

FCC Test Report

Product Name : Wireless-N300 Audio Streamer
Model No. : WMP-N12
FCC ID. : MSQ-WMPR300

Applicant : ASUSTeK COMPUTER INC.

Address : 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan

Date of Receipt : 2014/12/01

Issued Date : 2015/08/21

Report No. : 14C0126R-RFUSP27V00

Report Version : V1.0



The test results relate only to the samples tested.

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Test Report Certification

Issued Date : 2015/08/21

Report No. : 14C0126R-RFUSP27V00

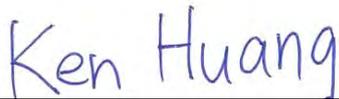


Product Name : Wireless-N300 Audio Streamer
 Applicant : ASUSTeK COMPUTER INC.
 Address : 4F, No. 150, Li-Te Rd., Peitou, Taipei, Taiwan
 Manufacturer : ASUSTeK COMPUTER INC.
 Model No. : WMP-N12
 FCC ID. : MSQ-WMPR300
 EUT Voltage : AC 100-240V, 50/60Hz
 Trade Name : ASUS
 Applicable Standard : FCC CFR Title 47 Part 15 Subpart C Section 15.247: 2014
 ANSI C63.10
 Test Result : Complied

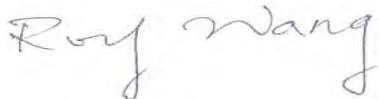
The test results relate only to the samples tested.
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Documented By : 

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Tested By : 

 (Ken Huang / Engineer)

Approved By : 

 (Roy Wang / Director)

Laboratory Information

We, **Quietek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C.	:	TAF, Accreditation Number: 3024
USA	:	FCC, Registration Number: 365520
Canada	:	IC, Submission No: 181665

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/english/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/index_en.aspx

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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1. General Information

1.1. EUT Description

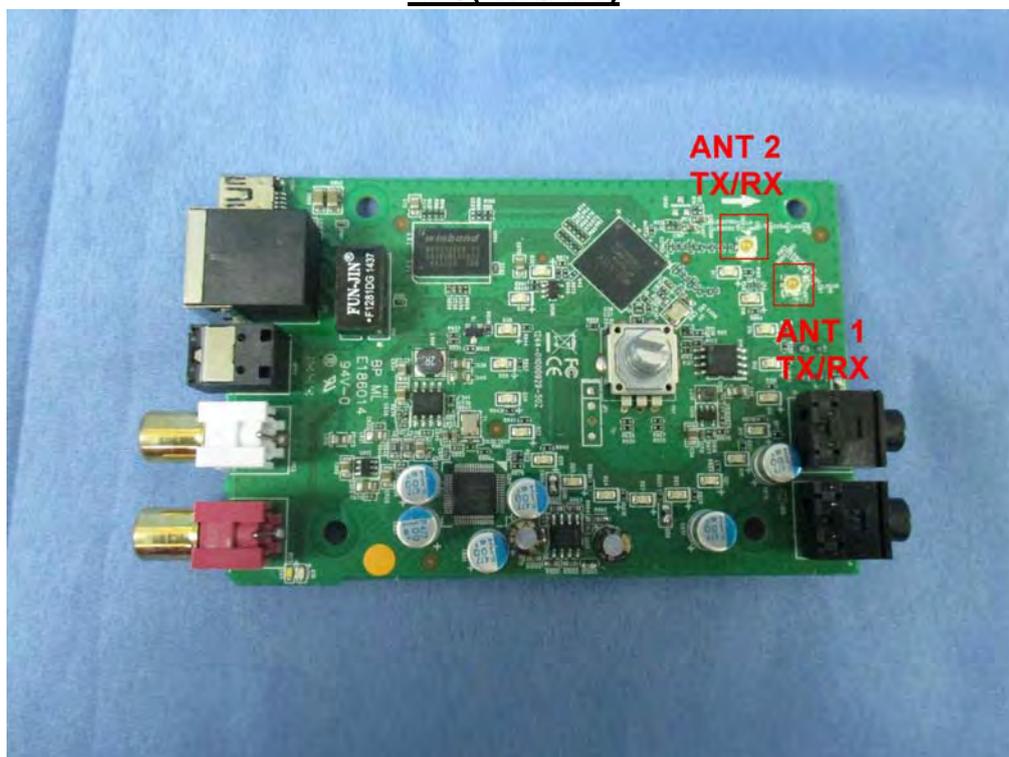
Product Name	Wireless-N300 Audio Streamer	
Product Type	WLAN (2TX, 2RX)	
Trade Name	ASUS	
Model No.	WMP-N12	
Frequency Range/ Channel Number	IEEE 802.11b/g/ IEEE 802.11n (20MHz)	2412~2462MHz / 11 Channels
	IEEE 802.11n (40MHz)	2422~2452MHz / 7 Channels
Type of Modulation	IEEE 802.11b	Direct Sequence Spread Spectrum
	IEEE 802.11g/n	Orthogonal Frequency Division Multiplexing
Data Speed	IEEE 802.11b	1, 2, 5.5, 11Mbps
	IEEE 802.11g	6, 9, 18, 24, 36, 48,54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0~MCS 15 and bandwidth defined in 802.11n
Antenna Gain	Ant 0: 2.7dBi Ant 1: 2.48dBi	
Antenna Type	PCB antenna	

Component	
Power Adapter	DVE · DSA-6PFE-05 FUS 050100 I/P: 100-240V, 50-60Hz 0.2A O/P: 5V == 1A Cable In: Non-Shielded, 1.5m

ANT-TX / RX & Bandwidth

ANT-TX / RX	TX		RX	
	20MHz	40MHz	20MHz	40MHz
IEEE802.11b	✓	✗	✓	✗
IEEE802.11g	✓	✗	✓	✗
IEEE802.11n	✓	✓	✓	✓

2.4G(2TX /2RX)



IEEE 802.11n

MCS Index	Modulation	R	N _{BPSCS}	N _{CBPS}		N _{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
0	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.2	15.0
1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.4	30.0
2	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.7	45.0
3	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.9	60.0
4	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.3	90.0
5	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.8	120.0
6	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.0	135.0
7	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.2	150.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 1 – MCS parameters for TX Antenna number = 1

MCS Index	Modulation	R	N _{BPSCS}	N _{CBPS}		N _{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
8	BPSK	1/2	1	104	216	52	108	13.0	27.0	14.4	30.0
9	QPSK	1/2	2	208	432	104	216	26.0	54.0	28.9	60.0
10	QPSK	3/4	2	208	432	156	324	39.0	81.0	43.3	90.0
11	16-QAM	1/2	4	416	864	208	432	52.0	108.0	57.8	120.0
12	16-QAM	3/4	4	416	864	312	648	78.0	162.0	86.7	180.0
13	64-QAM	2/3	6	624	1296	416	864	104.0	216.0	115.6	240.0
14	64-QAM	3/4	6	624	1296	468	972	117.0	243.0	130.0	270.0
15	64-QAM	5/6	6	624	1296	520	1080	130.0	270.0	144.4	300.0

Note 1: Support of 400ns GI is optional on transmit and receive.

Table 2 – MCS parameters for TX Antenna number = 2

Symbol	Explanation
R	Code rate
N _{BPSC}	Number of coded bits per single carrier
N _{CBPS}	Number of coded bits per symbol
N _{DBPS}	Number of data bits per symbol
GI	guard interval

IEEE 802.11b/g & IEEE 802.11n (20MHz) - 2.4GHz

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
001	2412 MHz	002	2417 MHz	003	2422 MHz	004	2427 MHz
005	2432 MHz	006	2437 MHz	007	2442 MHz	008	2447 MHz
009	2452 MHz	010	2457 MHz	011	2462 MHz		

IEEE 802.11n (40MHz) - 2.4GHz

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
003	2422 MHz	004	2427 MHz	005	2432 MHz	006	2437 MHz
007	2442 MHz	008	2447 MHz	009	2452 MHz		

Note:

1. This device is a Wireless-N300 Audio Streamer including 2.4GHz b/g/n(2x2) transmitting and receiving function..
2. Compliance with Part 15 Subpart C Paragraph 15.247.
3. Regards to the frequency band operation; the lowest , middle and highest frequency of channel were selected to perform the test, and then shown on this report.
4. This device is a composite device in accordance with Part 15 regulations. The receiving function receiving was tested and its test report number is 14C0126R-RFUSP01V00.

1.2. Test Mode

Quietek has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

TX	Mode 1: Transmit - Power by Adapter
----	-------------------------------------

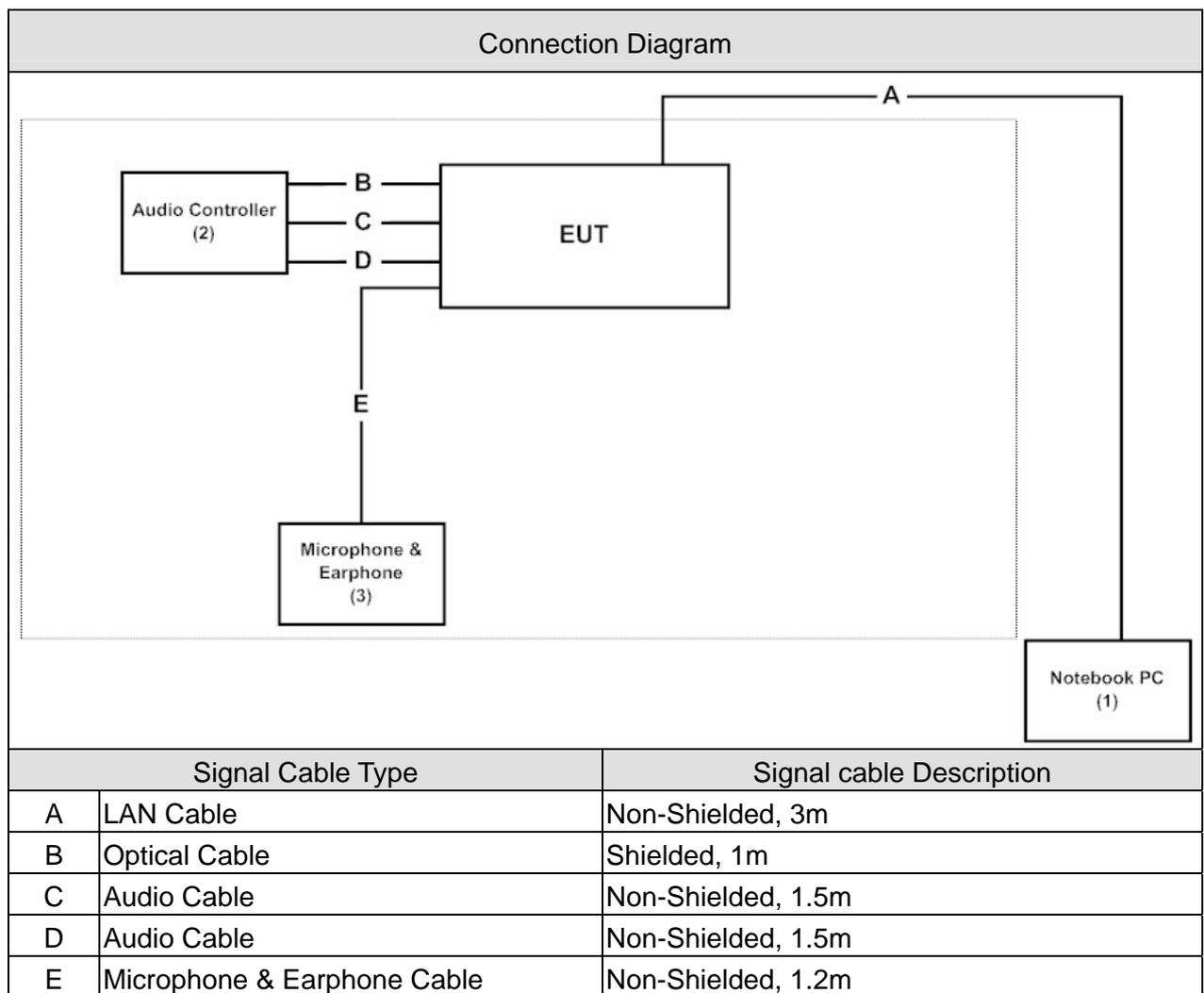
Test Items	Mode	Modulation	Channel	Antenna	Result
Conducted Emission	1	11n(40MHz)	6	0+1	Complies
Peak Power Output	1	11b/g	1/ 6/ 11	0	Complies
	1	11n(20MHz)	1/ 6/ 11	0+1	Complies
	1	11n(40MHz)	3/ 6/ 9	0+1	Complies
Radiated Emission	1	11b/g	1/ 6/ 11	0	Complies
	1	11n(20MHz)	1/ 6/ 11	0+1	Complies
	1	11n(40MHz)	3/ 6/ 9	0+1	Complies
RF antenna conducted test	1	11b/g	1/ 6/ 11	0	Complies
	1	11n(20MHz)	1/ 6/ 11	0/1	Complies
	1	11n(40MHz)	3/ 6/ 9	0/1	Complies
Radiated Emission Band Edge	1	11b/g	1/ 6/ 11	0	Complies
	1	11n(20MHz)	1/ 6/ 11	0+1	Complies
	1	11n(40MHz)	3/ 6/ 9	0+1	Complies
DTS Occupied Bandwidth	1	11b/g	1/ 6/ 11	0	Complies
	1	11n(20MHz)	1/ 6/ 11	0/1	Complies
	1	11n(40MHz)	3/ 6/ 9	0/1	Complies
Occupied Bandwidth	1	11b/g	1/ 6/ 11	0	Complies
	1	11n(20MHz)	1/ 6/ 11	0/1	Complies
	1	11n(40MHz)	3/ 6/ 9	0/1	Complies
Power Density	1	11b/g	1/ 6/ 11	0	Complies
	1	11n(20MHz)	1/ 6/ 11	0+1	Complies
	1	11n(40MHz)	3/ 6/ 9	0+1	Complies

1.3. Tested System Details

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

Product	Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1 Notebook PC	ACER	MS2296	LUSCV021391 150332C2000	DoC	Non-Shielded, 2.5m one ferrite core bonded
2 Audio Controller	Logitech	Z 5500	N/A	DoC	--
3 Microphone & Earphone	Fujiei	SBZ-38	N/A	DoC	--

1.4. Configuration of tested System



1.5. EUT Exercise Software

1	Setup the EUT as shown in Section 1.4.
2	Turn on all of equipment.
3	Execute the test program "MT7620 1.0.6.0 AP" for 2.4G function on the Notebook.
4	Configure the test mode, the test channel, and the data rate.
5	Press "Start TX" to start the continuous transmitting.
6	Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Peak Power Output	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 RF antenna conducted test	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Band Edge	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 DTS Occupied Bandwidth	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Power Density	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000

2. Conducted Emission

2.1. Test Equipment

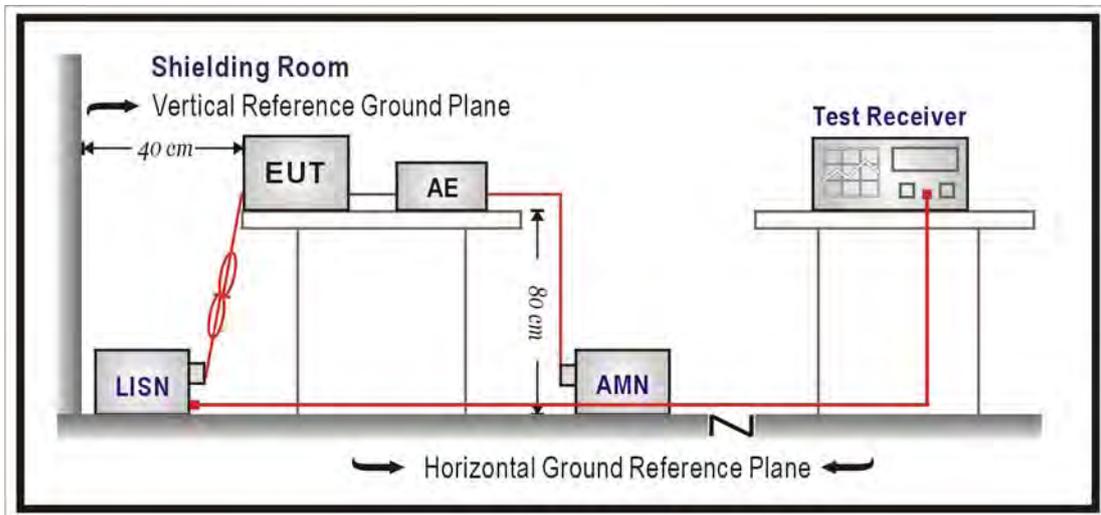
The following test equipments are used during the test:

Conducted Emission / SR3

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
LISN	R&S	ENV216	100096	2015/08/10
LISN	R&S	ESH3-Z5	836679/022	2015/12/15
Test Receiver	R&S	ESCS 30	825442/017	2016/01/07

Note: All equipments that need to calibrate are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

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

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

2.4. Test Procedure

The EUT was setup according to ANSI C63.10 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)

Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

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

2.5. Test Specification

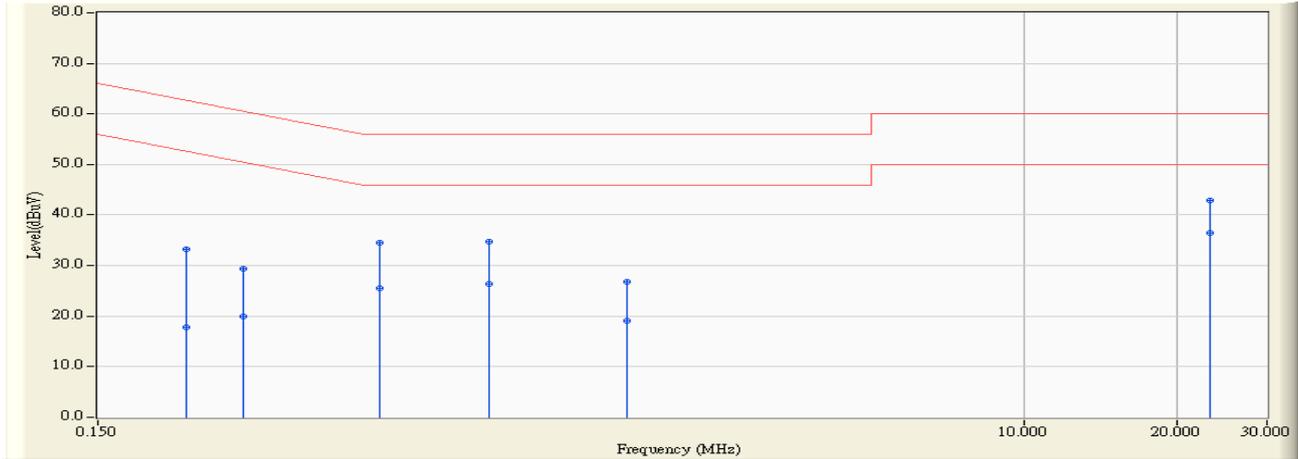
According to FCC Part 15 Subpart C Paragraph 15.207: 2014

2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

2.7. Test Result

Site : SR3	Time : 2015/01/22 - 15:50
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR3_LISN(16A)-4_0811 - Line1	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11n40-2437MHz

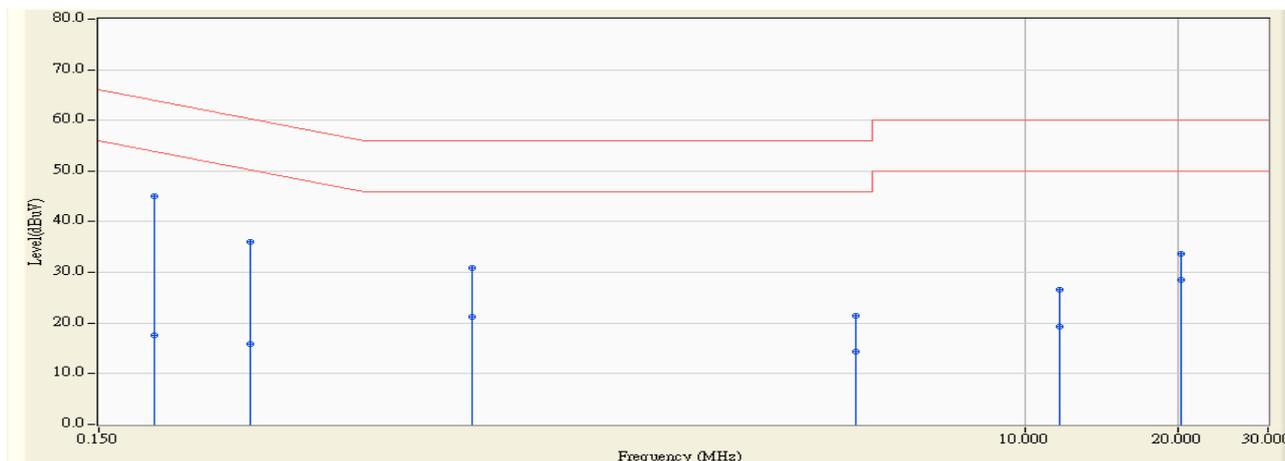


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Measure Level (dBμV)	Margin (dB)	Limit (dBμV)	Detector Type
1	0.224	9.693	23.450	33.142	-29.519	62.661	QUASPEAK
2	0.224	9.693	8.120	17.812	-34.849	52.661	AVERAGE
3	0.291	9.723	19.630	29.353	-31.153	60.507	QUASPEAK
4	0.291	9.723	10.310	20.033	-30.473	50.507	AVERAGE
5	0.537	9.848	24.720	34.568	-21.432	56.000	QUASPEAK
6	0.537	9.848	15.640	25.488	-20.512	46.000	AVERAGE
7	0.884	9.928	24.830	34.758	-21.242	56.000	QUASPEAK
8	0.884	9.928	16.540	26.468	-19.532	46.000	AVERAGE
9	1.646	9.950	16.810	26.760	-29.240	56.000	QUASPEAK
10	1.646	9.950	9.210	19.160	-26.840	46.000	AVERAGE
11	23.130	10.126	32.700	42.826	-17.174	60.000	QUASPEAK
12	* 23.130	10.126	26.280	36.406	-13.594	50.000	AVERAGE

Note:

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

Site : SR3	Time : 2015/01/22 - 15:55
Limit : CISPR_B_00M_QP	Margin : 10
Probe : SR3_LISN(16A)-4_0811 - Line2	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11n40-2437MHz



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.193	9.665	35.340	45.004	-18.903	63.908	QUASPEAK
2		0.193	9.665	7.920	17.584	-36.323	53.908	AVERAGE
3		0.298	9.723	26.360	36.083	-24.203	60.286	QUASPEAK
4		0.298	9.723	6.150	15.873	-34.413	50.286	AVERAGE
5		0.814	9.907	21.070	30.977	-25.023	56.000	QUASPEAK
6		0.814	9.907	11.220	21.127	-24.873	46.000	AVERAGE
7		4.623	10.080	11.370	21.450	-34.550	56.000	QUASPEAK
8		4.623	10.080	4.300	14.380	-31.620	46.000	AVERAGE
9		11.650	10.206	16.470	26.676	-33.324	60.000	QUASPEAK
10		11.650	10.206	9.010	19.216	-30.784	50.000	AVERAGE
11		20.259	10.344	23.430	33.774	-26.226	60.000	QUASPEAK
12		20.259	10.344	18.240	28.584	-21.416	50.000	AVERAGE

Note:

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

3. Peak Power Output

3.1. Test Equipment

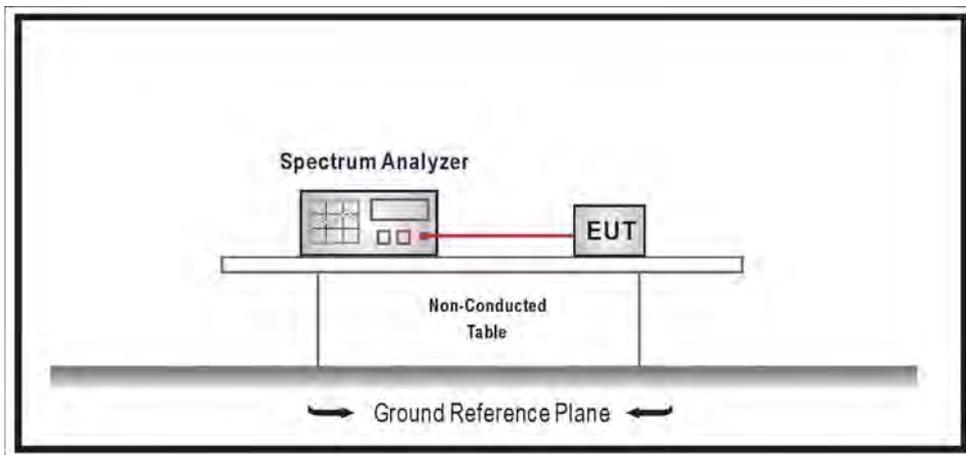
The following test equipments are used during the test:

Peak Power Output/ SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2015/07/14

Note: All equipments that need to calibrate are with calibration period of 1 year.

3.2. Test Setup



3.3. Test procedures

The EUT was tested according to DTS test procedure section 9.2.2.2 of KDB558074 v03r02 measurement to FCC 47CFR 15.247 requirements. Set the RBW=1MHz, Set the VBW \geq 3xRBW, Sweep Time=Auto, Set RMS Detector. The channel power measurement function with the band limits set equal to the DTS bandwidth edges.

3.4. Limits

The maximum peak power shall be less 1 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2014

3.6. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB.

3.7. Test Result

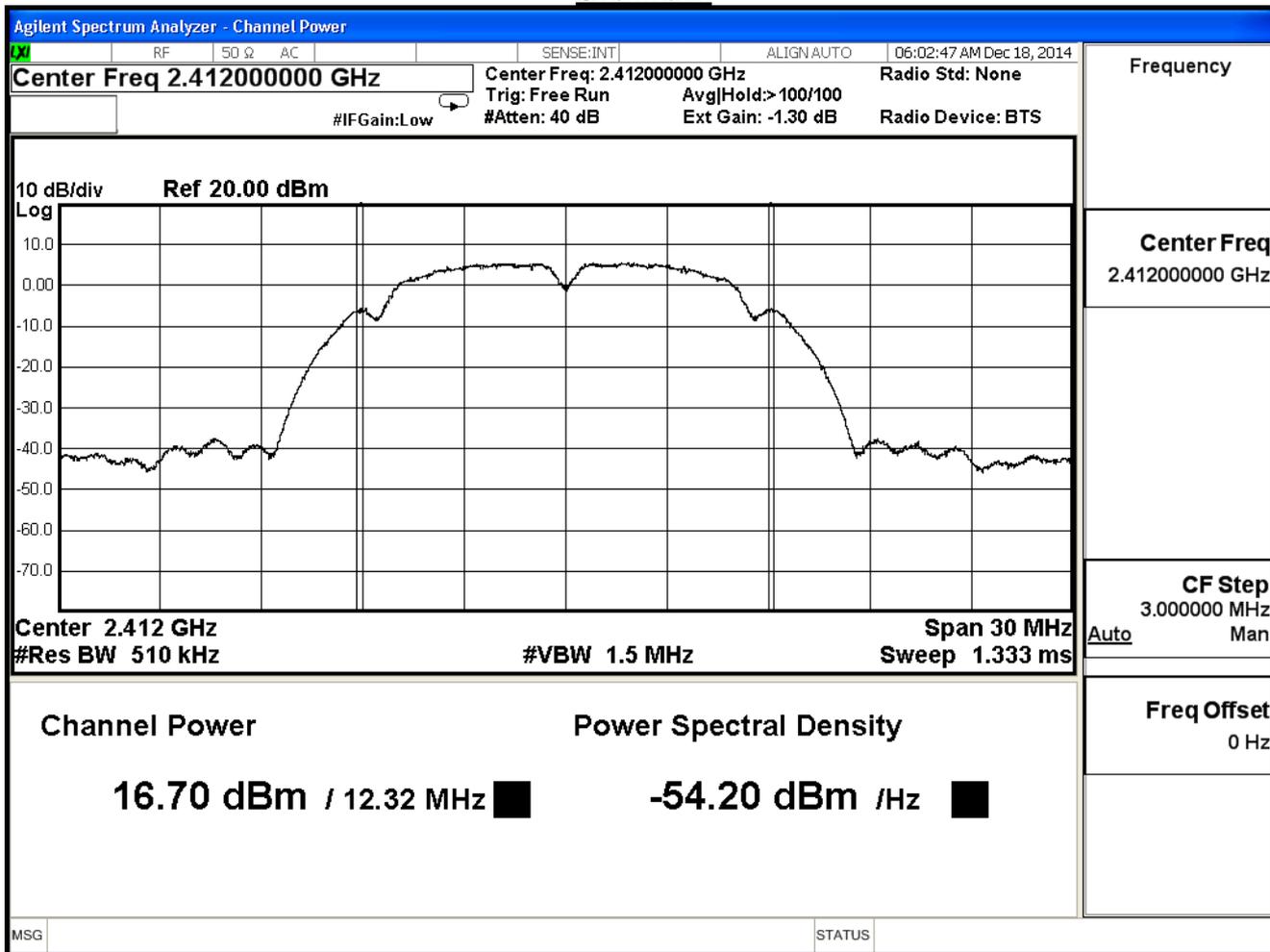
Product	Wireless-N300 Audio Streamer		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2014/12/18	Test Site	SR7

IEEE 802.11b (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	16.700	30	Pass
6	2437	16.990	30	Pass
11	2462	16.160	30	Pass

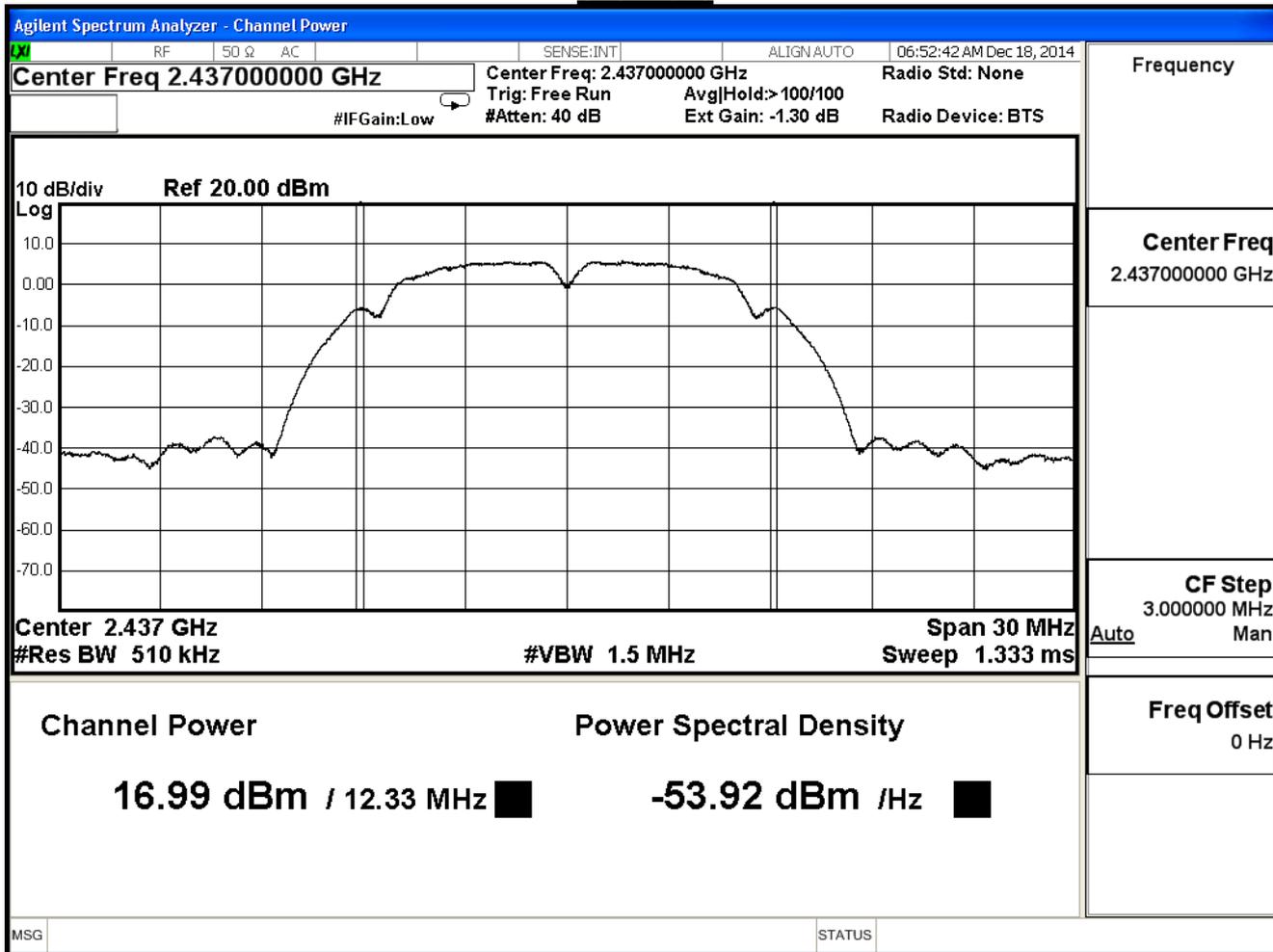
The worst emission of data rate is 1Mbps.

Peak Power Output (dBm)						
Channel No	Frequency (MHz)	Data Rate (Mbps)				Required Limit
		1	2	5.5	11	
1	2412	16.70	--	--	--	1 Watt=30dBm
6	2437	16.99	16.89	16.77	16.55	1 Watt=30dBm
11	2462	16.16	--	--	--	1 Watt=30dBm

Channel 1



Channel 6



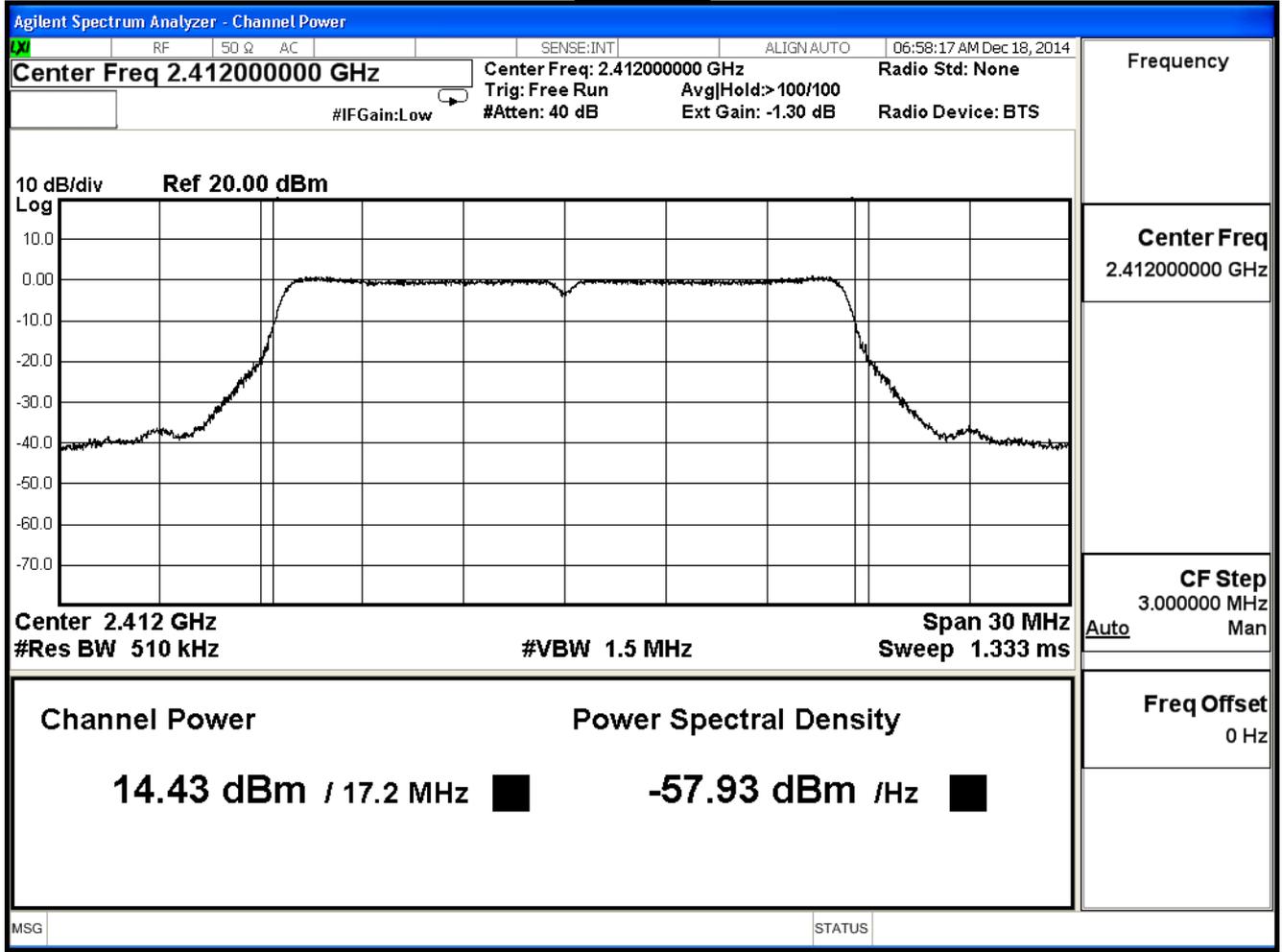
Product	Wireless-N300 Audio Streamer		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2014/12/18	Test Site	SR7

IEEE 802.11g (ANT 0)				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	14.430	30	Pass
6	2437	21.740	30	Pass
11	2462	14.010	30	Pass

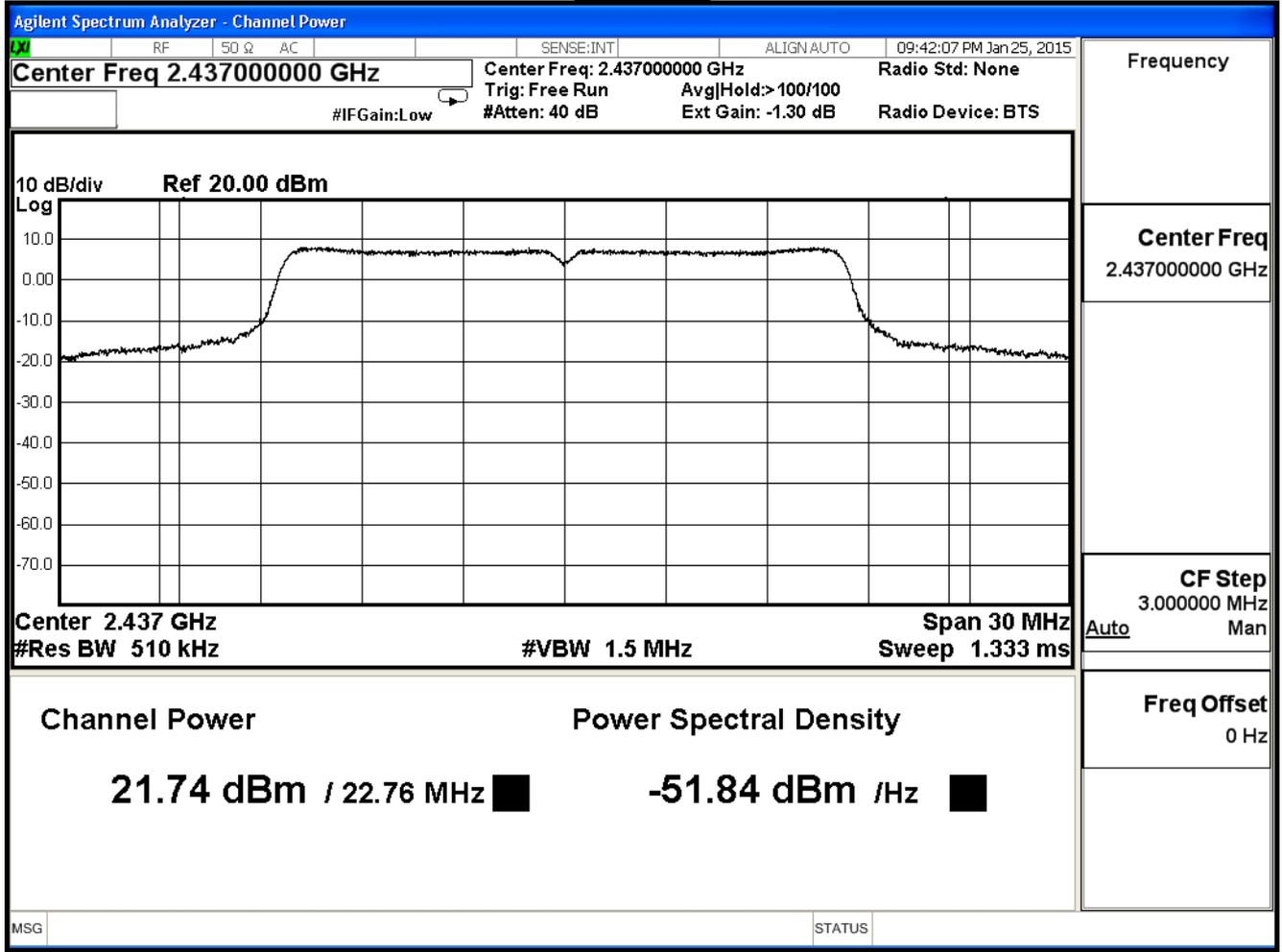
The worst emission of data rate is 6 Mbps.

Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
1	2412	14.43	--	--	--	--	--	--	1 Watt=30dBm
6	2437	21.74	21.64	21.53	21.27	21.03	20.92	20.68	1 Watt=30dBm
11	2462	14.01	--	--	--	--	--	--	1 Watt=30dBm

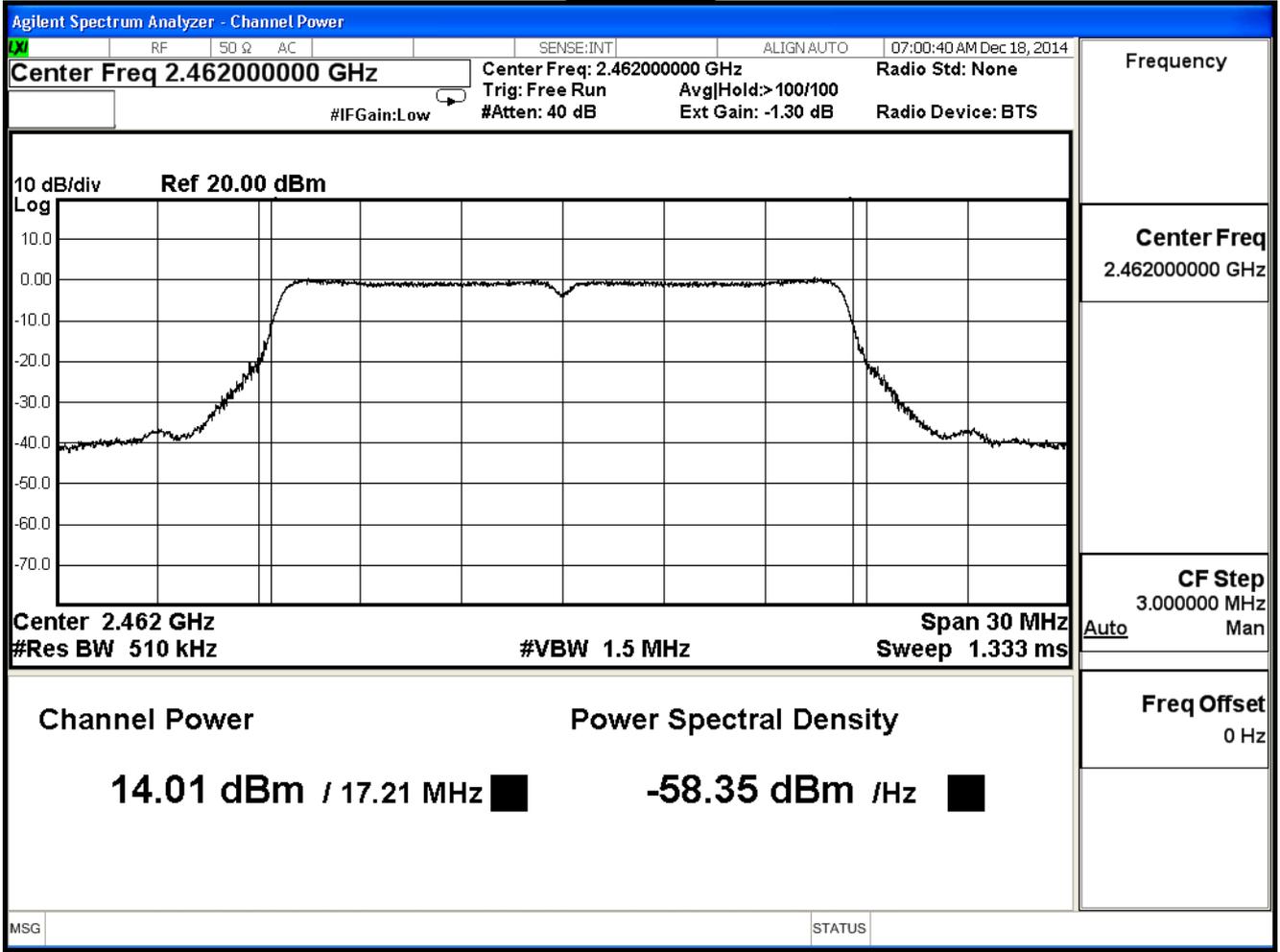
Channel 1



Channel 6



Channel 11



Product	Wireless-N300 Audio Streamer		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2014/12/18	Test Site	SR7

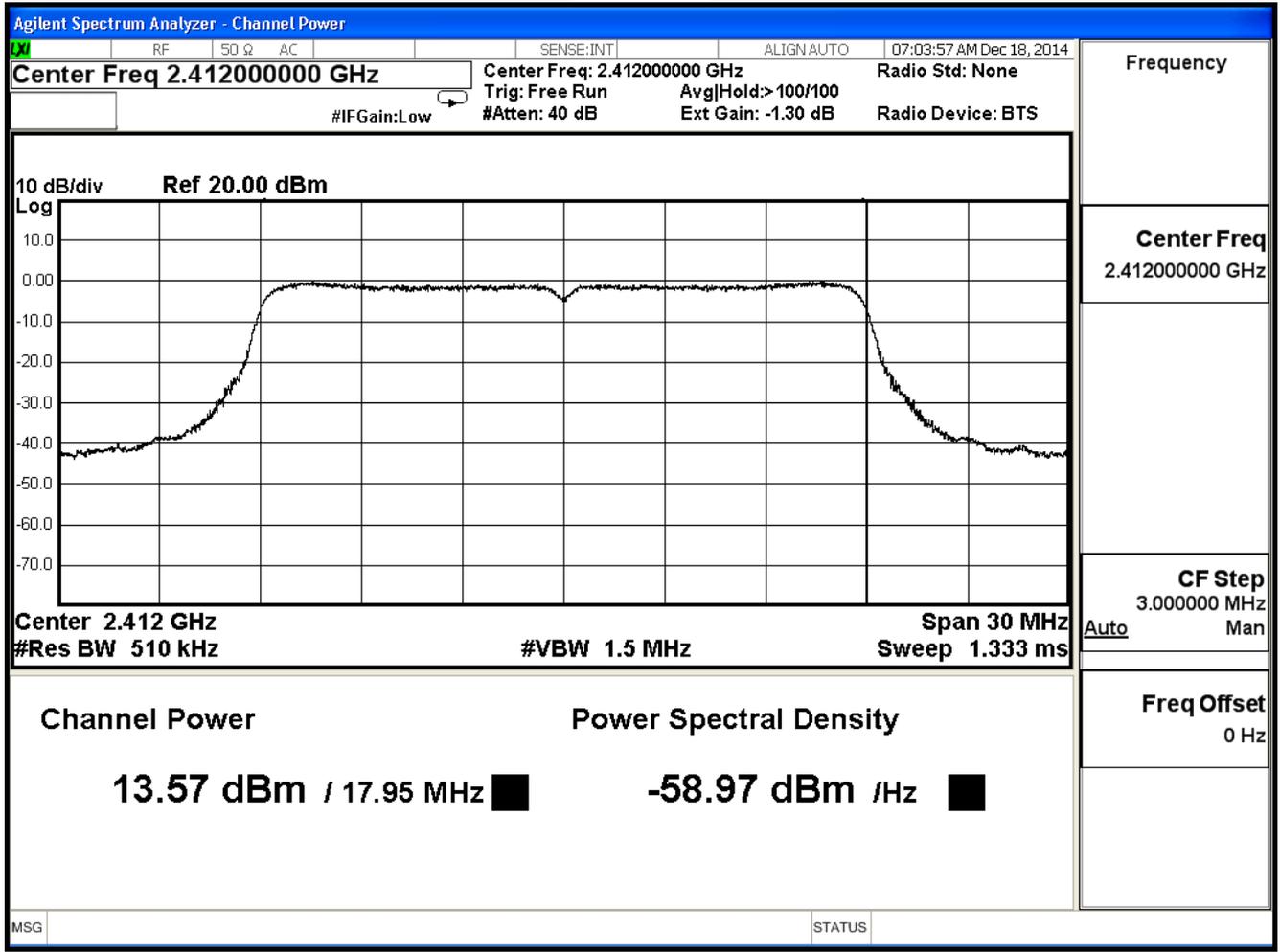
IEEE 802.11n 20MHz (ANT 0)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	13.57	30	Pass
6	2437	22.43	30	Pass
11	2462	13.44	30	Pass

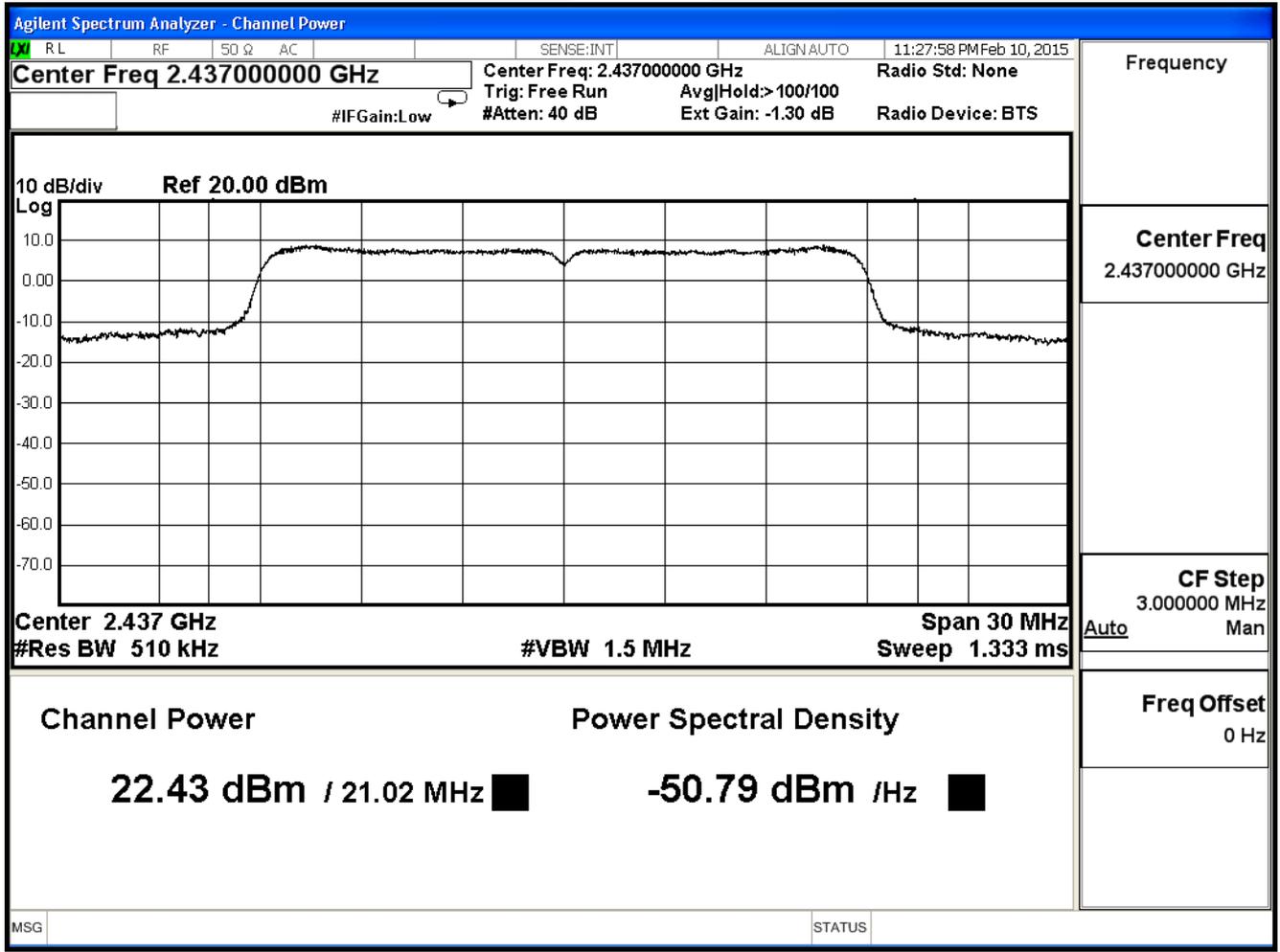
The worst emission of data rate is 13 Mbps.

