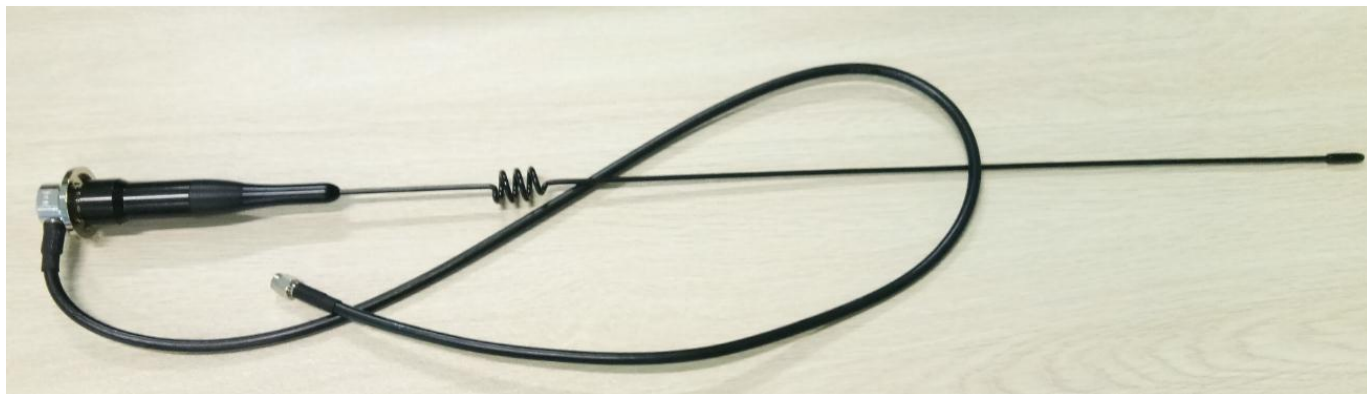


## 1. Antenna Specification/天线标准

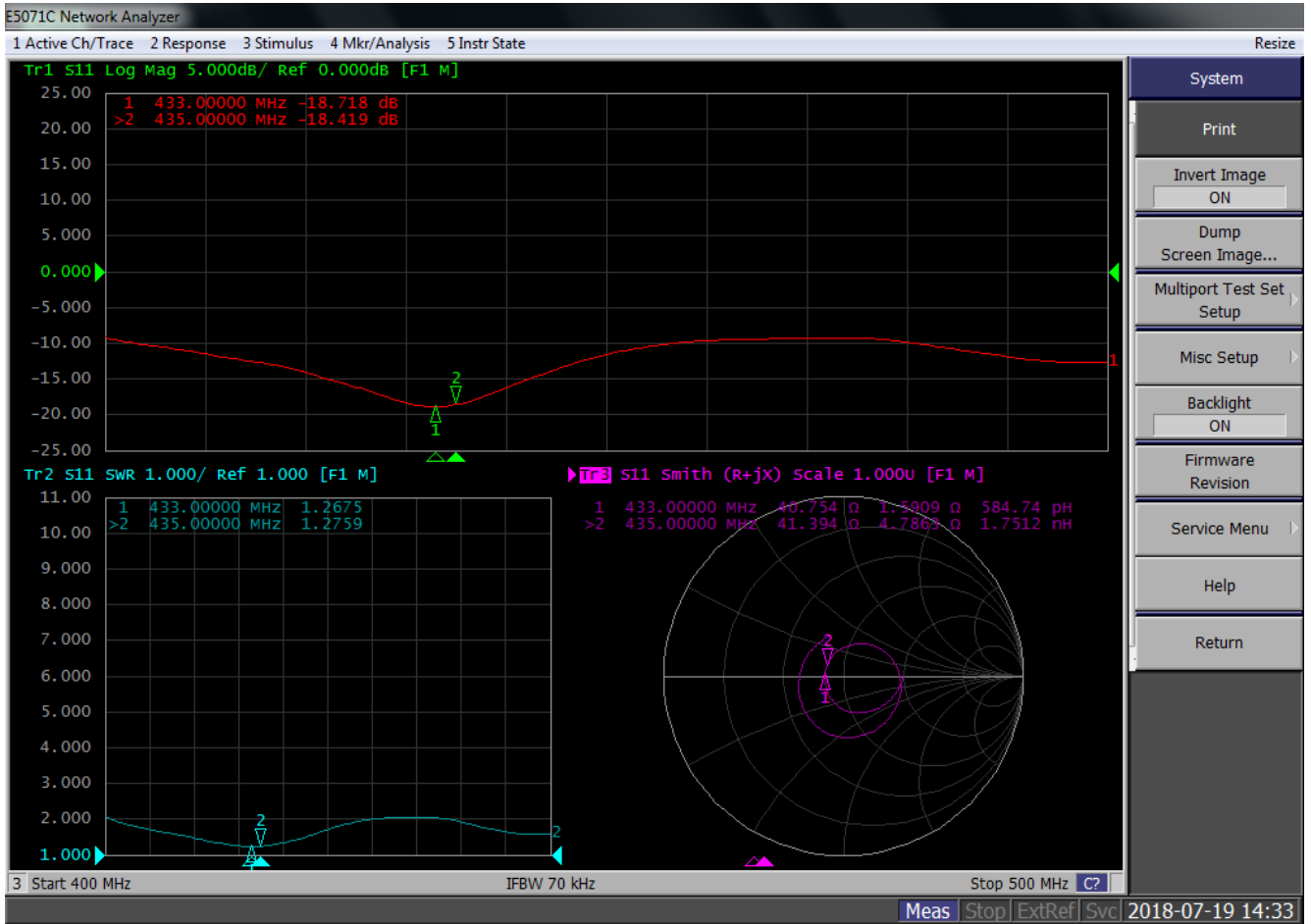
Antenna Specification/天线技术参数		
Electrical Specification/电气特性		
Item/目录	Specification/规格	Comment/备注
Freq. Range/频段范围	433-435 (MHz)	
Impedance/阻抗	50 ( $\Omega$ )	
VSWR/驻波比	$\leq 2.0$	
Directional/辐射方向	Omni directional	
Polarization/极化形式	Vertical	
Peak Gain/峰值增益	4.5 (dBi)	
Test condition/测试条件	passive test ( 无源测试 )	
Total Efficiency/无源效率	> 50%	
Mechanical Specification/机械指标		
Antenna type/天线类型	Spring antenna	
Connector Type/连接器类型	SMA-J(直公头公针 180°)	
RF Cable Type/射频线型号	RG58/U	
Connector Torque Test/连接器扭力	N/A	
Connector Pull Test/连接器拉力	$\geq 3.0\text{Kgf}$	
Salt Spray/盐雾测试	72 (H)	
Environmental Specification /环境指标		
Operating temp/工作温度	-40°C ~ +80°C	
Storage temp/存储温度	-40°C ~ +85°C	

## 2. Antenna Picture/天线图片

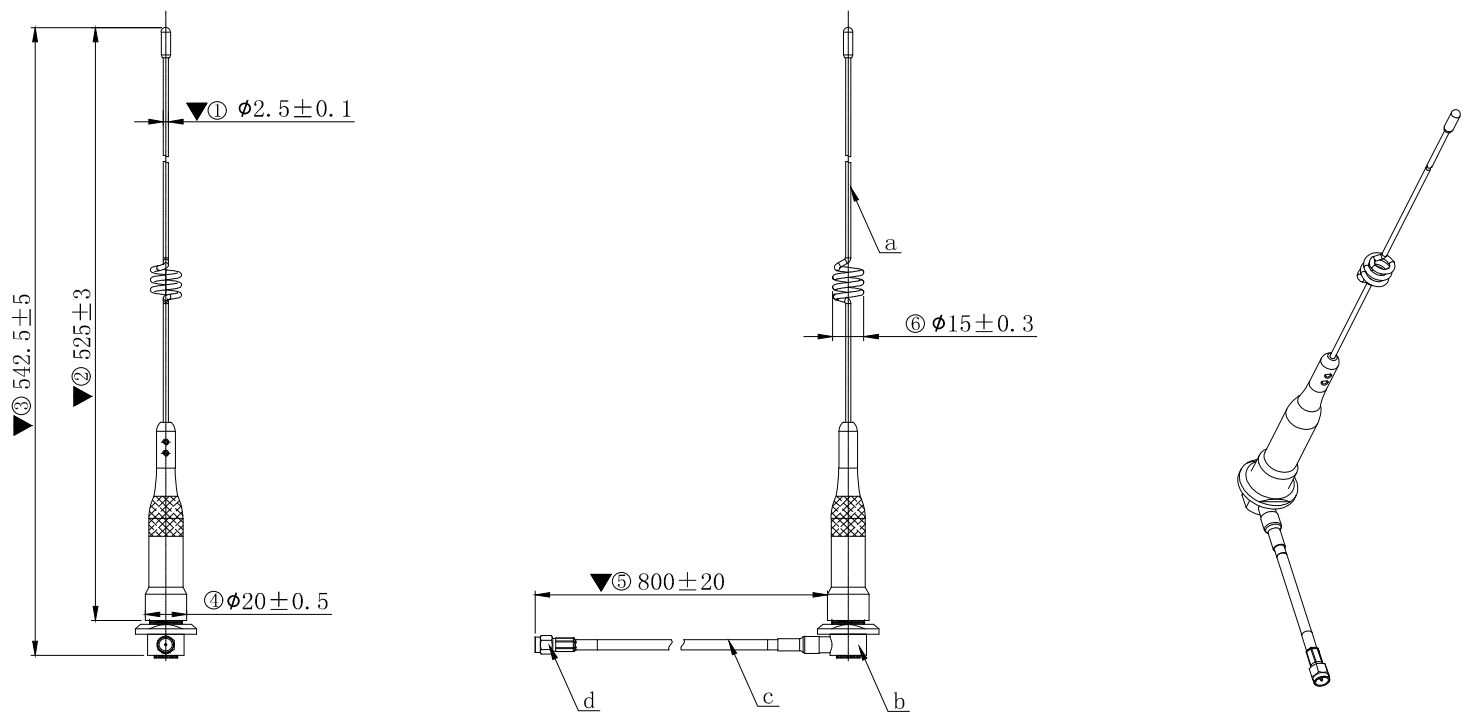


## 5. Antenna test result/测试结果

### 5.1 Return loss/Smith chart/VSWR/回波损耗/史密斯图/驻波比

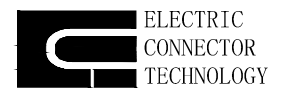


REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
A	ECN181330	FIRST RELEASE	09/06' 18	丁第斌	熊志辉	贾峰
B	ECN190519	Drawing to update	04/22' 19	丁第斌	徐伟	张英杰



- NOTES:
1. Material: can be found in the lower right corner.
  2. Marked with "▼" for QC key size detection.
  3. All materials must conform to our RoHS and related reliability test requirement.
  4. Frequency Range:433-435 MHz  
Gain:4.5dBi  
VSWR:2.0 Max

ITEM	PART NAME	Q' TY	PART #	DWG #	MATERIAL / FINISH
d	SMA-J	1			CU, H59
c	CABLE	1			RG58/U, BLACK
b	BODY2	1			CU
a	BODY1	1			BLACK



ELECTRIC CONNECTOR TECHNOLOGY	GENERAL TOLERANCE		SCALE: 1:1	DRAWN: 丁第斌	DATE: 04/22' 19	DWG. NO: 600-T619-01	TITLE: Structure diagram	REV. B
	.X ± 0.5	X.° ± 1°	UNIT: mm	CHECK:	DATE:			PARTS NO. (INTENDED USE): 81800T619
	.XX ± 0.5		SIZE: A4	APPROVE:	DATE:			

