FCC Test Report
(Class II Permissive Change)

Product Name	802.11 ac PCIe Module
Model No	NGP1058
FCC ID	HZB-NGP1058W

Applicant	Proxim Wireless Corporation
Address	47633 Westinghouse Drive, Fremont City, California, United States 94539

Date of Receipt	Apr. 13, 2016
Issued Date	May. 16, 2016
Report No.	1640316R-RFUSP63V00
Report Version	V1.0

Test Report

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Report No.: 1640316R-RFUSP63V00

Product Name	802.11 ac PCIe Module
Applicant	Proxim Wireless Corporation
Address	47633 Westinghouse Drive, Fremont City, California, United States 94539
Manufacturer	Compex Systems Pte Ltd
Model No.	NGP1058
FCC ID.	HZB-NGP1058W
EUT Rated Voltage	DC 5V, 1.5A
Voltage of host	AC 120V/60Hz
Trade Name	Proxim
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E: 2015 ANSI C63.4: 2014, ANSI C63.10: 2013 789033 D02 General UNII Test Procedures New Rules v01r02
Test Result	Complied

Documented By : Leven Huang

(Senior Adm. Specialist / Leven Huang)

Tested By : Nova chu

(Engineer / Nova Chu)

Approved By :

(Director / Vincent Lin)

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Description Page

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	802.11 ac PCIe Module
Trade Name	Proxim
Model No.	NGP1058
FCC ID.	HZB-NGP1058W
Frequency Range	802.11a/n-20MHz/ac-20MHz:5745-5825MHz 802.11n-40MHz/ac-40MHz:5755-5795MHz 802.11ac-80MHz: 5780MHz
Number of Channels	802.11a/n-20MHz/ac-20MHz: 5, n-40MHz/ac-40MHz: 2, ac-80MHz: 1
Data Speed	802.11a/g: 6-54Mbps, 802.11n: up to 300Mbps,802.11ac: up to 866.7Mbps
Channel separation	802.11a/n-20MHz: 20MHz, 802.11n-40MHz: 40MHz, 802.11ac-80MHz: 80MHz
Type of Modulation	802.11a/n/ac:OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM
Antenna Type	Grid DISH / Omni / Panel / Sector
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto
Contain Module	Atheros / QCA9882

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Mars	MA-WA55-30	External Antenna (Panel)	30dBi for 5.725~5.850GHz
2.	Mars	MA-WB55-20	External Antenna (Sector)	20dBi for 5.725~5.850GHz
3	Andrew	PX3F-52-N7A	External Antenna (Grid DISH)	33.5dBi for 5.725~5.850GHz
4	Smartant	SAA08-220570	External Antenna (Omni)	10dBi for 5.725~5.850GHz

Note: 1. The antenna of EUT is conform to FCC 15.203.

2. Dish Antenna, Panel Antenna, and sector antenna is directional gain antenna for fixed point to point UNII devices.

802.11a/n-20MHz (5G Band) Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 149:	5745 MHz	Channel 153:	5765 MHz	Channel 157:	5785 MHz	Channel 161:	5805 MHz
Channel 165:	5825 MHz						

802.11n-40MHz (5G Band) Center Working Frequency of Each Channel:

Channel	Frequency	Channel	Frequency
Channel 151:	5755 MHz	Channel 159:	5795 MHz

802.11ac-80MHz (5G Band)Center Working Frequency of Each Channel:

Channel	Frequency
Channel 156:	5780 MHz

Note:

1. This device is a 802.11 ac PCIe Module with a built-in 5GHz 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/n/ac is Chain A+ Chain B)
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 14.4Mbps, 802.11n-40BW is 30Mbps, 802.11ac-80BW is 65Mbps)
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.
6. This is requesting a Class II permissive change for FCC ID: HZB-NGP1058W. Originally granted on 11/04/2015.
   The differences are listed as below:
   Change #1: Frequency band 3 was previously authorized for this device under section 15.247 of the rules, this permissive change demonstrates compliance with new UNII rules for this same frequency band under section 15.407.
   This Change is according to KDB 926956 D01 U-NII Transition Plan v01r05.
   The minimum test requirements for Class II permissive change is according Answer of Question 16 section c)3) requirements.
   Change #2: Removes one antenna(Proxim-Dipole).

Test Mode	Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna) Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna) Mode 4: Transmit (802.11ac-80BW-65Mbps) (Grid DISH Antenna) Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna) Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna) Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna) Mode 8: Transmit (802.11ac-80BW-65Mbps)(Omni Antenna) Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna) Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna) Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna) Mode 12: Transmit (802.11ac-80BW-65Mbps)(Panel Antenna) Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna) Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna) Mode 15: Transmit (802.11n-40BW-30Mbps)(Sector Antenna) Mode 16: Transmit (802.11ac-80BW-65Mbps)(Sector Antenna)

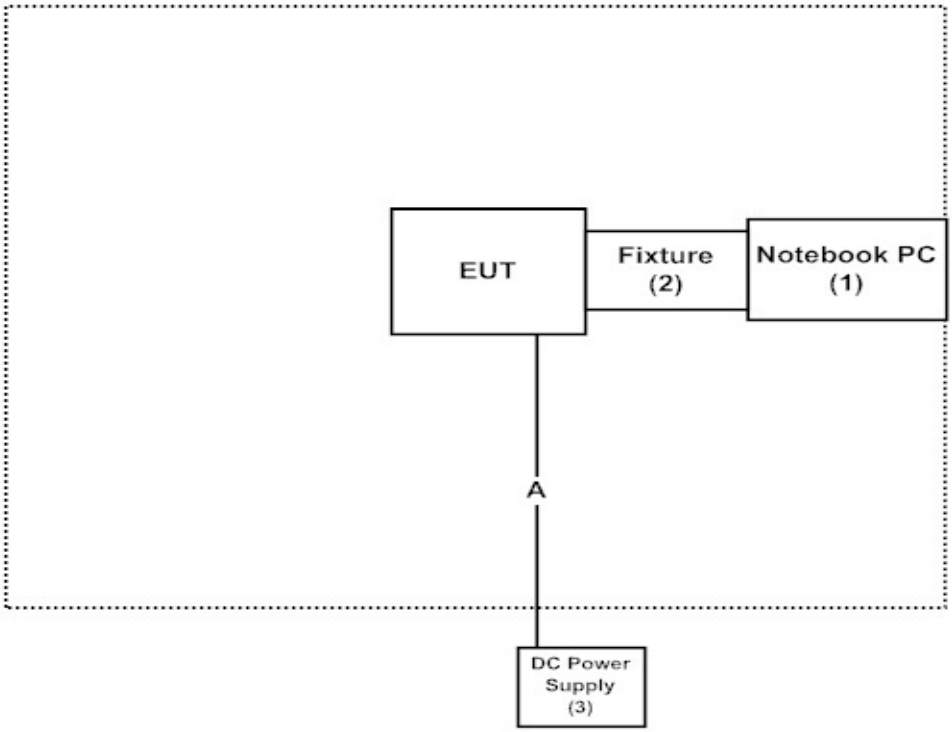
1.3. Tested System Datails

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	PP18L	36119001664	Non-Shielded, 0.8m
(2)	Fixture	Proxin	N/A	N/A	N/A
(3)	DC Power Supply	Gwinstek	SPD-3606	N/A	N/A

Signal Cable Type		Signal cable Description
A	DC Power Cable	Non-Shielded, 1.8m

1.4. Configuration of tested System



1.5. EUT Exercise Software

(1) Setup the EUT as shown in Section 1.4.
(2) Execute “Art2-GUI V2.3” 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 QuieTek Corporation's Web Site : http://www.quietek.com/chinese/about/certificates.aspx?bval=5

The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/

Site Description: File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195

Site Name: Quietek Corporation
Site Address: No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

FCC Accreditation Number: TW1014

2. Conducted Emission

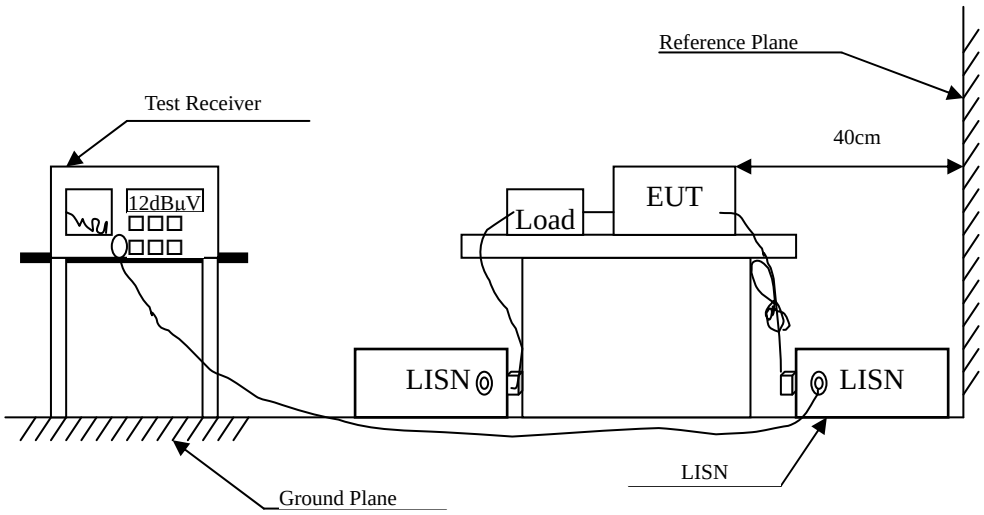
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2015	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2016	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2016	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2016	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2016	
	No.1 Shielded Room				

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked by “X” are used to measure the final test results.

2.2. Test Setup



2.3. 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.

2.4. 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 C63.10: 2013 on conducted measurement.
Conducted emissions were invested 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.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : 802.11 ac PCIe Module
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 4: Transmit (802.11ac-80BW-65Mbps) (Grid DISH Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.488	9.787	1.210	10.997	-45.346	56.343
0.861	9.826	1.160	10.986	-45.014	56.000
2.771	9.950	16.280	26.230	-29.770	56.000
3.951	9.982	23.170	33.152	-22.848	56.000
13.131	10.129	11.440	21.569	-38.431	60.000
23.568	10.194	11.590	21.784	-38.216	60.000
Average					
0.488	9.787	-2.410	7.377	-38.966	46.343
0.861	9.826	-2.100	7.726	-38.274	46.000
2.771	9.950	14.780	24.730	-21.270	46.000
3.951	9.982	18.080	28.062	-17.938	46.000
13.131	10.129	5.920	16.049	-33.951	50.000
23.568	10.194	7.510	17.704	-32.296	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : 802.11 ac PCIe Module
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 4: Transmit (802.11ac-80BW-65Mbps) (Grid DISH Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.235	9.837	0.270	10.107	-53.464	63.571
0.705	9.874	3.170	13.044	-42.956	56.000
1.195	9.912	3.410	13.322	-42.678	56.000
3.445	10.032	22.470	32.502	-23.498	56.000
7.805	10.141	22.690	32.831	-27.169	60.000
23.655	10.395	10.900	21.295	-38.705	60.000
Average					
0.235	9.837	-2.720	7.117	-46.454	53.571
0.705	9.874	-1.800	8.074	-37.926	46.000
1.195	9.912	-1.060	8.852	-37.148	46.000
3.445	10.032	18.680	28.712	-17.288	46.000
7.805	10.141	18.250	28.391	-21.609	50.000
23.655	10.395	6.720	17.115	-32.885	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : 802.11 ac PCIe Module
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 8: Transmit (802.11ac-80BW-65Mbps)(Omni Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.190	9.774	1.720	11.494	-53.363	64.857
0.572	9.794	6.770	16.564	-39.436	56.000
2.192	9.939	11.060	20.999	-35.001	56.000
4.482	9.991	22.930	32.921	-23.079	56.000
11.822	10.111	12.540	22.651	-37.349	60.000
23.662	10.195	10.340	20.535	-39.465	60.000
Average					
0.190	9.774	-2.020	7.754	-47.103	54.857
0.572	9.794	0.320	10.114	-35.886	46.000
2.192	9.939	5.680	15.619	-30.381	46.000
4.482	9.991	20.310	30.301	-15.699	46.000
11.822	10.111	5.600	15.711	-34.289	50.000
23.662	10.195	4.090	14.285	-35.715	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " " means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : 802.11 ac PCIe Module
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 8: Transmit (802.11ac-80BW-65Mbps)(Omni Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.301	9.843	0.690	10.533	-51.153	61.686
0.574	9.864	7.860	17.724	-38.276	56.000
2.284	10.001	19.300	29.301	-26.699	56.000
3.784	10.049	24.050	34.099	-21.901	56.000
6.764	10.121	18.860	28.981	-31.019	60.000
23.951	10.398	34.800	45.198	-14.802	60.000
Average					
0.301	9.843	-2.050	7.793	-43.893	51.686
0.574	9.864	5.590	15.454	-30.546	46.000
2.284	10.001	15.550	25.551	-20.449	46.000
3.784	10.049	18.250	28.299	-17.701	46.000
6.764	10.121	15.640	25.761	-24.239	50.000
23.951	10.398	34.720	45.118	-4.882	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : 802.11 ac PCIe Module
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 12: Transmit (802.11ac-80BW-65Mbps)(Panel Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.512	9.789	7.010	16.799	-39.201	56.000
0.582	9.794	6.690	16.484	-39.516	56.000
1.142	9.848	3.190	13.038	-42.962	56.000
3.722	9.978	21.750	31.728	-24.272	56.000
7.192	10.045	20.190	30.235	-29.765	60.000
11.952	10.113	12.850	22.963	-37.037	60.000
Average					
0.512	9.789	1.330	11.119	-34.881	46.000
0.582	9.794	1.790	11.584	-34.416	46.000
1.142	9.848	-0.910	8.938	-37.062	46.000
3.722	9.978	17.110	27.088	-18.912	46.000
7.192	10.045	14.990	25.035	-24.965	50.000
11.952	10.113	7.520	17.633	-32.367	50.000

Note:
1. All Reading Levels are Quasi-Peak and average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : 802.11 ac PCIe Module
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 12: Transmit (802.11ac-80BW-65Mbps)(Panel Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.574	9.864	11.300	21.164	-34.836	56.000
1.314	9.921	4.900	14.821	-41.179	56.000
3.724	10.048	23.000	33.048	-22.952	56.000
6.814	10.122	19.880	30.002	-29.998	60.000
11.924	10.222	12.370	22.592	-37.408	60.000
23.844	10.397	9.090	19.487	-40.513	60.000
Average					
0.574	9.864	6.760	16.624	-29.376	46.000
1.314	9.921	-0.100	9.821	-36.179	46.000
3.724	10.048	20.830	30.878	-15.122	46.000
6.814	10.122	13.250	23.372	-26.628	50.000
11.924	10.222	5.760	15.982	-34.018	50.000
23.844	10.397	4.780	15.177	-34.823	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : 802.11 ac PCIe Module
Test Item : Conducted Emission Test
Power Line : Line 1
Test Mode : Mode 16: Transmit (802.11ac-80BW-65Mbps)(Sector Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 1					
Quasi-Peak					
0.170	9.778	1.500	11.279	-54.150	65.429
0.610	9.796	2.990	12.786	-43.214	56.000
1.310	9.861	4.580	14.441	-41.559	56.000
2.630	9.948	16.930	26.878	-29.122	56.000
6.560	10.039	18.560	28.599	-31.401	60.000
11.830	10.111	11.250	21.361	-38.639	60.000
Average					
0.170	9.778	-1.760	8.019	-47.410	55.429
0.610	9.796	-1.140	8.656	-37.344	46.000
1.310	9.861	-0.530	9.331	-36.669	46.000
2.630	9.948	13.070	23.018	-22.982	46.000
6.560	10.039	15.170	25.209	-24.791	50.000
11.830	10.111	6.310	16.421	-33.579	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : 802.11 ac PCIe Module
Test Item : Conducted Emission Test
Power Line : Line 2
Test Mode : Mode 16: Transmit (802.11ac-80BW-65Mbps)(Sector Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBµV	dBµV	dB	dBµV
LINE 2					
Quasi-Peak					
0.516	9.859	3.980	13.839	-42.161	56.000
1.616	9.954	6.830	16.784	-39.216	56.000
3.106	10.026	17.660	27.686	-28.314	56.000
4.956	10.077	16.190	26.267	-29.733	56.000
10.566	10.196	12.970	23.166	-36.834	60.000
23.876	10.397	8.380	18.777	-41.223	60.000
Average					
0.516	9.859	-0.170	9.689	-36.311	46.000
1.616	9.954	1.330	11.284	-34.716	46.000
3.106	10.026	13.270	23.296	-22.704	46.000
4.956	10.077	12.560	22.637	-23.363	46.000
10.566	10.196	7.710	17.906	-32.094	50.000
23.876	10.397	5.410	15.807	-34.193	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. “ “ means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3. Maximun conducted output power

3.1. Test Equipment

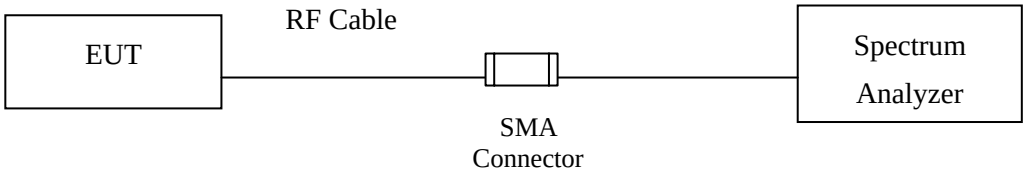
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2016
X	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016

Note:

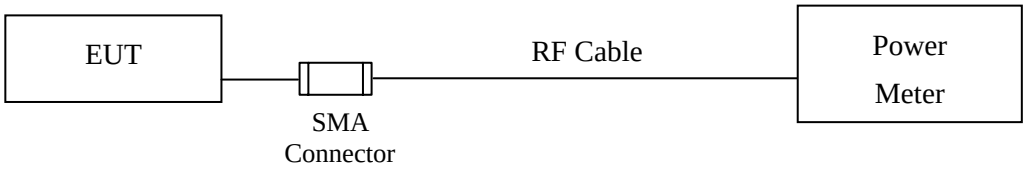
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

3.2. Test Setup

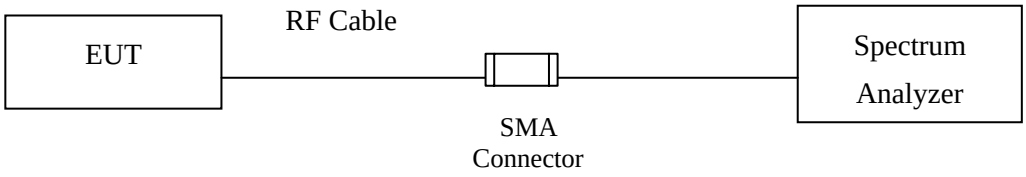
26dBc Occupied Bandwidth



Conduction Power Measurement (for 802.11an)



Conduction Power Measurement (for 802.11ac)



3.3. Limits

(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-topoint 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.

(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 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) 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.

3.4. 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 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≦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 D01 section F) procedure is used for measurements.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Maximum conducted output power

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna)

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)								
149	5745	16.28	--	--	--	--	--	--	--	<30dBm
157	5785	15.02	14.96	14.91	14.86	14.81	14.75	14.7	14.64	<30dBm
165	5825	17.43	--	--	--	--	--	--	--	<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)								
149	5745	16.22	--	--	--	--	--	--	--	<30dBm
157	5785	14.25	14.19	14.11	14.06	13.98	13.93	13.85	13.79	<30dBm
165	5825	16.81	--	--	--	--	--	--	--	<30dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
149	5745	16.28	16.22	19.26	30
157	5785	15.02	14.25	17.66	30
165	5825	17.43	16.81	20.14	30

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
149	5745	16.3	--	--	--	--	--	--	--	<30dBm
157	5785	16.06	16.01	15.96	15.92	15.86	15.82	15.77	15.72	<30dBm
165	5825	18.61	--	--	--	--	--	--	--	<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
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
149	5745	15.99	--	--	--	--	--	--	--	<30dBm
157	5785	15.09	15.04	14.99	14.93	14.89	14.83	14.77	14.73	<30dBm
165	5825	17.52	--	--	--	--	--	--	--	<30dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
149	5745	16.30	15.99	19.16	30
157	5785	16.06	15.09	18.61	30
165	5825	18.61	17.52	21.11	30

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna)

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)								
151	5755	14.49	--	--	--	--	--	--	--	<30dBm
159	5795	16.11	16.07	16.02	15.97	15.92	15.88	15.83	15.78	<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
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
151	5755	16.11	--	--	--	--	--	--	--	<30dBm
159	5795	17.35	17.3	17.26	17.21	17.16	17.11	17.07	17.03	<30dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
151	5755	14.49	16.11	18.39	30
159	5795	16.11	17.35	19.78	30

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11ac-80BW-65Mbps) (Grid DISH Antenna)

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	
156	5780	17.49	17.42	17.37	17.31	17.26	17.22	17.18	17.13	17.07	17.01	<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	
156	5780	19.77	19.71	19.65	19.59	19.52	19.46	19.39	19.32	19.26	19.21	<30dBm

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

Maximum conducted output power Measurement:

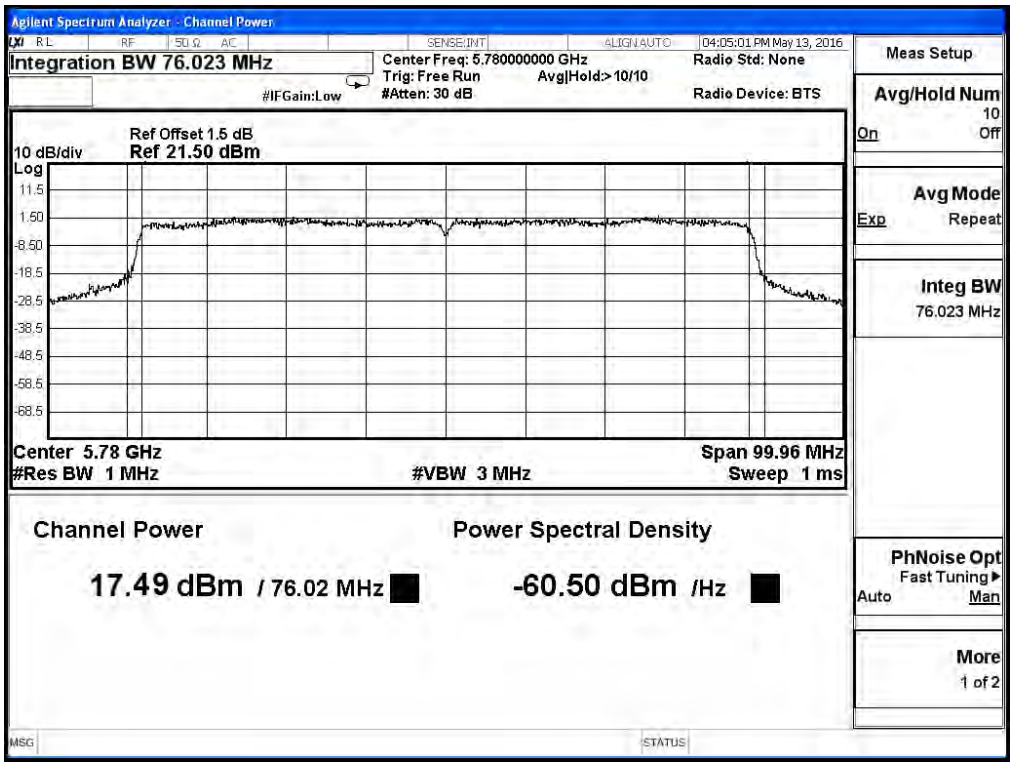
(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
156	5780	17.49	19.77	21.79	30

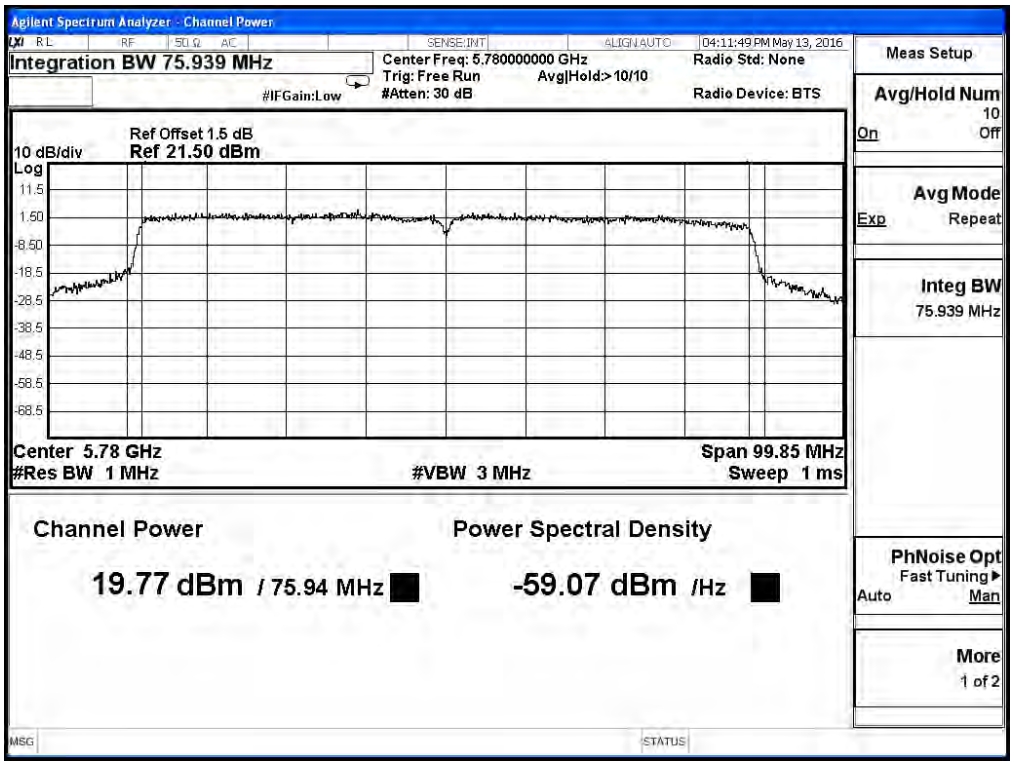
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Maximum conducted output power:
Channel 156– Chain A



Channel 156– Chain B



Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna)

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)								
149	5745	22.54	--	--	--	--	--	--	--	<26dBm
157	5785	23.22	22.16	22.11	22.06	22.02	21.97	21.92	21.88	<26dBm
165	5825	22.59	--	--	--	--	--	--	--	<26dBm

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)								
149	5745	22.94	--	--	--	--	--	--	--	<26dBm
157	5785	22.64	22.59	22.54	22.49	22.44	22.39	22.34	22.29	<26dBm
165	5825	22.05	--	--	--	--	--	--	--	<26dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
149	5745	22.54	22.94	25.75	26
157	5785	23.22	22.64	25.95	26
165	5825	22.59	22.05	25.34	26

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
149	5745	22.78	--	--	--	--	--	--	--	<26dBm
157	5785	22.93	22.87	22.82	22.76	22.71	22.56	22.51	22.45	<26dBm
165	5825	23.11	--	--	--	--	--	--	--	<26dBm

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
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
149	5745	23.11	--	--	--	--	--	--	--	<26dBm
157	5785	22.59	22.53	22.48	22.42	22.37	22.31	22.26	22.21	<26dBm
165	5825	22.41	--	--	--	--	--	--	--	<26dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
149	5745	22.78	23.11	25.96	26
157	5785	22.93	22.59	25.77	26
165	5825	23.11	22.41	25.78	26

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna)

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)								
151	5755	22.62	--	--	--	--	--	--	--	<26dBm
159	5795	22.86	22.81	22.76	22.71	22.63	22.58	22.53	22.49	<26dBm

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
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
151	5755	22.91	--	--	--	--	--	--	--	<26dBm
159	5795	22.55	22.5	22.46	22.41	22.34	22.28	22.23	22.18	<26dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
151	5755	22.62	22.91	25.78	26
159	5795	22.86	22.55	25.72	26

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 8: Transmit (802.11ac-80BW-65Mbps)(Omni Antenna)

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	
156	5780	22.42	22.37	22.31	22.26	22.19	22.13	22.07	22	21.93	21.86	<26dBm

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	
156	5780	22.05	21.97	21.91	21.86	21.79	21.72	21.64	21.59	21.53	21.47	<26dBm

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

Maximum conducted output power Measurement:

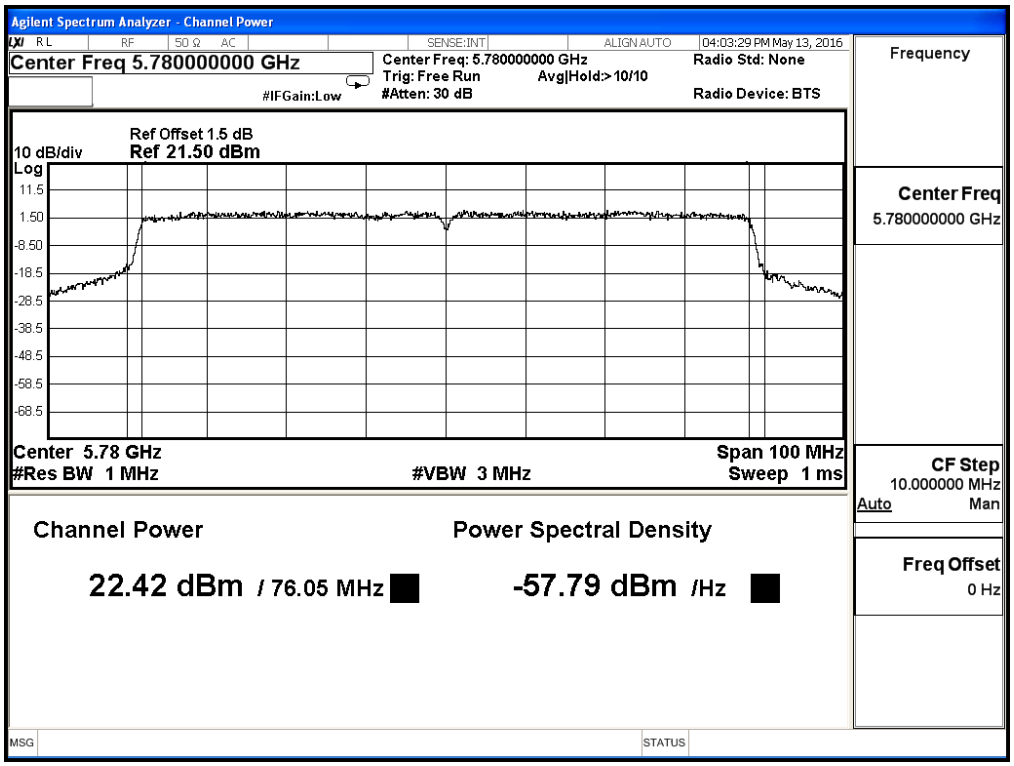
(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
156	5780	22.42	22.05	25.25	26

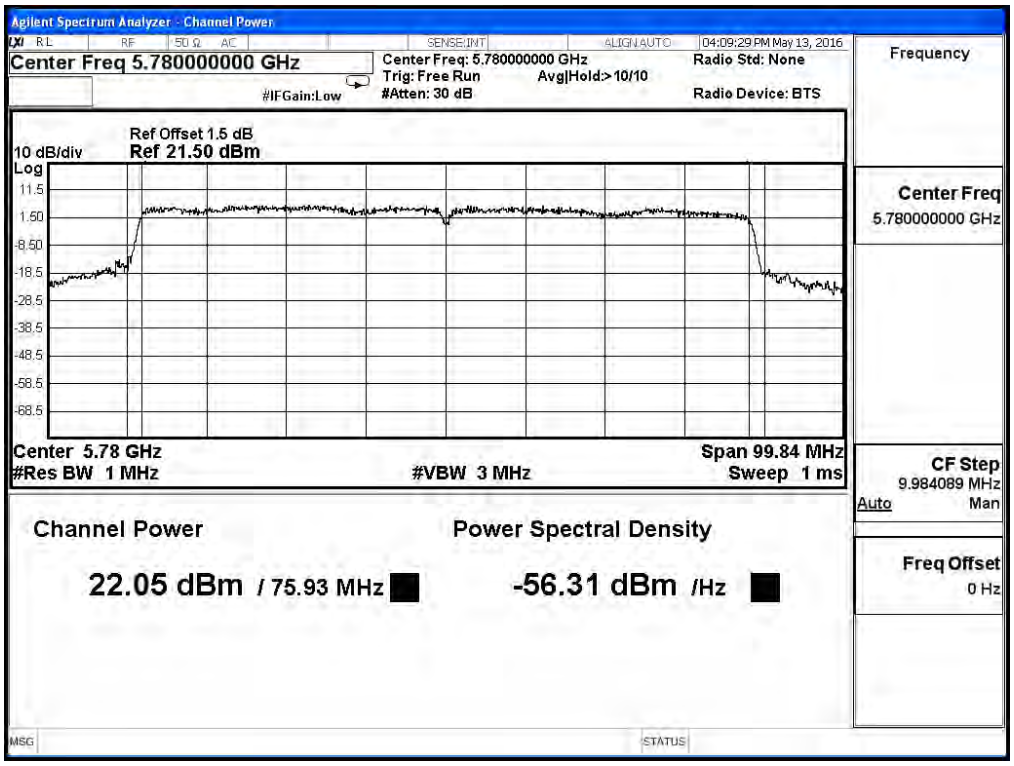
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Maximum conducted output power:
Channel 156– Chain A



Channel 156– Chain B



Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna)

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)								
149	5745	15.4	--	--	--	--	--	--	--	<30dBm
157	5785	26.41	26.37	26.31	26.27	26.21	26.16	26.11	26.07	<30dBm
165	5825	19	--	--	--	--	--	--	--	<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)								
149	5745	16.81	--	--	--	--	--	--	--	<30dBm
157	5785	25.07	24.99	24.93	24.87	24.82	24.76	24.71	24.64	<30dBm
165	5825	19.53	--	--	--	--	--	--	--	<30dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
149	5745	15.40	16.81	19.17	30
157	5785	26.41	25.07	28.80	30
165	5825	19.00	19.53	22.28	30

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
149	5745	15.25	--	--	--	--	--	--	--	<30dBm
157	5785	26.38	26.31	26.24	26.18	26.11	26.04	25.99	25.93	<30dBm
165	5825	18.26	--	--	--	--	--	--	--	<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
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
149	5745	16.55	--	--	--	--	--	--	--	<30dBm
157	5785	25.2	25.13	25.07	24.99	24.92	24.87	24.82	24.76	<30dBm
165	5825	18.87	--	--	--	--	--	--	--	<30dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
149	5745	15.25	16.55	18.96	30
157	5785	26.38	25.20	28.84	30
165	5825	18.26	18.87	21.59	30

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna)

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)								
151	5755	13.28	--	--	--	--	--	--	--	<30dBm
159	5795	16.81	16.75	16.69	16.62	16.57	16.53	16.47	16.42	<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
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
151	5755	15.09	--	--	--	--	--	--	--	<30dBm
159	5795	17.8	17.73	17.68	17.62	17.54	17.49	17.43	17.38	<30dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
151	5755	13.28	15.09	17.29	30
159	5795	16.81	17.80	20.34	30

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 12: Transmit (802.11ac-80BW-65Mbps)(Panel Antenna)

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	
156	5780	17.15	17.09	17.02	16.97	16.92	16.85	16.79	16.72	16.67	16.61	<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	
156	5780	19.24	19.19	19.11	19.05	18.98	18.92	18.84	18.76	18.69	18.61	<30dBm

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

Maximum conducted output power Measurement:

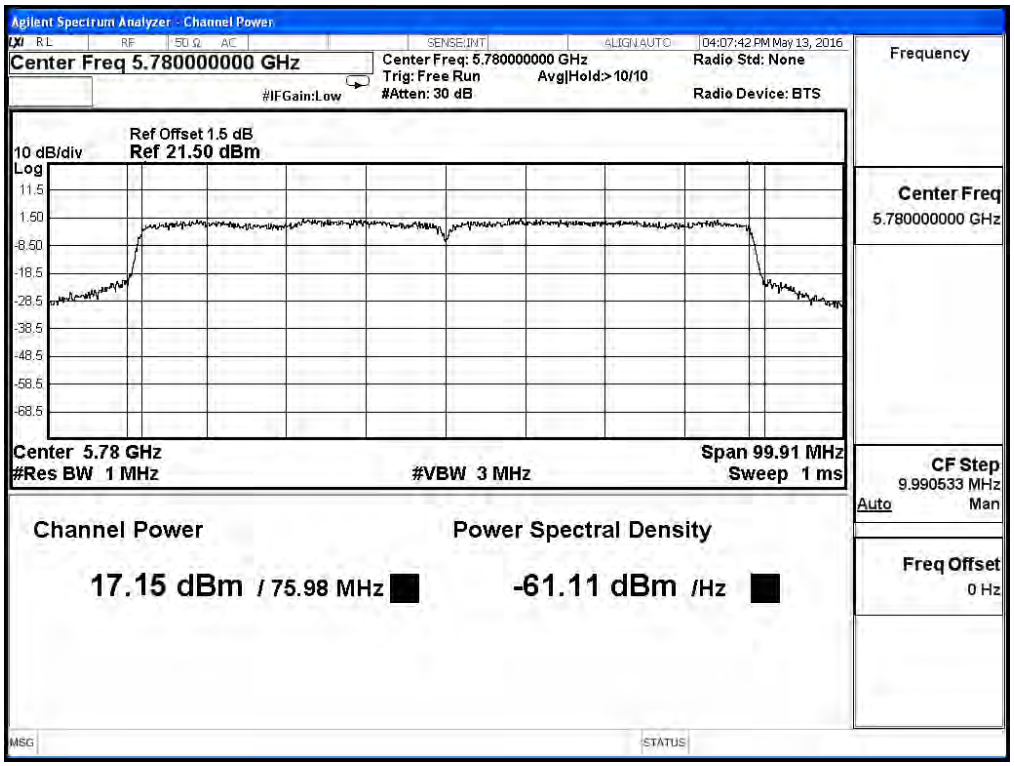
(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
156	5780	17.15	19.24	21.33	30

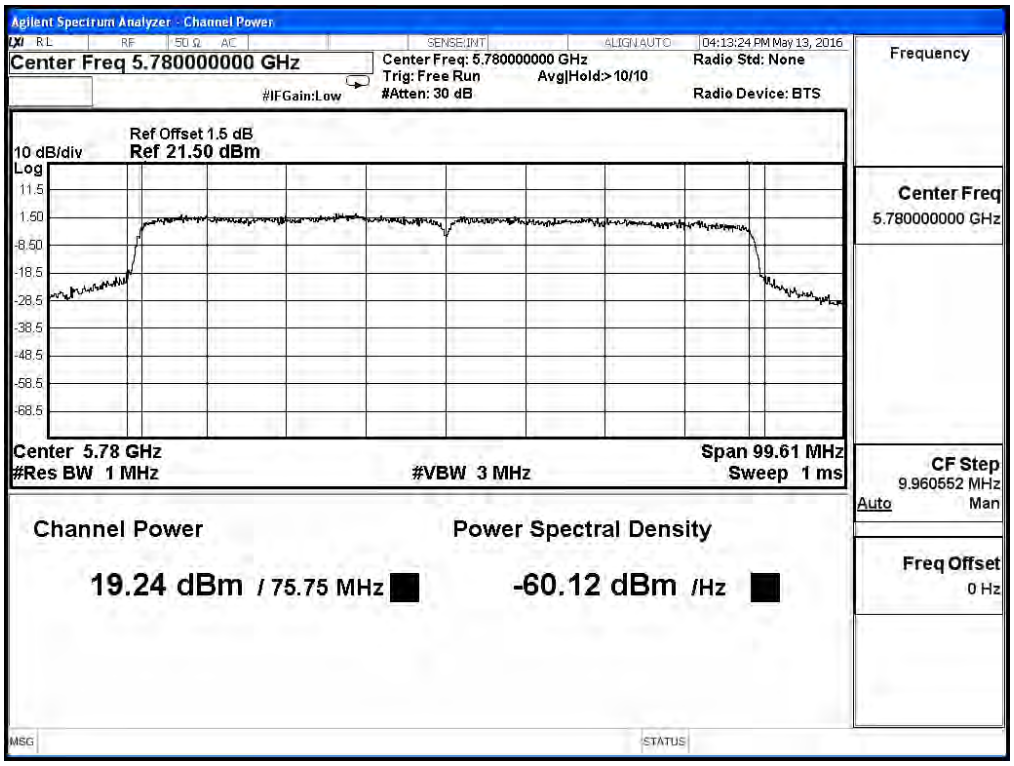
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Maximum conducted output power:
Channel 156– Chain A



Channel 156– Chain B



Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna)

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)								
149	5745	14.42	--	--	--	--	--	--	--	<30dBm
157	5785	26.41	26.37	26.31	26.27	26.21	26.16	26.11	26.07	<30dBm
165	5825	16.01	--	--	--	--	--	--	--	<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)								
149	5745	16.06	--	--	--	--	--	--	--	<30dBm
157	5785	25.07	24.99	24.93	24.87	24.82	24.76	24.71	24.64	<30dBm
165	5825	16.41	--	--	--	--	--	--	--	<30dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
149	5745	14.42	16.06	18.33	30
157	5785	26.41	25.07	28.80	30
165	5825	16.01	16.41	19.22	30

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna)

CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
149	5745	13.81	--	--	--	--	--	--	--	<30dBm
157	5785	26.38	26.31	26.24	26.18	26.11	26.04	25.99	25.93	<30dBm
165	5825	15.93	--	--	--	--	--	--	--	<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
		14.4	28.9	43.3	57.8	86.7	115.6	130	144.4	
		Measurement Level (dBm)								
149	5745	15.32	--	--	--	--	--	--	--	<30dBm
157	5785	25.2	25.13	25.07	24.99	24.92	24.87	24.82	24.76	<30dBm
165	5825	16.24	--	--	--	--	--	--	--	<30dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
149	5745	13.81	15.32	17.64	30
157	5785	26.38	25.20	28.84	30
165	5825	15.93	16.24	19.10	30

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 15: Transmit (802.11n-40BW-30Mbps)(Sector Antenna)

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)								
151	5755	9.94	--	--	--	--	--	--	--	<30dBm
159	5795	13.23	16.75	16.69	16.62	16.57	16.53	16.47	16.42	<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
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
151	5755	11.52	--	--	--	--	--	--	--	<30dBm
159	5795	14.27	17.73	17.68	17.62	17.54	17.49	17.43	17.38	<30dBm

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

Maximum conducted output power Measurement:

(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
151	5755	9.94	11.52	13.81	30
159	5795	13.23	14.27	16.79	30

Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Product : 802.11 ac PCIe Module
Test Item : Maximum conducted output power
Test Site : No.3 OATS
Test Mode : Mode 16: Transmit (802.11ac-80BW-65Mbps)(Sector Antenna)

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	
156	5780	16.56	16.49	16.41	16.35	16.28	16.22	16.15	16.07	15.99	15.93	<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	
156	5780	18.56	18.49	18.41	18.35	18.29	18.21	18.16	18.09	18.02	17.95	<30dBm

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

Maximum conducted output power Measurement:

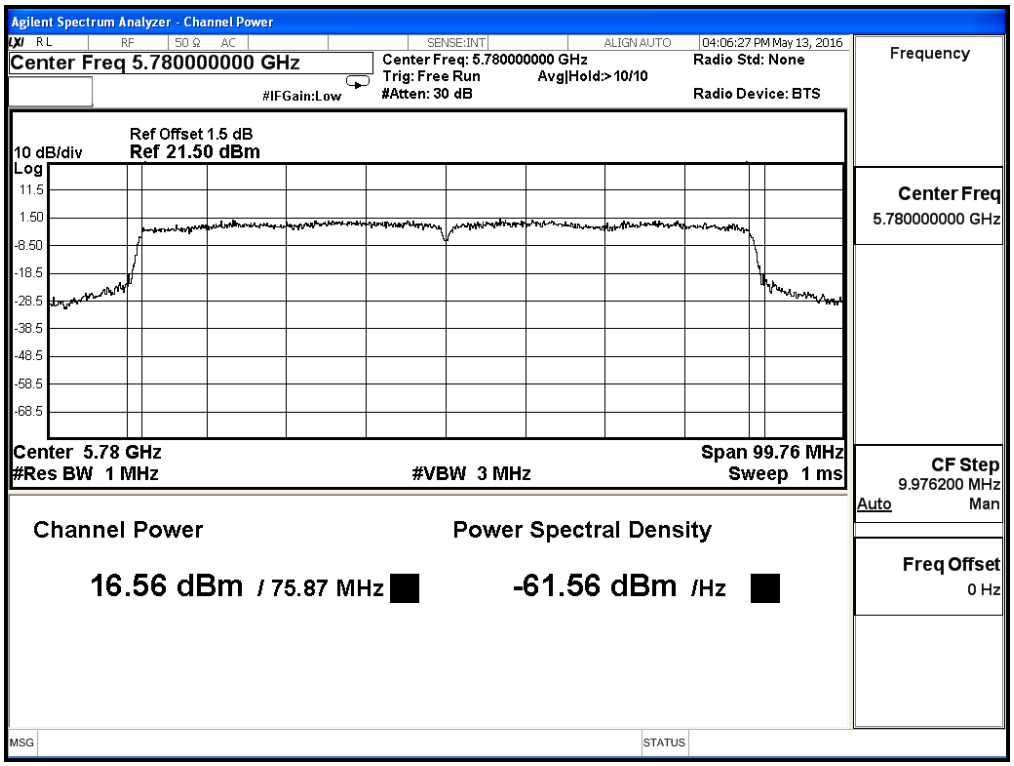
(CHAIN A+ B)

Channel Number	Frequency (MHz)	Chain A Power (dBm)	Chain B Power (dBm)	Output Power (dBm)	Output Power Limit (dBm)
156	5780	16.56	18.56	20.68	30

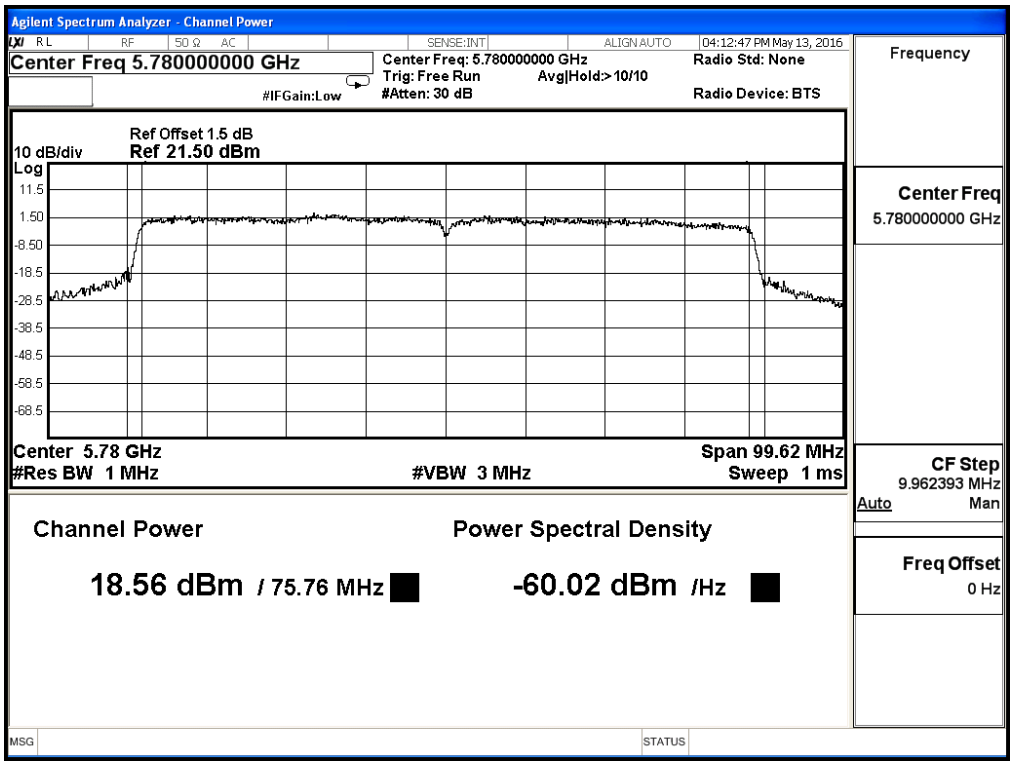
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. Output Power (dBm) = 10LOG (Chain A Power (mW)+ Chain B Power (mW))

Maximum conducted output power:
Channel 156– Chain A



Channel 156– Chain B



4. Peak Power Spectral Density

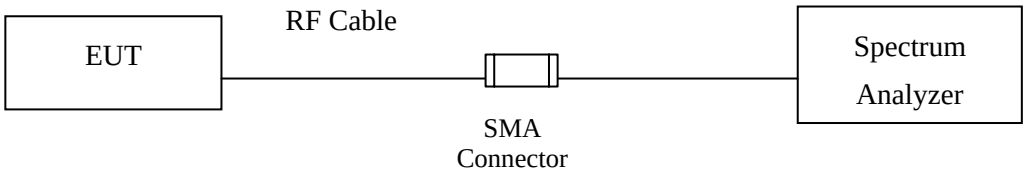
4.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr, 2016

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

4.2. Test Setup



4.3. Limits

(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 power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density 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-topoint U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. 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 and maximum power spectral density 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 power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.+

(2) For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density 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.

4.4. Test Procedure

The EUT was setup to ANSI C63.10: 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.
The Peak Power Spectral Density using KDB 789033 section F) procedure, Create an average power spectrum for the EUT operating mode being tested by following the instructions in section E)2) for measuring maximum conducted output power using a spectrum analyzer.
SA-1 method is selected to run the test.
Scale the observed power level to an equivalent value in 500 kHz by adjusting (increase) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log (500 kHz/100 kHz) = 6.98 dB.

4.5. Uncertainty

± 1.27 dB

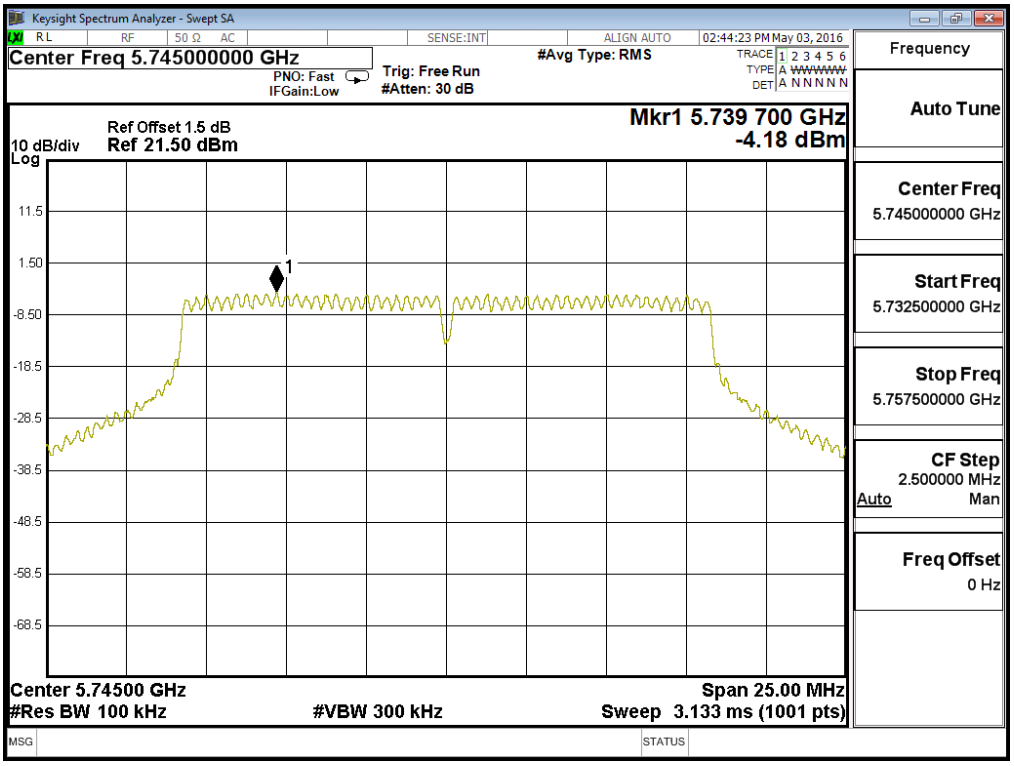
4.6. Test Result of Peak Power Spectral Density

Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna)

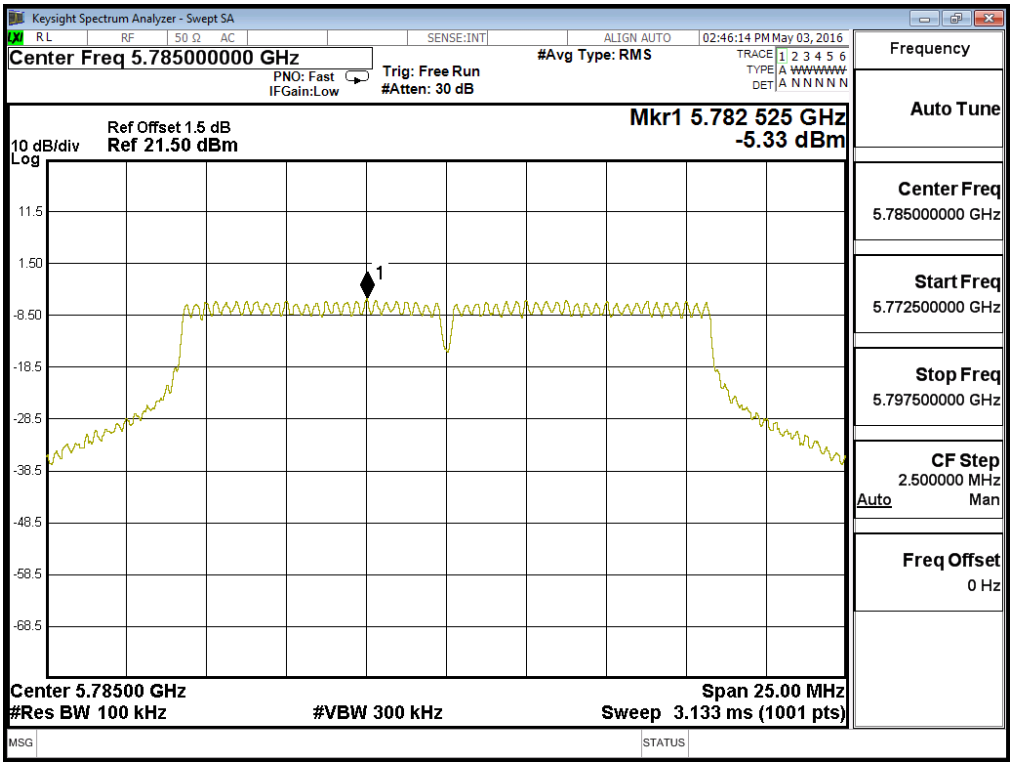
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
149	5745	A	-4.18	6.980	5.810	<30	Pass
		B	-3.600	6.980	6.390	<30	Pass
157	5785	A	-5.330	6.980	4.660	<30	Pass
		B	-5.520	6.980	4.470	<30	Pass
165	5825	A	-3.050	6.980	6.940	<30	Pass
		B	-3.450	6.980	6.540	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