		Peak Power Output (dBm)								Required Limit
MCS Index		8	9	10	11	12	13	14	15	
Channel No	Frequency (MHz)	Data Rate								
		13	26	39	52	78	104	117	130	
1	2412	13.57	--	--	--	--	--	--	--	1Watt=30dBm
6	2437	22.43	22.19	21.99	21.77	21.51	21.27	21.03	20.92	1Watt=30dBm
11	2462	13.44	--	--	--	--	--	--	--	1Watt=30dBm

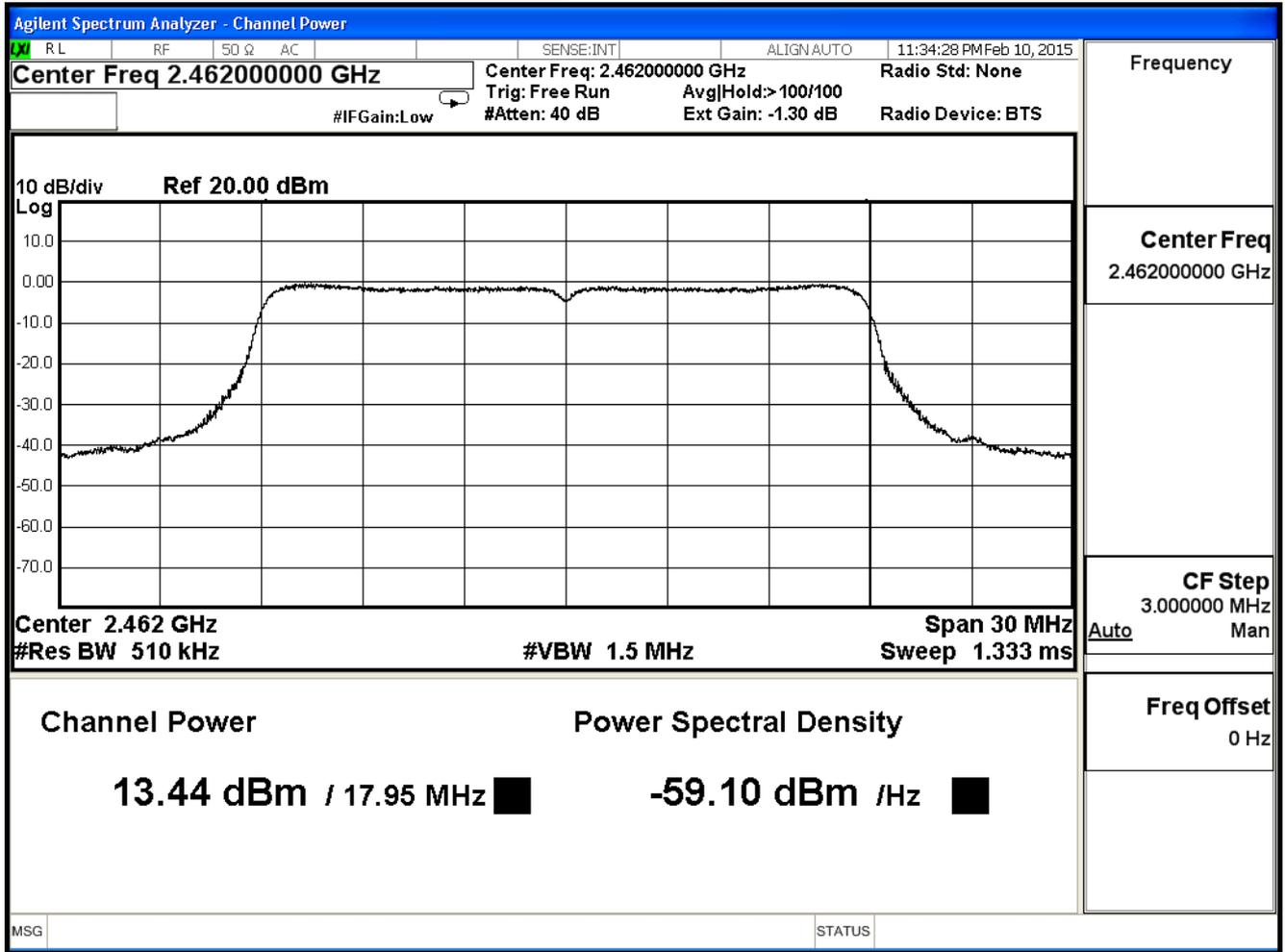
Channel 1



Channel 6



Channel 11



Product	Wireless-N300 Audio Streamer		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2014/12/18	Test Site	SR7

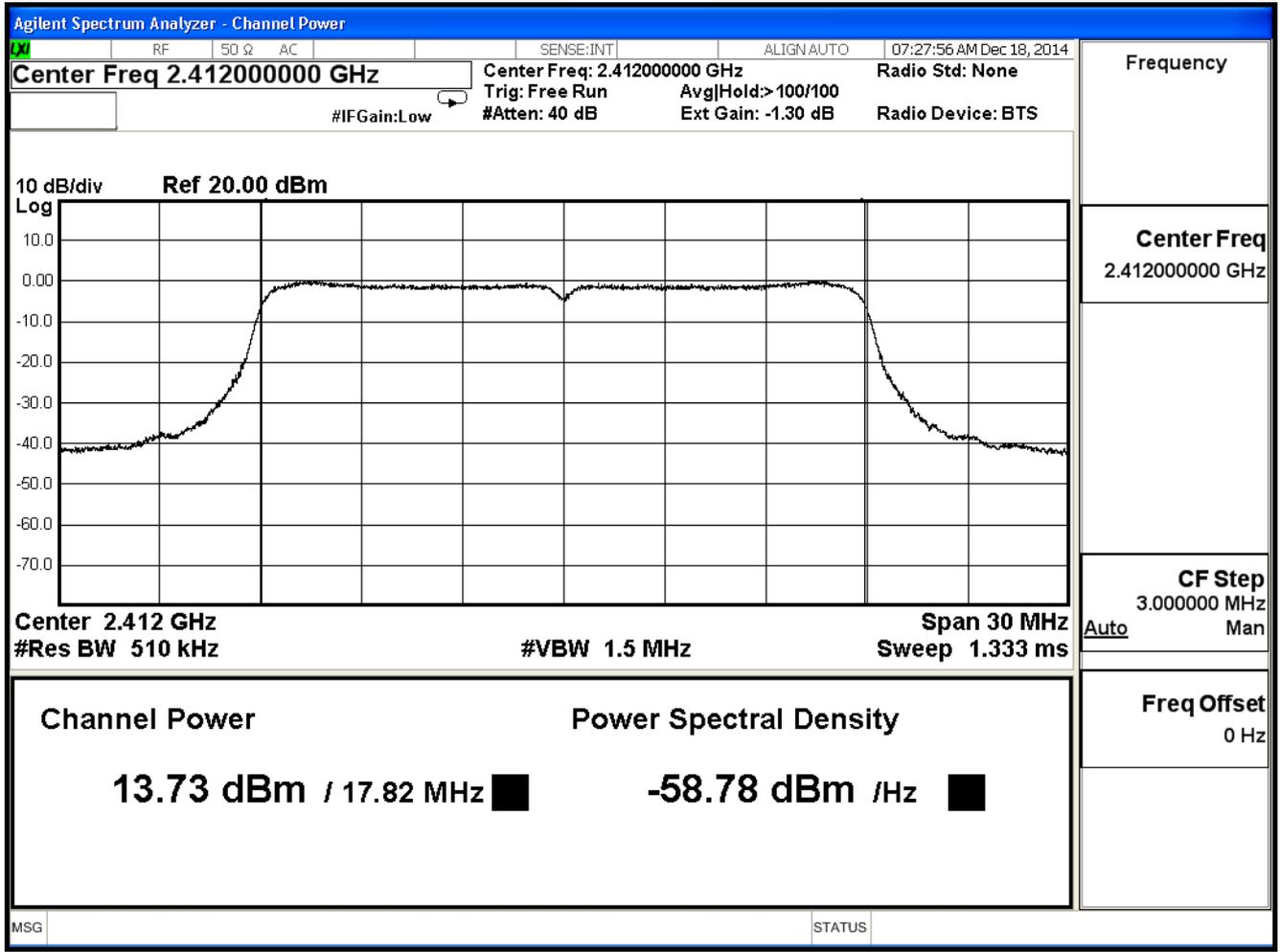
IEEE 802.11n 20MHz (ANT 1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	13.730	30	Pass
6	2437	22.030	30	Pass
11	2462	13.270	30	Pass

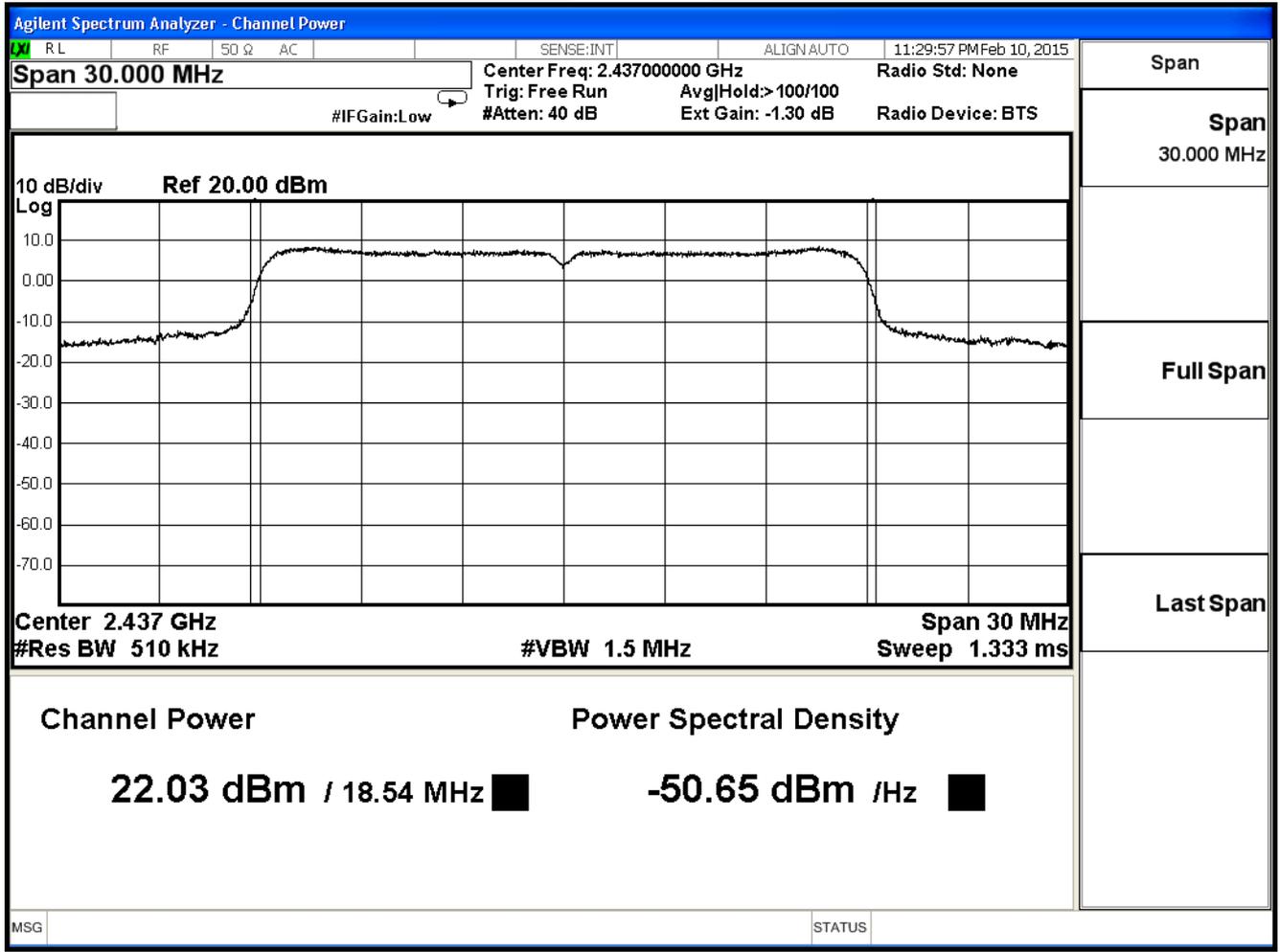
The worst emission of data rate is 13 Mbps.

		Peak Power Output (dBm)								Required Limit
MCS Index		8	9	10	11	12	13	14	15	
Channel No	Frequency (MHz)	Data Rate								
		13	26	39	52	78	104	117	130	
1	2412	13.73	--	--	--	--	--	--	--	1Watt=30dBm
6	2437	22.03	22.43	22.31	22.21	21.97	21.73	21.61	21.35	1Watt=30dBm
11	2462	13.27	--	--	--	--	--	--	--	1Watt=30dBm

Channel 1

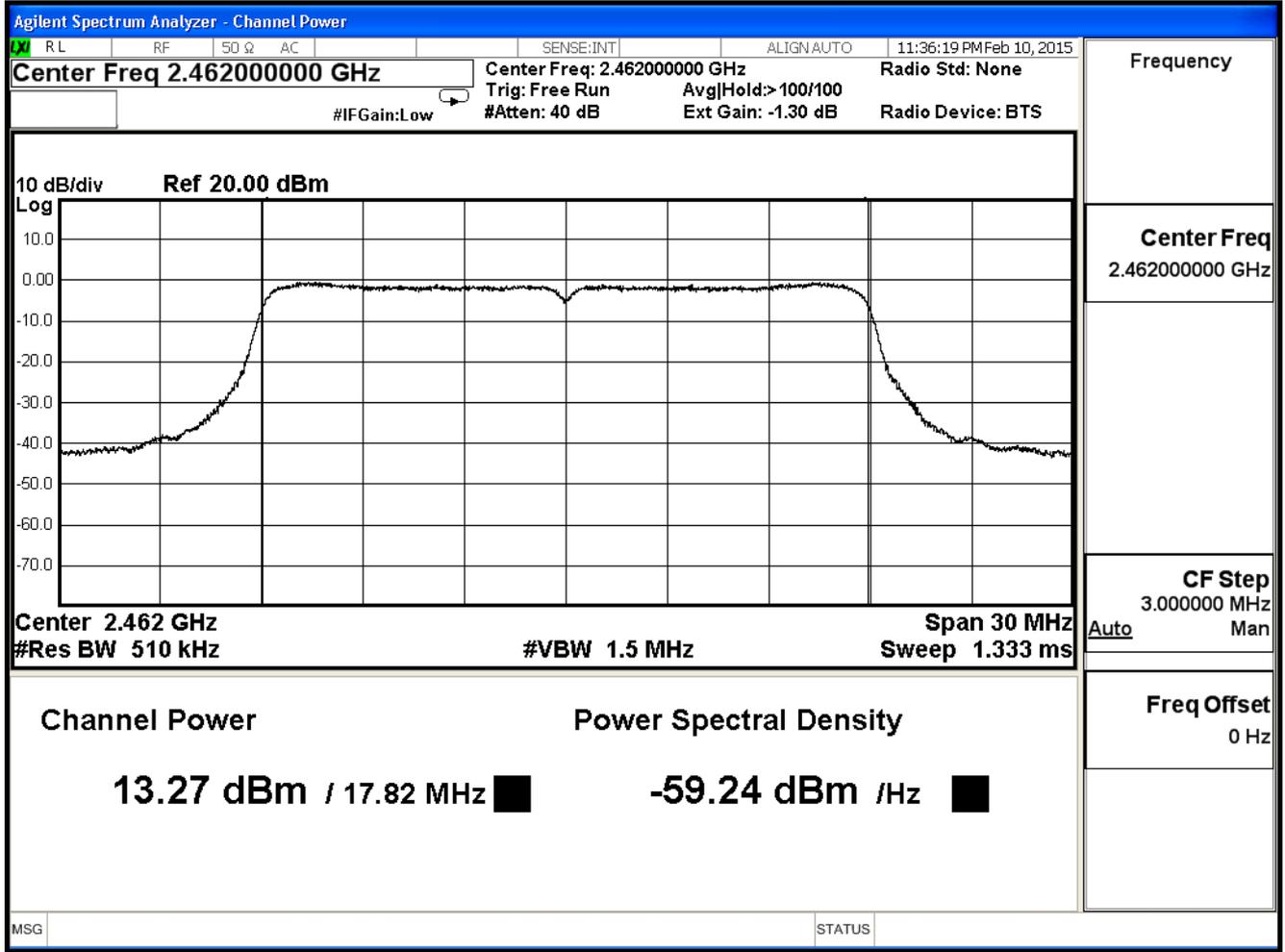


Channel 6



Span
Span 30.000 MHz
Full Span
Last Span

Channel 11



Product	Wireless-N300 Audio Streamer		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2014/12/18	Test Site	SR7

IEEE 802.11n 20MHz (ANT 0+1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	16.661	30	Pass
6	2437	25.245	30	Pass
11	2462	16.366	30	Pass

The worst emission of data rate is 13 Mbps.

Peak Power Output (dBm)										
MCS Index		8	9	10	11	12	13	14	15	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13	26	39	52	78	104	117	130	
1	2412	16.66	--	--	--	--	--	--	--	1Watt=30dBm
6	2437	25.25	25.32	25.16	25.01	24.76	24.52	24.34	24.15	1Watt=30dBm
11	2462	16.37	--	--	--	--	--	--	--	1Watt=30dBm

Product	Wireless-N300 Audio Streamer		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2014/12/18	Test Site	SR7

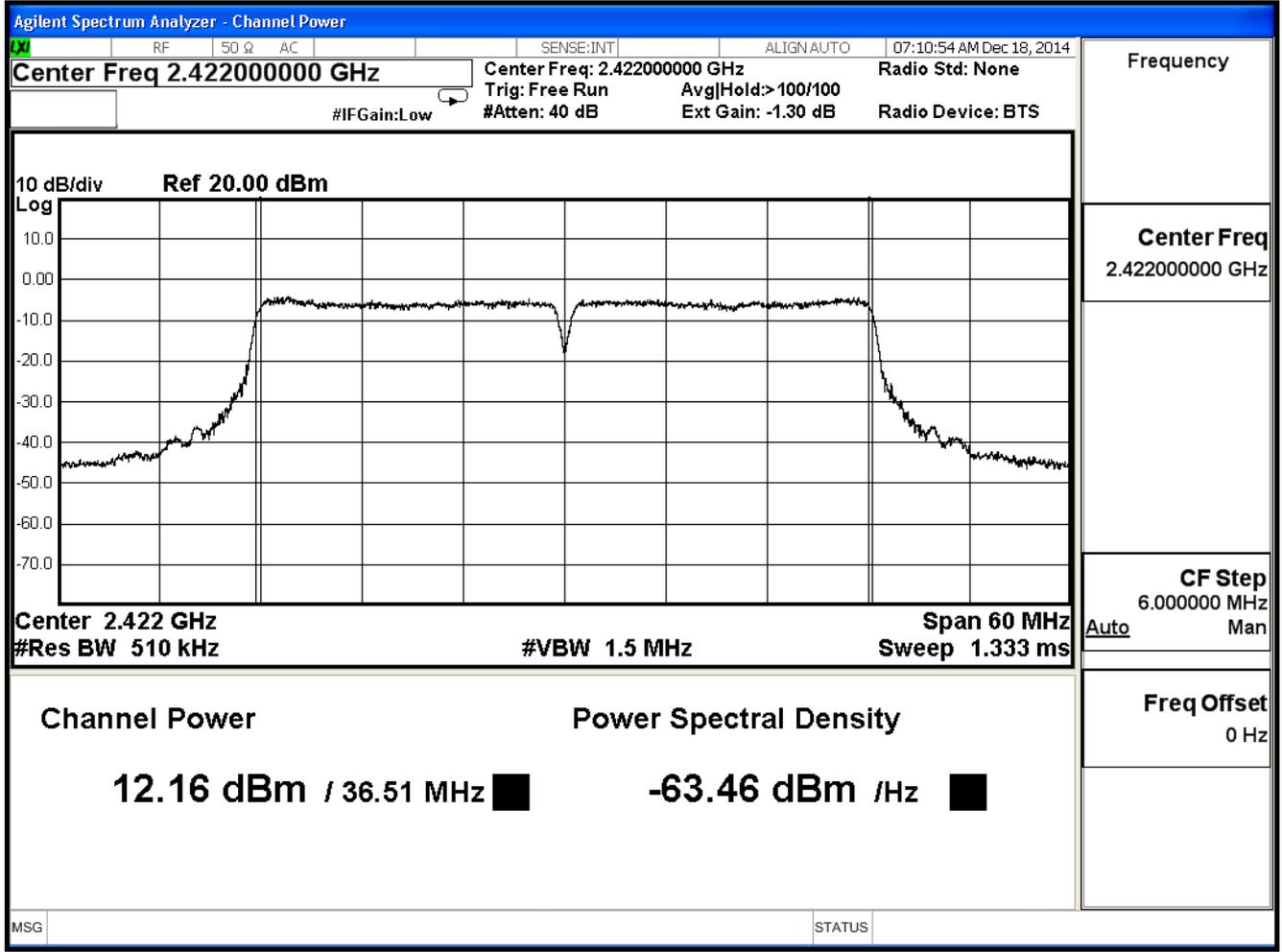
IEEE802.11n 40MHz (ANT 0)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	12.160	30	Pass
6	2437	14.850	30	Pass
9	2452	12.500	30	Pass

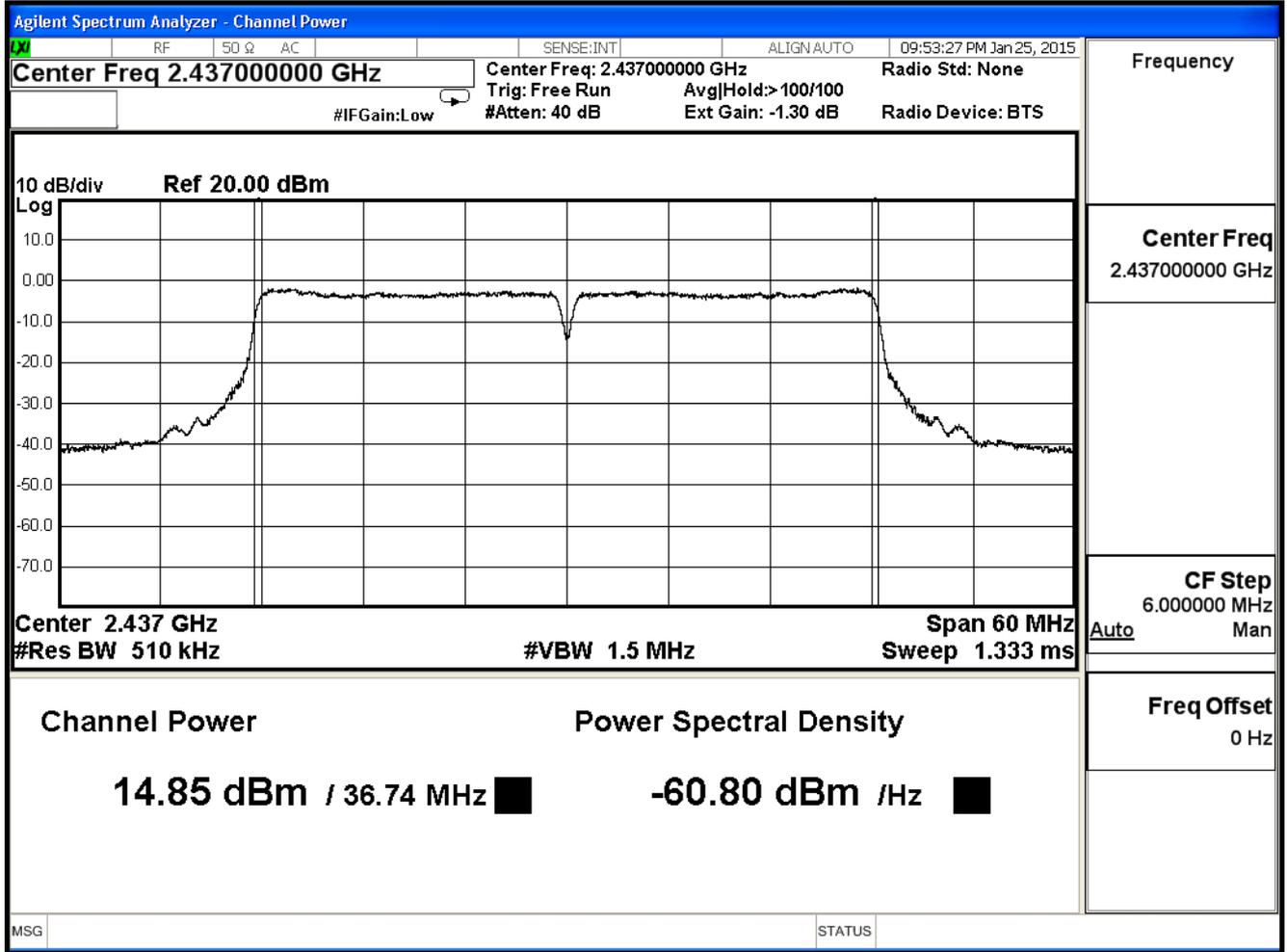
The worst emission of data rate is 27 Mbps.

Peak Power Output (dBm)										
MCS Index		8	9	10	11	12	13	14	15	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		27	54	81	108	162	216	243	270	
3	2422	12.16	--	--	--	--	--	--	--	1Watt=30dBm
6	2437	14.85	14.65	14.43	14.23	14.03	13.91	13.65	13.41	1Watt=30dBm
9	2452	12.50	--	--	--	--	--	--	--	1Watt=30dBm

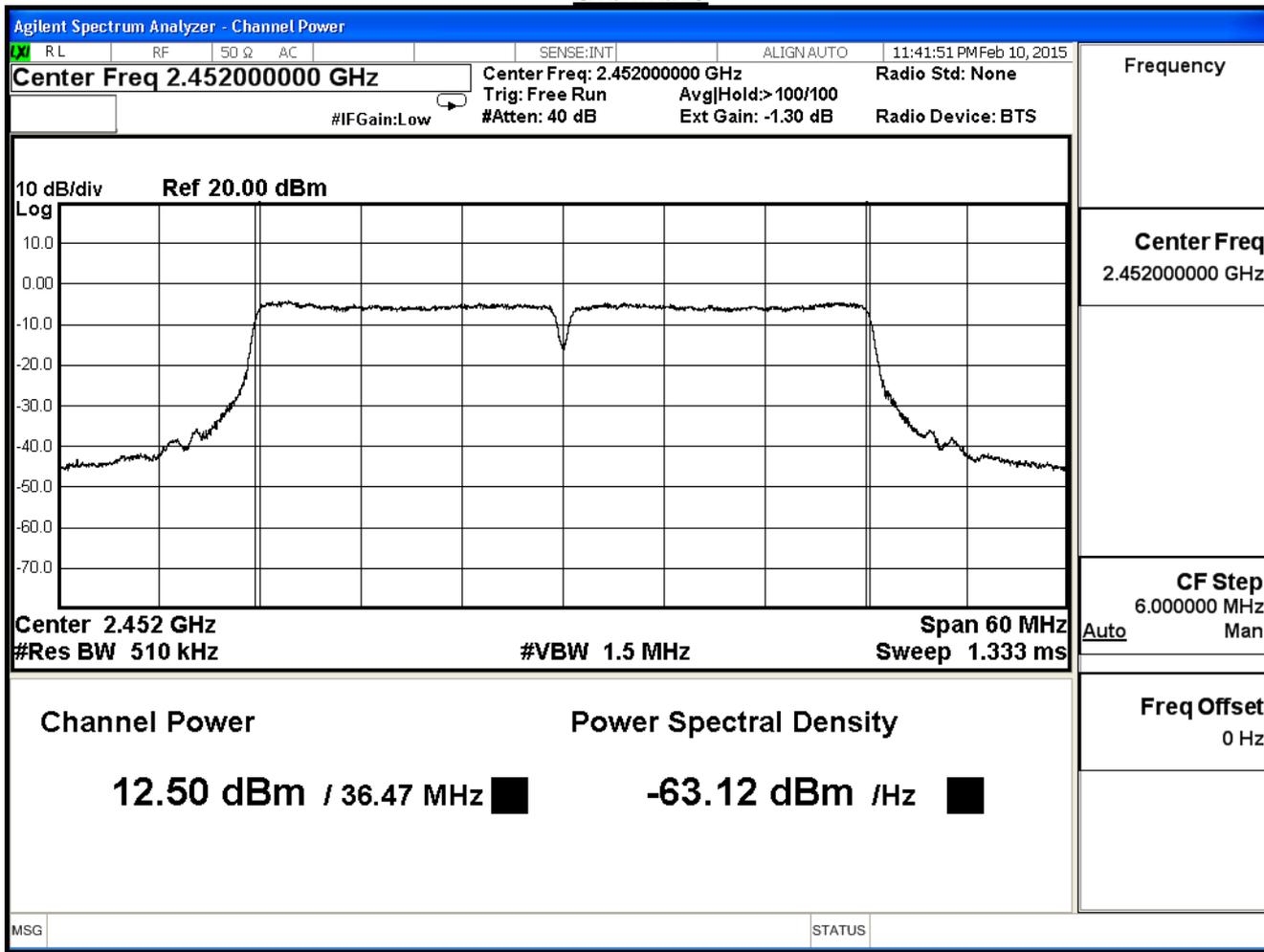
Channel 3



Channel 6



Channel 9



Product	Wireless-N300 Audio Streamer		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2014/12/18	Test Site	SR7

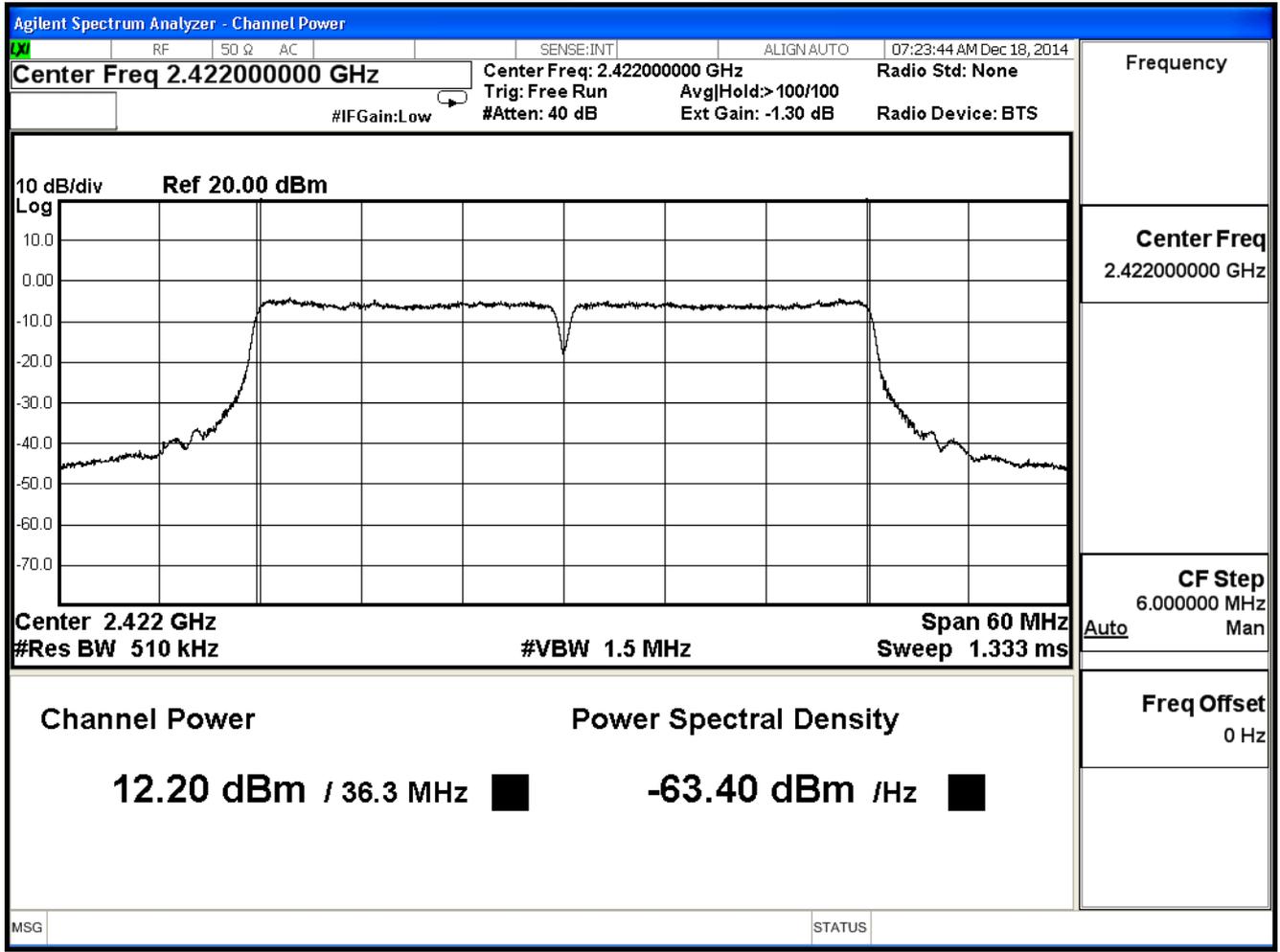
IEEE802.11n 40MHz (ANT 1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	12.200	30	Pass
6	2437	14.870	30	Pass
9	2452	12.390	30	Pass

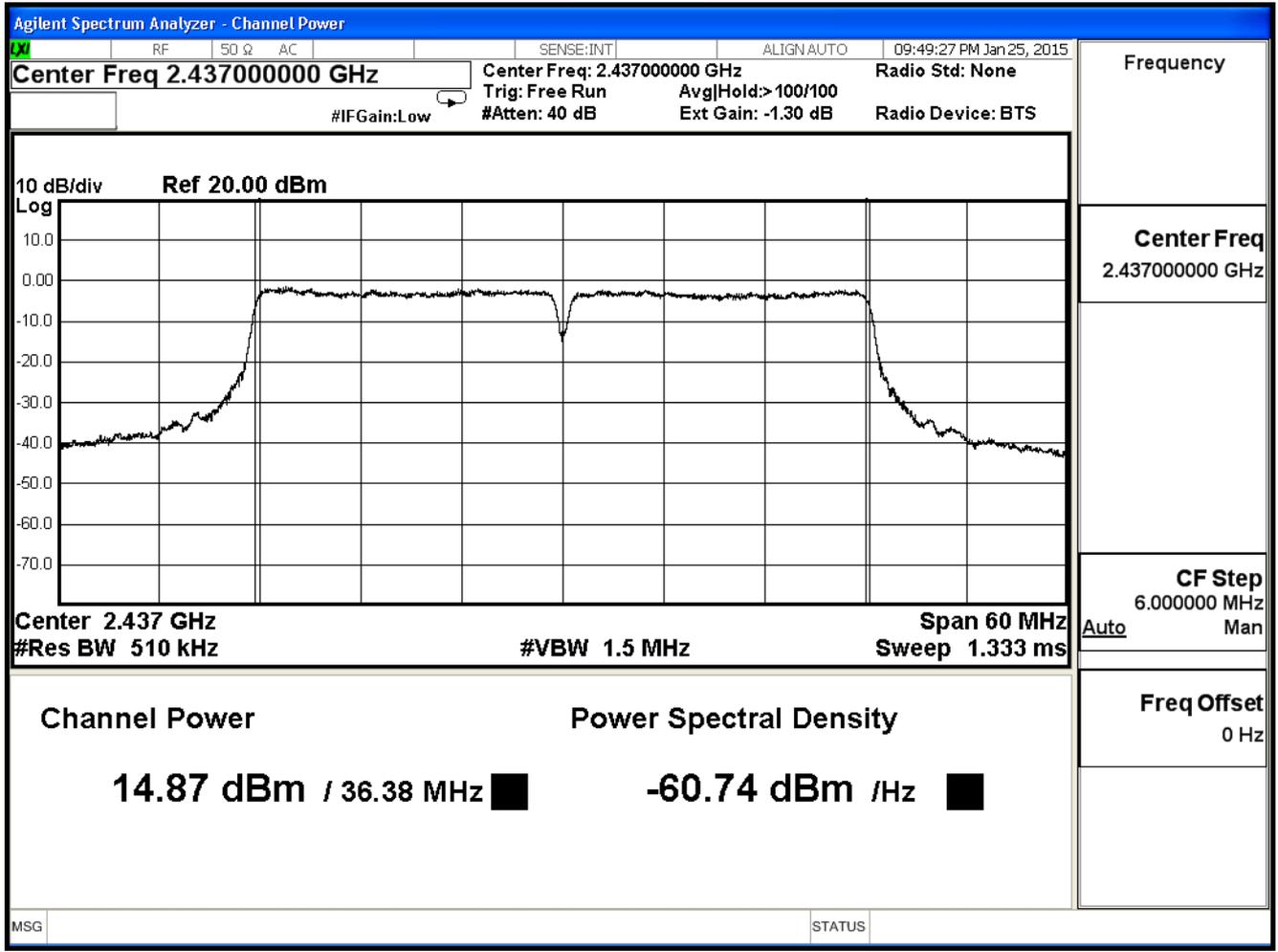
The worst emission of data rate is 27 Mbps.

		Peak Power Output (dBm)								Required Limit
MCS Index		8	9	10	11	12	13	14	15	
Channel No	Frequency (MHz)	Data Rate								
		27	54	81	108	162	216	243	270	
3	2422	12.20	--	--	--	--	--	--	--	1Watt=30dBm
6	2437	14.87	14.67	14.57	14.44	14.24	14.00	13.88	13.76	1Watt=30dBm
9	2452	12.39	--	--	--	--	--	--	--	1Watt=30dBm

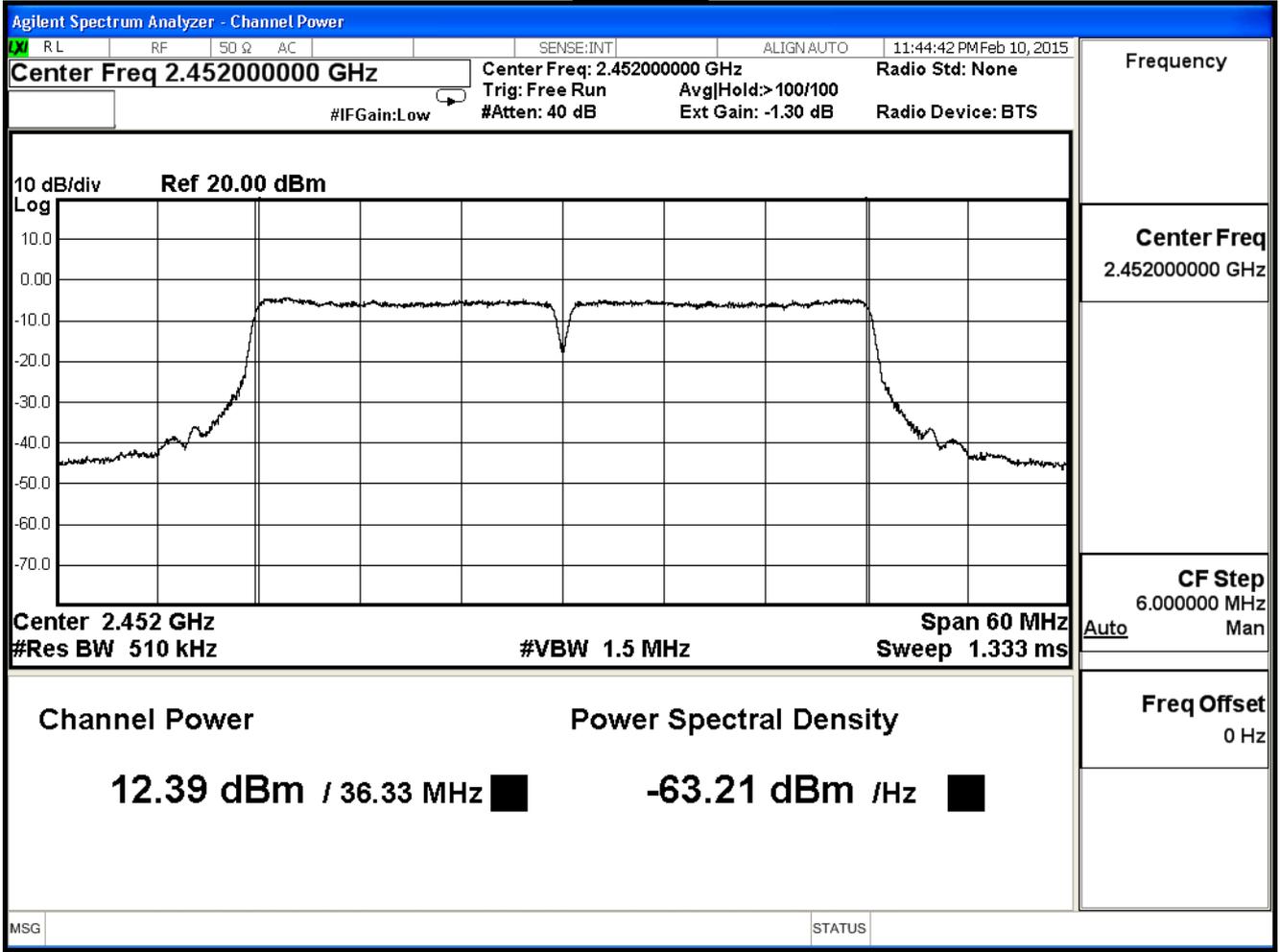
Channel 3



Channel 6



Channel 9



Product	Wireless-N300 Audio Streamer		
Test Item	Peak Power Output		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2014/12/18	Test Site	SR7

IEEE802.11n 40MHz (ANT 0+1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	15.190	30	Pass
6	2437	17.870	30	Pass
9	2452	15.450	30	Pass

The worst emission of data rate is 27 Mbps.

		Peak Power Output (dBm)								Required Limit
MCS Index		8	9	10	11	12	13	14	15	
Channel No	Frequency (MHz)	Data Rate								
		27	54	81	108	162	216	243	270	
3	2422	15.19	--	--	--	--	--	--	--	1Watt=30dBm
6	2437	17.87	17.67	17.51	17.35	17.15	16.97	16.78	16.60	1Watt=30dBm
9	2452	15.46	--	--	--	--	--	--	--	1Watt=30dBm

4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the test:

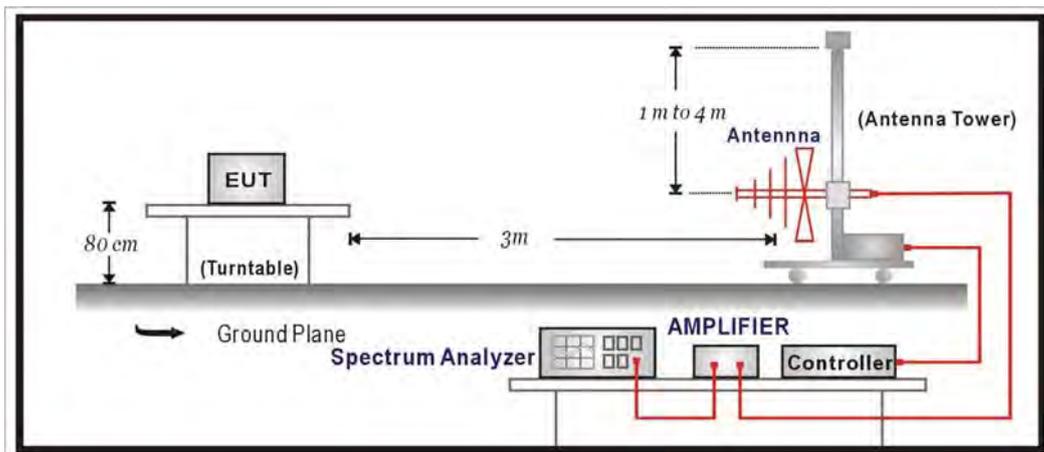
Radiated Emission / CB1

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895(CB1)	2015/08/14
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120	D743	2015/02/12
Pre-Amplifier	Quietek	AMF-4D.	888003	2015/06/02
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2015/02/06
Spectrum Analyzer	Agilent	E4440A	MY46187335	2016/01/07
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2015/02/10

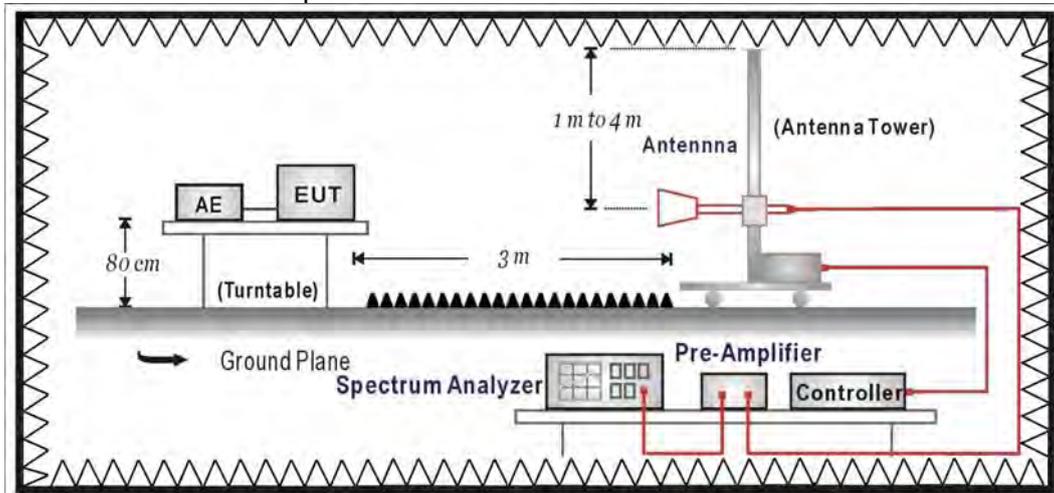
Note: All equipments that need to calibrate are with calibration period of 1 year.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limits

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

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

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

4.4. Test Procedure

The EUT was setup according to ANSI C63.10 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. 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 on radiated measurement.

