

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	700MHz-960MHz 1710MHz-1880MHz	
Impedance/阻抗	50 (Ω)	
VSWR/驻波比	700MHz-960MHz \leq 3.5 ; 1710MHz-1880MHz \leq 2.5 ;	
Directional/辐射方向	Omni directional	
Polarization/极化形式	Vertical	
Peak Gain/峰值增益	700MHz-960MHz 峰值增益为 1.69(dBi); 1710MHz-1880MHz 峰值增益为 1.99(dBi);	
Test condition/测试条件	passive test	
Total Efficiency/无源效率	700MHz-960MHz 平均效率为 29.03% 1710MHz-1880MHz 平均效率为 45.49%	
Mechanical Specification/机械指标		
Antenna type/天线类型	Plastic bracket+Steel sheet	
Connector Type/连接器类型	N/A	
RF Cable Type/射频线型号	N/A	
Connector Torque Test/连接器扭力	N/A	
Connector Pull Test/连接器拉力	N/A	
Salt Spray/盐雾测试	48 H	
Environmental Specification /环境指标		
Operating temp/工作温度	-40°C ~ +80°C	

P/N:

81800U417

Rev.:

B

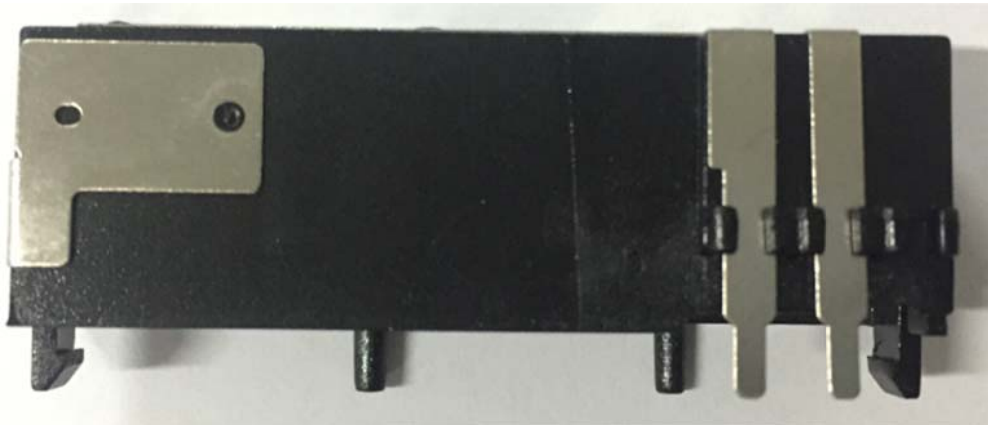
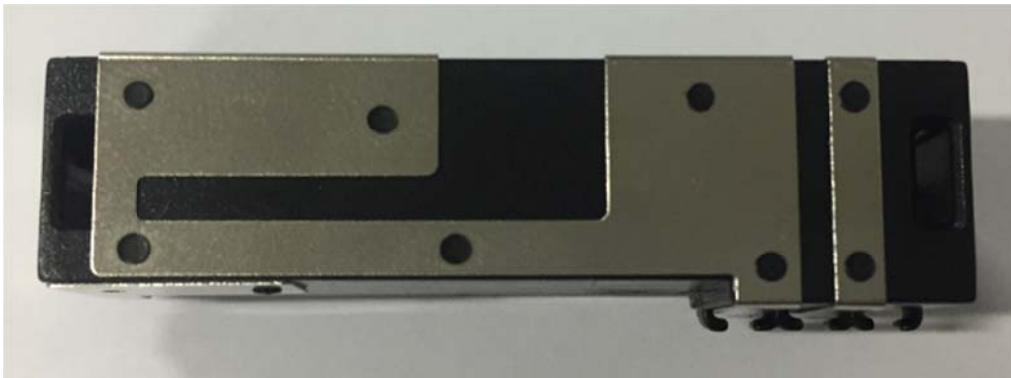
