



Shenzhen DEWEIMA Communication Equipment Co.Ltd

SPECIFICATION SHEET FOR APPROVAL

CUSTOMER NAME (客户名称)	ShenZhen FLYSKY Technology Co.,Ltd
CUSTOMER P/N (客户料号)	E-ANT0-240080-NV14-02
PART NAME (品 名)	EL18 - 2.4 G Built-in antenna
DWM P/N (料 号)	
APPROVAL REV. 版次	DWM-V1.0

CONTRACTOR			DATE: 2022.8.11
QA CHECKED	ME CHECKED	RF CHECKED	MANAGER CHECKED

CUSTOMER		DATE:
Approved By	Checked By	Prepared By

	Product Specification		
	P/N:	Rev.: A	Page:

Content

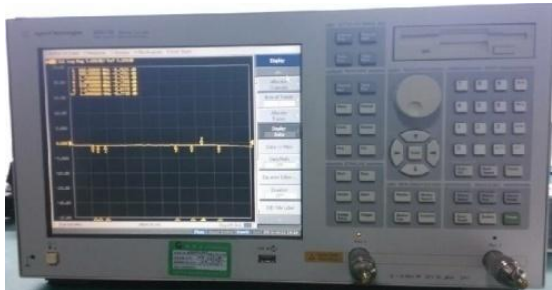
Content	2
1. Product Application/产品应用	3
2. The test environment, equipment/测试环境、设备	3
3. Technology Parameters/技术参数	6
4. Antenna Engineer drawing/工程图纸	7
5. Environmental Performance/环境性能	9
6. Usage Precaution/使用禁忌或注意事项	10

	Product Specification		
	P/N:	Rev.: A	Page:

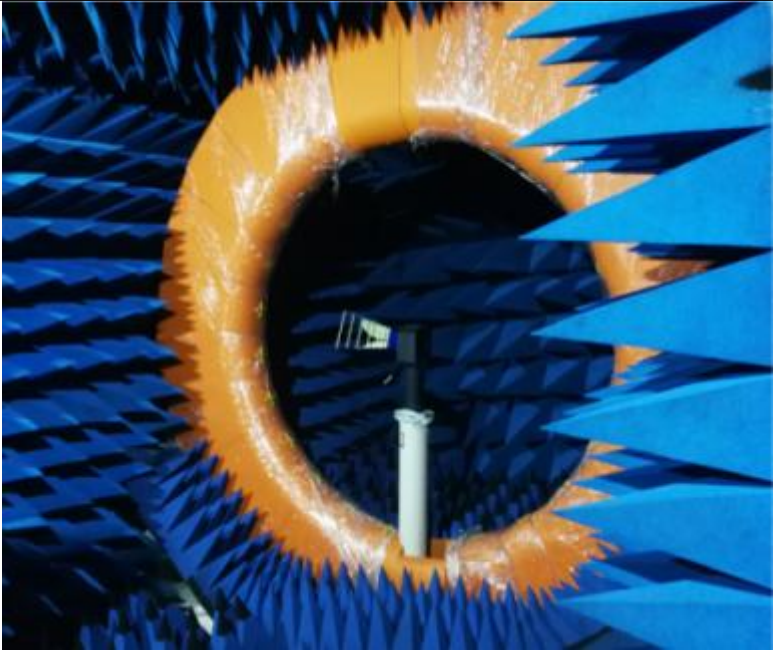
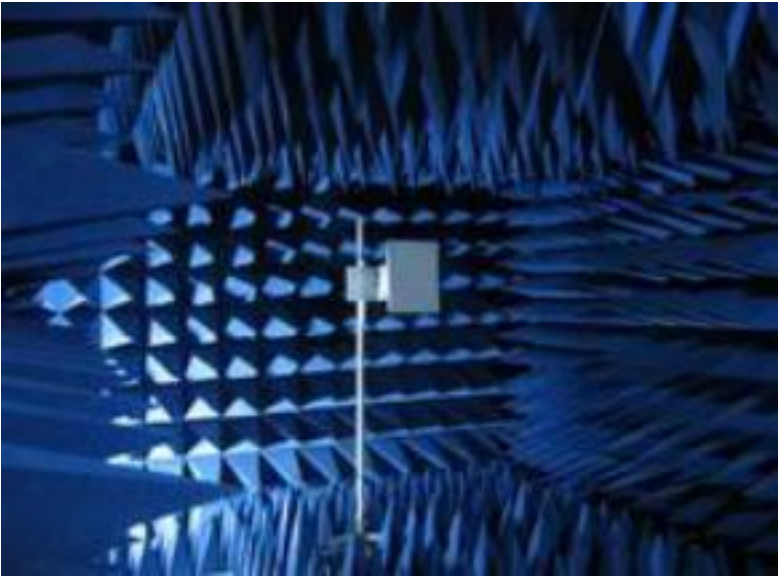
1. Product Application/产品应用

