

FCC C2PC RF Test Report

Reference No..... : WTD22D04074056W001
FCC ID : ZLZ-WLINK
Applicant..... : Shenzhen Mindray BIO-Medical electronics Co.,LTD.
Address..... : Mindray Building ,Keji 12th Road South,Hi-tech Ind, Shenzhen
China
Product..... : wireless module
Model(s) : Wlink
Standards..... : FCC CFR47 Part 15.247
FCC CFR47 Part 15.407
Date of Receipt sample : 2022-04-27
Date of Test : 2022-04-28 to 2022-05-11
Date of Issue..... : 2023-03-27
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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2 Contents

	Page
1 COVER PAGE	1
2 CONTENTS	2
3 REVISION HISTORY	3
4 GENERAL INFORMATION	4
4.1 GENERAL DESCRIPTION OF E.U.T.	4
4.2 DETAILS OF E.U.T.	4
4.3 TEST FACILITY	5
4.4 SUBCONTRACTED.....	5
4.5 ABNORMALITIES FROM STANDARD CONDITIONS	5
4.6 CHANNEL LIST.....	6
4.7 TEST MODE	9
5 TEST SUMMARY	10
6 EQUIPMENT USED DURING TEST	11
6.1 EQUIPMENTS LIST	11
6.2 DESCRIPTION OF SUPPORT UNITS.....	11
6.3 MEASUREMENT UNCERTAINTY	11
6.4 TEST EQUIPMENT CALIBRATION	11
7 RADIATED EMISSIONS	12
7.1 EUT OPERATION.....	12
7.2 TEST SETUP	13
7.3 SPECTRUM ANALYZER SETUP	14
7.4 TEST PROCEDURE.....	15
7.5 CORRECTED AMPLITUDE & MARGIN CALCULATION.....	15
7.6 SUMMARY OF TEST RESULTS.....	16
8 PHOTOGRAPHS OF TEST SETUP AND EUT	52

3 Revision History

Test Report No.	Date of Receipt Sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTD22D04074056W001	2022-04-27	2022-04-28 to 2022-05-11	2023-03-27	Original	-	Valid

4 General Information

This report is prepared for FCC Class II Permissive Change, add three optional antennas.

Ant.	Type	Operation Frequencies (MHz) /Antenna Gain (dBi)				
		2412~2462	5150~5250	5250~5350	5470~5725	5725~5850
Optional 1 RD542109NB86-1	FPC diploe	-0.95	0.50	0.98	2.59	3.29
Optional 2 RD542109NB86-2	FPC diploe	2.05	1.29	1.45	3.06	3.17
Optional 3 RD542109NB86-3	FPC diploe	1.80	0.70	1.07	2.12	2.77

Note: please refer to antenna specification for more details.

4.1 General Description of E.U.T.

Product: wireless module
 Model(s): Wink
 Model Description: N/A

4.2 Details of E.U.T.

Ratings: 3.3V DC
 Operation Frequency: 2.4G
 802.11b/g/n (HT20), 2412-2462MHz, 11CH
 802.11 n (HT40), 2422-2452MHz, 7CH
 U-NII-1
 802.11a/n(HT20), 5180-5240MHz 4CH
 802.11n(HT40), 5190-5230MHz 2CH
 U-NII-2A
 802.11a/n(HT20), 5260-5320MHz 4CH
 802.11n(HT40), 5270-5310MHz 2CH
 U-NII-2C
 802.11a/n(HT20), 5500-5700MHz 11CH
 802.11n(HT40), 5510-5670MHz 5CH
 U-NII-3
 802.11a/n(HT20), 5745-5825MHz 5CH
 802.11n(HT40), 5755-5795MHz 2CH
 Modulation Type: 802.11b: DBPSK, DQPSK, CCK
 802.11a/g: OFDM(BPSK, QPSK, 16QAM, 64QAM)
 802.11n: OFDM(BPSK, QPSK, 16QAM, 64QAM)
 DFS Function: Slave without radar detection
 TPC Function: Not support

4.3 Test Facility

The test facility has a test site registered with the following organizations:

ISED CAB identifier: CN0013. Test Firm Registration No.: 7760A.

Waltek Testing Group Co., Ltd. Has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files.

Registration number 7760A, October 15, 2016.

FCC Designation No.: CN1201. Test Firm Registration No.: 523476.

Waltek Testing Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration number 523476, September 10, 2019.

4.4 Subcontracted

Whether parts of tests for the product have been subcontracted to other labs:

Yes..... No

If Yes, list the related test items and lab information:

Test Lab: N/A

Lab address: N/A

Test items: N/A

4.5 Abnormalities from Standard Conditions

None.

4.6 Channel List

2.4G Wi-Fi

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2412	2	2417	3	2422	4	2427
5	2432	6	2437	7	2442	8	2447
9	2452	10	2457	11	2462	12	-

5G Wi-Fi

U-NII-1 (5.15-5.25GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
36	5180	38	5190
40	5200	42	5210
44	5220	46	5230
48	5240	50	5250

U-NII-2A (5.25-5.35GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
52	5260	54	5270
56	5280	58	5290
60	5300	62	5310
64	5320		

U-NII-2C (5.47-5.725GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
100	5500	102	5510
104	5520	108	5540
110	5550	112	5560
114	5570	116	5580
118	5590	120	5600
124	5620	126	5630
128	5640	132	5660
134	5670	136	5680
140	5700		

U-NII-3 (5.725-5.85GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
149	5745	151	5755
153	5765	155	5775
157	5785	159	5795
161	5805	165	5825

Overlapping channels			
channel	Frequency(MHz)	channel	Frequency(MHz)
138	5690	142	5710
144	5720		

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11a/n HT20:

channel	Frequency(MHz)	channel	Frequency(MHz)
36	5180	40	5200
48	5240		

channel	Frequency(MHz)	channel	Frequency(MHz)
52	5260	56	5280
64	5320		

channel	Frequency(MHz)	channel	Frequency(MHz)
100	5500	120	5600
140	5700		

channel	Frequency(MHz)	channel	Frequency(MHz)
144	5720		

channel	Frequency(MHz)	channel	Frequency(MHz)
149	5745	157	5785
165	5825		

For 802.11n (HT40):

channel	Frequency(MHz)	channel	Frequency(MHz)
38	5190	42	5210
46	5230		

channel	Frequency(MHz)	channel	Frequency(MHz)
54	5270	58	5290
62	5310		

channel	Frequency(MHz)	channel	Frequency(MHz)
102	5510	106	5530
110	5550	134	5670

channel	Frequency(MHz)	channel	Frequency(MHz)
138	5690	142	5710

channel	Frequency(MHz)	channel	Frequency(MHz)
151	5755	155	5775
159	5795		

4.7 Test Mode

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product. Transmitting duty cycle is no less 98%.

Tests Carried Out Under FCC part 15.247

Test Items	Mode	Data Rate	Channel	TX/RX
Transmitter Spurious Emissions	802.11b	1 Mbps	1/6/11	TX
	802.11g	6 Mbps	1/6/11	TX
	802.11n HT20	MCS0	1/6/11	TX

Tests Carried Out Under FCC part 15.407

Test Items	Mode	Data Rate	Channel	TX/RX
Transmitter Spurious Emissions	802.11a	6 Mbps	Refer 4.6	TX
	802.11n (HT20/40)	MCS0	Refer 4.6	TX

Note: Parameters set by test software during channel & power tests, the software provided by the customer was used to set the operating channels as well as the output power level. The RF output power set is the power expected by the manufacturer and is going to be fixed on the firmware of the final product.