On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit. The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2014

4.6. Uncertainty

The measurement uncertainty

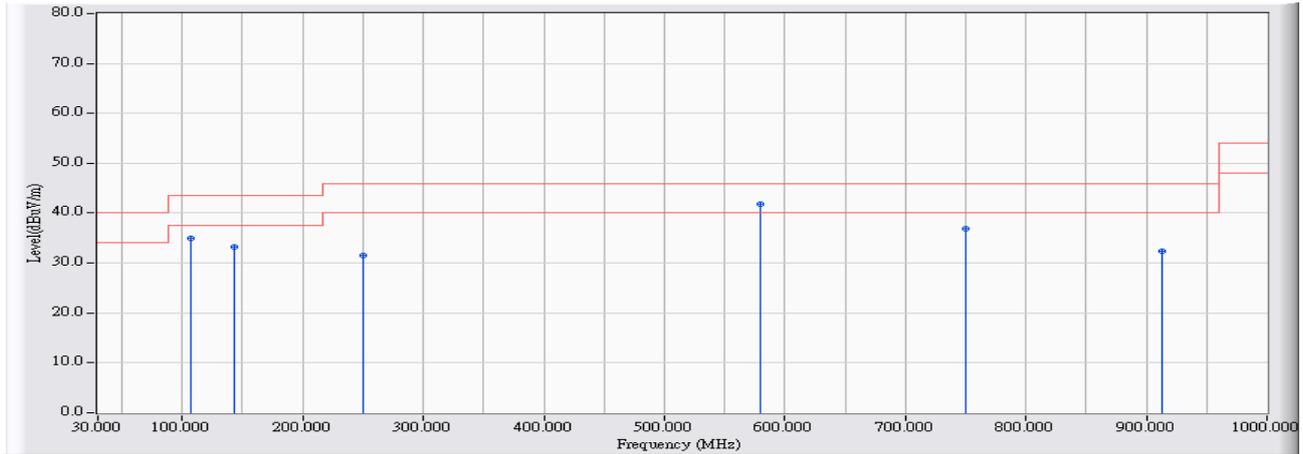
30MHz~1GHz as ±3.43dB

1GHz~26.5Ghz as ±3.65dB

4.7. Test Result

30MHz-1GHz Spurious

Site : CB1	Time : 2015/01/26 - 14:23
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11b-2437MHz

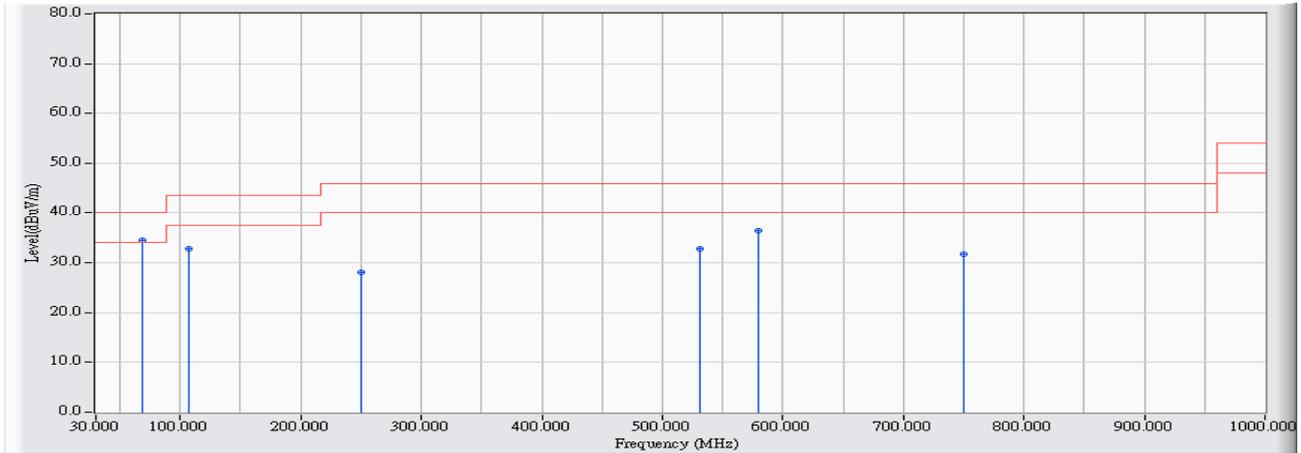


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	106.592	10.165	24.814	34.978	-8.522	43.500	QUASIPeAK
2	142.949	9.985	23.198	33.183	-10.317	43.500	QUASIPeAK
3	249.595	11.849	19.646	31.495	-14.505	46.000	QUASIPeAK
4	* 579.715	17.422	24.344	41.766	-4.234	46.000	QUASIPeAK
5	749.865	18.602	18.199	36.801	-9.199	46.000	QUASIPeAK
6	912.744	19.576	12.777	32.353	-13.647	46.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2015/01/26 - 14:28
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11b-2437MHz

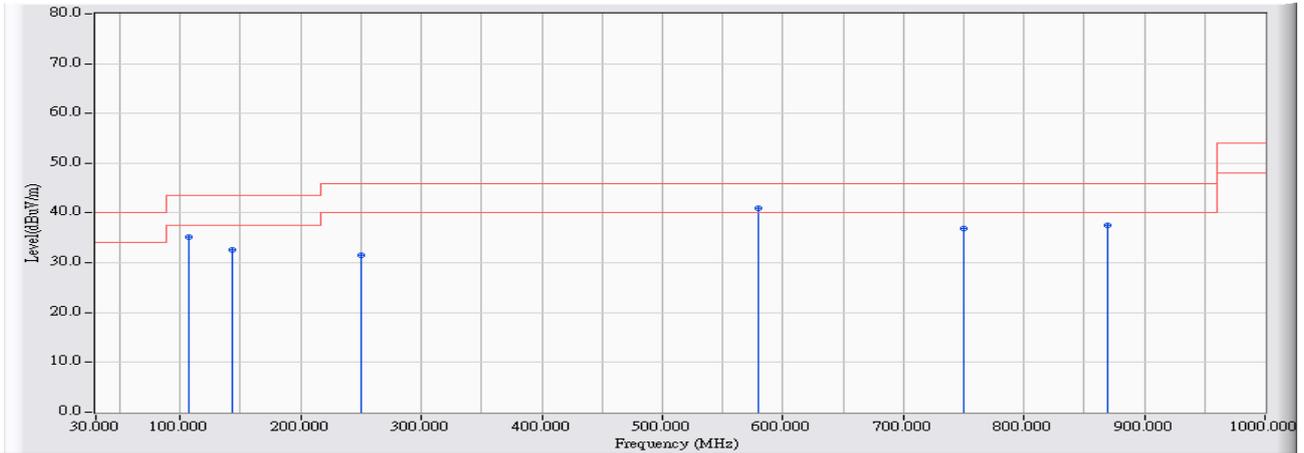


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	68.781	5.555	29.016	34.571	-5.429	40.000	QUASPEAK
2		106.592	10.165	22.552	32.716	-10.784	43.500	QUASPEAK
3		249.595	11.849	16.216	28.065	-17.935	46.000	QUASPEAK
4		531.239	17.276	15.563	32.840	-13.160	46.000	QUASPEAK
5		579.715	17.422	18.997	36.419	-9.581	46.000	QUASPEAK
6		749.865	18.602	13.171	31.773	-14.227	46.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2015/01/26 - 14:33
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11g-2437MHz

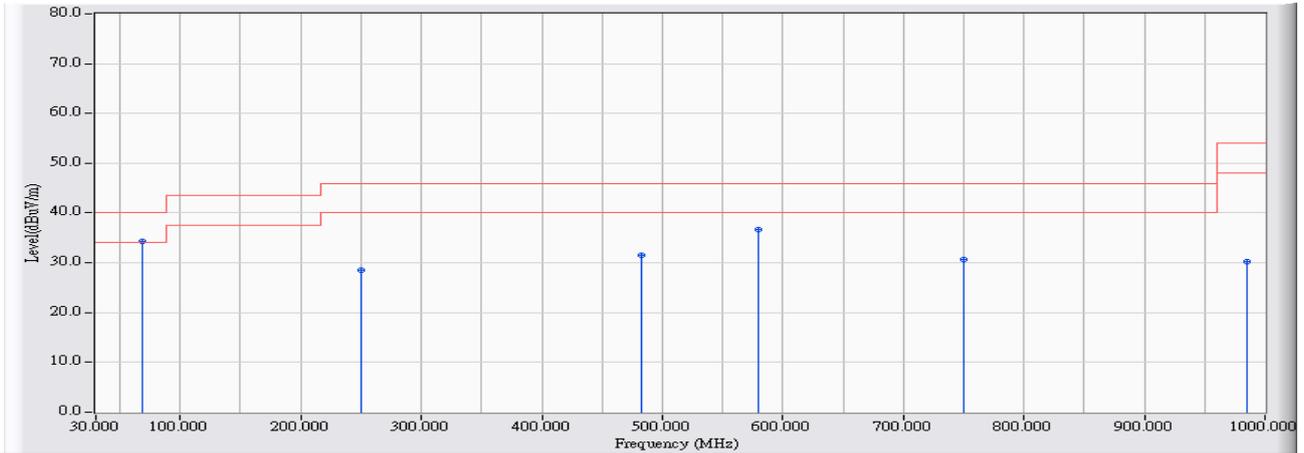


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	106.592	10.165	25.051	35.215	-8.285	43.500	QUASPEAK
2	142.949	9.985	22.657	32.642	-10.858	43.500	QUASPEAK
3	249.595	11.849	19.673	31.522	-14.478	46.000	QUASPEAK
4	* 579.715	17.422	23.546	40.968	-5.032	46.000	QUASPEAK
5	749.865	18.602	18.280	36.882	-9.118	46.000	QUASPEAK
6	869.600	19.393	18.039	37.433	-8.567	46.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2015/01/26 - 14:38
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11g-2437MHz

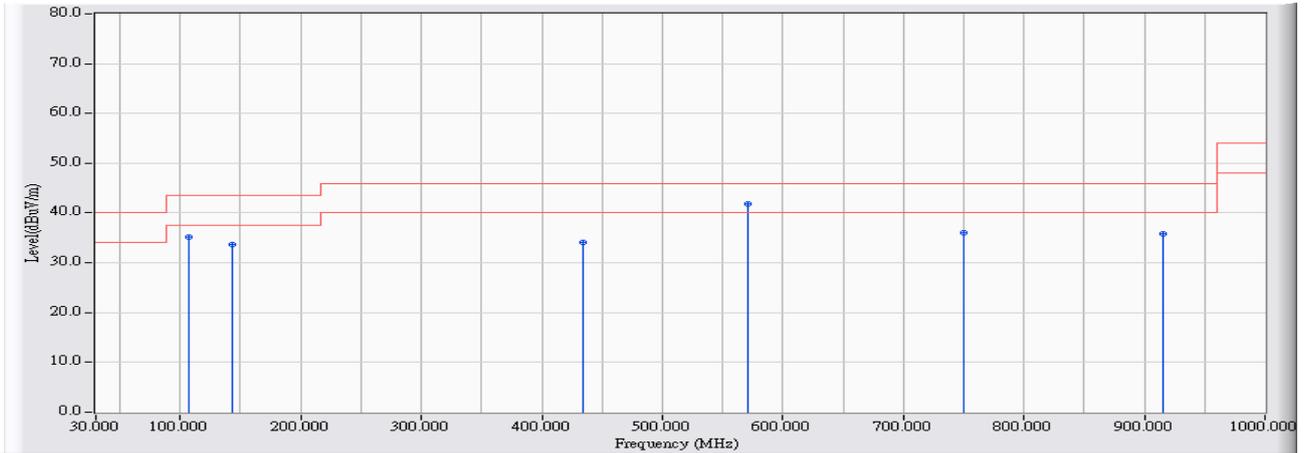


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	68.781	5.555	28.806	34.361	-5.639	40.000	QUASPEAK
2		249.595	11.849	16.716	28.565	-17.435	46.000	QUASPEAK
3		483.248	16.843	14.600	31.443	-14.557	46.000	QUASPEAK
4		579.715	17.422	19.217	36.639	-9.361	46.000	QUASPEAK
5		749.865	18.602	11.983	30.585	-15.415	46.000	QUASPEAK
6		984.973	20.166	10.087	30.253	-23.747	54.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2015/01/26 - 14:46
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11n20-2437MHz

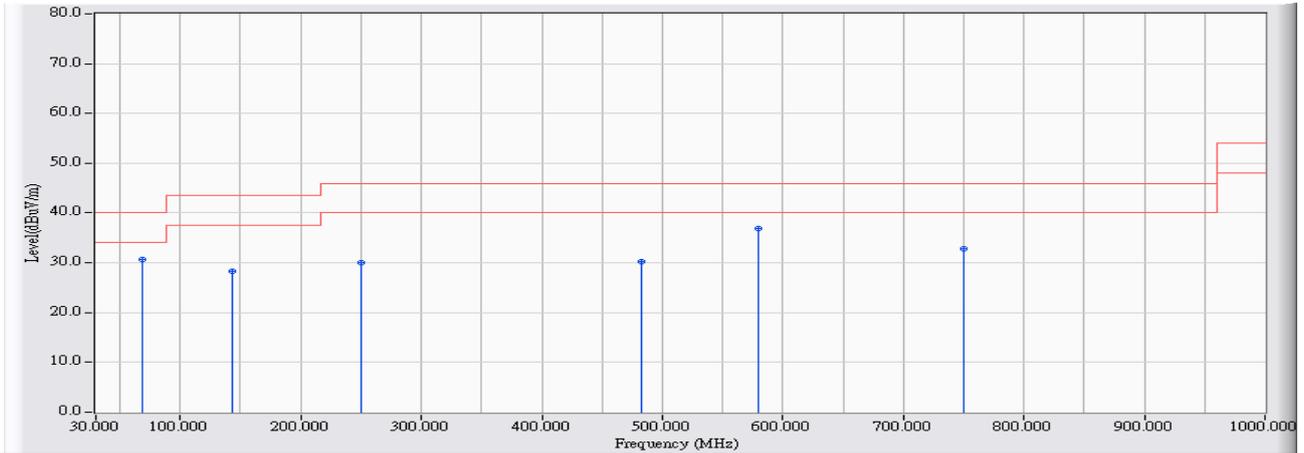


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	106.592	10.165	25.109	35.273	-8.227	43.500	QUASPEAK
2	142.949	9.985	23.655	33.640	-9.860	43.500	QUASPEAK
3	433.803	15.840	18.198	34.038	-11.962	46.000	QUASPEAK
4	* 571.474	17.398	24.484	41.882	-4.118	46.000	QUASPEAK
5	749.865	18.602	17.359	35.961	-10.039	46.000	QUASPEAK
6	915.652	19.600	16.143	35.743	-10.257	46.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2015/01/26 - 14:51
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11n20-2437MHz

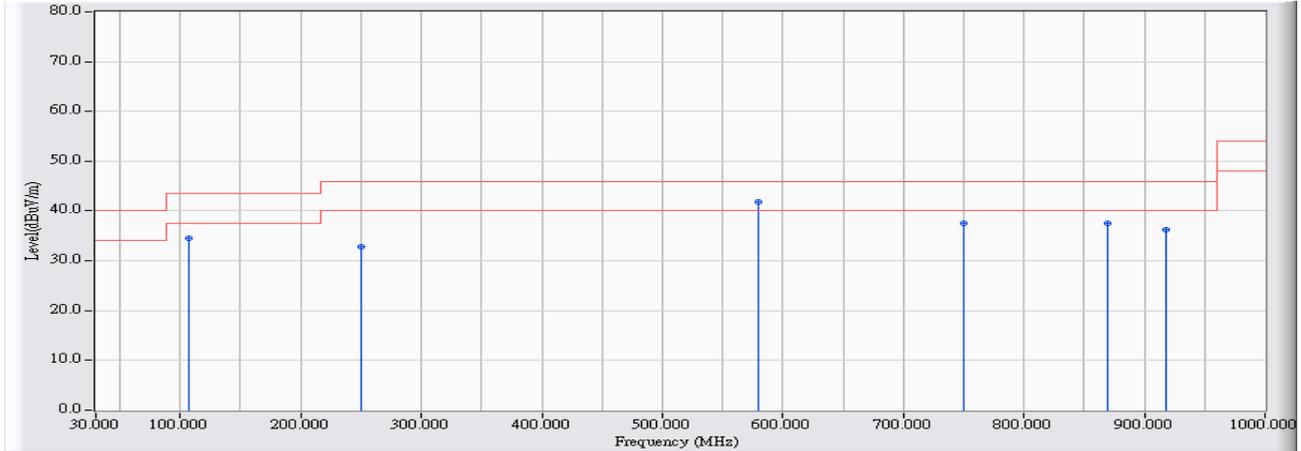


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	68.781	5.555	25.051	30.606	-9.394	40.000	QUASPEAK
2	142.949	9.985	18.372	28.357	-15.143	43.500	QUASPEAK
3	249.595	11.849	18.197	30.046	-15.954	46.000	QUASPEAK
4	483.248	16.843	13.477	30.320	-15.680	46.000	QUASPEAK
5	* 579.715	17.422	19.513	36.935	-9.065	46.000	QUASPEAK
6	749.865	18.602	14.260	32.862	-13.138	46.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2015/01/26 - 14:55
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11n40-2437MHz

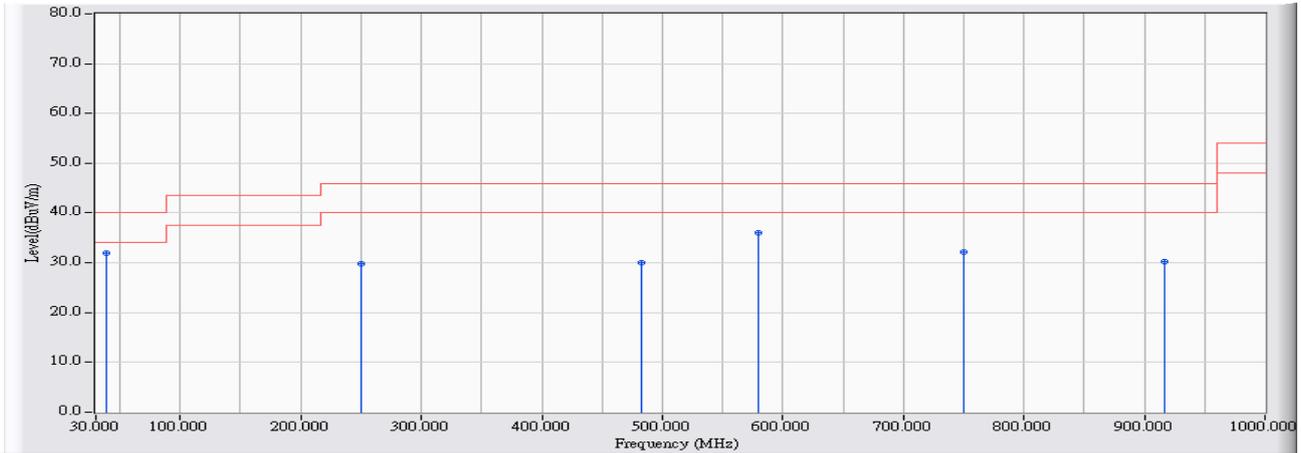


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	106.592	10.165	24.305	34.469	-9.031	43.500	QUASPEAK
2	249.595	11.849	20.892	32.741	-13.259	46.000	QUASPEAK
3	* 579.715	17.422	24.409	41.831	-4.169	46.000	QUASPEAK
4	749.865	18.602	18.968	37.570	-8.430	46.000	QUASPEAK
5	869.600	19.393	18.052	37.446	-8.554	46.000	QUASPEAK
6	918.076	19.619	16.701	36.321	-9.679	46.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	Time : 2015/01/26 - 14:59
Limit : FCC_CLASS_B_03M_QP	Margin : 6
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11n40-2437MHz



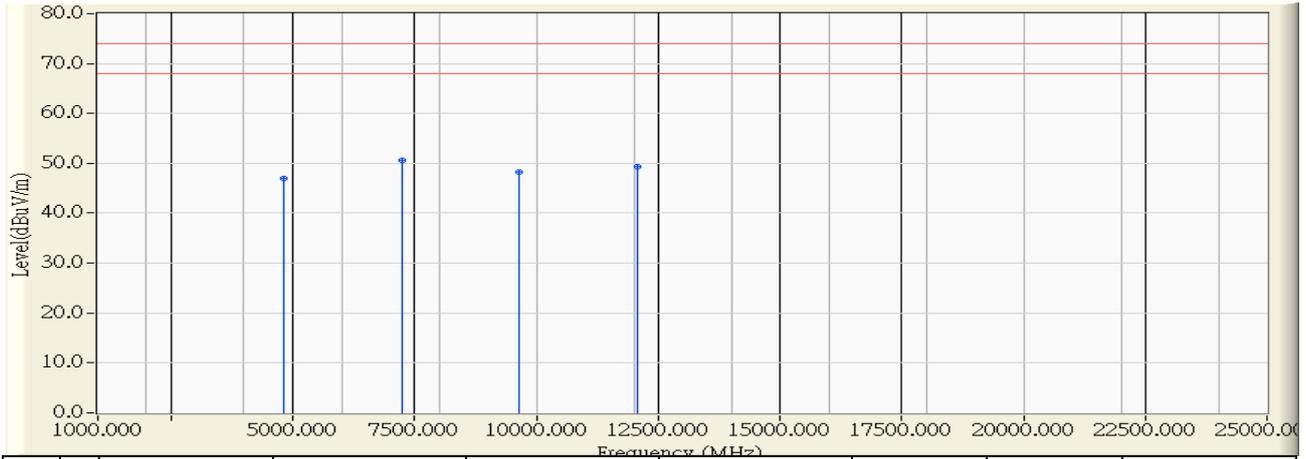
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	38.726	11.115	20.741	31.856	-8.144	40.000	QUASPEAK
2		249.595	11.849	18.034	29.883	-16.117	46.000	QUASPEAK
3		483.248	16.843	13.142	29.985	-16.015	46.000	QUASPEAK
4		579.715	17.422	18.583	36.005	-9.995	46.000	QUASPEAK
5		749.865	18.602	13.526	32.128	-13.872	46.000	QUASPEAK
6		917.106	19.612	10.648	30.260	-15.740	46.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. “ * ”, means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Above 1GHz Spurious

Site : CB1	Time : 2015/01/23 - 15:42
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11b-2412MHz

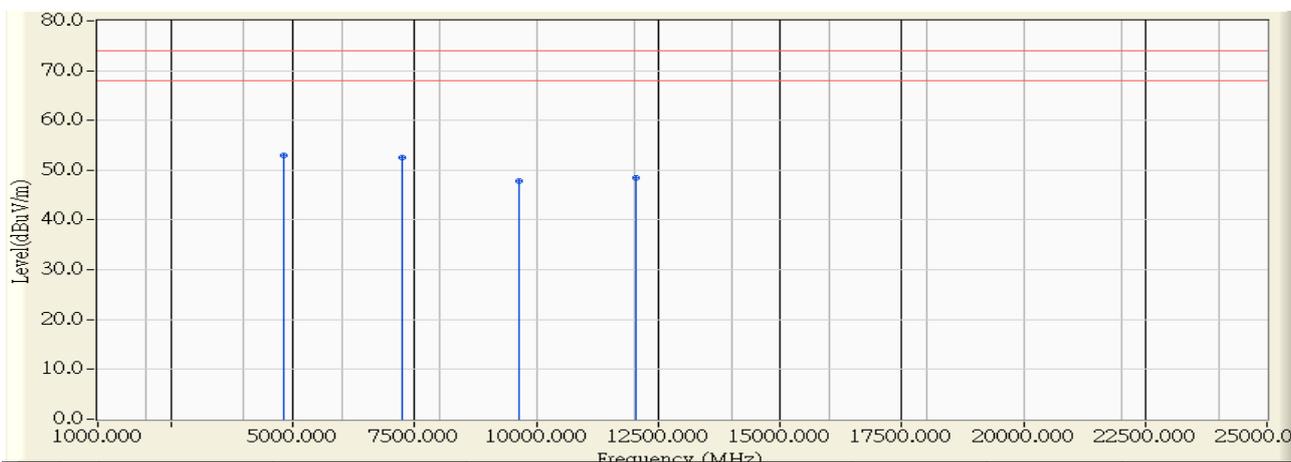


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	4824.010	-0.534	47.500	46.966	-27.034	74.000	PEAK
2	* 7235.010	5.516	45.000	50.517	-23.483	74.000	PEAK
3	9655.490	9.495	38.810	48.304	-25.696	74.000	PEAK
4	12068.670	11.096	38.230	49.326	-24.674	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 15:49
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11b-2412MHz

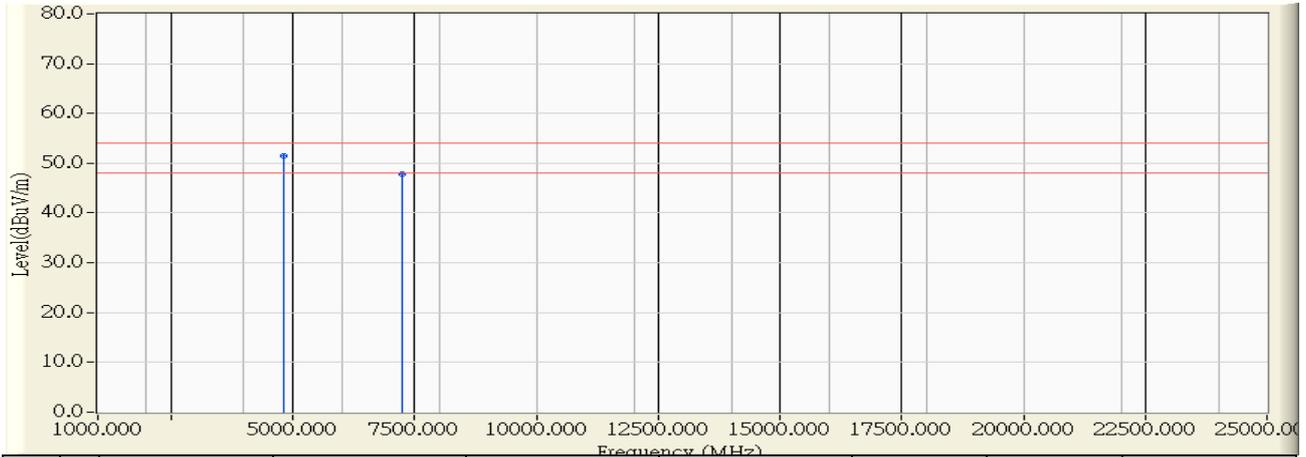


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4824.000	-0.534	53.490	52.956	-21.044	74.000	PEAK
2		7235.960	5.519	47.090	52.609	-21.391	74.000	PEAK
3		9638.350	9.383	38.530	47.913	-26.087	74.000	PEAK
4		12060.220	11.099	37.360	48.460	-25.540	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 15:50
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 b-2412MHz

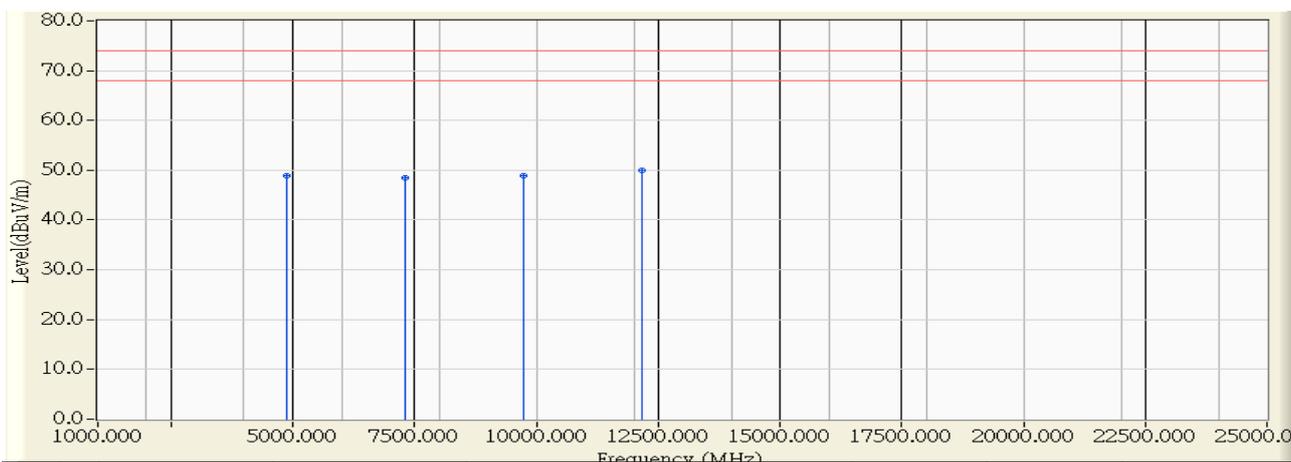


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4824.000	-0.534	52.030	51.496	-2.504	54.000	AVERAGE
2		7235.190	5.517	42.400	47.917	-6.083	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 15:57
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 b-2437MHz

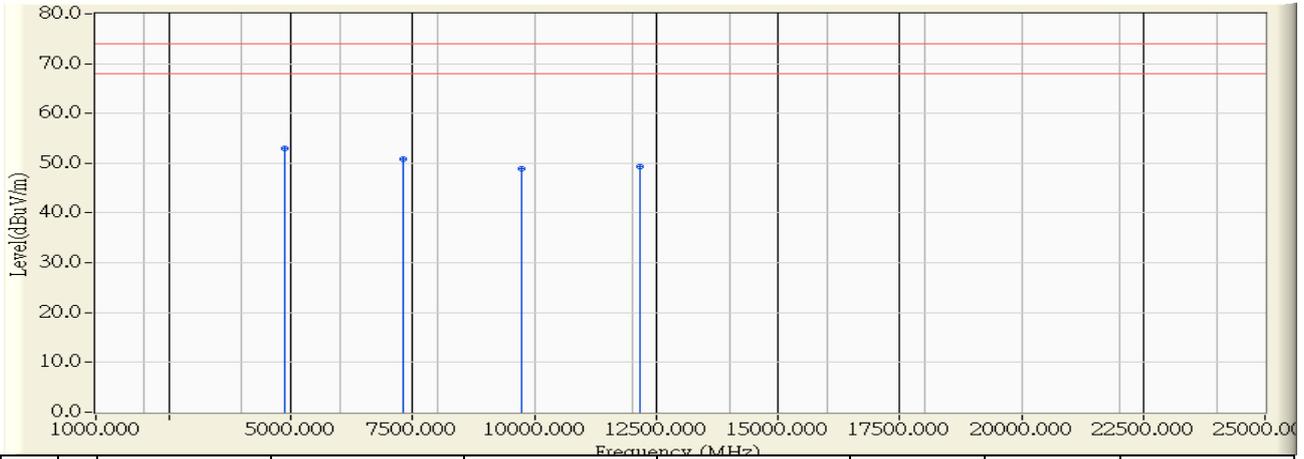


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	4873.960	-0.412	49.340	48.928	-25.072	74.000	PEAK
2	7311.330	5.682	42.750	48.432	-25.568	74.000	PEAK
3	9747.580	10.091	38.790	48.881	-25.119	74.000	PEAK
4	* 12180.160	11.045	38.840	49.885	-24.115	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:04
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 b-2437MHz

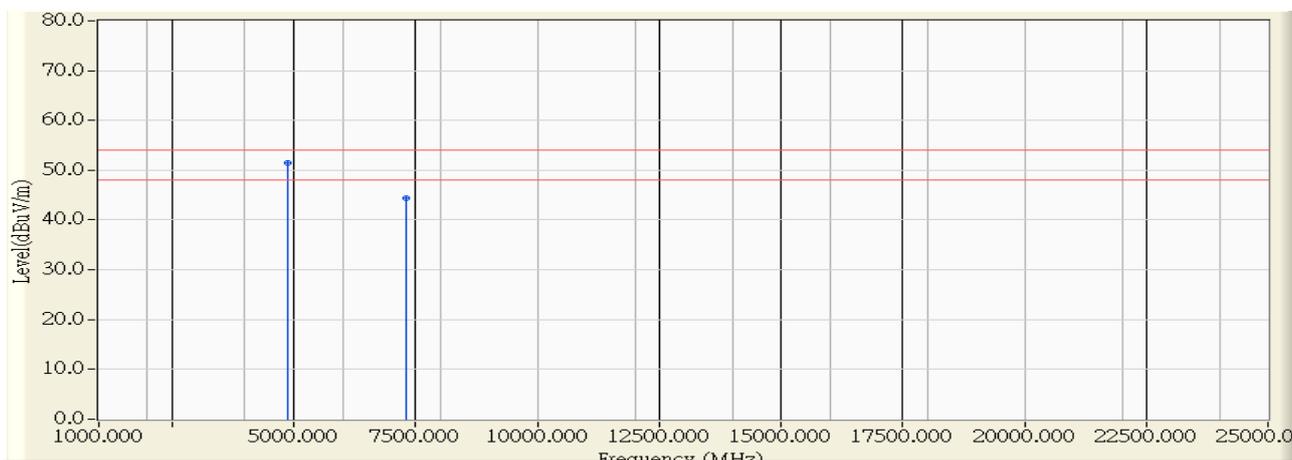


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4873.880	-0.412	53.410	52.998	-21.002	74.000	PEAK
2		7312.490	5.685	45.050	50.734	-23.266	74.000	PEAK
3		9738.260	10.031	38.830	48.860	-25.140	74.000	PEAK
4		12180.000	11.045	38.300	49.345	-24.655	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2014/12/18 - 16:05
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V/60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 b-2437 MHz

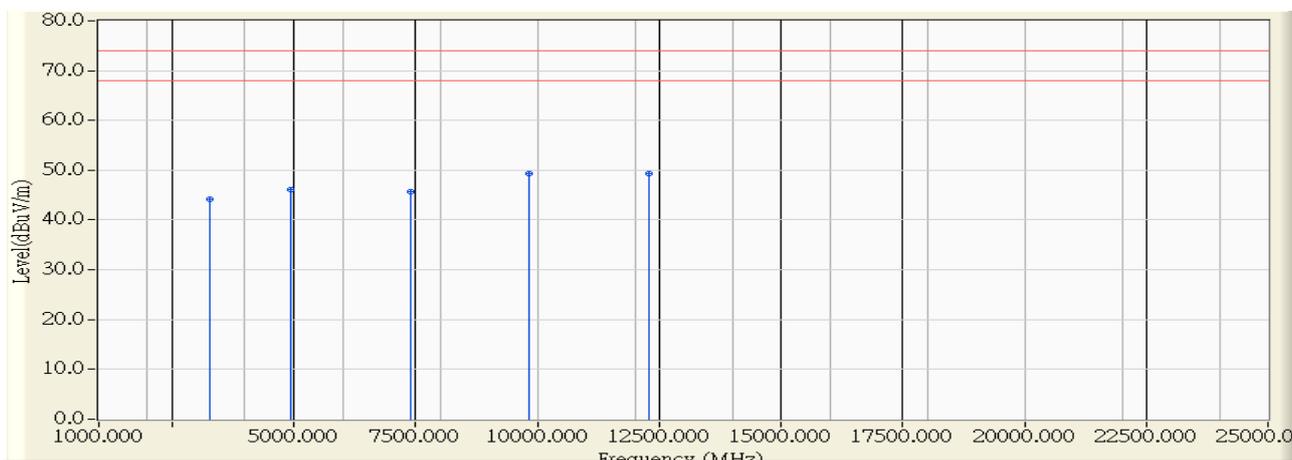


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4874.010	-0.412	51.790	51.378	-2.622	54.000	AVERAGE
2		7310.210	5.679	38.740	44.419	-9.581	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:12
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 b-2462MHz

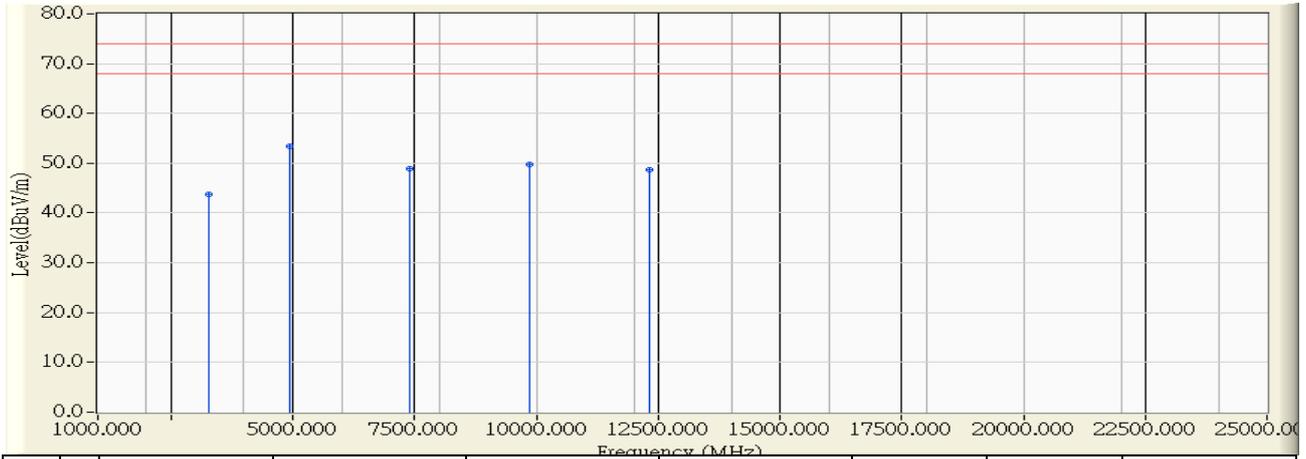


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3282.500	-3.903	48.130	44.228	-29.772	74.000	PEAK
2	4924.060	-0.289	46.440	46.150	-27.850	74.000	PEAK
3	7387.100	5.846	39.830	45.676	-28.324	74.000	PEAK
4	* 9842.940	10.709	38.700	49.408	-24.592	74.000	PEAK
5	12301.500	10.989	38.250	49.240	-24.760	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:19
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 b-2462MHz

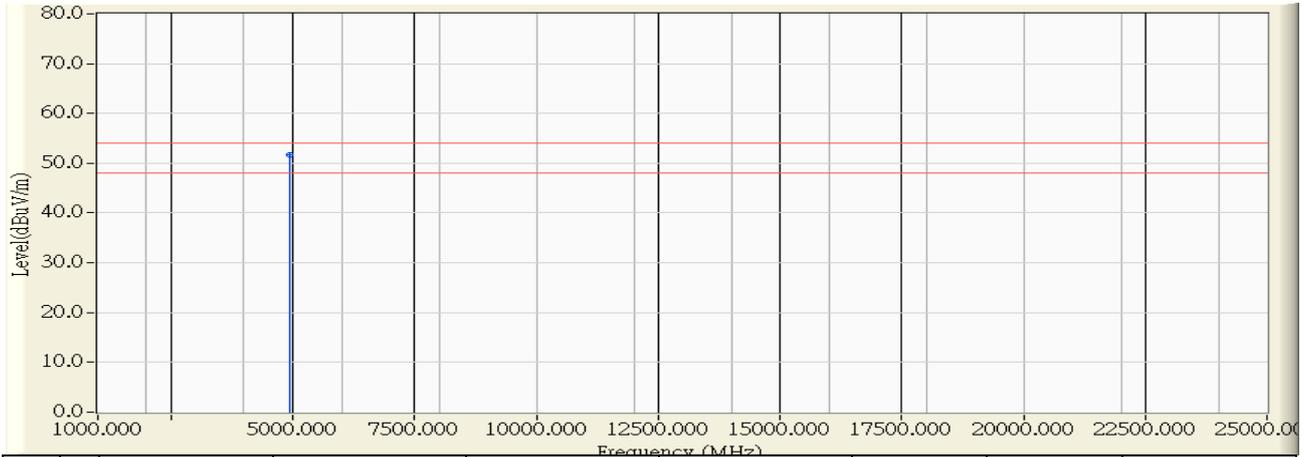


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3282.590	-3.903	47.590	43.688	-30.312	74.000	PEAK
2	* 4923.870	-0.290	53.690	53.400	-20.600	74.000	PEAK
3	7385.740	5.842	43.150	48.993	-25.007	74.000	PEAK
4	9856.430	10.796	38.960	49.755	-24.245	74.000	PEAK
5	12313.600	10.984	37.760	48.744	-25.256	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:20
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 b-2462MHz

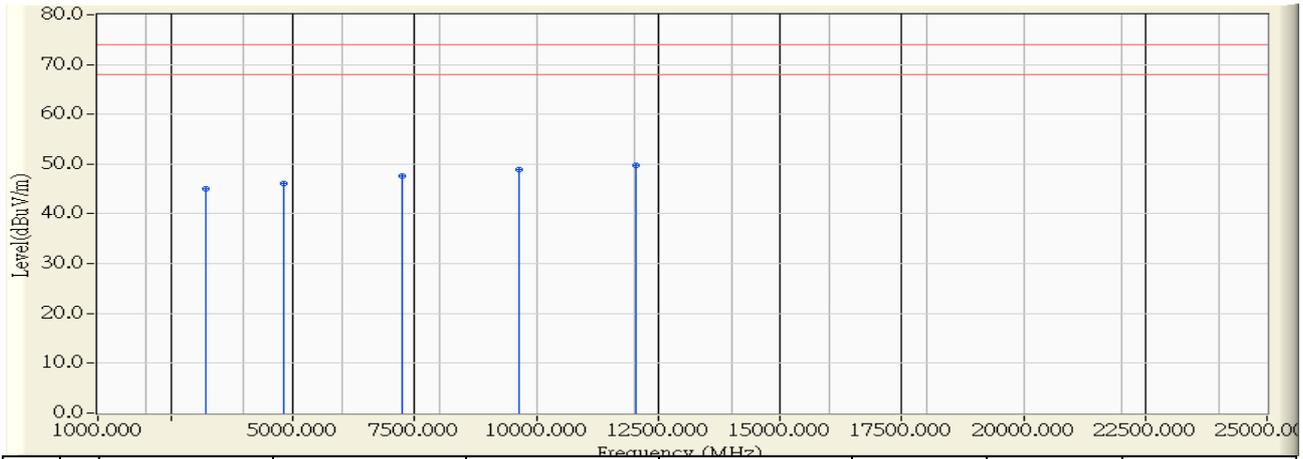


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	4924.000	-0.290	52.040	51.750	-2.250	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:21
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 g-2412MHz

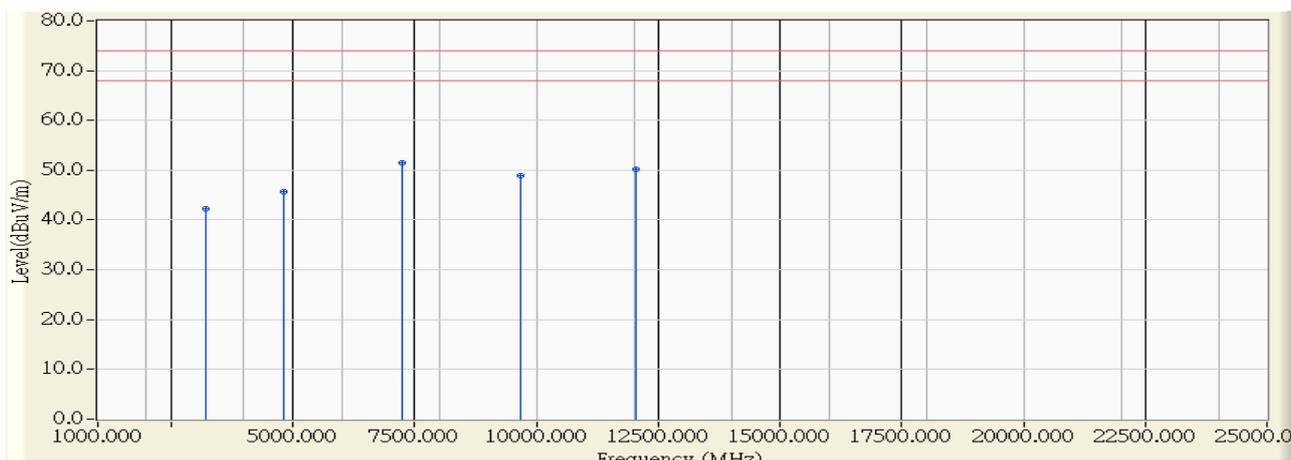


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3215.820	-3.930	49.070	45.140	-28.860	74.000	PEAK
2	4827.900	-0.525	46.540	46.016	-27.984	74.000	PEAK
3	7240.400	5.528	42.110	47.638	-26.362	74.000	PEAK
4	9659.340	9.519	39.380	48.899	-25.101	74.000	PEAK
5	* 12047.640	11.105	38.590	49.695	-24.305	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:22
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 g-2412MHz

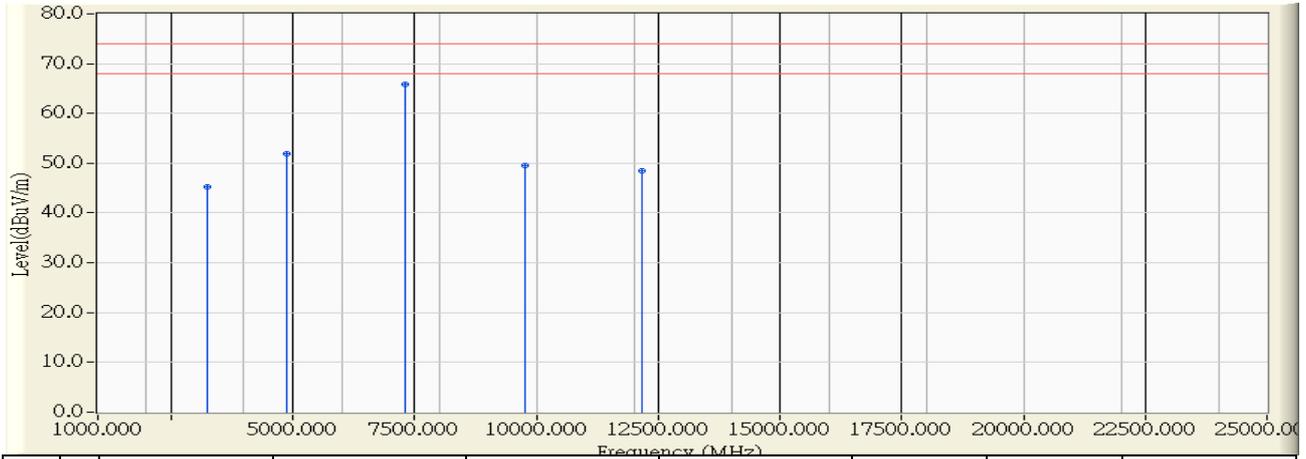


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3215.980	-3.930	46.250	42.320	-31.680	74.000	PEAK
2	4829.940	-0.519	46.230	45.711	-28.289	74.000	PEAK
3	* 7232.540	5.512	46.010	51.521	-22.479	74.000	PEAK
4	9662.280	9.539	39.340	48.878	-25.122	74.000	PEAK
5	12048.020	11.106	38.980	50.085	-23.915	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:29
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 g-2437MHz