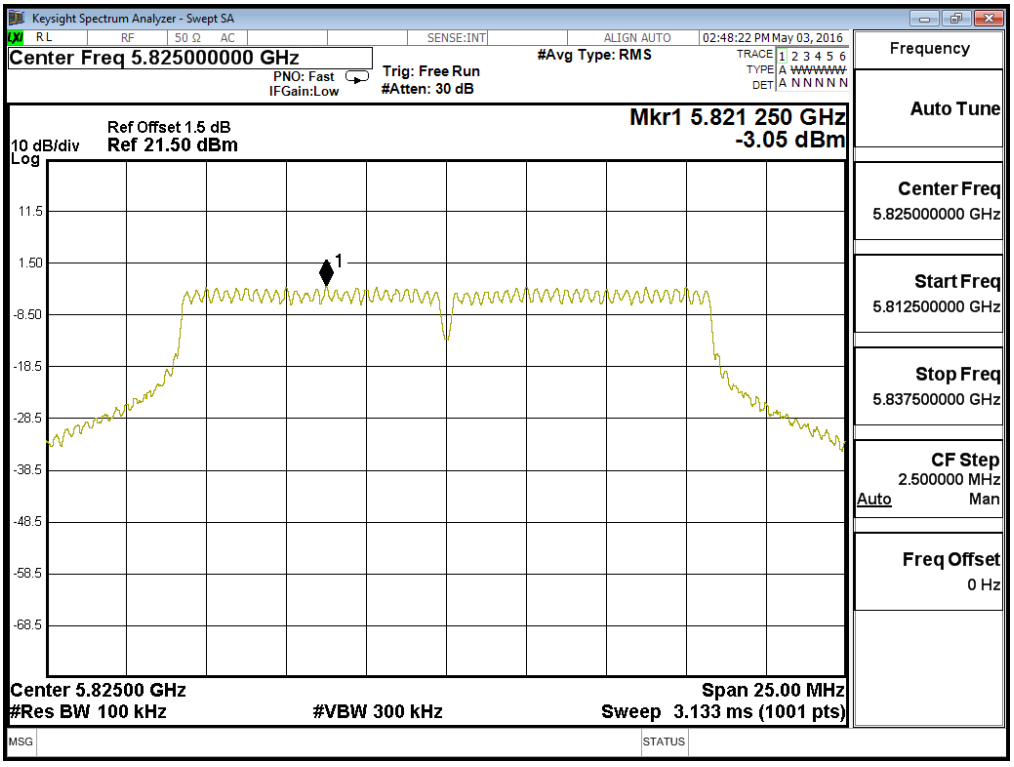
Channel 149– Chain A



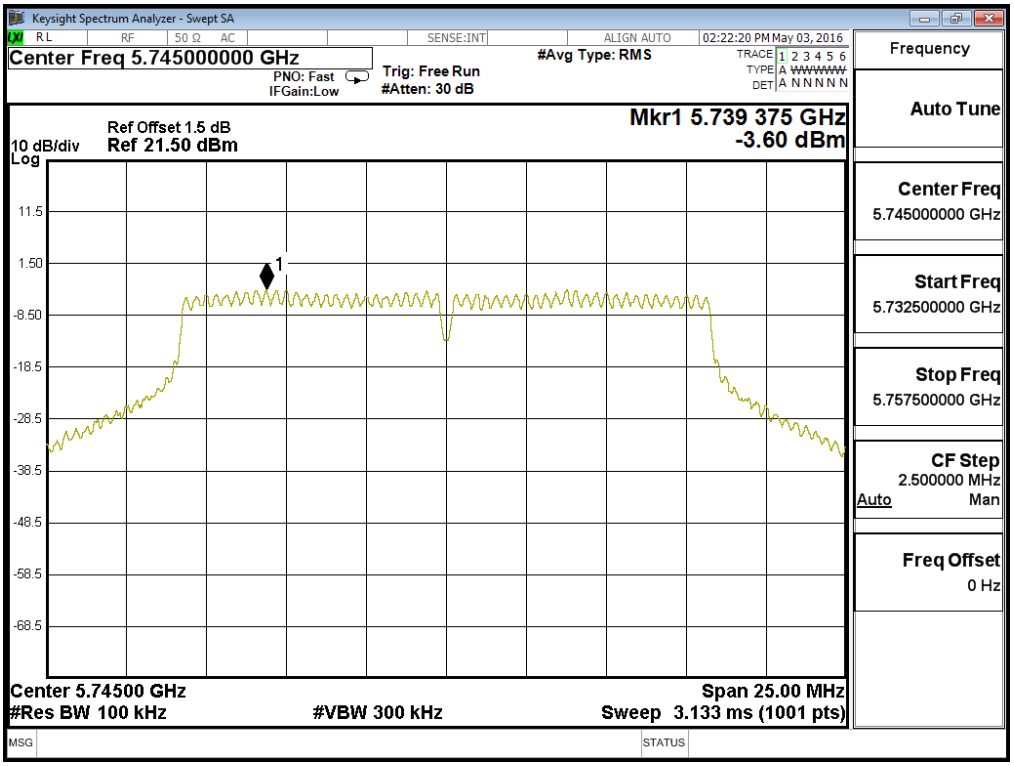
Channel 157– Chain A



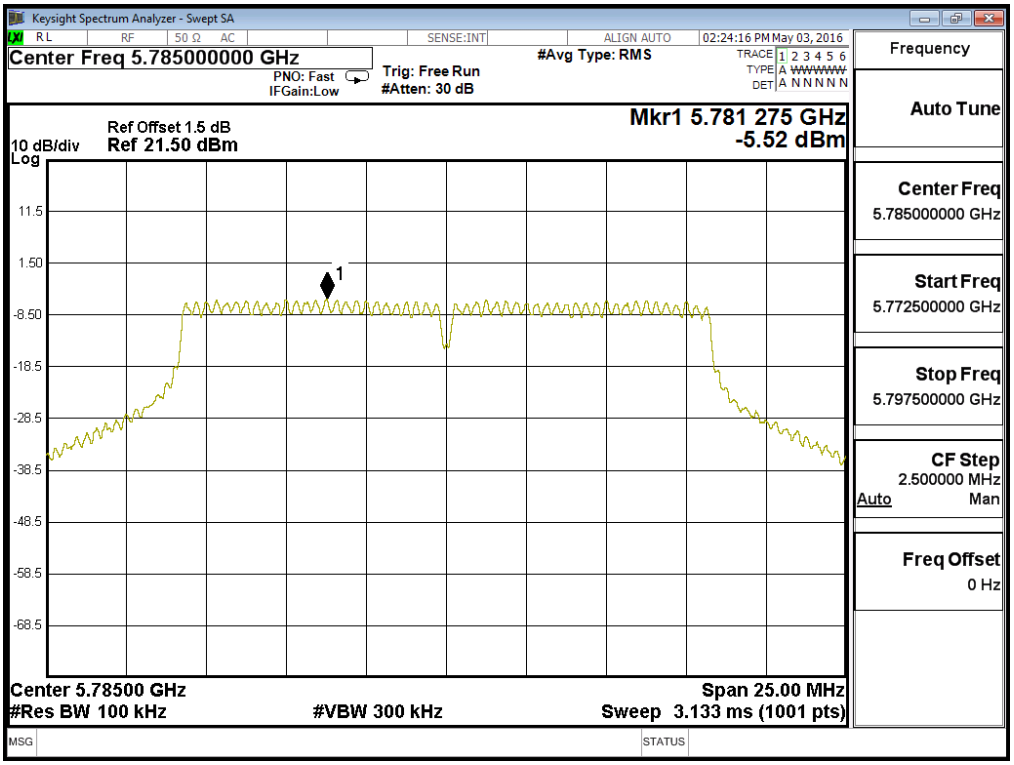
Channel 165– Chain A



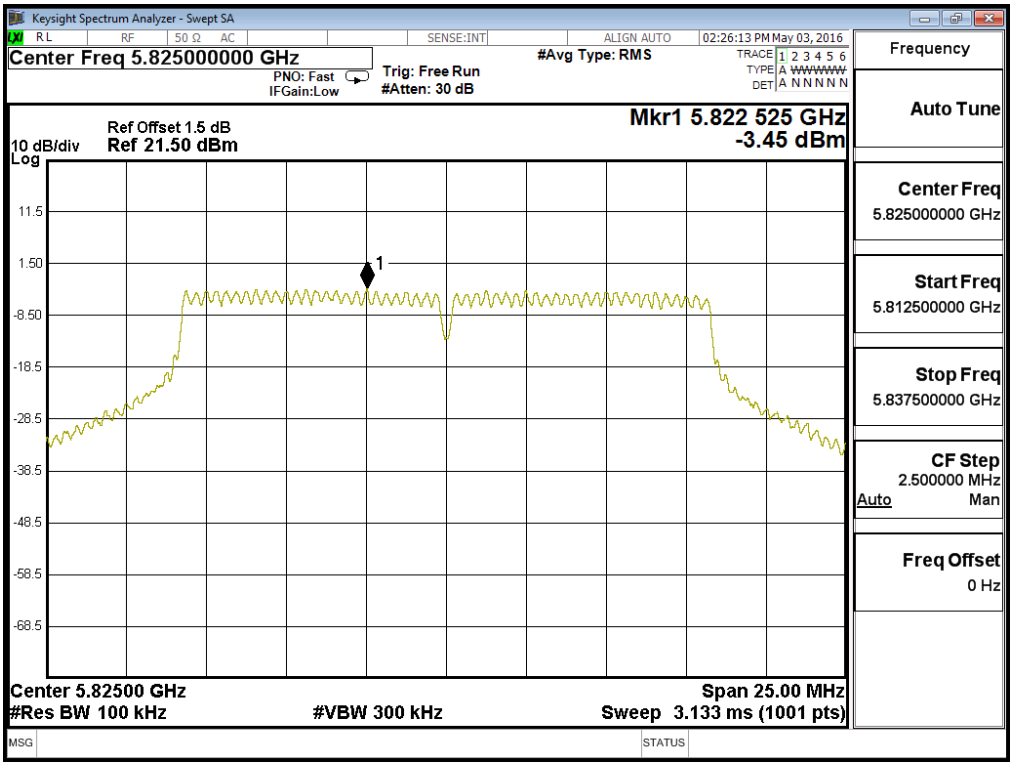
Channel 149– Chain B



Channel 157–Chain B



Channel 165–Chain B

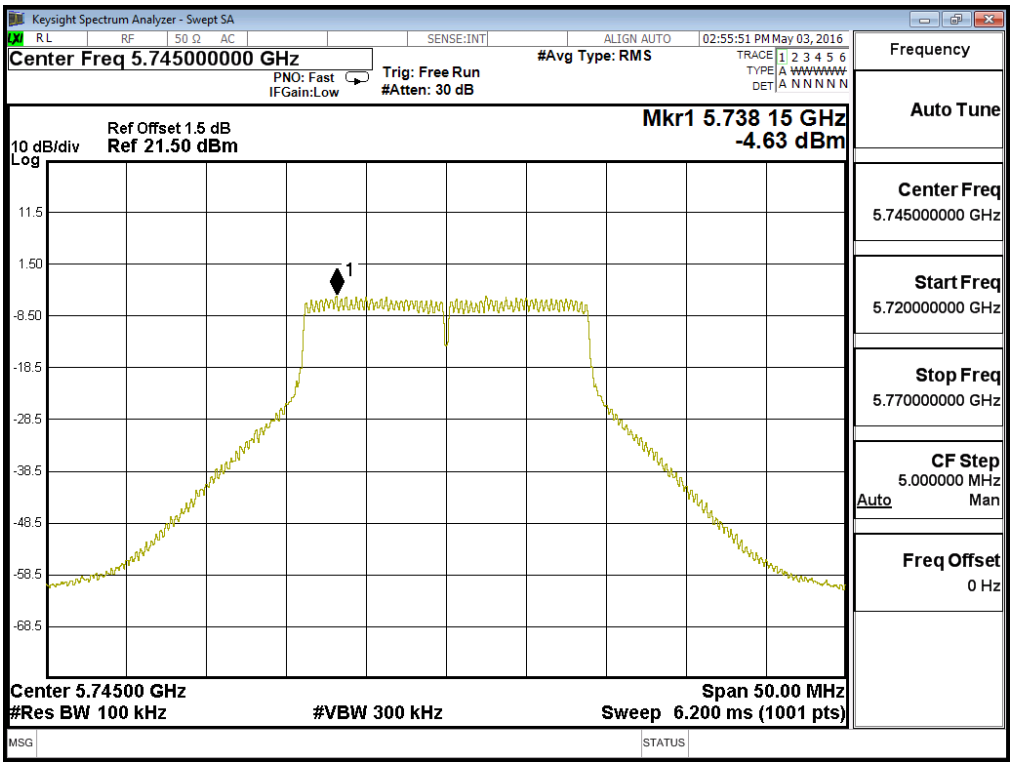


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna)

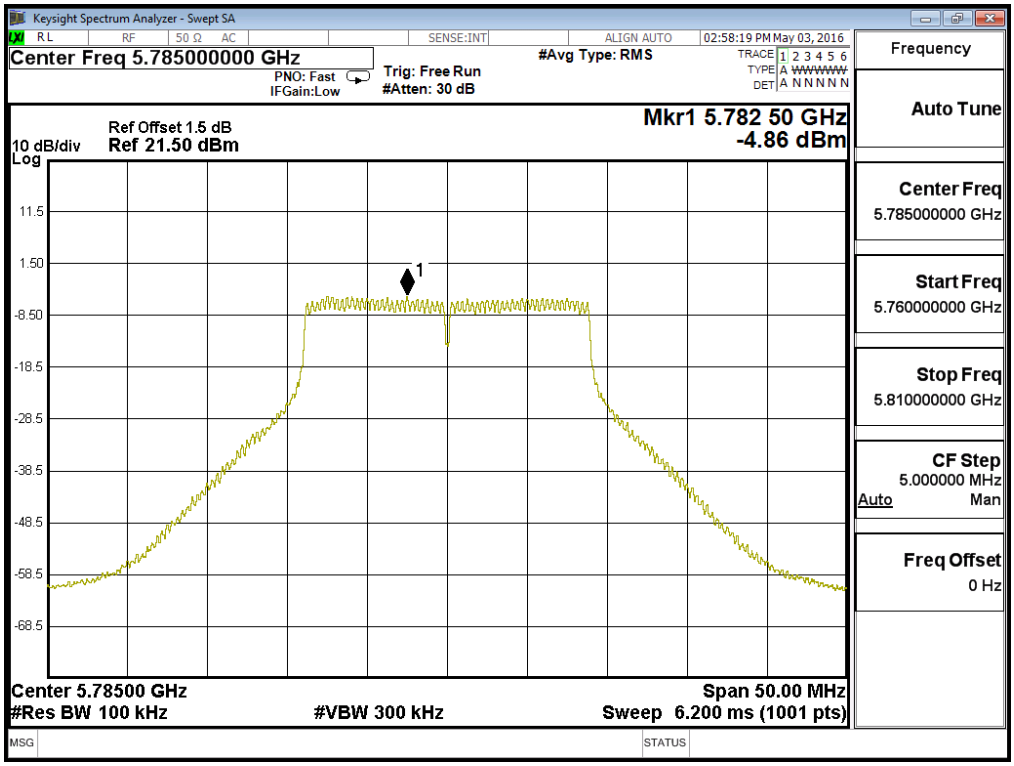
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
149	5745	A	-4.630	6.980	5.360	<30	Pass
		B	-4.310	6.980	5.680	<30	Pass
157	5785	A	-4.860	6.980	5.130	<30	Pass
		B	-4.880	6.980	5.110	<30	Pass
165	5825	A	-2.580	6.980	7.410	<30	Pass
		B	-2.580	6.980	7.410	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

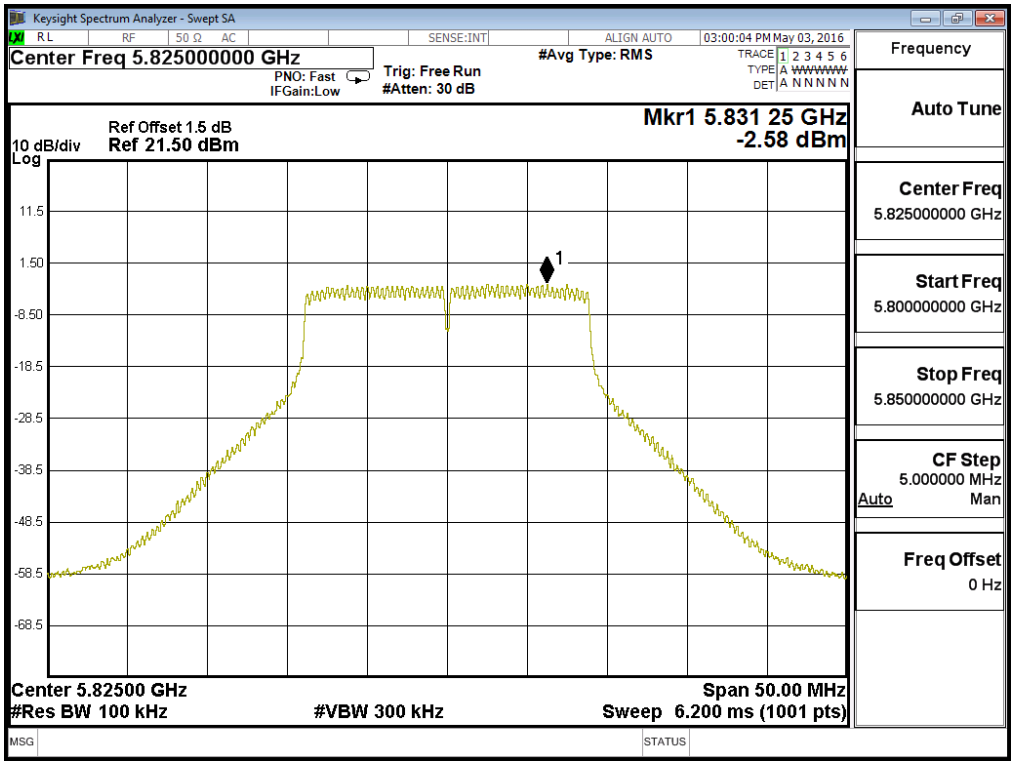
Channel 149 – Chain A



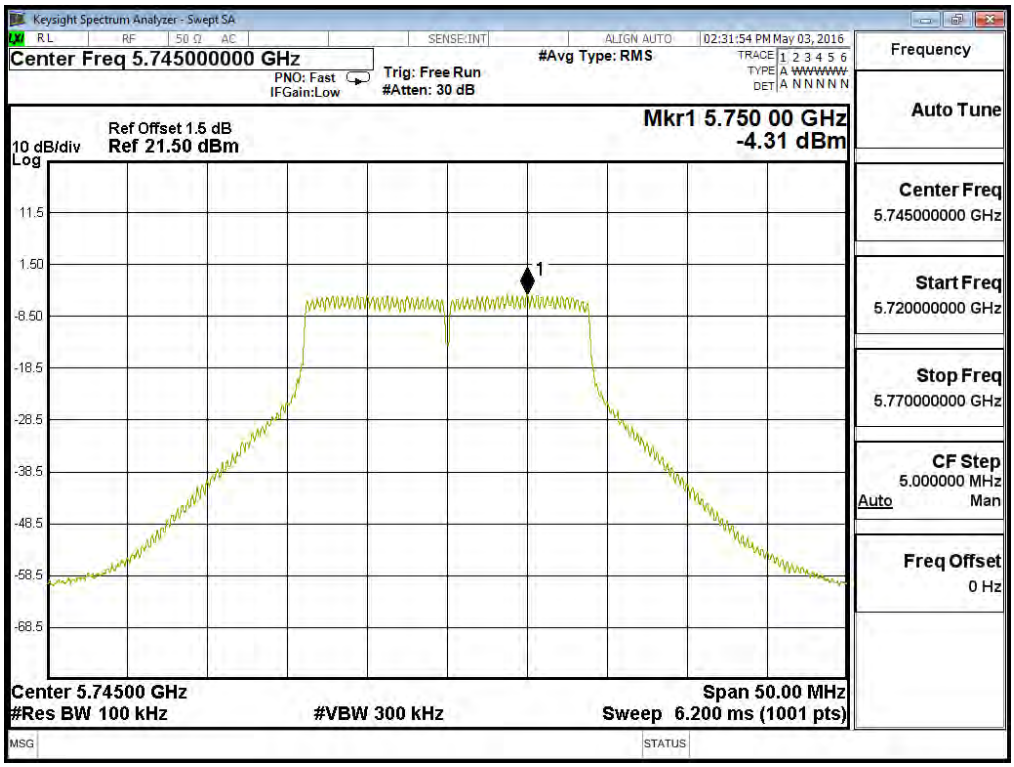
Channel 157 – Chain A



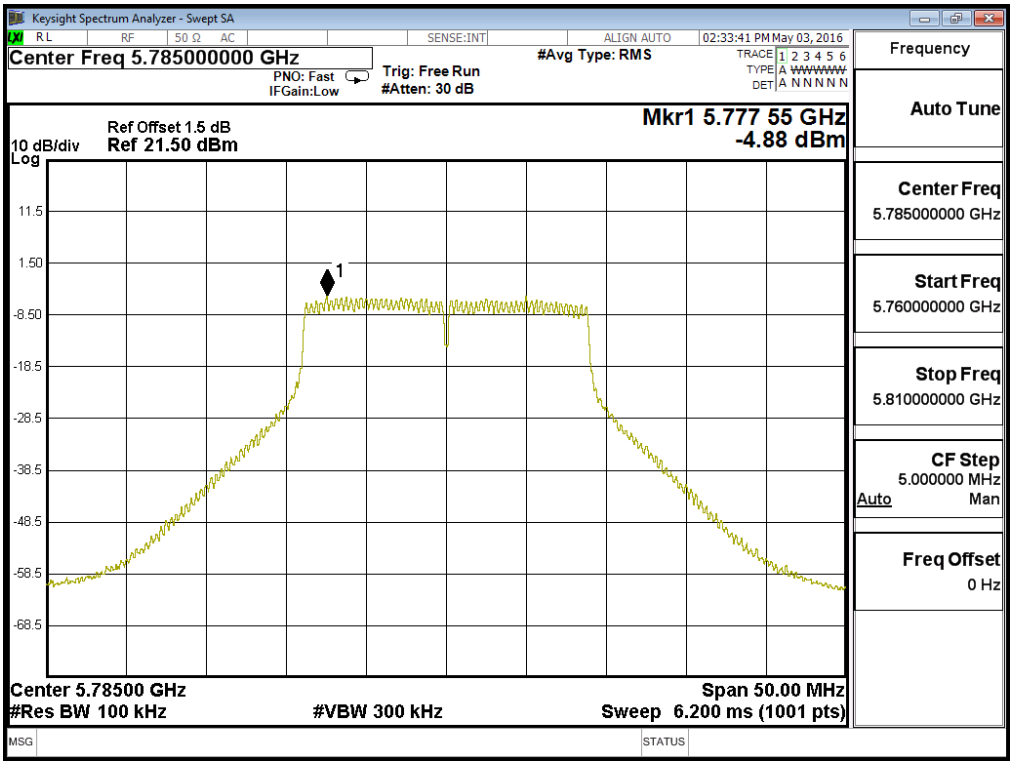
Channel 165 – Chain A



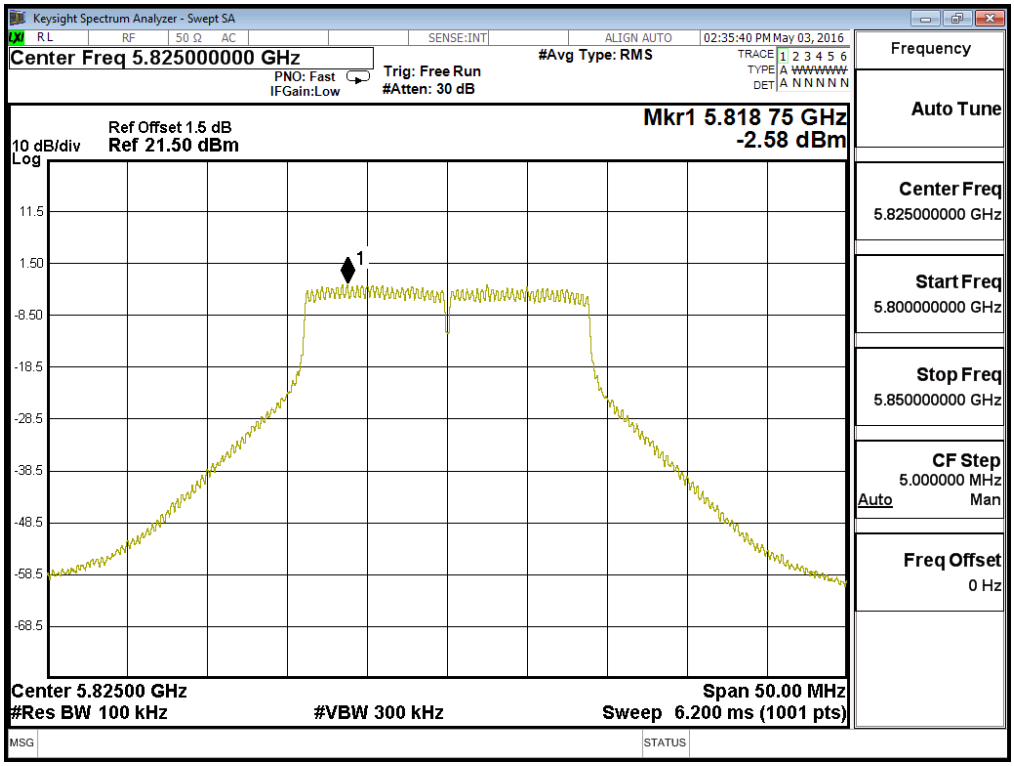
Channel 149 – Chain B



Channel 157 – Chain B



Channel 165 – Chain B

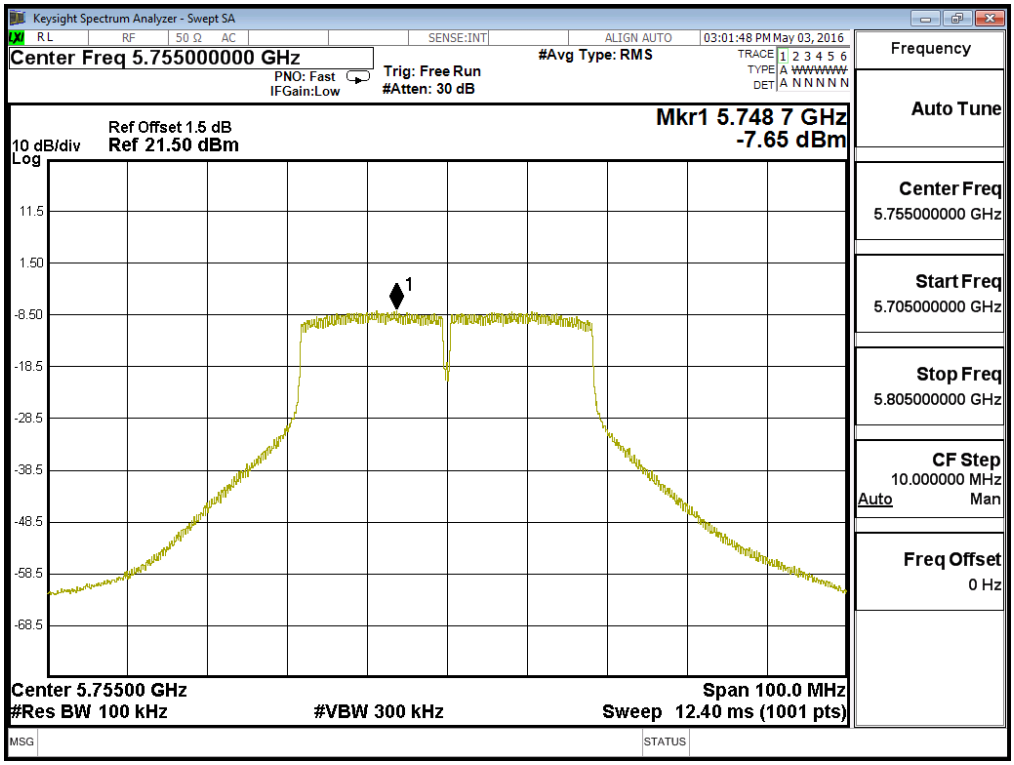


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna)

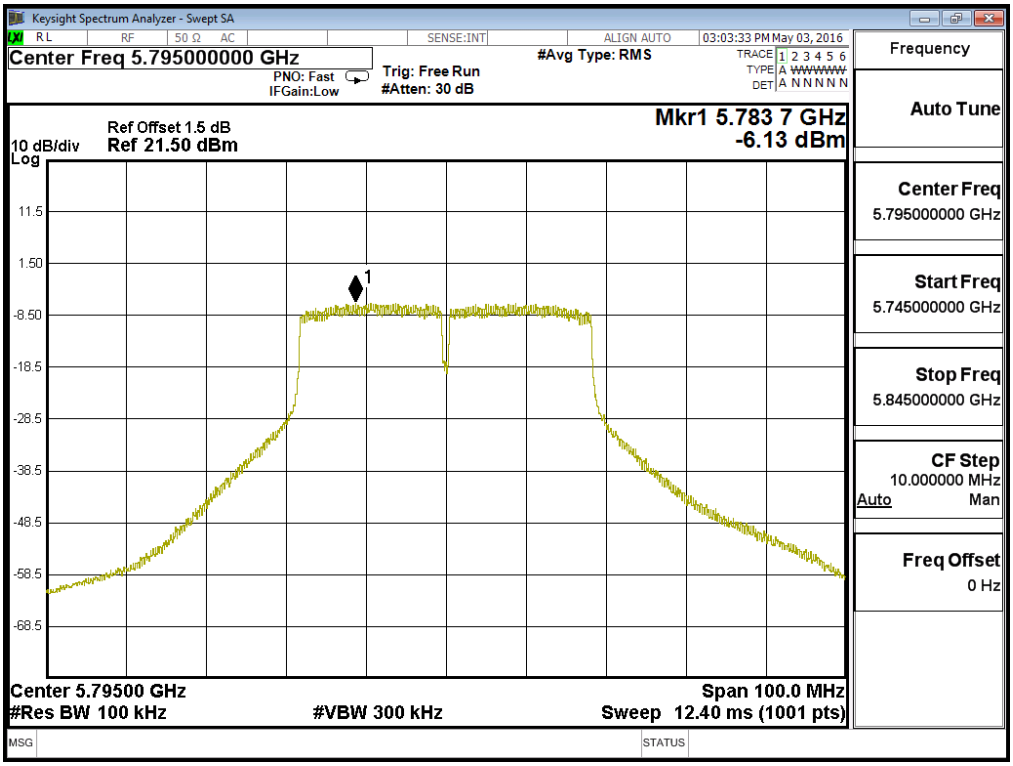
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
151	5755	A	-7.650	6.980	2.340	<30	Pass
		B	-7.230	6.980	2.760	<30	Pass
159	5795	A	-6.130	6.980	3.860	<30	Pass
		B	-6.230	6.980	3.760	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

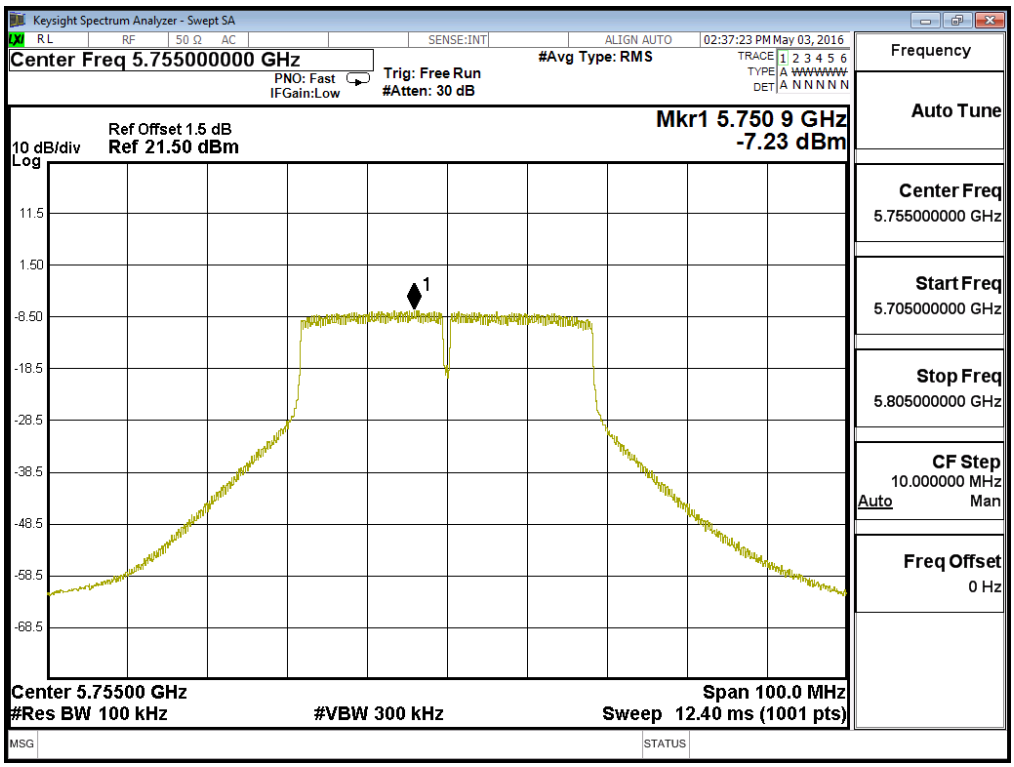
Channel 151 – Chain A



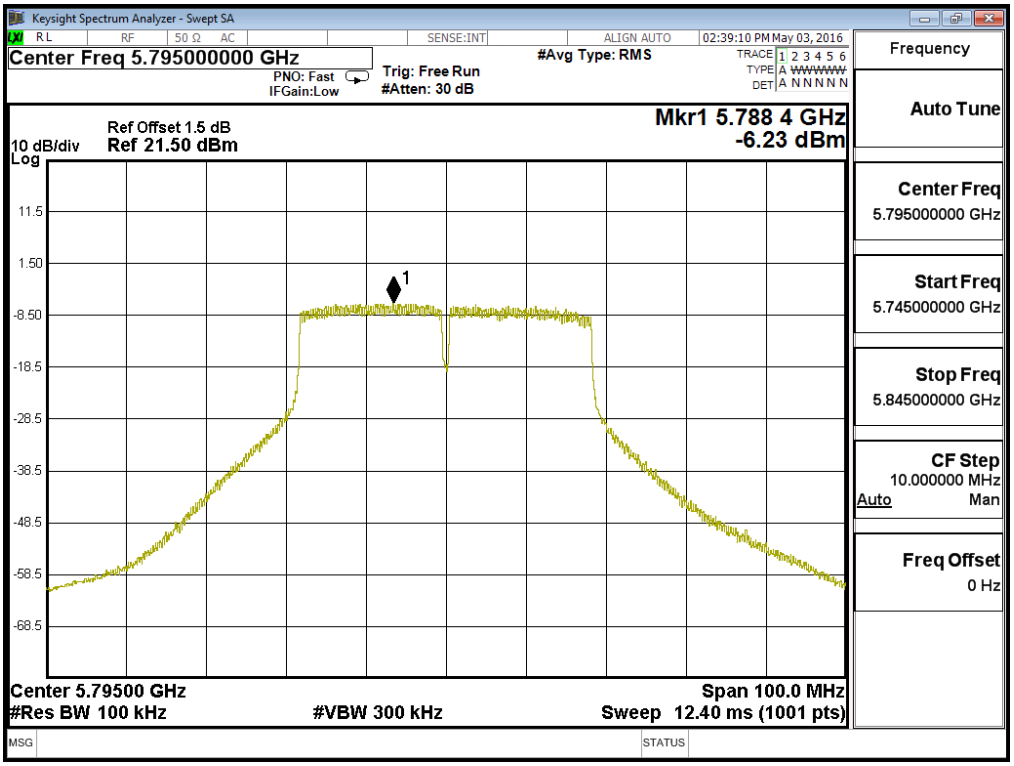
Channel 159 – Chain A



Channel 151 – Chain B



Channel 159 – Chain B

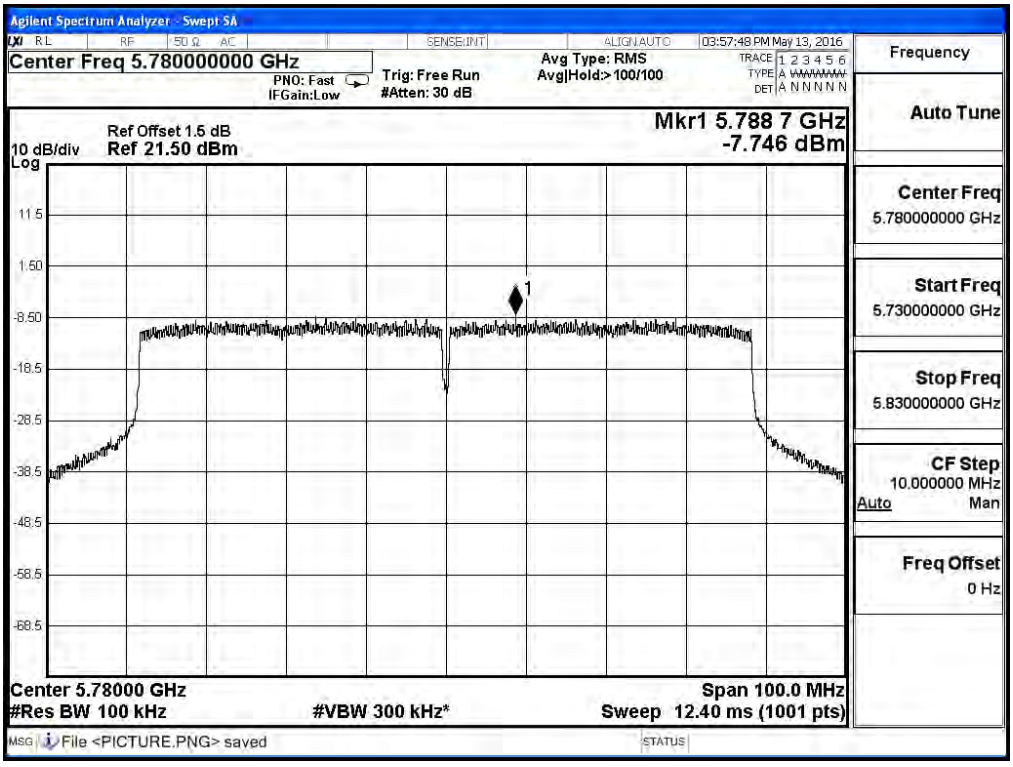


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11ac-80BW-65Mbps) (Grid DISH Antenna)

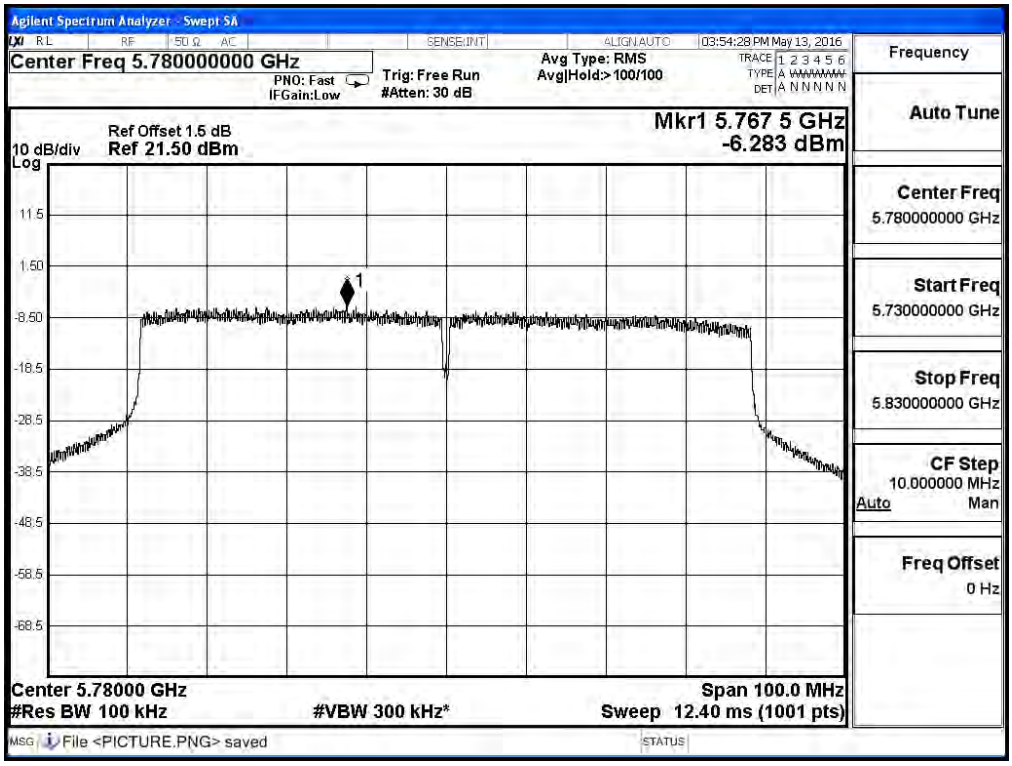
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
156	5780	A	-7.746	6.980	2.244	<30	Pass
		B	-6.283	6.980	3.707	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 156 – Chain A



Channel 156– Chain B

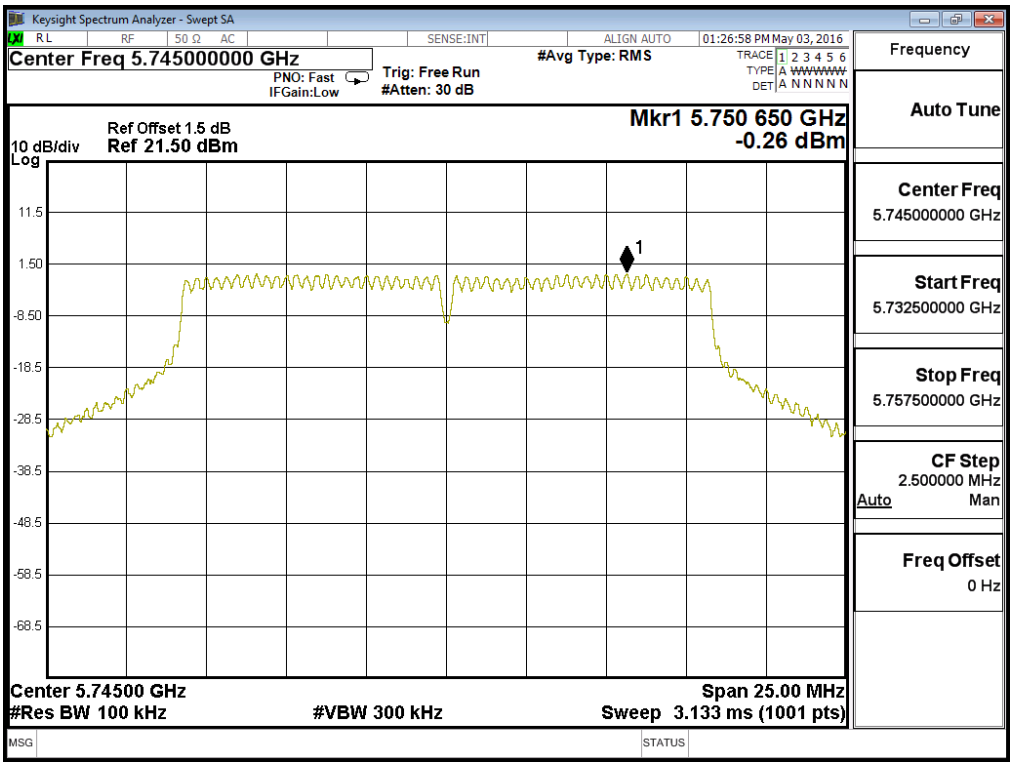


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna)

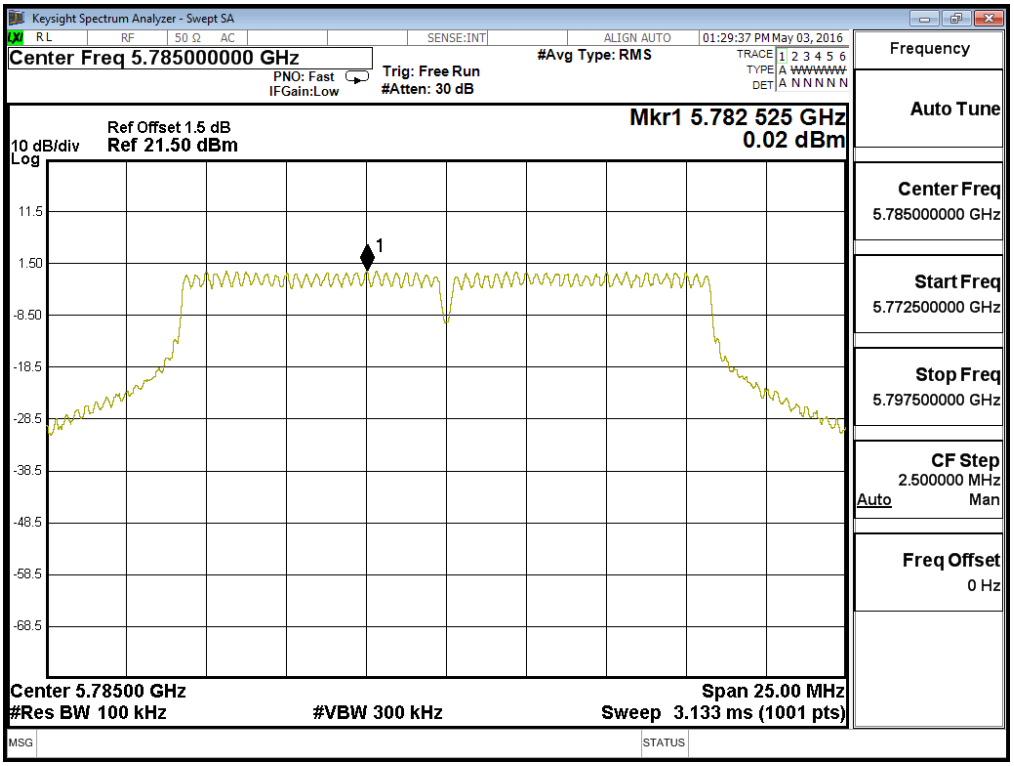
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
149	5745	A	-0.26	6.980	9.730	<26	Pass
		B	2.910	6.980	12.900	<26	Pass
157	5785	A	0.020	6.980	10.010	<26	Pass
		B	1.990	6.980	11.980	<26	Pass
165	5825	A	0.470	6.980	10.460	<26	Pass
		B	2.000	6.980	11.990	<26	Pass

Note :1. The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

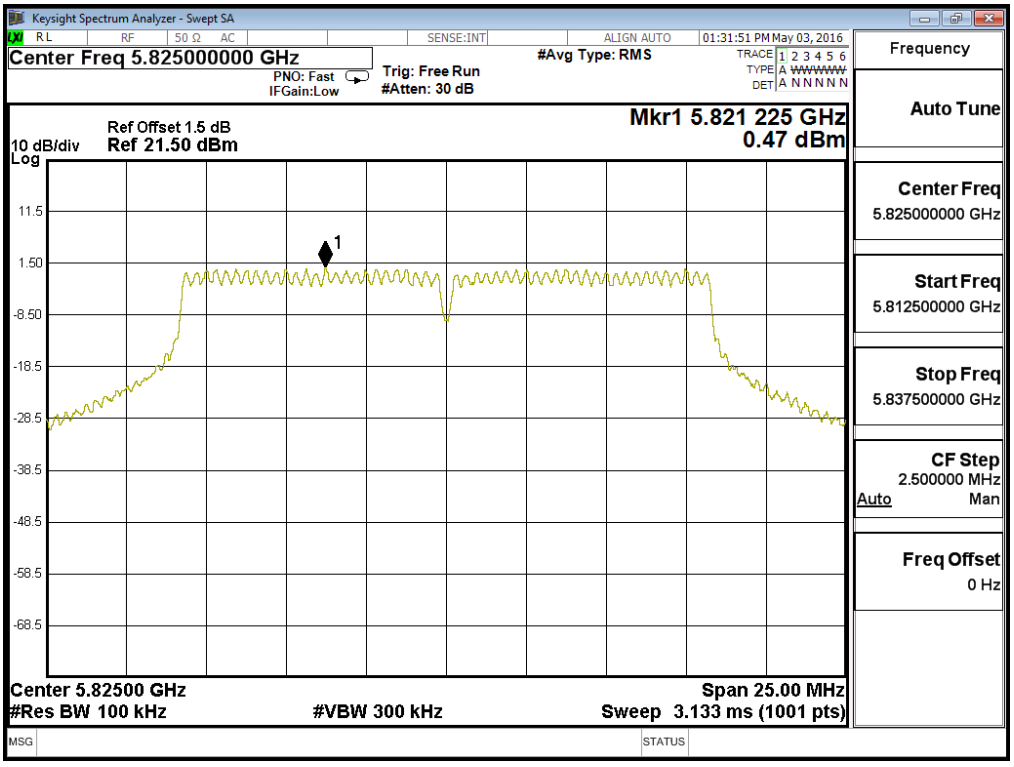
Channel 149– Chain A



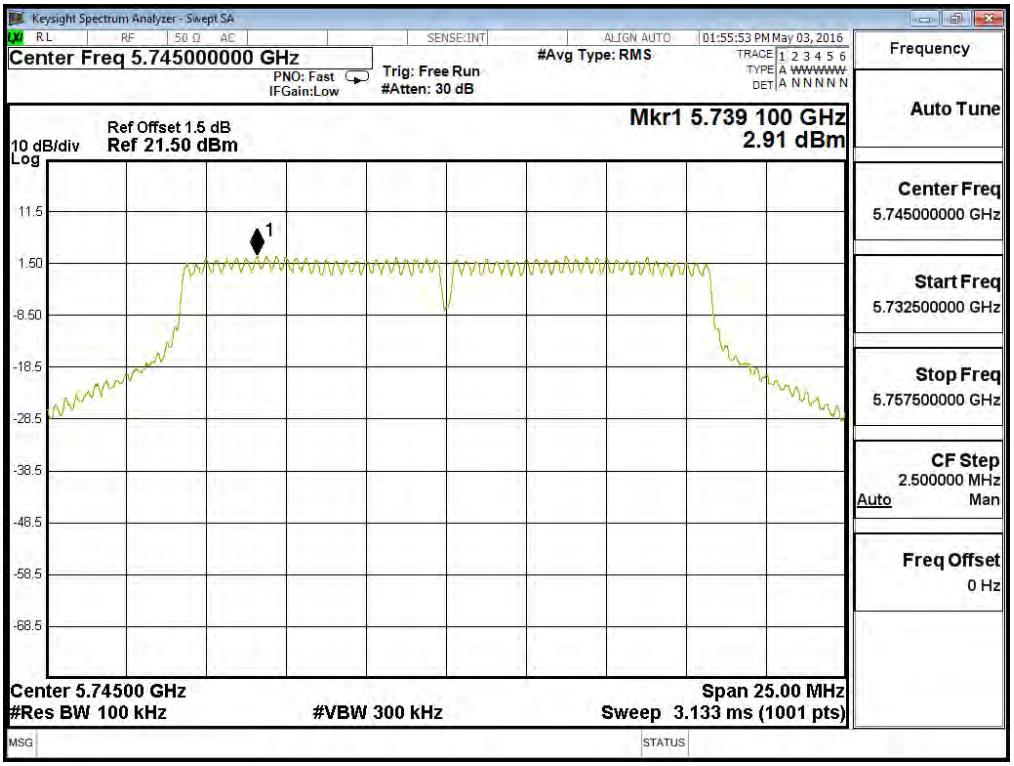
Channel 157– Chain A



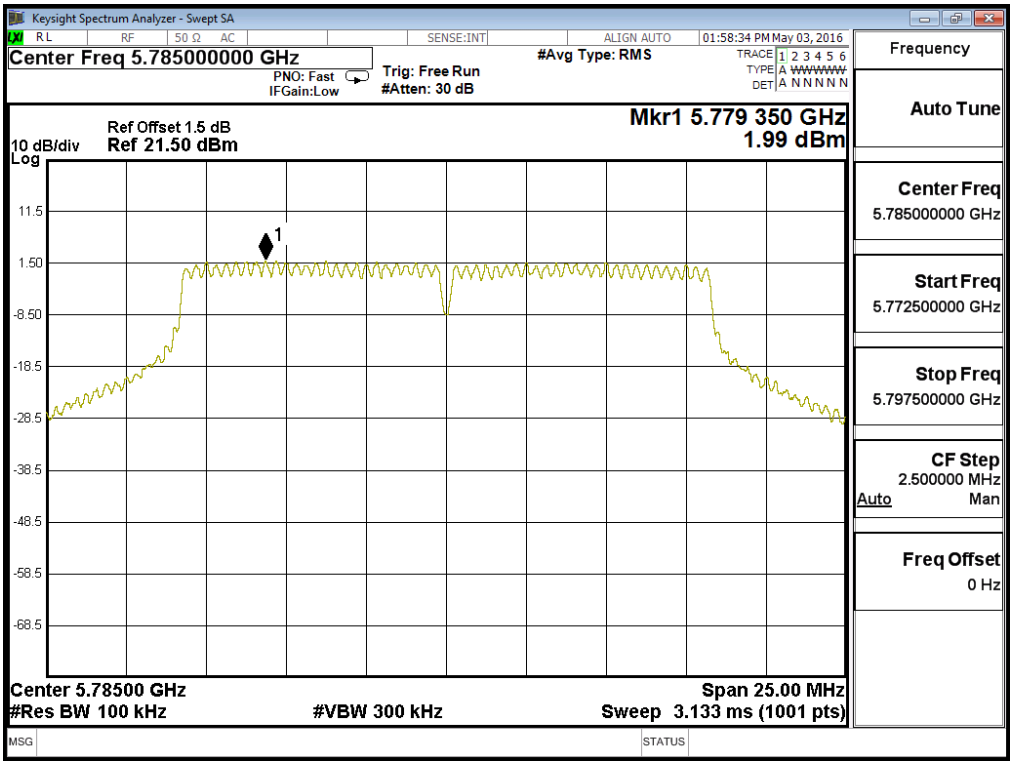
Channel 165– Chain A



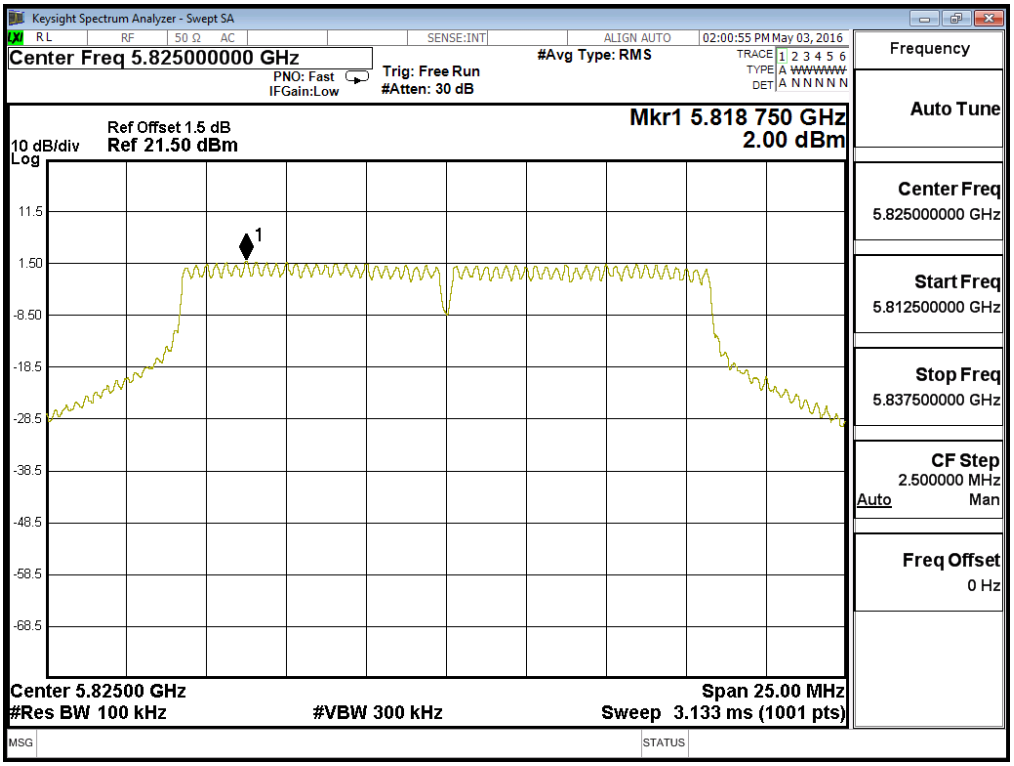
Channel 149– Chain B



Channel 157–Chain B



Channel 165–Chain B



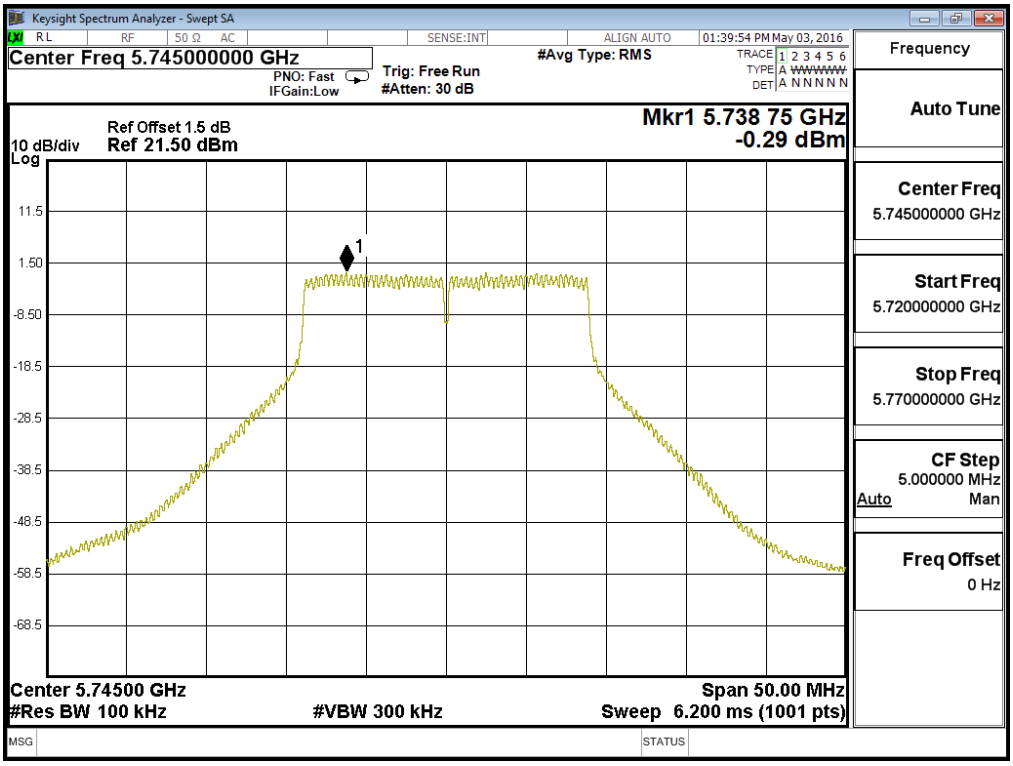
Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna)

Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
149	5745	A	-0.290	6.980	9.700	<23	Pass
		B	2.610	6.980	12.600	<23	Pass
157	5785	A	0.320	6.980	10.310	<23	Pass
		B	2.010	6.980	12.000	<23	Pass
165	5825	A	0.300	6.980	10.290	<23	Pass
		B	1.650	6.980	11.640	<23	Pass

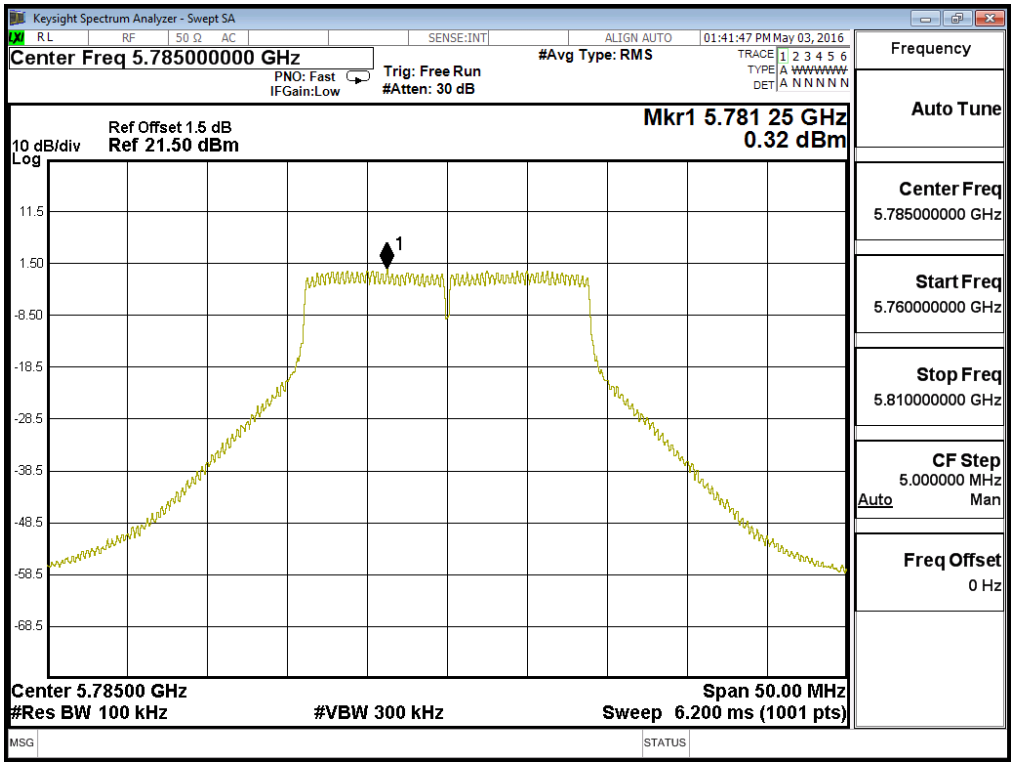
Note: 1.The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

2. The peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. Limit = 30dBm - (Antenna Gain +10*log 2 (two antennas) - 6) = 23dBm

