

TEST REPORT

Reference No. : WTS20S06036687W002
FCC ID..... : ZLZ-PMACS
Applicant..... : Shenzhen Mindray Bio-Medical Electronics Co., Ltd
Address : Mindray Building, Keji 12th Road South, High-tech Industrial Park,
Nanshan, Shenzhen of China.
Manufacturer : Shenzhen Mindray Bio-Medical Electronics Co., Ltd
Address : Mindray Building, Keji 12th Road South, High-tech Industrial Park,
Nanshan, Shenzhen of China.
Product..... : Wireless module
Model(s)..... : SX-SDMAC-2832S+
Brand Name : Mindray
Standards..... : FCC CFR47 Part 15 C Section 15.407
Date of Receipt sample..... : 2020-06-13
Date of Test..... : 2020-06-14 to 2020-06-27
Date of Issue : 2021-02-25
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.

Prepared By:

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3 Revision History

Test report No.	Date of Receipt sample	Date of Test	Date of Issue	Purpose	Comment	Approved
WTS20S06036 687W002	2020-06-13	2020-06-14 to 2020-06-27	2021-02-25	original	-	Valid

4 General Information

4.1 General Description of E.U.T.

Product:	Wireless module
Model(s):	SX-SDMAC-2832S+
Model Description:	N/A
Wi-Fi Specification:	2.4G-802.11b/g/n HT20/n HT40 5G-802.11a/ n(HT20/40)/ac(HT20/40/80)

4.2 Details of E.U.T.

Operation Frequency:	802.11a/n/ac (HT20): U-NII-1: 5150-5250MHz, U-NII-2A: 5250-5350MHz(DFS), U-NII-2C: 5470-5725MHz(DFS), U-NII-3: 5725-5850MHz 802.11n/ac (HT40): U-NII-1: 5190-5230MHz, U-NII-2A: 5270-5310MHz(DFS), U-NII-2C: 5510-5670MHz(DFS), U-NII-3: 5755-5795MHz 802.11ac (HT80): U-NII-1: 5210MHz, U-NII-2A: 5290MHz(DFS), U-NII-2C: 5530MHz, U-NII-3: 5775MHz
Max. RF output power:	13.95dBm
Type of Modulation:	OFDM
Change Antenna installation:	ANT1: FPC dipole ANT2: FPC dipole
Change Antenna Gain:	ANT1: 3.1dBi ANT2: 3.87dBi
Original Antenna installation:	ANT1: Dipole ANT2: PCB Dipole ANT3: Dipole ANT4: PCB Dipole ANT5: PCB Dipole
Original Antenna Gain:	ANT1: 0.94dBi ANT2: 3.38dBi ANT3: 2.75dBi ANT4: 3.38dBi ANT5: 1dBi
Ratings:	DC 3.3V from mainboard

4.3 Channel List

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

U-NII-2A (5.25-5.35GHz)			
channel	Frequency(MHz)	channel	Frequency(MHz)
52	5260	54	5270
56	5280	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
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	157	5785
159	5795	161	5805
165	5825		

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 only the lowest frequency was shown in report and the selected channel see below:

For 802.11a/n/ac(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)
149	5745	157	5785
165	5825		

For 802.11n/ac(HT40)/ ac(HT80):

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

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

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

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

4.4 Test Mode Description:

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%.

Test Items	Mode	Data Rate	Channel	TX/RX
Radiated Emissions	802.11a	6 Mbps	U-NII-1 36/40/48 U-NII-2A 52/56/64 U-NII-2C 100/116/140 U-NII-3 149/157/165	TX
	802.11n(HT20)	MCS0	U-NII-1 36/40/48 U-NII-2A 52/56/64 U-NII-2C 100/116/140 U-NII-3 149/157/165	TX

4.5 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.

5 Equipment Used during Test

5.1 Equipments List

3m Semi-anechoic Chamber for Radiation Emissions Test site 1#						
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Calibration Date	Calibration Due Date
1	Spectrum Analyzer	R&S	FSP	100091	2020-04-20	2021-04-19
2	Active Loop Antenna	Beijing Dazhi	ZN30900A	-	2020-04-20	2021-04-19
3	Trilog Broadband Antenna	SCHWARZBECK	VULB9163	336	2019-08-11	2020-08-10
4	Coaxial Cable (below 1GHz)	Top	TYPE16(13M)	-	2019-09-17	2020-09-16
5	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9120 D	667	2020-04-19	2021-04-18
6	Broad-band Horn Antenna	SCHWARZBECK	BBHA 9170	335	2020-04-20	2021-04-19
7	Broadband Preamplifier	COMPLIANCE DIRECTION	PAP-1G18	2004	2020-04-20	2021-04-19
8	Coaxial Cable (above 1GHz)	Top	1GHz-25GHz	EW02014-7	2020-04-20	2021-04-19
3m Semi-anechoic Chamber for Radiation Emissions Test site 2#						
Item	Equipment	Manufacturer	Model No.	Serial No	Last Calibration Date	Calibration Due Date
1	Test Receiver	R&S	ESCI	101296	2020-04-20	2021-04-19
2	Trilog Broadband Antenna	SCHWARZBECK	VULB9160	9160-3325	2020-04-25	2021-04-24
3	Amplifier	Compliance pirection systems inc	PAP-0203	22024	2020-04-20	2021-04-19
4	Cable	HUBER+SUHNER	CBL2	525178	2020-04-20	2021-04-19

5.2 Description of Support Units

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

5.3 Measurement Uncertainty

Parameter	Uncertainty
Radiated Spurious Emissions test	± 5.03 dB (30M~1000MHz)
	± 5.47 dB (1000M~25000MHz)
Confidence interval: 95%. Confidence factor:k=2	

5.4 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.

6 Test Summary

Test Items	Test Requirement	Result
Radiated Emissions	15.407 15.205(a) 15.209(a)	PASS
Antenna Requirement	15.203	PASS

7 Radiated Emissions

Test Requirement: FCC CFR47 Part 15 Section 15.209 & 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	$10000 * 2400/F(kHz)$	$20\log^{(2400/F(kHz))} + 80$
0.490 ~ 1.705	24000/F(kHz)	30	$100 * 24000/F(kHz)$	$20\log^{(24000/F(kHz))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

7.1 EUT Operation

Operating Environment :

Temperature: 23.5 °C

Humidity: 52.3 % RH

Atmospheric Pressure: 101.3kPa

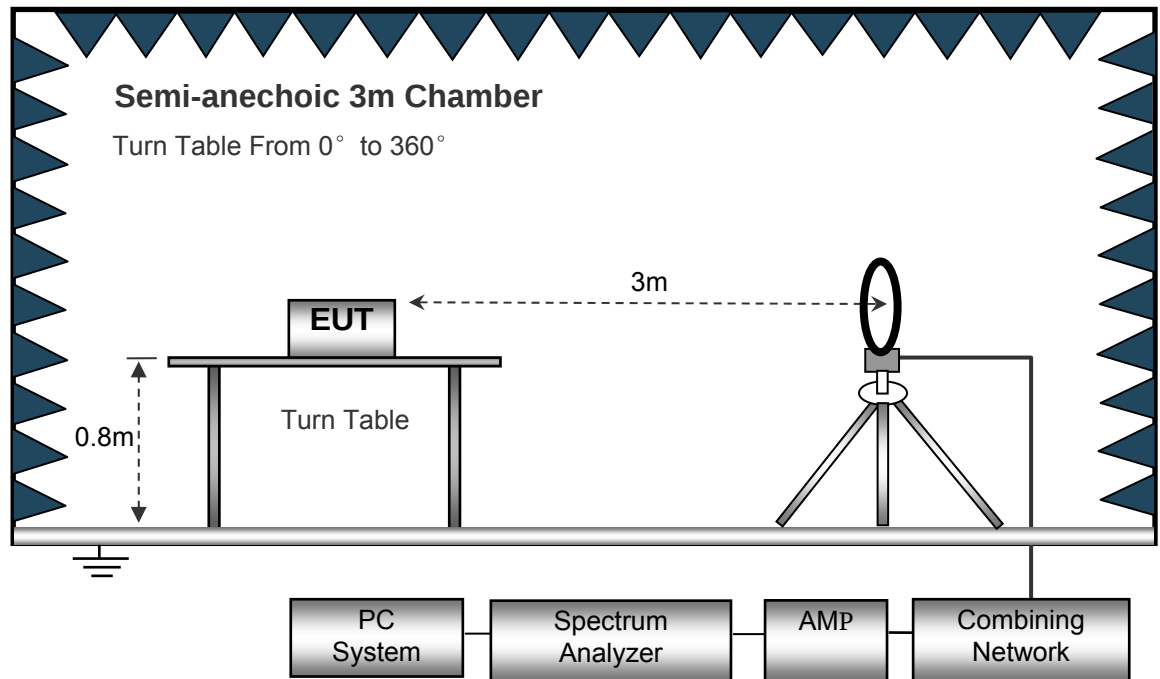
EUT Operation :

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

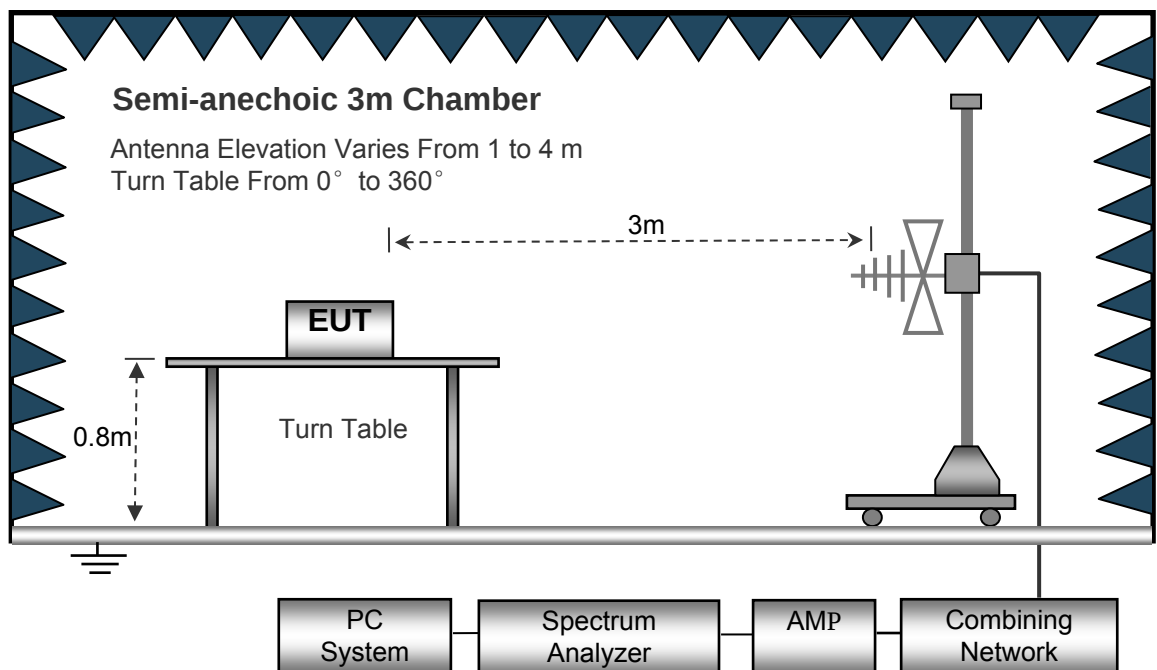
7.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4.

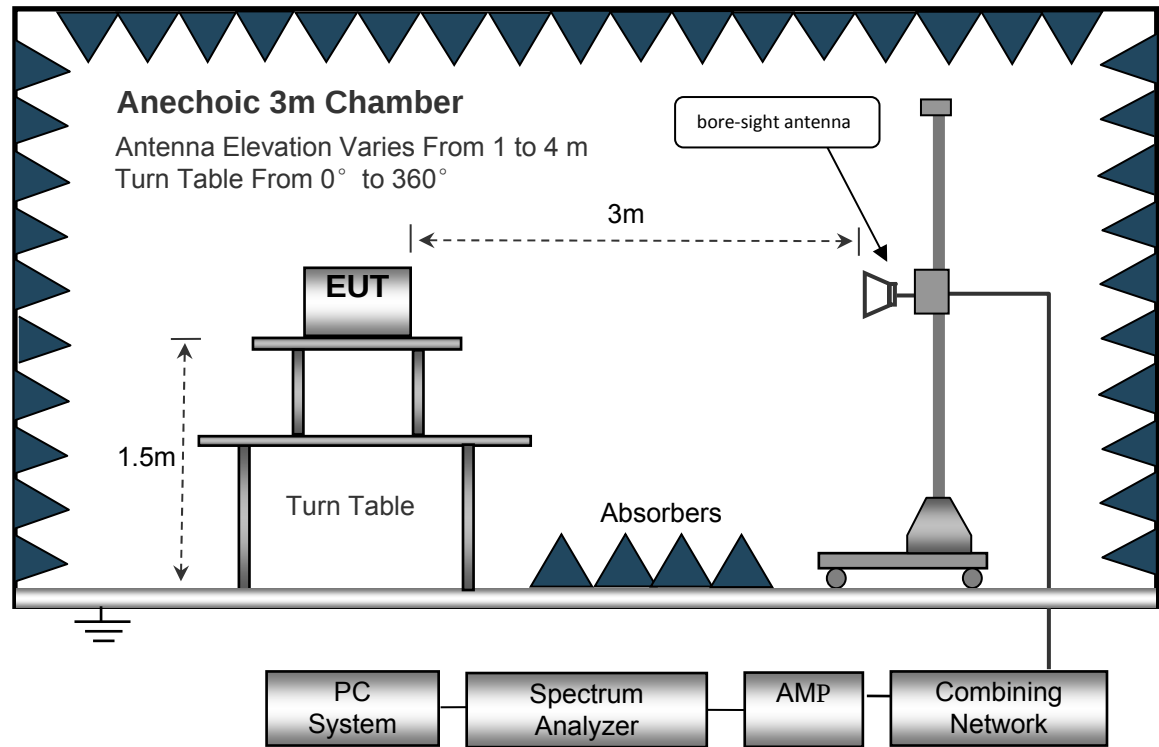
The test setup for emission measurement below 30MHz.



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
DetectorPK
Resolution Bandwidth.....100kHz
Video Bandwidth.....300kHz

Above 1GHz

Sweep Speed Auto
DetectorPK
Resolution Bandwidth.....1MHz
Video Bandwidth.....3MHz
DetectorAve.
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 during radiated emissions above 1GHz measurement.

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:

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

7.5 Summary of Test Results

Test Frequency: 9KHz~30MHz

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

Test Frequency: 30MHz ~ 1GHz

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-1 Low Channel 5180MHz									
223.45	39.93	QP	167	1.8	H	-11.62	28.31	46.00	-17.69
223.45	37.56	QP	155	1.8	V	-11.62	25.94	46.00	-20.06
4511.94	51.02	PK	6	1.2	H	-2.03	48.99	74.00	-25.01
4511.94	45.76	Ave	6	1.2	H	-2.03	43.73	54.00	-10.27
5148.65	53.26	PK	116	1.6	H	-1.02	52.24	74.00	-21.76
5148.65	47.58	Ave	116	1.6	H	-1.02	46.56	54.00	-7.44
10360.00	41.67	PK	194	1.5	H	5.33	47.00	74.00	-27.00
10360.00	38.16	Ave	194	1.5	H	5.33	43.49	54.00	-10.51
802.11a U-NII-1 Middle channel 5200MHz									
223.45	40.36	QP	143	1.2	H	-11.62	28.74	46.00	-17.26
223.45	38.67	QP	17	1.9	V	-11.62	27.05	46.00	-18.95
4502.78	52.02	PK	188	1.4	H	-1.94	50.08	74.00	-23.92
4502.78	44.27	Ave	188	1.4	H	-1.94	42.33	54.00	-11.67
5135.42	53.01	PK	31	1.1	H	-1.06	51.95	74.00	-22.05
5135.42	47.98	Ave	31	1.1	H	-1.06	46.92	54.00	-7.08
10400.00	42.38	PK	186	1.3	H	5.21	47.59	74.00	-26.41
10400.00	37.91	Ave	186	1.3	H	5.21	43.12	54.00	-10.88

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-1 High channel 5240MHz									
223.45	39.41	QP	345	1.8	H	-11.62	27.79	46.00	-18.21
223.45	37.99	QP	140	1.3	V	-11.62	26.37	46.00	-19.63
4537.16	52.25	PK	242	1.8	H	-2.24	50.01	74.00	-23.99
4537.16	44.80	Ave	242	1.8	H	-2.24	42.56	54.00	-11.44
5145.04	54.65	PK	211	1.5	H	-1.09	53.56	74.00	-20.44
5145.04	49.39	Ave	211	1.5	H	-1.09	48.30	54.00	-5.70
10480.00	41.19	PK	337	1.1	H	5.14	46.33	74.00	-27.67
10480.00	39.49	Ave	337	1.1	H	5.14	44.63	54.00	-9.37
802.11a U-NII-2A Low Channel 5260MHz									
223.45	41.05	QP	268	1.2	H	-11.62	29.43	46.00	-16.57
223.45	36.26	QP	267	1.6	V	-11.62	24.64	46.00	-21.36
4523.52	50.44	PK	9	1.3	H	-2.03	48.41	74.00	-25.59
4523.52	46.32	Ave	9	1.3	H	-2.03	44.29	54.00	-9.71
5126.08	52.53	PK	208	1.2	H	-1.02	51.51	74.00	-22.49
5126.08	48.18	Ave	208	1.2	H	-1.02	47.16	54.00	-6.84
10520.00	41.08	PK	175	1.4	H	5.33	46.41	74.00	-27.59
10520.00	36.85	Ave	175	1.4	H	5.33	42.18	54.00	-11.82

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-2A middle channel 5280MHz									
223.45	40.93	QP	260	1.2	H	-11.62	29.31	46.00	-16.69
223.45	35.94	QP	153	1.3	V	-11.62	24.32	46.00	-21.68
4527.32	49.30	PK	209	1.4	H	-1.94	47.36	74.00	-26.64
4527.32	47.68	Ave	209	1.4	H	-1.94	45.74	54.00	-8.26
5140.95	51.56	PK	336	1.3	H	-1.06	50.50	74.00	-23.50
5140.95	48.00	Ave	336	1.3	H	-1.06	46.94	54.00	-7.06
10560.00	42.55	PK	33	1.3	H	5.21	47.76	74.00	-26.24
10560.00	37.30	Ave	33	1.3	H	5.21	42.51	54.00	-11.49
802.11a U-NII-2A High channel 5320MHz									
223.45	40.05	QP	26	1.5	H	-11.62	28.43	46.00	-17.57
223.45	37.58	QP	186	1.3	V	-11.62	25.96	46.00	-20.04
4511.96	51.61	PK	10	1.4	H	-2.24	49.37	74.00	-24.63
4511.96	46.41	Ave	10	1.4	H	-2.24	44.17	54.00	-9.83
5137.38	53.50	PK	221	1.4	H	-1.09	52.41	74.00	-21.59
5137.38	48.30	Ave	221	1.4	H	-1.09	47.21	54.00	-6.79
10640.00	41.45	PK	326	1.3	H	5.14	46.59	68.20	-21.61
10640.00	36.47	Ave	326	1.3	H	5.14	41.61	54.00	-12.39

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-2C Low Channel 5500MHz									
223.45	41.05	QP	54	1.6	H	-11.62	29.43	46.00	-16.57
223.45	36.26	QP	50	1.1	V	-11.62	24.64	46.00	-21.36
4516.74	50.44	PK	336	1.1	H	-2.03	48.41	74.00	-25.59
4516.74	46.32	Ave	336	1.1	H	-2.03	44.29	54.00	-9.71
5113.52	52.53	PK	39	1.6	H	-1.02	51.51	74.00	-22.49
5113.52	48.18	Ave	39	1.6	H	-1.02	47.16	54.00	-6.84
11000.00	41.08	PK	122	1.5	H	5.33	46.41	68.20	-21.79
11000.00	36.85	Ave	122	1.5	H	5.33	42.18	54.00	-11.82
802.11a U-NII-2C Middle channel 5600MHz									
223.45	40.87	QP	282	1.8	H	-11.62	29.25	46.00	-16.75
223.45	36.47	QP	76	2.0	V	-11.62	24.85	46.00	-21.15
4515.84	49.29	PK	223	1.5	H	-1.94	47.35	74.00	-26.65
4515.84	44.93	Ave	223	1.5	H	-1.94	42.99	54.00	-11.01
5112.40	52.02	PK	218	1.4	H	-1.06	50.96	74.00	-23.04
5112.40	47.91	Ave	218	1.4	H	-1.06	46.85	54.00	-7.15
11200.00	41.16	PK	145	1.2	H	5.21	46.37	68.20	-21.83
11200.00	36.07	Ave	145	1.2	H	5.21	41.28	54.00	-12.72

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-2C High channel 5700MHz									
223.45	39.85	QP	13	1.0	H	-11.62	28.23	46.00	-17.77
223.45	35.05	QP	172	1.1	V	-11.62	23.43	46.00	-22.57
4526.36	50.57	PK	209	1.6	H	-2.24	48.33	74.00	-25.67
4526.36	45.14	Ave	209	1.6	H	-2.24	42.90	54.00	-11.10
5113.55	53.50	PK	30	1.2	H	-1.09	52.41	74.00	-21.59
5113.55	47.49	Ave	30	1.2	H	-1.09	46.40	54.00	-7.60
11400.00	41.23	PK	84	1.6	H	5.14	46.37	68.20	-21.83
11400.00	35.76	Ave	84	1.6	H	5.14	40.90	54.00	-13.10
802.11a U-NII-3 Low Channel 5745MHz									
223.45	40.80	QP	258	1.1	H	-11.62	29.18	46.00	-16.82
223.45	36.32	QP	160	1.1	V	-11.62	24.70	46.00	-21.30
4532.62	50.61	PK	6	1.4	H	-2.06	48.55	74.00	-25.45
4532.62	46.18	Ave	6	1.4	H	-2.06	44.12	54.00	-9.88
11490.00	41.55	PK	271	1.9	H	5.93	47.48	68.20	-20.72
11490.00	39.43	Ave	271	1.9	H	5.93	45.36	54.00	-8.64
5385.82	46.90	PK	97	1.8	H	-1.25	45.65	74.00	-28.35
5385.82	38.68	Ave	97	1.8	H	-1.25	37.43	54.00	-16.57

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11a U-NII-3 middle channel 5785MHz									
223.45	41.05	QP	11	1.1	H	-11.62	29.43	46.00	-16.57
223.45	36.02	QP	224	1.8	V	-11.62	24.40	46.00	-21.60
4503.12	50.86	PK	38	1.9	H	-2.03	48.83	74.00	-25.17
4503.12	45.11	Ave	38	1.9	H	-2.03	43.08	54.00	-10.92
11570.00	41.74	PK	234	1.7	H	5.81	47.55	68.20	-20.65
11570.00	39.56	Ave	234	1.7	H	5.81	45.37	54.00	-8.63
5380.67	45.96	PK	171	1.4	H	-1.22	44.74	74.00	-29.26
5380.67	39.61	Ave	171	1.4	H	-1.22	38.39	54.00	-15.61
802.11a U-NII-3 High channel 5825MHz									
223.45	40.46	QP	340	1.6	H	-11.62	28.84	46.00	-17.16
223.45	36.51	QP	172	1.9	V	-11.62	24.89	46.00	-21.11
4524.23	50.46	PK	251	1.2	H	-1.84	48.62	74.00	-25.38
4524.23	44.17	Ave	251	1.2	H	-1.84	42.33	54.00	-11.67
11650.00	41.36	PK	268	1.5	H	5.84	47.20	68.20	-21.00
11650.00	39.64	Ave	268	1.5	H	5.84	45.48	54.00	-8.52
5386.92	45.16	PK	59	1.1	H	-1.30	43.86	74.00	-30.14
5386.92	39.67	Ave	59	1.1	H	-1.30	38.37	54.00	-15.63

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT20) U-NII-1 Low Channel 5180MHz									
223.45	39.68	QP	250	2.0	H	-11.62	28.06	46.00	-17.94
223.45	34.75	QP	7	1.3	V	-11.62	23.13	46.00	-22.87
4528.77	51.22	PK	248	1.1	H	-2.14	49.08	74.00	-24.92
4528.77	48.16	Ave	248	1.1	H	-2.14	46.02	54.00	-7.98
5126.54	48.27	PK	31	1.4	H	-1.06	47.21	74.00	-26.79
5126.54	38.75	Ave	31	1.4	H	-1.06	37.69	54.00	-16.31
10360.00	40.53	PK	220	1.1	H	5.33	45.86	74.00	-28.14
10360.00	36.82	Ave	220	1.1	H	5.33	42.15	54.00	-11.85
802.11n(HT20) U-NII-1 Middle channel 5200MHz									
223.45	40.42	QP	72	1.2	H	-11.62	28.80	46.00	-17.20
223.45	34.80	QP	188	1.4	V	-11.62	23.18	46.00	-22.82
4529.37	52.63	PK	279	1.9	H	-2.12	50.51	74.00	-23.49
4529.37	48.43	Ave	279	1.9	H	-2.12	46.31	54.00	-7.69
5115.23	48.67	PK	328	1.0	H	-1.06	47.61	74.00	-26.39
5115.23	38.66	Ave	328	1.0	H	-1.06	37.60	54.00	-16.40
10400.00	42.58	PK	56	2.0	H	5.21	47.79	74.00	-26.21
10400.00	38.68	Ave	56	2.0	H	5.21	43.89	54.00	-10.11

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT20) U-NII-1 High channel 5240MHz									
223.45	40.77	QP	296	1.5	H	-11.62	29.15	46.00	-16.85
223.45	35.52	QP	343	1.6	V	-11.62	23.90	46.00	-22.10
4529.36	51.59	PK	188	1.5	H	-1.96	49.63	74.00	-24.37
4529.36	49.39	Ave	188	1.5	H	-1.96	47.43	54.00	-6.57
5142.08	49.44	PK	251	1.1	H	-1.06	48.38	74.00	-25.62
5142.08	39.36	Ave	251	1.1	H	-1.06	38.30	54.00	-15.70
10480.00	42.20	PK	181	1.0	H	5.14	47.34	74.00	-26.66
10480.00	37.54	Ave	181	1.0	H	5.14	42.68	54.00	-11.32
802.11n(HT20) U-NII-2A Low Channel 5260MHz									
223.45	39.81	QP	24	1.7	H	-11.62	28.19	46.00	-17.81
223.45	40.80	QP	217	1.3	V	-11.62	29.18	46.00	-16.82
4507.21	38.15	PK	155	1.3	H	-2.03	36.12	74.00	-37.88
4507.21	47.80	Ave	155	1.3	H	-2.03	45.77	54.00	-8.23
5132.77	37.58	PK	112	1.5	H	-1.02	36.56	74.00	-37.44
5132.77	1.78	Ave	112	1.5	H	-1.02	0.76	54.00	-53.24
10520.00	37.45	PK	16	1.1	H	5.33	42.78	74.00	-31.22
10520.00	35.45	Ave	16	1.1	H	5.33	40.78	54.00	-13.22

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT20) U-NII-2A middle channel 5280MHz									
223.45	39.99	QP	83	1.1	H	-11.62	28.37	46.00	-17.63
223.45	40.74	QP	339	1.2	V	-11.62	29.12	46.00	-16.88
4513.10	37.02	PK	75	2.0	H	-1.94	35.08	74.00	-38.92
4513.10	48.39	Ave	75	2.0	H	-1.94	46.45	54.00	-7.55
5148.28	38.62	PK	49	1.0	H	-1.06	37.56	74.00	-36.44
5148.28	1.57	Ave	49	1.0	H	-1.06	0.51	54.00	-53.49
10560.00	36.52	PK	272	1.1	H	5.21	41.73	74.00	-32.27
10560.00	35.13	Ave	272	1.1	H	5.21	40.34	54.00	-13.66
802.11n(HT20) U-NII-2A High channel 5320MHz									
223.45	39.30	QP	248	1.7	H	-11.62	27.68	46.00	-18.32
223.45	40.94	QP	352	2.0	V	-11.62	29.32	46.00	-16.68
4529.58	36.03	PK	250	1.3	H	-2.24	33.79	74.00	-40.21
4529.58	47.02	Ave	250	1.3	H	-2.24	44.78	54.00	-9.22
5139.35	38.78	PK	300	1.0	H	-1.09	37.69	74.00	-36.31
5139.35	0.91	Ave	300	1.0	H	-1.09	-0.18	54.00	-54.18
10640.00	37.95	PK	54	1.2	H	5.14	43.09	68.20	-25.11
10640.00	34.08	Ave	54	1.2	H	5.14	39.22	54.00	-14.78

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT20) U-NII-2C Low Channel 5500MHz									
223.45	40.07	QP	66	1.2	H	-11.62	28.45	46.00	-17.55
223.45	0.56	QP	282	1.8	V	-11.62	-11.06	46.00	-57.06
4509.31	37.41	PK	256	1.5	H	-2.03	35.38	74.00	-38.62
4509.31	35.19	Ave	256	1.5	H	-2.03	33.16	54.00	-20.84
5120.31	48.25	PK	128	1.2	H	-1.02	47.23	74.00	-26.77
5120.31	37.46	Ave	128	1.2	H	-1.02	36.44	54.00	-17.56
11000.00	1.40	PK	314	1.2	H	5.33	6.73	68.20	-61.47
11000.00	40.43	Ave	314	1.2	H	5.33	45.76	54.00	-8.24
802.11n(HT20) U-NII-2C Middle channel 5600MHz									
223.45	39.61	QP	340	1.1	H	-11.62	27.99	46.00	-18.01
223.45	-0.16	QP	124	1.7	V	-11.62	-11.78	46.00	-57.78
4523.91	38.69	PK	282	1.1	H	-1.94	36.75	74.00	-37.25
4523.91	35.05	Ave	282	1.1	H	-1.94	33.11	54.00	-20.89
5129.66	47.80	PK	2	1.0	H	-1.06	46.74	74.00	-27.26
5129.66	36.61	Ave	2	1.0	H	-1.06	35.55	54.00	-18.45
11200.00	2.23	PK	103	1.6	H	5.21	7.44	68.20	-60.76
11200.00	38.95	Ave	103	1.6	H	5.21	44.16	54.00	-9.84

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT20) U-NII-2C High channel 5700MHz									
223.45	40.74	QP	235	1.4	H	-11.62	29.12	46.00	-16.88
223.45	-0.56	QP	37	1.6	V	-11.62	-12.18	46.00	-58.18
4509.85	37.82	PK	297	1.6	H	-2.24	35.58	74.00	-38.42
4509.85	33.93	Ave	297	1.6	H	-2.24	31.69	54.00	-22.31
5147.35	47.83	PK	340	1.2	H	-1.09	46.74	74.00	-27.26
5147.35	38.45	Ave	340	1.2	H	-1.09	37.36	54.00	-16.64
11400.00	0.36	PK	137	1.3	H	5.14	5.50	68.20	-62.70
11400.00	39.59	Ave	137	1.3	H	5.14	44.73	54.00	-9.27
802.11n(HT20) U-NII-3 Low Channel 5745MHz									
223.45	35.08	QP	54	1.0	H	-11.62	23.46	46.00	-22.54
223.45	51.11	QP	323	1.6	V	-11.62	39.49	46.00	-6.51
4536.73	49.75	PK	241	2.0	H	-2.06	47.69	74.00	-26.31
4536.73	50.54	Ave	241	2.0	H	-2.06	48.48	54.00	-5.52
11490.00	36.08	PK	268	1.9	H	5.93	42.01	68.20	-26.19
11490.00	45.09	Ave	268	1.9	H	5.93	51.02	54.00	-2.98
5369.87	45.30	PK	292	1.1	H	-1.25	44.05	74.00	-29.95
5369.87	39.28	Ave	292	1.1	H	-1.25	38.03	54.00	-15.97

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT20) U-NII-3 middle channel 5785MHz									
223.45	34.70	QP	166	1.2	H	-11.62	23.08	46.00	-22.92
223.45	51.09	QP	122	1.4	V	-11.62	39.47	46.00	-6.53
4518.12	50.30	PK	216	1.1	H	-2.03	48.27	74.00	-25.73
4518.12	49.13	Ave	216	1.1	H	-2.03	47.10	54.00	-6.90
11570.00	35.68	PK	221	1.1	H	5.81	41.49	68.20	-26.71
11570.00	46.67	Ave	221	1.1	H	5.81	52.48	54.00	-1.52
5383.70	46.70	PK	80	1.9	H	-1.22	45.48	74.00	-28.52
5383.70	37.98	Ave	80	1.9	H	-1.22	36.76	54.00	-17.24
802.11n(HT20) U-NII-3 High channel 5825MHz									
223.45	35.04	QP	223	1.1	H	-11.62	23.42	46.00	-22.58
223.45	50.46	QP	65	1.8	V	-11.62	38.84	46.00	-7.16
4531.25	49.95	PK	282	1.8	H	-1.84	48.11	74.00	-25.89
4531.25	49.28	Ave	282	1.8	H	-1.84	47.44	54.00	-6.56
11650.00	36.49	PK	116	1.1	H	5.84	42.33	68.20	-25.87
11650.00	45.15	Ave	116	1.1	H	5.84	50.99	54.00	-3.01
5369.34	46.45	PK	70	1.8	H	-1.30	45.15	74.00	-28.85
5369.34	39.24	Ave	70	1.8	H	-1.30	37.94	54.00	-16.06

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT20) U-NII-1 Low Channel 5180MHz									
223.45	37.76	QP	52	1.9	H	-11.62	26.14	46.00	-19.86
223.45	46.43	QP	54	1.5	V	-11.62	34.81	46.00	-11.19
4502.56	46.70	PK	152	1.9	H	-1.86	44.84	74.00	-29.16
4502.56	39.35	Ave	152	1.9	H	-1.86	37.49	54.00	-16.51
5149.19	41.03	PK	317	1.1	H	-1.06	39.97	74.00	-34.03
5149.19	35.96	Ave	317	1.1	H	-1.06	34.90	54.00	-19.10
10360.00	46.46	PK	62	1.5	H	5.33	51.79	74.00	-22.21
10360.00	38.37	Ave	62	1.5	H	5.33	43.70	54.00	-10.30
802.11ac(HT20) U-NII-1 Middle channel 5200MHz									
223.45	37.87	QP	231	1.0	H	-11.62	26.25	46.00	-19.75
223.45	47.42	QP	117	1.5	V	-11.62	35.80	46.00	-10.20
4506.52	46.40	PK	105	1.4	H	-1.82	44.58	74.00	-29.42
4506.52	40.24	Ave	105	1.4	H	-1.82	38.42	54.00	-15.58
5118.52	42.16	PK	262	1.7	H	-1.06	41.10	74.00	-32.90
5118.52	35.78	Ave	262	1.7	H	-1.06	34.72	54.00	-19.28
10400.00	42.64	PK	263	1.2	H	5.21	47.85	74.00	-26.15
10400.00	39.09	Ave	263	1.2	H	5.21	44.30	54.00	-9.70

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT20) U-NII-1 High channel 5240MHz									
223.45	37.10	QP	262	1.5	H	-11.62	25.48	46.00	-20.52
223.45	47.22	QP	328	1.4	V	-11.62	35.60	46.00	-10.40
4505.53	45.81	PK	244	1.6	H	-1.81	44.00	74.00	-30.00
4505.53	41.06	Ave	244	1.6	H	-1.81	39.25	54.00	-14.75
5132.08	42.63	PK	230	1.5	H	-1.06	41.57	74.00	-32.43
5132.08	35.75	Ave	230	1.5	H	-1.06	34.69	54.00	-19.31
10480.00	41.67	PK	207	1.1	H	5.14	46.81	74.00	-27.19
10480.00	37.50	Ave	207	1.1	H	5.14	42.64	54.00	-11.36
802.11ac(HT20) U-NII-2A Low Channel 5260MHz									
223.45	42.95	QP	100	1.1	H	-11.62	31.33	46.00	-14.67
223.45	35.11	QP	31	1.5	V	-11.62	23.49	46.00	-22.51
4537.56	41.59	PK	237	1.8	H	-2.03	39.56	74.00	-34.44
4537.56	36.15	Ave	237	1.8	H	-2.03	34.12	54.00	-19.88
5114.10	45.68	PK	253	1.2	H	-1.02	44.66	74.00	-29.34
5114.10	37.73	Ave	253	1.2	H	-1.02	36.71	54.00	-17.29
10520.00	41.19	PK	32	1.1	H	5.33	46.52	74.00	-27.48
10520.00	36.83	Ave	32	1.1	H	5.33	42.16	54.00	-11.84

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT20) U-NII-2A middle channel 5280MHz									
223.45	44.14	QP	289	1.3	H	-11.62	32.52	46.00	-13.48
223.45	33.73	QP	264	1.8	V	-11.62	22.11	46.00	-23.89
4502.14	41.36	PK	345	1.7	H	-1.94	39.42	74.00	-34.58
4502.14	36.54	Ave	345	1.7	H	-1.94	34.60	54.00	-19.40
5120.73	45.60	PK	83	1.4	H	-1.06	44.54	74.00	-29.46
5120.73	39.40	Ave	83	1.4	H	-1.06	38.34	54.00	-15.66
10560.00	39.85	PK	222	2.0	H	5.21	45.06	74.00	-28.94
10560.00	36.75	Ave	222	2.0	H	5.21	41.96	54.00	-12.04
802.11ac(HT20) U-NII-2A High channel 5320MHz									
223.45	44.11	QP	115	1.4	H	-11.62	32.49	46.00	-13.51
223.45	33.82	QP	106	1.7	V	-11.62	22.20	46.00	-23.80
4508.32	42.73	PK	187	1.3	H	-2.24	40.49	74.00	-33.51
4508.32	37.92	Ave	187	1.3	H	-2.24	35.68	54.00	-18.32
5133.21	44.73	PK	316	1.1	H	-1.09	43.64	74.00	-30.36
5133.21	40.62	Ave	316	1.1	H	-1.09	39.53	54.00	-14.47
10640.00	40.87	PK	161	1.2	H	5.14	46.01	68.20	-22.19
10640.00	38.05	Ave	161	1.2	H	5.14	43.19	54.00	-10.81

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT20) U-NII-2C Low Channel 5500MHz									
223.45	45.99	QP	106	1.3	H	-11.62	34.37	46.00	-11.63
223.45	40.15	QP	261	2.0	V	-11.62	28.53	46.00	-17.47
4502.03	39.79	PK	171	1.8	H	-2.03	37.76	74.00	-36.24
4502.03	38.61	Ave	171	1.8	H	-2.03	36.58	54.00	-17.42
5145.63	47.60	PK	332	1.1	H	-1.02	46.58	74.00	-27.42
5145.63	37.04	Ave	332	1.1	H	-1.02	36.02	54.00	-17.98
11000.00	-0.01	PK	346	1.6	H	5.33	5.32	68.20	-62.88
11000.00	43.70	Ave	346	1.6	H	5.33	49.03	54.00	-4.97
802.11ac(HT20) U-NII-2C Middle channel 5600MHz									
223.45	46.95	QP	232	1.8	H	-11.62	35.33	46.00	-10.67
223.45	38.96	QP	140	1.2	V	-11.62	27.34	46.00	-18.66
4503.24	39.38	PK	276	1.2	H	-1.94	37.44	74.00	-36.56
4503.24	38.94	Ave	276	1.2	H	-1.94	37.00	54.00	-17.00
5136.55	49.07	PK	0	1.8	H	-1.06	48.01	74.00	-25.99
5136.55	38.38	Ave	0	1.8	H	-1.06	37.32	54.00	-16.68
11200.00	-1.42	PK	153	1.4	H	5.21	3.79	68.20	-64.41
11200.00	43.08	Ave	153	1.4	H	5.21	48.29	54.00	-5.71

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT20) U-NII-2C High channel 5700MHz									
223.45	47.14	QP	281	2.0	H	-11.62	35.52	46.00	-10.48
223.45	37.47	QP	107	1.0	V	-11.62	25.85	46.00	-20.15
4528.23	40.28	PK	90	1.4	H	-2.24	38.04	74.00	-35.96
4528.23	38.41	Ave	90	1.4	H	-2.24	36.17	54.00	-17.83
5148.31	49.22	PK	120	1.2	H	-1.09	48.13	74.00	-25.87
5148.31	39.56	Ave	120	1.2	H	-1.09	38.47	54.00	-15.53
11400.00	0.04	PK	278	1.0	H	5.14	5.18	68.20	-63.02
11400.00	43.92	Ave	278	1.0	H	5.14	49.06	54.00	-4.94
802.11ac(HT20) U-NII-3 Low Channel 5745MHz									
223.45	38.02	QP	132	1.8	H	-11.62	26.40	46.00	-19.60
223.45	47.58	QP	147	1.7	V	-11.62	35.96	46.00	-10.04
4507.58	44.33	PK	295	1.9	H	-1.92	42.41	74.00	-31.59
4507.58	38.99	Ave	295	1.9	H	-1.92	37.07	54.00	-16.93
11490.00	39.54	PK	40	1.8	H	5.93	45.47	68.20	-22.73
11490.00	35.36	Ave	40	1.8	H	5.93	41.29	54.00	-12.71
5383.92	46.20	PK	70	1.1	H	-1.03	45.17	74.00	-28.83
5383.92	39.37	Ave	70	1.1	H	-1.03	38.34	54.00	-15.66

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT20) U-NII-3 middle channel 5785MHz									
223.45	37.14	QP	221	1.6	H	-11.62	25.52	46.00	-20.48
223.45	47.97	QP	225	1.3	V	-11.62	36.35	46.00	-9.65
4512.53	45.00	PK	229	1.7	H	-1.97	43.03	74.00	-30.97
4512.53	39.53	Ave	229	1.7	H	-1.97	37.56	54.00	-16.44
11570.00	42.63	PK	149	1.9	H	5.81	48.44	68.20	-19.76
11570.00	38.01	Ave	149	1.9	H	5.81	43.82	54.00	-10.18
5376.19	46.77	PK	252	1.4	H	-1.05	45.72	74.00	-28.28
5376.19	38.61	Ave	252	1.4	H	-1.05	37.56	54.00	-16.44
802.11ac(HT20) U-NII-3 High channel 5825MHz									
223.45	37.82	QP	309	1.4	H	-11.62	26.20	46.00	-19.80
223.45	48.82	QP	188	1.9	V	-11.62	37.20	46.00	-8.80
4528.40	44.54	PK	21	1.1	H	-1.88	42.66	74.00	-31.34
4528.40	40.37	Ave	21	1.1	H	-1.88	38.49	54.00	-15.51
11650.00	40.74	PK	107	1.8	H	5.84	46.58	68.20	-21.62
11650.00	38.02	Ave	107	1.8	H	5.84	43.86	54.00	-10.14
5384.17	46.69	PK	312	1.5	H	-1.06	45.63	74.00	-28.37
5384.17	38.78	Ave	312	1.5	H	-1.06	37.72	54.00	-16.28

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT40) U-NII-1 Low Channel 5190MHz									
223.45	37.92	QP	269	1.4	H	-11.62	26.30	46.00	-19.70
223.45	47.39	QP	136	1.2	V	-11.62	35.77	46.00	-10.23
4502.54	42.07	PK	309	1.1	H	-1.89	40.18	74.00	-33.82
4502.54	38.70	Ave	309	1.1	H	-1.89	36.81	54.00	-17.19
5128.09	48.01	PK	39	1.6	H	-1.06	46.95	74.00	-27.05
5128.09	39.75	Ave	39	1.6	H	-1.06	38.69	54.00	-15.31
10380.00	39.55	PK	151	1.9	H	5.26	44.81	74.00	-29.19
10380.00	37.07	Ave	151	1.9	H	5.26	42.33	54.00	-11.67
802.11n(HT40) U-NII-1 High channel 5230MHz									
223.45	37.54	QP	77	1.5	H	-11.62	25.92	46.00	-20.08
223.45	47.68	QP	320	1.4	V	-11.62	36.06	46.00	-9.94
4504.87	42.48	PK	90	1.1	H	-1.94	40.54	74.00	-33.46
4504.87	39.63	Ave	90	1.1	H	-1.94	37.69	54.00	-16.31
5124.17	47.40	PK	323	1.3	H	-1.06	46.34	74.00	-27.66
5124.17	41.51	Ave	323	1.3	H	-1.06	40.45	54.00	-13.55
10460.00	42.09	PK	228	1.6	H	5.28	47.37	74.00	-26.63
10480.00	38.27	Ave	228	1.6	H	5.28	43.55	54.00	-10.45

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT40) U-NII-2A Low Channel 5270MHz									
223.45	48.06	QP	31	1.7	H	-11.62	36.44	46.00	-9.56
223.45	40.98	QP	193	1.9	V	-11.62	29.36	46.00	-16.64
4531.32	43.06	PK	178	1.2	H	-1.89	41.17	74.00	-32.83
4531.32	38.35	Ave	178	1.2	H	-1.89	36.46	54.00	-17.54
5126.84	46.71	PK	198	1.9	H	-1.06	45.65	74.00	-28.35
5126.84	37.22	Ave	198	1.9	H	-1.06	36.16	54.00	-17.84
10540.00	46.27	PK	340	1.8	H	5.26	51.53	74.00	-22.47
10540.00	38.64	Ave	340	1.8	H	5.26	43.90	54.00	-10.10
802.11n(HT40) U-NII-2A High channel 5310MHz									
223.45	47.35	QP	183	1.9	H	-11.62	35.73	46.00	-10.27
223.45	39.99	QP	128	1.8	V	-11.62	28.37	46.00	-17.63
4515.47	42.12	PK	269	1.7	H	-1.94	40.18	74.00	-33.82
4515.47	38.44	Ave	269	1.7	H	-1.94	36.50	54.00	-17.50
5111.70	46.93	PK	273	1.4	H	-1.06	45.87	74.00	-28.13
5111.70	38.83	Ave	273	1.4	H	-1.06	37.77	54.00	-16.23
10620.00	40.79	PK	216	1.0	H	5.28	46.07	68.20	-22.13
10620.00	39.13	Ave	216	1.0	H	5.28	44.41	54.00	-9.59

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT40) U-NII-2C Low Channel 5510MHz									
223.45	46.28	QP	121	1.7	H	-11.62	34.66	46.00	-11.34
223.45	38.67	QP	274	1.3	V	-11.62	27.05	46.00	-18.95
4505.21	41.68	PK	279	1.9	H	-1.89	39.79	74.00	-34.21
4505.21	38.50	Ave	279	1.9	H	-1.89	36.61	54.00	-17.39
5131.54	46.48	PK	4	1.1	H	-1.06	45.42	74.00	-28.58
5131.54	37.75	Ave	4	1.1	H	-1.06	36.69	54.00	-17.31
11020.00	42.39	PK	85	1.5	H	5.26	47.65	68.20	-20.55
11020.00	35.87	Ave	85	1.5	H	5.26	41.13	54.00	-12.87
802.11n(HT40) U-NII-2C Middle channel 5550MHz									
223.45	48.49	QP	186	1.4	H	-11.62	36.87	46.00	-9.13
223.45	37.73	QP	205	1.6	V	-11.62	26.11	46.00	-19.89
4519.08	41.33	PK	174	1.4	H	-1.94	39.39	74.00	-34.61
4519.08	36.67	Ave	174	1.4	H	-1.94	34.73	54.00	-19.27
5148.26	45.67	PK	172	2.0	H	-1.06	44.61	74.00	-29.39
5148.26	38.48	Ave	172	2.0	H	-1.06	37.42	54.00	-16.58
11100.00	46.81	PK	349	1.3	H	5.28	52.09	68.20	-16.11
11100.00	39.18	Ave	349	1.3	H	5.28	44.46	54.00	-9.54
802.11n(HT40) U-NII-2C High channel 5670MHz									
223.45	46.65	QP	68	1.9	H	-11.62	35.03	46.00	-10.97
223.45	38.72	QP	264	1.7	V	-11.62	27.10	46.00	-18.90
4527.67	42.86	PK	196	1.9	H	-1.94	40.92	74.00	-33.08
4527.67	39.09	Ave	196	1.9	H	-1.94	37.15	54.00	-16.85
5148.01	46.14	PK	301	2.0	H	-1.06	45.08	74.00	-28.92
5148.01	37.46	Ave	301	2.0	H	-1.06	36.40	54.00	-17.60
11340.00	41.77	PK	171	1.3	H	5.28	47.05	68.20	-21.15
11340.00	37.47	Ave	171	1.3	H	5.28	42.75	54.00	-11.25

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11n(HT40) U-NII-3 Low Channel 5755MHz									
223.45	36.33	QP	323	1.3	H	-11.62	24.71	46.00	-21.29
223.45	46.59	QP	26	1.2	V	-11.62	34.97	46.00	-11.03
4504.84	41.18	PK	0	2.0	H	-1.96	39.22	74.00	-34.78
4504.84	37.59	Ave	0	2.0	H	-1.96	35.63	54.00	-18.37
11510.00	40.43	PK	63	1.1	H	5.88	46.31	68.20	-21.89
11510.00	35.80	Ave	63	1.1	H	5.88	41.68	54.00	-12.32
5378.50	46.85	PK	122	1.1	H	-1.01	45.84	74.00	-28.16
5378.50	39.07	Ave	122	1.1	H	-1.01	38.06	54.00	-15.94
802.11n(HT40) U-NII-3 High Channel 5795MHz									
223.45	37.10	QP	86	1.3	H	-11.62	25.48	46.00	-20.52
223.45	47.52	QP	153	1.6	V	-11.62	35.90	46.00	-10.10
4538.74	41.81	PK	138	1.7	H	-1.92	39.89	74.00	-34.11
4538.74	37.65	Ave	138	1.7	H	-1.92	35.73	54.00	-18.27
11590.00	41.48	PK	179	1.0	H	5.63	47.11	68.20	-21.09
11590.00	38.50	Ave	179	1.0	H	5.63	44.13	54.00	-9.87
5378.73	45.65	PK	325	1.9	H	-1.04	44.61	74.00	-29.39
5378.73	39.89	Ave	325	1.9	H	-1.04	38.85	54.00	-15.15

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT40) U-NII-1 Low Channel 5190MHz									
223.45	38.22	QP	92	1.9	H	-11.62	26.60	46.00	-19.40
223.45	47.09	QP	349	1.4	V	-11.62	35.47	46.00	-10.53
4516.32	39.80	PK	100	1.6	H	-1.91	37.89	74.00	-36.11
4516.32	34.83	Ave	100	1.6	H	-1.91	32.92	54.00	-21.08
5148.45	45.57	PK	295	2.0	H	-1.06	44.51	74.00	-29.49
5148.45	41.34	Ave	295	2.0	H	-1.06	40.28	54.00	-13.72
10380.00	40.54	PK	94	1.7	H	5.26	45.80	74.00	-28.20
10380.00	36.21	Ave	94	1.7	H	5.26	41.47	54.00	-12.53
802.11ac(HT40) U-NII-1 High channel 5230MHz									
223.45	37.62	QP	251	1.7	H	-11.62	26.00	46.00	-20.00
223.45	46.48	QP	23	1.2	V	-11.62	34.86	46.00	-11.14
4509.77	38.84	PK	122	1.2	H	-1.93	36.91	74.00	-37.09
4509.77	35.30	Ave	122	1.2	H	-1.93	33.37	54.00	-20.63
5148.24	45.39	PK	74	1.6	H	-1.06	44.33	74.00	-29.67
5148.24	41.58	Ave	74	1.6	H	-1.06	40.52	54.00	-13.48
10460.00	41.52	PK	31	1.9	H	5.28	46.80	74.00	-27.20
10480.00	38.20	Ave	31	1.9	H	5.28	43.48	54.00	-10.52

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT40) U-NII-2A Low Channel 5270MHz									
223.45	46.01	QP	113	2.0	H	-11.62	34.39	46.00	-11.61
223.45	42.52	QP	93	1.5	V	-11.62	30.90	46.00	-15.10
4509.19	42.33	PK	261	1.1	H	-1.89	40.44	74.00	-33.56
4509.19	38.49	Ave	261	1.1	H	-1.89	36.60	54.00	-17.40
5143.36	47.12	PK	192	1.7	H	-1.06	46.06	74.00	-27.94
5143.36	37.00	Ave	192	1.7	H	-1.06	35.94	54.00	-18.06
10540.00	35.21	PK	46	1.8	H	5.26	40.47	74.00	-33.53
10540.00	32.42	Ave	46	1.8	H	5.26	37.68	54.00	-16.32
802.11ac(HT40) U-NII-2A High channel 5310MHz									
223.45	46.95	QP	3	1.6	H	-11.62	35.33	46.00	-10.67
223.45	41.67	QP	218	1.1	V	-11.62	30.05	46.00	-15.95
4522.72	41.42	PK	207	1.8	H	-1.94	39.48	74.00	-34.52
4522.72	39.23	Ave	207	1.8	H	-1.94	37.29	54.00	-16.71
5112.92	47.41	PK	26	1.1	H	-1.06	46.35	74.00	-27.65
5112.92	36.93	Ave	26	1.1	H	-1.06	35.87	54.00	-18.13
10620.00	-0.47	PK	308	1.0	H	5.28	4.81	68.20	-63.39
10620.00	37.66	Ave	308	1.0	H	5.28	42.94	54.00	-11.06

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT40) U-NII-2C Low Channel 5510MHz									
223.45	46.54	QP	29	1.1	H	-11.62	34.92	46.00	-11.08
223.45	37.08	QP	135	1.2	V	-11.62	25.46	46.00	-20.54
4531.37	-40.94	PK	13	1.5	H	-1.89	-42.83	74.00	-36.83
4531.37	37.33	Ave	13	1.5	H	-1.89	35.44	54.00	-18.56
5141.05	45.75	PK	118	1.2	H	-1.06	44.69	74.00	-29.31
5141.05	39.75	Ave	118	1.2	H	-1.06	38.69	54.00	-15.31
11020.00	34.37	PK	244	1.7	H	5.26	39.63	68.20	-28.57
11020.00	32.35	Ave	244	1.7	H	5.26	37.61	54.00	-16.39
802.11ac(HT40) U-NII-2C Middle channel 5550MHz									
223.45	47.78	QP	106	1.3	H	-11.62	36.16	46.00	-9.84
223.45	39.30	QP	12	1.1	V	-11.62	27.68	46.00	-18.32
4521.24	40.07	PK	27	1.1	H	-1.94	-41.87	74.00	-35.87
4521.24	39.04	Ave	27	1.1	H	-1.94	37.10	54.00	-16.90
5127.01	46.07	PK	14	1.1	H	-1.06	45.01	74.00	-28.99
5127.01	39.94	Ave	14	1.1	H	-1.06	38.88	54.00	-15.12
11100.00	37.46	PK	303	1.8	H	5.28	42.74	68.20	-25.46
11100.00	33.50	Ave	303	1.8	H	5.28	38.78	54.00	-15.32
802.11ac(HT40) U-NII-2C High channel 5670MHz									
223.45	45.71	QP	260	1.7	H	-11.62	34.09	46.00	-11.91
223.45	37.22	QP	355	1.9	V	-11.62	25.60	46.00	-20.40
4508.33	40.15	PK	42	1.7	H	-1.94	-41.79	74.00	-35.79
4508.33	38.17	Ave	42	1.7	H	-1.94	36.23	54.00	-17.77
5132.78	46.09	PK	2	1.7	H	-1.06	45.03	74.00	-28.97
5132.78	40.76	Ave	2	1.7	H	-1.06	39.70	54.00	-14.30
11340.00	0.85	PK	347	1.9	H	5.28	6.13	68.20	-62.07
11340.00	39.47	Ave	347	1.9	H	5.28	44.75	54.00	-9.25

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT40) U-NII-3 Low Channel 5755MHz									
223.45	37.79	QP	120	1.7	H	-11.62	26.17	46.00	-19.83
223.45	45.97	QP	345	1.9	V	-11.62	34.35	46.00	-11.65
4517.37	36.87	PK	27	2.0	H	-1.92	34.95	74.00	-39.05
4517.37	32.85	Ave	27	2.0	H	-1.92	30.93	54.00	-23.07
11510.00	38.82	PK	217	1.1	H	5.88	44.70	68.20	-23.50
11510.00	36.29	Ave	217	1.1	H	5.88	42.17	54.00	-11.83
5371.82	45.33	PK	215	1.3	H	-1.07	44.26	74.00	-29.74
5371.82	39.64	Ave	215	1.3	H	-1.07	38.57	54.00	-15.43
802.11ac(HT40) U-NII-3 High Channel 5795MHz									
223.45	37.14	QP	9	1.8	H	-11.62	25.52	46.00	-20.48
223.45	45.27	QP	146	1.3	V	-11.62	33.65	46.00	-12.35
4520.14	36.68	PK	282	1.1	H	-1.86	34.82	74.00	-39.18
4520.14	32.60	Ave	282	1.1	H	-1.86	30.74	54.00	-23.26
11590.00	40.88	PK	37	1.4	H	5.63	46.51	68.20	-21.69
11590.00	38.68	Ave	37	1.4	H	5.63	44.31	54.00	-9.69
5359.08	45.55	PK	172	1.4	H	-1.03	44.52	74.00	-29.48
5359.08	39.48	Ave	172	1.4	H	-1.03	38.45	54.00	-15.55

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT80) U-NII-1 Low Channel 5210MHz									
223.45	46.20	QP	298	1.7	H	-11.62	34.58	46.00	-11.42
4520.14	36.31	QP	21	1.4	V	-11.62	24.69	46.00	-21.31
4517.18	31.82	PK	126	1.0	H	-1.88	29.94	74.00	-44.06
4517.18	41.28	Ave	126	1.0	H	-1.88	39.40	54.00	-14.60
5126.41	37.90	PK	203	1.3	H	-1.06	36.84	74.00	-37.16
5126.41	46.61	Ave	203	1.3	H	-1.06	45.55	54.00	-8.45
10420.00	42.45	PK	39	1.5	H	4.65	47.10	74.00	-26.90
10420.00	37.59	Ave	39	1.5	H	4.65	42.24	54.00	-11.76
802.11ac(HT80) U-NII-2A Low Channel 5290MHz									
4520.14	36.37	QP	86	1.9	H	-11.62	24.75	46.00	-21.25
4517.18	30.89	QP	97	1.8	V	-11.62	19.27	46.00	-26.73
4507.97	40.48	PK	316	1.6	H	-1.88	38.60	74.00	-35.40
4507.97	37.12	Ave	316	1.6	H	-1.88	35.24	54.00	-18.76
5138.11	46.80	PK	205	1.5	H	-1.06	45.74	74.00	-28.26
5138.11	43.83	Ave	205	1.5	H	-1.06	42.77	54.00	-11.23
10580.00	38.99	PK	330	1.2	H	4.65	43.64	74.00	-30.36
10580.00	46.20	Ave	330	1.2	H	4.65	50.85	54.00	-3.15

Frequency	Receiver Reading	Detector	Turn table Angle	RX Antenna		Corrected Factor	Corrected Amplitude	FCC Part 15.407/209/205	
				Height	Polar			Limit	Margin
(MHz)	(dBμV)	(PK/QP/Ave)	Degree	(m)	(H/V)	(dB)	(dBμV/m)	(dBμV/m)	(dB)
802.11ac(HT80) U-NII-2C Low Channel 5530MHz									
4517.18	29.99	QP	285	1.2	H	-11.62	18.37	46.00	-27.63
4507.97	40.86	QP	88	1.8	V	-11.62	29.24	46.00	-16.76
4523.44	36.65	PK	206	1.4	H	-1.88	34.77	74.00	-39.23
4523.44	46.00	Ave	206	1.4	H	-1.88	44.12	54.00	-9.88
5145.64	43.08	PK	43	1.1	H	-1.06	42.02	74.00	-31.98
5145.64	38.49	Ave	43	1.1	H	-1.06	37.43	54.00	-16.57
11060.00	47.03	PK	316	1.6	H	4.65	51.68	68.20	-16.52
11060.00	38.50	Ave	316	1.6	H	4.65	43.15	54.00	-10.85
802.11ac(HT80) U-NII-3 Low channel 5775MHz									
4520.14	36.18	QP	271	1.4	H	-11.62	24.56	46.00	-21.44
4517.18	31.26	QP	8	1.9	V	-11.62	19.64	46.00	-26.36
4520.47	42.09	PK	258	1.0	H	-1.85	40.24	74.00	-33.76
4520.47	43.13	Ave	258	1.0	H	-1.85	41.28	54.00	-12.72
11550.00	41.51	PK	125	1.2	H	4.83	46.34	68.20	-21.86
11550.00	37.66	Ave	125	1.2	H	4.83	42.49	54.00	-11.51
5378.76	46.68	PK	262	1.8	H	-1.14	45.54	74.00	-28.46
5378.76	37.63	Ave	262	1.8	H	-1.14	36.49	54.00	-17.51

Test Frequency: 18GHz~40GHz

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

8 Antenna Requirement

According to the FCC Part 15 Paragraph 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. This product have a FPC dipole antenna(ANT1) and a FPC PIFA(ANT2) fulfill the requirement of this section.

9 RF Exposure

Remark: refer to MPE test report: WTS20S06036687W003.

10 Photographs of test setup and EUT.

Note: Please refer to appendix: Appendix-SX-SDMAC-2832S+_Photo.

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