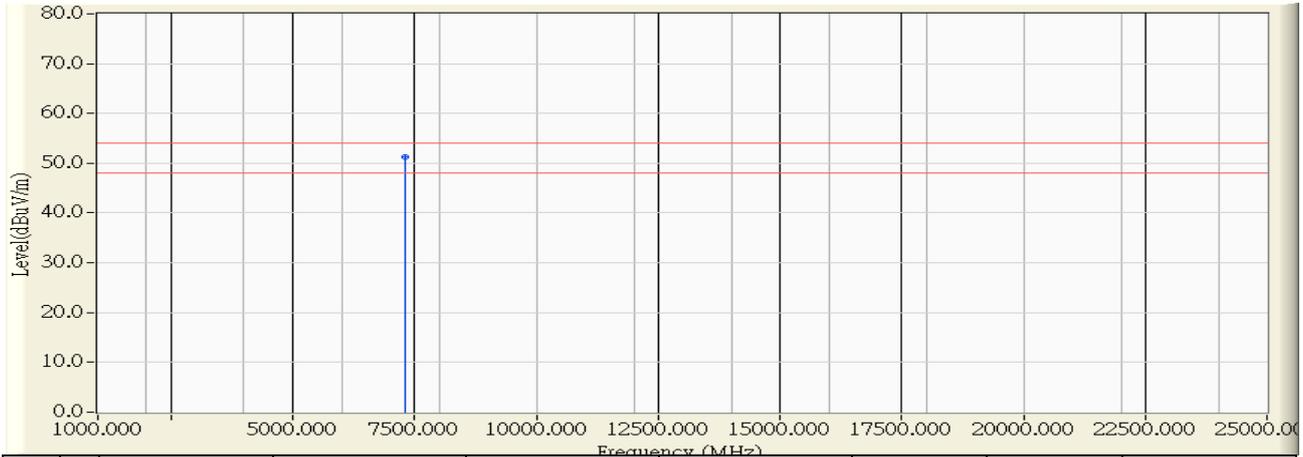


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3249.390	-3.916	49.190	45.274	-28.726	74.000	PEAK
2	4877.230	-0.404	52.390	51.986	-22.014	74.000	PEAK
3	* 7308.480	5.676	60.070	65.746	-8.254	74.000	PEAK
4	9765.040	10.204	39.320	49.524	-24.476	74.000	PEAK
5	12165.200	11.051	37.370	48.422	-25.578	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:30
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 g-2437MHz

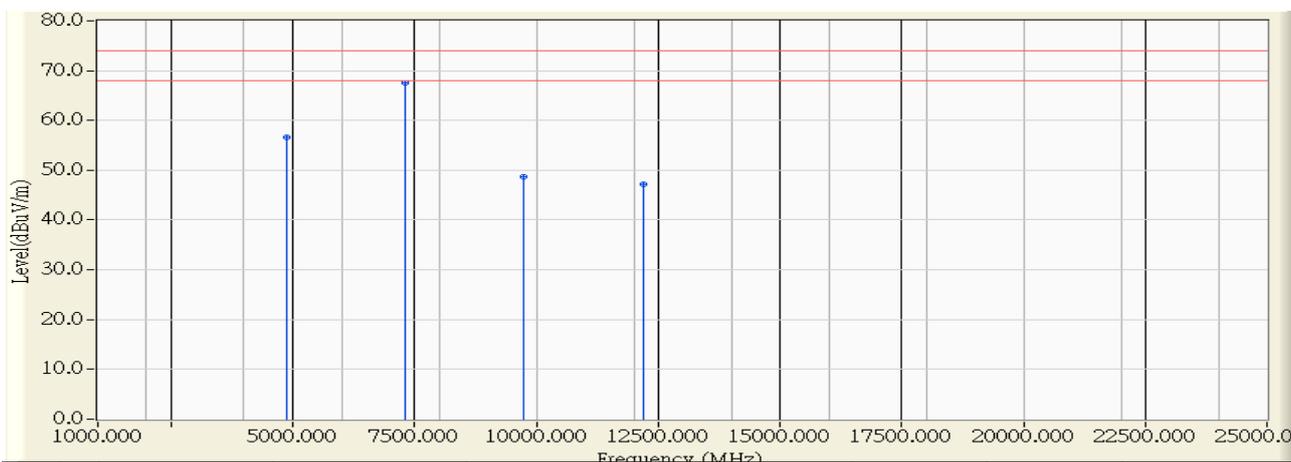


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	7310.360	5.680	45.480	51.160	-2.840	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 – 16:35
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 g-2437MHz

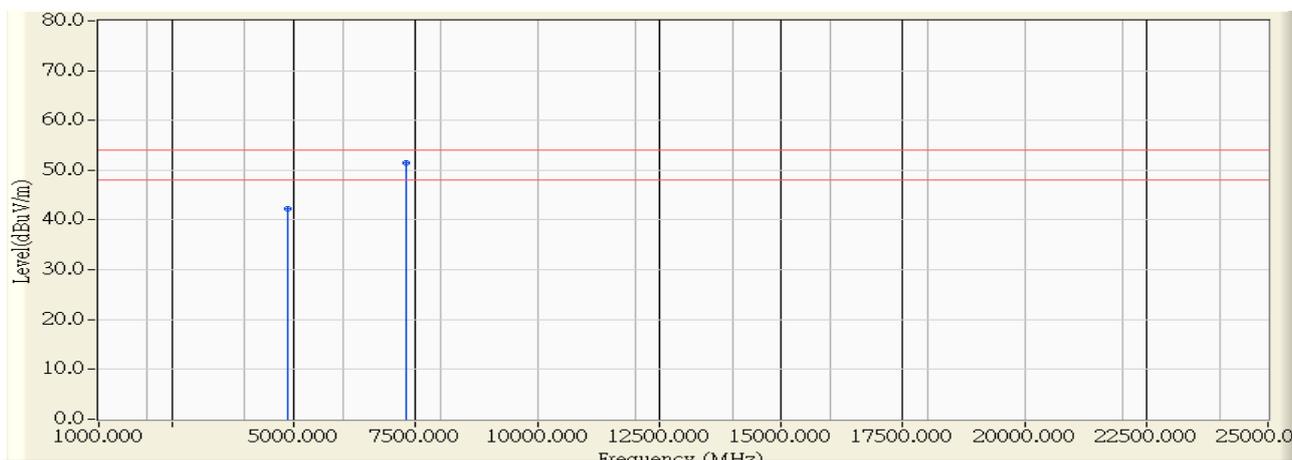


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	4875.780	-0.407	56.990	56.583	-17.417	74.000	PEAK
2	* 7314.120	5.687	61.920	67.608	-6.392	74.000	PEAK
3	9749.200	10.101	38.620	48.721	-25.279	74.000	PEAK
4	12186.200	11.042	36.210	47.252	-26.748	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:36
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 g-2437MHz

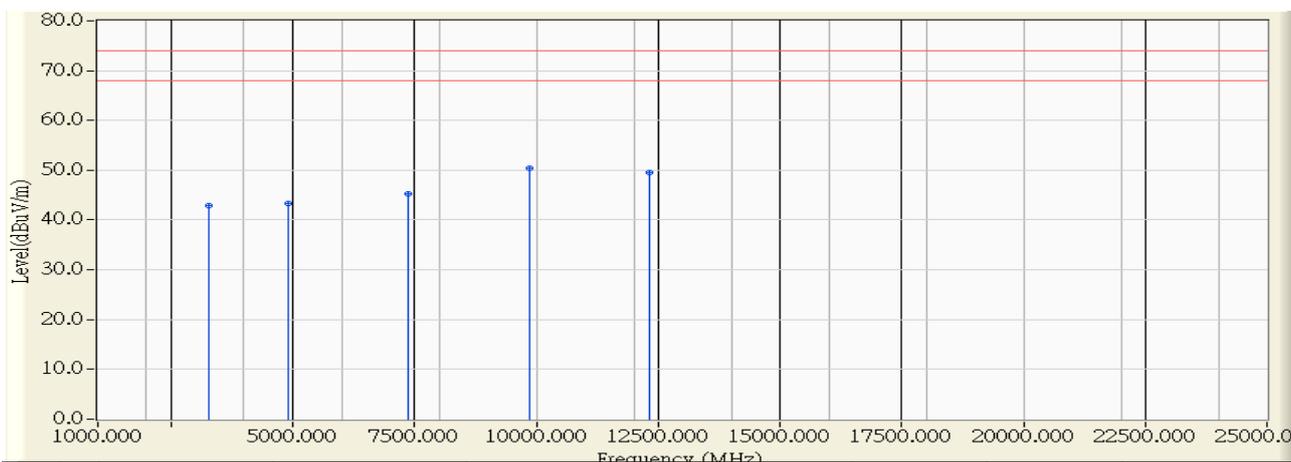


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	4874.040	-0.412	42.731	42.319	-11.681	54.000	AVERAGE
2	* 7313.260	5.687	45.820	51.506	-2.494	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:43
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 g-2462MHz

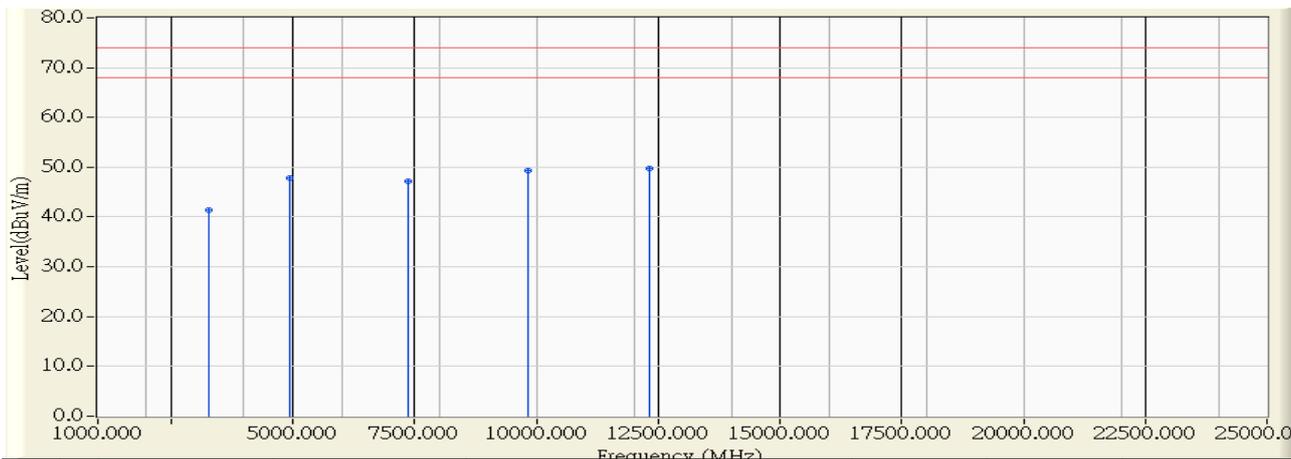


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3282.680	-3.903	46.700	42.798	-31.202	74.000	PEAK
2	4920.230	-0.298	43.690	43.391	-30.609	74.000	PEAK
3	7378.110	5.826	39.350	45.176	-28.824	74.000	PEAK
4	* 9857.530	10.803	39.540	50.343	-23.657	74.000	PEAK
5	12315.760	10.983	38.460	49.443	-24.557	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:49
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 g-2462MHz

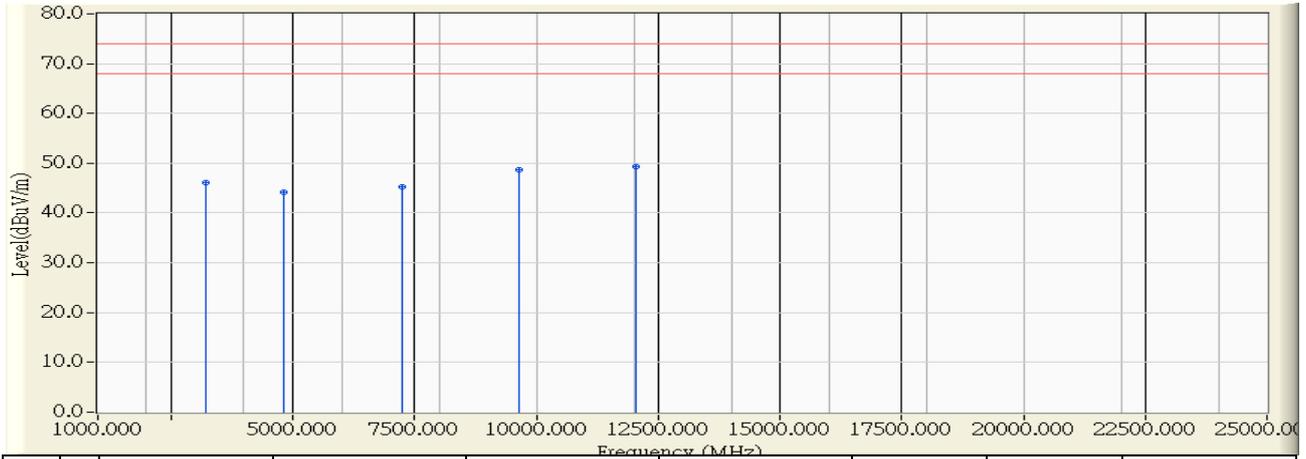


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3282.700	-3.902	45.230	41.328	-32.672	74.000	PEAK
2	4925.750	-0.285	48.020	47.734	-26.266	74.000	PEAK
3	7377.580	5.825	41.320	47.145	-26.855	74.000	PEAK
4	9839.290	10.684	38.710	49.395	-24.605	74.000	PEAK
5	* 12311.860	10.985	38.720	49.705	-24.295	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 16:56
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n20-2412MHz

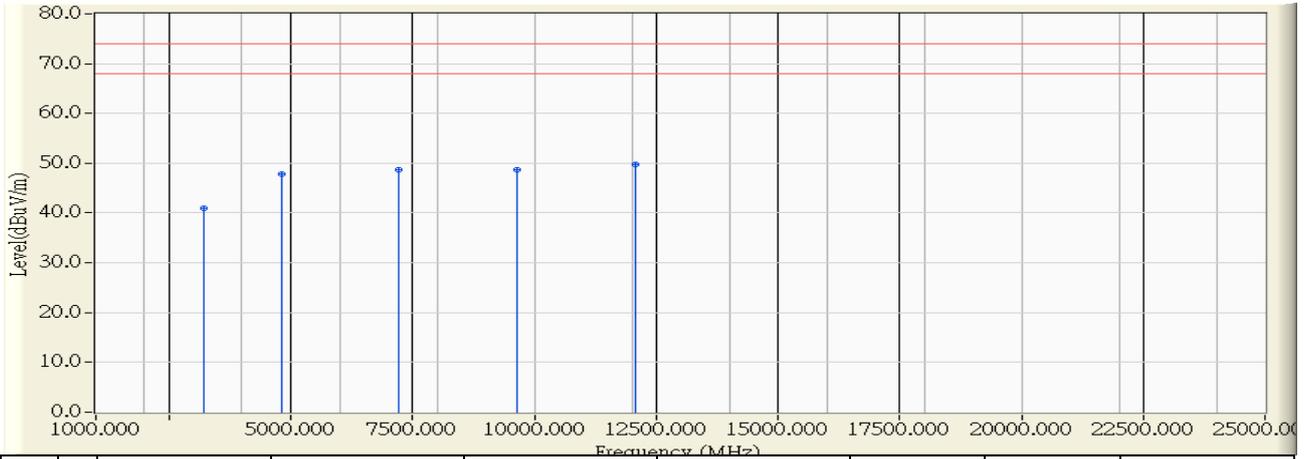


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3215.870	-3.930	49.980	46.050	-27.950	74.000	PEAK
2	4822.500	-0.537	44.640	44.103	-29.897	74.000	PEAK
3	7231.280	5.509	39.670	45.179	-28.821	74.000	PEAK
4	9657.290	9.507	39.090	48.596	-25.404	74.000	PEAK
5	* 12052.960	11.103	38.240	49.343	-24.657	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 17:01
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n20-2412MHz

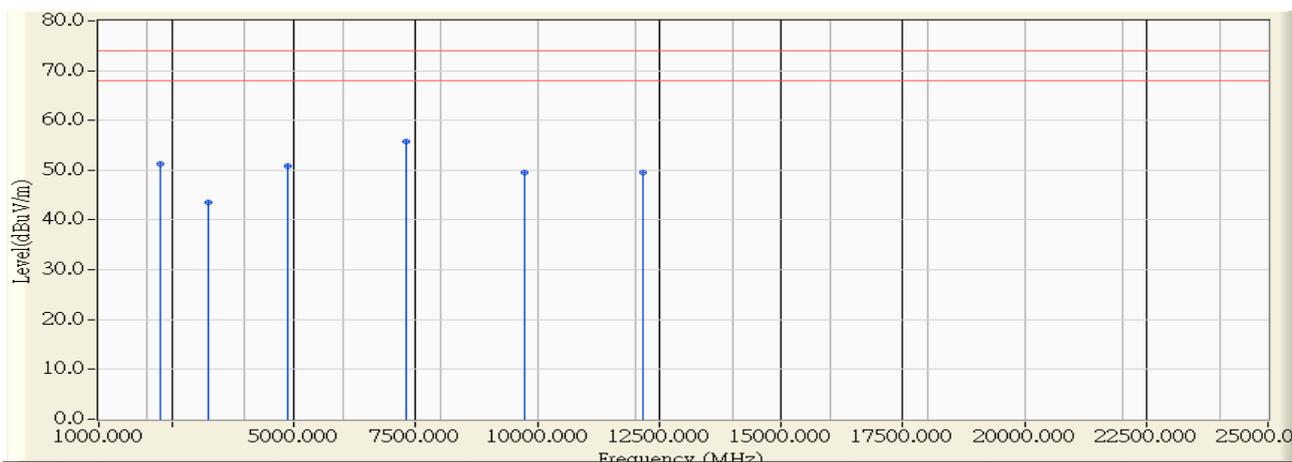


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3215.970	-3.930	44.890	40.960	-33.040	74.000	PEAK
2	4821.750	-0.540	48.460	47.921	-26.079	74.000	PEAK
3	7228.310	5.503	43.090	48.592	-25.408	74.000	PEAK
4	9652.480	9.475	39.130	48.605	-25.395	74.000	PEAK
5	* 12066.930	11.097	38.590	49.687	-24.313	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 17:09
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n20-2437MHz

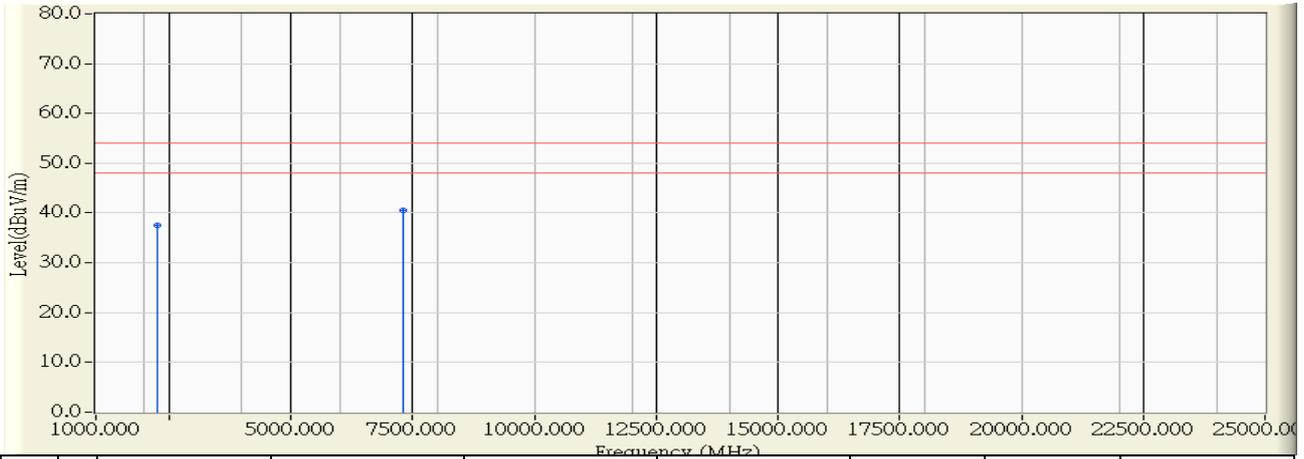


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2256.300	-4.661	55.960	51.298	-22.702	74.000	PEAK
2	3249.360	-3.916	47.390	43.474	-30.526	74.000	PEAK
3	4872.050	-0.417	51.230	50.814	-23.186	74.000	PEAK
4	* 7303.500	5.664	50.170	55.835	-18.165	74.000	PEAK
5	9753.490	10.129	39.490	49.619	-24.381	74.000	PEAK
6	12182.500	11.044	38.480	49.524	-24.476	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 17:10
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n20-2437MHz

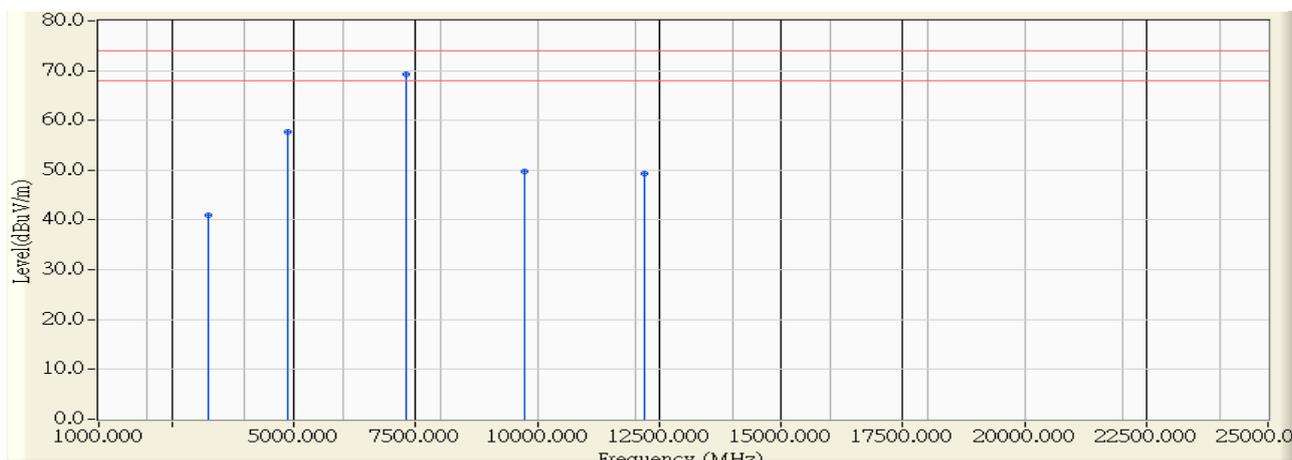


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	2253.150	-4.693	42.150	37.457	-16.543	54.000	AVERAGE
2	* 7308.375	5.676	34.830	40.505	-13.495	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 17:10
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n20-2437MHz

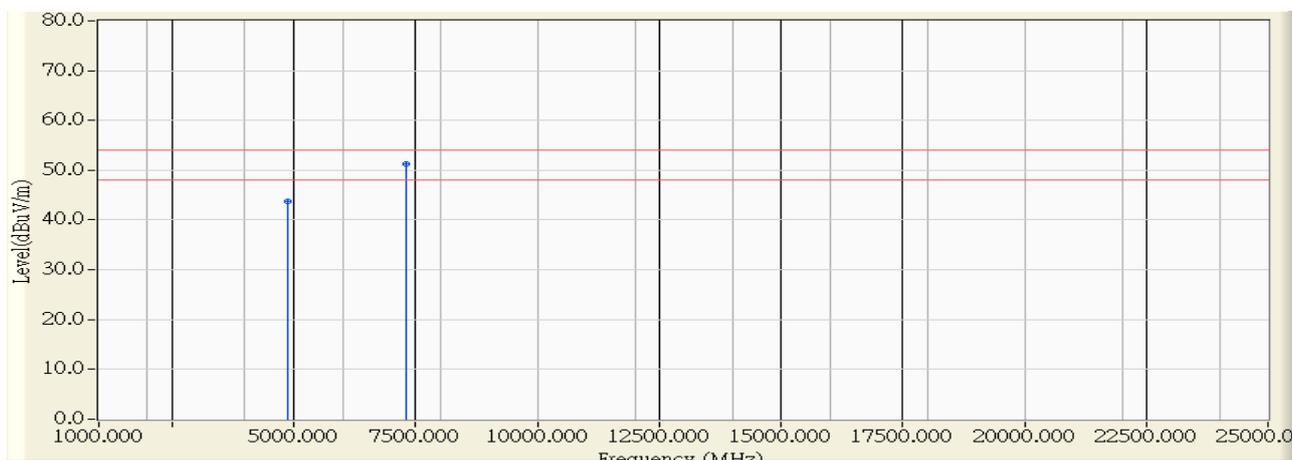


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3249.530	-3.915	44.820	40.904	-33.096	74.000	PEAK
2	4873.500	-0.413	58.040	57.627	-16.373	74.000	PEAK
3	* 7315.650	5.691	63.540	69.231	-4.769	74.000	PEAK
4	9740.700	10.046	39.750	49.796	-24.204	74.000	PEAK
5	12188.860	11.041	38.290	49.331	-24.669	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 17:11
Limit : FCC_SpartC_15.247_H_03M_AV	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n20-2437MHz

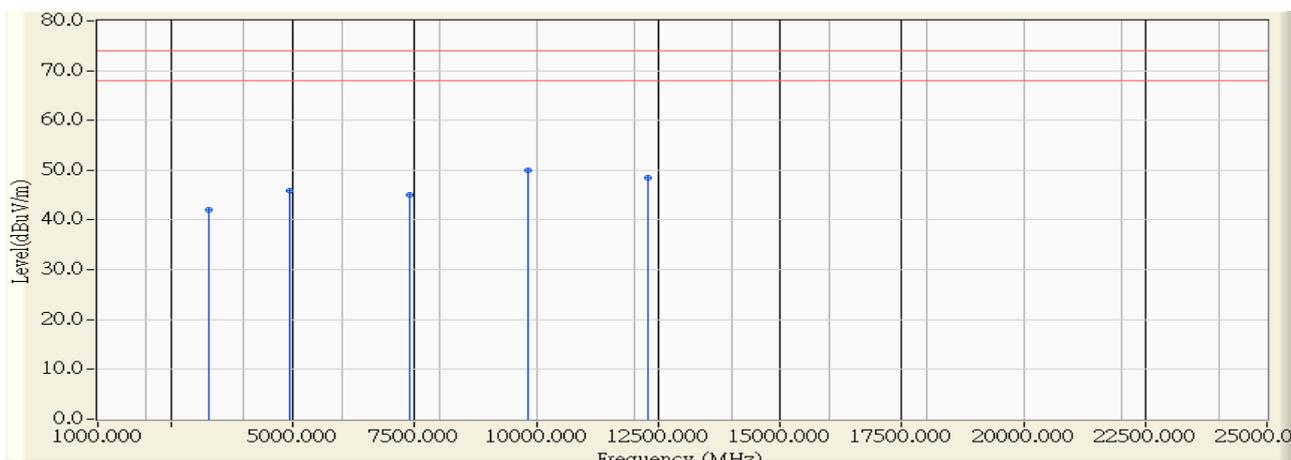


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	4874.650	-0.409	44.090	43.680	-10.320	54.000	AVERAGE
2	* 7308.350	5.676	45.530	51.205	-2.795	54.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 17:18
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n20-2462MHz

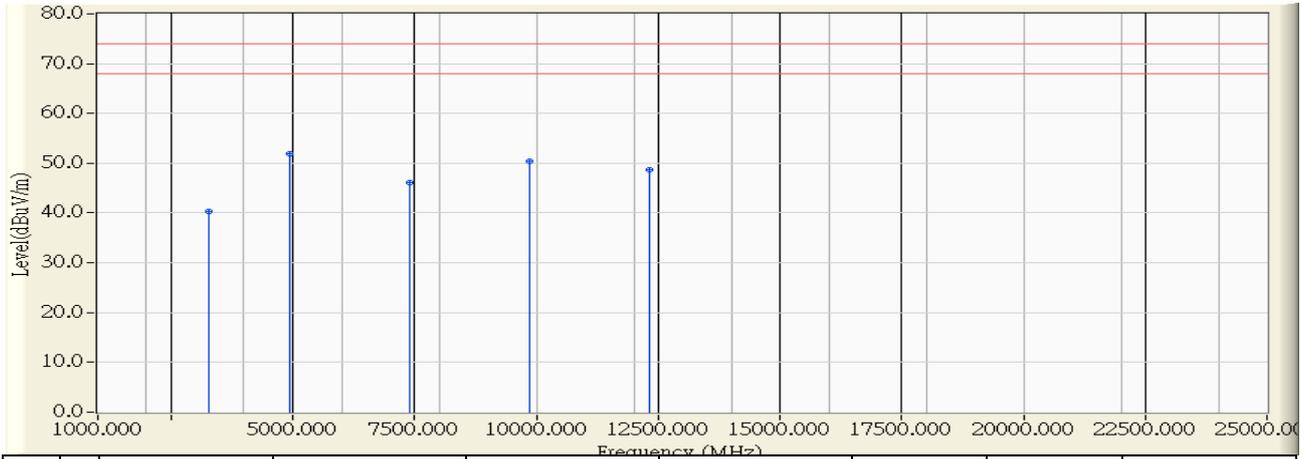


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3282.830	-3.902	45.980	42.078	-31.922	74.000	PEAK
2	4924.650	-0.288	46.110	45.822	-28.178	74.000	PEAK
3	7392.720	5.858	39.280	45.138	-28.862	74.000	PEAK
4	* 9840.100	10.691	39.390	50.080	-23.920	74.000	PEAK
5	12300.410	10.991	37.450	48.440	-25.560	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 17:28
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n20-2462MHz

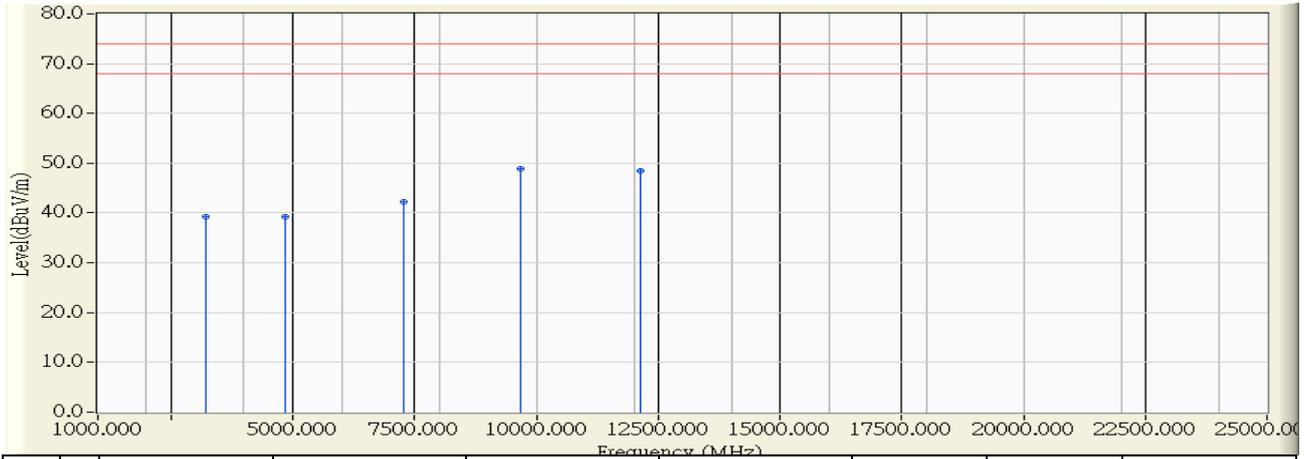


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3282.580	-3.903	44.150	40.248	-33.752	74.000	PEAK
2	* 4924.670	-0.288	52.200	51.912	-22.088	74.000	PEAK
3	7384.970	5.841	40.190	46.031	-27.969	74.000	PEAK
4	9855.390	10.789	39.540	50.329	-23.671	74.000	PEAK
5	12312.430	10.985	37.740	48.725	-25.275	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 17:35
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n40-2422MHz

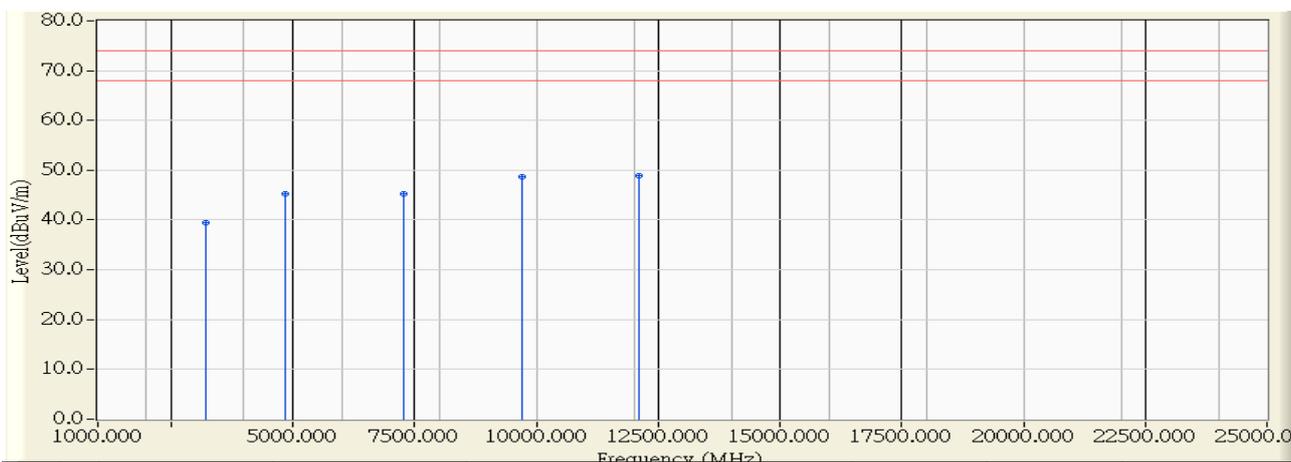


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3229.510	-3.924	43.180	39.256	-34.744	74.000	PEAK
2	4842.040	-0.490	39.790	39.300	-34.700	74.000	PEAK
3	7264.040	5.579	36.720	42.299	-31.701	74.000	PEAK
4	* 9690.360	9.720	39.220	48.940	-25.060	74.000	PEAK
5	12126.100	11.070	37.460	48.530	-25.470	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 17:42
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n40-2422MHz

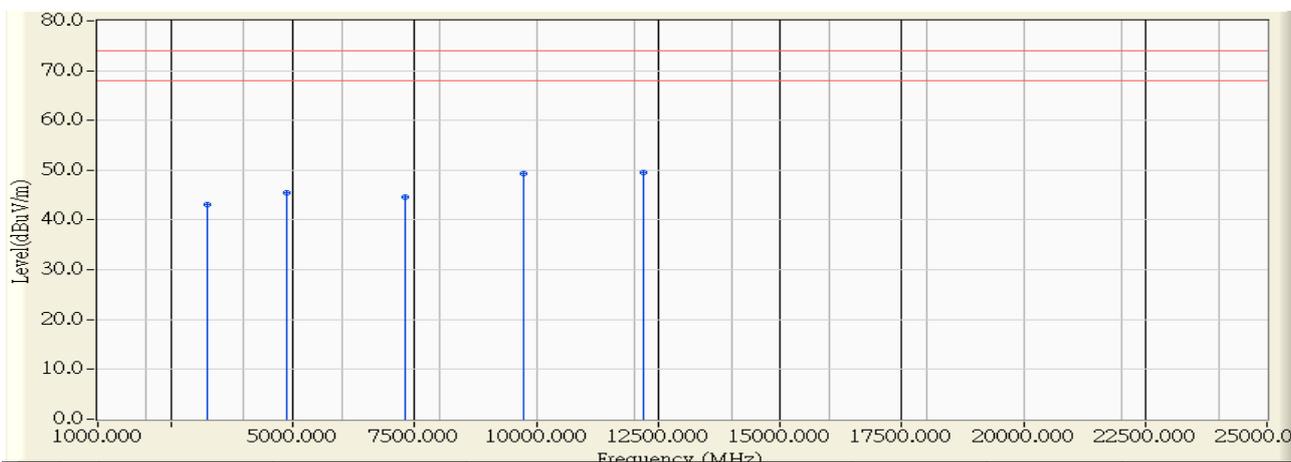


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3229.260	-3.924	43.400	39.476	-34.524	74.000	PEAK
2	4833.860	-0.509	45.710	45.200	-28.800	74.000	PEAK
3	7262.180	5.575	39.690	45.265	-28.735	74.000	PEAK
4	9700.240	9.784	38.840	48.624	-25.376	74.000	PEAK
5	* 12121.880	11.072	37.810	48.882	-25.118	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 – 17:49
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n40-2437MHz

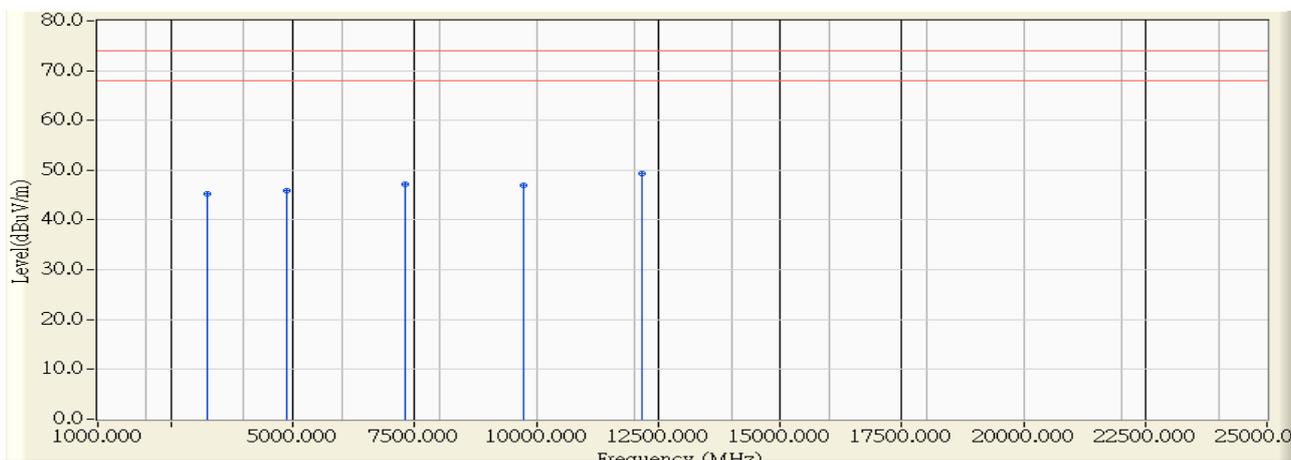


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3249.000	-3.916	46.940	43.024	-30.976	74.000	PEAK
2	4872.140	-0.417	45.820	45.404	-28.596	74.000	PEAK
3	7292.340	5.641	39.040	44.681	-29.319	74.000	PEAK
4	9745.920	10.080	39.200	49.280	-24.720	74.000	PEAK
5	* 12195.580	11.039	38.510	49.548	-24.452	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 17:56
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n40-2437MHz

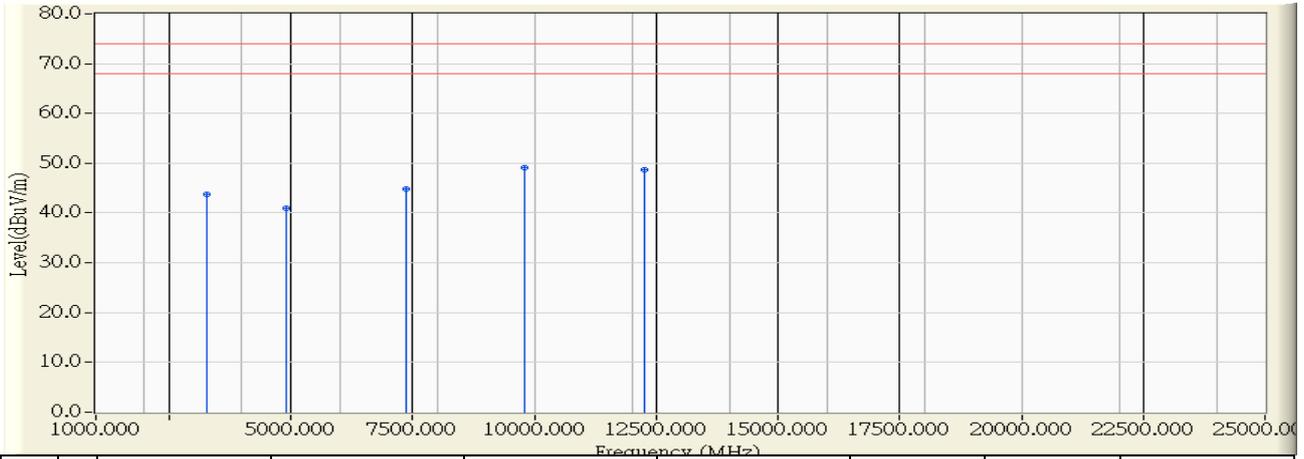


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3249.260	-3.916	49.130	45.214	-28.786	74.000	PEAK
2	4863.880	-0.436	46.240	45.804	-28.196	74.000	PEAK
3	7316.760	5.694	41.450	47.144	-26.856	74.000	PEAK
4	9753.760	10.131	36.840	46.971	-27.029	74.000	PEAK
5	* 12167.040	11.052	38.240	49.291	-24.709	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 18:03
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n40-2452MHz

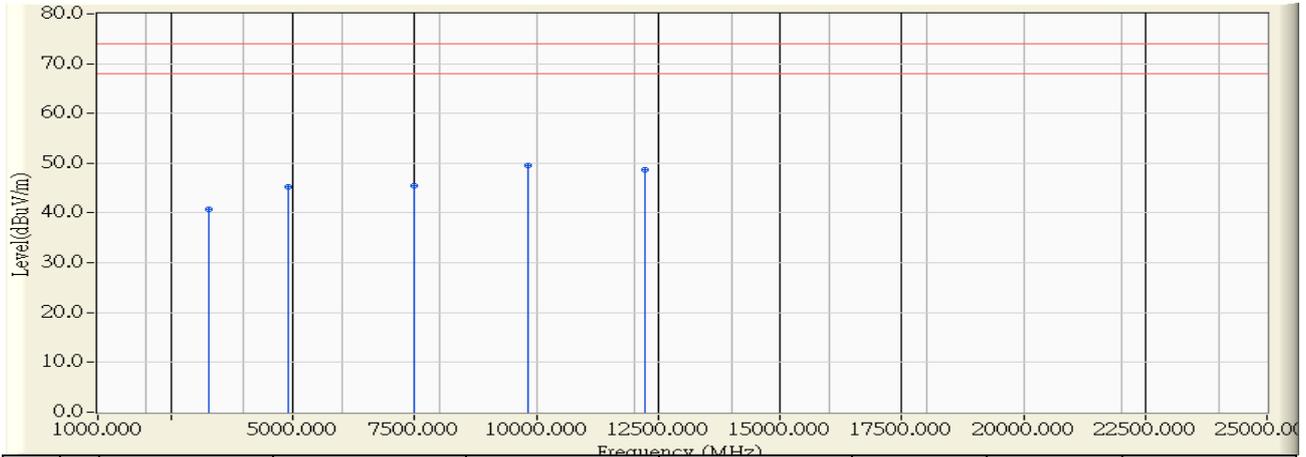


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3269.260	-3.907	47.560	43.652	-30.348	74.000	PEAK
2	4901.640	-0.345	41.400	41.056	-32.944	74.000	PEAK
3	7356.980	5.781	39.060	44.840	-29.160	74.000	PEAK
4	* 9808.980	10.488	38.600	49.088	-24.912	74.000	PEAK
5	12275.440	11.002	37.640	48.642	-25.358	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	Time : 2015/01/23 - 18:10
Limit : FCC_SpartC_15.247_H_03M_PK	Margin : 6
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	Power : AC 120V / 60Hz
EUT : Wireless-N300 Audio Streamer	Note : 802.11 n40-2452MHz



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	3269.560	-3.907	44.650	40.742	-33.258	74.000	PEAK
2	4894.000	-0.363	45.670	45.307	-28.693	74.000	PEAK
3	7487.200	6.052	39.360	45.412	-28.588	74.000	PEAK
4	* 9818.440	10.550	39.020	49.569	-24.431	74.000	PEAK
5	12244.160	11.017	37.590	48.606	-25.394	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 1MHz, 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.
7. The Emission above 18GHz were not included is because their levels are too low.

5. RF antenna conducted test

5.1. Test Equipment

The following test equipments are used during the test:

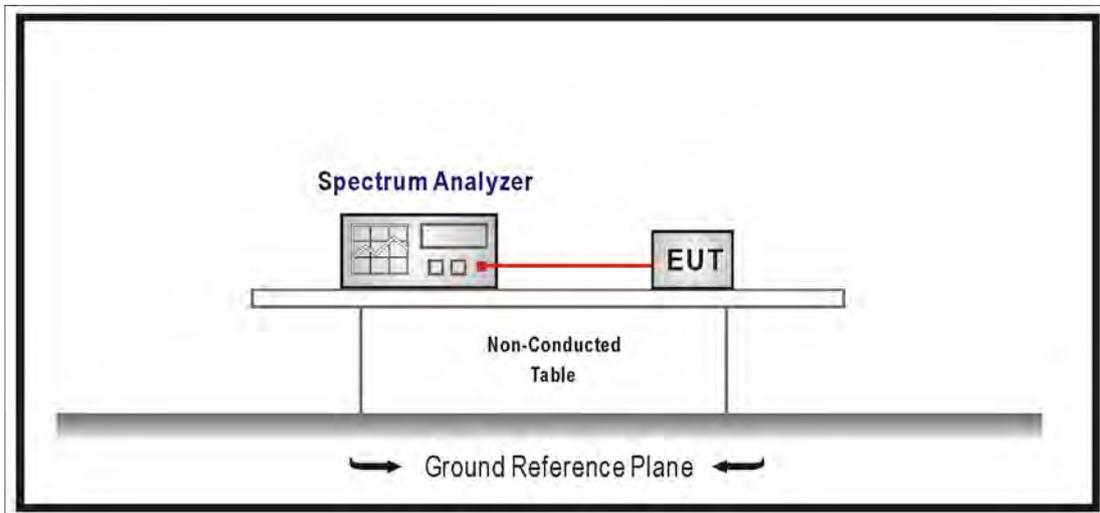
RF antenna conducted test / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2015/07/14

Note: All equipments that need to calibrate are with calibration period of 1 year.

5.2. Test Setup

Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power(RMS), based on an RF conducted or radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was setup according to ANSI C63.10 and tested according to DTS test procedure section 11.0 of KDB558074 v03r02 for compliance to FCC 47CFR 15.247 requirements. Set RBW = 100 kHz, Set VBW \geq 3xRBW, scan up through 10th harmonic.

5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2014

5.6. Uncertainty

Conducted is defined as ± 1.27 dB

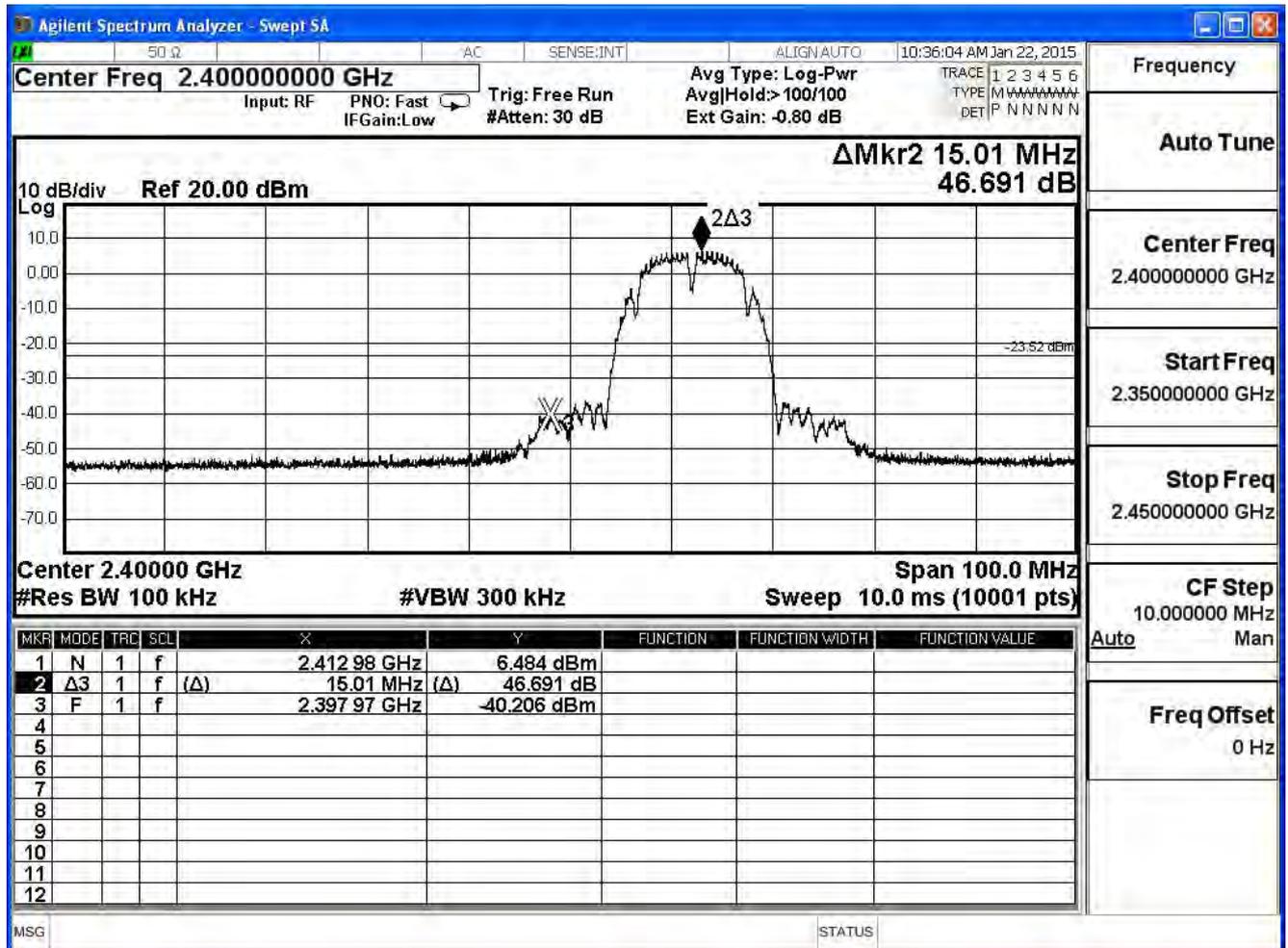
5.7. Test Result

Product	Wireless-N300 Audio Streamer		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2015/01/22	Test Site	SR7

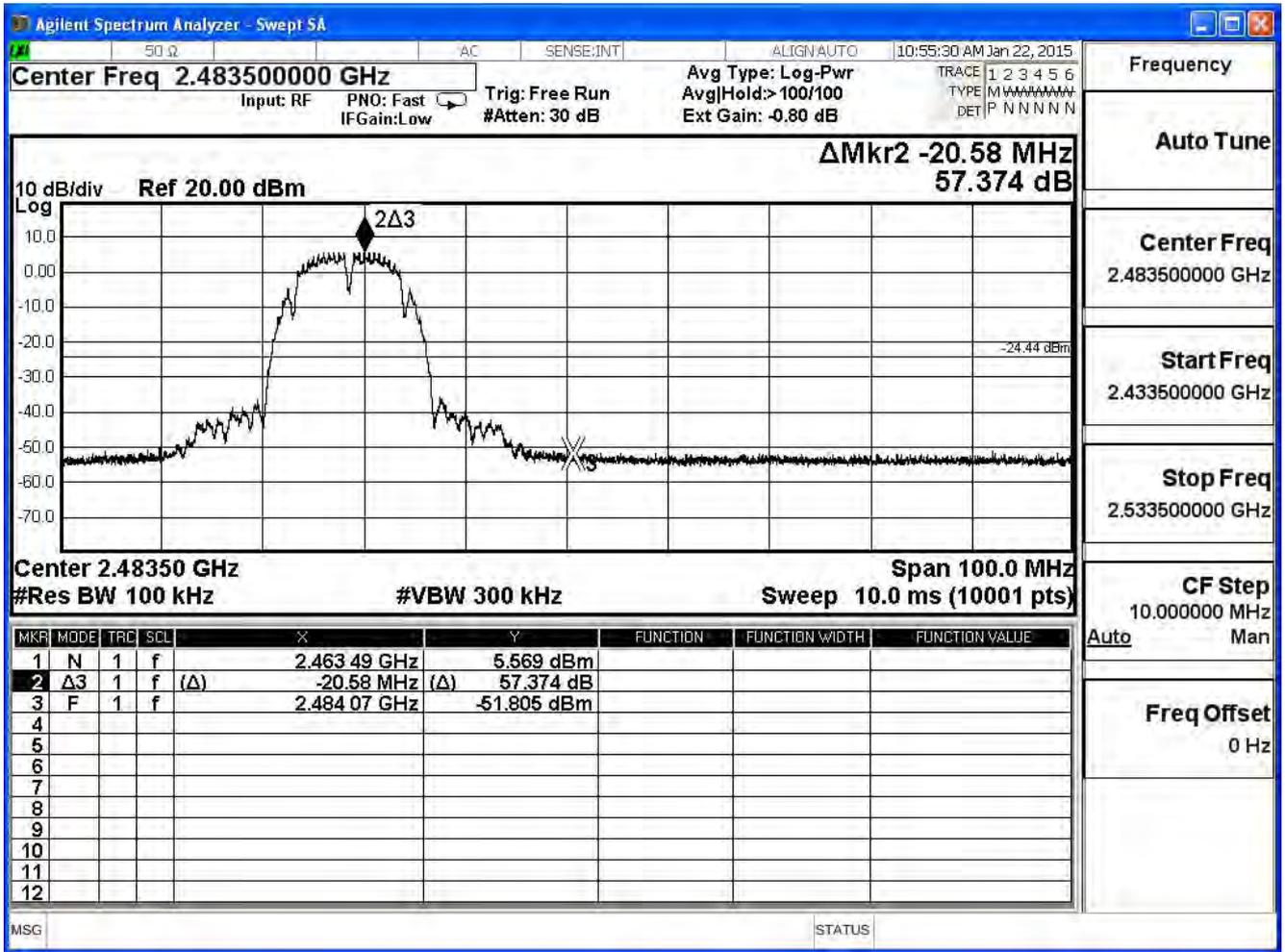
IEEE 802.11b, (ANT 0) Duty Cycle: 1

Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	46.691	≥ 30	Pass
6	2437	57.969	≥ 30	Pass
11	2462	57.374	≥ 30	Pass

Channel 01 (2412MHz)



Channel 11 (2462MHz)

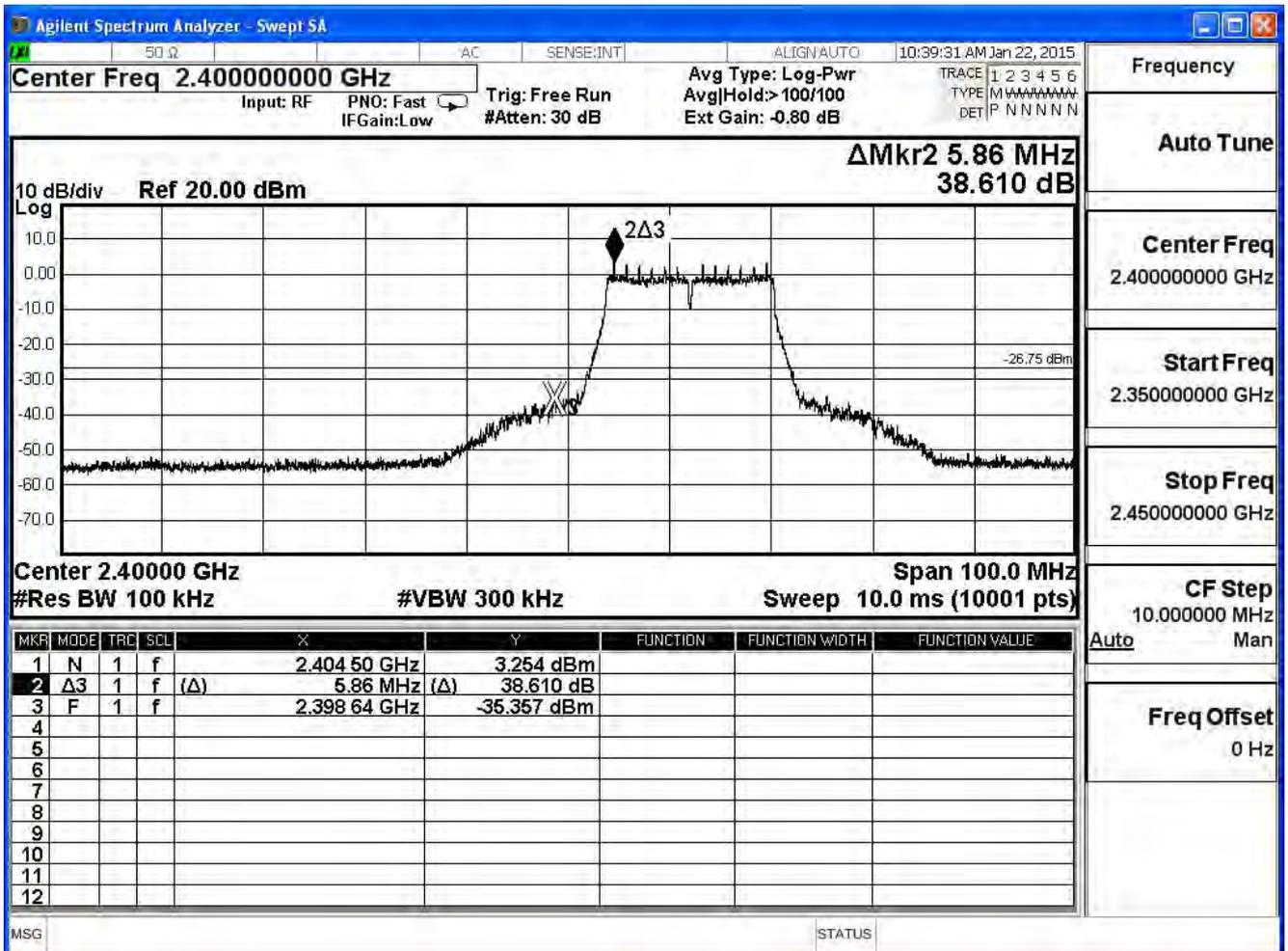


Product	Wireless-N300 Audio Streamer		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2015/01/22	Test Site	SR7

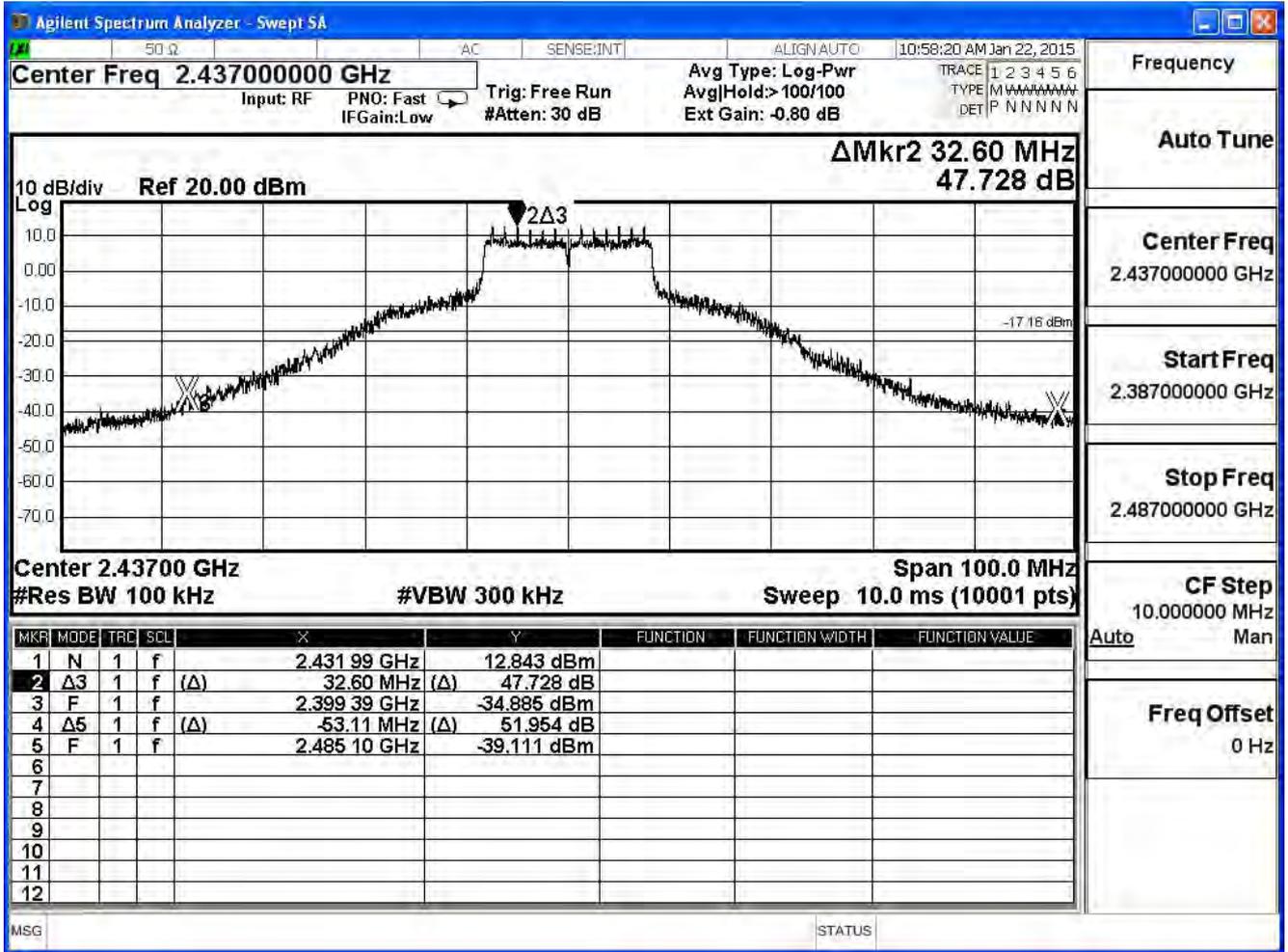
IEEE 802.11g, (ANT 0) Duty Cycle: 1

Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	38.610	≥ 30	Pass
6	2437	47.728	≥ 30	Pass
11	2462	48.999	≥ 30	Pass

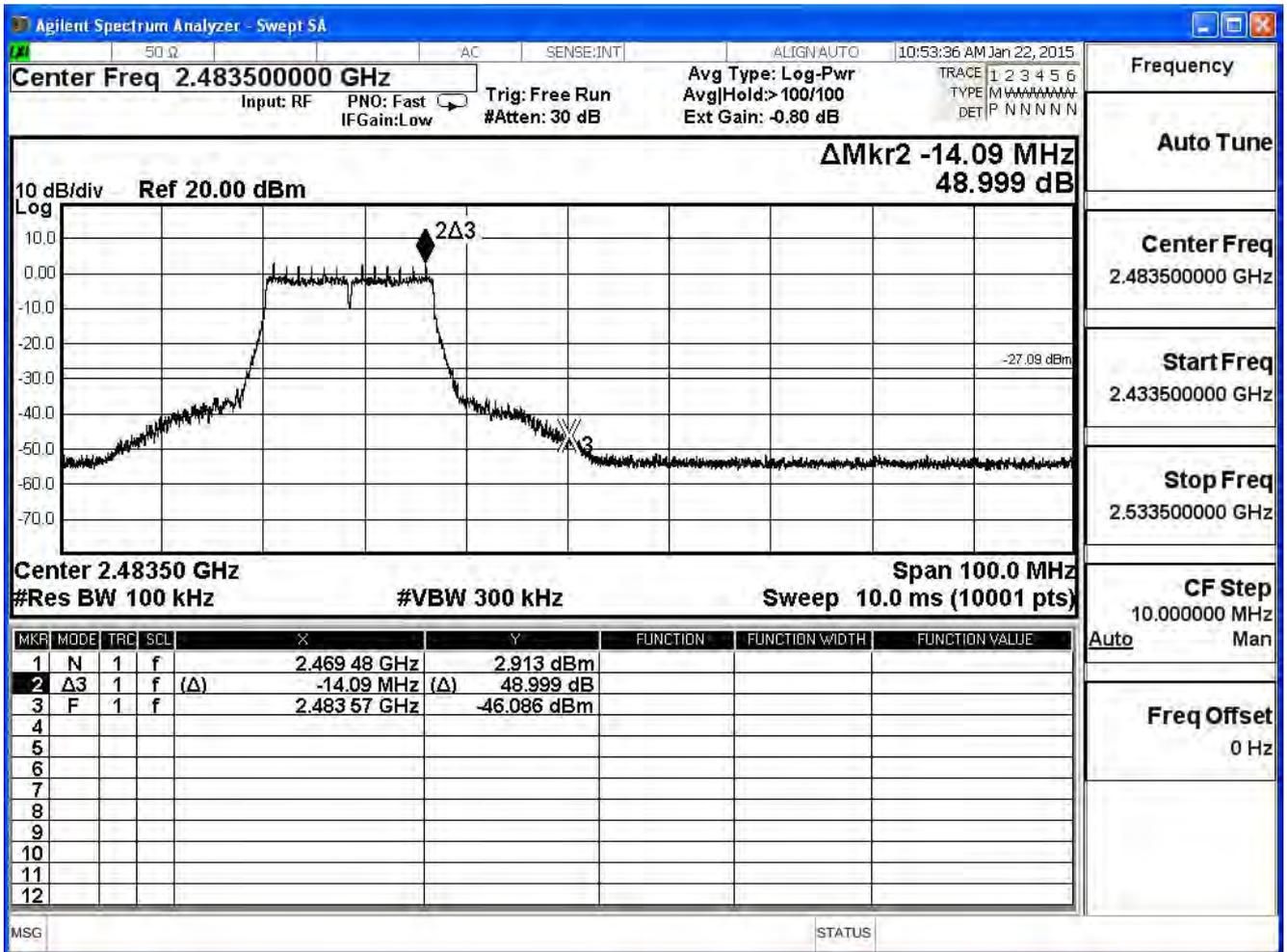
Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)

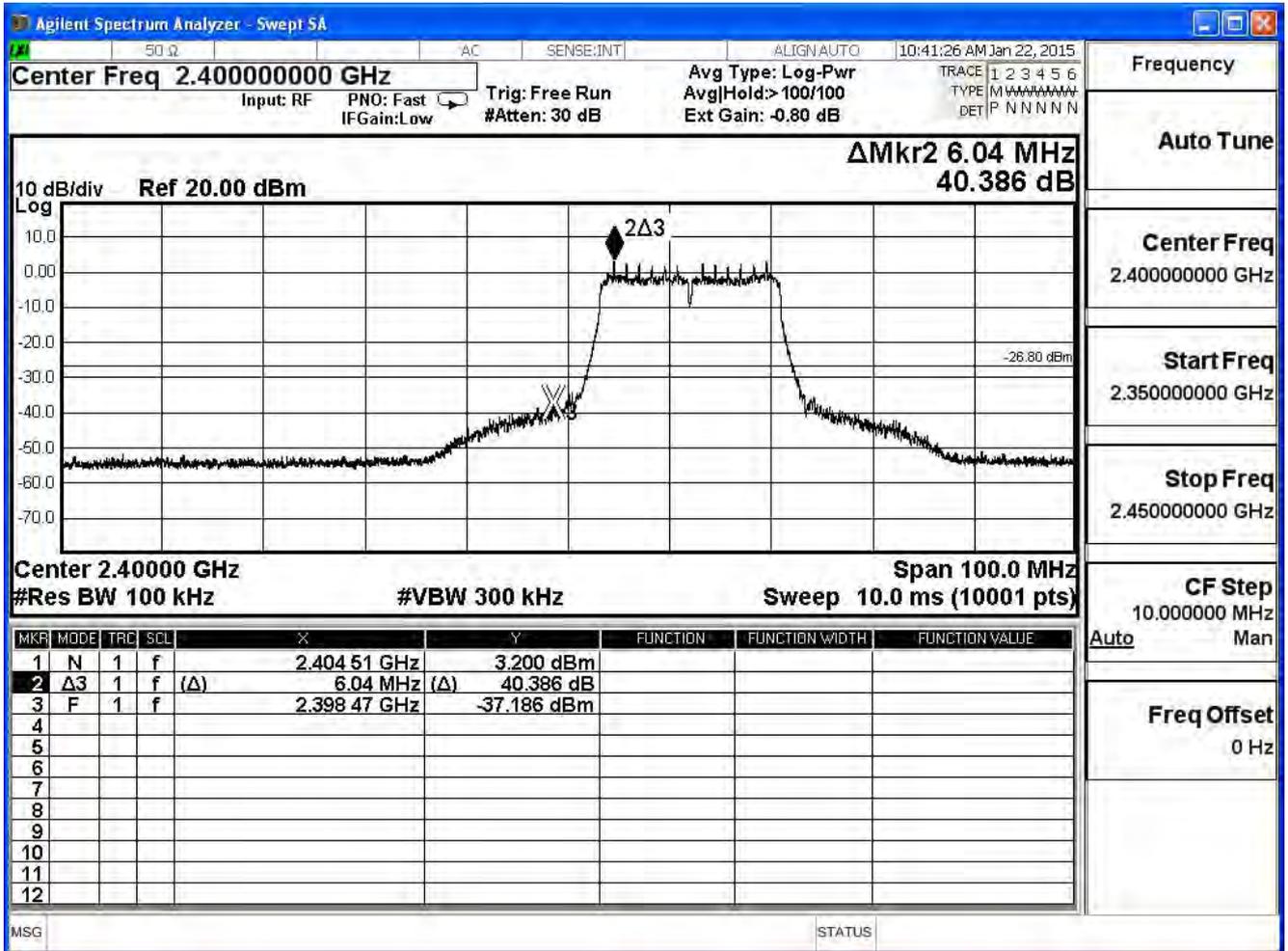


Product	Wireless-N300 Audio Streamer		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2015/01/22	Test Site	SR7

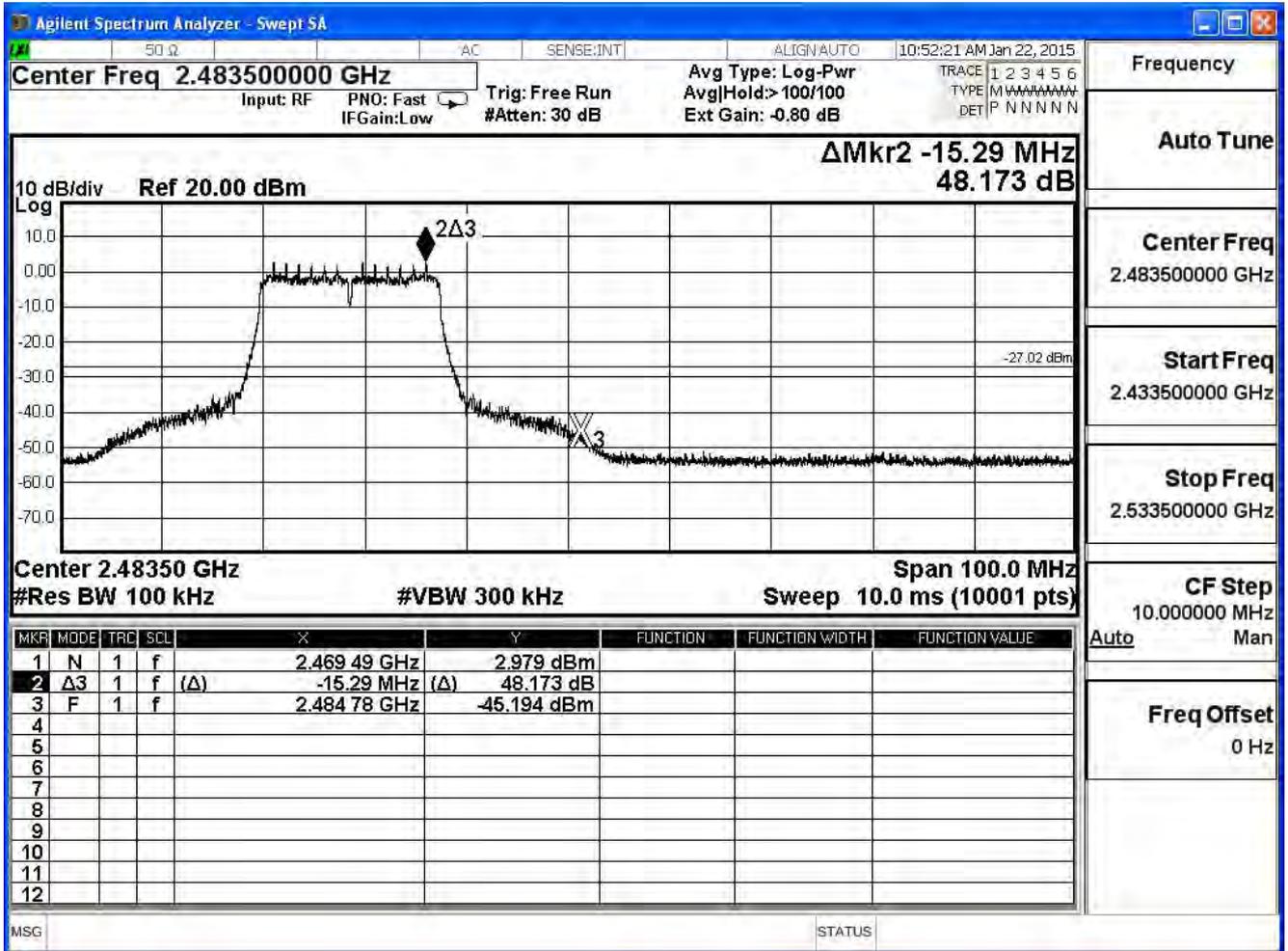
IEEE 802.11n (20MHz), (ANT 0) Duty Cycle: 1

Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	40.386	≥ 30	Pass
6	2437	50.770	≥ 30	Pass
11	2462	48.173	≥ 30	Pass

Channel 01 (2412MHz)



Channel 11 (2462MHz)

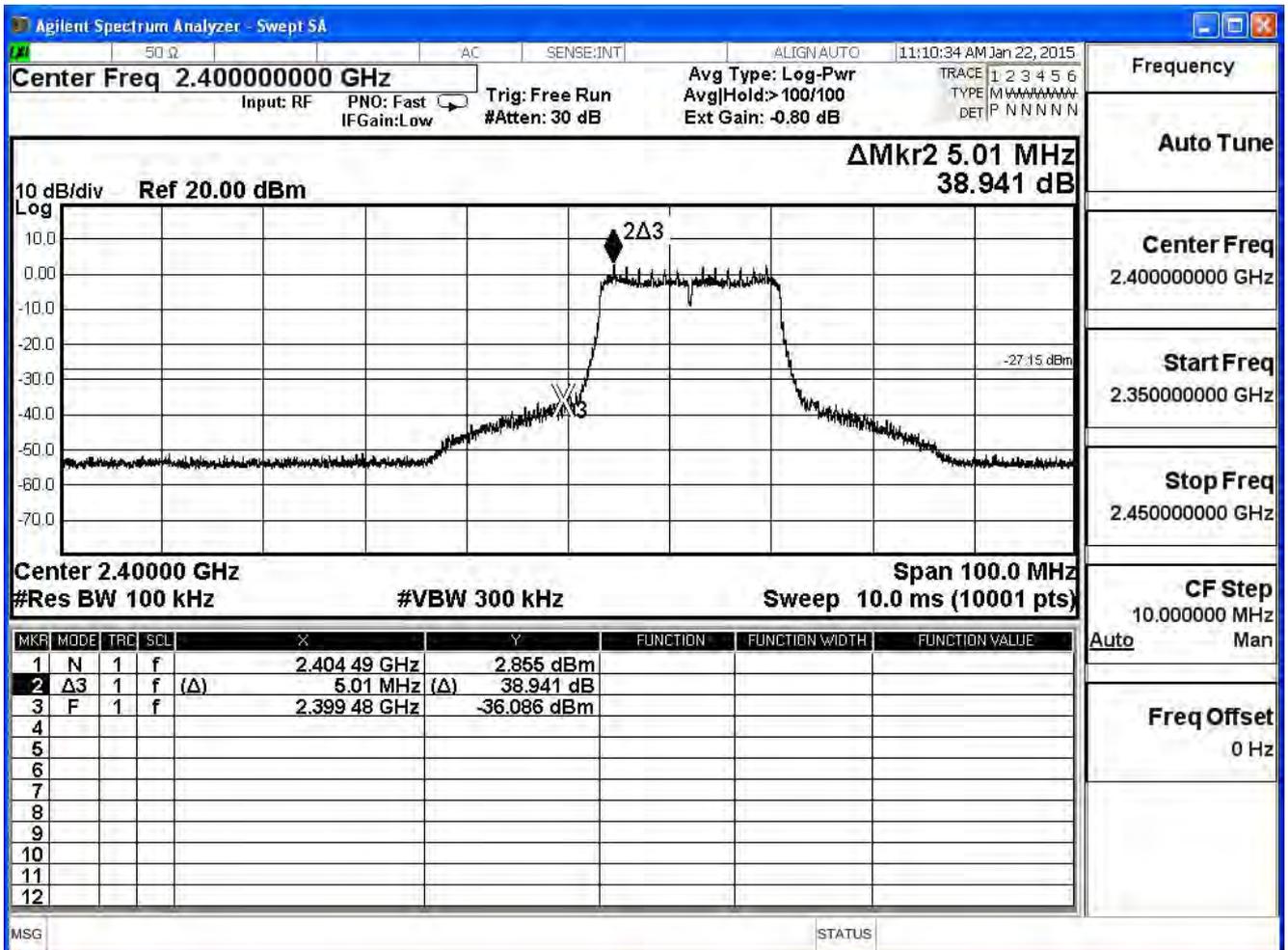


Product	Wireless-N300 Audio Streamer		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2015/01/22	Test Site	SR7

IEEE 802.11n (20MHz), (ANT 1) Duty Cycle: 1

Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	38.941	≥ 30	Pass
6	2437	49.201	≥ 30	Pass
11	2462	46.878	≥ 30	Pass

Channel 01 (2412MHz)

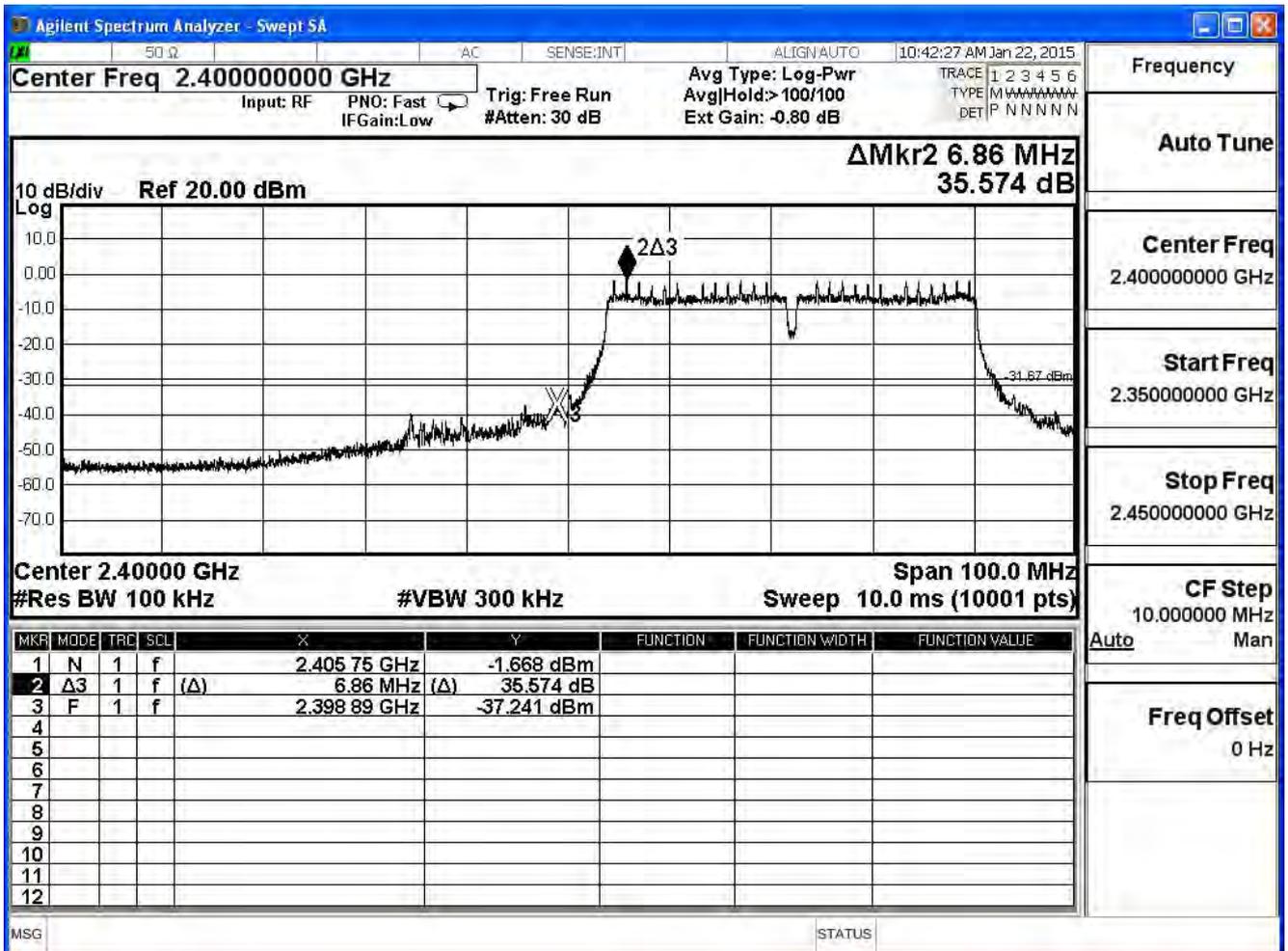


Product	Wireless-N300 Audio Streamer		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2015/01/22	Test Site	SR7

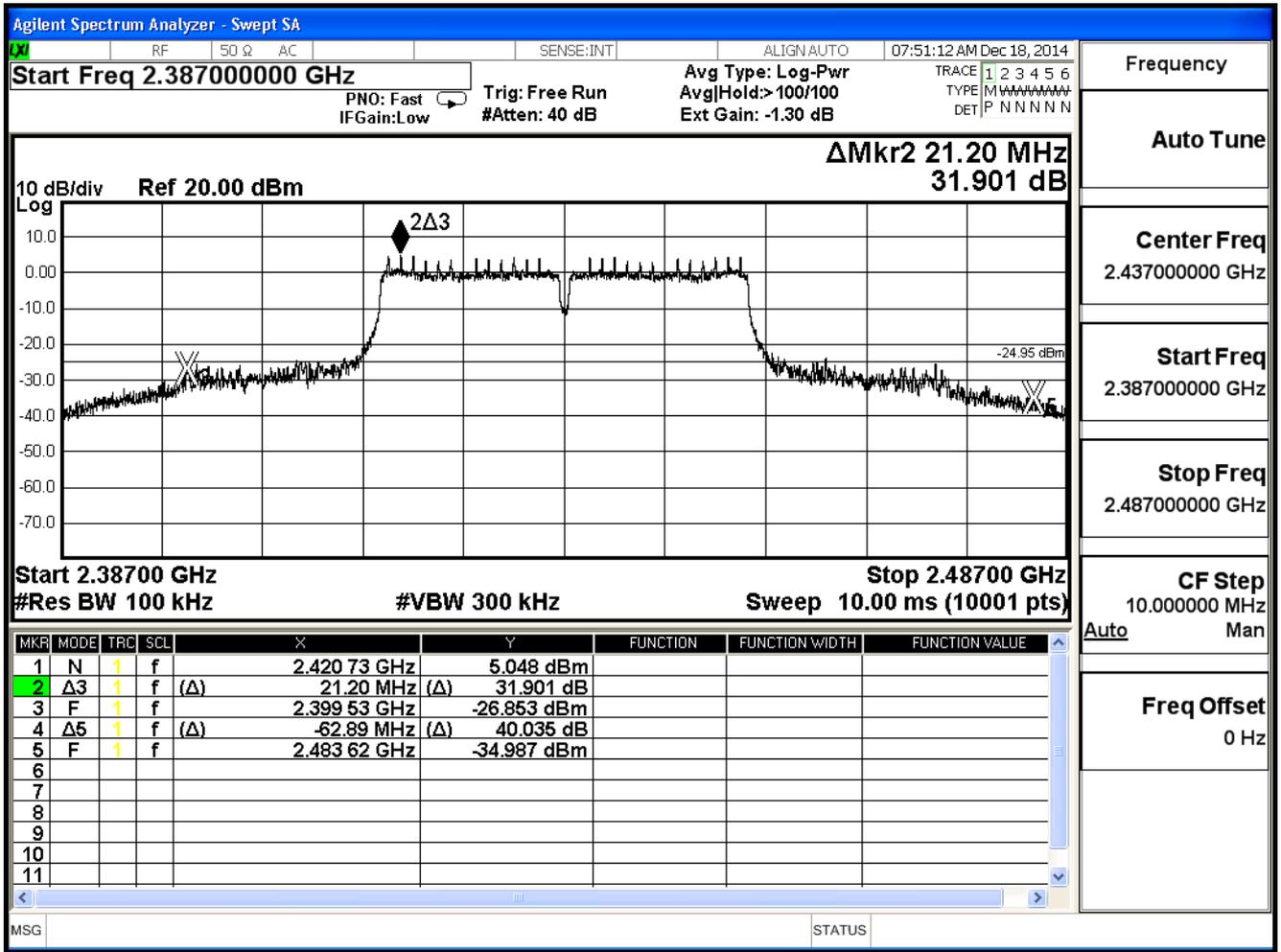
IEEE 802.11n (40MHz), (ANT 0) Duty Cycle: 1

Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
3	2422	35.574	≥ 30	Pass
6	2437	31.901	≥ 30	Pass
9	2452	40.901	≥ 30	Pass

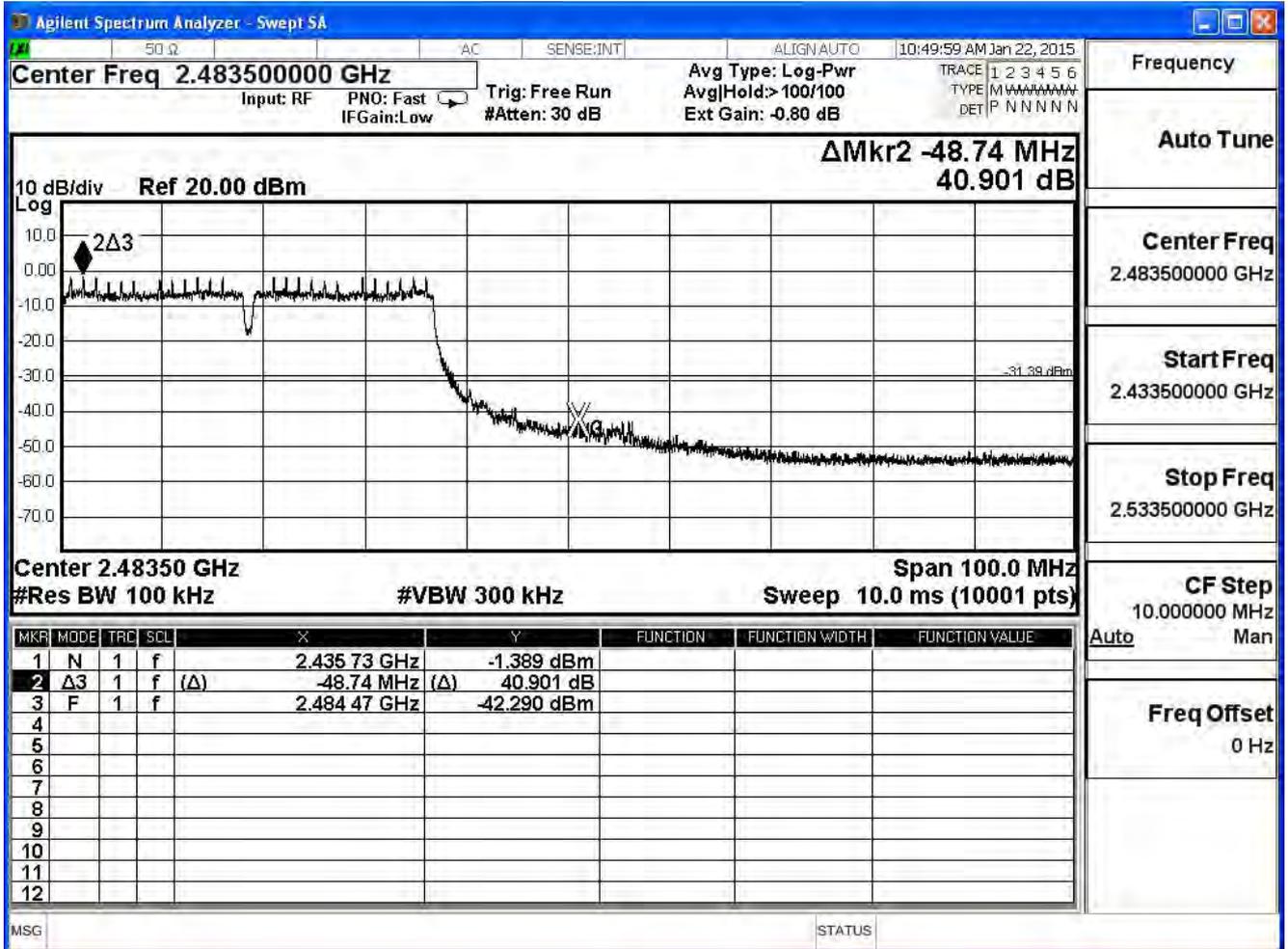
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)

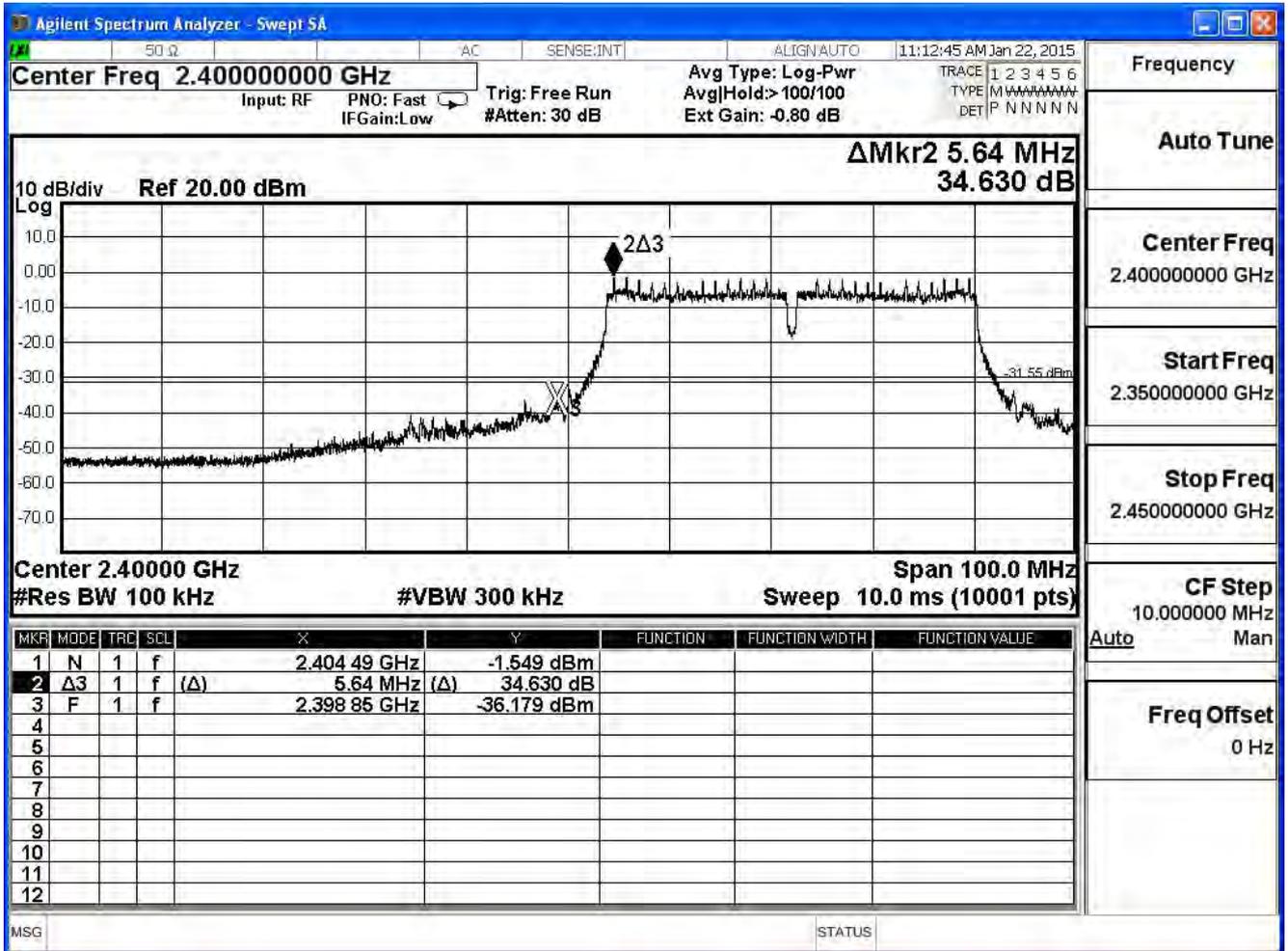


Product	Wireless-N300 Audio Streamer		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2015/01/22	Test Site	SR7

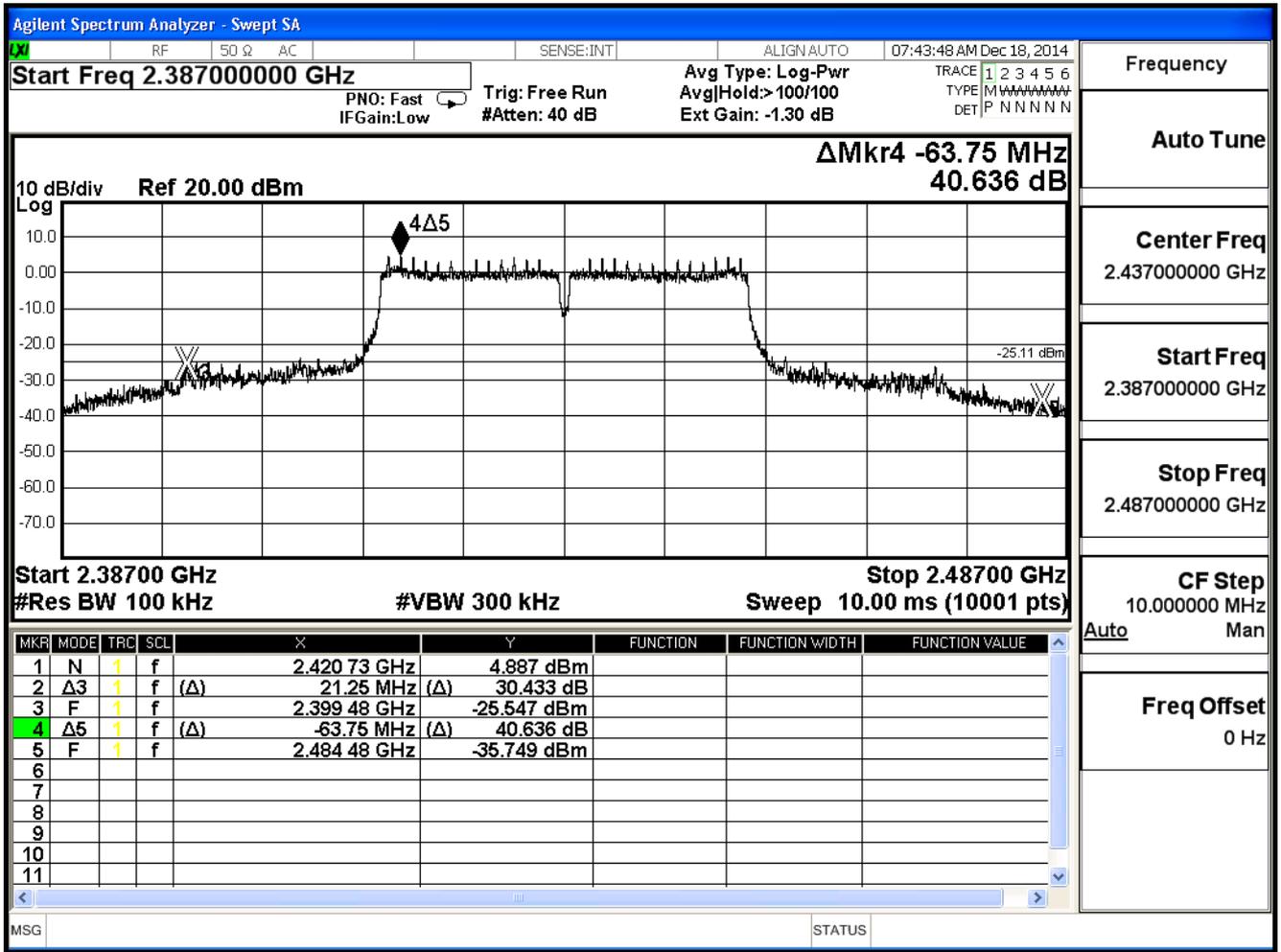
IEEE 802.11n (40MHz), (ANT 1) Duty Cycle: 1

Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
3	2422	34.630	≥ 30	Pass
6	2437	30.433	≥ 30	Pass
9	2452	40.736	≥ 30	Pass

Channel 03 (2422MHz)

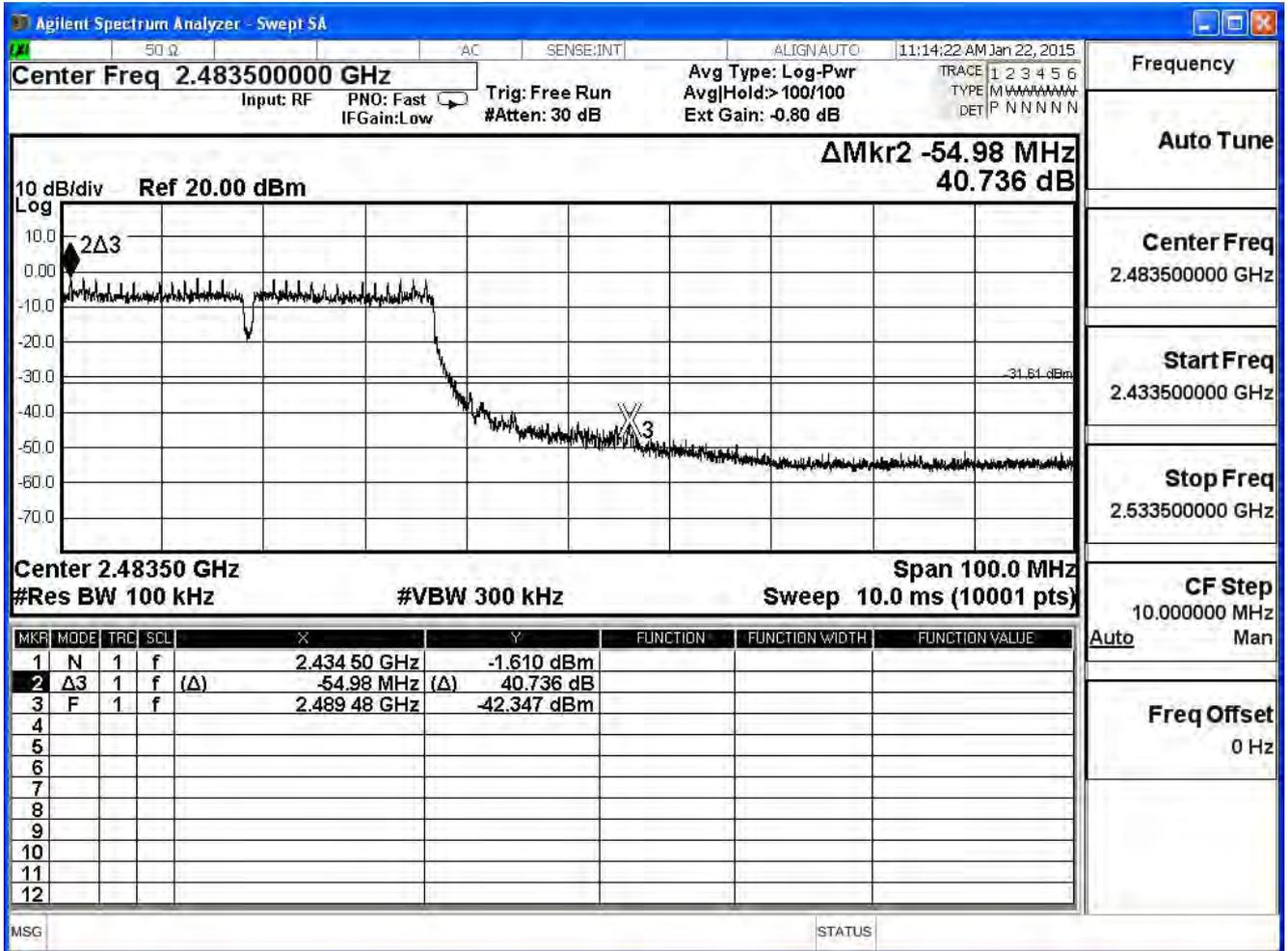


Channel 06 (2437MHz)



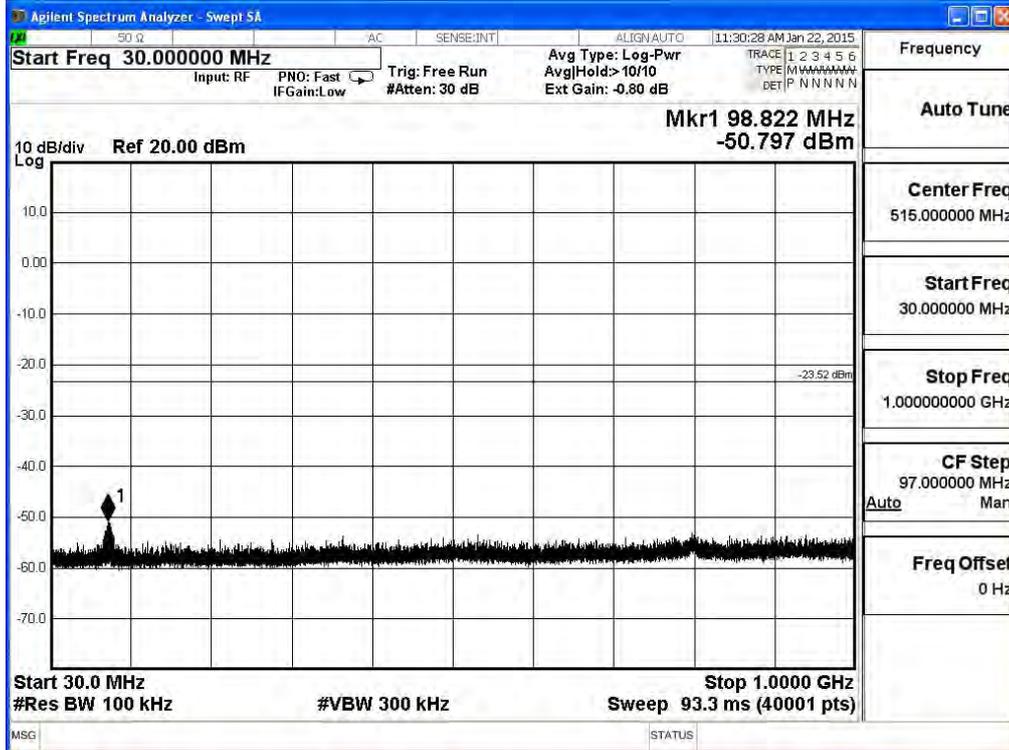
Frequency
Auto Tune
Center Freq 2.437000000 GHz
Start Freq 2.387000000 GHz
Stop Freq 2.487000000 GHz
CF Step 10.000000 MHz Auto Man
Freq Offset 0 Hz

Channel 09 (2452MHz)

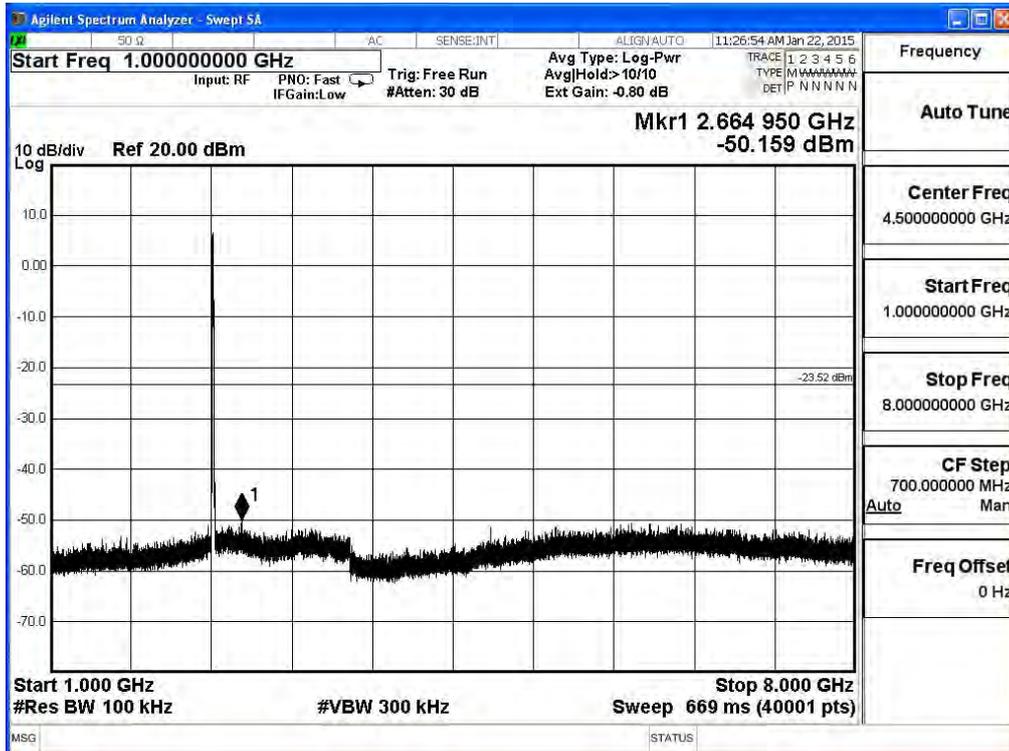


Product	Wireless-N300 Audio Streamer		
Test Item	RF antenna conducted test		
Test Mode	Mode 1: Transmit - Power by Adapter		
Date of Test	2015/01/22	Test Site	SR7

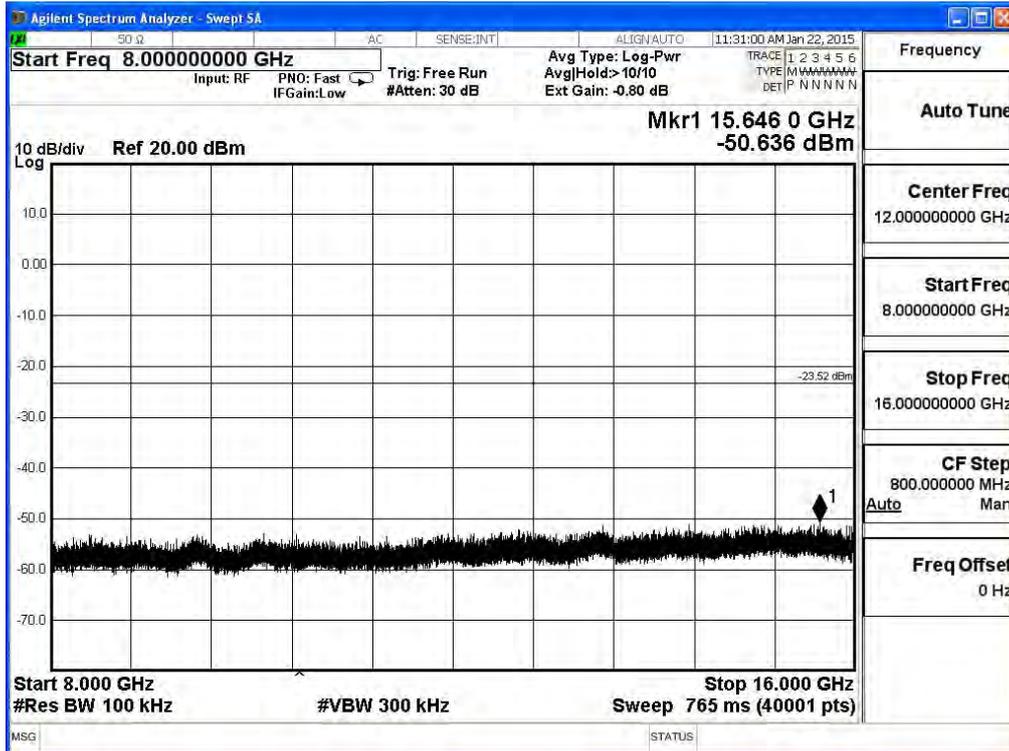
2412MHz (30MHz-1GHz)-802.11b (ANT 0)



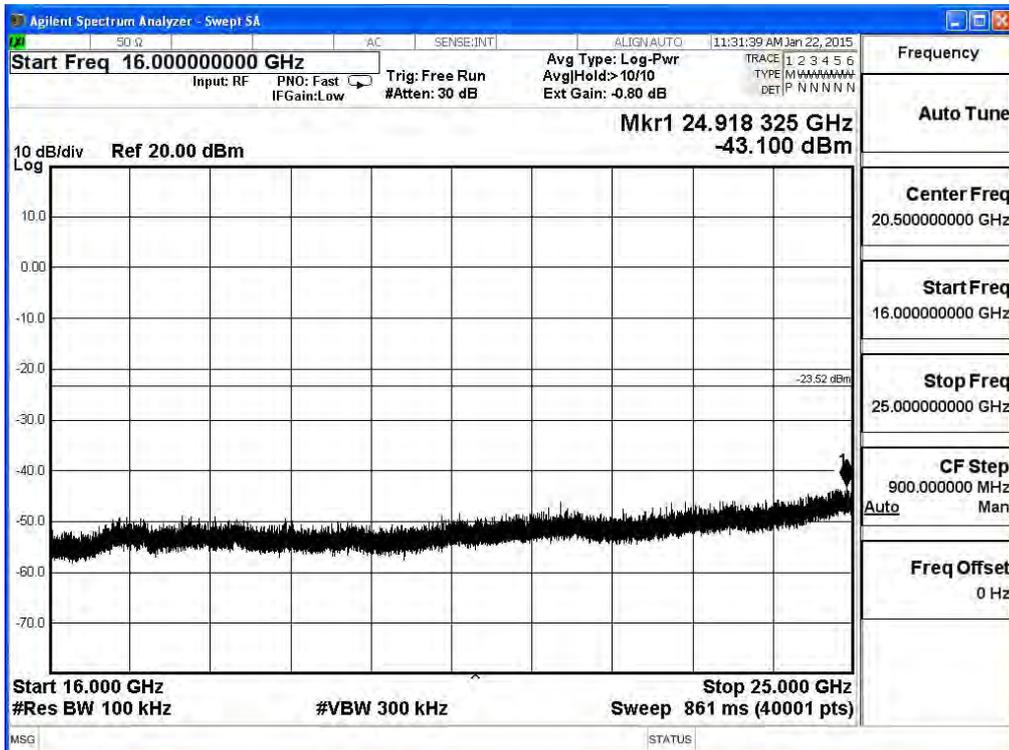
2412MHz (1GHz-8GHz) -802.11b (ANT 0)



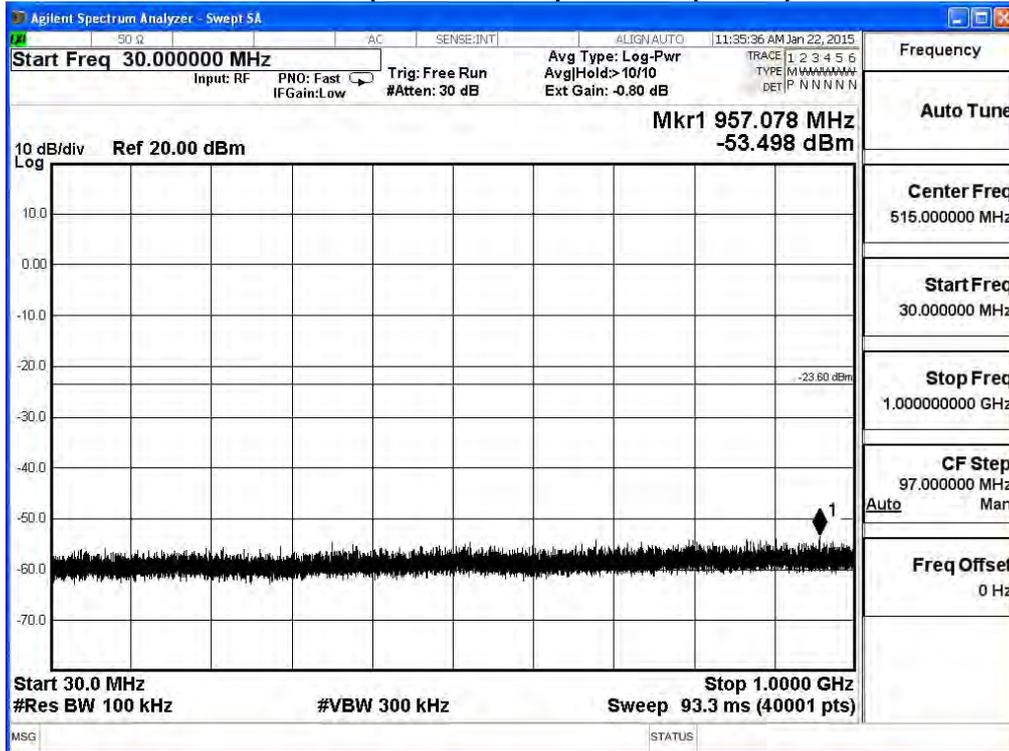
2412MHz (8GHz-16GHz) -802.11b (ANT 0)



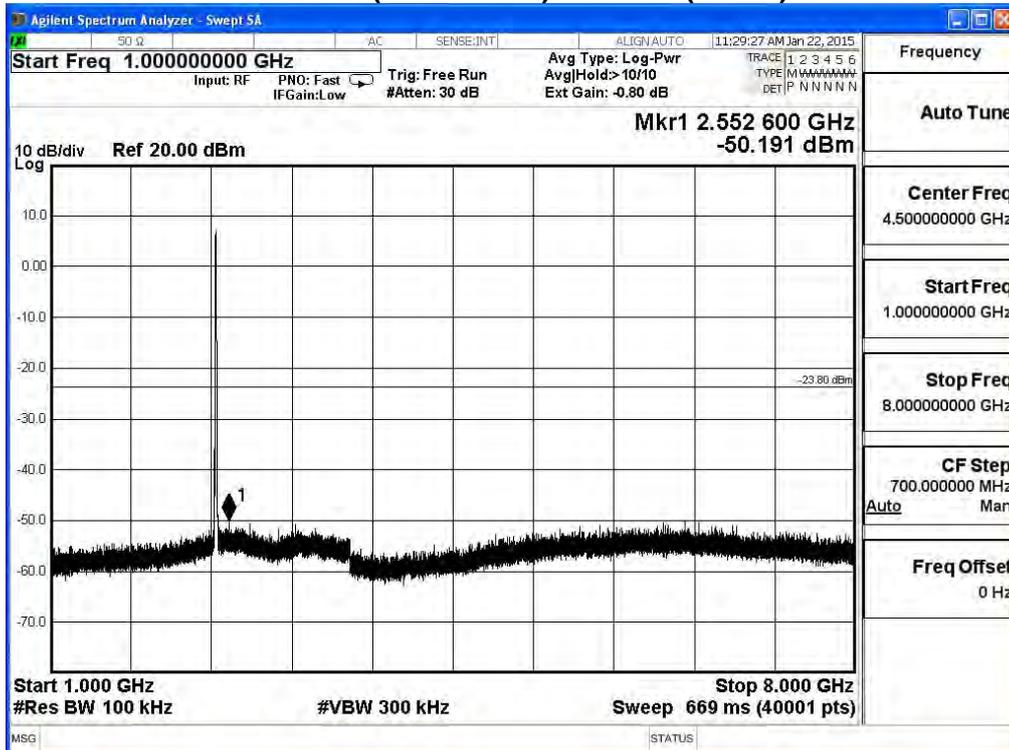
2412MHz (16GHz-25GHz) -802.11b (ANT 0)



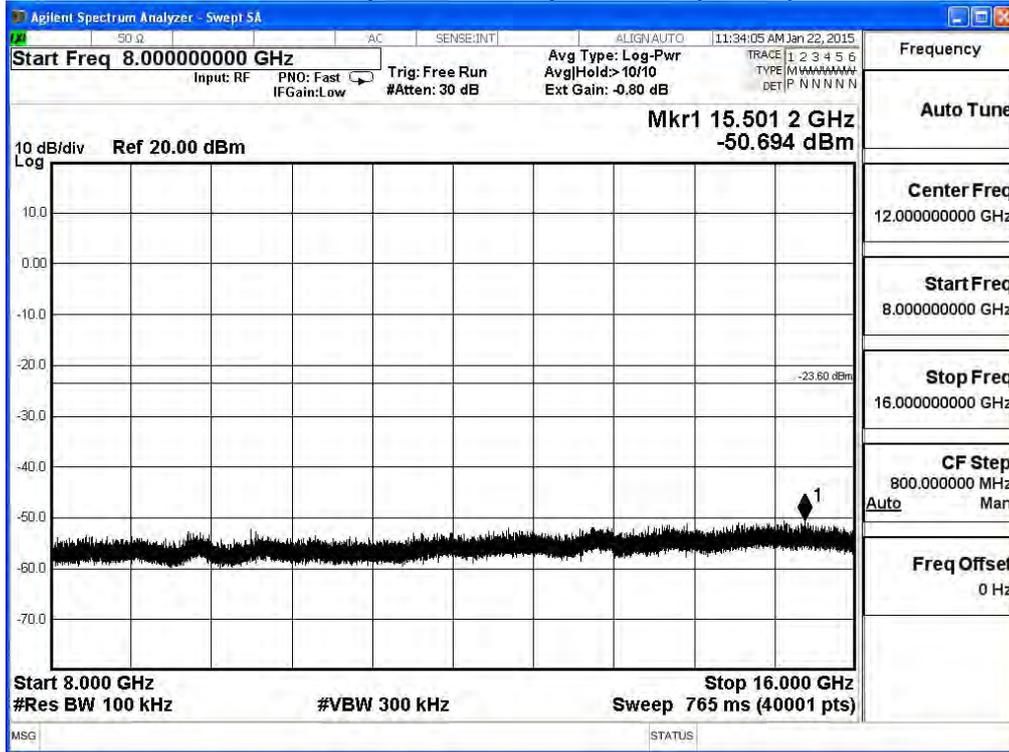
2437MHz (30MHz-1GHz)-802.11b (ANT 0)



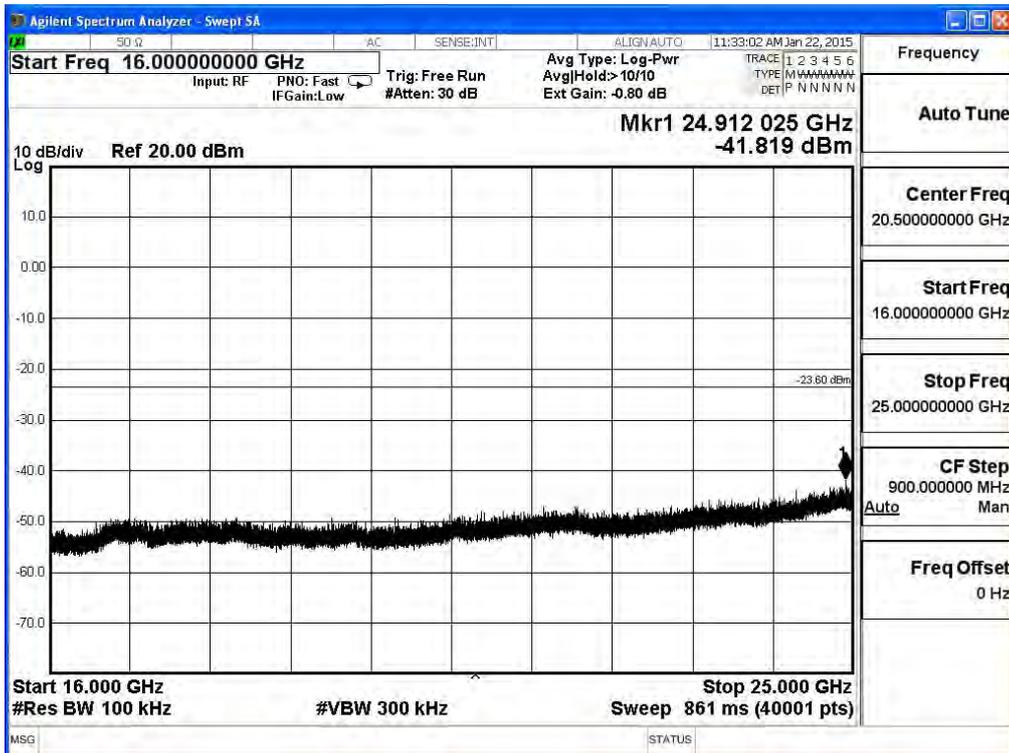
2437MHz (1GHz-8GHz) -802.11b (ANT 0)



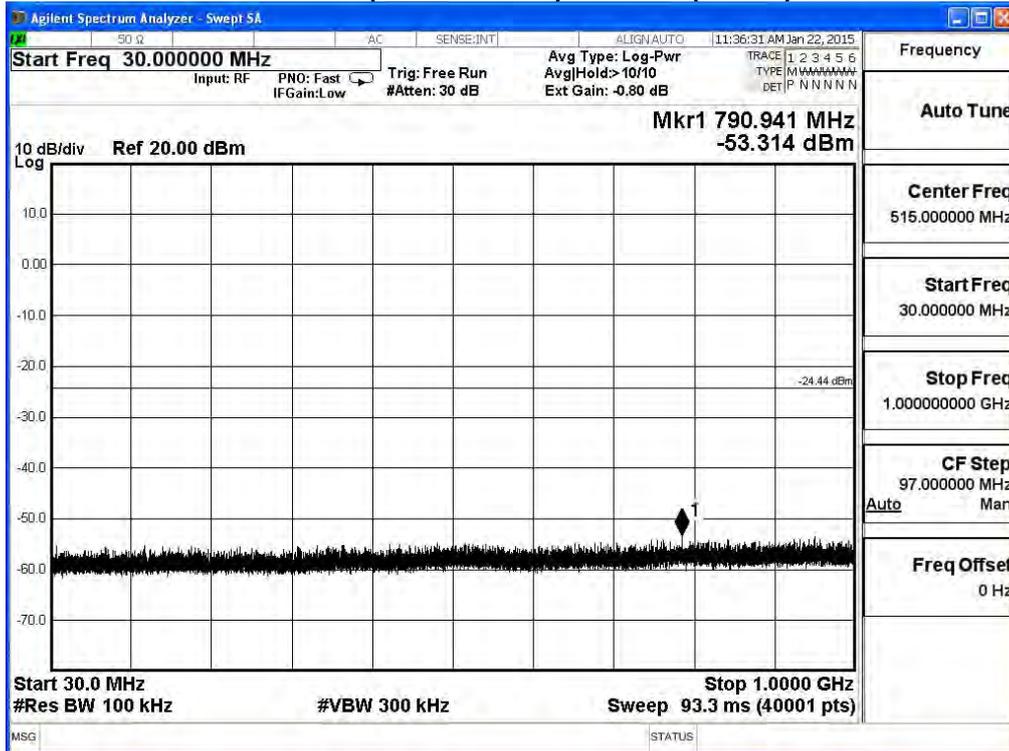
2437MHz (8GHz-16GHz) -802.11b (ANT 0)



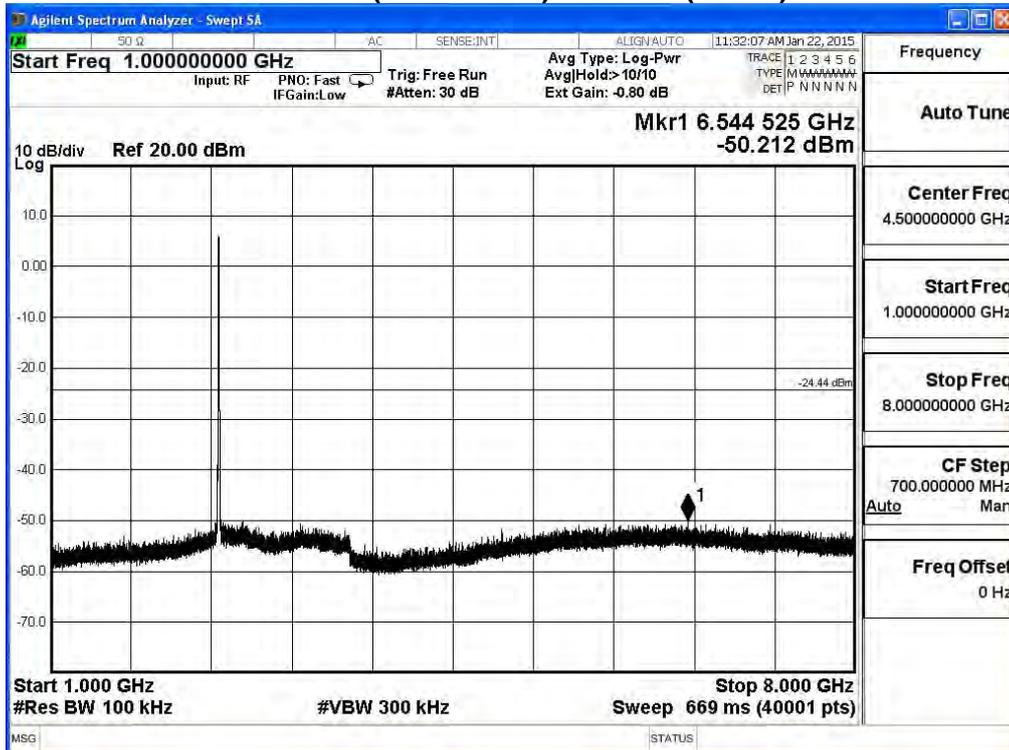
2437MHz (16GHz-25GHz) -802.11b (ANT 0)



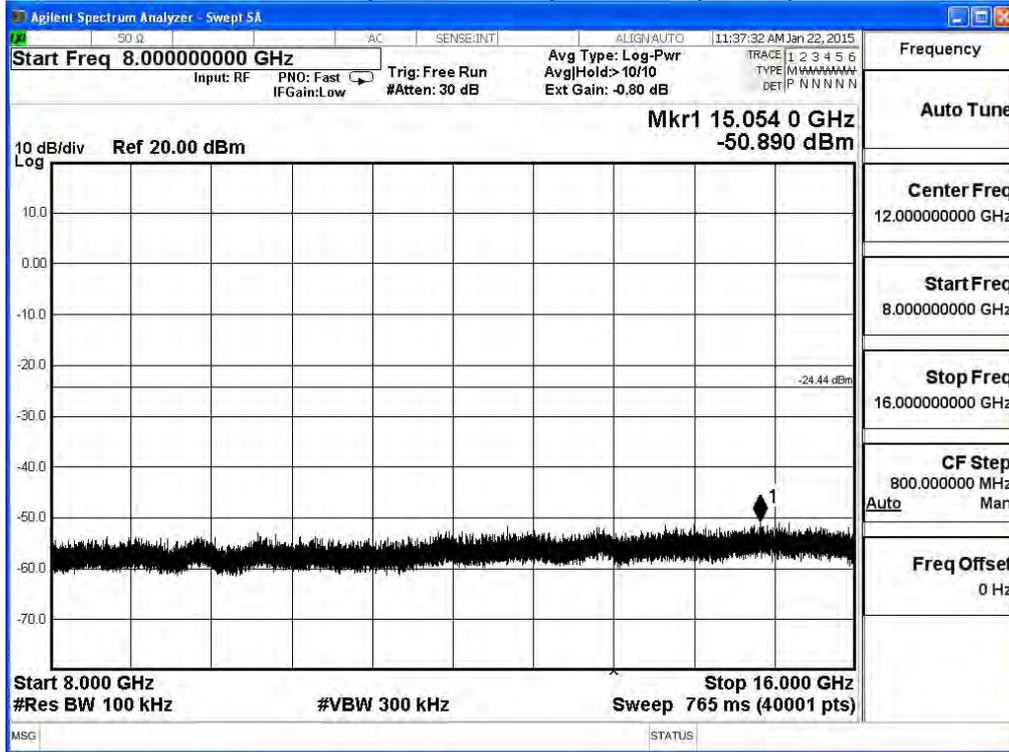
2462MHz (30MHz-1GHz)-802.11b (ANT 0)



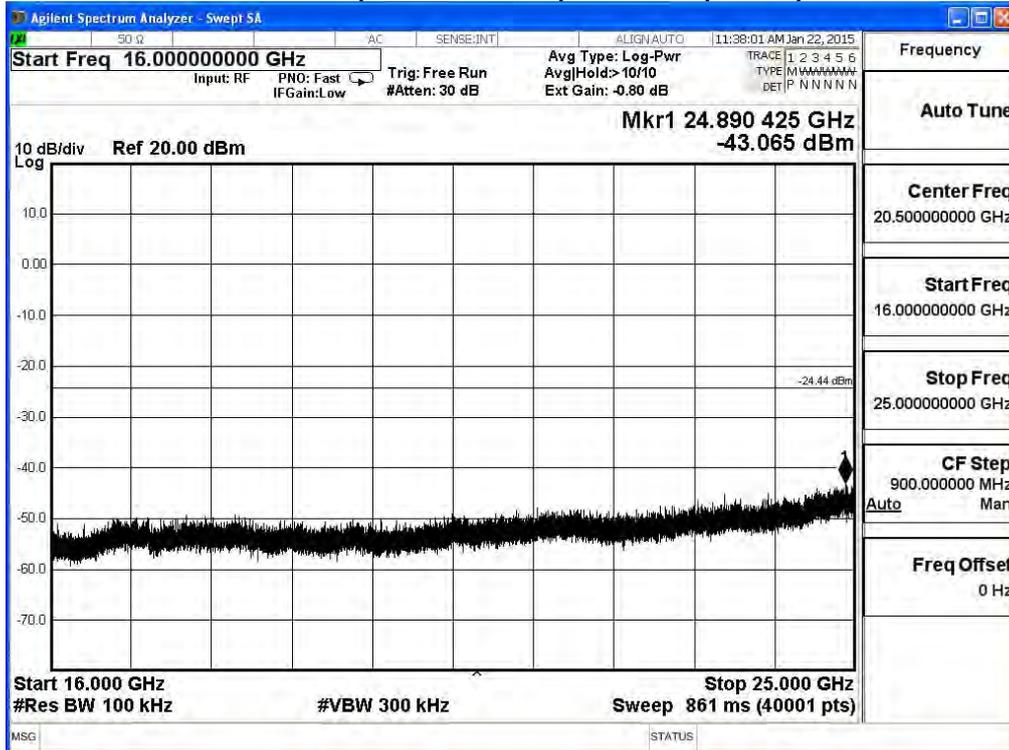
2462MHz (1GHz-8GHz) -802.11b (ANT 0)



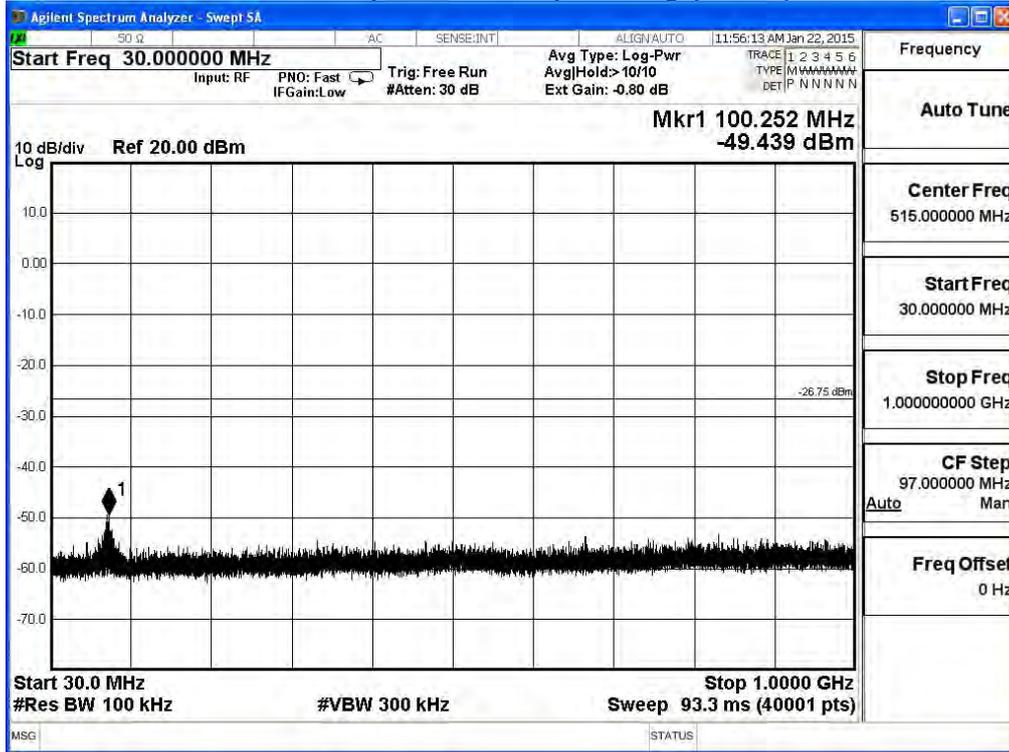
2462MHz (8GHz-16GHz) -802.11b (ANT 0)



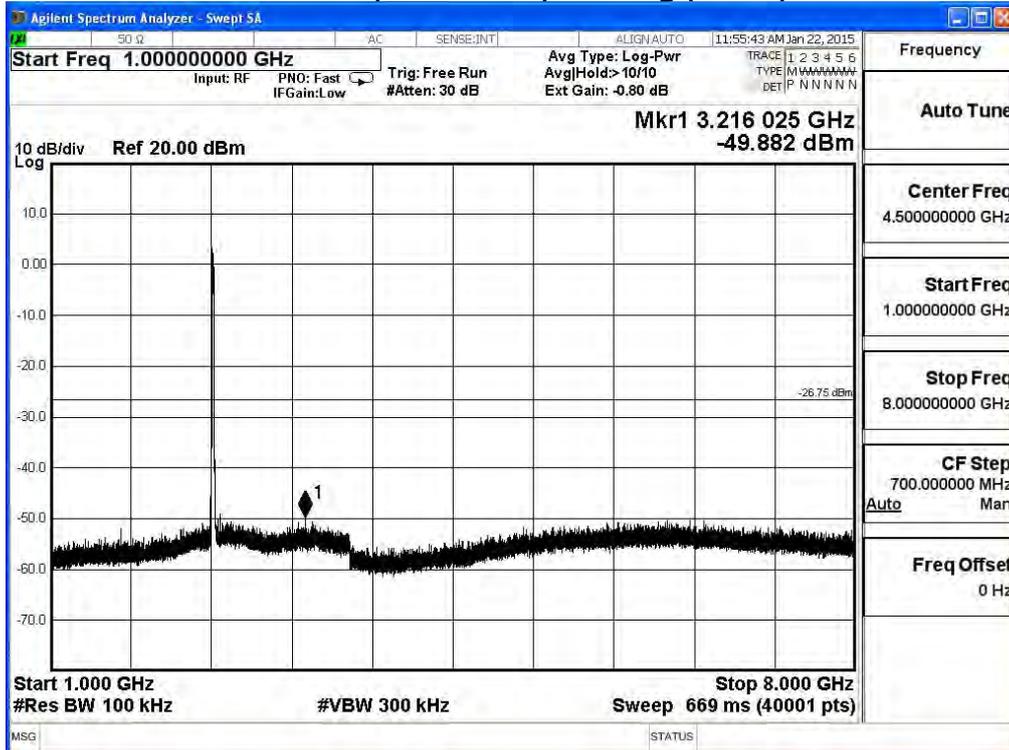
2462MHz (16GHz-25GHz) -802.11b (ANT 0)



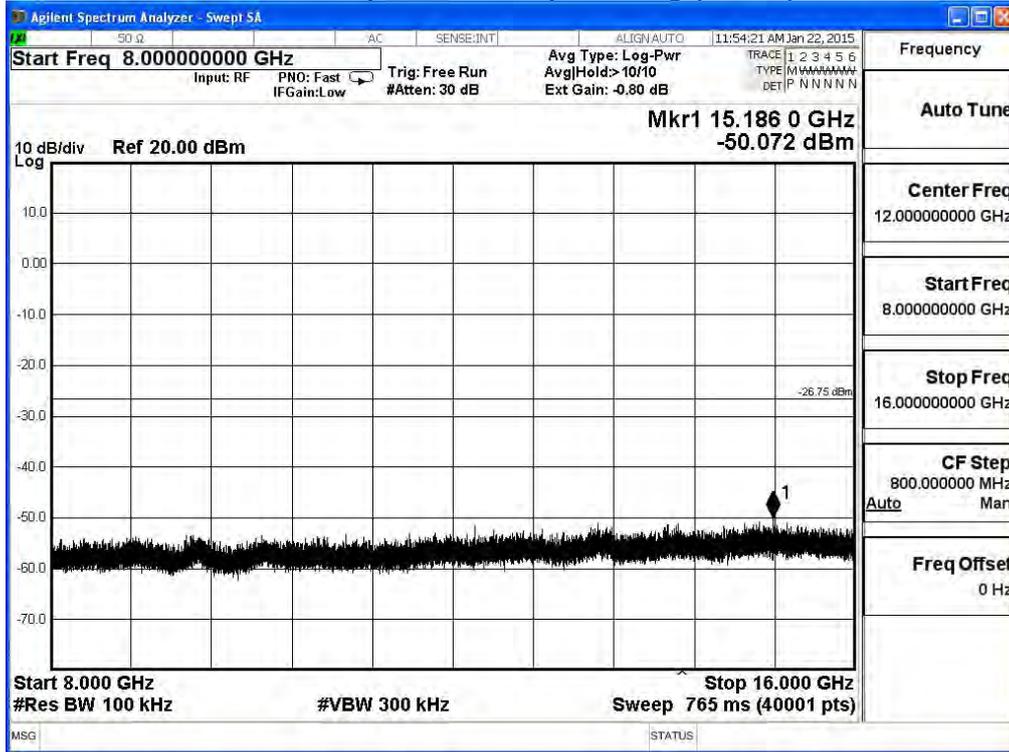
2412MHz (30MHz-1GHz)-802.11g (ANT 0)



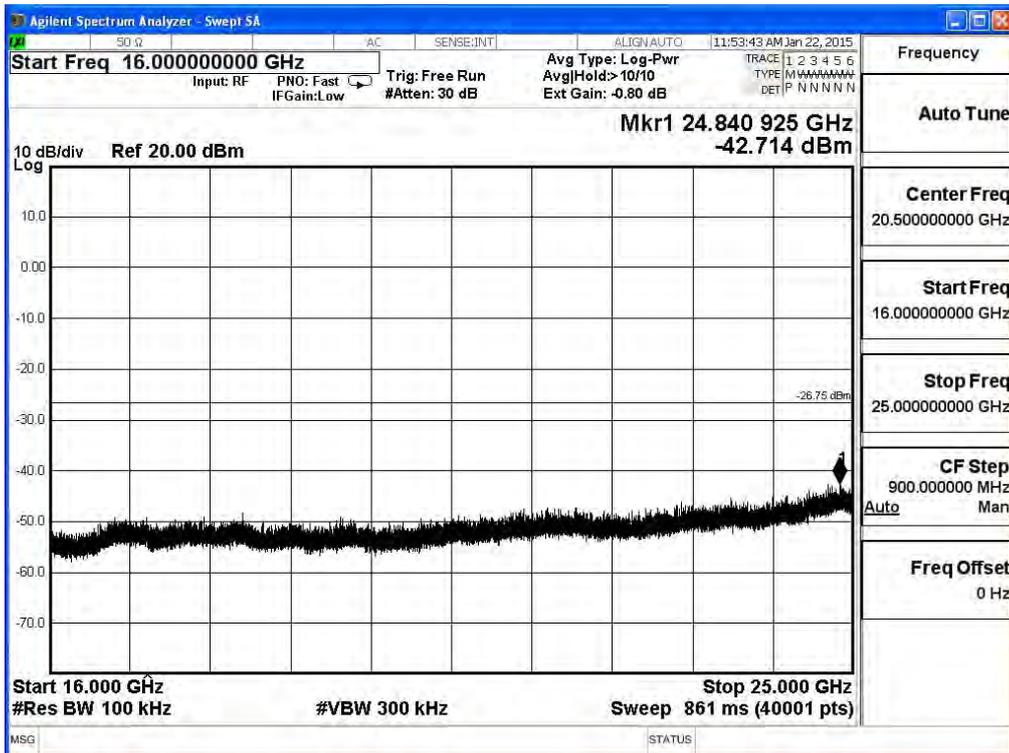
2412MHz (1GHz-8GHz) -802.11g (ANT 0)



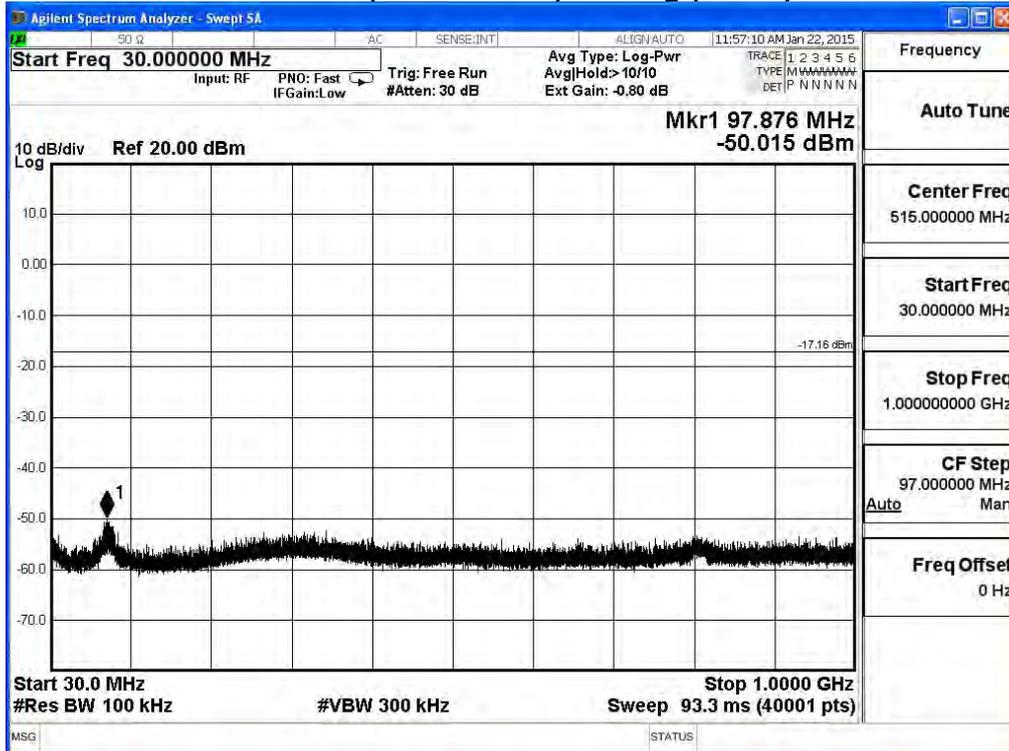
2412MHz (8GHz-16GHz) -802.11g (ANT 0)



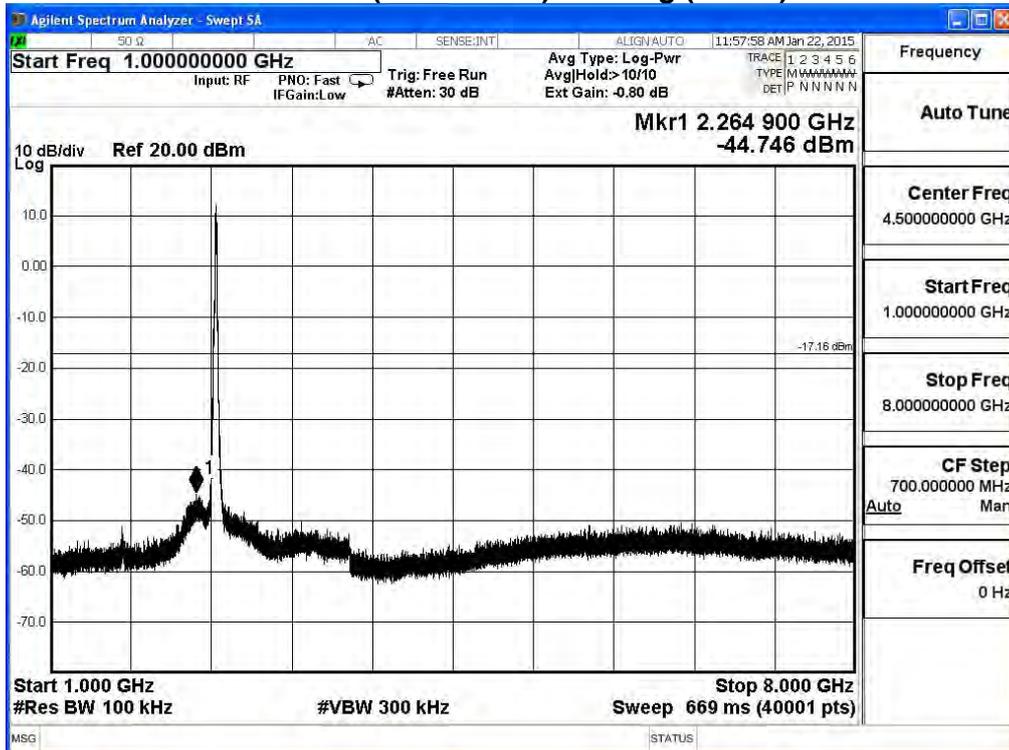
2412MHz (16GHz-25GHz) -802.11g (ANT 0)



