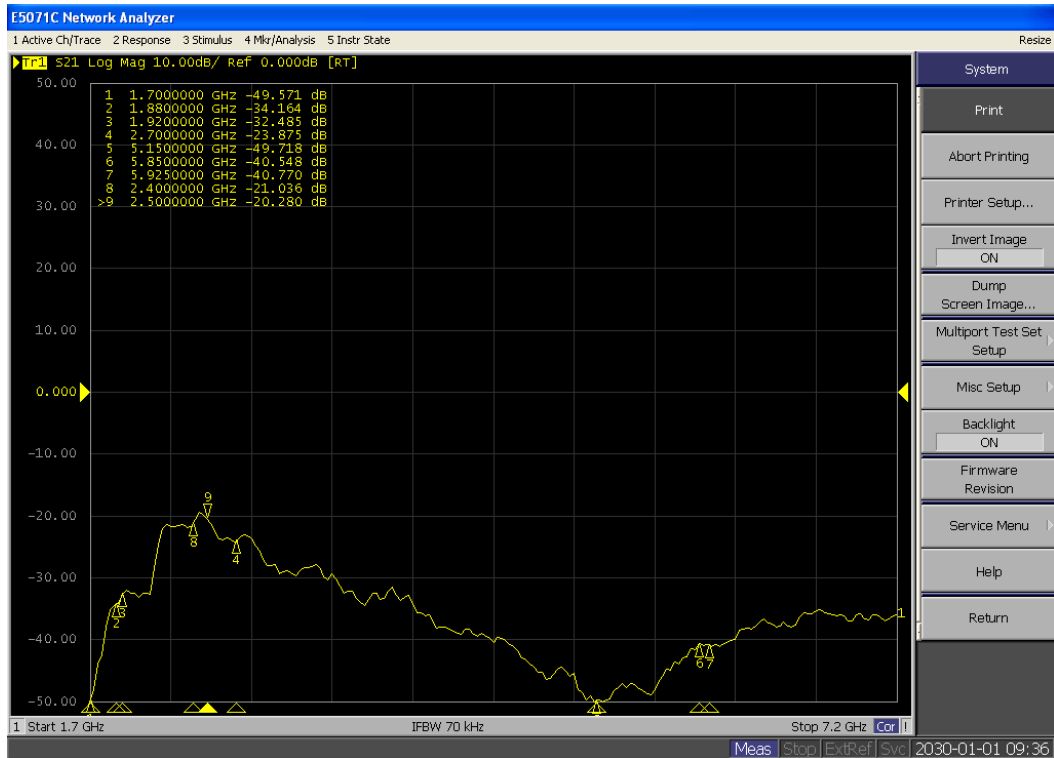
B48-6G-ANT2



B48-RNXL

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



2.4G-2.4G



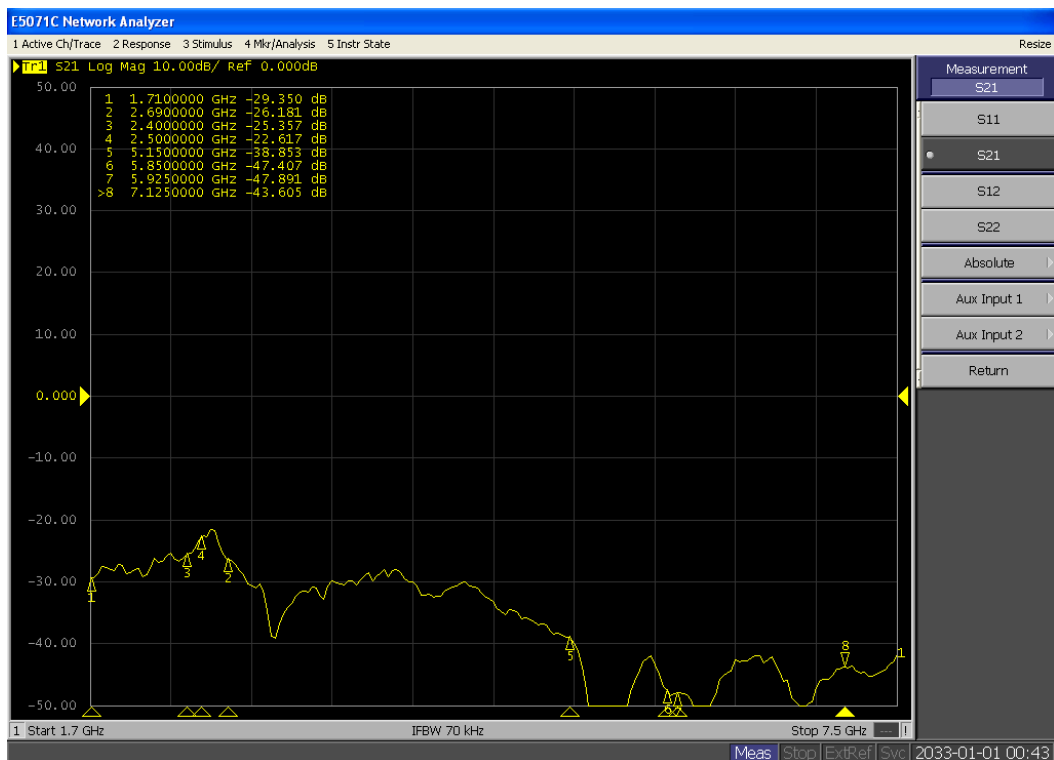
2.4G-RNXL

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



