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FCC UNII REPORT

Certification

Applicant Name:
SAMSUNG Electronics Co., Ltd.

Address:
129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

Date of Issue:
May 30, 2023

Test Site/Location:
74, Seoicheon-ro 578 beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383 KOREA

Report No.: HCT-RF-2305-FC064-R1

FCC ID:	**A3LSMF946B**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**
Model:	SM-F946B/DS
Additional Model:	SM-F946B
EUT Type:	Mobile Phone
Modulation type	OFDM
FCC Classification:	Unlicensed National Information Infrastructure(NII)
FCC Rule Part(s):	Part 15.407

Engineering Statement:

The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance.

REVIEWED BY

Report prepared by : Chang Hee Hwang
Engineer of Telecommunication Testing Center

Report approved by : Kwon Jeong
Manager of Telecommunication Testing Center

This test results were applied only to the test methods required by the standard.

This laboratory is not accredited for the test results marked *.
The above Test Report is the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA. (HCT Accreditation No.: KT197)

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2305-FC064	May 19, 2023	- First Approval Report
HCT-RF-2305-FC064-R1	May 30, 2023	- Revised The Typo on page 8. - Added the note #5 on page 30.

Table of Contents

1. GENERAL INFORMATION

EUT DESCRIPTION

Model	SM-F946B/DS	
Additional Model	SM-F946B	
EUT Type	Mobile Phone	
Power Supply	DC 3.88 V	
Modulation Type	OFDM : 802.11a, 802.11n, 802.11ac	
Frequency Range (MHz)	U-NII-1	20 MHz BW : 5180 - 5240 40 MHz BW : 5190 - 5230 80 MHz BW : 5210 160 MHz BW : 5250
	U-NII-2A	20 MHz BW : 5260 - 5320 40 MHz BW : 5270 - 5310 80 MHz BW : 5290 160 MHz BW : 5250
	U-NII-2C	20 MHz BW : 5500 - 5720 40 MHz BW : 5510 - 5710 80 MHz BW : 5530 – 5690 160 MHz BW : 5570
	U-NII-3	20 MHz BW : 5745 - 5825 40 MHz BW : 5755 - 5795 80 MHz BW : 5775 160 MHz BW : 5815
	U-NII-4	20 MHz BW : 5845 - 5885 40 MHz BW : 5835 - 5875 80 MHz BW : 5855 160 MHz BW : 5815
Straddle channel	Supported	
TDWR Band	Supported	
Dynamic Frequency Selection	Slave without radar detection	
Date(s) of Tests	March 24 2023 ~ May 19, 2023	
Serial number	Radiated: 723cb8b9934d7ece Conducted : 723cb64c654d7ece	

ANTENNA CONFIGURATIONS

1. Antenna configuration

Configurations	SISO		MIMO	
	Ant.1	Ant.2	CDD	SDM
802.11a	X	X	O	X
802.11n	X	X	O	O
802.11ac	X	X	O	O

Note:

(1) O = Support, X = Not Support

(2) SISO = Single Input Single Output

(3) SDM = Spatial Diversity Multiplexing

(4) CDD = Cyclic Delay Diversity

2.This device supports simultaneous transmission operation, which allows for two channels to operate independent of one another in the 2.4 GHz and 5 GHz or 6GHz bands simultaneously on each antenna.

RSDB Scenario	2.4 GHz WiFi Ant.1	2.4 GHz WiFi Ant.2	5 GHz WiFi Ant.1	5 GHz WiFi Ant.2	6 GHz WiFi Ant.1	6 GHz WiFi Ant.2	Bluetooth Ant.1	Bluetooth Ant.2	Test Case
2.4 GHz WiFi MIMO + 6 GHz WiFi MIMO	on	on			on	on			Scenario1
2.4 GHz WiFi MIMO + 5 GHz WiFi MIMO	on	on	on	on					Scenario2
Bluetooth ANT.1 + 2.4 GHz WiFi ANT.2 + 5 GHz WiFi MIMO		on	on	on			on		Scenario3
Bluetooth ANT.1 + 2.4 GHz WiFi ANT.2 + 6 GHz WiFi MIMO		on			on	on	on		

3. Directional Gain Calculation

According to KDB 662911 D01 Multiple Transmitter Output v02r01 F) 2) f) (ii)

Directional gain =

$$\bullet \quad DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

Band	Ant Gain (dBi)		N_{ANT}/ N_{SS}	Directional Gain (dBi)
	ANT1	ANT2		CDD
UNII 1	-5.00	-2.96	2 / 2	-0.91
UNII 2A	-3.88	-2.24	2 / 2	-0.01
UNII 2C	-3.59	-2.59	2 / 2	-0.07
UNII 3	-3.96	-2.19	2 / 2	-0.02
UNII 4	-3.89	-2.33	2 / 2	-0.06

Note

According to Ansi C63.10-2013 section 14.4.3, the directional gain is calculated using the formula, where GN is the gain of the nth antenna and NANT is the total number of antennas used.

Directional Gain = $10 \cdot \log(((10^{(ANT1\ Gain/20)}+10^{(ANT2\ Gain/20)})^2)/2)$ dBi

Sample Calculation (Conducted Power, MIMO):

Ex) Ant 1 : 11.58 dBm Ant 2 : 12.08 dBm

Ant1 + Ant 2 = MIMO

(11.58 dBm + 12.08 dBm) = (14.387 mW + 16.143 mW) = 30.53 mW = 14.88 dBm

Sample Calculation (E.I.R.P & E.I.R.P Spectral Density, MIMO):

Ex) ANT1 : 15.35 dBm , ANT2 : 15.12 dBm, Directional Gain : 3 dBi

Conducted Power = (15.35 dBm + 15.12 dBm) = (34.276 mW + 32.508 mW) = 66.784 mW = 18.25 dBm

E.I.R.P = 18.25 dBm + 3 dBi = 21.25 dBm

2. MAXIMUM OUTPUT POWER

The transmitter has a maximum total conducted average output power as follows:

Band	Mode	MIMO					
		Ant.1 Power		Ant.2 Power		Ant.1 + Ant.2 Power	
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
UNII1	802.11a	17.53	0.057	17.43	0.055	20.49	0.112
	802.11n (HT20)	17.47	0.056	17.35	0.054	20.42	0.110
	802.11n (HT40)	16.72	0.047	16.40	0.044	19.57	0.091
	802.11ac (VHT20)	17.19	0.052	17.80	0.060	20.52	0.113
	802.11ac (VHT40)	16.61	0.046	16.50	0.045	19.57	0.091
	802.11ac (VHT80)	14.89	0.031	14.39	0.027	17.66	0.058
UNII2A	802.11a	17.88	0.061	17.98	0.063	20.94	0.124
	802.11n (HT20)	17.81	0.060	17.93	0.062	20.88	0.122
	802.11n (HT40)	16.88	0.049	16.85	0.048	19.88	0.097
	802.11ac (VHT20)	17.86	0.061	17.99	0.063	20.93	0.124
	802.11ac (VHT40)	16.80	0.048	16.64	0.046	19.73	0.094
	802.11ac (VHT80)	14.98	0.031	14.85	0.031	17.93	0.062
UNII2C	802.11a	17.72	0.059	17.86	0.061	20.80	0.120
	802.11n (HT20)	17.62	0.058	17.76	0.060	20.70	0.118
	802.11n (HT40)	17.22	0.053	16.76	0.047	20.01	0.100
	802.11ac (VHT20)	17.78	0.060	17.82	0.060	20.81	0.121
	802.11ac (VHT40)	17.16	0.052	16.83	0.048	20.01	0.100
	802.11ac (VHT80)	17.38	0.055	16.82	0.048	20.12	0.103
UNII3	802.11a	17.86	0.061	17.84	0.061	20.86	0.122
	802.11n (HT20)	17.72	0.059	17.70	0.059	20.72	0.118
	802.11n (HT40)	16.67	0.046	17.21	0.053	19.96	0.099
	802.11ac (VHT20)	17.85	0.061	17.82	0.060	20.84	0.121
	802.11ac (VHT40)	16.67	0.046	17.21	0.053	19.96	0.099
	802.11ac (VHT80)	16.58	0.046	17.03	0.050	19.82	0.096
UNII4 (Conducted For inf.)	802.11a	17.78	0.060	17.93	0.062	20.87	0.122
	802.11n (HT20)	17.70	0.059	17.72	0.059	20.72	0.118
	802.11n (HT40)	16.71	0.047	16.68	0.047	19.70	0.093
	802.11ac (VHT20)	17.84	0.061	17.85	0.061	20.85	0.122
	802.11ac (VHT40)	16.74	0.047	16.71	0.047	19.74	0.094
	802.11ac (VHT80)	16.80	0.048	16.88	0.049	19.85	0.097
UNII1-2A	802.11ac (VHT160)	13.33	0.022	12.62	0.018	16.00	0.040
UNII2C	802.11ac (VHT160)	13.62	0.023	13.38	0.022	16.51	0.045
UNII3&4	802.11ac (VHT160)	14.65	0.029	14.86	0.031	17.76	0.060

Band	Mode	MIMO (EIRP)											
		Ant.1 Power				Ant.2 Power				(Ant.1 + Ant.2) Power			
		(dBm)	ANT Gain(dBi)	EIRP (dBm)	(W)	(dBm)	ANT Gain(dBi)	EIRP (dBm)	(W)	(dBm)	ANT Gain(dBi)	EIRP (dBm)	(W)
UNII4 (E.I.R.P)	802.11a	17.78	-3.89	13.89	0.025	17.93	-2.33	15.60	0.036	20.87	-0.06	20.81	0.121
	802.11n (HT20)	17.70	-3.89	13.81	0.024	17.72	-2.33	15.39	0.035	20.72	-0.06	20.66	0.116
	802.11n (HT40)	16.71	-3.89	12.82	0.019	16.68	-2.33	14.35	0.027	19.70	-0.06	19.64	0.092
	802.11ac (VHT20)	17.84	-3.89	13.95	0.025	17.85	-2.33	15.52	0.036	20.85	-0.06	20.79	0.120
	802.11ac (VHT40)	16.74	-3.89	12.85	0.019	16.71	-2.33	14.38	0.027	19.74	-0.06	19.68	0.093
	802.11ac (VHT80)	16.80	-3.89	12.91	0.020	16.88	-2.33	14.55	0.029	19.85	-0.06	19.79	0.095
	802.11ac (VHT160)	14.65	-3.89	10.76	0.012	14.86	-2.33	12.53	0.018	17.76	-0.06	17.70	0.059

3. TEST METHODOLOGY

The measurement procedure described in FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01 dated December 14, 2017 entitled “Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part15, Subpart E” and ANSI C63.10(Version : 2013) ‘the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices’ were used in the measurement. Additionally, for U-NII-4 band, use the following measurement procedure KDB 291074 D02 EMC Measurement v01

EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.407 under the FCC Rules Part 15 Subpart E.

GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2 of ANSI C63.10. (Version :2013) Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane below 1 GHz. Above 1 GHz with 1.5 m using absorbers between the EUT and receive antenna. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 6.6.5 of ANSI C63.10. (Version: 2013)

DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

4. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment's, which is traceable to recognized national standards.
Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).

5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA. The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2014) and CISPR Publication 22.
Detailed description of test facility was submitted to the Commission and accepted dated April 02, 2018 (Registration Number: KR0032).

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.
Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.
All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

6. ANTENNA REQUIREMENTS

According to FCC 47 CFR §15.203, §15.407:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 shall be considered sufficient to comply with the provisions of this section."

(1) The antennas of this E.U.T are permanently attached.

(2) The E.U.T Complies with the requirement of §15.203, §15.407

7. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013.

All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence.

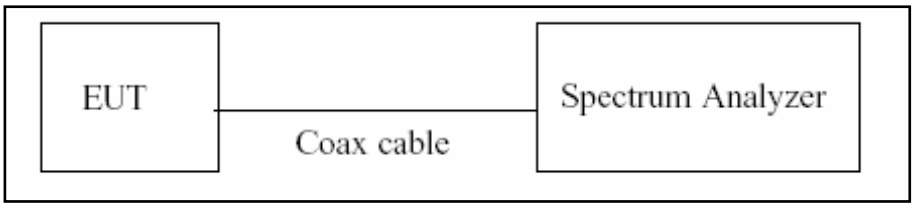
The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.90 (Confidence level about 95 %, k=2)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.14 (Confidence level about 95 %, k=2)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.82 (Confidence level about 95 %, k=2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.74 (Confidence level about 95 %, k=2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.76 (Confidence level about 95 %, k=2)
Radiated Disturbance (Above 40 GHz)	5.52 (Confidence level about 95 %, k=2)

8. DESCRIPTION OF TESTS

8.1. Duty Cycle

Test Configuration



Test Procedure

The transmitter output is connected to the Spectrum Analyzer.

We tested according to Procedure B.2 in KDB 789033 D02 v02r01.

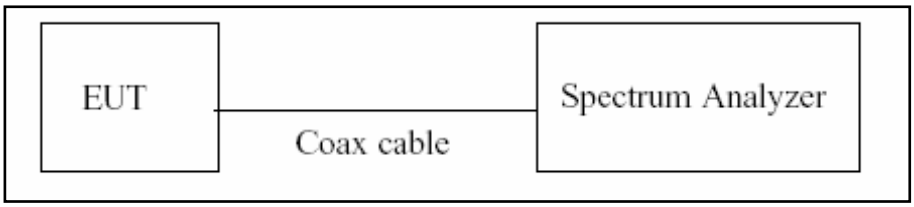
1. RBW = 8 MHz (the largest availble value)
2. VBW = 8 MHz (≥ RBW)
3. SPAN = 0 Hz
4. Detector = Peak
5. Number of points in sweep > 100
6. Trace mode = Clear write
7. Measure T_{total} and T_{on}
8. Calculate Duty Cycle = T_{on}/ T_{total} and Duty Cycle Factor = 10log(1/Duty Cycle)

8.2. 6 dB Bandwidth & 26 dB Bandwidth

Limit

Within the 5.725-5.85 GHz(NII-3) &5.85-5.925 GHz(NII-4) band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Configuration



Test Procedure(26 dB Bandwidth)

The transmitter output is connected to the Spectrum Analyzer.

We tested according to Procedure C.1 in KDB 789033 D02 v02r01.

1. RBW = approximately 1 % of the emission bandwidth
2. VBW > RBW
3. Detector = Peak
4. Trace mode = max hold
5. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1 %.

Test Procedure (6 dB Bandwidth)

The transmitter output is connected to the Spectrum Analyzer.

We tested according to Procedure C.2 in KDB 789033 D02 v02r01.

1. RBW = 100 kHz
2. VBW ≥ 3 x RBW
3. Detector = Peak
4. Trace mode = max hold
5. Allow the trace to stabilize
6. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points(upper and lower frequencies) that are attenuated by 6 dB relative to the maximum lever measured in the fundamental emission.

Note:

1. We tested X dB bandwidth using the automatic bandwidth measurement capability of a spectrum analyzer.
2. DFS test channels should be defined. So, We performed the OBW test to prove that no part of the fundamental emissions of any channels belong to UNII1 and UNII3 band for DFS.
3. The 26 dB bandwidth is used to determine the conducted power limits.

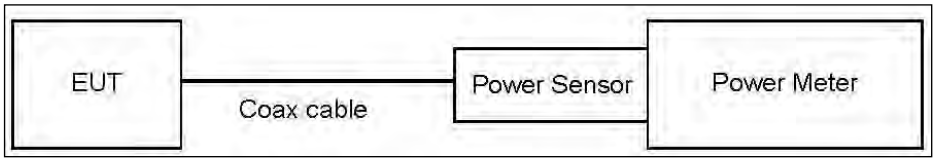
8.3. Output Power Measurement

Limit

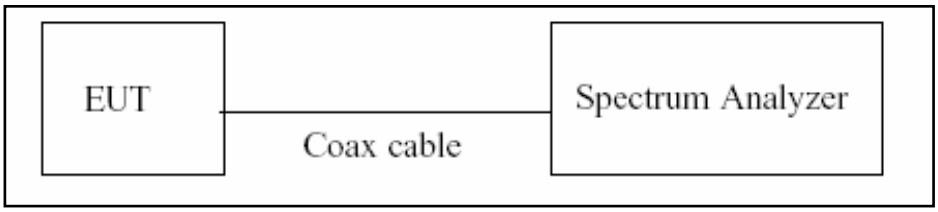
Band	Limit
UNII 1	- Master : Not exceed 1 W(=30 dBm) - Slave : Not exceed 250 mW(=23.98 dBm)
UNII 2A, 2C	Not exceed the lesser of 250 mW or 11 dBm + 10 log B, (where B is the 26 dB emission bandwidth in megahertz.)
UNII 3	Not exceed 1 W(=30 dBm)
UNII 4	EIRP 30 dBm

Test Configuration

Power Meter



Spectrum Analyzer(Only Straddle Channel)



Test Procedure(Power Meter)

We tested according to Procedure E.3.a in KDB 789033 D02 v02r01.

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Test Procedure(Spectrum Analyzer)

The transmitter output is connected to the Spectrum Analyzer.

We use the spectrum analyzer's integrated band power measurement function.

We tested according to Procedure E.2.d) in KDB 789033 D02 v02r01.

1. Measure the duty cycle.
2. Set span to encompass the 26 dB EBW of the signal.
3. RBW = 1 MHz.
4. VBW ≥ 3 MHz.
5. Number of points in sweep ≥ 2 x span/RBW.
6. Sweep time = auto.
7. Detector = RMS.
8. Do not use sweep triggering. Allow the sweep to "free run".
9. Trace average at least 100 traces in power averaging(RMS) mode
10. Integrated bandwidth = OBW
11. Add 10log(1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Sample Calculation

Total Power(dBm) = Measured Value(dBm) + ATT loss(dB) + Cable loss(dB) + Duty Cycle Factor(dB)

Note

1. Spectrum Measured Levels are not plot data.
   The power results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset Loss
   Attenuator loss(10 dB) + Cable loss
3. Actual value of loss for the attenuator and cable combination is below table.

Band	Loss(dB)
UNII 1	10.80
UNII 2A	10.80
UNII 2C	10.80
UNII 3&4	10.80

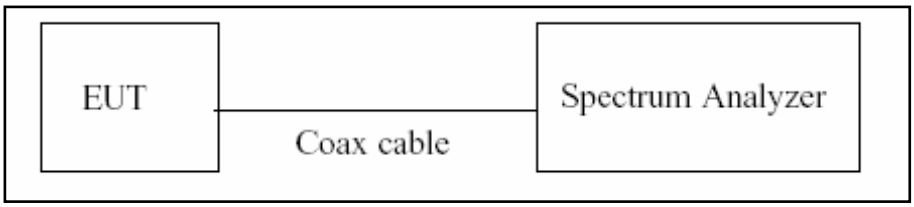
(Actual value of loss for the attenuator and cable combination)

8.4. Power Spectral Density

Limit

Band	Limit
UNII 1	11 dBm/MHz
UNII 2A, 2C	11 dBm/MHz
UNII 3	30 dBm/500 kHz
UNII 4	EIRP 14 dBm/MHz

Test Configuration



Test Procedure

We tested according to Procedure F in KDB 789033 D02 v02r01.

1. Set span to encompass the entire emission bandwidth(EBW) of the signal.
2. RBW = 1 MHz(510 kHz for UNII 3)
   ➔For portion within the NII-3 be used RBW 510kHz, for portion within the NII-4 be used RBW 1MHz
3. VBW ≥ 3 MHz
4. Number of points in sweep ≥ 2 x span/RBW.
5. Sweep time = auto.
6. Detector = RMS(i.e., power averaging), if available. Otherwise, use sample detector mode.
7. Do not use sweep triggering. Allow the sweep to “free run”.
8. Trace average at least 100 traces in power averaging(RMS) mode
9. Use the peak search function on the spectrum analyzer to find the peak of the spectrum.
10. If Method SA-2 was used, add 10 log(1/x), where x is the duty cycle, to the peak of the spectrum.

Sample Calculation

Total PSD(dBm) = Measured Value(dBm) + ATT loss(dB) + Cable loss(dB) + Duty Cycle Factor(dB)

Note

1. Spectrum Measured Levels are not plot data.
   The PSD results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Spectrum offset Loss
   Attenuator loss(10 dB) + Cable loss
3. Actual value of loss for the attenuator and cable combination is below table.

Band	Loss(dB)
UNII 1	10.80
UNII 2A	10.80
UNII 2C	10.80
UNII 3&4	10.80

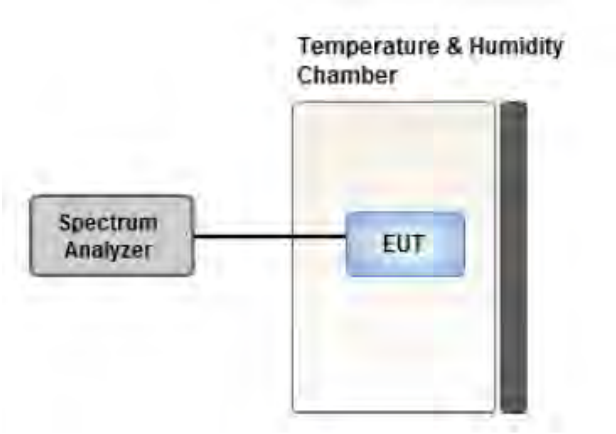
(Actual value of loss for the attenuator and cable combination)

8.5. Frequency Stability

Limit

Maintained within the band

Test Configuration



Test Procedure

1. The EUT was placed inside an environmental chamber as the temperature in the chamber was varied between -30 ℃ and 50 ℃.
2. The temperature was incremented by 10 ℃ intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.
3. The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battety operating end point which shall be specified by the manufacturer.
4. While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized. Four measurements in total are made.

8.6. AC Power line Conducted Emissions

Limit

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN).

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56[a]	56 to 46[a]
0.50 to 5	56	46
5 to 30	60	50

[a]Decreases with the logarithm of the frequency.

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Annex A for the actual connections between EUT and support equipment.

Test Procedure

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors : Quasi Peak and Average Detector.

Sample Calculation

Quasi-peak(Final Result) = Measured Value + Correction Factor

8.7. Radiated Test

Limit

1. UNII 1: All emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of −27 dBm/MHz.
2. UNII 2A, 2C: All emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of −27 dBm/MHz.
3. UNII 3: All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
4. UNII 4: [Low Channel O.O.B.E] measured with an Peak detector

   For a client device or indoor access point or subordinate device, all emissions below 5.725 GHz shall not exceed an e.i.r.p. of −27 dBm/MHz at 5.65 GHz increasing linearly to 10 dBm/MHz at 5.7 GHz, and from 5.7 GHz increasing linearly to a level of 15.6 dBm/MHz at 5.72 GHz, and from 5.72 GHz increasing linearly to a level of 27 dBm/MHz at 5.725 GHz.