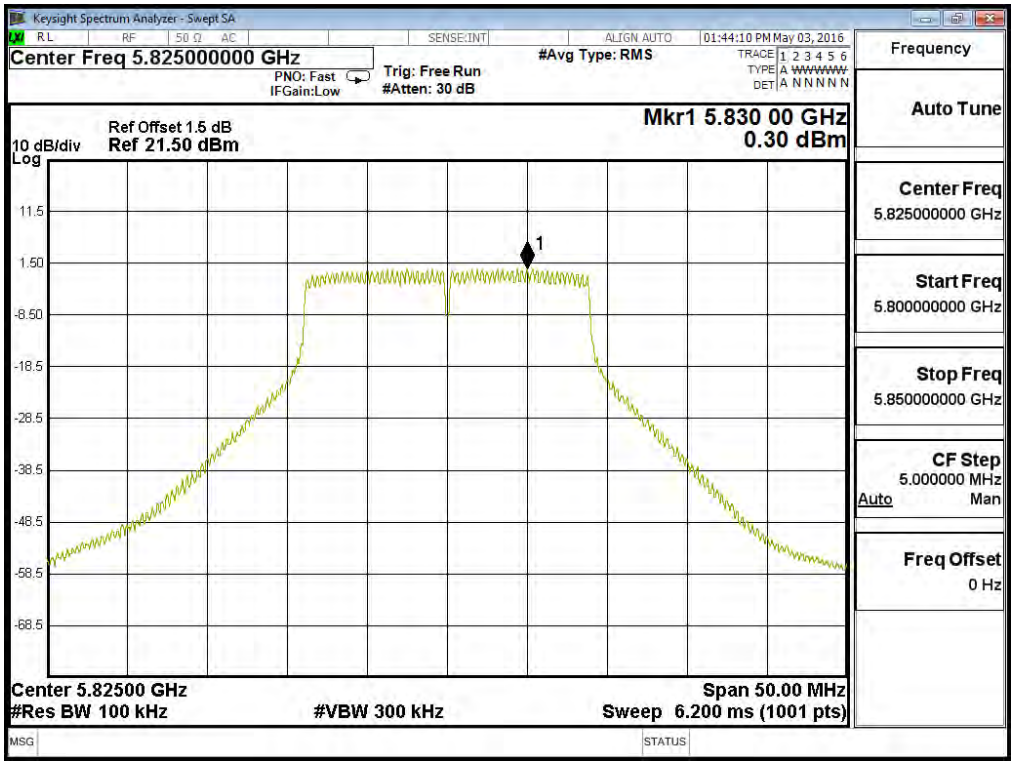
Channel 149 – Chain A



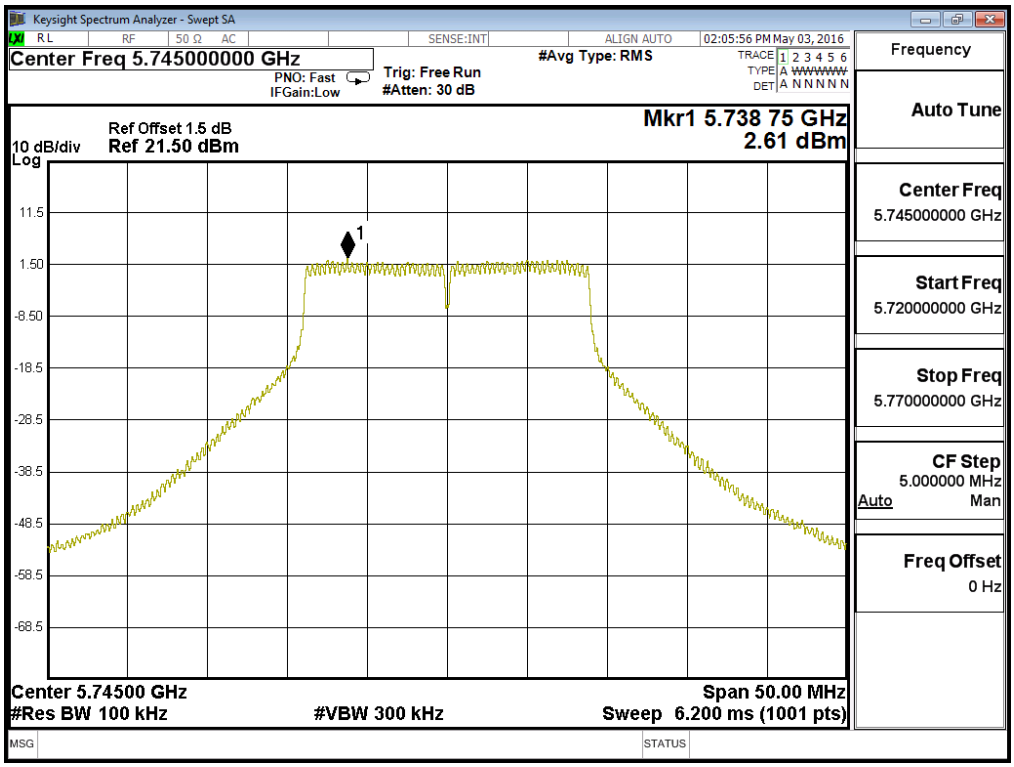
Channel 157 – Chain A



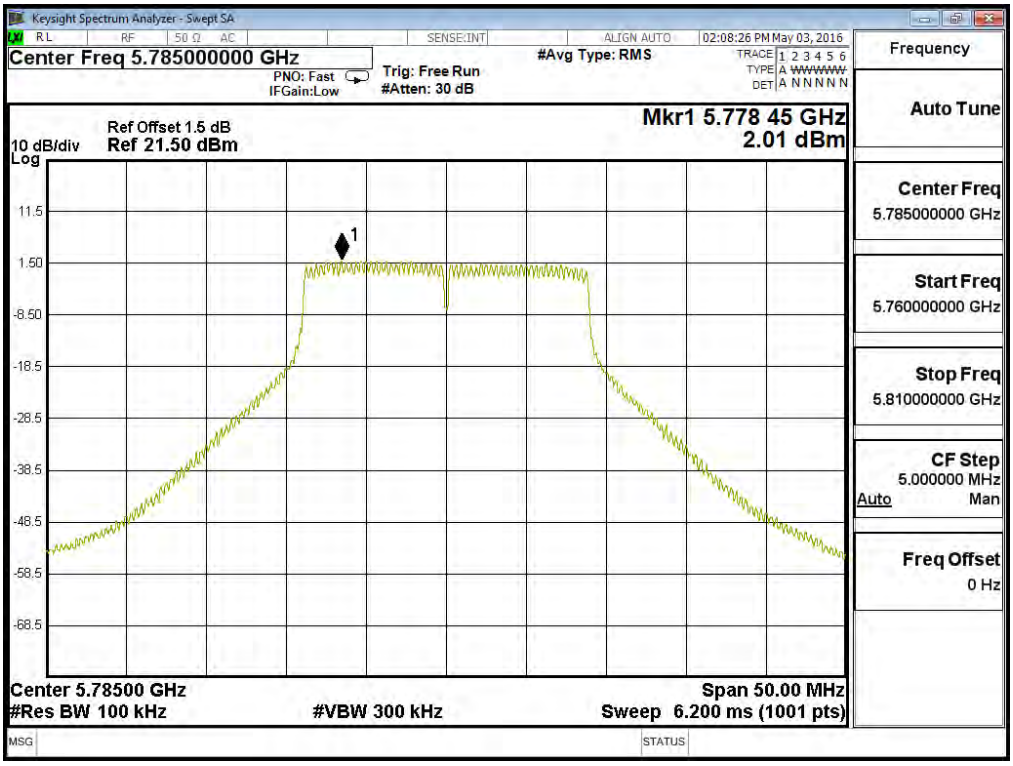
Channel 165 – Chain A



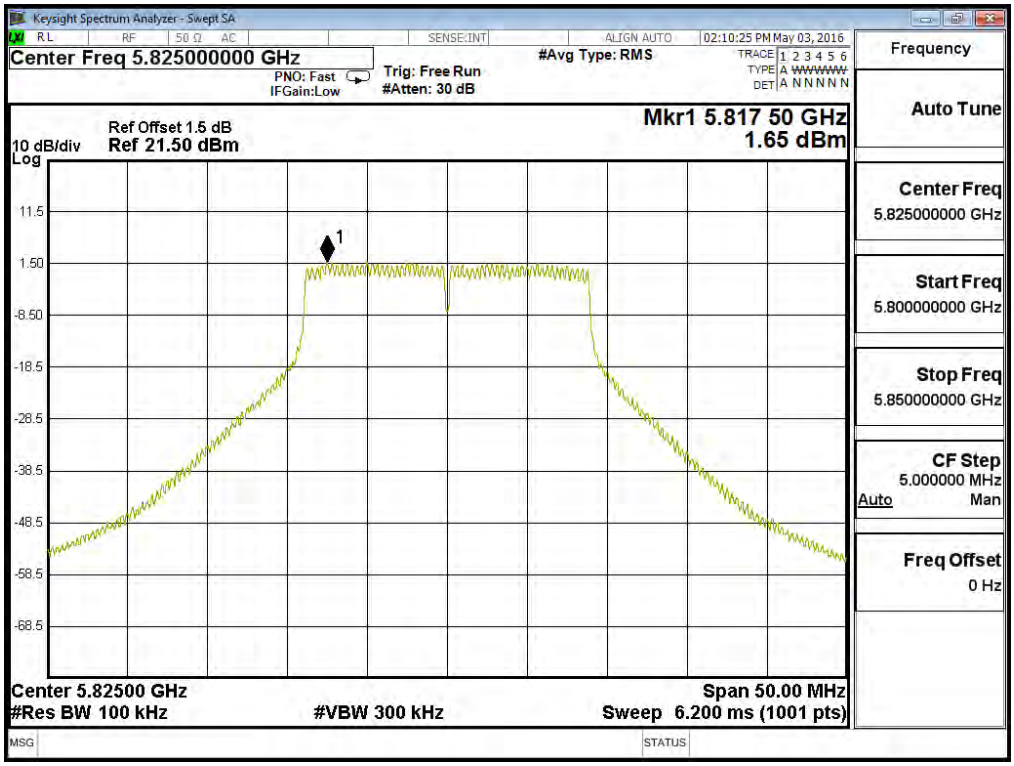
Channel 149 – Chain B



Channel 157 – Chain B



Channel 165 – Chain B



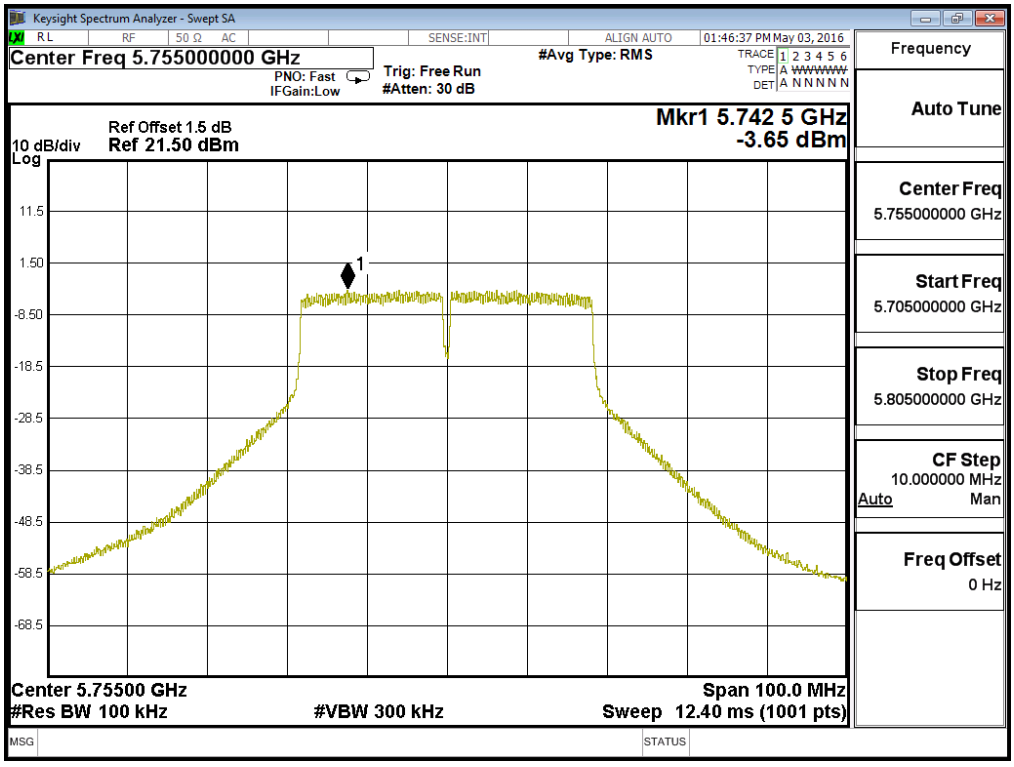
Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna)

Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
151	5755	A	-3.650	6.980	6.340	<23	Pass
		B	-0.610	6.980	9.380	<23	Pass
159	5795	A	-2.080	6.980	7.910	<23	Pass
		B	-0.860	6.980	9.130	<23	Pass

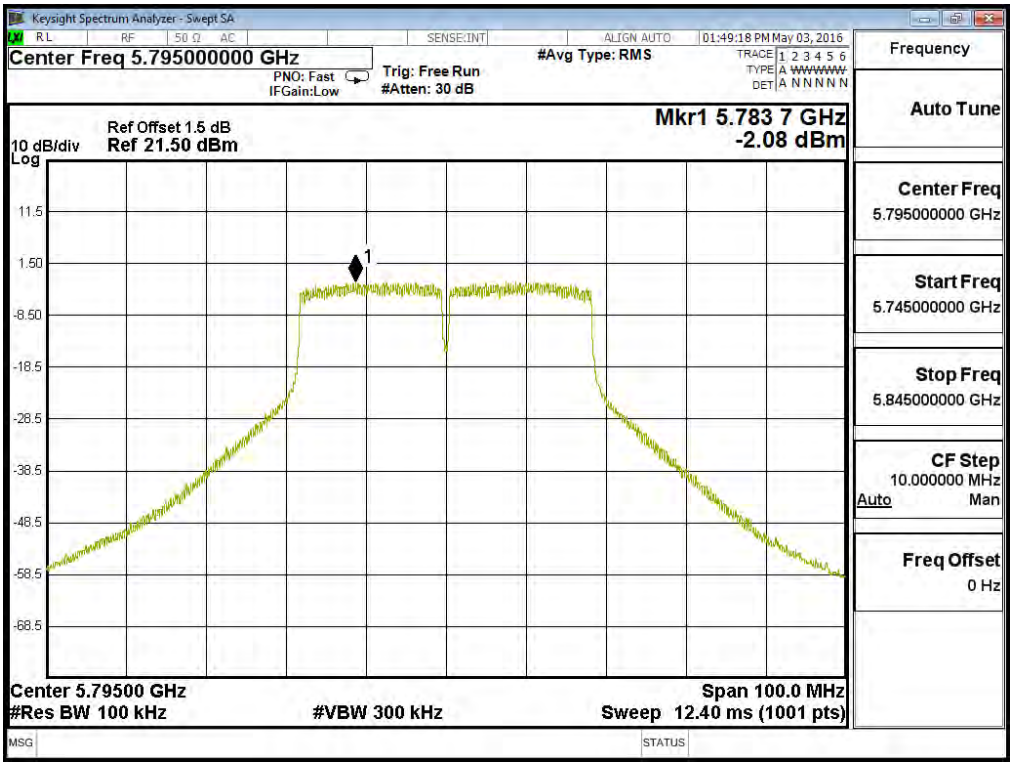
Note: 1.The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

2. The peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. Limit = 30dBm - (Antenna Gain +10*log 2 (two antennas) - 6) = 23dBm

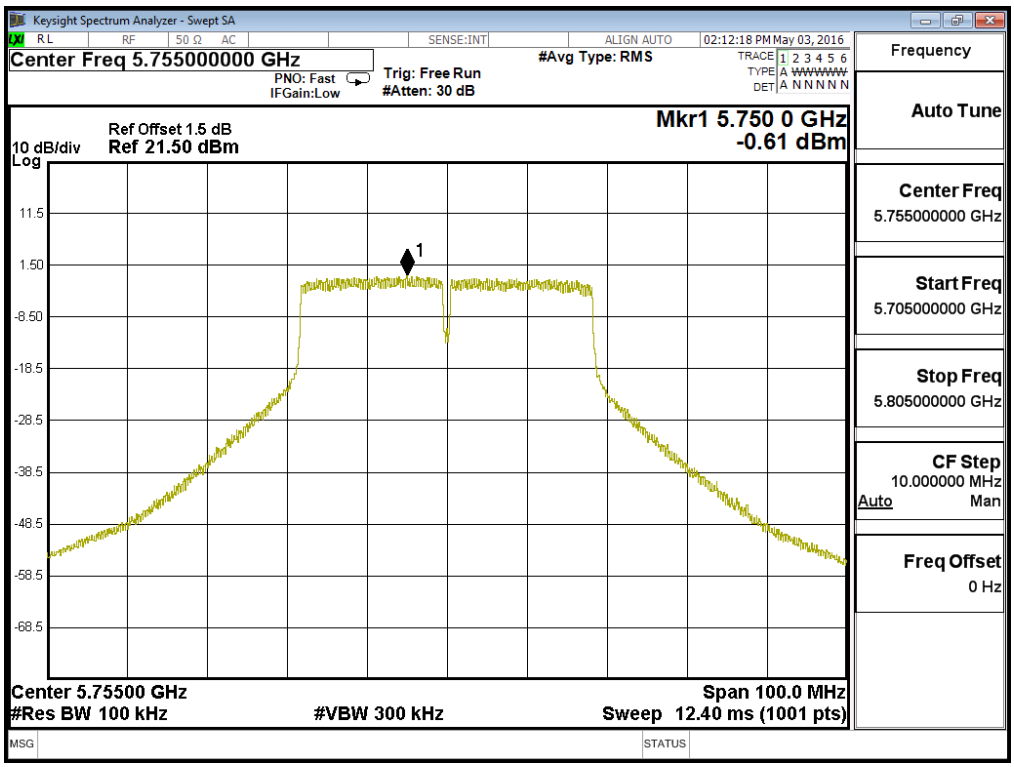
Channel 151 – Chain A



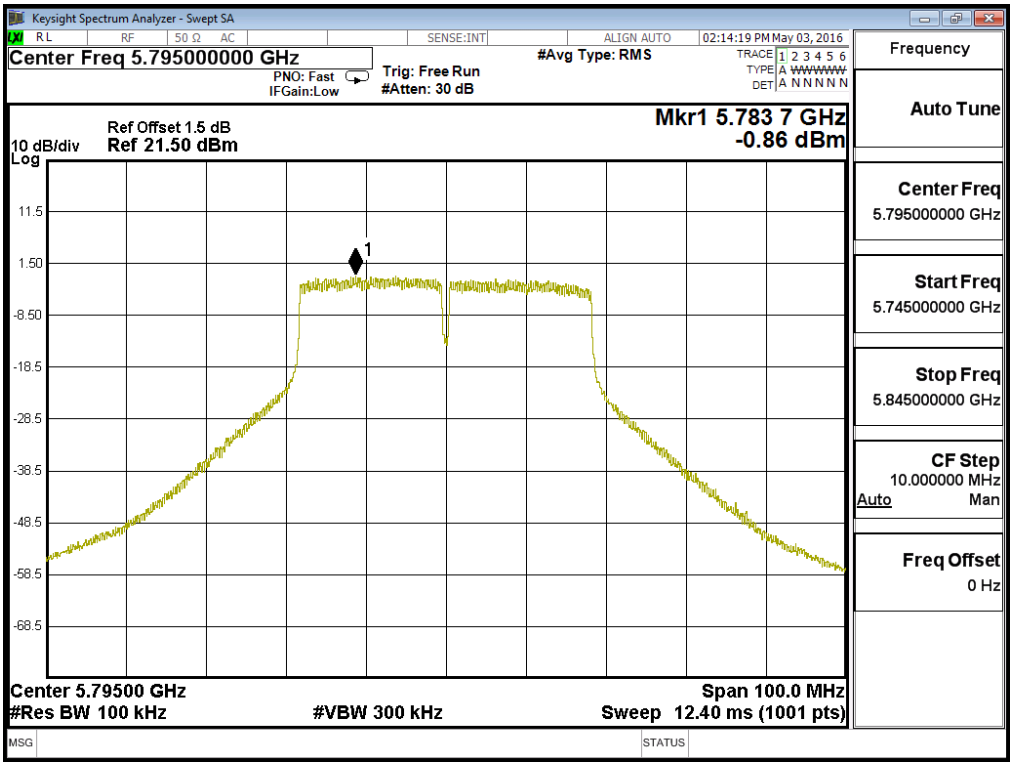
Channel 159 – Chain A



Channel 151 – Chain B



Channel 159 – Chain B



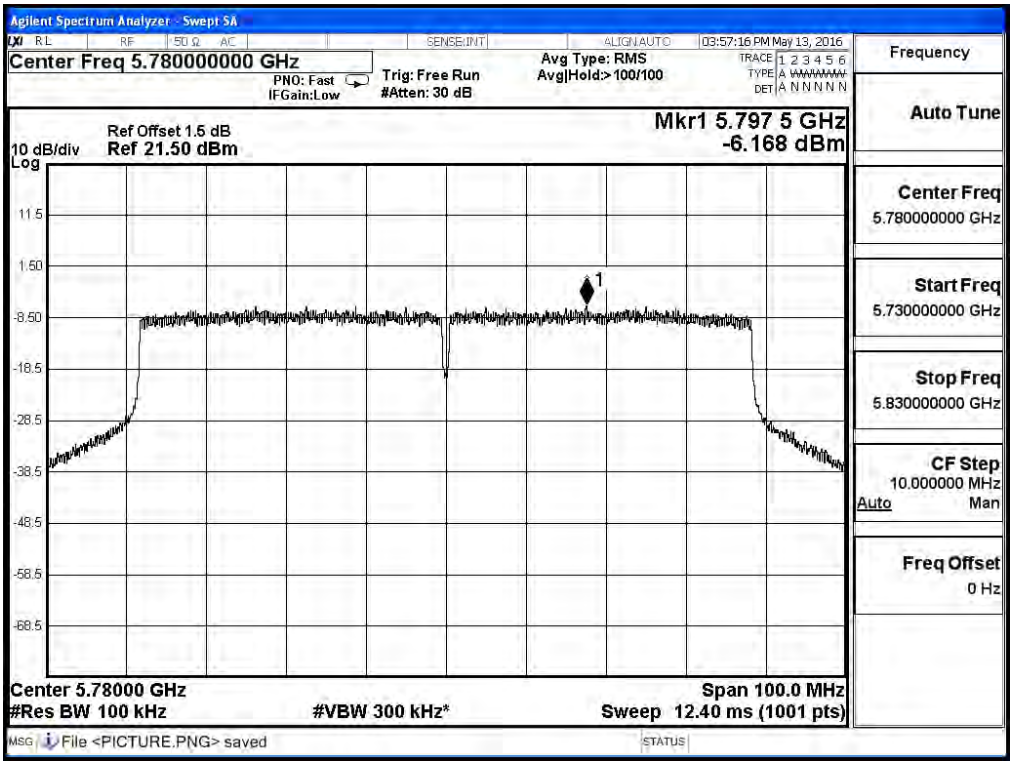
Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 8: Transmit (802.11ac-80BW-65Mbps)(Omni Antenna)

Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
156	5780	A	-6.168	6.980	3.822	<23	Pass
		B	-6.729	6.980	3.261	<23	Pass

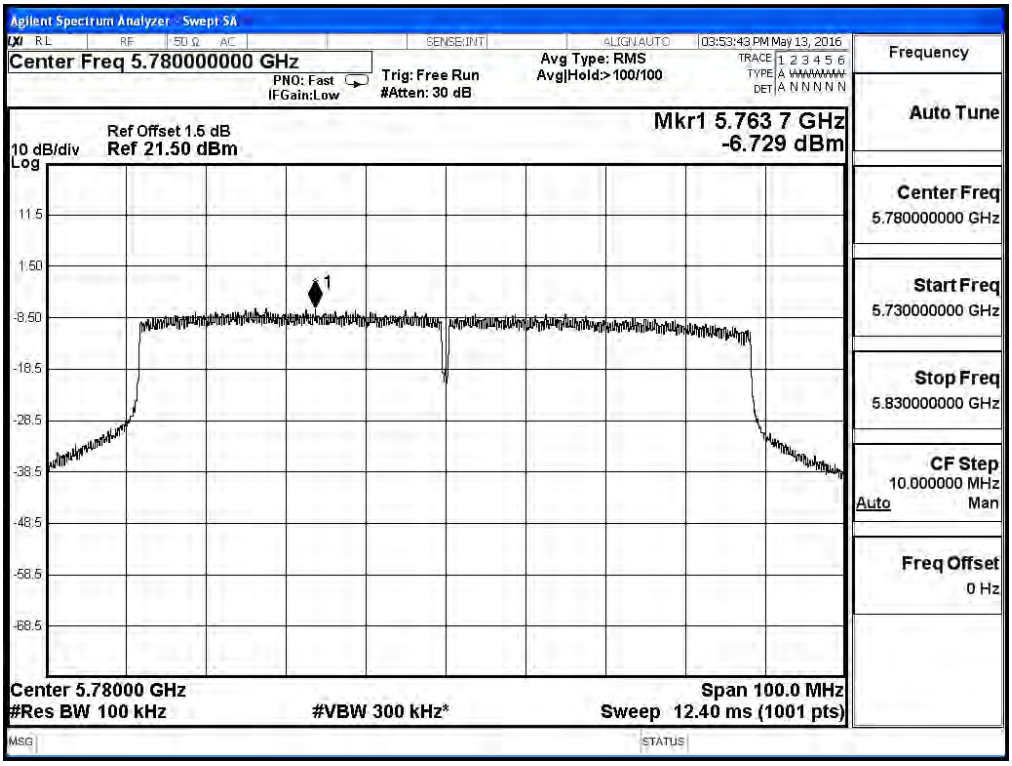
Note: 1.The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

2. The peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. Limit = 30dBm - (Antenna Gain +10*log 2 (two antennas) - 6) = 23dBm

Channel 156 – Chain A



Channel 156– Chain B

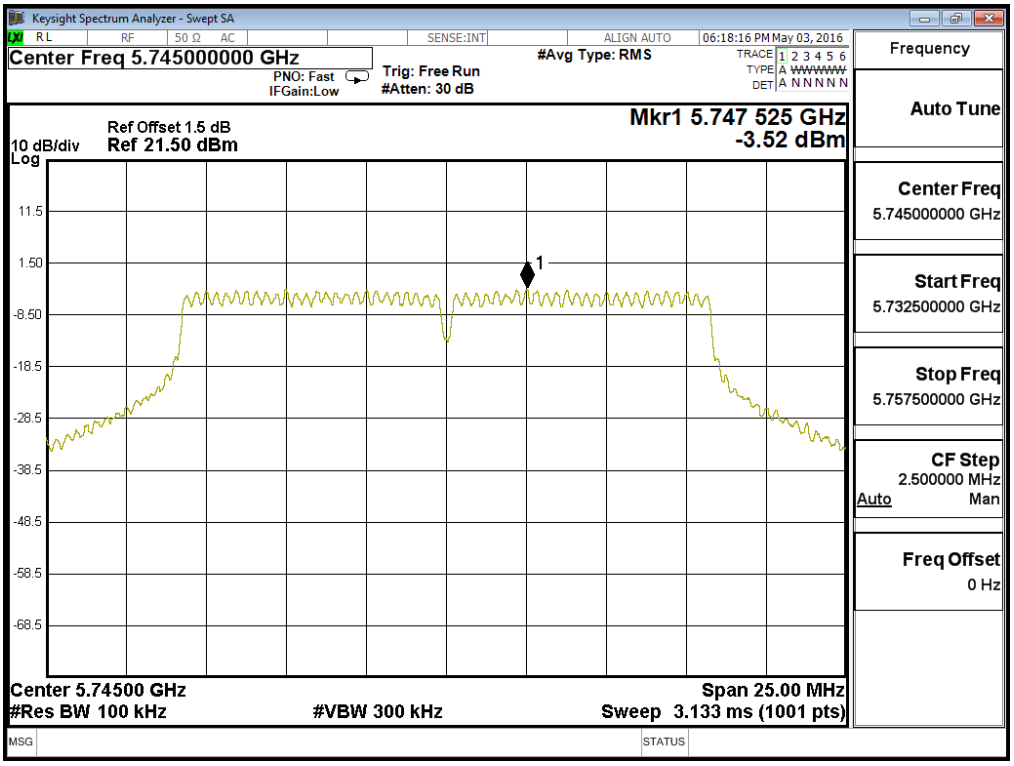


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna)

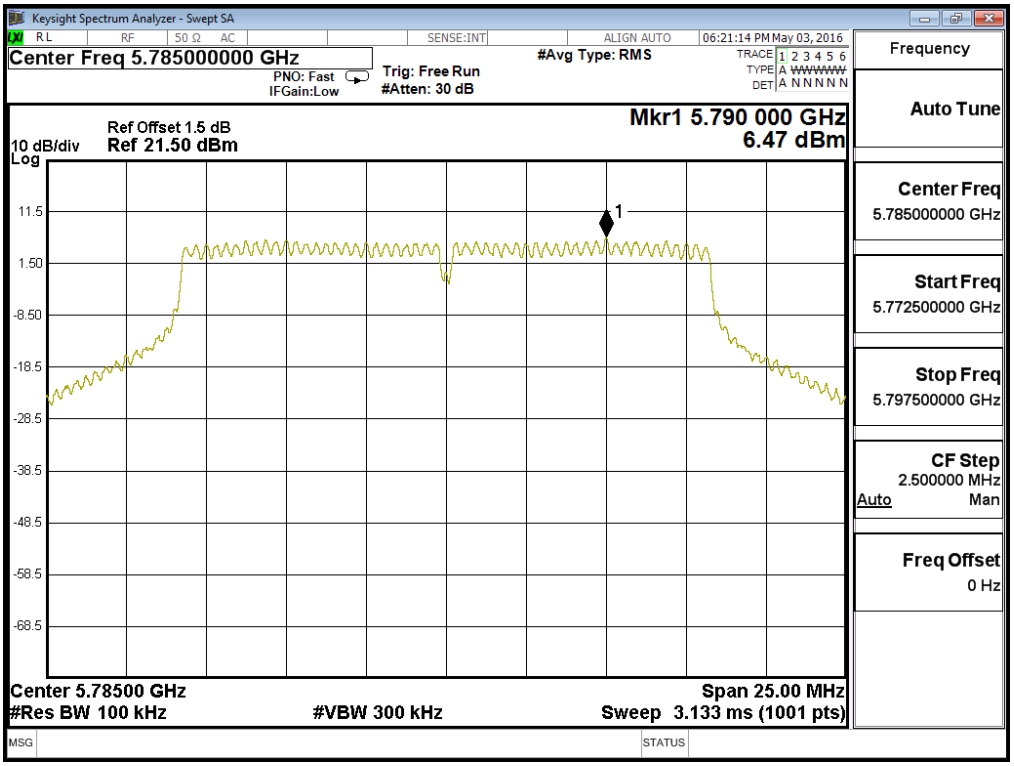
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
149	5745	A	-3.52	6.980	6.470	<30	Pass
		B	-2.890	6.980	7.100	<30	Pass
157	5785	A	6.470	6.980	16.460	<30	Pass
		B	5.600	6.980	15.590	<30	Pass
165	5825	A	0.010	6.980	10.000	<30	Pass
		B	-0.610	6.980	9.380	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

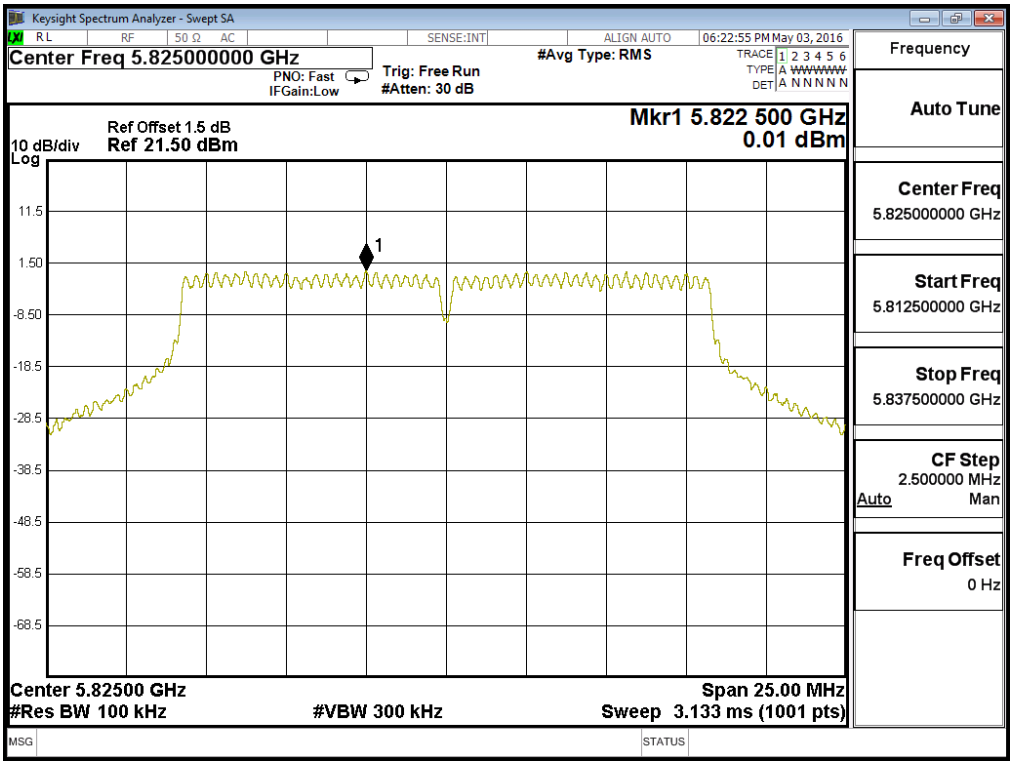
Channel 149– Chain A



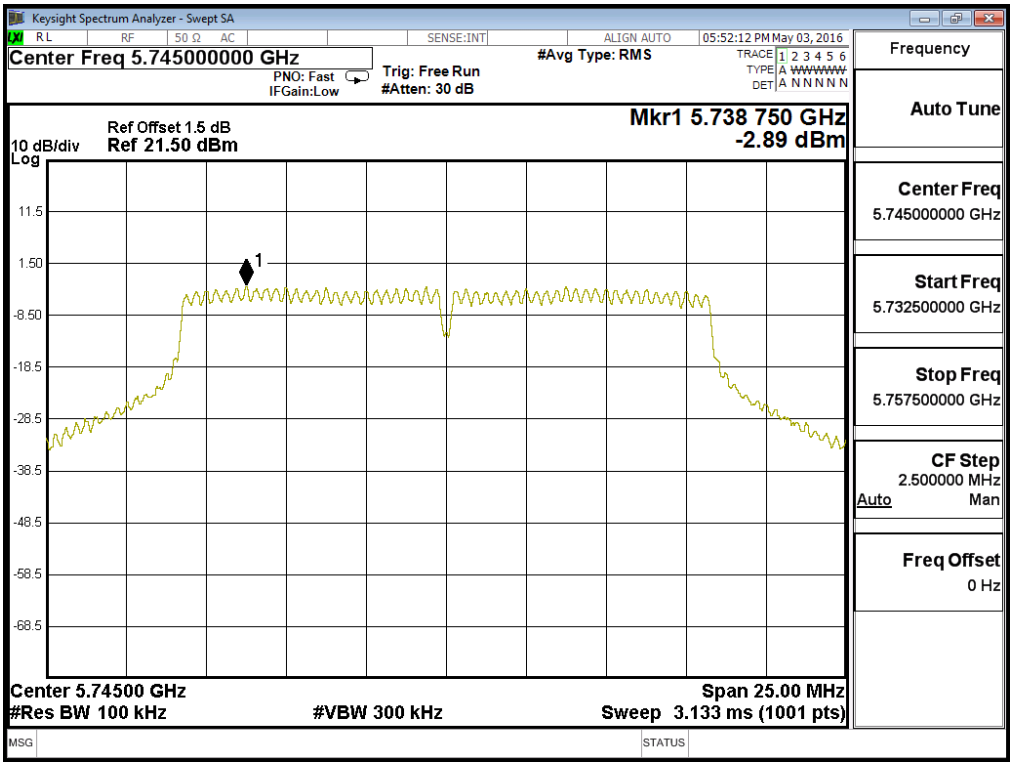
Channel 157– Chain A



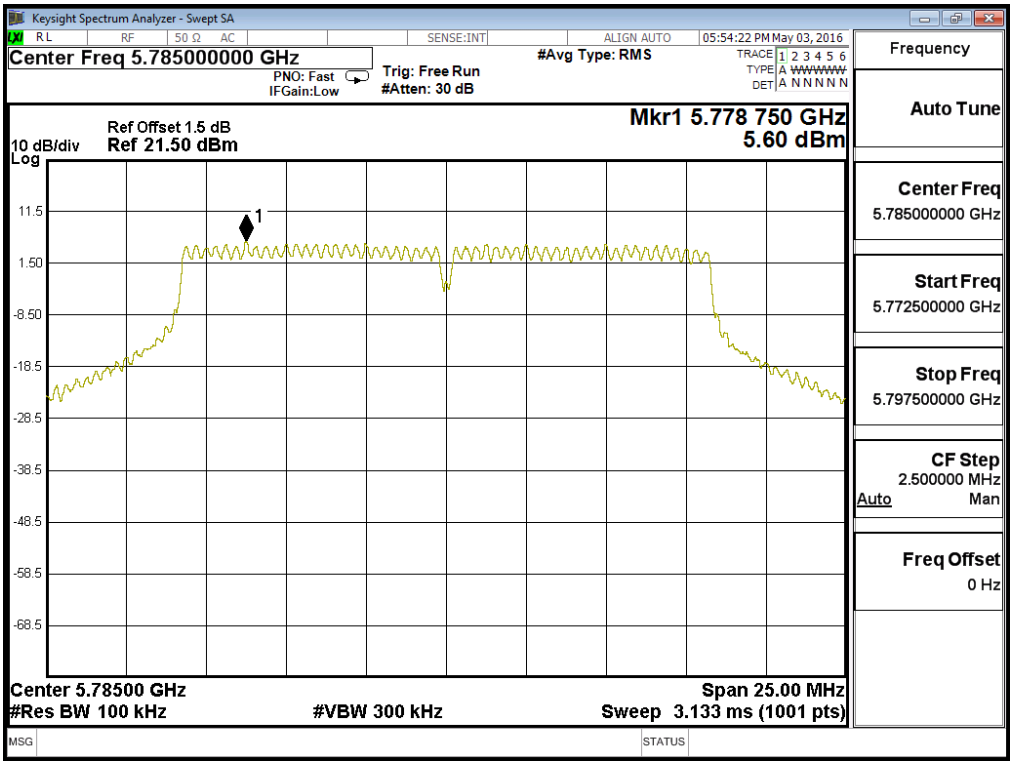
Channel 165– Chain A



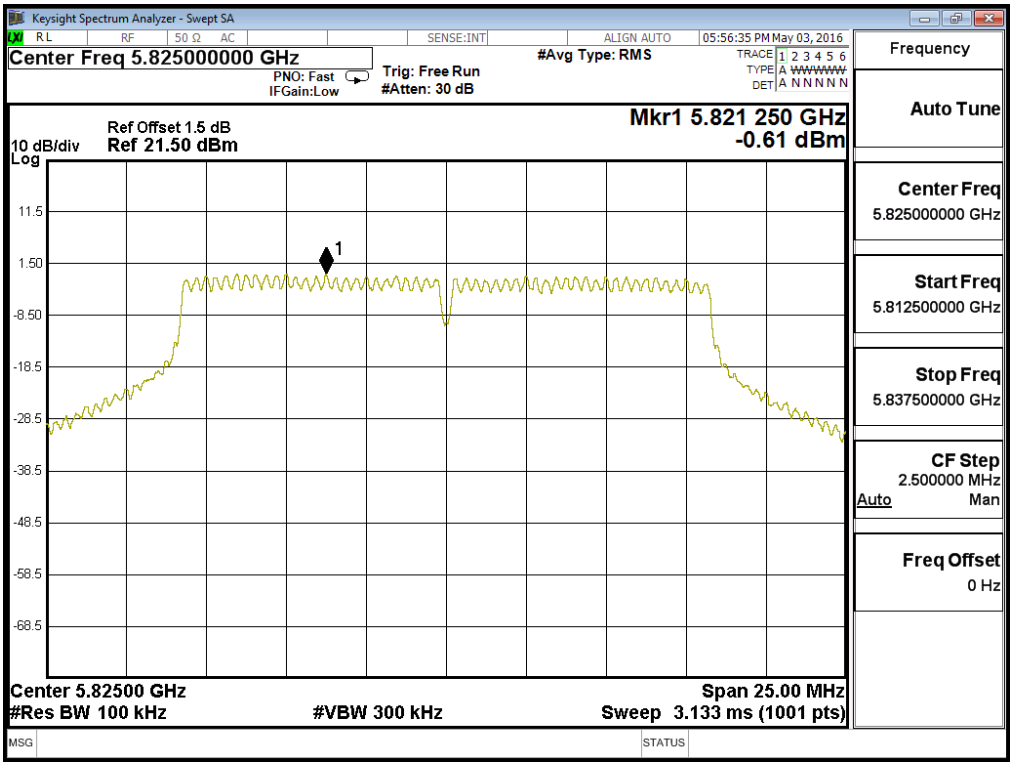
Channel 149– Chain B



Channel 157–Chain B



Channel 165–Chain B

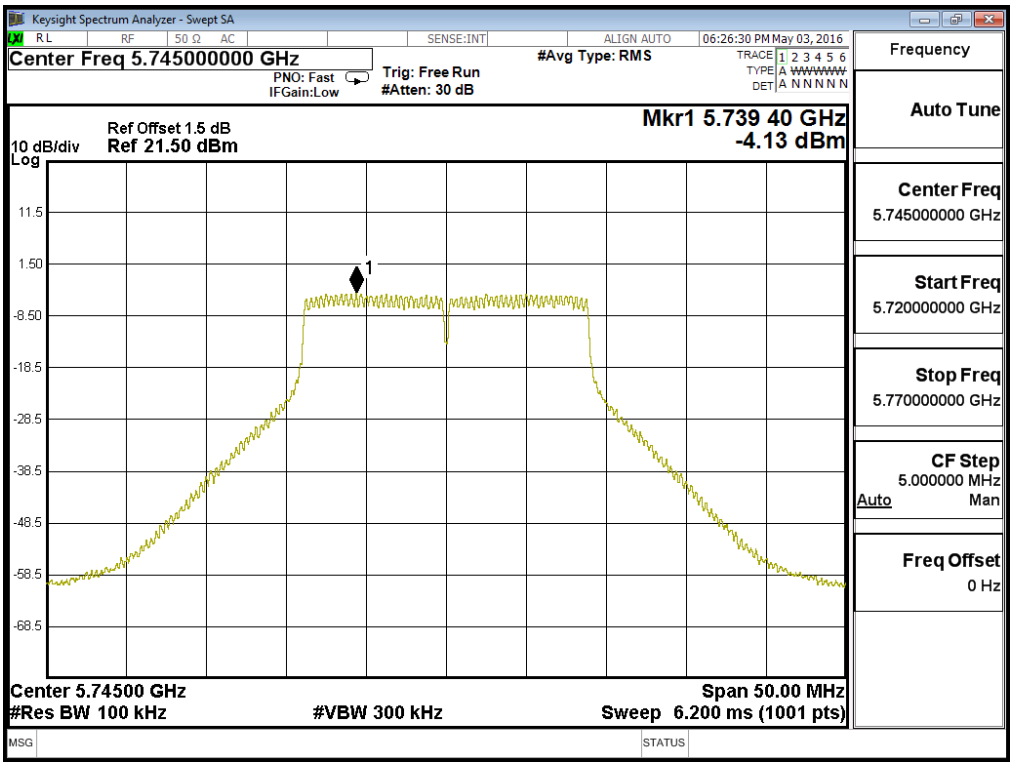


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna)

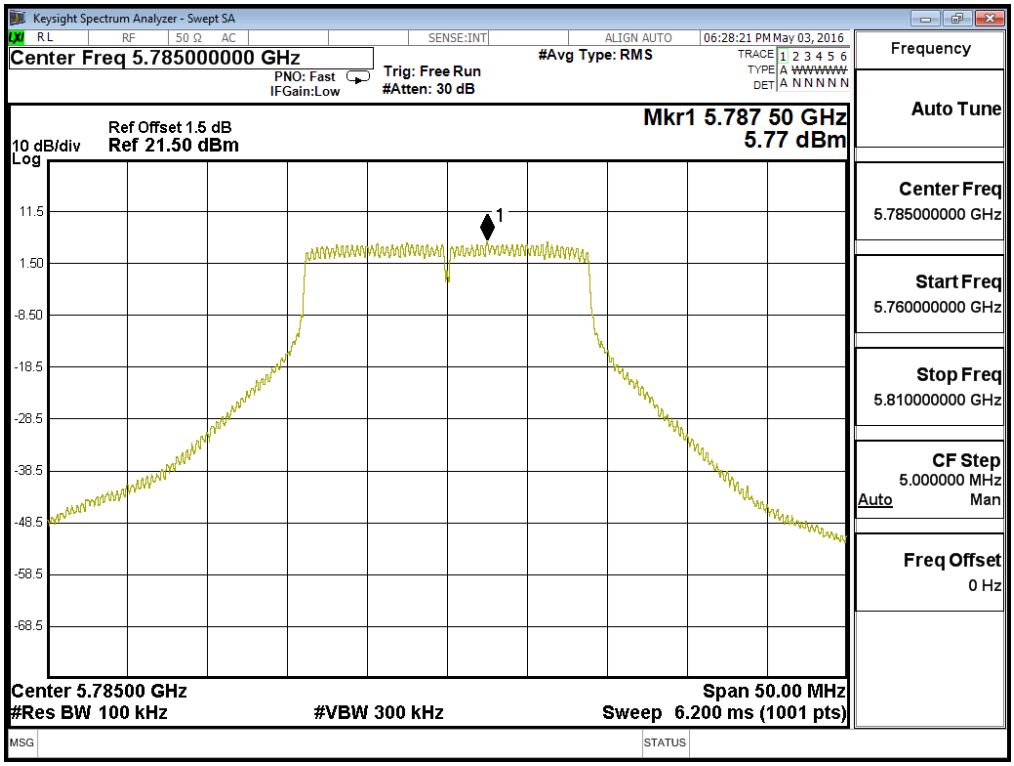
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
149	5745	A	-4.130	6.980	5.860	<30	Pass
		B	-3.440	6.980	6.550	<30	Pass
157	5785	A	5.770	6.980	15.760	<30	Pass
		B	4.950	6.980	14.940	<30	Pass
165	5825	A	-1.130	6.980	8.860	<30	Pass
		B	-1.030	6.980	8.960	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

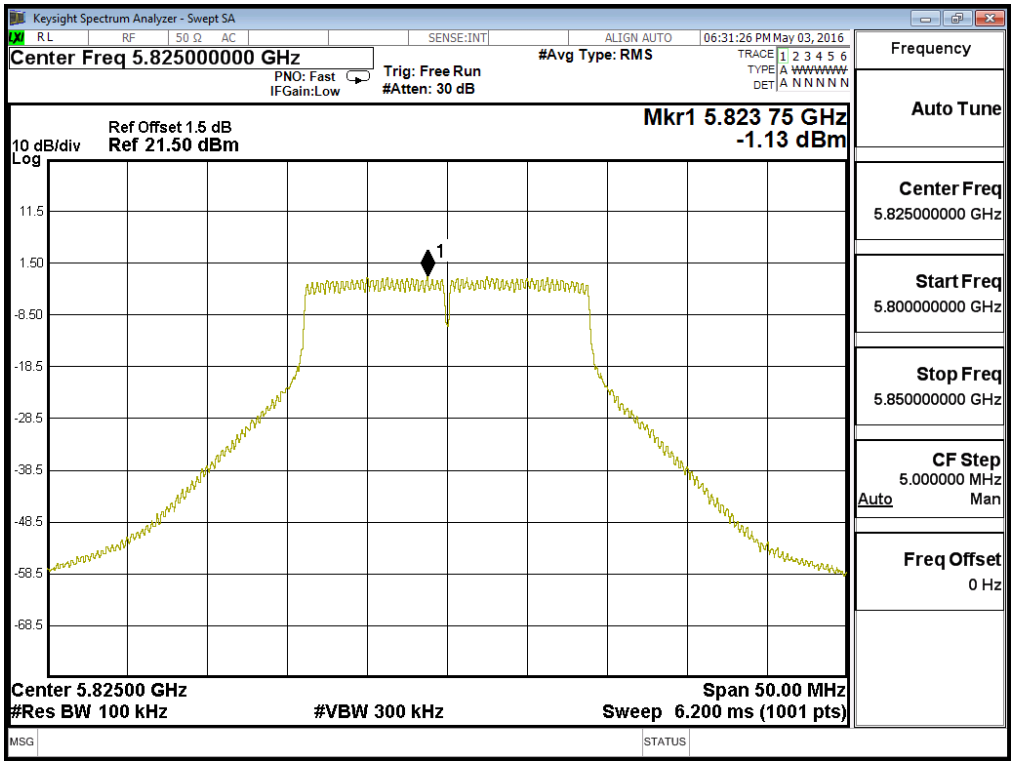
Channel 149 – Chain A



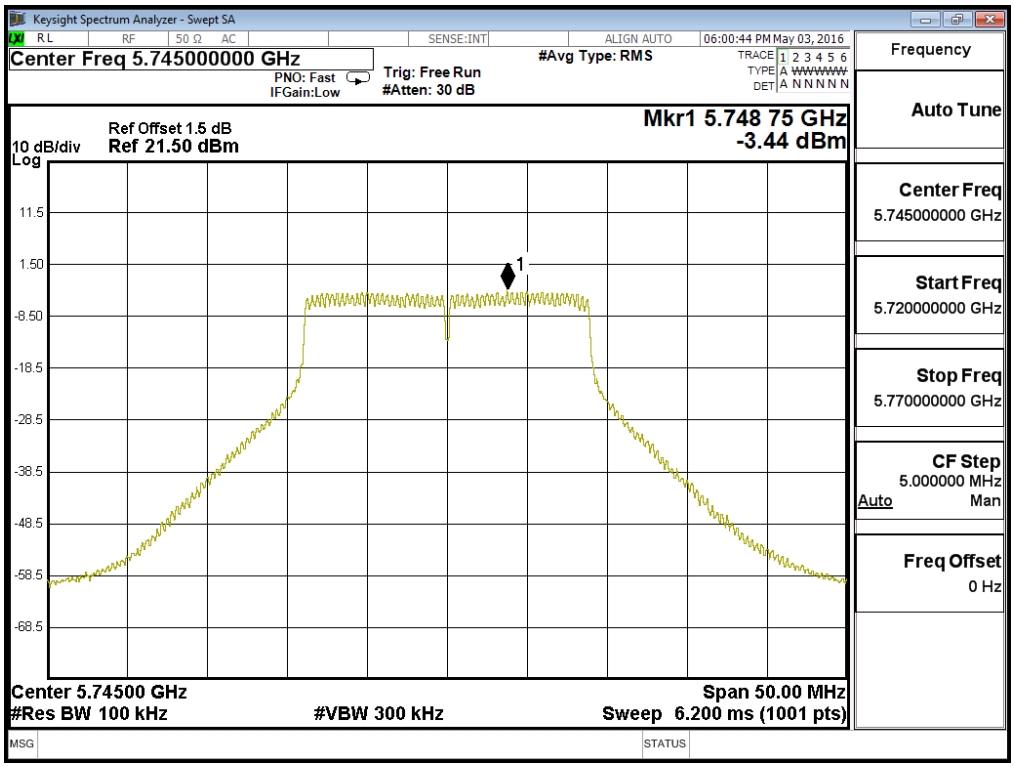
Channel 157 – Chain A



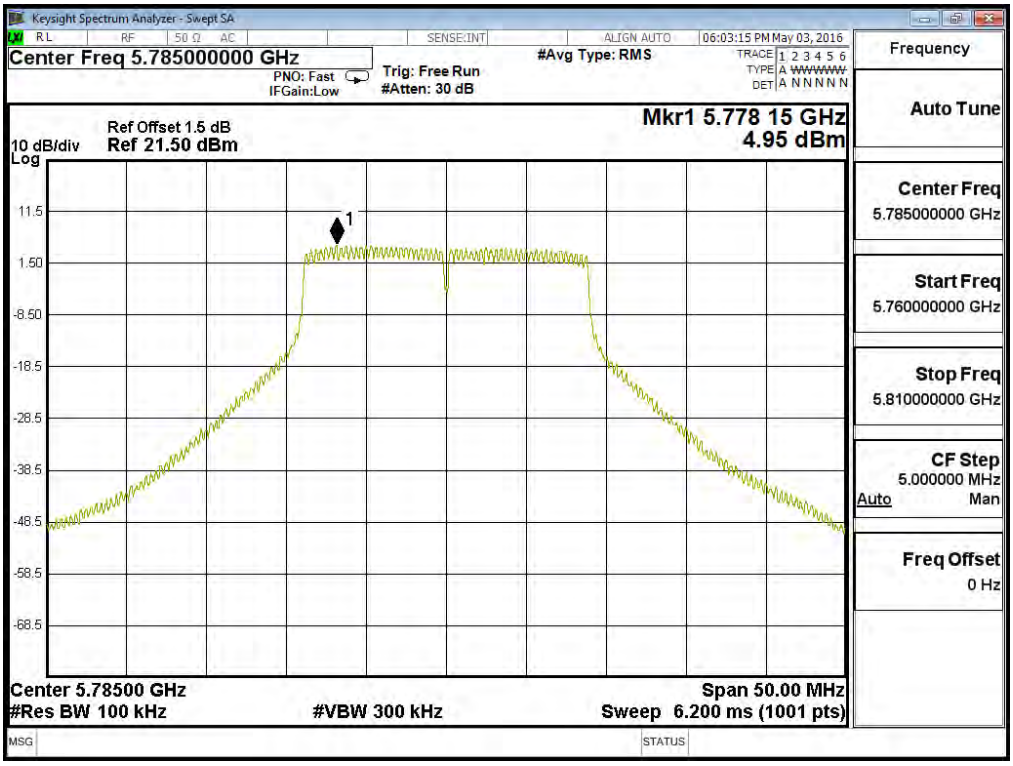
Channel 165 – Chain A



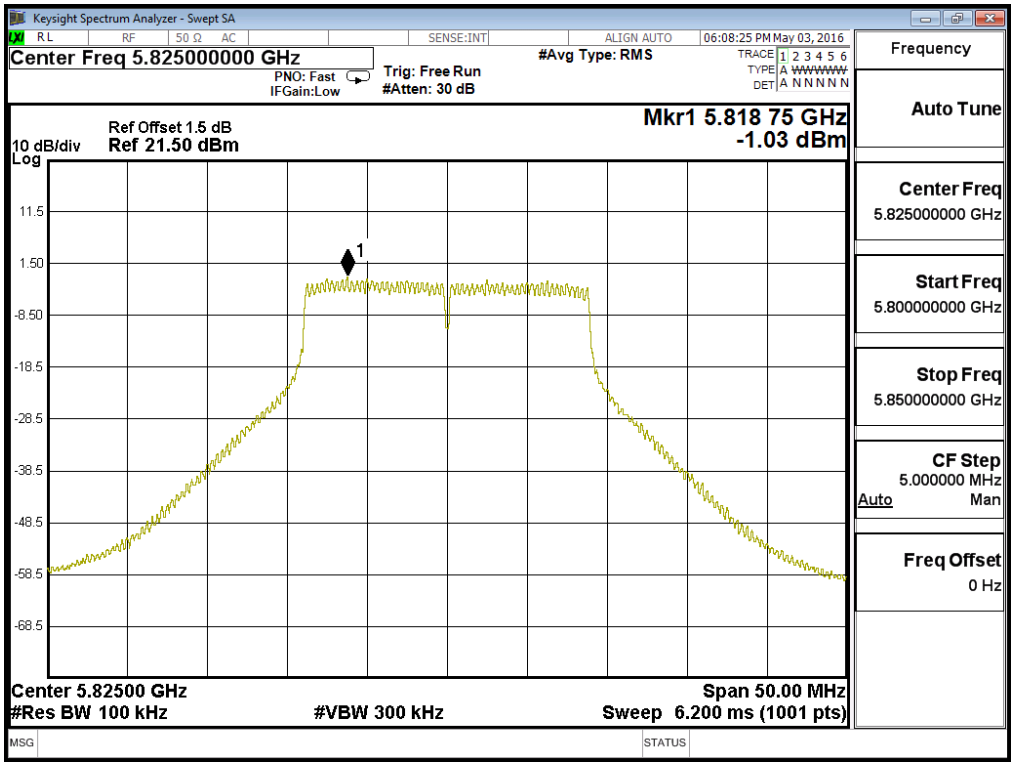
Channel 149 – Chain B



Channel 157 – Chain B



Channel 165 – Chain B

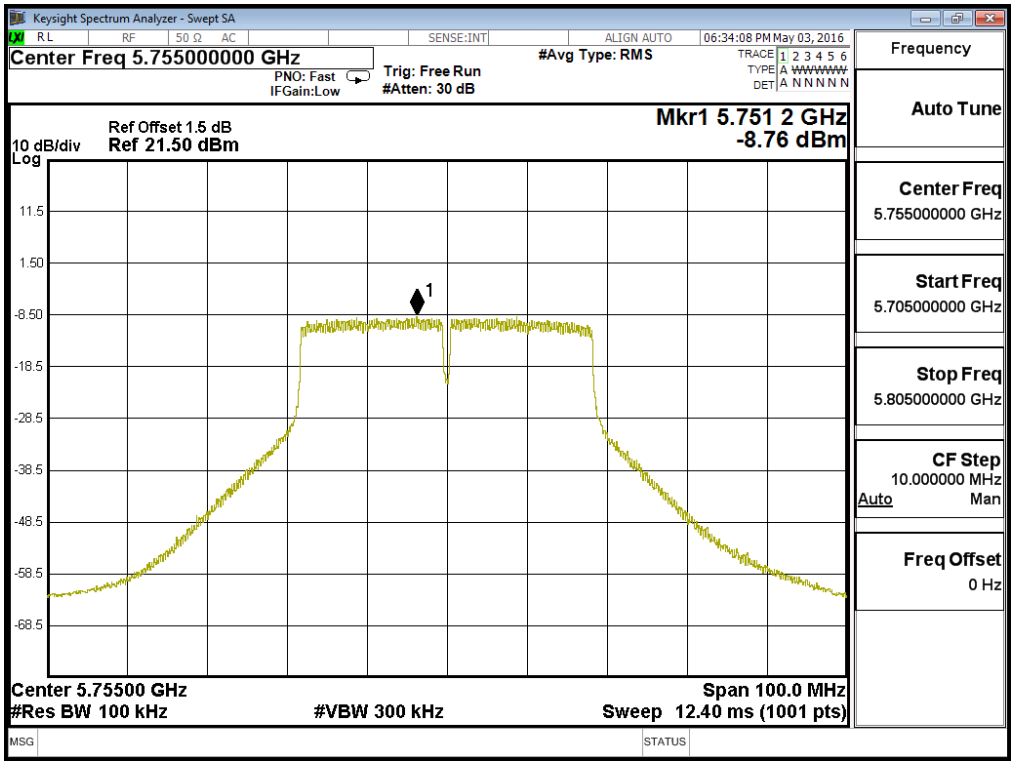


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna)

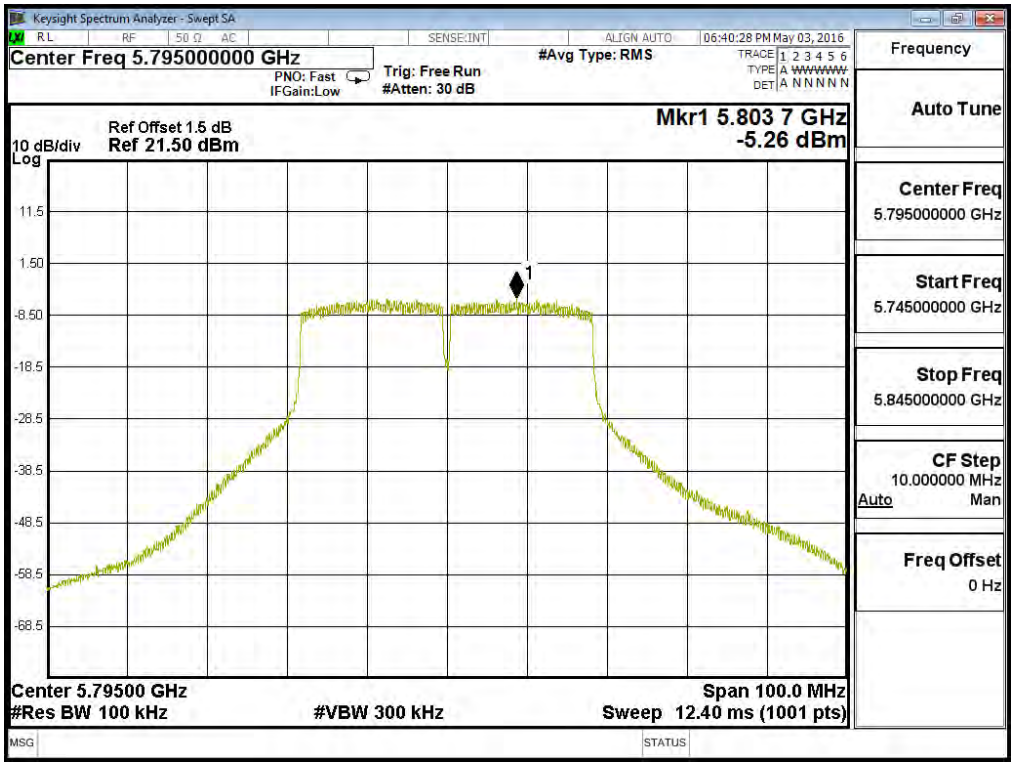
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
151	5755	A	-8.760	6.980	1.230	<30	Pass
		B	-8.020	6.980	1.970	<30	Pass
159	5795	A	-5.260	6.980	4.730	<30	Pass
		B	-5.450	6.980	4.540	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