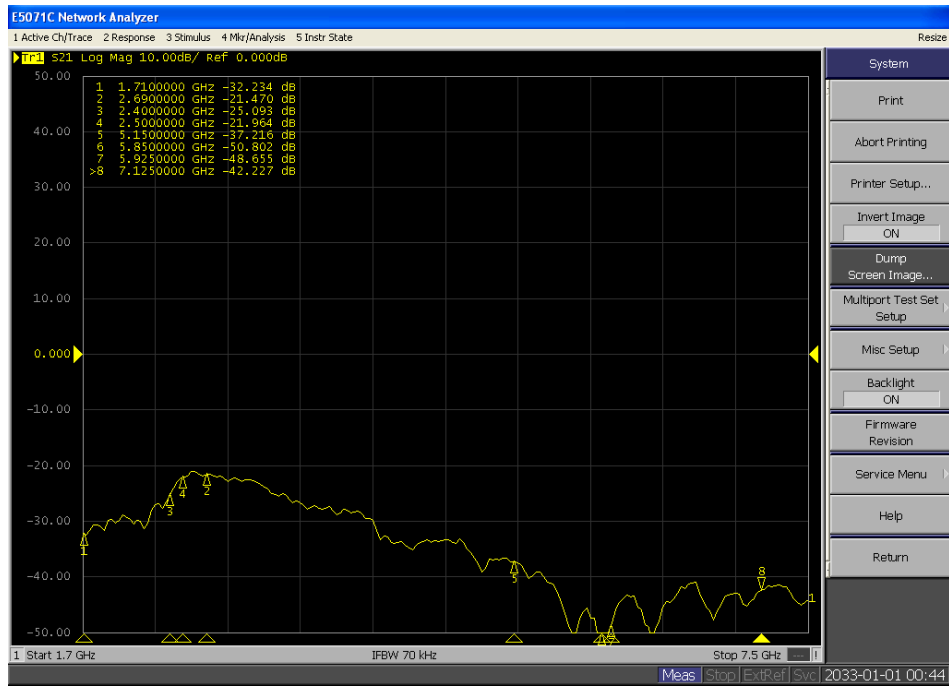
5.8G-6G



RNXL-2. 4G-1

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



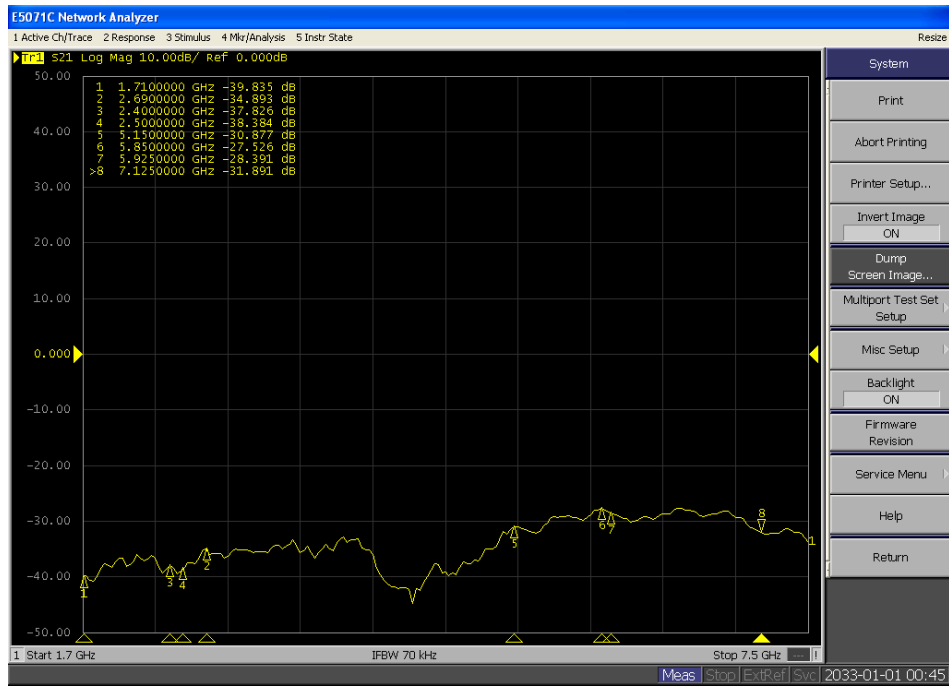
RNXL-2. 4G-2



RNXL-5G-1

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.



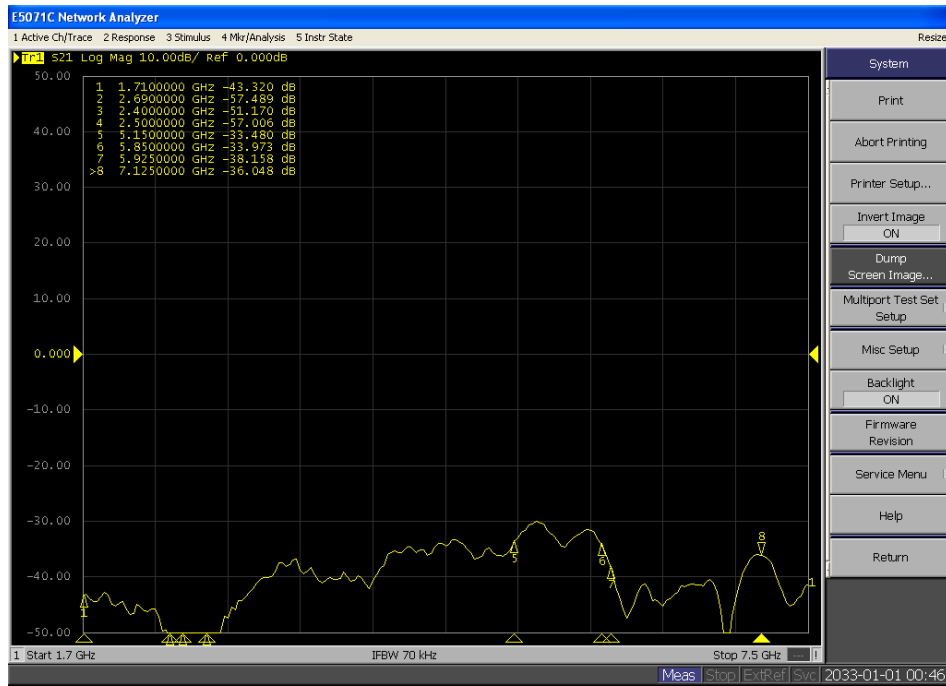
RNXL-5G-2



RNXL-6G-1

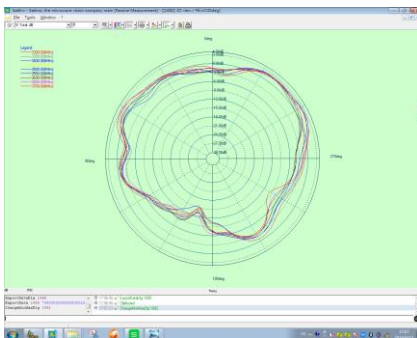
www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