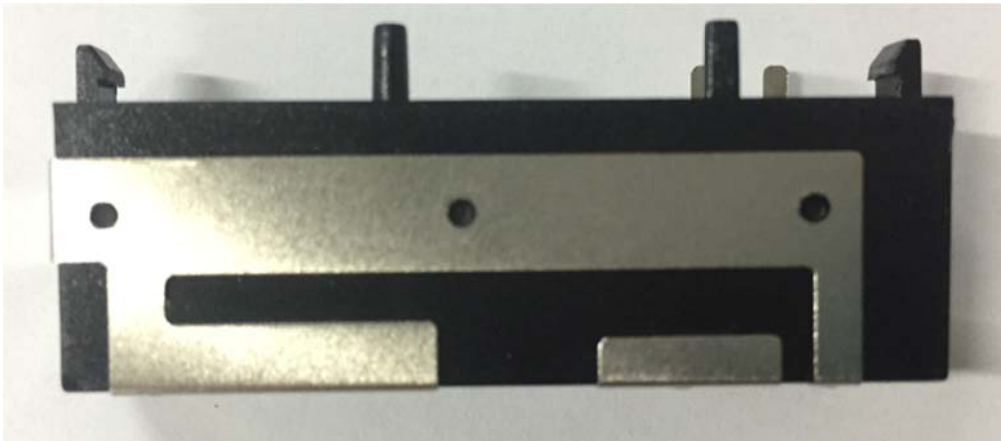
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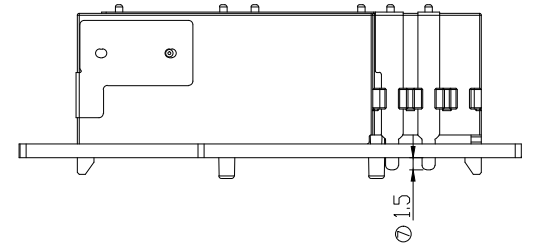
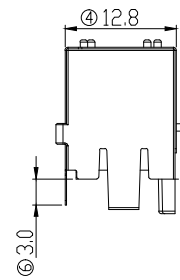
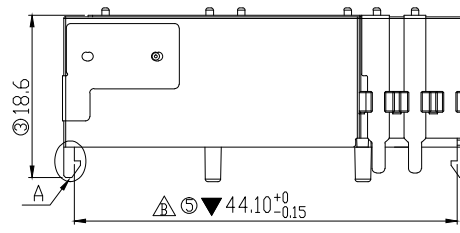
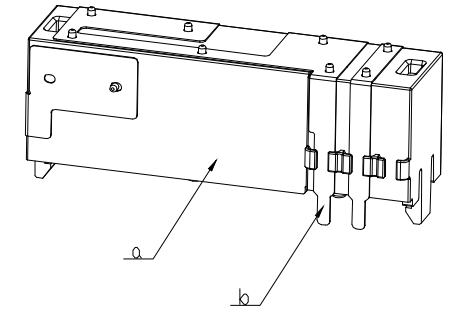
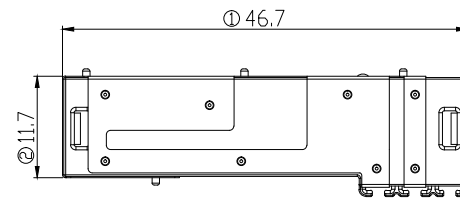
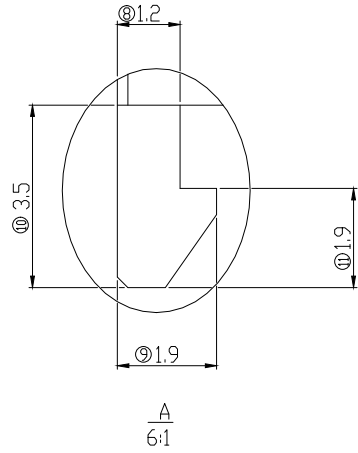
Storage temp/存储温度

-40°C ~ +85°C

2. Antenna Picture/天线图片



REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
A	ECN192596	NEW RELEASE	01/08'20	DANIEL	ZYJ	NBX
B	ECN200595	CHANGE DIMENSION TOLERANCE: FROM 44.10 ⁰ _{0.10} TO 44.10 ⁰ _{0.15}	04/21'20	DANIEL	ZYJ	NBX

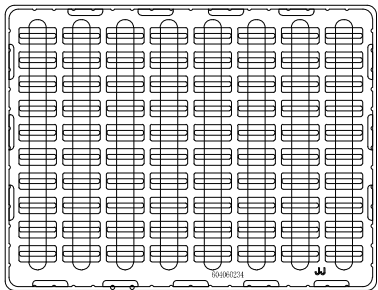


NOTES:
 1.MATERIAL:SEE TABLE.
 2.FREQUENCY RANGE: 700-960/1710-1880 MHz
 VSWR:
 700-960 MHz, VSWR ≤ 3.5
 1710-1880MHz, VSWR ≤ 2.5.
 3.ALL MATERIALS SHALL BE RoHS2.0&REACH COMPLIANT.

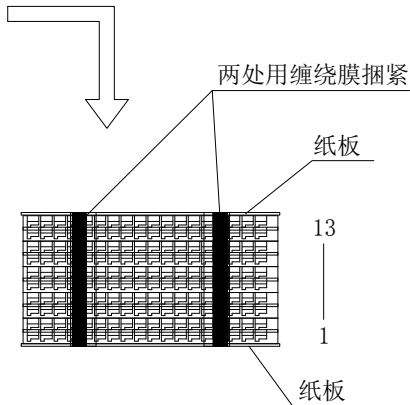
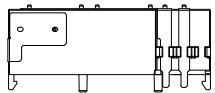
ITEM	PART NAME	Q'TY	PART #	DWG #	MATERIAL / FINISH
b	STAMPING	1			STAMPING, SUS301 PRE-Ni PLATED
a	HOUSING	1			HOUSING, CHIMEI PC 110, BLACK

	GENERAL TOLERANCE		SCALE: 1:1	DRAWN: DANIEL	DATE: 04/21'20	DWG.NO: 600-U417-01	TITLE: ANT_IN_0918_16.7*13.9*19.2_CAMEL01	REV. B
	X ± 0.30	XXX, ° ± 2°	UNIT: mm	CHECK:	DATE:			PARTS NO.(INTENDED USE): 81800U417
	.X ± 0.15	XX, ° ± 1°	SIZE: A4	APPROVE:	DATE:			

REV.	ECN NUMBER	DESCRIPTION	DATE	DRAWN	CHECKED	APPROVED
A	ECN192596	NEW RELEASE	01/08'20	DANIEL	ZYJ	NBX
B	ECN200595	△ 1. CHANGE PACKING SPECIFICATION 2. CHANGE DIMENSION TOLERANCE: FROM 44.1 $^{+0}_{-0.10}$ TO 44.10 $^{+0}_{-0.15}$	04/21'20	DANIEL	ZYJ	NBX



80 PCS/盘
(每层吸塑上的产品方向需一致)



两处用缠绕膜捆紧

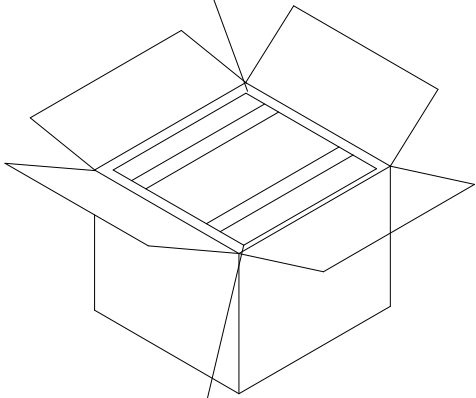
纸板

13

1

纸板

1个防水袋/箱
1040PCS/箱



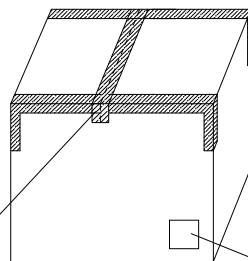
六面珍珠棉

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, 检查整盘层数是否正确.
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. 纸箱: 内尺寸L505*W395*H245mm, 双坑K=K 加强芯, 印ECT LOGO

项目	包装材料		产品包装数量			产品包装重量(kg)		
	料号	数量	Pcs/盘	盘/箱	PCS/箱	单重	净重	总重
△ 纸箱	604010158	1	80	13	1040			
△ 吸塑盘	604060234	13						
隔 纸	604010075	2						
防水袋	604020010	1						
上带								
纸板								
作业标签								
珍珠绵								
透明胶带								

透明无LOGO封箱胶



长城开发外箱标签



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:	A4

DRAWN:	王卫杰
CHECK:	
APPROVE:	

DATE:	04/21'20
DATE:	
DATE:	

