

# FCC Test Report

## (Class II Permissive Change)

Product Name	MOXA IEEE 802.11 a/b/g/n
Model No	WAPN008
FCC ID	SLE-WAPN008

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

Date of Receipt	Feb. 25, 2016
Issued Date	Mar. 14, 2016
Report No.	1620423R-RFUSP48V00
Report Version	V1.0



The test results relate only to the samples tested.

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

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of QuiTek Corporation.

# Test Report

Issued Date: Mar. 14, 2016

Report No.: 1620423R-RFUSP48V00



Product Name	MOXA IEEE 802.11 a/b/g/n
Applicant	MOXA Inc.
Address	FL.4, NO. 135. LANE 235, BAOQIAO RD. XINDIAN DIST., NEW TAIPEI CITY, TAIWAN
Manufacturer	MOXA Inc.
Model No.	WAPN008
FCC ID.	SLE-WAPN008
EUT Rated Voltage	DC 3.3V
EUT Test Voltage	AC 120V/60Hz
Trade Name	MOXA
Applicable Standard	FCC CFR Title 47 Part 15 Subpart E: 2014 ANSI C63.4: 2014, ANSI C63.10: 2013 789033 D02 General UNII Test Procedures New Rules v01
Test Result	Complied

Documented By :



( Senior Adm. Specialist / Genie Chang )

Tested By :



( Assistant Engineer / Yulin Chen )

Approved By :



( Director / Vincent Lin )

## TABLE OF CONTENTS

Description	Page
<b>1. GENERAL INFORMATION .....</b>	<b>4</b>
1.1. EUT Description.....	4
1.2. Operational Description .....	6
1.3. Tested System Details.....	7
1.4. Configuration of tested System .....	7
1.5. EUT Exercise Software .....	7
1.6. Test Facility .....	8
<b>2. Maximun conducted output power.....</b>	<b>9</b>
2.1. Test Equipment.....	9
2.2. Test Setup .....	9
2.3. Limits .....	10
2.4. Test Procedure .....	11
2.5. Uncertainty .....	11
2.6. Test Result of Maximum conducted output power.....	12
<b>3. Radiated Emission.....</b>	<b>35</b>
3.1. Test Equipment.....	35
3.2. Test Setup .....	36
3.3. Limits .....	37
3.4. Test Procedure .....	38
3.5. Uncertainty .....	38
3.6. Test Result of Radiated Emission.....	39
<b>4. Band Edge .....</b>	<b>82</b>
4.1. Test Equipment.....	82
4.2. Test Setup .....	83
4.3. Limits .....	84
4.4. Test Procedure .....	84
4.5. Uncertainty .....	84
4.6. Test Result of Band Edge .....	85
<b>5. EMI Reduction Method During Compliance Testing .....</b>	<b>123</b>

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs

## 1. GENERAL INFORMATION

### 1.1. EUT Description

Product Name	MOXA IEEE 802.11 a/b/g/n
Trade Name	MOXA
FCC ID.	SLE-WAPN008
Model No.	WAPN008
Frequency Range	802.11a/n-20MHz: 5180-5320MHz, 5500-5700MHz, 5745-5825MHz 802.11n-40MHz: 5190-5310, 5510-5670MHz, 5755-5795MHz
Number of Channels	802.11a/n-20MHz: 24; 802.11n-40MHz: 11
Data Rate	802.11a: 6 - 54Mbps 802.11n: up to 300Mbps
Channel Control	Auto
Type of Modulation	802.11a/n:OFDM, BPSK, QPSK, 16QAM, 64QAM
Antenna Type	Directional panel Antenna
Antenna Gain	Refer to the table “Antenna List”

### Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	MOXA	ANT-WDB-PNF-1518	Directional panel	18dBi for 5GHz

Note:

1. The antenna of EUT is conform to FCC 15.203

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

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

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

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

Note:

1. This device is a MOXA IEEE 802.11 a/b/g/n with a built-in 2.4GHz and 5GHz WLAN transceiver, this report for 5GHz WLAN.
2. This is requesting a Class II permissive change for FCC ID: SLE-WAPN008. Originally granted on 08/25/2015.

The major change filed under this application is:

Change #1: Addition of Directional panel type antenna.

Manufacturer : MOXA, Part No: ANT-WDB-PNF-1518.

Change #2: Reduce the Output Power through firmware filing to demonstrate compliance with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

3. At result of pretests, module supports dual-channel transmission, only the worst case is shown in the report. (802.11a is 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)
5. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance of 802.11a/n transmitter with Part 15 Subpart E for Unlicensed National Information Infrastructure devices.

Test Mode	Mode 1: Transmit (802.11a-6Mbps) Mode 2: Transmit (802.11n-20BW 14.4Mbps) Mode 3: Transmit (802.11n-40BW 30Mbps)
-----------	--

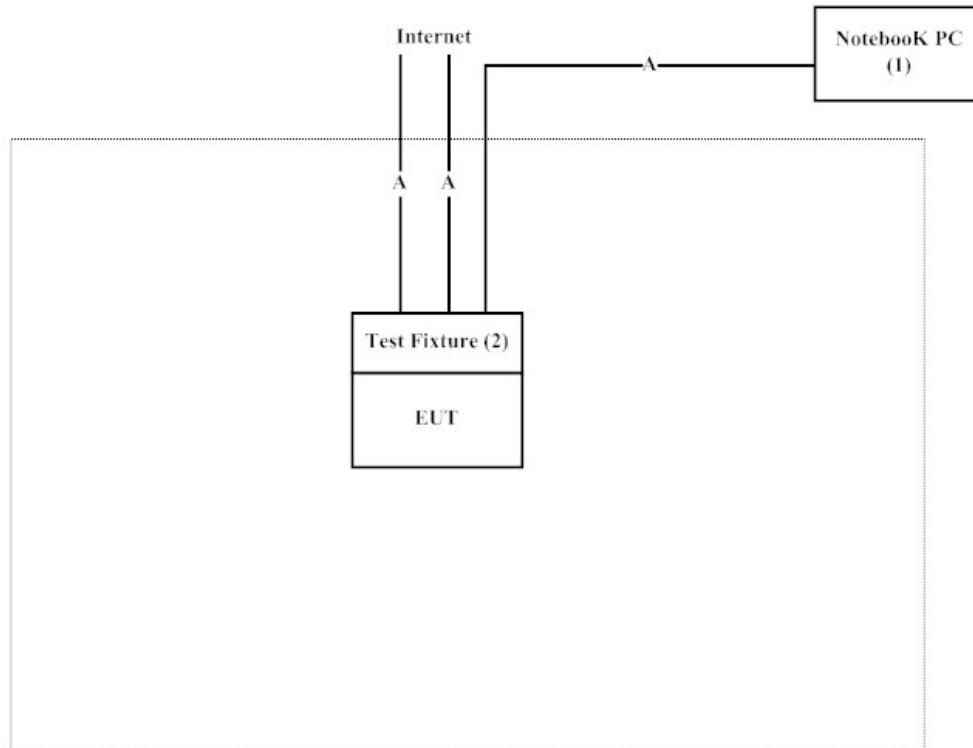
### 1.3. Tested System Details

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

Product	Manufacturer	Model No.	Serial No.	Power Cord
(1) Notebook PC	DELL	Latitude E5440	HG26TZ1	Non-Shielded, 1.8m
(2) Test Fixture	MOXA	N/A	N/A	N/A

Signal Cable Type		Signal cable Description
A LAN Cable		Shielded, 1.8m, three PCS.

### 1.4. Configuration of tested System



### 1.5. EUT Exercise Software

- (1) Setup the EUT as shown on 1.4
- (2) Execute “ART2-GUI 2.3” program on the EUT.
- (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, Ruei-Shu Valley, Ruei-Ping Tsuen,  
Lin-Kou Shiang, Taipei,  
Taiwan, R.O.C.  
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789  
E-Mail : [service@quietek.com](mailto:service@quietek.com)

FCC Accreditation Number: TW1014

## 2. Maximum conducted output power

### 2.1. Test Equipment

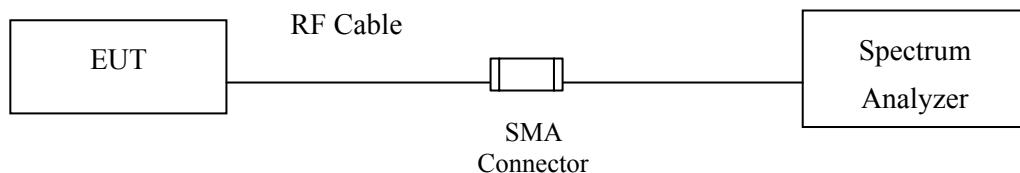
Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X Power Meter	Anritsu	ML2495A/6K00003357	May, 2015
X Power Sensor	Anritsu	MA2411B/0738448	Jun., 2015
X Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

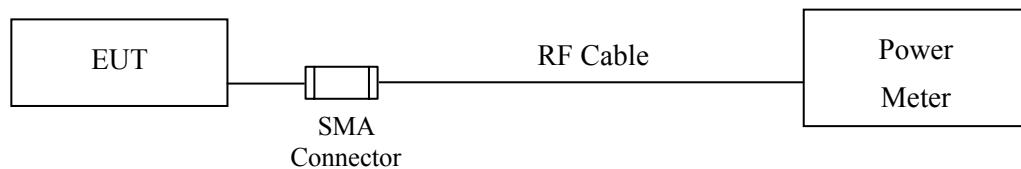
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with "X" are used to measure the final test results.

### 2.2. Test Setup

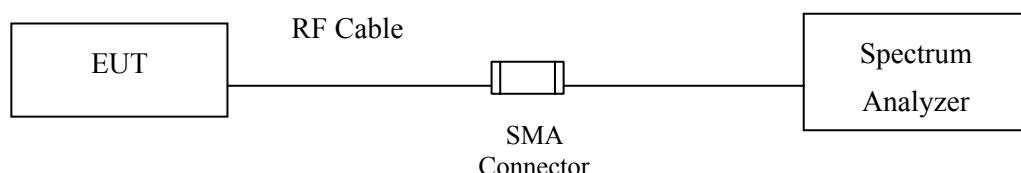
#### 99% Occupied Bandwidth



#### Conduction Power Measurement (for 802.11an)



#### Conduction Power Measurement (for 802.11ac)



## 2.3. Limits

### 2.3.1. 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.

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

2.3.3. 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.

## 2.4. 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 than the 6dB BW of the emission under test. Maximum conducted output power was read directly from the meter across all data rates, and across three channels within each sub-band. Special care was used to make sure that the EUT was transmitting in continuous mode. This method exceeds the limitations of FCC KDB-789033, and provides more accurate measurements.

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

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

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

When transmitted signals consist of two or more non-contiguous spectrum segments (e.g., 80+80 MHz mode) or when a single spectrum segment of a transmission crosses the boundary between two adjacent U-NII bands, KDB 644545 D01 section F) procedure is used for measurements.

## 2.5. Uncertainty

$\pm$  1.27 dB

## 2.6. Test Result of Maximum conducted output power

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Maximum conducted output power  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)

### CHAIN A

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	2.42	--	--	--	--	--	--	--	<12dBm
44	5220	2.18	2.09	2.02	1.94	1.86	1.78	1.70	1.62	<12dBm
48	5240	2.35	--	--	--	--	--	--	--	<12dBm
52	5260	8.09	--	--	--	--	--	--	--	<12dBm
60	5300	8.16	8.08	7.92	7.81	7.69	7.57	7.45	7.33	<12dBm
64	5320	8.23	--	--	--	--	--	--	--	<12dBm
100	5500	8.36	--	--	--	--	--	--	--	<12dBm
116	5580	8.29	8.2	8.06	7.95	7.84	7.72	7.61	7.49	<12dBm
140	5700	8.34	--	--	--	--	--	--	--	<12dBm
149	5745	17.28	--	--	--	--	--	--	--	<30dBm
157	5785	17.06	16.94	16.85	16.74	16.64	16.53	16.43	16.32	<30dBm
165	5825	17.44	--	--	--	--	--	--	--	<30dBm

Note:1. Maximum conducted output power Value =Reading value on average power meter + cable loss.

2. For the Band1、Band2a、Band2c, 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.

**CHAIN B**

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		6	9	12	18	24	36	48	54	
		Measurement Level (dBm)								
36	5180	2.82	--	--	--	--	--	--	--	<12dBm
44	5220	2.87	2.78	2.7	2.61	2.53	2.44	2.36	2.27	<12dBm
48	5240	2.79	--	--	--	--	--	--	--	<12dBm
52	5260	8.67	--	--	--	--	--	--	--	<12dBm
60	5300	8.76	8.68	8.59	8.51	8.42	8.34	8.25	8.17	<12dBm
64	5320	8.72	--	--	--	--	--	--	--	<12dBm
100	5500	8.82	--	--	--	--	--	--	--	<12dBm
116	5580	8.87	8.79	8.72	8.64	8.57	8.49	8.42	8.34	<12dBm
140	5700	8.84	--	--	--	--	--	--	--	<12dBm
149	5745	17.84	--	--	--	--	--	--	--	<30dBm
157	5785	17.65	17.6	17.48	17.41	17.32	17.24	17.15	17.07	<30dBm
165	5825	17.88	--	--	--	--	--	--	--	<30dBm

Note:1. Maximum conducted output power Value =Reading value on average power meter + cable loss.

2. For the Band1、Band2a、Band2c, 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.

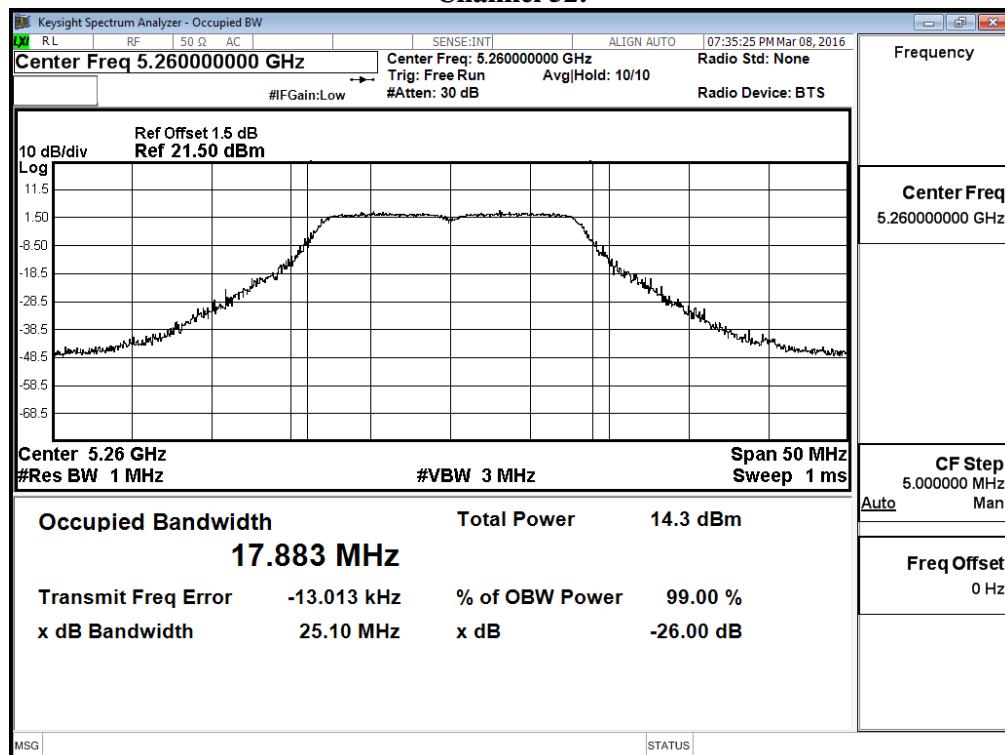
**Maximum conducted output power Measurement:**

Channel No	Frequency Range (MHz)	99% Bandwidth (MHz)	Output Power (dBm)	Output Power Limit	
				(dBm)	(dBm)+10log(BW)
36	5180	--	2.82	12	--
44	5220	--	2.87	12	--
48	5240	--	2.79	12	--
52	5260	17.883	8.67	12	11.52
60	5300	17.839	8.76	12	11.51
64	5320	17.905	8.72	12	11.53
100	5500	17.858	8.82	12	11.52
116	5580	17.877	8.87	12	11.52
140	5700	18.026	8.84	12	11.56
149	5745	--	17.84	30	--
157	5785	--	17.65	30	--
165	5825	--	17.88	30	--

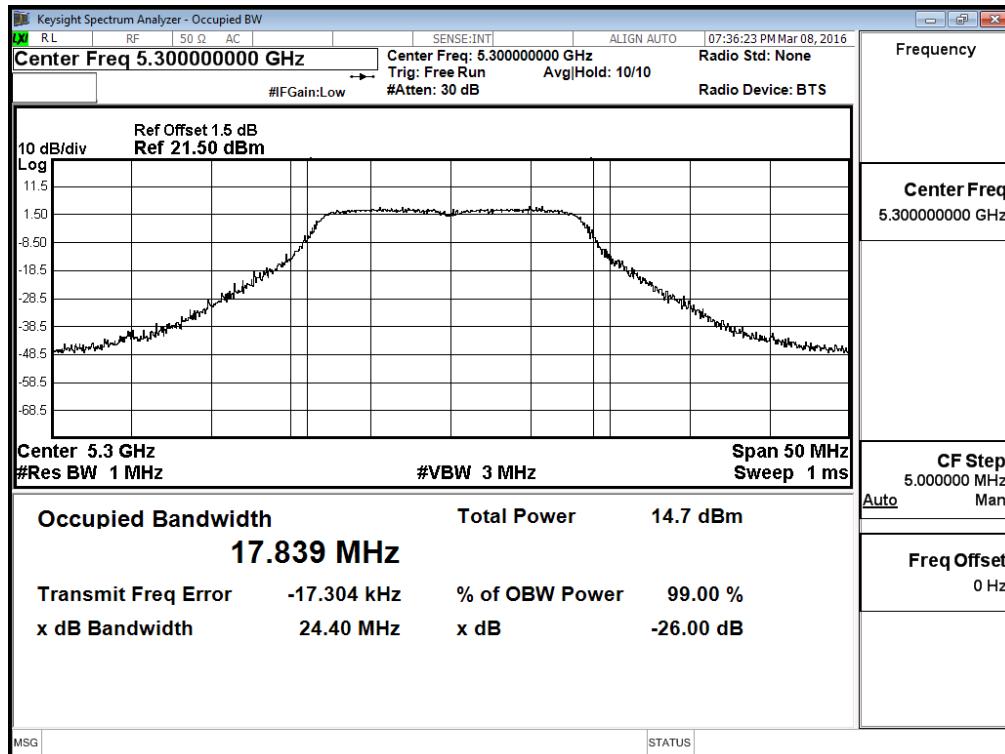
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. 99% Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. For the Band1、Band2a、Band2c, 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.

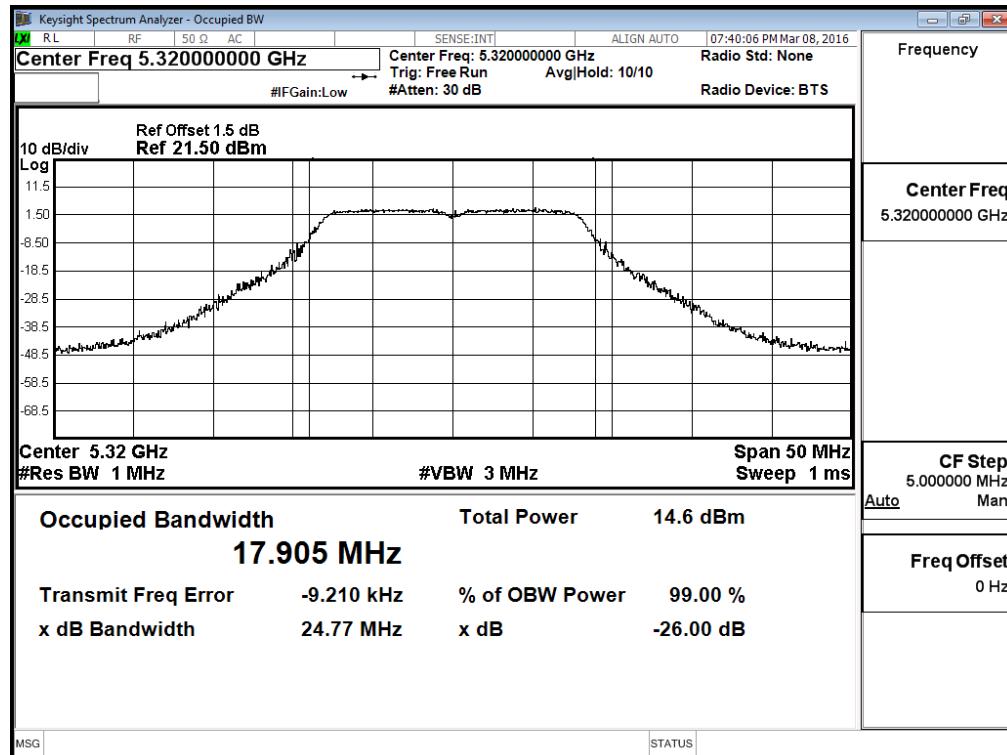
**99% Occupied Bandwidth:  
Channel 52:**



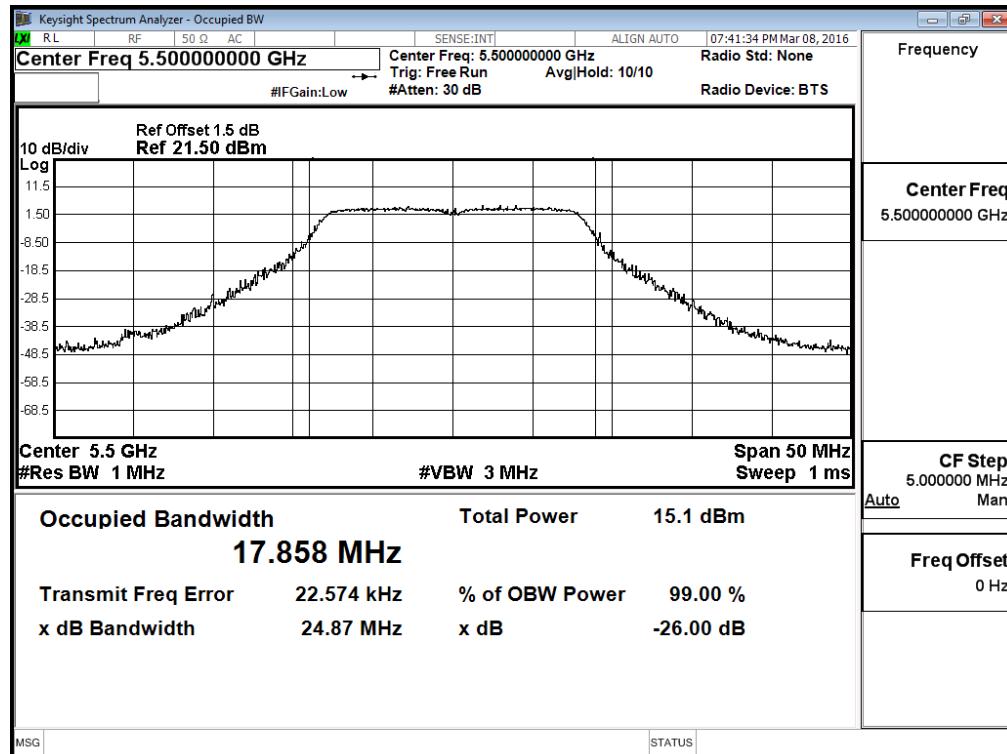
**Channel 60:**



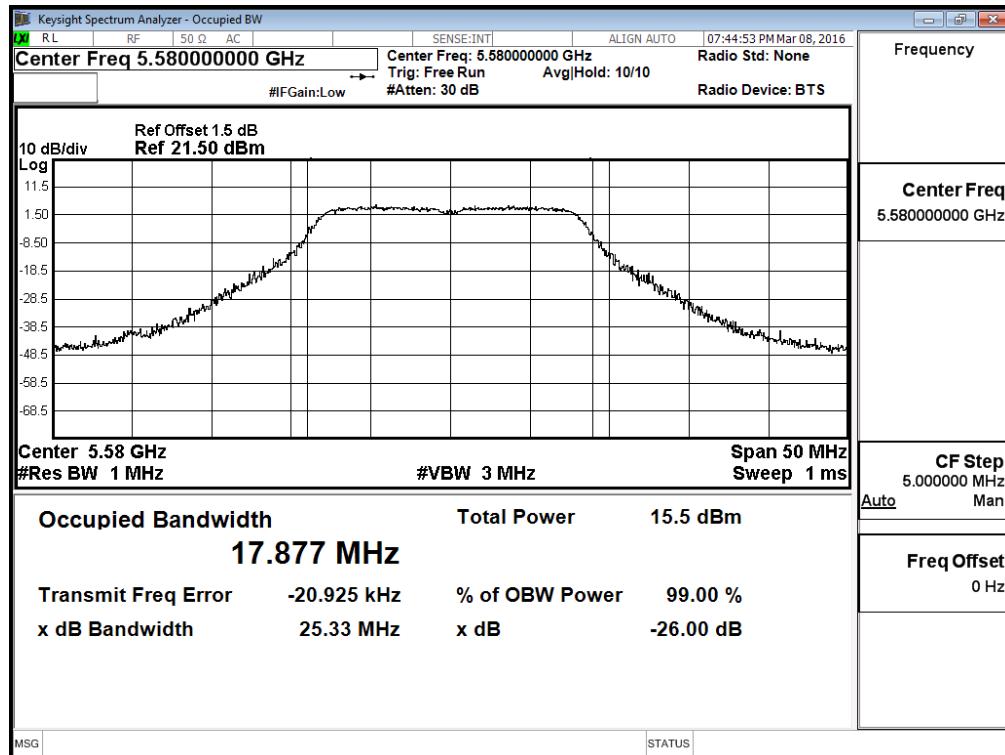
Channel 64:



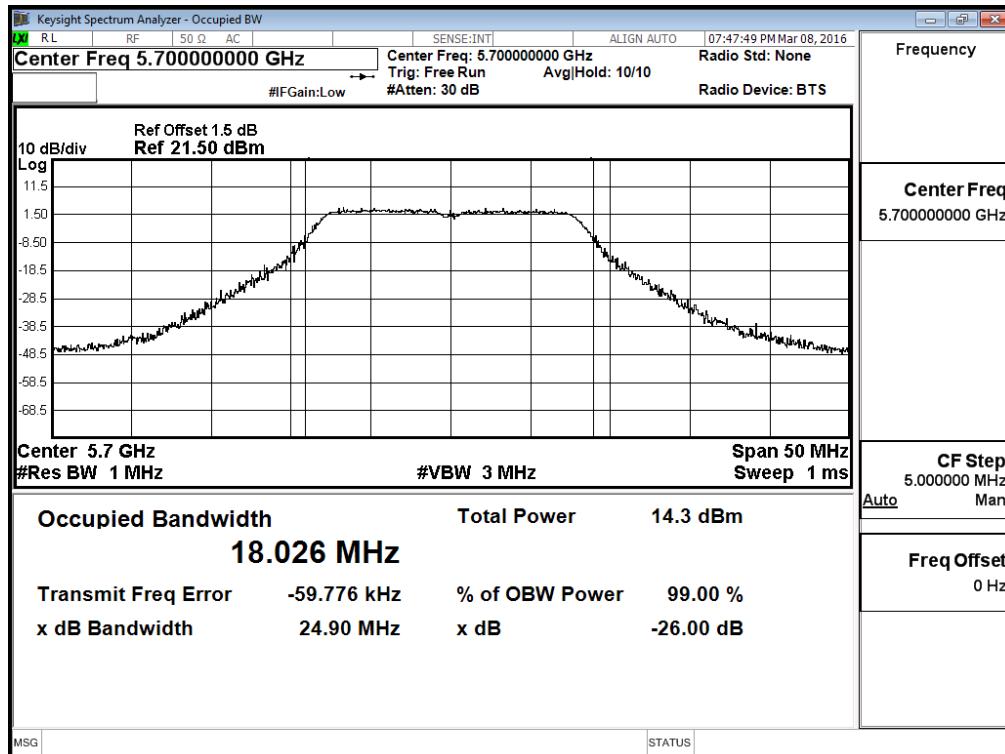
Channel 100:



Channel 116:



Channel 140:



Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Maximum conducted output power  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps)

**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)								
36	5180	-0.01	--	--	--	--	--	--	--	<12dBm
44	5220	-0.05	-0.12	-0.21	-0.29	-0.37	-0.45	-0.53	-0.61	<12dBm
48	5240	-0.02	--	--	--	--	--	--	--	<12dBm
52	5260	5.54	--	--	--	--	--	--	--	<12dBm
60	5300	6.24	6.18	6.11	6.05	5.98	5.92	5.85	5.79	<12dBm
64	5320	6.23	--	--	--	--	--	--	--	<12dBm
100	5500	6.25	--	--	--	--	--	--	--	<12dBm
116	5580	6.96	6.89	6.77	6.68	6.59	6.49	6.40	6.30	<12dBm
140	5700	7.78	--	--	--	--	--	--	--	<12dBm
149	5745	13.74	--	--	--	--	--	--	--	<30dBm
157	5785	14.51	14.42	14.35	14.27	14.19	14.11	14.03	13.95	<30dBm
165	5825	14.04	--	--	--	--	--	--	--	<30dBm

Note:1. Maximum conducted output power Value =Reading value on average power meter + cable loss.

2. For the Band1、Band2a 、Band2c, 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.

**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)								
36	5180	-0.28	--	--	--	--	--	--	--	<12dBm
44	5220	-1.42	-1.51	-1.58	-1.66	-1.74	-1.82	-1.90	-1.98	<12dBm
48	5240	-1.52	--	--	--	--	--	--	--	<12dBm
52	5260	5.48	--	--	--	--	--	--	--	<12dBm
60	5300	5.69	5.62	5.51	5.43	5.34	5.25	5.16	5.07	<12dBm
64	5320	5.16	--	--	--	--	--	--	--	<12dBm
100	5500	4.03	--	--	--	--	--	--	--	<12dBm
116	5580	3.77	3.72	3.64	3.58	3.52	3.45	3.39	3.32	<12dBm
140	5700	2.13	--	--	--	--	--	--	--	<12dBm
149	5745	14.56	--	--	--	--	--	--	--	<30dBm
157	5785	14.13	14.02	13.89	13.77	13.65	13.53	13.41	13.29	<30dBm
165	5825	14.75	--	--	--	--	--	--	--	<30dBm

Note:1. Maximum conducted output power Value =Reading value on average power meter + cable loss.