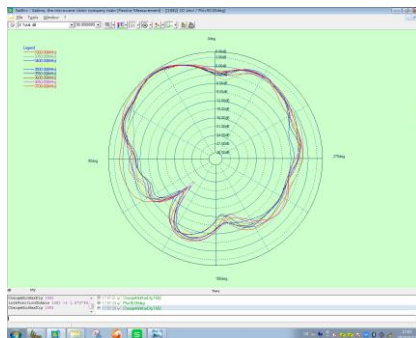


RNXL-6G-2

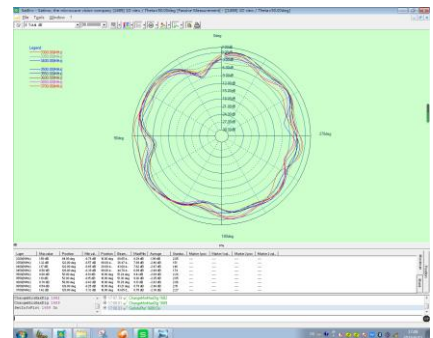
3.3 Antenna Pattern



Vertical plane 0° direction diagram

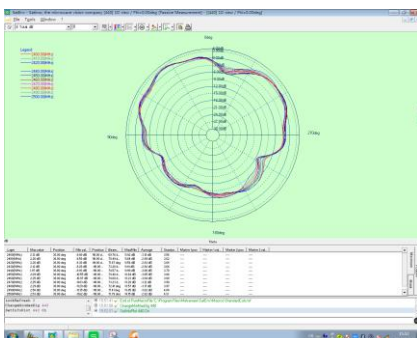


Vertical plane 90° direction diagram

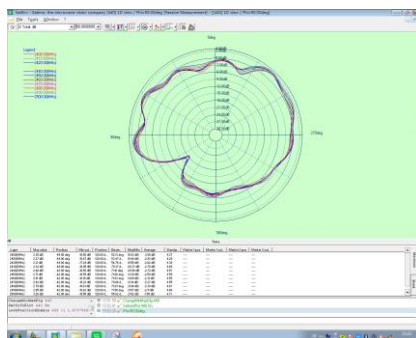


horizontal direction diagram

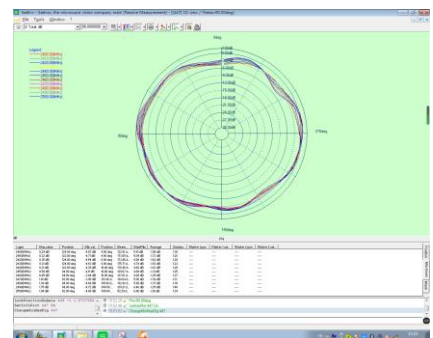
B48 Antenna Pattern



Vertical plane 0° direction diagram



Vertical plane 90° direction diagram

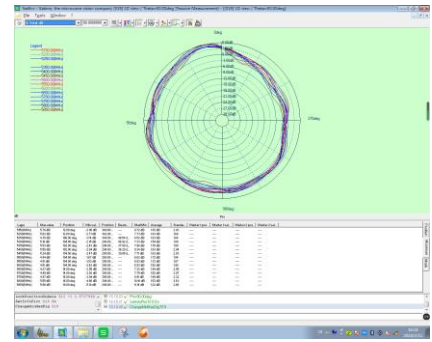
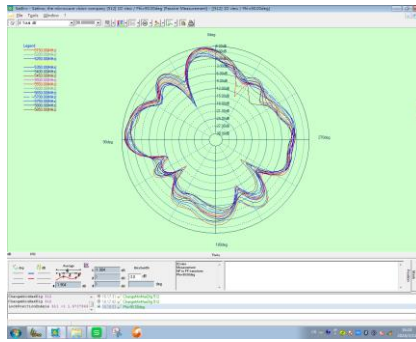
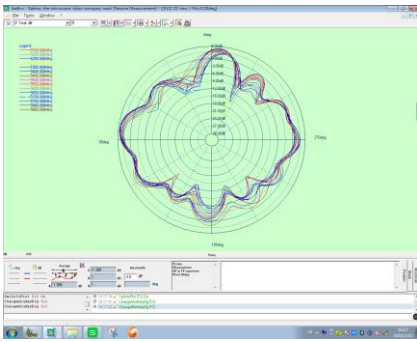