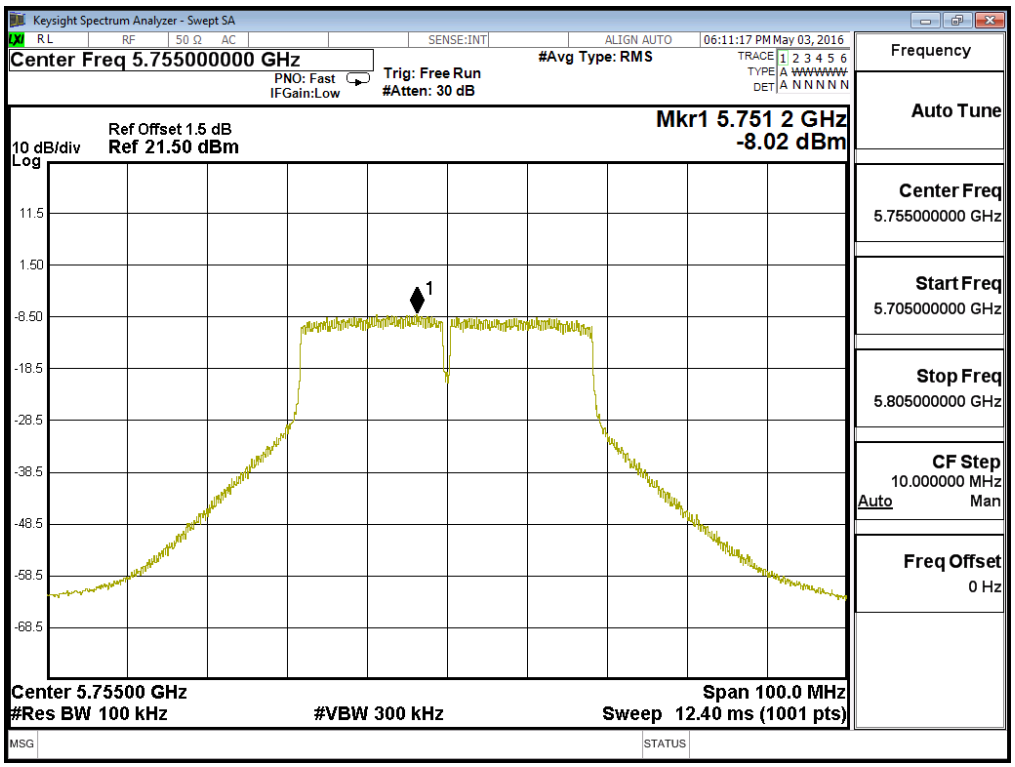
Channel 151 – Chain A



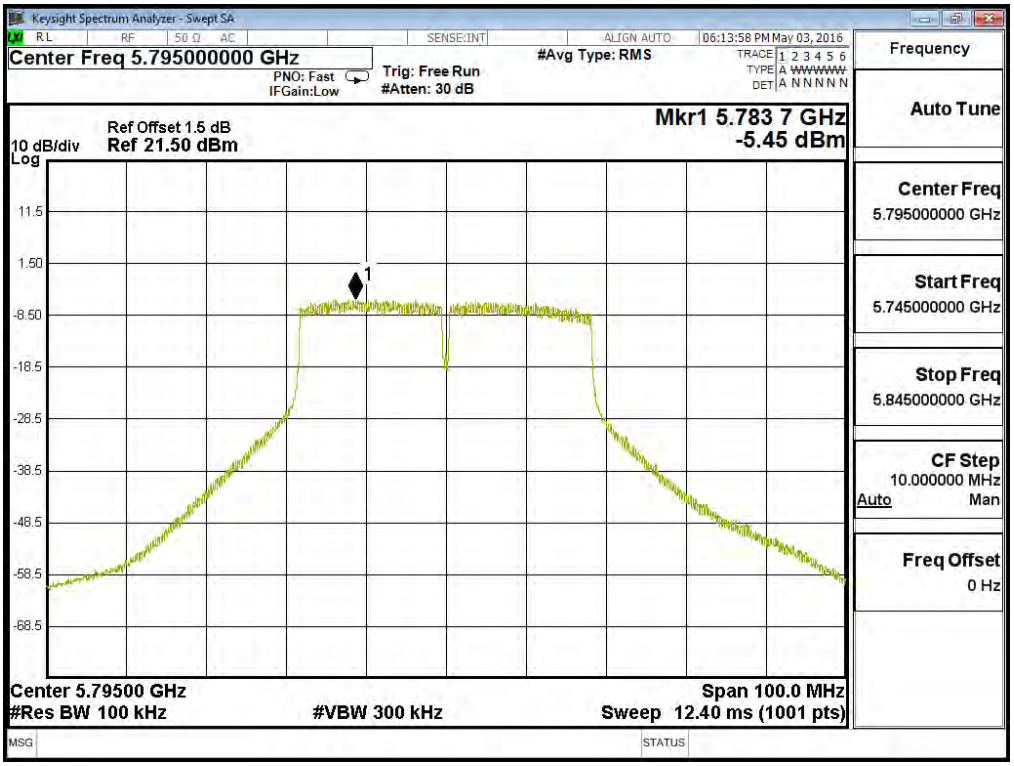
Channel 159 – Chain A



Channel 151 – Chain B



Channel 159 – Chain B

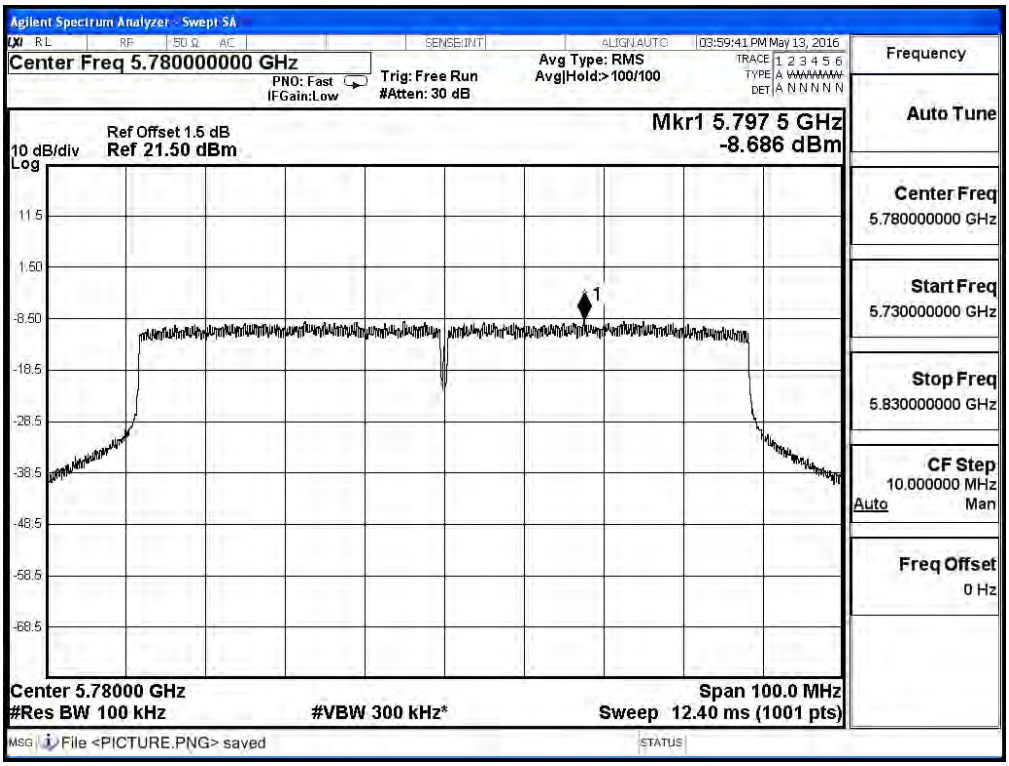


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 12: Transmit (802.11ac-80BW-65Mbps)(Panel Antenna)

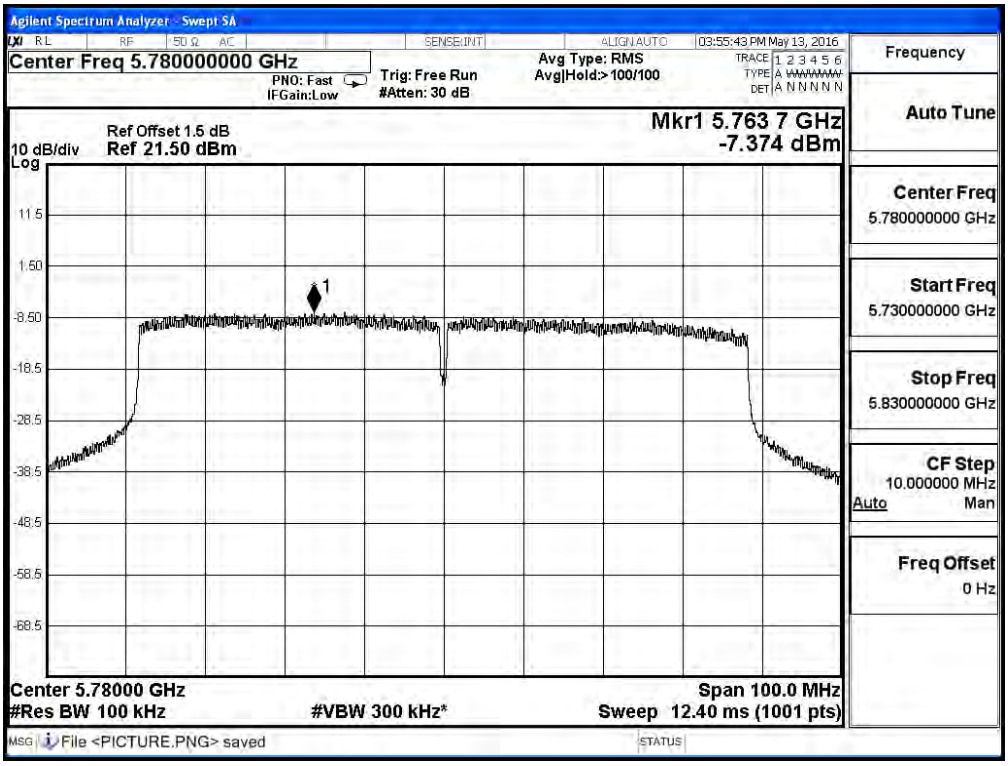
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
156	5780	A	-8.686	6.980	1.304	<30	Pass
		B	-7.374	6.980	2.616	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 156 – Chain A



Channel 156– Chain B

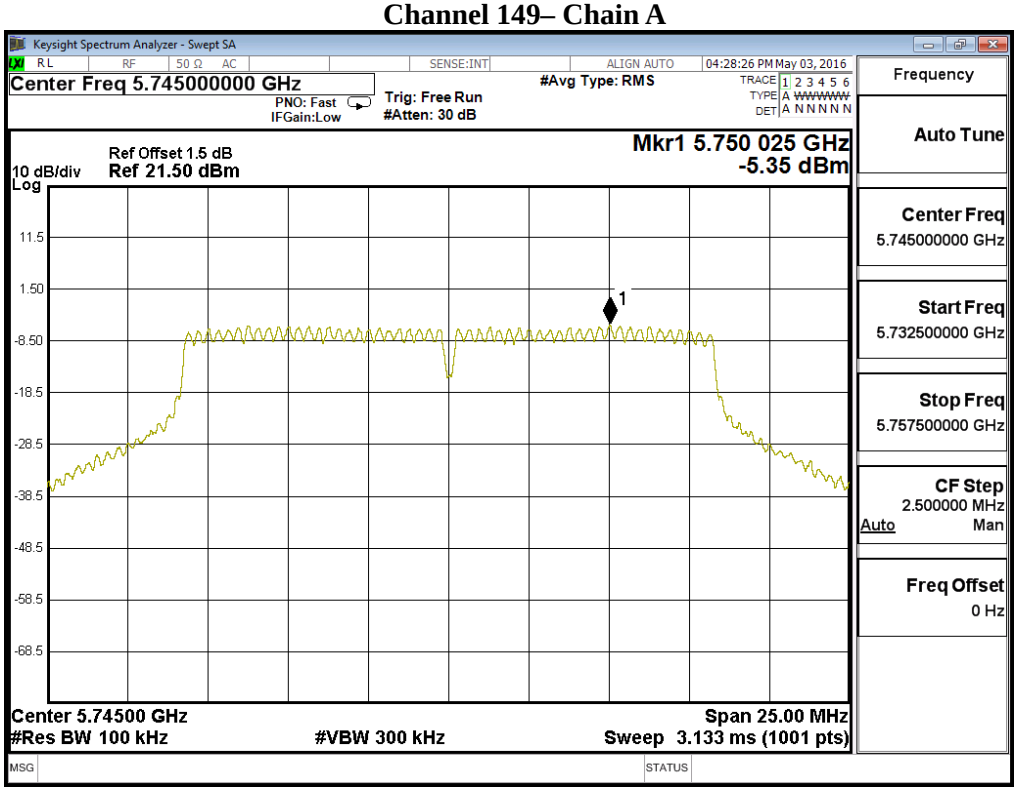


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna)

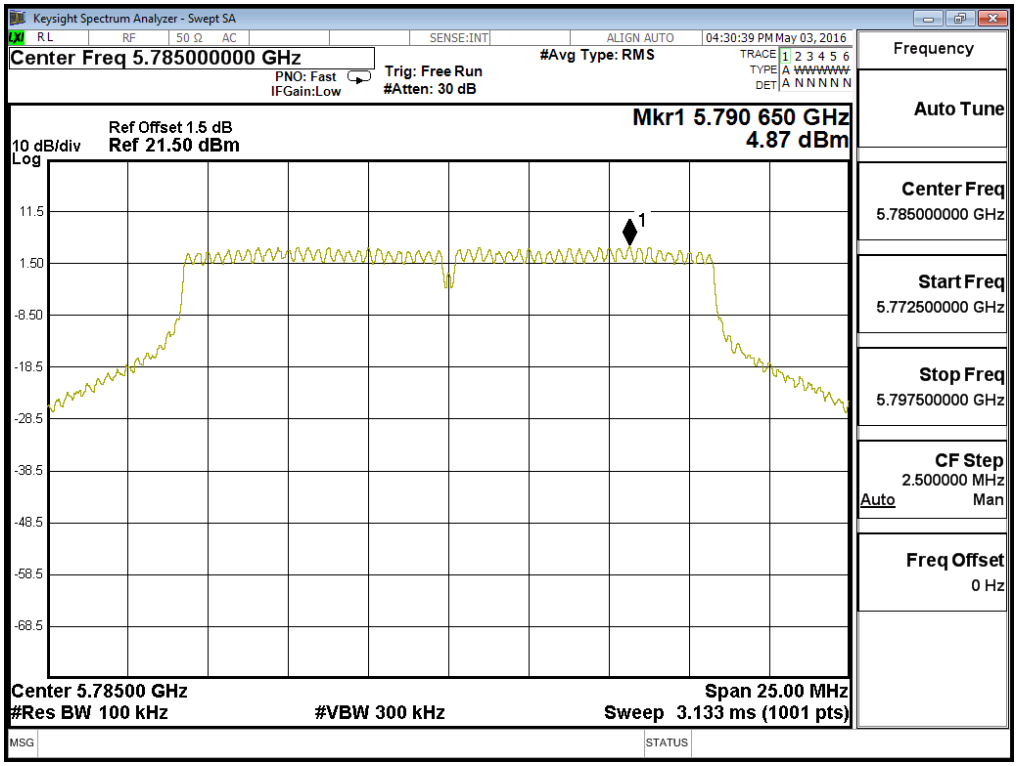
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)	Required Limit (dBm)	Result
149	5745	A	-5.35	6.980	4.640	<30	Pass
		B	-3.750	6.980	6.240	<30	Pass
157	5785	A	4.870	6.980	14.860	<30	Pass
		B	5.530	6.980	15.520	<30	Pass
165	5825	A	-4.260	6.980	5.730	<30	Pass
		B	-3.940	6.980	6.050	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

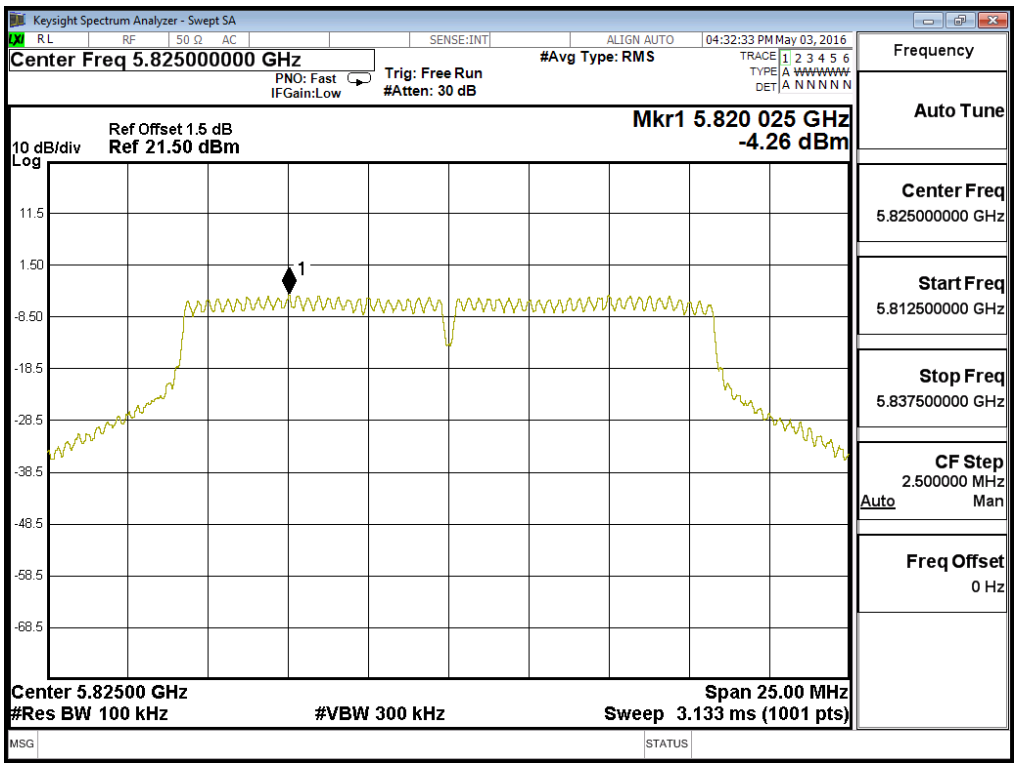
Channel 149– Chain A



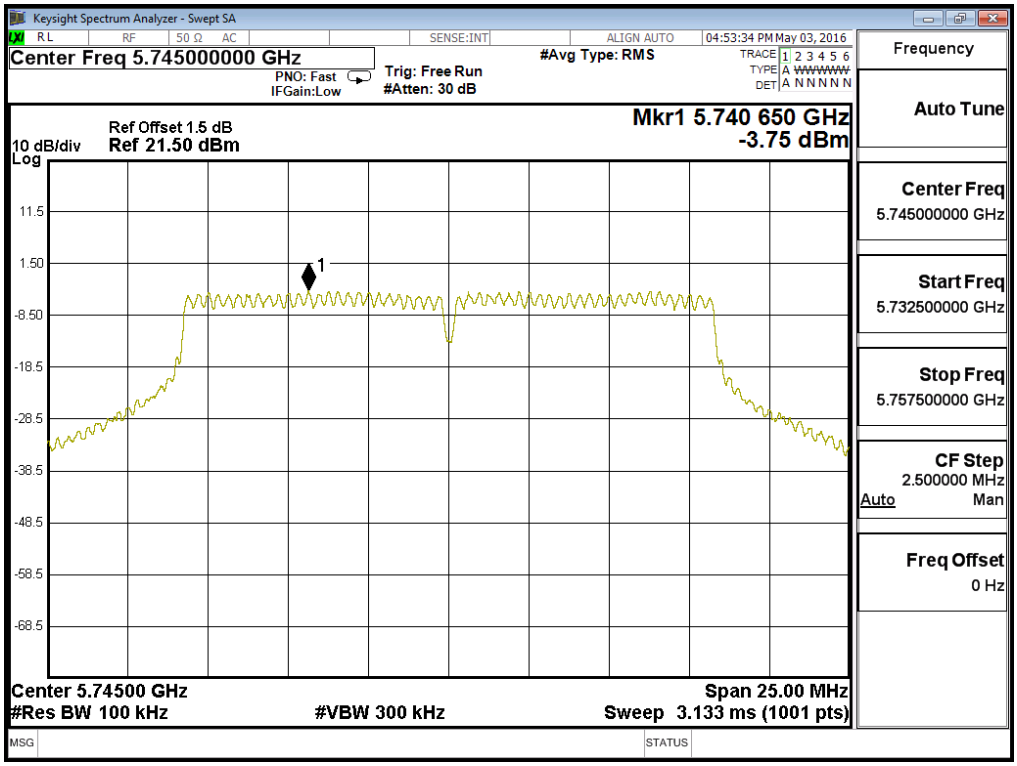
Channel 157– Chain A



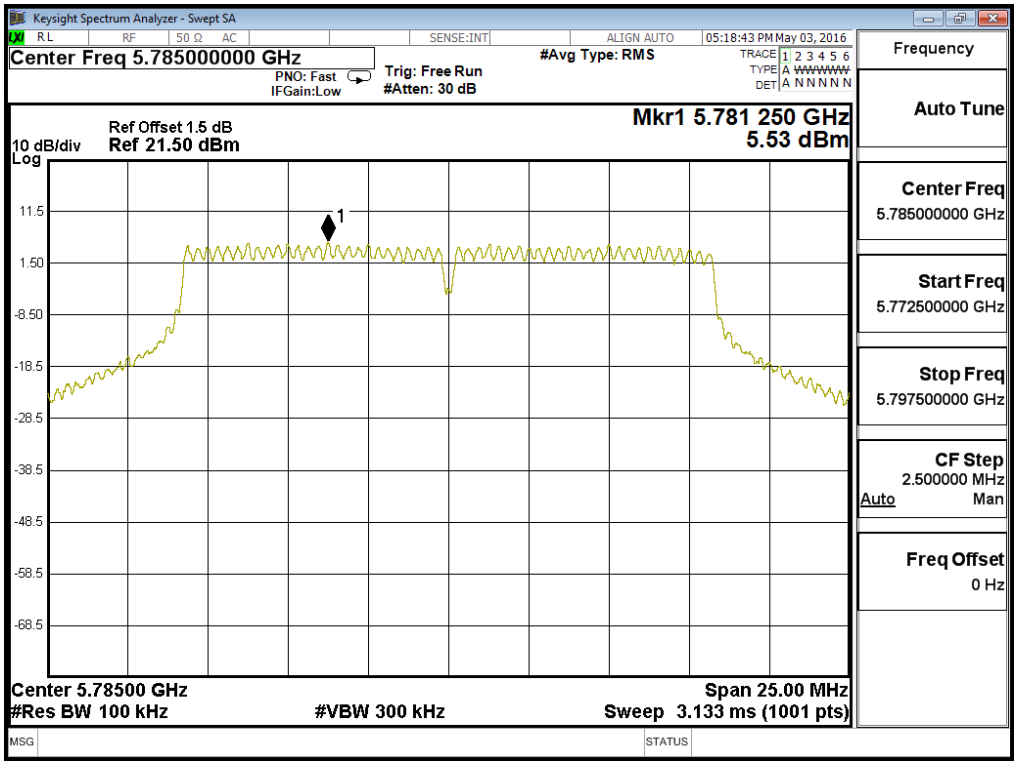
Channel 165– Chain A



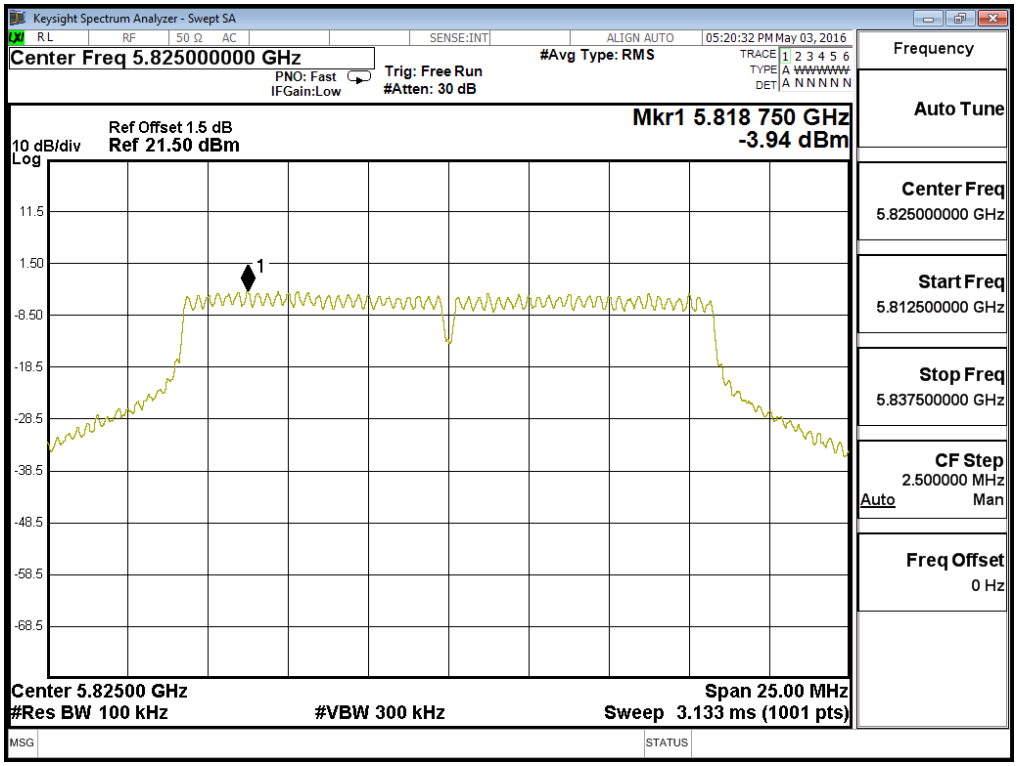
Channel 149– Chain B



Channel 157–Chain B



Channel 165–Chain B

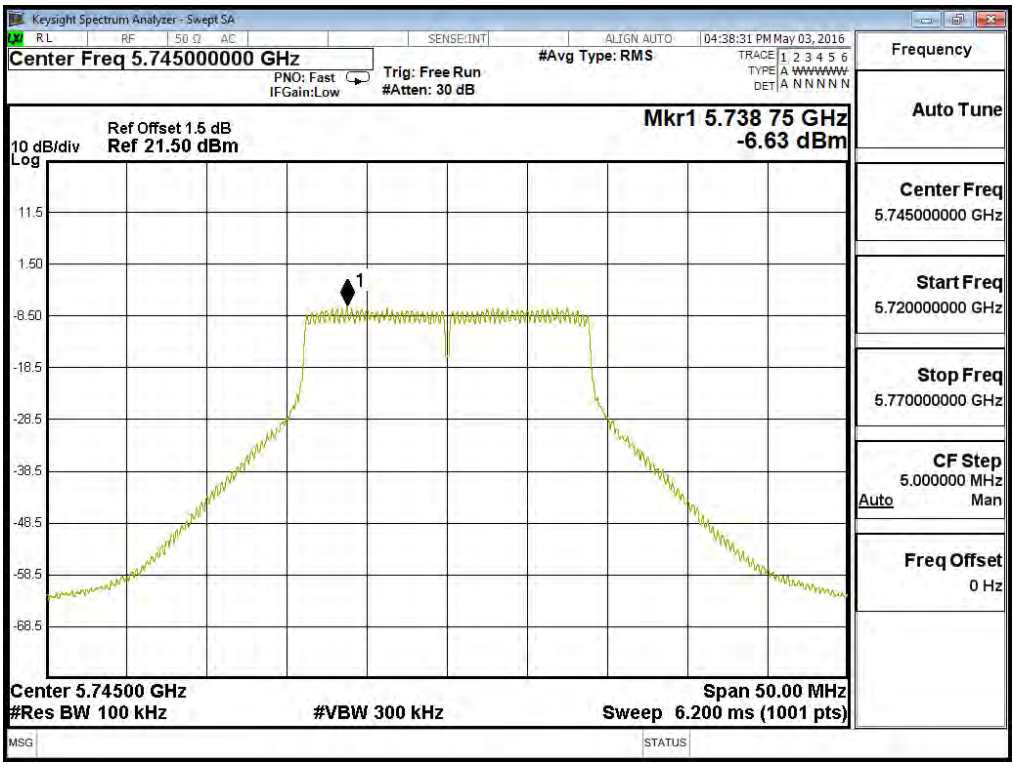


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna)

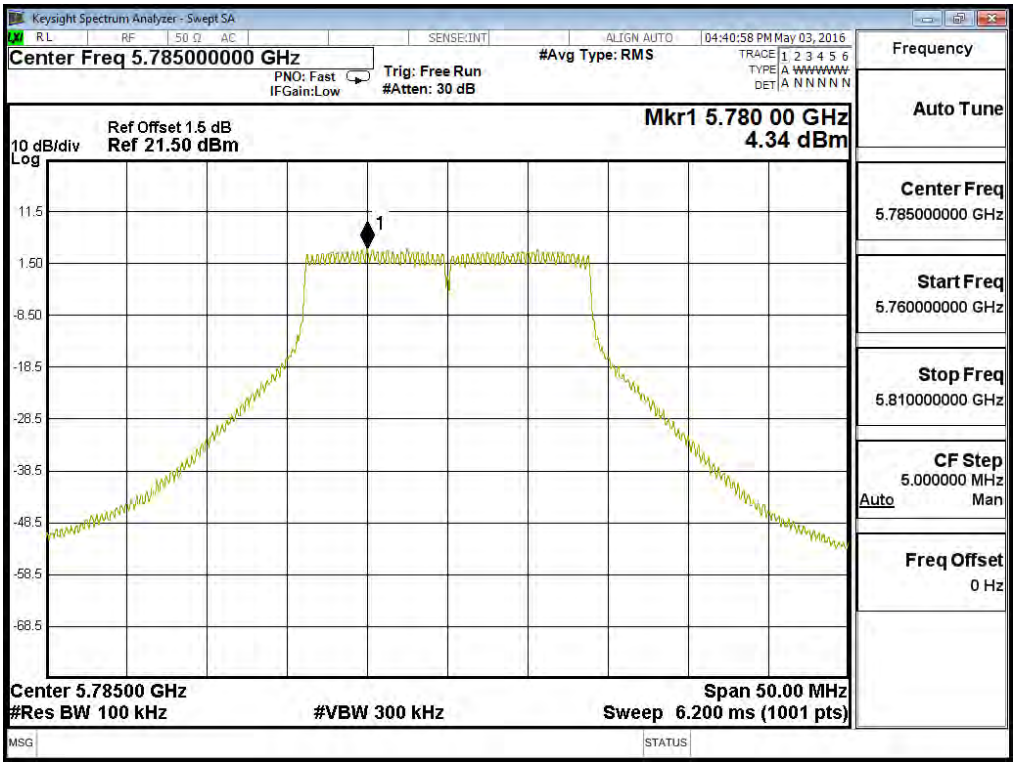
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
149	5745	A	-6.630	6.980	3.360	<30	Pass
		B	-4.680	6.980	5.310	<30	Pass
157	5785	A	4.340	6.980	14.330	<30	Pass
		B	5.060	6.980	15.050	<30	Pass
165	5825	A	-4.860	6.980	5.130	<30	Pass
		B	-4.360	6.980	5.630	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

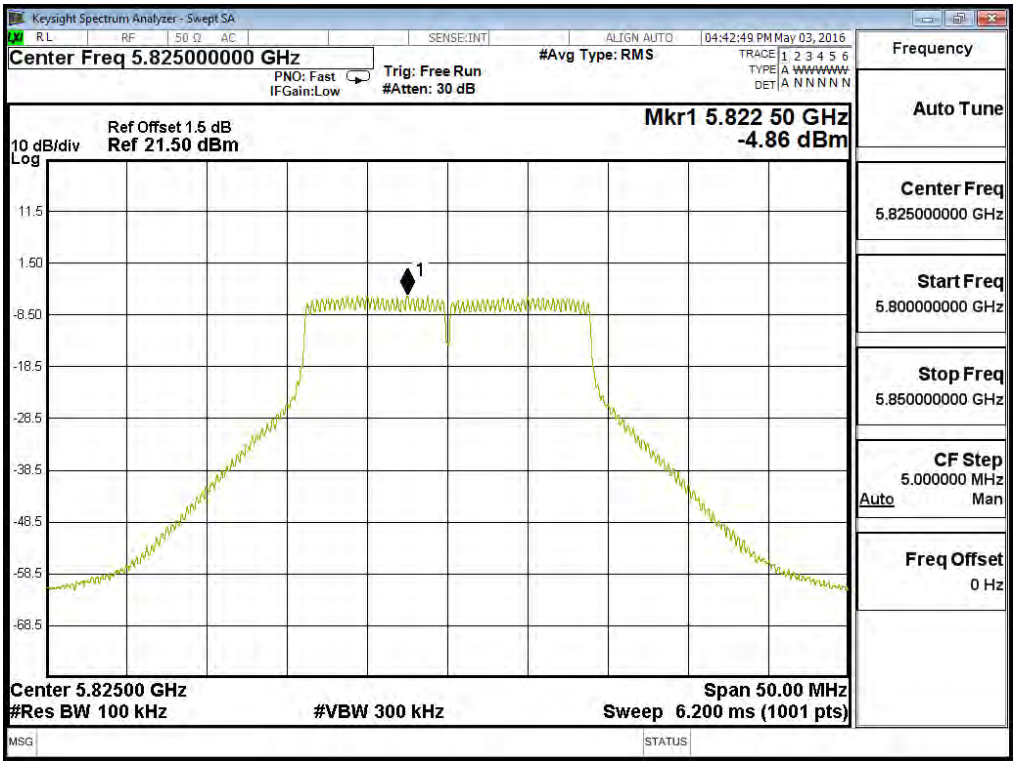
Channel 149 – Chain A



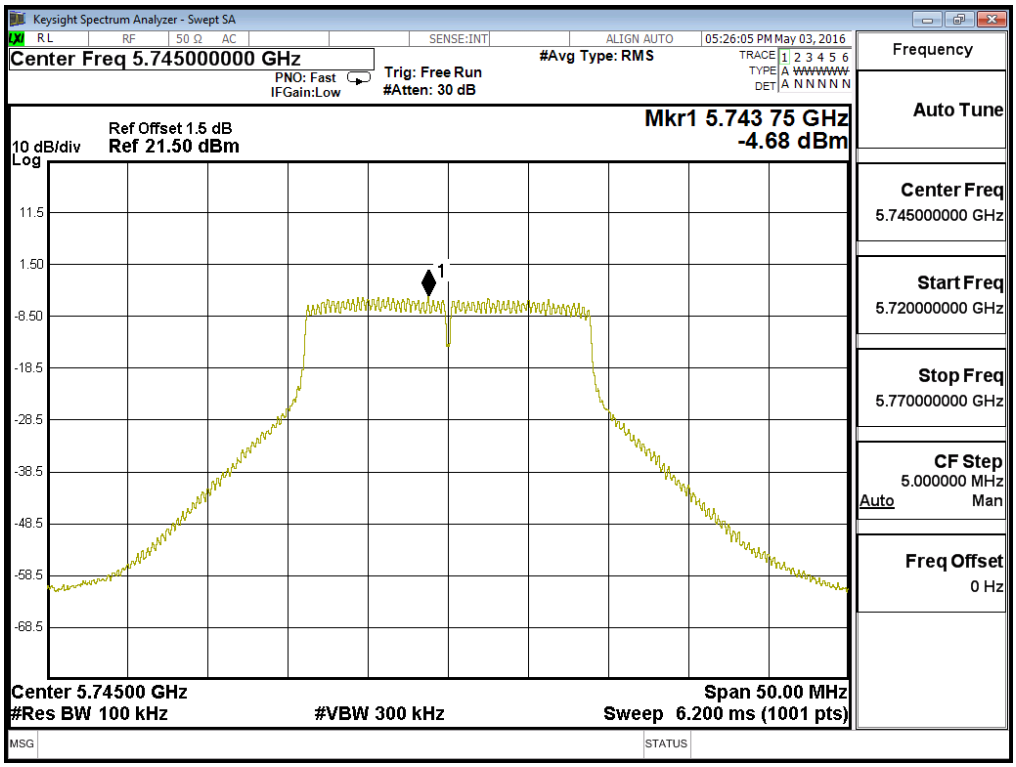
Channel 157 – Chain A



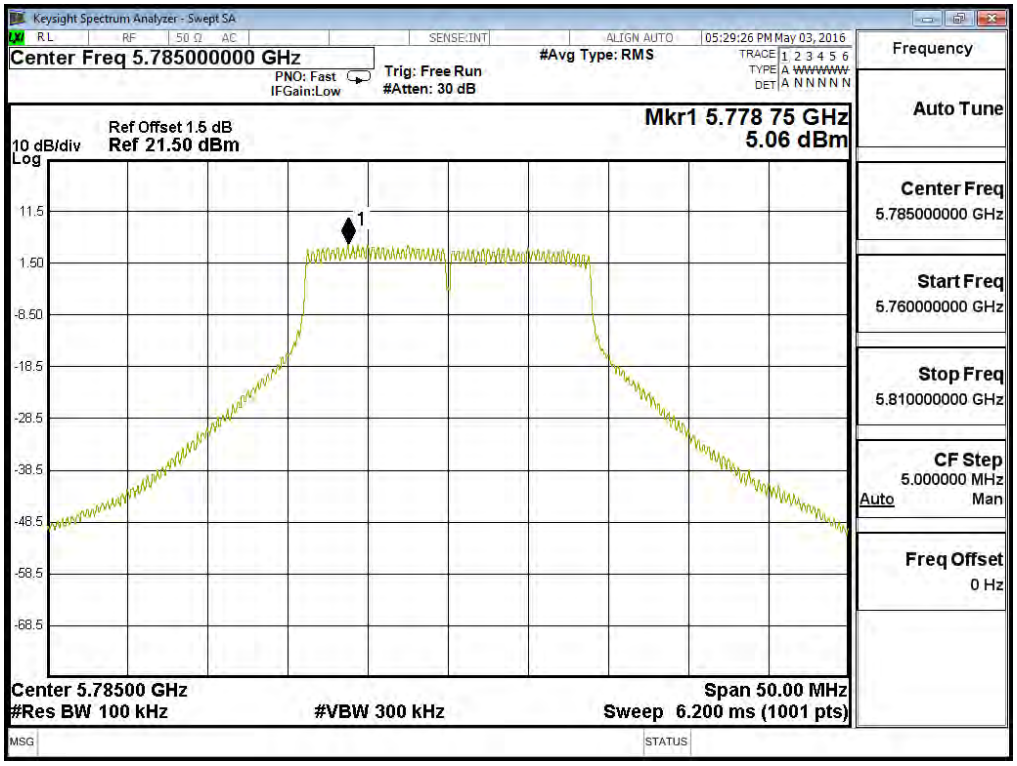
Channel 165 – Chain A



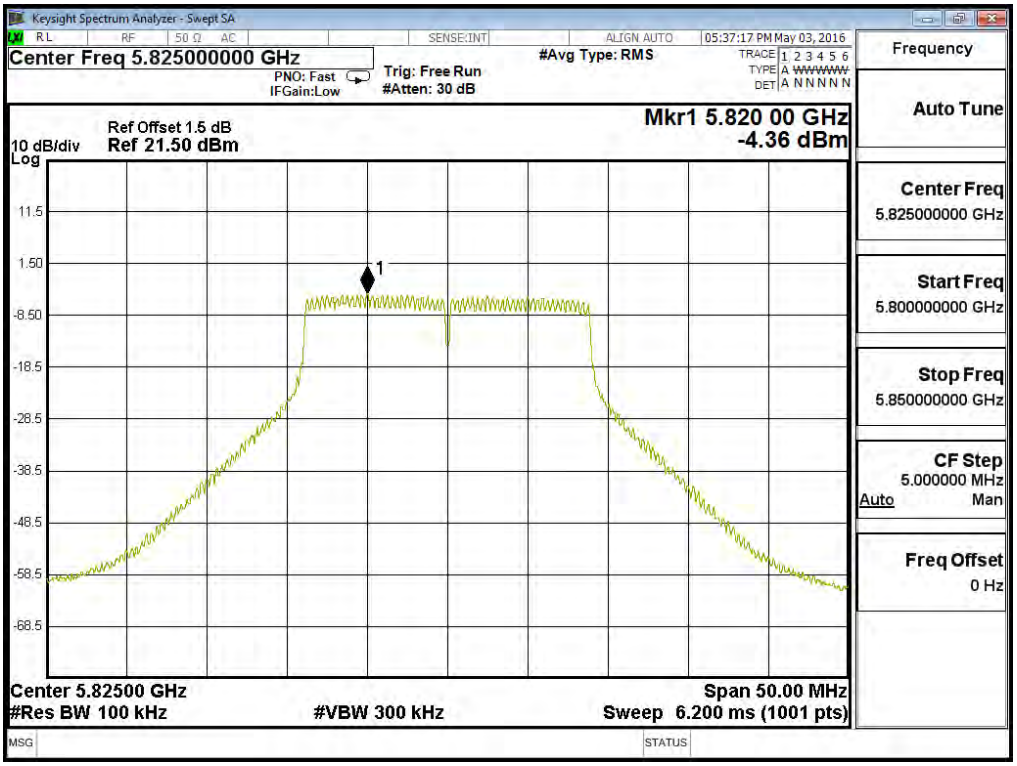
Channel 149 – Chain B



Channel 157 – Chain B



Channel 165 – Chain B

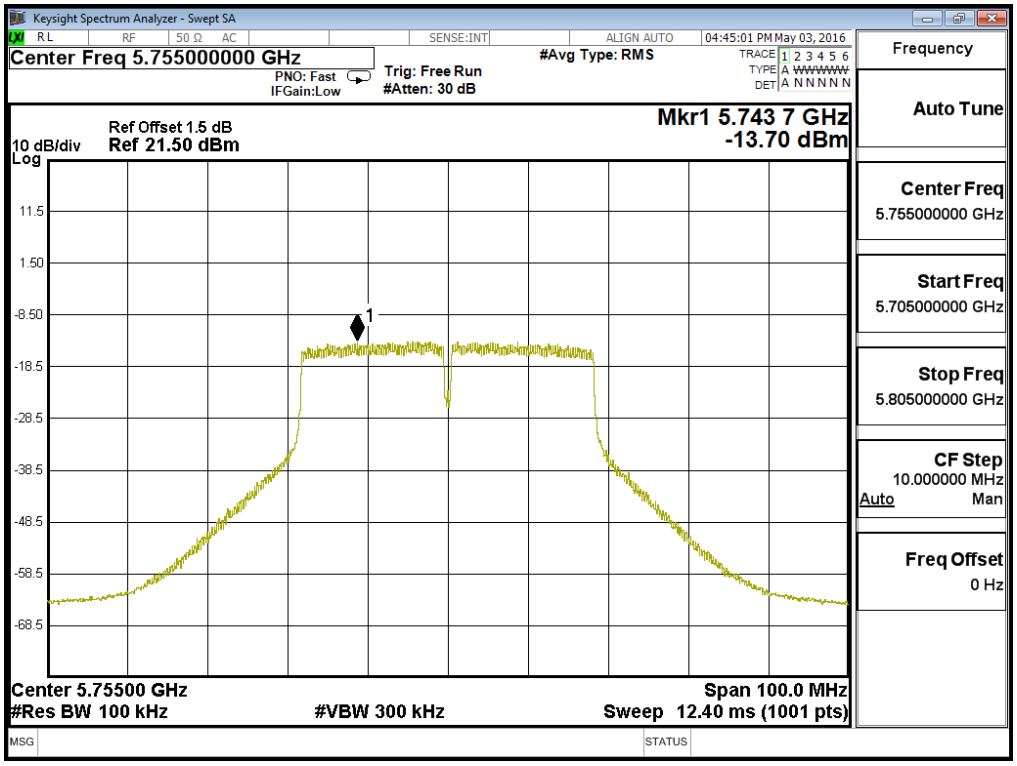


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 15: Transmit (802.11n-40BW-30Mbps)(Sector Antenna)

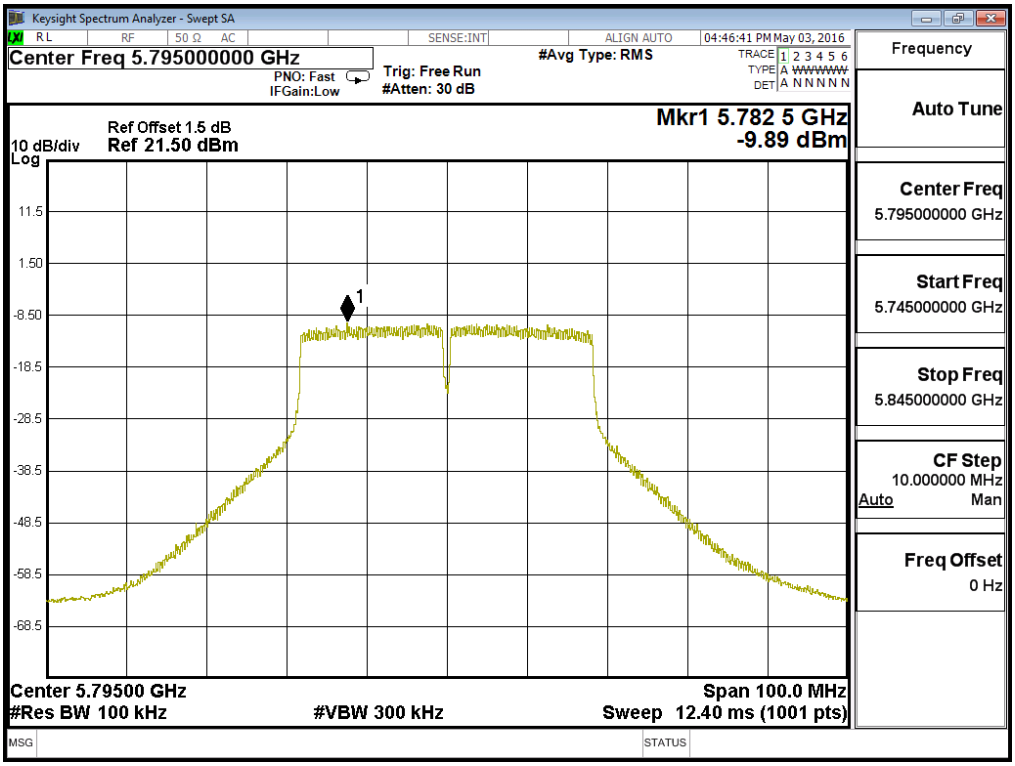
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
151	5755	A	-13.700	6.980	-3.710	<30	Pass
		B	-11.330	6.980	-1.340	<30	Pass
159	5795	A	-9.890	6.980	0.100	<30	Pass
		B	-8.560	6.980	1.430	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

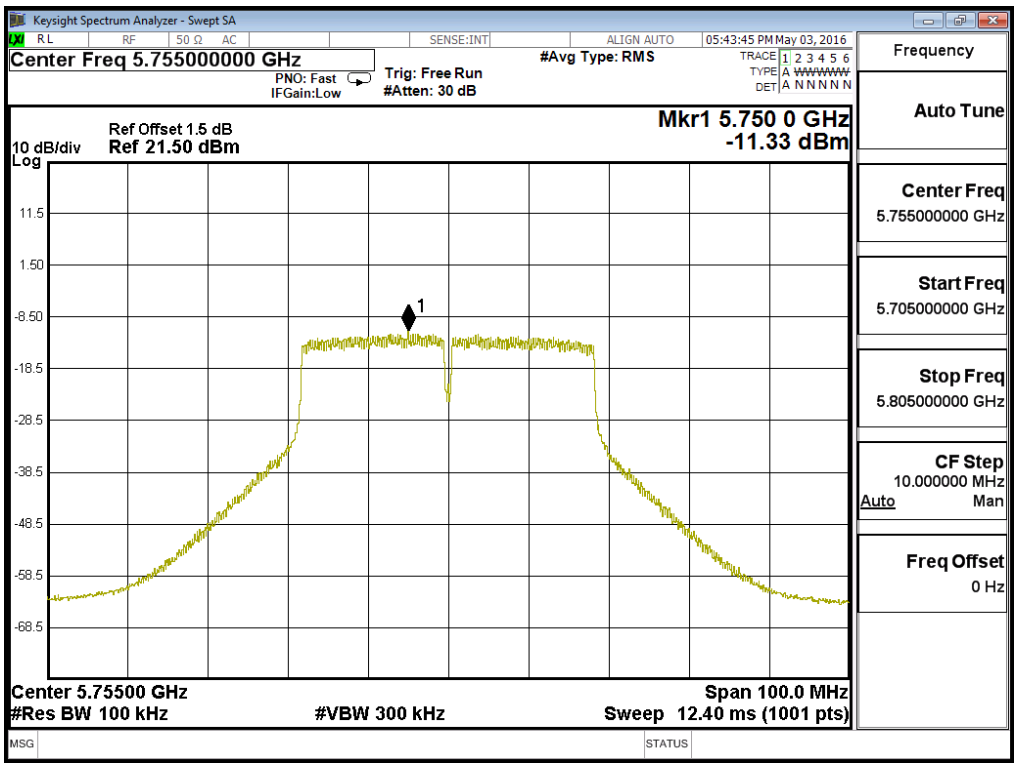
Channel 151 – Chain A



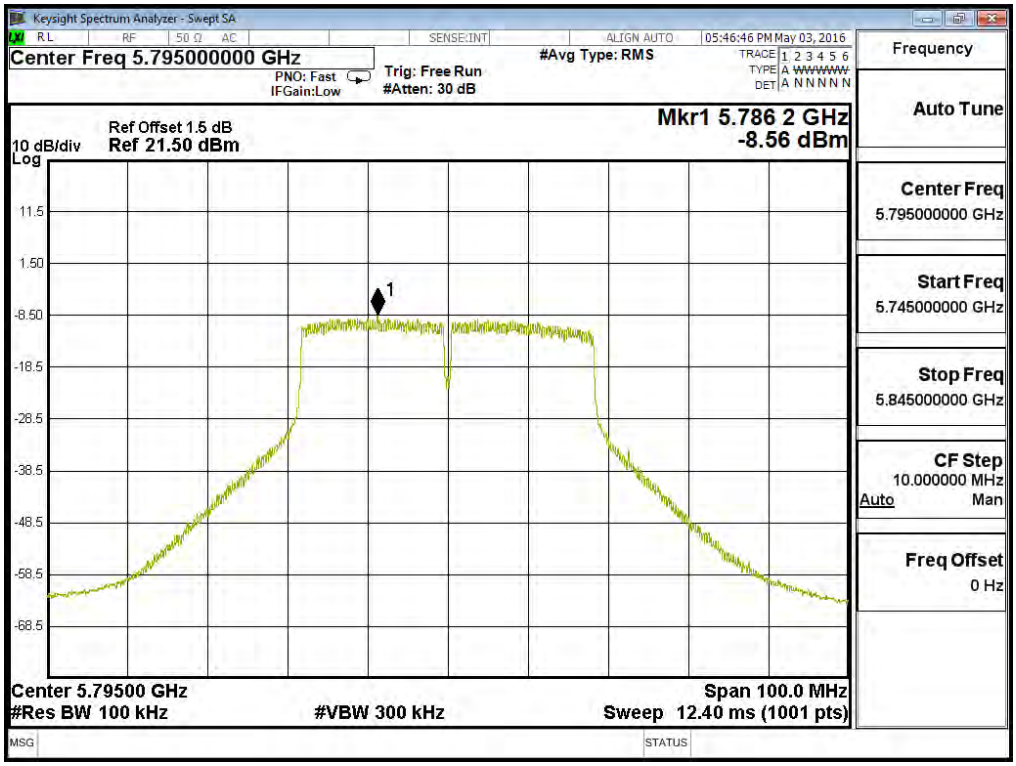
Channel 159 – Chain A



Channel 151 – Chain B



Channel 159 – Chain B

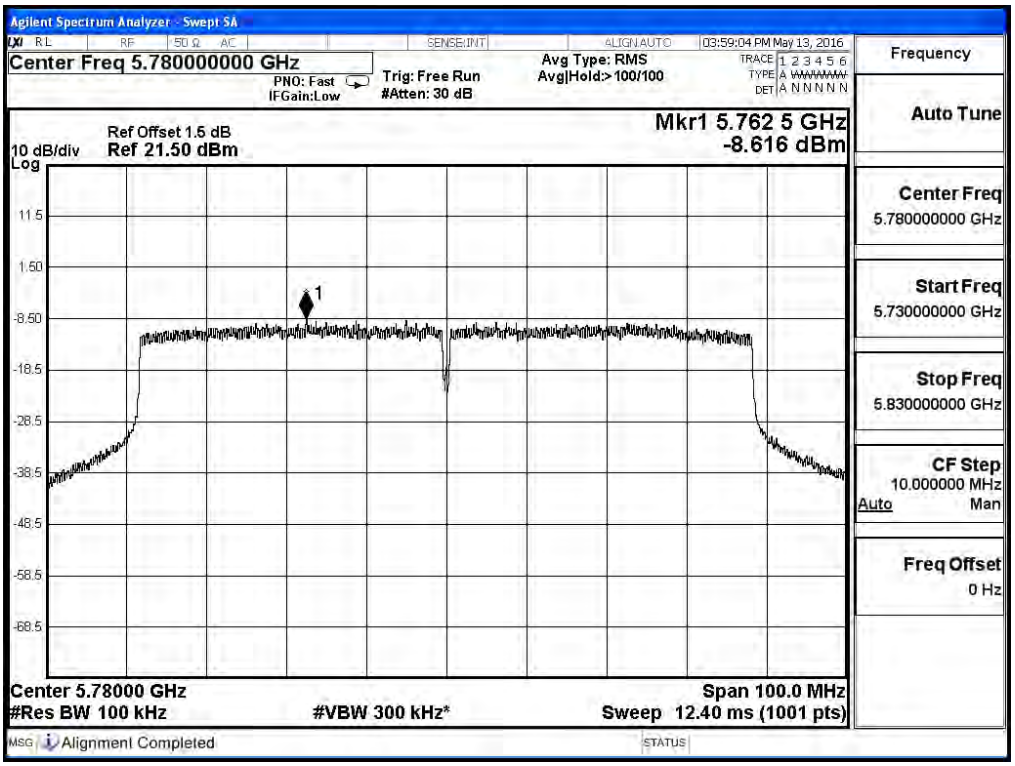


Product : 802.11 ac PCIe Module
Test Item : Peak Power Spectral Density
Test Site : No.3 OATS
Test Mode : Mode 16: Transmit (802.11ac-80BW-65Mbps)(Sector Antenna)

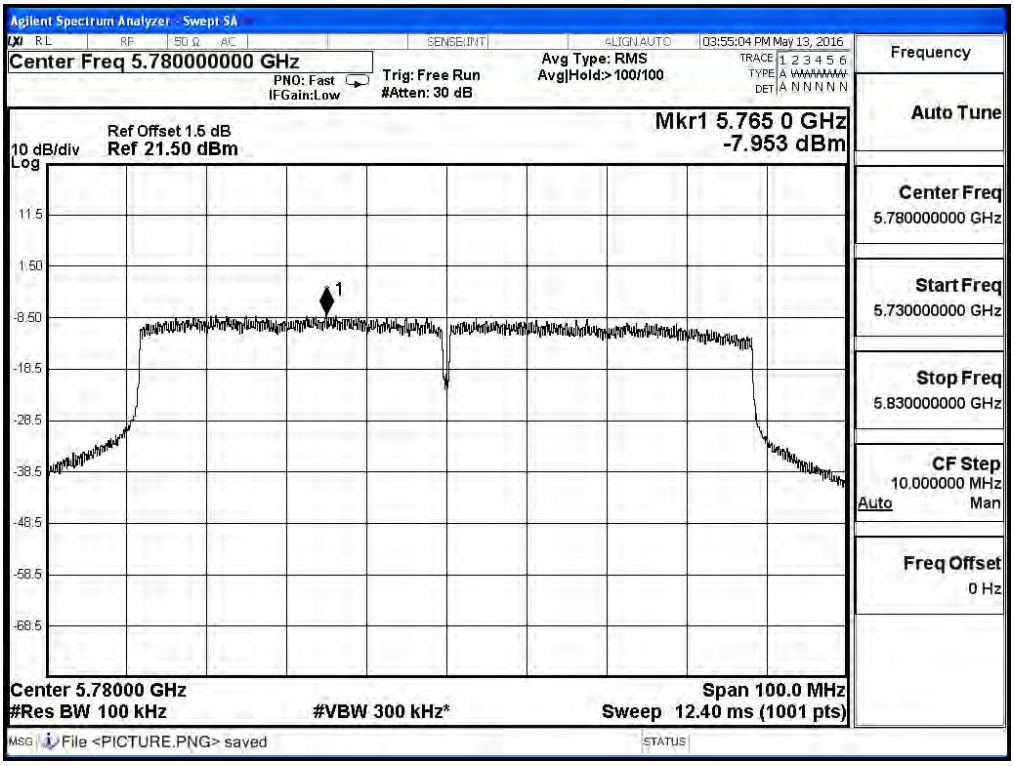
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm)1	Required Limit (dBm)	Result
156	5780	A	-8.616	6.980	1.374	<30	Pass
		B	-7.953	6.980	2.037	<30	Pass

Note 1: The quantity 10*log 2 (two antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 156 – Chain A



Channel 156– Chain B



5. Radiated Emission

5.1. Test Equipment

The following test equipments are used during the radiated emission test:

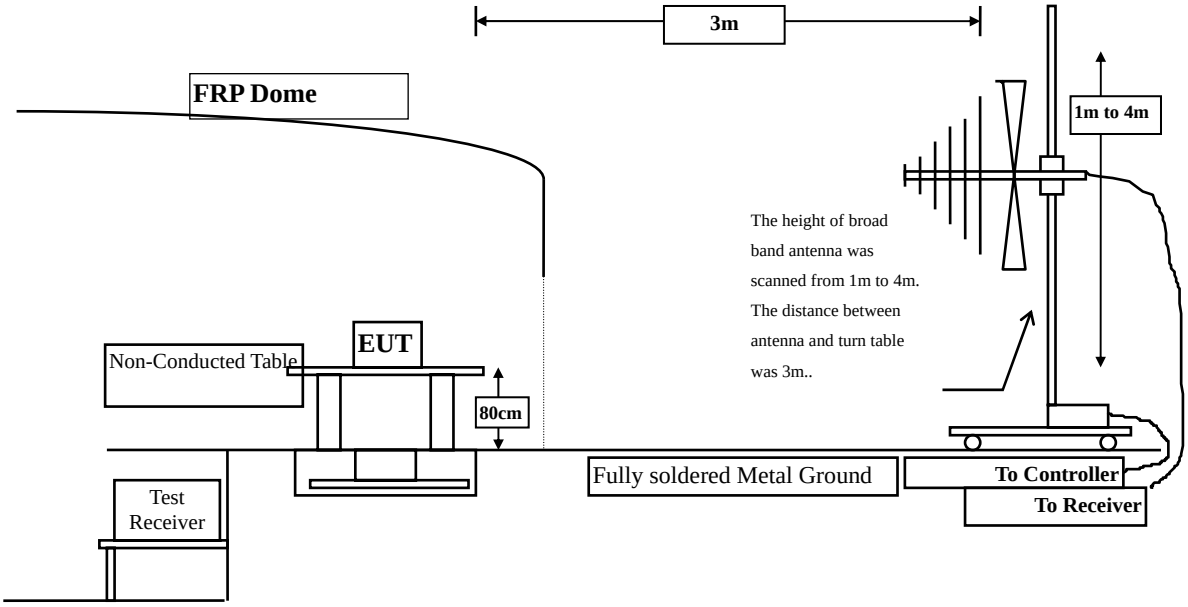
Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep, 2015
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun, 2015
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun, 2015
	X	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun, 2015
	X	Coaxial signal switch	Arnist	MP59B/ 6200798682	Jun, 2015

