深圳市盛邦尔科技有限公司
Shenzhen Surbaner Technology Co., Ltd.
地址：深圳市宝安区西乡街道鹤洲恒丰工业城 B25 栋 2 楼
TEL：0755-82790675　FAX：0755-82809726

承认书

SPECIFICATION FOR APPROVAL

客户 Customer	恒晨
项目名 Project	MID7016
频段 Band	1575.42± 3MHz/2.4-2.5GHz/5.15-5.85GHz
SBR 料号 Part number	PCWG83R3612AC165
版本 Version	A0
射频 RF	
结构 ME	
业务 Sale	岳磊
日期 Date	2019-8-5
客户项目名称 Customer project name	MID7016
客户料号 Customer part number	2A6.9.612AC16500

承 认 人 签 章 **Signature**		
制定 **Responsible**	审核 **Approve**	客户确认 **Confirm**
李瑶娜		

项次	日期	版次	修订说明	备注
1	2019-8-5	A0	首次发行	
2				

1. Antenna picture

The report mainly provides the test status of the electrical properties parameters of MID7016 . The MID7016 antenna is a 1575.42±3MHz/2.4-2.5GHz/5.15-5.85GHzBand . The antenna Picture and assembly are shown below.

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:

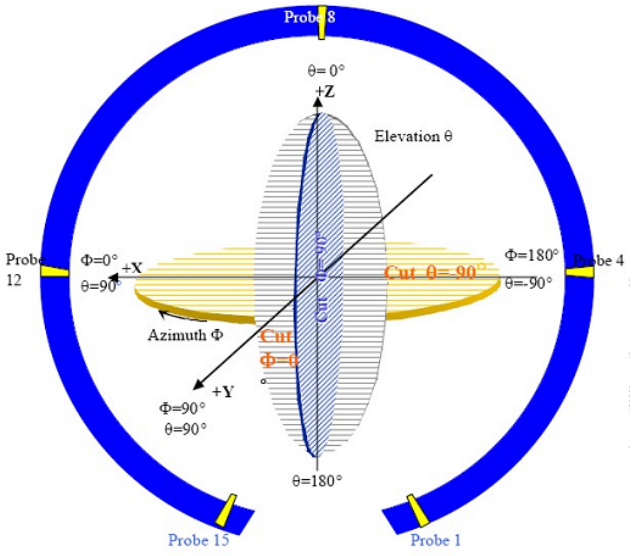


图 4 3D 微波暗室测试坐标系(back view)

.

