

FCC Test Report

Applicant : D2G Group LLC

Address : 81 Commerce Drive, Fall River,
Massachusetts, 02720, United States

Product Name : 65inch Floor Standing Digital Signage,IR
Touch

Report Date : Mar. 27, 2024



Shenzhen Anbotek Compliance Laboratory Limited



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TEST REPORT

Applicant : D2G Group LLC
Manufacturer : Shenzhen I-Pivot Intelligent Technology Co., Ltd
Product Name : 65inch Floor Standing Digital Signage,IR Touch
Test Model No. : DF065TLB
Reference Model No. : DF065NLB2
Trade Mark : Displays2go
Rating(s) : Rated Voltage: AC 100-240V
Rated Current: 3.5A
Rated Frequency: 50/60Hz
Max Power Consumption: 310W
Test Standard(s) : **FCC Part15 Subpart E, Paragraph 15.407**
Test Method(s) : **ANSI C63.10: 2020**
KDB 789033 D02 General UNII Test Procedures New Rules v02r01

The device described above is tested by Shenzhen Anbotek Compliance Laboratory Limited to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and Shenzhen Anbotek Compliance Laboratory Limited is assumed full of responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT (Equipment Under Test) is technically compliant with the FCC Part 15 Subpart E requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen Anbotek Compliance Laboratory Limited.

Date of Receipt

Dec. 29, 2023

Date of Test

Dec. 29, 2023 ~ Mar. 25, 2024

Prepared By

Nianxiu Chen

(Nianxiu Chen)

Approved & Authorized Signer

Edward Pan

(Edward Pan)



Revision History

Report Version	Description	Issued Date
R00	Original Issue.	Mar. 27, 2024



1. General Information

1.1. Client Information

Applicant	:	D2G Group LLC
Address	:	81 Commerce Drive, Fall River, Massachusetts, 02720, United States
Manufacturer	:	Shenzhen I-Pivot Intelligent Technology Co., Ltd
Address	:	2nd Floor, Building 2A, Dacheng Industrial Zone, No. 357 Jihua Rd, Longgang District, Shenzhen, Guangdong, China
Factory	:	Shenzhen I-Pivot Intelligent Technology Co., Ltd
Address	:	2nd Floor, Building 2A, Dacheng Industrial Zone, No. 357 Jihua Rd, Longgang District, Shenzhen, Guangdong, China

1.2. Description of Device (EUT)

Product Name	:	65inch Floor Standing Digital Signage,IR Touch		
Test Model No.	:	DF065TLB		
Reference Model No.	:	DF065NLB2 (Note: All samples are the same except the model number and appearance height and Whether there is touch function(see page 7), so we prepare "DF065TLB" for test only.)		
Trade Mark	:	Displays2go		
Test Power Supply	:	AC 120V, 60Hz		
Test Sample No.	:	1-2-1(Normal Sample), 1-2-2(Engineering Sample)		
Adapter	:	N/A		
RF Specification				
Operation Mode	:	<input checked="" type="checkbox"/> a	<input checked="" type="checkbox"/> n(HT20)	<input checked="" type="checkbox"/> n(HT40) <input checked="" type="checkbox"/> ac(VHT20)
		<input checked="" type="checkbox"/> ac(VHT40)	<input type="checkbox"/> ac(VHT80)	<input type="checkbox"/> ac(VHT160) <input checked="" type="checkbox"/> ax(HEW20)
		<input checked="" type="checkbox"/> ax(HEW40)	<input type="checkbox"/> ax(HEW80)	<input type="checkbox"/> ax(HEW160)
Device Type	:	<input type="checkbox"/> Outdoor AP	<input type="checkbox"/> Indoor AP	<input type="checkbox"/> Point-to-point AP
		<input checked="" type="checkbox"/> Client		
TPC Function	:	<input type="checkbox"/> With TPC		<input checked="" type="checkbox"/> Without TPC
DFS Type	:	<input checked="" type="checkbox"/> Slave without radar detection		<input type="checkbox"/> Slave with radar detection
		<input type="checkbox"/> Master		
Operation Frequency	:	<input checked="" type="checkbox"/> Wi-Fi 5.2G: 5150~5250MHz		<input checked="" type="checkbox"/> Wi-Fi 5.3G: 5250~5350MHz
		<input checked="" type="checkbox"/> Wi-Fi 5.6G: 5470~5725MHz		<input checked="" type="checkbox"/> Wi-Fi 5.8G: 5725~5850MHz



Number of Channel	: Wi-Fi 5.2G: <input checked="" type="checkbox"/> 4 Channels for 20MHz bandwidth (5180-5240MHz) <input checked="" type="checkbox"/> 2 Channels for 40MHz bandwidth (5190-5230MHz) <input type="checkbox"/> 1 Channels for 80MHz bandwidth (5210MHz) Wi-Fi 5.3G: <input checked="" type="checkbox"/> 4 Channels for 20MHz bandwidth (5260-5320MHz) <input checked="" type="checkbox"/> 2 Channels for 40MHz bandwidth (5270-5310MHz) <input type="checkbox"/> 1 Channels for 80MHz bandwidth (5290MHz) Wi-Fi 5.6G: <input checked="" type="checkbox"/> 11 Channels for 20MHz bandwidth (5500-5700MHz) <input checked="" type="checkbox"/> 5 Channels for 40MHz bandwidth (5510-5670MHz) <input type="checkbox"/> 2 Channels for 80MHz bandwidth (5530~5610MHz) Wi-Fi 5.8G: <input checked="" type="checkbox"/> 5 Channels for 20MHz bandwidth (5745MHz ~ 5825MHz) <input checked="" type="checkbox"/> 2 Channels for 40MHz bandwidth (5755MHz ~ 5795MHz) <input type="checkbox"/> 1 Channels for 80MHz bandwidth (5775MHz)
Modulation Type	: <input checked="" type="checkbox"/> 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) <input checked="" type="checkbox"/> 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM) <input checked="" type="checkbox"/> 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM) <input checked="" type="checkbox"/> 802.11ax: OFDMA(BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM)
Antenna Type	: Rod Antenna
Antenna Gain(Peak)	: Wi-Fi 5.2G: 5.06dBi Wi-Fi 5.3G: 5.17dBi Wi-Fi 5.6G: 5.21dBi Wi-Fi 5.8G: 5.28dBi
Remark: 1) All of the RF specification are provided by customer. 2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.	

Model differences:

Model No.	Height/[mm]	Touch function
DF065TLB	2000	Infrared touch
DF065NLB2	1690	N/A

1.3. Auxiliary Equipment Used During Test

Description	Rating(s)
--	--



1.4. Operation channel list

Operation Band: Wi-Fi 5.2G

Bandwidth:	20MHz	Bandwidth:	40MHz	/	/
Channel	Frequency (MHz)	Channel	Frequency (MHz)	/	/
36	5180	38	5190	/	/
40	5200	46	5230	/	/
44	5220	/	/	/	/
48	5240	/	/	/	/

Operation Band: Wi-Fi 5.3G

Bandwidth:	20MHz	Bandwidth:	40MHz	/	/
Channel	Frequency (MHz)	Channel	Frequency (MHz)	/	/
52	5260	54	5270	/	/
56	5280	62	5310	/	/
60	5300	/	/	/	/
64	5320	/	/	/	/

Operation Band: Wi-Fi 5.6G

Bandwidth:	20MHz	Bandwidth:	40MHz	/	/
Channel	Frequency (MHz)	Channel	Frequency (MHz)	/	/
100	5500	102	5510	/	/
104	5520	110	5550	/	/
108	5540	118	5590	/	/
112	5560	126	5630	/	/
116	5580	134	5670	/	/
120	5600	/	/	/	/
124	5620	/	/	/	/
128	5640	/	/	/	/
132	5660	/	/	/	/
136	5680	/	/	/	/
140	5700	/	/	/	/

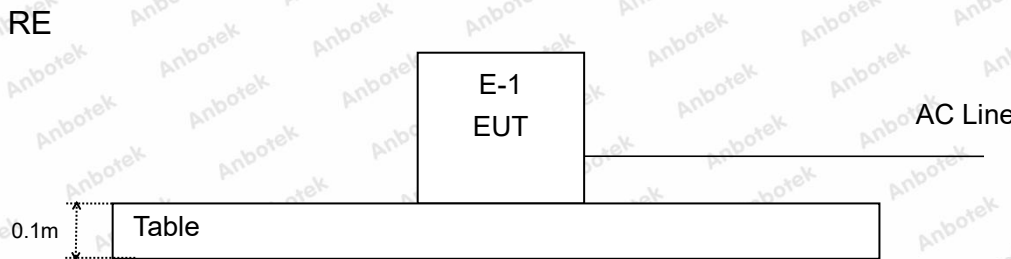
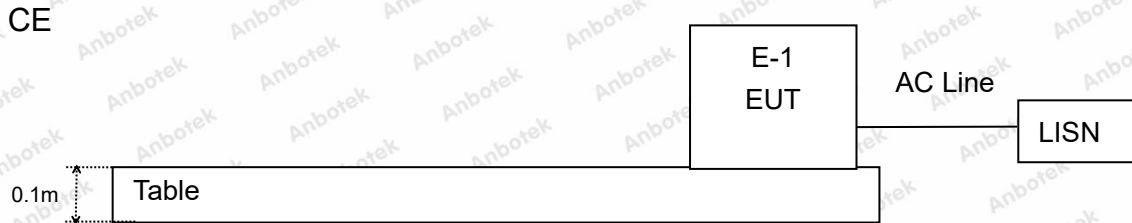


Operation Band: Wi-Fi 5.8G

Bandwidth:	20MHz	Bandwidth:	40MHz	/	/
Channel	Frequency (MHz)	Channel	Frequency (MHz)	/	/
149	5745	151	5755	/	/
153	5765	159	5795	/	/
157	5785	/	/	/	/
161	5805	/	/	/	/
165	5825	/	/	/	/



1.5. Description Of Test Setup



1.6. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	Oct. 12, 2023	1 Year
2.	Three Phase V-type Artificial Power Network	CYBERTEK	EM5040DT	E215040DT001	Jul. 05, 2023	1 Year
3.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Oct. 12, 2023	1 Year
4.	EMI Test Receiver	Rohde & Schwarz	ESR26	101481	Oct. 12, 2023	1 Year
5.	MXA Spectrum Analysis	Agilent	N9020A	MY51170037	Oct. 12, 2023	1 Year
6.	EMI Preamplifier	SKET Electronic	LNPA-0118G -45	SKET-PA-002	Oct. 12, 2023	1 Year
7.	Double Ridged Horn Antenna	SCHWARZBECK	BBHA 9120D	02555	Oct. 16, 2022	3 Year
8.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	345	Oct. 23, 2022	3 Year
9.	Loop Antenna	Schwarzbeck	FMZB1519B	00053	Oct. 12, 2023	1 Year
10.	Horn Antenna	A-INFO	LB-180400- KF	J211060628	Oct. 12, 2023	1 Year
11.	Pre-amplifier	SONOMA	310N	186860	Oct. 12, 2023	1 Year
12.	EMI Test Software EZ-EMC	SHURPLE	N/A	N/A	N/A	N/A
13.	MXA Spectrum Analysis	KEYSIGHT	N9020A	MY53280032	Oct. 12, 2023	1 Year
14.	MXG RF Vector Signal Generator	Agilent	N5182A	MY48180656	Oct. 12, 2023	1 Year
15.	Signal Generator	Agilent	E4421B	MY41000743	Oct. 12, 2023	1 Year
16.	DC Power Supply	IVYTECH	IV3605	1804D360510	Oct. 20, 2023	1 Year
17.	Constant Temperature Humidity Chamber	ZHONGJIAN	ZJ-KHWS80 B	N/A	Oct. 16, 2023	1 Year
18.	Spectrum Analyzer	Rohde & Schwarz	FSV40-N	101792	May. 26, 2023	1 Year



1.7. Measurement Uncertainty

Parameter	Uncertainty
Conducted emissions (AMN 150kHz~30MHz)	3.8dB
Occupied Bandwidth	925Hz
Conducted Output Power	0.76dB
Power Spectral Density	0.76dB
Conducted Spurious Emission	1.24dB
Radiated spurious emissions (Below 30MHz)	3.53dB
Radiated spurious emissions (30MHz~1GHz)	Horizontal: 3.92dB; Vertical: 4.52dB
Radiated spurious emissions (above 1GHz)	1G-6GHz: 4.78dB; 6G-18GHz: 4.88dB 18G-40GHz: 5.68dB
The measurement uncertainty and decision risk evaluated according to AB/WI-RF-F-032. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

1.8. Description of Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

FCC-Registration No.: 434132

Shenzhen Anbotek Compliance Laboratory Limited, 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 No. 434132.

ISED-Registration No.: 8058A

Shenzhen Anbotek Compliance Laboratory Limited, EMC Laboratory has been registered and fully described in a report filed with the (ISED) Innovation, Science and Economic Development Canada. The acceptance letter from the ISED is maintained in our files. Registration 8058A.

Test Location

Shenzhen Anbotek Compliance Laboratory Limited.

1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.



1.9. Disclaimer

1. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
2. The test report is invalid if there is any evidence and/or falsification.
3. The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
4. This document may not be altered or revised in any way unless done so by Anbotek and all revisions are duly noted in the revisions section.
5. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
6. The authenticity of the information provided by the customer is the responsibility of the customer and the laboratory is not responsible for its authenticity.

The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.



2. Summary of Test Results

Standard	Test Type	Result
15.207 & 15.407(b)	Conducted Emission	PASS
15.205 & 15.209	Spurious Emission	PASS
15.407(b)	Band Edge	PASS
15.407(a) & 2.1049	26dB Bandwidth & 99% Occupied Bandwidth	PASS
15.407(e)	Minimum 6dB bandwidth (5.725-5.85GHz band)	PASS
15.407(a)	Maximum Conducted Output Power	PASS
15.407(a)	Peak Power Spectral Density	PASS
15.407(g)	Frequency Stability	PASS
15.407(h)	Dynamic Frequency Selection (DFS)	PASS (Please Refer to DFS Report)
15.203	Antenna Requirement	PASS
Remark: "N/A" is an abbreviation for Not Applicable.		