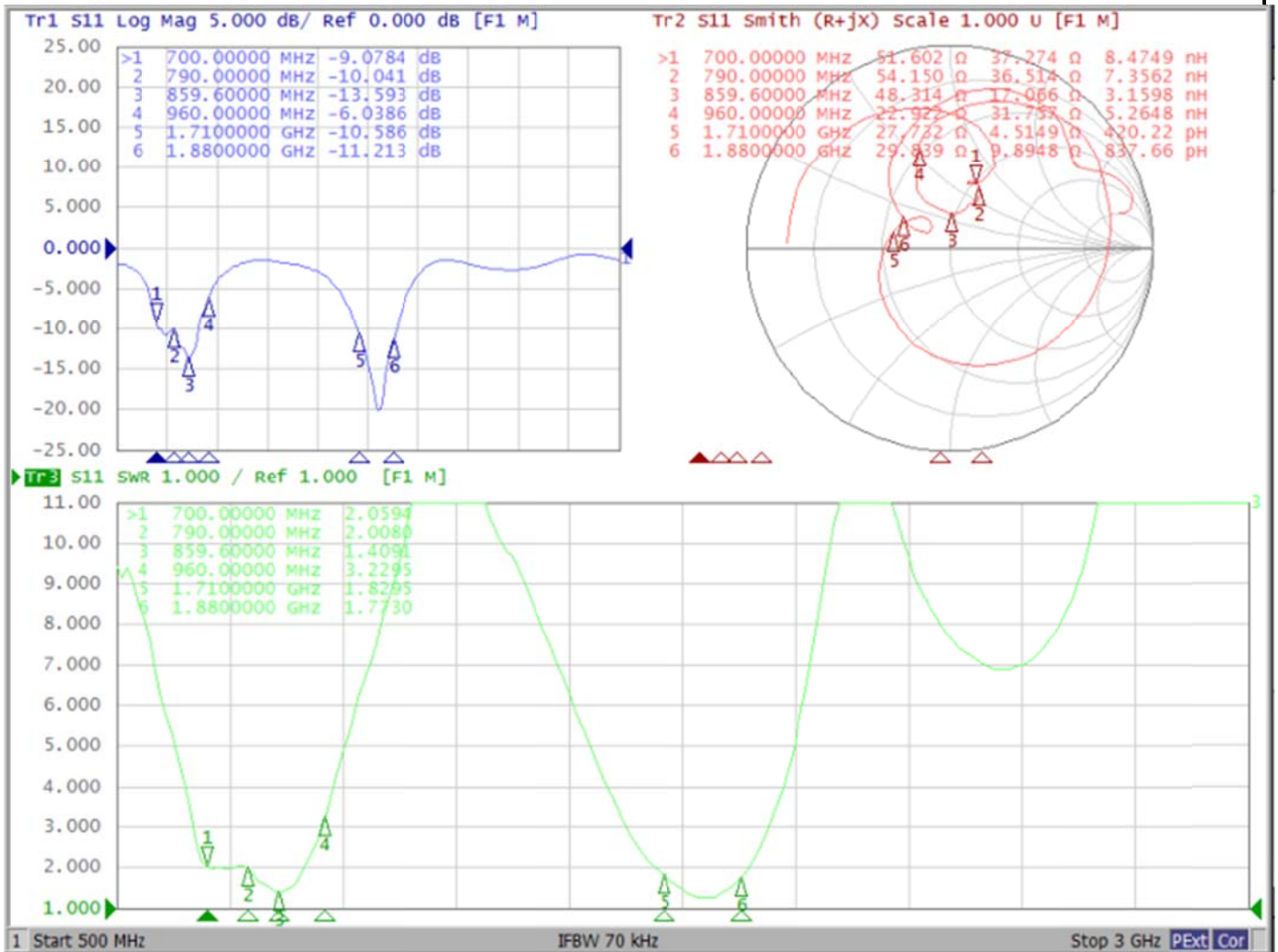
DWG. NO:	551-U417-01
PARTS NO. (INTENDED USE):	81800U417

TITLE:	ANT_IN_0918_16.7*13.9*19.2_CAMEL01
包装规范图	

REV.	B
SHEET:	1/1

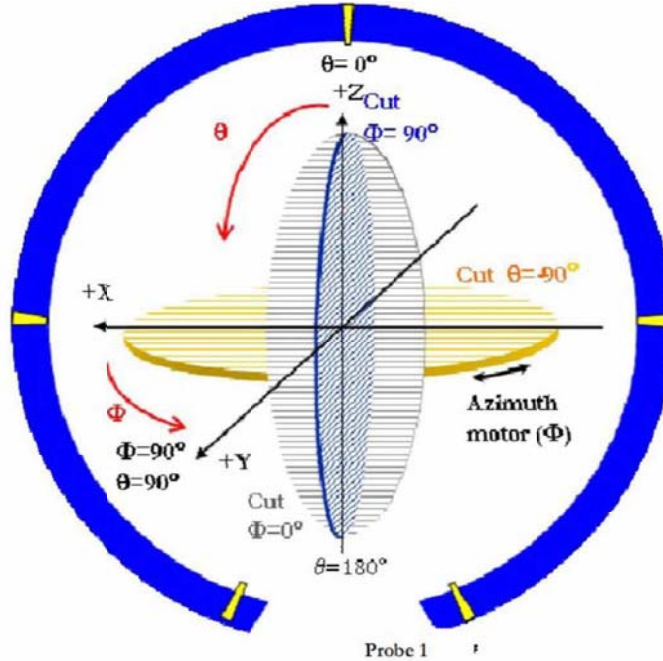
5. Antenna test result/测试结果

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

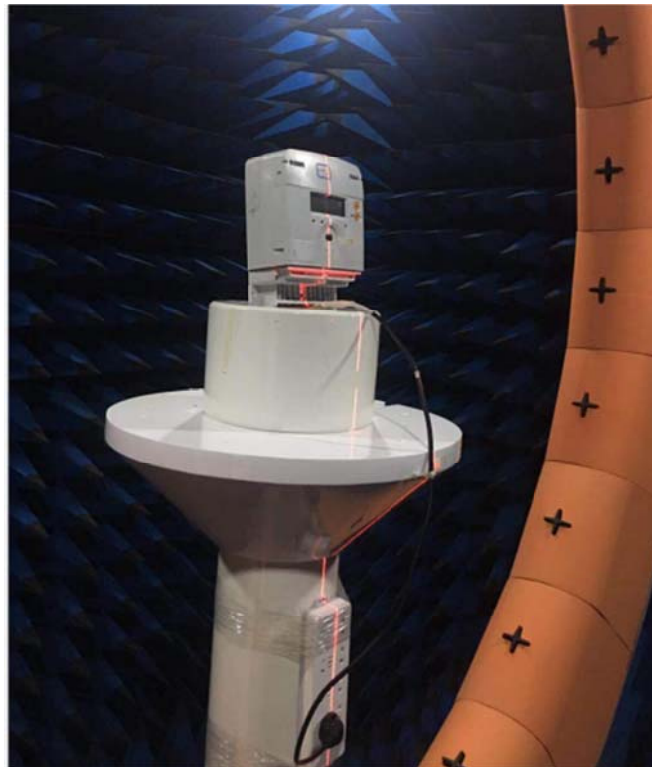


5.2 The gain and total efficiency test/增益和效率测试

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



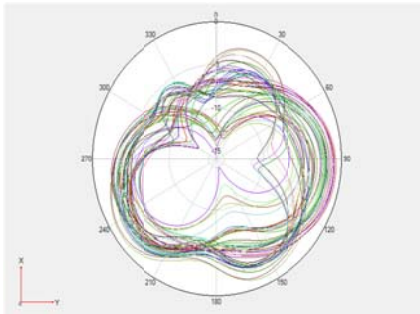
The production test position/天线测试放置位置

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

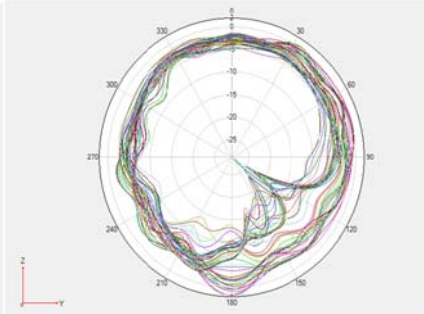
Frequency / MHz	Efficiency / %	Gain (dBi)	Frequency / MHz	Efficiency / %	Gain (dBi)
700	22.44	-1.93	1710	41.59	-0.24
710	21.33	-0.89	1720	42.95	0.26
720	20.37	-1.46	1730	43.65	0.31
730	21.78	-1.89	1740	44.36	0.65
740	26.18	-1.14	1750	48.64	0.89
750	28.51	-0.43	1760	47.21	0.8
760	27.99	-1.54	1770	45.29	0.37
770	29.51	-1.41	1780	48.19	0.72
780	32.36	-0.57	1790	49.32	1.02
790	33.42	-0.61	1800	48.87	1.25
800	29.72	-0.43	1810	49.55	1.99
810	29.65	-0.34	1820	49.89	1.76
820	27.61	0.68	1830	46.56	0.68
830	26.24	0.65	1840	44.67	0.65
840	25.76	0.59	1850	42.76	0.46
850	26.92	0.48	1860	41.59	0.29
860	31.41	0.86	1870	42.56	0.68
870	36.39	0.95	1880	41.3	0.81
880	36.31	0.56	AVG	45.49	0.74
890	35.65	0.43			
900	33.81	0.23			
910	33.04	0.01			
920	29.85	-0.95			
930	27.67	-0.78			
940	27.99	0.46			
950	30.97	1.64			
960	31.05	1.69			
AVG	29.03	0.19			

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

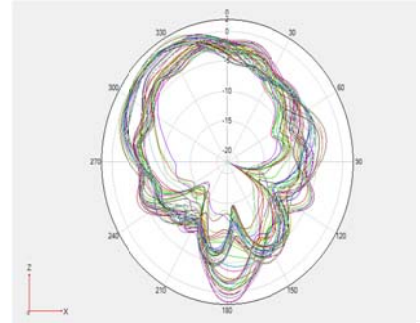
700-960MHz , 1710-1880MHz



XOY



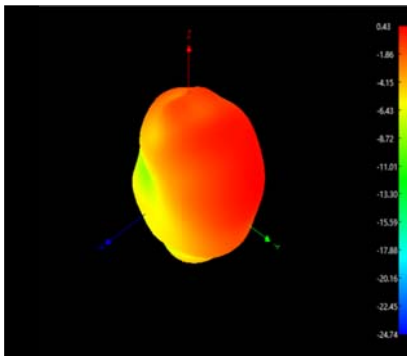
YOZ



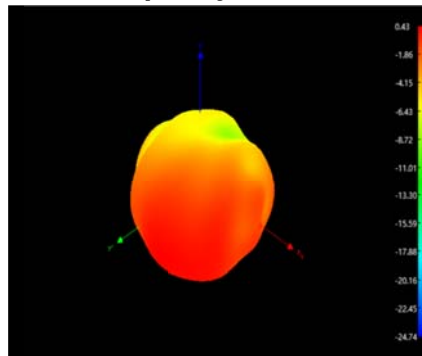
XOZ

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

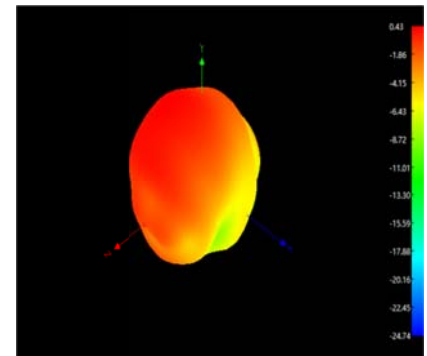
Frequency/频点 890MHz



XOY

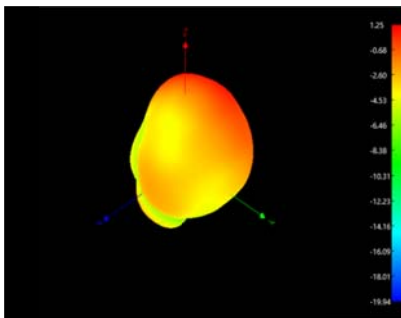


YOZ

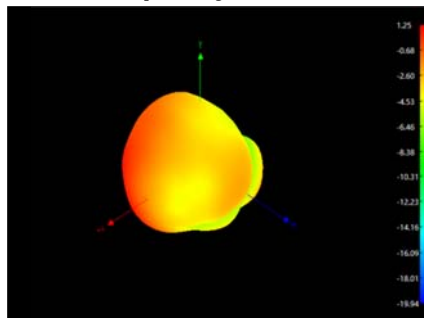


XOZ

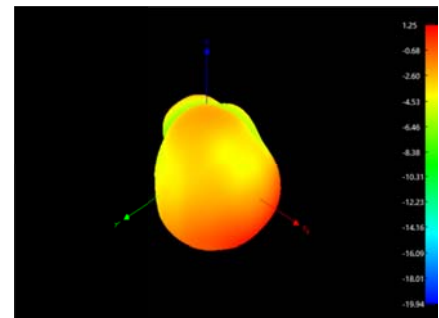
Frequency/频点 1800MHz



XOY



YOZ



XOZ