2. For the Band1、Band2a 、Band2c, 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.

**Maximum conducted output power Measurement:**

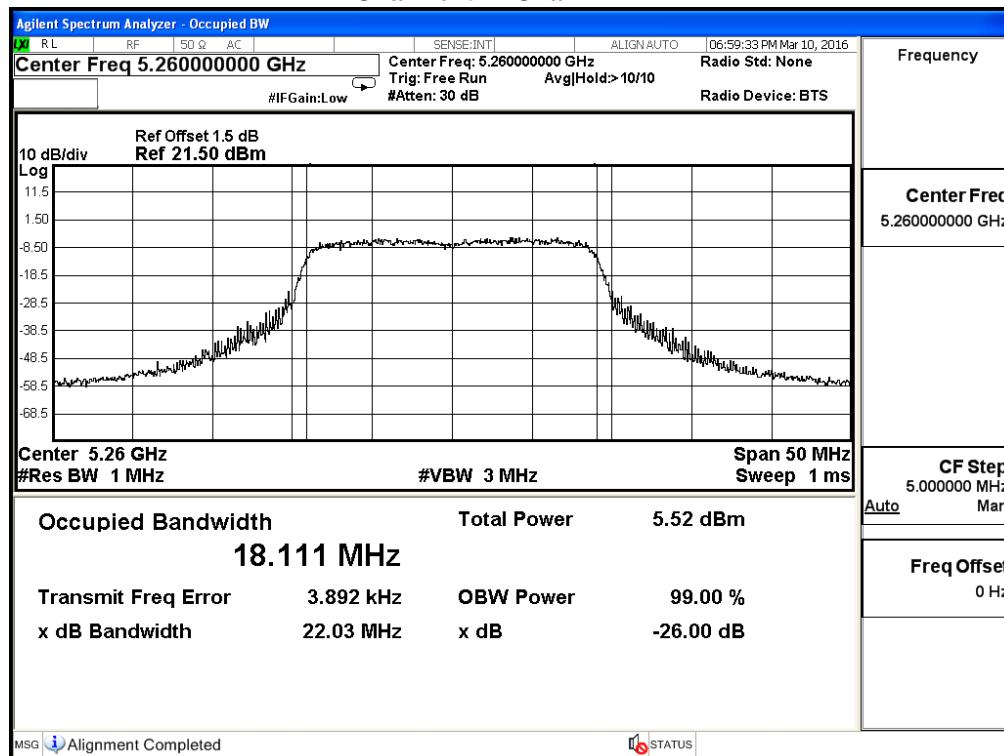
**(CHAIN A+ B)**

Channel Number	Frequency (MHz)	99% Bandwidth (MHz)	Chain A Power	Chain B Power	Output Power	Output Power Limit	
			(dBm)	(dBm)	(dBm)	(dBm)	(dBm+10log(BW))
36	5180	--	-0.01	-0.28	2.87	12	--
44	5220	--	-0.05	-1.42	2.33	12	--
48	5240	--	-0.02	-1.52	2.30	12	--
52	5260	18.111	5.54	5.48	8.52	12	11.58
60	5300	18.241	6.24	5.69	8.98	12	11.61
64	5320	18.135	6.23	5.16	8.74	12	11.59
100	5500	18.162	6.25	4.03	8.29	12	11.59
116	5580	18.179	6.96	3.77	8.66	12	11.60
140	5700	18.148	7.78	2.13	8.83	12	11.59
149	5745	--	13.74	14.56	17.18	30	--
157	5785	--	14.51	14.13	17.33	30	--
165	5825	--	14.04	14.75	17.42	30	--

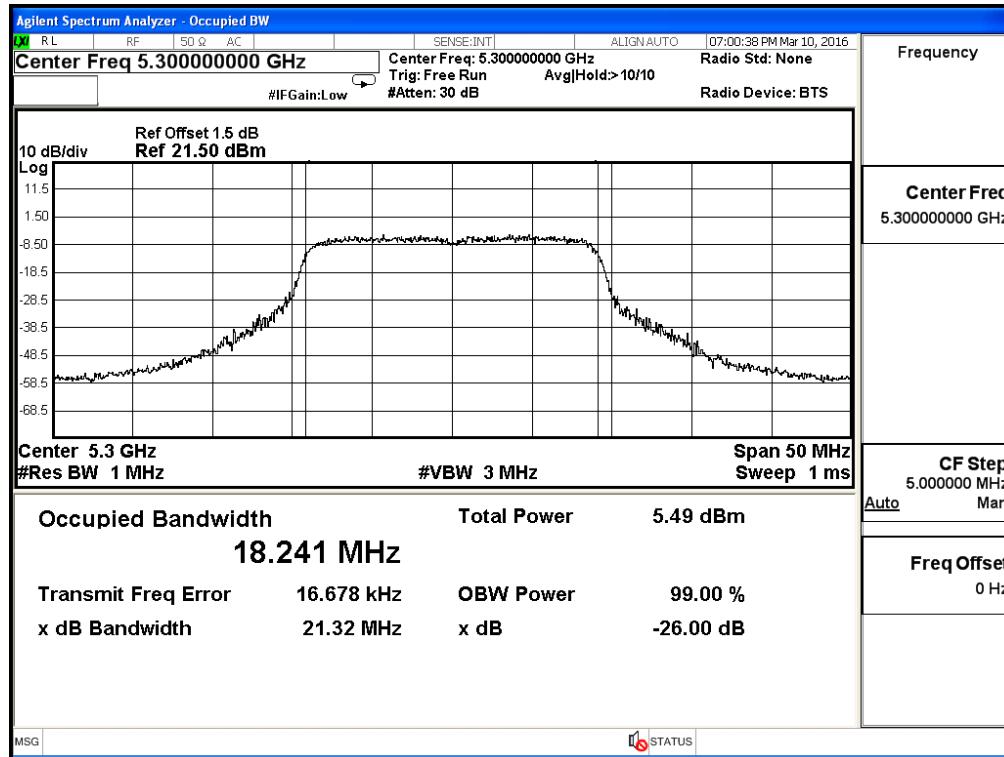
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. 99% Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. For the Band1 、Band2a 、Band2c, 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.

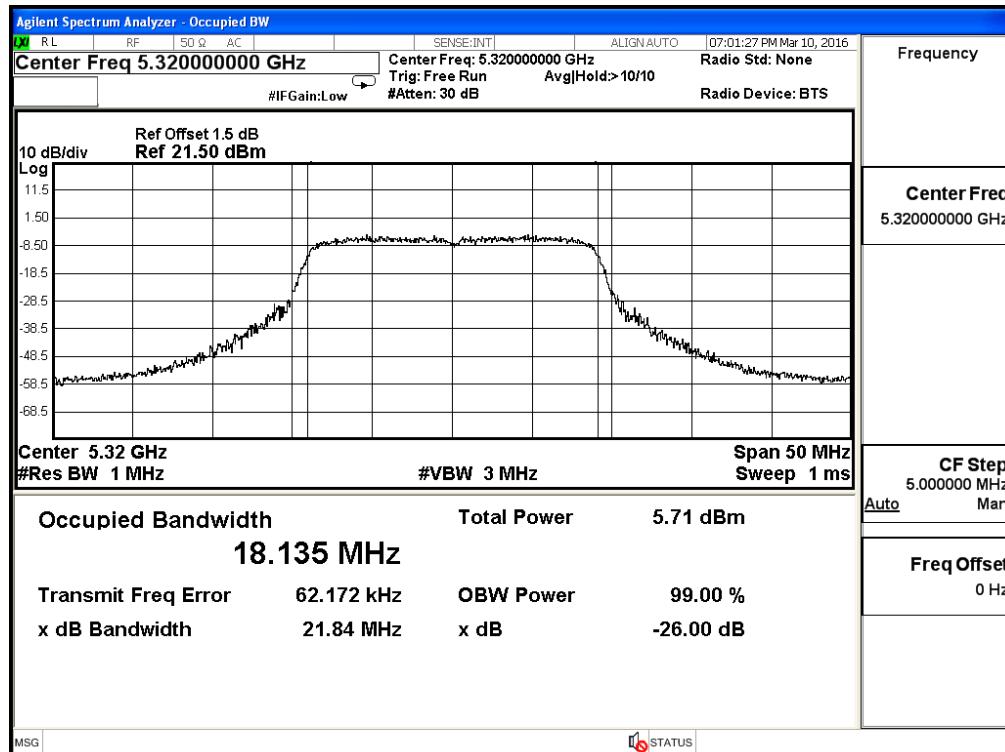
**99% Occupied Bandwidth:  
Channel 52 -Chain A**



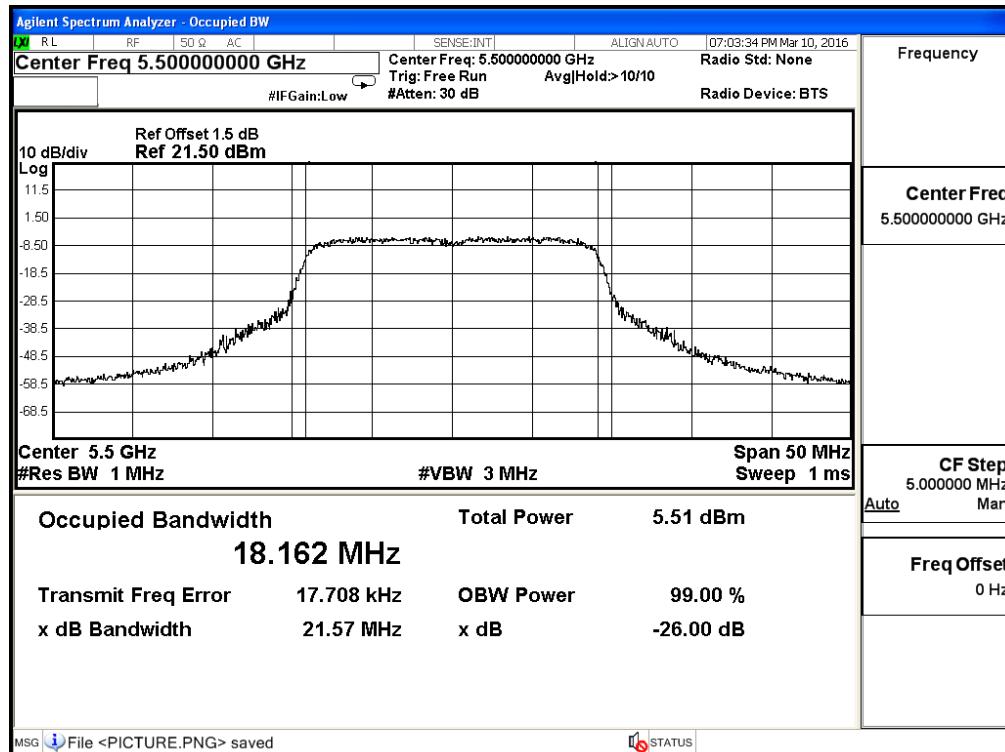
**Channel 60 -Chain A**



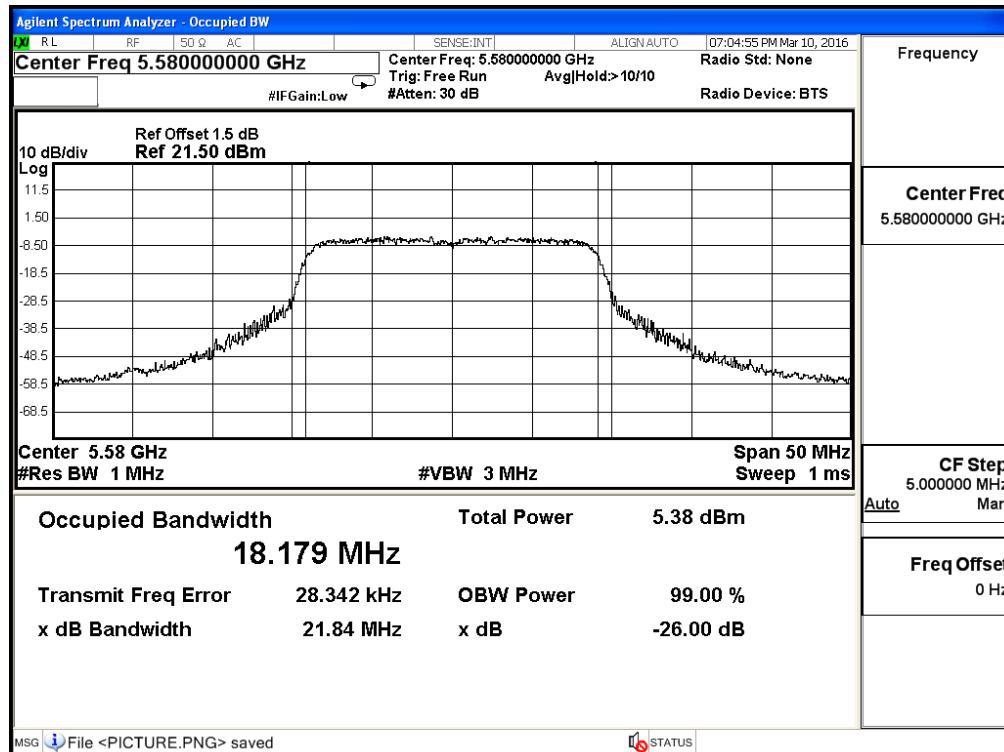
### Channel 64 -Chain A



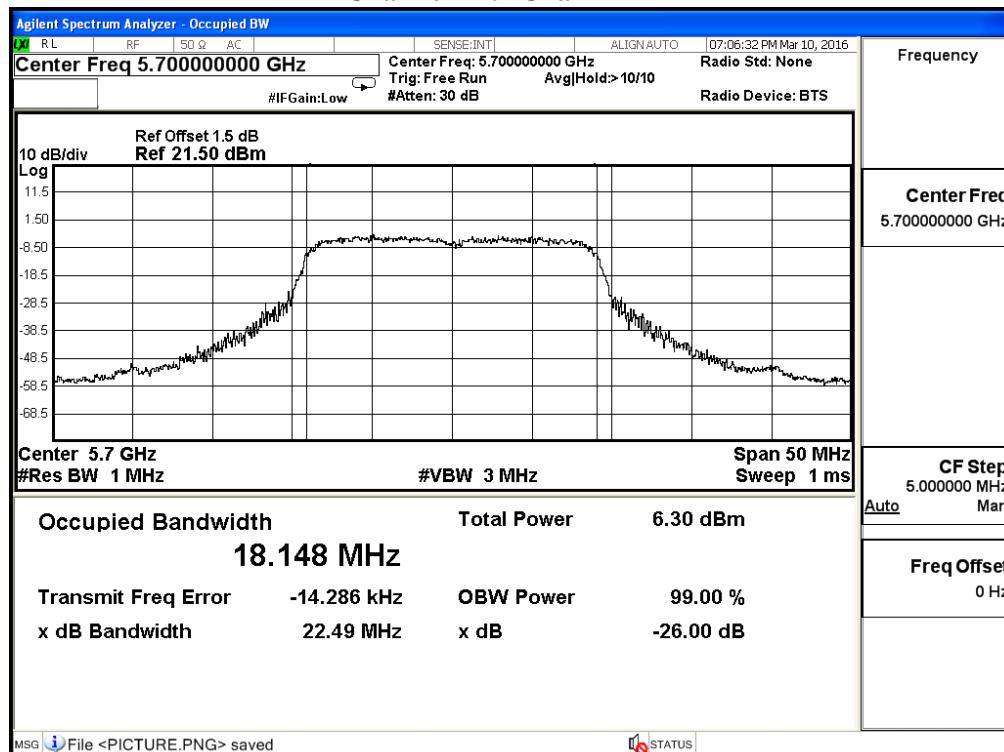
### Channel 100 -Chain A



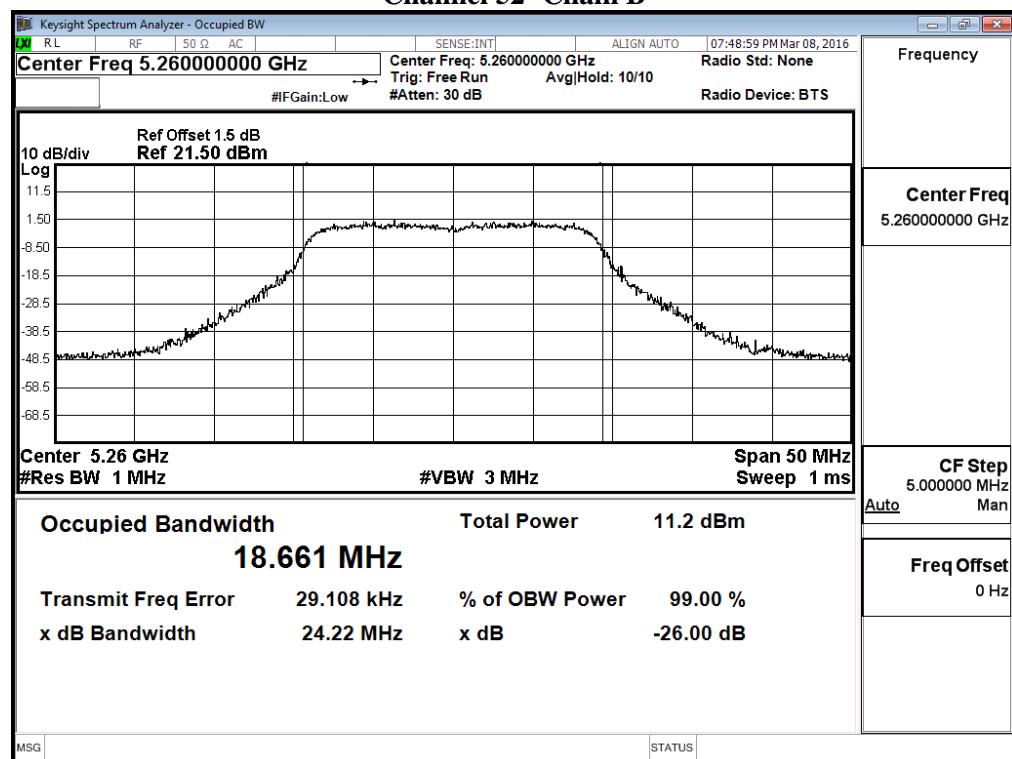
### Channel 116 -Chain A



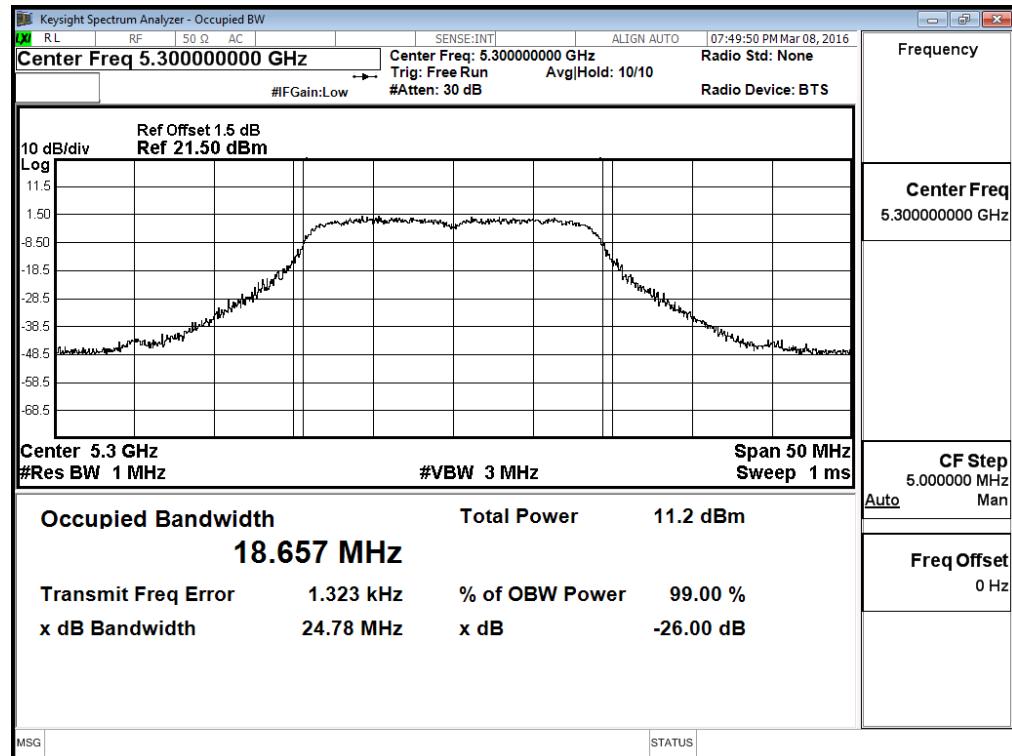
### Channel 140 -Chain A



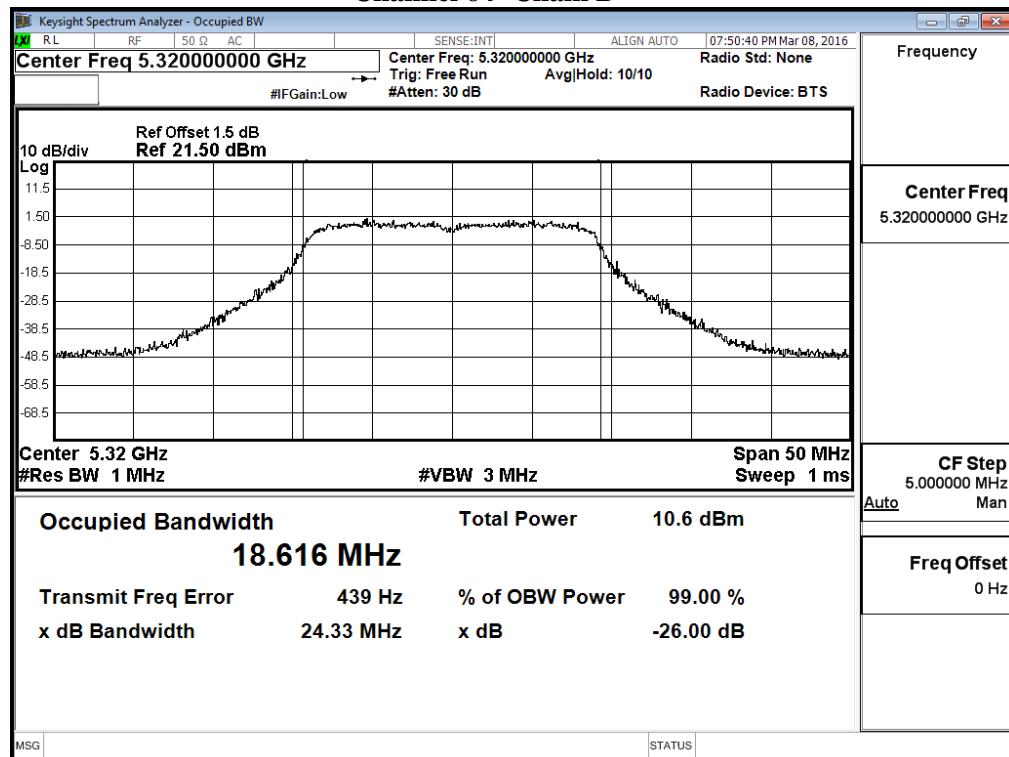
**99% Occupied Bandwidth:  
Channel 52 -Chain B**



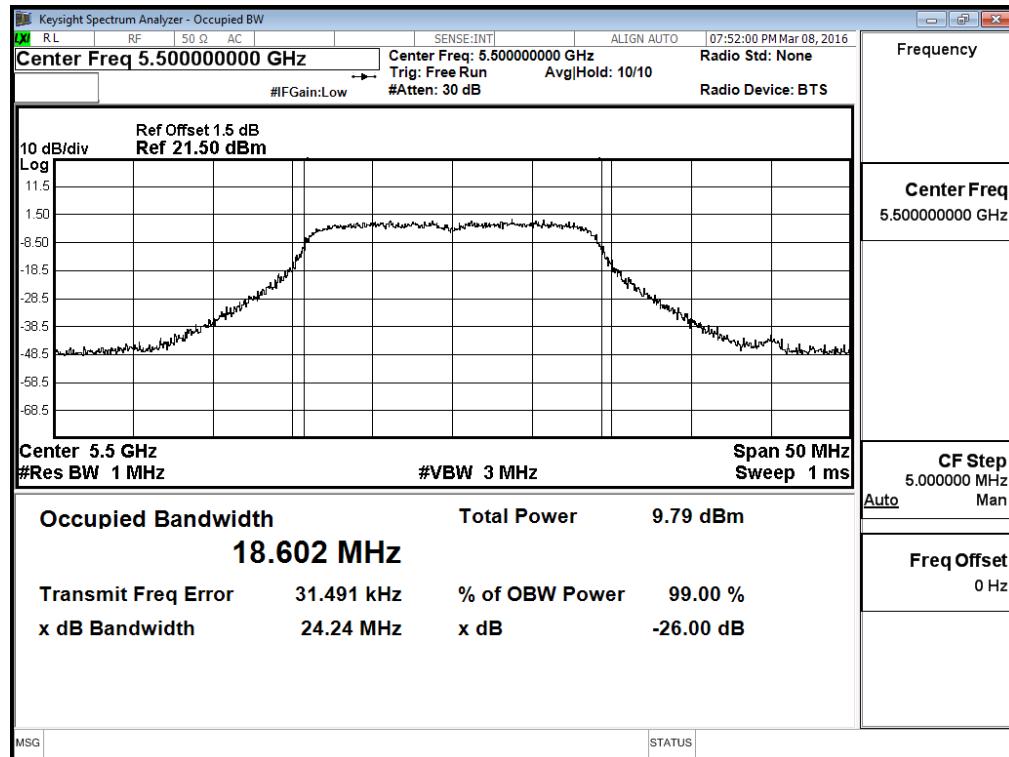
**Channel 60 -Chain B**



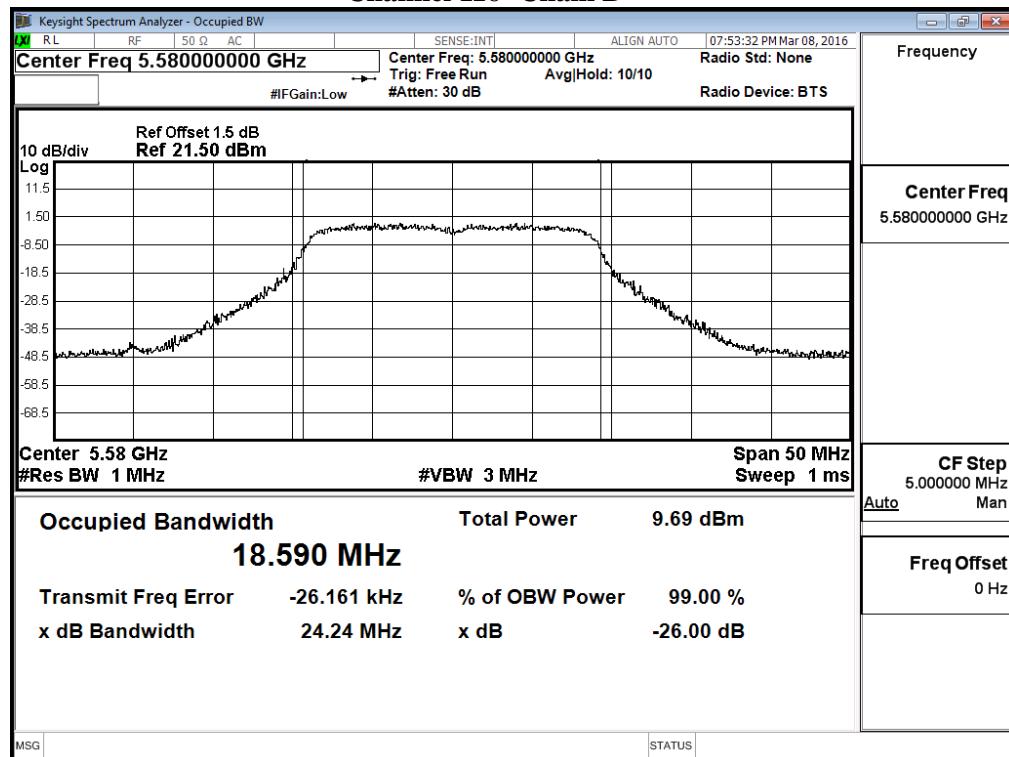
### Channel 64 -Chain B



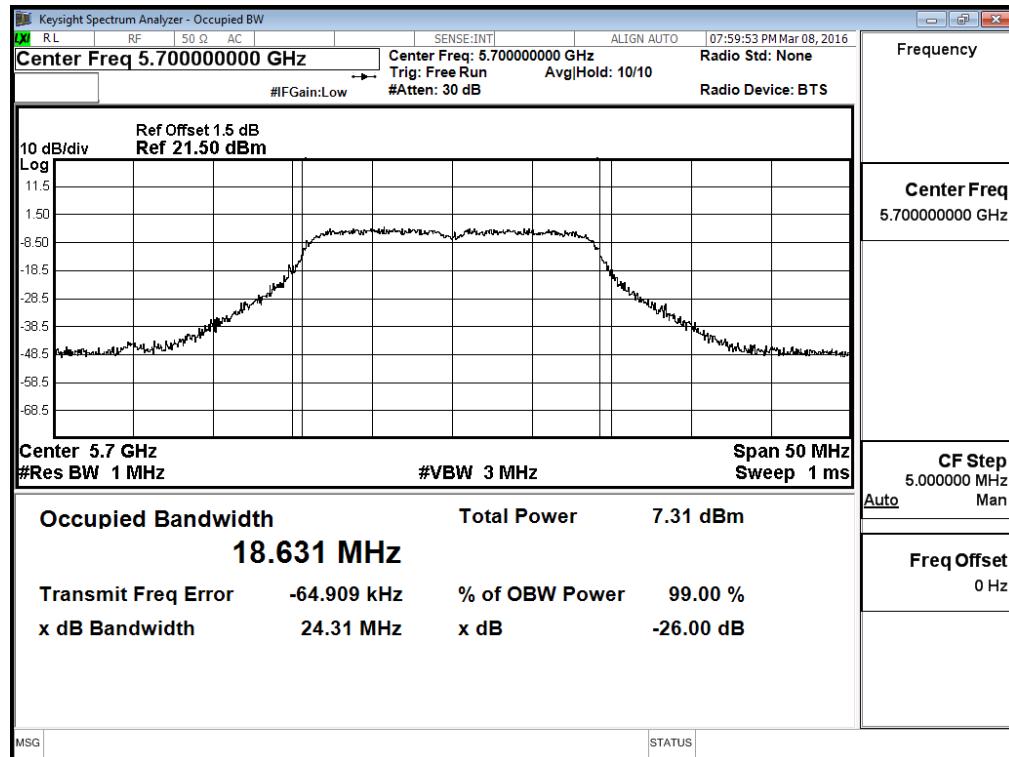
### Channel 100 -Chain B



### Channel 116 -Chain B



### Channel 140 -Chain B



Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Maximum conducted output power  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps)

**CHAIN A**

Cable loss=1dB		Maximum conducted output power								
Channel No.	Frequency (MHz)	Data Rate (Mbps)								Required Limit
		30	60	90	120	180	240	270	300	
		Measurement Level (dBm)								
38	5190	-0.16	--	--	--	--	--	--	--	<12dBm
46	5230	0.43	0.36	0.25	0.17	0.08	-0.01	-0.10	-0.19	<12dBm
54	5270	5.91	--	--	--	--	--	--	--	<12dBm
62	5310	6.23	6.12	6.07	5.98	5.9	5.82	5.74	5.66	<12dBm
102	5510	6.61	--	--	--	--	--	--	--	<12dBm
110	5550	6.69	6.56	6.44	6.31	6.19	6.06	5.94	5.81	<12dBm
134	5670	7.32	--	--	--	--	--	--	--	<12dBm
151	5755	14.56	--	--	--	--	--	--	--	<30dBm
159	5795	15.01	14.86	14.77	14.64	14.52	14.4	14.28	14.16	<30dBm

Note:1. Maximum conducted output power Value =Reading value on average power meter + cable loss.