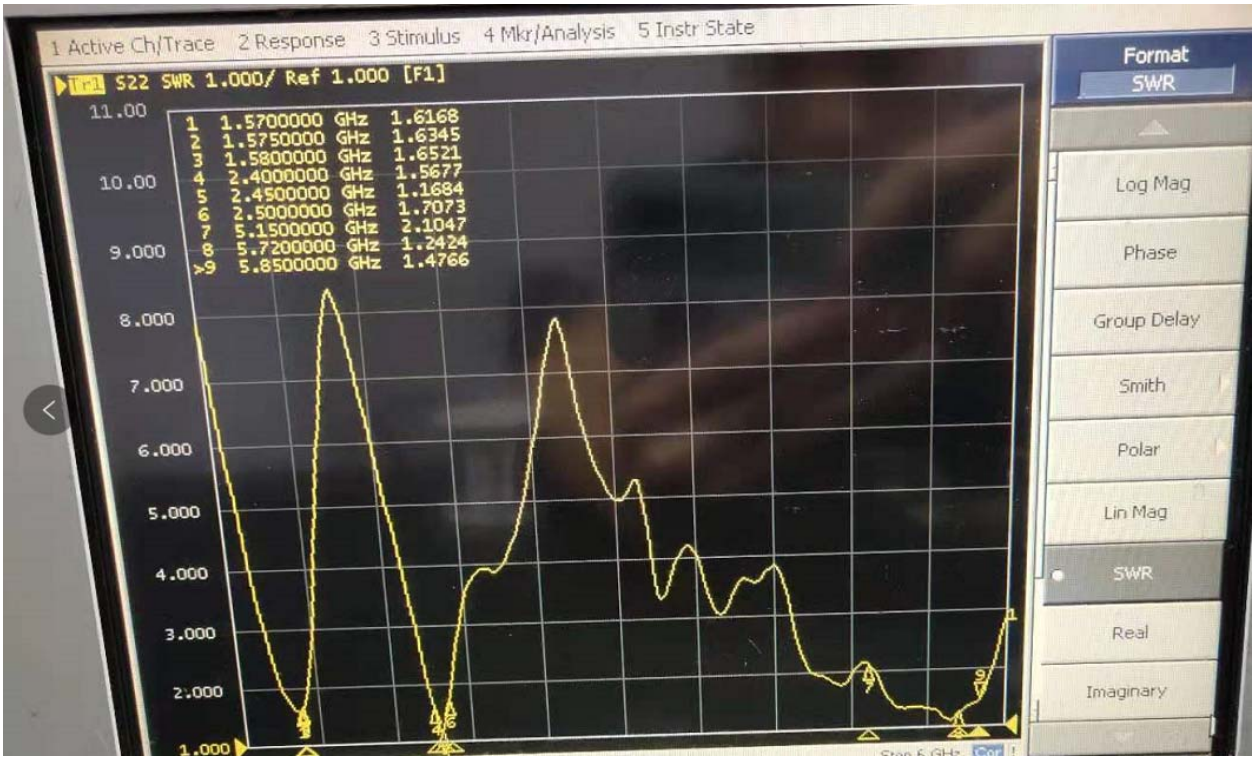
3. Electrical Specification

3-1 Frequency Requirements

MID7016 Antenna working band at 1575.42±3MHz/2.4-2.5GHz/5.15-5.85GHz ; Resonate in this frequency band.

3-2 Passive S11 parameter

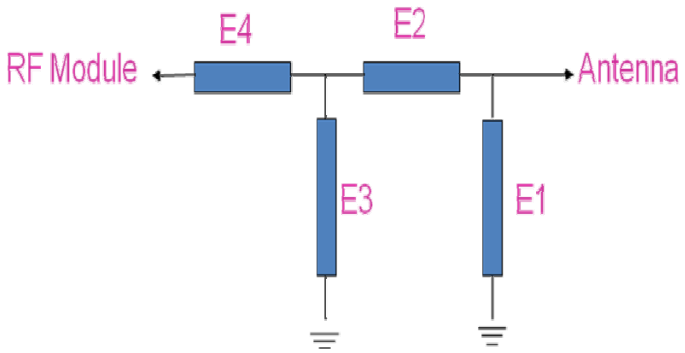
Measuring Method is a 50Ωcoaxial cable is connected to the antenna. Then this cable is connected to a network analyzer to measure the S11 parameter, Keeping this fixture away from metal at least 20cm.



VSWR

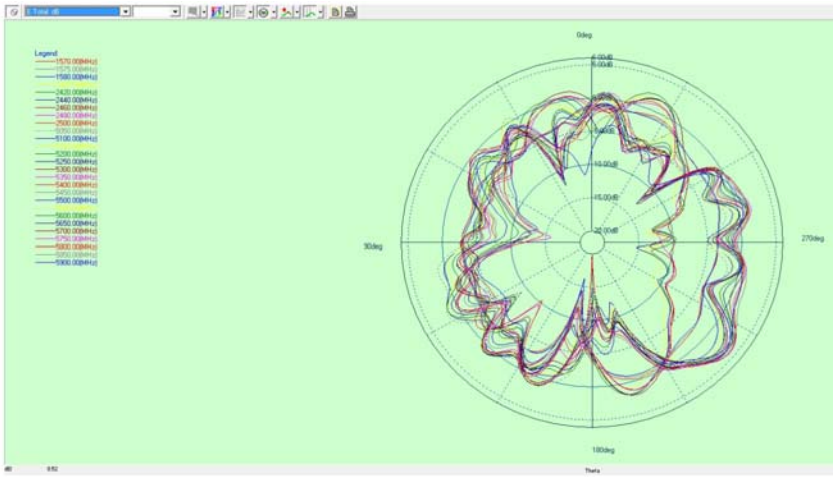
Frequency(MHz)	1575.42	2400	2450	2500	5150	5350	5850
VSWR	1.63	1.56	1.16	1.7	2.1	1.24	1.47

3-3 Antenna Matching Network

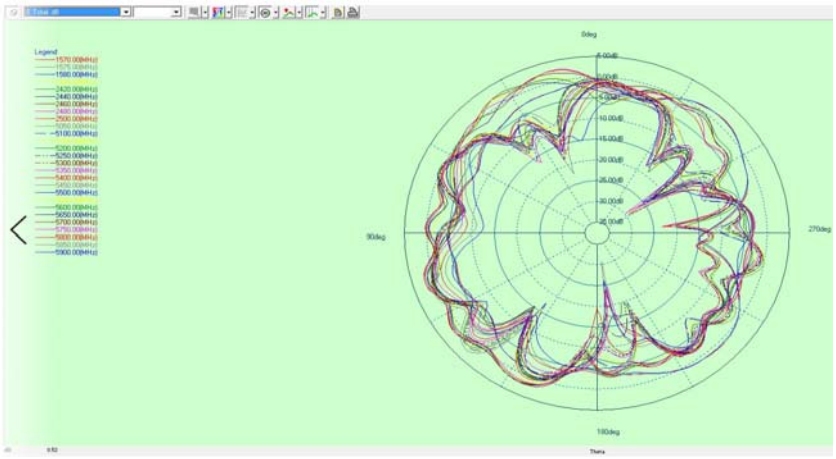


Element	Capacitor	Inductor
E1	N/A	N/A
E2	N/A	N/A
E3	N/A	N/A
E4	N/A	N/A

3-4 2D Pattern

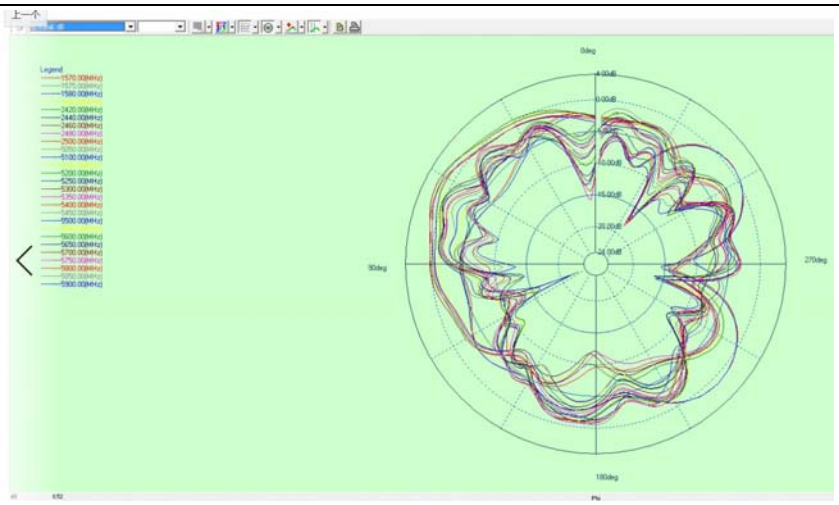


X-Z Plane



Y-Z Plane

.



X-Y Plane

3-5 Efficiency and Gain Value

Frequency (MHz)	Efficiency (%)	Peak GAIN (dBi)
1575.42	58.28	2.35
2400	48.67	2.29
2450	50.45	3.02
2500	48.97	3.24
5150	42.26	2.92
5720	40.69	3.49
5850	43.60	3.33

3-6 OTA

Test Equipment:	R&S CMW270			
Test Condition:	3D chamber			
Band	Wireless Protocol	Channel	TRP(dBm)	TIS(dBm)
WIFI	802.11 b/11Mbs	1	13.21	81.03
		6	13.19	81.14
		11	13.45	80.94
WIFI	802.11 g/54Mbs	1	9.21	68.38
		6	10.24	68.21
		11	10.18	67.74
WIFI	802.11 n/65Mbs	1	9.42	65.56
		6	10.08	65.42
		11	10.46	65.79
WIFI	802.11 a/54Mbs	36	8.15	68.28
		149		
		165		

4. Mechanical Specification:

Mechanical Configuration (Unit: mm)

The appearance of the antenna is according to drawing Figure 8

.