

## 1 规格 Specifications

本报告主要提供天线 BT280 天线 各项电气和结构性能参数的测试状况。  
This report mainly provides the test status of various electrical and structural performance parameters of antenna BT280 Antenna.

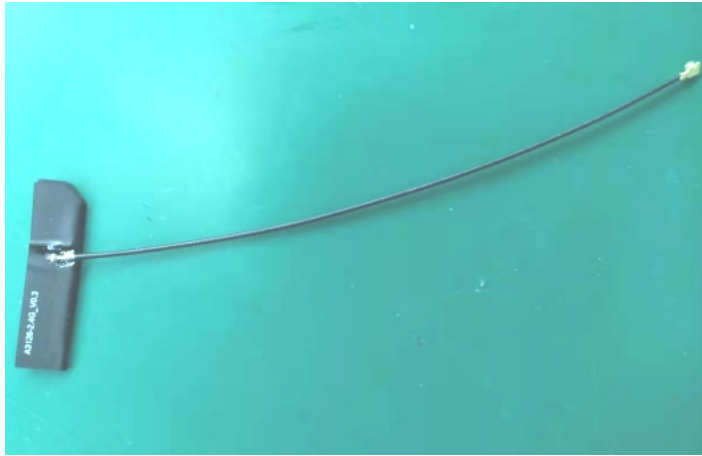


图 1 天线 Antenna

## 2 测试 Test

天线用客户提供的样机进行调试及测试。The antenna is debugged and tested with the prototype provided by the customer.

### 2.1 无源 S11 的测试 Test of passive S11

#### 2.1.1 测试连接 Test connection

无源 S11 测试装置依次连接为：网络分析仪 → 测试线 → 测试治具。

The passive S11 test device is connected as follows: Network analyzer → Test line → Test fixture.

#### 2.1.2 无源 S11 Passive S11

下表所示为天线工作频段边缘频点的驻波比数值。测试所得的 Return Loss, VSWR 相关波形图如下图所示。

The figure below shows the VSWR values of the edge frequency points of the antenna operating band. The waveform of return loss and VSWR is shown in the figure.

S11			
频率(MHz) Frequency	2400	2440	2480
VSWR	1.35	1.35	1.35
Return Loss	-16.6	-16.5	-16.6

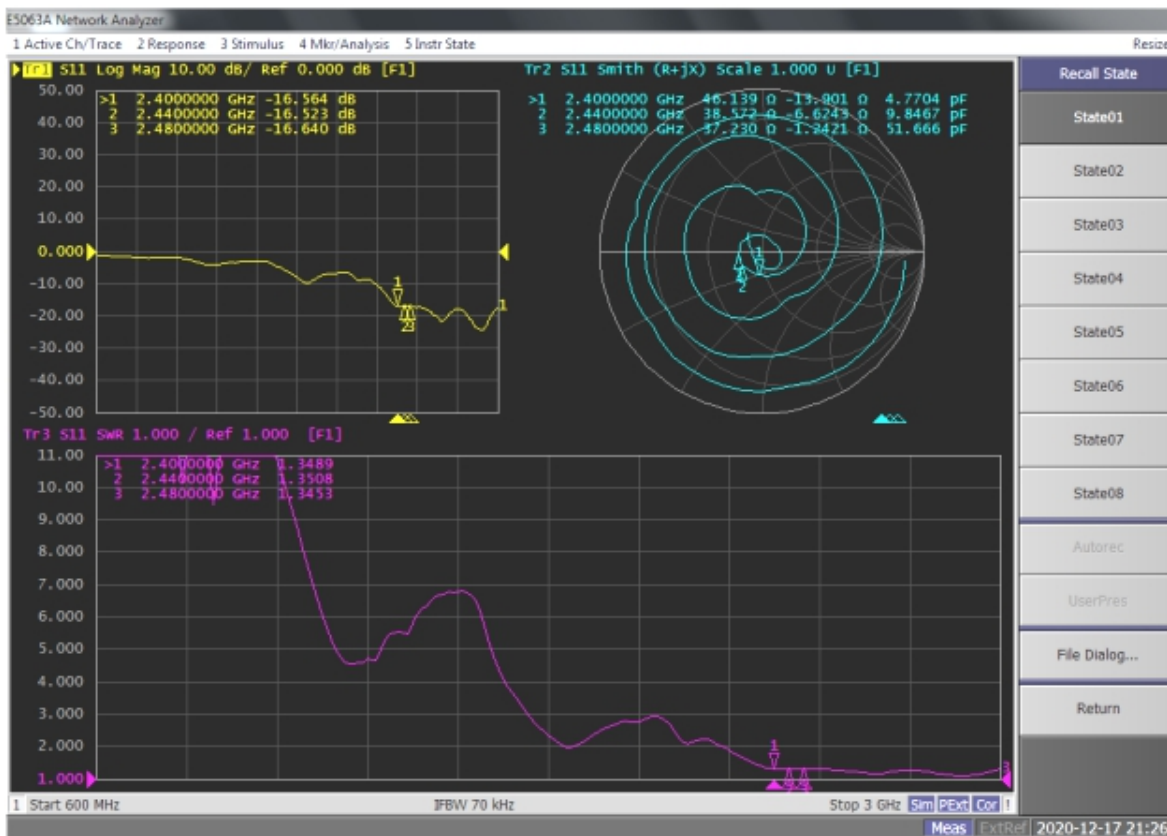


图 2 无源 S11 图 Passive S11 diagram

## 2.2 增益及效率的测试 Test of gain and efficiency

### 2.2.1 测试的场地 Test site

远德微波暗室：测试频率范围为 400MHz—6GHz。 Yuande microwave anechoic chamber: the test frequency range is 4000MHz-6GHz.

### 2.2.2 测试的仪表 Instruments tested

网络分析仪、标准喇叭天线、多探头近场天线测试系统、测试电脑等。 Network analyzer, standard horn antenna, multi probe near-field antenna test system, test computer, etc.

### 2.2.3 测试结果 Test result

在微波暗室中，测试的与效率及增益相关的数值如下表所示。

In the microwave anechoic chamber, the measured values related to efficiency and gain are shown in the table below.

频率 Frequency	效率 (%) Efficiency (%)	效率 (dbi) Efficiency (dbi)	增益 (dbi) Gain (dbi)
2400	72.79	-1.53	2.55
2410	68.76	-1.63	2.51
2420	72.84	-1.38	2.82
2430	73.47	-1.34	2.92
2440	74.27	-1.29	3.15
2450	77.46	-1.11	3.25
2460	75.56	-1.22	3.12
2470	75.08	-1.24	2.95
2480	78.00	-1.08	3.05

### 2.2.4 无源辐射方向图 Passive radiation pattern

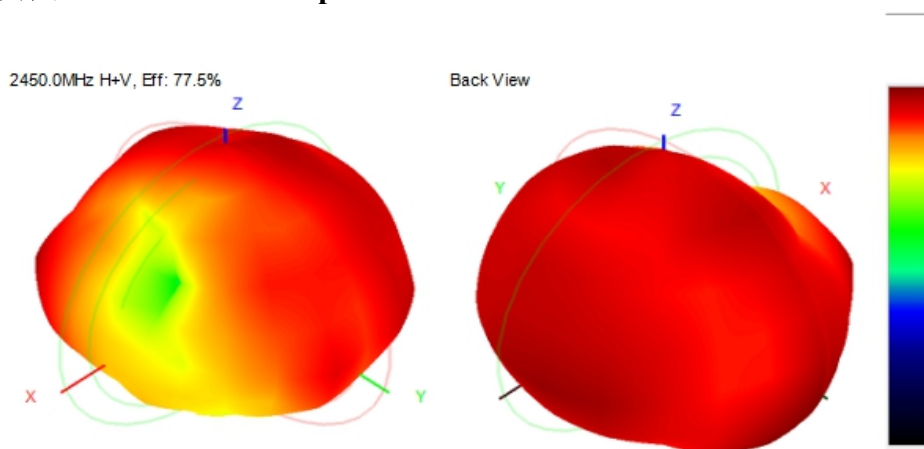


图 3 无源效率方向图 Passive efficiency pattern

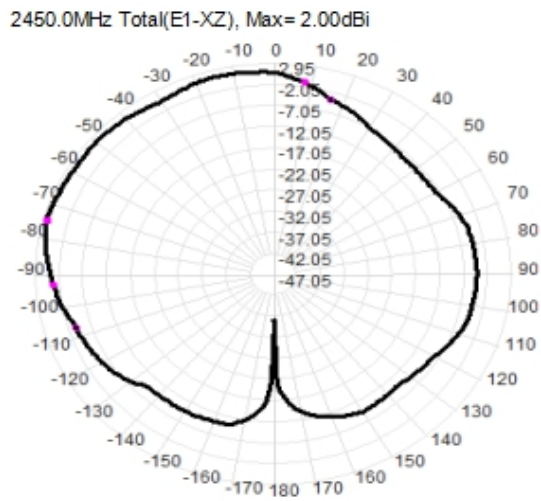


图 4 E1 面-总的增益方向图 E1 plane - total gain pattern

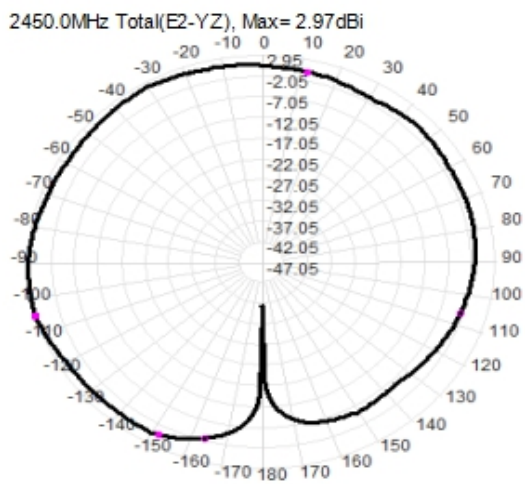


图 5 E2 面-总的增益方向图 E2 plane - total gain pattern

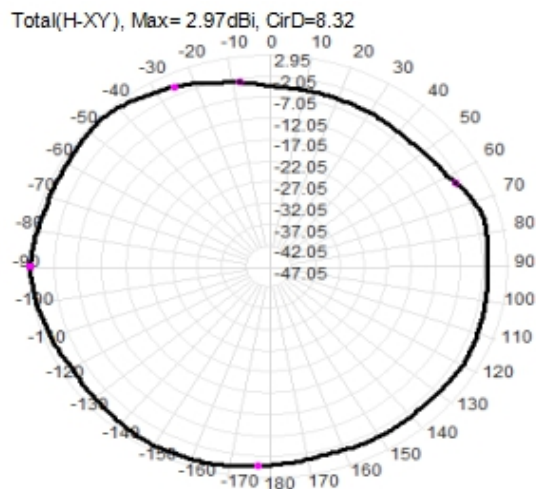


图 6 H 面-总的增益方向图 H plane - total gain pattern

# 4、产品结构图 Product structure drawing