   [High Channel O.O.B.E] measured with an RMS detector

   For a client device, all emissions at or above 5.895 GHz shall not exceed an e.i.r.p. of −5 dBm/MHz and shall decrease linearly to an e.i.r.p. of −27 dBm/MHz at or above 5.925 GHz.

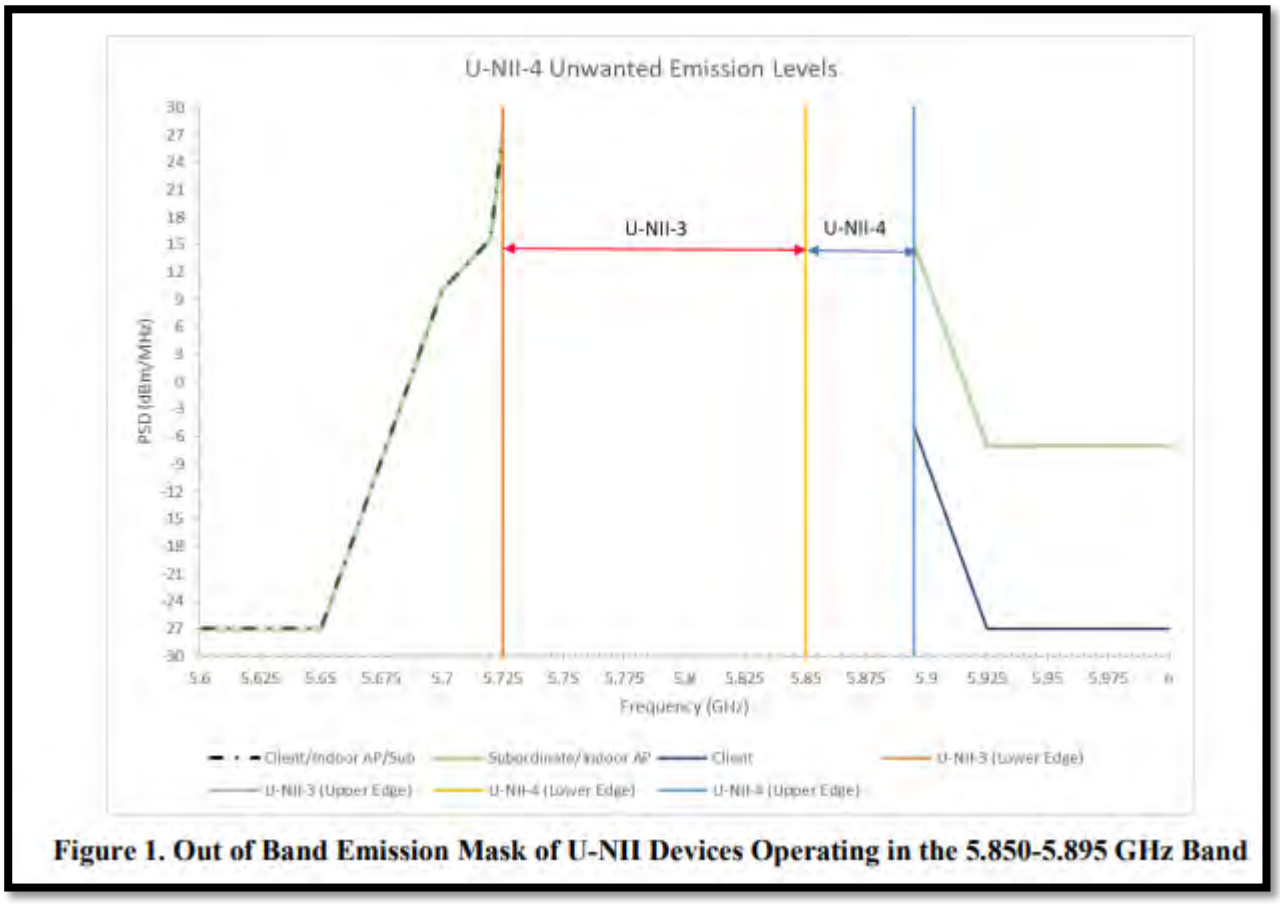


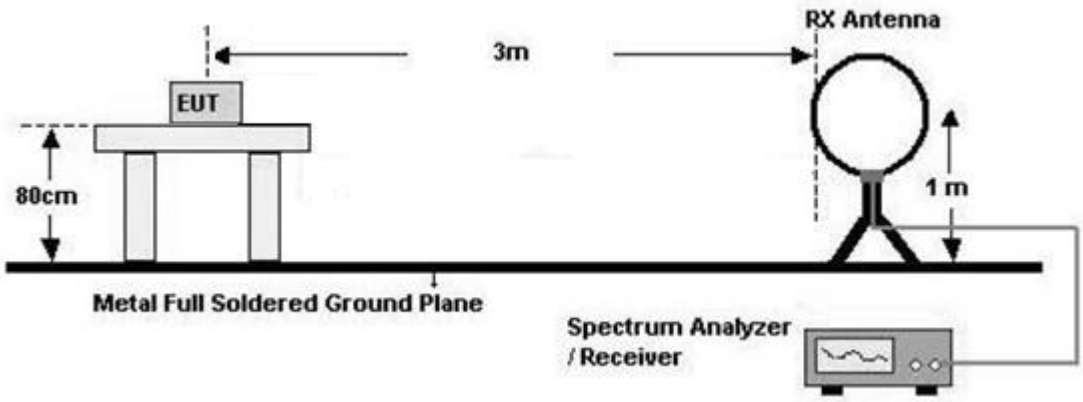
Figure 1. Out of Band Emission Mask of U-NII Devices Operating in the 5.850-5.895 GHz Band

5. All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Section 15.209.

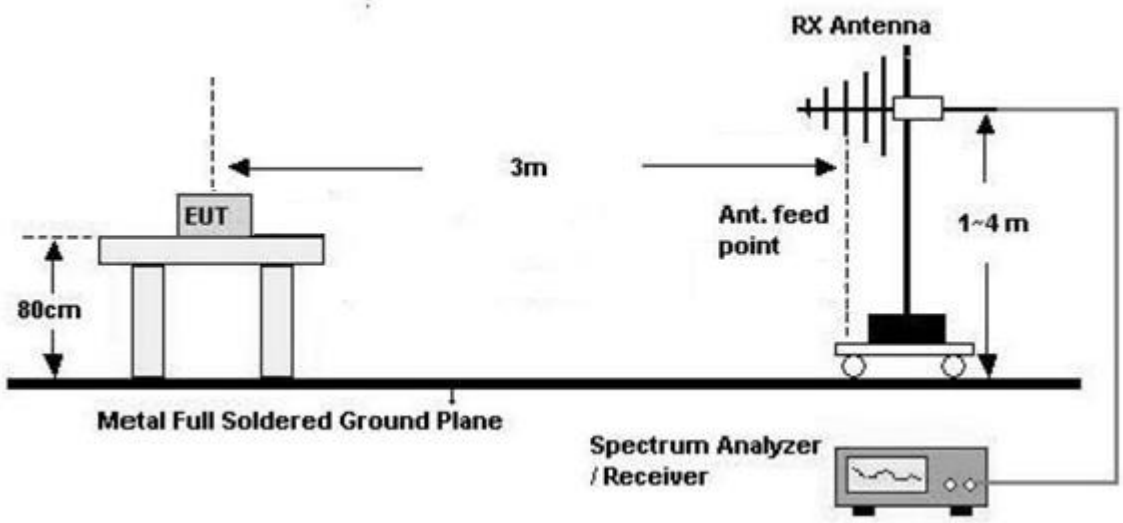
Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Configuration

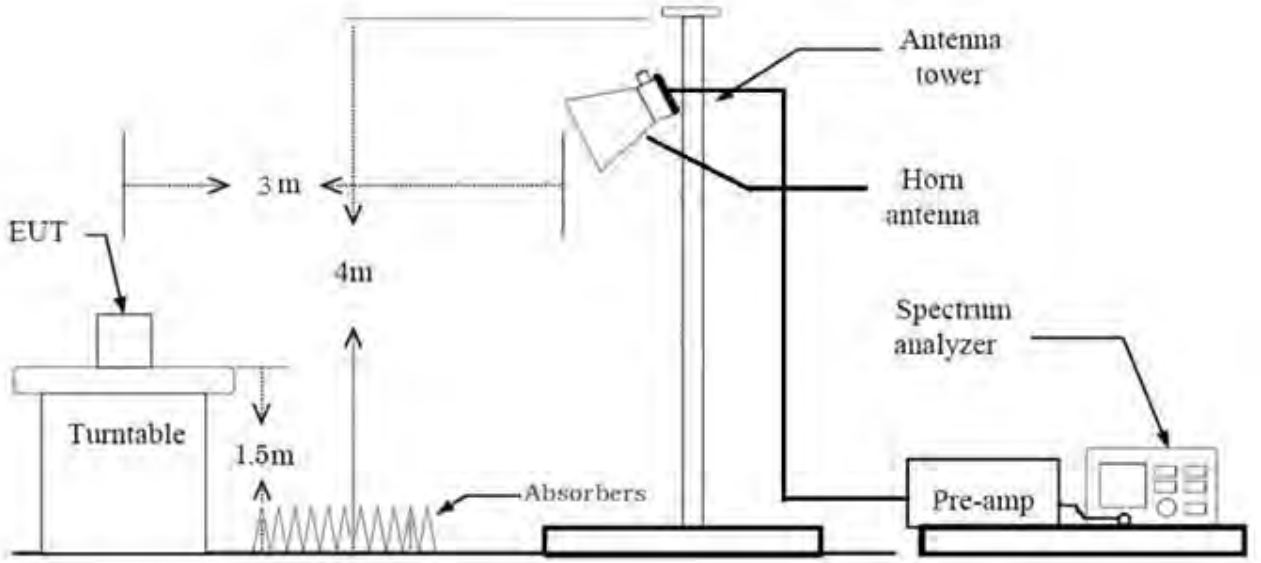
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



Test Procedure of Radiated spurious emissions(Below 30 MHz)

1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
2. The loop antenna was placed at a location 3 m from the EUT
3. The EUT is placed on a turntable, which is 0.8 m above ground plane.
4. .We have done x, y, z planes in EUT and horizontal and vertical polarization and Parallel to the ground plane in detecting antenna.
5. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
6. Distance Correction Factor(0.009 MHz – 0.490 MHz) = 40log(3 m/300 m) = - 80 dB
   Measurement Distance : 3 m
7. Distance Correction Factor(0.490 MHz – 30 MHz) = 40log(3 m/30 m) = - 40 dB
   Measurement Distance : 3 m
8. Spectrum Setting
   - Frequency Range = 9 kHz ~ 30 MHz
   - Detector = Peak
   - Trace = Maxhold
   - RBW = 9 kHz
   - VBW ≥ 3 x RBW
9. Total = Measured Value + Antenna Factor(A.F) + Cable Loss(C.L) + Distance Factor(D.F)
10. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.

KDB 414788 OFS and Chamber Correlation Justification

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

Test Procedure of Radiated spurious emissions(Below 1 GHz)

1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
2. The EUT is placed on a turntable, which is 0.8 m above ground plane.
3. The Hybrid antenna was placed at a location 3 m from the EUT, which is varied from 1 m to 4 m to find out the highest emissions.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
5. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
6. Spectrum Setting
   (1) Measurement Type(Peak):
      - Measured Frequency Range : 30 MHz – 1 GHz
      - Detector = Peak
      - Trace = Maxhold
      - RBW = 100 kHz
      - VBW ≥ 3 x RBW
   (2) Measurement Type(Quasi-peak):
      - Measured Frequency Range : 30 MHz – 1 GHz
      - Detector = Quasi-Peak
      - RBW = 120 kHz

   ※ In general, (1) is used mainly
7. Total = Measured Value + Antenna Factor(A.F) + Cable Loss(C.L)
8. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.

Test Procedure of Radiated spurious emissions (Above 1 GHz)

1. The EUT is placed on a turntable, which is 1.5 m above ground plane.
2. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
3. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
4. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
6. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
7. The unit was tested with its standard battery.
8. Spectrum Setting

(1) Measurement Type (Peak, G.5 in KDB 789033 v02r01):

- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = Peak
- Sweep Time = auto
- Trace mode = max hold
- Allow sweeps to continue until the trace stabilizes.

Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately 1/x, where x is the duty cycle.

(2) Measurement Type (Average, G.6.d in KDB 789033 v02r01):

- RBW = 1 MHz
- VBW(Duty cycle ≥ 98 %) = VBW ≤ RBW/100(i.e., 10 kHz) but not less than 10 Hz.
- VBW(Duty cycle is < 98 %) = VBW ≥ 1/T, where T is the minimum transmission duration.
- The analyzer is set to linear detector mode.
- Detector = Peak.
- Sweep time = auto.
- Trace mode = max hold.
- Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 % duty cycle. For lower duty cycles, increase the minimym number of traces by a factor of 1/x, where x is the duty cycle.

9. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor
10. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency
11. Distance extrapolation factor = 20log (test distance / specific distance) (dB)
12. Total = Measured Value + Antenna Factor(A.F) + Cable Loss(C.L) - Amp Gain(A.G) + Distance Factor(D.F)

Test Procedure of Radiated Restricted Band Edge

1. The EUT is placed on a turntable, which is 1.5 m above ground plane.
2. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
3. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
4. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
6. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
7. The unit was tested with its standard battery.
8. Spectrum Setting

(1) Measurement Type(Peak, G.5 in KDB 789033 v02r01):

- RBW = 1 MHz
- VBW ≥ 3 MHz
- Detector = Peak
- Sweep Time = auto
- Trace mode = max hold
- Allow sweeps to continue until the trace stabilizes.

Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately 1/x, where x is the duty cycle.

(2) Measurement Type(Average, G.6.d in KDB 789033 v02r01):

- RBW = 1 MHz
- VBW(Duty cycle ≥ 98 %) = VBW ≤ RBW/100(i.e., 10 kHz) but not less than 10 Hz.
- VBW(Duty cycle is < 98 %) = VBW ≥ 1/T, where T is the minimum transmission duration.
- The analyzer is set to linear detector mode.
- Detector = Peak.
- Sweep time = auto.
- Trace mode = max hold.
- Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98 % duty cycle. For lower duty cycles, increase the minimym number of traces by a factor of 1/x, where x is the duty cycle.

9. Measured Frequency Range :
   - 4 500 MHz ~ 5 150 MHz
   - 5 350 MHz ~ 5 460 MHz
   - 5 460 MHz ~ 5 470 MHz
   - (75 MHz or more below the 5 725 MHz) ~ 5 725 MHz
   - 5 850 MHz ~ (75 MHz or more above the 5 850 MHz)
10. Distance extrapolation factor = 20log (test distance / specific distance) (dB)
11. Total = Measured Value + Antenna Factor(A.F) + Cable Loss(C.L) - Amp Gain(A.G) + Attenuator(ATT) + Distance Factor(D.F)

The actual setting value of VBW

Mode	Worst Data rate (Mbps)	Duty Cycle	Duty Cycle Factor (dB)	The actual setting value of VBW (Hz)
802.11a	6	0.934	0.297	1000
802.11n(HT20)	MCS0	0.927	0.331	1000
802.11n(HT40)	MCS0	0.862	0.644	3000
802.11ac(VHT20)	MCS0	0.927	0.330	1000
802.11ac(VHT40)	MCS0	0.867	0.621	3000
802.11ac(VHT80)	MCS0	0.764	1.169	5000
802.11ac(VHT160)	MCS0	0.593	2.268	10000

8.8. Worst case configuration and mode

Conducted test

1. All datarate of operation were investigated and the worst case datarate results are reported.
2. SM-F946B/DS, SM-F946B were tested and the worst case results are reported.

(Worst case : SM-F946B/DS)

Radiated test

1. All modes of operation were investigated and the worst case configuration results are reported.
   - Mode : Stand alone, Stand alone + External accessories(Earphone, etc)
   - Worstcase : Stand alone
2. - The EUT was tested in three modes(Open, Half-open, Closed), the worst case configuration results are reported.
   - Radiated Spurious Emissions Worst case : Open mode
   - Radiated Restricted Band Edge : Half-open mode
3. EUT Axis
   - Radiated Spurious Emissions : Z
   - Radiated Restricted Band Edge : Y
4. All datarate of operation were investigated and the worst case datarate results are reported.
   - Mode : Ant.1+Ant.2(SDM), Ant.1+Ant.2(CDD)
   - Worstcase : Ant.1+Ant.2(CDD)
   - 802.11a : 6 Mbps
   - 802.11n_HT20 : MCS0
   - 802.11n_HT40 : MCS0
   - 802.11ac_VHT20 : MCS0
   - 802.11ac_VHT40 : MCS0
   - 802.11ac_VHT80 : MCS0
   - 802.11ac_VHT160: MCS0
5. Radiated Spurious Emission
   - All modulation of operation were investigated and the worst case modulation results are reported.
     (Worstcase : 802.11a_6Mbps)
6. All position of loop antenna were investigated and the test result is a no critical peak found at all positions.
   - Position : Horizontal, Vertical, Parallel to the ground plane
7. SM-F946B/DS, SM-F946B were tested and the worst case results are reported.

(Worst case : SM-F946B/DS)

Radiated test(RSDB)

1. All modes of operation were investigated and the worst case configuration results are reported.
   - Mode : Stand alone, Stand alone + External accessories(Earphone, Keyboard, etc)
   - Worstcase : Stand alone
2. EUT Axis - Radiated Spurious Emissions : Y
3. All of RSDB Scenario were investigated and the worst case configuration results are reported.

RSDB Scenario	2.4 GHz WiFi Ant.1	2.4 GHz WiFi Ant.2	5 GHz WiFi Ant.1	5 GHz WiFi Ant.2	6 GHz WiFi Ant.1	6 GHz WiFi Ant.2	Bluetooth Ant.1	Bluetooth Ant.2	Test Case
2.4 GHz WiFi MIMO + 6 GHz WiFi MIMO	on	on			on	on			Scenario1
2.4 GHz WiFi MIMO + 5 GHz WiFi MIMO	on	on	on	on					**Scenario2**
Bluetooth ANT.1 + 2.4 GHz WiFi ANT.2 + 5 GHz WiFi MIMO		on	on	on			on		**Scenario3**
Bluetooth ANT.1 + 2.4 GHz WiFi ANT.2 + 6 GHz WiFi MIMO		on			on	on	on		

4. SM-F946B/DS, SM-F946B were tested and the worst case results are reported. (Worst case : SM-F946B/DS)
5. The RSDB mode test investigated both intermodulation and radiated spurious emissions.
   And the worst results were reported.
   - Worst result: Radiated spurious emissions
   - Intermodulation: No signals are generated.
   - Radiated spurious emissions: cf. Section 10.8

5. The following tables show the worst case configurations determined during testing.

(Worst case: The lowest margin condition the channels and modes were selected for test.)

RSDB Scenario 1	Description	2.4GHz Emission	6 GHz Emission
2.4 GHz WiFi MIMO + 6 GHz WiFi MIMO	Antenna	Ant All	Ant All
	Channel	11	2
	Data Rate	1 Mbps	MCS 0
	Mode	802.11b	802.11ax(HE20) 242 Tone RU 61

Note : DTS, UNII 6e RSDB data refer to [DTS], [UNII 6e] Test Report

RSDB Scenario 2	Description	2.4GHz Emission	5 GHz Emission
2.4 GHz WiFi MIMO + 5 GHz WiFi MIMO	Antenna	Ant All	Ant All
	Channel	11	120
	Data Rate	1 Mbps	6 Mbps
	Mode	802.11b	802.11a

Note : DTS RSDB data refer to [DTS] Test Report

RSDB Scenario 3	Description	Bluetooth Emission	2.4GHz Emission	5 GHz Emission
Bluetooth ANT.1 + 2.4 GHz WiFi ANT.2 + 5 GHz WiFi MIMO	Antenna	ANT1	ANT2	Ant All
	Channel	0	6	120
	Data Rate	1 Mbps	1 Mbps	6 Mbps
	Mode	π/4-DQPSK	802.11b	802.11a

Note : BT, DTS RSDB data refer to [BT], [DTS] Test Report

AC Power line Conducted Emissions

1. All modes of operation were investigated and the worst case configuration results are reported.
   - Mode : Stand alone + External accessories(Earphone,etc) + Travel Adapter,
     Stand alone + Tr avel Adapter
   - Worstcase : Stand alone + Travel Adapter
2. SM-F946B/DS, SM-F946B were tested and the worst case results are reported.

(Worst case : SM-F946B/DS)

9. SUMMARY OF TEST RESULTS

Test Description	FCC Part Section(s)	Test Limit	Test Condition	Test Result
26 dB Bandwidth	§15.407 (for Power Measurement)	N/A	Conducted	PASS
6 dB Bandwidth	§15.407(e)	>500 kHz (5725-5850 MHz)(UNII-3) (5850-5895 MHz)(UNII-4)		PASS
Maximum Conducted Output Power	§15.407(a)(1),(2),(3)	< 250 mW(5150-5250 MHz) < 250 mW or 11+10log$_{10}$ (BW) dBm (5250-5350 MHz) < 250 mW or 11+10log$_{10}$ (BW) dBm (5470-5725 MHz) <1 W (5725-5850 MHz)		PASS
Maximum EIRP Output Power	§15.407(a)(1)(3)(iii)	< EIRP 30dBm (5850-5925 MHz)		PASS
Maximum Power Spectral Density	§15.407(a)(1),(2),(3)	<11 dBm/ MHz (5150-5250 MHz) <11 dBm/ MHz (5250-5350 MHz) <11 dBm/ MHz (5470-5725 MHz) <30 dBm/500 kHz(5725-5850 MHz) < EIRP 14 dBm/MHz(5850-5895 MHz)		PASS
Frequency Stability	§15.407(g) §2.1055	Maintained within the band		PASS
AC Conducted Emissions 150 kHz-30 MHz	15.207 15.407(b)(8)	<FCC 15.207 limits		PASS
Undesirable Emissions	§15.407(b) (1),(2),(3),(4) §15.407(b)(5)(ii),(iii) §15.35(b)	<-27 dBm/MHz EIRP (UNII1, 2A, 2C) cf. Section 8.6 (UNII 3&4)	Radiated	PASS
General Field Strength Limits(Restricted Bands and Radiated Emission Limits)	15.205, 15.407(b)(9),(10)	Emissions in restricted bands must meet the radiated limits detailed in 15.209		PASS

10. TEST RESULT

10.1 DUTY CYCLE

Mode	Data Rate (Mbps)	T_{on} (ms)	T_{total} (ms)	Duty Cycle	Duty Cycle Factor(dB)
802.11a	6	1.467	1.571	0.934	0.297
	9	0.983	1.082	0.909	0.416
	12	0.745	0.844	0.883	0.541
	18	0.507	0.603	0.840	0.755
	24	0.388	0.481	0.805	0.941
	36	0.263	0.362	0.727	1.383
	48	0.203	0.301	0.672	1.725
	54	0.185	0.291	0.635	1.974

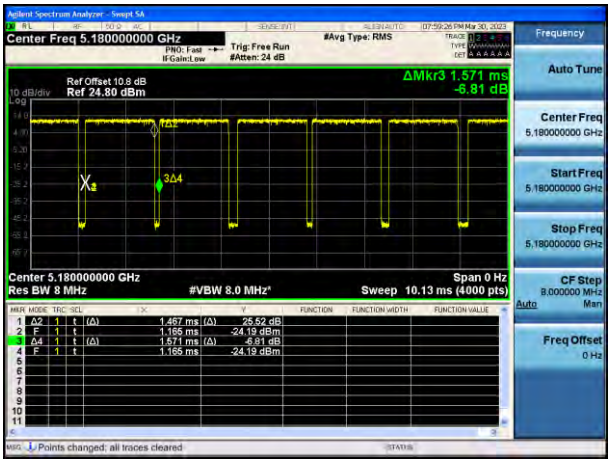
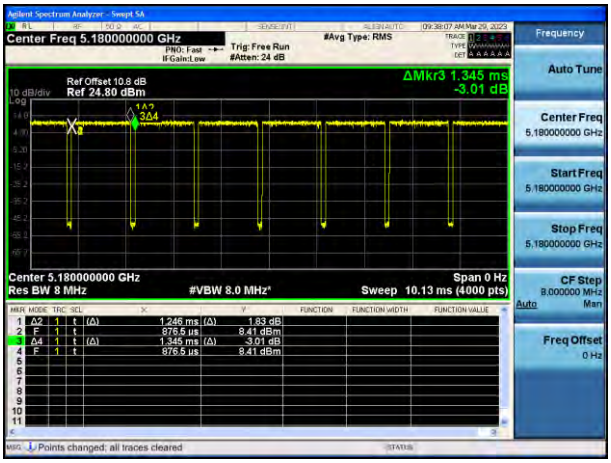
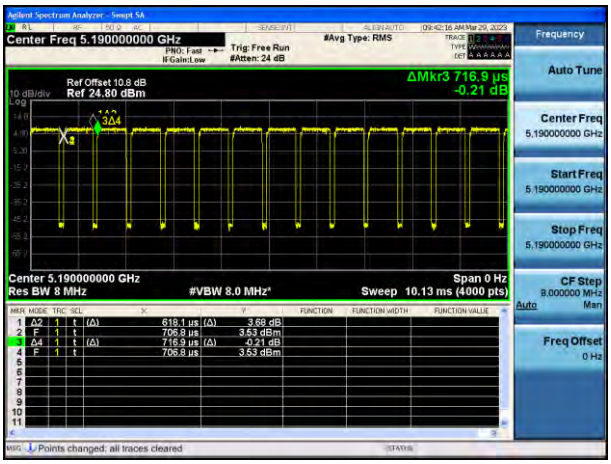
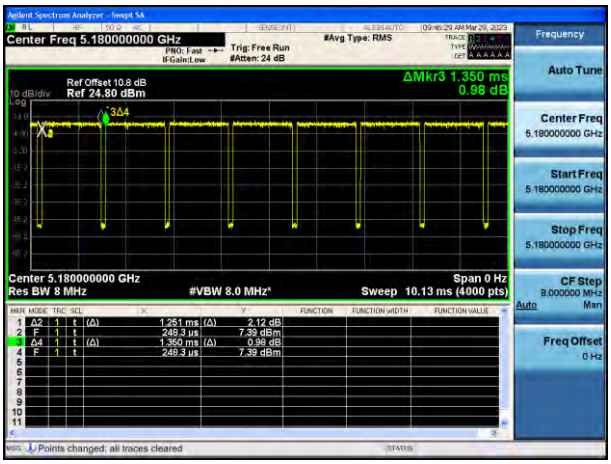
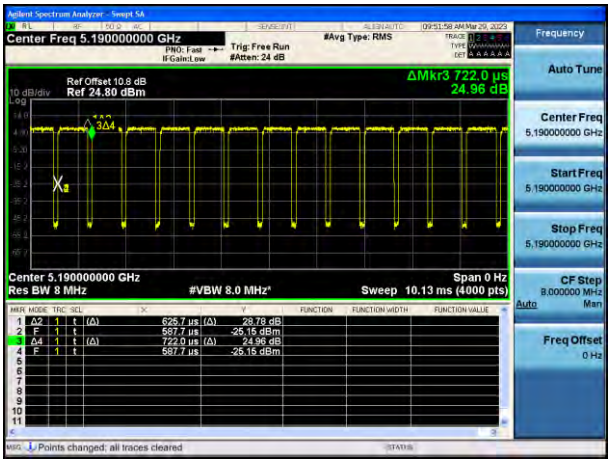
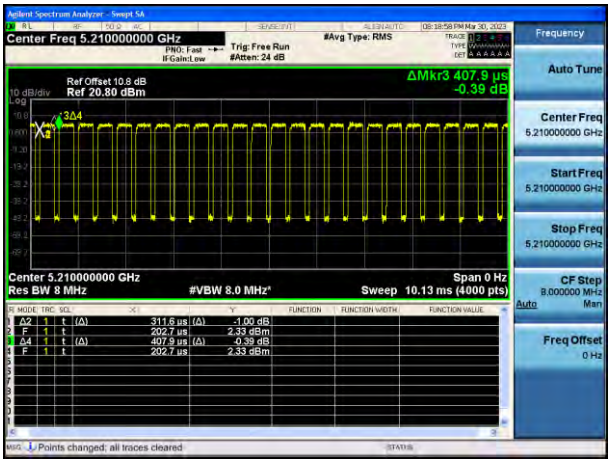
Mode	MCS Index	T_{on} (ms)	T_{total} (ms)	Duty Cycle	Duty Cycle Factor(dB)
802.11n (HT20)	0	1.246	1.345	0.927	0.331
	1	0.646	0.742	0.870	0.603
	2	0.443	0.540	0.822	0.853
	3	0.339	0.438	0.775	1.109
	4	0.243	0.337	0.722	1.416
	5	0.193	0.294	0.655	1.838
	6	0.172	0.279	0.618	2.089
	7	0.162	0.294	0.552	2.583
802.11n (HT40)	0	0.618	0.717	0.862	0.644
	1	0.329	0.426	0.774	1.114
	2	0.233	0.329	0.708	1.502
	3	0.184	0.316	0.582	2.349
	4	0.136	0.314	0.433	3.634
	5	0.112	0.308	0.364	4.393
	6	0.104	0.328	0.317	4.994
	7	0.098	0.320	0.306	5.139

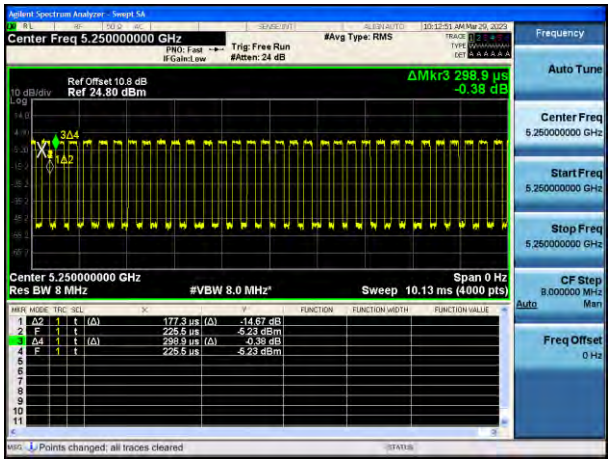
Mode	MCS Index	T_{on} (ms)	T_{total} (ms)	Duty Cycle	Duty Cycle Factor(dB)
802.11ac (VHT20)	0	1.251	1.350	0.927	0.330
	1	0.649	0.747	0.868	0.616
	2	0.446	0.542	0.822	0.849
	3	0.347	0.443	0.783	1.063
	4	0.246	0.342	0.719	1.436
	5	0.193	0.291	0.661	1.799
	6	0.175	0.299	0.585	2.330
	7	0.165	0.289	0.570	2.440
	8	0.144	0.282	0.512	2.907
802.11ac (VHT40)	0	0.626	0.722	0.867	0.621
	1	0.332	0.428	0.775	1.106
	2	0.236	0.334	0.705	1.521
	3	0.190	0.322	0.591	2.287
	4	0.139	0.317	0.440	3.565
	5	0.114	0.312	0.366	4.367
	6	0.106	0.312	0.341	4.667
	7	0.099	0.314	0.315	5.024
	8	0.094	0.317	0.296	5.287
	9	0.084	0.324	0.258	5.887
802.11ac (VHT80)	0	0.312	0.408	0.764	1.169
	1	0.175	0.345	0.507	2.947
	2	0.134	0.344	0.389	4.103
	3	0.109	0.350	0.312	5.064
	4	0.089	0.291	0.304	5.166
	5	0.076	0.334	0.227	6.435
	6	0.072	0.347	0.207	6.832
	7	0.069	0.334	0.206	6.867
	8	0.064	0.340	0.188	7.253
	9	0.064	0.340	0.188	7.253

Mode	MCS Index	T_{on} (ms)	T_{total} (ms)	Duty Cycle	Duty Cycle Factor(dB)
802.11ac (VHT160)	0	0.177	0.299	0.593	2.268
	1	0.109	0.301	0.361	4.421
	2	0.089	0.274	0.324	4.894
	3	0.076	0.289	0.263	5.798
	4	0.065	0.296	0.220	6.572
	5	0.061	0.299	0.203	6.917
	6	0.056	0.296	0.188	7.258
	7	0.056	0.296	0.188	7.258
	8	0.053	0.294	0.181	7.422
	9	0.053	0.283	0.185	7.319

Note:

In order to simplify the report, attached plots were only the lowest datarate.

802.11a	802.11n(HT20)
	
802.11n(HT40)	**802.11ac(VHT20)**
	
802.11ac(VHT40)	**802.11ac(VHT80)**
	

802.11ac(VHT160)


10.2 26 dB Bandwidth

Straddle channel data in the table below are for reporting purposes only. Straddle channel data were added in section 10.7.1.

[Ant.1]

802.11a Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5180	36	19.12	16.369
5200	40	18.93	16.369
5240	48	18.94	16.363
5260	52	18.85	16.366
5280	56	19.10	16.369
5320	64	19.04	16.369
5500	100	18.92	16.366
5600	120	18.96	16.365
5720	144	19.06	16.358
5745	149	19.05	16.358
5785	157	19.07	16.365
5825	165	19.18	16.369
5845	169	18.87	16.364
5865	173	19.29	16.370
5885	177	19.02	16.370

802.11n(HT20) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5180	36	20.25	17.552
5200	40	20.05	17.546
5240	48	20.29	17.558
5260	52	20.20	17.553
5280	56	20.13	17.553
5320	64	20.31	17.556
5500	100	20.32	17.553
5600	120	20.30	17.550
5720	144	20.34	17.549
5745	149	20.17	17.550
5785	157	20.11	17.561
5825	165	20.38	17.553
5845	169	20.08	17.548
5865	173	20.37	17.551
5885	177	20.24	17.550

802.11ac(VHT20) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5180	36	20.15	17.552
5200	40	19.94	17.562
5240	48	20.30	17.564
5260	52	20.21	17.552
5280	56	20.12	17.554
5320	64	20.02	17.562
5500	100	20.19	17.553
5600	120	20.28	17.559
5720	144	20.03	17.545
5745	149	20.32	17.551
5785	157	20.34	17.556
5825	165	20.23	17.559
5845	169	20.21	17.555
5865	173	20.30	17.553
5885	177	20.06	17.561

802.11n(HT40) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5190	38	39.68	35.986
5230	46	39.76	35.991
5270	54	39.76	36.012
5310	62	39.72	36.018
5510	102	39.82	36.007
5590	118	39.70	35.992
5710	142	39.70	36.028
5755	151	39.56	36.004
5795	159	39.74	36.025
5835	167	39.47	36.006
5875	175	39.42	35.997

802.11ac(VHT40) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5190	38	39.84	36.026
5230	46	39.48	35.984
5270	54	39.68	35.985
5310	62	39.70	36.004
5510	102	39.69	36.035
5590	118	39.64	35.985
5710	142	39.64	35.993
5755	151	39.63	36.017
5795	159	39.60	36.034
5835	167	39.63	36.014
5875	175	39.59	36.004

802.11ac(VHT80) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5210	42	81.58	75.518
5290	58	81.72	75.452
5530	106	82.22	75.496
5610	122	81.84	75.502
5690	138	81.80	75.489
5775	155	81.61	75.503
5855	171	81.49	75.451

802.11ac(VHT160) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5250	50	164.5	154.36
5570	114	165.4	154.34
5815	163	165.4	154.31

[Ant.2]

802.11a Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5180	36	19.29	16.372
5200	40	19.27	16.379
5240	48	19.02	16.368
5260	52	19.30	16.367
5280	56	19.16	16.362
5320	64	19.04	16.363
5500	100	19.13	16.370
5600	120	19.03	16.370
5720	144	19.15	16.370
5745	149	18.92	16.366
5785	157	19.06	16.368
5825	165	19.14	16.352
5845	169	18.99	16.357
5865	173	19.00	16.366
5885	177	18.98	16.358

802.11n(HT20) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5180	36	20.17	17.562
5200	40	20.17	17.555
5240	48	20.39	17.556
5260	52	20.36	17.552
5280	56	20.19	17.547
5320	64	20.37	17.555
5500	100	20.39	17.552
5600	120	20.33	17.556
5720	144	20.33	17.557
5745	149	20.04	17.561
5785	157	20.25	17.562
5825	165	19.94	17.553
5845	169	20.25	17.553
5865	173	20.11	17.553
5885	177	20.06	17.548

802.11ac(VHT20) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5180	36	20.24	17.568
5200	40	20.38	17.569
5240	48	20.47	17.559
5260	52	20.33	17.559
5280	56	20.21	17.557
5320	64	20.16	17.555
5500	100	20.33	17.573
5600	120	20.35	17.558
5720	144	20.14	17.559
5745	149	20.30	17.564
5785	157	20.04	17.559
5825	165	20.00	17.556
5845	169	20.27	17.564
5865	173	20.14	17.547
5885	177	20.19	17.571

802.11n(HT40) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5190	38	39.72	36.014
5230	46	39.64	35.993
5270	54	39.78	35.983
5310	62	39.59	36.033
5510	102	39.80	36.025
5590	118	39.79	36.039
5710	142	39.77	36.054
5755	151	39.69	36.025
5795	159	39.66	36.022
5835	167	39.71	36.030
5875	175	39.76	36.007

802.11ac(VHT40) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5190	38	39.63	36.013
5230	46	39.63	35.993
5270	54	39.70	36.036
5310	62	39.63	36.002
5510	102	39.61	36.014
5590	118	39.84	36.006
5710	142	39.68	36.051
5755	151	39.59	36.005
5795	159	39.79	35.996
5835	167	39.66	36.033
5875	175	39.74	36.041

802.11ac(VHT80) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5210	42	81.99	75.498
5290	58	81.60	75.466
5530	106	82.06	75.497
5610	122	82.43	75.474
5690	138	81.88	75.495
5775	155	81.45	75.486
5855	171	81.67	75.474

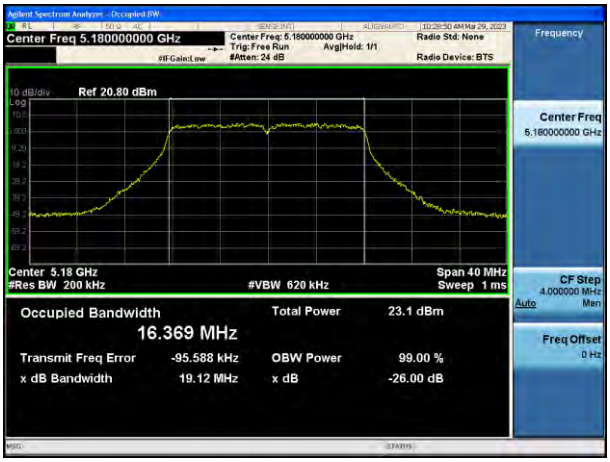
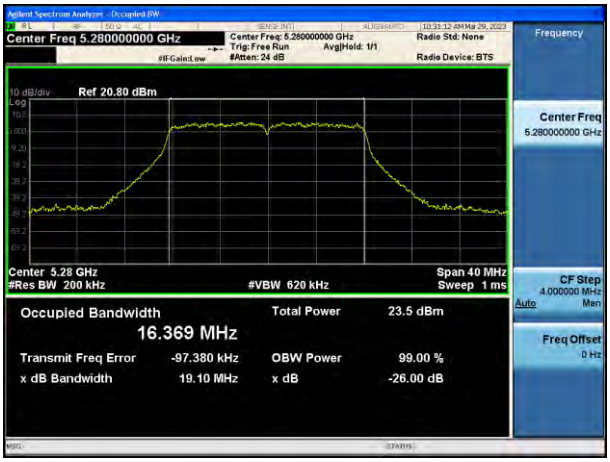
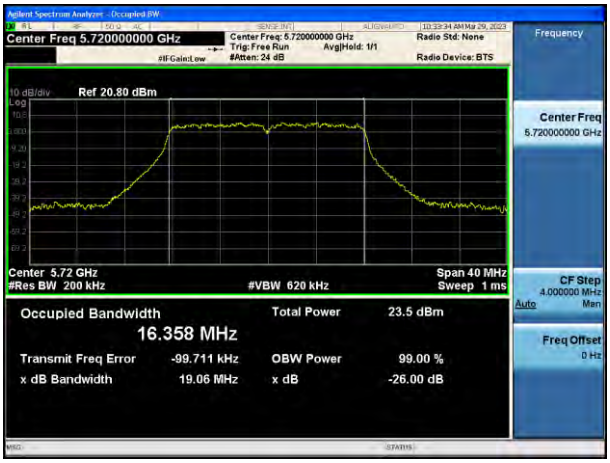
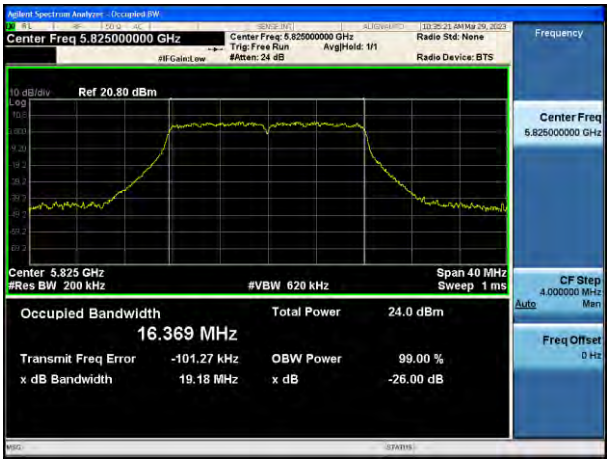
802.11ac(VHT160) Mode		26 dB Bandwidth [MHz]	99 % bandwidth [MHz]
Frequency [MHz]	Channel No.		
5250	50	165.5	154.46
5570	114	165.9	154.31
5815	163	165.3	154.27

[Ant.1]

▣ Test Plots(802.11a)

Note:

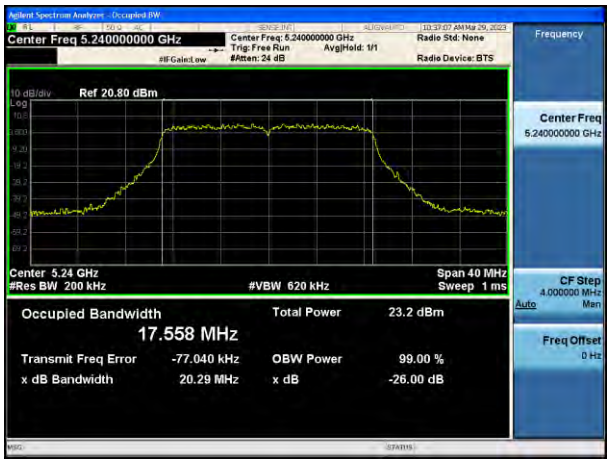
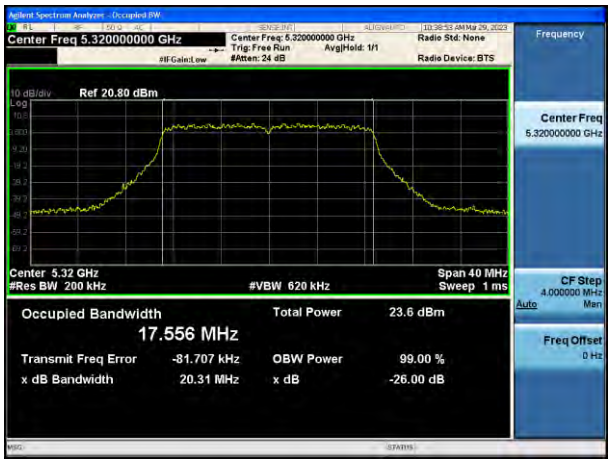
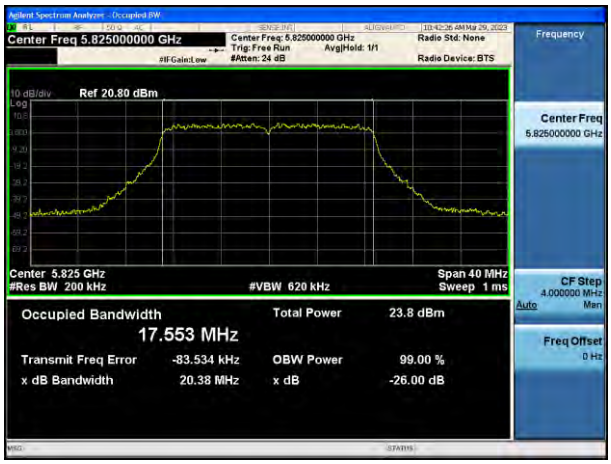
In order to simplify the report, attached plots were only the widest channel.

802.11a UNII 1 BAND 26 dB Bandwidth (CH 36)	802.11a UNII 2A BAND 26 dB Bandwidth (CH 56)
	
802.11a UNII 2C BAND 26 dB Bandwidth (CH 144)	**802.11a UNII 3 BAND 26 dB Bandwidth (CH 165)**
	
802.11a UNII 4 BAND 26 dB Bandwidth (CH 173)	
	

▣ Test Plots(802.11n(HT20))

Note:

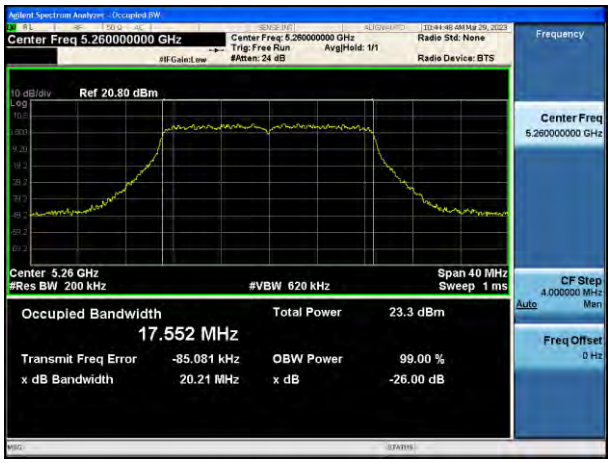
In order to simplify the report, attached plots were only the widest channel.

802.11n_HT20 UNII 1 BAND 26 dB Bandwidth(CH 48)	802.11n_HT20 UNII 2A BAND 26 dB Bandwidth(CH 64)
	
802.11n_HT20 UNII 2C BAND 26 dB Bandwidth(CH 144)	**802.11n_HT20 UNII 3 BAND 26 dB Bandwidth(CH 165)**
	
802.11n_HT20 UNII 4 BAND 26 dB Bandwidth(CH 173)	
	

▣ Test Plots(802.11ac(VHT20))

Note:

In order to simplify the report, attached plots were only the widest channel.

802.11ac_VHT20 UNII 1 BAND 26 dB Bandwidth(CH 48)	802.11ac_VHT20 UNII 2A BAND 26 dB Bandwidth(CH 52)
	
802.11ac_VHT20 UNII 2C BAND 26 dB Bandwidth(CH 120)	**802.11ac_VHT20 UNII 3 BAND 26 dB Bandwidth(CH 157)**
	
802.11ac_VHT20 UNII 4 BAND 26 dB Bandwidth(CH 173)	
	

▣ Test Plots(802.11n(HT40))

Note:

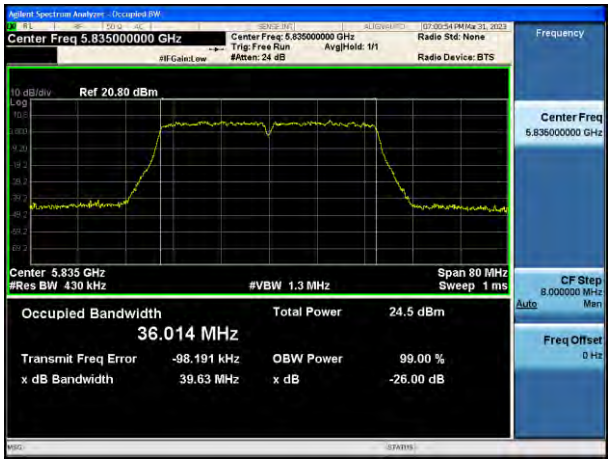
In order to simplify the report, attached plots were only the widest channel.

802.11n_HT40 UNII 1 BAND 26 dB Bandwidth(CH 46)	802.11n_HT40 UNII 2A BAND 26 dB Bandwidth (CH 54)
	
802.11n_HT40 UNII 2C BAND 26 dB Bandwidth(CH 102)	**802.11n_HT40 UNII 3 BAND 26 dB Bandwidth (CH 159)**
	
802.11n_HT40 UNII 4 BAND 26 dB Bandwidth (CH 167)	
	

▣ Test Plots(802.11ac(VHT40))

Note:

In order to simplify the report, attached plots were only the widest channel.

802.11ac_VHT40 UNII 1 BAND 26 dB Bandwidth(CH 38)	802.11ac_VHT40 UNII 2A BAND 26 dB Bandwidth (CH 62)
	
802.11ac_VHT40 UNII 2C BAND 26 dB Bandwidth(CH 102)	**802.11ac_VHT40 UNII 3 BAND 26 dB Bandwidth (CH 151)**
	
802.11ac_VHT40 UNII 4 BAND 26 dB Bandwidth (CH 167)	
	

▣ Test Plots(802.11ac(VHT80))

Note:

In order to simplify the report, attached plots were only the widest channel.

802.11ac_VHT80 UNII 1 BAND 26 dB Bandwidth(CH 42)	802.11ac_VHT80 UNII 2A BAND 26 dB Bandwidth (CH 58)
	
802.11ac_VHT80 UNII 2C BAND 26 dB Bandwidth(CH 106)	**802.11ac_VHT80 UNII 3 BAND 26 dB Bandwidth (CH 155)**
	
802.11ac_VHT80 UNII 4 BAND 26 dB Bandwidth (CH 171)	
	

▣ Test Plots(802.11ac(VHT160))

Note:

In order to simplify the report, attached plots were only the widest channel.

802.11ac_VHT160 UNII 1 BAND 26 dB Bandwidth(CH 50)

802.11ac_VHT160 UNII 2A BAND 26 dB Bandwidth (CH 114)

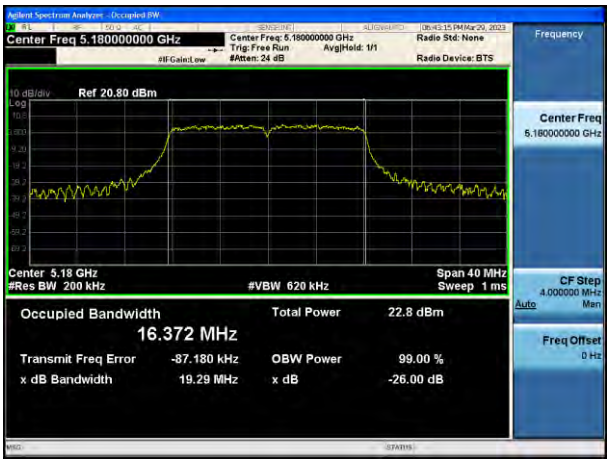
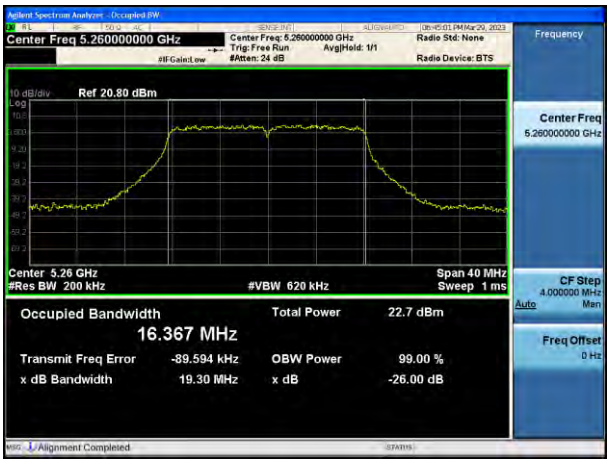
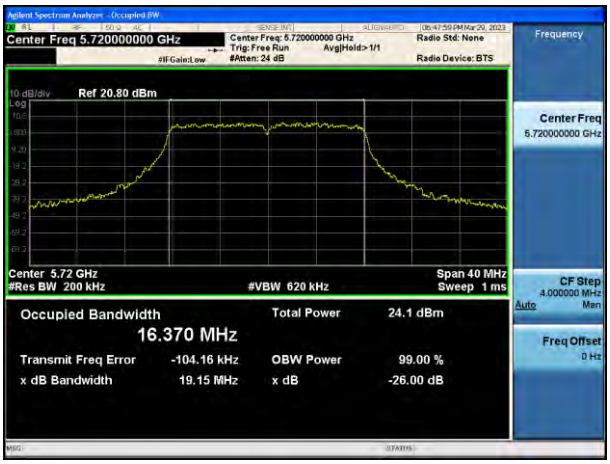
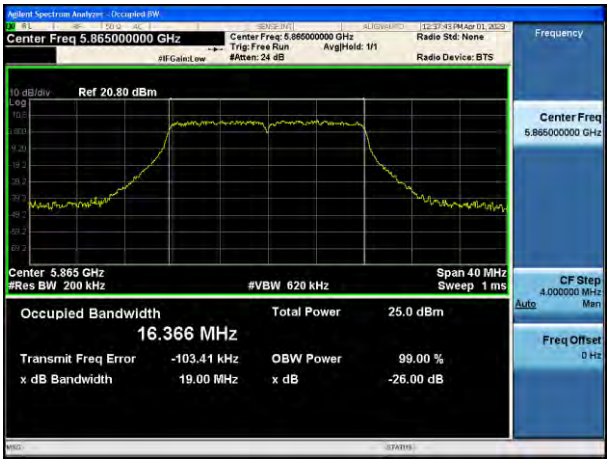
802.11ac_VHT160 UNII 4 BAND 26 dB Bandwidth(CH 163)

[Ant.2]

▣ Test Plots(802.11a)

Note:

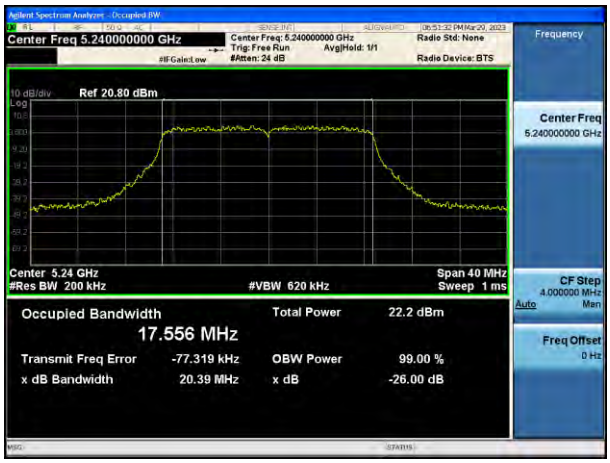
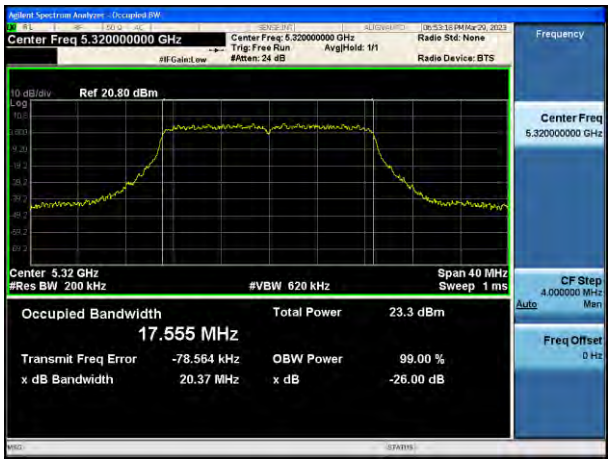
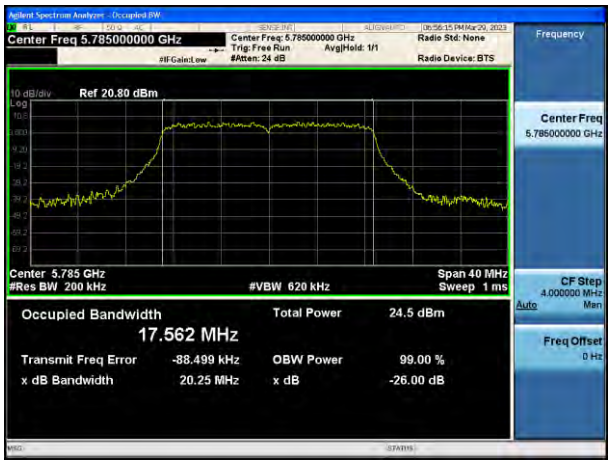
In order to simplify the report, attached plots were only the widest channel.

802.11a UNII 1 BAND 26 dB Bandwidth (CH 36)	802.11a UNII 2A BAND 26 dB Bandwidth (CH 52)
	
802.11a UNII 2C BAND 26 dB Bandwidth (CH 144)	**802.11a UNII 3 BAND 26 dB Bandwidth (CH 165)**
	
802.11a UNII 4 BAND 26 dB Bandwidth (CH 173)	
	

▣ Test Plots(802.11n(HT20))

Note:

In order to simplify the report, attached plots were only the widest channel.

802.11n_HT20 UNII 1 BAND 26 dB Bandwidth(CH 48)	802.11n_HT20 UNII 2A BAND 26 dB Bandwidth(CH 64)
	
802.11n_HT20 UNII 2C BAND 26 dB Bandwidth(CH 100)	**802.11n_HT20 UNII 3 BAND 26 dB Bandwidth(CH 157)**
	
802.11n_HT20 UNII 4 BAND 26 dB Bandwidth(CH 169)	
	

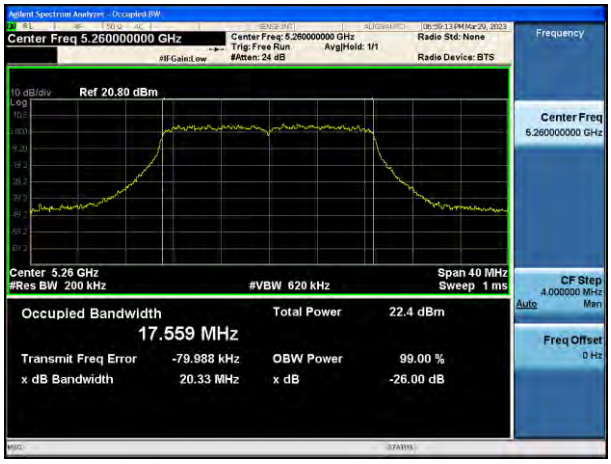
▣ Test Plots(802.11ac(VHT20))

Note:

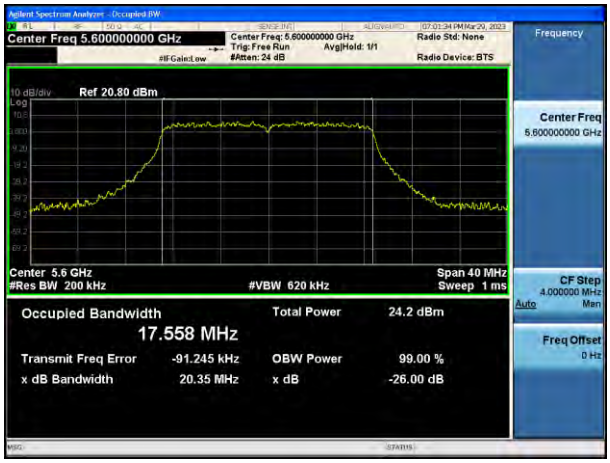
In order to simplify the report, attached plots were only the widest channel.

802.11ac_VHT20 UNII 1 BAND 26 dB Bandwidth(CH 48)

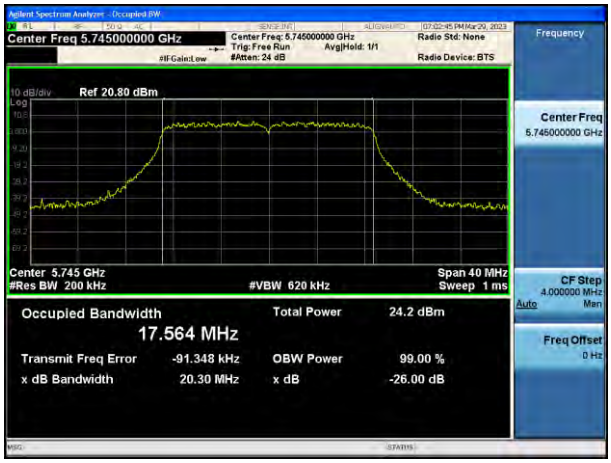
802.11ac_VHT20 UNII 2A BAND 26 dB Bandwidth(CH 52)



802.11ac_VHT20 UNII 2C BAND 26 dB Bandwidth(CH 120)



802.11ac_VHT20 UNII 3 BAND 26 dB Bandwidth(CH 149)

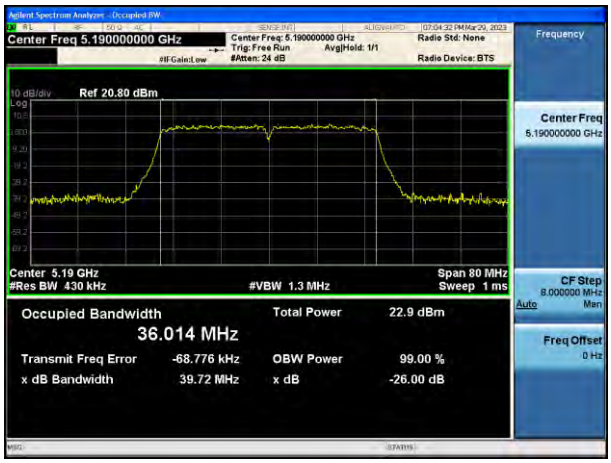
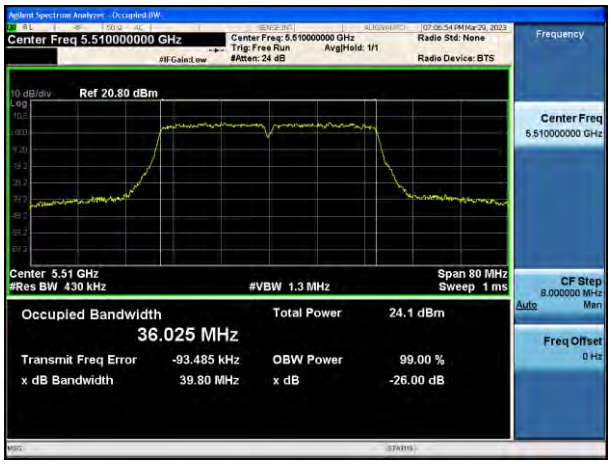


802.11ac_VHT20 UNII 4 BAND 26 dB Bandwidth(CH 169)

▣ Test Plots(802.11n(HT40))

Note:

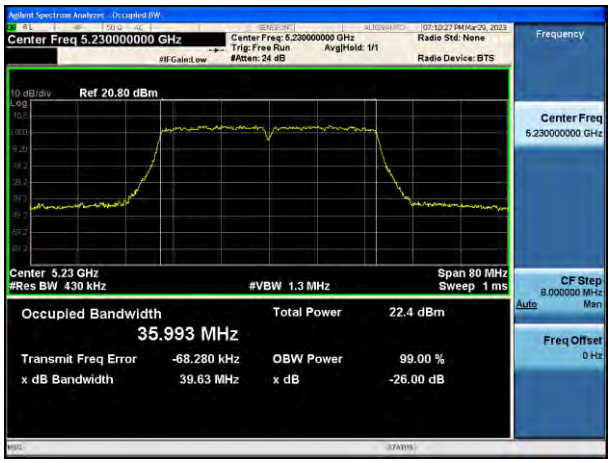
In order to simplify the report, attached plots were only the widest channel.

802.11n_HT40 UNII 1 BAND 26 dB Bandwidth(CH 38)	802.11n_HT40 UNII 2A BAND 26 dB Bandwidth (CH 54)
	
802.11n_HT40 UNII 2C BAND 26 dB Bandwidth(CH 102)	**802.11n_HT40 UNII 3 BAND 26 dB Bandwidth (CH 151)**
	
802.11n_HT40 UNII 4 BAND 26 dB Bandwidth (CH 175)	
	

▣ Test Plots(802.11ac(VHT40))

Note:

In order to simplify the report, attached plots were only the widest channel.

802.11ac_VHT40 UNII 1 BAND 26 dB Bandwidth(CH 46)	802.11ac_VHT40 UNII 2A BAND 26 dB Bandwidth (CH 54)
	
802.11ac_VHT40 UNII 2C BAND 26 dB Bandwidth(CH 118)	**802.11ac_VHT40 UNII 3 BAND 26 dB Bandwidth (CH 159)**
	
802.11ac_VHT40 UNII 4 BAND 26 dB Bandwidth (CH 175)	
	

▣ Test Plots(802.11ac(VHT80))

Note:

In order to simplify the report, attached plots were only the widest channel.

802.11ac_VHT80 UNII 1 BAND 26 dB Bandwidth(CH 42)	802.11ac_VHT80 UNII 2A BAND 26 dB Bandwidth (CH 58)
	
802.11ac_VHT80 UNII 2C BAND 26 dB Bandwidth(CH 122)	**802.11ac_VHT80 UNII 3 BAND 26 dB Bandwidth (CH 155)**
	
802.11ac_VHT80 UNII 4 BAND 26 dB Bandwidth (CH 171)	
	

▣ Test Plots(802.11ac(VHT160))

Note:

In order to simplify the report, attached plots were only the widest channel.

802.11ac_VHT160 UNII 1 BAND 26 dB Bandwidth(CH 50)	802.11ac_VHT160 UNII 2A BAND 26 dB Bandwidth (CH 114)
	
802.11ac_VHT160 UNII 4 BAND 26 dB Bandwidth(CH 163)	
	

10.3 6 dB BANDWIDTH

[Ant.1]

802.11a Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	16.34	> 0.5	Pass
5785	157	16.34	> 0.5	Pass
5825	165	16.35	> 0.5	Pass
5845	169	16.33	> 0.5	Pass
5865	173	16.34	> 0.5	Pass
5885	177	16.33	> 0.5	Pass

802.11n(HT20) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	17.30	> 0.5	Pass
5785	157	17.33	> 0.5	Pass
5825	165	17.12	> 0.5	Pass
5845	169	17.12	> 0.5	Pass
5865	173	16.98	> 0.5	Pass
5885	177	17.07	> 0.5	Pass

802.11ac(VHT20) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	16.97	> 0.5	Pass
5785	157	16.98	> 0.5	Pass
5825	165	17.28	> 0.5	Pass
5845	169	17.31	> 0.5	Pass
5865	173	17.21	> 0.5	Pass
5885	177	17.29	> 0.5	Pass

802.11n(HT40) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5755	151	35.45	> 0.5	Pass
5795	159	35.47	> 0.5	Pass
5835	167	35.45	> 0.5	Pass
5875	175	35.58	> 0.5	Pass

802.11ac(VHT40) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5755	151	35.60	> 0.5	Pass
5795	159	35.47	> 0.5	Pass
5835	167	35.58	> 0.5	Pass
5875	175	35.43	> 0.5	Pass

802.11ac(VHT80) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5775	155	75.35	> 0.5	Pass
5855	171	75.51	> 0.5	Pass

802.11ac(VHT160) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5815	163	155.7	> 0.5	Pass

[Ant.2]

802.11a Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	16.34	> 0.5	Pass
5785	157	16.34	> 0.5	Pass
5825	165	16.34	> 0.5	Pass
5845	169	16.35	> 0.5	Pass
5865	173	16.35	> 0.5	Pass
5885	177	16.36	> 0.5	Pass

802.11n(HT20) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	17.09	> 0.5	Pass
5785	157	17.09	> 0.5	Pass
5825	165	17.03	> 0.5	Pass
5845	169	17.30	> 0.5	Pass
5865	173	17.06	> 0.5	Pass
5885	177	17.29	> 0.5	Pass

802.11ac(VHT20) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5745	149	16.98	> 0.5	Pass
5785	157	17.33	> 0.5	Pass
5825	165	17.06	> 0.5	Pass
5845	169	17.11	> 0.5	Pass
5865	173	17.01	> 0.5	Pass
5885	177	17.31	> 0.5	Pass

802.11n(HT40) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5755	151	35.73	> 0.5	Pass
5795	159	35.59	> 0.5	Pass
5835	167	35.44	> 0.5	Pass
5875	175	35.57	> 0.5	Pass

802.11ac(VHT40) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5755	151	35.54	> 0.5	Pass
5795	159	35.58	> 0.5	Pass
5835	167	35.47	> 0.5	Pass
5875	175	35.58	> 0.5	Pass

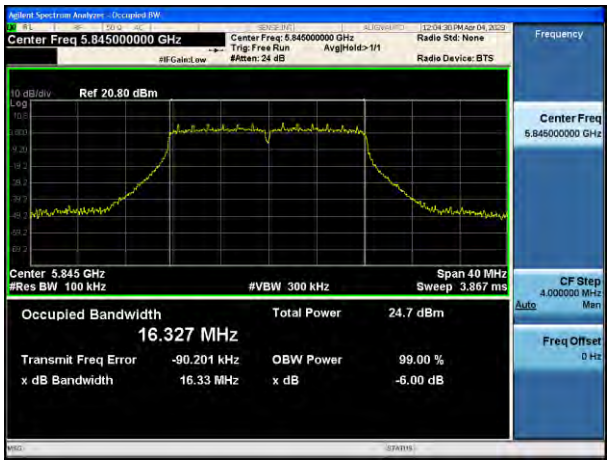
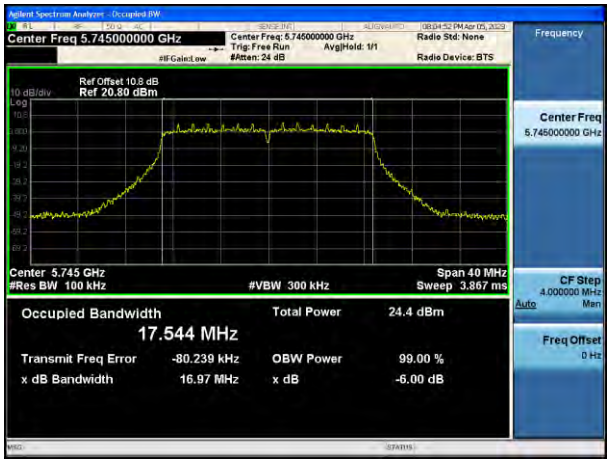
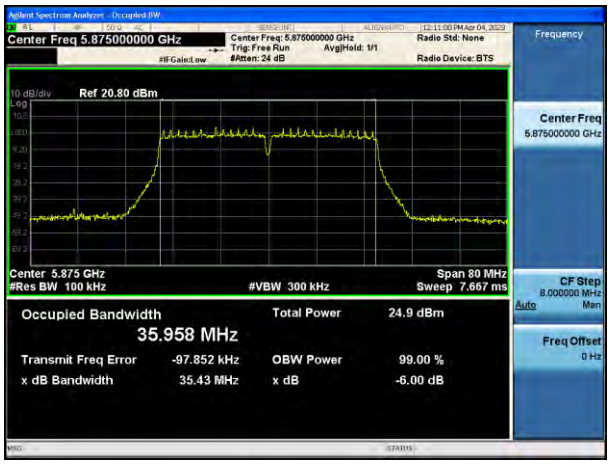
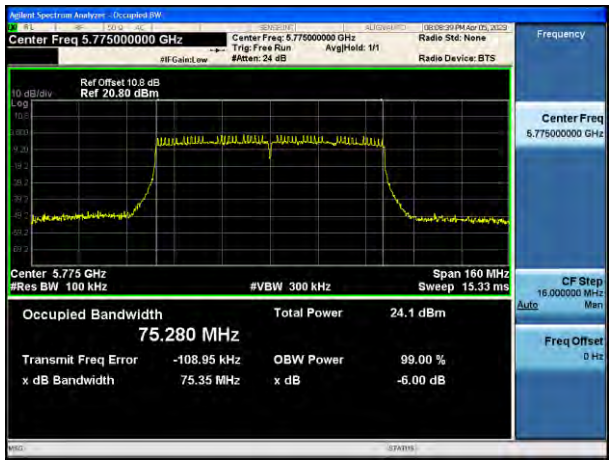
802.11ac(VHT80) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5775	155	75.34	> 0.5	Pass
5855	171	75.34	> 0.5	Pass

802.11ac(VHT160) Mode		Measured Bandwidth [MHz]	Limit [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
5815	163	155.7	> 0.5	Pass

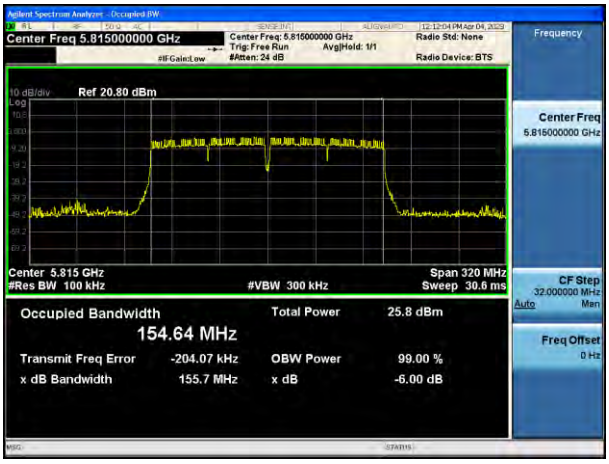
[Ant.1]

▣ Test Plots

Note: In order to simplify the report, attached plots were only the narrowest channel.

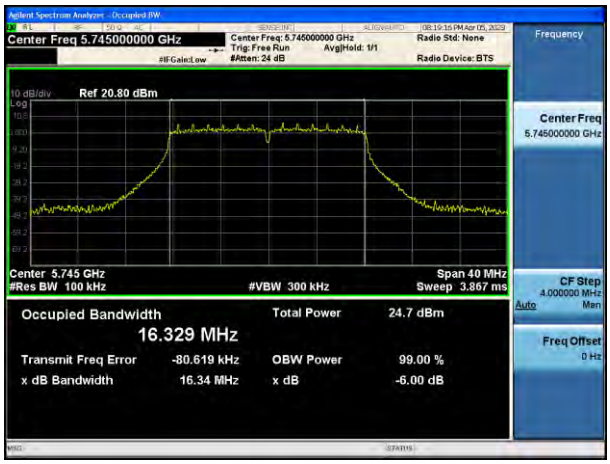
802.11a (CH.169)	802.11n(HT20) (CH.173)
	
802.11ac(VHT20) (CH.149)	**802.11n(HT40) (CH.167)**
	
802.11ac(VHT40) (CH.175)	**802.11ac(VHT80) (CH.155)**
	

802.11ac(VHT160) (CH.163)

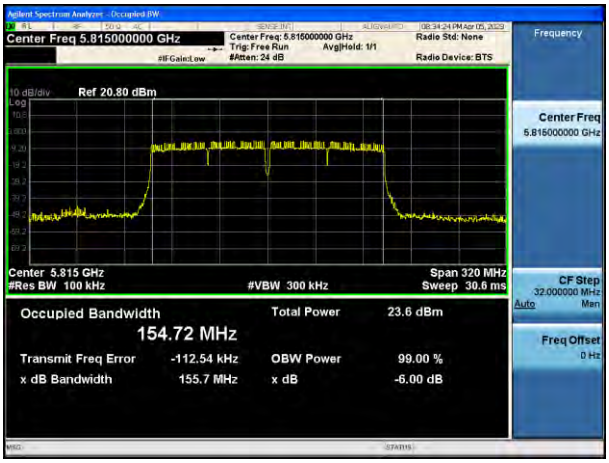


[Ant.2]

Note: In order to simplify the report, attached plots were only the narrowest channel.

802.11a (CH.149)	802.11n(HT20) (CH.165)
	
802.11ac(VHT20) (CH.149)	**802.11n(HT40) (CH.167)**
	
802.11ac(VHT40) (CH.167)	**802.11ac(VHT80) (CH.171)**
	

802.11ac(VHT160) (CH.163)



10.4 OUTPUT POWER MEASUREMENT

Straddle channel data in the table below are for reporting purposes only.

Straddle channel data were added in section 10.7.3.

Limit

(UNII 1) : 23.98 dBm

(UNII 2A, 2C) : 23.98 dBm or 11 dBm + 10 log B, (where B is the 26 dB emission bandwidth in megahertz.)

(UNII 3) : 30.00 dBm

(UNII 4) : EIRP 30.0 dBm/MHz

(UNII 3&4) : Worst limit 30.00 dBm ➔UNII 4 Band Antenna Gain Negative

[MIMO(ANT1)]

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	18M	a	16.21	0.755	16.96	-	-	23.98
5200	40	18M	a	16.24	0.755	17.00	-	-	23.98
5240	48	18M	a	16.77	0.755	17.53	-	-	23.98
5260	52	18M	a	16.81	0.755	17.56	-	-	23.75
5280	56	18M	a	16.89	0.755	17.65	-	-	23.81
5320	64	18M	a	17.12	0.755	17.88	-	-	23.80
5500	100	18M	a	16.96	0.755	17.72	-	-	23.77
5600	120	18M	a	16.97	0.755	17.72	-	-	23.78
5720	144	18M	a	17.04	0.755	17.80	-	-	23.80
5745	149	18M	a	16.90	0.755	17.66	-	-	30.00
5785	157	18M	a	15.89	0.755	16.65	-	-	30.00
5825	165	18M	a	17.10	0.755	17.86	-	-	30.00
5845	169	18M	a	17.03	0.755	17.78	-3.89	13.89	EIRP ≤ 30dBm
5865	173	18M	a	16.89	0.755	17.64	-3.89	13.75	EIRP ≤ 30dBm
5885	177	18M	a	16.99	0.755	17.75	-3.89	13.86	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	n20	15.50	1.416	16.92	-	-	23.98
5200	40	MCS4	n20	15.57	1.416	16.99	-	-	23.98
5240	48	MCS4	n20	16.05	1.416	17.47	-	-	23.98
5260	52	MCS4	n20	16.12	1.416	17.54	-	-	23.98
5280	56	MCS4	n20	16.15	1.416	17.56	-	-	23.98
5320	64	MCS4	n20	16.40	1.416	17.81	-	-	23.98
5500	100	MCS4	n20	16.24	1.416	17.66	-	-	23.98
5600	120	MCS4	n20	16.20	1.416	17.62	-	-	23.98
5720	144	MCS4	n20	16.42	1.416	17.83	-	-	23.98
5745	149	MCS4	n20	16.19	1.416	17.61	-	-	30.00
5785	157	MCS4	n20	15.12	1.416	16.54	-	-	30.00
5825	165	MCS4	n20	16.30	1.416	17.72	-	-	30.00
5845	169	MCS4	n20	16.28	1.416	17.70	-3.89	13.81	EIRP ≤ 30dBm
5865	173	MCS4	n20	16.18	1.416	17.59	-3.89	13.70	EIRP ≤ 30dBm
5885	177	MCS4	n20	16.21	1.416	17.63	-3.89	13.74	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	ac20	15.75	1.436	17.19	-	-	23.98
5200	40	MCS4	ac20	15.73	1.436	17.17	-	-	23.98
5240	48	MCS4	ac20	16.18	1.436	17.62	-	-	23.98
5260	52	MCS4	ac20	16.18	1.436	17.62	-	-	23.98
5280	56	MCS4	ac20	16.25	1.436	17.69	-	-	23.98
5320	64	MCS4	ac20	16.42	1.436	17.86	-	-	23.98
5500	100	MCS4	ac20	16.33	1.436	17.77	-	-	23.98
5600	120	MCS4	ac20	16.34	1.436	17.78	-	-	23.98
5720	144	MCS4	ac20	16.49	1.436	17.93	-	-	23.98
5745	149	MCS4	ac20	16.35	1.436	17.79	-	-	30.00
5785	157	MCS4	ac20	15.25	1.436	16.69	-	-	30.00
5825	165	MCS4	ac20	16.41	1.436	17.85	-	-	30.00
5845	169	MCS4	ac20	16.40	1.436	17.84	-3.89	13.95	EIRP ≤ 30dBm
5865	173	MCS4	ac20	16.12	1.436	17.56	-3.89	13.67	EIRP ≤ 30dBm
5885	177	MCS4	ac20	16.01	1.436	17.44	-3.89	13.55	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	n40	14.66	0.644	15.30	-	-	23.98
5230	46	MCS0	n40	16.08	0.644	16.72	-	-	23.98
5270	54	MCS0	n40	16.24	0.644	16.88	-	-	23.98
5310	62	MCS0	n40	14.65	0.644	15.29	-	-	23.98
5510	102	MCS0	n40	15.36	0.644	16.00	-	-	23.98
5590	118	MCS0	n40	16.21	0.644	16.85	-	-	23.98
5710	142	MCS0	n40	16.58	0.644	17.22	-	-	23.98
5755	151	MCS0	n40	16.26	0.644	16.90	-	-	30.00
5795	159	MCS0	n40	16.03	0.644	16.67	-	-	30.00
5835	167	MCS0	n40	16.07	0.644	16.71	-3.89	12.82	EIRP ≤ 30dBm
5875	175	MCS0	n40	15.92	0.644	16.56	-3.89	12.67	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	ac40	14.80	0.621	15.42	-	-	23.98
5230	46	MCS0	ac40	15.99	0.621	16.61	-	-	23.98
5270	54	MCS0	ac40	16.18	0.621	16.80	-	-	23.98
5310	62	MCS0	ac40	14.65	0.621	15.27	-	-	23.98
5510	102	MCS0	ac40	15.41	0.621	16.03	-	-	23.98
5590	118	MCS0	ac40	16.18	0.621	16.80	-	-	23.98
5710	142	MCS0	ac40	16.54	0.621	17.16	-	-	23.98
5755	151	MCS0	ac40	16.23	0.621	16.85	-	-	30.00
5795	159	MCS0	ac40	16.05	0.621	16.67	-	-	30.00
5835	167	MCS0	ac40	16.12	0.621	16.74	-3.89	12.85	EIRP ≤ 30dBm
5875	175	MCS0	ac40	15.93	0.621	16.55	-3.89	12.66	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5210	42	MCS6	ac80	8.06	6.832	14.89	-	-	23.98
5290	58	MCS6	ac80	8.15	6.832	14.98	-	-	23.98
5530	106	MCS6	ac80	9.25	6.832	16.08	-	-	23.98
5610	122	MCS6	ac80	10.12	6.832	16.95	-	-	23.98
5690	138	MCS6	ac80	10.55	6.832	17.38	-	-	23.98
5775	155	MCS6	ac80	9.75	6.832	16.58	-	-	30.00
5855	171	MCS6	ac80	9.97	6.832	16.80	-3.89	12.91	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5250	50	MCS0	ac160	11.06	2.268	13.33	-	-	23.98
5570	114	MCS0	ac160	11.35	2.268	13.62	-	-	23.98
5815	163	MCS0	ac160	12.38	2.268	14.65	-3.89	10.76	EIRP ≤ 30dBm

[MIMO(ANT2)]

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	18M	a	17.15	0.755	17.91	-	-	23.98
5200	40	18M	a	17.11	0.755	17.87	-	-	23.98
5240	48	18M	a	16.67	0.755	17.43	-	-	23.98
5260	52	18M	a	16.78	0.755	17.54	-	-	23.75
5280	56	18M	a	16.96	0.755	17.72	-	-	23.81
5320	64	18M	a	17.22	0.755	17.98	-	-	23.80
5500	100	18M	a	16.83	0.755	17.59	-	-	23.77
5600	120	18M	a	17.10	0.755	17.86	-	-	23.78
5720	144	18M	a	16.69	0.755	17.45	-	-	23.80
5745	149	18M	a	17.12	0.755	17.88	-	-	30.00
5785	157	18M	a	16.47	0.755	17.23	-	-	30.00
5825	165	18M	a	17.08	0.755	17.84	-	-	30.00
5845	169	18M	a	17.18	0.755	17.93	-2.33	15.60	EIRP ≤ 30dBm
5865	173	18M	a	17.14	0.755	17.90	-2.33	15.57	EIRP ≤ 30dBm
5885	177	18M	a	15.80	0.755	16.56	-2.33	14.23	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	n20	16.36	1.416	17.78	-	-	23.98
5200	40	MCS4	n20	16.34	1.416	17.76	-	-	23.98
5240	48	MCS4	n20	15.94	1.416	17.35	-	-	23.98
5260	52	MCS4	n20	16.04	1.416	17.45	-	-	23.98
5280	56	MCS4	n20	16.17	1.416	17.58	-	-	23.98
5320	64	MCS4	n20	16.51	1.416	17.93	-	-	23.98
5500	100	MCS4	n20	16.11	1.416	17.53	-	-	23.98
5600	120	MCS4	n20	16.35	1.416	17.76	-	-	23.98
5720	144	MCS4	n20	15.94	1.416	17.35	-	-	23.98
5745	149	MCS4	n20	16.37	1.416	17.78	-	-	30.00
5785	157	MCS4	n20	15.65	1.416	17.06	-	-	30.00
5825	165	MCS4	n20	16.29	1.416	17.70	-	-	30.00
5845	169	MCS4	n20	16.30	1.416	17.72	-2.33	15.39	EIRP ≤ 30dBm
5865	173	MCS4	n20	16.25	1.416	17.66	-2.33	15.33	EIRP ≤ 30dBm
5885	177	MCS4	n20	14.96	1.416	16.38	-2.33	14.05	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	ac20	16.37	1.436	17.80	-	-	23.98
5200	40	MCS4	ac20	16.31	1.436	17.75	-	-	23.98
5240	48	MCS4	ac20	15.93	1.436	17.37	-	-	23.98
5260	52	MCS4	ac20	16.03	1.436	17.47	-	-	23.98
5280	56	MCS4	ac20	16.21	1.436	17.64	-	-	23.98
5320	64	MCS4	ac20	16.56	1.436	17.99	-	-	23.98
5500	100	MCS4	ac20	16.14	1.436	17.58	-	-	23.98
5600	120	MCS4	ac20	16.38	1.436	17.82	-	-	23.98
5720	144	MCS4	ac20	16.04	1.436	17.47	-	-	23.98
5745	149	MCS4	ac20	16.30	1.436	17.74	-	-	30.00
5785	157	MCS4	ac20	15.68	1.436	17.12	-	-	30.00
5825	165	MCS4	ac20	16.38	1.436	17.82	-	-	30.00
5845	169	MCS4	ac20	16.41	1.436	17.85	-2.33	15.52	EIRP ≤ 30dBm
5865	173	MCS4	ac20	16.33	1.436	17.77	-2.33	15.44	EIRP ≤ 30dBm
5885	177	MCS4	ac20	15.07	1.436	16.51	-2.33	14.18	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	n40	15.25	0.644	15.89	-	-	23.98
5230	46	MCS0	n40	15.75	0.644	16.40	-	-	23.98
5270	54	MCS0	n40	16.21	0.644	16.85	-	-	23.98
5310	62	MCS0	n40	14.49	0.644	15.13	-	-	23.98
5510	102	MCS0	n40	14.97	0.644	15.61	-	-	23.98
5590	118	MCS0	n40	16.29	0.644	16.93	-	-	23.98
5710	142	MCS0	n40	16.12	0.644	16.76	-	-	23.98
5755	151	MCS0	n40	16.29	0.644	16.93	-	-	30.00
5795	159	MCS0	n40	16.57	0.644	17.21	-	-	30.00
5835	167	MCS0	n40	16.03	0.644	16.68	-2.33	14.35	EIRP ≤ 30dBm
5875	175	MCS0	n40	16.16	0.644	16.81	-2.33	14.48	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	ac40	15.36	0.621	15.98	-	-	23.98
5230	46	MCS0	ac40	15.88	0.621	16.50	-	-	23.98
5270	54	MCS0	ac40	16.02	0.621	16.64	-	-	23.98
5310	62	MCS0	ac40	14.52	0.621	15.14	-	-	23.98
5510	102	MCS0	ac40	14.97	0.621	15.59	-	-	23.98
5590	118	MCS0	ac40	16.30	0.621	16.92	-	-	23.98
5710	142	MCS0	ac40	16.21	0.621	16.83	-	-	23.98
5755	151	MCS0	ac40	16.30	0.621	16.92	-	-	30.00
5795	159	MCS0	ac40	16.59	0.621	17.21	-	-	30.00
5835	167	MCS0	ac40	16.09	0.621	16.71	-2.33	14.38	EIRP ≤ 30dBm
5875	175	MCS0	ac40	16.22	0.621	16.84	-2.33	14.51	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5210	42	MCS6	ac80	7.56	6.832	14.39	-	-	23.98
5290	58	MCS6	ac80	8.02	6.832	14.85	-	-	23.98
5530	106	MCS6	ac80	8.69	6.832	15.53	-	-	23.98
5610	122	MCS6	ac80	9.98	6.832	16.81	-	-	23.98
5690	138	MCS6	ac80	9.99	6.832	16.82	-	-	23.98
5775	155	MCS6	ac80	10.20	6.832	17.03	-	-	30.00
5855	171	MCS6	ac80	10.05	6.832	16.88	-2.33	14.55	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Measured Power [dBm]	Duty Cyle Factor [dB]	Total Power [dBm]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5250	50	MCS0	ac160	10.35	2.268	12.62	-	-	23.98
5570	114	MCS0	ac160	11.11	2.268	13.38	-	-	23.98
5815	163	MCS0	ac160	12.59	2.268	14.86	-2.33	12.53	EIRP ≤ 30dBm

[MIMO(ANT1+ANT2)]

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	MIMO Total Power [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	18M	a	16.96	17.91	20.47	-	-	23.98
5200	40	18M	a	17.00	17.87	20.46	-	-	23.98
5240	48	18M	a	17.53	17.43	20.49	-	-	23.98
5260	52	18M	a	17.56	17.54	20.56	-	-	23.75
5280	56	18M	a	17.65	17.72	20.69	-	-	23.81
5320	64	18M	a	17.88	17.98	20.94	-	-	23.80
5500	100	18M	a	17.72	17.59	20.66	-	-	23.77
5600	120	18M	a	17.72	17.86	20.80	-	-	23.78
5720	144	18M	a	17.80	17.45	20.64	-	-	23.80
5745	149	18M	a	17.66	17.88	20.78	-	-	30.00
5785	157	18M	a	16.65	17.23	19.96	-	-	30.00
5825	165	18M	a	17.86	17.84	20.86	-	-	30.00
5845	169	18M	a	17.78	17.93	20.87	-0.06	20.81	EIRP ≤ 30dBm
5865	173	18M	a	17.64	17.90	20.78	-0.06	20.72	EIRP ≤ 30dBm
5885	177	18M	a	17.75	16.56	20.20	-0.06	20.14	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	MIMO Total Power [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	n20	16.92	17.78	20.38	-	-	23.98
5200	40	MCS4	n20	16.99	17.76	20.40	-	-	23.98
5240	48	MCS4	n20	17.47	17.35	20.42	-	-	23.98
5260	52	MCS4	n20	17.54	17.45	20.50	-	-	23.98
5280	56	MCS4	n20	17.56	17.58	20.58	-	-	23.98
5320	64	MCS4	n20	17.81	17.93	20.88	-	-	23.98
5500	100	MCS4	n20	17.66	17.53	20.60	-	-	23.98
5600	120	MCS4	n20	17.62	17.76	20.70	-	-	23.98
5720	144	MCS4	n20	17.83	17.35	20.61	-	-	23.98
5745	149	MCS4	n20	17.61	17.78	20.71	-	-	30.00
5785	157	MCS4	n20	16.54	17.06	19.82	-	-	30.00
5825	165	MCS4	n20	17.72	17.70	20.72	-	-	30.00
5845	169	MCS4	n20	17.70	17.72	20.72	-0.06	20.66	EIRP ≤ 30dBm
5865	173	MCS4	n20	17.59	17.66	20.64	-0.06	20.58	EIRP ≤ 30dBm
5885	177	MCS4	n20	17.63	16.38	20.06	-0.06	20.00	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	MIMO Total Power [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	ac20	17.19	17.80	20.52	-	-	23.98
5200	40	MCS4	ac20	17.17	17.75	20.48	-	-	23.98
5240	48	MCS4	ac20	17.62	17.37	20.50	-	-	23.98
5260	52	MCS4	ac20	17.62	17.47	20.55	-	-	23.98
5280	56	MCS4	ac20	17.69	17.64	20.67	-	-	23.98
5320	64	MCS4	ac20	17.86	17.99	20.93	-	-	23.98
5500	100	MCS4	ac20	17.77	17.58	20.68	-	-	23.98
5600	120	MCS4	ac20	17.78	17.82	20.81	-	-	23.98
5720	144	MCS4	ac20	17.93	17.47	20.72	-	-	23.98
5745	149	MCS4	ac20	17.79	17.74	20.77	-	-	30.00
5785	157	MCS4	ac20	16.69	17.12	19.92	-	-	30.00
5825	165	MCS4	ac20	17.85	17.82	20.84	-	-	30.00
5845	169	MCS4	ac20	17.84	17.85	20.85	-0.06	20.79	EIRP ≤ 30dBm
5865	173	MCS4	ac20	17.56	17.77	20.67	-0.06	20.61	EIRP ≤ 30dBm
5885	177	MCS4	ac20	17.44	16.51	20.01	-0.06	19.95	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	MIMO Total Power [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	n40	15.30	15.89	18.62	-	-	23.98
5230	46	MCS0	n40	16.72	16.40	19.57	-	-	23.98
5270	54	MCS0	n40	16.88	16.85	19.88	-	-	23.98
5310	62	MCS0	n40	15.29	15.13	18.22	-	-	23.98
5510	102	MCS0	n40	16.00	15.61	18.82	-	-	23.98
5590	118	MCS0	n40	16.85	16.93	19.90	-	-	23.98
5710	142	MCS0	n40	17.22	16.76	20.01	-	-	23.98
5755	151	MCS0	n40	16.90	16.93	19.93	-	-	30.00
5795	159	MCS0	n40	16.67	17.21	19.96	-	-	30.00
5835	167	MCS0	n40	16.71	16.68	19.70	-0.06	19.64	EIRP ≤ 30dBm
5875	175	MCS0	n40	16.56	16.81	19.70	-0.06	19.64	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	MIMO Total Power [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	ac40	15.42	15.98	18.72	-	-	23.98
5230	46	MCS0	ac40	16.61	16.50	19.57	-	-	23.98
5270	54	MCS0	ac40	16.80	16.64	19.73	-	-	23.98
5310	62	MCS0	ac40	15.27	15.14	18.22	-	-	23.98
5510	102	MCS0	ac40	16.03	15.59	18.83	-	-	23.98
5590	118	MCS0	ac40	16.80	16.92	19.87	-	-	23.98
5710	142	MCS0	ac40	17.16	16.83	20.01	-	-	23.98
5755	151	MCS0	ac40	16.85	16.92	19.90	-	-	30.00
5795	159	MCS0	ac40	16.67	17.21	19.96	-	-	30.00
5835	167	MCS0	ac40	16.74	16.71	19.74	-0.06	19.68	EIRP ≤ 30dBm
5875	175	MCS0	ac40	16.55	16.84	19.71	-0.06	19.65	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	MIMO Total Power [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5210	42	MCS6	ac80	14.89	14.39	17.66	-	-	23.98
5290	58	MCS6	ac80	14.98	14.85	17.93	-	-	23.98
5530	106	MCS6	ac80	16.08	15.53	18.82	-	-	23.98
5610	122	MCS6	ac80	16.95	16.81	19.89	-	-	23.98
5690	138	MCS6	ac80	17.38	16.82	20.12	-	-	23.98
5775	155	MCS6	ac80	16.58	17.03	19.82	-	-	30.00
5855	171	MCS6	ac80	16.80	16.88	19.85	-0.06	19.79	EIRP ≤ 30dBm

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	Ant.1 Measured Power [dBm] + Duty Cycle Factor[dB]	MIMO Total Power [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5250	50	MCS0	ac160	13.33	12.62	16.00	-	-	23.98
5570	114	MCS0	ac160	13.62	13.38	16.51	-	-	23.98
5815	163	MCS0	ac160	14.65	14.86	17.76	-0.06	17.70	EIRP ≤ 30dBm

10.5 POWER SPECTRAL DENSITY

[MIMO(ANT1)]

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	18M	a	5.060	0.755	5.815	-	-	11 dBm/MHz
5200	40	18M	a	5.163	0.755	5.918	-	-	11 dBm/MHz
5240	48	18M	a	5.477	0.755	6.232	-	-	11 dBm/MHz
5260	52	18M	a	5.728	0.755	6.483	-	-	11 dBm/MHz
5280	56	18M	a	5.829	0.755	6.584	-	-	11 dBm/MHz
5320	64	18M	a	5.719	0.755	6.474	-	-	11 dBm/MHz
5500	100	18M	a	5.741	0.755	6.496	-	-	11 dBm/MHz
5600	120	18M	a	5.623	0.755	6.378	-	-	11 dBm/MHz
5720	144	18M	a	5.732	0.755	6.487	-	-	11 dBm/MHz
5745	149	18M	a	3.063	0.755	3.818	-	-	30 dBm/500kHz
5785	157	18M	a	2.809	0.755	3.564	-	-	30 dBm/500kHz
5825	165	18M	a	3.177	0.755	3.932	-	-	30 dBm/500kHz
5845	169	18M	a	6.290	0.755	7.045	-3.89	3.155	14 dBm/EIRP
5865	173	18M	a	5.812	0.755	6.567	-3.89	2.677	14 dBm/EIRP
5885	177	18M	a	5.968	0.755	6.723	-3.89	2.833	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	n20	3.992	1.416	5.408	-	-	11 dBm/MHz
5200	40	MCS4	n20	4.050	1.416	5.466	-	-	11 dBm/MHz
5240	48	MCS4	n20	4.541	1.416	5.957	-	-	11 dBm/MHz
5260	52	MCS4	n20	4.549	1.416	5.965	-	-	11 dBm/MHz
5280	56	MCS4	n20	4.638	1.416	6.054	-	-	11 dBm/MHz
5320	64	MCS4	n20	4.908	1.416	6.324	-	-	11 dBm/MHz
5500	100	MCS4	n20	4.806	1.416	6.222	-	-	11 dBm/MHz
5600	120	MCS4	n20	4.686	1.416	6.102	-	-	11 dBm/MHz
5720	144	MCS4	n20	4.880	1.416	6.296	-	-	11 dBm/MHz
5745	149	MCS4	n20	1.882	1.416	3.298	-	-	30 dBm/500kHz
5785	157	MCS4	n20	1.931	1.416	3.347	-	-	30 dBm/500kHz
5825	165	MCS4	n20	2.371	1.416	3.787	-	-	30 dBm/500kHz
5845	169	MCS4	n20	4.838	1.416	6.254	-3.89	2.364	14 dBm/EIRP
5865	173	MCS4	n20	4.718	1.416	6.134	-3.89	2.244	14 dBm/EIRP
5885	177	MCS4	n20	4.740	1.416	6.156	-3.89	2.266	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	ac20	4.176	1.436	5.612	-	-	11 dBm/MHz
5200	40	MCS4	ac20	4.102	1.436	5.538	-	-	11 dBm/MHz
5240	48	MCS4	ac20	4.653	1.436	6.089	-	-	11 dBm/MHz
5260	52	MCS4	ac20	4.790	1.436	6.226	-	-	11 dBm/MHz
5280	56	MCS4	ac20	4.700	1.436	6.136	-	-	11 dBm/MHz
5320	64	MCS4	ac20	4.874	1.436	6.310	-	-	11 dBm/MHz
5500	100	MCS4	ac20	4.922	1.436	6.358	-	-	11 dBm/MHz
5600	120	MCS4	ac20	4.417	1.436	5.853	-	-	11 dBm/MHz
5720	144	MCS4	ac20	5.073	1.436	6.509	-	-	11 dBm/MHz
5745	149	MCS4	ac20	2.169	1.436	3.605	-	-	30 dBm/500kHz
5785	157	MCS4	ac20	1.981	1.436	3.417	-	-	30 dBm/500kHz
5825	165	MCS4	ac20	2.272	1.436	3.708	-	-	30 dBm/500kHz
5845	169	MCS4	ac20	4.908	1.436	6.344	-3.89	2.454	14 dBm/EIRP
5865	173	MCS4	ac20	4.599	1.436	6.035	-3.89	2.145	14 dBm/EIRP
5885	177	MCS4	ac20	5.128	1.436	6.564	-3.89	2.674	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	n40	0.719	0.644	1.363	-	-	11 dBm/MHz
5230	46	MCS0	n40	-1.233	0.644	-0.589	-	-	11 dBm/MHz
5270	54	MCS0	n40	-0.896	0.644	-0.252	-	-	11 dBm/MHz
5310	62	MCS0	n40	0.243	0.644	0.887	-	-	11 dBm/MHz
5510	102	MCS0	n40	1.140	0.644	1.784	-	-	11 dBm/MHz
5590	118	MCS0	n40	-1.242	0.644	-0.598	-	-	11 dBm/MHz
5710	142	MCS0	n40	-0.522	0.644	0.122	-	-	11 dBm/MHz
5755	151	MCS0	n40	-3.712	0.644	-3.068	-	-	30 dBm/500kHz
5795	159	MCS0	n40	-3.799	0.644	-3.155	-	-	30 dBm/500kHz
5835	167	MCS0	n40	-1.126	0.644	-0.482	-3.89	-4.372	14 dBm/EIRP
5875	175	MCS0	n40	-1.306	0.644	-0.662	-3.89	-4.552	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	ac40	0.618	0.621	1.239	-	-	11 dBm/MHz
5230	46	MCS0	ac40	1.962	0.621	2.583	-	-	11 dBm/MHz
5270	54	MCS0	ac40	1.950	0.621	2.571	-	-	11 dBm/MHz
5310	62	MCS0	ac40	0.428	0.621	1.049	-	-	11 dBm/MHz
5510	102	MCS0	ac40	1.201	0.621	1.822	-	-	11 dBm/MHz
5590	118	MCS0	ac40	2.091	0.621	2.712	-	-	11 dBm/MHz
5710	142	MCS0	ac40	2.123	0.621	2.744	-	-	11 dBm/MHz
5755	151	MCS0	ac40	-0.558	0.621	0.063	-	-	30 dBm/500kHz
5795	159	MCS0	ac40	-0.755	0.621	-0.134	-	-	30 dBm/500kHz
5835	167	MCS0	ac40	2.195	0.621	2.816	-3.89	-1.074	14 dBm/EIRP
5875	175	MCS0	ac40	2.042	0.621	2.663	-3.89	-1.227	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5210	42	MCS6	ac80	-8.375	6.832	-1.543	-	-	11 dBm/MHz
5290	58	MCS6	ac80	-7.590	6.832	-0.758	-	-	11 dBm/MHz
5530	106	MCS6	ac80	-7.408	6.832	-0.576	-	-	11 dBm/MHz
5610	122	MCS6	ac80	-6.789	6.832	0.043	-	-	11 dBm/MHz
5690	138	MCS6	ac80	-5.920	6.832	0.912	-	-	11 dBm/MHz
5775	155	MCS6	ac80	-8.409	6.832	-1.577	-	-	30 dBm/500kHz
5855	171	MCS6	ac80	-6.896	6.832	-0.064	-3.89	-3.954	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5250	50	MCS0	ac160	-8.864	2.268	-6.596	-	-	11 dBm/MHz
5570	114	MCS0	ac160	-8.544	2.268	-6.276	-	-	11 dBm/MHz
5815	163	MCS0	ac160	-7.576	2.268	-5.308	-3.89	-9.198	14 dBm/EIRP

[MIMO(ANT2)]

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	18M	a	6.217	0.755	6.972	-	-	11 dBm/MHz
5200	40	18M	a	6.220	0.755	6.975	-	-	11 dBm/MHz
5240	48	18M	a	5.767	0.755	6.522	-	-	11 dBm/MHz
5260	52	18M	a	6.137	0.755	6.892	-	-	11 dBm/MHz
5280	56	18M	a	6.109	0.755	6.864	-	-	11 dBm/MHz
5320	64	18M	a	6.540	0.755	7.295	-	-	11 dBm/MHz
5500	100	18M	a	6.150	0.755	6.905	-	-	11 dBm/MHz
5600	120	18M	a	6.119	0.755	6.874	-	-	11 dBm/MHz
5720	144	18M	a	5.751	0.755	6.506	-	-	11 dBm/MHz
5745	149	18M	a	3.451	0.755	4.206	-	-	30 dBm/500kHz
5785	157	18M	a	3.934	0.755	4.689	-	-	30 dBm/500kHz
5825	165	18M	a	3.487	0.755	4.242	-	-	30 dBm/500kHz
5845	169	18M	a	6.356	0.755	7.111	-2.33	4.781	14 dBm/EIRP
5865	173	18M	a	6.469	0.755	7.224	-2.33	4.894	14 dBm/EIRP
5885	177	18M	a	5.019	0.755	5.774	-2.33	3.444	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	n20	5.770	1.416	7.186	-	-	11 dBm/MHz
5200	40	MCS4	n20	5.428	1.416	6.844	-	-	11 dBm/MHz
5240	48	MCS4	n20	5.056	1.416	6.472	-	-	11 dBm/MHz
5260	52	MCS4	n20	5.195	1.416	6.611	-	-	11 dBm/MHz
5280	56	MCS4	n20	5.404	1.416	6.820	-	-	11 dBm/MHz
5320	64	MCS4	n20	6.018	1.416	7.434	-	-	11 dBm/MHz
5500	100	MCS4	n20	4.971	1.416	6.387	-	-	11 dBm/MHz
5600	120	MCS4	n20	5.660	1.416	7.076	-	-	11 dBm/MHz
5720	144	MCS4	n20	5.332	1.416	6.748	-	-	11 dBm/MHz
5745	149	MCS4	n20	2.629	1.416	4.045	-	-	30 dBm/500kHz
5785	157	MCS4	n20	3.179	1.416	4.595	-	-	30 dBm/500kHz
5825	165	MCS4	n20	2.694	1.416	4.110	-	-	30 dBm/500kHz
5845	169	MCS4	n20	5.738	1.416	7.154	-2.33	4.824	14 dBm/EIRP
5865	173	MCS4	n20	5.619	1.416	7.035	-2.33	4.705	14 dBm/EIRP
5885	177	MCS4	n20	4.475	1.416	5.891	-2.33	3.561	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	ac20	4.993	1.436	6.429	-	-	11 dBm/MHz
5200	40	MCS4	ac20	5.067	1.436	6.503	-	-	11 dBm/MHz
5240	48	MCS4	ac20	4.579	1.436	6.015	-	-	11 dBm/MHz
5260	52	MCS4	ac20	4.490	1.436	5.926	-	-	11 dBm/MHz
5280	56	MCS4	ac20	4.734	1.436	6.170	-	-	11 dBm/MHz
5320	64	MCS4	ac20	5.244	1.436	6.680	-	-	11 dBm/MHz
5500	100	MCS4	ac20	4.844	1.436	6.280	-	-	11 dBm/MHz
5600	120	MCS4	ac20	4.899	1.436	6.335	-	-	11 dBm/MHz
5720	144	MCS4	ac20	4.651	1.436	6.087	-	-	11 dBm/MHz
5745	149	MCS4	ac20	2.290	1.436	3.726	-	-	30 dBm/500kHz
5785	157	MCS4	ac20	2.569	1.436	4.005	-	-	30 dBm/500kHz
5825	165	MCS4	ac20	2.261	1.436	3.697	-	-	30 dBm/500kHz
5845	169	MCS4	ac20	5.156	1.436	6.592	-2.33	4.262	14 dBm/EIRP
5865	173	MCS4	ac20	5.193	1.436	6.629	-2.33	4.299	14 dBm/EIRP
5885	177	MCS4	ac20	3.688	1.436	5.124	-2.33	2.794	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	n40	0.829	0.644	1.473	-	-	11 dBm/MHz
5230	46	MCS0	n40	2.493	0.644	3.137	-	-	11 dBm/MHz
5270	54	MCS0	n40	2.614	0.644	3.258	-	-	11 dBm/MHz
5310	62	MCS0	n40	0.190	0.644	0.834	-	-	11 dBm/MHz
5510	102	MCS0	n40	0.415	0.644	1.059	-	-	11 dBm/MHz
5590	118	MCS0	n40	2.915	0.644	3.559	-	-	11 dBm/MHz
5710	142	MCS0	n40	2.688	0.644	3.332	-	-	11 dBm/MHz
5755	151	MCS0	n40	-0.033	0.644	0.611	-	-	30 dBm/500kHz
5795	159	MCS0	n40	0.650	0.644	1.294	-	-	30 dBm/500kHz
5835	167	MCS0	n40	3.015	0.644	3.659	-2.33	1.329	14 dBm/EIRP
5875	175	MCS0	n40	2.693	0.644	3.337	-2.33	1.007	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	ac40	0.927	0.621	1.548	-	-	11 dBm/MHz
5230	46	MCS0	ac40	2.123	0.621	2.744	-	-	11 dBm/MHz
5270	54	MCS0	ac40	2.331	0.621	2.952	-	-	11 dBm/MHz
5310	62	MCS0	ac40	0.187	0.621	0.808	-	-	11 dBm/MHz
5510	102	MCS0	ac40	0.421	0.621	1.042	-	-	11 dBm/MHz
5590	118	MCS0	ac40	2.777	0.621	3.398	-	-	11 dBm/MHz
5710	142	MCS0	ac40	2.292	0.621	2.913	-	-	11 dBm/MHz
5755	151	MCS0	ac40	-0.150	0.621	0.471	-	-	30 dBm/500kHz
5795	159	MCS0	ac40	-0.211	0.621	0.410	-	-	30 dBm/500kHz
5835	167	MCS0	ac40	2.569	0.621	3.190	-2.33	0.860	14 dBm/EIRP
5875	175	MCS0	ac40	2.407	0.621	3.028	-2.33	0.698	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5210	42	MCS6	ac80	-9.264	6.832	-2.432	-	-	11 dBm/MHz
5290	58	MCS6	ac80	-8.141	6.832	-1.309	-	-	11 dBm/MHz
5530	106	MCS6	ac80	-8.303	6.832	-1.471	-	-	11 dBm/MHz
5610	122	MCS6	ac80	-6.998	6.832	-0.166	-	-	11 dBm/MHz
5690	138	MCS6	ac80	-6.561	6.832	0.271	-	-	11 dBm/MHz
5775	155	MCS6	ac80	-8.666	6.832	-1.834	-	-	30 dBm/500kHz
5855	171	MCS6	ac80	-6.071	6.832	0.761	-2.33	-1.569	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	Mea. PSD [dBm/MHz]	Duty Cyle Factor [dB]	Total PSD [dBm/MHz]	Ant. Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5250	50	MCS0	ac160	-9.904	2.268	-7.636	-	-	11 dBm/MHz
5570	114	MCS0	ac160	-9.032	2.268	-6.764	-	-	11 dBm/MHz
5815	163	MCS0	ac160	-7.815	2.268	-5.547	-2.33	-7.877	14 dBm/EIRP

[MIMO(ANT1+ANT2)]

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	ANT.1 Measured PSD[dBm] + Duty Cycle Factor [dB]	ANT.2 Measured PSD[dBm] + Duty Cycle Factor [dB]	MIMO Total PSD [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	18M	a	5.815	6.972	9.443	-	-	11 dBm/MHz
5200	40	18M	a	5.918	6.975	9.489	-	-	11 dBm/MHz
5240	48	18M	a	6.232	6.522	9.390	-	-	11 dBm/MHz
5260	52	18M	a	6.483	6.892	9.703	-	-	11 dBm/MHz
5280	56	18M	a	6.584	6.864	9.737	-	-	11 dBm/MHz
5320	64	18M	a	6.474	7.295	9.915	-	-	11 dBm/MHz
5500	100	18M	a	6.496	6.905	9.716	-	-	11 dBm/MHz
5600	120	18M	a	6.378	6.874	9.644	-	-	11 dBm/MHz
5720	144	18M	a	6.487	6.506	9.507	-	-	11 dBm/MHz
5745	149	18M	a	3.818	4.206	7.027	-	-	30 dBm/500kHz
5785	157	18M	a	3.564	4.689	7.174	-	-	30 dBm/500kHz
5825	165	18M	a	3.932	4.242	7.101	-	-	30 dBm/500kHz
5845	169	18M	a	7.045	7.111	10.089	-0.06	10.029	14 dBm/EIRP
5865	173	18M	a	6.567	7.224	9.919	-0.06	9.859	14 dBm/EIRP
5885	177	18M	a	6.723	5.774	9.285	-0.06	9.225	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	ANT.1 Measured PSD[dBm] + Duty Cycle Factor [dB]	ANT.2 Measured PSD[dBm] + Duty Cycle Factor [dB]	MIMO Total PSD [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	n20	5.408	7.186	9.397	-	-	11 dBm/MHz
5200	40	MCS4	n20	5.466	6.844	9.220	-	-	11 dBm/MHz
5240	48	MCS4	n20	5.957	6.472	9.232	-	-	11 dBm/MHz
5260	52	MCS4	n20	5.965	6.611	9.310	-	-	11 dBm/MHz
5280	56	MCS4	n20	6.054	6.820	9.464	-	-	11 dBm/MHz
5320	64	MCS4	n20	6.324	7.434	9.924	-	-	11 dBm/MHz
5500	100	MCS4	n20	6.222	6.387	9.315	-	-	11 dBm/MHz
5600	120	MCS4	n20	6.102	7.076	9.626	-	-	11 dBm/MHz
5720	144	MCS4	n20	6.296	6.748	9.538	-	-	11 dBm/MHz
5745	149	MCS4	n20	3.298	4.045	6.698	-	-	30 dBm/500kHz
5785	157	MCS4	n20	3.347	4.595	7.026	-	-	30 dBm/500kHz
5825	165	MCS4	n20	3.787	4.110	6.962	-	-	30 dBm/500kHz
5845	169	MCS4	n20	6.254	7.154	9.737	-0.06	9.677	14 dBm/EIRP
5865	173	MCS4	n20	6.134	7.035	9.618	-0.06	9.558	14 dBm/EIRP
5885	177	MCS4	n20	6.156	5.891	9.036	-0.06	8.976	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	ANT.1 Measured PSD[dBm] + Duty Cycle Factor [dB]	ANT.2 Measured PSD[dBm] + Duty Cycle Factor [dB]	MIMO Total PSD [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5180	36	MCS4	ac20	5.612	6.429	9.050	-	-	11 dBm/MHz
5200	40	MCS4	ac20	5.538	6.503	9.057	-	-	11 dBm/MHz
5240	48	MCS4	ac20	6.089	6.015	9.062	-	-	11 dBm/MHz
5260	52	MCS4	ac20	6.226	5.926	9.089	-	-	11 dBm/MHz
5280	56	MCS4	ac20	6.136	6.170	9.163	-	-	11 dBm/MHz
5320	64	MCS4	ac20	6.310	6.680	9.509	-	-	11 dBm/MHz
5500	100	MCS4	ac20	6.358	6.280	9.329	-	-	11 dBm/MHz
5600	120	MCS4	ac20	5.853	6.335	9.111	-	-	11 dBm/MHz
5720	144	MCS4	ac20	6.509	6.087	9.313	-	-	11 dBm/MHz
5745	149	MCS4	ac20	3.605	3.726	6.676	-	-	30 dBm/500kHz
5785	157	MCS4	ac20	3.417	4.005	6.731	-	-	30 dBm/500kHz
5825	165	MCS4	ac20	3.708	3.697	6.712	-	-	30 dBm/500kHz
5845	169	MCS4	ac20	6.344	6.592	9.480	-0.06	9.420	14 dBm/EIRP
5865	173	MCS4	ac20	6.035	6.629	9.352	-0.06	9.292	14 dBm/EIRP
5885	177	MCS4	ac20	6.564	5.124	8.913	-0.06	8.853	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	ANT.1 Measured PSD[dBm] + Duty Cycle Factor [dB]	ANT.2 Measured PSD[dBm] + Duty Cycle Factor [dB]	MIMO Total PSD [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	n40	1.363	1.473	4.429	-	-	11 dBm/MHz
5230	46	MCS0	n40	-0.589	3.137	4.672	-	-	11 dBm/MHz
5270	54	MCS0	n40	-0.252	3.258	4.859	-	-	11 dBm/MHz
5310	62	MCS0	n40	0.887	0.834	3.871	-	-	11 dBm/MHz
5510	102	MCS0	n40	1.784	1.059	4.447	-	-	11 dBm/MHz
5590	118	MCS0	n40	-0.598	3.559	4.970	-	-	11 dBm/MHz
5710	142	MCS0	n40	0.122	3.332	5.027	-	-	11 dBm/MHz
5755	151	MCS0	n40	-3.068	0.611	2.160	-	-	30 dBm/500kHz
5795	159	MCS0	n40	-3.155	1.294	2.626	-	-	30 dBm/500kHz
5835	167	MCS0	n40	-0.482	3.659	5.075	-0.06	5.015	14 dBm/EIRP
5875	175	MCS0	n40	-0.662	3.337	4.793	-0.06	4.733	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	ANT.1 Measured PSD[dBm] + Duty Cycle Factor [dB]	ANT.2 Measured PSD[dBm] + Duty Cycle Factor [dB]	MIMO Total PSD [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5190	38	MCS0	ac40	1.239	1.548	4.407	-	-	11 dBm/MHz
5230	46	MCS0	ac40	2.583	2.744	5.675	-	-	11 dBm/MHz
5270	54	MCS0	ac40	2.571	2.952	5.776	-	-	11 dBm/MHz
5310	62	MCS0	ac40	1.049	0.808	3.941	-	-	11 dBm/MHz
5510	102	MCS0	ac40	1.822	1.042	4.460	-	-	11 dBm/MHz
5590	118	MCS0	ac40	2.712	3.398	6.079	-	-	11 dBm/MHz
5710	142	MCS0	ac40	2.744	2.913	5.840	-	-	11 dBm/MHz
5755	151	MCS0	ac40	0.063	0.471	3.283	-	-	30 dBm/500kHz
5795	159	MCS0	ac40	-0.134	0.410	3.157	-	-	30 dBm/500kHz
5835	167	MCS0	ac40	2.816	3.190	6.018	-0.06	5.958	14 dBm/EIRP
5875	175	MCS0	ac40	2.663	3.028	5.860	-0.06	5.800	14 dBm/EIRP

Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	ANT.1 Measured PSD[dBm] + Duty Cycle Factor [dB]	ANT.2 Measured PSD[dBm] + Duty Cycle Factor [dB]	MIMO Total PSD [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5210	42	MCS6	ac80	-1.543	-2.432	1.046	-	-	11 dBm/MHz
5290	58	MCS6	ac80	-0.758	-1.309	1.986	-	-	11 dBm/MHz
5530	106	MCS6	ac80	-0.576	-1.471	2.010	-	-	11 dBm/MHz
5610	122	MCS6	ac80	0.043	-0.166	2.951	-	-	11 dBm/MHz
5690	138	MCS6	ac80	0.912	0.271	3.614	-	-	11 dBm/MHz
5775	155	MCS6	ac80	-1.577	-1.834	1.307	-	-	30 dBm/500kHz
5855	171	MCS6	ac80	-0.064	0.761	3.379	-0.06	3.319	14 dBm/EIRP

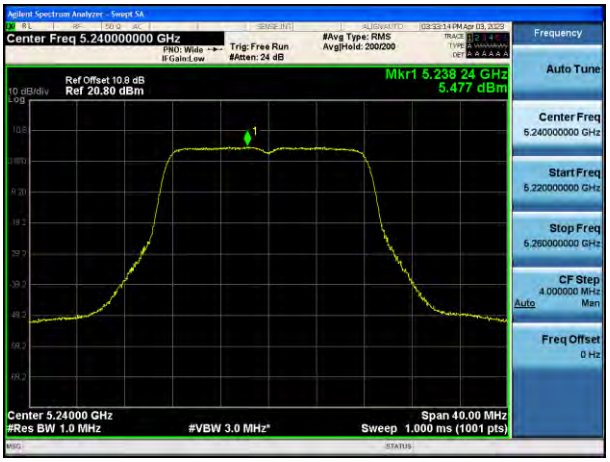
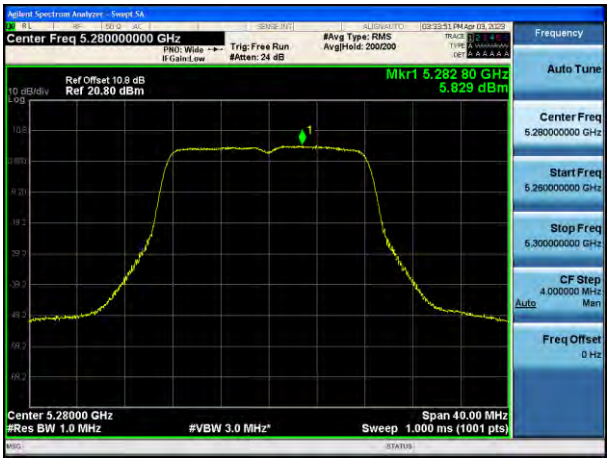
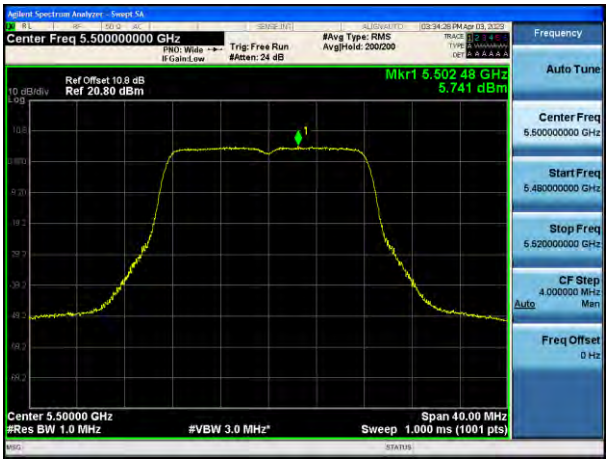
Frequency [MHz]	Channel No.	Worstcase Datarate	Mode(802.11)	ANT.1 Measured PSD[dBm] + Duty Cycle Factor [dB]	ANT.2 Measured PSD[dBm] + Duty Cycle Factor [dB]	MIMO Total PSD [dBm]	Directional Gain [dBi]	E.I.R.P [dBm]	Limit [dBm]
5250	50	MCS0	ac160	-6.596	-7.636	-4.075	-	-	11 dBm/MHz
5570	114	MCS0	ac160	-6.276	-6.764	-3.503	-	-	11 dBm/MHz
5815	163	MCS0	ac160	-5.308	-5.547	-2.416	-0.06	-2.476	14 dBm/EIRP

[Ant.1]

▣ Test Plots(802.11a)

Note:

In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 48)	UNII 2A (Ch. 56)
	
UNII 2C (Ch. 100)	**UNII 3 (Ch. 165)**
	
UNII 4 (Ch. 169)	
	

▣ Test Plots(802.11n(HT20))

Note:

In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 48)	UNII 2A (Ch. 64)
	
UNII 2C (Ch. 144)	**UNII 3 (Ch. 165)**
	
UNII 4 (Ch. 169)	
	

▣ Test Plots(802.11ac(VHT20))

Note:

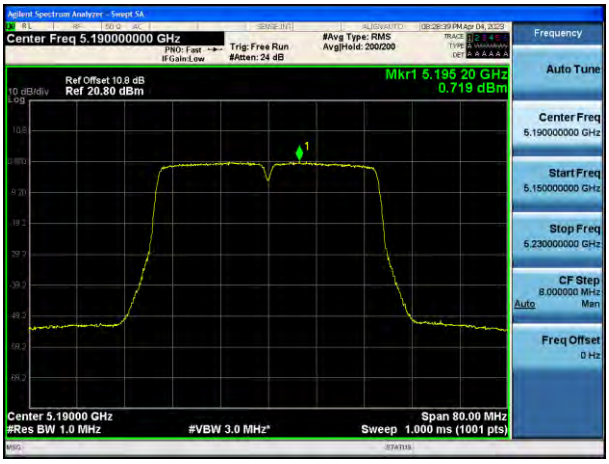
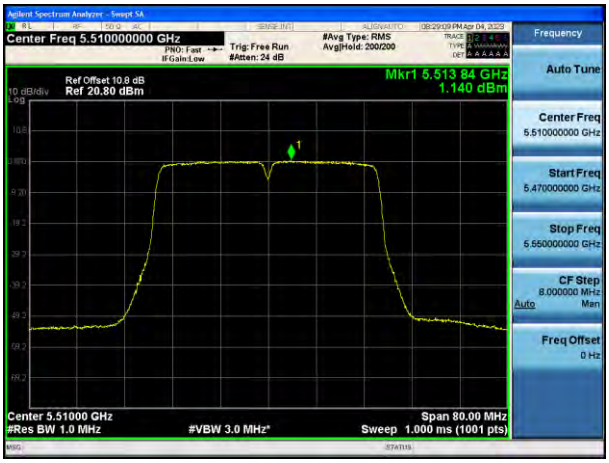
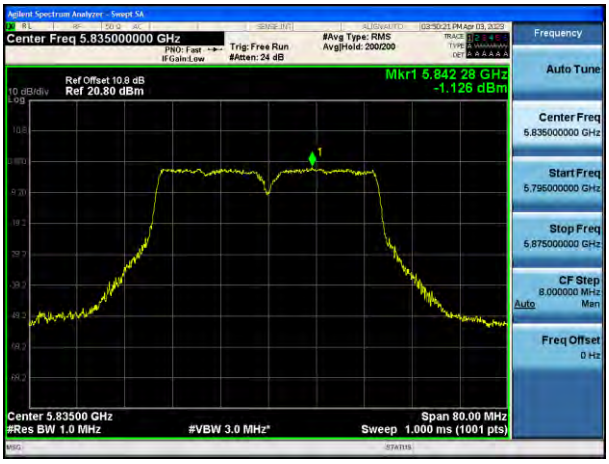
In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 48)	UNII 2A (Ch. 64)
	
UNII 2C (Ch. 144)	**UNII 3 (Ch. 165)**
	
UNII 4 (Ch. 177)	
	

▣ Test Plots(802.11n(HT40))

Note:

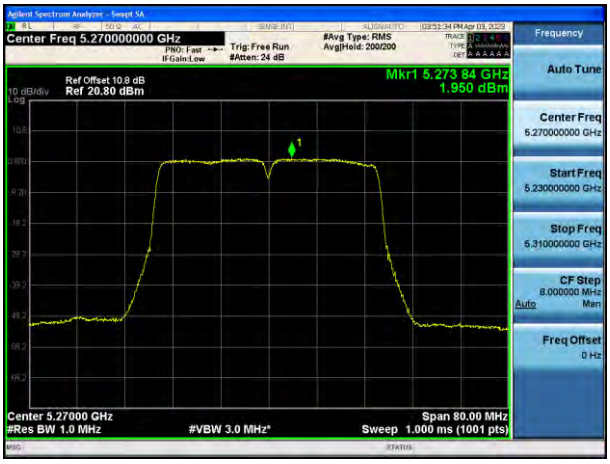
In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 38)	UNII 2A (Ch. 62)
	
UNII 2C (Ch. 102)	**UNII 3 (Ch. 151)**
	
UNII 4 (Ch. 167)	
	

▣ Test Plots(802.11ac(VHT40))

Note:

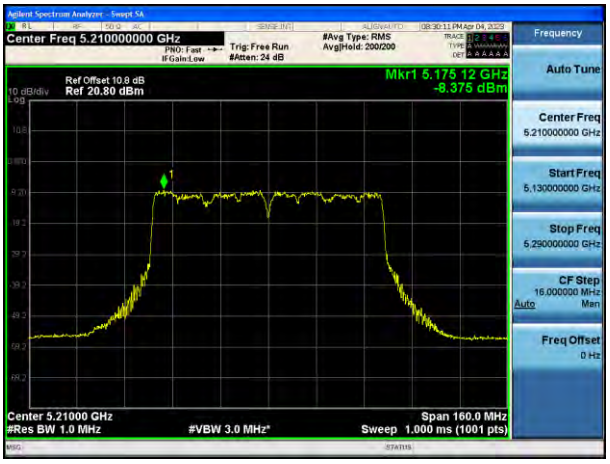
In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 46)	UNII 2A (Ch. 54)
	
UNII 2C (Ch. 142)	**UNII 3 (Ch. 151)**
	
UNII 4 (Ch. 167)	
	

▣ Test Plots(802.11ac(VHT80))

Note:

In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 42)	UNII 2A (Ch. 58)
	
UNII 2C (Ch. 138)	**UNII 3 (Ch. 155)**
	
UNII 4 (Ch. 171)	
	

▣ Test Plots(802.11ac(VHT160))

Note:

In order to simplify the report, attached plots were only channel of the highest power.

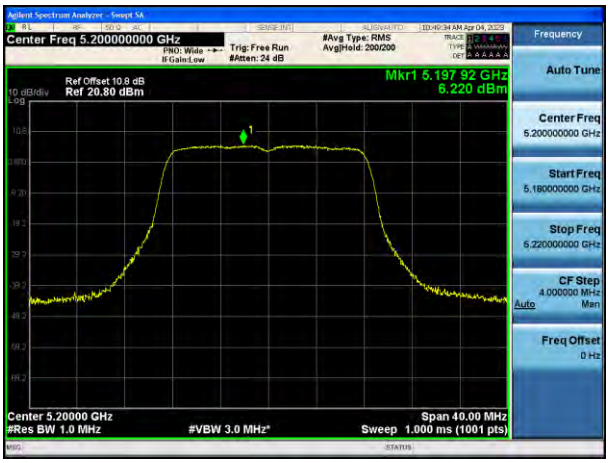
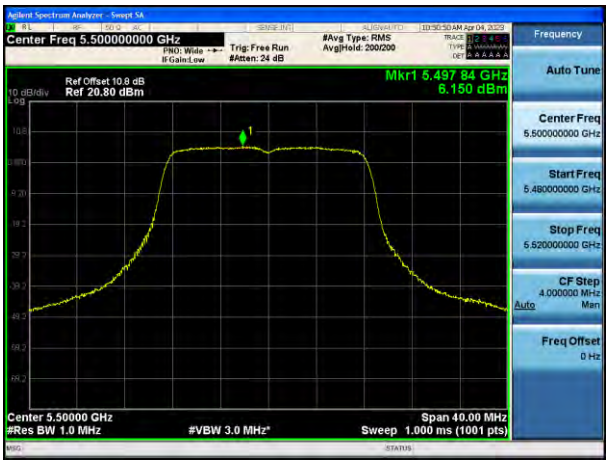
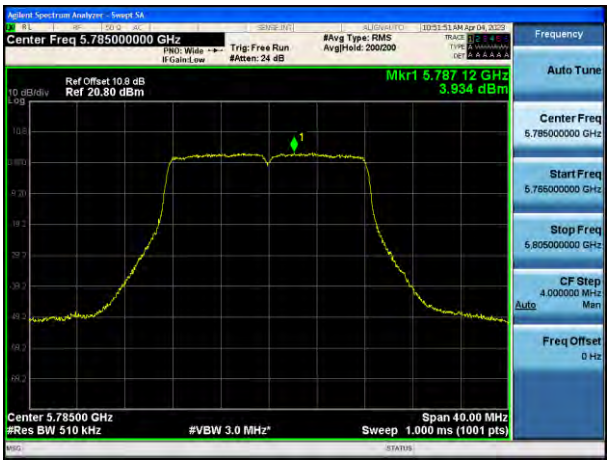
UNII 1 (Ch. 50)	UNII 2C (Ch. 114)
	
UNII 4 (Ch. 163)	
	

[Ant.2]

▣ Test Plots(802.11a)

Note:

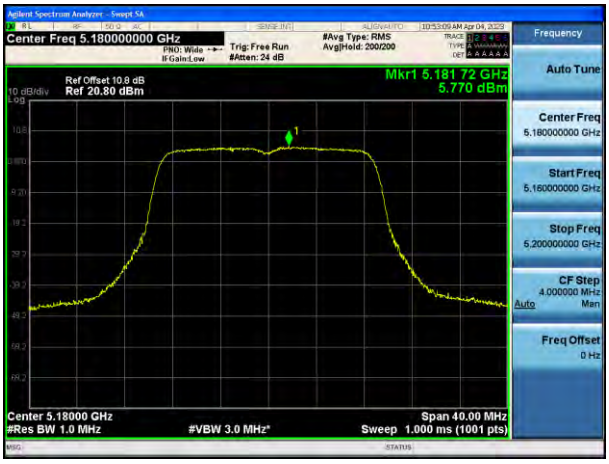
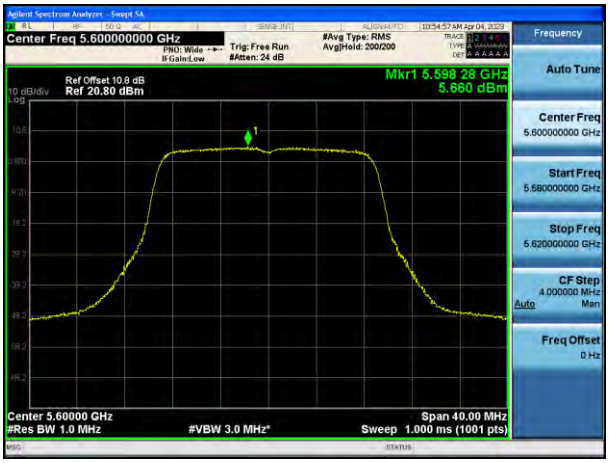
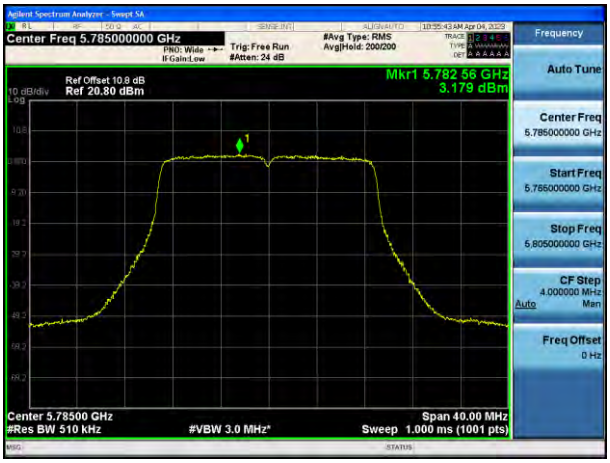
In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 40)	UNII 2A (Ch. 64)
	
UNII 2C (Ch. 100)	**UNII 3 (Ch. 157)**
	
UNII 4 (Ch. 173)	
	

▣ Test Plots(802.11n(HT20))

Note:

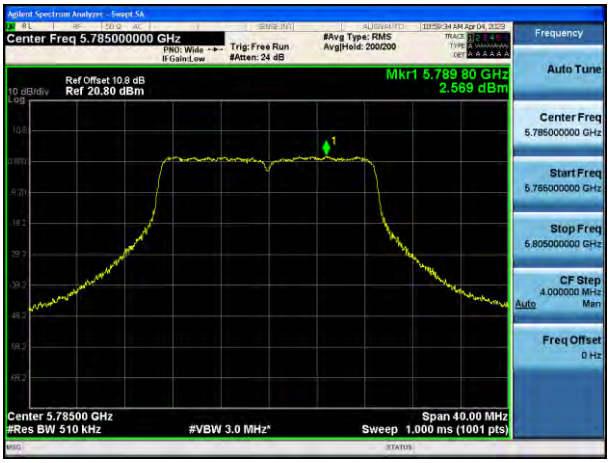
In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 36)	UNII 2A (Ch. 64)
	
UNII 2C (Ch. 120)	**UNII 3 (Ch. 157)**
	
UNII 4 (Ch. 169)	
	

▣ Test Plots(802.11ac(VHT20))

Note:

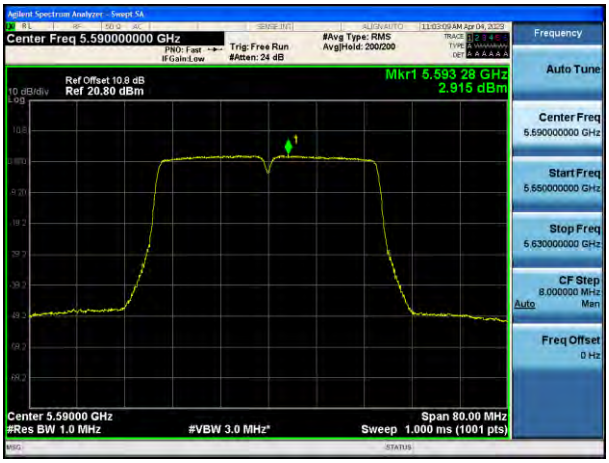
In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 40)	UNII 2A (Ch. 64)
	
UNII 2C (Ch. 120)	**UNII 3 (Ch. 157)**
	
UNII 4 (Ch. 173)	
	

▣ Test Plots(802.11n(HT40))

Note:

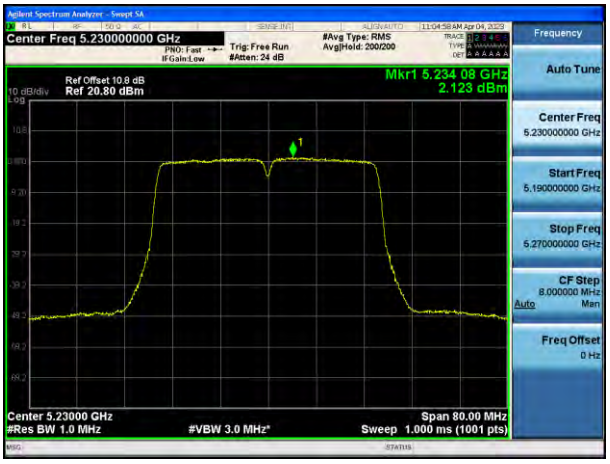
In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 46)	UNII 2A (Ch. 54)
	
UNII 2C (Ch. 118)	**UNII 3 (Ch. 159)**
	
UNII 4 (Ch. 167)	
	

▣ Test Plots(802.11ac(VHT40))

Note:

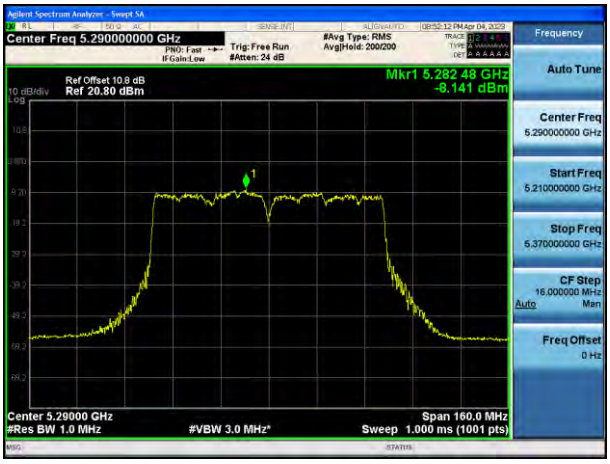
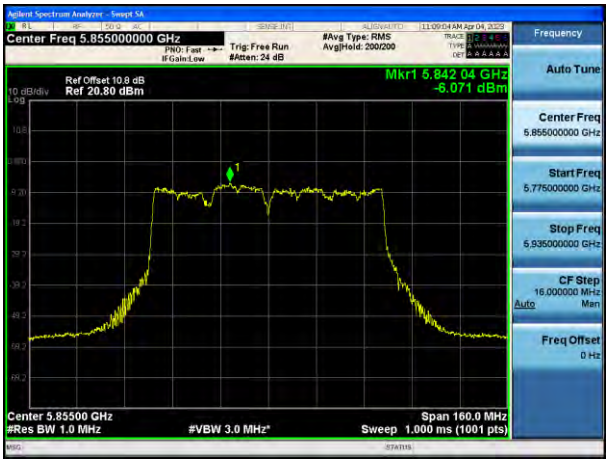
In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 46)	UNII 2A (Ch. 54)
	
UNII 2C (Ch. 118)	**UNII 3 (Ch. 151)**
	
UNII 4 (Ch. 167)	
	

▣ Test Plots(802.11ac(VHT80))

Note:

In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 42)	UNII 2A (Ch. 58)
	
UNII 2C (Ch. 138)	**UNII 3 (Ch. 155)**
	
UNII 4 (Ch. 171)	
	

▣ Test Plots(802.11ac(VHT160))

Note:

In order to simplify the report, attached plots were only channel of the highest power.

UNII 1 (Ch. 50)	UNII 2C (Ch. 114)
	
UNII 4 (Ch. 163)	
	

10.6 FREQUENCY STABILITY.

10.6.1 80 MHz BW

[Ant.1]

Startup after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210031.12	31.12
100%		-30	5210010.48	10.48
100%		-20	5210015.67	15.67
100%		-10	5210019.49	19.49
100%		0	5210023.73	23.73
100%		+10	5210028.34	28.34
100%		+30	5210037.57	37.57
100%		+40	5210042.94	42.94
100%		+50	5210055.61	55.61
High	4.45	+20	5210032.31	32.31
Low	3.70	+20	5210030.90	30.90

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290034.36	34.36
100%		-30	5290009.50	9.50
100%		-20	5290014.58	14.58
100%		-10	5290016.68	16.68
100%		0	5290022.71	22.71
100%		+10	5290026.55	26.55
100%		+30	5290040.24	40.24
100%		+40	5290044.04	44.04
100%		+50	5290055.81	55.81
High	4.45	+20	5290034.11	34.11
Low	3.70	+20	5290033.17	33.17

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530035.35	35.35
100%		-30	5530006.73	6.73
100%		-20	5530014.50	14.50
100%		-10	5530020.97	20.97
100%		0	5530023.23	23.23
100%		+10	5530026.87	26.87
100%		+30	5530036.78	36.78
100%		+40	5530043.44	43.44
100%		+50	5530060.23	60.23
High	4.45	+20	5530031.89	31.89
Low	3.70	+20	5530034.06	34.06

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775035.98	35.98
100%		-30	5775009.87	9.87
100%		-20	5775010.29	10.29
100%		-10	5775015.63	15.63
100%		0	5775020.81	20.81
100%		+10	5775026.84	26.84
100%		+30	5775040.31	40.31
100%		+40	5775045.28	45.28
100%		+50	5775053.16	53.16
High	4.45	+20	5775030.99	30.99
Low	3.70	+20	5775033.80	33.80

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

2 minutes after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210030.07	30.07
100%		-30	5210007.64	7.64
100%		-20	5210011.18	11.18
100%		-10	5210016.91	16.91
100%		0	5210025.12	25.12
100%		+10	5210028.22	28.22
100%		+30	5210037.44	37.44
100%		+40	5210049.88	49.88
100%		+50	5210060.67	60.67
High	4.45	+20	5210033.28	33.28
Low	3.70	+20	5210035.05	35.05

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290030.10	30.10
100%		-30	5290006.56	6.56
100%		-20	5290014.15	14.15
100%		-10	5290015.18	15.18
100%		0	5290022.72	22.72
100%		+10	5290027.23	27.23
100%		+30	5290038.55	38.55
100%		+40	5290042.14	42.14
100%		+50	5290051.74	51.74
High	4.45	+20	5290032.42	32.42
Low	3.70	+20	5290032.16	32.16

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530031.85	31.85
100%		-30	5530009.60	9.60
100%		-20	5530010.19	10.19
100%		-10	5530018.95	18.95
100%		0	5530023.61	23.61
100%		+10	5530029.77	29.77
100%		+30	5530039.18	39.18
100%		+40	5530041.65	41.65
100%		+50	5530058.68	58.68
High	4.45	+20	5530031.32	31.32
Low	3.70	+20	5530030.64	30.64

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775035.10	35.10
100%		-30	5775007.56	7.56
100%		-20	5775014.22	14.22
100%		-10	5775019.30	19.30
100%		0	5775025.67	25.67
100%		+10	5775026.07	26.07
100%		+30	5775035.93	35.93
100%		+40	5775049.37	49.37
100%		+50	5775055.20	55.20
High	4.45	+20	5775030.41	30.41
Low	3.70	+20	5775030.54	30.54

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

5 minutes after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210032.96	32.96
100%		-30	5210010.33	10.33
100%		-20	5210013.03	13.03
100%		-10	5210015.97	15.97
100%		0	5210020.81	20.81
100%		+10	5210029.13	29.13
100%		+30	5210038.85	38.85
100%		+40	5210049.57	49.57
100%		+50	5210050.02	50.02
High	4.45	+20	5210032.33	32.33
Low	3.70	+20	5210030.57	30.57

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290034.37	34.37
100%		-30	5290010.63	10.63
100%		-20	5290014.84	14.84
100%		-10	5290016.93	16.93
100%		0	5290024.86	24.86
100%		+10	5290029.65	29.65
100%		+30	5290037.09	37.09
100%		+40	5290049.72	49.72
100%		+50	5290052.43	52.43
High	4.45	+20	5290034.07	34.07
Low	3.70	+20	5290032.97	32.97

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530035.58	35.58
100%		-30	5530010.91	10.91
100%		-20	5530012.32	12.32
100%		-10	5530019.36	19.36
100%		0	5530021.27	21.27
100%		+10	5530029.45	29.45
100%		+30	5530038.18	38.18
100%		+40	5530041.91	41.91
100%		+50	5530060.54	60.54
High	4.45	+20	5530033.92	33.92
Low	3.70	+20	5530032.27	32.27

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775030.10	30.10
100%		-30	5775009.78	9.78
100%		-20	5775015.22	15.22
100%		-10	5775020.19	20.19
100%		0	5775023.71	23.71
100%		+10	5775027.48	27.48
100%		+30	5775038.95	38.95
100%		+40	5775048.98	48.98
100%		+50	5775052.63	52.63
High	4.45	+20	5775031.93	31.93
Low	3.70	+20	5775032.91	32.91

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

10 minutes after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210031.08	31.08
100%		-30	5210009.02	9.02
100%		-20	5210012.08	12.08
100%		-10	5210020.12	20.12
100%		0	5210020.98	20.98
100%		+10	5210029.88	29.88
100%		+30	5210037.05	37.05
100%		+40	5210042.30	42.30
100%		+50	5210060.26	60.26
High	4.45	+20	5210031.40	31.40
Low	3.70	+20	5210030.38	30.38

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290035.81	35.81
100%		-30	5290009.22	9.22
100%		-20	5290011.86	11.86
100%		-10	5290018.49	18.49
100%		0	5290022.16	22.16
100%		+10	5290028.75	28.75
100%		+30	5290037.98	37.98
100%		+40	5290046.58	46.58
100%		+50	5290050.39	50.39
High	4.45	+20	5290034.11	34.11
Low	3.70	+20	5290031.27	31.27

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530030.48	30.48
100%		-30	5530005.39	5.39
100%		-20	5530010.45	10.45
100%		-10	5530015.91	15.91
100%		0	5530024.54	24.54
100%		+10	5530025.41	25.41
100%		+30	5530037.85	37.85
100%		+40	5530047.09	47.09
100%		+50	5530053.34	53.34
High	4.45	+20	5530033.36	33.36
Low	3.70	+20	5530032.68	32.68

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775030.09	30.09
100%		-30	5775010.82	10.82
100%		-20	5775012.38	12.38
100%		-10	5775017.21	17.21
100%		0	5775023.55	23.55
100%		+10	5775025.50	25.50
100%		+30	5775038.26	38.26
100%		+40	5775047.45	47.45
100%		+50	5775054.46	54.46
High	4.45	+20	5775031.78	31.78
Low	3.70	+20	5775030.24	30.24

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

[Ant.2]

Startup after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210030.93	30.93
100%		-30	5210005.74	5.74
100%		-20	5210012.06	12.06
100%		-10	5210017.44	17.44
100%		0	5210022.47	22.47
100%		+10	5210029.08	29.08
100%		+30	5210040.60	40.60
100%		+40	5210042.38	42.38
100%		+50	5210060.97	60.97
High	4.45	+20	5210034.41	34.41
Low	3.70	+20	5210032.26	32.26

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290034.56	34.56
100%		-30	5290010.62	10.62
100%		-20	5290015.81	15.81
100%		-10	5290018.20	18.20
100%		0	5290024.24	24.24
100%		+10	5290027.71	27.71
100%		+30	5290037.60	37.60
100%		+40	5290043.86	43.86
100%		+50	5290051.28	51.28
High	4.45	+20	5290032.92	32.92
Low	3.70	+20	5290035.33	35.33

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530031.38	31.38
100%		-30	5530005.26	5.26
100%		-20	5530012.47	12.47
100%		-10	5530020.04	20.04
100%		0	5530022.44	22.44
100%		+10	5530028.95	28.95
100%		+30	5530035.08	35.08
100%		+40	5530040.63	40.63
100%		+50	5530054.37	54.37
High	4.45	+20	5530035.03	35.03
Low	3.70	+20	5530033.97	33.97

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775034.13	34.13
100%		-30	5775009.21	9.21
100%		-20	5775011.64	11.64
100%		-10	5775019.11	19.11
100%		0	5775025.63	25.63
100%		+10	5775025.14	25.14
100%		+30	5775037.92	37.92
100%		+40	5775041.26	41.26
100%		+50	5775054.88	54.88
High	4.45	+20	5775032.41	32.41
Low	3.70	+20	5775035.68	35.68

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

2 minutes after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210035.33	35.33
100%		-30	5210009.23	9.23
100%		-20	5210012.54	12.54
100%		-10	5210018.98	18.98
100%		0	5210024.39	24.39
100%		+10	5210030.40	30.40
100%		+30	5210039.22	39.22
100%		+40	5210040.62	40.62
100%		+50	5210052.71	52.71
High	4.45	+20	5210035.04	35.04
Low	3.70	+20	5210031.33	31.33

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290035.10	35.10
100%		-30	5290008.22	8.22
100%		-20	5290012.14	12.14
100%		-10	5290016.04	16.04
100%		0	5290024.58	24.58
100%		+10	5290025.35	25.35
100%		+30	5290038.16	38.16
100%		+40	5290046.18	46.18
100%		+50	5290055.10	55.10
High	4.45	+20	5290031.75	31.75
Low	3.70	+20	5290035.19	35.19

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530034.49	34.49
100%		-30	5530006.58	6.58
100%		-20	5530010.14	10.14
100%		-10	5530016.18	16.18
100%		0	5530021.95	21.95
100%		+10	5530029.67	29.67
100%		+30	5530040.14	40.14
100%		+40	5530045.33	45.33
100%		+50	5530051.59	51.59
High	4.45	+20	5530032.93	32.93
Low	3.70	+20	5530032.91	32.91

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775030.28	30.28
100%		-30	5775009.71	9.71
100%		-20	5775014.39	14.39
100%		-10	5775015.08	15.08
100%		0	5775022.36	22.36
100%		+10	5775026.77	26.77
100%		+30	5775036.10	36.10
100%		+40	5775041.88	41.88
100%		+50	5775051.52	51.52
High	4.45	+20	5775034.12	34.12
Low	3.70	+20	5775033.49	33.49

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

5 minutes after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210035.50	35.50
100%		-30	5210008.21	8.21
100%		-20	5210015.71	15.71
100%		-10	5210018.85	18.85
100%		0	5210024.29	24.29
100%		+10	5210029.27	29.27
100%		+30	5210039.29	39.29
100%		+40	5210049.57	49.57
100%		+50	5210057.96	57.96
High	4.45	+20	5210033.78	33.78
Low	3.70	+20	5210032.93	32.93

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290034.56	34.56
100%		-30	5290010.40	10.40
100%		-20	5290010.28	10.28
100%		-10	5290020.22	20.22
100%		0	5290022.92	22.92
100%		+10	5290025.84	25.84
100%		+30	5290035.80	35.80
100%		+40	5290041.53	41.53
100%		+50	5290057.74	57.74
High	4.45	+20	5290035.77	35.77
Low	3.70	+20	5290034.52	34.52

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530034.41	34.41
100%		-30	5530009.95	9.95
100%		-20	5530015.73	15.73
100%		-10	5530019.04	19.04
100%		0	5530022.62	22.62
100%		+10	5530026.08	26.08
100%		+30	5530035.02	35.02
100%		+40	5530046.46	46.46
100%		+50	5530055.86	55.86
High	4.45	+20	5530033.86	33.86
Low	3.70	+20	5530034.93	34.93

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775033.43	33.43
100%		-30	5775008.93	8.93
100%		-20	5775010.73	10.73
100%		-10	5775017.46	17.46
100%		0	5775020.64	20.64
100%		+10	5775028.87	28.87
100%		+30	5775039.81	39.81
100%		+40	5775046.10	46.10
100%		+50	5775057.41	57.41
High	4.45	+20	5775033.98	33.98
Low	3.70	+20	5775031.05	31.05

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

10 minutes after the EUT is energized

OPERATING BAND:	UNII Band 1
OPERATING FREQUENCY:	5,210,000,000 Hz
CHANNEL:	42
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5210033.71	33.71
100%		-30	5210006.28	6.28
100%		-20	5210010.05	10.05
100%		-10	5210015.21	15.21
100%		0	5210020.47	20.47
100%		+10	5210028.11	28.11
100%		+30	5210036.56	36.56
100%		+40	5210042.93	42.93
100%		+50	5210050.19	50.19
High	4.45	+20	5210031.47	31.47
Low	3.70	+20	5210033.10	33.10

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2A
OPERATING FREQUENCY:	5,290,000,000 Hz
CHANNEL:	58
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5290030.93	30.93
100%		-30	5290010.76	10.76
100%		-20	5290013.05	13.05
100%		-10	5290020.05	20.05
100%		0	5290020.98	20.98
100%		+10	5290028.58	28.58
100%		+30	5290039.98	39.98
100%		+40	5290044.63	44.63
100%		+50	5290055.18	55.18
High	4.45	+20	5290030.76	30.76
Low	3.70	+20	5290030.46	30.46

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 2C
OPERATING FREQUENCY:	5,530,000,000 Hz
CHANNEL:	106
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5530034.06	34.06
100%		-30	5530006.55	6.55
100%		-20	5530010.10	10.10
100%		-10	5530016.47	16.47
100%		0	5530025.86	25.86
100%		+10	5530027.57	27.57
100%		+30	5530039.55	39.55
100%		+40	5530050.29	50.29
100%		+50	5530051.85	51.85
High	4.45	+20	5530030.10	30.10
Low	3.70	+20	5530034.17	34.17

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

OPERATING BAND:	UNII Band 3
OPERATING FREQUENCY:	5,775,000,000 Hz
CHANNEL:	155
REFERENCE VOLTAGE:	3.88 VDC

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (kHz)	Frequency Error (kHz)
100%	3.88	+20(Ref)	5775031.13	31.13
100%		-30	5775006.35	6.35
100%		-20	5775010.69	10.69
100%		-10	5775019.89	19.89
100%		0	5775024.33	24.33
100%		+10	5775028.32	28.32
100%		+30	5775038.77	38.77
100%		+40	5775041.66	41.66
100%		+50	5775053.22	53.22
High	4.45	+20	5775030.18	30.18
Low	3.70	+20	5775032.36	32.36

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency error noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

10.7 STRADDLE CHANNEL

10.7.1 26 dB Bandwidth

[Ant.1]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11a	UNII 2C	5720	144	5710.44	14.56
802.11n(HT20)				5708.96	16.04
802.11ac(VHT20)				5708.92	16.08
802.11a	UNII 3	5720	144	5729.36	4.36
802.11n(HT20)				5731.24	6.24
802.11ac(VHT20)				5731.16	6.16

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11n(HT40)	UNII 2C	5710	142	5690.00	35.00
802.11ac(VHT40)				5690.24	34.76
802.11n(HT40)	UNII 3	5710	142	5729.76	4.76
802.11ac(VHT40)				5729.44	4.44

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11ac(VHT80)	UNII 2C	5690	138	5644.24	80.76
	UNII 3	5690	138	5734.96	9.96

Note:

[UNII 2C] 26 dB Bandwidth = 5 725 MHz - Measured Frequency[MHz]

[UNII 3C] 26 dB Bandwidth = Measured Frequency[MHz] – 5 725 MHz

[Ant.2]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11a	UNII 2C	5720	144	5710.36	14.64
802.11n(HT20)				5709.24	15.76
802.11ac(VHT20)				5708.76	16.24
802.11a	UNII 3	5720	144	5729.32	4.32
802.11n(HT20)				5731.04	6.04
802.11ac(VHT20)				5731.04	6.04

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11n(HT40)	UNII 2C	5710	142	5690.16	34.84
802.11ac(VHT40)				5690.00	35.00
802.11n(HT40)	UNII 3	5710	142	5729.68	4.68
802.11ac(VHT40)				5729.84	4.84

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	26 dB Bandwidth [MHz]
802.11ac(VHT80)	UNII 2C	5690	138	5645.68	79.32
	UNII 3	5690	138	5735.12	10.12

Note:

[UNII 2C] 26 dB Bandwidth = 5 725 MHz - Measured Frequency[MHz]

[UNII 3C] 26 dB Bandwidth = Measured Frequency[MHz] – 5 725 MHz

[Ant.1]

▣ Test Plots (26 dB Bandwidth)

802.11a UNII Band	802.11n(HT20) UNII Band
	
802.11ac(VHT20) UNII Band	
	

▣ Test Plots (26 dB Bandwidth)

802.11n(HT40) UNII Band	802.11ac(VHT40) UNII Band
	

802.11ac(VHT80) UNII Band


[Ant.2]

▣ Test Plots (26 dB Bandwidth)

802.11a UNII Band	802.11n(HT20) UNII Band
	
802.11ac(VHT20) UNII Band	
	

▣ Test Plots (26 dB Bandwidth)

802.11n(HT40) UNII Band	802.11ac(VHT40) UNII Band
	

802.11ac(VHT80) UNII Band


10.7.2 6 dB Bandwidth

[Ant.1]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11a	UNII3	5720	144	5728.12	3.12	> 0.5
802.11n(HT20)				5728.80	3.80	> 0.5
802.11ac(VHT20)				5728.80	3.80	> 0.5
802.11n(HT40)	UNII3	5710	142	5727.60	2.60	> 0.5
802.11ac(VHT40)				5728.16	3.16	> 0.5
802.11ac(VHT80)	UNII3	5690	138	5728.24	3.24	> 0.5

[Ant.2]

Mode	Band	Frequency [MHz]	Channel	Measured Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
802.11a	UNII3	5720	144	5728.12	3.12	> 0.5
802.11n(HT20)				5728.80	3.80	> 0.5
802.11ac(VHT20)				5728.80	3.80	> 0.5
802.11n(HT40)	UNII3	5710	142	5727.60	2.60	> 0.5
802.11ac(VHT40)				5727.60	2.60	> 0.5
802.11ac(VHT80)	UNII3	5690	138	5728.24	3.24	> 0.5

Note:

6 dB Bandwidth = Measured Frequency[MHz] – 5 725MHz