

FCC Test Report

Product Name	MOXA IEEE 802.11a/n/ac 4*4 module
Model No	WAPC002
FCC ID	SLE-WAPC002

Applicant	MOXA Inc.
Address	FL.4, NO. 135. LANE 235, BAOQIAO RD. XINDIAN DIST., NEW TAIPEI CITY, TAIWAN

Date of Receipt	Apr. 20, 2018
Issued Date	Sep. 14, 2018
Report No.	1840253R-RFUSP50V00
Report Version	V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

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Applicant	MOXA Inc.
Address	FL.4, NO. 135. LANE 235, BAOQIAO RD. XINDIAN DIST., NEW TAIPEI CITY, TAIWAN
Manufacturer	MOXA Inc.
Model No.	WAPC002
FCC ID.	SLE-WAPC002
EUT Rated Voltage	DC 3.3V
EUT Test Voltage	AC 120V/60Hz
Trade Name	MOXA
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E: 2017 ANSI C63.4: 2014, ANSI C63.10: 2013 789033 D02 General UNII Test Procedures New Rules v02
Test Result	Complied

Documented By :



(Senior Adm. Specialist / Rita Huang)

Tested By :



(Engineer / Sam Hsu)

Approved By :



(Director / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	MOXA IEEE 802.11a/n/ac 4*4 module
Trade Name	MOXA
FCC ID.	SLE-WAPC002
Model No.	WAPC002
Frequency Range	802.11a/n-20MHz: 5180-5320MHz, 5500-5700MHz, 5745-5825MHz 802.11n-40MHz: 5190-5310, 5510-5670MHz, 5755-5795MHz 802.11ac-20MHz: 5720, 802.11ac-40MHz: 5710 802.11ac-80MHz: 5210-5290MHz, 5530-5690MHz, 5775MHz
Number of Channels	802.11a/n-20MHz: 24; 802.11n-40MHz: 11 802.11ac-20MHz: 1, 802.11ac-40MHz: 1, 802.11ac-80MHz: 6
Data Rate	802.11a: 6 - 54Mbps 802.11n: up to 600Mbps 802.11ac-80MHz: up to 1733.3MHz
Channel Control	Auto
Type of Modulation	802.11a/n/ac: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM
Antenna type	Panel Antenna, Dipole Antenna, Railway Antenna, Sector Antenna, Patch Antenna
Antenna Gain	Refer to the table "Antenna List"

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	MOXA	MAT-WDB-PA-NF-2-0708	Panel	8.77dBi For 5.15~5.25GHz 8.77dBi For 5.25~5.35GHz 8.50dBi For 5.47~5.725GHz 8.18dBi For 5.725~5.825GHz
2	MOXA	MI05-A1-XX23037-X0	Panel	23dBi For 5GHz
3	MOXA	MI05-A1-XX16020-X0	Panel	12 dBi For 5GHz
4	MOXA	WI25-A1-0810012-RG316	Panel	10.5 dBi For 5GHz
5	MOXA	ANT-WSB5-PNF-18	Panel	18 dBi For 5GHz
6	MOXA	ANT-WDB-PNF-1518	Panel	18 dBi For 5GHz
7	MOXA	ANT-WDB-ARM-02	Dipole	0.81 dBi For 5GHz
8	MOXA	ANT-WSB5-ANF-12	Dipole	12 dBi For 5GHz
9	MOXA	MAT-WDB-CA-RM-2-0205	Dipole	5.0dBi For 5.15~5.25GHz 5.7dBi For 5.25~5.35GHz 4.9dBi For 5.47~5.725GHz 5.2dBi For 5.725~5.825GHz
10	MOXA	MAT-WDB-DA-RM-2-0203-1m	Dipole	3.80dBi For 5.15~5.25GHz 2.72dBi For 5.25~5.35GHz 2.26dBi For 5.47~5.725GHz 2.34dBi For 5.725~5.825GHz
11	MOXA	ANT-WDB-ANM-0306	Dipole	5.7dBi For 5.15~5.25GHz 5.7dBi For 5.25~5.35GHz 6.3dBi For 5.47~5.725GHz 6.3dBi For 5.725~5.825GHz
12	MOXA	ANT-WDB-ARM-0202	Dipole	1.8 dBi For 5GHz
13	MOXA	ANT-WDB-ANM-0502	Dipole	2 dBi For 5GHz
14	MOXA	ANT-WDB-ANM-0407	Dipole	7 dBi For 5GHz
15	MOXA	ANT-WDB-ANF-0609	Dipole	9 dBi For 5GHz
16	MOXA	ANT-WDB-ANM-0609	Dipole	9 dBi For 5GHz
17	MOXA	MHH-A11-XX110170-X0	Railway	8 dBi For 5GHz
18	MOXA	WI25-A1-1215053-X0	Sector	15 dBi For 5GHz
19	MOXA	TOP 200 AMR MF-05-4	Patch	8.5 dBi For 5GHz

Note:

1. Each antenna has been evaluated and only the worst case (higher gain antenna) is presented in the report.
2. The antenna of EUT conforms to FCC 15.203.
3. The Panel antenna and Sector antenna is directional antenna.

802.11a/n-20MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 36:	5180 MHz	Channel 40:	5200 MHz	Channel 44:	5220 MHz	Channel 48:	5240 MHz
Channel 52:	5260 MHz	Channel 56:	5280 MHz	Channel 60:	5300 MHz	Channel 64:	5320 MHz
Channel 100:	5500 MHz	Channel 104:	5520 MHz	Channel 108:	5540 MHz	Channel 112:	5560 MHz
Channel 116:	5580 MHz	Channel 120:	5600 MHz	Channel 124:	5620 MHz	Channel 128:	5640 MHz
Channel 132:	5660 MHz	Channel 136:	5680 MHz	Channel 140:	5700 MHz	Channel 149:	5745 MHz
Channel 153:	5765 MHz	Channel 157:	5785 MHz	Channel 161:	5805 MHz	Channel 165:	5825 MHz

802.11n-40MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 38:	5190 MHz	Channel 46:	5230 MHz	Channel 54:	5270 MHz	Channel 62:	5310 MHz
Channel 102:	5510 MHz	Channel 110:	5550 MHz	Channel 118:	5590 MHz	Channel 126:	5630 MHz
Channel 134:	5670 MHz	Channel 151:	5755 MHz	Channel 159:	5795 MHz		

802.11ac-20MHz Center Working Frequency of Each Channel:

Channel	Frequency
Channel 144:	5720 MHz

802.11ac-40MHz Center Working Frequency of Each Channel:

Channel	Frequency
Channel 142:	5710 MHz

802.11ac-80MHz Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 42:	5210 MHz	Channel 58:	5290 MHz	Channel 106:	5530 MHz	Channel 122:	5610 MHz
Channel 138:	5690 MHz	Channel 155:	5775 MHz				

Note:

1. This device is a MOXA IEEE 802.11a/n/ac 4*4 module with a built-in 802.11a/n/ac WLAN transceiver.
2. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
3. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report. (802.11a is chain A)
4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11a is 6Mbps 、 802.11n-20BW is 28.8Mbps 、 802.11n-40BW is 60Mbps and 802.11ac(80M-BW) is 130 Mbps)
5. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

Test Mode	Mode 1: Transmit (802.11a-6Mbps) Mode 2: Transmit (802.11n-20BW 28.8Mbps) Mode 3: Transmit (802.11n-40BW 60Mbps) Mode 4: Transmit (802.11ac-20BW-28.8Mbps) Mode 5: Transmit (802.11ac-40BW-60Mbps) Mode 6: Transmit (802.11ac-80BW-130Mbps)
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Summary of Test Item

Test Condition			Test Item					
			Conducted			Radiated		
Antenna No.	Antenna Type	Antenna Gain (dBi)	Conducted Power	Power Density	Occupied Bandwidth	Radiated Emission	Band Edge	DFS
1	Panel	8.77dBi For 5.15~5.25GHz 8.77dBi For 5.25~5.35GHz 8.5dBi For 5.47~5.725GHz 8.18dBi For 5.725~5.825GHz	✓	✓	✓			
2	Panel	23dBi For 5GHz	✓			✓	✓	
3	Panel	12 dBi For 5GHz	✓					
4	Panel	10.5 dBi For 5GHz	✓					
5	Panel	18 dBi For 5GHz	✓					
6	Panel	18 dBi For 5GHz	✓					
7	Dipole	0.81 dBi For 5GHz	✓	✓	✓			✓
8	Dipole	12 dBi For 5GHz	✓			✓	✓	
9	Dipole	5dBi For 5.15~5.25GHz 5.7dBi For 5.25~5.35GHz 4.9dBi For 5.47~5.725GHz 5.2dBi For 5.725~5.825GHz	✓					
10	Dipole	3.8dBi For 5.15~5.25GHz 2.72dBi For 5.25~5.35GHz 2.26dBi For 5.47~5.725GHz 2.34dBi For 5.725~5.825GHz	✓					
11	Dipole	5.7dBi For 5.15~5.25GHz 5.7dBi For 5.25~5.35GHz 6.3dBi For 5.47~5.725GHz 6.3dBi For 5.725~5.825GHz	✓					
12	Dipole	1.8 dBi For 5GHz	✓					
13	Dipole	2 dBi For 5GHz	✓					
14	Dipole	7 dBi For 5GHz	✓					
15	Dipole	9 dBi For 5GHz	✓					
16	Dipole	9 dBi For 5GHz	✓					
17	Railway	8 dBi For 5GHz	✓	✓	✓	✓	✓	
18	Sector	15 dBi For 5GHz	✓	✓	✓	✓	✓	
19	Patch	8.5 dBi For 5GHz	✓	✓	✓	✓	✓	

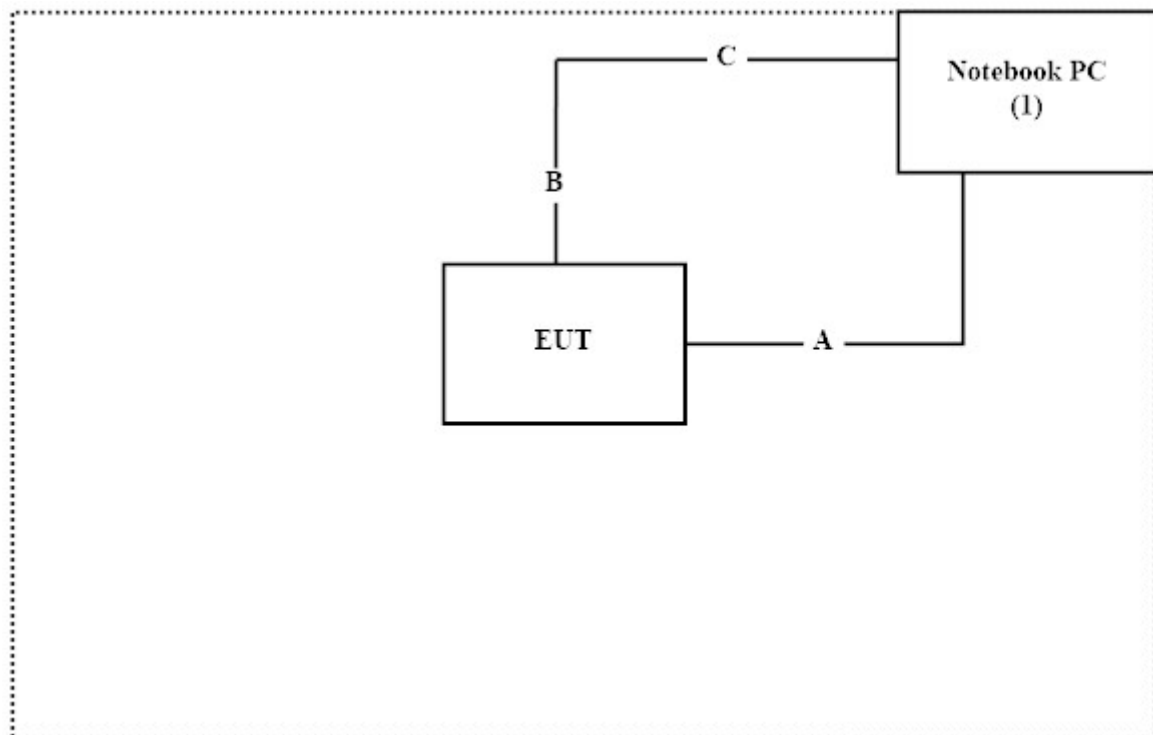
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	Latitude 5580	2HRD7H2	Non-Shielded, 0.8m

Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 1.9m
B	Sign Cable	Shielded, 1.6m
C	RS232 to USB Cable	Non-Shielded, 0.5m

1.4. Configuration of tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown on 1.4
- (2) Execute “QRCT Ver. 3.0.210.0” program on the Notebook PC.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Start the continuous transmission.
- (5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:

<http://www.dekra.com.tw/english/about/certificates.aspx?bval=5>

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Site Description: Accredited by TAF
Accredited Number: 3023

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FCC Accreditation Number: TW3023

1.7. List of Test Equipment

For Conducted measurements /CB3/SR8

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Date	Due. Date
	Temperature Chamber	WIT GROUP	TH-1S-B	EQ-201-00146	2018/2/12	2019/2/11
X	Spectrum Analyzer	Agilent	N9010A	MY48030495	2017/10/13	2018/10/12
X	Peak Power Analyzer	Keysight	8990B	MY51000410	2018/7/19	2019/7/18
X	Wideband Power Sensor	Keysight	N1923A	MY56080003	2018/7/6	2019/7/5
X	Wideband Power Sensor	Keysight	N1923A	MY56080004	2018/7/6	2019/7/5
X	EMI Test Receiver	R&S	ESCS 30	100369	2017/11/7	2018/11/6
X	LISN	R&S	ESH3-Z5	836679/017	2018/2/9	2019/2/8
X	LISN	R&S	ENV216	100097	2018/2/9	2019/2/8
X	Coaxial Cable	DEKRA	RG 400	LC018-RG	2018/6/22	2019/6/21

For Radiated measurements /Site3/CB8

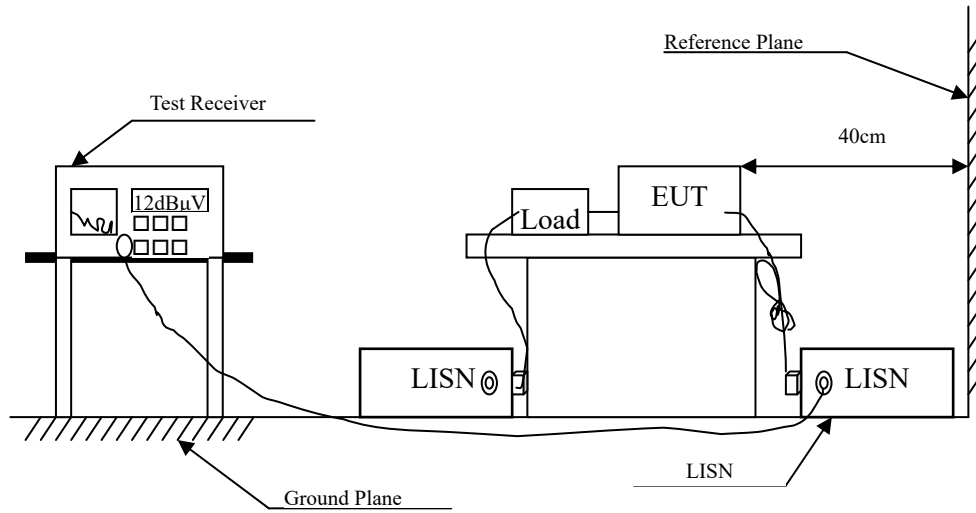
	Equipment	Manufacturer	Model No.	Serial No.	Cali. Date	Due. Date
X	Spectrum Analyzer	R&S	FSP40	100170	2018/3/12	2019/3/11
X	Loop Antenna	Teseq	HLA6121	37133	2017/10/13	2018/10/12
X	Bilog Antenna	Schaffner Chase	CBL6112B	2707	2018/6/25	2019/6/24
X	Coaxial Cable	DEKRA	RG 214	LC003-RG	2018/6/15	2019/6/14
X	Pre-Amplifier	Jet-Power	JPA-10M1G33	170101000330010	2018/7/19	2019/7/18
X	Horn Antenna	ETS-Lindgren	3117	00135205	2018/5/3	2019/5/2
X	Pre-Amplifier	EMCI	EMC012630SE	980210	2018/4/10	2019/4/9
X	Coaxial Cable	QuieTek	SF-106	LC035/37/41-SF LC038-SF , LC037-SF	2018/6/21	2019/6/20
X	Amplifier + Cable	EMCI	EMC184045SE	980370	2018/3/21	2019/3/20
X	Horn Antenna	Com-Power	AH-840	101043	2018/1/9	2019/1/8
X	Filter	MicroTRON	BRM50701	019	2017/11/21	2018/11/20
X	Filter	Microwave Circuits	N0257881	36681	2018/1/22	2019/1/21

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked with “X” are used to measure the final test results.
3. Test Software version :QuieTek EMI 2.0 V2.1.113.

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBμV) Limit		
Frequency MHz	Limits	
	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks : In the above table, the tighter limit applies at the band edges.

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4:2014 on conducted measurement.

Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

The EUT was setup to ANSI C63.4, 2014; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

2.4. Uncertainty

± 2.26 dB

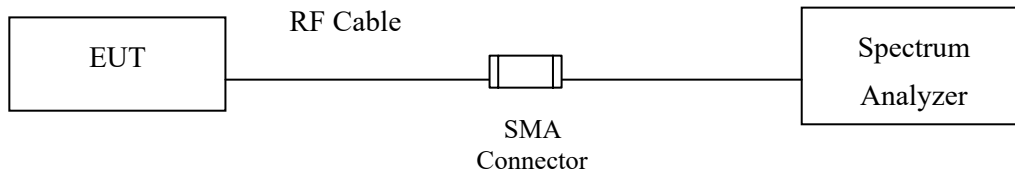
2.5. Test Result of Conducted Emission

Owing to the DC operation of EUT, this test item is not performed.

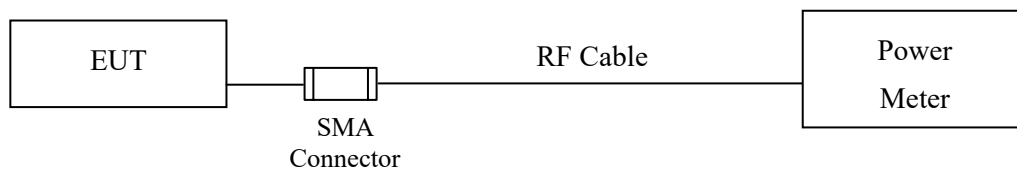
3. Maximun conducted output power

3.1. Test Setup

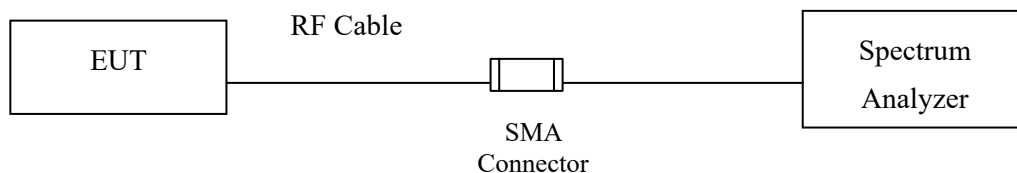
99% Occupied Bandwidth



Conduction Power Measurement (for 802.11an)



Conduction Power Measurement (for 802.11ac)



3.2. Limits

3.2.1. For the band 5.15-5.25 GHz,

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna

gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.3. For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point UNII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

3.3. Test Procedure

As an alternative to FCC KDB-789033, the EUT maximum conducted output power was measured with an average power meter employing a video bandwidth greater than the 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

802.11an (BW $\leq$ 40MHz) Maximum conducted output power using KDB 789033 section E)3)b)
Method PM-G (Measurement using a gated RF average power meter)

Note: the power meter have a video bandwidth that is greater than or equal to the measurement bandwidth, (Anritsu/ MA2411B video bandwidth: 65MHz)

802.11ac (BW=80MHz) Maximum conducted output power using KDB 789033 section E)2)b)
Method SA-1 (trace averaging with the EUT transmitting at full power throughout each sweep).

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D03 section D) procedure is used for measurements.

3.4. Uncertainty

± 1.62 dB

3.5. Test Result of Maximum conducted output power

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (Antenna No.1)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	20.68	--	--	--	--	--	--	--	<21.23dBm
44	5220	21.11	21.05	20.95	20.86	20.79	20.69	20.6	20.51	<21.23dBm
48	5240	21.18	--	--	--	--	--	--	--	<21.23dBm
52	5260	20.28	--	--	--	--	--	--	--	<21.23dBm
60	5300	20.11	20.01	19.92	19.86	19.77	19.71	19.62	19.56	<21.23dBm
64	5320	20.39	--	--	--	--	--	--	--	<21.23dBm
100	5500	20.57	--	--	--	--	--	--	--	<21.25dBm
116	5580	20.61	20.55	20.49	20.41	20.36	20.31	20.25	20.16	<21.25dBm
140	5700	20.46	--	--	--	--	--	--	--	<21.25dBm
149	5745	20.56	--	--	--	--	--	--	--	<30dBm
157	5785	20.81	20.74	20.67	20.6	20.55	20.46	20.36	20.3	<30dBm
165	5825	20.85	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	20.58	--	--	--	--	--	--	--	<21.23dBm
44	5220	21.03	20.96	20.86	20.81	20.72	20.67	20.57	20.52	<21.23dBm
48	5240	21.1	--	--	--	--	--	--	--	<21.23dBm
52	5260	20.19	--	--	--	--	--	--	--	<21.23dBm
60	5300	20.02	19.96	19.91	19.85	19.76	19.71	19.63	19.58	<21.23dBm
64	5320	20.34	--	--	--	--	--	--	--	<21.23dBm
100	5500	20.48	--	--	--	--	--	--	--	<21.25dBm
116	5580	20.52	20.42	20.34	20.26	20.17	20.09	20.01	19.96	<21.25dBm
140	5700	20.41	--	--	--	--	--	--	--	<21.25dBm
149	5745	20.5	--	--	--	--	--	--	--	<30dBm
157	5785	20.73	20.68	20.63	20.57	20.48	20.38	20.31	20.21	<30dBm
165	5825	20.79	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	20.6	--	--	--	--	--	--	--	<21.23dBm
44	5220	21.03	20.95	20.86	20.8	20.73	20.68	20.58	20.48	<21.23dBm
48	5240	21.12	--	--	--	--	--	--	--	<21.23dBm
52	5260	20.2	--	--	--	--	--	--	--	<21.23dBm
60	5300	20.02	19.96	19.9	19.82	19.72	19.66	19.57	19.48	<21.23dBm
64	5320	20.32	--	--	--	--	--	--	--	<21.23dBm
100	5500	20.48	--	--	--	--	--	--	--	<21.25dBm
116	5580	20.56	20.46	20.37	20.29	20.21	20.13	20.06	19.96	<21.25dBm
140	5700	20.36	--	--	--	--	--	--	--	<21.25dBm
149	5745	20.46	--	--	--	--	--	--	--	<30dBm
157	5785	20.73	20.65	20.59	20.5	20.45	20.4	20.32	20.25	<30dBm
165	5825	20.76	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	20.6	--	--	--	--	--	--	--	<21.23dBm
44	5220	21.02	20.93	20.87	20.81	20.76	20.66	20.57	20.5	<21.23dBm
48	5240	21.09	--	--	--	--	--	--	--	<21.23dBm
52	5260	20.19	--	--	--	--	--	--	--	<21.23dBm
60	5300	20.05	19.95	19.85	19.78	19.68	19.61	19.56	19.47	<21.23dBm
64	5320	20.34	--	--	--	--	--	--	--	<21.23dBm
100	5500	20.52	--	--	--	--	--	--	--	<21.25dBm
116	5580	20.52	20.47	20.42	20.35	20.3	20.24	20.17	20.09	<21.25dBm
140	5700	20.4	--	--	--	--	--	--	--	<21.25dBm
149	5745	20.46	--	--	--	--	--	--	--	<30dBm
157	5785	20.76	20.69	20.63	20.55	20.46	20.38	20.28	20.19	<30dBm
165	5825	20.78	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	$\text{dBm} + 10\log(\text{BW})$	
36	5180	--	20.68	--	--	--	20.68	21.23	--	Pass
44	5220	--	21.11	--	--	--	21.11	21.23	--	Pass
48	5240	--	21.18	--	--	--	21.18	21.23	--	Pass
52	5260	16.473	20.28	--	--	--	20.28	21.23	20.40	Pass
60	5300	16.470	20.11	--	--	--	20.11	21.23	20.40	Pass
64	5320	16.482	20.39	--	--	--	20.39	21.23	20.40	Pass
100	5500	16.488	20.57	--	--	--	20.57	21.5	20.67	Pass
116	5580	16.463	20.61	--	--	--	20.61	21.5	20.67	Pass
140	5700	16.480	20.46	--	--	--	20.46	21.5	20.67	Pass
149	5745	--	20.56	--	--	--	20.56	30	--	Pass
157	5785	--	20.81	--	--	--	20.81	30	--	Pass
165	5825	--	20.85	--	--	--	20.85	30	--	Pass

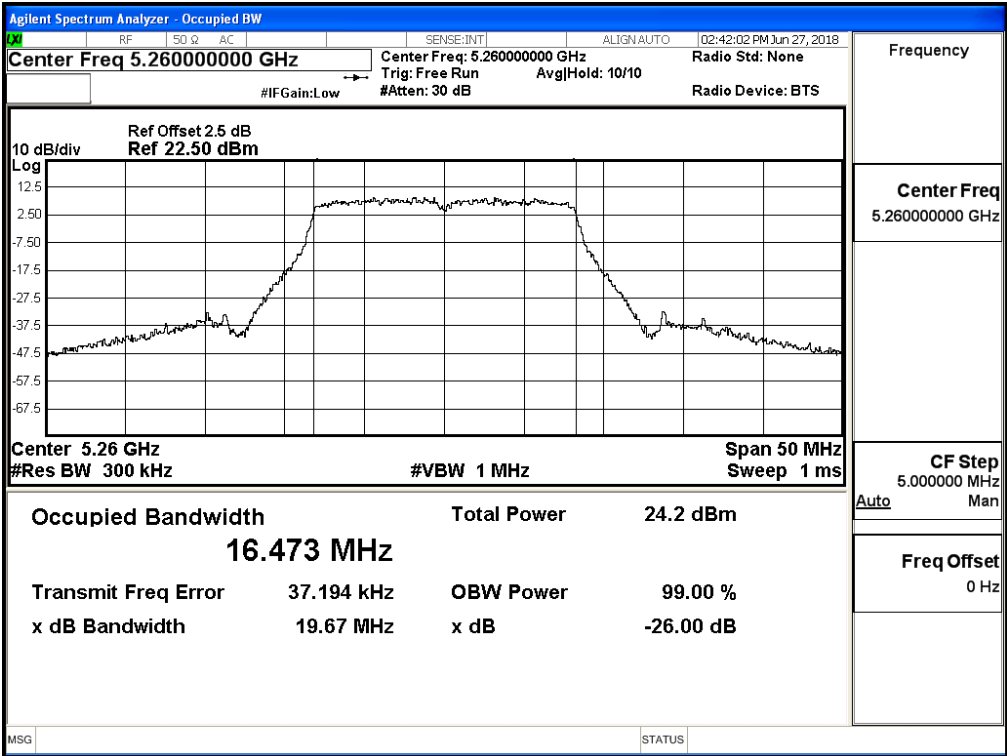
Note:

1. Power Output Value = Reading value on average power meter + cable loss
2. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

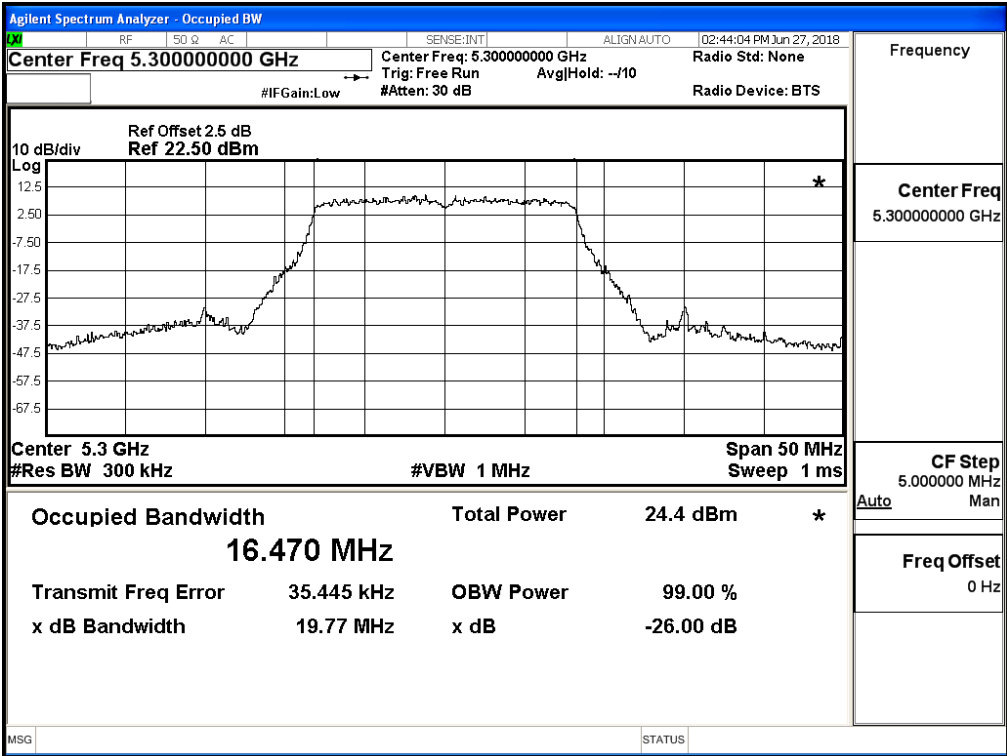
Maximum conducted output power Measurement with Transmit power Control (TPC)

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	14.00	--	--	--	14.00	Pass
60	5300	13.78	--	--	--	13.78	Pass
64	5320	14.02	--	--	--	14.02	Pass
100	5500	14.40	--	--	--	14.40	Pass
116	5580	14.43	--	--	--	14.43	Pass
140	5700	14.14	--	--	--	14.14	Pass

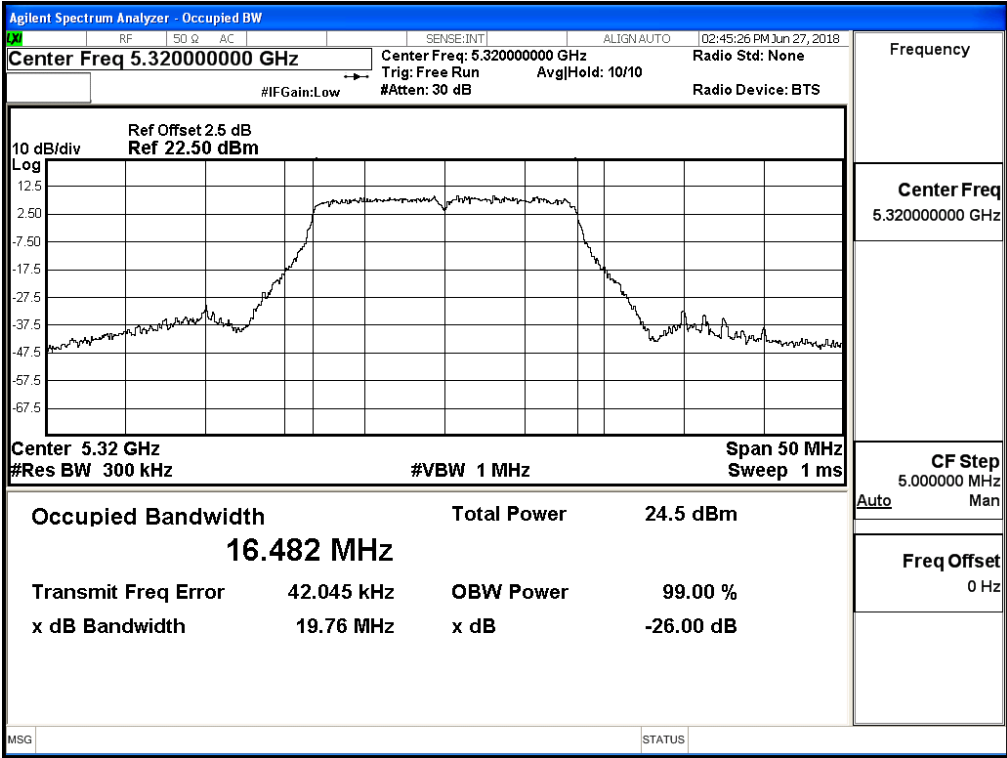
99% Bandwidth:
Channel 52:



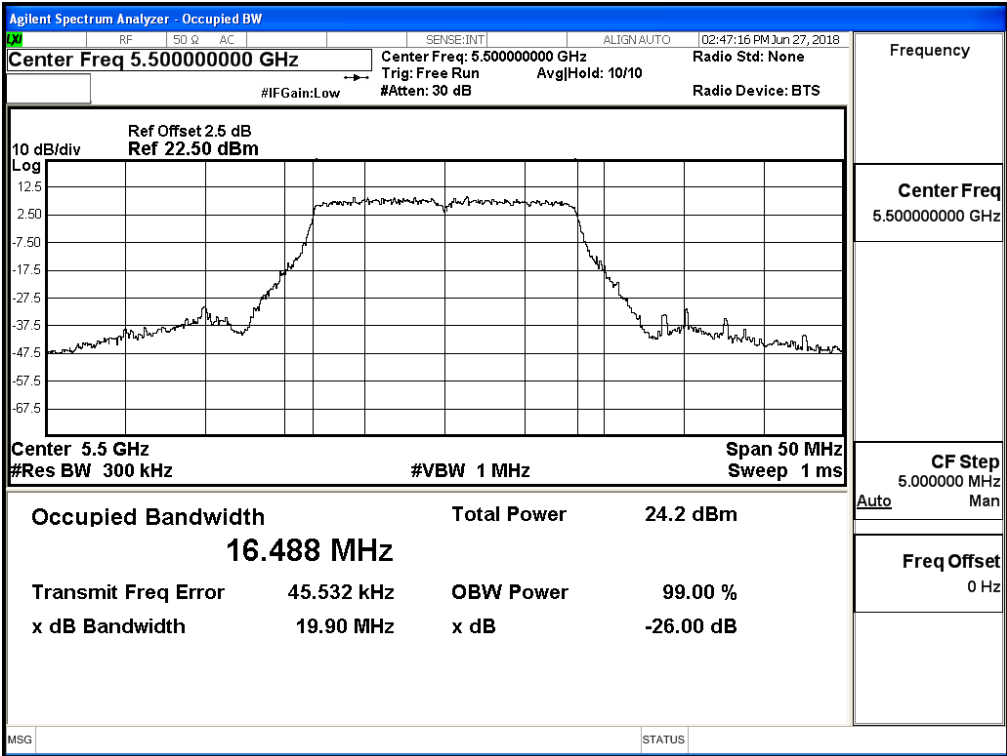
Channel 60:



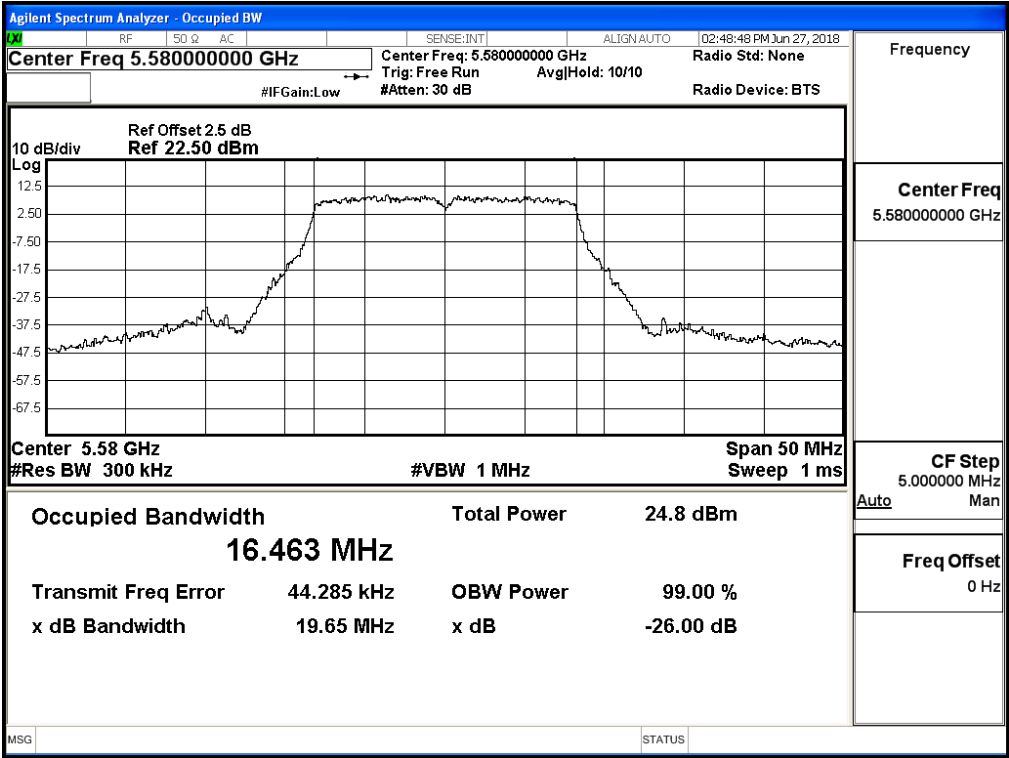
Channel 64:



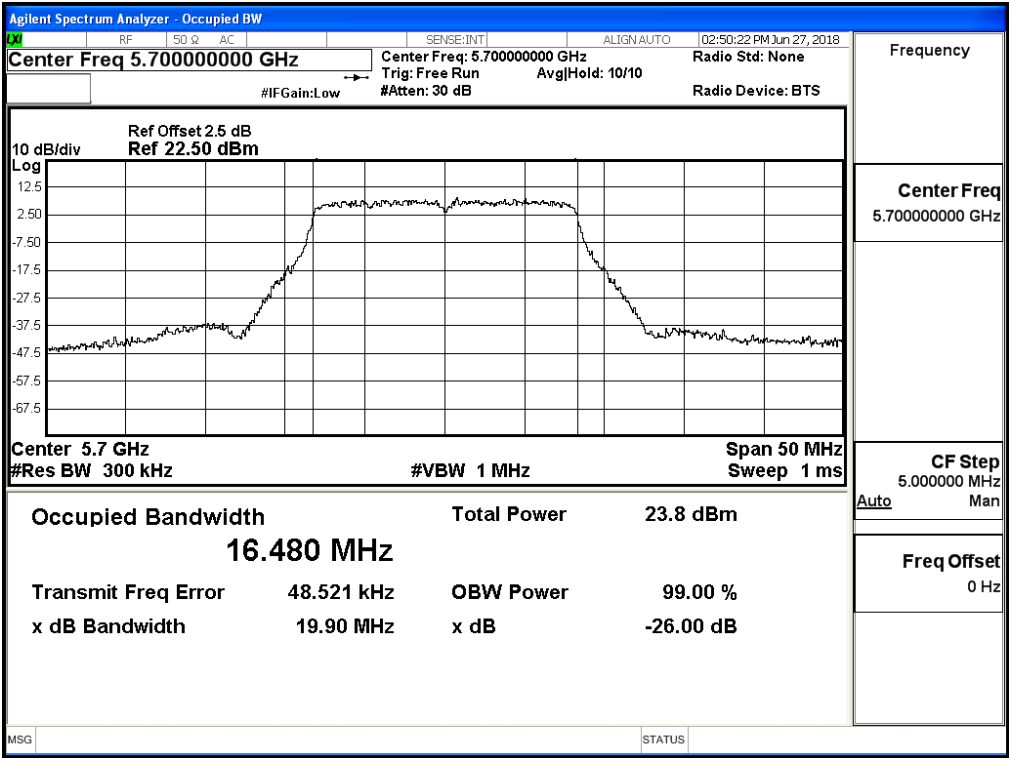
Channel 100:



Channel 116:



Channel 140:



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 2: Transmit (802.11n-20BW 28.8Mbps) (Antenna No.1)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	12.21	--	--	--	--	--	--	--	<21.23dBm
44	5220	12.59	12.53	12.43	12.33	12.23	12.14	12.05	11.95	<21.23dBm
48	5240	12.65	--	--	--	--	--	--	--	<21.23dBm
52	5260	11.89	--	--	--	--	--	--	--	<21.23dBm
60	5300	11.62	11.53	11.47	11.39	11.3	11.25	11.16	11.06	<21.23dBm
64	5320	13.27	--	--	--	--	--	--	--	<21.23dBm
100	5500	12.22	--	--	--	--	--	--	--	<21.25dBm
116	5580	11.37	11.31	11.25	11.19	11.13	11.04	10.99	10.89	<21.25dBm
140	5700	11.53	--	--	--	--	--	--	--	<21.25dBm
149	5745	18.64	--	--	--	--	--	--	--	<30dBm
157	5785	18.32	18.26	18.16	18.07	17.98	17.93	17.83	17.73	<30dBm
165	5825	18.5	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	12.16	--	--	--	--	--	--	--	<21.23dBm
44	5220	12.42	12.34	12.28	12.21	12.12	12.02	11.95	11.9	<21.23dBm
48	5240	12.27	--	--	--	--	--	--	--	<21.23dBm
52	5260	11.62	--	--	--	--	--	--	--	<21.23dBm
60	5300	11.99	11.89	11.83	11.78	11.68	11.58	11.52	11.42	<21.23dBm
64	5320	12.16	--	--	--	--	--	--	--	<21.23dBm
100	5500	12.46	--	--	--	--	--	--	--	<21.25dBm
116	5580	11.42	11.37	11.32	11.25	11.19	11.13	11.03	10.98	<21.25dBm
140	5700	11.94	--	--	--	--	--	--	--	<21.25dBm
149	5745	20.36	--	--	--	--	--	--	--	<30dBm
157	5785	20.14	20.06	19.96	19.89	19.82	19.74	19.67	19.57	<30dBm
165	5825	19.86	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	12.19	--	--	--	--	--	--	--	<21.23dBm
44	5220	12.51	12.44	12.37	12.31	12.26	12.2	12.15	12.07	<21.23dBm
48	5240	12.69	--	--	--	--	--	--	--	<21.23dBm
52	5260	12.43	--	--	--	--	--	--	--	<21.23dBm
60	5300	12.42	12.36	12.31	12.25	12.2	12.12	12.02	11.97	<21.23dBm
64	5320	12.42	--	--	--	--	--	--	--	<21.23dBm
100	5500	12.59	--	--	--	--	--	--	--	<21.25dBm
116	5580	11.9	11.8	11.73	11.63	11.55	11.45	11.35	11.25	<21.25dBm
140	5700	12.09	--	--	--	--	--	--	--	<21.25dBm
149	5745	19.84	--	--	--	--	--	--	--	<30dBm
157	5785	20.02	19.96	19.86	19.77	19.72	19.64	19.57	19.47	<30dBm
165	5825	19.78	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	11.56	--	--	--	--	--	--	--	<21.23dBm
44	5220	12.03	11.98	11.93	11.86	11.8	11.71	11.61	11.55	<21.23dBm
48	5240	12.05	--	--	--	--	--	--	--	<21.23dBm
52	5260	11.34	--	--	--	--	--	--	--	<21.23dBm
60	5300	11.48	11.42	11.32	11.23	11.18	11.12	11.03	10.97	<21.23dBm
64	5320	11.43	--	--	--	--	--	--	--	<21.23dBm
100	5500	12.36	--	--	--	--	--	--	--	<21.25dBm
116	5580	12.16	12.09	11.99	11.89	11.83	11.74	11.66	11.6	<21.25dBm
140	5700	12.73	--	--	--	--	--	--	--	<21.25dBm
149	5745	19.34	--	--	--	--	--	--	--	<30dBm
157	5785	19.88	19.83	19.74	19.65	19.58	19.52	19.45	19.38	<30dBm
165	5825	19.74	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
36	5180	--	12.21	12.16	12.19	11.56	18.06	21.23	--	Pass
44	5220	--	12.59	12.42	12.51	12.03	18.41	21.23	--	Pass
48	5240	--	12.65	12.27	12.69	12.05	18.44	21.23	--	Pass
52	5260	17.887	11.89	11.62	12.43	11.34	17.86	21.23	20.76	Pass
60	5300	17.896	11.62	11.99	12.42	11.48	17.91	21.23	20.76	Pass
64	5320	17.857	13.27	12.16	12.42	11.43	18.39	21.23	20.75	Pass
100	5500	17.865	12.22	12.46	12.59	12.36	18.43	21.5	21.02	Pass
116	5580	17.856	11.37	11.42	11.90	12.16	17.75	21.5	21.02	Pass
140	5700	17.888	11.53	11.94	12.09	12.73	18.11	21.5	21.03	Pass
149	5745	--	18.64	20.36	19.84	19.34	25.61	30	--	Pass
157	5785	--	18.32	20.14	20.02	19.88	25.67	30	--	Pass
165	5825	--	18.50	19.86	19.78	19.74	25.53	30	--	Pass

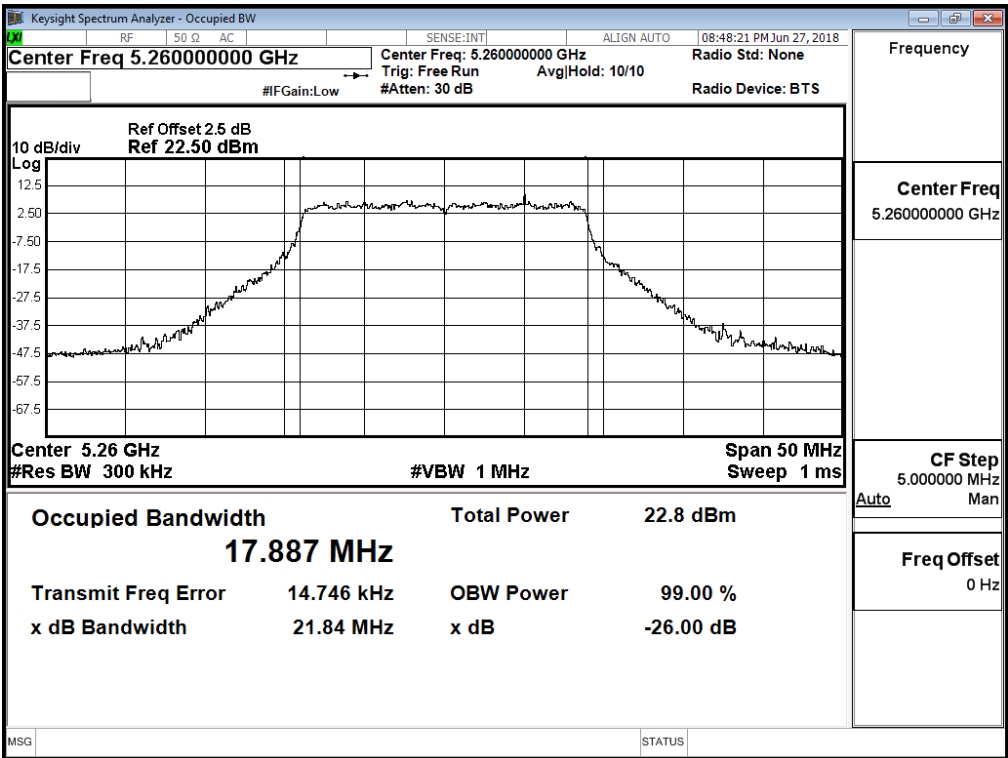
Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

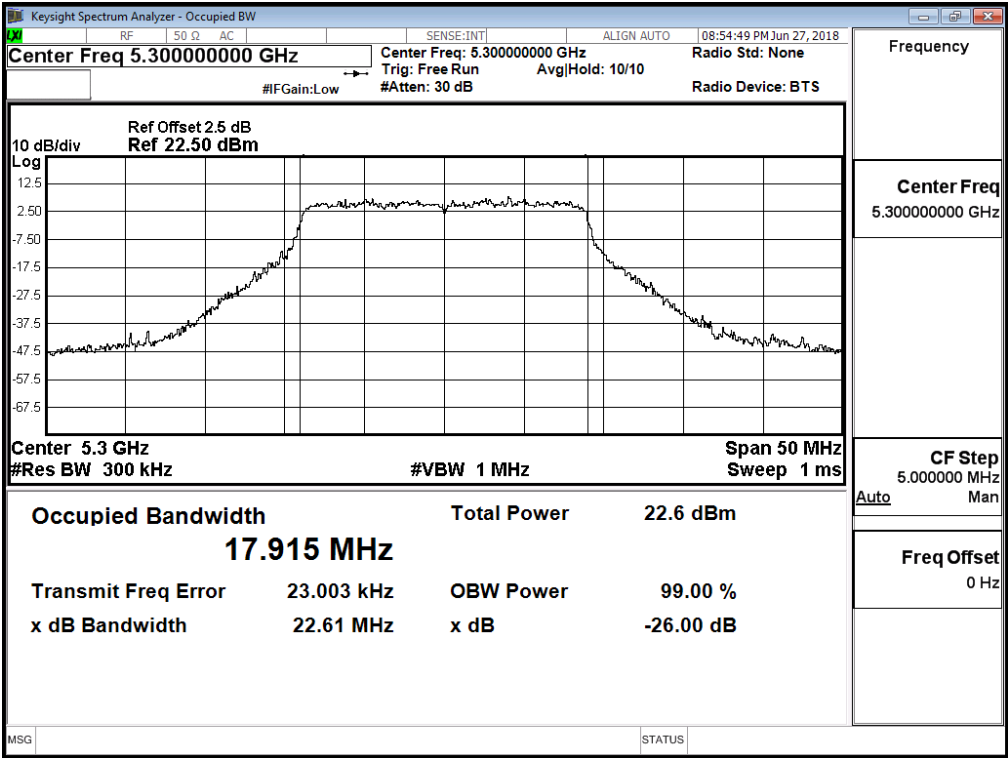
Maximum conducted output power Measurement with Transmit power Control (TPC)

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	5.78	5.43	6.25	5.14	11.69	Pass
60	5300	5.31	5.68	6.20	5.13	11.62	Pass
64	5320	6.90	5.77	6.12	5.15	12.05	Pass
100	5500	5.85	6.15	6.22	6.05	12.09	Pass
116	5580	5.05	5.05	5.73	5.83	11.45	Pass
140	5700	5.25	5.77	5.75	6.36	11.82	Pass

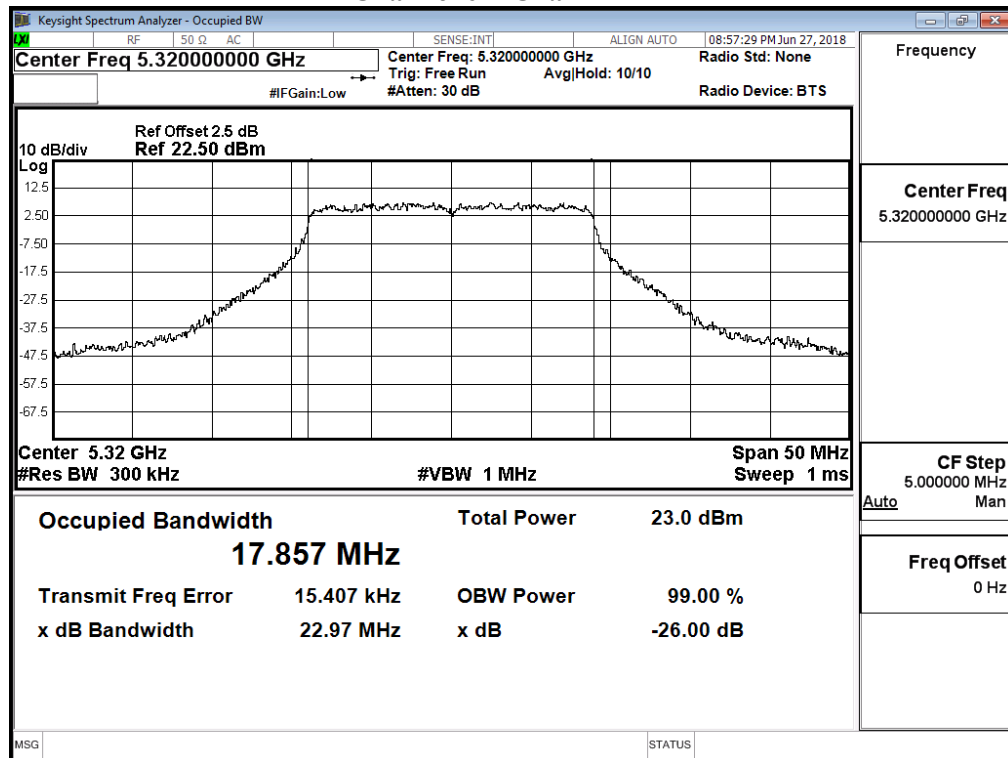
99% Bandwidth:
Channel 52 -Chain A



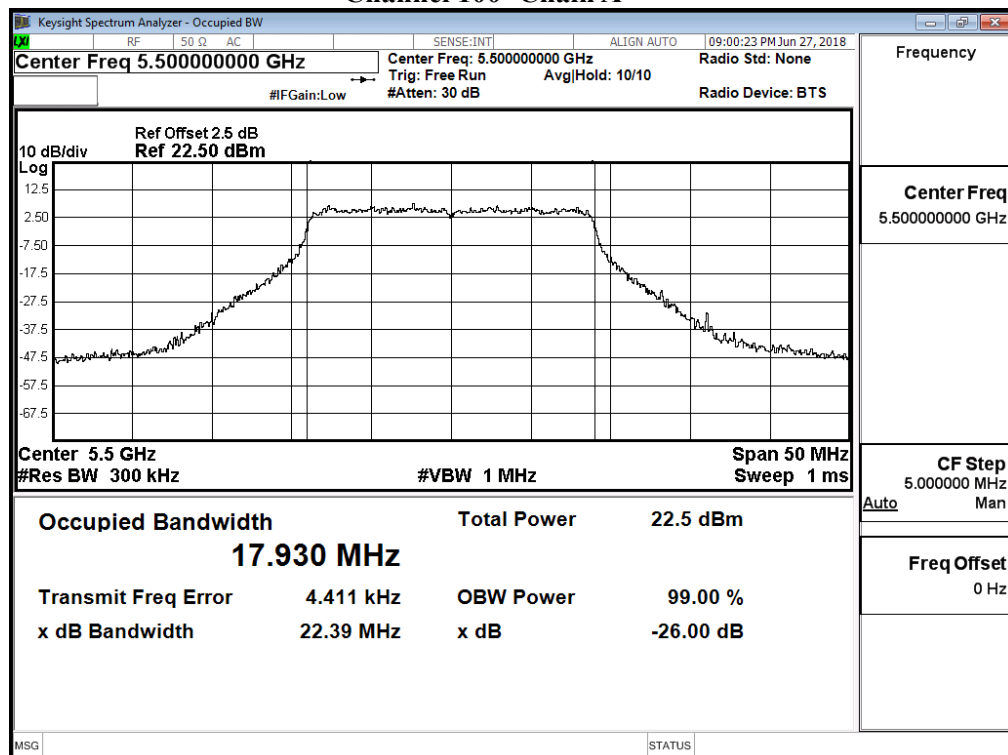
Channel 60 -Chain A



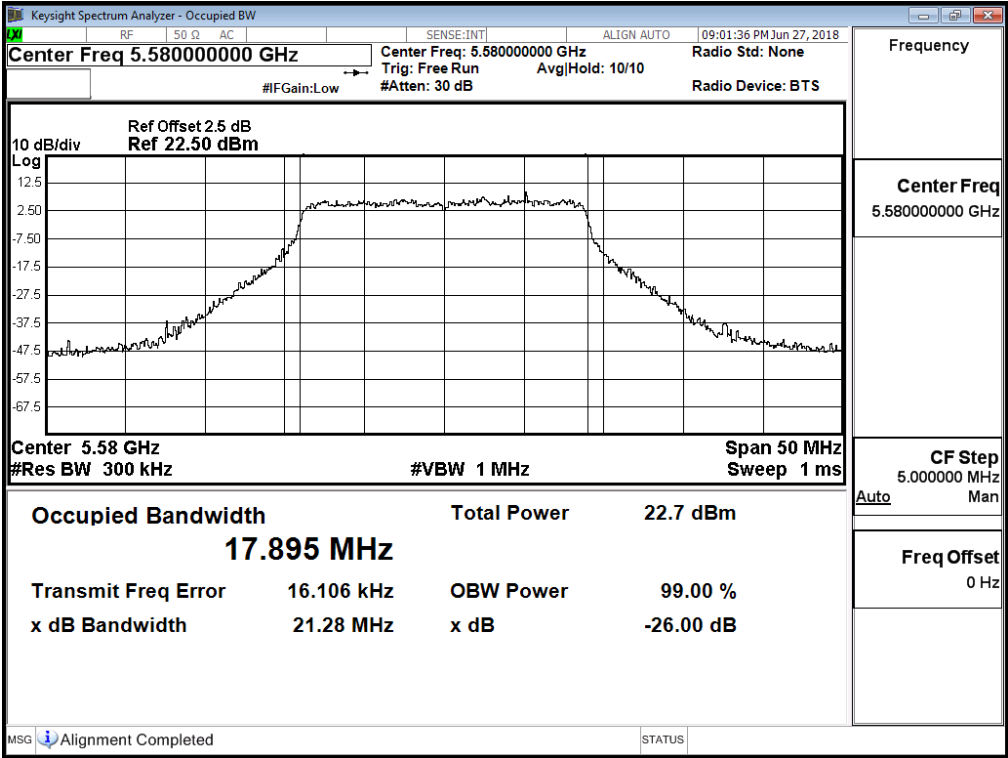
Channel 64 -Chain A



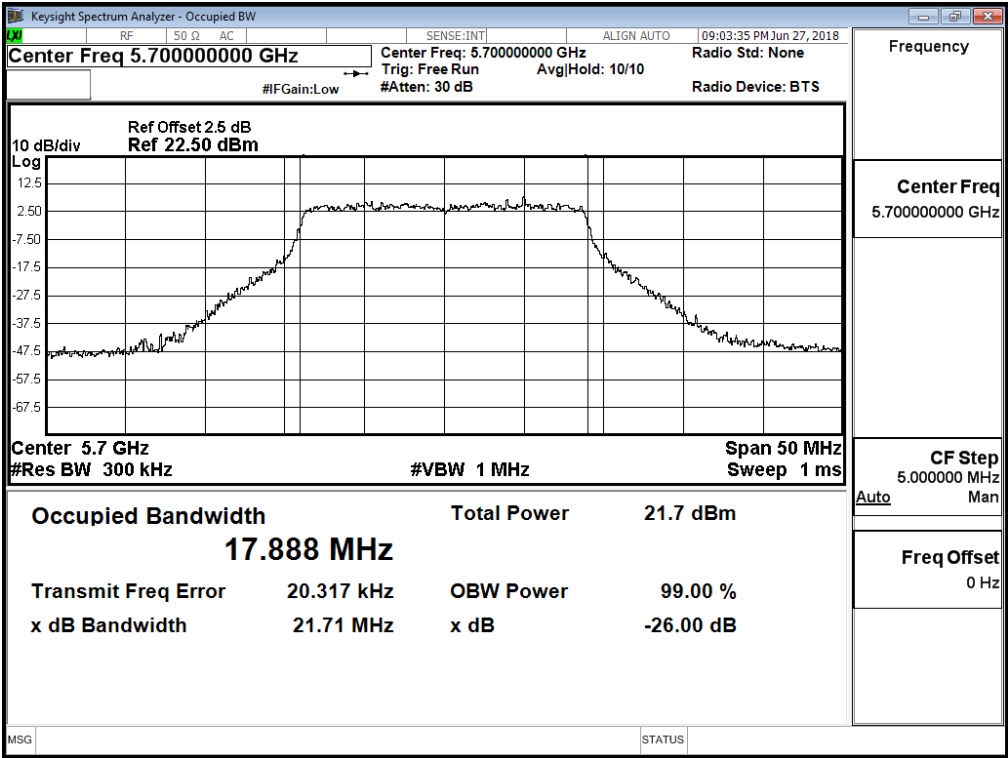
Channel 100 -Chain A



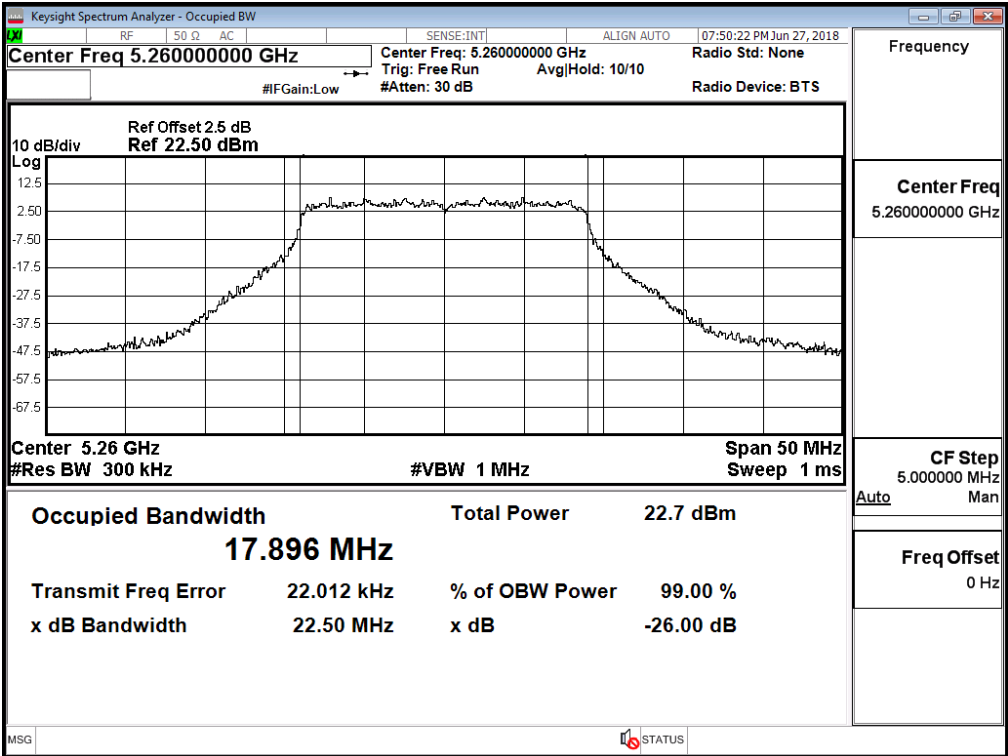
Channel 116 -Chain A



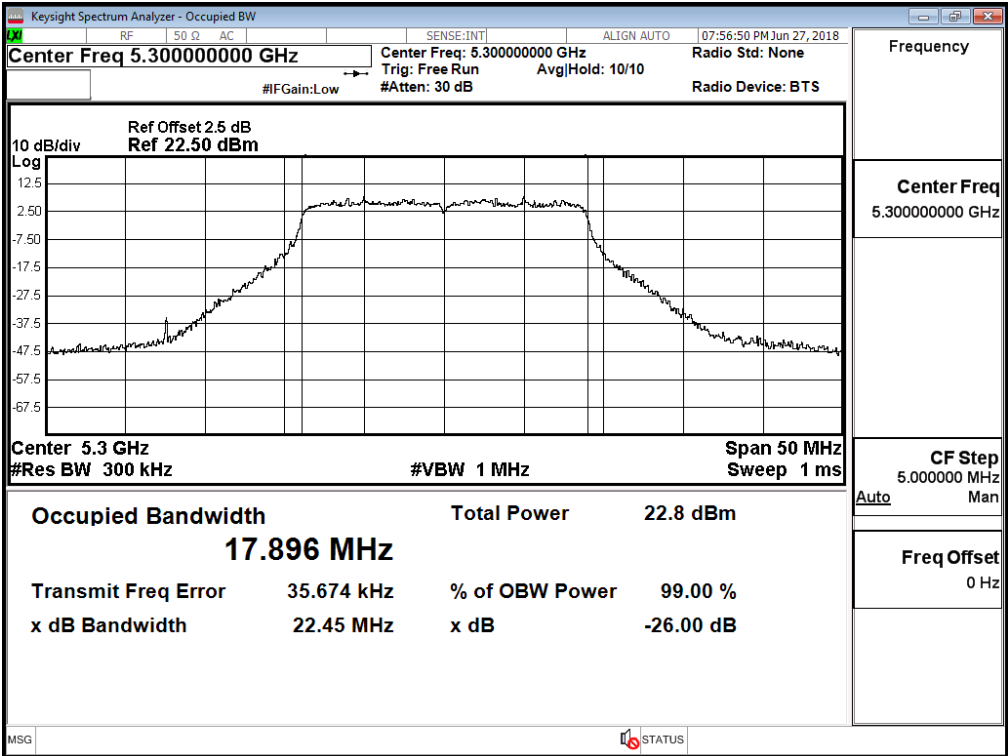
Channel 140 -Chain A



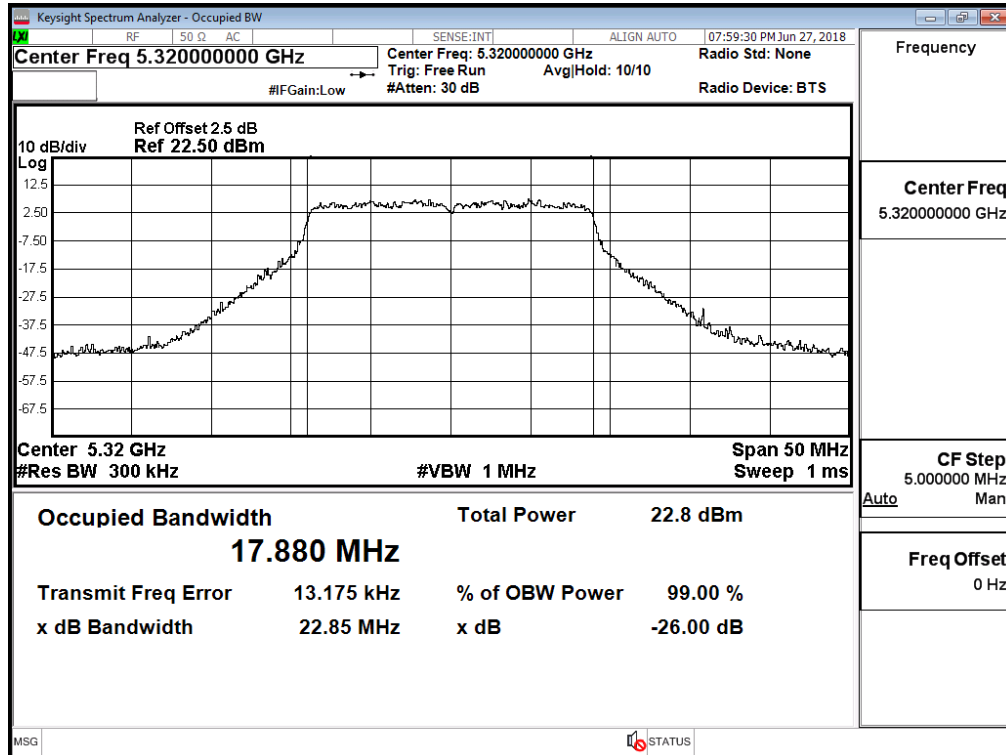
99% Bandwidth:
Channel 52 -Chain B



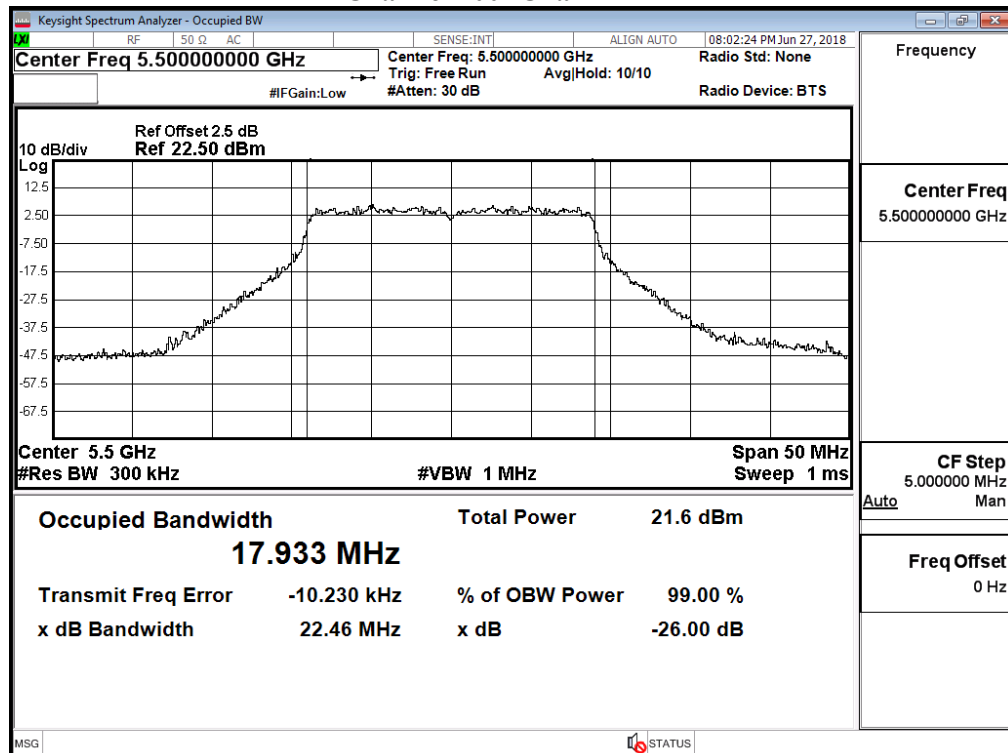
Channel 60 -Chain B



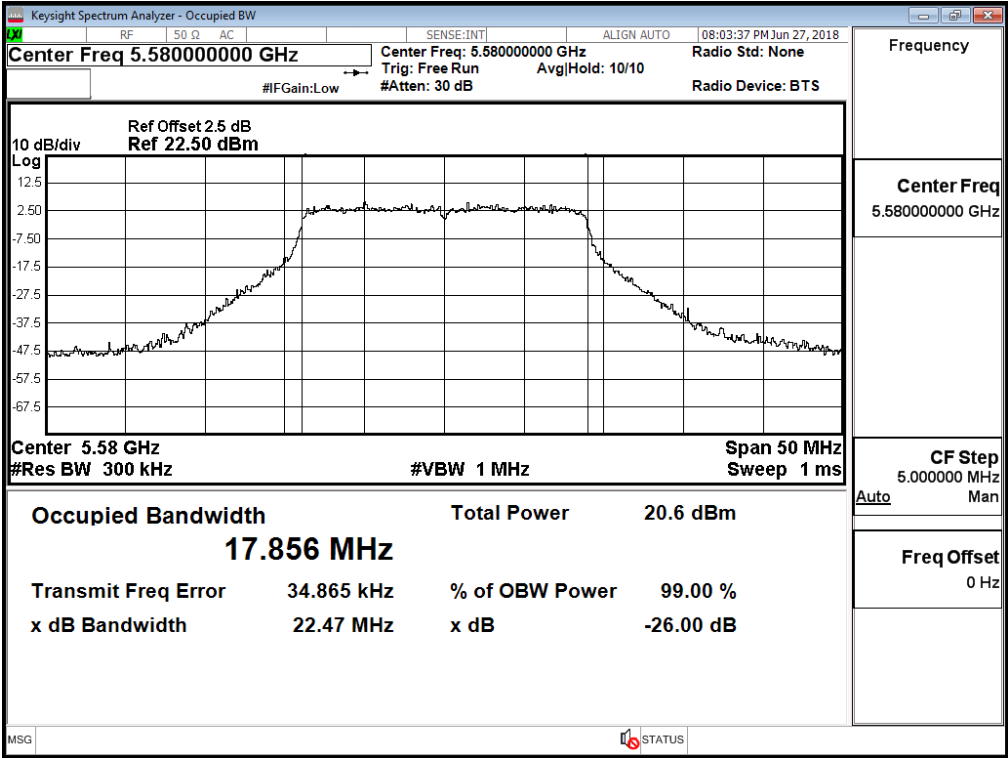
Channel 64 -Chain B



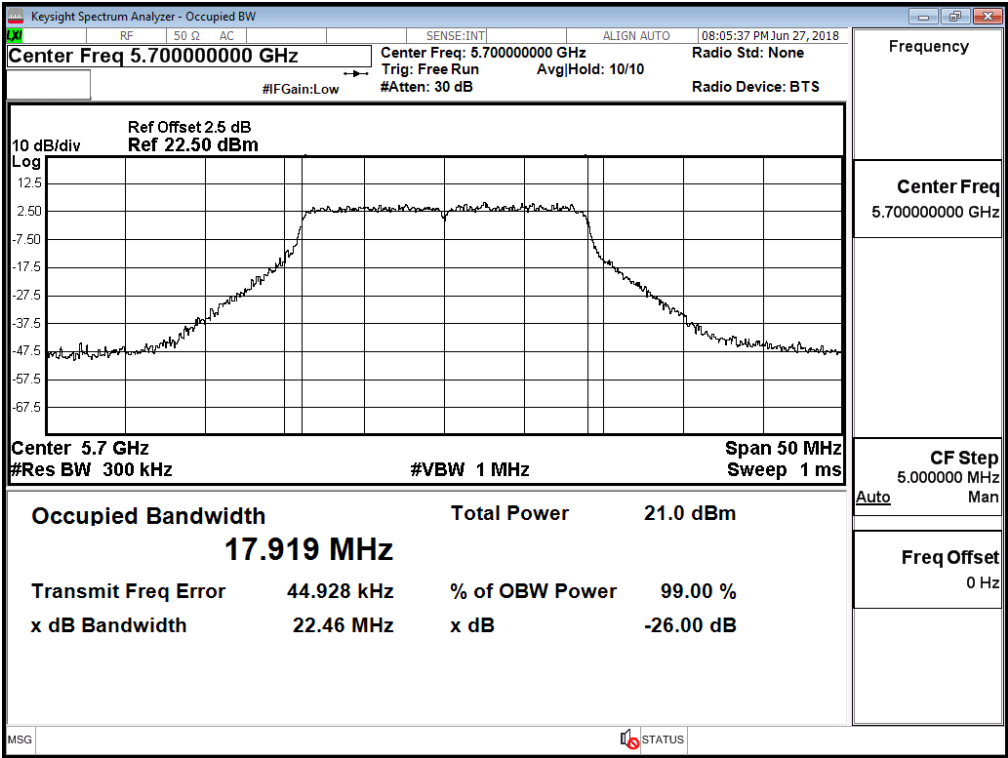
Channel 100 -Chain B



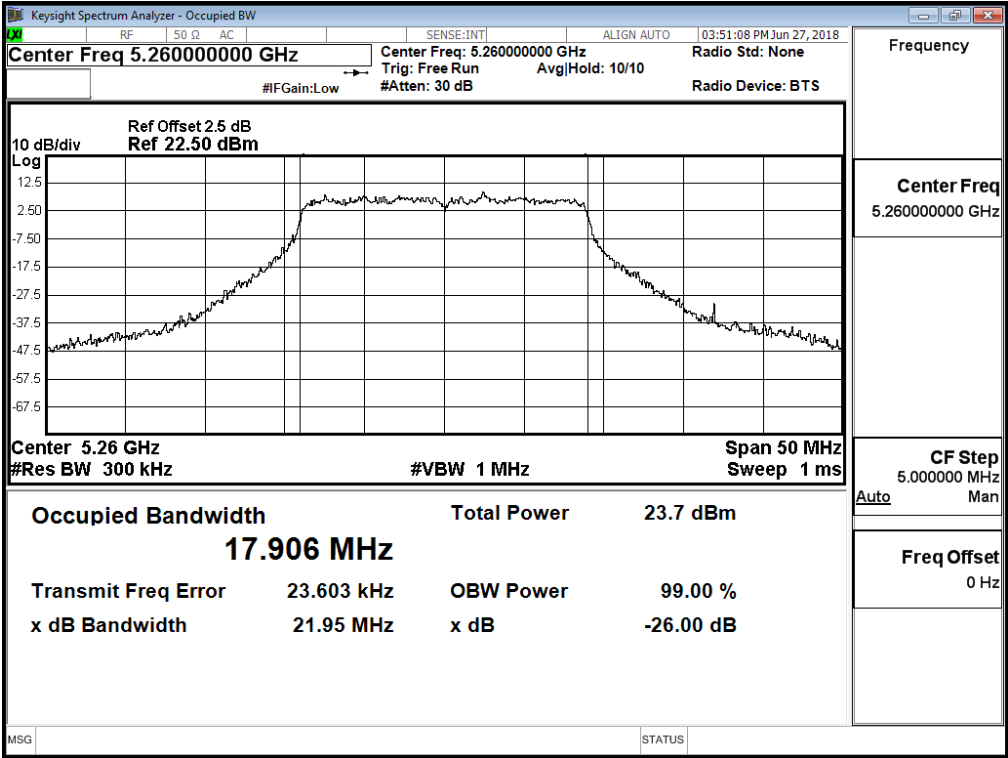
Channel 116 -Chain B



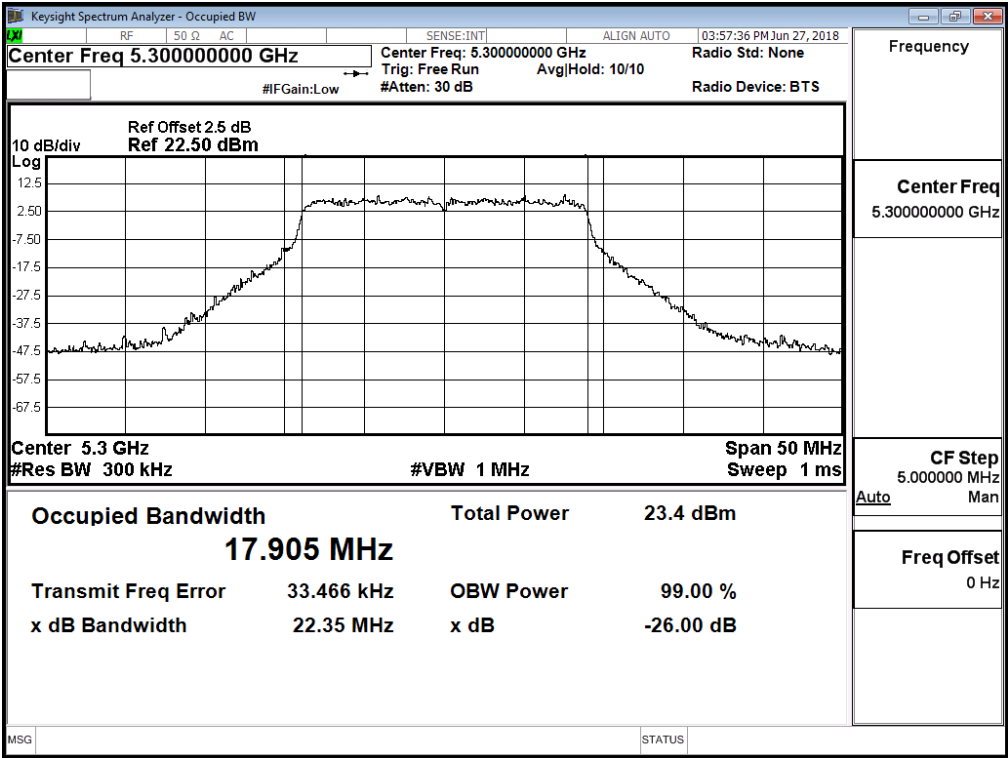
Channel 140 -Chain B



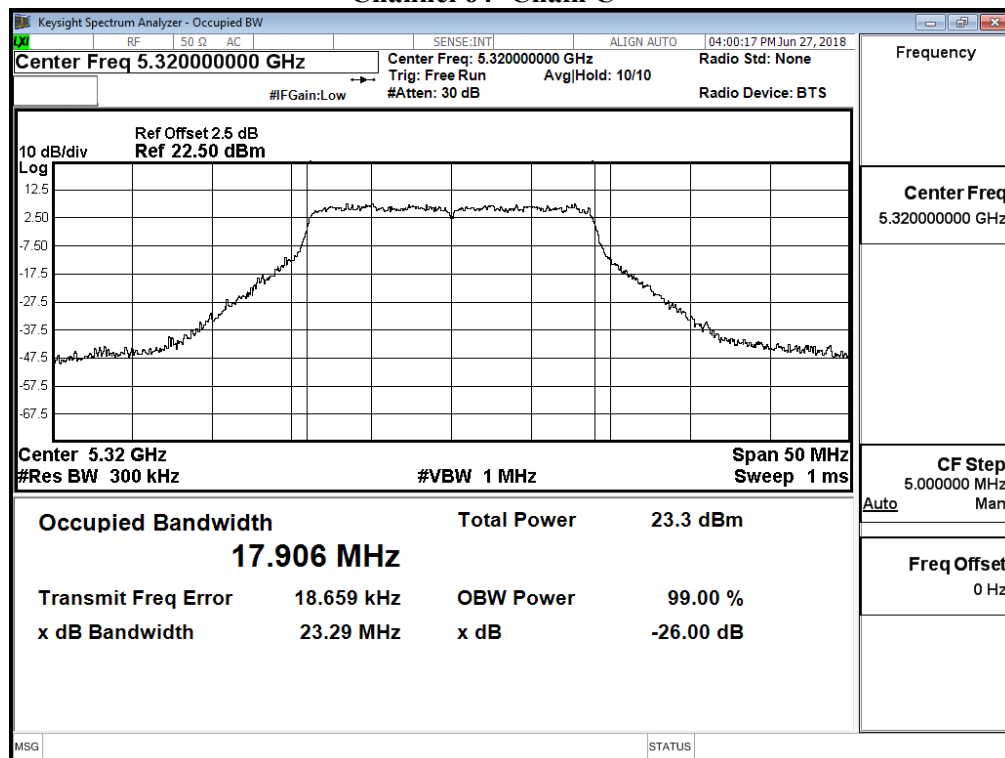
99% Bandwidth:
Channel 52 -Chain C



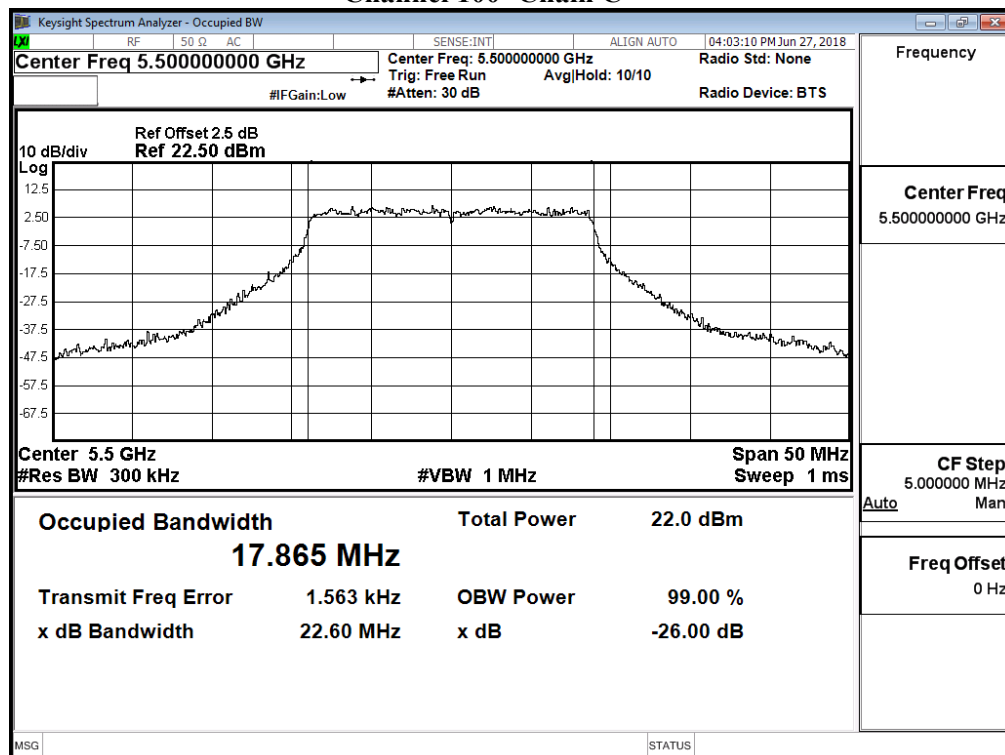
Channel 60 -Chain C



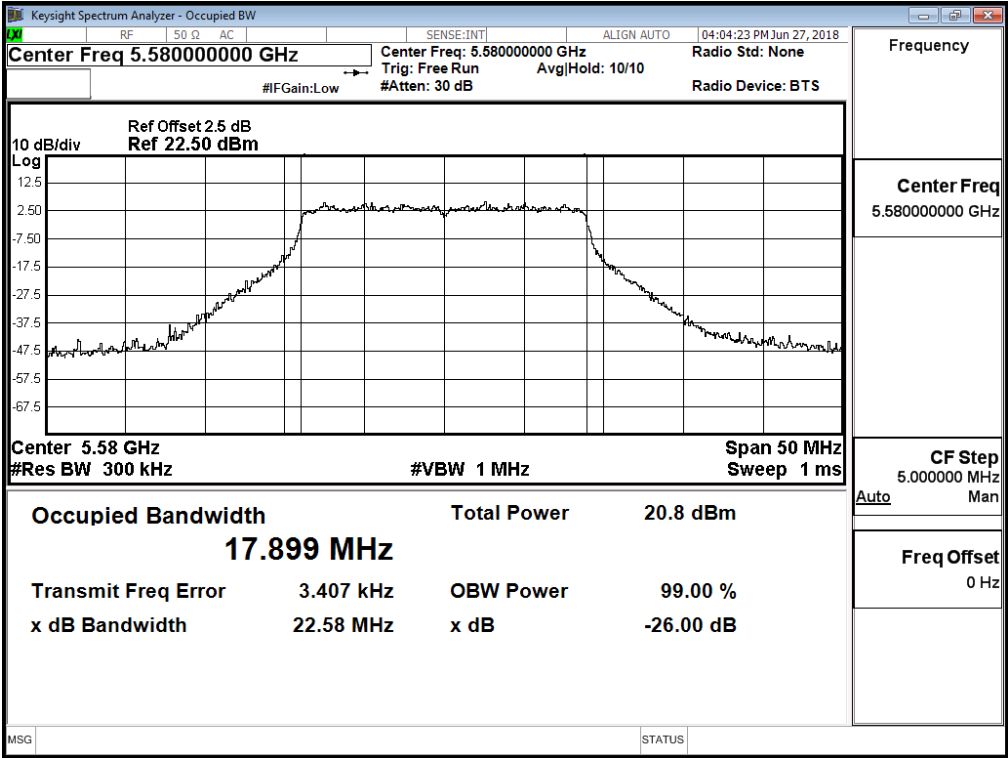
Channel 64 -Chain C



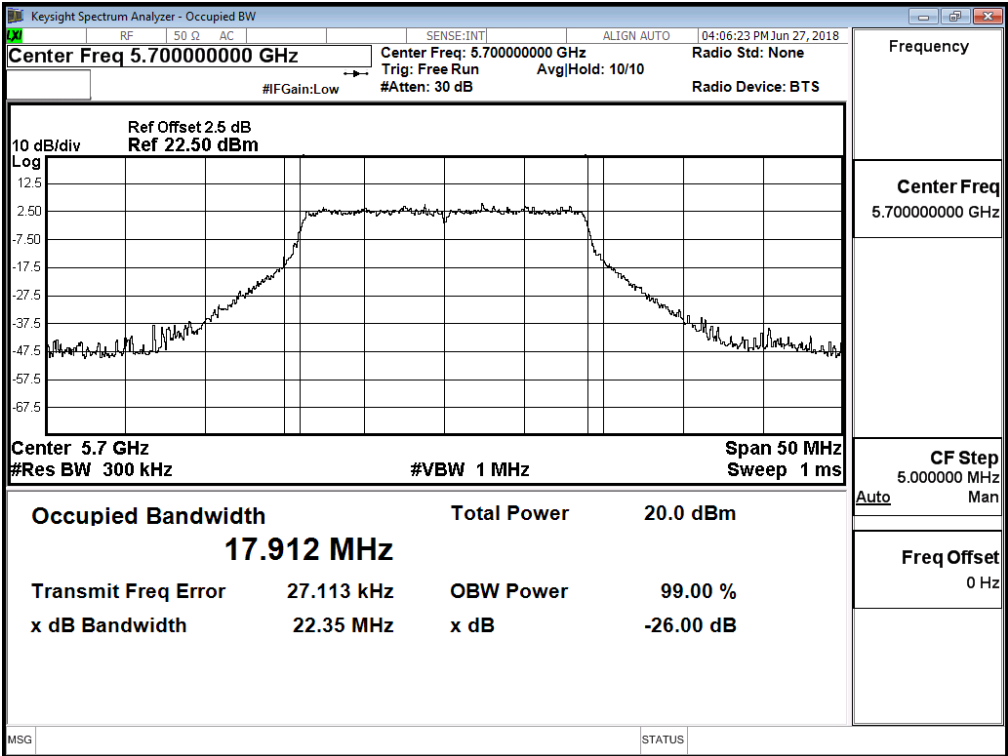
Channel 100 -Chain C



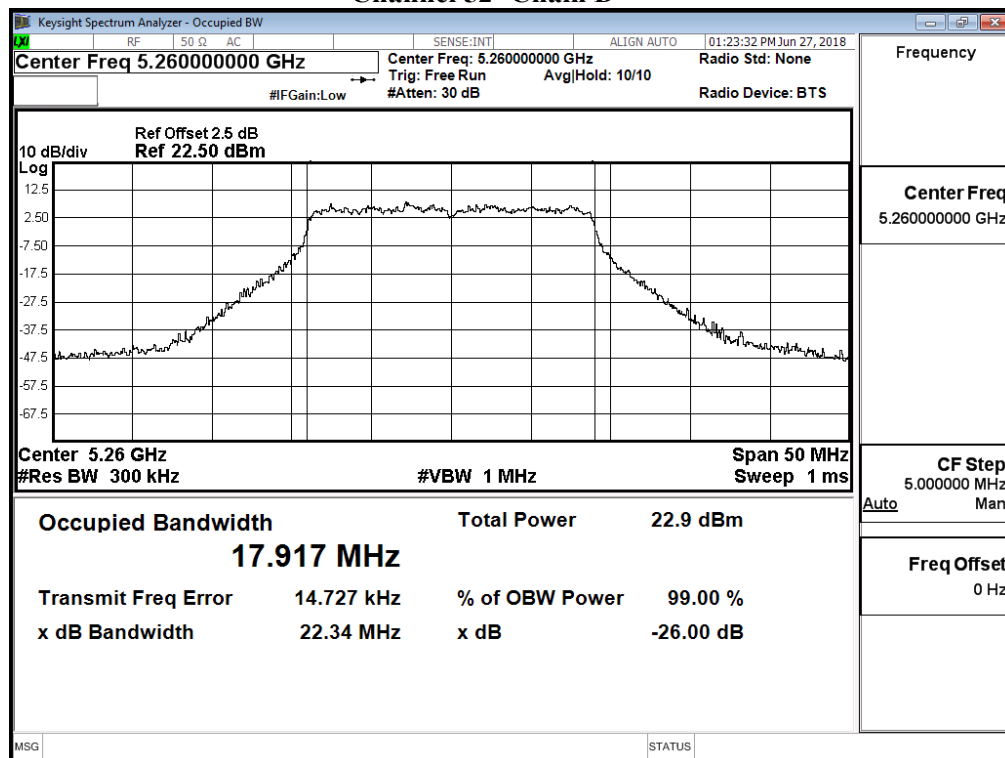
Channel 116 -Chain C



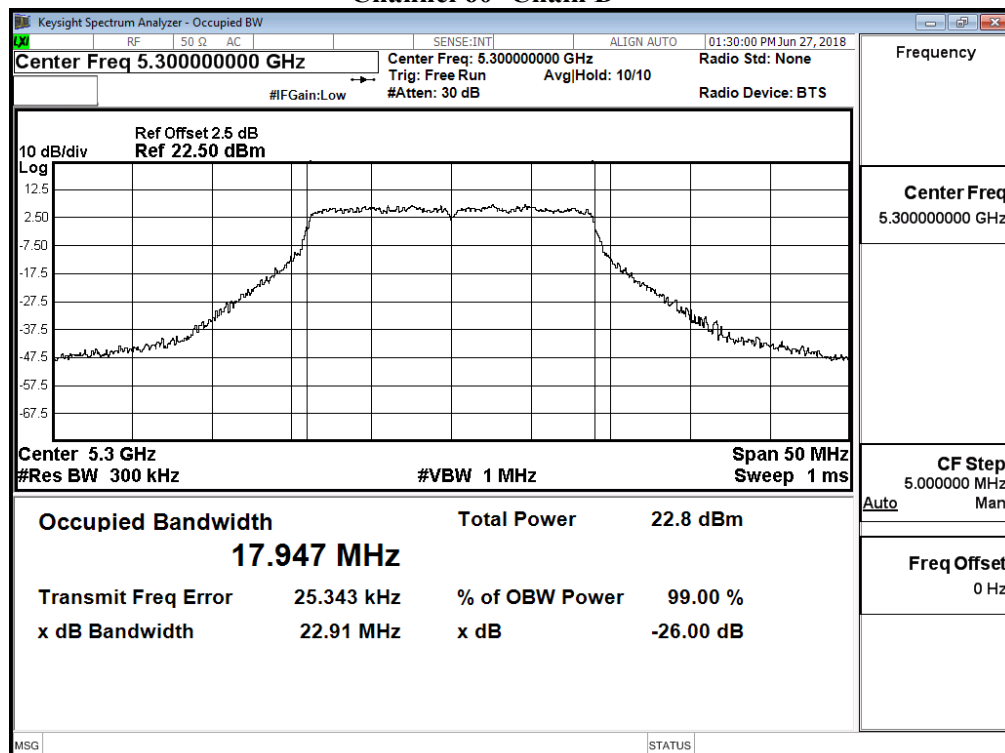
Channel 140 -Chain C



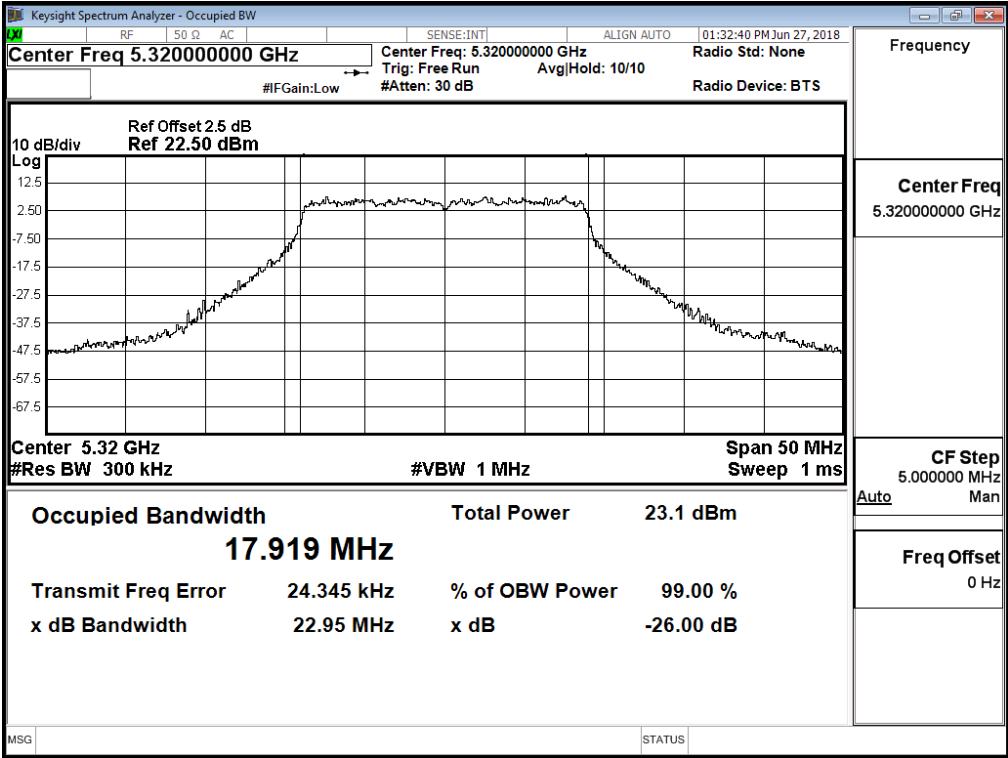
**99% Bandwidth:
Channel 52 -Chain D**



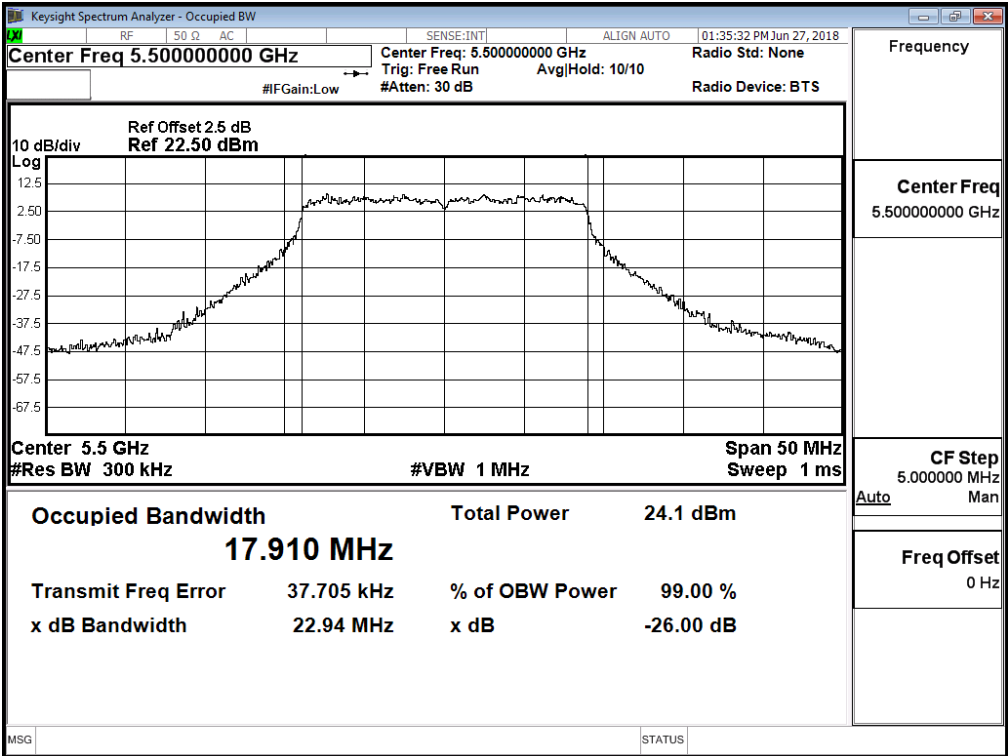
Channel 60 -Chain D



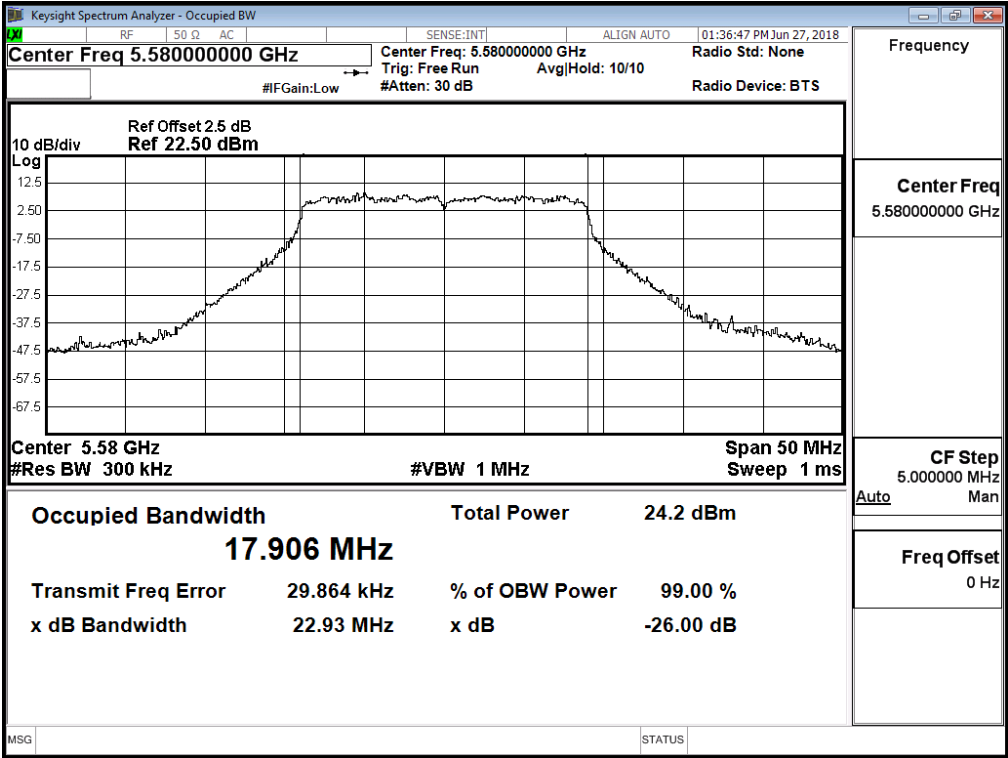
Channel 64 -Chain D



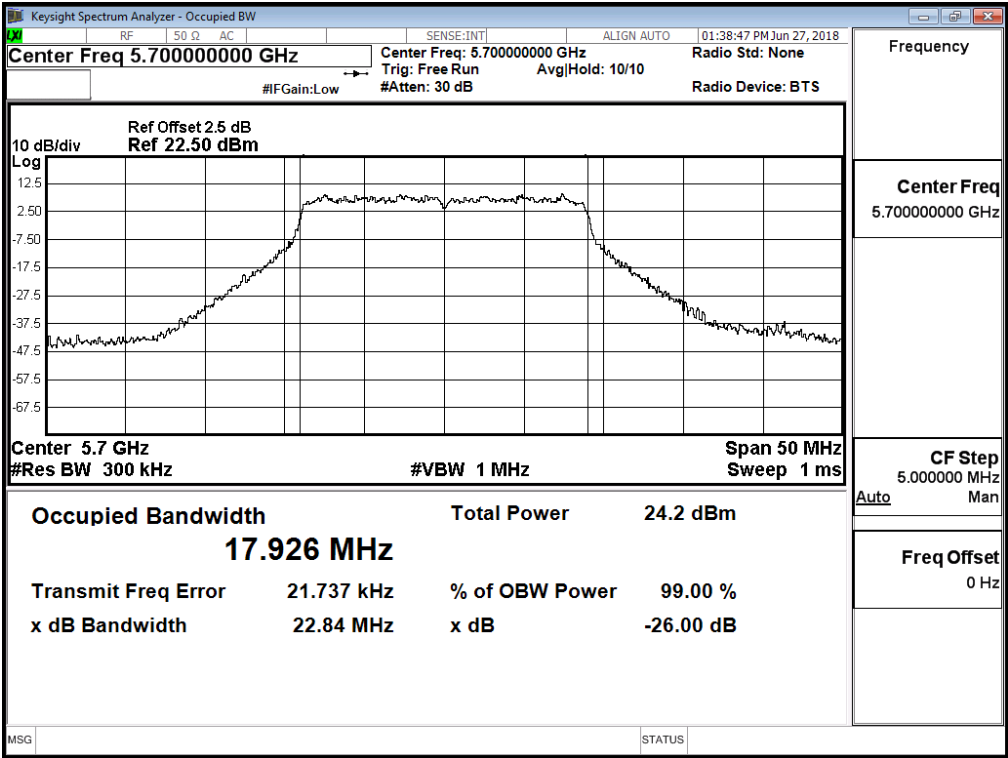
Channel 100 -Chain D



Channel 116 -Chain D



Channel 140 -Chain D



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (Antenna No.1)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	15.11	--	--	--	--	--	--	--	<21.23dBm
46	5230	15.01	14.95	14.89	14.79	14.73	14.64	14.58	14.53	<21.23dBm
54	5270	14.44	--	--	--	--	--	--	--	<21.23dBm
62	5310	14.43	14.38	14.33	14.27	14.22	14.12	14.06	14	<21.23dBm
102	5510	14.31	--	--	--	--	--	--	--	<21.25dBm
110	5550	14.49	14.41	14.36	14.3	14.22	14.14	14.07	14.02	<21.25dBm
134	5670	13.71	--	--	--	--	--	--	--	<21.25dBm
151	5755	18.81	--	--	--	--	--	--	--	<30dBm
159	5795	18.23	18.15	18.1	18.05	18	17.91	17.82	17.75	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	15.09	--	--	--	--	--	--	--	<21.23dBm
46	5230	14.81	14.75	14.67	14.6	14.52	14.43	14.34	14.26	<21.23dBm
54	5270	14.59	--	--	--	--	--	--	--	<21.23dBm
62	5310	14.91	14.84	14.77	14.69	14.61	14.52	14.42	14.32	<21.23dBm
102	5510	14.59	--	--	--	--	--	--	--	<21.25dBm
110	5550	14.67	14.59	14.53	14.48	14.4	14.31	14.25	14.17	<21.25dBm
134	5670	14.31	--	--	--	--	--	--	--	<21.25dBm
151	5755	19.31	--	--	--	--	--	--	--	<30dBm
159	5795	20.21	20.15	20.08	20	19.94	19.89	19.8	19.75	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	15.09	--	--	--	--	--	--	--	<21.23dBm
46	5230	15.22	15.17	15.12	15.05	14.97	14.88	14.82	14.74	<21.23dBm
54	5270	15.02	--	--	--	--	--	--	--	<21.23dBm
62	5310	15.16	15.1	15.03	14.94	14.89	14.82	14.76	14.7	<21.23dBm
102	5510	14.77	--	--	--	--	--	--	--	<21.25dBm
110	5550	14.99	14.89	14.79	14.72	14.63	14.53	14.47	14.37	<21.25dBm
134	5670	14.72	--	--	--	--	--	--	--	<21.25dBm
151	5755	18.83	--	--	--	--	--	--	--	<30dBm
159	5795	19.87	19.82	19.77	19.71	19.61	19.53	19.46	19.4	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	14.55	--	--	--	--	--	--	--	<21.23dBm
46	5230	14.69	14.61	14.53	14.44	14.38	14.31	14.24	14.15	<21.23dBm
54	5270	14.08	--	--	--	--	--	--	--	<21.23dBm
62	5310	14.09	14.01	13.94	13.89	13.79	13.72	13.67	13.59	<21.23dBm
102	5510	14.81	--	--	--	--	--	--	--	<21.25dBm
110	5550	15.05	14.97	14.89	14.79	14.72	14.66	14.56	14.48	<21.25dBm
134	5670	15.1	--	--	--	--	--	--	--	<21.25dBm
151	5755	19.72	--	--	--	--	--	--	--	<30dBm
159	5795	19.75	19.65	19.58	19.52	19.43	19.36	19.26	19.19	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
38	5190	--	15.11	15.09	15.09	14.55	20.99	21.23	--	Pass
46	5230	--	15.01	14.81	15.22	14.69	20.96	21.23	--	Pass
54	5270	36.420	14.44	14.59	15.02	14.08	20.57	21.23	23.84	Pass
62	5310	36.398	14.43	14.91	15.16	14.09	20.69	21.23	23.84	Pass
102	5510	36.410	14.31	14.59	14.77	14.81	20.65	21.5	24.11	Pass
110	5550	36.405	14.49	14.67	14.99	15.05	20.83	21.5	24.11	Pass
134	5670	36.440	13.71	14.31	14.72	15.10	20.51	21.5	24.12	Pass
151	5755	--	18.81	19.31	18.83	19.72	25.20	30	--	Pass
159	5795	--	18.23	20.21	19.87	19.75	25.60	30	--	Pass

Note:

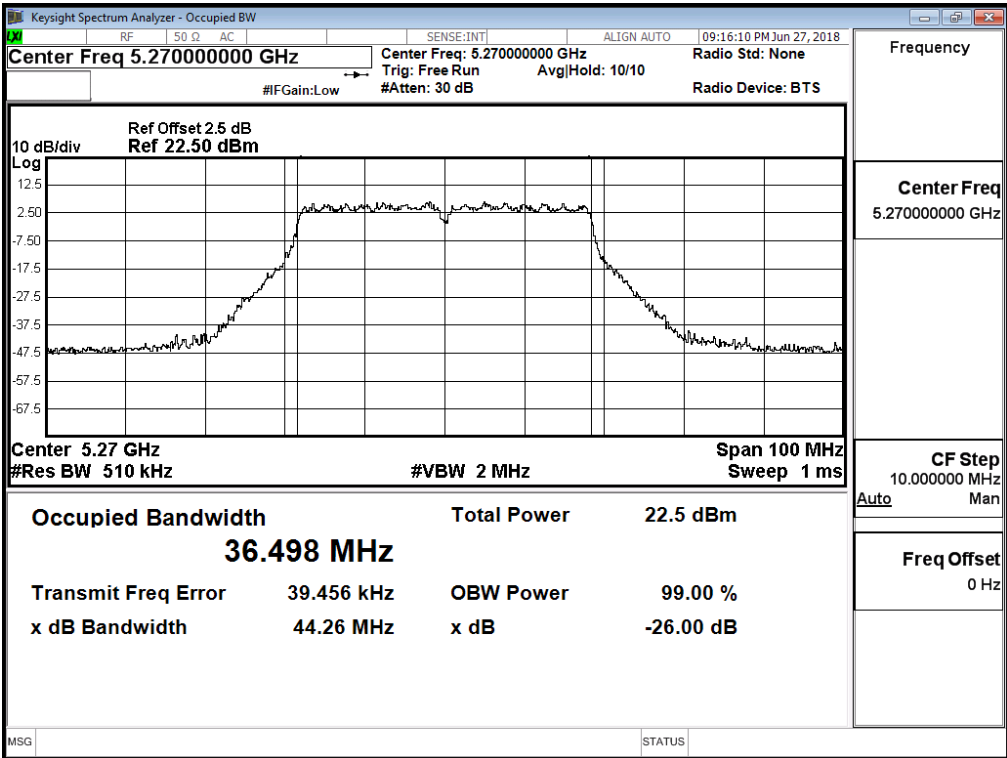
1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple colocated transmitters transmitting the same information.

Maximum conducted output power Measurement with Transmit power Control (TPC)

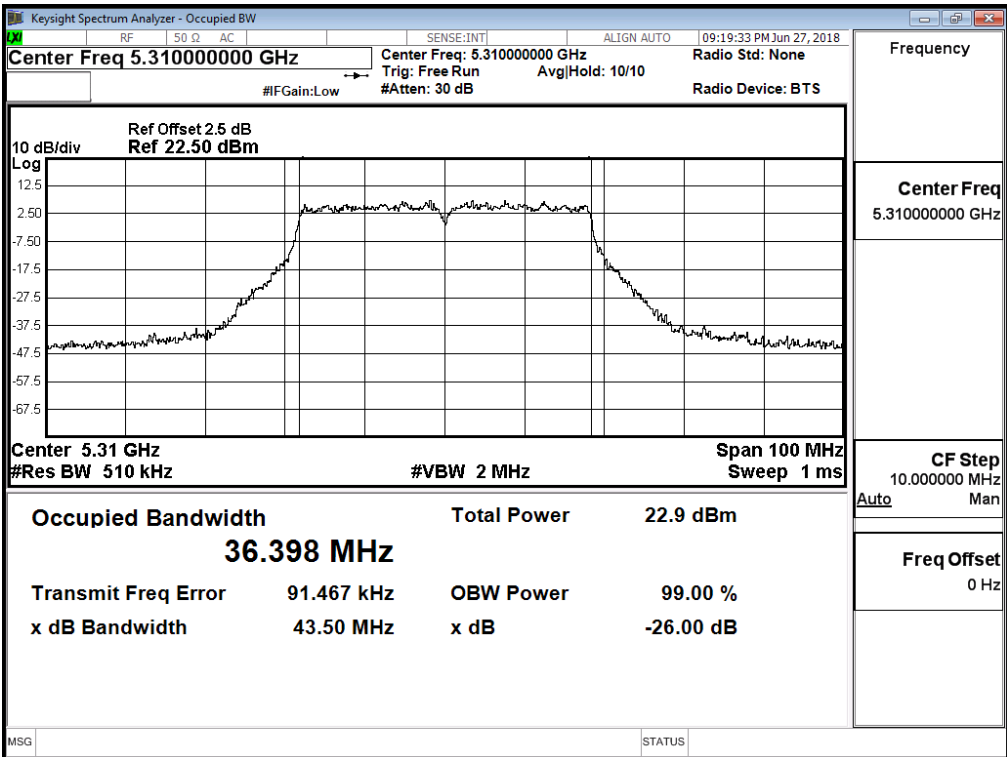
Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
54	5270	8.17	8.45	8.71	7.90	14.34	Pass
62	5310	8.25	8.65	8.84	7.92	14.45	Pass
102	5510	8.19	8.42	8.65	8.59	14.49	Pass
110	5550	8.28	8.56	8.80	8.78	14.63	Pass
134	5670	7.33	8.01	8.52	8.73	14.20	Pass

99% Bandwidth:

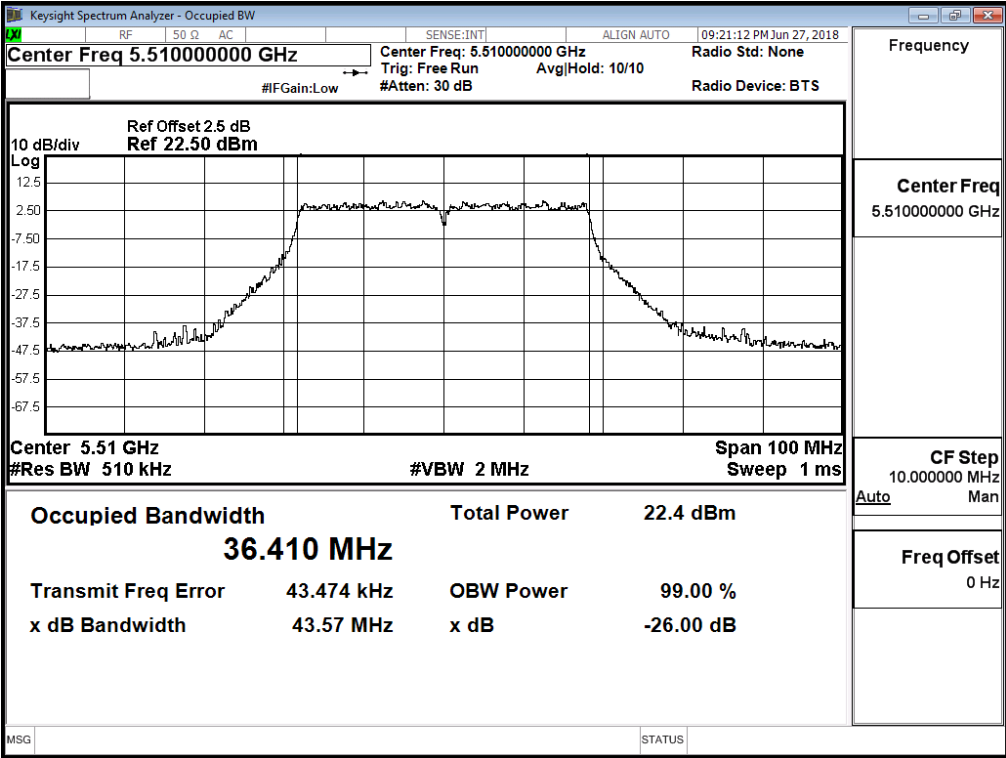
Channel 54 – Chain A



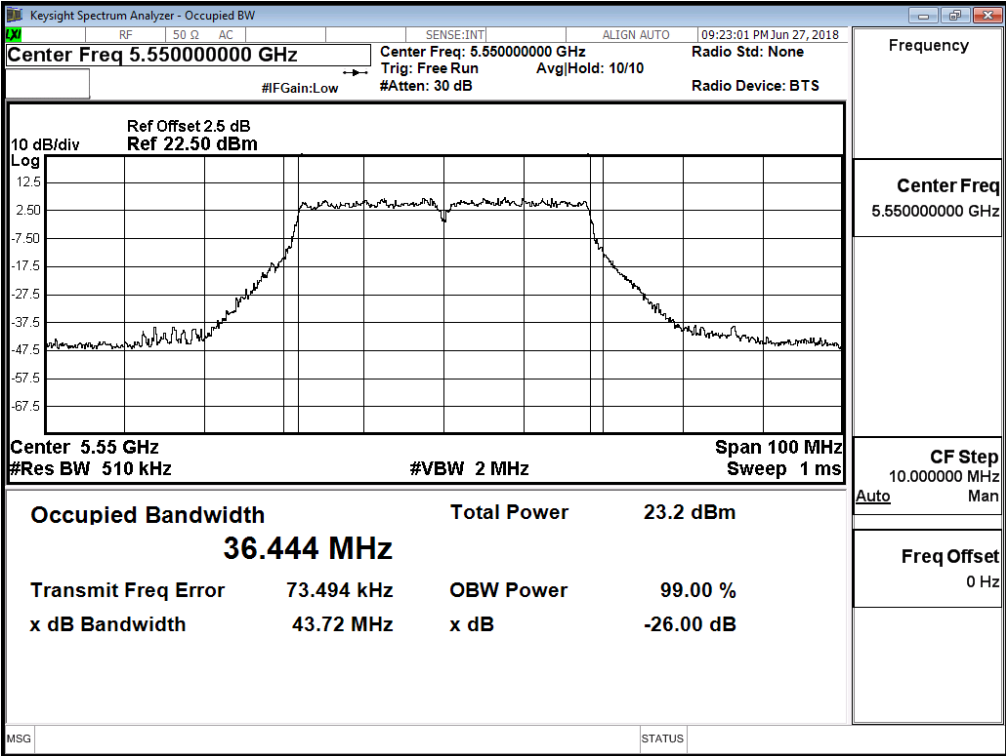
Channel 62 – Chain A



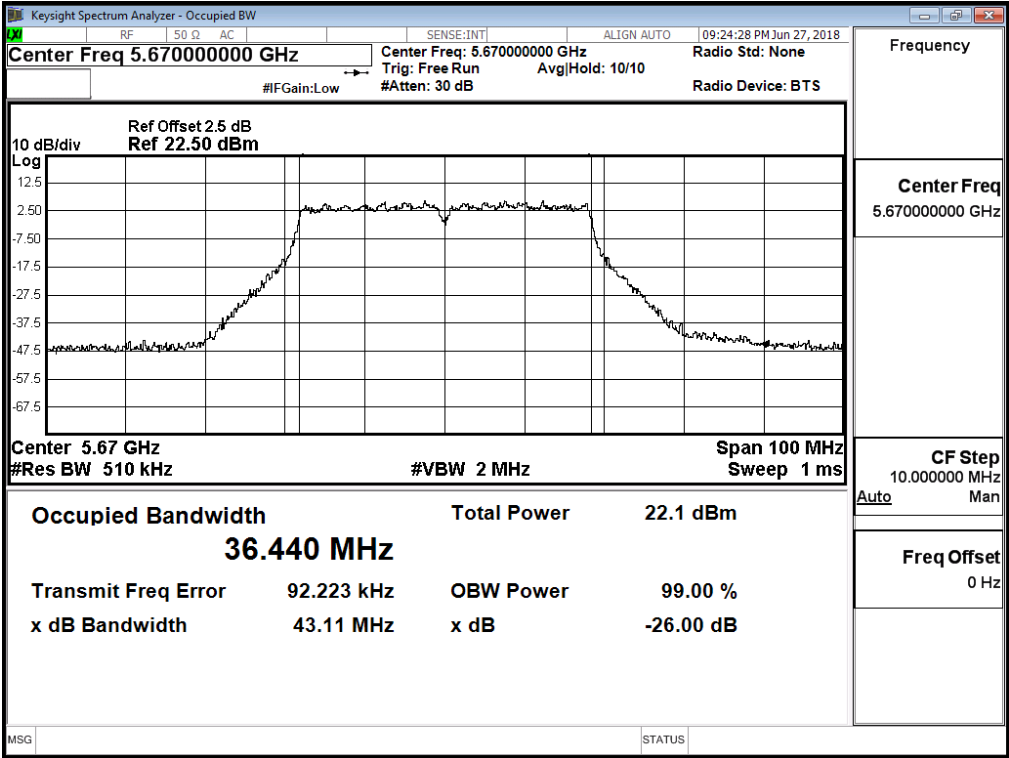
Channel 102 – Chain A



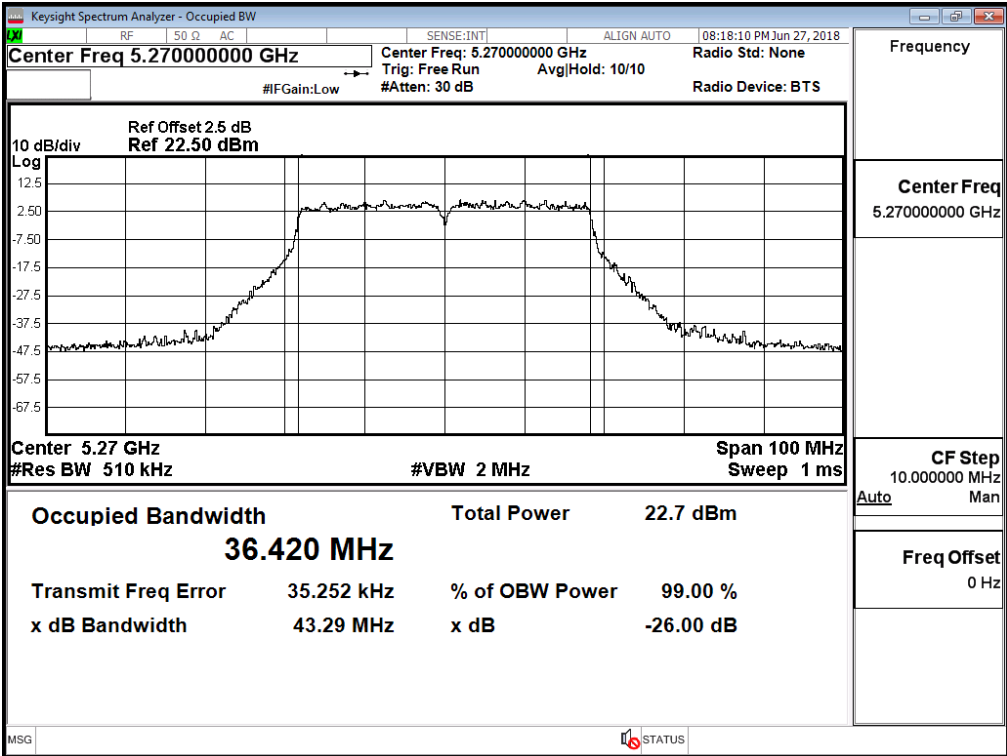
Channel 110 – Chain A



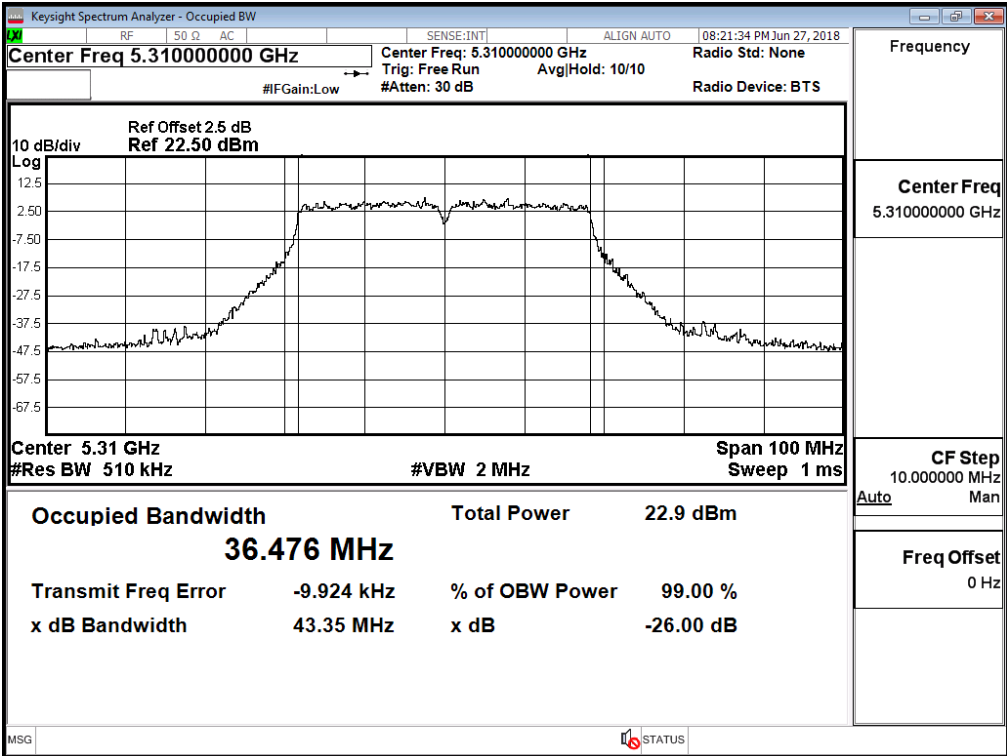
Channel 134 – Chain A



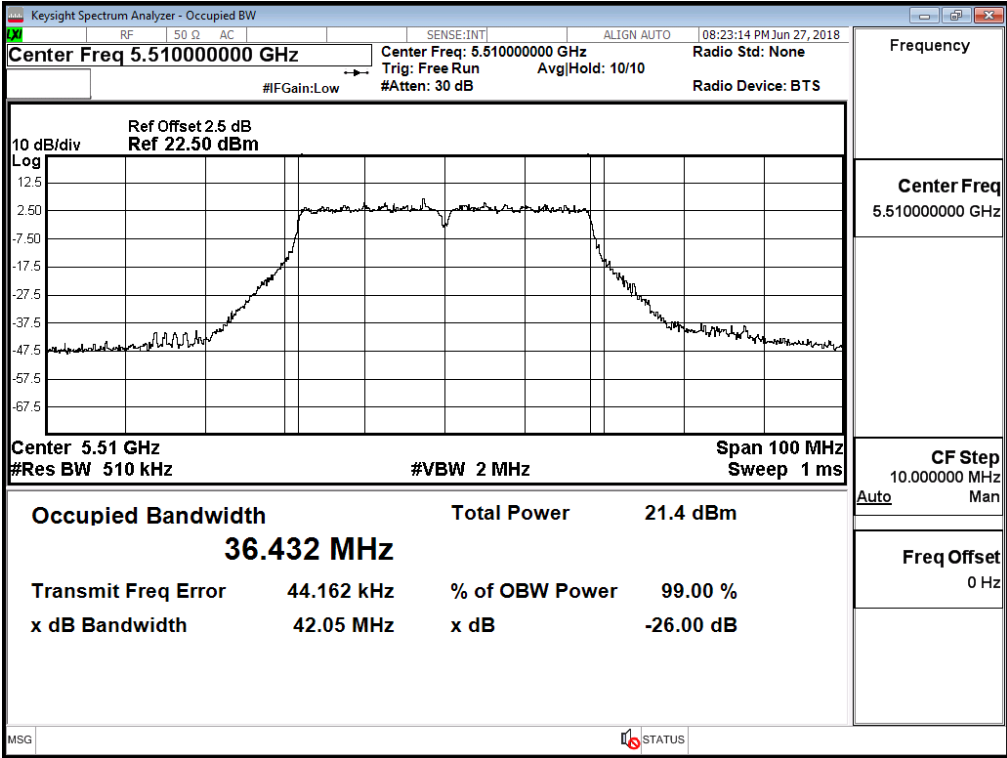
99% Bandwidth:
Channel 54 – Chain B



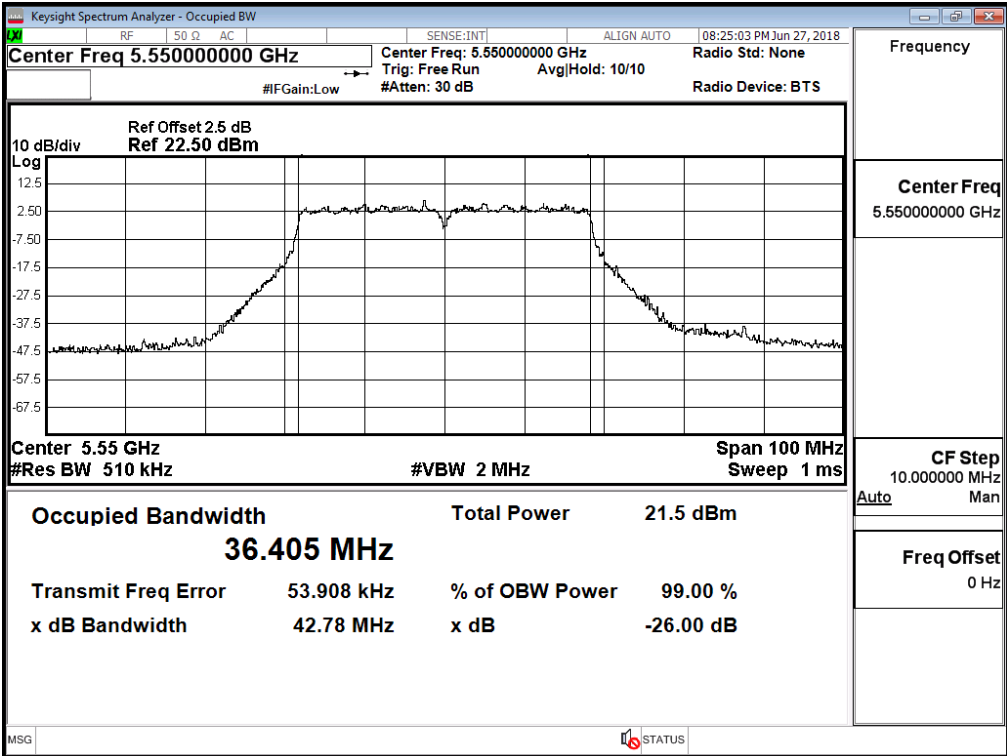
Channel 62 – Chain B



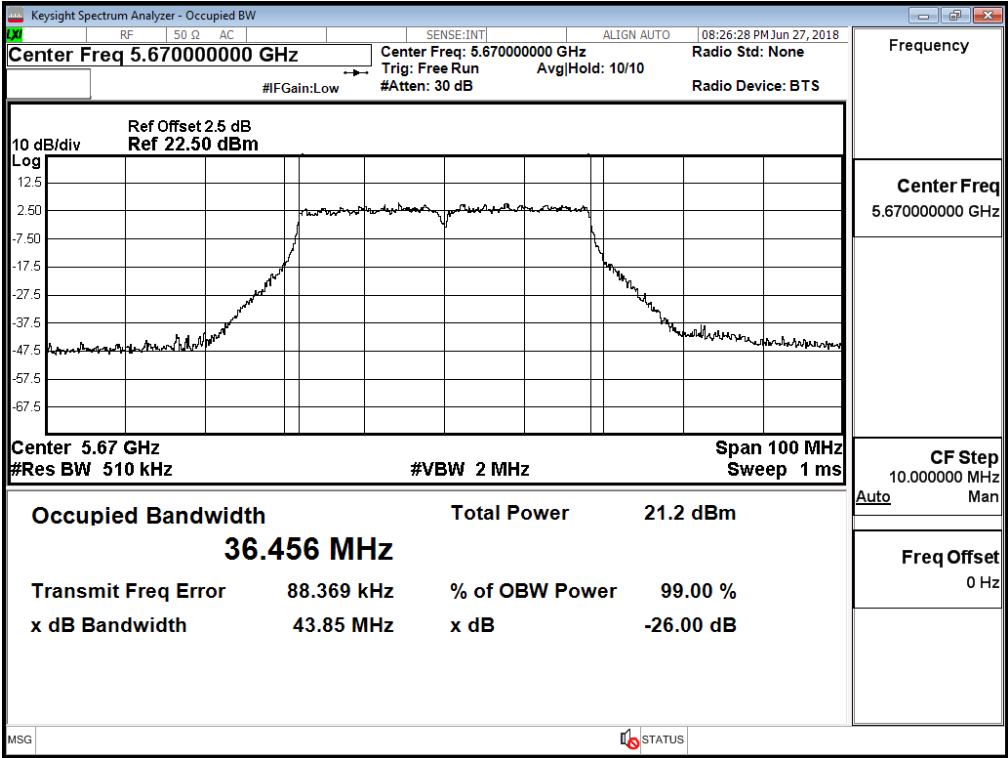
Channel 102 – Chain B



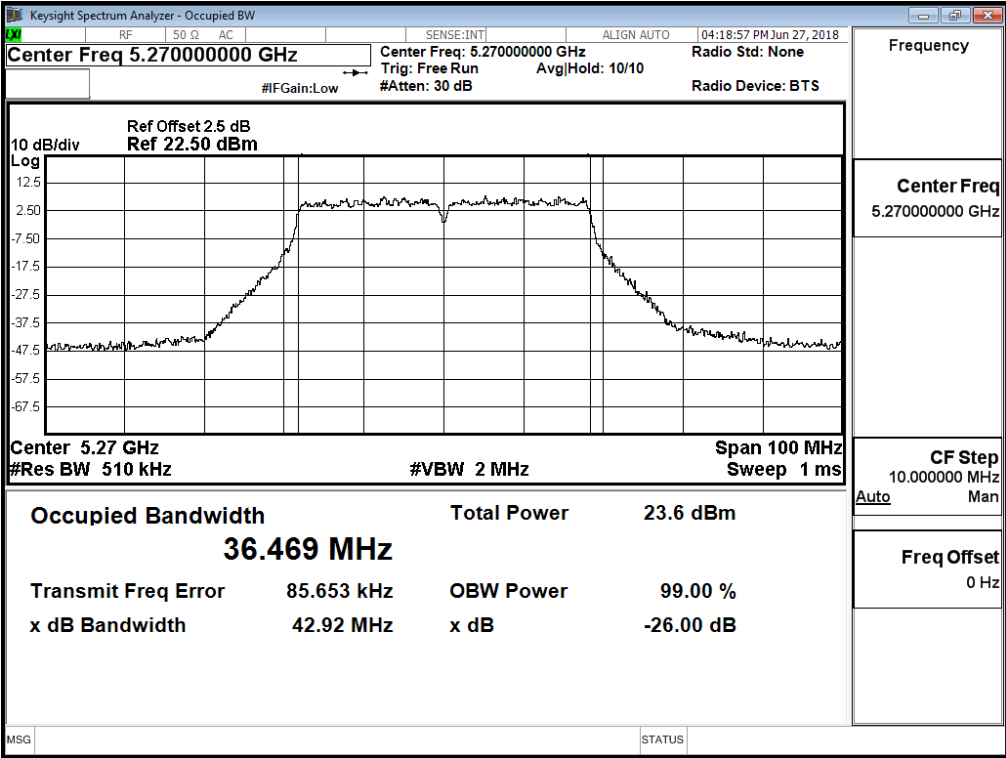
Channel 110 – Chain B



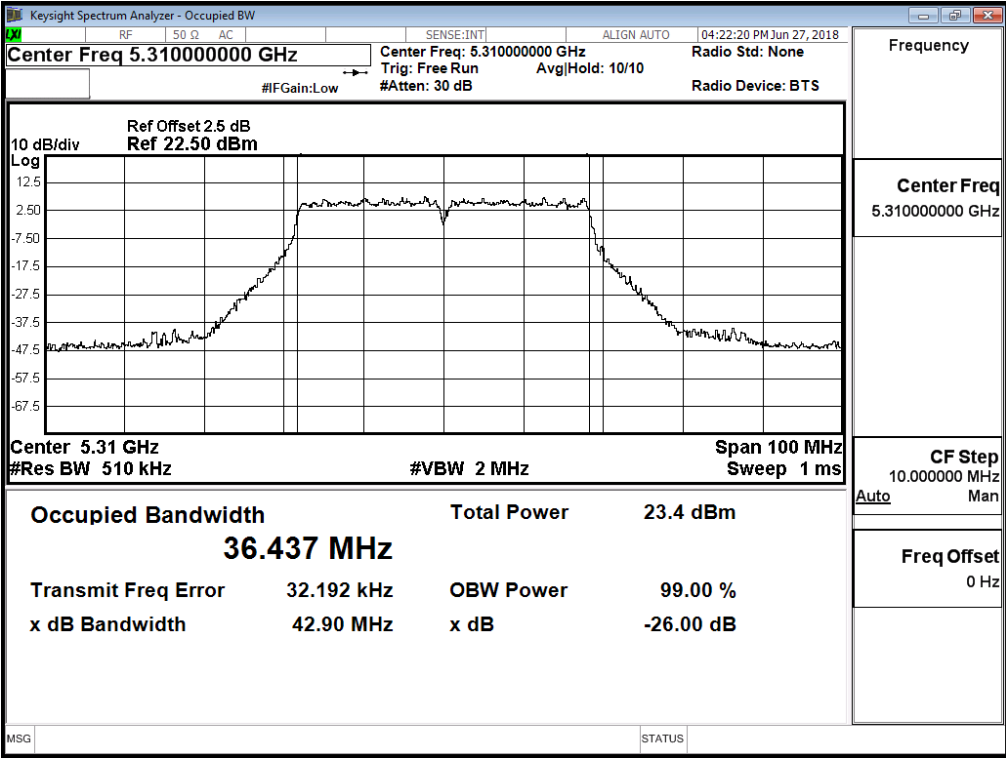
Channel 134 – Chain B



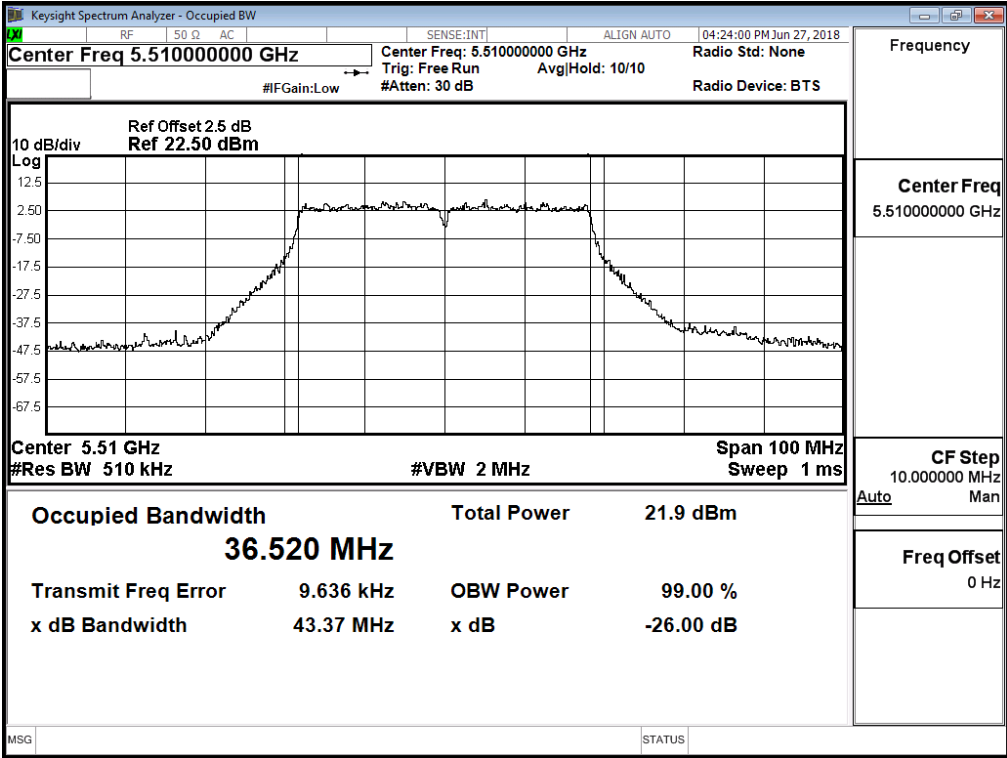
99% Bandwidth:
Channel 54 – Chain C



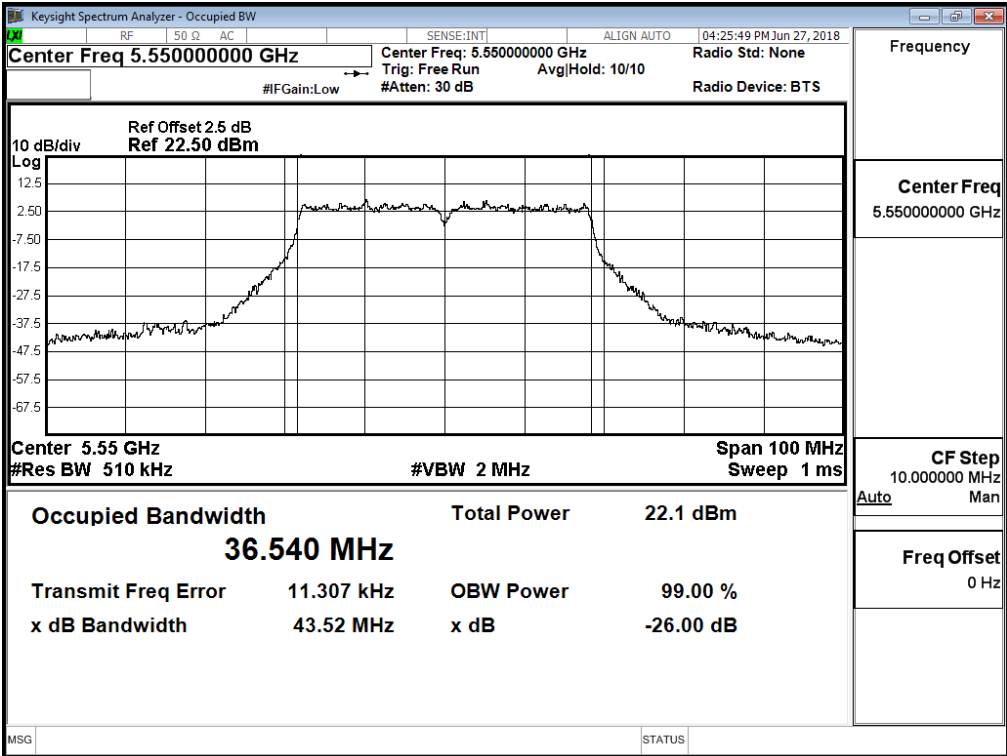
Channel 62 – Chain C



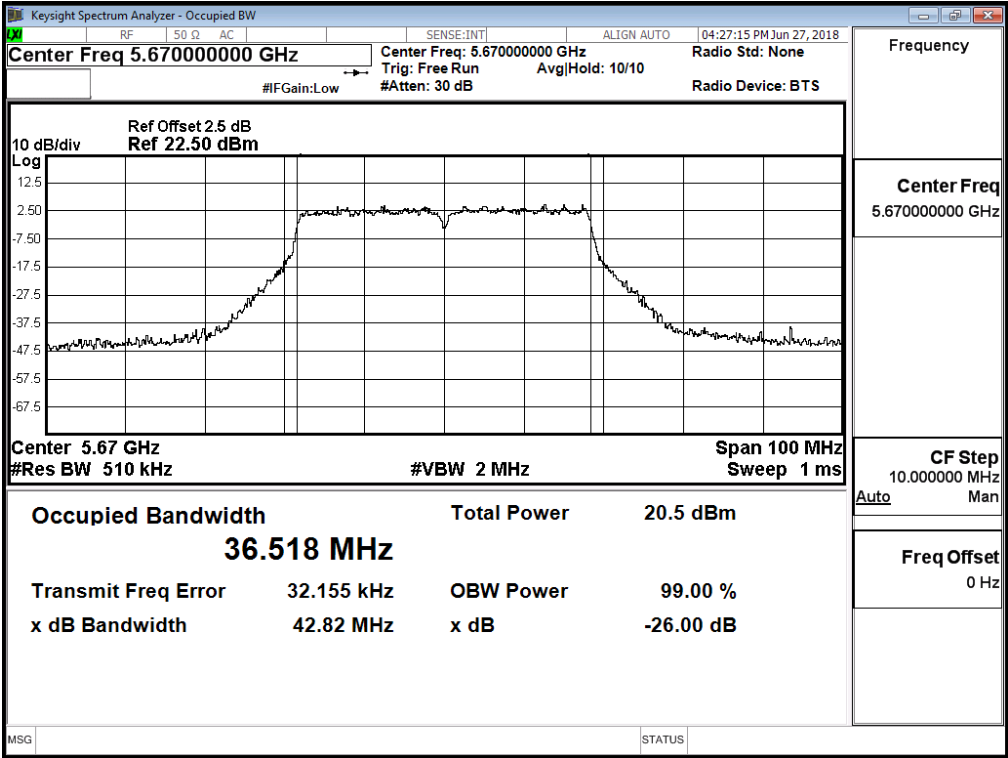
Channel 102 – Chain C



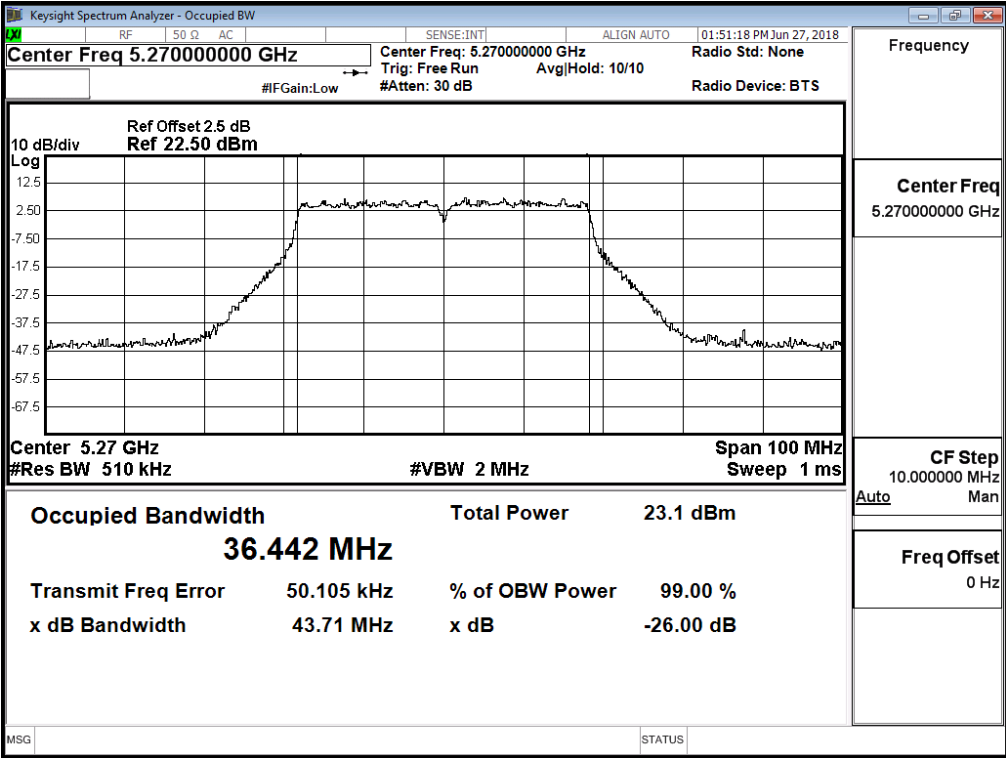
Channel 110 – Chain C



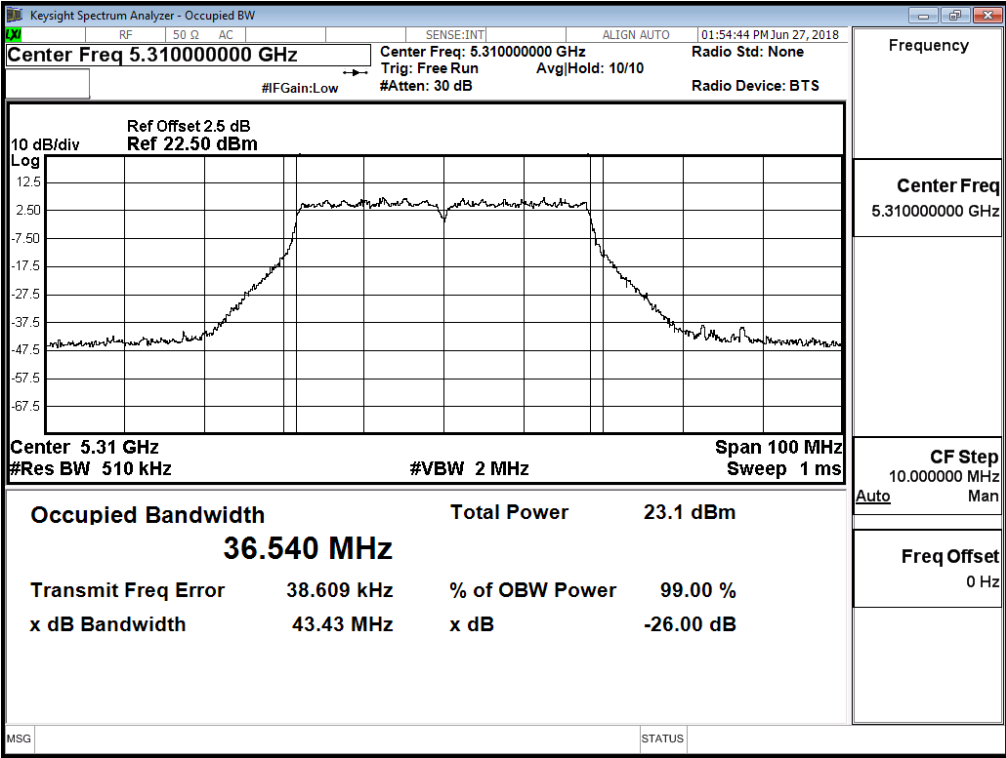
Channel 134 – Chain C



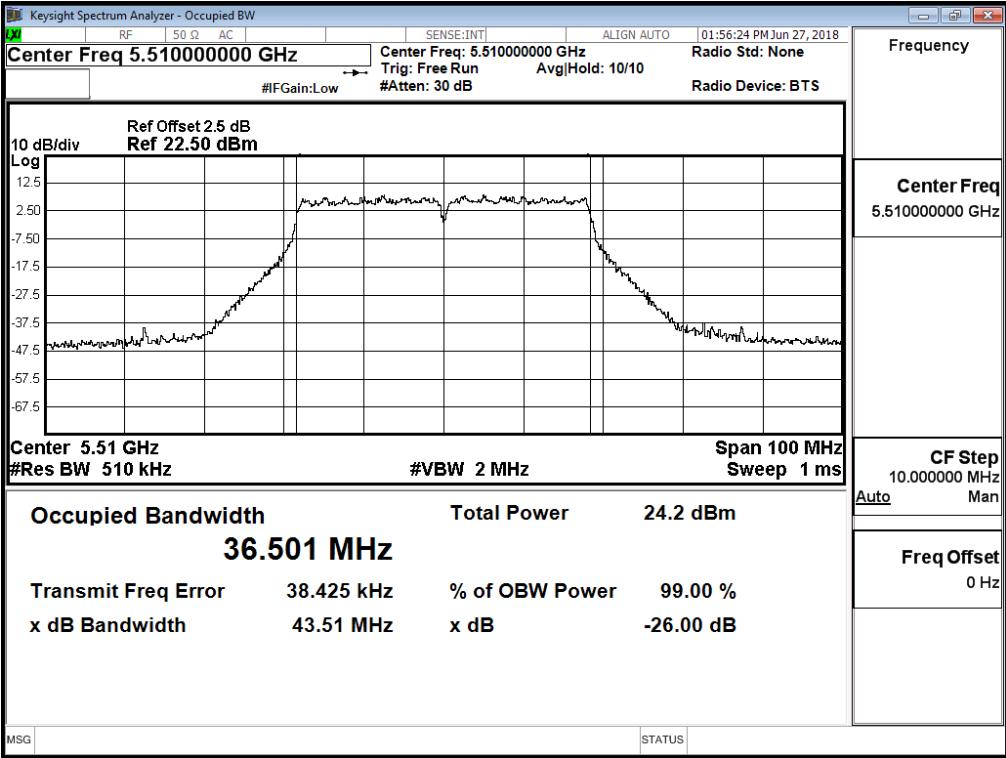
99% Bandwidth:
Channel 54 – Chain D



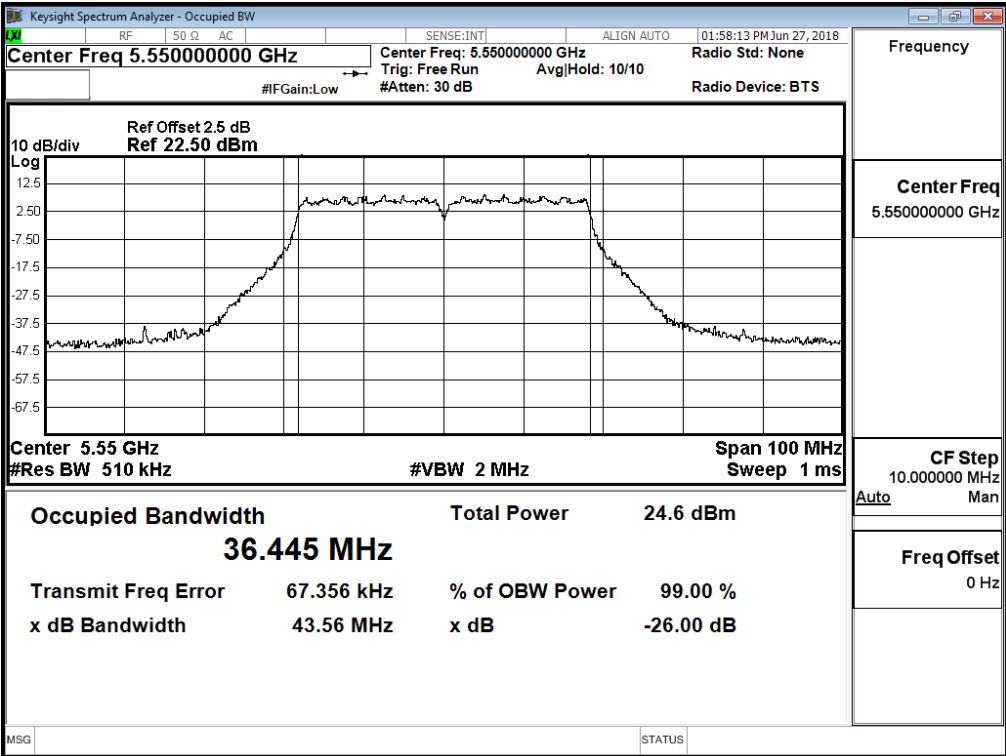
Channel 62 – Chain D



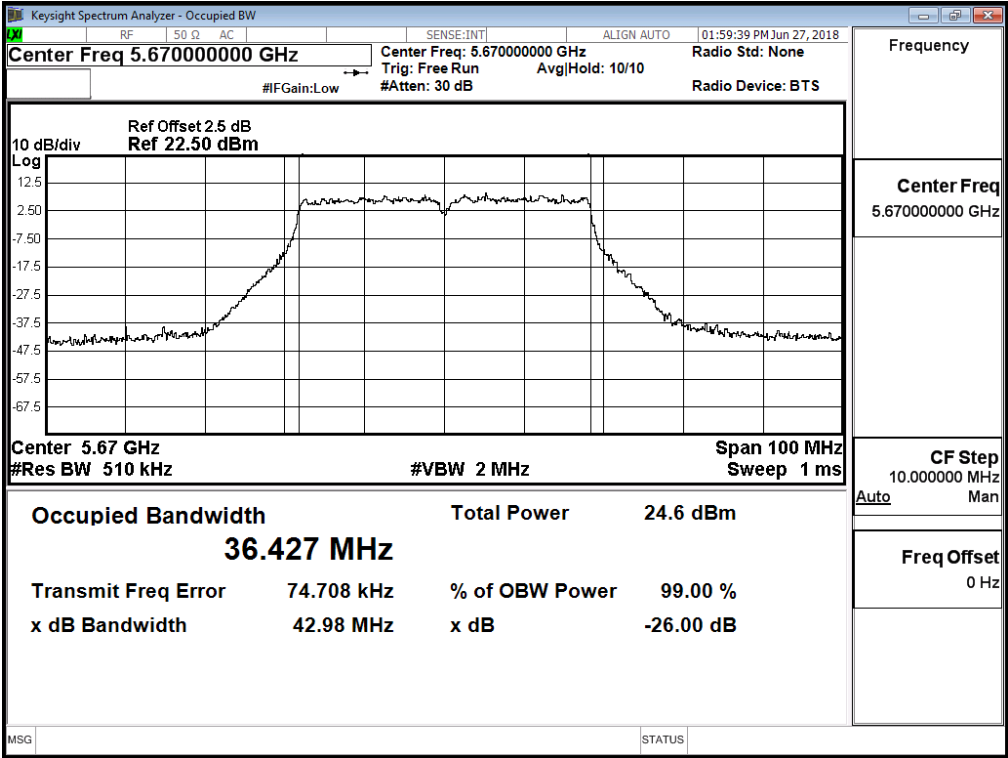
Channel 102 – Chain D



Channel 110 – Chain D



Channel 134 – Chain D



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 4: Transmit (802.11ac-20BW-28.8Mbps) (Antenna No.1)

Chain A

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	11.31	11.21	11.13	11.08	10.99	10.94	10.88	10.8	10.71	<21.5dBm
144 (Band4)	5720	5.37	5.28	5.23	5.17	5.1	5	4.92	4.82	4.73	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	11.25	11.19	11.13	11.06	10.98	10.91	10.81	10.75	10.66	<21.5dBm
144 (Band4)	5720	5.49	5.39	5.34	5.29	5.19	5.14	5.07	4.98	4.92	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	11.24	11.15	11.09	11.02	10.92	10.85	10.76	10.67	10.58	<21.5dBm
144 (Band4)	5720	5.33	5.27	5.18	5.11	5.03	4.93	4.87	4.81	4.74	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	11.32	11.27	11.19	11.09	11.02	10.94	10.86	10.76	10.7	<21.5dBm
144 (Band4)	5720	5.58	5.5	5.4	5.3	5.25	5.16	5.1	5.01	4.96	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
144(Band3)	5720	13.954	11.310	11.250	11.240	11.320	17.28	21.5	19.95	Pass
144(Band4)	5720	--	5.370	5.490	5.330	5.580	11.46	30	--	Pass

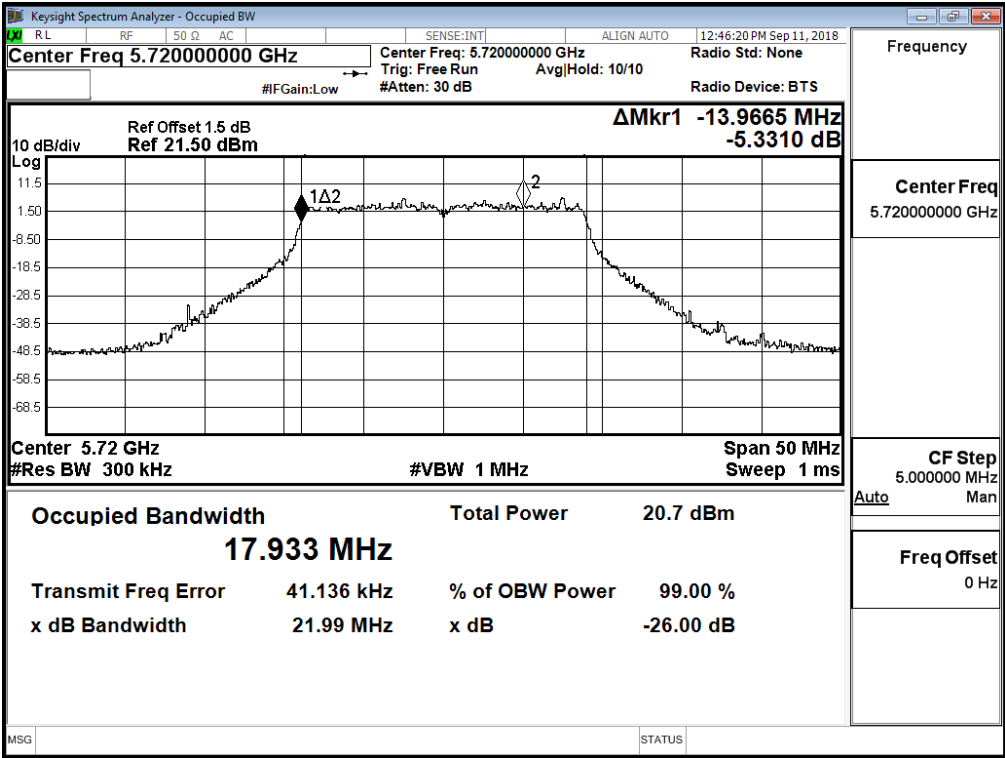
Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

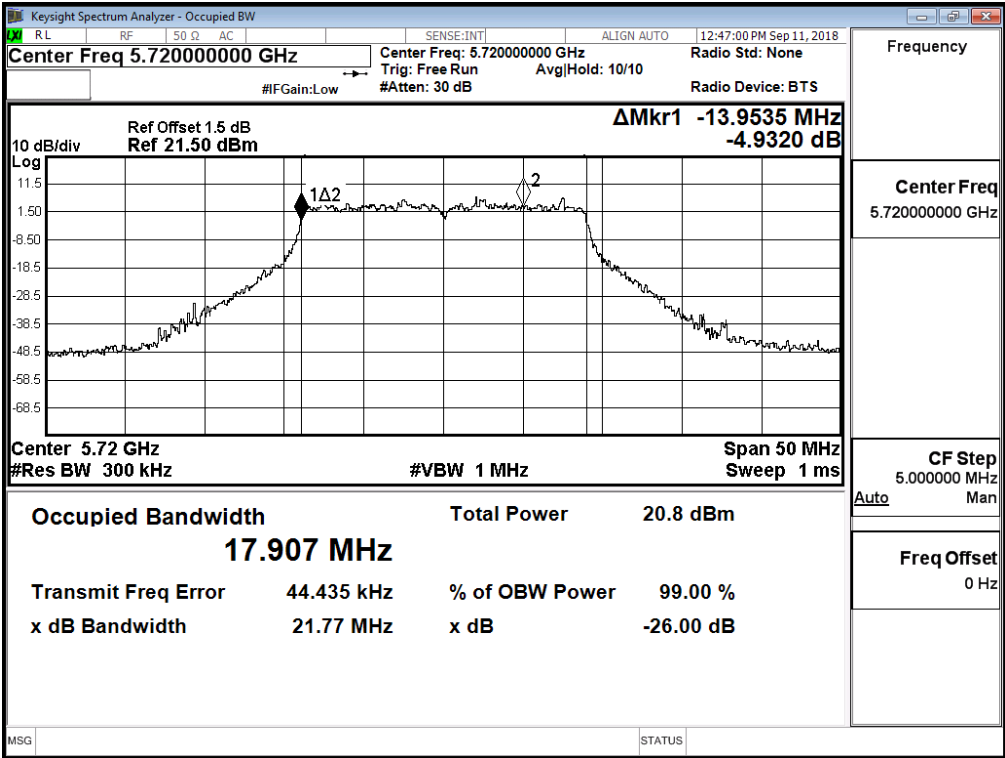
Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
144(Band3)	5720	5.040	5.030	5.060	5.000	11.06	Pass

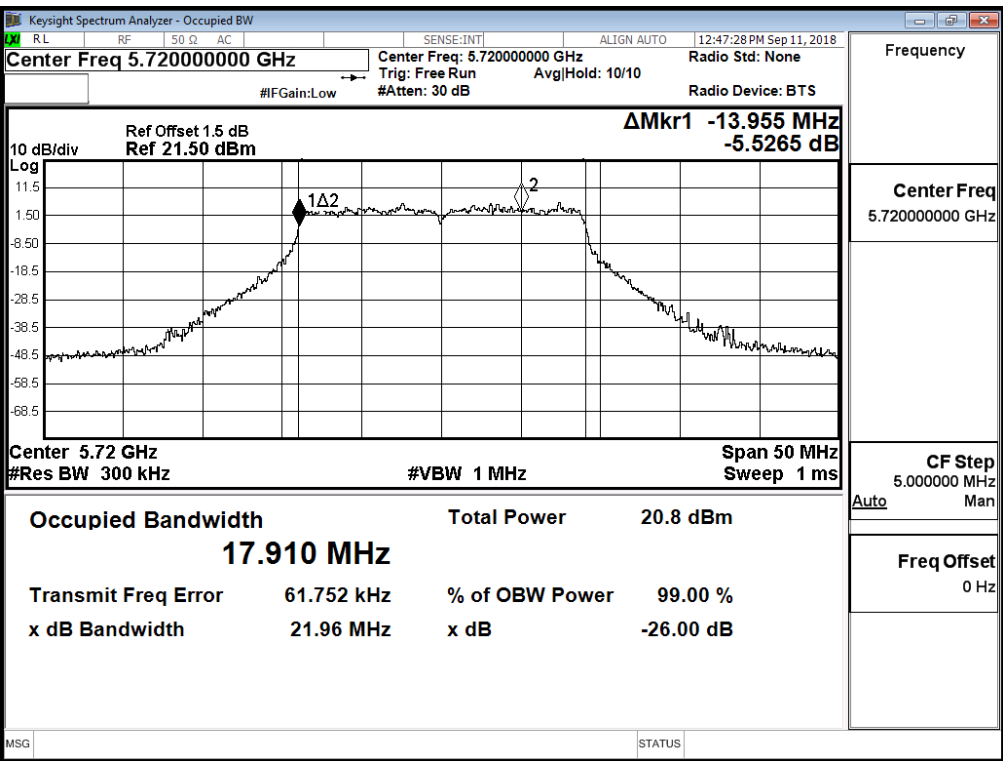
99% Bandwidth:
Channel 144 – Chain A



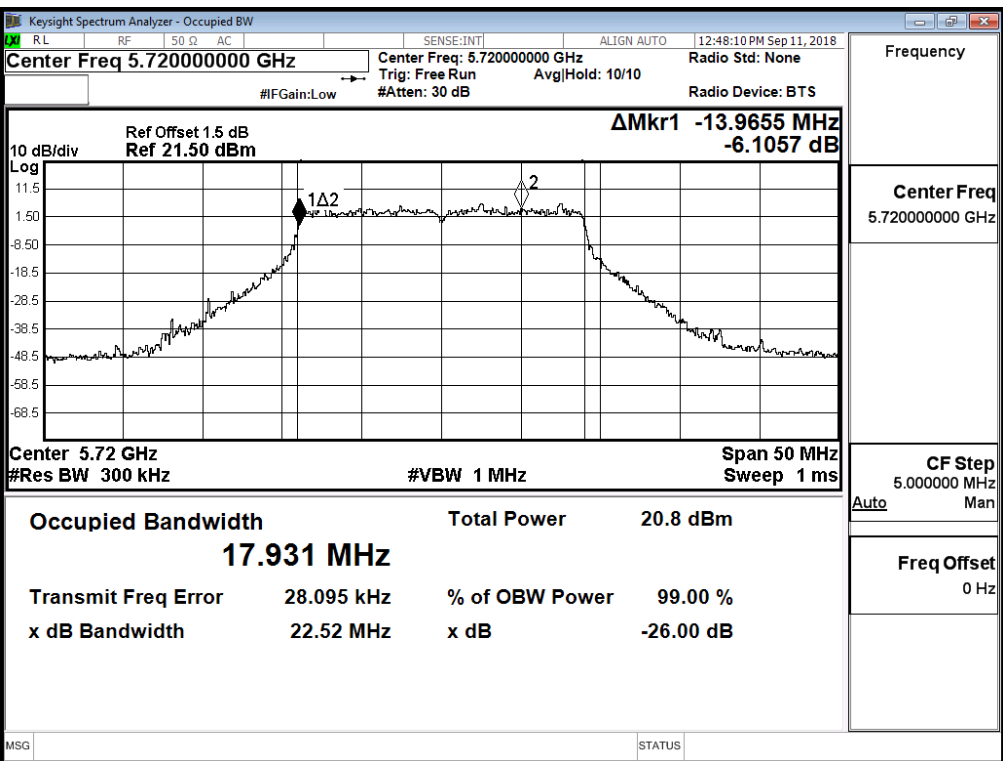
99% Bandwidth:
Channel 144 – Chain B



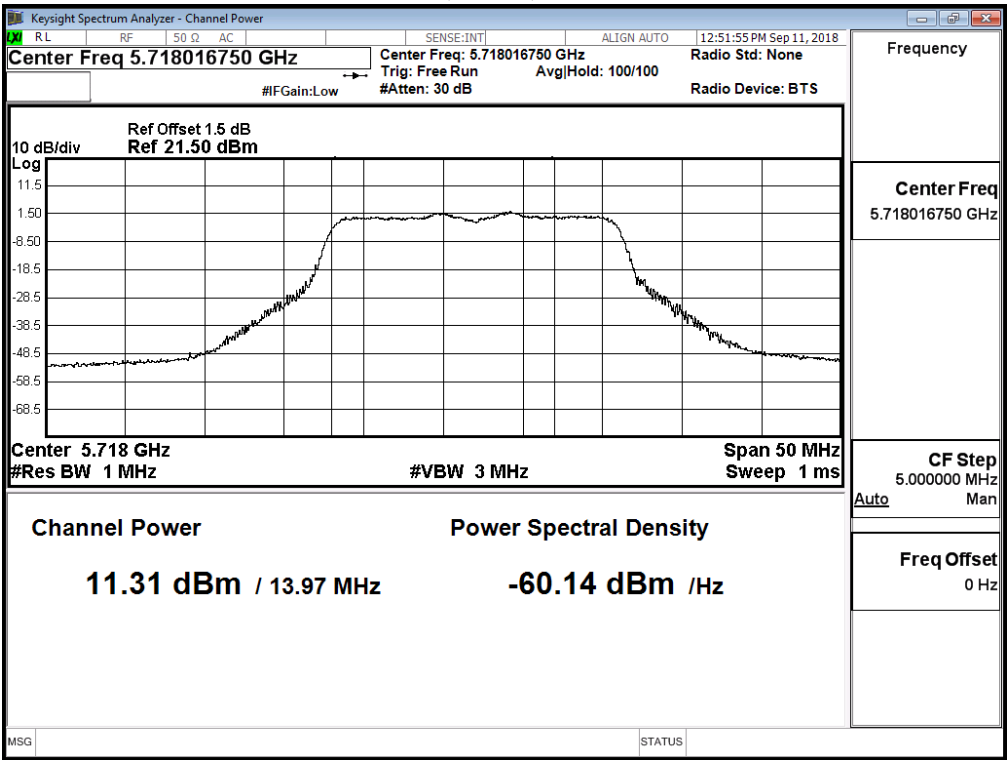
99% Bandwidth:
Channel 144 – Chain C



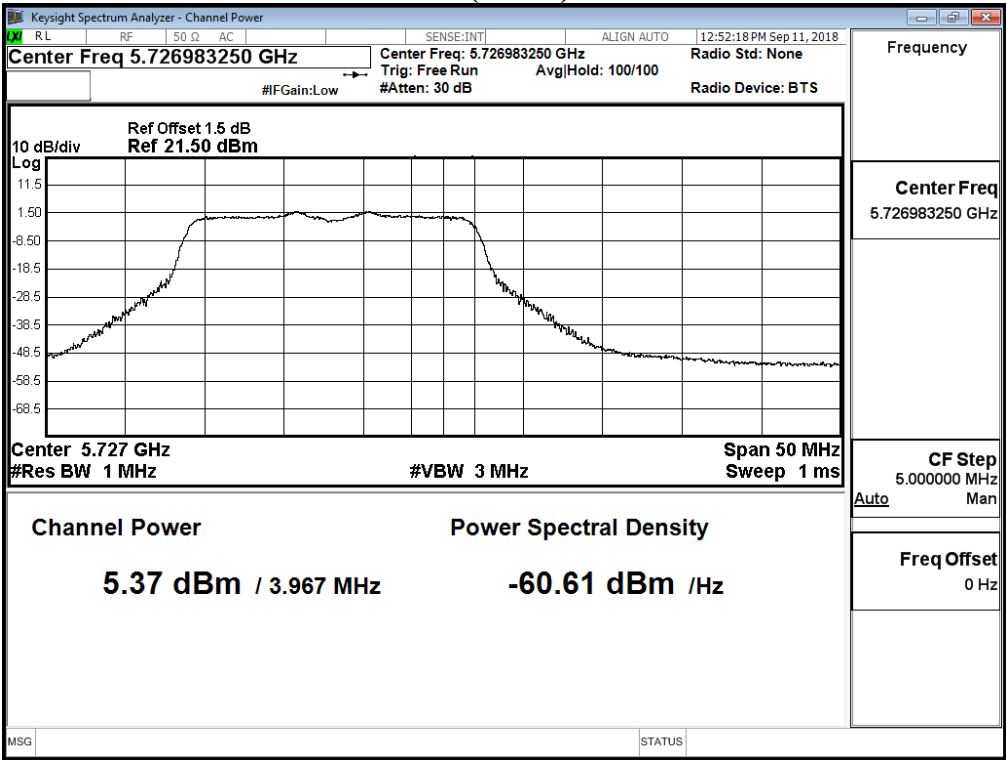
99% Bandwidth:
Channel 144 – Chain D



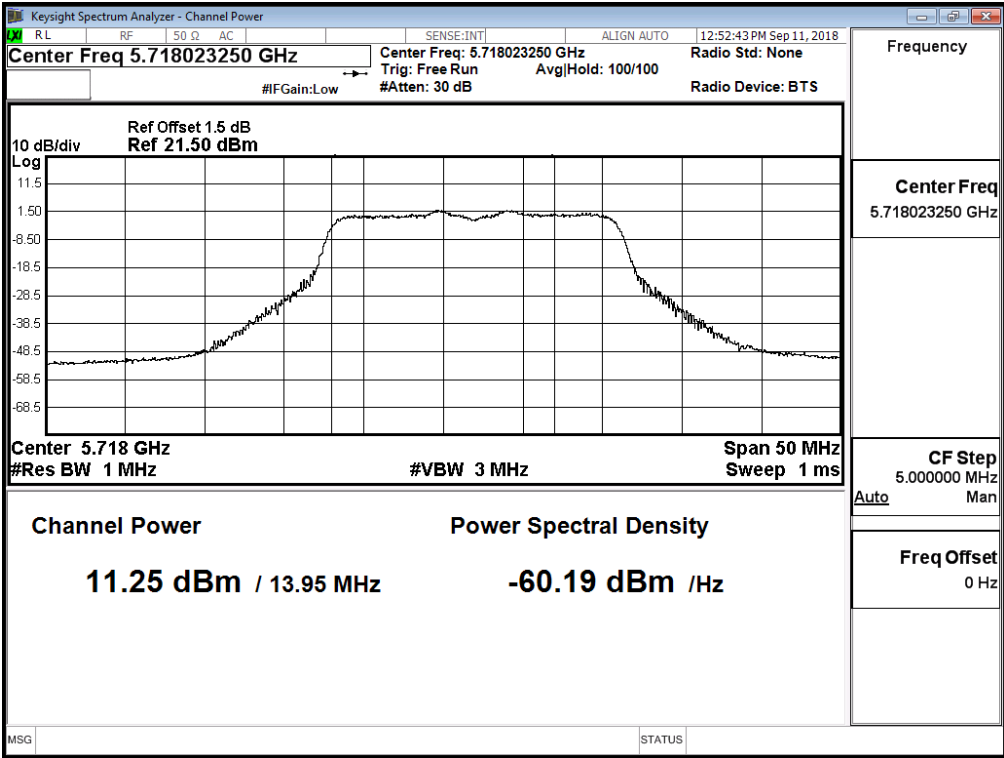
Maximum conducted output power:
Channel 144 (Band3) – Chain A



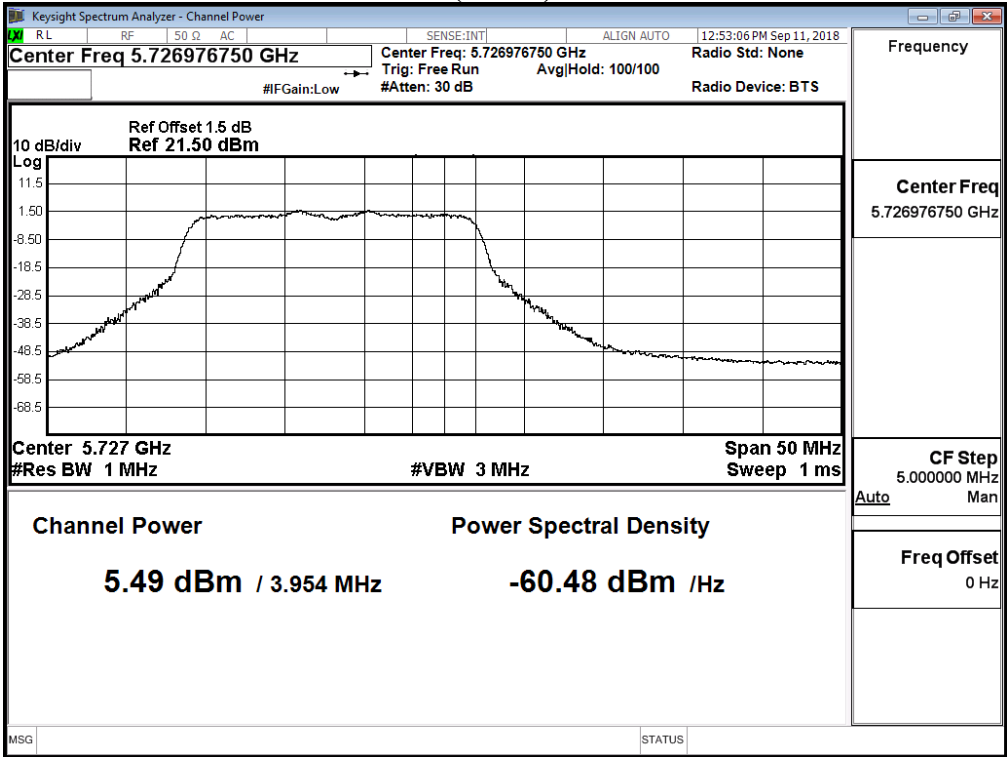
Channel 144 (Band4) – Chain A



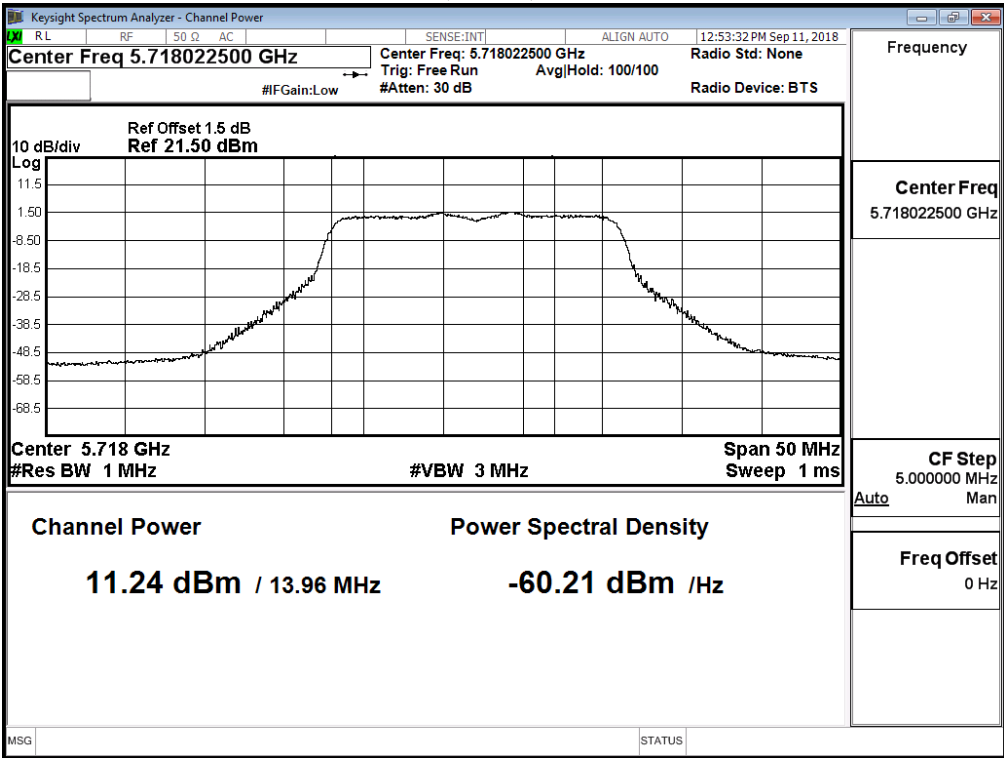
Maximum conducted output power:
Channel 144 (Band3) – Chain B



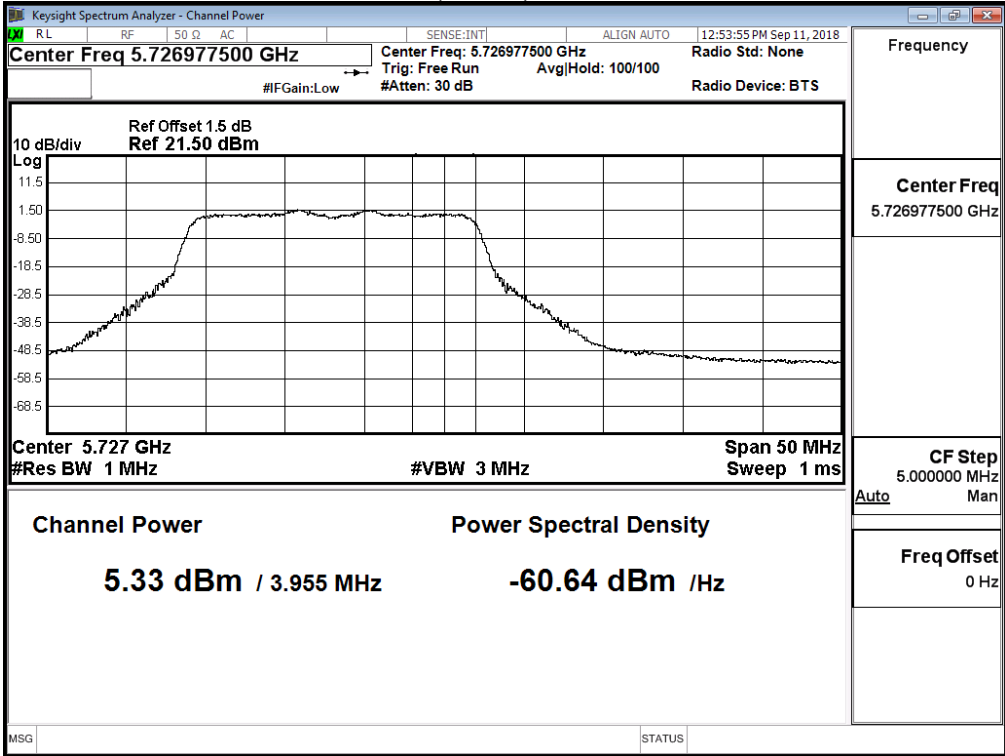
Channel 144 (Band4) – Chain B



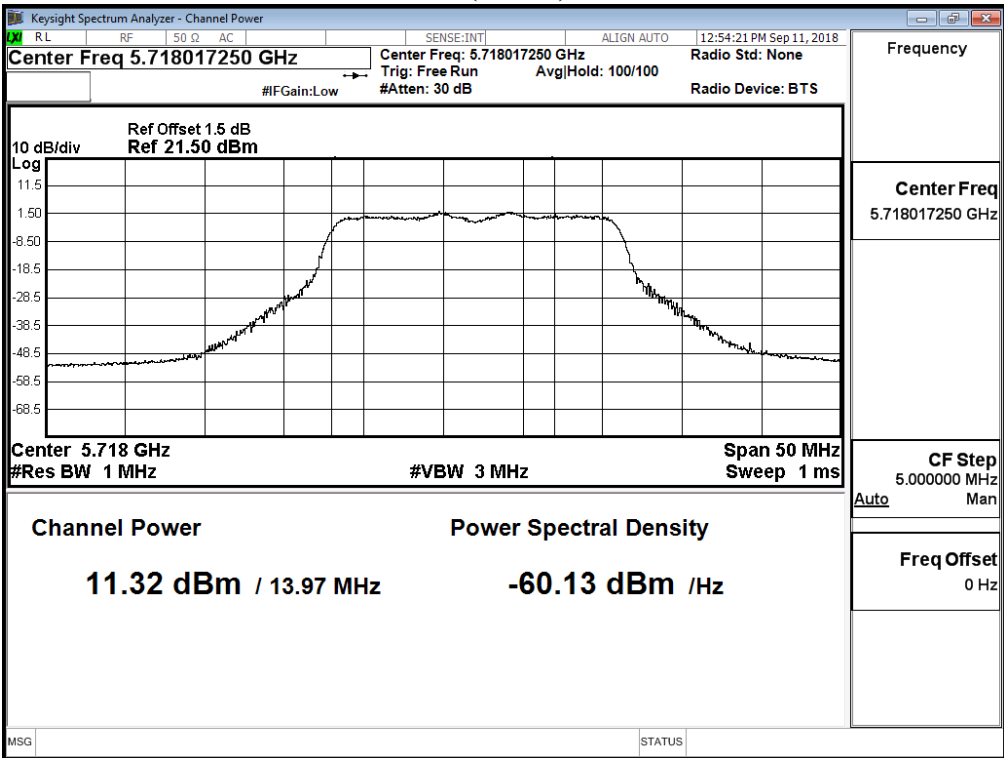
Maximum conducted output power:
Channel 144 (Band3) – Chain C



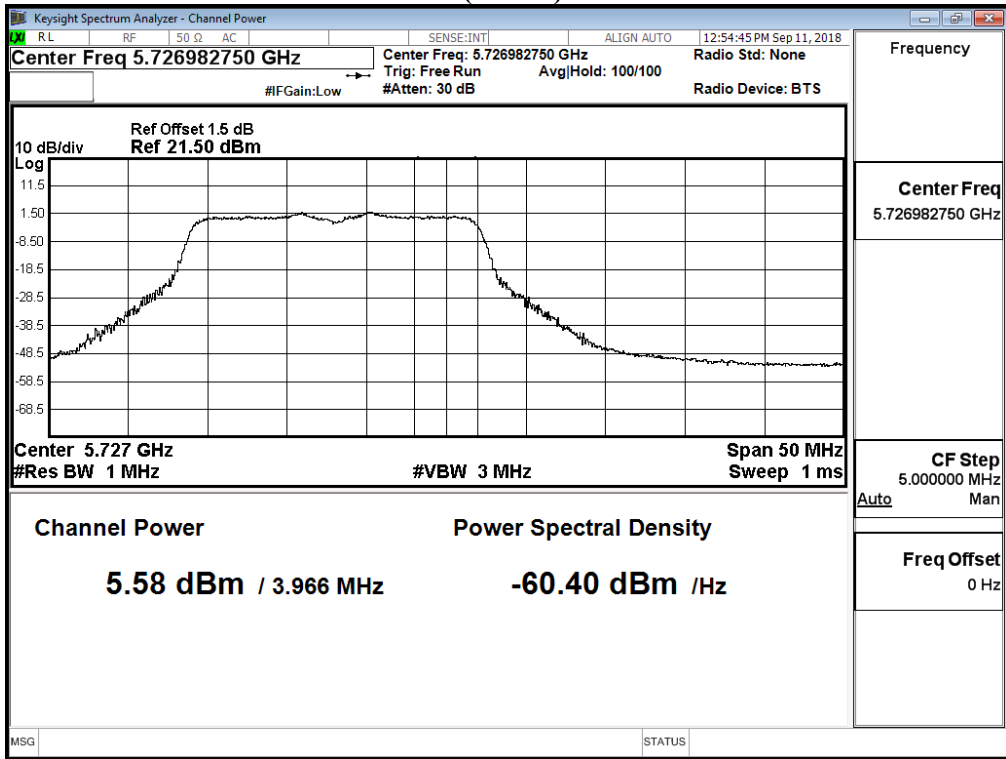
Channel 144 (Band4) – Chain C



Maximum conducted output power:
Channel 144 (Band3) – Chain D



Channel 144 (Band4) – Chain D



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 5: Transmit (802.11ac-40BW-60Mbps) (Antenna No.1)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	14.05	13.97	13.88	13.81	13.76	13.66	13.56	13.5	13.41	13.36	<21.5dBm
142F(Band4)	5710	4.07	3.98	3.9	3.83	3.75	3.67	3.57	3.51	3.43	3.37	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	14.12	14.04	13.96	13.91	13.86	13.78	13.71	13.64	13.55	13.5	<21.5dBm
142F(Band4)	5710	4.01	3.96	3.88	3.8	3.71	3.61	3.51	3.41	3.36	3.26	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	14.16	14.07	13.99	13.93	13.85	13.78	13.68	13.58	13.49	13.41	<21.5dBm
142F(Band4)	5710	4.13	4.06	4.01	3.91	3.83	3.74	3.65	3.59	3.54	3.48	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	14.12	14.03	13.95	13.85	13.75	13.67	13.6	13.52	13.44	13.37	<21.5dBm
142F(Band4)	5710	3.96	3.89	3.79	3.72	3.63	3.57	3.52	3.43	3.37	3.29	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
142F(Band3)	5710	33.222	14.050	14.120	14.16	14.12	20.13	21.5	23.71	Pass
142F(Band4)	5710	--	4.070	4.010	4.13	3.96	10.06	30	--	Pass

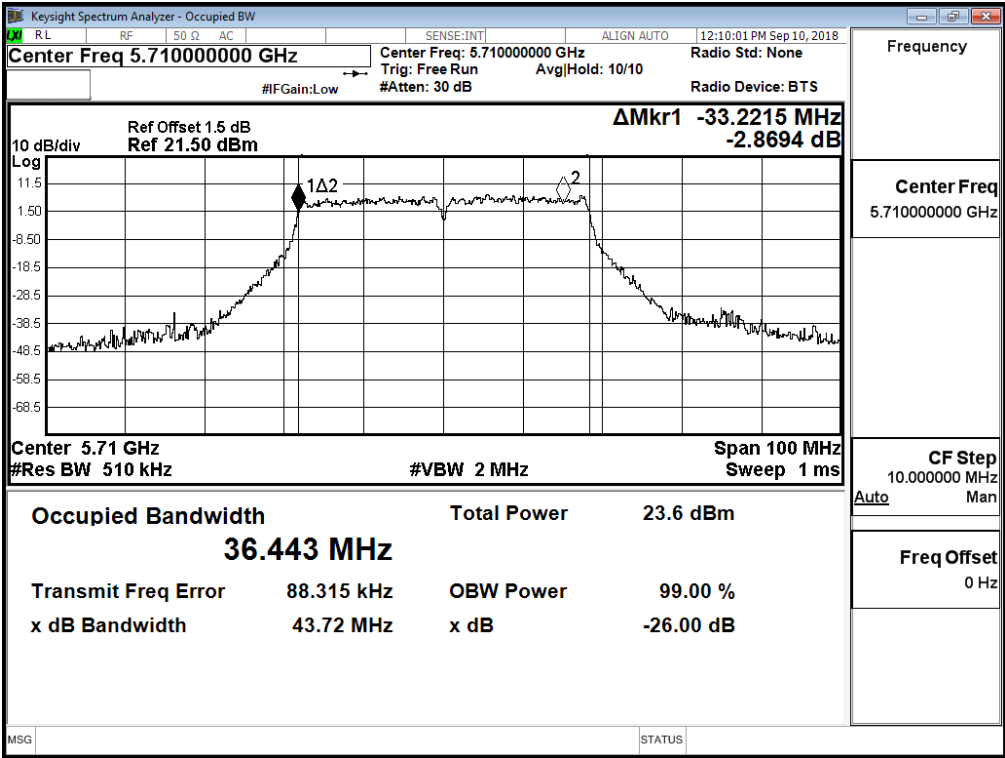
Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

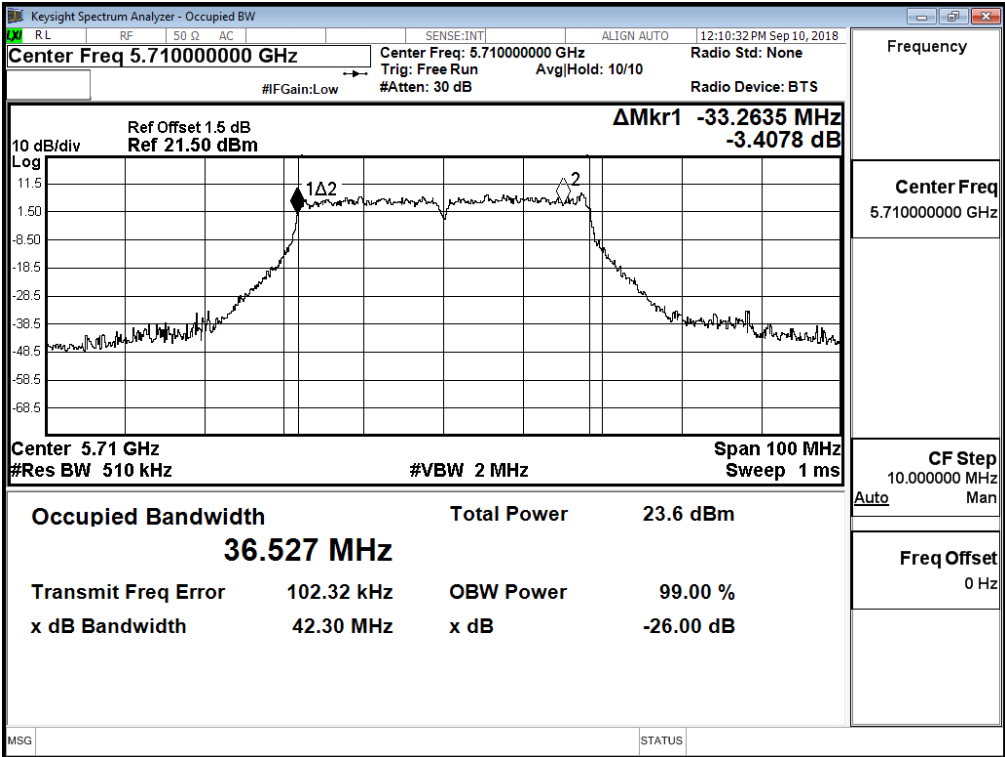
Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
142(Band3)	5710	7.720	7.930	7.77	7.87	13.84	Pass

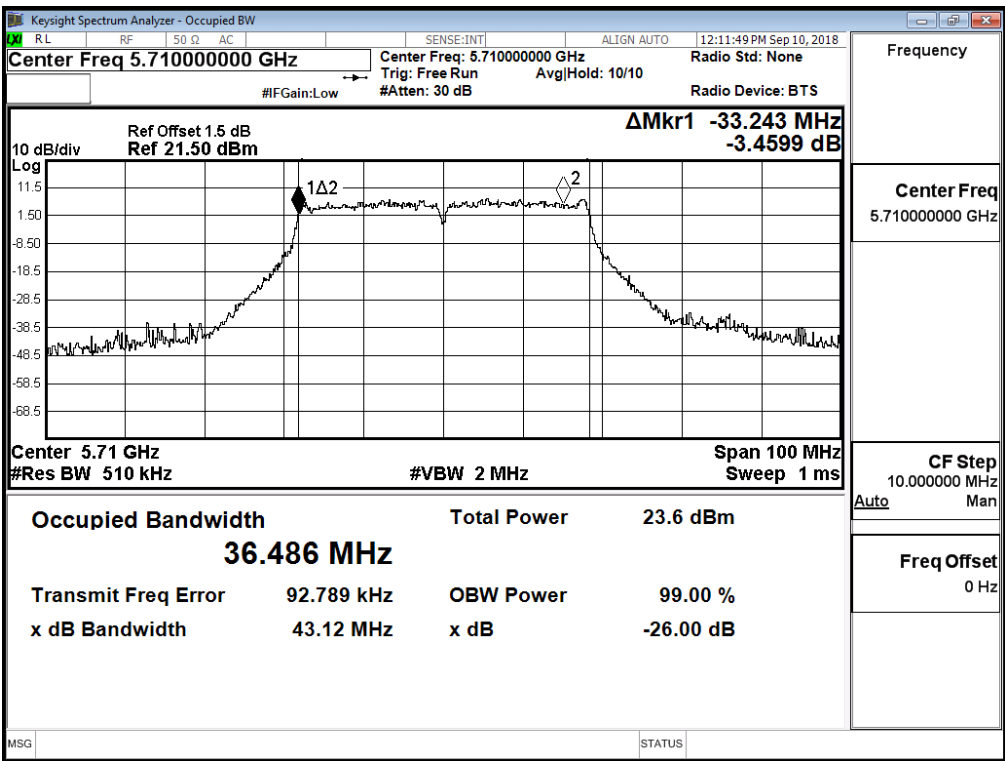
99% Bandwidth:
Channel 142 – Chain A



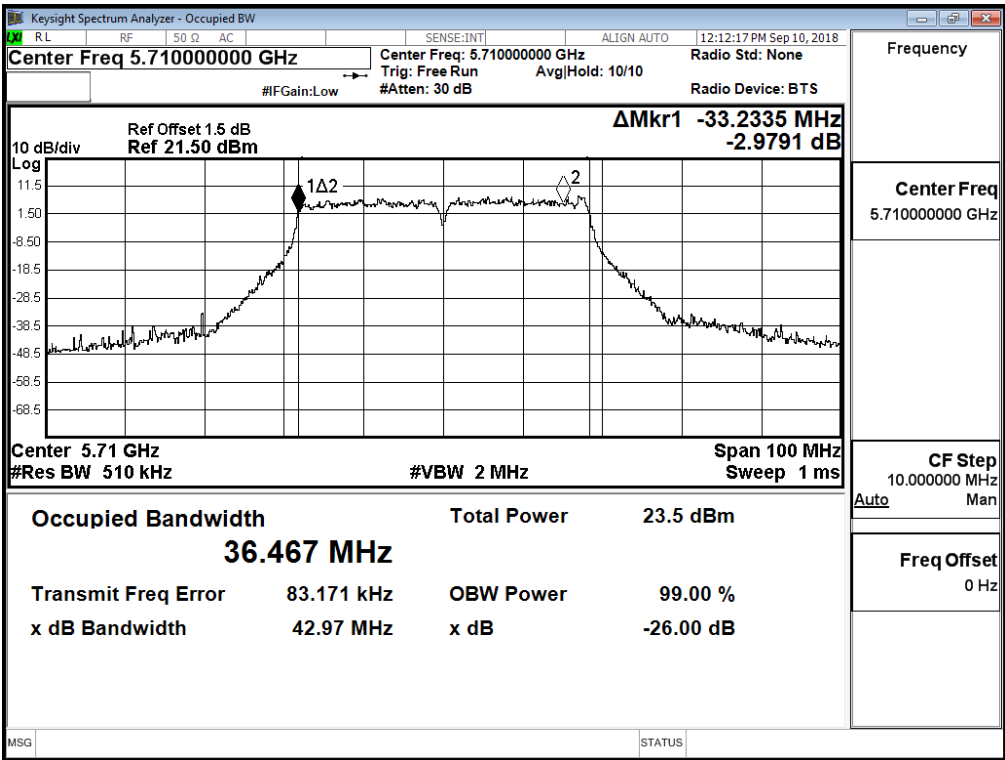
99% Bandwidth:
Channel 142 – Chain B



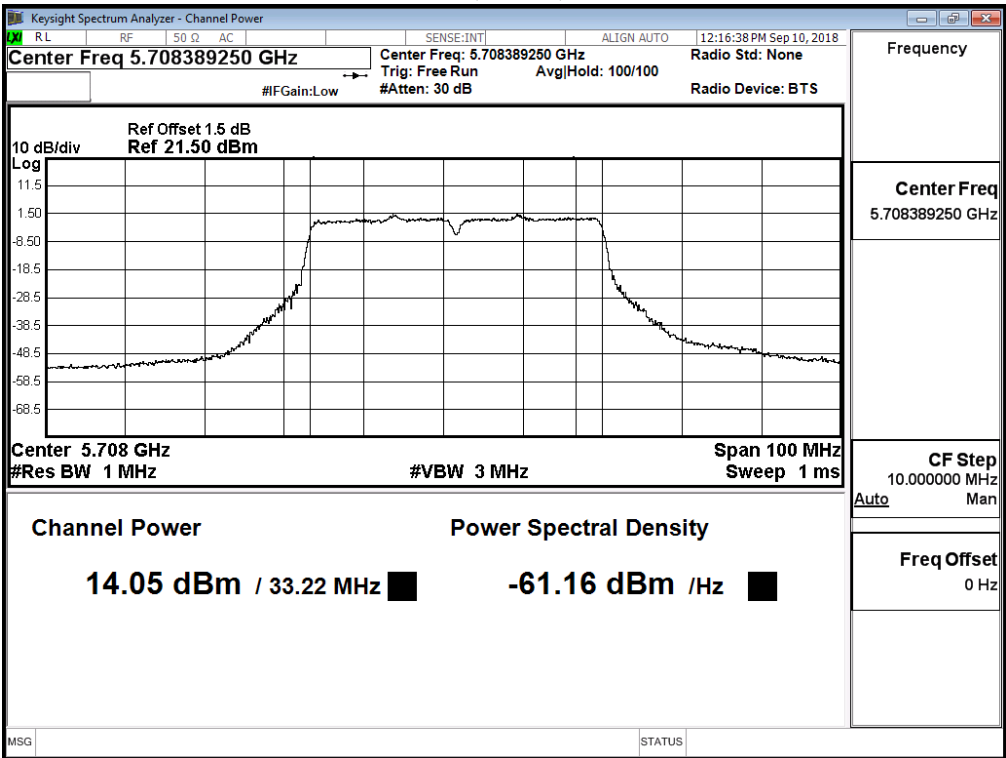
99% Bandwidth:
Channel 142 – Chain C



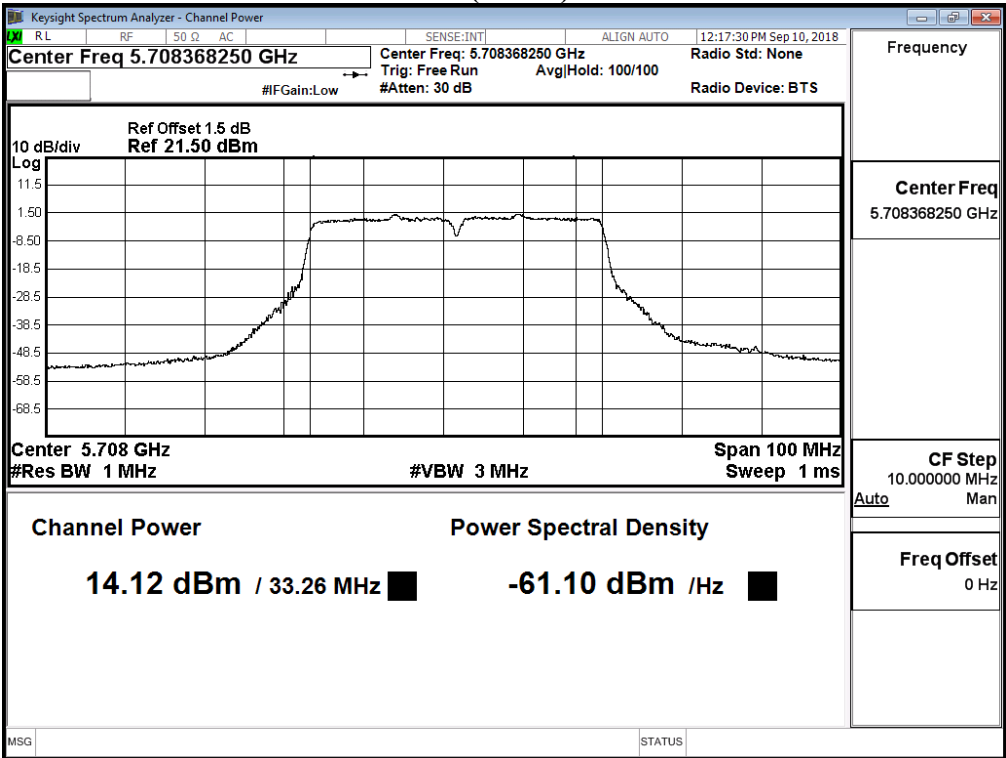
99% Bandwidth:
Channel 142 – Chain D



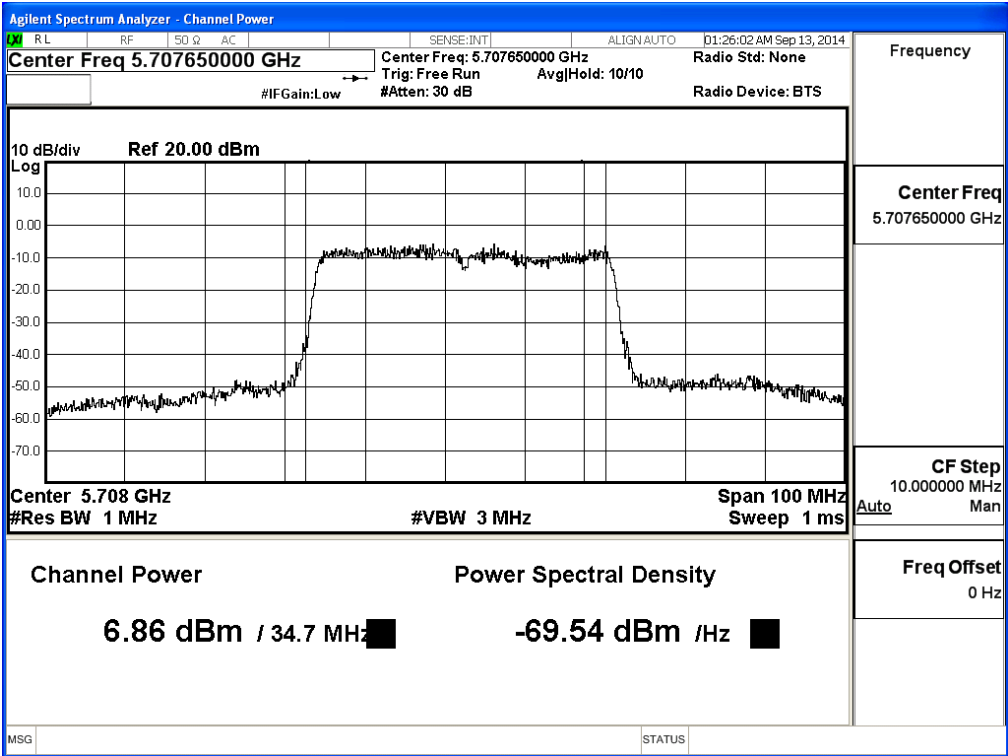
Maximum conducted output power:
Channel 142 (Band3) – Chain A



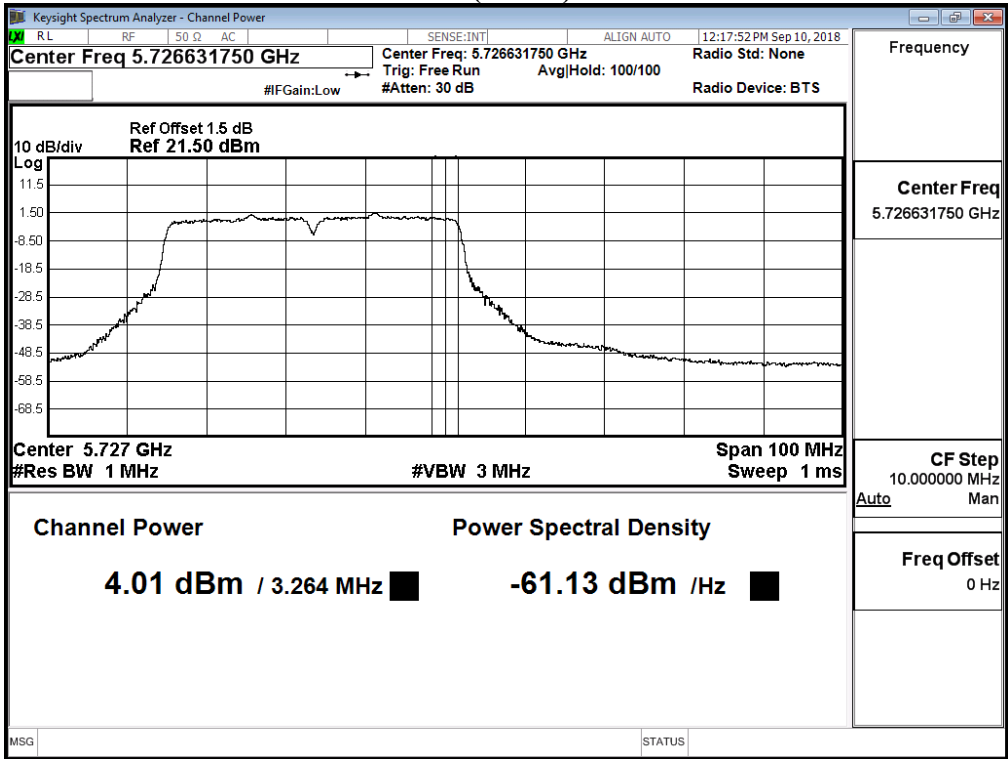
Channel 142 (Band4) – Chain A



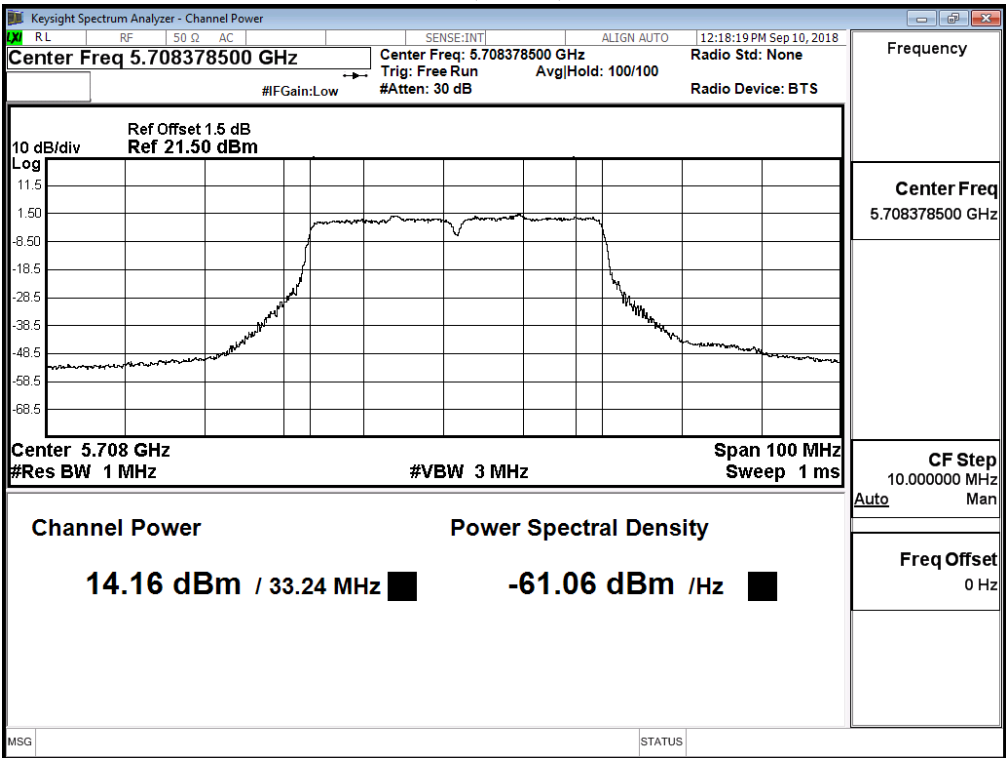
Maximum conducted output power:
Channel 142 (Band3) – Chain B



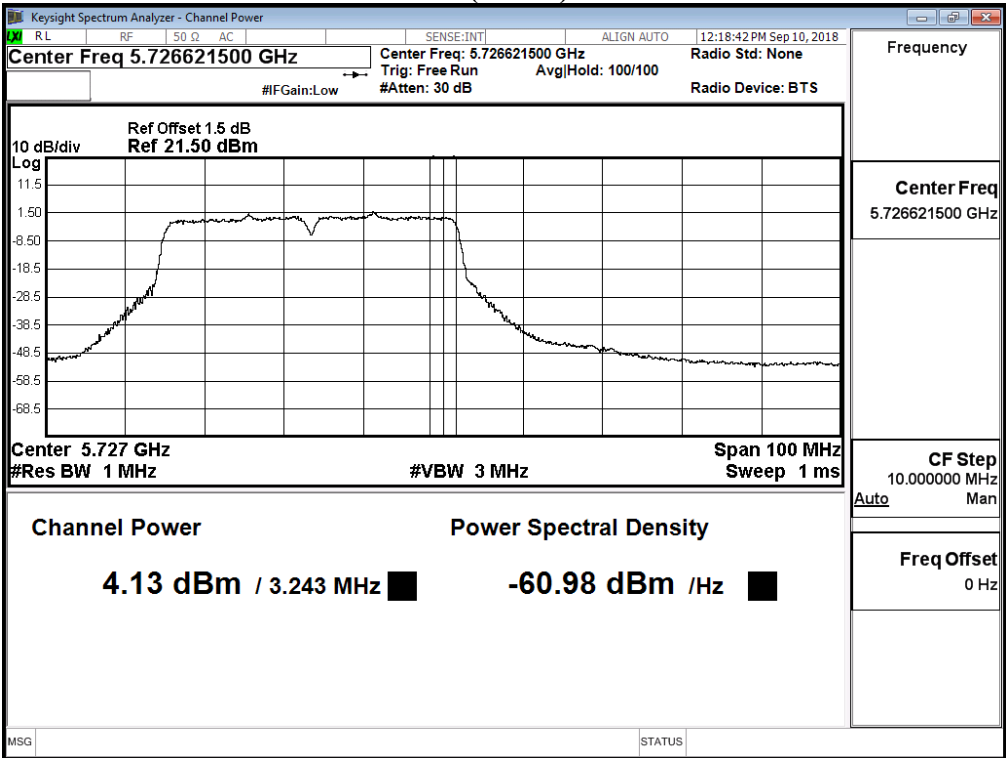
Channel 142 (Band4) – Chain B



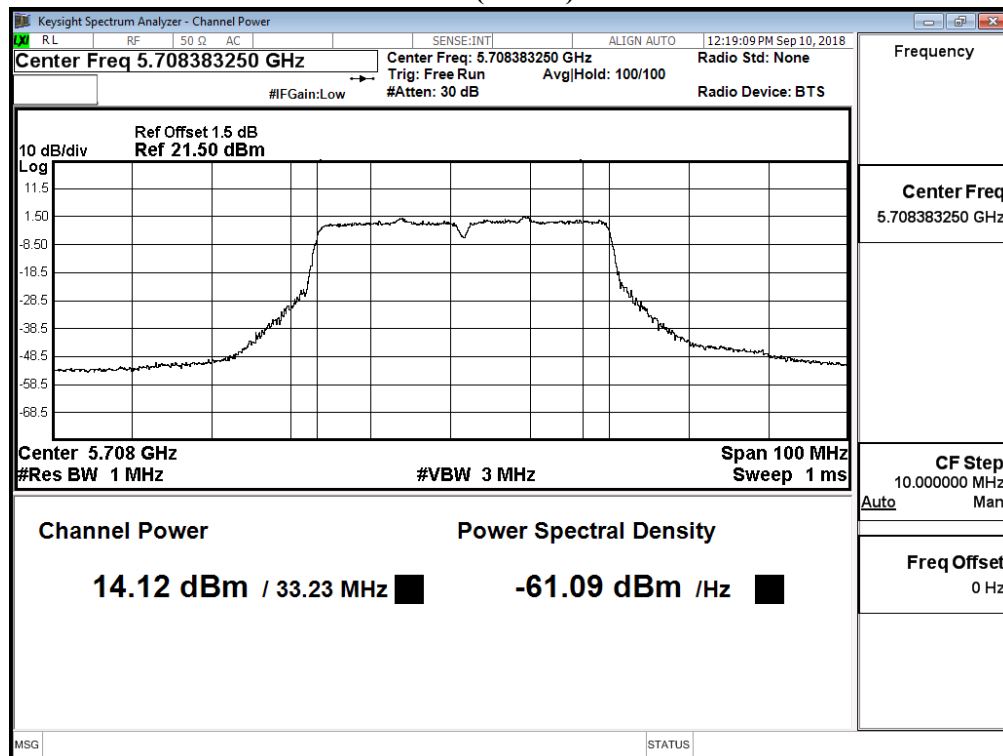
Maximum conducted output power:
Channel 142 (Band3) – Chain C



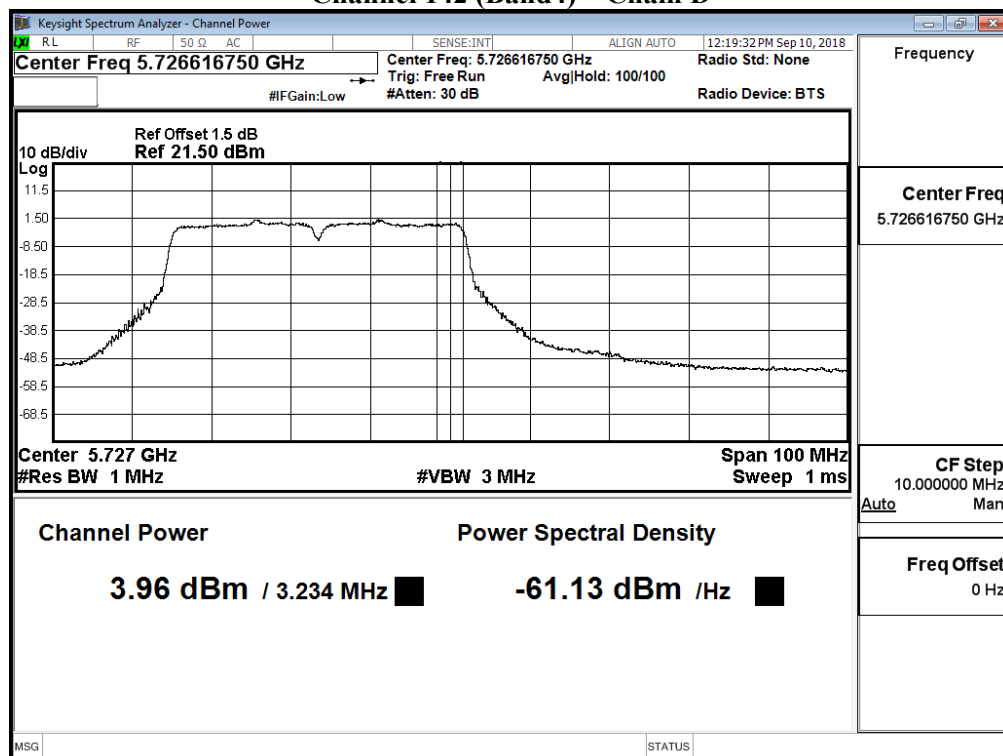
Channel 142 (Band4) – Chain C



Maximum conducted output power:
Channel 142 (Band3) – Chain D



Channel 142 (Band4) – Chain D



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-130Mbps) (Antenna No.1)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	14.86	14.77	14.71	14.63	14.56	14.51	14.46	14.39	14.33	14.28	<21.23dBm
58	5290	14.12	14.06	13.99	13.89	13.83	13.77	13.71	13.63	13.54	13.48	<21.23dBm
106	5530	14.69	--	--	--	--	--	--	--	--	--	<21.5dBm
122	5610	14.29	14.23	14.15	14.07	13.98	13.91	13.84	13.76	13.69	13.64	<21.5dBm
138(Band3)	5690	13.16	--	--	--	--	--	--	--	--	--	<21.5dBm
138(Band4)	5690	-0.26	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.79	20.73	20.65	20.56	20.51	20.44	20.36	20.31	20.22	20.14	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	14.91	14.86	14.78	14.72	14.63	14.54	14.44	14.35	14.28	14.21	<21.23dBm
58	5290	14.57	14.49	14.44	14.37	14.28	14.21	14.14	14.07	14.00	13.95	<21.23dBm
106	5530	14.8	--	--	--	--	--	--	--	--	--	<21.5dBm
122	5610	14.48	14.41	14.31	14.23	14.18	14.08	14.02	13.92	13.82	13.72	<21.5dBm
138(Band3)	5690	15.58	--	--	--	--	--	--	--	--	--	<21.5dBm
138(Band4)	5690	3.23	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.88	20.8	20.7	20.65	20.55	20.50	20.42	20.33	20.26	20.17	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	14.74	14.64	14.57	14.51	14.45	14.4	14.35	14.28	14.18	14.08	<21.23dBm
58	5290	14.76	14.68	14.58	14.50	14.40	14.30	14.22	14.16	14.07	14.00	<21.23dBm
106	5530	14.77	--	--	--	--	--	--	--	--	--	<21.5dBm
122	5610	15.01	14.94	14.86	14.79	14.73	14.66	14.61	14.51	14.46	14.40	<21.5dBm
138(Band3)	5690	13.72	--	--	--	--	--	--	--	--	--	<21.5dBm
138(Band4)	5690	-0.58	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.01	19.91	19.81	19.71	19.65	19.60	19.54	19.44	19.39	19.30	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	14.28	14.21	14.16	14.08	14.02	13.92	13.86	13.78	13.72	13.63	<21.23dBm
58	5290	13.75	13.69	13.59	13.50	13.43	13.38	13.28	13.19	13.12	13.07	<21.23dBm
106	5530	14.73	--	--	--	--	--	--	--	--	--	<21.5dBm
122	5610	15.33	15.28	15.21	15.15	15.08	15.02	14.96	14.90	14.84	14.77	<21.5dBm
138(Band3)	5690	16.04	--	--	--	--	--	--	--	--	--	<21.5dBm
138(Band4)	5690	2.27	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.87	20.77	20.71	20.66	20.61	20.56	20.49	20.39	20.31	20.26	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement

(CHAIN A+ B+C+D)

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
42	5210	--	14.860	14.910	14.740	14.280	20.73	21.23	--	Pass
58	5290	75.616	14.120	14.570	14.760	13.750	20.34	21.23	27.02	Pass
106	5530	75.697	14.690	14.800	14.770	14.730	20.77	21.5	27.29	Pass
122	5610	75.793	14.290	14.480	15.010	15.330	20.82	21.5	27.30	Pass
138	5690	72.854	13.160	15.580	13.720	16.040	20.81	21.5	27.12	Pass
138ac80(Band4)	5690	2.854	-0.260	3.230	-0.580	2.270	7.49	30	15.55	Pass
155	5775	--	20.790	20.880	20.010	20.870	26.67	30	--	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

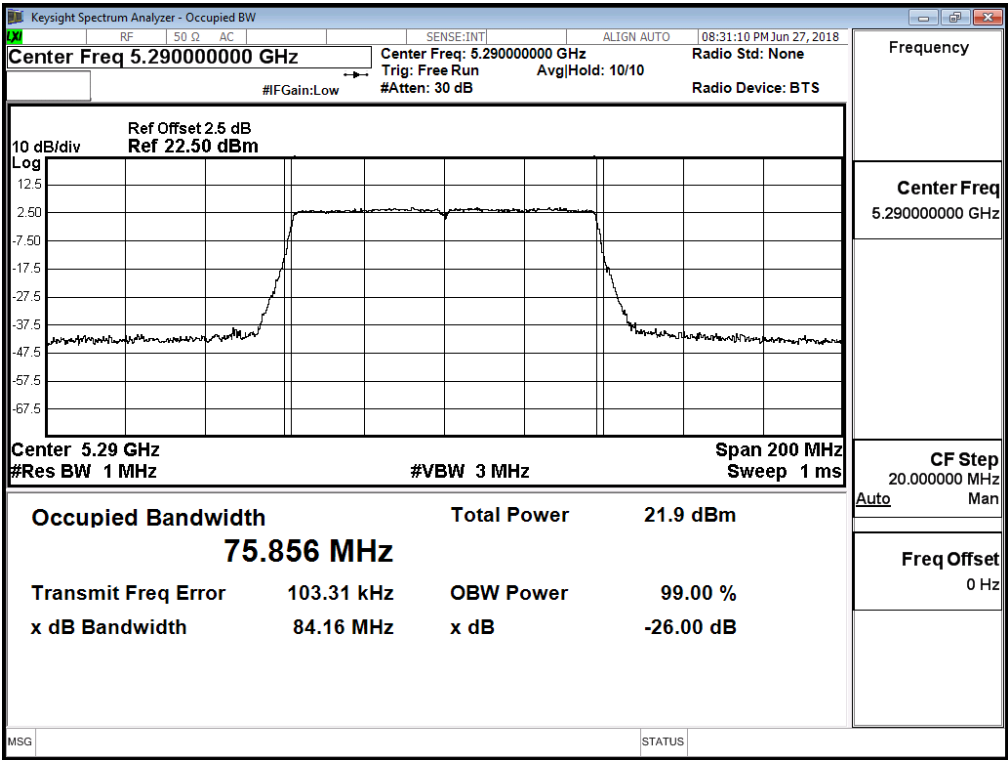
Maximum conducted output power Measurement with Transmit power Control (TPC)

(CHAIN A+ B+C+D)

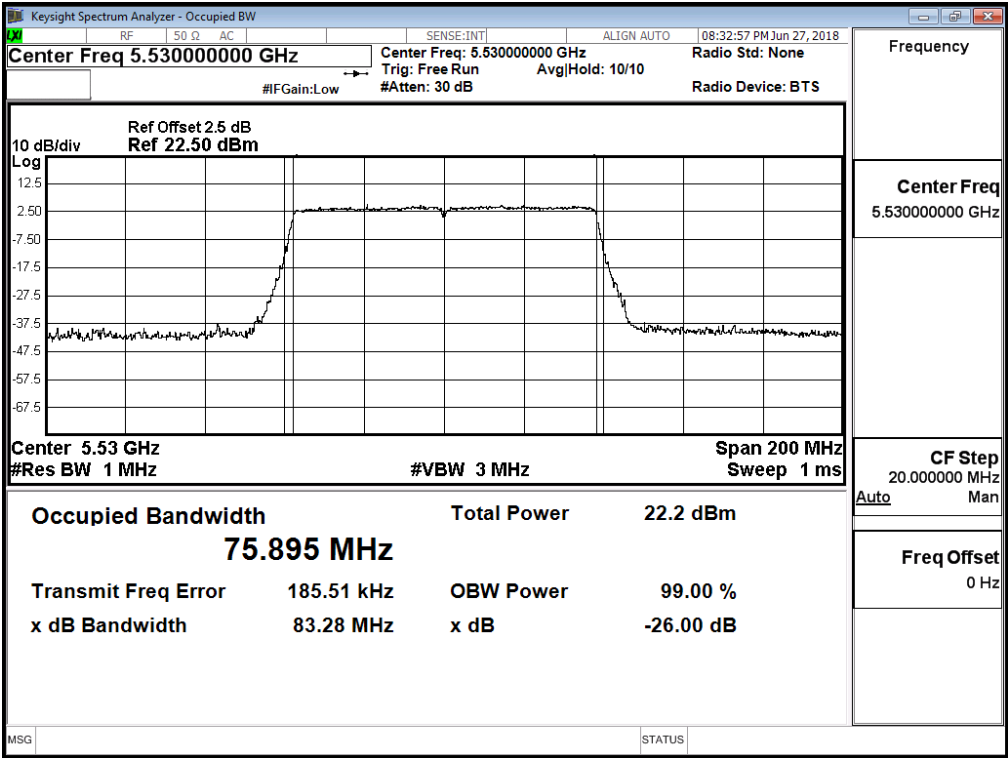
Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
58	5290	7.750	8.190	8.460	7.560	14.03	Pass
106	5530	8.500	8.490	8.450	8.450	14.49	Pass
122	5610	7.910	8.290	8.700	9.020	14.52	Pass
138	5690	7.050	9.460	7.340	9.650	14.56	Pass

99% Bandwidth:

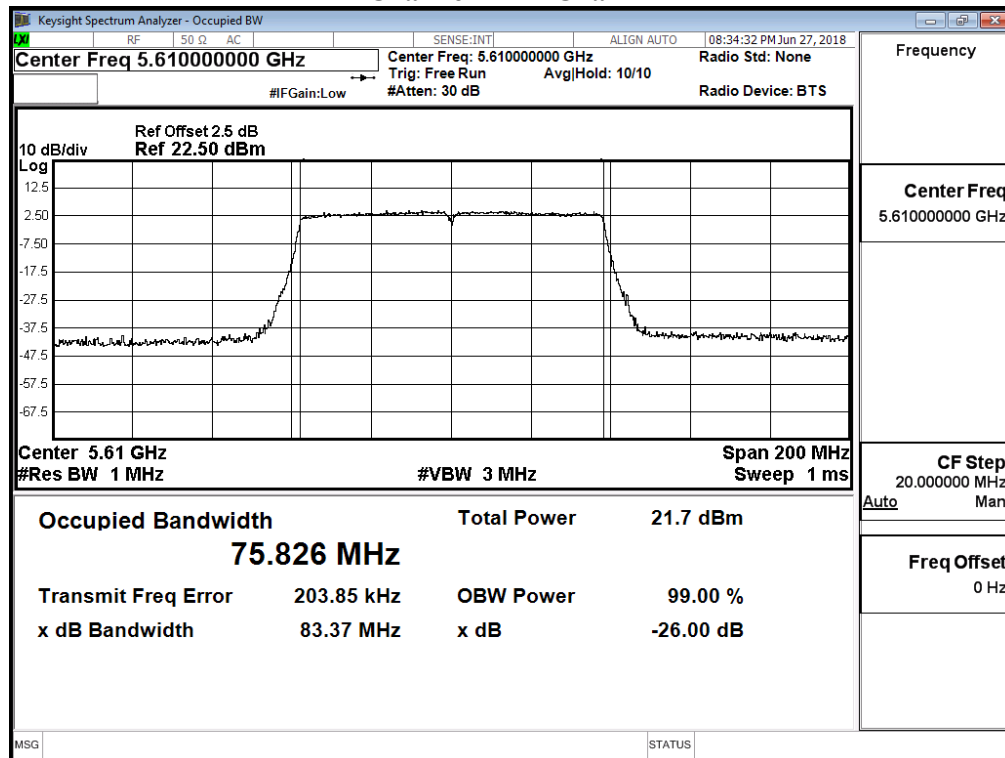
Channel 58 – Chain A



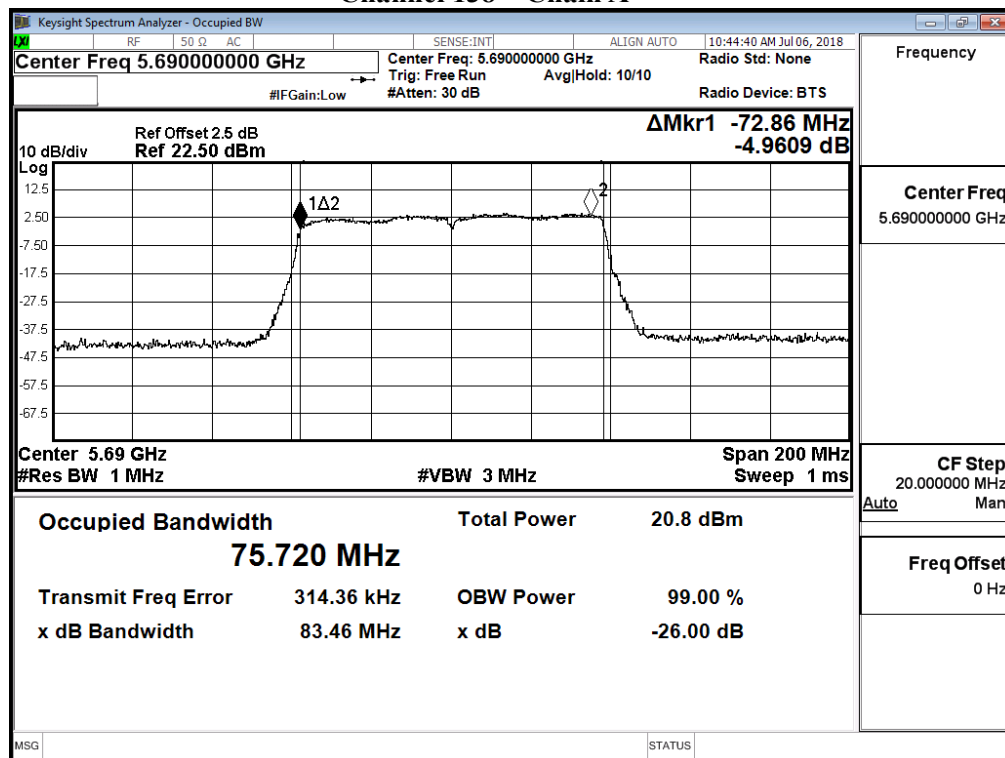
Channel 106 – Chain A



Channel 122 – Chain A

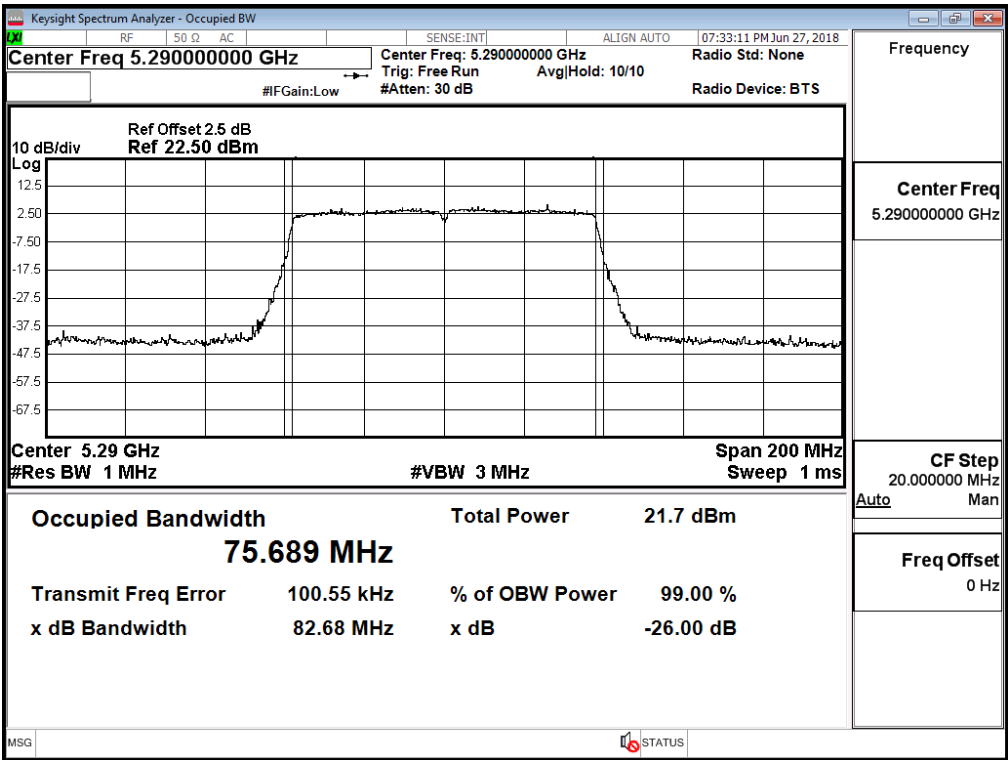


Channel 138 – Chain A

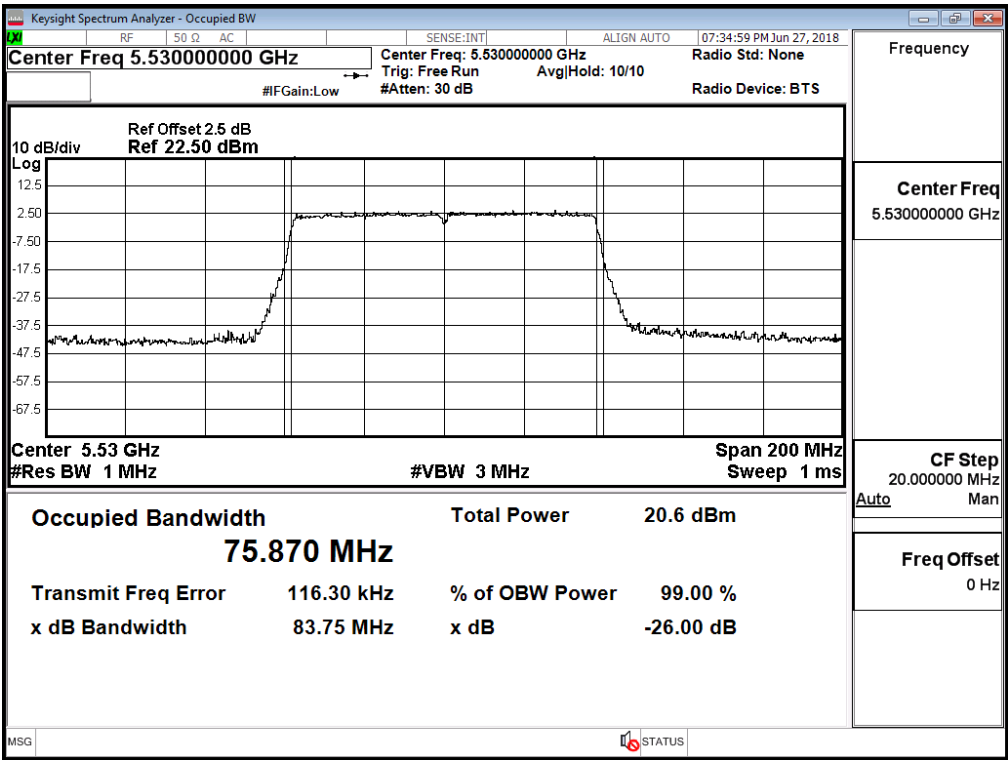


99% Bandwidth:

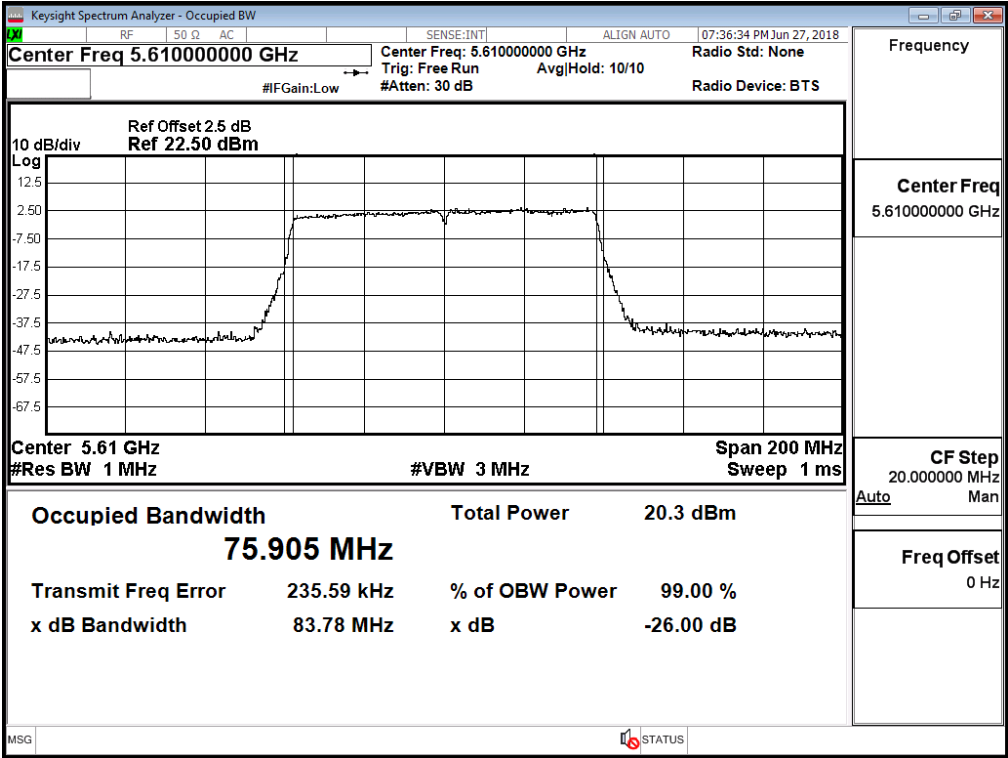
Channel 58 – Chain B



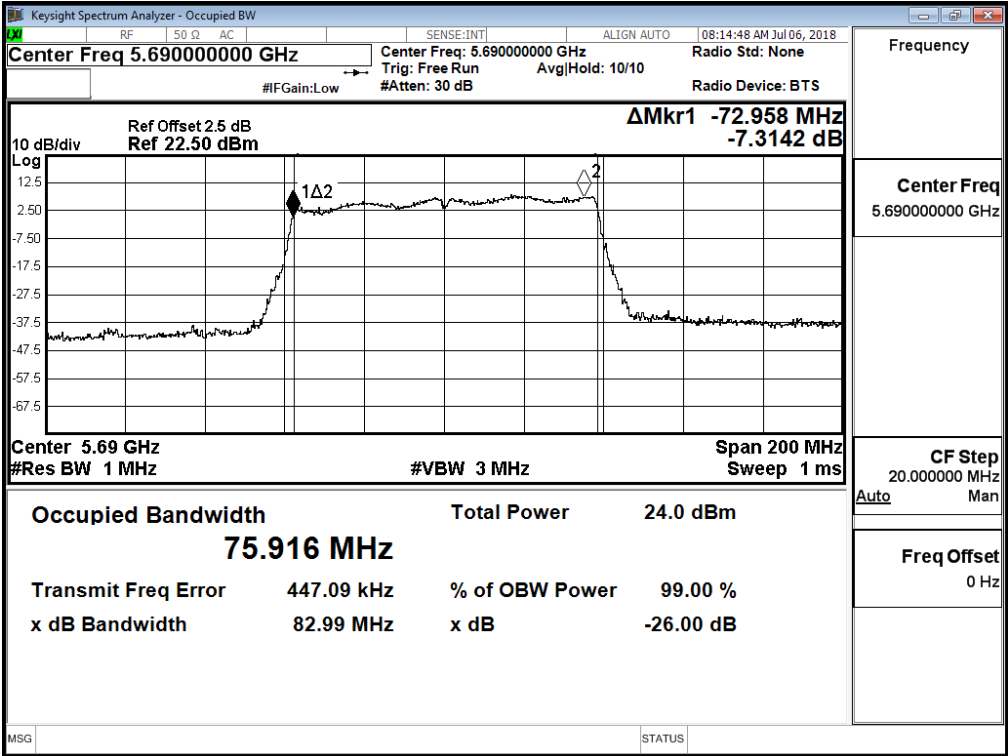
Channel 106 – Chain B



Channel 122 – Chain B

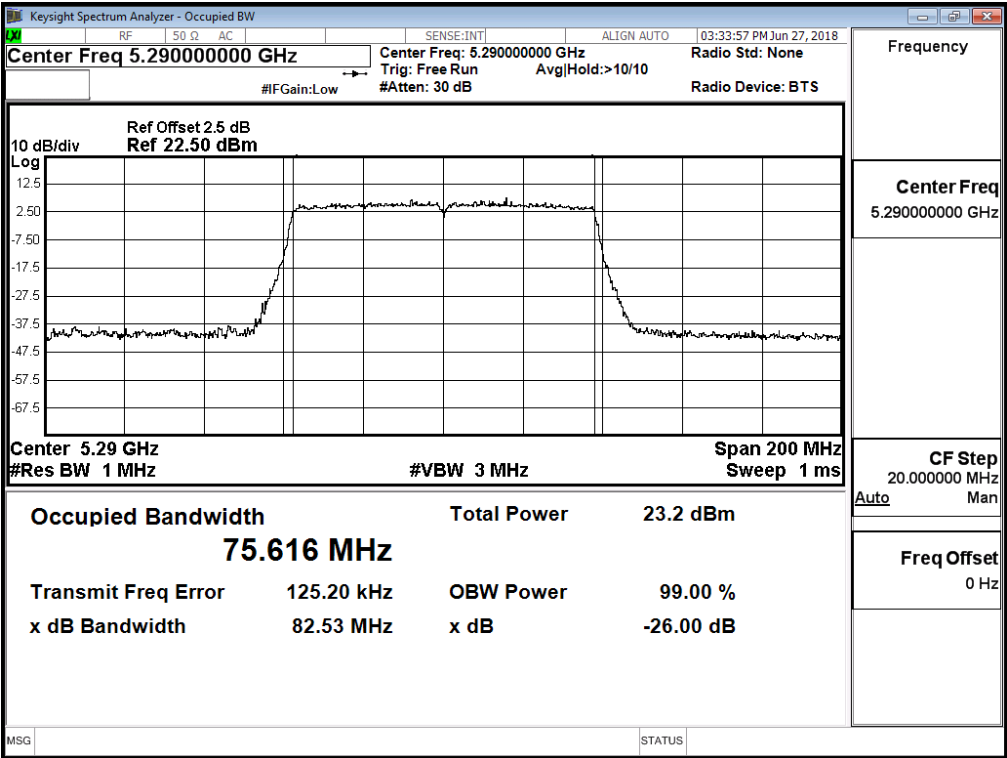


Channel 138 – Chain B

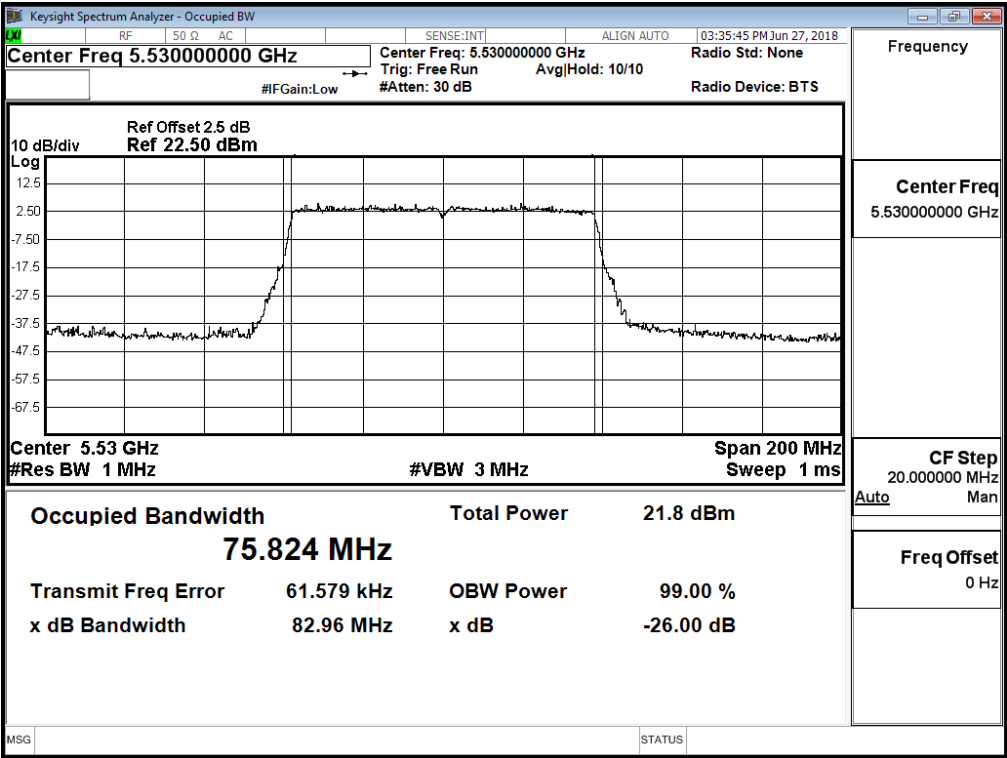


99% Bandwidth:

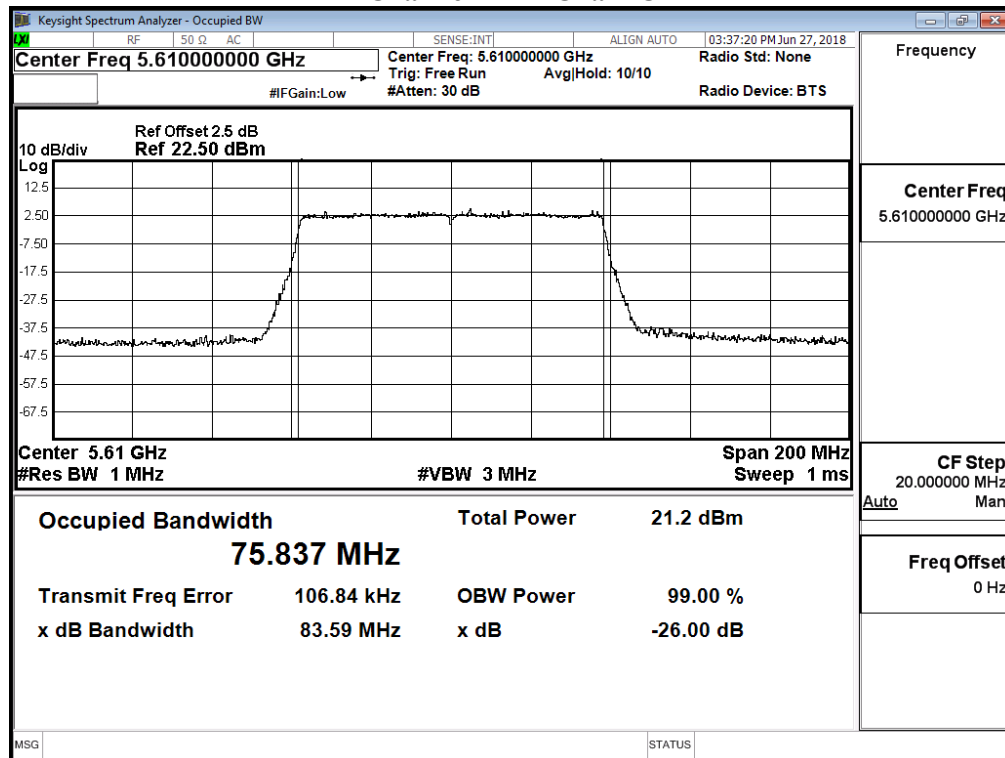
Channel 58 – Chain C



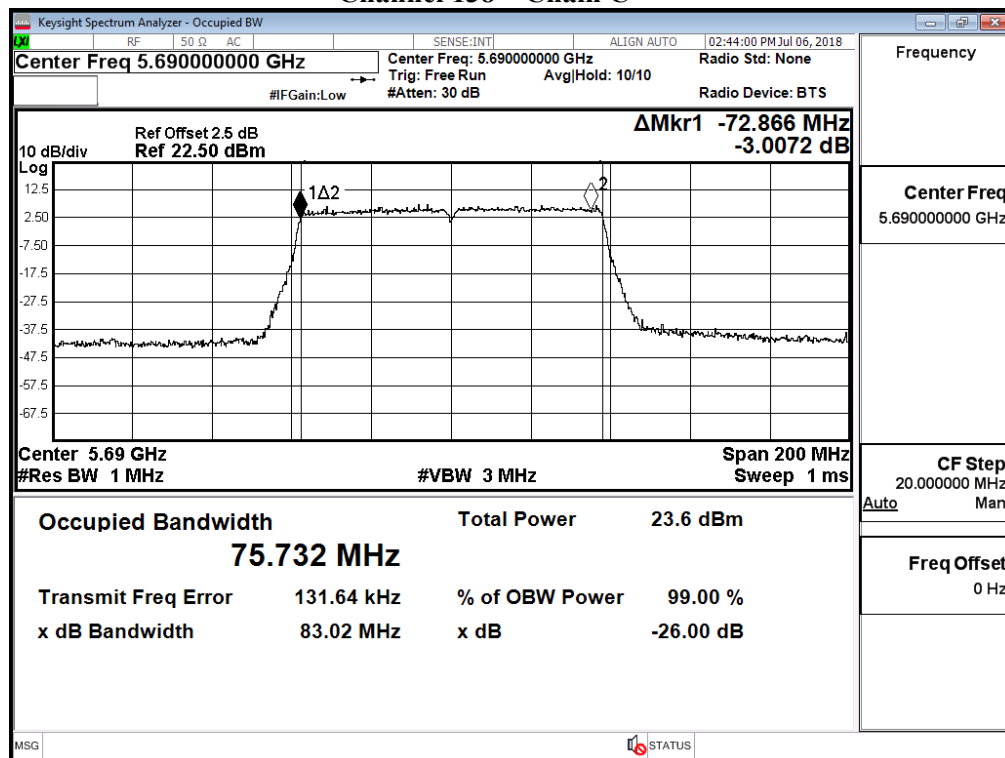
Channel 106 – Chain C



Channel 122 – Chain C

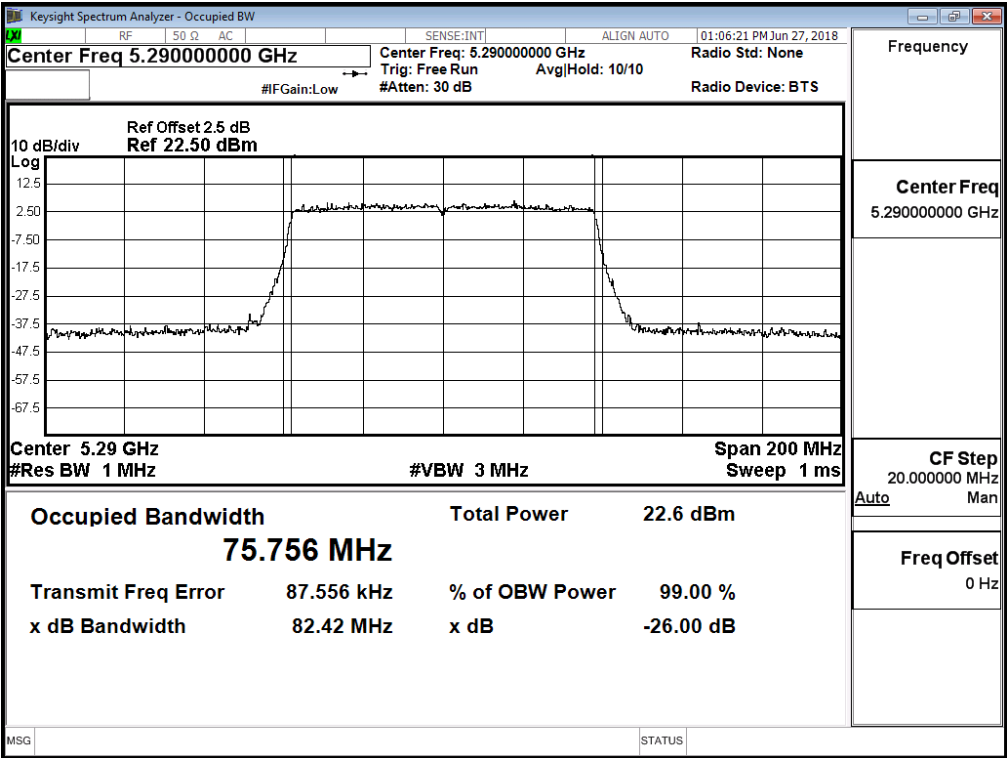


Channel 138 – Chain C

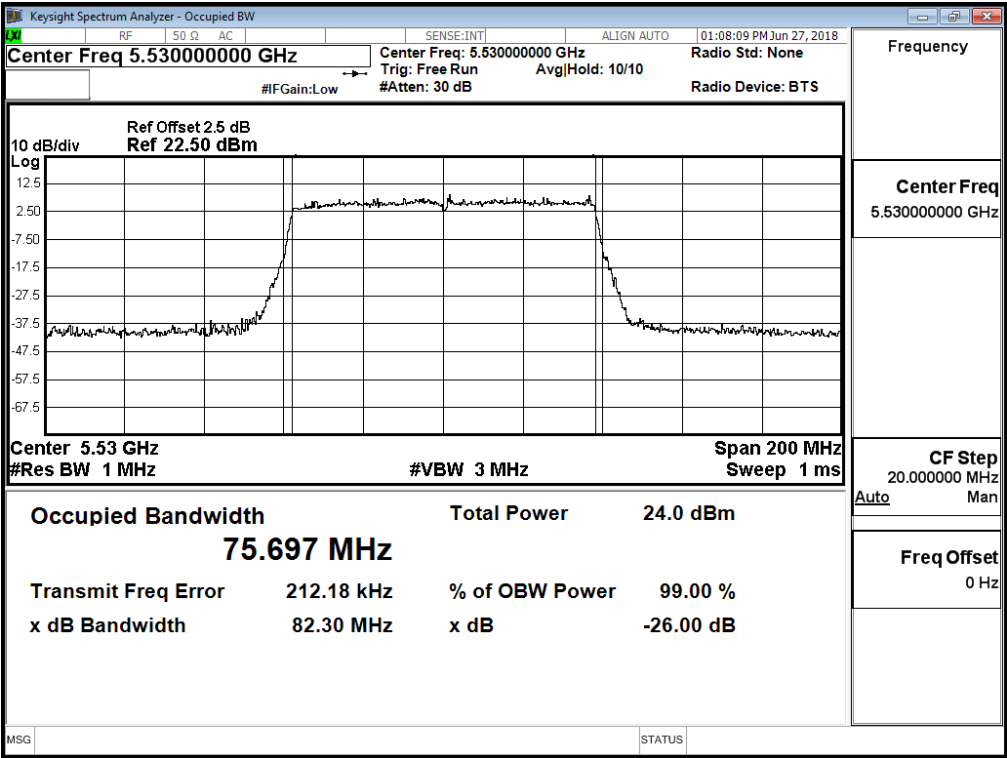


99% Bandwidth:

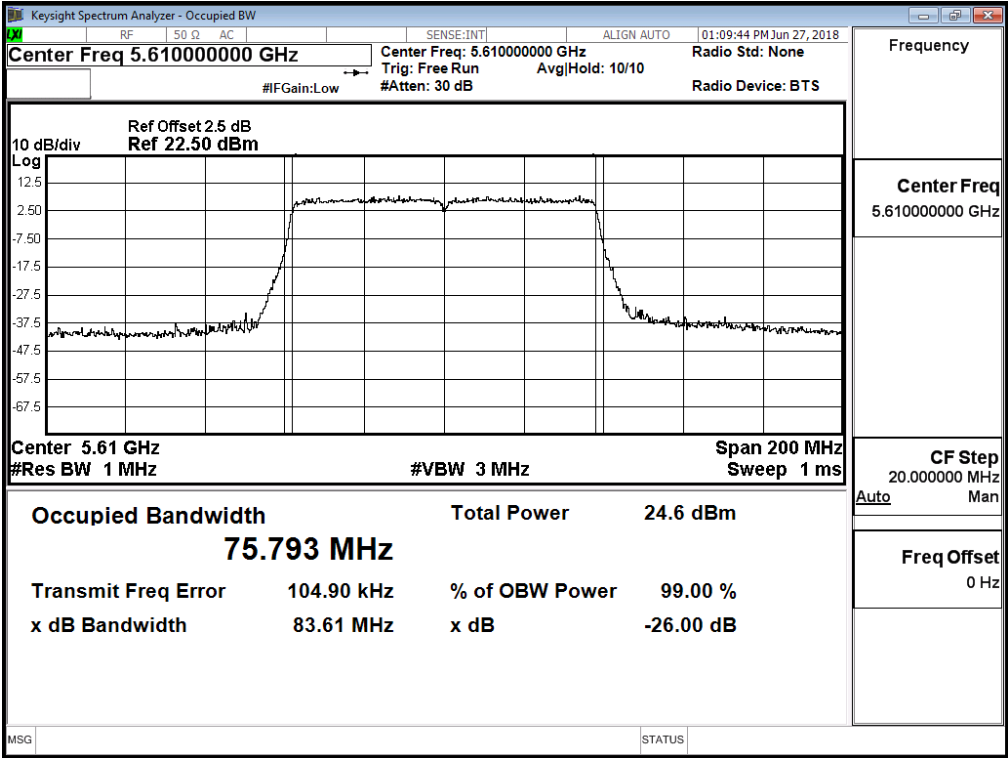
Channel 58 – Chain D



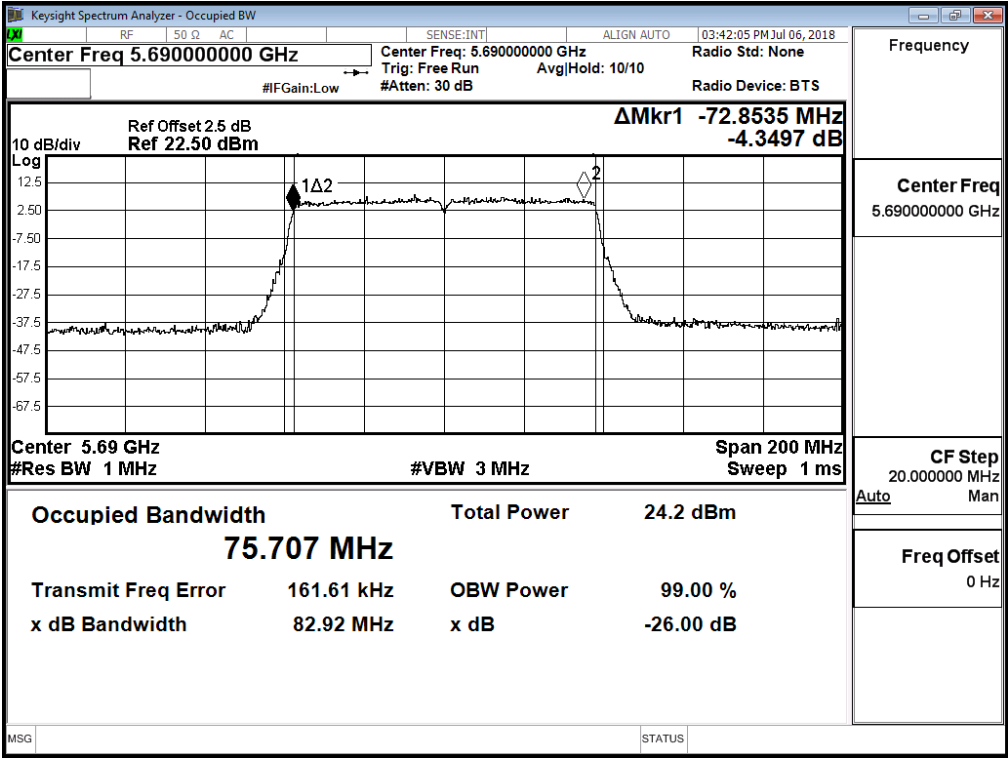
Channel 106 – Chain D



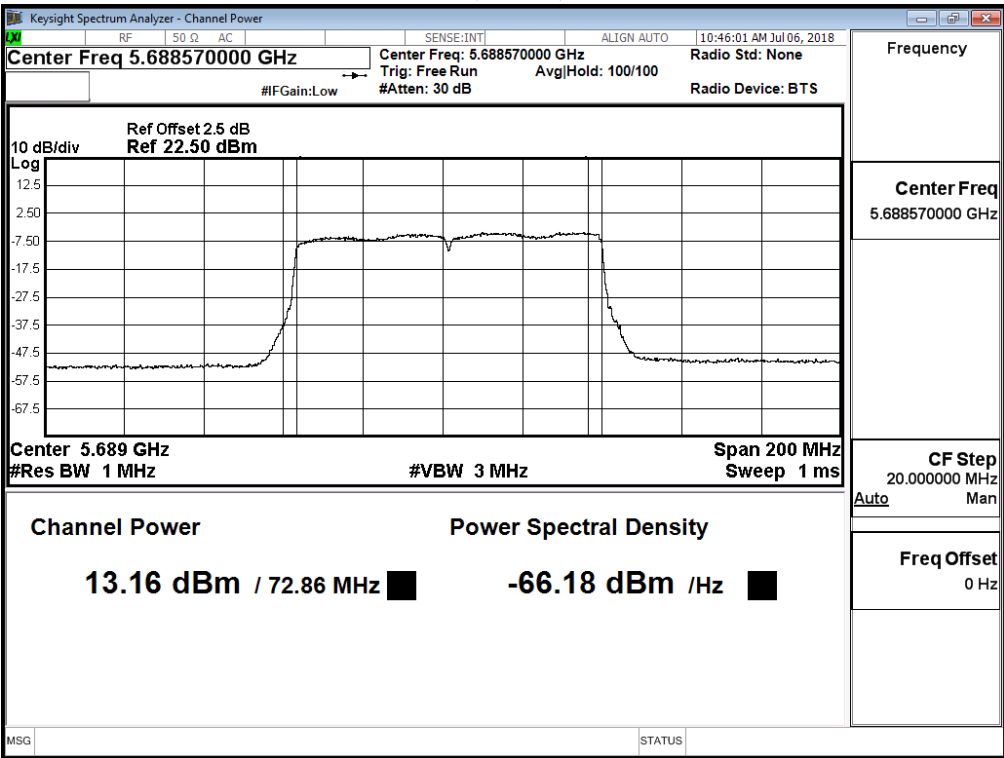
Channel 122 – Chain D



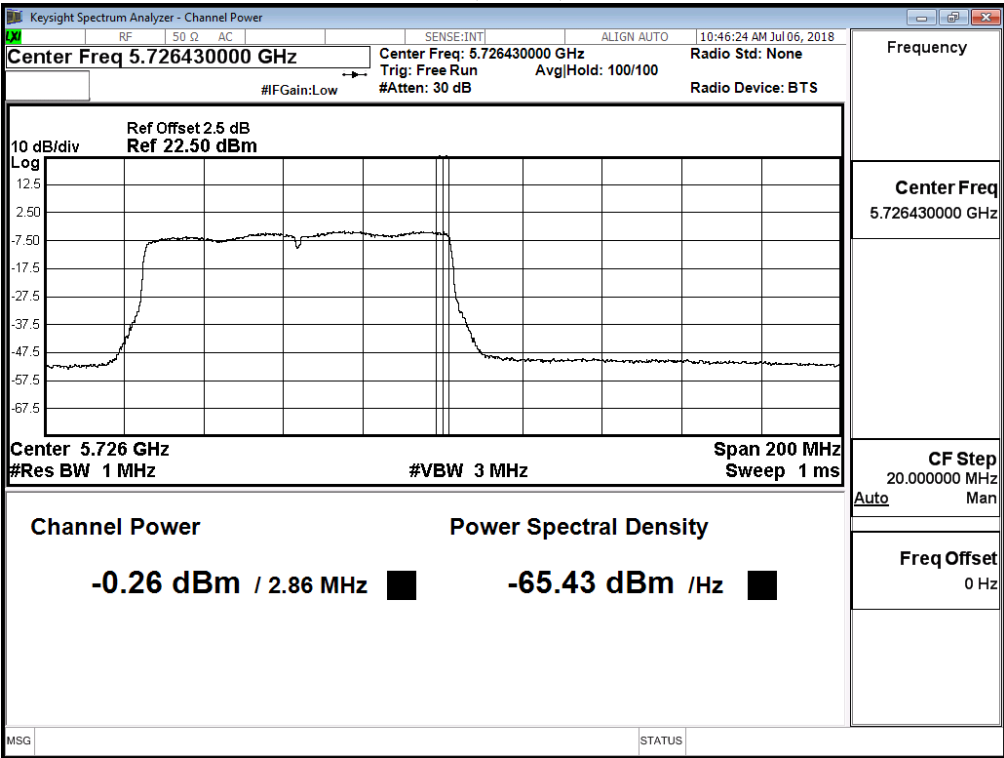
Channel 138 – Chain D



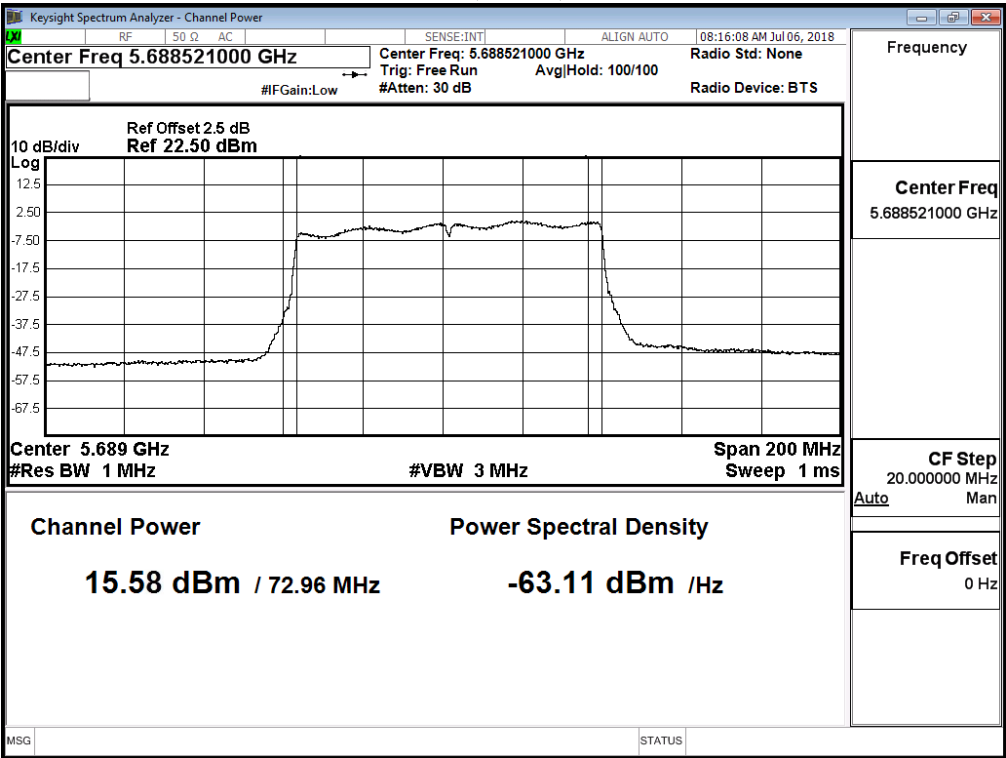
Maximum conducted output power:
Channel 138 (Band3) – Chain A



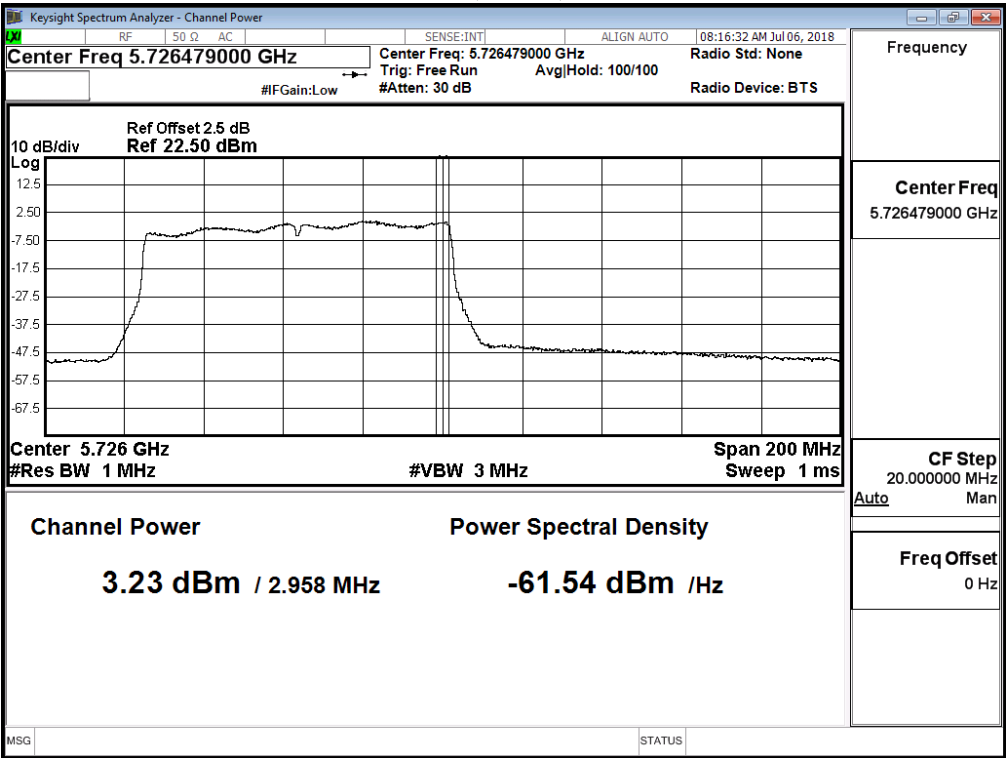
Maximum conducted output power:
Channel 138 (Band4) – Chain A



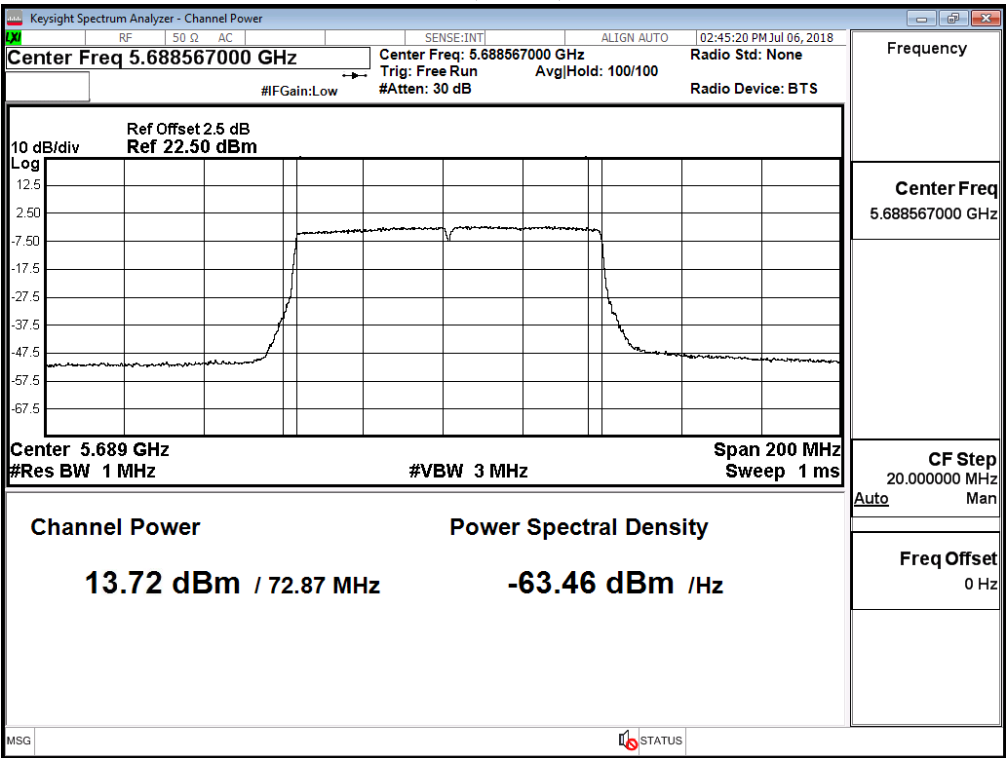
Maximum conducted output power:
Channel 138 (Band3) – Chain B



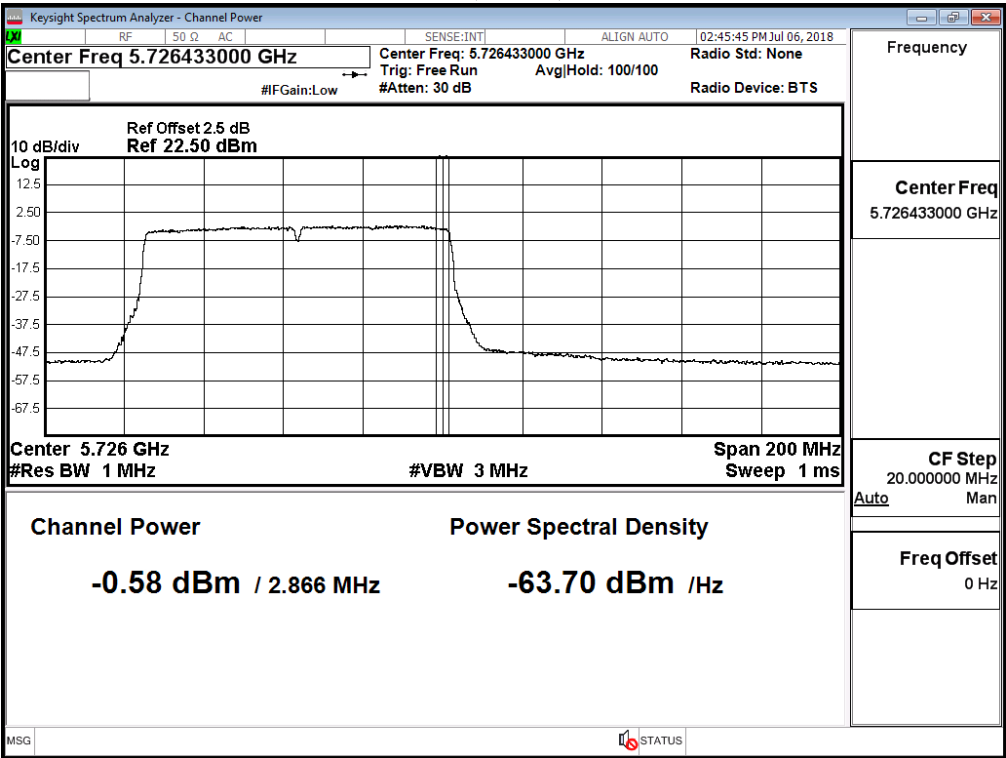
Maximum conducted output power:
Channel 138 (Band4) – Chain B



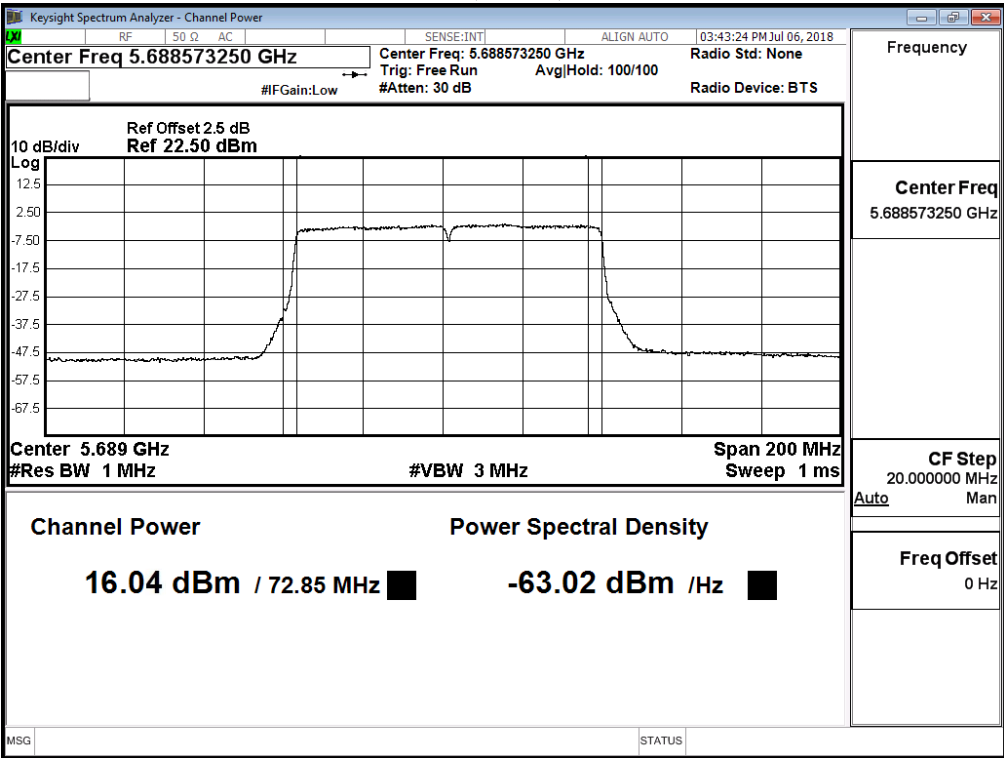
Maximum conducted output power:
Channel 138 (Band3) – Chain C



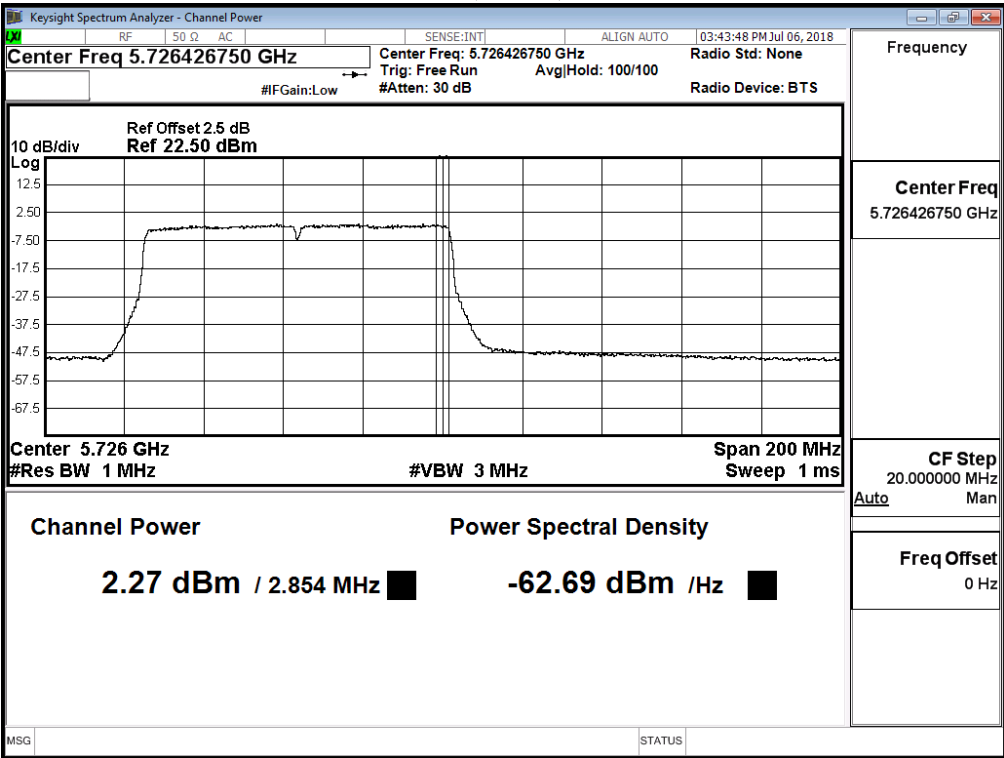
Maximum conducted output power:
Channel 138 (Band4) – Chain C



Maximum conducted output power:
Channel 138 (Band3) – Chain D



Maximum conducted output power:
Channel 138 (Band4) – Chain D



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (Antenna No.2)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	6.72	--	--	--	--	--	--	--	<7dBm
44	5220	6.25	6.15	6.05	5.95	5.9	5.83	5.77	5.71	<7dBm
48	5240	6.33	--	--	--	--	--	--	--	<7dBm
52	5260	6.89	--	--	--	--	--	--	--	<7dBm
60	5300	6.59	6.54	6.44	6.39	6.31	6.26	6.2	6.13	<7dBm
64	5320	6.51	--	--	--	--	--	--	--	<7dBm
100	5500	6.45	--	--	--	--	--	--	--	<7dBm
116	5580	6.41	6.32	6.23	6.16	6.07	6.01	5.94	5.87	<7dBm
140	5700	6.49	--	--	--	--	--	--	--	<7dBm
149	5745	19.41	--	--	--	--	--	--	--	<30dBm
157	5785	20.58	20.51	20.41	20.36	20.26	20.16	20.08	20.01	<30dBm
165	5825	21.17	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	6.67	--	--	--	--	--	--	--	<7dBm
44	5220	6.17	6.07	5	5.92	5.86	5.76	5.68	5.59	<7dBm
48	5240	6.24	--	--	--	--	--	--	--	<7dBm
52	5260	6.84	--	--	--	--	--	--	--	<7dBm
60	5300	6.52	6.44	6.39	6.32	6.23	6.13	6.03	5.95	<7dBm
64	5320	6.41	--	--	--	--	--	--	--	<7dBm
100	5500	6.36	--	--	--	--	--	--	--	<7dBm
116	5580	6.33	6.23	6.17	6.1	6	5.91	5.86	5.81	<7dBm
140	5700	6.43	--	--	--	--	--	--	--	<7dBm
149	5745	19.34	--	--	--	--	--	--	--	<30dBm
157	5785	20.52	20.44	20.34	20.26	20.17	20.07	20.02	19.92	<30dBm
165	5825	21.09	--	--	--	--	--	--	--	<30dBm

Note:

Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	6.64	--	--	--	--	--	--	--	<7dBm
44	5220	6.2	6.12	6.03	5.93	5.84	5.79	5.71	5.61	<7dBm
48	5240	6.26	--	--	--	--	--	--	--	<7dBm
52	5260	6.81	--	--	--	--	--	--	--	<7dBm
60	5300	6.54	6.46	6.36	6.29	6.22	6.13	6.08	5.98	<7dBm
64	5320	6.45	--	--	--	--	--	--	--	<7dBm
100	5500	6.36	--	--	--	--	--	--	--	<7dBm
116	5580	6.36	6.26	6.16	6.11	6.06	5.96	5.88	5.81	<7dBm
140	5700	6.44	--	--	--	--	--	--	--	<7dBm
149	5745	19.31	--	--	--	--	--	--	--	<30dBm
157	5785	20.53	20.47	20.39	20.33	20.23	20.15	20.08	20.01	<30dBm
165	5825	21.08	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	6.63	--	--	--	--	--	--	--	<7dBm
44	5220	6.2	6.12	6.07	6.02	5.92	5.82	5.72	5.63	<7dBm
48	5240	6.28	--	--	--	--	--	--	--	<7dBm
52	5260	6.82	--	--	--	--	--	--	--	<7dBm
60	5300	6.54	6.46	6.37	6.28	6.2	6.12	6.05	5.95	<7dBm
64	5320	6.44	--	--	--	--	--	--	--	<7dBm
100	5500	6.4	--	--	--	--	--	--	--	<7dBm
116	5580	6.32	6.25	6.19	6.12	6.06	5.96	5.89	5.83	<7dBm
140	5700	6.43	--	--	--	--	--	--	--	<7dBm
149	5745	19.31	--	--	--	--	--	--	--	<30dBm
157	5785	20.48	20.42	20.36	20.3	20.22	20.15	20.09	20.03	<30dBm
165	5825	21.07	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
36	5180	--	6.72	--	--	--	6.72	7	Pass
44	5220	--	6.25	--	--	--	6.25	7	Pass
48	5240	--	6.33	--	--	--	6.33	7	Pass
52	5260	--	6.89	--	--	--	6.89	7	Pass
60	5300	--	6.59	--	--	--	6.59	7	Pass
64	5320	--	6.51	--	--	--	6.51	7	Pass
100	5500	--	6.45	--	--	--	6.45	7	Pass
116	5580	--	6.41	--	--	--	6.41	7	Pass
140	5700	--	6.49	--	--	--	6.49	7	Pass
149	5745	--	19.41	--	--	--	19.41	30	Pass
157	5785	--	20.58	--	--	--	20.58	30	Pass
165	5825	--	21.17	--	--	--	21.17	30	Pass

Note:

1. Power Output Value = Reading value on average power meter + cable loss
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	0.77	--	--	--	0.77	Pass
60	5300	0.37	--	--	--	0.37	Pass
64	5320	0.23	--	--	--	0.23	Pass
100	5500	0.27	--	--	--	0.27	Pass
116	5580	0.20	--	--	--	0.20	Pass
140	5700	0.37	--	--	--	0.37	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 2: Transmit (802.11n-20BW 28.8Mbps) (Antenna No.2)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	0.68	--	--	--	--	--	--	--	<7dBm
44	5220	0.75	0.7	0.65	0.55	0.49	0.41	0.34	0.25	<7dBm
48	5240	0.99	--	--	--	--	--	--	--	<7dBm
52	5260	1.12	--	--	--	--	--	--	--	<7dBm
60	5300	0.94	0.85	0.76	0.68	0.6	0.55	0.48	0.43	<7dBm
64	5320	0.79	--	--	--	--	--	--	--	<7dBm
100	5500	1.02	--	--	--	--	--	--	--	<7dBm
116	5580	0.64	0.58	0.53	0.47	0.38	0.32	0.25	0.15	<7dBm
140	5700	0.39	--	--	--	--	--	--	--	<7dBm
149	5745	16.04	--	--	--	--	--	--	--	<30dBm
157	5785	16.41	16.35	16.29	16.2	16.11	16.05	15.98	15.91	<30dBm
165	5825	15.16	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	0.33	--	--	--	--	--	--	--	<7dBm
44	5220	0.45	0.36	0.27	0.22	0.17	0.12	0.05	-0.04	<7dBm
48	5240	0.39	--	--	--	--	--	--	--	<7dBm
52	5260	0.72	--	--	--	--	--	--	--	<7dBm
60	5300	1.03	0.97	0.9	0.82	0.75	0.68	0.61	0.54	<7dBm
64	5320	1.01	--	--	--	--	--	--	--	<7dBm
100	5500	1.21	--	--	--	--	--	--	--	<7dBm
116	5580	0.91	0.81	0.71	0.63	0.55	0.48	0.38	0.33	<7dBm
140	5700	1.32	--	--	--	--	--	--	--	<7dBm
149	5745	16.34	--	--	--	--	--	--	--	<30dBm
157	5785	16.89	16.79	16.72	16.67	16.62	16.55	16.49	16.39	<30dBm
165	5825	15.7	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	0.84	--	--	--	--	--	--	--	<7dBm
44	5220	0.67	0.57	0.49	0.41	0.36	0.26	0.16	0.07	<7dBm
48	5240	0.99	--	--	--	--	--	--	--	<7dBm
52	5260	1.43	--	--	--	--	--	--	--	<7dBm
60	5300	1.45	1.35	1.28	1.23	1.14	1.04	0.96	0.89	<7dBm
64	5320	1.49	--	--	--	--	--	--	--	<7dBm
100	5500	1.15	--	--	--	--	--	--	--	<7dBm
116	5580	1.21	1.11	1.02	0.92	0.83	0.74	0.66	0.58	<7dBm
140	5700	0.66	--	--	--	--	--	--	--	<7dBm
149	5745	17.22	--	--	--	--	--	--	--	<30dBm
157	5785	15.69	15.61	15.51	15.45	15.4	15.34	15.24	15.19	<30dBm
165	5825	15.15	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	0.21	--	--	--	--	--	--	--	<7dBm
44	5220	0.28	0.2	0.1	0.05	-0.04	-0.09	-0.18	-0.23	<7dBm
48	5240	0.38	--	--	--	--	--	--	--	<7dBm
52	5260	0.19	--	--	--	--	--	--	--	<7dBm
60	5300	0.23	0.14	0.08	-0.01	-0.09	-0.14	-0.2	-0.25	<7dBm
64	5320	0.28	--	--	--	--	--	--	--	<7dBm
100	5500	0.43	--	--	--	--	--	--	--	<7dBm
116	5580	1.05	0.96	0.9	0.82	0.72	0.63	0.57	0.5	<7dBm
140	5700	0.76	--	--	--	--	--	--	--	<7dBm
149	5745	16.81	--	--	--	--	--	--	--	<30dBm
157	5785	16.44	16.36	16.3	16.24	16.14	16.07	16	15.93	<30dBm
165	5825	15.17	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

**Maximum conducted output power Measurement:
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
36	5180	--	0.68	0.33	0.84	0.21	6.54	7	Pass
44	5220	--	0.75	0.45	0.67	0.28	6.56	7	Pass
48	5240	--	0.99	0.39	0.99	0.38	6.72	7	Pass
52	5260	--	1.12	0.72	1.43	0.19	6.91	7	Pass
60	5300	--	0.94	1.03	1.45	0.23	6.95	7	Pass
64	5320	--	0.79	1.01	1.49	0.28	6.93	7	Pass
100	5500	--	1.02	1.21	1.15	0.43	6.98	7	Pass
116	5580	--	0.64	0.91	1.21	1.05	6.98	7	Pass
140	5700	--	0.39	1.32	0.66	0.76	6.82	7	Pass
149	5745	--	16.04	16.34	17.22	16.81	22.65	30	Pass
157	5785	--	16.41	16.89	15.69	16.44	22.40	30	Pass
165	5825	--	15.16	15.70	15.15	15.17	21.32	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	-5.09	-5.61	-4.79	-5.93	0.69	Pass
60	5300	-5.37	-5.24	-4.86	-6.08	0.66	Pass
64	5320	-5.43	-5.30	-4.69	-6.00	0.69	Pass
100	5500	-5.28	-5.07	-5.07	-5.90	0.70	Pass
116	5580	-5.70	-5.42	-5.07	-5.19	0.68	Pass
140	5700	-5.93	-4.99	-5.72	-5.36	0.54	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (Antenna No.2)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	1.07	--	--	--	--	--	--	--	<7dBm
46	5230	1.22	1.12	1.03	0.93	0.88	0.78	0.72	0.62	<7dBm
54	5270	0.93	--	--	--	--	--	--	--	<7dBm
62	5310	0.82	0.72	0.65	0.57	0.51	0.44	0.38	0.31	<7dBm
102	5510	1.05	--	--	--	--	--	--	--	<7dBm
110	5550	0.81	0.71	0.61	0.52	0.42	0.35	0.25	0.19	<7dBm
134	5670	-0.12	--	--	--	--	--	--	--	<7dBm
151	5755	15.09	--	--	--	--	--	--	--	<30dBm
159	5795	14.81	14.76	14.67	14.6	14.51	14.45	14.38	14.32	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	0.25	--	--	--	--	--	--	--	<7dBm
46	5230	0.66	0.58	0.52	0.44	0.39	0.32	0.27	0.19	<7dBm
54	5270	0.57	--	--	--	--	--	--	--	<7dBm
62	5310	0.77	0.72	0.63	0.55	0.46	0.4	0.31	0.25	<7dBm
102	5510	1.01	--	--	--	--	--	--	--	<7dBm
110	5550	1.02	0.97	0.87	0.8	0.73	0.66	0.57	0.49	<7dBm
134	5670	1.04	--	--	--	--	--	--	--	<7dBm
151	5755	16.59	--	--	--	--	--	--	--	<30dBm
159	5795	15.91	15.85	15.8	15.71	15.61	15.54	15.45	15.38	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	0.99	--	--	--	--	--	--	--	<7dBm
46	5230	1.19	1.11	1.02	0.97	0.87	0.81	0.76	0.67	<7dBm
54	5270	1.43	--	--	--	--	--	--	--	<7dBm
62	5310	1.42	1.37	1.28	1.2	1.11	1.01	0.96	0.88	<7dBm
102	5510	1.05	--	--	--	--	--	--	--	<7dBm
110	5550	1.05	1	0.9	0.81	0.72	0.66	0.6	0.52	<7dBm
134	5670	0.66	--	--	--	--	--	--	--	<7dBm
151	5755	16.56	--	--	--	--	--	--	--	<30dBm
159	5795	15.9	15.82	15.72	15.65	15.57	15.49	15.44	15.35	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	0.43	--	--	--	--	--	--	--	<7dBm
46	5230	0.61	0.51	0.44	0.37	0.31	0.24	0.14	0.08	<7dBm
54	5270	-0.29	--	--	--	--	--	--	--	<7dBm
62	5310	-0.18	-0.23	-0.3	-0.38	-0.44	-0.51	-0.61	-0.71	<7dBm
102	5510	0.69	--	--	--	--	--	--	--	<7dBm
110	5550	0.84	0.75	0.68	0.6	0.52	0.43	0.37	0.28	<7dBm
134	5670	0.78	--	--	--	--	--	--	--	<7dBm
151	5755	15.99	--	--	--	--	--	--	--	<30dBm
159	5795	15.41	15.31	15.24	15.17	15.08	15.03	14.93	14.83	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

**Maximum conducted output power Measurement:
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
38	5190	--	1.07	0.25	0.99	0.43	6.72	7	Pass
46	5230	--	1.22	0.66	1.19	0.61	6.95	7	Pass
54	5270	--	0.93	0.57	1.43	-0.29	6.73	7	Pass
62	5310	--	0.82	0.77	1.42	-0.18	6.77	7	Pass
102	5510	--	1.05	1.01	1.05	0.69	6.97	7	Pass
110	5550	--	0.81	1.02	1.05	0.84	6.95	7	Pass
134	5670	--	-0.12	1.04	0.66	0.78	6.63	7	Pass
151	5755	--	15.09	16.59	16.56	15.99	22.12	30	Pass
159	5795	--	14.81	15.91	15.90	15.41	21.55	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

**Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
54	5270	-5.19	-5.55	-4.74	-6.51	0.57	Pass
62	5310	-5.55	-5.56	-4.91	-6.55	0.42	Pass
102	5510	-5.18	-5.36	-5.18	-5.43	0.73	Pass
110	5550	-5.53	-5.19	-5.13	-5.44	0.70	Pass
134	5670	-6.24	-5.28	-5.57	-5.51	0.38	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 4: Transmit (802.11ac-20BW-28.8Mbps) (Antenna No.2)

Chain A

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	-0.65	-0.74	-0.8	-0.85	-0.9	-0.97	-1.06	-1.16	-1.25	<7dBm
144 (Band4)	5720	-5.92	-6.02	-6.07	-6.13	-6.19	-6.27	-6.34	-6.43	-6.52	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	-0.7	-0.75	-0.8	-0.9	-0.95	-1.04	-1.12	-1.18	-1.27	<7dBm
144 (Band4)	5720	-6.12	-6.18	-6.26	-6.35	-6.4	-6.5	-6.55	-6.6	-6.66	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	-0.53	-0.58	-0.65	-0.72	-0.78	-0.86	-0.92	-0.98	-1.05	<7dBm
144 (Band4)	5720	-6.03	-6.09	-6.16	-6.22	-6.31	-6.38	-6.45	-6.5	-6.57	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	-0.64	-0.71	-0.79	-0.86	-0.96	-1.03	-1.1	-1.17	-1.24	<7dBm
144 (Band4)	5720	-5.95	-6.04	-6.14	-6.21	-6.26	-6.32	-6.37	-6.44	-6.52	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
144(Band3)	5720	--	-0.650	-0.700	-0.530	-0.640	5.38	7	Pass
144(Band4)	5720	--	-5.920	-6.120	-6.030	-5.950	0.02	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
144(Band3)	5720	5.090	4.940	4.870	4.980	10.98	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 5: Transmit (802.11ac-40BW-60Mbps) (Antenna No.2)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	0.15	0.07	0.01	-0.05	-0.12	-0.17	-0.27	-0.34	-0.42	-0.47	<7dBm
142F(Band4)	5710	-10.16	-10.23	-10.28	-10.35	-10.44	-10.51	-10.56	-10.64	-10.69	-10.75	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	0.24	0.18	0.12	0.04	-0.02	-0.07	-0.17	-0.22	-0.29	-0.36	<7dBm
142F(Band4)	5710	-10.34	-10.42	-10.48	-10.55	-10.6	-10.65	-10.74	-10.8	-10.88	-10.95	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	0.28	0.22	0.14	0.09	0.03	-0.07	-0.17	-0.22	-0.3	-0.4	<7dBm
142F(Band4)	5710	-9.82	-9.92	-9.99	-10.09	-10.16	-10.22	-10.28	-10.37	-10.44	-10.49	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	0.27	0.18	0.08	-0.01	-0.07	-0.12	-0.18	-0.25	-0.31	-0.38	<7dBm
142F(Band4)	5710	-10.18	-10.28	-10.33	-10.41	-10.51	-10.61	-10.67	-10.77	-10.82	-10.87	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
142F(Band3)	5710	--	0.150	0.240	0.28	0.27	6.26	7	Pass
142F(Band4)	5710	--	-10.160	-10.340	-9.82	-10.18	-4.10	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple colocated transmitters transmitting the same information.

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
142(Band3)	5710	-5.960	-6.110	-6.10	-6.03	-0.03	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-130Mbps) (Antenna No.2)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	1.09	1.03	0.93	0.85	0.78	0.71	0.65	0.6	0.50	0.44	<7dBm
58	5290	0.73	0.63	0.54	0.47	0.37	0.30	0.24	0.16	0.08	-0.02	<7dBm
106	5530	1.38	--	--	--	--	--	--	--	--	--	<7dBm
122	5610	0.55	0.5	0.41	0.34	0.29	0.19	0.13	0.05	0.00	-0.06	<7dBm
138(Band3)	5690	-0.38	--	--	--	--	--	--	--	--	--	<7dBm
138(Band4)	5690	-13.88	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	13.38	13.3	13.2	13.13	13.05	12.97	12.87	12.79	12.73	12.64	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	0.65	0.55	0.49	0.44	0.35	0.3	0.21	0.12	0.04	-0.01	<7dBm
58	5290	0.54	0.44	0.34	0.28	0.18	0.10	0.00	-0.06	-0.14	-0.23	<7dBm
106	5530	1.31	--	--	--	--	--	--	--	--	--	<7dBm
122	5610	1.12	1.05	1	0.91	0.85	0.79	0.73	0.67	0.60	0.51	<7dBm
138(Band3)	5690	1.84	--	--	--	--	--	--	--	--	--	<7dBm
138(Band4)	5690	-11.66	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	14.63	14.54	14.49	14.40	14.31	14.26	14.21	14.16	14.06	14.01	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	1.08	1.02	0.95	0.88	0.82	0.74	0.67	0.62	0.57	0.5	<7dBm
58	5290	0.75	0.67	0.61	0.51	0.44	0.35	0.25	0.20	0.14	0.09	<7dBm
106	5530	0.48	--	--	--	--	--	--	--	--	--	<7dBm
122	5610	0.86	0.77	0.7	0.62	0.54	0.47	0.39	0.32	0.25	0.18	<7dBm
138(Band3)	5690	-0.81	--	--	--	--	--	--	--	--	--	<7dBm
138(Band4)	5690	-14.31	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	14.66	14.61	14.53	14.43	14.35	14.30	14.22	14.17	14.11	14.06	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	0.25	0.17	0.1	0.03	-0.05	-0.15	-0.24	-0.33	-0.38	-0.46	<7dBm
58	5290	-0.42	-0.51	-0.61	-0.67	-0.76	-0.84	-0.92	-0.99	-1.08	-1.14	<7dBm
106	5530	0.31	--	--	--	--	--	--	--	--	--	<7dBm
122	5610	1.12	1.07	0.99	0.89	0.81	0.72	0.65	0.56	0.49	0.41	<7dBm
138(Band3)	5690	1.31	--	--	--	--	--	--	--	--	--	<7dBm
138(Band4)	5690	-12.19	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	14.15	14.07	14.01	13.96	13.91	13.81	13.76	13.67	13.60	13.53	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

**Maximum conducted output power Measurement
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)	Result
42	5210	--	1.090	0.650	1.080	0.250	6.80	7	Pass
58	5290	--	0.730	0.540	0.750	-0.420	6.45	7	Pass
106	5530	--	1.380	1.310	0.480	0.310	6.92	7	Pass
122	5610	--	0.550	1.120	0.860	1.120	6.94	7	Pass
138	5690	--	-0.380	1.840	-0.810	1.310	6.65	7	Pass
138ac80(Band4)	5690	--	-13.880	-11.660	-14.310	-12.190	-6.85	30	Pass
155	5775	--	13.380	14.630	14.660	14.150	20.26	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. 26 dB Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

**Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
58	5290	-5.370	-5.570	-5.470	-6.610	0.29	Pass
106	5530	-4.850	-4.920	-5.910	-5.910	0.65	Pass
122	5610	-5.640	-5.010	-5.520	-5.110	0.71	Pass
138	5690	-6.670	-4.300	-7.030	-5.060	0.40	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (Antenna No.3)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	17.68	--	--	--	--	--	--	--	<18dBm
44	5220	17.58	17.5	17.41	17.36	17.29	17.23	17.16	17.06	<18dBm
48	5240	17.69	--	--	--	--	--	--	--	<18dBm
52	5260	17.65	--	--	--	--	--	--	--	<18dBm
60	5300	17.51	17.44	17.35	17.28	17.19	17.13	17.07	17.02	<18dBm
64	5320	17.2	--	--	--	--	--	--	--	<18dBm
100	5500	17.4	--	--	--	--	--	--	--	<18dBm
116	5580	17.39	17.34	17.25	17.19	17.14	17.05	16.96	16.88	<18dBm
140	5700	17.29	--	--	--	--	--	--	--	<18dBm
149	5745	20.6	--	--	--	--	--	--	--	<30dBm
157	5785	20.75	20.69	20.62	20.53	20.45	20.37	20.31	20.26	<30dBm
165	5825	20.84	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	17.58	--	--	--	--	--	--	--	<18dBm
44	5220	17.49	17.44	17.34	17.25	17.2	17.11	17.03	16.98	<18dBm
48	5240	17.61	--	--	--	--	--	--	--	<18dBm
52	5260	17.59	--	--	--	--	--	--	--	<18dBm
60	5300	17.46	17.36	17.29	17.2	17.1	17.02	16.97	16.9	<18dBm
64	5320	17.11	--	--	--	--	--	--	--	<18dBm
100	5500	17.35	--	--	--	--	--	--	--	<18dBm
116	5580	17.29	17.19	17.1	17.01	16.95	16.9	16.82	16.76	<18dBm
140	5700	17.19	--	--	--	--	--	--	--	<18dBm
149	5745	20.54	--	--	--	--	--	--	--	<30dBm
157	5785	20.68	20.63	20.56	20.47	20.42	20.33	20.24	20.14	<30dBm
165	5825	20.77	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	17.61	--	--	--	--	--	--	--	<18dBm
44	5220	17.52	17.45	17.39	17.33	17.27	17.19	17.09	17.04	<18dBm
48	5240	17.59	--	--	--	--	--	--	--	<18dBm
52	5260	17.59	--	--	--	--	--	--	--	<18dBm
60	5300	17.44	17.35	17.28	17.21	17.12	17.04	16.95	16.9	<18dBm
64	5320	17.14	--	--	--	--	--	--	--	<18dBm
100	5500	17.33	--	--	--	--	--	--	--	<18dBm
116	5580	17.33	17.25	17.16	17.11	17.06	17	16.9	16.84	<18dBm
140	5700	17.2	--	--	--	--	--	--	--	<18dBm
149	5745	20.55	--	--	--	--	--	--	--	<30dBm
157	5785	20.7	20.6	20.55	20.46	20.41	20.35	20.25	20.19	<30dBm
165	5825	20.78	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	17.63	--	--	--	--	--	--	--	<18dBm
44	5220	17.48	17.42	17.37	17.31	17.26	17.21	17.16	17.11	<18dBm
48	5240	17.64	--	--	--	--	--	--	--	<18dBm
52	5260	17.59	--	--	--	--	--	--	--	<18dBm
60	5300	17.45	17.39	17.31	17.24	17.19	17.11	17.06	16.97	<18dBm
64	5320	17.13	--	--	--	--	--	--	--	<18dBm
100	5500	17.34	--	--	--	--	--	--	--	<18dBm
116	5580	17.31	17.24	17.18	17.08	17	16.92	16.87	16.77	<18dBm
140	5700	17.24	--	--	--	--	--	--	--	<18dBm
149	5745	20.5	--	--	--	--	--	--	--	<30dBm
157	5785	20.67	20.58	20.5	20.44	20.38	20.3	20.23	20.15	<30dBm
165	5825	20.74	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
36	5180	--	17.68	--	--	--	17.68	18	Pass
44	5220	--	17.58	--	--	--	17.58	18	Pass
48	5240	--	17.69	--	--	--	17.69	18	Pass
52	5260	--	17.65	--	--	--	17.65	18	Pass
60	5300	--	17.51	--	--	--	17.51	18	Pass
64	5320	--	17.20	--	--	--	17.20	18	Pass
100	5500	--	17.40	--	--	--	17.40	18	Pass
116	5580	--	17.39	--	--	--	17.39	18	Pass
140	5700	--	17.29	--	--	--	17.29	18	Pass
149	5745	--	20.60	--	--	--	20.60	30	Pass
157	5785	--	20.75	--	--	--	20.75	30	Pass
165	5825	--	20.84	--	--	--	20.84	30	Pass

Note:

1. Power Output Value = Reading value on average power meter + cable loss
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	11.47	--	--	--	11.47	Pass
60	5300	11.28	--	--	--	11.28	Pass
64	5320	10.83	--	--	--	10.83	Pass
100	5500	11.08	--	--	--	11.08	Pass
116	5580	11.02	--	--	--	11.02	Pass
140	5700	11.07	--	--	--	11.07	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 2: Transmit (802.11n-20BW 28.8Mbps) (Antenna No.3)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	11.65	--	--	--	--	--	--	--	<18dBm
44	5220	11.6	11.52	11.44	11.34	11.29	11.22	11.12	11.04	<18dBm
48	5240	11.56	--	--	--	--	--	--	--	<18dBm
52	5260	11.46	--	--	--	--	--	--	--	<18dBm
60	5300	11.27	11.19	11.09	11	10.92	10.84	10.74	10.65	<18dBm
64	5320	10.92	--	--	--	--	--	--	--	<18dBm
100	5500	11.19	--	--	--	--	--	--	--	<18dBm
116	5580	11.24	11.18	11.09	10.99	10.92	10.86	10.8	10.75	<18dBm
140	5700	10.65	--	--	--	--	--	--	--	<18dBm
149	5745	18.61	--	--	--	--	--	--	--	<30dBm
157	5785	18.35	18.28	18.23	18.15	18.08	18.01	17.96	17.89	<30dBm
165	5825	18.45	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	11.67	--	--	--	--	--	--	--	<18dBm
44	5220	11.41	11.36	11.29	11.19	11.13	11.08	10.99	10.93	<18dBm
48	5240	11.28	--	--	--	--	--	--	--	<18dBm
52	5260	11.68	--	--	--	--	--	--	--	<18dBm
60	5300	11.92	11.86	11.77	11.71	11.62	11.57	11.52	11.45	<18dBm
64	5320	11.92	--	--	--	--	--	--	--	<18dBm
100	5500	12.09	--	--	--	--	--	--	--	<18dBm
116	5580	11.56	11.46	11.37	11.27	11.21	11.11	11.06	10.98	<18dBm
140	5700	12.35	--	--	--	--	--	--	--	<18dBm
149	5745	20.38	--	--	--	--	--	--	--	<30dBm
157	5785	20.07	20.01	19.96	19.89	19.84	19.79	19.74	19.65	<30dBm
165	5825	19.78	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	11.66	--	--	--	--	--	--	--	<18dBm
44	5220	11.5	11.41	11.36	11.28	11.18	11.08	10.99	10.92	<18dBm
48	5240	11.72	--	--	--	--	--	--	--	<18dBm
52	5260	12.42	--	--	--	--	--	--	--	<18dBm
60	5300	12.46	12.41	12.31	12.24	12.14	12.09	12	11.93	<18dBm
64	5320	12.58	--	--	--	--	--	--	--	<18dBm
100	5500	12.14	--	--	--	--	--	--	--	<18dBm
116	5580	12.2	12.1	12.02	11.96	11.88	11.78	11.72	11.67	<18dBm
140	5700	12.01	--	--	--	--	--	--	--	<18dBm
149	5745	19.82	--	--	--	--	--	--	--	<30dBm
157	5785	19.97	19.9	19.85	19.77	19.69	19.62	19.52	19.43	<30dBm
165	5825	19.79	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	11.07	--	--	--	--	--	--	--	<18dBm
44	5220	10.98	10.93	10.85	10.8	10.75	10.66	10.59	10.49	<18dBm
48	5240	11.03	--	--	--	--	--	--	--	<18dBm
52	5260	11.04	--	--	--	--	--	--	--	<18dBm
60	5300	11.09	11.03	10.97	10.91	10.86	10.76	10.68	10.6	<18dBm
64	5320	11.37	--	--	--	--	--	--	--	<18dBm
100	5500	11.58	--	--	--	--	--	--	--	<18dBm
116	5580	11.72	11.63	11.57	11.5	11.43	11.37	11.29	11.22	<18dBm
140	5700	11.93	--	--	--	--	--	--	--	<18dBm
149	5745	19.34	--	--	--	--	--	--	--	<30dBm
157	5785	19.81	19.74	19.66	19.61	19.51	19.45	19.36	19.28	<30dBm
165	5825	19.69	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

**Maximum conducted output power Measurement:
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
36	5180	--	11.65	11.67	11.66	11.07	17.54	18	Pass
44	5220	--	11.60	11.41	11.50	10.98	17.40	18	Pass
48	5240	--	11.56	11.28	11.72	11.03	17.43	18	Pass
52	5260	--	11.46	11.68	12.42	11.04	17.70	18	Pass
60	5300	--	11.27	11.92	12.46	11.09	17.74	18	Pass
64	5320	--	10.92	11.92	12.58	11.37	17.76	18	Pass
100	5500	--	11.19	12.09	12.14	11.58	17.79	18	Pass
116	5580	--	11.24	11.56	12.20	11.72	17.71	18	Pass
140	5700	--	10.65	12.35	12.01	11.93	17.80	18	Pass
149	5745	--	18.61	20.38	19.82	19.34	25.61	30	Pass
157	5785	--	18.35	20.07	19.97	19.81	25.62	30	Pass
165	5825	--	18.45	19.78	19.79	19.69	25.48	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

**Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	5.28	5.40	6.20	4.66	11.44	Pass
60	5300	5.04	5.79	6.28	4.89	11.56	Pass
64	5320	4.54	5.73	6.20	5.24	11.49	Pass
100	5500	4.80	5.71	5.80	5.39	11.46	Pass
116	5580	5.11	5.28	5.98	5.49	11.50	Pass
140	5700	4.42	6.07	5.90	5.59	11.56	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (Antenna No.3)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
38	5190	12.07	--	--	--	--	--	--	--	<18dBm
46	5230	11.64	11.59	11.51	11.42	11.36	11.3	11.24	11.17	<18dBm
54	5270	11.34	--	--	--	--	--	--	--	<18dBm
62	5310	11.13	11.05	10.98	10.91	10.84	10.77	10.68	10.58	<18dBm
102	5510	11.32	--	--	--	--	--	--	--	<18dBm
110	5550	10.86	10.77	10.69	10.62	10.53	10.43	10.38	10.33	<18dBm
134	5670	9.96	--	--	--	--	--	--	--	<18dBm
151	5755	18.86	--	--	--	--	--	--	--	<30dBm
159	5795	18.22	18.12	18.05	17.95	17.88	17.79	17.73	17.64	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	12.04	--	--	--	--	--	--	--	<18dBm
46	5230	11.34	11.29	11.22	11.17	11.08	11	10.92	10.82	<18dBm
54	5270	11.5	--	--	--	--	--	--	--	<18dBm
62	5310	11.8	11.7	11.63	11.55	11.48	11.39	11.3	11.24	<18dBm
102	5510	12.14	--	--	--	--	--	--	--	<18dBm
110	5550	11.7	11.64	11.57	11.52	11.46	11.38	11.33	11.25	<18dBm
134	5670	11.37	--	--	--	--	--	--	--	<18dBm
151	5755	19.35	--	--	--	--	--	--	--	<30dBm
159	5795	20.2	20.1	20.04	19.96	19.87	19.81	19.75	19.67	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	12.06	--	--	--	--	--	--	--	<18dBm
46	5230	11.84	11.77	11.69	11.64	11.55	11.5	11.41	11.33	<18dBm
54	5270	12.46	--	--	--	--	--	--	--	<18dBm
62	5310	12.47	12.4	12.34	12.29	12.24	12.15	12.06	11.99	<18dBm
102	5510	12.3	--	--	--	--	--	--	--	<18dBm
110	5550	12.18	12.09	12.01	11.94	11.88	11.83	11.73	11.65	<18dBm
134	5670	12.16	--	--	--	--	--	--	--	<18dBm
151	5755	18.84	--	--	--	--	--	--	--	<30dBm
159	5795	19.8	19.7	19.61	19.56	19.46	19.37	19.31	19.21	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	11.5	--	--	--	--	--	--	--	<18dBm
46	5230	11.21	11.14	11.06	10.97	10.9	10.85	10.8	10.74	<18dBm
54	5270	11.17	--	--	--	--	--	--	--	<18dBm
62	5310	11.3	11.2	11.12	11.06	10.96	10.91	10.85	10.75	<18dBm
102	5510	11.69	--	--	--	--	--	--	--	<18dBm
110	5550	11.6	11.51	11.46	11.4	11.32	11.25	11.17	11.07	<18dBm
134	5670	11.46	--	--	--	--	--	--	--	<18dBm
151	5755	19.74	--	--	--	--	--	--	--	<30dBm
159	5795	19.67	19.59	19.53	19.44	19.35	19.3	19.23	19.18	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
38	5190	--	12.07	12.04	12.06	11.50	17.94	18	Pass
46	5230	--	11.64	11.34	11.84	11.21	17.54	18	Pass
54	5270	--	11.34	11.50	12.46	11.17	17.67	18	Pass
62	5310	--	11.13	11.80	12.47	11.30	17.73	18	Pass
102	5510	--	11.32	12.14	12.30	11.69	17.90	18	Pass
110	5550	--	10.86	11.70	12.18	11.60	17.63	18	Pass
134	5670	--	9.96	11.37	12.16	11.46	17.33	18	Pass
151	5755	--	18.86	19.35	18.84	19.74	25.23	30	Pass
159	5795	--	18.22	20.20	19.80	19.67	25.55	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple colocated transmitters transmitting the same information.

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
54	5270	4.96	5.17	6.08	4.89	11.32	Pass
62	5310	4.91	5.58	6.25	5.19	11.53	Pass
102	5510	4.95	5.96	5.99	5.46	11.63	Pass
110	5550	4.53	5.59	5.89	5.22	11.36	Pass
134	5670	3.84	5.15	6.03	5.08	11.11	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 4: Transmit (802.11ac-20BW-28.8Mbps) (Antenna No.3)

Chain A

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	7.89	7.8	7.7	7.65	7.58	7.49	7.44	7.35	7.26	<18dBm
144 (Band4)	5720	1.91	1.81	1.71	1.62	1.53	1.48	1.38	1.29	1.21	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	7.95	7.9	7.85	7.77	7.67	7.57	7.49	7.4	7.31	<18dBm
144 (Band4)	5720	1.82	1.72	1.65	1.58	1.51	1.42	1.35	1.26	1.19	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	7.87	7.8	7.74	7.66	7.61	7.51	7.43	7.37	7.3	<18dBm
144 (Band4)	5720	1.86	1.8	1.71	1.63	1.58	1.51	1.45	1.39	1.3	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	7.91	7.81	7.76	7.68	7.62	7.53	7.47	7.38	7.29	<18dBm
144 (Band4)	5720	1.96	1.88	1.78	1.72	1.65	1.55	1.45	1.4	1.31	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
144(Band3)	5720	--	7.890	7.950	7.870	7.910	13.94	18	Pass
144(Band4)	5720	--	1.910	1.820	1.860	1.960	7.91	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
144(Band3)	5720	1.600	1.840	1.490	1.680	7.72	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 5: Transmit (802.11ac-40BW-60Mbps) (Antenna No.3)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	10.48	10.4	10.3	10.22	10.13	10.05	9.97	9.87	9.81	9.73	<18dBm
142F(Band4)	5710	0.59	0.52	0.44	0.37	0.29	0.19	0.11	0.03	-0.05	-0.13	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	10.61	10.51	10.42	10.36	10.29	10.21	10.14	10.07	10.02	9.92	<18dBm
142F(Band4)	5710	0.55	0.49	0.44	0.34	0.28	0.23	0.17	0.07	-0.02	-0.11	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	10.59	10.5	10.44	10.36	10.27	10.18	10.11	10.02	9.95	9.85	<18dBm
142F(Band4)	5710	0.53	0.44	0.36	0.29	0.24	0.16	0.1	0.05	-0.02	-0.1	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	10.41	10.32	10.27	10.18	10.13	10.04	9.95	9.88	9.83	9.78	<18dBm
142F(Band4)	5710	0.43	0.36	0.28	0.2	0.13	0.07	-0.02	-0.12	-0.18	-0.27	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
142F(Band3)	5710	--	10.480	10.610	10.59	10.41	16.54	18	Pass
142F(Band4)	5710	--	0.590	0.550	0.53	0.43	6.55	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
142(Band3)	5710	4.190	4.420	4.26	4.12	10.27	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-130Mbps) (Antenna No.3)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	11.84	11.78	11.68	11.6	11.51	11.42	11.35	11.3	11.24	11.16	<18dBm
58	5290	11.13	11.04	10.94	10.84	10.75	10.69	10.61	10.55	10.46	10.37	<18dBm
106	5530	11.08	--	--	--	--	--	--	--	--	--	<18dBm
122	5610	10.81	10.74	10.66	10.59	10.54	10.48	10.41	10.31	10.21	10.12	<18dBm
138(Band3)	5690	9.82	--	--	--	--	--	--	--	--	--	<18dBm
138(Band4)	5690	-3.71	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.71	20.64	20.54	20.47	20.42	20.36	20.28	20.19	20.14	20.08	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	11.9	11.84	11.76	11.66	11.61	11.56	11.49	11.42	11.34	11.24	<18dBm
58	5290	11.52	11.46	11.38	11.31	11.23	11.13	11.08	11.02	10.93	10.88	<18dBm
106	5530	11.88	--	--	--	--	--	--	--	--	--	<18dBm
122	5610	11.56	11.51	11.43	11.38	11.30	11.20	11.11	11.04	10.97	10.89	<18dBm
138(Band3)	5690	12.62	--	--	--	--	--	--	--	--	--	<18dBm
138(Band4)	5690	-0.35	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.93	20.88	20.83	20.78	20.72	20.65	20.58	20.52	20.42	20.33	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	11.79	11.72	11.63	11.55	11.46	11.4	11.31	11.21	11.16	11.11	<18dBm
58	5290	12.07	11.97	11.91	11.85	11.80	11.74	11.69	11.61	11.51	11.42	<18dBm
106	5530	11.82	--	--	--	--	--	--	--	--	--	<18dBm
122	5610	12.39	12.3	12.24	12.17	12.07	11.97	11.87	11.79	11.72	11.67	<18dBm
138(Band3)	5690	10.44	--	--	--	--	--	--	--	--	--	<18dBm
138(Band4)	5690	-4.01	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	19.94	19.84	19.75	19.70	19.64	19.59	19.53	19.45	19.38	19.29	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	11.21	11.12	11.04	10.99	10.91	10.86	10.79	10.74	10.64	10.58	<18dBm
58	5290	10.88	10.81	10.75	10.67	10.62	10.55	10.46	10.40	10.34	10.24	<18dBm
106	5530	11.38	--	--	--	--	--	--	--	--	--	<18dBm
122	5610	11.82	11.77	11.67	11.61	11.52	11.47	11.42	11.33	11.24	11.14	<18dBm
138(Band3)	5690	12.48	--	--	--	--	--	--	--	--	--	<18dBm
138(Band4)	5690	-1.29	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.78	20.68	20.6	20.50	20.40	20.31	20.21	20.12	20.03	19.97	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

**Maximum conducted output power Measurement
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)	Result
42	5210	--	11.840	11.900	11.790	11.210	17.71	18	Pass
58	5290	--	11.130	11.520	12.070	10.880	17.44	18	Pass
106	5530	--	11.080	11.880	11.820	11.380	17.57	18	Pass
122	5610	--	10.810	11.560	12.390	11.820	17.70	18	Pass
138	5690	--	9.820	12.620	10.440	12.480	17.53	18	Pass
138ac80(Band4)	5690	--	-3.710	-0.350	-4.010	-1.290	3.96	30	Pass
155	5775	--	20.710	20.930	19.940	20.780	26.63	30	Pass

Note:

- Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
- Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information.

**Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
58	5290	5.020	5.230	5.770	4.780	11.24	Pass
106	5530	4.690	5.650	5.500	5.080	11.27	Pass
122	5610	4.590	5.450	6.200	5.530	11.50	Pass
138	5690	3.490	6.420	4.150	6.200	11.27	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (Antenna No.4)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	19.22	--	--	--	--	--	--	--	<19.5dBm
44	5220	19	18.94	18.87	18.78	18.71	18.64	18.57	18.5	<19.5dBm
48	5240	19.17	--	--	--	--	--	--	--	<19.5dBm
52	5260	19.12	--	--	--	--	--	--	--	<19.5dBm
60	5300	19.02	18.97	18.88	18.83	18.77	18.7	18.64	18.55	<19.5dBm
64	5320	18.71	--	--	--	--	--	--	--	<19.5dBm
100	5500	18.95	--	--	--	--	--	--	--	<19.5dBm
116	5580	18.83	18.74	18.69	18.59	18.54	18.44	18.35	18.3	<19.5dBm
140	5700	18.97	--	--	--	--	--	--	--	<19.5dBm
149	5745	20.55	--	--	--	--	--	--	--	<30dBm
157	5785	20.74	20.68	20.61	20.54	20.46	20.41	20.33	20.26	<30dBm
165	5825	20.88	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	19.16	--	--	--	--	--	--	--	<19.5dBm
44	5220	18.9	18.81	18.74	18.69	18.62	18.55	18.49	18.42	<19.5dBm
48	5240	19.11	--	--	--	--	--	--	--	<19.5dBm
52	5260	19.03	--	--	--	--	--	--	--	<19.5dBm
60	5300	18.94	18.87	18.82	18.76	18.67	18.59	18.49	18.43	<19.5dBm
64	5320	18.62	--	--	--	--	--	--	--	<19.5dBm
100	5500	18.88	--	--	--	--	--	--	--	<19.5dBm
116	5580	18.76	18.7	18.63	18.55	18.48	18.38	18.29	18.19	<19.5dBm
140	5700	18.88	--	--	--	--	--	--	--	<19.5dBm
149	5745	20.5	--	--	--	--	--	--	--	<30dBm
157	5785	20.65	20.59	20.51	20.44	20.36	20.29	20.24	20.17	<30dBm
165	5825	20.79	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	19.17	--	--	--	--	--	--	--	<19.5dBm
44	5220	18.91	18.82	18.74	18.64	18.57	18.48	18.41	18.33	<19.5dBm
48	5240	19.07	--	--	--	--	--	--	--	<19.5dBm
52	5260	19.05	--	--	--	--	--	--	--	<19.5dBm
60	5300	18.97	18.92	18.87	18.81	18.71	18.65	18.57	18.48	<19.5dBm
64	5320	18.64	--	--	--	--	--	--	--	<19.5dBm
100	5500	18.9	--	--	--	--	--	--	--	<19.5dBm
116	5580	18.78	18.73	18.66	18.58	18.48	18.42	18.35	18.25	<19.5dBm
140	5700	18.87	--	--	--	--	--	--	--	<19.5dBm
149	5745	20.5	--	--	--	--	--	--	--	<30dBm
157	5785	20.64	20.56	20.47	20.39	20.34	20.26	20.21	20.11	<30dBm
165	5825	20.8	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	19.14	--	--	--	--	--	--	--	<19.5dBm
44	5220	18.93	18.85	18.75	18.66	18.59	18.53	18.43	18.37	<19.5dBm
48	5240	19.1	--	--	--	--	--	--	--	<19.5dBm
52	5260	19.05	--	--	--	--	--	--	--	<19.5dBm
60	5300	18.92	18.84	18.78	18.69	18.59	18.54	18.49	18.42	<19.5dBm
64	5320	18.64	--	--	--	--	--	--	--	<19.5dBm
100	5500	18.88	--	--	--	--	--	--	--	<19.5dBm
116	5580	18.74	18.65	18.57	18.52	18.46	18.39	18.34	18.27	<19.5dBm
140	5700	18.87	--	--	--	--	--	--	--	<19.5dBm
149	5745	20.5	--	--	--	--	--	--	--	<30dBm
157	5785	20.65	20.6	20.51	20.45	20.36	20.3	20.25	20.19	<30dBm
165	5825	20.81	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
36	5180	--	19.22	--	--	--	19.22	19.5	Pass
44	5220	--	19.00	--	--	--	19.00	19.5	Pass
48	5240	--	19.17	--	--	--	19.17	19.5	Pass
52	5260	--	19.12	--	--	--	19.12	19.5	Pass
60	5300	--	19.02	--	--	--	19.02	19.5	Pass
64	5320	--	18.71	--	--	--	18.71	19.5	Pass
100	5500	--	18.95	--	--	--	18.95	19.5	Pass
116	5580	--	18.83	--	--	--	18.83	19.5	Pass
140	5700	--	18.97	--	--	--	18.97	19.5	Pass
149	5745	--	20.55	--	--	--	20.55	30	Pass
157	5785	--	20.74	--	--	--	20.74	30	Pass
165	5825	--	20.88	--	--	--	20.88	30	Pass

Note:

1. Power Output Value = Reading value on average power meter + cable loss
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	12.89	--	--	--	12.89	Pass
60	5300	12.68	--	--	--	12.68	Pass
64	5320	12.43	--	--	--	12.43	Pass
100	5500	12.83	--	--	--	12.83	Pass
116	5580	12.49	--	--	--	12.49	Pass
140	5700	12.59	--	--	--	12.59	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 2: Transmit (802.11n-20BW 28.8Mbps) (Antenna No.4)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	13.15	--	--	--	--	--	--	--	<19.5dBm
44	5220	13.58	13.53	13.46	13.37	13.32	13.25	13.15	13.07	<19.5dBm
48	5240	13.65	--	--	--	--	--	--	--	<19.5dBm
52	5260	12.82	--	--	--	--	--	--	--	<19.5dBm
60	5300	12.67	12.6	12.55	12.49	12.41	12.34	12.28	12.18	<19.5dBm
64	5320	12.42	--	--	--	--	--	--	--	<19.5dBm
100	5500	12.81	--	--	--	--	--	--	--	<19.5dBm
116	5580	12.16	12.07	11.97	11.89	11.79	11.74	11.67	11.61	<19.5dBm
140	5700	11.81	--	--	--	--	--	--	--	<19.5dBm
149	5745	18.62	--	--	--	--	--	--	--	<30dBm
157	5785	18.32	18.23	18.15	18.05	17.98	17.92	17.85	17.8	<30dBm
165	5825	18.45	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	13.2	--	--	--	--	--	--	--	<19.5dBm
44	5220	13.46	13.39	13.3	13.25	13.17	13.12	13.03	12.94	<19.5dBm
48	5240	13.22	--	--	--	--	--	--	--	<19.5dBm
52	5260	13.05	--	--	--	--	--	--	--	<19.5dBm
60	5300	13.37	13.31	13.25	13.18	13.08	13.02	12.93	12.87	<19.5dBm
64	5320	13.52	--	--	--	--	--	--	--	<19.5dBm
100	5500	13.64	--	--	--	--	--	--	--	<19.5dBm
116	5580	13.22	13.14	13.09	13	12.9	12.83	12.77	12.68	<19.5dBm
140	5700	13.34	--	--	--	--	--	--	--	<19.5dBm
149	5745	20.35	--	--	--	--	--	--	--	<30dBm
157	5785	20.16	20.1	20.04	19.97	19.89	19.79	19.69	19.63	<30dBm
165	5825	19.79	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		28.8								
36	5180	13.17	--	--	--	--	--	--	--	<19.5dBm
44	5220	13.48	13.41	13.31	13.26	13.21	13.13	13.06	12.96	<19.5dBm
48	5240	13.72	--	--	--	--	--	--	--	<19.5dBm
52	5260	13.88	--	--	--	--	--	--	--	<19.5dBm
60	5300	13.99	13.9	13.82	13.75	13.68	13.61	13.56	13.46	<19.5dBm
64	5320	13.77	--	--	--	--	--	--	--	<19.5dBm
100	5500	13.56	--	--	--	--	--	--	--	<19.5dBm
116	5580	13.46	13.41	13.33	13.24	13.17	13.11	13.03	12.96	<19.5dBm
140	5700	13.12	--	--	--	--	--	--	--	<19.5dBm
149	5745	19.75	--	--	--	--	--	--	--	<30dBm
157	5785	19.98	19.93	19.86	19.78	19.68	19.58	19.5	19.41	<30dBm
165	5825	19.74	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	12.58	--	--	--	--	--	--	--	<19.5dBm
44	5220	12.93	12.86	12.81	12.76	12.66	12.59	12.53	12.44	<19.5dBm
48	5240	13.05	--	--	--	--	--	--	--	<19.5dBm
52	5260	12.64	--	--	--	--	--	--	--	<19.5dBm
60	5300	12.69	12.63	12.54	12.48	12.43	12.36	12.31	12.22	<19.5dBm
64	5320	12.81	--	--	--	--	--	--	--	<19.5dBm
100	5500	13.08	--	--	--	--	--	--	--	<19.5dBm
116	5580	13.08	13.02	12.92	12.82	12.73	12.68	12.59	12.49	<19.5dBm
140	5700	13.13	--	--	--	--	--	--	--	<19.5dBm
149	5745	19.24	--	--	--	--	--	--	--	<30dBm
157	5785	19.87	19.79	19.69	19.62	19.52	19.45	19.36	19.28	<30dBm
165	5825	19.69	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
36	5180	--	13.15	13.20	13.17	12.58	19.05	19.5	Pass
44	5220	--	13.58	13.46	13.48	12.93	19.39	19.5	Pass
48	5240	--	13.65	13.22	13.72	13.05	19.44	19.5	Pass
52	5260	--	12.82	13.05	13.88	12.64	19.14	19.5	Pass
60	5300	--	12.67	13.37	13.99	12.69	19.24	19.5	Pass
64	5320	--	12.42	13.52	13.77	12.81	19.18	19.5	Pass
100	5500	--	12.81	13.64	13.56	13.08	19.31	19.5	Pass
116	5580	--	12.16	13.22	13.46	13.08	19.03	19.5	Pass
140	5700	--	11.81	13.34	13.12	13.13	18.91	19.5	Pass
149	5745	--	18.62	20.35	19.75	19.24	25.56	30	Pass
157	5785	--	18.32	20.16	19.98	19.87	25.66	30	Pass
165	5825	--	18.45	19.79	19.74	19.69	25.47	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	6.69	6.87	7.66	6.53	12.98	Pass
60	5300	6.30	7.04	7.86	6.40	12.97	Pass
64	5320	6.20	7.13	7.48	6.50	12.88	Pass
100	5500	6.63	7.27	7.40	6.79	13.05	Pass
116	5580	5.85	7.10	7.17	6.74	12.77	Pass
140	5700	5.59	7.19	6.75	6.92	12.67	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (Antenna No.4)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	13.6	--	--	--	--	--	--	--	<19.5dBm
46	5230	13.17	13.07	13.01	12.94	12.86	12.79	12.71	12.64	<19.5dBm
54	5270	12.85	--	--	--	--	--	--	--	<19.5dBm
62	5310	12.75	12.67	12.6	12.54	12.47	12.37	12.3	12.25	<19.5dBm
102	5510	12.82	--	--	--	--	--	--	--	<19.5dBm
110	5550	12.65	12.58	12.5	12.42	12.36	12.31	12.23	12.15	<19.5dBm
134	5670	11.69	--	--	--	--	--	--	--	<19.5dBm
151	5755	18.86	--	--	--	--	--	--	--	<30dBm
159	5795	18.21	18.11	18.01	17.94	17.86	17.78	17.69	17.59	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	13.61	--	--	--	--	--	--	--	<19.5dBm
46	5230	12.95	12.87	12.78	12.71	12.64	12.56	12.47	12.4	<19.5dBm
54	5270	13.21	--	--	--	--	--	--	--	<19.5dBm
62	5310	13.39	13.32	13.22	13.13	13.08	13	12.95	12.9	<19.5dBm
102	5510	13.69	--	--	--	--	--	--	--	<19.5dBm
110	5550	13.35	13.26	13.16	13.11	13.02	12.94	12.87	12.8	<19.5dBm
134	5670	13.17	--	--	--	--	--	--	--	<19.5dBm
151	5755	19.23	--	--	--	--	--	--	--	<30dBm
159	5795	20.19	20.09	20.03	19.98	19.88	19.78	19.73	19.67	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	13.57	--	--	--	--	--	--	--	<19.5dBm
46	5230	13.33	13.26	13.21	13.16	13.1	13	12.95	12.9	<19.5dBm
54	5270	13.77	--	--	--	--	--	--	--	<19.5dBm
62	5310	13.84	13.74	13.67	13.6	13.5	13.41	13.33	13.27	<19.5dBm
102	5510	13.58	--	--	--	--	--	--	--	<19.5dBm
110	5550	13.5	13.42	13.36	13.31	13.23	13.17	13.11	13.02	<19.5dBm
134	5670	13.39	--	--	--	--	--	--	--	<19.5dBm
151	5755	18.82	--	--	--	--	--	--	--	<30dBm
159	5795	19.83	19.73	19.66	19.58	19.52	19.42	19.37	19.27	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	12.96	--	--	--	--	--	--	--	<19.5dBm
46	5230	12.8	12.74	12.64	12.54	12.49	12.4	12.33	12.25	<19.5dBm
54	5270	12.57	--	--	--	--	--	--	--	<19.5dBm
62	5310	12.67	12.62	12.54	12.44	12.39	12.34	12.26	12.16	<19.5dBm
102	5510	13.2	--	--	--	--	--	--	--	<19.5dBm
110	5550	13.12	13.02	12.92	12.85	12.79	12.71	12.65	12.59	<19.5dBm
134	5670	12.94	--	--	--	--	--	--	--	<19.5dBm
151	5755	19.69	--	--	--	--	--	--	--	<30dBm
159	5795	19.65	19.57	19.52	19.45	19.38	19.31	19.26	19.16	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
38	5190	--	13.60	13.61	13.57	12.96	19.46	19.5	Pass
46	5230	--	13.17	12.95	13.33	12.80	19.09	19.5	Pass
54	5270	--	12.85	13.21	13.77	12.57	19.14	19.5	Pass
62	5310	--	12.75	13.39	13.84	12.67	19.21	19.5	Pass
102	5510	--	12.82	13.69	13.58	13.20	19.36	19.5	Pass
110	5550	--	12.65	13.35	13.50	13.12	19.19	19.5	Pass
134	5670	--	11.69	13.17	13.39	12.94	18.87	19.5	Pass
151	5755	--	18.86	19.23	18.82	19.69	25.18	30	Pass
159	5795	--	18.21	20.19	19.83	19.65	25.55	30	Pass

Note:

- Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
- Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
54	5270	6.74	7.08	7.59	6.44	13.00	Pass
62	5310	6.47	7.16	7.60	6.36	12.95	Pass
102	5510	6.43	7.35	7.21	6.98	13.03	Pass
110	5550	6.52	7.13	7.32	6.99	13.02	Pass
134	5670	5.44	6.99	7.27	6.57	12.64	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 4: Transmit (802.11ac-20BW-28.8Mbps) (Antenna No.4)

Chain A

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	9.17	9.11	9.04	8.98	8.93	8.87	8.79	8.71	8.64	<19.5dBm
144 (Band4)	5720	3.41	3.35	3.25	3.16	3.08	3	2.94	2.85	2.76	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	9.32	9.22	9.12	9.03	8.95	8.87	8.81	8.72	8.62	<19.5dBm
144 (Band4)	5720	3.45	3.39	3.34	3.27	3.2	3.1	3.05	2.96	2.86	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	9.26	9.16	9.09	9	8.94	8.89	8.83	8.73	8.63	<19.5dBm
144 (Band4)	5720	3.29	3.22	3.16	3.1	3.04	2.99	2.93	2.86	2.79	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	9.37	9.31	9.25	9.17	9.11	9.01	8.92	8.82	8.72	<19.5dBm
144 (Band4)	5720	3.53	3.48	3.4	3.32	3.27	3.22	3.15	3.06	3.01	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
144(Band3)	5720	--	9.170	9.320	9.260	9.370	15.29	19.5	Pass
144(Band4)	5720	--	3.410	3.450	3.290	3.530	9.44	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple colocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
144(Band3)	5720	2.950	3.020	2.970	3.180	9.01	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 5: Transmit (802.11ac-40BW-60Mbps) (Antenna No.4)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	12.17	12.1	12.01	11.91	11.81	11.72	11.65	11.55	11.5	11.44	<19.5dBm
142F(Band4)	5710	2.01	1.93	1.83	1.75	1.67	1.59	1.5	1.42	1.35	1.3	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	12.25	12.16	12.11	12.06	11.97	11.87	11.77	11.68	11.58	11.51	<19.5dBm
142F(Band4)	5710	2.09	2.03	1.93	1.83	1.73	1.66	1.58	1.48	1.39	1.3	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	12.13	12.05	12	11.93	11.85	11.76	11.68	11.62	11.57	11.5	<19.5dBm
142F(Band4)	5710	2.25	2.18	2.11	2.02	1.94	1.88	1.78	1.72	1.66	1.56	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	12.05	12	11.92	11.87	11.77	11.7	11.62	11.53	11.46	11.39	<19.5dBm
142F(Band4)	5710	1.89	1.84	1.77	1.72	1.64	1.57	1.49	1.4	1.31	1.25	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
142F(Band3)	5710	--	12.170	12.250	12.13	12.05	18.17	19.5	Pass
142F(Band4)	5710	--	2.010	2.090	2.25	1.89	8.08	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
142(Band3)	5710	5.970	5.960	5.83	5.86	11.93	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-130Mbps) (Antenna No.4)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	13.37	13.32	13.22	13.16	13.09	12.99	12.89	12.84	12.76	12.7	<19.5dBm
58	5290	12.51	12.42	12.32	12.26	12.20	12.14	12.07	11.97	11.89	11.83	<19.5dBm
106	5530	12.67	--	--	--	--	--	--	--	--	--	<19.5dBm
122	5610	12.32	12.22	12.13	12.03	11.97	11.92	11.84	11.76	11.66	11.59	<19.5dBm
138(Band3)	5690	11.32	--	--	--	--	--	--	--	--	--	<19.5dBm
138(Band4)	5690	-2.11	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.77	20.68	20.63	20.57	20.51	20.43	20.38	20.30	20.24	20.14	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	13.37	13.3	13.21	13.12	13.04	12.98	12.89	12.83	12.76	12.7	<19.5dBm
58	5290	13.09	13.03	12.96	12.88	12.79	12.73	12.66	12.57	12.50	12.44	<19.5dBm
106	5530	13.32	--	--	--	--	--	--	--	--	--	<19.5dBm
122	5610	13.07	13	12.92	12.82	12.74	12.64	12.56	12.48	12.40	12.35	<19.5dBm
138(Band3)	5690	14.11	--	--	--	--	--	--	--	--	--	<19.5dBm
138(Band4)	5690	1.35	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.84	20.77	20.7	20.62	20.53	20.47	20.39	20.32	20.26	20.17	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	13.14	13.05	12.98	12.9	12.81	12.72	12.66	12.56	12.47	12.42	<19.5dBm
58	5290	13.46	13.39	13.3	13.22	13.12	13.03	12.95	12.89	12.79	12.74	<19.5dBm
106	5530	13.28	--	--	--	--	--	--	--	--	--	<19.5dBm
122	5610	13.76	13.68	13.63	13.54	13.46	13.39	13.34	13.28	13.20	13.10	<19.5dBm
138(Band3)	5690	11.61	--	--	--	--	--	--	--	--	--	<19.5dBm
138(Band4)	5690	-2.63	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.04	19.96	19.87	19.82	19.73	19.66	19.61	19.53	19.46	19.40	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	12.7	12.64	12.59	12.52	12.47	12.41	12.32	12.24	12.18	12.08	<19.5dBm
58	5290	12.42	12.37	12.29	12.22	12.15	12.08	12.03	11.96	11.87	11.79	<19.5dBm
106	5530	12.92	--	--	--	--	--	--	--	--	--	<19.5dBm
122	5610	13.35	13.26	13.19	13.11	13.05	12.97	12.87	12.78	12.70	12.62	<19.5dBm
138(Band3)	5690	14.04	--	--	--	--	--	--	--	--	--	<19.5dBm
138(Band4)	5690	0.17	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	20.84	20.75	20.65	20.56	20.47	20.37	20.30	20.25	20.15	20.06	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

**Maximum conducted output power Measurement
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)	Result
42	5210	--	13.370	13.370	13.140	12.700	19.17	19.5	Pass
58	5290	--	12.510	13.090	13.460	12.420	18.91	19.5	Pass
106	5530	--	12.670	13.320	13.280	12.920	19.08	19.5	Pass
122	5610	--	12.320	13.070	13.760	13.350	19.18	19.5	Pass
138	5690	--	11.320	14.110	11.610	14.040	18.98	19.5	Pass
138ac80(Band4)	5690	--	-2.110	1.350	-2.630	0.170	5.52	30	Pass
155	5775	--	20.770	20.840	20.040	20.840	26.66	30	Pass

Note:

- Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
- Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

**Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
58	5290	6.290	6.870	7.240	6.300	12.71	Pass
106	5530	6.340	7.030	6.950	6.590	12.76	Pass
122	5610	6.040	6.740	7.630	7.100	12.94	Pass
138	5690	5.190	7.980	5.320	7.770	12.78	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (Antenna No.5)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	11.69	--	--	--	--	--	--	--	<12dBm
44	5220	11.62	11.57	11.47	11.37	11.31	11.22	11.16	11.1	<12dBm
48	5240	11.68	--	--	--	--	--	--	--	<12dBm
52	5260	11.64	--	--	--	--	--	--	--	<12dBm
60	5300	11.49	11.42	11.34	11.28	11.22	11.15	11.08	11.03	<12dBm
64	5320	11.07	--	--	--	--	--	--	--	<12dBm
100	5500	11.38	--	--	--	--	--	--	--	<12dBm
116	5580	11.37	11.28	11.22	11.15	11.05	11	10.95	10.86	<12dBm
140	5700	11.42	--	--	--	--	--	--	--	<12dBm
149	5745	20.61	--	--	--	--	--	--	--	<30dBm
157	5785	20.75	20.66	20.56	20.48	20.43	20.35	20.27	20.17	<30dBm
165	5825	20.86	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	11.63	--	--	--	--	--	--	--	<12dBm
44	5220	11.53	11.44	11.39	11.31	11.21	11.13	11.05	11	<12dBm
48	5240	11.58	--	--	--	--	--	--	--	<12dBm
52	5260	11.56	--	--	--	--	--	--	--	<12dBm
60	5300	11.42	11.34	11.29	11.19	11.12	11.05	10.96	10.88	<12dBm
64	5320	11.01	--	--	--	--	--	--	--	<12dBm
100	5500	11.33	--	--	--	--	--	--	--	<12dBm
116	5580	11.32	11.27	11.2	11.11	11.02	10.94	10.86	10.8	<12dBm
140	5700	11.36	--	--	--	--	--	--	--	<12dBm
149	5745	20.56	--	--	--	--	--	--	--	<30dBm
157	5785	20.68	20.61	20.51	20.46	20.39	20.33	20.23	20.16	<30dBm
165	5825	20.79	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	11.62	--	--	--	--	--	--	--	<12dBm
44	5220	11.56	11.49	11.4	11.33	11.28	11.19	11.09	11.01	<12dBm
48	5240	11.6	--	--	--	--	--	--	--	<12dBm
52	5260	11.56	--	--	--	--	--	--	--	<12dBm
60	5300	11.42	11.32	11.27	11.18	11.09	11.01	10.91	10.85	<12dBm
64	5320	11.02	--	--	--	--	--	--	--	<12dBm
100	5500	11.28	--	--	--	--	--	--	--	<12dBm
116	5580	11.29	11.24	11.15	11.1	11.01	10.92	10.82	10.74	<12dBm
140	5700	11.37	--	--	--	--	--	--	--	<12dBm
149	5745	20.54	--	--	--	--	--	--	--	<30dBm
157	5785	20.67	20.61	20.51	20.46	20.36	20.3	20.22	20.12	<30dBm
165	5825	20.81	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	11.63	--	--	--	--	--	--	--	<12dBm
44	5220	11.56	11.48	11.39	11.32	11.26	11.19	11.1	11.03	<12dBm
48	5240	11.6	--	--	--	--	--	--	--	<12dBm
52	5260	11.55	--	--	--	--	--	--	--	<12dBm
60	5300	11.42	11.35	11.26	11.18	11.12	11.06	10.96	10.86	<12dBm
64	5320	11	--	--	--	--	--	--	--	<12dBm
100	5500	11.3	--	--	--	--	--	--	--	<12dBm
116	5580	11.28	11.22	11.12	11.06	10.97	10.87	10.82	10.73	<12dBm
140	5700	11.33	--	--	--	--	--	--	--	<12dBm
149	5745	20.51	--	--	--	--	--	--	--	<30dBm
157	5785	20.67	20.62	20.53	20.47	20.41	20.32	20.23	20.18	<30dBm
165	5825	20.78	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
36	5180	--	11.69	--	--	--	11.69	12	Pass
44	5220	--	11.62	--	--	--	11.62	12	Pass
48	5240	--	11.68	--	--	--	11.68	12	Pass
52	5260	--	11.64	--	--	--	11.64	12	Pass
60	5300	--	11.49	--	--	--	11.49	12	Pass
64	5320	--	11.07	--	--	--	11.07	12	Pass
100	5500	--	11.38	--	--	--	11.38	12	Pass
116	5580	--	11.37	--	--	--	11.37	12	Pass
140	5700	--	11.42	--	--	--	11.42	12	Pass
149	5745	--	20.61	--	--	--	20.61	30	Pass
157	5785	--	20.75	--	--	--	20.75	30	Pass
165	5825	--	20.86	--	--	--	20.86	30	Pass

Note:

1. Power Output Value = Reading value on average power meter + cable loss

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	5.41	--	--	--	5.41	Pass
60	5300	5.38	--	--	--	5.38	Pass
64	5320	4.70	--	--	--	4.70	Pass
100	5500	5.04	--	--	--	5.04	Pass
116	5580	4.99	--	--	--	4.99	Pass
140	5700	5.03	--	--	--	5.03	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 2: Transmit (802.11n-20BW 28.8Mbps) (Antenna No.5)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	5.71	--	--	--	--	--	--	--	<12dBm
44	5220	5.53	5.48	5.43	5.34	5.29	5.2	5.14	5.04	<12dBm
48	5240	5.67	--	--	--	--	--	--	--	<12dBm
52	5260	5.33	--	--	--	--	--	--	--	<12dBm
60	5300	5.09	5.02	4.94	4.84	4.76	4.71	4.65	4.56	<12dBm
64	5320	4.91	--	--	--	--	--	--	--	<12dBm
100	5500	5.18	--	--	--	--	--	--	--	<12dBm
116	5580	4.63	4.55	4.5	4.41	4.32	4.26	4.16	4.06	<12dBm
140	5700	3.83	--	--	--	--	--	--	--	<12dBm
149	5745	18.66	--	--	--	--	--	--	--	<30dBm
157	5785	18.25	18.18	18.09	17.99	17.93	17.86	17.81	17.73	<30dBm
165	5825	18.5	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	5.63	--	--	--	--	--	--	--	<12dBm
44	5220	5.42	5.33	5.26	5.2	5.12	5.07	4.97	4.92	<12dBm
48	5240	5.24	--	--	--	--	--	--	--	<12dBm
52	5260	5.72	--	--	--	--	--	--	--	<12dBm
60	5300	6.01	5.92	5.83	5.75	5.7	5.64	5.56	5.47	<12dBm
64	5320	6.15	--	--	--	--	--	--	--	<12dBm
100	5500	6.12	--	--	--	--	--	--	--	<12dBm
116	5580	5.37	5.29	5.2	5.12	5.07	4.99	4.94	4.87	<12dBm
140	5700	5.85	--	--	--	--	--	--	--	<12dBm
149	5745	20.35	--	--	--	--	--	--	--	<30dBm
157	5785	20.1	20.04	19.99	19.94	19.85	19.76	19.7	19.63	<30dBm
165	5825	19.9	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	5.59	--	--	--	--	--	--	--	<12dBm
44	5220	5.48	5.38	5.33	5.25	5.17	5.09	5.03	4.96	<12dBm
48	5240	5.7	--	--	--	--	--	--	--	<12dBm
52	5260	6.46	--	--	--	--	--	--	--	<12dBm
60	5300	6.54	6.49	6.42	6.33	6.27	6.17	6.12	6.06	<12dBm
64	5320	6.58	--	--	--	--	--	--	--	<12dBm
100	5500	6.34	--	--	--	--	--	--	--	<12dBm
116	5580	6.28	6.18	6.12	6.07	6.01	5.93	5.85	5.75	<12dBm
140	5700	6.39	--	--	--	--	--	--	--	<12dBm
149	5745	19.84	--	--	--	--	--	--	--	<30dBm
157	5785	20.06	20	19.95	19.9	19.85	19.76	19.67	19.58	<30dBm
165	5825	19.8	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	4.94	--	--	--	--	--	--	--	<12dBm
44	5220	5.04	4.99	4.92	4.85	4.8	4.74	4.64	4.59	<12dBm
48	5240	4.95	--	--	--	--	--	--	--	<12dBm
52	5260	5.14	--	--	--	--	--	--	--	<12dBm
60	5300	5.27	5.22	5.15	5.05	5	4.95	4.85	4.79	<12dBm
64	5320	5.38	--	--	--	--	--	--	--	<12dBm
100	5500	5.59	--	--	--	--	--	--	--	<12dBm
116	5580	5.63	5.57	5.48	5.42	5.32	5.26	5.18	5.1	<12dBm
140	5700	5.47	--	--	--	--	--	--	--	<12dBm
149	5745	19.27	--	--	--	--	--	--	--	<30dBm
157	5785	19.91	19.85	19.8	19.75	19.68	19.63	19.53	19.44	<30dBm
165	5825	19.68	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
36	5180	--	5.71	5.63	5.59	4.94	11.50	12	Pass
44	5220	--	5.53	5.42	5.48	5.04	11.39	12	Pass
48	5240	--	5.67	5.24	5.70	4.95	11.42	12	Pass
52	5260	--	5.33	5.72	6.46	5.14	11.71	12	Pass
60	5300	--	5.09	6.01	6.54	5.27	11.79	12	Pass
64	5320	--	4.91	6.15	6.58	5.38	11.82	12	Pass
100	5500	--	5.18	6.12	6.34	5.59	11.85	12	Pass
116	5580	--	4.63	5.37	6.28	5.63	11.54	12	Pass
140	5700	--	3.83	5.85	6.39	5.47	11.50	12	Pass
149	5745	--	18.66	20.35	19.84	19.27	25.60	30	Pass
157	5785	--	18.25	20.10	20.06	19.91	25.66	30	Pass
165	5825	--	18.50	19.90	19.80	19.68	25.53	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

**Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	-0.89	-0.39	0.33	-1.14	5.54	Pass
60	5300	-1.28	-0.22	0.19	-1.11	5.46	Pass
64	5320	-1.22	-0.23	0.23	-0.94	5.52	Pass
100	5500	-1.20	-0.16	0.23	-0.69	5.60	Pass
116	5580	-1.60	-0.96	0.06	-0.70	5.26	Pass
140	5700	-2.51	-0.43	0.01	-0.71	5.21	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (Antenna No.5)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	5.64	--	--	--	--	--	--	--	<12dBm
46	5230	5.58	5.53	5.46	5.41	5.35	5.29	5.22	5.13	<12dBm
54	5270	5.03	--	--	--	--	--	--	--	<12dBm
62	5310	4.82	4.77	4.67	4.6	4.5	4.45	4.36	4.3	<12dBm
102	5510	4.98	--	--	--	--	--	--	--	<12dBm
110	5550	4.61	4.55	4.47	4.41	4.33	4.23	4.13	4.04	<12dBm
134	5670	4.16	--	--	--	--	--	--	--	<12dBm
151	5755	18.74	--	--	--	--	--	--	--	<30dBm
159	5795	18.06	17.98	17.9	17.84	17.78	17.69	17.64	17.59	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	5.63	--	--	--	--	--	--	--	<12dBm
46	5230	5.31	5.26	5.21	5.15	5.05	4.98	4.88	4.78	<12dBm
54	5270	4.82	--	--	--	--	--	--	--	<12dBm
62	5310	4.71	4.64	4.59	4.5	4.44	4.37	4.27	4.22	<12dBm
102	5510	5.21	--	--	--	--	--	--	--	<12dBm
110	5550	4.82	4.74	4.69	4.61	4.55	4.48	4.43	4.35	<12dBm
134	5670	5.27	--	--	--	--	--	--	--	<12dBm
151	5755	19.16	--	--	--	--	--	--	--	<30dBm
159	5795	20.14	20.05	19.98	19.92	19.84	19.78	19.73	19.65	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	5.64	--	--	--	--	--	--	--	<12dBm
46	5230	5.77	5.72	5.66	5.58	5.51	5.42	5.34	5.26	<12dBm
54	5270	6.52	--	--	--	--	--	--	--	<12dBm
62	5310	6.52	6.45	6.37	6.27	6.18	6.12	6.06	6.01	<12dBm
102	5510	6.27	--	--	--	--	--	--	--	<12dBm
110	5550	6.29	6.19	6.11	6.03	5.93	5.85	5.78	5.7	<12dBm
134	5670	6.75	--	--	--	--	--	--	--	<12dBm
151	5755	18.73	--	--	--	--	--	--	--	<30dBm
159	5795	19.69	19.59	19.49	19.42	19.34	19.24	19.14	19.09	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	5.09	--	--	--	--	--	--	--	<12dBm
46	5230	5.21	5.11	5.03	4.97	4.92	4.82	4.75	4.65	<12dBm
54	5270	5.29	--	--	--	--	--	--	--	<12dBm
62	5310	5.39	5.32	5.27	5.21	5.14	5.08	4.98	4.88	<12dBm
102	5510	5.72	--	--	--	--	--	--	--	<12dBm
110	5550	5.72	5.65	5.56	5.49	5.4	5.33	5.25	5.15	<12dBm
134	5670	5.75	--	--	--	--	--	--	--	<12dBm
151	5755	19.57	--	--	--	--	--	--	--	<30dBm
159	5795	19.66	19.58	19.53	19.44	19.36	19.28	19.19	19.11	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
38	5190	--	5.64	5.63	5.64	5.09	11.53	12	Pass
46	5230	--	5.58	5.31	5.77	5.21	11.49	12	Pass
54	5270	--	5.03	4.82	6.52	5.29	11.49	12	Pass
62	5310	--	4.82	4.71	6.52	5.39	11.44	12	Pass
102	5510	--	4.98	5.21	6.27	5.72	11.59	12	Pass
110	5550	--	4.61	4.82	6.29	5.72	11.43	12	Pass
134	5670	--	4.16	5.27	6.75	5.75	11.60	12	Pass
151	5755	--	18.74	19.16	18.73	19.57	25.08	30	Pass
159	5795	--	18.06	20.14	19.69	19.66	25.48	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
54	5270	-1.08	-1.40	0.30	-1.00	5.28	Pass
62	5310	-1.56	-1.62	0.19	-0.83	5.13	Pass
102	5510	-1.24	-0.92	-0.06	-0.61	5.34	Pass
110	5550	-1.57	-1.40	0.10	-0.66	5.19	Pass
134	5670	-2.12	-0.91	0.46	-0.57	5.33	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 4: Transmit (802.11ac-20BW-28.8Mbps) (Antenna No.5)

Chain A

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	1.77	1.7	1.63	1.58	1.48	1.43	1.33	1.28	1.21	<12dBm
144 (Band4)	5720	-4.22	-4.28	-4.35	-4.45	-4.54	-4.59	-4.64	-4.72	-4.82	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	1.89	1.81	1.72	1.65	1.58	1.49	1.41	1.31	1.22	<12dBm
144 (Band4)	5720	-4.11	-4.16	-4.24	-4.31	-4.41	-4.47	-4.57	-4.64	-4.74	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	1.82	1.72	1.62	1.54	1.46	1.41	1.35	1.28	1.2	<12dBm
144 (Band4)	5720	-4.09	-4.14	-4.22	-4.32	-4.39	-4.47	-4.53	-4.59	-4.64	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	1.79	1.7	1.65	1.56	1.46	1.38	1.33	1.26	1.21	<12dBm
144 (Band4)	5720	-4.15	-4.25	-4.3	-4.37	-4.44	-4.54	-4.6	-4.65	-4.73	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
144(Band3)	5720	--	1.770	1.890	1.820	1.790	7.86	12	Pass
144(Band4)	5720	--	-4.220	-4.110	-4.090	-4.150	1.88	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
144(Band3)	5720	-4.450	-4.400	-4.370	-4.310	1.62	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 5: Transmit (802.11ac-40BW-60Mbps) (Antenna No.5)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	4.61	4.55	4.49	4.44	4.37	4.32	4.26	4.16	4.09	4	<12dBm
142F(Band4)	5710	-5.37	-5.47	-5.53	-5.59	-5.64	-5.72	-5.82	-5.92	-5.98	-6.08	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	4.52	4.47	4.39	4.33	4.28	4.19	4.14	4.08	4	3.91	<12dBm
142F(Band4)	5710	-5.43	-5.49	-5.58	-5.63	-5.72	-5.79	-5.84	-5.89	-5.94	-6	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	4.69	4.61	4.53	4.47	4.42	4.34	4.28	4.22	4.16	4.09	<12dBm
142F(Band4)	5710	-5.31	-5.37	-5.44	-5.49	-5.57	-5.63	-5.68	-5.75	-5.83	-5.92	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	4.57	4.5	4.44	4.37	4.28	4.2	4.11	4.05	3.98	3.88	<12dBm
142F(Band4)	5710	-5.38	-5.47	-5.56	-5.61	-5.71	-5.78	-5.83	-5.89	-5.95	-6.02	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
142F(Band3)	5710	--	4.610	4.520	4.69	4.57	10.62	12	Pass
142F(Band4)	5710	--	-5.370	-5.430	-5.31	-5.38	0.65	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
142(Band3)	5710	-1.690	-1.770	-1.69	-1.62	4.33	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-130Mbps) (Antenna No.5)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	5.91	5.82	5.77	5.68	5.58	5.49	5.43	5.37	5.31	5.22	<12dBm
58	5290	5.09	5.03	4.98	4.90	4.82	4.76	4.68	4.60	4.52	4.47	<12dBm
106	5530	4.91	--	--	--	--	--	--	--	--	--	<12dBm
122	5610	4.75	4.68	4.62	4.52	4.43	4.35	4.25	4.19	4.11	4.04	<12dBm
138(Band3)	5690	4.25	--	--	--	--	--	--	--	--	--	<12dBm
138(Band4)	5690	-9.11	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	19.27	19.21	19.15	19.09	19.02	18.95	18.86	18.81	18.75	18.69	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	5.91	5.82	5.76	5.71	5.63	5.55	5.46	5.4	5.31	5.25	<12dBm
58	5290	5.03	4.94	4.88	4.80	4.70	4.64	4.58	4.52	4.47	4.38	<12dBm
106	5530	5.25	--	--	--	--	--	--	--	--	--	<12dBm
122	5610	5.25	5.19	5.14	5.05	4.98	4.88	4.79	4.73	4.68	4.62	<12dBm
138(Band3)	5690	6.86	--	--	--	--	--	--	--	--	--	<12dBm
138(Band4)	5690	-5.81	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	19.28	19.21	19.13	19.08	18.99	18.91	18.81	18.74	18.69	18.64	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	5.66	5.57	5.47	5.39	5.33	5.25	5.18	5.09	5.02	4.96	<12dBm
58	5290	6.14	6.05	5.98	5.90	5.80	5.75	5.65	5.60	5.50	5.41	<12dBm
106	5530	5.98	--	--	--	--	--	--	--	--	--	<12dBm
122	5610	6.65	6.55	6.5	6.43	6.37	6.27	6.18	6.13	6.08	6.01	<12dBm
138(Band3)	5690	4.66	--	--	--	--	--	--	--	--	--	<12dBm
138(Band4)	5690	-10.13	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	18.56	18.46	18.4	18.35	18.29	18.24	18.18	18.11	18.06	18.00	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	5.19	5.14	5.06	4.98	4.93	4.85	4.75	4.7	4.65	4.56	<12dBm
58	5290	5.09	5	4.95	4.85	4.76	4.68	4.60	4.55	4.49	4.41	<12dBm
106	5530	5.49	--	--	--	--	--	--	--	--	--	<12dBm
122	5610	5.88	5.83	5.77	5.68	5.62	5.54	5.48	5.38	5.33	5.26	<12dBm
138(Band3)	5690	6.71	--	--	--	--	--	--	--	--	--	<12dBm
138(Band4)	5690	-7.35	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	19.34	19.25	19.17	19.07	18.97	18.91	18.82	18.75	18.68	18.62	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

**Maximum conducted output power Measurement
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)	Result
42	5210	--	5.910	5.910	5.660	5.190	11.70	12	Pass
58	5290	--	5.090	5.030	6.140	5.090	11.38	12	Pass
106	5530	--	4.910	5.250	5.980	5.490	11.45	12	Pass
122	5610	--	4.750	5.250	6.650	5.880	11.71	12	Pass
138	5690	--	4.250	6.860	4.660	6.710	11.80	12	Pass
138ac80(Band4)	5690	--	-9.110	-5.810	-10.130	-7.350	-1.76	30	Pass
155	5775	--	19.270	19.280	18.560	19.340	25.14	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

**Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
58	5290	-1.090	-1.100	-0.190	-1.240	5.14	Pass
106	5530	-1.310	-0.970	-0.140	-0.900	5.21	Pass
122	5610	-1.480	-1.130	0.430	-0.410	5.44	Pass
138	5690	-2.050	0.680	-1.520	0.530	5.60	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (Antenna No.6)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	11.6	--	--	--	--	--	--	--	<12dBm
44	5220	11.58	11.52	11.47	11.42	11.34	11.28	11.2	11.15	<12dBm
48	5240	11.59	--	--	--	--	--	--	--	<12dBm
52	5260	11.54	--	--	--	--	--	--	--	<12dBm
60	5300	11.41	11.33	11.26	11.2	11.14	11.08	11.03	10.93	<12dBm
64	5320	11.22	--	--	--	--	--	--	--	<12dBm
100	5500	11.32	--	--	--	--	--	--	--	<12dBm
116	5580	11.37	11.28	11.19	11.09	11.01	10.91	10.82	10.76	<12dBm
140	5700	11.32	--	--	--	--	--	--	--	<12dBm
149	5745	20.56	--	--	--	--	--	--	--	<30dBm
157	5785	20.73	20.64	20.59	20.52	20.43	20.34	20.27	20.22	<30dBm
165	5825	20.77	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	11.53	--	--	--	--	--	--	--	<12dBm
44	5220	11.48	11.43	11.35	11.29	11.23	11.16	11.08	11.01	<12dBm
48	5240	11.51	--	--	--	--	--	--	--	<12dBm
52	5260	11.48	--	--	--	--	--	--	--	<12dBm
60	5300	11.32	11.27	11.17	11.12	11.03	10.93	10.87	10.79	<12dBm
64	5320	11.15	--	--	--	--	--	--	--	<12dBm
100	5500	11.27	--	--	--	--	--	--	--	<12dBm
116	5580	11.32	11.23	11.18	11.1	11.03	10.93	10.83	10.77	<12dBm
140	5700	11.27	--	--	--	--	--	--	--	<12dBm
149	5745	20.49	--	--	--	--	--	--	--	<30dBm
157	5785	20.64	20.57	20.51	20.43	20.37	20.28	20.18	20.08	<30dBm
165	5825	20.71	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	11.53	--	--	--	--	--	--	--	<12dBm
44	5220	11.5	11.4	11.35	11.26	11.16	11.09	11.03	10.96	<12dBm
48	5240	11.52	--	--	--	--	--	--	--	<12dBm
52	5260	11.48	--	--	--	--	--	--	--	<12dBm
60	5300	11.32	11.24	11.14	11.07	10.97	10.88	10.8	10.75	<12dBm
64	5320	11.17	--	--	--	--	--	--	--	<12dBm
100	5500	11.27	--	--	--	--	--	--	--	<12dBm
116	5580	11.32	11.22	11.14	11.08	11.01	10.92	10.86	10.78	<12dBm
140	5700	11.23	--	--	--	--	--	--	--	<12dBm
149	5745	20.47	--	--	--	--	--	--	--	<30dBm
157	5785	20.68	20.61	20.56	20.49	20.44	20.37	20.32	20.24	<30dBm
165	5825	20.69	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	11.55	--	--	--	--	--	--	--	<12dBm
44	5220	11.51	11.45	11.35	11.3	11.21	11.11	11.02	10.97	<12dBm
48	5240	11.51	--	--	--	--	--	--	--	<12dBm
52	5260	11.48	--	--	--	--	--	--	--	<12dBm
60	5300	11.36	11.27	11.17	11.09	11.01	10.91	10.84	10.75	<12dBm
64	5320	11.12	--	--	--	--	--	--	--	<12dBm
100	5500	11.24	--	--	--	--	--	--	--	<12dBm
116	5580	11.28	11.18	11.11	11.02	10.95	10.87	10.77	10.7	<12dBm
140	5700	11.25	--	--	--	--	--	--	--	<12dBm
149	5745	20.47	--	--	--	--	--	--	--	<30dBm
157	5785	20.67	20.58	20.53	20.44	20.34	20.26	20.2	20.12	<30dBm
165	5825	20.67	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
36	5180	--	11.60	--	--	--	11.60	12	Pass
44	5220	--	11.58	--	--	--	11.58	12	Pass
48	5240	--	11.59	--	--	--	11.59	12	Pass
52	5260	--	11.54	--	--	--	11.54	12	Pass
60	5300	--	11.41	--	--	--	11.41	12	Pass
64	5320	--	11.22	--	--	--	11.22	12	Pass
100	5500	--	11.32	--	--	--	11.32	12	Pass
116	5580	--	11.37	--	--	--	11.37	12	Pass
140	5700	--	11.32	--	--	--	11.32	12	Pass
149	5745	--	20.56	--	--	--	20.56	30	Pass
157	5785	--	20.73	--	--	--	20.73	30	Pass
165	5825	--	20.77	--	--	--	20.77	30	Pass

Note:

1. Power Output Value = Reading value on average power meter + cable loss
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	5.32	--	--	--	5.32	Pass
60	5300	5.08	--	--	--	5.08	Pass
64	5320	5.04	--	--	--	5.04	Pass
100	5500	5.20	--	--	--	5.20	Pass
116	5580	5.14	--	--	--	5.14	Pass
140	5700	4.98	--	--	--	4.98	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 2: Transmit (802.11n-20BW 28.8Mbps) (Antenna No.6)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	5.65	--	--	--	--	--	--	--	<12dBm
44	5220	5.49	5.41	5.32	5.22	5.17	5.12	5.04	4.98	<12dBm
48	5240	5.63	--	--	--	--	--	--	--	<12dBm
52	5260	5.26	--	--	--	--	--	--	--	<12dBm
60	5300	5.05	4.99	4.89	4.79	4.74	4.67	4.57	4.48	<12dBm
64	5320	4.94	--	--	--	--	--	--	--	<12dBm
100	5500	5.21	--	--	--	--	--	--	--	<12dBm
116	5580	4.64	4.59	4.51	4.43	4.34	4.24	4.17	4.11	<12dBm
140	5700	3.74	--	--	--	--	--	--	--	<12dBm
149	5745	18.57	--	--	--	--	--	--	--	<30dBm
157	5785	18.31	18.21	18.15	18.07	18	17.91	17.81	17.72	<30dBm
165	5825	18.48	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	5.62	--	--	--	--	--	--	--	<12dBm
44	5220	5.47	5.39	5.32	5.22	5.13	5.06	4.98	4.9	<12dBm
48	5240	5.17	--	--	--	--	--	--	--	<12dBm
52	5260	5.73	--	--	--	--	--	--	--	<12dBm
60	5300	6.03	5.96	5.89	5.84	5.77	5.7	5.61	5.51	<12dBm
64	5320	6.2	--	--	--	--	--	--	--	<12dBm
100	5500	6.16	--	--	--	--	--	--	--	<12dBm
116	5580	5.4	5.34	5.26	5.16	5.07	4.97	4.91	4.84	<12dBm
140	5700	5.85	--	--	--	--	--	--	--	<12dBm
149	5745	20.37	--	--	--	--	--	--	--	<30dBm
157	5785	20.19	20.14	20.07	19.99	19.91	19.85	19.79	19.72	<30dBm
165	5825	19.77	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	5.68	--	--	--	--	--	--	--	<12dBm
44	5220	5.46	5.36	5.26	5.21	5.13	5.03	4.93	4.83	<12dBm
48	5240	5.74	--	--	--	--	--	--	--	<12dBm
52	5260	6.38	--	--	--	--	--	--	--	<12dBm
60	5300	6.58	6.53	6.45	6.37	6.31	6.26	6.17	6.11	<12dBm
64	5320	6.6	--	--	--	--	--	--	--	<12dBm
100	5500	6.27	--	--	--	--	--	--	--	<12dBm
116	5580	6.31	6.22	6.16	6.06	6.01	5.94	5.86	5.77	<12dBm
140	5700	6.29	--	--	--	--	--	--	--	<12dBm
149	5745	19.78	--	--	--	--	--	--	--	<30dBm
157	5785	19.97	19.88	19.79	19.71	19.65	19.57	19.5	19.41	<30dBm
165	5825	19.79	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		28.8	57.6	86.8	115.6	173.2	231.2	260	288.8	
		Measurement Level (dBm)								
36	5180	5.03	--	--	--	--	--	--	--	<12dBm
44	5220	4.95	4.85	4.77	4.68	4.61	4.55	4.49	4.43	<12dBm
48	5240	4.96	--	--	--	--	--	--	--	<12dBm
52	5260	5.05	--	--	--	--	--	--	--	<12dBm
60	5300	5.3	5.25	5.2	5.1	5.01	4.94	4.88	4.82	<12dBm
64	5320	5.43	--	--	--	--	--	--	--	<12dBm
100	5500	5.62	--	--	--	--	--	--	--	<12dBm
116	5580	5.59	5.54	5.47	5.39	5.33	5.24	5.16	5.1	<12dBm
140	5700	5.45	--	--	--	--	--	--	--	<12dBm
149	5745	19.24	--	--	--	--	--	--	--	<30dBm
157	5785	19.85	19.8	19.7	19.64	19.56	19.47	19.37	19.29	<30dBm
165	5825	19.68	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
36	5180	--	5.65	5.62	5.68	5.03	11.52	12	Pass
44	5220	--	5.49	5.47	5.46	4.95	11.37	12	Pass
48	5240	--	5.63	5.17	5.74	4.96	11.41	12	Pass
52	5260	--	5.26	5.73	6.38	5.05	11.66	12	Pass
60	5300	--	5.05	6.03	6.58	5.30	11.80	12	Pass
64	5320	--	4.94	6.20	6.60	5.43	11.86	12	Pass
100	5500	--	5.21	6.16	6.27	5.62	11.86	12	Pass
116	5580	--	4.64	5.40	6.31	5.59	11.55	12	Pass
140	5700	--	3.74	5.85	6.29	5.45	11.45	12	Pass
149	5745	--	18.57	20.37	19.78	19.24	25.56	30	Pass
157	5785	--	18.31	20.19	19.97	19.85	25.66	30	Pass
165	5825	--	18.48	19.77	19.79	19.68	25.48	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

**Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	-0.85	-0.38	0.13	-1.13	5.49	Pass
60	5300	-1.23	-0.26	0.20	-0.99	5.49	Pass
64	5320	-1.41	-0.15	0.47	-0.79	5.61	Pass
100	5500	-1.11	-0.11	-0.08	-0.73	5.53	Pass
116	5580	-1.51	-0.78	0.05	-0.69	5.32	Pass
140	5700	-2.54	-0.44	-0.05	-0.87	5.14	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (Antenna No.6)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	5.66	--	--	--	--	--	--	--	<12dBm
46	5230	5.67	5.61	5.54	5.47	5.42	5.34	5.29	5.21	<12dBm
54	5270	4.94	--	--	--	--	--	--	--	<12dBm
62	5310	4.82	4.74	4.69	4.64	4.57	4.51	4.42	4.35	<12dBm
102	5510	4.99	--	--	--	--	--	--	--	<12dBm
110	5550	4.52	4.46	4.4	4.32	4.25	4.2	4.13	4.05	<12dBm
134	5670	4.1	--	--	--	--	--	--	--	<12dBm
151	5755	18.79	--	--	--	--	--	--	--	<30dBm
159	5795	18.14	18.04	17.97	17.92	17.86	17.77	17.68	17.58	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	5.52	--	--	--	--	--	--	--	<12dBm
46	5230	5.33	5.27	5.18	5.11	5.06	5	4.95	4.86	<12dBm
54	5270	4.86	--	--	--	--	--	--	--	<12dBm
62	5310	4.72	4.62	4.52	4.42	4.37	4.31	4.26	4.17	<12dBm
102	5510	5.11	--	--	--	--	--	--	--	<12dBm
110	5550	4.79	4.7	4.6	4.55	4.45	4.35	4.29	4.2	<12dBm
134	5670	5.24	--	--	--	--	--	--	--	<12dBm
151	5755	19.21	--	--	--	--	--	--	--	<30dBm
159	5795	20.24	20.15	20.08	19.99	19.89	19.8	19.73	19.66	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	5.49	--	--	--	--	--	--	--	<12dBm
46	5230	5.83	5.77	5.68	5.62	5.56	5.48	5.43	5.35	<12dBm
54	5270	6.44	--	--	--	--	--	--	--	<12dBm
62	5310	6.54	6.48	6.39	6.34	6.25	6.19	6.13	6.08	<12dBm
102	5510	6.29	--	--	--	--	--	--	--	<12dBm
110	5550	6.33	6.26	6.21	6.13	6.05	5.97	5.87	5.82	<12dBm
134	5670	6.8	--	--	--	--	--	--	--	<12dBm
151	5755	18.88	--	--	--	--	--	--	--	<30dBm
159	5795	19.83	19.73	19.66	19.57	19.5	19.44	19.35	19.27	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		60	120	180	240	360	480	540	600	
		Measurement Level (dBm)								
38	5190	5.02	--	--	--	--	--	--	--	<12dBm
46	5230	5.27	5.17	5.09	5.03	4.96	4.9	4.82	4.77	<12dBm
54	5270	5.2	--	--	--	--	--	--	--	<12dBm
62	5310	5.33	5.23	5.16	5.11	5.05	4.96	4.89	4.8	<12dBm
102	5510	5.74	--	--	--	--	--	--	--	<12dBm
110	5550	5.73	5.63	5.54	5.49	5.39	5.34	5.24	5.18	<12dBm
134	5670	5.76	--	--	--	--	--	--	--	<12dBm
151	5755	19.75	--	--	--	--	--	--	--	<30dBm
159	5795	19.79	19.7	19.6	19.55	19.49	19.43	19.33	19.25	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:
(CHAIN A+ B+C+D)

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
38	5190	--	5.66	5.52	5.49	5.02	11.45	12	Pass
46	5230	--	5.67	5.33	5.83	5.27	11.55	12	Pass
54	5270	--	4.94	4.86	6.44	5.20	11.43	12	Pass
62	5310	--	4.82	4.72	6.54	5.33	11.44	12	Pass
102	5510	--	4.99	5.11	6.29	5.74	11.58	12	Pass
110	5550	--	4.52	4.79	6.33	5.73	11.42	12	Pass
134	5670	--	4.10	5.24	6.80	5.76	11.60	12	Pass
151	5755	--	18.79	19.21	18.88	19.75	25.19	30	Pass
159	5795	--	18.14	20.24	19.83	19.79	25.59	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)
(CHAIN A+ B+C+D)

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
54	5270	-1.18	-1.25	0.22	-1.08	5.24	Pass
62	5310	-1.56	-1.56	0.16	-1.05	5.08	Pass
102	5510	-1.29	-1.27	0.18	-0.37	5.38	Pass
110	5550	-1.86	-1.56	0.11	-0.49	5.14	Pass
134	5670	-2.03	-1.04	0.62	-0.58	5.37	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 4: Transmit (802.11ac-20BW-28.8Mbps) (Antenna No.6)

Chain A

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	1.68	1.61	1.56	1.51	1.43	1.37	1.3	1.25	1.15	<12dBm
144 (Band4)	5720	-4.11	-4.16	-4.22	-4.27	-4.33	-4.39	-4.49	-4.57	-4.64	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	1.93	1.83	1.73	1.67	1.57	1.49	1.44	1.36	1.29	<12dBm
144 (Band4)	5720	-4.19	-4.24	-4.34	-4.43	-4.49	-4.55	-4.61	-4.69	-4.75	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	1.89	1.83	1.76	1.7	1.65	1.57	1.49	1.39	1.33	<12dBm
144 (Band4)	5720	-4.01	-4.06	-4.16	-4.22	-4.28	-4.35	-4.43	-4.53	-4.62	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power									
Channel No.	Frequency (MHz)	Data Rate (Mbps)									Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	
		Measurement Level (dBm)									
144 (Band3)	5720	1.91	1.86	1.77	1.72	1.67	1.6	1.51	1.46	1.38	<12dBm
144 (Band4)	5720	-4.23	-4.28	-4.37	-4.42	-4.49	-4.55	-4.65	-4.71	-4.8	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
144(Band3)	5720	--	1.680	1.930	1.890	1.910	7.88	12	Pass
144(Band4)	5720	--	-4.110	-4.190	-4.010	-4.230	1.89	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
144(Band3)	5720	-4.540	-4.260	-4.400	-4.420	1.66	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 5: Transmit (802.11ac-40BW-60Mbps) (Antenna No.6)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	4.73	4.63	4.58	4.51	4.43	4.38	4.33	4.28	4.22	4.12	<12dBm
142F(Band4)	5710	-5.32	-5.37	-5.47	-5.54	-5.59	-5.64	-5.71	-5.8	-5.9	-5.97	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	4.45	4.38	4.33	4.27	4.2	4.12	4.07	3.99	3.94	3.88	<12dBm
142F(Band4)	5710	-5.51	-5.57	-5.66	-5.74	-5.8	-5.9	-5.99	-6.09	-6.18	-6.25	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	4.75	4.69	4.59	4.51	4.41	4.33	4.24	4.14	4.07	3.97	<12dBm
142F(Band4)	5710	-5.19	-5.26	-5.35	-5.44	-5.53	-5.58	-5.68	-5.77	-5.85	-5.93	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
142F(Band3)	5710	4.68	4.61	4.54	4.46	4.4	4.31	4.23	4.16	4.11	4.01	<12dBm
142F(Band4)	5710	-5.27	-5.36	-5.46	-5.52	-5.62	-5.69	-5.74	-5.82	-5.92	-5.97	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
142F(Band3)	5710	--	4.730	4.450	4.75	4.68	10.67	12	Pass
142F(Band4)	5710	--	-5.320	-5.510	-5.19	-5.27	0.70	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)**(CHAIN A+ B+C+D)**

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
142(Band3)	5710	-1.560	-1.880	-1.44	-1.61	4.40	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-130Mbps) (Antenna No.6)

Chain A

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	5.88	5.79	5.69	5.61	5.54	5.44	5.36	5.31	5.23	5.18	<12dBm
58	5290	5.1	5.03	4.94	4.89	4.81	4.71	4.61	4.52	4.43	4.34	<12dBm
106	5530	4.96	--	--	--	--	--	--	--	--	--	<12dBm
122	5610	4.71	4.63	4.57	4.47	4.39	4.30	4.21	4.16	4.06	3.97	<12dBm
138(Band3)	5690	4.21	--	--	--	--	--	--	--	--	--	<12dBm
138(Band4)	5690	-9.34	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	19.2	19.12	19.06	19.01	18.96	18.87	18.79	18.70	18.64	18.55	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain B

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	5.86	5.81	5.74	5.67	5.60	5.5	5.40	5.34	5.26	5.18	<12dBm
58	5290	5.03	4.93	4.84	4.75	4.69	4.63	4.56	4.50	4.42	4.36	<12dBm
106	5530	5.29	--	--	--	--	--	--	--	--	--	<12dBm
122	5610	5.18	5.08	5.03	4.95	4.85	4.78	4.68	4.62	4.53	4.45	<12dBm
138(Band3)	5690	6.88	--	--	--	--	--	--	--	--	--	<12dBm
138(Band4)	5690	-5.62	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	19.28	19.2	19.14	19.04	18.96	18.86	18.76	18.70	18.64	18.59	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain C

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	5.72	5.62	5.56	5.48	5.42	5.37	5.31	5.21	5.16	5.07	<12dBm
58	5290	6.09	6.03	5.93	5.84	5.78	5.73	5.63	5.56	5.50	5.42	<12dBm
106	5530	5.98	--	--	--	--	--	--	--	--	--	<12dBm
122	5610	6.62	6.54	6.45	6.39	6.34	6.24	6.16	6.07	5.98	5.88	<12dBm
138(Band3)	5690	4.64	--	--	--	--	--	--	--	--	--	<12dBm
138(Band4)	5690	-10.19	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	18.41	18.35	18.25	18.15	18.06	17.98	17.93	17.87	17.78	17.73	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Chain D

Cable loss=1dB		Maximum conducted output power										
Channel No	Frequency (MHz)	Data Rate (Mbps)										Required Limit
		VTH0	VTH1	VTH2	VTH3	VTH4	VTH5	VTH6	VTH7	VTH8	VTH9	
42	5210	5.19	5.09	5.03	4.93	4.86	4.78	4.68	4.62	4.53	4.46	<12dBm
58	5290	5.09	5.03	4.95	4.86	4.76	4.69	4.62	4.53	4.44	4.35	<12dBm
106	5530	5.5	--	--	--	--	--	--	--	--	--	<12dBm
122	5610	5.79	5.7	5.65	5.56	5.47	5.37	5.27	5.22	5.15	5.09	<12dBm
138(Band3)	5690	6.76	--	--	--	--	--	--	--	--	--	<12dBm
138(Band4)	5690	-7.31	--	--	--	--	--	--	--	--	--	<30dBm
155	5775	19.32	19.24	19.19	19.12	19.05	18.95	18.88	18.79	18.74	18.67	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement

(CHAIN A+ B+C+D)

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit	Result
								(dBm)	
42	5210	--	5.880	5.860	5.720	5.190	11.69	12	Pass
58	5290	--	5.100	5.030	6.090	5.090	11.37	12	Pass
106	5530	--	4.960	5.290	5.980	5.500	11.47	12	Pass
122	5610	--	4.710	5.180	6.620	5.790	11.66	12	Pass
138	5690	--	4.210	6.880	4.640	6.760	11.81	12	Pass
138ac80(Band4)	5690	--	-9.340	-5.620	-10.190	-7.310	-1.73	30	Pass
155	5775	--	19.200	19.280	18.410	19.320	25.09	30	Pass

Note:

1. Output Power (dBm) = 10*LOG (Chain A (mW)+ Chain B (mW) + Chain C (mW) + Chain D (mW))
2. Band 5.725-5.85 GHz, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information

Maximum conducted output power Measurement with Transmit power Control (TPC)

(CHAIN A+ B+C+D)

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
58	5290	-1.010	-1.260	-0.100	-1.090	5.18	Pass
106	5530	-1.260	-0.810	-0.300	-0.720	5.26	Pass
122	5610	-1.670	-1.020	0.330	-0.330	5.41	Pass
138	5690	-2.080	0.500	-1.640	0.540	5.51	Pass

Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Maximum conducted output power
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (Antenna No.7)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	20.58	--	--	--	--	--	--	--	<24dBm
44	5220	20.97	20.91	20.85	20.78	20.68	20.63	20.54	20.44	<24dBm
48	5240	21.12	--	--	--	--	--	--	--	<24dBm
52	5260	21.53	--	--	--	--	--	--	--	<24dBm
60	5300	21.29	21.24	21.14	21.09	21.04	20.98	20.89	20.84	<24dBm
64	5320	21.18	--	--	--	--	--	--	--	<24dBm
100	5500	22.33	--	--	--	--	--	--	--	<24dBm
116	5580	21.85	21.8	21.75	21.68	21.6	21.52	21.43	21.38	<24dBm
140	5700	20.51	--	--	--	--	--	--	--	<24dBm
149	5745	20.51	--	--	--	--	--	--	--	<30dBm
157	5785	20.68	20.58	20.5	20.41	20.32	20.25	20.2	20.13	<30dBm
165	5825	20.7	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN B

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	20.53	--	--	--	--	--	--	--	<24dBm
44	5220	20.9	20.85	20.79	20.69	20.63	20.53	20.48	20.39	<24dBm
48	5240	21.07	--	--	--	--	--	--	--	<24dBm
52	5260	21.47	--	--	--	--	--	--	--	<24dBm
60	5300	21.23	21.15	21.09	20.99	20.89	20.82	20.76	20.7	<24dBm
64	5320	21.1	--	--	--	--	--	--	--	<24dBm
100	5500	22.23	--	--	--	--	--	--	--	<24dBm
116	5580	21.75	21.65	21.59	21.53	21.47	21.4	21.3	21.21	<24dBm
140	5700	20.41	--	--	--	--	--	--	--	<24dBm
149	5745	20.45	--	--	--	--	--	--	--	<30dBm
157	5785	20.59	20.49	20.42	20.32	20.27	20.17	20.11	20.05	<30dBm
165	5825	20.64	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN C

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	20.53	--	--	--	--	--	--	--	<24dBm
44	5220	20.91	20.81	20.71	20.66	20.61	20.55	20.47	20.41	<24dBm
48	5240	21.06	--	--	--	--	--	--	--	<24dBm
52	5260	21.45	--	--	--	--	--	--	--	<24dBm
60	5300	21.23	21.18	21.1	21.05	20.96	20.89	20.79	20.69	<24dBm
64	5320	21.12	--	--	--	--	--	--	--	<24dBm
100	5500	22.24	--	--	--	--	--	--	--	<24dBm
116	5580	21.78	21.71	21.61	21.55	21.46	21.41	21.36	21.31	<24dBm
140	5700	20.43	--	--	--	--	--	--	--	<24dBm
149	5745	20.42	--	--	--	--	--	--	--	<30dBm
157	5785	20.63	20.58	20.49	20.41	20.35	20.26	20.16	20.09	<30dBm
165	5825	20.61	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

CHAIN D

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	20.53	--	--	--	--	--	--	--	<24dBm
44	5220	20.87	20.78	20.71	20.63	20.57	20.52	20.43	20.36	<24dBm
48	5240	21.07	--	--	--	--	--	--	--	<24dBm
52	5260	21.45	--	--	--	--	--	--	--	<24dBm
60	5300	21.22	21.16	21.09	21.03	20.97	20.9	20.8	20.71	<24dBm
64	5320	21.11	--	--	--	--	--	--	--	<24dBm
100	5500	22.24	--	--	--	--	--	--	--	<24dBm
116	5580	21.77	21.72	21.65	21.58	21.53	21.43	21.35	21.25	<24dBm
140	5700	20.46	--	--	--	--	--	--	--	<24dBm
149	5745	20.44	--	--	--	--	--	--	--	<30dBm
157	5785	20.61	20.52	20.44	20.37	20.27	20.21	20.13	20.07	<30dBm
165	5825	20.6	--	--	--	--	--	--	--	<30dBm

Note: Maximum conducted output power Value =Reading value on average power meter + cable loss

Maximum conducted output power Measurement:

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Output Power Limit		Result
								(dBm)	dBm+10log(BW)	
36	5180	--	20.58	--	--	--	20.58	24	--	Pass
44	5220	--	20.97	--	--	--	20.97	24	--	Pass
48	5240	--	21.12	--	--	--	21.12	24	--	Pass
52	5260	16.493	21.53	--	--	--	21.53	24	23.17	Pass
60	5300	16.478	21.29	--	--	--	21.29	24	23.17	Pass
64	5320	16.484	21.18	--	--	--	21.18	24	23.17	Pass
100	5500	16.506	22.33	--	--	--	22.33	24	23.18	Pass
116	5580	16.497	21.85	--	--	--	21.85	24	23.17	Pass
140	5700	16.481	20.51	--	--	--	20.51	24	23.17	Pass
149	5745	--	20.51	--	--	--	20.51	30	--	Pass
157	5785	--	20.68	--	--	--	20.68	30	--	Pass
165	5825	--	20.70	--	--	--	20.70	30	--	Pass

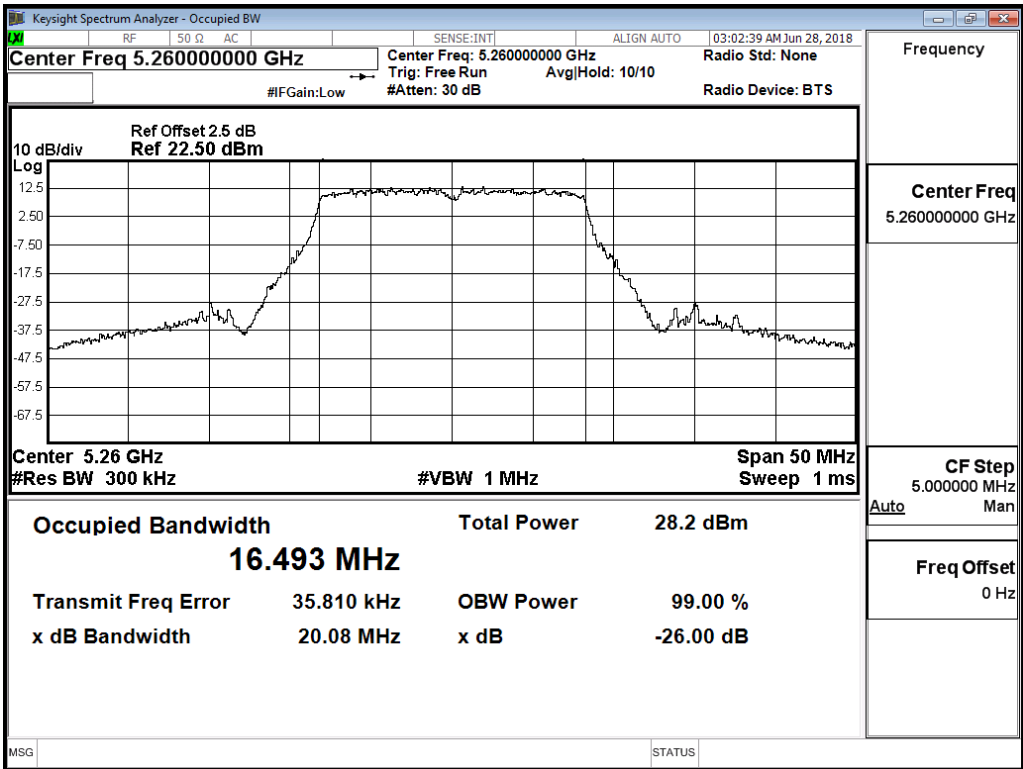
Note:

1. Power Output Value = Reading value on average power meter + cable loss
2. 26 dB Bandwidth is the bandwidth of chain A, chain B, chain C or chain D whichever is less bandwidth, output power limitation is more stringent.

Maximum conducted output power Measurement with Transmit power Control (TPC)

Channel No	Frequency Range (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Chain C Power (dBm)	Chain D Power (dBm)	Output Power (dBm)	Result
52	5260	15.42	--	--	--	15.42	Pass
60	5300	15.00	--	--	--	15.00	Pass
64	5320	14.90	--	--	--	14.90	Pass
100	5500	15.99	--	--	--	15.99	Pass
116	5580	15.67	--	--	--	15.67	Pass
140	5700	14.13	--	--	--	14.13	Pass

99% Bandwidth:
Channel 52:



Channel 60:

