



深圳市迪比通通讯设备有限公司

SHENZHEN DIBITONG TELECOMMUNICATION TECHNOLOGY CO.,LTD.

移动通信终端天线

Mobile communication terminal antenna

产品设计与制造规格书

Product design and manufacturing specifications

- ◆ 客户名称/ Customer: 福斯康姆
- ◆ 项目名称/Projec: R8
- ◆ 物料名称/Name: 2.4-5.8GWIFI/BT 天线
- ◆ 天线材质/Antenna materials: FPC+Cable
- ◆ 物料编号/Part no:
- ◆ 设计/Designer:
- ◆ 审核/Check:
- ◆ 客户确认签章/Approved:

地址/Add: 深圳市南山区西丽镇平山一路云谷二期 8 栋 505

Rm505, 8th building, Yungu 2nd period, pingshan No.1 Road, Xili Town, Nanshan District, ShenZhen , China

电话/Tel: 86-755-83763273/13927478525

传真/Fax: 86-755-83763348

电邮/Email: dbt1668@163.com

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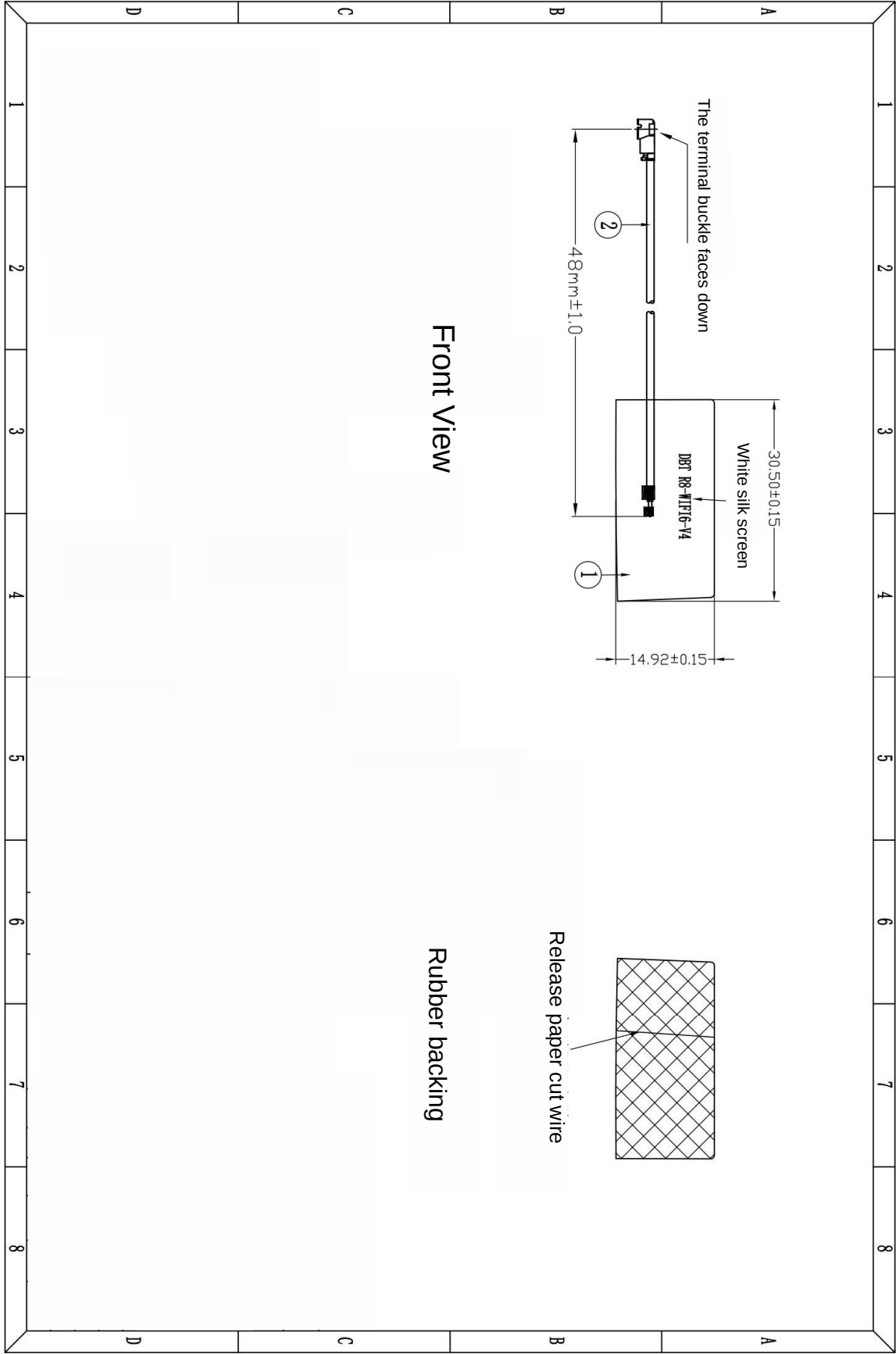
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1. 天线 2D 图/Antenna 2D diagram

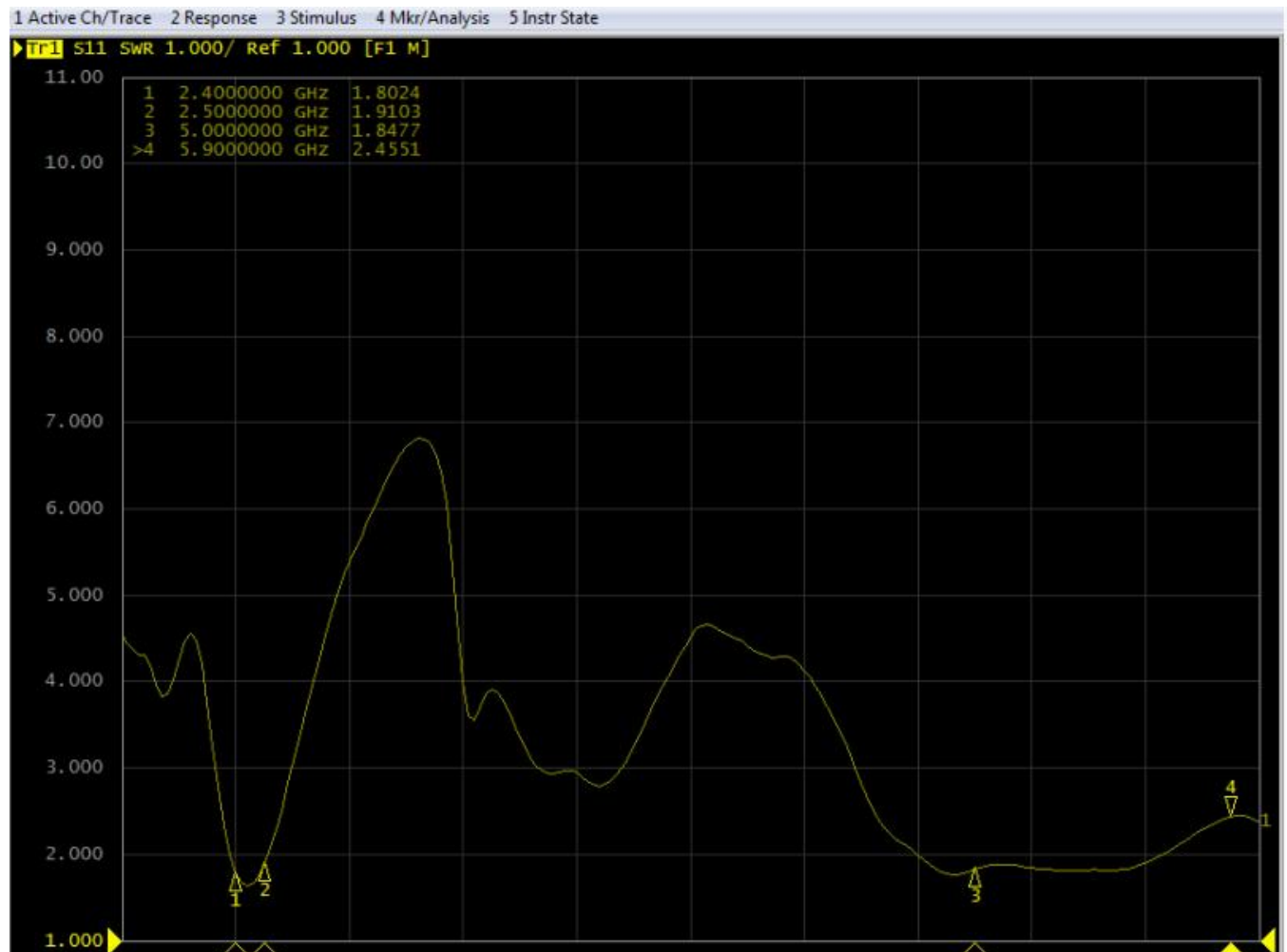


2.技术指标/ Technical target

A. 电气性能/Electrical Parameter	
工作频率范围/Frequency Range	2400~2500 MHz 5000~5900 MHz
驻波比/VSWR	2400~2500 MHz: ≤ 2.0 5000~5900 MHz: ≤ 2.5
天线增益/Gain (Max)	2400~2500 MHz: 2.95dBi 5000~5900 MHz: 3.98dBi
平均辐射效率/ Average radiation efficiency	2400~2500 MHz :51.3% 5000~5900 MHz: 51.7 %
阻抗/Input Impedance	50 ohm
B. 材料/ Material	
FPC+Cable	
C. 环境/Environmental Science	
工作温度/Working Temperature	- 30°C ~ + 85 °C
储藏温度/Storage temperature	- 30°C ~ + 85 °C

3.S11 驻波比 /阻抗测试结果

S11 SWR/ Impedance test results



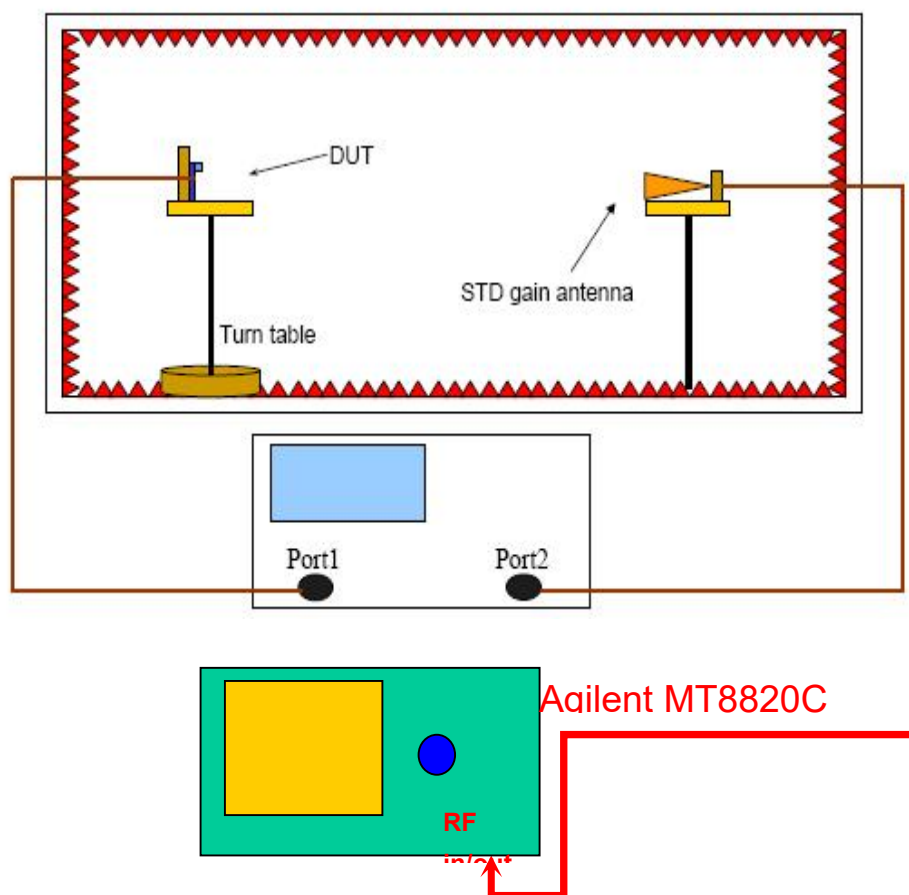
驻波/VSWR: 2400-2500MHz $\leq$ 2.0

5000~5900MHz: $\leq$ 2.5

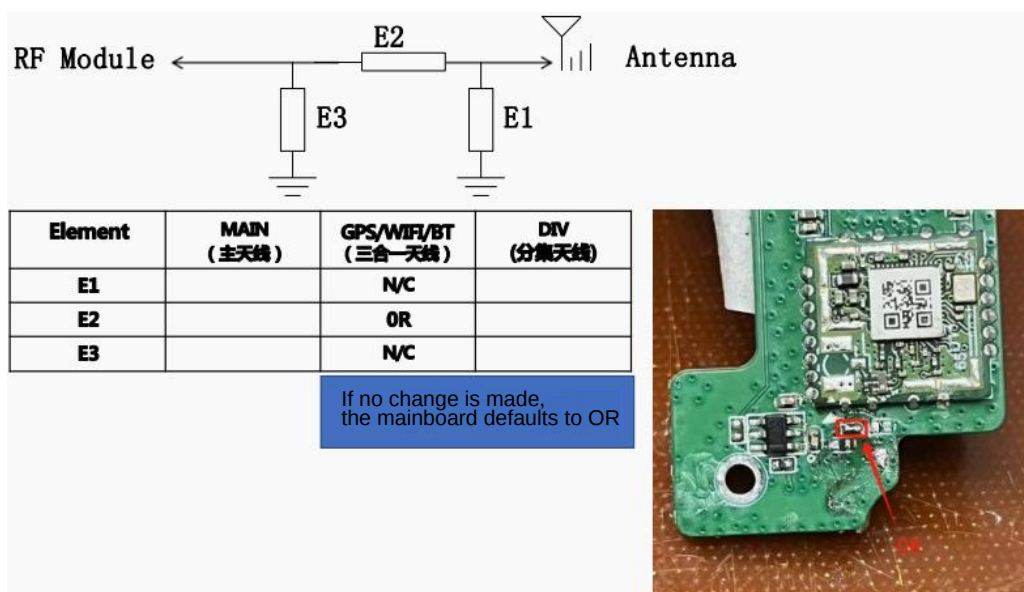
阻抗/Input Impedance: 50 Ohm

4.动态测试数据--- 天线安置在设备里/Dynamic test instructions - Antennas are placed in electronic scales

测试仪器/ Testing instrument : Anrits CMW500+ Anechoic Chamber 6X4X3m(3D-OTA)



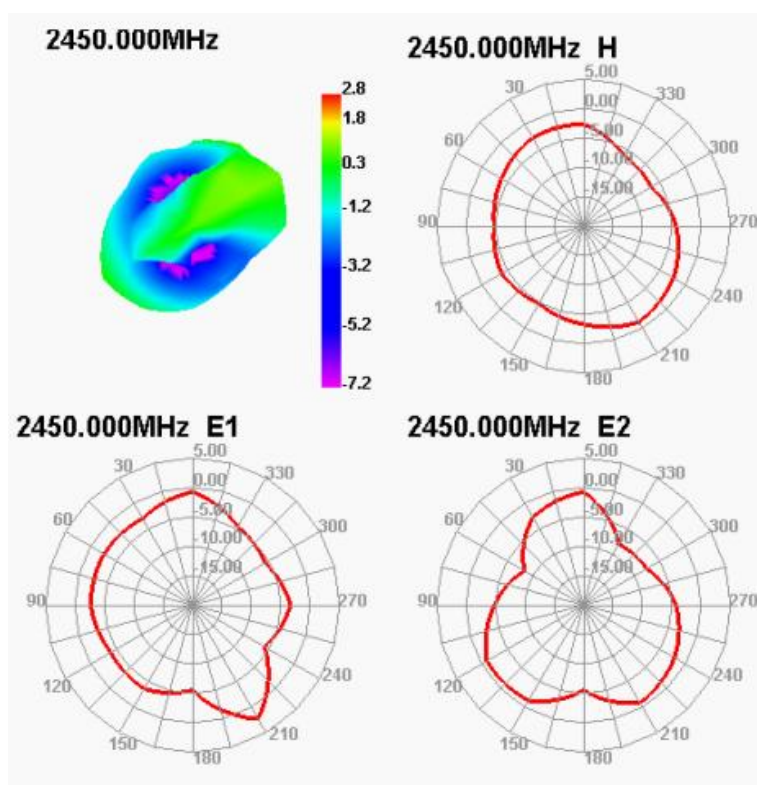
5.匹配电路/Matching Circuit



(The match has not changed)

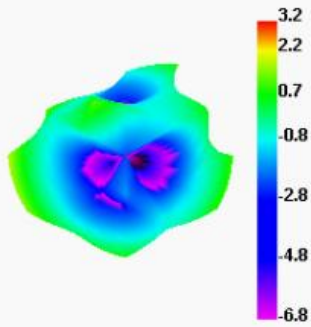
6.天线实际测试数据/Antenna test report

6.1)无源效率/增益/方向图/Passive Efficiency/Gain/Pattern

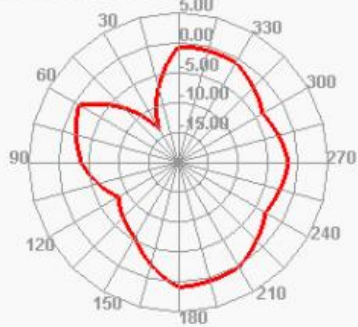


2.4G		
Freq (MHz)	Effi (%)	Gain (dBi)
2400	52.43	2.22
2410	50.8	1.86
2420	51.09	2.11
2430	51.56	2.18
2440	52.37	2.54
2450	50.52	2.79
2460	51.94	2.47
2470	49.78	2.58
2480	51.88	2.83
2490	51.59	2.95
2500	50.34	2.65

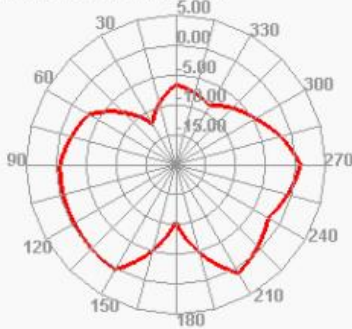
5100.000MHz



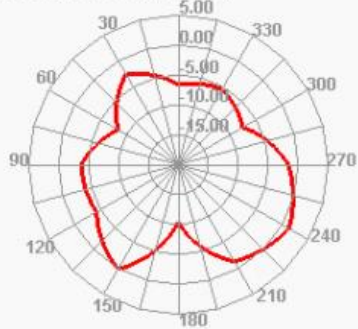
5100.000MHz H



5100.000MHz E1



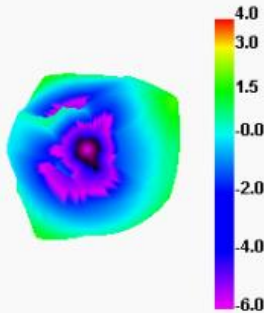
5100.000MHz E2



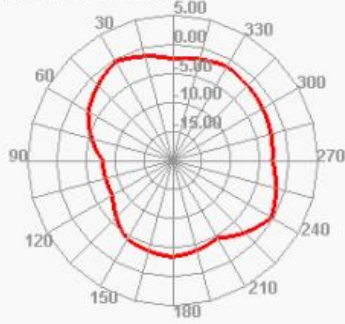
5.8G

Freq (MHz)	Effi (%)	Gain (dBi)
5000	50.05	2.51
5100	50.74	3.24
5200	52.38	2.14
5300	55.61	2.13
5400	50.2	2.91
5500	51.29	2.01
5600	50.28	3.91
5700	53.12	2.42
5800	51.52	3.78
5900	52.02	3.98

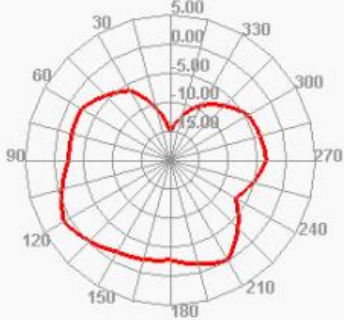
5900.000MHz



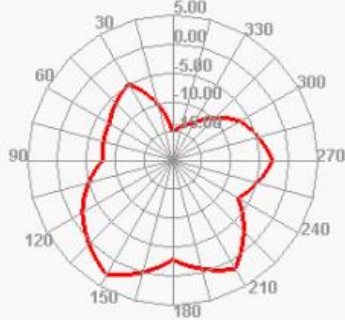
5900.000MHz H



5900.000MHz E1



5900.000MHz E2



6.2)有源数据测试报告/Active data test report

2.4G		802.11b : 11Mbps		
Test	Wifi 2G TRP			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
Txp Ave (dBm)	16.22	16.13	16.08	
Test	Wifi 2G TIS			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
Sens Ave (dBm)	-82.09	-82.15	-82.14	

		802.11g : 54MBps		
Test	Wifi 2G TRP			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
Txp Ave (dBm)	15.99	15.6	15.09	
Test	Wifi 2G TIS			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
Sens Ave (dBm)	-70.8	-70.55	-70.29	

		802.11n : MCS7		
Test	Wifi 2G TRP			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
Txp Ave (dBm)	15.66	16.07	16.5	
Test	Wifi 2G TIS			
Result	1	6	11	
Frequency (MHz)	2412	2437	2462	
Sens Ave (dBm)	-67.67	-68.6	-67.17	

5G		802.11a : 54Mbps		
Test Result	Wifi 5G TRP			
	36	48	64	
Frequency (MHz)	5180	5240	5320	
Txp Ave (dBm)	14.01	14.58	17.27	
Test Result	Wifi 5G TIS			
	36	48	64	
Frequency (MHz)	5180	5240	5320	
Sens Ave (dBm)	-73.66	-73.21	-74.61	

		802.11a : 54Mbps		
Test Result	Wifi 5G TRP			
	149	157	161	
Frequency (MHz)	5745	5785	5805	
Txp Ave(dBm)	15.55	16.28	16.57	
Test Result	Wifi 5G TIS			
	149	157	161	
Frequency (MHz)	5745	5785	5805	
Sens Ave(dBm)	-73.07	-72.6	-72.53	

		802.11ac : MCS7		
Test Result	Wifi 5G TRP			
	36	48	64	
Frequency (MHz)	5180	5240	5320	
Txp Ave(dBm)	14.64	15.05	17.71	
Test Result	Wifi 5G TIS			
	36	48	64	
Frequency (MHz)	5180	5240	5320	
Sens Ave(dBm)	-70.61	-70.6	-71.53	

		802.11ac : MCS7		
Test Result	Wifi 5G TRP			
	149	157	161	
Frequency (MHz)	5745	5785	5805	
Txp Ave(dBm)	16.11	16.8	17.04	
Test Result	Wifi 5G TIS			
	149	157	161	
Frequency (MHz)	5745	5785	5805	
Sens Ave(dBm)	-68.7	-68.45	-68.09	