

顶设科技 i-Top Design	BN978-FPC 天线	Pb RoHS Compliant
Date of Issue: 2025-9-17		ESD Sensitive
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样品承认书

Sample Approved Sheet

产品描述说明: Product Description:	BN978-FPC 天线
客 户 料 号: Customer part number	
客户规格描述: Customer specification description:	
公司内部编码: Internal company code:	BF.978TX001
软件版本: Software version:	无
PCB 板描述: Hardware description:	FPC 天线-YX-BT-BN978-V3.0-4 代 IPEX 端子-线粗 0.64MM 线长 30MM-剥线长度 2mm-1mm-1mm 亚鑫

物料满足如下环保要求: The materials meet the following environmental requirements: ☒ 禁用及监控物质控制标准(最新版本) Banned and Monitored Substances Control Standard(Latest Edition) ☒ 无卤素技术标准 Halogen-free technical standard

供应商确认 Vender Confirm (盖章) (Stamp)	制 作 Prepared by	审 核 Checked by	批 准 Approved by

客户确认 Customer Approved (盖章) (Stamp)	采 购 Sourcing	品质管理部 DQ	研发 RD	批 准 Approved by

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发布记录							
Revision	ECO	Description	Date	Prep'd By	Ck'd By	Ck'd By	Appr'd By
V1.0		初次发布	2025-9-10				

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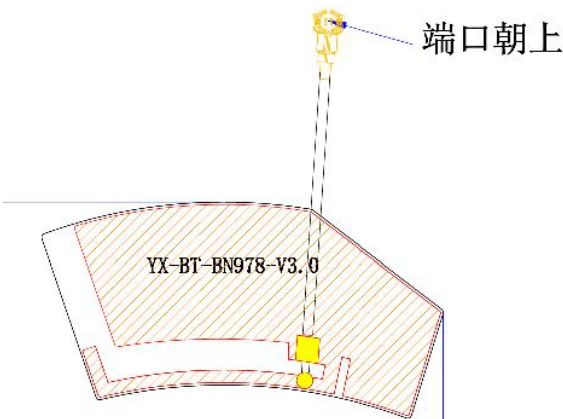
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1. Antenna picture

Thereport mainly provides the test status oftheelectricalproperties parametersofYX-BT-BN978-V3.0The YX-BT-BN978-V3.0 antenna is a **BT** Band . The antenna Picture and assembly are shown below.



FPC Antenna picture & assembly picture

2.Antenna Test Equipment Introduction

Test of antenna input characteristics using Agilent E5071C and Agilent 5062A vector network analyzer; The radiation pattern of the antenna are tested using the Satimo starlab 3D near field Anechoic Chamber , and the instrument is used to agilent8960 E5515 and Agilent E4438C. The test coordinates of the darkroom are as follows:

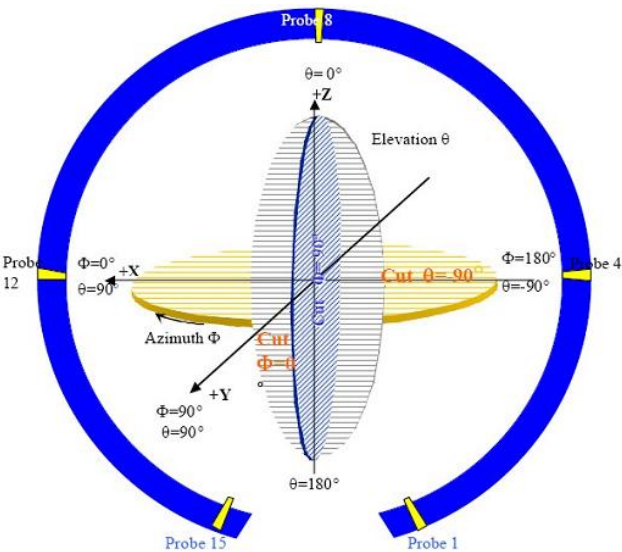


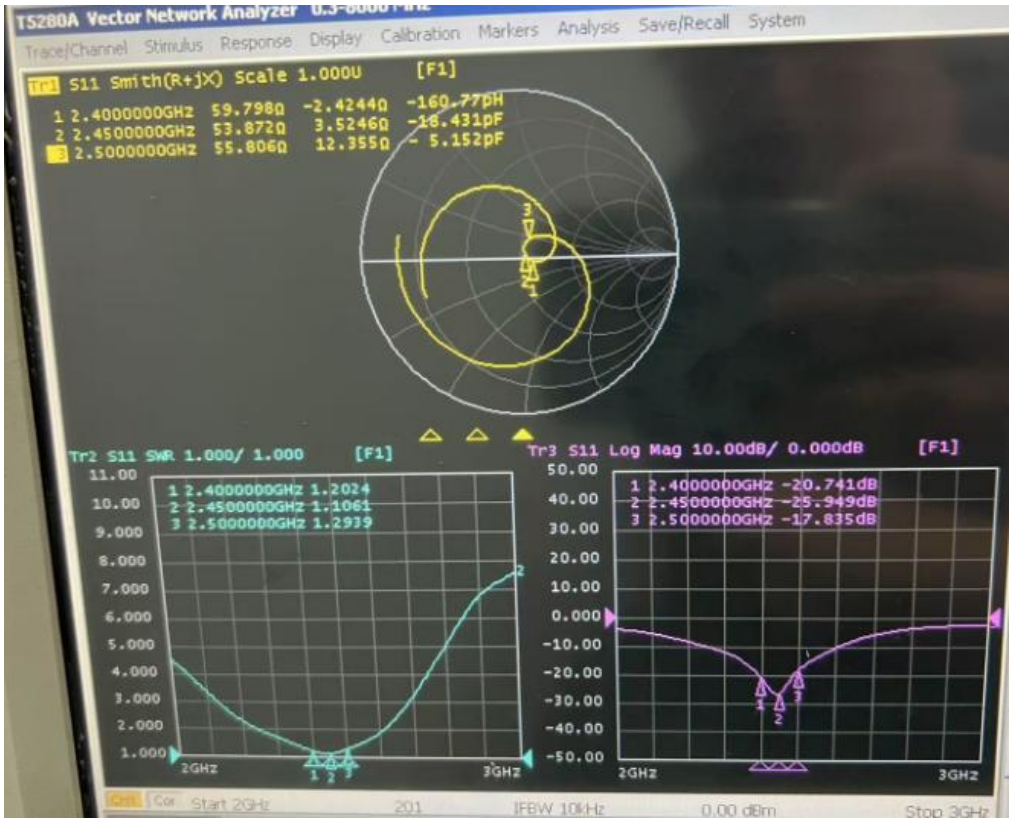
图 4 3D 微波暗室测试坐标系 (back view)

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3. Electrical Specification

3-2 Passive S11 parameter

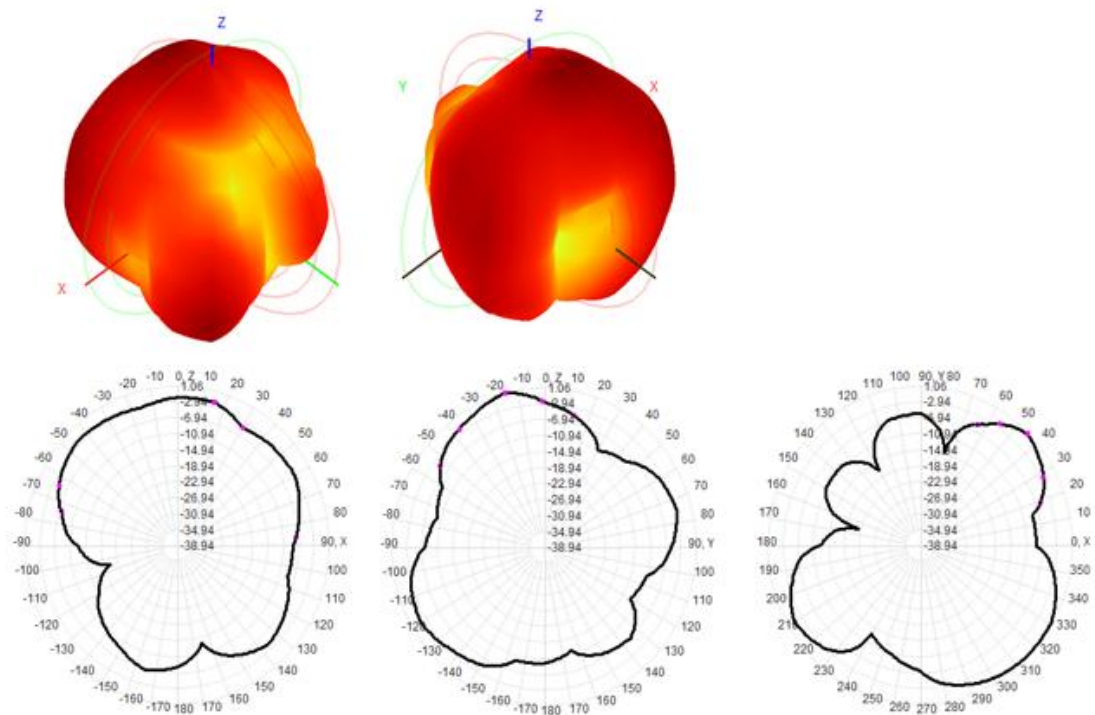
Measuring Method is a 50 Ω coaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.



VSWR

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3-3 2D/3D field pattern diagram



3-4 Passive efficiency & Gain

Frequency (MHz)	2400.0	2410.0	2420.0	2430.0	2440.0	2450.0	2460.0	2470.0	2480.0	2490.0	2500.0
Efficiency (dBi)	-4.58	-4.59	-4.49	-4.36	-4.48	-4.39	-4.53	-4.91	-4.97	-4.94	-5.19
Gain (dBi)	0.94	0.90	0.86	0.88	0.92	1.28	1.36	1.13	1.08	0.96	0.54
Efficiency (%)	34.86	34.77	35.59	36.62	35.61	36.38	35.27	32.25	31.82	32.08	30.27
Directivity (dB)	5.52	5.48	5.35	5.24	5.41	5.67	5.88	6.05	6.05	5.90	5.73
Peak Gain Position (Theta)	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Peak Gain Position (Phi)	270.00	270.00	270.00	285.00	285.00	285.00	285.00	285.00	285.00	285.00	285.00
Efficiency ThetaPol (%)	10.18	10.27	10.55	10.83	10.32	10.28	9.77	8.98	9.03	9.31	8.92
Efficiency PhiPol (%)	24.68	24.50	25.03	25.79	25.29	26.10	25.50	23.27	22.80	22.77	21.35
Upper Hem. Efficiency (%)	20.69	20.47	20.84	21.48	21.16	21.99	21.66	20.01	19.83	20.11	19.03
Lower Hem. Efficiency (%)	14.17	14.30	14.74	15.13	14.45	14.39	13.61	12.24	11.99	11.97	11.24

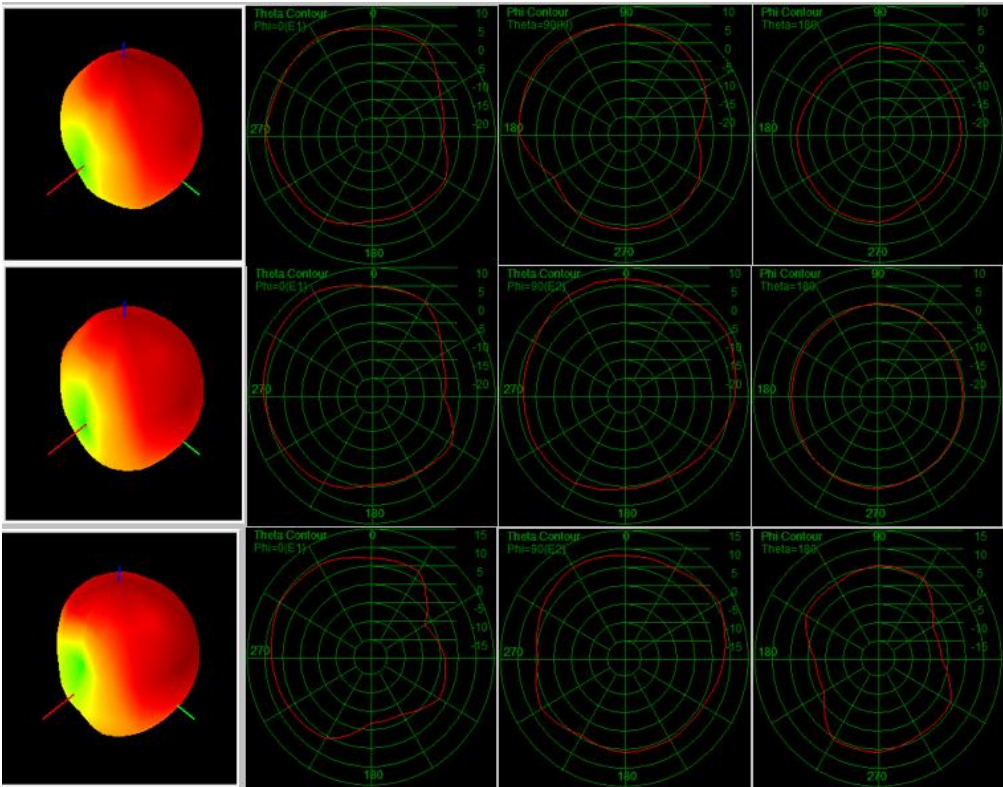
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3-5 OTA active

FS		BT TEST
CH	TRP	TIS
0	2.77	-87.70
39	4.35	-87.41
78	6.81	-90.92
BH		BT TEST
CH	TRP	TIS
0	2.68	-87.61
39	3.82	-86.83
78	6.20	-90.54

3-6 Active 3D&2D field pattern diagrams

FS TRP



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4. Mechanical Specification:

Mechanical Configuration (Unit: mm) he appearance of the antenna is according to drawing Figure 10