2. For the Band1、Band2a、Band2c, 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.

**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)								
38	5190	-0.37	--	--	--	--	--	--	--	<12dBm
46	5230	-0.98	-1.12	-1.26	-1.4	-1.54	-1.68	-1.82	-1.96	<12dBm
54	5270	5.72	--	--	--	--	--	--	--	<12dBm
62	5310	5.32	5.22	5.09	4.98	4.865	4.75	4.635	4.52	<12dBm
102	5510	3.94	--	--	--	--	--	--	--	<12dBm
110	5550	3.89	3.83	3.72	3.64	3.56	3.47	3.39	3.30	<12dBm
134	5670	2.57	--	--	--	--	--	--	--	<12dBm
151	5755	14.22	--	--	--	--	--	--	--	<30dBm
159	5795	14.04	13.96	13.83	13.73	13.63	13.52	13.42	13.31	<30dBm

Note:1. Maximum conducted output power Value =Reading value on average power meter + cable loss.

2. For the Band1、Band2a、Band2c, 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.

**Maximum conducted output power Measurement:**

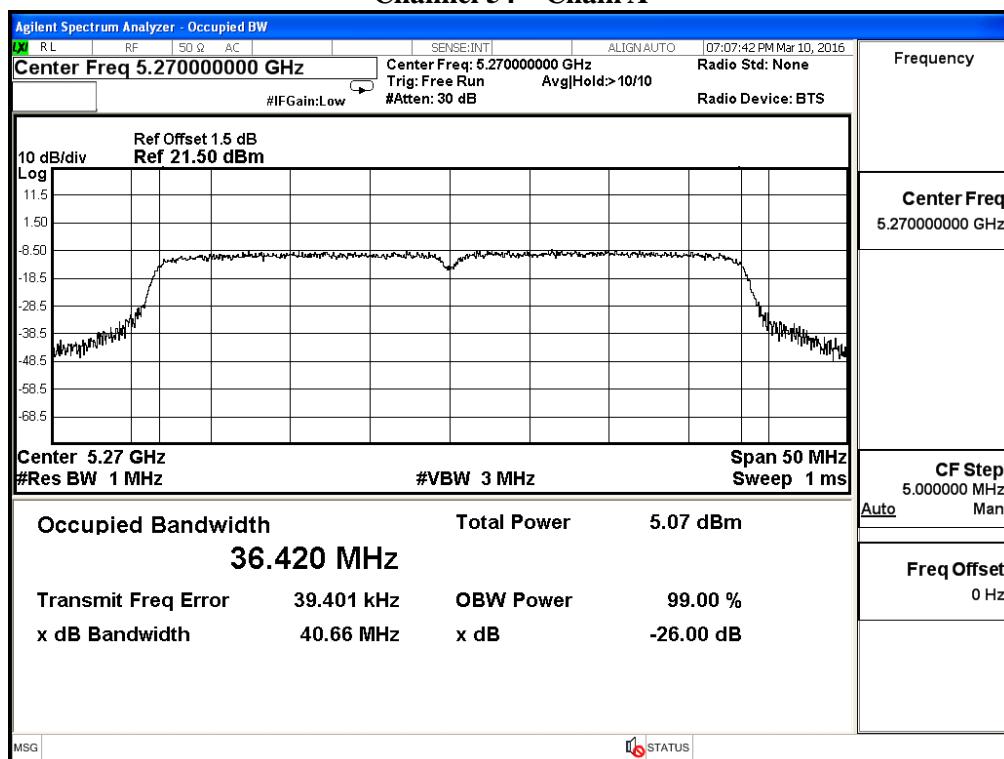
**(CHAIN A+ B)**

Channel Number	Frequency (MHz)	99% Bandwidth (MHz)	Chain A Power	Chain B Power	Output Power	Output Power Limit	
			(dBm)	(dBm)	(dBm)	(dBm)	(dBm+10log(BW))
38	5190	--	-0.16	-0.37	2.75	12	--
46	5230	--	0.43	-0.98	2.79	12	--
54	5270	36.420	5.91	5.72	8.83	12	14.61
62	5310	36.437	6.23	5.32	8.81	12	14.62
102	5510	36.371	6.61	3.94	8.49	12	14.61
110	5550	36.386	6.69	3.89	8.52	12	14.61
134	5670	36.390	7.32	2.57	8.57	12	14.61
151	5755	--	14.56	14.22	17.40	30	--
159	5795	--	15.01	14.04	17.56	30	--

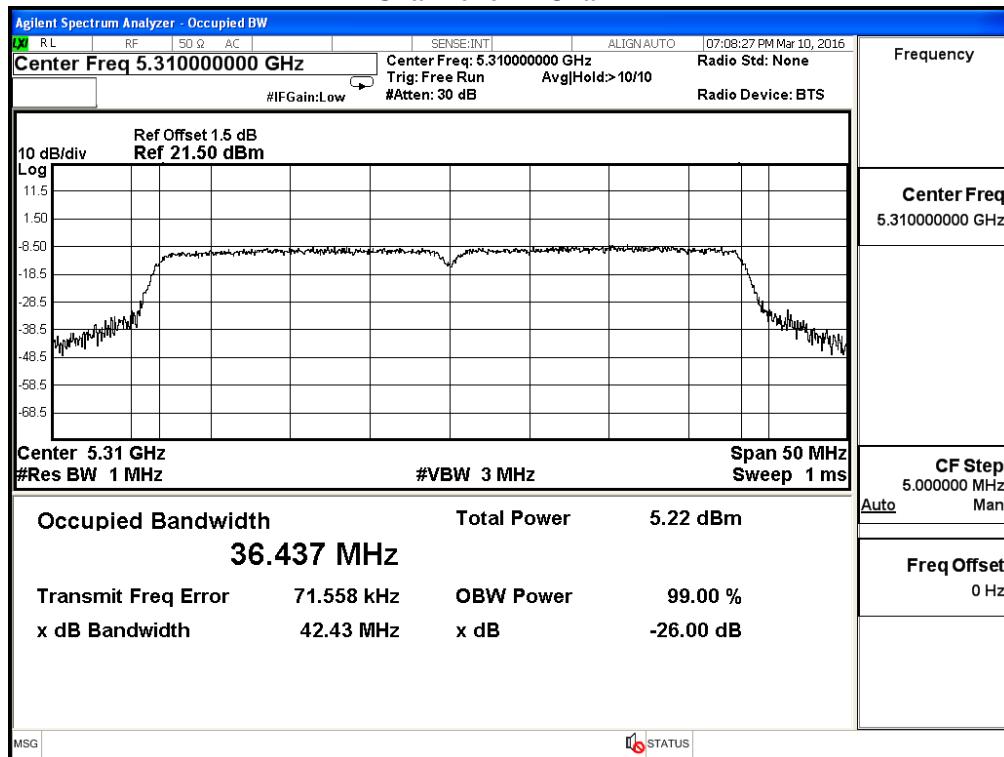
Note:

1. Power Output Value =Reading value on average power meter + cable loss
2. 99% Bandwidth is the bandwidth of chain A or chain B whichever is less bandwidth, output power limitation is more stringent.
3. For the Band1、Band2a、Band2c, 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.

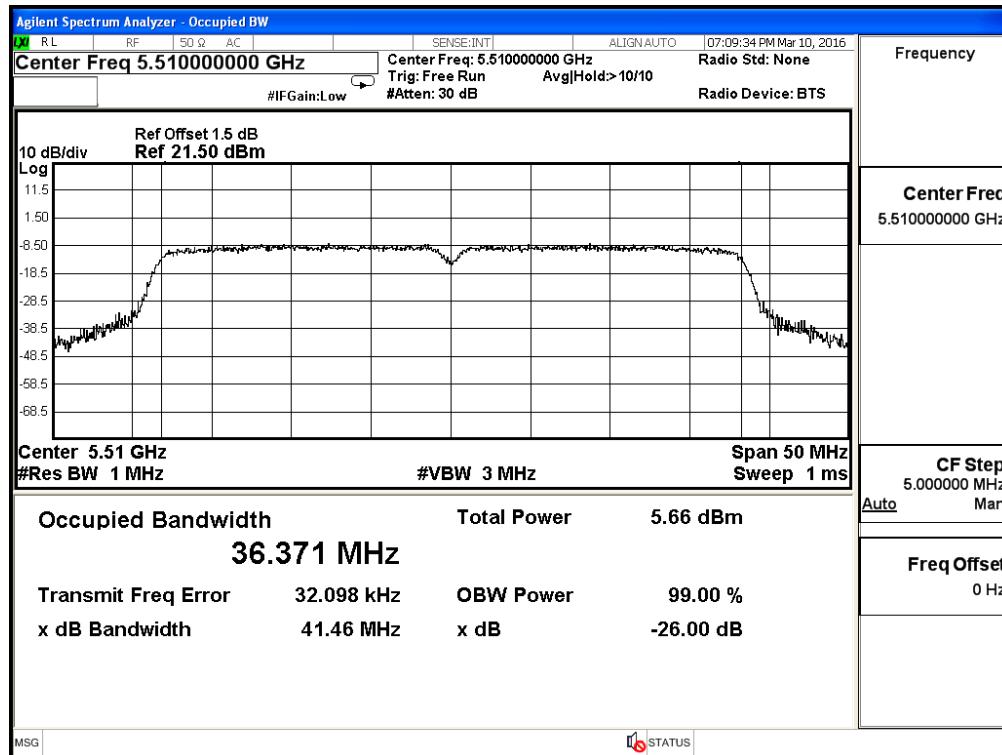
**99% Occupied Bandwidth:  
Channel 54 – Chain A**



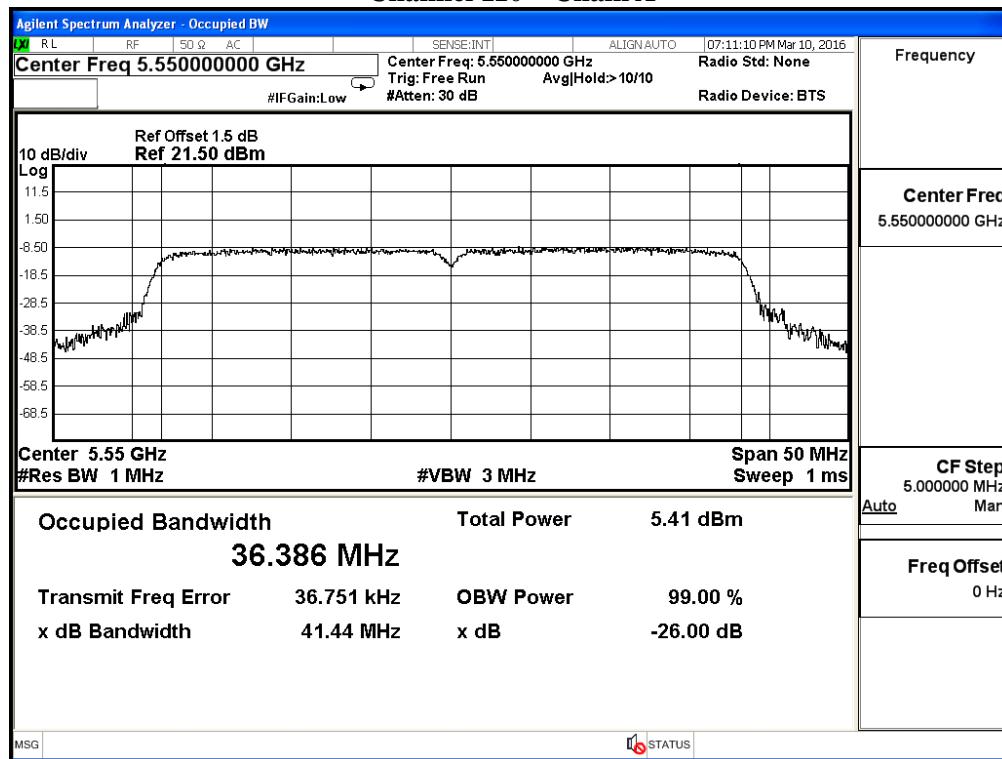
**Channel 62 – Chain A**



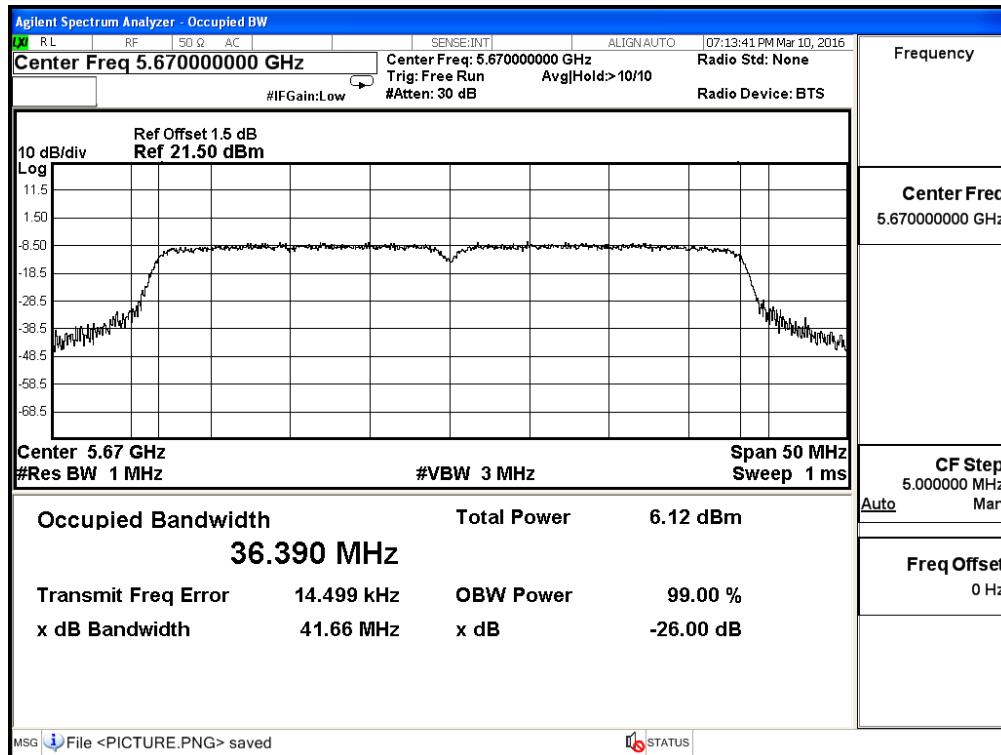
### Channel 102 – Chain A



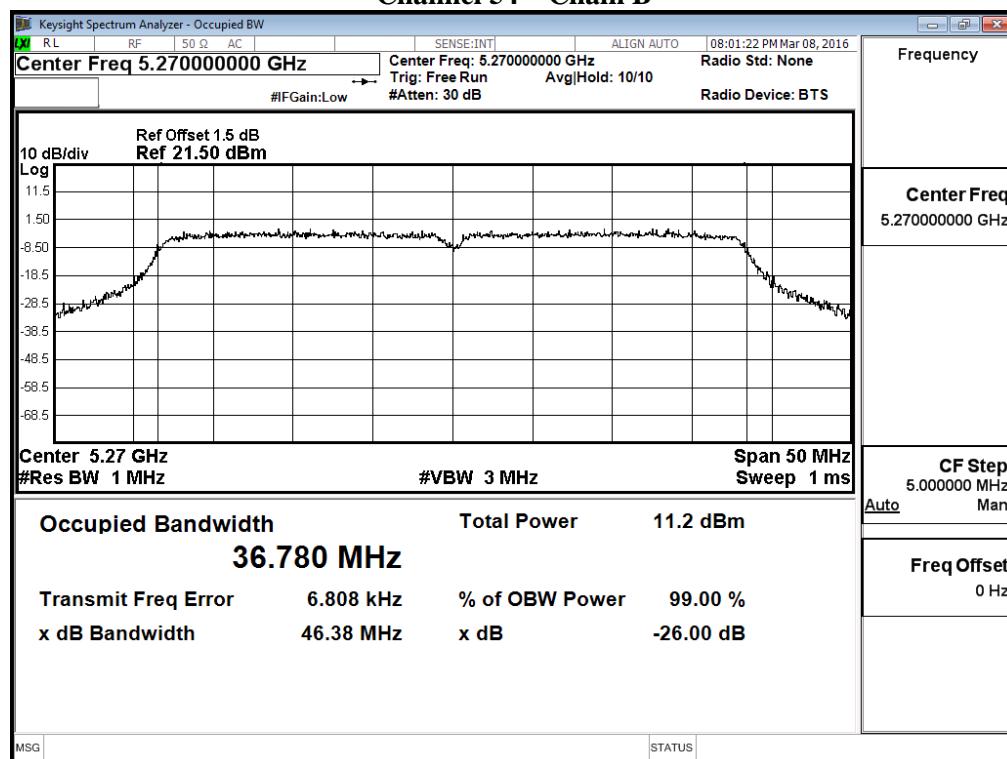
### Channel 110 – Chain A



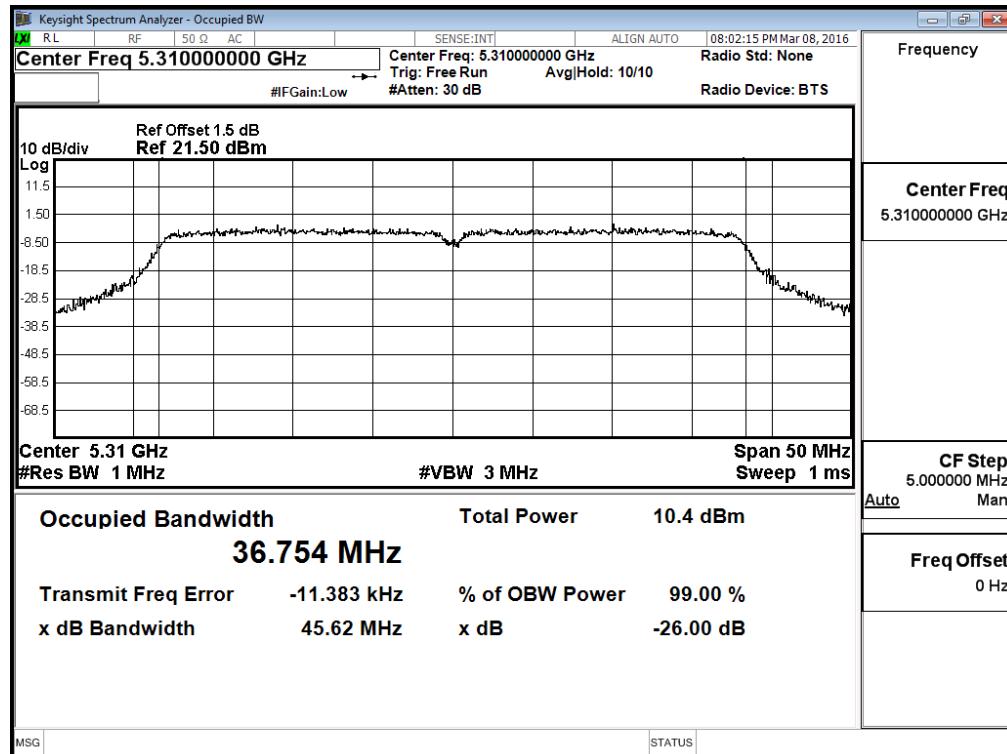
Channel 134 – Chain A



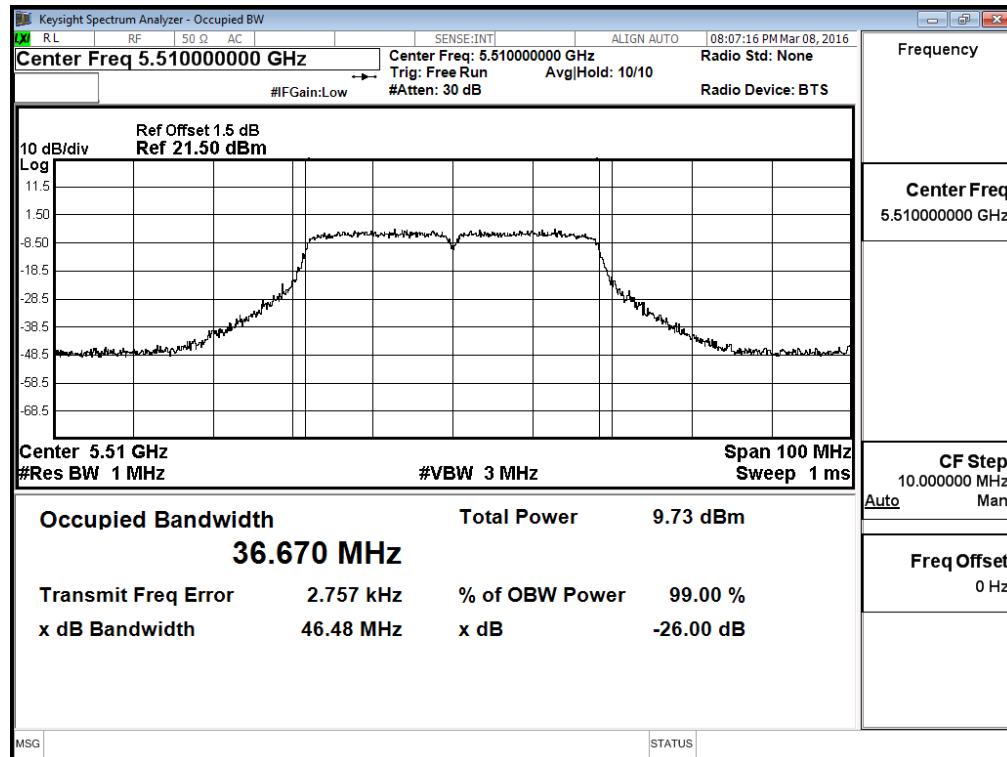
**99% Occupied Bandwidth:  
Channel 54 – Chain B**



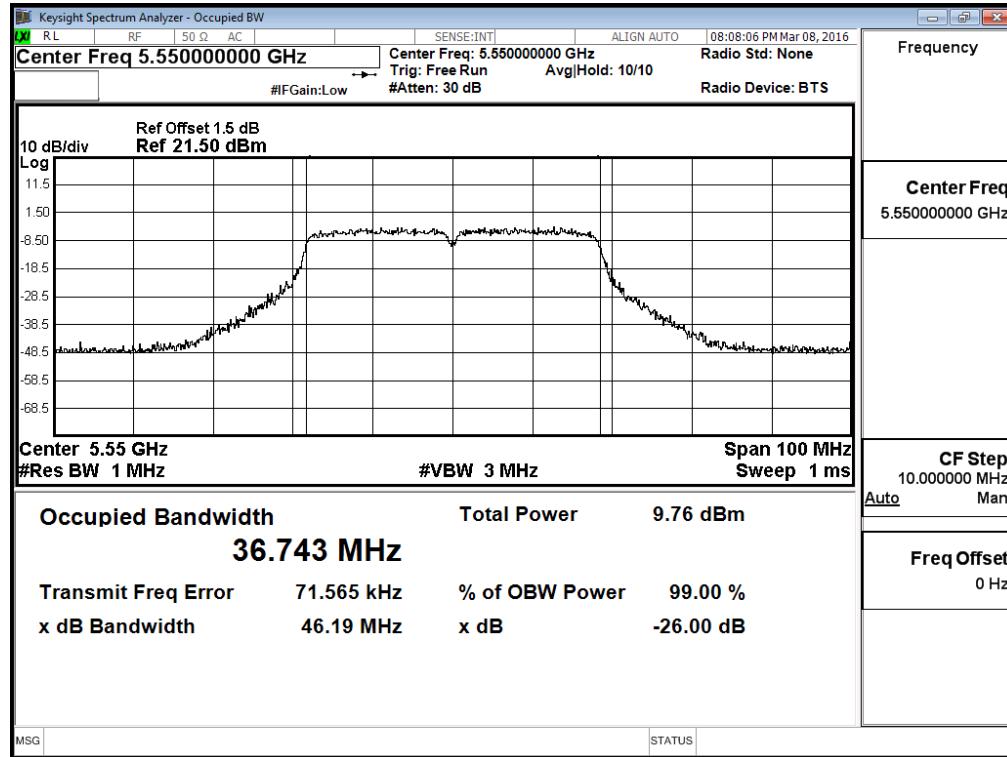
**Channel 62 – Chain B**



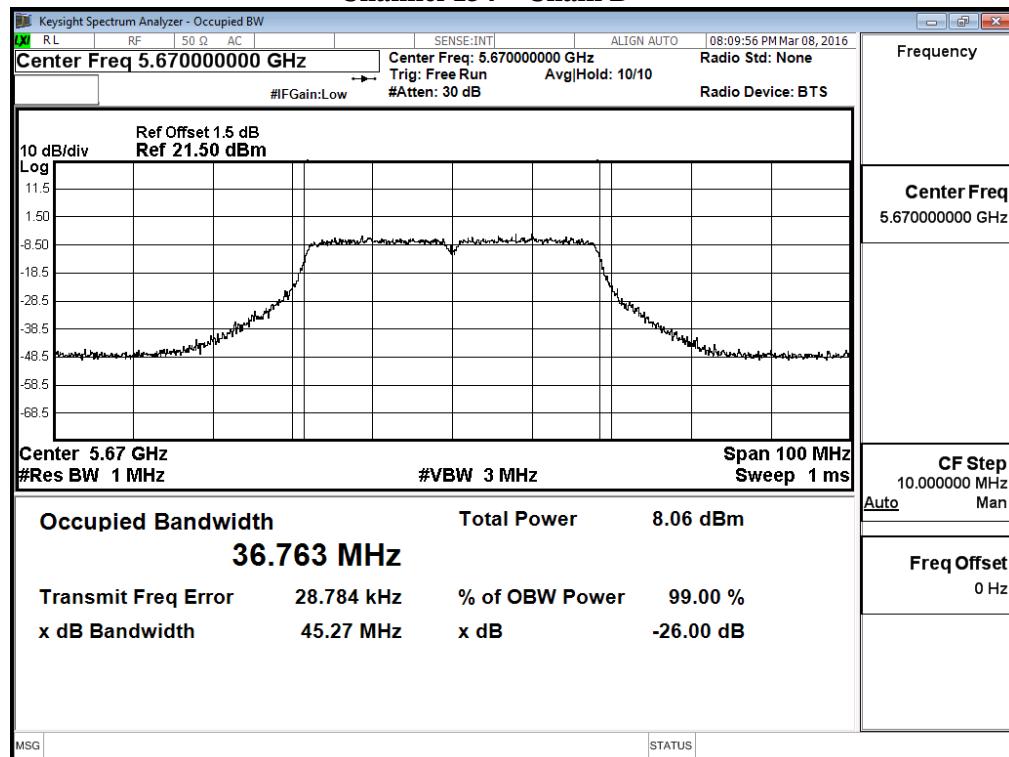
Channel 102 – Chain B



Channel 110 – Chain B



Channel 134 – Chain B



### 3. Radiated Emission

#### 3.1. Test Equipment

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

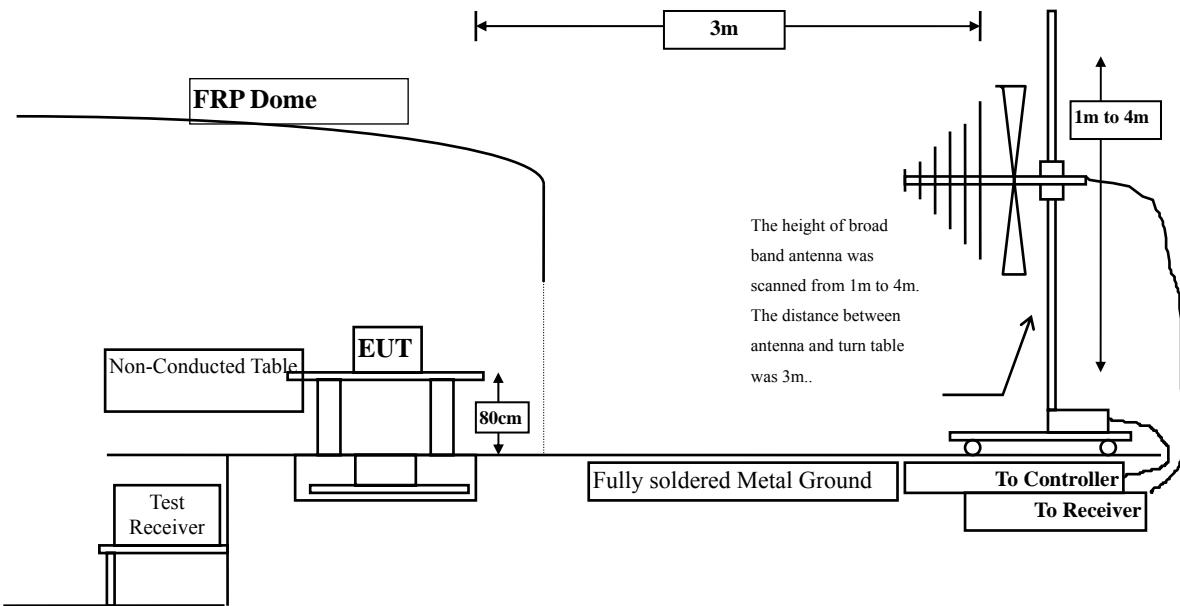
Test Site	Equipment		Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X	Magnetic Loop Antenna	Teseq	HLA6121/ 37133	Sep, 2015
	X	Bilog Antenna	Schaffner Chase	CBL6112B/ 2707	Jun, 2015
	X	EMI Test Receiver	R&S	ESCS 30/838251/ 001	Jun, 2015
	X	Coaxial Cable	QTK(Arnist)	RG 214/ LC003-RG	Jun, 2015
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

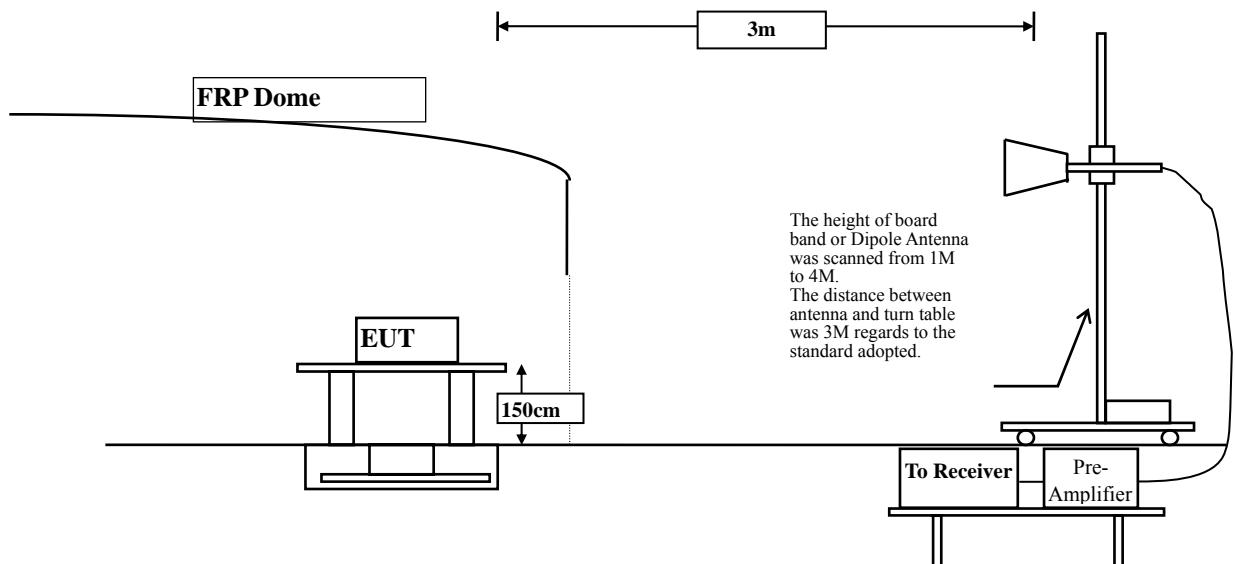
Note: 1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.  
 2. The test instruments marked with "X" are used to measure the final test results.