horizontal direction diagram

www.vlg.com.cn

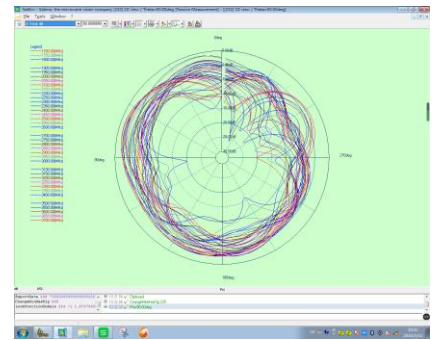
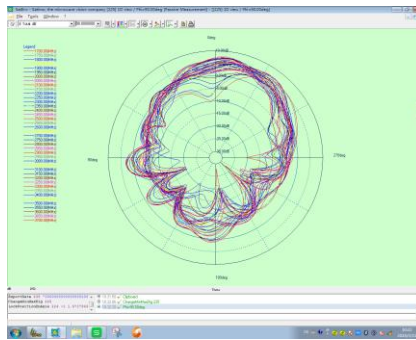
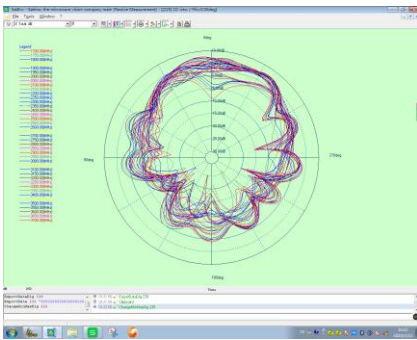
VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

2. 4G Antenna Pattern



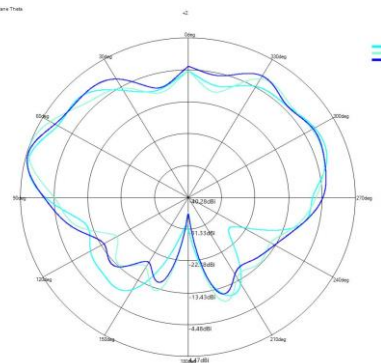
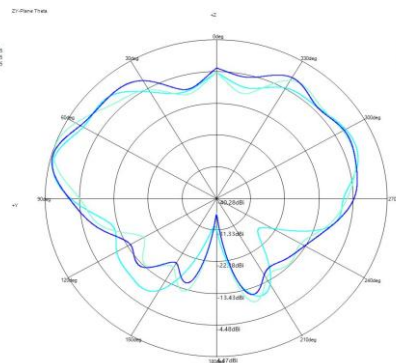
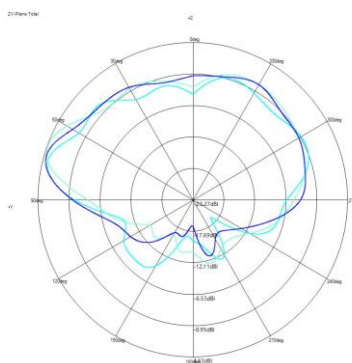
Vertical plane 0° direction diagram Vertical plane 90° direction diagram horizontal direction diagram

5G Antenna Pattern



Vertical plane 0° direction diagram Vertical plane 90° direction diagram horizontal direction diagram

RXNL Antenna Pattern



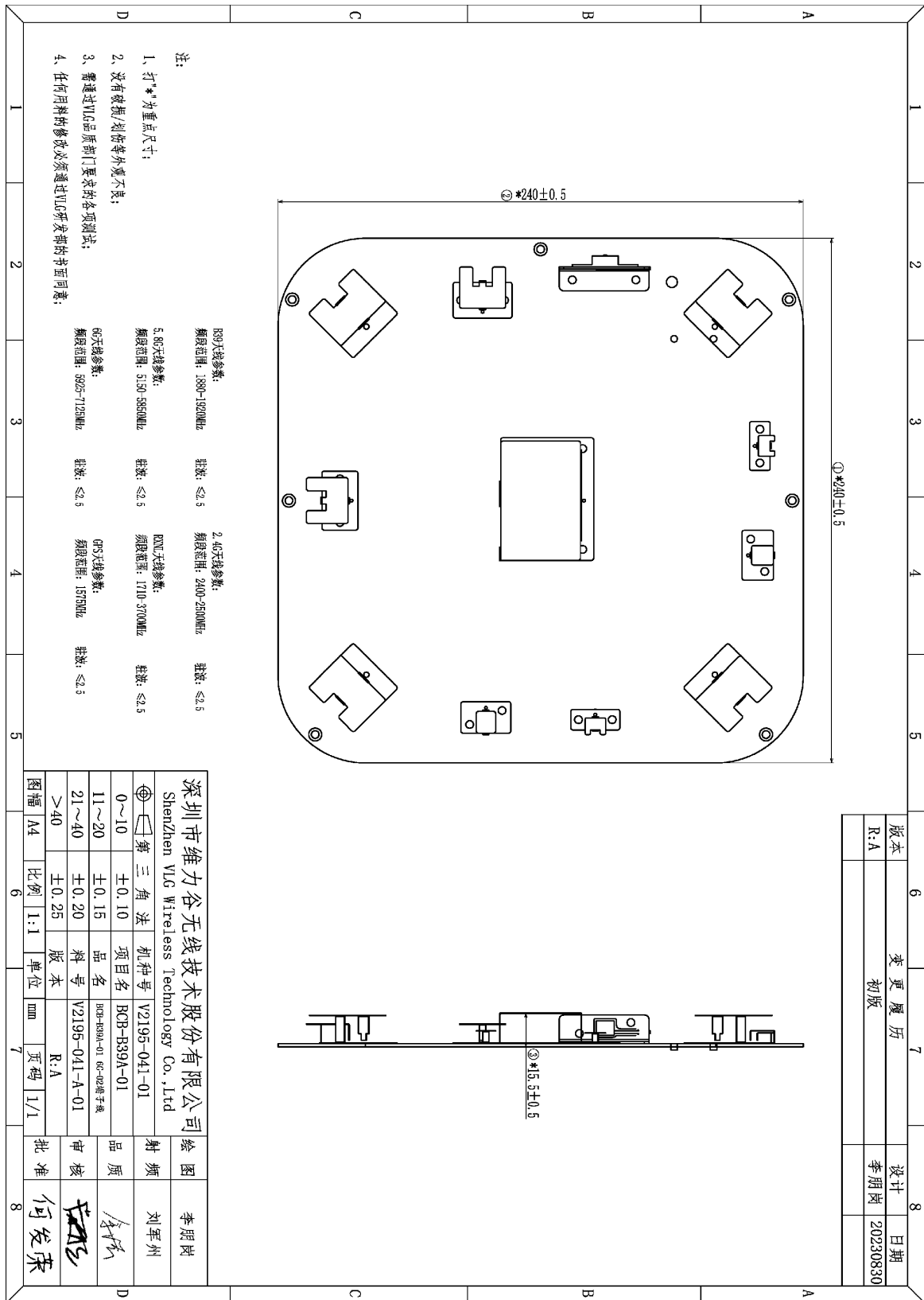
Vertical plane 0° direction diagram Vertical plane 90° direction diagram horizontal direction diagram

6G Antenna Pattern

www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.

4、Antenna structure diagram


www.vlg.com.cn

VLG Communication has possession of proprietary information provided in this report and this proprietary information shall be kept in strict confidence and not disclosed to any person or firm without the prior written consent of VLG Communication Technology.