5 Test Summary

Test Items	Test Requirement	Result
Radiated Spurious Emissions	15.247(d) 15.205(a) 15.209(a) 15.407	PASS

6 Equipment Used during Test

6.1 Equipments List

3m Semi-anechoic Chamber for Radiation Emissions Test site 1#						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date	Valid
1	Spectrum Analyzer	R&S	FSP30	100091	2022-04-19	1Year
2	Amplifier	Agilent	8447D	2944A10178	2021-07-26	1Year
3	Tri-log Broadband Antenna	SCHWARZBECK	VULB9163	336	2021-08-23	1Year
4	Coaxial Cable	Top	TYPE16(13M)	-	2022-04-19	1Year
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	2022-03-29	1Year
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	2021-07-30	1Year
7	Amplifier	COMPLIANCE	PAP-1G18	2004	2021-07-26	1Year
8	Coaxial Cable	ZT26-NJ-NJ-8M/FA	1GHz-18GHz	NA	2022-04-19	1Year
9	Amplifier	SCHWARZBECK	BBV 9721	100472	2021-07-30	1Year
10	Coaxial Cable	ZT40-2.92J-2.92J-2.0M	10MHz-40GHz	17100919	2022-04-19	1Year
3m Semi-anechoic Chamber for Radiation Emissions Test site 2#						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date	Valid
1	Test Receiver	R&S	ESCI	101296	2022-04-19	1Year
2	Tri-log Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2021-10-29	1Year
3	Active Loop Antenna	Com-Power Corp.	AL-130R	10160007	2022-03-29	1Year
4	Amplifier	ANRITSU	MH648A	M43381	2022-04-19	1Year
5	Cable	HUBER+SUHNER	CBL2	525178	2022-04-19	1Year

6.2 Description of Support Units

Equipment	Manufacturer	Model No.	Series No.
/	/	/	/

6.3 Measurement Uncertainty

Parameter	Uncertainty
Conducted Emission	± 3.64 dB(AC mains 150KHz~30MHz)
Radiated Spurious Emissions	± 5.08 dB (Bilog antenna 30M~1000MHz)
	± 5.47 dB (Horn antenna 1000M~25000MHz)
Radio Frequency	± 1 x 10 ⁻⁷ Hz
RF Power	± 0.42 dB
RF Power Density	± 0.7dB
Conducted Spurious Emissions	± 2.76 dB (9kHz~26500MHz)
Confidence interval: 95%. Confidence factor:k=2	

6.4 Test Equipment Calibration

All the test equipments used are valid and calibrated by CEPREI Certification Body that address is No.110 Dongguan Zhuang RD. Guangzhou, P.R.China.

Waltek Testing Group Co., Ltd.

<http://www.waltek.com.cn>

7 Radiated Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 15.247&15.407

Test Method: ANSI C63.10:2013

Test Result: PASS

Measurement Distance: 3m

Limit:

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	20log ^{(2400/F(kHz))} + 80
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	20log ^{(24000/F(kHz))} + 40
1.705 ~ 30	30	30	100 * 30	20log ⁽³⁰⁾ + 40
30 ~ 88	100	3	100	20log ⁽¹⁰⁰⁾
88 ~ 216	150	3	150	20log ⁽¹⁵⁰⁾
216 ~ 960	200	3	200	20log ⁽²⁰⁰⁾
Above 960	500	3	500	20log ⁽⁵⁰⁰⁾

7.1 EUT Operation

Operating Environment:

Temperature: 21.5 °C

Humidity: 49.9 % RH

Atmospheric Pressure: 101.2kPa

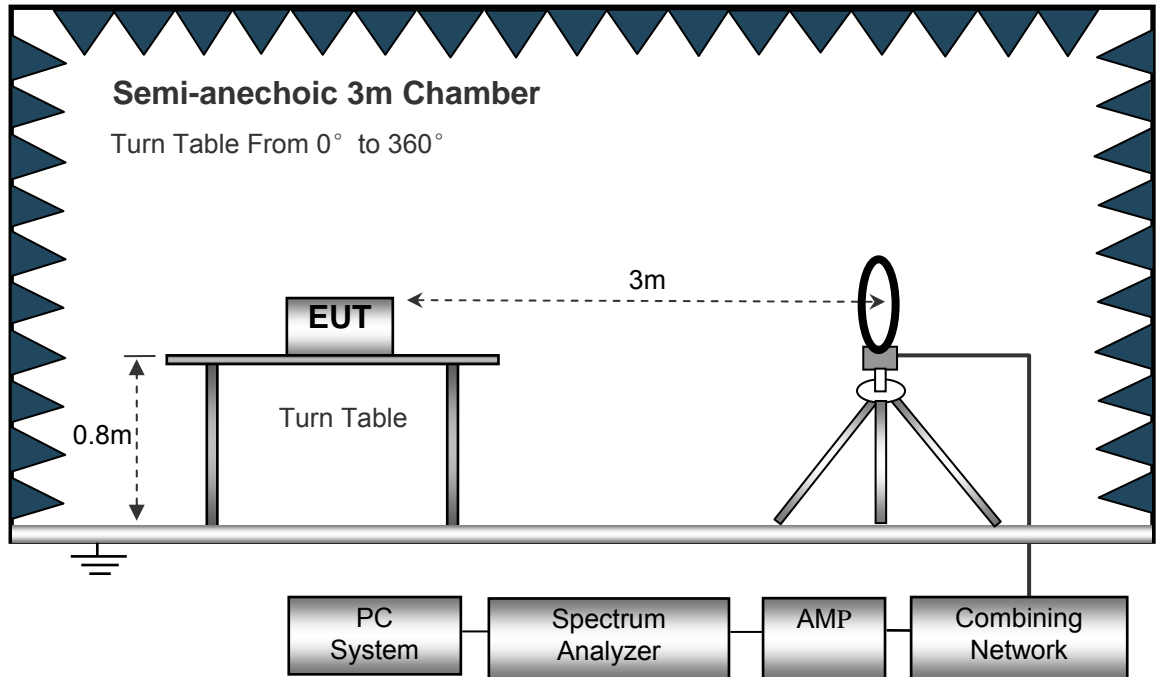
EUT Operation:

The test was performed in TX transmitting mode, the test data were shown in the report.

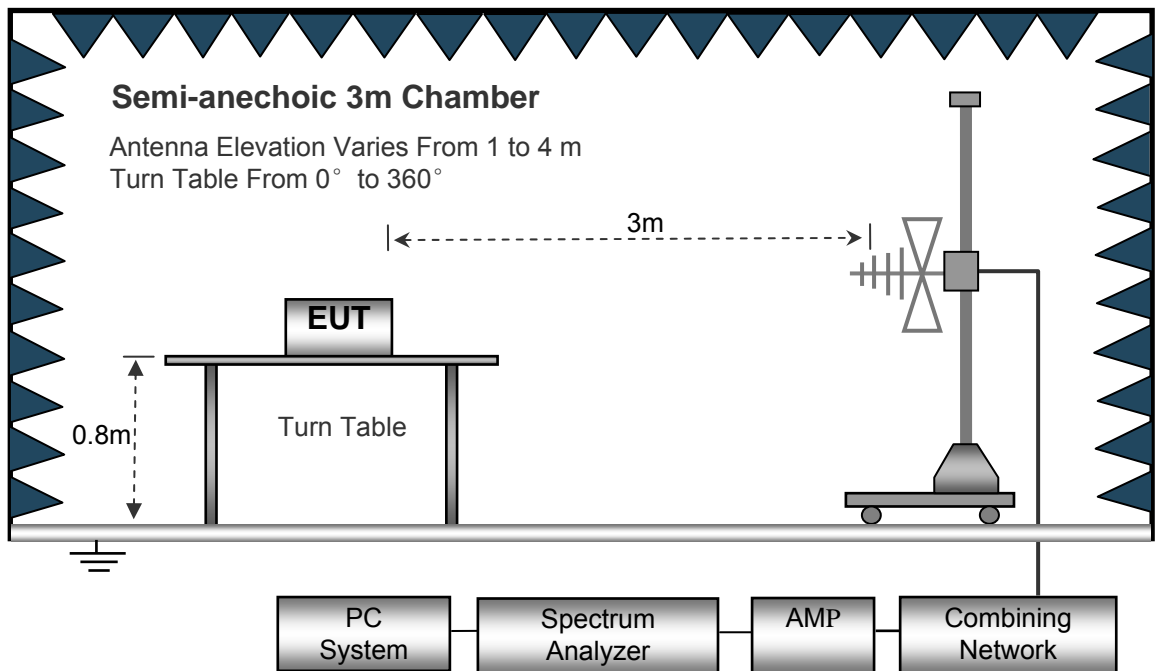
7.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.10.

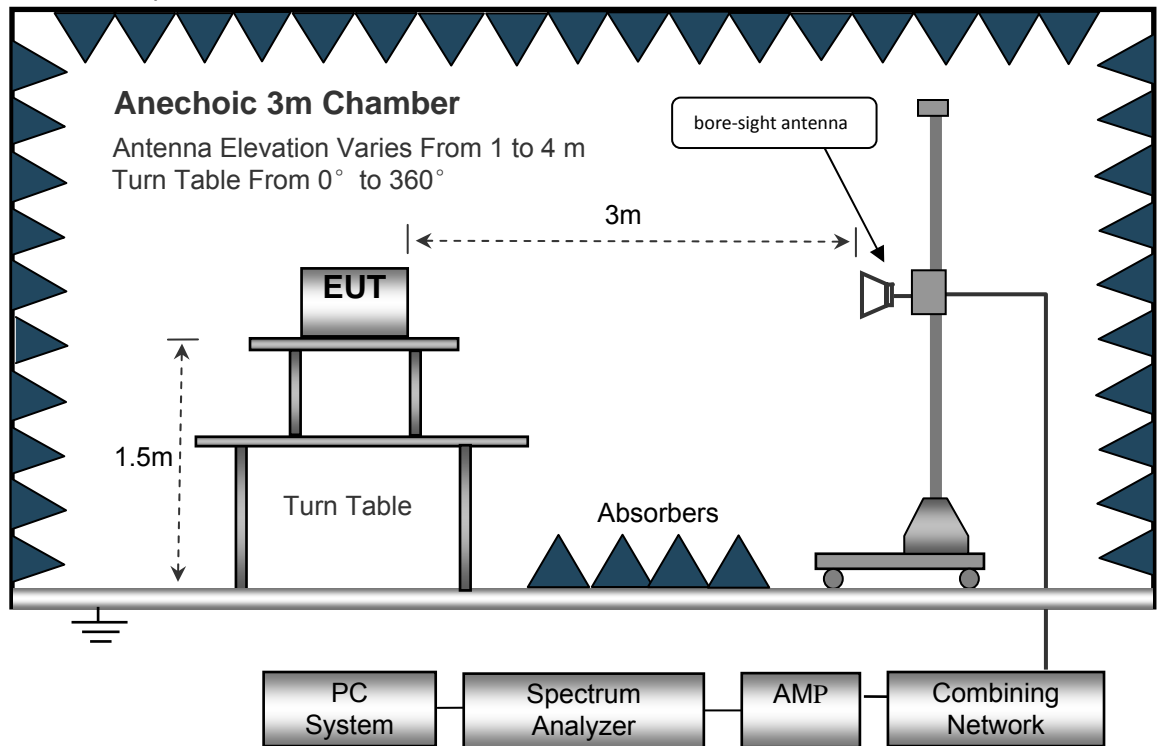
The test setup for emission measurement below 30MHz.



The test setup for emission measurement from 30 MHz to 1 GHz.



The test setup for emission measurement above 1 GHz.



7.3 Spectrum Analyzer Setup

Below 30MHz

Sweep Speed Auto
 IF Bandwidth..... 10kHz
 Video Bandwidth..... 10kHz
 Resolution Bandwidth..... 10kHz

30MHz ~ 1GHz

Sweep Speed Auto
 Detector PK
 Resolution Bandwidth..... 100kHz
 Video Bandwidth..... 300kHz

Above 1GHz

Sweep Speed Auto
 Detector PK
 Resolution Bandwidth..... 1MHz
 Video Bandwidth..... 3MHz
 Detector Ave.
 Resolution Bandwidth..... 1MHz
 Video Bandwidth..... 10Hz

7.4 Test Procedure

1. The EUT is placed on a turntable, which is 0.8m above ground plane for below 1GHz and 1.5m for above 1GHz.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are performed in X, Y and Z axis positioning (X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), the worst condition was tested putting the eut in Z axis,so the worst data were shown as follow.
8. A 2.4GHz high –pass filter is used druing radiated emissions above 1GHz measurement.

7.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Antenna Factor} + \text{Cable Factor} - \text{Amplifier Gain}$$

The “Margin” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dB means the emission is 7dB below the maximum limit for Class B. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{Limit}$$

7.6 Summary of Test Results

Optional antenna 1

Test Frequency: 9KHz~30MHz

The measurements were more than 20 dB below the limit and not reported.

2.4G Wi-Fi

All models have been tested, and only the worst-case (11b mode) was showed in the report.

Test Frequency: 30MHz ~ 18GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11b: Low Channel 2412MHz									
223.45	35.32	QP	7	1.5	H	-11.62	23.70	46.00	-22.30
223.45	29.29	QP	84	1.3	V	-11.62	17.67	46.00	-28.33
4824.00	51.08	PK	33	1.7	V	-1.06	50.02	74.00	-23.98
4824.00	40.70	Ave	33	1.7	V	-1.06	39.64	54.00	-14.36
7236.00	43.16	PK	266	1.8	H	1.33	44.49	74.00	-29.51
7236.00	37.55	Ave	266	1.8	H	1.33	38.88	54.00	-15.12
2342.87	45.12	PK	130	2.0	V	-13.19	31.93	74.00	-42.07
2342.87	37.33	Ave	130	2.0	V	-13.19	24.14	54.00	-29.86
2385.38	44.83	PK	307	1.2	H	-13.14	31.69	74.00	-42.31
2385.38	37.91	Ave	307	1.2	H	-13.14	24.77	54.00	-29.23
2487.63	43.08	PK	189	1.9	V	-13.08	30.00	74.00	-44.00
2487.63	37.77	Ave	189	1.9	V	-13.08	24.69	54.00	-29.31