This antenna product is used for the transmission of 2400~2500MHz signals.
该天线产品用于 2400~2500MHz 信号的传输。

2. The test environment, equipment/测试环境、设备

Item 项目	Description 项目描述	Test Condition/测试条件	Requirement /规格要求
2.1	Passive testing /无源测试	The VSWR measurement devices are connected in sequence: Agilent5071B Network Analyzer → measurement Cable → Customer-providing Devices. (VSWR 测量装置依次连接: 网络分析仪测量电缆 agilent5071B→→客户提供终端。)	Standing wave ratio 驻波比: 2400~2500MHz<2.0 impedance 阻抗: 50 oh
		Test equipment/测试设备	
			
Item 项目	Description 项目描述	Test Condition/测试条件	Requirement /规格要求
2.2	增益及 效率测试	Follow picture shows the measurement condition of the antenna been put on the measurement device, which is used for all measurement of electric performances. (以下图片显示的天线的测量条件被放在测量装置,它是用于所有的测量电性能。)	Antenna gain 天线增益: 2400~2500MHz:2.5dBi±1.0dBi Antenna efficiency 天线效率: 2400~2500MHz>45%

	Product Specification		
	P/N:	Rev.: A	Page:

		2.3 Microwave Anechoic (Satimo&ETS) /微波暗室	Test equipment/测试设备
			 



Product Specification

P/N:

Rev.:
A

Page:

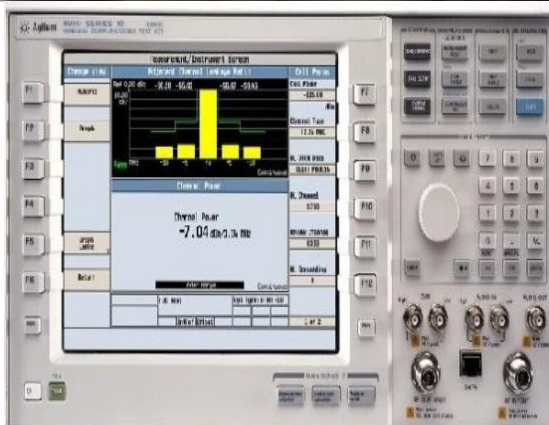
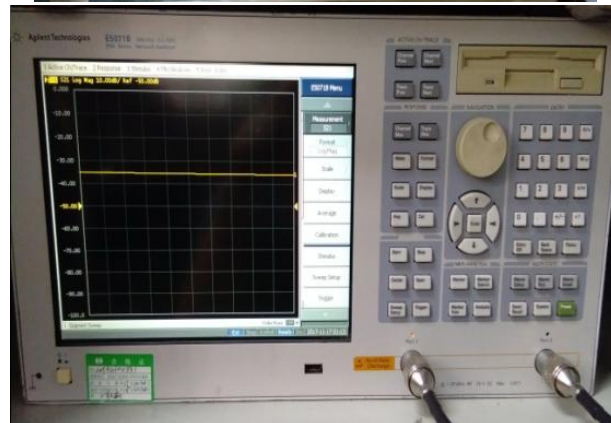
CMW500

Agilent5071B

AgilentE4405B

Agilent8960

2.4





Product Specification

P/N:

Rev.:

A

Page:

3. Technology Parameters/技术参数

Frequency Range/频率范围: 2400-2500MHz

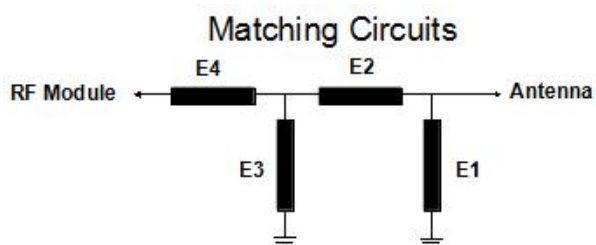
Operating Humidity/工作湿度: 85% R.H.MAX

Temperature Rating/温度范围: -40°C ~ +85°C

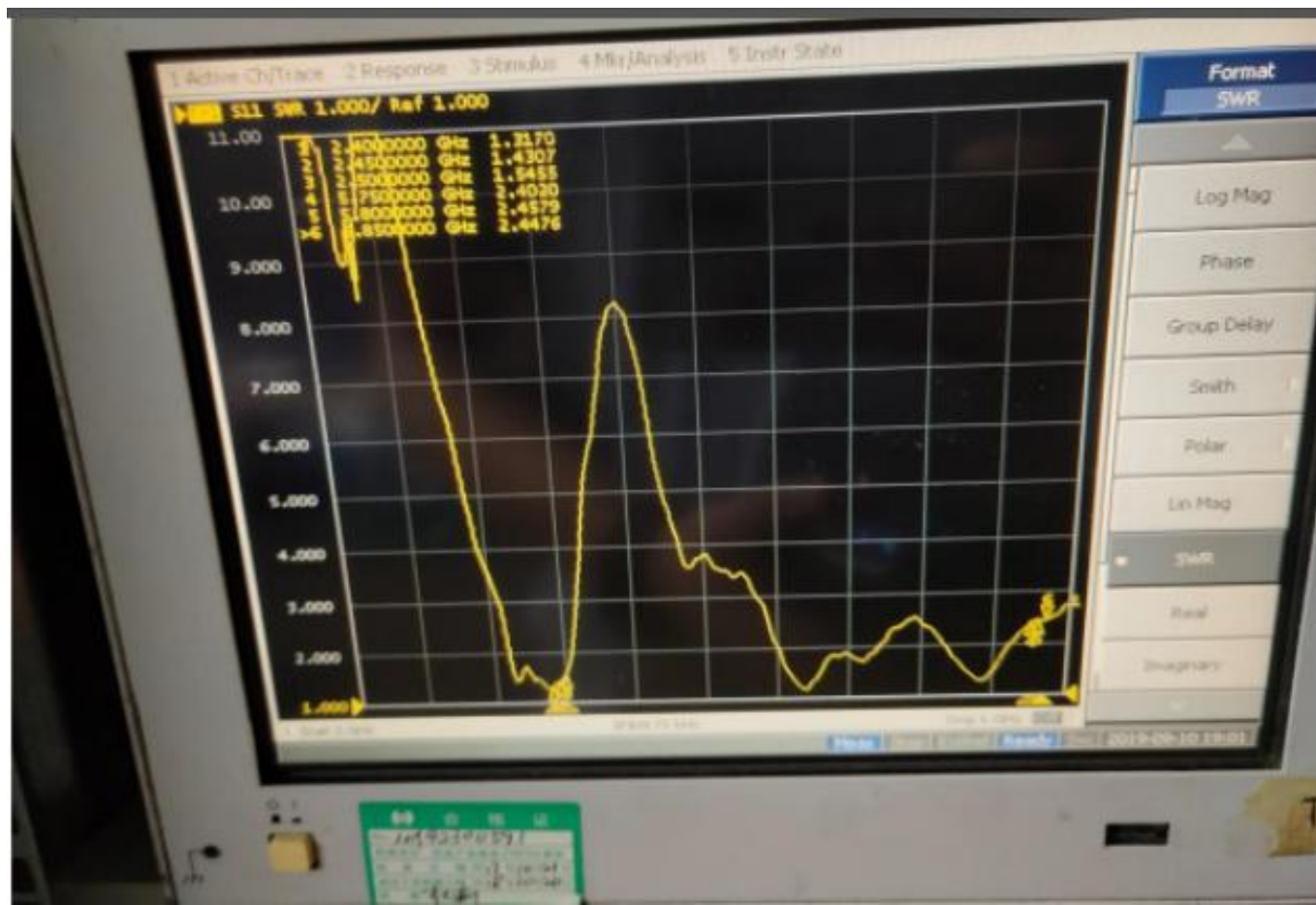
3.1 The matching test value/调试匹配值

我司没有对天线的匹配电路做调试

Element	Value
E1(0402)	
E2(0402)	
E3(0402)	
E4(0402)	



3.2 VSWR/驻波比:





Product Specification

P/N:

Rev.:

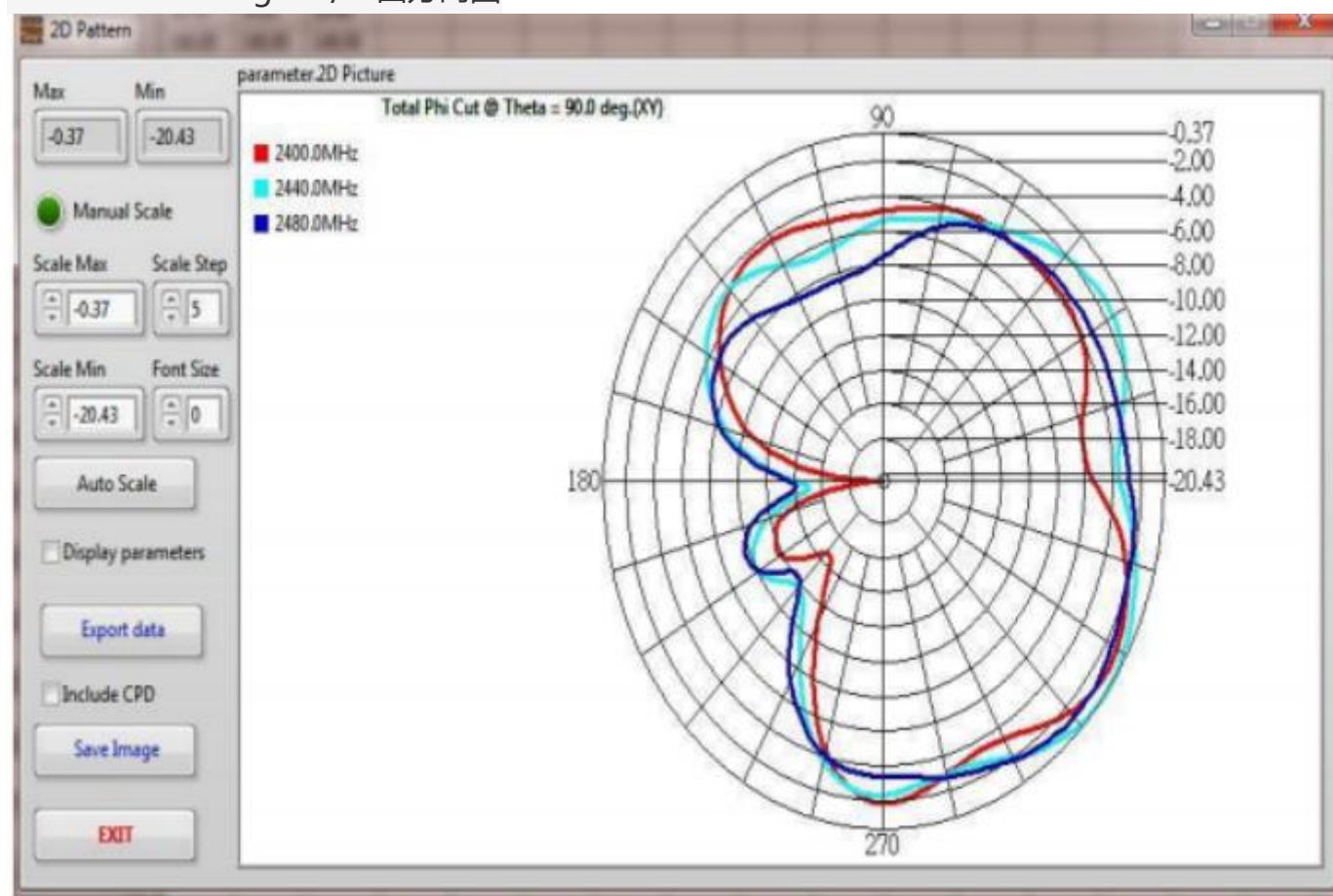
A

Page:

3.3. Efficiency And Gain/效率和增益

Frequency(MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Peak Gain(dBi)	2.47	2.50	2.31	2.67	3.04	2.75	2.55	2.33	1.84	2.13	2.14
Directivity(dBi)	5.91	5.74	5.84	5.70	5.70	5.70	5.46	5.36	5.16	5.12	5.23
Average Gain(dBi)	-3.43	-3.24	-3.53	-3.03	-2.66	-2.95	-2.91	-3.03	-3.32	-2.99	-3.08
Efficiency(%)	45.36	47.46	44.37	49.81	54.23	50.70	51.15	49.74	46.51	50.24	49.18
Upper HEM . EIRP(dB)	-7.91	-7.89	-8.22	-7.75	-7.39	-7.49	-7.40	-7.33	-7.51	-7.08	-7.04
Lower HEM . EIRP(dB)	-5.35	-5.06	-5.33	-4.81	-4.44	-4.83	-4.82	-5.05	-5.41	-5.13	-5.32
Upper HEM . EIRP(%)	16.19	16.25	15.05	16.79	18.26	17.82	18.21	18.49	17.72	19.57	19.78
Lower HEM . EIRP(%)	29.17	31.21	29.32	33.02	35.97	32.87	32.95	31.26	28.79	30.67	29.40
Peak Gain @ Theta(degree)	166.00	164.00	164.00	164.00	164.00	166.00	166.00	166.00	166.00	148.00	148.00
Peak Gain @ Phi(degree)	166.00	172.00	170.00	172.00	170.00	168.00	168.00	168.00	168.00	90.00	92.00
Null @ Phi(degree)	-96.00	-98.00	-98.00	-98.00	-100.00	-100.00	-102.00	-100.00	-100.00	-100.00	-98.00
Null @ Theta(degree)	46.00	42.00	42.00	40.00	38.00	38.00	38.00	38.00	38.00	38.00	36.00
Roundness @90degree	19.38	18.85	17.69	15.77	14.78	14.04	13.52	13.30	13.00	13.51	14.50
Roundness @60degree	5.67	6.28	6.48	6.66	6.77	5.76	5.10	4.90	4.93	5.42	6.05
Roundness @30degree	4.23	3.77	3.68	3.84	4.54	4.96	5.45	5.81	6.17	6.77	7.42

4.H direction diagram/H 面方向图





Product Specification

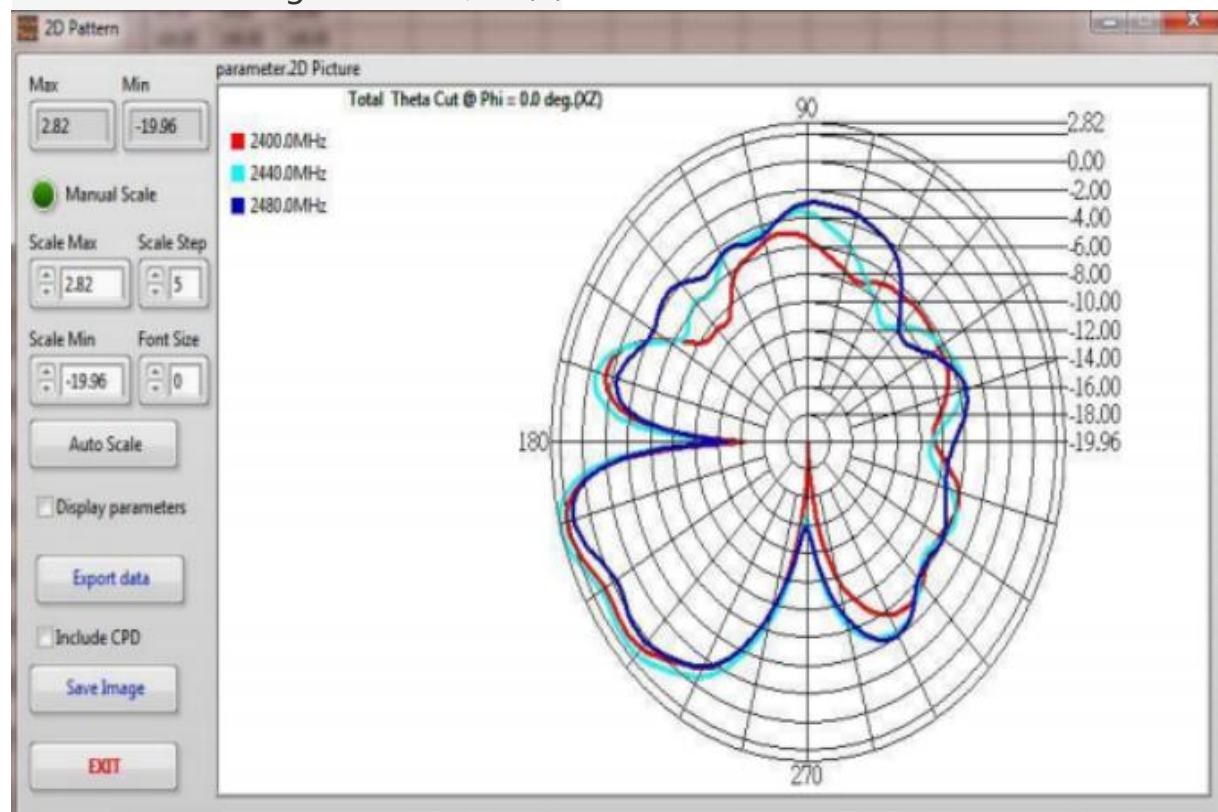
P/N:

Rev.:

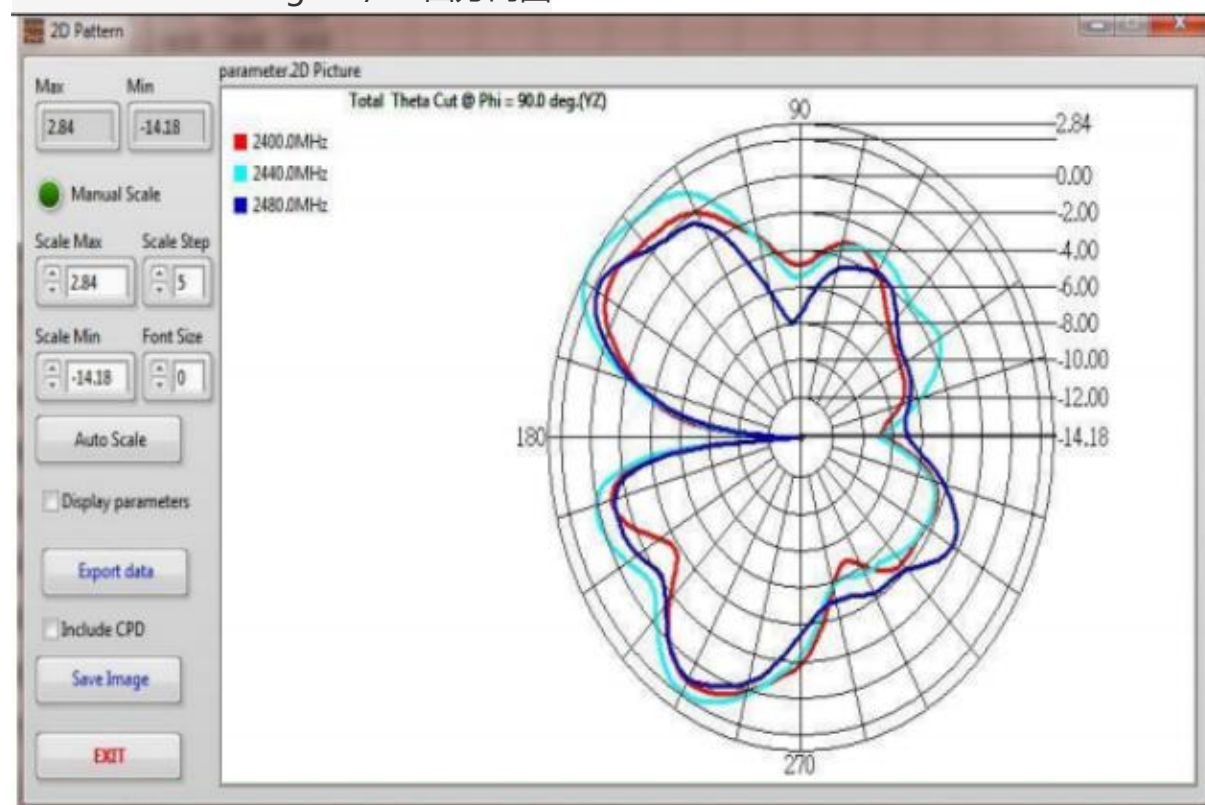
Page:

A

5.E 2 direction diagram/E 1 面方向图



5.E 3 direction diagram/E2 面方向图





Product Specification

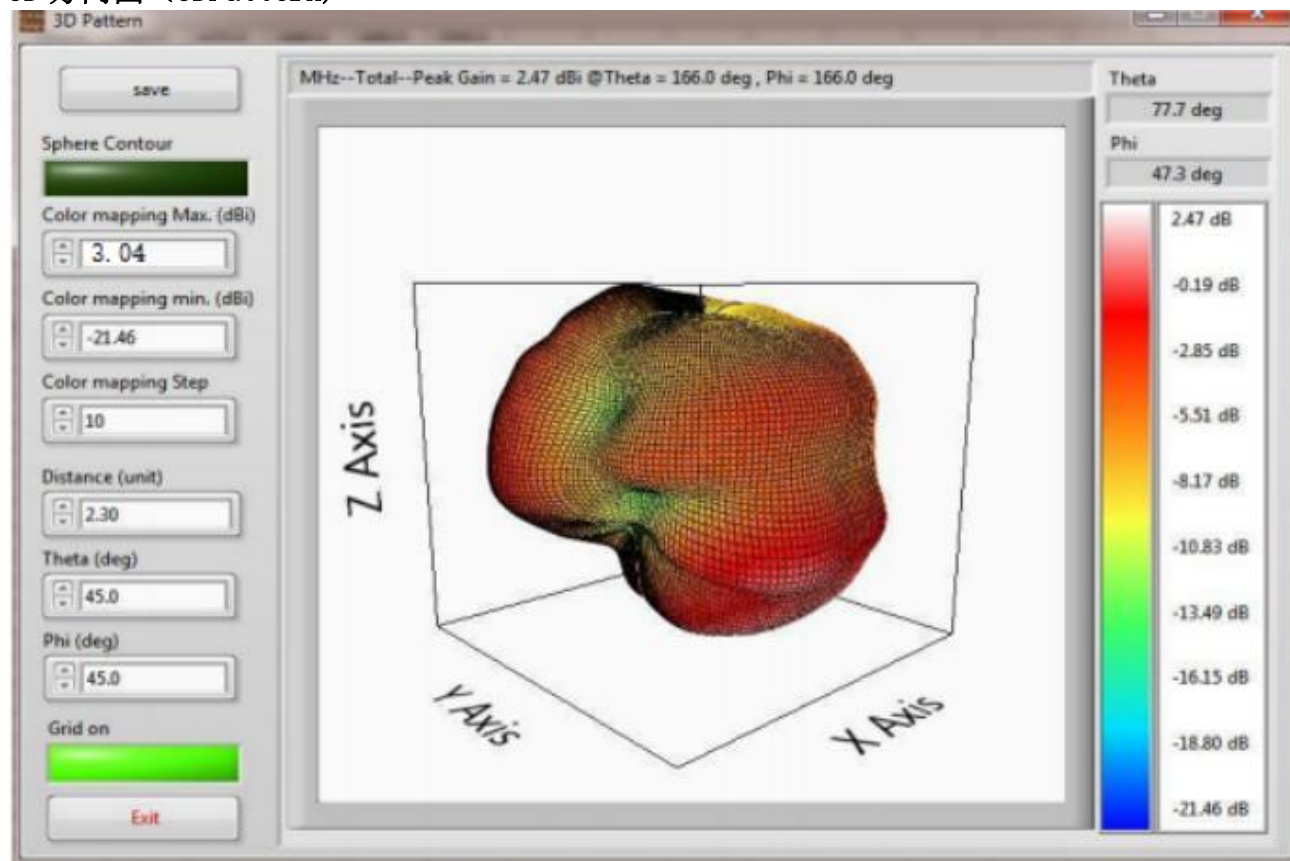
P/N:

Rev.:

Page:

A

3D 方向图 (3D Pattern)





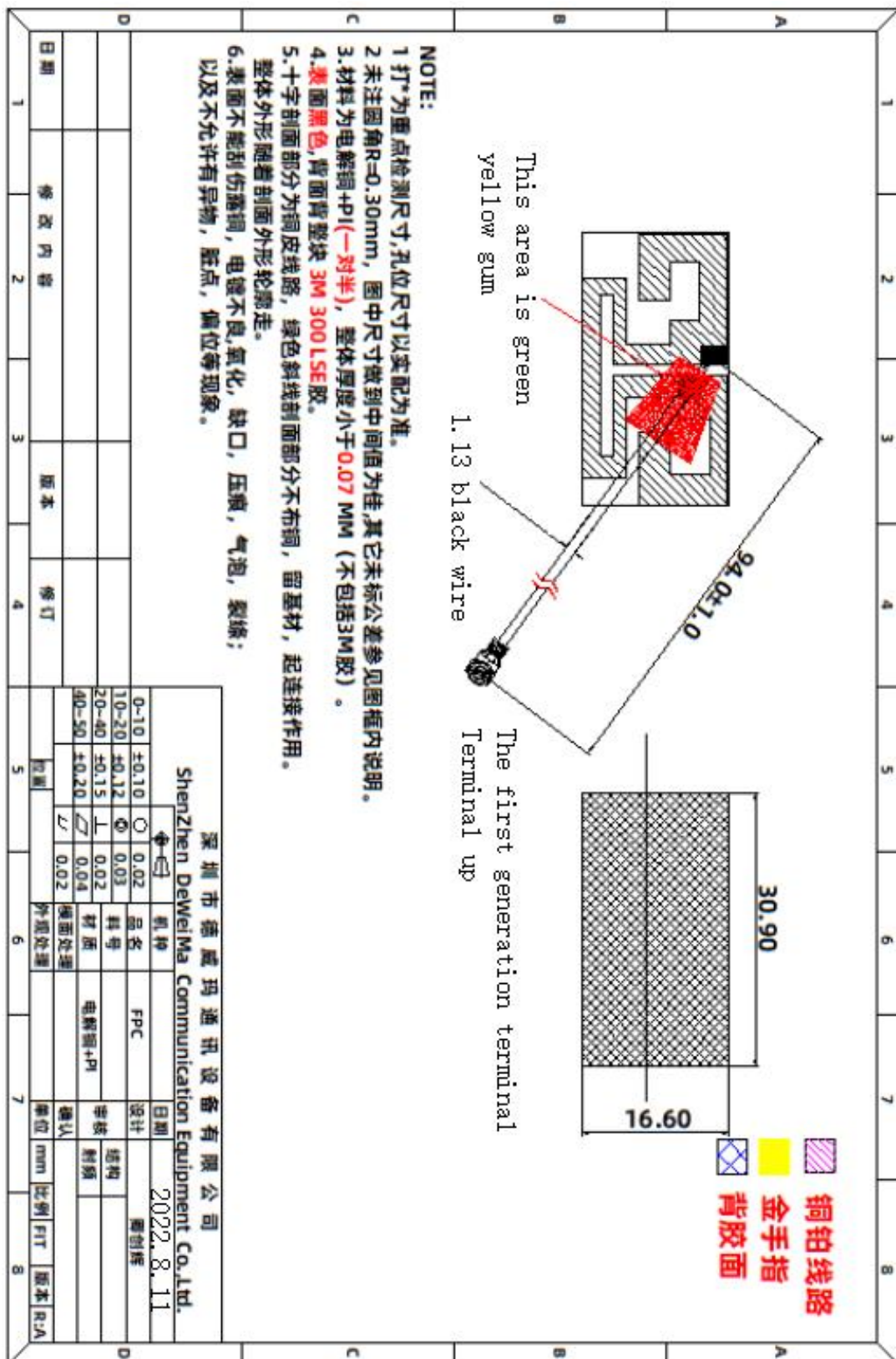
Product Specification

P/N:

Rev.:
A

Page:

6. Antenna Engineer drawing/工程图纸



	Product Specification		
	P/N:	Rev.: A	Page:

7.Environmental Performance/环境性能

Item 项目	Description 项目描述	Test Condition 测试条件	Requirement 规格要求
5.1	High and low temperature test 高低温测试	Temp.: -40 °C Time: 48 hours Temp.: 85°C Time: 48 hours	1. No visible damage. (无可见损伤) 2. The electric performances reach the standard. (电气性能达标)
Item 项目	Description 项目描述	Test Condition 测试条件	Requirement 规格要求
5.2	Salt Spray 盐雾测试	5±0.1% Nad salt fog PH Value: 6.5-7.2 Temp: 35±1 °C Time:24 hours	1. No color change. (无颜色变化) 2. the appearance of the antenna does not flake off. (天线无外观脱落)

6.Usage Precaution/使用禁忌或注意事项

No	Items 项目	Matter 事项
6.1	Precautions 禁忌	a)Please avoid the cleaning of this product a)请避免清洁此产品
No	Items 项目	Matter 事项
6.2	Stockpile condition 存储条件	Use this product within 6 months after receipt Condition : Temp: 5~30°C Humidity:≤70% 有效期: 请在产品接收后的 6 个月内使用 存储环境: 温度:5~30°C; 湿度:≤70%