### 3.2. Test Setup

#### Radiated Emission Below 1GHz



#### Radiated Emission Above 1GHz



### 3.3. 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.

<b>FCC Part 15 Subpart C Paragraph 15.209(a) Limits</b>		
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 (dB $\mu$ V/m) = 20 log E field strength (uV/m)

### **3.4. 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 from 9kHz - 10th Harmonic of fundamental was investigated.

### **3.5. Uncertainty**

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

### 3.6. Test Result of Radiated Emission

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5180MHz)

Frequency MHz	Correct Factor dB	Reading Level dB $\mu$ V	Measurement Level dB $\mu$ V/m	Margin dB	Limit dB $\mu$ V/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10360.000	12.930	39.610	52.540	-21.460	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*
<b>Vertical</b>					
<b>Peak Detector:</b>					
10360.000	13.724	39.400	53.124	-20.876	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*

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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10440.000	13.322	39.300	52.622	-21.378	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000

#### Average

#### Detector:

\* \* \* \* \*

### Vertical

#### Peak Detector:

10440.000	14.245	38.920	53.165	-20.835	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5240MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10480.000	13.693	39.890	53.584	-20.416	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000

#### Average

#### Detector:

\* \* \* \* \*

### Vertical

#### Peak Detector:

10480.000	14.620	39.200	53.821	-20.179	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5260MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10520.000	14.015	39.110	53.125	-20.875	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000

#### Average

#### Detector:

\* \* \* \* \*

### Vertical

#### Peak Detector:

10520.000	14.818	39.180	53.998	-20.002	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10600.000	14.550	39.370	53.919	-20.081	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

10600.000	14.881	38.690	53.571	-20.429	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5320MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10640.000	14.690	39.290	53.980	-20.020	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

10640.000	15.083	38.790	53.873	-20.127	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5500MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

11000.000	16.399	37.290	53.689	-20.311	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

11000.000	17.132	35.940	53.072	-20.928	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5580MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

11160.000	16.664	36.310	52.975	-21.025	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

11160.000	17.643	35.550	53.193	-20.807	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5700MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

11400.000	16.530	36.950	53.481	-20.519	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

11400.000	17.138	35.570	52.708	-21.292	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5745MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11490.000	17.106	35.400	52.507	-21.493	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*
<b>Vertical</b>					
<b>Peak Detector:</b>					
11490.000	18.034	34.320	52.355	-21.645	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*

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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5785MHz)

Frequency MHz	Correct Factor	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11570.000	16.809	36.340	53.149	-20.851	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*
<b>Vertical</b>					
<b>Peak Detector:</b>					
11570.000	17.698	35.580	53.278	-20.722	74.000
17355.000	*	*	*	*	74.000
20800.000	*	*	*	*	74.000
26000.000	*	*	*	*	74.000
31200.000	*	*	*	*	74.000
36400.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*

**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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5825MHz)

Frequency MHz	Correct Factor	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11650.000	16.158	36.790	52.948	-21.052	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*
<b>Vertical</b>					
<b>Peak Detector:</b>					
11650.000	17.274	35.960	53.235	-20.765	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*

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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5180MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10360.000	12.930	39.060	51.990	-22.010	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

10360.000	13.724	39.010	52.734	-21.266	74.000
15540.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5220MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10440.000	13.322	38.510	51.832	-22.168	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

10440.000	14.245	38.590	52.835	-21.165	74.000
15660.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5240MHz)

Frequency MHz	Correct Factor	Reading Level dB $\mu$ V	Measurement Level dB $\mu$ V/m	Margin dB	Limit dB $\mu$ V/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
10480.000	13.693	39.010	52.704	-21.296	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*
<b>Vertical</b>					
<b>Peak Detector:</b>					
10480.000	14.620	38.720	53.341	-20.659	74.000
15720.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*

**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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5260MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10520.000	14.015	39.360	53.375	-20.625	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

10520.000	14.818	39.050	53.868	-20.132	74.000
15780.000	*	*	*	*	74.000
21040.000	*	*	*	*	74.000
26300.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5300MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10600.000	14.550	38.280	52.829	-21.171	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

10600.000	14.881	38.920	53.801	-20.199	74.000
15900.000	*	*	*	*	74.000
21200.000	*	*	*	*	74.000
26500.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5320MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10640.000	14.690	38.110	52.800	-21.200	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

10640.000	15.083	37.140	52.223	-21.777	74.000
15960.000	*	*	*	*	74.000
21280.000	*	*	*	*	74.000
26600.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5500MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

11000.000	16.399	37.080	53.479	-20.521	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

11000.000	17.132	35.650	52.782	-21.218	74.000
16500.000	*	*	*	*	74.000
22000.000	*	*	*	*	74.000
27500.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5580MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

11160.000	16.664	36.290	52.955	-21.045	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

11160.000	17.643	35.700	53.343	-20.657	74.000
16800.000	*	*	*	*	74.000
22400.000	*	*	*	*	74.000
28000.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5700MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

**Horizontal**

**Peak Detector:**

11400.000	16.530	36.770	53.301	-20.699	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	74.000

**Average**

**Detector:**

*	*	*	*	*	*
---	---	---	---	---	---

**Vertical**

**Peak Detector:**

11400.000	17.138	36.110	53.248	-20.752	74.000
17100.000	*	*	*	*	74.000
22800.000	*	*	*	*	74.000
28500.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5745MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11490.000	17.106	36.430	53.537	-20.463	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*
<b>Vertical</b>					
<b>Peak Detector:</b>					
11490.000	18.034	35.170	53.205	-20.795	74.000
17235.000	*	*	*	*	74.000
20720.000	*	*	*	*	74.000
25900.000	*	*	*	*	74.000
31080.000	*	*	*	*	74.000
36260.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*

**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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5785MHz)

Frequency MHz	Correct Factor	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11570.000	16.809	36.680	53.489	-20.511	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
<b>Average</b>					
<b>Detector:</b>					
*	*	*	*	*	*
<b>Vertical</b>					
<b>Peak Detector:</b>					
11570.000	17.698	35.700	53.398	-20.602	74.000
17355.000	*	*	*	*	74.000
20880.000	*	*	*	*	74.000
26100.000	*	*	*	*	74.000
31320.000	*	*	*	*	74.000
36540.000	*	*	*	*	74.000
<b>Average</b>					
<b>Detector:</b>					
*	*	*	*	*	*

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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5825MHz)

Frequency MHz	Correct Factor	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11650.000	16.158	37.280	53.438	-20.562	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*
<b>Vertical</b>					
<b>Peak Detector:</b>					
11650.000	17.274	36.390	53.665	-20.335	74.000
17475.000	*	*	*	*	74.000
20960.000	*	*	*	*	74.000
26200.000	*	*	*	*	74.000
31440.000	*	*	*	*	74.000
36680.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*

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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10380.000	12.939	38.510	51.449	-22.551	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000

#### Average

#### Detector:

\* \* \* \* \*

### Vertical

#### Peak Detector:

10380.000	13.796	38.990	52.786	-21.214	74.000
15570.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5230MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10460.000	13.508	38.720	52.228	-21.772	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

10460.000	14.433	38.610	53.043	-20.957	74.000
15690.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5310MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

10620.000	14.623	39.030	53.653	-20.347	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

10620.000	14.970	38.410	53.380	-20.620	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5510MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

11020.000	16.474	37.360	53.833	-20.167	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

11020.000	17.224	36.400	53.624	-20.376	74.000
15930.000	*	*	*	*	74.000
21240.000	*	*	*	*	74.000
26550.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5670MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector:

11340.000	16.408	36.700	53.107	-20.893	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	74.000

#### Average

#### Detector:

*	*	*	*	*	*
---	---	---	---	---	---

### Vertical

#### Peak Detector:

11340.000	17.167	35.850	53.017	-20.983	74.000
17010.000	*	*	*	*	74.000
22680.000	*	*	*	*	74.000
28350.000	*	*	*	*	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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5755MHz)

Frequency MHz	Correct Factor	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11510.000	17.124	36.110	53.234	-20.766	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*
<b>Vertical</b>					
<b>Peak Detector:</b>					
11510.000	18.081	35.110	53.191	-20.809	74.000
17265.000	*	*	*	*	74.000
20760.000	*	*	*	*	74.000
25950.000	*	*	*	*	74.000
31140.000	*	*	*	*	74.000
36330.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*

**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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Harmonic Radiated Emission Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5795MHz)

Frequency MHz	Correct Factor	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
<b>Horizontal</b>					
<b>Peak Detector:</b>					
11590.000	16.701	37.130	53.830	-20.170	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*
<b>Vertical</b>					
<b>Peak Detector:</b>					
11590.000	17.567	35.910	53.476	-20.524	74.000
17385.000	*	*	*	*	74.000
20920.000	*	*	*	*	74.000
26150.000	*	*	*	*	74.000
31380.000	*	*	*	*	74.000
36610.000	*	*	*	*	74.000
<b>Average Detector:</b>					
*	*	*	*	*	*

**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. “\*” means the emission levels are very lower than the limit and not show in test report.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5220MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector

240.870	-6.583	45.060	38.478	-7.522	46.000
450.333	-1.913	40.213	38.300	-7.700	46.000
624.652	1.861	40.159	42.020	-3.980	46.000
675.261	2.910	35.819	38.729	-7.271	46.000
874.884	5.221	38.020	43.241	-2.759	46.000
929.710	7.135	34.273	41.408	-4.592	46.000

### Vertical

#### Peak Detector

181.826	-9.836	46.576	36.740	-6.760	43.500
252.116	-7.540	39.527	31.987	-14.013	46.000
374.420	-2.179	38.861	36.682	-9.318	46.000
624.652	-2.567	40.159	37.593	-8.407	46.000
675.261	-0.156	33.719	33.563	-12.437	46.000
901.594	3.231	35.208	38.439	-7.561	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5300MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m
<b>Horizontal</b>					
<b>Peak Detector</b>					
211.348	-10.928	44.643	33.715	-9.785	43.500
374.420	-1.202	35.262	34.060	-11.940	46.000
450.333	-1.913	37.757	35.844	-10.156	46.000
624.652	1.861	36.059	37.920	-8.080	46.000
676.667	2.905	32.422	35.328	-10.672	46.000
876.290	5.360	34.212	39.572	-6.428	46.000

### Vertical

#### Peak Detector

180.420	-9.048	47.462	38.414	-5.086	43.500
281.638	-8.536	46.859	38.323	-7.677	46.000
374.420	-2.179	35.861	33.682	-12.318	46.000
624.652	-2.567	40.207	37.641	-8.359	46.000
675.261	-0.156	36.219	36.063	-9.937	46.000
900.188	3.388	34.949	38.337	-7.663	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5580MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m
<b>Horizontal</b>					
<b>Peak Detector</b>					
249.304	-6.004	40.911	34.907	-11.093	46.000
374.420	-1.202	37.862	36.660	-9.340	46.000
450.333	-1.913	40.257	38.344	-7.656	46.000
624.652	1.861	38.097	39.958	-6.042	46.000
849.580	5.837	30.553	36.390	-9.610	46.000
874.884	5.221	37.589	42.810	-3.190	46.000

### Vertical

#### Peak Detector

177.609	-8.348	46.163	37.815	-5.685	43.500
249.304	-7.622	46.310	38.689	-7.311	46.000
374.420	-2.179	41.361	39.182	-6.818	46.000
624.652	-2.567	36.797	34.231	-11.769	46.000
675.261	-0.156	40.819	40.663	-5.337	46.000
900.188	3.388	34.749	38.137	-7.863	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m
<b>Horizontal</b>					
<b>Peak Detector</b>					
246.493	-6.260	43.128	36.868	-9.132	46.000
374.420	-1.202	37.862	36.660	-9.340	46.000
450.333	-1.913	42.157	40.244	-5.756	46.000
624.652	1.861	36.897	38.758	-7.242	46.000
675.261	2.910	34.319	37.229	-8.771	46.000
874.884	5.221	35.589	40.810	-5.190	46.000

### Vertical

#### Peak Detector

181.826	-9.836	49.176	39.340	-4.160	43.500
374.420	-2.179	40.861	38.682	-7.318	46.000
675.261	-0.156	33.319	33.163	-12.837	46.000
804.594	3.701	31.771	35.472	-10.528	46.000
874.884	1.443	36.146	37.589	-8.411	46.000
904.406	2.705	31.411	34.116	-11.884	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5220MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector

105.913	-6.721	39.009	32.289	-11.211	43.500
266.174	-4.970	32.224	27.253	-18.747	46.000
405.348	-2.351	23.670	21.319	-24.681	46.000
610.594	4.024	23.384	27.408	-18.592	46.000
798.971	5.150	18.041	23.191	-22.809	46.000
984.536	7.688	27.785	35.473	-18.527	54.000

### Vertical

#### Peak Detector

110.130	-0.531	29.590	29.059	-14.441	43.500
226.812	-8.558	30.713	22.155	-23.845	46.000
389.884	-3.070	20.025	16.954	-29.046	46.000
541.710	-0.172	24.793	24.621	-21.379	46.000
772.261	2.895	20.350	23.244	-22.756	46.000
969.072	8.191	24.192	32.383	-21.617	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5300MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector

104.507	-6.647	41.567	34.920	-8.580	43.500
297.101	-3.640	31.592	27.952	-18.048	46.000
472.826	0.476	20.788	21.264	-24.736	46.000
651.362	2.175	24.382	26.557	-19.443	46.000
786.319	4.671	16.630	21.301	-24.699	46.000
1000.000	9.119	28.891	38.010	-15.990	54.000

### Vertical

#### Peak Detector

105.913	-0.261	29.031	28.770	-14.730	43.500
291.478	-8.068	29.560	21.493	-24.507	46.000
461.580	-3.367	30.558	27.191	-18.809	46.000
610.594	-1.590	27.616	26.026	-19.974	46.000
784.913	3.007	21.482	24.489	-21.511	46.000
967.667	8.104	24.199	32.303	-21.697	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5580MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector

104.507	-6.647	40.805	34.158	-9.342	43.500
267.580	-4.959	30.996	26.037	-19.963	46.000
402.536	-2.263	25.305	23.042	-22.958	46.000
599.348	3.984	25.579	29.563	-16.437	46.000
741.333	3.351	21.441	24.792	-21.208	46.000
932.522	6.858	27.951	34.808	-11.192	46.000

### Vertical

#### Peak Detector

100.290	0.009	26.455	26.464	-17.036	43.500
285.855	-8.093	28.272	20.179	-25.821	46.000
460.174	-3.359	30.800	27.442	-18.558	46.000
599.348	-2.928	23.286	20.358	-25.642	46.000
755.391	3.286	25.612	28.898	-17.102	46.000
963.449	7.661	27.218	34.879	-19.121	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5785MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m
<b>Horizontal</b>					
<b>Peak Detector</b>					
107.319	-6.999	37.645	30.647	-12.853	43.500
229.623	-8.233	31.044	22.811	-23.189	46.000
380.043	-0.966	20.938	19.972	-26.028	46.000
562.797	1.530	23.327	24.857	-21.143	46.000
735.710	2.519	18.336	20.854	-25.146	46.000
924.087	6.248	27.625	33.873	-12.127	46.000

**Vertical**

**Peak Detector**

108.725	-0.372	30.488	30.116	-13.384	43.500
239.464	-8.591	29.987	21.396	-24.604	46.000
389.884	-3.070	31.221	28.150	-17.850	46.000
540.304	0.105	25.111	25.216	-20.784	46.000
769.449	2.972	20.721	23.693	-22.307	46.000
952.203	6.630	25.950	32.580	-13.420	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5190MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector

104.507	-6.647	37.614	30.967	-12.533	43.500
259.145	-5.049	27.462	22.413	-23.587	46.000
375.826	-1.187	29.007	27.820	-18.180	46.000
548.739	3.135	19.583	22.718	-23.282	46.000
744.145	3.324	26.352	29.676	-16.324	46.000
963.449	6.696	27.235	33.931	-20.069	54.000

### Vertical

#### Peak Detector

108.725	-0.372	28.610	28.238	-15.262	43.500
243.681	-8.450	28.368	19.918	-26.082	46.000
391.290	-3.191	29.316	26.125	-19.875	46.000
626.058	-2.705	25.876	23.170	-22.830	46.000
797.565	2.819	21.205	24.025	-21.975	46.000
963.449	7.661	27.291	34.952	-19.048	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5270MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector

100.290	-7.403	40.781	33.377	-10.123	43.500
278.826	-5.643	30.993	25.350	-20.650	46.000
467.203	0.939	18.781	19.720	-26.280	46.000
635.899	2.144	26.614	28.758	-17.242	46.000
794.754	5.177	19.666	24.843	-21.157	46.000
945.174	6.537	26.337	32.874	-13.126	46.000

### Vertical

#### Peak Detector

104.507	-0.201	30.652	30.451	-13.049	43.500
202.913	-7.727	29.127	21.400	-22.100	43.500
381.449	-1.656	22.347	20.691	-25.309	46.000
536.087	-0.345	25.122	24.777	-21.223	46.000
752.580	3.012	20.083	23.094	-22.906	46.000
969.072	8.191	23.513	31.704	-22.296	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5550MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector

105.913	-6.721	37.913	31.193	-12.307	43.500
256.333	-5.081	30.300	25.219	-20.781	46.000
402.536	-2.263	23.628	21.365	-24.635	46.000
604.971	4.781	24.738	29.518	-16.482	46.000
794.754	5.177	19.025	24.202	-21.798	46.000
971.884	6.891	29.858	36.749	-17.251	54.000

### Vertical

#### Peak Detector

105.913	-0.261	29.759	29.498	-14.002	43.500
250.710	-7.498	28.336	20.838	-25.162	46.000
373.014	-2.442	23.856	21.414	-24.586	46.000
544.522	-0.790	26.690	25.900	-20.100	46.000
742.739	0.605	23.587	24.193	-21.807	46.000
967.667	8.104	26.527	34.631	-19.369	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 : MOXA IEEE 802.11 a/b/g/n  
 Test Item : General Radiated Emission  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5755MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dB $\mu$ V	dB $\mu$ V/m	dB	dB $\mu$ V/m

### Horizontal

#### Peak Detector

101.696	-7.157	41.195	34.038	-9.462	43.500
295.696	-3.661	29.979	26.318	-19.682	46.000
462.986	1.017	23.409	24.426	-21.574	46.000
648.551	1.999	22.191	24.189	-21.811	46.000
815.841	5.290	20.172	25.462	-20.538	46.000
994.377	7.169	27.233	34.402	-19.598	54.000

### Vertical

#### Peak Detector

108.725	-0.372	31.073	30.701	-12.799	43.500
261.957	-7.512	29.831	22.319	-23.681	46.000
409.565	-6.588	31.579	24.991	-21.009	46.000
603.565	-1.937	24.545	22.608	-23.392	46.000
777.884	2.641	26.976	29.616	-16.384	46.000
963.449	7.661	27.241	34.902	-19.098	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.

## 4. Band Edge

### 4.1. Test Equipment

#### RF Conducted Measurement

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

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, 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.

#### RF Radiated Measurement:

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

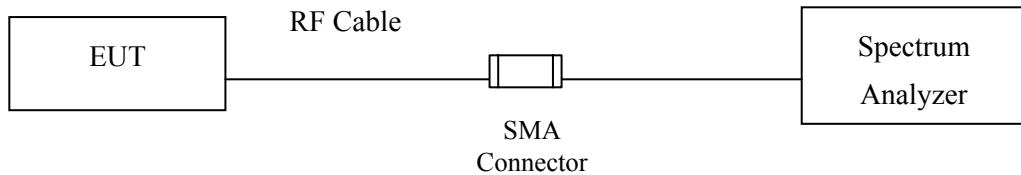
Test Site	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒CB # 8	X Spectrum Analyzer	R&S	FSP40/ 100339	Oct, 2015
	X Horn Antenna	ETS-Lindgren	3117/ 35205	Mar, 2016
	X Horn Antenna	Schwarzbeck	BBHA9170/209	Jan, 2016
	X Horn Antenna	TRC	AH-0801/95051	Aug, 2015
	X Pre-Amplifier	EMCI	EMC012630SE/980210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

Note:

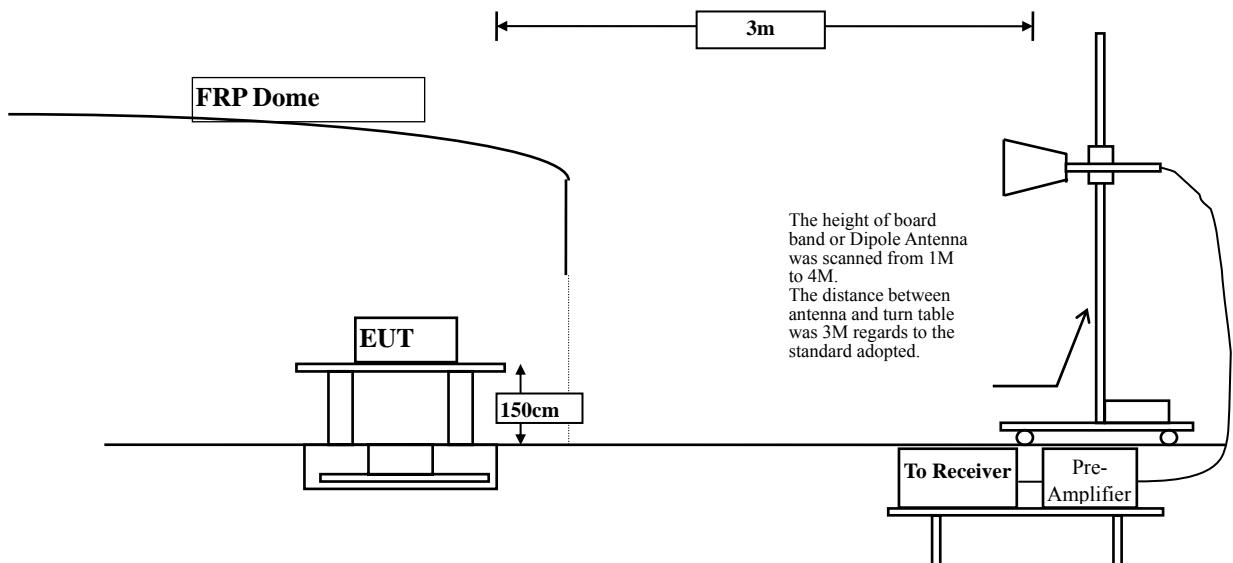
1. All instruments are calibrated every one year.
2. The test instruments marked by “X” are used to measure the final test results.

## 4.2. Test Setup

### RF Conducted Measurement:



### RF Radiated Measurement:



#### 4.3. 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:

<b>FCC Part 15 Subpart C Paragraph 15.209 Limits</b>		
Frequency MHz	uV/m @3m	dB $\mu$ V/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks : 1. RF Voltage (dB $\mu$ V) = 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.

#### 4.4. 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 3 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.

#### 4.5. Uncertainty

± 3.8 dB below 1GHz

± 3.9 dB above 1GHz

#### 4.6. Test Result of Band Edge

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 36

##### RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
36 (Peak)	5149.000	3.344	53.634	56.978	74.00	54.00	Pass
36 (Peak)	5150.000	3.340	52.117	55.457	74.00	54.00	Pass
36 (Peak)	5179.000	3.237	93.180	96.418	--	--	--
36 (Average)	5147.400	3.350	39.916	43.266	74.00	54.00	Pass
36 (Average)	5150.000	3.340	39.800	43.140	74.00	54.00	Pass
36 (Average)	5175.400	3.251	82.313	85.564	--	--	--

Figure Channel 36:

Horizontal (Peak)

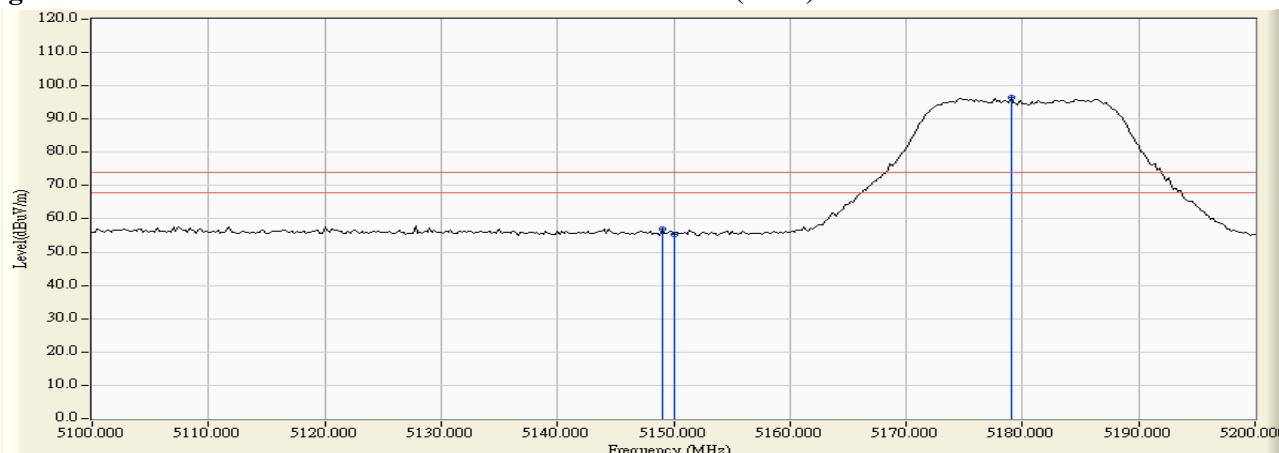
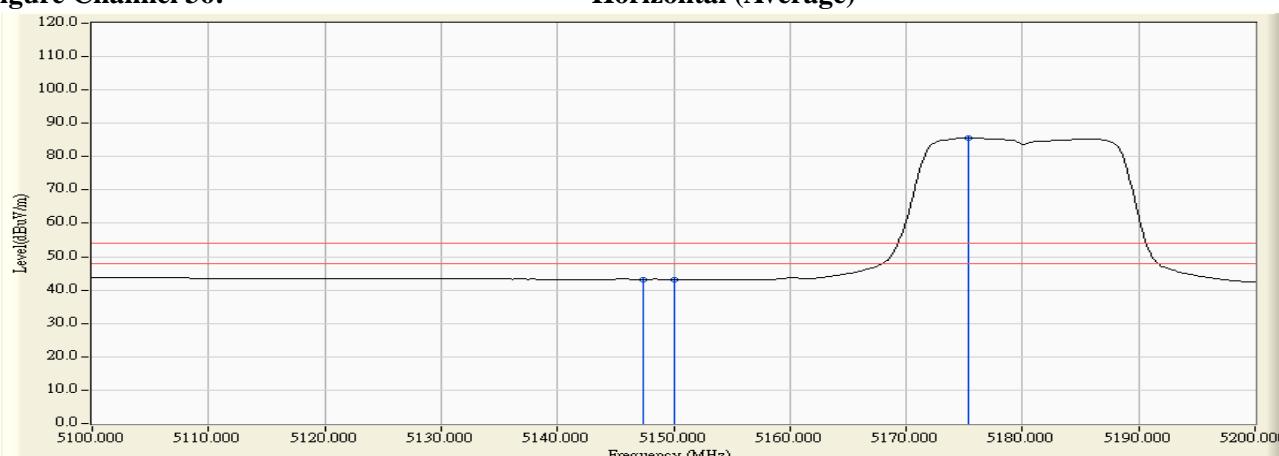


Figure Channel 36:

Horizontal (Average)



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

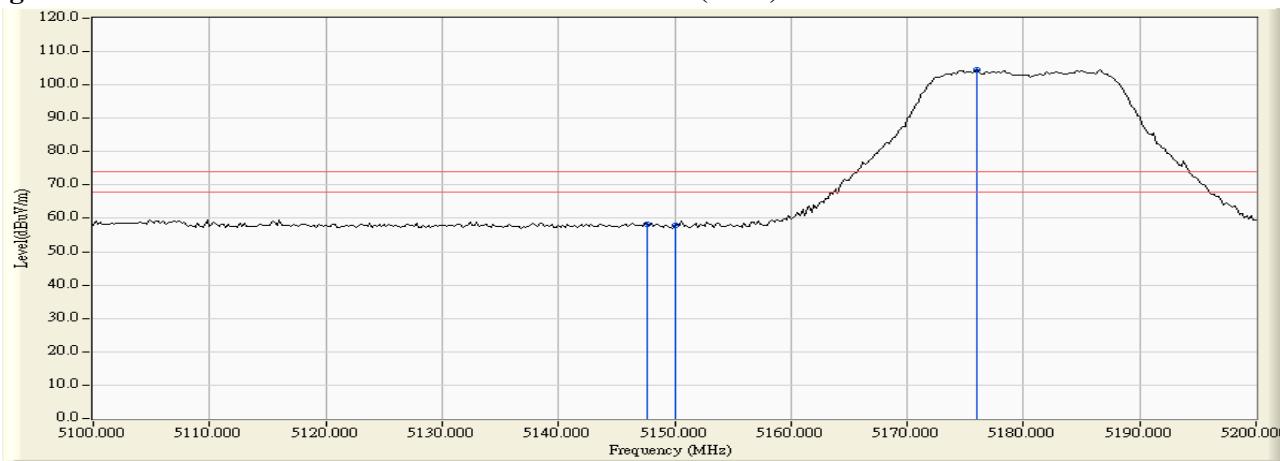
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 36

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
36 (Peak)	5147.600	5.253	53.117	58.370	74.00	54.00	Pass
36 (Peak)	5150.000	5.260	52.769	58.029	74.00	54.00	Pass
36 (Peak)	5176.000	5.332	99.100	104.431	--	--	--
36 (Average)	5147.200	5.252	40.499	45.751	74.00	54.00	Pass
36 (Average)	5150.000	5.260	40.331	45.591	74.00	54.00	Pass
36 (Average)	5176.000	5.332	88.728	94.059	--	--	--

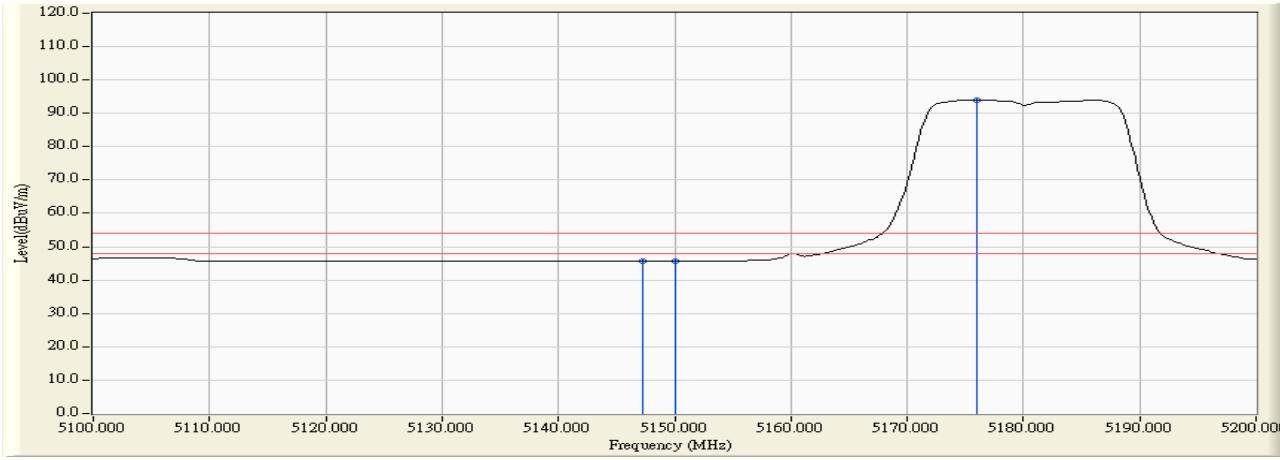
**Figure Channel 36:**

**Vertical (Peak)**



**Figure Channel 36:**

**Vertical (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

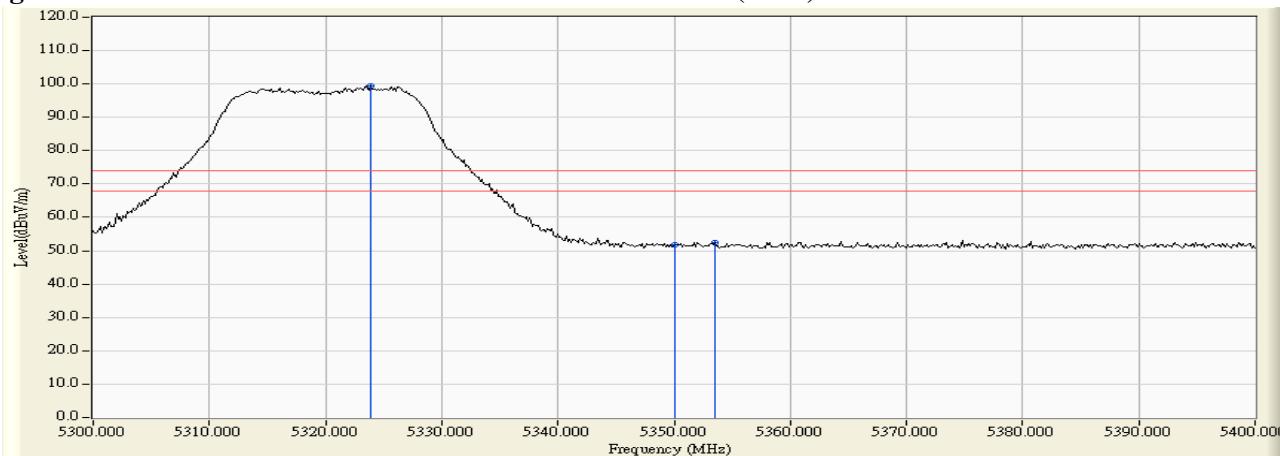
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 64

**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
64 (Peak)	5323.913	3.800	95.644	99.444	--	--	--
64 (Peak)	5350.000	3.716	48.174	51.891	74.00	54.00	Pass
64 (Peak)	5353.478	3.705	48.870	52.575	74.00	54.00	Pass
64 (Average)	5324.203	3.799	84.391	88.190	--	--	--
64 (Average)	5350.000	3.716	43.670	47.387	74.00	54.00	Pass
64 (Average)	5350.580	3.714	43.884	47.599	74.00	54.00	Pass

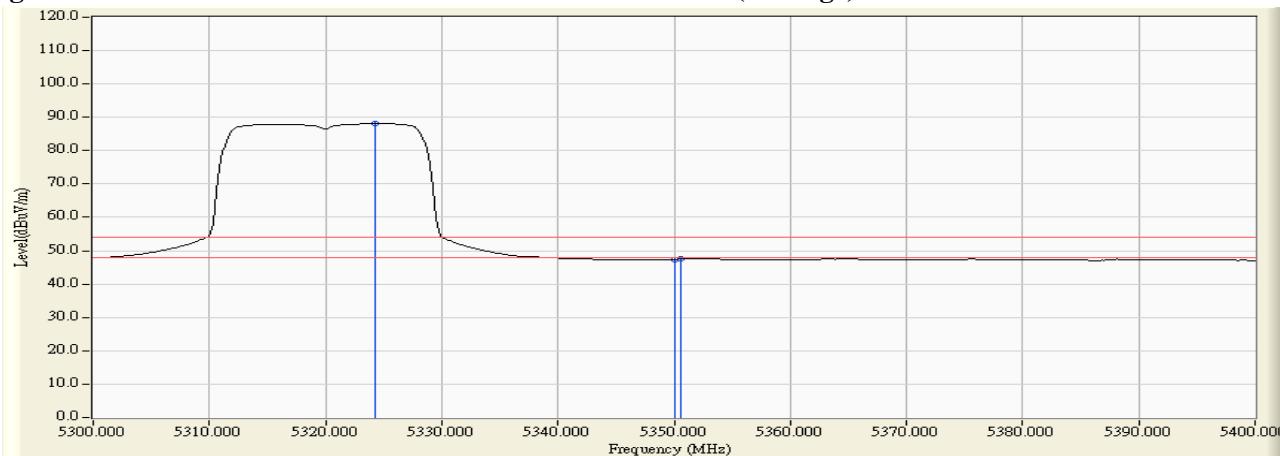
**Figure Channel 64:**

**Horizontal (Peak)**



**Figure Channel 64:**

**Horizontal (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

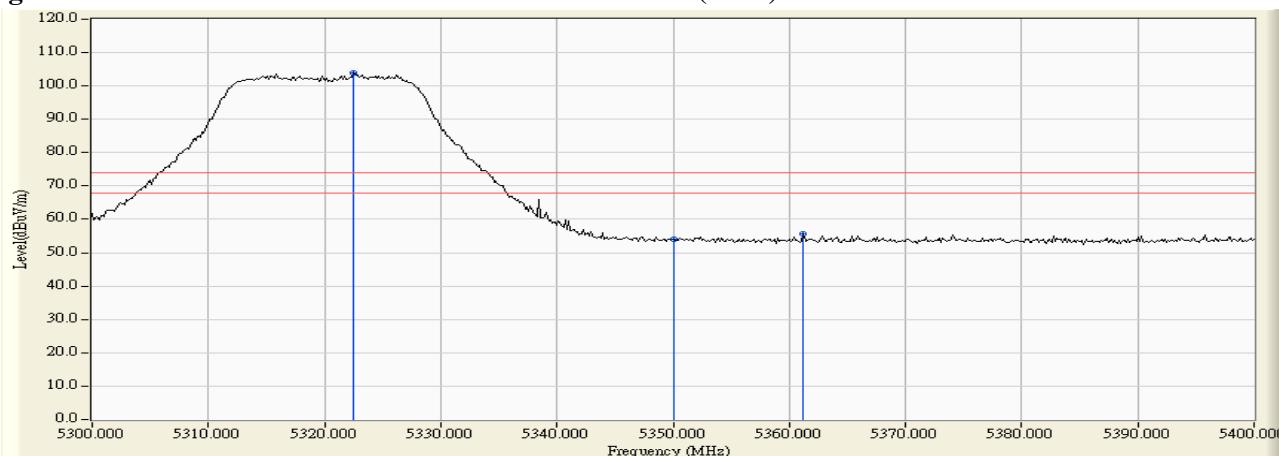
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 64

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
64 (Peak)	5322.464	5.725	98.062	103.788	--	--	--
64 (Peak)	5350.000	5.691	48.281	53.973	74.00	54.00	Pass
64 (Peak)	5361.159	5.676	49.830	55.506	74.00	54.00	Pass
64 (Average)	5315.217	5.735	86.359	92.094	--	--	--
64 (Average)	5350.000	5.691	43.675	49.367	74.00	54.00	Pass

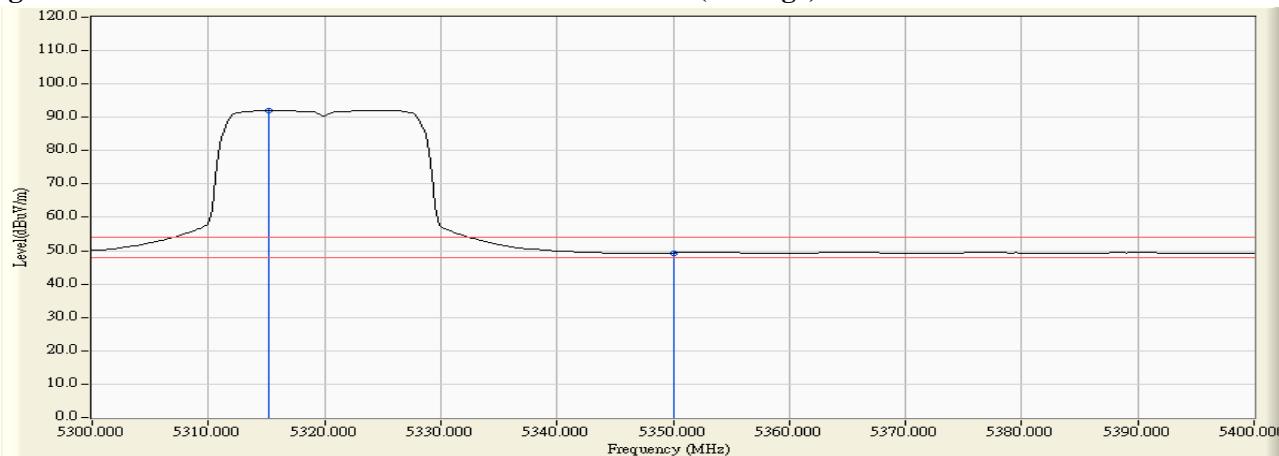
**Figure Channel 64:**

**Vertical (Peak)**



**Figure Channel 64:**

**Vertical (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

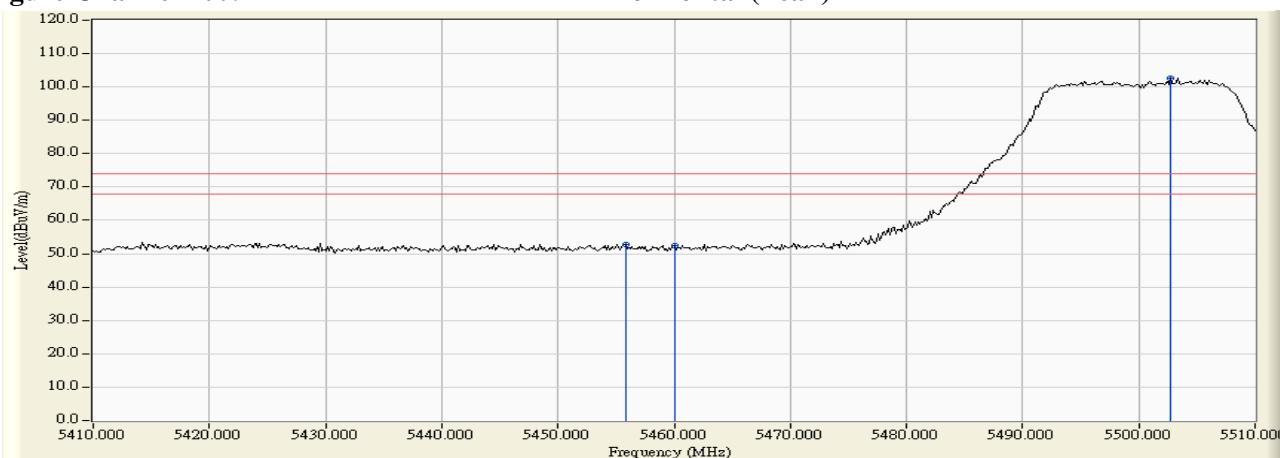
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
100 (Peak)	5455.797	4.298	48.338	52.636	74.00	54.00	Pass
100 (Peak)	5460.000	4.354	47.972	52.326	74.00	54.00	Pass
100 (Peak)	5502.754	4.833	97.722	102.555	--	--	--
100 (Average)	5447.826	4.192	44.561	48.753	74.00	54.00	Pass
100 (Average)	5460.000	4.354	43.719	48.073	74.00	54.00	Pass
100 (Average)	5495.942	4.786	86.672	91.458	--	--	--

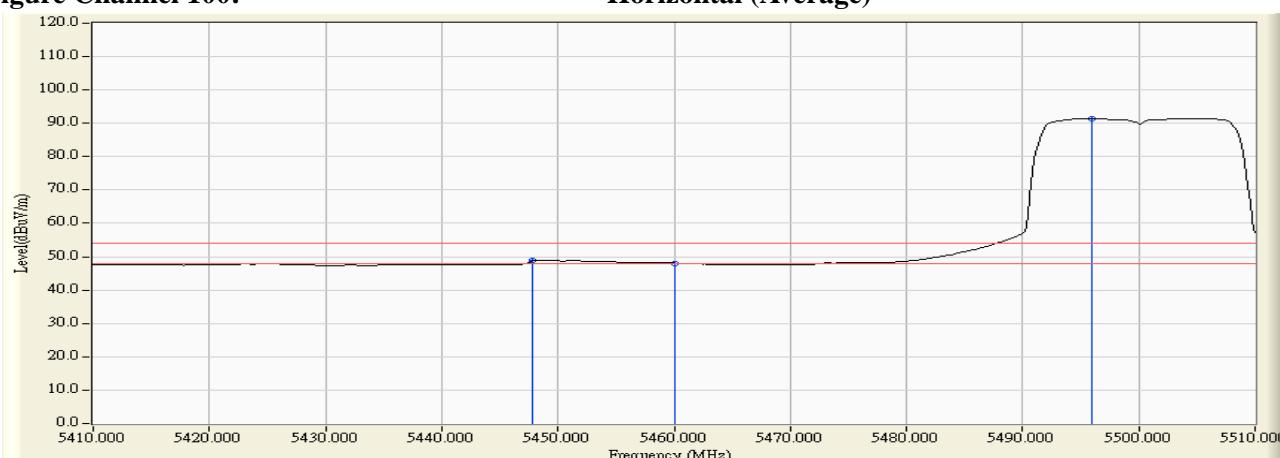
**Figure Channel 100:**

**Horizontal (Peak)**



**Figure Channel 100:**

**Horizontal (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

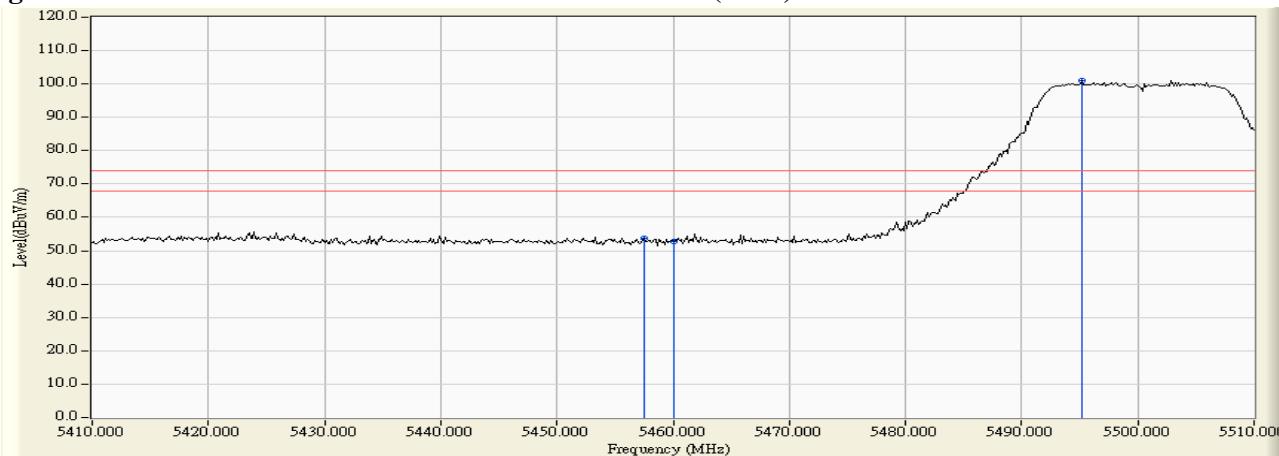
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
100 (Peak)	5457.536	6.024	47.782	53.805	74.00	54.00	Pass
100 (Peak)	5460.000	6.041	46.796	52.837	74.00	54.00	Pass
100 (Peak)	5495.217	6.260	94.654	100.914	--	--	--
100 (Average)	5452.029	5.985	44.477	50.462	74.00	54.00	Pass
100 (Average)	5460.000	6.041	43.682	49.723	74.00	54.00	Pass
100 (Average)	5495.217	6.260	84.100	90.360	--	--	--

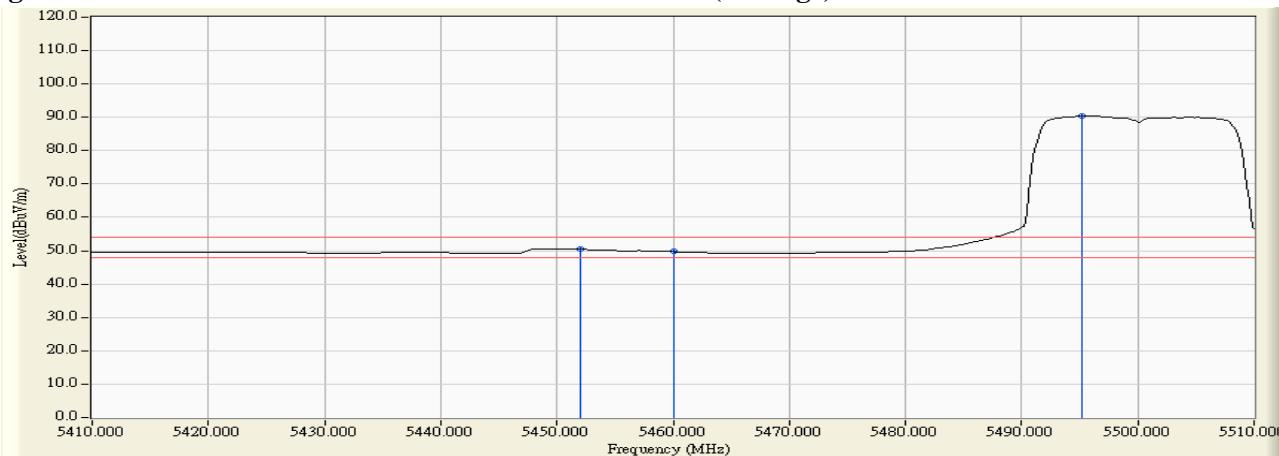
**Figure Channel 100:**

**Vertical (Peak)**



**Figure Channel 100:**

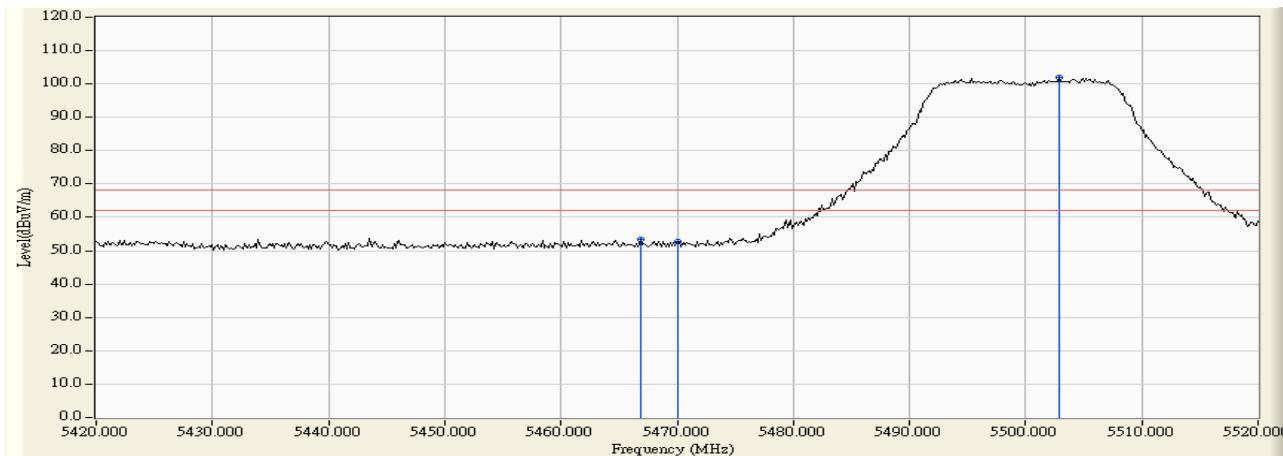
**Vertical (Average)**



Note:

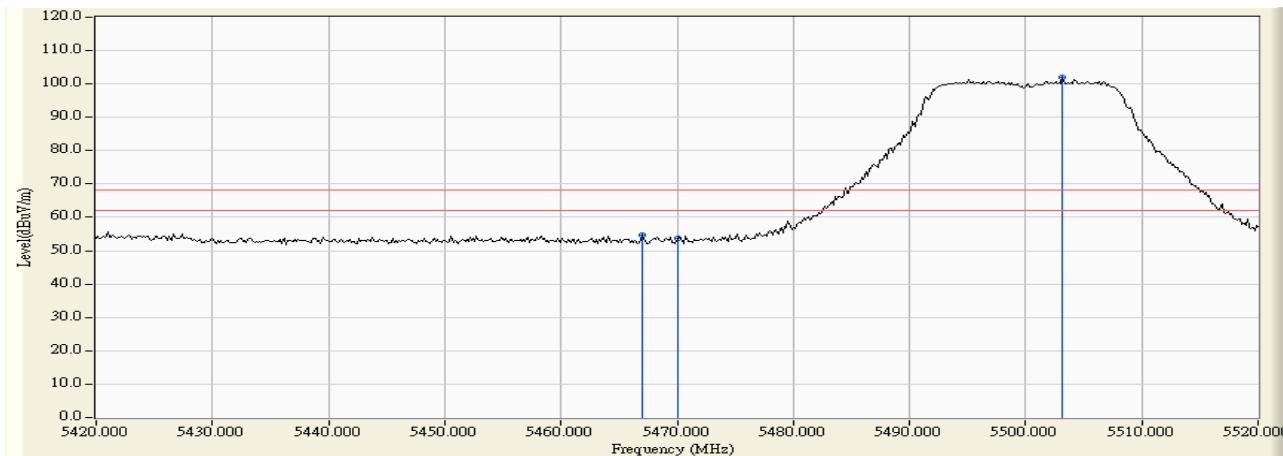
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 100



**RF Radiated Measurement:**

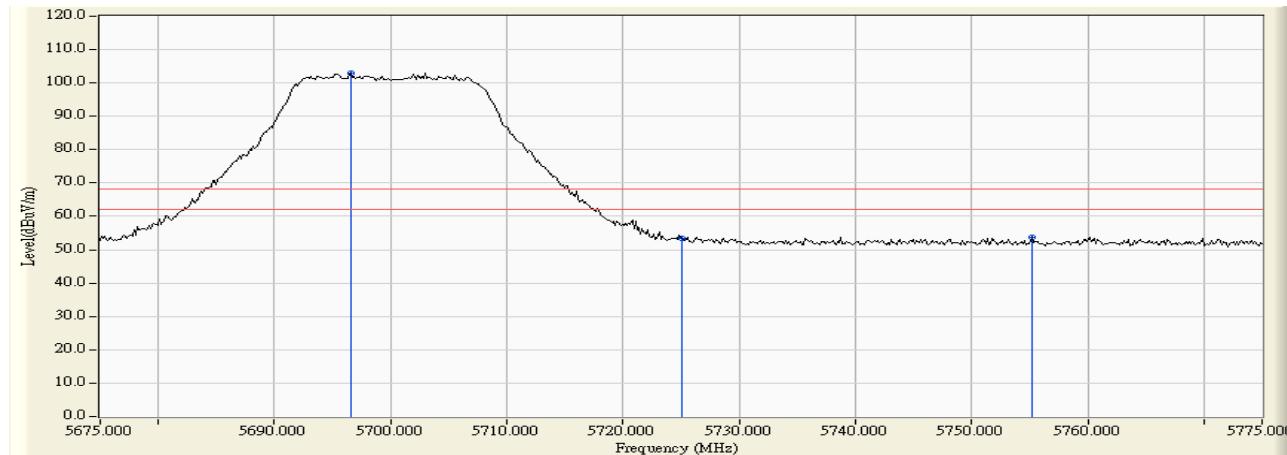
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
Horizontal	5466.812	4.445	49.011	53.456	-14.764	68.220	Pass
Horizontal	5470.000	4.488	48.301	52.789	-15.431	68.220	Pass
Horizontal	5502.899	4.835	97.146	101.981	--	--	--



**RF Radiated Measurement:**

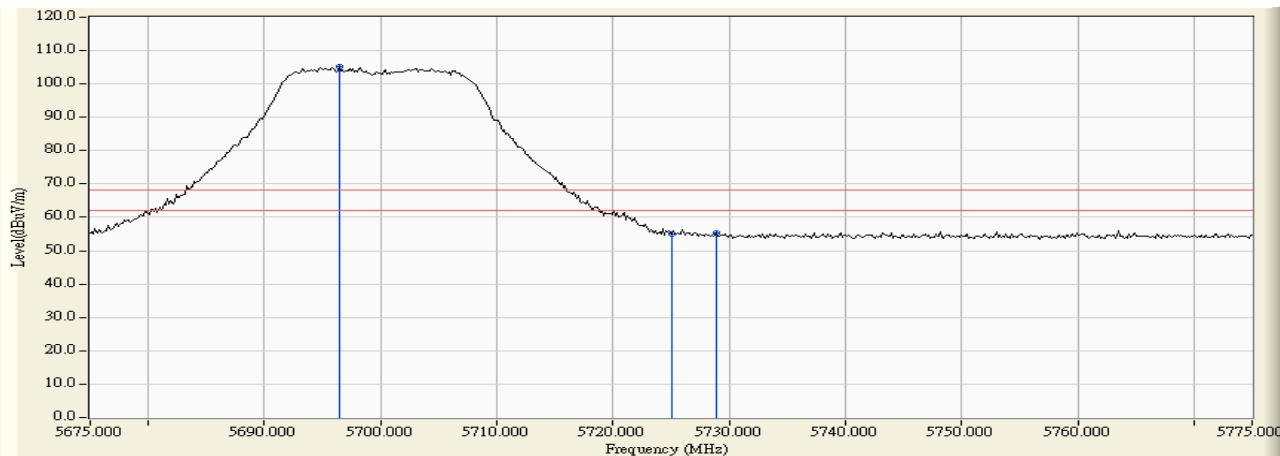
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
Vertical	5466.957	6.090	48.453	54.543	-13.677	68.220	Pass
Vertical	5470.000	6.112	47.606	53.717	-14.503	68.220	Pass
Vertical	5503.188	6.284	95.602	101.887	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) -Channel 140



#### RF Radiated Measurement:

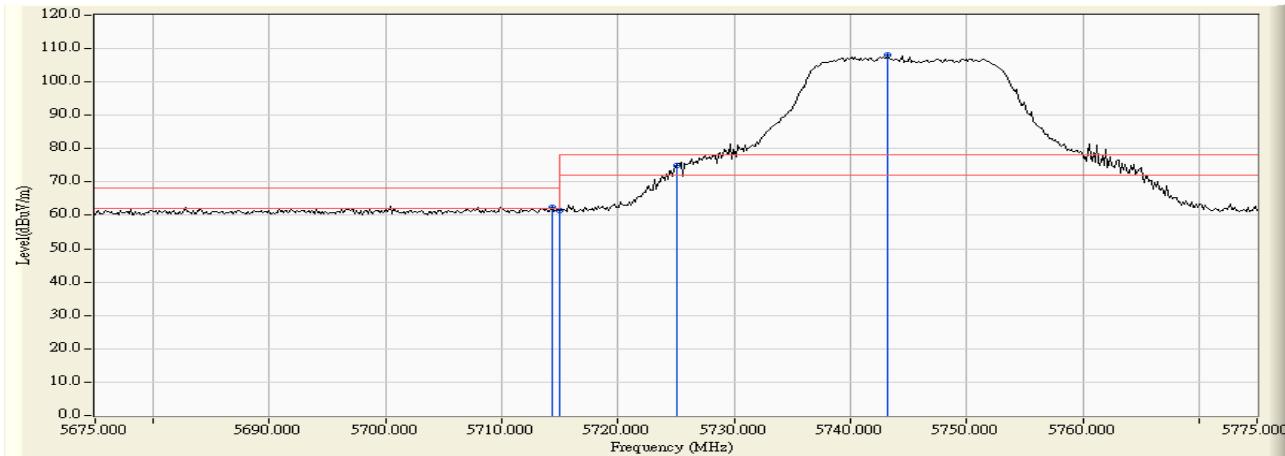
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
Horizontal	5696.594	4.617	98.395	103.013	--	--	--
Horizontal	5725.000	4.654	48.632	53.286	-14.934	68.220	Pass
Horizontal	5755.145	4.659	49.184	53.842	-14.378	68.220	Pass



#### RF Radiated Measurement:

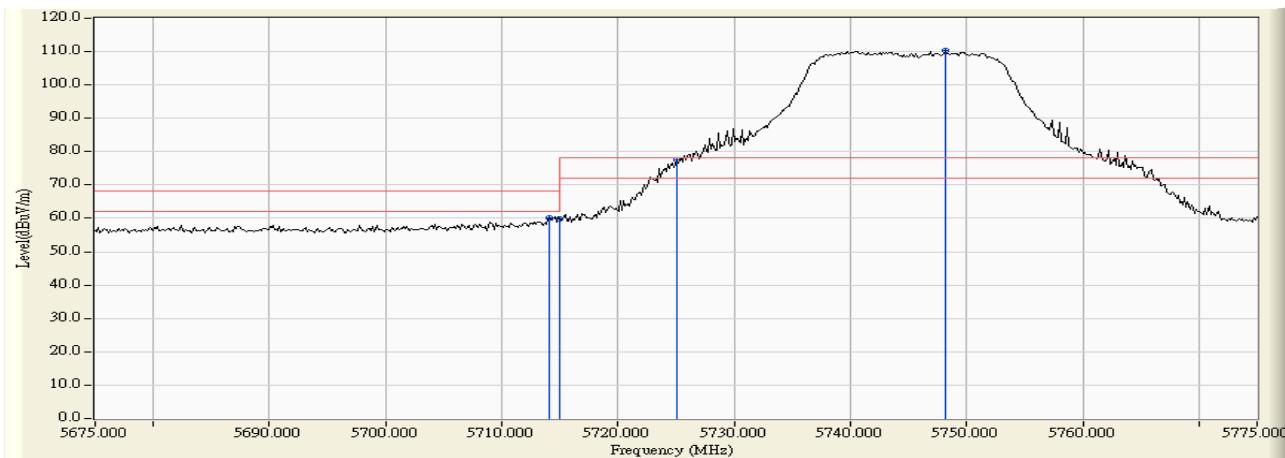
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
Vertical	5696.449	5.977	99.198	105.176	--	--	--
Vertical	5725.000	5.992	48.955	54.948	-13.272	68.220	Pass
Vertical	5728.913	5.992	49.397	55.389	-12.831	68.220	Pass

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 149



#### RF Radiated Measurement:

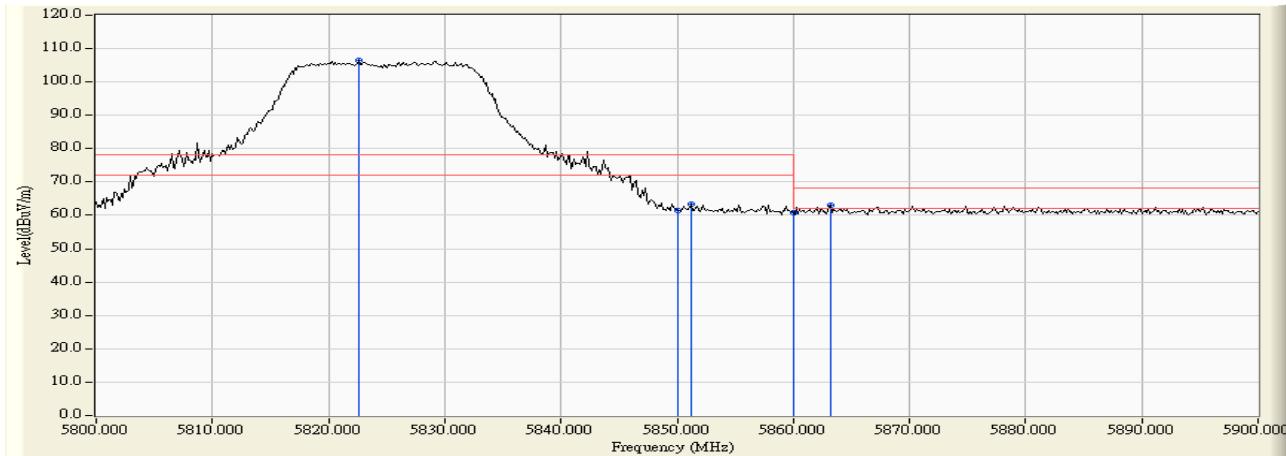
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5714.275	4.653	57.604	62.256	-5.964	68.220	Pass
Horizontal	5715.000	4.652	56.770	61.422	-6.798	68.220	Pass
Horizontal	5725.000	4.654	70.218	74.872	-3.348	78.220	Pass
Horizontal	5743.261	4.656	103.305	107.961	--	--	--



**RF Radiated Measurement:**

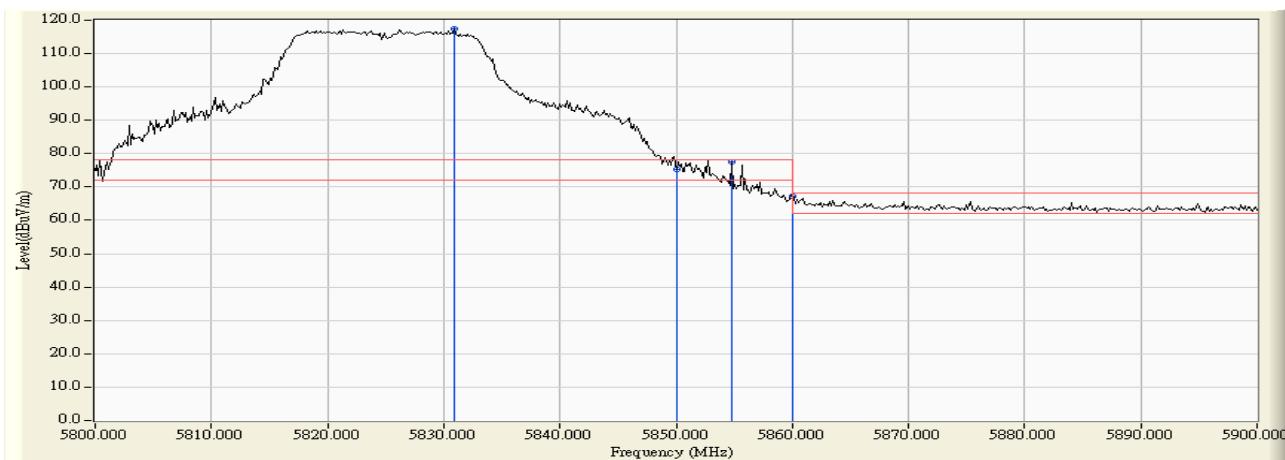
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5714.130	5.994	54.276	60.270	-7.950	68.220	Pass
Vertical	5715.000	5.994	53.816	59.810	-8.410	68.220	Pass
Vertical	5725.000	5.992	71.592	77.585	-0.635	78.220	Pass
Vertical	5748.188	5.987	104.437	110.425	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11a-6Mbps)-Channel 165



**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
Horizontal	5822.609	4.800	101.713	106.513	--	--	--
Horizontal	5850.000	4.964	56.591	61.555	-16.665	78.220	Pass
Horizontal	5851.159	4.971	58.419	63.390	-14.830	78.220	Pass
Horizontal	5860.000	5.023	55.804	60.827	-7.393	68.220	Pass
Horizontal	5863.188	5.041	57.958	62.999	-5.221	68.220	Pass



**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
Vertical	5830.870	6.014	111.254	117.268	--	--	--
Vertical	5850.000	6.037	69.198	75.235	-2.985	78.220	Pass
Vertical	5854.783	6.041	71.434	77.476	-0.744	78.220	Pass
Vertical	5860.000	6.047	61.119	67.166	-1.054	68.220	Pass

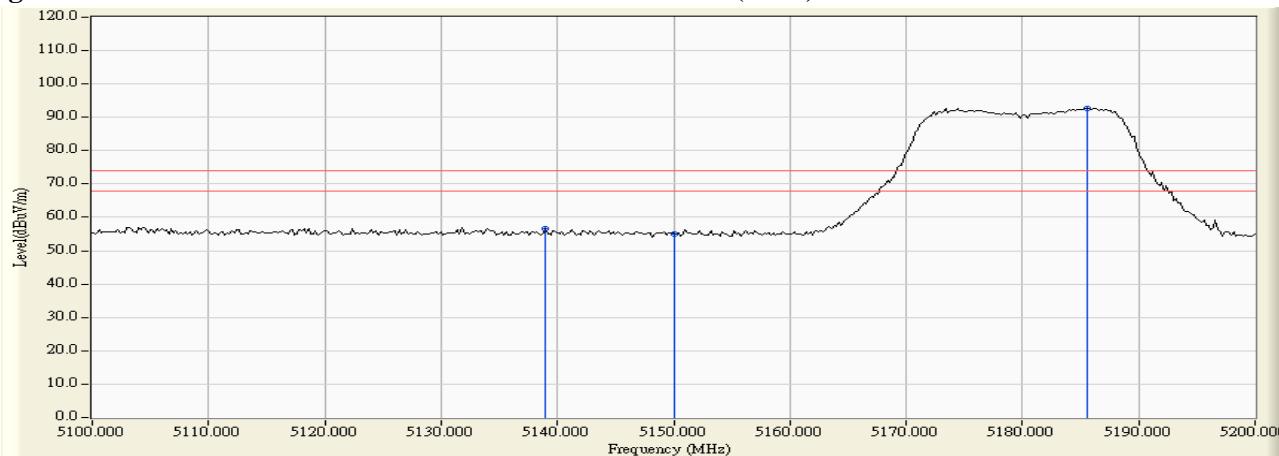
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 36

**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
36 (Peak)	5139.000	3.379	53.338	56.717	74.00	54.00	Pass
36 (Peak)	5150.000	3.340	51.559	54.899	74.00	54.00	Pass
36 (Peak)	5185.600	3.215	89.554	92.768	--	--	--
36 (Average)	5103.800	3.480	41.275	44.755	74.00	54.00	Pass
36 (Average)	5150.000	3.340	39.894	43.234	74.00	54.00	Pass
36 (Average)	5176.200	3.248	78.148	81.396	--	--	--

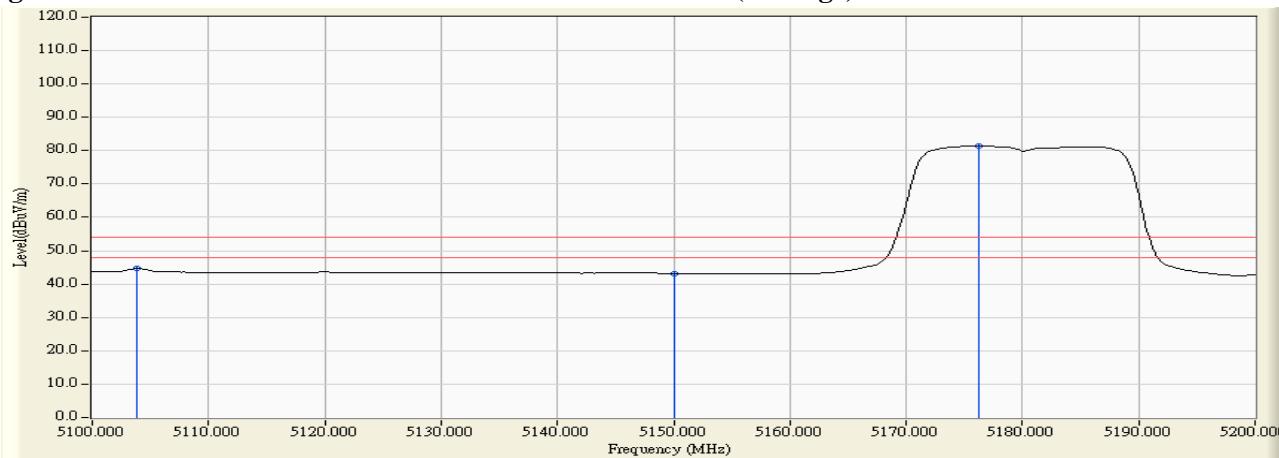
**Figure Channel 36:**

**Horizontal (Peak)**



**Figure Channel 36:**

**Horizontal (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

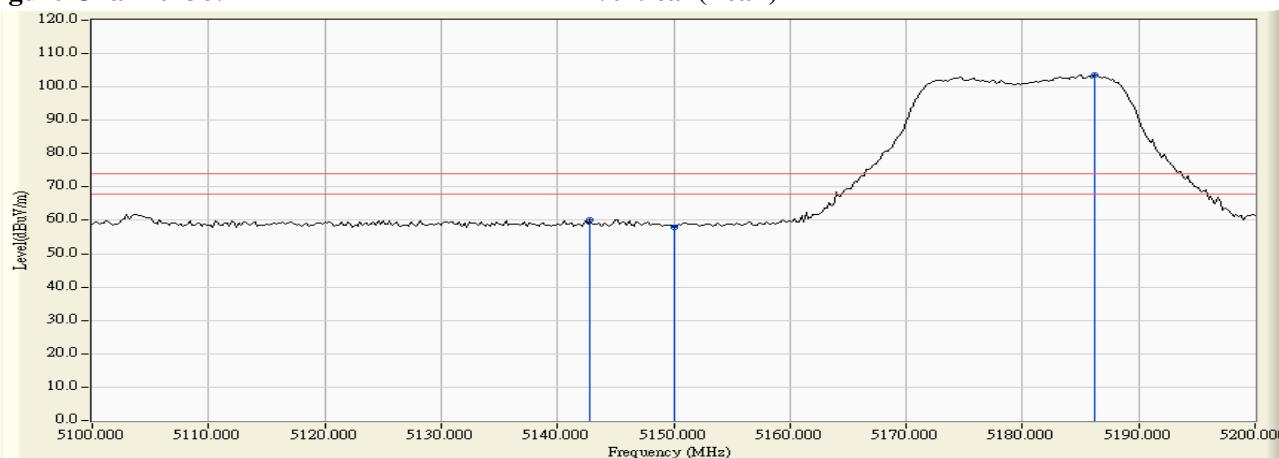
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 36

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
36 (Peak)	5142.800	5.241	55.020	60.260	74.00	54.00	Pass
36 (Peak)	5150.000	5.260	52.595	57.855	74.00	54.00	Pass
36 (Peak)	5186.200	5.360	98.207	103.566	--	--	--
36 (Average)	5104.000	5.145	47.155	52.300	74.00	54.00	Pass
36 (Average)	5150.000	5.260	41.369	46.629	74.00	54.00	Pass
36 (Average)	5176.200	5.332	86.496	91.828	--	--	--

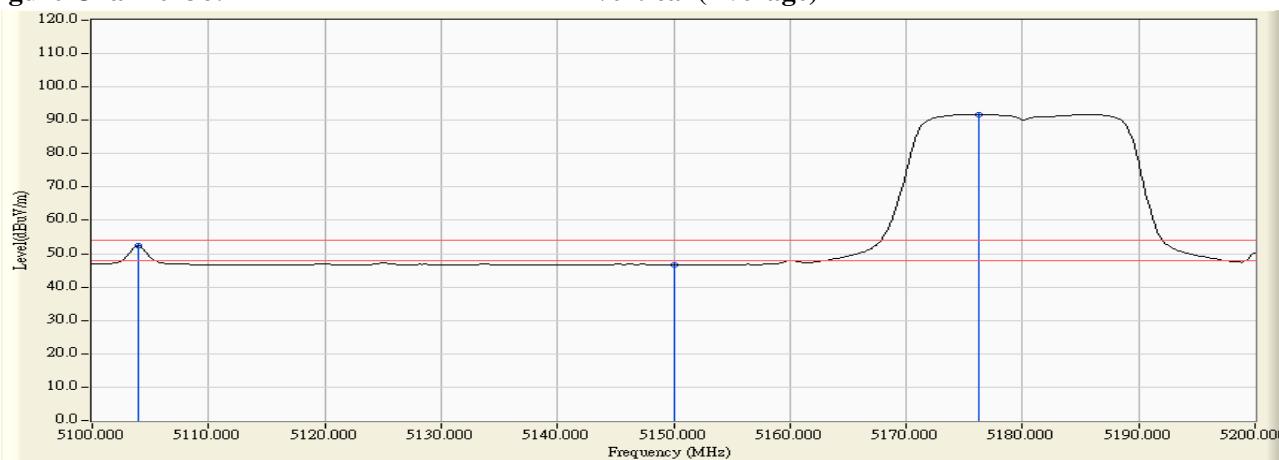
**Figure Channel 36:**

**Vertical (Peak)**



**Figure Channel 36:**

**Vertical (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

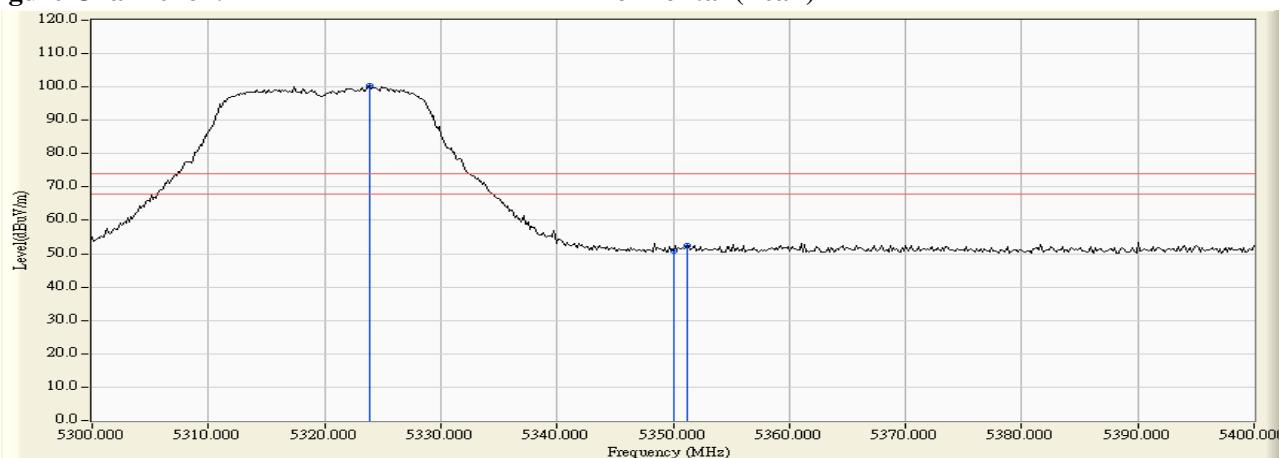
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 64

**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
64 (Peak)	5323.913	3.800	96.666	100.466	--	--	--
64 (Peak)	5350.000	3.716	47.249	50.966	74.00	54.00	Pass
64 (Peak)	5351.159	3.713	48.862	52.575	74.00	54.00	Pass
64 (Average)	5325.072	3.796	83.166	86.962	--	--	--
64 (Average)	5350.000	3.716	43.649	47.366	74.00	54.00	Pass
	5353.913	3.704	43.745	47.449	74.00	54.00	Pass

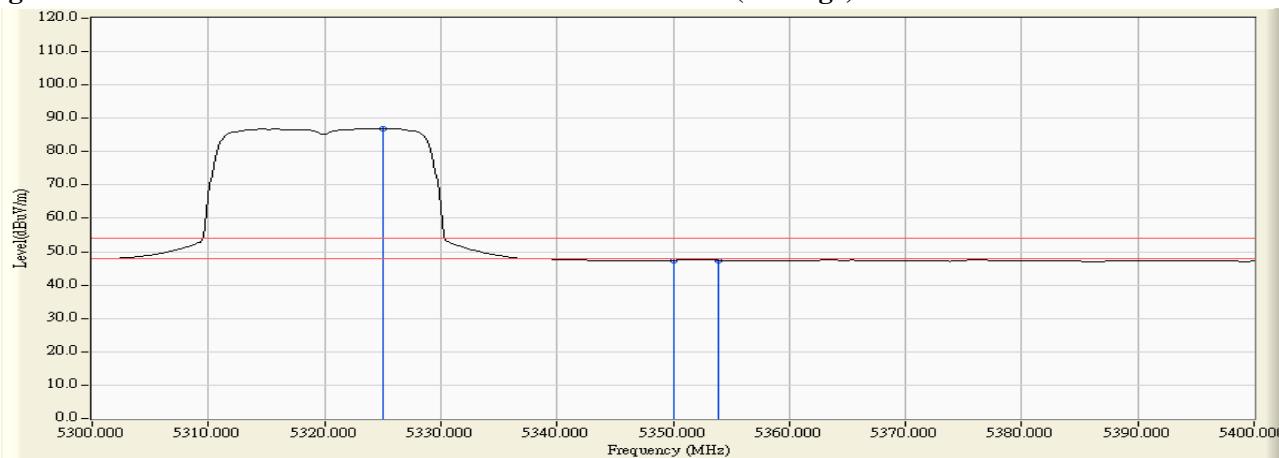
**Figure Channel 64:**

**Horizontal (Peak)**



**Figure Channel 64:**

**Horizontal (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

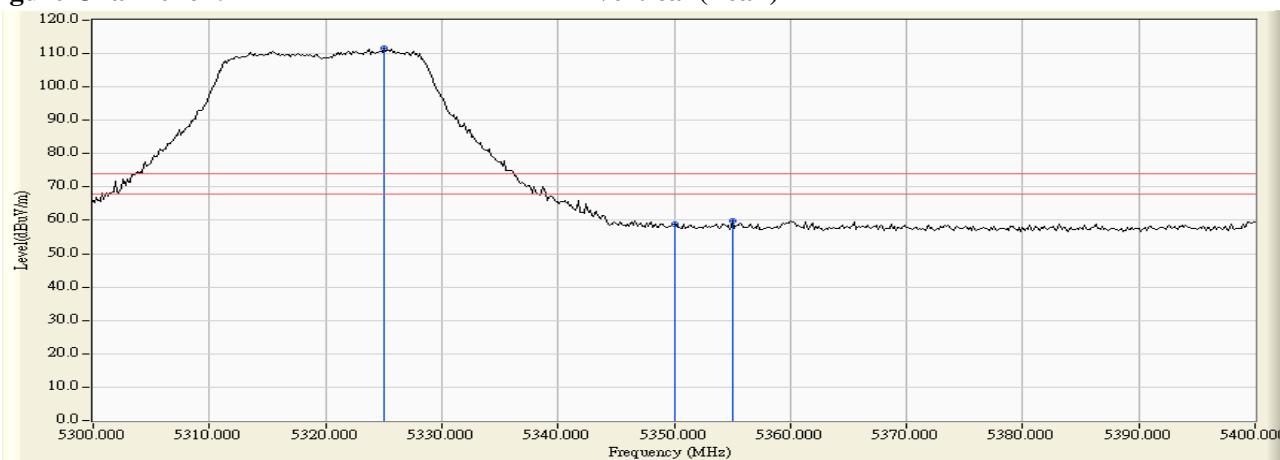
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 64

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
64 (Peak)	5325.072	5.723	105.878	111.601	--	--	--
64 (Peak)	5350.000	5.691	53.226	58.918	74.00	54.00	Pass
64 (Peak)	5355.072	5.685	53.997	59.682	74.00	54.00	Pass
64 (Average)	5324.203	5.724	92.724	98.448	--	--	--
64 (Average)	5350.000	5.691	44.693	50.385	74.00	54.00	Pass
	5360.145	5.677	46.158	51.835	74.00	54.00	Pass

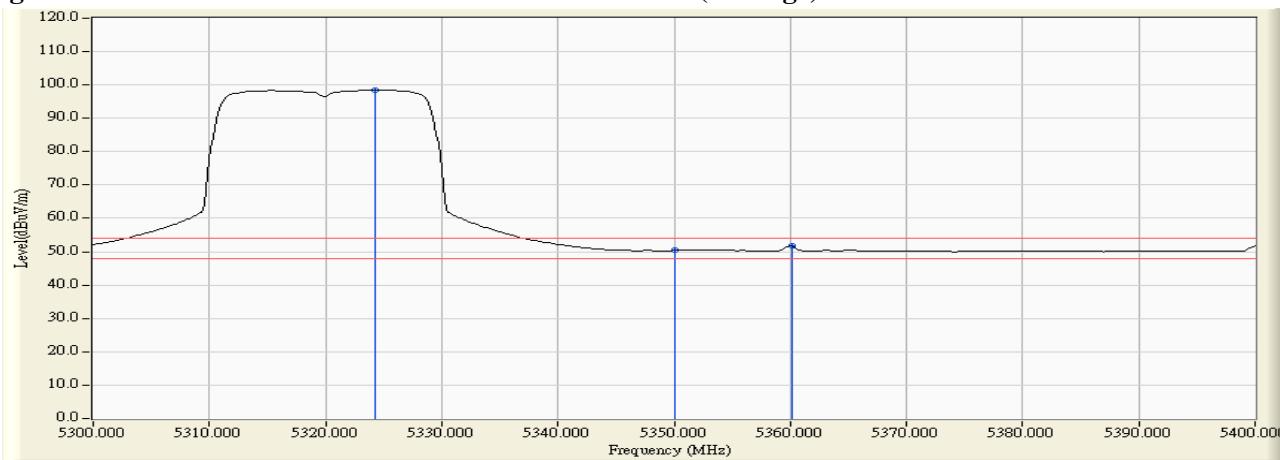
**Figure Channel 64:**

**Vertical (Peak)**



**Figure Channel 64:**

**Vertical (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

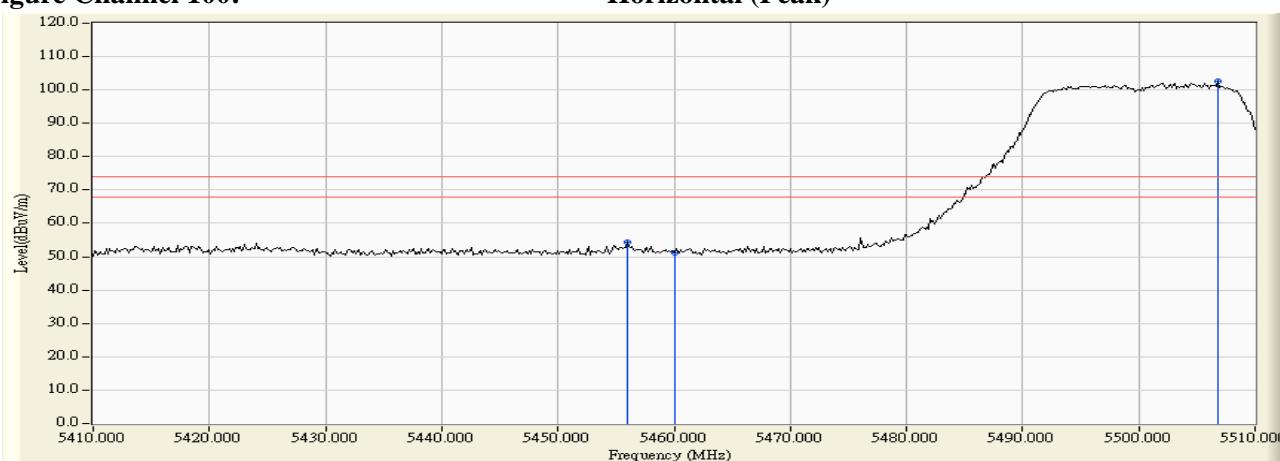
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100

**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
100 (Peak)	5455.942	4.300	49.990	54.290	74.00	54.00	Pass
100 (Peak)	5460.000	4.354	46.690	51.044	74.00	54.00	Pass
100 (Peak)	5506.812	4.835	97.750	102.584	--	--	--
100 (Average)	5447.826	4.192	44.574	48.766	74.00	54.00	Pass
100 (Average)	5460.000	4.354	43.731	48.085	74.00	54.00	Pass
100 (Average)	5495.942	4.786	84.998	89.784	--	--	--

**Figure Channel 100:**

**Horizontal (Peak)**



**Figure Channel 100:**

**Horizontal (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

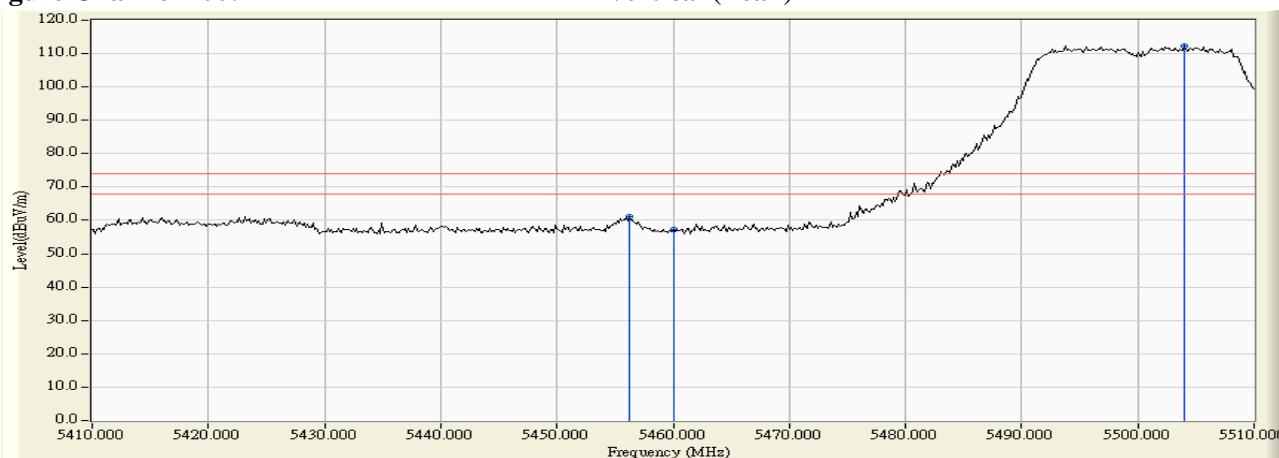
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
100 (Peak)	5456.232	6.014	55.041	61.055	74.00	54.00	Pass
100 (Peak)	5460.000	6.041	51.160	57.201	74.00	54.00	Pass
100 (Peak)	5504.058	6.287	105.955	112.242	--	--	--
100 (Average)	5439.710	5.902	47.379	53.281	74.00	54.00	Pass
100 (Average)	5460.000	6.041	44.443	50.484	74.00	54.00	Pass
100 (Average)	5495.652	6.261	93.558	99.820	--	--	--

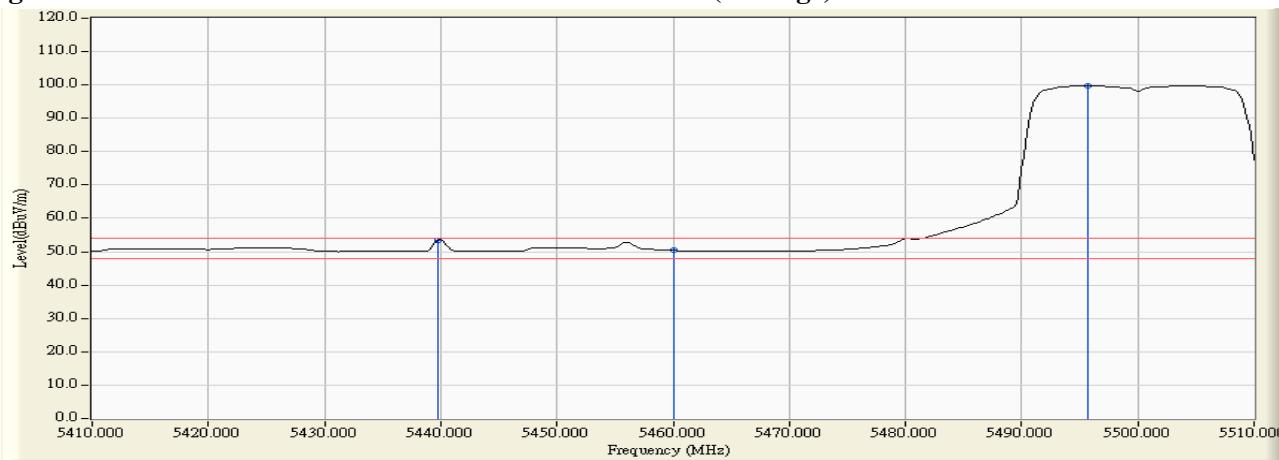
**Figure Channel 100:**

**Vertical (Peak)**



**Figure Channel 100:**

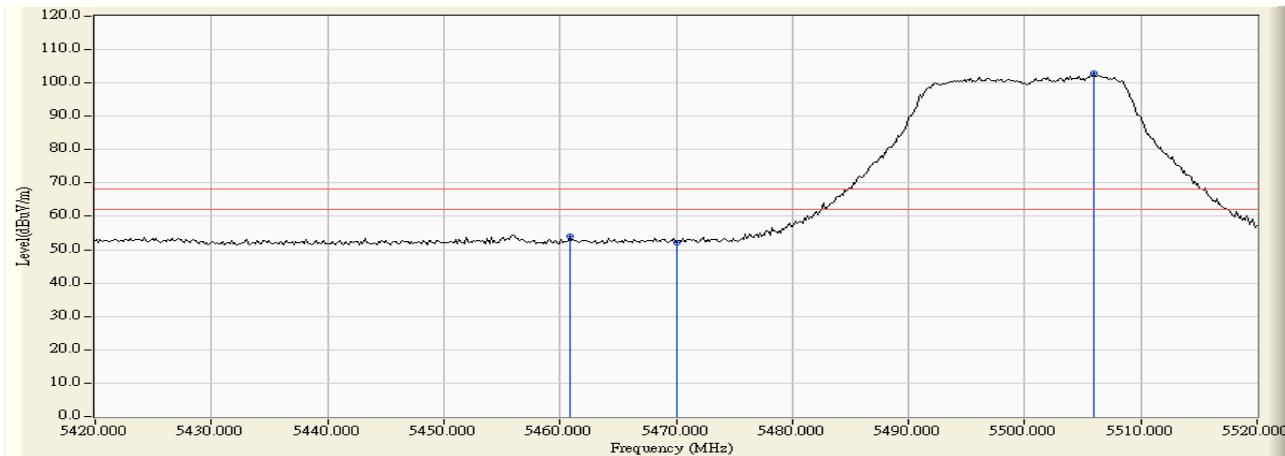
**Vertical (Average)**



Note:

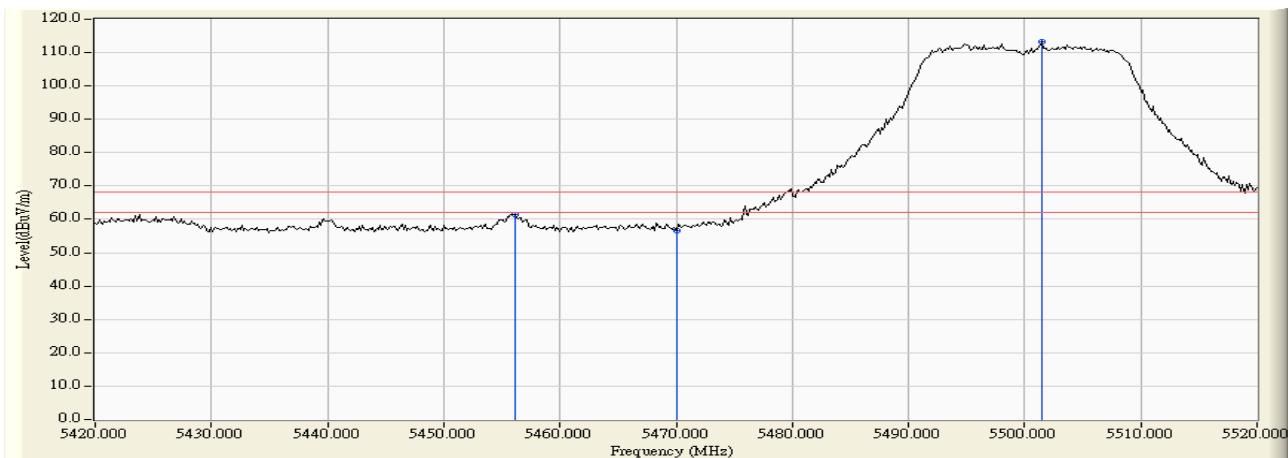
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 100



**RF Radiated Measurement:**

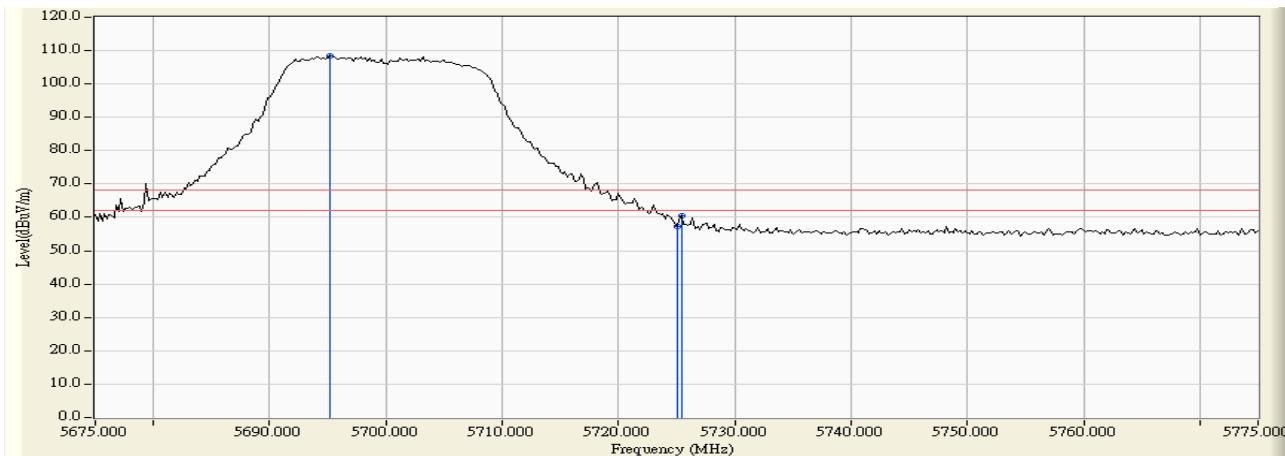
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
Horizontal	5460.870	4.365	49.582	53.948	-14.272	68.220	Pass
Horizontal	5470.000	4.488	47.789	52.277	-15.943	68.220	Pass
Horizontal	5505.942	4.841	98.204	103.045	--	--	--



**RF Radiated Measurement:**

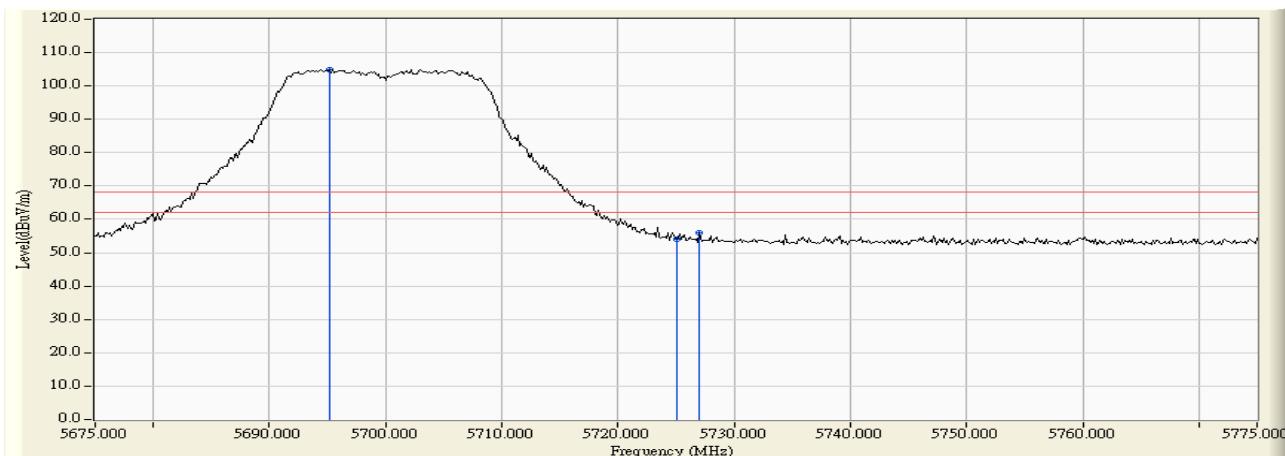
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
Vertical	5456.087	6.013	55.413	61.426	-6.794	68.220	Pass
Vertical	5470.000	6.112	50.534	56.645	-11.575	68.220	Pass
Vertical	5501.449	6.279	106.831	113.110	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 140



#### RF Radiated Measurement:

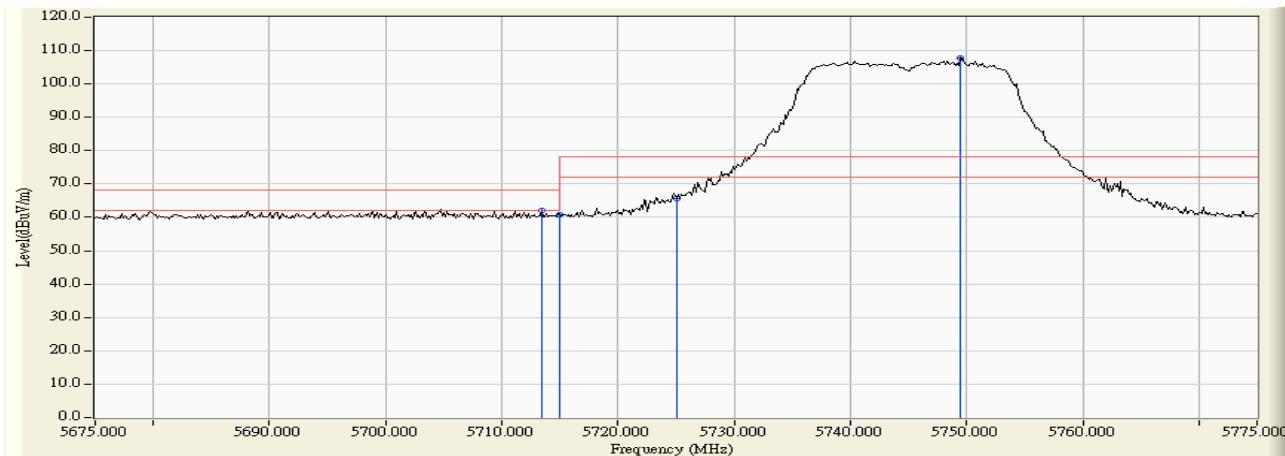
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
Horizontal	5693.696	4.610	98.923	103.533	--	--	--
Horizontal	5725.000	4.654	47.840	52.494	-15.726	68.220	Pass
Horizontal	5727.319	4.655	49.273	53.928	-14.292	68.220	Pass



#### RF Radiated Measurement:

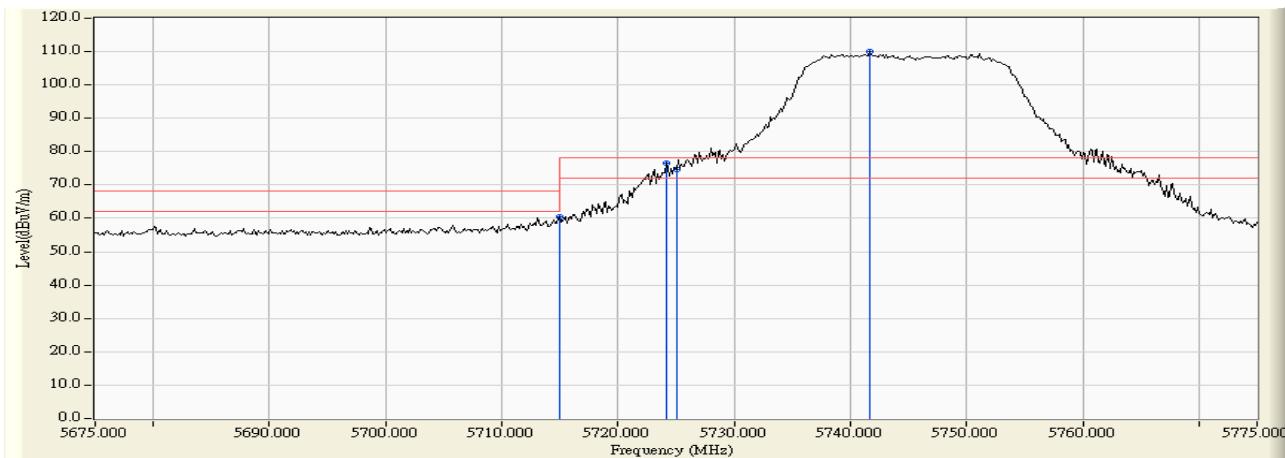
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBµV)	Emission Level (dBµV/m)	Peak Limit (dBµV/m)	Average Limit (dBµV/m)	Result
Vertical	5695.145	5.977	98.980	104.956	--	--	--
Vertical	5725.000	5.992	48.158	54.151	-14.069	68.220	Pass
Vertical	5727.029	5.992	49.912	55.904	-12.316	68.220	Pass

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 149



#### RF Radiated Measurement:

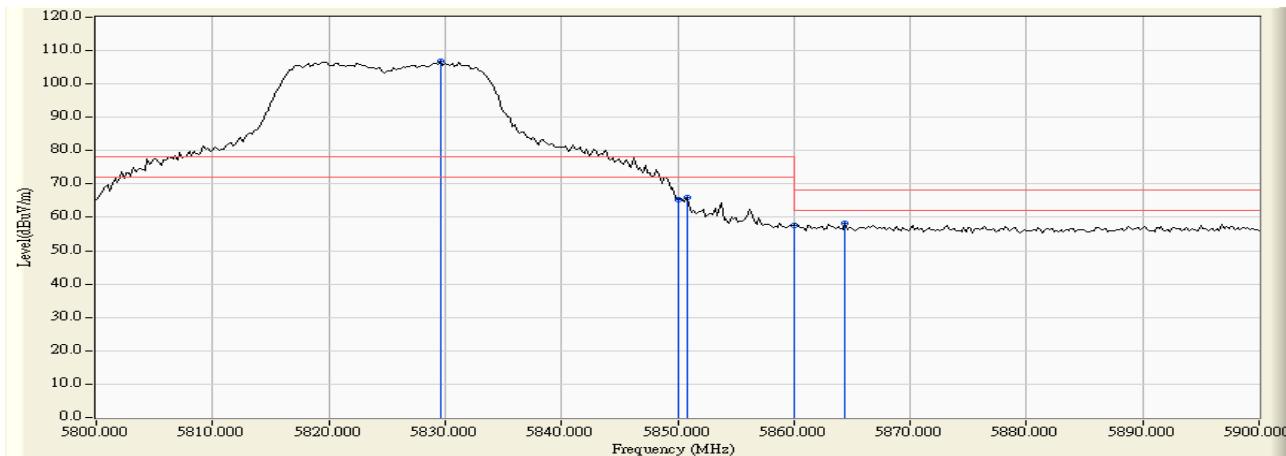
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5713.406	4.651	57.288	61.940	-6.280	68.220	Pass
Horizontal	5715.000	4.652	56.111	60.763	-7.457	68.220	Pass
Horizontal	5725.000	4.654	61.029	65.683	-12.537	78.220	Pass
Horizontal	5749.493	4.657	103.000	107.657	--	--	--



**RF Radiated Measurement:**

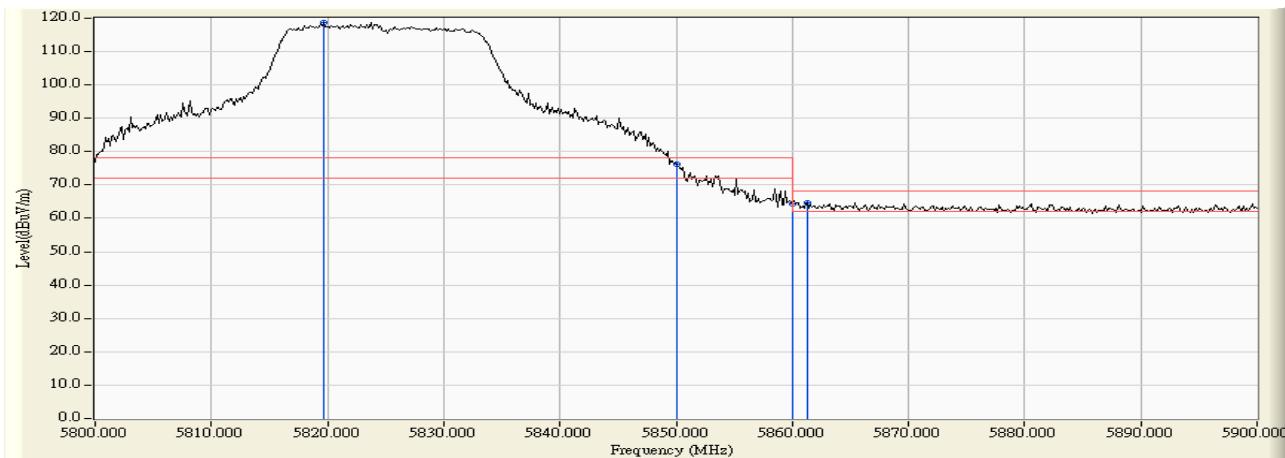
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5715.000	5.994	54.465	60.459	-7.761	68.220	Pass
Vertical	5724.130	5.992	70.716	76.709	-1.511	78.220	Pass
Vertical	5725.000	5.992	68.639	74.632	-3.588	78.220	Pass
Vertical	5741.667	5.990	104.026	110.016	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) -Channel 165



**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
Horizontal	5829.565	4.840	101.534	106.375	--	--	--
Horizontal	5850.000	4.964	56.112	61.076	-17.144	78.220	Pass
Horizontal	5851.739	4.974	58.431	63.405	-14.815	78.220	Pass
Horizontal	5860.000	5.023	56.056	61.079	-7.141	68.220	Pass
Horizontal	5863.623	5.043	57.985	63.029	-5.191	68.220	Pass



**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Arerage Limit (dB $\mu$ V/m)	Result
Vertical	5819.710	6.002	112.738	118.739	--	--	--
Vertical	5850.000	6.037	70.205	76.242	-1.978	78.220	Pass
Vertical	5860.000	6.047	58.197	64.244	-3.976	68.220	Pass
Vertical	5861.304	6.049	58.559	64.608	-3.612	68.220	Pass

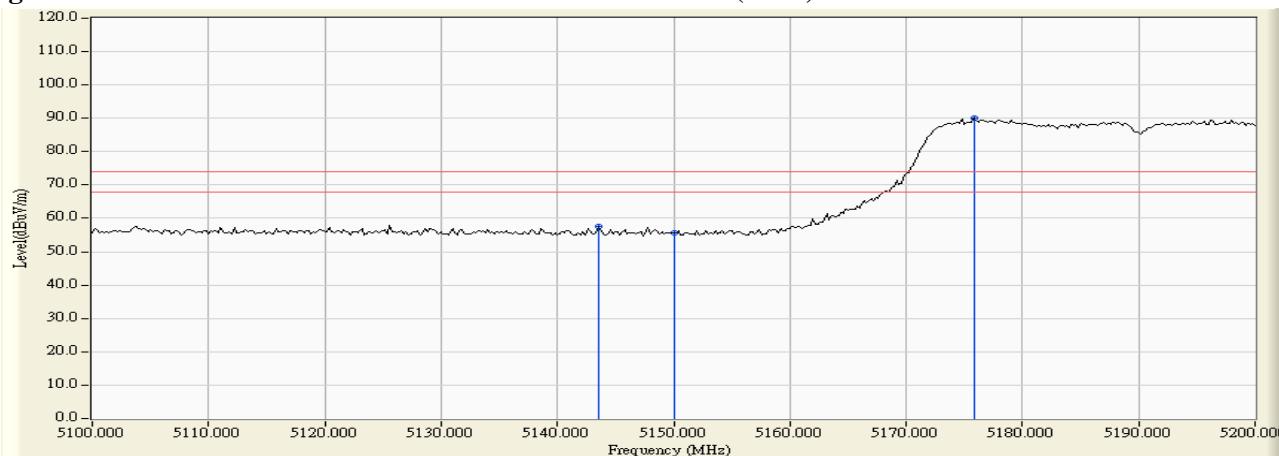
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 38

**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
38 (Peak)	5143.600	3.363	54.352	57.715	74.00	54.00	Pass
38 (Peak)	5150.000	3.340	52.369	55.709	74.00	54.00	Pass
38 (Peak)	5175.800	3.249	86.778	90.027	--	--	--
38 (Average)	5104.400	3.479	41.484	44.963	74.00	54.00	Pass
38 (Average)	5150.000	3.340	40.018	43.358	74.00	54.00	Pass
38 (Average)	5177.600	3.243	74.594	77.837	--	--	--

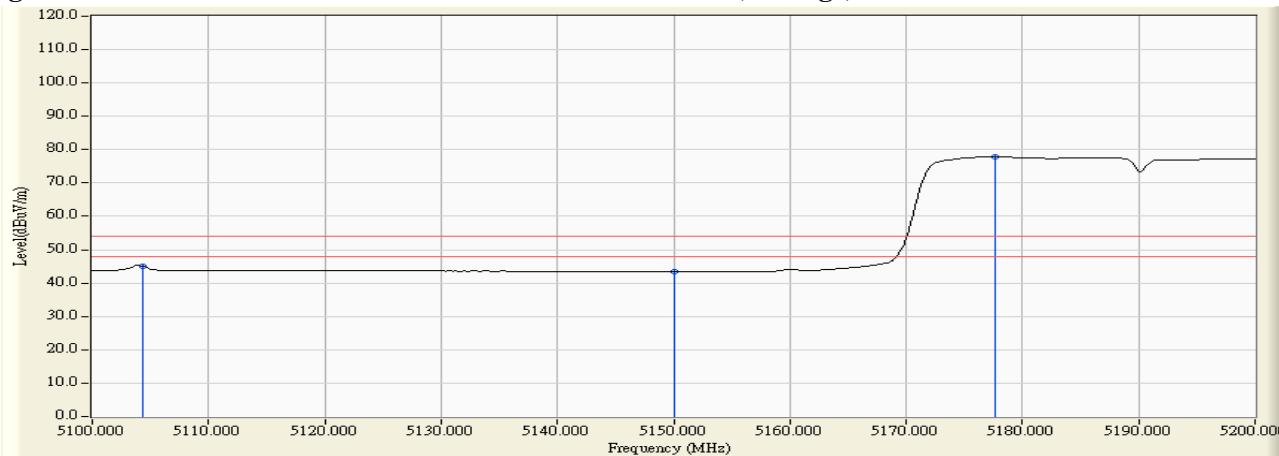
**Figure Channel 38:**

**Horizontal (Peak)**



**Figure Channel 38:**

**Horizontal (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

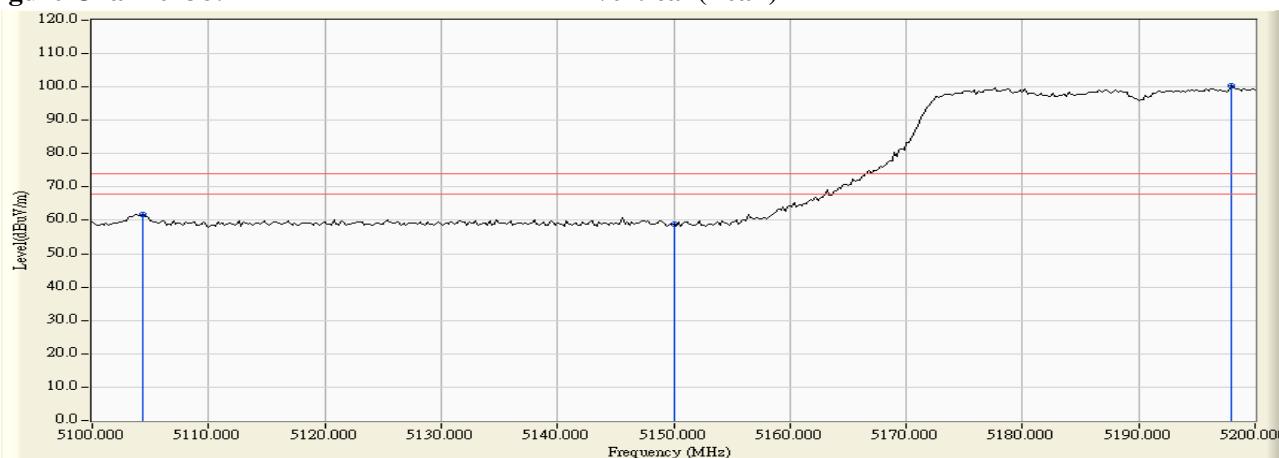
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 38

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
38 (Peak)	5104.400	5.146	56.609	61.755	74.00	54.00	Pass
38 (Peak)	5150.000	5.260	53.729	58.989	74.00	54.00	Pass
38 (Peak)	5198.000	5.381	94.898	100.279	--	--	--
38 (Average)	5104.200	5.146	46.391	51.537	74.00	54.00	Pass
38 (Average)	5150.000	5.260	41.373	46.633	74.00	54.00	Pass
38 (Average)	5198.400	5.382	82.435	87.817	--	--	--

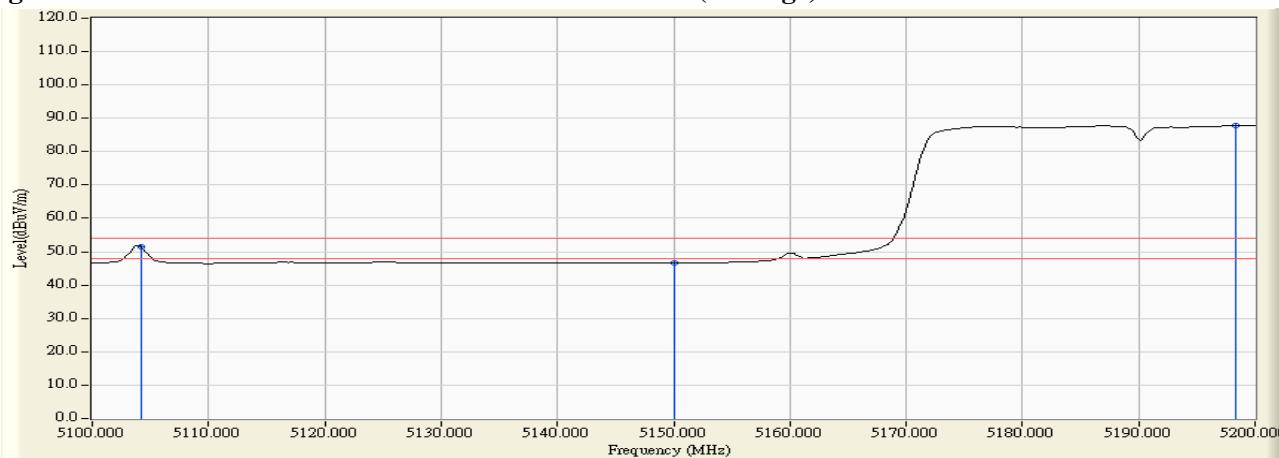
**Figure Channel 38:**

**Vertical (Peak)**



**Figure Channel 38:**

**Vertical (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

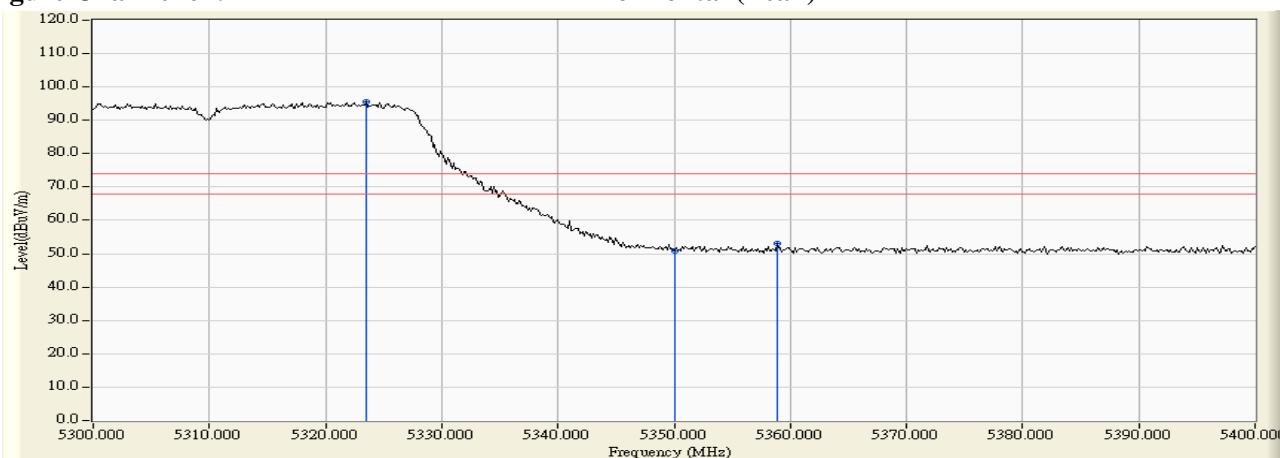
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 62

**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
62 (Peak)	5323.478	3.801	91.660	95.461	--	--	--
62 (Peak)	5350.000	3.716	47.274	50.991	74.00	54.00	Pass
62 (Peak)	5358.841	3.688	49.501	53.188	74.00	54.00	Pass
62 (Average)	5322.754	3.804	79.188	82.992	--	--	--
62 (Average)	5350.000	3.716	43.727	47.444	74.00	54.00	Pass
62 (Average)	5350.435	3.715	43.858	47.573	74.00	54.00	Pass

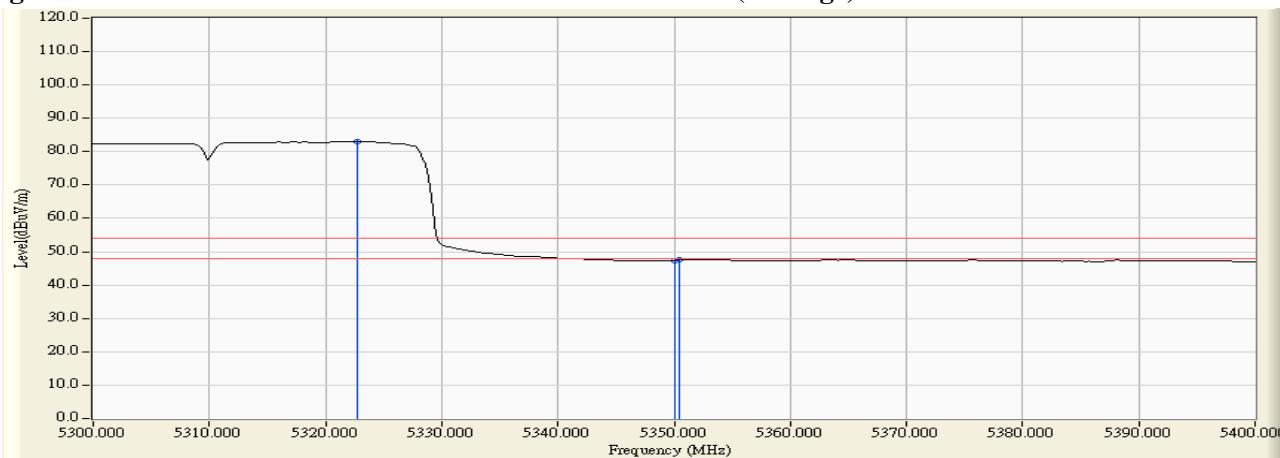
**Figure Channel 62:**

**Horizontal (Peak)**



**Figure Channel 62:**

**Horizontal (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

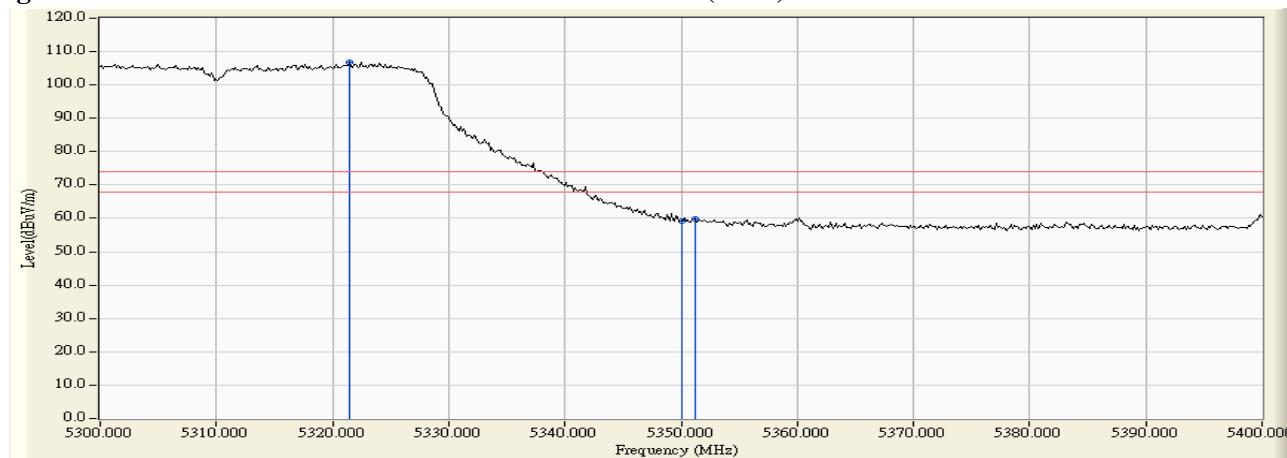
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 62

