ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART E AND INDUSTRY CANADA RSS 247 REQUIREMENT

OF

Applicant:	Quanta Computer Inc. No. 188, Wenhua 2nd Road, Guishan District, Taoyuan City 33377, Taiwan
Product Name:	Clover Mini Enterprise/Clover Station Pro Terminal
Brand Name:	clover
Model No.:	C303, C503
Model Difference:	C303 is a standalone POS terminal. C503 includes the same POS terminal (C303) but comes with an included peripheral display (S503).
FCC ID:	HFS-CX03U
IC:	1787B-CX03U
Report Number:	T190612W02-RP2
FCC Rule Part:	§15.407, Cat: NII
IC Rule:	RSS-247 issue 2 Feb. 2017
Issue Date:	Jul. 16, 2019
Date of Test:	Jun. 14, 2019 ~ Jul. 15, 2019
Date of EUT Received:	Jun. 14, 2019
Issued by	Compliance Certification Services Inc.Wugu Lab. No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.) service@ccsrf.com

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.
The test results of this report relate only to the tested sample (EUT) identified in this report.
The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc. (Wugu Laboratory).

Tested By: Hone Hsieh

Hone Hsieh / Engineer

Approved By: Kevin Tsai

Kevin Tsai / Deputy Manager

Revision History

Report Number	Revision	Description	Effected Page	Issue Date	Revised By
T190612W02-RP2	Rev.00	Initial creation of document	All	Jul. 16, 2019	Elle Chang

Contents

1 GENERAL INFORMATION

1.1 Product Description

General:

Product Name:	Clover Mini Enterprise/Clover Station Pro Terminal	
Brand Name:	clover	
Model No.:	C303, C503	
Model Difference:	C303 is a standalone POS terminal. C503 includes the same POS terminal (C303) but comes with an included peripheral display (S503)	
Product SW/HW version:	N/A / 4.01	
Radio SW/HW version:	N/A/ N/A	
Test SW Version:	N/A	
RF power setting in TEST SW:	N/A	
Micro Hub:	Model No.: H303, Supplier: clover	
Power Supply:	12V from Hub and Adapter	
	Battery:	Model No.: YJ3B, Supplier: N/A
	Adapter:	Model No.: FSP040-RHBN3, Supplier: FSP

FCC WLAN 5GHz:

Wi-Fi	Frequency Range	Channels	Avg. Power (dBm)	Modulation Technology
11a_20	5150~5250	4	16.24	OFDM
	5250~5350	4	16.45	
	5470~5725	12	16.49	
	5725~5850	5	16.48	
11n_HT / ac_VHT 20M	5150~5250	4	HT: 13.80	OFDM
	5250~5350	4	HT: 19.99	
	5470~5725	12	HT: 20.49	
	5725~5850	5	HT: 20.47	
11n_HT / ac_VHT 40M	5150~5250	2	HT: 14.15	OFDM
	5250~5350	2	HT: 19.39	
	5470~5725	6	HT: 19.34	
	5725~5850	2	HT: 19.21	
11ac VHT80M	5150~5250	1	14.25	OFDM
	5250~5350	1	16.67	
	5470~5725	3	18.44	
	5725~5850	1	18.34	
Antenna Designation:	PIFA Antenna, 1. P/N: GD9320-15-001-R, Supplier: SAA, Main Antenna: 5150~5250MHz Peak Gain: 5.43dBi 5250~5350MHz Peak Gain: 5.61dBi 5470~5725MHz Peak Gain: 5.86dBi 5725~5850MHz Peak Gain: 5.04dBi P/N: GD9321-15-001-R, Supplier: SAA, Aux Antenna: 5150~5250MHz Peak Gain: 5.88dBi 5250~5350MHz Peak Gain: 4.73dBi 5470~5725MHz Peak Gain: 4.16dBi 5725~5850MHz Peak Gain: 4.28dBi 2. P/N: LA81FP017-1H, Supplier: Luxshare-ICT, Main Antenna: 5150~5250MHz Peak Gain: 3.5dBi 5250~5350MHz Peak Gain: 4.8dBi 5470~5725MHz Peak Gain: 4.9dBi 5725~5850MHz Peak Gain: 4.9dBi			

	P/N: LA81FP018-1H, Supplier: Luxshare-ICT, Aux Antenna: 5150~5250MHz Peak Gain: 4.3dBi 5250~5350MHz Peak Gain: 4.6dBi 5470~5725MHz Peak Gain: 4.8dBi 5725~5850MHz Peak Gain: 5.1dBi

IC WLAN 5GHz:

Wi-Fi	Frequency Range	Channels	Avg. or EIRP	Rated Power(dBm) (Worst Case)	Modulation Technology
11a	5150~5250	4	EIRP	22.12	OFDM
	5250~5350	4	Avg.	16.45	
	5470~5725	9	Avg.	16.49	
	5725-5850	5	Avg.	16.48	
11n_HT / ac_VHT 20M	5150~5250	4	EIRP	HT: 22.47	OFDM
	5250~5350	4	Avg.	HT: 19.99	
	5470~5725	9	Avg.	HT: 20.49	
	5725-5850	5	Avg.	HT: 20.47	
11n_HT / ac_VHT 40M	5150~5250	2	EIRP	HT: 22.82	OFDM
	5250~5350	2	Avg.	HT: 19.39	
	5470~5725	5	Avg.	HT: 19.34	
	5725-5850	2	Avg.	HT: 19.21	
11ac VHT80M	5150~5250	1	EIRP	22.92	OFDM
	5250~5350	1	Avg.	16.67	
	5470~5725	2	Avg.	18.44	
	5725-5850	1	Avg.	18.34	
Modulation type		64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 802.11ac only			
Transition Rate:		802.11 a: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 – 144.4Mbps 802.11 n_40MHz: 13.5 – 300.0Mbps 802.11 ac_20MHz: 6.5 – 173.3Mbps 802.11 ac_40MHz: 27 – 400Mbps 802.11 ac_80MHz: 58.5 – 866.7Mbps			

1.2 Test Methodology of Applied Standards

FCC Part 15, Subpart E §15.407

FCC KDB 789033 D02 General UNII Test Procedures New Rules

KDB 789033 D02 v01r04 General UNII Test Procedures New Rules

KDB 644545 D03 v01 Guidance for IEEE 802.11ac

RSS-247 issue 2 Feb. 2017

RSS-Gen. issue 5 Apr. 2018

ANSI C63.10:2013

Note: All test items have been performed and record as per the above standards.

1.3 Test Facility

Compliance Certification Services Inc. Wugu Lab. No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.) (TAF code 1309)

FCC Designation number: TW1309

Canada Registration Number: TW1309

1.4 Special Accessories

There are no special accessories used while test was conducted.

1.5 Equipment Modifications

There was no modification incorporated into the EUT.

2 SYSTEM TEST CONFIGURATION

2.1 EUT Configuration

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

2.2 EUT Exercise

An engineering test mode (software/firmware) that applicant provided was utilized to manipulate the EUT into transmit, selection of the test channel, and modulation scheme.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz,. The CISPR Quasi-Peak and Average detector mode is employed according to §15.207. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

2.3.2 Radiated Emissions

The EUT is a placed on as turn table. For emissions testing at or below 1 GHz, the table height shall be 0.8 m above the reference ground plan. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m 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 transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made “while keeping the antenna in the ‘cone of radiation’ from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.” is still within the 3dB illumination BW of the measurement antenna.

2.4 Measurement Results Explanation

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

2.5 Configuration of Tested System

Fig. 2-1 Radiated Emission Configuration

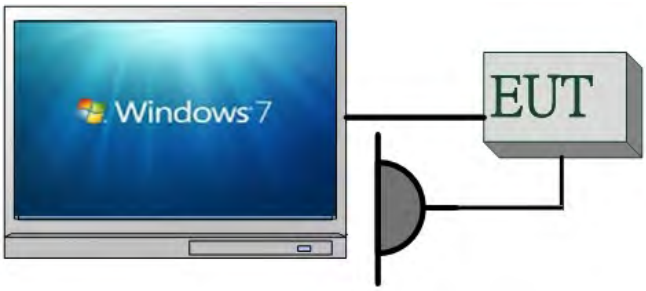


Fig. 2-2 Conducted Emission Configuration

Fig 2-3 Conduction (AC Power Line) Configuration

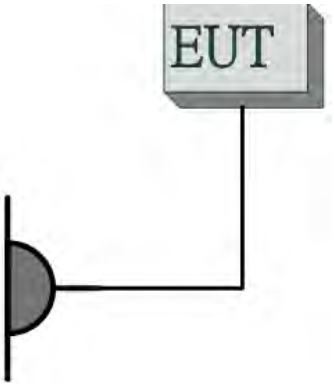


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Data Cable	Power Cord
1	WLAN Test Software	N/A	N/A	N/A	N/A	N/A
2	Notebook	Lenovo	L420	S0012467	Unshielded	Shielded

3 SUMMARY OF TEST RESULT

FCC Rules	IC Rules	Description Of Test	Result
§15.207	RSS-Gen §8.8	AC Power Line Conducted Emission	Compliant
§15.403(i) §15.407(e)	RSS-247 §6.2.1~ 4 (1) RSS-Gen §6.6	26 dB & 6dB & 99% Emission Bandwidth	Compliant
§15.407(a)	RSS-247 §6.2.1~ 4 (1)	Maximum Conducted Output Power	Compliant
§15.407(a)	RSS-247 §6.2.1~ 4 (1)	Power Spectral Density	Compliant
§15.407(b)	RSS-247 §6.2.1~ 4 (2)	Undesirable Radiated Emissions	Compliant
§15.407(c)	RSS-247 §6.4	Transmission in case of Absence of Information	Compliant
§15.407(g)	RSS-Gen §6.11	Frequency Stability	Compliant
§15.203 §15.407(a)	RSS- Gen §6.8	Antenna Requirement	Compliant

4 DESCRIPTION OF TEST MODES

4.1 Operated in U-NII Bands

Operated band in 5150 MHz ~5250 MHz:

802.11a / n HT20 Mode, 802.11ac VHT20 Mode	
Channel	Frequency
36	5180
40	5200
44	5220
48	5240

802.11 n HT40 Mode, 802.11ac VHT40 Mode	
channel	Frequency
38	5190
46	5230

802.11ac VHT80 Mode	
channel	Frequency
42	5210

Operated band in 5250 MHz ~5350 MHz:

802.11a / n HT20 Mode, 802.11ac VHT20 Mode	
channel	Frequency
52	5260
56	5280
60	5300
64	5320

802.11 n HT40 Mode, 802.11ac VHT40 Mode	
channel	Frequency
54	5270
62	5310

802.11ac VHT80 Mode	
Channel	Frequency
58	5290

Operated band in 5470 MHz ~5725 MHz:

802.11a / n HT20 Mode, 802.11ac VHT20 Mode	
Channel	Freq (MHz)
100	5500
104	5520
108	5540
112	5560
116	5580
120	5600
124	5620
128	5640
132	5660
136	5680
140	5700
144	5720

802.11 n HT40 Mode, 802.11ac VHT40 Mode	
Channel	Freq (MHz)
102	5510
110	5550
118	5590
126	5630
134	5670
142	5710

802.11ac VHT80 Mode	
Channel	Freq (MHz)
106	5530
122	5610
138	5690

Operated band in 5745 MHz ~5850 MHz:

802.11a / n HT20 Mode, 802.11ac VHT20 Mode	
Channel	Freq (MHz)
149	5745
153	5765
157	5785
161	5805

802.11 n HT40 Mode, 802.11ac VHT40 Mode	
channel	Freq (MHz)
151	5755
159	5795

802.11ac VHT80 Mode	
channel	Freq (MHz)
155	5775

Note: Operating at 5600~5650MHz is prohibited in Canada.

4.2 The Worst Test Modes and Channel Details

1. The EUT has been tested under operating condition.
2. Test program used to control the EUT for staying in continuous transmitting mode is programmed.
3. Investigation has been done on all the possible configurations for searching the worst case. The gevin UE is pre-scanned among below modes.

Modulation	Transmission Chain				Multiple Transmission Spatial
☑ 802.11 a	☑ Ch0	☑ Ch1	☐ Ch2	☐ Ch3	☐ 2TX
☑ 802.11 n	☑ Ch0	☑ Ch1	☐ Ch2	☐ Ch3	☑ MIMO
☑ 802.11 ac	☑ Ch0	☑ Ch1	☐ Ch2	☐ Ch3	☑ MIMO

Therefore, below summary is the modes of test configuration that yield the highest reading and generate the highest emission chosen to carry out the relevantly mandatory test items.

AC POWER LINE CONDUCTED EMISSION TEST:

Test Condition	AC Power line conducted emission for line and neutral
Worst Case	Operation in normal mode

RADIATED EMISSION TEST:

RADIATED EMISSION TEST (BELOW 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	44	OFDM	6	Aux
802.11a	5260~5320	52 to 64	60	OFDM	6	Aux
802.11a	5500~5720	100 to 144	116	OFDM	6	Aux
802.11a	5745~5825	149 to 165	157	OFDM	6	Aux
802.11ac_VHT80	5210	42	42	OFDM	MCS0	MIMO
802.11ac_VHT80	5290	58	58	OFDM	MCS0	MIMO
802.11ac_VHT80	5530~5690	106 to 138	122	OFDM	MCS0	MIMO
802.11ac_VHT80	5775	155	155	OFDM	MCS0	MIMO

RADIATED EMISSION TEST (ABOVE 1 GHz)						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	Aux
802.11n_HT20				OFDM	MCS8	MIMO
802.11n_HT40	5190~5230	38 to 46	38,46	OFDM	MCS8	MIMO
802.11ac_VHT80	5210	42	42	OFDM	MCS0	MIMO
802.11a	5260~5320	52 to 64	52,60,64	OFDM	6	Aux
802.11n_HT20				OFDM	MCS8	MIMO
802.11n_HT40	5270~5310	54 to 62	54,62	OFDM	MCS8	MIMO
802.11ac_VHT80	5290	58	58	OFDM	MCS0	MIMO
802.11a	5500~5720	100 to 144	100,116,140,144	OFDM	6	Aux
802.11n_HT20				OFDM	MCS8	MIMO
802.11n_HT40	5510~5710	102 to 142	102,110,134,142	OFDM	MCS8	MIMO
802.11ac_VHT80	5530~5690	106 to 138	106,122,138	OFDM	MCS0	MIMO
802.11a	5745~5825	149 to 165	149,157,165	OFDM	6	Aux
802.11n_HT20				OFDM	MCS8	MIMO
802.11n_HT40	5755~5795	151 to 159	151,159	OFDM	MCS8	MIMO
802.11ac_VHT80	5775	155	155	OFDM	MCS0	MIMO

Note:
The field strength of radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for 802.11a/n/ac WLAN Transmitter for channel Low, Mid and High, the worst case E2 position was reported.

ANTENNA PORT CONDUCTED MEASUREMENT:

CONDUCTED TEST						
MODE	FREQUENCY BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)	ANTENNA PORT
802.11a	5180~5240	36 to 48	36,44,48	OFDM	6	Aux
802.11n_HT20 802.11ac_VHT20				OFDM	MCS8	MIMO
802.11n_HT40 802.11ac_VHT40	5190~5230	38 to 46	38,46	OFDM	MCS8	MIMO
802.11ac_VHT80	5210	42	42	OFDM	MCS0	MIMO
802.11a	5260~5320	52 to 64	52,60,64	OFDM	6	Aux
802.11n_HT20 802.11ac_VHT20				OFDM	MCS8	MIMO
802.11n_HT40 802.11ac_VHT40	5270~5310	54 to 62	54,62	OFDM	MCS8	MIMO
802.11ac_VHT80	5290	58	58	OFDM	MCS0	MIMO
802.11a	5500~5720	100 to 144	100,116,140,144	OFDM	6	Aux
802.11n_HT20 802.11ac_VHT20				OFDM	MCS8	MIMO
802.11n_HT40 802.11ac_VHT40	5510~5710	102 to 142	102,110,134,142	OFDM	MCS8	MIMO
802.11ac_VHT80	5530~5690	106 to 138	106,122,138	OFDM	MCS0	MIMO
802.11a	5745~5825	149 to 165	149,157,165	OFDM	6	Aux
802.11n_HT20 802.11ac_VHT20				OFDM	MCS8	MIMO
802.11n_HT40 802.11ac_VHT40	5755~5795	151 to 159	151,159	OFDM	MCS8	MIMO
802.11ac_VHT80	5775	155	155	OFDM	MCS0	MIMO

5 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 1.2575 dB
26dB & 6dB Emission Bandwidth	+/- 147.256 Hz
The Maximum Output Power	+/- 1.924 dB
Peak Power Spectral Density	+/- 2.038 dB
Frequency Stability	+/- 147.256 Hz
3M Semi Anechoic Chamber / 30M~200M	+/- 4.12 dB
3M Semi Anechoic Chamber / 200M~1000M	+/- 4.68 dB
3M Semi Anechoic Chamber / 1G~8G	+/- 5.18 dB
3M Semi Anechoic Chamber / 8G~18G	+/- 5.47 dB
3M Semi Anechoic Chamber / 18G~26G	+/- 3.81 dB
3M Semi Anechoic Chamber / 26G~40G	+/- 3.87 dB

Note:

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
2. The conformity assessment statement in this report is based solely on the test results, measurement uncertainty is excluded.

6 CONDUCTED EMISSION TEST

6.1 Standard Applicable

Frequency range within 150 kHz to 30 MHz shall not exceed the Limit table as below.

Frequency range MHz	Limits dB(uV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50
Note 1.The lower limit shall apply at the transition frequencies 2.The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.		

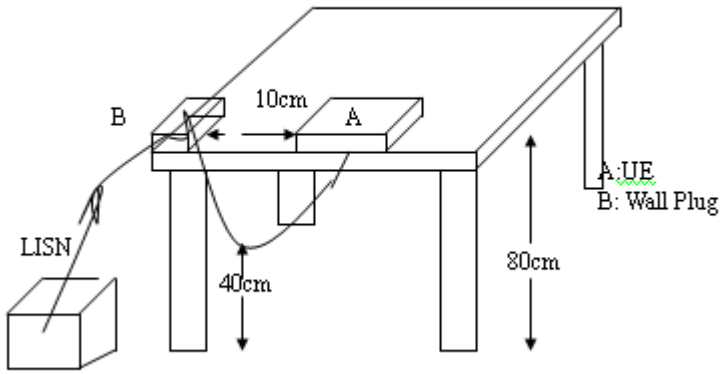
6.2 Measurement Equipment Used

Conducted Emission Test Site					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
CABLE	EMCI	CFD300-NL	CERF	06/29/2018	06/28/2019
EMI Test Receiver	R&S	ESCI	100064	07/24/2018	07/23/2019
LISN	SCHWARZBECK	NSLK 8127	8127-541	01/31/2019	01/30/2020
LISN	SCHAFFNER	NNB 41	03/10013	02/13/2019	02/12/2020
Software	EZ-EMC(CCS-3A1-CE)				

6.3 EUT Setup

1. The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.10:2013.
2. The AC/DC Power adaptor of EUT was plug-in LISN. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
3. The LISN was connected with 120Vac/60Hz power source.

6.4 Test SET-UP



6.5 Measurement Procedure

1. The EUT was placed on a table which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all phases of power being supplied by given UE are completed.

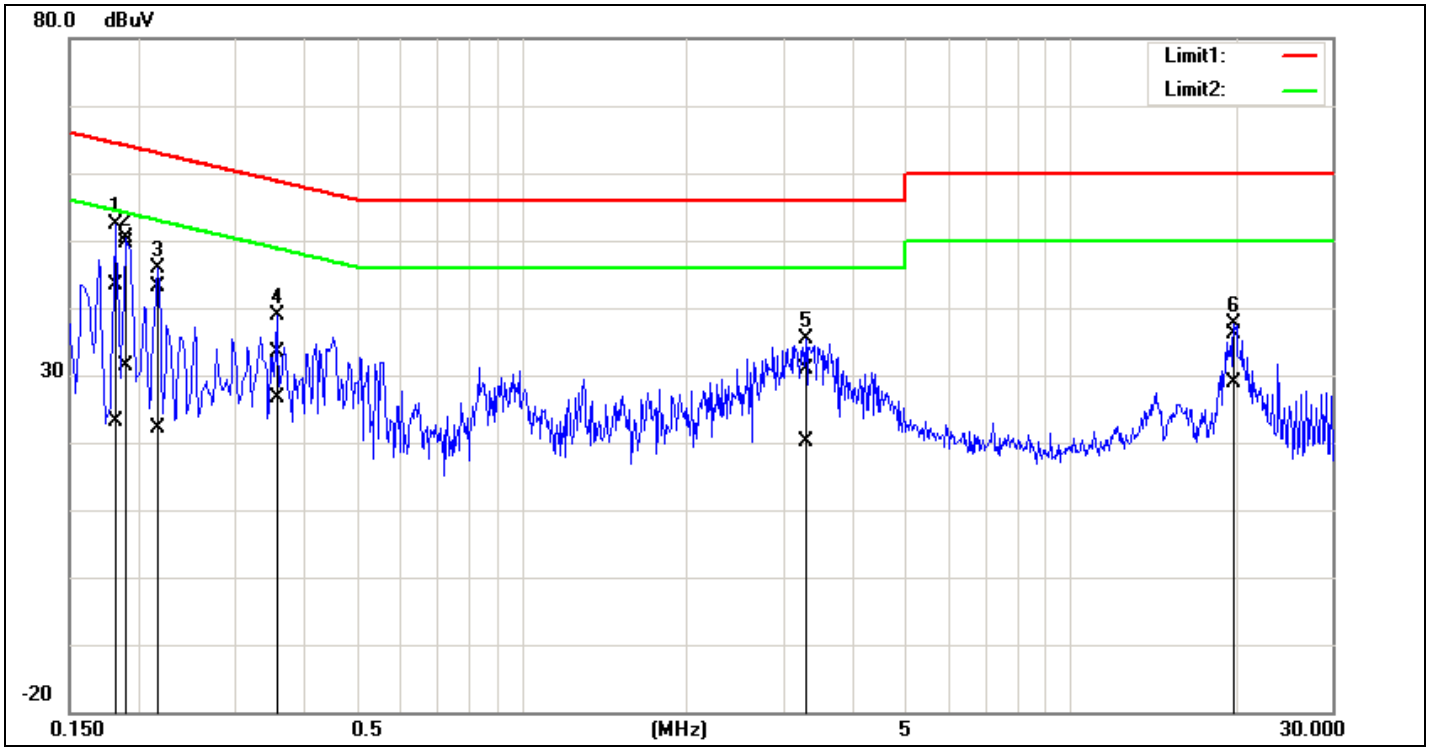
6.6 Measurement Result

Note: Refer to next page for measurement data and plots.

Note2: The * reveals the worst-case results that closet to the limit

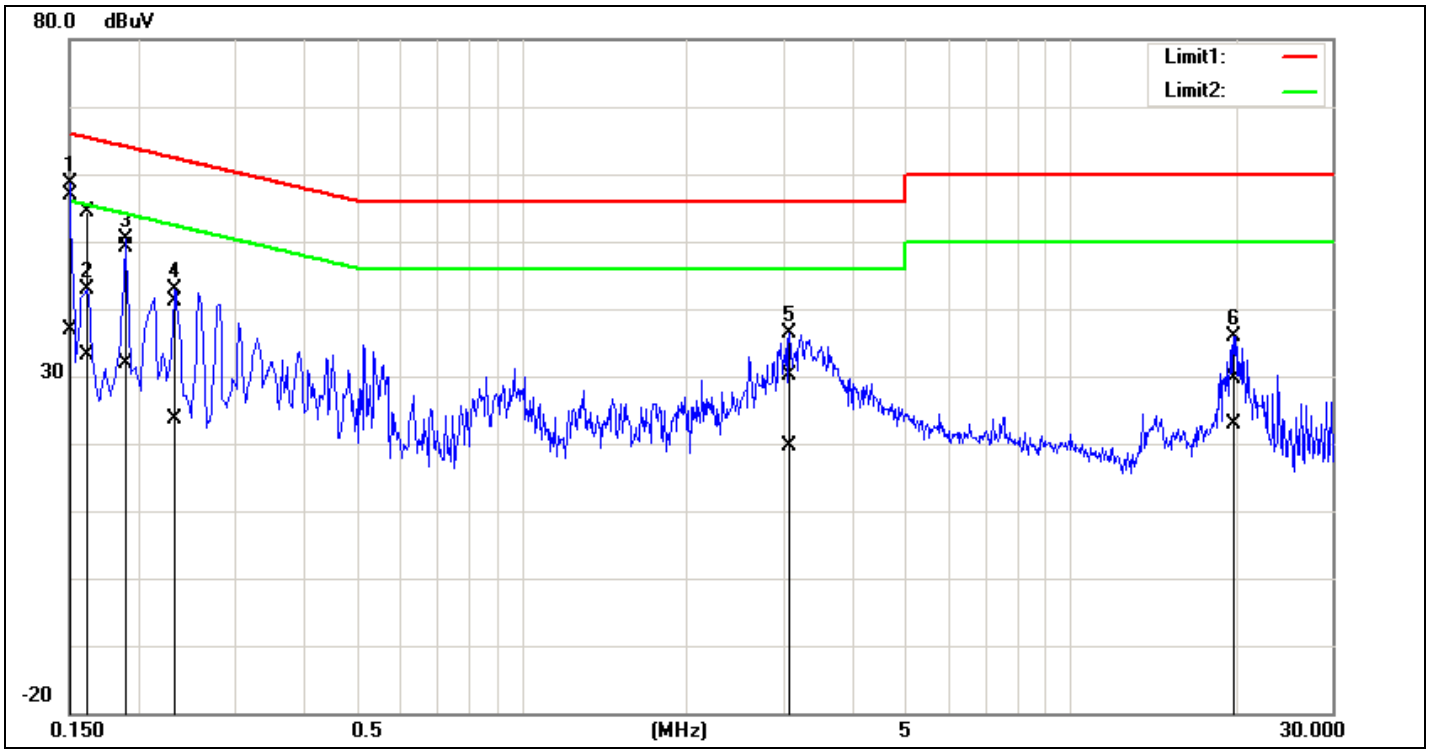
AC POWER LINE CONDUCTED EMISSION TEST DATA

Description:	**Operation**	**Date:**	**2019/6/21**
Line:	**L1**	**Temp.(℃)/Hum.(%):**	**26.9(℃)/67%**
Test Voltage:	**AC 120V/60Hz**	**Test By:**	**Henry**
Job No.:	**T190612W02**		



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.1819	33.32	13.08	10.13	43.45	23.21	64.39	54.40	-20.94	-31.19	Pass
2*	0.1900	39.57	21.21	10.13	49.70	31.34	64.03	54.04	-14.33	-22.70	Pass
3	0.2180	33.06	11.91	10.13	43.19	22.04	62.89	52.89	-19.70	-30.85	Pass
4	0.3580	23.24	16.59	10.14	33.38	26.73	58.77	48.77	-25.39	-22.04	Pass
5	3.3020	20.69	9.81	10.22	30.91	20.03	56.00	46.00	-25.09	-25.97	Pass
6	19.9180	25.72	18.45	10.37	36.09	28.82	60.00	50.00	-23.91	-21.18	Pass

Description:	**Operation**	**Date:**	**2019/6/21**
Line:	**N**	**Temp.(℃)/Hum.(%):**	**26.9(℃)/67%**
Test Voltage:	**AC 120V/60Hz**	**Test By:**	**Henry**
Job No.:	**T190612W02**		



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1*	0.1500	46.87	26.82	10.02	56.89	36.84	65.99	56.00	-9.10	-19.16	Pass
2	0.1620	44.27	23.03	10.02	54.29	33.05	65.36	55.36	-11.07	-22.31	Pass
3	0.1900	39.05	21.93	10.02	49.07	31.95	64.03	54.04	-14.96	-22.09	Pass
4	0.2340	31.20	13.69	10.02	41.22	23.71	62.30	52.31	-21.08	-28.60	Pass
5	3.0820	20.00	9.45	10.08	30.08	19.53	56.00	46.00	-25.92	-26.47	Pass
6	19.9100	19.28	12.68	10.27	29.55	22.95	60.00	50.00	-30.45	-27.05	Pass

7 DUTY CYCLE TEST SIGNAL

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle.

All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

Formula:

Duty Cycle = Ton / (Ton+Toff)

Measurement Procedure:

1. Set span = Zero
2. RBW = 8MHz
3. VBW = 8MHz,
4. Detector = Peak

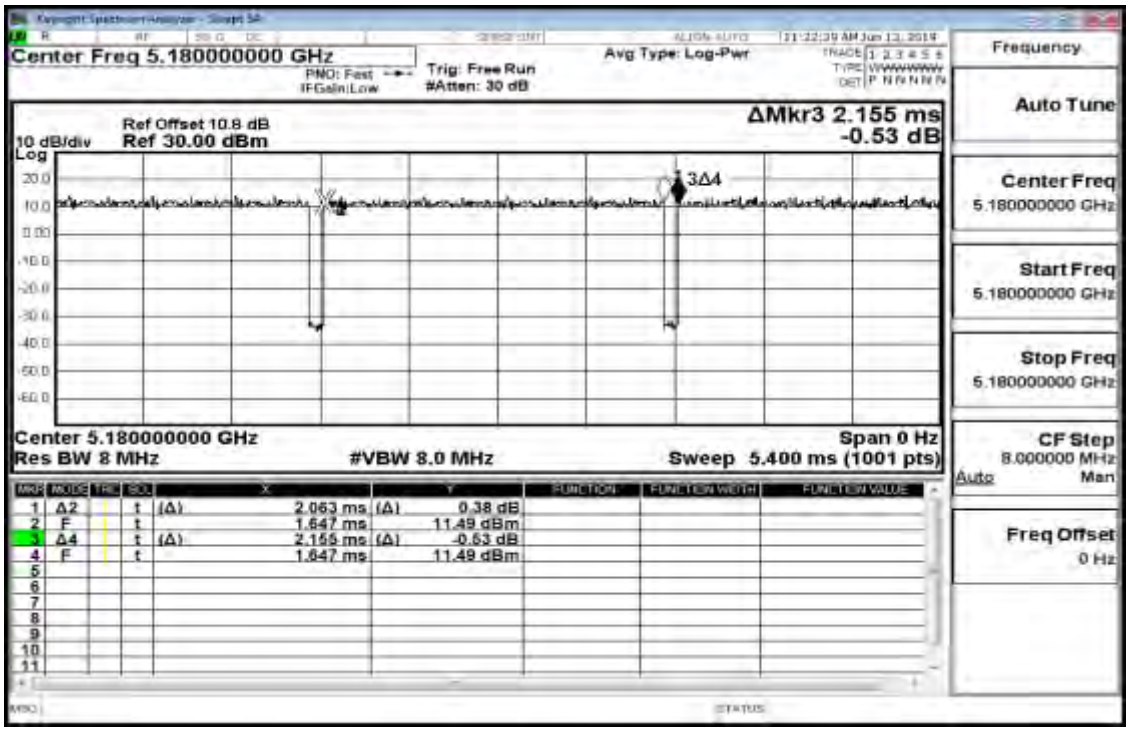
Duty Cycle:

Mode	Duty Cycle (%)	Duty Factor (dB) =10*log (1/Duty Cycle)	1/T (kHz)	VBW setting (kHz)
802.11a	95.73	0.19	0.48	1.00
802.11n_20	91.50	0.39	1.02	2.00
802.11n_40	85.68	0.67	2.02	3.00
802.11ac_80	84.87	0.71	2.16	3.00

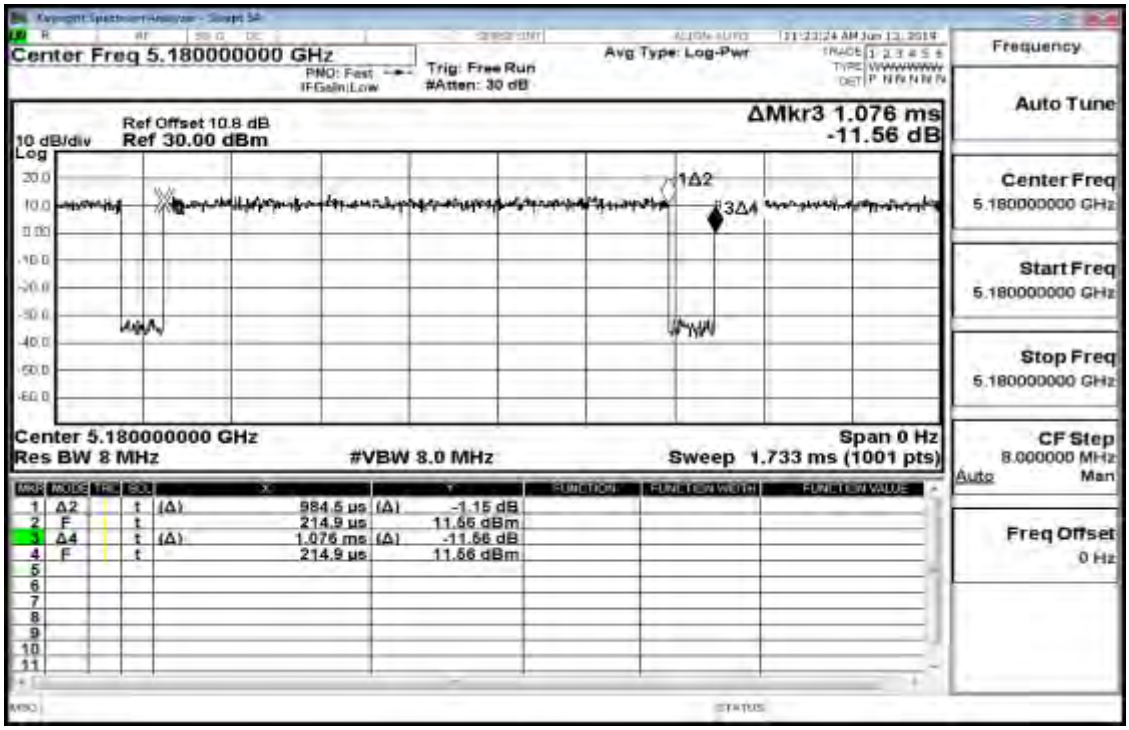
Duty Cycle Factor: 10 * log(1/0.9573) = 0.19
Duty Cycle Factor: 10 * log(1/0.915) = 0.39
Duty Cycle Factor: 10 * log(1/0.8568) = 0.67
Duty Cycle Factor: 10 * log(1/0.8487) = 0.71

DUTY CYCLE TEST SIGNAL Measurement Result

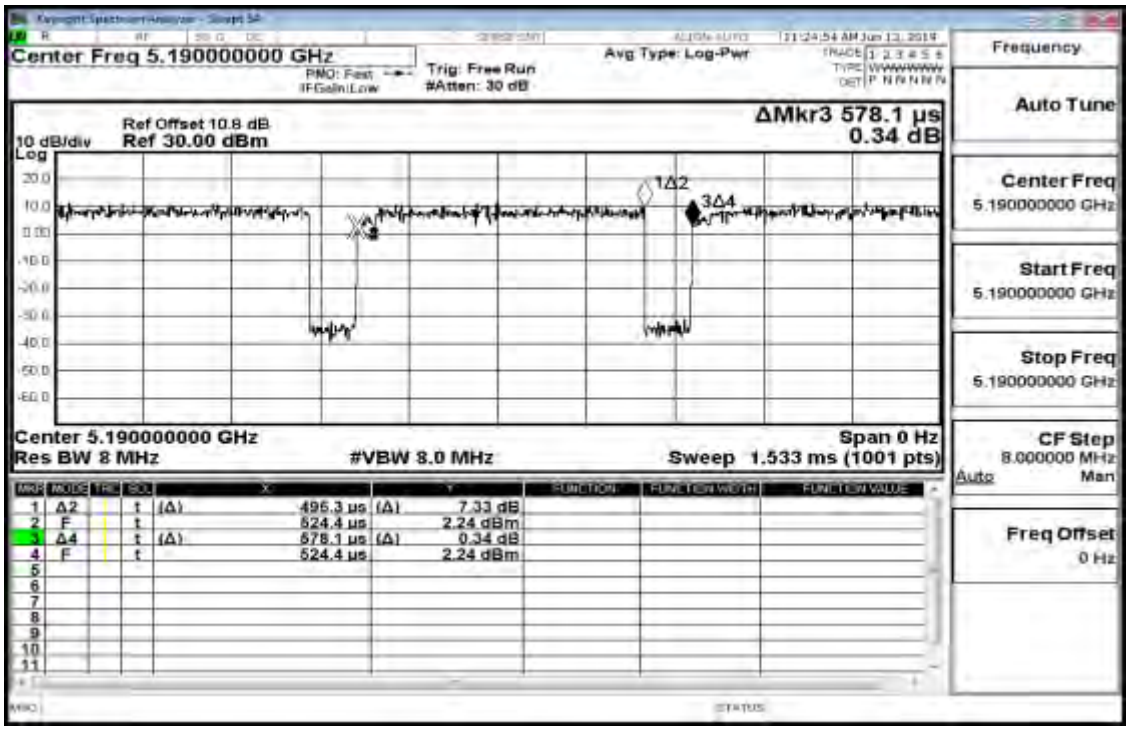
802.11a



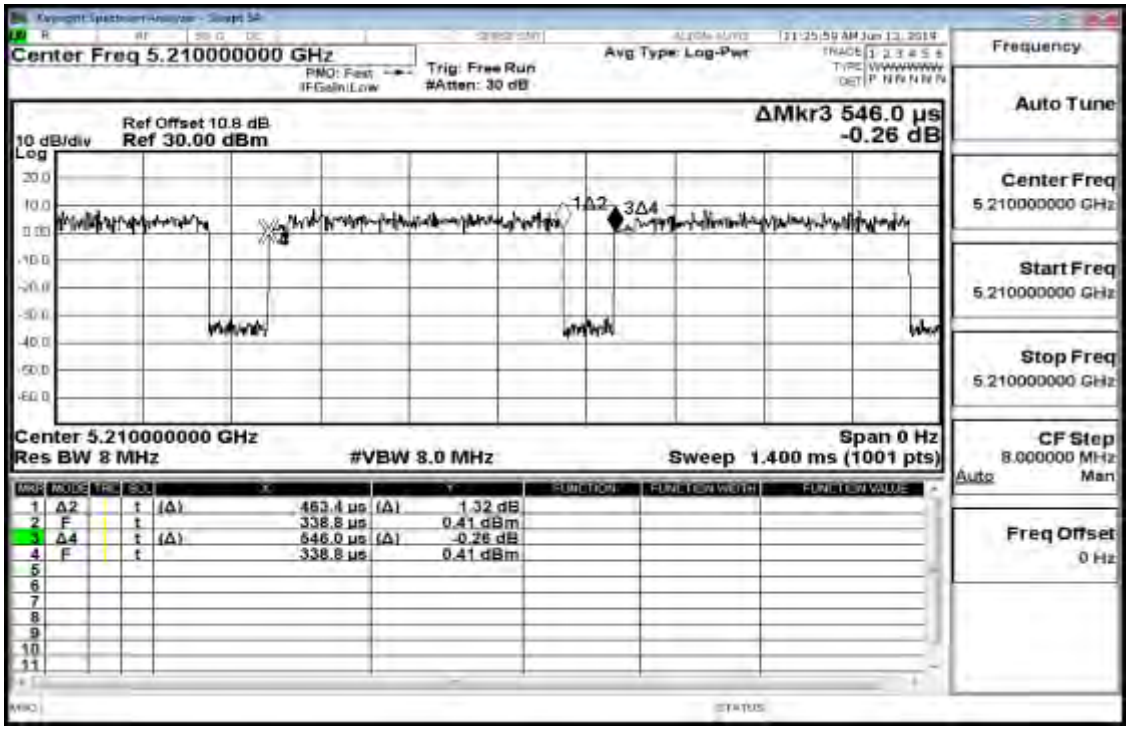
802.11n HT20



802.11n HT 40



802.11 ac VHT 80



8 26DB & 6DB EMISSION BANDWIDTH MEASUREMENT

8.1 Standard Applicable

There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.

The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

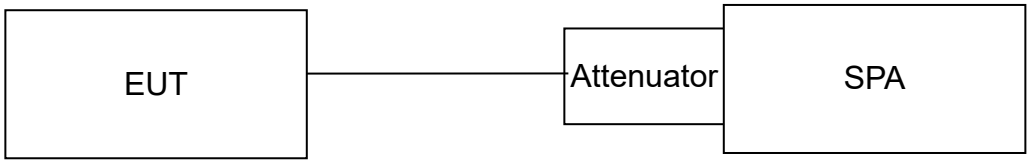
8.2 Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. Remove the antenna from the EUT and then connect a low loss RF cable from the Antenna port to the spectrum analyzer.
   a. 26dB Band width Measurement: Set the spectrum analyzer as 1% of emission BW Sweep=auto, Detector = Peak, Trace Mode = Max Hold, Manually readjust RBW until the RBW/EBW ratio is 1% based on EBW as observed on the result of pre-sequence measurement.
   b. Mark the peak frequency and –26dB (upper and lower) frequency.
4. Repeat the procedures as list above until all test default channels (low, middle, and high) are completed.
5. Minimum Emission Bandwidth for the band 5.725-5.850GHz.
   a. Set the spectrum analyzer as RBW = 100 kHz, VBW = 3*RBW, Span = 30M/50MHz, Detector=Peak,
   Sweep=auto
   b. Mark the peak frequency and –6dB (upper and lower) frequency.
6. Repeat above procedures until all test default channel measured were complete.

8.3 Measurement Equipment Used

SGS Conducted Room					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
DC Block	PASTERNACK	PE8210	RF256	02/26/2019	02/25/2020
Spectrum Analyzer	Agilent	N9010A	MY53400256	11/21/2018	11/20/2019
Thermostatic/Hrgrosatic Chamber	GWINSTEK	GTC-288MH-CC	TH160402	05/16/2019	05/15/2020
Attenuator	Marvelous	MVE2213-10	RF80	02/26/2019	02/25/2020

8.4 Test Set-up



8.5 Measurement Result

26dB and 6dB Bandwidth

802.11a_Ch0

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	22.07	13.438
5220	23.48	13.707
5240	22.55	13.531
5260	23.66	13.740
5300	21.9	13.404
5320	22.74	13.568
5500	22.01	13.426
5580	23.63	13.735
5700	23.43	13.698
5720	22.82	13.583

802.11a_Ch1

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	21.74	13.373
5220	22.57	13.535
5240	22.52	13.526
5260	22.96	13.610
5300	22.55	13.531
5320	21.87	13.398
5500	22.29	13.481
5580	22.7	13.560
5700	23.45	13.701
5720	23.71	13.749

802.11a_Ch0 **802.11a_Ch1**

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)	Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	15.92	12.019	5745	16.32	12.127
5785	15.43	11.884	5785	14.95	11.746
5825	14.79	11.700	5825	15.82	11.992

802.11n_HT20_Ch0 **802.11n_HT20_Ch1**

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)	Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5180	23.91	13.786	5180	22.66	13.553
5220	22.43	13.508	5220	23.53	13.716
5240	24.61	13.911	5240	23.35	13.683
5260	23.77	13.760	5260	24.32	13.860
5300	24.17	13.833	5300	23.89	13.782
5320	23.52	13.714	5320	24.42	13.877
5500	23.82	13.769	5500	23.3	13.674
5580	22.9	13.598	5580	25.14	14.004
5700	25.67	14.094	5700	23.95	13.793
5720	23.05	13.627	5720	25.16	14.007

802.11n_HT20_Ch0 **802.11n_HT20_Ch1**

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)	Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	15.73	11.967	5745	15.37	11.867
5785	15.31	11.850	5785	15.43	11.884
5825	15.47	11.895	5825	16.31	12.125

802.11n _HT40_Ch0

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5190	41.08	16.136
5230	40.96	16.124
5270	41.06	16.134
5310	40.91	16.118
5510	41.25	16.154
5550	**41.15**	16.144
5670	40.88	16.115
5710	41.26	16.155

802.11n _HT40_Ch1

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5190	40.9	16.117
5230	41	16.128
5270	41.07	16.135
5310	40.98	16.126
5510	41.12	16.141
5550	**41.36**	16.166
5670	41.36	16.166
5710	40.85	16.112

802.11n_HT40_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	35.18	15.463
5795	35.17	15.462

802.11n_HT40_Ch1

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	35.74	15.532
5795	35.71	15.528

802.11ac _VHT80_Ch0

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5210	82.22	19.150
5290	82.87	19.184
5530	83.41	19.212
5610	82.74	19.177
5690	82.09	19.143

802.11ac _VHT80_Ch1

Frequency (MHz)	26dB BW (MHz)	10 Log (B) (dB)
5210	82.66	19.173
5290	82.84	19.182
5530	82.81	19.181
5610	83.05	19.193
5690	82.46	19.162

802.11ac _VHT80_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5775	75.31	18.769

802.11ac _VHT80_Ch1

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5775	75.23	18.764

802.11a_Ch0 **802.11a_Ch1**

Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)	Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)
5180	16.651	12.214	5180	16.622	12.207
5220	16.618	12.206	5220	16.637	12.211
5240	16.688	12.224	5240	16.648	12.214
5260	16.661	12.217	5260	16.656	12.216
5300	16.647	12.213	5300	16.637	12.211
5320	16.631	12.209	5320	16.66	12.217
5500	16.616	12.205	5500	16.696	12.226
5580	16.664	12.218	5580	16.652	12.215
5700	16.636	12.210	5700	16.676	12.221
5720	16.673	12.220	5720	16.676	12.221

802.11a_Ch0 **802.11a_Ch1**

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)	Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	16.12	12.074	5745	16.36	12.138
5785	16.23	12.103	5785	16.2	12.095
5825	16.27	12.114	5825	16.27	12.114

802.11n_HT20_Ch0 **802.11n_HT20_Ch1**

Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)	Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)
5180	17.871	12.521	5180	17.875	12.522
5220	17.84	12.514	5220	17.87	12.521
5240	17.809	12.506	5240	17.845	12.515
5260	17.885	12.525	5260	17.841	12.514
5300	17.874	12.522	5300	17.85	12.516
5320	17.824	12.510	5320	17.835	12.513
5500	17.83	12.512	5500	17.838	12.513
5580	17.858	12.518	5580	17.865	12.520
5700	17.865	12.520	5700	17.914	12.532
5720	17.891	12.526	5720	17.889	12.526

802.11n_HT20_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	17.59	12.453
5785	17.6	12.455
5825	17.56	12.445

802.11n_HT20_Ch1

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5745	17.63	12.463
5785	17.55	12.443
5825	17.43	12.413

802.11n _HT40_Ch0

Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)
5190	36.099	15.575
5230	36.092	15.574
5270	36.095	15.574
5310	36.088	15.574
5510	36.109	15.576
5550	36.107	15.576
5670	36.124	15.578
5710	36.112	15.577

802.11n _HT40_Ch1

Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)
5190	36.113	15.577
5230	36.071	15.572
5270	36.089	15.574
5310	36.147	15.581
5510	36.147	15.581
5550	36.144	15.580
5670	36.102	15.575
5710	36.106	15.576

802.11n _HT40_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	36.3	15.599
5795	36.16	15.582

802.11n _HT40_Ch1

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5755	36.33	15.603
5795	36.21	15.588

802.11ac _VHT80_Ch0

Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)
5210	75.49	18.779
5290	75.537	18.782
5530	75.507	18.780
5610	75.572	18.784
5690	75.61	18.786

802.11ac _VHT80_Ch1

Frequency (MHz)	99% BW (MHz)	10 Log (B) (dB)
5210	75.469	18.778
5290	75.492	18.779
5530	75.55	18.782
5610	75.606	18.786
5690	75.52	18.781

802.11ac _VHT80_Ch0

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5775	76.21	18.820

802.11ac _VHT80_Ch1

Frequency (MHz)	6dB BW (MHz)	10 Log (B) (dB)
5775	76.31	18.826

99% BW to prove that all signals in band I is no over band U-NII-1

802.11a_Ch0

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5240	5248.28	< 5250
5745	5736.72	> 5725

802.11a_Ch1

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5240	5248.31	< 5250
5745	5736.72	> 5725

802.11n_HT20_Ch0

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5240	5248.94	< 5250
5745	5736.12	> 5725

802.11n_HT20_Ch1

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5240	5248.91	< 5250
5745	5736.12	> 5725

802.11n _HT40_Ch0

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5230	5248.10	< 5250
5755	5736.95	> 5725

802.11n _HT40_Ch1

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5230	5248.15	< 5250
5755	5736.95	> 5725

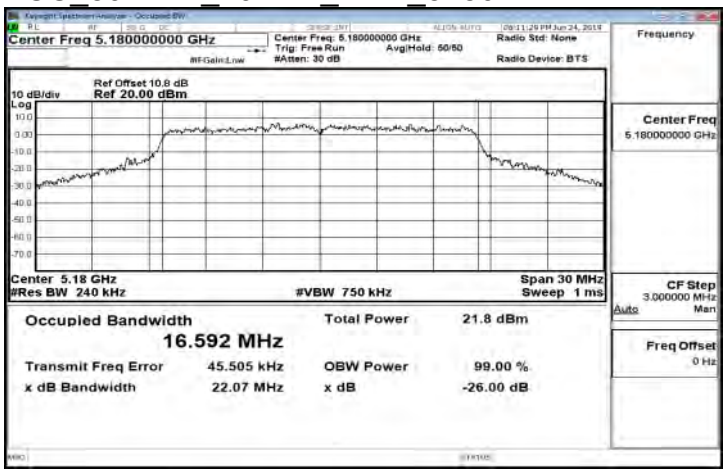
802.11ac _VHT80_Ch0

Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5210	5248.00	< 5250
5775	5737.40	> 5725

802.11n _HT80_Ch1

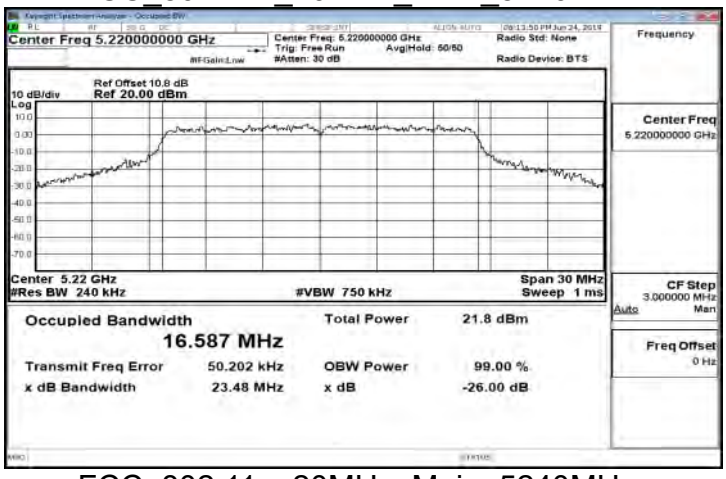
Frequency (MHz)	Measured Frequency (MHz)	Limit (MHz)
5210	5248.00	< 5250
5775	5737.10	> 5725