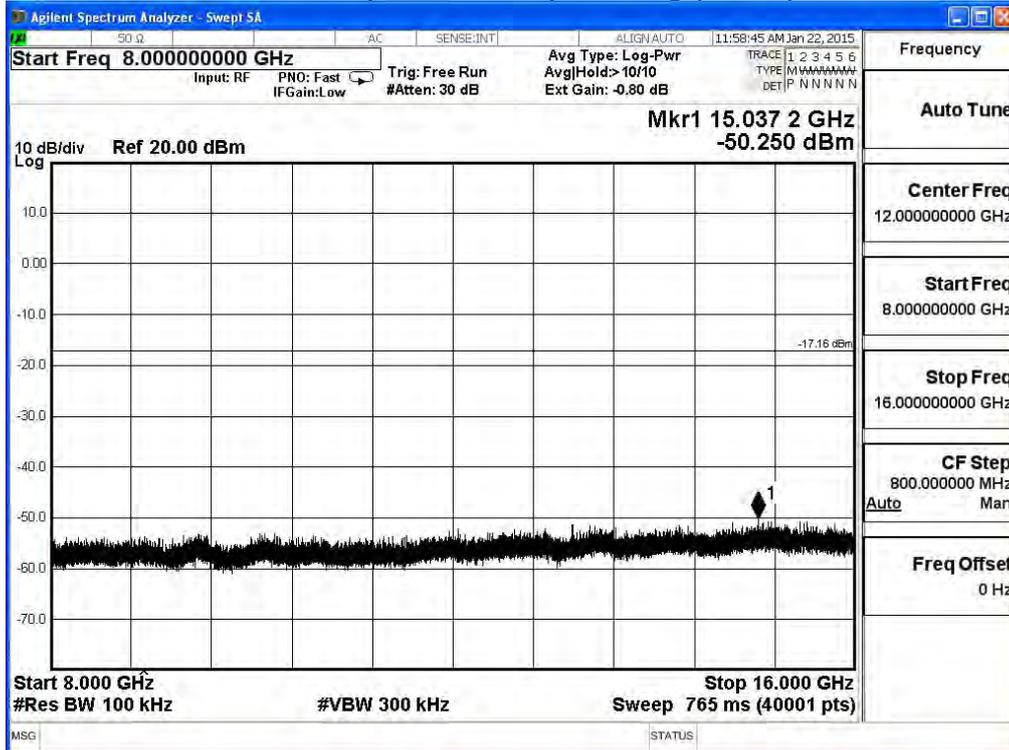
2437MHz (30MHz-1GHz)-802.11g (ANT 0)



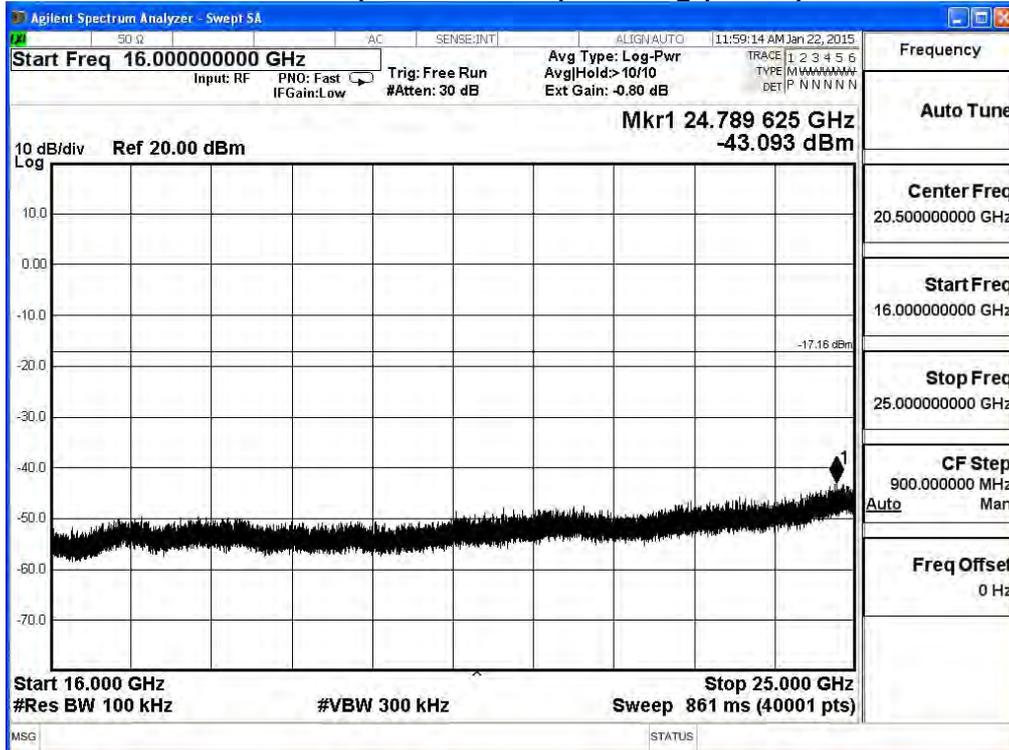
2437MHz (1GHz-8GHz) -802.11g (ANT 0)



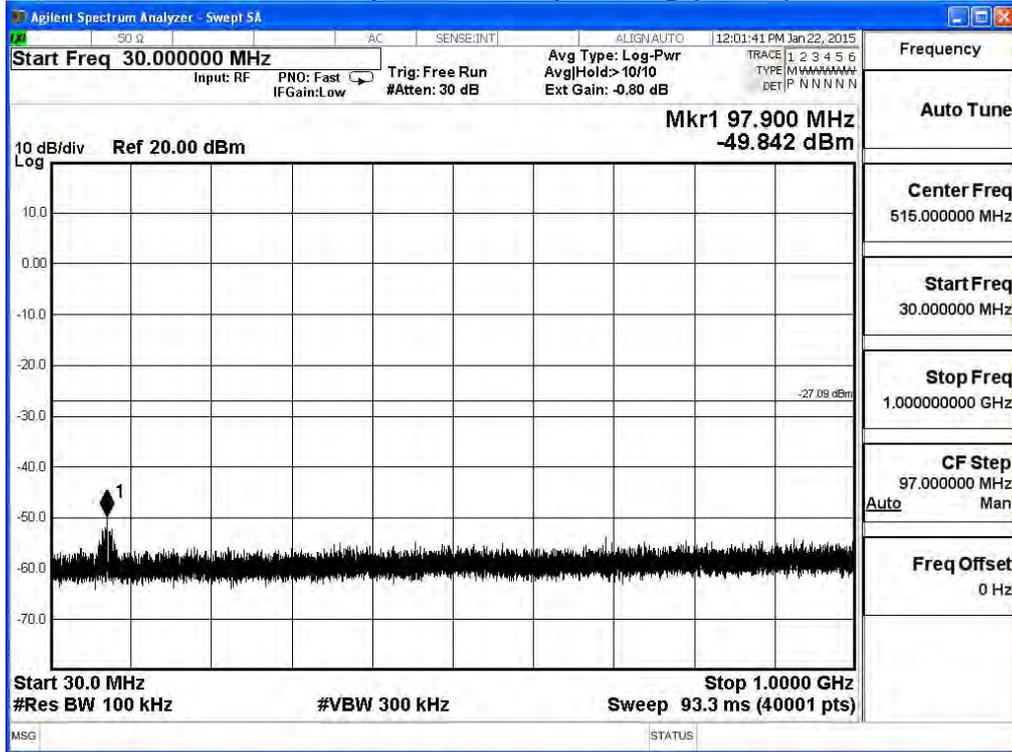
2437MHz (8GHz-16GHz) -802.11g (ANT 0)



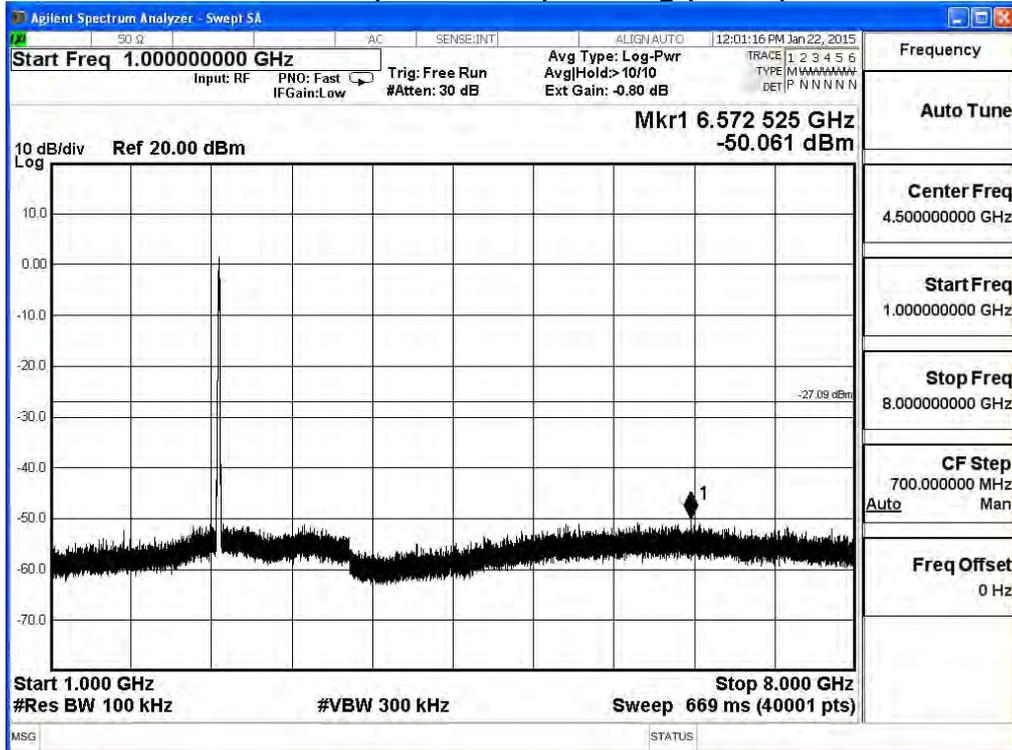
2437MHz (16GHz-25GHz) -802.11g (ANT 0)



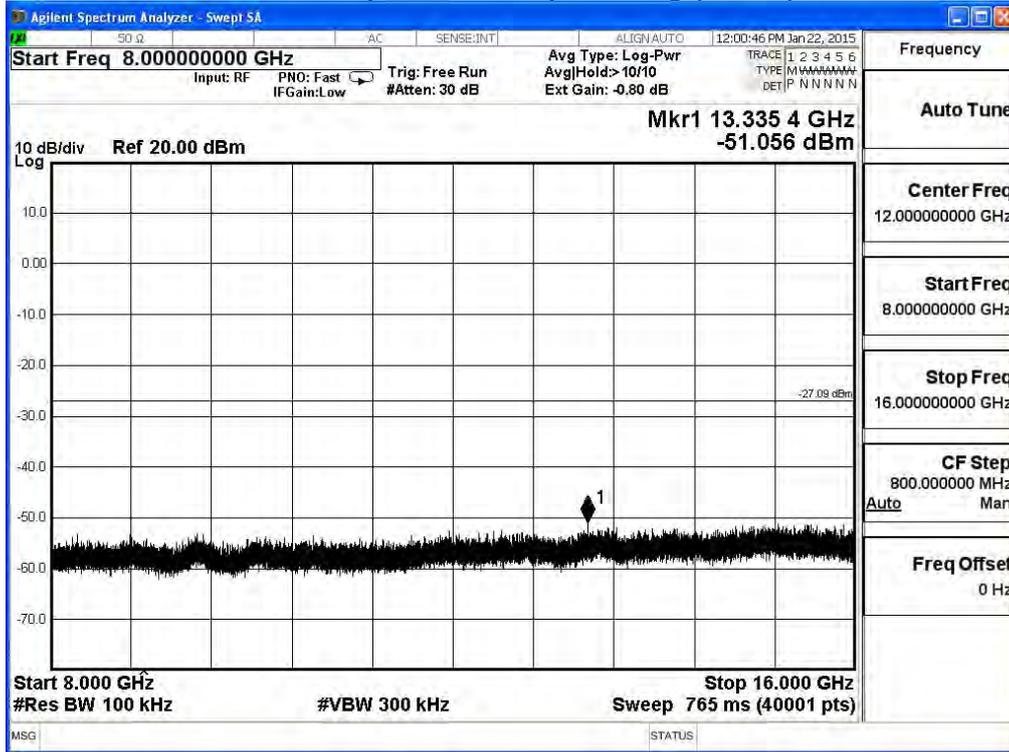
2462MHz (30MHz-1GHz)-802.11g (ANT 0)



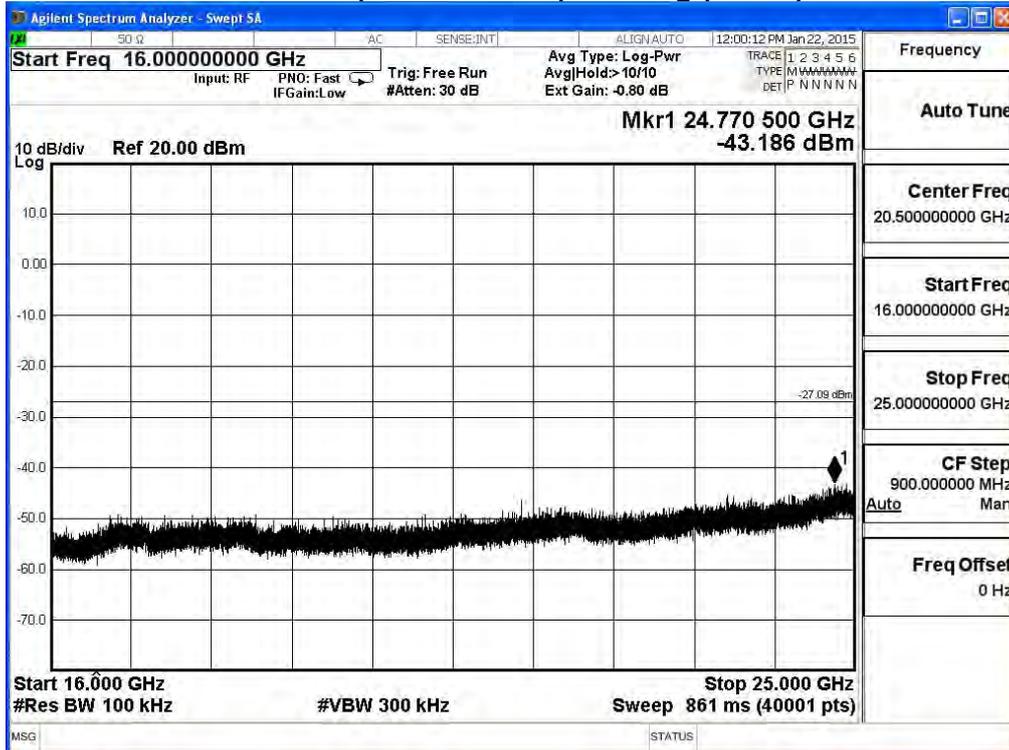
2462MHz (1GHz-8GHz) -802.11g (ANT 0)



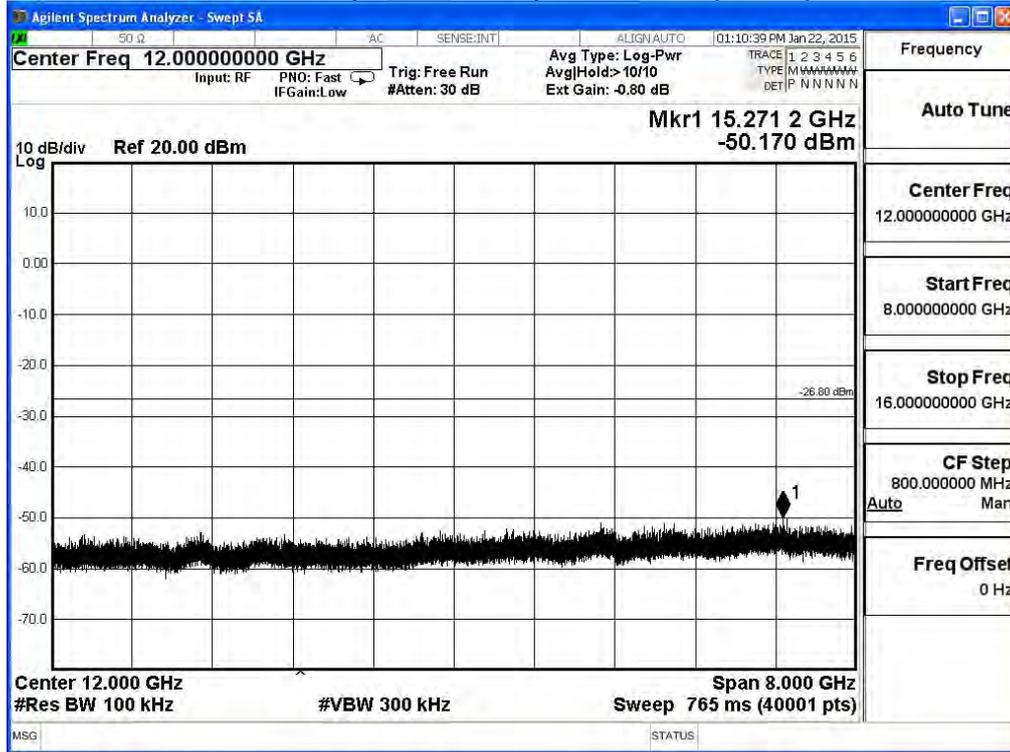
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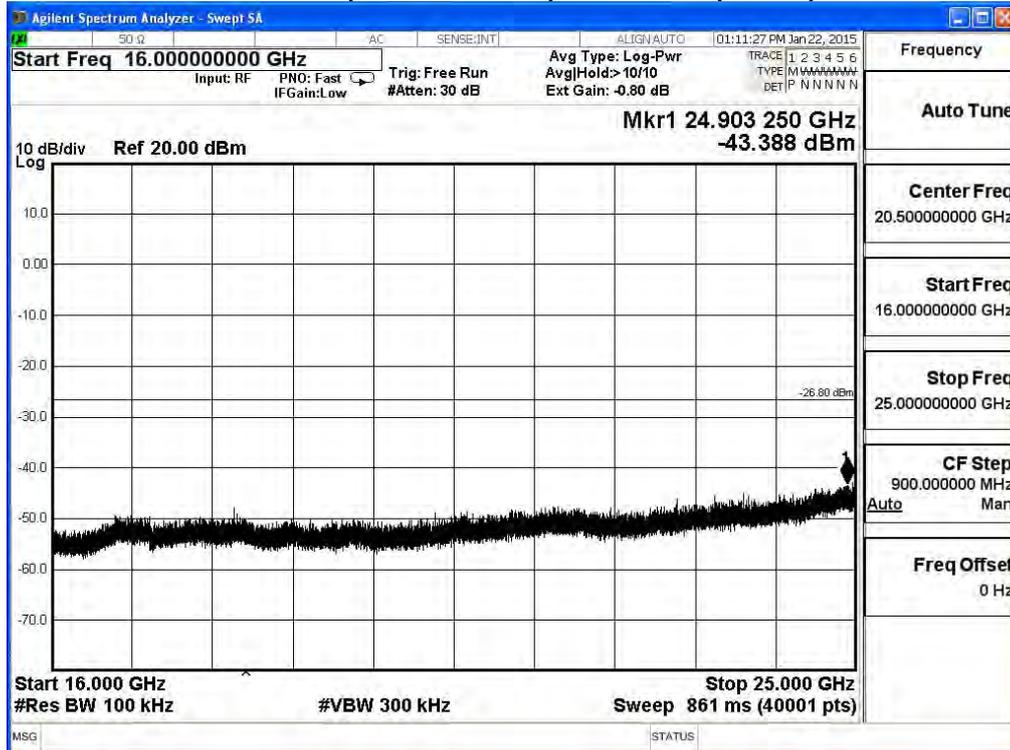
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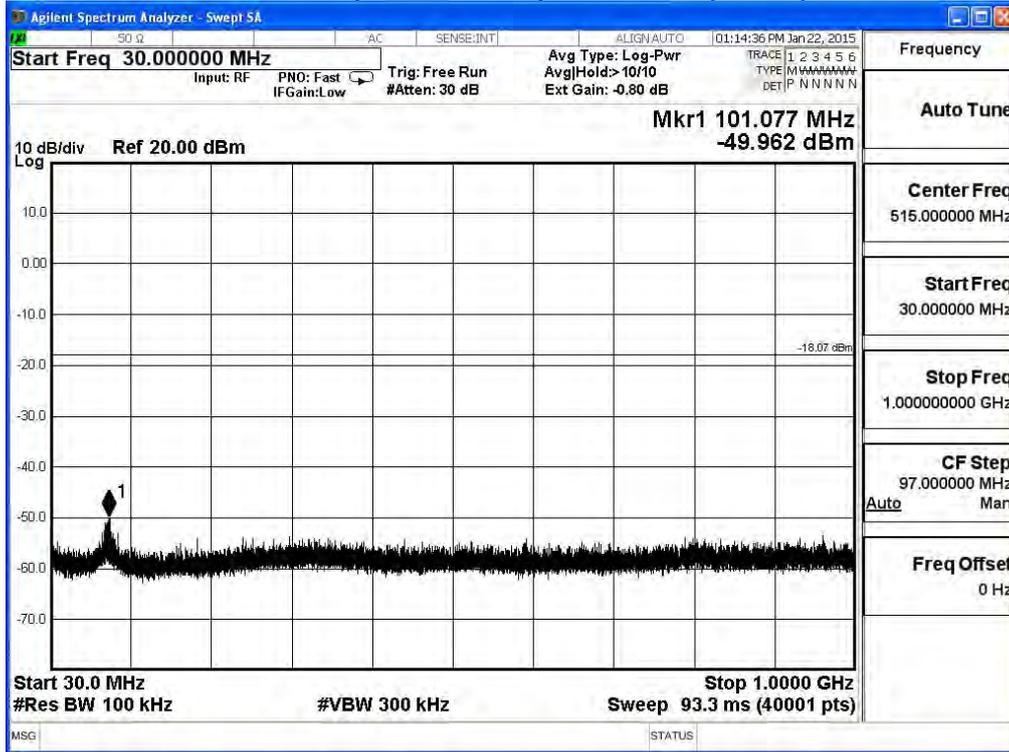
2412MHz (8GHz-16GHz) -802.11n20 (ANT 0)



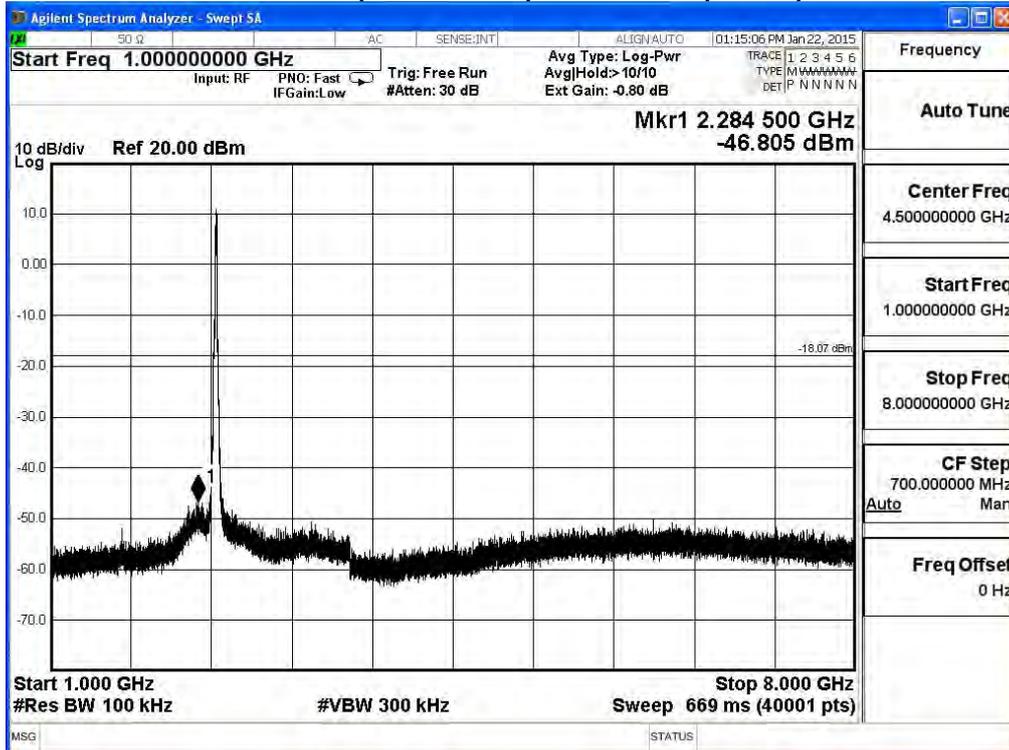
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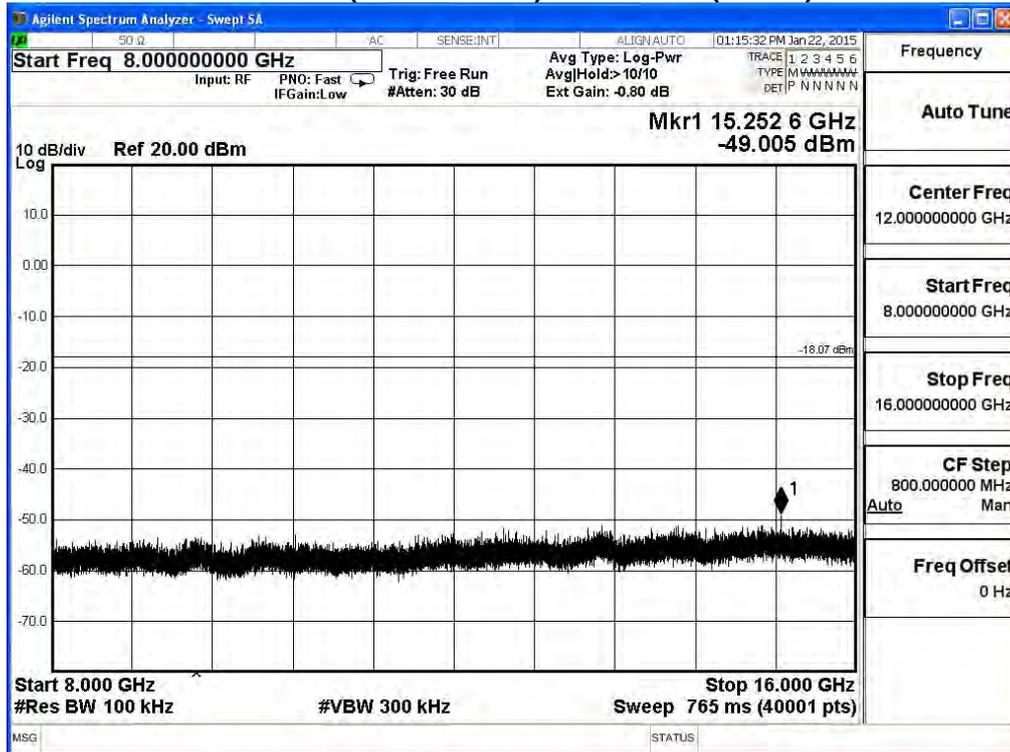
2437MHz (30MHz-1GHz)-802.11n20 (ANT 0)



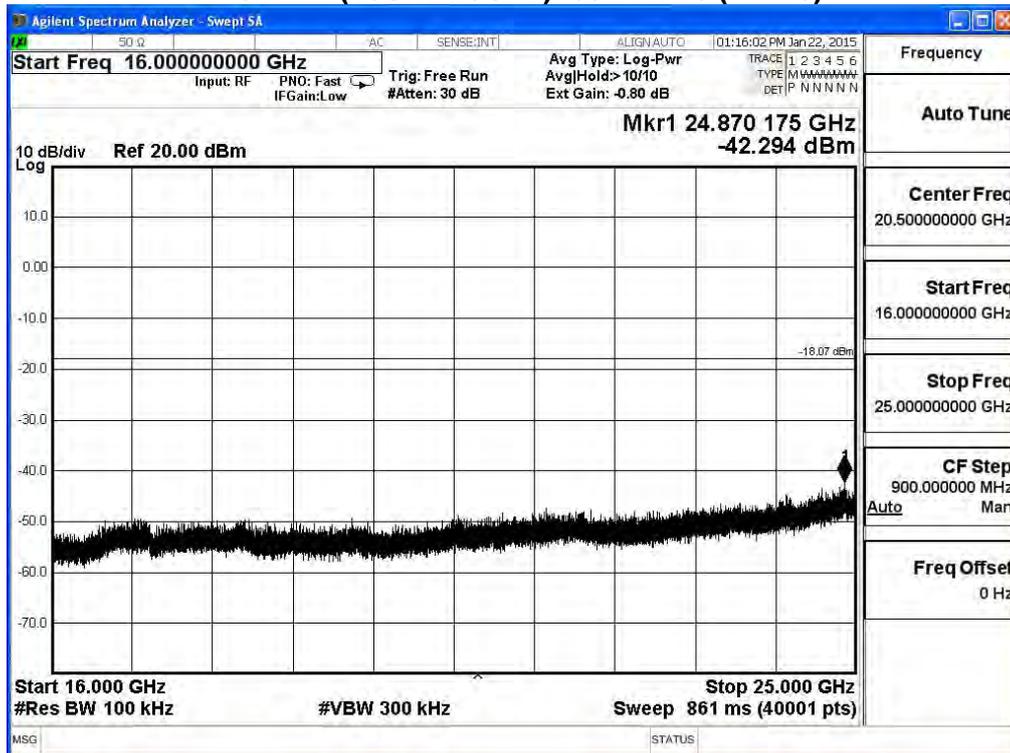
2437MHz (1GHz-8GHz) -802.11n20 (ANT 0)



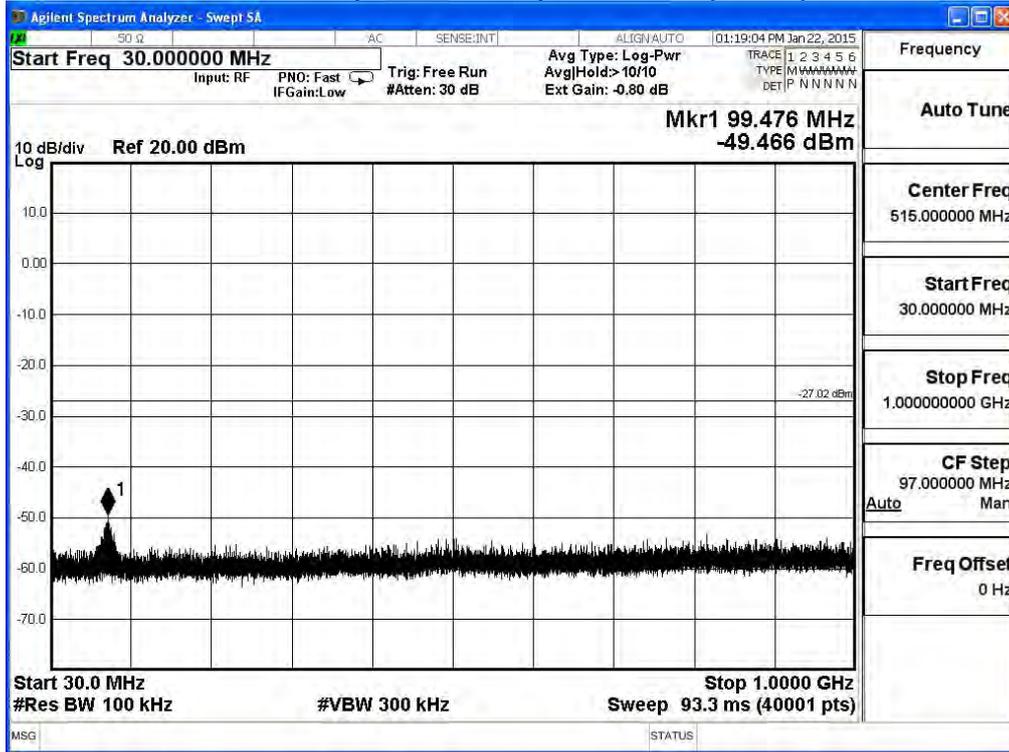
2437MHz (8GHz-16GHz) -802.11n20 (ANT 0)



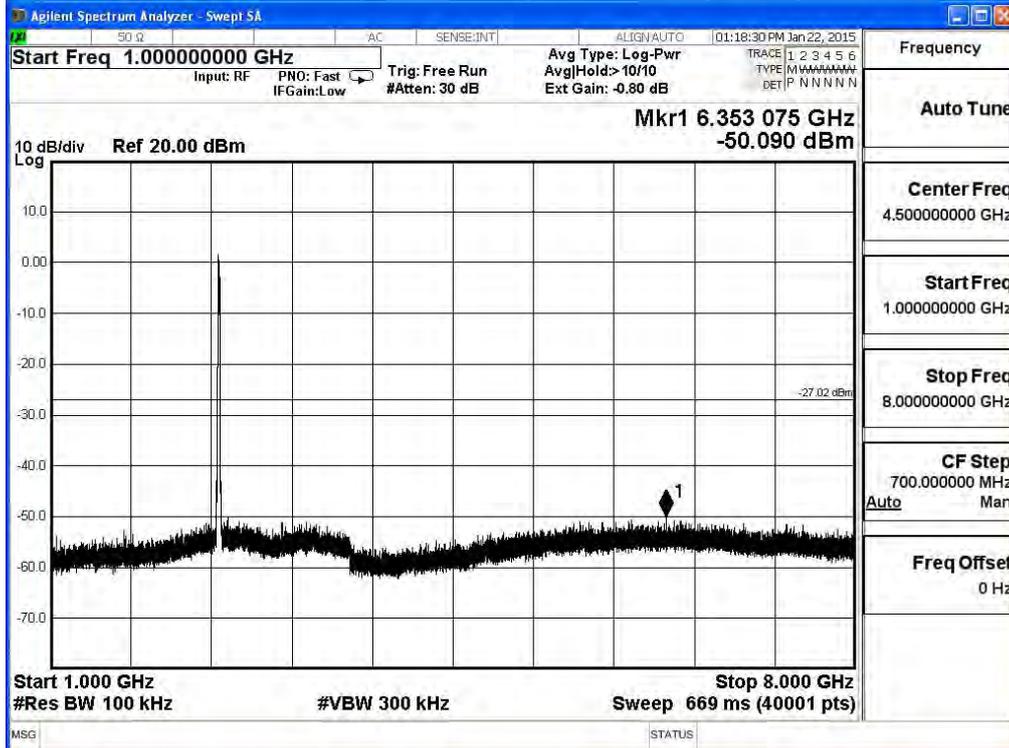
2437MHz (16GHz-25GHz) -802.11n20 (ANT 0)



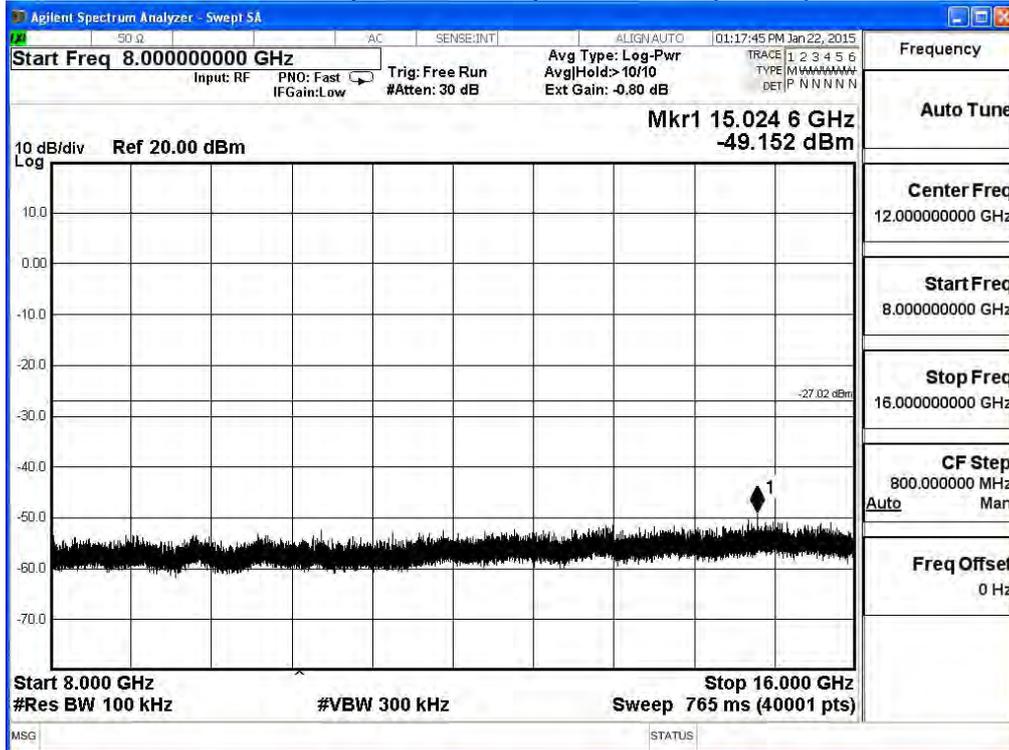
2462MHz (30MHz-1GHz)-802.11n20 (ANT 0)



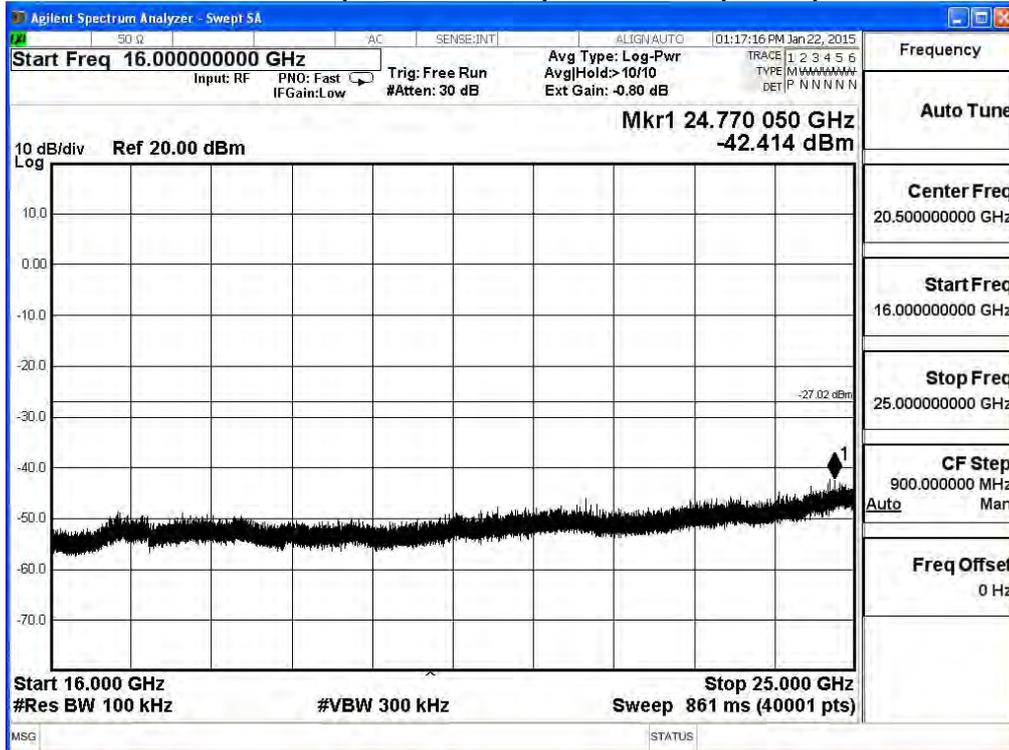
2462MHz (1GHz-8GHz) -802.11n20 (ANT 0)



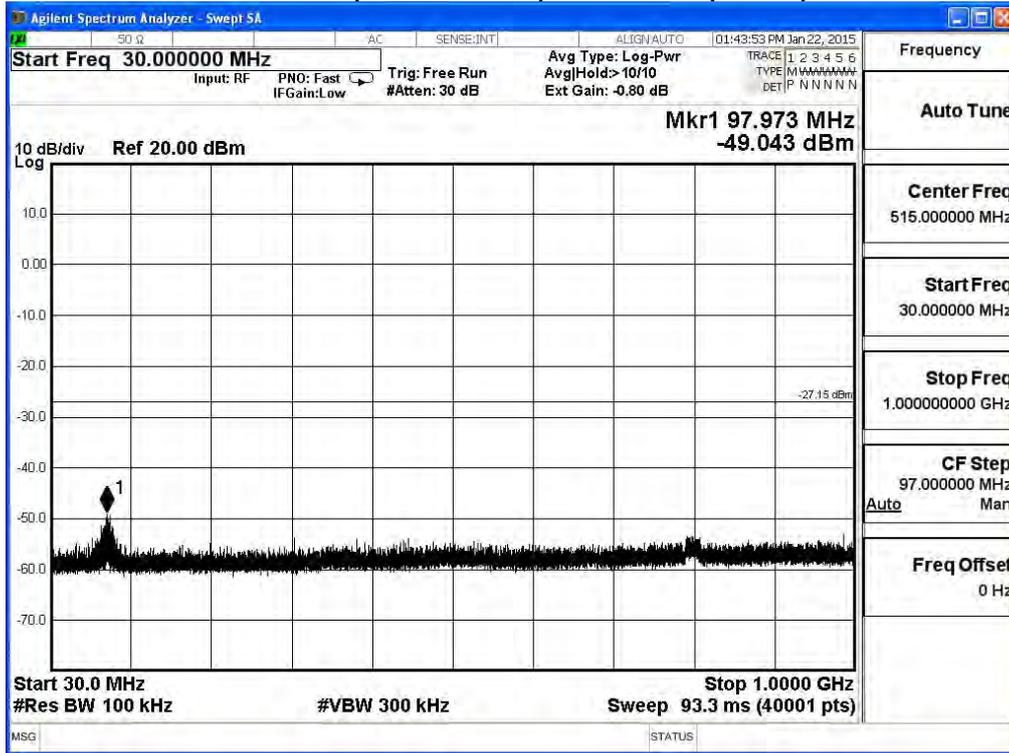
2462MHz (8GHz-16GHz) -802.11n20 (ANT 0)



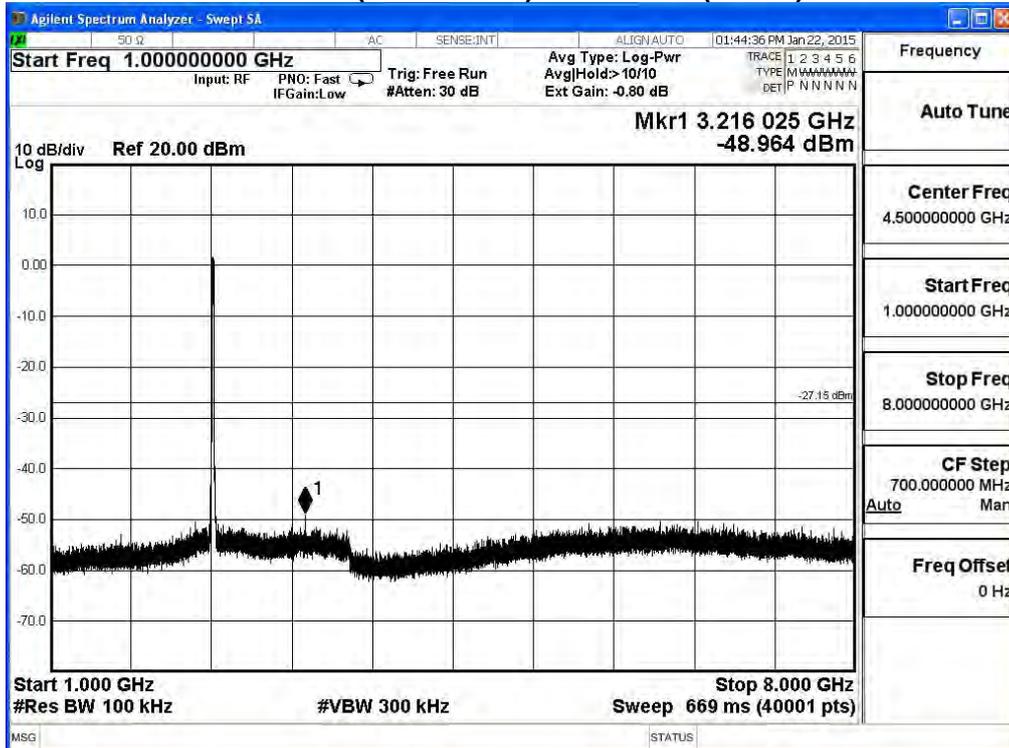
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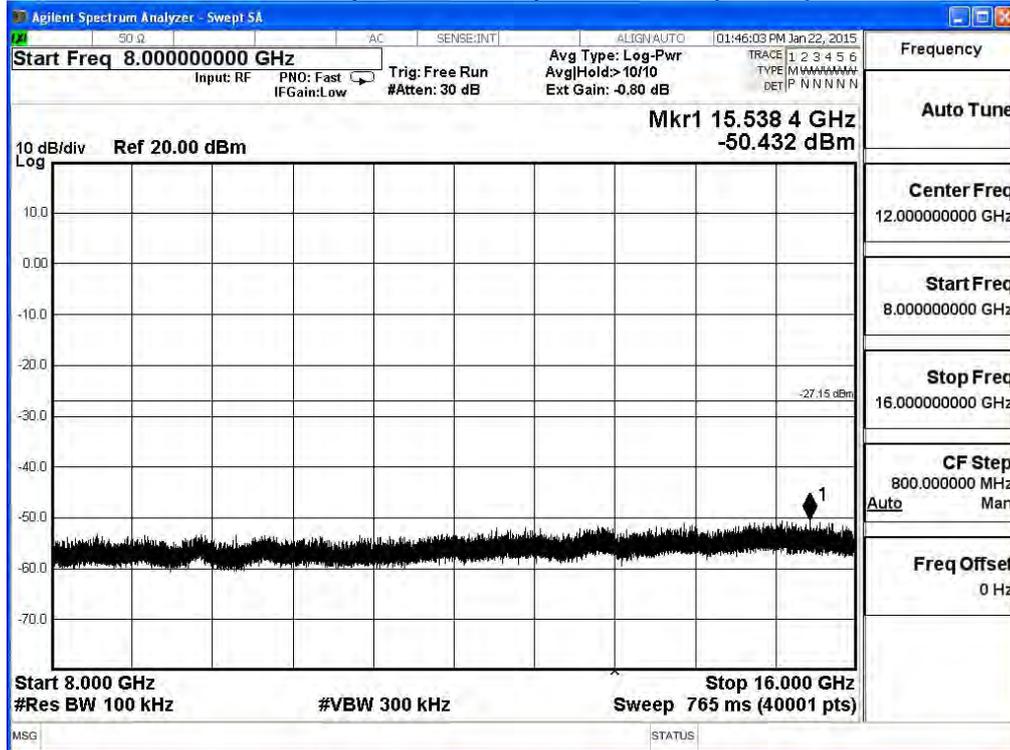
2412MHz (30MHz-1GHz)-802.11n20 (ANT 1)



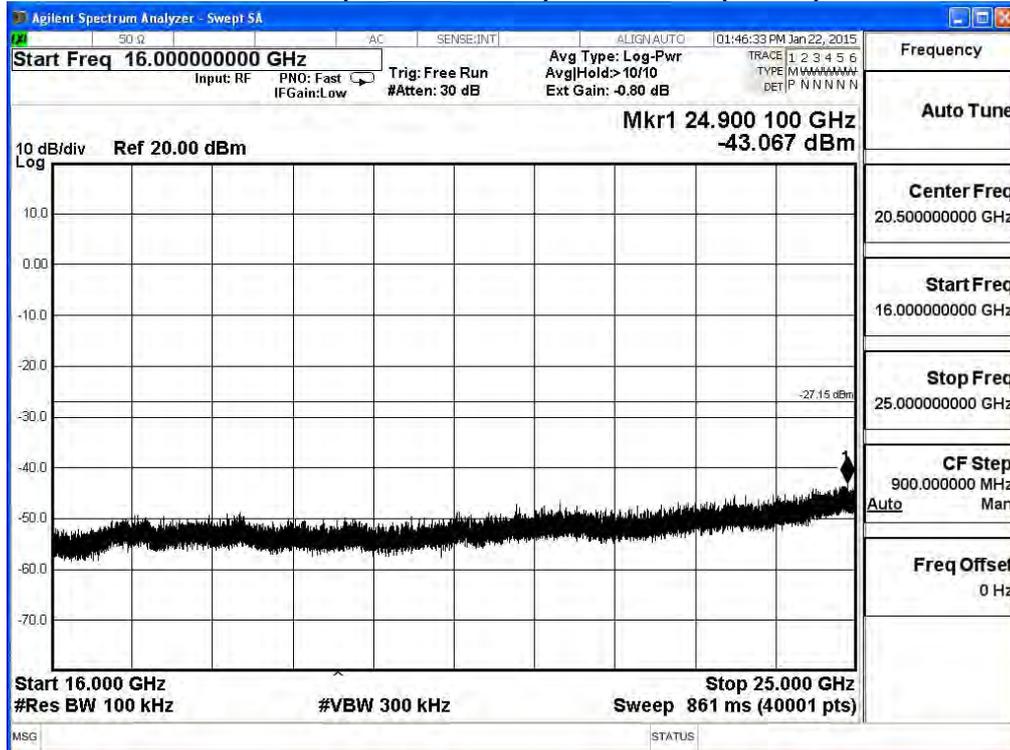
2412MHz (1GHz-8GHz) -802.11n20 (ANT 1)



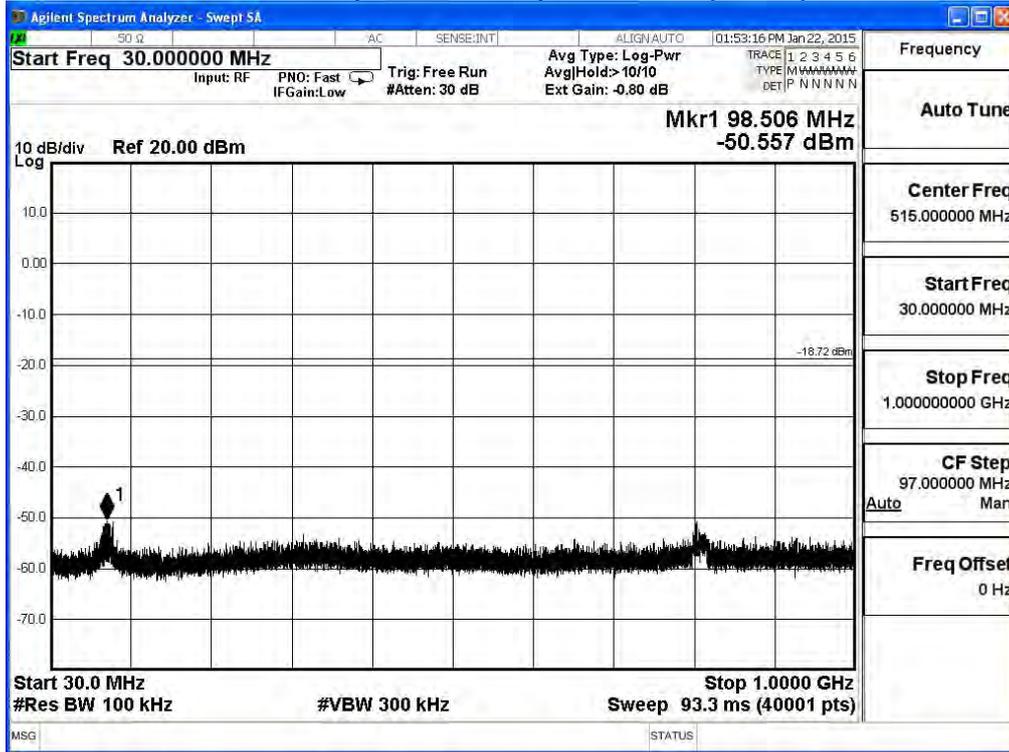
2412MHz (8GHz-16GHz) -802.11n20 (ANT 1)



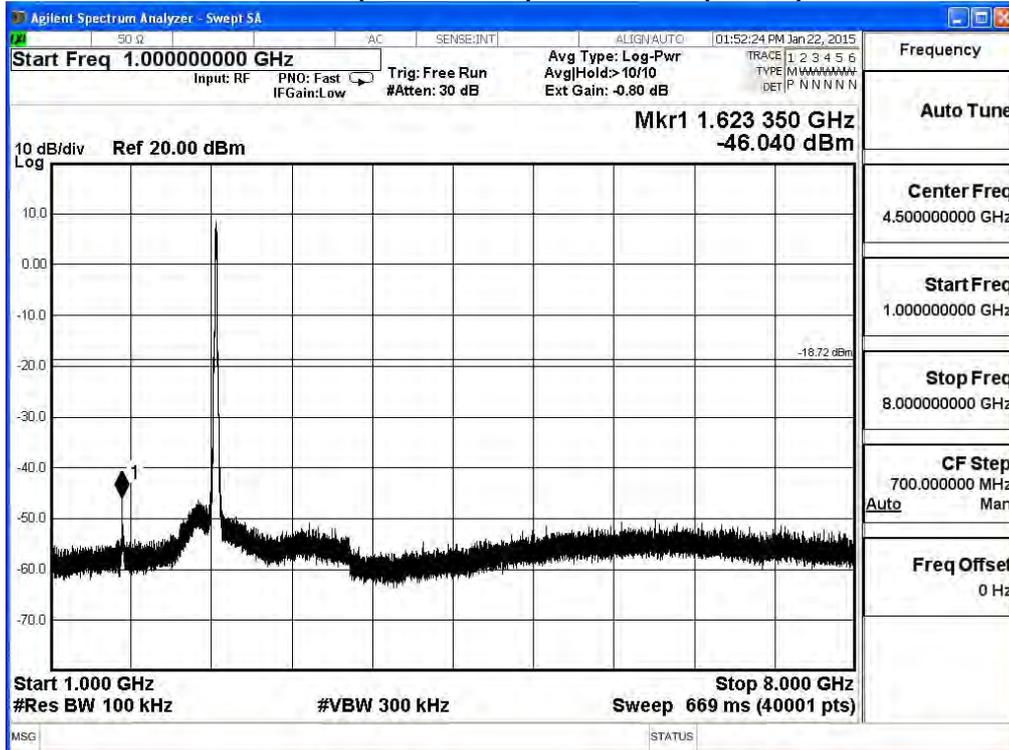
2412MHz (16GHz-25GHz) -802.11n20 (ANT 1)



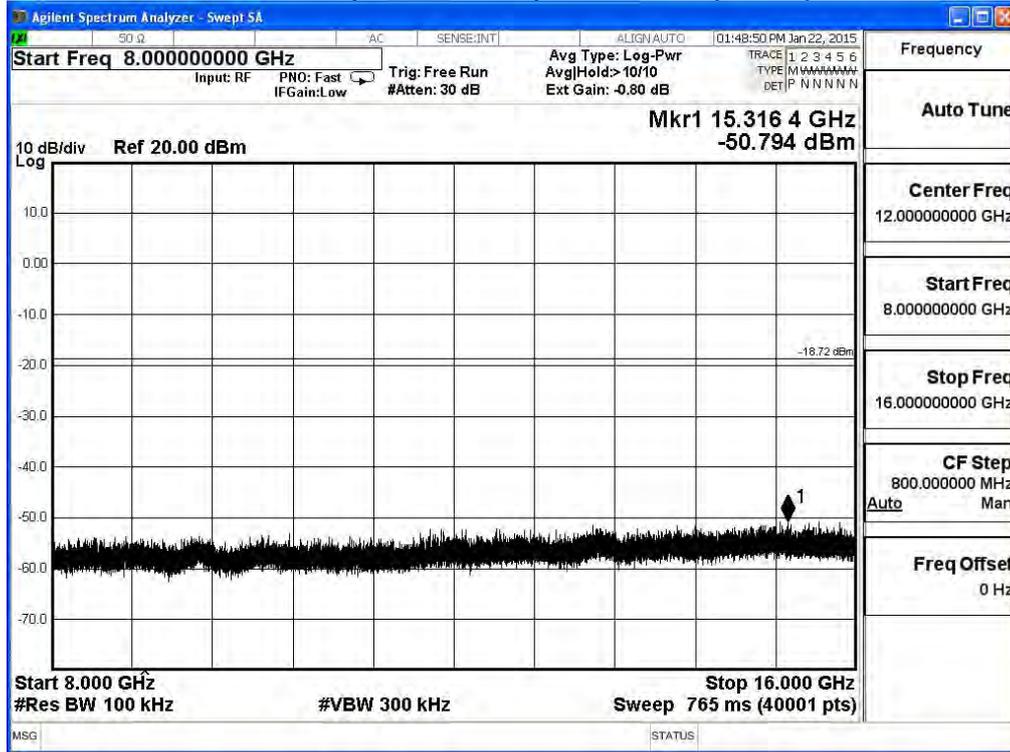
2437MHz (30MHz-1GHz)-802.11n20 (ANT 1)



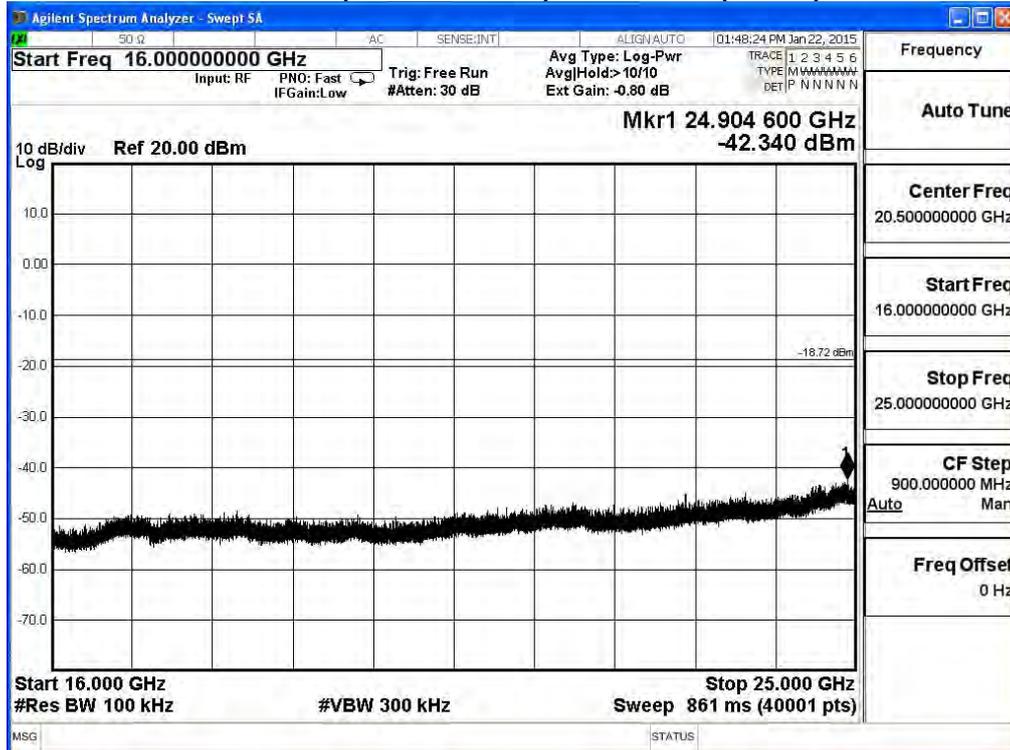
2437MHz (1GHz-8GHz) -802.11n20 (ANT 1)



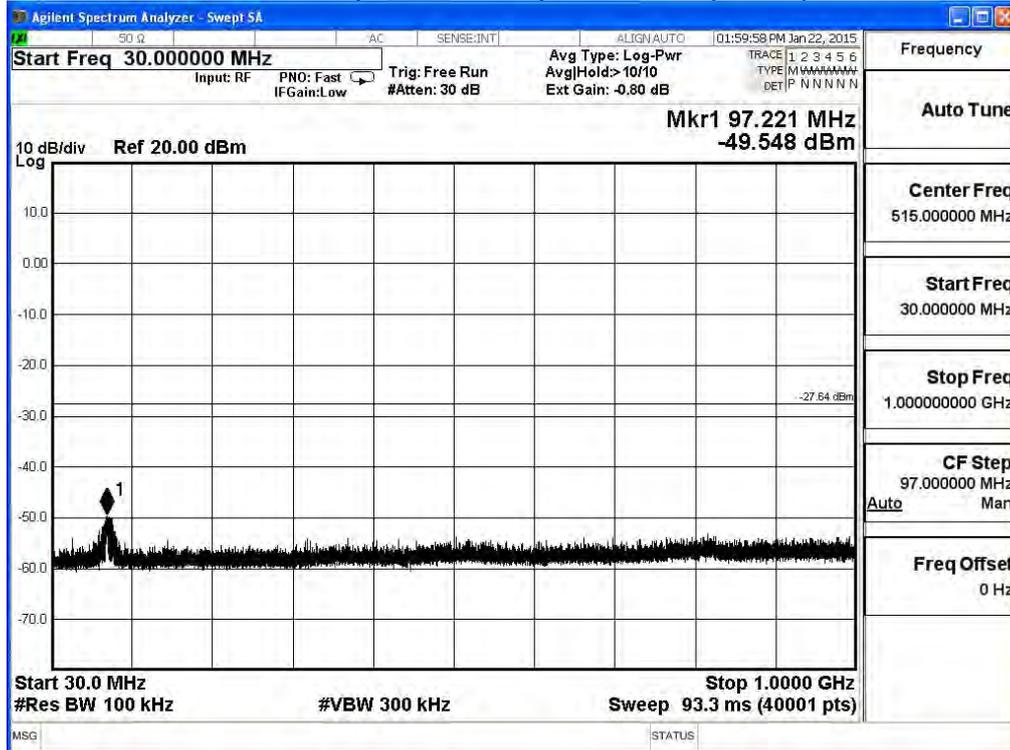
2437MHz (8GHz-16GHz) -802.11n20 (ANT 1)



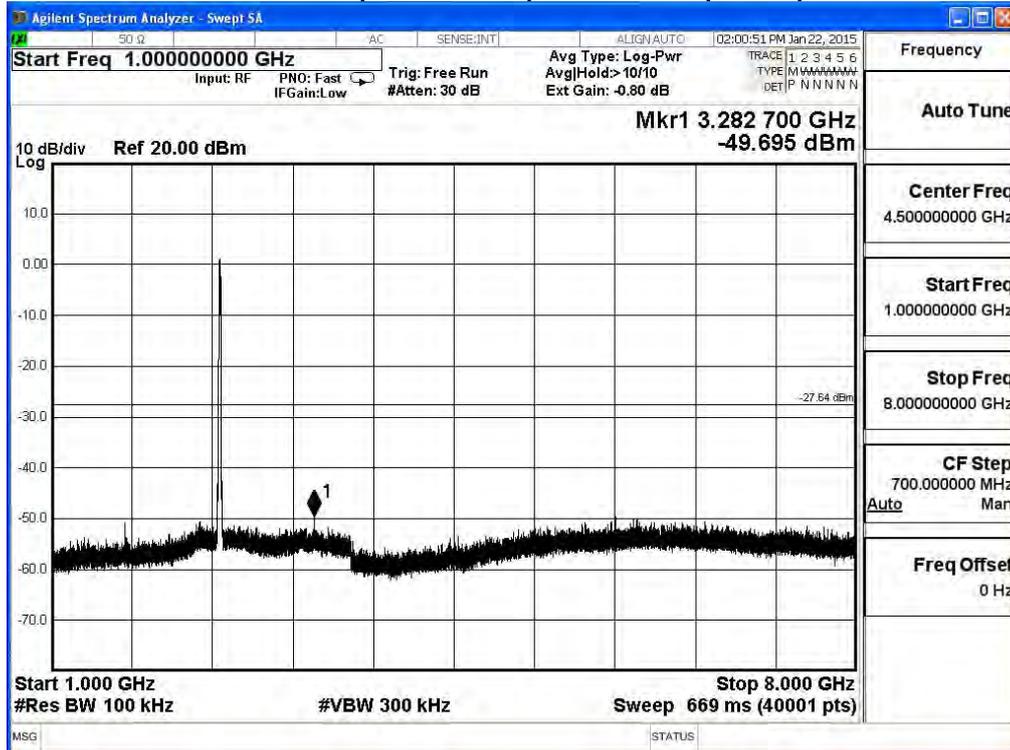
2437MHz (16GHz-25GHz) -802.11n20 (ANT 1)



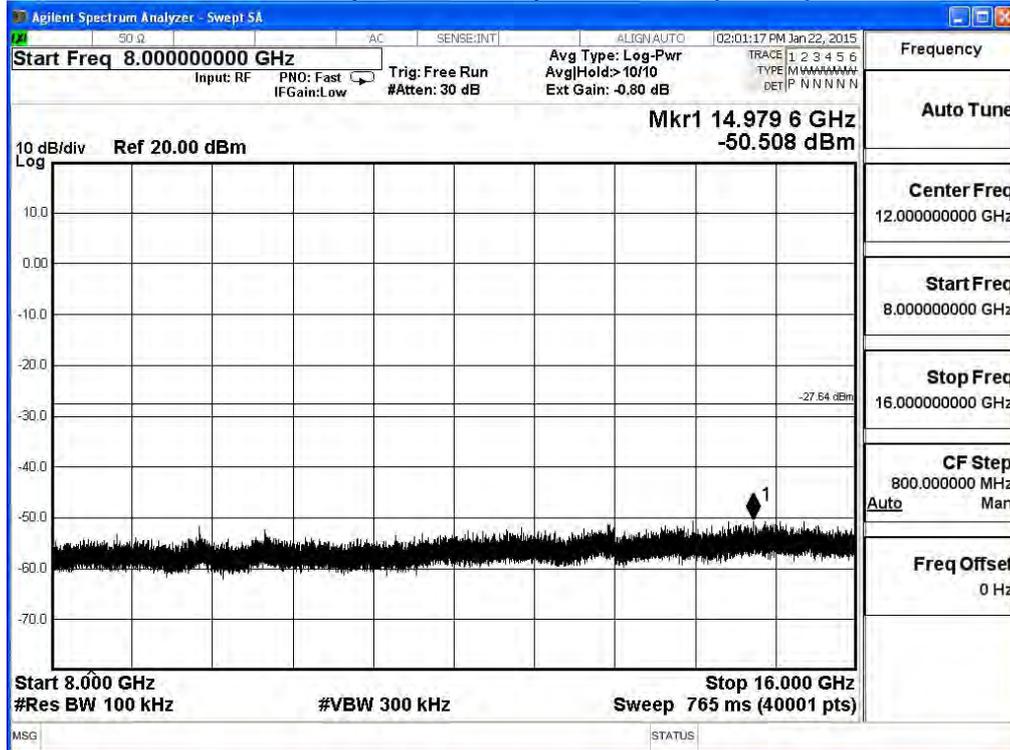
2462MHz (30MHz-1GHz)-802.11n20 (ANT 1)



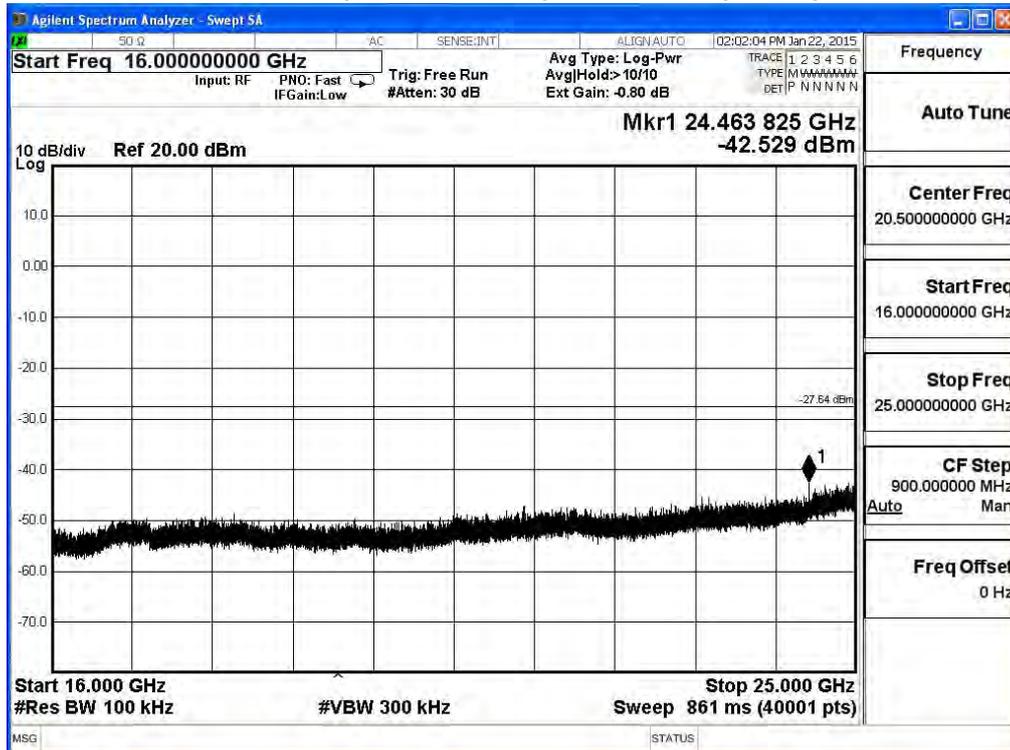
2462MHz (1GHz-8GHz) -802.11n20 (ANT 1)



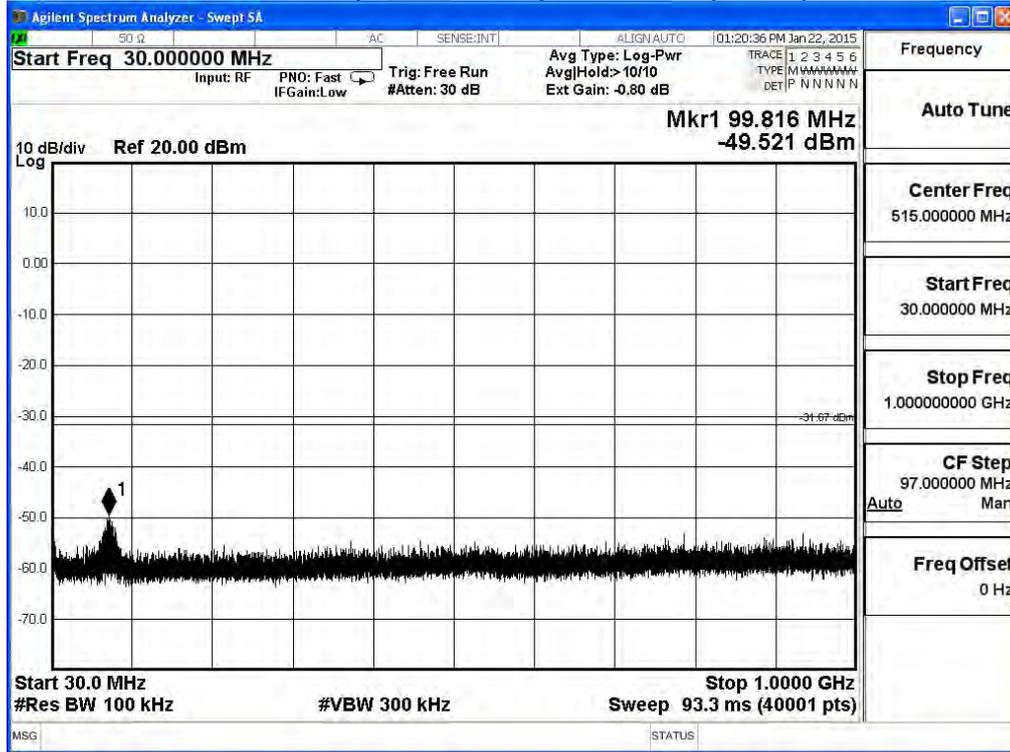
2462MHz (8GHz-16GHz) -802.11n20 (ANT 1)



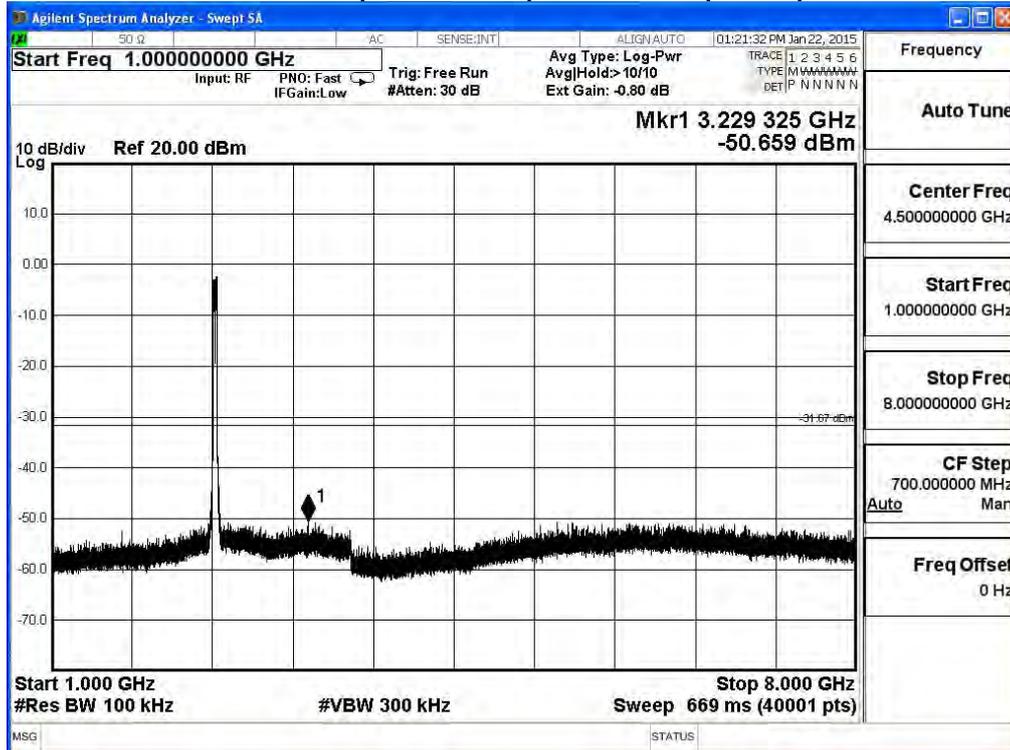
2462MHz (16GHz-25GHz) -802.11n20 (ANT 1)



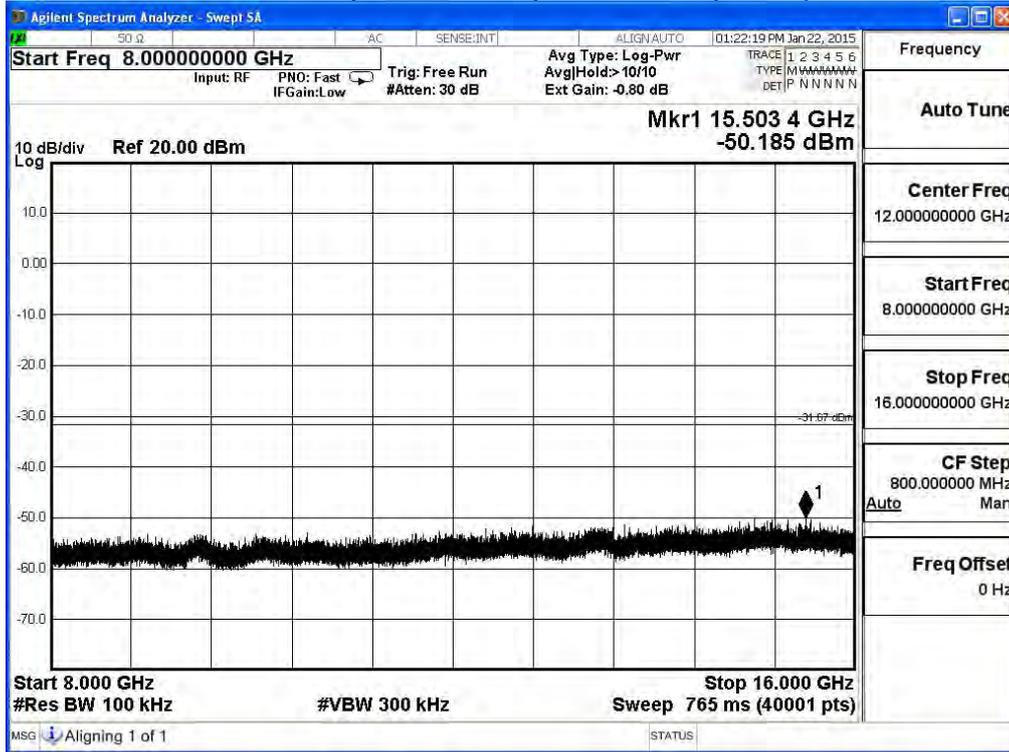
2422MHz (30MHz-1GHz)-802.11n40 (ANT 0)



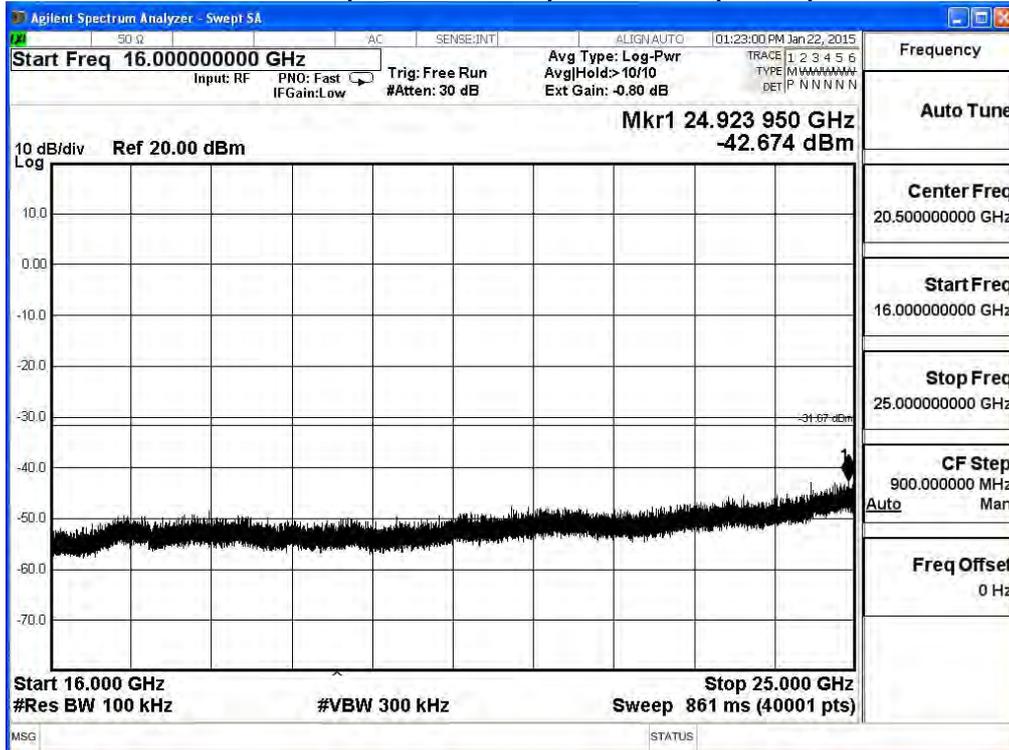
2422MHz (1GHz-8GHz) -802.11n40 (ANT 0)



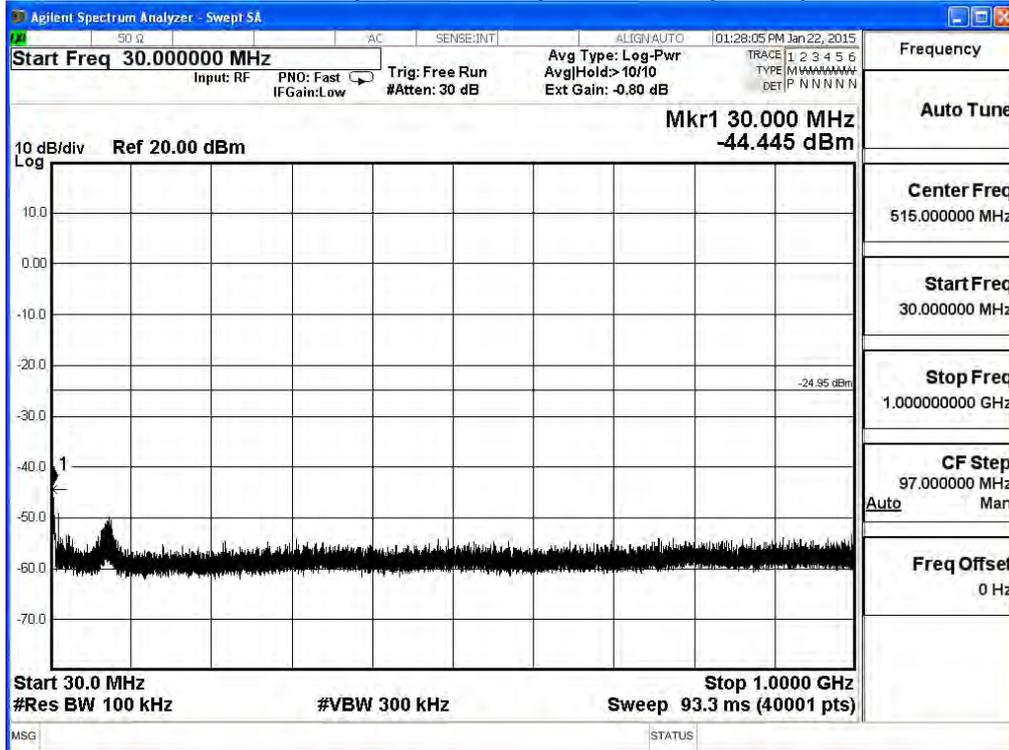
2422MHz (8GHz-16GHz) -802.11n40 (ANT 0)



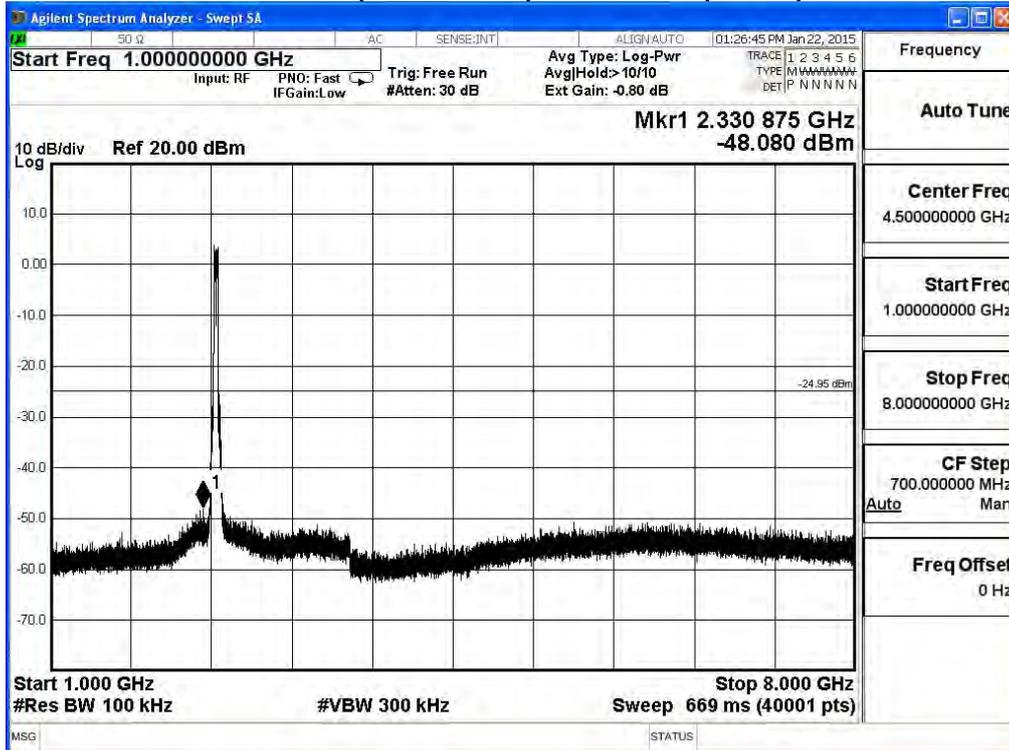
2422MHz (16GHz-25GHz) -802.11 20 (ANT 0)



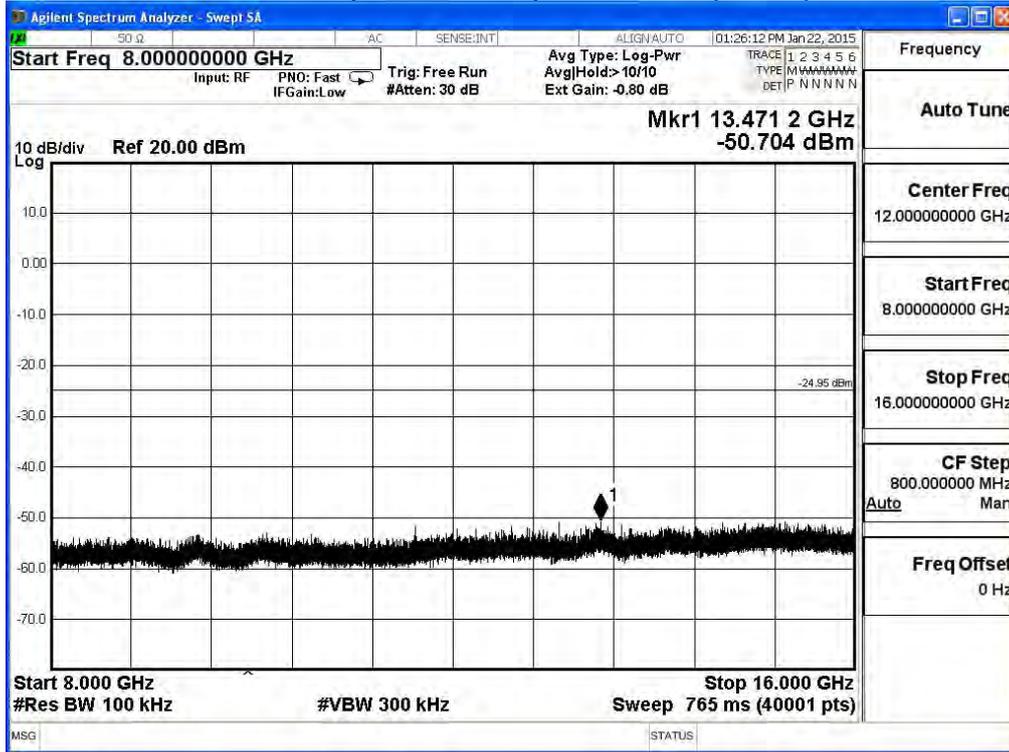
2437MHz (30MHz-1GHz)-802.11n40 (ANT 0)



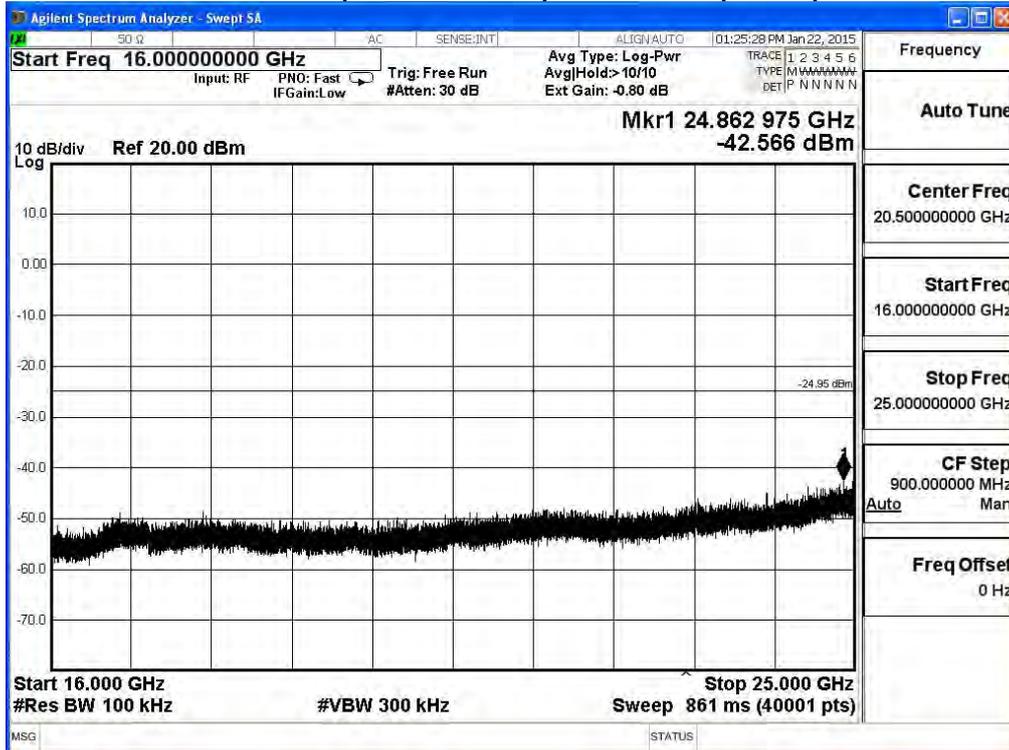
2437MHz (1GHz-8GHz) -802.11n40 (ANT 0)



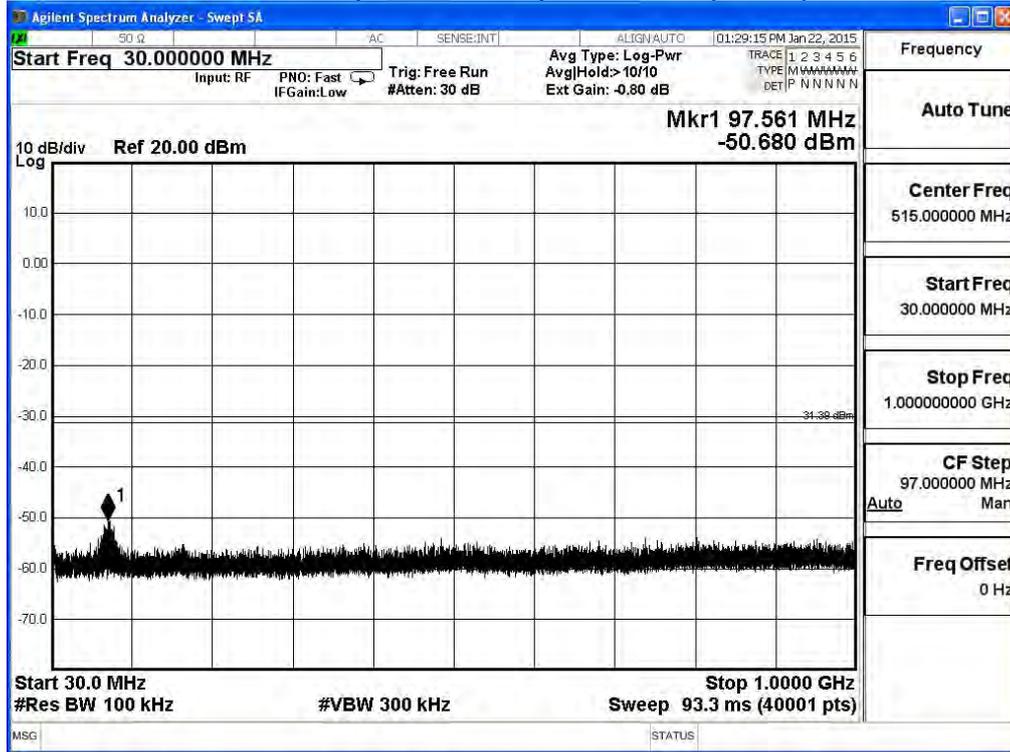
2437MHz (8GHz-16GHz) -802.11n40 (ANT 0)



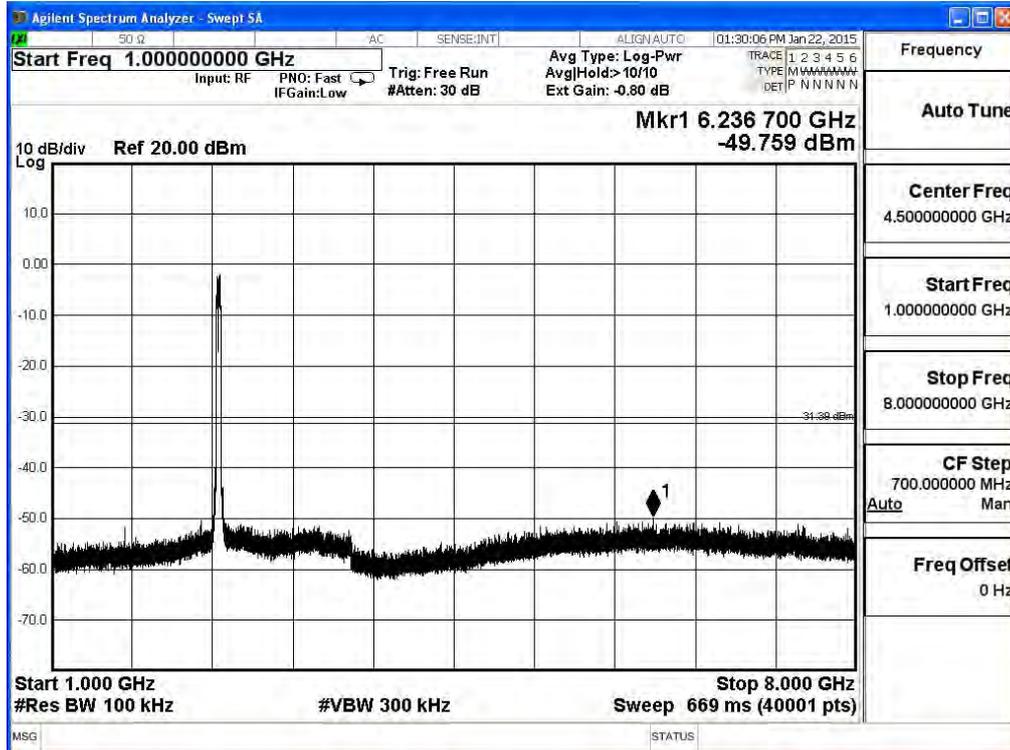
2437MHz (16GHz-25GHz) -802.11n40 (ANT 0)



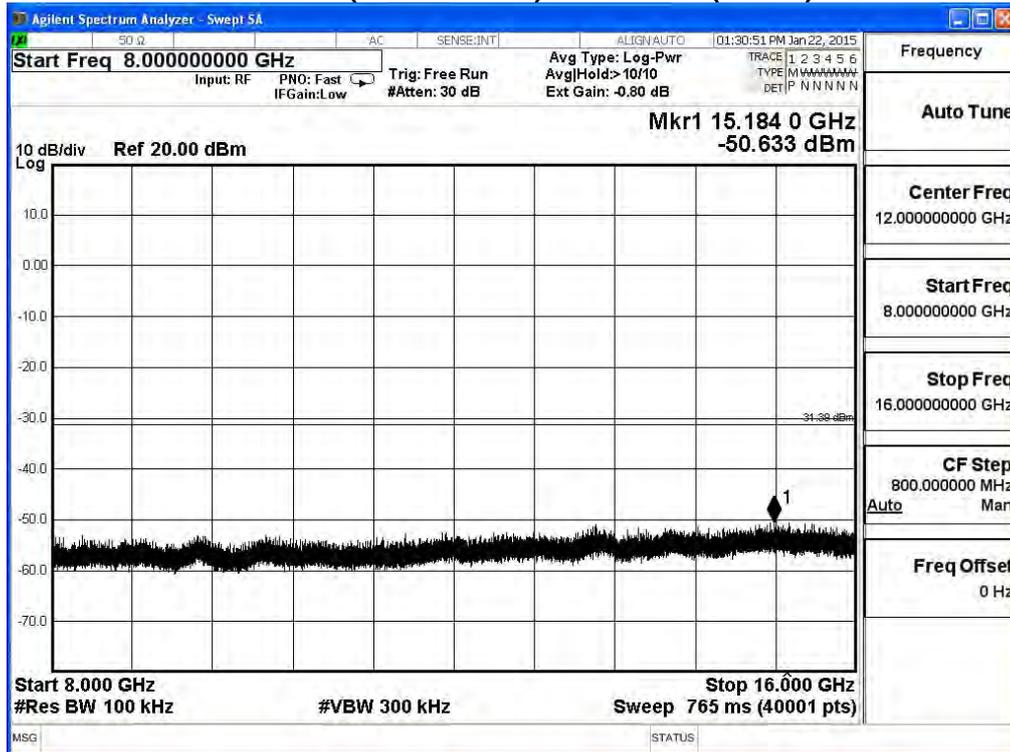
2452MHz (30MHz-1GHz)-802.11n40 (ANT 0)



2452MHz (1GHz-8GHz) -802.11n40 (ANT 0)



2452MHz (8GHz-16GHz) -802.11n40 (ANT 0)



2452MHz (16GHz-25GHz) -802.11n40 (ANT 0)