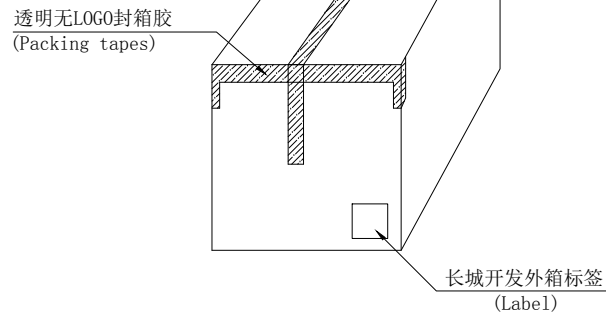
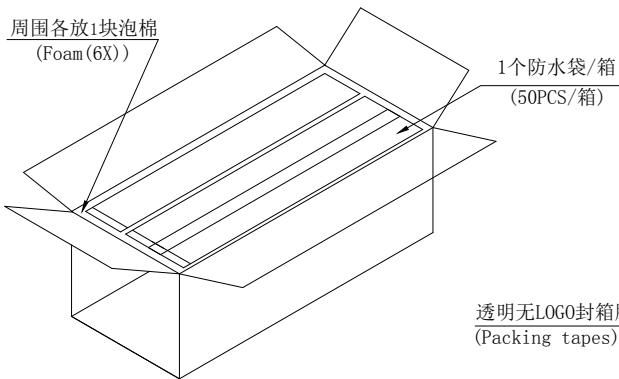
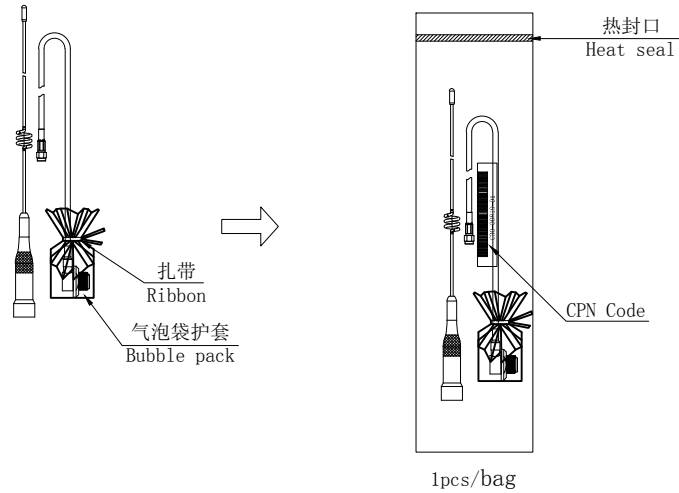
REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
A	ECN181330	FIRST RELEASE	09/06' 18	丁第斌	熊志辉	张英杰
B	ECN190519	Update the specification	04/16' 19	丁第斌	徐 伟	张英杰

NOTES:

1. 包装时产品轻拿轻放, 避免产品变形.
2. 整盘包装好后, 检查是否有漏装, 产品的放置方向是否正确.
3. 检查是否有产品被压死, 检查整摞层数是否正确.
4. 若有未装满之零数箱, 须以缓冲材塞满.
5. 整箱封好后, 检查标签是否贴好, 干净, 字迹清晰, 标签内容是否正确, 完善.
6. 内尺寸L535\*W270\*H225mm, 七层纸, K三K, 加强芯.

NOTES:

1. Packing product light , avoid the product deformation
2. The tape packaging, check for leaks installs, product placement direction is correct
3. Check the whole stack of layers is correct
4. If not filled with null box, cushion material should be related to fill
5. After sealed the whole case, check the label content is correct
6. Size:L535\*W270\*H225mm.



Project	M/No.	Q' TY	Amount of packing			Weight of packing		
			pcs/bag	bag/Carton	U/Carton	Unit weigh (g)	Net weight (kg)	GW (kg)
Carton	840000650	1	1	50	50			
PE-bag	604020010	1						
PE-bag		50						
PE-bag								
Foam		6						



ELECTRIC  
CONNECTOR  
TECHNOLOGY

GENERAL TOLERANCE

XX. ± 0.25	XX. ° ± 2°
X. ± 0.20	X. ° ± 1°
. X ± 0.13	. X ° ± 0.5°
. XX ± 0.05	

SCALE:

1:1

UNIT:

mm

SIZE:



DRAWN:

丁第斌

CHECK:

APPROVE:

DATE:

04/16' 19

DATE:

DATE:

DWG. NO:

551-T619-01

PARTS NO. (INTENDED USE):

81800T619

TITLE:

Antenna, 433MHz, RG58U, 0.8M,  
SMA-J+UHF接头+弹簧杆  
包规图

REV.

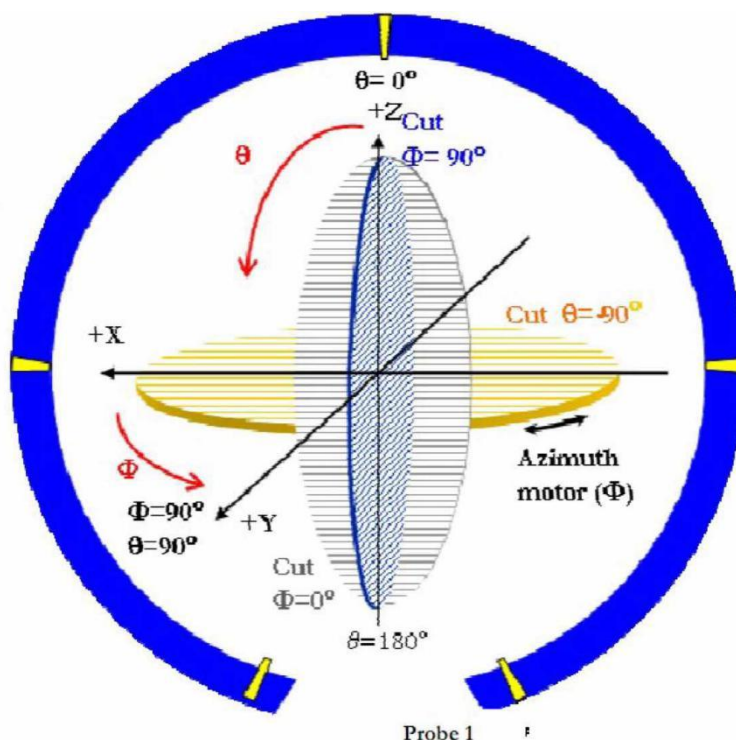
B

SHEET:

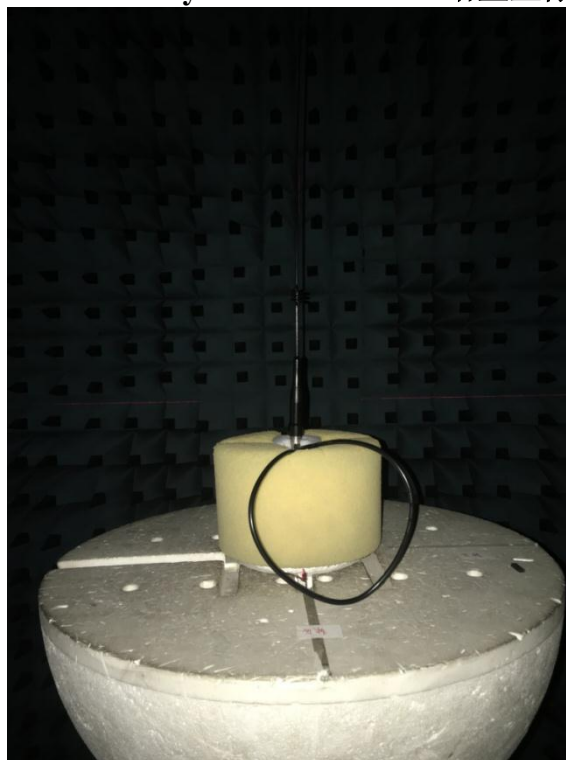
1/1

**5.2 The gain and total efficiency test/增益和效率测试**

**5.2.1 The definition of coordinate system/坐标系定义-Satimo SG24**



**The coordinate system of Chamber/暗室坐标系**



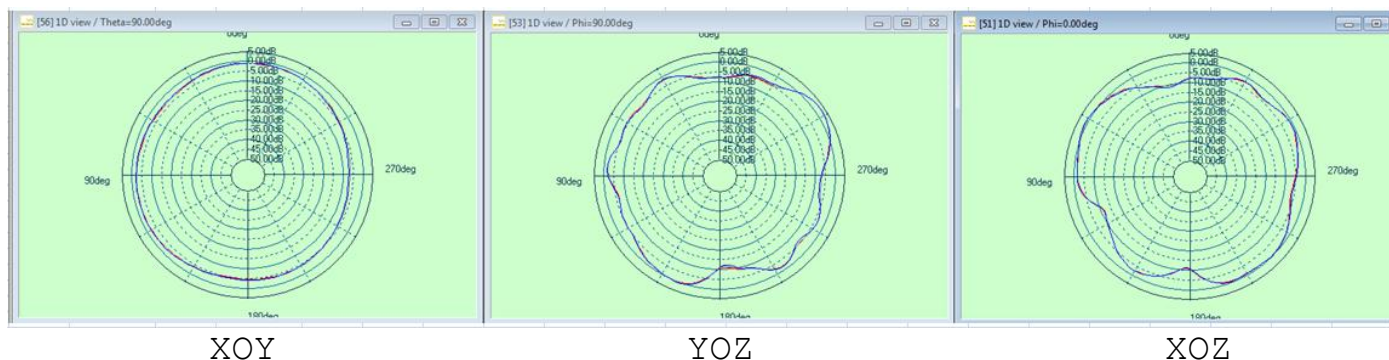
**The production test position/天线测试放置位置**

**5.2.2 The test result of total efficiency and total gain/天线效率及增益测试结果**
**433MHz-435MHz**

Frequency	Efficiency (%)	Gain (dBi)
433MHz	53%	4.32
434MHz	53%	4.53
435MHz	54%	4.36
AVG	53%	4.40

## 5.2.3 The antenna radiation pattern(2D)/天线辐射方向图 (2D)

**433MHz-435MHz**



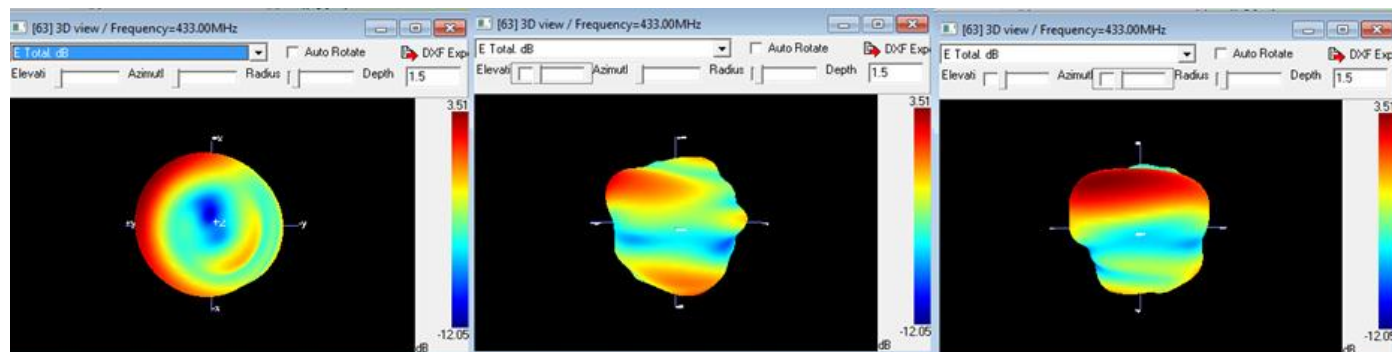
XOY

YOZ

XOZ

## 5.2.4 The antenna radiation pattern(3D)/天线辐射方向图 (3D)

**Frequency/频点 433MHz**



XOY

YOZ

XOZ