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2015
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2016
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2016
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2015
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2016
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2015
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2015

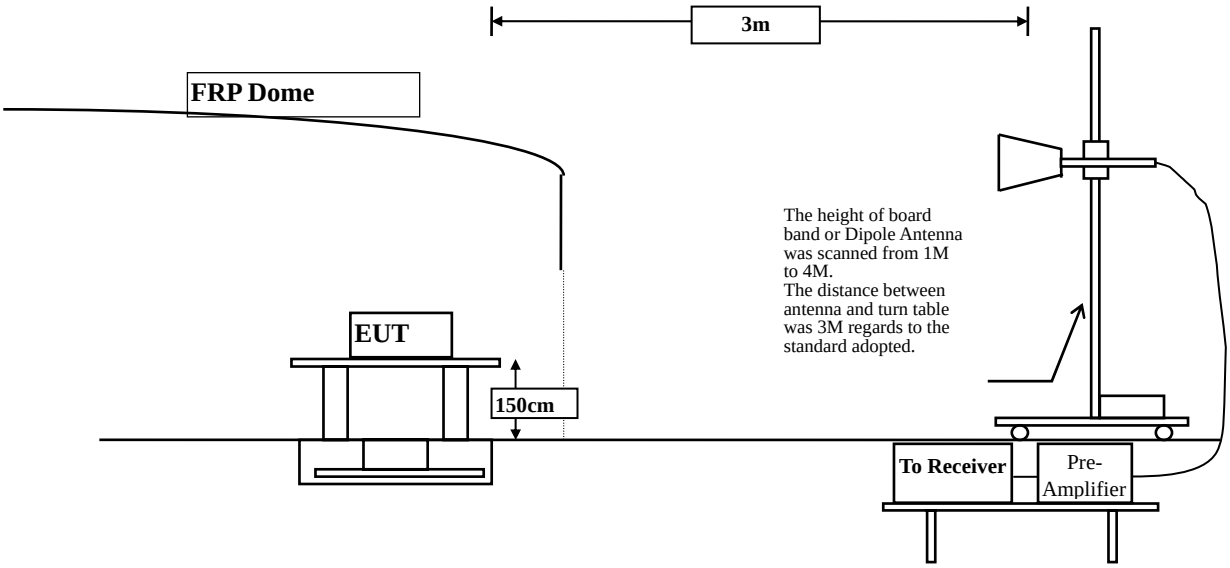
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

5.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



5.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks: E field strength (dBμV/m) = 20 log E field strength (uV/m)

5.4. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested according to FCC KDB-789033 test procedure for compliance to FCC 47CFR 15. 407 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

5.5. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

5.6. Test Result of Radiated Emission

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna) (5745MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal Peak Detector:					
11490.000	14.326	46.010	60.335	-13.665	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	14.326	31.490	45.815	-8.185	54.000
Vertical Peak Detector:					
11490.000	15.842	48.240	64.081	-9.919	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	15.842	33.250	49.091	-4.909	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11570.000	14.849	40.060	54.909	-19.091	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
Average Detector:					
11570.000	14.849	27.220	42.069	-11.931	54.000
Vertical					
Peak Detector:					
11570.000	16.215	43.280	59.494	-14.506	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
Average Detector:					
11570.000	16.215	29.480	45.694	-8.306	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna) (5825MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11650.000	13.179	38.540	51.719	-22.281	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11650.000	14.634	40.180	54.814	-19.186	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
11650.000	14.634	26.130	40.764	-13.236	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) (5745MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11490.000	14.326	47.100	61.425	-12.575	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	14.326	32.350	46.675	-7.325	54.000
Vertical					
Peak Detector:					
11490.000	15.842	47.240	63.081	-10.919	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	15.842	32.640	48.481	-5.519	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11570.000	14.849	41.260	56.109	-17.891	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
11570.000	14.849	27.490	42.339	-11.661	54.000
Vertical					
Peak Detector:					
11570.000	16.215	43.990	60.204	-13.796	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
11570.000	16.215	30.100	46.314	-7.686	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) (5825MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11650.000	13.179	38.250	51.429	-22.571	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11650.000	14.634	39.410	54.044	-19.956	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
11650.000	14.634	25.880	40.514	-13.486	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11510.000	14.402	40.900	55.302	-18.698	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
11510.000	14.402	27.130	41.532	-12.468	54.000
Vertical					
Peak Detector:					
11510.000	15.894	42.390	58.284	-15.716	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
11510.000	15.894	29.440	45.334	-8.666	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna) (5795MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11590.000	15.138	41.240	56.378	-17.622	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average Detector:					
11590.000	15.138	26.980	42.118	-11.882	54.000
Vertical					
Peak Detector:					
11590.000	16.461	45.570	62.031	-11.969	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average Detector:					
11590.000	16.461	31.160	47.621	-6.379	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11ac-80BW-65Mbps) (Grid DISH Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11560.000	16.914	31.530	48.444	-25.556	74.000
17340.000	*	*	*	*	74.000
23120.000	*	*	*	*	74.000
28900.000	*	*	*	*	74.000
34680.000	*	*	*	*	74.000
40460.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11560.000	17.826	31.310	49.135	-24.865	74.000
17340.000	*	*	*	*	74.000
23120.000	*	*	*	*	74.000
28900.000	*	*	*	*	74.000
34680.000	*	*	*	*	74.000
40460.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna) (5745MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11490.000	14.326	38.800	53.125	-20.875	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11490.000	15.842	39.450	55.291	-18.709	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	15.842	25.850	41.691	-12.309	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11570.000	14.849	39.450	54.299	-19.701	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
Average Detector:					
11570.000	14.849	26.160	41.009	-12.991	54.000
Vertical					
Peak Detector:					
11570.000	16.215	39.990	56.204	-17.796	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
Average Detector:					
11570.000	16.215	26.970	43.184	-10.816	54.000

Note:
1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna) (5825MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11650.000	13.179	38.160	51.339	-22.661	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11650.000	14.634	38.490	53.124	-20.876	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna) (5745MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11490.000	14.326	39.220	53.545	-20.455	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11490.000	15.842	40.150	55.991	-18.009	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	15.842	25.900	41.741	-12.259	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11570.000	14.849	40.240	55.089	-18.911	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
11570.000	14.849	26.210	41.059	-12.941	54.000
Vertical					
Peak Detector:					
11570.000	16.215	40.270	56.484	-17.516	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
11570.000	16.215	26.980	43.194	-10.806	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna) (5825MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11650.000	13.179	38.180	51.359	-22.641	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11650.000	14.634	38.660	53.294	-20.706	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11510.000	14.402	39.370	53.772	-20.228	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11510.000	15.894	39.430	55.324	-18.676	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
11510.000	15.894	25.600	41.494	-12.506	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna) (5795MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11590.000	15.138	39.390	54.528	-19.472	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average Detector:					
11590.000	15.138	25.330	40.468	-13.532	54.000
Vertical					
Peak Detector:					
11590.000	16.461	38.920	55.381	-18.619	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average Detector:					
11590.000	16.461	25.500	41.961	-12.039	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 8: Transmit (802.11ac-80BW-65Mbps)(Omni Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11560.000	14.599	39.820	54.419	-19.581	74.000
17340.000	*	*	*	*	74.000
23120.000	*	*	*	*	74.000
28900.000	*	*	*	*	74.000
34680.000	*	*	*	*	74.000
40460.000	*	*	*	*	74.000
Average Detector:					
11560.000	14.599	25.410	40.009	-13.991	54.000
Vertical					
Peak Detector:					
11560.000	16.007	39.530	55.537	-18.463	74.000
17340.000	*	*	*	*	74.000
23120.000	*	*	*	*	74.000
28900.000	*	*	*	*	74.000
34680.000	*	*	*	*	74.000
40460.000	*	*	*	*	74.000
Average Detector:					
11560.000	16.007	25.670	41.677	-12.323	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna) (5745MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11490.000	15.004	44.790	59.794	-14.206	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	14.326	23.930	38.255	-15.745	54.000
Vertical					
Peak Detector:					
11490.000	15.842	38.070	53.911	-20.089	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11570.000	14.849	41.800	56.649	-17.351	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
Average Detector:					
11570.000	14.849	27.730	42.579	-11.421	54.000
Vertical					
Peak Detector:					
11570.000	16.215	37.680	53.894	-20.106	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
Average Detector:					

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna) (5825MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11650.000	13.179	38.570	51.749	-22.251	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11650.000	14.634	38.470	53.104	-20.896	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna) (5745MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11490.000	14.326	44.350	58.675	-15.325	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	14.326	29.620	43.945	-10.055	54.000
Vertical					
Peak Detector:					
11490.000	15.842	39.250	55.091	-18.909	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	15.842	25.430	41.271	-12.729	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11570.000	14.849	43.030	57.879	-16.121	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
11570.000	14.849	27.870	42.719	-11.281	54.000
Vertical					
Peak Detector:					
11570.000	16.215	39.720	55.934	-18.066	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
11570.000	16.215	25.440	41.654	-12.346	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna) (5825MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11650.000	13.179	38.820	51.999	-22.001	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11650.000	14.634	38.650	53.284	-20.716	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11510.000	14.402	41.550	55.952	-18.048	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
11510.000	14.402	26.900	41.302	-12.698	54.000
Vertical					
Peak Detector:					
11510.000	15.894	39.350	55.244	-18.756	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
11510.000	15.894	25.010	40.904	-13.096	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna) (5795MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11590.000	15.138	37.050	52.188	-21.812	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11590.000	16.461	37.410	53.871	-20.129	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 12: Transmit (802.11ac-80BW-65Mbps)(Panel Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11560.000	14.599	36.930	51.529	-22.471	74.000
17340.000	*	*	*	*	74.000
23120.000	*	*	*	*	74.000
28900.000	*	*	*	*	74.000
34680.000	*	*	*	*	74.000
40460.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11560.000	16.007	36.430	52.437	-21.563	74.000
17340.000	*	*	*	*	74.000
23120.000	*	*	*	*	74.000
28900.000	*	*	*	*	74.000
34680.000	*	*	*	*	74.000
40460.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna) (5745MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11490.000	14.326	38.910	53.235	-20.765	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11490.000	15.842	37.190	53.031	-20.969	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11570.000	14.849	43.330	58.179	-15.821	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
Average Detector:					
11570.000	14.849	29.200	44.049	-9.951	54.000
Vertical					
Peak Detector:					
11570.000	16.215	46.100	62.314	-11.686	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
Average Detector:					
11570.000	16.215	32.550	48.764	-5.236	54.000

Note:
1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna) (5825MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11650.000	14.634	38.500	53.134	-20.866	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11650.000	14.634	38.360	52.994	-21.006	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna) (5745MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11490.000	14.326	39.150	53.475	-20.525	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11490.000	15.842	39.010	54.851	-19.149	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
Average Detector:					
11490.000	15.842	25.130	40.971	-13.029	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11570.000	14.849	45.970	60.819	-13.181	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
11570.000	14.849	32.000	46.849	-7.151	54.000
Vertical					
Peak Detector:					
11570.000	16.215	45.990	62.204	-11.796	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
Average Detector:					
11570.000	16.215	31.940	48.154	-5.846	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna) (5825MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11650.000	13.179	38.630	51.809	-22.191	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11650.000	14.634	38.700	53.334	-20.666	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
Average Detector:					
--					

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 15: Transmit (802.11n-40BW-30Mbps)(Sector Antenna) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11510.000	14.402	38.850	53.252	-20.748	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11510.000	15.894	38.820	54.714	-19.286	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
Average Detector:					
11510.000	15.894	25.510	41.404	-12.596	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 15: Transmit (802.11n-40BW-30Mbps)(Sector Antenna) (5795MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11590.000	15.138	39.270	54.408	-19.592	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average Detector:					
11590.000	15.138	25.490	40.628	-13.372	54.000
Vertical					
Peak Detector:					
11590.000	16.461	39.300	55.761	-18.239	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
Average Detector:					
11590.000	16.461	25.600	42.061	-11.939	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Mode : Mode 16: Transmit (802.11ac-80BW-65Mbps)(Sector Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector:					
11560.000	14.599	39.340	53.939	-20.061	74.000
17340.000	*	*	*	*	74.000
23120.000	*	*	*	*	74.000
28900.000	*	*	*	*	74.000
34680.000	*	*	*	*	74.000
40460.000	*	*	*	*	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
11560.000	16.007	39.110	55.117	-18.883	74.000
17340.000	*	*	*	*	74.000
23120.000	*	*	*	*	74.000
28900.000	*	*	*	*	74.000
34680.000	*	*	*	*	74.000
40460.000	*	*	*	*	74.000
Average Detector:					
11560.000	16.007	25.740	41.747	-12.253	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
117.159	-9.165	45.307	36.142	-7.358	43.500
198.696	-10.673	44.429	33.756	-9.744	43.500
422.217	-3.206	35.442	32.236	-13.764	46.000
630.275	1.549	33.713	35.262	-10.738	46.000
700.565	2.723	41.285	44.008	-1.992	46.000
839.739	5.147	31.830	36.977	-9.023	46.000
Vertical					
Peak Detector					
200.101	-7.901	38.747	30.846	-12.654	43.500
373.014	-2.442	30.051	27.609	-18.391	46.000
596.536	-3.108	37.886	34.778	-11.222	46.000
700.565	0.336	43.832	44.168	-1.832	46.000
928.304	6.219	29.666	35.884	-10.116	46.000
997.188	4.096	36.102	40.198	-13.802	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
105.913	-6.721	43.477	36.757	-6.743	43.500
420.812	-3.234	35.191	31.957	-14.043	46.000
559.986	1.615	33.688	35.303	-10.697	46.000
597.942	3.999	32.701	36.700	-9.300	46.000
839.739	5.147	32.155	37.302	-8.698	46.000
998.594	8.591	34.247	42.837	-11.163	54.000
Vertical					
Peak Detector					
167.768	-8.247	40.223	31.976	-11.524	43.500
373.014	-2.442	29.710	27.268	-18.732	46.000
533.275	-0.578	31.007	30.429	-15.571	46.000
633.087	-3.939	31.805	27.866	-18.134	46.000
942.362	6.584	29.615	36.199	-9.801	46.000
1000.000	4.329	29.477	33.806	-20.194	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
190.261	-9.876	44.767	34.892	-8.608	43.500
419.406	-3.234	34.758	31.524	-14.476	46.000
630.275	1.549	34.981	36.530	-9.470	46.000
701.971	2.650	30.174	32.824	-13.176	46.000
839.739	5.147	31.129	36.276	-9.724	46.000
998.594	8.591	28.455	37.045	-16.955	54.000
Vertical					
Peak Detector					
159.333	-6.187	41.274	35.087	-8.413	43.500
374.420	-2.179	30.794	28.615	-17.385	46.000
520.623	-0.316	31.101	30.785	-15.215	46.000
687.913	2.458	27.084	29.542	-16.458	46.000
797.565	2.819	29.649	32.469	-13.531	46.000
956.420	6.713	28.162	34.874	-11.126	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11ac-80BW-65Mbps) (Grid DISH Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
119.971	-9.755	44.326	34.571	-8.929	43.500
191.667	-10.208	43.582	33.374	-10.126	43.500
489.696	-0.585	35.241	34.656	-11.344	46.000
596.536	4.016	33.795	37.811	-8.189	46.000
797.565	5.152	30.000	35.153	-10.847	46.000
843.957	5.505	32.615	38.121	-7.879	46.000
Vertical					
Peak Detector					
119.971	-3.705	40.854	37.149	-6.351	43.500
384.261	-2.571	30.505	27.934	-18.066	46.000
520.623	-0.316	30.387	30.071	-15.929	46.000
630.275	-3.916	33.202	29.286	-16.714	46.000
843.957	3.138	29.927	33.065	-12.935	46.000
950.797	6.619	29.151	35.770	-10.230	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
117.300	-7.350	41.878	34.528	-8.972	43.500
421.880	-0.260	36.674	36.414	-9.586	46.000
489.780	1.498	34.767	36.265	-9.735	46.000
559.620	2.147	34.766	36.913	-9.087	46.000
598.420	3.524	32.665	36.189	-9.811	46.000
798.240	6.409	30.954	37.362	-8.638	46.000
Vertical					
Peak Detector					
121.180	-3.559	43.372	39.813	-3.687	43.500
181.320	-1.910	36.919	35.009	-8.491	43.500
598.420	1.114	32.685	33.799	-12.201	46.000
697.360	0.691	33.680	34.371	-11.629	46.000
844.800	2.462	29.688	32.150	-13.850	46.000
957.320	3.015	28.949	31.964	-14.036	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna)(5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
99.840	-9.873	49.413	39.540	-3.960	43.500
375.320	0.918	33.941	34.859	-11.141	46.000
598.420	3.524	32.055	35.579	-10.421	46.000
798.240	6.409	30.294	36.702	-9.298	46.000
840.920	6.064	30.076	36.140	-9.860	46.000
998.060	8.838	35.645	44.483	-9.517	54.000
Vertical					
Peak Detector					
121.180	-3.559	42.503	38.944	-4.556	43.500
181.320	-1.910	36.612	34.702	-8.798	43.500
373.380	0.043	27.217	27.260	-18.740	46.000
600.360	1.302	34.176	35.478	-10.522	46.000
844.800	2.462	28.514	30.976	-15.024	46.000
967.020	3.889	27.056	30.945	-23.055	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
115.360	-7.390	41.605	34.216	-9.284	43.500
489.780	1.498	34.246	35.744	-10.256	46.000
561.560	1.951	32.436	34.387	-11.613	46.000
598.420	3.524	31.464	34.988	-11.012	46.000
798.240	6.409	30.083	36.491	-9.509	46.000
840.920	6.064	30.133	36.197	-9.803	46.000
Vertical					
Peak Detector					
123.120	-3.630	43.085	39.455	-4.045	43.500
373.380	0.043	26.131	26.174	-19.826	46.000
598.420	1.114	32.116	33.230	-12.770	46.000
697.360	0.691	33.768	34.459	-11.541	46.000
804.060	3.371	26.589	29.960	-16.040	46.000
844.800	2.462	30.424	32.886	-13.114	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 8: Transmit (802.11ac-80BW-65Mbps)(Omni Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
115.360	-7.390	42.767	35.378	-8.122	43.500
375.320	0.918	32.287	33.205	-12.795	46.000
491.720	1.521	34.523	36.044	-9.956	46.000
798.240	6.409	30.546	36.954	-9.046	46.000
840.920	6.064	29.471	35.535	-10.465	46.000
1000.000	9.564	37.977	47.541	-6.459	54.000
Vertical					
Peak Detector					
121.180	-3.559	41.316	37.757	-5.743	43.500
177.440	-1.248	36.241	34.993	-8.507	43.500
600.360	1.302	28.285	29.587	-16.413	46.000
697.360	0.691	33.659	34.350	-11.650	46.000
809.880	3.026	27.621	30.647	-15.353	46.000
930.160	3.830	27.761	31.591	-14.409	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
123.120	-7.320	41.882	34.562	-8.938	43.500
173.560	-9.543	44.795	35.252	-8.248	43.500
419.940	-0.254	33.429	33.175	-12.825	46.000
598.420	3.524	30.515	34.039	-11.961	46.000
798.240	6.409	27.629	34.037	-11.963	46.000
840.920	6.064	30.045	36.109	-9.891	46.000
Vertical					
Peak Detector					
123.120	-3.630	43.165	39.535	-3.965	43.500
177.440	-1.248	44.380	43.132	-0.368	43.500
350.100	-1.278	36.689	35.411	-10.589	46.000
600.360	1.302	29.883	31.185	-14.815	46.000
697.360	0.691	40.673	41.364	-4.636	46.000
840.920	2.284	29.543	31.827	-14.173	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
99.840	-9.873	51.644	41.771	-1.729	43.500
233.700	-8.528	44.536	36.008	-9.992	46.000
421.880	-0.260	32.352	32.092	-13.908	46.000
491.720	1.521	32.707	34.228	-11.772	46.000
697.360	3.231	36.582	39.813	-6.187	46.000
840.920	6.064	31.806	37.870	-8.130	46.000
Vertical					
Peak Detector					
123.120	-3.630	42.067	38.437	-5.063	43.500
183.260	-3.735	46.170	42.435	-1.065	43.500
377.260	0.647	33.197	33.844	-12.156	46.000
491.720	-2.059	32.835	30.776	-15.224	46.000
697.360	0.691	40.917	41.608	-4.392	46.000
844.800	2.462	31.838	34.300	-11.700	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
171.620	-9.641	42.919	33.278	-10.222	43.500
237.580	-7.697	43.398	35.701	-10.299	46.000
419.940	-0.254	33.871	33.617	-12.383	46.000
489.780	1.498	31.210	32.708	-13.292	46.000
701.240	2.759	36.547	39.306	-6.694	46.000
840.920	6.064	28.455	34.519	-11.481	46.000
Vertical					
Peak Detector					
173.560	-2.713	40.951	38.238	-5.262	43.500
299.660	-4.061	40.778	36.717	-9.283	46.000
359.800	-1.316	28.536	27.220	-18.780	46.000
596.480	0.907	27.210	28.117	-17.883	46.000
697.360	0.691	32.156	32.847	-13.153	46.000
844.800	2.462	24.369	26.831	-19.169	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 12: Transmit (802.11ac-80BW-65Mbps)(Panel Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
198.780	-9.958	43.891	33.933	-9.567	43.500
373.380	0.873	32.521	33.394	-12.606	46.000
489.780	1.498	33.994	35.492	-10.508	46.000
563.500	1.950	31.844	33.794	-12.206	46.000
697.360	3.231	39.852	43.083	-2.917	46.000
840.920	6.064	32.945	39.009	-6.991	46.000
Vertical					
Peak Detector					
179.380	-0.824	40.418	39.594	-3.906	43.500
352.040	-1.292	32.400	31.108	-14.892	46.000
491.720	-2.059	33.207	31.148	-14.852	46.000
600.360	1.302	31.327	32.629	-13.371	46.000
697.360	0.691	38.319	39.010	-6.990	46.000
844.800	2.462	32.077	34.539	-11.461	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
198.780	-9.958	44.880	34.922	-8.578	43.500
352.040	-1.282	36.949	35.667	-10.333	46.000
491.720	1.521	35.584	37.105	-8.895	46.000
596.480	3.587	33.898	37.485	-8.515	46.000
798.240	6.409	30.264	36.672	-9.328	46.000
844.800	6.442	29.798	36.240	-9.760	46.000
Vertical					
Peak Detector					
123.120	-3.630	40.744	37.114	-6.386	43.500
177.440	-1.248	36.078	34.830	-8.670	43.500
598.420	1.114	31.894	33.008	-12.992	46.000
697.360	0.691	33.826	34.517	-11.483	46.000
840.920	2.284	28.930	31.214	-14.786	46.000
928.220	3.640	28.360	32.000	-14.000	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
198.780	-9.958	44.269	34.311	-9.189	43.500
350.100	-1.298	39.461	38.163	-7.837	46.000
489.780	1.498	33.943	35.441	-10.559	46.000
600.360	3.472	31.277	34.749	-11.251	46.000
798.240	6.409	29.724	36.132	-9.868	46.000
840.920	6.064	30.066	36.130	-9.870	46.000
Vertical					
Peak Detector					
121.180	-3.559	41.350	37.791	-5.709	43.500
177.440	-1.248	35.699	34.451	-9.049	43.500
379.200	0.881	26.624	27.505	-18.495	46.000
598.420	1.114	34.009	35.123	-10.877	46.000
697.360	0.691	33.292	33.983	-12.017	46.000
840.920	2.284	29.374	31.658	-14.342	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 15: Transmit (802.11n-40BW-30Mbps)(Sector Antenna) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
121.180	-7.289	41.124	33.835	-9.665	43.500
241.460	-6.590	42.732	36.142	-9.858	46.000
491.720	1.521	34.070	35.591	-10.409	46.000
598.420	3.524	34.085	37.609	-8.391	46.000
798.240	6.409	30.189	36.597	-9.403	46.000
840.920	6.064	30.526	36.590	-9.410	46.000
Vertical					
Peak Detector					
121.180	-3.559	42.156	38.597	-4.903	43.500
179.380	-0.824	37.337	36.513	-6.987	43.500
377.260	0.647	26.381	27.028	-18.972	46.000
598.420	1.114	34.436	35.550	-10.450	46.000
697.360	0.691	34.140	34.831	-11.169	46.000
833.160	1.716	31.989	33.705	-12.295	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : 802.11 ac PCIe Module
Test Item : General Radiated Emission
Test Site : No.3 OATS
Test Mode : Mode 16: Transmit (802.11ac-80BW-65Mbps)(Sector Antenna) (5780MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBμV	dBμV/m	dB	dBμV/m
Horizontal					
Peak Detector					
115.360	-7.390	41.632	34.243	-9.257	43.500
350.100	-1.298	36.796	35.498	-10.502	46.000
491.720	1.521	35.379	36.900	-9.100	46.000
596.480	3.587	34.955	38.542	-7.458	46.000
798.240	6.409	29.392	35.800	-10.200	46.000
844.800	6.442	29.964	36.406	-9.594	46.000
Vertical					
Peak Detector					
121.180	-3.559	41.180	37.621	-5.879	43.500
177.440	-1.248	35.118	33.870	-9.630	43.500
598.420	1.114	33.728	34.842	-11.158	46.000
697.360	0.691	33.210	33.901	-12.099	46.000
844.800	2.462	28.928	31.390	-14.610	46.000
928.220	3.640	27.107	30.747	-15.253	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

6. Band Edge

6.1. Test Equipment

RF Radiated Measurement:

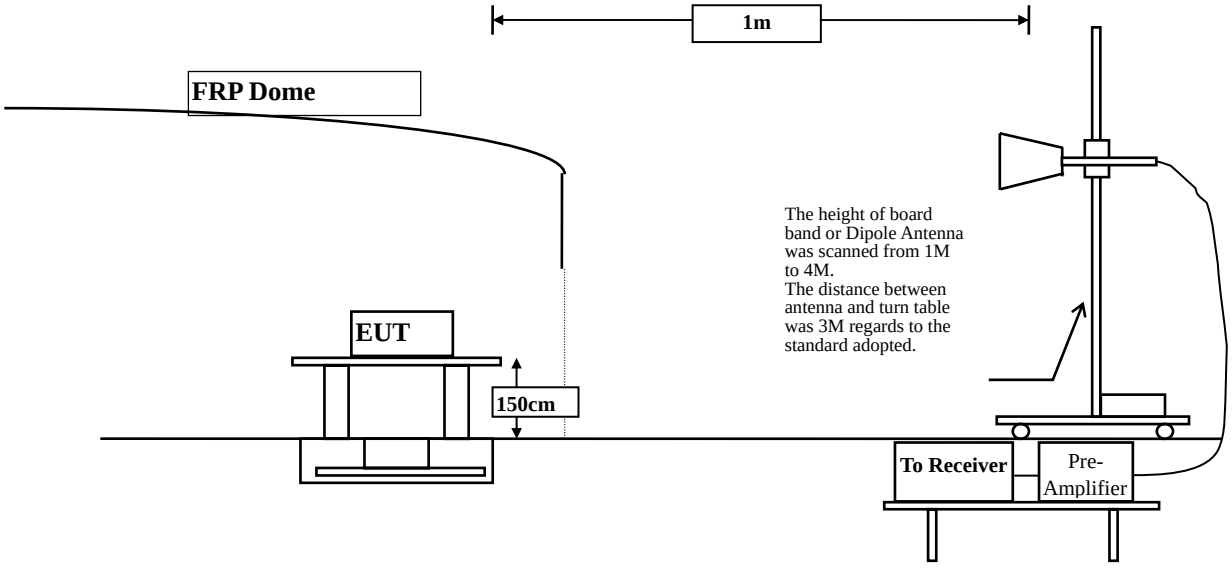
The following test equipments are used during the band edge tests:

Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒CB # 8	X	Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2015
	X	Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2016
	X	Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2016
	X	Horn Antenna	TRC	AH-0801/95051	Aug, 2015
	X	Pre-Amplifier	EMCI	EMC012630SE/980210	Jan, 2016
	X	Pre-Amplifier	MITEQ	JS41-001040000-58-5P/153945	Jul, 2015
	X	Pre-Amplifier	NARDA	DBL-1840N506/013	Jul, 2015

Note: 1. All instruments are calibrated every one year.
2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Radiated Measurement:



6.3. Limits

The provisions of Section 15.205 of this part apply to intentional radiators operating under this section.

Radiated emissions which fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209:

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	uV/m @3m	dBμV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks : 1. RF Voltage (dBμV) = 20 log RF Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

For transmitters operating in the 5.725-5.85GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

6.4. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 1 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10:2013 on radiated measurement.
The bandwidth below 1GHz setting on the field strength meter is 120 kHz, above 1GHz are 1 MHz.
The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

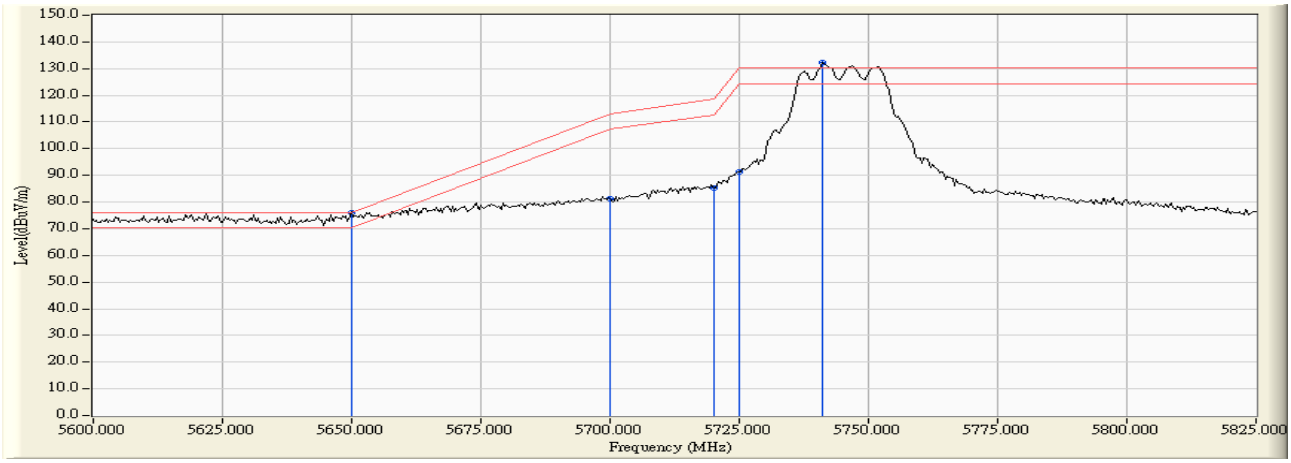
6.5. Uncertainty

± 3.8 dB below 1GHz
± 3.9 dB above 1GHz

6.6. Test Result of Band Edge

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5650.000	36.161	39.756	75.918	-0.262	76.180	Pass
Horizontal	5700.000	36.382	44.892	81.274	-31.906	113.180	Pass
Horizontal	5720.000	36.393	48.971	85.365	-33.415	118.780	Pass
Horizontal	5725.000	36.391	54.859	91.250	-38.930	130.180	Pass
Horizontal	5741.196	36.381	95.947	132.328	--	--	--

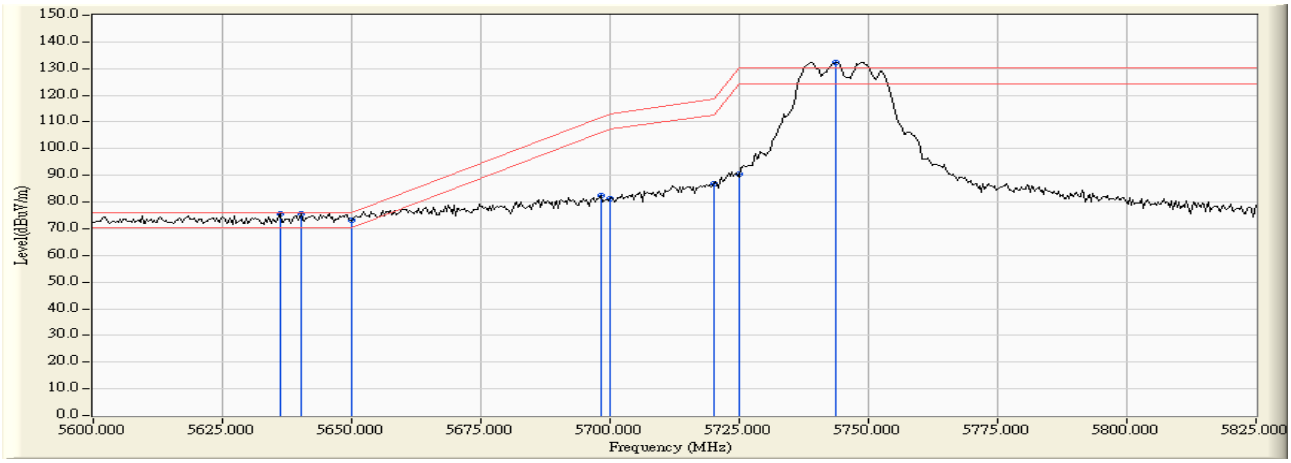
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5636.196	37.605	37.888	75.493	-0.687	76.180	Pass
Vertical	5640.109	37.614	37.865	75.479	-0.701	76.180	Pass
Vertical	5650.000	37.636	35.608	73.245	-2.935	76.180	Pass
Vertical	5698.152	37.736	44.641	82.378	-29.434	111.812	Pass
Vertical	5700.000	37.738	43.505	81.243	-31.937	113.180	Pass
Vertical	5720.000	37.733	49.323	87.057	-31.723	118.780	Pass
Vertical	5725.000	37.729	52.896	90.625	-39.555	130.180	Pass
Vertical	5743.804	37.712	94.651	132.363	--	--	--

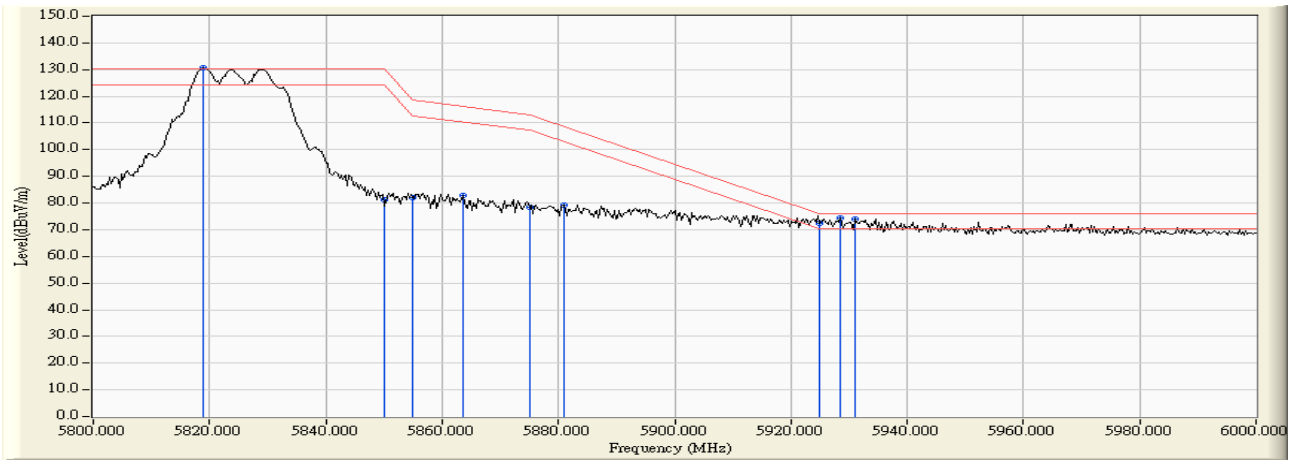
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5818.841	36.427	94.467	130.894	--	--	--
Horizontal	5850.000	36.561	44.635	81.196	-48.984	130.180	Pass
Horizontal	5855.000	36.582	45.520	82.102	-36.678	118.780	Pass
Horizontal	5863.478	36.619	46.204	82.823	-33.583	116.406	Pass
Horizontal	5875.000	36.668	41.936	78.604	-34.576	113.180	Pass
Horizontal	5880.870	36.694	42.578	79.272	-29.564	108.836	Pass
Horizontal	5925.000	36.734	35.608	72.342	-3.838	76.180	Pass
Horizontal	5928.406	36.727	37.659	74.387	-1.793	76.180	Pass
Horizontal	5931.014	36.723	37.424	74.147	-2.033	76.180	Pass

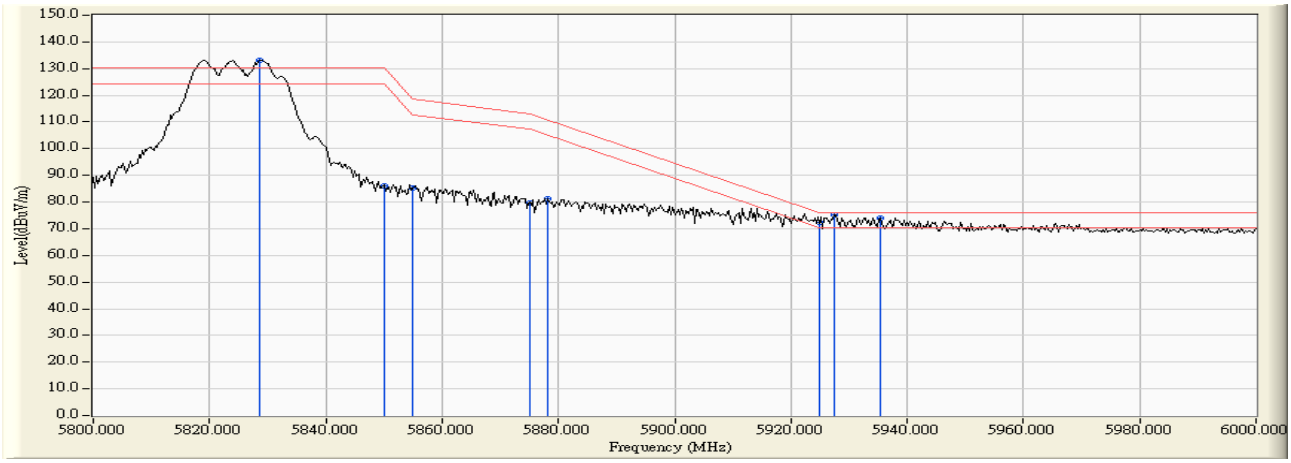
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5828.696	37.644	95.662	133.306	--	--	--
Vertical	5850.000	37.634	48.571	86.205	-43.975	130.180	Pass
Vertical	5855.000	37.631	47.649	85.280	-33.500	118.780	Pass
Vertical	5875.000	37.620	42.161	79.782	-33.398	113.180	Pass
Vertical	5878.261	37.620	43.541	81.160	-29.607	110.767	Pass
Vertical	5925.000	37.577	34.993	72.570	-3.610	76.180	Pass
Vertical	5927.536	37.573	37.751	75.324	-0.856	76.180	Pass
Vertical	5935.362	37.564	36.309	73.872	-2.308	76.180	Pass

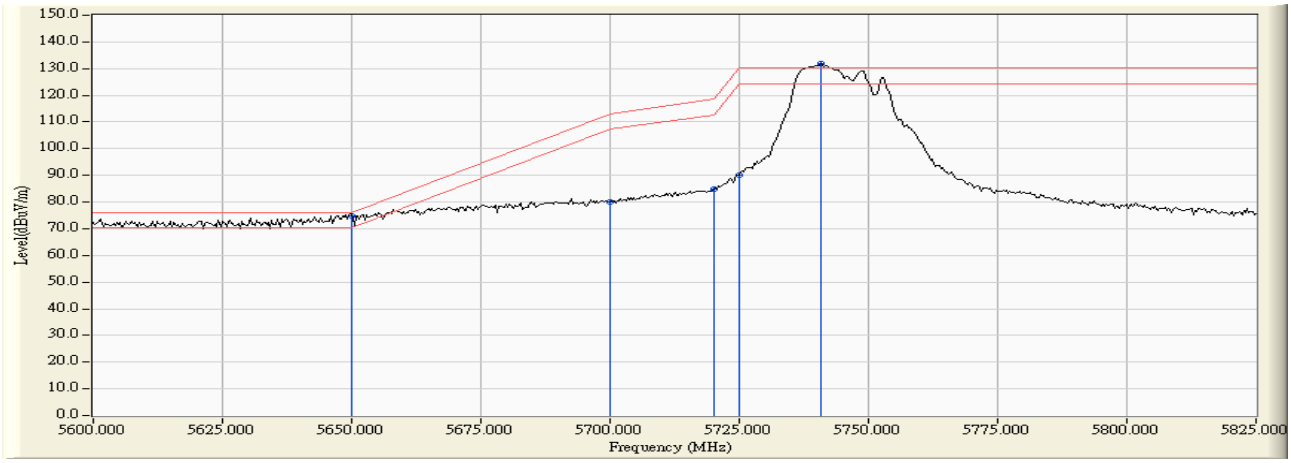
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) -Channel 149

RF Radiated Measurement:



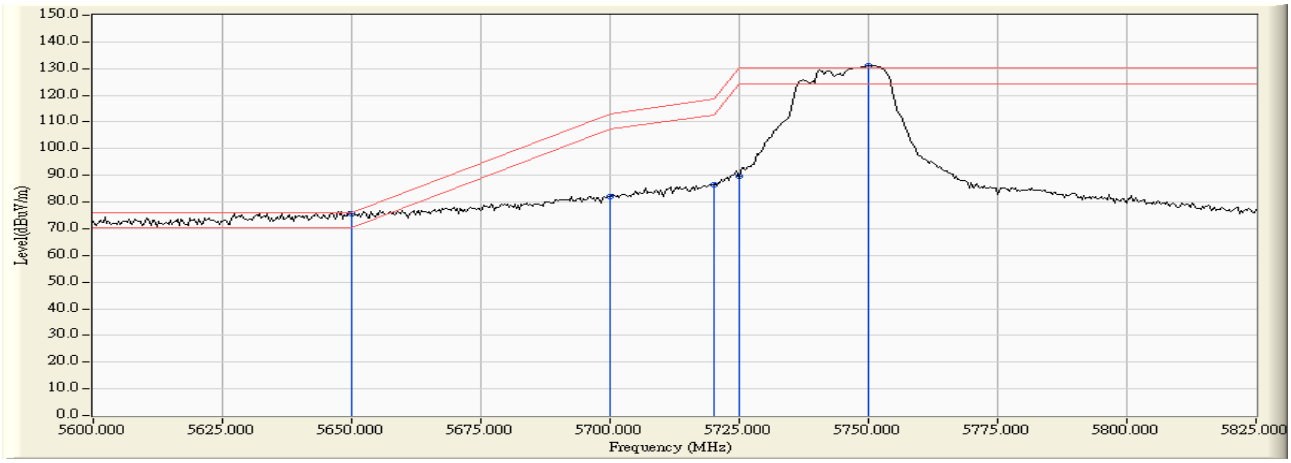
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5650.000	36.161	38.752	74.914	-1.266	76.180	Pass
Horizontal	5700.000	36.382	43.620	80.002	-33.178	113.180	Pass
Horizontal	5720.000	36.393	48.406	84.800	-33.980	118.780	Pass
Horizontal	5725.000	36.391	53.846	90.237	-39.943	130.180	Pass
Horizontal	5740.870	36.381	95.494	131.875	--	--	--

Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.
3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) -Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5650.000	37.636	37.822	75.459	-0.721	76.180	Pass
Vertical	5700.000	37.738	44.419	82.157	-31.023	113.180	Pass
Vertical	5720.000	37.733	48.812	86.546	-32.234	118.780	Pass
Vertical	5725.000	37.729	52.020	89.749	-40.431	130.180	Pass
Vertical	5750.000	37.706	93.582	131.287	--	--	--

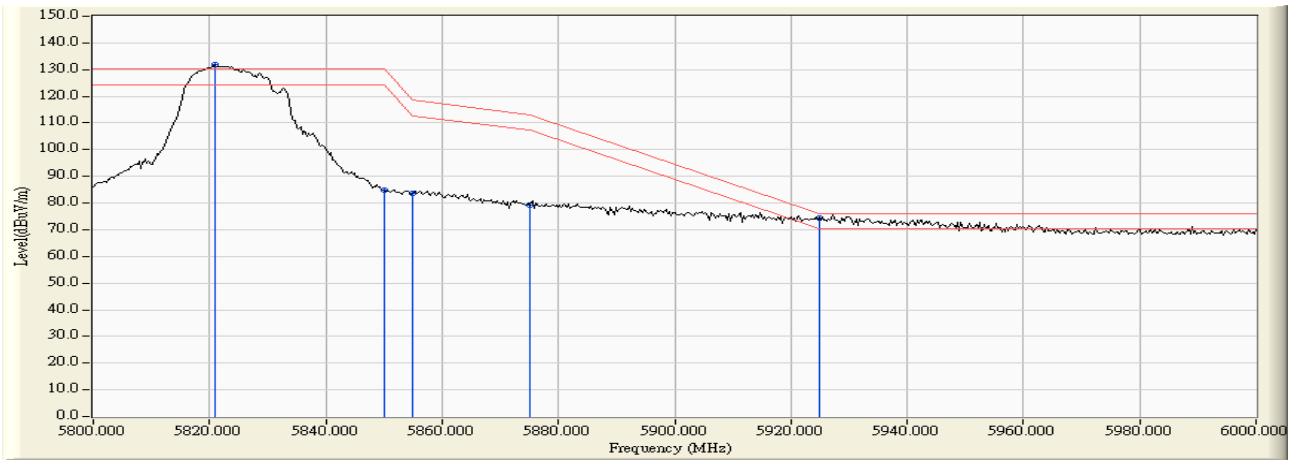
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) -Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5820.870	36.435	95.354	131.789	--	--	--
Horizontal	5850.000	36.561	48.169	84.730	-45.450	130.180	Pass
Horizontal	5855.000	36.582	47.157	83.739	-35.041	118.780	Pass
Horizontal	5875.000	36.668	42.464	79.132	-34.048	113.180	Pass
Horizontal	5925.000	36.734	37.516	74.250	-1.930	76.180	Pass

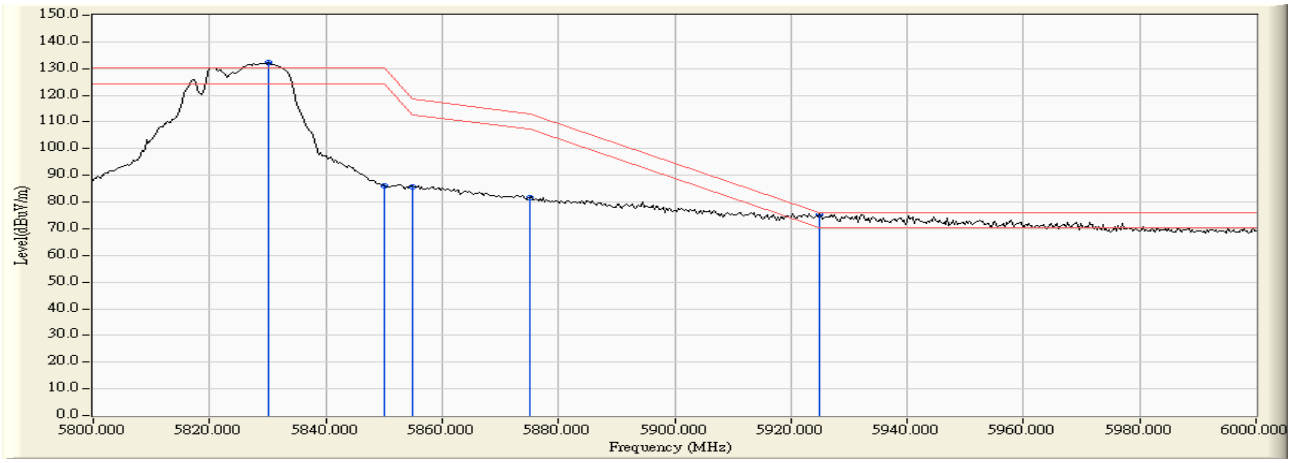
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) -Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5830.145	37.643	94.822	132.465	--	--	--
Vertical	5850.000	37.634	48.532	86.166	-44.014	130.180	Pass
Vertical	5855.000	37.631	48.137	85.768	-33.012	118.780	Pass
Vertical	5875.000	37.620	44.184	81.805	-31.375	113.180	Pass
Vertical	5925.000	37.577	37.696	75.273	-0.907	76.180	Pass

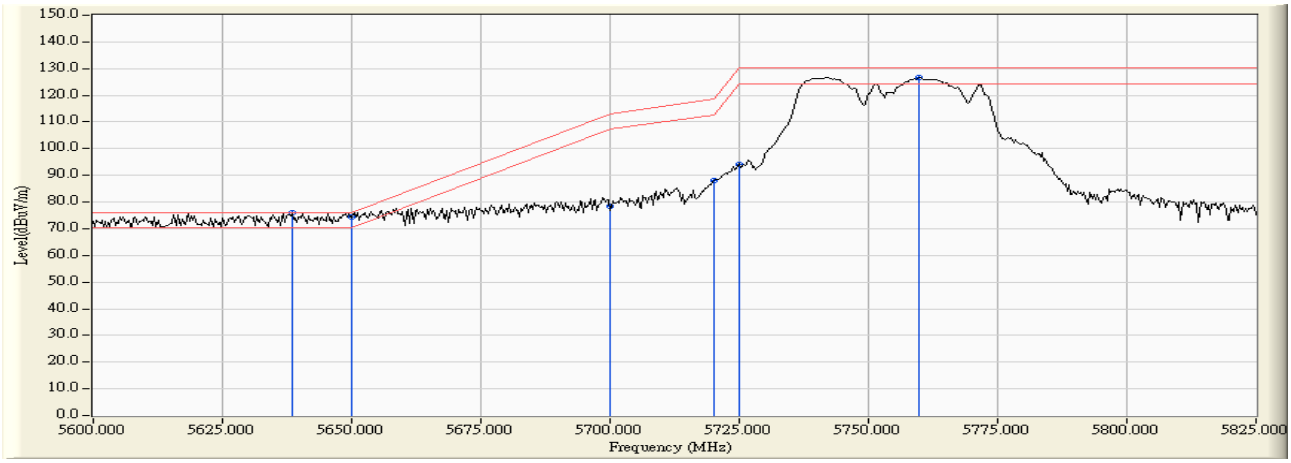
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna) -Channel 151

RF Radiated Measurement :



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Measure Level (dBµV /m)	Margin (dB)	Limit (dBµV /m)	Result
Horizontal	5638.478	36.106	40.007	76.112	-0.068	76.180	Pass
Horizontal	5650.000	36.161	38.339	74.501	-1.679	76.180	Pass
Horizontal	5700.000	36.382	41.895	78.277	-34.903	113.180	Pass
Horizontal	5720.000	36.393	51.675	88.069	-30.711	118.780	Pass
Horizontal	5725.000	36.391	57.540	93.931	-36.249	130.180	Pass
Horizontal	5759.783	36.370	90.338	126.707	--	--	--

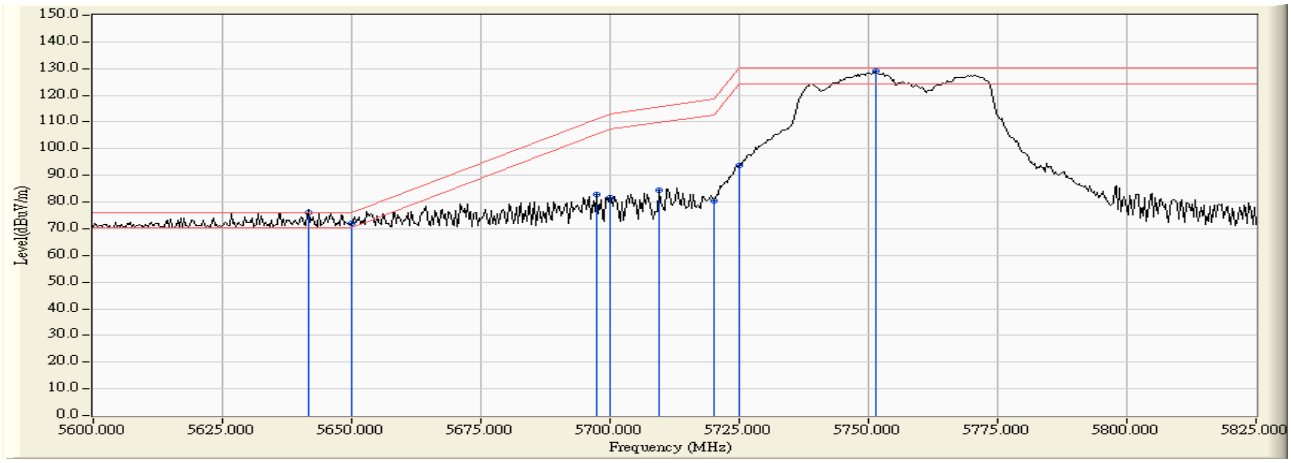
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna) -Channel 151

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5641.739	37.617	38.530	76.148	-0.032	76.180	Pass
Vertical	5650.000	37.636	34.369	72.006	-4.174	76.180	Pass
Vertical	5697.500	37.735	45.120	82.856	-28.474	111.330	Pass
Vertical	5700.000	37.738	43.960	81.698	-31.482	113.180	Pass
Vertical	5709.565	37.743	46.829	84.572	-31.286	115.858	Pass
Vertical	5720.000	37.733	42.865	80.599	-38.181	118.780	Pass
Vertical	5725.000	37.729	55.884	93.613	-36.567	130.180	Pass
Vertical	5751.304	37.704	91.468	129.172	--	--	--

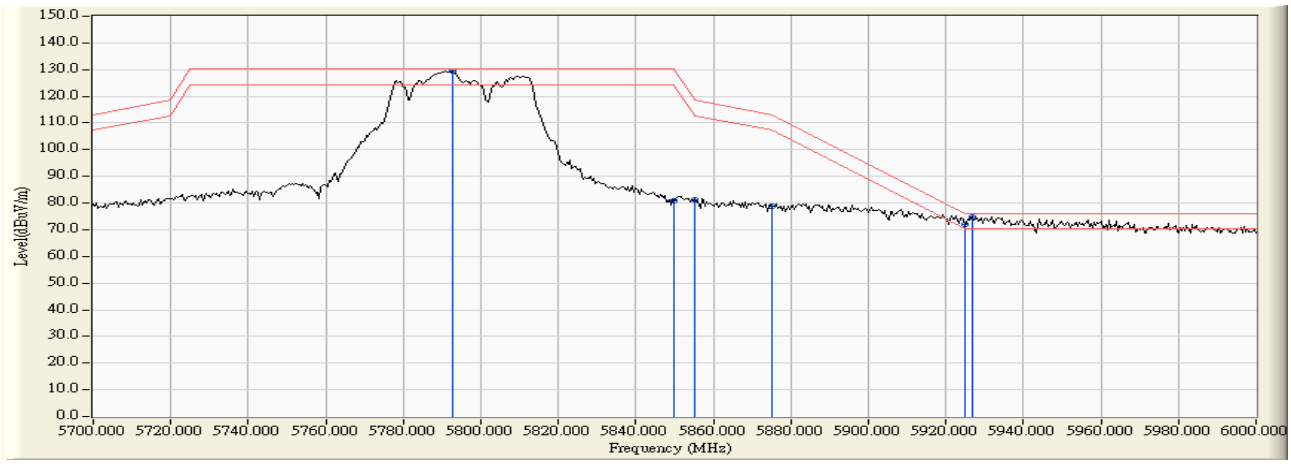
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna) -Channel 159

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5792.609	36.349	93.066	129.415	--	--	--
Horizontal	5850.000	36.561	44.117	80.678	-49.502	130.180	Pass
Horizontal	5855.000	36.582	44.639	81.221	-37.559	118.780	Pass
Horizontal	5875.000	36.668	41.956	78.624	-34.556	113.180	Pass
Horizontal	5925.000	36.734	35.318	72.052	-4.128	76.180	Pass
Horizontal	5926.957	36.730	37.963	74.694	-1.486	76.180	Pass

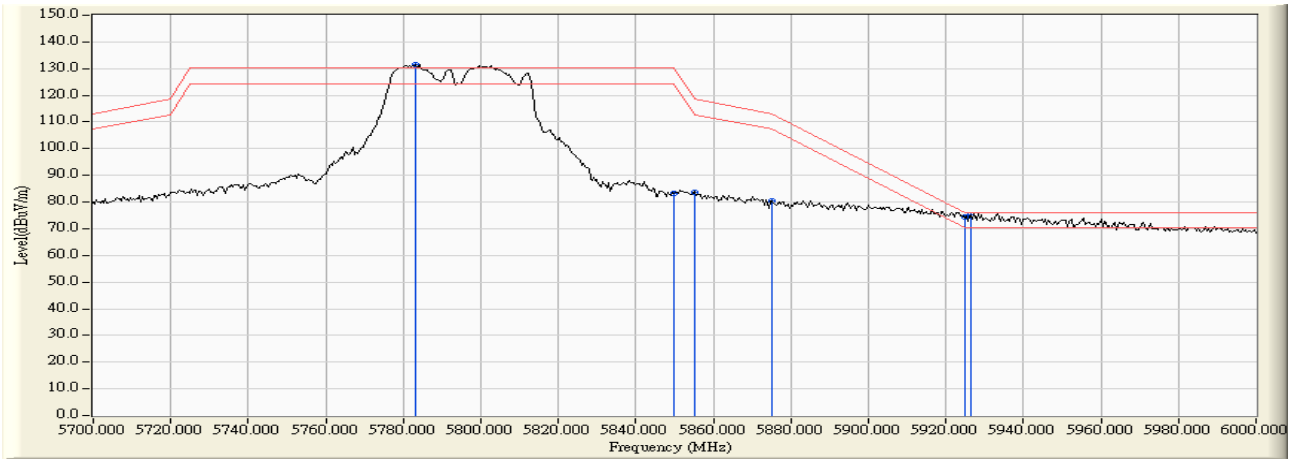
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna) -Channel 159

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5783.043	37.673	93.832	131.505	--	--	--
Vertical	5850.000	37.634	45.625	83.259	-46.921	130.180	Pass
Vertical	5855.000	37.631	46.016	83.647	-35.133	118.780	Pass
Vertical	5875.000	37.620	42.712	80.333	-32.847	113.180	Pass
Vertical	5925.000	37.577	36.766	74.343	-1.837	76.180	Pass
Vertical	5926.522	37.574	37.789	75.364	-0.816	76.180	Pass

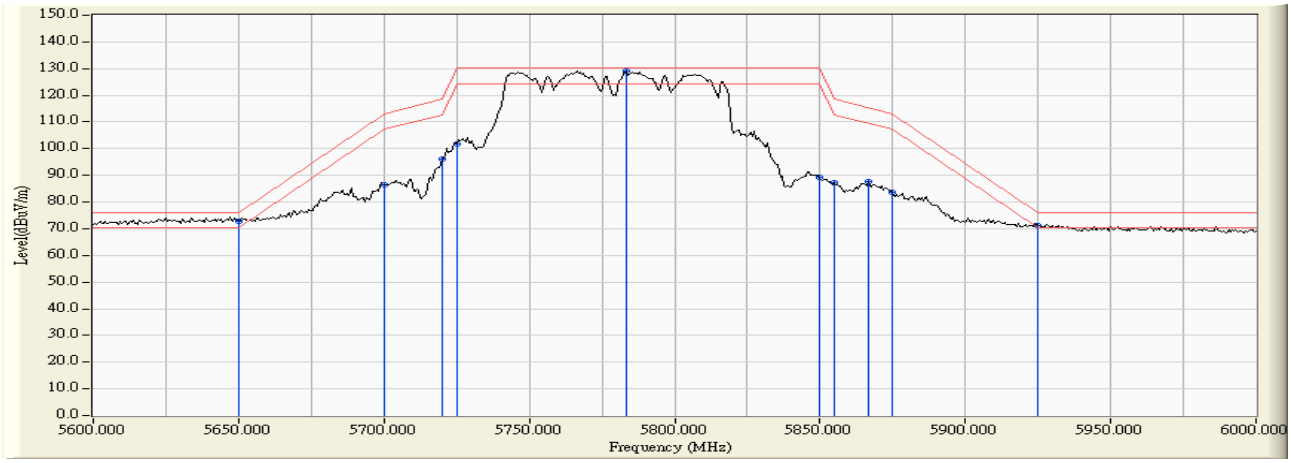
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11ac-80BW-65Mbps) (Grid DISH Antenna) -Channel 156

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Measure Level (dBµV /m)	Margin (dB)	Limit (dBµV /m)	Result
Horizontal	5650.000	36.161	36.814	72.976	-3.204	76.180	Pass
Horizontal	5700.000	36.382	49.991	86.373	-26.807	113.180	Pass
Horizontal	5720.000	36.393	59.670	96.064	-22.716	118.780	Pass
Horizontal	5725.000	36.391	65.431	101.822	-28.358	130.180	Pass
Horizontal	5783.188	36.354	92.857	129.212	--	--	--
Horizontal	5850.000	36.561	52.518	89.079	-41.101	130.180	Pass
Horizontal	5855.000	36.582	50.499	87.081	-31.699	118.780	Pass
Horizontal	5866.667	36.632	50.837	87.469	-28.044	115.513	Pass
Horizontal	5875.000	36.668	46.836	83.504	-29.676	113.180	Pass
Horizontal	5925.000	36.734	34.603	71.337	-4.843	76.180	Pass

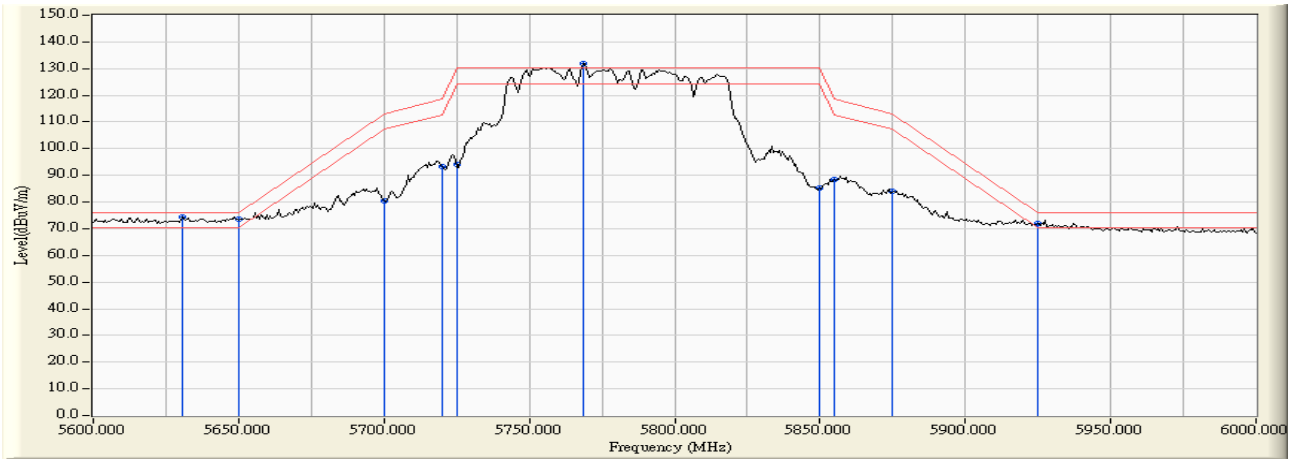
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11ac-80BW-65Mbps) (Grid DISH Antenna) -Channel 156

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5630.725	37.593	36.943	74.535	-1.645	76.180	Pass
Vertical	5650.000	37.636	35.771	73.408	-2.772	76.180	Pass
Vertical	5700.000	37.738	42.868	80.606	-32.574	113.180	Pass
Vertical	5720.000	37.733	55.719	93.453	-25.327	118.780	Pass
Vertical	5725.000	37.729	56.281	94.010	-36.170	130.180	Pass
Vertical	5768.696	37.687	94.206	131.893	--	--	--
Vertical	5850.000	37.634	47.663	85.297	-44.883	130.180	Pass
Vertical	5855.000	37.631	50.876	88.507	-30.273	118.780	Pass
Vertical	5875.000	37.620	46.258	83.879	-29.301	113.180	Pass
Vertical	5925.000	37.577	34.287	71.864	-4.316	76.180	Pass

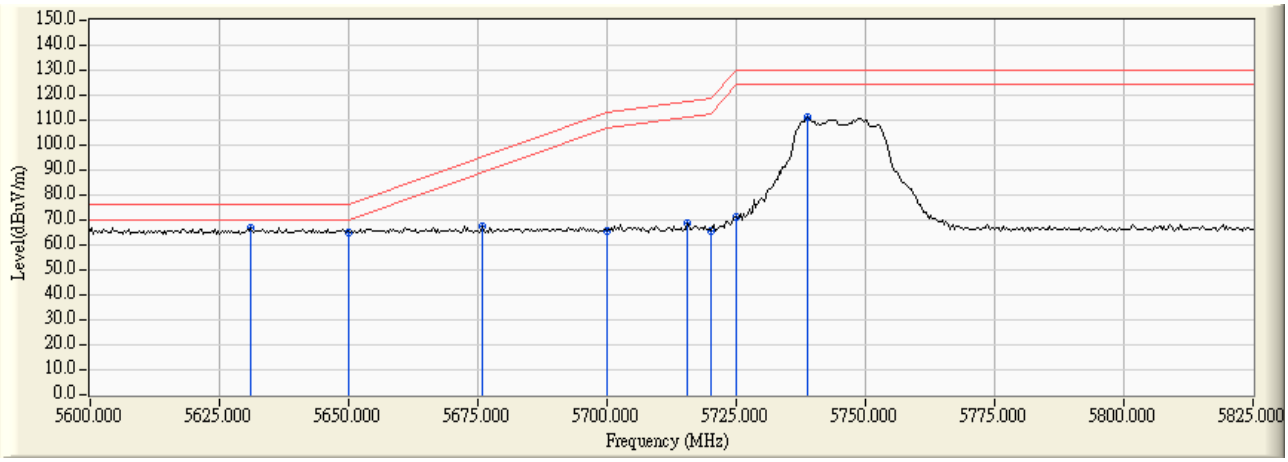
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5630.978	36.069	30.775	66.843	-9.337	76.180	Pass
Horizontal	5650.000	36.161	29.145	65.307	-10.873	76.180	Pass
Horizontal	5675.978	36.290	30.933	67.222	-28.182	95.404	Pass
Horizontal	5700.000	36.382	29.536	65.918	-47.262	113.180	Pass
Horizontal	5715.435	36.396	32.263	68.659	-48.843	117.502	Pass
Horizontal	5720.000	36.393	29.468	65.862	-52.918	118.780	Pass
Horizontal	5725.000	36.391	34.580	70.971	-59.209	130.180	Pass
Horizontal	5738.913	36.382	74.577	110.959	--	--	--

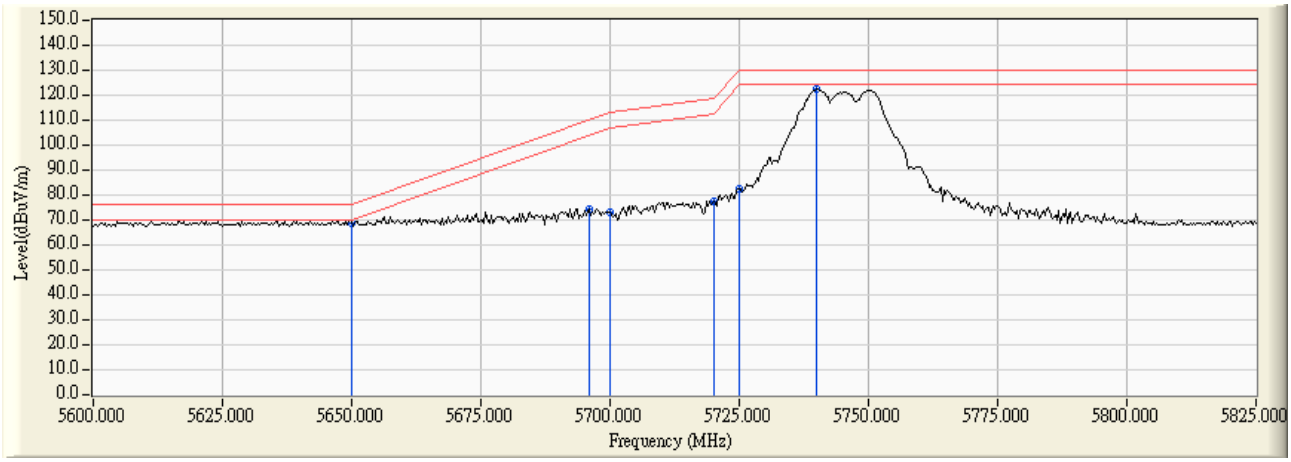
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5650.000	37.636	31.024	68.661	-7.519	76.180	Pass
Vertical	5695.870	37.736	36.909	74.644	-35.480	110.124	Pass
Vertical	5700.000	37.738	35.478	73.216	-39.964	113.180	Pass
Vertical	5720.000	37.733	39.919	77.653	-41.127	118.780	Pass
Vertical	5725.000	37.729	44.476	82.205	-47.975	130.180	Pass
Vertical	5739.891	37.715	84.785	122.500	--	--	--

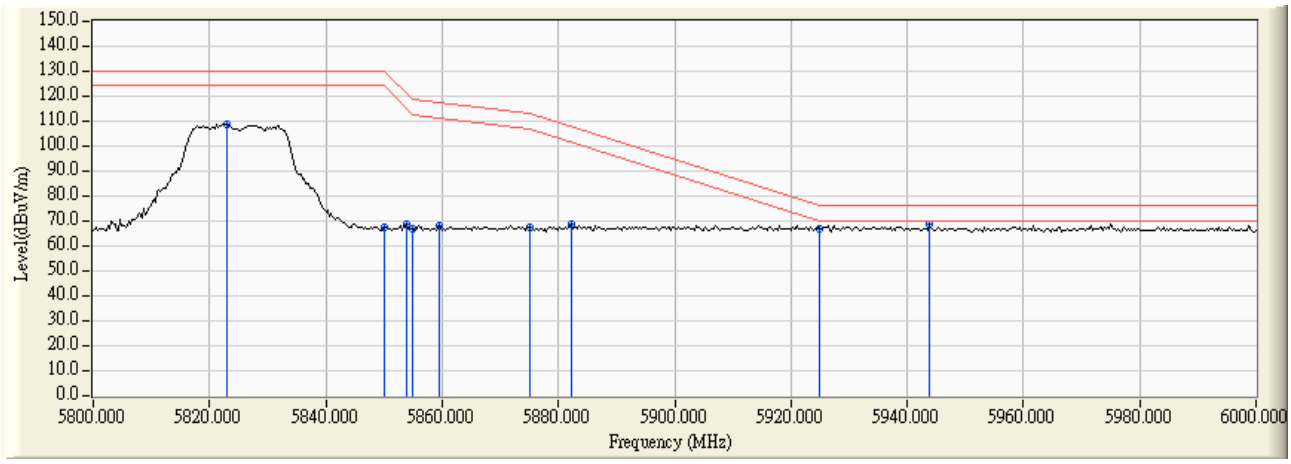
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5822.899	36.445	72.282	108.726	--	--	--
Horizontal	5850.000	36.561	30.719	67.280	-62.900	130.180	Pass
Horizontal	5853.913	36.578	31.951	68.529	-52.729	121.258	Pass
Horizontal	5855.000	36.582	30.003	66.585	-52.195	118.780	Pass
Horizontal	5859.420	36.601	31.326	67.927	-49.615	117.542	Pass
Horizontal	5875.000	36.668	30.821	67.489	-45.691	113.180	Pass
Horizontal	5882.319	36.701	32.040	68.741	-39.023	107.764	Pass
Horizontal	5925.000	36.734	30.151	66.885	-9.295	76.180	Pass
Horizontal	5943.768	36.702	31.768	68.469	-7.711	76.180	Pass

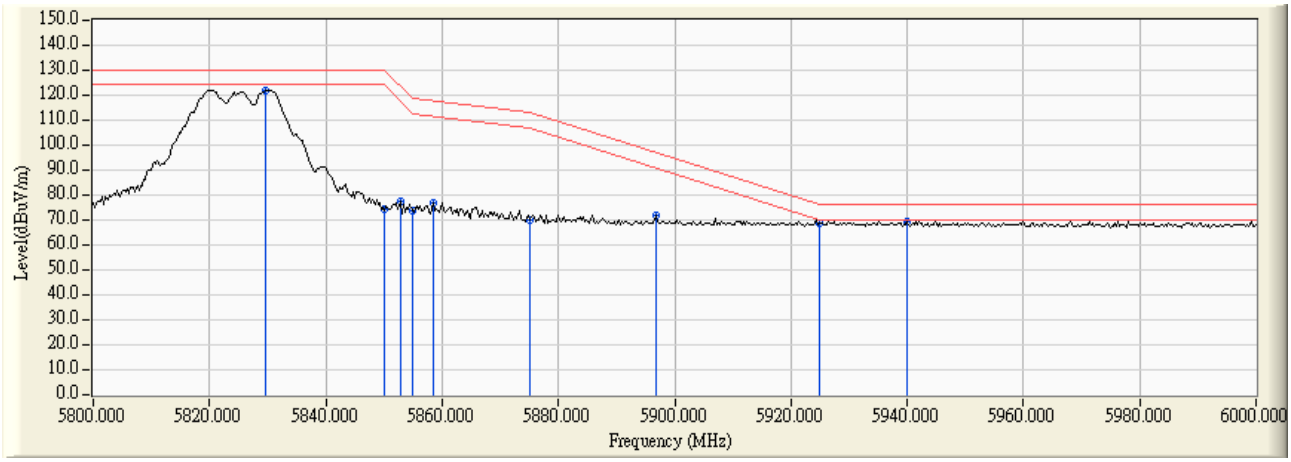
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5829.565	37.644	84.540	122.184	--	--	--
Vertical	5850.000	37.634	36.553	74.187	-55.993	130.180	Pass
Vertical	5852.754	37.633	39.760	77.392	-46.509	123.901	Pass
Vertical	5855.000	37.631	36.143	73.774	-45.006	118.780	Pass
Vertical	5858.551	37.629	39.073	76.702	-41.084	117.786	Pass
Vertical	5875.000	37.620	32.605	70.226	-42.954	113.180	Pass
Vertical	5896.812	37.610	34.149	71.759	-25.280	97.039	Pass
Vertical	5925.000	37.577	31.130	68.707	-7.473	76.180	Pass
Vertical	5940.000	37.557	31.559	69.117	-7.063	76.180	Pass

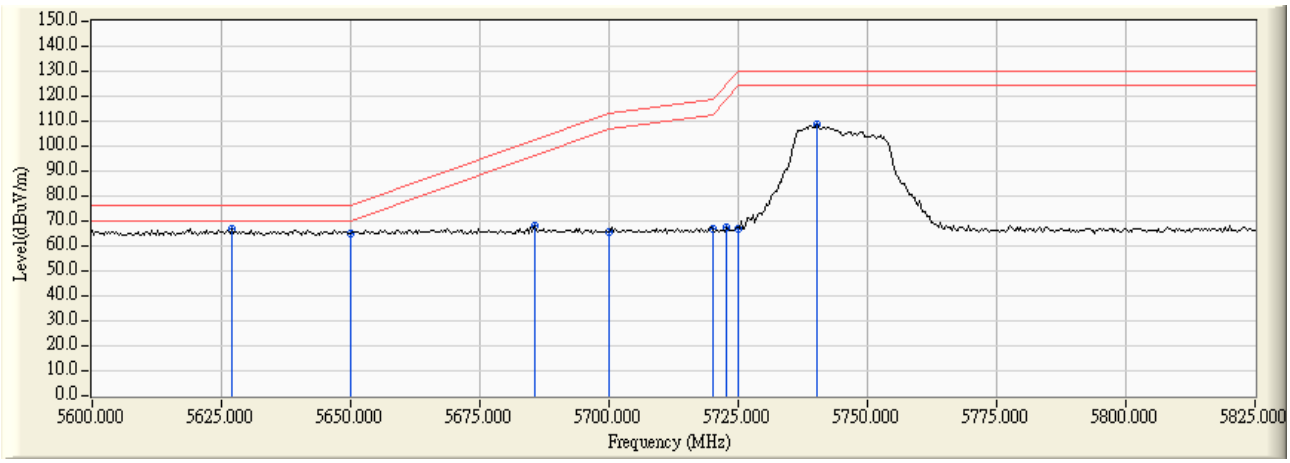
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna) -Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5627.065	36.049	31.063	67.112	-9.068	76.180	Pass
Horizontal	5650.000	36.161	28.900	65.062	-11.118	76.180	Pass
Horizontal	5685.761	36.337	31.602	67.939	-34.704	102.643	Pass
Horizontal	5700.000	36.382	29.252	65.634	-47.546	113.180	Pass
Horizontal	5720.000	36.393	30.209	66.603	-52.177	118.780	Pass
Horizontal	5722.609	36.393	31.080	67.472	-57.257	124.729	Pass
Horizontal	5725.000	36.391	30.735	67.126	-63.054	130.180	Pass
Horizontal	5740.217	36.381	72.181	108.562	--	--	--

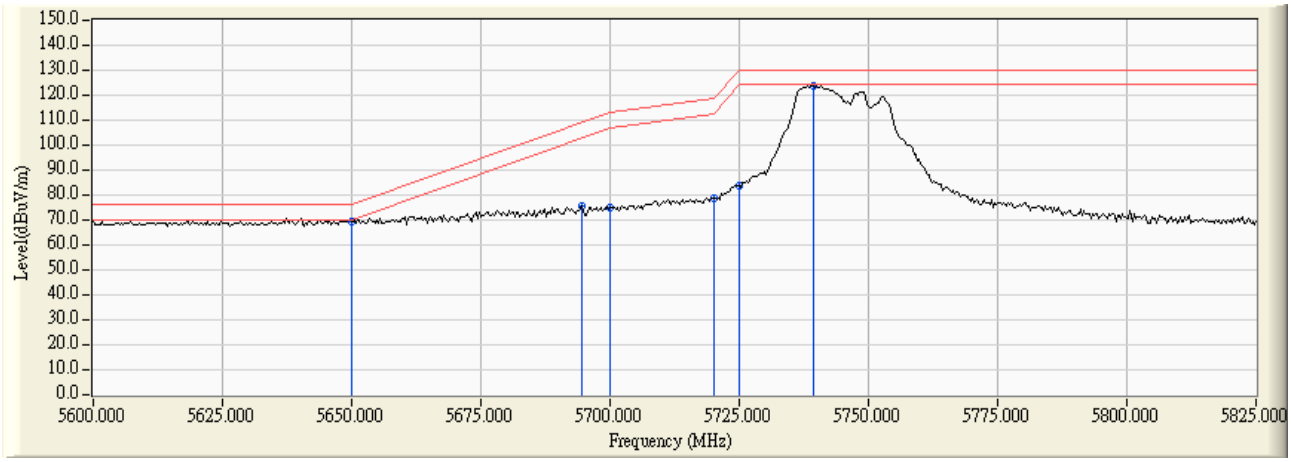
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5650.000	37.636	31.683	69.320	-6.860	76.180	Pass
Vertical	5694.565	37.734	37.786	75.520	-33.638	109.158	Pass
Vertical	5700.000	37.738	36.972	74.710	-38.470	113.180	Pass
Vertical	5720.000	37.733	41.000	78.734	-40.046	118.780	Pass
Vertical	5725.000	37.729	45.856	83.585	-46.595	130.180	Pass
Vertical	5739.239	37.716	85.993	123.709	--	--	--

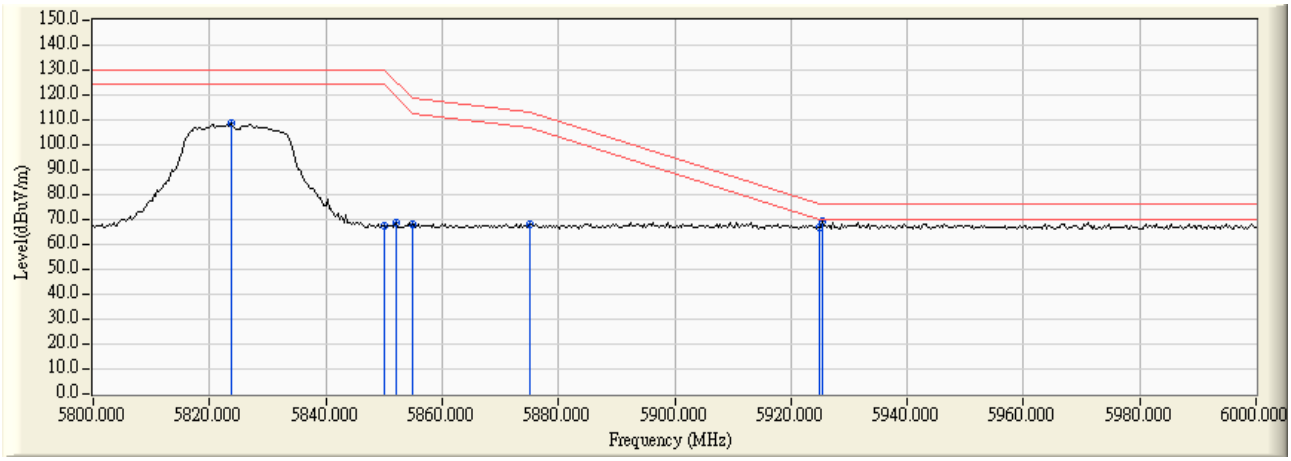
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna) -Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5823.768	36.448	72.311	108.759	--	--	--
Horizontal	5850.000	36.561	30.829	67.390	-62.790	130.180	Pass
Horizontal	5852.174	36.570	32.104	68.674	-56.549	125.223	Pass
Horizontal	5855.000	36.582	31.432	68.014	-50.766	118.780	Pass
Horizontal	5875.000	36.668	31.168	67.836	-45.344	113.180	Pass
Horizontal	5925.000	36.734	30.040	66.774	-9.406	76.180	Pass
Horizontal	5925.507	36.734	32.556	69.289	-6.891	76.180	Pass

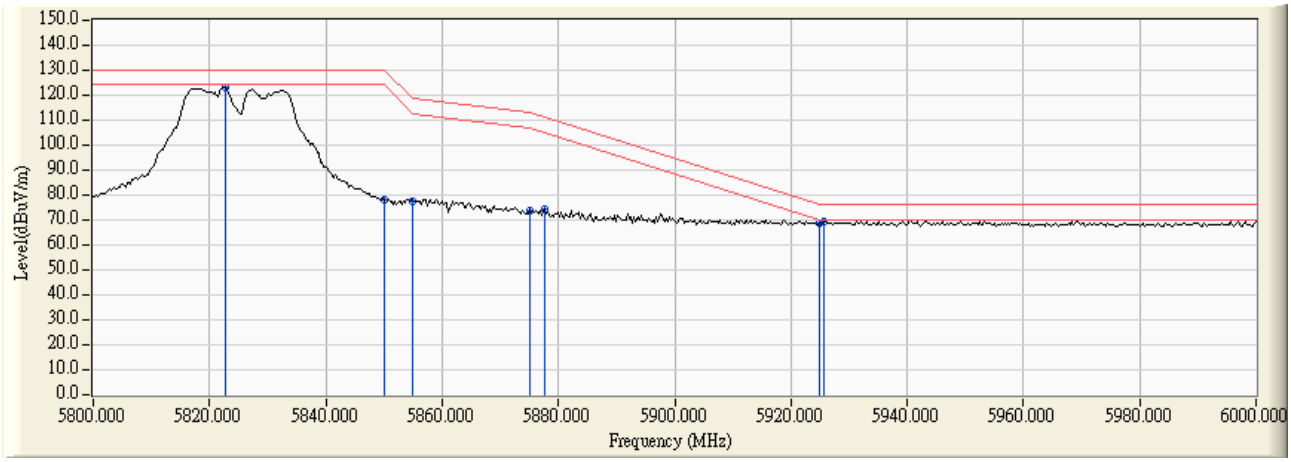
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna)-Channel 165

RF Radiated Measurement:



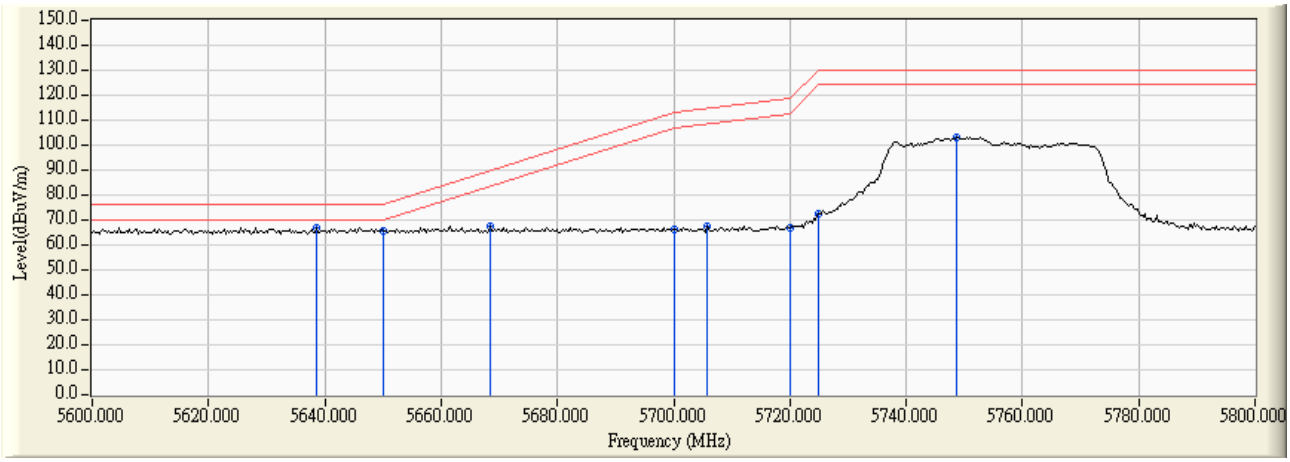
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5822.609	37.647	85.446	123.094	--	--	--
Vertical	5850.000	37.634	40.671	78.305	-51.875	130.180	Pass
Vertical	5855.000	37.631	40.048	77.679	-41.101	118.780	Pass
Vertical	5875.000	37.620	36.109	73.730	-39.450	113.180	Pass
Vertical	5877.681	37.619	36.841	74.460	-36.736	111.196	Pass
Vertical	5925.000	37.577	30.997	68.574	-7.606	76.180	Pass
Vertical	5925.797	37.576	31.937	69.513	-6.667	76.180	Pass

Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.
3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna) -Channel 151

RF Radiated Measurement :



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5638.551	36.106	30.462	66.568	-9.612	76.180	Pass
Horizontal	5650.000	36.161	29.537	65.699	-10.481	76.180	Pass
Horizontal	5668.406	36.253	31.091	67.344	-22.456	89.800	Pass
Horizontal	5700.000	36.382	30.001	66.383	-46.797	113.180	Pass
Horizontal	5705.797	36.393	31.186	67.579	-47.224	114.803	Pass
Horizontal	5720.000	36.393	30.357	66.751	-52.029	118.780	Pass
Horizontal	5725.000	36.391	35.973	72.364	-57.816	130.180	Pass
Horizontal	5748.696	36.376	66.546	102.922	--	--	--

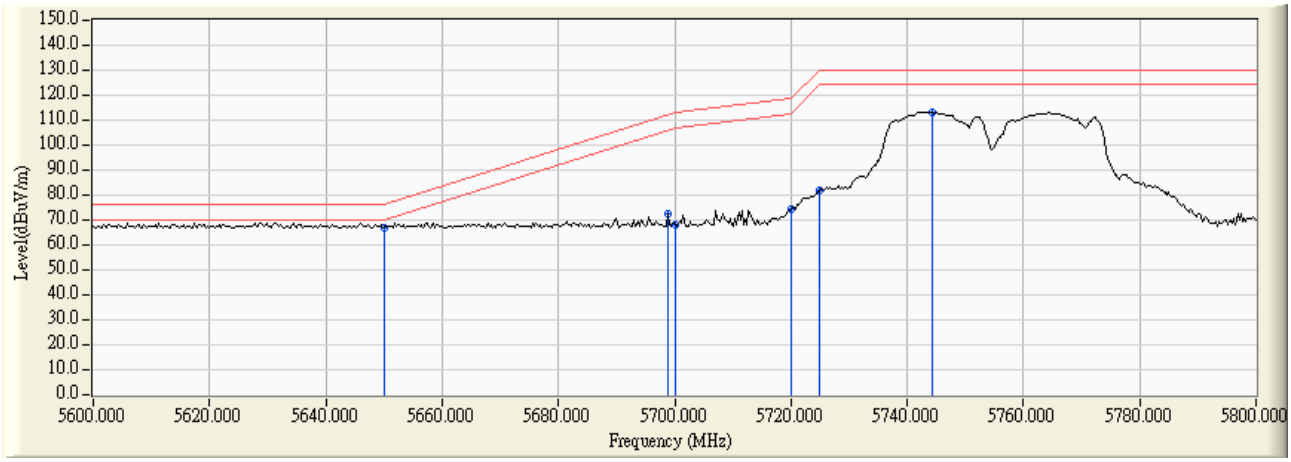
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna) -Channel 151

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5650.000	37.636	29.497	67.134	-9.046	76.180	Pass
Vertical	5698.841	37.737	34.468	72.205	-40.117	112.322	Pass
Vertical	5700.000	37.738	30.385	68.123	-45.057	113.180	Pass
Vertical	5720.000	37.733	36.436	74.170	-44.610	118.780	Pass
Vertical	5725.000	37.729	43.893	81.622	-48.558	130.180	Pass
Vertical	5744.348	37.711	75.465	113.176	--	--	--

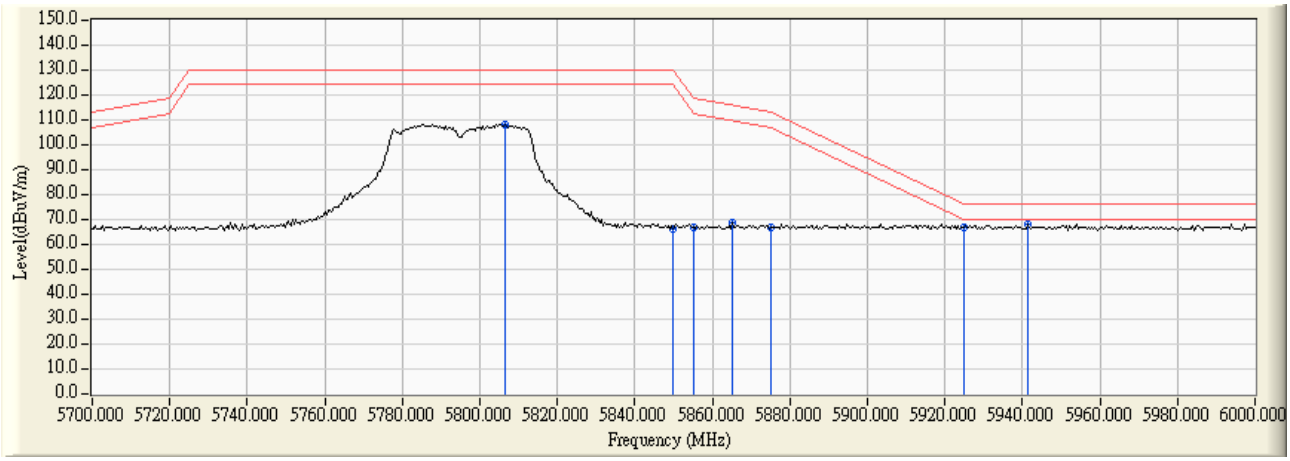
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna) -Channel 159

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5806.522	36.380	71.794	108.174	--	--	--
Horizontal	5850.000	36.561	29.860	66.421	-63.759	130.180	Pass
Horizontal	5855.000	36.582	30.158	66.740	-52.040	118.780	Pass
Horizontal	5865.217	36.626	31.996	68.622	-47.297	115.919	Pass
Horizontal	5875.000	36.668	29.975	66.643	-46.537	113.180	Pass
Horizontal	5925.000	36.734	30.340	67.074	-9.106	76.180	Pass
Horizontal	5941.304	36.706	31.175	67.881	-8.299	76.180	Pass

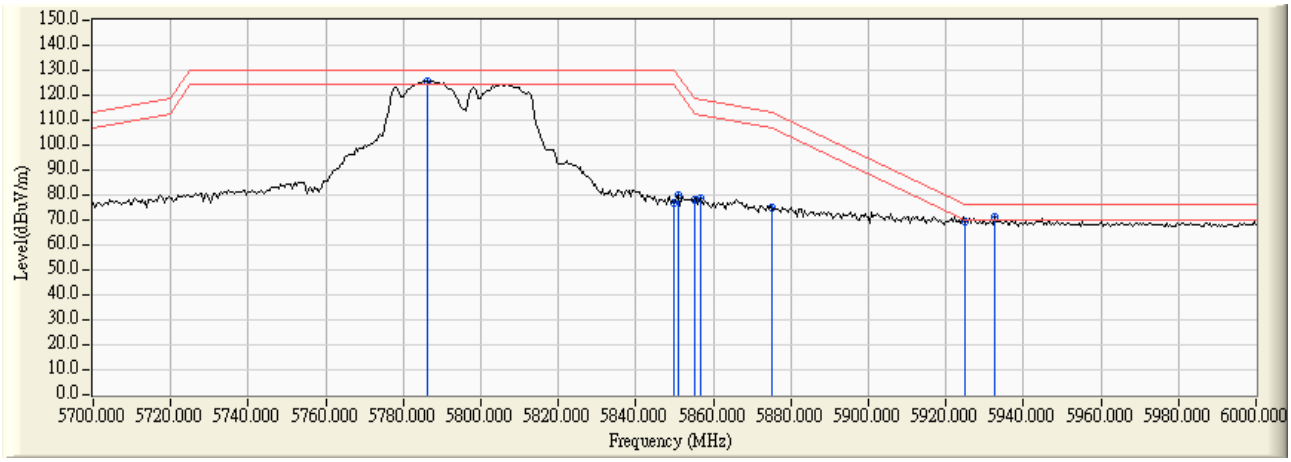
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna) -Channel 159

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5786.087	37.671	87.979	125.650	--	--	--
Vertical	5850.000	37.634	39.327	76.961	-53.219	130.180	Pass
Vertical	5850.870	37.633	42.298	79.931	-48.265	128.196	Pass
Vertical	5855.000	37.631	40.439	78.070	-40.710	118.780	Pass
Vertical	5856.522	37.630	40.958	78.588	-39.766	118.354	Pass
Vertical	5875.000	37.620	37.196	74.817	-38.363	113.180	Pass
Vertical	5925.000	37.577	31.923	69.500	-6.680	76.180	Pass
Vertical	5932.609	37.566	33.377	70.944	-5.236	76.180	Pass

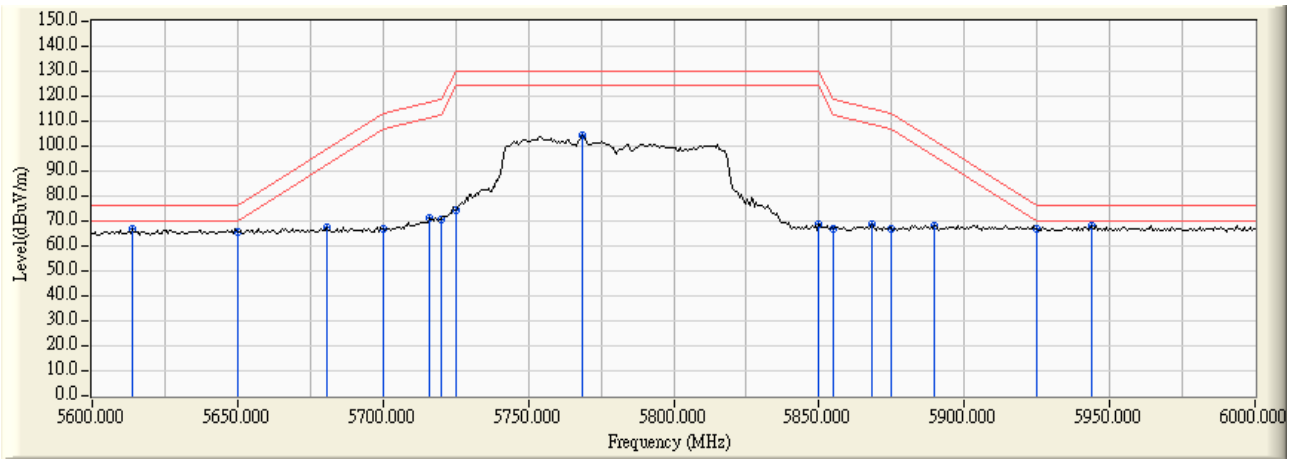
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 8: Transmit (802.11ac-80BW-65Mbps)(Omni Antenna)-Channel 156

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5613.913	35.986	30.713	66.698	-9.482	76.180	Pass
Horizontal	5650.000	36.161	29.387	65.549	-10.631	76.180	Pass
Horizontal	5680.580	36.311	31.011	67.323	-31.486	98.809	Pass
Horizontal	5700.000	36.382	30.337	66.719	-46.461	113.180	Pass
Horizontal	5715.942	36.395	34.646	71.042	-46.602	117.644	Pass
Horizontal	5720.000	36.393	34.506	70.900	-47.880	118.780	Pass
Horizontal	5725.000	36.391	38.062	74.453	-55.727	130.180	Pass
Horizontal	5768.696	36.364	67.949	104.313	--	--	--
Horizontal	5850.000	36.561	31.922	68.483	-61.697	130.180	Pass
Horizontal	5855.000	36.582	30.423	67.005	-51.775	118.780	Pass
Horizontal	5868.406	36.640	31.827	68.467	-46.559	115.026	Pass
Horizontal	5875.000	36.668	30.277	66.945	-46.235	113.180	Pass
Horizontal	5889.855	36.734	31.490	68.224	-33.963	102.187	Pass
Horizontal	5925.000	36.734	29.938	66.672	-9.508	76.180	Pass
Horizontal	5943.768	36.702	31.125	67.826	-8.354	76.180	Pass

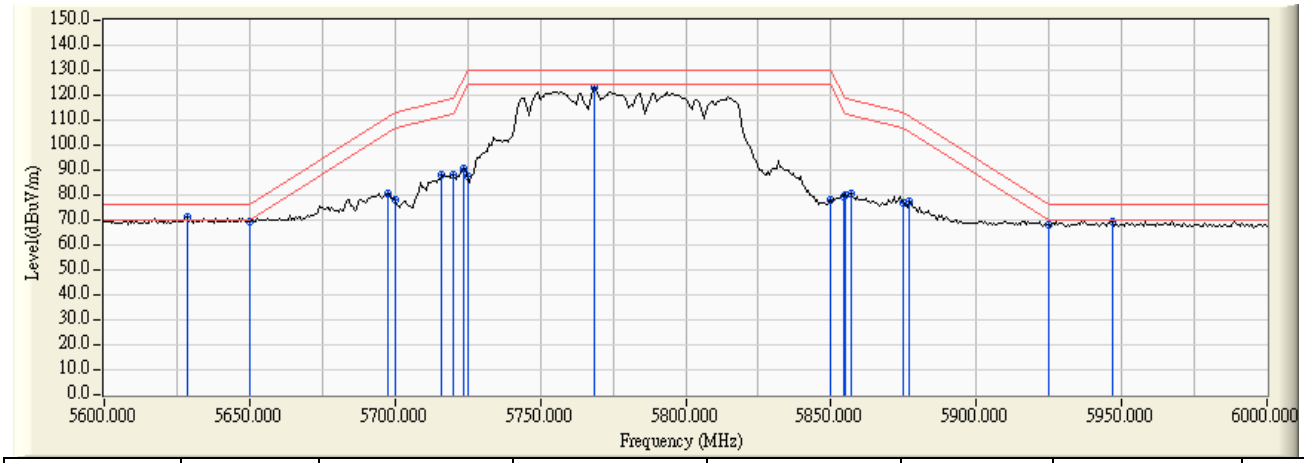
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 8: Transmit (802.11ac-80BW-65Mbps)(Omni Antenna) -Channel 156

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Measure Level (dBµV /m)	Margin (dB)	Limit (dBµV /m)	Result
Vertical	5628.406	37.587	33.447	71.034	-5.146	76.180	Pass
Vertical	5650.000	37.636	31.777	69.414	-6.766	76.180	Pass
Vertical	5697.391	37.736	42.843	80.579	-30.670	111.249	Pass
Vertical	5700.000	37.738	40.246	77.984	-35.196	113.180	Pass
Vertical	5715.942	37.737	50.517	88.254	-29.390	117.644	Pass
Vertical	5720.000	37.733	50.102	87.836	-30.944	118.780	Pass
Vertical	5723.478	37.731	53.083	90.814	-35.896	126.710	Pass
Vertical	5725.000	37.729	49.547	87.276	-42.904	130.180	Pass
Vertical	5768.696	37.687	85.263	122.950	--	--	--
Vertical	5850.000	37.634	40.350	77.984	-52.196	130.180	Pass
Vertical	5854.493	37.631	41.523	79.154	-40.782	119.936	Pass
Vertical	5855.000	37.631	42.606	80.237	-38.543	118.780	Pass
Vertical	5856.812	37.630	42.733	80.363	-37.910	118.273	Pass
Vertical	5875.000	37.620	39.464	77.085	-36.095	113.180	Pass
Vertical	5877.101	37.619	39.722	77.342	-34.283	111.625	Pass
Vertical	5925.000	37.577	30.442	68.019	-8.161	76.180	Pass
Vertical	5946.667	37.549	31.729	69.278	-6.902	76.180	Pass

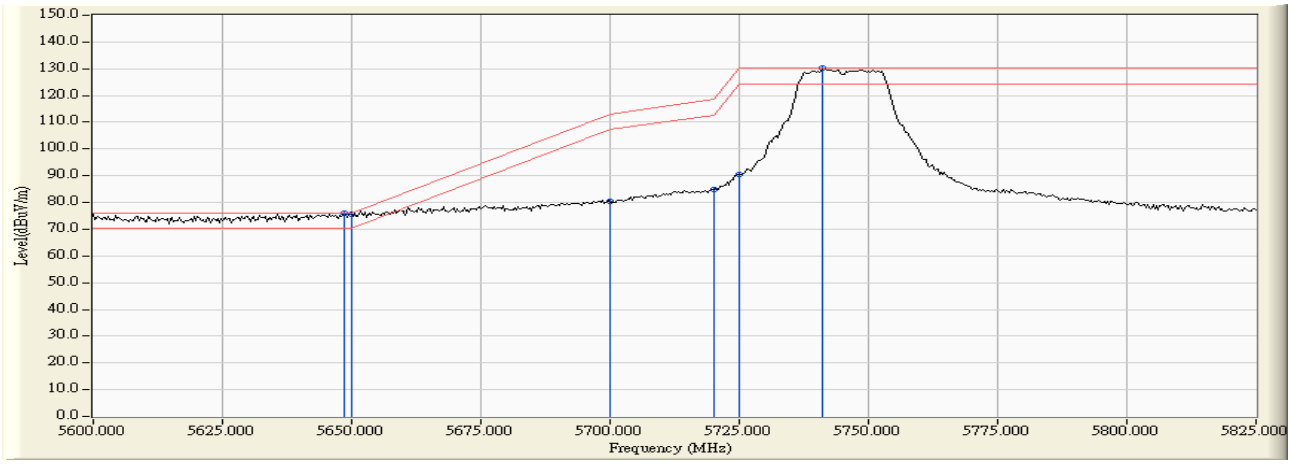
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5648.587	36.155	39.856	76.011	-0.169	76.180	Pass
Horizontal	5650.000	36.161	39.594	75.756	-0.424	76.180	Pass
Horizontal	5700.000	36.382	43.945	80.327	-32.853	113.180	Pass
Horizontal	5720.000	36.393	48.516	84.910	-33.870	118.780	Pass
Horizontal	5725.000	36.391	54.105	90.496	-39.684	130.180	Pass
Horizontal	5741.196	36.381	93.732	130.113	--	--	--

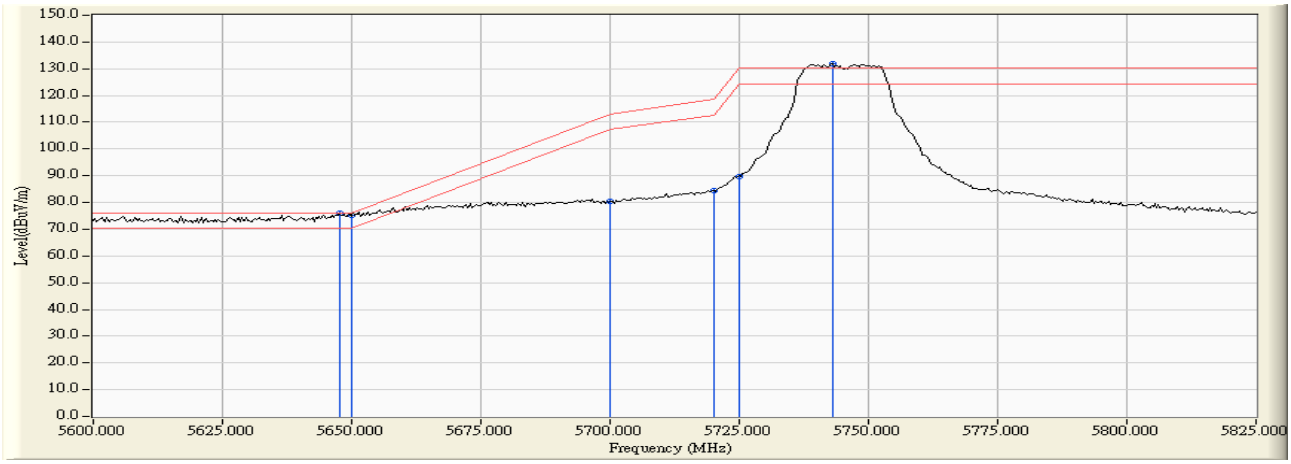
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5647.609	37.631	38.521	76.152	-0.028	76.180	Pass
Vertical	5650.000	37.636	37.731	75.368	-0.812	76.180	Pass
Vertical	5700.000	37.738	42.658	80.396	-32.784	113.180	Pass
Vertical	5720.000	37.733	46.878	84.612	-34.168	118.780	Pass
Vertical	5725.000	37.729	52.132	89.861	-40.319	130.180	Pass
Vertical	5743.152	37.712	94.142	131.854	--	--	--

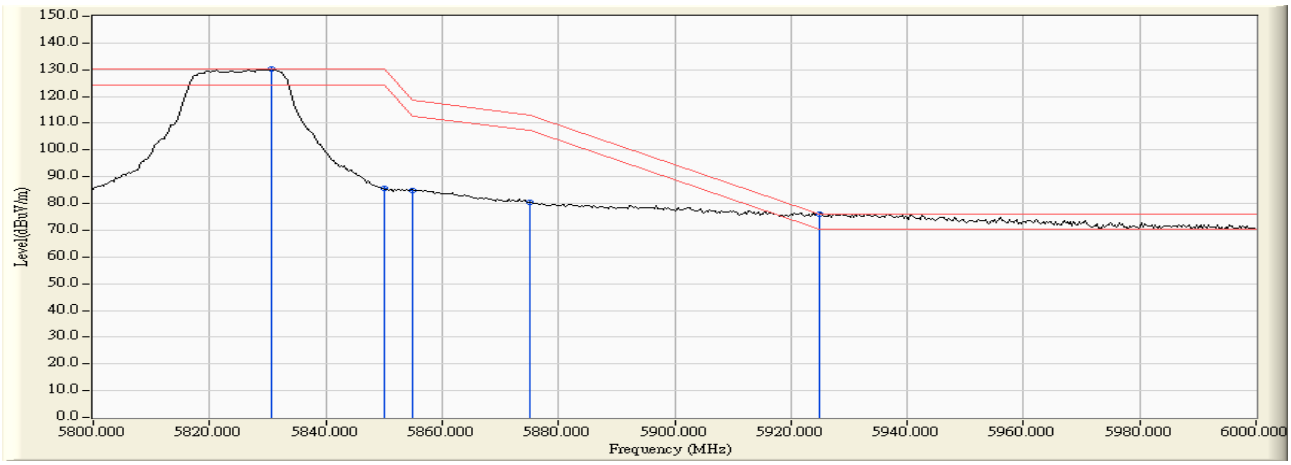
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5830.725	36.477	93.681	130.158	--	--	--
Horizontal	5850.000	36.561	49.060	85.621	-44.559	130.180	Pass
Horizontal	5855.000	36.582	48.338	84.920	-33.860	118.780	Pass
Horizontal	5875.000	36.668	43.820	80.488	-32.692	113.180	Pass
Horizontal	5925.000	36.734	39.227	75.961	-0.219	76.180	Pass

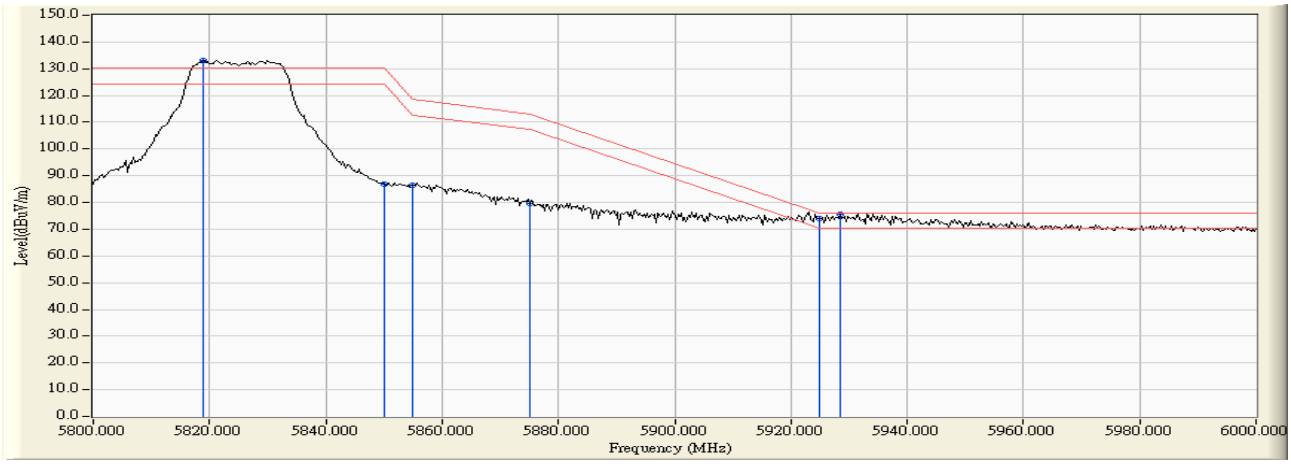
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5818.841	37.649	95.559	133.209	--	--	--
Vertical	5850.000	37.634	49.393	87.027	-43.153	130.180	Pass
Vertical	5855.000	37.631	48.828	86.459	-32.321	118.780	Pass
Vertical	5875.000	37.620	42.190	79.811	-33.369	113.180	Pass
Vertical	5925.000	37.577	36.505	74.082	-2.098	76.180	Pass
Vertical	5928.406	37.572	38.086	75.658	-0.522	76.180	Pass

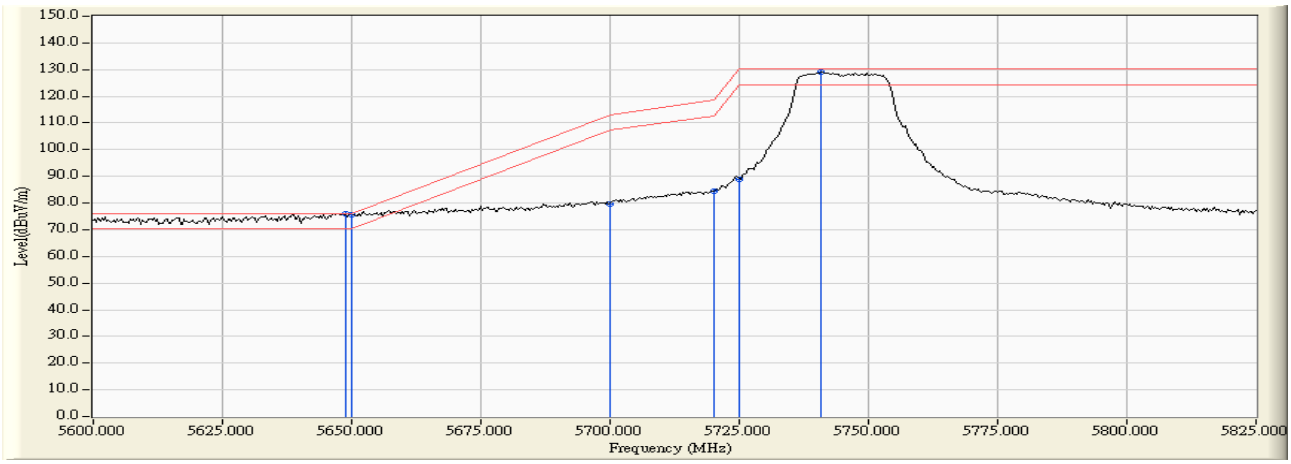
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5648.913	36.156	39.950	76.107	-0.073	76.180	Pass
Horizontal	5650.000	36.161	39.613	75.775	-0.405	76.180	Pass
Horizontal	5700.000	36.382	43.430	79.812	-33.368	113.180	Pass
Horizontal	5720.000	36.393	47.974	84.368	-34.412	118.780	Pass
Horizontal	5725.000	36.391	52.680	89.071	-41.109	130.180	Pass
Horizontal	5740.870	36.381	92.753	129.134	--	--	--

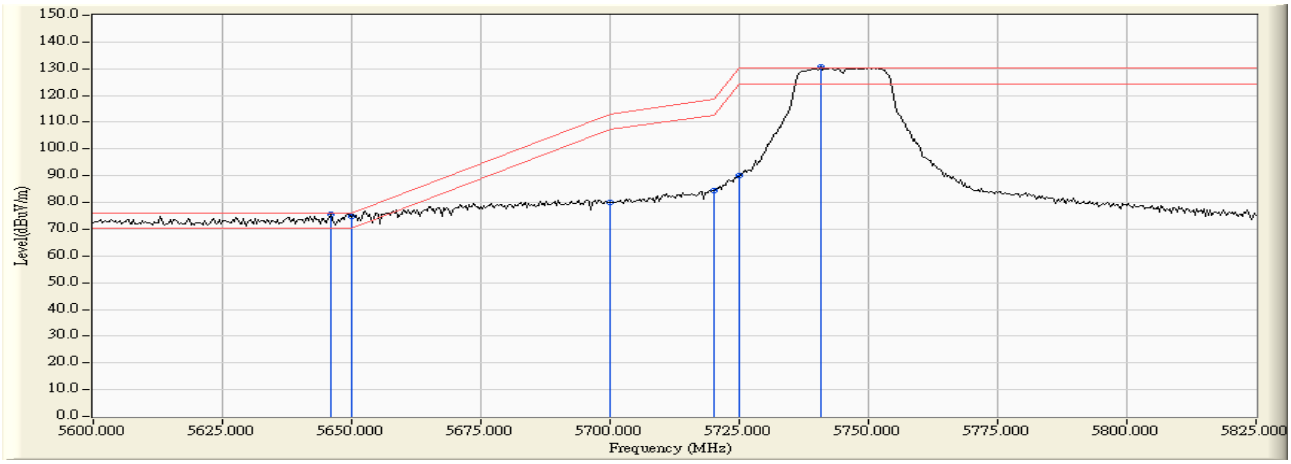
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5645.978	37.628	37.777	75.405	-0.775	76.180	Pass
Vertical	5650.000	37.636	37.131	74.768	-1.412	76.180	Pass
Vertical	5700.000	37.738	42.431	80.169	-33.011	113.180	Pass
Vertical	5720.000	37.733	46.736	84.470	-34.310	118.780	Pass
Vertical	5725.000	37.729	52.241	89.970	-40.210	130.180	Pass
Vertical	5740.870	37.714	92.911	130.625	--	--	--

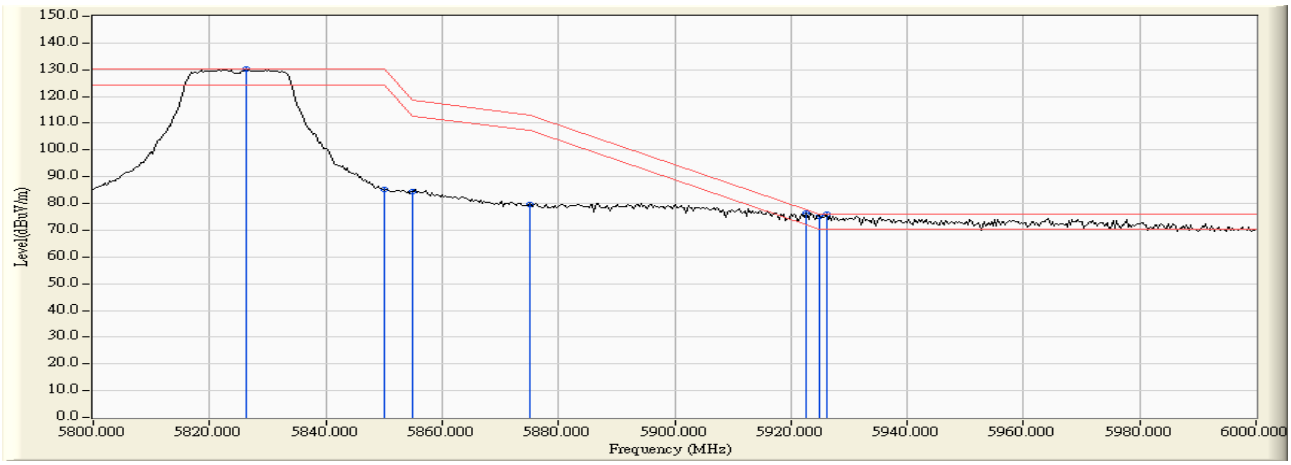
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5826.377	36.459	93.842	130.301	--	--	--
Horizontal	5850.000	36.561	48.587	85.148	-45.032	130.180	Pass
Horizontal	5855.000	36.582	47.762	84.344	-34.436	118.780	Pass
Horizontal	5875.000	36.668	43.108	79.776	-33.404	113.180	Pass
Horizontal	5922.609	36.739	39.857	76.595	-1.354	77.949	Pass
Horizontal	5925.000	36.734	38.655	75.389	-0.791	76.180	Pass
Horizontal	5926.087	36.731	39.273	76.005	-0.175	76.180	Pass

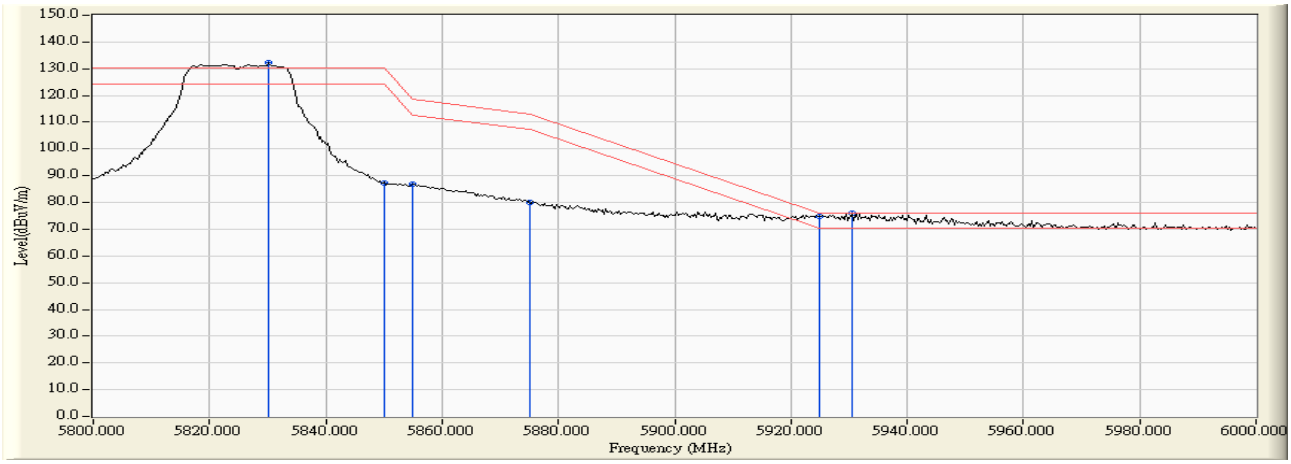
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 10: Transmit (802.11n-20BW-14.4Mbps)(Panel Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5830.145	37.643	94.591	132.234	--	--	--
Vertical	5850.000	37.634	49.680	87.314	-42.866	130.180	Pass
Vertical	5855.000	37.631	49.071	86.702	-32.078	118.780	Pass
Vertical	5875.000	37.620	42.275	79.896	-33.284	113.180	Pass
Vertical	5925.000	37.577	37.172	74.749	-1.431	76.180	Pass
Vertical	5930.435	37.570	38.417	75.987	-0.193	76.180	Pass

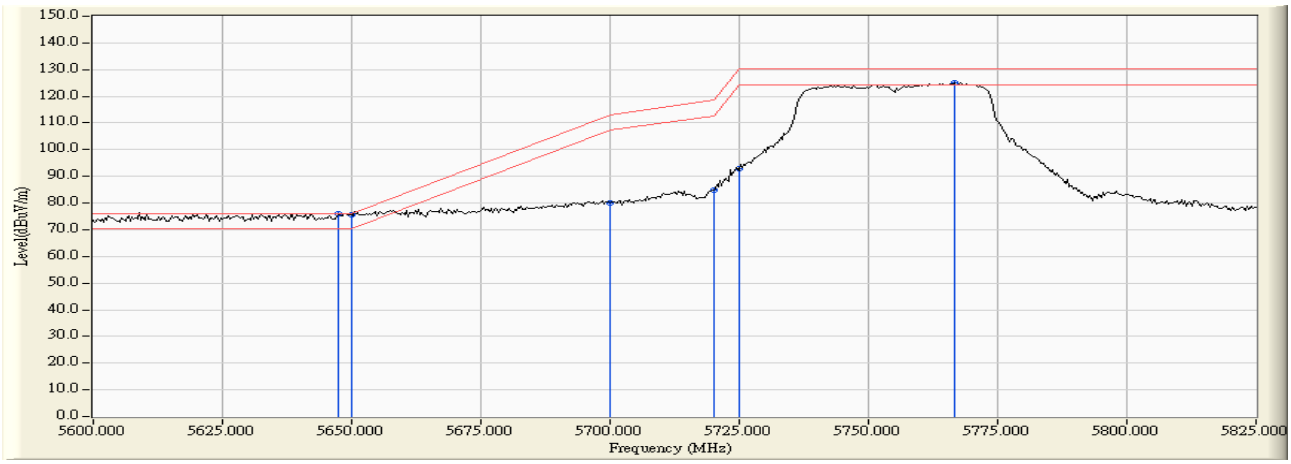
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna)-Channel 151

RF Radiated Measurement :



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5647.283	36.148	39.975	76.124	-0.056	76.180	Pass
Horizontal	5650.000	36.161	39.388	75.550	-0.630	76.180	Pass
Horizontal	5700.000	36.382	43.702	80.084	-33.096	113.180	Pass
Horizontal	5720.000	36.393	48.423	84.817	-33.963	118.780	Pass
Horizontal	5725.000	36.391	56.691	93.082	-37.098	130.180	Pass
Horizontal	5766.630	36.364	88.653	125.018	--	--	--

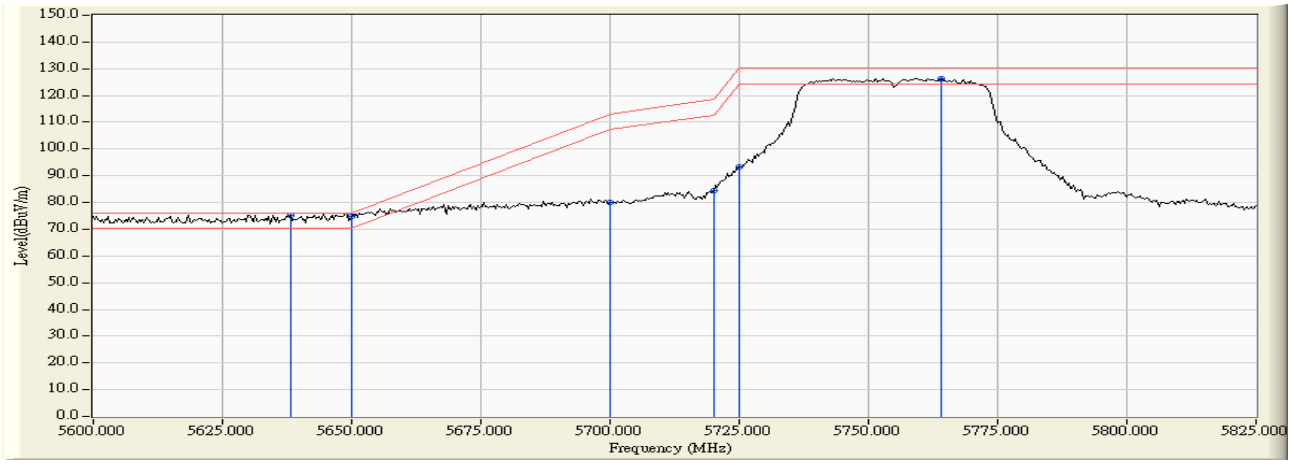
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna) -Channel 151

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Measure Level (dBµV /m)	Margin (dB)	Limit (dBµV /m)	Result
Vertical	5638.152	37.610	37.711	75.320	-0.860	76.180	Pass
Vertical	5650.000	37.636	37.317	74.954	-1.226	76.180	Pass
Vertical	5700.000	37.738	42.089	79.827	-33.353	113.180	Pass
Vertical	5720.000	37.733	46.665	84.399	-34.381	118.780	Pass
Vertical	5725.000	37.729	55.514	93.243	-36.937	130.180	Pass
Vertical	5764.022	37.691	88.752	126.443	--	--	--

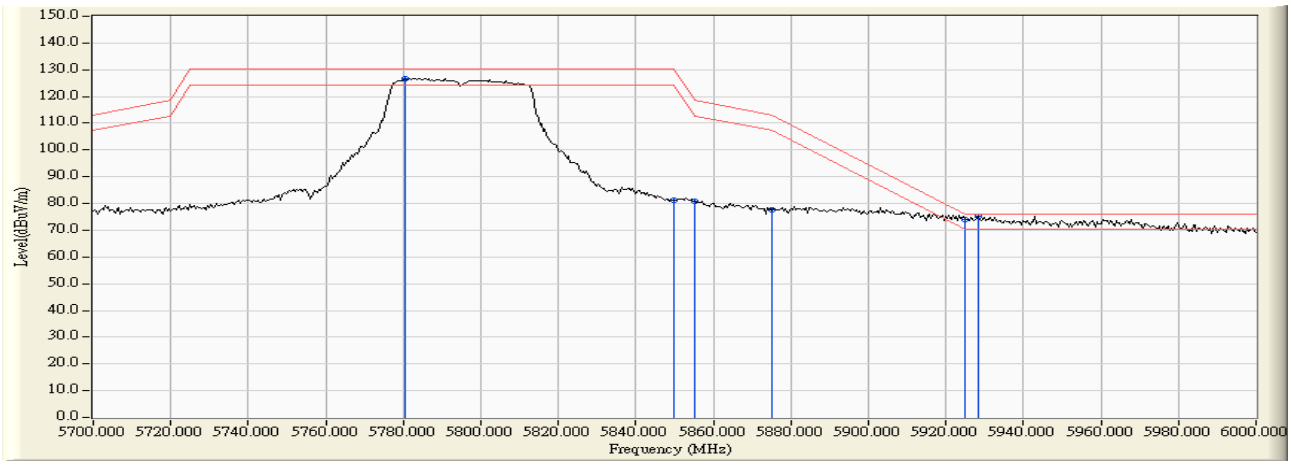
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna)-Channel 159

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5780.435	36.356	90.398	126.754	--	--	--
Horizontal	5850.000	36.561	44.701	81.262	-48.918	130.180	Pass
Horizontal	5855.000	36.582	44.185	80.767	-38.013	118.780	Pass
Horizontal	5875.000	36.668	40.991	77.659	-35.521	113.180	Pass
Horizontal	5925.000	36.734	37.446	74.180	-2.000	76.180	Pass
Horizontal	5928.261	36.729	38.397	75.125	-1.055	76.180	Pass

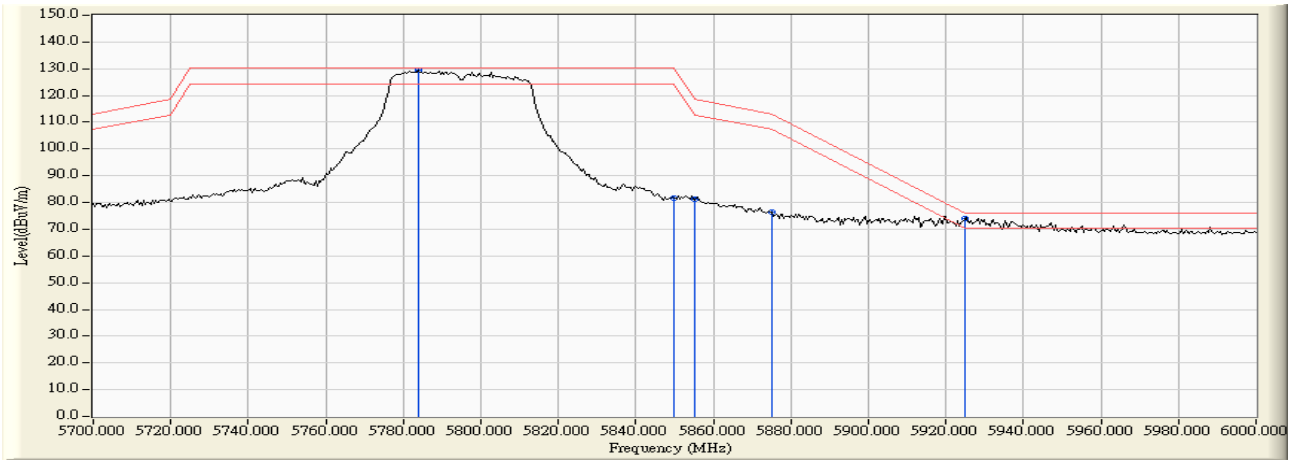
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna) -Channel 159

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5783.913	37.673	91.923	129.596	--	--	--
Vertical	5850.000	37.634	43.875	81.509	-48.671	130.180	Pass
Vertical	5855.000	37.631	43.547	81.178	-37.602	118.780	Pass
Vertical	5875.000	37.620	38.773	76.394	-36.786	113.180	Pass
Vertical	5925.000	37.577	36.484	74.061	-2.119	76.180	Pass

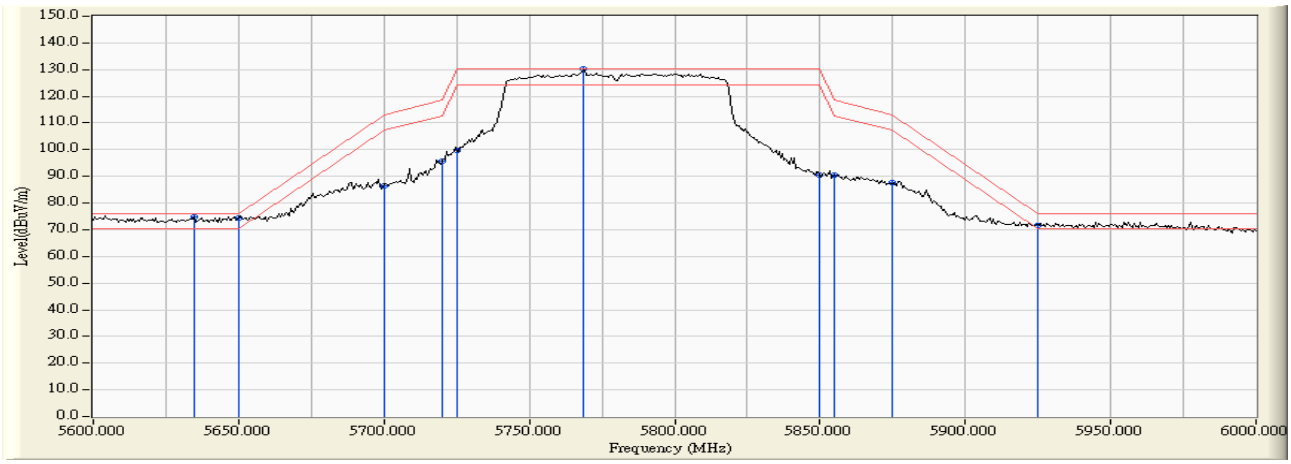
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 12: Transmit (802.11ac-80BW-65Mbps)(Panel Antenna)-Channel 156

RF Radiated Measurement:



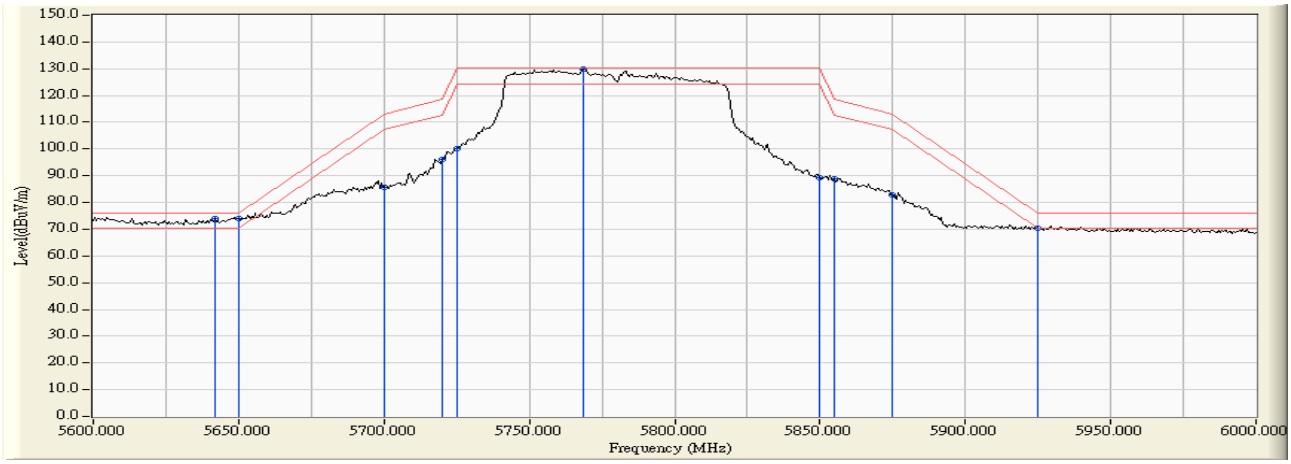
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5634.783	36.088	38.798	74.885	-1.295	76.180	Pass
Horizontal	5650.000	36.161	38.321	74.483	-1.697	76.180	Pass
Horizontal	5700.000	36.382	50.204	86.586	-26.594	113.180	Pass
Horizontal	5720.000	36.393	59.237	95.631	-23.149	118.780	Pass
Horizontal	5725.000	36.391	63.473	99.864	-30.316	130.180	Pass
Horizontal	5768.696	36.364	93.771	130.135	--	--	--
Horizontal	5850.000	36.561	53.814	90.375	-39.805	130.180	Pass
Horizontal	5855.000	36.582	53.811	90.393	-28.387	118.780	Pass
Horizontal	5875.000	36.668	50.903	87.571	-25.609	113.180	Pass
Horizontal	5925.000	36.734	35.009	71.743	-4.437	76.180	Pass

Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.
3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 12: Transmit (802.11ac-80BW-65Mbps)(Panel Antenna)-Channel 156

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Measure Level (dBµV /m)	Margin (dB)	Limit (dBµV /m)	Result
Vertical	5641.739	37.617	36.576	74.194	-1.986	76.180	Pass
Vertical	5650.000	37.636	36.203	73.840	-2.340	76.180	Pass
Vertical	5700.000	37.738	48.115	85.853	-27.327	113.180	Pass
Vertical	5720.000	37.733	58.287	96.021	-22.759	118.780	Pass
Vertical	5725.000	37.729	62.566	100.295	-29.885	130.180	Pass
Vertical	5768.696	37.687	92.324	130.011	--	--	--
Vertical	5850.000	37.634	51.772	89.406	-40.774	130.180	Pass
Vertical	5855.000	37.631	51.327	88.958	-29.822	118.780	Pass
Vertical	5875.000	37.620	45.085	82.706	-30.474	113.180	Pass
Vertical	5925.000	37.577	32.821	70.398	-5.782	76.180	Pass

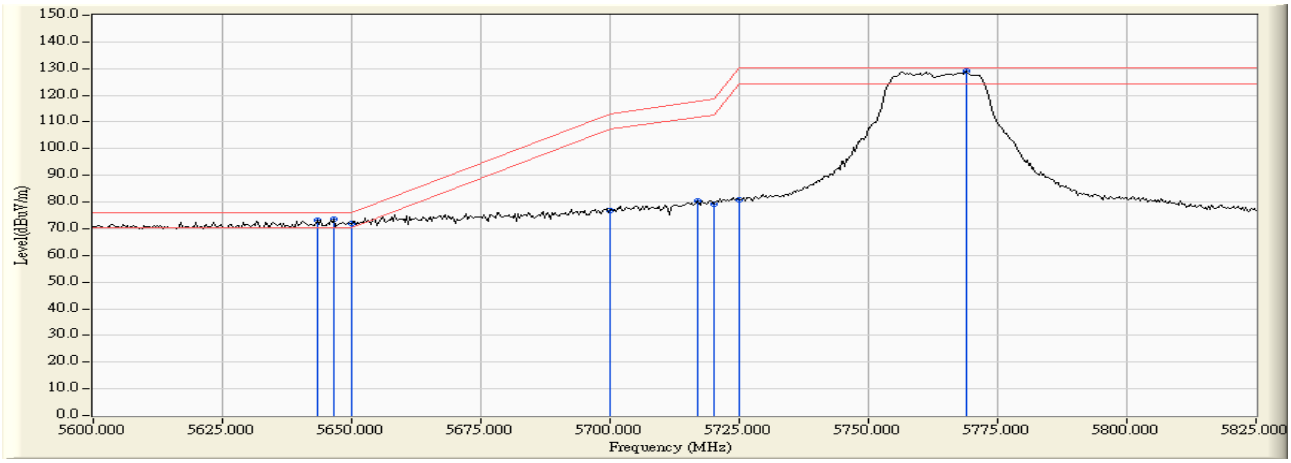
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Measure Level (dBµV /m)	Margin (dB)	Limit (dBµV /m)	Result
Horizontal	5643.370	36.130	36.909	73.039	-3.141	76.180	Pass
Horizontal	5646.630	36.147	37.408	73.554	-2.626	76.180	Pass
Horizontal	5650.000	36.161	35.735	71.897	-4.283	76.180	Pass
Horizontal	5700.000	36.382	40.432	76.814	-36.366	113.180	Pass
Horizontal	5717.065	36.396	44.036	80.431	-37.527	117.958	Pass
Horizontal	5720.000	36.393	42.885	79.279	-39.501	118.780	Pass
Horizontal	5725.000	36.391	44.344	80.735	-49.445	130.180	Pass
Horizontal	5768.913	36.363	92.561	128.924	--	--	--

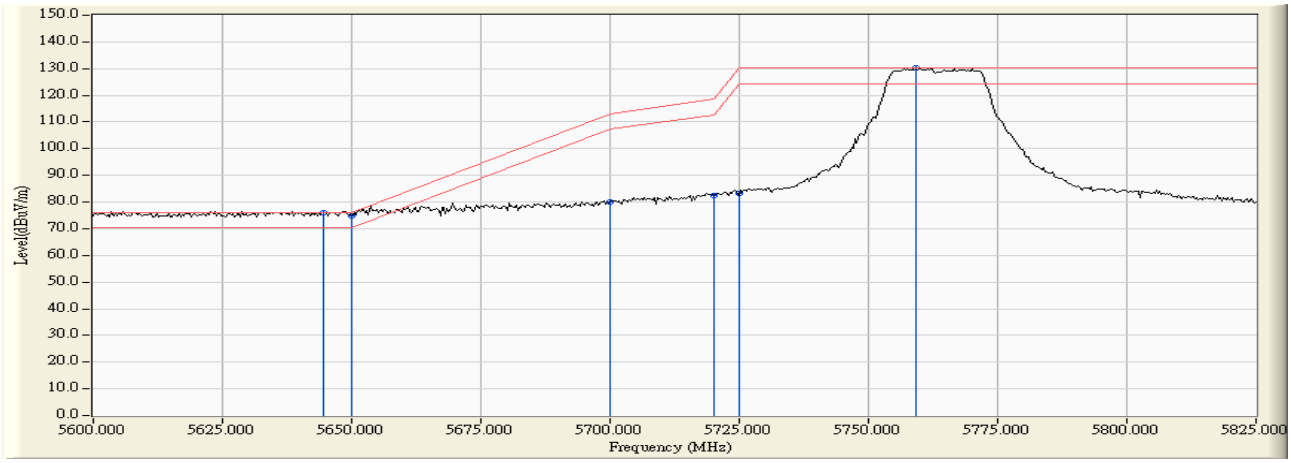
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Measure Level (dBµV /m)	Margin (dB)	Limit (dBµV /m)	Result
Vertical	5644.674	37.624	38.520	76.145	-0.035	76.180	Pass
Vertical	5650.000	37.636	37.307	74.944	-1.236	76.180	Pass
Vertical	5700.000	37.738	42.177	79.915	-33.265	113.180	Pass
Vertical	5720.000	37.733	44.823	82.557	-36.223	118.780	Pass
Vertical	5725.000	37.729	45.336	83.065	-47.115	130.180	Pass
Vertical	5759.130	37.696	92.580	130.276	--	--	--

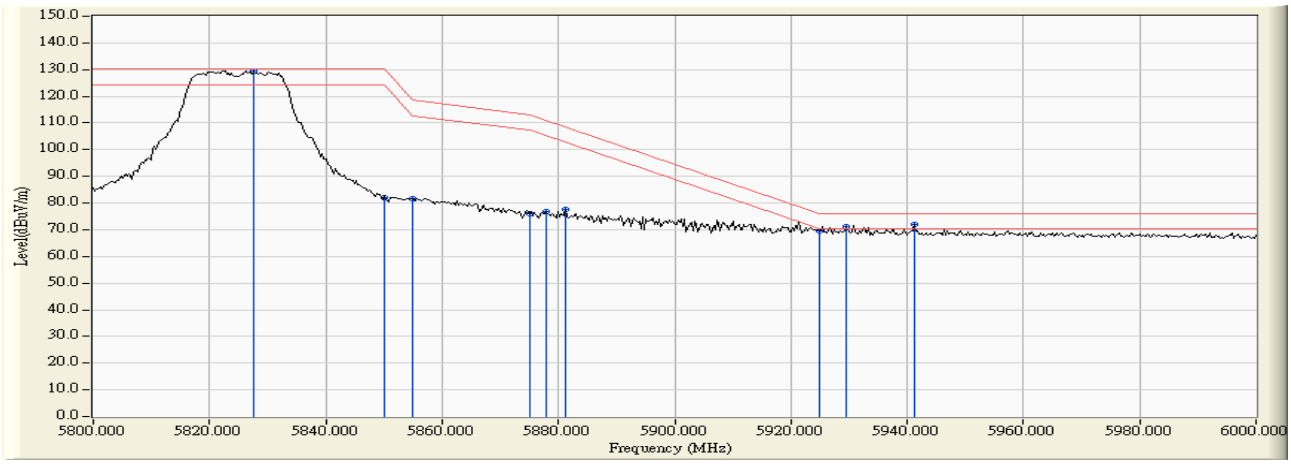
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5827.536	36.464	93.199	129.663	--	--	--
Horizontal	5850.000	36.561	45.539	82.100	-48.080	130.180	Pass
Horizontal	5855.000	36.582	44.927	81.509	-37.271	118.780	Pass
Horizontal	5875.000	36.668	39.510	76.178	-37.002	113.180	Pass
Horizontal	5877.971	36.681	40.130	76.811	-34.170	110.981	Pass
Horizontal	5881.159	36.695	40.765	77.460	-31.162	108.622	Pass
Horizontal	5925.000	36.734	32.761	69.495	-6.685	76.180	Pass
Horizontal	5929.565	36.726	34.389	71.115	-5.065	76.180	Pass
Horizontal	5941.159	36.706	35.223	71.929	-4.251	76.180	Pass

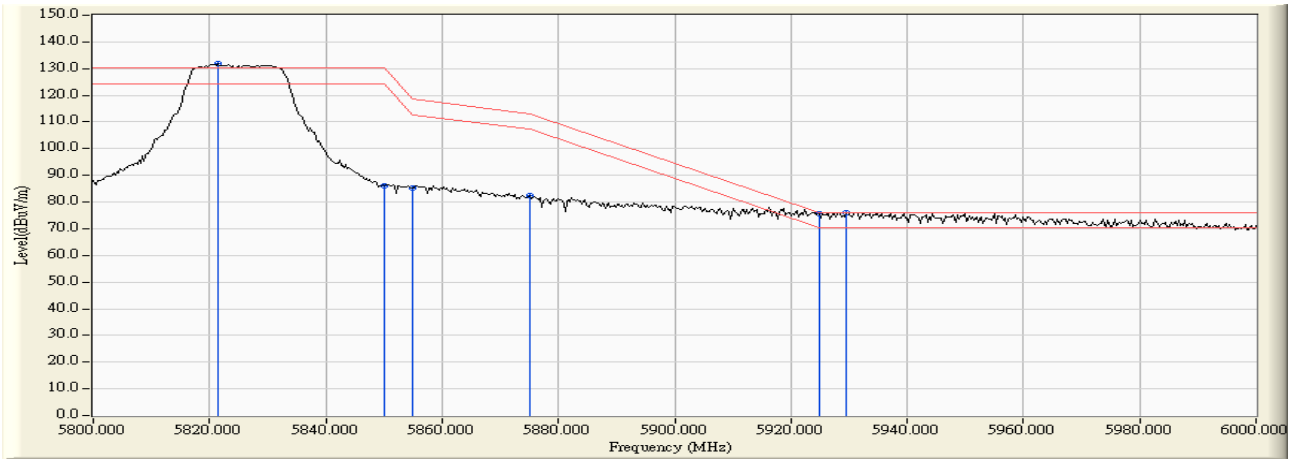
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 13: Transmit (802.11a-6Mbps)(Sector Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5821.449	37.648	94.194	131.842	--	--	--
Vertical	5850.000	37.634	48.581	86.215	-43.965	130.180	Pass
Vertical	5855.000	37.631	47.799	85.430	-33.350	118.780	Pass
Vertical	5875.000	37.620	44.819	82.440	-30.740	113.180	Pass
Vertical	5925.000	37.577	38.026	75.603	-0.577	76.180	Pass
Vertical	5929.565	37.571	38.431	76.002	-0.178	76.180	Pass

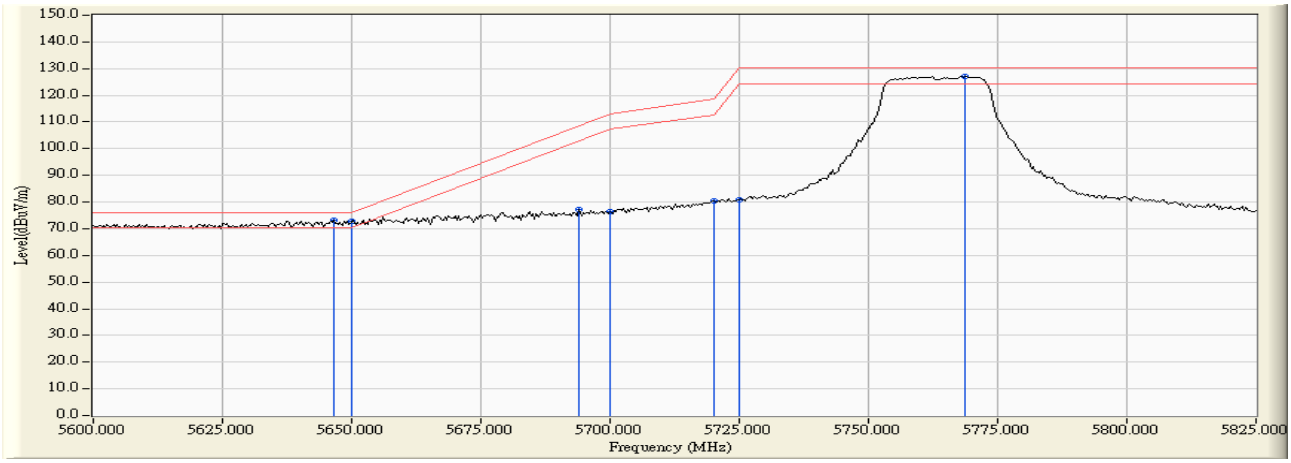
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5646.630	36.147	36.934	73.080	-3.100	76.180	Pass
Horizontal	5650.000	36.161	36.537	72.699	-3.481	76.180	Pass
Horizontal	5693.913	36.371	40.883	77.253	-31.423	108.676	Pass
Horizontal	5700.000	36.382	39.840	76.222	-36.958	113.180	Pass
Horizontal	5720.000	36.393	43.956	80.350	-38.430	118.780	Pass
Horizontal	5725.000	36.391	44.516	80.907	-49.273	130.180	Pass
Horizontal	5768.587	36.363	90.607	126.971	--	--	--

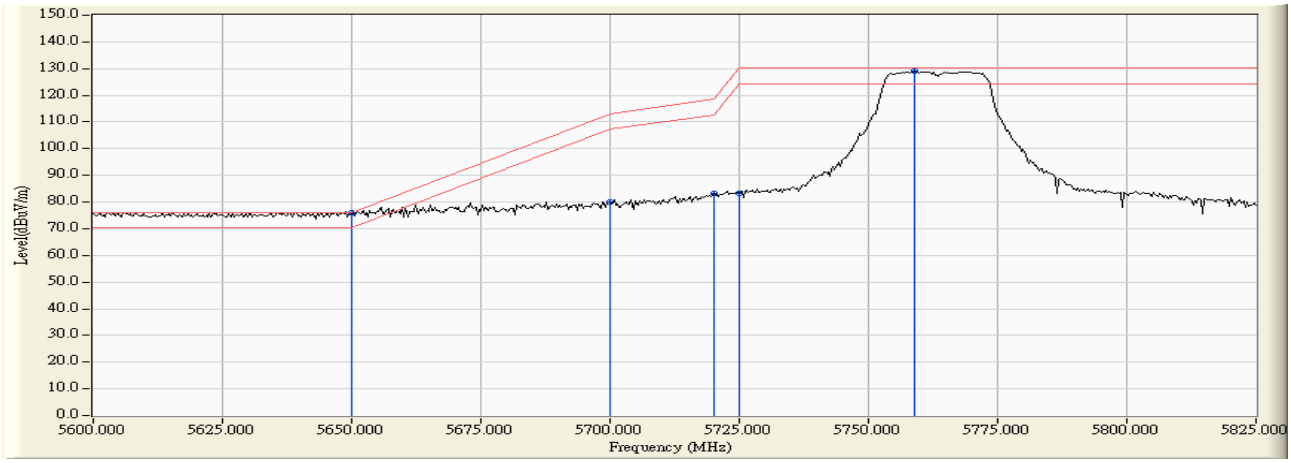
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna)-Channel 149

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5650.000	37.636	38.199	75.836	-0.344	76.180	Pass
Vertical	5700.000	37.738	42.150	79.888	-33.292	113.180	Pass
Vertical	5720.000	37.733	45.533	83.267	-35.513	118.780	Pass
Vertical	5725.000	37.729	45.711	83.440	-46.740	130.180	Pass
Vertical	5758.804	37.696	91.449	129.146	--	--	--

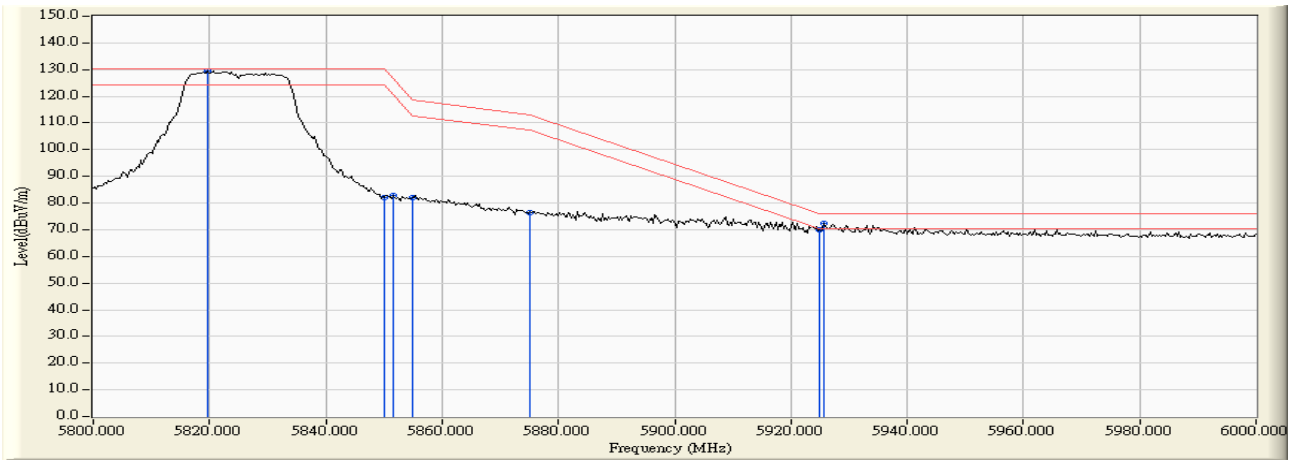
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5819.710	36.431	93.222	129.653	--	--	--
Horizontal	5850.000	36.561	45.589	82.150	-48.030	130.180	Pass
Horizontal	5851.594	36.567	46.277	82.845	-43.701	126.546	Pass
Horizontal	5855.000	36.582	45.429	82.011	-36.769	118.780	Pass
Horizontal	5875.000	36.668	39.901	76.569	-36.611	113.180	Pass
Horizontal	5925.000	36.734	33.217	69.951	-6.229	76.180	Pass
Horizontal	5925.797	36.733	35.695	72.428	-3.752	76.180	Pass

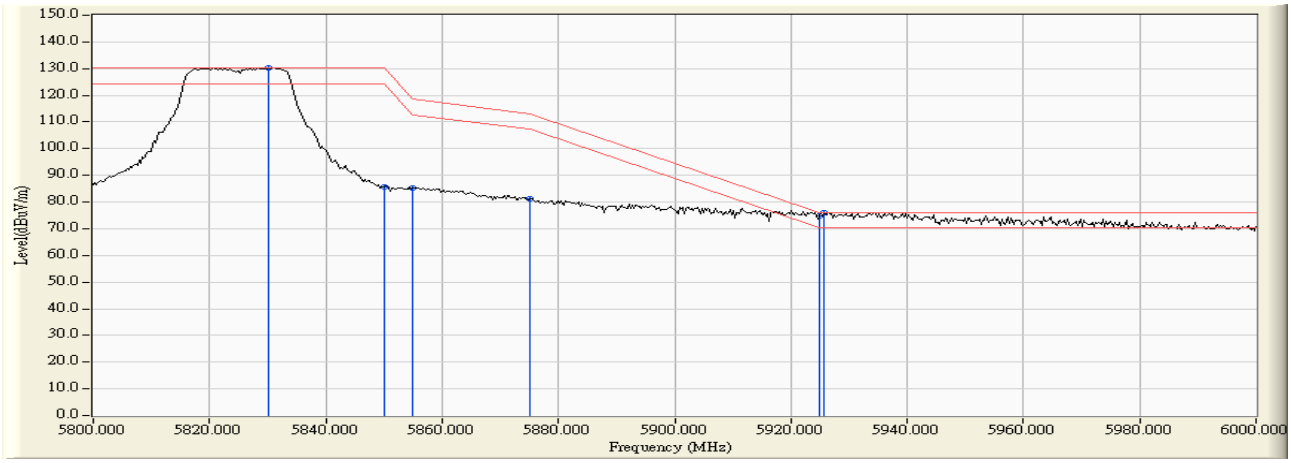
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 14: Transmit (802.11n-20BW-14.4Mbps)(Sector Antenna)-Channel 165

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5830.145	37.643	92.742	130.385	--	--	--
Vertical	5850.000	37.634	47.917	85.551	-44.629	130.180	Pass
Vertical	5855.000	37.631	47.533	85.164	-33.616	118.780	Pass
Vertical	5875.000	37.620	43.416	81.037	-32.143	113.180	Pass
Vertical	5925.000	37.577	37.290	74.867	-1.313	76.180	Pass
Vertical	5925.797	37.576	38.431	76.007	-0.173	76.180	Pass

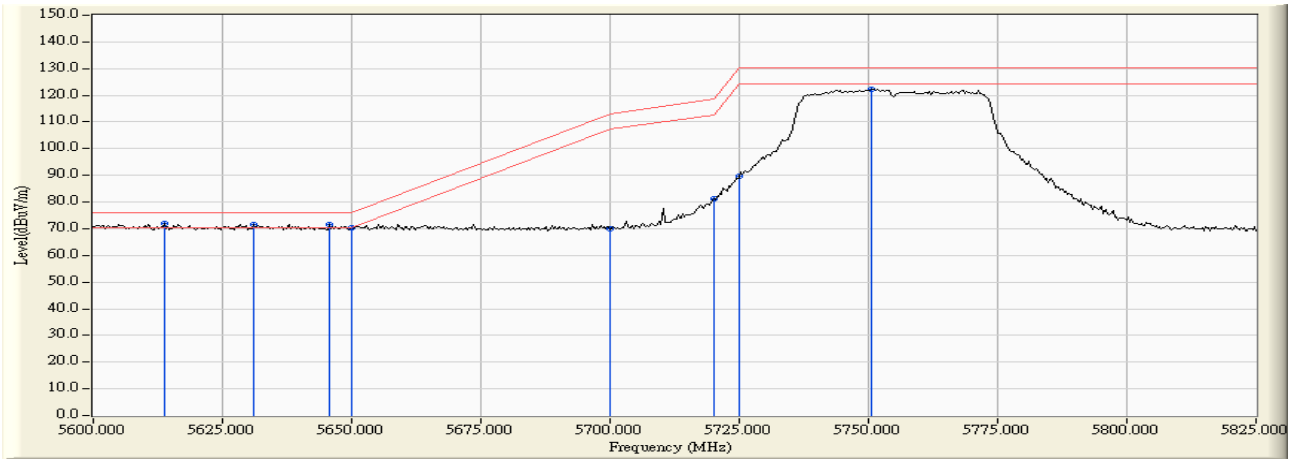
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna)-Channel 151

RF Radiated Measurement :



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Measure Level (dBµV /m)	Margin (dB)	Limit (dBµV /m)	Result
Horizontal	5613.696	37.553	34.267	71.820	-4.360	76.180	Pass
Horizontal	5630.978	37.593	34.115	71.708	-4.472	76.180	Pass
Horizontal	5645.652	37.627	34.024	71.651	-4.529	76.180	Pass
Horizontal	5650.000	37.636	32.590	70.227	-5.953	76.180	Pass
Horizontal	5700.000	37.738	32.357	70.095	-43.085	113.180	Pass
Horizontal	5720.000	37.733	43.397	81.131	-37.649	118.780	Pass
Horizontal	5725.000	37.729	51.970	89.699	-40.481	130.180	Pass
Horizontal	5750.652	37.705	84.441	122.146	--	--	--

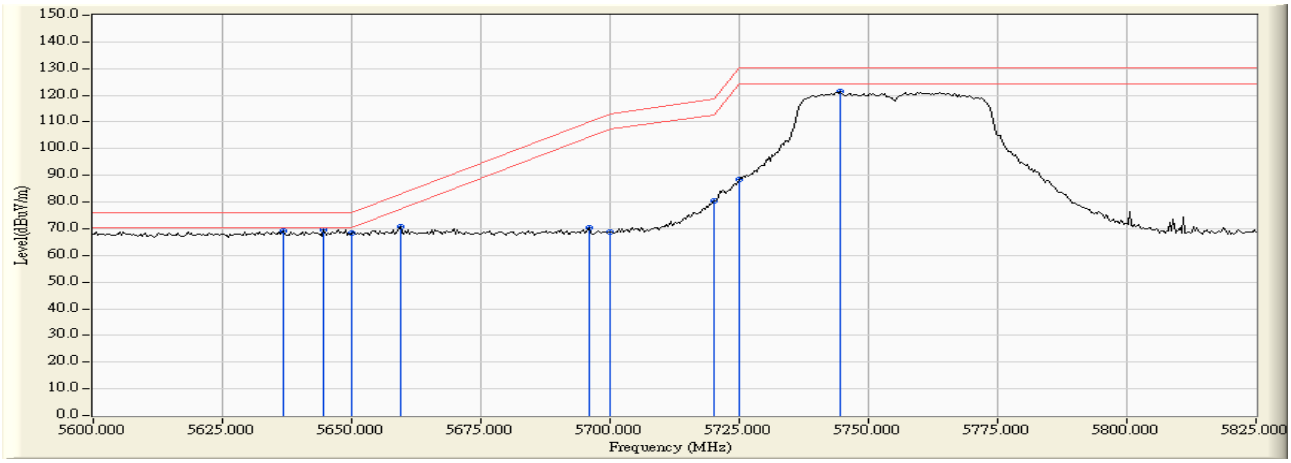
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna) -Channel 151

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5636.848	36.098	33.125	69.222	-6.958	76.180	Pass
Vertical	5644.674	36.136	33.297	69.433	-6.747	76.180	Pass
Vertical	5650.000	36.161	32.033	68.195	-7.985	76.180	Pass
Vertical	5659.348	36.209	34.481	70.689	-12.409	83.098	Pass
Vertical	5695.870	36.375	33.871	70.245	-39.879	110.124	Pass
Vertical	5700.000	36.382	32.489	68.871	-44.309	113.180	Pass
Vertical	5720.000	36.393	43.904	80.298	-38.482	118.780	Pass
Vertical	5725.000	36.391	51.972	88.363	-41.817	130.180	Pass
Vertical	5744.457	36.378	85.117	121.496	--	--	--

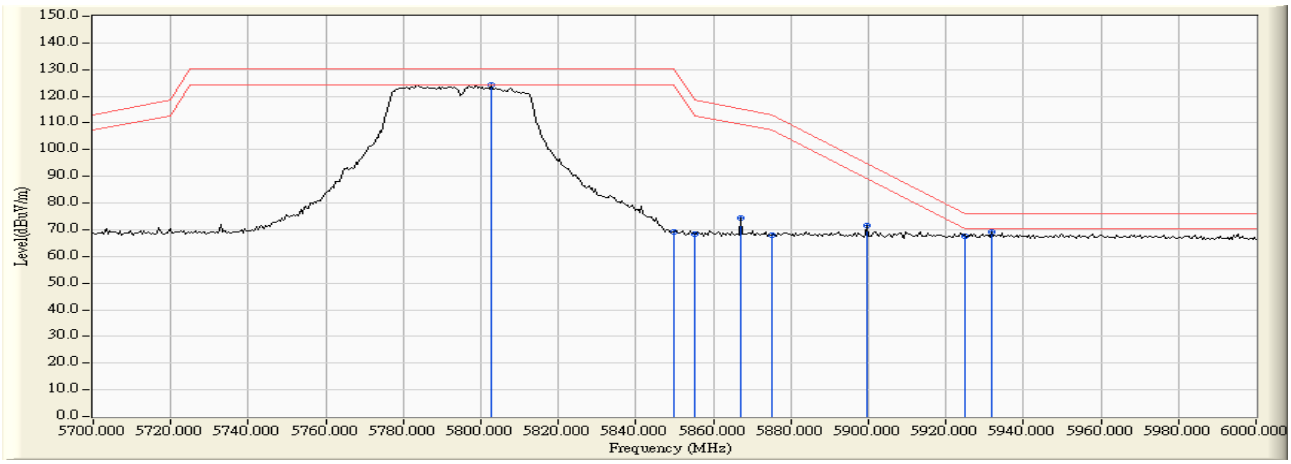
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna)-Channel 159

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5802.609	36.367	87.982	124.349	--	--	--
Horizontal	5850.000	36.561	32.736	69.297	-60.883	130.180	Pass
Horizontal	5855.000	36.582	31.940	68.522	-50.258	118.780	Pass
Horizontal	5866.957	36.634	37.606	74.240	-41.192	115.432	Pass
Horizontal	5875.000	36.668	31.405	68.073	-45.107	113.180	Pass
Horizontal	5899.565	36.760	34.708	71.468	-23.534	95.002	Pass
Horizontal	5925.000	36.734	30.887	67.621	-8.559	76.180	Pass
Horizontal	5931.739	36.722	32.410	69.132	-7.048	76.180	Pass

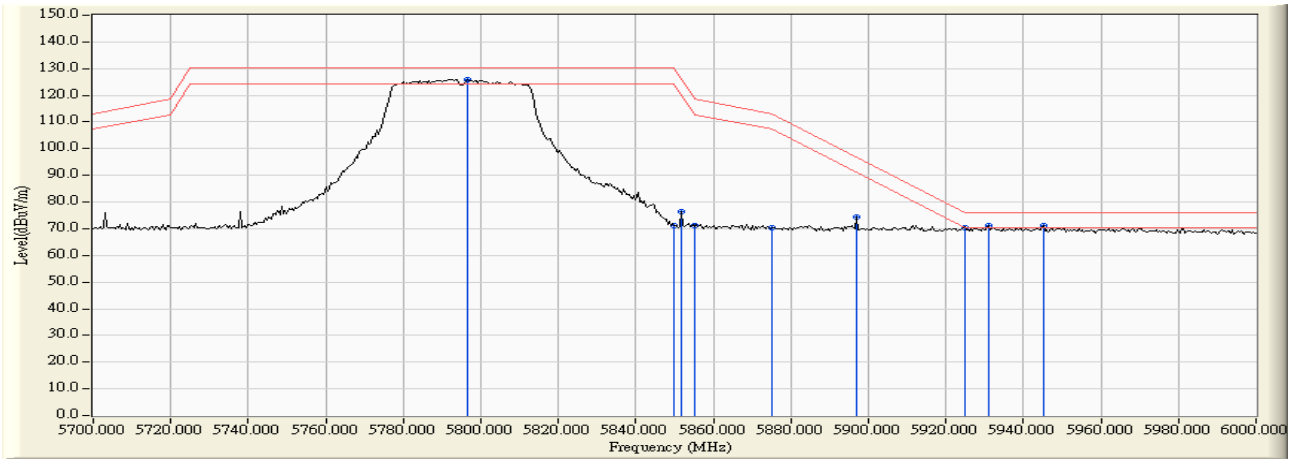
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 11: Transmit (802.11n-40BW-30Mbps)(Panel Antenna) -Channel 159

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Vertical	5796.522	37.658	88.320	125.978	--	--	--
Vertical	5850.000	37.634	33.554	71.188	-58.992	130.180	Pass
Vertical	5851.739	37.632	38.629	76.262	-49.953	126.215	Pass
Vertical	5855.000	37.631	33.540	71.171	-47.609	118.780	Pass
Vertical	5875.000	37.620	32.579	70.200	-42.980	113.180	Pass
Vertical	5896.957	37.610	36.921	74.531	-22.401	96.932	Pass
Vertical	5925.000	37.577	32.600	70.177	-6.003	76.180	Pass
Vertical	5930.870	37.569	33.414	70.983	-5.197	76.180	Pass
Vertical	5945.217	37.552	33.684	71.235	-4.945	76.180	Pass

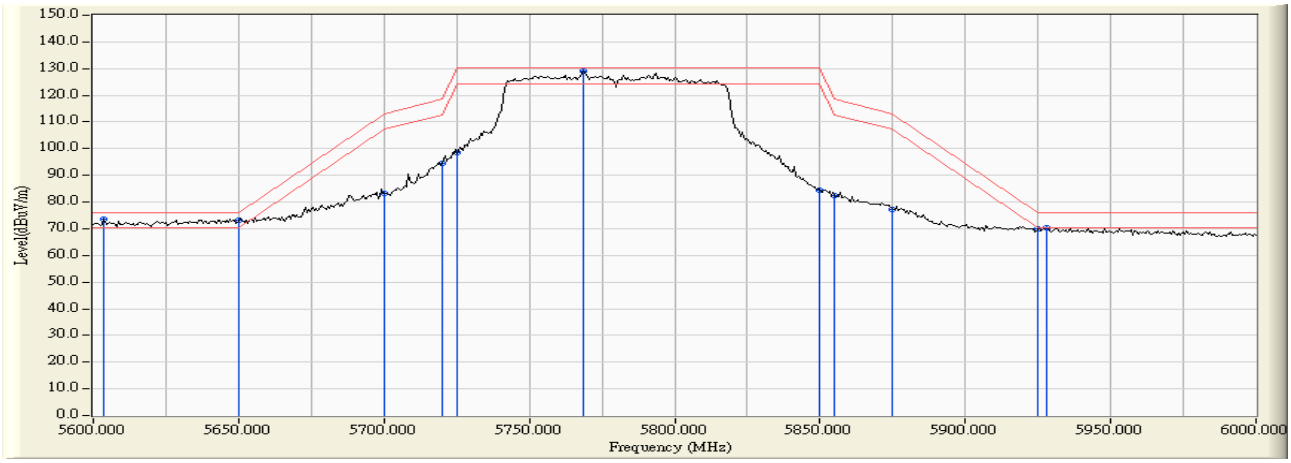
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2 / (c/f)$ is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 16: Transmit (802.11ac-80BW-65Mbps)(Sector Antenna)-Channel 156

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV /m)	Margin (dB)	Limit (dBμV /m)	Result
Horizontal	5603.478	35.955	37.638	73.593	-2.587	76.180	Pass
Horizontal	5650.000	36.161	36.934	73.096	-3.084	76.180	Pass
Horizontal	5700.000	36.382	46.910	83.292	-29.888	113.180	Pass
Horizontal	5720.000	36.393	58.096	94.490	-24.290	118.780	Pass
Horizontal	5725.000	36.391	62.164	98.555	-31.625	130.180	Pass
Horizontal	5768.696	36.364	92.694	129.058	--	--	--
Horizontal	5850.000	36.561	48.080	84.641	-45.539	130.180	Pass
Horizontal	5855.000	36.582	46.034	82.616	-36.164	118.780	Pass
Horizontal	5875.000	36.668	40.683	77.351	-35.829	113.180	Pass
Horizontal	5925.000	36.734	33.098	69.832	-6.348	76.180	Pass
Horizontal	5928.116	36.729	33.646	70.374	-5.806	76.180	Pass

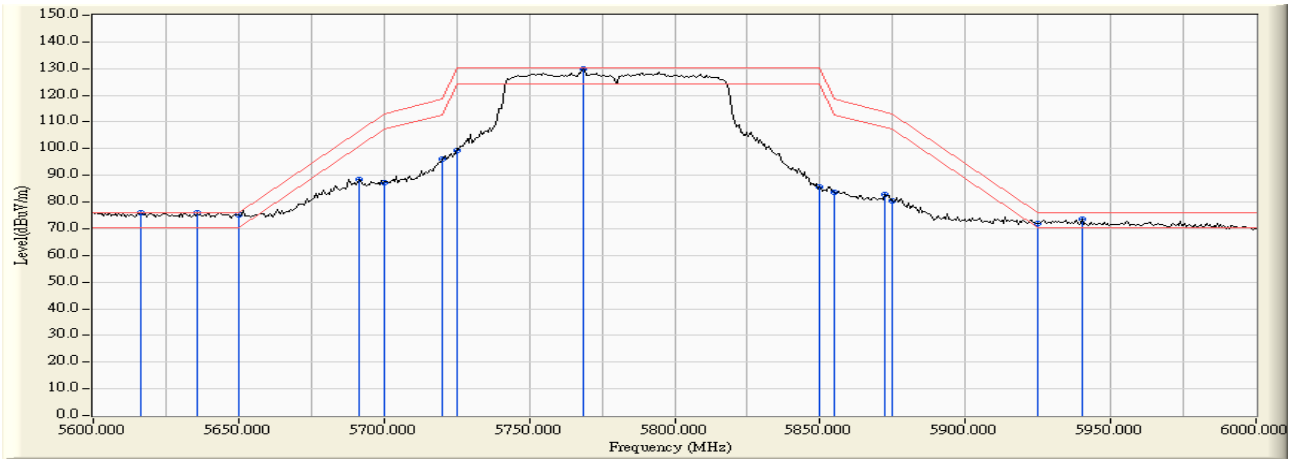
Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

Product : 802.11 ac PCIe Module
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 16: Transmit (802.11ac-80BW-65Mbps)(Sector Antenna)-Channel 156

RF Radiated Measurement:



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Measure Level (dBµV /m)	Margin (dB)	Limit (dBµV /m)	Result
Vertical	5616.232	37.558	38.459	76.018	-0.162	76.180	Pass
Vertical	5635.942	37.605	38.356	75.960	-0.220	76.180	Pass
Vertical	5650.000	37.636	37.520	75.157	-1.023	76.180	Pass
Vertical	5691.594	37.732	50.832	88.564	-18.396	106.960	Pass
Vertical	5700.000	37.738	49.590	87.328	-25.852	113.180	Pass
Vertical	5720.000	37.733	58.227	95.961	-22.819	118.780	Pass
Vertical	5725.000	37.729	61.759	99.488	-30.692	130.180	Pass
Vertical	5768.696	37.687	92.177	129.864	--	--	--
Vertical	5850.000	37.634	48.054	85.688	-44.492	130.180	Pass
Vertical	5855.000	37.631	46.168	83.799	-34.981	118.780	Pass
Vertical	5872.464	37.622	45.250	82.872	-31.018	113.890	Pass
Vertical	5875.000	37.620	42.818	80.439	-32.741	113.180	Pass
Vertical	5925.000	37.577	34.441	72.018	-4.162	76.180	Pass
Vertical	5940.290	37.557	35.911	73.468	-2.712	76.180	Pass

Note: 1. The measurements distance is 1.2 m, E[dB μ V/m] = EIRP[dBm] - 20 log (d[meters]) + 104.77, where E = field strength and d = distance at which field strength limit is specified in the rules.

2. The measurement sensitivity does not provide a noise floor more than 6 dB below the limit when performing the test in 3 m distance hence we did the test in 1.2 m distance.

3. The far-field = $2D^2$ / (c/f) is 1.2 m, then perform test in 1.2 m distance.

7. Occupied Bandwidth

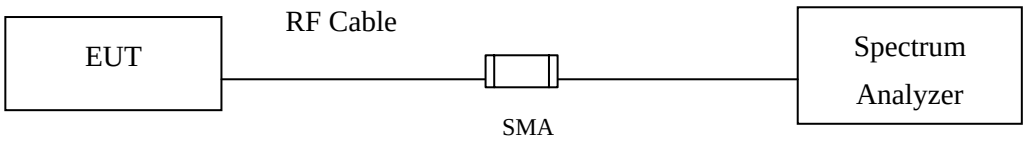
7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2016

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

7.2. Test Setup



7.3. Limits

For the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz

7.4. .Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

7.5. Uncertainty

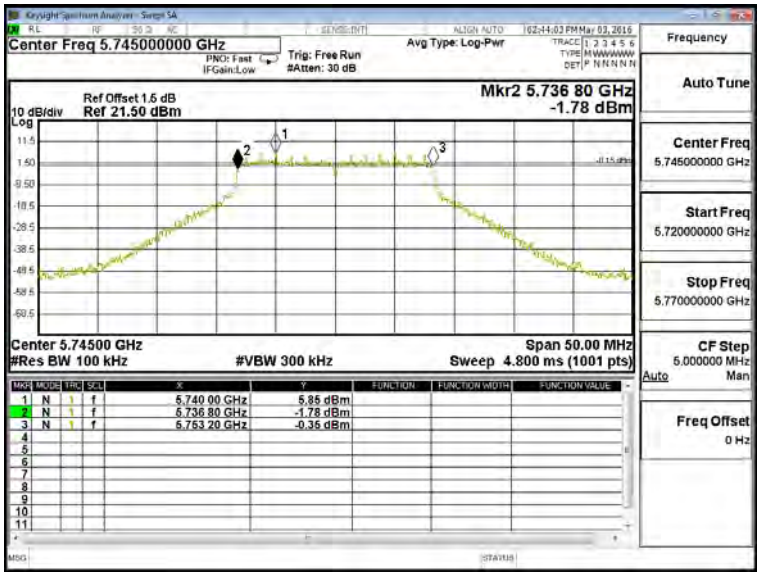
± 150Hz

7.6. Test Result of Occupied Bandwidth

Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna) (5745MHz)

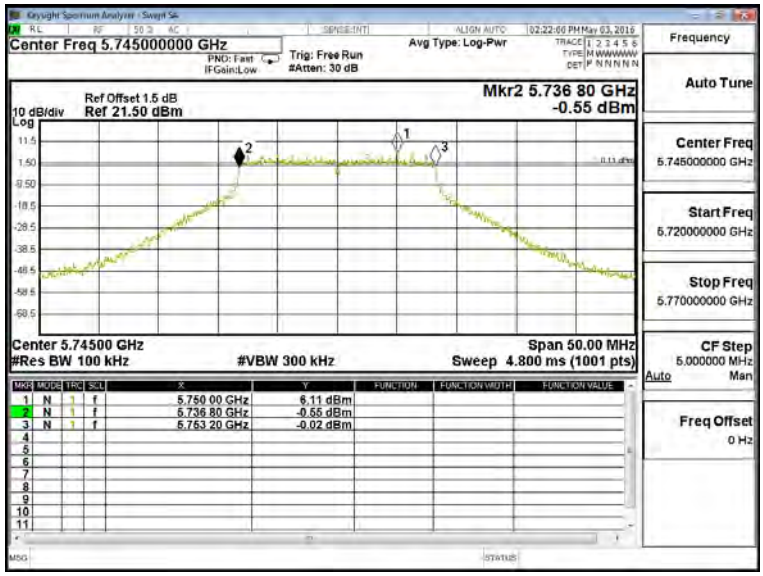
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16400	>500	Pass

Figure Channel 149: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16400	>500	Pass

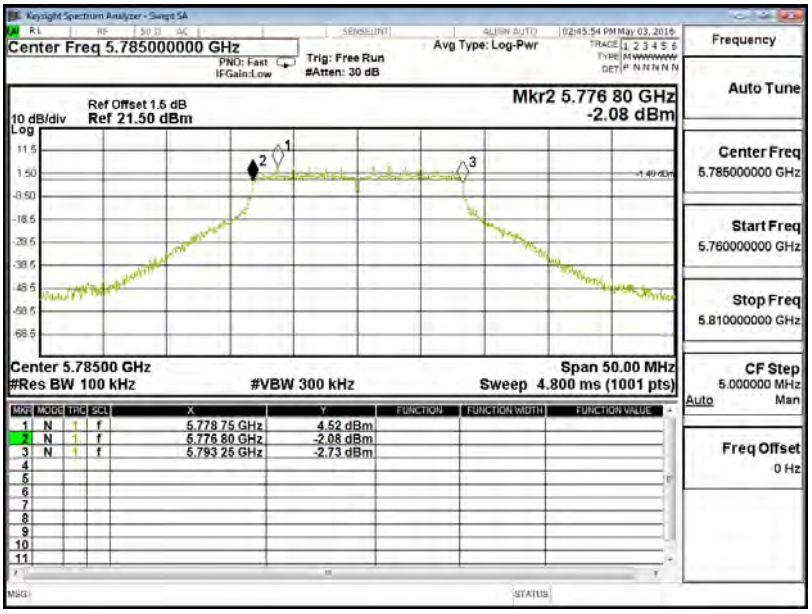
Figure Channel 149: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna) (5785MHz)

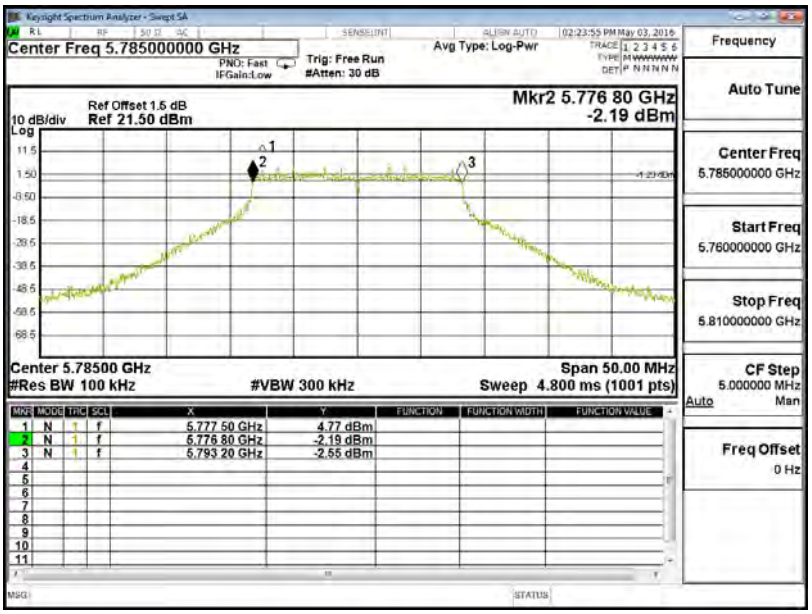
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16450	>500	Pass

Figure Channel 157: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16400	>500	Pass

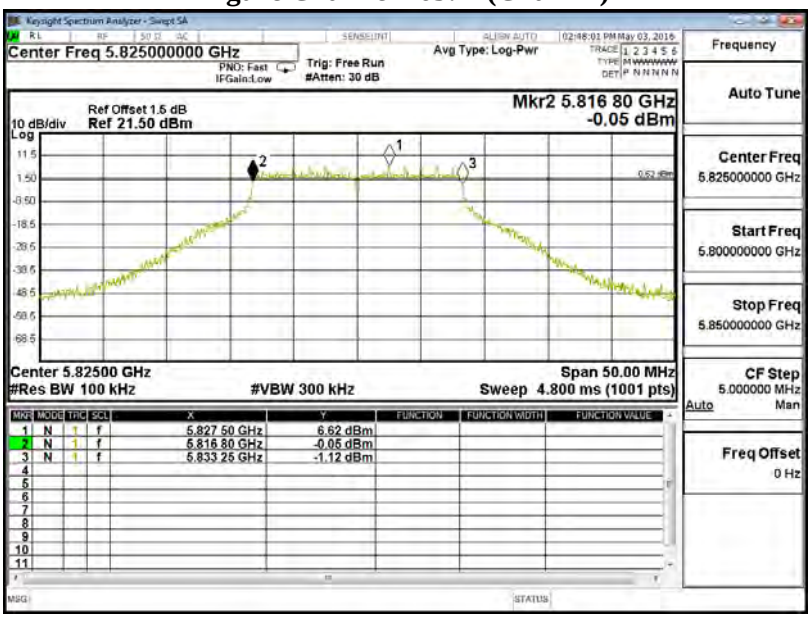
Figure Channel 157: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps)(Grid DISH Antenna) (5825MHz)

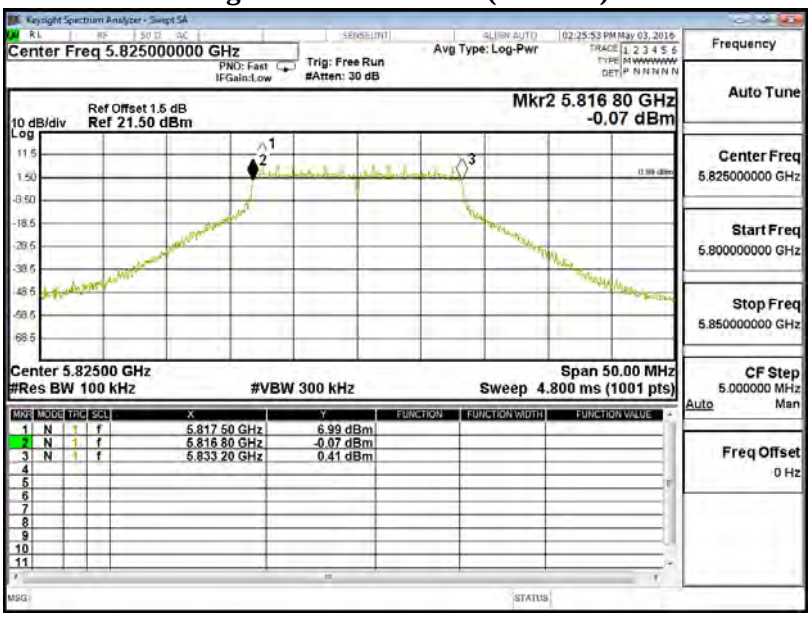
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	16450	>500	Pass

Figure Channel 165: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	16400	>500	Pass

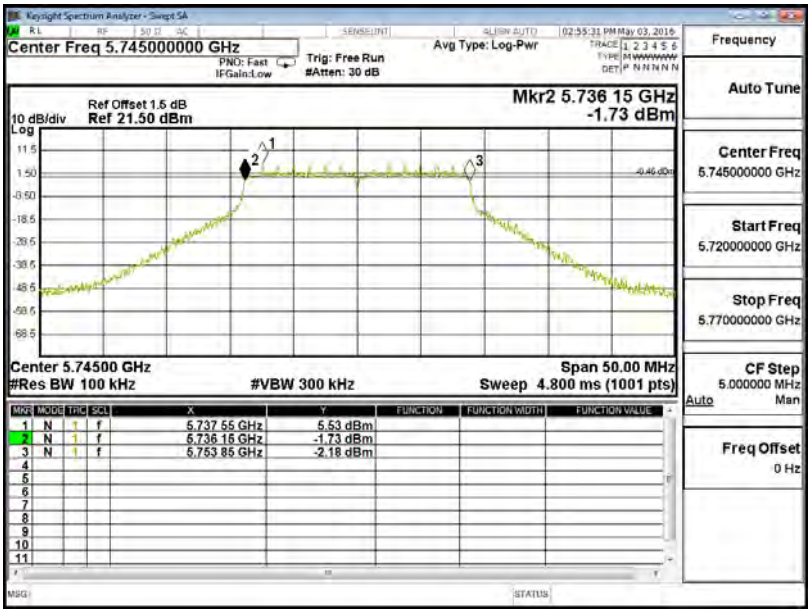
Figure Channel 165: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) (5745MHz)

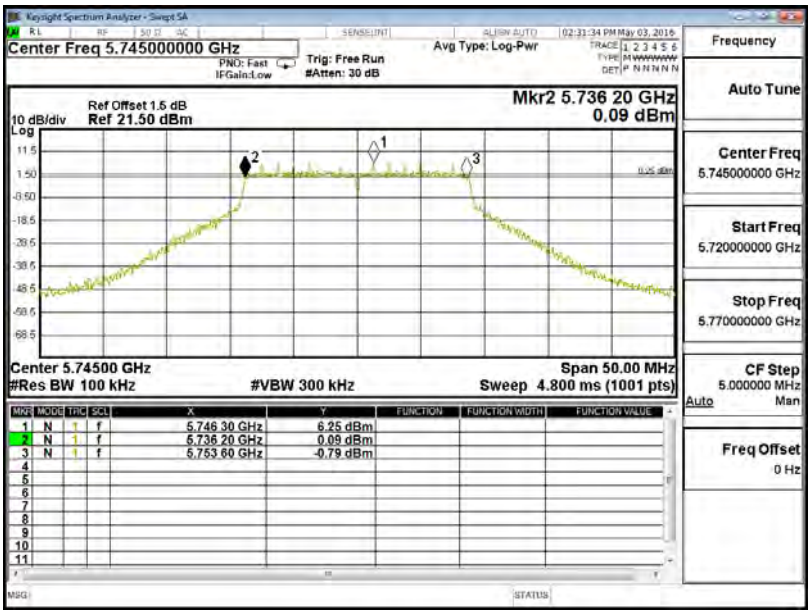
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17700	>500	Pass

Figure Channel 149: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17400	>500	Pass

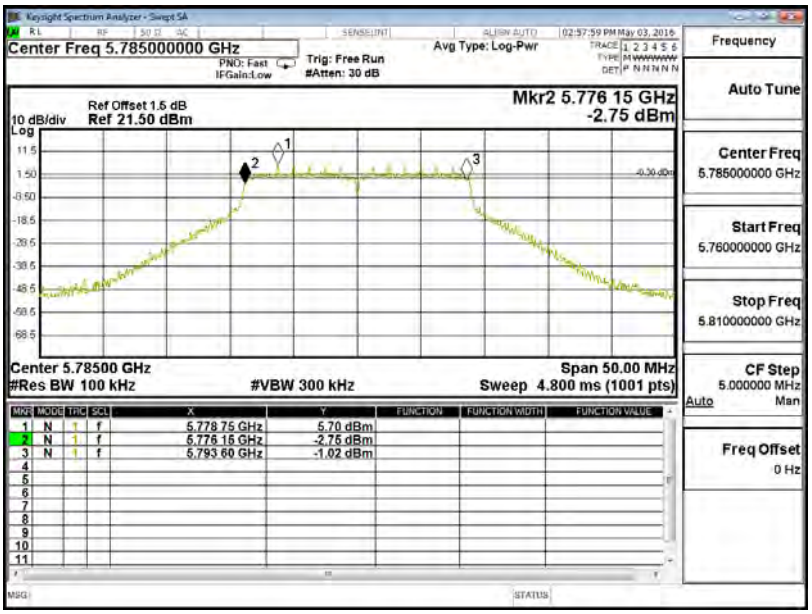
Figure Channel 149: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) (5785MHz)

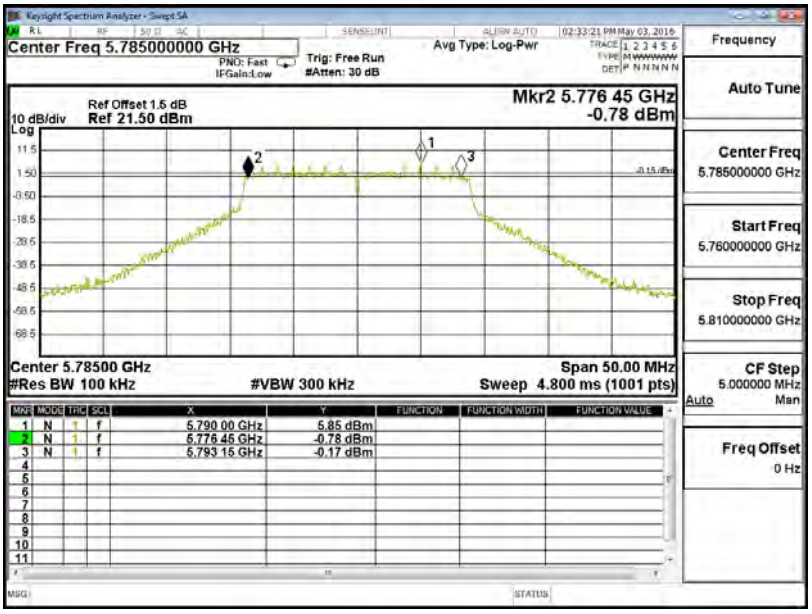
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17450	>500	Pass

Figure Channel 157: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16700	>500	Pass

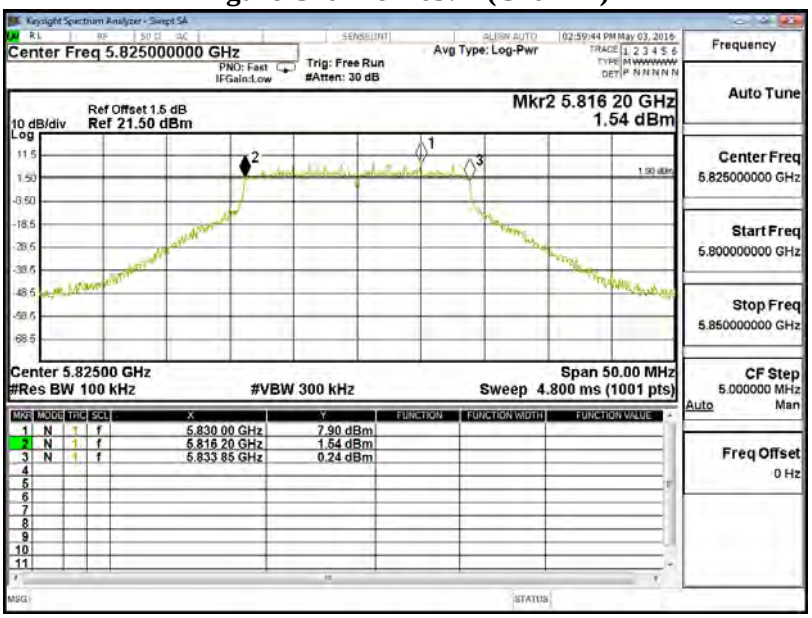
Figure Channel 157: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW-14.4Mbps)(Grid DISH Antenna) (5825MHz)

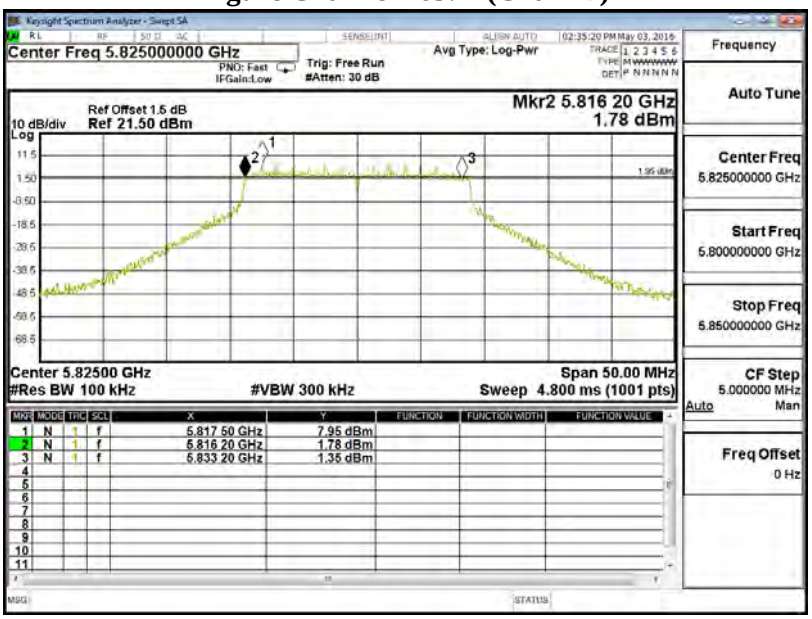
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17650	>500	Pass

Figure Channel 165: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17000	>500	Pass

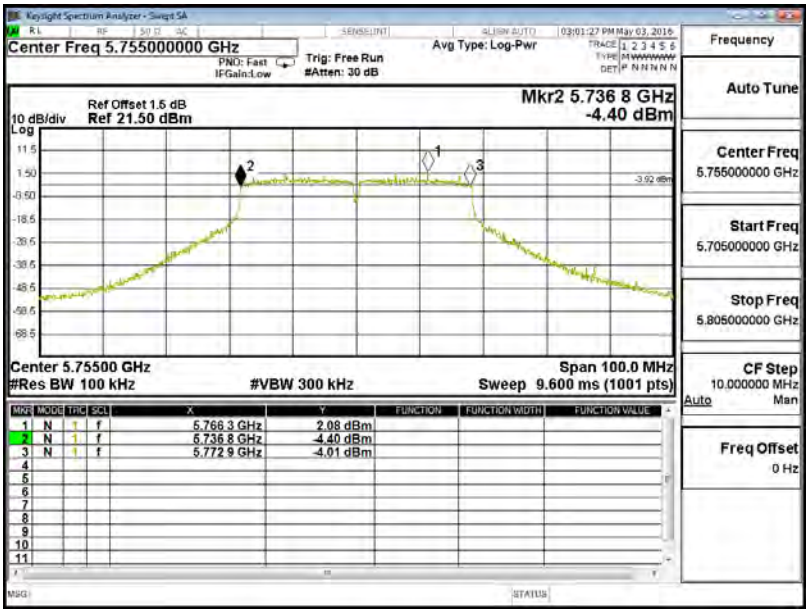
Figure Channel 165: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna) (5755MHz)

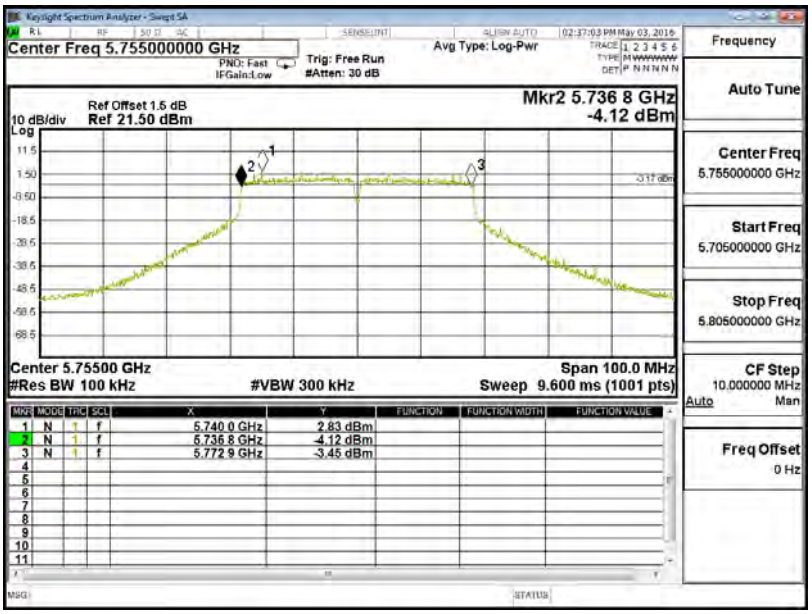
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36100	>500	Pass

Figure Channel 151: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36100	>500	Pass

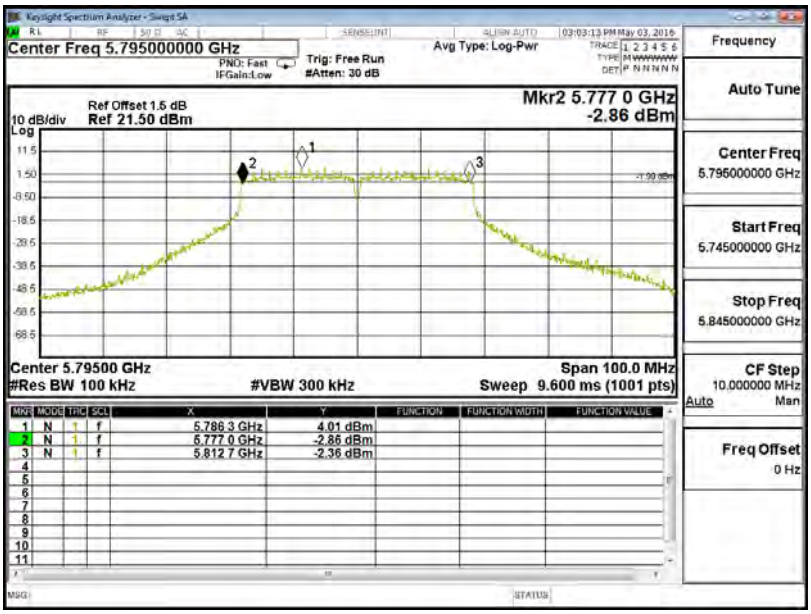
Figure Channel 151: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW-30Mbps) (Grid DISH Antenna) (5795MHz)

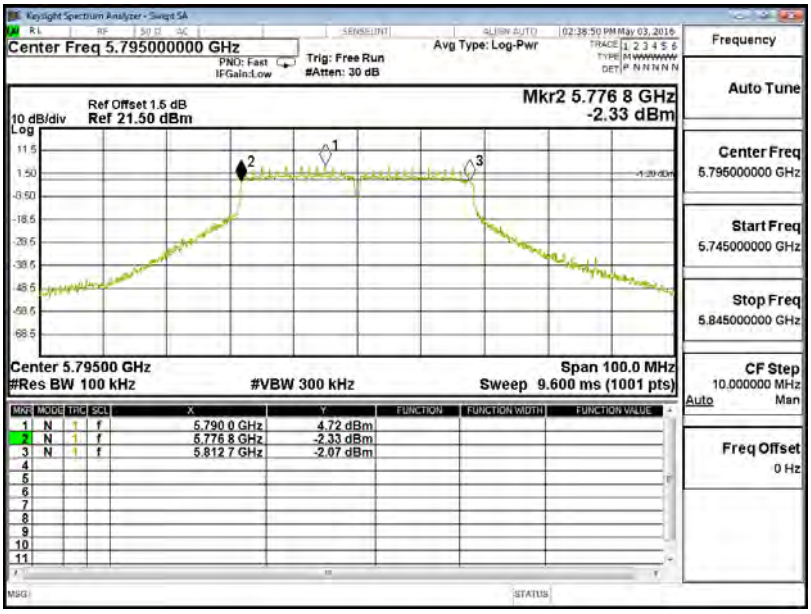
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	35700	>500	Pass

Figure Channel 159: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	35900	>500	Pass

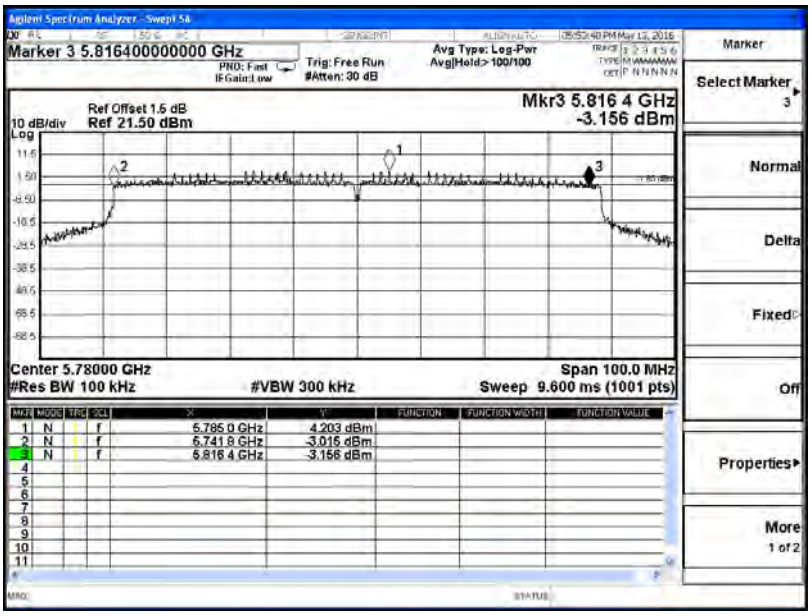
Figure Channel 159: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 4: Transmit (802.11ac-80BW-65Mbps) (Grid DISH Antenna) (5780MHz)

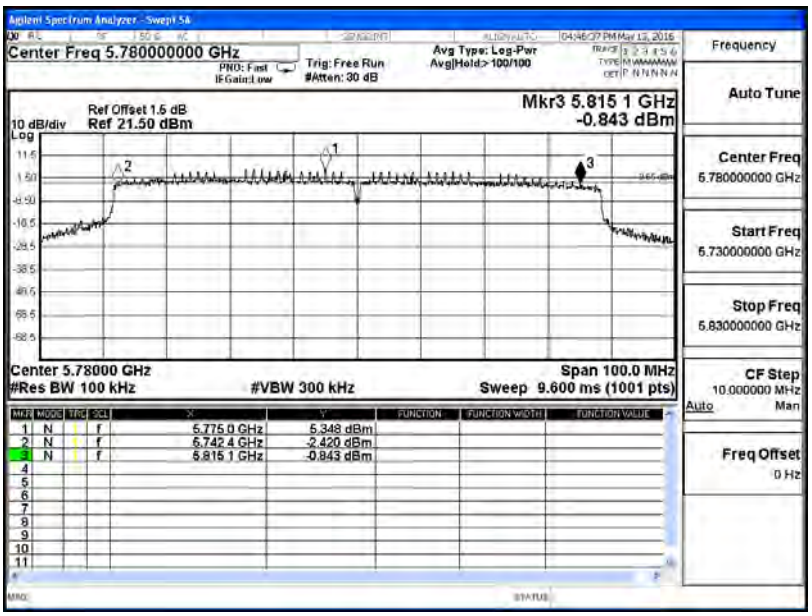
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
156	5780.00	74600	>500	Pass

Figure Channel 156 (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
156	5780.00	72700	>500	Pass

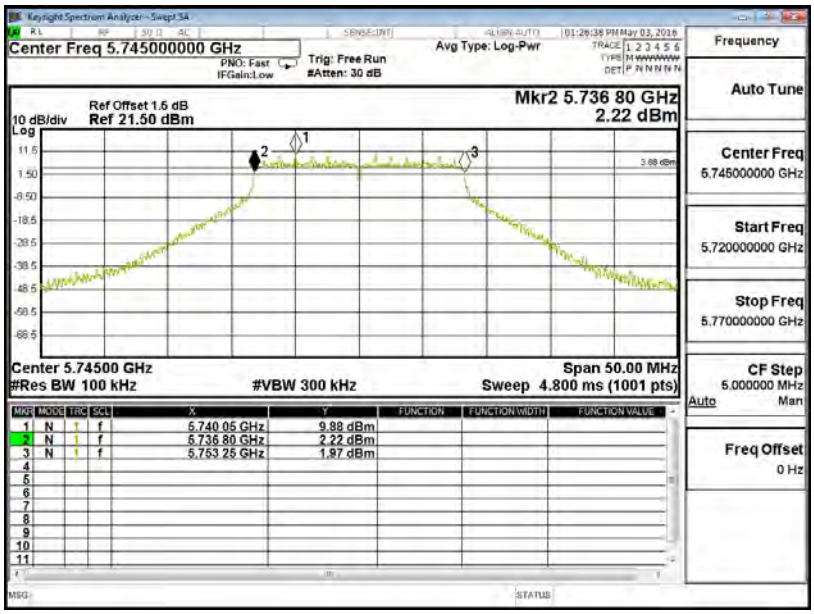
Figure Channel 156: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna) (5745MHz)

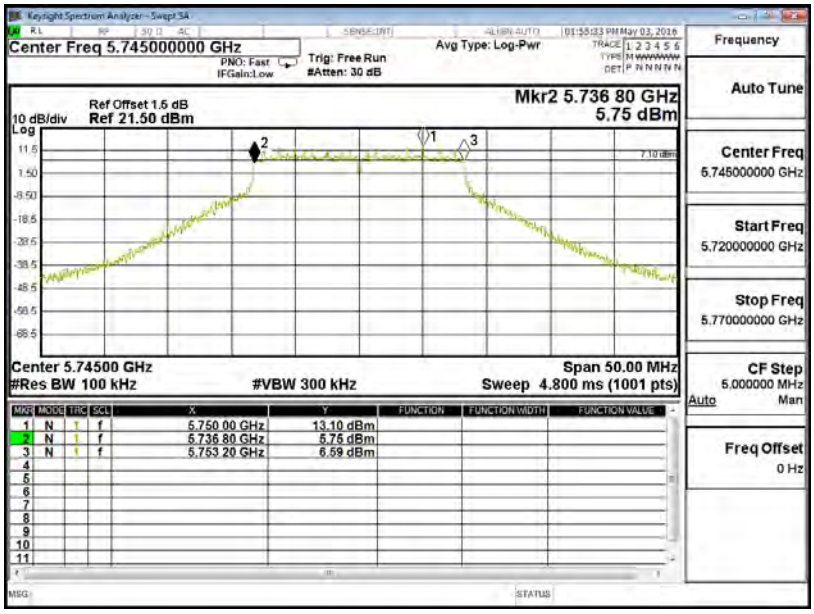
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16450	>500	Pass

Figure Channel 149: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16400	>500	Pass

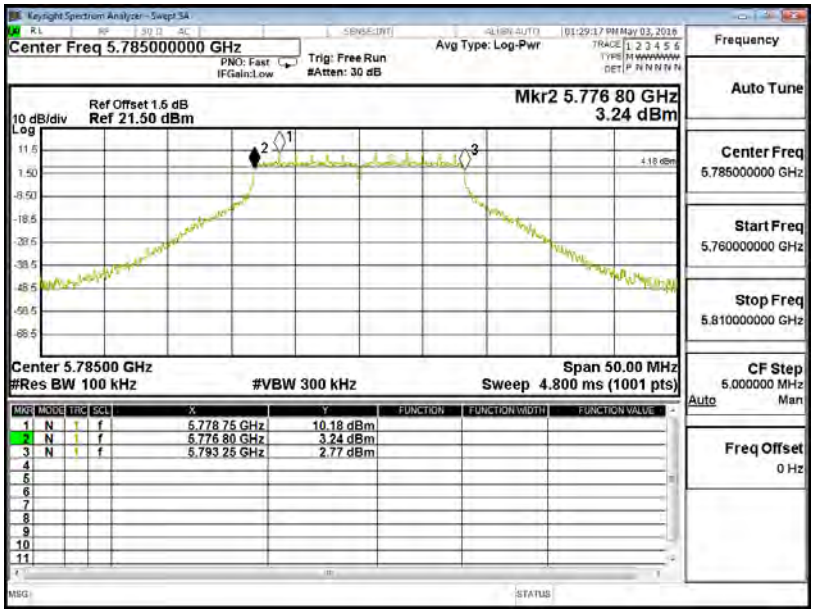
Figure Channel 149: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna) ((5785MHz)

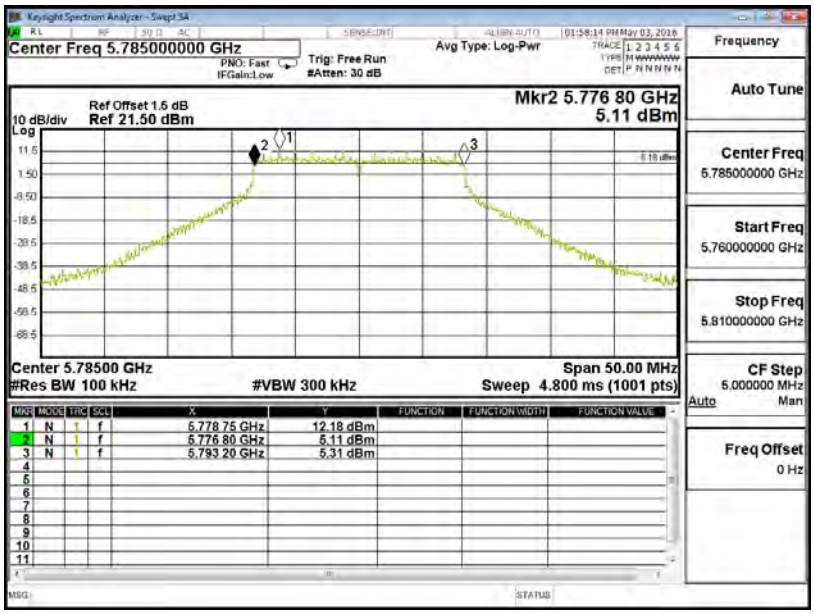
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16450	>500	Pass

Figure Channel 157: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16400	>500	Pass

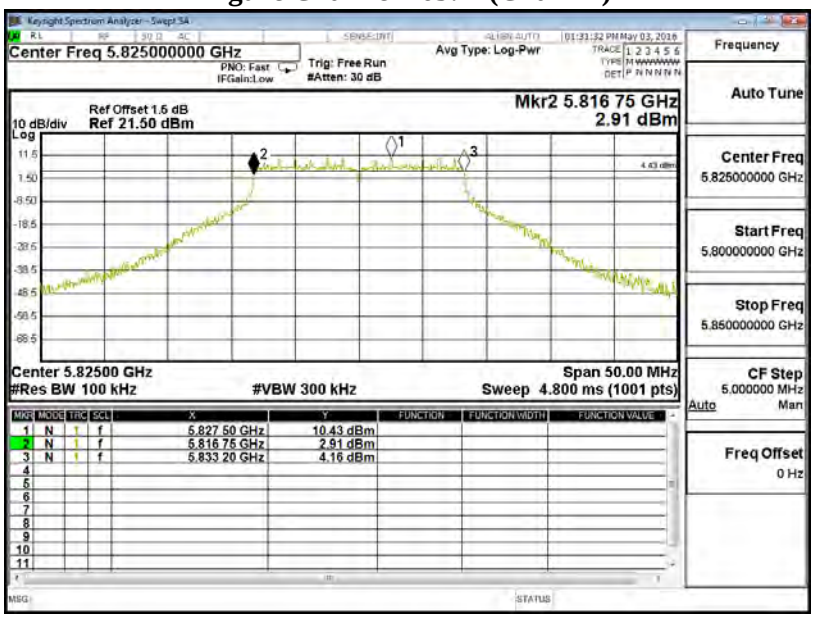
Figure Channel 157: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 5: Transmit (802.11a-6Mbps)(Omni Antenna) ((5825MHz)

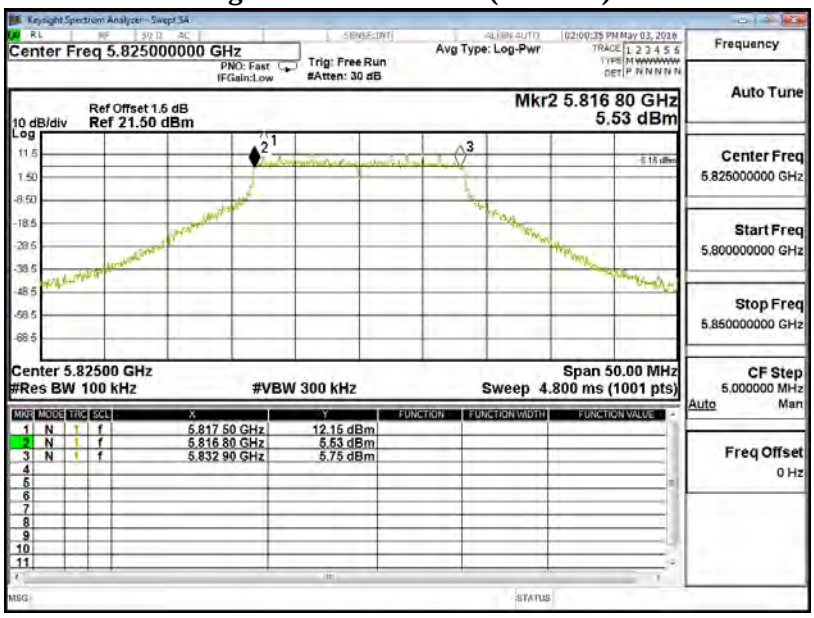
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	16450	>500	Pass

Figure Channel 165: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	16100	>500	Pass

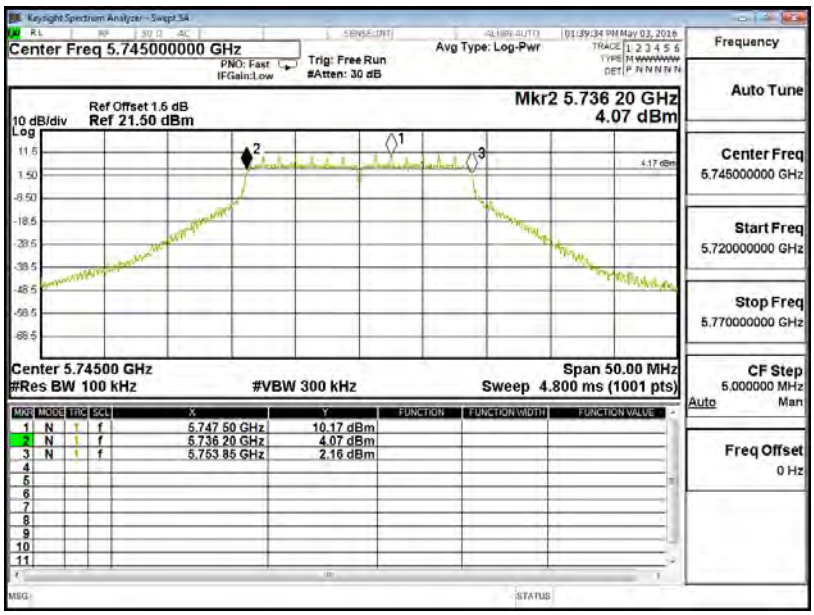
Figure Channel 165: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna) (5745MHz)

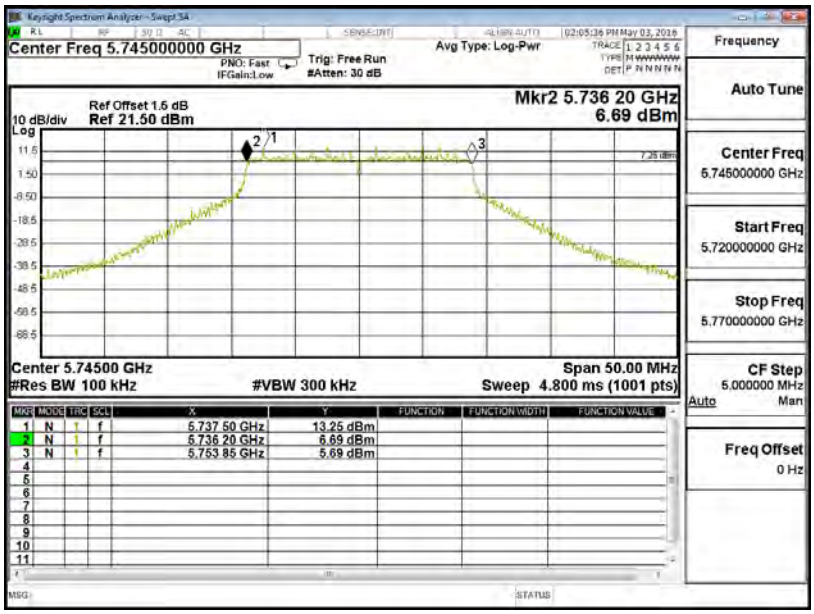
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17650	>500	Pass

Figure Channel 149: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	17650	>500	Pass

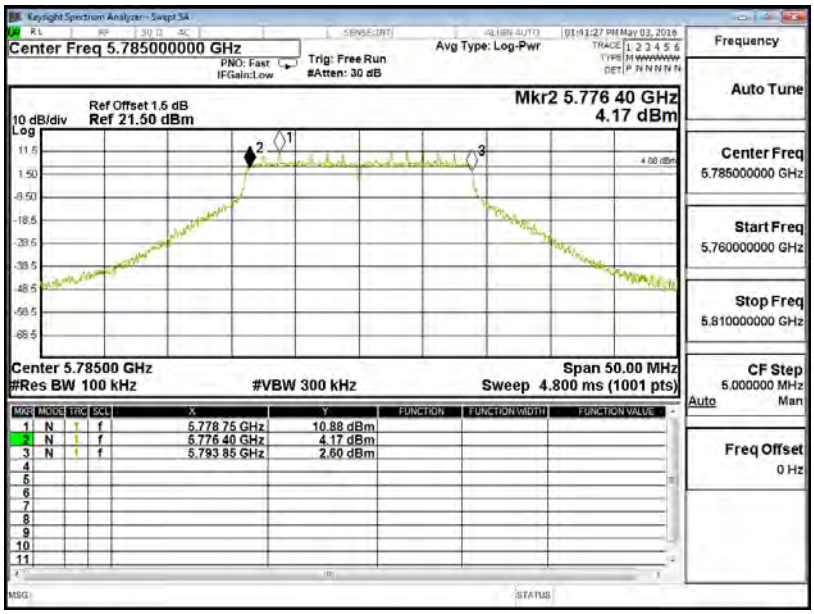
Figure Channel 149: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna) (5785MHz)

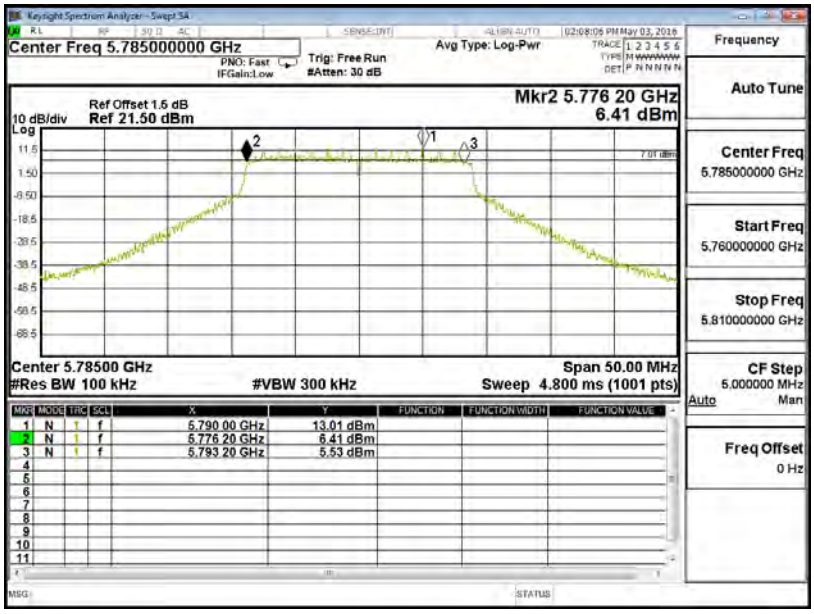
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17450	>500	Pass

Figure Channel 157: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	17000	>500	Pass

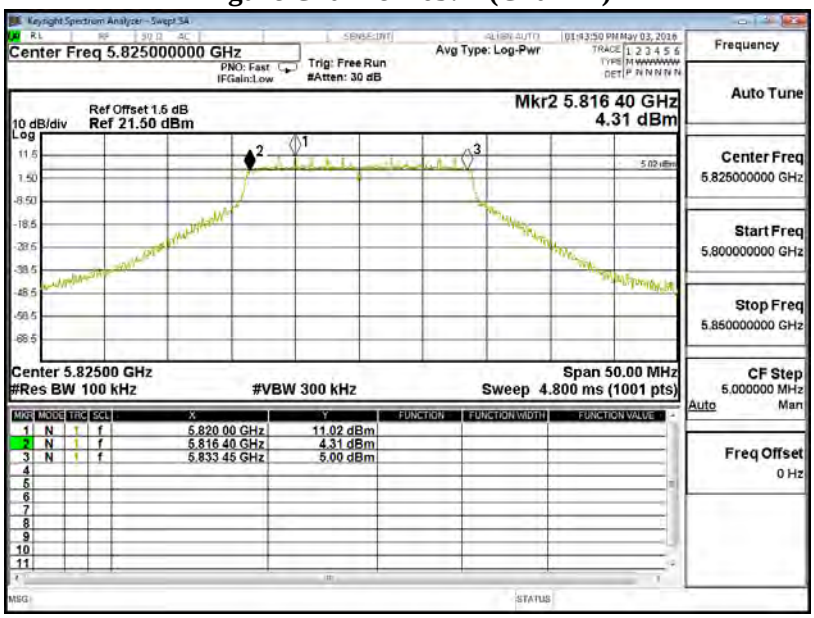
Figure Channel 157: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11n-20BW-14.4Mbps)(Omni Antenna) (5825MHz)

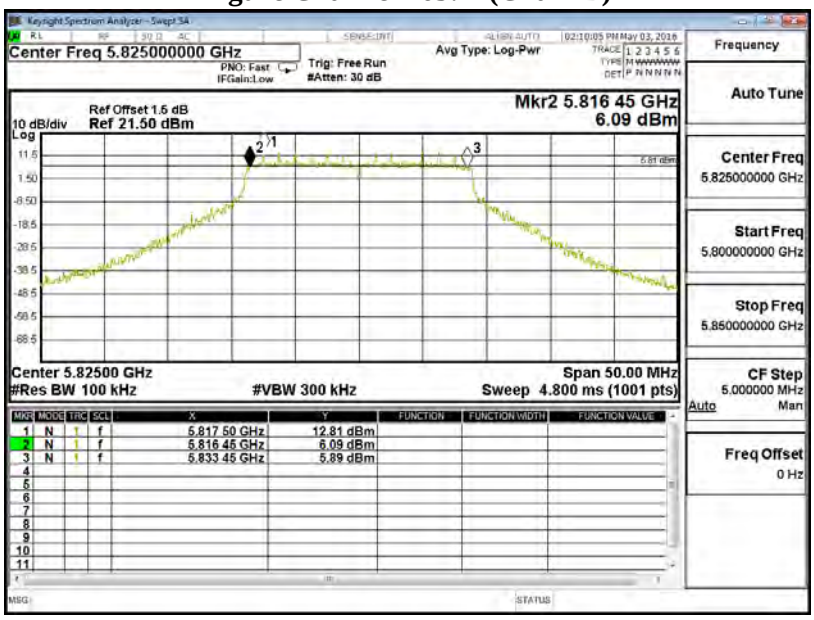
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17050	>500	Pass

Figure Channel 165: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	17000	>500	Pass

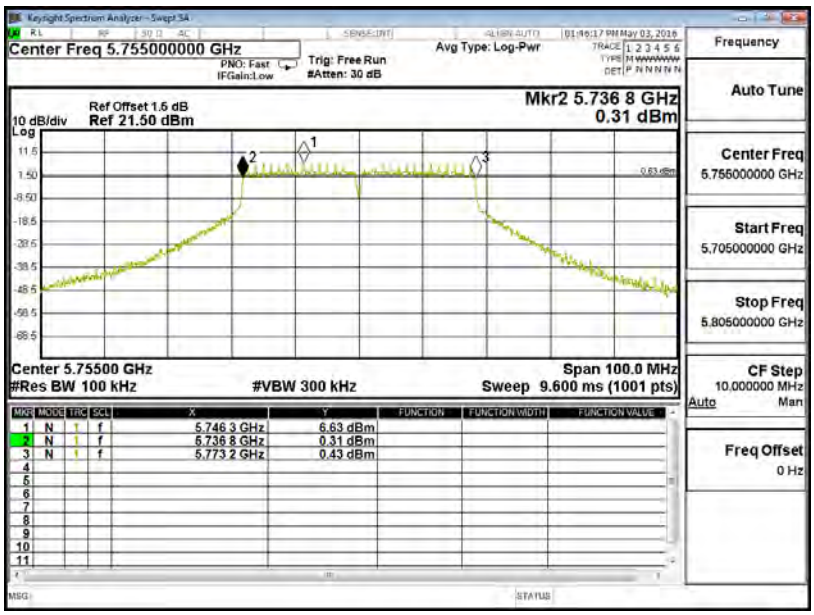
Figure Channel 165: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna) (5755MHz)

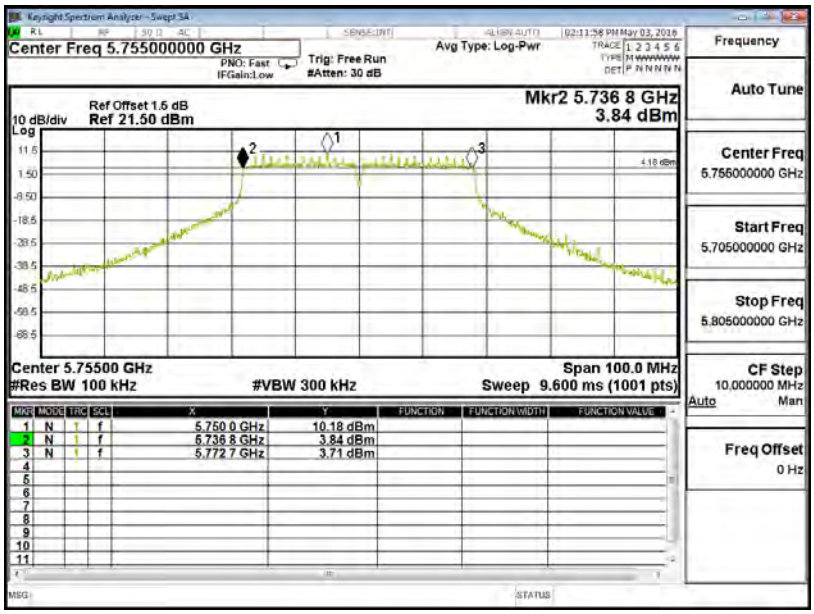
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	36400	>500	Pass

Figure Channel 151: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	35900	>500	Pass

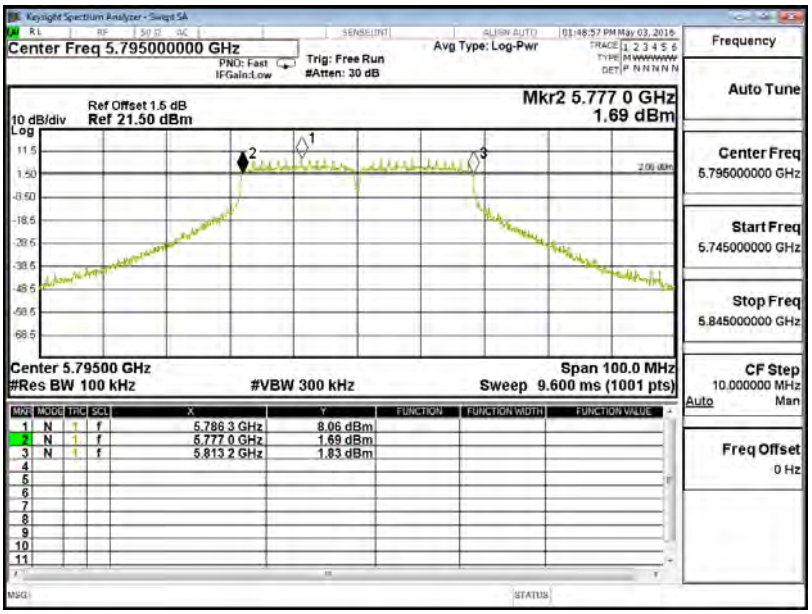
Figure Channel 151: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 7: Transmit (802.11n-40BW-30Mbps)(Omni Antenna) (5795MHz)

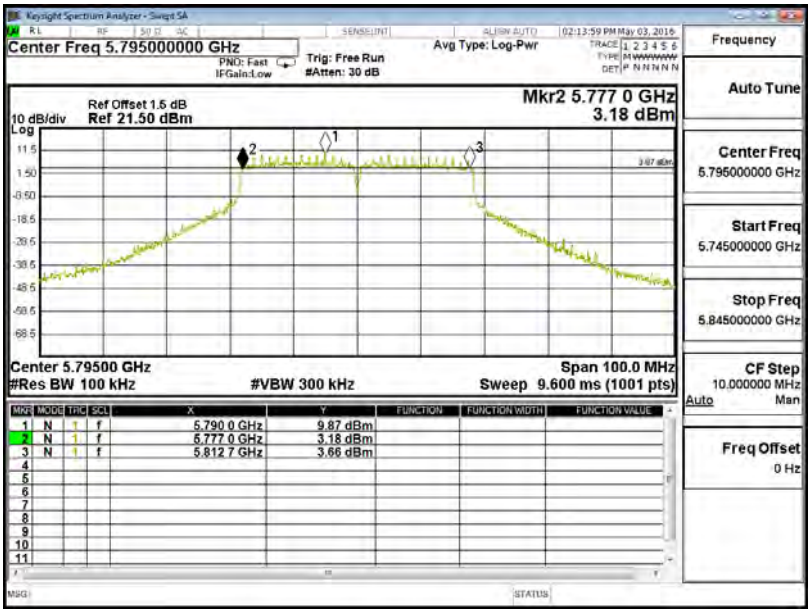
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	36200	>500	Pass

Figure Channel 159: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	35700	>500	Pass

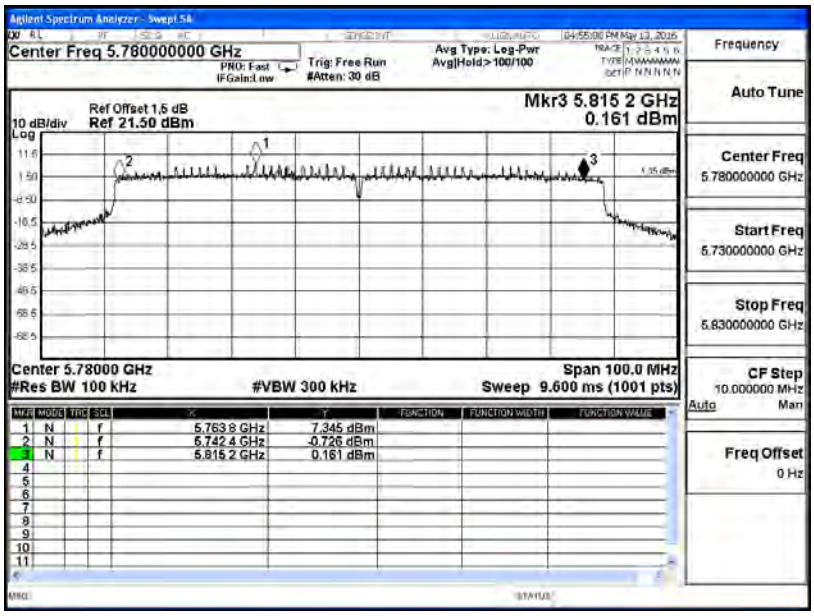
Figure Channel 159: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 8: Transmit (802.11ac-80BW-65Mbps)(Omni Antenna) (5780MHz)

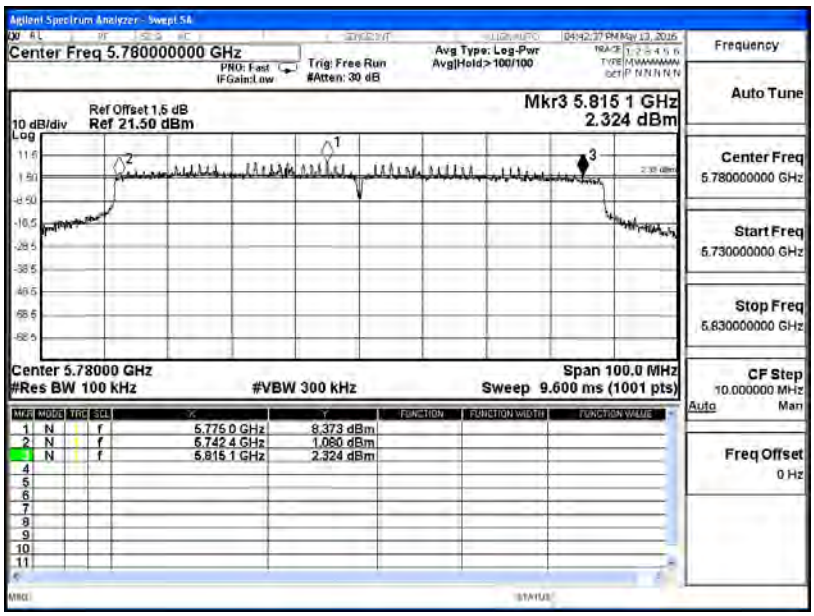
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
156	5780.00	72800	>500	Pass

Figure Channel 156 (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
156	5780.00	72700	>500	Pass

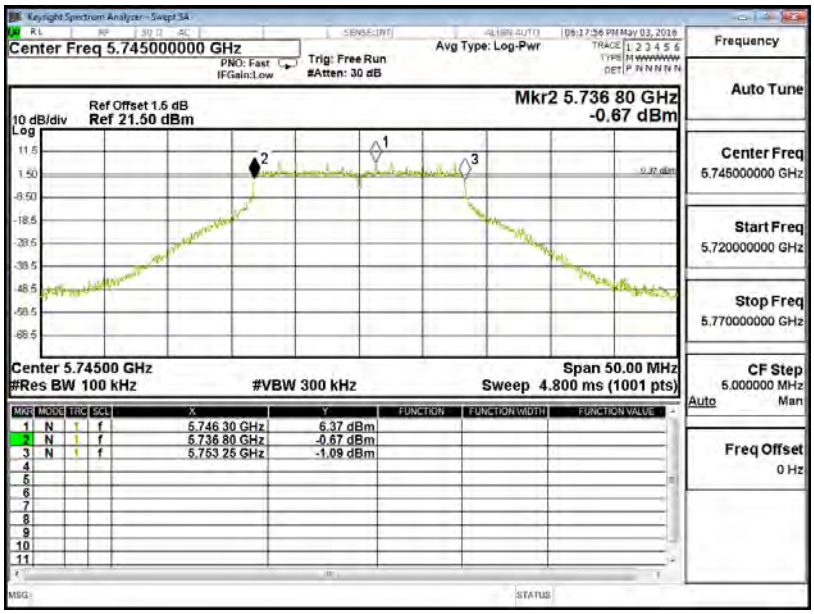
Figure Channel 156: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna) (5745MHz)

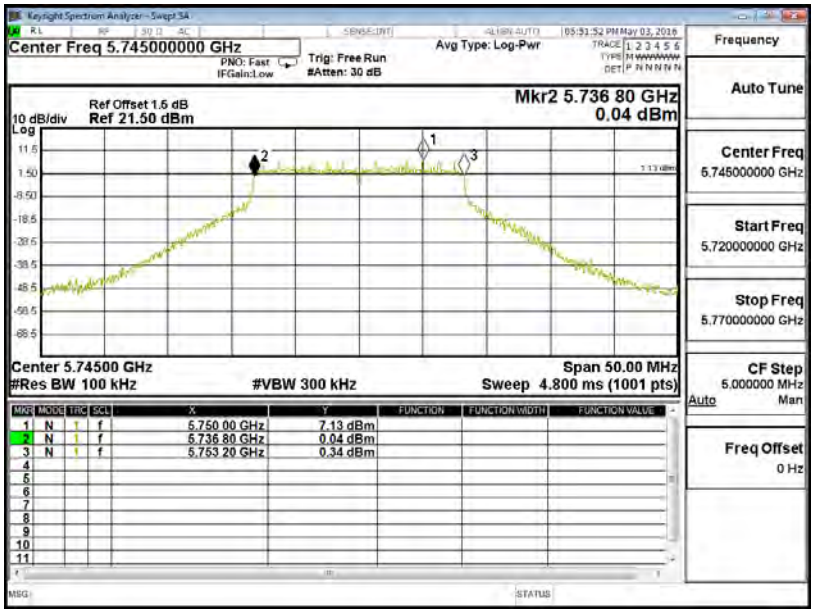
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16450	>500	Pass

Figure Channel 149: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16400	>500	Pass

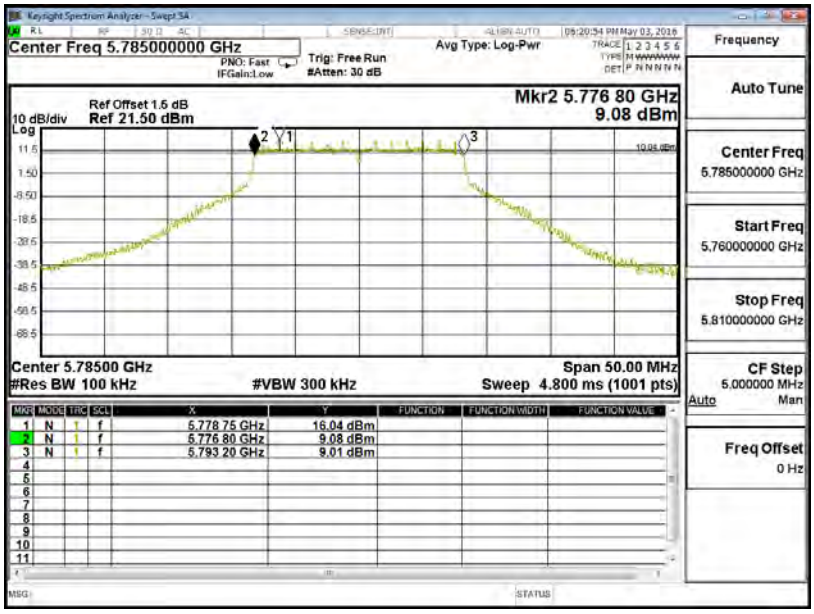
Figure Channel 149: (Chain B)



Product : 802.11 ac PCIe Module
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 9: Transmit (802.11a-6Mbps)(Panel Antenna) ((5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16400	>500	Pass

Figure Channel 157: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	16450	>500	Pass

Figure Channel 157: (Chain B)