FCC_802.11a_20MHz_Main_5180MHz

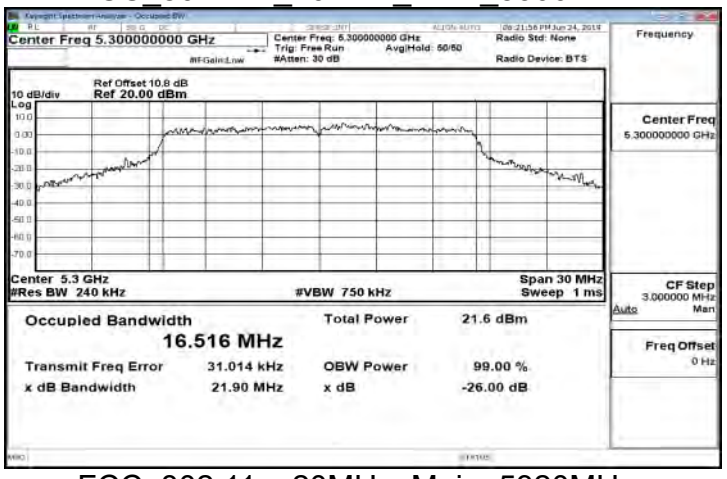


FCC_802.11a_20MHz_Main_5260MHz

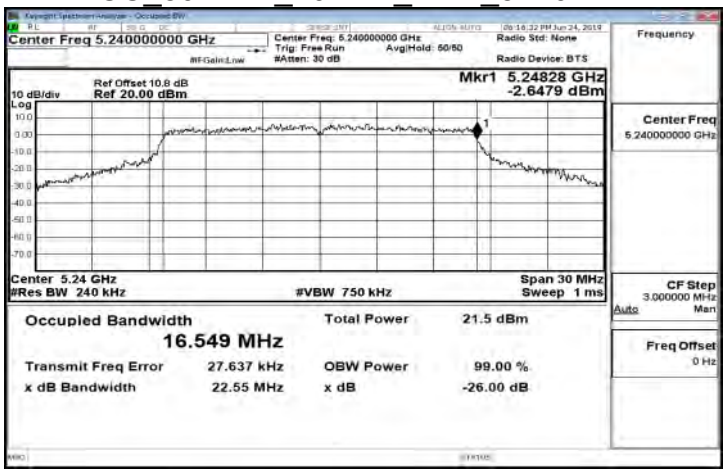
FCC_802.11a_20MHz_Main_5220MHz



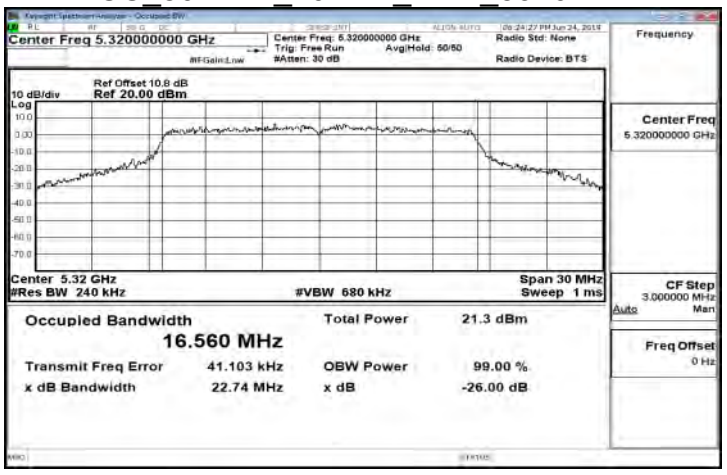
FCC_802.11a_20MHz_Main_5300MHz



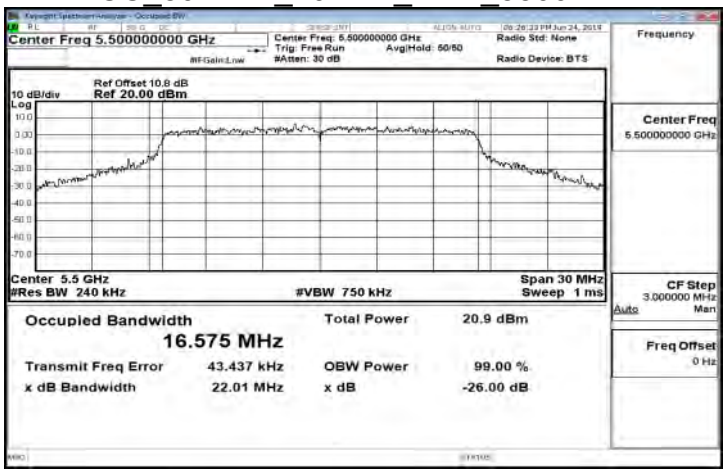
FCC_802.11a_20MHz_Main_5240MHz



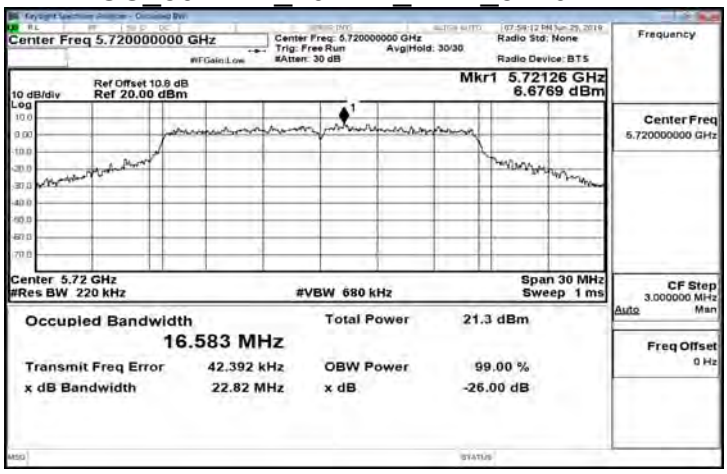
FCC_802.11a_20MHz_Main_5320MHz



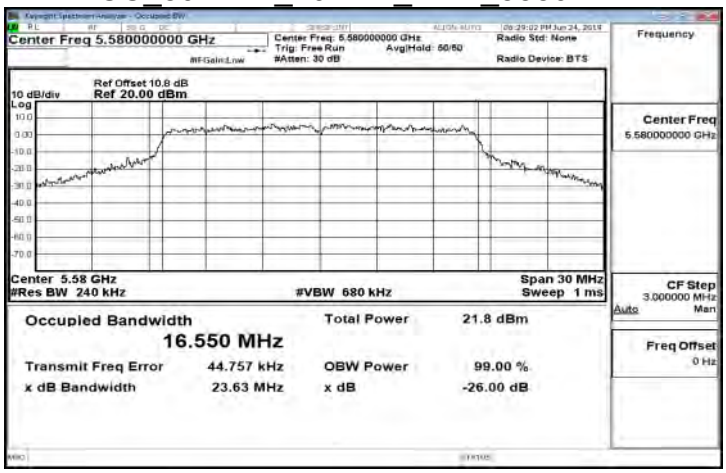
FCC_802.11a_20MHz_Main_5500MHz



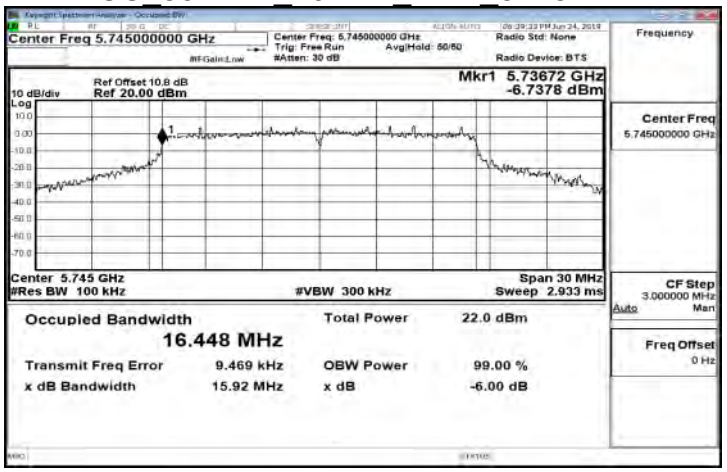
FCC_802.11a_20MHz_Main_5720MHz



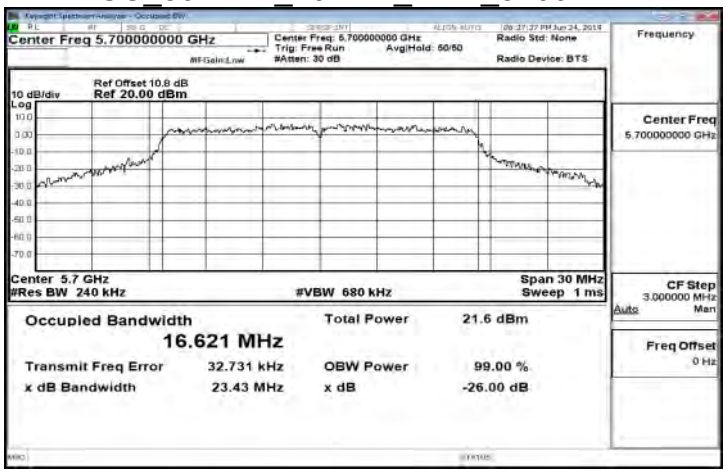
FCC_802.11a_20MHz_Main_5580MHz



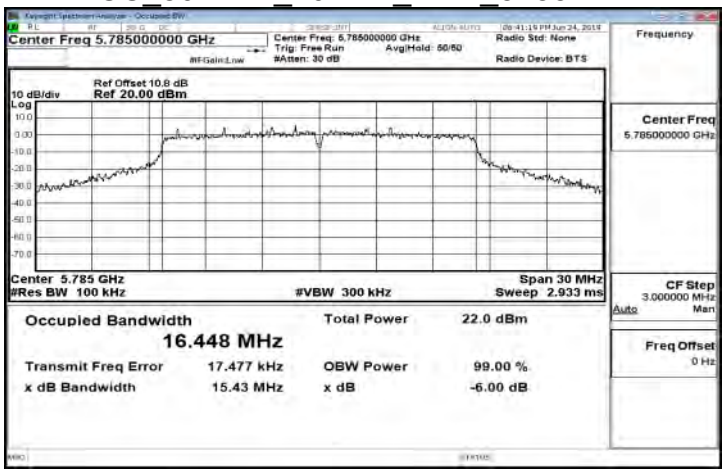
FCC_802.11a_20MHz_Main_5745MHz



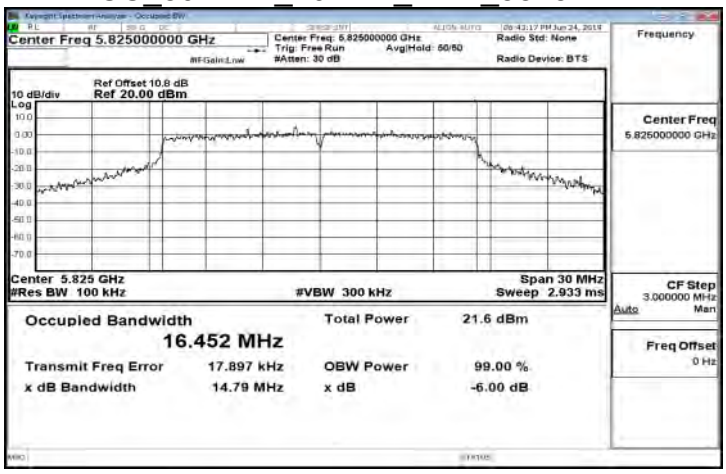
FCC_802.11a_20MHz_Main_5700MHz



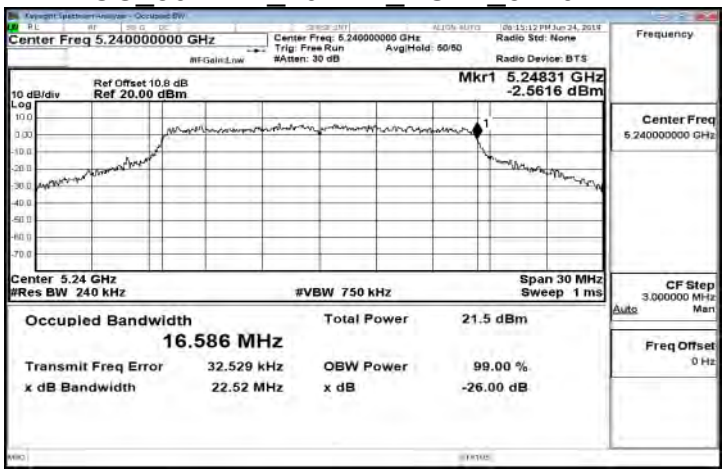
FCC_802.11a_20MHz_Main_5785MHz



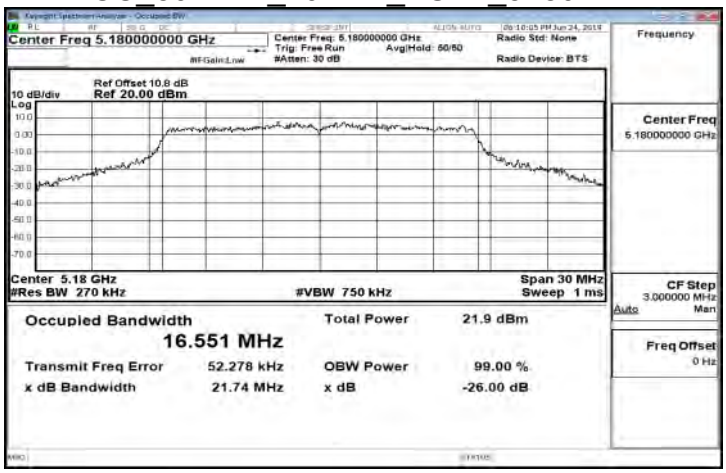
FCC_802.11a_20MHz_Main_5825MHz



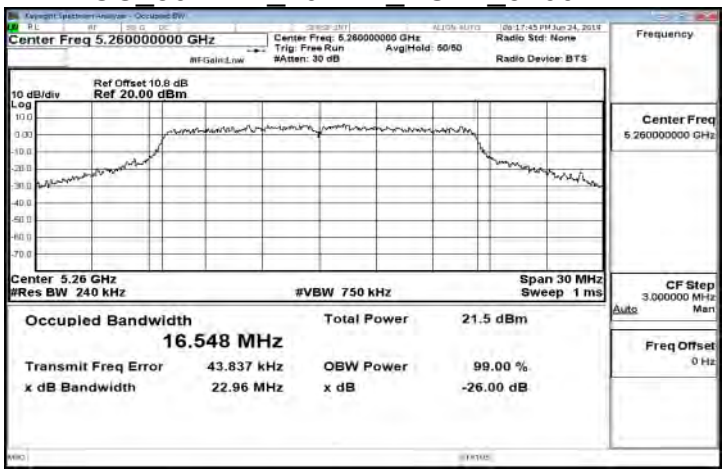
FCC_802.11a_20MHz_AUX1_5240MHz



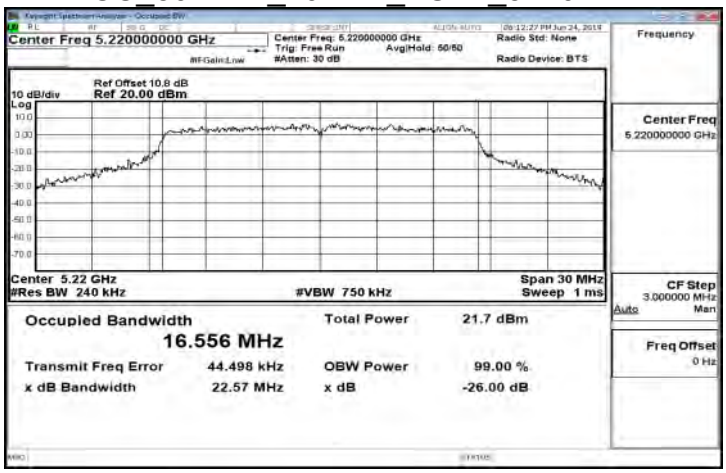
FCC_802.11a_20MHz_AUX1_5180MHz



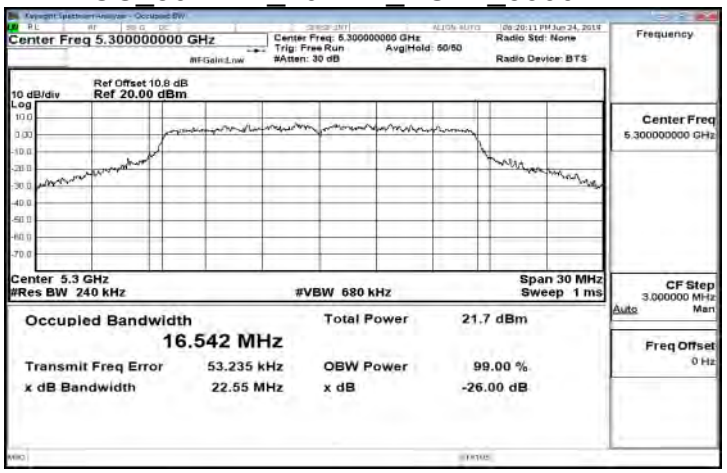
FCC_802.11a_20MHz_AUX1_5260MHz



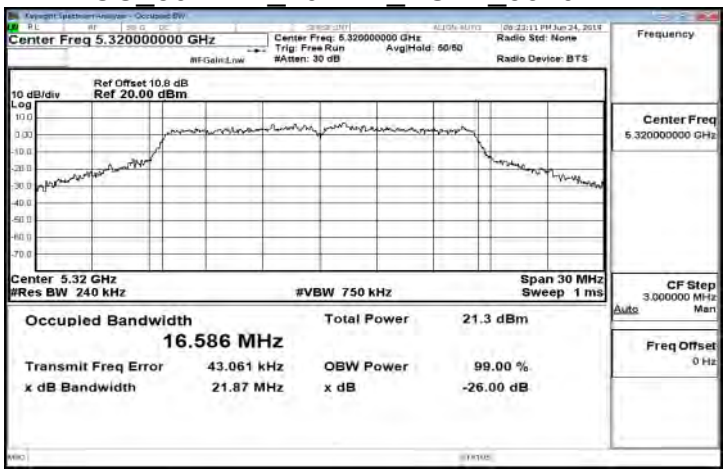
FCC_802.11a_20MHz_AUX1_5220MHz



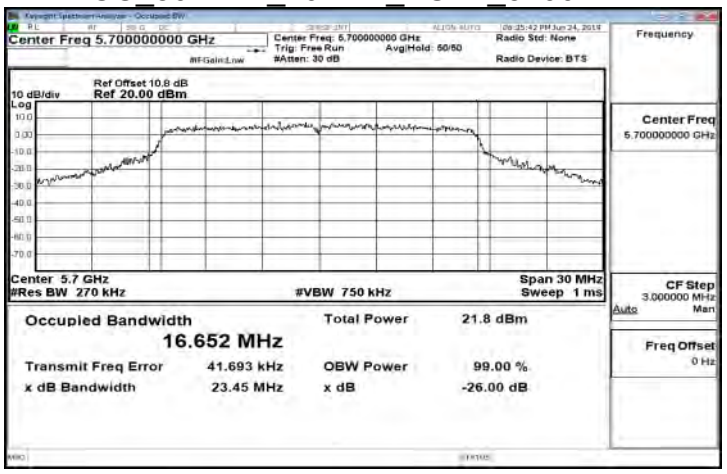
FCC_802.11a_20MHz_AUX1_5300MHz



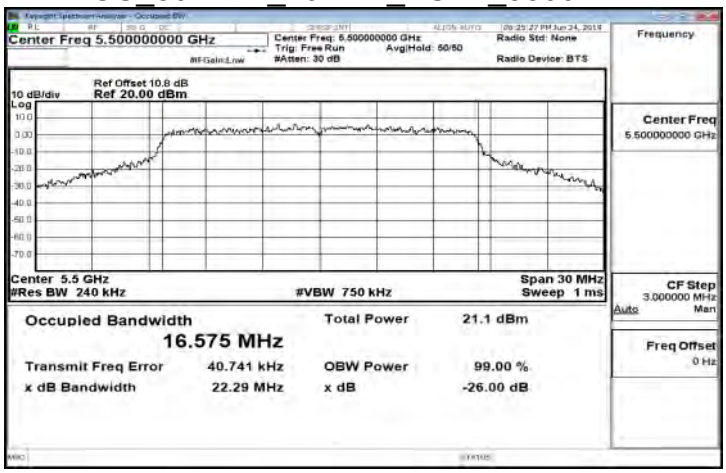
FCC_802.11a_20MHz_AUX1_5320MHz



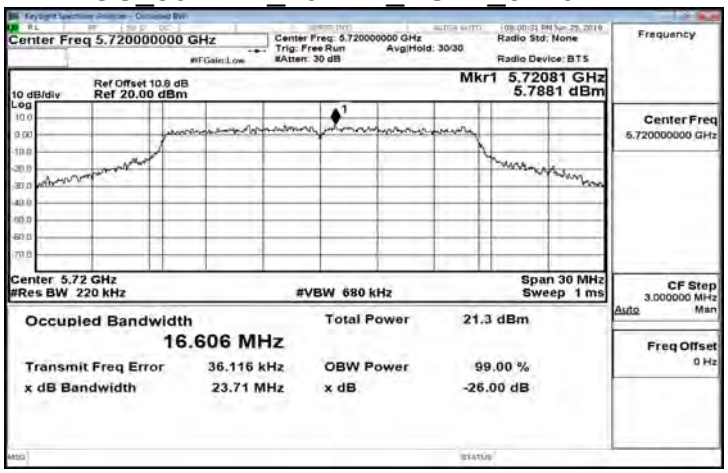
FCC_802.11a_20MHz_AUX1_5700MHz



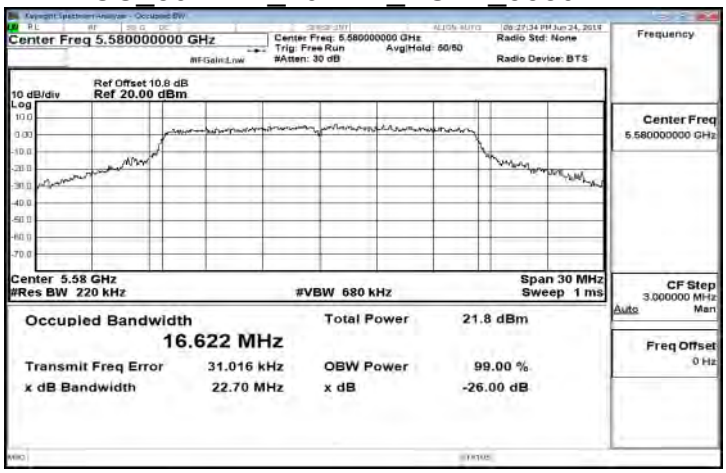
FCC_802.11a_20MHz_AUX1_5500MHz



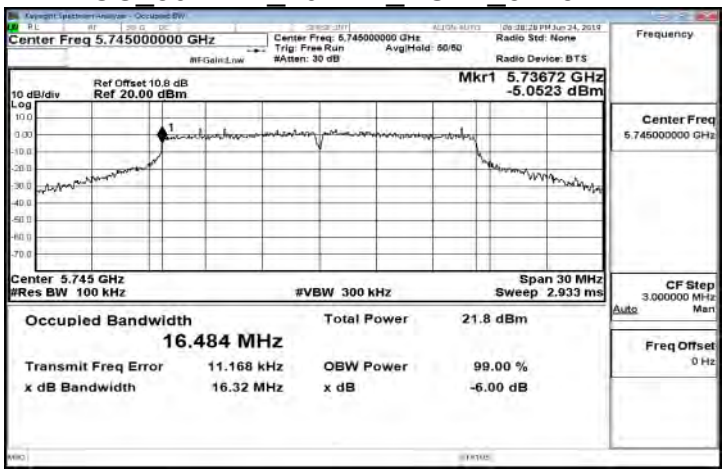
FCC_802.11a_20MHz_AUX1_5720MHz



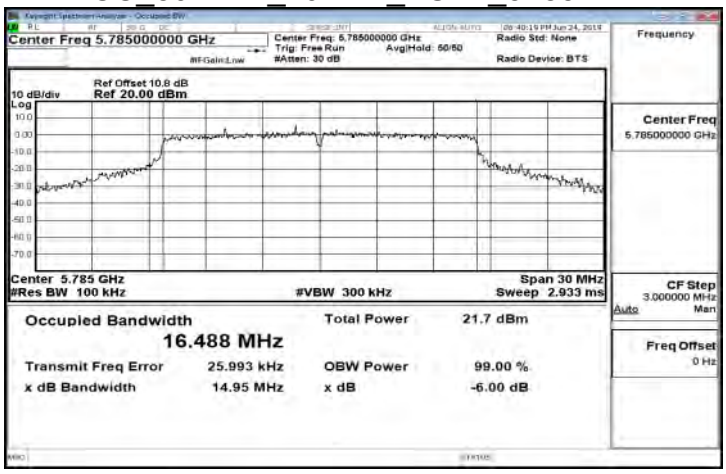
FCC_802.11a_20MHz_AUX1_5580MHz



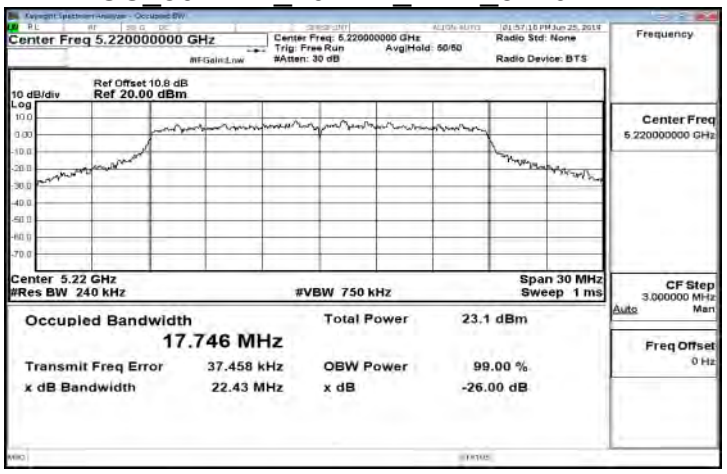
FCC_802.11a_20MHz_AUX1_5745MHz



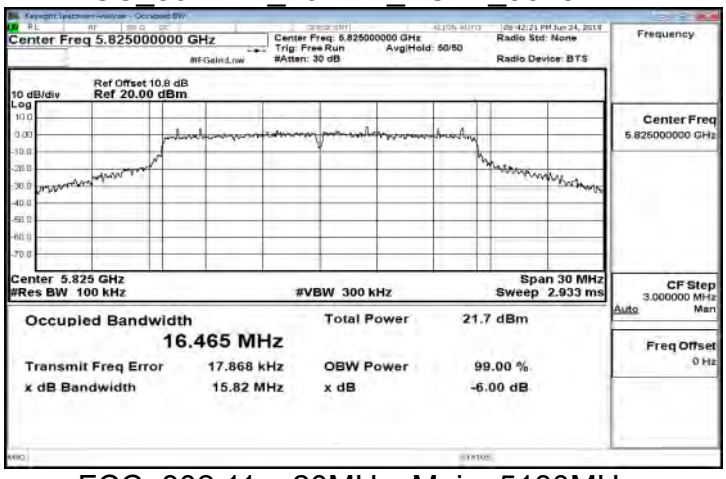
FCC_802.11a_20MHz_AUX1_5785MHz



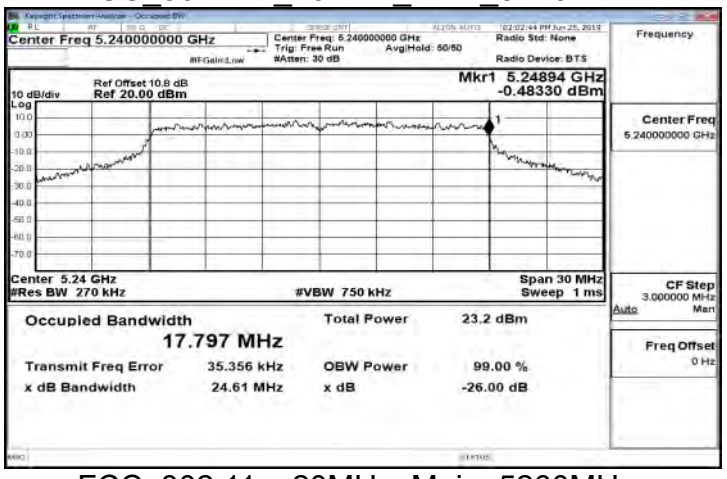
FCC_802.11n_20MHz_Main_5220MHz



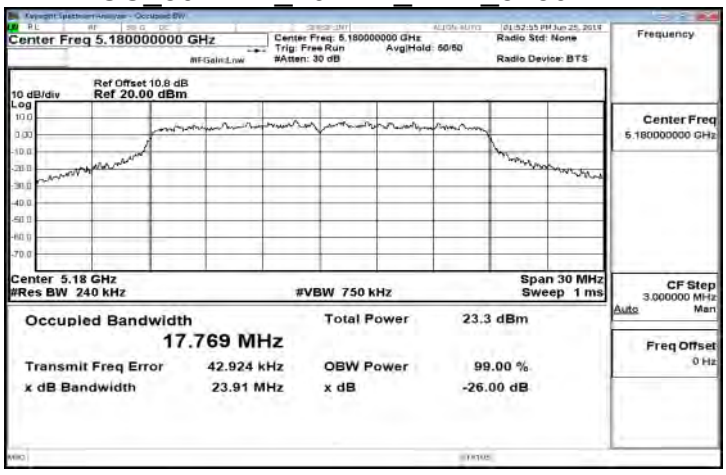
FCC_802.11a_20MHz_AUX1_5825MHz



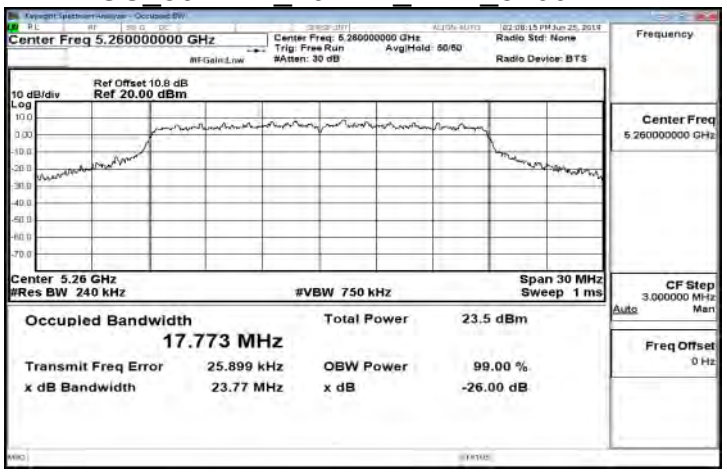
FCC_802.11n_20MHz_Main_5240MHz



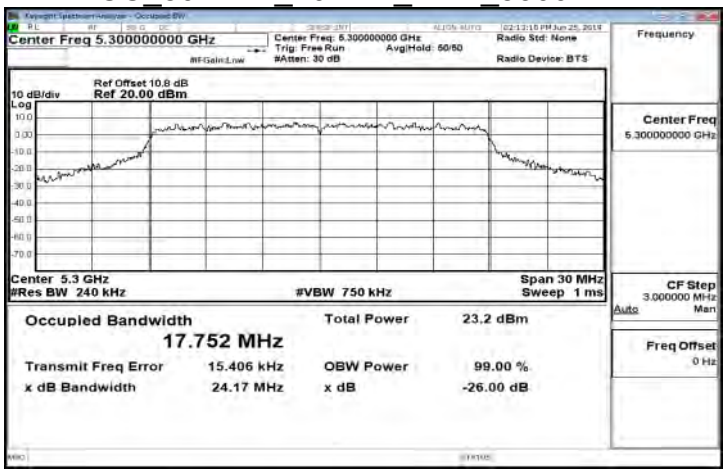
FCC_802.11n_20MHz_Main_5180MHz



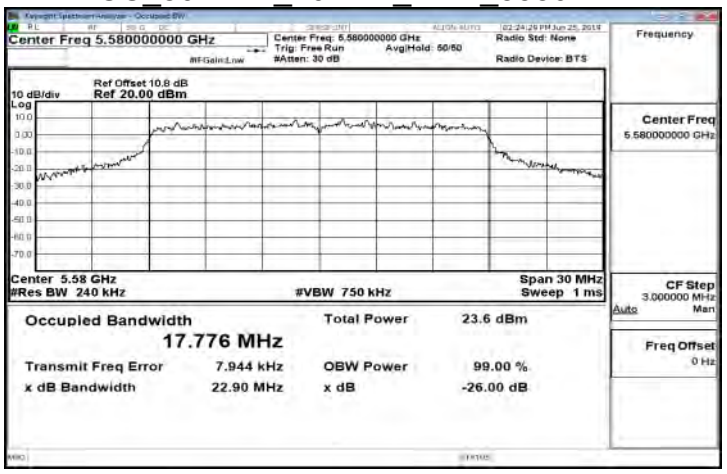
FCC_802.11n_20MHz_Main_5260MHz



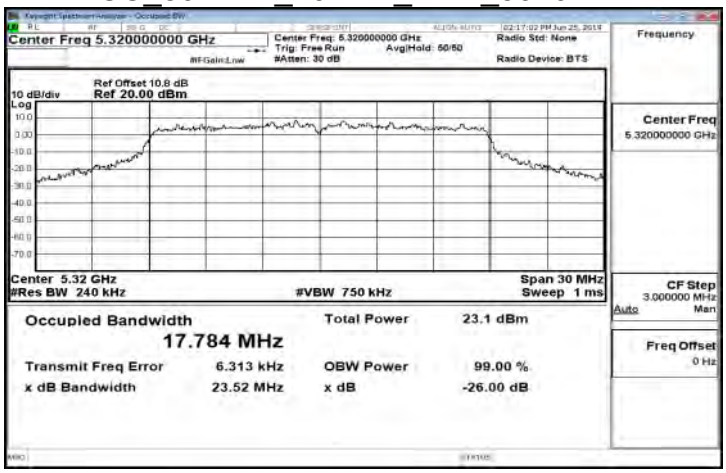
FCC_802.11n_20MHz_Main_5300MHz



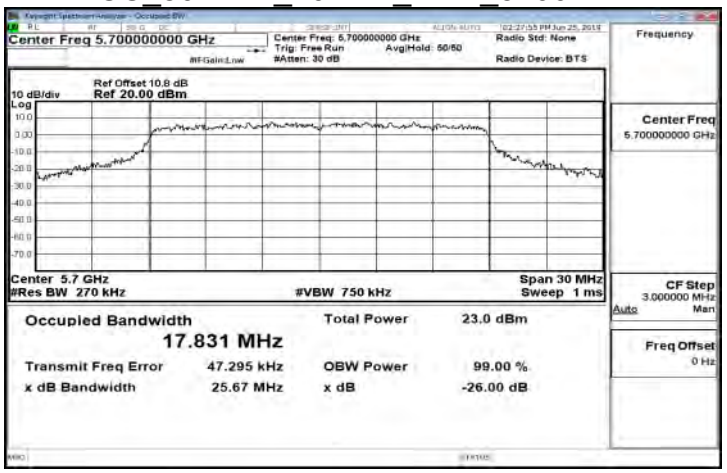
FCC_802.11n_20MHz_Main_5580MHz



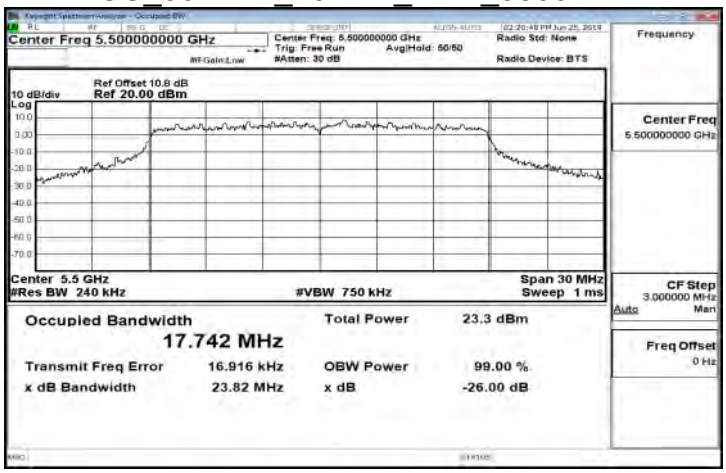
FCC_802.11n_20MHz_Main_5320MHz



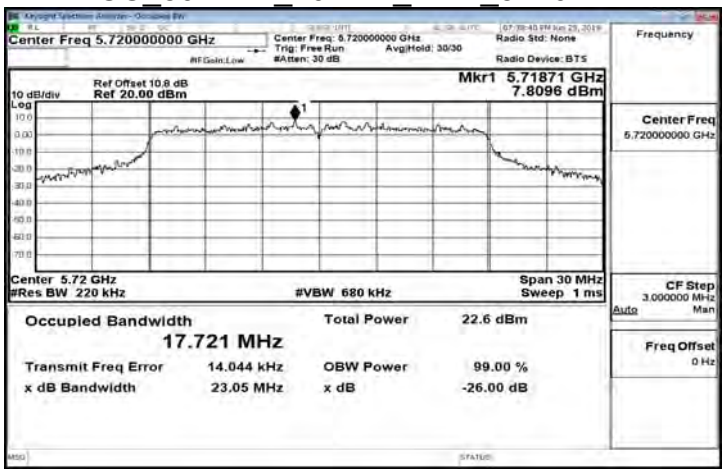
FCC_802.11n_20MHz_Main_5700MHz



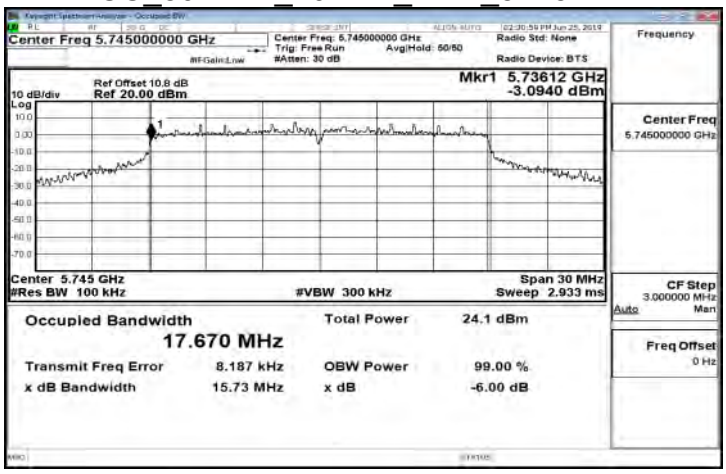
FCC_802.11n_20MHz_Main_5500MHz



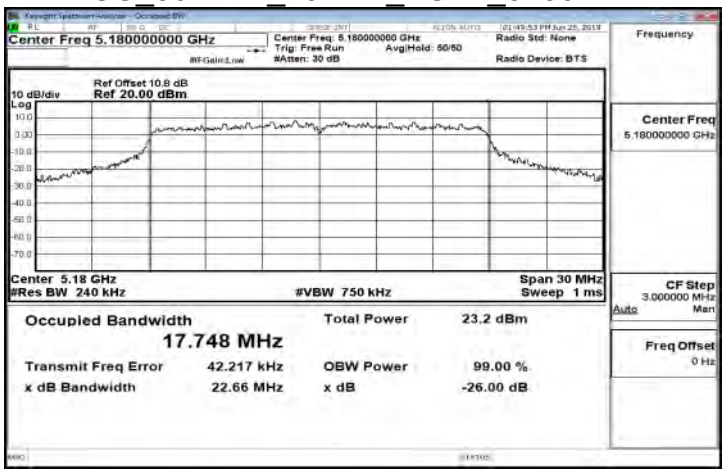
FCC_802.11n_20MHz_Main_5720MHz



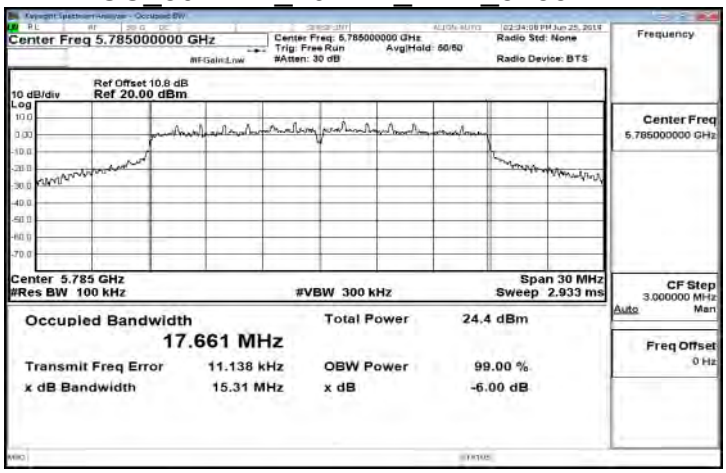
FCC_802.11n_20MHz_Main_5745MHz



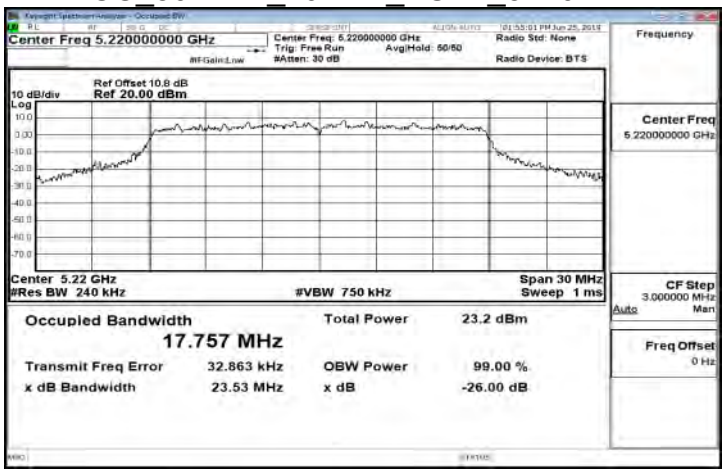
FCC_802.11n_20MHz_AUX1_5180MHz



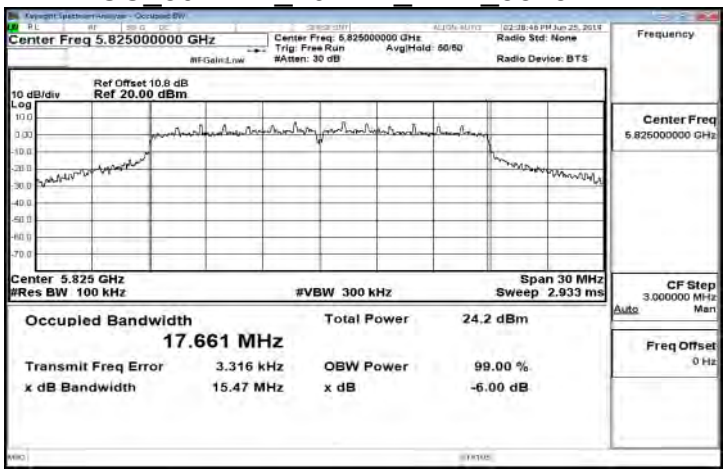
FCC_802.11n_20MHz_Main_5785MHz



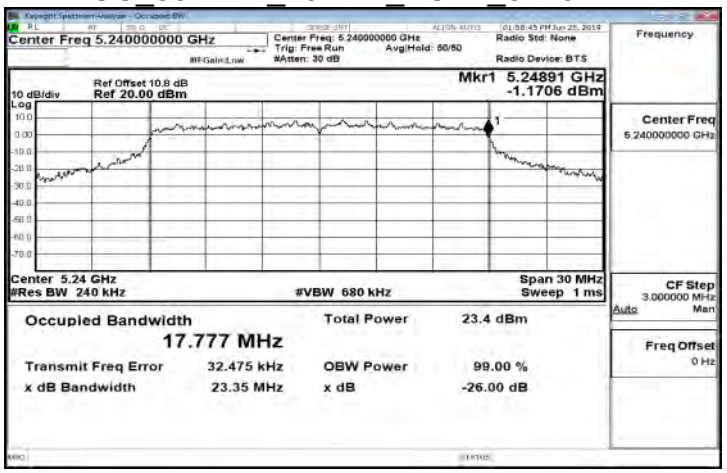
FCC_802.11n_20MHz_AUX1_5220MHz



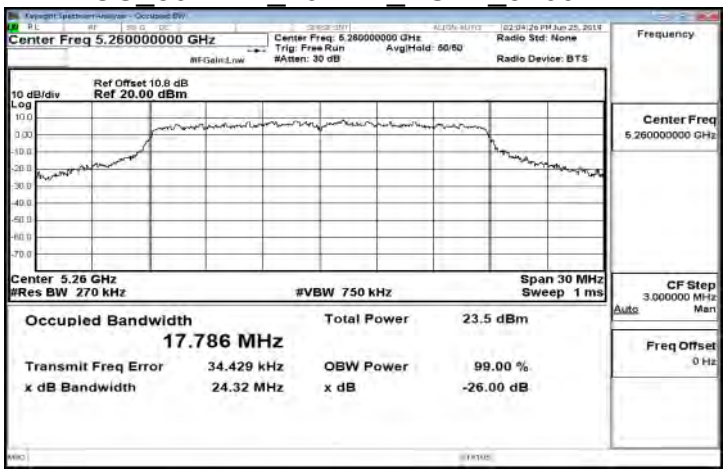
FCC_802.11n_20MHz_Main_5825MHz



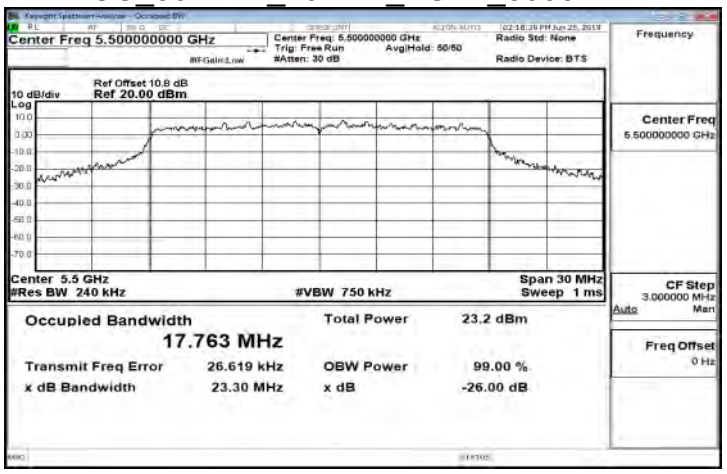
FCC_802.11n_20MHz_AUX1_5240MHz



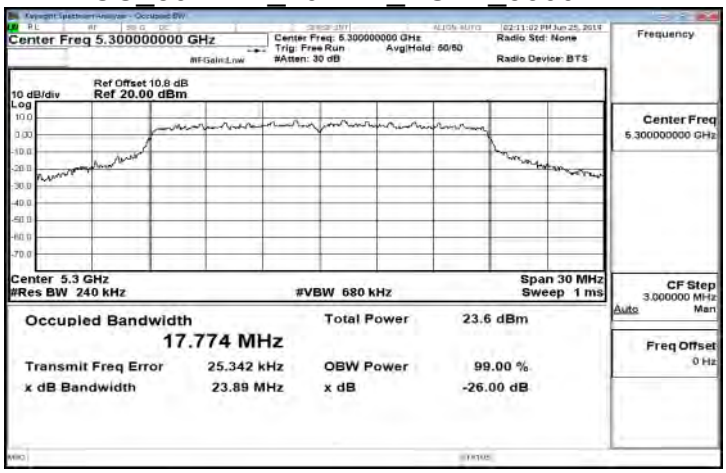
FCC_802.11n_20MHz_AUX1_5260MHz



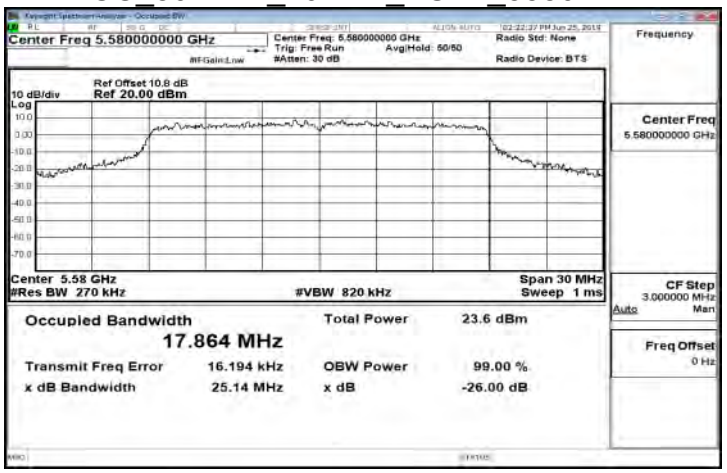
FCC_802.11n_20MHz_AUX1_5500MHz



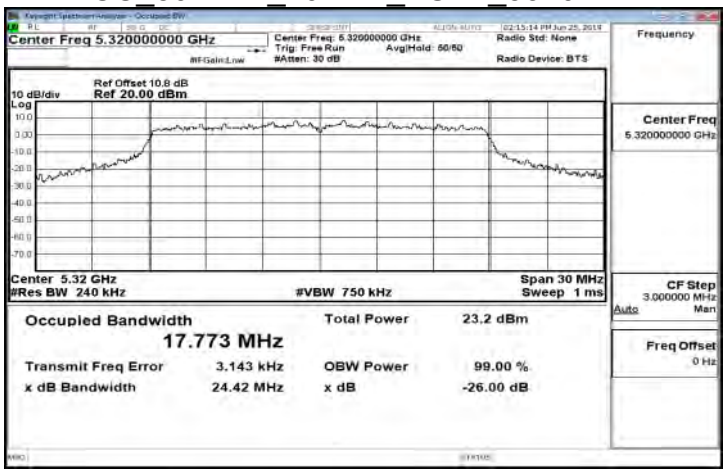
FCC_802.11n_20MHz_AUX1_5300MHz



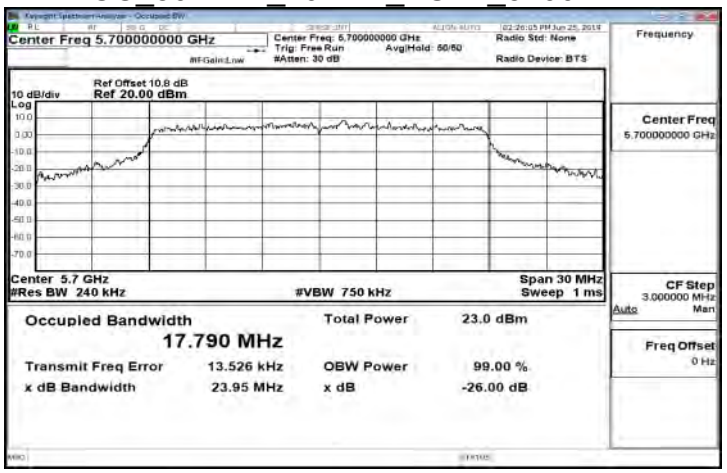
FCC_802.11n_20MHz_AUX1_5580MHz



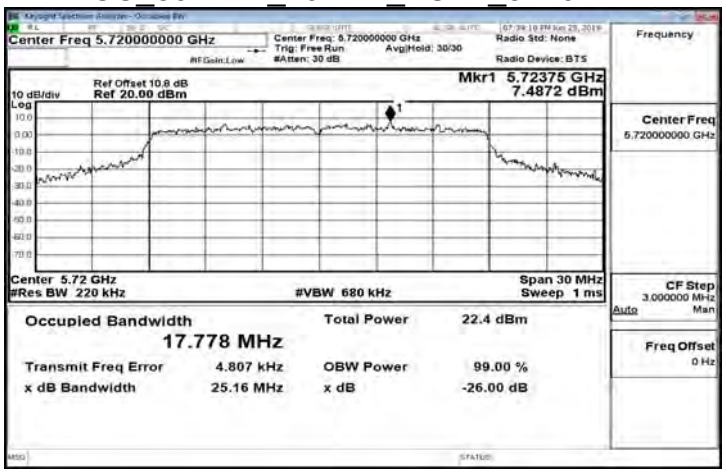
FCC_802.11n_20MHz_AUX1_5320MHz



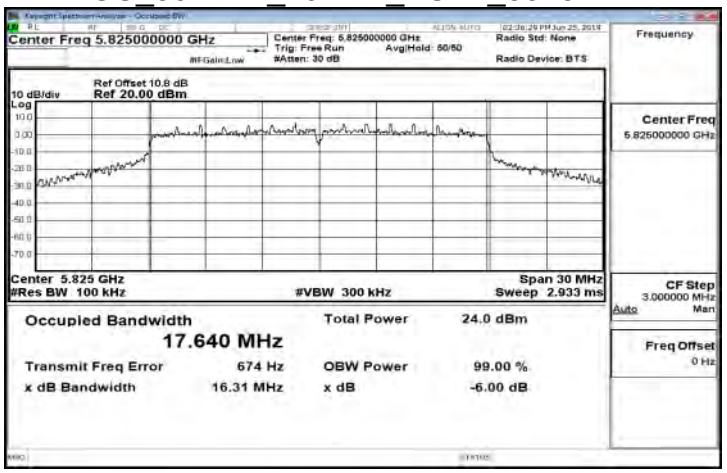
FCC_802.11n_20MHz_AUX1_5700MHz



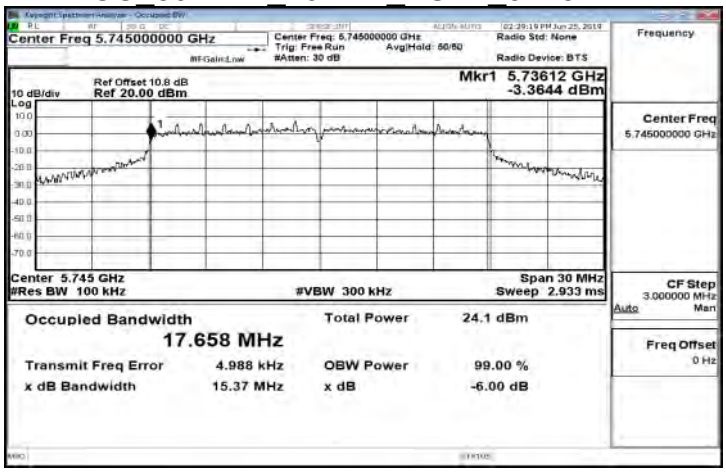
FCC_802.11n_20MHz_AUX1_5720MHz



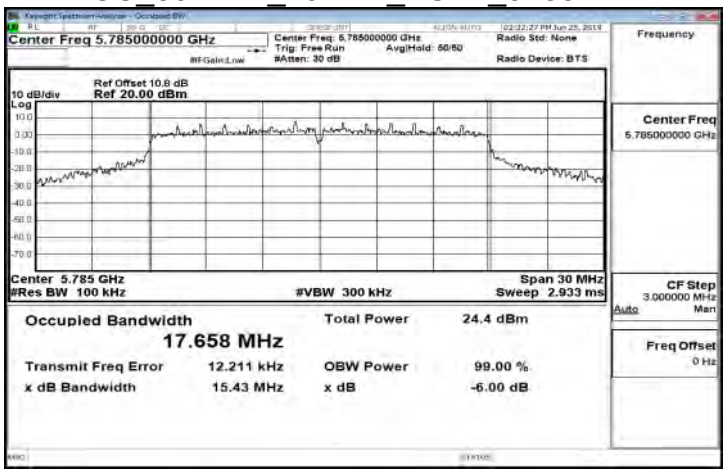
FCC_802.11n_20MHz_AUX1_5825MHz



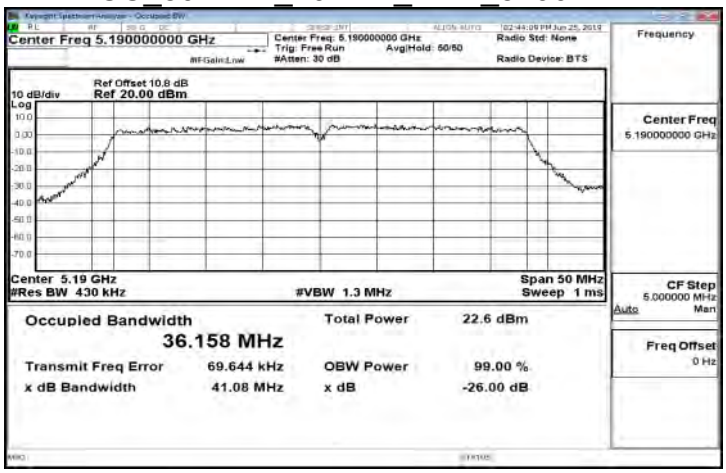
FCC_802.11n_20MHz_AUX1_5745MHz



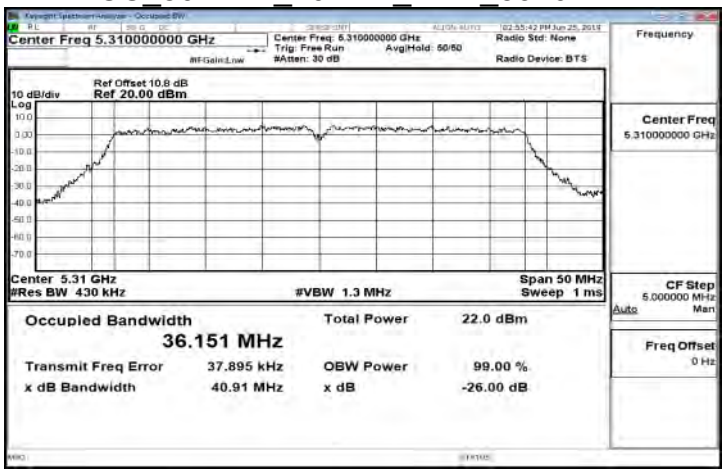
FCC_802.11n_20MHz_AUX1_5785MHz



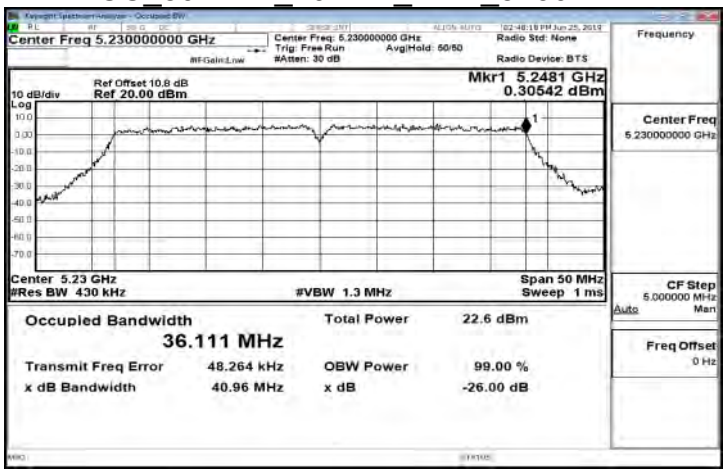
FCC_802.11n_40MHz_Main_5190MHz



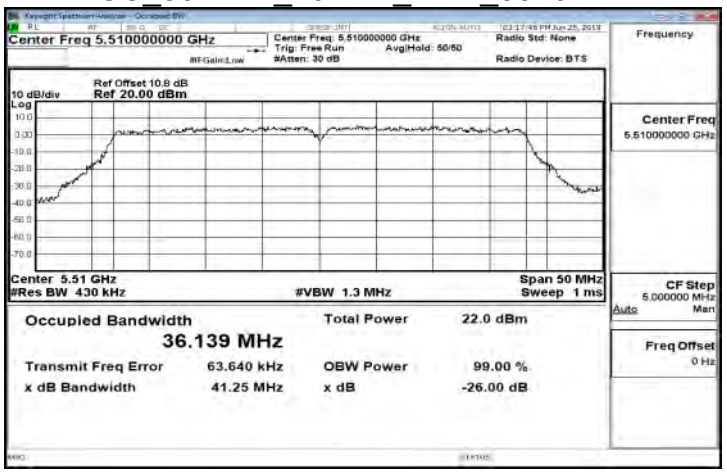
FCC_802.11n_40MHz_Main_5310MHz



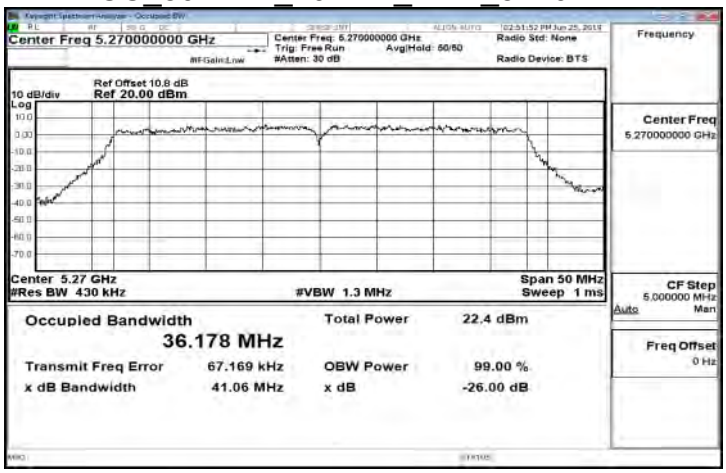
FCC_802.11n_40MHz_Main_5230MHz



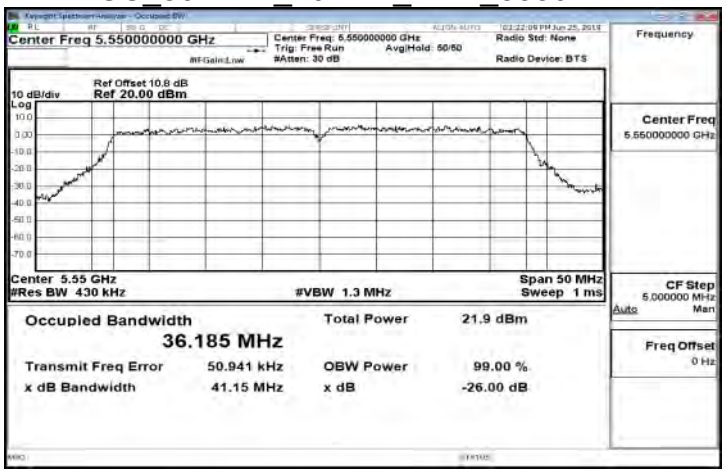
FCC_802.11n_40MHz_Main_5510MHz



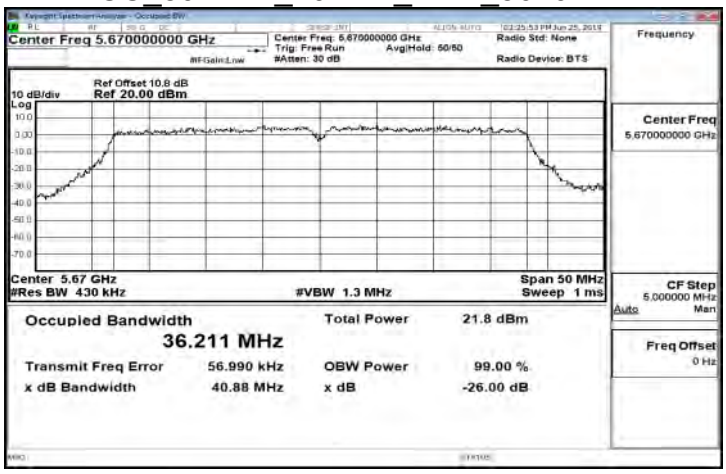
FCC_802.11n_40MHz_Main_5270MHz



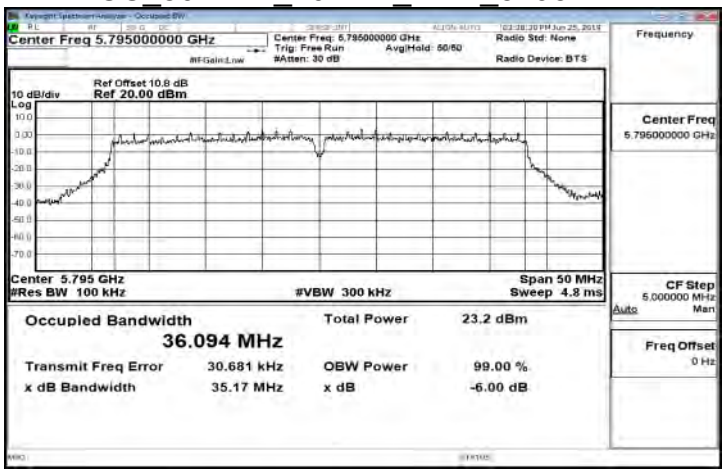
FCC_802.11n_40MHz_Main_5550MHz



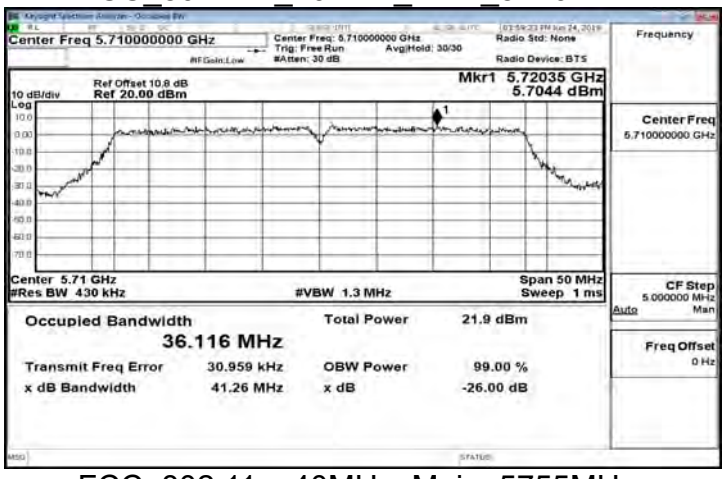
FCC_802.11n_40MHz_Main_5670MHz



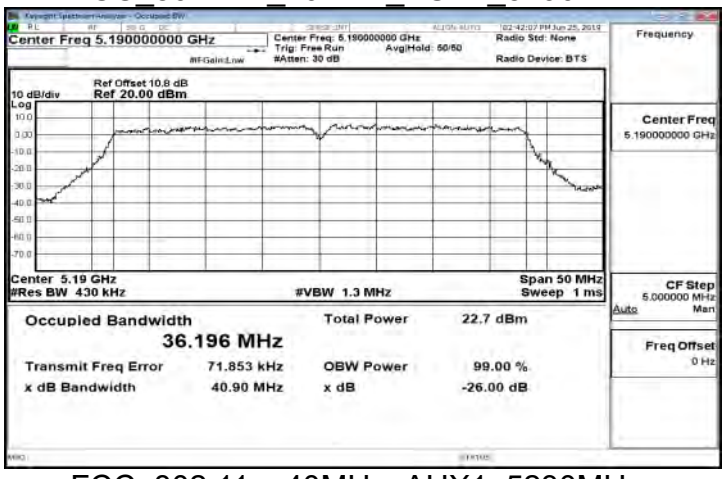
FCC_802.11n_40MHz_Main_5795MHz



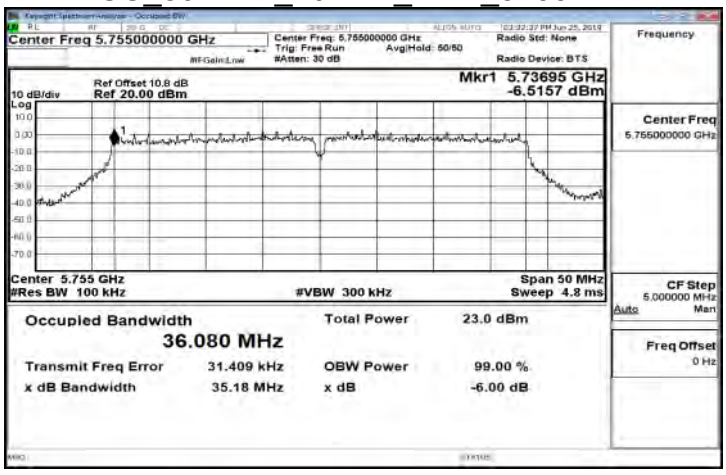
FCC_802.11n_40MHz_Main_5710MHz



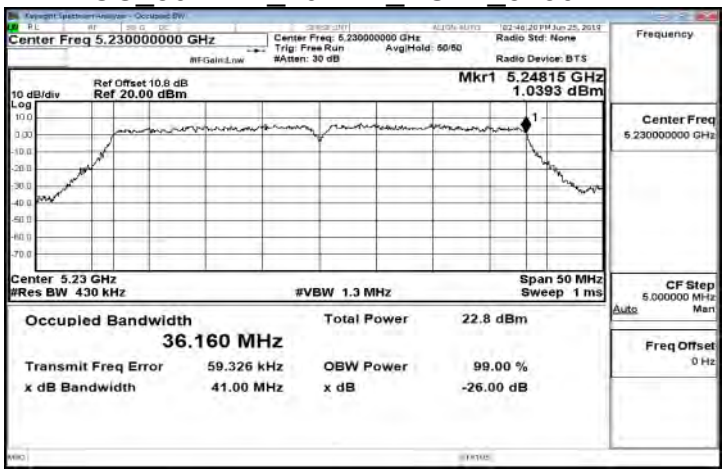
FCC_802.11n_40MHz_AUX1_5190MHz



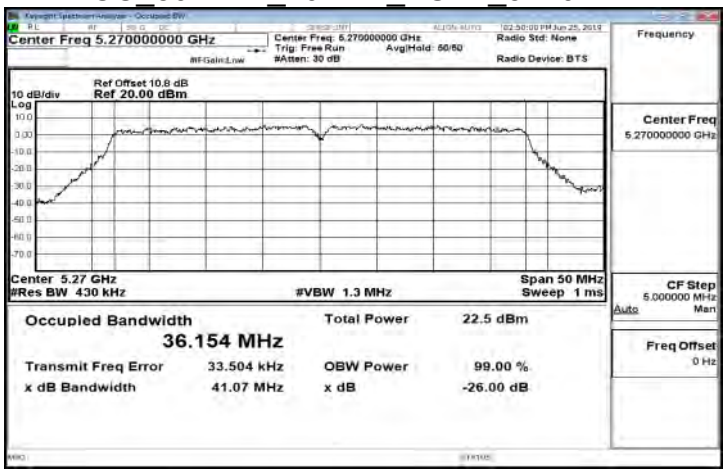
FCC_802.11n_40MHz_Main_5755MHz



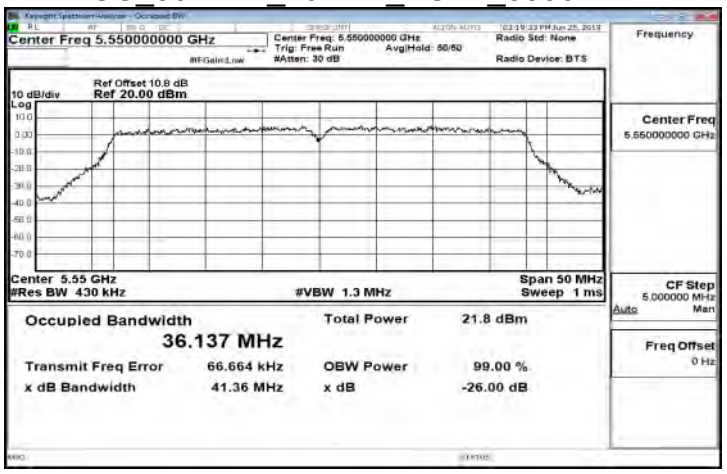
FCC_802.11n_40MHz_AUX1_5230MHz



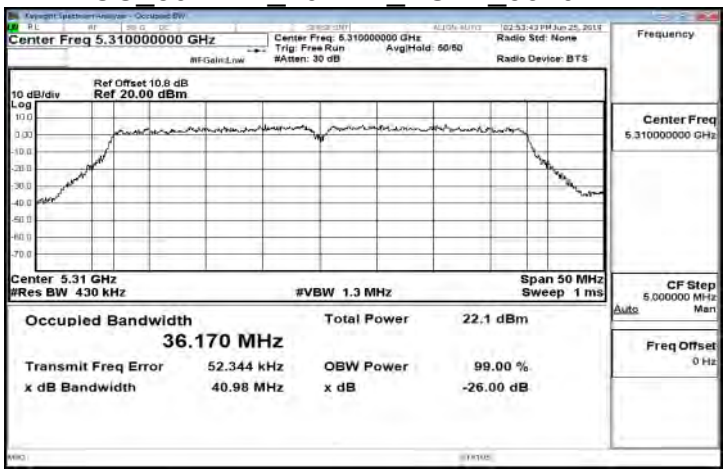
FCC_802.11n_40MHz_AUX1_5270MHz



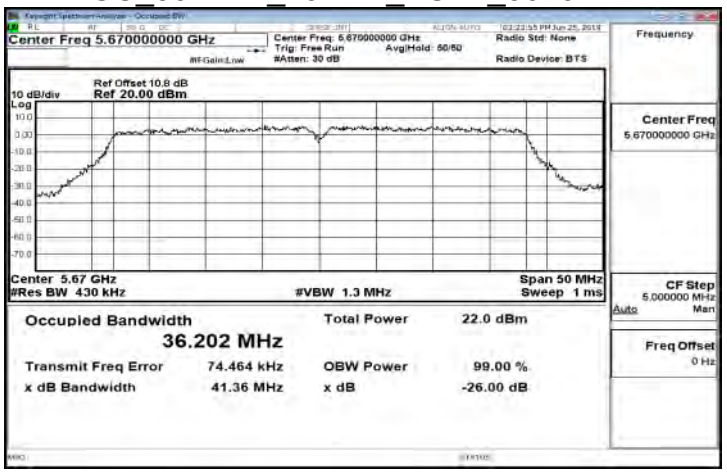
FCC_802.11n_40MHz_AUX1_5550MHz



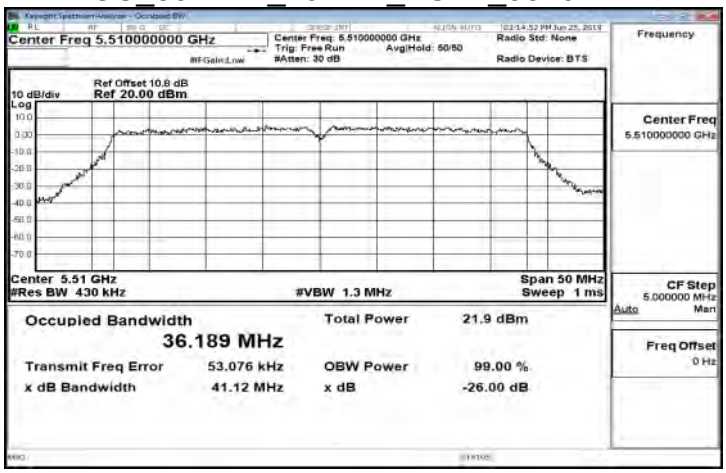
FCC_802.11n_40MHz_AUX1_5310MHz



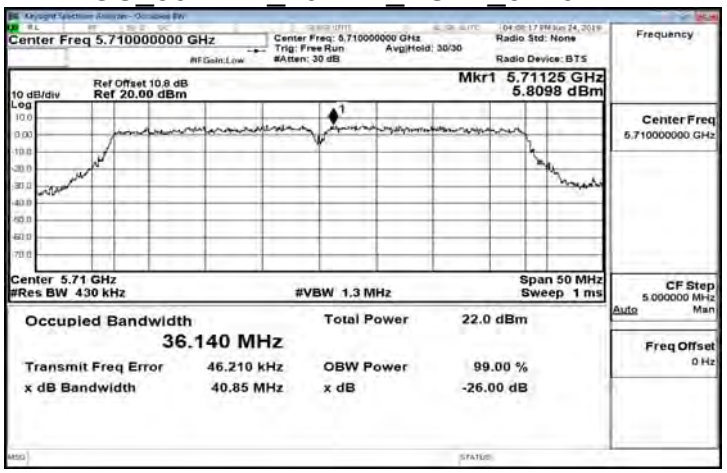
FCC_802.11n_40MHz_AUX1_5670MHz



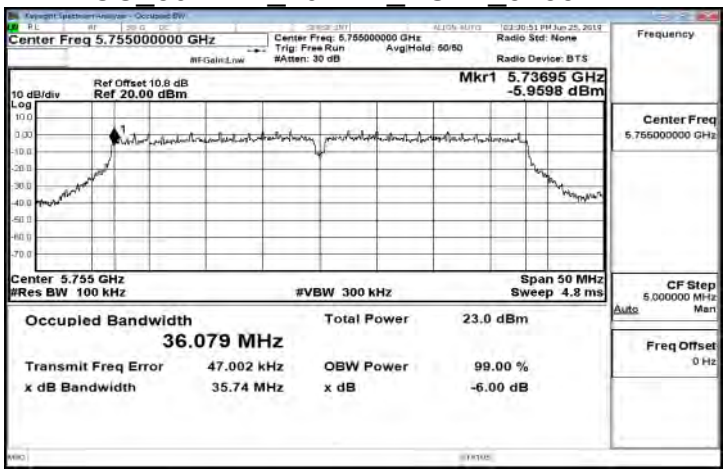
FCC_802.11n_40MHz_AUX1_5510MHz



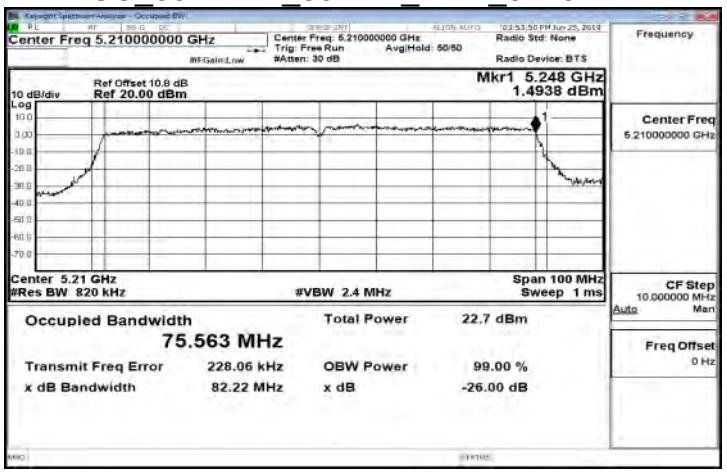
FCC_802.11n_40MHz_AUX1_5710MHz



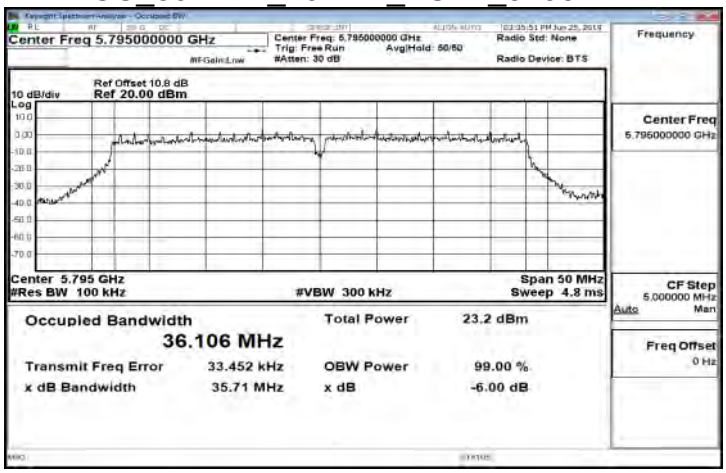
FCC_802.11n_40MHz_AUX1_5755MHz



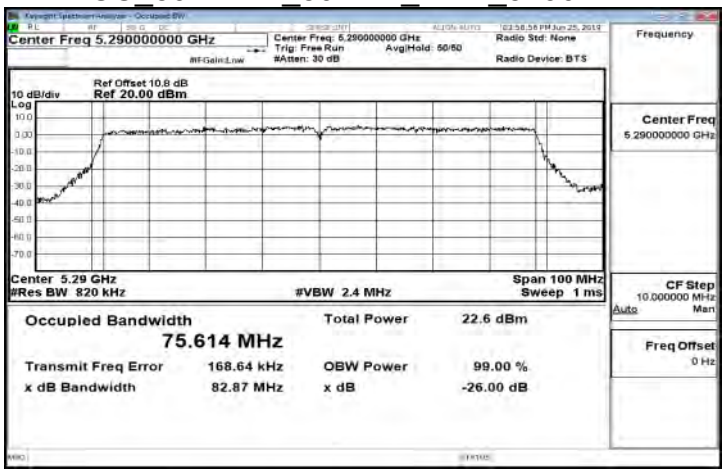
FCC_802.11ac_80MHz_Main_5210MHz



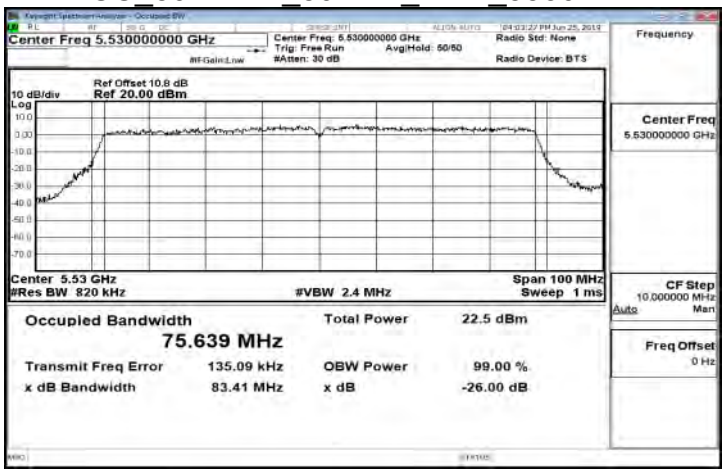
FCC_802.11n_40MHz_AUX1_5795MHz



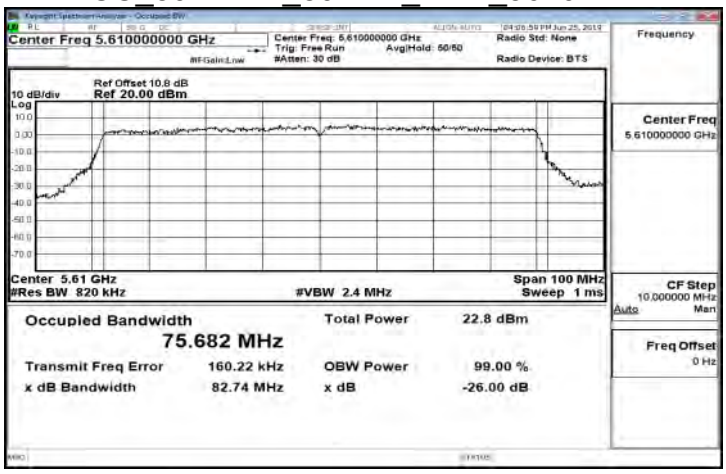
FCC_802.11ac_80MHz_Main_5290MHz



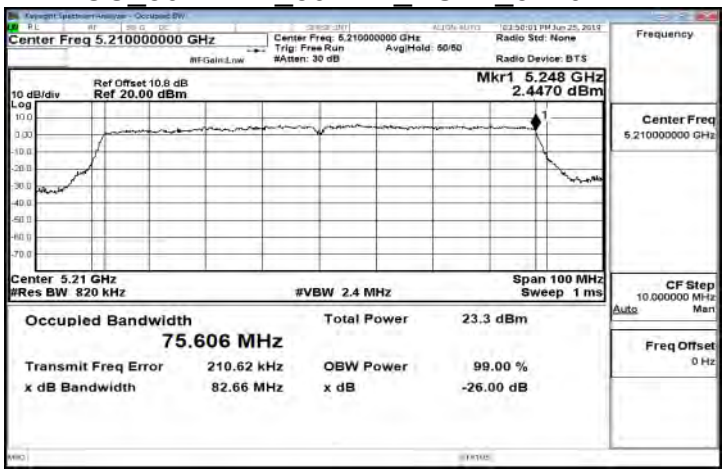
FCC_802.11ac_80MHz_Main_5530MHz



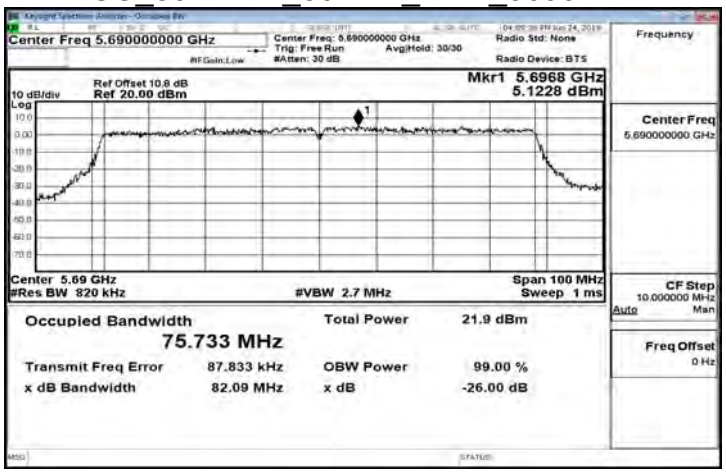
FCC_802.11ac_80MHz_Main_5610MHz



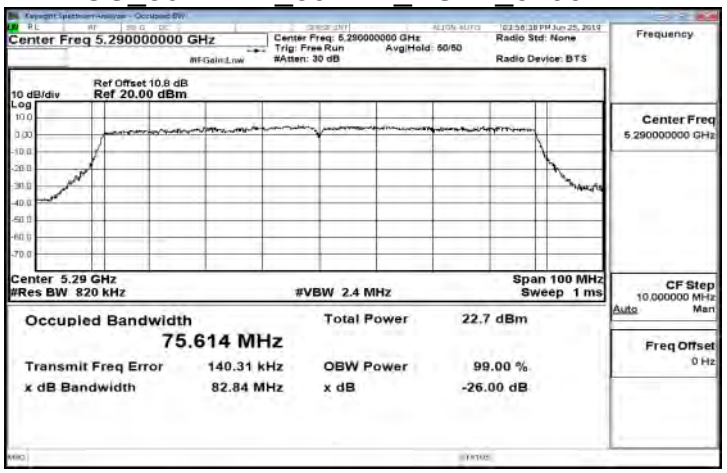
FCC_802.11ac_80MHz_AUX1_5210MHz



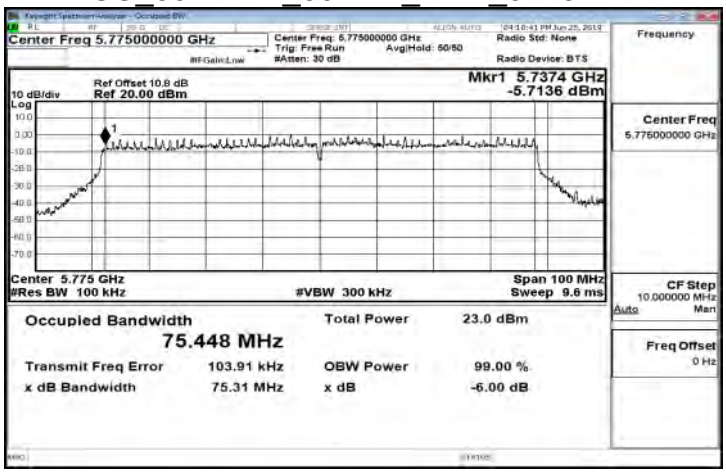
FCC_802.11ac_80MHz_Main_5690MHz



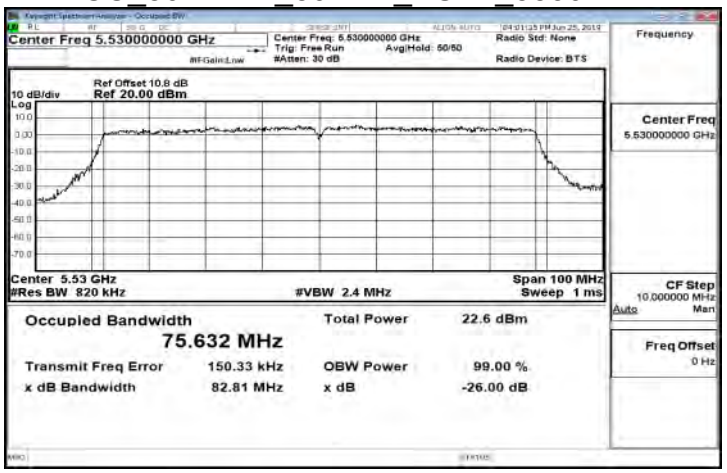
FCC_802.11ac_80MHz_AUX1_5290MHz



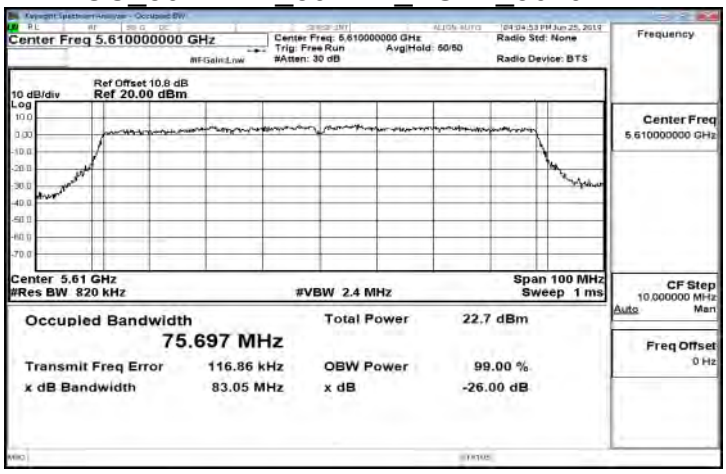
FCC_802.11ac_80MHz_Main_5775MHz



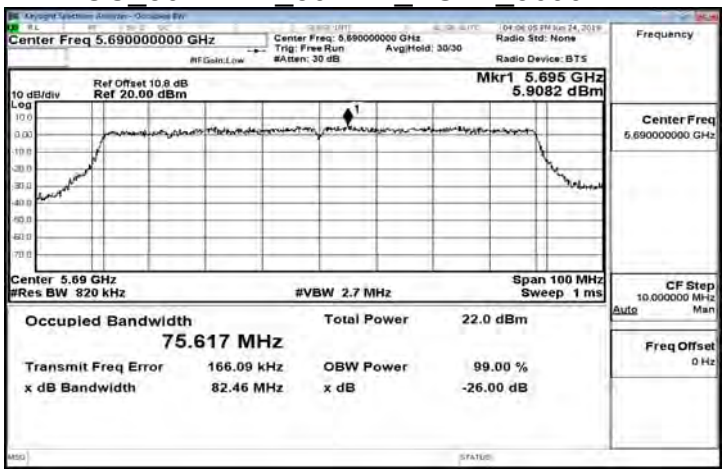
FCC_802.11ac_80MHz_AUX1_5530MHz



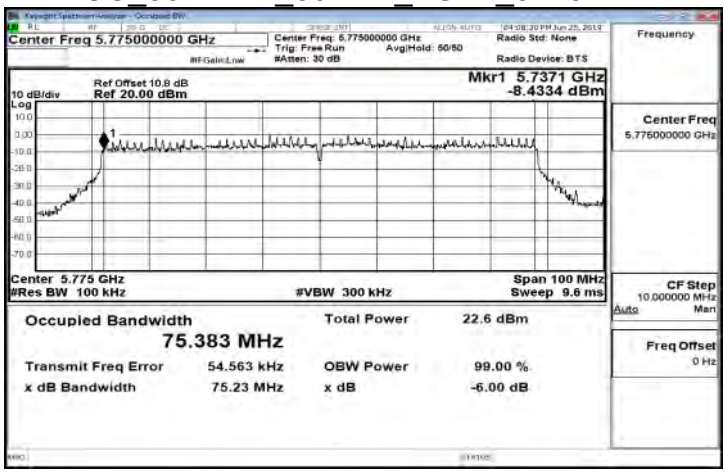
FCC_802.11ac_80MHz_AUX1_5610MHz



FCC_802.11ac_80MHz_AUX1_5690MHz

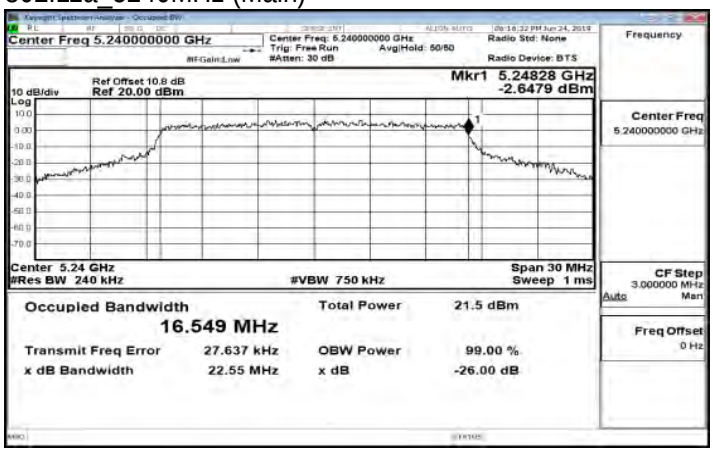


FCC_802.11ac_80MHz_AUX1_5775MHz

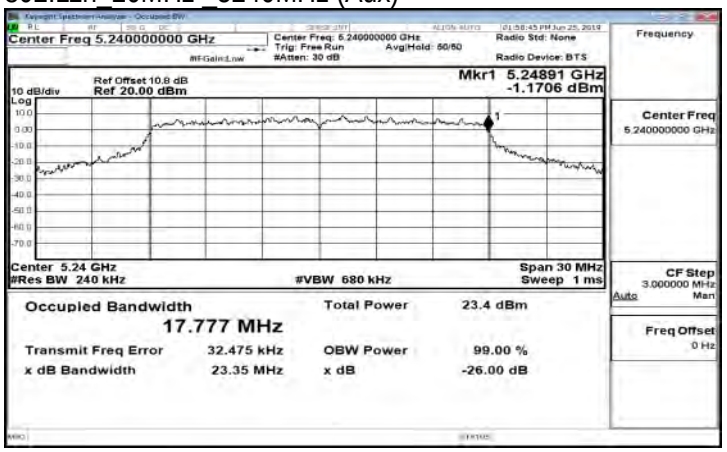


99% BW to prove that all signals in band I is no over band U-NII-1

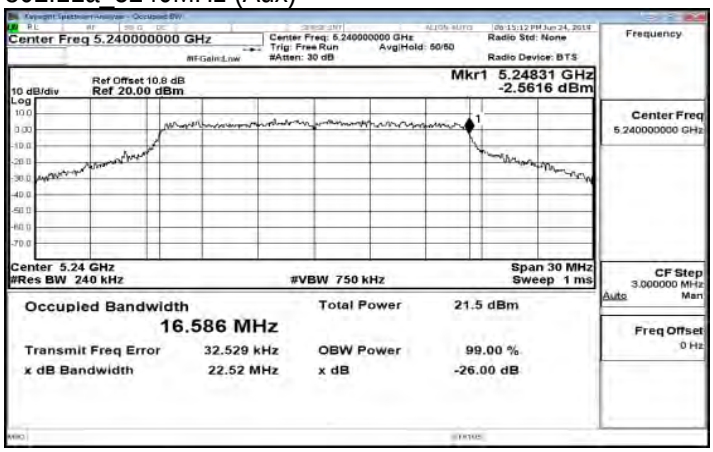
802.11a_5240MHz (Main)



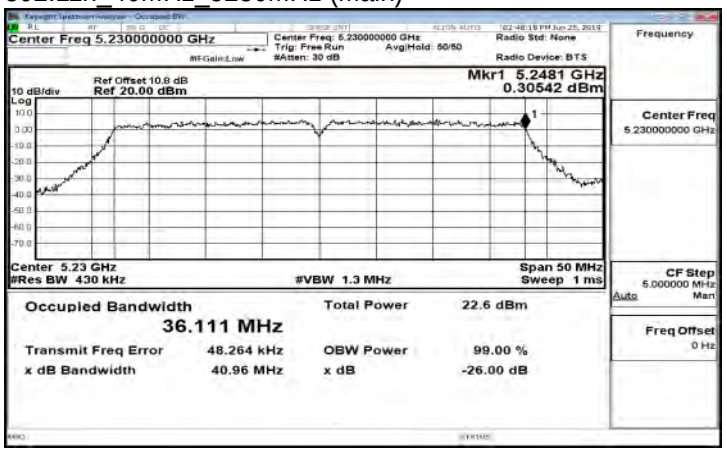
802.11n_20MHz_5240MHz (Aux)



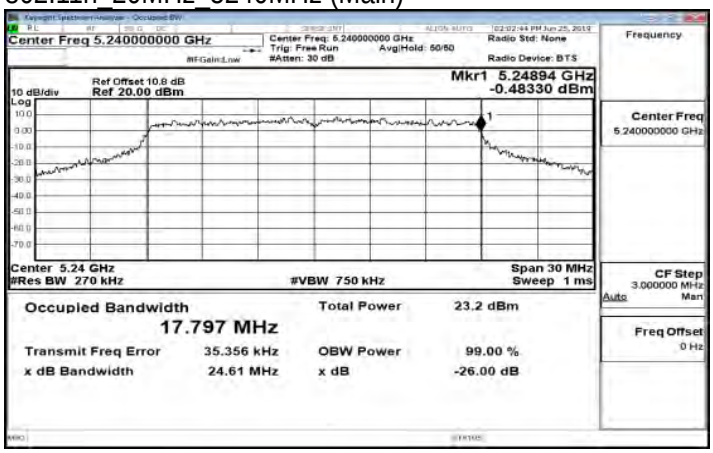
802.11a_5240MHz (Aux)



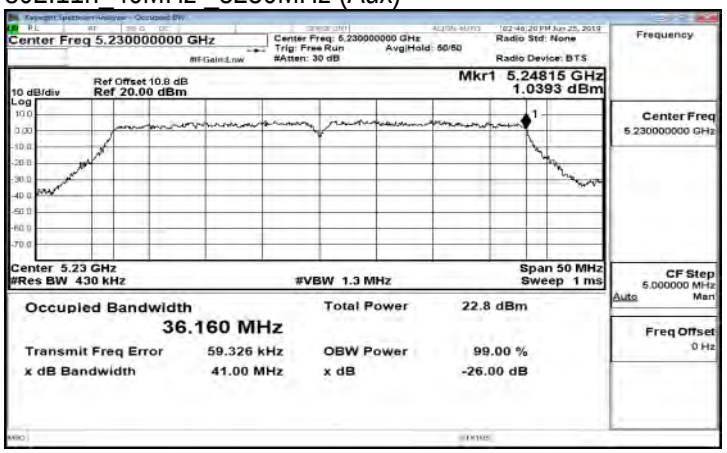
802.11n_40MHz_5230MHz (Main)



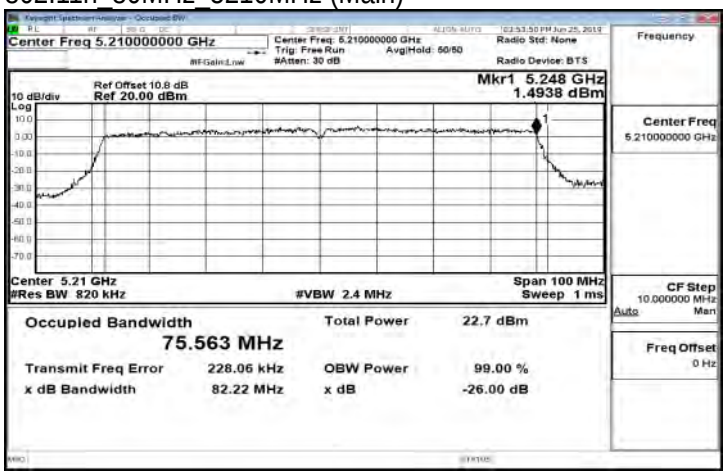
802.11n_20MHz_5240MHz (Main)



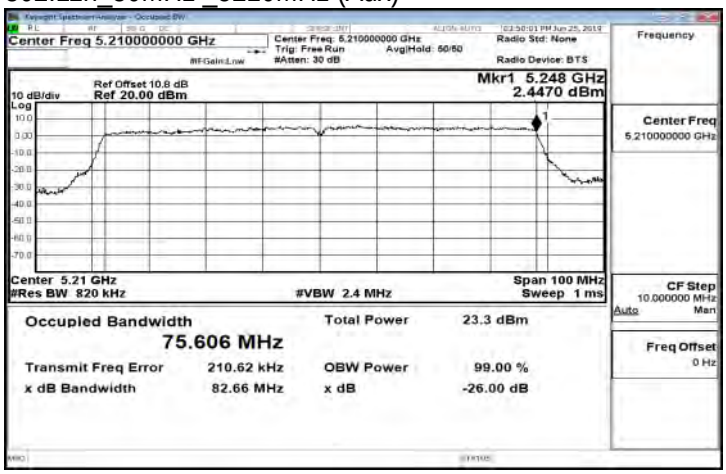
802.11n_40MHz_5230MHz (Aux)



802.11n_80MHz_5210MHz (Main)



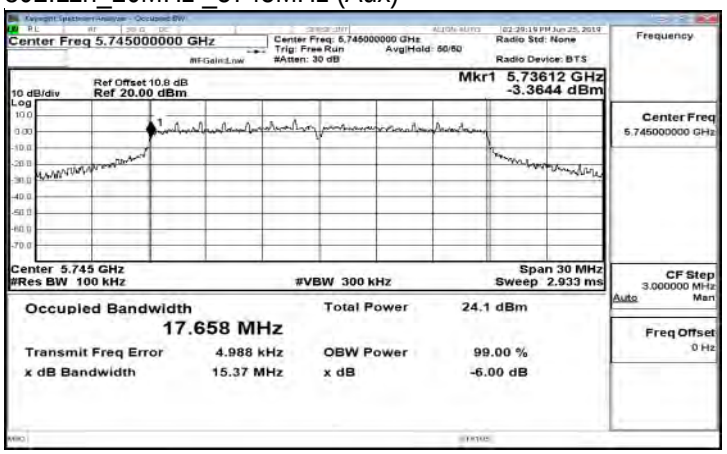
802.11n_80MHz_5210MHz (Aux)



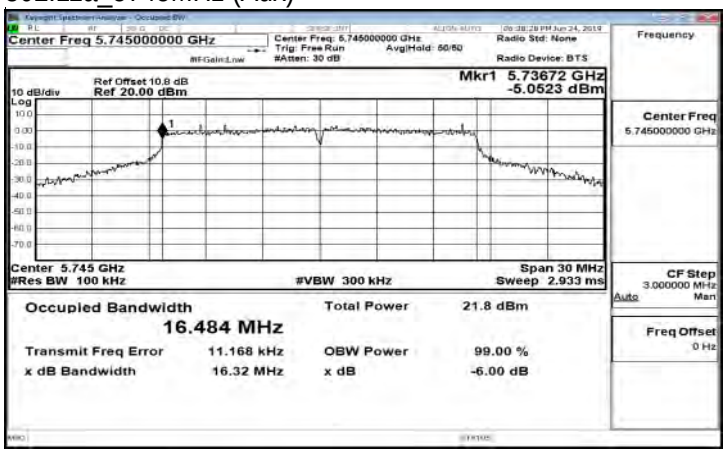
99% BW to prove that all signals in band I is no over band U-NII-3

802.11a_5745MHz (Main)

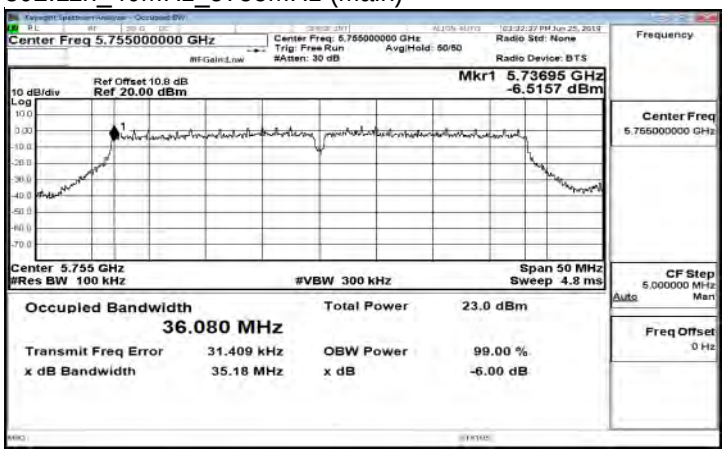
802.11n_20MHz _5745MHz (Aux)



802.11a_5745MHz (Aux)

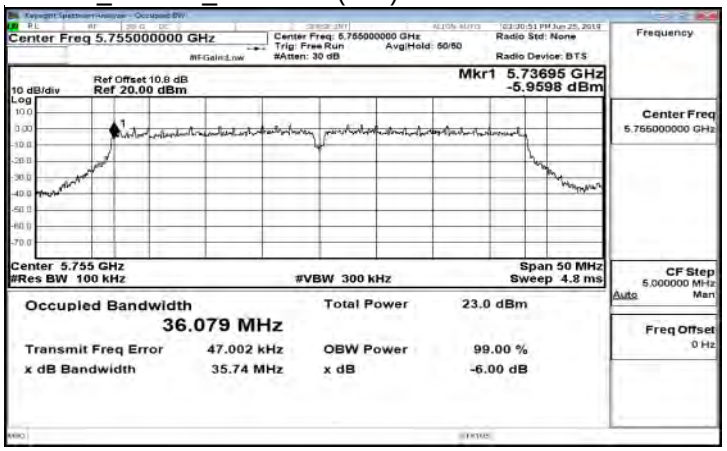


802.11n_40MHz_5755MHz (Main)

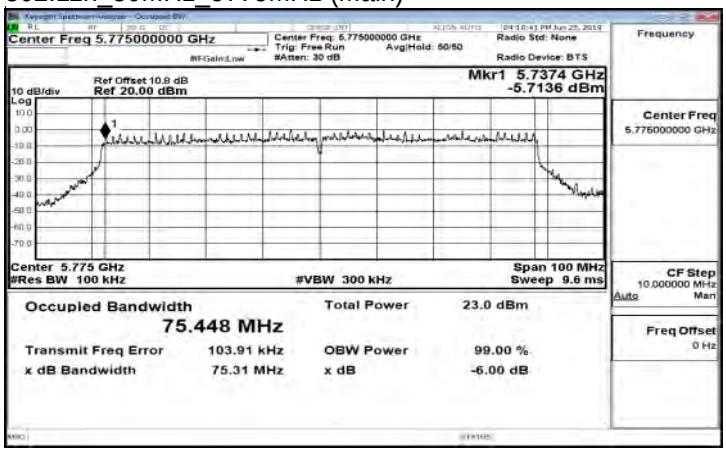


802.11n_20MHz_5745MHz (Main)

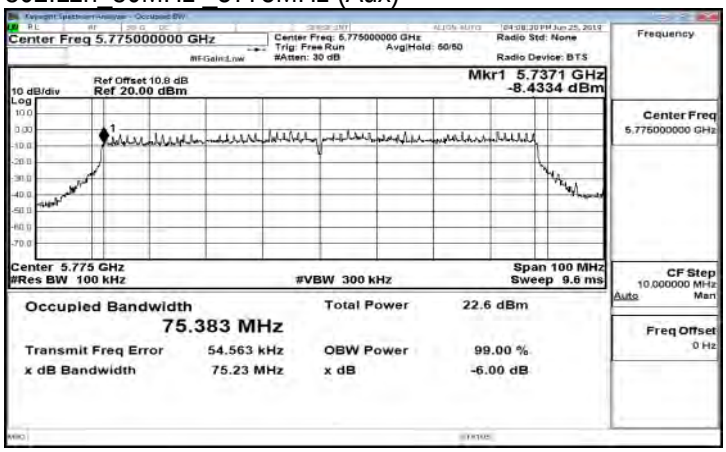
802.11n_40MHz _5755MHz (Aux)



802.11n_80MHz_5775MHz (Main)

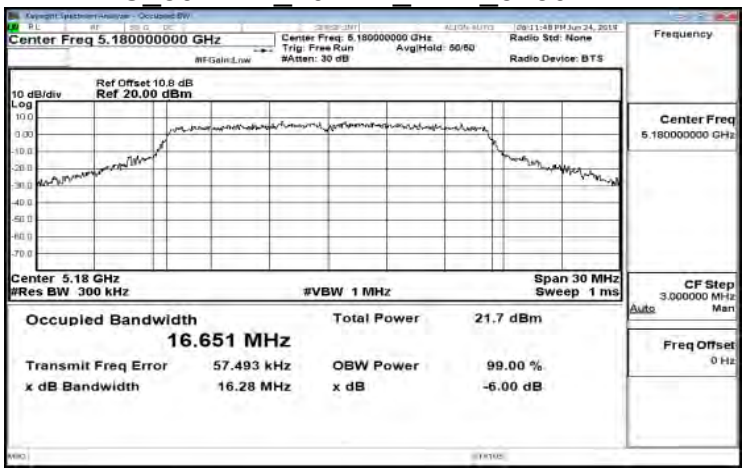


802.11n_80MHz_5775MHz (Aux)

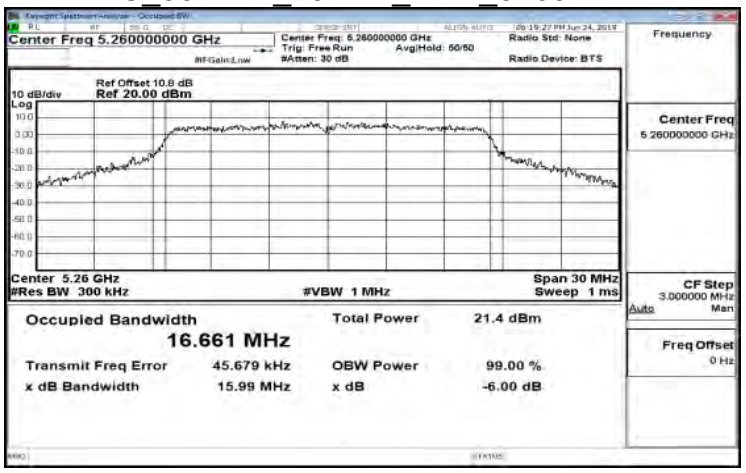


For 99%,

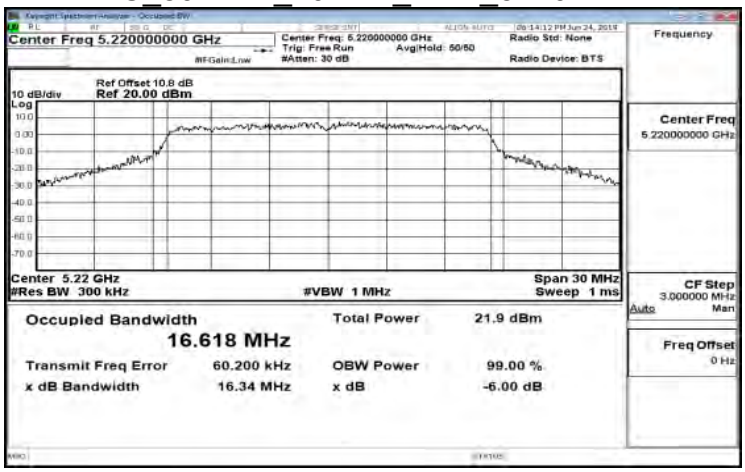
IC_802.11a_20MHz_Main_5180MHz



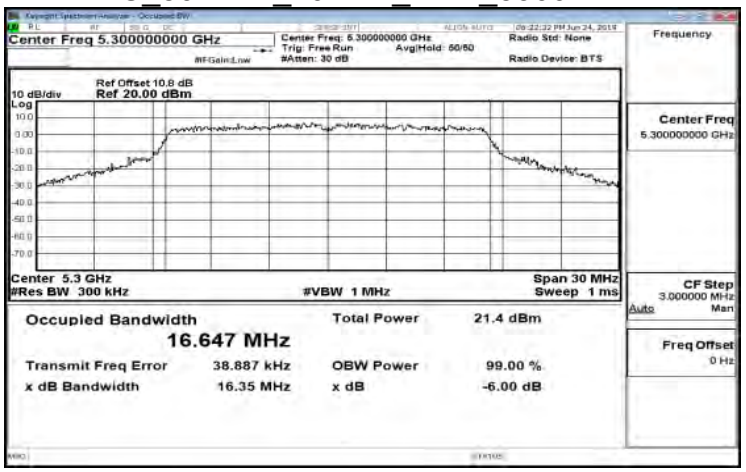
IC_802.11a_20MHz_Main_5260MHz



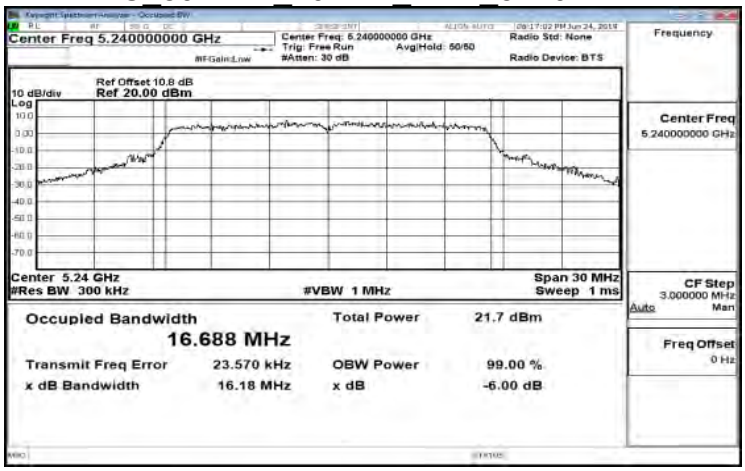
IC_802.11a_20MHz_Main_5220MHz



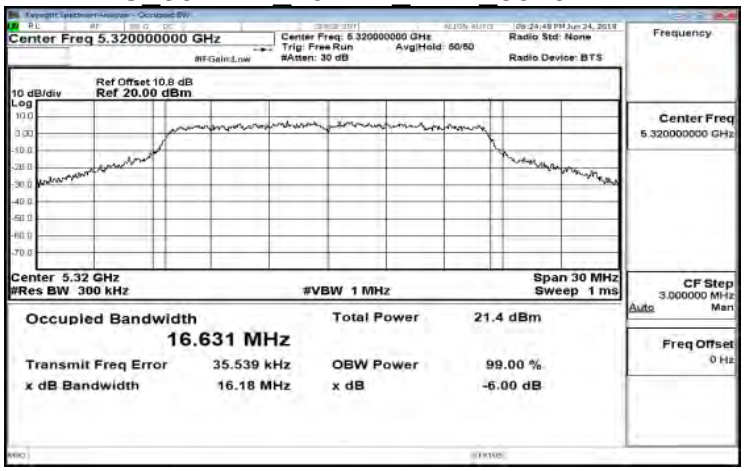
IC_802.11a_20MHz_Main_5300MHz



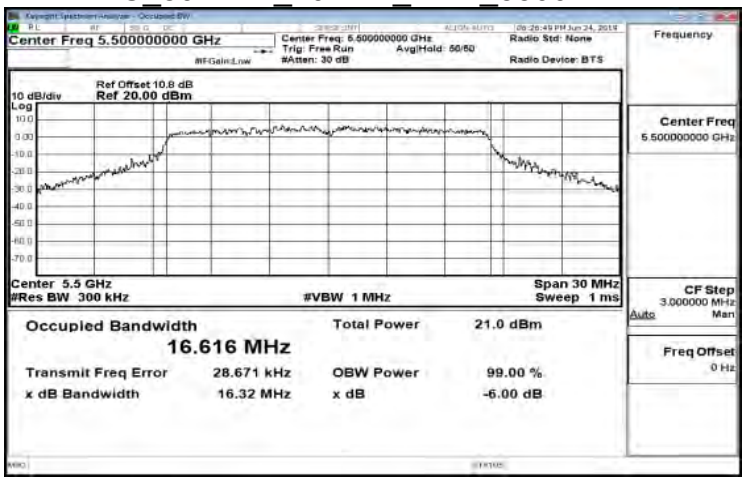
IC_802.11a_20MHz_Main_5240MHz



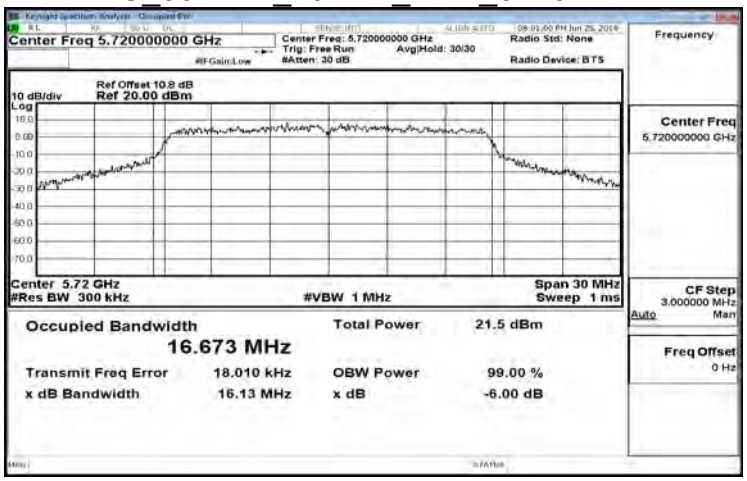
IC_802.11a_20MHz_Main_5320MHz



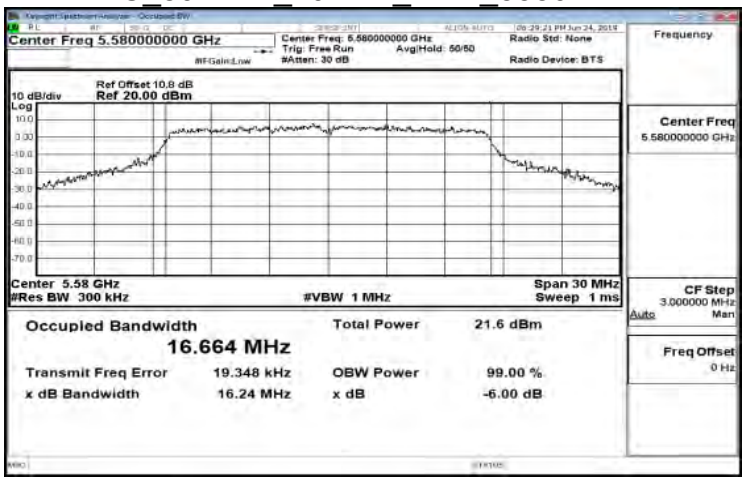
IC_802.11a_20MHz_Main_5500MHz



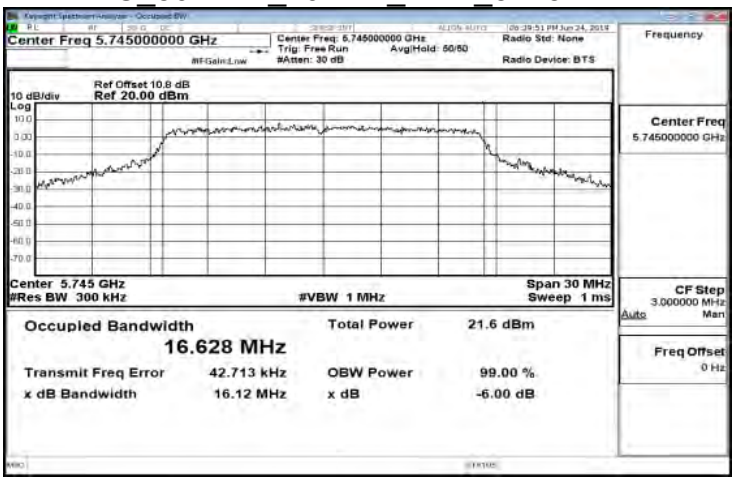
IC_802.11a_20MHz_Main_5720MHz



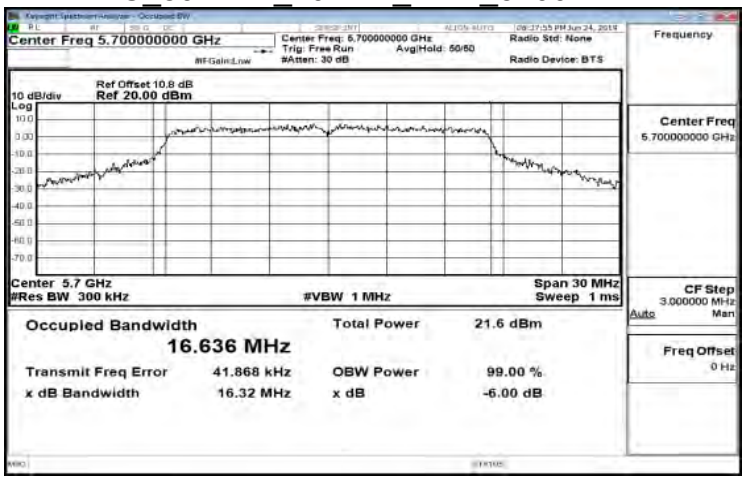
IC_802.11a_20MHz_Main_5580MHz



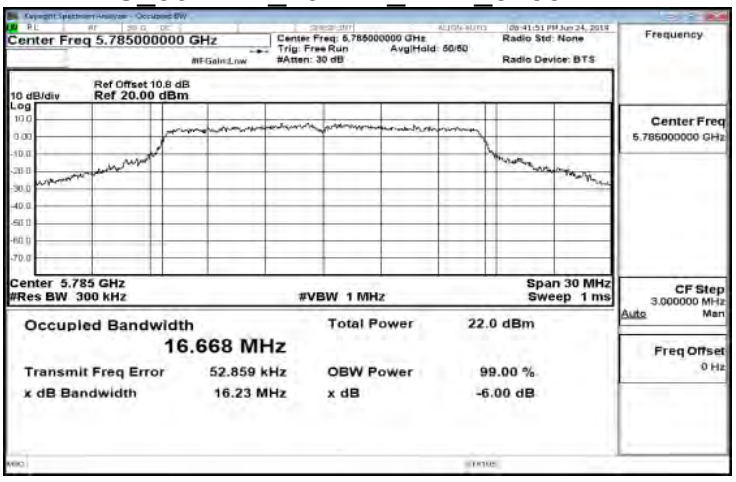
IC_802.11a_20MHz_Main_5745MHz



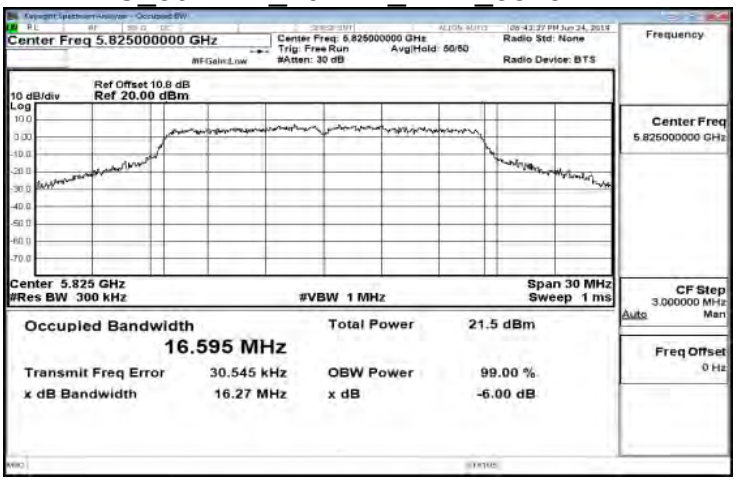
IC_802.11a_20MHz_Main_5700MHz



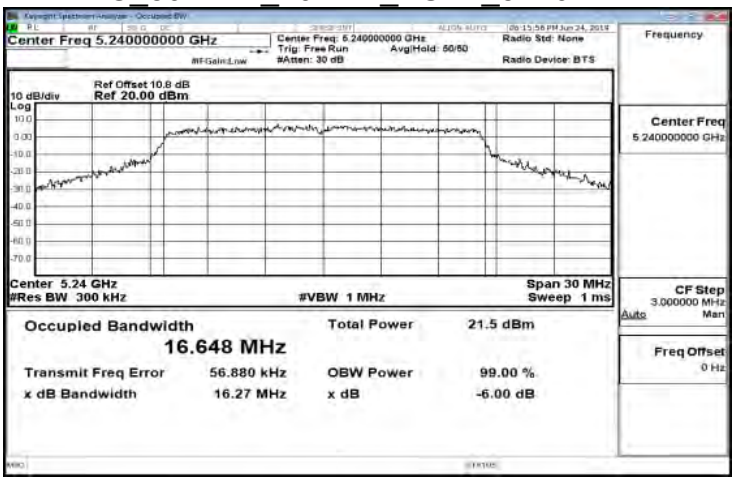
IC_802.11a_20MHz_Main_5785MHz



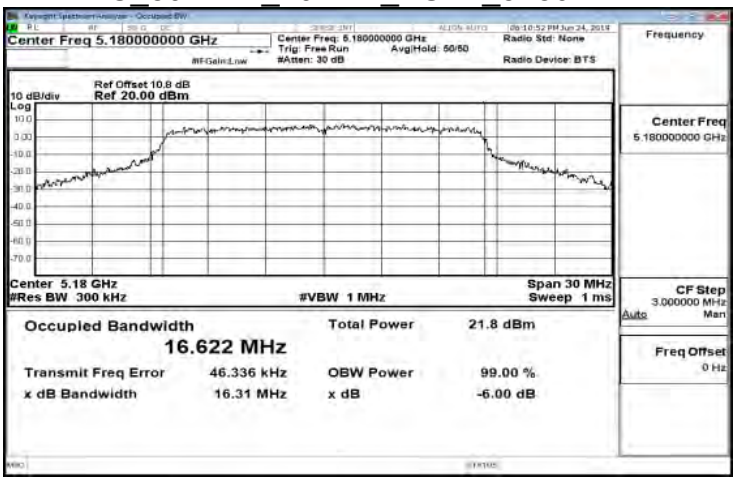
IC_802.11a_20MHz_Main_5825MHz



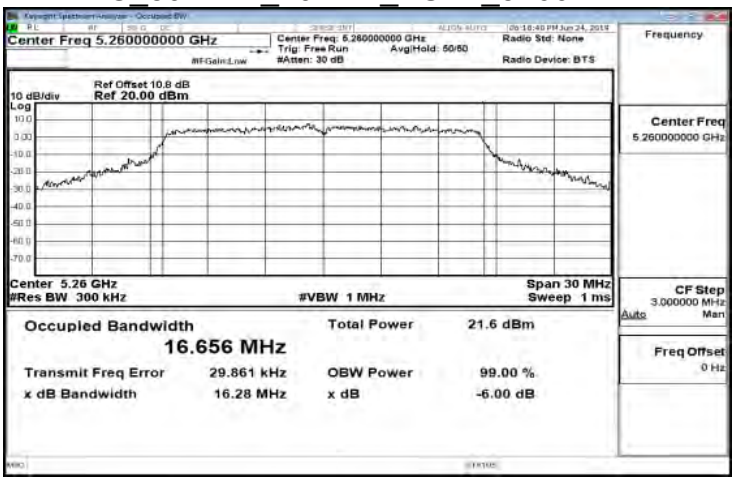
IC_802.11a_20MHz_AUX1_5240MHz



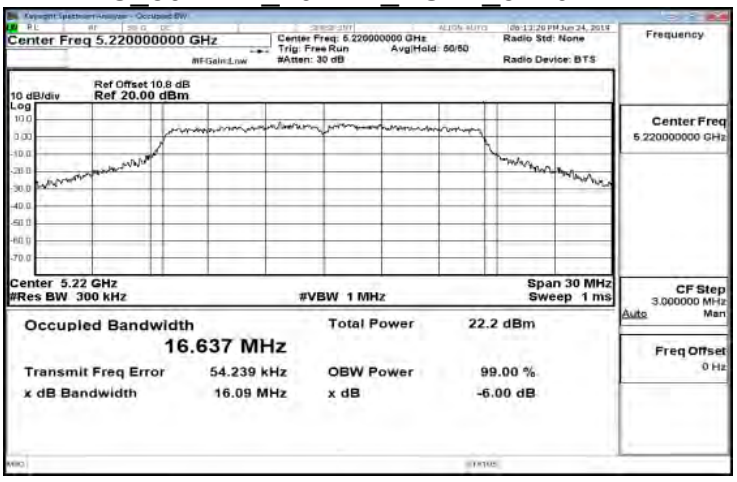
IC_802.11a_20MHz_AUX1_5180MHz



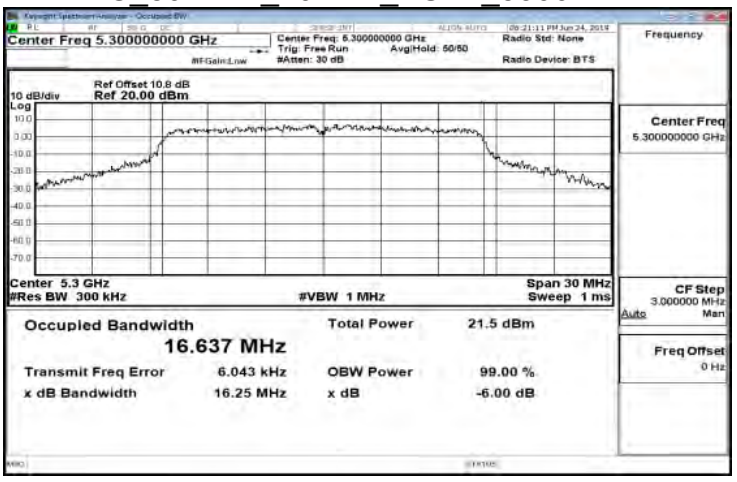
IC_802.11a_20MHz_AUX1_5260MHz



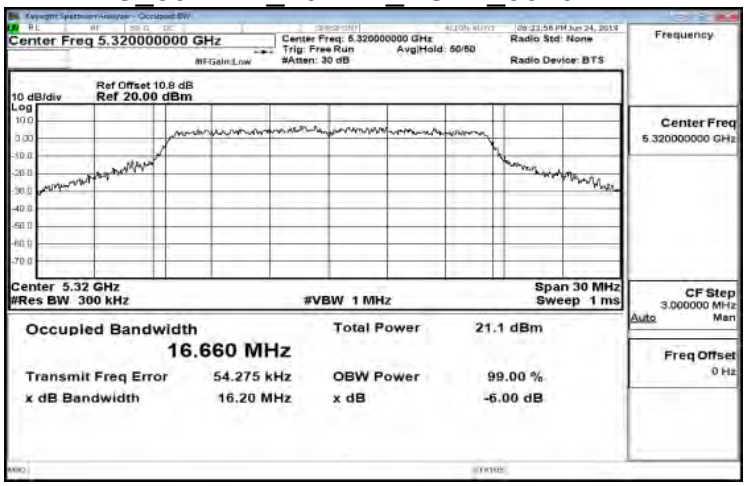
IC_802.11a_20MHz_AUX1_5220MHz



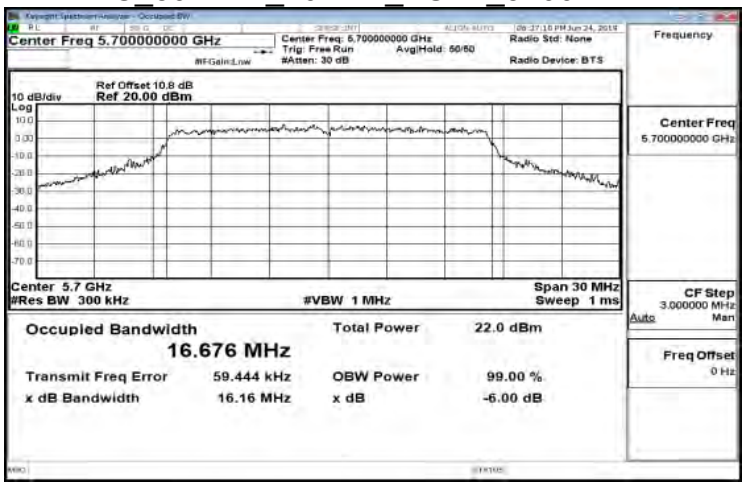
IC_802.11a_20MHz_AUX1_5300MHz



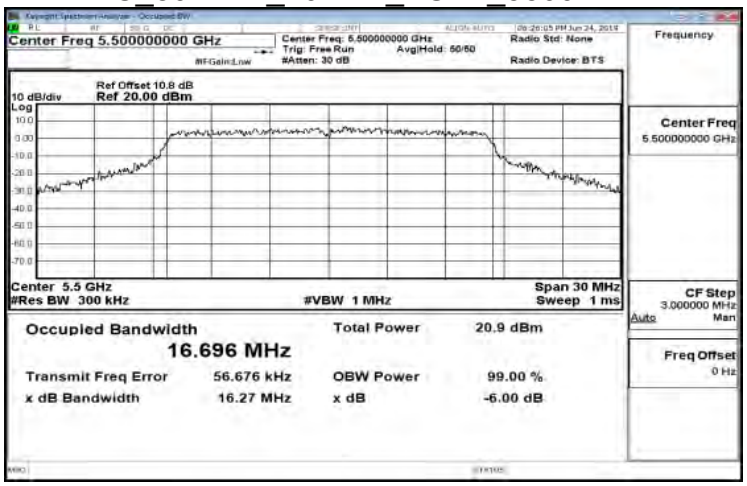
IC_802.11a_20MHz_AUX1_5320MHz



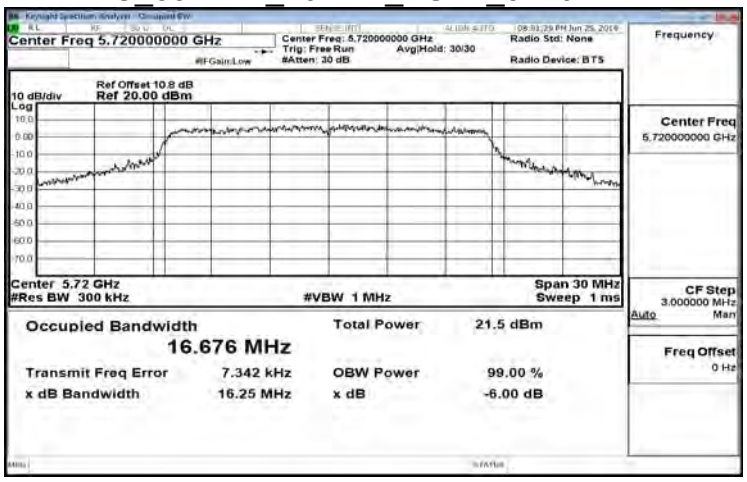
IC_802.11a_20MHz_AUX1_5700MHz



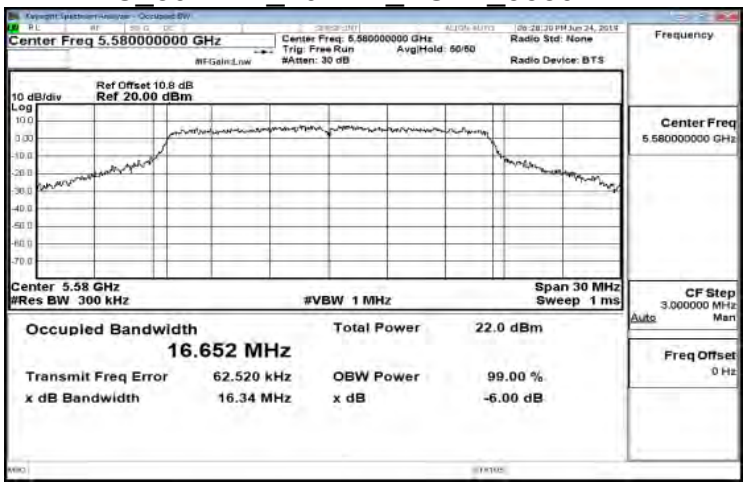
IC_802.11a_20MHz_AUX1_5500MHz



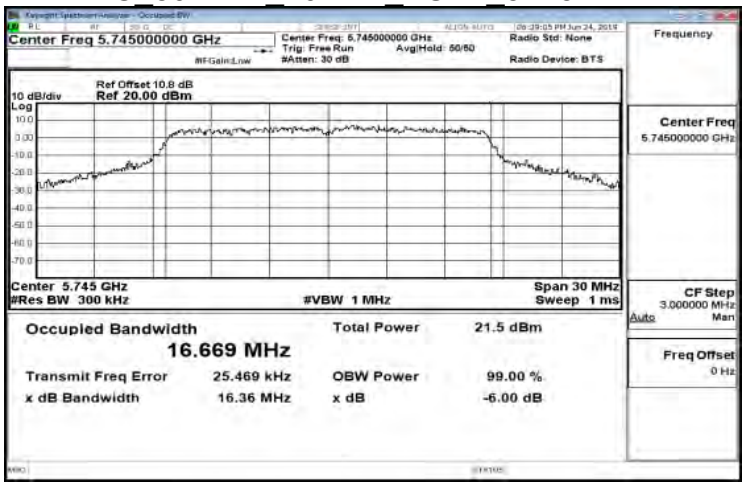
IC_802.11a_20MHz_AUX1_5720MHz



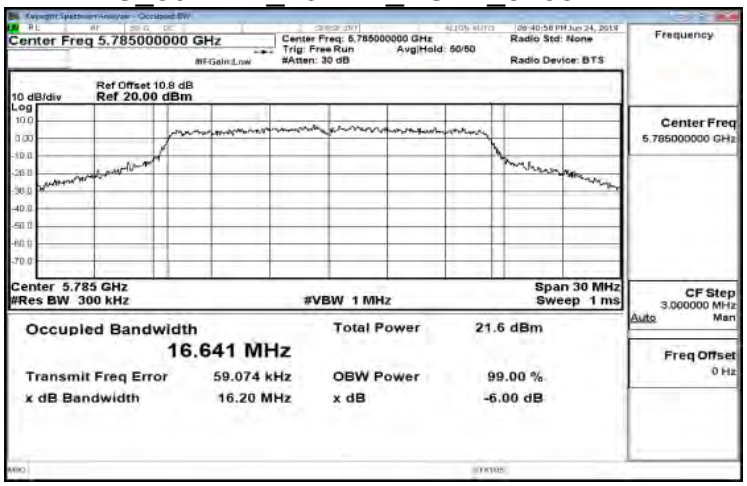
IC_802.11a_20MHz_AUX1_5580MHz



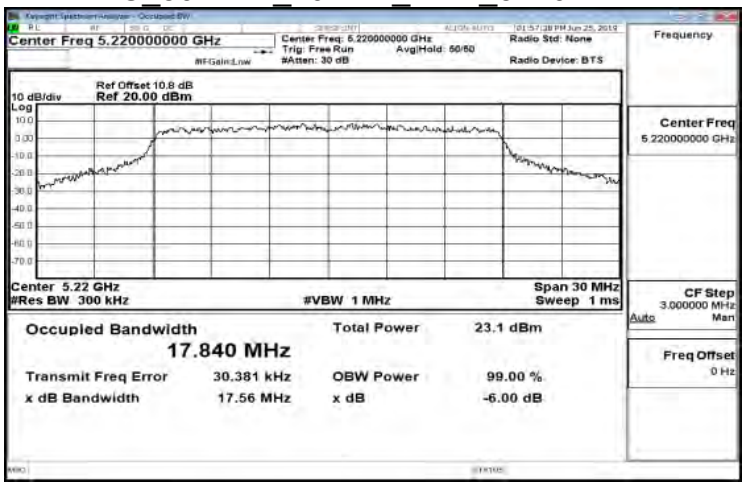
IC_802.11a_20MHz_AUX1_5745MHz



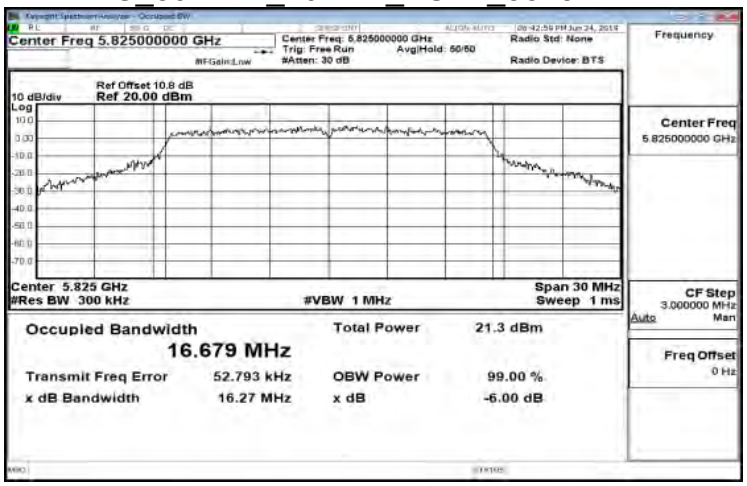
IC_802.11a_20MHz_AUX1_5785MHz



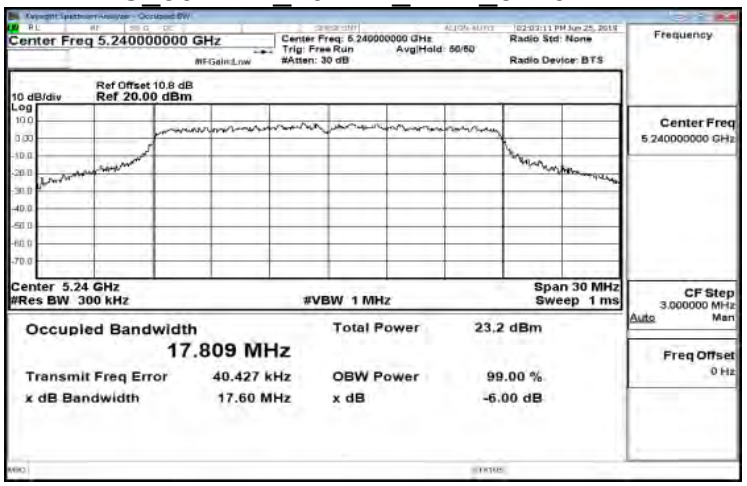
IC_802.11n_20MHz_Main_5220MHz



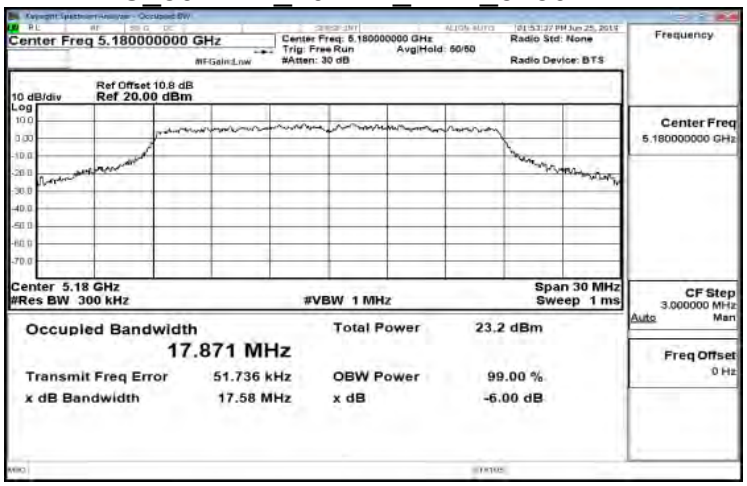
IC_802.11a_20MHz_AUX1_5825MHz



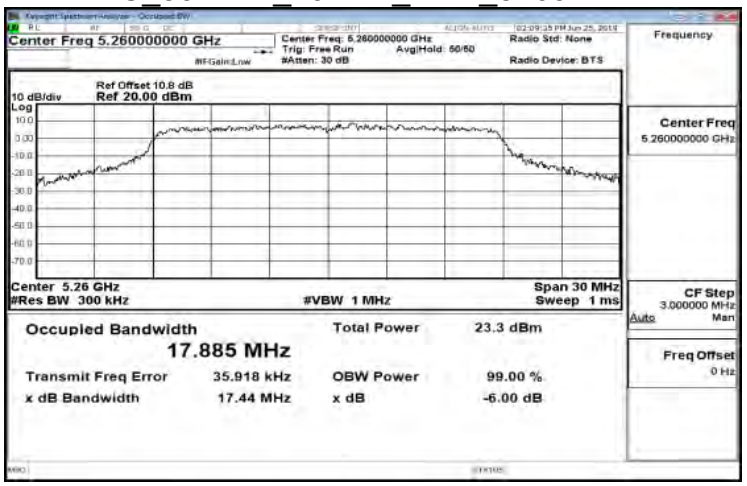
IC_802.11n_20MHz_Main_5240MHz



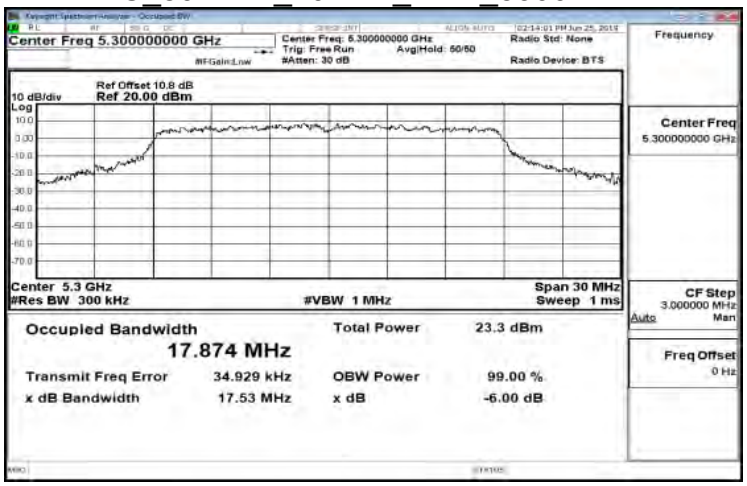
IC_802.11n_20MHz_Main_5180MHz



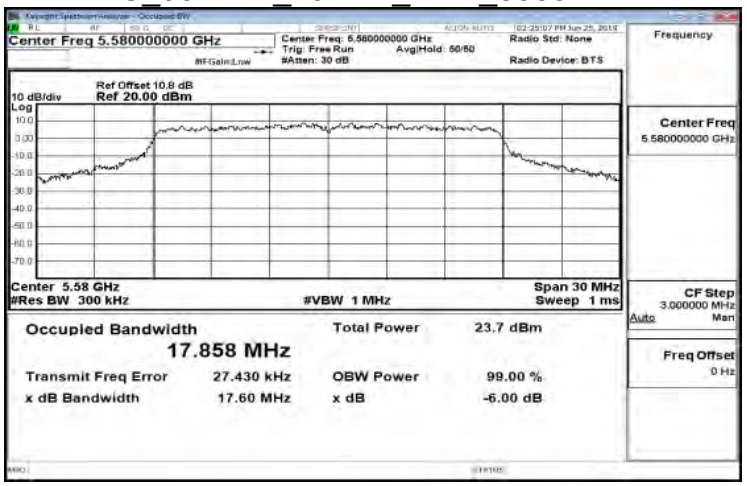
IC_802.11n_20MHz_Main_5260MHz



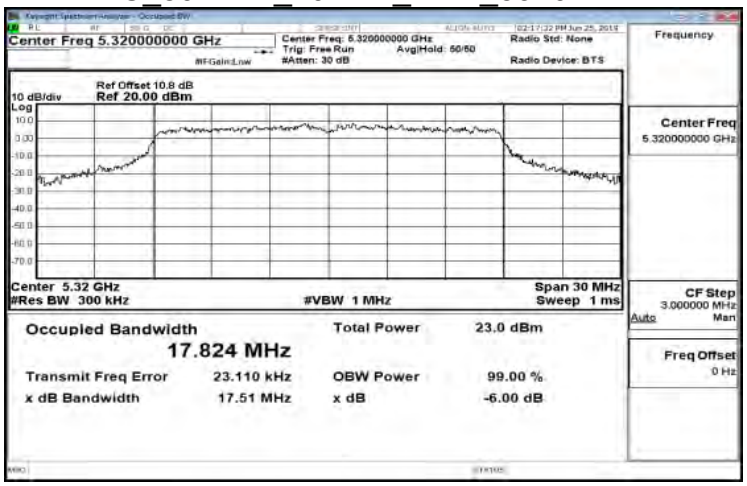
IC_802.11n_20MHz_Main_5300MHz



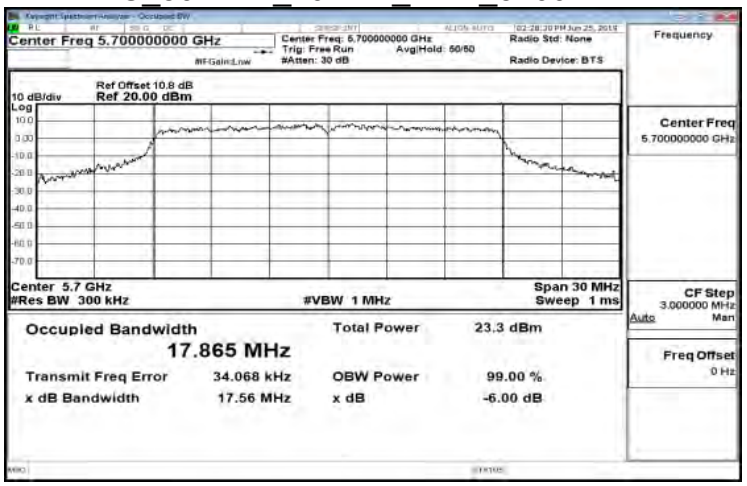
IC_802.11n_20MHz_Main_5580MHz



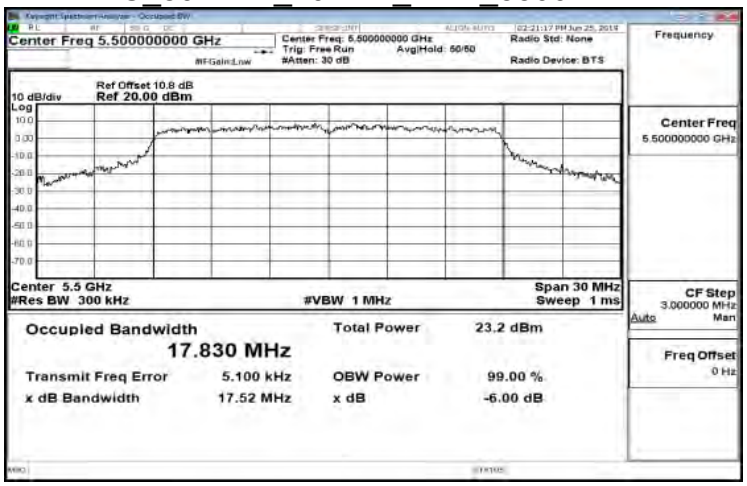
IC_802.11n_20MHz_Main_5320MHz



IC_802.11n_20MHz_Main_5700MHz



IC_802.11n_20MHz_Main_5500MHz



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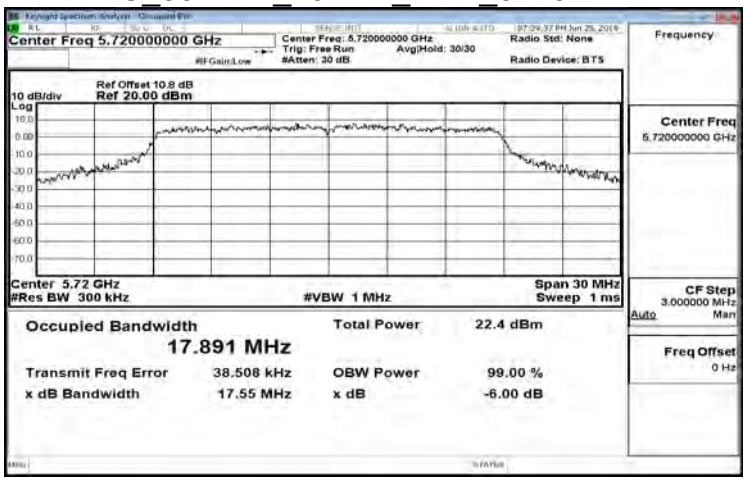

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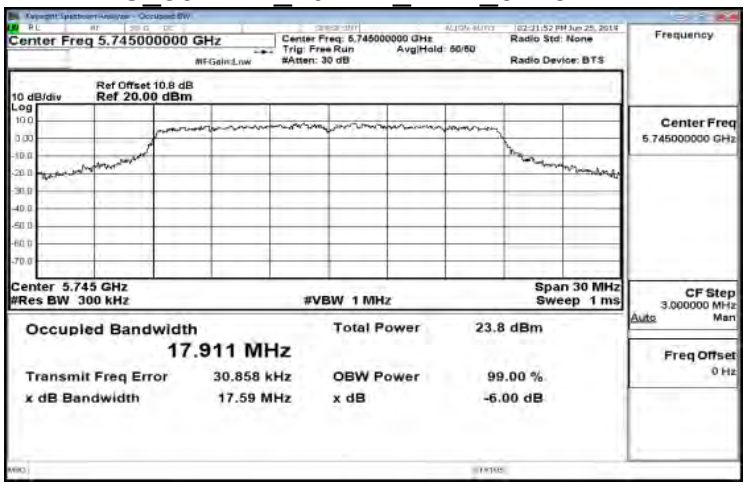

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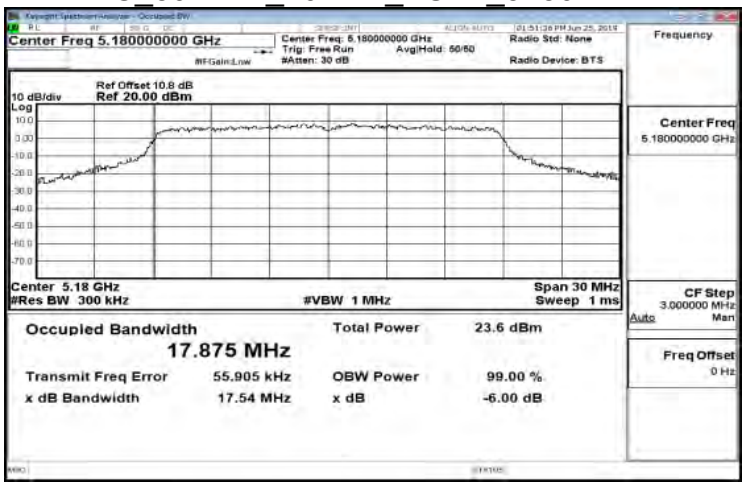

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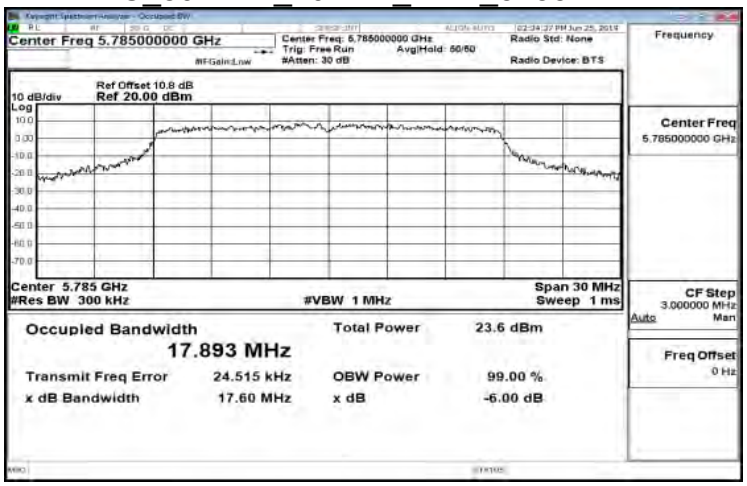

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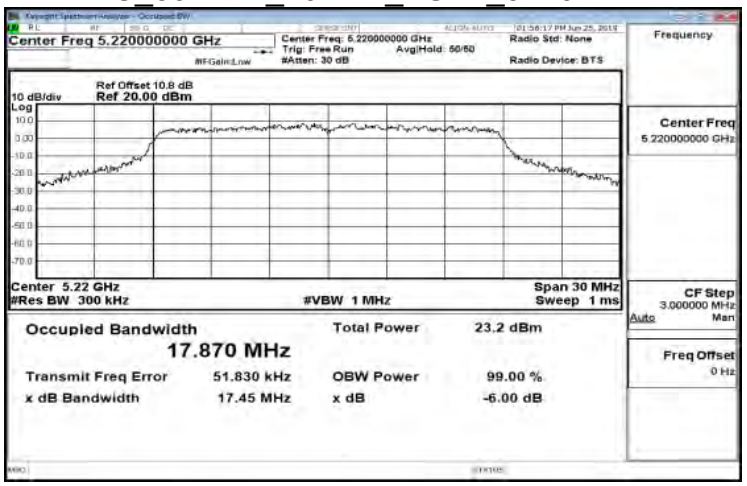

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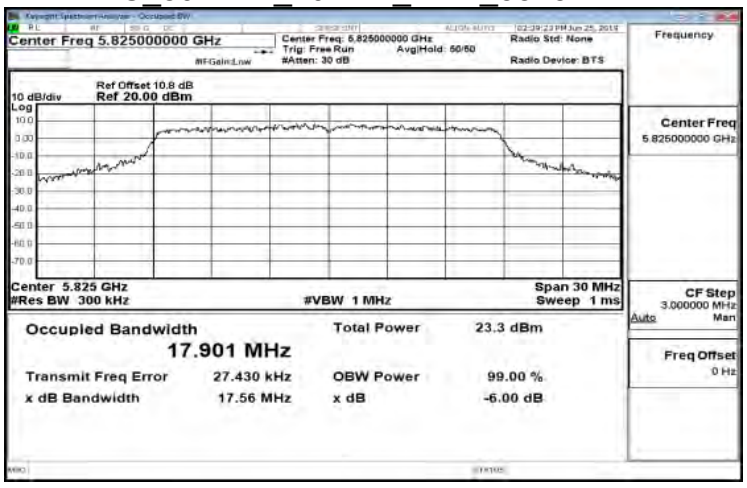

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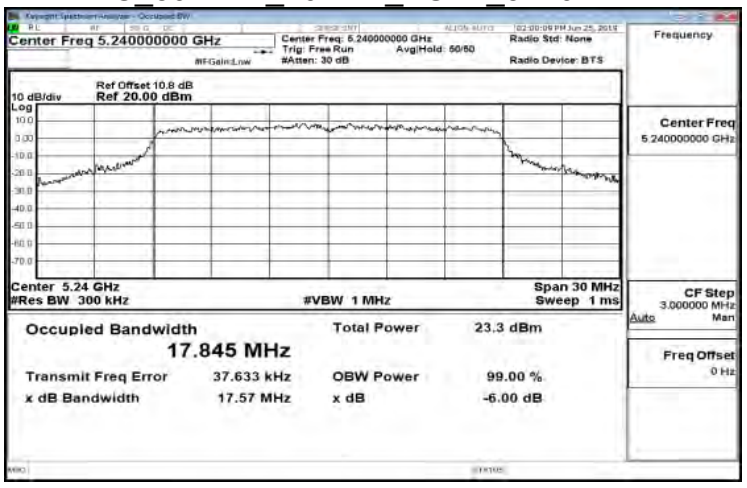

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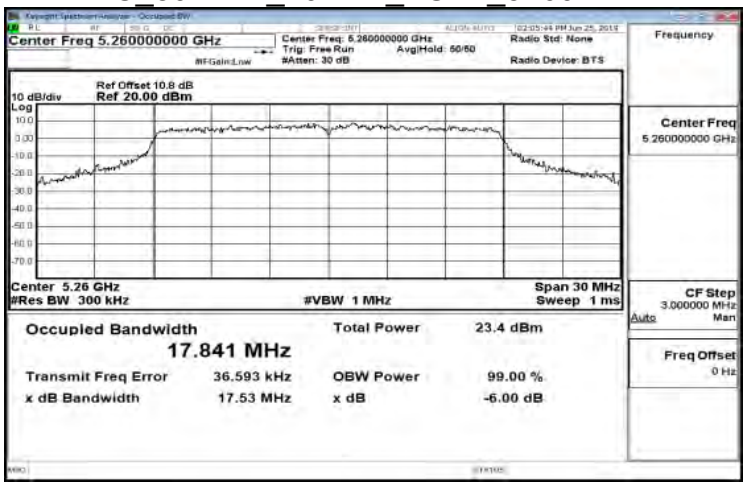

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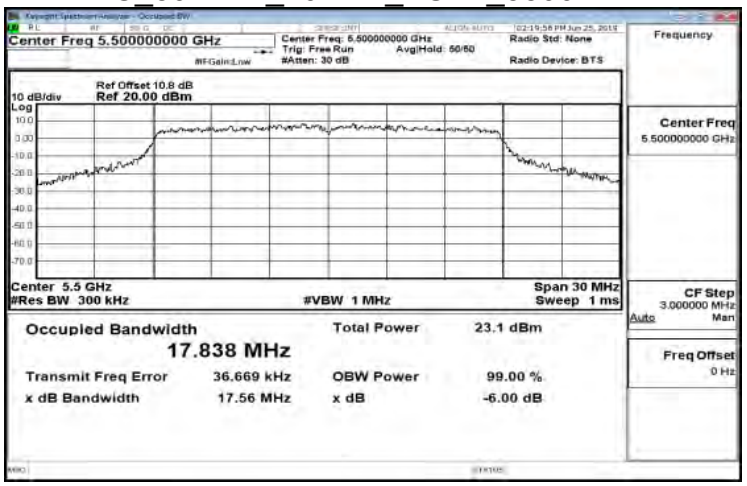

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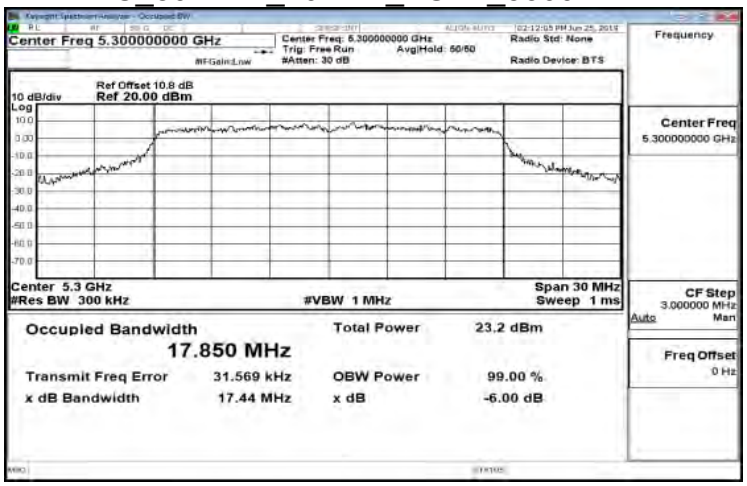

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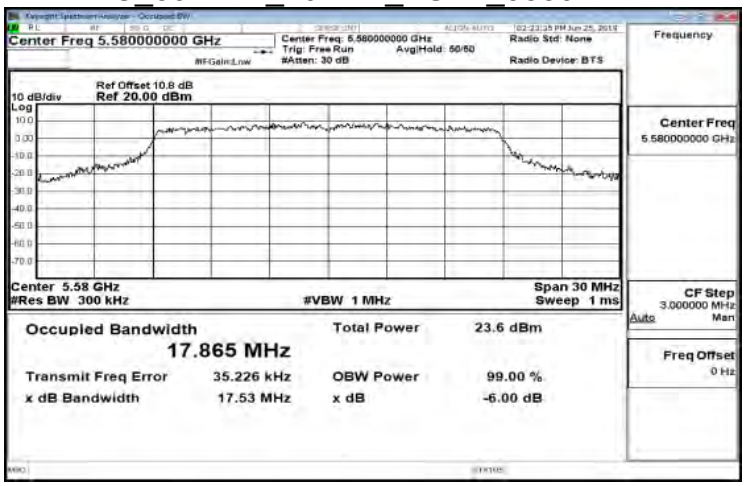
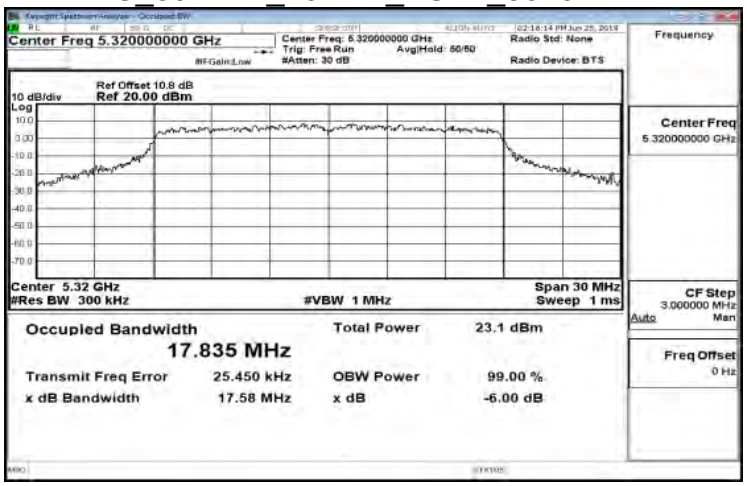


IC_802.11n_20MHz_AUX1_5320MHz



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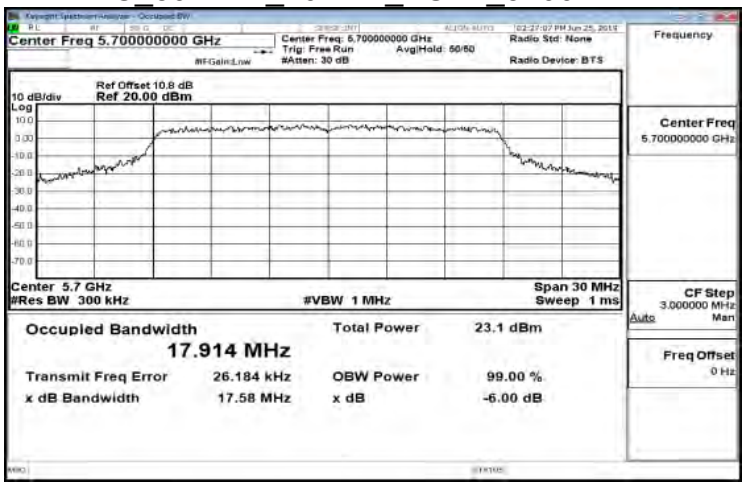
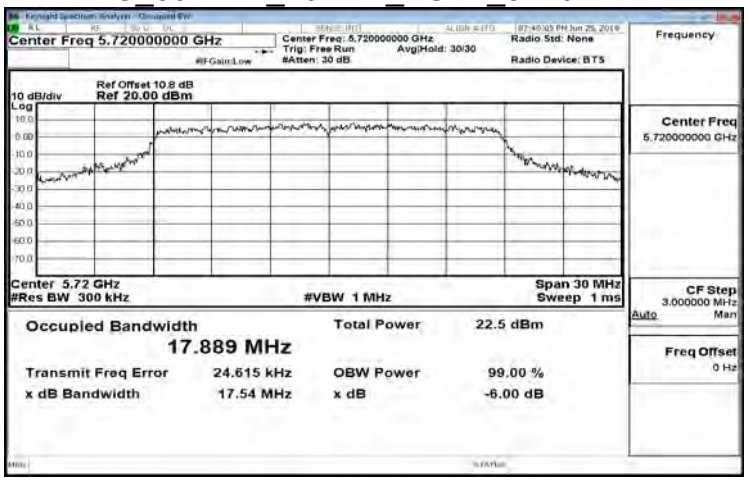


IC_802.11n_20MHz_AUX1_5720MHz



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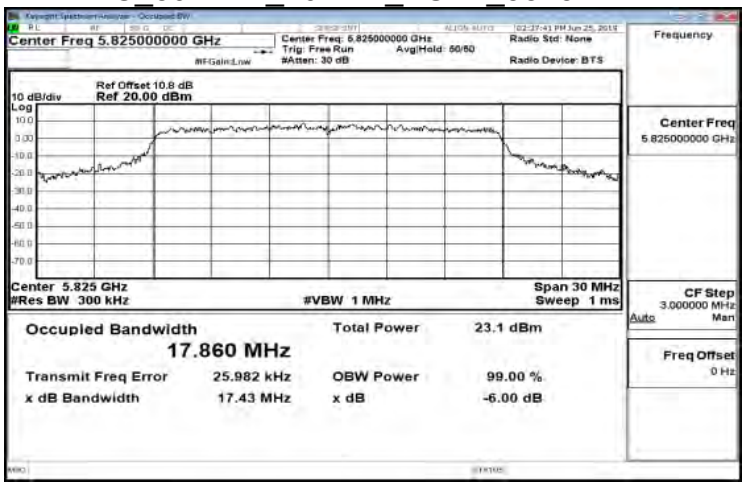

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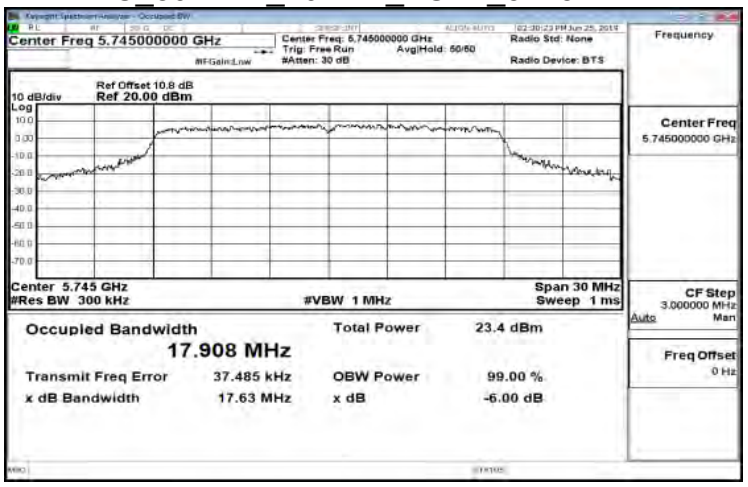
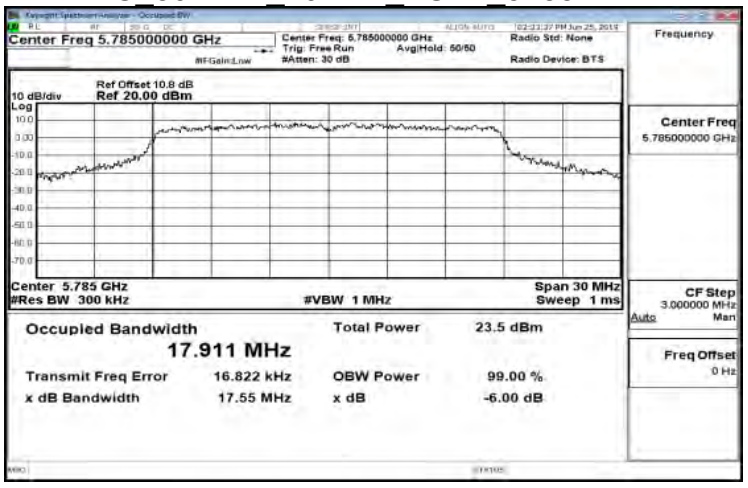
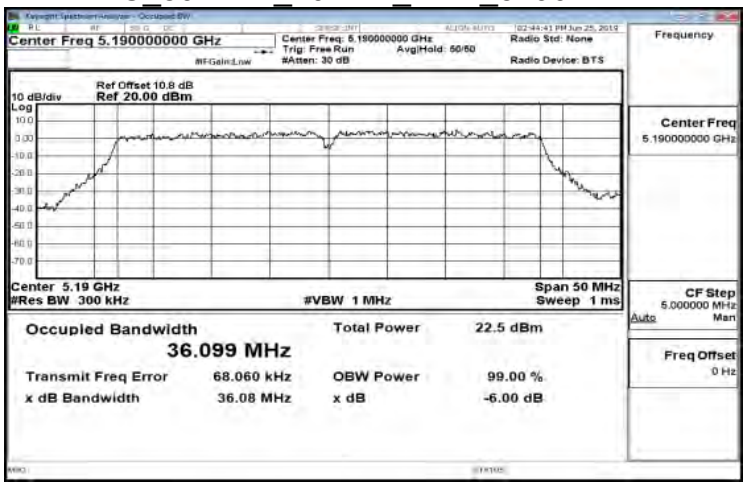


IC_802.11n_20MHz_AUX1_5785MHz



IC_802.11n_40MHz_Main_5190MHz



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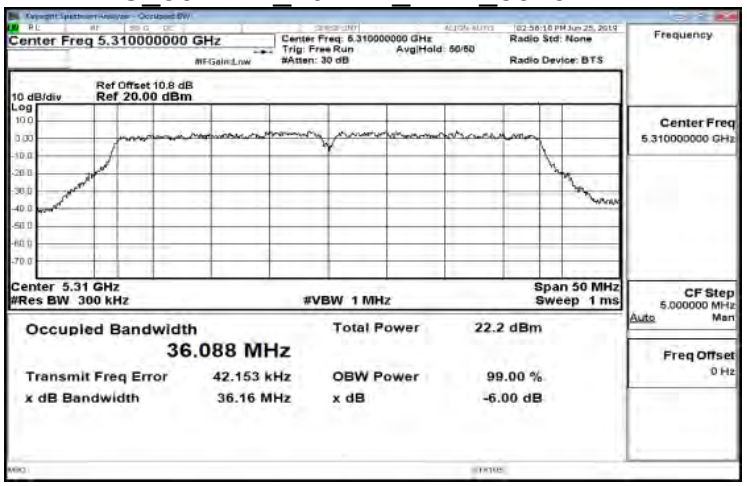
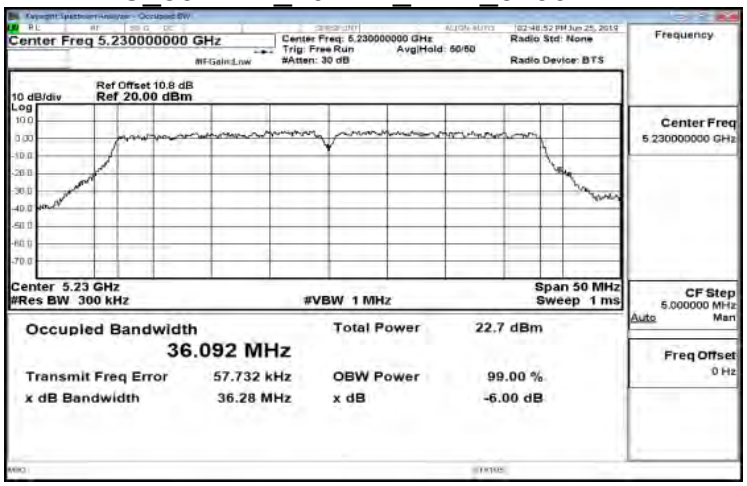
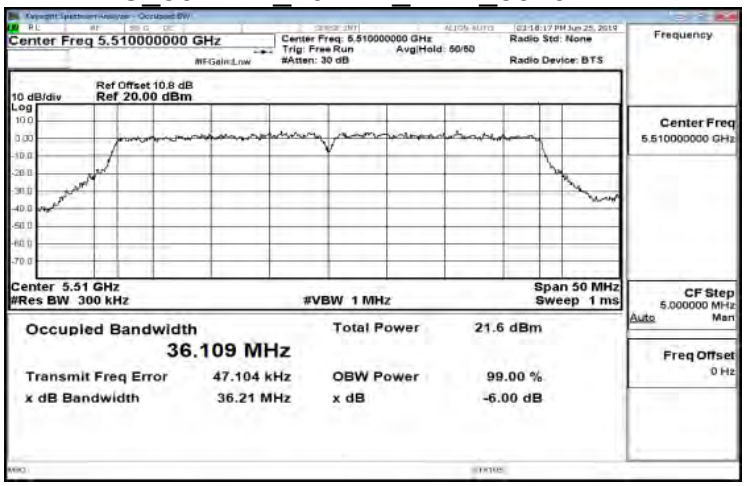


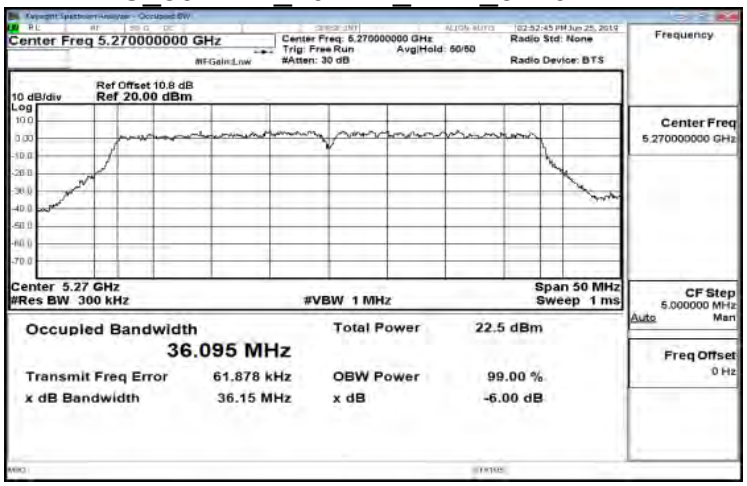
IC_802.11n_40MHz_Main_5230MHz



IC_802.11n_40MHz_Main_5510MHz



IC_802.11n_40MHz_Main_5270MHz



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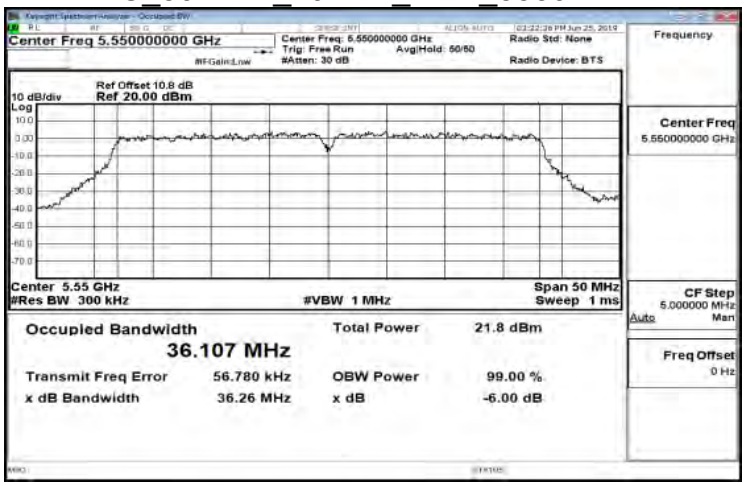
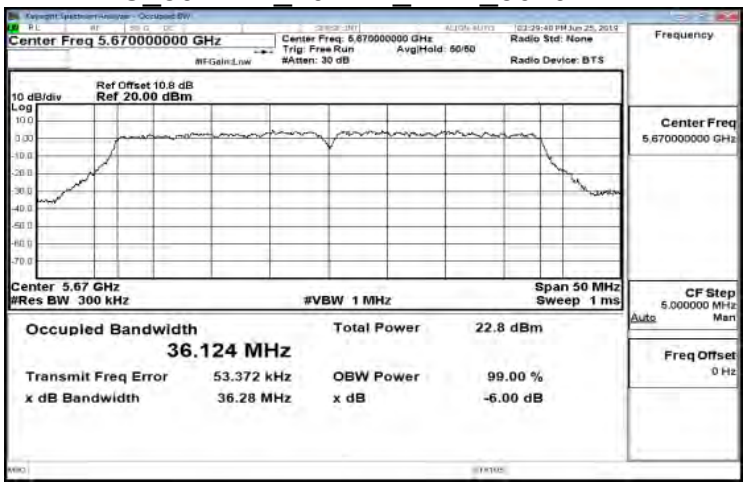


IC_802.11n_40MHz_Main_5670MHz



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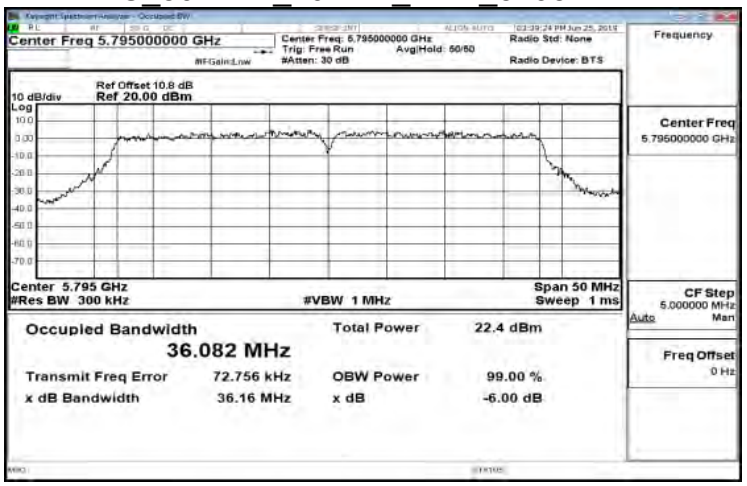
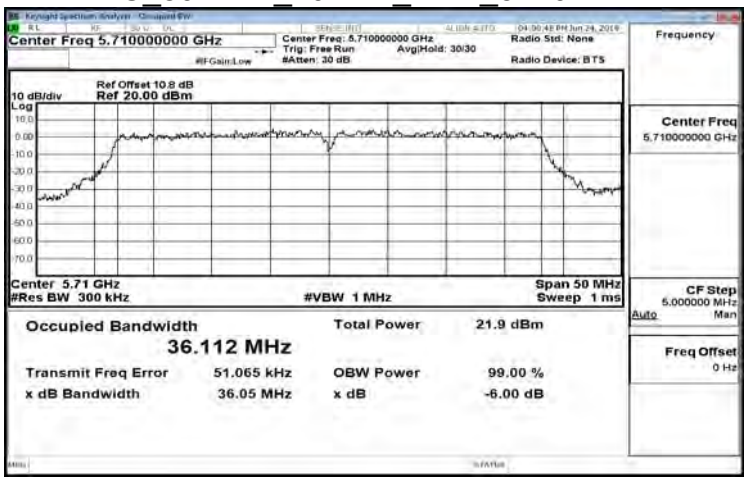
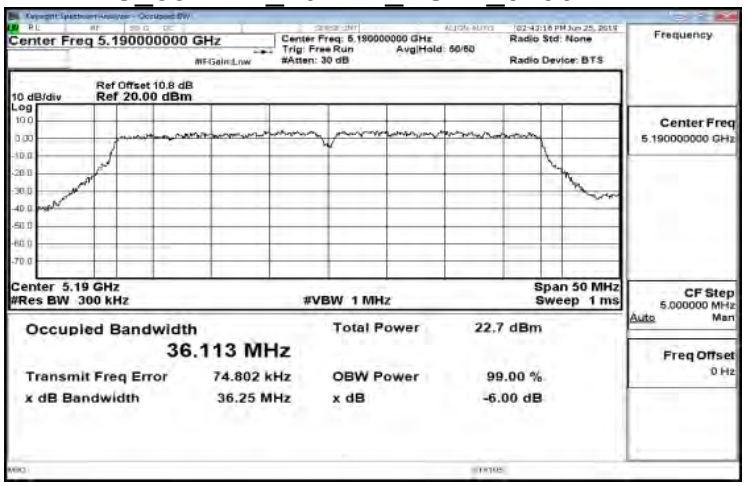


IC_802.11n_40MHz_Main_5710MHz



IC_802.11n_40MHz_AUX1_5190MHz



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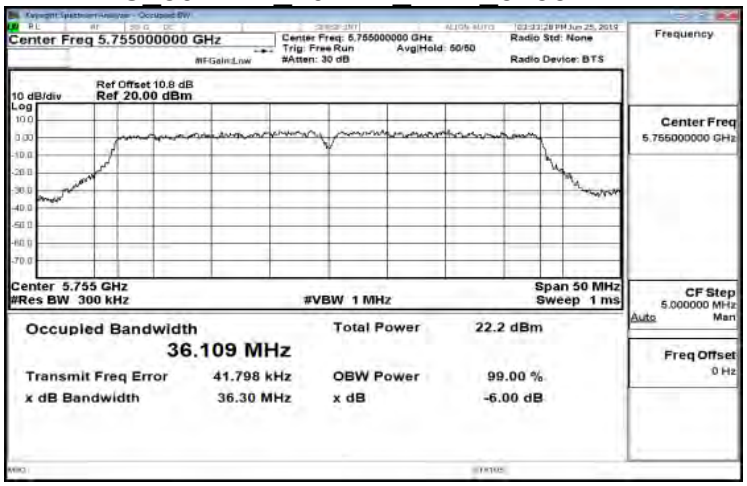

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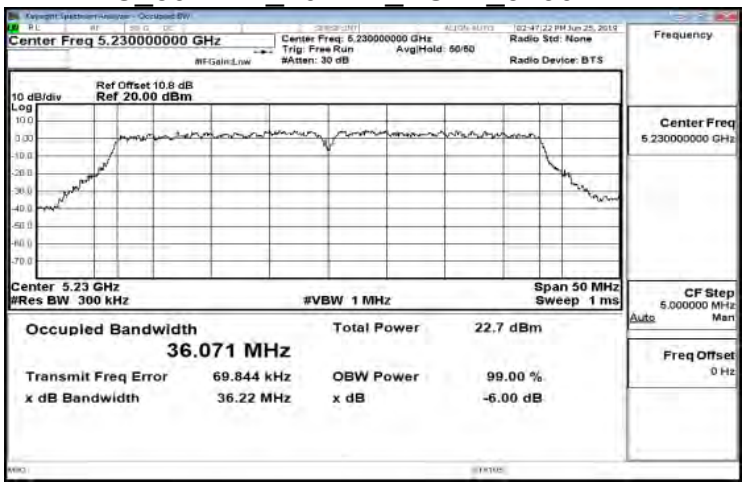

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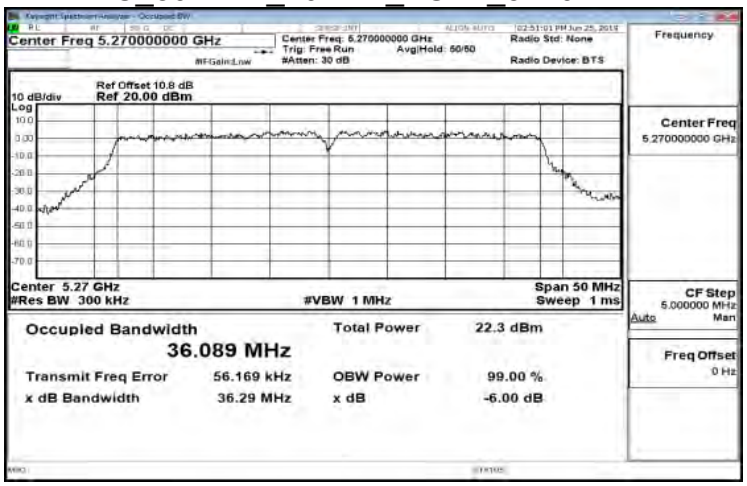

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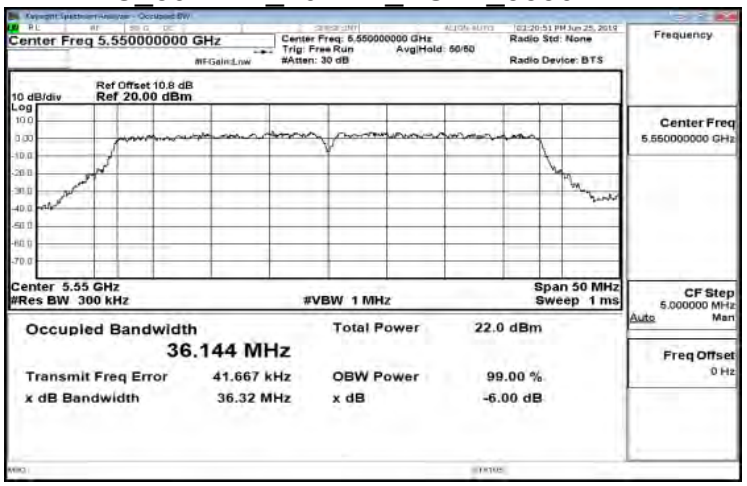

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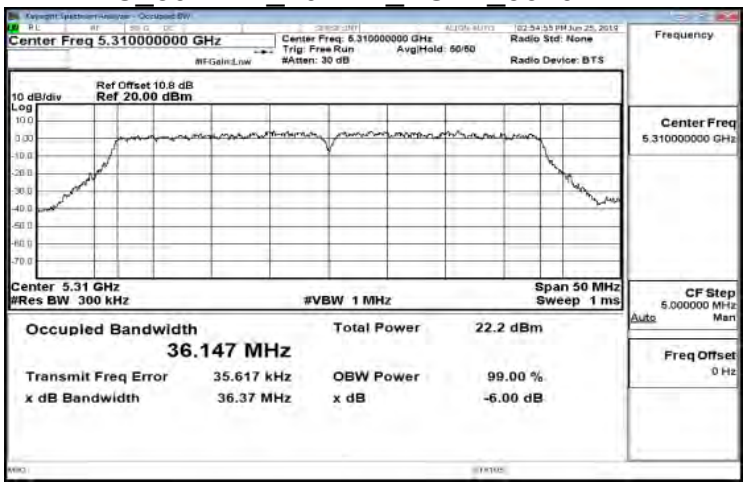
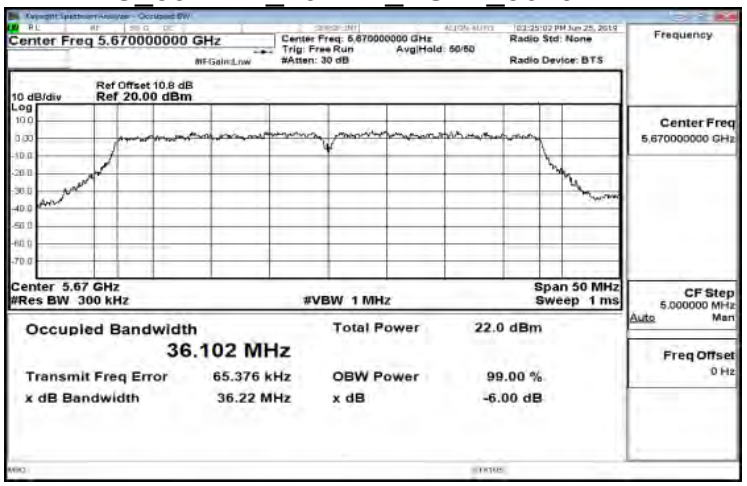


IC_802.11n_40MHz_AUX1_5670MHz



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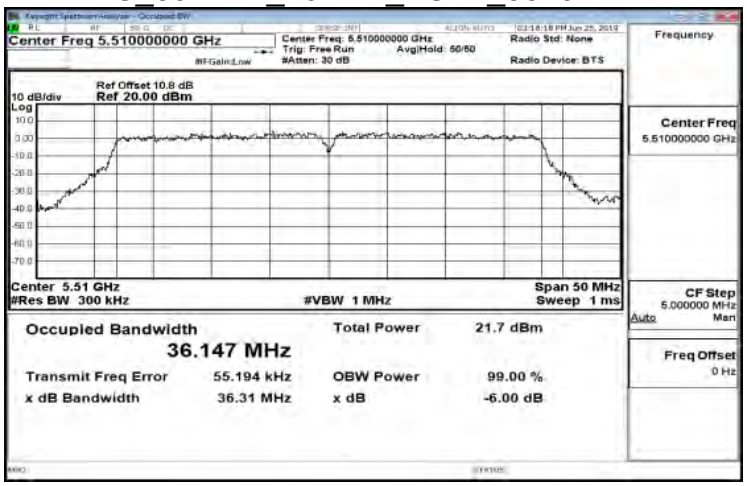
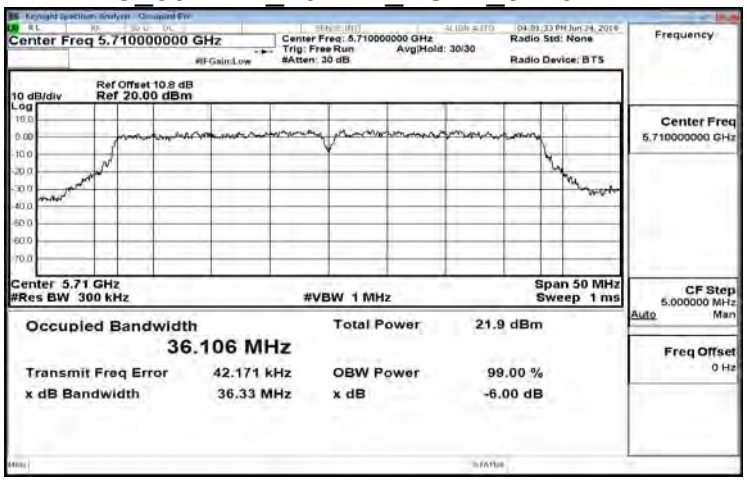


IC_802.11n_40MHz_AUX1_5710MHz



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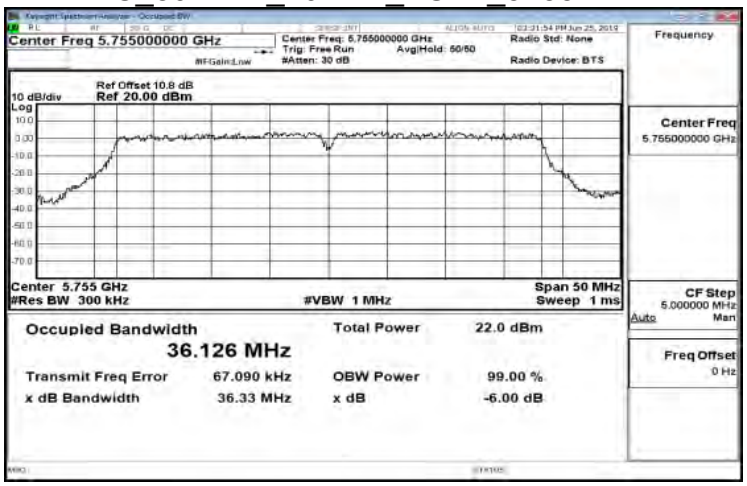
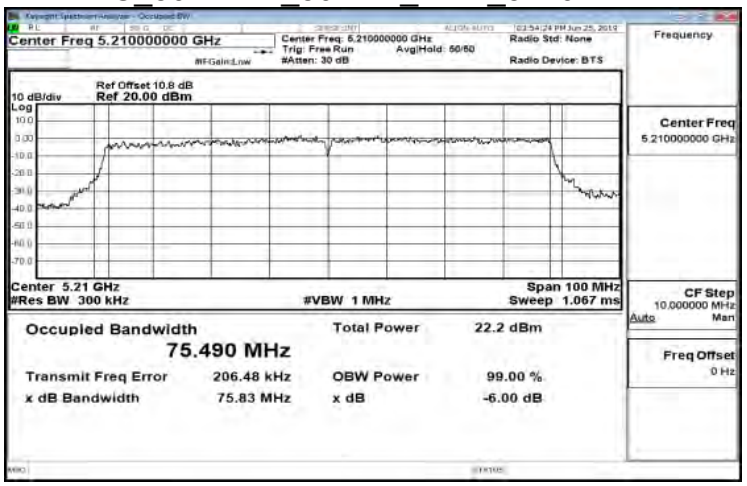
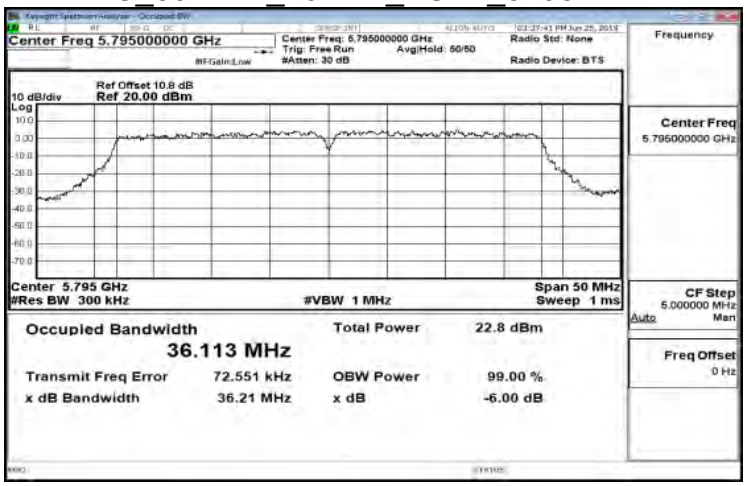


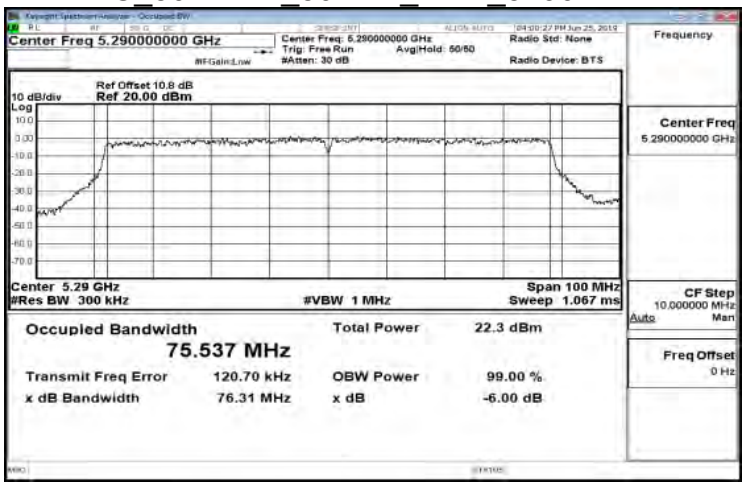
IC_802.11ac_80MHz_Main_5210MHz



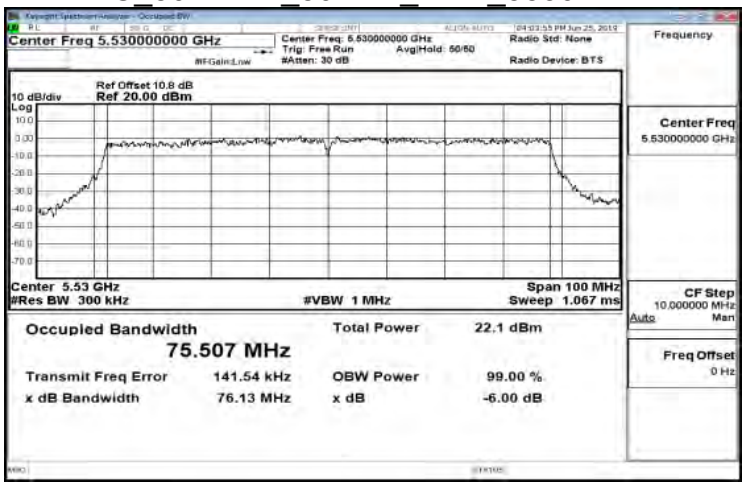
IC_802.11n_40MHz_AUX1_5795MHz



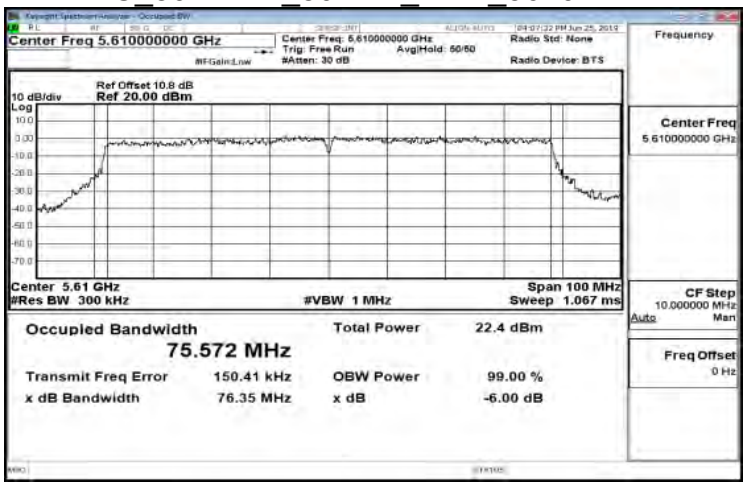
IC_802.11ac_80MHz_Main_5290MHz



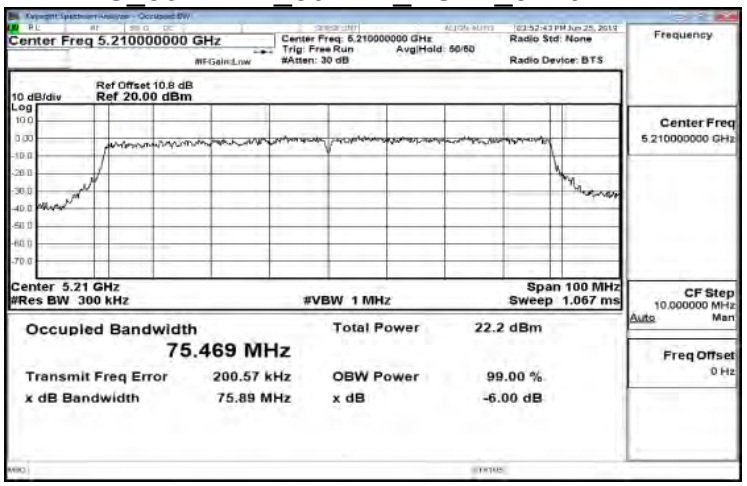
IC_802.11ac_80MHz_Main_5530MHz



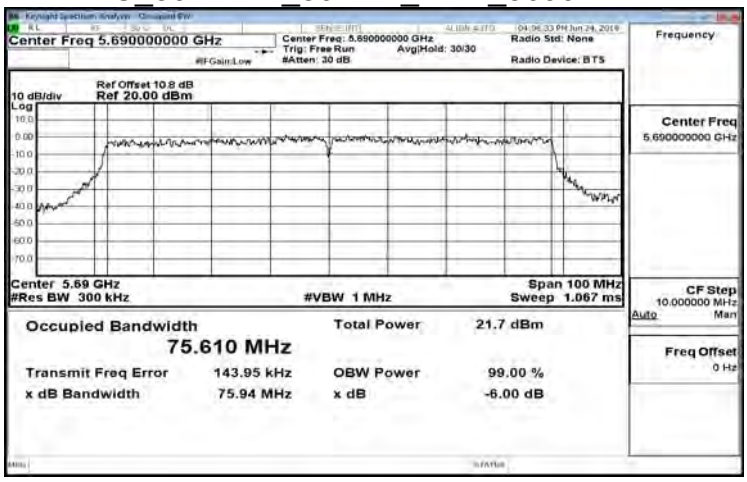
IC_802.11ac_80MHz_Main_5610MHz



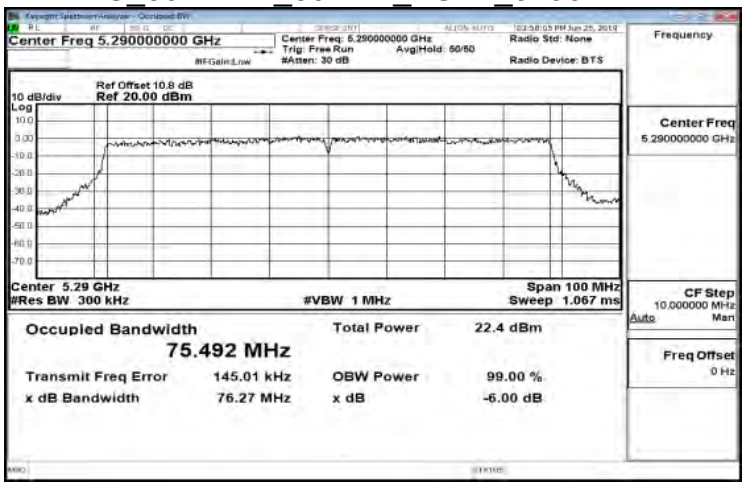
IC_802.11ac_80MHz_AUX1_5210MHz



IC_802.11ac_80MHz_Main_5690MHz



IC_802.11ac_80MHz_AUX1_5290MHz



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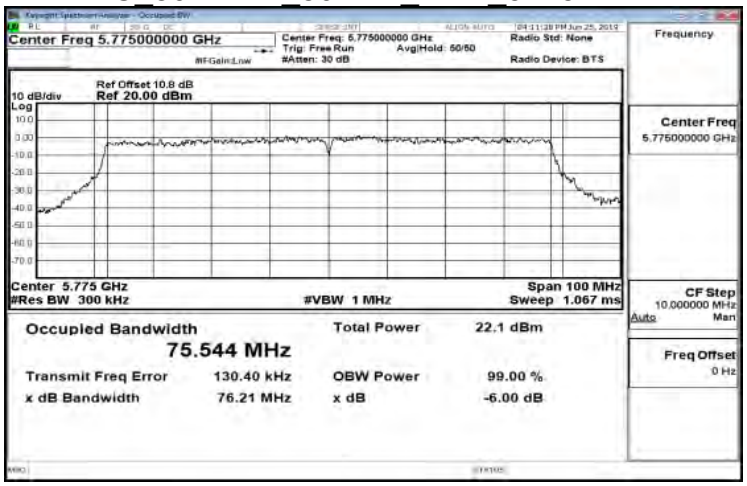
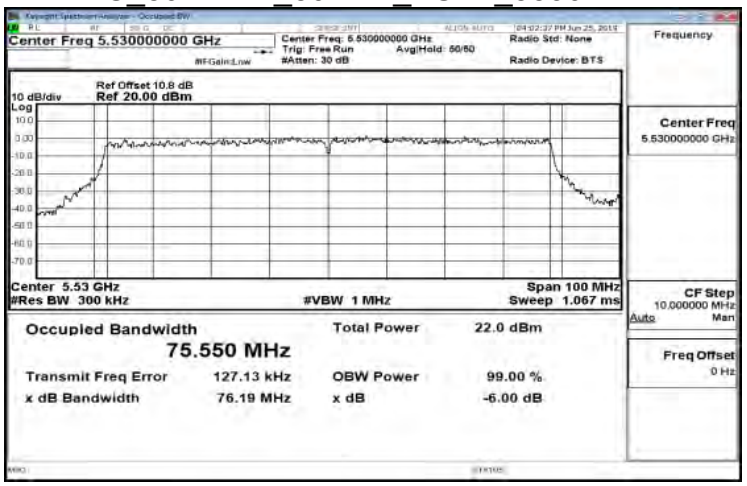
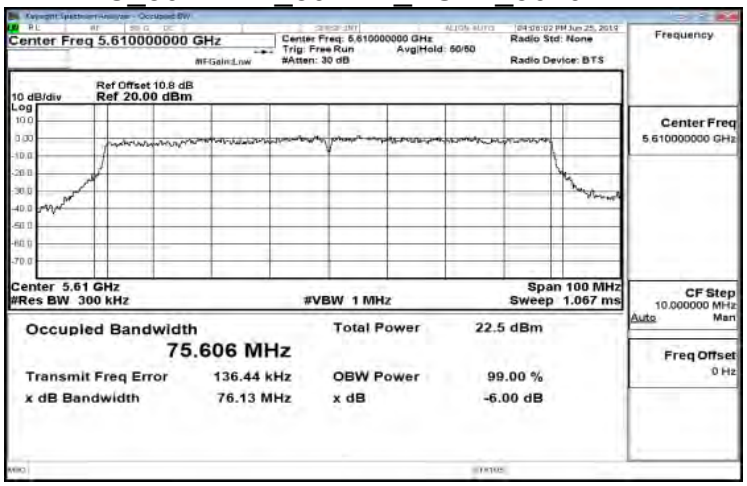


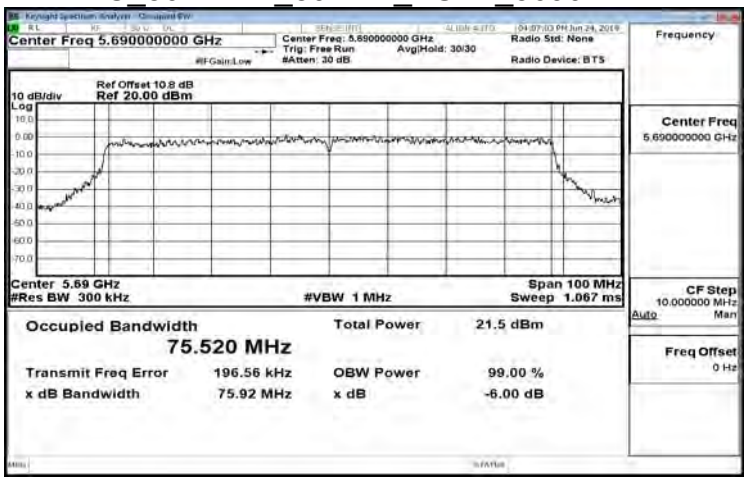
IC_802.11ac_80MHz_AUX1_5530MHz



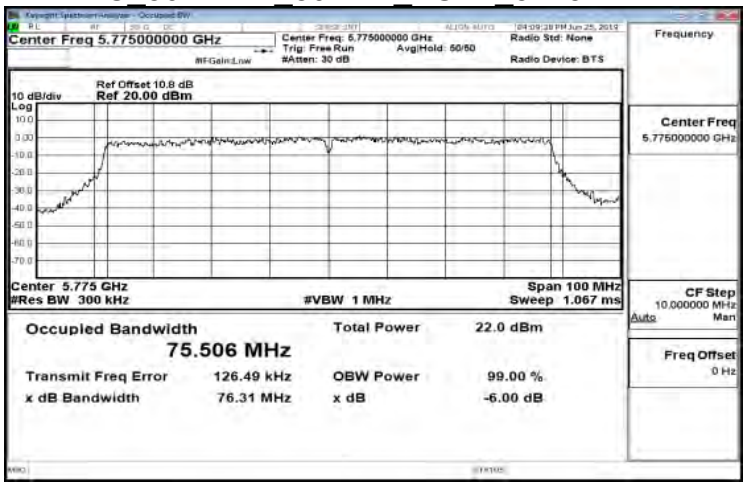
IC_802.11ac_80MHz_AUX1_5610MHz



IC_802.11ac_80MHz_AUX1_5690MHz



IC_802.11ac_80MHz_AUX1_5775MHz



9 MAXIMUM CONDUCTED OUTPUT POWER MEASUREMENT

9.1 Standard Applicable

FCC

OPERZTION Band	EUT CATEGORY		LIMIT
U-NII-1		Access Point (Mater device)	1 Watt(30dBm)
		Fixed point-to-point Acess Ponit	1 Watt(30dBm)
	√	Mobile and portable clinet device	250mW(23.98dBm)
U-NII-2A	√		250mW(23.98dBm) or 11dBm+10 log B
U-NII-2C	√		250mW(23.98dBm) or 11dBm+10 log B
U-NII-3	√		1 Watt(30dBm)

IC

OPERZTION FREQUENCY BAND	LIMIT
5150~5250 MHz	EIRP shall not exceed 200 mW or 10 + 10 $\log_{10}$B, dBm
5250~5350 MHz	Conducted output power shall not exceed 250 mW or 11 +10 $\log_{10}$B EIRP shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm
5470-5600 MHz and 5650-5725 MHz	Conducted output power shall not exceed 250 mW or 11 +10 $\log_{10}$ B EIRP shall not exceed 1.0 W or 17 + 10 $\log_{10}$B, dBm
5725~5850 MHz	Conducted output power shall not exceed 1 W

If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the Maximum Power Spectral Density shall be reduced by the amount in dB that the direction-al gain of the antenna exceeds 6 dBi.

Note:

As per FCC KDB 662911 D01

Unequal antenna gains, with equal transmit powers. For antenna gains given by G1, G2, …, GN dBi.

(i) If transmit signals are correlated, then Directional gain

= 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}$] dBi

[Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

The antenna gain is grater than 6 dBi in MIMO mode, therefore the limit needs to be reduced as below:

	Effective Legacy Gain (dBi)	Conducted Power Limit (dBm)
UNII-1	8.67	27.95
UNII-2A	8.19	21.79
U-NII-2C	8.36	21.62
U-NII-3	8.05	27.95

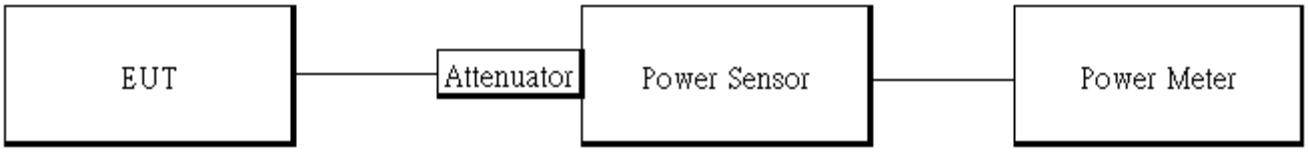
9.2 Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules.
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter
4. Power Meter is used as the auxiliary test equipment to conduct the output power measurement.
5. Record the max. reading and add 10 log(1/duty cycle).
6. Repeat above procedures until all frequency (low, middle, and high channel) measured were complete.

9.3 Measurement Equipment Used

SGS Conducted Room					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Power Meter	Anritsu	ML2496A	1326001	08/03/2018	08/02/2019
Power Sensor	Anritsu	MA2411B	1315048	08/03/2018	08/02/2019
Power Sensor	Anritsu	MA2411B	1315049	08/03/2018	08/02/2019
Attenuator	Marvelous	MVE2213-10	RF80	02/26/2019	02/25/2020
DC Block	PASTERNACK	PE8210	RF256	02/26/2019	02/25/2020
Spectrum Analyzer	Agilent	N9010A	MY53400256	11/21/2018	11/20/2019

9.4 Test Set-up



9.5 Measurement Result

Conducted output power (FCC)

802.11a_Ch1

CH	Frequency (MHz)	Data Rate	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
36	5180	6	15.69	37.064	23.98	PASS
44	5220	6	15.75	37.580	23.98	PASS
48	5240	6	**16.24**	42.068	23.98	PASS
52	5260	6	16.37	43.346	23.98 or 11+10log(B) = 24.61	PASS
60	5300	6	16.43	43.949	23.98 or 11+10log(B) = 24.53	PASS
64	5320	6	**16.45**	44.152	23.98 or 11+10log(B) = 24.40	PASS
100	5500	6	16.12	40.922	23.98 or 11+10log(B) = 24.48	PASS
116	5580	6	16.47	44.356	23.98 or 11+10log(B) = 24.56	PASS
140	5700	6	**16.49**	44.561	23.98 or 11+10log(B) = 24.70	PASS
144	5720(U-NII 2C)	6	**14.98**	31.46	23.98 or 11+10log(B) = 24.75	PASS
144	5720 (U-NII 3)	6	**11.07**	12.79	30	PASS
149	5745	6	**16.48**	44.458	30	PASS
157	5785	6	16.44	44.051	30	PASS
165	5825	6	16.23	41.971	30	PASS

802.11n_HT20_MIMO

CH	Frequency (MHz)	Data Rate	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
			CH 0	CH 1				
36	5180	MCS8	10.04	10.22	13.53	22.527	21.31178616	PASS
44	5220	MCS8	10.26	10.29	13.67	23.287	21.31178616	PASS
48	5240	MCS8	10.36	10.45	**13.80**	23.996	21.31178616	PASS
52	5260	MCS8	16.14	16.88	19.92	98.216	21.79 or 11+10log(B) = 24.76	PASS
60	5300	MCS8	16.25	16.88	19.97	99.369	21.79 or 11+10log(B) = 24.78	PASS
64	5320	MCS8	16.16	16.98	**19.99**	99.665	21.79 or 11+10log(B) = 24.71	PASS
100	5500	MCS8	13.12	13.77	16.85	48.453	21.62 or 11+10log(B) = 24.67	PASS
116	5580	MCS8	16.61	17.53	**20.49**	111.954	21.62 or 11+10log(B) = 24.60	PASS
140	5700	MCS8	10.44	11.03	14.14	25.948	21.62 or 11+10log(B) = 24.79	PASS
144	5720(U-NII 2C)	MCS8	14.83	15.57	**18.68**	73.732	21.62 or 11+10log(B) = 24.63	PASS
144	5720 (U-NII 3)	MCS8	10.80	11.92	**14.64**	29.114	27.94949281	PASS
149	5745	MCS8	16.63	17.43	20.44	110.777	27.94949281	PASS
157	5785	MCS8	16.74	17.39	**20.47**	111.513	27.94949281	PASS
165	5825	MCS8	16.4	17.18	20.20	104.799	27.94949281	PASS

802.11n_HT40_MIMO

CH	Frequency (MHz)	Data Rate	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
			CH 0	CH 1				
38	5190	MCS8	10.48	10.46	**14.15**	26.011	21.31178616	PASS
46	5230	MCS8	10.2	10.02	13.79	23.947	21.31178616	PASS
54	5270	MCS8	15.26	16.06	19.36	86.296	21.79 or 11+10log(B) = 27.13	PASS
62	5310	MCS8	15.31	16.08	**19.39**	86.967	21.79 or 11+10log(B) = 27.12	PASS
102	5510	MCS8	15.14	15.98	19.26	84.368	21.62 or 11+10log(B) = 27.14	PASS
110	5550	MCS8	15.18	16.09	**19.34**	85.907	21.62 or 11+10log(B) = 27.14	PASS
134	5670	MCS8	14.06	14.6	18.02	63.385	21.62 or 11+10log(B) = 27.12	PASS
142	5710(U-NII 2C)	MCS8	14.47	15.29	**18.57**	71.991	21.62 or 11+10log(B) = 27.11	PASS
142	5710 (U-NII 3)	MCS8	6.46	7.14	**10.56**	11.375	27.94949281	PASS
151	5755	MCS8	15.11	15.91	**19.21**	83.366	27.94949281	PASS
159	5795	MCS8	15.11	15.91	**19.21**	83.366	27.94949281	PASS

802.11ac_VHT80_MIMO

CH	Frequency (MHz)	Data Rate	Avg. POWER (dBm)		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
			CH 0	CH 1				
42	5210	MCS0	10.21	10.83	**14.25**	26.631	21.31178616	PASS
58	5290	MCS0	12.73	13.15	**16.67**	46.428	21.79 or 11+10log(B) = 30.18	PASS
106	5530	MCS0	14.36	15.05	**18.44**	69.847	21.62 or 11+10log(B) = 30.18	PASS
122	5610	MCS0	14.31	15.08	18.43	69.740	21.62 or 11+10log(B) = 30.18	PASS
138	5690(U-NII 2C)	MCS0	13.72	14.70	**17.96**	62.571	21.62 or 11+10log(B) = 30.14	PASS
138	5690 (U-NII 3)	MCS0	2.72	3.82	**6.97**	4.974	27.94949281	PASS
155	5775	MCS0	14.15	15.04	**18.34**	68.242	27.94949281	PASS

Conducted output power (IC)

802.11a_Ch1

CH	Frequency (MHz)	TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
52	5260	16.37	43.346	23.98 or 11+10log(B) = 23.22	PASS
60	5300	16.43	43.949	23.98 or 11+10log(B) = 23.21	PASS
64	5320	**16.45**	**44.152**	23.98 or 11+10log(B) = 23.22	PASS
100	5500	16.12	40.922	23.98 or 11+10log(B) = 23.23	PASS
116	5580	16.47	44.356	23.98 or 11+10log(B) = 23.21	PASS
140	5700	**16.49**	**44.561**	23.98 or 11+10log(B) = 23.22	PASS
144	5720(U-NII 2C)	14.98	31.459	23.98 or 11+10log(B) = 23.22	PASS
144	5720 (U-NII 3)	11.07	12.795	30	PASS
149	5745	**16.48**	**44.458**	30	PASS
157	5785	16.44	44.051	30	PASS
165	5825	16.23	41.971	30	PASS

802.11n_HT20_MIMO

CH	Frequency (MHz)	AVERAGE POWER		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)	RESULT
		CH 0	CH 1				
52	5260	16.14	16.88	19.92	98.216	21.79 or 11+10log(B) = 23.51	PASS
60	5300	16.25	16.88	19.97	99.369	21.79 or 11+10log(B) = 23.52	PASS
64	5320	16.16	16.98	**19.99**	**99.665**	21.79 or 11+10log(B) = 23.51	PASS
100	5500	13.12	13.77	16.85	48.453	21.62 or 11+10log(B) = 23.51	PASS
116	5580	16.61	17.53	**20.49**	**111.954**	21.62 or 11+10log(B) = 23.52	PASS
140	5700	10.44	11.03	14.14	25.948	21.62 or 11+10log(B) = 23.52	PASS
144	5720(U-NII 2C)	14.83	15.57	**18.68**	**73.732**	21.62 or 11+10log(B) = 23.53	PASS
144	5720 (U-NII 3)	10.8	11.92	14.64	29.114	27.94949281	PASS
149	5745	16.63	17.43	20.44	110.777	27.94949281	PASS
157	5785	16.74	17.39	**20.47**	**111.513**	27.94949281	PASS
165	5825	16.4	17.18	20.20	104.799	27.94949281	PASS

802.11n_HT40_MIMO

CH	Frequency (MHz)	AVERAGE POWER		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)			RESULT
		CH 0	CH 1						
54	5270	15.26	16.06	19.36	86.296	21.79	or 11+10log(B) =	26.57	PASS
62	5310	15.31	16.08	**19.39**	**86.967**	21.79	or 11+10log(B) =	26.57	PASS
102	5510	15.14	15.98	19.26	84.368	21.62	or 11+10log(B) =	26.58	PASS
110	5550	15.18	16.09	**19.34**	**85.907**	21.62	or 11+10log(B) =	26.58	PASS
134	5670	14.06	14.6	18.02	63.385	21.62	or 11+10log(B) =	26.58	PASS
142	5710(U-NII 2C)	14.47	15.29	**18.57**	**71.991**	21.62	or 11+10log(B) =	26.58	PASS
142	5710 (U-NII 3)	6.46	7.142	10.56	11.375	27.94949281			PASS
151	5755	15.11	15.91	**19.21**	**83.366**	27.94949281			PASS
159	5795	15.11	15.91	**19.21**	**83.366**	27.94949281			PASS

802.11ac_VHT80_MIMO

CH	Frequency (MHz)	AVERAGE POWER		TOTAL POWER (dBm)	TOTAL POWER (mW)	REQUIRED LIMIT (dBm)			RESULT
		CH 0	CH 1						
58	5290	12.73	13.15	**16.67**	46.428	21.79	or 11+10log(B) =	29.78	PASS
106	5530	14.36	15.05	**18.44**	**69.847**	21.62	or 11+10log(B) =	29.78	PASS
122	5610	14.31	15.08	18.43	69.740	21.62	or 11+10log(B) =	29.78	PASS
138	5690(U-NII 2C)	13.72	14.7	17.96	62.571	21.62	or 11+10log(B) =	29.78	PASS
138	5690 (U-NII 3)	2.721	3.822	6.97	4.974	27.94949281			PASS
155	5775	14.15	15.04	**18.34**	**68.242**	27.94949281			PASS

EIRP

802.11a_Ch1

CH	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	REQUIRED LIMIT (dBm)			RESULT
36	5180	15.69	5.880	21.57	143.533	23.01	or 10+10log(B)=	22.21	PASS
44	5220	15.75	5.880	21.63	145.530	23.01	or 10+10log(B)=	22.21	PASS
48	5240	**16.24**	5.880	**22.12**	**162.912**	23.01	or 10+10log(B)=	22.21	PASS
52	5260	16.37	4.730	21.10	128.811	30	or 17+10log(B)=	29.22	PASS
60	5300	16.43	4.730	21.16	130.603	30	or 17+10log(B)=	29.21	PASS
64	5320	**16.45**	4.730	**21.18**	**131.205**	30	or 17+10log(B)=	29.22	PASS
100	5500	16.12	4.800	20.92	123.581	30	or 17+10log(B)=	29.23	PASS
116	5580	**16.47**	4.800	**21.27**	**133.953**	30	or 17+10log(B)=	29.21	PASS
140	5700	**16.49**	4.800	**21.29**	**134.571**	30	or 17+10log(B)=	29.22	PASS

802.11n_HT20_MIMO

CH	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	REQUIRED LIMIT (dBm)			RESULT
36	5180	13.53	8.668	22.20	165.777	23.01	or 10+10log(B)=	22.52	PASS
44	5220	13.67	8.668	22.34	171.369	23.01	or 10+10log(B)=	22.51	PASS
48	5240	**13.80**	8.668	**22.47**	**176.585**	23.01	or 10+10log(B)=	22.51	PASS
52	5260	19.92	8.191	28.11	647.630	30	or 17+10log(B)=	29.51	PASS
60	5300	19.97	8.191	28.16	655.231	30	or 17+10log(B)=	29.52	PASS
64	5320	**19.99**	8.191	**28.18**	**657.181**	30	or 17+10log(B)=	29.51	PASS
100	5500	16.85	8.356	25.21	331.871	30	or 17+10log(B)=	29.51	PASS
116	5580	**20.49**	8.356	**28.85**	**766.808**	30	or 17+10log(B)=	29.52	PASS
140	5700	**14.14**	8.356	**22.50**	**177.728**	30	or 17+10log(B)=	29.52	PASS

802.11n_HT40_MIMO

CH	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	REQUIRED LIMIT (dBm)			RESULT
38	5190	**14.15**	8.668	**22.82**	**191.414**	23.01	or 10+10log(B)=	25.57	PASS
46	5230	13.79	8.668	22.46	176.224	23.01	or 10+10log(B)=	25.57	PASS
54	5270	19.36	8.191	27.55	569.028	30	or 17+10log(B)=	32.57	PASS
62	5310	**19.39**	8.191	**27.58**	**573.454**	30	or 17+10log(B)=	32.57	PASS
102	5510	19.26	8.356	27.62	577.862	30	or 17+10log(B)=	32.58	PASS
110	5550	**19.34**	8.356	**27.70**	**588.404**	30	or 17+10log(B)=	32.58	PASS
134	5670	**18.02**	8.356	**26.38**	**434.145**	30	or 17+10log(B)=	32.58	PASS

802.11ac_VHT80_MIMO

CH	Frequency (MHz)	TOTAL POWER (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	REQUIRED LIMIT (dBm)			RESULT
42	5210	**14.25**	8.668	**22.92**	**195.976**	23.01	or 10+10log(B)=	28.78	PASS
58	5290	**16.67**	8.191	**24.86**	**306.145**	30	or 17+10log(B)=	35.78	PASS
106	5530	**18.44**	8.356	**26.80**	**478.399**	30	or 17+10log(B)=	35.78	PASS

10 MAXIMUM POWER SPECTRAL DENSITY

10.1 Standard Applicable

FCC

OPERZTION Band	EUT CATEGORY		LIMIT
U-NII-1		Access Point (Mater device)	17dBm/ MHz
		Fixed point-to-point Acess Ponit	
	√	Mobile and portable clinet device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

IC

OPERZTION FREQUENCY BAND	LIMIT
5150~5250 MHz	EIRP spectral density 10 dBm / MHz
5250~5350 MHz	11dBm / MHz
5470-5600 MHz and 5650-5725 MHz	11dBm / MHz
5725~5850 MHz	30dBm / 500 kHz

If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the Maximum Power Spectral Density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note:

As per FCC KDB 662911 D01

Unequal antenna gains, with equal transmit powers. For antenna gains given by G1, G2, …, GN dBi.

(i) If transmit signals are correlated, then Directional gain

$= 10 \log[(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2 / N_{ANT}]$ dBi

[Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]

	Effective Legacy Gain (dBi)	Limit
UNII-1	8.67	8.33 (dBm / MHz)
UNII-2A	8.19	8.81 (dBm / MHz)
U-NII-2C	8.36	8.64 (dBm / MHz)
U-NII-3	8.05	27.95 (dBm/500 kHz)

10.2 Measurement Procedure

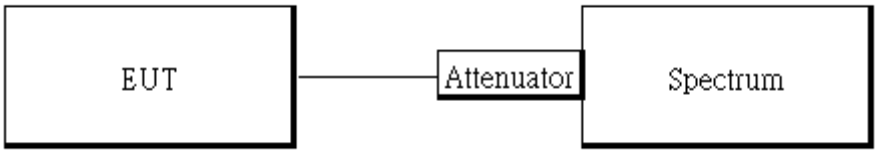
1. Place the EUT on the table and set it in transmitting mode.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules.
3. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to Spectrum.
4. **For U-NII1, U-NII-2A, U-NII-2C Band**:
   Set RBW=1MHz, VBW=3MHz, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)
   For U-NII-3 Band:
   Set RBW=500 kHz, VBW≥ 3RBW, where span is enough to capture the entire bandwidth, Sweep time = Auto (601 pts), detector = sample, traces 100 sweeps of video averaging. (SA-2 with the omission of procedure x, the integration with 26dB EBW bandwidth)
5. User the cursor on spectrum to peak search the highest level of trace
6. Record the max. reading and add 10 log(1/duty cycle).
7. Repeat above procedures until all default test channel (low, middle, and high) was complete.

Note: For the test of PSD at MIMO mode, the highest emission of worst case employing Measure and add 10 log (N) technical is reported on this report after the comparison between Main Antenna at single transmitting mode and Aux that yields the higher value. The MIMO transmitting mode produces higher value of outcome

10.3 Measurement Equipment Used

SGS Conducted Room					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
DC Block	PASTERNACK	PE8210	RF256	02/26/2019	02/25/2020
Spectrum Analyzer	Agilent	N9010A	MY53400256	11/21/2018	11/20/2019
Thermostatic/Hrgrosatic Chamber	GWINSTEK	GTC-288MH-CC	TH160402	05/16/2019	05/15/2020
Attenuator	Marvelous	MVE2213-10	RF80	02/26/2019	02/25/2020

10.4 Test Set-up



10.5 Measurement Result

POWER DENSITY 802.11a MODE					
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5180.00	3.81	0.19	4.00	11.00	-7.00
5220.00	3.87	0.19	4.06	11.00	-6.94
5240.00	3.46	0.19	3.65	11.00	-7.35
5260.00	4.70	0.19	4.89	11.00	-6.11
5300.00	4.81	0.19	5.00	11.00	-6.00
5320.00	4.32	0.19	4.51	11.00	-6.49
5500.00	2.08	0.19	2.27	11.00	-8.73
5580.00	4.74	0.19	4.93	11.00	-6.07
5700.00	-0.38	0.19	-0.19	11.00	-11.19
5720 (U-NII 2C)	4.96	0.19	5.15	11.00	-5.85
5720 (U-NII 3)	1.24	0.19	1.43	30.00	-28.57
5745.00	2.63	0.19	2.82	30.00	-27.18
5785.00	2.47	0.19	2.66	30.00	-27.34
5825.00	2.42	0.19	2.61	30.00	-27.39

POWER DENSITY 802.11n HT20 MODE					
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5180	0.89	0.39	1.28	8.33	-7.06
5220	0.88	0.39	1.27	8.33	-7.07
5240	0.43	0.39	0.82	8.33	-7.52
5260	8.12	0.39	8.51	8.81	-0.30
5300	8.17	0.39	8.56	8.81	-0.25
5320	8.14	0.39	8.53	8.81	-0.28
5500	4.59	0.39	4.98	8.64	-3.67
5580	8.05	0.39	8.44	8.64	-0.21
5700	2.22	0.39	2.61	8.64	-6.04
5720 (U-NII 2C)	8.17	0.39	8.56	8.64	-0.09
5720 (U-NII 3)	3.99	0.39	4.38	27.95	-23.57
5745	6.46	0.39	6.85	27.95	-21.10
5785	6.56	0.39	6.95	27.95	-21.00
5825	6.33	0.39	6.72	27.95	-21.23

POWER DENSITY 802.11n HT40 MODE					
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5190	-0.31	0.67	0.36	8.33	-7.97
5230	-0.47	0.67	0.20	8.33	-8.13
5270	4.54	0.67	5.21	8.81	-3.60
5310	4.22	0.67	4.89	8.81	-3.92
5510	3.7	0.67	4.37	8.64	-4.27
5550	4.11	0.67	4.78	8.64	-3.86
5670	2.93	0.67	3.60	8.64	-5.04
5710 (U-NII 2C)	5.10	0.67	5.77	8.64	-2.87
5710 (U-NII 3)	1.00	0.67	1.67	27.95	-26.28
5755	1.97	0.67	2.64	27.95	-25.31
5795	2.10	0.67	2.77	27.95	-25.18

POWER DENSITY 802.11ac VHT80 MODE					
Frequency (MHz)	PSD W/O Duty Factor (dBm)	Duty Factor	PSD With Duty Factor (dBm)	Limit (dBm)	Margin (dB)
5210	-4.27	0.71	-3.56	8.33	-11.89
5290	-0.94	0.71	-0.23	8.81	-9.04
5530	1.12	0.71	1.83	8.64	-6.81
5610	1.14	0.71	1.85	8.64	-6.79
5690 (U-NII 2C)	0.90	0.71	1.61	8.64	-7.03
5690 (U-NII 3)	-2.87	0.71	-2.15	27.95	-30.10
5775	-1.84	0.71	-1.13	27.95	-29.08

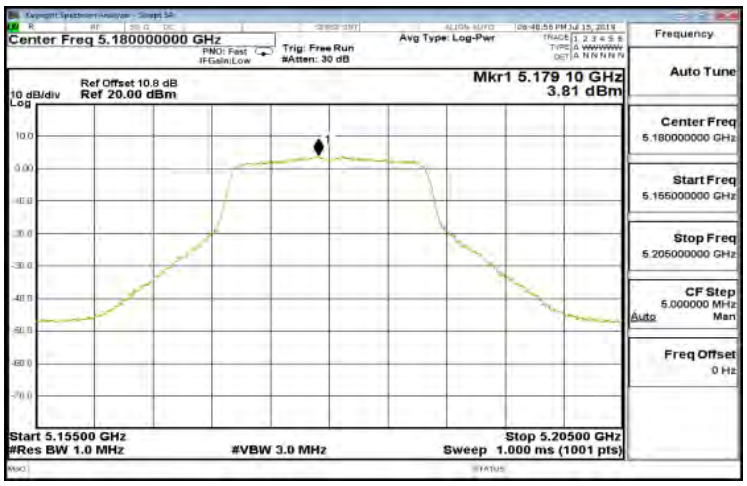
EIRP spectral density 802.11a MODE					
Freq. (MHz)	PSD (dBm)	Ant. Gain (dBi)	EIRP SD (dBm)	Limit (dBm)	Margin (dB)
5180	4.00	5.88	9.88	10	-0.12
5220	4.06	5.88	9.94	10	-0.06
5240	3.65	5.88	9.53	10	-0.47

EIRP spectral density 802.11n HT20 MODE					
Freq. (MHz)	PSD (dBm)	Ant. Gain (dBi)	EIRP SD (dBm)	Limit (dBm)	Margin (dB)
5180	1.28	8.67	9.94	10	-0.06
5220	1.27	8.67	9.93	10	-0.07
5240	0.82	8.67	9.48	10	-0.52

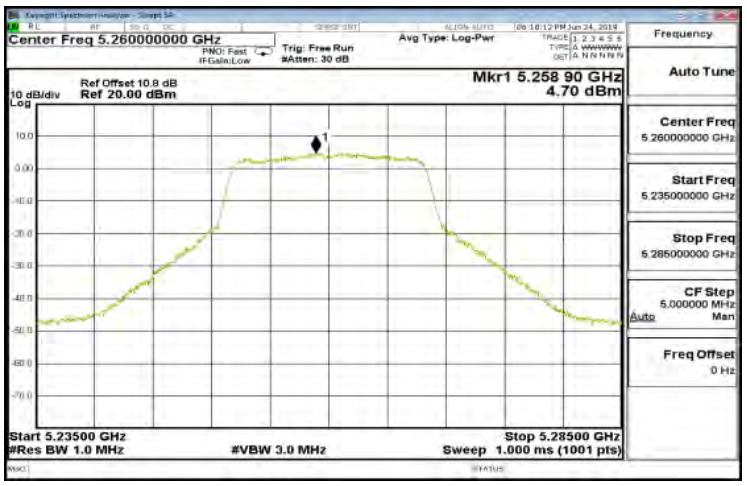
EIRP spectral density 802.11n HT40 MODE					
Freq. (MHz)	PSD (dBm)	Ant. Gain (dBi)	EIRP SD (dBm)	Limit (dBm)	Margin (dB)
5180	0.36	8.67	9.03	10	-0.97
5220	0.20	8.67	8.87	10	-1.13

EIRP spectral density 802.11ac VHT80 MODE					
Freq. (MHz)	PSD (dBm)	Ant. Gain (dBi)	EIRP SD (dBm)	Limit (dBm)	Margin (dB)
5210	-3.56	8.67	5.11	10	-4.89

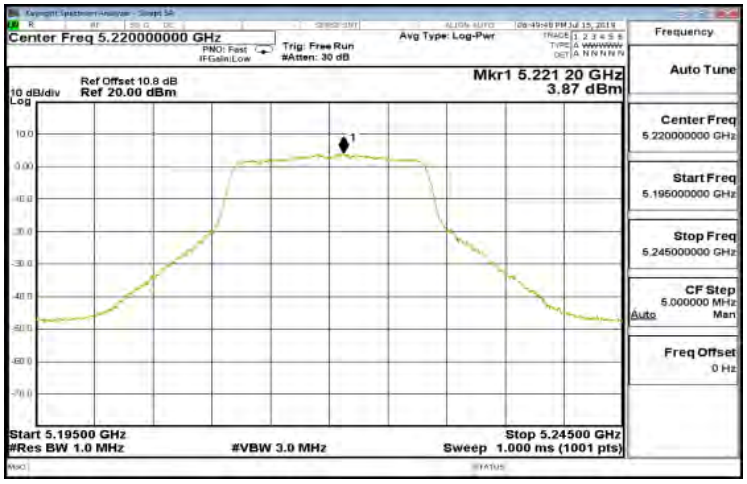
802.11a_20MHz_5180MHz



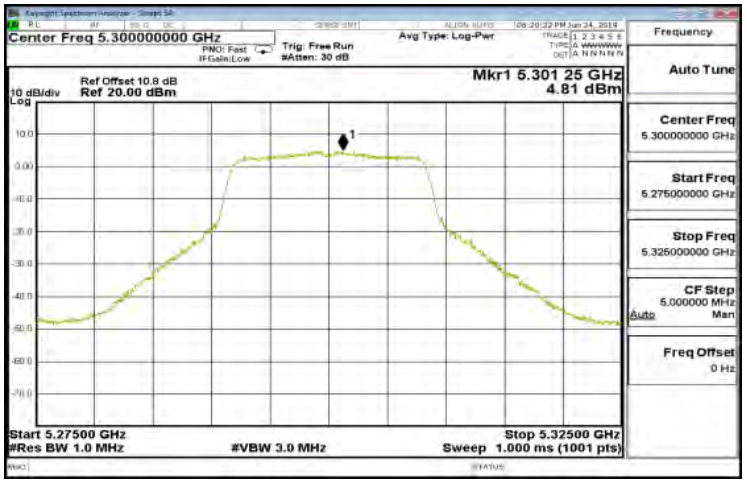
802.11a_20MHz_5260MHz



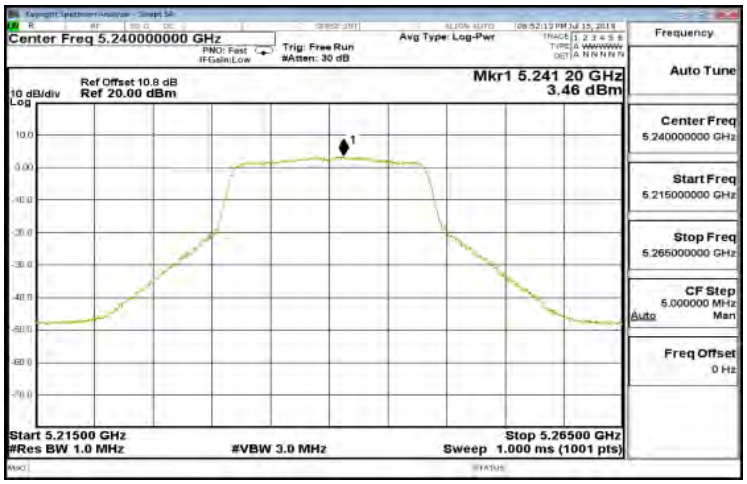
802.11a_20MHz_5220MHz



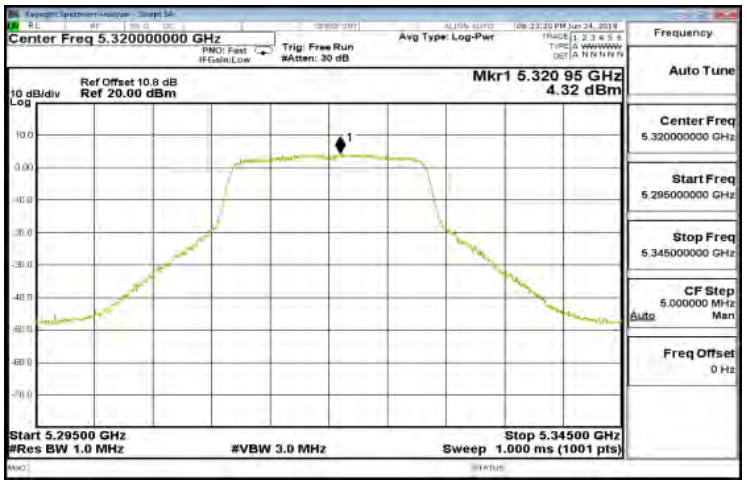
802.11a_20MHz_5300MHz



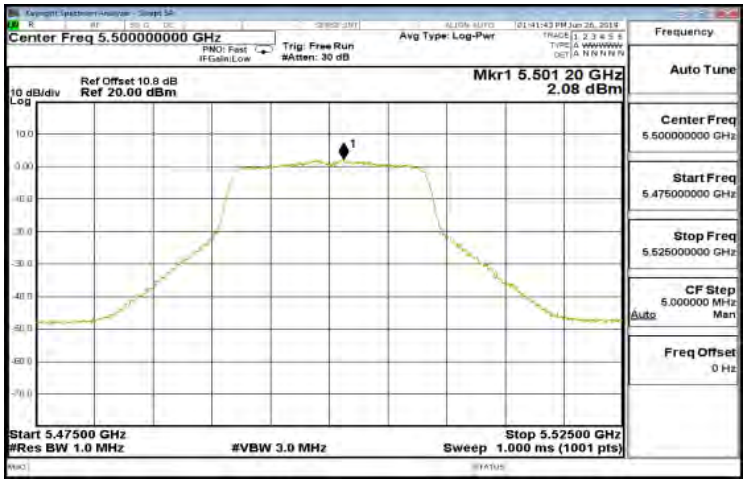
802.11a_20MHz_5240MHz



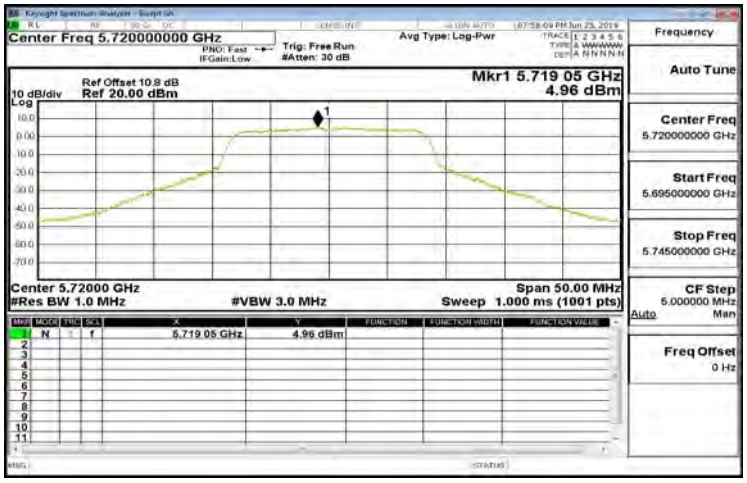
802.11a_20MHz_5320MHz



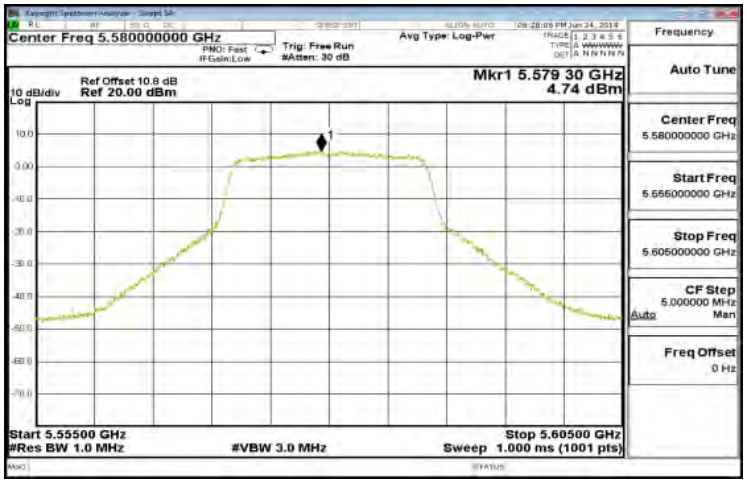
802.11a_20MHz_5500MHz



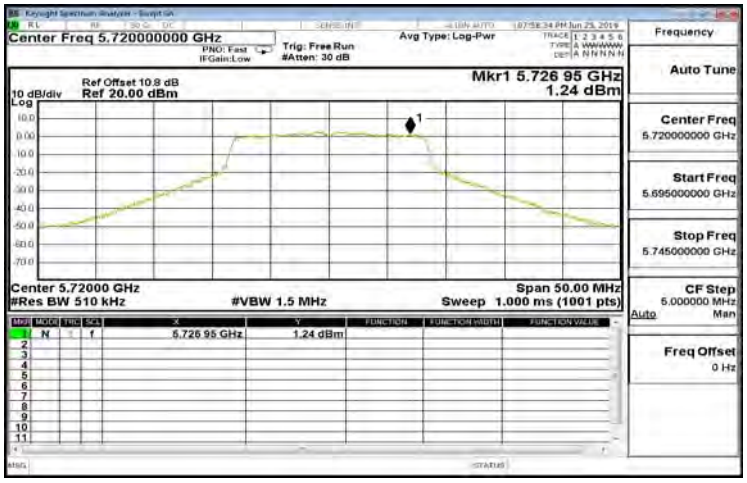
802.11a_20MHz_5720MHz (UNII 2C)



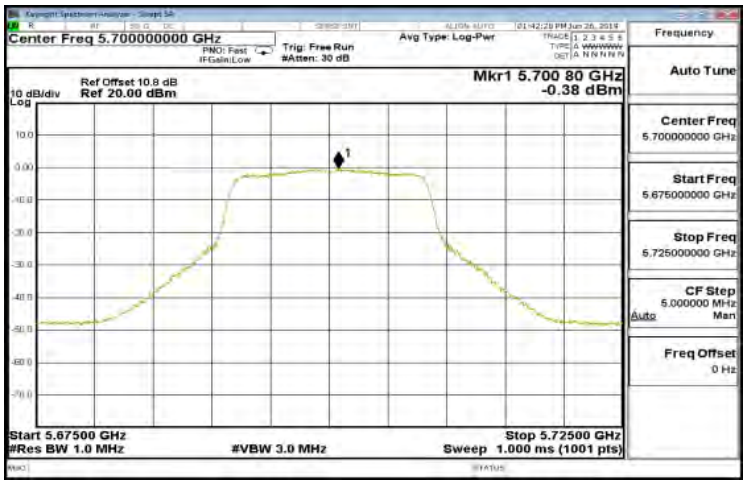
802.11a_20MHz_5580MHz



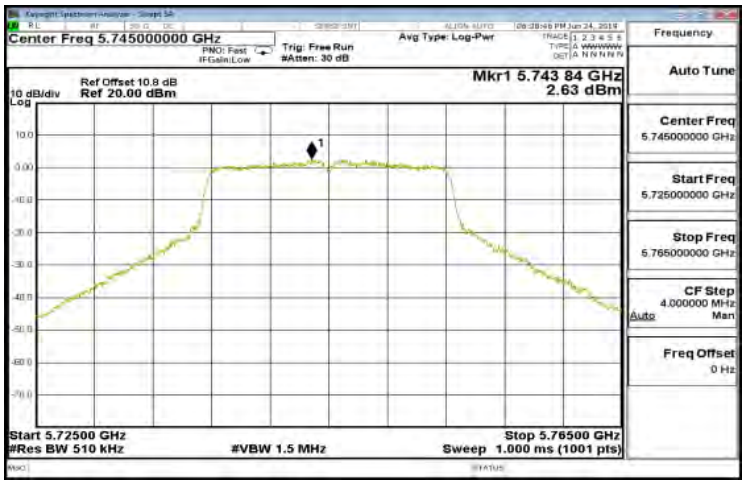
802.11a_20MHz_5720MHz (UNII 3)



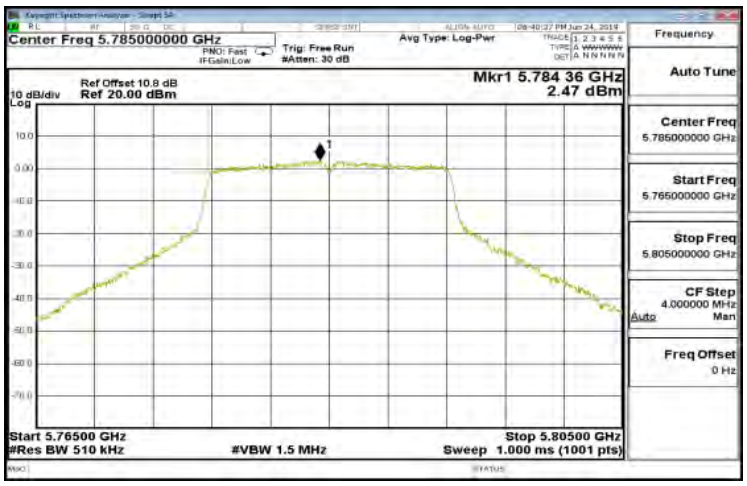
802.11a_20MHz_5700MHz



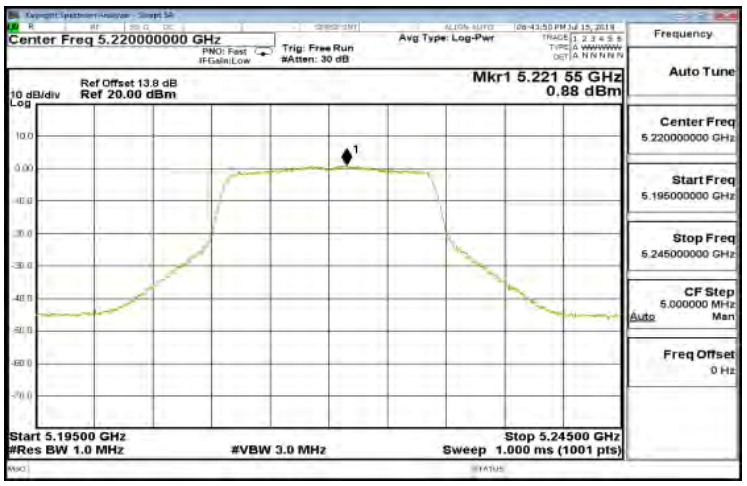
802.11a_20MHz_5745MHz



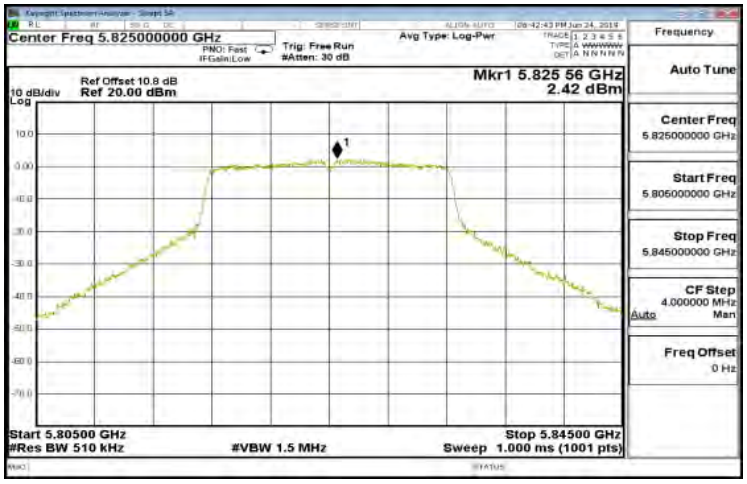
802.11a_20MHz_5785MHz



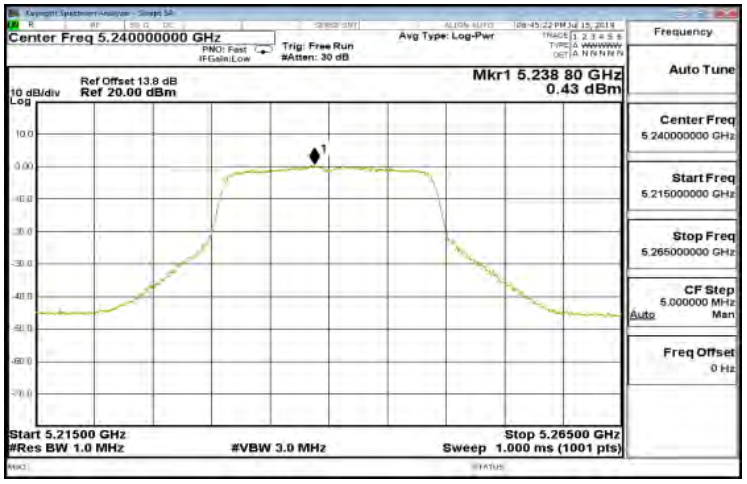
802.11n_20MHz_5220MHz



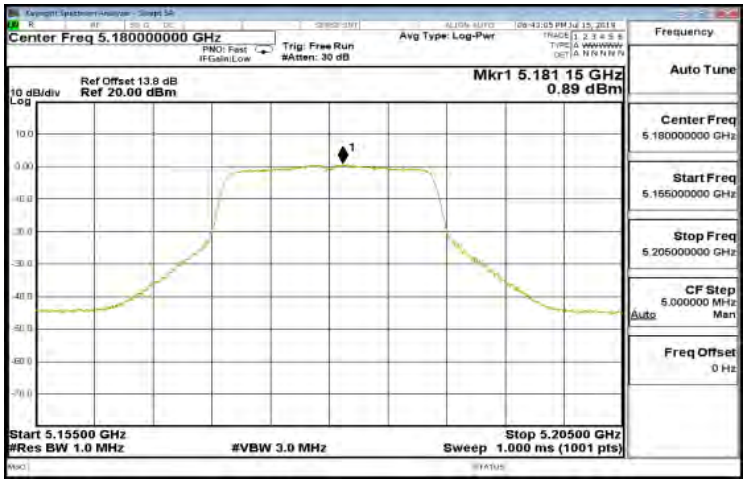
802.11a_20MHz_5825MHz



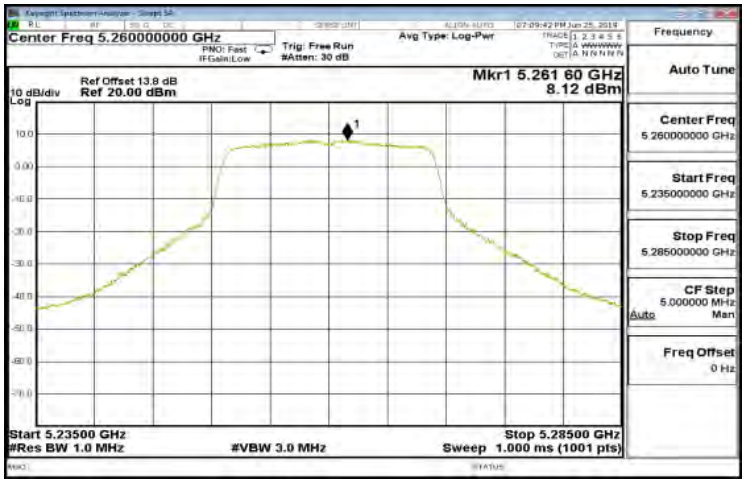
802.11n_20MHz_5240MHz



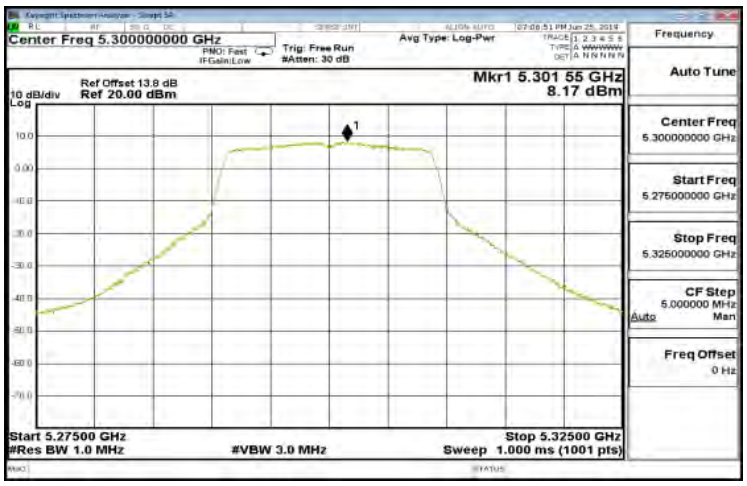
802.11n_20MHz_5180MHz



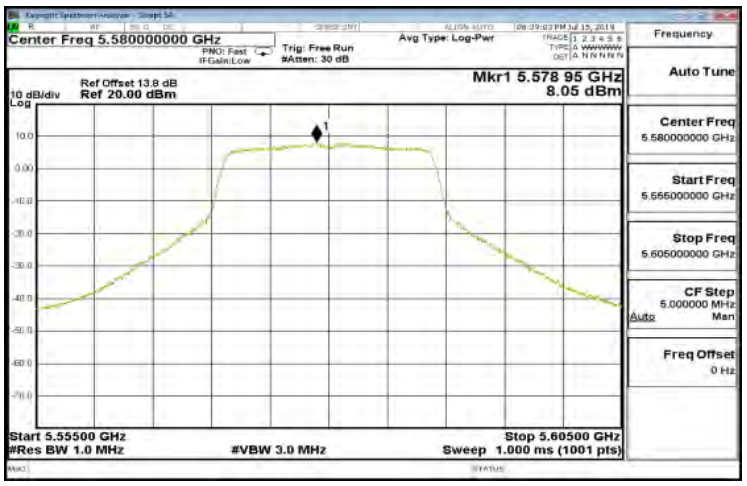
802.11n_20MHz_5260MHz



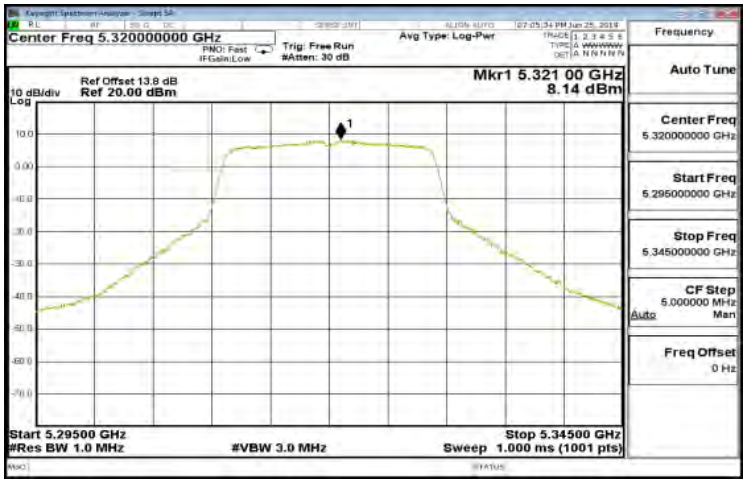
802.11n_20MHz_5300MHz



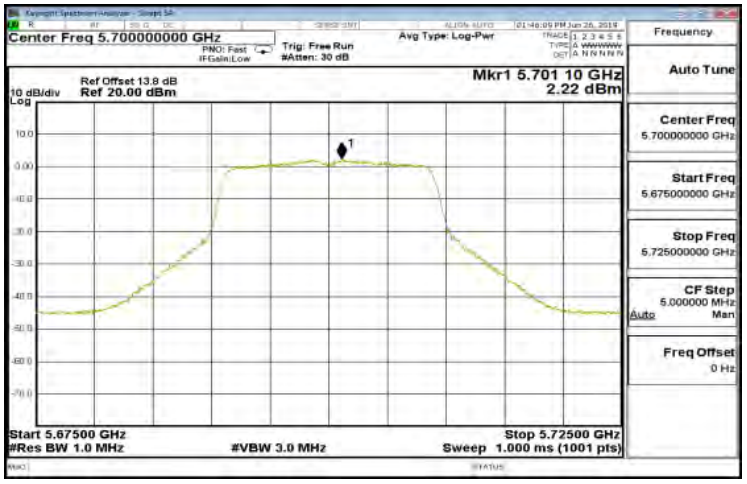
802.11n_20MHz_5580MHz



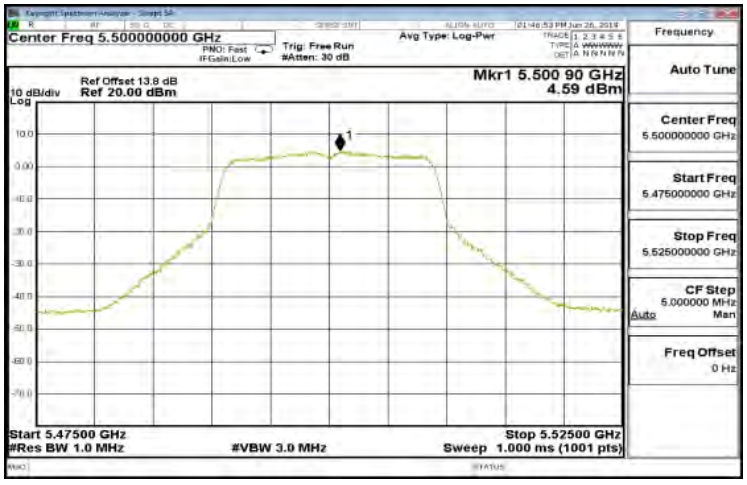
802.11n_20MHz_5320MHz



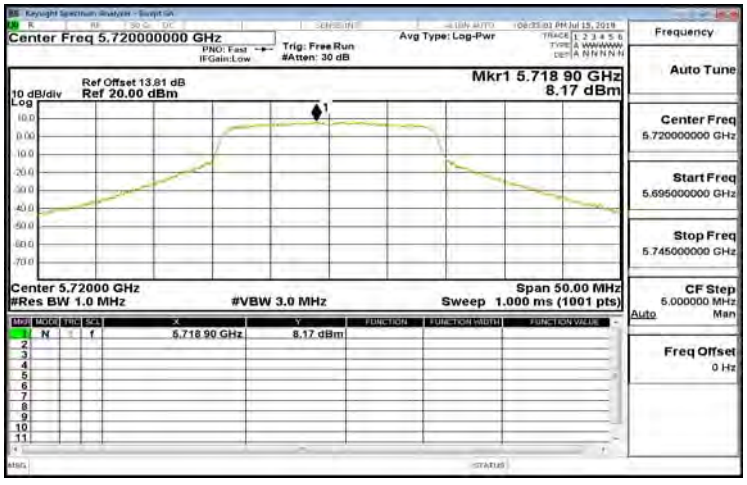
802.11n_20MHz_5700MHz



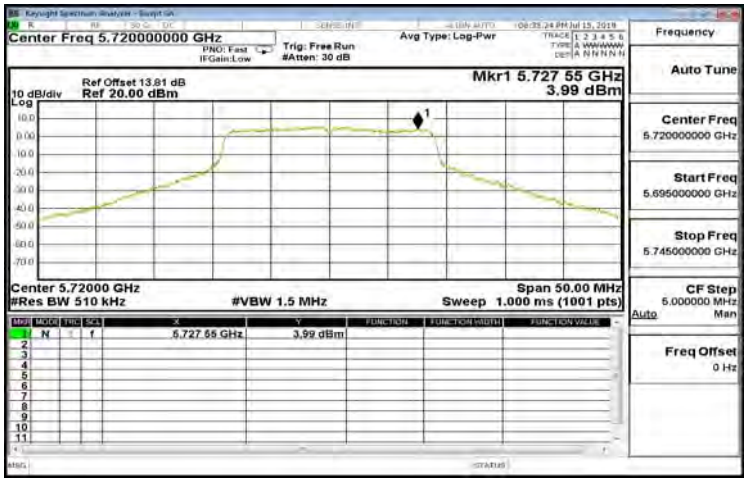
802.11n_20MHz_5500MHz



802.11n_20MHz_5720MHz (UNII 2C)



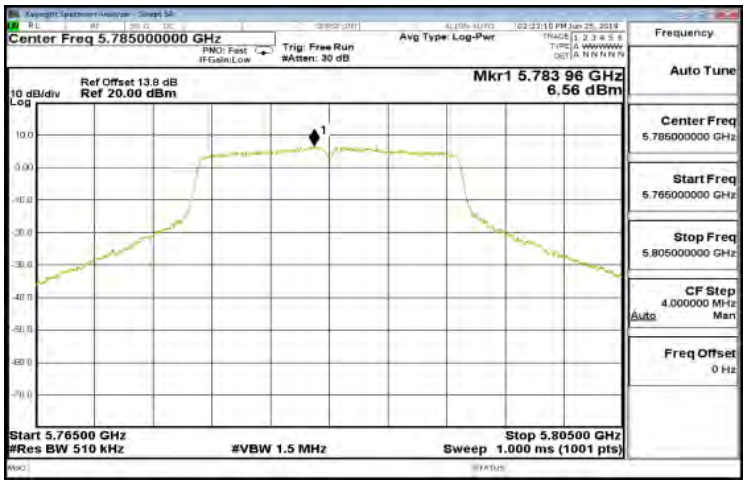
802.11n_20MHz_5720MHz (UNII 3)



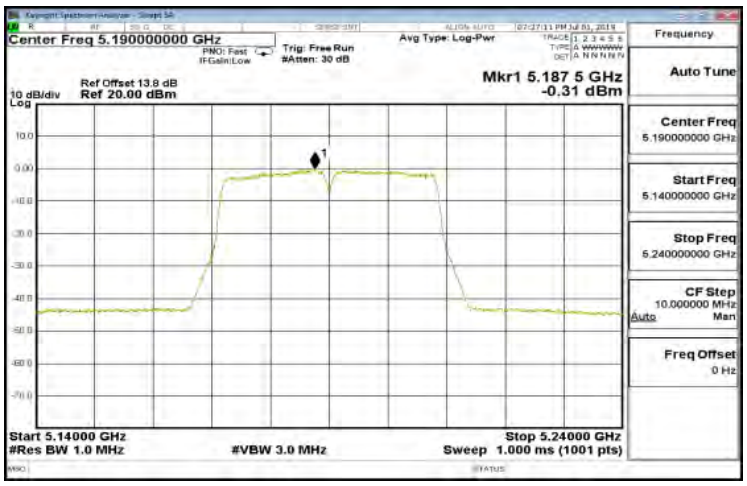
802.11n_20MHz_5825MHz

802.11n_20MHz_5745MHz

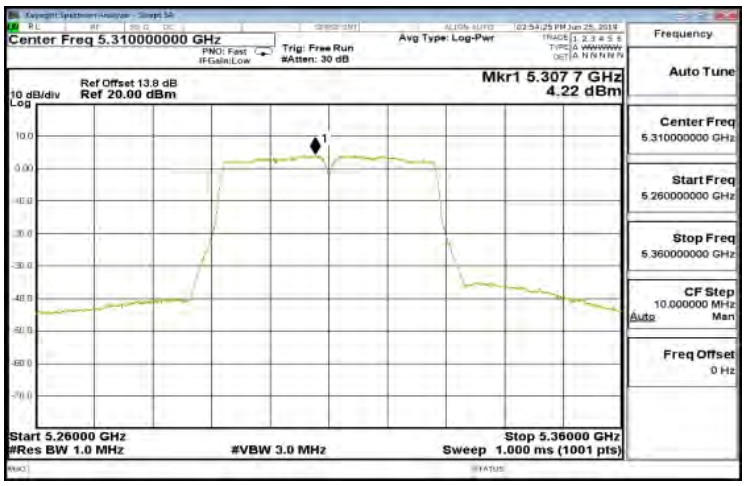
802.11n_20MHz_5785MHz



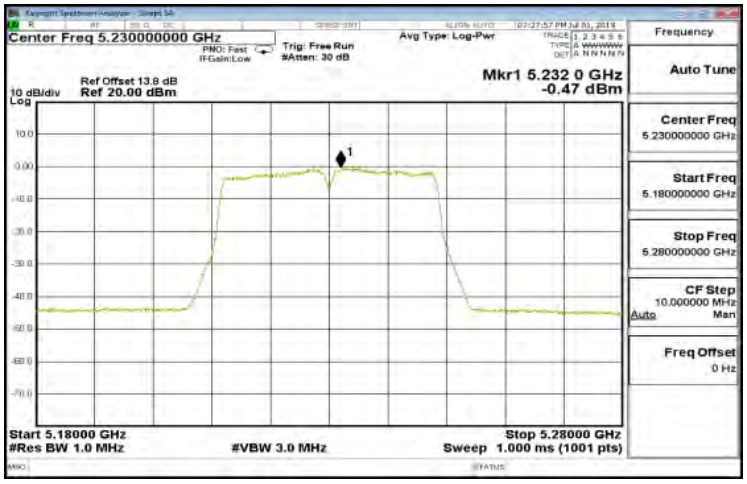
802.11n_40MHz_5190MHz



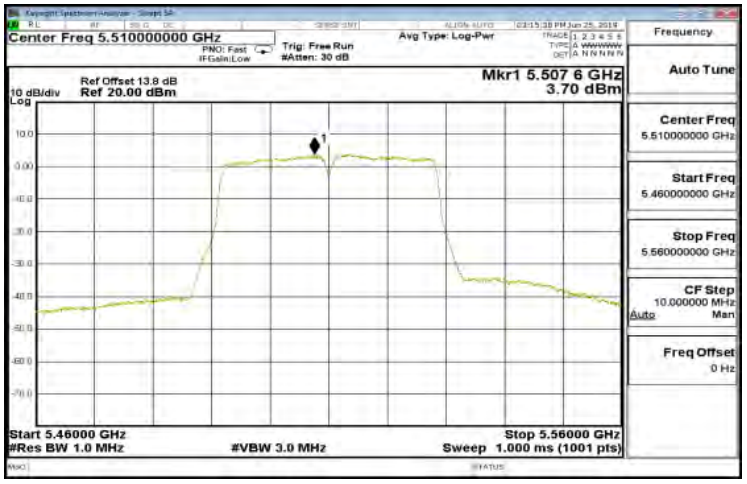
802.11n_40MHz_5310MHz



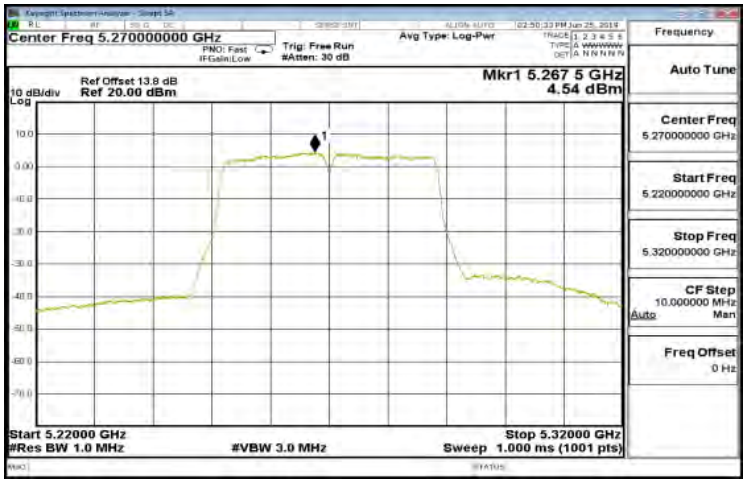
802.11n_40MHz_5230MHz



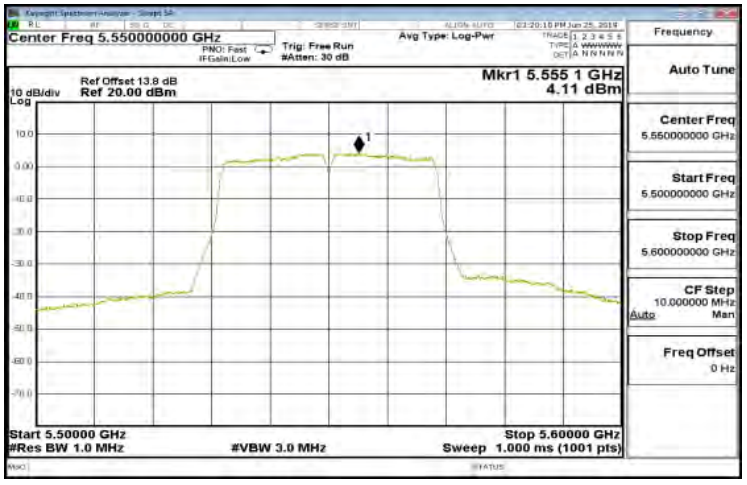
802.11n_40MHz_5510MHz



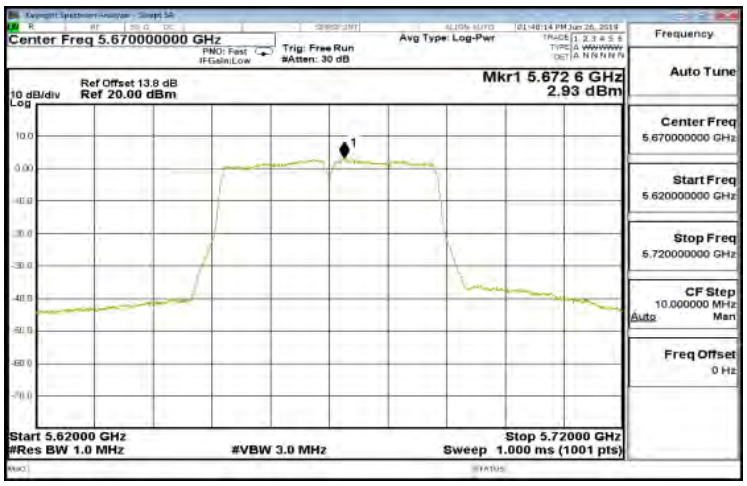
802.11n_40MHz_5270MHz



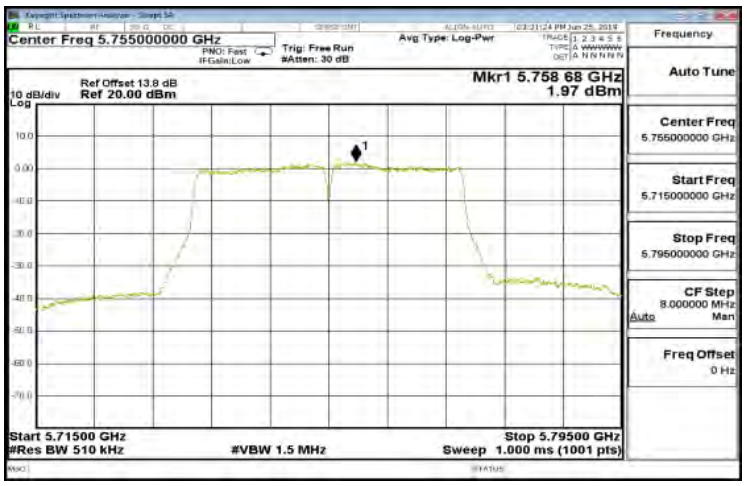
802.11n_40MHz_5550MHz



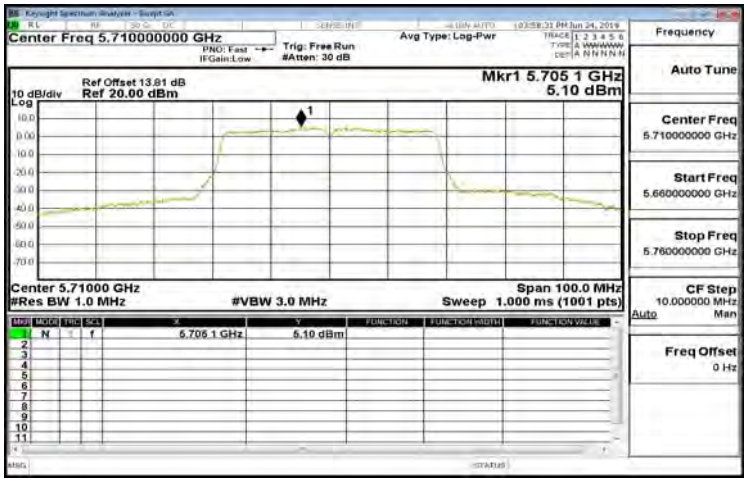
802.11n_40MHz_5670MHz



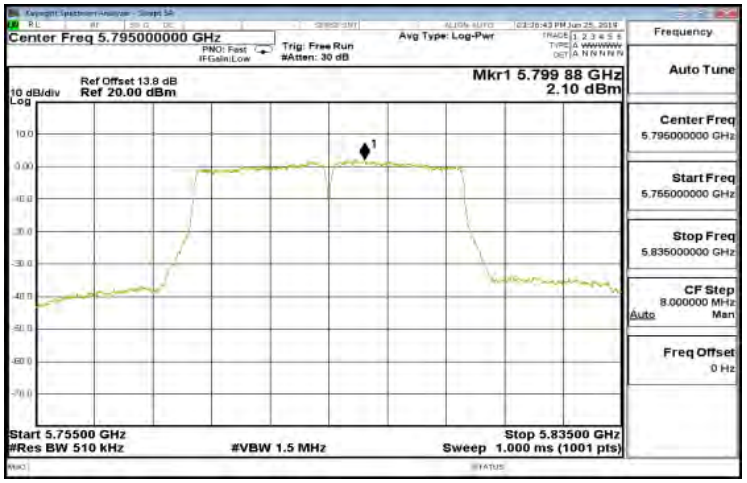
802.11n_40MHz_5755MHz



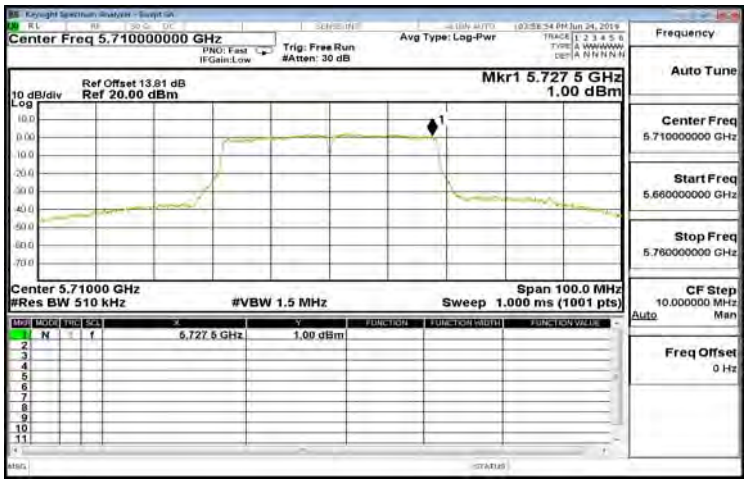
802.11n_40MHz_5710MHz (UNII 2C)



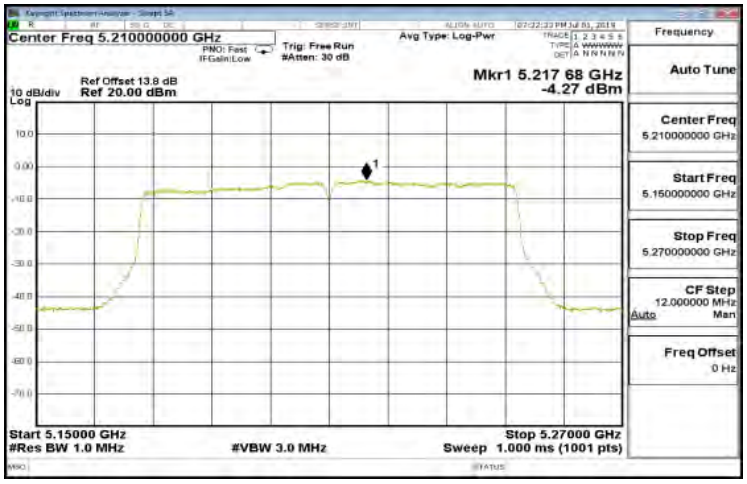
802.11n_40MHz_5795MHz



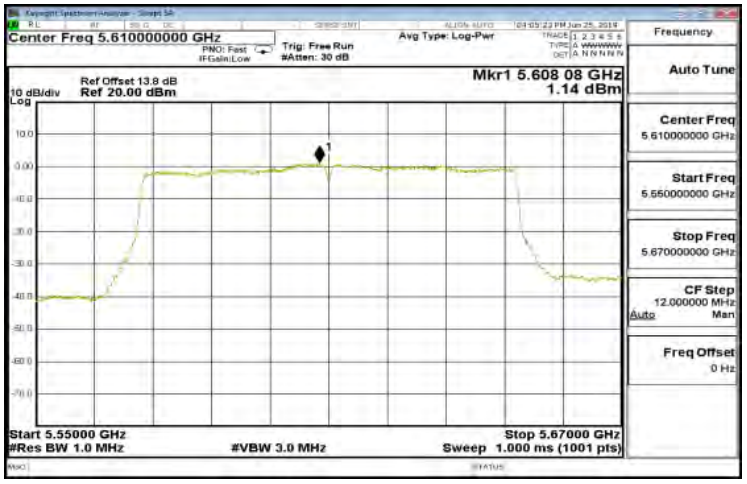
802.11n_40MHz_5710MHz (UNII 3)



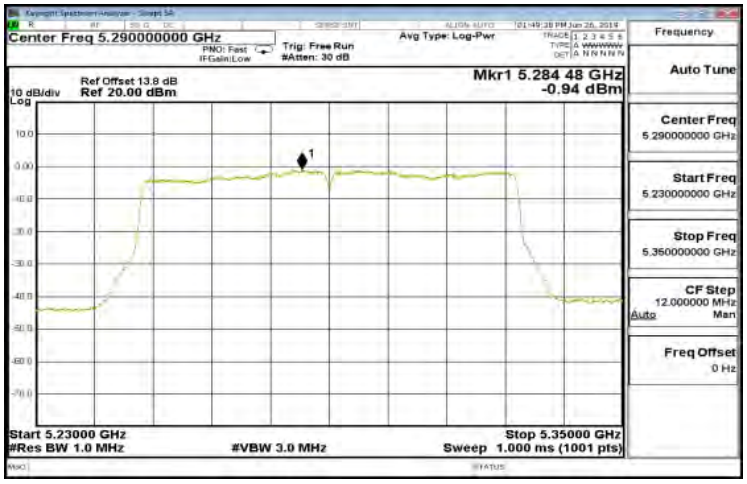
802.11ac_80MHz_5210MHz



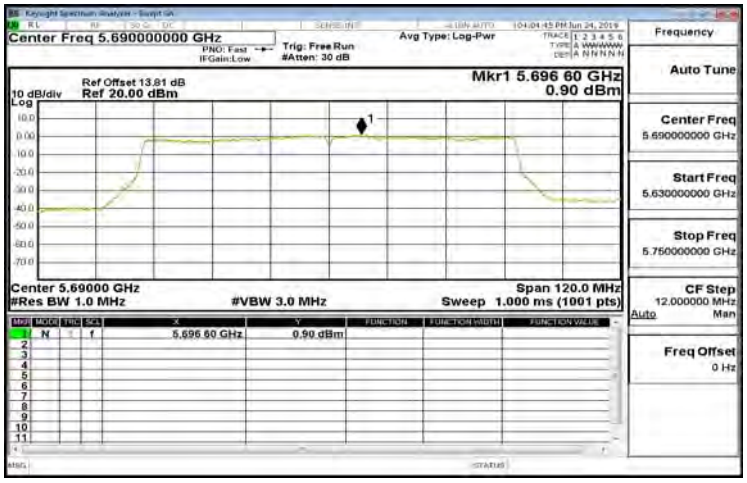
802.11ac_80MHz_5610MHz



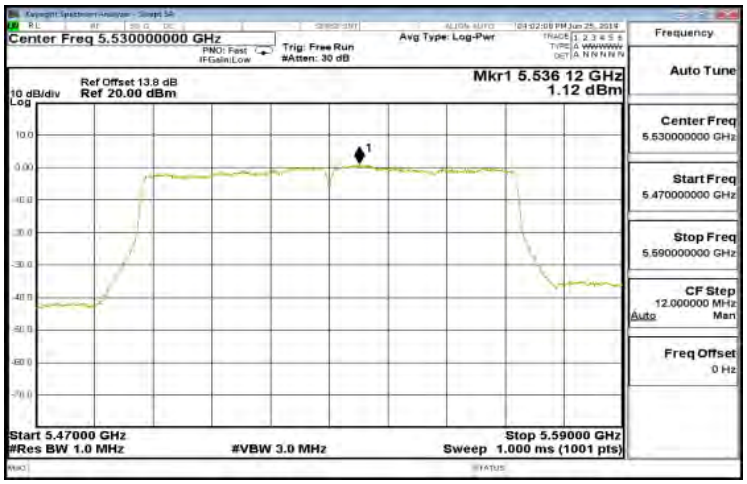
802.11ac_80MHz_5290MHz



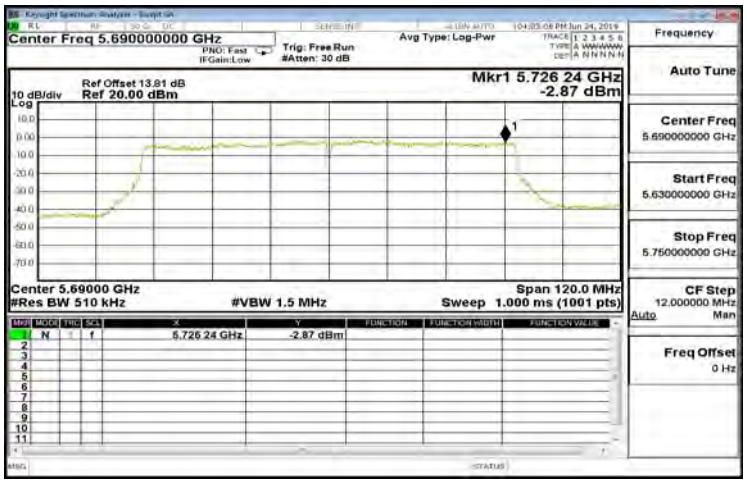
802.11ac_80MHz_5690MHz (UNII 2C)



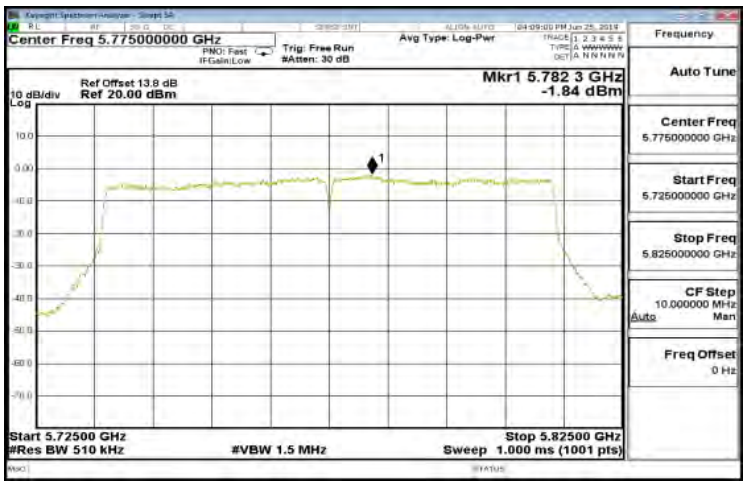
802.11ac_80MHz_5530MHz



802.11ac_80MHz_5690MHz (UNII 3)



802.11ac_80MHz_5775MHz



11 UNDESIRABLE RADIATED EMISSION MEASUREMENT

11.1 Standard Applicable

The maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

1. For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

2. For transmitters operating in the 5.725-5.85 GHz band: 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.

<table>
<tr><th>APPLICABLE TO</th><th colspan="2">LIMIT</th></tr>
<tr><td rowspan="2">FCC KDB 789033 D02 General UNII Test Procedures New Rules</td><td colspan="2">FIELD STRENGTH AT 3m</td></tr>
<tr><td>PK: 74 (dBμV/m)</td><td>AV 54 (dBμV/m)</td></tr>
<tr><th>APPLICABLE TO</th><th>EIRP LIMIT</th><th>FIELD STRENGTH AT 3m</th></tr>
<tr><td>15.407(b)(1)
RSS-247 6.2.1.2</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.3 (dBμV/m)</td></tr>
<tr><td>15.407(b)(2)
RSS-247 6.2.2.2</td></tr>
<tr><td>15.407(b)(3)
RSS-247 6.2.3.2</td></tr>
<tr><td>15.407(b)(4)(i)
RSS-247 6.2.4.2</td><td>PK:-27 (dBm/MHz) *1
PK:10 (dBm/MHz) *2
PK:15.6 (dBm/MHz) *3
PK:27 (dBm/MHz) *4</td><td>PK: 68.2(dBμV/m) *1
PK:105.2 (dBμV/m) *2
PK: 110.8(dBμV/m) *3
PK:122.2 (dBμV/m) *4</td></tr>
<tr><td colspan="3">*1 beyond 75 MHz or more above of the bandedge.
*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.
*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.
*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.</td></tr>
</table>

EIRP = ((E*d)^2) / 30, where E is the field in V/m, d is the measurement distance (3m), EIRP is the equivalent isotropically radiated power in Watts.

Unwanted spurious emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

Frequency (MHz)	Field strength (microvolts/meter)	Distance (meters)
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

Note:

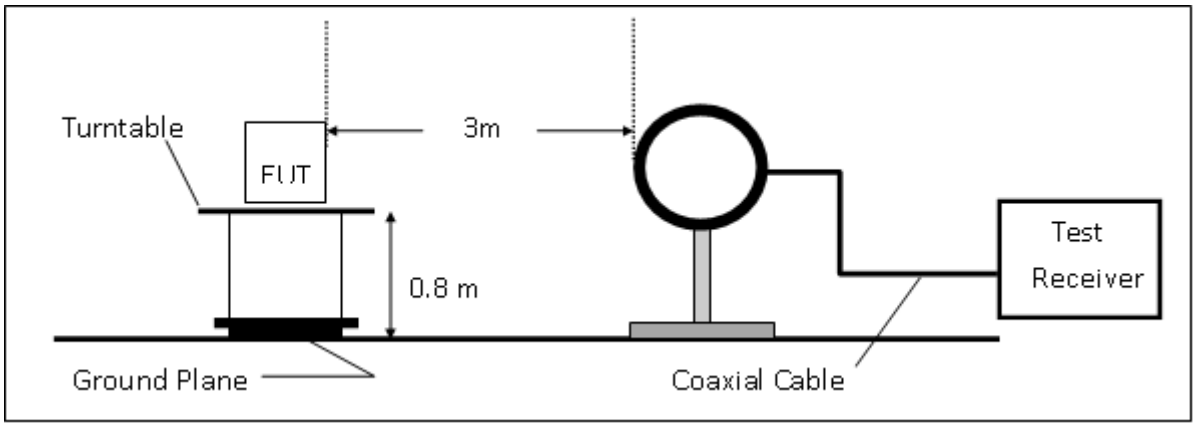
1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBμV/m) = 20 log Emission level (dBμV/m)

11.2 Measurement Equipment Used

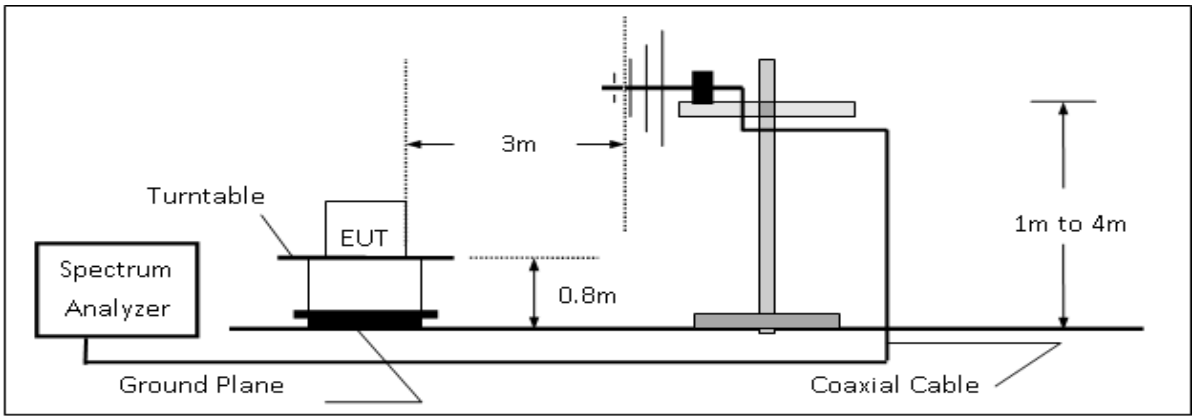
966A Chamber					
EQUIPMENT TYPE	**MFR**	**MODEL NUMBER**	**SERIAL NUMBER**	**LAST CAL.**	**CAL DUE.**
Bilog Antenna	Sunol Sciences	JB3	A030105	07/13/2018	07/12/2019
Cable	HUBER SU-HNER	SUCOFLEX 104PEA	25157	02/26/2019	02/25/2020
Cable	HUBER SU-HNER	SUCOFLEX 104PEA	20995	02/26/2019	02/25/2020
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	01/30/2019	01/29/2020
double Ridged Guide Horn Antenna	ETC	MCTD 1209	DRH13M02003	08/20/2018	08/19/2019
Low Pass Filter	EWT	EWT-56-0019	RF46	02/26/2019	02/25/2020
High Pass Filter	WI	WHKX7.0/18G-8SS	45	02/26/2019	02/25/2020
Horn Antenna	ETS LINDGREN	3116	00026370	12/26/2018	12/25/2019
Loop Antenna	COM-POWER	AL-130	121051	03/22/2019	03/21/2020
Pre-Amplifier	EMEC	EM330	060609	02/26/2019	02/25/2020
Pre-Amplifier	MITEQ	AMF-6F-260400-40-8P	985646	02/26/2019	02/25/2020
Pre-Amplifier	HP	8449B	3008A00965	02/26/2019	02/25/2020
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	05/29/2019	05/28/2020
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	e3 V6.11-20180413				

11.3 Test SET-UP

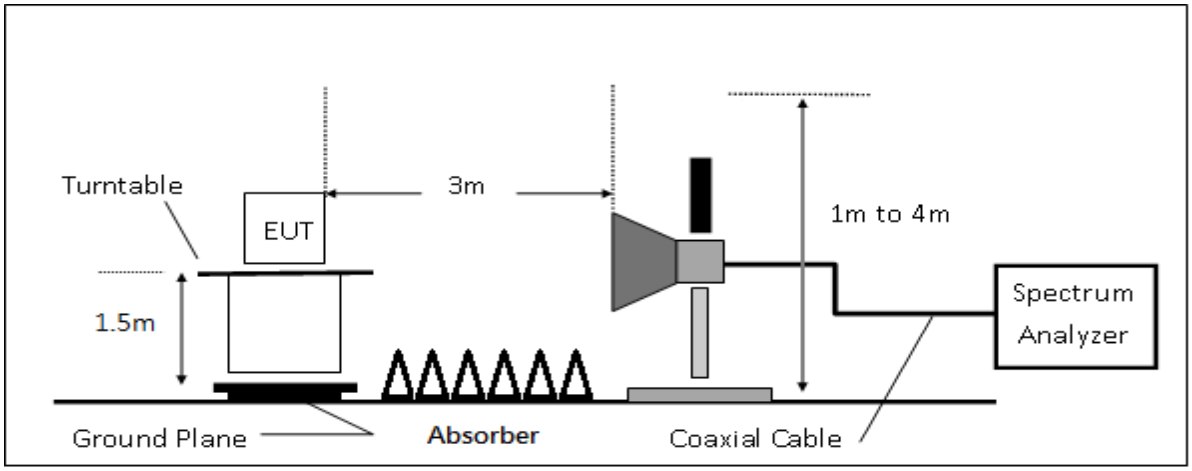
(A) Radiated Emission Test Set-UP Frequency Below 30MHz.



(B) Radiated Emission Test Set-Up, Frequency form 30MHz to 1000MHz



(C) Radiated Emission Test Set-UP Frequency Over 1 GHz



11.4 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules .
3. The EUT was placed on a turn table with 0.8m for frequency< 1GHz and 1.5m for frequency> 1GHz above ground plane.
4. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
5. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
6. Set the spectrum analyzer as RBW=120 kHz and VBW=300 kHz for Peak Detector (PK) and Quasi-peak (QP) at frequency below 1 GHz.
7. Set the spectrum analyzer as RBW=1 MHz, VBW=3 MHz for Peak Detector at frequency above 1 GHz.
8. Set the spectrum analyzer as RBW=1 MHz, VBW=10 Hz (Duty cycle > 98%) or VBW ≥ 1/T (Duty cycle < 98%) for Average Detector at frequency above 1 GHz.
9. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
10. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
11. Repeat above procedures until all frequency measured were complete.

11.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CL - AG

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

Actual FS(dBμV/m) = SPA. Reading level(dBμV) + Factor(dB)

Factor(dB) = Antenna Factor(dBμV/m) + Cable Loss(dB) – Pre_Amplifier Gain(dB)

11.6 Test Results of Radiated Spurious Emissions form 9 KHz to 30 MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit per 15.31(o) was not reported.

11.7 Measurement Result

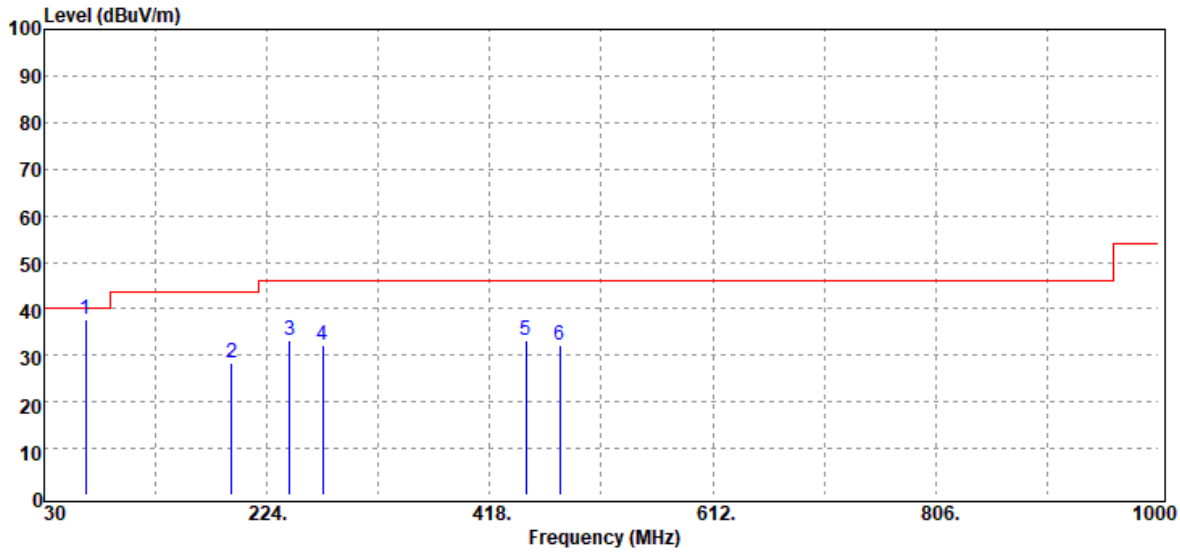
Refer to next page for tabular data sheets.

Radiated Spurious Emission Measurement Result

Below 1GHz Worst-Case Data:

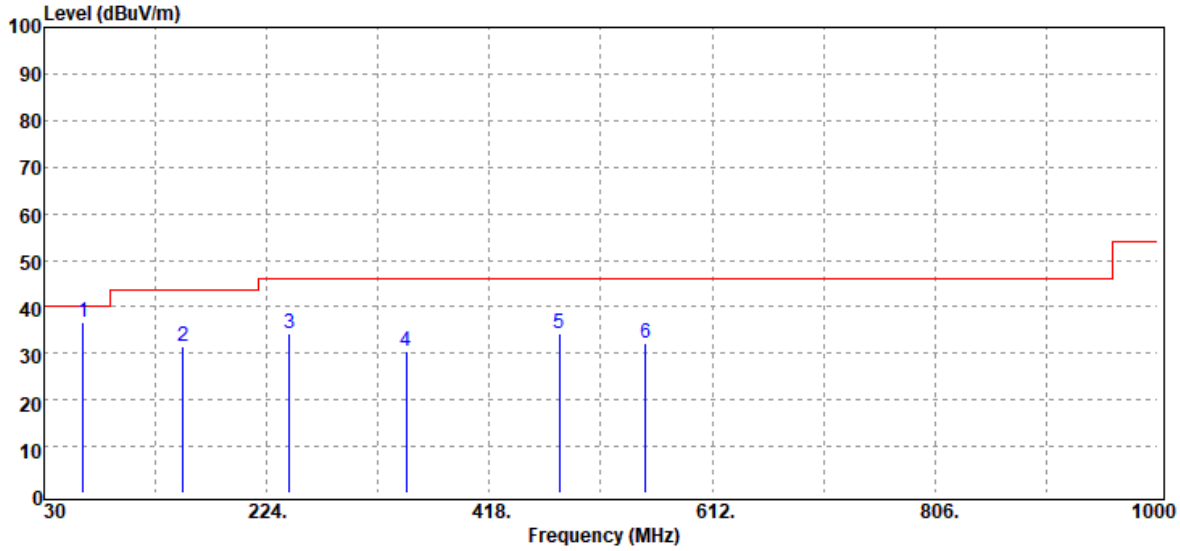
802.11a 5150~5250 MHz

Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11a / Band1	Temp./Humi.	:21/52
Frequency	:5220 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
65.89	Peak	52.97	-15.35	37.62	40.00	-2.38
192.96	Peak	38.98	-10.44	28.54	43.50	-14.96
243.40	Peak	43.65	-10.28	33.37	46.00	-12.63
272.50	Peak	40.56	-8.49	32.07	46.00	-13.93
449.04	Peak	37.01	-3.88	33.13	46.00	-12.87
479.11	Peak	35.00	-2.98	32.02	46.00	-13.98

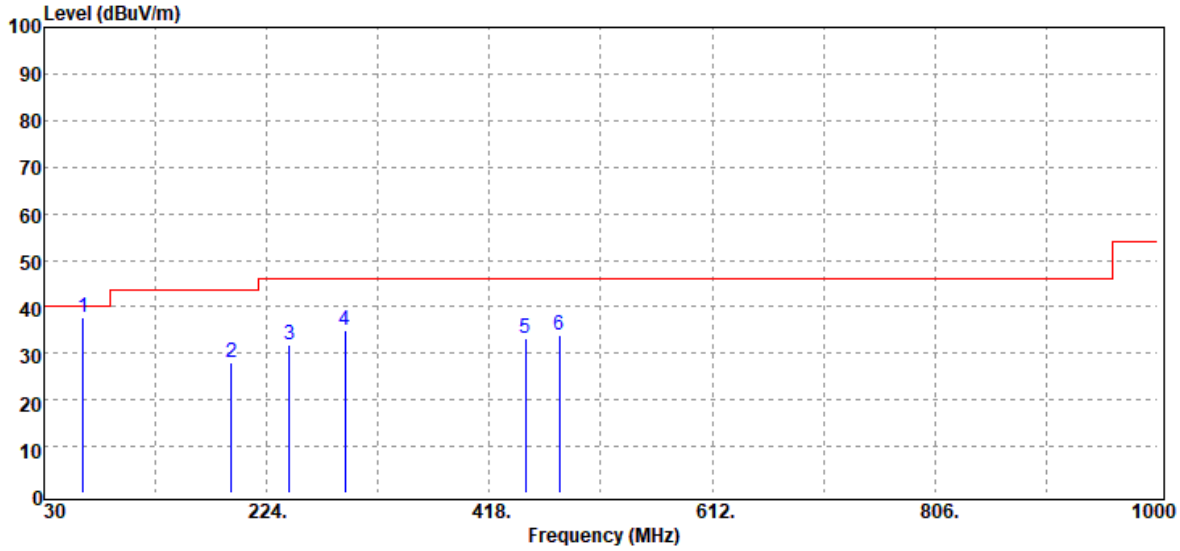
Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11a / Band1	Temp./Humi.	:21/52
Frequency	:5220 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	51.86	-15.28	36.58	40.00	-3.42
151.25	Peak	41.23	-9.90	31.33	43.50	-12.17
243.40	Peak	44.67	-10.28	34.39	46.00	-11.61
345.25	Peak	37.59	-7.12	30.47	46.00	-15.53
479.11	Peak	37.21	-2.98	34.23	46.00	-11.77
553.80	Peak	34.37	-2.29	32.08	46.00	-13.92

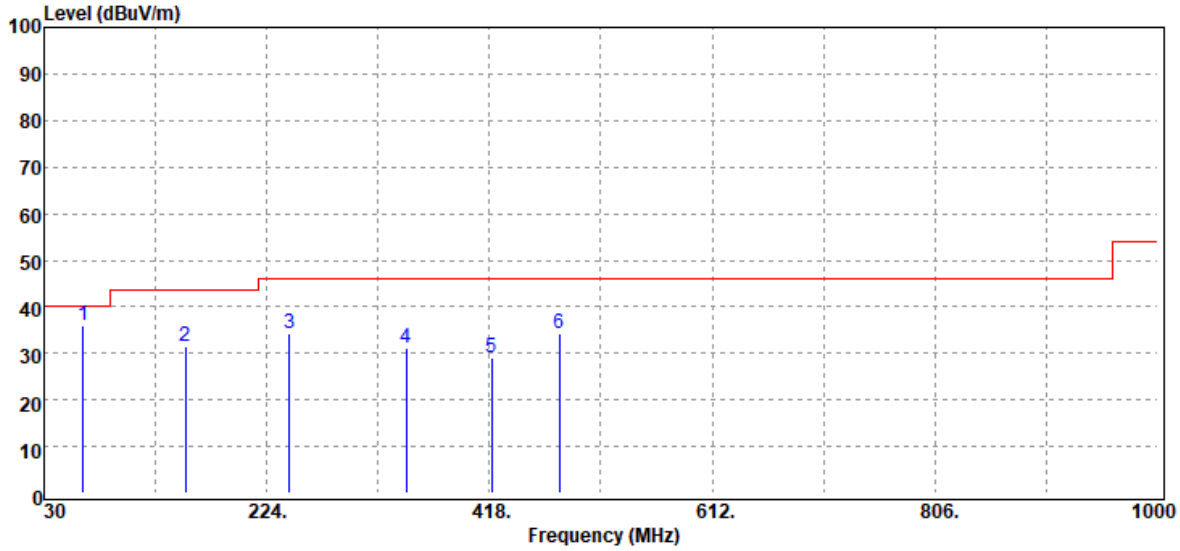
802.11a 5250~5350 MHz

Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11a / Band2	Temp./Humi.	:21/52
Frequency	:5300 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	52.88	-15.28	37.60	40.00	-2.40
192.96	Peak	38.49	-10.44	28.05	43.50	-15.45
243.40	Peak	42.17	-10.28	31.89	46.00	-14.11
291.90	Peak	43.40	-8.33	35.07	46.00	-10.93
449.04	Peak	37.14	-3.88	33.26	46.00	-12.74
479.11	Peak	37.00	-2.98	34.02	46.00	-11.98

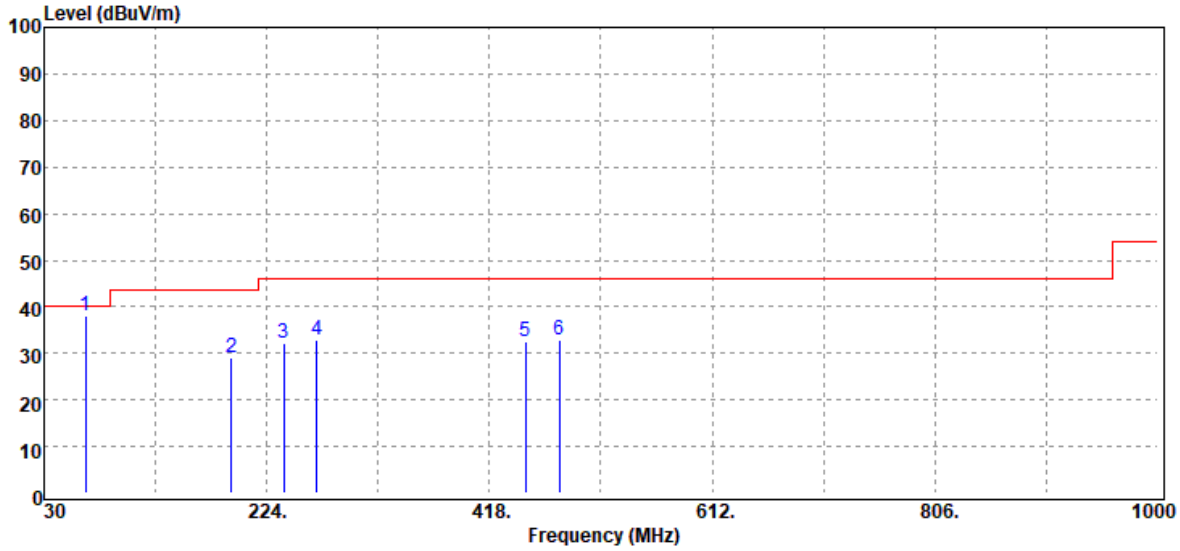
Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11a / Band2	Temp./Humi.	:21/52
Frequency	:5300 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	51.42	-15.28	36.14	40.00	-3.86
153.19	Peak	41.71	-10.09	31.62	43.50	-11.88
243.40	Peak	44.65	-10.28	34.37	46.00	-11.63
345.25	Peak	38.16	-7.12	31.04	46.00	-14.96
419.94	Peak	33.86	-4.62	29.24	46.00	-16.76
479.11	Peak	37.30	-2.98	34.32	46.00	-11.68

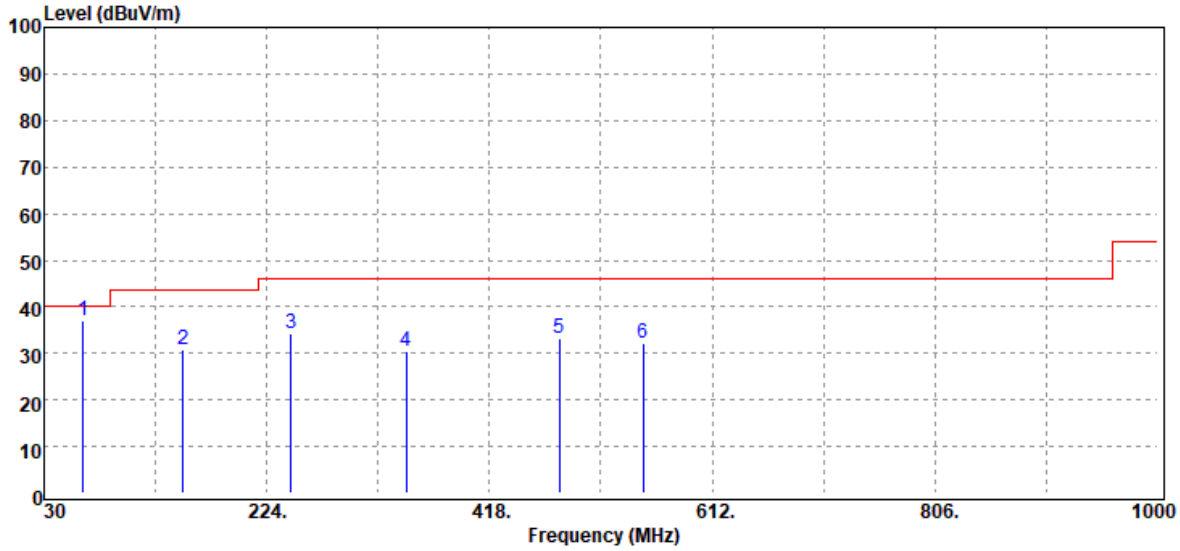
802.11a 5470~5725 MHz

Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11a / Band3	Temp./Humi.	:21/52
Frequency	:5580 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
65.89	Peak	53.39	-15.35	38.04	40.00	-1.96
192.96	Peak	39.52	-10.44	29.08	43.50	-14.42
238.55	Peak	42.57	-10.38	32.19	46.00	-13.81
267.65	Peak	41.49	-8.72	32.77	46.00	-13.23
449.04	Peak	36.47	-3.88	32.59	46.00	-13.41
479.11	Peak	35.78	-2.98	32.80	46.00	-13.20

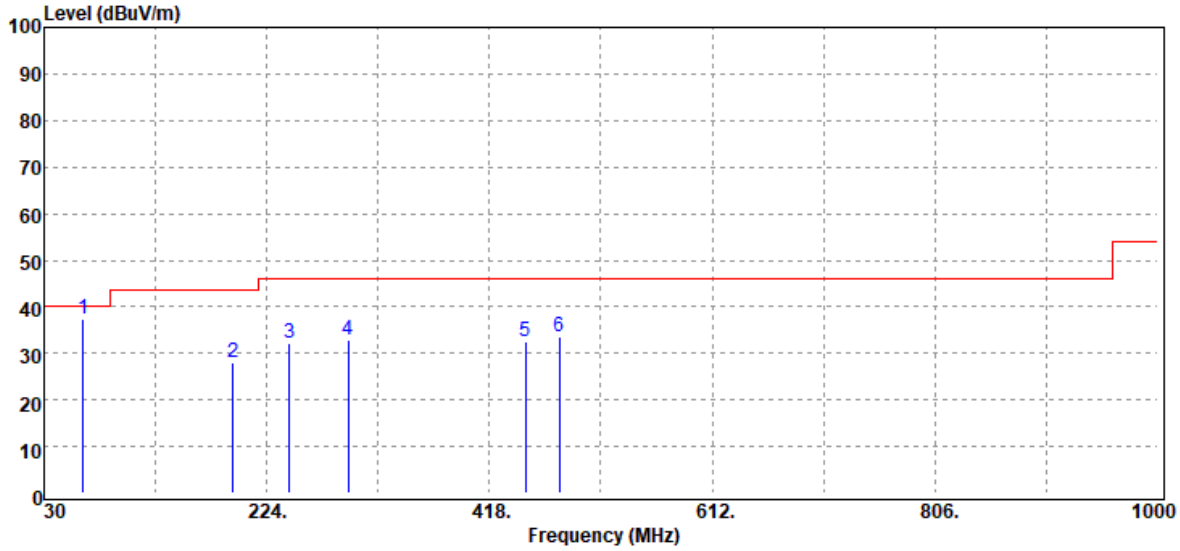
Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11a / Band3	Temp./Humi.	:21/52
Frequency	:5580 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	52.21	-15.28	36.93	40.00	-3.07
151.25	Peak	40.76	-9.90	30.86	43.50	-12.64
245.34	Peak	44.37	-10.28	34.09	46.00	-11.91
345.25	Peak	37.66	-7.12	30.54	46.00	-15.46
479.11	Peak	36.24	-2.98	33.26	46.00	-12.74
551.86	Peak	34.55	-2.22	32.33	46.00	-13.67

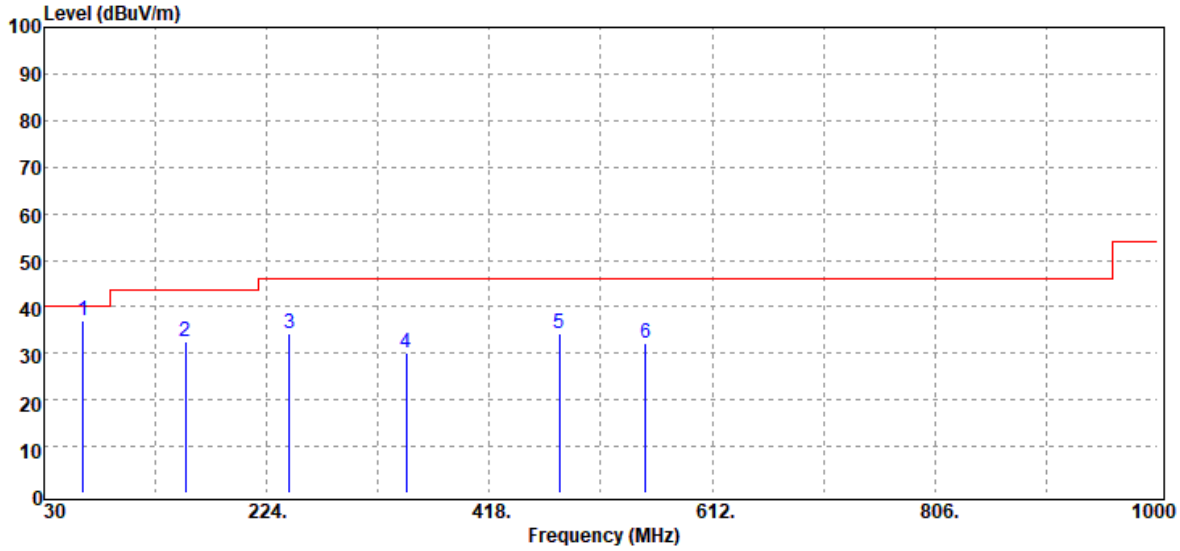
802.11a 5725~5850 MHz

Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11a / Band4	Temp./Humi.	:21/52
Frequency	:5785 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	52.76	-15.28	37.48	40.00	-2.52
194.90	Peak	38.06	-10.06	28.00	43.50	-15.50
243.40	Peak	42.34	-10.28	32.06	46.00	-13.94
294.81	Peak	41.18	-8.32	32.86	46.00	-13.14
449.04	Peak	36.45	-3.88	32.57	46.00	-13.43
479.11	Peak	36.53	-2.98	33.55	46.00	-12.45

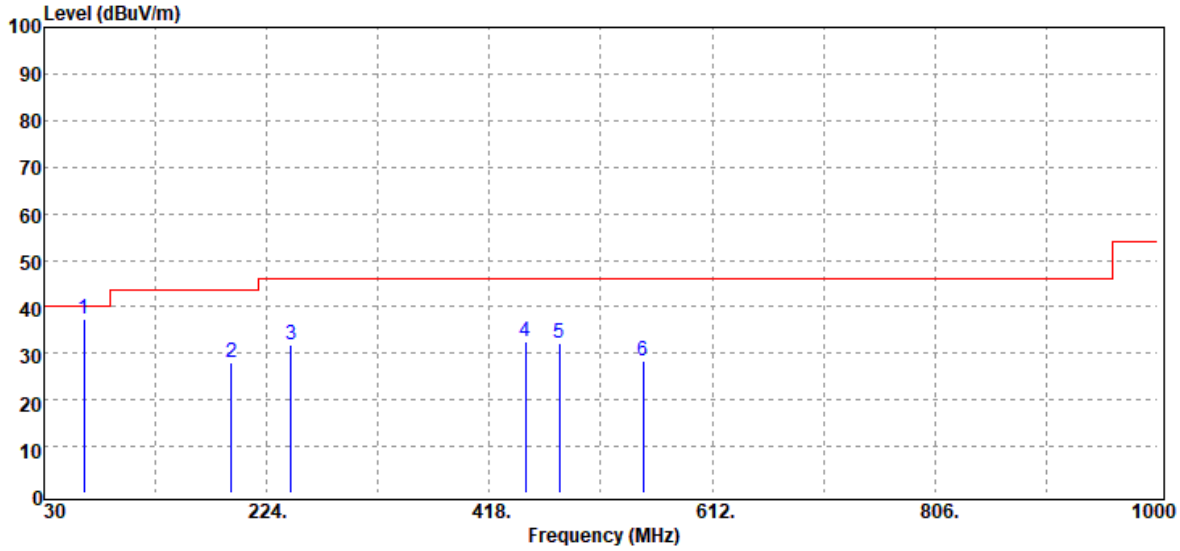
Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11a / Band4	Temp./Humi.	:21/52
Frequency	:5785 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	52.22	-15.28	36.94	40.00	-3.06
153.19	Peak	42.55	-10.09	32.46	43.50	-11.04
243.40	Peak	44.69	-10.28	34.41	46.00	-11.59
345.25	Peak	37.13	-7.12	30.01	46.00	-15.99
479.11	Peak	37.27	-2.98	34.29	46.00	-11.71
553.80	Peak	34.35	-2.29	32.06	46.00	-13.94

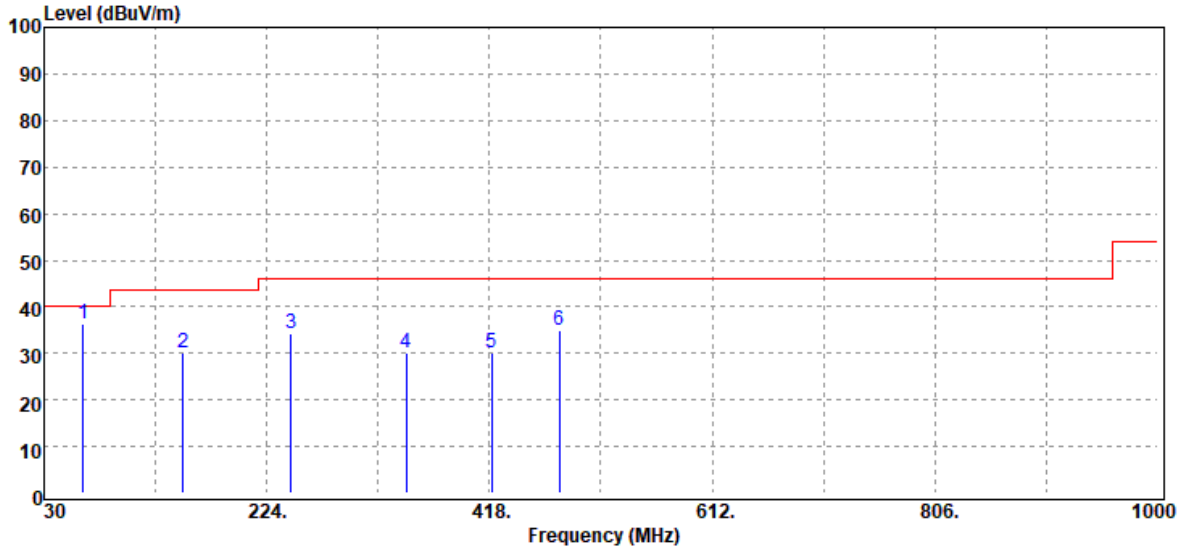
802.11ac VHT80, 5150~5250 MHz

Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11ac80 / Band1	Temp./Humi.	:21/52
Frequency	:5210 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
64.92	Peak	52.53	-15.17	37.36	40.00	-2.64
192.96	Peak	38.52	-10.44	28.08	43.50	-15.42
245.34	Peak	42.14	-10.28	31.86	46.00	-14.14
449.04	Peak	36.44	-3.88	32.56	46.00	-13.44
479.11	Peak	35.31	-2.98	32.33	46.00	-13.67
551.86	Peak	30.49	-2.22	28.27	46.00	-17.73

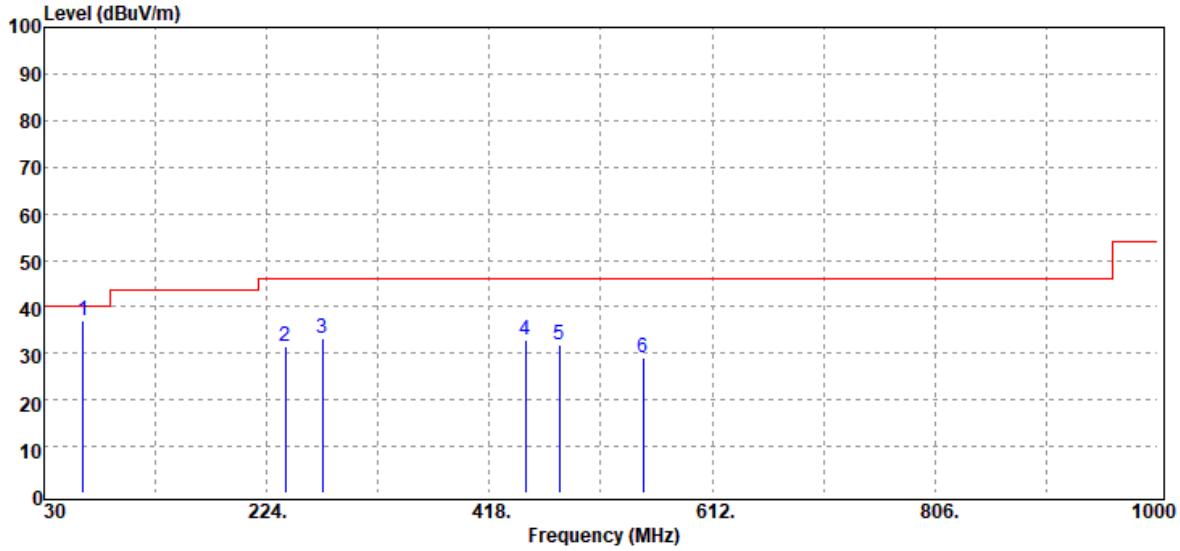
Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11ac80 / Band1	Temp./Humi.	:21/52
Frequency	:5210 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	51.66	-15.28	36.38	40.00	-3.62
151.25	Peak	40.04	-9.90	30.14	43.50	-13.36
245.34	Peak	44.52	-10.28	34.24	46.00	-11.76
345.25	Peak	37.15	-7.12	30.03	46.00	-15.97
419.94	Peak	34.57	-4.62	29.95	46.00	-16.05
479.11	Peak	38.03	-2.98	35.05	46.00	-10.95

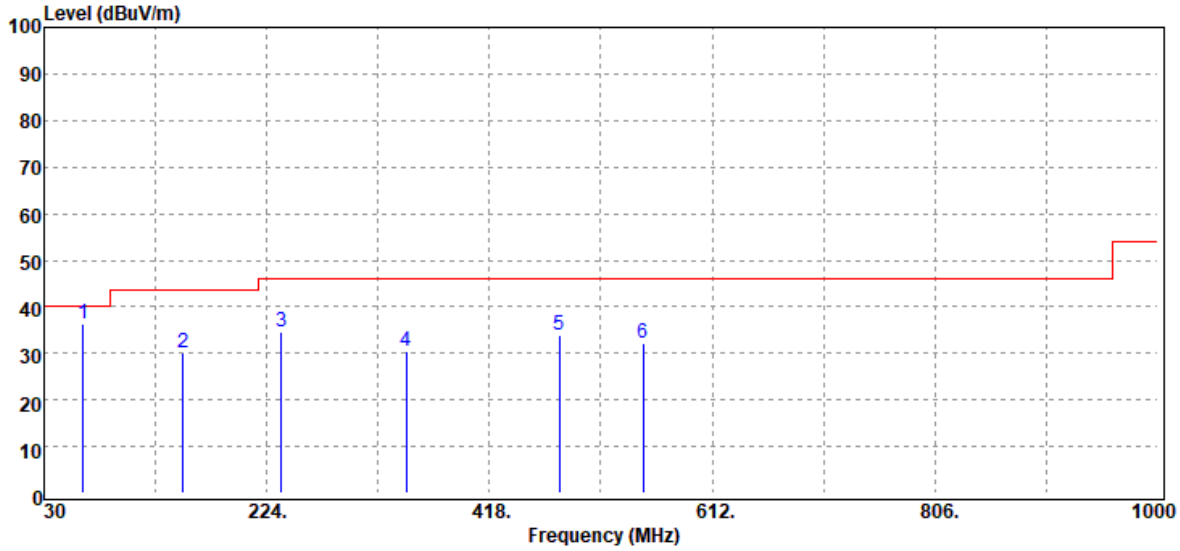
802.11ac VHT80, 5250~5350 MHz

Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11ac80 / Band2	Temp./Humi.	:21/52
Frequency	:5290 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	52.39	-15.28	37.11	40.00	-2.89
240.49	Peak	41.79	-10.25	31.54	46.00	-14.46
272.50	Peak	41.62	-8.49	33.13	46.00	-12.87
449.04	Peak	36.81	-3.88	32.93	46.00	-13.07
479.11	Peak	34.67	-2.98	31.69	46.00	-14.31
551.86	Peak	31.36	-2.22	29.14	46.00	-16.86

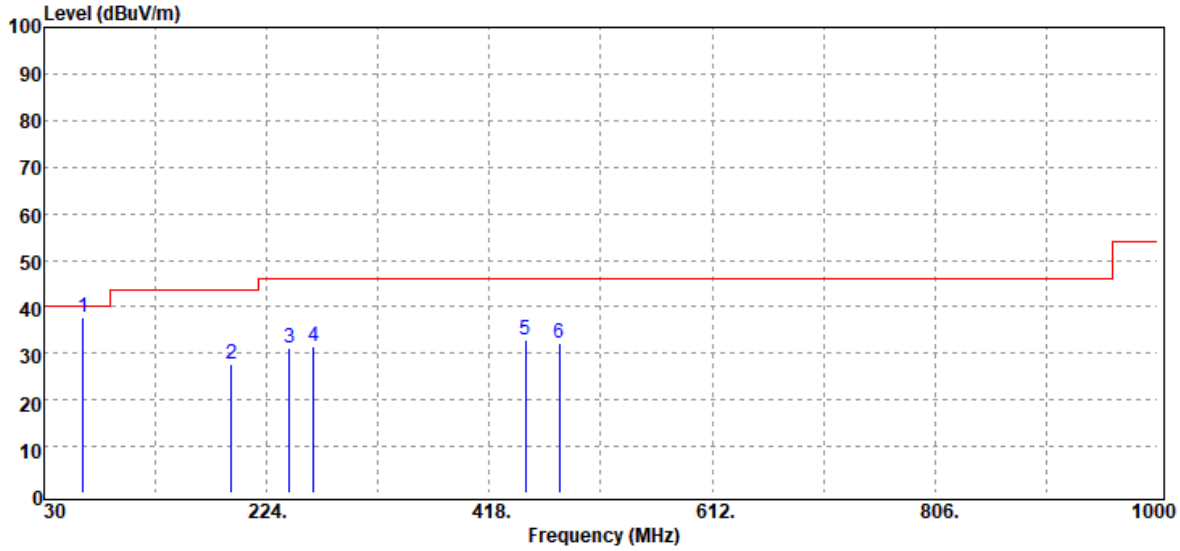
Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11ac80 / Band2	Temp./Humi.	:21/52
Frequency	:5290 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	51.50	-15.28	36.22	40.00	-3.78
151.25	Peak	39.96	-9.90	30.06	43.50	-13.44
236.61	Peak	45.09	-10.51	34.58	46.00	-11.42
345.25	Peak	37.65	-7.12	30.53	46.00	-15.47
479.11	Peak	37.02	-2.98	34.04	46.00	-11.96
551.86	Peak	34.32	-2.22	32.10	46.00	-13.90

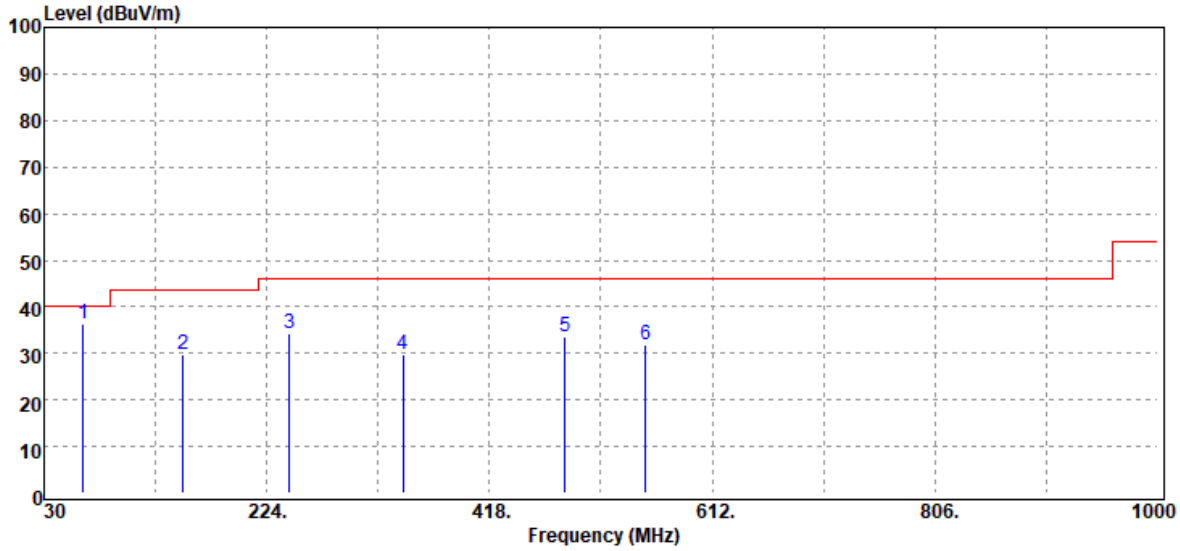
802.11ac VHT80, 5470~5725 MHz

Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11ac80 / Band3	Temp./Humi.	:21/52
Frequency	:5610 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	52.86	-15.28	37.58	40.00	-2.42
192.96	Peak	38.27	-10.44	27.83	43.50	-15.67
243.40	Peak	41.50	-10.28	31.22	46.00	-14.78
264.74	Peak	40.60	-8.95	31.65	46.00	-14.35
449.04	Peak	36.77	-3.88	32.89	46.00	-13.11
479.11	Peak	35.28	-2.98	32.30	46.00	-13.70

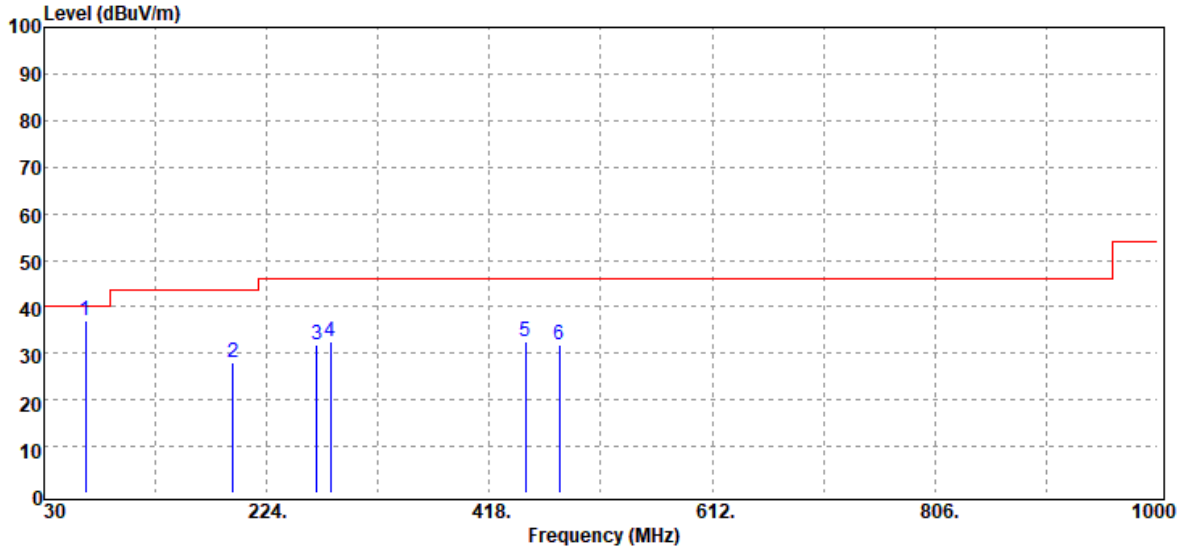
Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11ac80 / Band3	Temp./Humi.	:21/52
Frequency	:5610 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	51.54	-15.28	36.26	40.00	-3.74
151.25	Peak	39.56	-9.90	29.66	43.50	-13.84
243.40	Peak	44.43	-10.28	34.15	46.00	-11.85
342.34	Peak	37.00	-7.19	29.81	46.00	-16.19
483.96	Peak	36.62	-3.03	33.59	46.00	-12.41
553.80	Peak	34.12	-2.29	31.83	46.00	-14.17

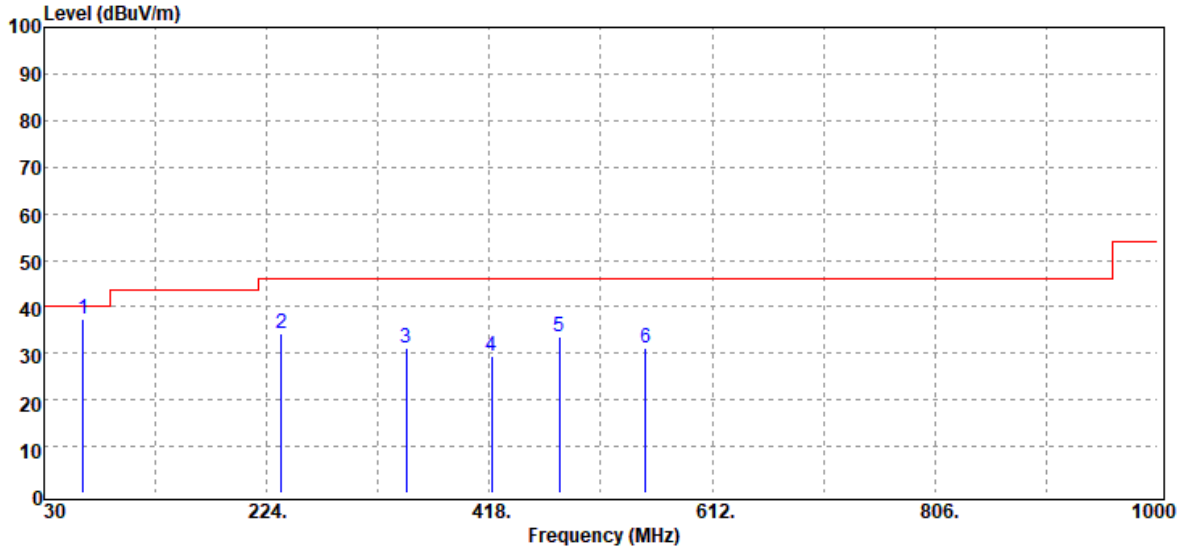
802.11ac VHT80, 5725~5850 MHz

Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11ac80 / Band4	Temp./Humi.	:21/52
Frequency	:5775 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
65.89	Peak	52.20	-15.35	36.85	40.00	-3.15
194.90	Peak	37.98	-10.06	27.92	43.50	-15.58
267.65	Peak	40.59	-8.72	31.87	46.00	-14.13
279.29	Peak	41.01	-8.40	32.61	46.00	-13.39
449.04	Peak	36.43	-3.88	32.55	46.00	-13.45
479.11	Peak	34.65	-2.98	31.67	46.00	-14.33

Report Number	:T190612W02	Test Date	:2019-06-28
Operation Band	:802.11ac80 / Band4	Temp./Humi.	:21/52
Frequency	:5775 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		

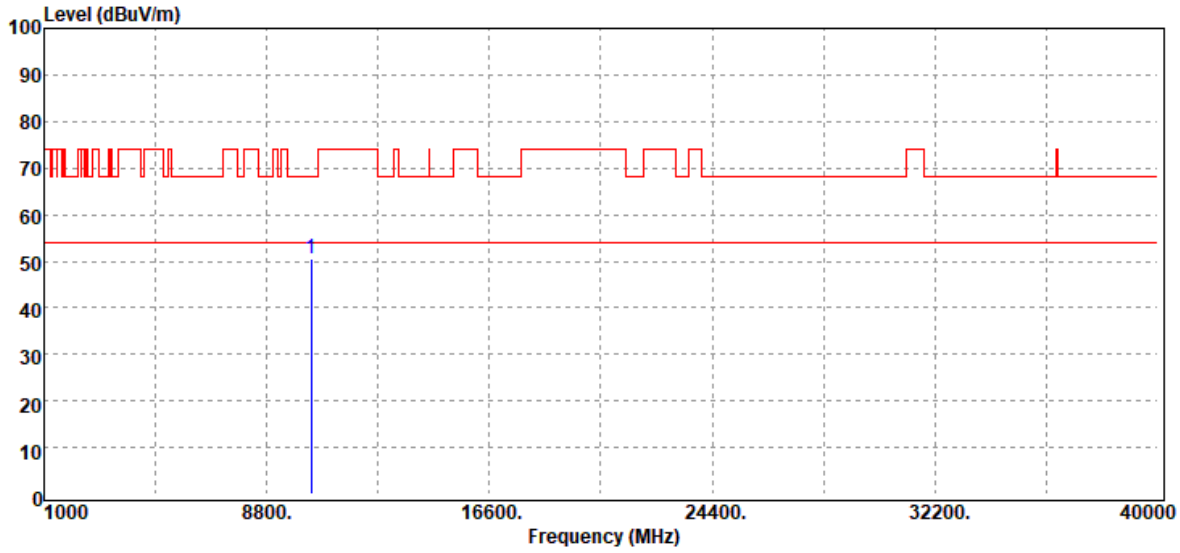


Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
63.95	Peak	52.56	-15.28	37.28	40.00	-2.72
236.61	Peak	44.91	-10.51	34.40	46.00	-11.60
345.25	Peak	38.25	-7.12	31.13	46.00	-14.87
419.94	Peak	34.03	-4.62	29.41	46.00	-16.59
479.11	Peak	36.67	-2.98	33.69	46.00	-12.31
553.80	Peak	33.30	-2.29	31.01	46.00	-14.99

Above 1GHz Worst-Case Data:

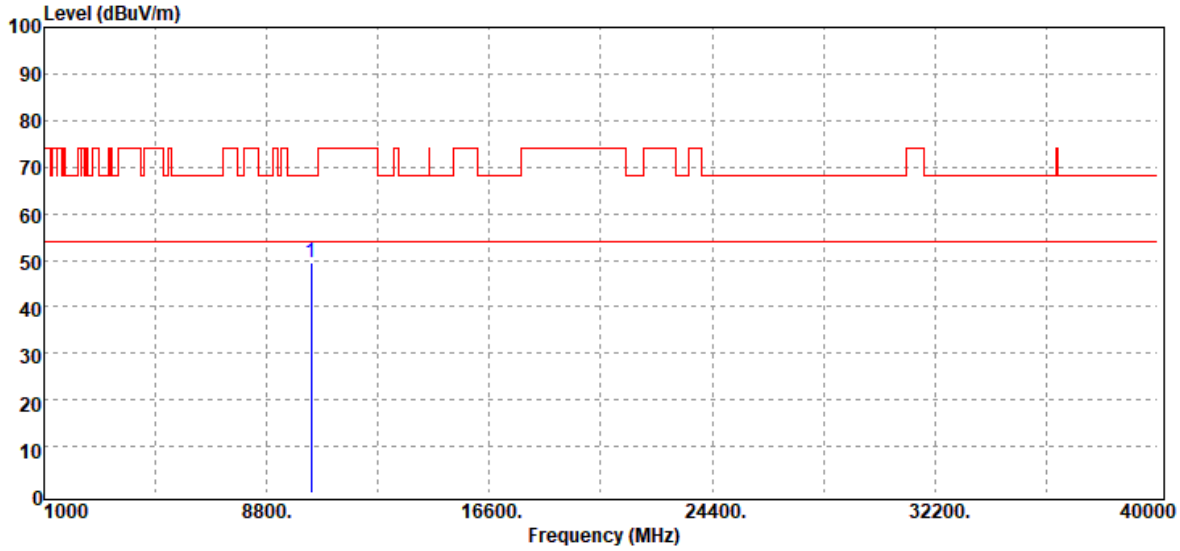
Radiated Spurious Emission Measurement Result 802.11a, 5150~5250 MHz

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band1	Temp./Humi.	:21/52
Frequency	:5180 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



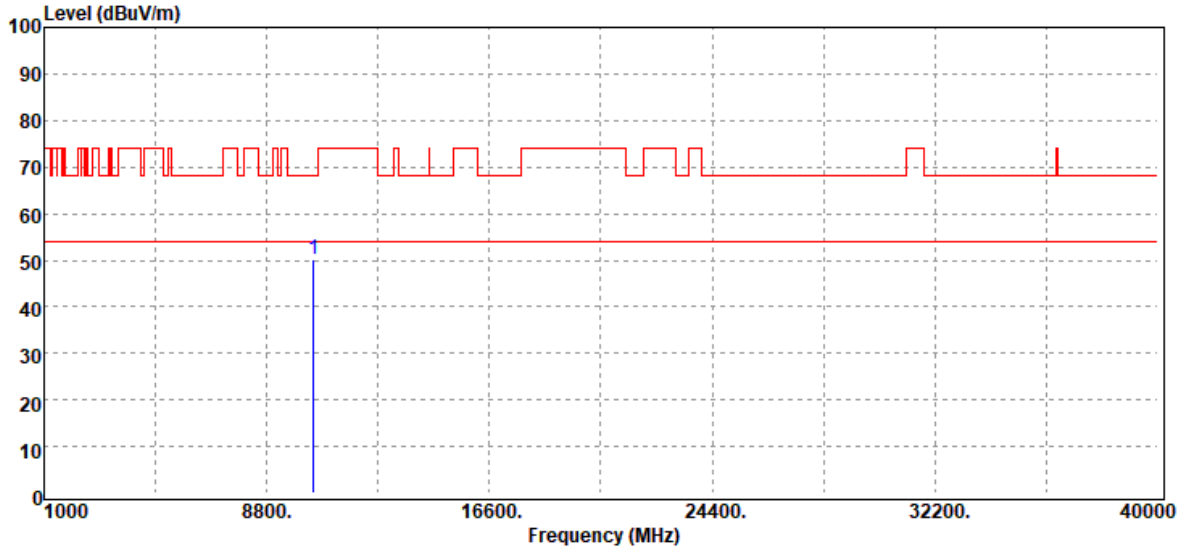
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10360.00	Peak	35.76	14.73	50.49	68.20	-17.71

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band1	Temp./Humi.	:21/52
Frequency	:5180 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



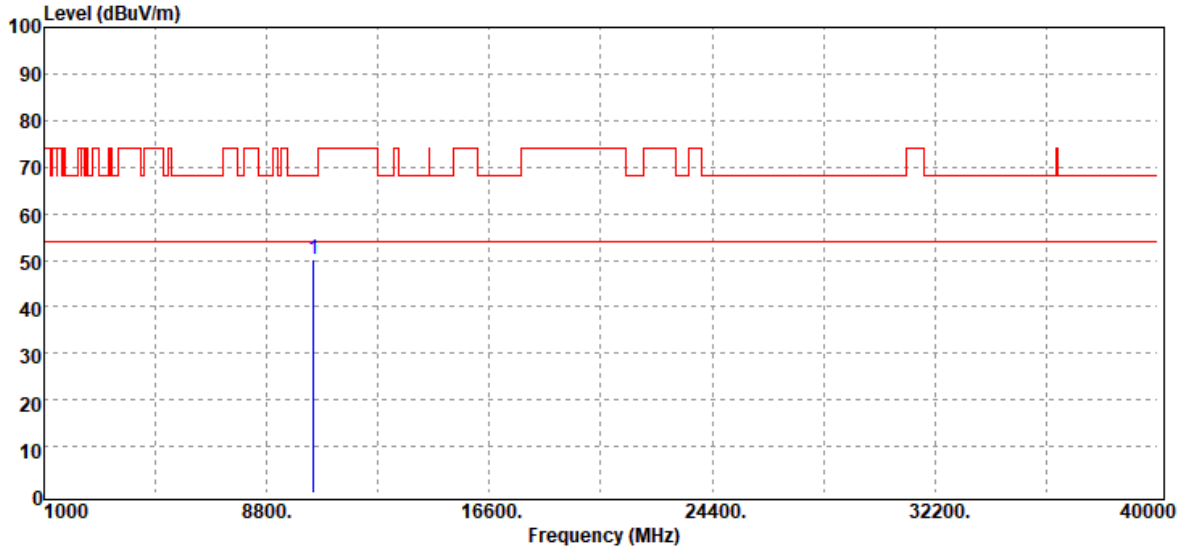
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10360.00	Peak	34.58	14.73	49.31	68.20	-18.89

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band1	Temp./Humi.	:21/52
Frequency	:5220 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



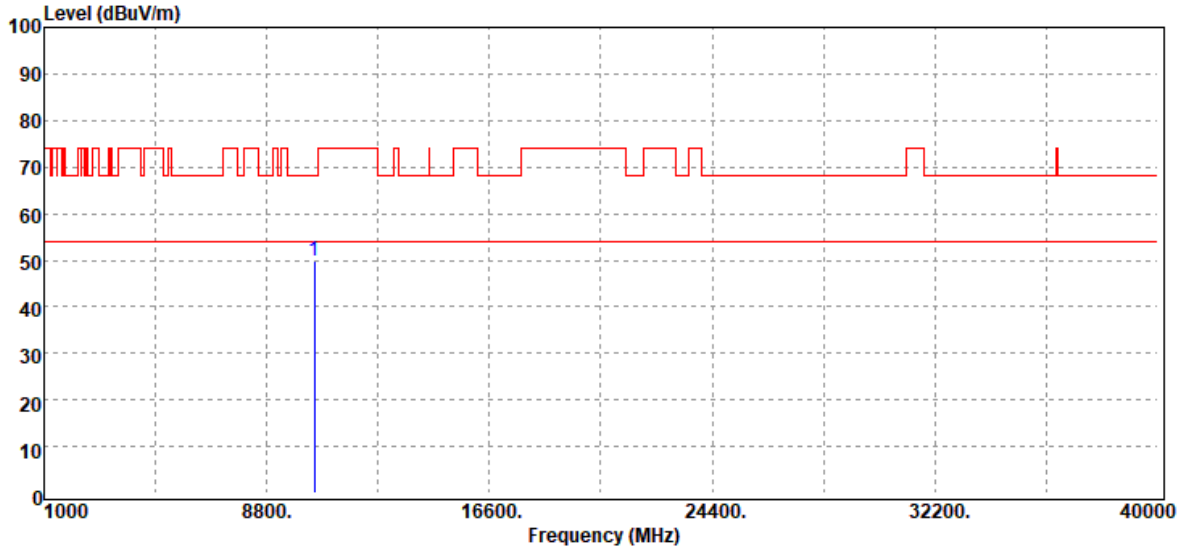
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10440.00	Peak	34.66	15.66	50.32	68.20	-17.88

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band1	Temp./Humi.	:21/52
Frequency	:5220 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



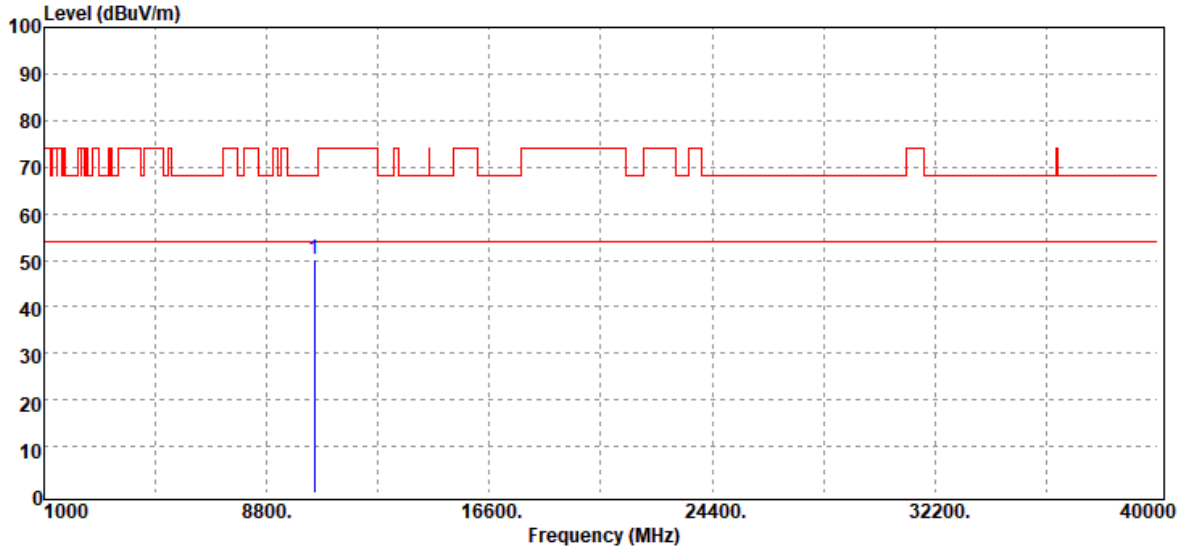
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10440.00	Peak	34.59	15.66	50.25	68.20	-17.95

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band1	Temp./Humi.	:21/52
Frequency	:5240 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10480.00	Peak	33.23	16.48	49.71	68.20	-18.49

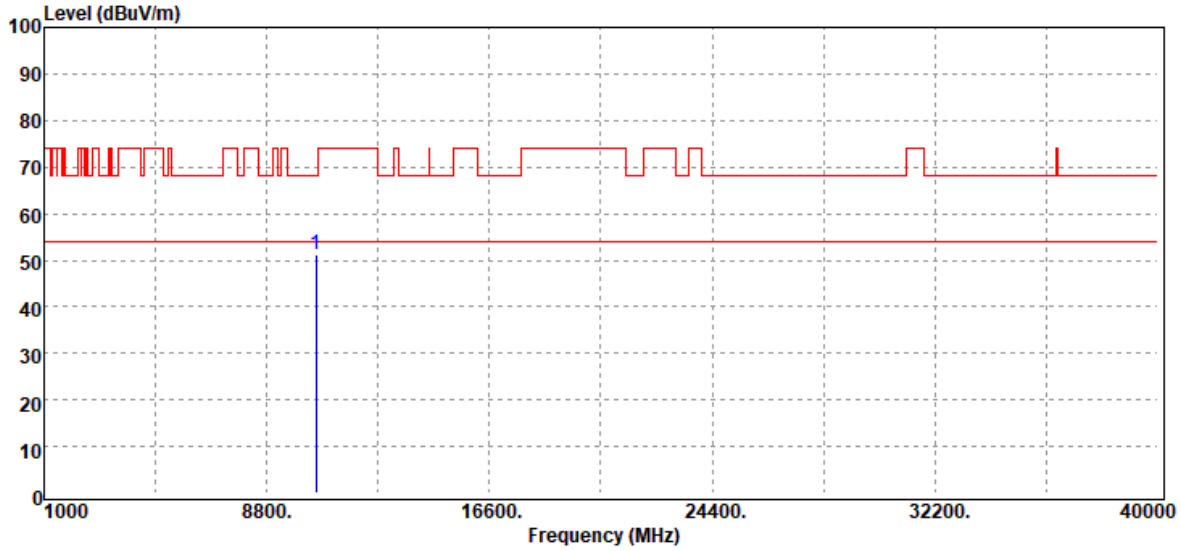
Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band1	Temp./Humi.	:21/52
Frequency	:5240 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10480.00	Peak	33.57	16.48	50.05	68.20	-18.15

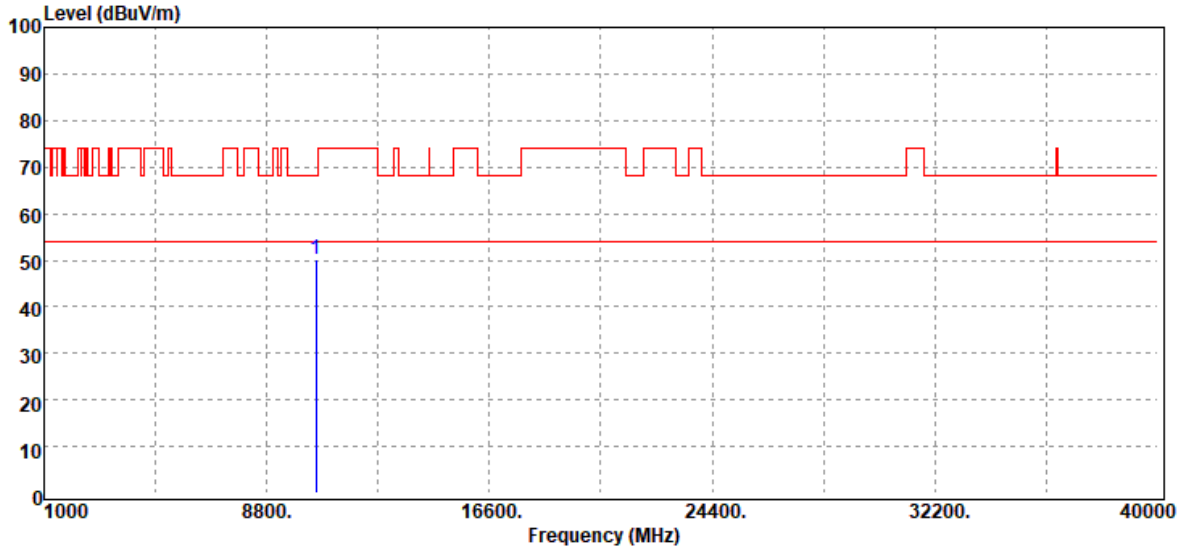
Radiated Spurious Emission Measurement Result 802.11a, 5250MHz-5350MHz

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band2	Temp./Humi.	:21/52
Frequency	:5260 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



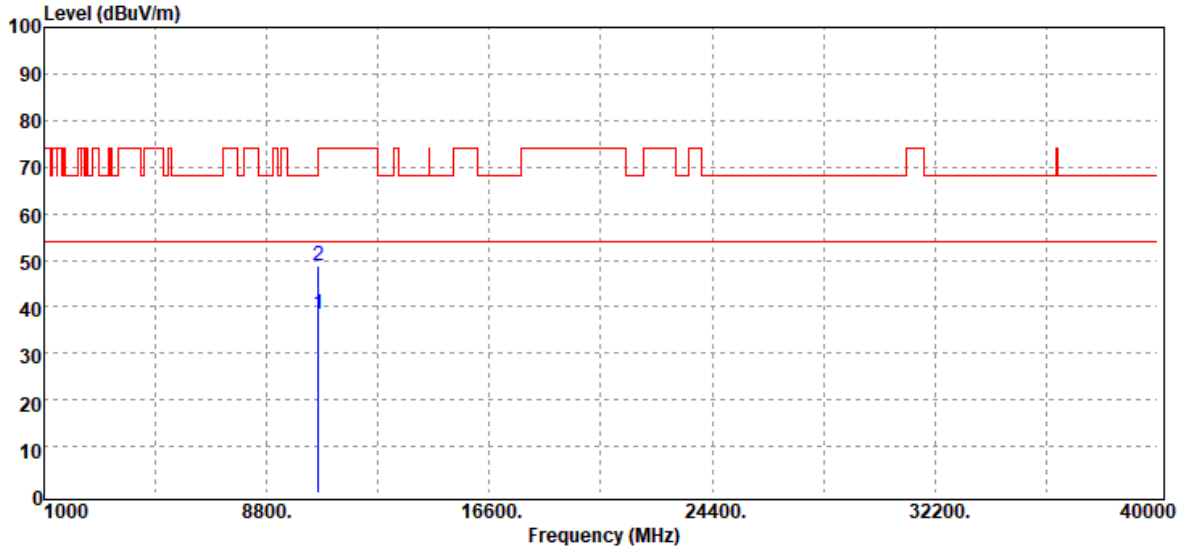
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10520.00	Peak	35.37	15.99	51.36	68.20	-16.84

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band2	Temp./Humi.	:21/52
Frequency	:5260 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



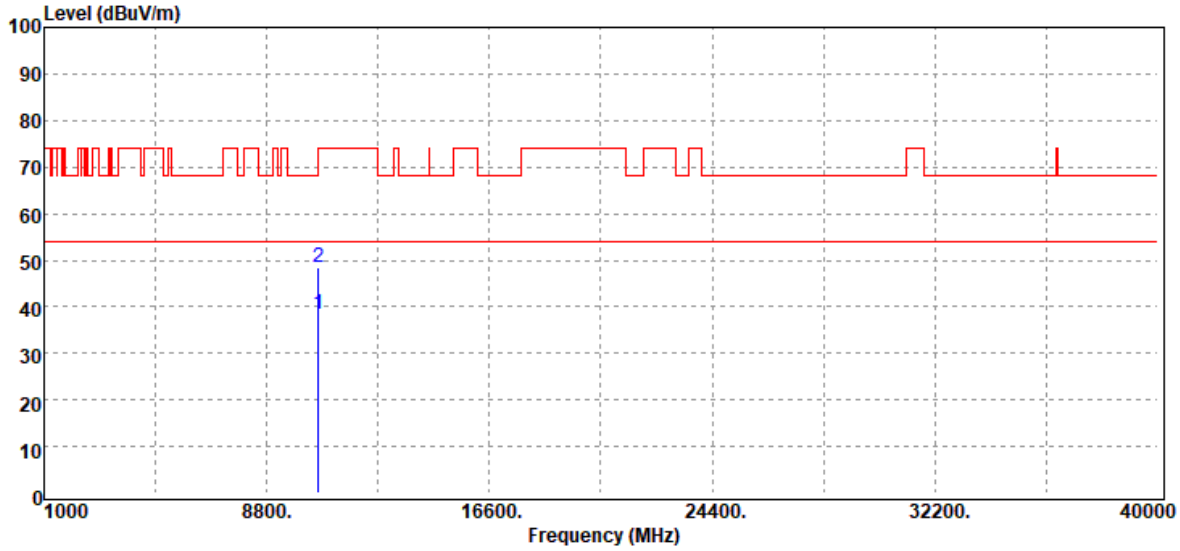
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10520.00	Peak	34.34	15.99	50.33	68.20	-17.87

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band2	Temp./Humi.	:21/52
Frequency	:5300 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



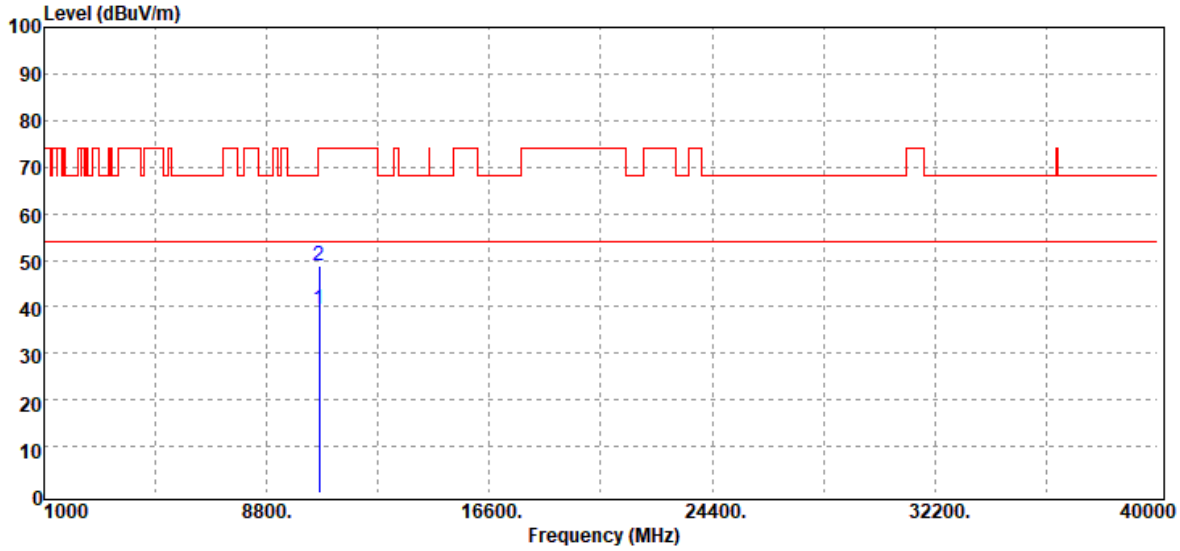
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10600.00	Average	23.25	15.27	38.52	54.00	-15.48
10600.00	Peak	33.44	15.27	48.71	74.00	-25.29

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band2	Temp./Humi.	:21/52
Frequency	:5300 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



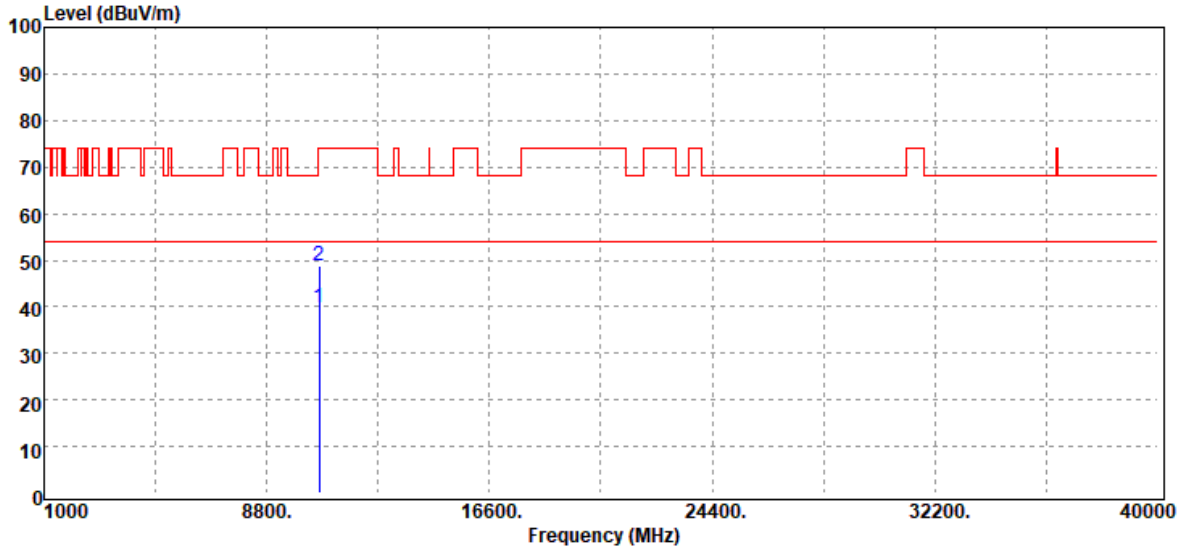
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10600.00	Average	23.13	15.27	38.40	54.00	-15.60
10600.00	Peak	33.24	15.27	48.51	74.00	-25.49

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band2	Temp./Humi.	:21/52
Frequency	:5320 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10640.00	Average	23.47	16.05	39.52	54.00	-14.48
10640.00	Peak	32.90	16.05	48.95	74.00	-25.05

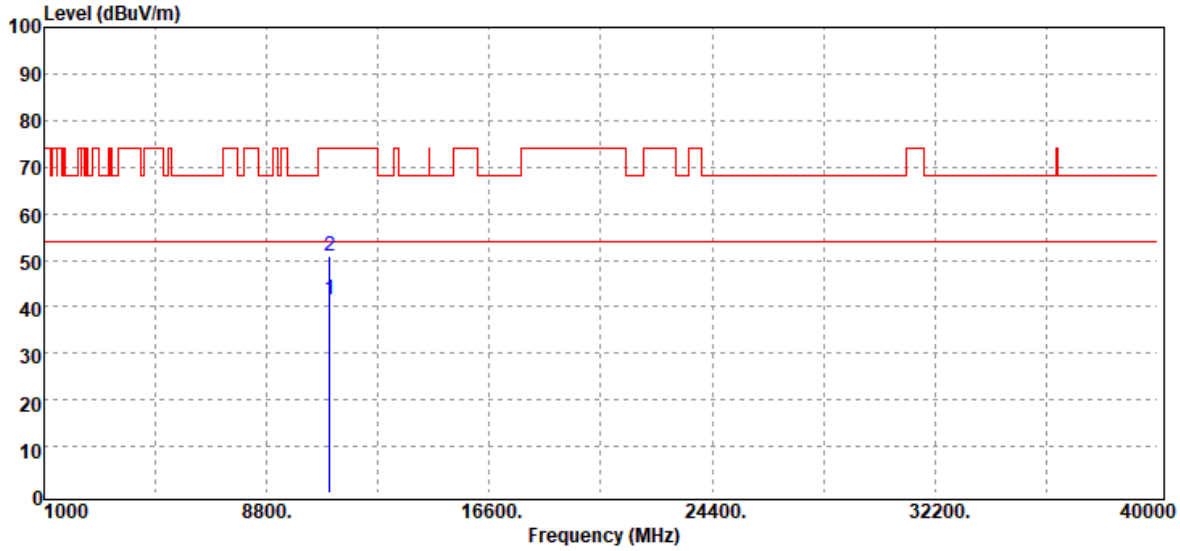
Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band2	Temp./Humi.	:21/52
Frequency	:5320 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10640.00	Average	23.61	16.05	39.66	54.00	-14.34
10640.00	Peak	32.79	16.05	48.84	74.00	-25.16

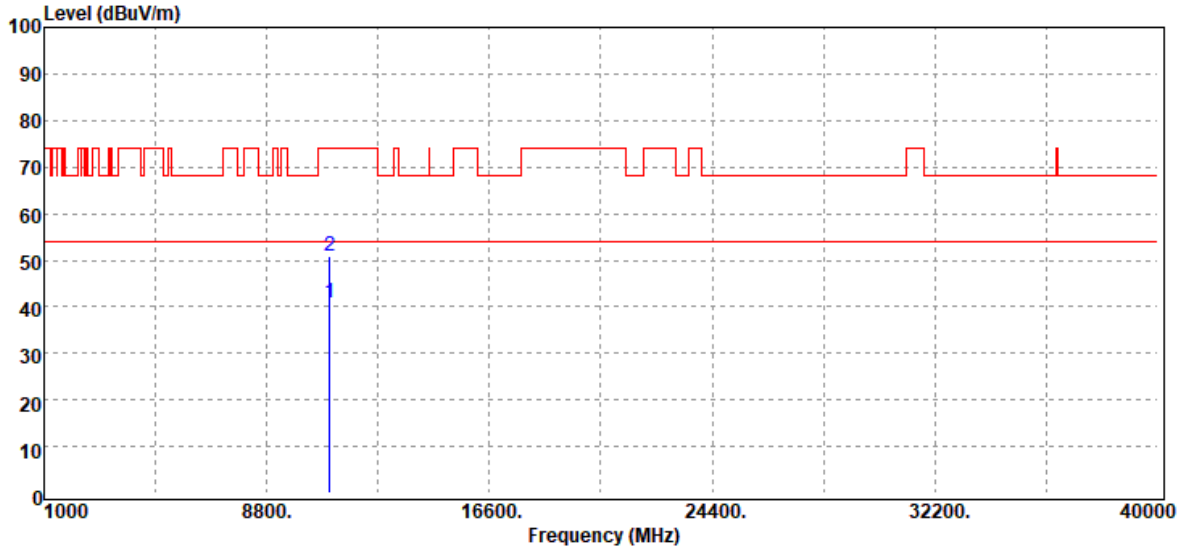
Radiated Spurious Emission Measurement Result 802.11a, 5470~5725 MHz

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band3	Temp./Humi.	:21/52
Frequency	:5500 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



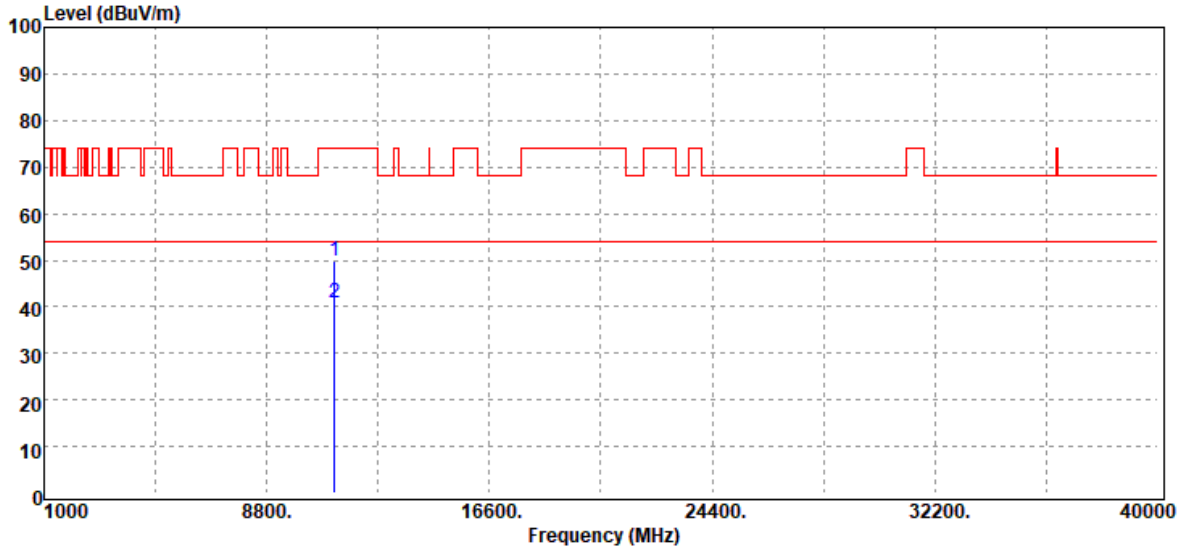
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11000.00	Average	24.20	17.44	41.64	54.00	-12.36
11000.00	Peak	33.58	17.44	51.02	74.00	-22.98

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band3	Temp./Humi.	:21/52
Frequency	:5500 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



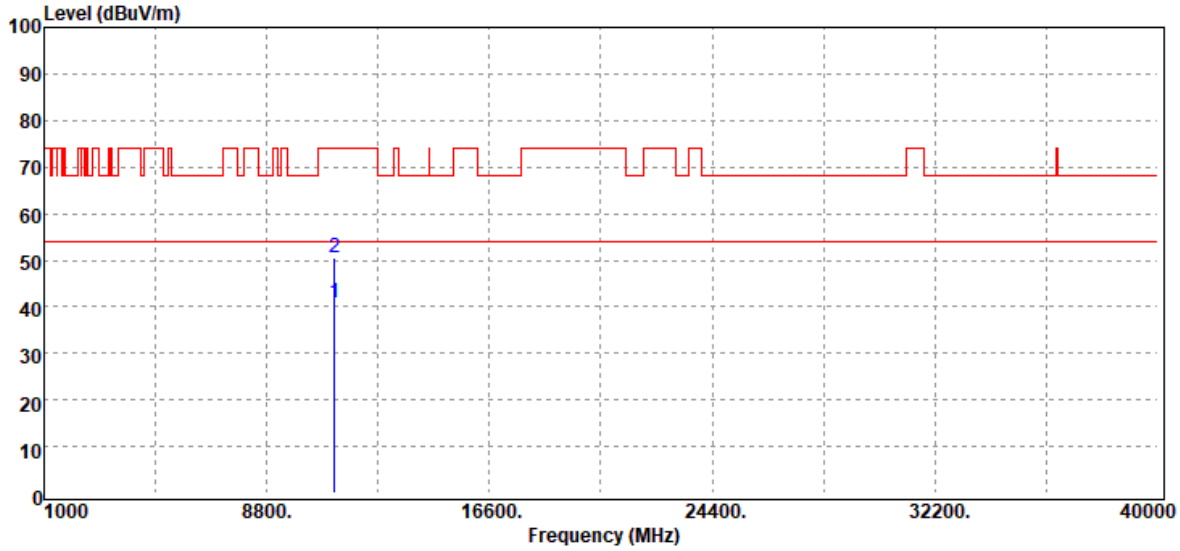
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11000.00	Average	23.52	17.44	40.96	54.00	-13.04
11000.00	Peak	33.54	17.44	50.98	74.00	-23.02

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band3	Temp./Humi.	:21/52
Frequency	:5580 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



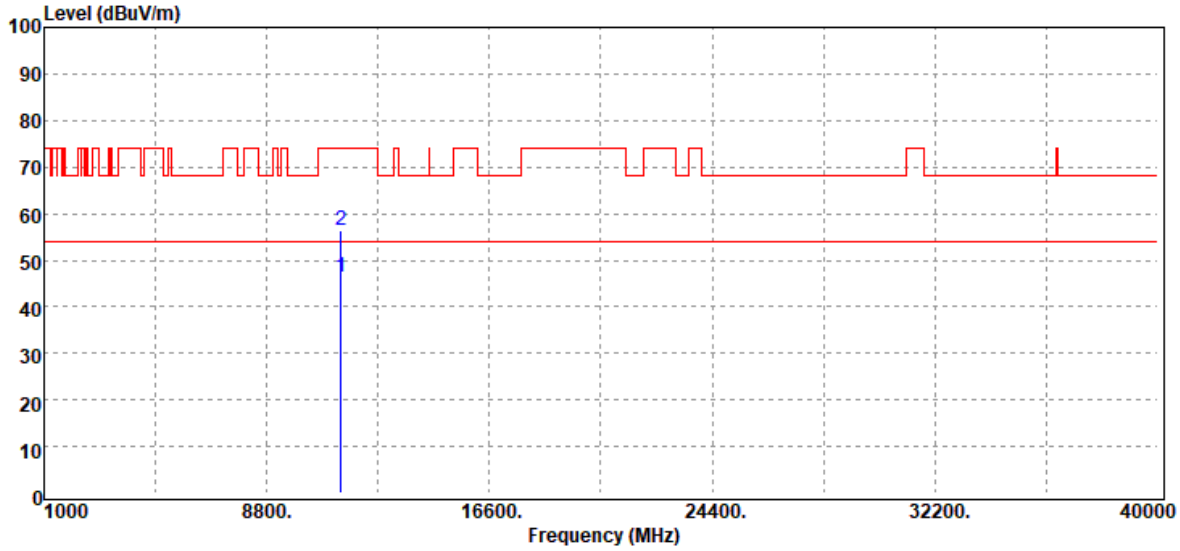
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11160.00	Average	23.81	16.85	40.66	54.00	-13.34
11160.00	Peak	33.03	16.85	49.88	74.00	-24.12

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band3	Temp./Humi.	:21/52
Frequency	:5580 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



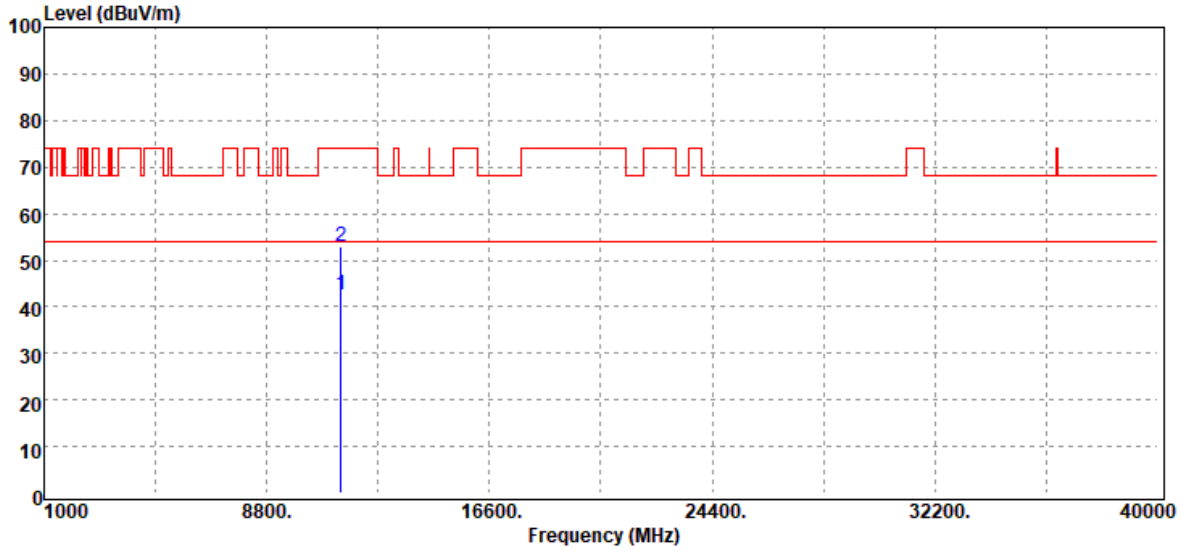
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11160.00	Average	23.88	16.85	40.73	54.00	-13.27
11160.00	Peak	33.68	16.85	50.53	74.00	-23.47

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band3	Temp./Humi.	:21/52
Frequency	:5700 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



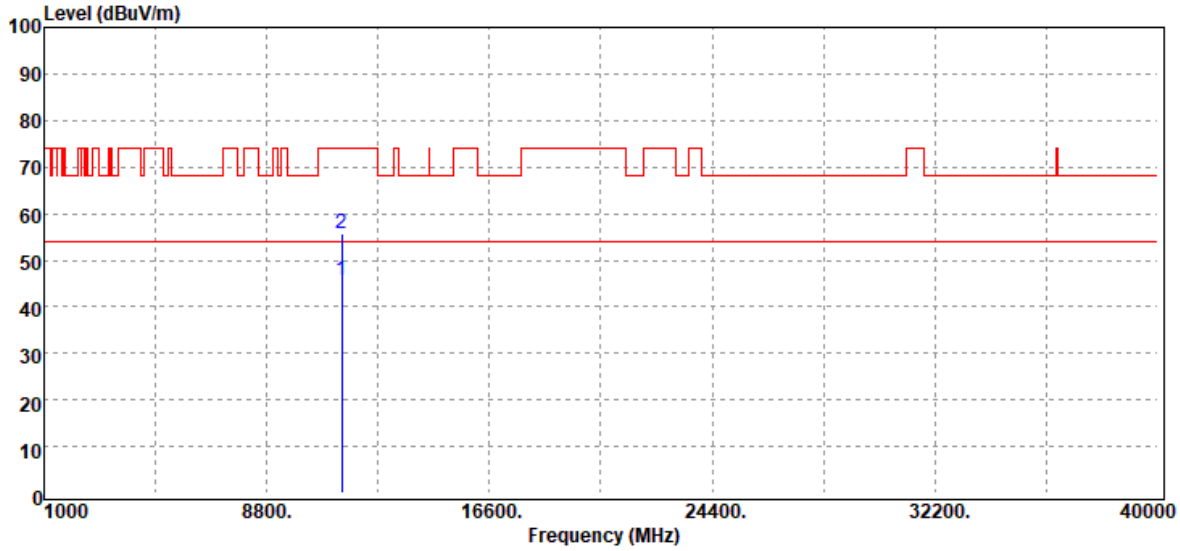
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11400.00	Average	29.46	16.89	46.35	54.00	-7.65
11400.00	Peak	39.44	16.89	56.33	74.00	-17.67

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band3	Temp./Humi.	:21/52
Frequency	:5700 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



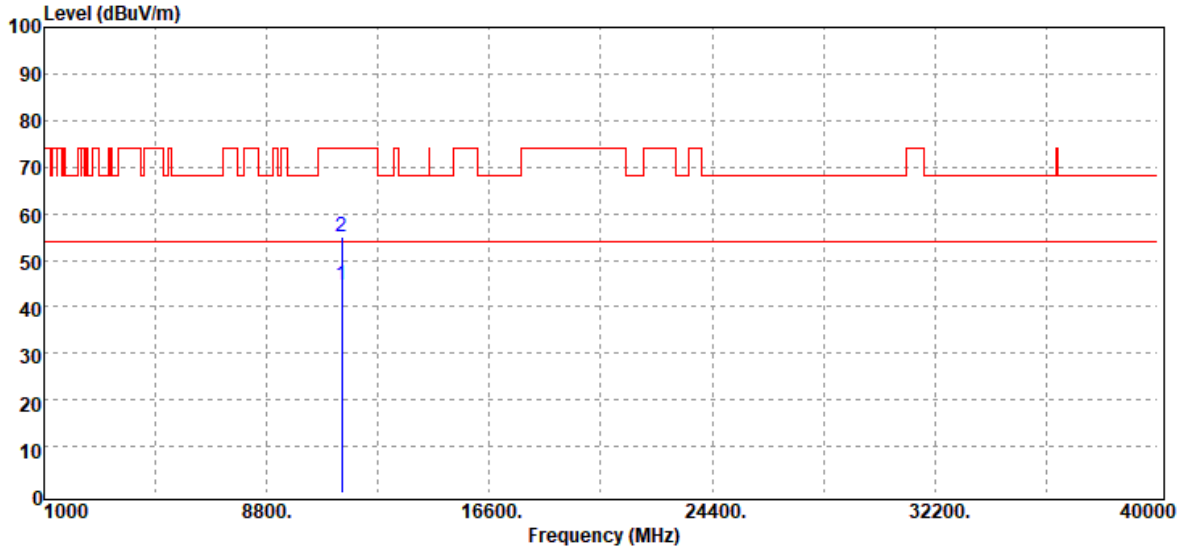
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11400.00	Average	25.63	16.89	42.52	54.00	-11.48
11400.00	Peak	35.95	16.89	52.84	74.00	-21.16

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11a / Band3/4	Temp./Humi.	:21/52
Frequency	:5720 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH 144	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11440.00	Average	28.69	17.09	45.78	54.00	-8.22
11440.00	Peak	38.79	17.09	55.88	74.00	-18.12

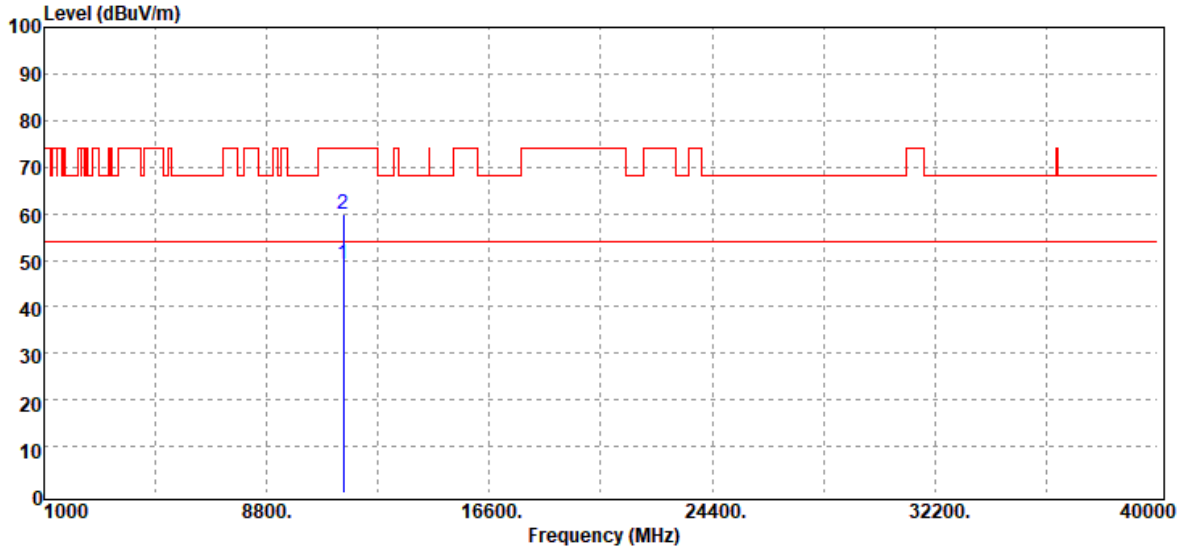
Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11a / Band3/4	Temp./Humi.	:21/52
Frequency	:5720 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH 144	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11440.00	Average	27.52	17.09	44.61	54.00	-9.39
11440.00	Peak	37.81	17.09	54.90	74.00	-19.10

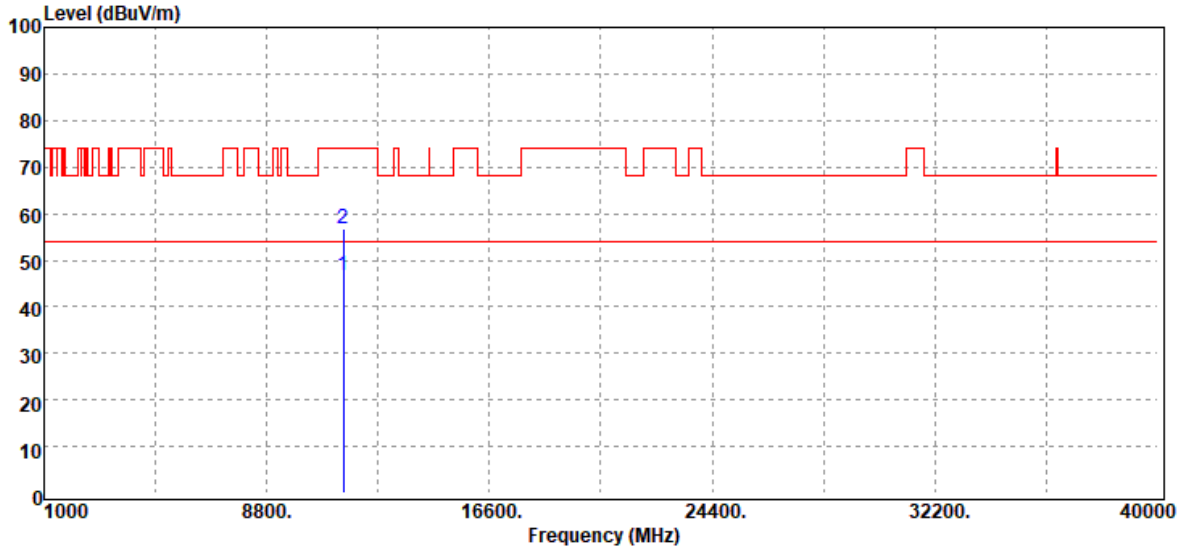
Radiated Spurious Emission Measurement Result 802.11a, 5725~5850 MHz

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band4	Temp./Humi.	:21/52
Frequency	:5745 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



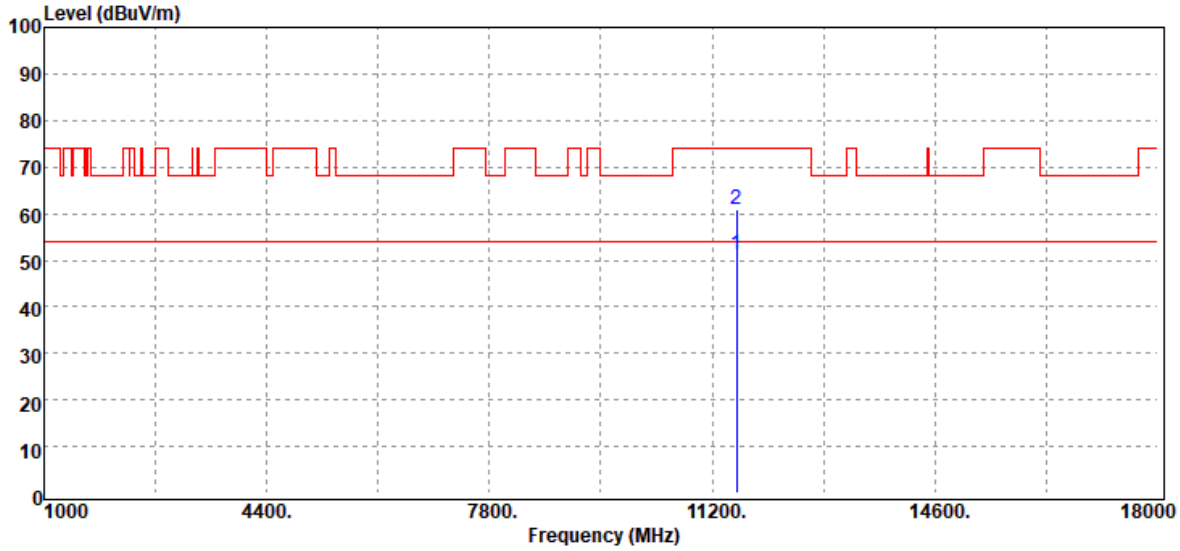
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11490.00	Average	33.09	15.95	49.04	54.00	-4.96
11490.00	Peak	43.78	15.95	59.73	74.00	-14.27

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band4	Temp./Humi.	:21/52
Frequency	:5745 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



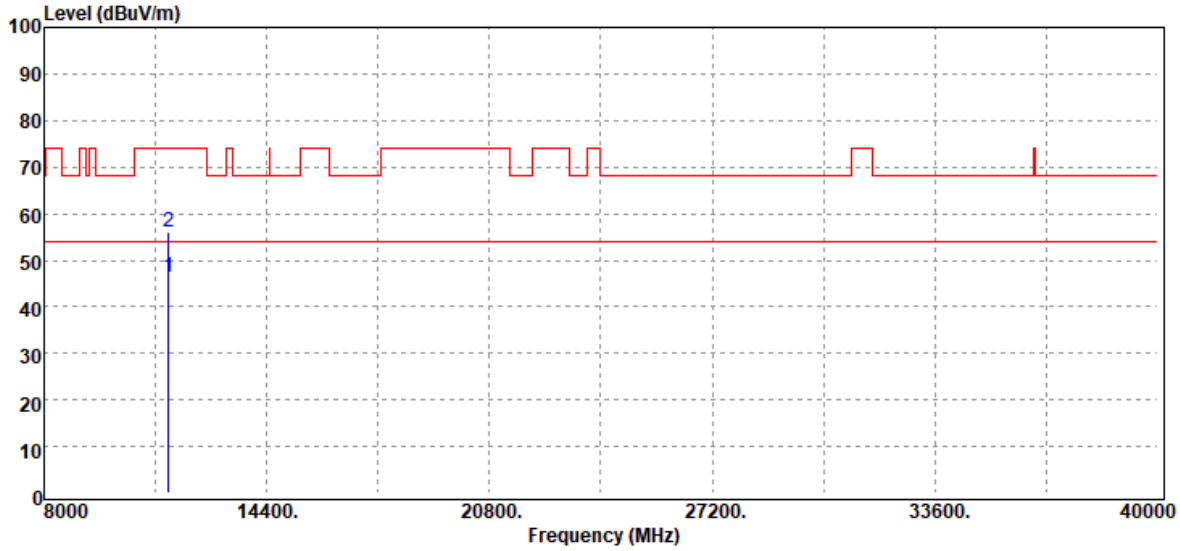
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11490.00	Average	30.80	15.95	46.75	54.00	-7.25
11490.00	Peak	40.95	15.95	56.90	74.00	-17.10

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band4	Temp./Humi.	:21/52
Frequency	:5785 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



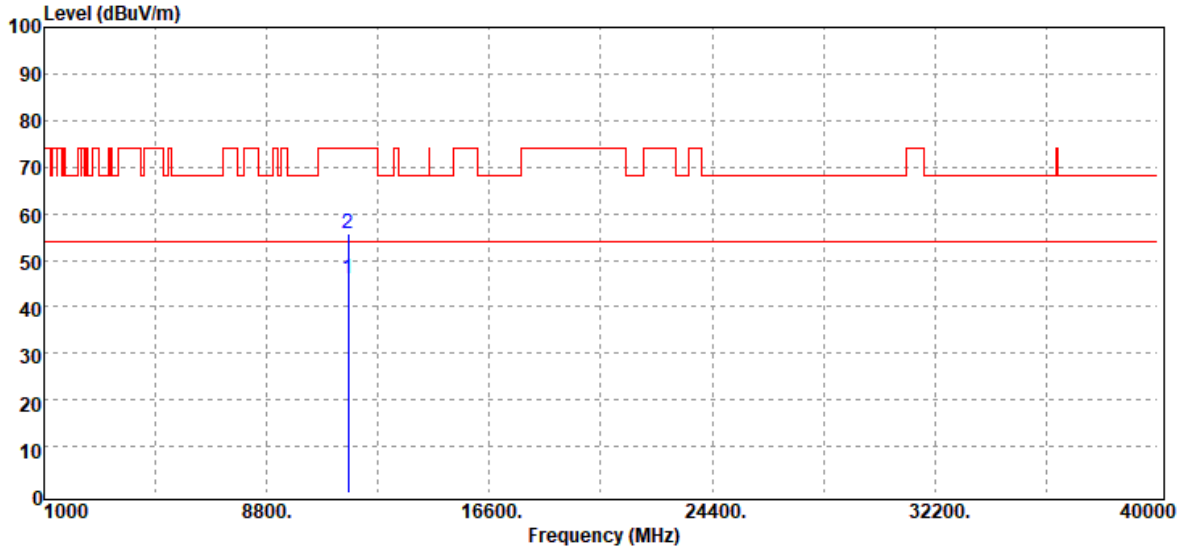
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11570.00	Average	34.72	16.41	51.13	54.00	-2.87
11570.00	Peak	44.44	16.41	60.85	74.00	-13.15

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band4	Temp./Humi.	:21/52
Frequency	:5785 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



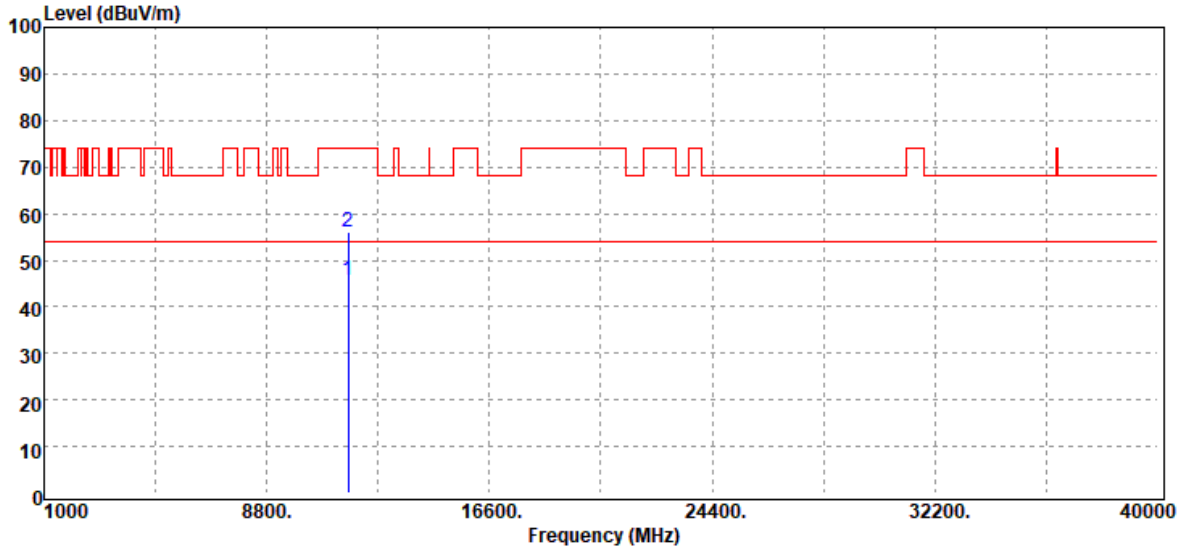
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11570.00	Average	29.83	16.41	46.24	54.00	-7.76
11570.00	Peak	39.61	16.41	56.02	74.00	-17.98

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band4	Temp./Humi.	:21/52
Frequency	:5825 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11650.00	Average	29.87	16.21	46.08	54.00	-7.92
11650.00	Peak	39.45	16.21	55.66	74.00	-18.34

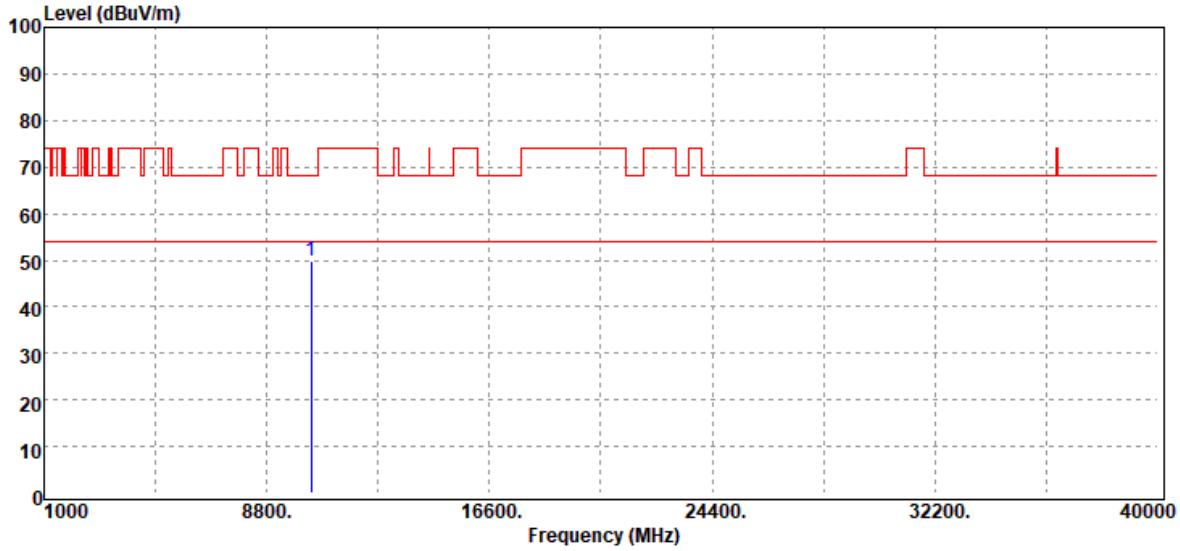
Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band4	Temp./Humi.	:21/52
Frequency	:5825 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11650.00	Average	29.52	16.21	45.73	54.00	-8.27
11650.00	Peak	39.76	16.21	55.97	74.00	-18.03

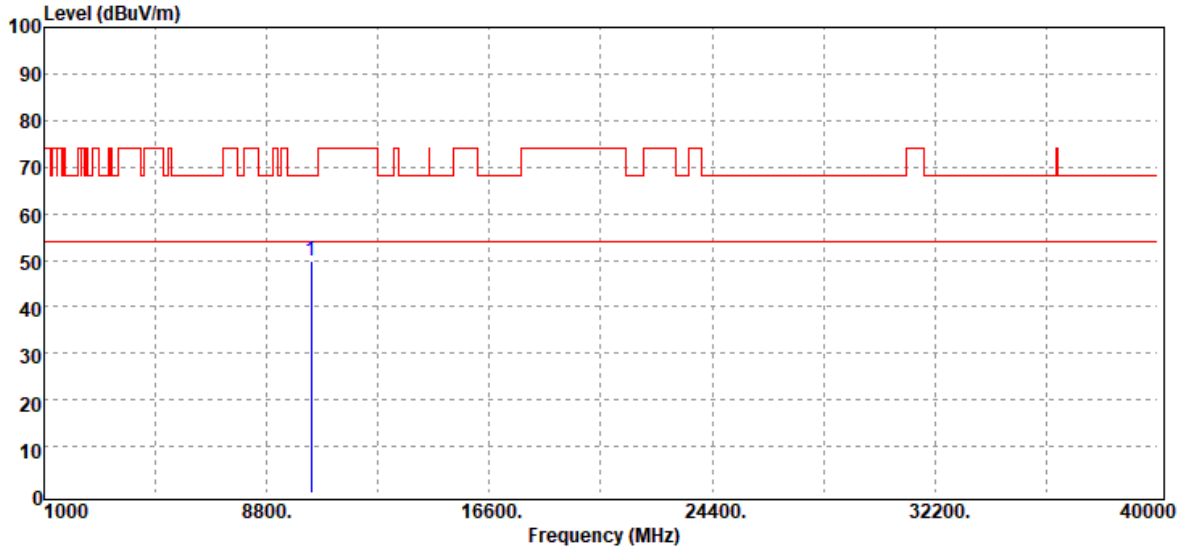
Radiated Spurious Emission Measurement Result 802.11n HT20, 5150~5250 MHz

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 1	Temp./Humi.	:21/52
Frequency	:5180 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



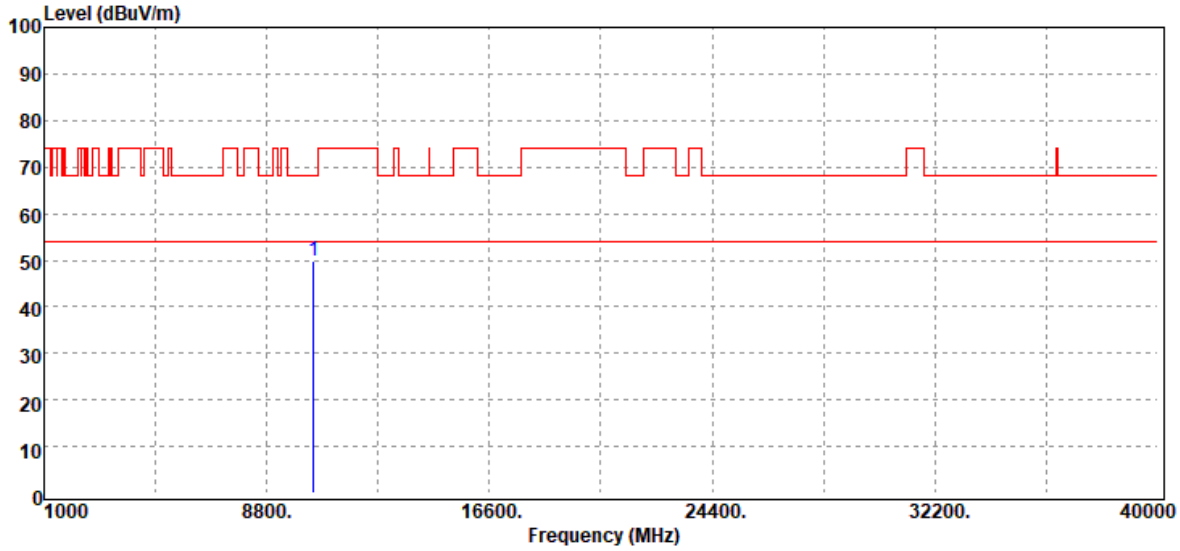
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10360.00	Peak	35.11	14.73	49.84	68.20	-18.36

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 1	Temp./Humi.	:21/52
Frequency	:5180 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



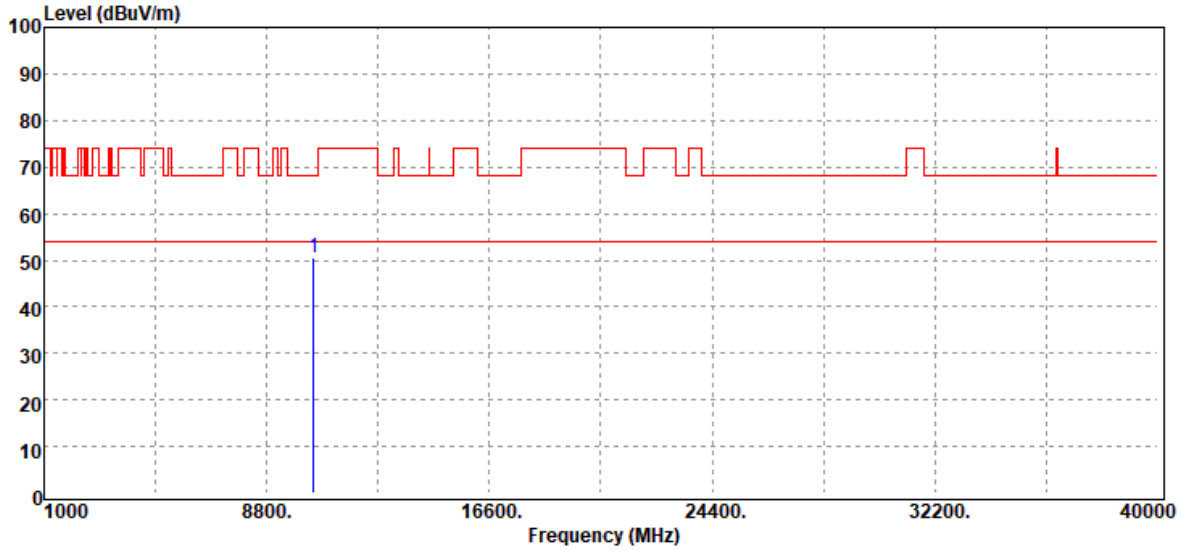
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10360.00	Peak	35.02	14.73	49.75	68.20	-18.45

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 1	Temp./Humi.	:21/52
Frequency	:5220 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



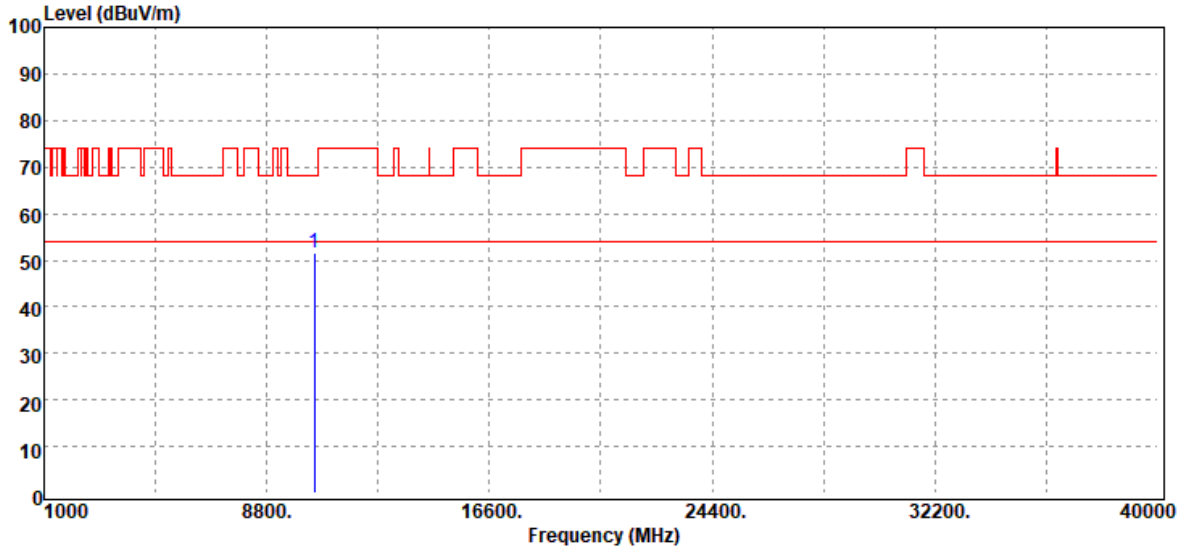
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10440.00	Peak	34.04	15.66	49.70	68.20	-18.50

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 1	Temp./Humi.	:21/52
Frequency	:5220 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



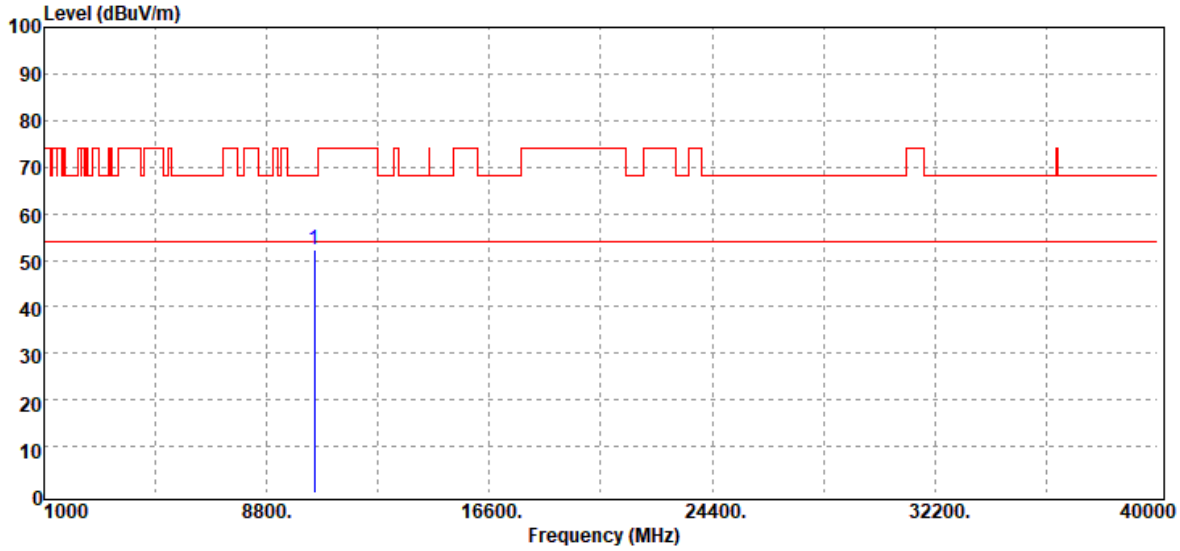
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10440.00	Peak	34.97	15.66	50.63	68.20	-17.57

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 1	Temp./Humi.	:21/52
Frequency	:5240 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10480.00	Peak	35.11	16.48	51.59	68.20	-16.61

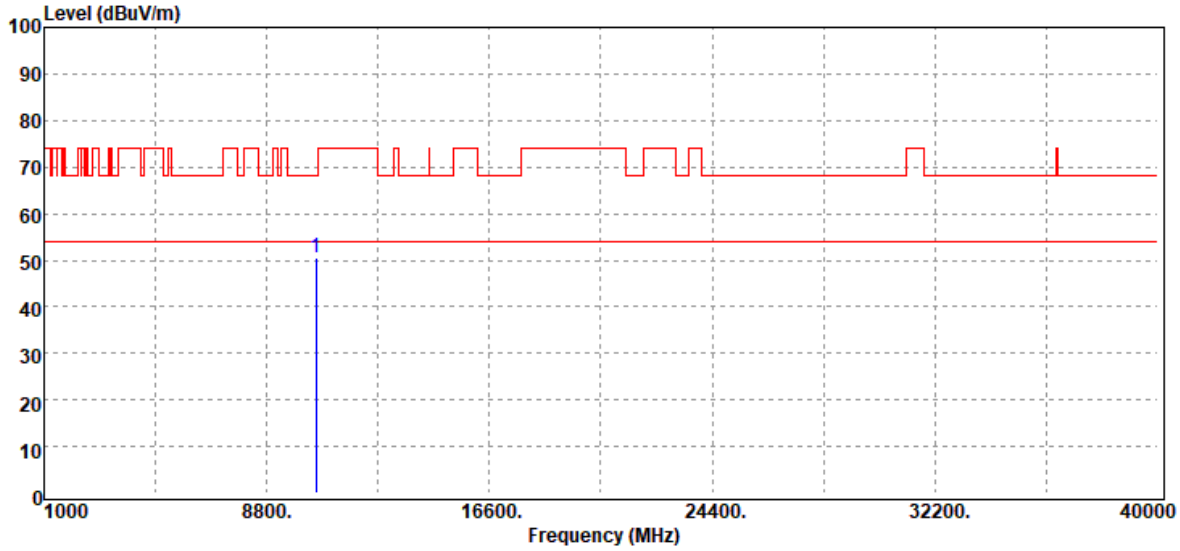
Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 1	Temp./Humi.	:21/52
Frequency	:5240 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10480.00	Peak	35.76	16.48	52.24	68.20	-15.96

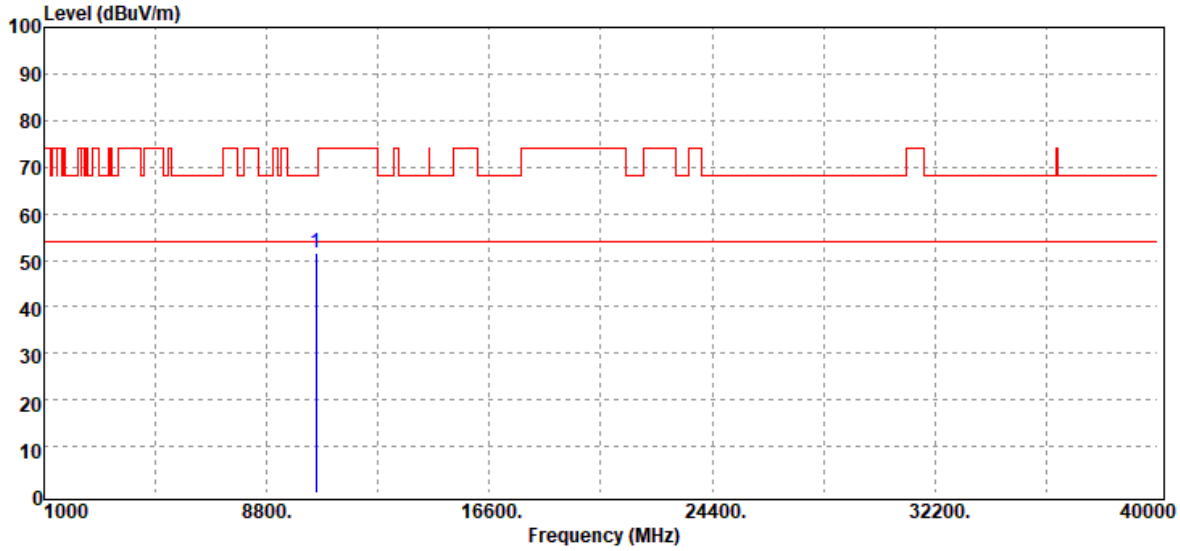
Radiated Spurious Emission Measurement Result 802.11n HT20, 5250~5350 MHz

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 2	Temp./Humi.	:21/52
Frequency	:5260 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



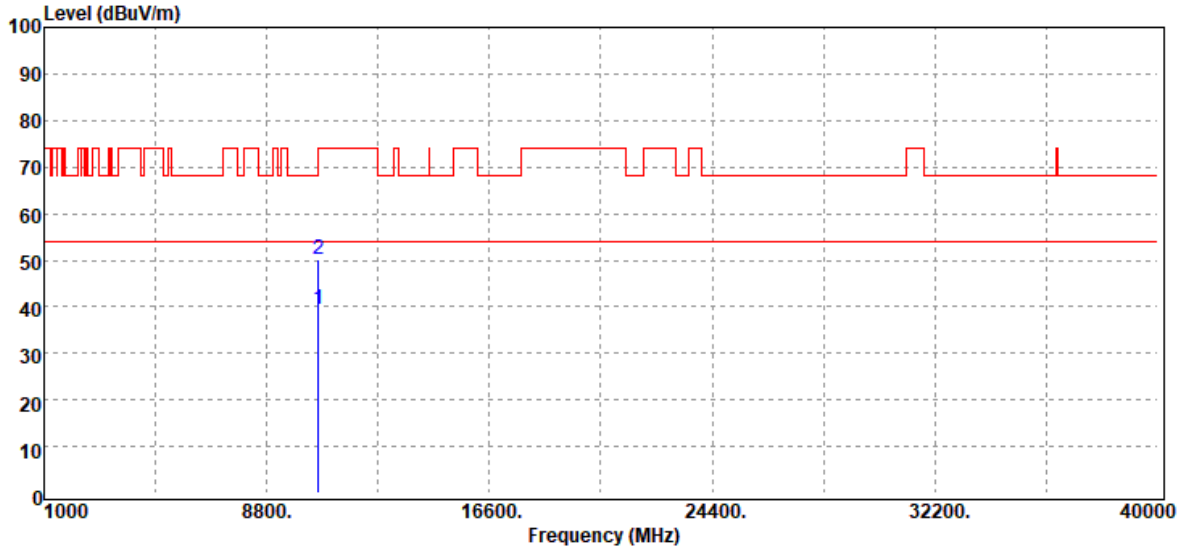
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10520.00	Peak	34.55	15.99	50.54	68.20	-17.66

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 2	Temp./Humi.	:21/52
Frequency	:5260 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



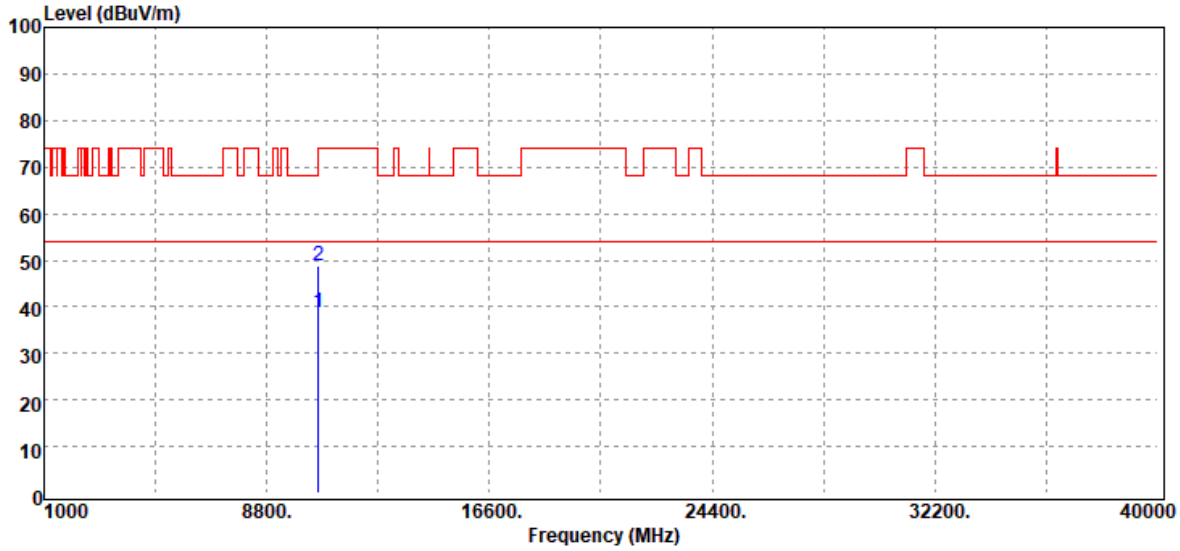
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10520.00	Peak	35.43	15.99	51.42	68.20	-16.78

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 2	Temp./Humi.	:21/52
Frequency	:5300 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



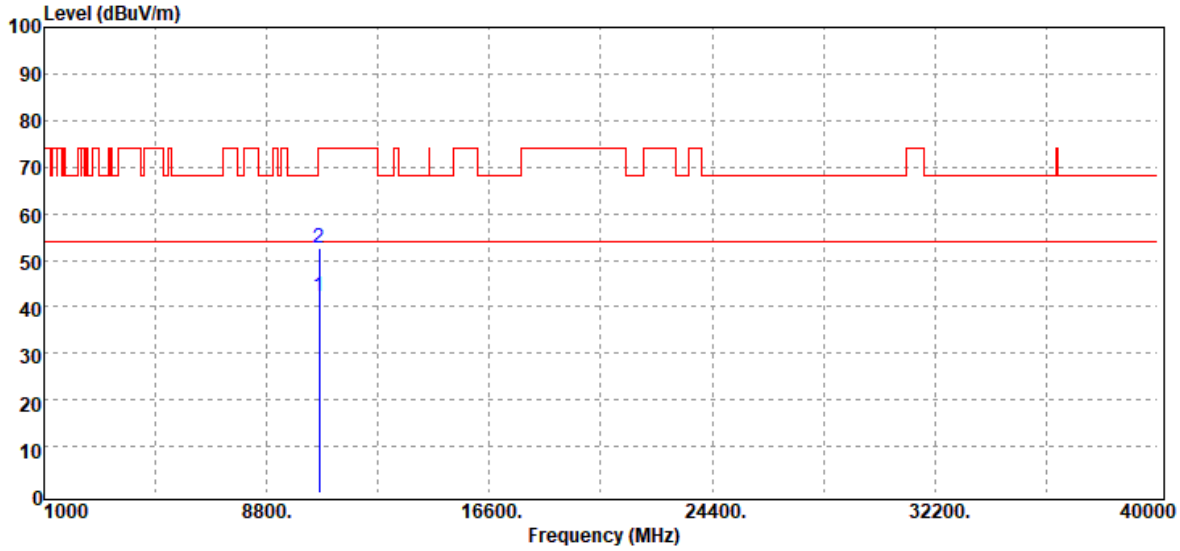
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10600.00	Average	24.28	15.27	39.55	54.00	-14.45
10600.00	Peak	34.76	15.27	50.03	74.00	-23.97

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 2	Temp./Humi.	:21/52
Frequency	:5300 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



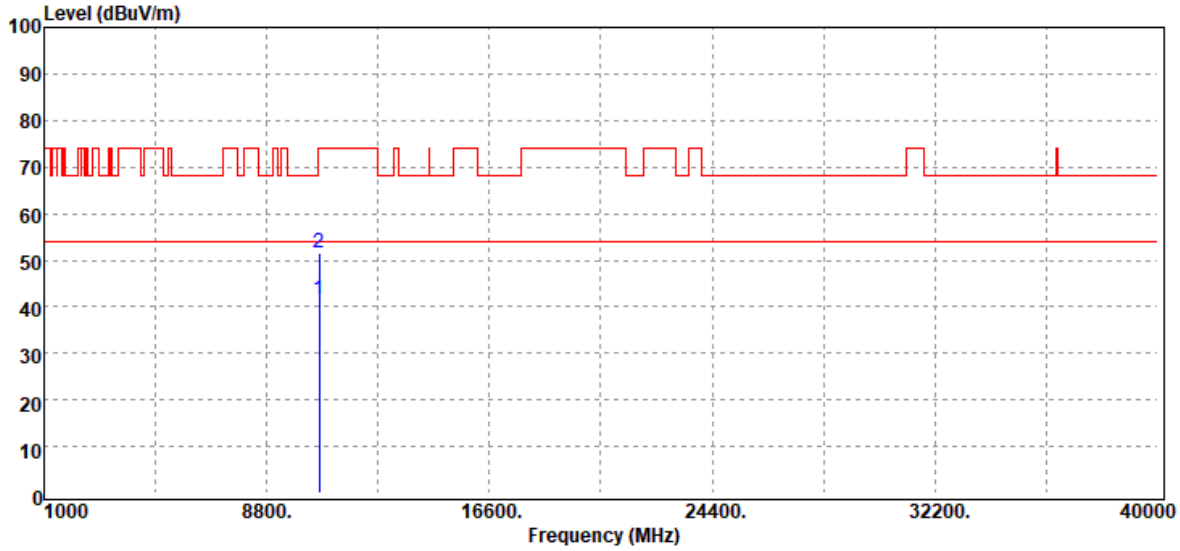
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10600.00	Average	23.41	15.27	38.68	54.00	-15.32
10600.00	Peak	33.65	15.27	48.92	74.00	-25.08

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 2	Temp./Humi.	:21/52
Frequency	:5320 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10640.00	Average	26.28	16.05	42.33	54.00	-11.67
10640.00	Peak	36.67	16.05	52.72	74.00	-21.28

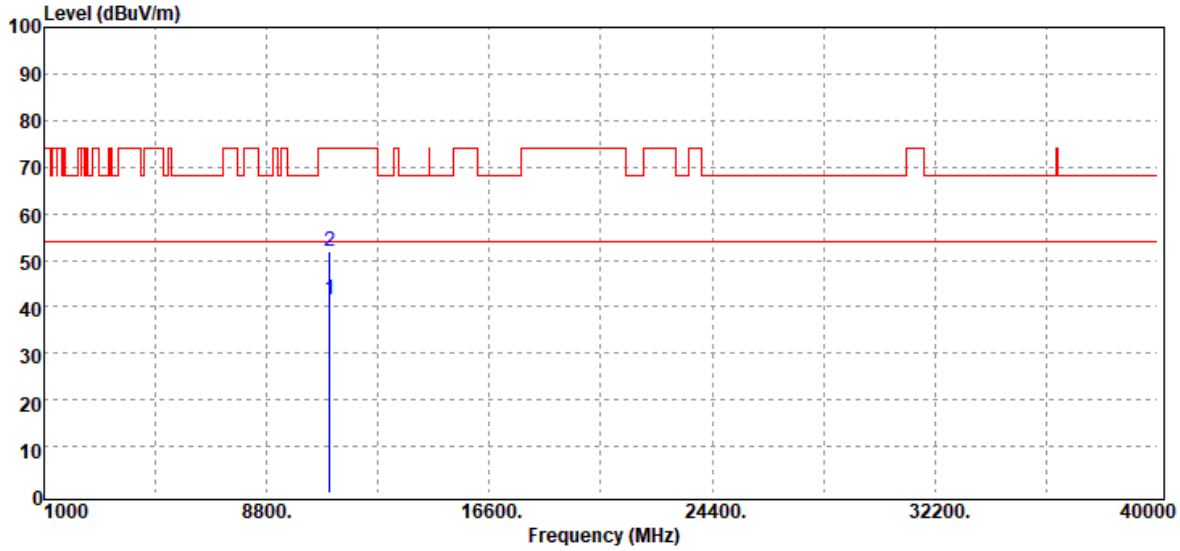
Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 2	Temp./Humi.	:21/52
Frequency	:5320 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10640.00	Average	25.33	16.05	41.38	54.00	-12.62
10640.00	Peak	35.38	16.05	51.43	74.00	-22.57

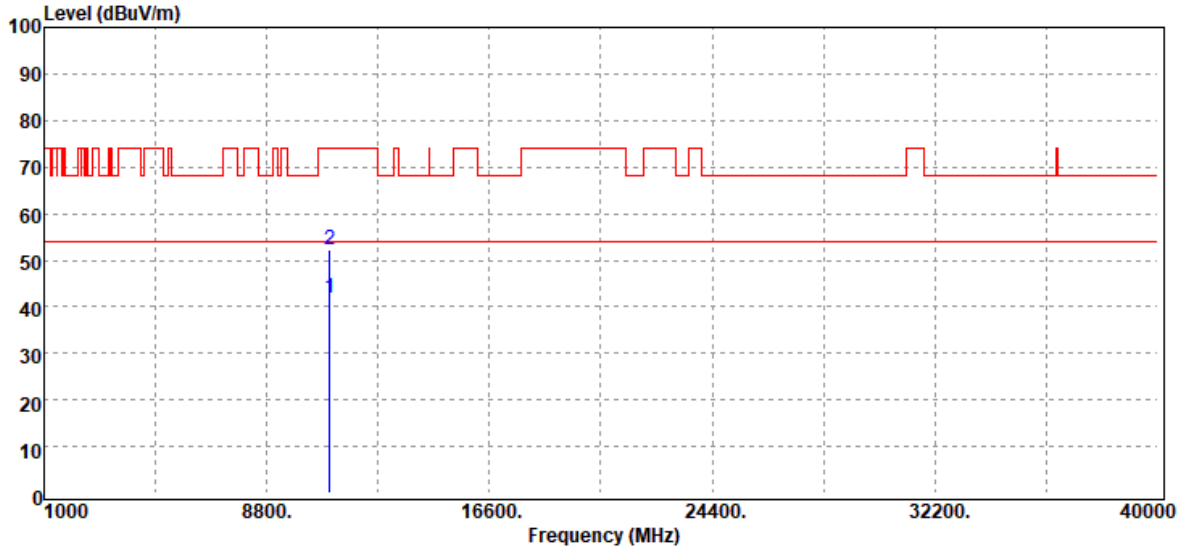
Radiated Spurious Emission Measurement Result 802.11n HT20, 5470~5725 MHz

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 3	Temp./Humi.	:21/52
Frequency	:5500 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



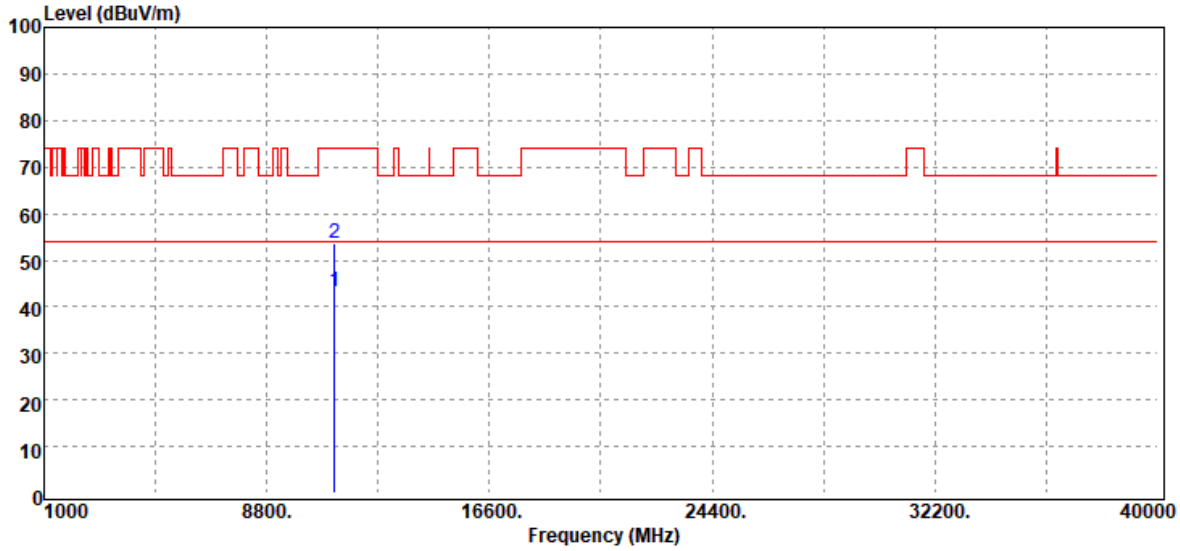
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11000.00	Average	24.17	17.44	41.61	54.00	-12.39
11000.00	Peak	34.35	17.44	51.79	74.00	-22.21

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 3	Temp./Humi.	:21/52
Frequency	:5500 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



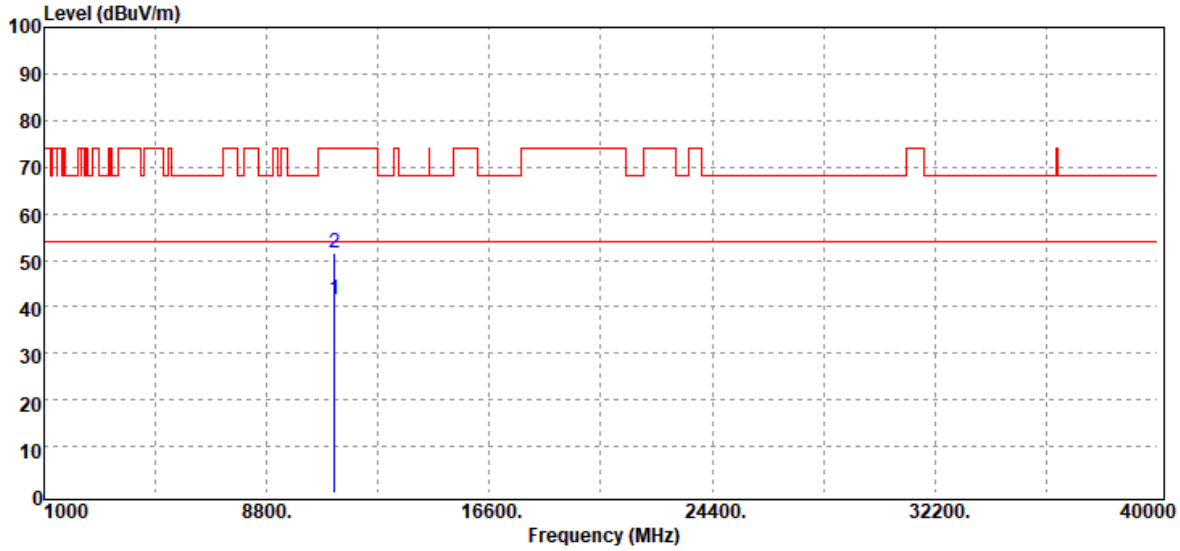
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11000.00	Average	24.35	17.44	41.79	54.00	-12.21
11000.00	Peak	34.74	17.44	52.18	74.00	-21.82

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 3	Temp./Humi.	:21/52
Frequency	:5580 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



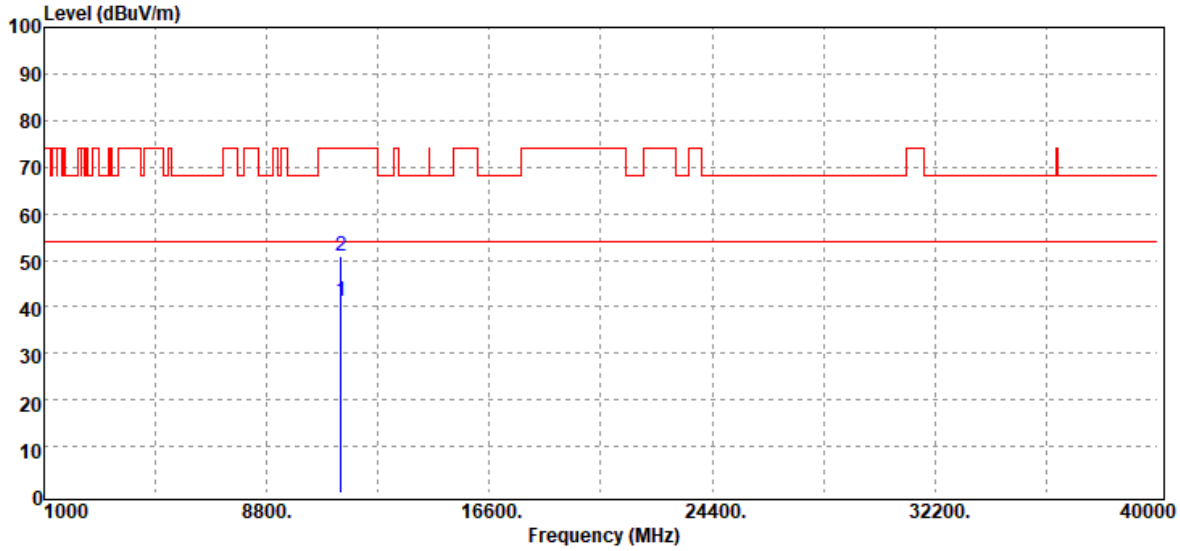
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11160.00	Average	26.43	16.85	43.28	54.00	-10.72
11160.00	Peak	36.95	16.85	53.80	74.00	-20.20

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 3	Temp./Humi.	:21/52
Frequency	:5580 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



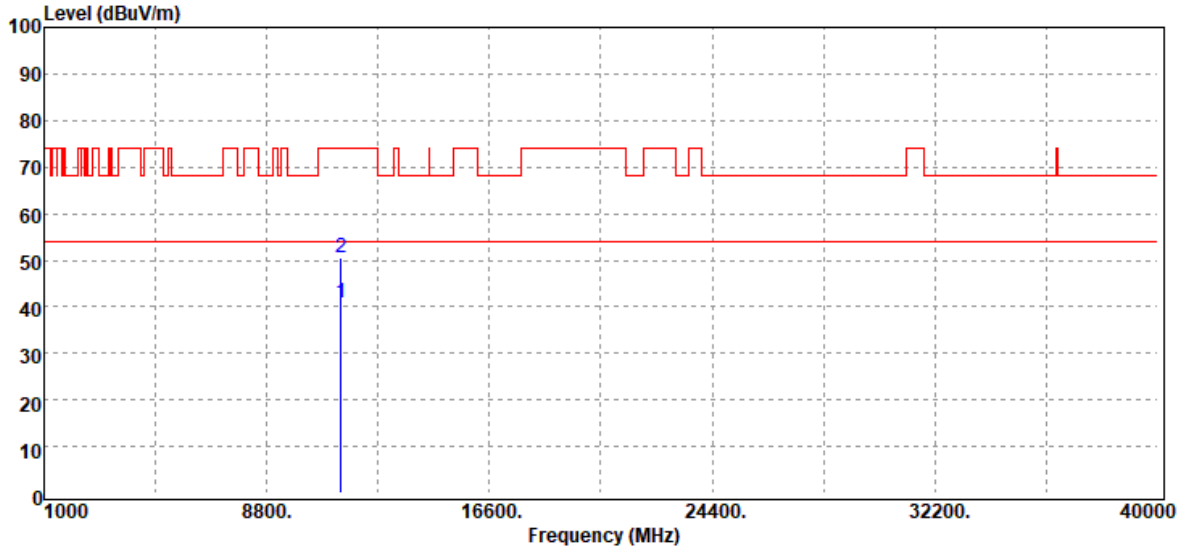
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11160.00	Average	24.81	16.85	41.66	54.00	-12.34
11160.00	Peak	34.65	16.85	51.50	74.00	-22.50

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 3	Temp./Humi.	:21/52
Frequency	:5700 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



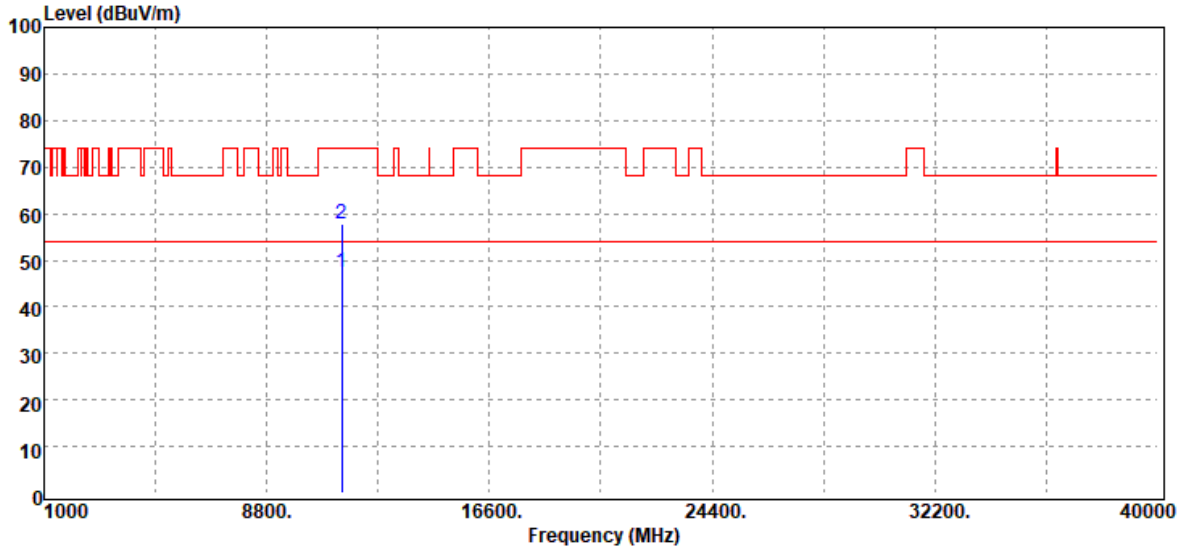
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11400.00	Average	24.12	16.89	41.01	54.00	-12.99
11400.00	Peak	33.91	16.89	50.80	74.00	-23.20

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 3	Temp./Humi.	:21/52
Frequency	:5700 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



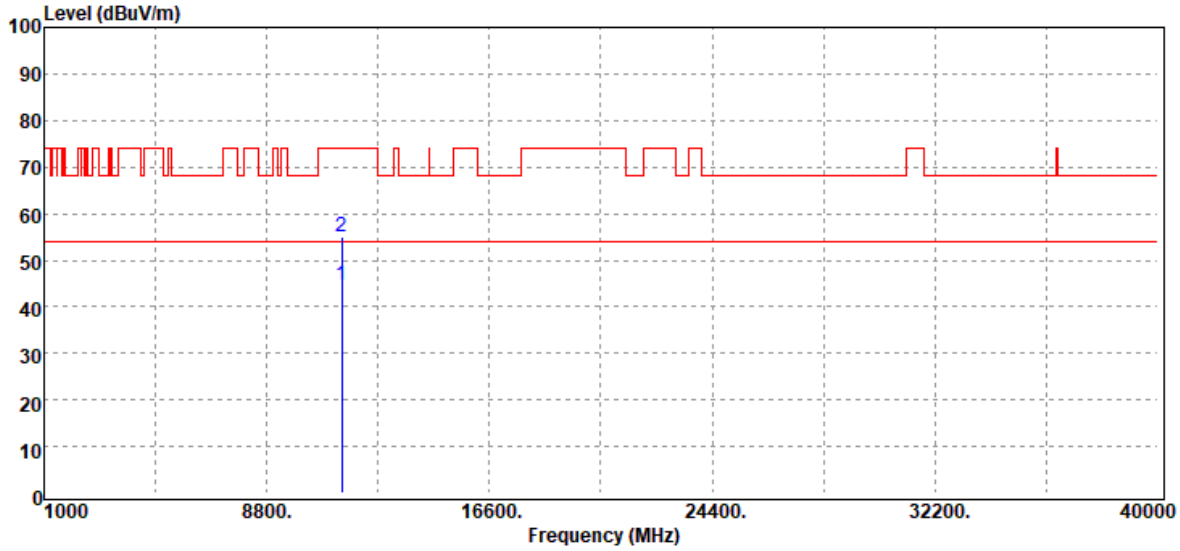
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11400.00	Average	23.93	16.89	40.82	54.00	-13.18
11400.00	Peak	33.56	16.89	50.45	74.00	-23.55

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n20 / Band3/4	Temp./Humi.	:21/52
Frequency	:5720 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH 144	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11440.00	Average	30.32	17.09	47.41	54.00	-6.59
11440.00	Peak	40.55	17.09	57.64	74.00	-16.36

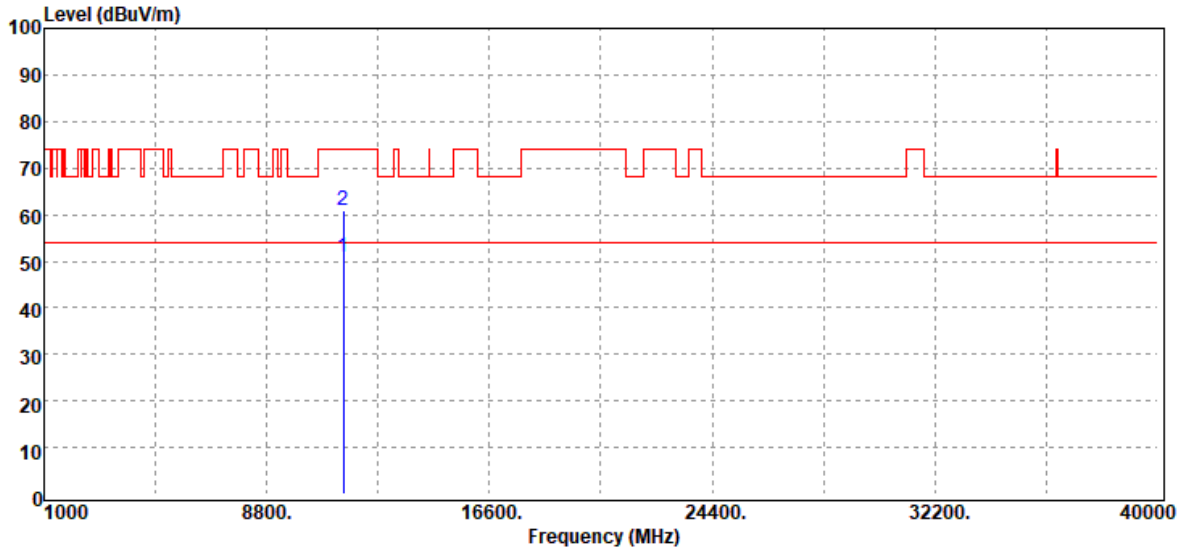
Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n20 / Band3/4	Temp./Humi.	:21/52
Frequency	:5720 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH 144	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11440.00	Average	27.57	17.09	44.66	54.00	-9.34
11440.00	Peak	37.78	17.09	54.87	74.00	-19.13

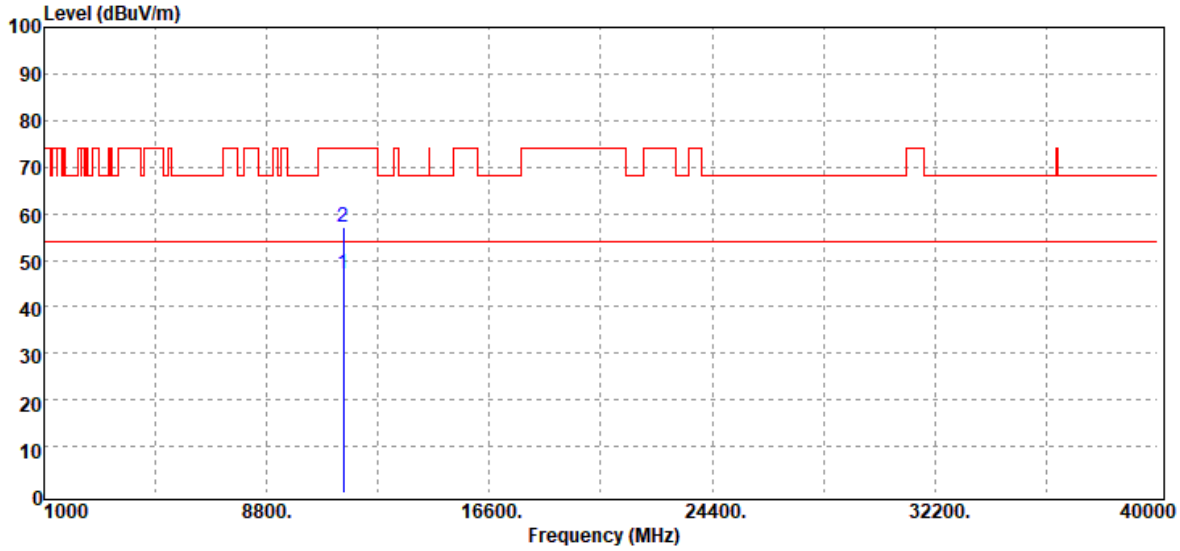
Radiated Spurious Emission Measurement Result 802.11n HT20, 5725~5850 MHz

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 4	Temp./Humi.	:21/52
Frequency	:5745 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



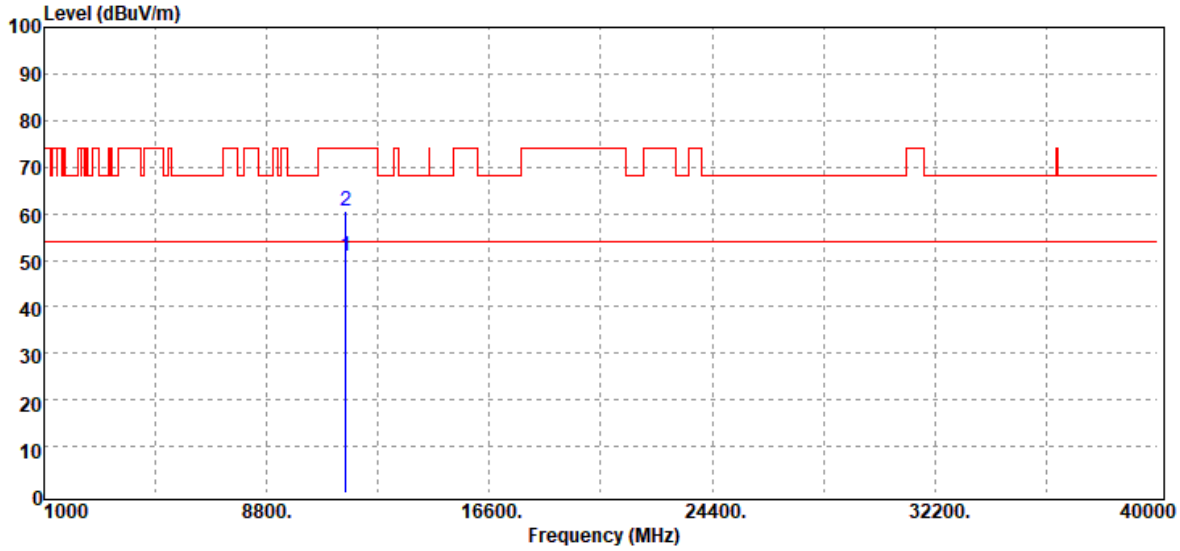
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11490.00	Average	34.88	15.95	50.83	54.00	-3.17
11490.00	Peak	44.83	15.95	60.78	74.00	-13.22

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 4	Temp./Humi.	:21/52
Frequency	:5745 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



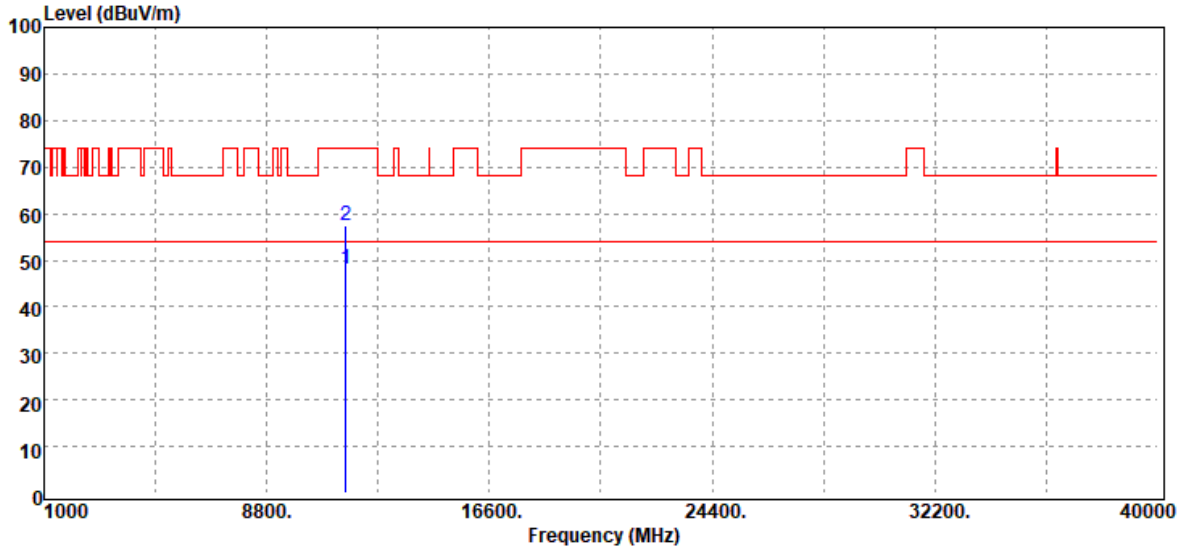
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11490.00	Average	31.17	15.95	47.12	54.00	-6.88
11490.00	Peak	40.99	15.95	56.94	74.00	-17.06

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 4	Temp./Humi.	:21/52
Frequency	:5785 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



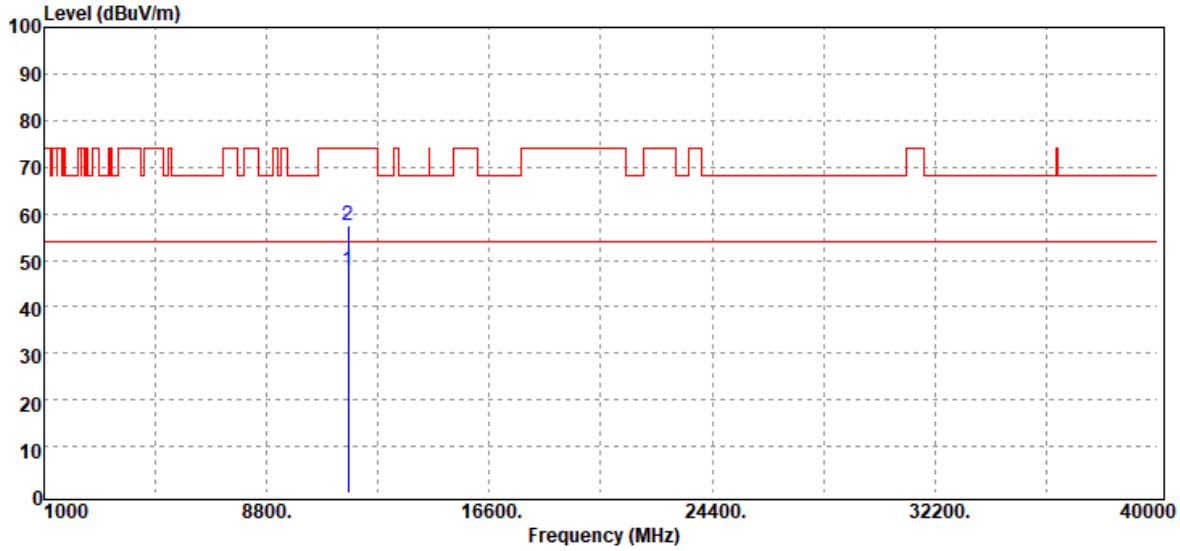
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11570.00	Average	34.32	16.41	50.73	54.00	-3.27
11570.00	Peak	44.04	16.41	60.45	74.00	-13.55

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 4	Temp./Humi.	:21/52
Frequency	:5785 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



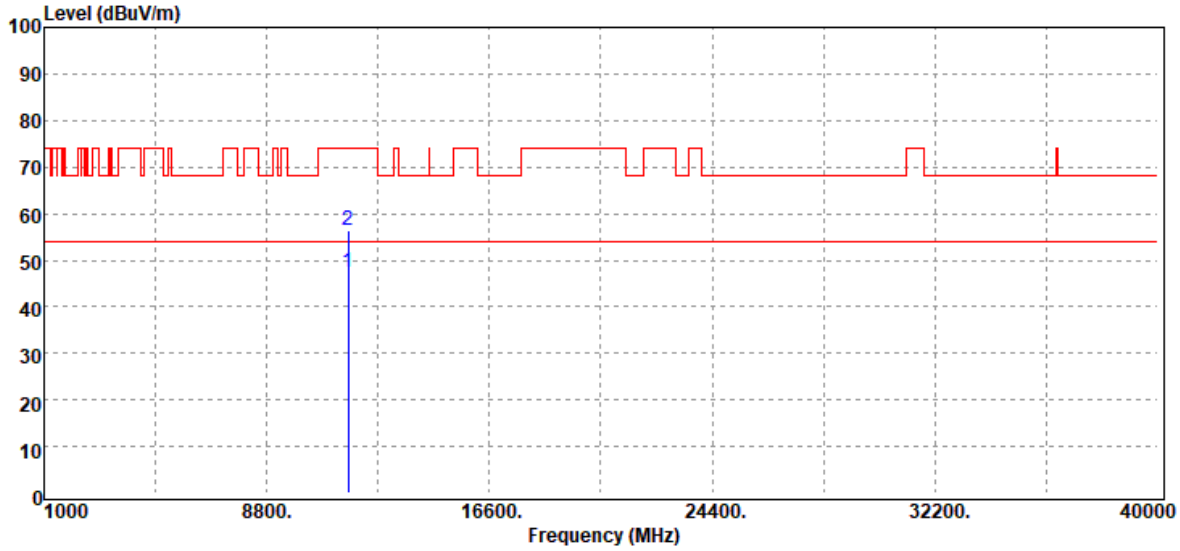
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11570.00	Average	31.68	16.41	48.09	54.00	-5.91
11570.00	Peak	41.17	16.41	57.58	74.00	-16.42

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 4	Temp./Humi.	:21/52
Frequency	:5825 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11650.00	Average	31.52	16.21	47.73	54.00	-6.27
11650.00	Peak	41.27	16.21	57.48	74.00	-16.52

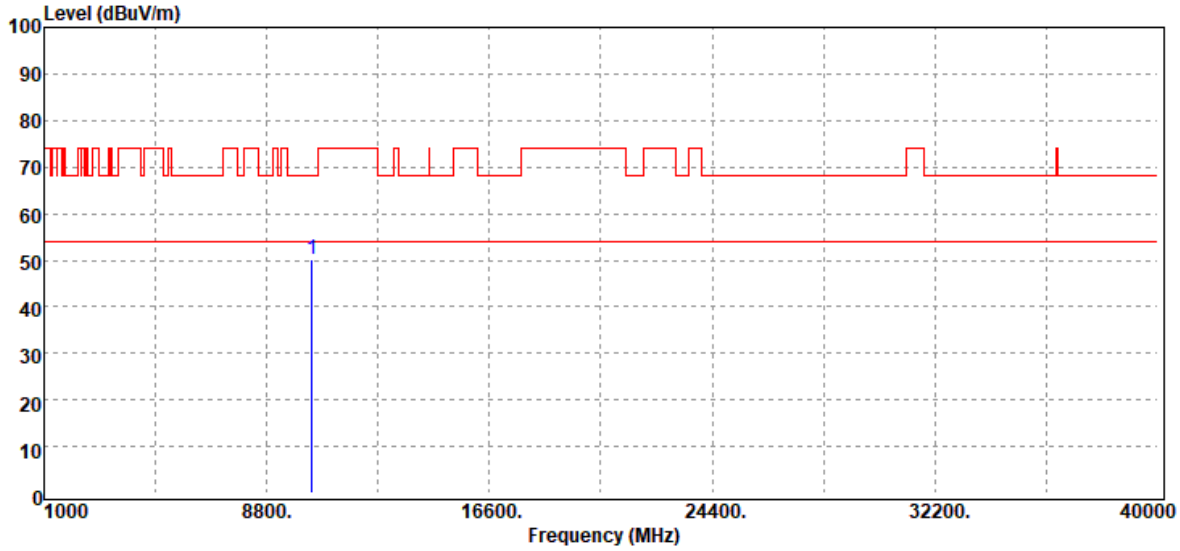
Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20/Band 4	Temp./Humi.	:21/52
Frequency	:5825 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11650.00	Average	31.26	16.21	47.47	54.00	-6.53
11650.00	Peak	40.36	16.21	56.57	74.00	-17.43

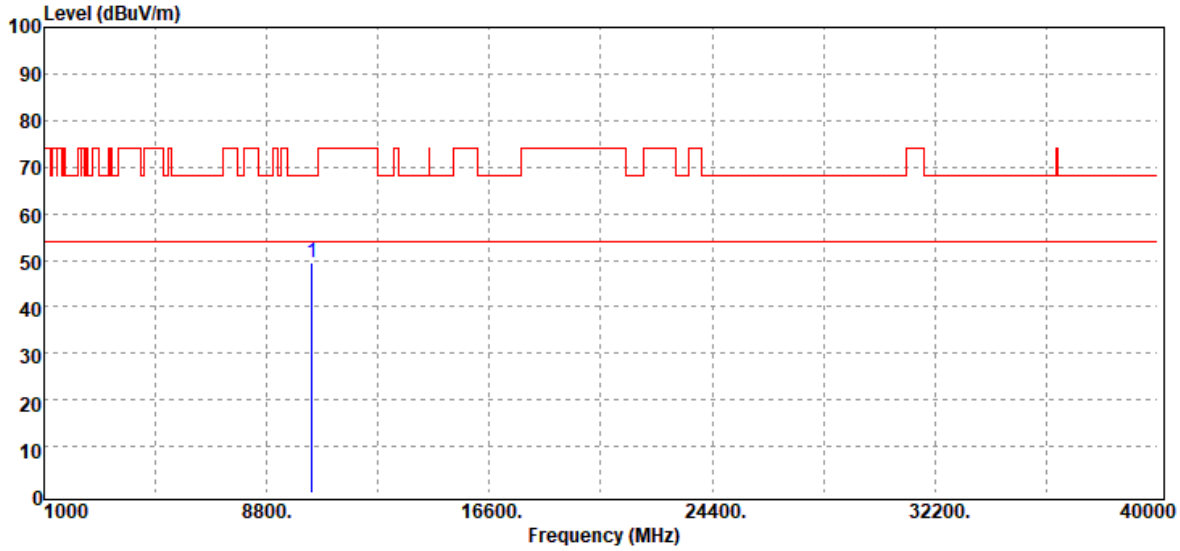
Radiated Spurious Emission Measurement Result 802.11n HT40, 5150~5250 MHz

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band1	Temp./Humi.	:21/52
Frequency	:5190 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



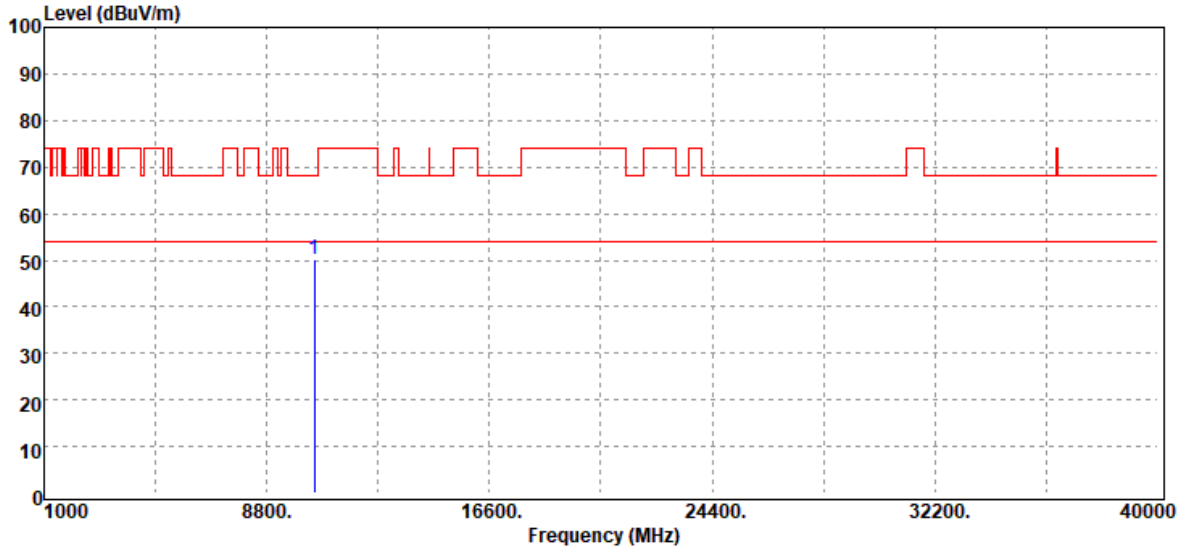
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10380.00	Peak	35.48	14.82	50.30	68.20	-17.90

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band1	Temp./Humi.	:21/52
Frequency	:5190 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



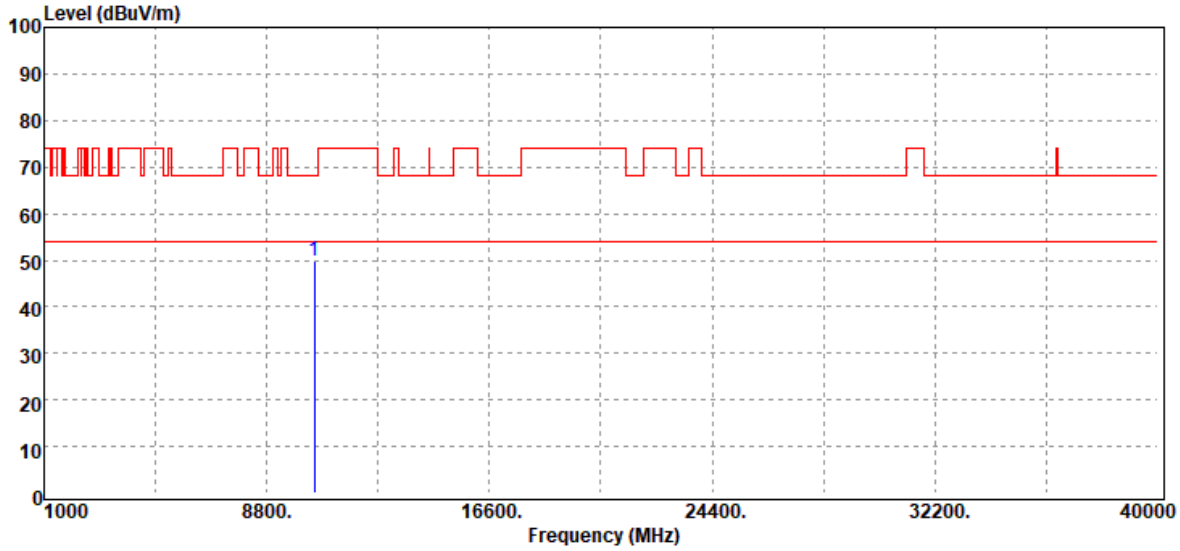
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10380.00	Peak	34.79	14.82	49.61	68.20	-18.59

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band1	Temp./Humi.	:21/52
Frequency	:5230 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10460.00	Peak	34.09	16.01	50.10	68.20	-18.10

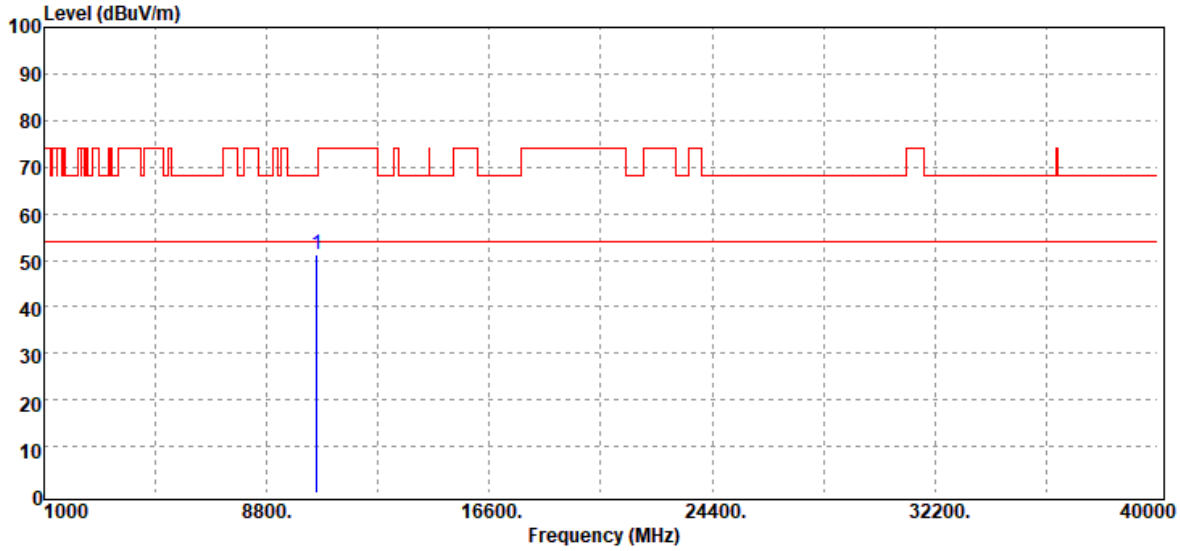
Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band1	Temp./Humi.	:21/52
Frequency	:5230 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10460.00	Peak	33.68	16.01	49.69	68.20	-18.51

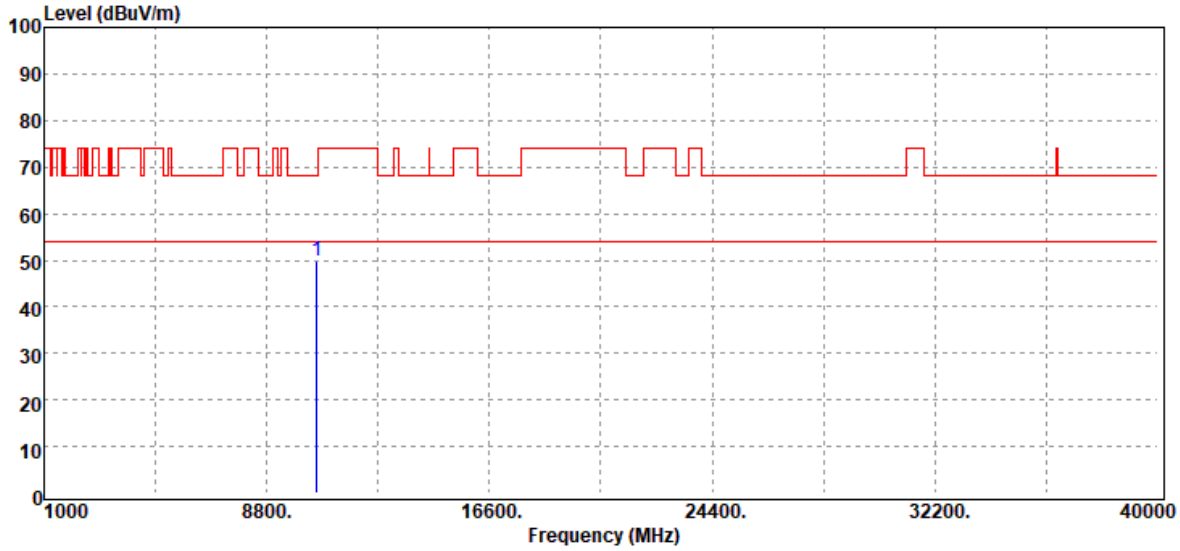
Radiated Spurious Emission Measurement Result 802.11n HT40, 5250~5350 MHz

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band2	Temp./Humi.	:21/52
Frequency	:5270 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



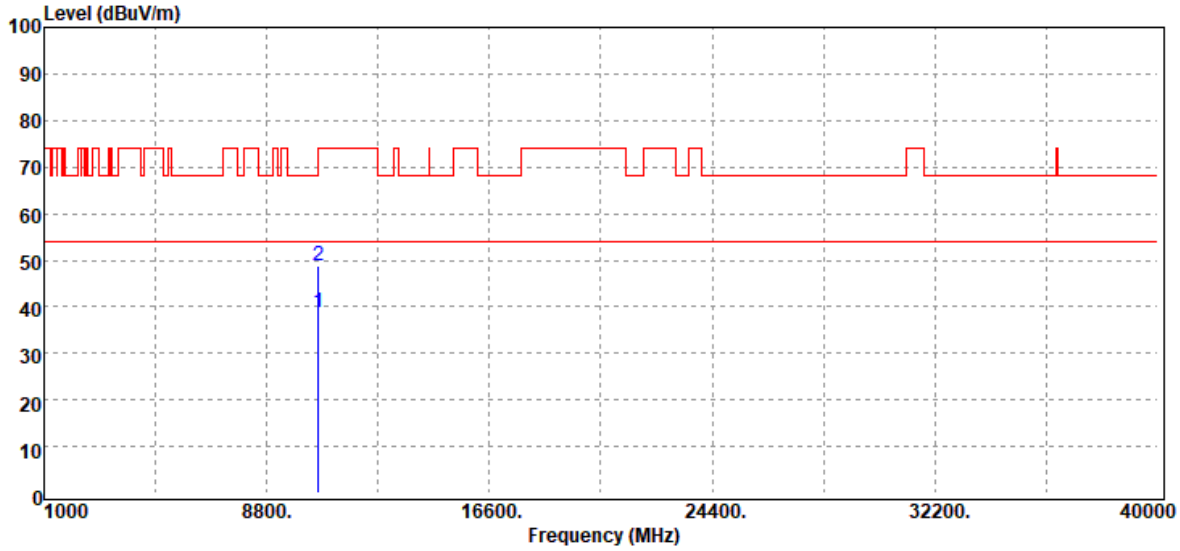
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10540.00	Peak	35.69	15.67	51.36	68.20	-16.84

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band2	Temp./Humi.	:21/52
Frequency	:5270 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



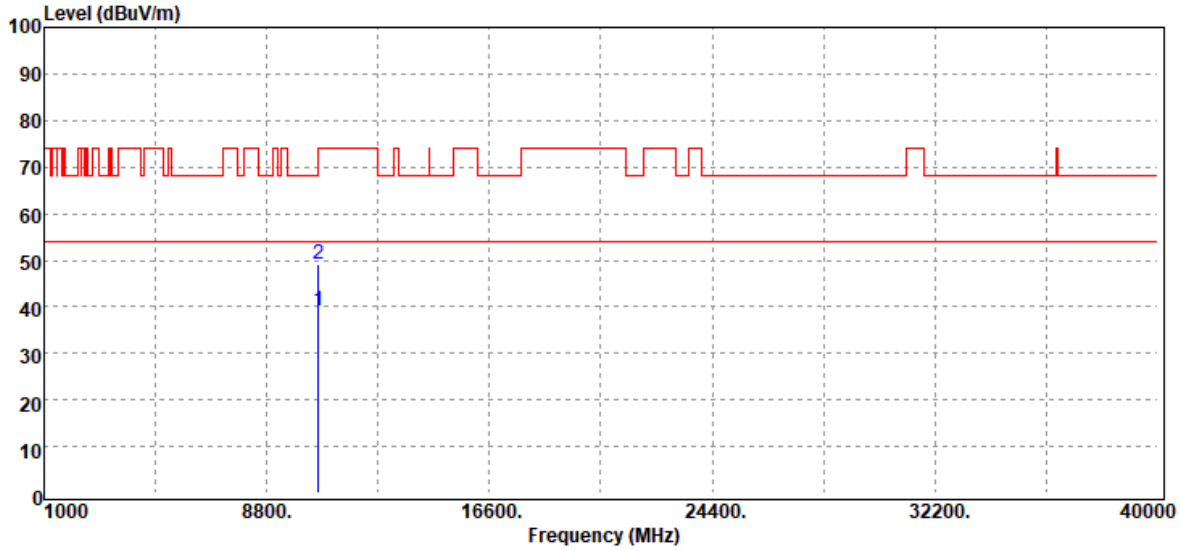
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10540.00	Peak	34.02	15.67	49.69	68.20	-18.51

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band2	Temp./Humi.	:21/52
Frequency	:5310 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10620.00	Average	23.23	15.66	38.89	54.00	-15.11
10620.00	Peak	33.26	15.66	48.92	74.00	-25.08

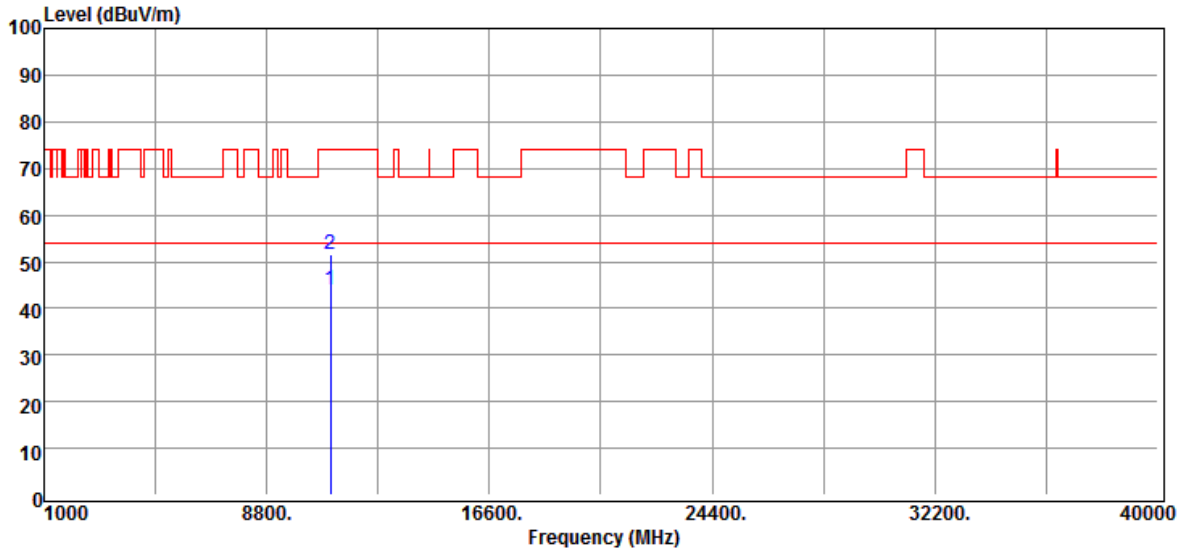
Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band2	Temp./Humi.	:21/52
Frequency	:5310 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10620.00	Average	23.29	15.66	38.95	54.00	-15.05
10620.00	Peak	33.35	15.66	49.01	74.00	-24.99

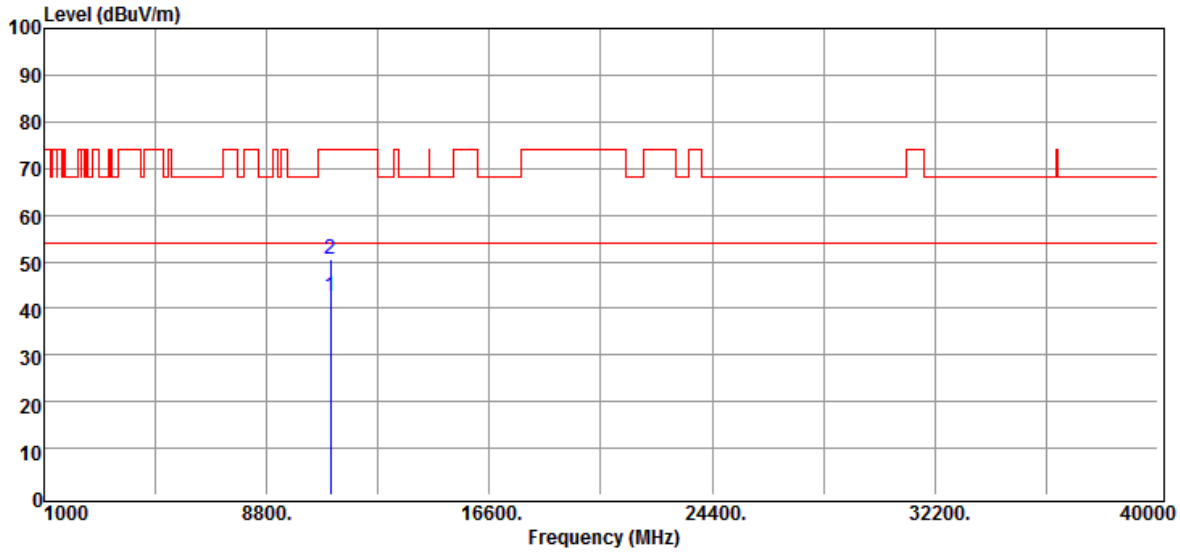
Radiated Spurious Emission Measurement Result 802.11n HT40, 5470~5725 MHz

Operation Mode	:802.11n40 / Band3	Test Date	:2018-08-17
Test Mode	:Tx CH Low	Temp./Humi.	:25/60
EUT Pol	:E1 Plan	Antenna Pol.	:VERTICAL
Test Channel	:5510 MHz	Engineer	:Jerry



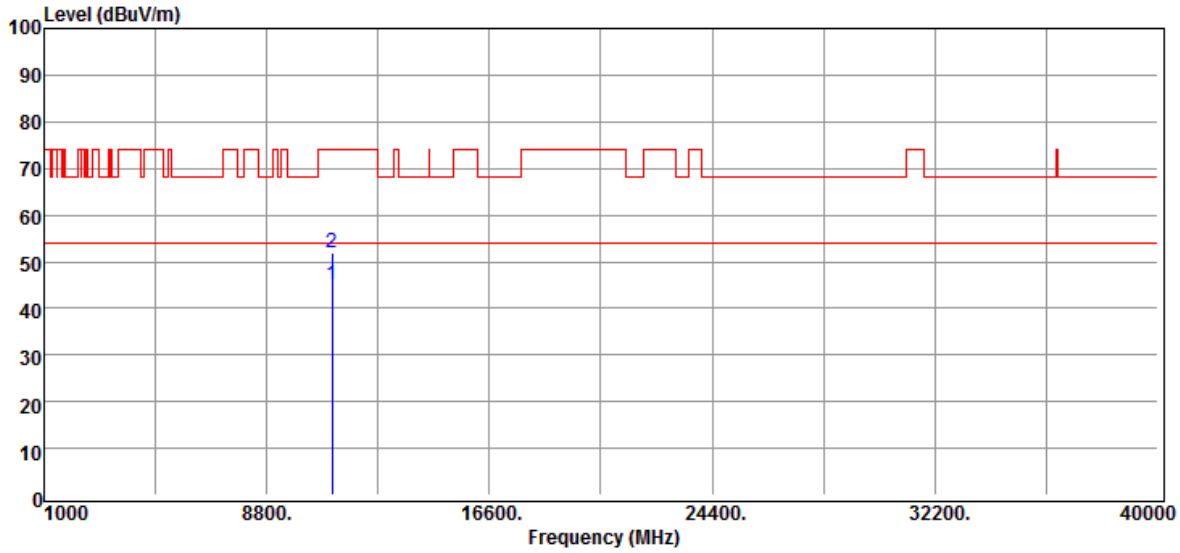
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBμV	dB	dBμV/m	dBμV/m	dB
11020.00	Average	32.71	11.10	43.81	54.00	-10.19
11020.00	Peak	40.63	11.10	51.73	74.00	-22.27

Operation Mode	:802.11n40 / Band3	Test Date	:2018-08-17
Test Mode	:Tx CH Low	Temp./Humi.	:25/60
EUT Pol	:E1 Plan	Antenna Pol.	:HORIZONTAL
Test Channel	:5510 MHz	Engineer	:Jerry



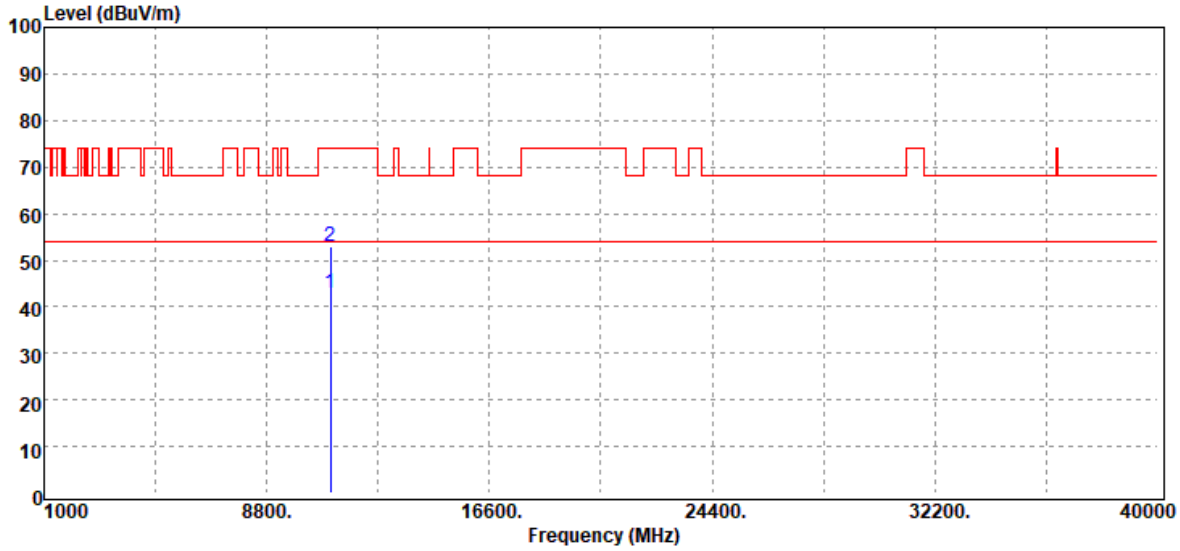
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBμV	dB	dBμV/m	dBμV/m	dB
11020.00	Average	31.57	11.10	42.67	54.00	-11.33
11020.00	Peak	39.55	11.10	50.65	74.00	-23.35

Operation Mode	:802.11n40 / Band3	Test Date	:2018-08-17
Test Mode	:Tx CH Mid	Temp./Humi.	:25/60
EUT Pol	:E1 Plan	Antenna Pol.	:VERTICAL
Test Channel	:5550 MHz	Engineer	:Jerry



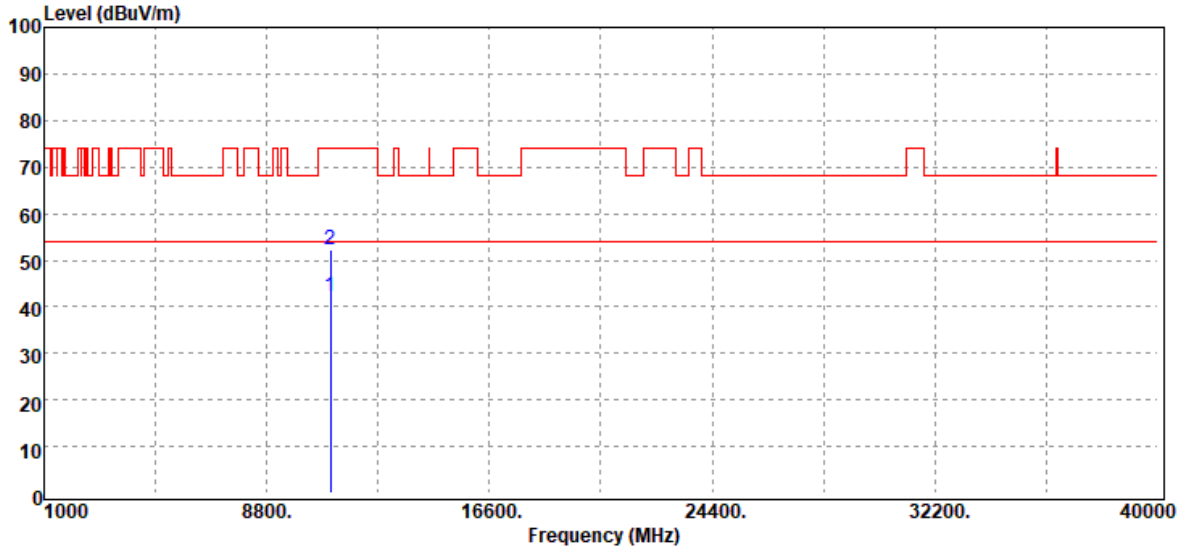
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBμV	dB	dBμV/m	dBμV/m	dB
11100.00	Average	33.27	11.63	44.90	54.00	-9.10
11100.00	Peak	40.36	11.63	51.99	74.00	-22.01

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band3	Temp./Humi.	:21/52
Frequency	:5510 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



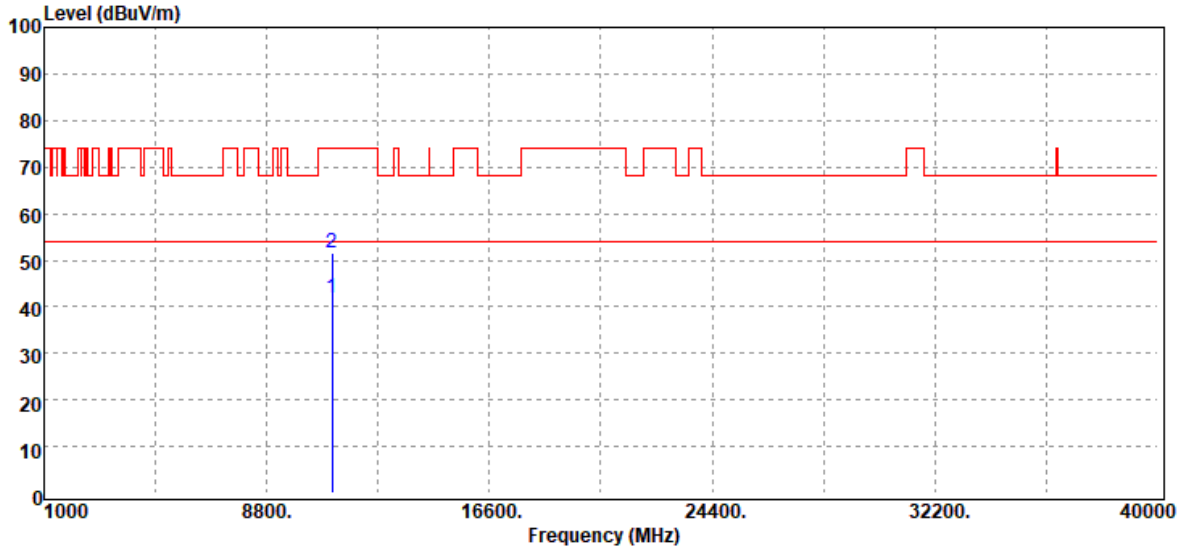
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11020.00	Average	25.31	17.69	43.00	54.00	-11.00
11020.00	Peak	35.14	17.69	52.83	74.00	-21.17

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band3	Temp./Humi.	:21/52
Frequency	:5510 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



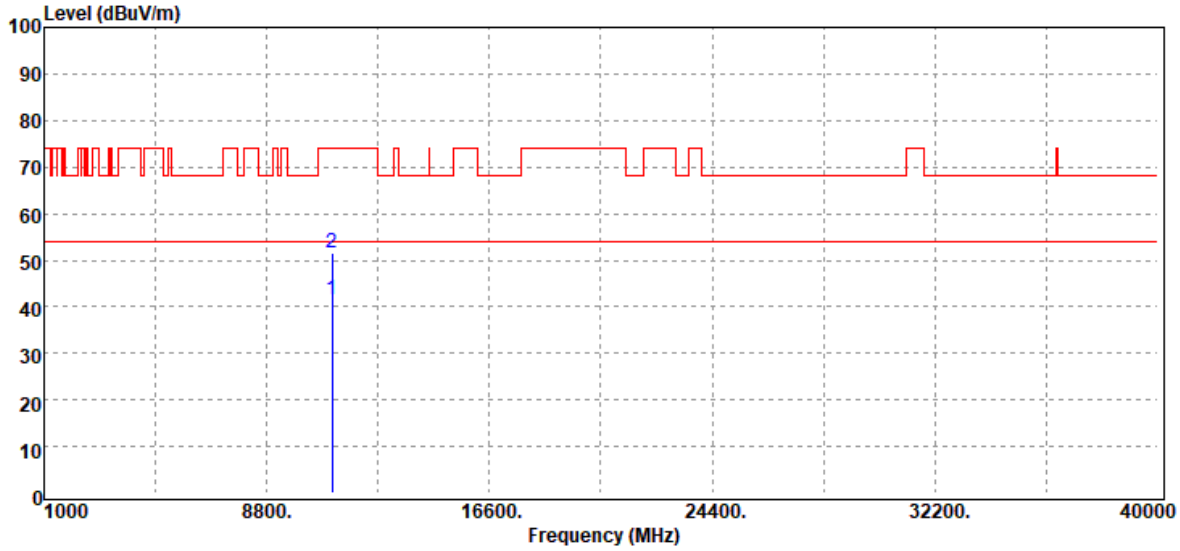
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11020.00	Average	24.53	17.69	42.22	54.00	-11.78
11020.00	Peak	34.69	17.69	52.38	74.00	-21.62

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band3	Temp./Humi.	:21/52
Frequency	:5550 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



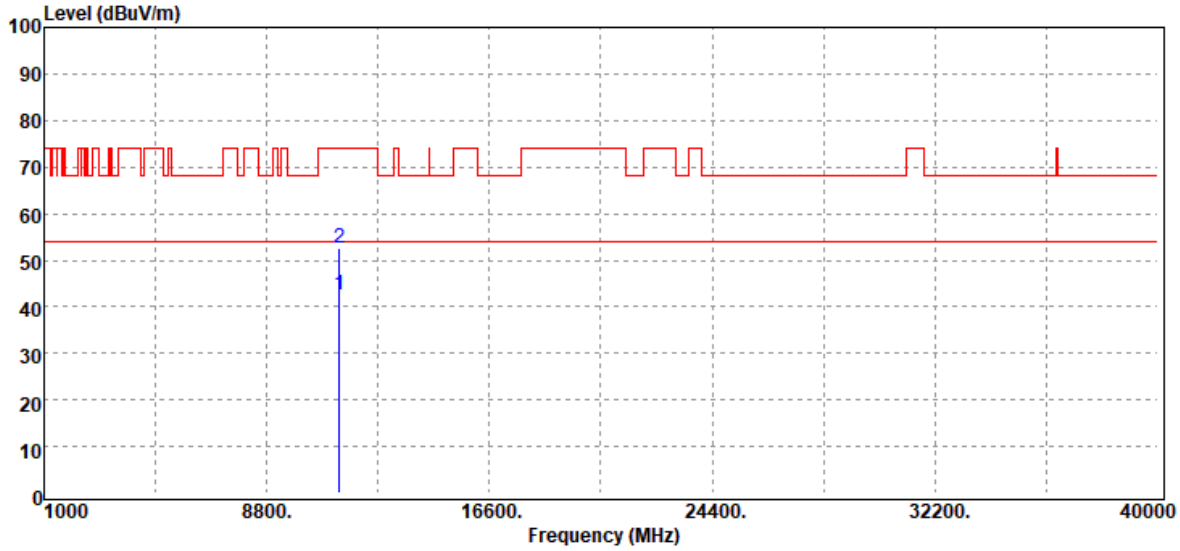
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11100.00	Average	24.39	17.36	41.75	54.00	-12.25
11100.00	Peak	34.32	17.36	51.68	74.00	-22.32

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band3	Temp./Humi.	:21/52
Frequency	:5550 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



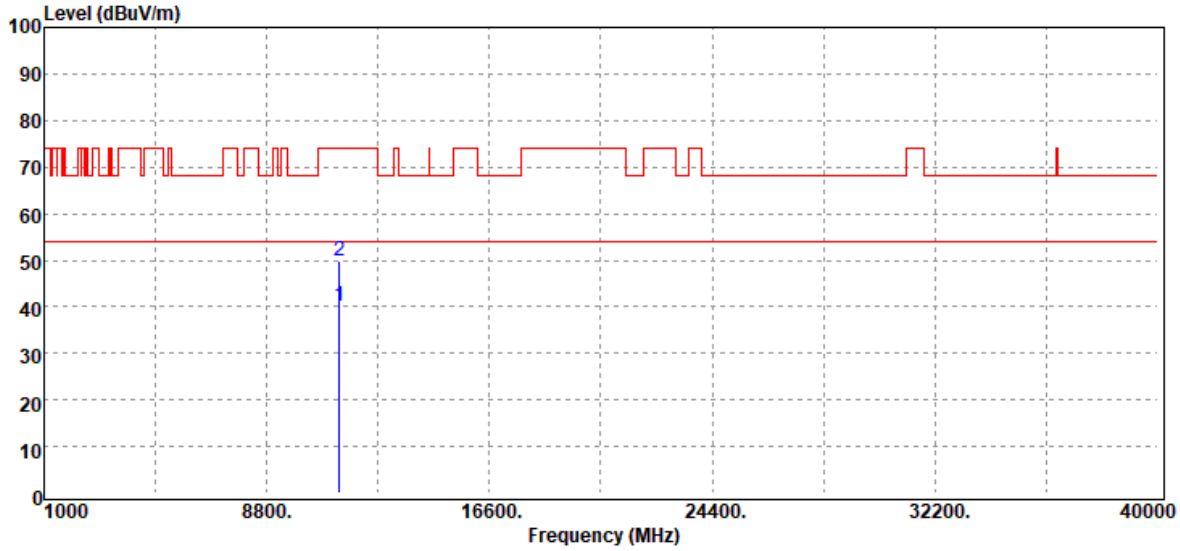
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11100.00	Average	24.29	17.36	41.65	54.00	-12.35
11100.00	Peak	34.23	17.36	51.59	74.00	-22.41

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band3	Temp./Humi.	:21/52
Frequency	:5670 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



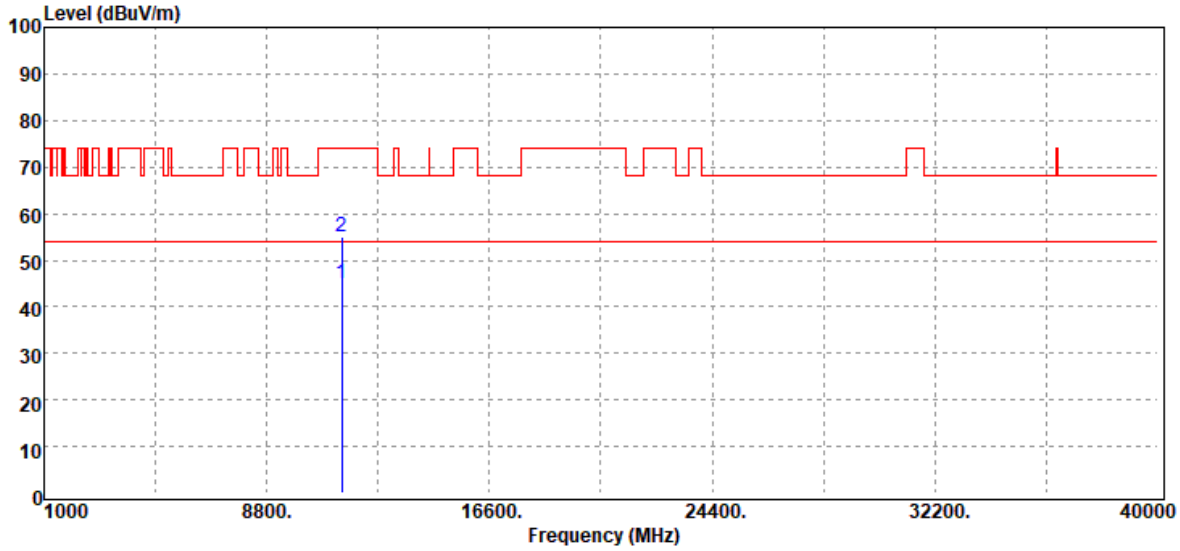
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11340.00	Average	26.11	16.32	42.43	54.00	-11.57
11340.00	Peak	36.39	16.32	52.71	74.00	-21.29

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band3	Temp./Humi.	:21/52
Frequency	:5670 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



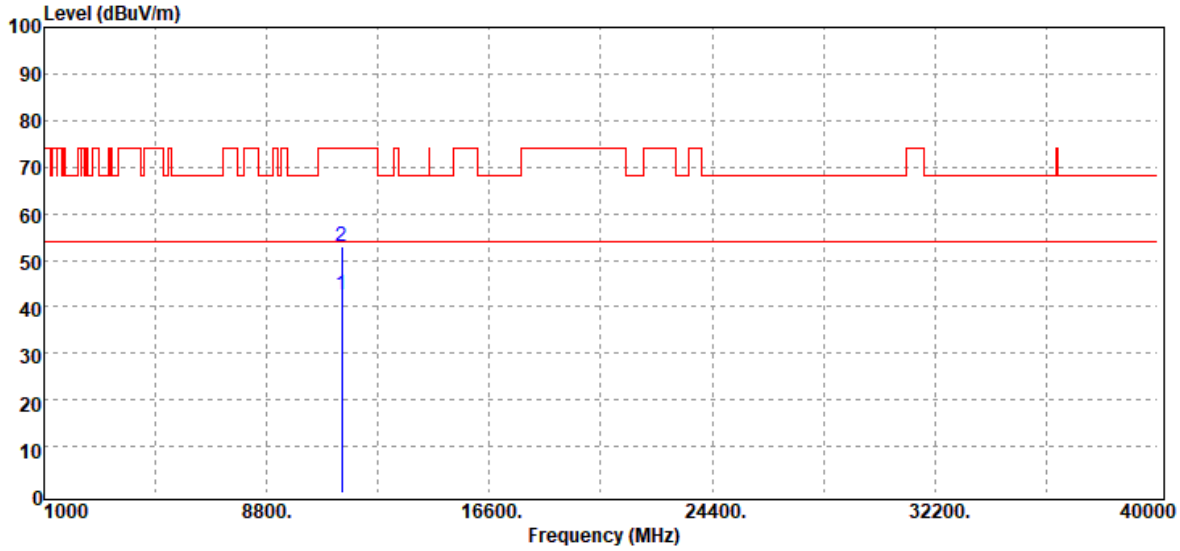
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11340.00	Average	23.81	16.32	40.13	54.00	-13.87
11340.00	Peak	33.58	16.32	49.90	74.00	-24.10

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band3/4	Temp./Humi.	:21/52
Frequency	:5710 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH 142	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11420.00	Average	27.83	17.08	44.91	54.00	-9.09
11420.00	Peak	38.05	17.08	55.13	74.00	-18.87

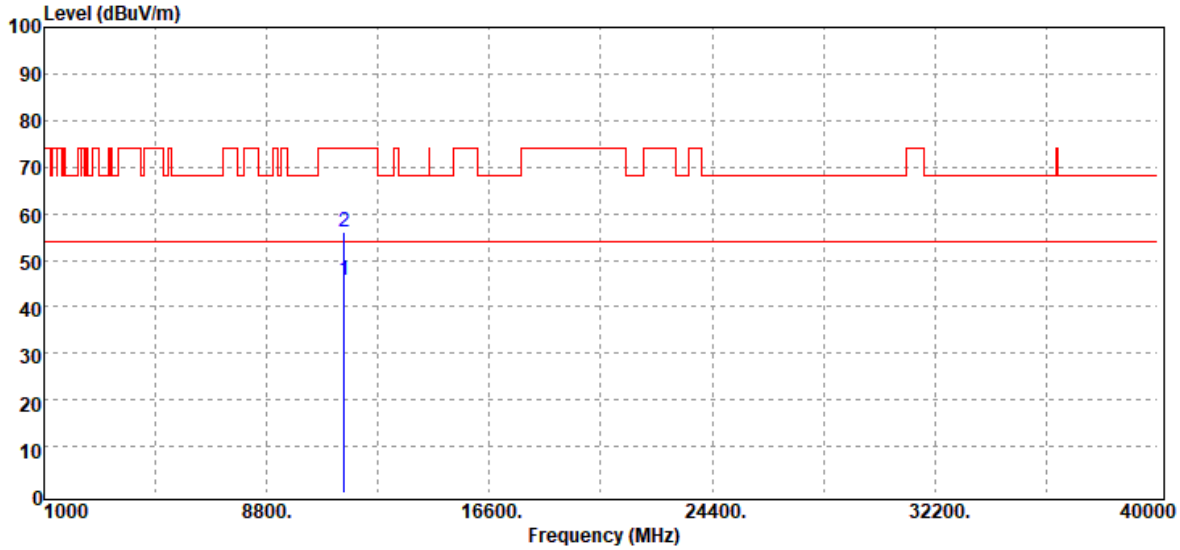
Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band3/4	Temp./Humi.	:21/52
Frequency	:5710 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH 142	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11420.00	Average	25.61	17.08	42.69	54.00	-11.31
11420.00	Peak	35.91	17.08	52.99	74.00	-21.01

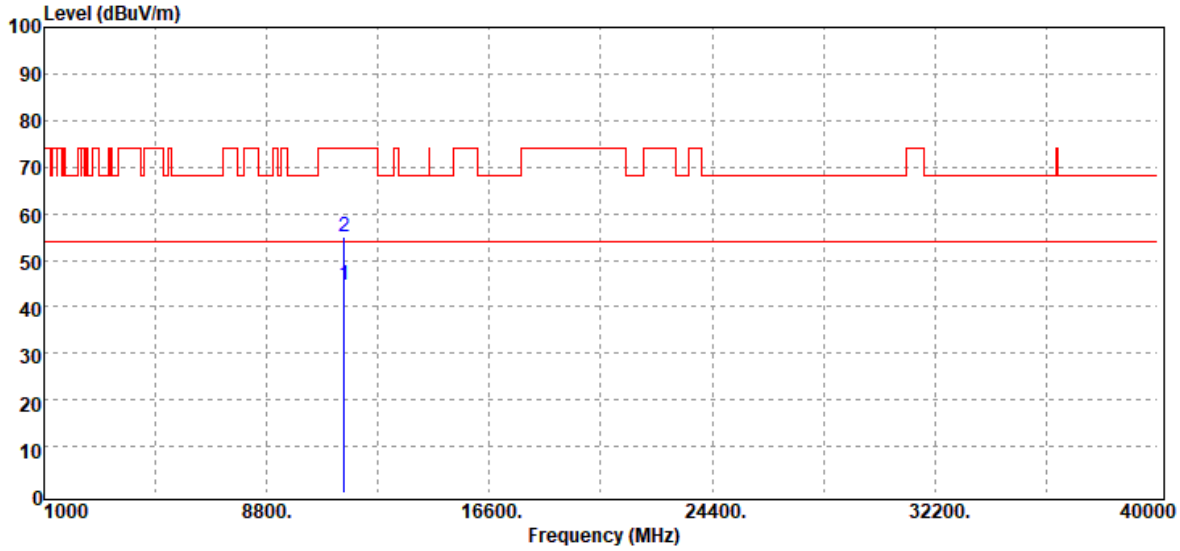
Radiated Spurious Emission Measurement Result 802.11n HT40, 5725~5850 MHz

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band4	Temp./Humi.	:21/52
Frequency	:5755 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



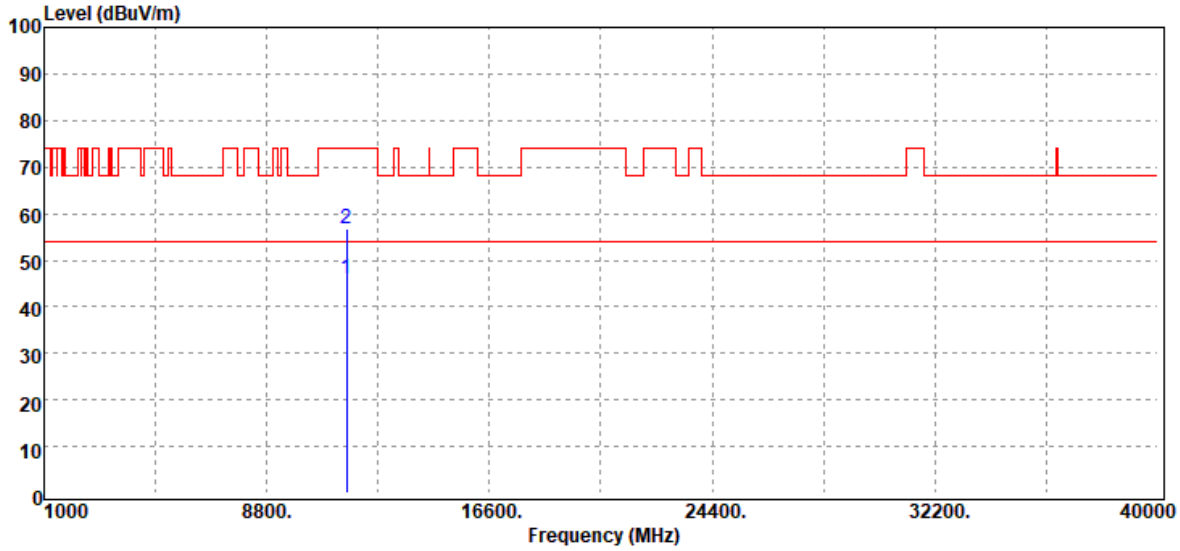
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11510.00	Average	29.84	15.83	45.67	54.00	-8.33
11510.00	Peak	40.24	15.83	56.07	74.00	-17.93

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band4	Temp./Humi.	:21/52
Frequency	:5755 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



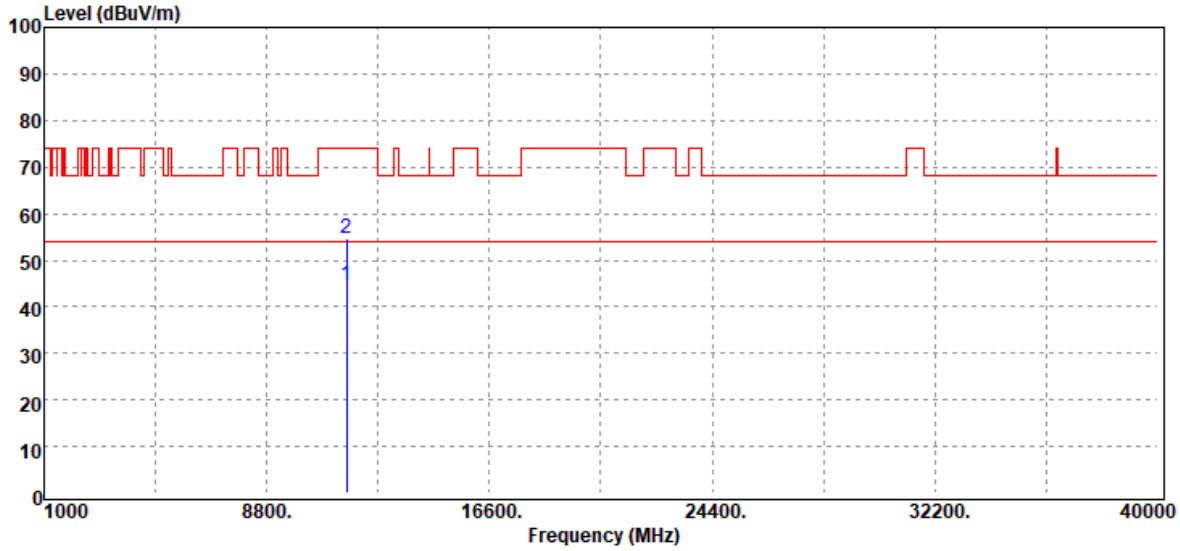
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11510.00	Average	28.68	15.83	44.51	54.00	-9.49
11510.00	Peak	39.08	15.83	54.91	74.00	-19.09

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band4	Temp./Humi.	:21/52
Frequency	:5795 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11590.00	Average	29.37	16.74	46.11	54.00	-7.89
11590.00	Peak	39.94	16.74	56.68	74.00	-17.32

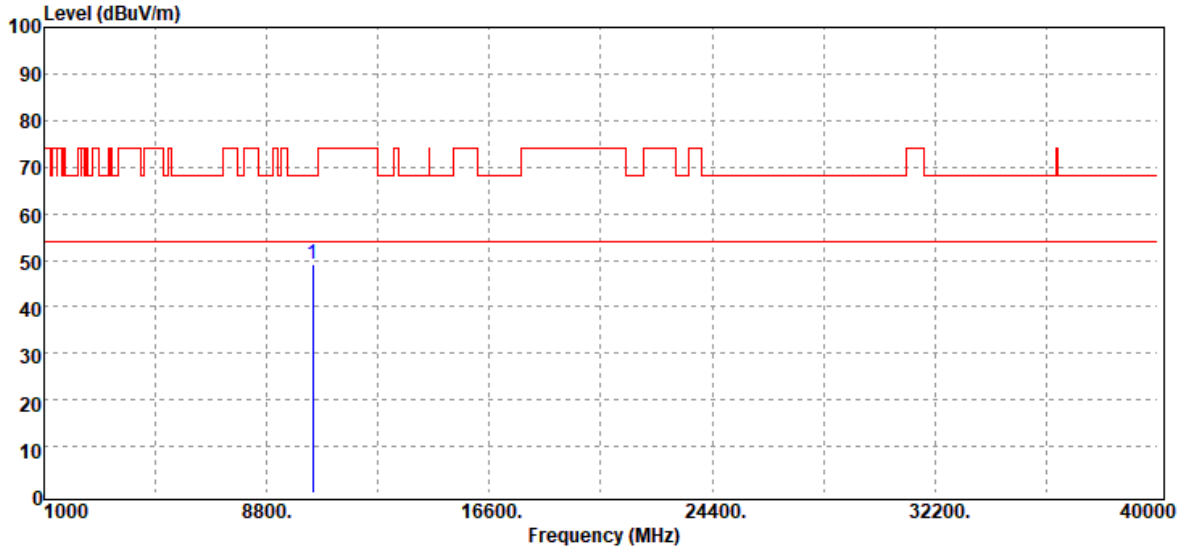
Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11n40 / Band4	Temp./Humi.	:21/52
Frequency	:5795 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11590.00	Average	27.82	16.74	44.56	54.00	-9.44
11590.00	Peak	38.03	16.74	54.77	74.00	-19.23

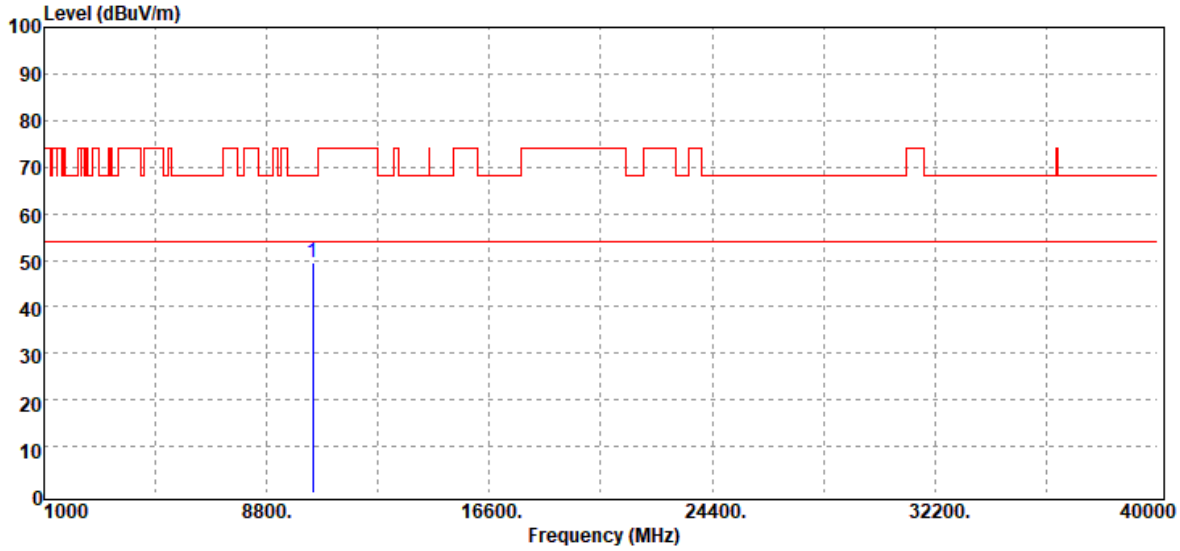
Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5150~5250 MHz

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band1	Temp./Humi.	:21/52
Frequency	:5210 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10420.00	Peak	33.94	15.31	49.25	68.20	-18.95

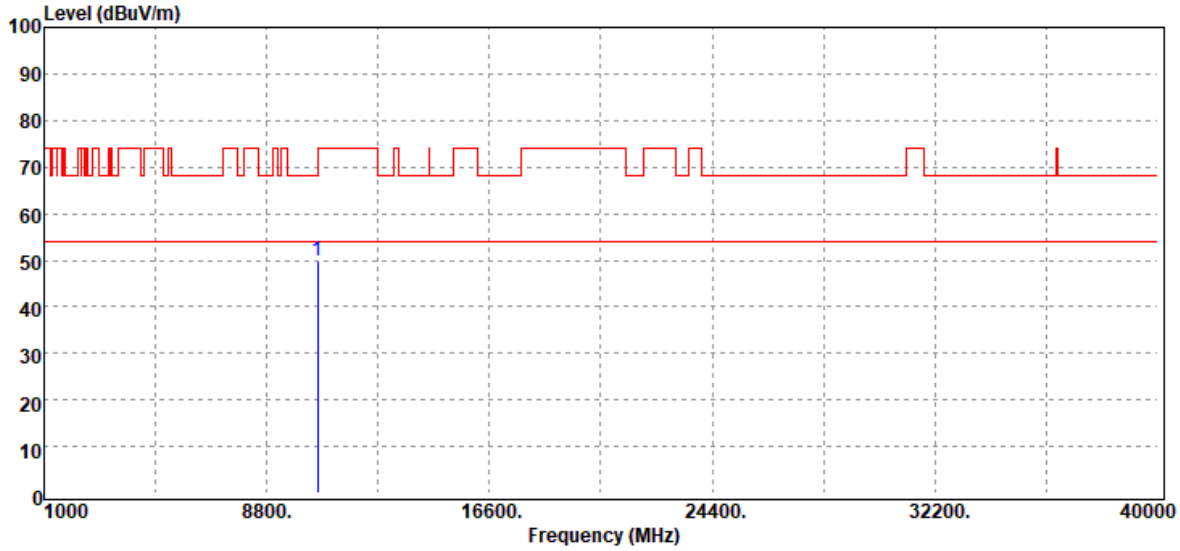
Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band1	Temp./Humi.	:21/52
Frequency	:5210 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10420.00	Peak	34.03	15.31	49.34	68.20	-18.86

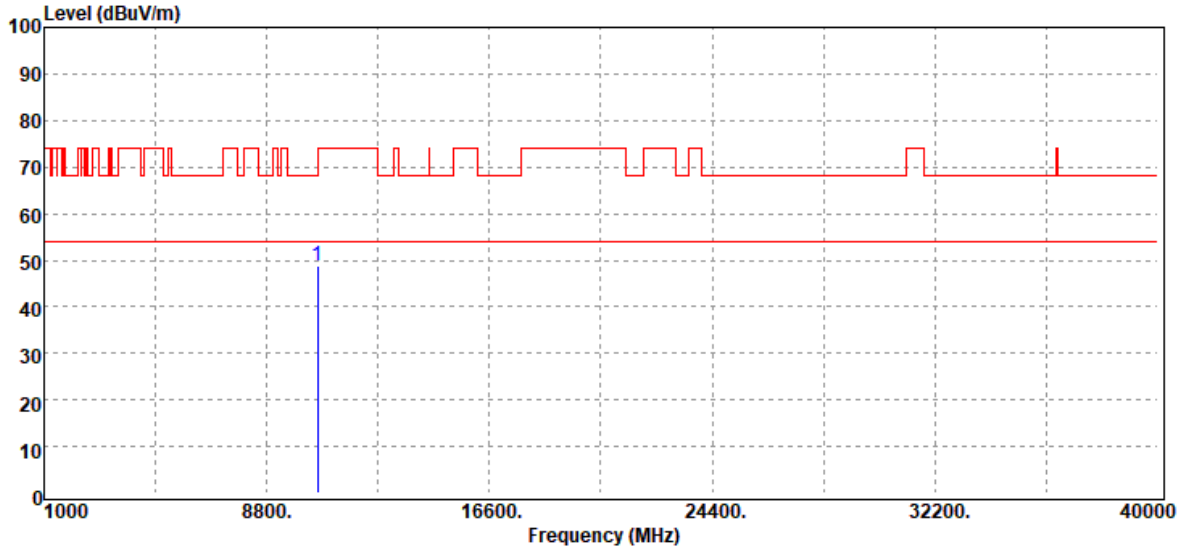
Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5250~5350 MHz

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band2	Temp./Humi.	:21/52
Frequency	:5290 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10580.00	Peak	34.61	15.21	49.82	68.20	-18.38

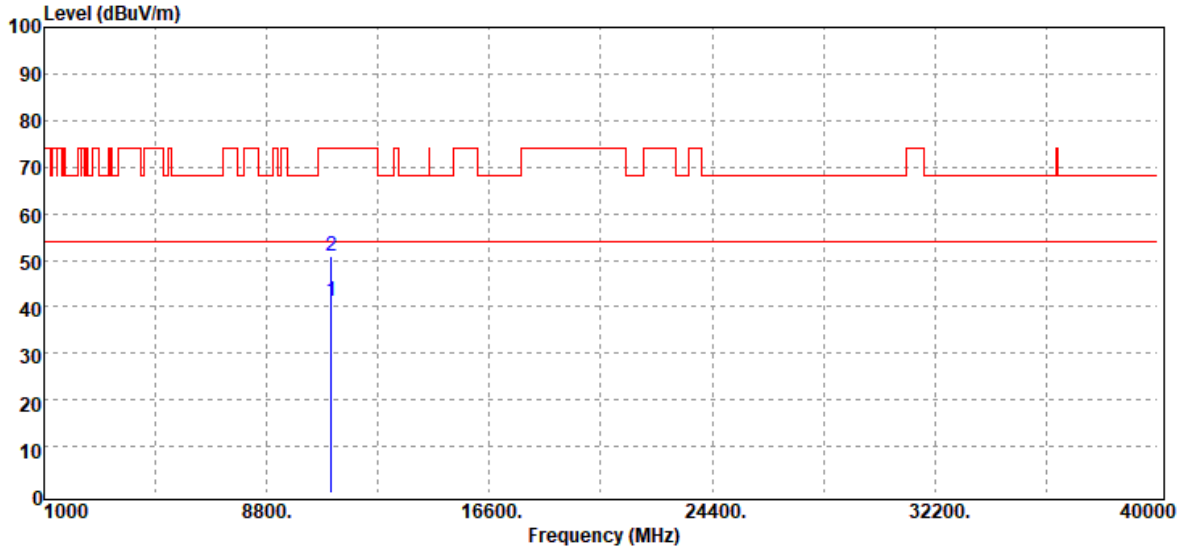
Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band2	Temp./Humi.	:21/52
Frequency	:5290 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
10580.00	Peak	33.43	15.21	48.64	68.20	-19.56

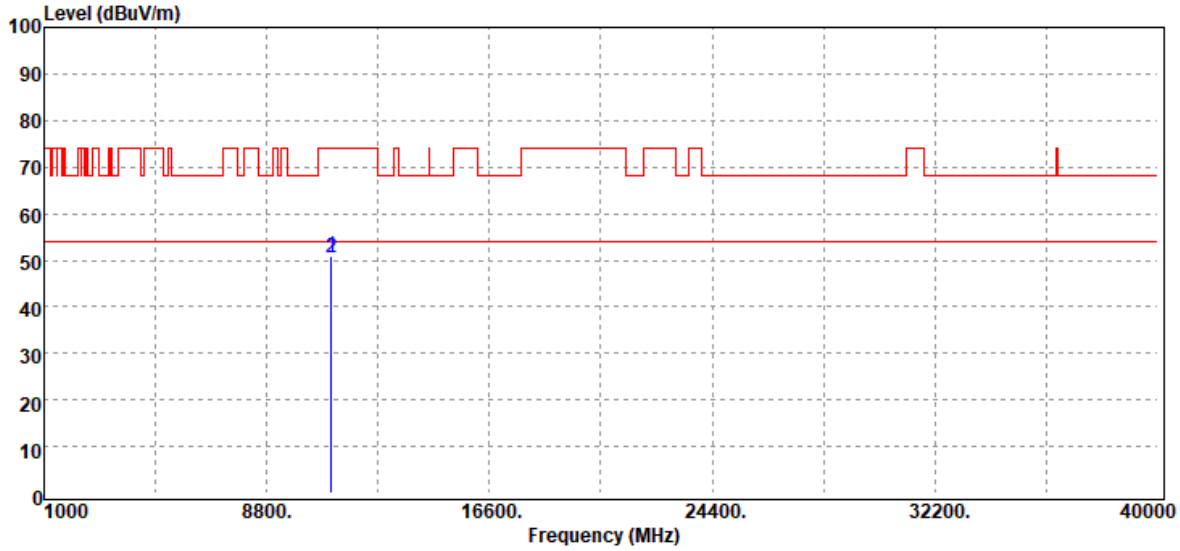
Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5470~5725 MHz

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band3	Temp./Humi.	:21/52
Frequency	:5530 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



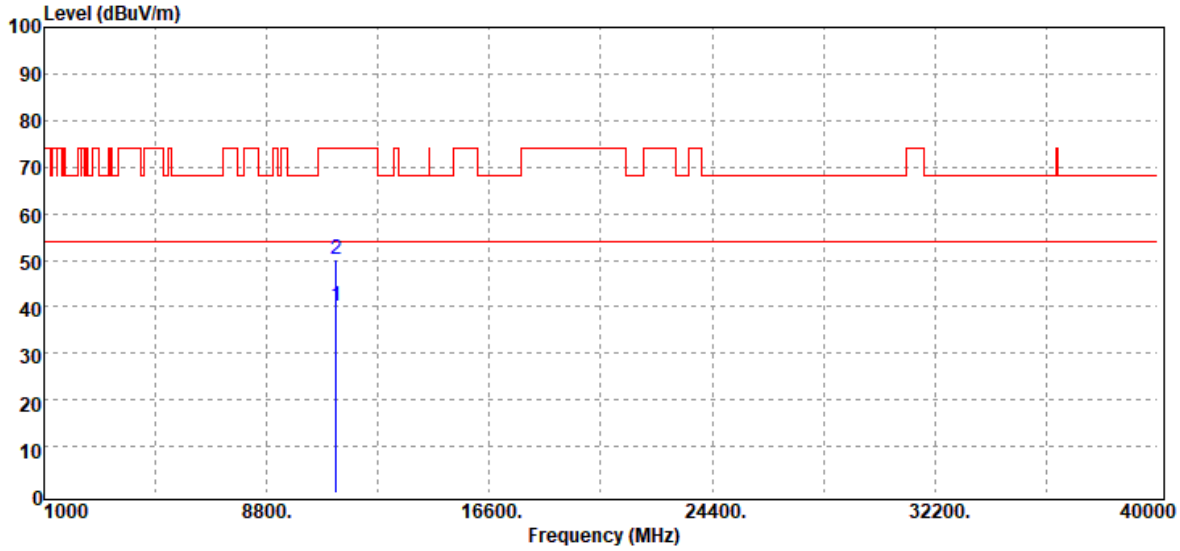
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11060.00	Average	23.57	17.46	41.03	54.00	-12.97
11060.00	Peak	33.24	17.46	50.70	74.00	-23.30

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band3	Temp./Humi.	:21/52
Frequency	:5530 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



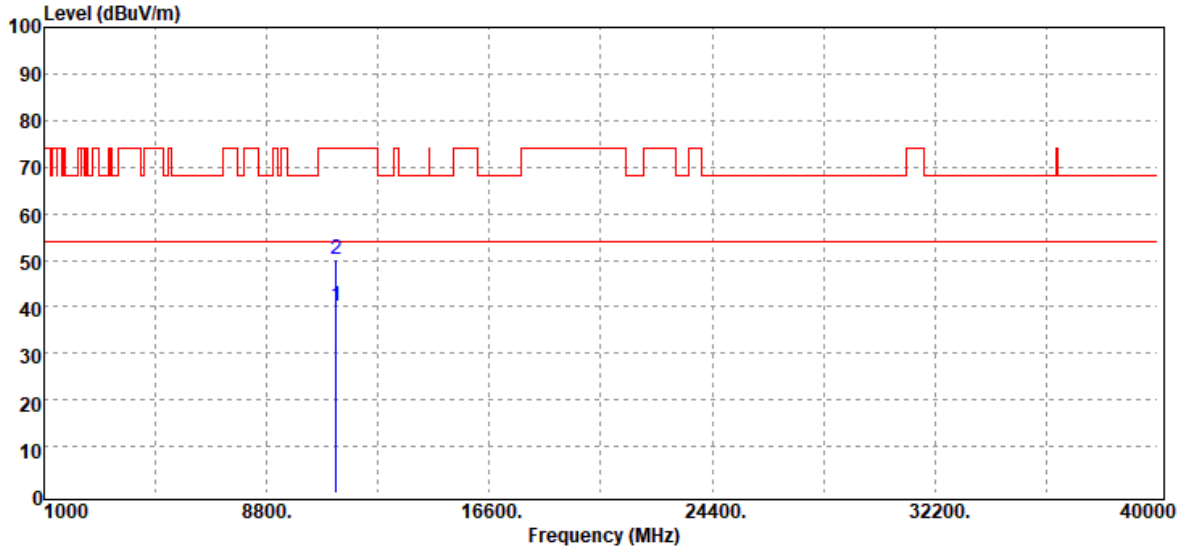
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11060.00	Average	33.39	17.46	50.85	54.00	-3.15
11060.00	Peak	33.02	17.46	50.48	74.00	-23.52

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band3	Temp./Humi.	:21/52
Frequency	:5610 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



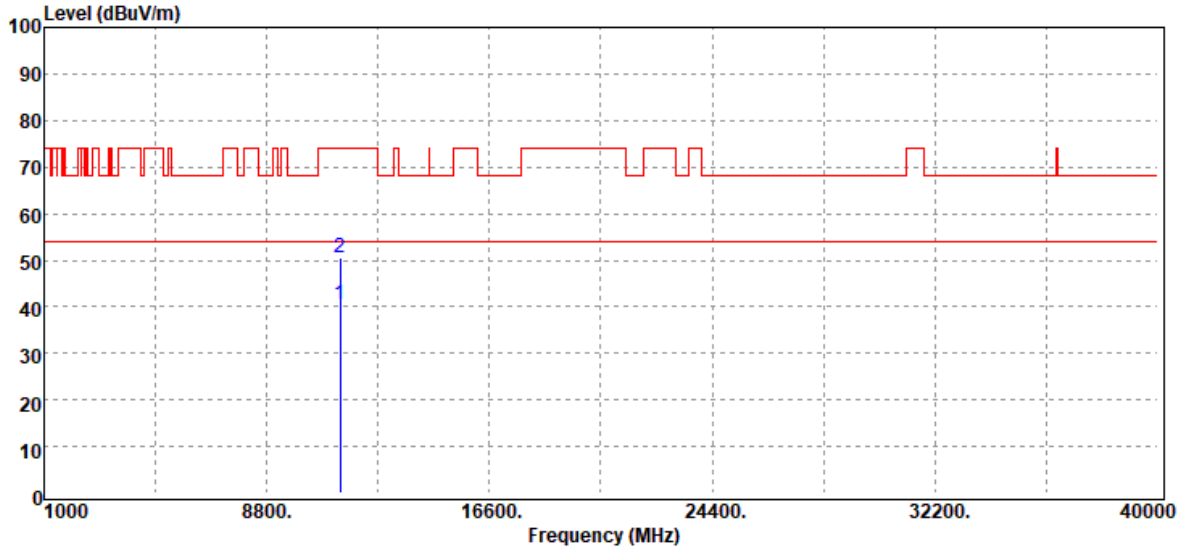
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11220.00	Average	23.42	16.62	40.04	54.00	-13.96
11220.00	Peak	33.42	16.62	50.04	74.00	-23.96

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band3	Temp./Humi.	:21/52
Frequency	:5610 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Mid	Engineer	:Kane
EUT Pol.	:E2 Plan		



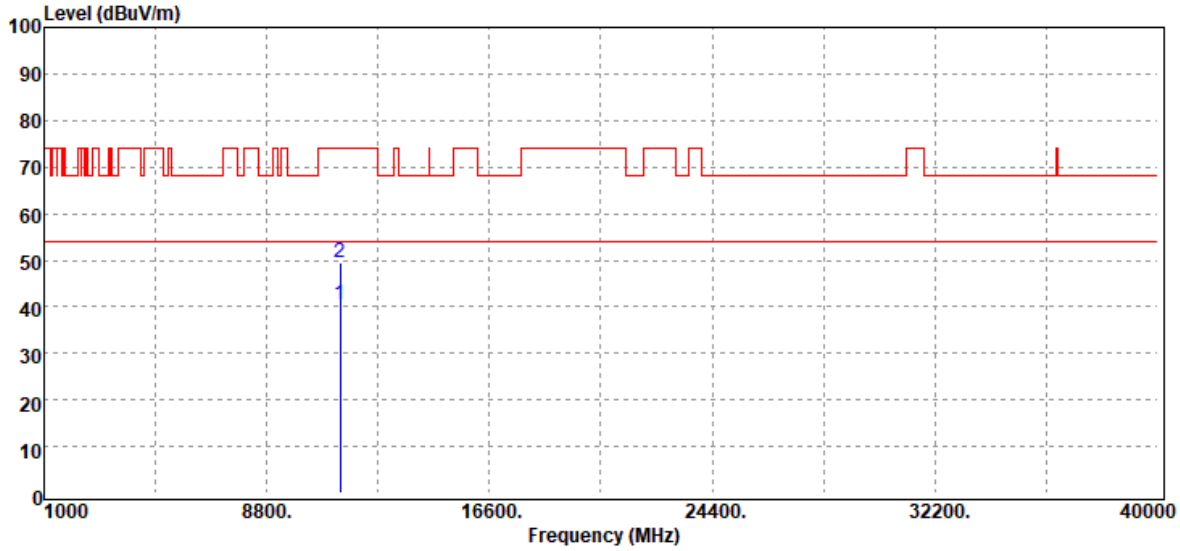
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11220.00	Average	23.63	16.62	40.25	54.00	-13.75
11220.00	Peak	33.40	16.62	50.02	74.00	-23.98

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band3/4	Temp./Humi.	:21/52
Frequency	:5690 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11380.00	Average	23.64	16.77	40.41	54.00	-13.59
11380.00	Peak	33.59	16.77	50.36	74.00	-23.64

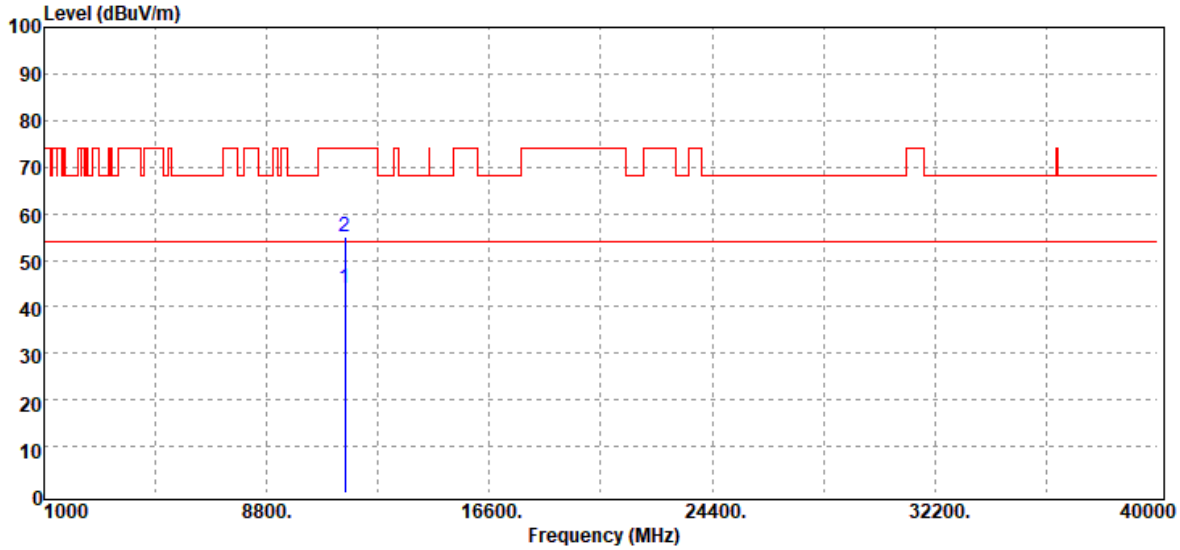
Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band3/4	Temp./Humi.	:21/52
Frequency	:5690 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11380.00	Average	23.67	16.77	40.44	54.00	-13.56
11380.00	Peak	32.88	16.77	49.65	74.00	-24.35

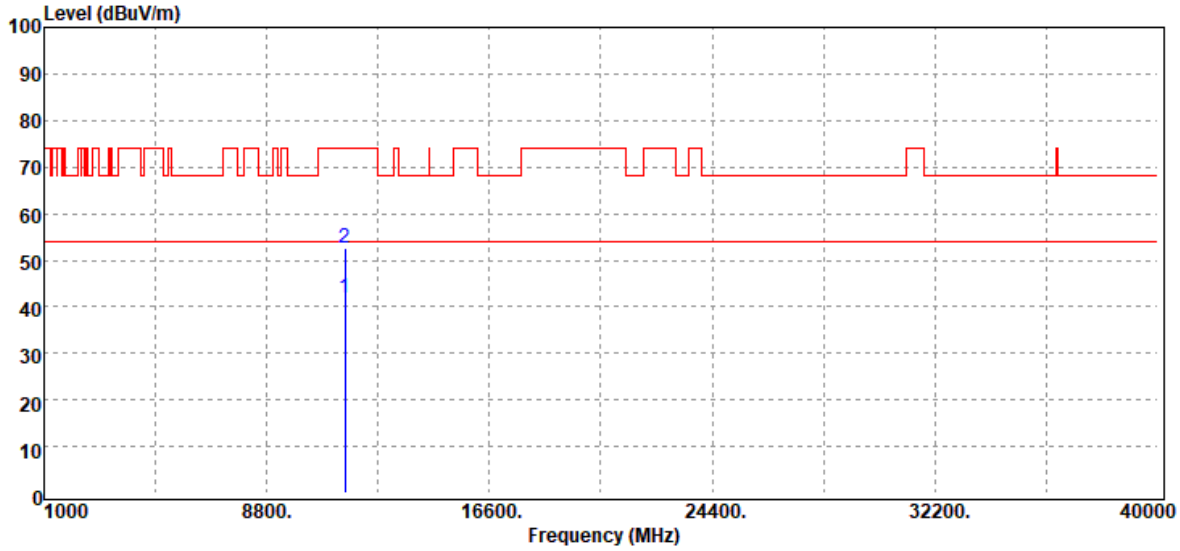
Radiated Spurious Emission Measurement Result 802.11ac VHT80, 5725~5850 MHz

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band4	Temp./Humi.	:21/52
Frequency	:5775 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11550.00	Average	27.83	16.09	43.92	54.00	-10.08
11550.00	Peak	38.84	16.09	54.93	74.00	-19.07

Report Number	:T190612W02	Test Date	:2019-06-27
Operation Band	:802.11ac80 / Band4	Temp./Humi.	:21/52
Frequency	:5775 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:Tx CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		

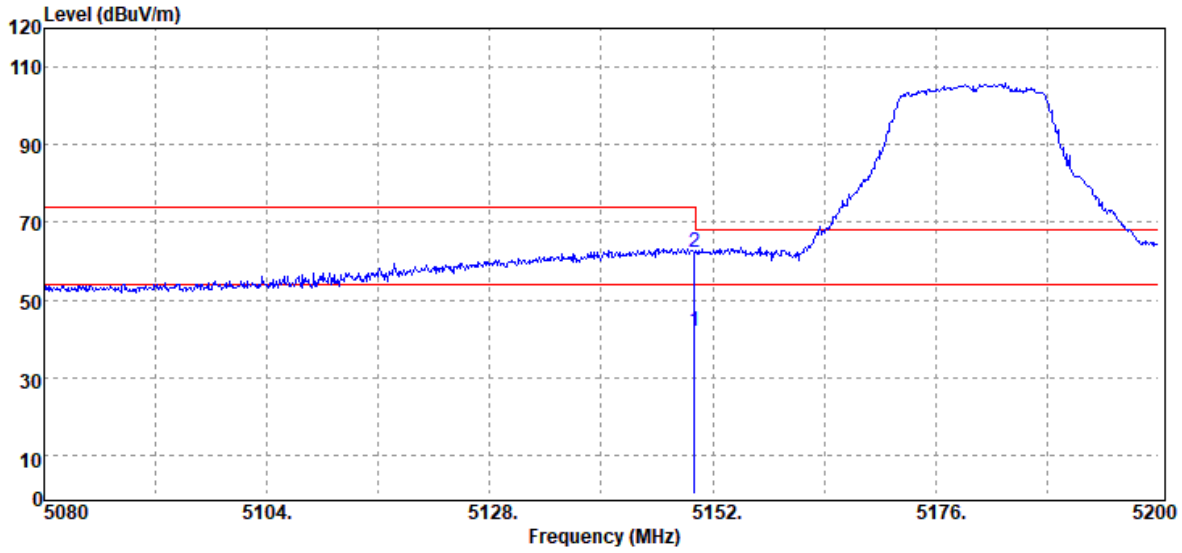


Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
11550.00	Average	25.89	16.09	41.98	54.00	-12.02
11550.00	Peak	36.41	16.09	52.50	74.00	-21.50

Band edge falling to restricted band

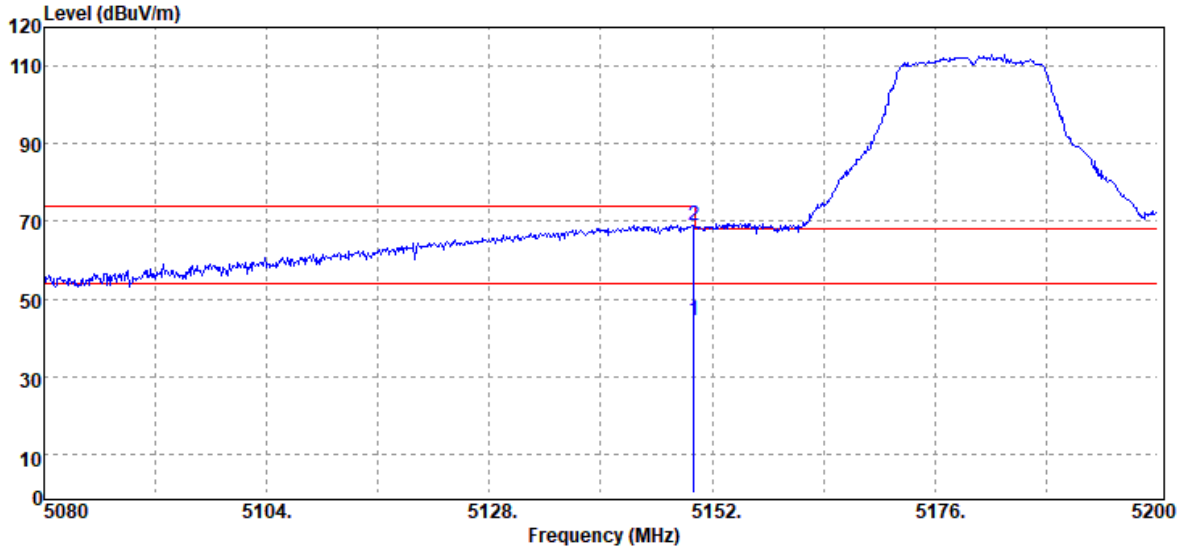
802.11a mode

Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band1	Temp./Humi.	:20/50
Frequency	:5180 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



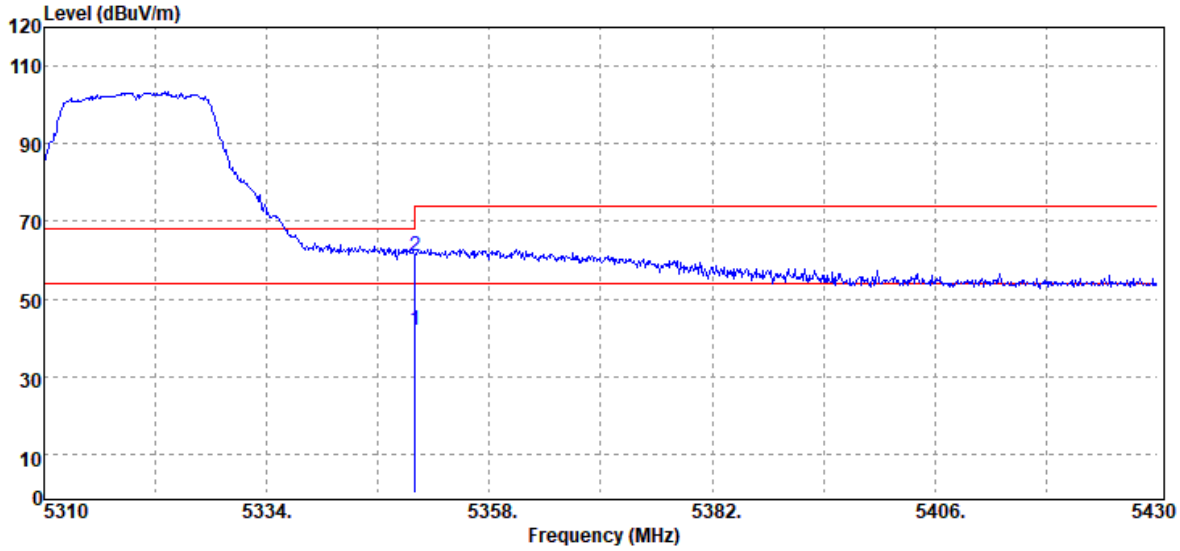
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5150.00	Average	36.82	4.92	41.74	54.00	-12.26
5150.00	Peak	57.21	4.92	62.13	74.00	-11.87

Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band1	Temp./Humi.	:20/50
Frequency	:5180 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



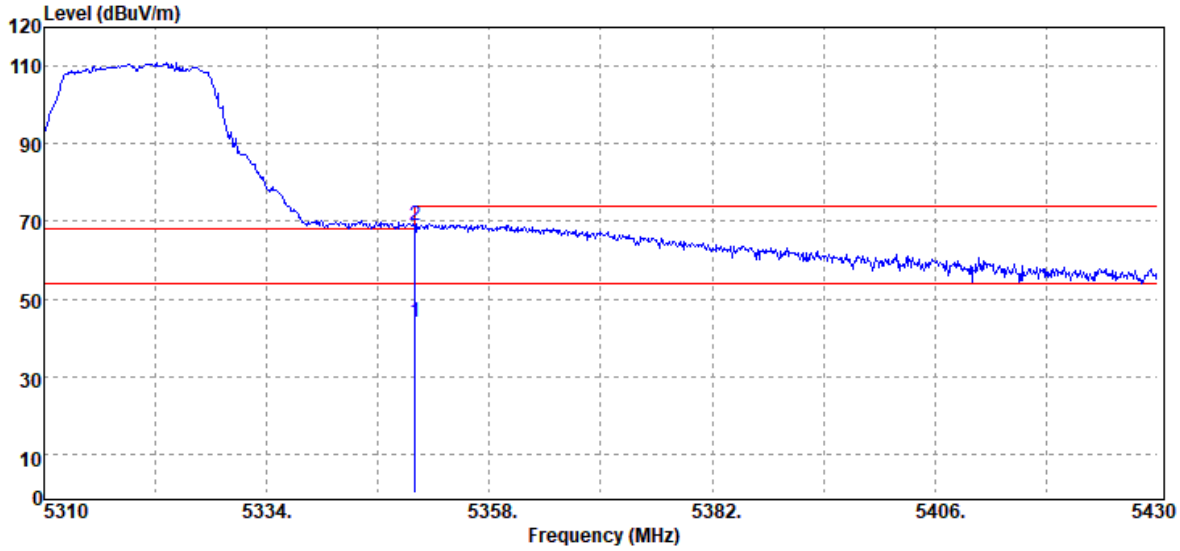
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5150.00	Average	39.43	4.92	44.35	54.00	-9.65
5150.00	Peak	64.15	4.92	69.07	74.00	-4.93

Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band2	Temp./Humi.	:20/50
Frequency	:5320 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



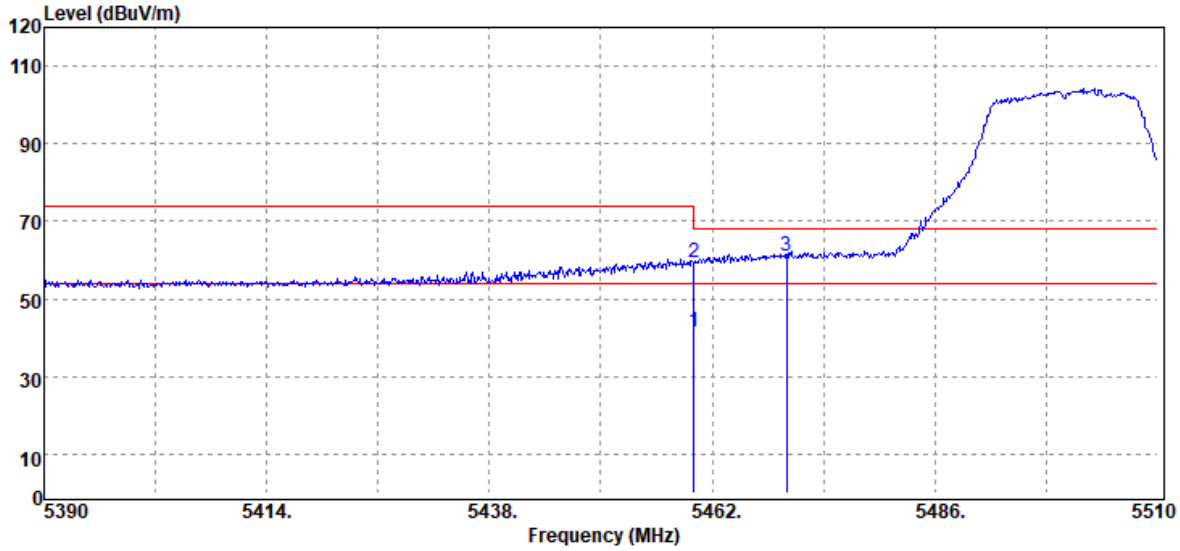
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	36.56	5.21	41.77	54.00	-12.23
5350.00	Peak	55.70	5.21	60.91	74.00	-13.09

Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band2	Temp./Humi.	:20/50
Frequency	:5320 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



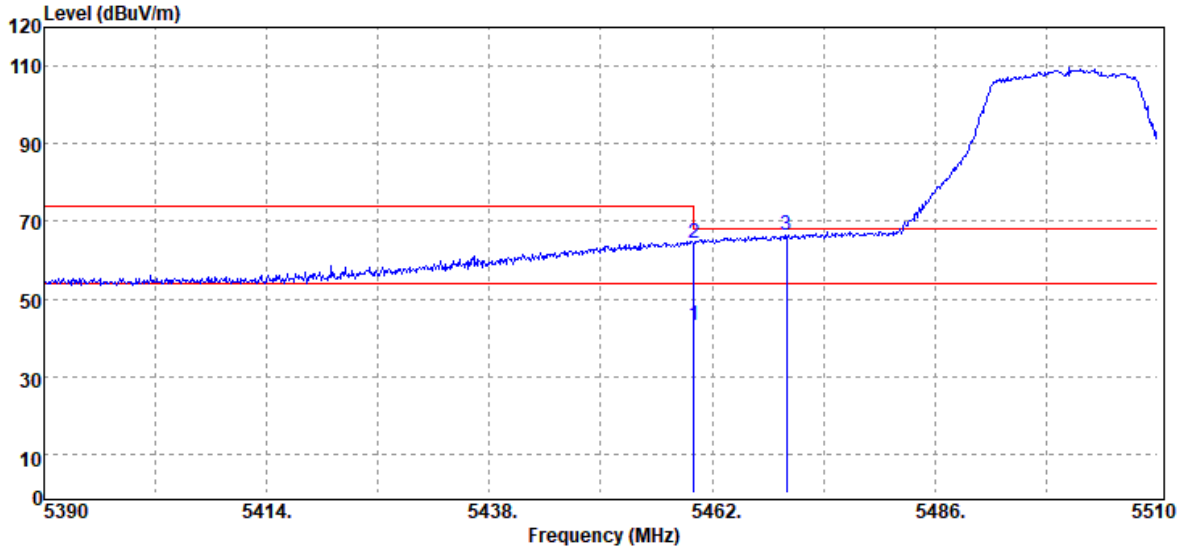
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	38.95	5.21	44.16	54.00	-9.84
5350.00	Peak	63.75	5.21	68.96	74.00	-5.04

Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band3	Temp./Humi.	:20/50
Frequency	:5500 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



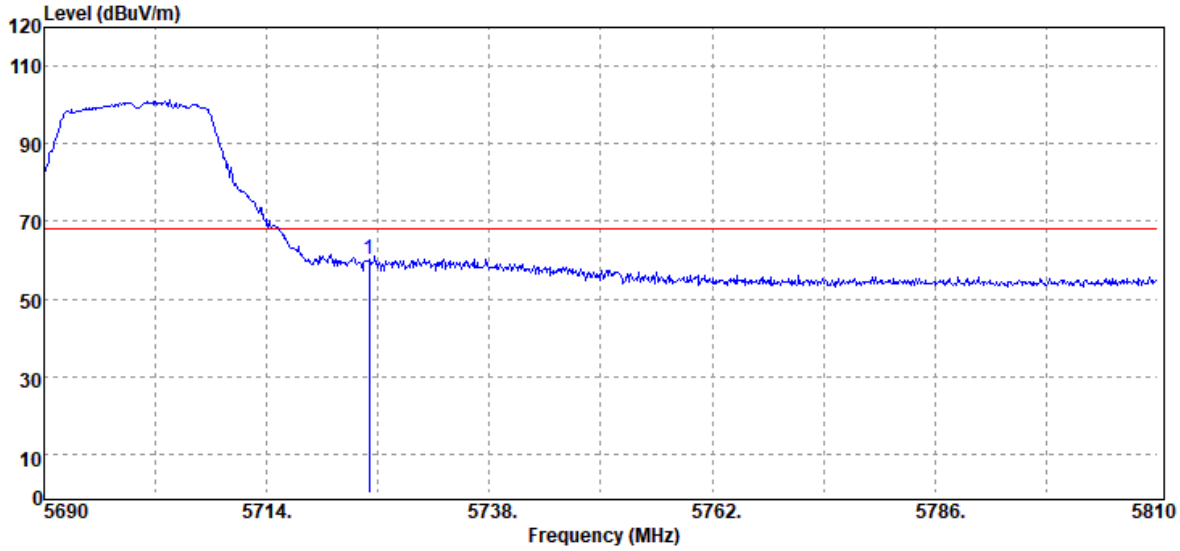
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	36.07	5.63	41.70	54.00	-12.30
5460.00	Peak	53.92	5.63	59.55	74.00	-14.45
5470.00	Peak	55.51	5.65	61.16	68.20	-7.04

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11a / Band3	Temp./Humi.	:20/50
Frequency	:5500 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



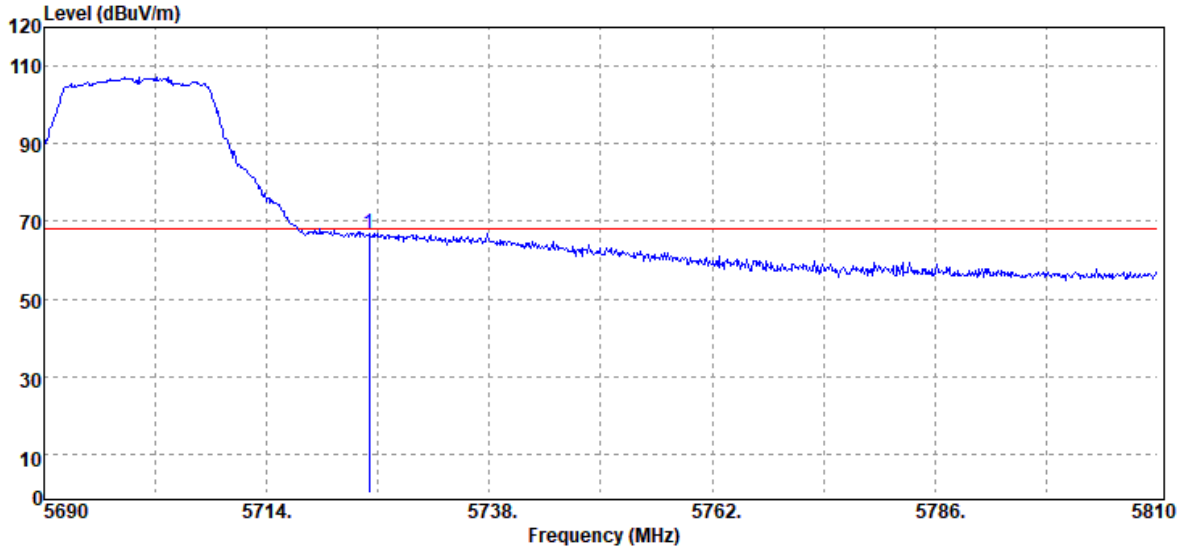
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	37.40	5.63	43.03	54.00	-10.97
5460.00	Peak	58.87	5.63	64.50	74.00	-9.50
5470.00	Peak	60.68	5.65	66.33	68.20	-1.87

Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band3	Temp./Humi.	:20/50
Frequency	:5700 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



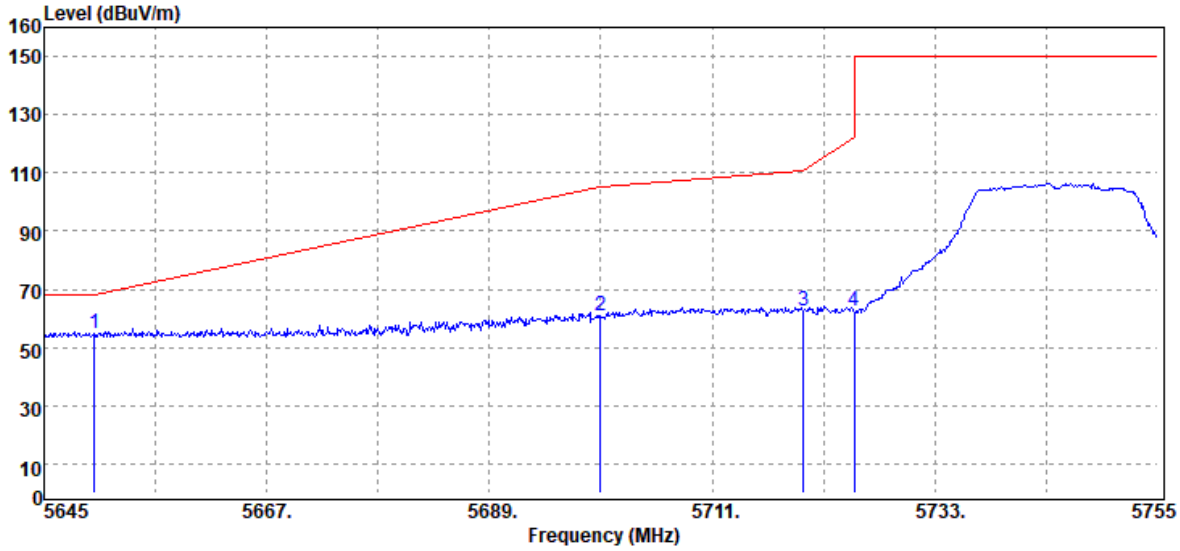
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5725.00	Peak	53.74	6.34	60.08	68.20	-8.12

Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band3	Temp./Humi.	:20/50
Frequency	:5700 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



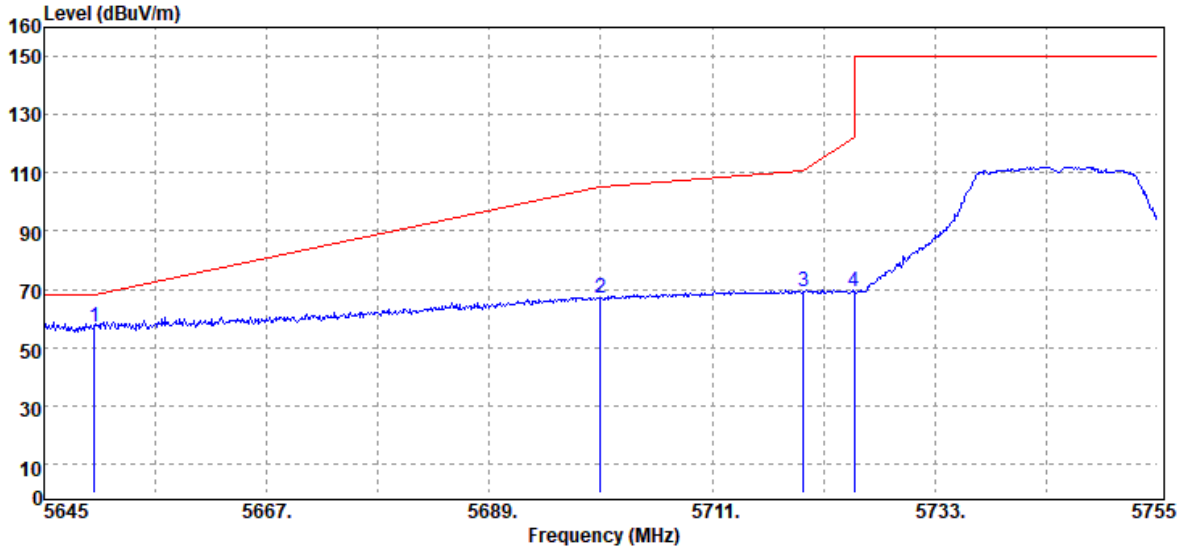
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5725.00	Peak	60.54	6.34	66.88	68.20	-1.32

Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band4	Temp./Humi.	:20/50
Frequency	:5745 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



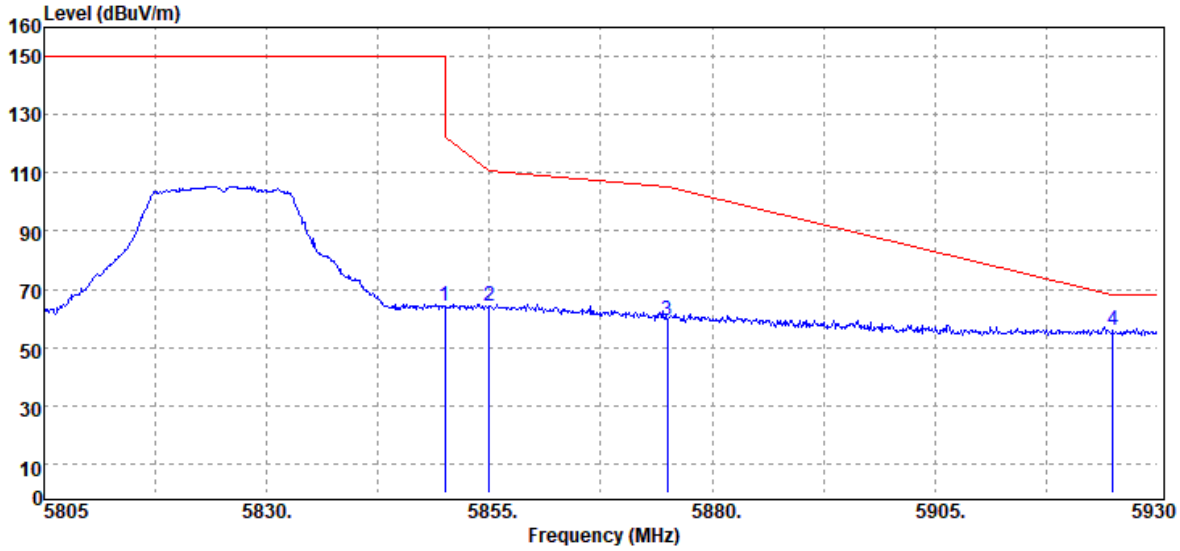
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	48.89	6.04	54.93	68.20	-13.27
5700.00	Peak	54.37	6.32	60.69	105.20	-44.51
5720.00	Peak	56.35	6.33	62.68	110.80	-48.12
5725.00	Peak	56.43	6.34	62.77	122.20	-59.43

Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band4	Temp./Humi.	:20/50
Frequency	:5745 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



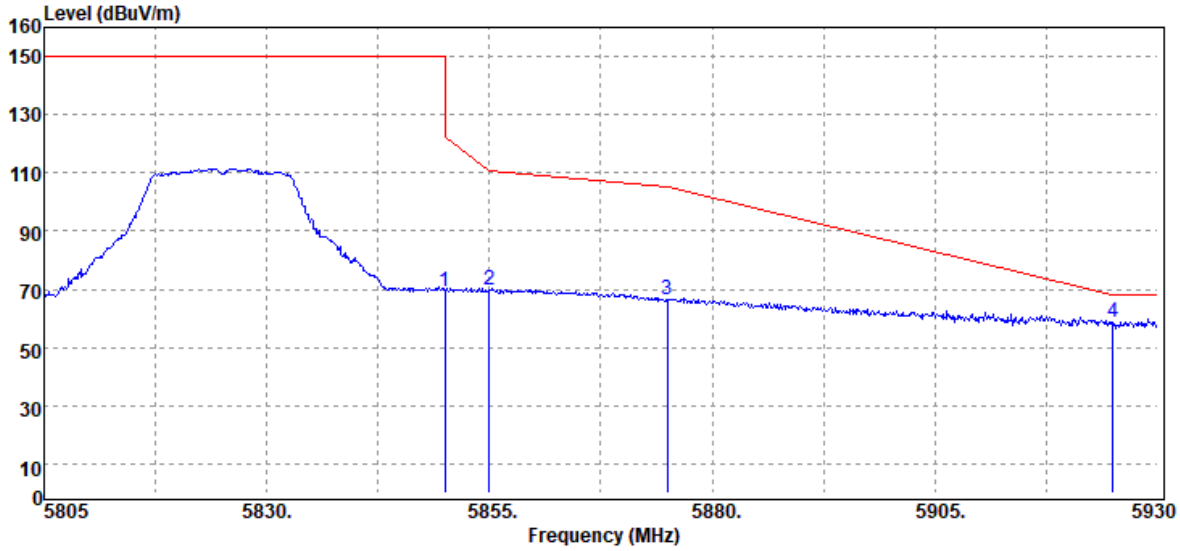
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	51.24	6.04	57.28	68.20	-10.92
5700.00	Peak	60.63	6.32	66.95	105.20	-38.25
5720.00	Peak	62.60	6.33	68.93	110.80	-41.87
5725.00	Peak	62.87	6.34	69.21	122.20	-52.99

Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band4	Temp./Humi.	:20/50
Frequency	:5825 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5850.00	Peak	57.64	6.39	64.03	122.20	-58.17
5855.00	Peak	57.84	6.38	64.22	110.80	-46.58
5875.00	Peak	52.64	6.37	59.01	105.20	-46.19
5925.00	Peak	49.25	6.42	55.67	68.20	-12.53

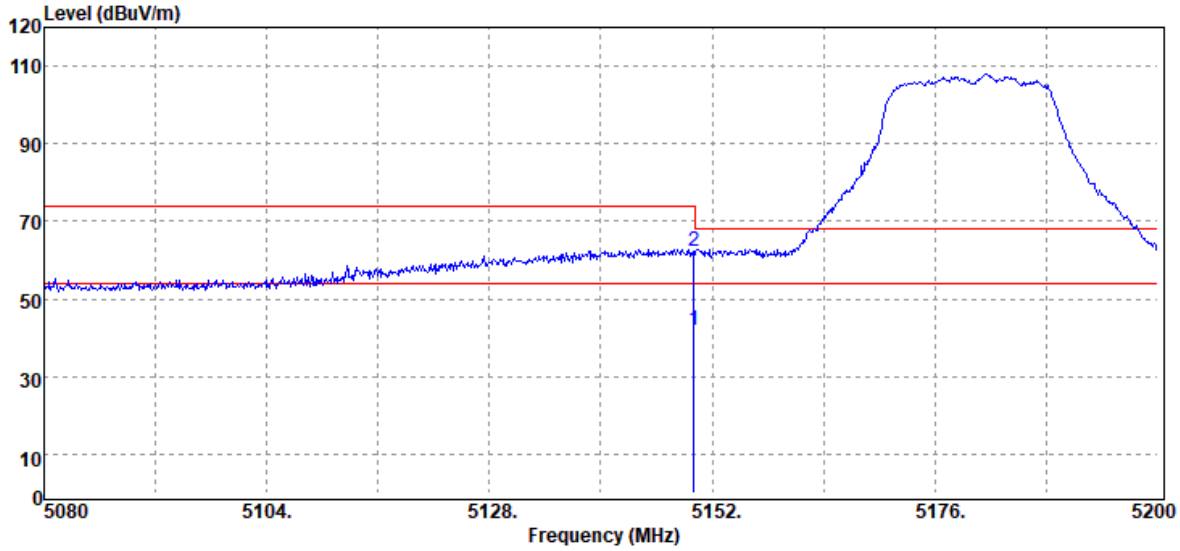
Report Number	:T190612W02	Test Date	:2019-06-25
Operation Band	:802.11a / Band4	Temp./Humi.	:20/50
Frequency	:5825 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5850.00	Peak	62.83	6.39	69.22	122.20	-52.98
5855.00	Peak	63.16	6.38	69.54	110.80	-41.26
5875.00	Peak	60.25	6.37	66.62	105.20	-38.58
5925.00	Peak	52.03	6.42	58.45	68.20	-9.75

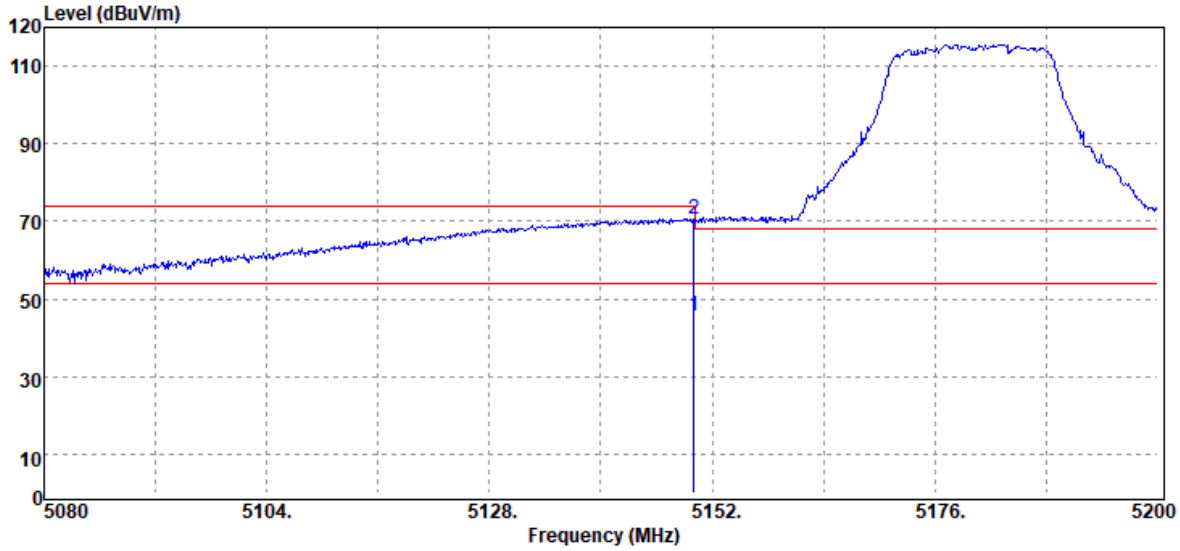
802.11n20 HT mode

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band1	Temp./Humi.	:20/50
Frequency	:5180 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



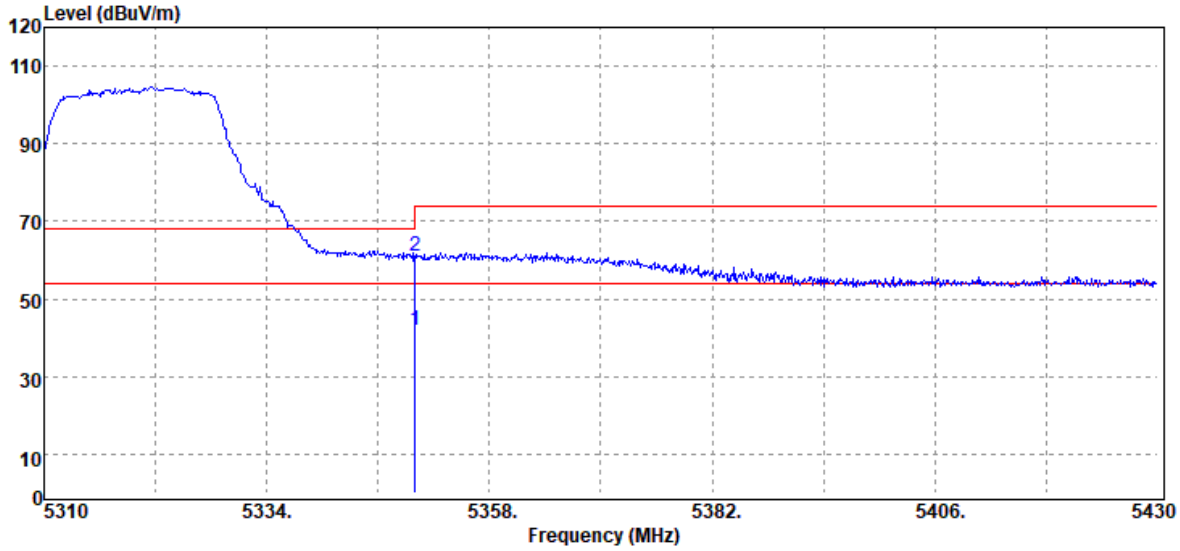
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5150.00	Average	36.85	4.92	41.77	54.00	-12.23
5150.00	Peak	57.18	4.92	62.10	74.00	-11.90

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band1	Temp./Humi.	:20/50
Frequency	:5180 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



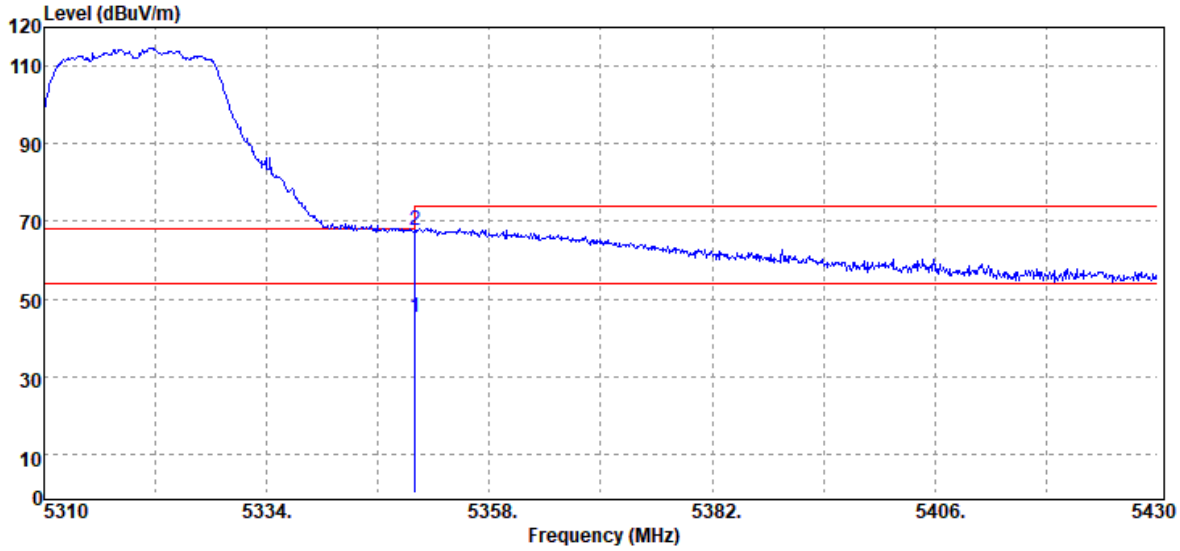
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5150.00	Average	40.83	4.92	45.75	54.00	-8.25
5150.00	Peak	65.63	4.92	70.55	74.00	-3.45

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band2	Temp./Humi.	:20/50
Frequency	:5320 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



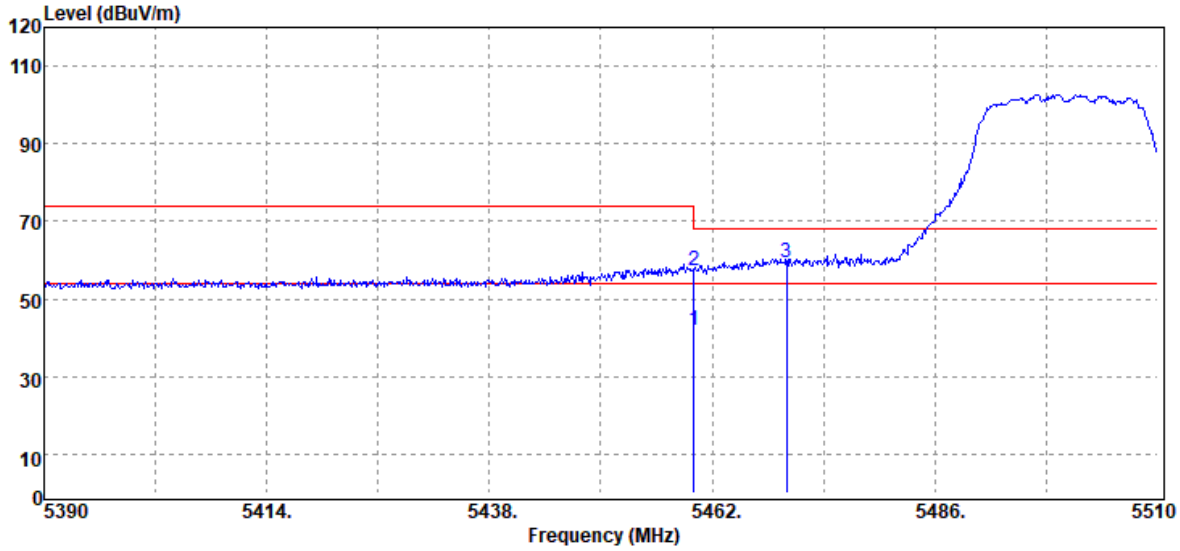
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	36.70	5.21	41.91	54.00	-12.09
5350.00	Peak	55.98	5.21	61.19	74.00	-12.81

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band2	Temp./Humi.	:20/50
Frequency	:5320 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



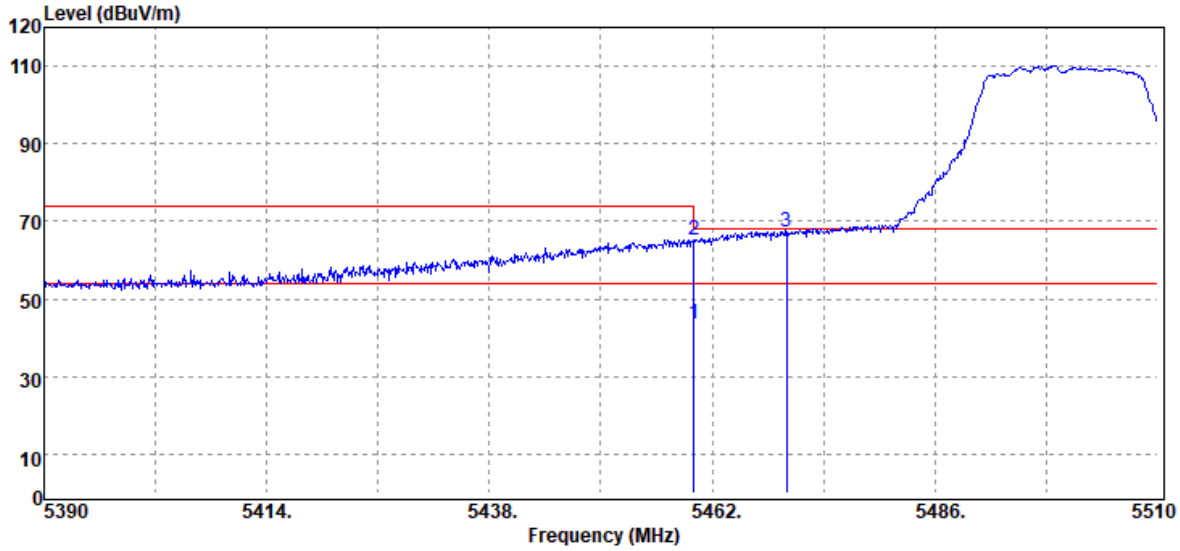
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	40.20	5.21	45.41	54.00	-8.59
5350.00	Peak	62.36	5.21	67.57	74.00	-6.43

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band3	Temp./Humi.	:20/50
Frequency	:5500 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



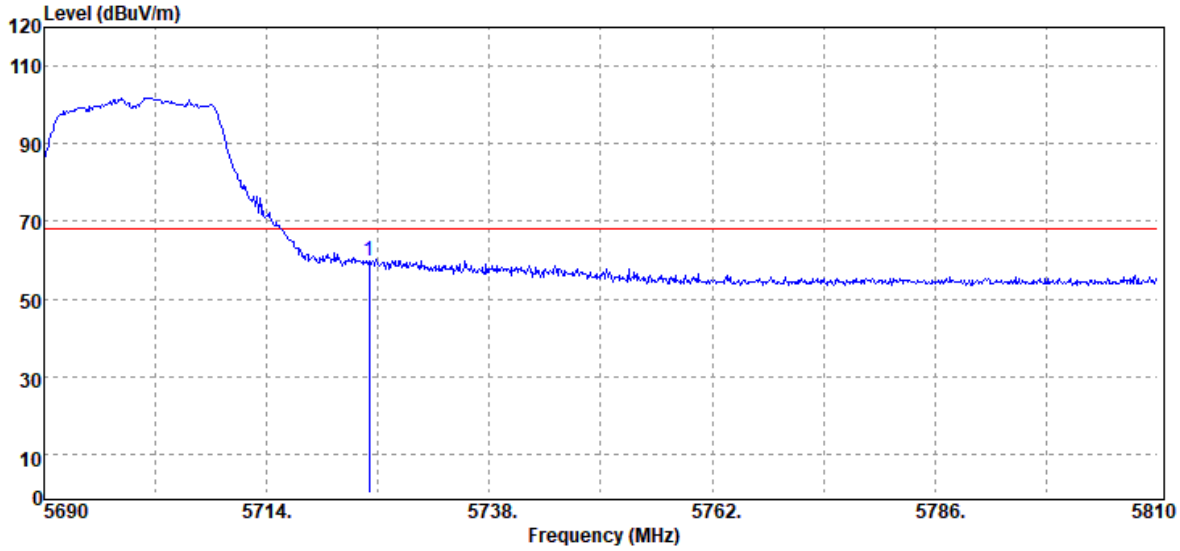
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	36.16	5.63	41.79	54.00	-12.21
5460.00	Peak	51.61	5.63	57.24	74.00	-16.76
5470.00	Peak	53.56	5.65	59.21	68.20	-8.99

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band3	Temp./Humi.	:20/50
Frequency	:5500 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



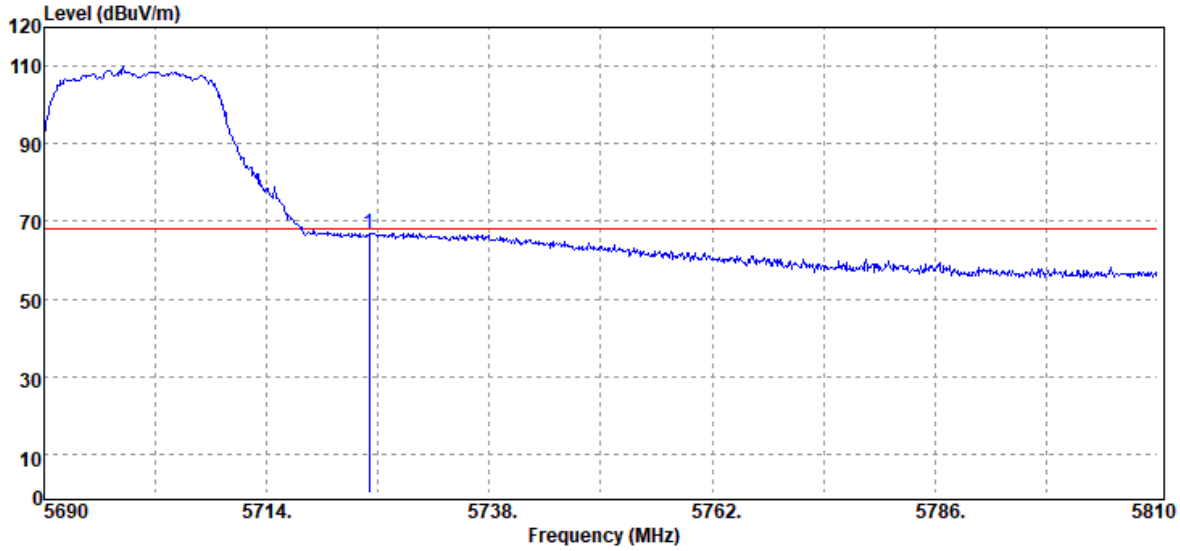
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	37.77	5.63	43.40	54.00	-10.60
5460.00	Peak	59.62	5.63	65.25	74.00	-8.75
5470.00	Peak	61.53	5.65	67.18	68.20	-1.02

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band3	Temp./Humi.	:20/50
Frequency	:5700 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



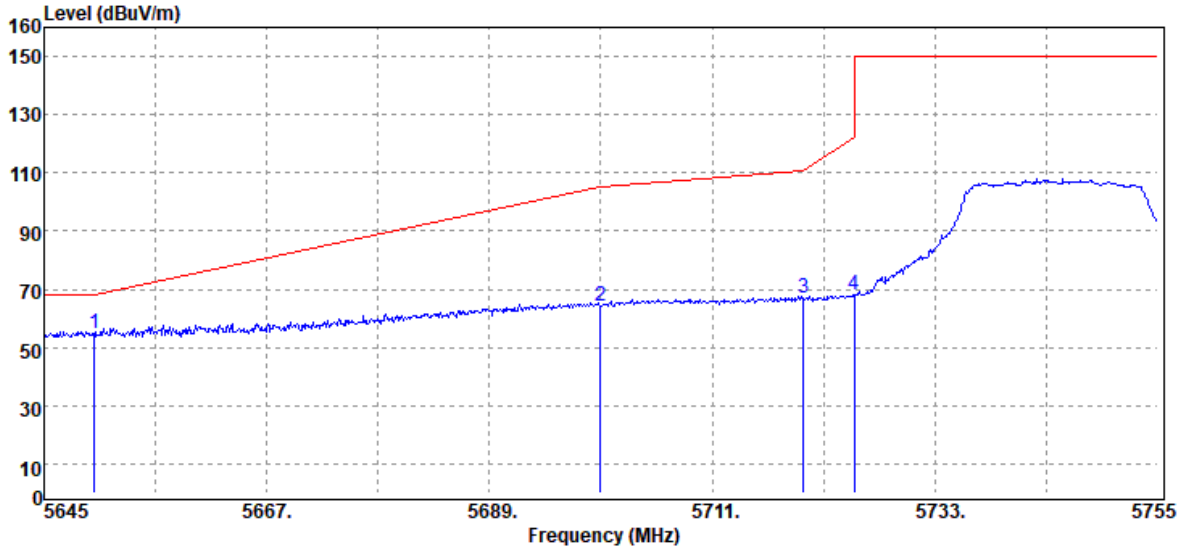
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5725.00	Peak	53.62	6.34	59.96	68.20	-8.24

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band3	Temp./Humi.	:20/50
Frequency	:5700 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



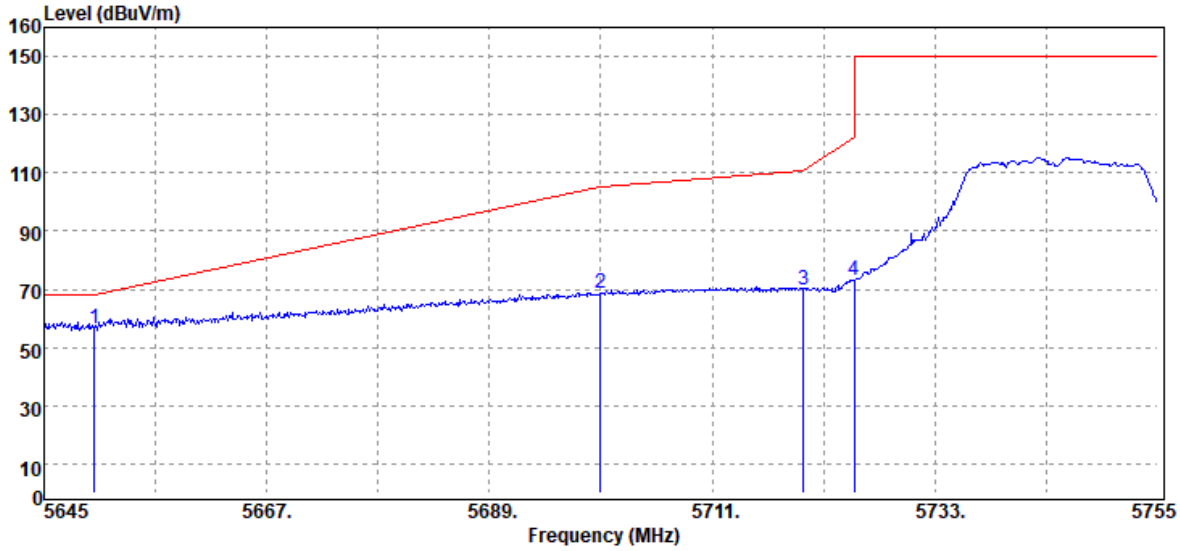
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5725.00	Peak	60.65	6.34	66.99	68.20	-1.21

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band4	Temp./Humi.	:20/50
Frequency	:5745 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



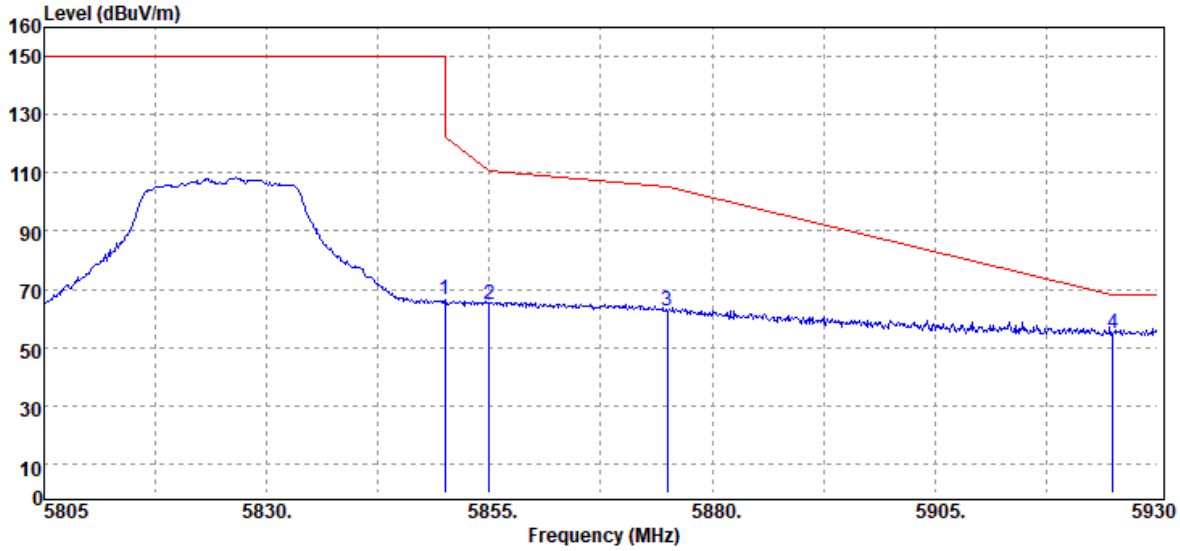
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	48.91	6.04	54.95	68.20	-13.25
5700.00	Peak	57.87	6.32	64.19	105.20	-41.01
5720.00	Peak	60.56	6.33	66.89	110.80	-43.91
5725.00	Peak	61.64	6.34	67.98	122.20	-54.22

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band4	Temp./Humi.	:20/50
Frequency	:5745 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



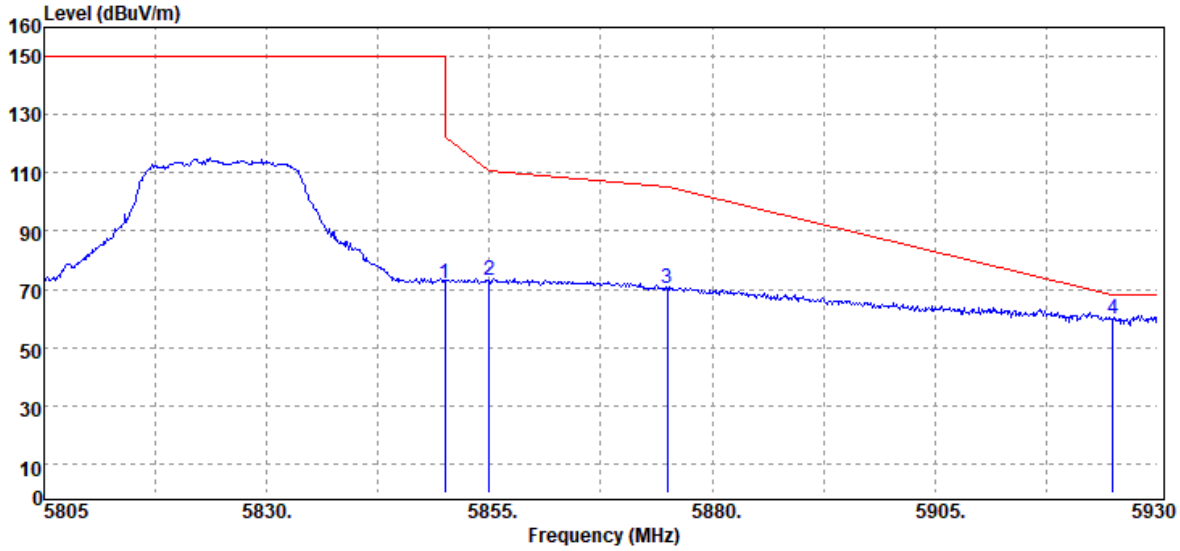
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	50.63	6.04	56.67	68.20	-11.53
5700.00	Peak	62.38	6.32	68.70	105.20	-36.50
5720.00	Peak	63.34	6.33	69.67	110.80	-41.13
5725.00	Peak	66.60	6.34	72.94	122.20	-49.26

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band4	Temp./Humi.	:20/50
Frequency	:5825 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5850.00	Peak	59.85	6.39	66.24	122.20	-55.96
5855.00	Peak	58.45	6.38	64.83	110.80	-45.97
5875.00	Peak	56.19	6.37	62.56	105.20	-42.64
5925.00	Peak	48.52	6.42	54.94	68.20	-13.26

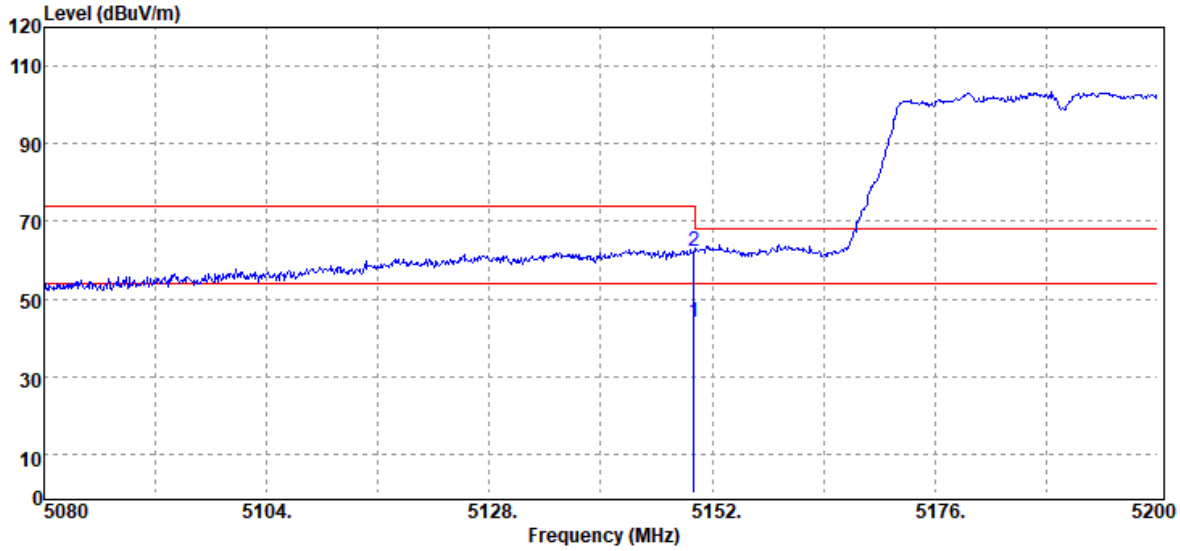
Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n20 / Band4	Temp./Humi.	:20/50
Frequency	:5825 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5850.00	Peak	65.62	6.39	72.01	122.20	-50.19
5855.00	Peak	66.46	6.38	72.84	110.80	-37.96
5875.00	Peak	63.70	6.37	70.07	105.20	-35.13
5925.00	Peak	53.32	6.42	59.74	68.20	-8.46

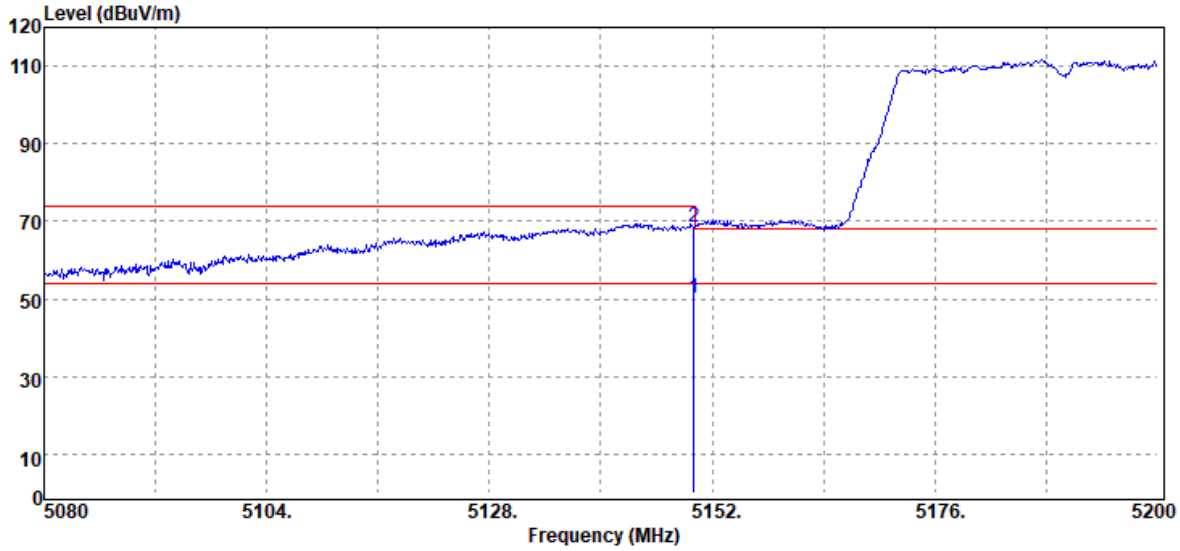
802.11n40 HT mode

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band1	Temp./Humi.	:20/50
Frequency	:5190 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



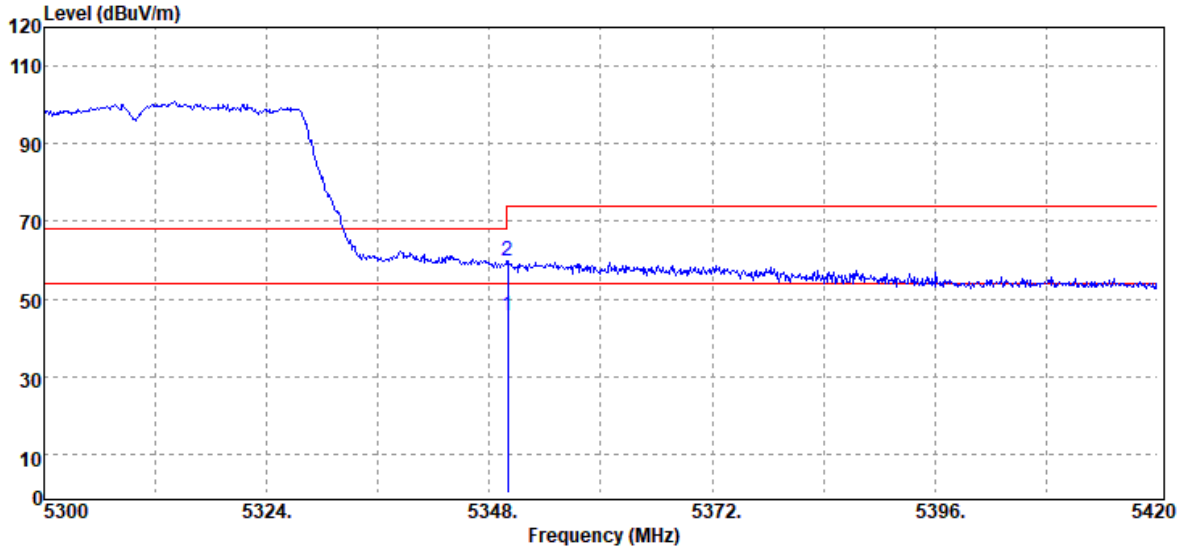
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5150.00	Average	39.07	4.92	43.99	54.00	-10.01
5150.00	Peak	57.36	4.92	62.28	74.00	-11.72

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band1	Temp./Humi.	:20/50
Frequency	:5190 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



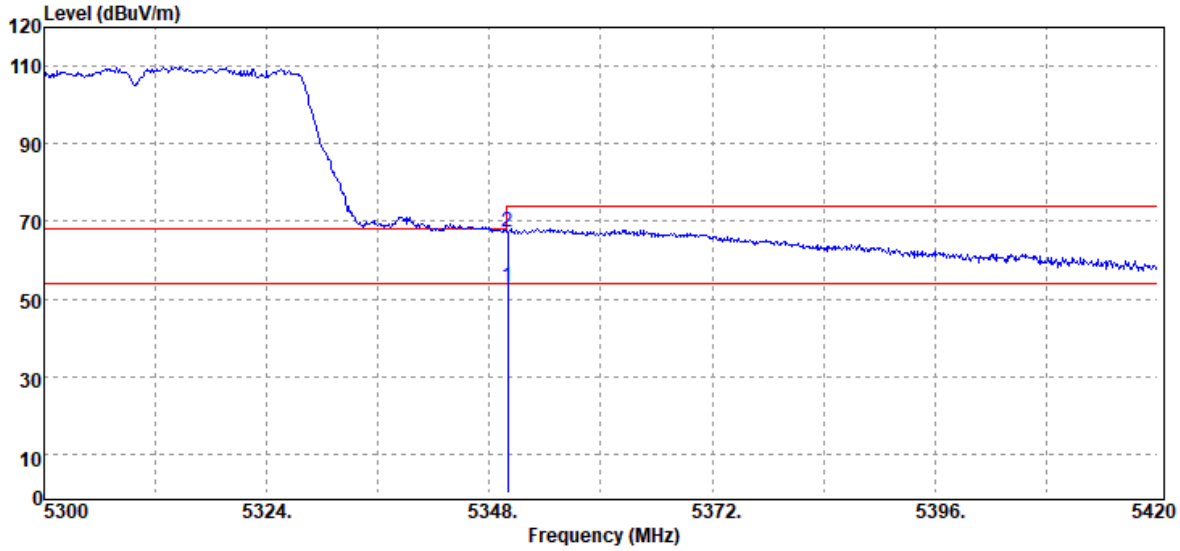
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5150.00	Average	45.30	4.92	50.22	54.00	-3.78
5150.00	Peak	63.63	4.92	68.55	74.00	-5.45

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band2	Temp./Humi.	:20/50
Frequency	:5310 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



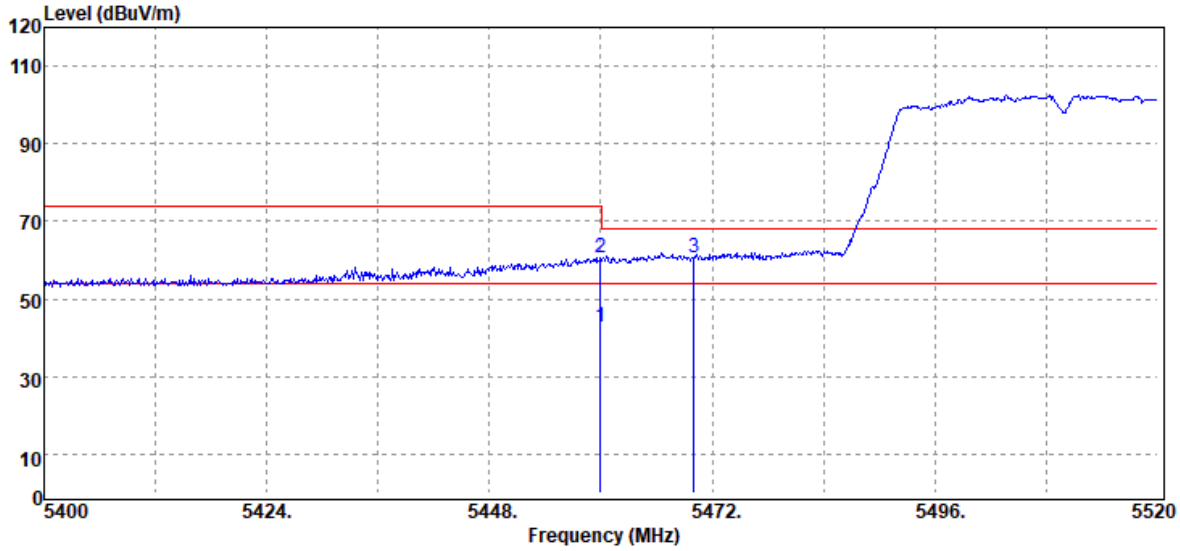
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	40.51	5.21	45.72	54.00	-8.28
5350.00	Peak	54.65	5.21	59.86	74.00	-14.14

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band2	Temp./Humi.	:20/50
Frequency	:5310 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



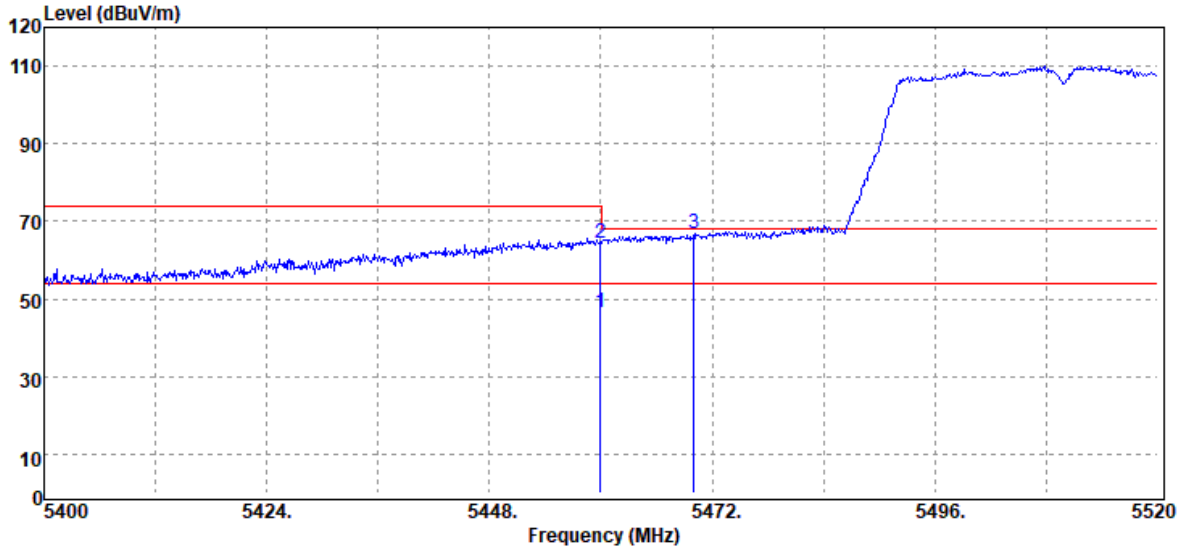
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	47.92	5.21	53.13	54.00	-0.87
5350.00	Peak	61.86	5.21	67.07	74.00	-6.93

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band3	Temp./Humi.	:20/50
Frequency	:5510 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



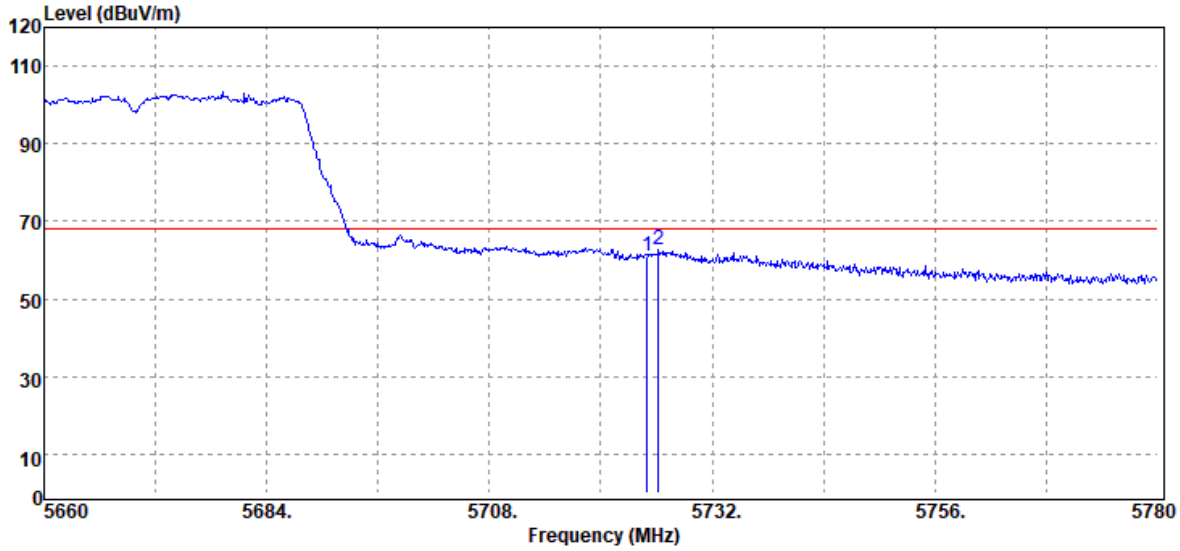
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	37.25	5.63	42.88	54.00	-11.12
5460.00	Peak	55.17	5.63	60.80	74.00	-13.20
5470.00	Peak	54.87	5.65	60.52	68.20	-7.68

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band3	Temp./Humi.	:20/50
Frequency	:5510 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



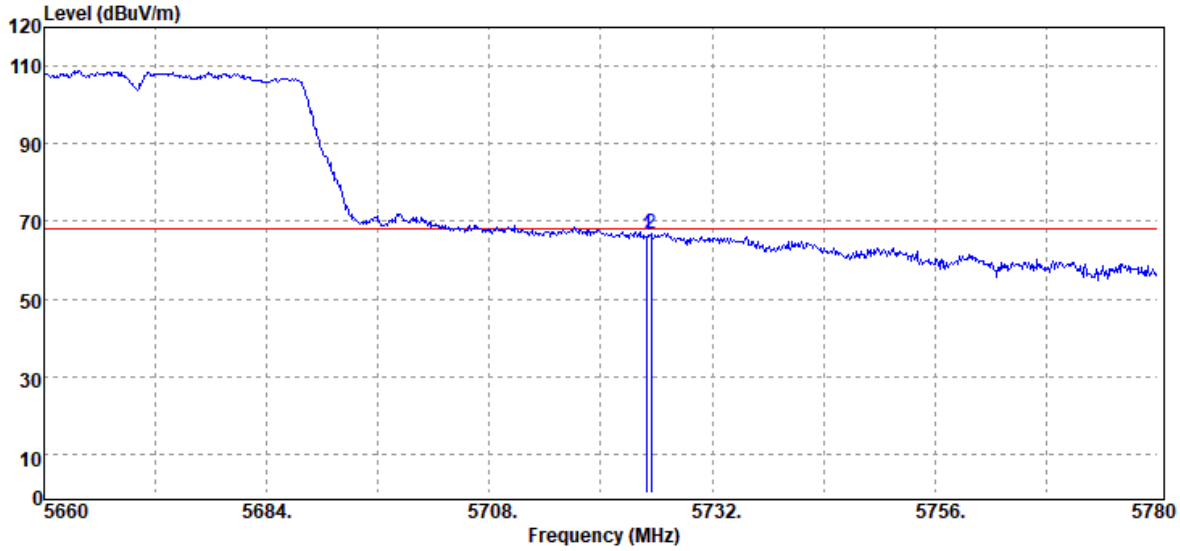
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	40.68	5.63	46.31	54.00	-7.69
5460.00	Peak	58.89	5.63	64.52	74.00	-9.48
5470.00	Peak	61.00	5.65	66.65	68.20	-1.55

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band3	Temp./Humi.	:20/50
Frequency	:5670 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



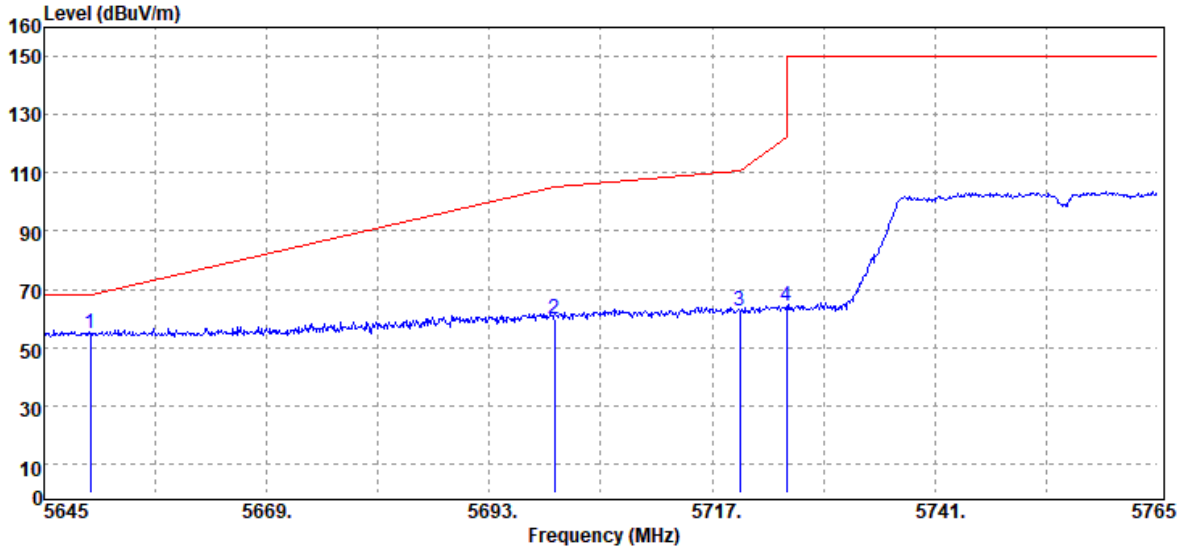
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5725.00	Peak	54.61	6.34	60.95	68.20	-7.25
5726.24	Peak	56.21	6.34	62.55	68.20	-5.65

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band3	Temp./Humi.	:20/50
Frequency	:5670 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



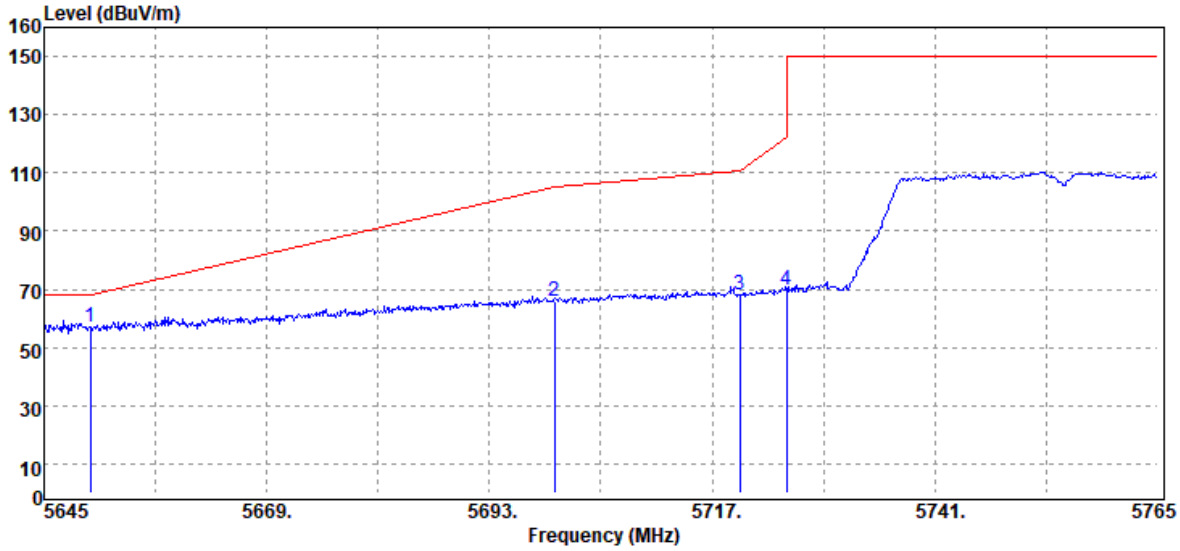
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5725.00	Peak	59.90	6.34	66.24	68.20	-1.96
5725.40	Peak	60.46	6.34	66.80	68.20	-1.40

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band4	Temp./Humi.	:20/50
Frequency	:5755 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



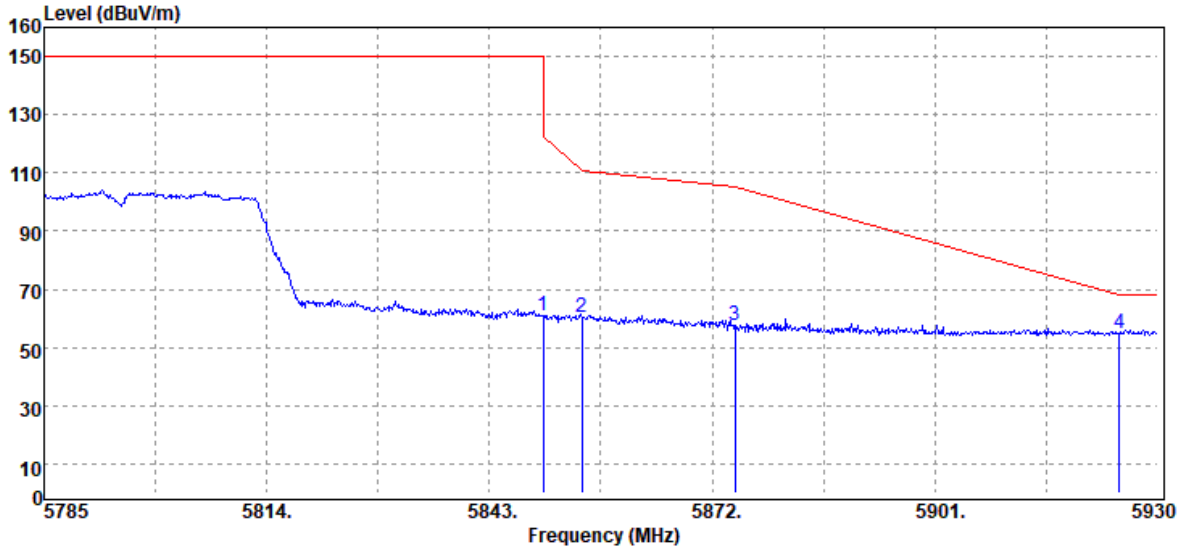
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	48.73	6.04	54.77	68.20	-13.43
5700.00	Peak	53.23	6.32	59.55	105.20	-45.65
5720.00	Peak	56.02	6.33	62.35	110.80	-48.45
5725.00	Peak	57.75	6.34	64.09	122.20	-58.11

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band4	Temp./Humi.	:20/50
Frequency	:5755 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



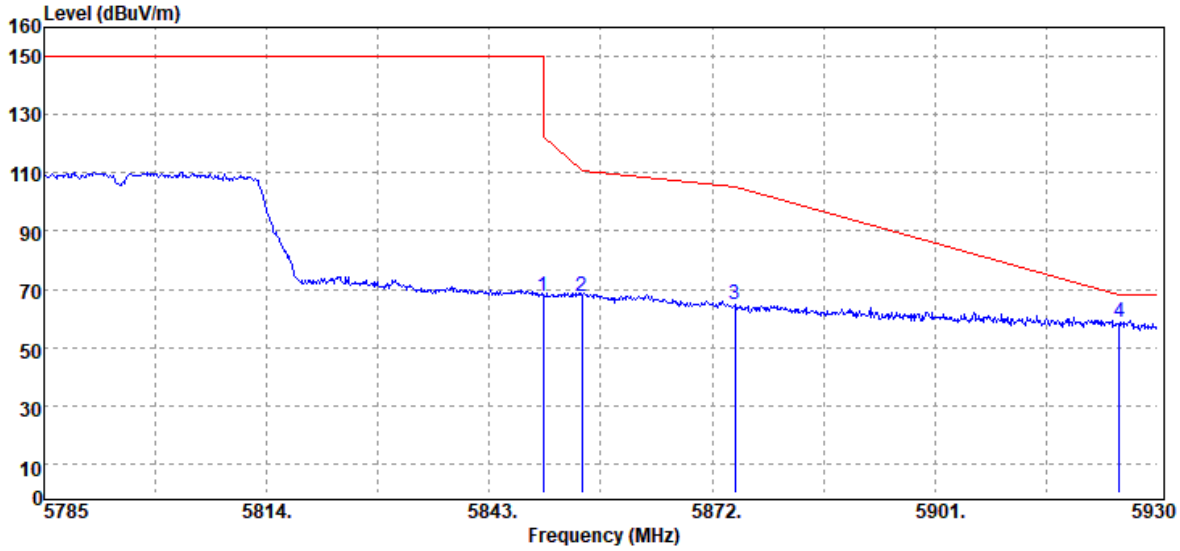
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	50.85	6.04	56.89	68.20	-11.31
5700.00	Peak	59.44	6.32	65.76	105.20	-39.44
5720.00	Peak	61.73	6.33	68.06	110.80	-42.74
5725.00	Peak	63.69	6.34	70.03	122.20	-52.17

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band4	Temp./Humi.	:20/50
Frequency	:5795 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5850.00	Peak	54.28	6.39	60.67	122.20	-61.53
5855.00	Peak	53.89	6.38	60.27	110.80	-50.53
5875.00	Peak	51.16	6.37	57.53	105.20	-47.67
5925.00	Peak	48.43	6.42	54.85	68.20	-13.35

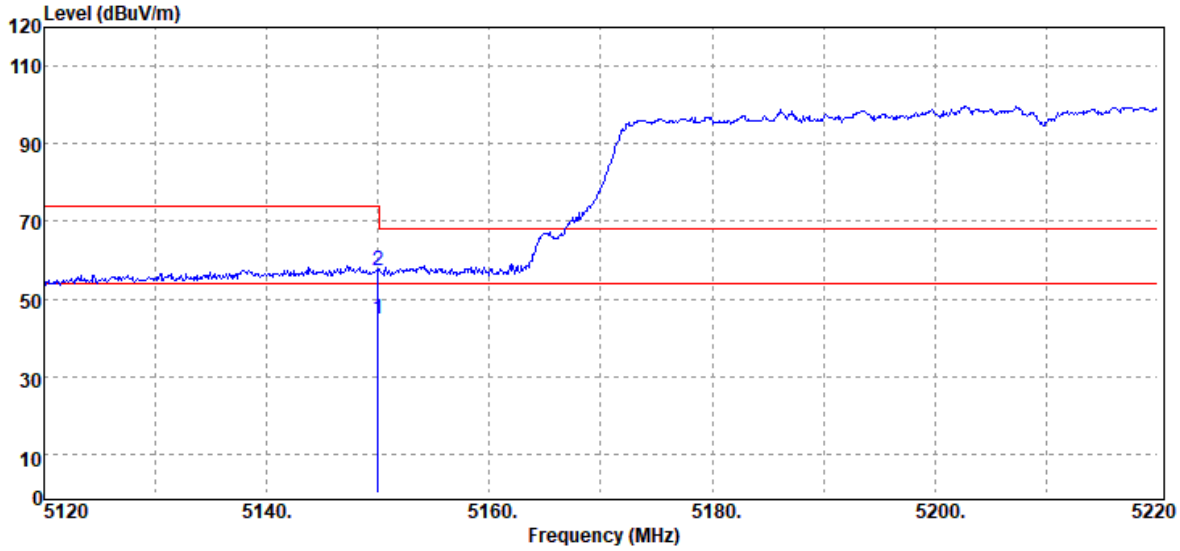
Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11n40 / Band4	Temp./Humi.	:20/50
Frequency	:5795 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5850.00	Peak	61.03	6.39	67.42	122.20	-54.78
5855.00	Peak	61.18	6.38	67.56	110.80	-43.24
5875.00	Peak	58.67	6.37	65.04	105.20	-40.16
5925.00	Peak	52.21	6.42	58.63	68.20	-9.57

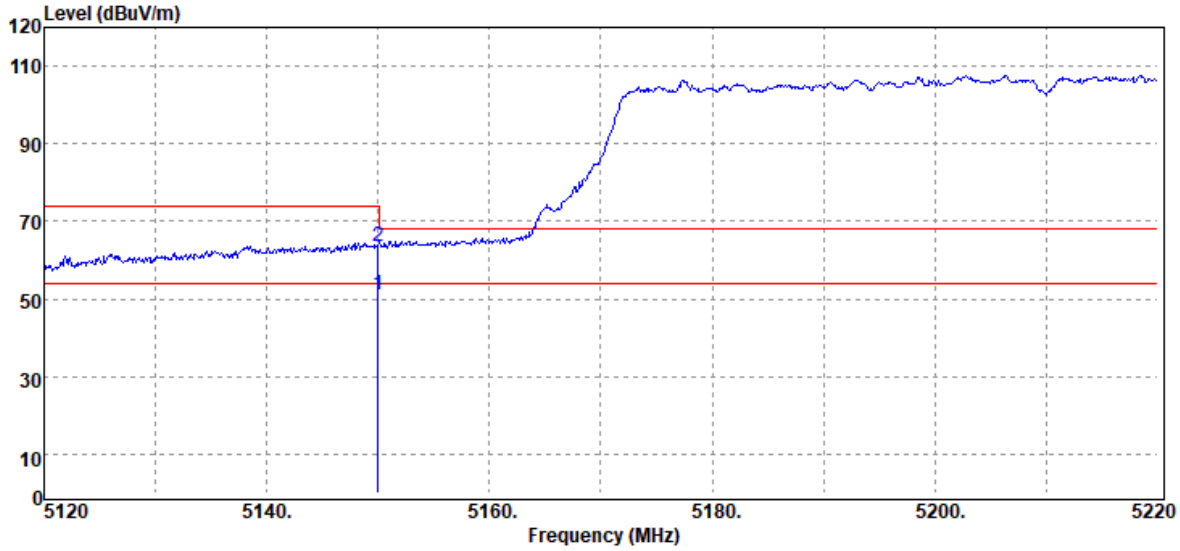
802.11ac80 VHT mode

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11ac80 / Band1	Temp./Humi.	:20/50
Frequency	:5210 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



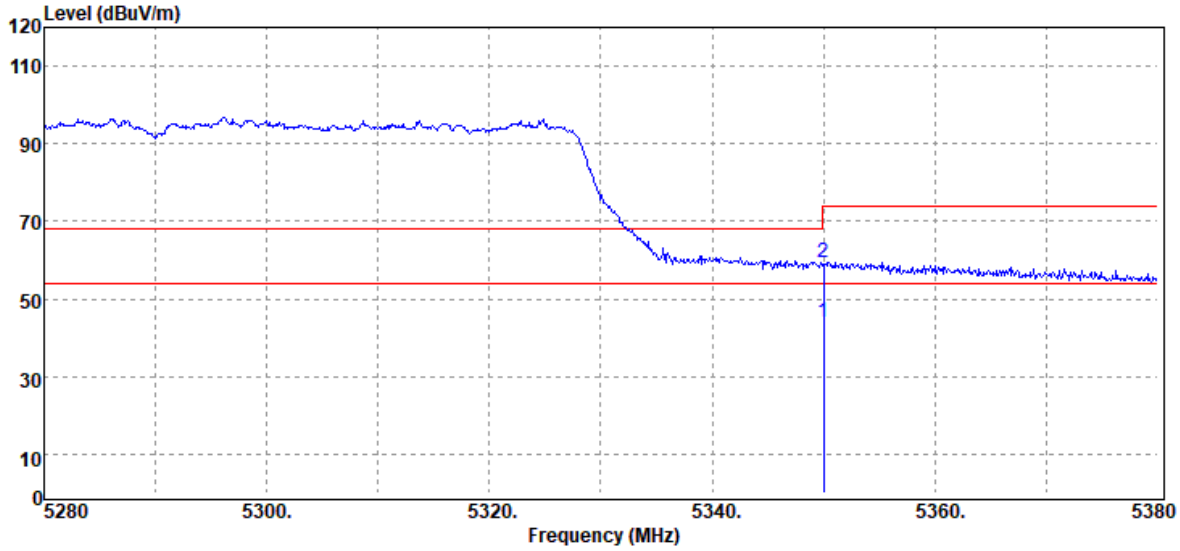
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5150.00	Average	39.96	4.92	44.88	54.00	-9.12
5150.00	Peak	52.37	4.92	57.29	74.00	-16.71

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11ac80 / Band1	Temp./Humi.	:20/50
Frequency	:5210 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



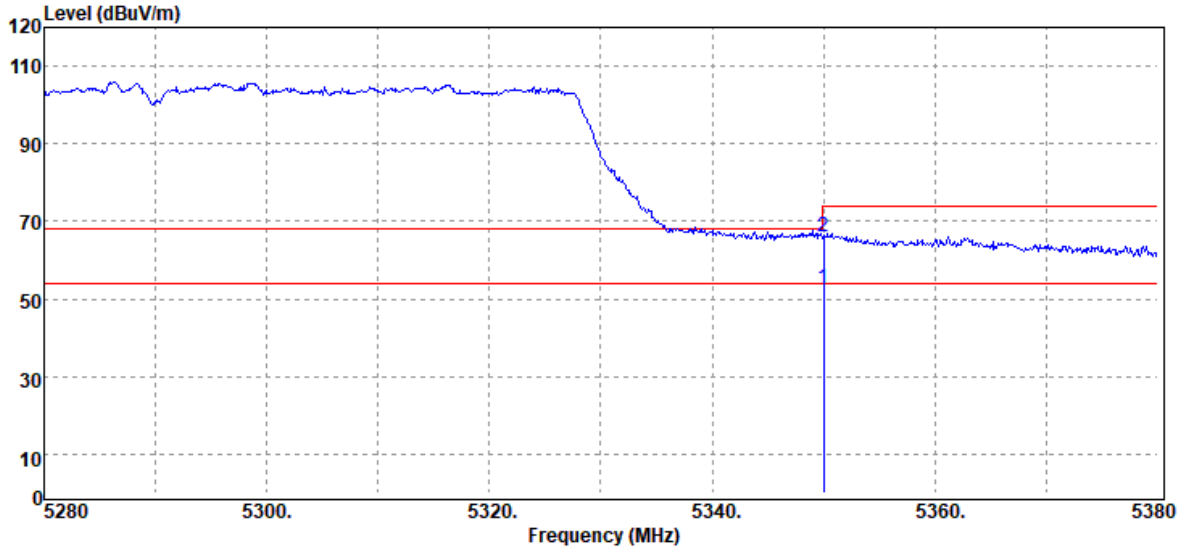
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5150.00	Average	46.16	4.92	51.08	54.00	-2.92
5150.00	Peak	58.60	4.92	63.52	74.00	-10.48

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11ac80 / Band2	Temp./Humi.	:20/50
Frequency	:5290 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



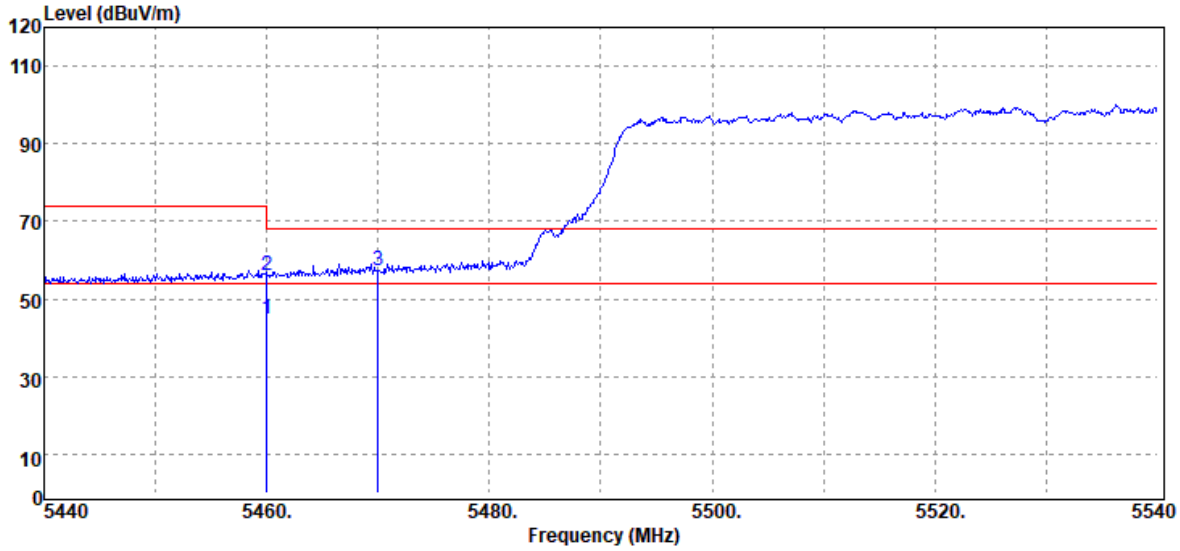
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	38.61	5.21	43.82	54.00	-10.18
5350.00	Peak	54.08	5.21	59.29	74.00	-14.71

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11ac80 / Band2	Temp./Humi.	:20/50
Frequency	:5290 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



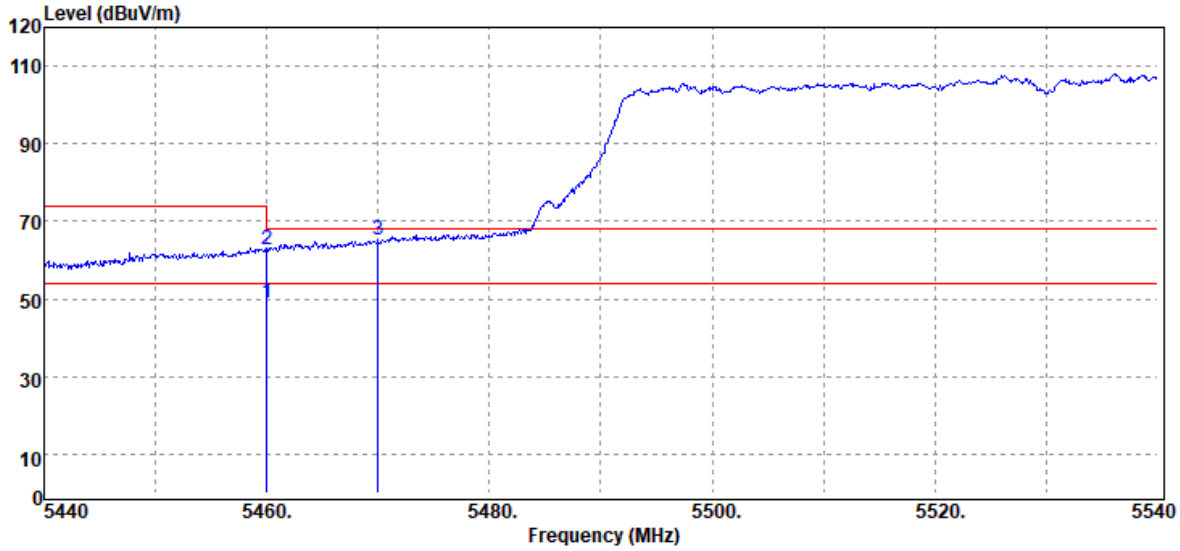
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5350.00	Average	47.47	5.21	52.68	54.00	-1.32
5350.00	Peak	60.87	5.21	66.08	74.00	-7.92

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11ac80 / Band3	Temp./Humi.	:20/50
Frequency	:5530 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



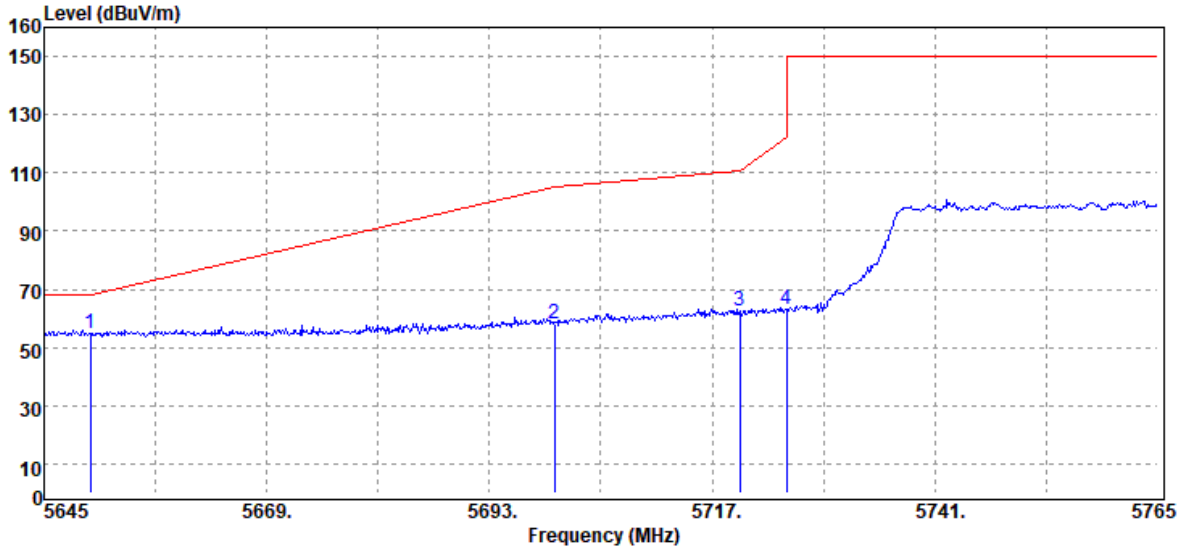
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	39.02	5.63	44.65	54.00	-9.35
5460.00	Peak	50.47	5.63	56.10	74.00	-17.90
5470.00	Peak	51.86	5.65	57.51	68.20	-10.69

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11ac80 / Band3	Temp./Humi.	:20/50
Frequency	:5530 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



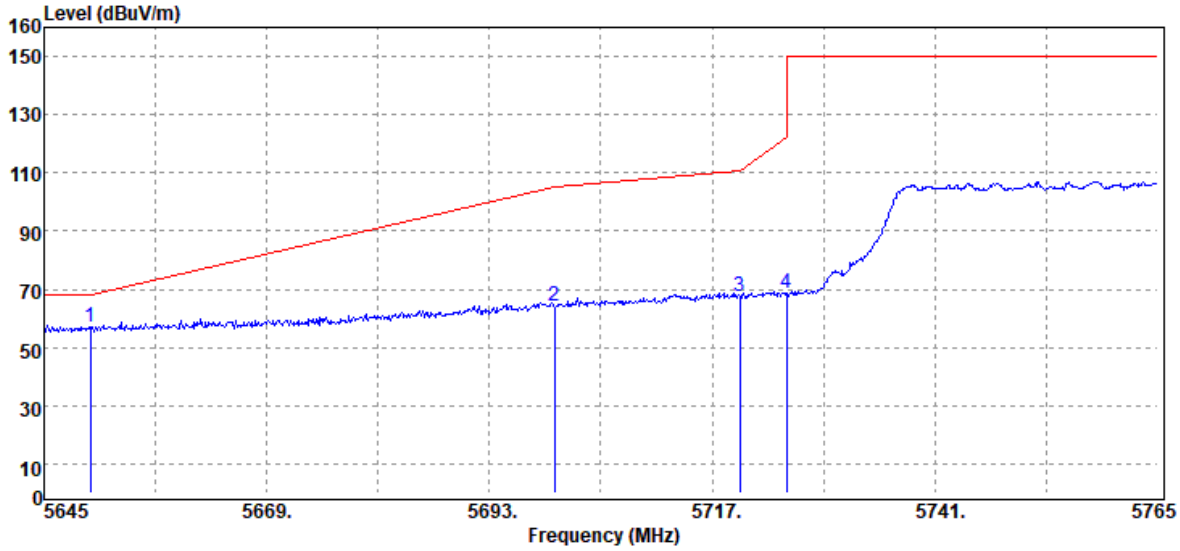
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5460.00	Average	43.29	5.63	48.92	54.00	-5.08
5460.00	Peak	57.05	5.63	62.68	74.00	-11.32
5470.00	Peak	59.43	5.65	65.08	68.20	-3.12

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11ac80 / Band4	Temp./Humi.	:20/50
Frequency	:5775 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



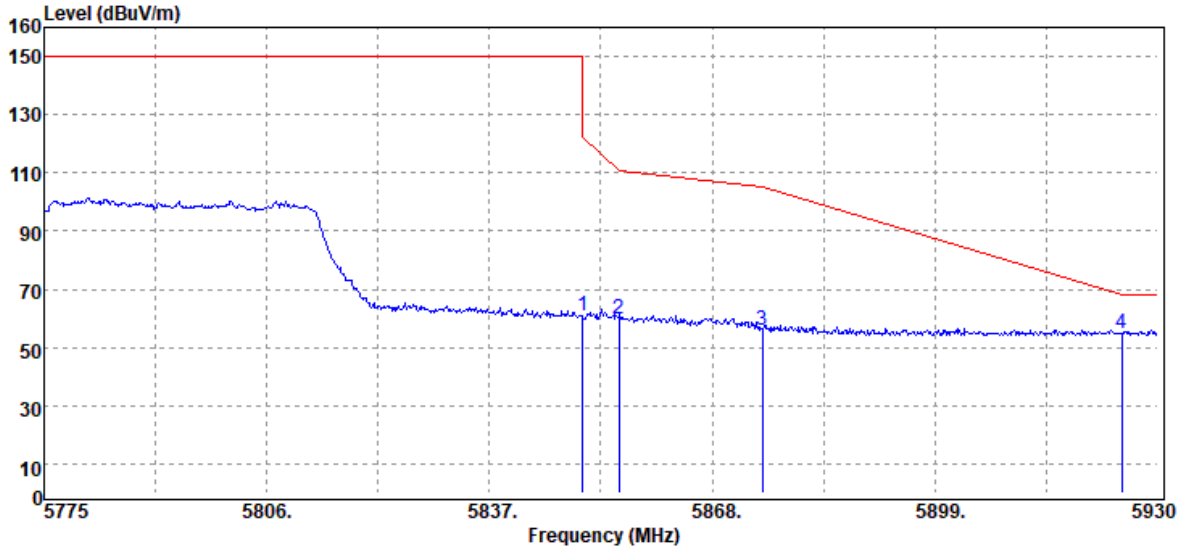
Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	48.81	6.04	54.85	68.20	-13.35
5700.00	Peak	51.81	6.32	58.13	105.20	-47.07
5720.00	Peak	55.97	6.33	62.30	110.80	-48.50
5725.00	Peak	56.84	6.34	63.18	122.20	-59.02

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11ac80 / Band4	Temp./Humi.	:20/50
Frequency	:5775 MHz	Antenna Pol.	:HORIZONTAL
Operation Mode	:BE CH Low	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5650.00	Peak	50.76	6.04	56.80	68.20	-11.40
5700.00	Peak	58.03	6.32	64.35	105.20	-40.85
5720.00	Peak	61.23	6.33	67.56	110.80	-43.24
5725.00	Peak	62.22	6.34	68.56	122.20	-53.64

Report Number	:T190612W02	Test Date	:2019-06-26
Operation Band	:802.11ac80 / Band4	Temp./Humi.	:20/50
Frequency	:5775 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:BE CH High	Engineer	:Kane
EUT Pol.	:E2 Plan		



Freq.	Detector Mode	Spectrum Reading Level	Factor	Actual FS	Limit @3m	Margin
MHz	PK/QP/AV	dBµV	dB	dBµV/m	dBµV/m	dB
5850.00	Peak	54.60	6.39	60.99	122.20	-61.21
5855.00	Peak	53.33	6.38	59.71	110.80	-51.09
5875.00	Peak	49.79	6.37	56.16	105.20	-49.04
5925.00	Peak	48.44	6.42	54.86	68.20	-13.34

12 TRANSMISSION IN THE ABSENCE OF DATA

12.1 Standard Applicable

According to §15.407(c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

12.2 Result

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ASK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

13 FREQUENCY STABILITY

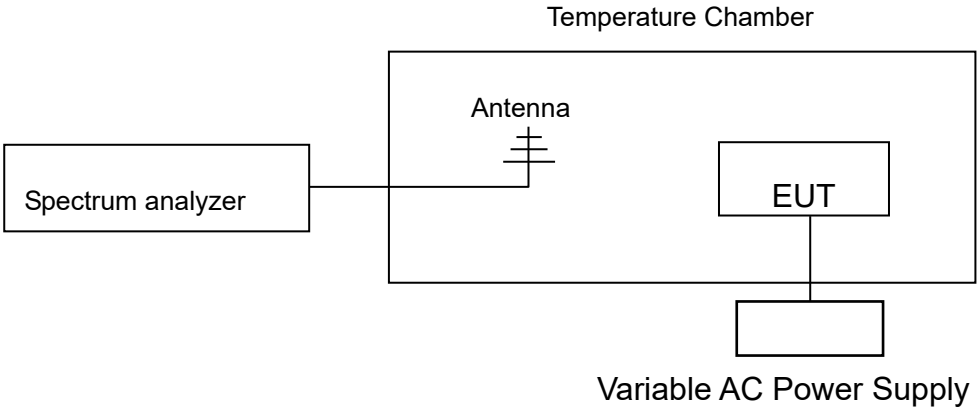
13.1 Standard Applicable

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

13.2 Measurement Procedure

1. The EUT was placed inside temperature chamber and powered and powered by nominal DC voltage.
2. Set EUT as normal operation.
3. Turn the EUT on and couple its output to spectrum.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT and measure the operating frequency.
6. Repeat step with the temperature chamber set to the lowest temperature.

13.3 Test SET-UP



13.4 Measurement Equipment Used:

SGS Conducted Room					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
DC Block	PASTERNACK	PE8210	RF256	02/26/2019	02/25/2020
Spectrum Analyzer	Agilent	N9010A	MY53400256	11/21/2018	11/20/2019
Thermostatic/Hrgrosatic Chamber	GWINSTEK	GTC-288MH-CC	TH160402	05/16/2019	05/15/2020
Attenuator	Marvelous	MVE2213-10	RF80	02/26/2019	02/25/2020

13.5 Measurement Result

Startup:

Operation Mode	802.11 a	Test Date	2019.07.01
Temperature	: 22.6℃	Test By	Hone
Humidity	: 69%		

Test Temp.(℃)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
0	12.6	36	5180	5,179.98890	0.00000214
	11.4	36	5180	5,179.99830	0.00000033
25	12	36	5180	5,179.99640	0.00000069
40	12.6	36	5180	5,179.99150	0.00000164
	11.4	36	5180	5,179.98920	0.00000208

2 Minutes:

Operation Mode	802.11 a	Test Date	2019.07.01
Temperature	: 22.6℃	Test By	Hone
Humidity	: 69%		

Test Temp.(℃)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
0	12.6	36	5180	5,179.98570	0.00000276
	11.4	36	5180	5,179.99620	0.00000073
25	12	36	5180	5,179.98540	0.00000282
40	12.6	36	5180	5,179.99140	0.00000166
	11.4	36	5180	5,179.99260	0.00000143

5 Minutes:

Operation Mode	802.11 a	Test Date	2019.07.01
Temperature	: 22.6℃	Test By	Hone
Humidity	: 69%		

Test Temp.(℃)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
0	12.6	36	5180	5,179.99680	0.00000062
	11.4	36	5180	5,179.99550	0.00000087
25	12	36	5180	5,179.98950	0.00000203
40	12.6	36	5180	5,179.98860	0.00000220
	11.4	36	5180	5,179.98680	0.00000255

10 Minutes:

Operation Mode	802.11 a	Test Date	2019.07.01
Temperature	: 22.6℃	Test By	Hone
Humidity	: 69%		

Test Temp.(℃)	Test Voltage(V)	Channel	Measured Frequency (MHz)	Spectrum Frequency (MHz)	ΔFrequency (MHz)
0	12.6	36	5180	5,179.99330	0.00000129
	11.4	36	5180	5,179.99100	0.00000174
25	12	36	5180	5,179.99690	0.00000060
40	12.6	36	5180	5,179.99850	0.00000029
	11.4	36	5180	5,179.99010	0.00000191

14 ANTENNA REQUIREMENT

14.1 Standard Applicable

According to §15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device.

According to §15.407, If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

14.2 Antenna Connected Construction

The antenna is designed as permanently attached and no consideration of replacement. Please see EUT photo for details.

~ End of Report ~