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
62 (Peak)	5321.449	5.727	101.123	106.850	--	--	--
62 (Peak)	5350.000	5.691	53.631	59.323	74.00	54.00	Pass
62 (Peak)	5351.159	5.690	54.227	59.917	74.00	54.00	Pass
62 (Average)	5322.899	5.725	87.912	93.637	--	--	--
62 (Average)	5350.000	5.691	44.896	50.588	74.00	54.00	Pass
62 (Average)	5360.000	5.678	45.598	51.276	74.00	54.00	Pass

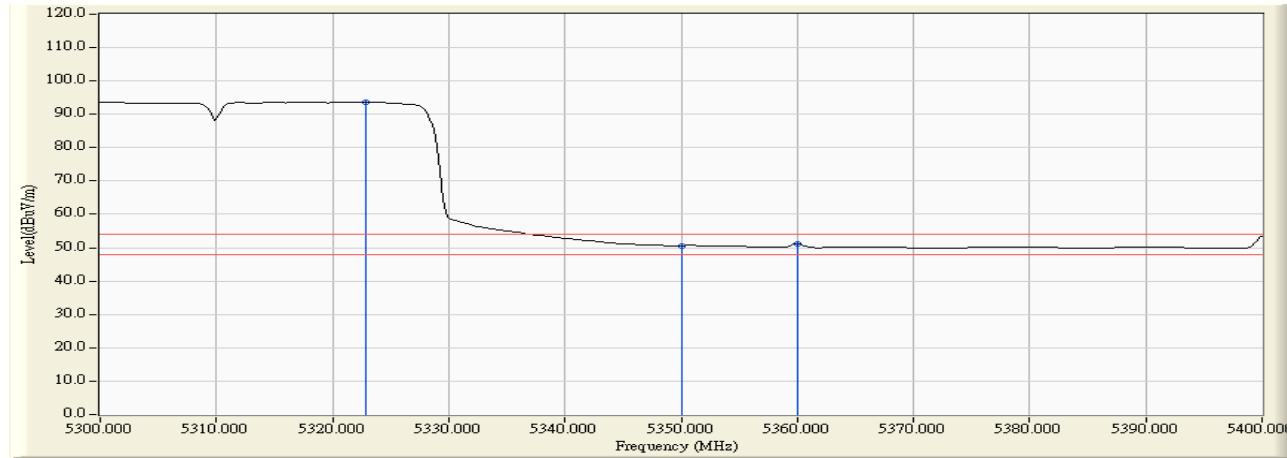
**Figure Channel 62:**

**Vertical (Peak)**



**Figure Channel 62:**

**Vertical (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

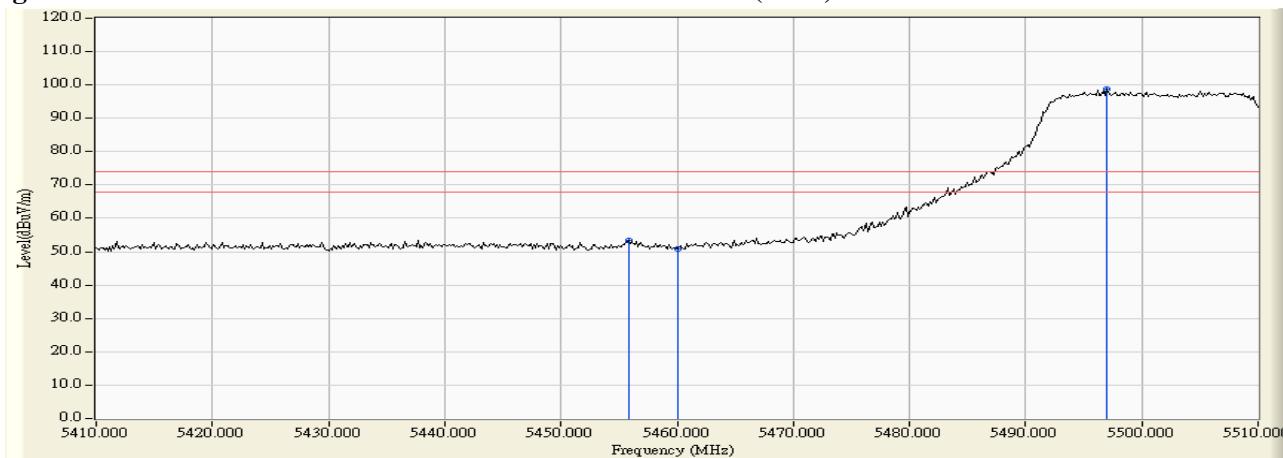
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102

**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
102 (Peak)	5455.797	4.298	49.058	53.356	74.00	54.00	Pass
102 (Peak)	5460.000	4.354	46.527	50.881	74.00	54.00	Pass
102 (Peak)	5496.957	4.794	94.130	98.923	--	--	--
102 (Average)	5447.826	4.192	44.580	48.772	74.00	54.00	Pass
102 (Average)	5460.000	4.354	43.736	48.090	74.00	54.00	Pass
102 (Average)	5500.435	4.817	81.396	86.213	--	--	--

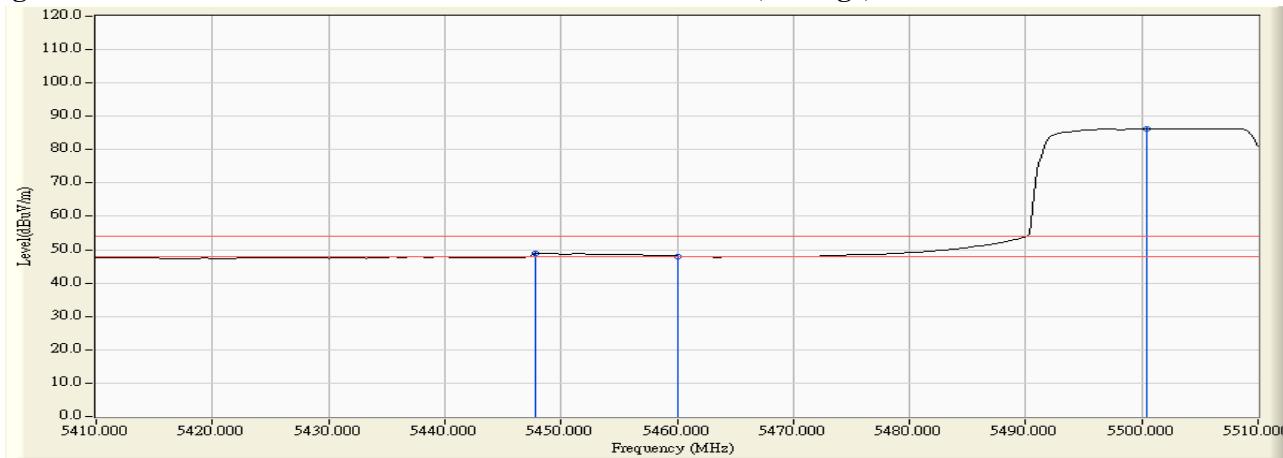
**Figure Channel 102:**

**Horizontal (Peak)**



**Figure Channel 102:**

**Horizontal (Average)**



Note:

1. All readings 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. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

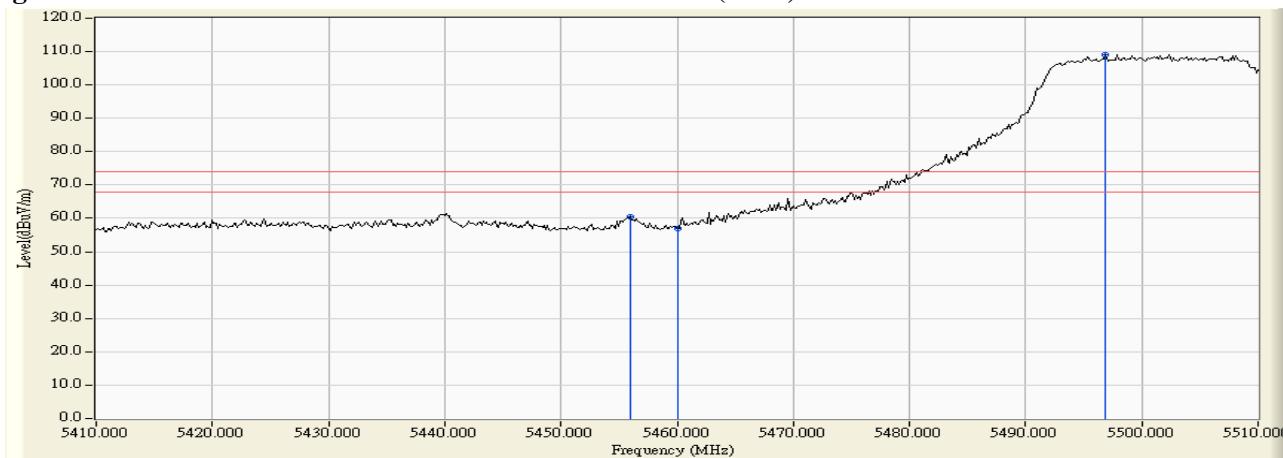
Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
102 (Peak)	5455.942	6.013	54.434	60.446	74.00	54.00	Pass
102 (Peak)	5460.000	6.041	51.017	57.058	74.00	54.00	Pass
102 (Peak)	5496.812	6.266	102.943	109.208	--	--	--
102 (Average)	5456.377	6.016	46.317	52.332	74.00	54.00	Pass
102 (Average)	5460.000	6.041	44.546	50.587	74.00	54.00	Pass
102 (Average)	5496.957	6.266	90.076	96.342	--	--	--

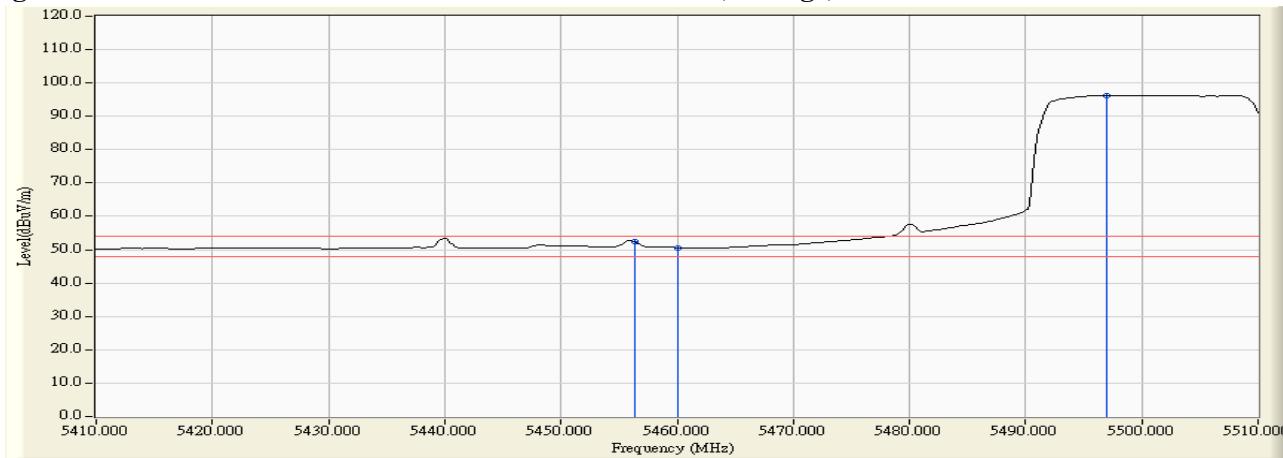
**Figure Channel 102:**

**Vertical (Peak)**



**Figure Channel 102:**

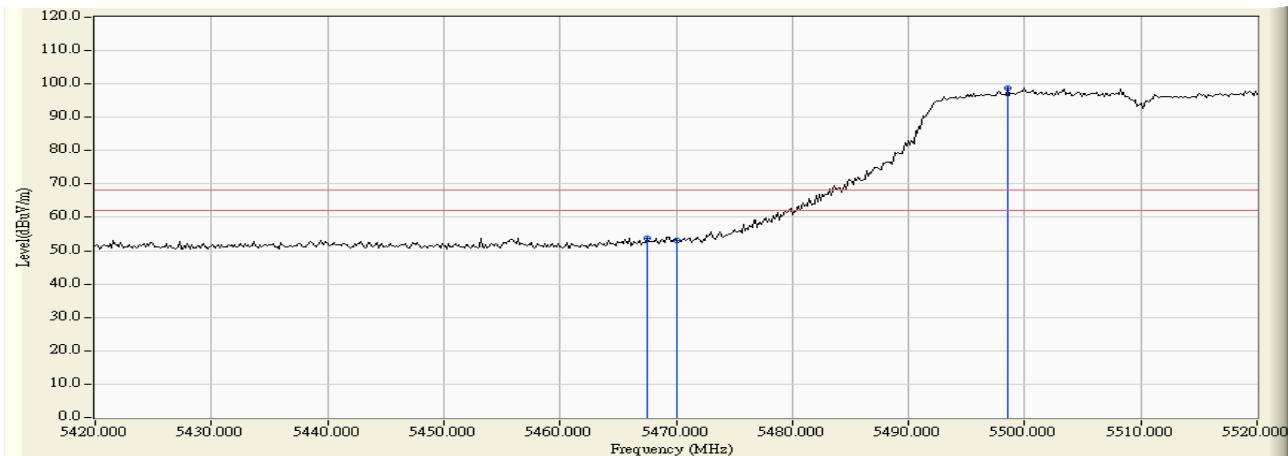
**Vertical (Average)**



Note:

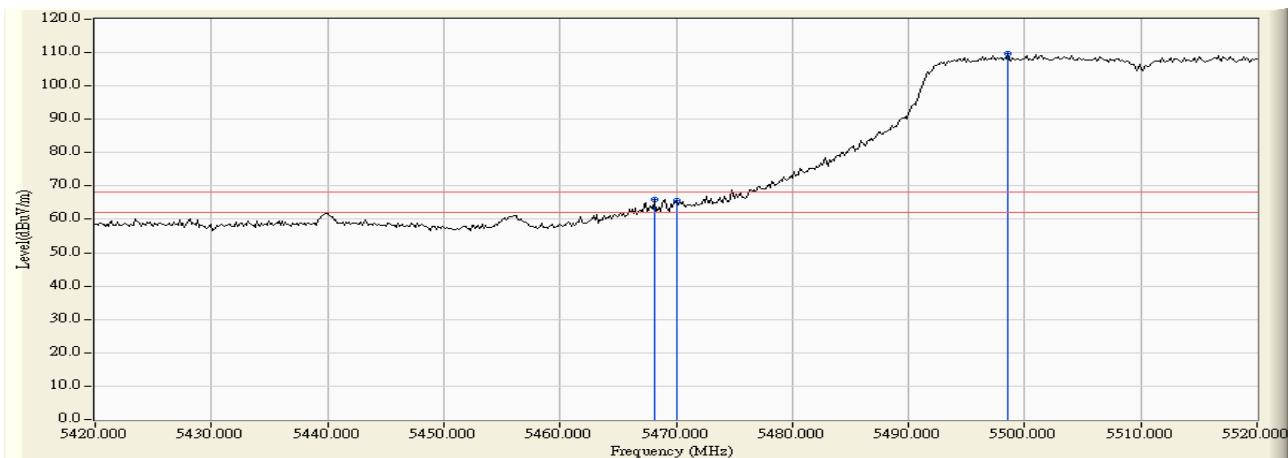
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “\*”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102



**RF Radiated Measurement:**

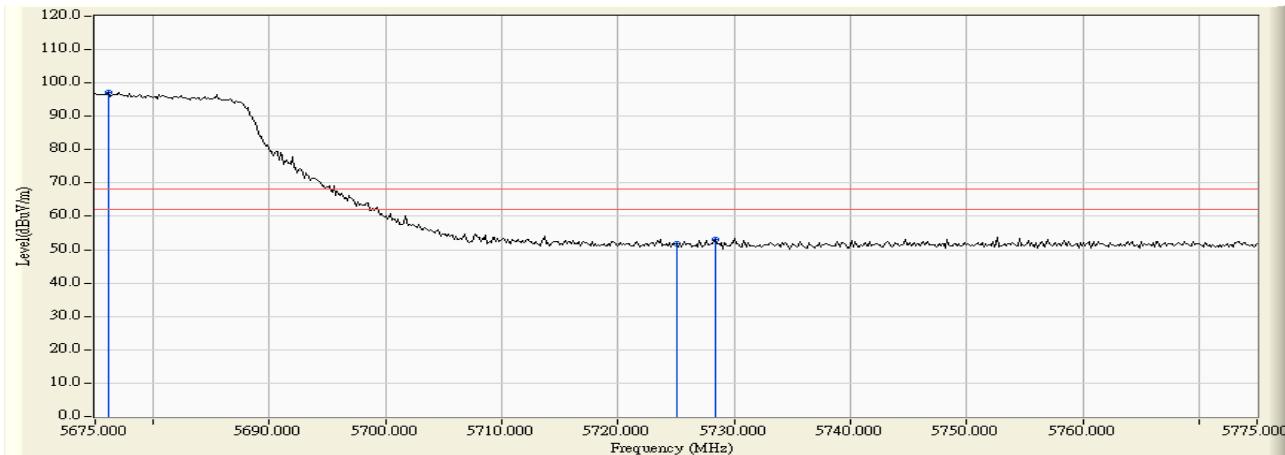
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
Horizontal	5467.536	4.454	49.377	53.832	-14.388	68.220	Pass
Horizontal	5470.000	4.488	48.700	53.188	-15.032	68.220	Pass
Horizontal	5498.551	4.804	93.936	98.740	--	--	--



**RF Radiated Measurement:**

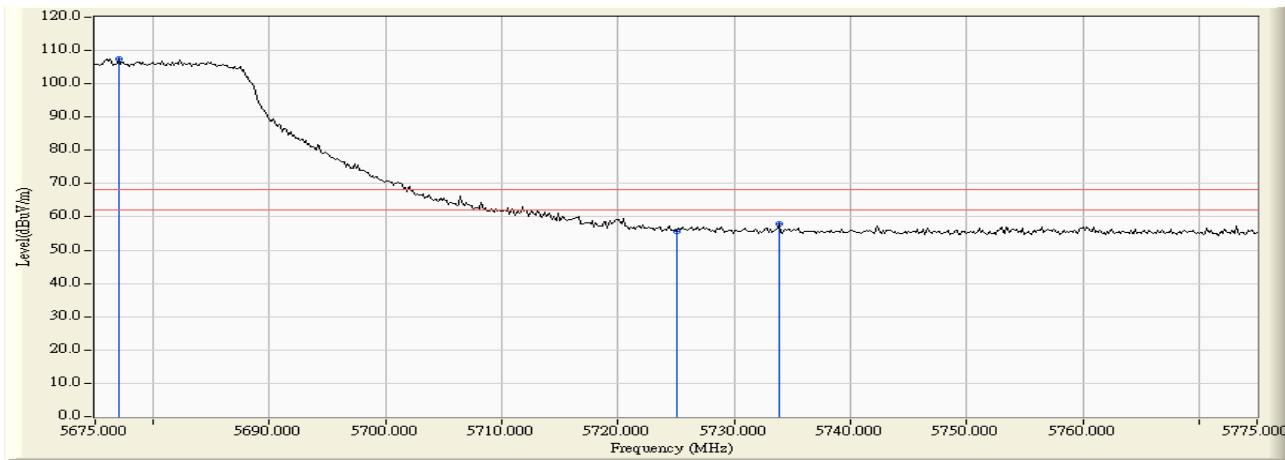
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
Vertical	5468.116	6.098	59.929	66.027	-2.193	68.220	Pass
Vertical	5470.000	6.112	59.574	65.685	-2.535	68.220	Pass
Vertical	5498.551	6.270	103.515	109.785	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 134



#### RF Radiated Measurement:

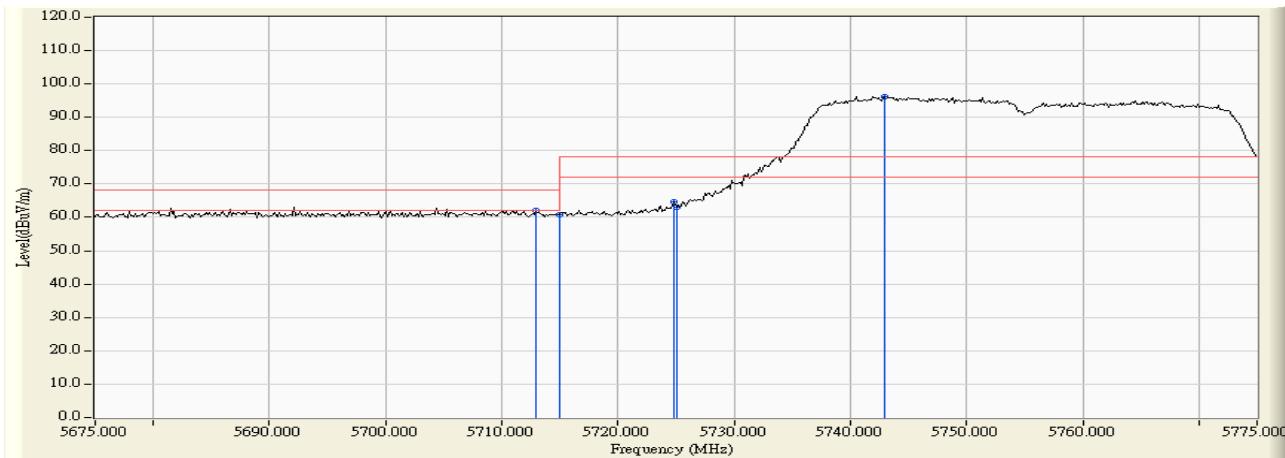
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
Horizontal	5676.159	4.518	92.634	97.152	--	--	--
Horizontal	5725.000	4.654	47.144	51.798	-16.422	68.220	Pass
Horizontal	5728.333	4.655	48.576	53.231	-14.989	68.220	Pass



#### RF Radiated Measurement:

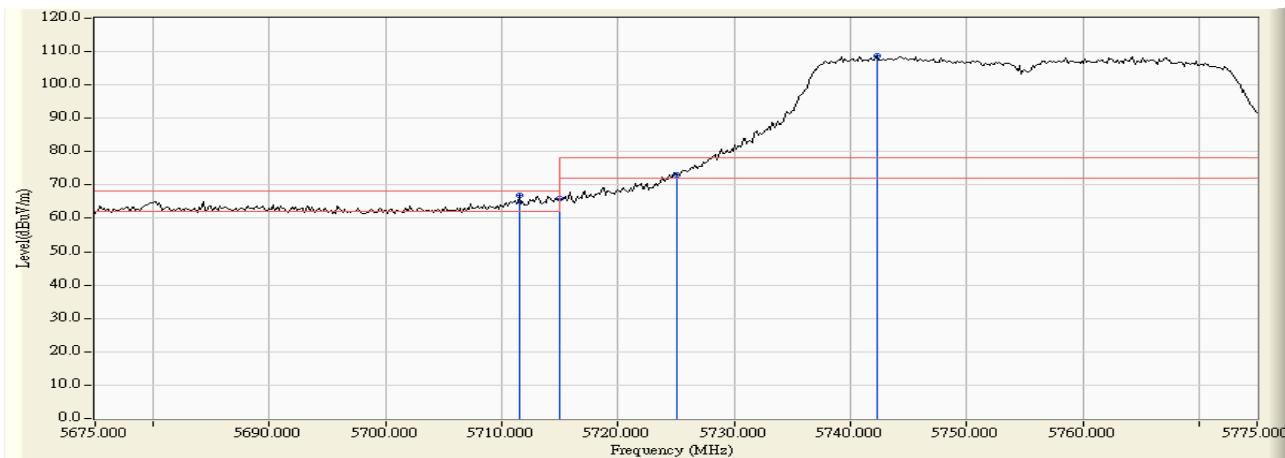
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
Vertical	5677.029	5.927	101.656	107.584	--	--	--
Vertical	5725.000	5.992	49.715	55.708	-12.512	68.220	Pass
Vertical	5733.841	5.991	51.892	57.883	-10.337	68.220	Pass

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 151



**RF Radiated Measurement :**

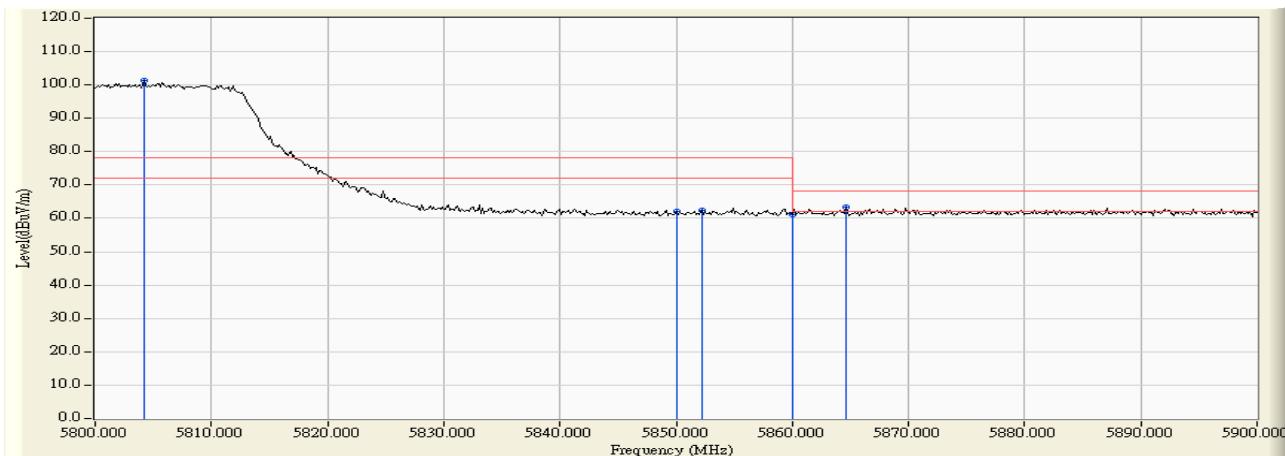
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Arerage Limit (dB $\mu$ V/m)	Result
Horizontal	5712.971	4.652	57.537	62.188	-6.032	68.220	Pass
Horizontal	5715.000	4.652	56.120	60.772	-7.448	68.220	Pass
Horizontal	5724.855	4.655	59.877	64.531	-13.689	78.220	Pass
Horizontal	5725.000	4.654	58.268	62.922	-15.298	78.220	Pass
Horizontal	5742.971	4.656	91.565	96.221	--	--	--



**RF Radiated Measurement:**

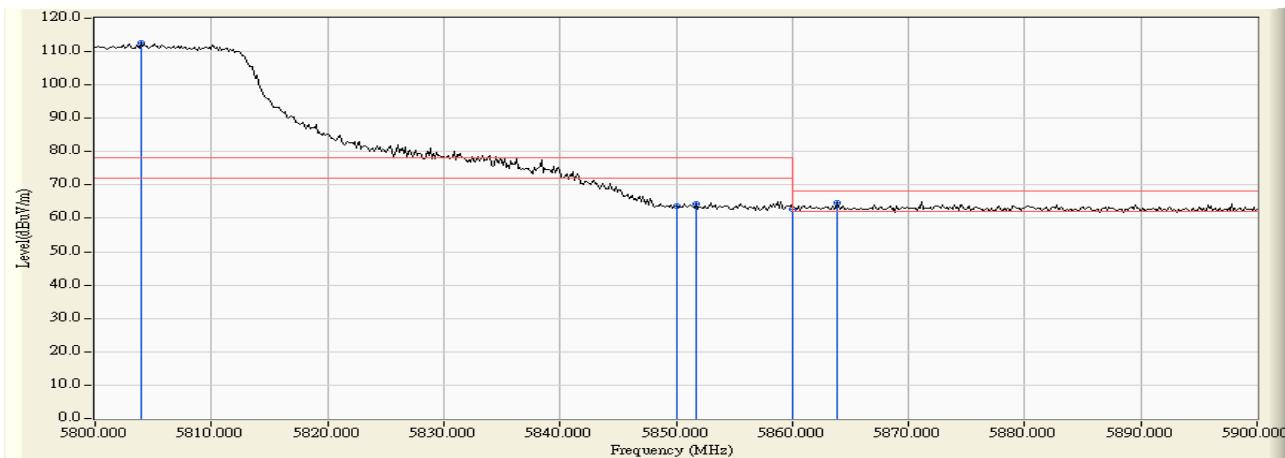
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
Vertical	5711.522	5.994	60.781	66.775	-1.445	68.220	Pass
Vertical	5715.000	5.994	59.808	65.802	-2.418	68.220	Pass
Vertical	5725.000	5.992	67.014	73.007	-5.213	78.220	Pass
Vertical	5742.246	5.989	102.711	108.701	--	--	--

Product : MOXA IEEE 802.11 a/b/g/n  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 159



#### RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
Horizontal	5804.203	4.702	96.641	101.343	--	--	--
Horizontal	5850.000	4.964	57.283	62.247	-15.973	78.220	Pass
Horizontal	5852.174	4.977	57.483	62.460	-15.760	78.220	Pass
Horizontal	5860.000	5.023	56.260	61.283	-6.937	68.220	Pass
Horizontal	5864.638	5.050	58.168	63.218	-5.002	68.220	Pass



**RF Radiated Measurement:**

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB $\mu$ V)	Emission Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Result
Vertical	5803.913	5.984	106.528	112.511	--	--	--
Vertical	5850.000	6.037	57.755	63.792	-14.428	78.220	Pass
Vertical	5851.739	6.038	58.307	64.346	-13.874	78.220	Pass
Vertical	5860.000	6.047	56.596	62.643	-5.577	68.220	Pass
Vertical	5863.913	6.052	58.601	64.652	-3.568	68.220	Pass

## 5. **EMI Reduction Method During Compliance Testing**

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs