

FCC PART 15E TEST REPORT



Issued to

GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP.,LTD

For

Mobile Phone

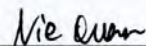
Model Name: OPPO X9076
Trade Name: OPPO
Brand Name: OPPO
FCC ID: R9C-X9076
Standard: 47 CFR Part 15 Subpart E
Test date: 2013-12-20 to 2014-5-19
Issue date: 2014-5-19

by

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Tested by



Nie Quan
(Test Engineer)

Date 2014.5.19

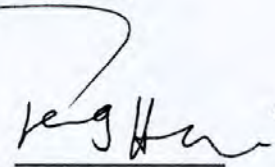
Approved by



Zeng Dexin
(Chief Engineer)

Date

Reviewed by



Peng Huarui
(Dept. Manager)

Date

2014.5.19

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Change History		
Issue	Date	Reason for change
1.0	May 6, 2014	First Edition
2.0	May 19, 2014	Add clause 2.7 in the report

1. General Information

1.1. EUT Description

EUT Type :	Mobile Phone
Serial No.	(n.a, marked #1 by test site)
Hardware Version :	214076
Software Version :	X9076_12_A.01_140410
Applicant :	GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP.,LTD NO. 18 HAIBIN ROAD, WUSHA, CHANG'AN, DONGGUAN, GUANGDONG, CHINA
Manufacturer	GUANGDONG OPPO MOBILE TELECOMMUNICATIONS CORP.,LTD NO. 18 HAIBIN ROAD, WUSHA, CHANG'AN, DONGGUAN, GUANGDONG, CHINA
Frequency Range :	802.11b/g/n: 2.400GHz - 2.4835GHz 802.11a/n/ac: 5.150GHz- 5.350GHz 5.470GHz- 5725GHz 5.725GHz- 5.850GHz
Channel Number	2.4GHz Band: 802.11b/g/n-20MHz: 11 802.11n-40MHz: 7 802.11a/n/ac-20MHz: 5.725GHz- 5.850GHz: 5 Channels 5.150GHz – 5.350GHz: 8 Channels 5.470GHz – 5.725GHz: 11Channels 802.11n/ac-40MHz: 5.725GHz- 5.850GHz: 2 Channels 5.150GHz – 5.350GHz: 4 Channels 5.470GHz – 5.725GHz: 5 Channels
Modulation Type :	DSSS, OFDM
Antenna Type	PIFA Antenna
Antenna Gain :	1.0dBi MAX

Note :

- The U-NII band is applicable to this report, another bands of operation (2.4GHz and 5.8GHz) is documented in a separate report.
- For 802.11a/n/ac-20MHz, the frequencies allocated is $F \text{ (MHz)} = 5180 + 20 \times (n-1)$ ($1 \leq n \leq 8$). For 5.150GHz – 5.250GHz, The channel of the EUT used and tested in this report are separately 36 (5180MHz), 44 (5220MHz) and 48 (5240MHz). For 5.250GHz – 5.350GHz, The channel of the EUT used and tested in this report are separately 52 (5260MHz), 60 (5300MHz) and 48 (5240MHz). For 5.470GHz – 5725GHz ,The channel of the EUT used and tested in this report are separately 100(5500MHz), 116 (5580MHz) and 140(5700MHz).

3. For 802.11n/ac-40MHz (5150GHz–5350GHz),the frequencies allocated is F (MHz) $=5190\text{MHz}+40*(n-1)$ ($1 \leq n \leq 4$). For 5.150GHz – 5.250GHz,The channel of the EUT used and tested in this report are separately 38 (5190MHz), 46 (5230MHz). For 5.250GHz – 5.350GHz,The channel of the EUT used and tested in this report are separately 54 (5270MHz), 62 (5310MHz)
4. For 802.11n/ac-40MHz (5470–5725GHz),the frequencies allocated is F (MHz) $=5510\text{MHz}+40*(n-1)$ ($1 \leq n \leq 5$). The channel of the EUT used and tested in this report are separately 102 (5510MHz), 110 (5550MHz) ,102 (5670MHz),.
5. For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.
6. The antenna connector of EUT is designed with permanent attachment and no consideration of replacement.

1.2. Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart E (UNII band) for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-12 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.203	Antenna Requirement	<u>PASS</u>
2	15.407(a)	26dB Emission Bandwidth	<u>PASS</u>
3	15.407(a)	Maximum conducted output Power	<u>PASS</u>
4	15.407(a)	Peak Power spectral density	<u>PASS</u>
5	15.407(b)	Restricted Frequency Bands	<u>PASS</u>
6	15.407(a)	Peak Excursion	<u>PASS</u>
7	15.407(g)	Frequency Stability	<u>PASS</u>
8	15.207	Conducted Emission	<u>PASS</u>
9	15.407(b)	Radiated Emission	<u>PASS</u>
10	15.407(f)	RF exposure evaluation	<u>PASS</u>

The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.4 2009.

These RF tests were performed according to the method of measurements prescribed in KDB789033 D01 v01r03 (04/08/2013).

1.3. Facilities and Accreditations

1.3.1. Facilities

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at FL.1, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10 2009, ANSI C63.4 2009 and CISPR Publication 22; the FCC registration number is 695796.

1.3.2. Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106

2. 47 CFR Part 15E Requirements

2.1. Antenna requirement

2.1.1. Applicable Standard

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

2.1.2. Result: Compliant

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

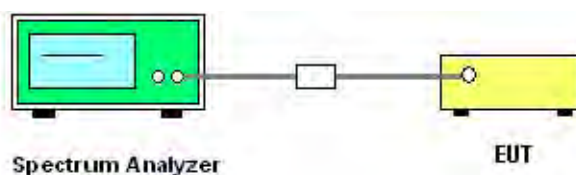
2.2. Duty Cycle

2.2.1. Requirement

None; for reporting purpose only.

2.2.2. Test Description

A. Test Set:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

B. Test Procedure

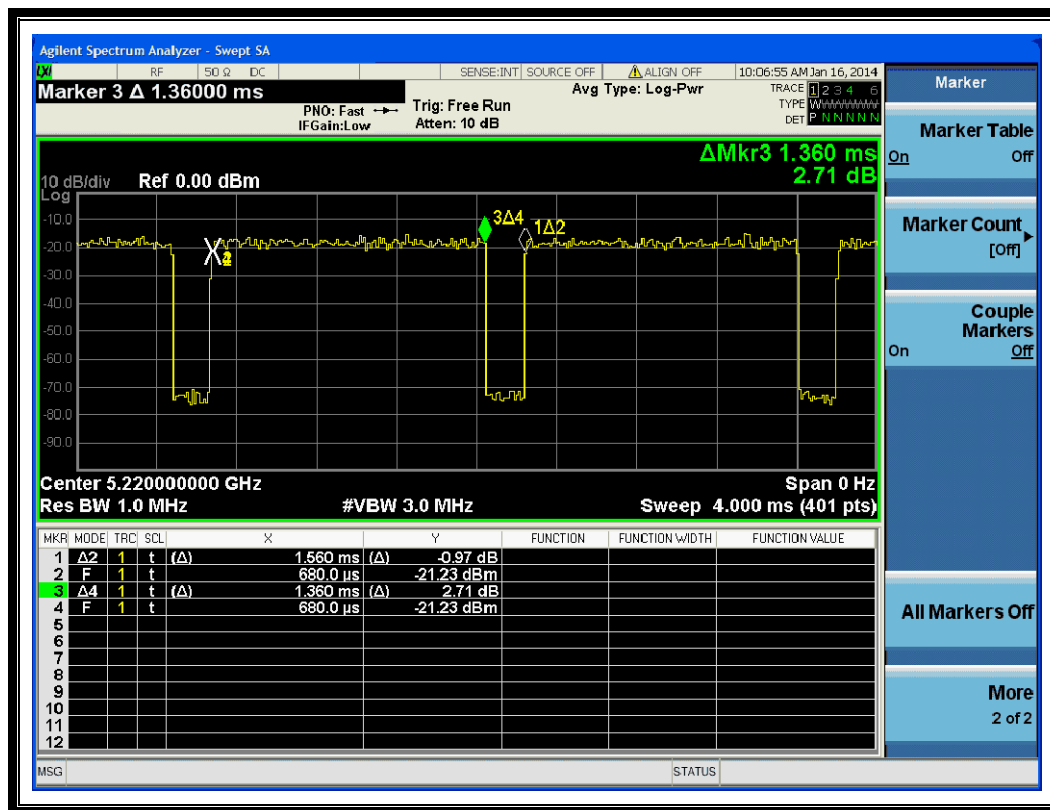
KDB 789033 Zero-Span Spectrum Analyzer

C. Equipments List:

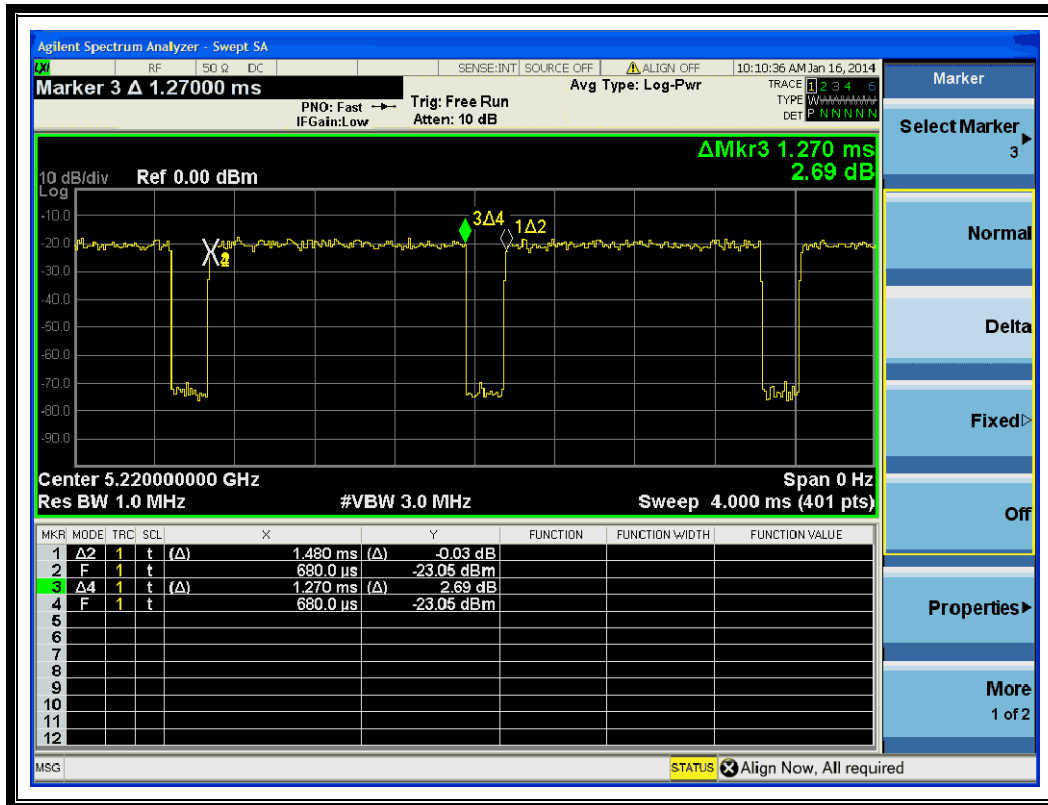
Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EXA Signal Analyzer	Agilent	N9010A	MY51440152	2013.05.12	2014.05.11

2.2.3. Test Result

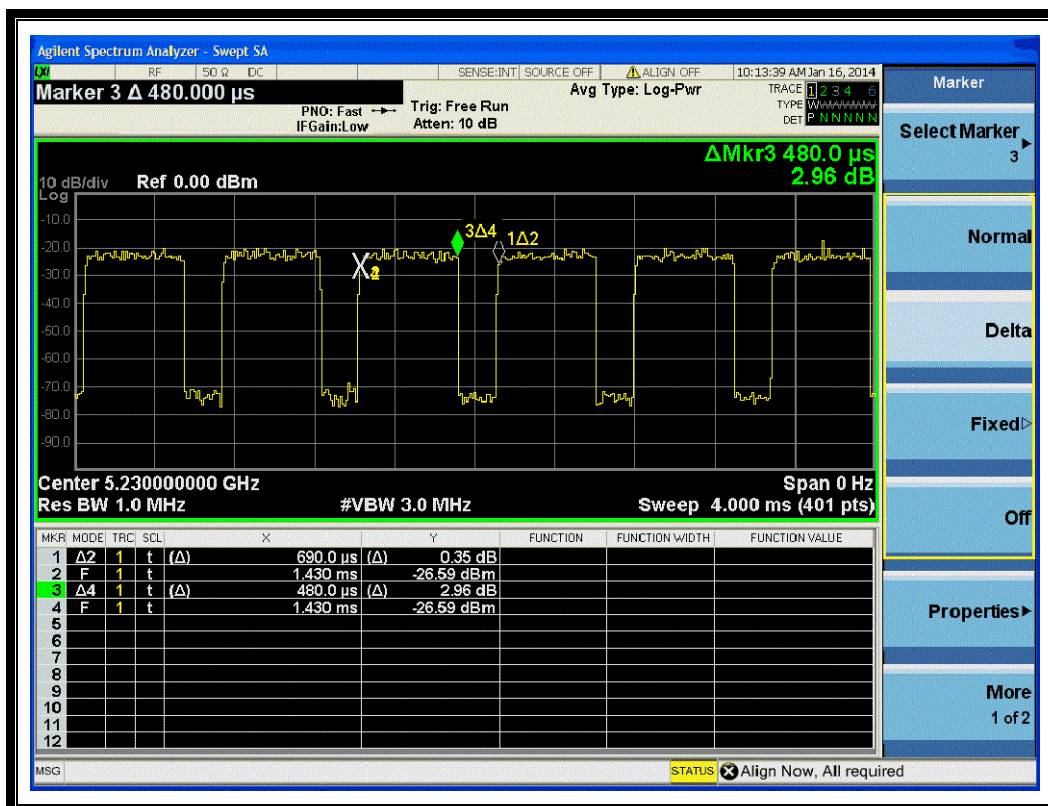
Mode	On Time (msec)	Period (msec)	Duty Cycle X(linear)	Duty Cycle (%)	Duty Cycle Correction Factor	1/T Minimum VBW (KHz)
802.11a	1.360	1.560	0.872	87.2%	0.59	0.735
802.11n-20MHz	1.270	1.480	0.858	85.8%	0.67	0.787
802.11n-40MHz	0.480	0.690	0.696	69.6%	1.57	2.083
802.11ac-20MHz	1.270	1.480	0.858	85.8%	0.67	0.787
802.11ac-40MHz	0.480	0.690	0.696	69.6%	1.57	2.083



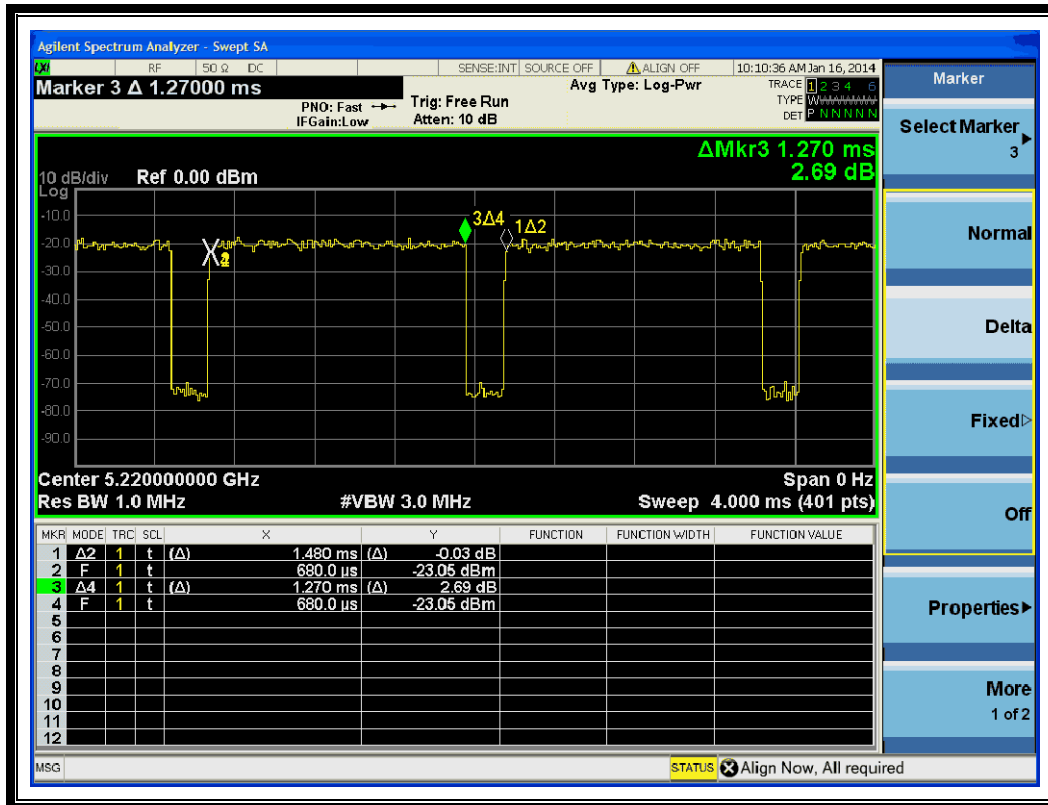
(802.11a)



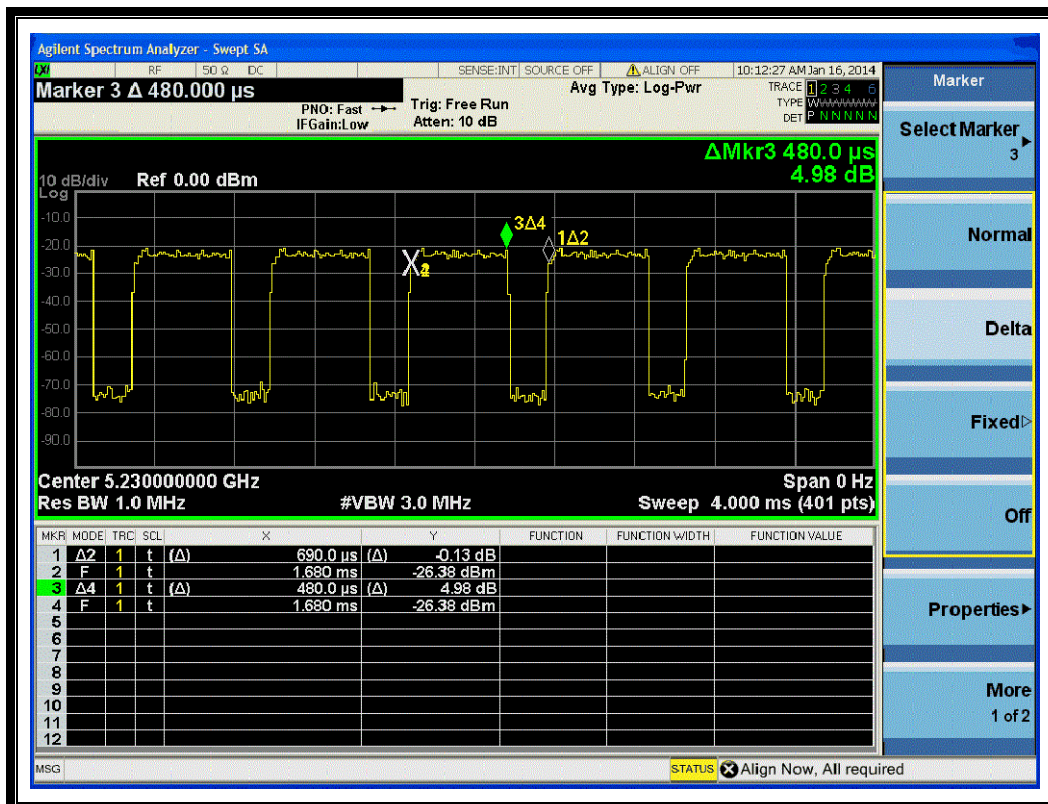
(802.11n-20MHz)



(802.11n-40MHz)



(802.11ac)



(802.11ac-40MHz)

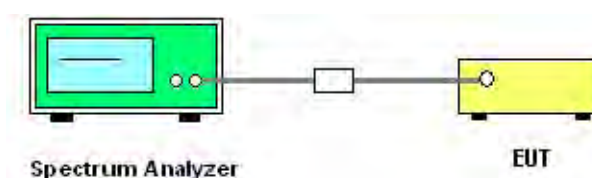
2.3. 26dB Emission Bandwidth

2.3.1. Requirement

For purposes of this subpart the emission bandwidth shall be determined by measuring the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, that are 26 dB down relative to the maximum level of the modulated carrier. Determination of the emissions bandwidth is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

2.3.2. Test Description

A. Test Set:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

B. Test Procedure

KDB 789033 Section C) Emission Bandwidth was used in order to prove compliance

- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = Peak.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

C. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EXA Signal Analyzer	Agilent	N9010A	MY51440152	2013.05.12	2014.05.11

2.3.3. Test Result

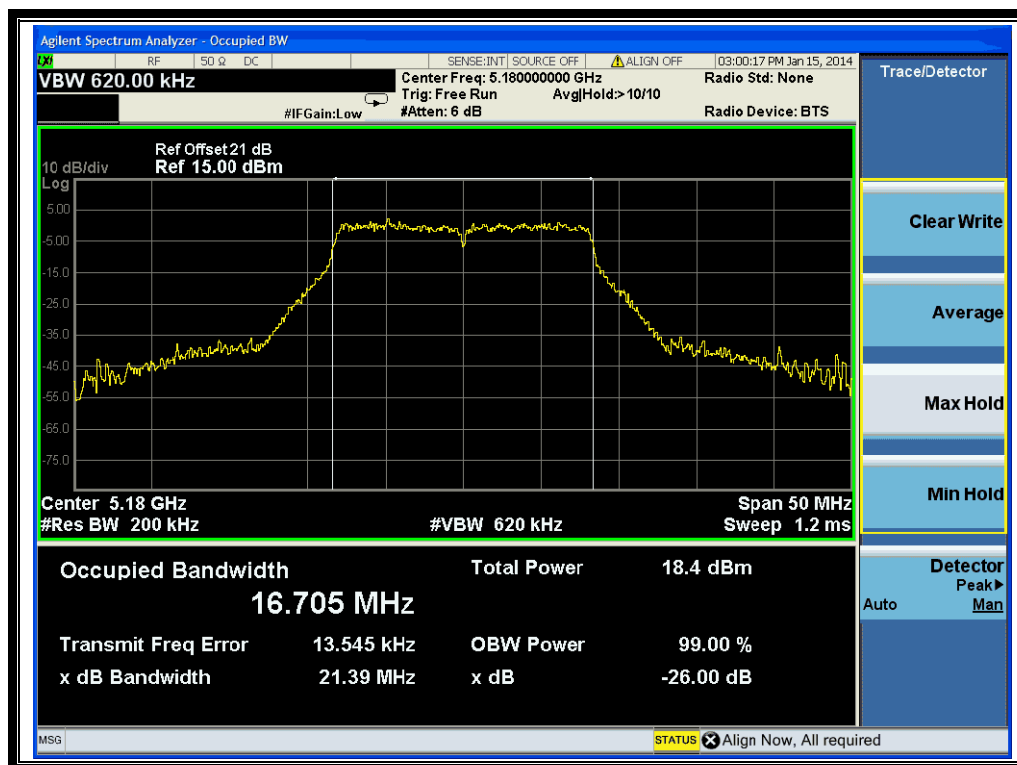
The lowest, middle and highest channels are selected to perform testing to record the 6 dB bandwidth of the Module.

2.3.3.1. 802.11a Test mode

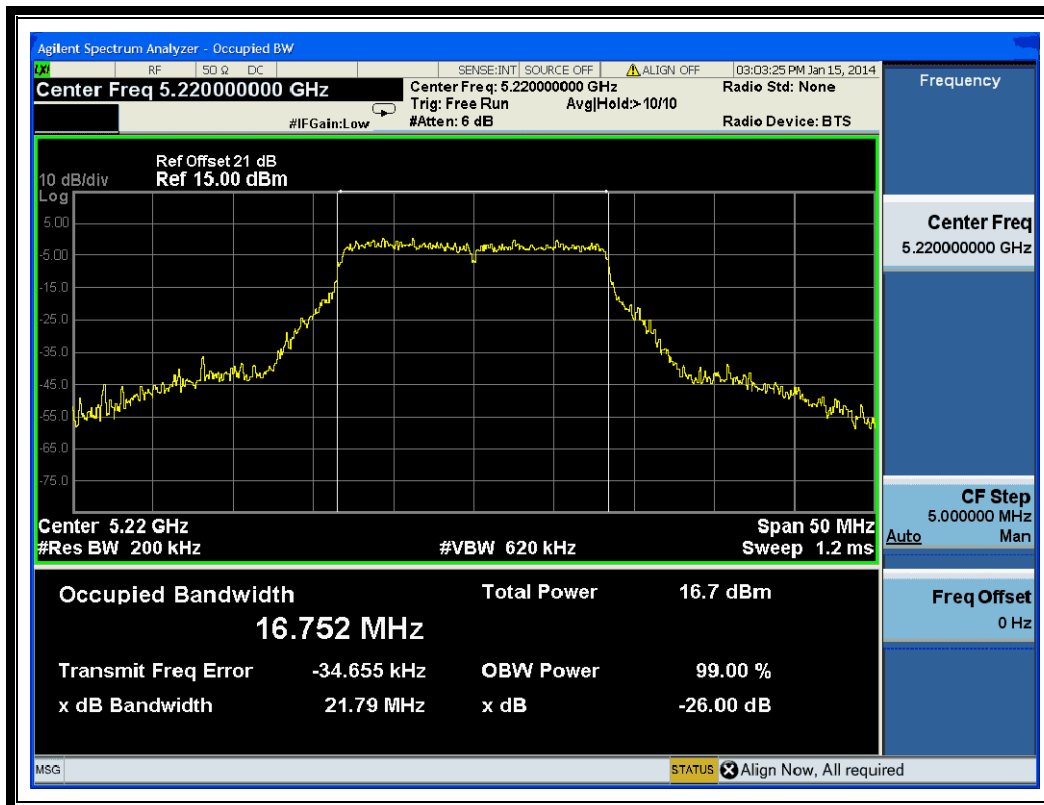
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
36	5180	21.39
44	5220	21.79
48	5240	20.38
52	5260	21.04
60	5300	21.01
64	5320	21.14
100	5500	21.33
116	5580	20.88
140	5700	21.01

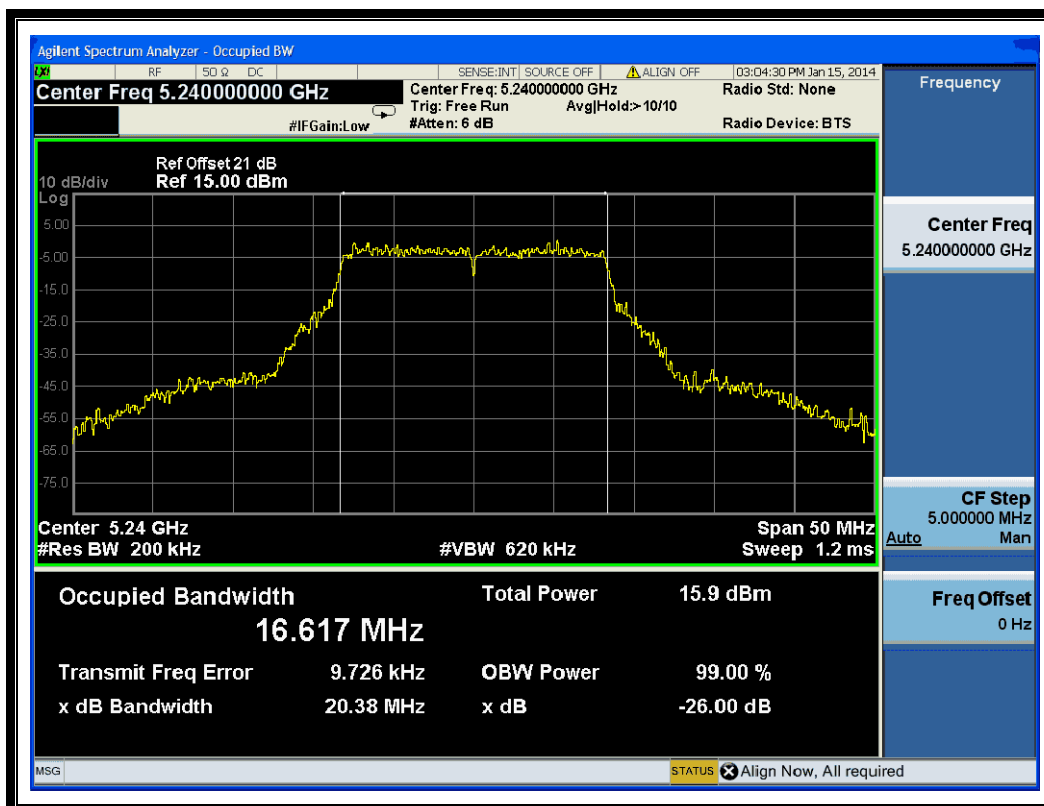
B. Test Plots



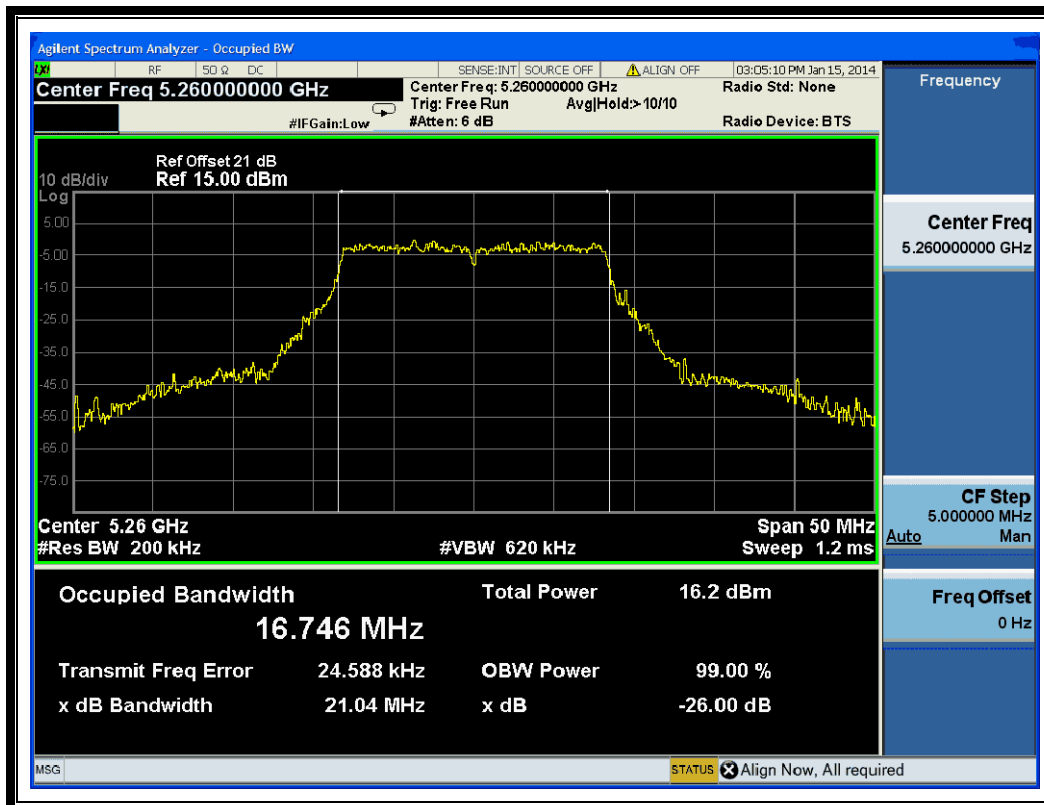
(Channel 36: 5180MHz @ 802.11a)



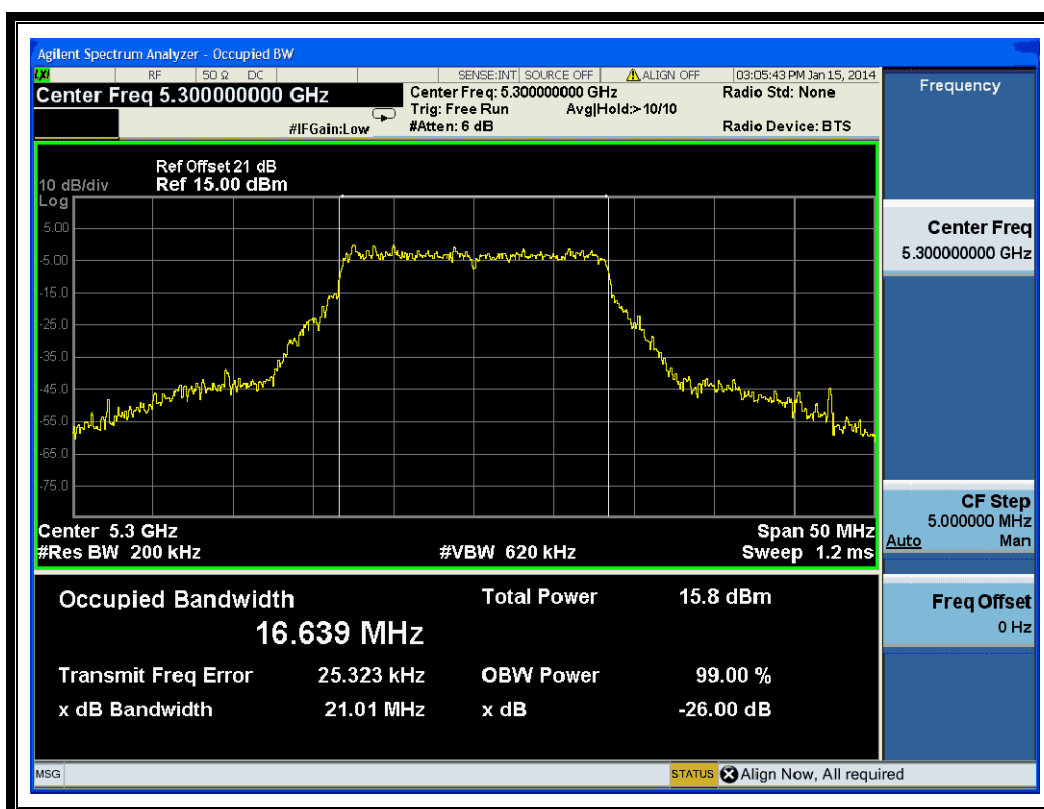
(Channel 44: 5220 MHz @ 802.11a)



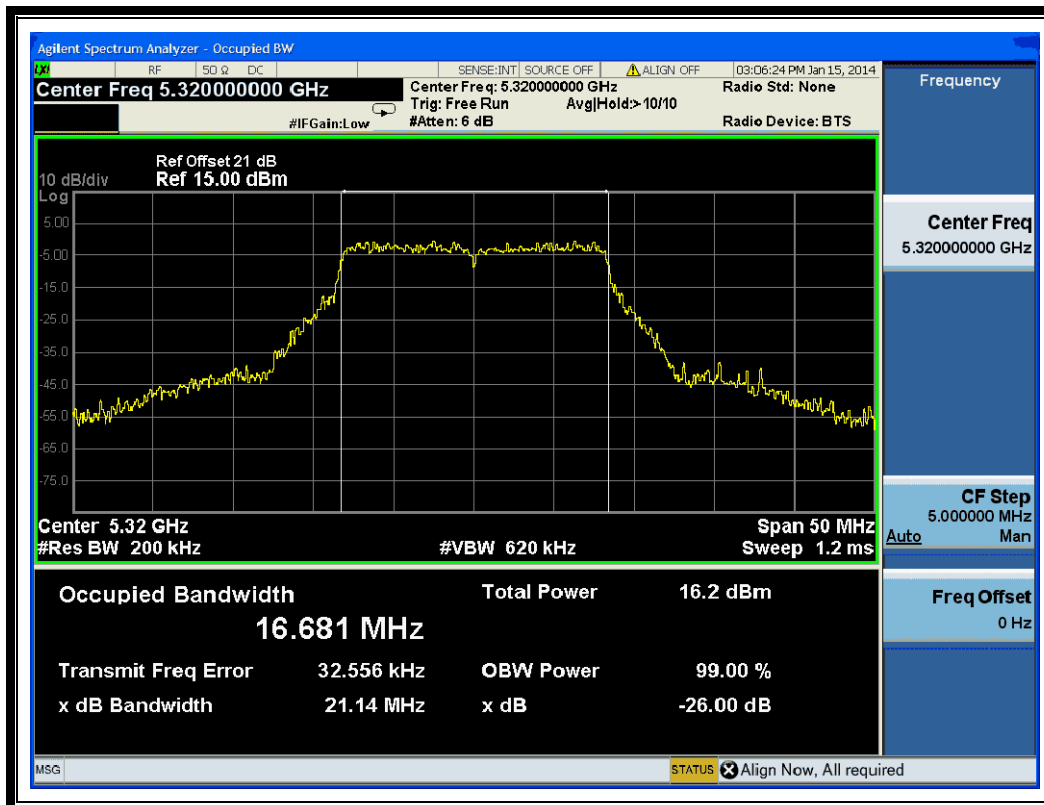
(Channel 48: 5240MHz @ 802.11a)



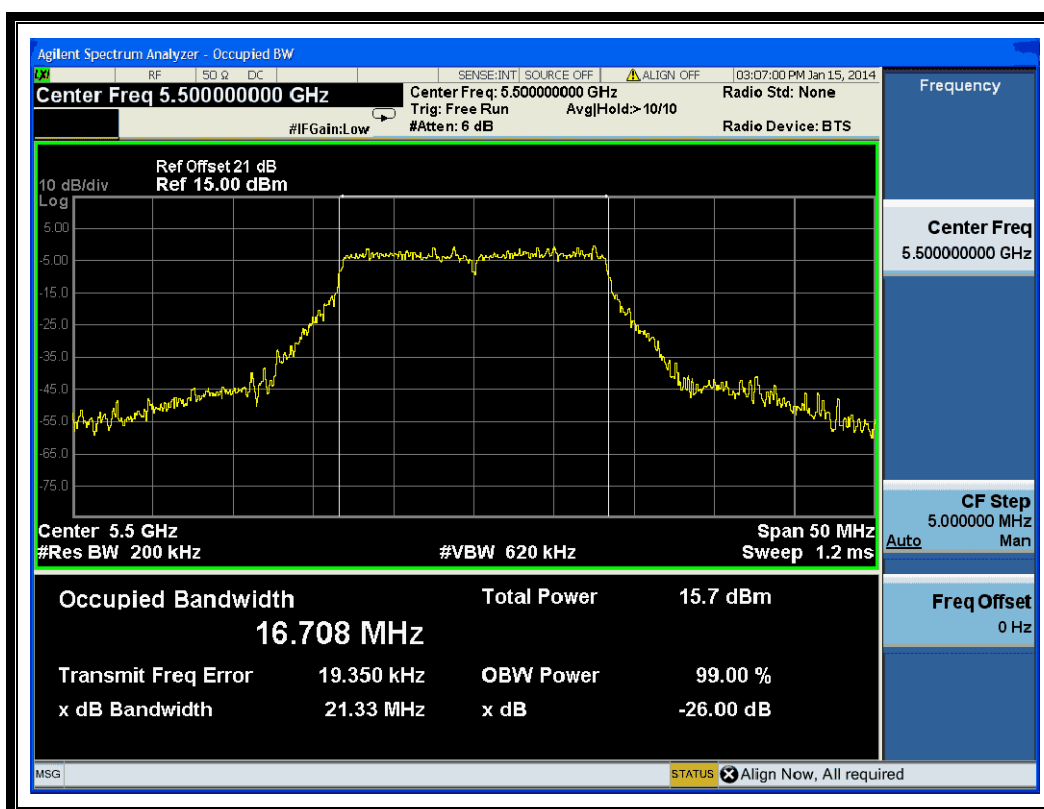
(Channel 52: 5260MHz @ 802.11a)



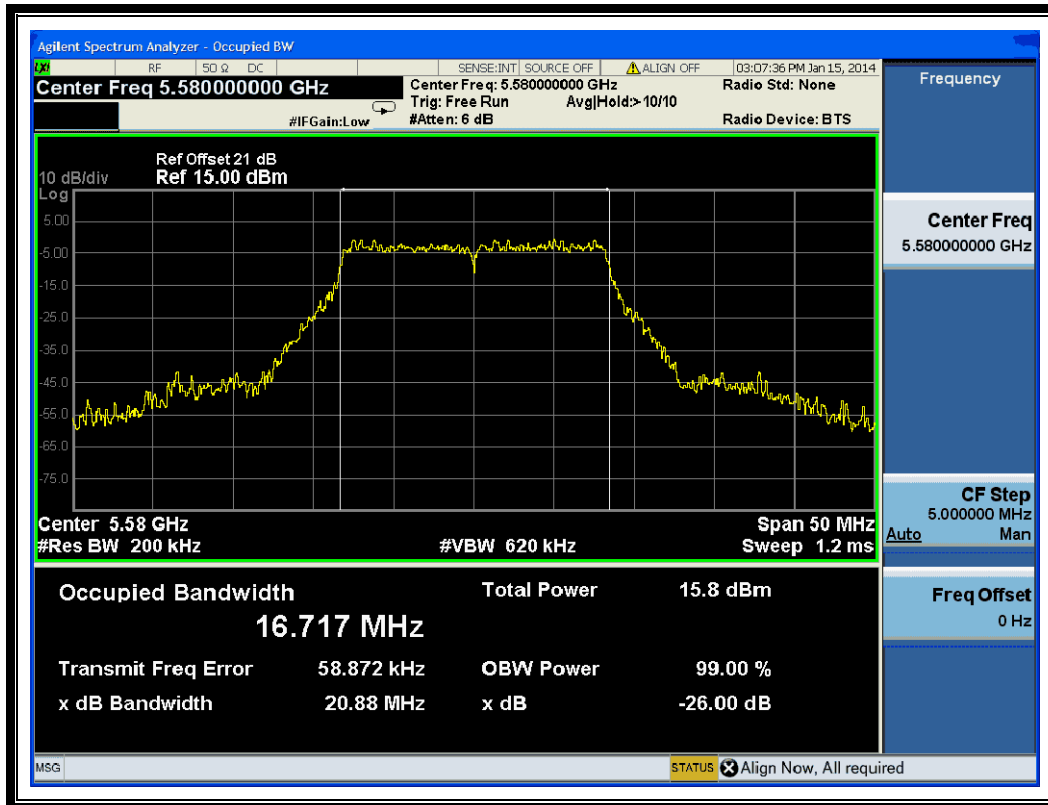
(Channel 60: 5300 MHz @ 802.11a)



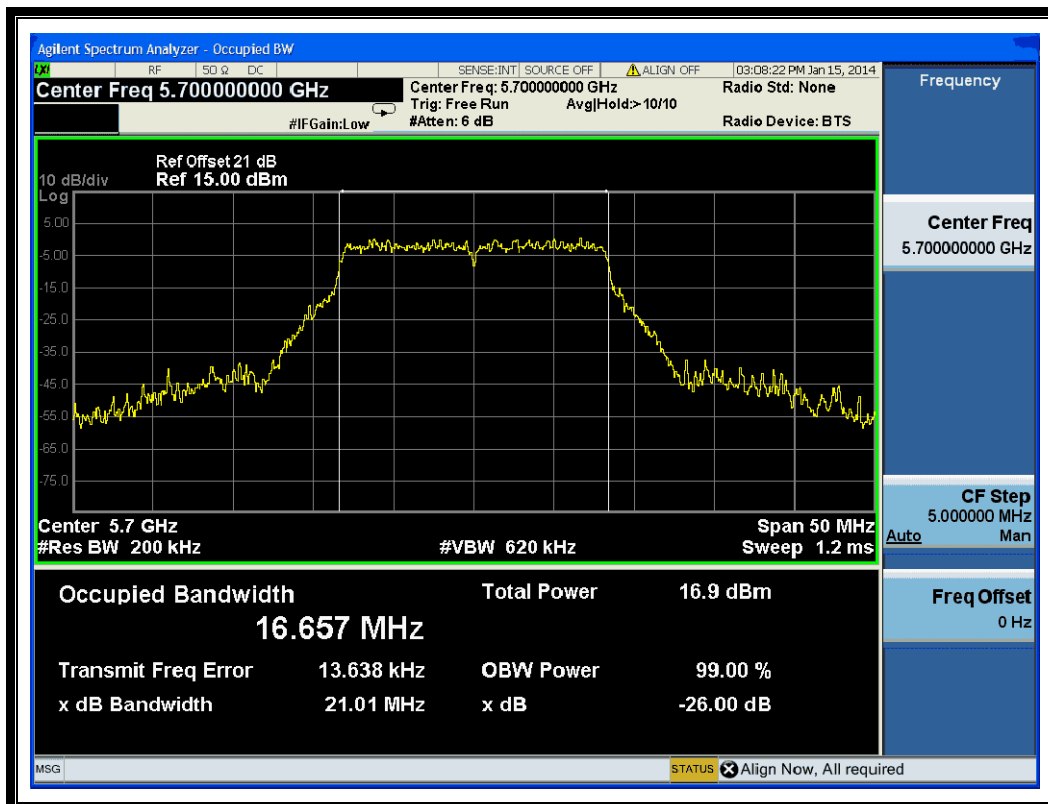
(Channel 64: 5320MHz @ 802.11a)



(Channel 100: 5500MHz @ 802.11a)



(Channel 116: 5580 MHz @ 802.11a)



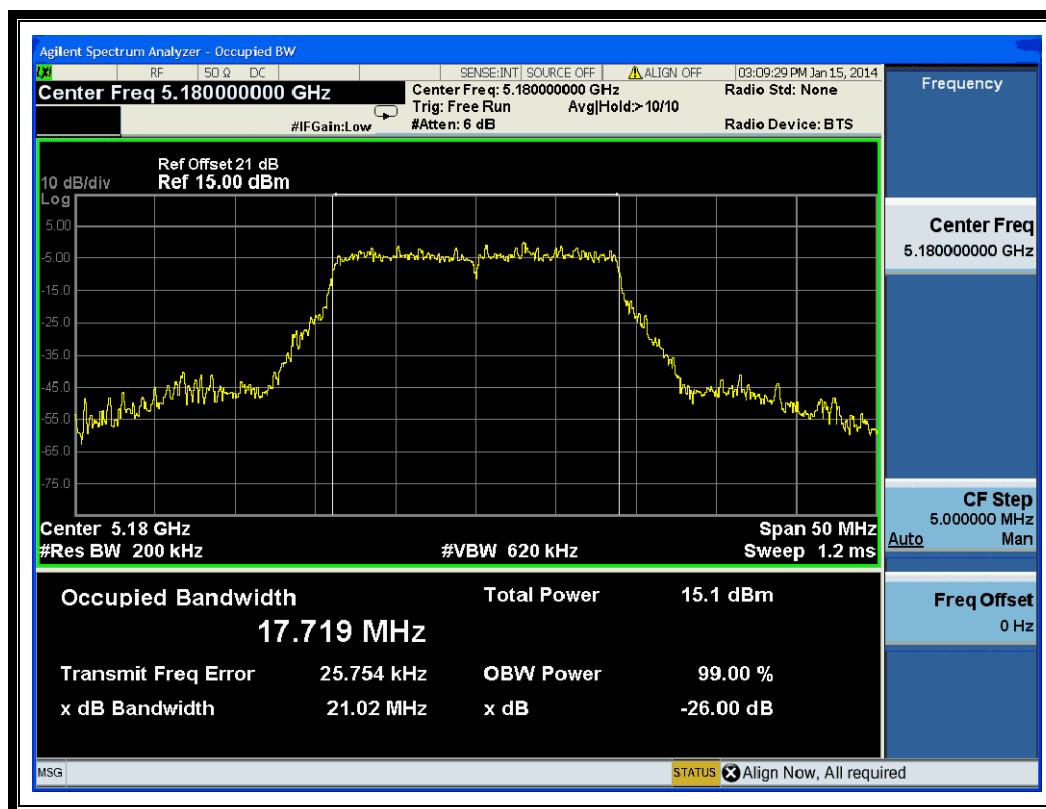
(Channel 140: 5700MHz @ 802.11a)

2.3.3.2. 802.11n-20MHz Test mode

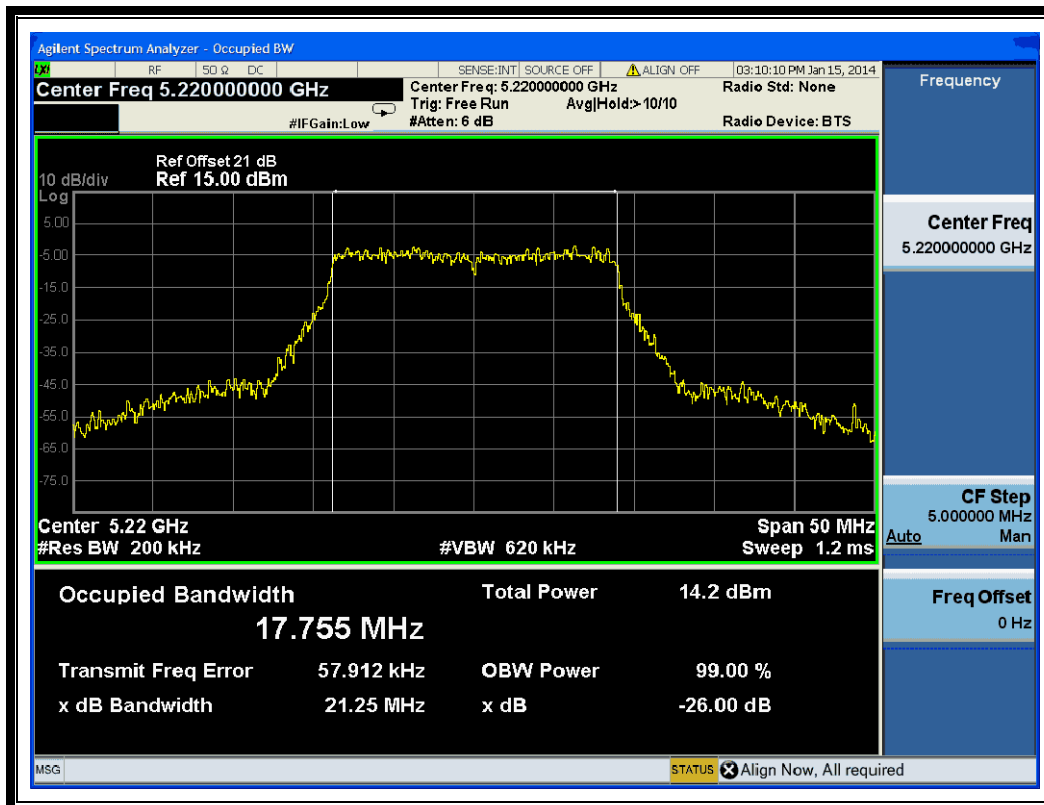
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
36	5180	21.02
44	5220	21.25
48	5240	21.14
52	5260	22.06
60	5300	21.47
64	5320	21.72
100	5500	21.35
116	5580	21.17
140	5700	20.70

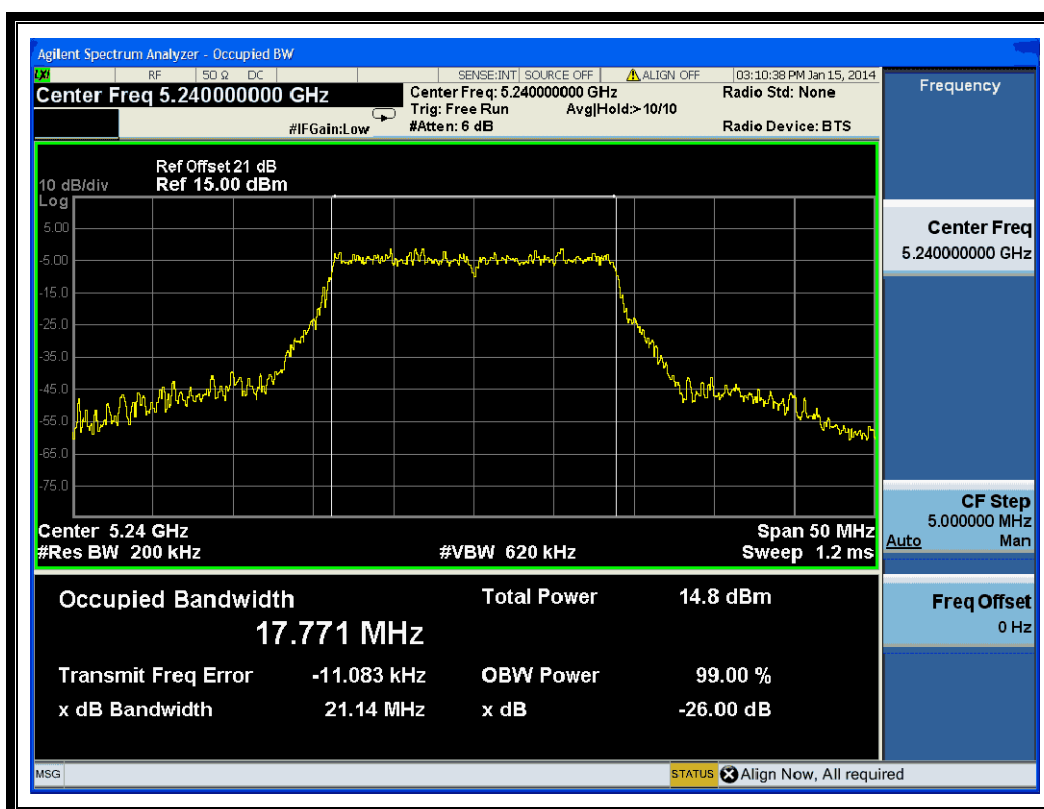
B. Test Plots



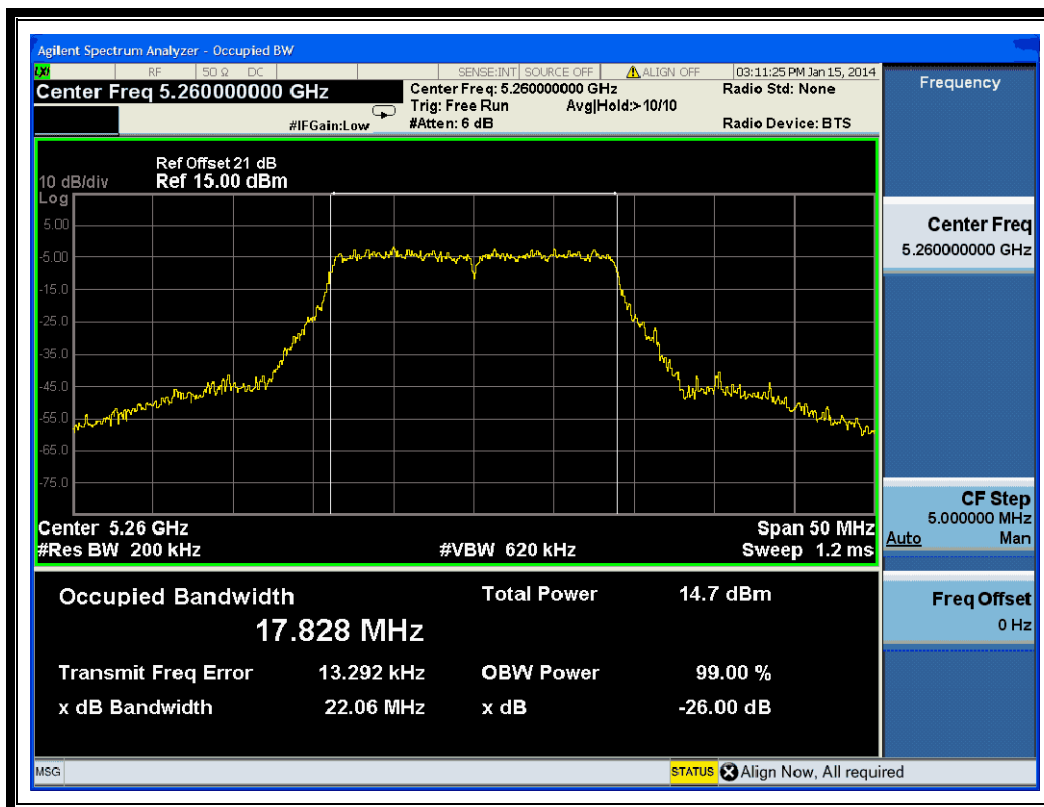
(Channel 36: 5180MHz @ 802.11n-20MHz)



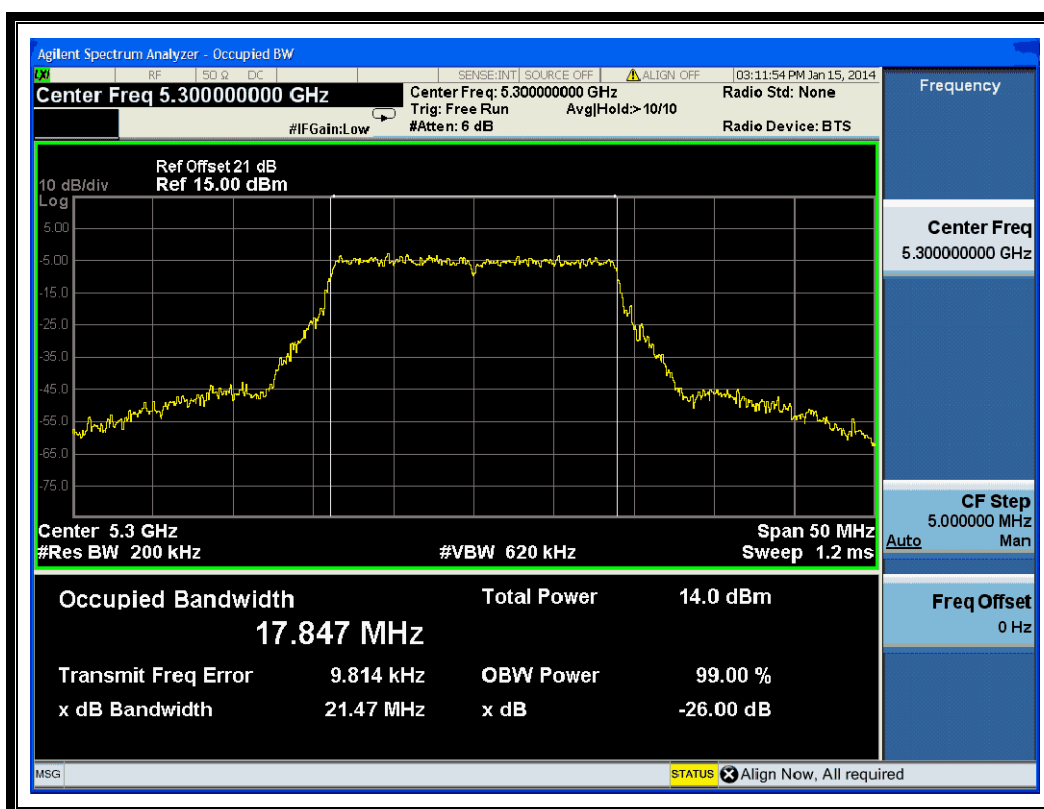
(Channel 44: 5220 MHz @ 802.11n-20MHz)



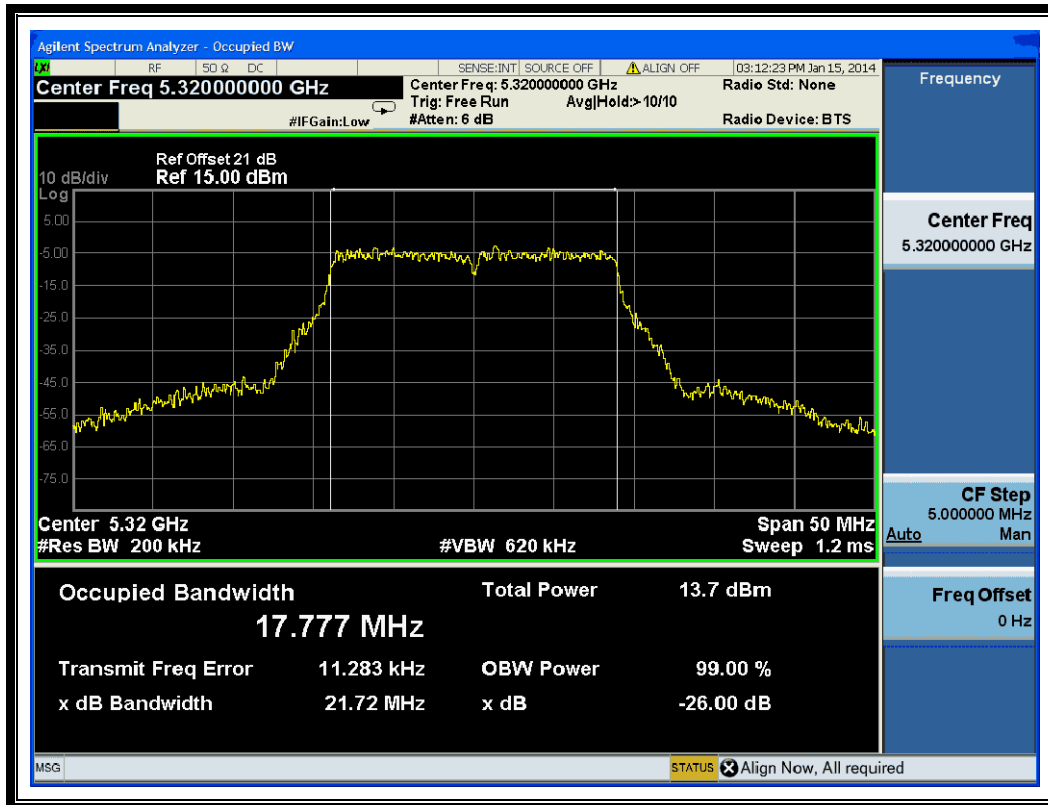
(Channel 48: 5240MHz @ 802.11n-20MHz)



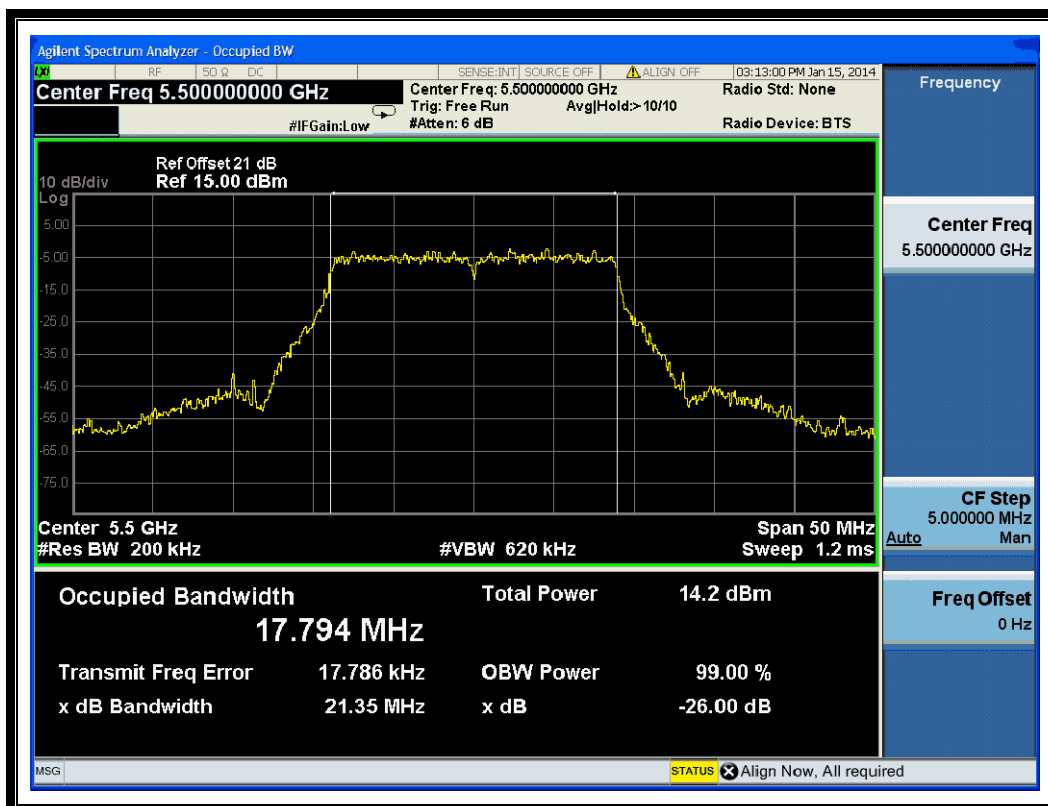
(Channel 52: 5260MHz @ 802.11n-20MHz)



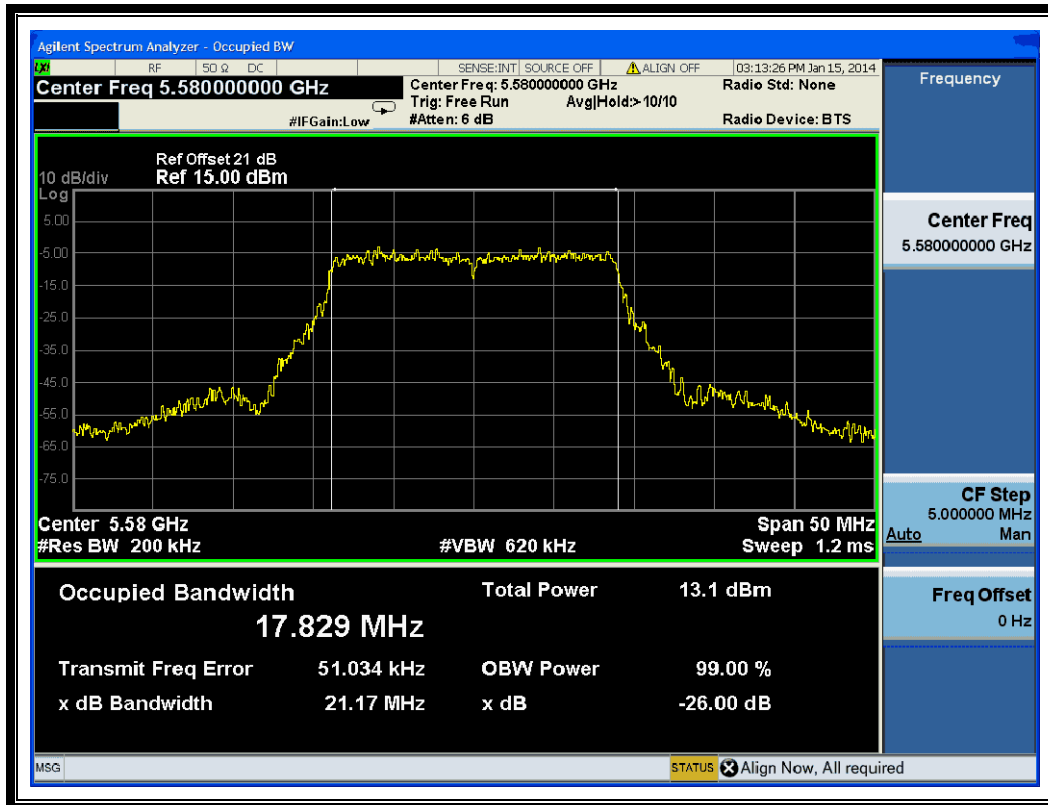
(Channel 60: 5300 MHz @ 802.11n-20MHz)



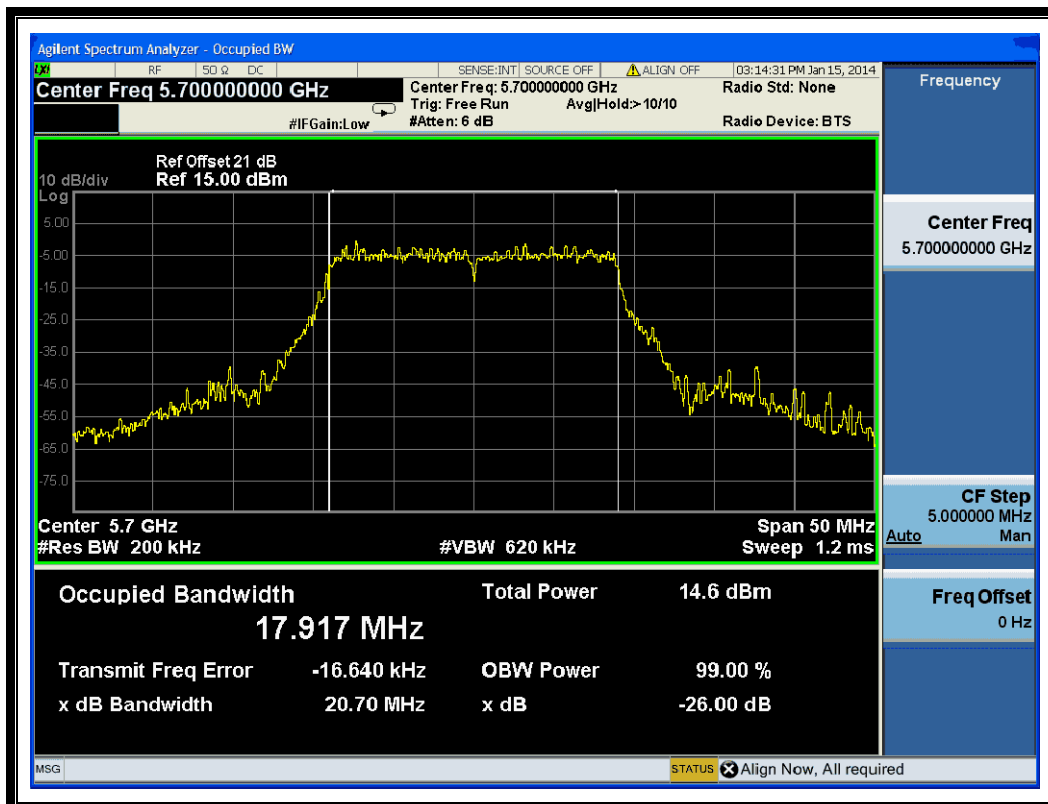
(Channel 64: 5320MHz @ 802.11n-20MHz)



(Channel 100: 5500MHz @ 802.11n-20MHz)



(Channel 116: 5580 MHz @ 802.11n-20MHz)



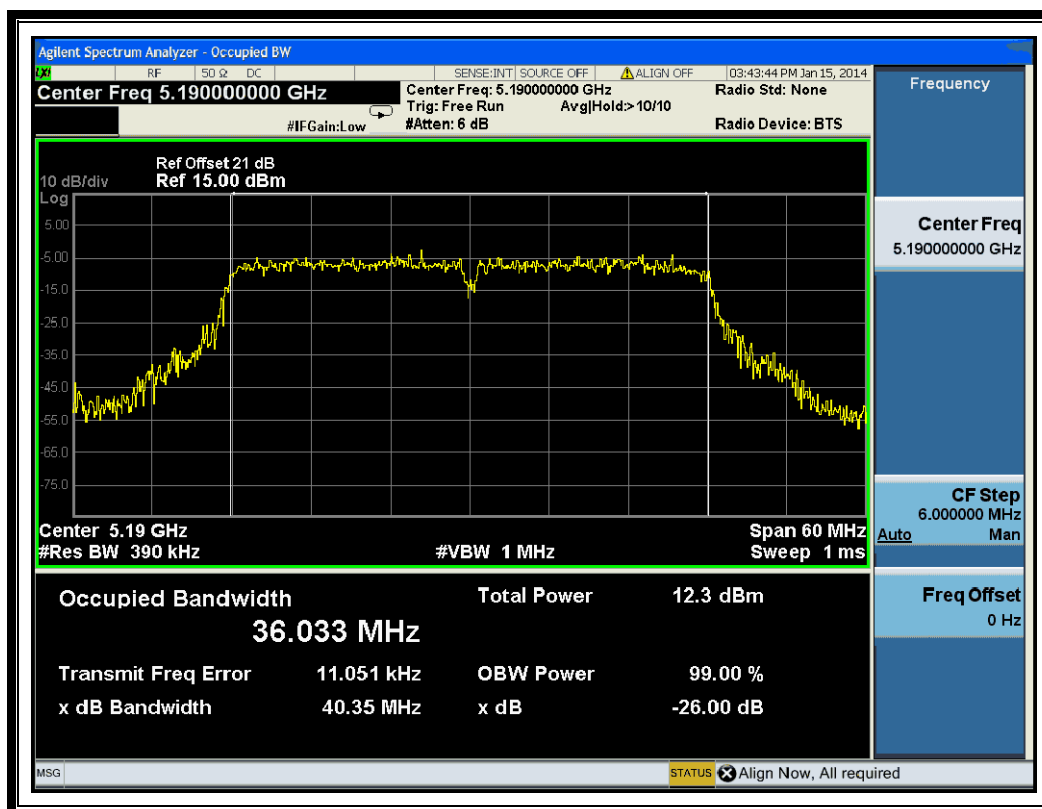
(Channel 140: 5700MHz @ 802.11n-20MHz)

2.3.3.3. 802.11n-40MHz Test mode

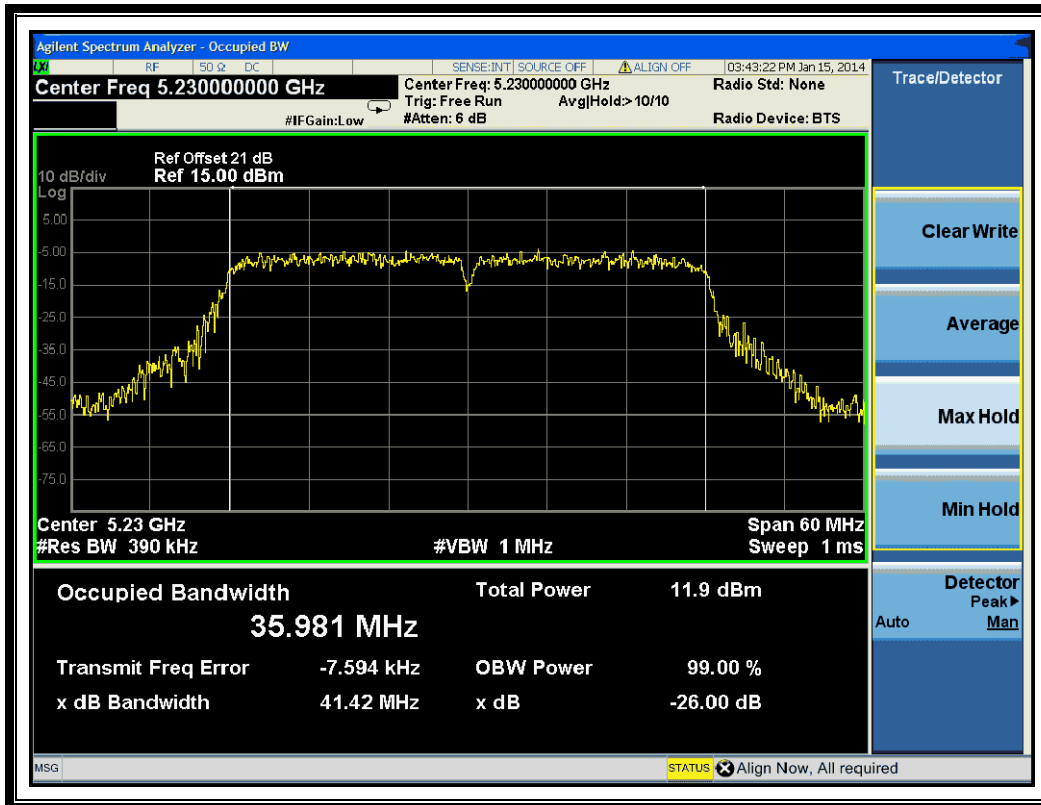
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
38	5190	40.35
46	5230	41.42
54	5270	41.08
62	5310	39.58
102	5510	41.58
110	5550	40.93
134	5670	40.52

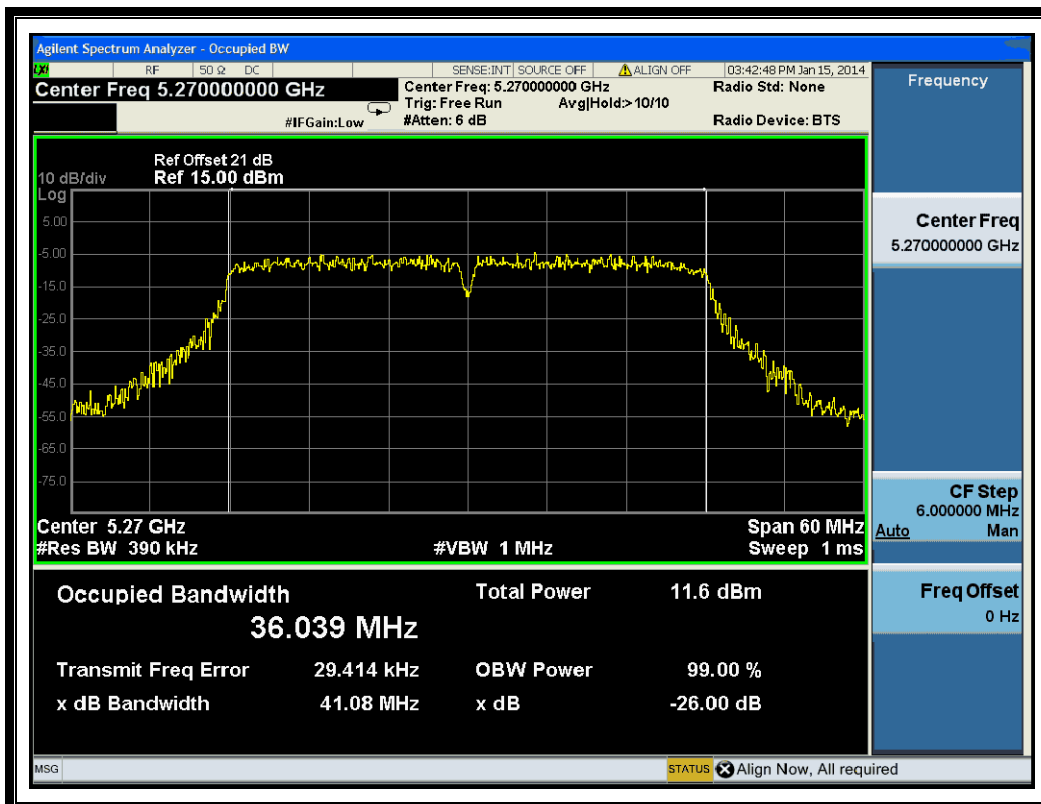
B. Test Plots



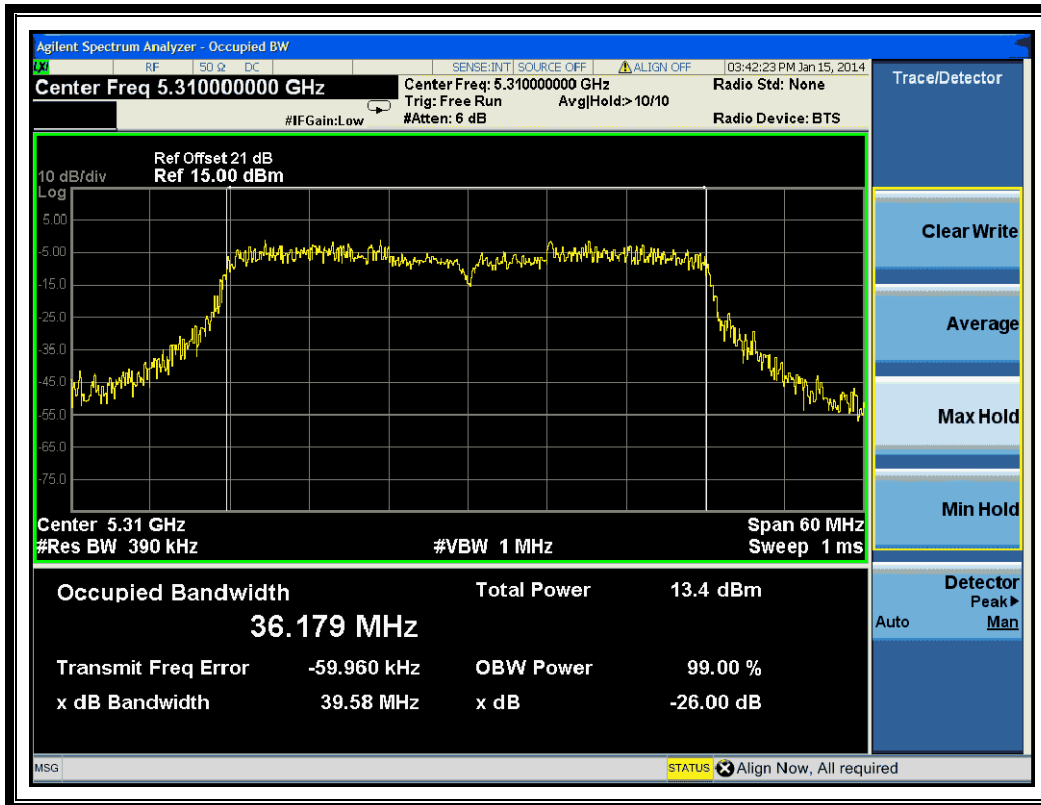
(Channel 38: 5190MHz @ 802.11n-40MHz)



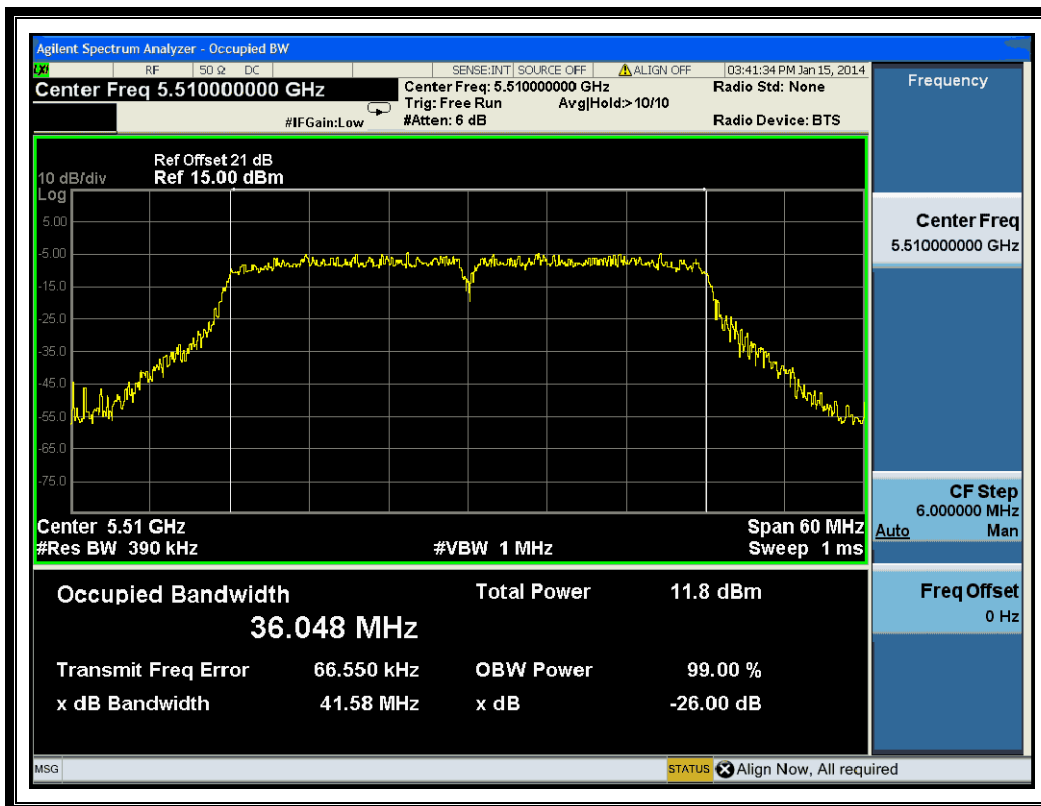
(Channel 46: 5230 MHz @ 802.11n-40MHz)



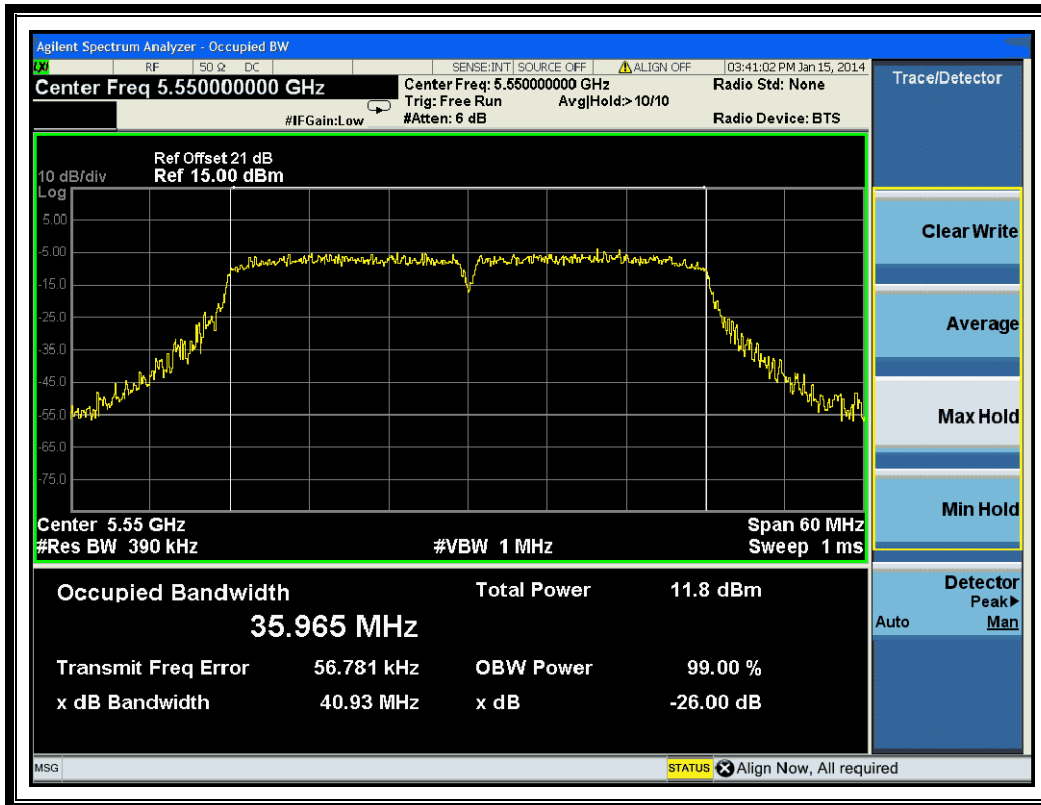
(Channel 54: 5270MHz @ 802.11n-40MHz)



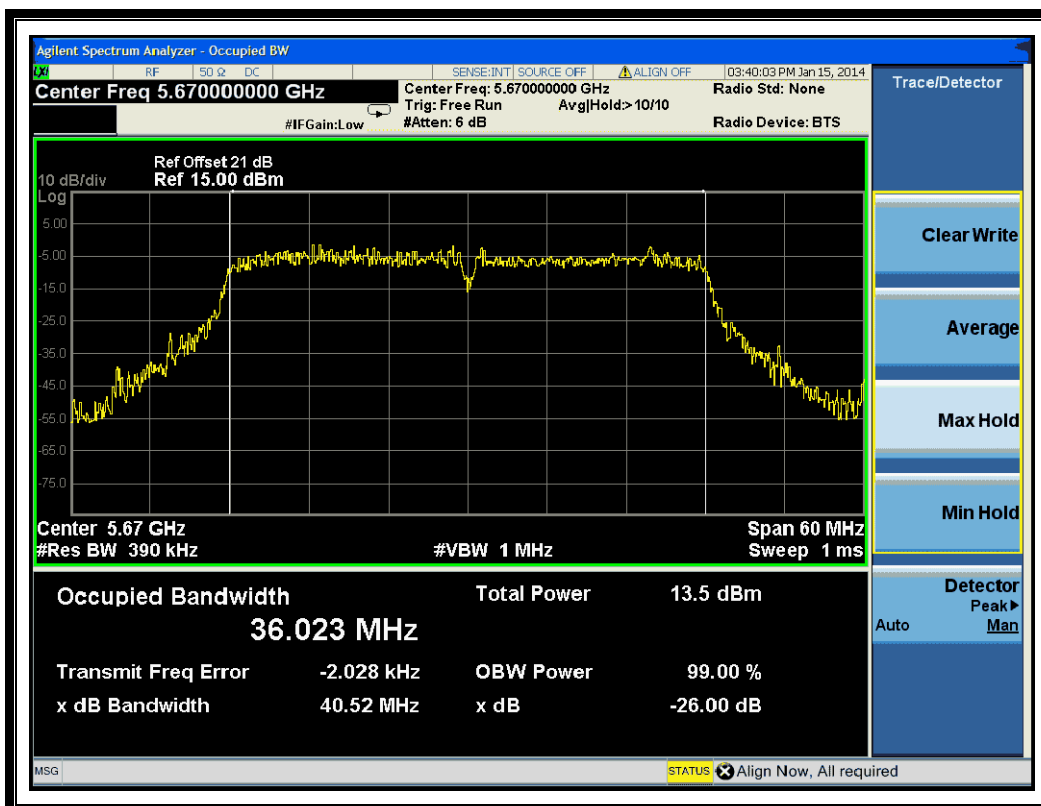
(Channel 62: 5310MHz @ 802.11n-40MHz)



(Channel 102: 5510MHz @ 802.11n-40MHz)



(Channel 110: 5550MHz @ 802.11n-40MHz)



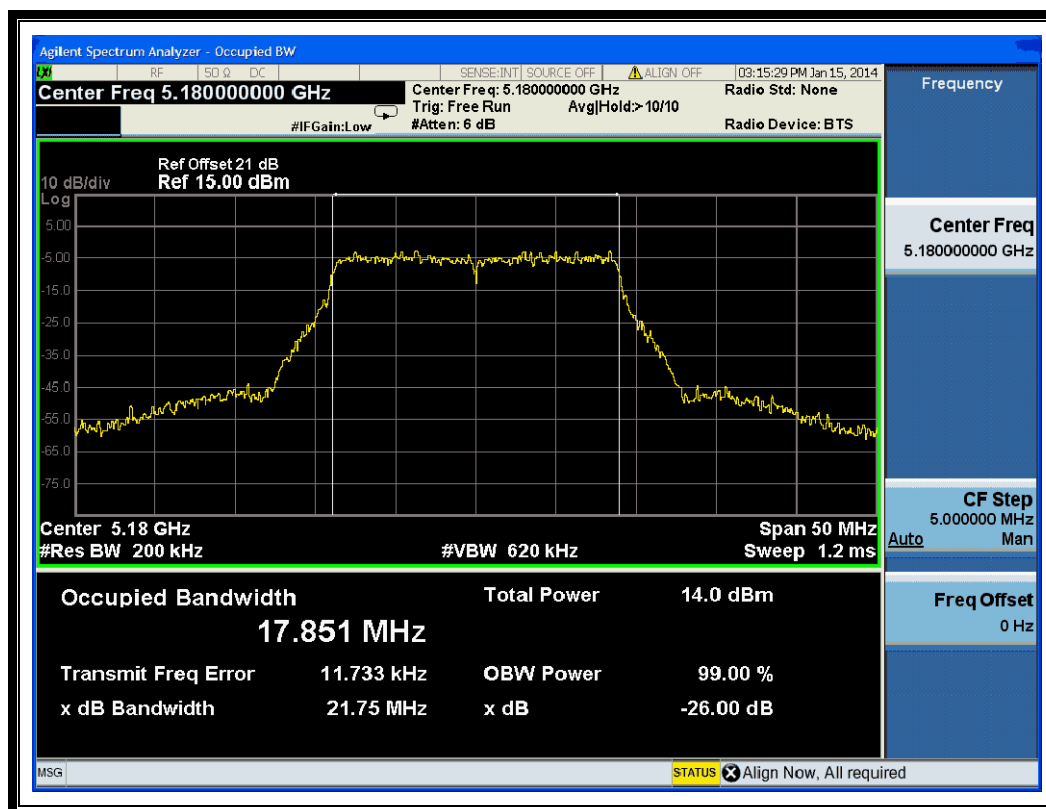
(Channel 134: 5670MHz @ 802.11n-40MHz)

2.3.3.4. 802.11ac-20 Test mode

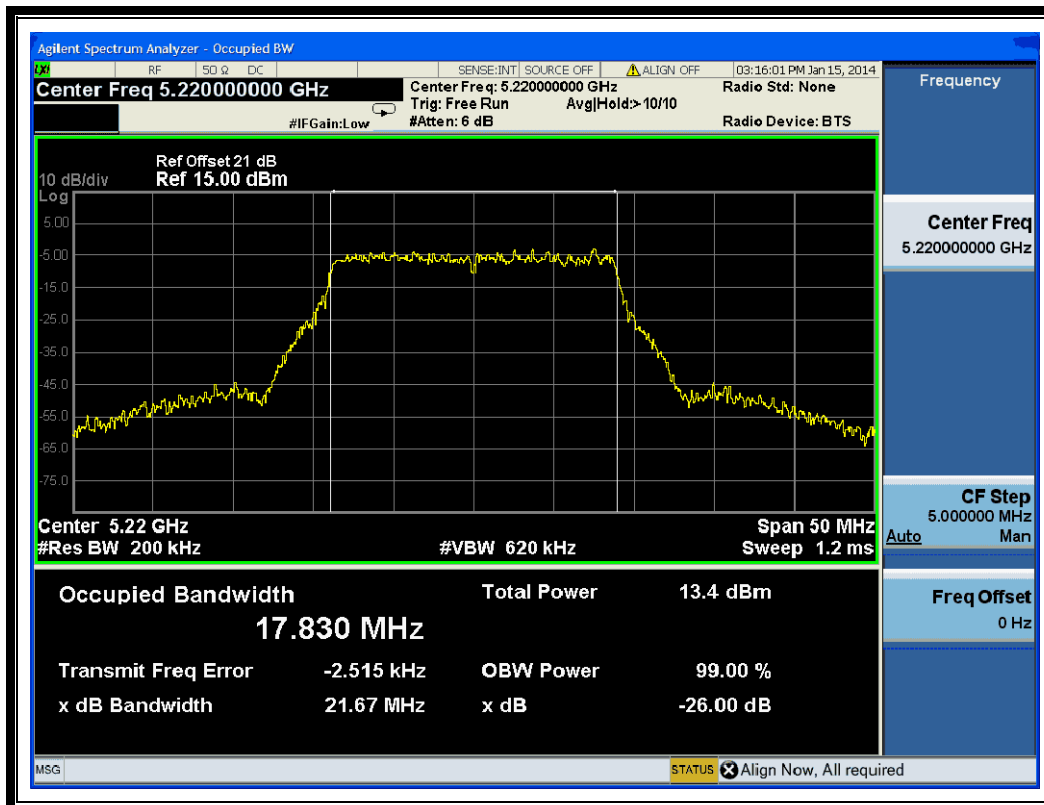
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
36	5180	21.75
44	5220	21.67
48	5240	21.45
52	5260	21.34
60	5300	21.55
64	5320	21.17
100	5500	21.70
116	5580	21.59
140	5700	21.45

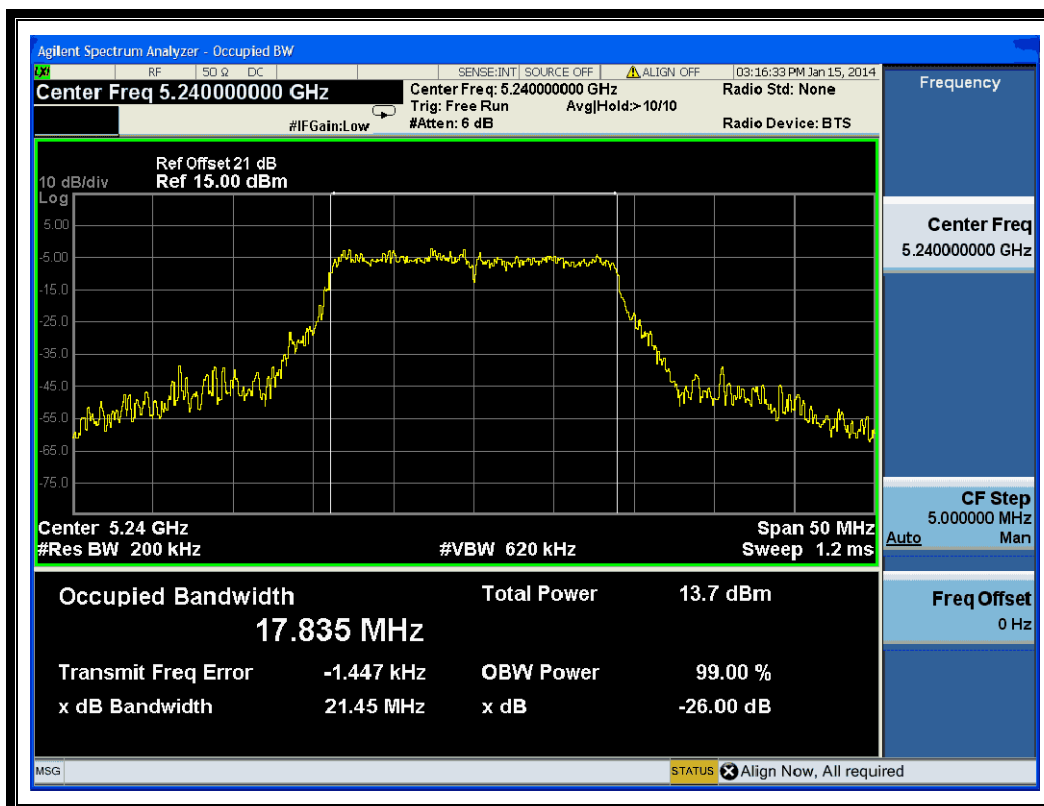
B. Test Plots



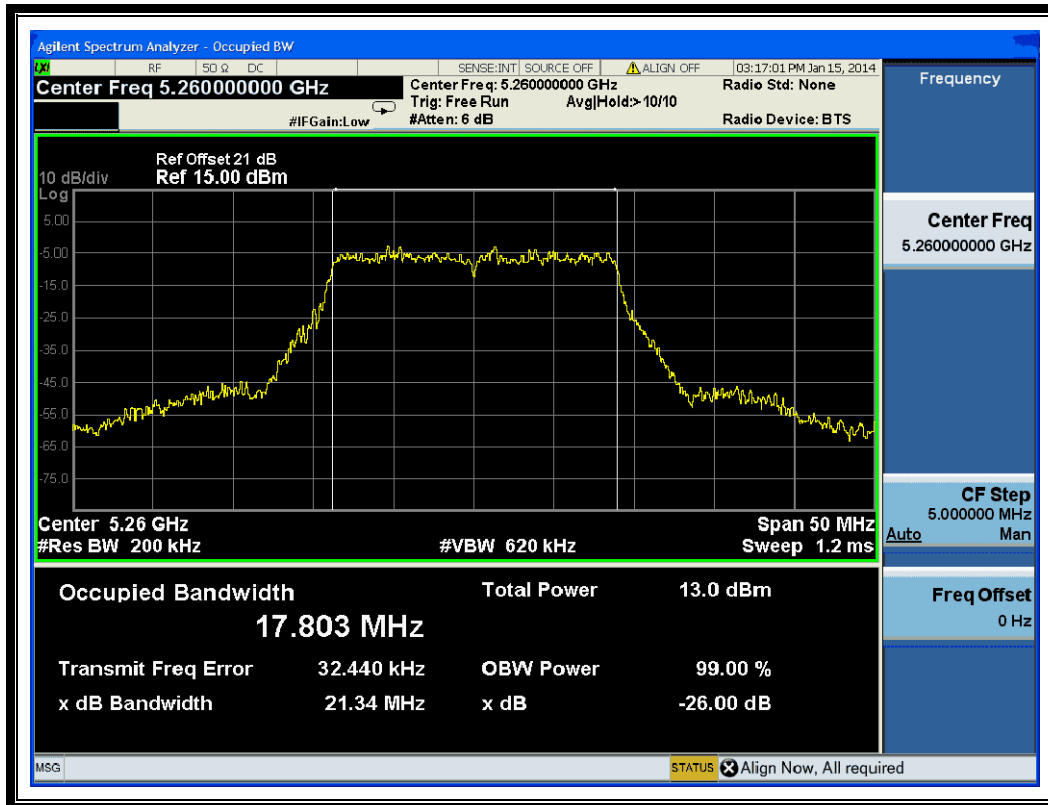
(Channel 36: 5180MHz @ 802.11ac-20MHz)



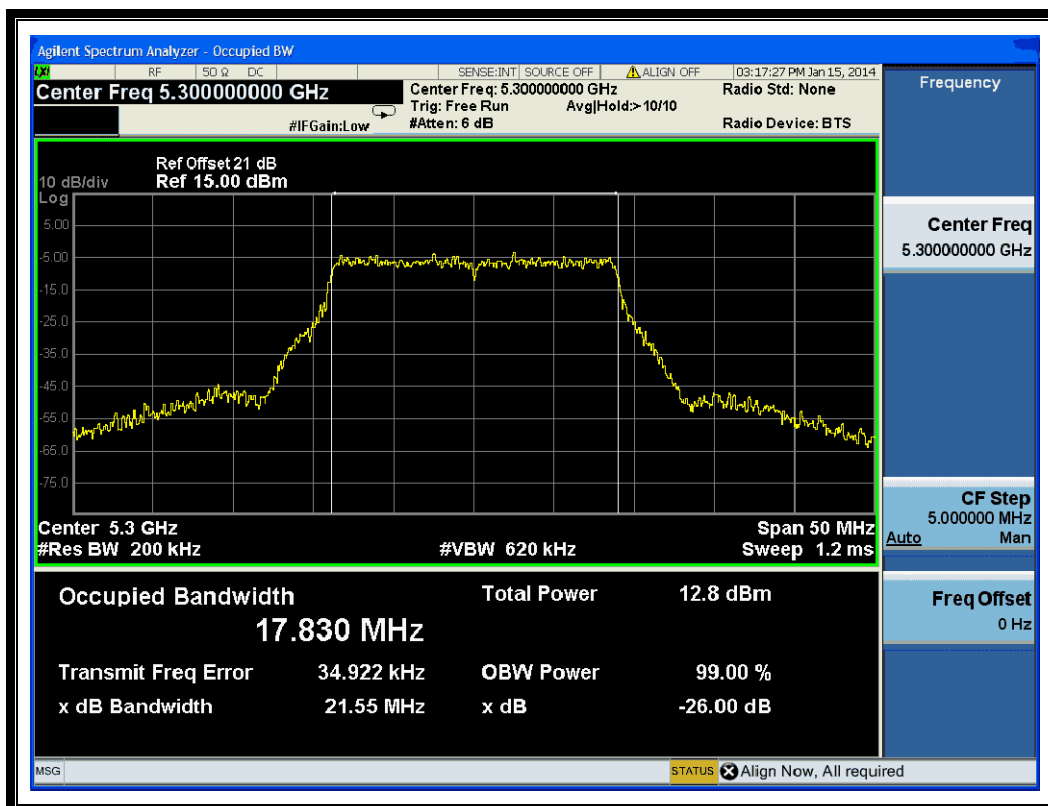
(Channel 44: 5220 MHz @ 802.11ac-20MHz)



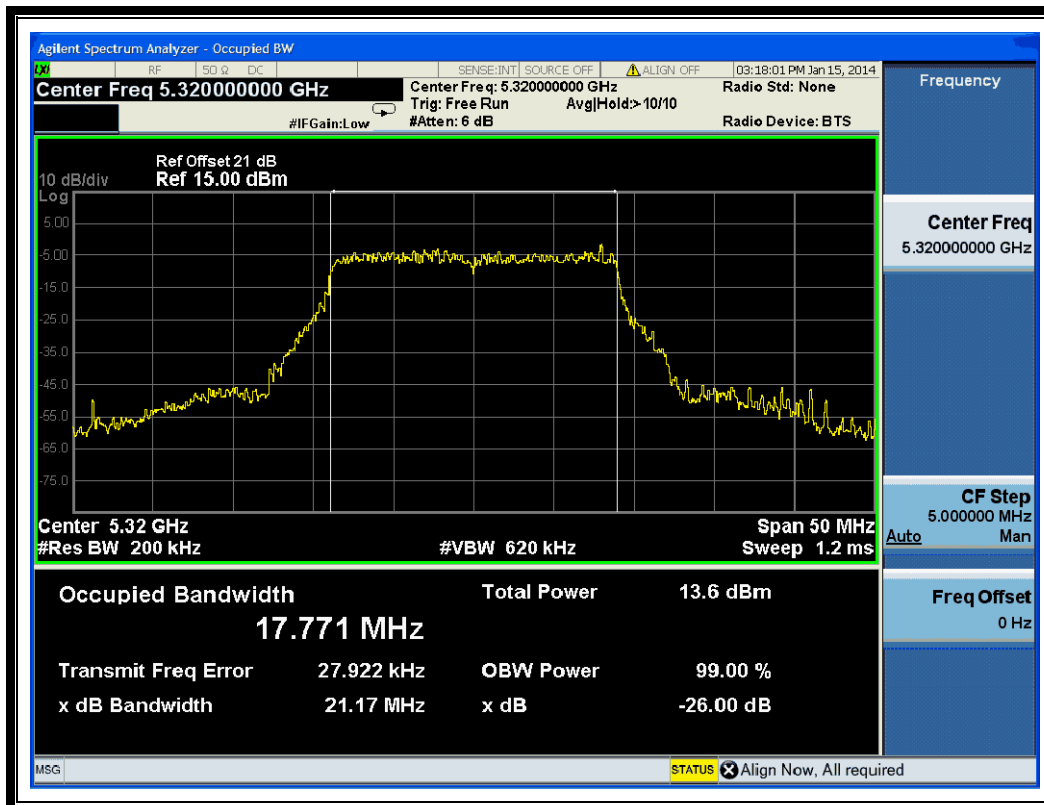
(Channel 48: 5240MHz @ 802.11ac-20MHz)



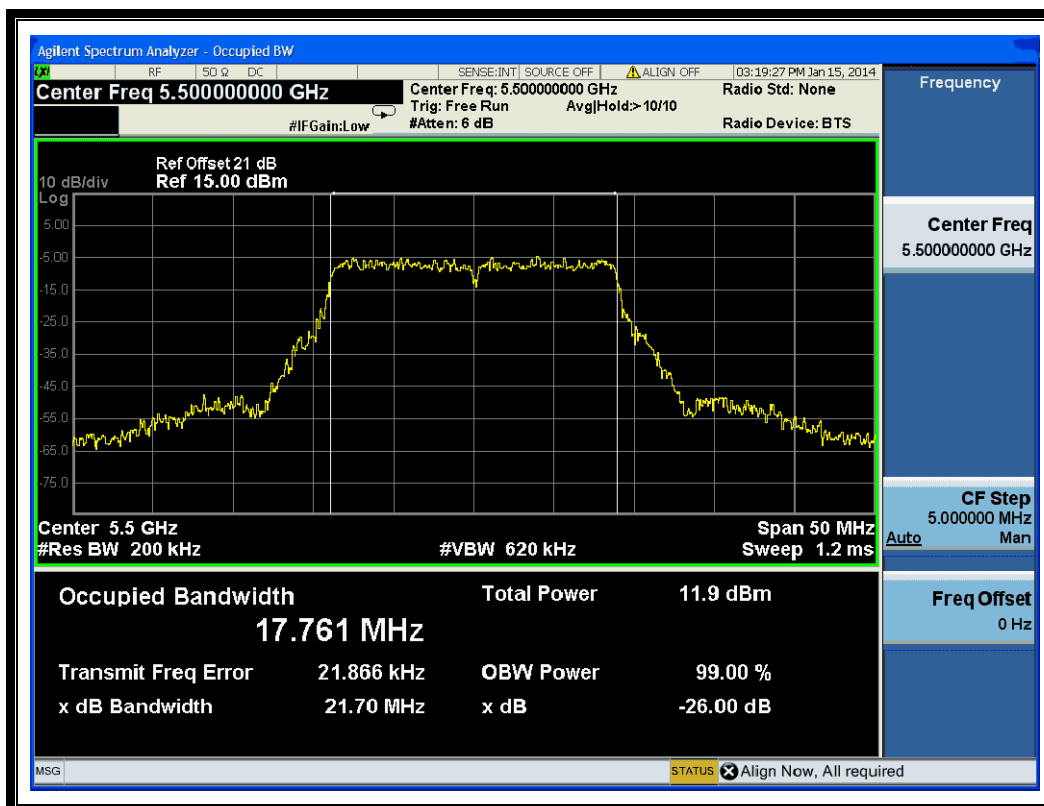
(Channel 52: 5260MHz @ 802.11ac-20MHz)



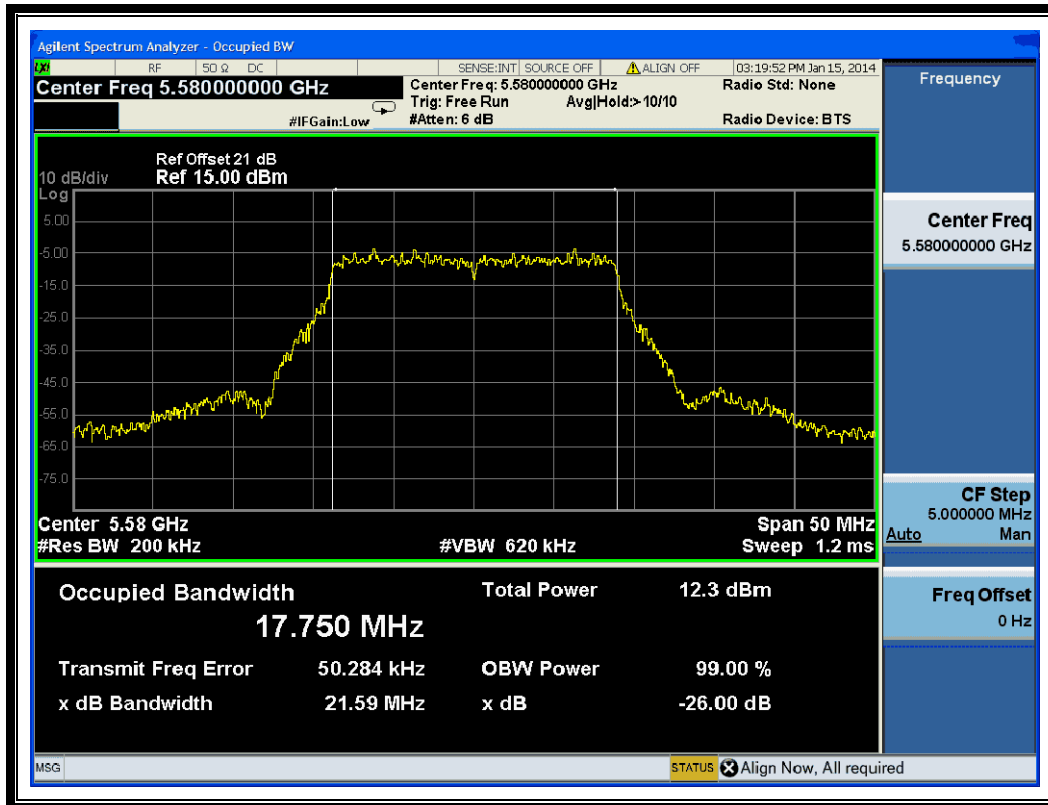
(Channel 60: 5300 MHz @ 802.11ac-20MHz)



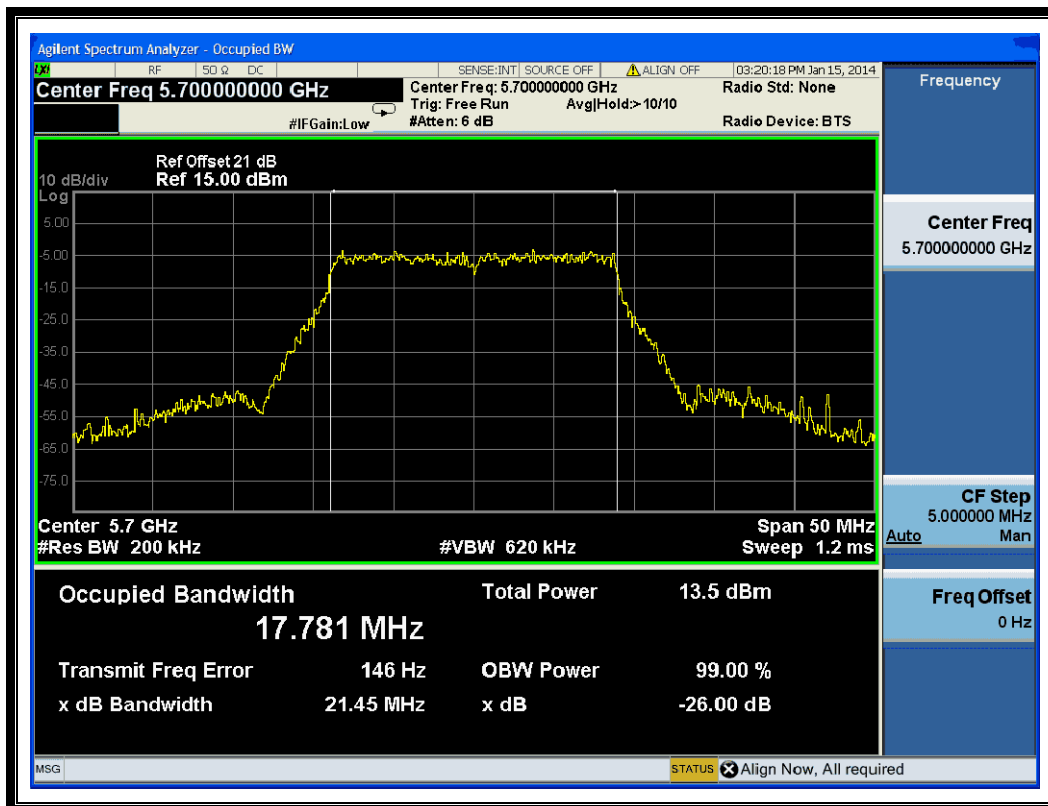
(Channel 64: 5320MHz @ 802.11ac-20MHz)



(Channel 100: 5500MHz @ 802.11ac-20MHz)



(Channel 116: 5580 MHz @ 802.11ac-20MHz)



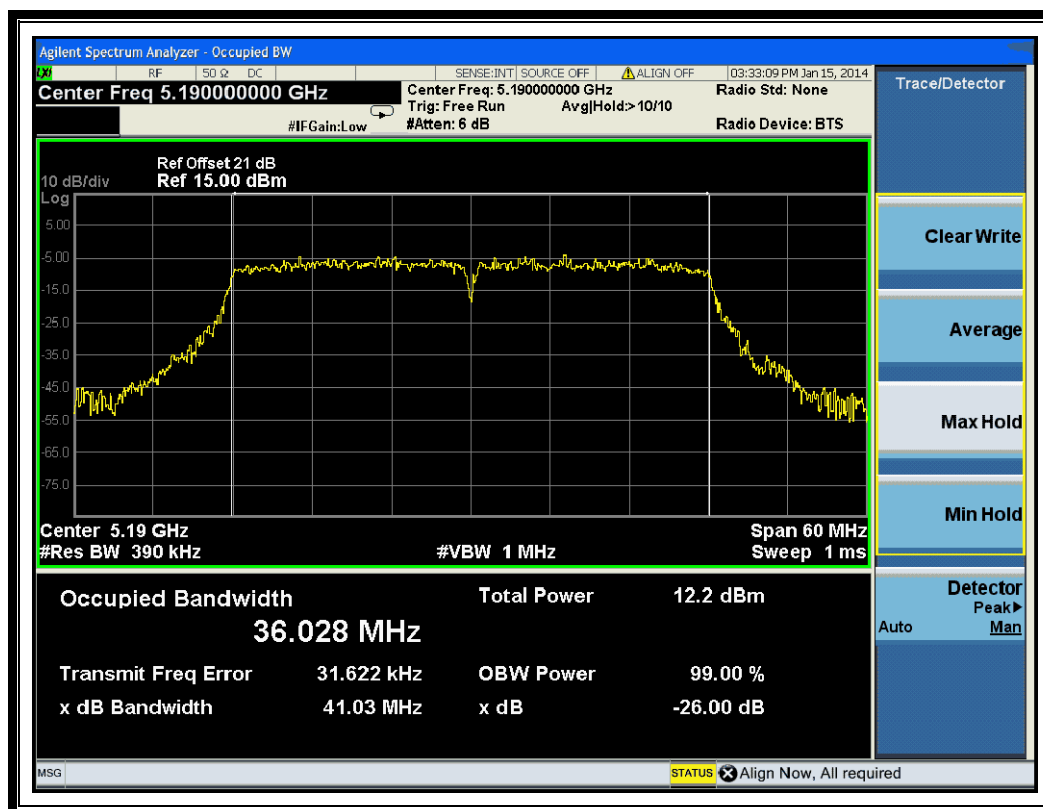
(Channel 140: 5700MHz @ 802.11ac-20MHz)

2.3.3.5. 802.11ac-40MHz Test mode

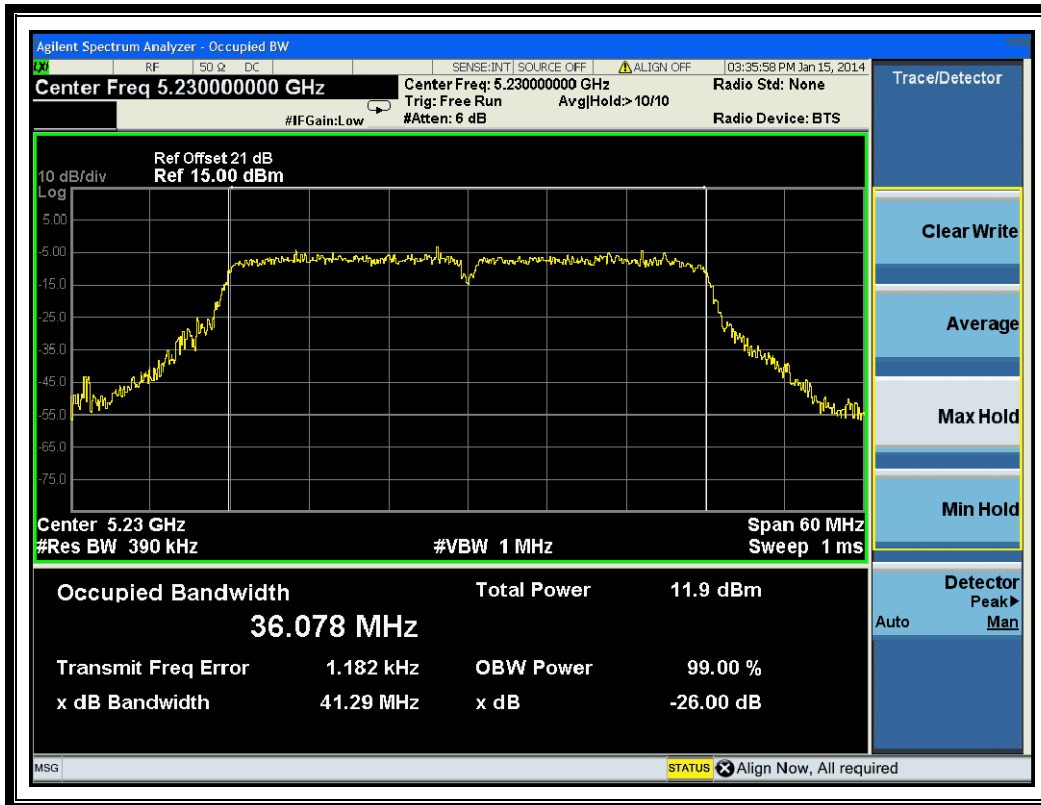
A. Test Verdict:

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
38	5190	41.03
46	5230	41.29
54	5270	41.92
62	5310	40.89
102	5510	39.48
110	5550	41.42
134	5670	41.83

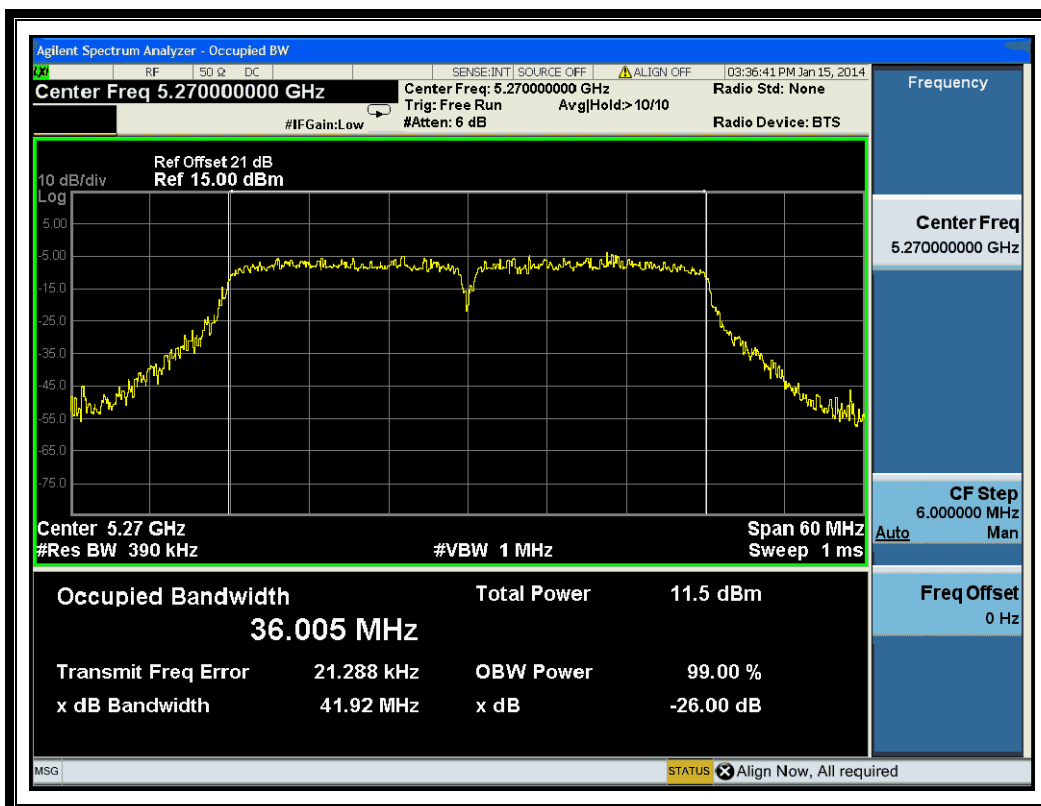
B. Test Plots



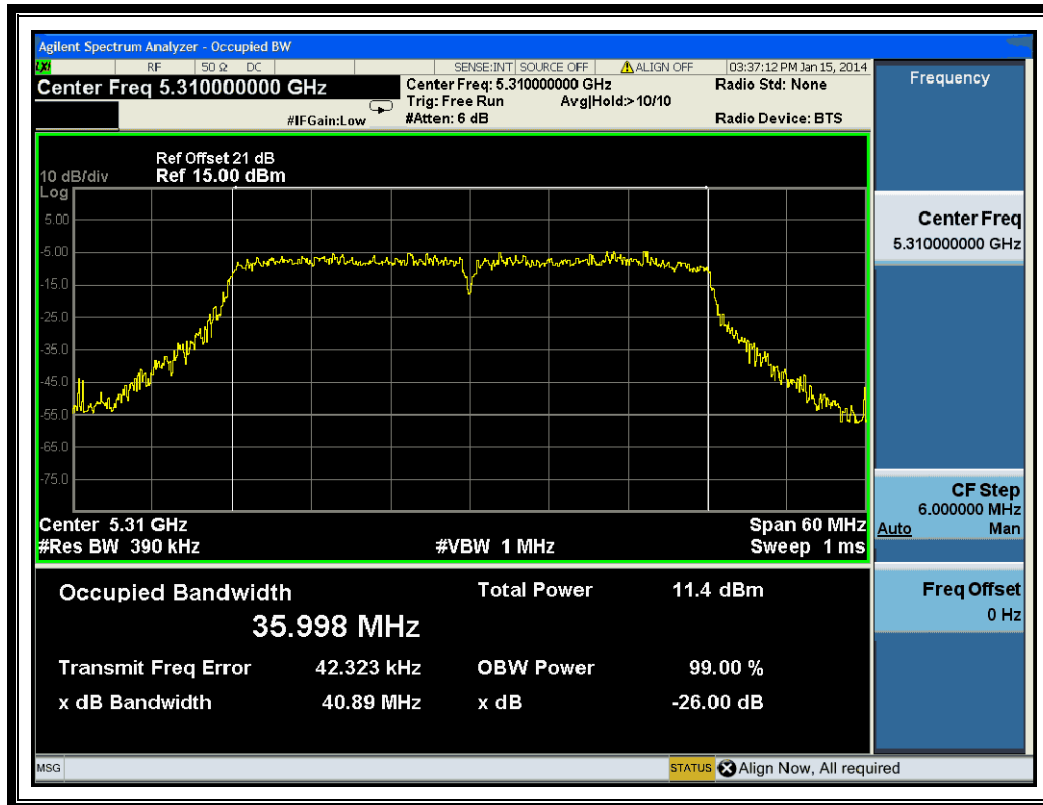
(Channel 38: 5190MHz @ 802.11ac-40MHz)



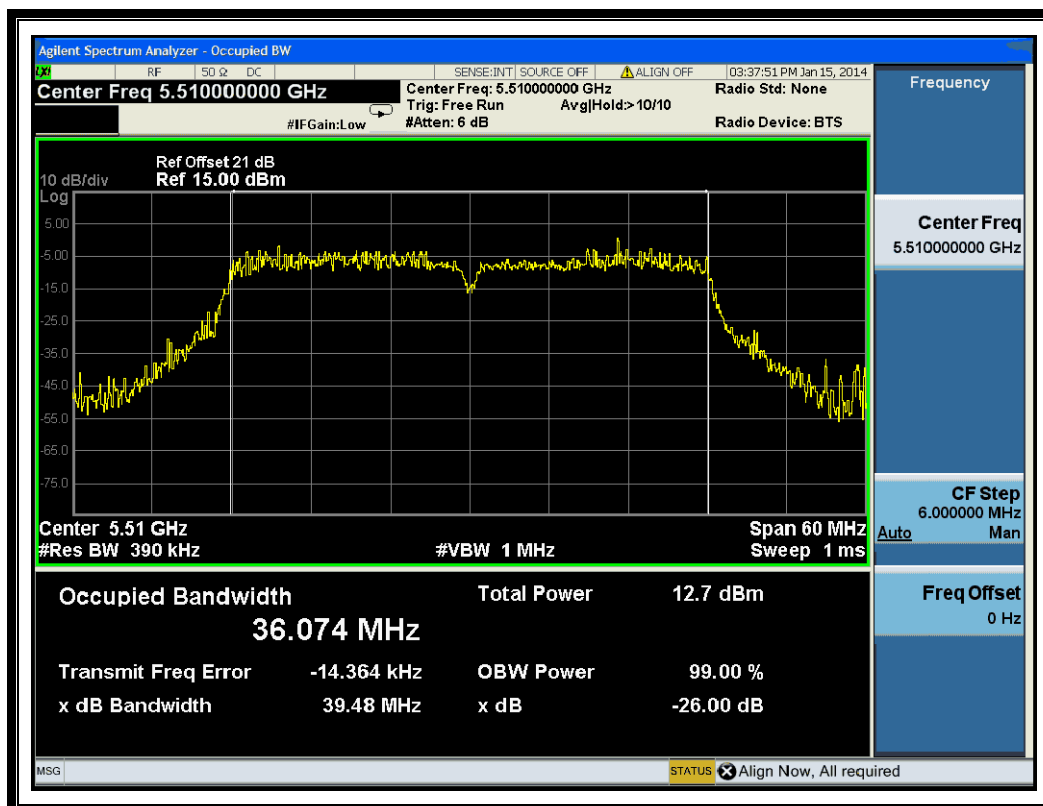
(Channel 46: 5230 MHz @ 802.11ac-40MHz)



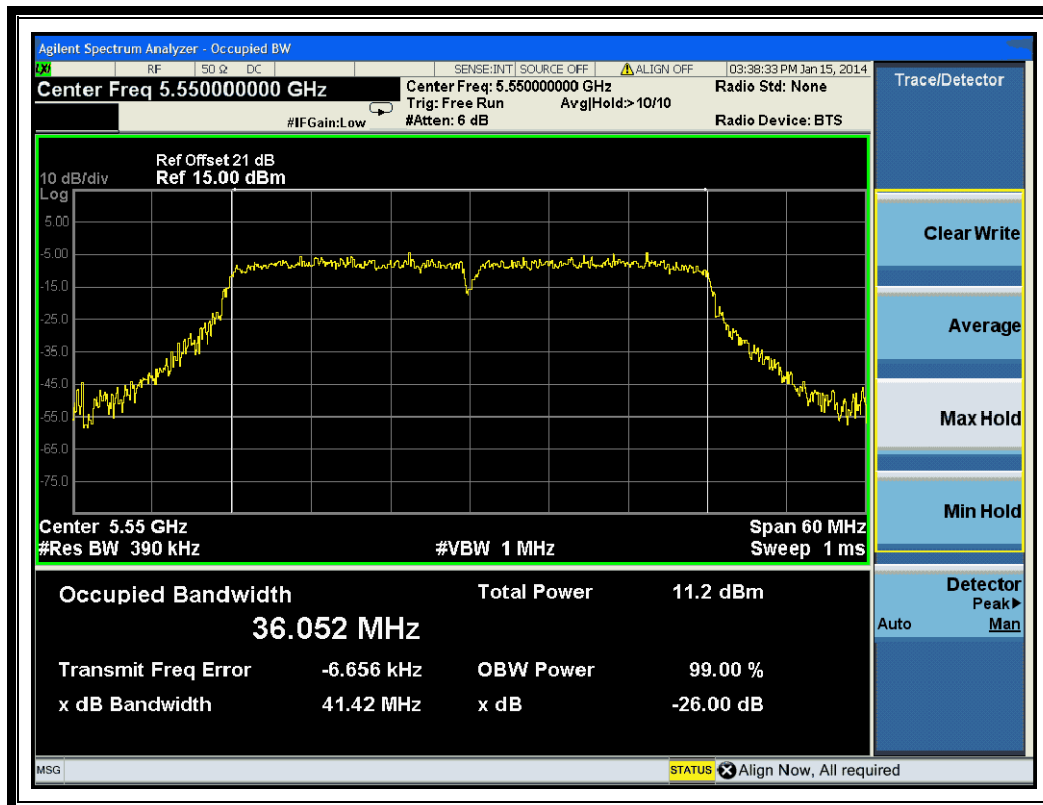
(Channel 54: 5270MHz @ 802.11ac-40MHz)



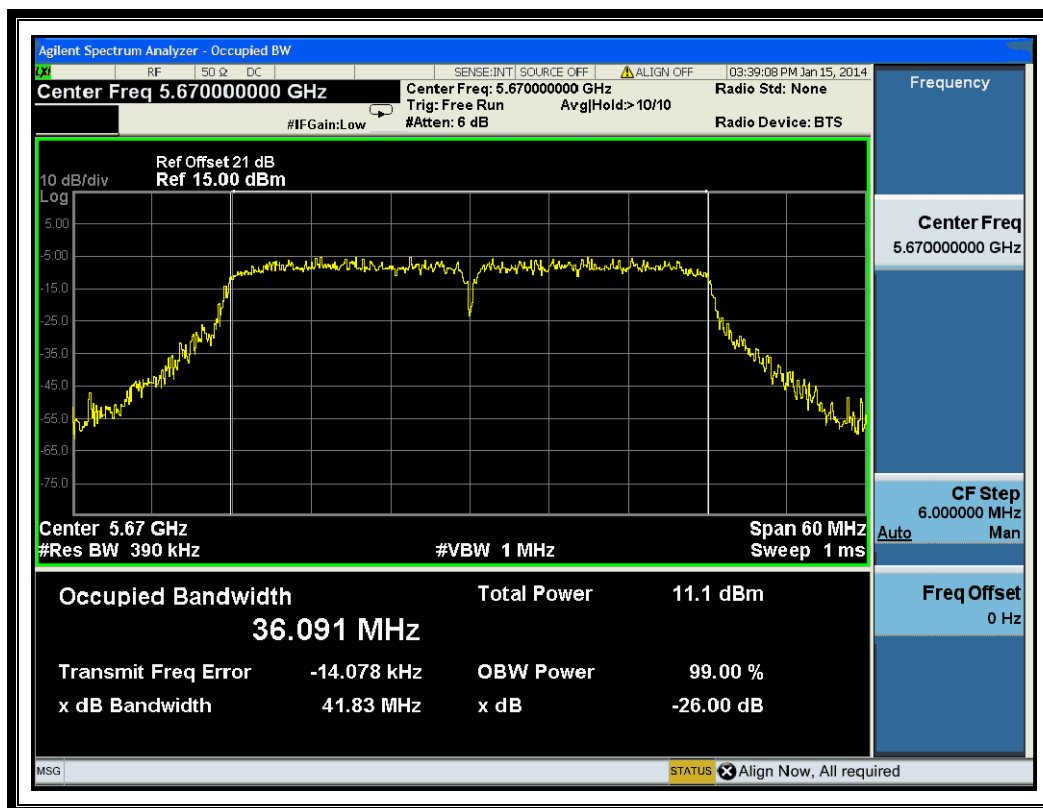
(Channel 62: 5310MHz @ 802.11ac-40MHz)



(Channel 102: 5510 MHz @ 802.11ac-40MHz)



(Channel 110: 5550MHz @ 802.11ac-40MHz)



(Channel 134: 5670MHz @ 802.11ac-40MHz)

2.4. Maximum conducted output Power

2.4.1. Requirement

(1) For the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50mW or $4\text{dBm} + 10\log B$, where B is the 26dB emission bandwidth in MHz.

(2) For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250mW or $11\text{dBm} + 10\log B$, where B is the 26 dB emission bandwidth in megahertz.

(3) For the band 5.725–5.825 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W or $17\text{dBm} + 10\log B$, where B is the 26dB emission bandwidth in MHz.

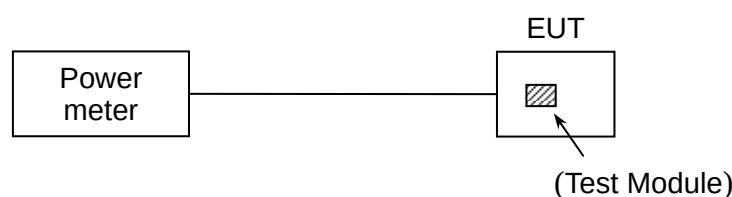
If transmitting antennas of directional gain greater than 6dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

2.4.2. Test Description

Section E) 3) of KDB 789033 defines a methodology using an RF average power meter.

The measured output power was calculated by the reading of the Power Meter. Then, record the max value and add $10\log(1/\text{duty cycle})$

A. Test Setup:



The EUT (Equipment under the test) which is powered by the Battery is coupled to the Power Meter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading, all test result in power meter.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EPM Series Power Meter	Agilent	E4418B	GB43318055	2013.05.12	2014.05.11
Power Sensor	Agilent	8482A	MY41091706	2013.05.12	2014.05.11

2.4.3. Test Result

2.4.3.1. 802.11a Test mode

Channel	Frequency (MHz)	Measured Output Power without duty factor dBm	Duty factor	Measured Output Power with duty factor dBm	Limit dBm	Verdict
36	5180	11.11	0.59	11.70	17	PASS
44	5220	11.33		11.92		
48	5240	11.59		12.18		
52	5260	11.63		12.22	24	
60	5300	11.17		11.76		
64	5320	11.39		11.98		
100	5500	11.98		12.57		
116	5580	11.94		12.53		
140	5700	11.64		12.23		

2.4.3.2. 802.11n-20MHz Test mode

Channel	Frequency (MHz)	Measured Output Power without duty factor dBm	Duty factor	Measured Output Power with duty factor dBm	Limit dBm	Verdict
36	5180	9.49	0.67	10.16	17	PASS
44	5220	9.55		10.22		
48	5240	9.72		10.39		
52	5260	9.69		10.36	24	
60	5300	9.57		10.24		
64	5320	9.50		10.17		
100	5500	9.94		10.61		
116	5580	9.86		10.53		
140	5700	9.59		10.26		

2.4.3.3. 802.11n-40MHz Test mode

Channel	Frequency (MHz)	Measured Output Power without duty factor dBm	Duty factor	Measured Output Power with duty factor dBm	Limit dBm	Verdict
38	5190	7.66	1.57	9.23	17	PASS
46	5230	7.86		9.43	24	
54	5270	7.83		9.40		
62	5310	7.62		9.19		
102	5510	7.99		9.56		
110	5550	7.93		9.50		
134	5670	7.56		9.13		

2.4.3.4. 802.11ac-20MHz Test mode

Channel	Frequency (MHz)	Measured Output Power without duty factor dBm	Duty factor	Measured Output Power with duty factor dBm	Limit dBm	Verdict
36	5180	8.40	0.67	9.07	17	PASS
44	5220	8.42		9.09		
48	5240	8.51		9.18		
52	5260	8.51		9.18	24	
60	5300	8.33		9.00		
64	5320	8.21		8.88		
100	5500	8.75		9.42		
116	5580	8.70		9.37		
140	5700	8.63		9.30		

2.4.3.5. 802.11ac-40MHz Test mode

Channel	Frequency (MHz)	Measured Output Power without duty factor dBm	Duty factor	Measured Output Power without duty factor dBm	Limit dBm	Verdict
38	5190	6.36	1.57	7.93	17	PASS
46	5230	6.55		8.12		
54	5270	6.58		8.15	24	
62	5310	6.34		7.91		
102	5510	6.74		8.31		
110	5550	6.61		8.18		
134	5670	6.52		8.09		

2.5. Peak Power spectral density

2.5.1. Requirement

(1) For the band 5.15–5.25 GHz, the peak power spectral density shall not exceed 4 dBm in any 1-MHz band.

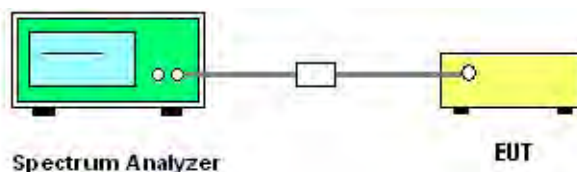
(2) For the 5.25–5.35 GHz and 5.47–5.725GHz bands, the peak power spectral density shall not exceed 11dBm in any 1 megahertz band.

(3) For the band 5.725–5.825 GHz, the peak power spectral density shall not exceed 17dBm in any 1-MHz band.

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

2.5.2. Test Description

A. Test Set:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

B. Test Procedure

KDB 789033 Section F) Peak power spectral density(PPSD) Method SA-2 was used in order to prove compliance

- 1) Set span to encompass the entire 26-dB emission bandwidth
- 2) Set RBW = 1 MHz. Set VBW $\geq$ 3 MHz.
- 3) Number of points in sweep $\geq$ 2 Span / RBW. Sweep time = auto.
- 4) Detector = RMS (i.e., power averaging)
- 5) Trace average at least 100 traces in power averaging (i.e., RMS) mode
- 6) Record the max value and add $10\log(1/\text{duty cycle})$

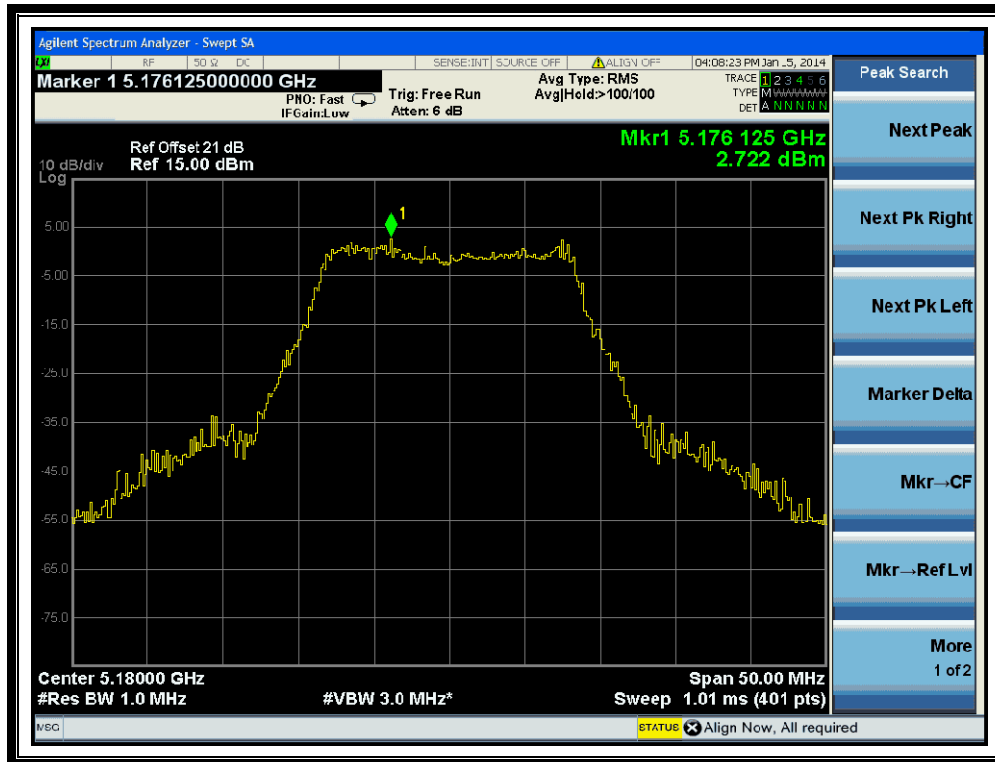
C. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EXA Signal Analyzer	Agilent	N9010A	MY51440152	2013.05.12	2014.05.11

2.5.3. Test Result**2.5.3.1. 802.11a Test mode****A. Test Verdict:**

Channel	Frequency (MHz)	Measured PPSD Without Duty factor (dBm)	Duty factor	Measured PPSD With Duty factor (dBm)	Limit (dBm)	Verdict
36	5180	2.722	0.59	3.312	4	PASS
44	5220	2.657		3.247		
48	5240	2.703		3.293		
52	5260	2.034		2.624	11	
60	5300	1.858		2.448		
64	5320	2.311		2.901		
100	5500	1.706		2.296		
116	5580	1.697		2.287		
140	5700	2.606		3.196		

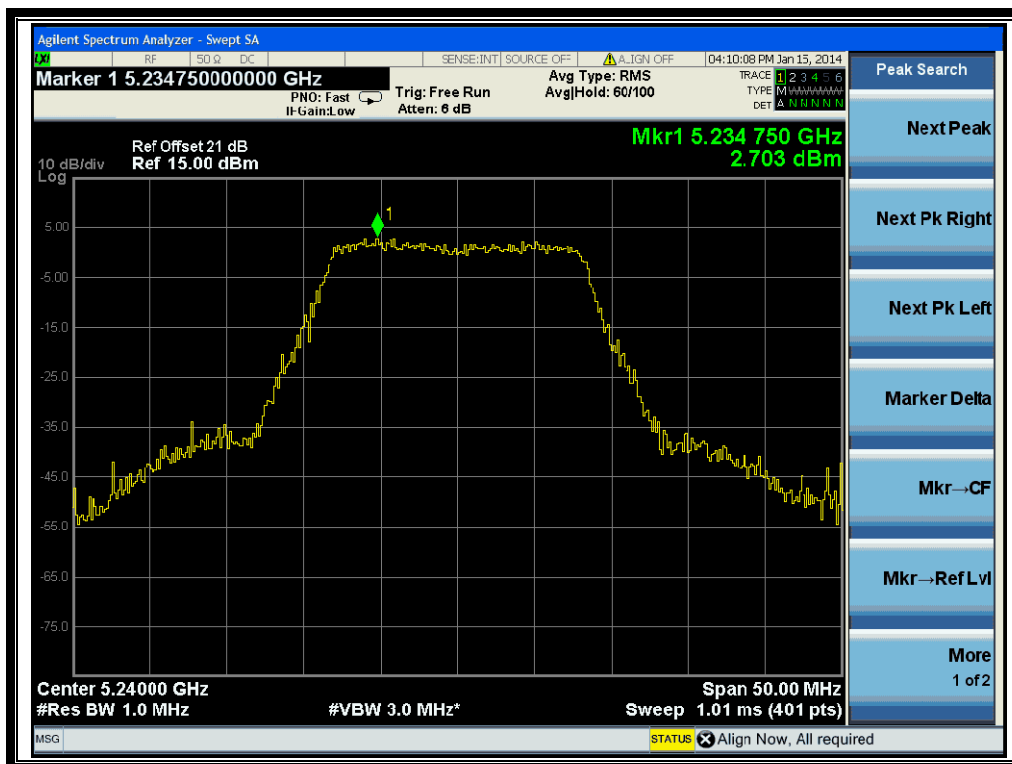
B. Test Plots:



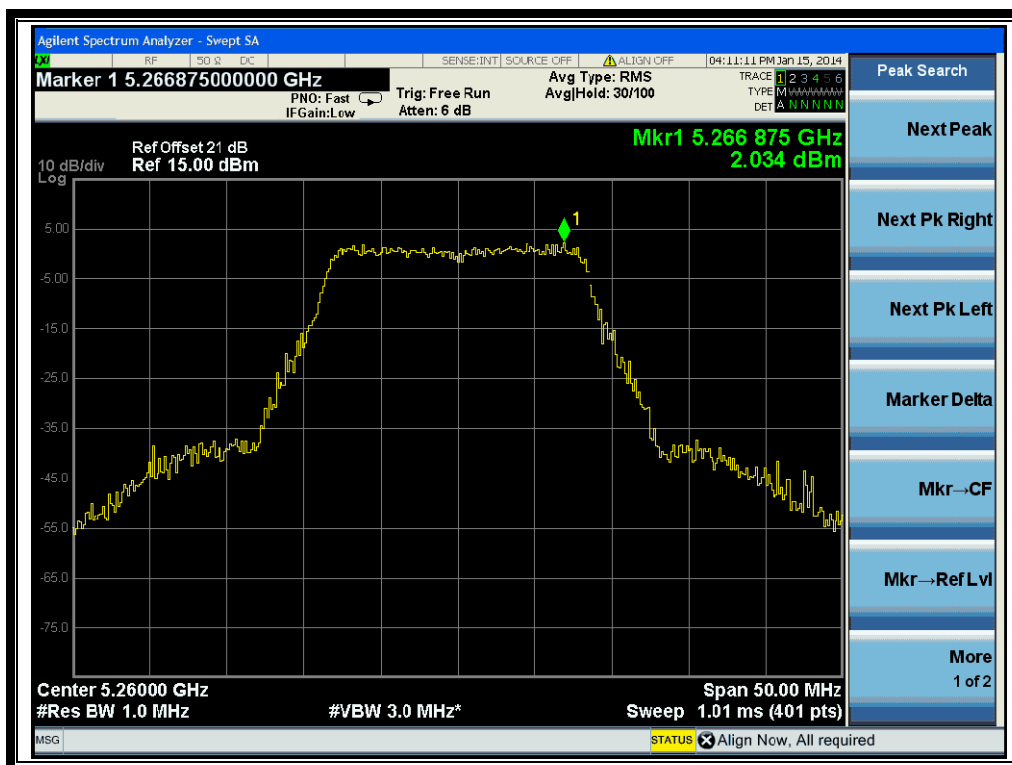
(Channel 36: 5180MHz @ 802.11a)



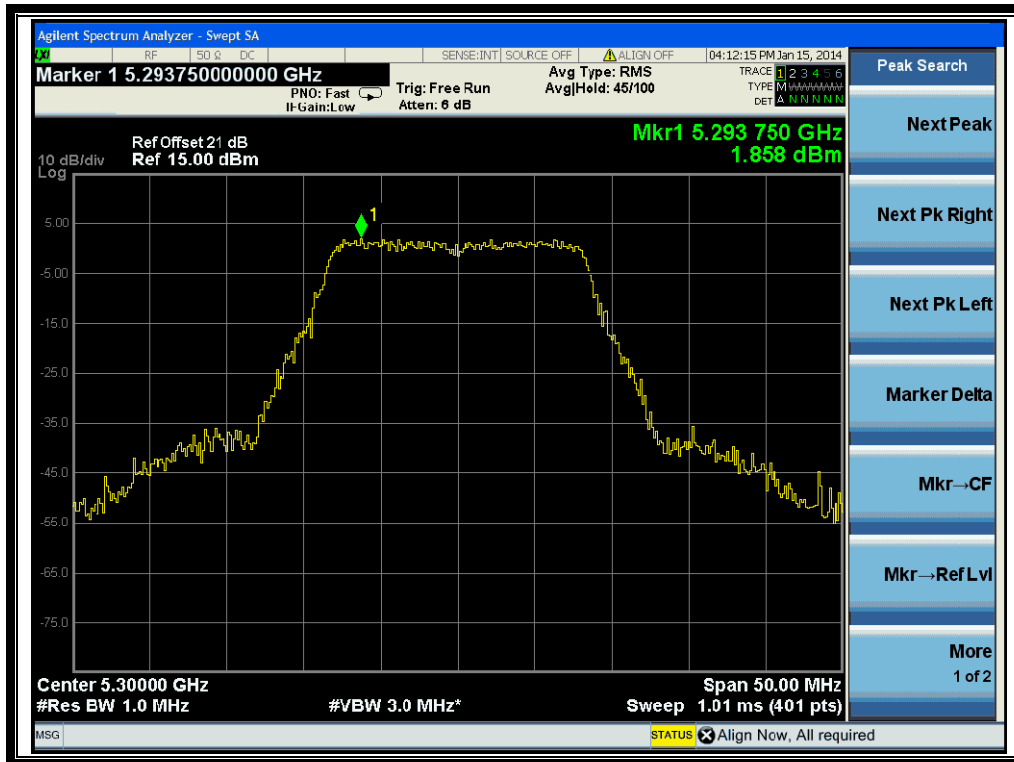
(Channel 44: 5220 MHz @ 802.11a)



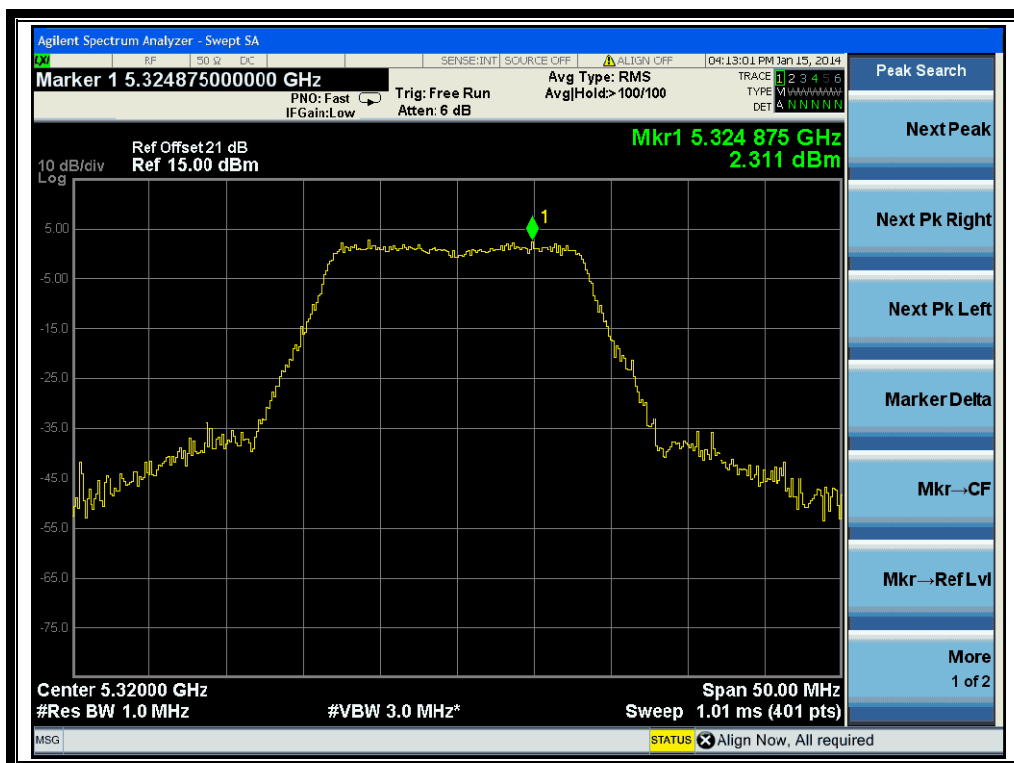
(Channel 48: 5240MHz @ 802.11a)



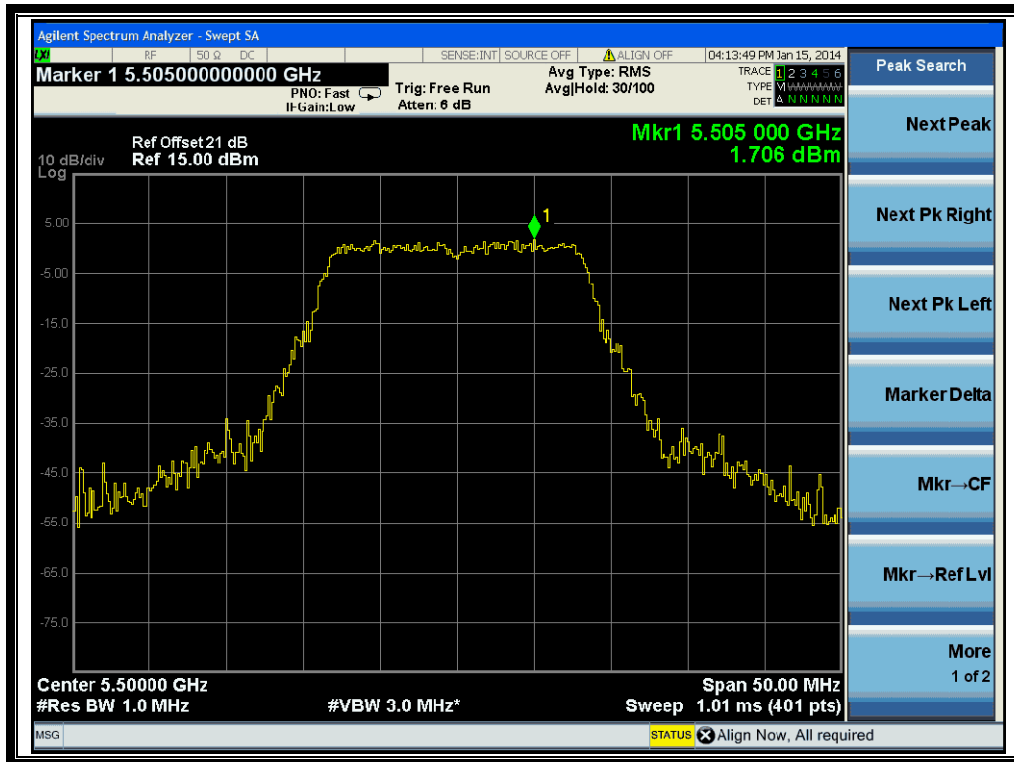
(Channel 52: 5260MHz @ 802.11a)



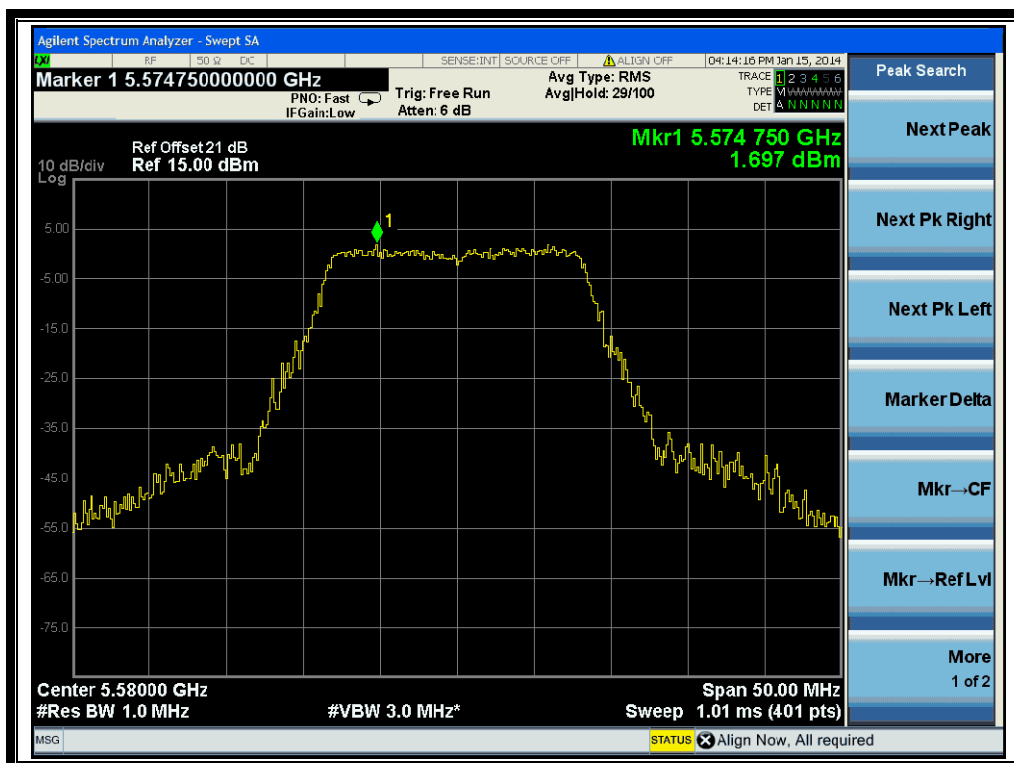
(Channel 60: 5300 MHz @ 802.11a)



(Channel 64: 5320MHz @ 802.11a)



(Channel 100: 5500MHz @ 802.11a)



(Channel 116: 5580 MHz @ 802.11a)



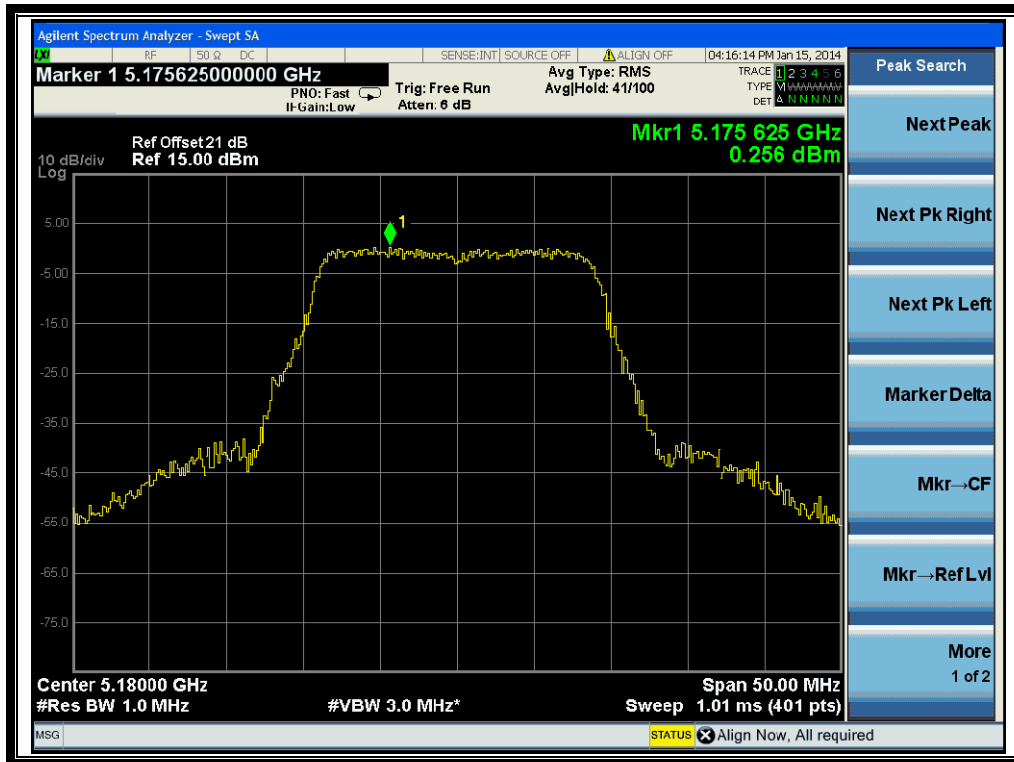
(Channel 140: 5700MHz @ 802.11a)

2.5.3.2. 802.11n-20MHz Test mode

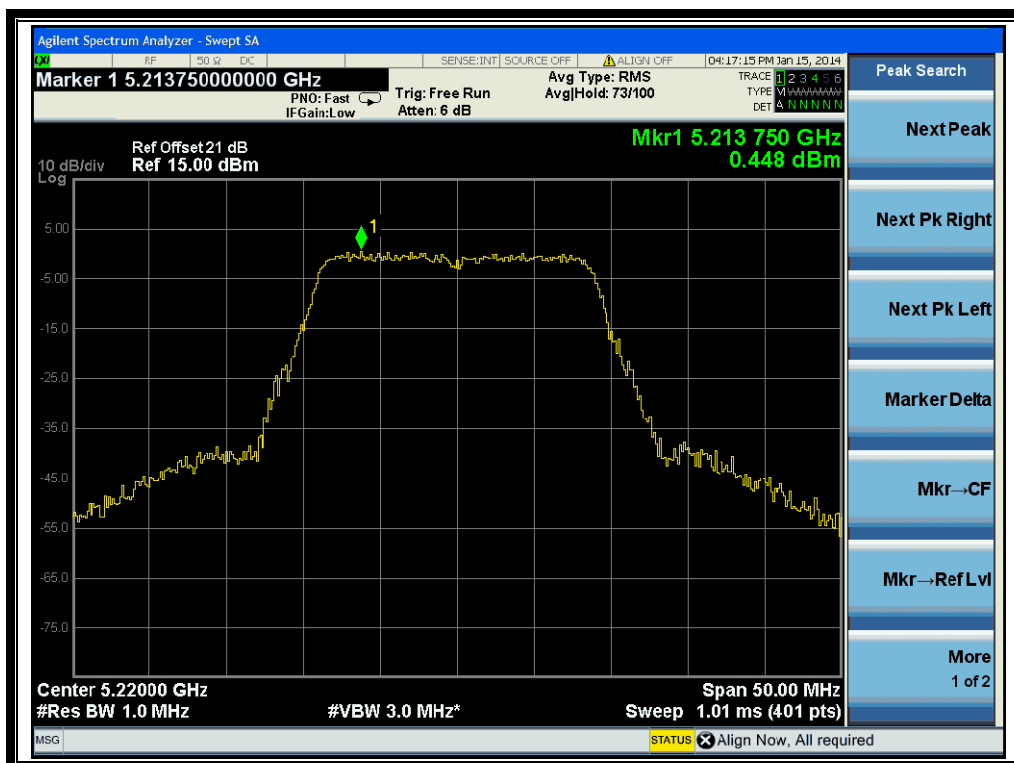
A. Test Verdict:

Channel	Frequency (MHz)	Measured PPSS Without Duty factor (dBm)	Duty factor	Measured PPSS With Duty factor (dBm)	Limit (dBm)	Verdict
36	5180	0.256	0.67	0.926	4	PASS
44	5220	0.448		1.118		
48	5240	1.631		2.301		
52	5260	1.632		2.302	11	
60	5300	1.423		2.093		
64	5320	-0.009		0.661		
100	5500	-0.862		-0.192		
116	5580	0.937		1.607		
140	5700	2.108		2.778		

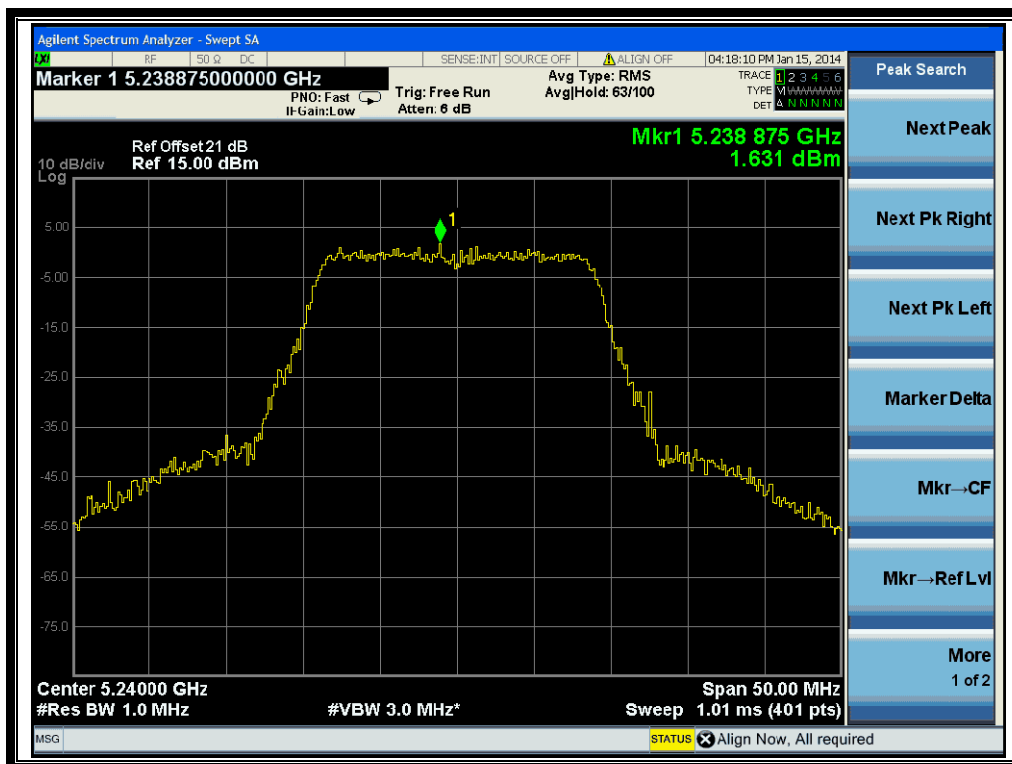
B. Test Plots:



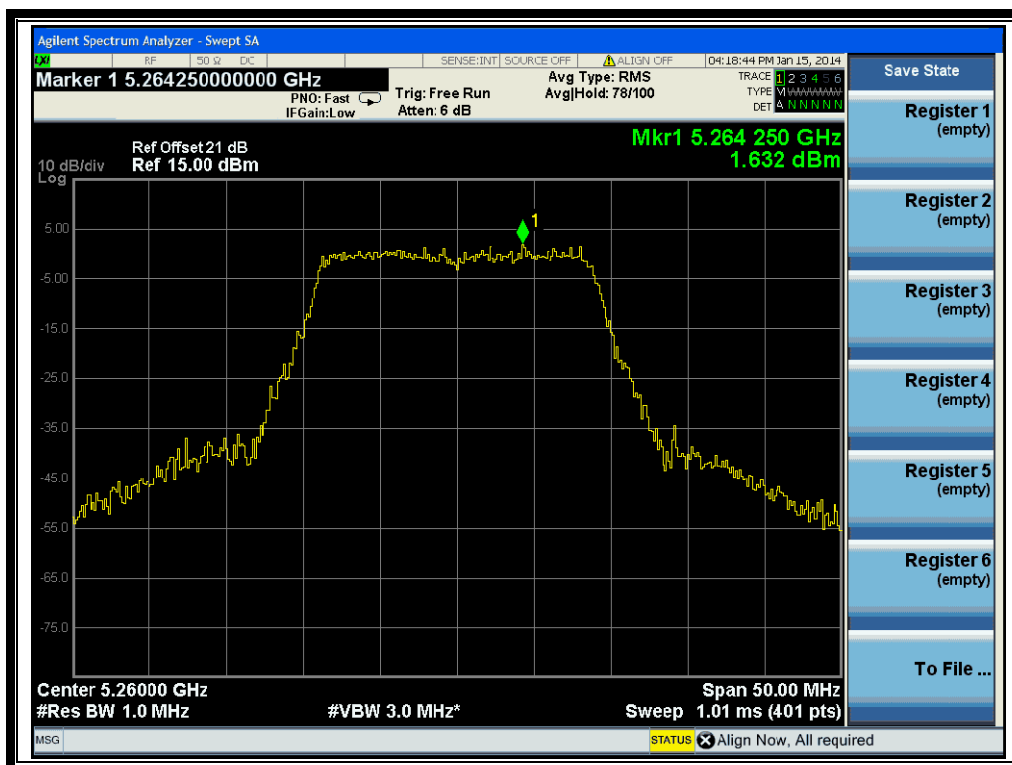
(Channel 36: 5180MHz @ 802.11n-20MHz)



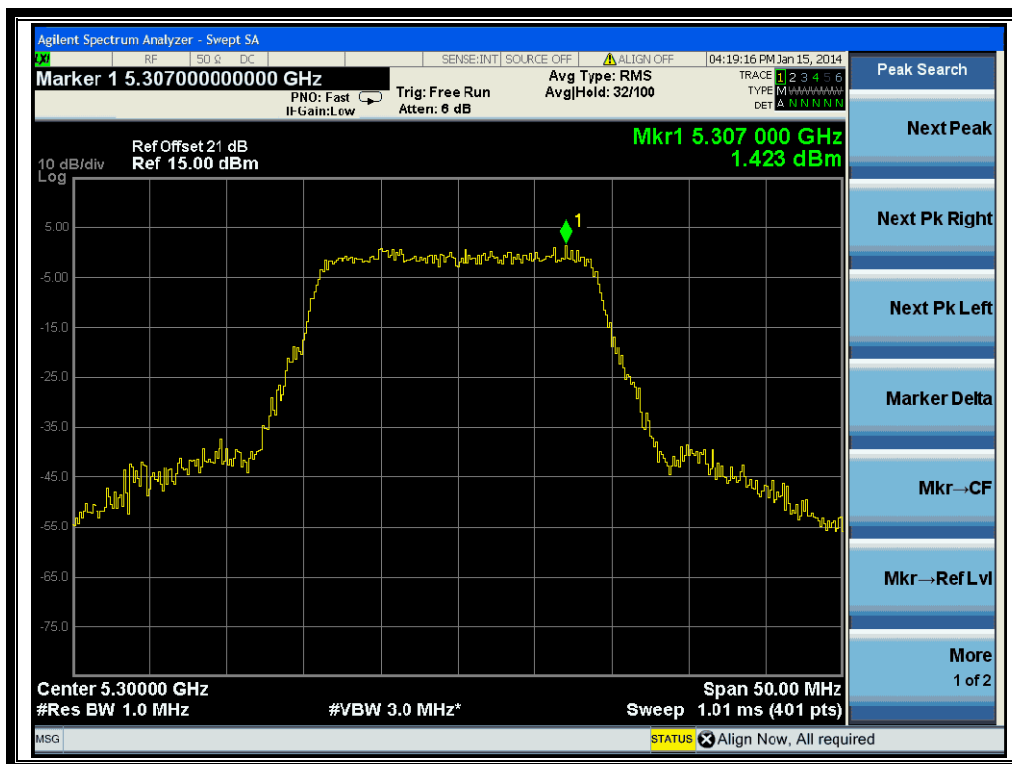
(Channel 44: 5220 MHz @ 802.11n-20MHz)



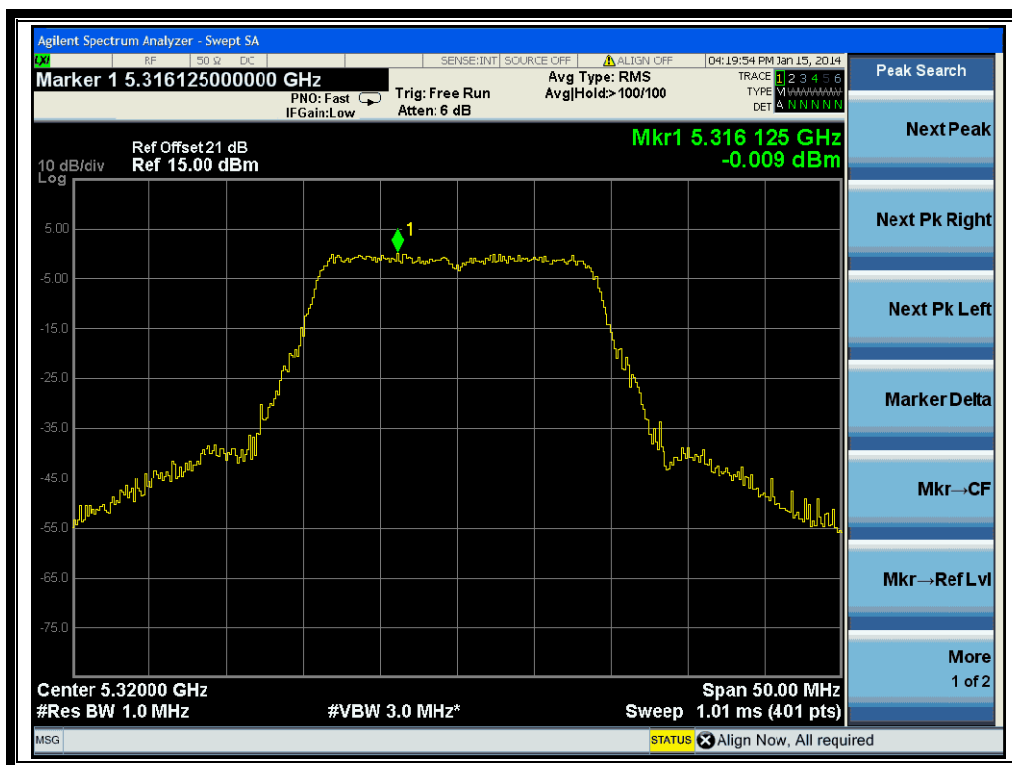
(Channel 48: 5240MHz @ 802.11n-20MHz)



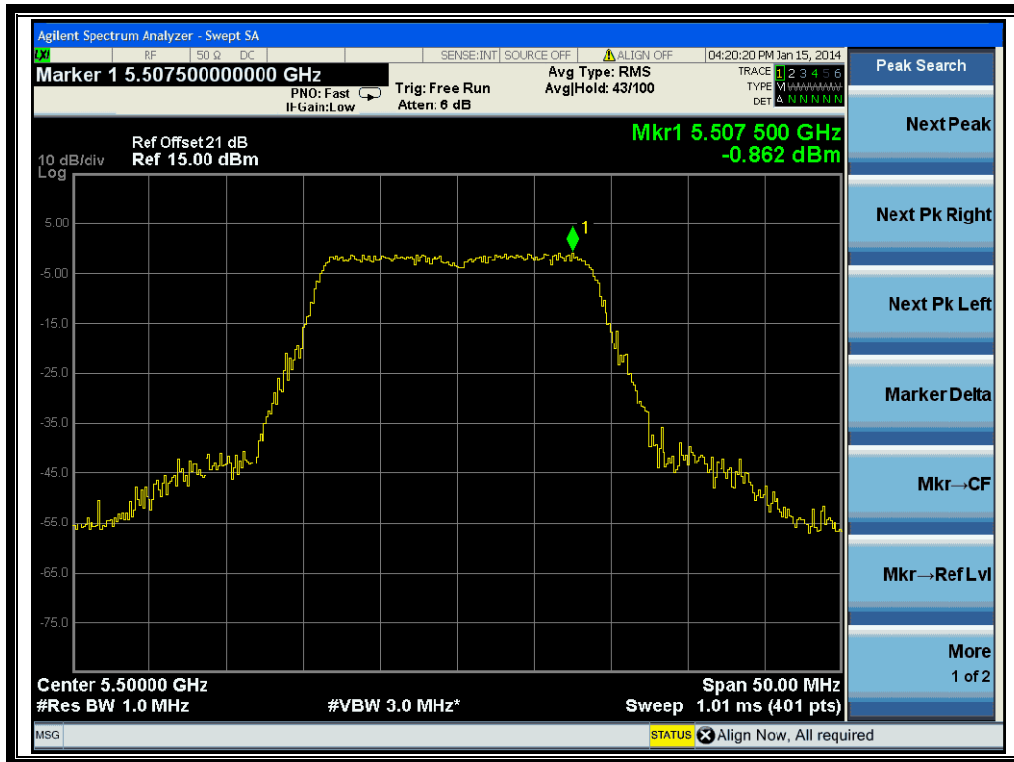
(Channel 52: 5260MHz @ 802.11n-20MHz)



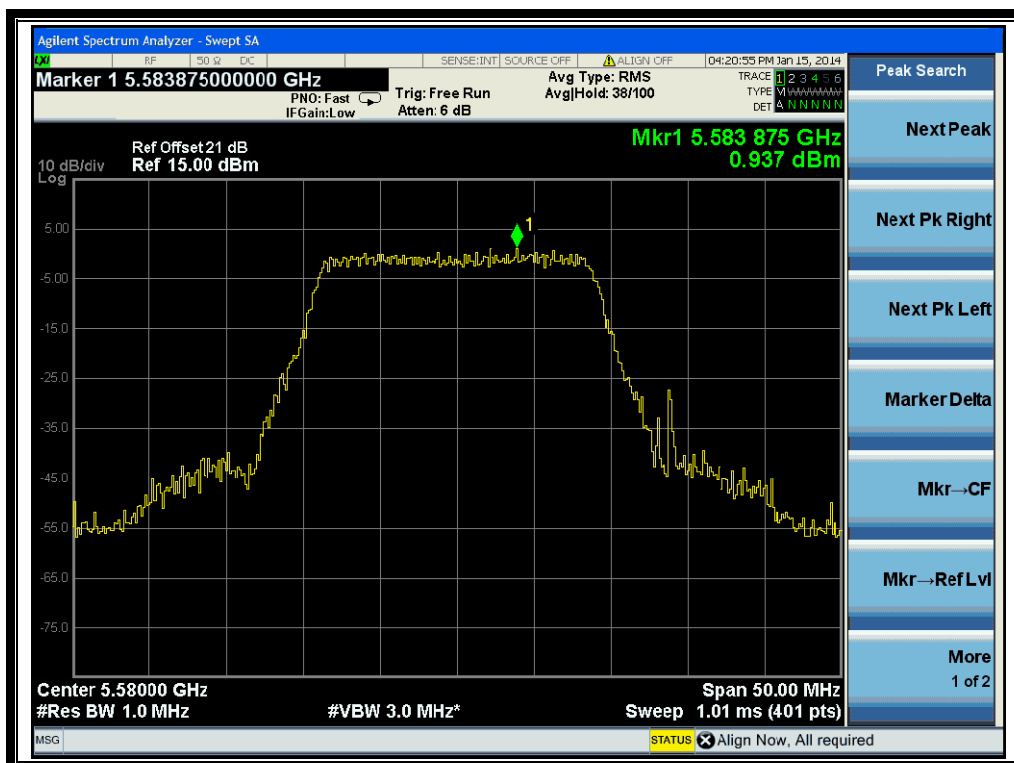
(Channel 60: 5300 MHz @ 802.11n-20MHz)



(Channel 64: 5320MHz @ 802.11n-20MHz)



(Channel 100: 5500MHz @ 802.11n-20MHz)



(Channel 116: 5580 MHz @ 802.11n-20MHz)



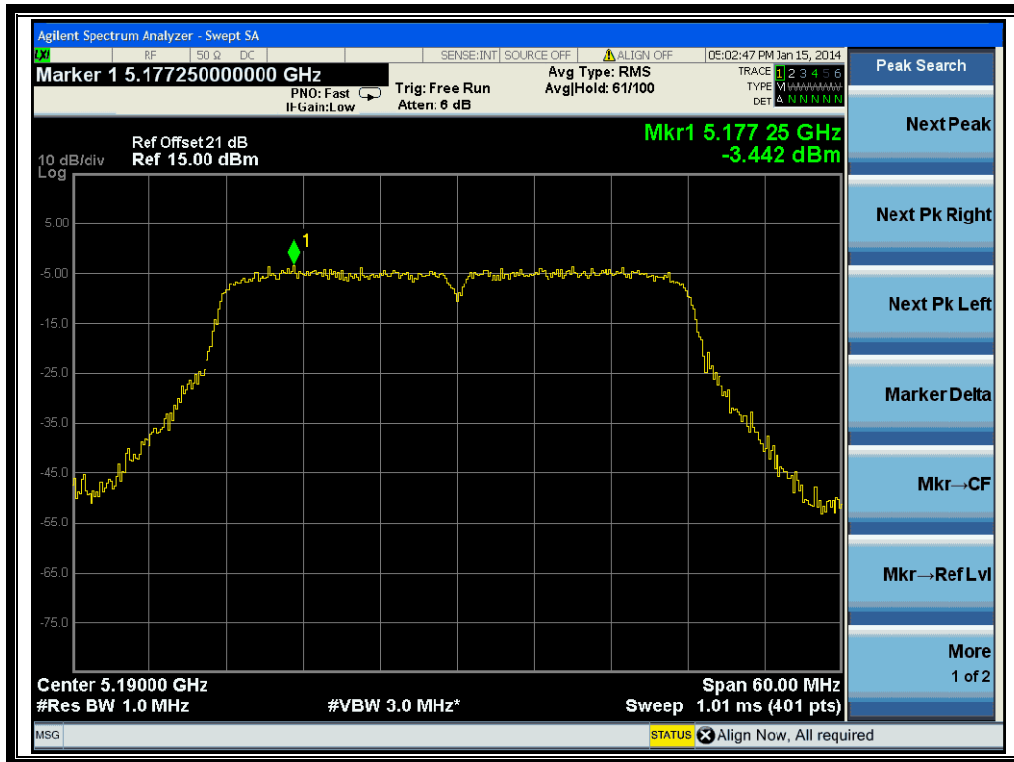
(Channel 140: 5700MHz @ 802.11n-20MHz)

2.5.3.3. 802.11n-40MHz Test mode

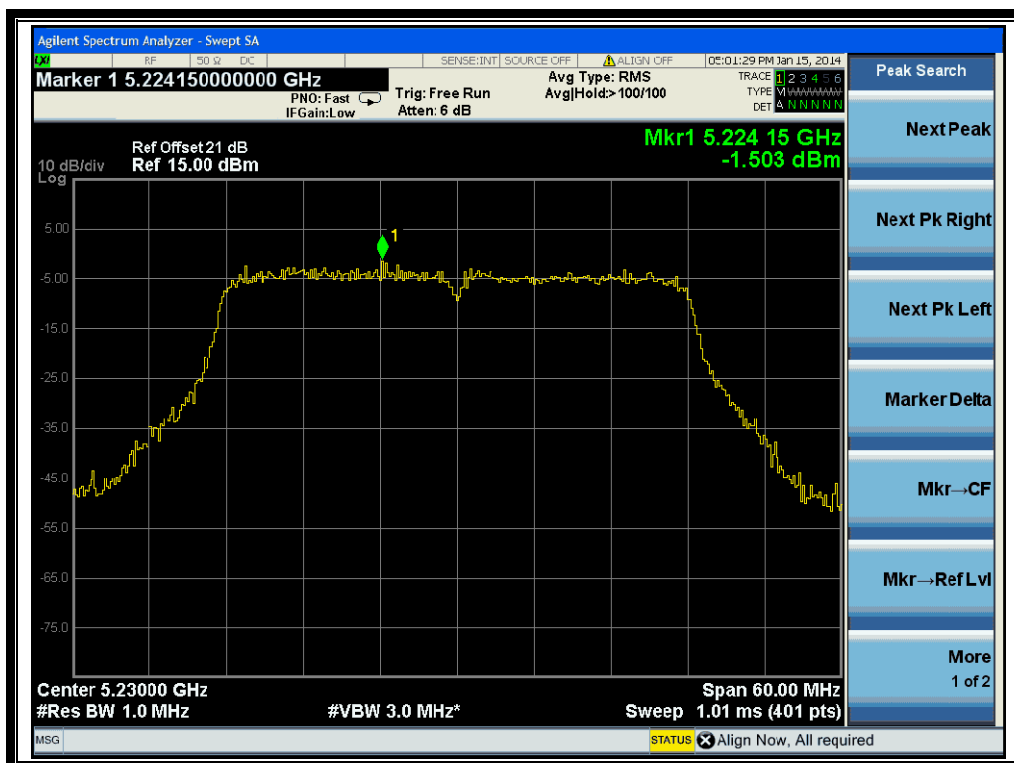
A. Test Verdict:

Channel	Frequency (MHz)	Measured PPSD Without Duty factor (dBm)	Duty factor	Measured PPSD With Duty factor (dBm)	Limit (dBm)	Verdict
38	5190	-3.442	1.57	-1.872	4	PASS
46	5230	-1.503		0.067		
54	5270	-2.181		-0.611	11	
62	5310	-3.482		-1.912		
102	5510	-4.325		-2.755		
110	5550	-4.626		-3.056		
134	5670	-3.245		-1.675		

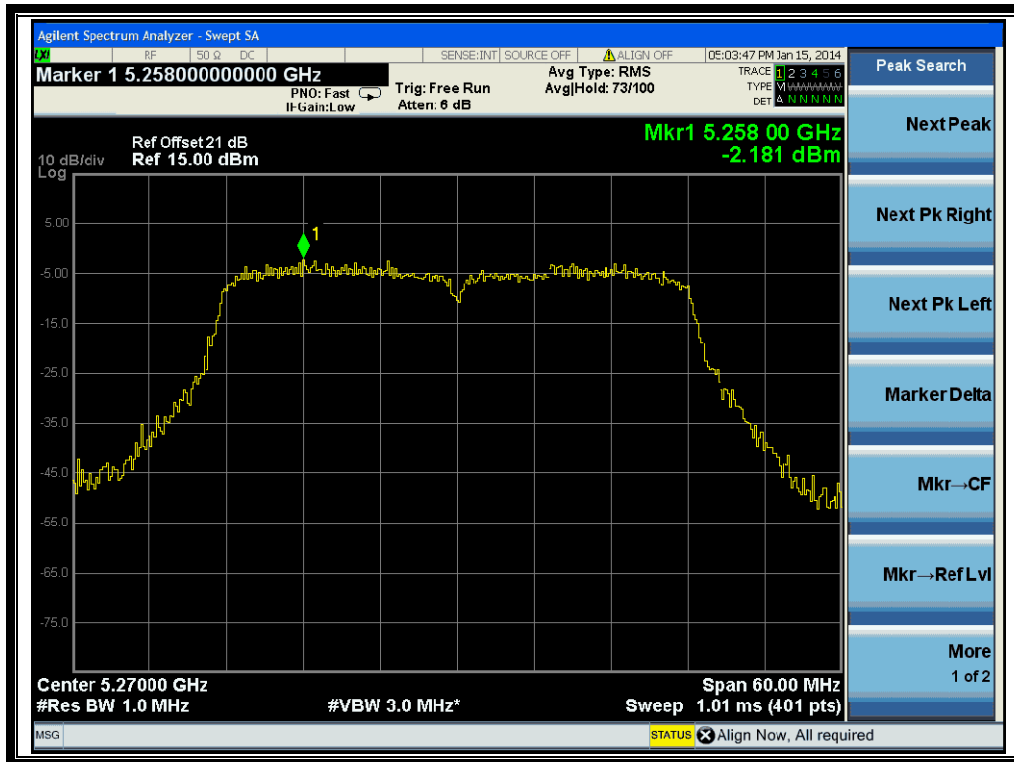
B. Test Plots:



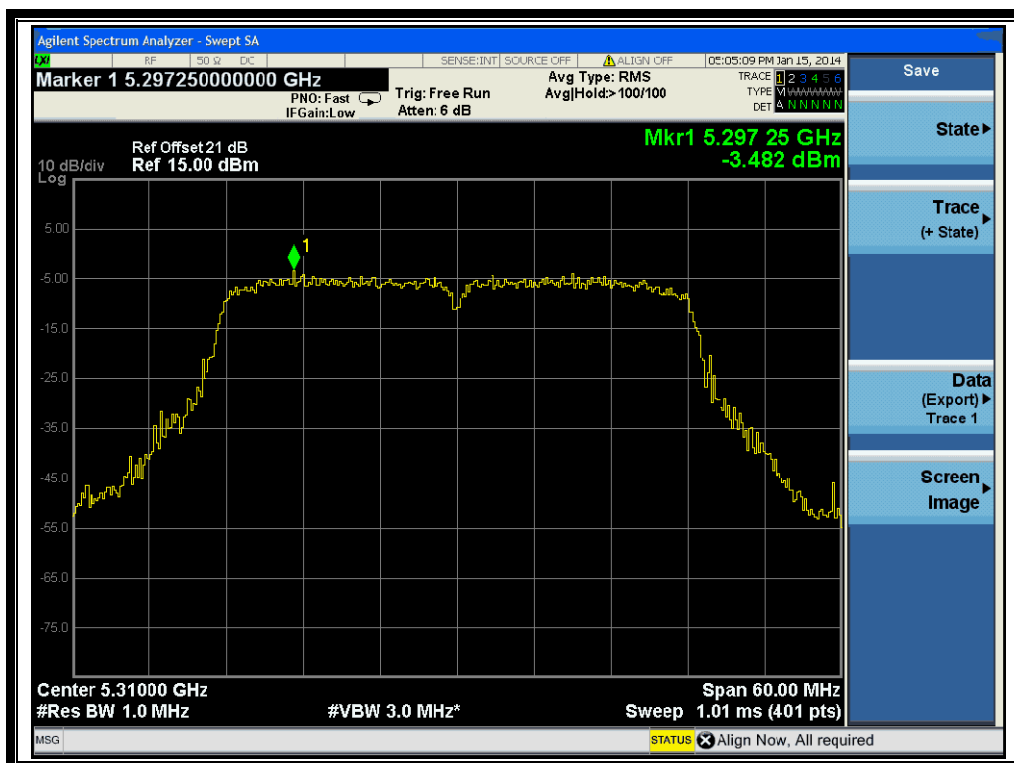
(Channel 38: 5190MHz @ 802.11n-40MHz)



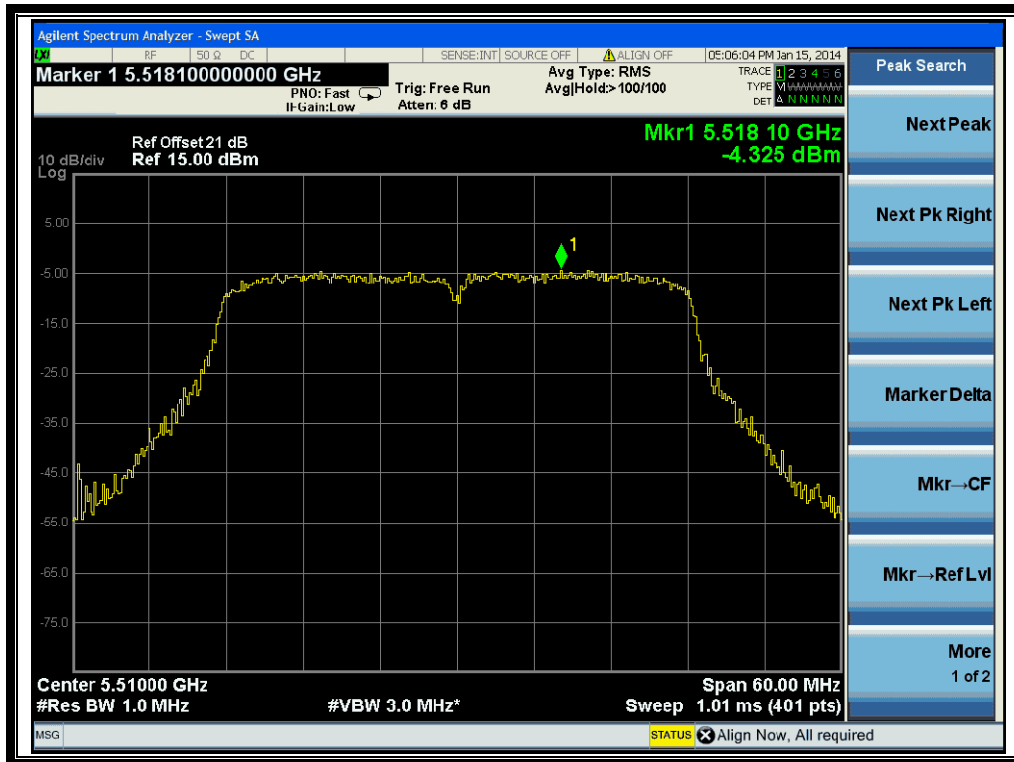
(Channel 46: 5230 MHz @ 802.11n-40MHz)



(Channel 54: 5270MHz @ 802.11n-40MHz)



(Channel 62: 5310MHz @ 802.11n-40MHz)



(Channel 102: 5510 MHz @ 802.11n-40MHz)



(Channel 110: 5550MHz @ 802.11n-40MHz)



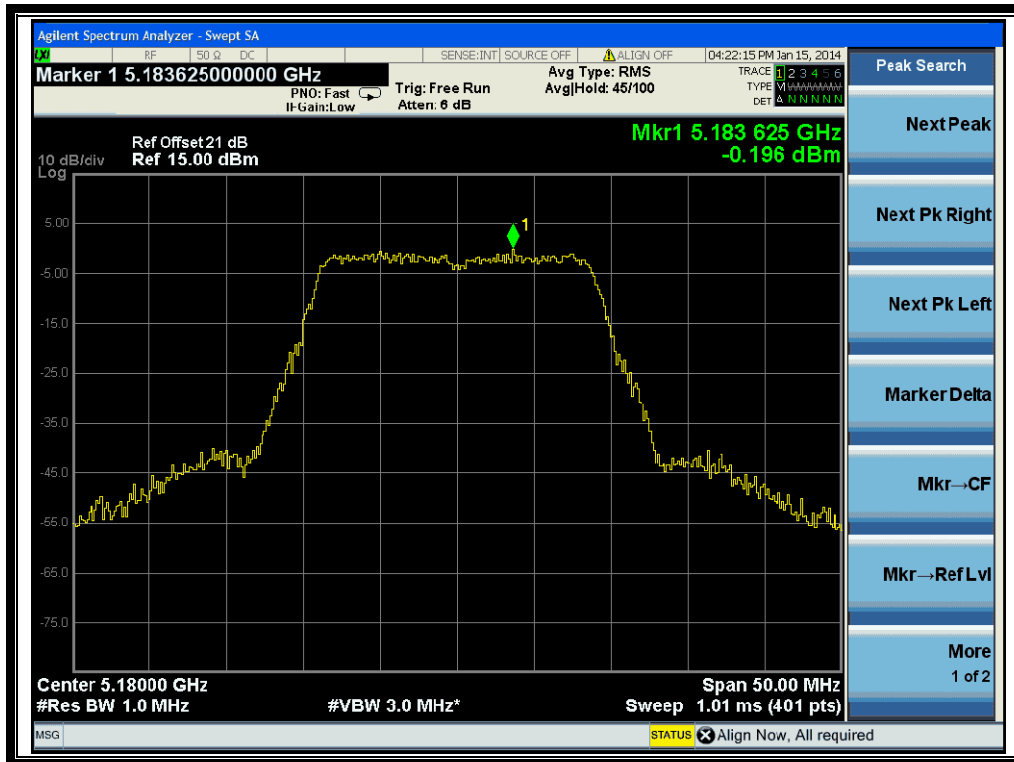
(Channel 134: 5670MHz @ 802.11n-40MHz)

2.5.3.4. 802.11ac-20MHz Test mode

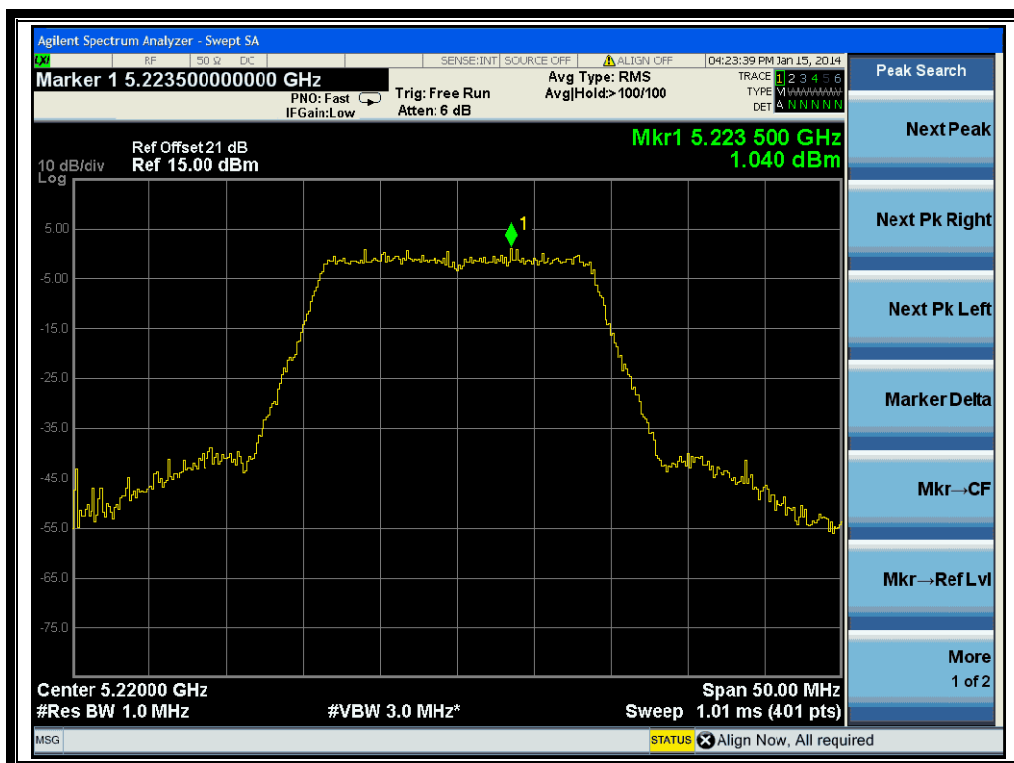
A. Test Verdict:

Channel	Frequency (MHz)	Measured PPSD Without Duty factor (dBm)	Duty factor	Measured PPSD With Duty factor (dBm)	Limit (dBm)	Verdict
36	5180	-0.196	0.67	0.474	4	PASS
44	5220	1.040		1.71		
48	5240	-1.028		-0.358		
52	5260	-1.241		-0.571	11	
60	5300	-0.986		-0.316		
64	5320	-1.027		-0.357		
100	5500	-1.375		-0.705		
116	5580	0.074		0.744		
140	5700	2.321		2.991		

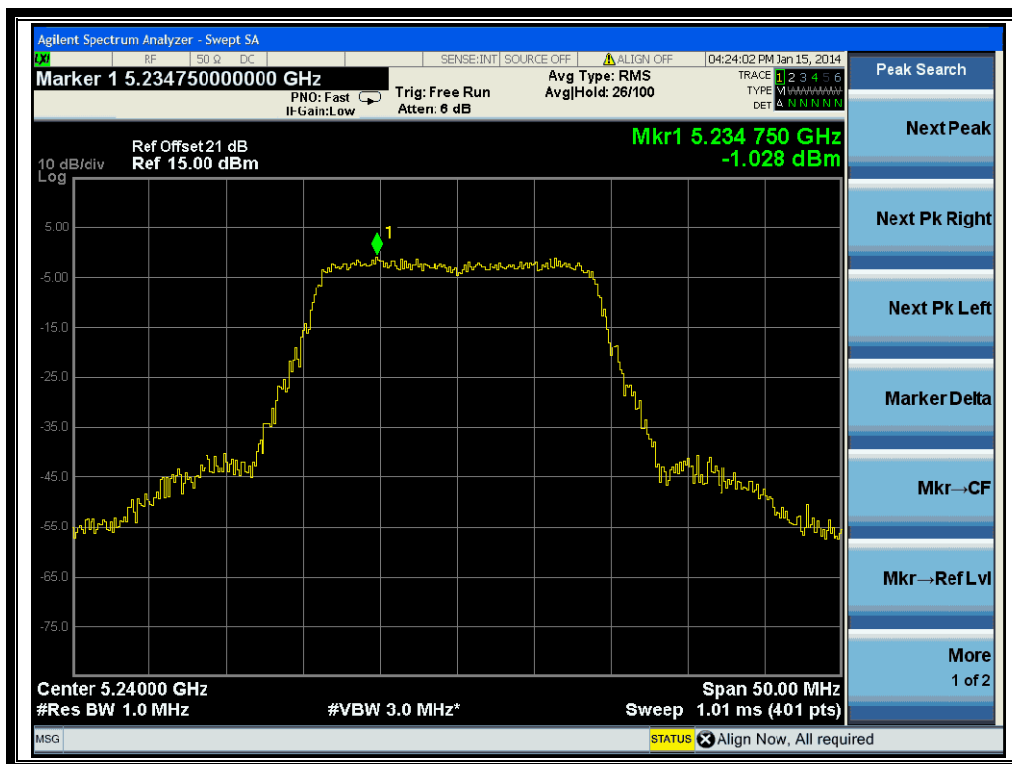
B. Test Plots:



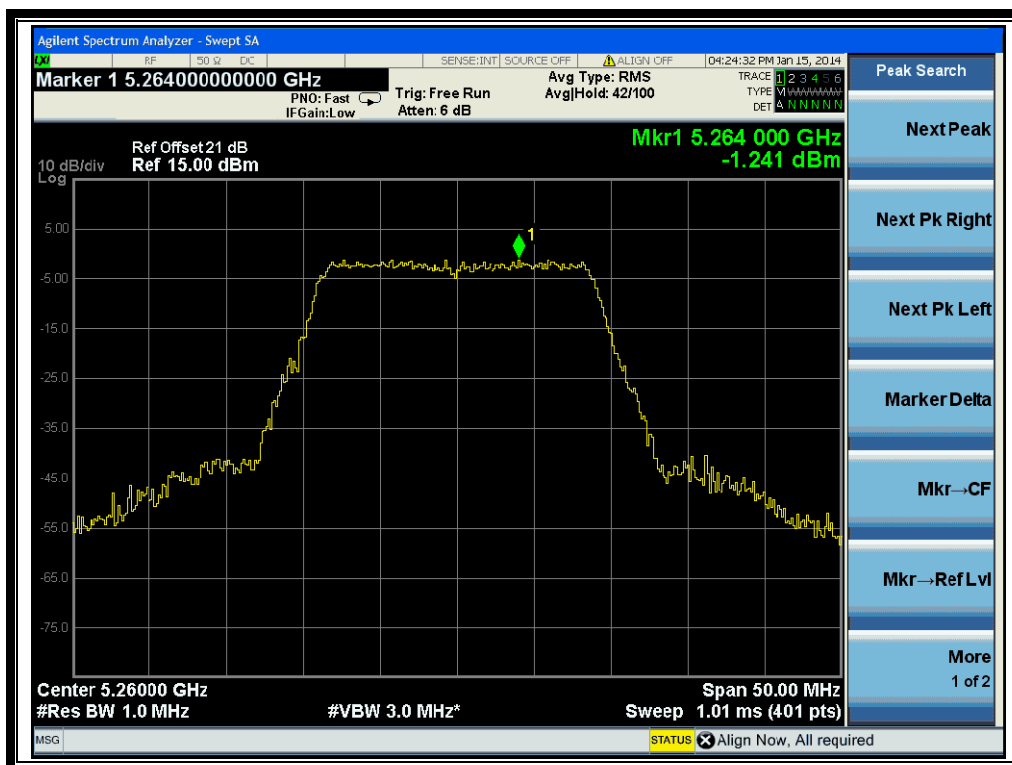
(Channel 36: 5180MHz @ 802.11ac-20MHz)



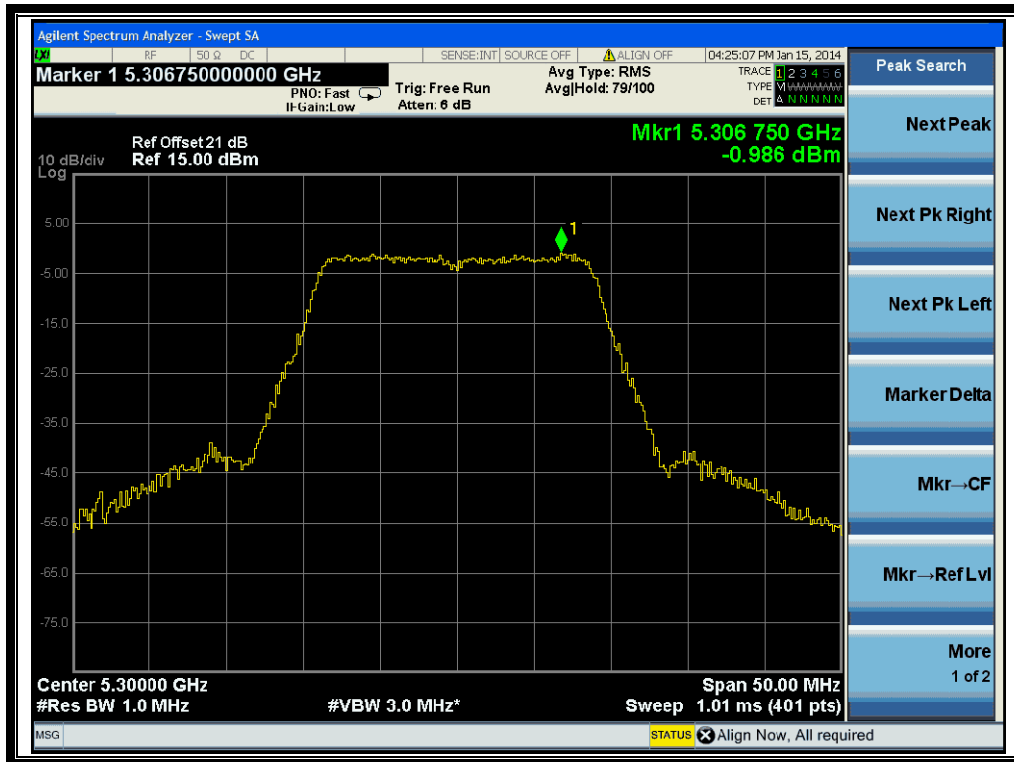
(Channel 44: 5220 MHz @ 802.11ac-20MHz)



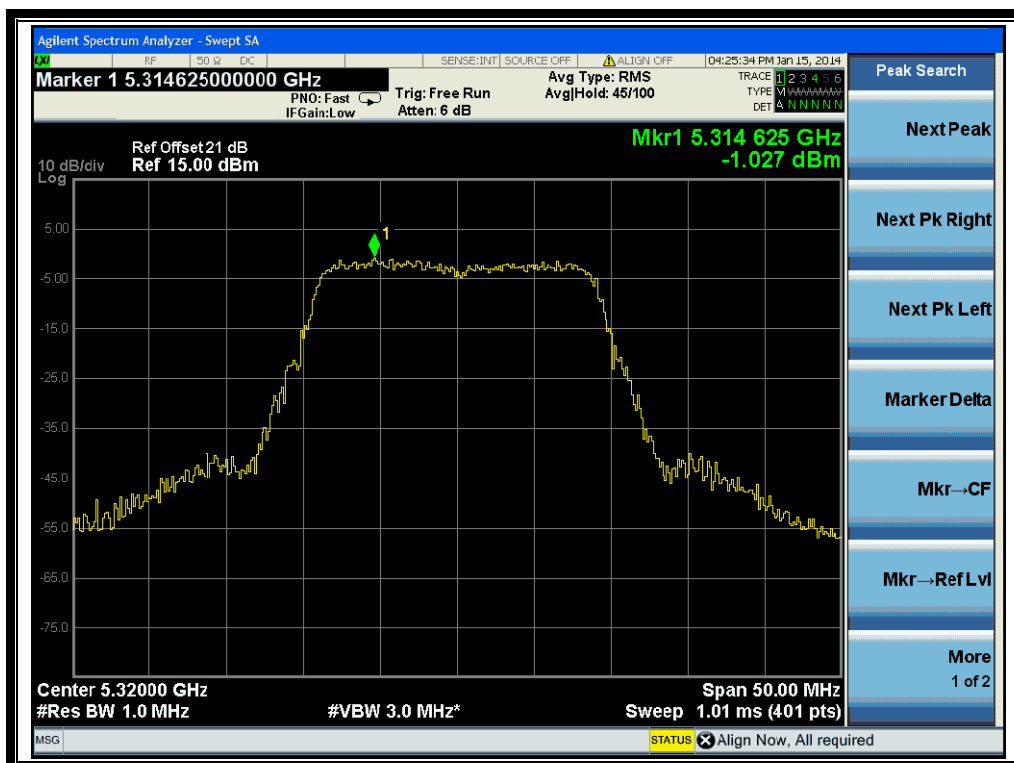
(Channel 48: 5240MHz @ 802.11ac-20MHz)



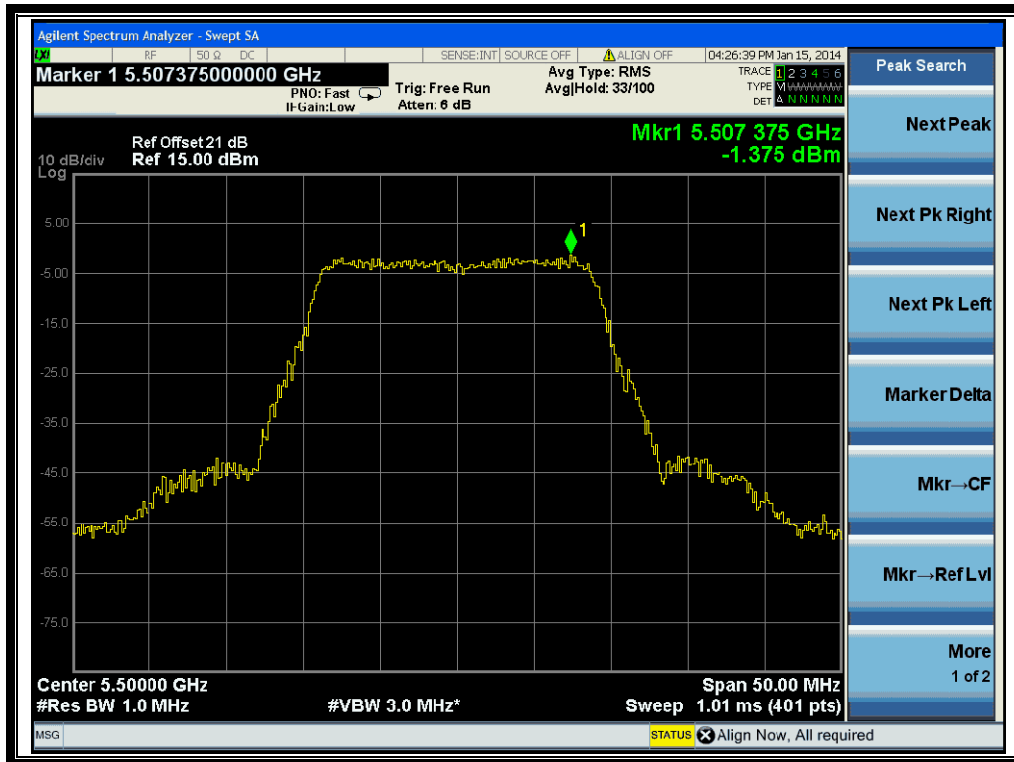
(Channel 52: 5260MHz @ 802.11ac-20MHz)



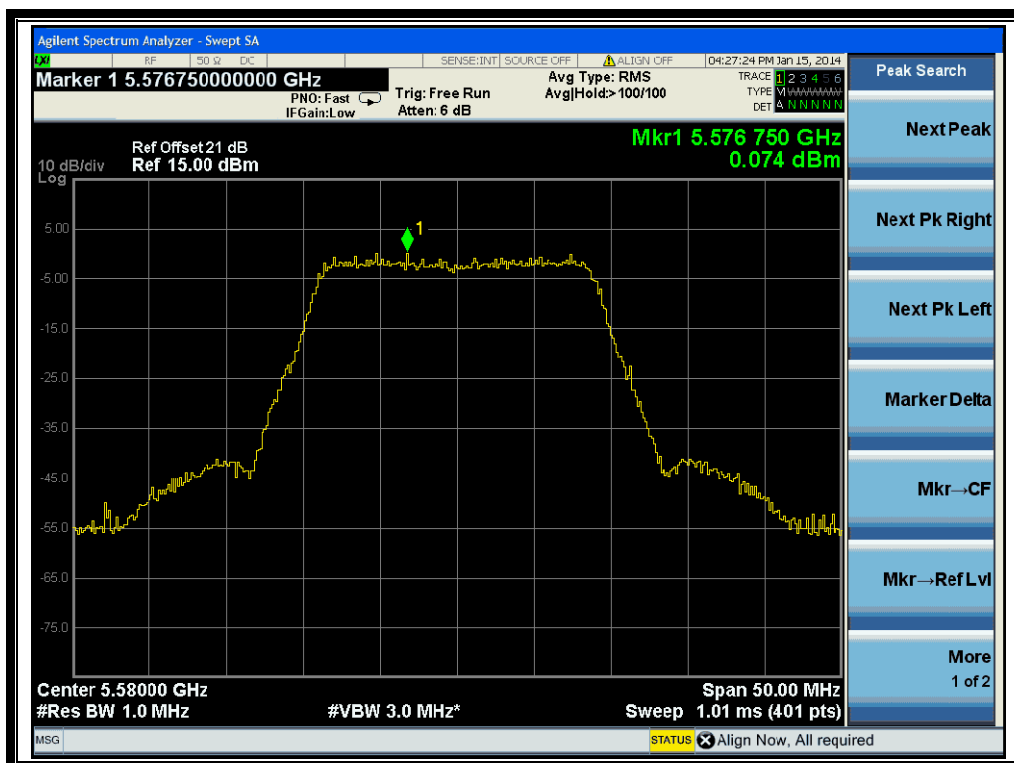
(Channel 60: 5300 MHz @ 802.11ac-20MHz)



(Channel 64: 5320MHz @ 802.11ac-20MHz)



(Channel 100: 5500MHz @ 802.11ac-20MHz)



(Channel 116: 5580 MHz @ 802.11ac-20MHz)



(Channel 140: 5700MHz @ 802.11ac-20MHz)

2.5.3.5. 802.11ac-40MHz Test mode

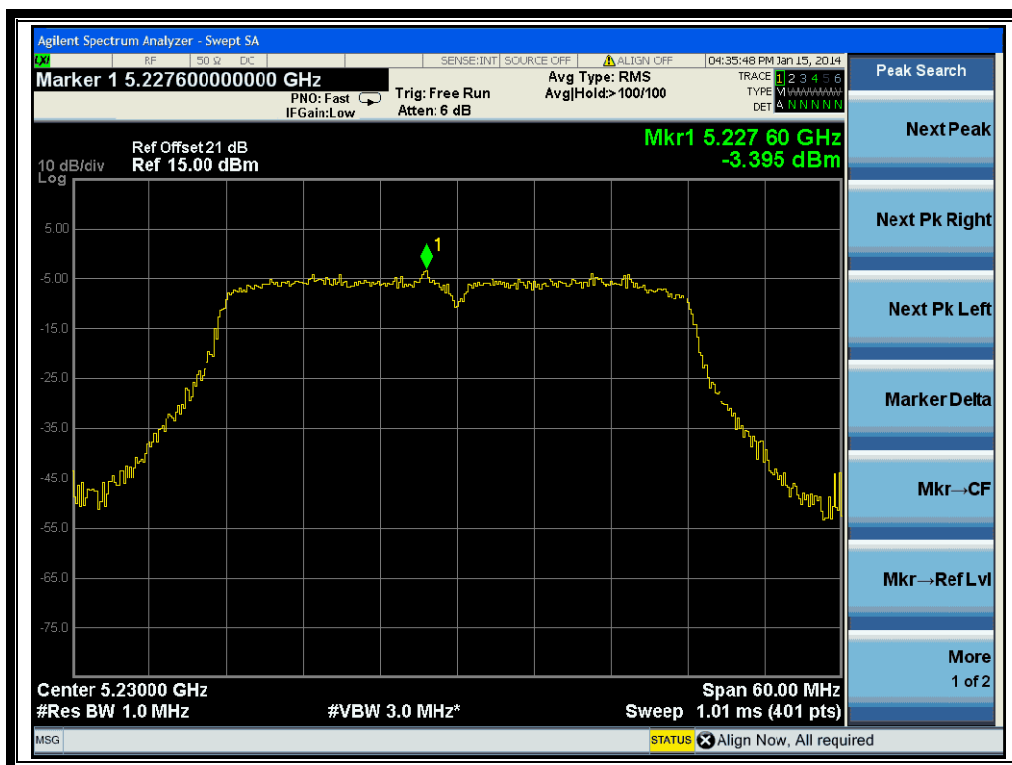
A. Test Verdict:

Channel	Frequency (MHz)	Measured PPSD Without Duty factor (dBm)	Duty factor	Measured PPSD With Duty factor (dBm)	Limit (dBm)	Verdict
38	5190	-2.727	1.57	-1.157	4	PASS
46	5230	-3.395		-1.825		
54	5270	-4.334		-2.764	11	
62	5310	-4.955		-3.385		
102	5510	-4.724		-3.154		
110	5550	-4.318		-2.748		
134	5670	-3.995		-2.425		

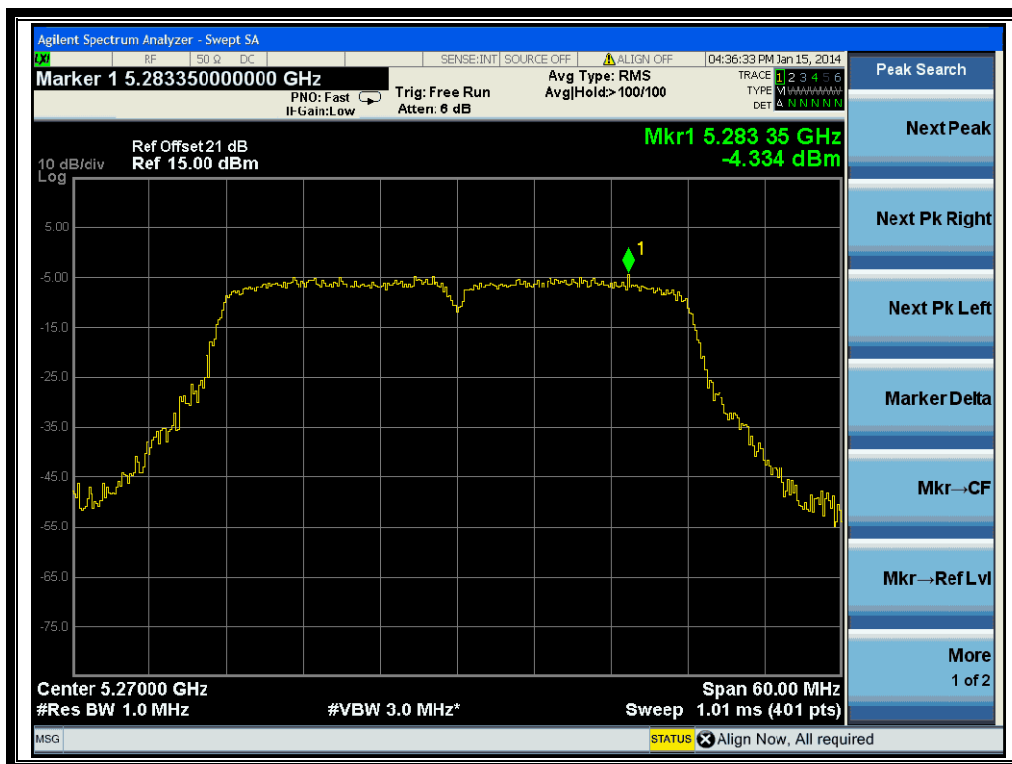
B. Test Plots:



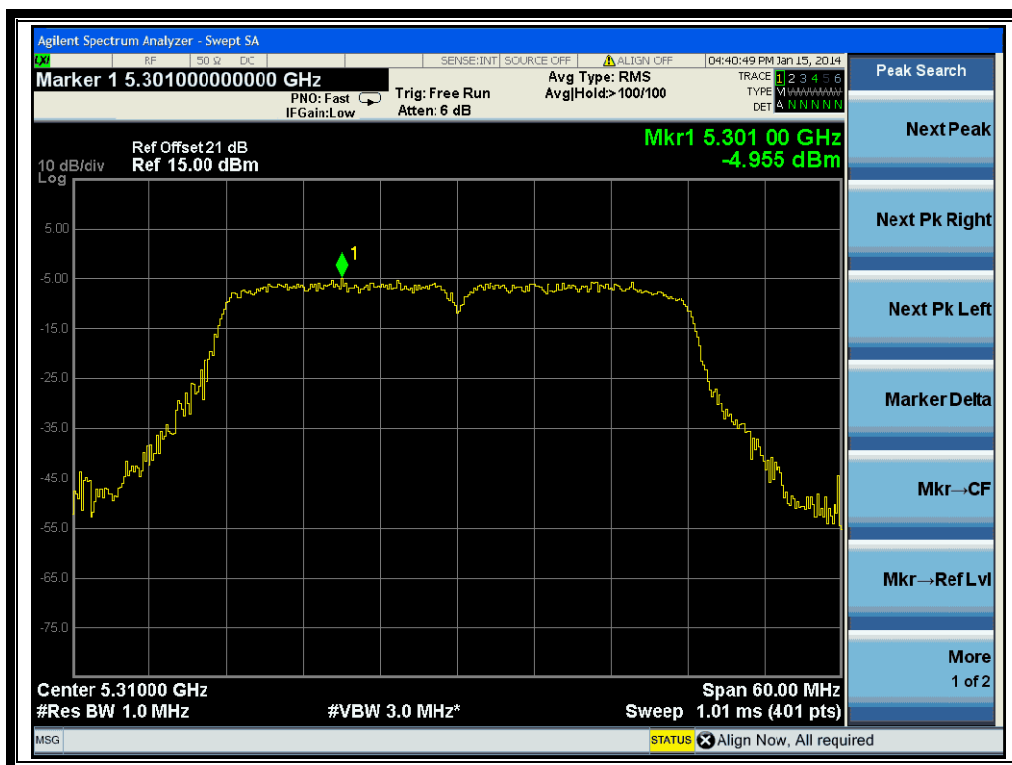
(Channel 38: 5190MHz @ 802.11ac-40MHz)



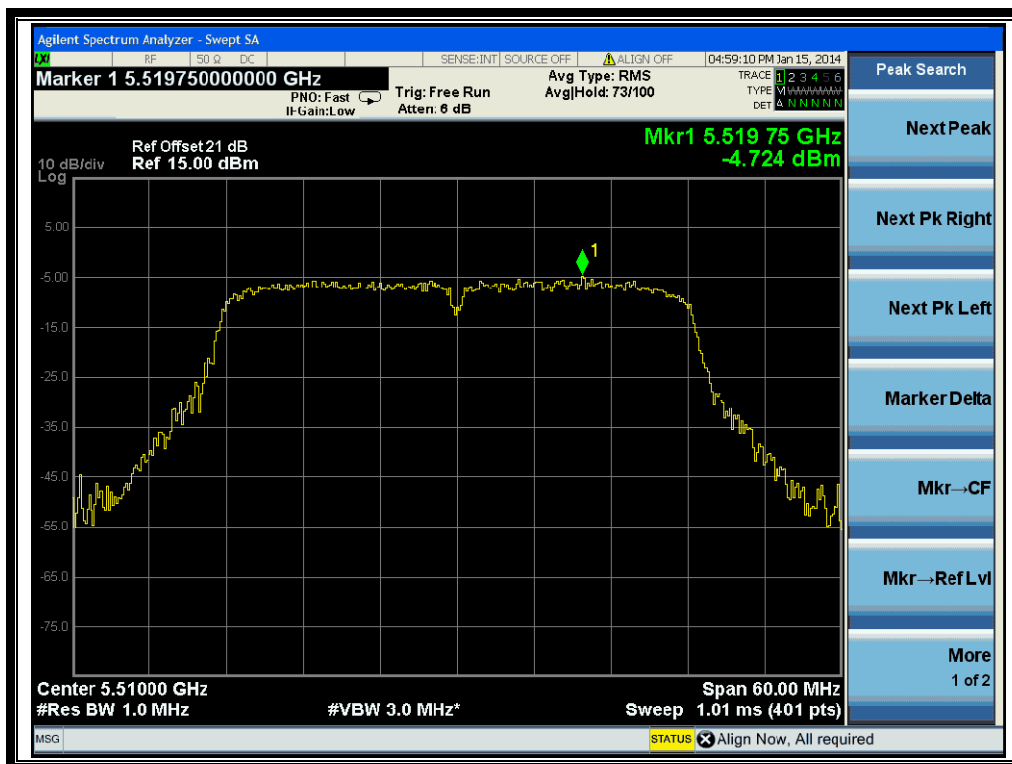
(Channel 46: 5230 MHz @ 802.11ac-40MHz)



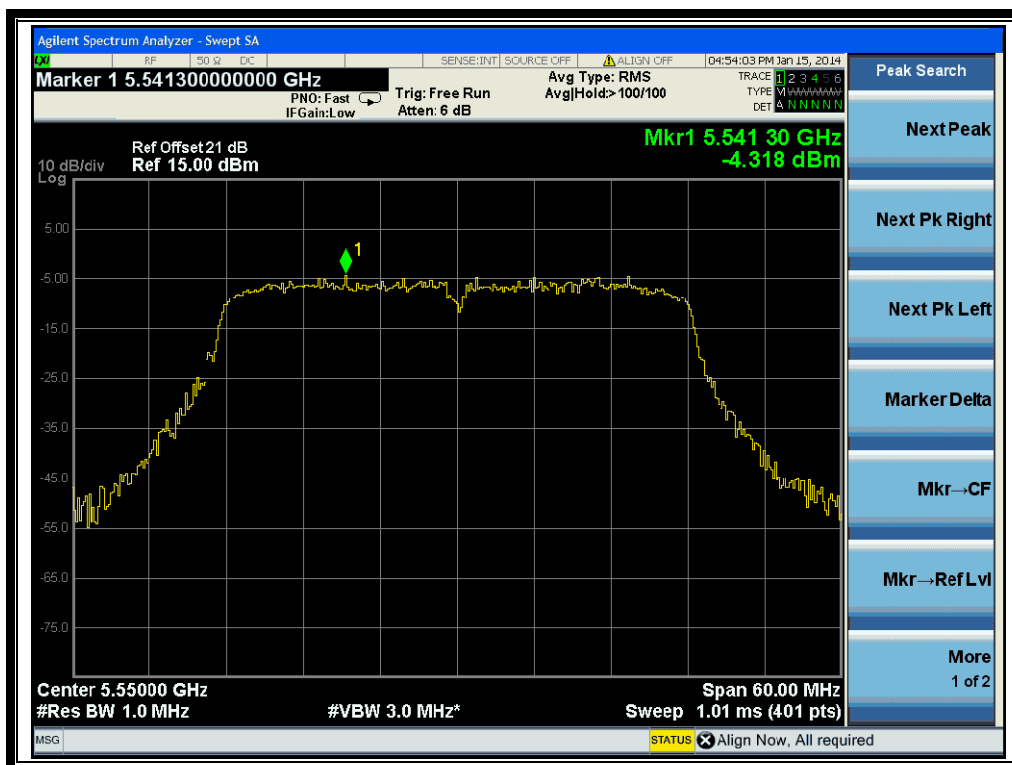
(Channel 54: 5270MHz @ 802.11ac-40MHz)



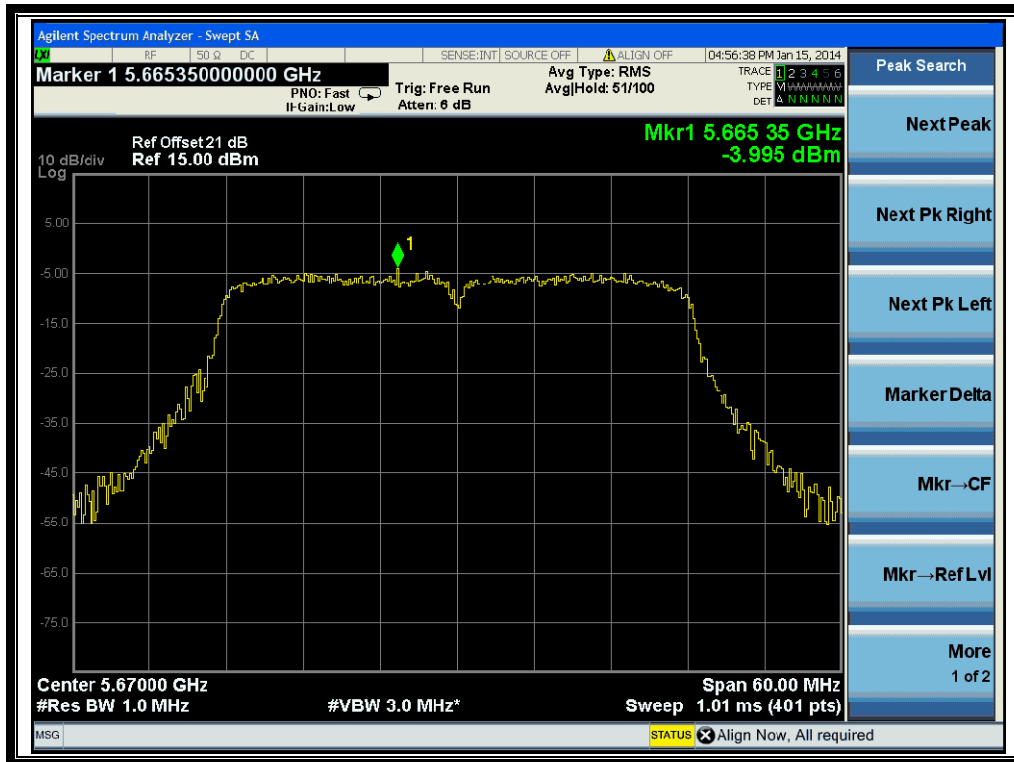
(Channel 62: 5310MHz @ 802.11ac-40MHz)



(Channel 102: 5510 MHz @ 802.11ac-40MHz)



(Channel 110: 5550MHz @ 802.11ac-40MHz)



(Channel 134: 5670MHz @ 802.11ac-40MHz)

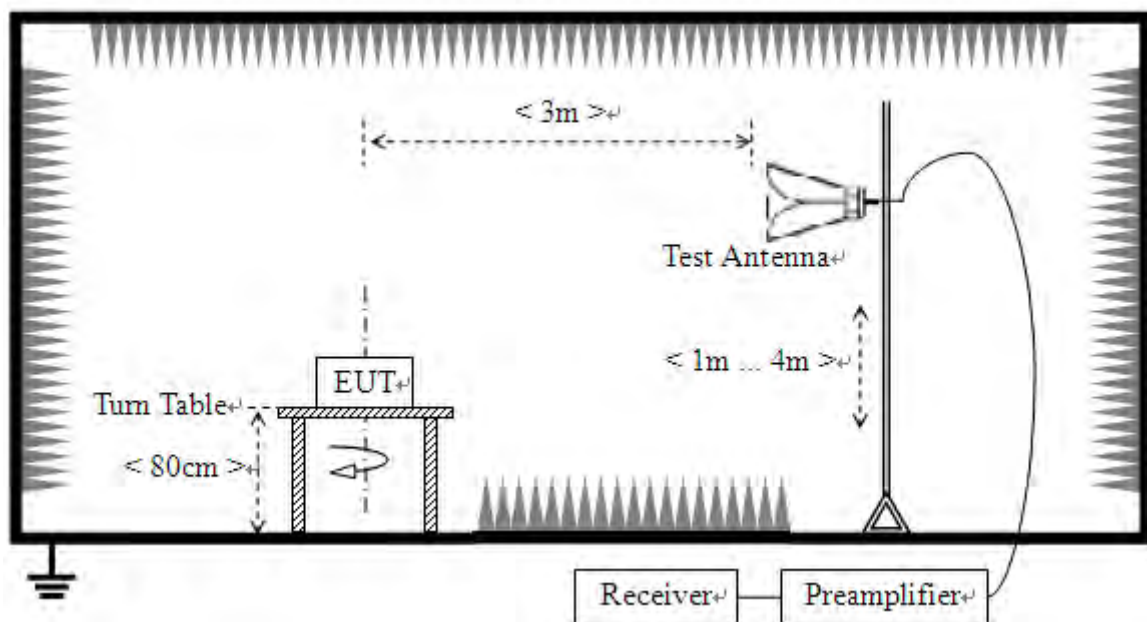
2.6. Restricted Frequency Bands

2.6.1. Requirement

According to FCC section 15.407(b)(7), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

2.6.2. Test Description

A. Test Setup



The Module is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

KDB 789033 Section H) 3)5)6(d)) was used in order to prove compliance

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2013.05.12	2014.05.11
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2012.05.12	2014.05.11
Test Antenna - Horn	Schwarzbeck	BBHA 9120D	9120D-963	2013.05.12	2014.05.11

2.6.3. Test Result

The lowest and highest channels are tested to verify Restricted Frequency Bands.

The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V/m]} = U_R + A_T + A_{\text{Factor}} \text{ [dB]}; A_T = L_{\text{Cable loss}} \text{ [dB]} - G_{\text{preamp}} \text{ [dB]}$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

Note: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (vertical) was recorded in this test report.

2.6.3.1. 802.11a Test mode

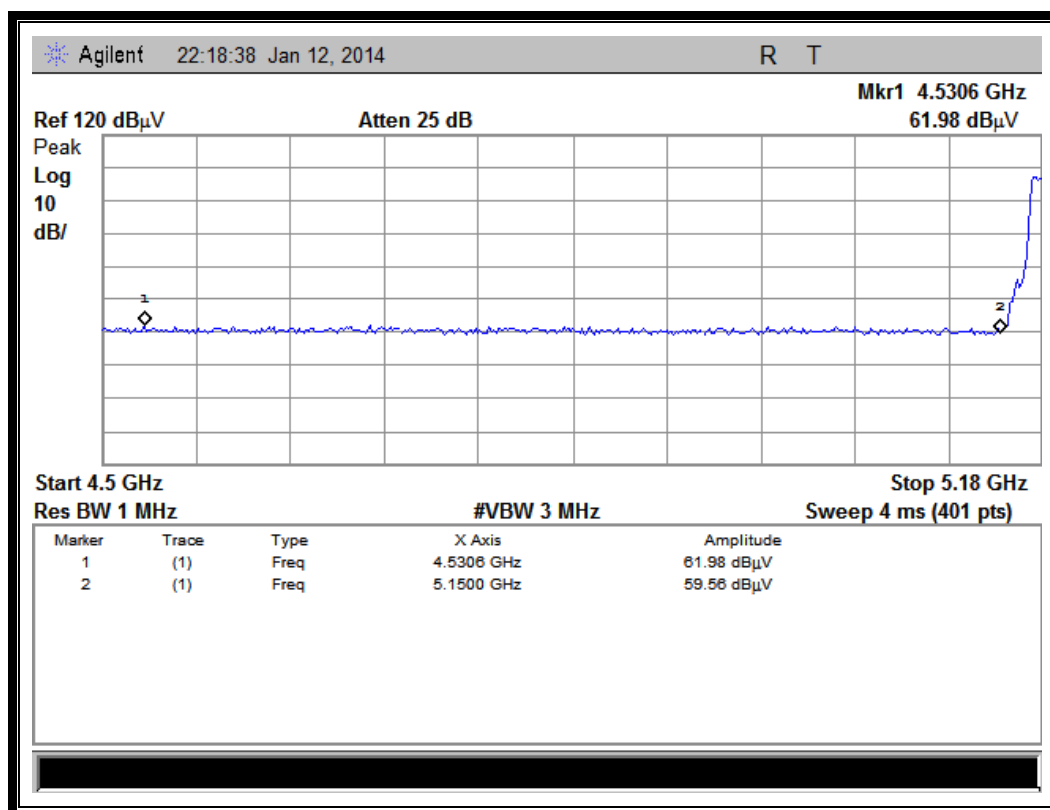
The lowest and highest channels are tested to verify the band edge emissions.

A. Test Verdict:

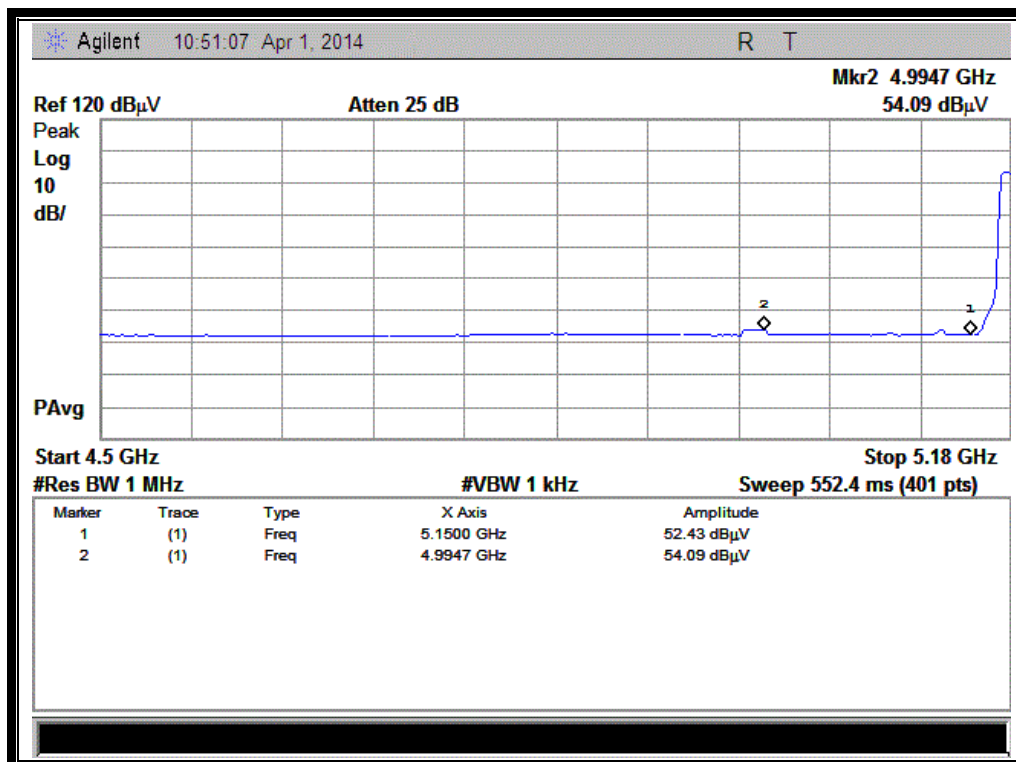
Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
36	4530.60	PK	61.98	-43.13	32.11	50.96	74	Pass
36	4994.70	AV	54.09	-43.13	32.11	43.07	54	Pass
64	5443.90	PK	61.70	-42.79	31.69	50.60	74	Pass
64	5372.85	AV	52.90	-42.79	31.69	41.80	54	Pass
100	5427.63	PK	61.63	-42.79	31.69	50.53	74	Pass

Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
100	5447.50	AV	53.94	-42.79	31.69	42.84	54	Pass
140	5740.60	PK	59.69	-42.79	31.69	48.59	74	Pass
140	5753.10	AV	52.85	-42.79	31.69	41.75	54	Pass

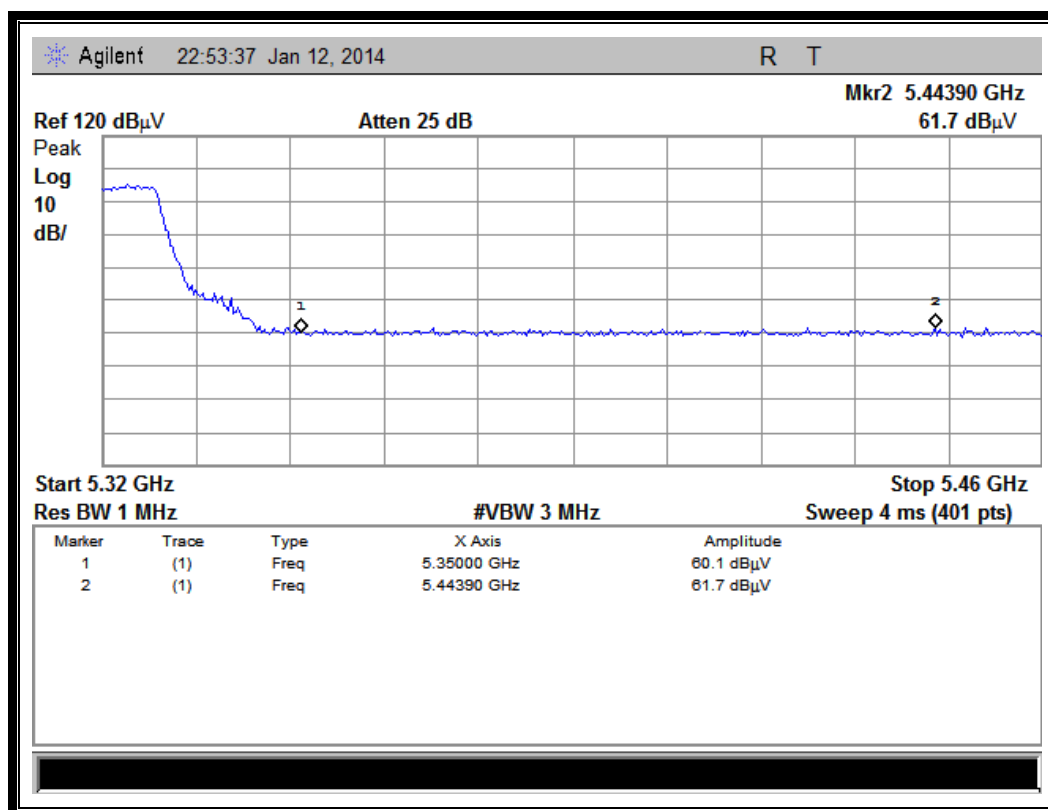
B. Test Plots:



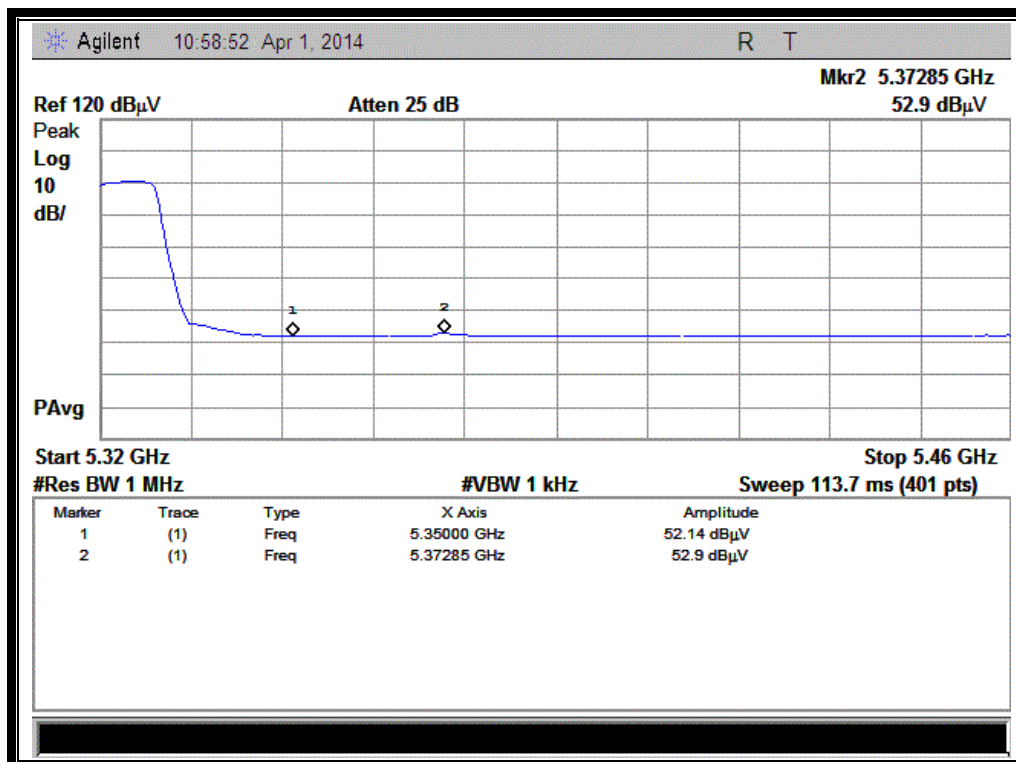
(Channel = 36 PEAK @ 802.11a)



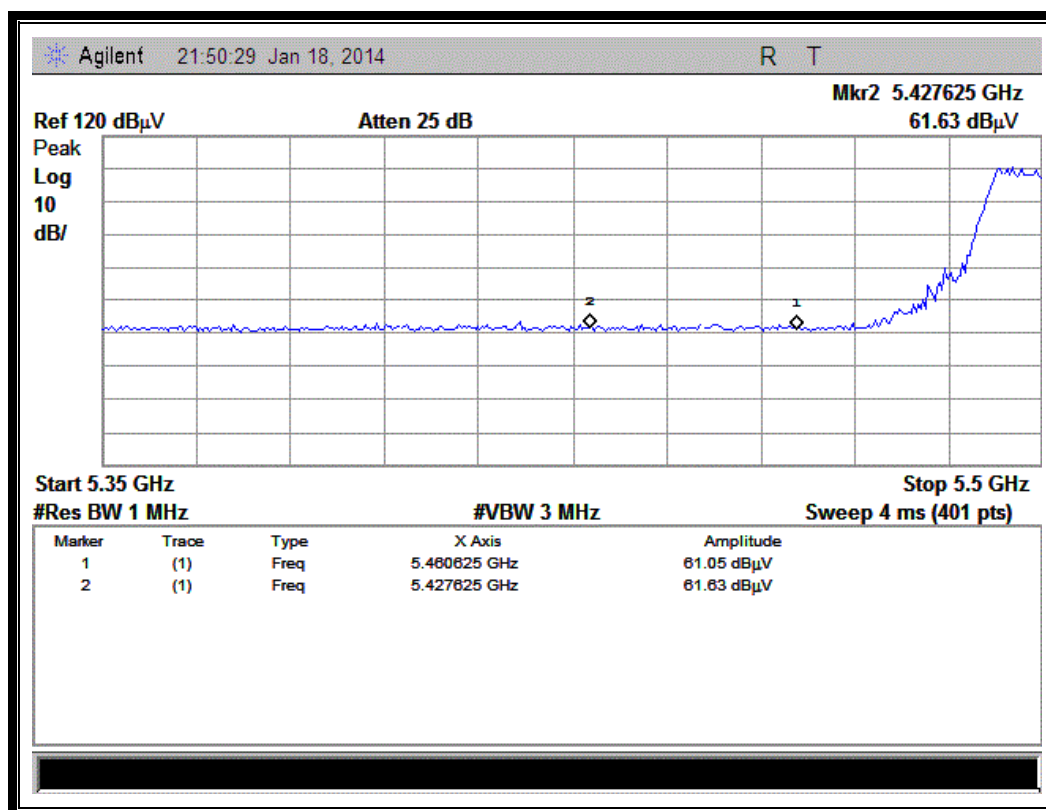
(Channel = 36 AVG @ 802.11a)



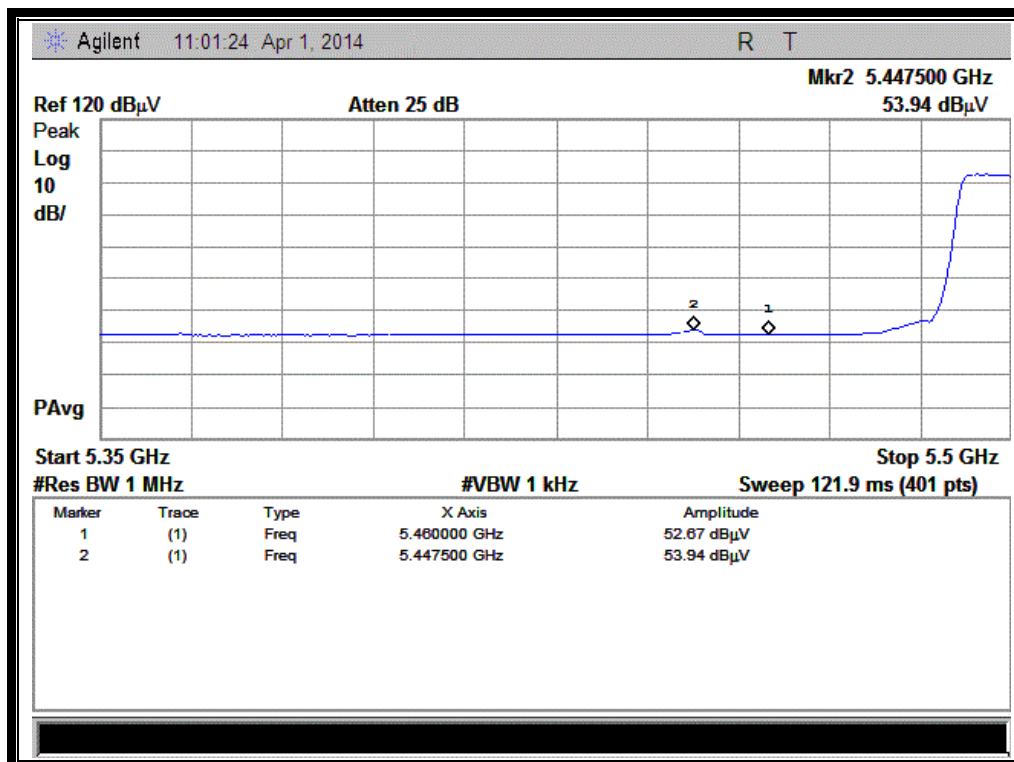
(Channel = 64 PEAK @ 802.11a)



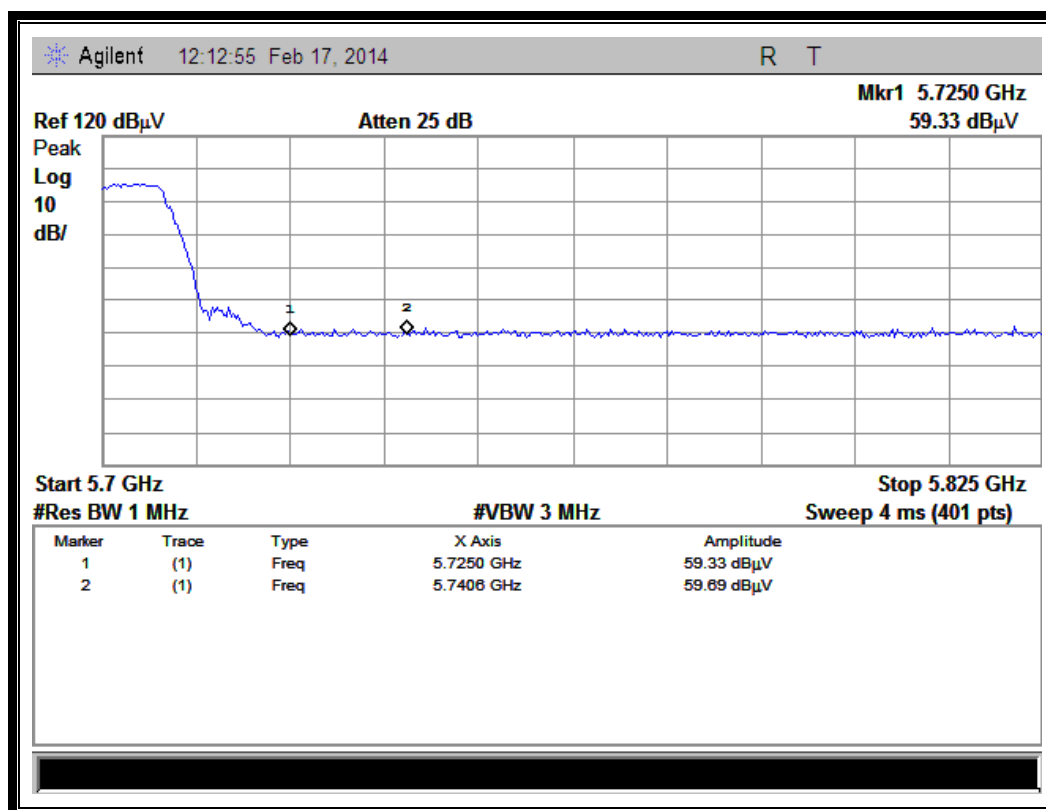
(Channel = 64 AVG @ 802.11a)



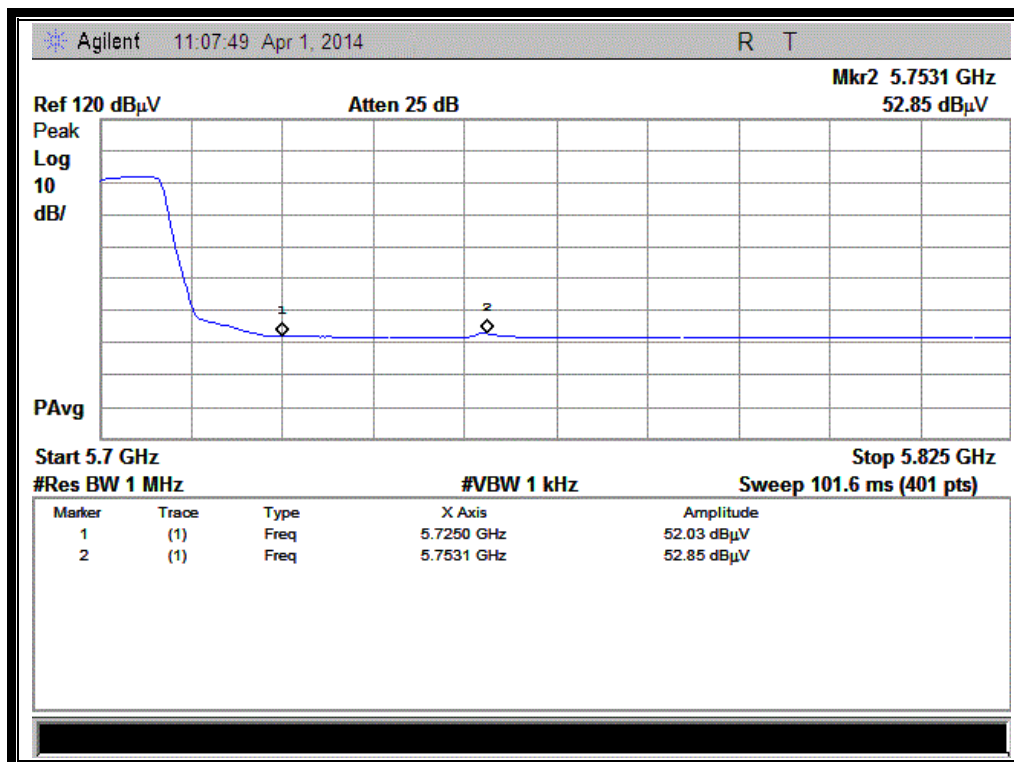
(Channel = 100 PEAK @ 802.11a)



(Channel = 100 AVG @ 802.11a)



(Channel = 140 PEAK @ 802.11a)



(Channel = 140 AVG @ 802.11a)

2.6.3.2. 802.11n-20MHz Test mode

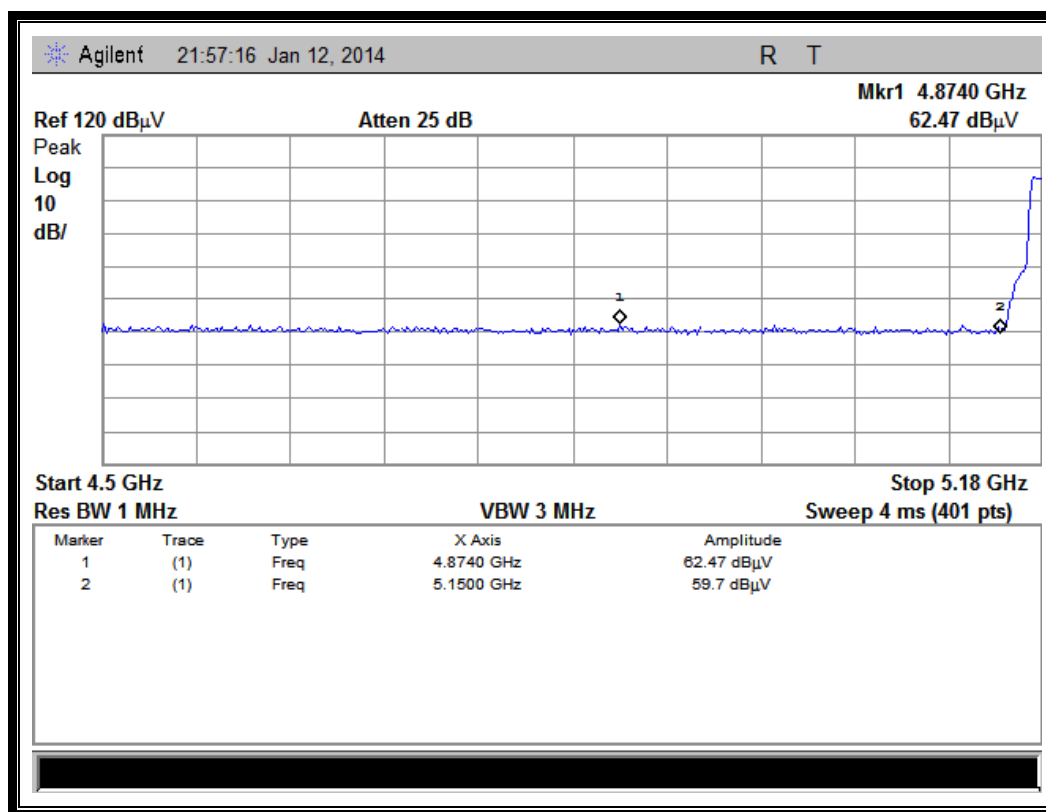
The lowest and highest channels are tested to verify the band edge emissions.

A. Test Verdict:

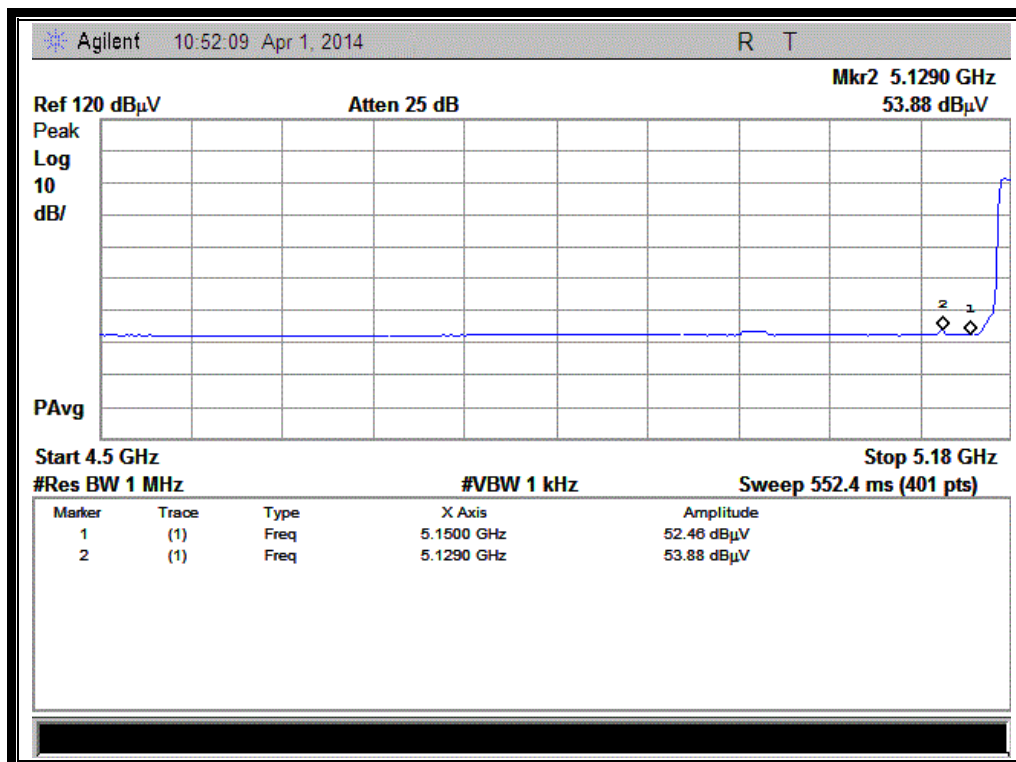
Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dB μ V/m)	Limit (dB μ V/m)	Verdict
		PK/ AV						
36	4874.00	PK	62.47	-43.13	32.11	51.45	74	Pass
36	5129.00	AV	53.88	-43.13	32.11	42.86	54	Pass
64	5358.85	PK	61.98	-42.79	31.69	50.88	74	Pass
64	5371.80	AV	53.38	-42.79	31.69	42.28	54	Pass
100	5442.25	PK	62.28	-42.79	31.69	51.18	74	Pass

Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
100	5448.63	AV	53.81	-42.79	31.69	42.71	54	Pass
140	5740.60	PK	60.78	-42.79	31.69	49.68	74	Pass
140	5752.20	AV	52.91	-42.79	31.69	41.81	54	Pass

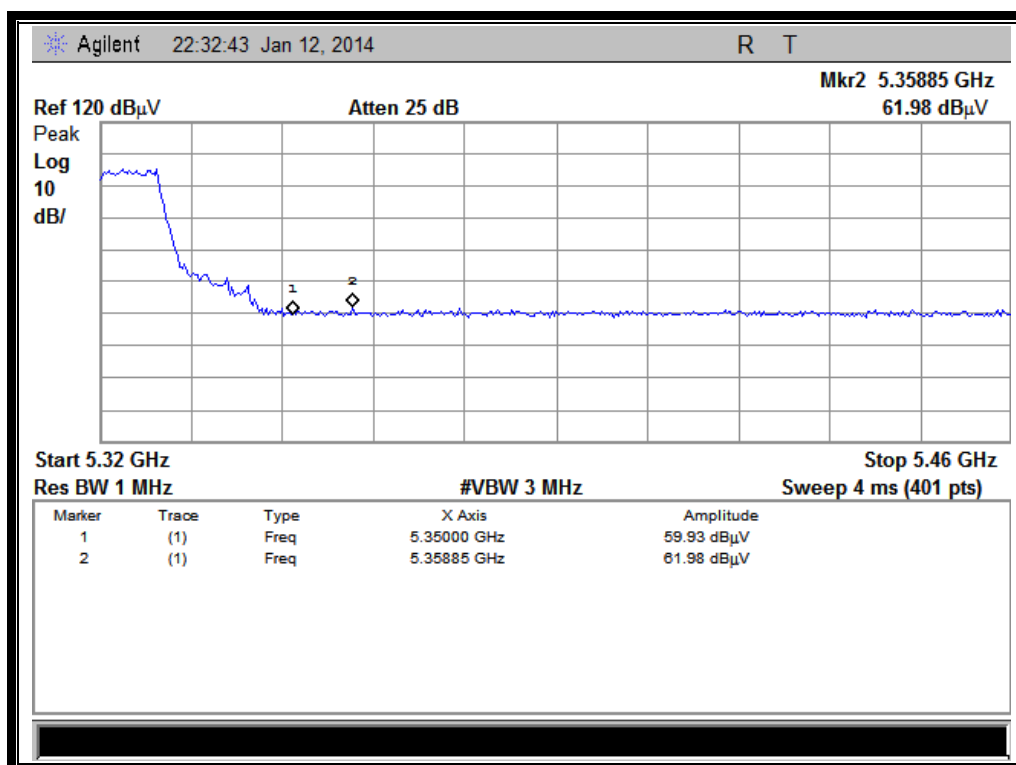
B. Test Plots:



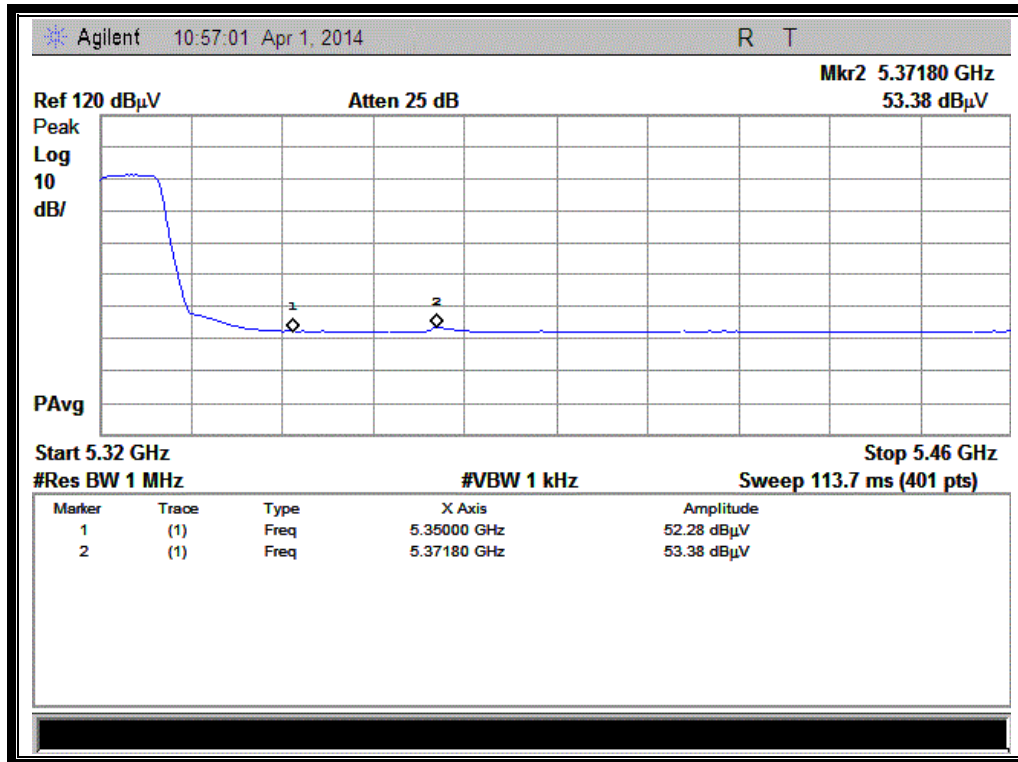
(Channel = 36 PEAK @ 802.11n-20MHz)



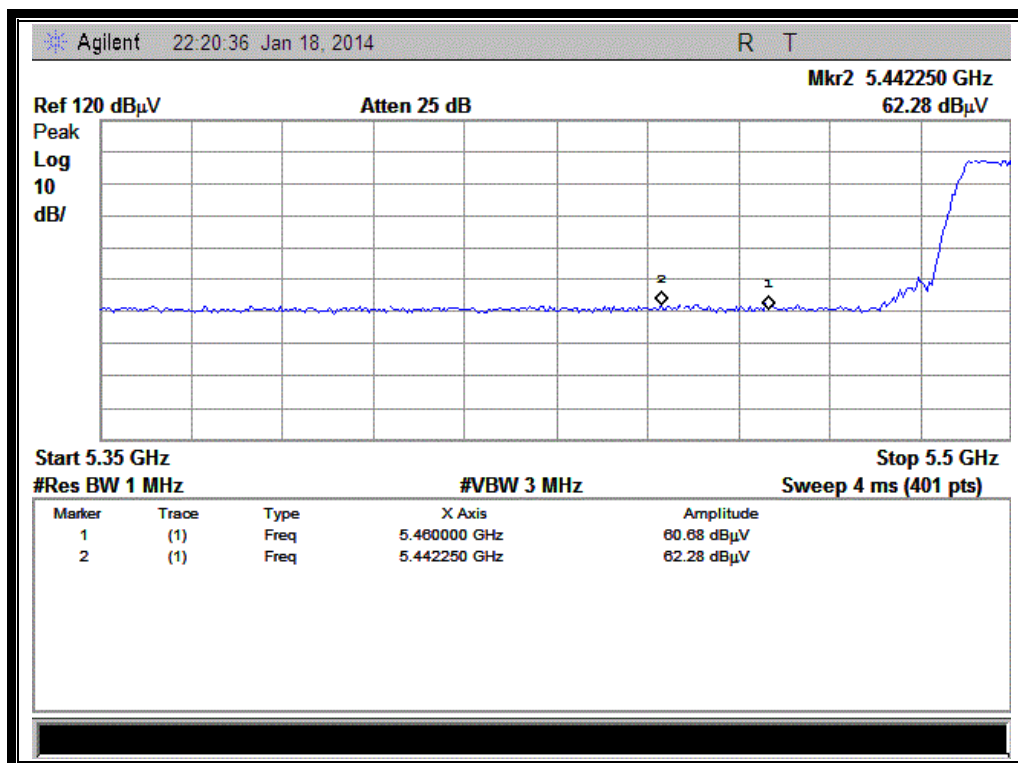
(Channel = 36 AVG @ 802.11n-20MHz)



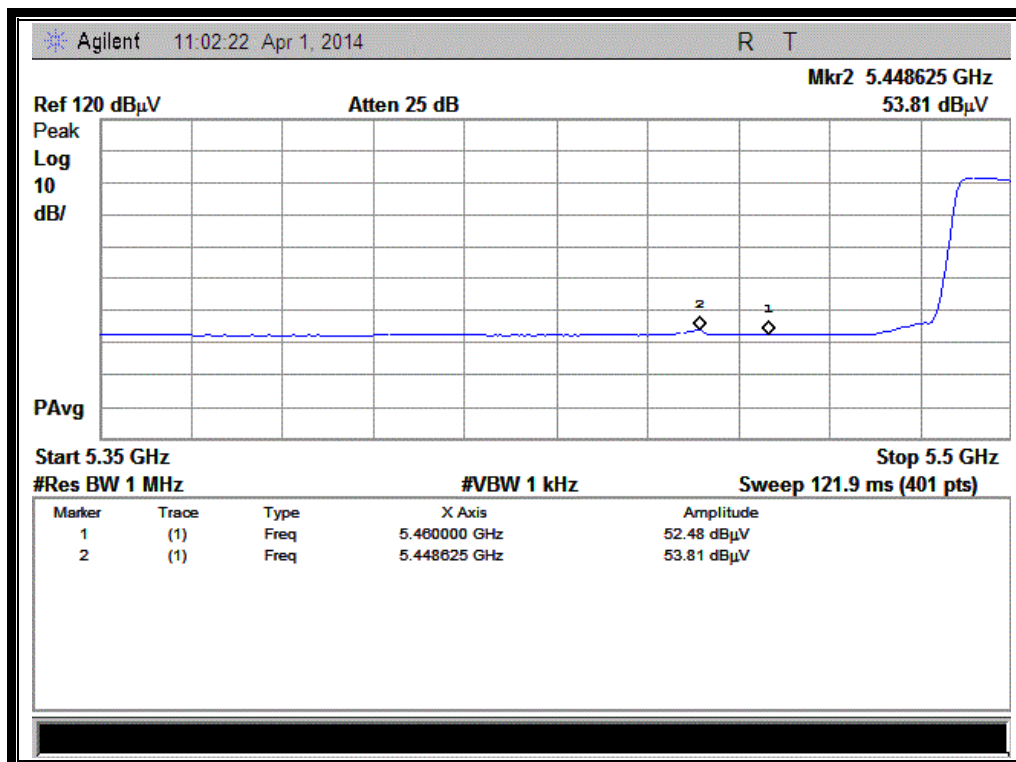
(Channel = 64 PEAK @ 802.11n-20MHz)



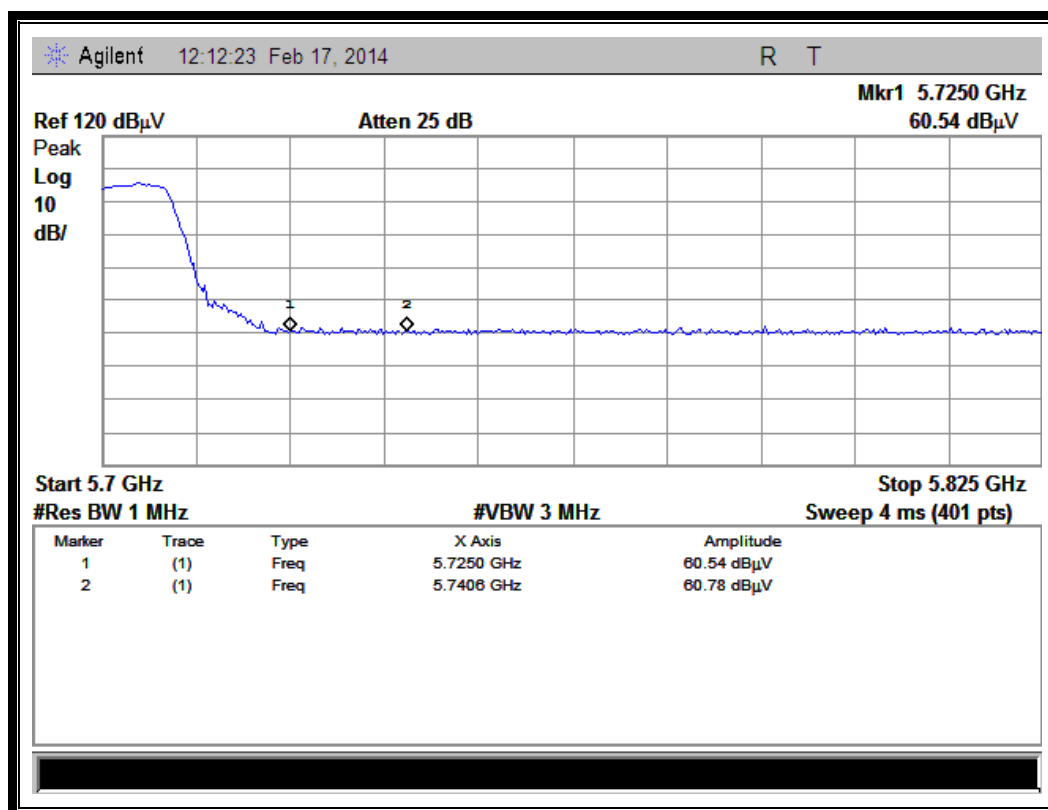
(Channel = 64 AVG @ 802.11n-20MHz)



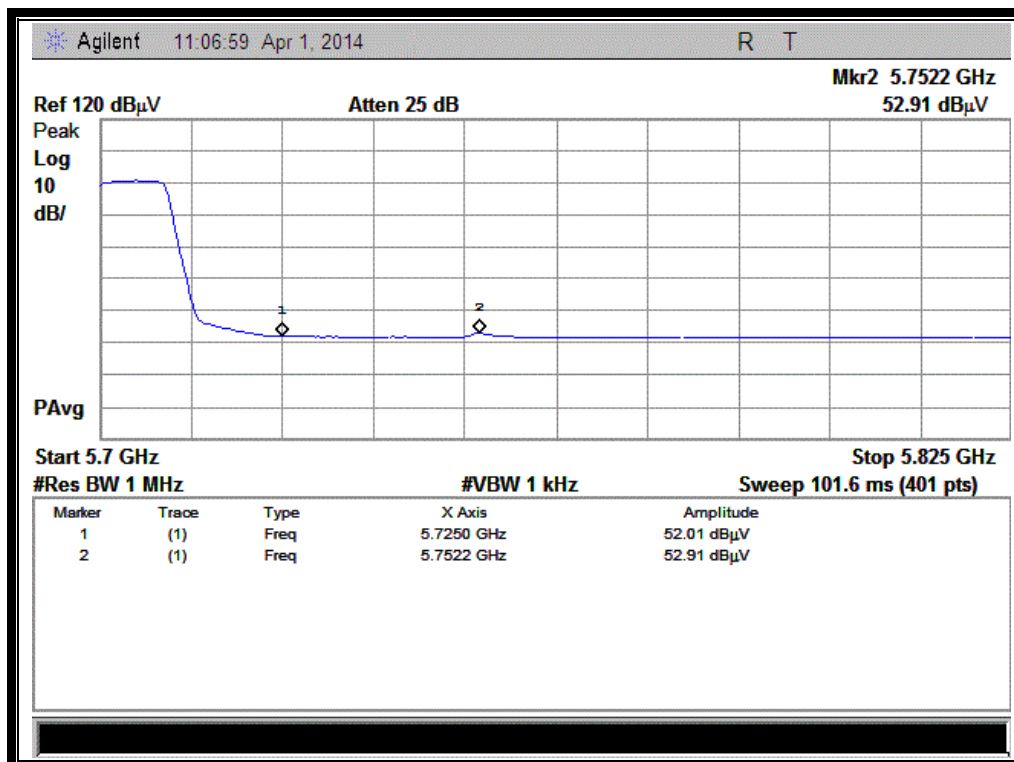
(Channel = 100 PEAK @ 802.11n-20MHz)



(Channel = 100 AVG @ 802.11n-20MHz)



(Channel = 140 PEAK @ 802.11n-20MHz)



(Channel = 140 AVG @ 802.11n-20MHz)

2.6.3.3. 802.11n-40MHz Test mode

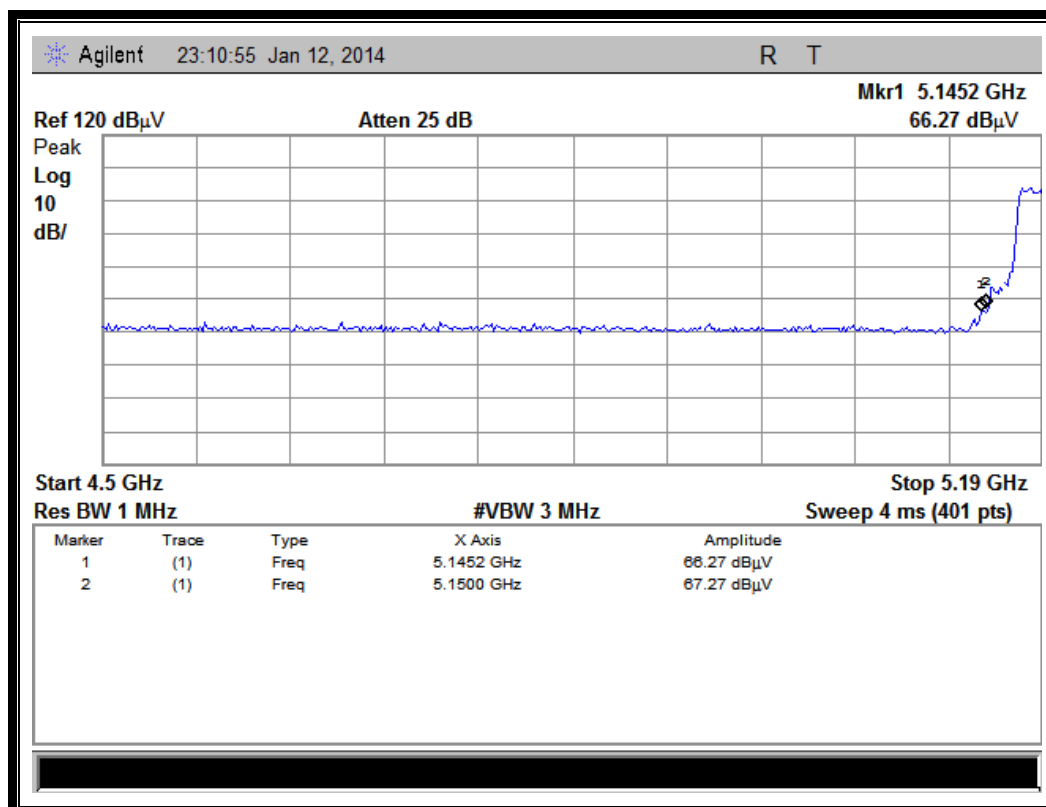
The lowest and highest channels are tested to verify the band edge emissions.

A. Test Verdict:

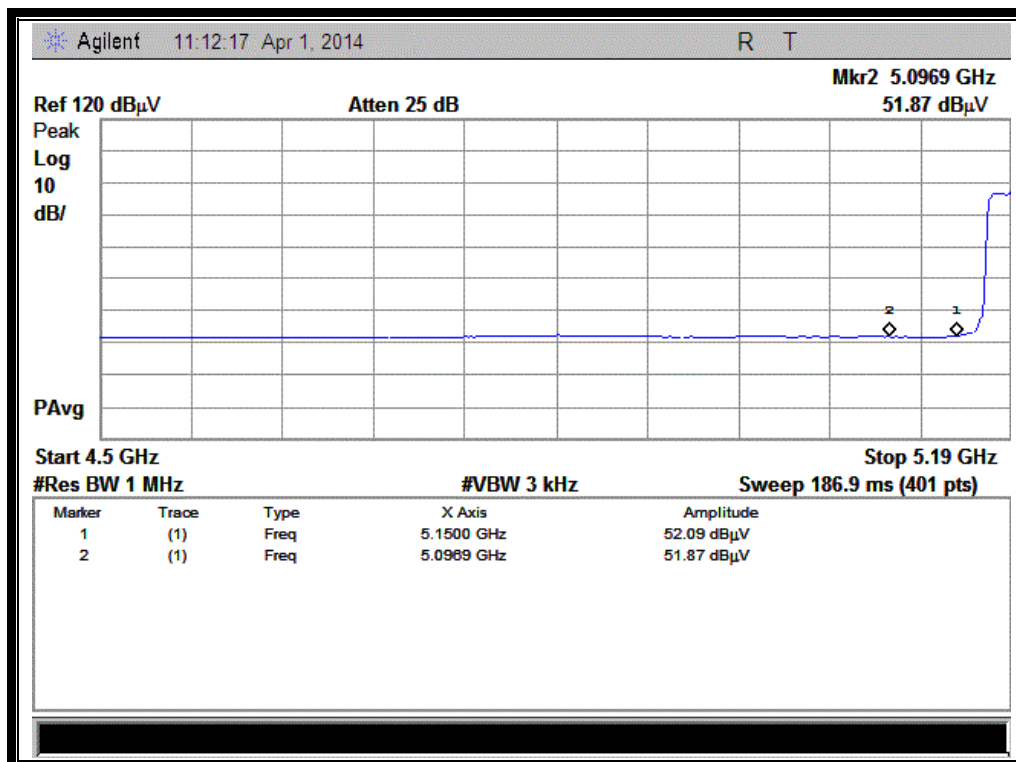
Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
38	5150.00	PK	67.27	-43.13	32.11	56.25	74	Pass
38	5150.00	AV	52.09	-43.13	32.11	41.07	54	Pass
62	5350.88	PK	63.59	-42.79	31.69	52.49	74	Pass
62	5413.88	AV	52.83	-42.79	31.69	41.73	54	Pass
102	5442.25	PK	61.46	-42.79	31.69	50.36	74	Pass

Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
102	5460.00	AV	52.83	-42.79	31.69	41.73	54	Pass

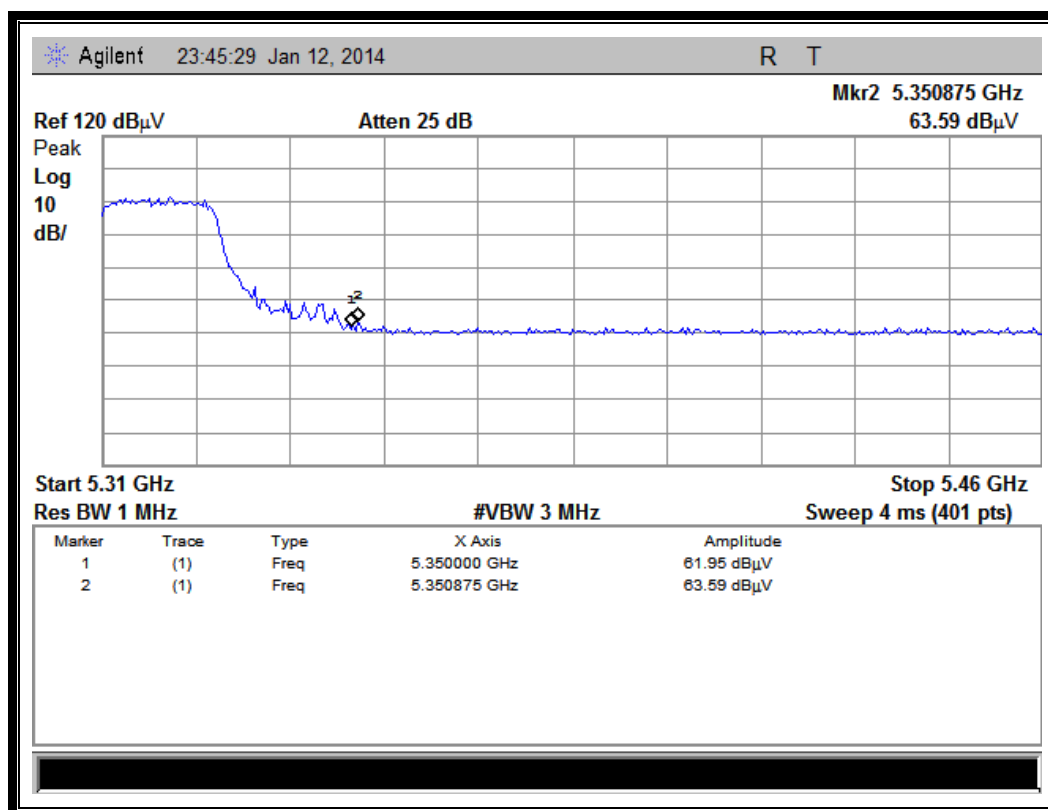
B. Test Plots:



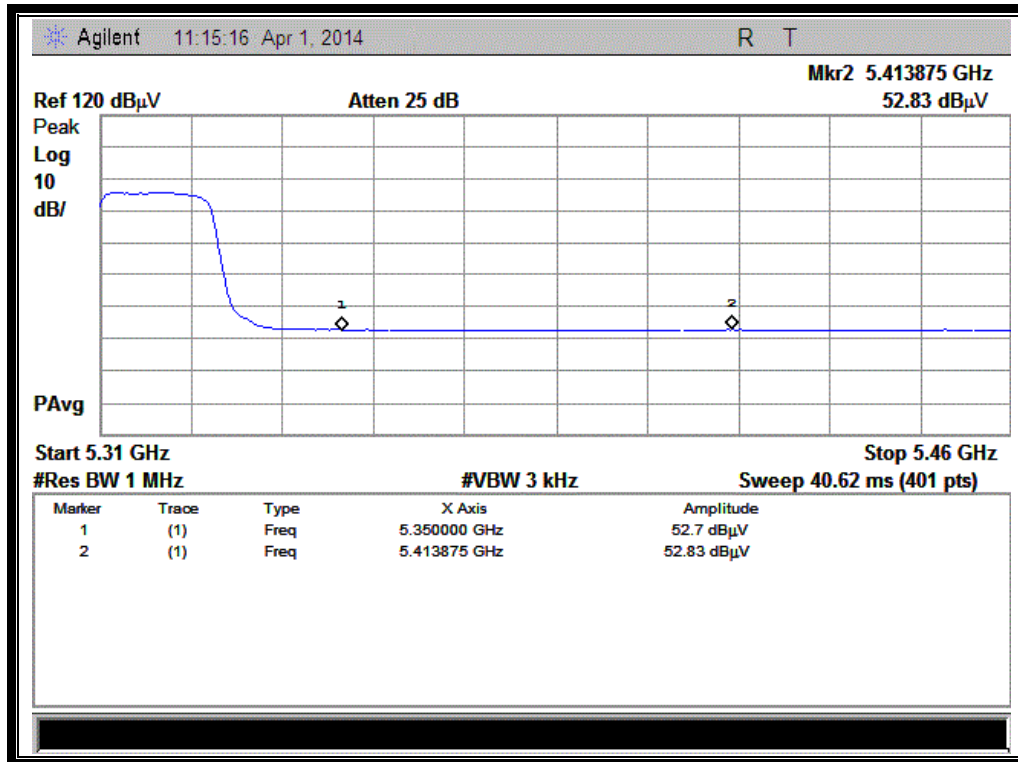
(Channel = 38 PEAK @ 802.11n-40MHz)



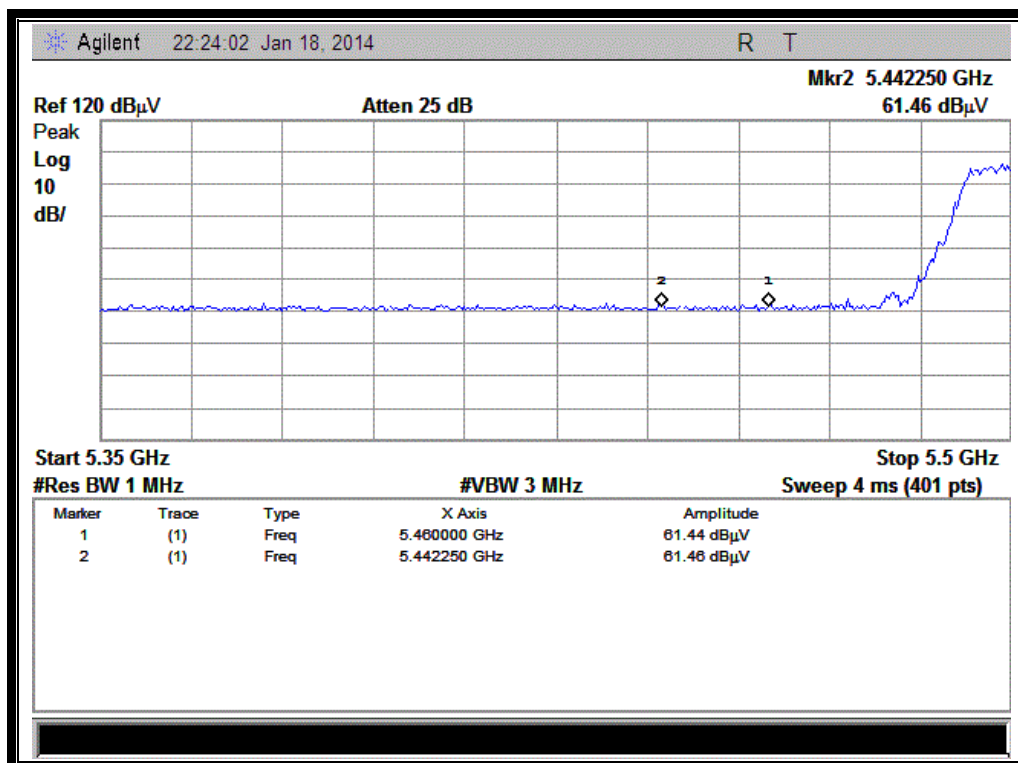
(Channel = 38 AVG @ 802.11n-40MHz)



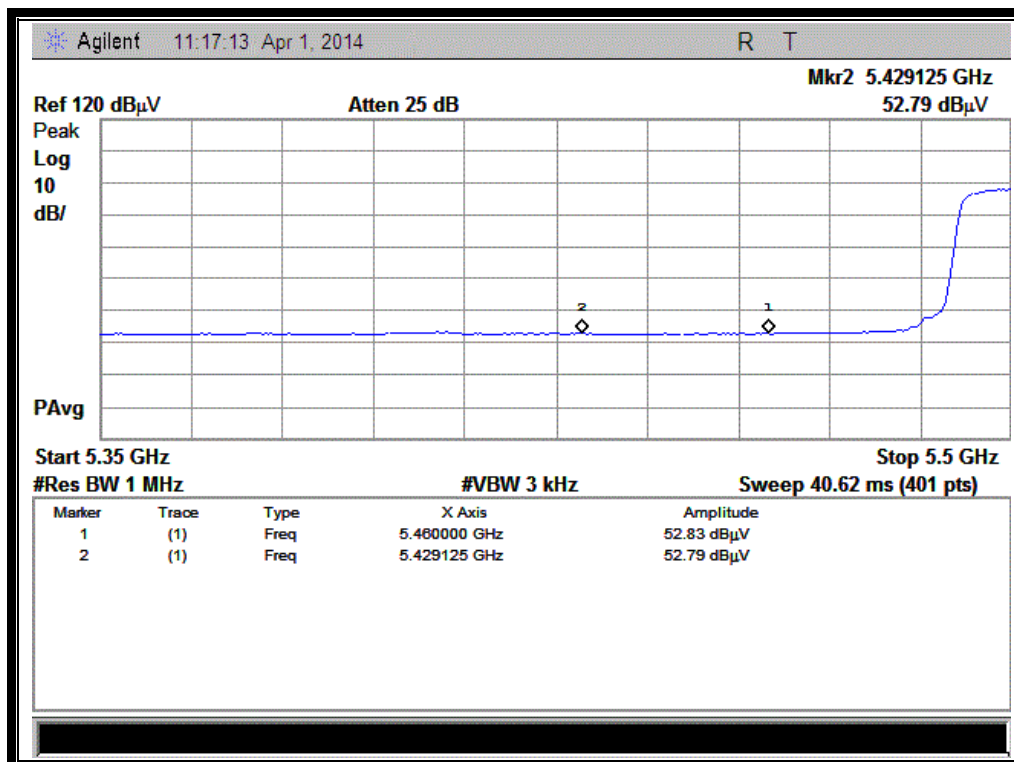
(Channel = 62 PEAK @ 802.11n-40MHz)



(Channel = 62 AVG @ 802.11n-40MHz)



(Channel = 102 PEAK @ 802.11n-40MHz)



(Channel = 102 AVG @ 802.11n-40MHz)

2.6.3.4. 802.11ac-20MHz Test mode

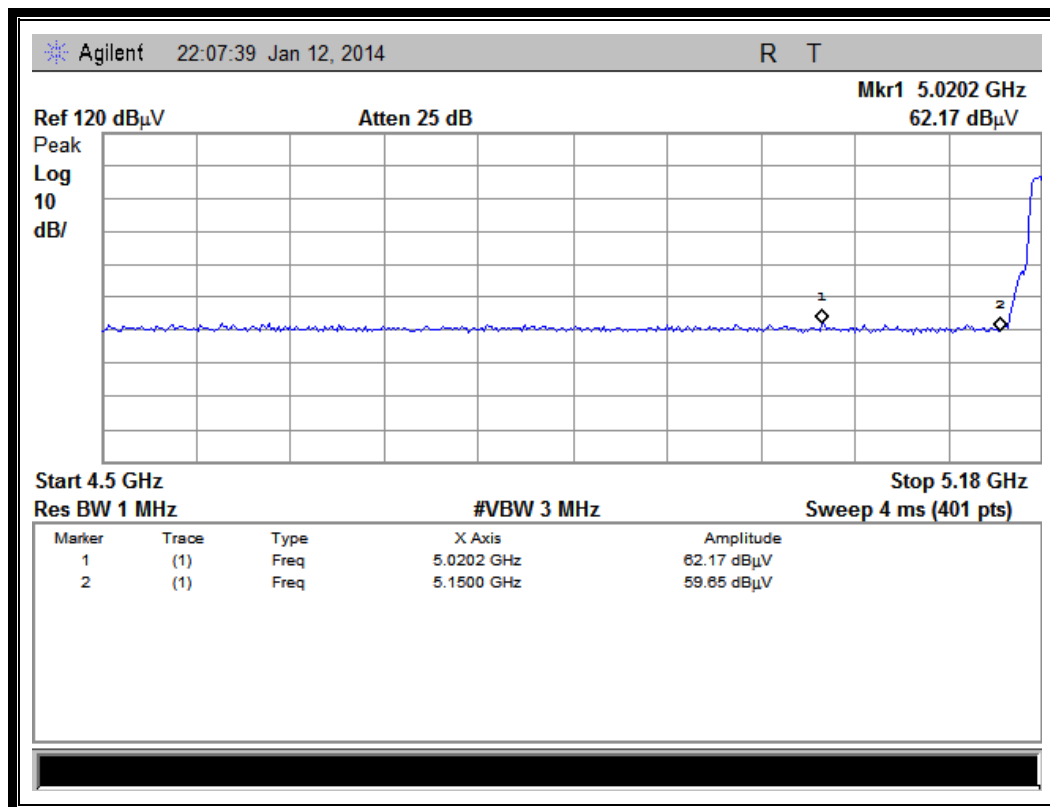
The lowest and highest channels are tested to verify the band edge emissions.

A. Test Verdict:

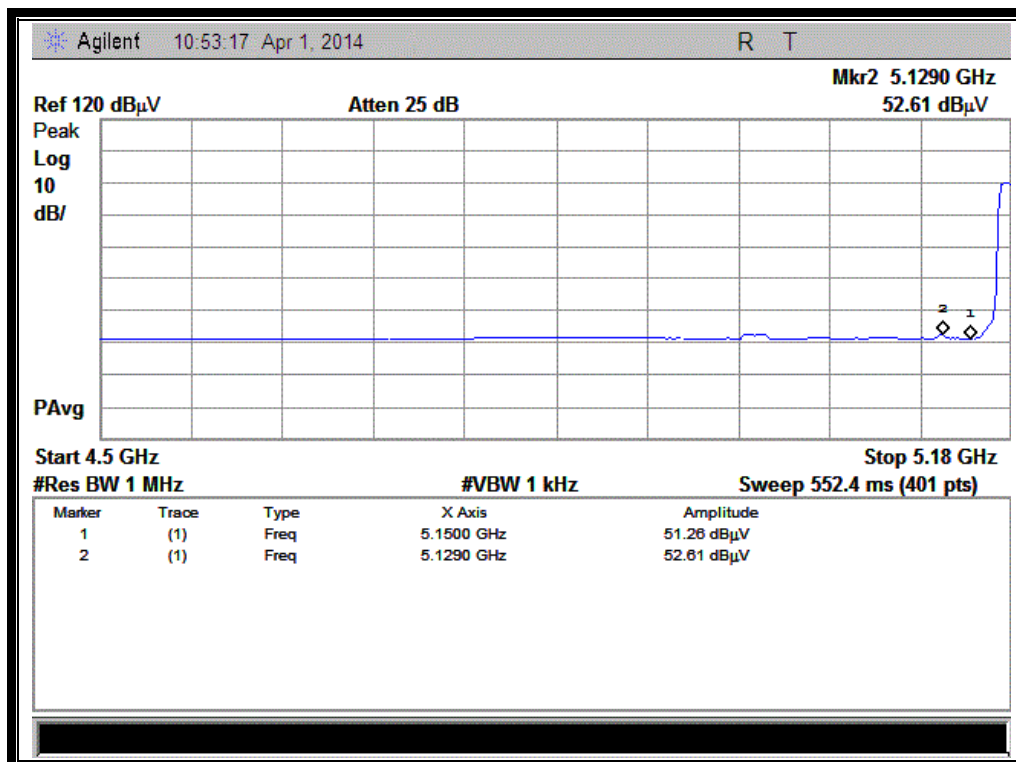
Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
36	5020.20	PK	62.17	-43.13	32.11	51.15	74	Pass
36	5129.00	AV	52.61	-43.13	32.11	41.59	54	Pass
64	5380.90	PK	62.24	-42.79	31.69	51.14	74	Pass
64	5371.80	AV	53.19	-42.79	31.69	42.09	54	Pass
100	5411.50	PK	61.99	-42.79	31.69	58.89	74	Pass

Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
100	5449.00	AV	53.34	-42.79	31.69	42.24	54	Pass
140	5725.00	PK	60.50	-42.79	31.69	49.40	74	Pass
140	5752.80	AV	52.50	-42.79	31.69	41.40	54	Pass

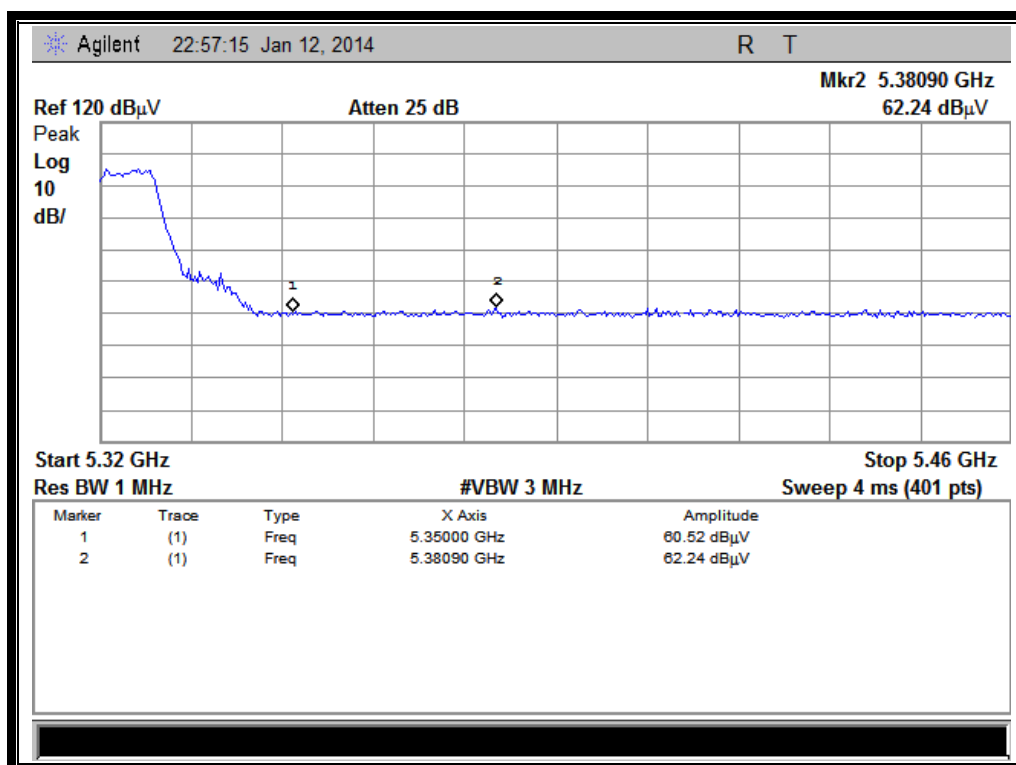
B. Test Plots:



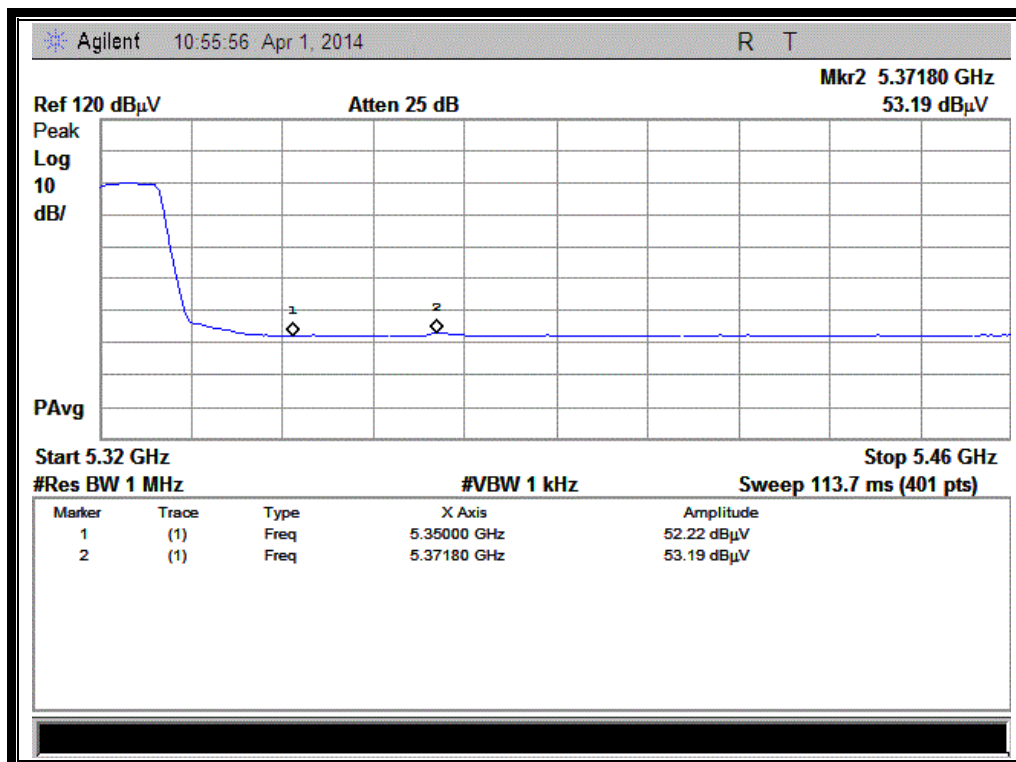
(Channel = 36 PEAK @ 802.11ac-20MHz)



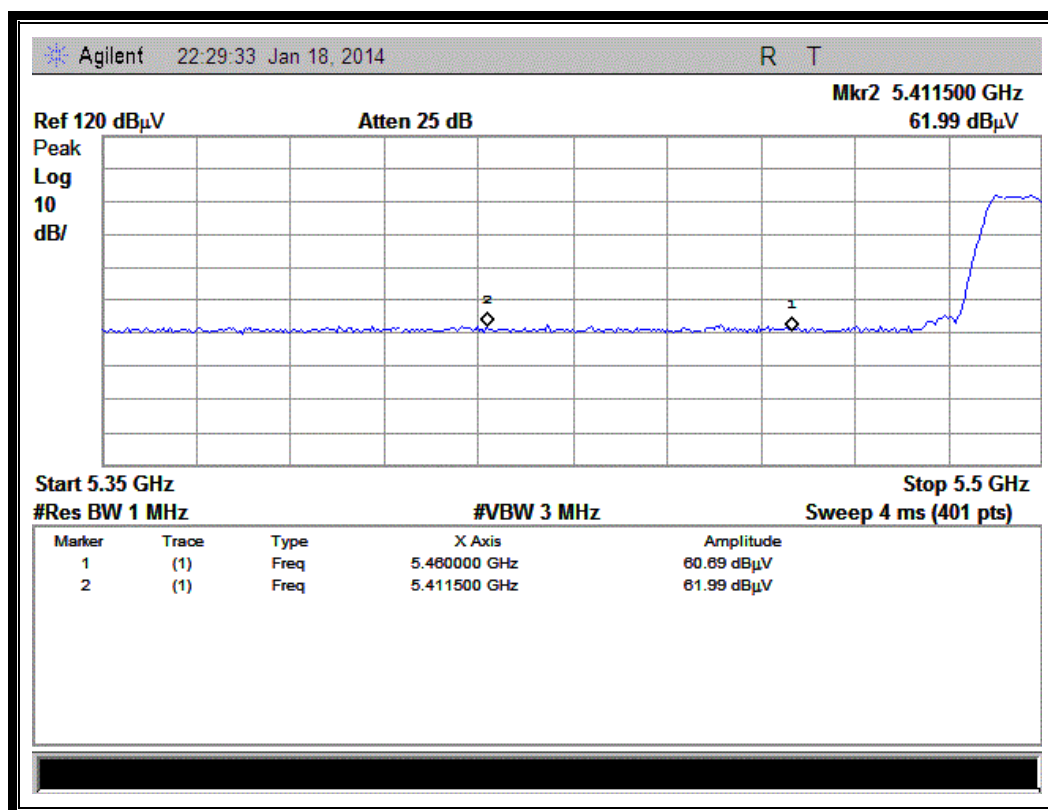
(Channel = 36 AVG @ 802.11ac-20MHz)



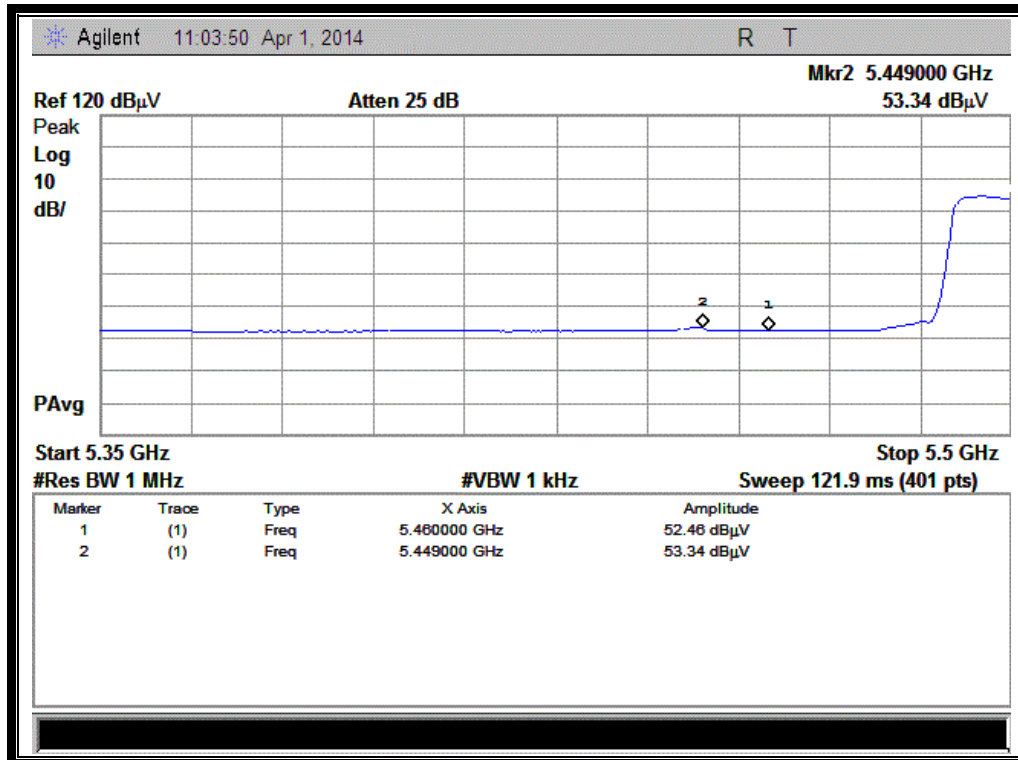
(Channel = 64 PEAK @ 802.11ac-20MHz)



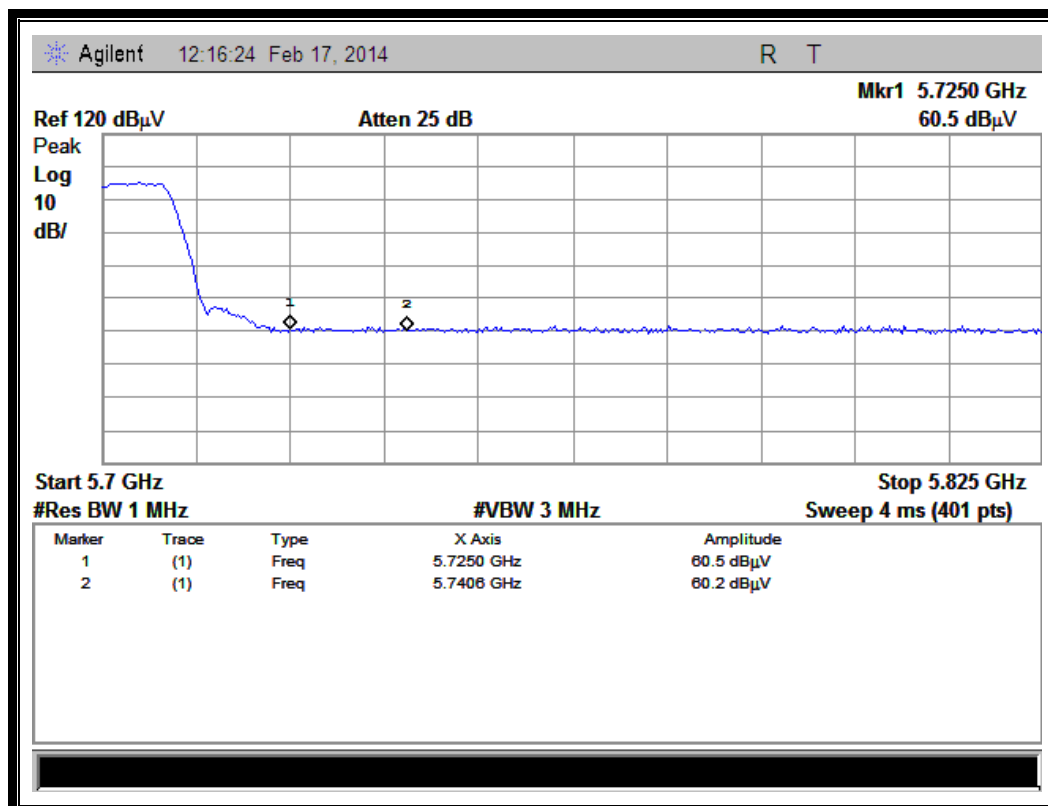
(Channel = 64 AVG @ 802.11ac-20MHz)



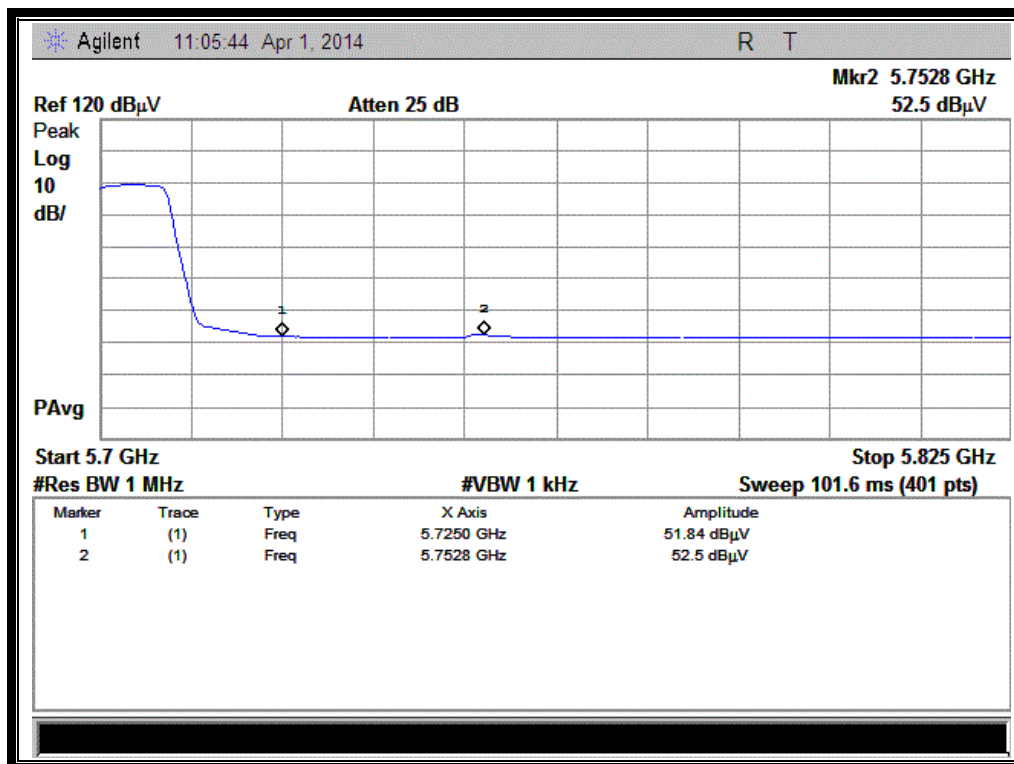
(Channel = 100 PEAK @ 802.11ac-20MHz)



(Channel = 100 AVG @ 802.11ac-20MHz)



(Channel = 140 PEAK @ 802.11ac-20MHz)



(Channel = 140 AVG @ 802.11ac-20MHz)

2.6.3.5. 802.11ac-40MHz Test mode

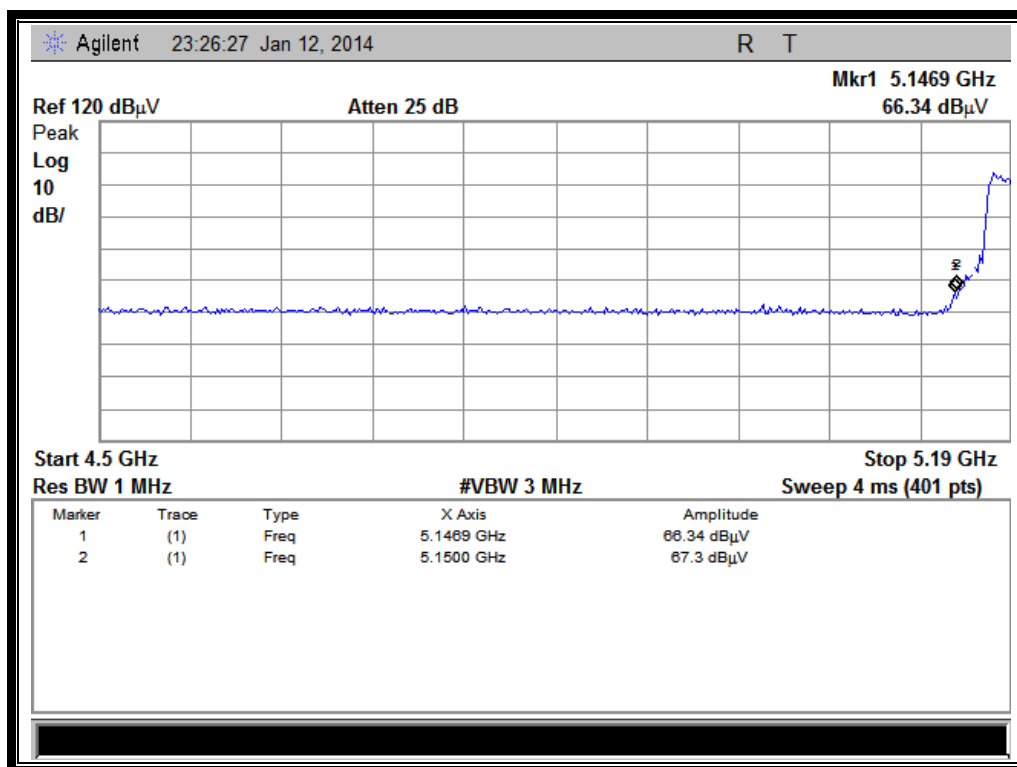
The lowest and highest channels are tested to verify the band edge emissions.

A. Test Verdict:

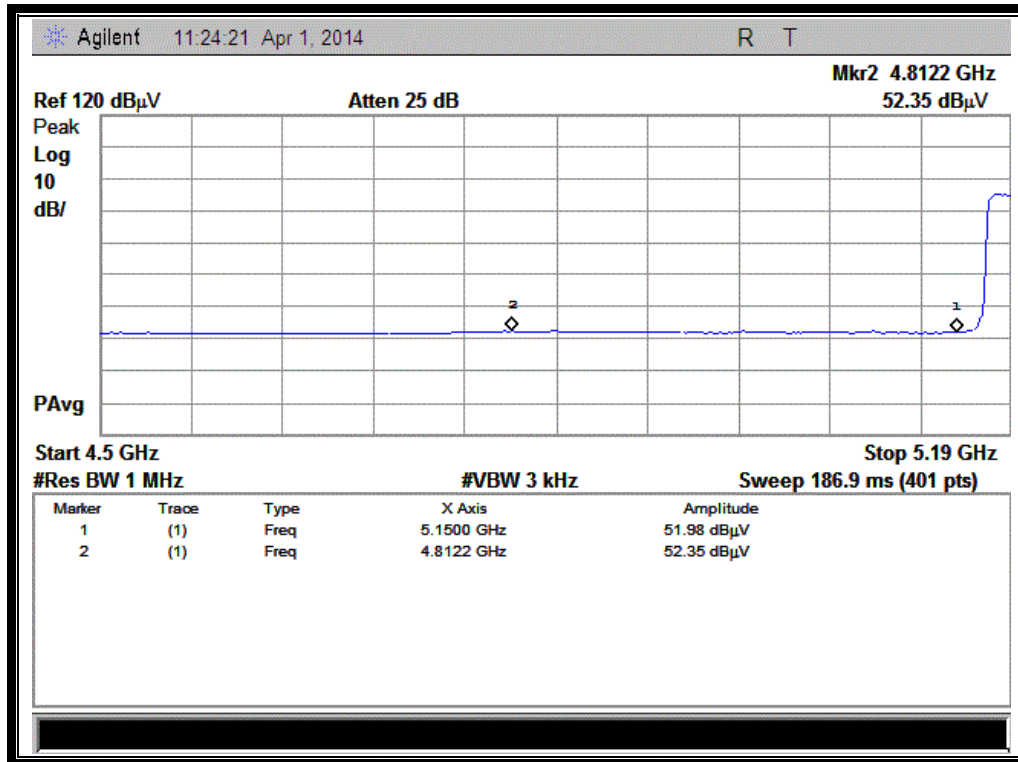
Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
38	5150.00	PK	67.30	-43.13	32.11	56.28	74	Pass
38	4812.20	AV	52.35	-43.13	32.11	41.33	54	Pass
62	5350.00	PK	62.73	-42.79	31.69	51.63	74	Pass
62	5417.25	AV	52.88	-42.79	31.69	41.78	54	Pass
102	5416.75	PK	61.91	-42.79	31.69	50.81	74	Pass

Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
102	5460.00	AV	52.74	-42.79	31.69	41.64	54	Pass

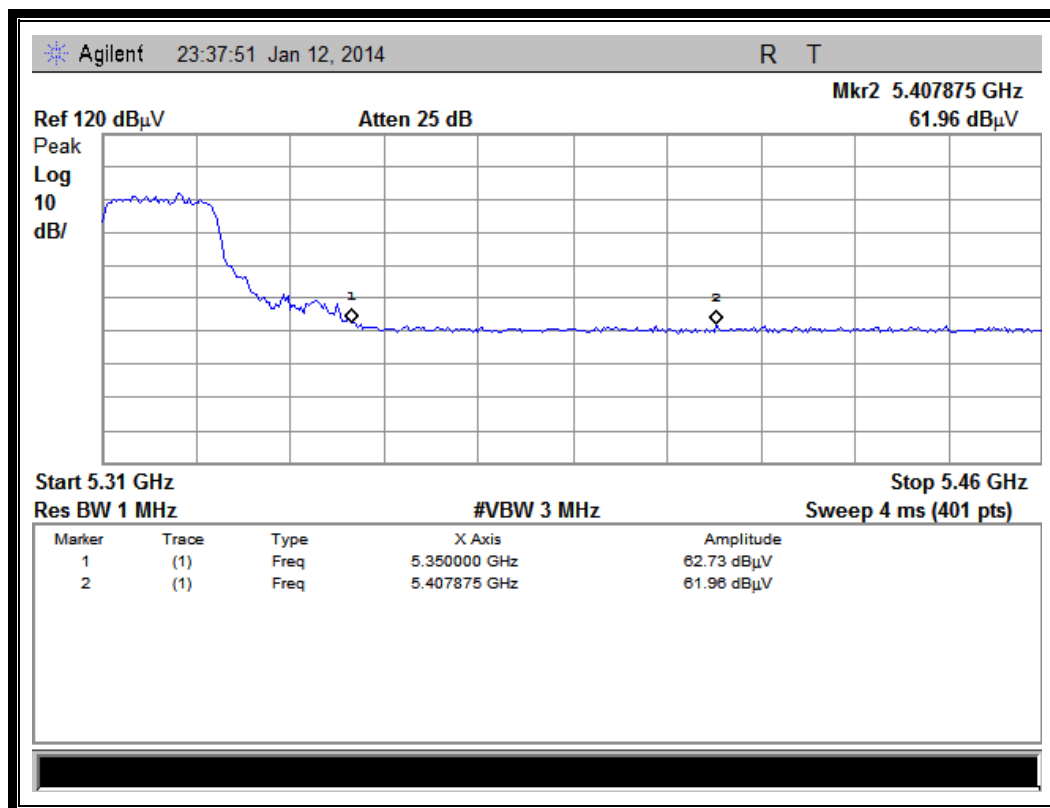
B. Test Plots:



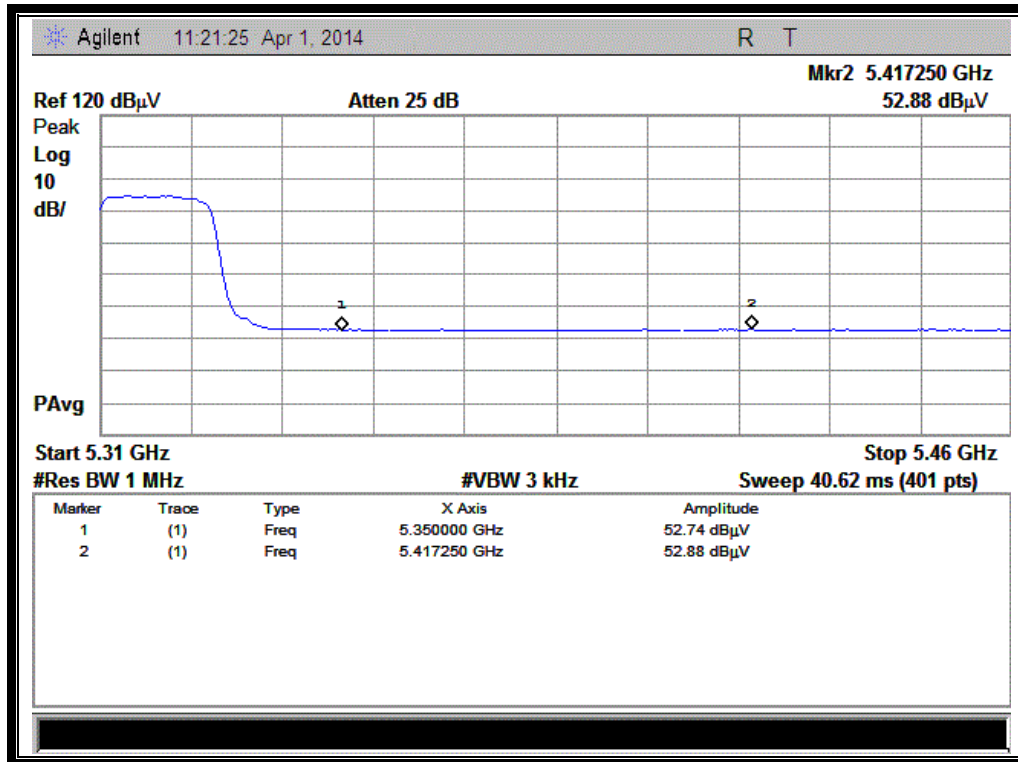
(Channel = 38 PEAK @ 802.11ac-40MHz)



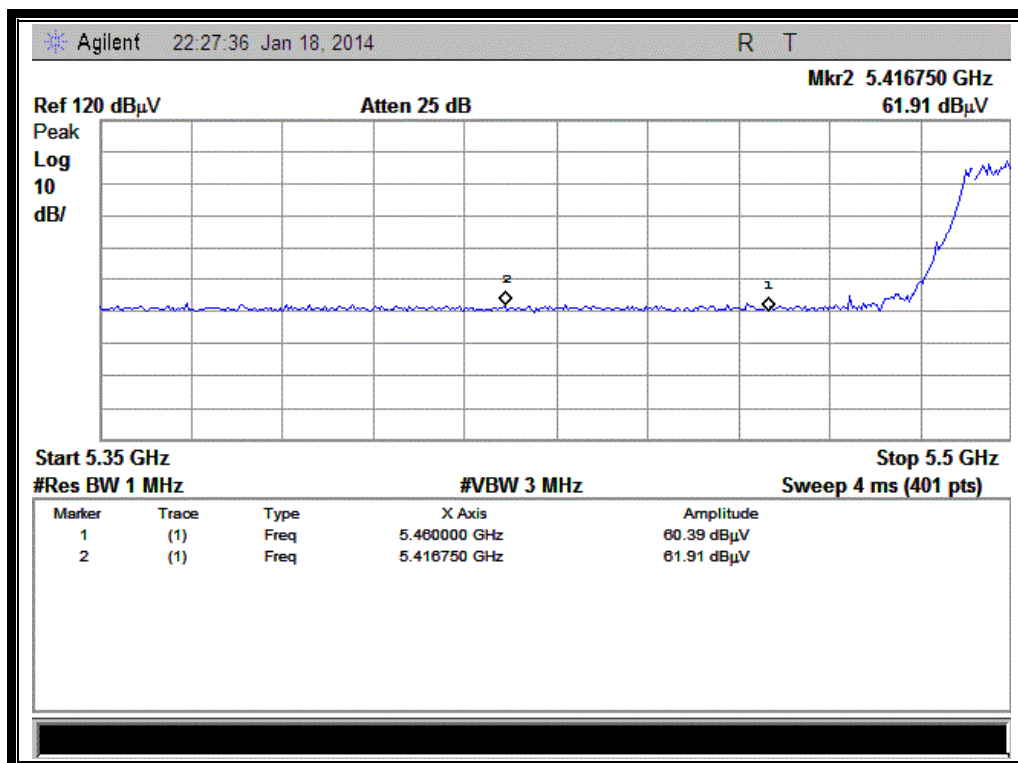
(Channel = 38 AVG @ 802.11ac-40MHz)



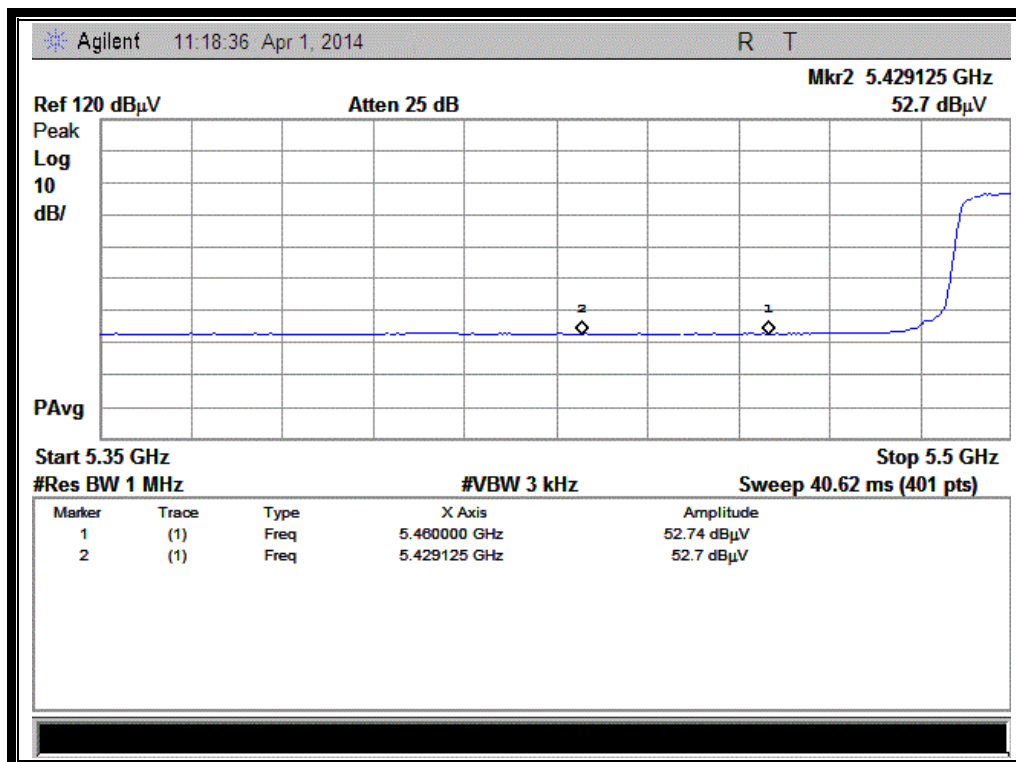
(Channel = 62 PEAK @ 802.11 ac-40MHz)



(Channel = 62 AVG @ 802.11 ac-40MHz)



(Channel = 102 PEAK @ 802.11ac-40MHz)



(Channel = 102 AVG @ 802.11ac-40MHz)

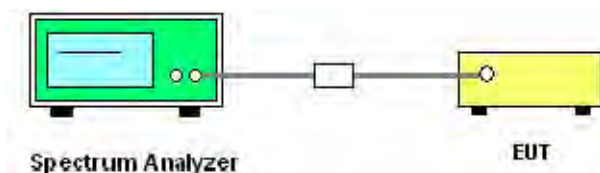
2.7. Conducted Band Edge

2.7.1. Requirement

Put the radio on the highest channel before 5600 MHz and make a conducted band edge measurement to show 20 dBc point. The 20 dBc point should be less than 5600 MHz. Put the radio on the first channel after 5650 MHz and make a conducted band edge measurement on the lower side to show that the 20 dBc point is above 5650 MHz. RBW = 100 kHz and VBW= 300 kHz with peak detector.

2.7.2. Test Description

A. Test Setup:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

B. Test Procedure

- (1) Set RBW = 100 KHz. VBW $\geq$ 300 KHz. Detector = peak.
- (2) Trace mode = max-hold. Allow the sweeps to continue until the trace stabilizes.
- (3) Use the peak search function to find the peak of the spectrum.
- (4) Record the frequency of 20dBc point

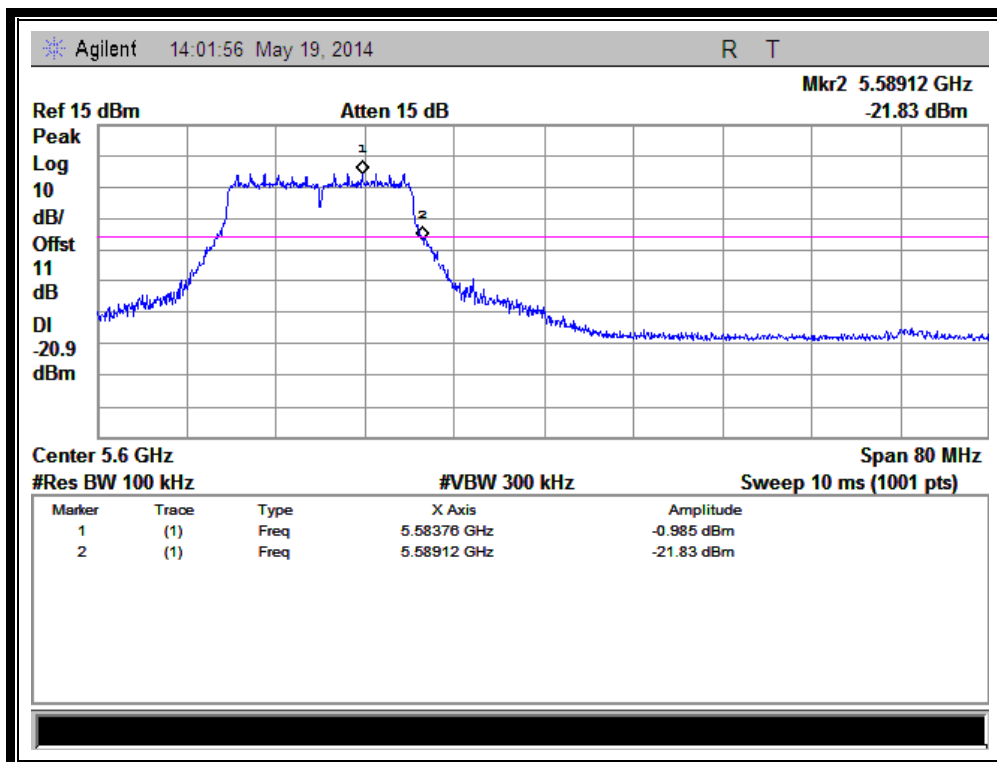
C. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2014.02.26	2015.02.25

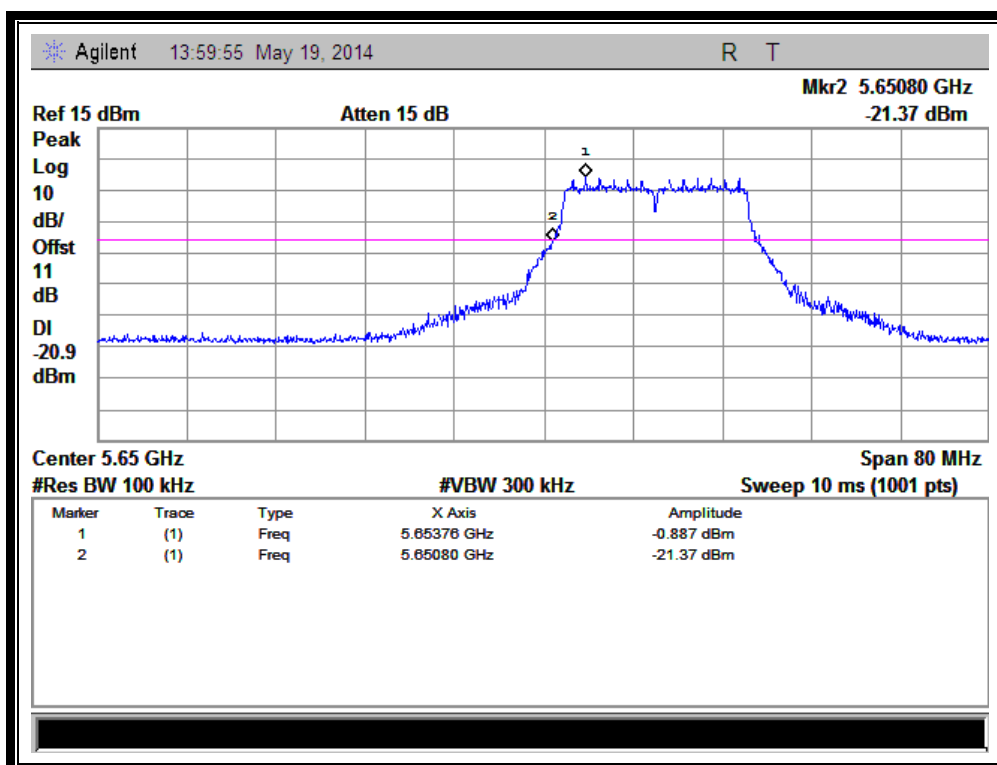
2.7.3. Test Result

2.7.3.1. 802.11a Test mode

A. Test Plots:



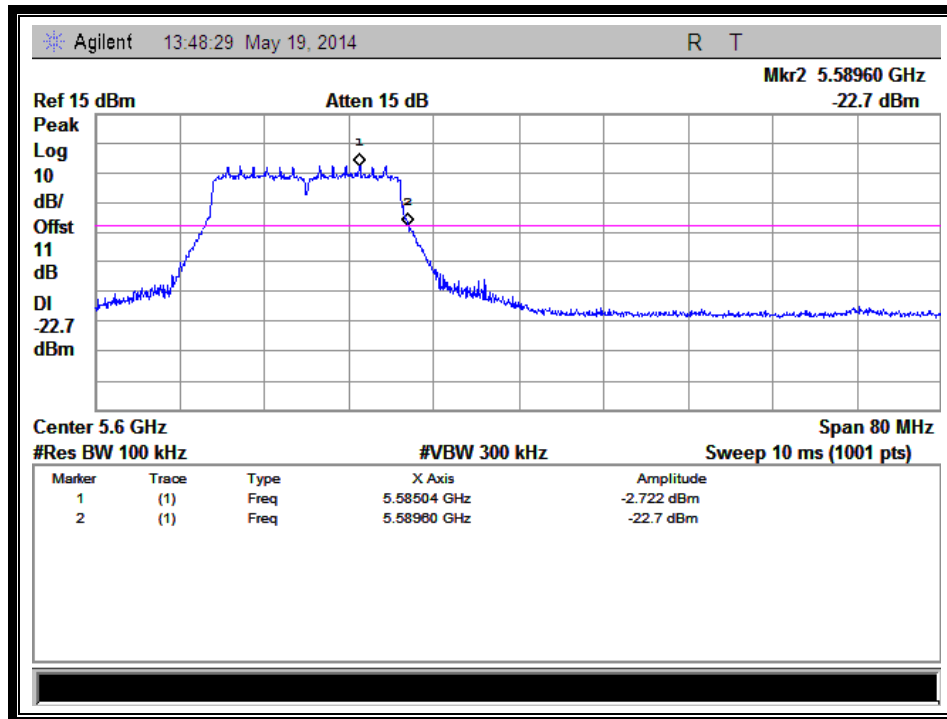
(Channel 116: 5580MHz @ 802.11a)



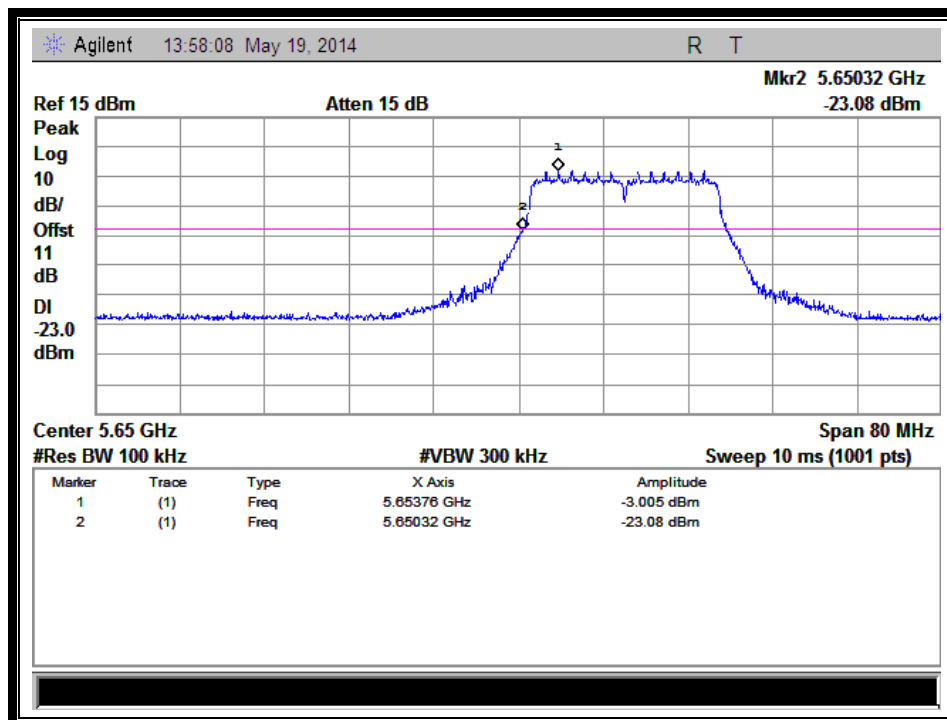
(Channel 132: 5660 MHz @ 802.11a)