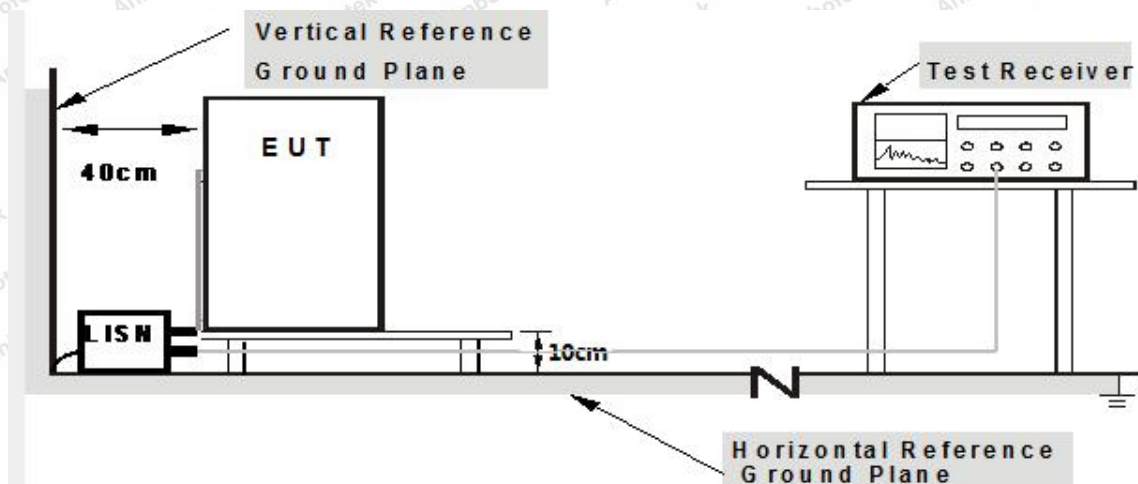
3. Conducted Emission Test

3.1. Test Standard and Limit

Test Standard	FCC Part15 Section 15.207 & 15.407(b)		
	Frequency	Maximum RF Line Voltage (dBuV)	
		Quasi-peak Level	Average Level
Test Limit	150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
	500kHz~5MHz	56	46
	5MHz~30MHz	60	50

Remark: (1) *Decreasing linearly with logarithm of the frequency.
 (2) The lower limit shall apply at the transition frequency.

3.2. Test Setup



- Note:**
- 1.Support units were connected to second LISN.
 - 2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.3. Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC ANSI C63.10: 2020 on Conducted Emission Measurement.

The bandwidth of test receiver (ESCI) set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.



3.4. Test Data

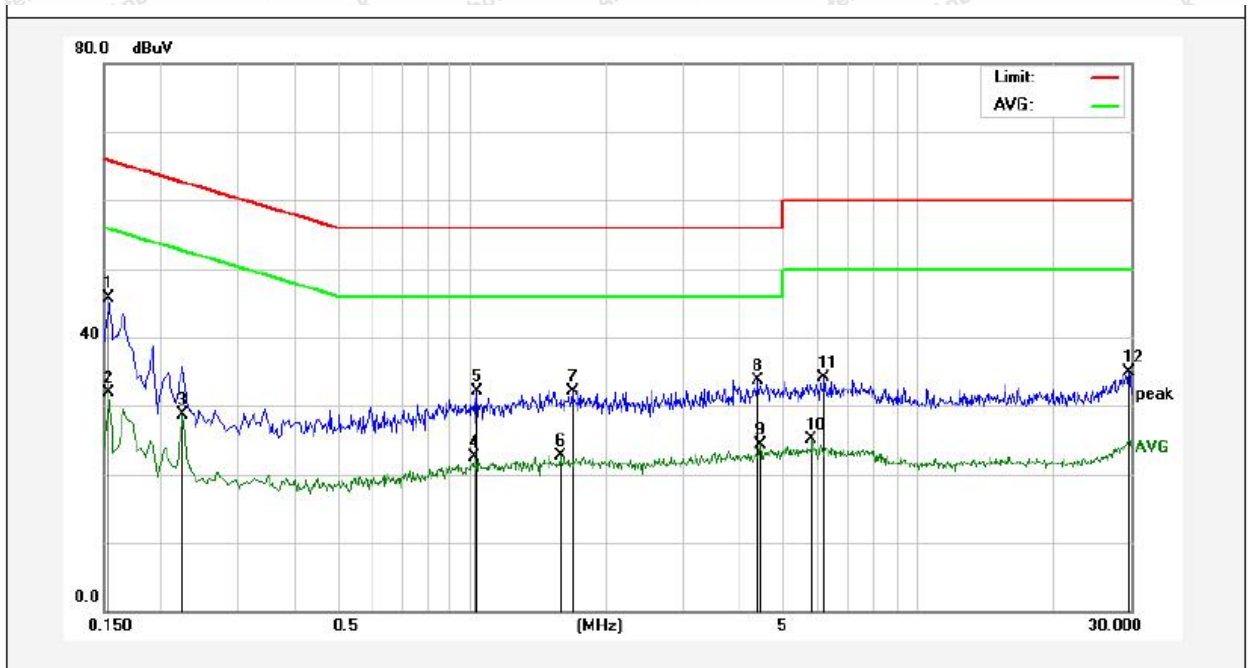
During the test, pre-scan all modes, and found the 802.11ax(HEW40) 5190MHz for WiFi 5.2G which is the worst case, only the worst case is recorded in the report.

AC conducted emission pre-test at both at AC 120V/60Hz and AC 240V/60Hz modes, recorded worst case AC 120V/60Hz.



Conducted Emission Test Data

Test Site: 1# Shielded Room
 Operating Condition: 802.11ax(HEW40) 5190MHz for WiFi 5.2G
 Test Specification: AC 120V, 60Hz
 Comment: Live Line
 Temp.(°C)/Hum.(%RH): 23.9°C/45%RH

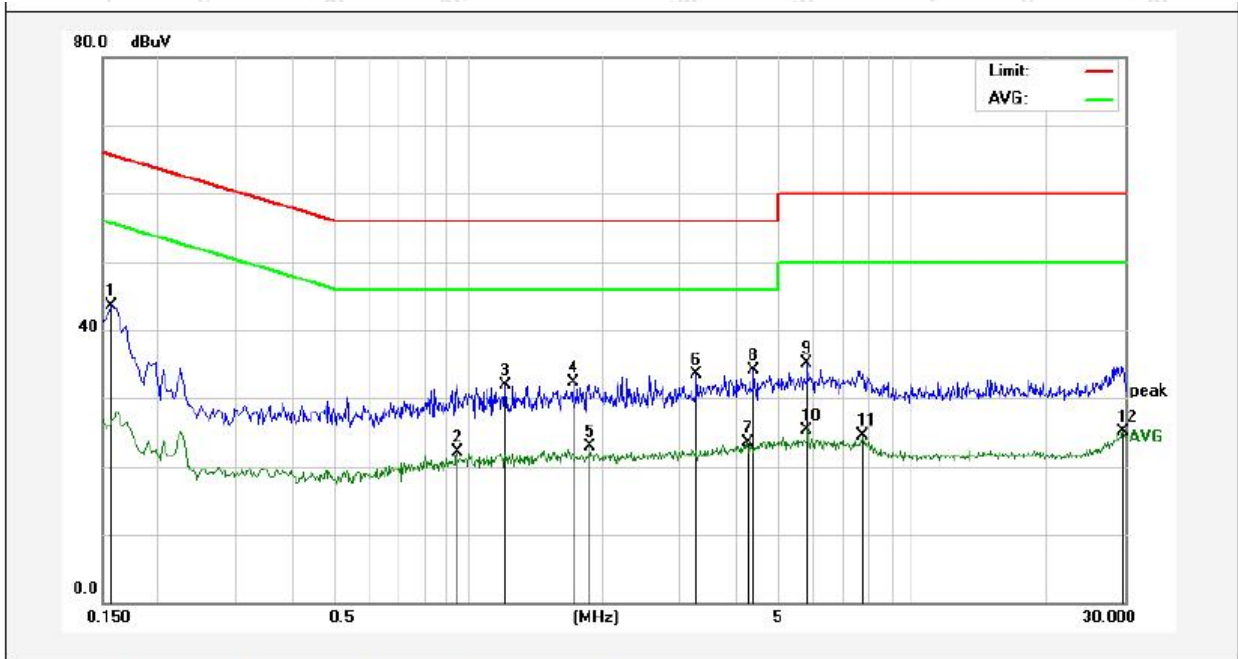


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1539	23.65	22.01	45.66	65.78	-20.12	QP	
2	0.1539	9.88	22.01	31.89	55.78	-23.89	AVG	
3	0.2260	6.71	22.02	28.73	52.59	-23.86	AVG	
4	1.0140	-2.18	24.77	22.59	46.00	-23.41	AVG	
5	1.0300	7.29	24.78	32.07	56.00	-23.93	QP	
6	1.5820	-2.31	25.08	22.77	46.00	-23.23	AVG	
7	1.6860	7.03	25.14	32.17	56.00	-23.83	QP	
8	4.4020	7.12	26.65	33.77	56.00	-22.23	QP	
9	4.4540	-2.27	26.67	24.40	46.00	-21.60	AVG	
10	5.8020	-1.52	26.58	25.06	50.00	-24.94	AVG	
11	6.1579	7.75	26.43	34.18	60.00	-25.82	QP	
12	29.7860	7.20	27.72	34.92	60.00	-25.08	QP	



Conducted Emission Test Data

Test Site: 1# Shielded Room
 Operating Condition: 802.11ax(HEW40) 5190MHz for WiFi 5.2G
 Test Specification: AC 120V, 60Hz
 Comment: Neutral Line
 Temp.(°C)/Hum.(%RH): 23.9°C/45%RH



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV)	Limit (dBuV)	Over Limit (dB)	Detector	Remark
1	0.1580	21.59	22.01	43.60	65.56	-21.96	QP	
2	0.9420	-2.29	24.46	22.17	46.00	-23.83	AVG	
3	1.2140	7.10	24.87	31.97	56.00	-24.03	QP	
4	1.7180	7.07	25.16	32.23	56.00	-23.77	peak	
5	1.8820	-2.39	25.26	22.87	46.00	-23.13	AVG	
6	3.2700	7.45	26.11	33.56	56.00	-22.44	QP	
7	4.2260	-3.03	26.55	23.52	46.00	-22.48	AVG	
8	4.3940	7.48	26.64	34.12	56.00	-21.88	QP	
9	5.8020	8.43	26.58	35.01	60.00	-24.99	QP	
10	5.8020	-1.18	26.58	25.40	50.00	-24.60	AVG	
11	7.6980	-1.28	25.76	24.48	50.00	-25.52	AVG	
12	29.6900	-2.59	27.67	25.08	50.00	-24.92	AVG	



4. Radiation Spurious Emission and Band Edge

4.1. Test Standard and Limit

Radiated Spurious Emission						
Test Standard	FCC Part15 C Section 15.205 & 15.209					
Test Limit	Frequency (MHz)	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)	
	0.009MHz~0.490MHz	2400/F(kHz)	-	-	300	
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30	
	1.705MHz-30MHz	30	-	-	30	
	30MHz~88MHz	100	40.0	Quasi-peak	3	
	88MHz~216MHz	150	43.5	Quasi-peak	3	
	216MHz~960MHz	200	46.0	Quasi-peak	3	
	960MHz~1000MHz	500	54.0	Quasi-peak	3	
	Above 1000MHz	500	54.0	Average	3	
		-	68.2	Peak	3	
Band Edge						
Test Standard	15.407(b)					
Test Limit	Operating Band	Frequency	EIRP Limit	Remark		
	5725-5850 MHz	5150-5250MHz	Above 1GHz	-27dBm/MHz(68.2dBuV/m)@3m	Peak	
		5250-5350MHz	Above 1GHz	-27dBm/MHz(68.2dBuV/m)@3m	Peak	
		5470-5725MHz	Above 1GHz	-27dBm/MHz(68.2dBuV/m)@3m	Peak	
			Above 1GHz	-27dBm/MHz(68.2dBuV/m)@3m	Peak	
		1GHz-5.65GHz	-27*dBm/MHz to 10dBm/MHz (68.2* dBuV/m to 105.6dBuV/m)	Peak		
		5.65GHz-5.7GHz	10*dBm/MHz to 15.6dBm/MHz (105.6*dBuV/m to 110.8dBuV/m)	Peak		
		5.7GHz-5.72GHz	15.6*dBm/MHz to 27dBm/MHz (110.8dBuV/m to* 122.2dBuV/m)	Peak		
		5.72GHz-5.725GHz	27dBm/MHz to 15.6*dBm/MHz (122.2dBuV/m to110.8* dBuV/m)	Peak		
	5.85GHz-5.855GHz	15.6dBm/MHz to 10*dBm/MHz (110.8dBuV/m to 105.6* dBuV/m)	Peak			



		5.855GHz-5.875GHz	10dBm/MHz to -27*dBm/MHz (105.6dBuV/m to 68.2* dBuV/m)	Peak
		5.875GHz-5.925GHz	-27 dBm/MHz(68.2dBuV/m)@3m	Peak

Remark:

- (1)The lower limit shall apply at the transition frequency.
- (2) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.
- (3)Above 1GHz limit: $E[dB\mu V/m] = EIRP[dBm] + 95.2 = 68.2 \text{ dBuV/m}$, for $EIPR[dBm] = -27\text{dBm}$.

4.2. Test Setup

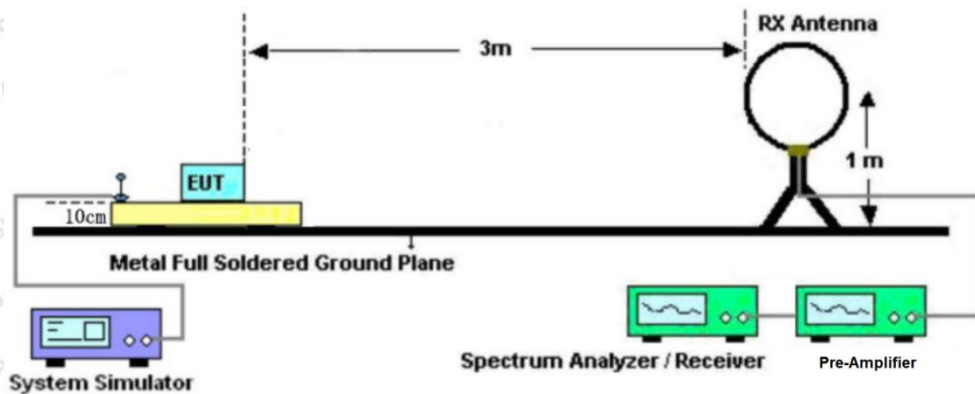


Figure 1. Below 30MHz

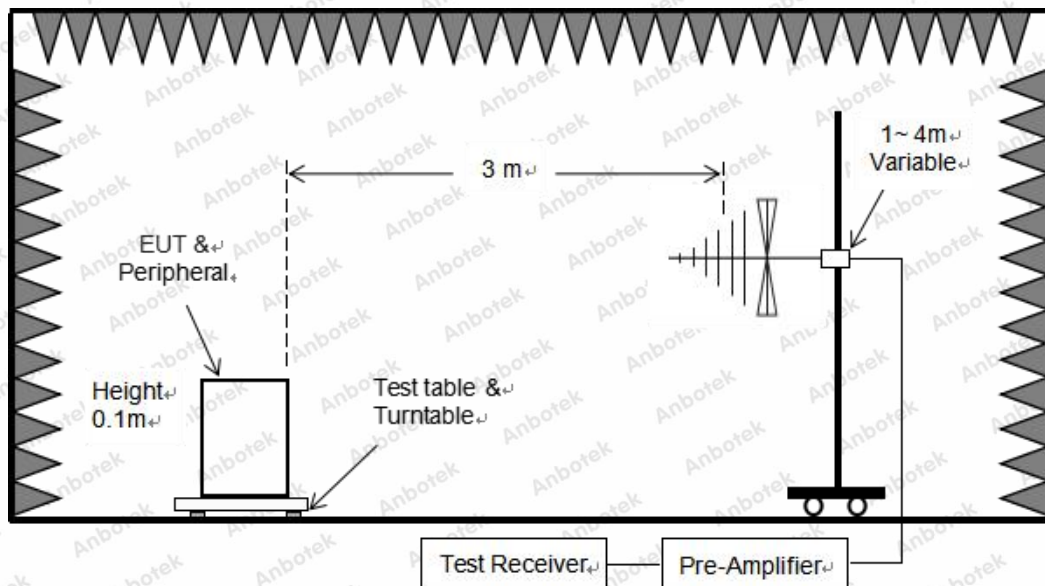


Figure 2. 30MHz to 1GHz



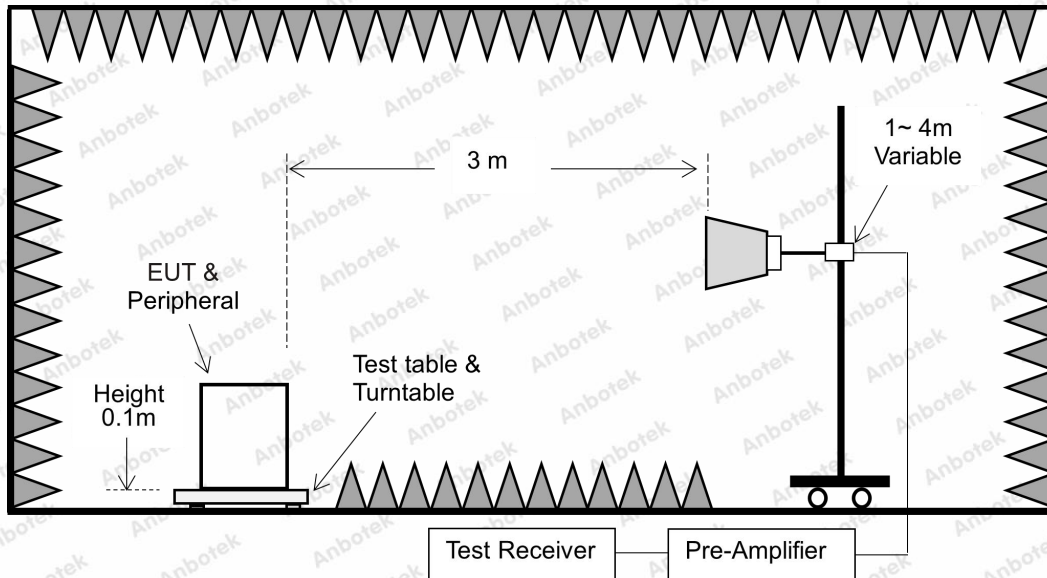


Figure 3. Above 1 GHz

4.3. Test Procedure

For below 1GHz: The EUT is placed on a turntable, which is 0.8m above the ground plane.

For above 1GHz: The EUT is placed on a turntable, which is 1.5m above the ground plane.

The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meters to find out the maximum emission level. Rotated the EUT through three orthogonal axes to determine the maximum emissions, both horizontal and vertical polarization of the antenna are set on test. The EUT is tested in 9*6*6 Chamber. The device is evaluated in xyz orientation.

For the radiated emission test above 1GHz:

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.

For 9kHz to 150kHz, Set the spectrum analyzer as:

RBW = 200Hz, VBW =1kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 150kHz to 30MHz, Set the spectrum analyzer as:

RBW = 9KHz, VBW =30kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For 30MHz to 1000MHz, Set the spectrum analyzer as:

RBW = 100kHz, VBW =300kHz, Detector= Quasi-Peak, Trace mode= Max hold, Sweep- auto couple.

For above 1GHz, Set the spectrum analyzer as:

RBW =1MHz, VBW =1MHz, Detector= Peak, Trace mode= Max hold, Sweep- auto couple.

RBW =1MHz, VBW =10Hz, Detector= Average, Trace mode= Max hold, Sweep- auto couple.



4.4. Test Data

PASS

During the test, Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the X-axis is the worst case.

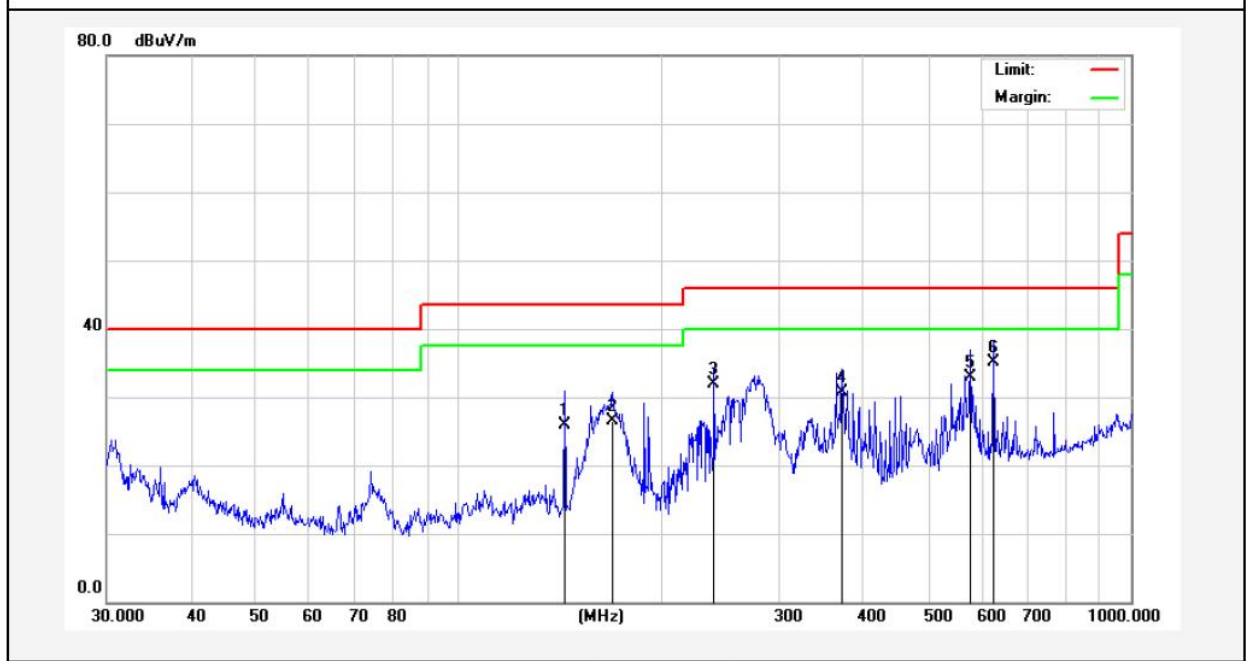
The test results of 9kHz-30MHz was attenuated more than 20dB below the permissible limits, so the results don't record in the report.

During the test, pre-scan all the modes, and found the 802.11ax(HEW40) 5190MHz for WiFi 5.2G which is the worst case, only the worst case is recorded in the report.



Test Results (30~1000MHz)

Test Mode: 802.11ax(HEW40) 5190MHz for WiFi 5.2G
 Power Source: AC 120V, 60Hz
 Polarization: Horizontal
 Temp.(°C)/Hum.(%RH): 22.6°C/56%RH

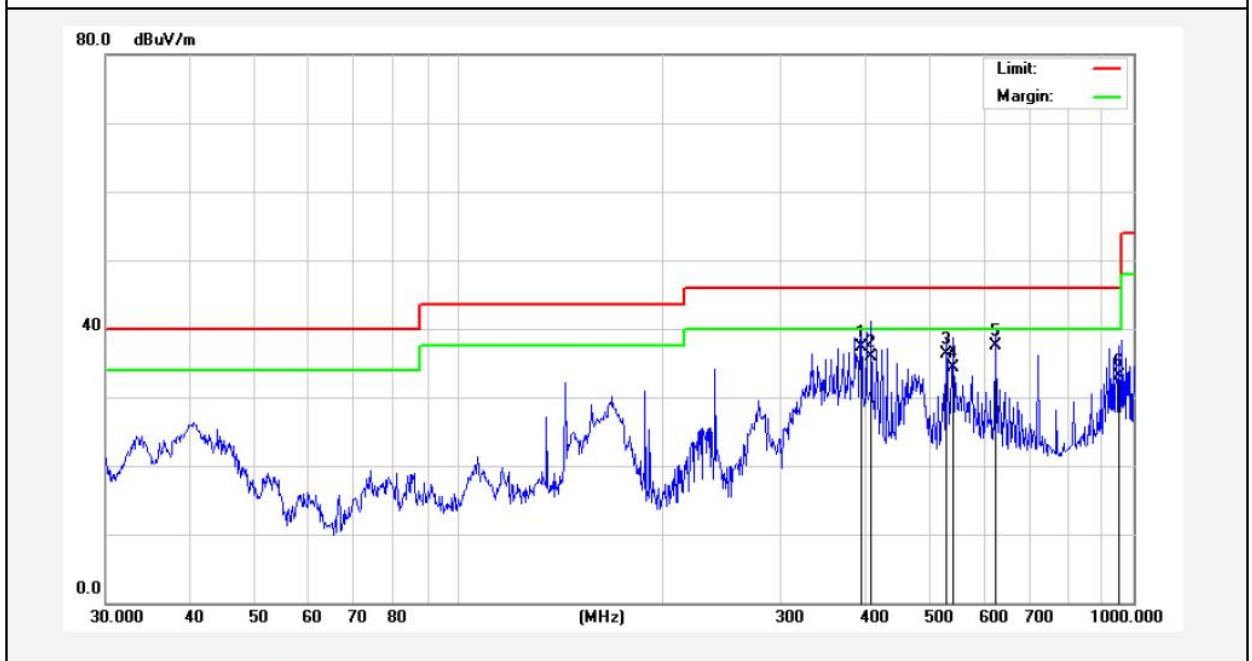


No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	143.8294	48.89	-22.99	25.90	43.50	-17.60	QP			
2	169.5989	50.10	-23.63	26.47	43.50	-17.03	QP			
3	239.9874	53.48	-21.66	31.82	46.00	-14.18	QP			
4	372.0045	46.87	-16.07	30.80	46.00	-15.20	QP			
5	576.6443	44.07	-11.10	32.97	46.00	-13.03	QP			
6	625.0779	45.67	-10.60	35.07	46.00	-10.93	QP			



Test Results (30~1000MHz)

Test Mode: 802.11ax(HEW40) 5190MHz for WiFi 5.2G
 Power Source: AC 120V, 60Hz
 Polarization: Vertical
 Temp.(°C)/Hum.(%RH): 22.6°C/56%RH



No.	Freq. (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Height (cm)	degree (deg)	Remark
1	394.8544	51.90	-14.50	37.40	46.00	-8.60	QP			
2	408.9460	50.28	-14.30	35.98	46.00	-10.02	QP			
3	528.2458	48.34	-11.97	36.37	46.00	-9.63	QP			
4	541.3724	46.09	-11.84	34.25	46.00	-11.75	QP			
5	625.0779	48.15	-10.60	37.55	46.00	-8.45	QP			
6	952.0937	38.77	-5.61	33.16	46.00	-12.84	QP			



Test Results (Above 1000MHz)

Test Mode: IEEE 802.11ax(HEW40) for WiFi 5.2G							
Test channel: Low CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10380.00	29.69	23.81	53.50	68.20	-14.70	V	Peak
15570.00	31.08	28.91	59.99	68.20	-8.21	V	Peak
10380.00	30.95	23.81	54.76	68.20	-13.44	H	Peak
15570.00	31.68	28.91	60.59	68.20	-7.61	H	Peak
10380.00	20.46	23.81	44.27	54.00	-9.73	V	AVG
15570.00	20.99	28.91	49.90	54.00	-4.10	V	AVG
10380.00	20.90	23.81	44.71	54.00	-9.29	H	AVG
15570.00	21.23	28.91	50.14	54.00	-3.86	H	AVG
Test channel: High CH							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
10460.00	30.12	23.80	53.92	68.20	-14.28	V	Peak
15690.00	31.28	30.03	61.31	68.20	-6.89	V	Peak
10460.00	30.51	23.80	54.31	68.20	-13.89	H	Peak
15690.00	31.78	30.03	61.81	68.20	-6.39	H	Peak
10460.00	20.79	23.80	44.59	54.00	-9.41	V	AVG
15690.00	20.89	30.03	50.92	54.00	-3.08	V	AVG
10460.00	20.57	23.80	44.37	54.00	-9.63	H	AVG
15690.00	20.77	30.03	50.80	54.00	-3.20	H	AVG

Remark:

1. During the test, pre-scan the 802.11a, 802.11n(HT20), ac(VHT20), ax(HEW20), n(HT40), ac(VHT40), ax(HEW40) mode, and found the 802.11ax(HEW40) mode is worse case, the report only record this mode.
2. Result =Reading + Factor



Radiated Band Edge: 5.2G&5.3G

Test Mode: IEEE 802.11a							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5150.00	51.01	15.99	67.00	68.20	-1.20	H	Peak
5150.00	51.37	15.99	67.36	68.20	-0.84	V	Peak
5150.00	29.48	15.99	45.47	54.00	-8.53	H	AVG
5150.00	29.53	15.99	45.52	54.00	-8.48	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5350.00	39.72	16.43	56.15	68.20	-12.05	H	Peak
5350.00	44.30	16.43	60.73	68.20	-7.47	V	Peak
5350.00	26.28	16.43	42.71	54.00	-11.29	H	AVG
5350.00	28.69	15.99	44.68	54.00	-9.32	V	AVG

Remark: 1. Result =Reading + Factor

Test Mode: IEEE 802.11n(HT20)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5150.00	46.37	15.99	62.36	68.20	-5.84	H	Peak
5150.00	50.56	15.99	66.55	68.20	-1.65	V	Peak
5150.00	26.47	15.99	42.46	54.00	-11.54	H	AVG
5150.00	27.48	15.99	43.47	54.00	-10.53	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5350.00	40.22	16.43	56.65	68.20	-11.55	H	Peak
5350.00	38.61	16.43	55.04	68.20	-13.16	V	Peak
5350.00	27.53	16.43	43.96	54.00	-10.04	H	AVG
5350.00	28.91	16.43	45.34	54.00	-8.66	V	AVG

Remark: 1. Result =Reading + Factor



Test Mode: IEEE 802.11n(HT40)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5150.00	42.25	15.99	58.24	68.20	-9.96	H	Peak
5150.00	48.78	15.99	64.77	68.20	-3.43	V	Peak
5150.00	26.83	15.99	42.82	54.00	-11.18	H	AVG
5150.00	28.62	15.99	44.61	54.00	-9.39	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5350.00	44.55	16.43	60.98	68.20	-7.22	H	Peak
5350.00	48.73	16.43	65.16	68.20	-3.04	V	Peak
5350.00	27.97	16.43	44.40	54.00	-9.60	H	AVG
5350.00	27.71	16.43	44.14	54.00	-9.86	V	AVG

Remark: 1. Result =Reading + Factor

Test Mode: IEEE 802.11ac(VHT20)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5150.00	45.35	15.99	61.34	68.20	-6.86	H	Peak
5150.00	48.97	15.99	64.96	68.20	-3.24	V	Peak
5150.00	26.38	15.99	42.37	54.00	-11.63	H	AVG
5150.00	30.01	15.99	46.00	54.00	-8.00	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5350.00	50.17	16.43	66.60	68.20	-1.60	H	Peak
5350.00	46.98	16.43	63.41	68.20	-4.79	V	Peak
5350.00	29.59	16.43	46.02	54.00	-7.98	H	AVG
5350.00	28.03	16.43	44.46	54.00	-9.54	V	AVG

Remark: 1. Result =Reading + Factor



Test Mode: IEEE 802.11ac(VHT40)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5150.00	44.89	15.99	60.88	68.20	-7.32	H	Peak
5150.00	45.39	15.99	61.38	68.20	-6.82	V	Peak
5150.00	27.23	15.99	43.22	54.00	-10.78	H	AVG
5150.00	28.77	15.99	44.76	54.00	-9.24	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5350.00	41.21	16.43	57.64	68.20	-10.56	H	Peak
5350.00	48.09	16.43	64.52	68.20	-3.68	V	Peak
5350.00	27.31	16.43	43.74	54.00	-10.26	H	AVG
5350.00	28.66	16.43	45.09	54.00	-8.91	V	AVG

Remark: 1. Result =Reading + Factor

Test Mode: IEEE 802.11ax(HEW20)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5150.00	45.35	15.99	61.34	68.20	-6.86	H	Peak
5150.00	48.97	15.99	64.96	68.20	-3.24	V	Peak
5150.00	26.38	15.99	42.37	54.00	-11.63	H	AVG
5150.00	30.01	15.99	46.00	54.00	-8.00	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5350.00	50.17	16.43	66.60	68.20	-1.60	H	Peak
5350.00	46.98	16.43	63.41	68.20	-4.79	V	Peak
5350.00	29.59	16.43	46.02	54.00	-7.98	H	AVG
5350.00	28.03	16.43	44.46	54.00	-9.54	V	AVG

Remark: 1. Result =Reading + Factor



Test Mode: IEEE 802.11ax(HEW40)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5150.00	44.89	15.99	60.88	68.20	-7.32	H	Peak
5150.00	45.39	15.99	61.38	68.20	-6.82	V	Peak
5150.00	27.23	15.99	43.22	54.00	-10.78	H	AVG
5150.00	28.77	15.99	44.76	54.00	-9.24	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5350.00	41.21	16.43	57.64	68.20	-10.56	H	Peak
5350.00	48.09	16.43	64.52	68.20	-3.68	V	Peak
5350.00	27.31	16.43	43.74	54.00	-10.26	H	AVG
5350.00	28.66	16.43	45.09	54.00	-8.91	V	AVG

Remark: 1. Result = Reading + Factor



Radiated Band Edge: 5.6G&5.8G

Test Mode: IEEE 802.11a

Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5460.00	42.19	16.37	58.56	74.00	-15.44	H	Peak
5460.00	44.39	16.37	60.76	74.00	-13.24	V	Peak
5470.00	48.90	16.70	65.60	68.20	-2.60	H	Peak
5470.00	50.11	16.70	66.81	68.20	-1.39	V	Peak
5460.00	28.45	16.37	44.82	54.00	-9.18	H	AVG
5460.00	29.32	16.37	45.69	54.00	-8.31	V	AVG
5470.00	28.61	16.70	45.31	54.00	-8.69	H	AVG
5470.00	29.67	16.70	46.37	54.00	-7.63	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5850.00	42.90	17.21	60.11	68.20	-8.09	H	Peak
5850.00	44.19	17.21	61.40	68.20	-6.80	V	Peak
5850.00	28.88	17.21	46.09	54.00	-7.91	H	AVG
5850.00	28.94	17.21	46.15	54.00	-7.85	V	AVG

Remark: Result =Reading + Factor

Test Mode: IEEE 802.11n(HT20)

Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5460.00	44.78	16.37	61.15	74.00	-12.85	H	Peak
5460.00	44.83	16.37	61.20	74.00	-12.80	V	Peak
5470.00	44.23	16.70	60.93	68.20	-7.27	H	Peak
5470.00	40.29	16.70	56.99	68.20	-11.21	V	Peak
5460.00	26.26	16.37	42.63	54.00	-11.37	H	AVG
5460.00	27.42	16.37	43.79	54.00	-10.21	V	AVG
5470.00	26.22	16.70	42.92	54.00	-11.08	H	AVG
5470.00	27.65	16.70	44.35	54.00	-9.65	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5850.00	42.14	17.21	59.35	68.20	-8.85	H	Peak
5850.00	42.64	17.21	59.85	68.20	-8.35	V	Peak
5850.00	25.34	17.21	42.55	54.00	-11.45	H	AVG
5850.00	26.43	17.21	43.64	54.00	-10.36	V	AVG

Remark: 1. Result =Reading + Factor



Test Mode: IEEE 802.11n(HT40)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5460.00	40.17	16.37	56.54	74.00	-17.46	H	Peak
5460.00	42.69	16.37	59.06	74.00	-14.94	V	Peak
5470.00	43.02	16.70	59.72	68.20	-8.48	H	Peak
5470.00	46.92	16.70	63.62	68.20	-4.58	V	Peak
5460.00	27.31	16.37	43.68	54.00	-10.32	H	AVG
5460.00	28.61	16.37	44.98	54.00	-9.02	V	AVG
5470.00	26.57	16.70	43.27	54.00	-10.73	H	AVG
5470.00	28.08	16.70	44.78	54.00	-9.22	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5850.00	37.87	17.05	54.92	68.20	-13.28	H	Peak
5850.00	38.30	17.05	55.35	68.20	-12.85	V	Peak
5850.00	28.02	17.05	45.07	54.00	-8.93	H	AVG
5850.00	29.17	17.05	46.22	54.00	-7.78	V	AVG

Remark: 1. Result =Reading + Factor

Test Mode: IEEE 802.11ac(VHT20)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5460.00	43.69	16.37	60.06	74.00	-13.94	H	Peak
5460.00	44.96	16.37	61.33	74.00	-12.67	V	Peak
5470.00	50.93	16.70	67.63	68.20	-0.57	H	Peak
5470.00	49.04	16.70	65.74	68.20	-2.46	V	Peak
5460.00	27.88	16.37	44.25	54.00	-9.75	H	AVG
5460.00	28.42	16.37	44.79	54.00	-9.21	V	AVG
5470.00	29.82	16.70	46.52	54.00	-7.48	H	AVG
5470.00	30.54	16.70	47.24	54.00	-6.76	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5850.00	40.72	17.21	57.93	68.20	-10.27	H	Peak
5850.00	41.93	17.21	59.14	68.20	-9.06	V	Peak
5850.00	25.76	17.21	42.97	54.00	-11.03	H	AVG
5850.00	25.86	17.21	43.07	54.00	-10.93	V	AVG

Remark: 1. Result =Reading + Factor



Test Mode: IEEE 802.11ac(VHT40)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5460.00	44.37	16.37	60.74	74.00	-13.26	H	Peak
5460.00	46.92	16.37	63.29	74.00	-10.71	V	Peak
5470.00	46.55	16.70	63.25	68.20	-4.95	H	Peak
5470.00	48.83	16.70	65.53	68.20	-2.67	V	Peak
5460.00	27.19	16.37	43.56	54.00	-10.44	H	AVG
5460.00	27.34	16.37	43.71	54.00	-10.29	V	AVG
5470.00	28.37	16.70	45.07	54.00	-8.93	H	AVG
5470.00	28.66	16.70	45.36	54.00	-8.64	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5725.00	37.52	17.21	54.73	68.20	-13.47	H	Peak
5725.00	38.28	17.21	55.49	68.20	-12.71	V	Peak
5725.00	27.50	17.21	44.71	54.00	-9.29	H	AVG
5725.00	27.07	17.21	44.28	54.00	-9.72	V	AVG

Remark: 1. Result =Reading + Factor

Test Mode: IEEE 802.11ax(HEW20)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5460.00	43.69	16.37	60.06	74.00	-13.94	H	Peak
5460.00	44.96	16.37	61.33	74.00	-12.67	V	Peak
5470.00	50.93	16.70	67.63	68.20	-0.57	H	Peak
5470.00	49.04	16.70	65.74	68.20	-2.46	V	Peak
5460.00	27.88	16.37	44.25	54.00	-9.75	H	AVG
5460.00	28.42	16.37	44.79	54.00	-9.21	V	AVG
5470.00	29.82	16.70	46.52	54.00	-7.48	H	AVG
5470.00	30.54	16.70	47.24	54.00	-6.76	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5850.00	40.72	17.21	57.93	68.20	-10.27	H	Peak
5850.00	41.93	17.21	59.14	68.20	-9.06	V	Peak
5850.00	25.76	17.21	42.97	54.00	-11.03	H	AVG
5850.00	25.86	17.21	43.07	54.00	-10.93	V	AVG

Remark: 1. Result =Reading + Factor



Test Mode: IEEE 802.11ax(HEW40)							
Test channel: Lowest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5460.00	44.37	16.37	60.74	74.00	-13.26	H	Peak
5460.00	46.92	16.37	63.29	74.00	-10.71	V	Peak
5470.00	46.55	16.70	63.25	68.20	-4.95	H	Peak
5470.00	48.83	16.70	65.53	68.20	-2.67	V	Peak
5460.00	27.19	16.37	43.56	54.00	-10.44	H	AVG
5460.00	27.34	16.37	43.71	54.00	-10.29	V	AVG
5470.00	28.37	16.70	45.07	54.00	-8.93	H	AVG
5470.00	28.66	16.70	45.36	54.00	-8.64	V	AVG
Test channel: Highest							
Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Over limit (dB)	Antenna Pol.	Detector
5725.00	37.52	17.21	54.73	68.20	-13.47	H	Peak
5725.00	38.28	17.21	55.49	68.20	-12.71	V	Peak
5725.00	27.50	17.21	44.71	54.00	-9.29	H	AVG
5725.00	27.07	17.21	44.28	54.00	-9.72	V	AVG

Remark: 1. Result =Reading + Factor

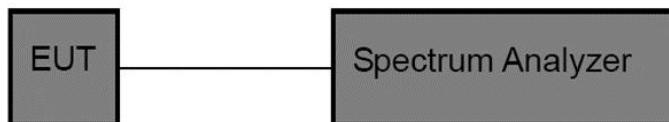


5. Maximum conducted output power Test

5.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.407(a)	
Test Limit	5.15 - 5.25GHz	1) Outdoor AP The maximum conducted output power (Pout) shall not exceed the lesser of 1W (30dBm). if $GT_x > 6dBi$, then $P_{out} = 30 - (GT_x - 6)$. e.i.r.p. at any elevation angle above 30 degrees $\leq 125mW$ (21dBm) 2) Indoor AP The maximum conducted output power (Pout) shall not exceed the lesser of 1W (30dBm). if $GT_x > 6dBi$, then $P_{out} = 30 - (GT_x - 6)$. 3) Point-to-point AP The maximum conducted output power (Pout) shall not exceed the lesser of 1W (30dBm). if $GT_x > 23dBi$, then $P_{out} = 30 - (GT_x - 23)$. 4) Client devices The maximum conducted output power (Pout) shall not exceed the lesser of 250W (23.98dBm). if $GT_x > 6dBi$, then $P_{out} = 24 - (GT_x - 6)$.
	5.25 - 5.35GHz	The maximum conducted output power (Pout) shall not exceed the lesser of 250mW (24dBm) or $11dBm + 10 \log B$, where B is the 26dB emission bandwidth in MHz. if $GT_x > 6dBi$, then $P_{out} = 24 - (GT_x - 6)$.
	5.47- 5.725GHz	The maximum conducted output power (Pout) shall not exceed the lesser of 250mW (23.98dBm) or $11dBm + 10 \log B$, where B is the 26dB emission bandwidth in MHz. if $GT_x > 6dBi$, then $P_{out} = 24 - (GT_x - 6)$.
	5.725 - 5.85GHz	1) Point-to-multipoint systems (P2M) The maximum conducted output power (Pout) shall not exceed the lesser of 1W (30dBm). if $GT_x > 6dBi$, then $P_{out} = 30 - (GT_x - 6)$. 2) Point-to-point systems (P2P) The maximum conducted output power (Pout) shall not exceed the lesser of 1W (30dBm).

5.2. Test Setup



5.3. Test Procedure

1. Measure the duty cycle D of the transmitter output signal.
2. Set span to encompass the entire 99% OBW of the signal.



3. Set RBW = 1 MHz.
4. Set VBW $\geq [3 \times \text{RBW}]$.
5. Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
6. Sweep time = auto.
7. Detector = RMS
8. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.
9. Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
10. Add $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power to compute the average power during the actual transmission times.

Note: The cable loss and attenuator loss were offset into measure device as amplitude offset.

5.4. Test Data

Pass

Please refer to Appendix B of the Appendix Test Data.

Additional test for duty cycle.

Please refer to Appendix H of the Appendix Test Data.

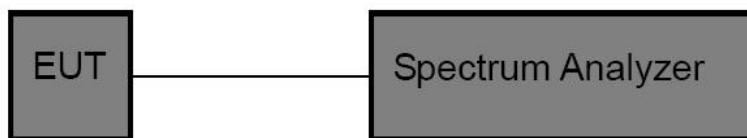


6. 26dB Bandwidth & 99% Occupied Bandwidth Test

6.1. Test Standard

Test Standard	FCC Part15 C Section 15.407(a) & 2.1049
Test Limit	N/A

6.2. Test Setup



6.3. Test Procedure

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as:
 - 26 dB &99%bandwidth**
 - RBW = approximately 1% of the emission bandwidth;
 - Set the VBW>RBW;
 - Detector= Peak
 - Trace mode= Max hold.
 - Sweep- auto couple.
4. Measure the maximum width of the emission that is 26dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer.
5. Repeat until all the rest channels are investigated.

6.4. Test Data

Pass

Please refer to Appendix A1&A2 of the Appendix Test Data.

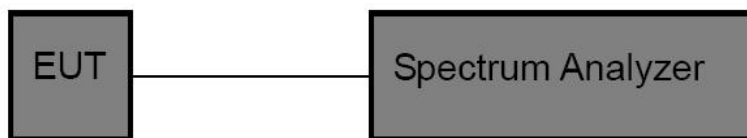


7. Minimum 6dB bandwidth Test

7.1. Test Standard

Test Standard	FCC Part15 C Section 15.407(e)
Test Limit	≥500 kHz

7.2. Test Setup



7.3. Test Procedure

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

4. Set the spectrum analyzer as:

6 dB bandwidth

RBW = approximately 1% of the emission bandwidth;

Set the VBW > RBW;

Detector= Peak

Trace mode= Max hold.

Sweep- auto couple.

4. Measure the maximum width of the emission that is 6dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer.
5. Repeat until all the rest channels are investigated.

7.4. Test Data

Pass

Please refer to Appendix A3 of the Appendix Test Data.

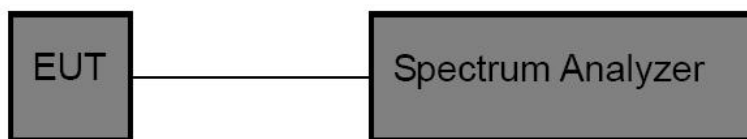


8. Power Spectral Density Test

8.1. Test Standard and Limit

Test Standard	FCC Part15 C Section 15.407(a)	
Test Limit	5.15 - 5.25GHz	1) Outdoor AP The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz. if $GT_x > 6\text{dBi}$, then $PSD = 17 - (GT_x - 6)$. 2) Indoor AP The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz. if $GT_x > 6\text{dBi}$, then $PSD = 17 - (GT_x - 6)$. 3) Point-to-point AP The peak power spectral density (PSD) shall not exceed the lesser of 17dBm/MHz. if $GT_x > 23\text{dBi}$, then $PSD = 17 - (GT_x - 23)$. 4) Client devices The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz. if $GT_x > 6\text{dBi}$, then $PSD = 11 - (GT_x - 6)$.
	5.25 - 5.35GHz	The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz. if $GT_x > 6\text{dBi}$, then $PSD = 11 - (GT_x - 6)$.
	5.47- 5.725GHz	The peak power spectral density (PSD) shall not exceed the lesser of 11dBm/MHz. if $GT_x > 6\text{dBi}$, then $PSD = 11 - (GT_x - 6)$.
	5.725 - 5.85GHz	1) Point-to-multipoint systems (P2M) The peak power spectral density (PSD) shall not exceed the lesser of 30dBm/500kHz. if $GT_x > 6\text{dBi}$, then $PSD = 30 - (GT_x - 6)$. 2) Point-to-point systems (P2P) The peak power spectral density (PSD) shall not exceed the lesser of 30dBm/500kHz.

8.2. Test Setup



8.3. Test Procedure

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz).

1. The EUT is directly connected to the spectrum analyzer;
2. Set RBW =1MHz;



3. Set VBW \geq 3 RBW=3MHz;
3. Set the span to encompass the entire emissions bandwidth (EBW) of the signal;
5. Detector=RMS;
6. Sweep time= auto couple;
7. Trace mode=max. hold;

8.4. Test Data

Pass

Please refer to Appendix C of the Appendix Test Data.

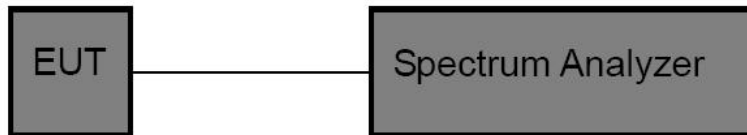


9. Frequency Stability

9.1. Test Standard and Limit

Test Standard	FCC Part15 Section 15.407(g)
Test Limit	The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of 0 degrees to 35 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

9.2. Test Setup



9.3. Test Procedure

The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage. b. Turn the EUT on and couple its output to a spectrum analyzer. c. Turn the EUT off and set the chamber to the highest temperature specified. d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

9.4. Test Data

Pass

Please to see the following pages.



Test Mode: 5.2G								
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit	Verdict	
802.11a	SISO	5180	20	102.00	5180.02	5172 to 5188	Pass	
				120.00	5180.09	5172 to 5188	Pass	
				138.00	5180.12	5172 to 5188	Pass	
			-30	120.00	5180.03	5172 to 5188	Pass	
				-20	120.00	5180.01	5150 to 5250	Pass
					-10	120.00	5180.10	5150 to 5250
			0	120.00	5180.07	5150 to 5250	Pass	
				10	120.00	5180.04	5150 to 5250	Pass
			30	120.00	5180.00	5150 to 5250	Pass	
			40	120.00	5180.13	5150 to 5250	Pass	
		50	120.00	5180.08	5172 to 5188	Pass		
		5200	20	102.00	5200.12	5192 to 5208	Pass	
				120.00	5200.08	5192 to 5208	Pass	
				138.00	5200.12	5192 to 5208	Pass	
			-30	120.00	5200.11	5192 to 5208	Pass	
				-20	120.00	5200.09	5150 to 5250	Pass
					-10	120.00	5200.09	5150 to 5250
			0	120.00	5200.06	5150 to 5250	Pass	
				10	120.00	5200.08	5150 to 5250	Pass
			30	120.00	5200.11	5150 to 5250	Pass	
			40	120.00	5200.11	5150 to 5250	Pass	
		50	120.00	5200.07	5192 to 5208	Pass		
		5240	20	102.00	5240.03	5232 to 5248	Pass	
				120.00	5240.06	5232 to 5248	Pass	
				138.00	5240.05	5232 to 5248	Pass	
			-30	120.00	5240.12	5232 to 5248	Pass	
				-20	120.00	5240.10	5150 to 5250	Pass
					-10	120.00	5240.10	5150 to 5250
			0	120.00	5240.07	5150 to 5250	Pass	
				10	120.00	5240.11	5150 to 5250	Pass
30	120.00		5240.06	5150 to 5250	Pass			
40	120.00		5240.07	5150 to 5250	Pass			
50	120.00	5240.11	5232 to 5248	Pass				
802.11n (HT20)	SISO	5180	20	102.00	5180.12	5172 to 5188	Pass	
				120.00	5180.02	5172 to 5188	Pass	
				138.00	5180.08	5172 to 5188	Pass	
			-30	120.00	5180.02	5172 to 5188	Pass	
				-20	120.00	5180.06	5150 to 5250	Pass
					-10	120.00	5180.06	5150 to 5250
			0	120.00	5180.06	5150 to 5250	Pass	
				10	120.00	5180.12	5150 to 5250	Pass



			30	120.00	5180.09	5150 to 5250	Pass		
			40	120.00	5180.12	5150 to 5250	Pass		
			50	120.00	5180.02	5172 to 5188	Pass		
		5200	20	102.00	5200.07	5192 to 5208	Pass		
				120.00	5200.12	5192 to 5208	Pass		
				138.00	5200.06	5192 to 5208	Pass		
			-30	120.00	5200.01	5192 to 5208	Pass		
			-20	120.00	5200.01	5150 to 5250	Pass		
			-10	120.00	5200.02	5150 to 5250	Pass		
			0	120.00	5200.04	5150 to 5250	Pass		
			10	120.00	5200.02	5150 to 5250	Pass		
			30	120.00	5200.02	5150 to 5250	Pass		
			40	120.00	5200.10	5150 to 5250	Pass		
			50	120.00	5200.02	5192 to 5208	Pass		
		5240	20	102.00	5240.06	5232 to 5248	Pass		
				120.00	5240.09	5232 to 5248	Pass		
				138.00	5240.08	5232 to 5248	Pass		
			-30	120.00	5240.10	5232 to 5248	Pass		
			-20	120.00	5240.03	5150 to 5250	Pass		
			-10	120.00	5240.10	5150 to 5250	Pass		
			0	120.00	5240.05	5150 to 5250	Pass		
			10	120.00	5240.03	5150 to 5250	Pass		
			30	120.00	5240.12	5150 to 5250	Pass		
			40	120.00	5240.07	5150 to 5250	Pass		
			50	120.00	5240.06	5232 to 5248	Pass		
		802.11n (HT40)	SISO	5190	20	102.00	5190.09	5174 to 5206	Pass
						120.00	5190.05	5174 to 5206	Pass
						138.00	5190.12	5174 to 5206	Pass
					-30	120.00	5190.10	5174 to 5206	Pass
					-20	120.00	5190.02	5150 to 5250	Pass
-10	120.00				5190.11	5150 to 5250	Pass		
0	120.00				5190.07	5150 to 5250	Pass		
10	120.00				5190.06	5150 to 5250	Pass		
30	120.00				5190.08	5150 to 5250	Pass		
40	120.00			5190.03	5150 to 5250	Pass			
50	120.00			5190.01	5174 to 5206	Pass			
5230	20			102.00	5230.12	5214 to 5246	Pass		
				120.00	5230.04	5214 to 5246	Pass		
				138.00	5230.11	5214 to 5246	Pass		
	-30			120.00	5230.05	5214 to 5246	Pass		
	-20	120.00	5230.01	5150 to 5250	Pass				
	-10	120.00	5230.04	5150 to 5250	Pass				
0	120.00	5230.01	5150 to 5250	Pass					
10	120.00	5230.03	5150 to 5250	Pass					



802.11ac (VHT20)	SISO	5180	30	120.00	5230.10	5150 to 5250	Pass
			40	120.00	5230.01	5150 to 5250	Pass
			50	120.00	5230.02	5214 to 5246	Pass
		20	102.00	5180.02	5172 to 5188	Pass	
			120.00	5180.06	5172 to 5188	Pass	
			138.00	5180.03	5172 to 5188	Pass	
		-30	120.00	5180.06	5172 to 5188	Pass	
		-20	120.00	5180.05	5150 to 5250	Pass	
		-10	120.00	5180.13	5150 to 5250	Pass	
		0	120.00	5180.13	5150 to 5250	Pass	
		10	120.00	5180.12	5150 to 5250	Pass	
		30	120.00	5180.06	5150 to 5250	Pass	
		40	120.00	5180.01	5150 to 5250	Pass	
		50	120.00	5180.12	5172 to 5188	Pass	
		5200	20	102.00	5200.10	5192 to 5208	Pass
				120.00	5200.07	5192 to 5208	Pass
				138.00	5200.12	5192 to 5208	Pass
			-30	120.00	5200.01	5192 to 5208	Pass
			-20	120.00	5200.02	5150 to 5250	Pass
			-10	120.00	5200.03	5150 to 5250	Pass
			0	120.00	5200.02	5150 to 5250	Pass
			10	120.00	5200.11	5150 to 5250	Pass
			30	120.00	5200.07	5150 to 5250	Pass
			40	120.00	5200.04	5150 to 5250	Pass
			50	120.00	5200.02	5192 to 5208	Pass
			5240	20	102.00	5240.11	5232 to 5248
		120.00			5240.11	5232 to 5248	Pass
		138.00			5240.06	5232 to 5248	Pass
		-30		120.00	5240.12	5232 to 5248	Pass
		-20		120.00	5240.07	5150 to 5250	Pass
-10	120.00	5240.05		5150 to 5250	Pass		
0	120.00	5240.03		5150 to 5250	Pass		
10	120.00	5240.01		5150 to 5250	Pass		
30	120.00	5240.11		5150 to 5250	Pass		
40	120.00	5240.05		5150 to 5250	Pass		
50	120.00	5240.01		5232 to 5248	Pass		
5190	20	102.00		5190.08	5174 to 5206	Pass	
		120.00	5190.11	5174 to 5206	Pass		
		138.00	5190.12	5174 to 5206	Pass		
	-30	120.00	5190.06	5174 to 5206	Pass		
	-20	120.00	5190.09	5150 to 5250	Pass		
	-10	120.00	5190.01	5150 to 5250	Pass		
	0	120.00	5190.04	5150 to 5250	Pass		
	10	120.00	5190.08	5150 to 5250	Pass		



802.11ax (HEW20)	SISO	5230	30	120.00	5190.05	5150 to 5250	Pass
			40	120.00	5190.10	5150 to 5250	Pass
			50	120.00	5190.07	5174 to 5206	Pass
		5230	20	102.00	5230.02	5214 to 5246	Pass
				120.00	5230.12	5214 to 5246	Pass
				138.00	5230.02	5214 to 5246	Pass
			-30	120.00	5230.04	5214 to 5246	Pass
			-20	120.00	5230.00	5150 to 5250	Pass
			-10	120.00	5230.04	5150 to 5250	Pass
			0	120.00	5230.10	5150 to 5250	Pass
			10	120.00	5230.03	5150 to 5250	Pass
			30	120.00	5230.12	5150 to 5250	Pass
			40	120.00	5230.01	5150 to 5250	Pass
		50	120.00	5230.12	5214 to 5246	Pass	
		5180	20	102.00	5180.10	5172 to 5188	Pass
				120.00	5180.09	5172 to 5188	Pass
				138.00	5180.09	5172 to 5188	Pass
			-30	120.00	5180.04	5172 to 5188	Pass
			-20	120.00	5180.04	5150 to 5250	Pass
			-10	120.00	5180.11	5150 to 5250	Pass
			0	120.00	5180.09	5150 to 5250	Pass
10	120.00		5180.07	5150 to 5250	Pass		
30	120.00		5180.03	5150 to 5250	Pass		
40	120.00		5180.03	5150 to 5250	Pass		
50	120.00	5180.03	5172 to 5188	Pass			
5200	20	102.00	5200.08	5192 to 5208	Pass		
		120.00	5200.06	5192 to 5208	Pass		
		138.00	5200.06	5192 to 5208	Pass		
	-30	120.00	5200.01	5192 to 5208	Pass		
	-20	120.00	5200.13	5150 to 5250	Pass		
	-10	120.00	5200.10	5150 to 5250	Pass		
	0	120.00	5200.04	5150 to 5250	Pass		
	10	120.00	5200.01	5150 to 5250	Pass		
	30	120.00	5200.07	5150 to 5250	Pass		
	40	120.00	5200.11	5150 to 5250	Pass		
50	120.00	5200.07	5192 to 5208	Pass			
5240	20	102.00	5240.00	5232 to 5248	Pass		
		120.00	5240.09	5232 to 5248	Pass		
		138.00	5240.10	5232 to 5248	Pass		
	-30	120.00	5240.01	5232 to 5248	Pass		
	-20	120.00	5240.10	5150 to 5250	Pass		
	-10	120.00	5240.05	5150 to 5250	Pass		
	0	120.00	5240.12	5150 to 5250	Pass		
10	120.00	5240.03	5150 to 5250	Pass			



802.11ax (HEW40)	SISO	5190	30	120.00	5240.13	5150 to 5250	Pass
			40	120.00	5240.01	5150 to 5250	Pass
			50	120.00	5240.03	5232 to 5248	Pass
		20	102.00	5190.07	5174 to 5206	Pass	
			120.00	5190.10	5174 to 5206	Pass	
			138.00	5190.11	5174 to 5206	Pass	
		-30	120.00	5190.10	5174 to 5206	Pass	
		-20	120.00	5190.00	5150 to 5250	Pass	
		-10	120.00	5190.02	5150 to 5250	Pass	
		0	120.00	5190.11	5150 to 5250	Pass	
		10	120.00	5190.00	5150 to 5250	Pass	
		30	120.00	5190.06	5150 to 5250	Pass	
		40	120.00	5190.04	5150 to 5250	Pass	
		50	120.00	5190.11	5174 to 5206	Pass	
		5230	20	102.00	5230.03	5214 to 5246	Pass
				120.00	5230.03	5214 to 5246	Pass
				138.00	5230.13	5214 to 5246	Pass
			-30	120.00	5230.06	5214 to 5246	Pass
			-20	120.00	5230.10	5150 to 5250	Pass
			-10	120.00	5230.03	5150 to 5250	Pass
			0	120.00	5230.01	5150 to 5250	Pass
			10	120.00	5230.10	5150 to 5250	Pass
			30	120.00	5230.12	5150 to 5250	Pass
			40	120.00	5230.03	5150 to 5250	Pass
50	120.00		5230.05	5214 to 5246	Pass		



Test Mode: 5.3G								
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit	Verdict	
802.11a	SISO	5260	20	102.00	5260.09	5252 to 5268	Pass	
				120.00	5260.02	5252 to 5268	Pass	
				138.00	5260.01	5252 to 5268	Pass	
			-30	102.00	5260.07	5252 to 5268	Pass	
				-20	120.00	5260.06	5250 to 5350	Pass
					120.00	5260.08	5250 to 5350	Pass
			0	120.00	5260.06	5250 to 5350	Pass	
				10	120.00	5260.11	5250 to 5350	Pass
			30	120.00	5260.02	5250 to 5350	Pass	
			40	120.00	5260.01	5250 to 5350	Pass	
		50	120.00	5260.00	5252 to 5268	Pass		
		5300	20	102.00	5300.10	5292 to 5308	Pass	
				120.00	5300.10	5292 to 5308	Pass	
				138.00	5300.08	5292 to 5308	Pass	
			-30	102.00	5300.12	5292 to 5308	Pass	
				-20	120.00	5300.08	5250 to 5350	Pass
					120.00	5300.08	5250 to 5350	Pass
			0	120.00	5300.03	5250 to 5350	Pass	
				10	120.00	5300.07	5250 to 5350	Pass
			30	120.00	5300.04	5250 to 5350	Pass	
			40	120.00	5300.03	5250 to 5350	Pass	
		50	120.00	5300.04	5292 to 5308	Pass		
		5320	20	102.00	5320.02	5312 to 5328	Pass	
				120.00	5320.06	5312 to 5328	Pass	
				138.00	5320.01	5312 to 5328	Pass	
			-30	102.00	5320.03	5312 to 5328	Pass	
				-20	120.00	5320.07	5250 to 5350	Pass
					120.00	5320.09	5250 to 5350	Pass
			0	120.00	5320.12	5250 to 5350	Pass	
				10	120.00	5320.10	5250 to 5350	Pass
30	120.00		5320.11	5250 to 5350	Pass			
40	120.00		5320.12	5250 to 5350	Pass			
50	120.00	5320.08	5312 to 5328	Pass				
802.11n (HT20)	SISO	5260	20	102.00	5260.05	5252 to 5268	Pass	
				120.00	5260.09	5252 to 5268	Pass	
				138.00	5260.10	5252 to 5268	Pass	
			-30	102.00	5260.03	5252 to 5268	Pass	
				-20	120.00	5260.01	5250 to 5350	Pass
					120.00	5260.11	5250 to 5350	Pass
			0	120.00	5260.07	5250 to 5350	Pass	
				10	120.00	5260.08	5250 to 5350	Pass



			30	120.00	5260.06	5250 to 5350	Pass			
			40	120.00	5260.01	5250 to 5350	Pass			
			50	120.00	5260.01	5252 to 5268	Pass			
			5300	20	102.00	5300.10	5292 to 5308	Pass		
					120.00	5300.06	5292 to 5308	Pass		
					138.00	5300.03	5292 to 5308	Pass		
				-30	102.00	5300.00	5292 to 5308	Pass		
				-20	120.00	5300.01	5250 to 5350	Pass		
				-10	120.00	5300.07	5250 to 5350	Pass		
				0	120.00	5300.05	5250 to 5350	Pass		
				10	120.00	5300.02	5250 to 5350	Pass		
				30	120.00	5300.01	5250 to 5350	Pass		
				40	120.00	5300.11	5250 to 5350	Pass		
				50	120.00	5300.11	5292 to 5308	Pass		
				5320	20	102.00	5320.05	5312 to 5328	Pass	
			120.00			5320.06	5312 to 5328	Pass		
			138.00			5320.13	5312 to 5328	Pass		
			-30		102.00	5320.01	5312 to 5328	Pass		
			-20		120.00	5320.01	5250 to 5350	Pass		
			-10		120.00	5320.11	5250 to 5350	Pass		
			0		120.00	5320.08	5250 to 5350	Pass		
			10		120.00	5320.12	5250 to 5350	Pass		
			30		120.00	5320.12	5250 to 5350	Pass		
			40		120.00	5320.02	5250 to 5350	Pass		
			50		120.00	5320.10	5312 to 5328	Pass		
			802.11n (HT40)		SISO	5270	20	102.00	5270.06	5254 to 5286
				120.00				5270.13	5254 to 5286	Pass
				138.00				5270.12	5254 to 5286	Pass
				-30			102.00	5270.11	5254 to 5286	Pass
				-20			120.00	5270.11	5250 to 5350	Pass
-10	120.00	5270.12		5250 to 5350			Pass			
0	120.00	5270.10		5250 to 5350			Pass			
10	120.00	5270.01		5250 to 5350			Pass			
30	120.00	5270.01		5250 to 5350			Pass			
40	120.00	5270.07		5250 to 5350		Pass				
50	120.00	5270.03		5254 to 5286		Pass				
5310	20	102.00		5310.02		5294 to 5326	Pass			
		120.00		5310.09		5294 to 5326	Pass			
		138.00		5310.00		5294 to 5326	Pass			
	-30	102.00		5310.02		5294 to 5326	Pass			
	-20	120.00		5310.09		5250 to 5350	Pass			
	-10	120.00		5310.06		5250 to 5350	Pass			
	0	120.00		5310.00		5250 to 5350	Pass			
	10	120.00	5310.09	5250 to 5350	Pass					



802.11ac (VHT20)	SISO	5260	30	120.00	5310.11	5250 to 5350	Pass
			40	120.00	5310.11	5250 to 5350	Pass
			50	120.00	5310.11	5294 to 5326	Pass
		20	102.00	5260.13	5252 to 5268	Pass	
			120.00	5260.01	5252 to 5268	Pass	
			138.00	5260.09	5252 to 5268	Pass	
		-30	102.00	5260.07	5252 to 5268	Pass	
		-20	120.00	5260.07	5250 to 5350	Pass	
		-10	120.00	5260.13	5250 to 5350	Pass	
		0	120.00	5260.08	5250 to 5350	Pass	
		10	120.00	5260.02	5250 to 5350	Pass	
		30	120.00	5260.07	5250 to 5350	Pass	
		40	120.00	5260.13	5250 to 5350	Pass	
		50	120.00	5260.11	5252 to 5268	Pass	
		20	102.00	5300.03	5292 to 5308	Pass	
			120.00	5300.02	5292 to 5308	Pass	
			138.00	5300.04	5292 to 5308	Pass	
		-30	102.00	5300.04	5292 to 5308	Pass	
		-20	120.00	5300.01	5250 to 5350	Pass	
		-10	120.00	5300.07	5250 to 5350	Pass	
		0	120.00	5300.09	5250 to 5350	Pass	
		10	120.00	5300.02	5250 to 5350	Pass	
		30	120.00	5300.09	5250 to 5350	Pass	
		40	120.00	5300.01	5250 to 5350	Pass	
		50	120.00	5300.08	5292 to 5308	Pass	
		20	102.00	5320.05	5312 to 5328	Pass	
			120.00	5320.06	5312 to 5328	Pass	
			138.00	5320.08	5312 to 5328	Pass	
		-30	102.00	5320.09	5312 to 5328	Pass	
		-20	120.00	5320.07	5250 to 5350	Pass	
-10	120.00	5320.09	5250 to 5350	Pass			
0	120.00	5320.07	5250 to 5350	Pass			
10	120.00	5320.11	5250 to 5350	Pass			
30	120.00	5320.08	5250 to 5350	Pass			
40	120.00	5320.12	5250 to 5350	Pass			
50	120.00	5320.01	5312 to 5328	Pass			
802.11ac (VHT40)	SISO	5270	20	102.00	5270.10	5254 to 5286	Pass
				120.00	5270.07	5254 to 5286	Pass
				138.00	5270.02	5254 to 5286	Pass
			-30	102.00	5270.13	5254 to 5286	Pass
			-20	120.00	5270.00	5250 to 5350	Pass
			-10	120.00	5270.08	5250 to 5350	Pass
			0	120.00	5270.03	5250 to 5350	Pass
10	120.00	5270.06	5250 to 5350	Pass			



802.11ax (HEW20)	SISO	5310	30	120.00	5270.12	5250 to 5350	Pass
			40	120.00	5270.07	5250 to 5350	Pass
			50	120.00	5270.06	5254 to 5286	Pass
			20	102.00	5310.03	5294 to 5326	Pass
				120.00	5310.05	5294 to 5326	Pass
				138.00	5310.09	5294 to 5326	Pass
			-30	102.00	5310.08	5294 to 5326	Pass
			-20	120.00	5310.03	5250 to 5350	Pass
			-10	120.00	5310.04	5250 to 5350	Pass
			0	120.00	5310.04	5250 to 5350	Pass
			10	120.00	5310.05	5250 to 5350	Pass
			30	120.00	5310.01	5250 to 5350	Pass
		40	120.00	5310.08	5250 to 5350	Pass	
		50	120.00	5310.10	5294 to 5326	Pass	
		5320	20	102.00	5260.11	5252 to 5268	Pass
				120.00	5260.09	5252 to 5268	Pass
				138.00	5260.08	5252 to 5268	Pass
			-30	102.00	5260.13	5252 to 5268	Pass
			-20	120.00	5260.07	5250 to 5350	Pass
			-10	120.00	5260.02	5250 to 5350	Pass
			0	120.00	5260.12	5250 to 5350	Pass
			10	120.00	5260.04	5250 to 5350	Pass
			30	120.00	5260.02	5250 to 5350	Pass
			40	120.00	5260.12	5250 to 5350	Pass
50	120.00		5260.07	5252 to 5268	Pass		
5300	20		102.00	5300.06	5292 to 5308	Pass	
		120.00	5300.03	5292 to 5308	Pass		
		138.00	5300.11	5292 to 5308	Pass		
	-30	102.00	5300.08	5292 to 5308	Pass		
	-20	120.00	5300.03	5250 to 5350	Pass		
	-10	120.00	5300.03	5250 to 5350	Pass		
	0	120.00	5300.04	5250 to 5350	Pass		
	10	120.00	5300.06	5250 to 5350	Pass		
	30	120.00	5300.03	5250 to 5350	Pass		
	40	120.00	5300.05	5250 to 5350	Pass		
	50	120.00	5300.05	5292 to 5308	Pass		
	5310	20	102.00	5320.02	5312 to 5328	Pass	
120.00			5320.09	5312 to 5328	Pass		
138.00			5320.12	5312 to 5328	Pass		
-30		102.00	5320.01	5312 to 5328	Pass		
-20		120.00	5320.05	5250 to 5350	Pass		
-10		120.00	5320.11	5250 to 5350	Pass		
0		120.00	5320.07	5250 to 5350	Pass		
10		120.00	5320.00	5250 to 5350	Pass		



802.11ax (HEW40)	SISO	5270	30	120.00	5320.13	5250 to 5350	Pass
			40	120.00	5320.01	5250 to 5350	Pass
			50	120.00	5320.10	5312 to 5328	Pass
		5270	20	102.00	5270.08	5254 to 5286	Pass
				120.00	5270.02	5254 to 5286	Pass
				138.00	5270.00	5254 to 5286	Pass
			-30	102.00	5270.06	5254 to 5286	Pass
			-20	120.00	5270.07	5250 to 5350	Pass
			-10	120.00	5270.01	5250 to 5350	Pass
			0	120.00	5270.05	5250 to 5350	Pass
			10	120.00	5270.03	5250 to 5350	Pass
			30	120.00	5270.05	5250 to 5350	Pass
			40	120.00	5270.02	5250 to 5350	Pass
			50	120.00	5270.04	5254 to 5286	Pass
		5310	20	102.00	5310.11	5294 to 5326	Pass
				120.00	5310.07	5294 to 5326	Pass
				138.00	5310.00	5294 to 5326	Pass
			-30	102.00	5310.05	5294 to 5326	Pass
			-20	120.00	5310.04	5250 to 5350	Pass
			-10	120.00	5310.05	5250 to 5350	Pass
			0	120.00	5310.12	5250 to 5350	Pass
			10	120.00	5310.05	5250 to 5350	Pass
			30	120.00	5310.09	5250 to 5350	Pass
			40	120.00	5310.06	5250 to 5350	Pass
50	120.00		5310.05	5294 to 5326	Pass		



Test Mode: 5.6G								
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit	Verdict	
802.11a	SISO	5500	20	102.00	5500.04	5492 to 5508	Pass	
				120.00	5500.07	5492 to 5508	Pass	
				138.00	5500.07	5492 to 5508	Pass	
			-30	102.00	5500.09	5492 to 5508	Pass	
				-20	120.00	5500.11	5470 to 5725	Pass
					-10	120.00	5500.02	5470 to 5725
			0	120.00	5500.00	5470 to 5725	Pass	
				10	120.00	5500.08	5470 to 5725	Pass
			30	120.00	5500.03	5470 to 5725	Pass	
			40	120.00	5500.02	5470 to 5725	Pass	
		50	120.00	5500.09	5492 to 5508	Pass		
		5580	20	102.00	5580.09	5572 to 5588	Pass	
				120.00	5580.05	5572 to 5588	Pass	
				138.00	5580.12	5572 to 5588	Pass	
			-30	102.00	5580.02	5572 to 5588	Pass	
				-20	120.00	5580.10	5470 to 5725	Pass
					-10	120.00	5580.08	5470 to 5725
			0	120.00	5580.05	5470 to 5725	Pass	
				10	120.00	5580.06	5470 to 5725	Pass
			30	120.00	5580.05	5470 to 5725	Pass	
			40	120.00	5580.03	5470 to 5725	Pass	
		50	120.00	5580.10	5572 to 5588	Pass		
		5700	20	102.00	5700.11	5692 to 5708	Pass	
				120.00	5700.12	5692 to 5708	Pass	
				138.00	5700.08	5692 to 5708	Pass	
			-30	102.00	5700.05	5692 to 5708	Pass	
				-20	120.00	5700.12	5470 to 5725	Pass
					-10	120.00	5700.04	5470 to 5725
			0	120.00	5700.06	5470 to 5725	Pass	
				10	120.00	5700.12	5470 to 5725	Pass
30	120.00		5700.01	5470 to 5725	Pass			
40	120.00		5700.08	5470 to 5725	Pass			
50	120.00	5700.08	5692 to 5708	Pass				
802.11n (HT20)	SISO	5500	20	102.00	5500.00	5492 to 5508	Pass	
				120.00	5500.00	5492 to 5508	Pass	
				138.00	5500.04	5492 to 5508	Pass	
			-30	102.00	5500.08	5492 to 5508	Pass	
				-20	120.00	5500.10	5470 to 5725	Pass
					-10	120.00	5500.10	5470 to 5725
0	120.00	5500.05	5470 to 5725	Pass				



			10	120.00	5500.09	5470 to 5725	Pass		
			30	120.00	5500.13	5470 to 5725	Pass		
			40	120.00	5500.06	5470 to 5725	Pass		
			50	120.00	5500.03	5492 to 5508	Pass		
		5580	20	102.00	5580.10	5572 to 5588	Pass		
				120.00	5580.05	5572 to 5588	Pass		
				138.00	5580.11	5572 to 5588	Pass		
			-30	102.00	5580.01	5572 to 5588	Pass		
			-20	120.00	5580.07	5470 to 5725	Pass		
			-10	120.00	5580.11	5470 to 5725	Pass		
			0	120.00	5580.09	5470 to 5725	Pass		
			10	120.00	5580.08	5470 to 5725	Pass		
			30	120.00	5580.09	5470 to 5725	Pass		
			40	120.00	5580.07	5470 to 5725	Pass		
			50	120.00	5580.03	5572 to 5588	Pass		
			5700	20	102.00	5700.07	5692 to 5708	Pass	
		120.00			5700.01	5692 to 5708	Pass		
		138.00			5700.07	5692 to 5708	Pass		
		-30		102.00	5700.06	5692 to 5708	Pass		
		-20		120.00	5700.00	5470 to 5725	Pass		
		-10		120.00	5700.04	5470 to 5725	Pass		
		0		120.00	5700.01	5470 to 5725	Pass		
		10		120.00	5700.12	5470 to 5725	Pass		
		30		120.00	5700.10	5470 to 5725	Pass		
		40		120.00	5700.08	5470 to 5725	Pass		
		50		120.00	5700.06	5692 to 5708	Pass		
		802.11n (HT40)		SISO	5510	20	102.00	5510.04	5494 to 5526
			120.00				5510.01	5494 to 5526	Pass
138.00	5510.07		5494 to 5526				Pass		
-30	102.00		5510.01			5494 to 5526	Pass		
-20	120.00		5510.05			5470 to 5725	Pass		
-10	120.00		5510.04			5470 to 5725	Pass		
0	120.00		5510.11		5470 to 5725	Pass			
10	120.00		5510.02		5470 to 5725	Pass			
30	120.00		5510.12		5470 to 5725	Pass			
40	120.00		5510.00		5470 to 5725	Pass			
50	120.00		5510.06		5494 to 5526	Pass			
5550	20		102.00		5550.11	5534 to 5566	Pass		
			120.00		5550.02	5534 to 5566	Pass		
			138.00		5550.12	5534 to 5566	Pass		
	-30		102.00		5550.08	5534 to 5566	Pass		
	-20		120.00		5550.08	5470 to 5725	Pass		
	-10		120.00		5550.01	5470 to 5725	Pass		



			0	120.00	5550.02	5470 to 5725	Pass	
			10	120.00	5550.09	5470 to 5725	Pass	
			30	120.00	5550.13	5470 to 5725	Pass	
			40	120.00	5550.03	5470 to 5725	Pass	
			50	120.00	5550.09	5534 to 5566	Pass	
		5670	20	102.00	5670.10	5654 to 5686	Pass	
				120.00	5670.05	5654 to 5686	Pass	
				138.00	5670.06	5654 to 5686	Pass	
			-30	102.00	5670.03	5654 to 5686	Pass	
			-20	120.00	5670.07	5470 to 5725	Pass	
			-10	120.00	5670.02	5470 to 5725	Pass	
			0	120.00	5670.03	5470 to 5725	Pass	
			10	120.00	5670.04	5470 to 5725	Pass	
			30	120.00	5670.05	5470 to 5725	Pass	
			40	120.00	5670.08	5470 to 5725	Pass	
			50	120.00	5670.07	5654 to 5686	Pass	
			5500	20	102.00	5500.09	5492 to 5508	Pass
					120.00	5500.00	5492 to 5508	Pass
					138.00	5500.06	5492 to 5508	Pass
				-30	102.00	5500.05	5492 to 5508	Pass
-20	120.00	5500.03		5470 to 5725	Pass			
-10	120.00	5500.10		5470 to 5725	Pass			
0	120.00	5500.04		5470 to 5725	Pass			
10	120.00	5500.10		5470 to 5725	Pass			
30	120.00	5500.08		5470 to 5725	Pass			
40	120.00	5500.05		5470 to 5725	Pass			
50	120.00	5500.12	5492 to 5508	Pass				
5580	20	102.00	5580.05	5572 to 5588	Pass			
		120.00	5580.10	5572 to 5588	Pass			
		138.00	5580.03	5572 to 5588	Pass			
	-30	102.00	5580.01	5572 to 5588	Pass			
	-20	120.00	5580.09	5470 to 5725	Pass			
	-10	120.00	5580.07	5470 to 5725	Pass			
	0	120.00	5580.03	5470 to 5725	Pass			
	10	120.00	5580.10	5470 to 5725	Pass			
	30	120.00	5580.04	5470 to 5725	Pass			
	40	120.00	5580.02	5470 to 5725	Pass			
50	120.00	5580.07	5572 to 5588	Pass				
5700	20	102.00	5700.09	5692 to 5708	Pass			
		120.00	5700.09	5692 to 5708	Pass			
		138.00	5700.09	5692 to 5708	Pass			
	-30	102.00	5700.03	5692 to 5708	Pass			
	-20	120.00	5700.10	5470 to 5725	Pass			

802.11ac
(VHT20)

SISO



			-10	120.00	5700.08	5470 to 5725	Pass			
			0	120.00	5700.08	5470 to 5725	Pass			
			10	120.00	5700.10	5470 to 5725	Pass			
			30	120.00	5700.09	5470 to 5725	Pass			
			40	120.00	5700.06	5470 to 5725	Pass			
			50	120.00	5700.07	5692 to 5708	Pass			
			802.11ac (VHT40)	SISO	5510	20	102.00	5510.01	5494 to 5526	Pass
							120.00	5510.13	5494 to 5526	Pass
							138.00	5510.03	5494 to 5526	Pass
						-30	102.00	5510.03	5494 to 5526	Pass
						-20	120.00	5510.13	5470 to 5725	Pass
						-10	120.00	5510.12	5470 to 5725	Pass
5550	5550	5550			20	0	120.00	5510.07	5470 to 5725	Pass
						10	120.00	5510.01	5470 to 5725	Pass
						30	120.00	5510.01	5470 to 5725	Pass
						40	120.00	5510.08	5470 to 5725	Pass
						50	120.00	5510.12	5494 to 5526	Pass
						102.00	5550.02	5534 to 5566	Pass	
5670	5670	5670	20	120.00	5550.06	5534 to 5566	Pass			
				138.00	5550.09	5534 to 5566	Pass			
				102.00	5550.01	5534 to 5566	Pass			
			-30	102.00	5550.01	5470 to 5725	Pass			
			-20	120.00	5550.08	5470 to 5725	Pass			
			-10	120.00	5550.01	5470 to 5725	Pass			
5500	5500	5500	20	0	120.00	5550.09	5470 to 5725	Pass		
				10	120.00	5550.05	5470 to 5725	Pass		
				30	120.00	5550.09	5470 to 5725	Pass		
				40	120.00	5550.01	5470 to 5725	Pass		
				50	120.00	5550.04	5534 to 5566	Pass		
				102.00	5670.01	5654 to 5686	Pass			
802.11ax (HEW20)	SISO	5500	20	120.00	5670.06	5654 to 5686	Pass			
				138.00	5670.05	5654 to 5686	Pass			
				102.00	5670.05	5654 to 5686	Pass			
			-30	102.00	5670.05	5654 to 5686	Pass			
			-20	120.00	5670.07	5470 to 5725	Pass			
			-10	120.00	5670.07	5470 to 5725	Pass			
5500	5500	5500	20	0	120.00	5670.04	5470 to 5725	Pass		
				10	120.00	5670.02	5470 to 5725	Pass		
				30	120.00	5670.01	5470 to 5725	Pass		
				40	120.00	5670.07	5470 to 5725	Pass		
5500	5500	5500	20	50	120.00	5670.12	5654 to 5686	Pass		
				102.00	5500.09	5492 to 5508	Pass			
				120.00	5500.06	5492 to 5508	Pass			
				138.00	5500.06	5492 to 5508	Pass			
			-30	102.00	5500.10	5492 to 5508	Pass			



			-20	120.00	5500.12	5470 to 5725	Pass	
			-10	120.00	5500.10	5470 to 5725	Pass	
			0	120.00	5500.02	5470 to 5725	Pass	
			10	120.00	5500.06	5470 to 5725	Pass	
			30	120.00	5500.11	5470 to 5725	Pass	
			40	120.00	5500.04	5470 to 5725	Pass	
			50	120.00	5500.12	5492 to 5508	Pass	
		5580	20	102.00	5580.03	5572 to 5588	Pass	
				120.00	5580.06	5572 to 5588	Pass	
				138.00	5580.07	5572 to 5588	Pass	
			-30	102.00	5580.06	5572 to 5588	Pass	
			-20	120.00	5580.04	5470 to 5725	Pass	
			-10	120.00	5580.00	5470 to 5725	Pass	
			0	120.00	5580.10	5470 to 5725	Pass	
			10	120.00	5580.00	5470 to 5725	Pass	
			30	120.00	5580.09	5470 to 5725	Pass	
			40	120.00	5580.07	5470 to 5725	Pass	
			50	120.00	5580.03	5572 to 5588	Pass	
			5700	20	102.00	5700.07	5692 to 5708	Pass
					120.00	5700.08	5692 to 5708	Pass
					138.00	5700.07	5692 to 5708	Pass
-30	102.00	5700.05		5692 to 5708	Pass			
-20	120.00	5700.01		5470 to 5725	Pass			
-10	120.00	5700.13		5470 to 5725	Pass			
0	120.00	5700.02		5470 to 5725	Pass			
10	120.00	5700.03		5470 to 5725	Pass			
30	120.00	5700.05		5470 to 5725	Pass			
40	120.00	5700.07		5470 to 5725	Pass			
50	120.00	5700.02	5692 to 5708	Pass				
802.11ax (HEW40)	SISO	5510	20	102.00	5510.04	5494 to 5526	Pass	
				120.00	5510.04	5494 to 5526	Pass	
				138.00	5510.12	5494 to 5526	Pass	
			-30	102.00	5510.02	5494 to 5526	Pass	
			-20	120.00	5510.04	5470 to 5725	Pass	
			-10	120.00	5510.08	5470 to 5725	Pass	
			0	120.00	5510.00	5470 to 5725	Pass	
		10	120.00	5510.02	5470 to 5725	Pass		
		30	120.00	5510.11	5470 to 5725	Pass		
		40	120.00	5510.10	5470 to 5725	Pass		
		50	120.00	5510.08	5494 to 5526	Pass		
		5550	20	102.00	5550.07	5534 to 5566	Pass	
				120.00	5550.05	5534 to 5566	Pass	
				138.00	5550.03	5534 to 5566	Pass	



		-30	102.00	5550.11	5534 to 5566	Pass	
		-20	120.00	5550.13	5470 to 5725	Pass	
		-10	120.00	5550.03	5470 to 5725	Pass	
		0	120.00	5550.07	5470 to 5725	Pass	
		10	120.00	5550.12	5470 to 5725	Pass	
		30	120.00	5550.03	5470 to 5725	Pass	
		40	120.00	5550.13	5470 to 5725	Pass	
		50	120.00	5550.08	5534 to 5566	Pass	
	5670	20		102.00	5670.04	5654 to 5686	Pass
				120.00	5670.05	5654 to 5686	Pass
				138.00	5670.10	5654 to 5686	Pass
		-30	102.00	5670.06	5654 to 5686	Pass	
		-20	120.00	5670.05	5470 to 5725	Pass	
		-10	120.00	5670.12	5470 to 5725	Pass	
0		120.00	5670.05	5470 to 5725	Pass		
10		120.00	5670.08	5470 to 5725	Pass		
		30	120.00	5670.01	5470 to 5725	Pass	
		40	120.00	5670.02	5470 to 5725	Pass	
		50	120.00	5670.00	5654 to 5686	Pass	



Test Mode: 5.8G								
Mode	TX Type	Frequency (MHz)	Temperature (°C)	Voltage (VAC)	Measured Frequency (MHz)	Limit	Verdict	
802.11a	SISO	5745	20	102.00	5745.10	5737 to 5753	Pass	
				120.00	5745.10	5737 to 5753	Pass	
				138.00	5745.06	5737 to 5753	Pass	
			-30	102.00	5745.06	5737 to 5753	Pass	
				-20	120.00	5745.13	5725 to 5850	Pass
					120.00	5745.04	5725 to 5850	Pass
				0	120.00	5745.06	5725 to 5850	Pass
					120.00	5745.01	5725 to 5850	Pass
				30	120.00	5745.13	5725 to 5850	Pass
				40	120.00	5745.10	5725 to 5850	Pass
		50	120.00	5745.00	5737 to 5753	Pass		
		5785	20	102.00	5785.12	5777 to 5793	Pass	
				120.00	5785.09	5777 to 5793	Pass	
				138.00	5785.09	5777 to 5793	Pass	
			-30	102.00	5785.05	5777 to 5793	Pass	
				120.00	5785.09	5725 to 5850	Pass	
			-10	120.00	5785.04	5725 to 5850	Pass	
				120.00	5785.09	5725 to 5850	Pass	
			0	120.00	5785.09	5725 to 5850	Pass	
			10	120.00	5785.04	5725 to 5850	Pass	
			30	120.00	5785.05	5725 to 5850	Pass	
		40	120.00	5785.09	5725 to 5850	Pass		
		50	120.00	5785.05	5777 to 5793	Pass		
		5825	20	102.00	5825.03	5817 to 5833	Pass	
				120.00	5825.10	5817 to 5833	Pass	
				138.00	5825.03	5817 to 5833	Pass	
			-30	102.00	5825.06	5817 to 5833	Pass	
				120.00	5825.13	5725 to 5850	Pass	
			-10	120.00	5825.04	5725 to 5850	Pass	
				120.00	5825.02	5725 to 5850	Pass	
0	120.00		5825.07	5725 to 5850	Pass			
30	120.00		5825.02	5725 to 5850	Pass			
40	120.00		5825.04	5725 to 5850	Pass			
50	120.00	5825.07	5817 to 5833	Pass				
802.11n (HT20)	SISO	5745	20	102.00	5745.07	5737 to 5753	Pass	
				120.00	5745.08	5737 to 5753	Pass	
				138.00	5745.04	5737 to 5753	Pass	
			-30	102.00	5745.12	5737 to 5753	Pass	
				120.00	5745.05	5725 to 5850	Pass	
			-10	120.00	5745.09	5725 to 5850	Pass	
				120.00	5745.08	5725 to 5850	Pass	
			0	120.00	5745.08	5725 to 5850	Pass	
			10	120.00	5745.06	5725 to 5850	Pass	



802.11n (HT40)	SISO	5785	30	120.00	5745.02	5725 to 5850	Pass
			40	120.00	5745.01	5725 to 5850	Pass
			50	120.00	5745.04	5737 to 5753	Pass
		5785	20	102.00	5785.03	5777 to 5793	Pass
				120.00	5785.10	5777 to 5793	Pass
				138.00	5785.02	5777 to 5793	Pass
			-30	102.00	5785.03	5777 to 5793	Pass
			-20	120.00	5785.01	5725 to 5850	Pass
			-10	120.00	5785.10	5725 to 5850	Pass
			0	120.00	5785.03	5725 to 5850	Pass
			10	120.00	5785.05	5725 to 5850	Pass
			30	120.00	5785.10	5725 to 5850	Pass
			40	120.00	5785.04	5725 to 5850	Pass
			50	120.00	5785.07	5777 to 5793	Pass
		5825	20	102.00	5825.08	5817 to 5833	Pass
				120.00	5825.04	5817 to 5833	Pass
				138.00	5825.05	5817 to 5833	Pass
			-30	102.00	5825.10	5817 to 5833	Pass
			-20	120.00	5825.06	5725 to 5850	Pass
			-10	120.00	5825.09	5725 to 5850	Pass
			0	120.00	5825.12	5725 to 5850	Pass
			10	120.00	5825.00	5725 to 5850	Pass
			30	120.00	5825.06	5725 to 5850	Pass
			40	120.00	5825.05	5725 to 5850	Pass
			50	120.00	5825.04	5817 to 5833	Pass
		5755	20	102.00	5755.06	5739 to 5771	Pass
				120.00	5755.12	5739 to 5771	Pass
				138.00	5755.01	5739 to 5771	Pass
-30	102.00		5755.13	5739 to 5771	Pass		
-20	120.00		5755.03	5725 to 5850	Pass		
-10	120.00		5755.01	5725 to 5850	Pass		
0	120.00		5755.02	5725 to 5850	Pass		
10	120.00		5755.01	5725 to 5850	Pass		
30	120.00		5755.12	5725 to 5850	Pass		
40	120.00		5755.12	5725 to 5850	Pass		
50	120.00		5755.10	5739 to 5771	Pass		
5795	20	102.00	5795.03	5779 to 5811	Pass		
		120.00	5795.12	5779 to 5811	Pass		
		138.00	5795.09	5779 to 5811	Pass		
	-30	102.00	5795.05	5779 to 5811	Pass		
	-20	120.00	5795.11	5725 to 5850	Pass		
	-10	120.00	5795.04	5725 to 5850	Pass		
	0	120.00	5795.13	5725 to 5850	Pass		
	10	120.00	5795.05	5725 to 5850	Pass		



802.11ac (VHT20)	SISO	5745	30	120.00	5795.07	5725 to 5850	Pass
			40	120.00	5795.10	5725 to 5850	Pass
			50	120.00	5795.09	5779 to 5811	Pass
		5745	20	102.00	5745.02	5737 to 5753	Pass
				120.00	5745.04	5737 to 5753	Pass
				138.00	5745.12	5737 to 5753	Pass
			-30	102.00	5745.07	5737 to 5753	Pass
			-20	120.00	5745.07	5725 to 5850	Pass
			-10	120.00	5745.05	5725 to 5850	Pass
			0	120.00	5745.08	5725 to 5850	Pass
			10	120.00	5745.06	5725 to 5850	Pass
			30	120.00	5745.09	5725 to 5850	Pass
			40	120.00	5745.03	5725 to 5850	Pass
			50	120.00	5745.04	5737 to 5753	Pass
			5785	20	102.00	5785.06	5777 to 5793
		120.00			5785.09	5777 to 5793	Pass
		138.00			5785.02	5777 to 5793	Pass
		-30		102.00	5785.07	5777 to 5793	Pass
		-20		120.00	5785.10	5725 to 5850	Pass
		-10		120.00	5785.03	5725 to 5850	Pass
		0		120.00	5785.13	5725 to 5850	Pass
		10		120.00	5785.09	5725 to 5850	Pass
		30		120.00	5785.05	5725 to 5850	Pass
		40		120.00	5785.01	5725 to 5850	Pass
		50		120.00	5785.10	5777 to 5793	Pass
		5825		20	102.00	5825.06	5817 to 5833
			120.00		5825.02	5817 to 5833	Pass
			138.00		5825.10	5817 to 5833	Pass
			-30	102.00	5825.03	5817 to 5833	Pass
			-20	120.00	5825.02	5725 to 5850	Pass
-10	120.00		5825.01	5725 to 5850	Pass		
0	120.00		5825.11	5725 to 5850	Pass		
10	120.00		5825.03	5725 to 5850	Pass		
30	120.00		5825.06	5725 to 5850	Pass		
40	120.00		5825.05	5725 to 5850	Pass		
50	120.00		5825.00	5817 to 5833	Pass		
802.11ac (VHT40)	SISO		5755	20	102.00	5755.04	5739 to 5771
		120.00			5755.01	5739 to 5771	Pass
		138.00			5755.11	5739 to 5771	Pass
		-30		102.00	5755.03	5739 to 5771	Pass
		-20		120.00	5755.02	5725 to 5850	Pass
		-10		120.00	5755.08	5725 to 5850	Pass
		0		120.00	5755.08	5725 to 5850	Pass
		10		120.00	5755.07	5725 to 5850	Pass



		5795	30	120.00	5755.02	5725 to 5850	Pass	
			40	120.00	5755.09	5725 to 5850	Pass	
			50	120.00	5755.02	5739 to 5771	Pass	
			20	102.00	5795.07	5779 to 5811	Pass	
				120.00	5795.03	5779 to 5811	Pass	
				138.00	5795.04	5779 to 5811	Pass	
			-30	102.00	5795.04	5779 to 5811	Pass	
			-20	120.00	5795.02	5725 to 5850	Pass	
			-10	120.00	5795.11	5725 to 5850	Pass	
			0	120.00	5795.11	5725 to 5850	Pass	
			10	120.00	5795.01	5725 to 5850	Pass	
			30	120.00	5795.05	5725 to 5850	Pass	
			40	120.00	5795.08	5725 to 5850	Pass	
			50	120.00	5795.04	5779 to 5811	Pass	
			5745	20	102.00	5745.05	5737 to 5753	Pass
					120.00	5745.03	5737 to 5753	Pass
					138.00	5745.02	5737 to 5753	Pass
				-30	102.00	5745.03	5737 to 5753	Pass
				-20	120.00	5745.12	5725 to 5850	Pass
				-10	120.00	5745.02	5725 to 5850	Pass
0	120.00	5745.07		5725 to 5850	Pass			
10	120.00	5745.00		5725 to 5850	Pass			
30	120.00	5745.05		5725 to 5850	Pass			
40	120.00	5745.03		5725 to 5850	Pass			
50	120.00	5745.04		5737 to 5753	Pass			
5785	20	102.00		5785.12	5777 to 5793	Pass		
		120.00		5785.13	5777 to 5793	Pass		
		138.00	5785.09	5777 to 5793	Pass			
	-30	102.00	5785.08	5777 to 5793	Pass			
	-20	120.00	5785.00	5725 to 5850	Pass			
	-10	120.00	5785.01	5725 to 5850	Pass			
	0	120.00	5785.07	5725 to 5850	Pass			
	10	120.00	5785.06	5725 to 5850	Pass			
	30	120.00	5785.03	5725 to 5850	Pass			
5825	20	102.00	5825.01	5817 to 5833	Pass			
		120.00	5825.09	5817 to 5833	Pass			
		138.00	5825.12	5817 to 5833	Pass			
	-30	102.00	5825.02	5817 to 5833	Pass			
	-20	120.00	5825.03	5725 to 5850	Pass			
	-10	120.00	5825.08	5725 to 5850	Pass			
	0	120.00	5825.00	5725 to 5850	Pass			
10	120.00	5825.12	5725 to 5850	Pass				



802.11ax (HEW40)	SISO	5755	30	120.00	5825.13	5725 to 5850	Pass
			40	120.00	5825.11	5725 to 5850	Pass
			50	120.00	5825.09	5817 to 5833	Pass
			20	102.00	5755.06	5739 to 5771	Pass
				120.00	5755.01	5739 to 5771	Pass
				138.00	5755.05	5739 to 5771	Pass
	-30	102.00	5755.03	5739 to 5771	Pass		
	-20	120.00	5755.05	5725 to 5850	Pass		
	-10	120.00	5755.13	5725 to 5850	Pass		
	0	120.00	5755.07	5725 to 5850	Pass		
	10	120.00	5755.08	5725 to 5850	Pass		
	30	120.00	5755.11	5725 to 5850	Pass		
	40	120.00	5755.11	5725 to 5850	Pass		
	50	120.00	5755.03	5739 to 5771	Pass		
	SISO	5795	20	102.00	5795.08	5779 to 5811	Pass
				120.00	5795.05	5779 to 5811	Pass
				138.00	5795.12	5779 to 5811	Pass
			-30	102.00	5795.08	5779 to 5811	Pass
			-20	120.00	5795.13	5725 to 5850	Pass
			-10	120.00	5795.04	5725 to 5850	Pass
			0	120.00	5795.02	5725 to 5850	Pass
			10	120.00	5795.01	5725 to 5850	Pass
			30	120.00	5795.03	5725 to 5850	Pass
			40	120.00	5795.03	5725 to 5850	Pass
50			120.00	5795.12	5779 to 5811	Pass	



10. Antenna Requirement

10.1. Test Standard and Requirement

Test Standard	FCC Part15 Section 15.203 /15.407
Requirement	<p>1) 15.203 requirement: 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p> <p>2) 15.407 requirement: if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.</p>

10.2. Antenna Connected Construction

The antenna is a Rod Antenna, and the best case gain of the Wi-Fi 5.2G: 5.06dBi, Wi-Fi 5.3G: 5.17dBi, Wi-Fi 5.6G: 5.21dBi, Wi-Fi 5.8G: 5.28dBi. It complies with the standard requirement.



APPENDIX I -- TEST SETUP PHOTOGRAPH

Please refer to separated files Appendix I -- Test Setup Photograph

APPENDIX II -- EXTERNAL PHOTOGRAPH

Please refer to separated files Appendix II -- External Photograph

APPENDIX III -- INTERNAL PHOTOGRAPH

Please refer to separated files Appendix III -- Internal Photograph

----- End of Report -----