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11b: Middle Channel 2437MHz									
223.45	35.77	QP	110	1.4	H	-11.62	24.15	46.00	-21.85
223.45	28.99	QP	40	1.1	V	-11.62	17.37	46.00	-28.63
4874.00	49.89	PK	76	1.4	V	-0.62	49.27	74.00	-24.73
4874.00	40.02	Ave	76	1.4	V	-0.62	39.40	54.00	-14.60
7311.00	41.77	PK	275	1.1	H	2.21	43.98	74.00	-30.02
7311.00	38.85	Ave	275	1.1	H	2.21	41.06	54.00	-12.94
2348.72	46.48	PK	204	1.5	V	-13.19	33.29	74.00	-40.71
2348.72	39.34	Ave	204	1.5	V	-13.19	26.15	54.00	-27.85
2373.16	44.35	PK	187	1.3	H	-13.14	31.21	74.00	-42.79
2373.16	36.02	Ave	187	1.3	H	-13.14	22.88	54.00	-31.12
2487.64	43.02	PK	332	1.7	V	-13.08	29.94	74.00	-44.06
2487.64	38.52	Ave	332	1.7	V	-13.08	25.44	54.00	-28.56

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11b: High Channel 2462MHz									
223.45	36.42	QP	77	1.0	H	-11.62	24.80	46.00	-21.20
223.45	30.35	QP	180	1.2	V	-11.62	18.73	46.00	-27.27
4924.00	49.66	PK	286	1.8	V	-0.24	49.42	74.00	-24.58
4924.00	39.60	Ave	286	1.8	V	-0.24	39.36	54.00	-14.64
7386.00	40.85	PK	218	2.0	H	2.84	43.69	74.00	-30.31
7386.00	40.13	Ave	218	2.0	H	2.84	42.97	54.00	-11.03
2338.66	45.61	PK	296	2.0	V	-13.19	32.42	74.00	-41.58
2338.66	38.97	Ave	296	2.0	V	-13.19	25.78	54.00	-28.22
2373.73	42.43	PK	347	1.2	H	-13.14	29.29	74.00	-44.71
2373.73	36.80	Ave	347	1.2	H	-13.14	23.66	54.00	-30.34
2485.44	42.55	PK	349	1.1	V	-13.08	29.47	74.00	-44.53
2485.44	38.01	Ave	349	1.1	V	-13.08	24.93	54.00	-29.07

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

5G Wi-Fi**U-NII-1**

All models have been tested, and only the worst-case (11a mode) was showed in the report.

Test Frequency: 30MHz ~ 18GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band I low Channel 5190MHz									
223.45	31.39	QP	238	1.0	H	-11.62	19.77	46.00	-26.23
223.45	42.73	QP	305	1.8	V	-11.62	31.11	46.00	-14.89
4501.28	37.86	PK	85	1.6	H	-2.03	35.83	74.00	-38.17
4501.28	40.65	Ave	85	1.6	H	-2.03	38.62	54.00	-15.38
5135.64	42.35	PK	261	1.4	H	-1.02	41.33	74.00	-32.67
5135.64	38.04	Ave	261	1.4	H	-1.02	37.02	54.00	-16.98
10360.00	47.77	PK	215	1.7	H	5.33	53.10	74.00	-20.90
10360.00	36.65	Ave	215	1.7	H	5.33	41.98	54.00	-12.02
5376.48	45.33	PK	1	2.0	H	-1.21	44.12	74.00	-29.88
5376.48	39.41	Ave	1	2.0	H	-1.21	38.20	54.00	-15.80

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band I High channel 5230MHz									
223.45	28.85	QP	340	1.9	H	-11.62	17.23	46.00	-28.77
223.45	45.21	QP	348	1.5	V	-11.62	33.59	46.00	-12.41
4505.30	37.76	PK	34	1.9	H	-2.24	35.52	74.00	-38.48
4505.30	42.31	Ave	34	1.9	H	-2.24	40.07	54.00	-13.93
5114.92	43.37	PK	182	1.6	H	-1.09	42.28	74.00	-31.72
5114.92	39.91	Ave	182	1.6	H	-1.09	38.82	54.00	-15.18
10480.00	47.62	PK	5	1.6	H	5.14	52.76	74.00	-21.24
10480.00	37.86	Ave	5	1.6	H	5.14	43.00	54.00	-11.00
5359.77	45.92	PK	298	1.5	H	-1.38	44.54	74.00	-29.46
5359.77	37.56	Ave	298	1.5	H	-1.38	36.18	54.00	-17.82

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

U-NII-2A**Test Frequency: 30MHz ~ 18GHz**

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band II low Channel 5270MHz									
223.45	38.35	QP	186	1.5	H	-11.62	26.73	46.00	-19.27
223.45	45.98	QP	211	1.0	V	-11.62	34.36	46.00	-11.64
4537.39	40.20	PK	102	1.6	H	-1.89	38.31	74.00	-35.69
4537.39	32.36	Ave	102	1.6	H	-1.89	30.47	54.00	-23.53
5113.90	48.51	PK	54	1.4	H	-1.06	47.45	74.00	-26.55
5113.90	40.55	Ave	54	1.4	H	-1.06	39.49	54.00	-14.51
10380.00	44.94	PK	130	2.0	H	5.26	50.20	74.00	-23.80
10380.00	33.74	Ave	130	2.0	H	5.26	39.00	54.00	-15.00
5352.75	46.03	PK	224	1.5	H	-1.03	45.00	74.00	-29.00
5352.75	39.55	Ave	224	1.5	H	-1.03	38.52	54.00	-15.48

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band II High channel 5310MHz									
223.45	39.16	QP	346	1.4	H	-11.62	27.54	46.00	-18.46
223.45	45.10	QP	217	1.2	V	-11.62	33.48	46.00	-12.52
4524.69	39.47	PK	233	1.2	H	-1.94	37.53	74.00	-36.47
4524.69	31.54	Ave	233	1.2	H	-1.94	29.60	54.00	-24.40
5129.25	49.90	PK	184	1.7	H	-1.06	48.84	74.00	-25.16
5129.25	41.12	Ave	184	1.7	H	-1.06	40.06	54.00	-13.94
10460.00	48.17	PK	215	2.0	H	5.28	53.45	74.00	-20.55
10480.00	36.72	Ave	215	2.0	H	5.28	42.00	54.00	-12.00
5369.58	45.10	PK	43	1.9	H	-1.05	44.05	74.00	-29.95
5369.58	38.31	Ave	43	1.9	H	-1.05	37.26	54.00	-16.74

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

U-NII-2C**Test Frequency: 30MHz ~ 18GHz**

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band III low Channel 5510MHz									
223.45	45.16	QP	174	1.2	H	-11.62	33.54	46.00	-12.46
223.45	40.34	QP	316	2.0	V	-11.62	28.72	46.00	-17.28
4527.93	47.85	PK	161	1.3	H	-1.89	45.96	74.00	-28.04
4527.93	36.87	Ave	161	1.3	H	-1.89	34.98	54.00	-19.02
5119.06	46.87	PK	97	1.0	H	-1.06	45.81	74.00	-28.19
5119.06	38.33	Ave	97	1.0	H	-1.06	37.27	54.00	-16.73
11020.00	42.91	PK	247	1.3	H	5.26	48.17	68.20	-20.03
11020.00	38.84	Ave	247	1.3	H	5.26	44.10	54.00	-9.90
5367.65	46.61	PK	138	1.2	H	-1.03	45.58	74.00	-28.42
5367.65	38.95	Ave	138	1.2	H	-1.03	37.92	54.00	-16.08

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band III Middle channel 5550MHz									
223.45	45.35	QP	64	1.4	H	-11.62	33.73	46.00	-12.27
223.45	40.93	QP	338	1.3	V	-11.62	29.31	46.00	-16.69
4500.46	48.08	PK	179	1.6	H	-1.94	46.14	74.00	-27.86
4500.46	36.46	Ave	179	1.6	H	-1.94	34.52	54.00	-19.48
5147.95	46.58	PK	102	1.8	H	-1.06	45.52	74.00	-28.48
5147.95	39.52	Ave	102	1.8	H	-1.06	38.46	54.00	-15.54
11100.00	46.15	PK	48	1.9	H	5.28	51.43	68.20	-16.77
11100.00	39.21	Ave	48	1.9	H	5.28	44.49	54.00	-9.51
5381.39	45.90	PK	137	1.4	H	-1.05	44.85	74.00	-29.15
5381.39	39.66	Ave	137	1.4	H	-1.05	38.61	54.00	-15.39

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band III High channel 5670MHz									
223.45	45.15	QP	142	1.7	H	-11.62	33.53	46.00	-12.47
223.45	40.60	QP	192	1.0	V	-11.62	28.98	46.00	-17.02
4525.81	47.80	PK	143	1.4	H	-1.94	45.86	74.00	-28.14
4525.81	36.94	Ave	143	1.4	H	-1.94	35.00	54.00	-19.00
5148.64	47.27	PK	340	1.9	H	-1.06	46.21	74.00	-27.79
5148.64	38.54	Ave	340	1.9	H	-1.06	37.48	54.00	-16.52
11340.00	40.98	PK	197	1.2	H	5.28	46.26	68.20	-21.94
11340.00	35.90	Ave	197	1.2	H	5.28	41.18	54.00	-12.82
5360.29	46.99	PK	45	1.7	H	-1.05	45.94	74.00	-28.06
5360.29	38.55	Ave	45	1.7	H	-1.05	37.50	54.00	-16.50

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

U-NII-3**Test Frequency: 30MHz ~ 18GHz**

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band IV low Channel 5755MHz									
223.45	37.55	QP	179	1.6	H	-11.62	25.93	46.00	-20.07
223.45	45.23	QP	89	1.0	V	-11.62	33.61	46.00	-12.39
4522.23	39.18	PK	315	2.0	H	-1.96	37.22	74.00	-36.78
4522.23	31.37	Ave	315	2.0	H	-1.96	29.41	54.00	-24.59
11510.00	45.66	PK	230	1.1	H	5.88	51.54	68.20	-16.66
11510.00	34.74	Ave	230	1.1	H	5.88	40.62	54.00	-13.38
5353.74	45.74	PK	261	1.0	H	-1.01	44.73	74.00	-29.27
5353.74	38.58	Ave	261	1.0	H	-1.01	37.57	54.00	-16.43
5449.32	46.26	PK	145	1.3	H	-1.36	44.90	74.00	-29.10
223.45	37.55	QP	179	1.6	H	-11.62	25.93	46.00	-20.07

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band IV High channel 5795MHz									
223.45	37.62	QP	344	1.4	H	-11.62	26.00	46.00	-20.00
223.45	44.24	QP	54	1.3	V	-11.62	32.62	46.00	-13.38
4508.84	39.82	PK	265	1.2	H	-1.92	37.90	74.00	-36.10
4508.84	32.06	Ave	265	1.2	H	-1.92	30.14	54.00	-23.86
11590.00	47.64	PK	236	1.6	H	5.63	53.27	68.20	-14.93
11590.00	36.22	Ave	236	1.6	H	5.63	41.85	54.00	-12.15
5380.75	45.37	PK	330	1.8	H	-1.04	44.33	74.00	-29.67
5380.75	38.63	Ave	330	1.8	H	-1.04	37.59	54.00	-16.41
5441.99	46.09	PK	342	1.7	H	-1.36	44.73	74.00	-29.27
5441.99	38.88	Ave	342	1.7	H	-1.36	37.52	54.00	-16.48

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

Optional antenna 2**Test Frequency: 9KHz~30MHz**

The measurements were more than 20 dB below the limit and not reported.

2.4G Wi-Fi

All models have been tested, and only the worst-case (11b mode) was showed in the report.

Test Frequency: 30MHz ~ 18GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
11b: Low Channel 2412MHz									
223.45	37.39	QP	162	1.1	H	-11.62	25.77	46.00	-20.23
223.45	31.47	QP	15	1.5	V	-11.62	19.85	46.00	-26.15
4824.00	51.45	PK	244	1.3	V	-1.06	50.39	74.00	-23.61
4824.00	40.41	Ave	244	1.3	V	-1.06	39.35	54.00	-14.65
7236.00	42.37	PK	280	1.7	H	1.33	43.70	74.00	-30.30
7236.00	39.98	Ave	280	1.7	H	1.33	41.31	54.00	-12.69
2342.78	45.04	PK	135	1.9	V	-13.19	31.85	74.00	-42.15
2342.78	37.16	Ave	135	1.9	V	-13.19	23.97	54.00	-30.03
2387.95	44.92	PK	267	1.2	H	-13.14	31.78	74.00	-42.22
2387.95	38.87	Ave	267	1.2	H	-13.14	25.73	54.00	-28.27
2494.97	42.54	PK	277	1.2	V	-13.08	29.46	74.00	-44.54
2494.97	38.67	Ave	277	1.2	V	-13.08	25.59	54.00	-28.41

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11b: Middle Channel 2437MHz									
223.45	38.71	QP	271	1.7	H	-11.62	27.09	46.00	-18.91
223.45	30.39	QP	29	1.7	V	-11.62	18.77	46.00	-27.23
4874.00	51.33	PK	328	1.5	V	-0.62	50.71	74.00	-23.29
4874.00	40.33	Ave	328	1.5	V	-0.62	39.71	54.00	-14.29
7311.00	42.43	PK	228	1.1	H	2.21	44.64	74.00	-29.36
7311.00	41.19	Ave	228	1.1	H	2.21	43.40	54.00	-10.60
2318.12	45.71	PK	128	1.2	V	-13.19	32.52	74.00	-41.48
2318.12	38.19	Ave	128	1.2	V	-13.19	25.00	54.00	-29.00
2381.06	42.46	PK	11	1.2	H	-13.14	29.32	74.00	-44.68
2381.06	36.65	Ave	11	1.2	H	-13.14	23.51	54.00	-30.49
2498.85	43.76	PK	15	1.9	V	-13.08	30.68	74.00	-43.32
2498.85	38.46	Ave	15	1.9	V	-13.08	25.38	54.00	-28.62

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11b: High Channel 2462MHz									
223.45	38.84	QP	8	1.1	H	-11.62	27.22	46.00	-18.78
223.45	29.53	QP	233	1.0	V	-11.62	17.91	46.00	-28.09
4924.00	52.38	PK	78	1.1	V	-0.24	52.14	74.00	-21.86
4924.00	39.05	Ave	78	1.1	V	-0.24	38.81	54.00	-15.19
7386.00	42.70	PK	218	1.3	H	2.84	45.54	74.00	-28.46
7386.00	40.75	Ave	218	1.3	H	2.84	43.59	54.00	-10.41
2327.43	45.89	PK	237	1.9	V	-13.19	32.70	74.00	-41.30
2327.43	39.87	Ave	237	1.9	V	-13.19	26.68	54.00	-27.32
2370.16	42.11	PK	91	1.2	H	-13.14	28.97	74.00	-45.03
2370.16	37.28	Ave	91	1.2	H	-13.14	24.14	54.00	-29.86
2490.60	43.72	PK	261	1.6	V	-13.08	30.64	74.00	-43.36
2490.60	38.23	Ave	261	1.6	V	-13.08	25.15	54.00	-28.85

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

5G Wi-Fi**U-NII-1**

All models have been tested, and only the worst-case (11a mode) was showed in the report.

Test Frequency: 30MHz ~ 18GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band I low Channel 5190MHz									
223.45	36.29	QP	265	1.6	H	-11.62	24.67	46.00	-21.33
223.45	47.05	QP	323	1.1	V	-11.62	35.43	46.00	-10.57
4526.58	45.67	PK	140	1.7	H	-1.89	43.78	74.00	-30.22
4526.58	35.86	Ave	140	1.7	H	-1.89	33.97	54.00	-20.03
5128.83	48.77	PK	344	1.2	H	-1.06	47.71	74.00	-26.29
5128.83	36.53	Ave	344	1.2	H	-1.06	35.47	54.00	-18.53
10380.00	46.61	PK	276	1.1	H	5.26	51.87	74.00	-22.13
10380.00	39.47	Ave	276	1.1	H	5.26	44.73	54.00	-9.27
5351.66	45.11	PK	330	1.1	H	-1.03	44.08	74.00	-29.92
5351.66	39.67	Ave	330	1.1	H	-1.03	38.64	54.00	-15.36

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band I High channel 5230MHz									
223.45	35.63	QP	189	1.3	H	-11.62	24.01	46.00	-21.99
223.45	47.92	QP	5	1.7	V	-11.62	36.30	46.00	-9.70
4509.57	44.69	PK	11	1.5	H	-1.94	42.75	74.00	-31.25
4509.57	35.34	Ave	11	1.5	H	-1.94	33.40	54.00	-20.60
5134.83	50.19	PK	359	1.3	H	-1.06	49.13	74.00	-24.87
5134.83	35.70	Ave	359	1.3	H	-1.06	34.64	54.00	-19.36
10460.00	47.80	PK	317	1.2	H	5.28	53.08	74.00	-20.92
10480.00	36.15	Ave	317	1.2	H	5.28	41.43	54.00	-12.57
5355.54	45.22	PK	194	1.5	H	-1.05	44.17	74.00	-29.83
5355.54	39.96	Ave	194	1.5	H	-1.05	38.91	54.00	-15.09

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

U-NII-2A**Test Frequency: 30MHz ~ 18GHz**

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band II low Channel 5270MHz									
223.45	37.36	QP	231	1.7	H	-11.62	25.74	46.00	-20.26
223.45	46.96	QP	121	1.1	V	-11.62	35.34	46.00	-10.66
4502.31	43.06	PK	276	1.8	H	-1.89	41.17	74.00	-32.83
4502.31	33.32	Ave	276	1.8	H	-1.89	31.43	54.00	-22.57
5111.46	47.69	PK	133	1.4	H	-1.06	46.63	74.00	-27.37
5111.46	36.03	Ave	133	1.4	H	-1.06	34.97	54.00	-19.03
10540.00	45.56	PK	344	2.0	H	5.26	50.82	74.00	-23.18
10540.00	37.43	Ave	344	2.0	H	5.26	42.69	54.00	-11.31
5376.05	46.24	PK	166	1.2	H	-1.03	45.21	74.00	-28.79
5376.05	39.28	Ave	166	1.2	H	-1.03	38.25	54.00	-15.75

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band II High channel 5310MHz									
223.45	37.00	QP	341	1.4	H	-11.62	25.38	46.00	-20.62
223.45	47.70	QP	295	1.9	V	-11.62	36.08	46.00	-9.92
4502.80	42.74	PK	260	1.4	H	-1.94	40.80	74.00	-33.20
4502.80	34.14	Ave	260	1.4	H	-1.94	32.20	54.00	-21.80
5119.83	46.81	PK	228	1.8	H	-1.06	45.75	74.00	-28.25
5119.83	37.47	Ave	228	1.8	H	-1.06	36.41	54.00	-17.59
10620.00	48.68	PK	255	1.8	H	5.28	53.96	68.20	-14.24
10620.00	36.01	Ave	255	1.8	H	5.28	41.29	54.00	-12.71
5371.10	45.80	PK	94	1.9	H	-1.05	44.75	74.00	-29.25
5371.10	38.23	Ave	94	1.9	H	-1.05	37.18	54.00	-16.82

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

U-NII-2C**Test Frequency: 30MHz ~ 18GHz**

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band III low Channel 5510MHz									
223.45	47.10	QP	239	1.8	H	-11.62	35.48	46.00	-10.52
223.45	37.67	QP	324	1.0	V	-11.62	26.05	46.00	-19.95
4521.65	49.34	PK	41	1.4	H	-1.89	47.45	74.00	-26.55
4521.65	36.94	Ave	41	1.4	H	-1.89	35.05	54.00	-18.95
5113.76	47.47	PK	123	1.3	H	-1.06	46.41	74.00	-27.59
5113.76	38.71	Ave	123	1.3	H	-1.06	37.65	54.00	-16.35
11020.00	42.97	PK	253	1.2	H	5.26	48.23	68.20	-19.97
11020.00	36.81	Ave	253	1.2	H	5.26	42.07	54.00	-11.93
5369.41	46.88	PK	144	1.8	H	-1.03	45.85	74.00	-28.15
5369.41	38.41	Ave	144	1.8	H	-1.03	37.38	54.00	-16.62

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band III Middle channel 5550MHz									
223.45	46.30	QP	344	1.7	H	-11.62	34.68	46.00	-11.32
223.45	36.83	QP	188	1.9	V	-11.62	25.21	46.00	-20.79
4505.49	49.51	PK	77	1.0	H	-1.94	47.57	74.00	-26.43
4505.49	37.11	Ave	77	1.0	H	-1.94	35.17	54.00	-18.83
5143.83	48.61	PK	142	1.3	H	-1.06	47.55	74.00	-26.45
5143.83	39.95	Ave	142	1.3	H	-1.06	38.89	54.00	-15.11
11100.00	45.95	PK	255	1.8	H	5.28	51.23	68.20	-16.97
11100.00	37.42	Ave	255	1.8	H	5.28	42.70	54.00	-11.30
5352.28	46.48	PK	149	2.0	H	-1.05	45.43	74.00	-28.57
5352.28	37.41	Ave	149	2.0	H	-1.05	36.36	54.00	-17.64

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band III High channel 5670MHz									
223.45	46.52	QP	183	1.2	H	-11.62	34.90	46.00	-11.10
223.45	36.92	QP	46	1.1	V	-11.62	25.30	46.00	-20.70
4505.25	50.10	PK	124	1.4	H	-1.94	48.16	74.00	-25.84
4505.25	36.43	Ave	124	1.4	H	-1.94	34.49	54.00	-19.51
5142.81	49.13	PK	0	1.9	H	-1.06	48.07	74.00	-25.93
5142.81	40.00	Ave	0	1.9	H	-1.06	38.94	54.00	-15.06
11340.00	41.39	PK	221	1.9	H	5.28	46.67	68.20	-21.53
11340.00	36.45	Ave	221	1.9	H	5.28	41.73	54.00	-12.27
5382.46	46.40	PK	295	1.7	H	-1.05	45.35	74.00	-28.65
5382.46	39.78	Ave	295	1.7	H	-1.05	38.73	54.00	-15.27

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

U-NII-3**Test Frequency: 30MHz ~ 18GHz**

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band IV low Channel 5755MHz									
223.45	35.98	QP	257	1.3	H	-11.62	24.36	46.00	-21.64
223.45	46.25	QP	192	1.9	V	-11.62	34.63	46.00	-11.37
4526.62	42.89	PK	122	1.9	H	-1.96	40.93	74.00	-33.07
4526.62	33.90	Ave	122	1.9	H	-1.96	31.94	54.00	-22.06
11510.00	45.47	PK	300	1.8	H	5.88	51.35	68.20	-16.85
11510.00	34.79	Ave	300	1.8	H	5.88	40.67	54.00	-13.33
5383.18	46.28	PK	245	2.0	H	-1.01	45.27	74.00	-28.73
5383.18	39.26	Ave	245	2.0	H	-1.01	38.25	54.00	-15.75
5458.49	46.85	PK	145	1.2	H	-1.36	45.49	74.00	-28.51
5458.49	38.55	Ave	145	1.2	H	-1.36	37.19	54.00	-16.81

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band IV High channel 5795MHz									
223.45	36.79	QP	67	1.5	H	-11.62	25.17	46.00	-20.83
223.45	46.49	QP	245	1.6	V	-11.62	34.87	46.00	-11.13
4511.24	43.13	PK	278	1.4	H	-1.92	41.21	74.00	-32.79
4511.24	34.64	Ave	278	1.4	H	-1.92	32.72	54.00	-21.28
11590.00	47.96	PK	186	1.9	H	5.63	53.59	68.20	-14.61
11590.00	35.91	Ave	186	1.9	H	5.63	41.54	54.00	-12.46
5367.85	45.43	PK	354	1.7	H	-1.04	44.39	74.00	-29.61
5367.85	38.58	Ave	354	1.7	H	-1.04	37.54	54.00	-16.46
5436.34	45.15	PK	160	1.3	H	-1.36	43.79	74.00	-30.21
5436.34	38.30	Ave	160	1.3	H	-1.36	36.94	54.00	-17.06

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

Optional antenna 3**Test Frequency: 9KHz~30MHz**

The measurements were more than 20 dB below the limit and not reported.

2.4G Wi-Fi

All models have been tested, and only the worst-case (11b mode) was showed in the report.

Test Frequency: 30MHz ~ 18GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
11b: Low Channel 2412MHz									
223.45	39.15	QP	323	1.8	H	-11.62	27.53	46.00	-18.47
223.45	33.12	QP	16	1.4	V	-11.62	21.50	46.00	-24.50
4824.00	51.93	PK	90	1.5	V	-1.06	50.87	74.00	-23.13
4824.00	40.61	Ave	90	1.5	V	-1.06	39.55	54.00	-14.45
7236.00	39.94	PK	113	1.3	H	1.33	41.27	74.00	-32.73
7236.00	38.58	Ave	113	1.3	H	1.33	39.91	54.00	-14.09
2341.31	45.91	PK	4	1.2	V	-13.19	32.72	74.00	-41.28
2341.31	38.64	Ave	4	1.2	V	-13.19	25.45	54.00	-28.55
2374.33	43.79	PK	125	1.5	H	-13.14	30.65	74.00	-43.35
2374.33	39.00	Ave	125	1.5	H	-13.14	25.86	54.00	-28.14
2486.26	43.12	PK	129	2.0	V	-13.08	30.04	74.00	-43.96
2486.26	38.97	Ave	129	2.0	V	-13.08	25.89	54.00	-28.11

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11b: Middle Channel 2437MHz									
223.45	39.98	QP	139	1.8	H	-11.62	28.36	46.00	-17.64
223.45	33.45	QP	264	1.3	V	-11.62	21.83	46.00	-24.17
4874.00	51.16	PK	71	1.6	V	-0.62	50.54	74.00	-23.46
4874.00	39.31	Ave	71	1.6	V	-0.62	38.69	54.00	-15.31
7311.00	39.25	PK	290	1.6	H	2.21	41.46	74.00	-32.54
7311.00	39.57	Ave	290	1.6	H	2.21	41.78	54.00	-12.22
2312.53	45.03	PK	11	1.5	V	-13.19	31.84	74.00	-42.16
2312.53	37.14	Ave	11	1.5	V	-13.19	23.95	54.00	-30.05
2388.46	44.79	PK	335	1.4	H	-13.14	31.65	74.00	-42.35
2388.46	37.88	Ave	335	1.4	H	-13.14	24.74	54.00	-29.26
2489.47	42.60	PK	285	1.1	V	-13.08	29.52	74.00	-44.48
2489.47	36.20	Ave	285	1.1	V	-13.08	23.12	54.00	-30.88

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
11b: High Channel 2462MHz									
223.45	40.79	QP	174	1.4	H	-11.62	29.17	46.00	-16.83
223.45	34.80	QP	92	1.8	V	-11.62	23.18	46.00	-22.82
4924.00	50.12	PK	254	1.7	V	-0.24	49.88	74.00	-24.12
4924.00	39.74	Ave	254	1.7	V	-0.24	39.50	54.00	-14.50
7386.00	40.46	PK	154	1.0	H	2.84	43.30	74.00	-30.70
7386.00	40.56	Ave	154	1.0	H	2.84	43.40	54.00	-10.60
2348.03	45.75	PK	12	1.3	V	-13.19	32.56	74.00	-41.44
2348.03	38.16	Ave	12	1.3	V	-13.19	24.97	54.00	-29.03
2354.56	44.97	PK	177	1.7	H	-13.14	31.83	74.00	-42.17
2354.56	37.00	Ave	177	1.7	H	-13.14	23.86	54.00	-30.14
2487.27	43.67	PK	326	1.8	V	-13.08	30.59	74.00	-43.41
2487.27	38.54	Ave	326	1.8	V	-13.08	25.46	54.00	-28.54

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

5G Wi-Fi**U-NII-1**

All models have been tested, and only the worst-case (11a mode) was showed in the report.

Test Frequency: 30MHz ~ 18GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band I low Channel 5190MHz									
223.45	47.35	QP	202	1.2	H	-11.62	35.73	46.00	-10.27
223.45	36.34	QP	111	1.2	V	-11.62	24.72	46.00	-21.28
4531.71	47.66	PK	36	1.2	H	-1.89	45.77	74.00	-28.23
4531.71	36.04	Ave	36	1.2	H	-1.89	34.15	54.00	-19.85
5142.95	46.30	PK	151	1.8	H	-1.06	45.24	74.00	-28.76
5142.95	40.69	Ave	151	1.8	H	-1.06	39.63	54.00	-14.37
10380.00	43.64	PK	200	1.9	H	5.26	48.90	74.00	-25.10
10380.00	37.25	Ave	200	1.9	H	5.26	42.51	54.00	-11.49
5363.94	46.64	PK	341	1.7	H	-1.03	45.61	74.00	-28.39
5363.94	37.99	Ave	341	1.7	H	-1.03	36.96	54.00	-17.04

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band I High channel 5230MHz									
223.45	47.35	QP	202	1.2	H	-11.62	35.73	46.00	-10.27
223.45	36.34	QP	111	1.2	V	-11.62	24.72	46.00	-21.28
4531.71	47.66	PK	36	1.2	H	-1.89	45.77	74.00	-28.23
4531.71	36.04	Ave	36	1.2	H	-1.89	34.15	54.00	-19.85
5142.95	46.30	PK	151	1.8	H	-1.06	45.24	74.00	-28.76
5142.95	40.69	Ave	151	1.8	H	-1.06	39.63	54.00	-14.37
10380.00	43.64	PK	200	1.9	H	5.26	48.90	74.00	-25.10
10380.00	37.25	Ave	200	1.9	H	5.26	42.51	54.00	-11.49
5363.94	46.64	PK	341	1.7	H	-1.03	45.61	74.00	-28.39
5363.94	37.99	Ave	341	1.7	H	-1.03	36.96	54.00	-17.04

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

U-NII-2A**Test Frequency: 30MHz ~ 18GHz**

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band II low Channel 5270MHz									
223.45	37.36	QP	218	1.3	H	-11.62	25.74	46.00	-20.26
223.45	46.96	QP	249	1.4	V	-11.62	35.34	46.00	-10.66
4538.42	43.06	PK	270	1.7	H	-1.89	41.17	74.00	-32.83
4538.42	33.32	Ave	270	1.7	H	-1.89	31.43	54.00	-22.57
5126.26	47.69	PK	123	1.7	H	-1.06	46.63	74.00	-27.37
5126.26	36.03	Ave	123	1.7	H	-1.06	34.97	54.00	-19.03
10540.00	45.56	PK	329	1.6	H	5.26	50.82	74.00	-23.18
10540.00	37.43	Ave	329	1.6	H	5.26	42.69	54.00	-11.31
5380.67	46.24	PK	23	1.9	H	-1.03	45.21	74.00	-28.79
5380.67	39.28	Ave	23	1.9	H	-1.03	38.25	54.00	-15.75

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band II High channel 5310MHz									
223.45	36.36	QP	11	1.3	H	-11.62	24.74	46.00	-21.26
223.45	46.30	QP	148	1.4	V	-11.62	34.68	46.00	-11.32
4515.32	43.69	PK	127	1.9	H	-1.94	41.75	74.00	-32.25
4515.32	32.45	Ave	127	1.9	H	-1.94	30.51	54.00	-23.49
5136.92	49.43	PK	94	1.9	H	-1.06	48.37	74.00	-25.63
5136.92	36.55	Ave	94	1.9	H	-1.06	35.49	54.00	-18.51
10620.00	48.74	PK	205	1.4	H	5.28	54.02	68.20	-14.18
10620.00	36.48	Ave	205	1.4	H	5.28	41.76	54.00	-12.24
5358.36	45.90	PK	107	1.6	H	-1.05	44.85	74.00	-29.15
5358.36	37.14	Ave	107	1.6	H	-1.05	36.09	54.00	-17.91

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

U-NII-2C**Test Frequency: 30MHz ~ 18GHz**

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band III low Channel 5510MHz									
223.45	48.61	QP	154	1.2	H	-11.62	36.99	46.00	-9.01
223.45	37.05	QP	255	1.0	V	-11.62	25.43	46.00	-20.57
4523.76	49.67	PK	283	1.5	H	-1.89	47.78	74.00	-26.22
4523.76	37.18	Ave	283	1.5	H	-1.89	35.29	54.00	-18.71
5129.21	47.75	PK	24	1.4	H	-1.06	46.69	74.00	-27.31
5129.21	36.31	Ave	24	1.4	H	-1.06	35.25	54.00	-18.75
11020.00	42.69	PK	136	1.9	H	5.26	47.95	68.20	-20.25
11020.00	38.39	Ave	136	1.9	H	5.26	43.65	54.00	-10.35
5367.76	46.42	PK	74	1.4	H	-1.03	45.39	74.00	-28.61
5367.76	37.21	Ave	74	1.4	H	-1.03	36.18	54.00	-17.82

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band III Middle channel 5550MHz									
223.45	48.94	QP	2	1.9	H	-11.62	37.32	46.00	-8.68
223.45	37.65	QP	227	1.6	V	-11.62	26.03	46.00	-19.97
4534.55	50.23	PK	90	1.4	H	-1.94	48.29	74.00	-25.71
4534.55	36.23	Ave	90	1.4	H	-1.94	34.29	54.00	-19.71
5146.19	47.58	PK	24	1.1	H	-1.06	46.52	74.00	-27.48
5146.19	35.55	Ave	24	1.1	H	-1.06	34.49	54.00	-19.51
11100.00	45.80	PK	347	1.5	H	5.28	51.08	68.20	-17.12
11100.00	37.21	Ave	347	1.5	H	5.28	42.49	54.00	-11.51
5377.74	46.88	PK	335	1.2	H	-1.05	45.83	74.00	-28.17
5377.74	39.64	Ave	335	1.2	H	-1.05	38.59	54.00	-15.41

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band III High channel 5670MHz									
223.45	49.18	QP	77	1.2	H	-11.62	37.56	46.00	-8.44
223.45	38.02	QP	221	1.1	V	-11.62	26.40	46.00	-19.60
4504.90	50.20	PK	331	1.9	H	-1.94	48.26	74.00	-25.74
4504.90	35.76	Ave	331	1.9	H	-1.94	33.82	54.00	-20.18
5114.86	46.99	PK	84	1.6	H	-1.06	45.93	74.00	-28.07
5114.86	35.24	Ave	84	1.6	H	-1.06	34.18	54.00	-19.82
11340.00	41.70	PK	274	1.8	H	5.28	46.98	68.20	-21.22
11340.00	37.16	Ave	274	1.8	H	5.28	42.44	54.00	-11.56
5365.44	45.74	PK	232	1.2	H	-1.05	44.69	74.00	-29.31
5365.44	38.09	Ave	232	1.2	H	-1.05	37.04	54.00	-16.96

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

U-NII-3**Test Frequency: 30MHz ~ 18GHz**

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band IV low Channel 5755MHz									
223.45	47.39	QP	29	1.4	H	-11.62	35.77	46.00	-10.23
223.45	35.27	QP	355	1.5	V	-11.62	23.65	46.00	-22.35
4503.06	44.80	PK	295	1.8	H	-1.96	42.84	74.00	-31.16
4503.06	33.75	Ave	295	1.8	H	-1.96	31.79	54.00	-22.21
11510.00	46.45	PK	222	1.8	H	5.88	52.33	68.20	-15.87
11510.00	35.23	Ave	222	1.8	H	5.88	41.11	54.00	-12.89
5388.82	45.70	PK	147	1.7	H	-1.01	44.69	74.00	-29.31
5388.82	37.16	Ave	147	1.7	H	-1.01	36.15	54.00	-17.85
5430.99	46.27	PK	165	1.3	H	-1.36	44.91	74.00	-29.09
5430.99	39.74	Ave	165	1.3	H	-1.36	38.38	54.00	-15.62

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	Limit	Margin
				Height	Polar				
(MHz)	(dB μ V)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dB μ V/m)	(dB μ V/m)	(dB)
802.11n(HT40) band IV High channel 5795MHz									
223.45	47.95	QP	125	1.4	H	-11.62	36.33	46.00	-9.67
223.45	34.95	QP	30	1.3	V	-11.62	23.33	46.00	-22.67
4527.03	44.16	PK	129	1.2	H	-1.92	42.24	74.00	-31.76
4527.03	33.31	Ave	129	1.2	H	-1.92	31.39	54.00	-22.61
11590.00	47.04	PK	293	1.9	H	5.63	52.67	68.20	-15.53
11590.00	37.05	Ave	293	1.9	H	5.63	42.68	54.00	-11.32
5350.97	45.96	PK	238	1.4	H	-1.04	44.92	74.00	-29.08
5350.97	37.37	Ave	238	1.4	H	-1.04	36.33	54.00	-17.67
5440.39	46.97	PK	83	1.2	H	-1.36	45.61	74.00	-28.39
5440.39	39.36	Ave	83	1.2	H	-1.36	38.00	54.00	-16.00

Test Frequency: 18GHz~25GHz

The measurements were more than 20 dB below the limit and not reported.

8 Photographs of test setup and EUT.

Note: Please refer to appendix: Appendix-Wink-Photos.

=====**End of Report**=====