2.7.3.2. 802.11n-20MHz Test mode

A. Test Plots:



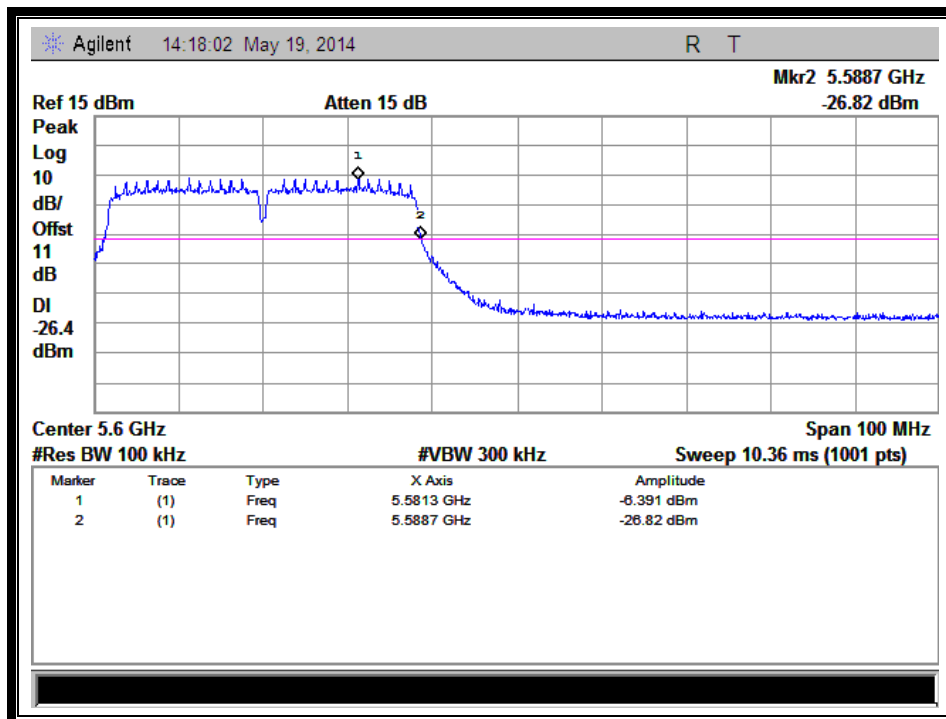
(Channel 116: 5580MHz @ 802.11n-20MHz)



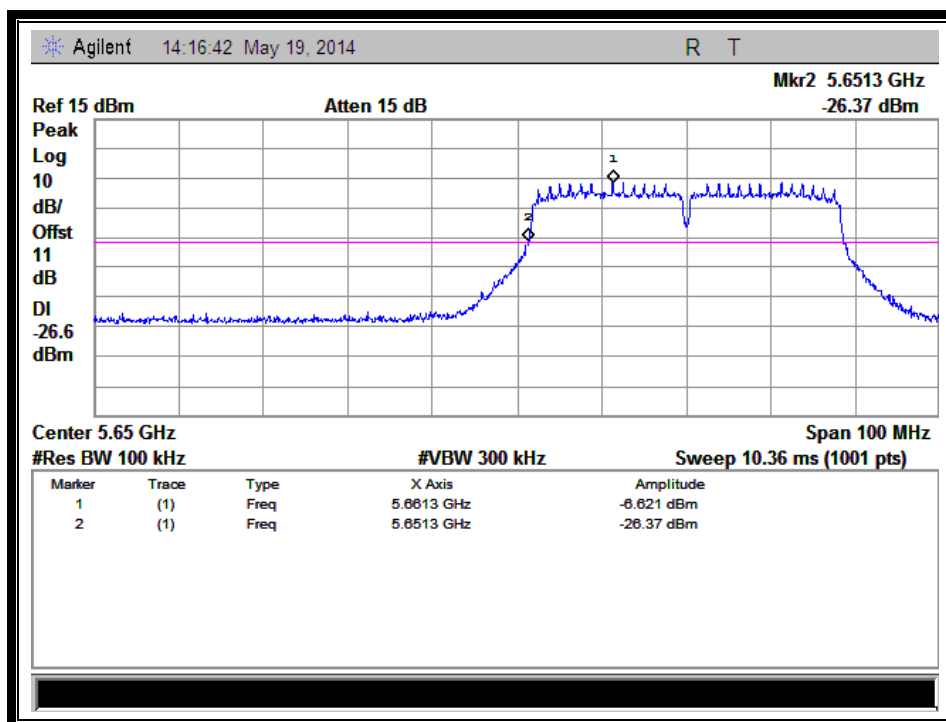
(Channel 132: 5660 MHz @ 802.11n-20MHz)

2.7.3.3. 802.11n-40MHz Test mode

A. Test Plots:



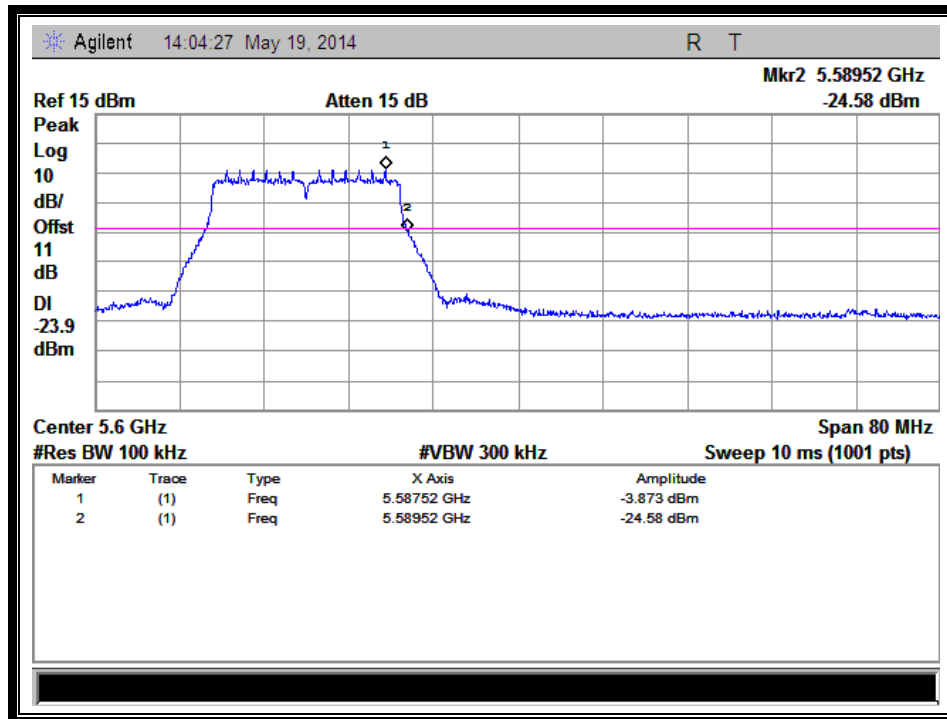
(Channel 114: 5570MHz @ 802.11n-40MHz)



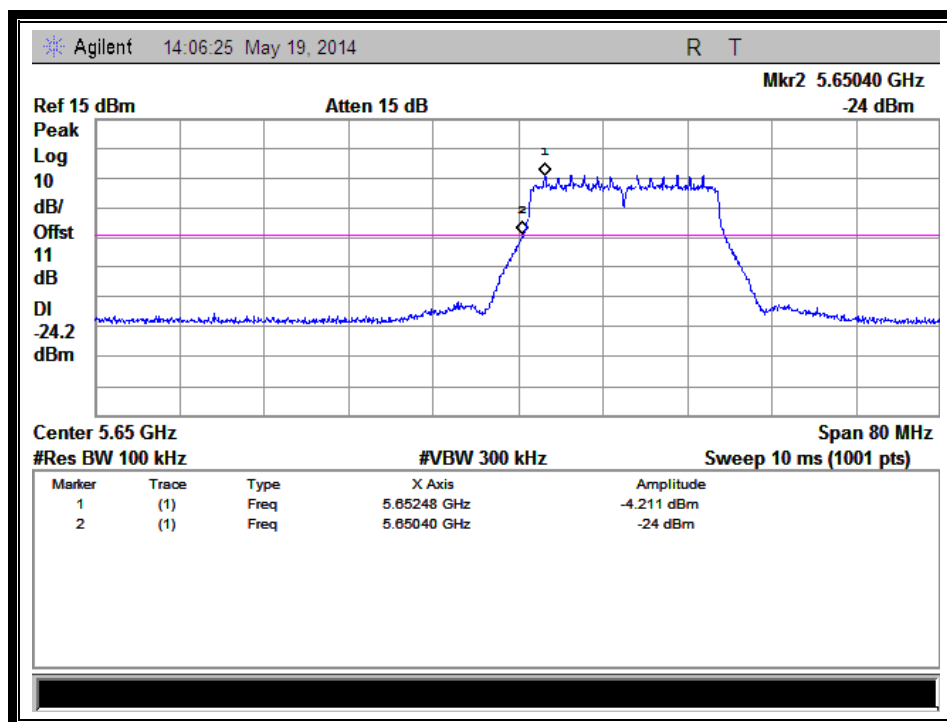
(Channel 134: 5670 MHz @ 802.11n-40MHz)

2.7.3.4. 802.11ac-20MHz Test mode

A. Test Plots:



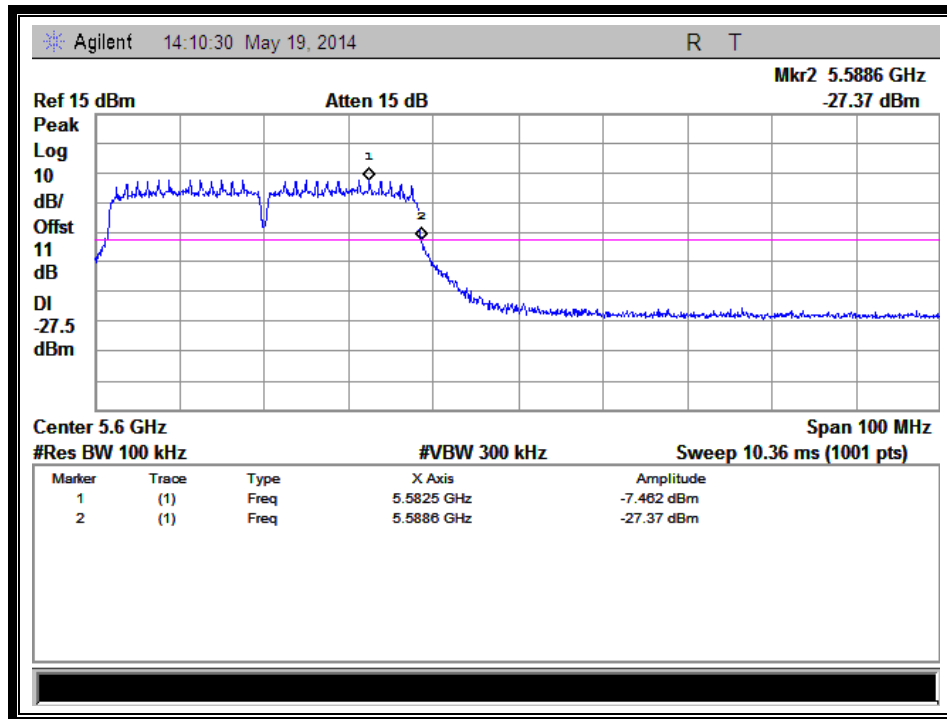
(Channel 116: 5580MHz @ 802.11ac-20MHz)



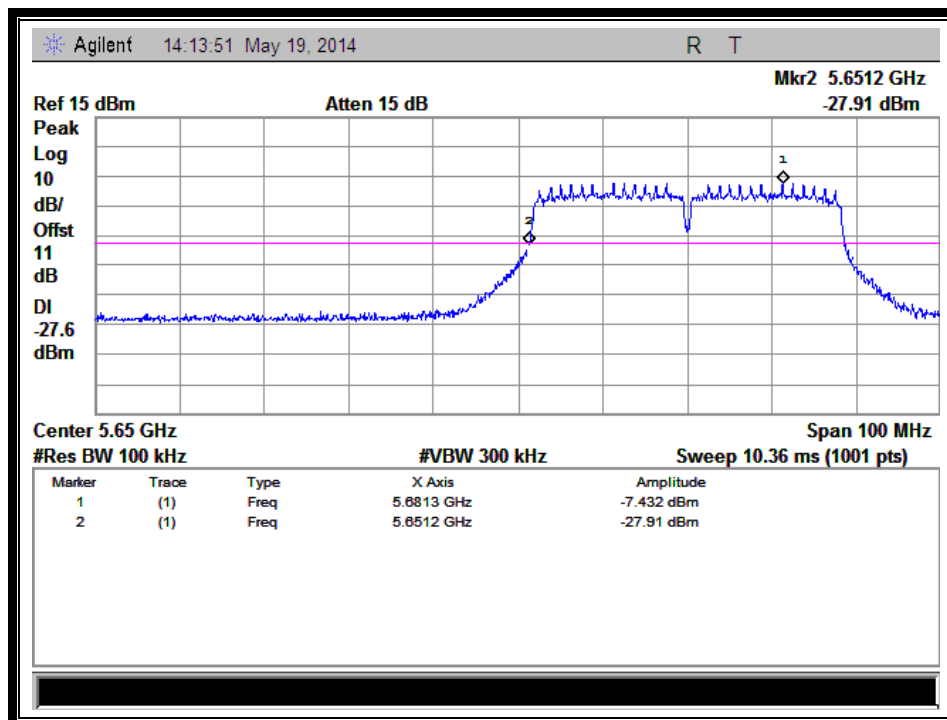
(Channel 134: 5660 MHz @ 802.11ac-20MHz)

2.7.3.5. 802.11ac-40MHz Test mode

A. Test Plots:



(Channel 116: 5580MHz @ 802.11ac-40MHz)



(Channel 132: 5660 MHz @ 802.11ac-40MHz)

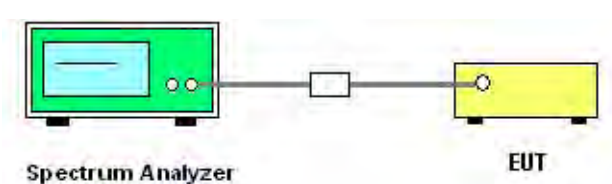
2.8. Peak Excursion

2.8.1. Requirement

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

2.8.2. Test Description

B. Test Setup:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

C. Test Procedure

Section G) of KDB 789033 was used in order to prove compliance

- (5) Set RBW = 1 MHz. VBW $\geq$ 3 MHz. Detector = peak.
- (6) Trace mode = max-hold. Allow the sweeps to continue until the trace stabilizes.
- (7) Use the peak search function to find the peak of the spectrum.
- (8) measure the PPSD.
- (9) Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

D. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EXA Signal Analyzer	Agilent	N9010A	MY51440152	2013.05.12	2014.05.11

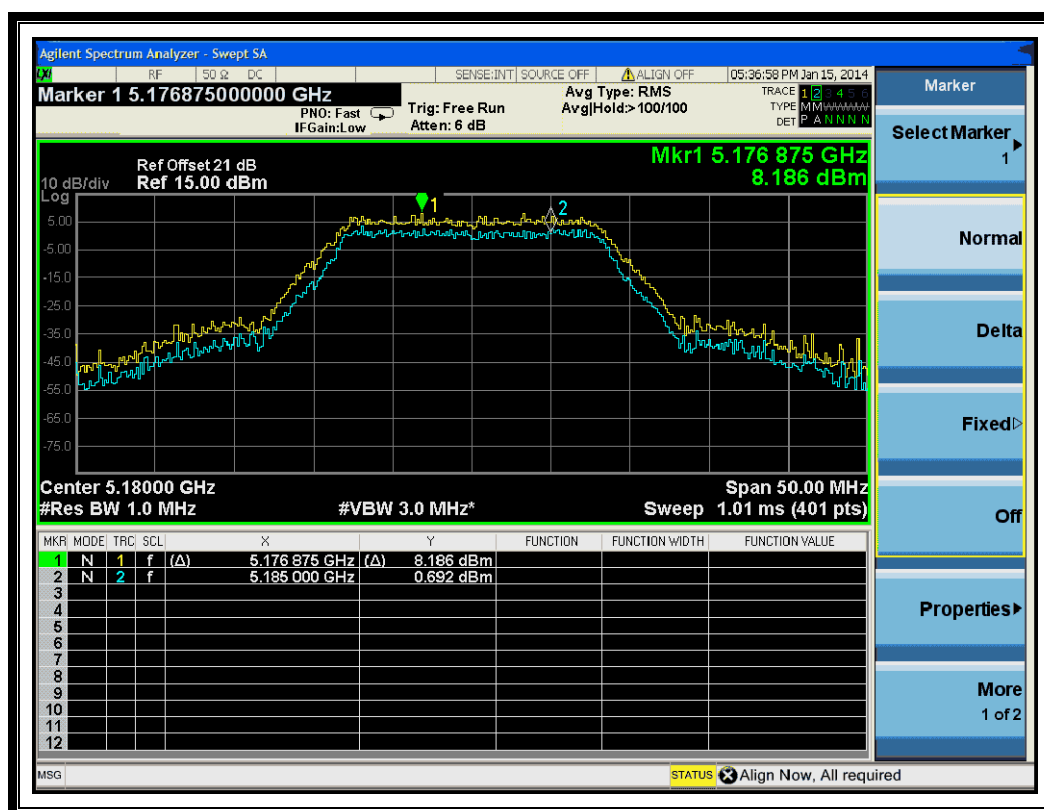
2.8.3. Test Result

2.8.3.1. 802.11a Test mode

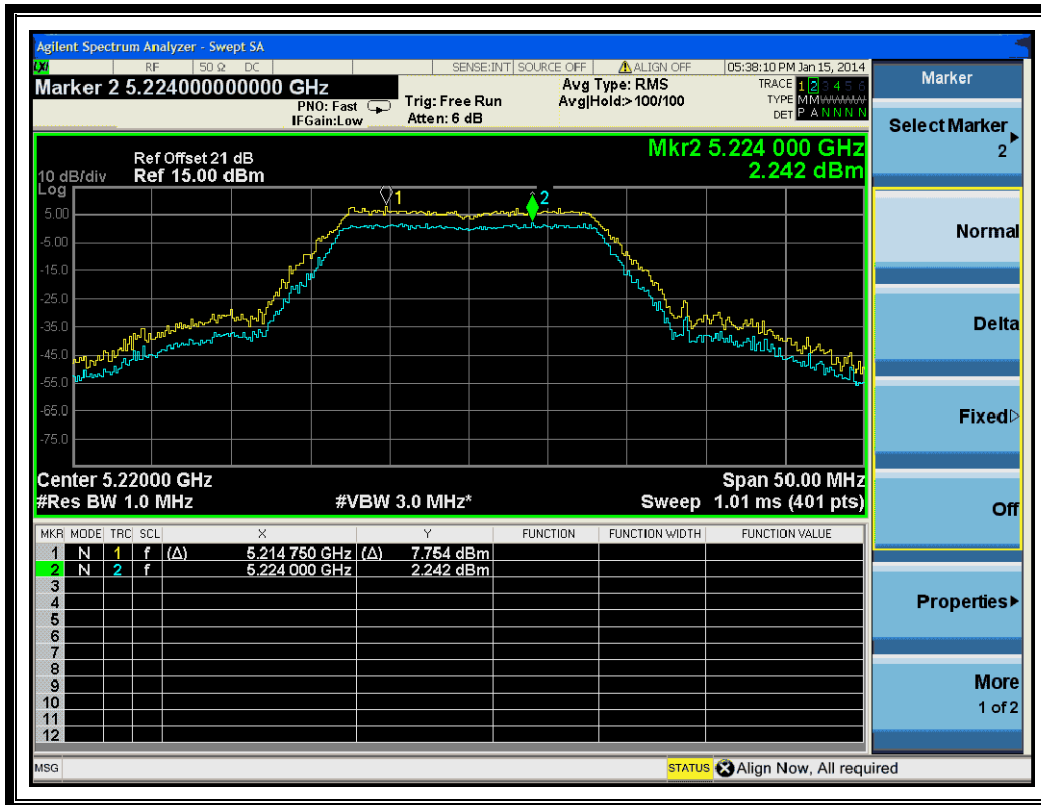
A. Test Verdict:

Channel	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Verdict
36	5180	7.494	13	PASS
44	5220	5.512	13	PASS
48	5240	6.439	13	PASS
52	5260	3.619	13	PASS
60	5300	5.207	13	PASS
64	5320	3.421	13	PASS
100	5500	5.843	13	PASS
116	5580	3.827	13	PASS
140	5700	6.368	13	PASS

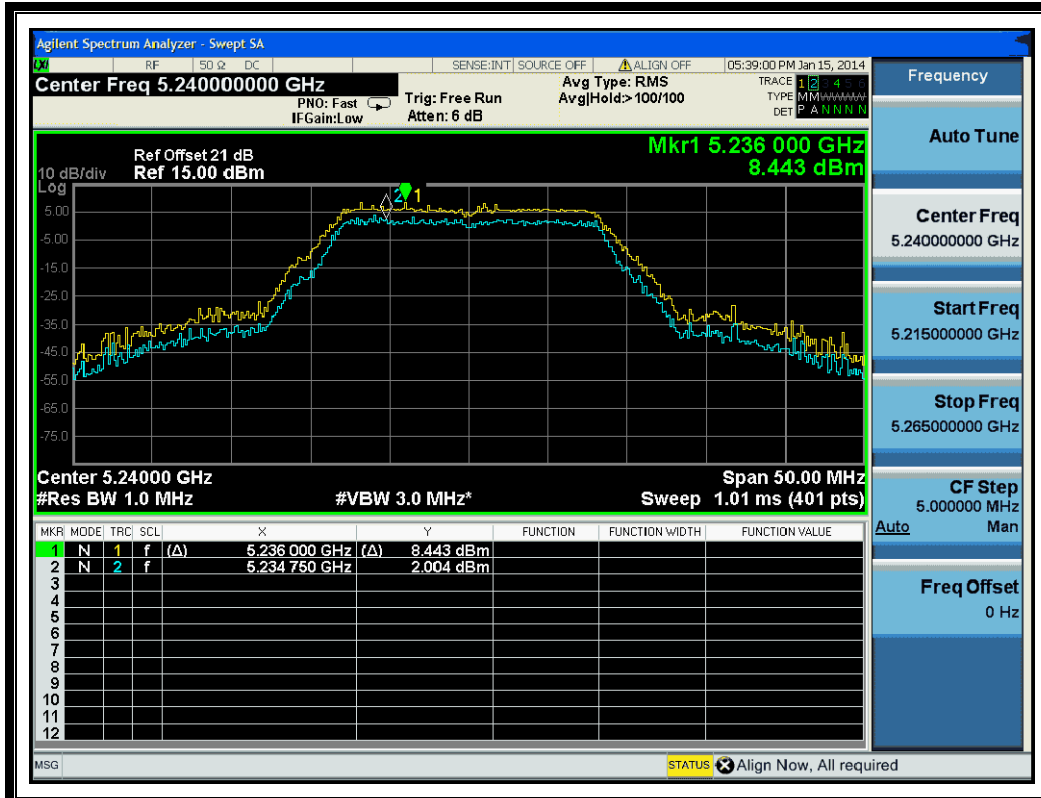
B. Test Plots:



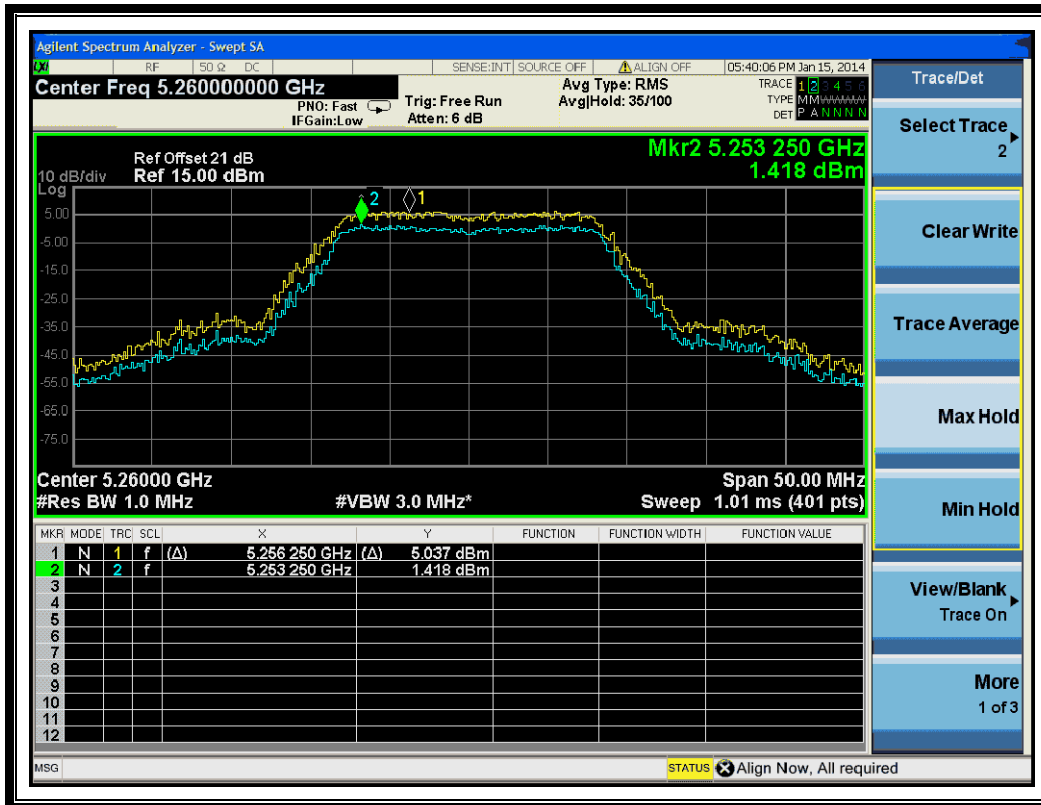
(Channel 36: 5180MHz @ 802.11a)



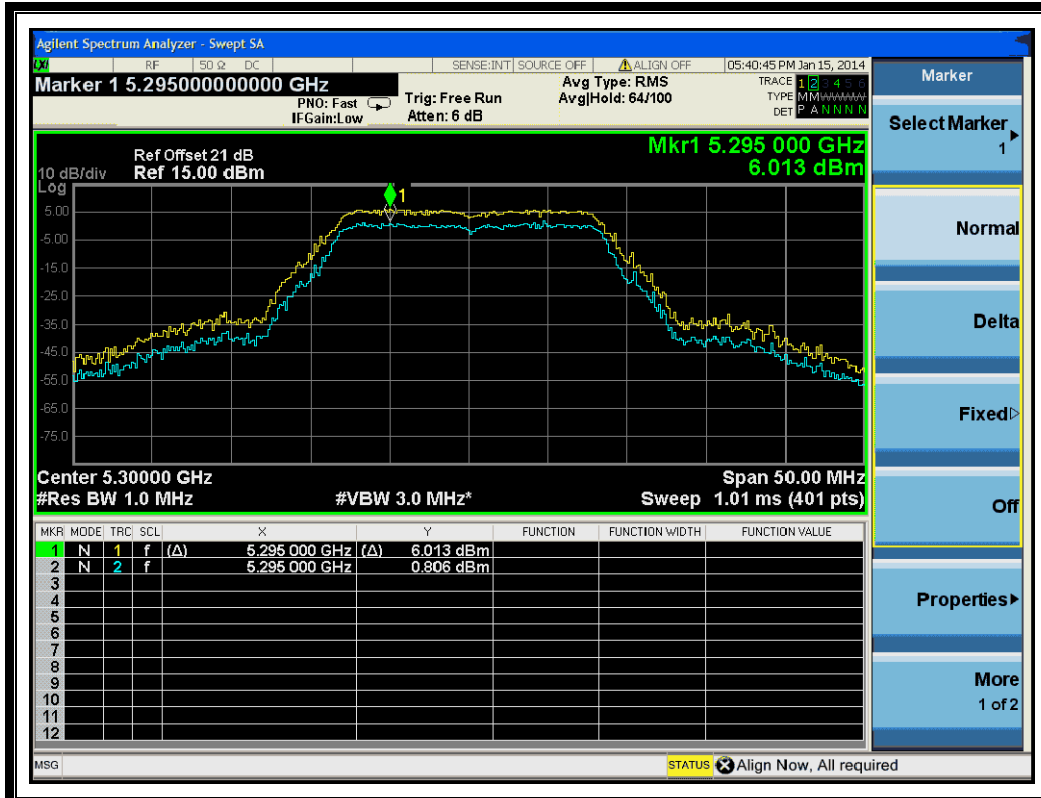
(Channel 44: 5220 MHz @ 802.11a)



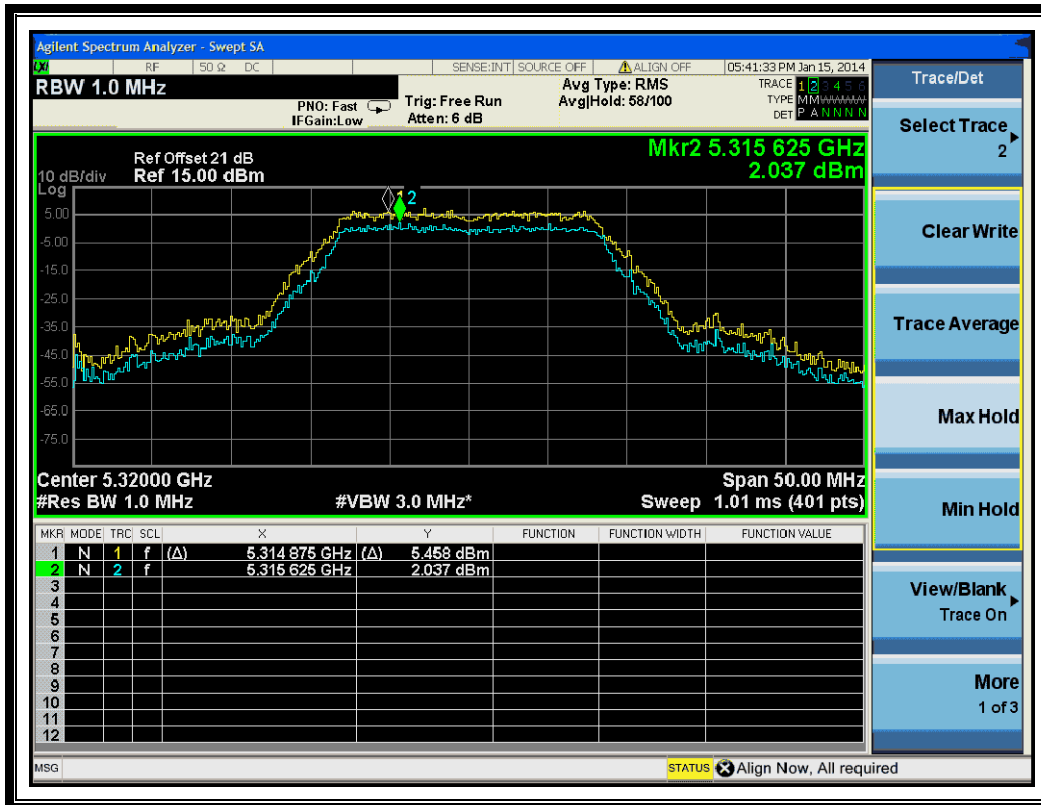
(Channel 48: 5240MHz @ 802.11a)



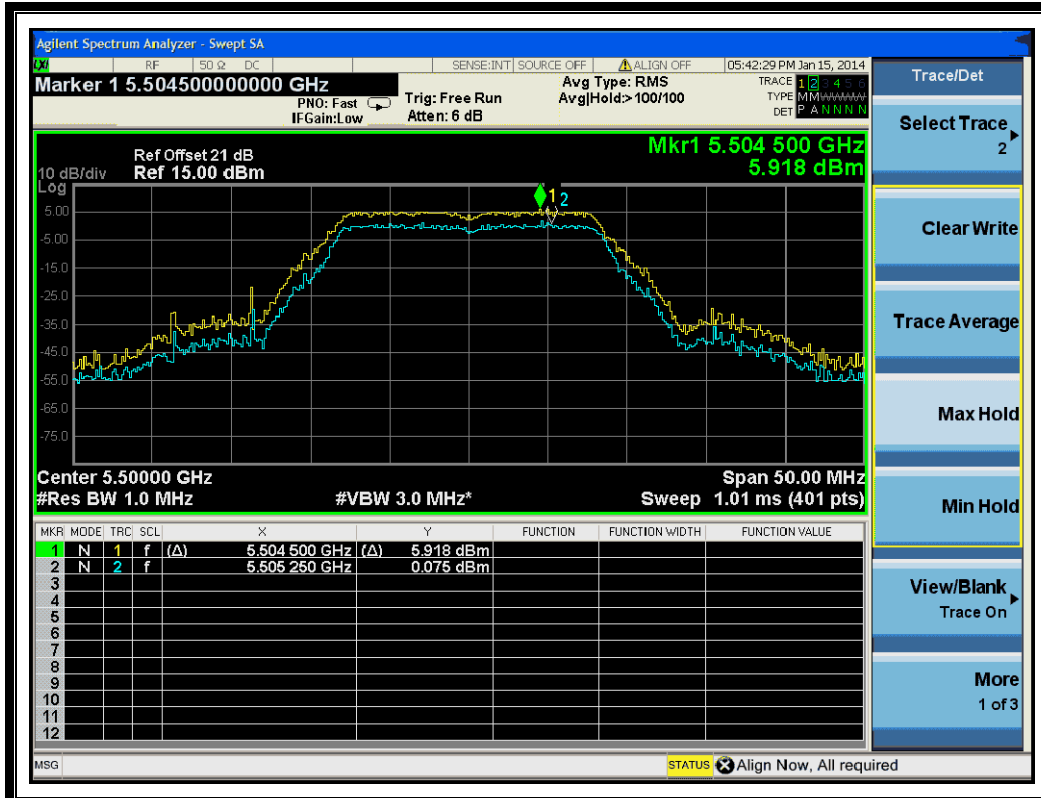
(Channel 52: 5260MHz @ 802.11a)



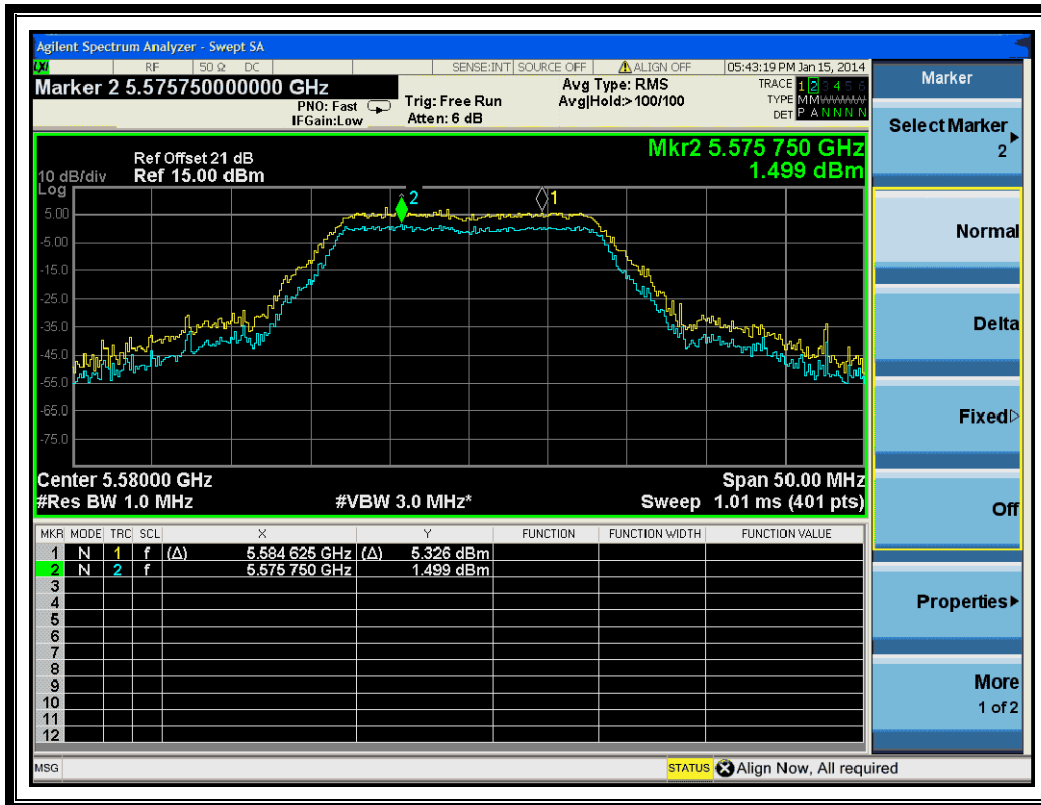
(Channel 60: 5300 MHz @ 802.11a)



(Channel 64: 5320MHz @ 802.11a)



(Channel 100: 5500MHz @ 802.11a)



(Channel 116: 5580 MHz @ 802.11a)



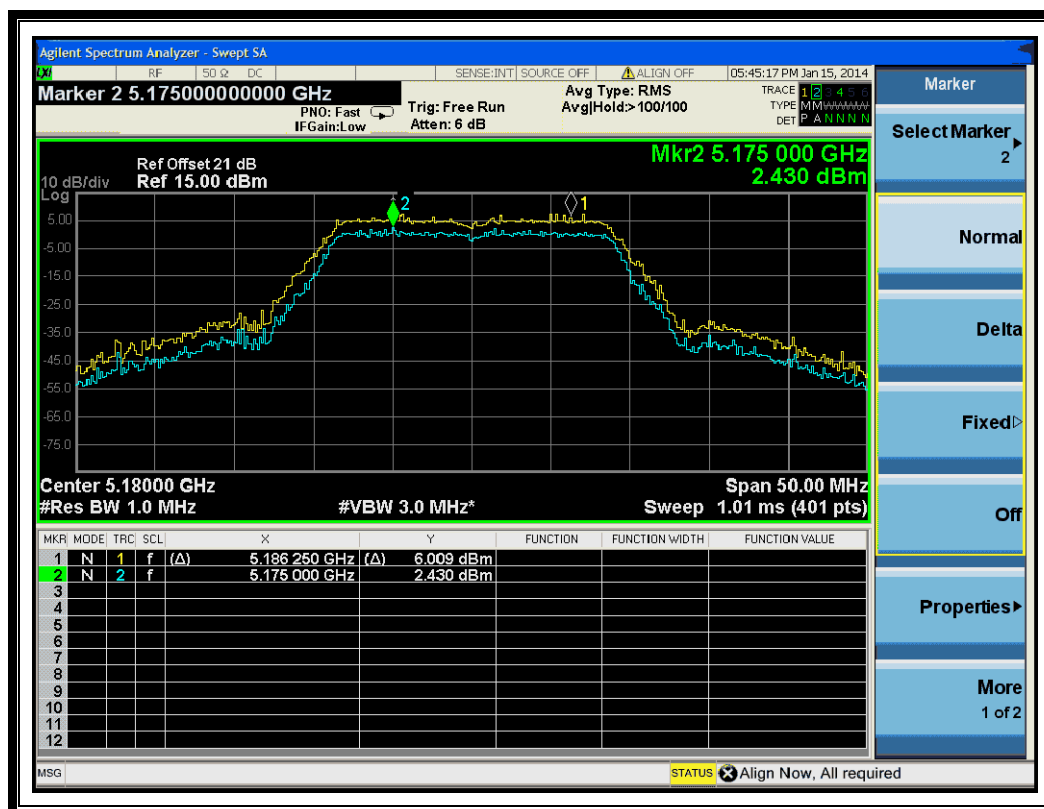
(Channel 140: 5700MHz @ 802.11a)

2.8.3.2. 802.11n-20MHz Test mode

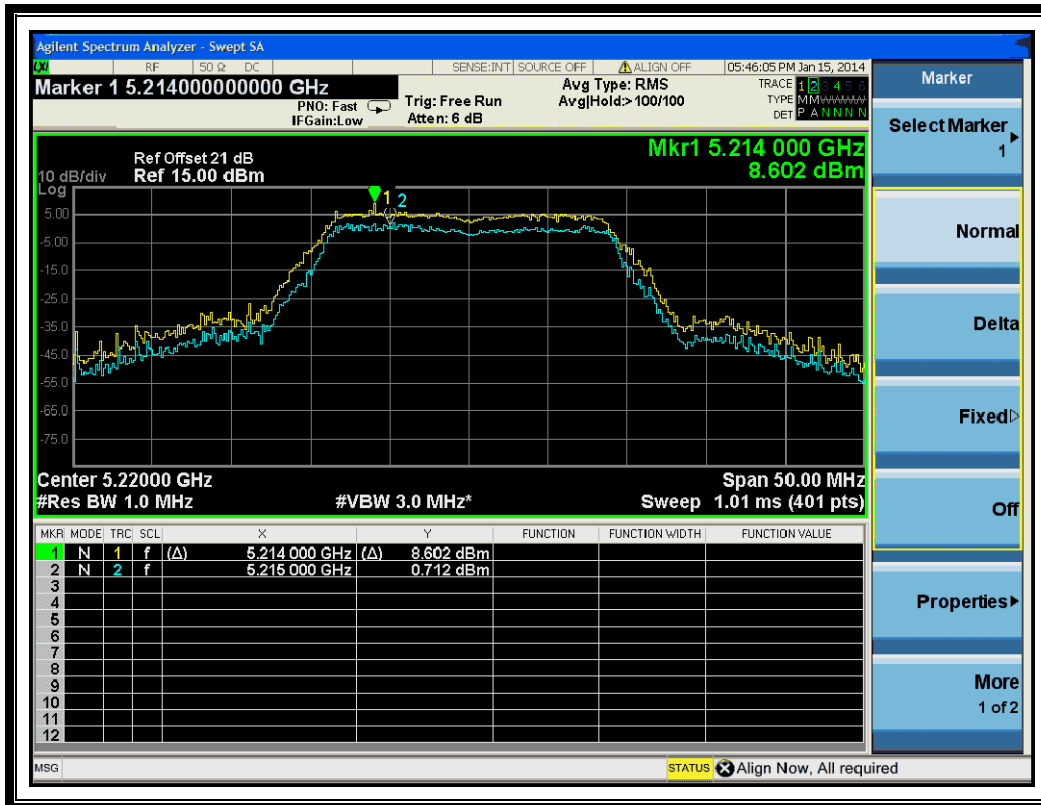
A. Test Verdict:

Channel	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Verdict
36	5180	3.579	13	PASS
44	5220	7.890	13	PASS
48	5240	4.604	13	PASS
52	5260	4.795	13	PASS
60	5300	5.042	13	PASS
64	5320	3.880	13	PASS
100	5500	5.197	13	PASS
116	5580	2.794	13	PASS
140	5700	4.852	13	PASS

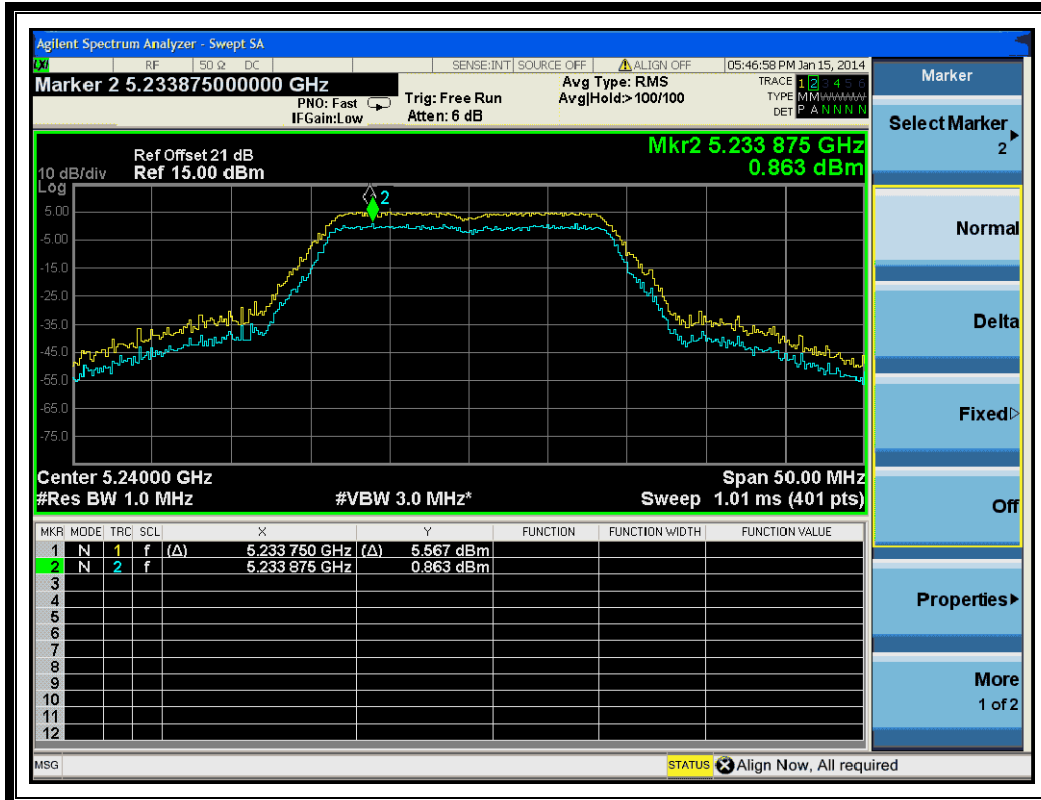
B. Test Plots:



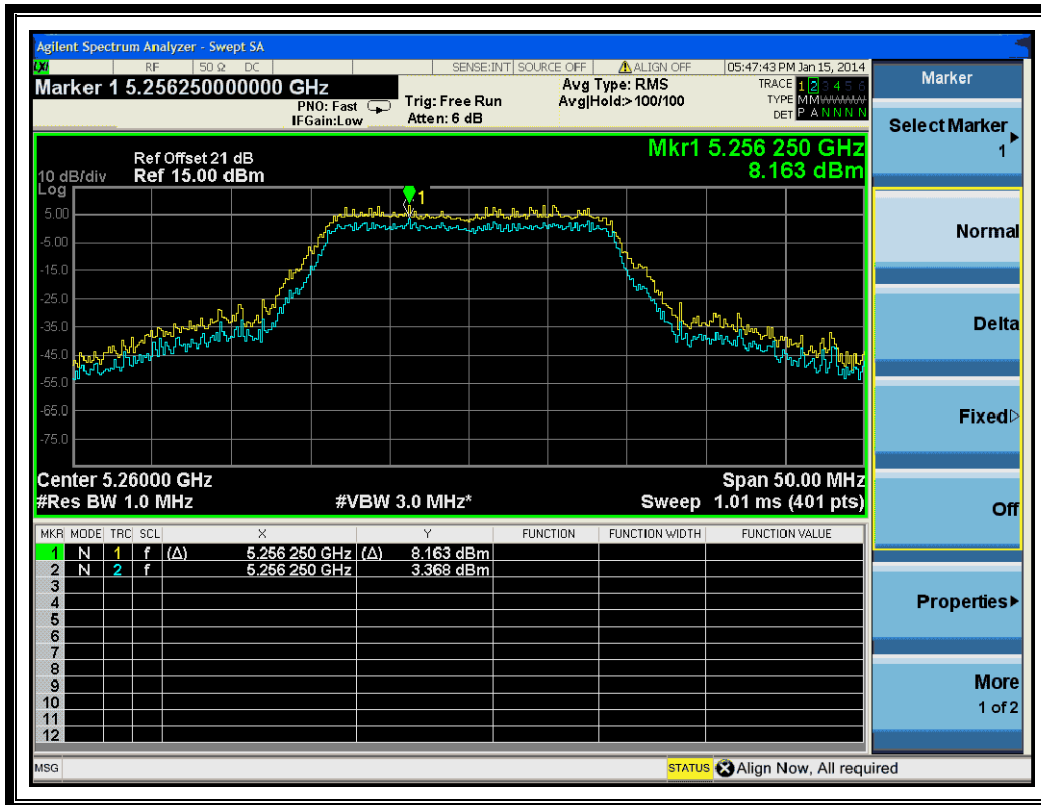
(Channel 36: 5180MHz @ 802.11n-20MHz)



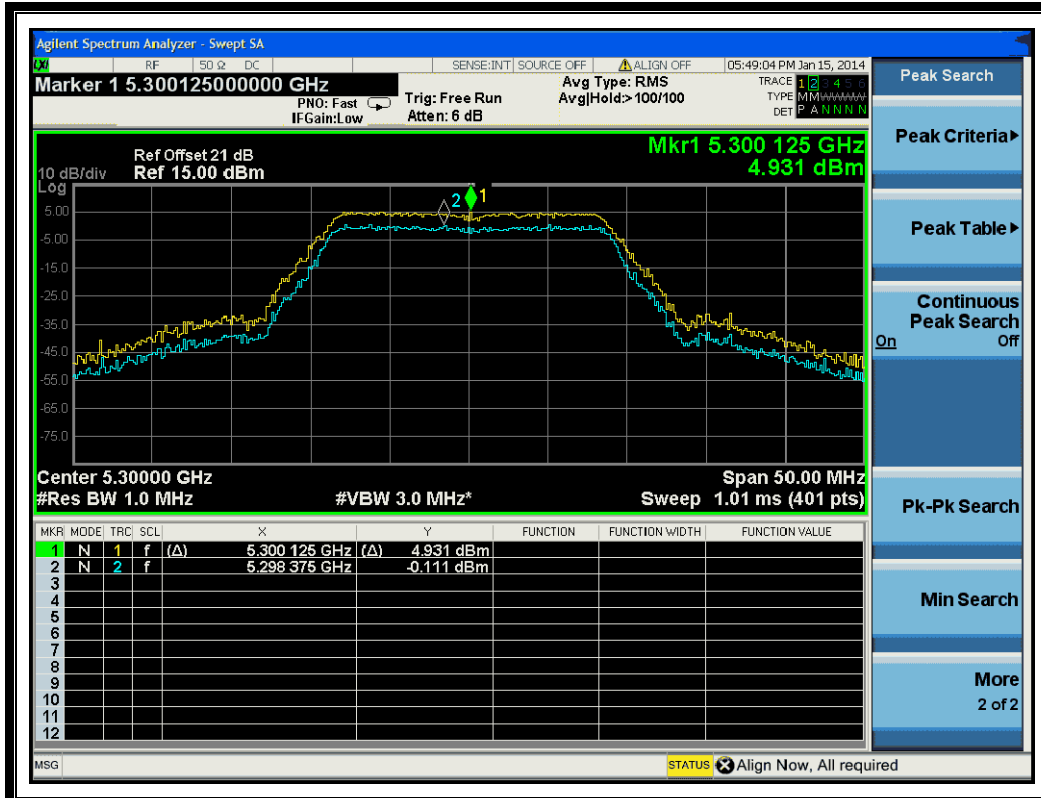
(Channel 44: 5220 MHz @ 802.11n-20MHz)



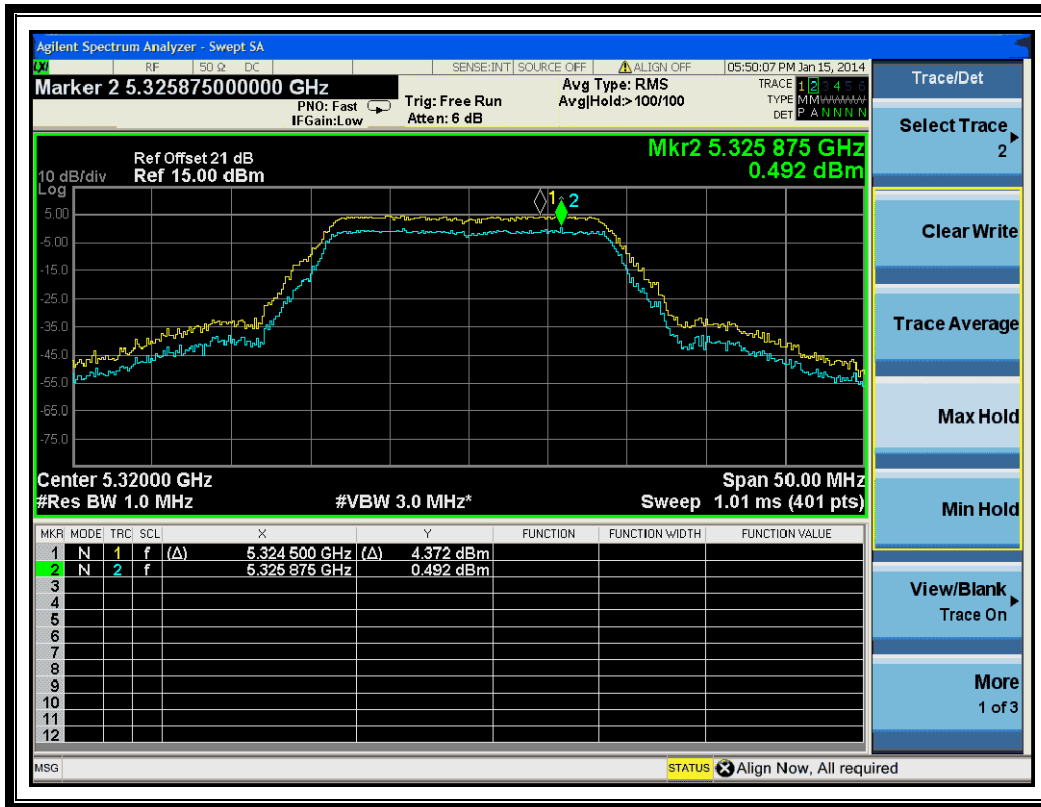
(Channel 48: 5240MHz @ 802.11n-20MHz)



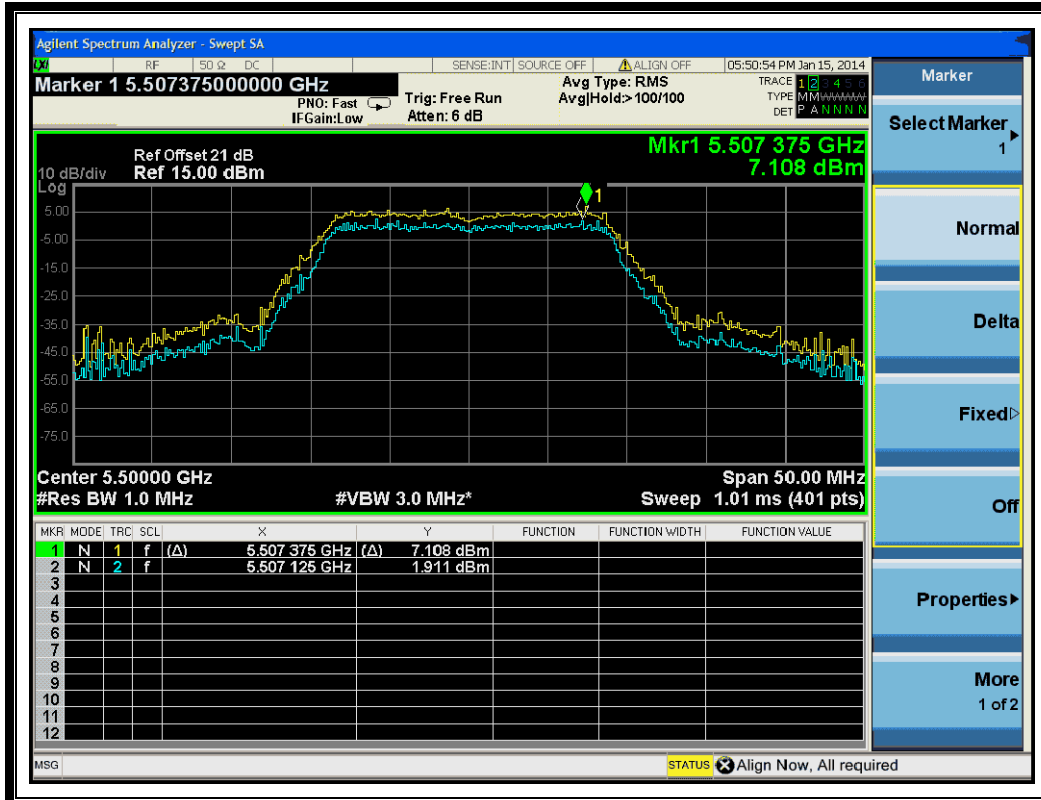
(Channel 52: 5260MHz @ 802.11n-20MHz)



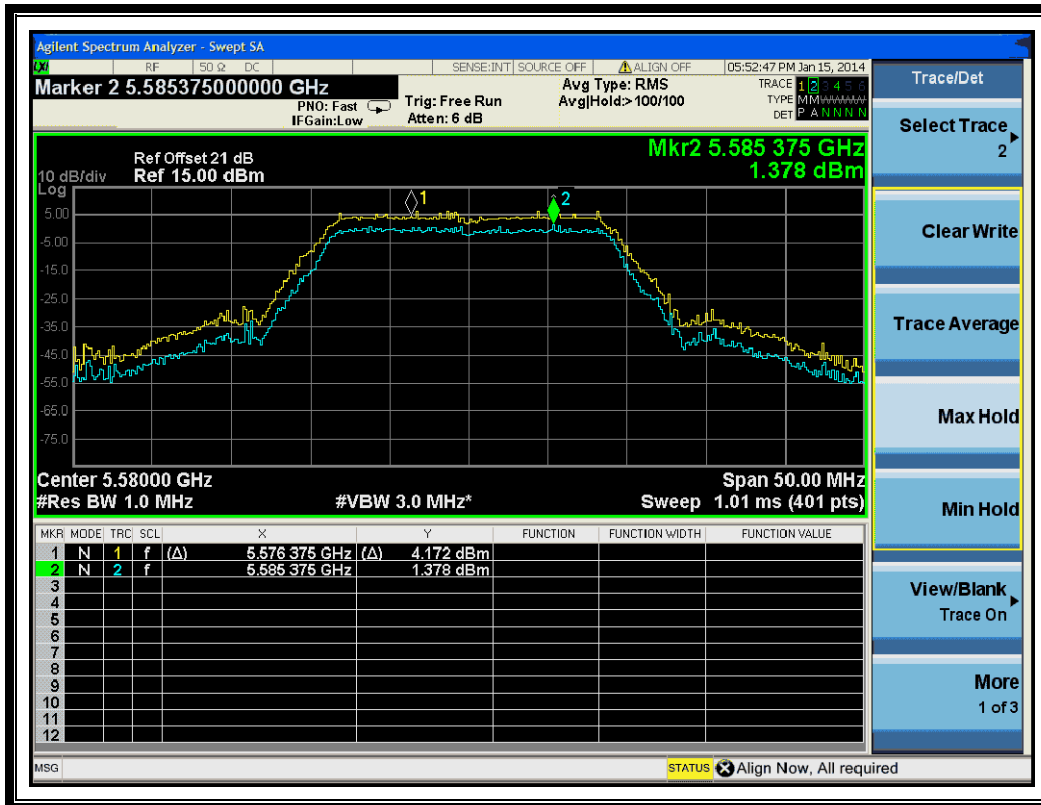
(Channel 60: 5300 MHz @ 802.11n-20MHz)



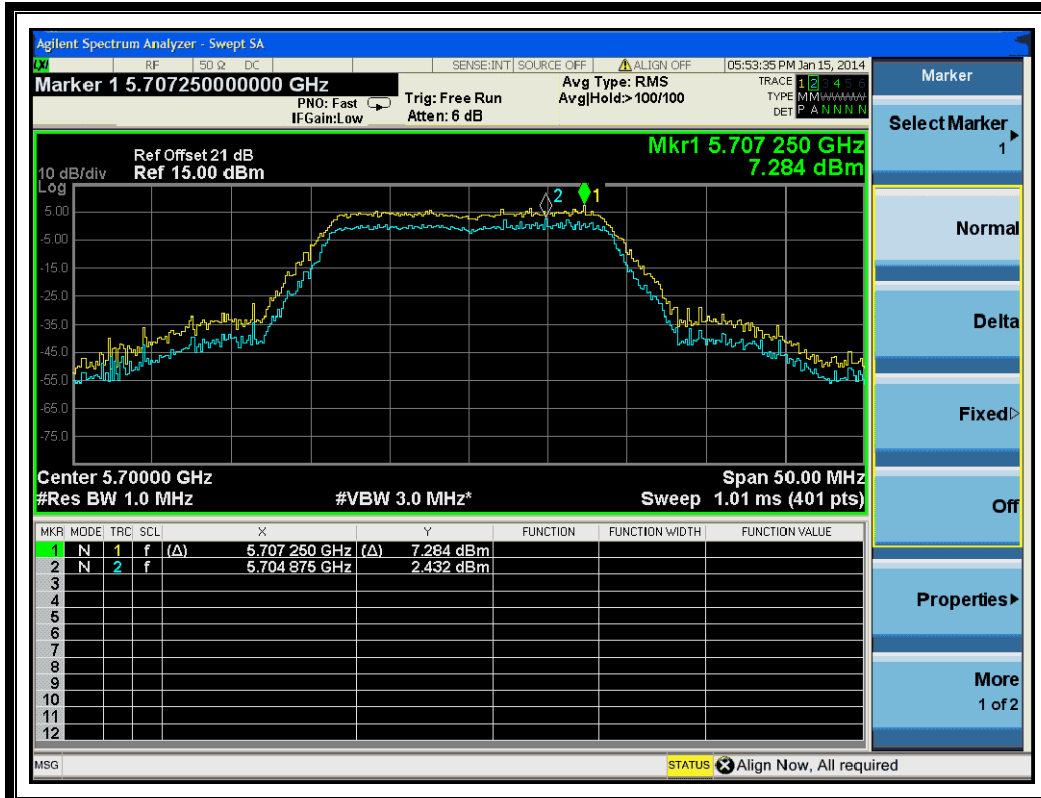
(Channel 64: 5320MHz @ 802.11n-20MHz)



(Channel 100: 5500MHz @ 802.11n-20MHz)



(Channel 116: 5580 MHz @ 802.11n-20MHz)



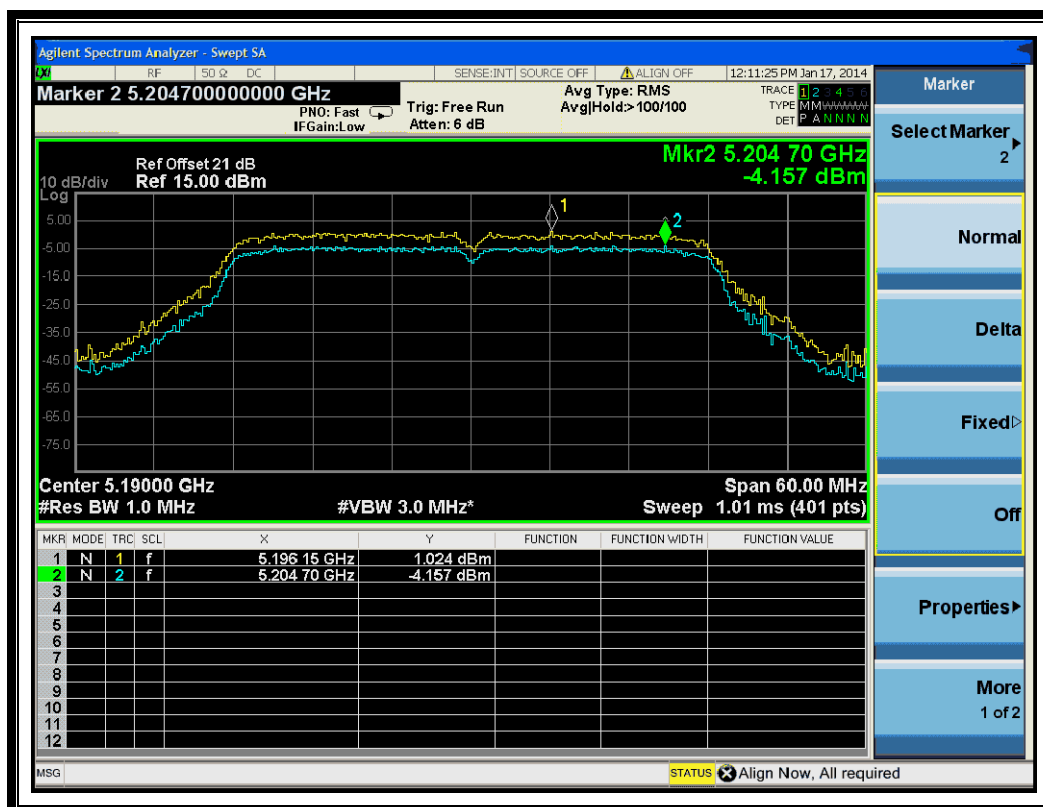
(Channel 140: 5700MHz @ 802.11n-20MHz)

2.8.3.3. 802.11n-40MHz Test mode

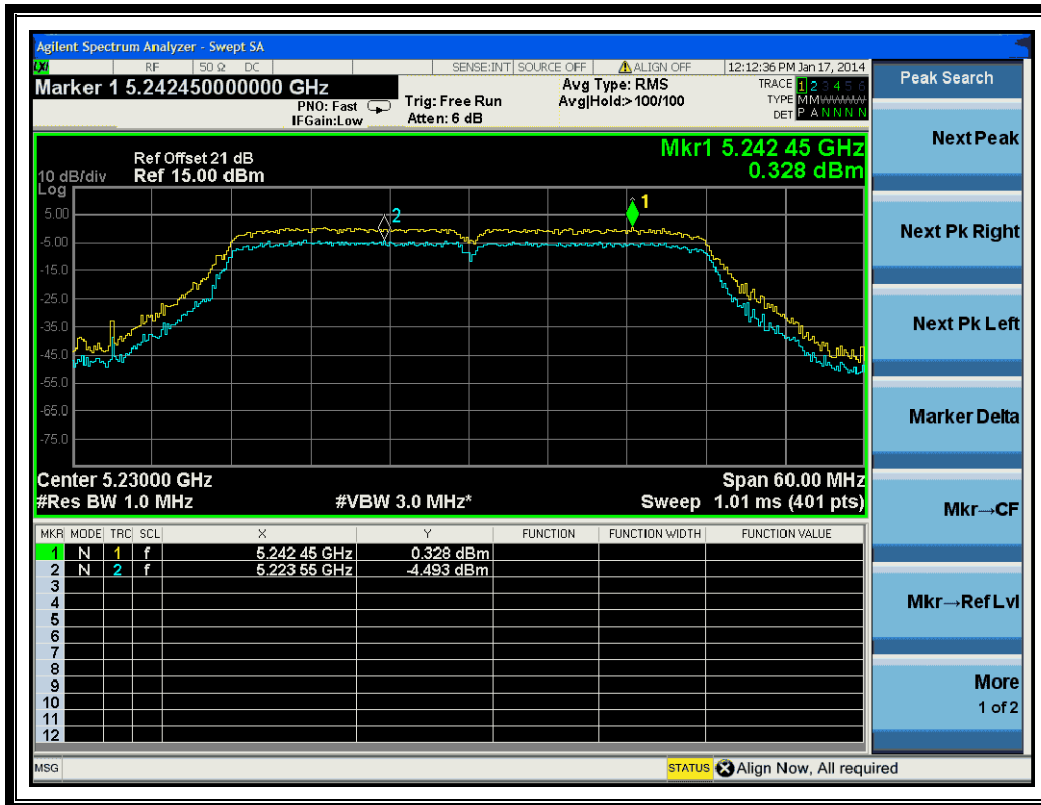
A. Test Verdict:

Channel	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Verdict
38	5190	5.181	13	PASS
46	5230	4.821	13	PASS
54	5270	4.487	13	PASS
62	5310	3.996	13	PASS
102	5510	4.751	13	PASS
110	5550	5.026	13	PASS
134	5670	5.507	13	PASS

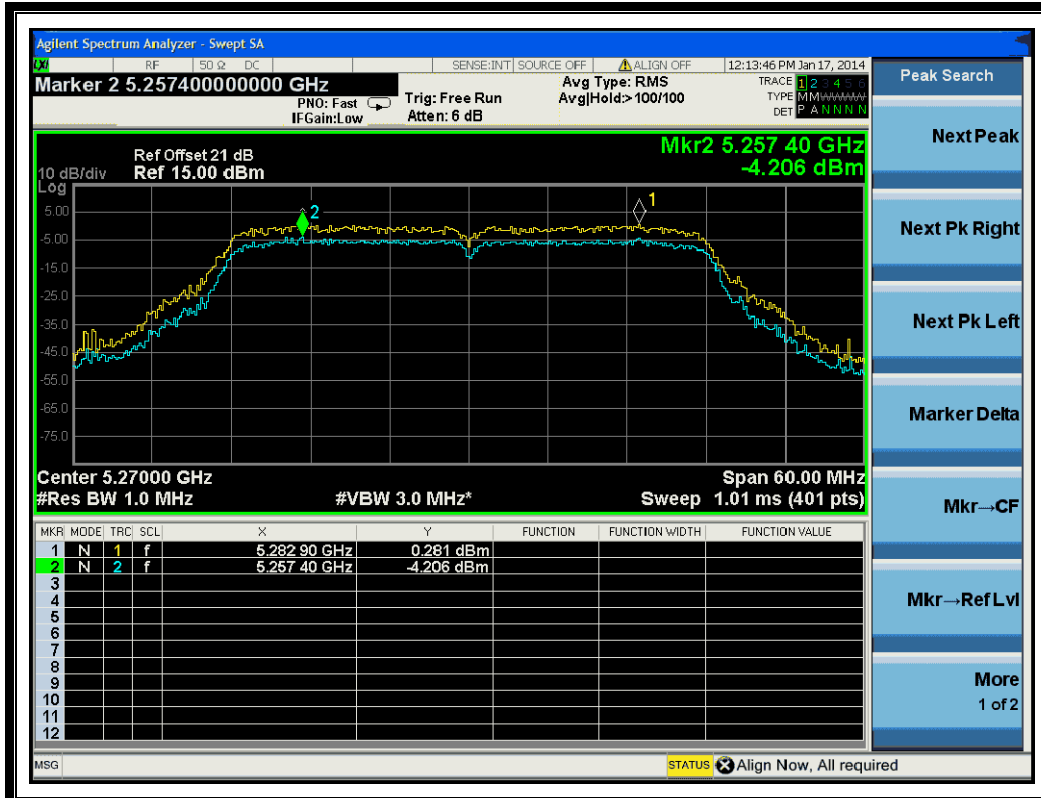
B. Test Plots:



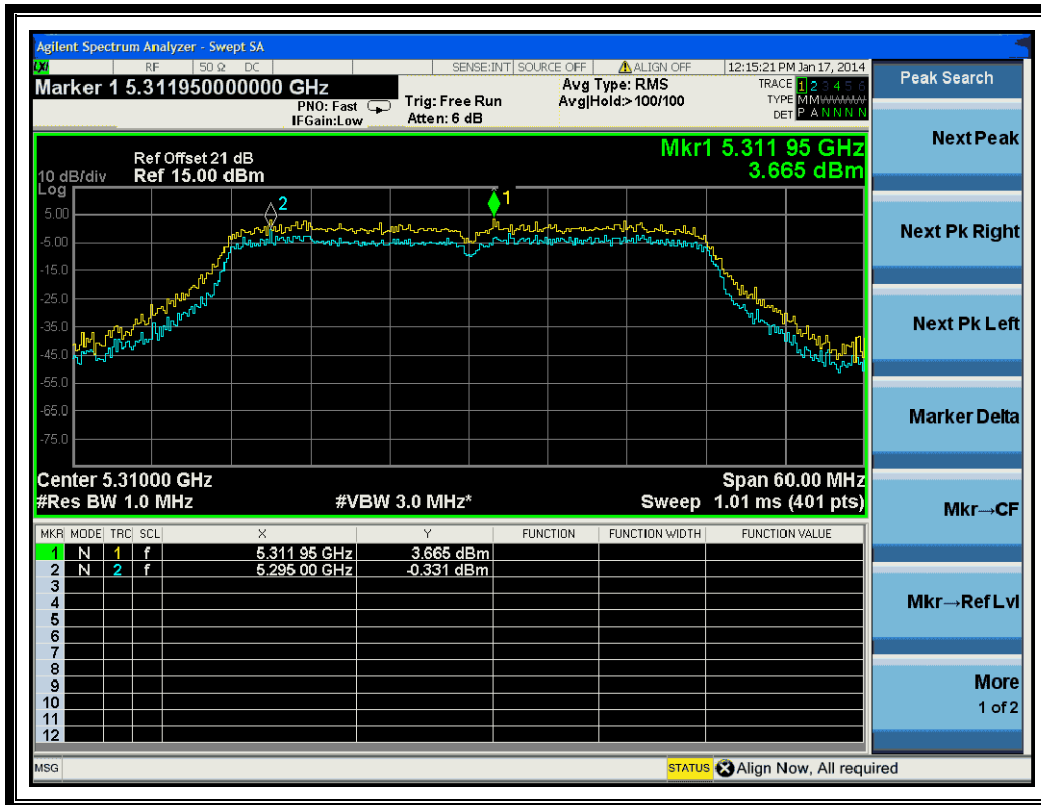
(Channel 38: 5190MHz @ 802.11n-40MHz)



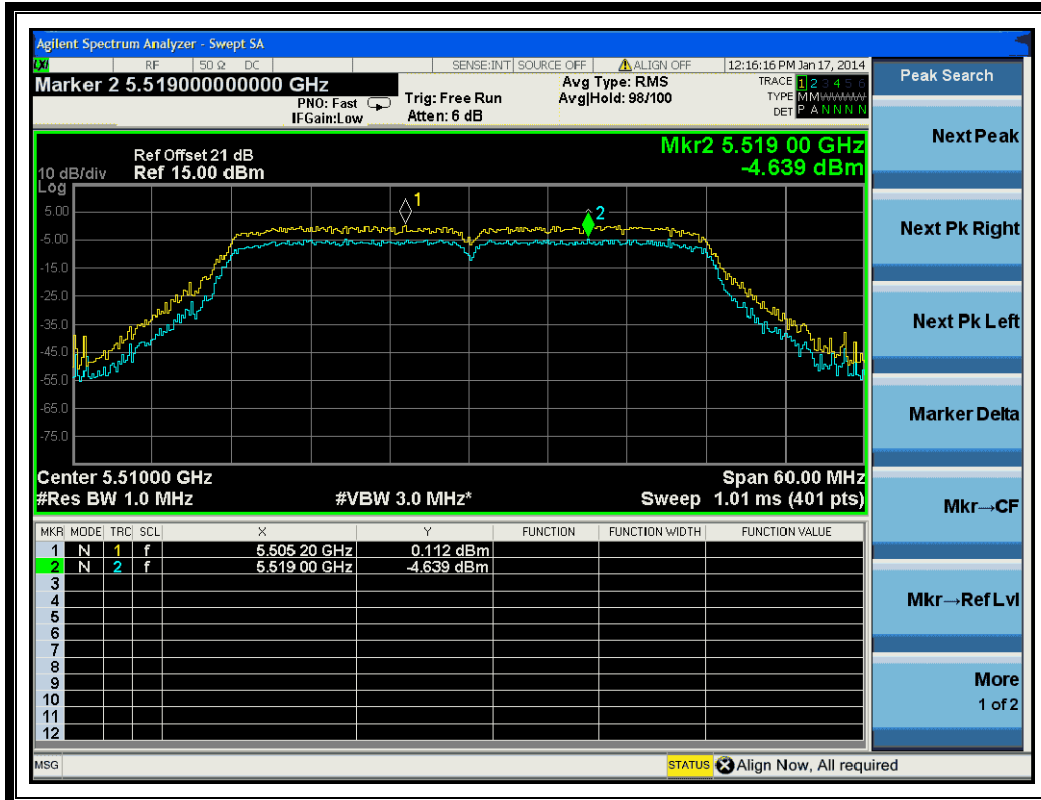
(Channel 46: 5310MHz @ 802.11n-40MHz)



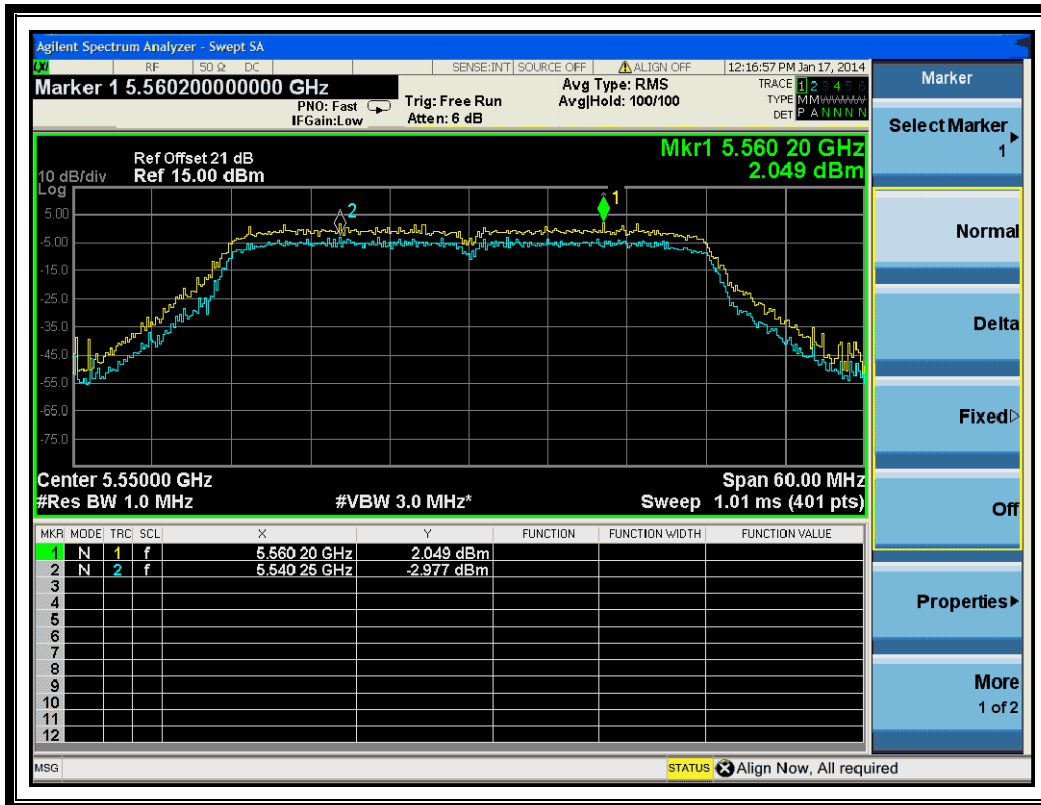
(Channel 54: 5270MHz @ 802.11n-40MHz)



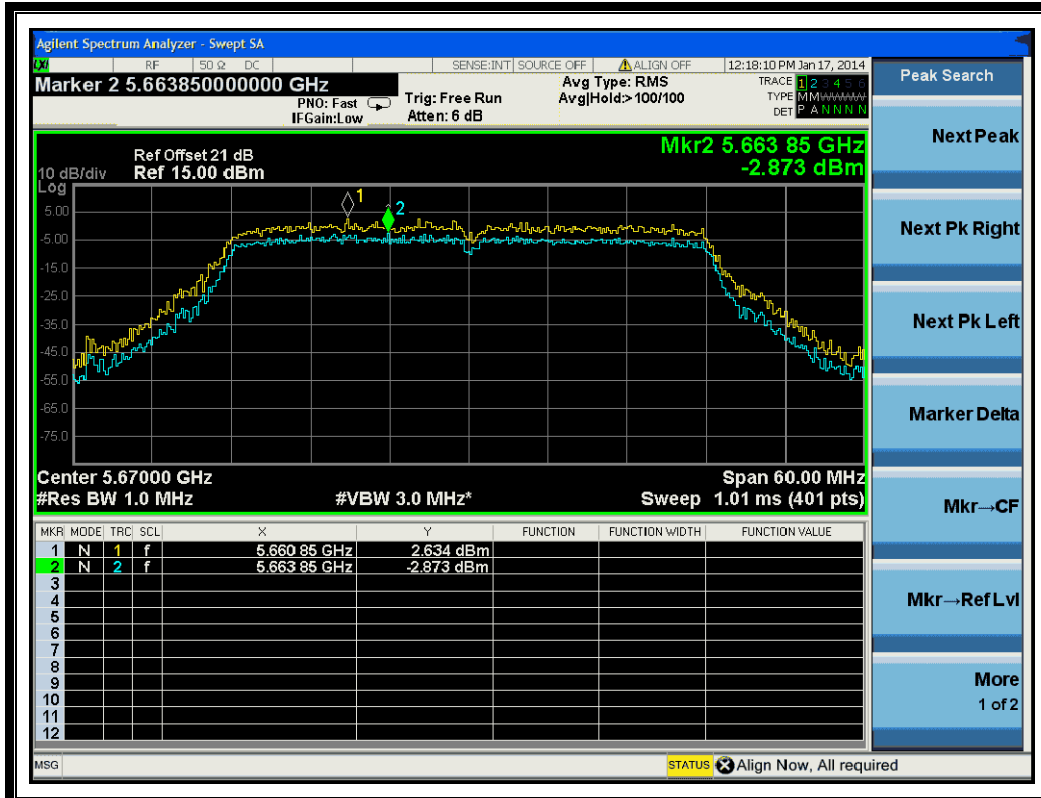
(Channel 62: 5310MHz @ 802.11n-40MHz)



(Channel 102: 5510 MHz @ 802.11n-40MHz)



(Channel 110: 5550MHz @ 802.11n-40MHz)



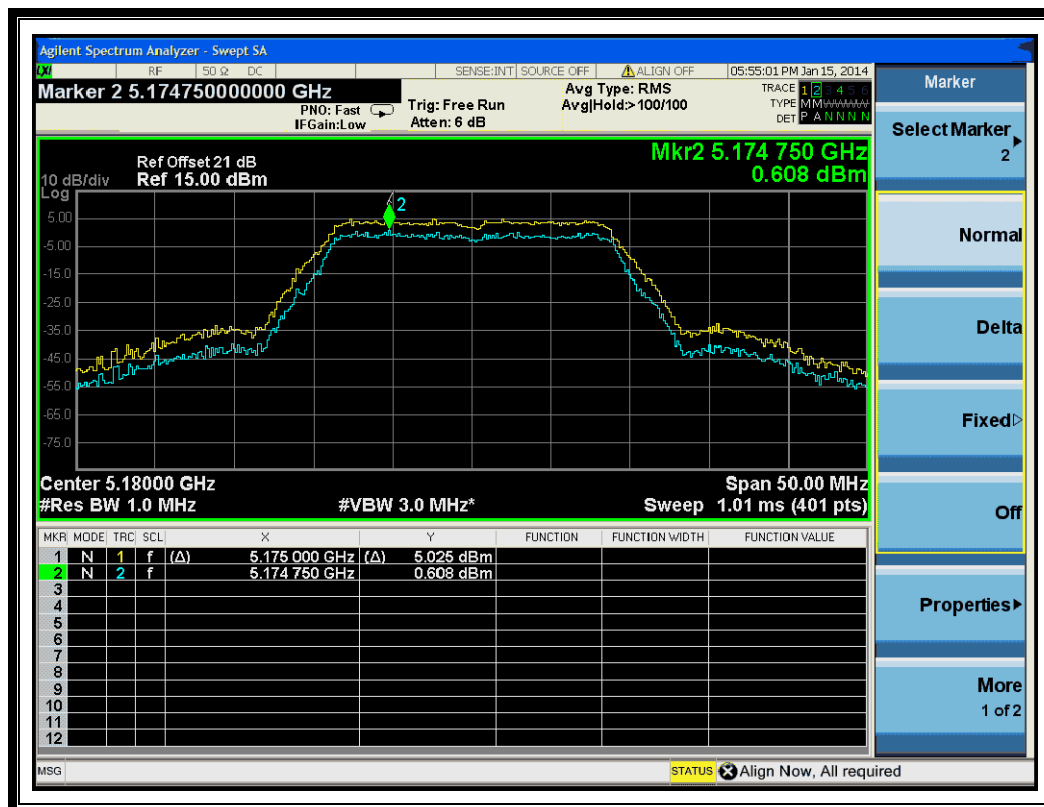
(Channel 134: 5670MHz @ 802.11n-40MHz)

2.8.3.4. 802.11ac-20MHz Test mode

A. Test Verdict:

Channel	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Verdict
36	5180	4.417	13	PASS
44	5220	2.886	13	PASS
48	5240	6.778	13	PASS
52	5260	5.355	13	PASS
60	5300	5.136	13	PASS
64	5320	4.427	13	PASS
100	5500	5.148	13	PASS
116	5580	6.749	13	PASS
140	5700	4.579	13	PASS

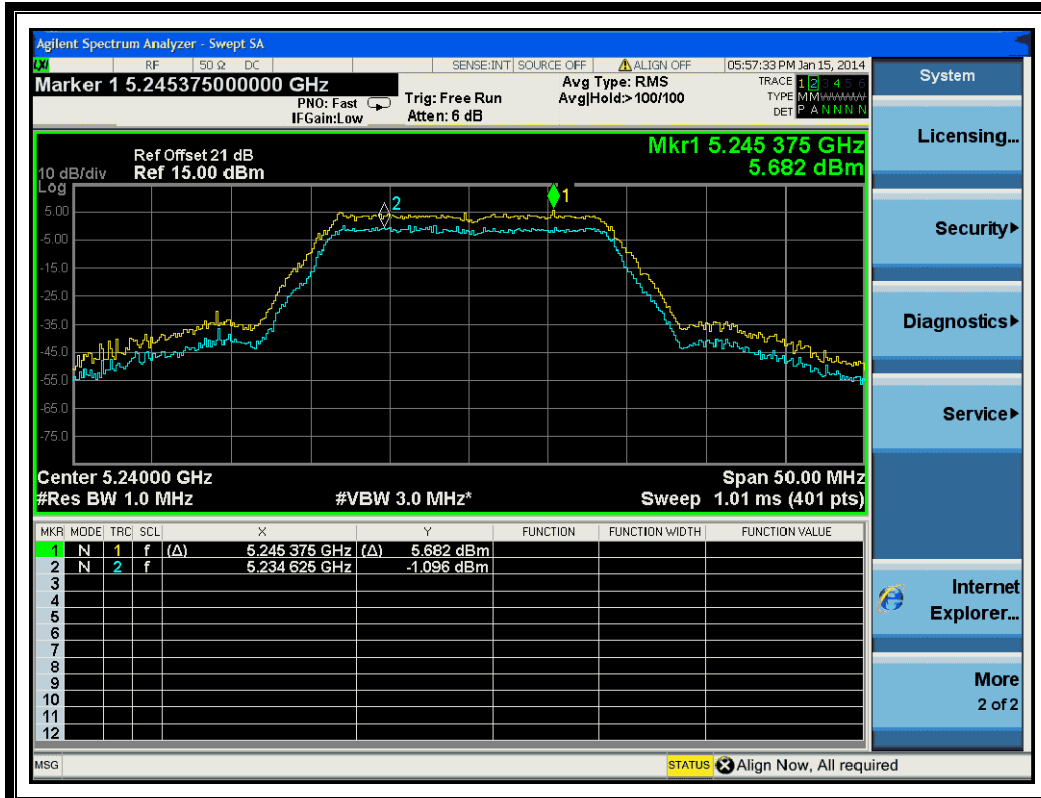
B. Test Plots:



(Channel 36: 5180MHz @ 802.11ac-20MHz)



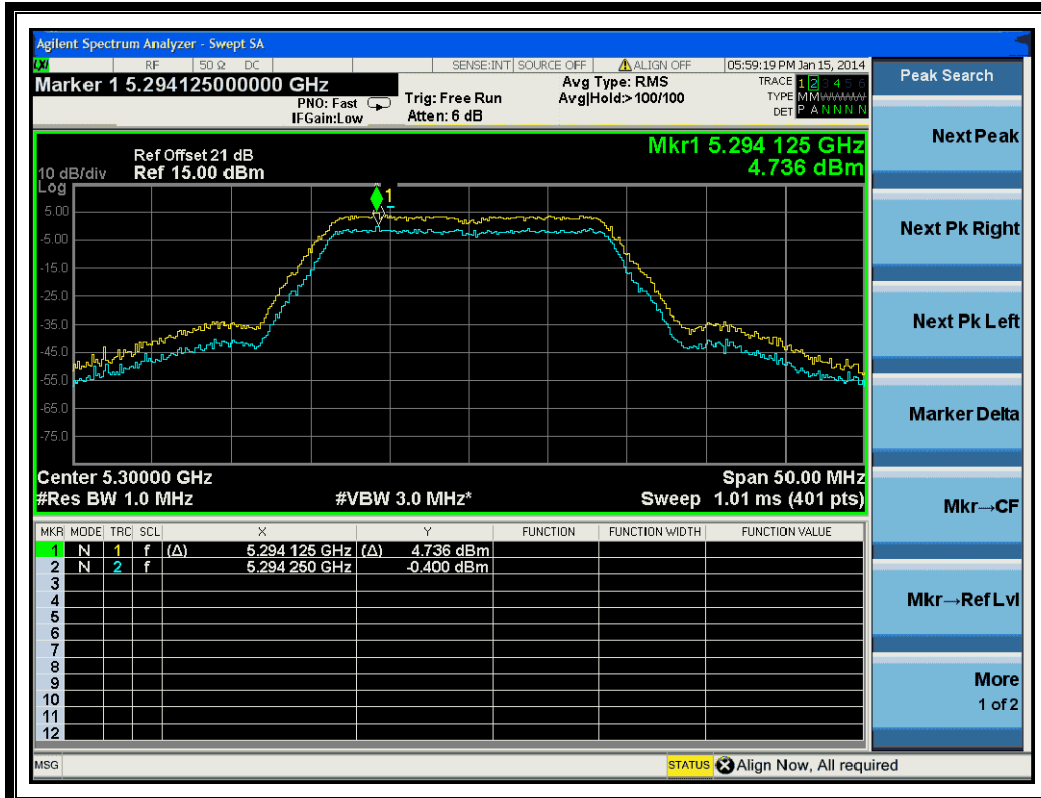
(Channel 44: 5220 MHz @ 802.11ac-20MHz)



(Channel 48: 5240MHz @ 802.11ac-20MHz)



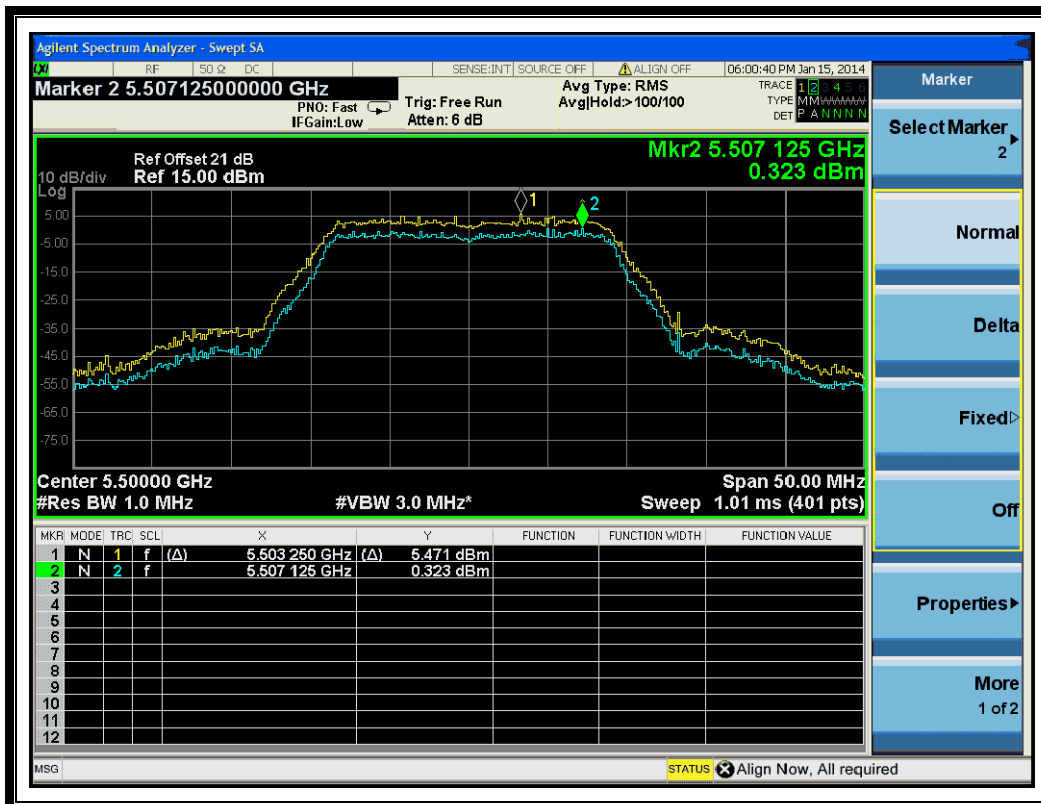
(Channel 52: 5260MHz @ 802.11ac-20MHz)



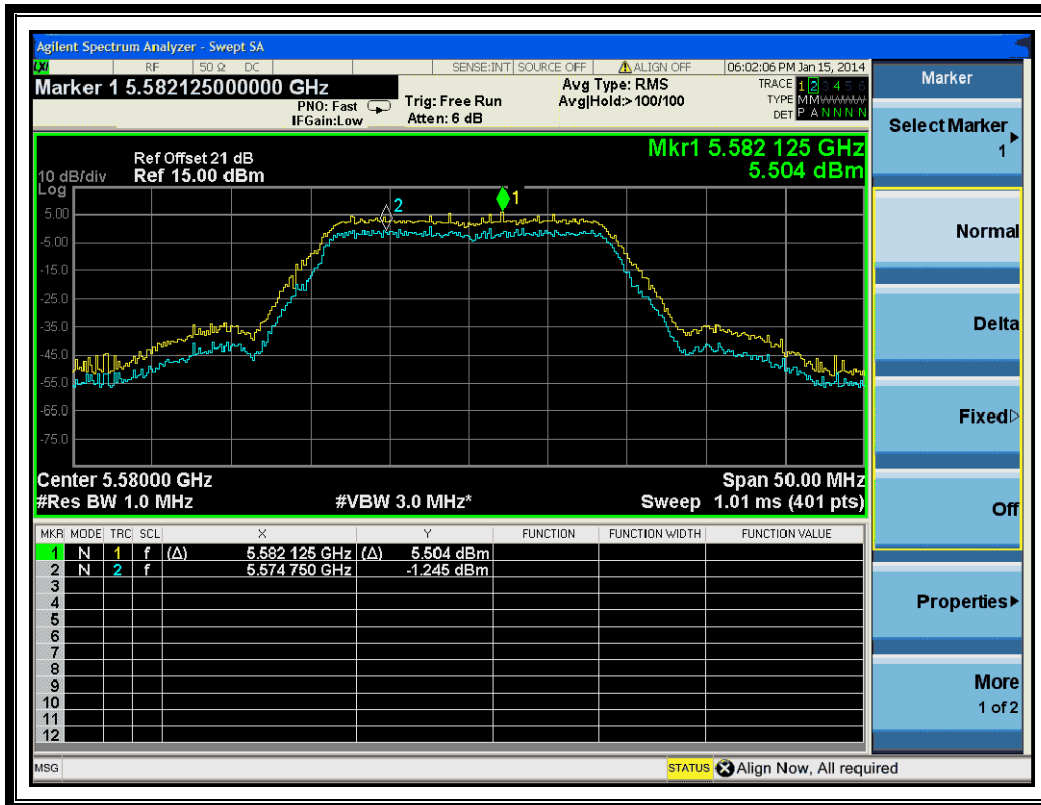
(Channel 60: 5300 MHz @ 802.11ac-20MHz)



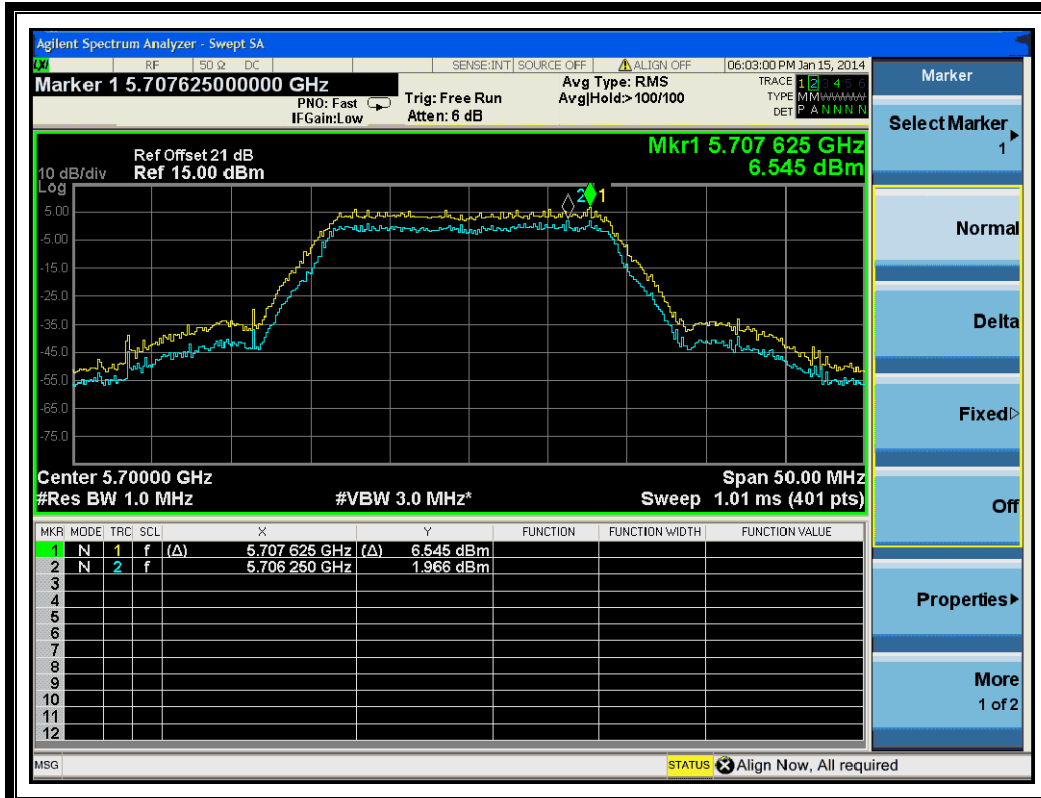
(Channel 64: 5320MHz @ 802.11ac-20MHz)



(Channel 100: 5500MHz @ 802.11ac-20MHz)



(Channel 116: 5580 MHz @ 802.11ac-20MHz)



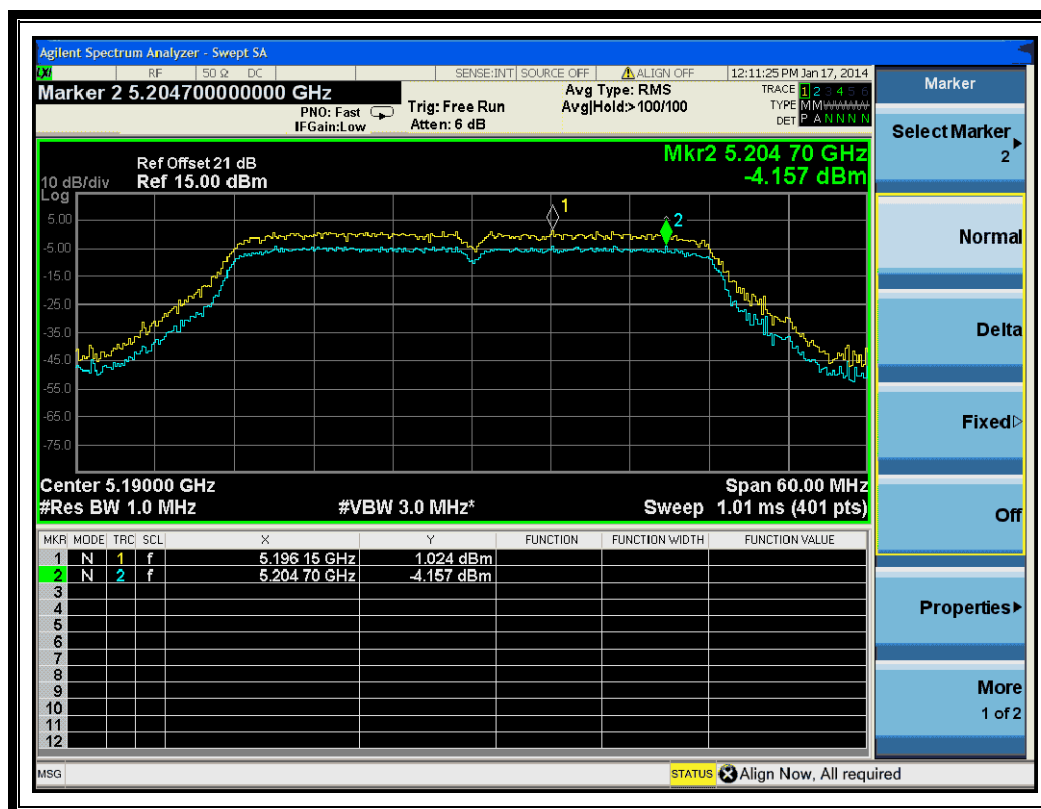
(Channel 140: 5700MHz @ 802.11ac-20MHz)

2.8.3.5. 802.11ac-40MHz Test mode

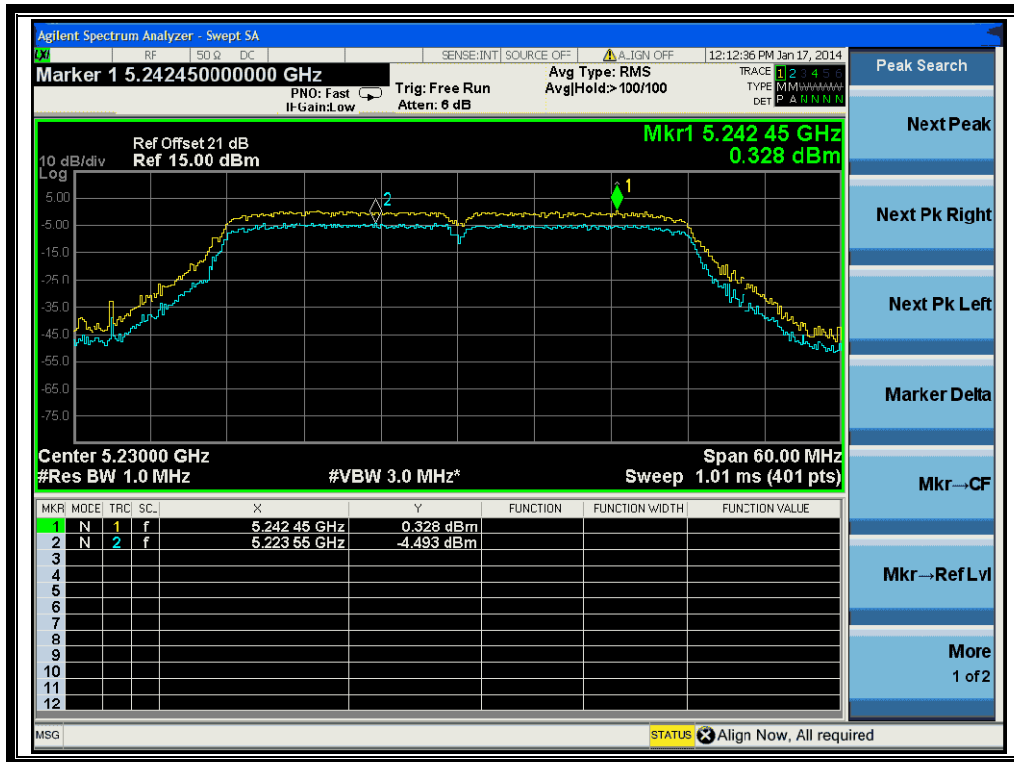
A. Test Verdict:

Channel	Frequency (MHz)	Peak Excursion (dB)	Limit (dB)	Verdict
38	5190	5.181	13	PASS
46	5230	4.821	13	PASS
54	5270	4.487	13	PASS
62	5310	3.996	13	PASS
102	5510	4.751	13	PASS
110	5550	5.026	13	PASS
134	5670	5.507	13	PASS

B. Test Plots:



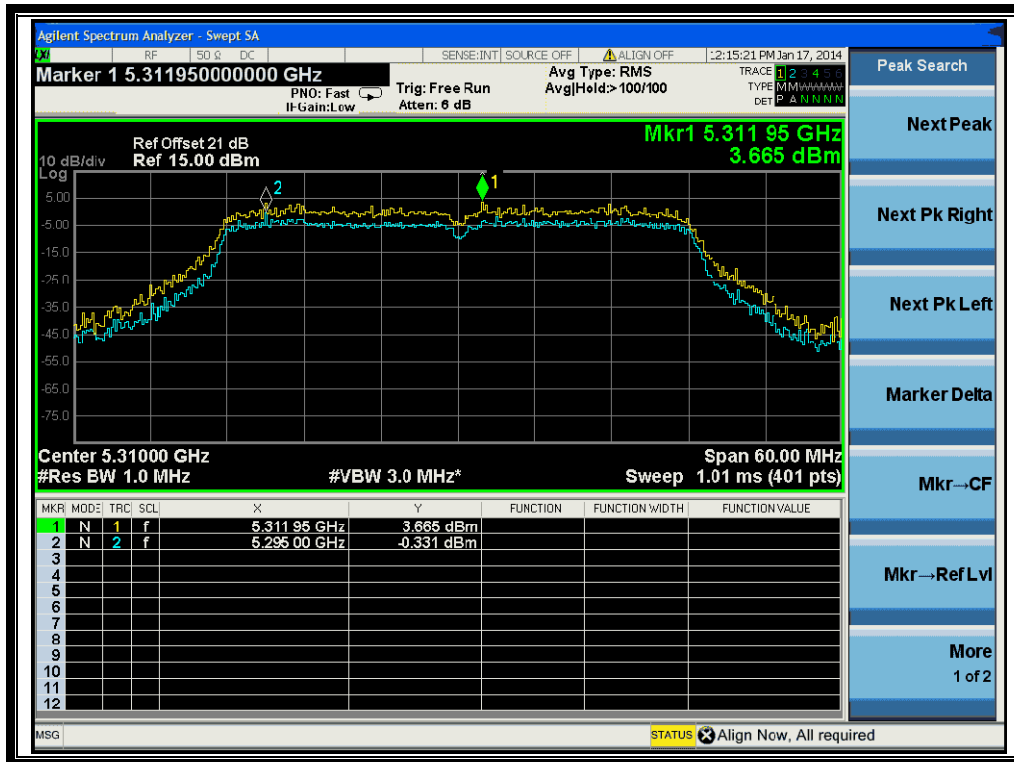
(Channel 38: 5190MHz @ 802.11ac-40MHz)



(Channel 46: 5230 MHz @ 802.11ac-40MHz)



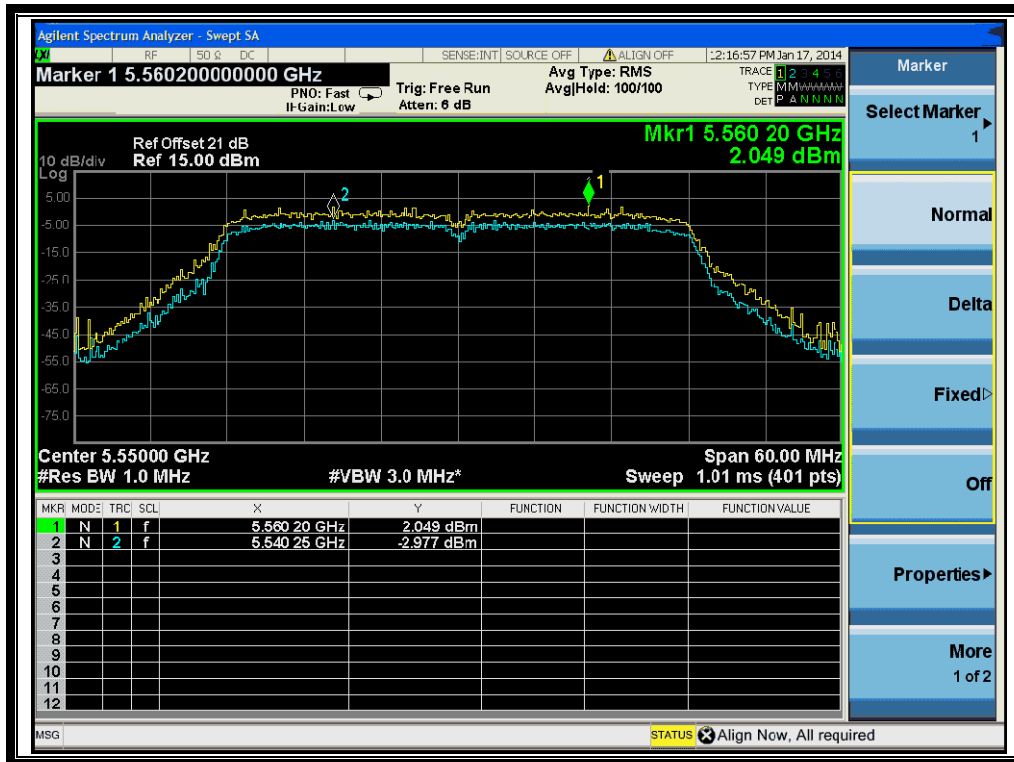
(Channel 54: 5270MHz @ 802.11ac-40MHz)



(Channel 62: 5310MHz @ 802.11ac-40MHz)



(Channel 102: 5510 MHz @ 802.11ac-40MHz)



(Channel 110: 5550MHz @ 802.11ac-40MHz)



(Channel 134: 5670MHz @ 802.11ac-40MHz)

2.9. Frequency Stability

2.9.1. Requirement

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

2.9.2. Test Procedure

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between -30°C and +50°C. The temperature was incremented by 10° intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded. Data for the worst case channel is shown below.

A. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
DC Power Supply	Good Will	GPS-3030DD	EF920938	2013.05.13	2014.05.12
Temperature Chamber	YinHe Experimental Equip.	HL4003T	(n.a.)	2013.05.13	2014.05.12

2.9.3. Test Result

Frequency Stability Measurements for UNII Band 1 (Ch. 36)

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq Dev. (Hz)	Deviation (%)
100%	3.80	+20(Ref)	5,179,999,983	-17	-0.00000033
100%		-30	5,179,999,987	-13	-0.00000025
100%		-20	5,180,000,000	0	0.00000000
100%		-10	5,179,999,999	-1	-0.00000002
100%		0	5,179,999,988	-12	-0.00000023
100%		+10	5,179,999,987	-13	-0.00000025
100%		+20	5,179,999,986	-14	-0.00000027
100%		+30	5,180,000,006	6	0.00000012
100%		+40	5,180,000,001	1	0.00000002
100%		+50	5,179,999,995	-5	-0.00000010
114%	4.35	+20	5,180,000,011	11	0.00000021
BATT.ENDPOINT	3.60	+20	5,179,999,991	-9	-0.00000017

Frequency Stability Measurements for UNII Band 2 (Ch. 52)

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq Dev. (Hz)	Deviation (%)
100%	3.80	+20(Ref)	5,260,000,001	1	0.00000002
100%		-30	5,260,000,009	9	0.00000017
100%		-20	5,259,999,994	-6	-0.00000011
100%		-10	5,259,999,999	-1	-0.00000002
100%		0	5,260,000,004	4	0.00000008
100%		+10	5,260,000,001	1	0.00000002
100%		+20	5,260,000,003	3	0.00000006
100%		+30	5,260,000,004	4	0.00000008
100%		+40	5,260,000,013	13	0.00000025
100%		+50	5,259,999,989	-11	-0.00000021
114%	4.35	+20	5,260,000,020	20	0.00000038
BATT.ENDPOINT	3.60	+20	5,260,000,006	6	0.00000011

Frequency Stability Measurements for UNII Band 3 (Ch. 100)

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq Dev. (Hz)	Deviation(%)
100%	3.80	+20(Ref)	5,500,000,007	7	0.00000013
100%		-30	5,499,999,987	-13	-0.00000024
100%		-20	5,500,000,002	2	0.00000004
100%		-10	5,499,999,988	-12	-0.00000022
100%		0	5,500,000,005	5	0.00000009
100%		+10	5,499,999,992	-8	-0.00000015
100%		+20	5,500,000,018	18	0.00000033
100%		+30	5,500,000,002	2	0.00000004
100%		+40	5,499,999,994	-6	-0.00000011
100%		+50	5,500,000,000	0	0.00000000
114%	4.35	+20	5,500,000,006	6	0.00000011
BATT.ENDPOINT	3.60	+20	5,499,999,989	-11	-0.00000020

Note:

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

2.10. Conducted Emission

2.10.1. Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

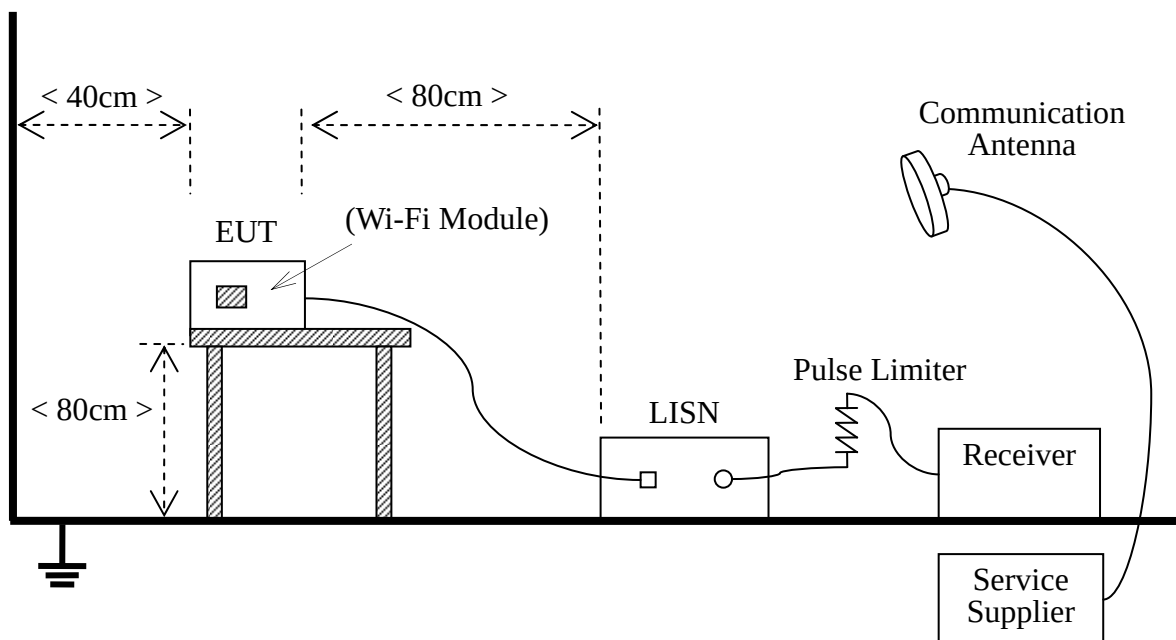
Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

- The lower limit shall apply at the band edges.
- The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

2.10.2. Test Description

A. Test Setup:



The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.4:2009

The EUT is powered by the Battery charged with the AC Adapter which is powered by 120V, 60Hz AC mains supply. The factors of the site are calibrated to correct the reading. During the measurement, the EUT is activated and controlled by the Wi-Fi Service Supplier (SS) via a Common Antenna.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2013.05.12	2014.05.11
LISN	Schwarzbeck	NSLK 8127	812744	2013.05.12	2014.05.11
Service Supplier	R&S	CMU200	100448	2013.05.12	2014.05.11
Pulse Limiter (20dB)	Schwarzbeck	VTSD 9561-D	9391	(n.a.)	(n.a.)

2.10.3. Test Result

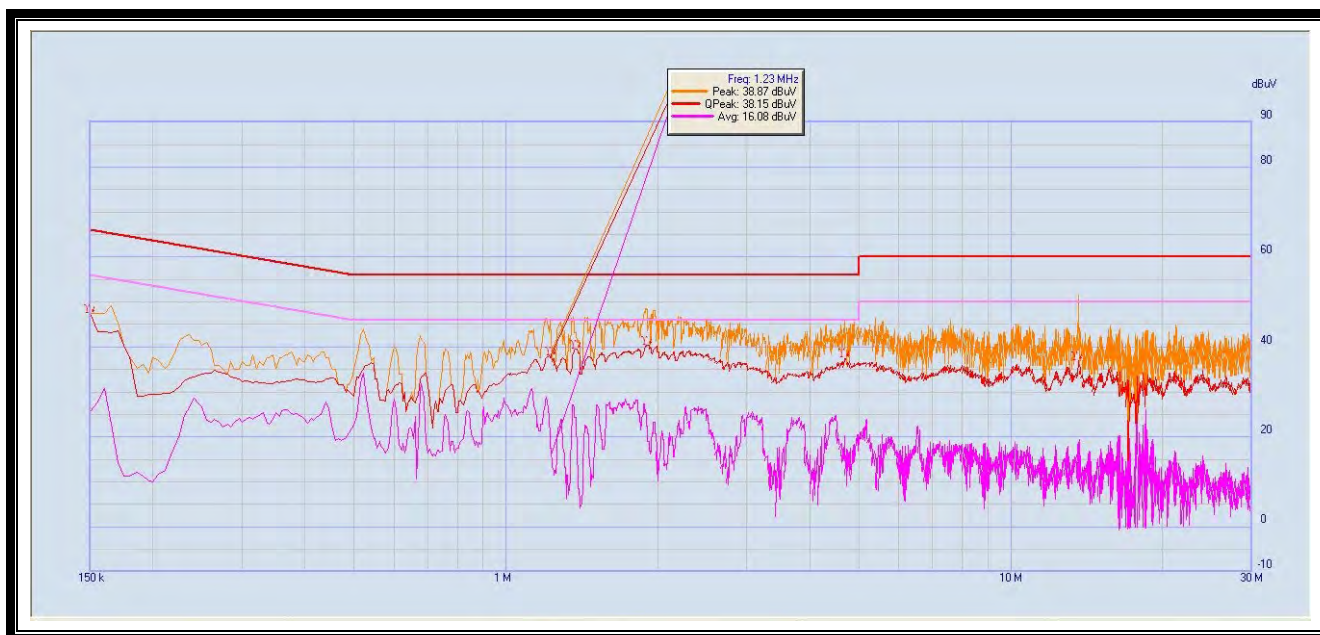
The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Note: All test modes are performed, only the worst case is recorded in this report.

A. Test setup:

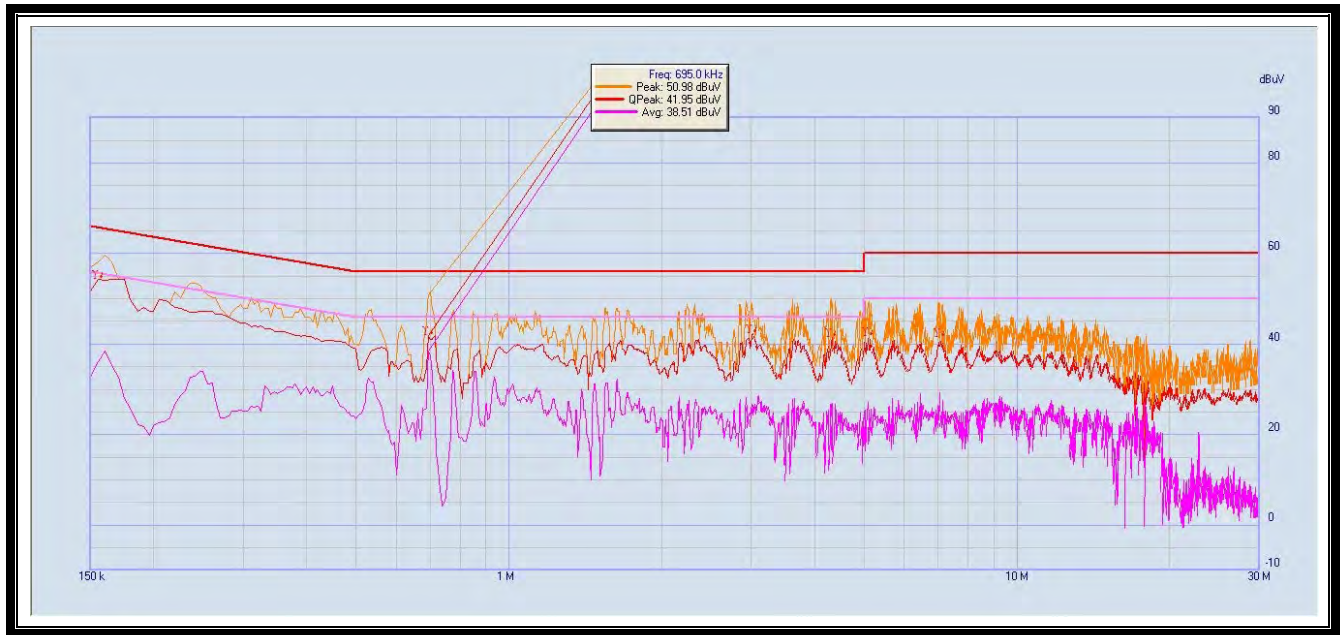
The EUT configuration of the emission tests is EUT + Link.

B. Test Plots:



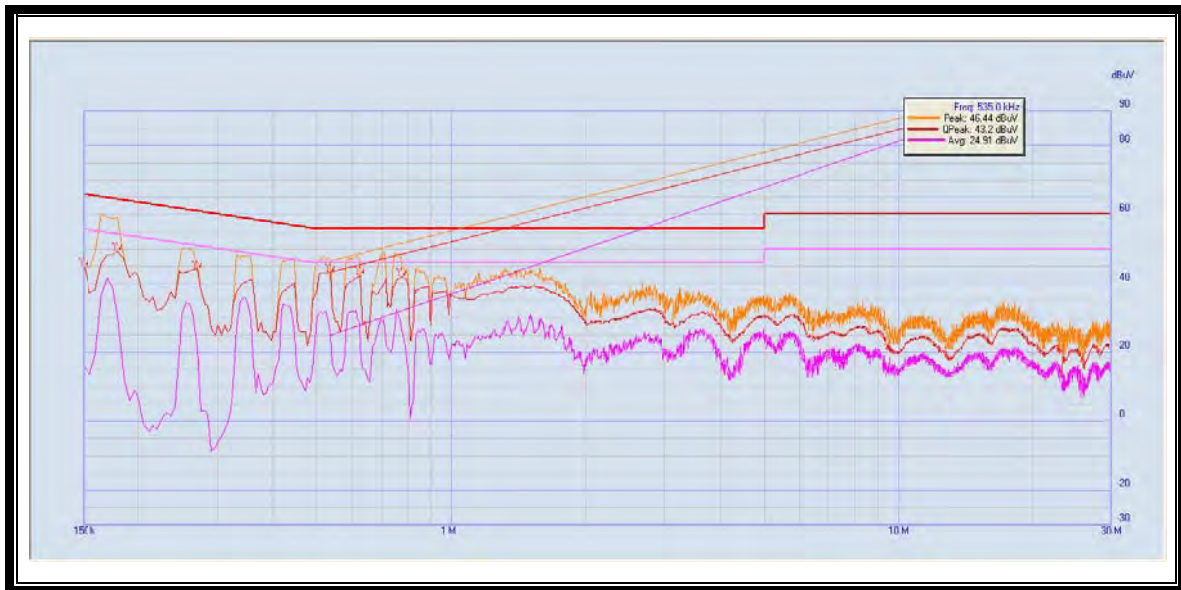
NO.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.150	47.41	25.70	66.00	56.00	Line	PASS
2	1.230	38.15	17.48	56.00	46.00		PASS
3	1.375	39.55	24.38	56.00	46.00		PASS
4	1.905	40.42	22.32	56.00	46.00		PASS
5	4.685	37.04	20.23	56.00	46.00		PASS
6	13.56	37.02	17.46	60.00	50.00		PASS

(Plot A: Adapter AK717, L Phase)



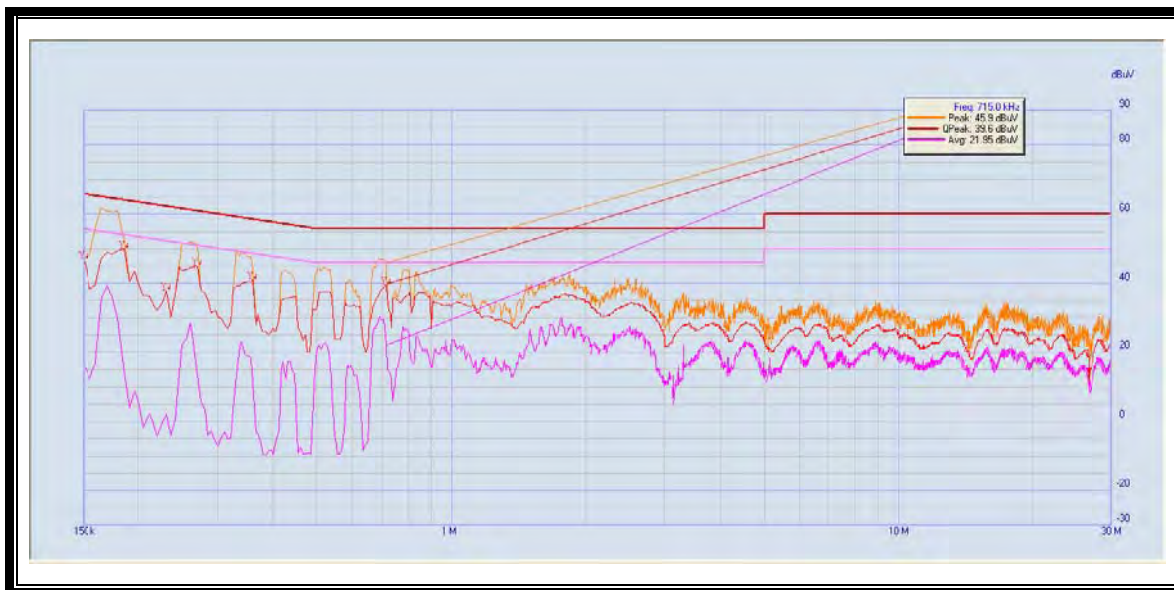
NO.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.155	54.39	36.10	66.00	56.00	Neutral	PASS
2	0.695	41.95	38.51	56.00	46.00		PASS
3	3.005	42.08	26.74	56.00	46.00		PASS
4	4.310	40.49	26.89	56.00	46.00		PASS
5	5.080	40.95	25.48	60.00	50.00		PASS
6	7.070	40.13	24.78	60.00	50.00		PASS

(Plot B: Adapter AK717, N Phase)



NO.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.15	44.93	41.58	66.00	56.00	Line	PASS
2	0.18	49.54	34.75	65.14	55.14		PASS
3	0.27	44.35	35.82	62.57	52.57		PASS
4	0.535	43.20	33.94	56.00	46.00		PASS
5	0.625	42.59	32.10	56.00	46.00		PASS
6	0.775	42.13	32.42	56.00	46.00		PASS

(Plot A: Adapter AK719, L Phase)



NO.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.15	46.87	39.27	66.00	56.00	Neutral	PASS
2	0.185	50.01	28.43	65.00	55.00		PASS
3	0.23	37.85	30.33	63.71	53.71		PASS
4	0.27	44.89	28.24	62.57	52.57		PASS
5	0.36	41.02	29.90	60.00	50.00		PASS
6	0.715	39.60	27.48	56.00	46.00		PASS

(Plot B: Adapter AK719, N Phase)

2.11. Radiated Emission

2.11.1. Requirement

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

(1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.

(2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz. Devices operating in the 5.25–5.35 GHz band that generate emissions in the 5.15–5.25 GHz band must meet all applicable technical requirements for operation in the 5.15–5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15–5.25 GHz band.

(3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.

(4) For transmitters operating in the 5.725–5.825 GHz band: all emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an EIRP of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an EIRP of -27 dBm/MHz.

The following formula is used to convert the equipment isotropic radiated power(eirp) to field strength (dBμV/m);

$$E = 1000000 \times \sqrt{30P} / 3 \mu\text{V/m}$$

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30

1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Note:

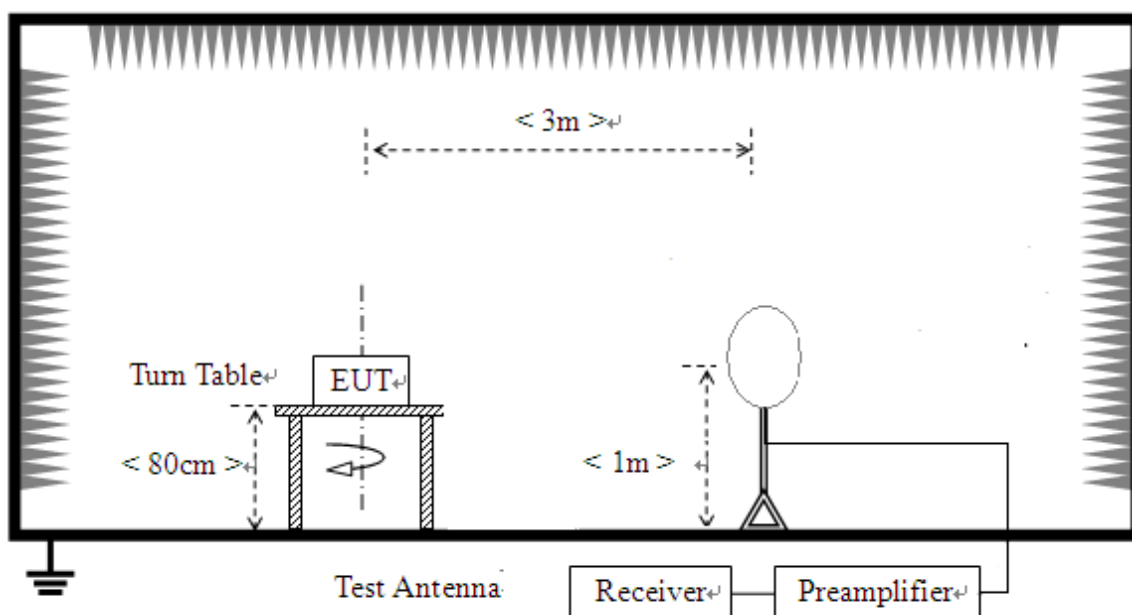
- For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table)

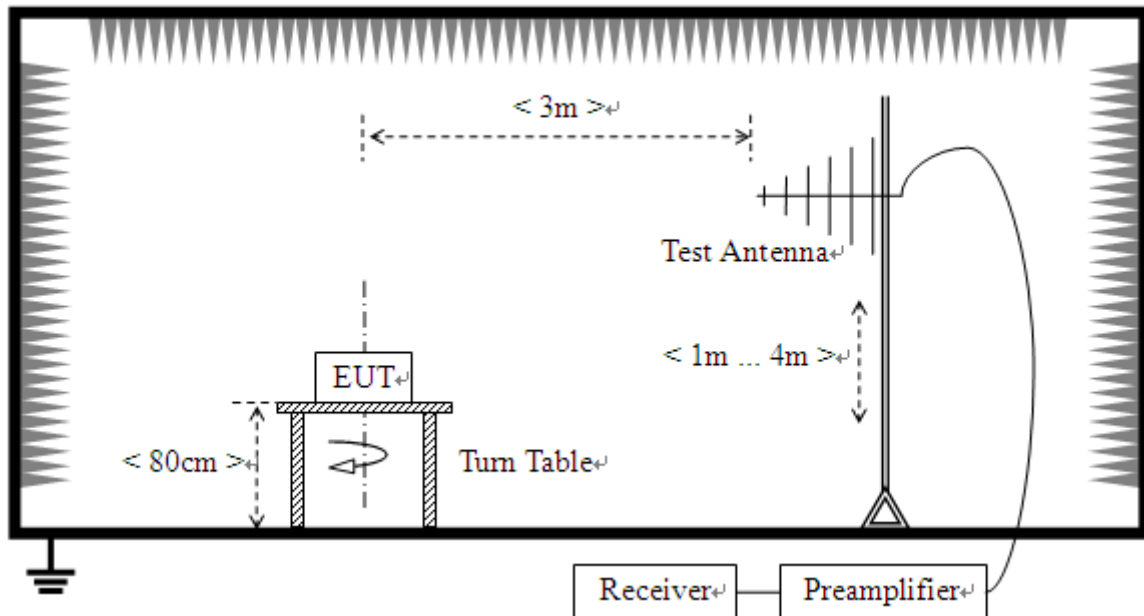
2.11.2. Test Description

A. Test Setup:

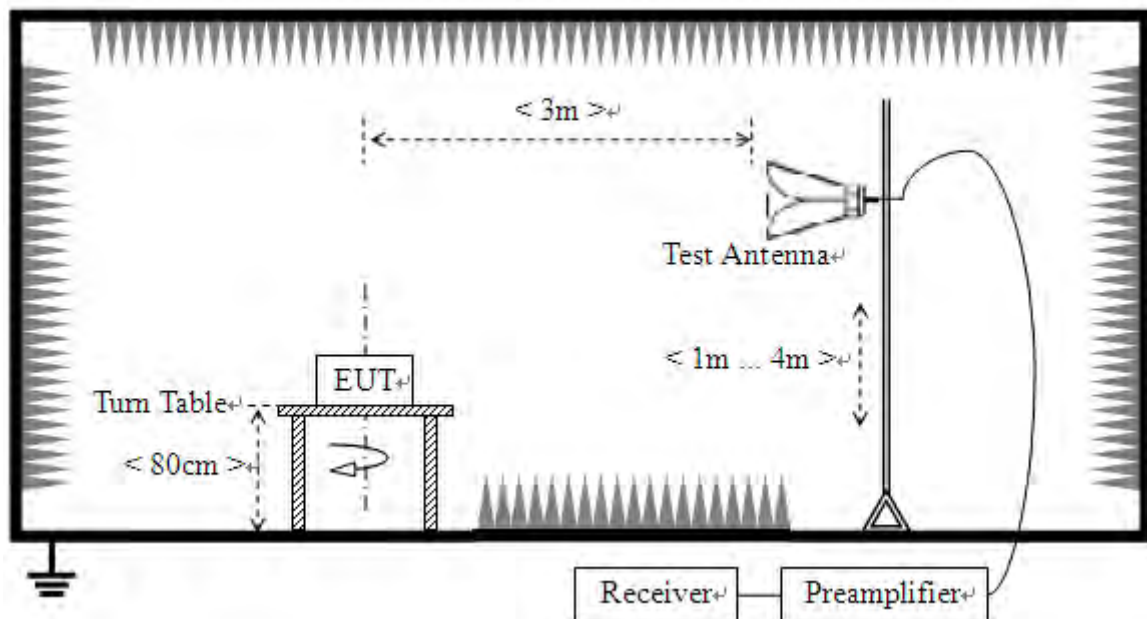
- For radiated emissions from 9kHz to 30MHz



- For radiated emissions from 30MHz to 1GHz



3) For radiated emissions above 1GHz



The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.4 (2009). The EUT was set-up on insulator 80cm above the Ground Plane. The set-up and test methods were according to ANSI C63.4.

The EUT of the EUT is powered by the Battery charged with the AC Adapter which is powered by 120V, 60Hz AC mains supply. The Module is located in a 3m Semi-Anechoic Chamber; the antenna factors,

cable loss and so on of the site as factors are calculated to correct the reading. During the measurement, the EUT is activated and controlled by the Wireless Router via a Common Antenna, and is set to operate under hopping-on test mode.

For the Test Antenna:

(a) In the frequency range of 9kHz to 30MHz, magnetic field is measured with Loop Test Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.

(b) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 2GHz) and Horn Test Antenna (above 2GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2013.05.12	2014.05.11
EXA Signal Analyzer	Agilent	N9010A	MY51440152	2013.05.12	2014.05.11
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2012.05.12	2014.05.11
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2013.05.12	2014.05.11
Test Antenna - Horn	Schwarzbeck	BBHA 9120D	9120D-963	2013.05.12	2014.05.11
Test Antenna - Horn	Schwarzbeck	BBHA9170	9170-872	2013.05.12	2014.05.11
Test Antenna - Horn	R&S	HL050S7	71688	2013.05.12	2014.05.11
Test Antenna -Loop	Schwarzbeck	FMZB 1519	1519-022	2013.05.12	2014.05.11

2.11.3. Test Result

According to ANSI C63.4 selection 4.2.2, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak limit, it is unnecessary to perform an quasi-peak measurement.

The measurement results are obtained as below:

$$E [\text{dB}\mu\text{V/m}] = U_R + A_T + A_{\text{Factor}} [\text{dB}]; A_T = L_{\text{Cable loss}} [\text{dB}] - G_{\text{preamp}} [\text{dB}]$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

Note: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test

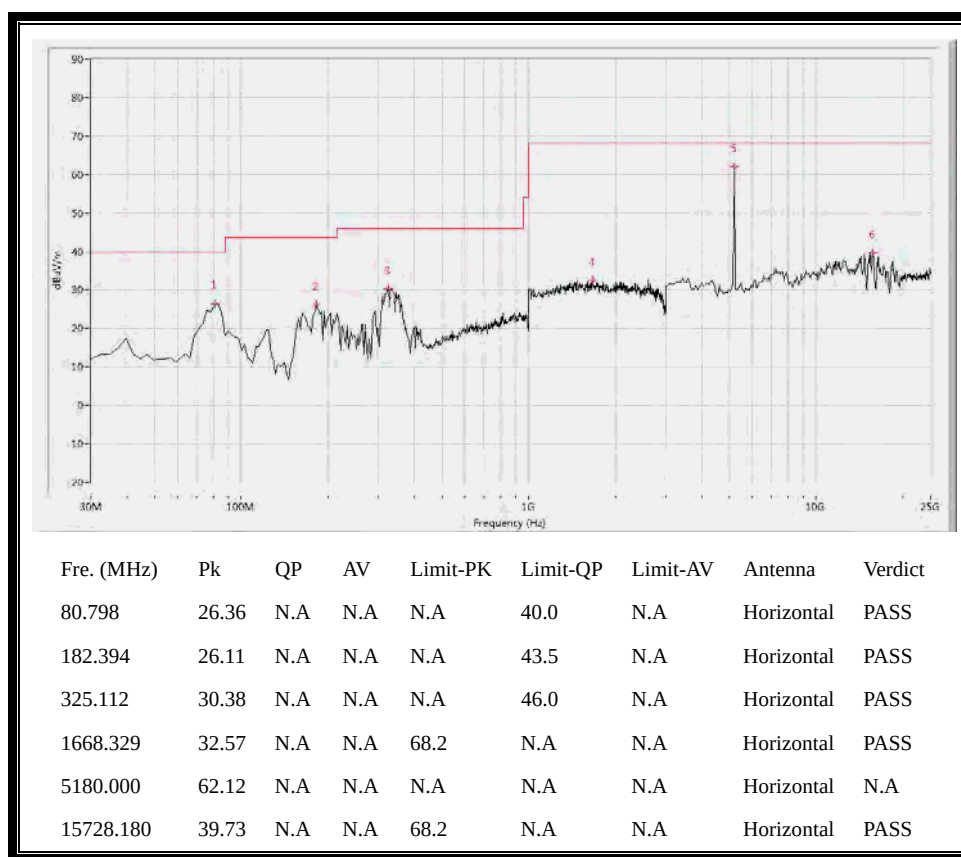
condition was recorded in this test report.

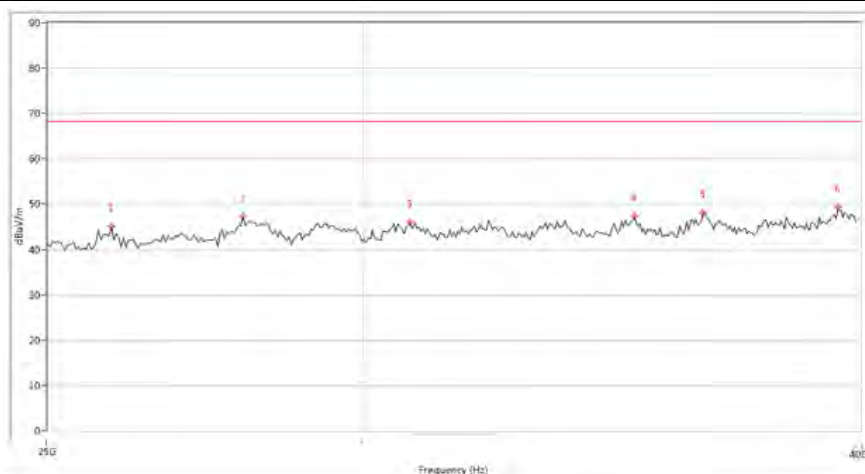
The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

2.11.3.1. 802.11a Test mode

A. Test Plots for the Whole Measurement Frequency Range:

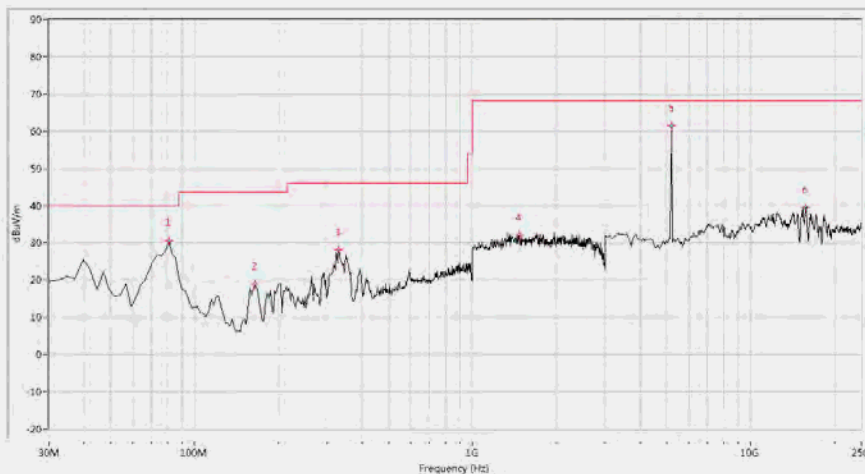
Plots for Channel = 36



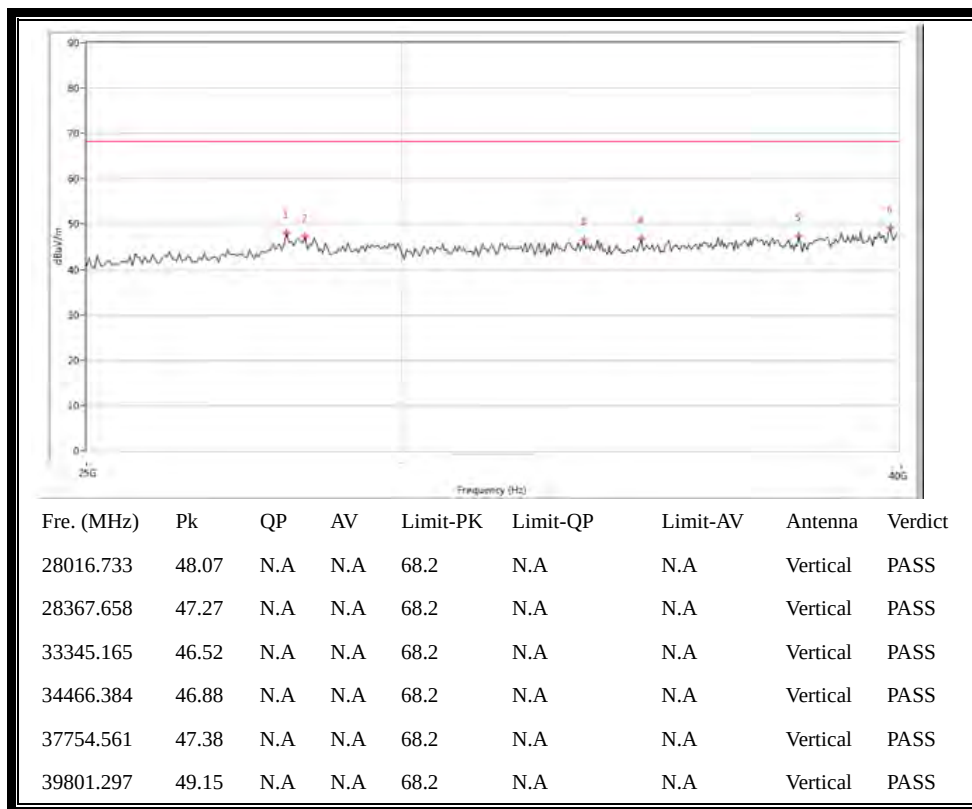


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
25937.516	45.08	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
27909.252	47.29	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
30833.541	46.01	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
35049.975	47.35	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
36520.120	48.10	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
39477.631	49.31	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 40GHz)

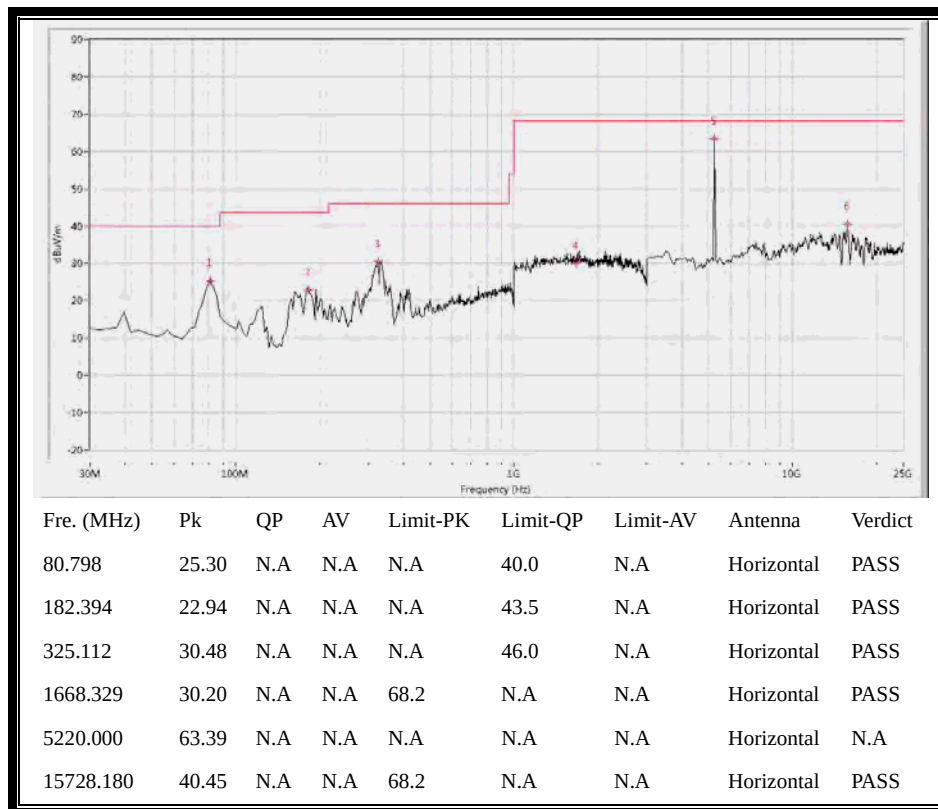


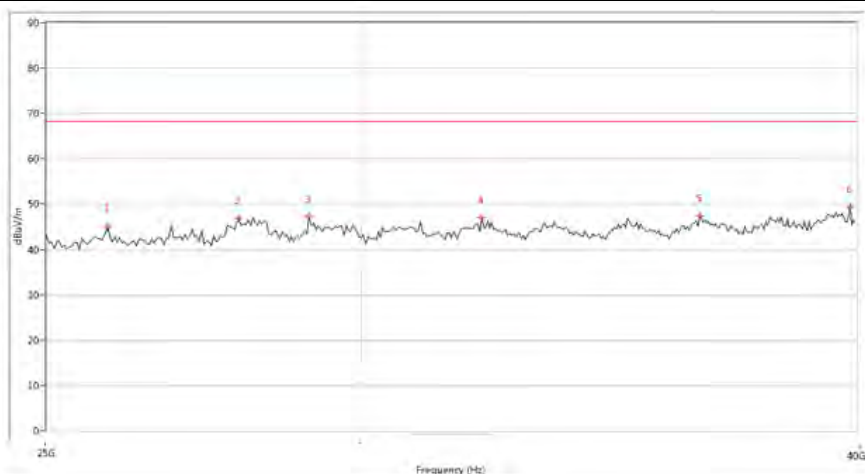
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
80.798	30.51	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
165.461	18.90	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
329.950	28.04	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1473.815	31.97	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5180.000	61.55	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.50	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



(Antenna Vertical, 30MHz to 40GHz)

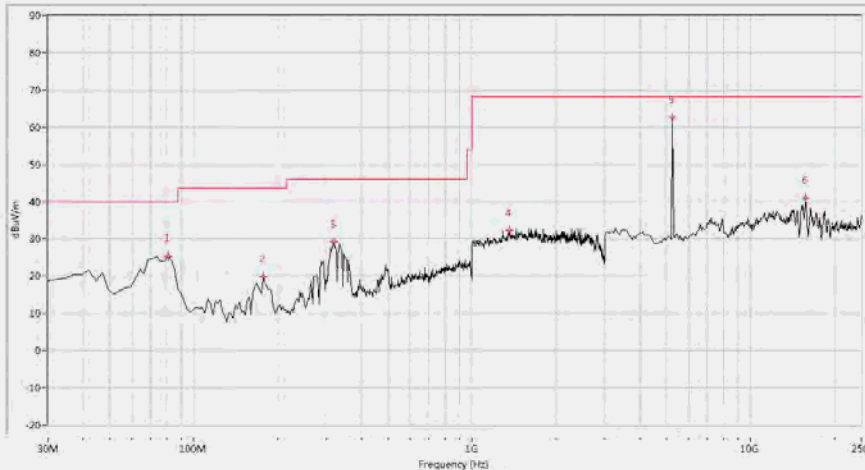
Plot for Channel = 44



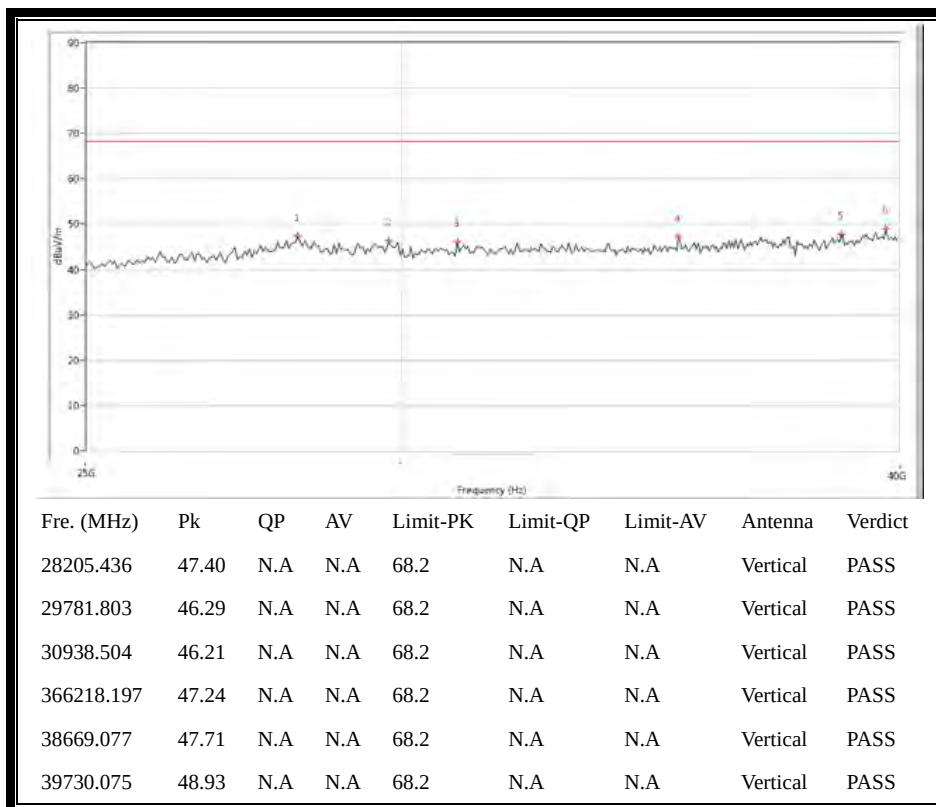


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
25819.776	45.15	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
27953.511	46.79	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
29117.471	47.16	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
32180.204	47.02	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
36524.120	47.49	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
39815.037	49.32	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 40GHz)

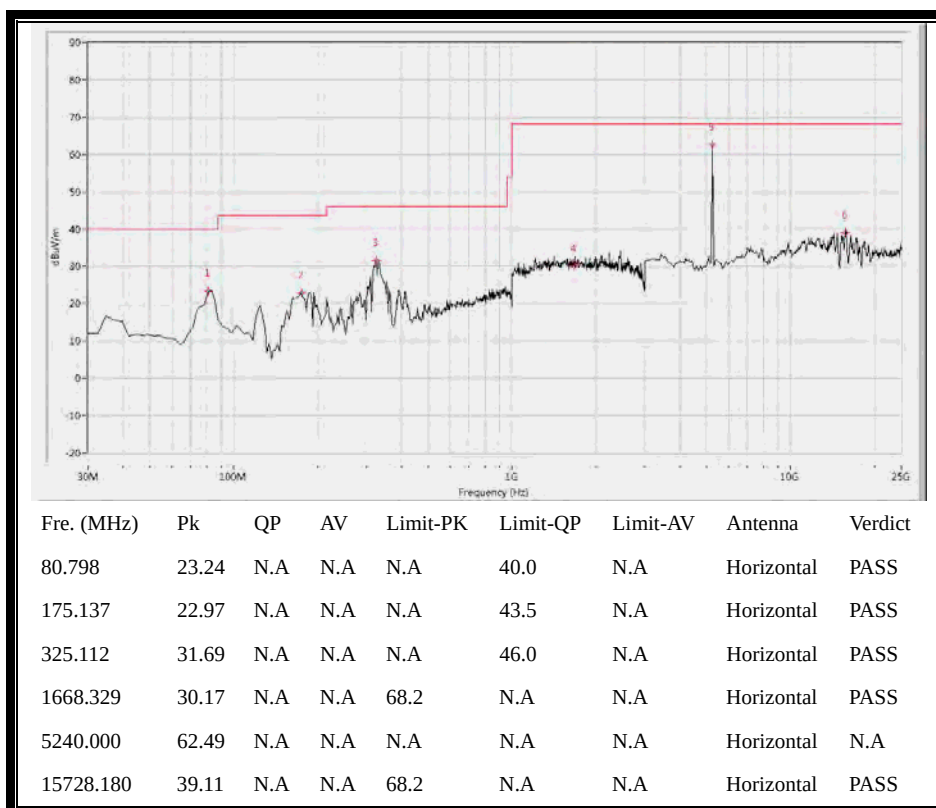


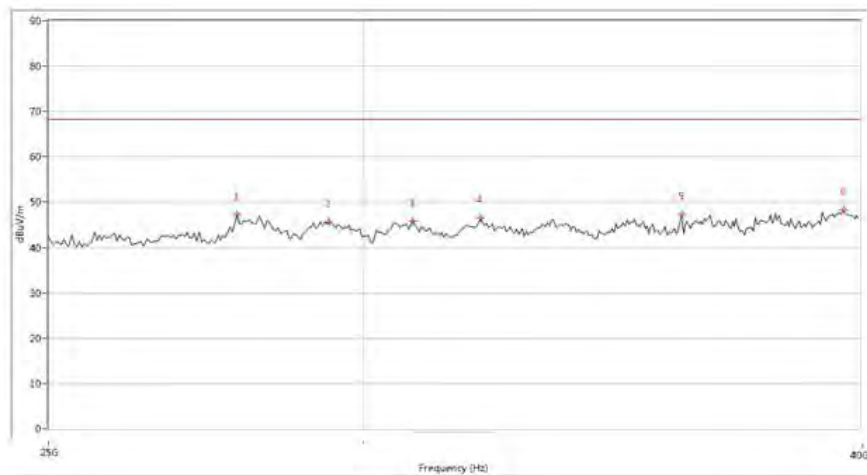
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
80.798	25.21	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
177.556	19.77	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
317.855	29.26	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1354.115	32.20	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5220.000	62.50	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.96	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



(Antenna Vertical, 30MHz to 40GHz)

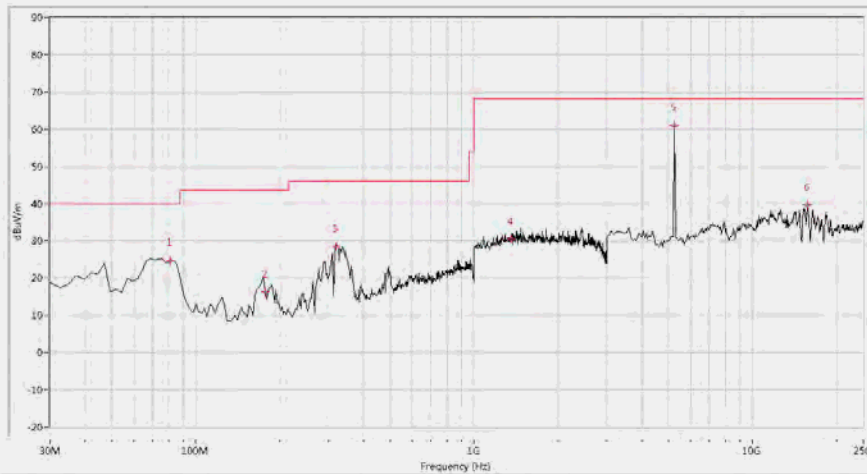
Plot for Channel = 48



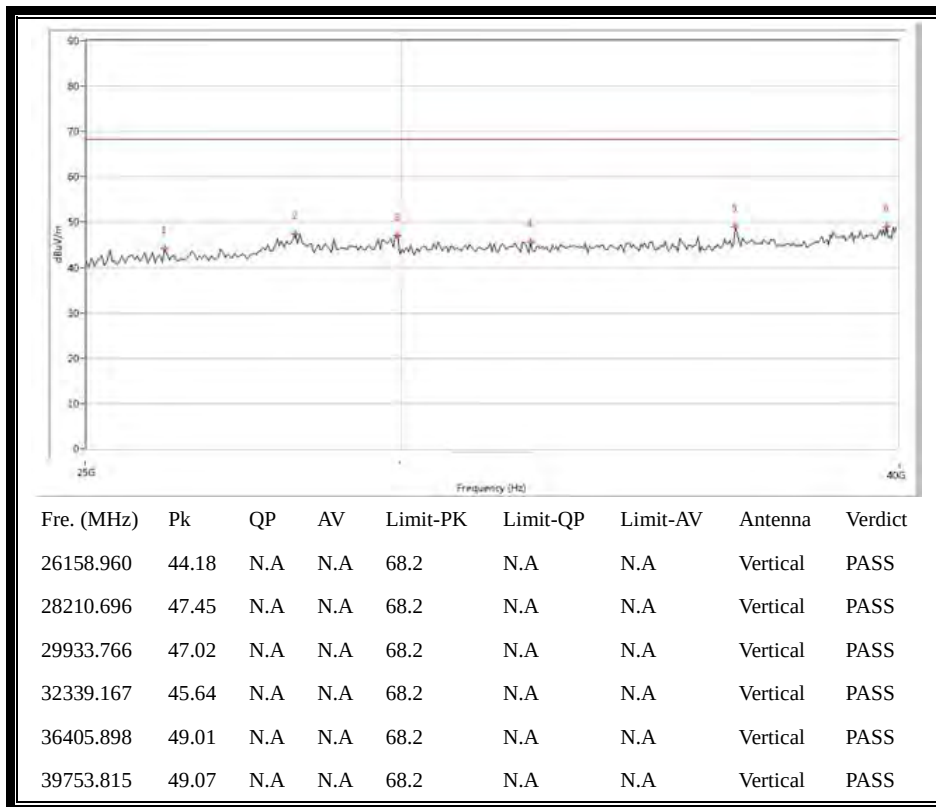


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
27808.030	47.26	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
29416.397	45.69	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
30872.282	45.77	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
32109.723	46.52	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
36071.232	47.23	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
39620.594	48.28	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 40GHz)

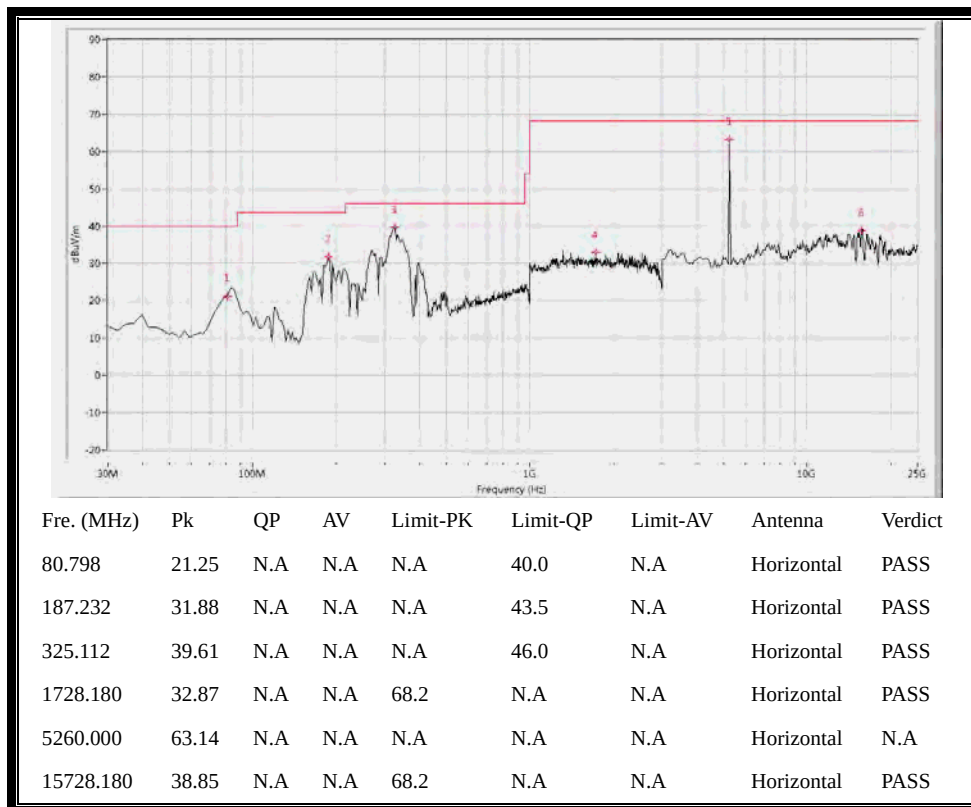


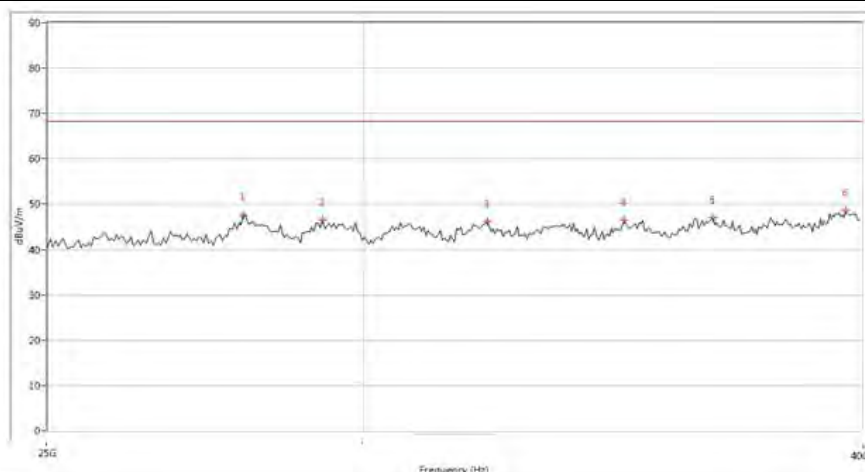
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
80.798	24.66	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
177.556	16.47	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
317.855	28.60	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1354.115	30.46	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5240.000	61.06	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.70	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



(Antenna Vertical, 30MHz to 40GHz)

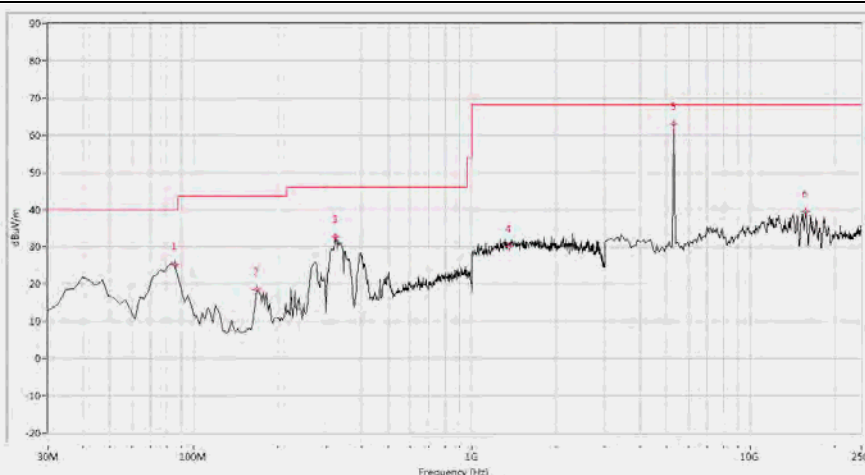
Plots for Channel = 52



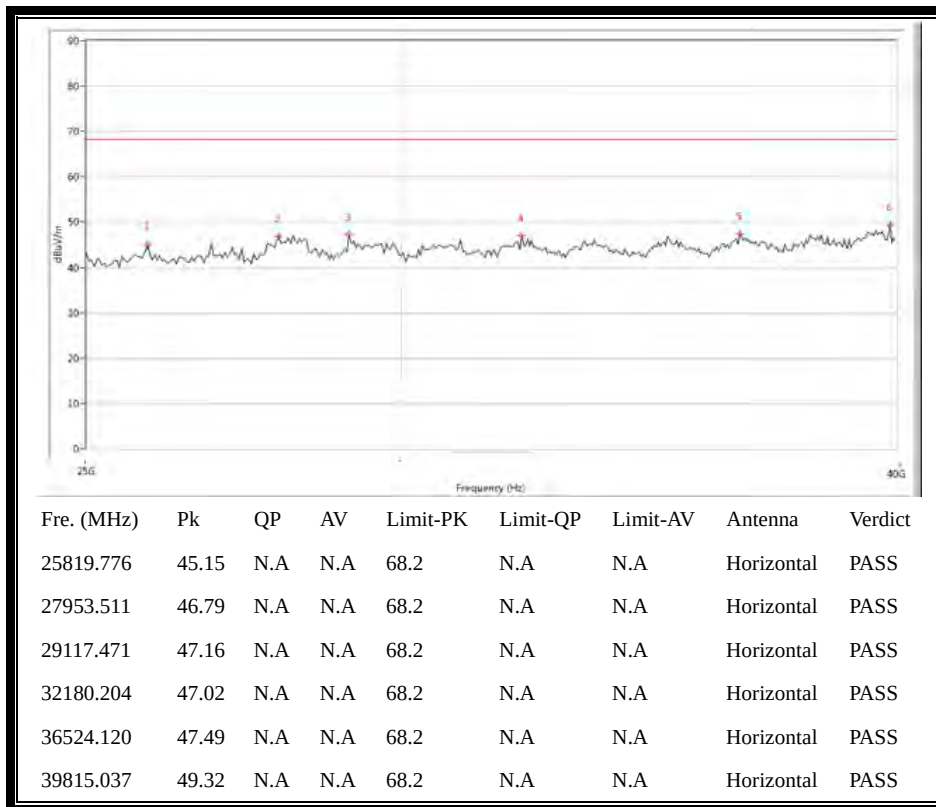


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
27909.252	47.53	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
29304.175	46.52	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
32281.945	46.14	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
34873.531	46.54	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
36707.823	46.96	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
39612.594	48.67	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 40GHz)

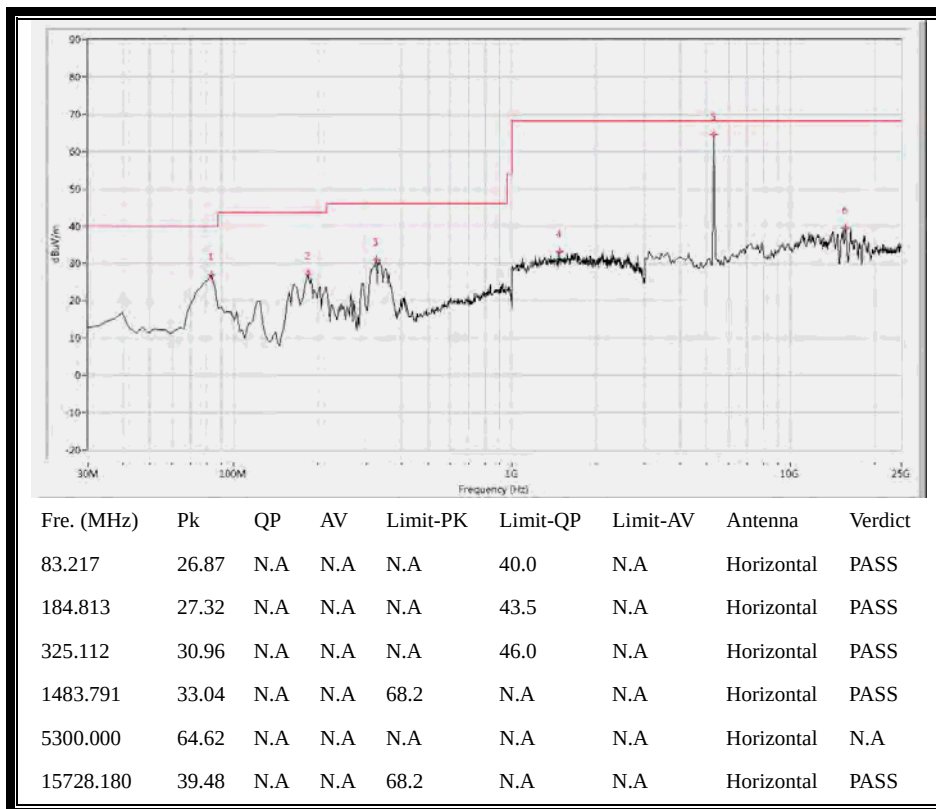


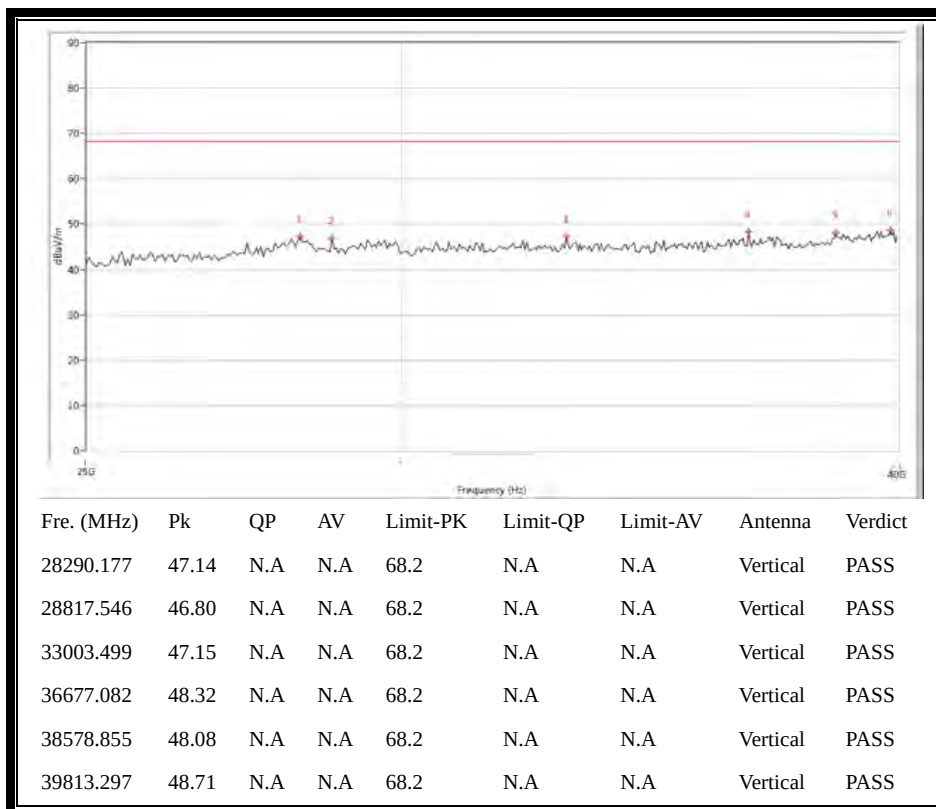
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
85.636	25.38	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
167.880	18.57	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	32.69	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1354.115	30.15	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5260.000	63.09	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.45	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



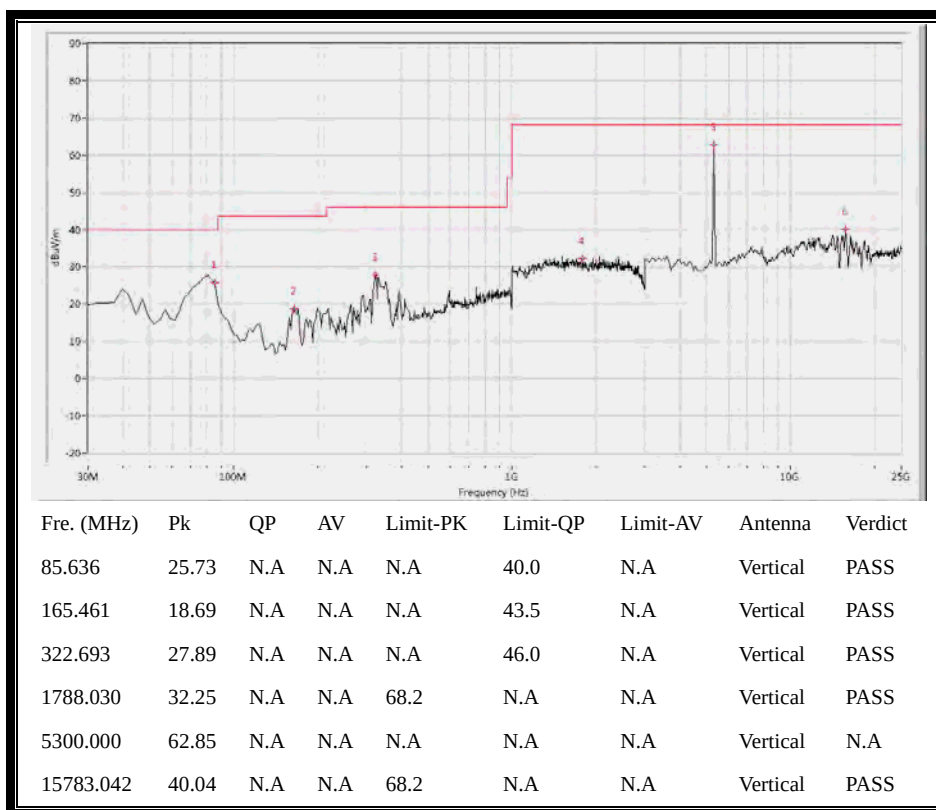
(Antenna Vertical, 30MHz to 40GHz)

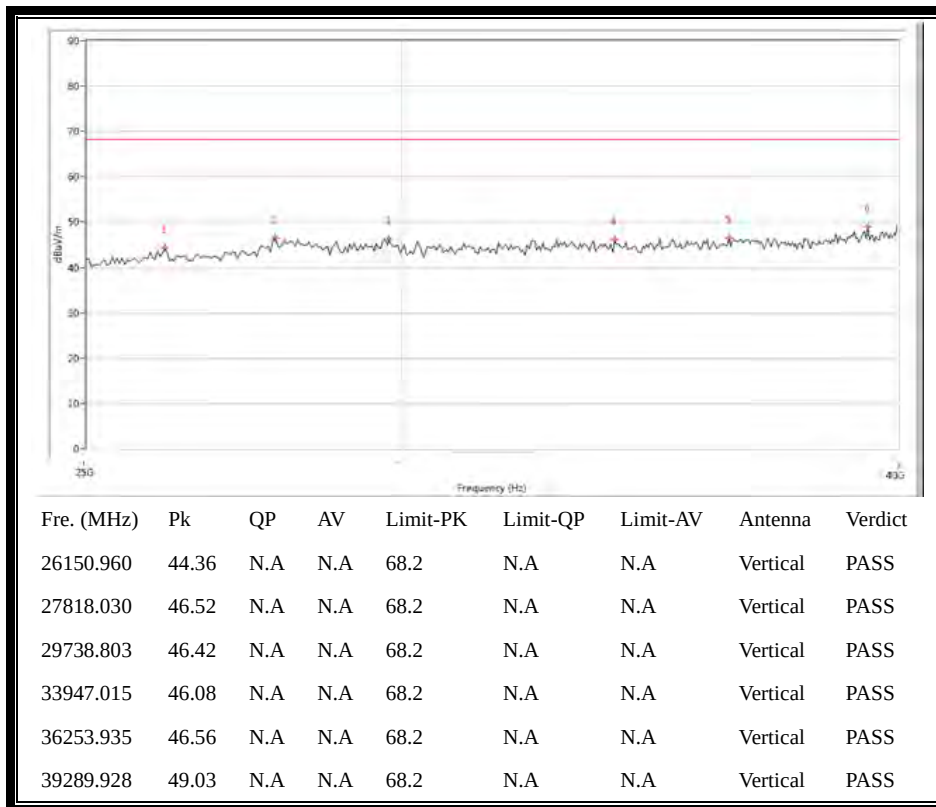
Plot for Channel = 60





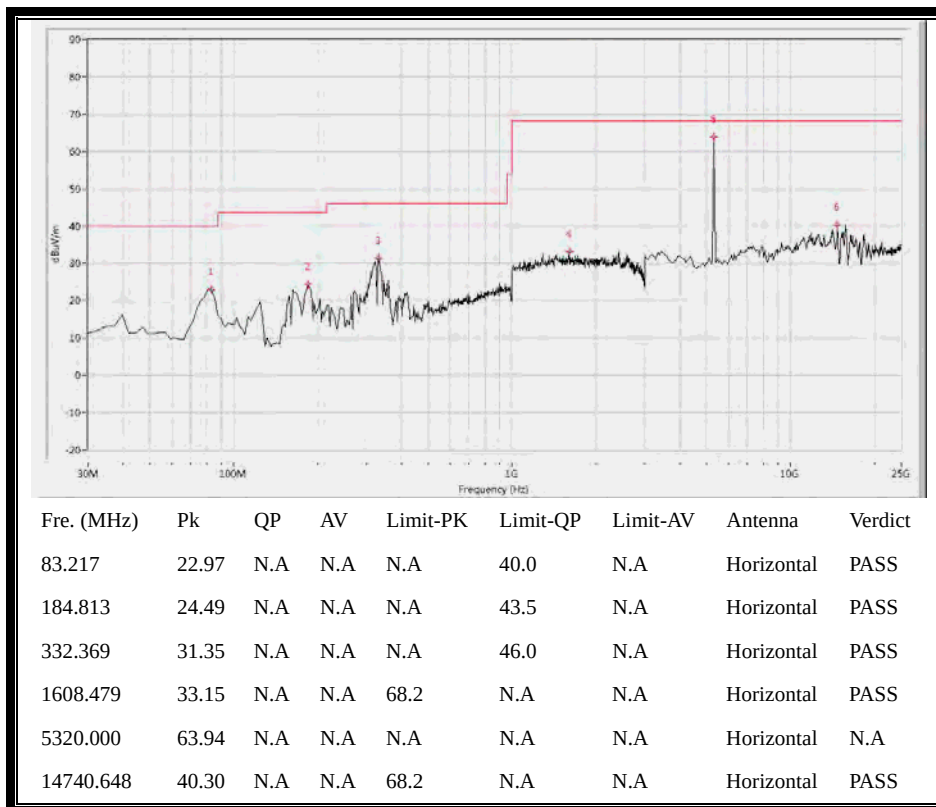
(Antenna Horizontal, 30MHz to 40GHz)

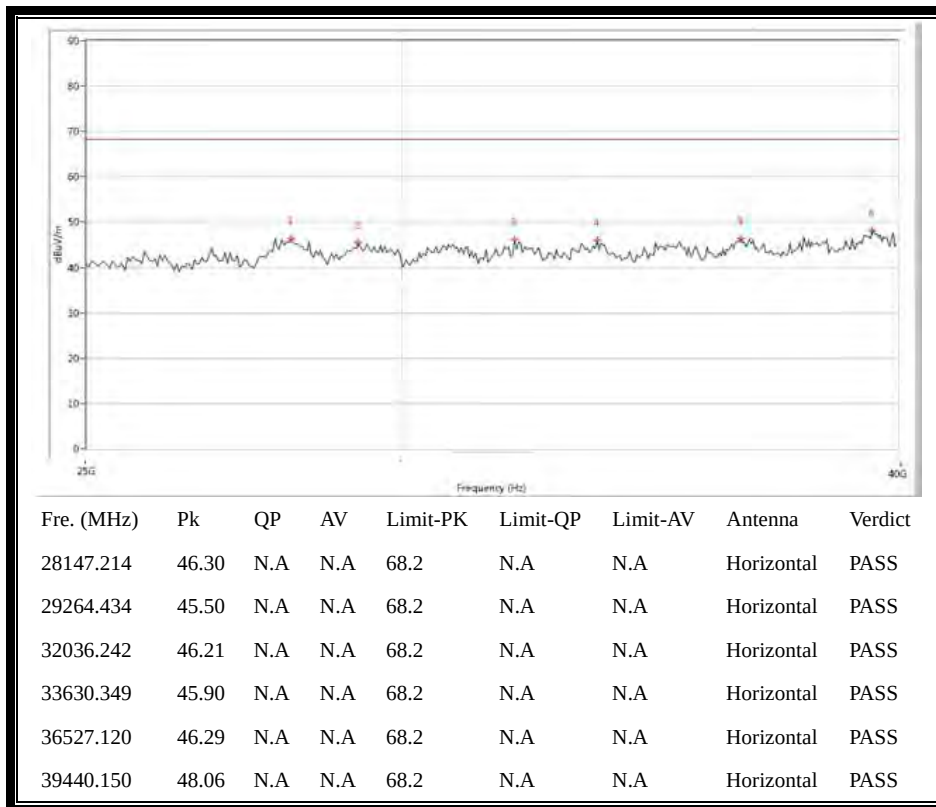




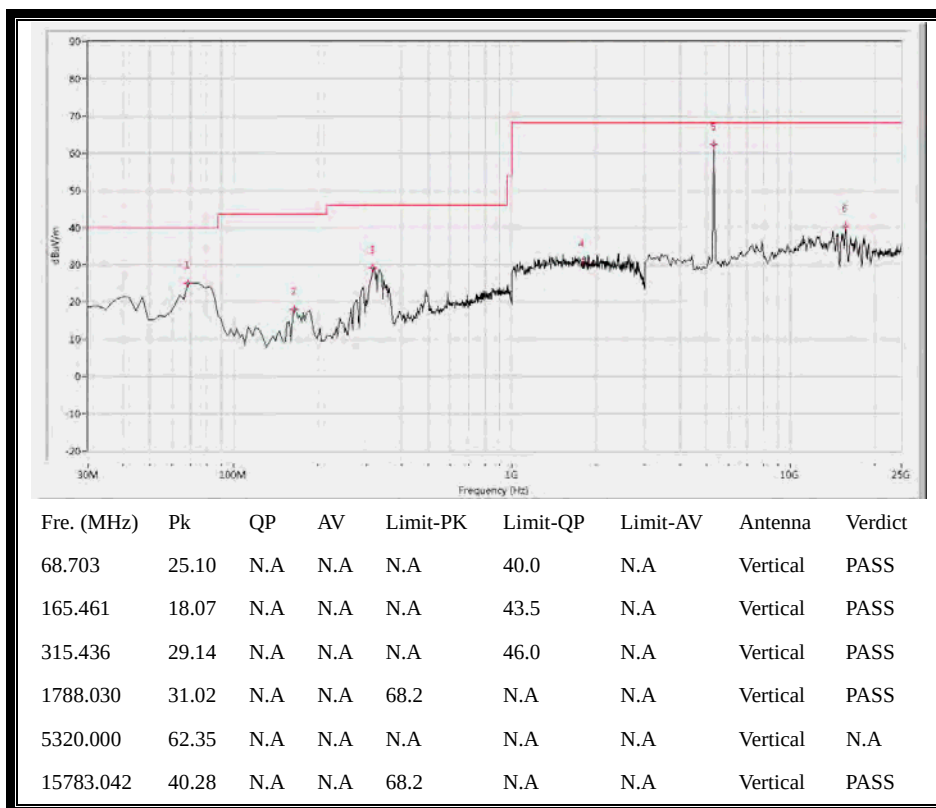
(Antenna Vertical, 30MHz to 40GHz)

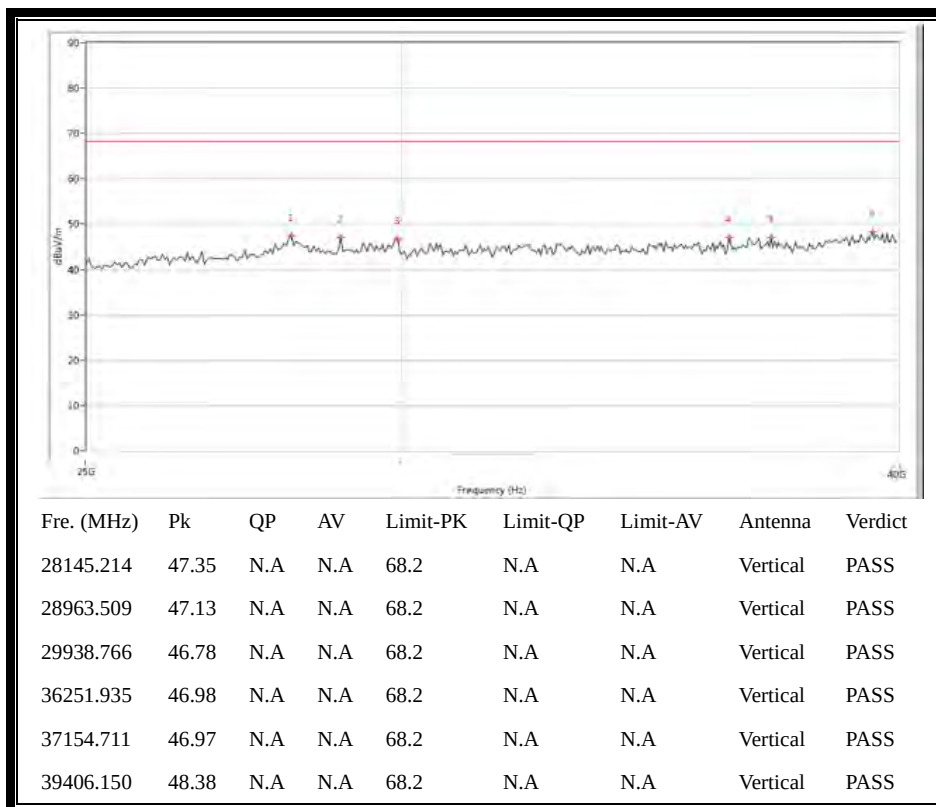
Plot for Channel = 64





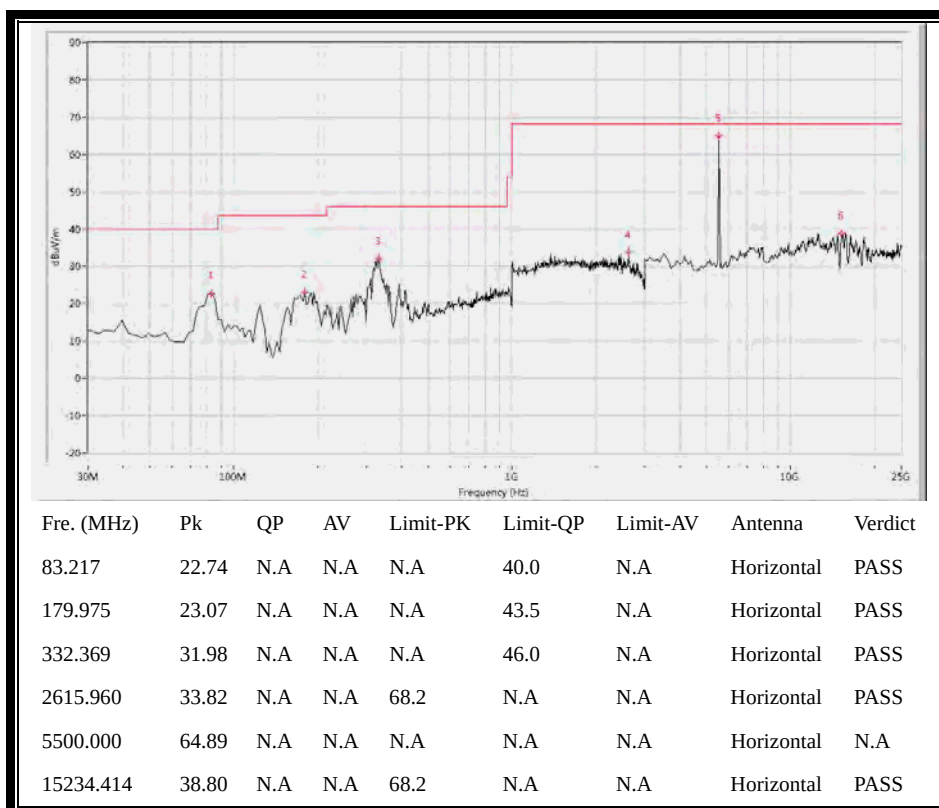
(Antenna Horizontal, 30MHz to 40GHz)

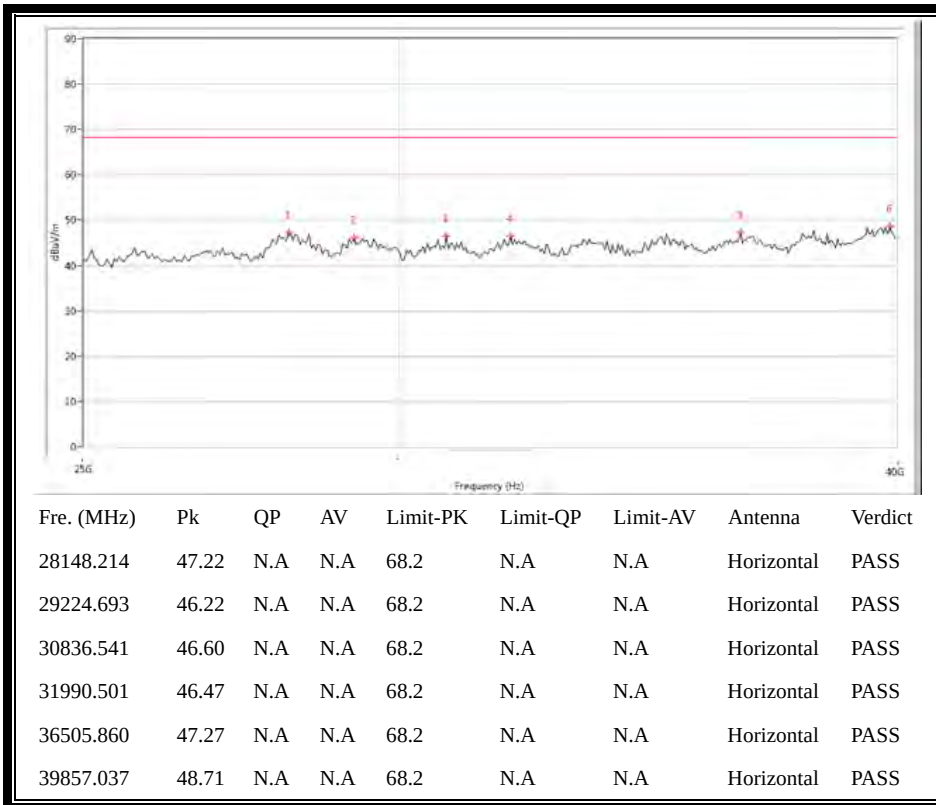




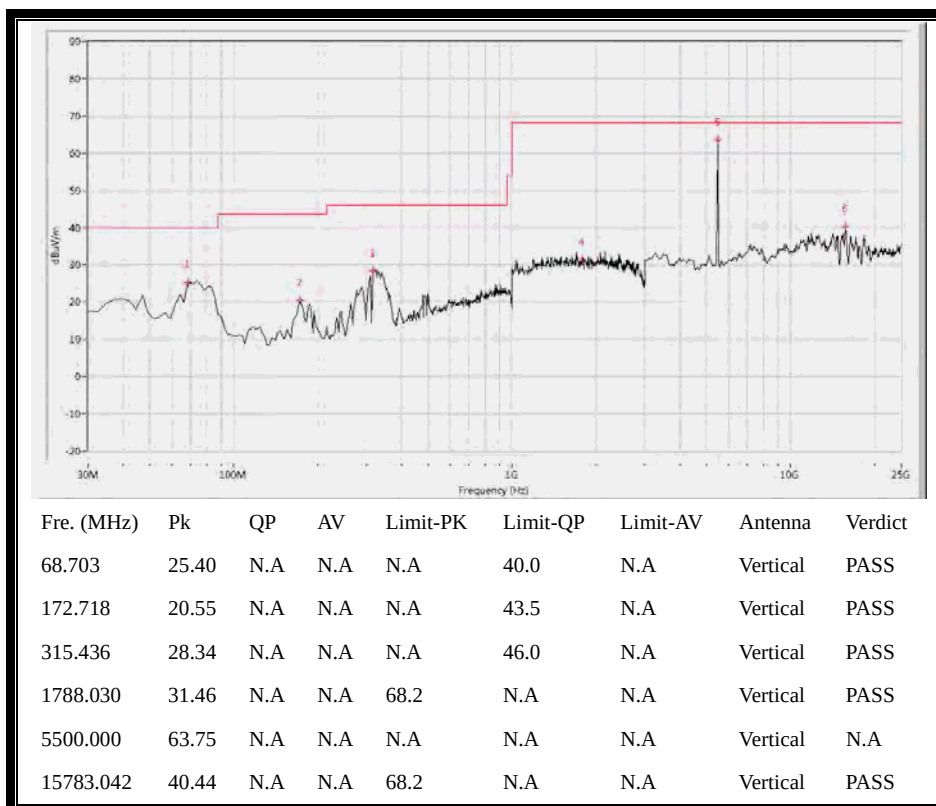
(Antenna Vertical, 30MHz to 40GHz)

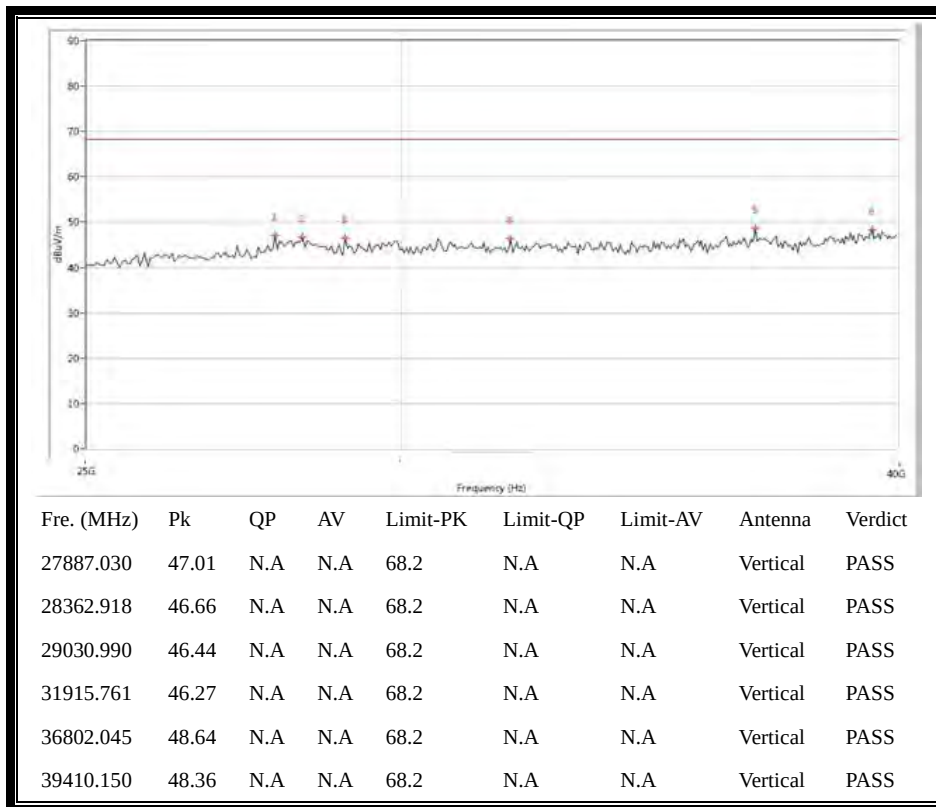
Plots for Channel = 100





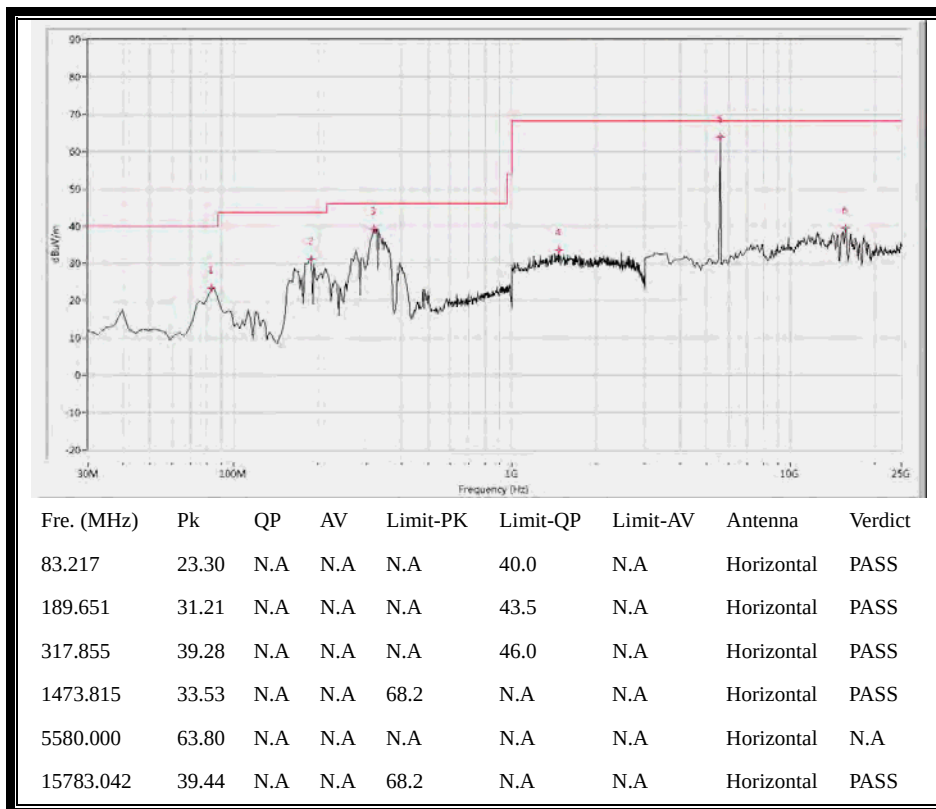
(Antenna Horizontal, 30MHz to 40GHz)

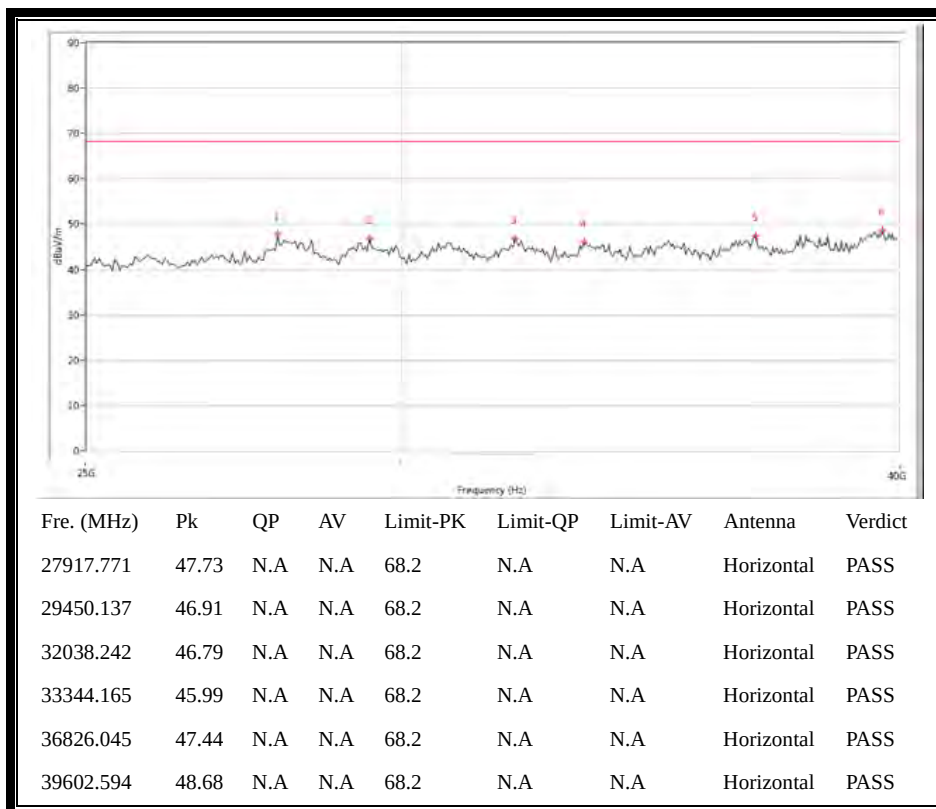




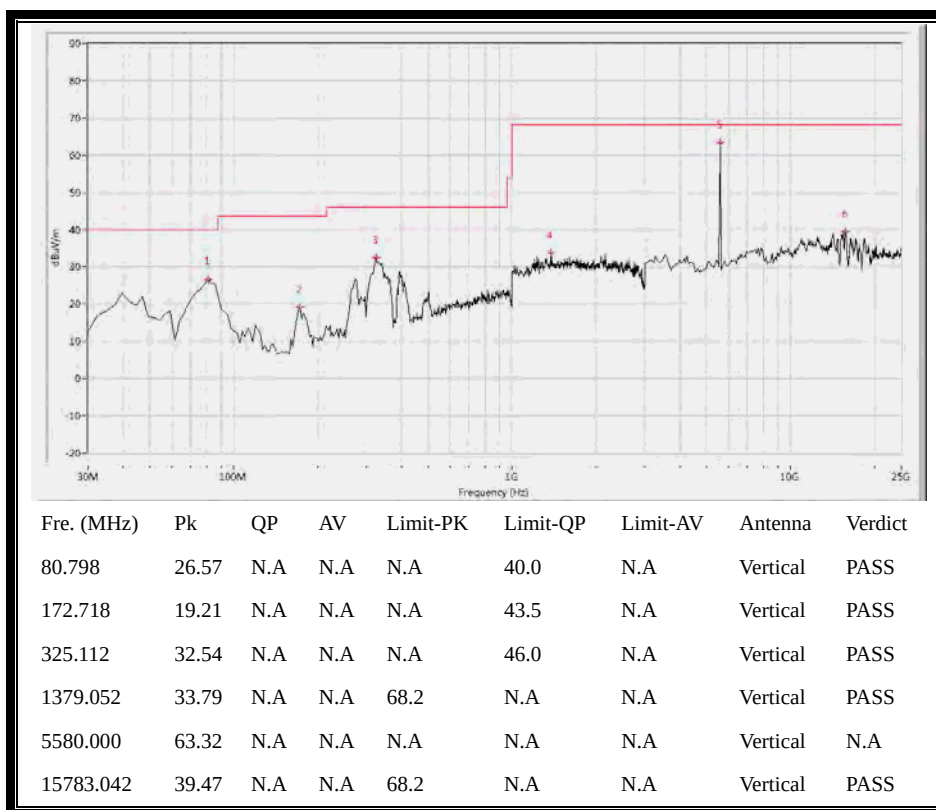
(Antenna Vertical, 30MHz to 40GHz)

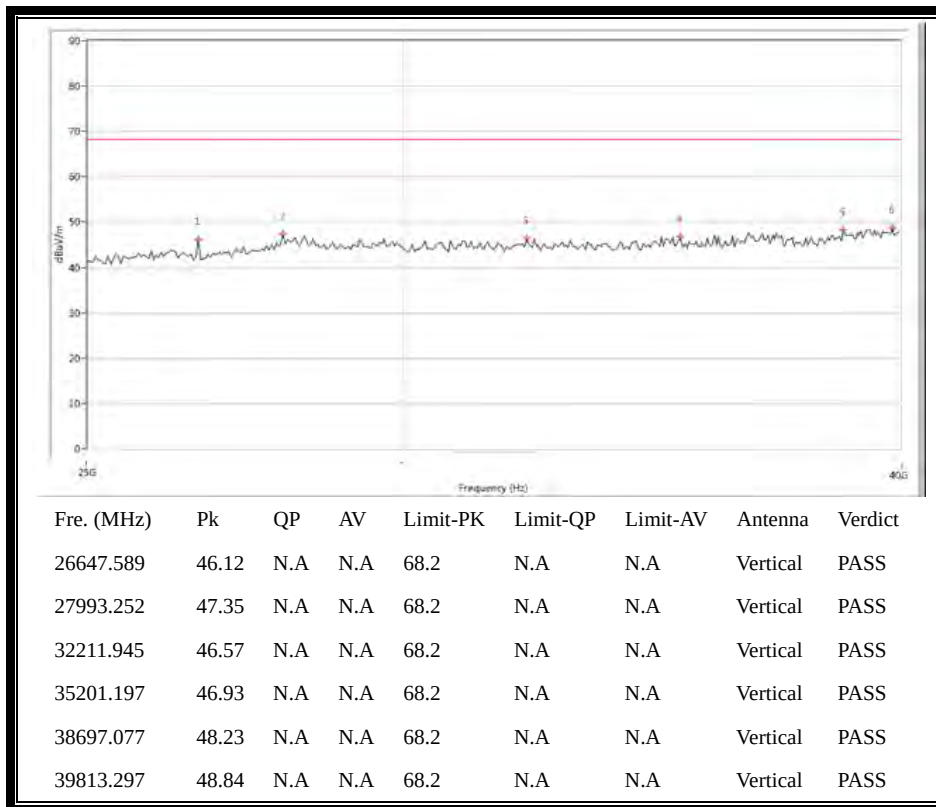
Plot for Channel = 116





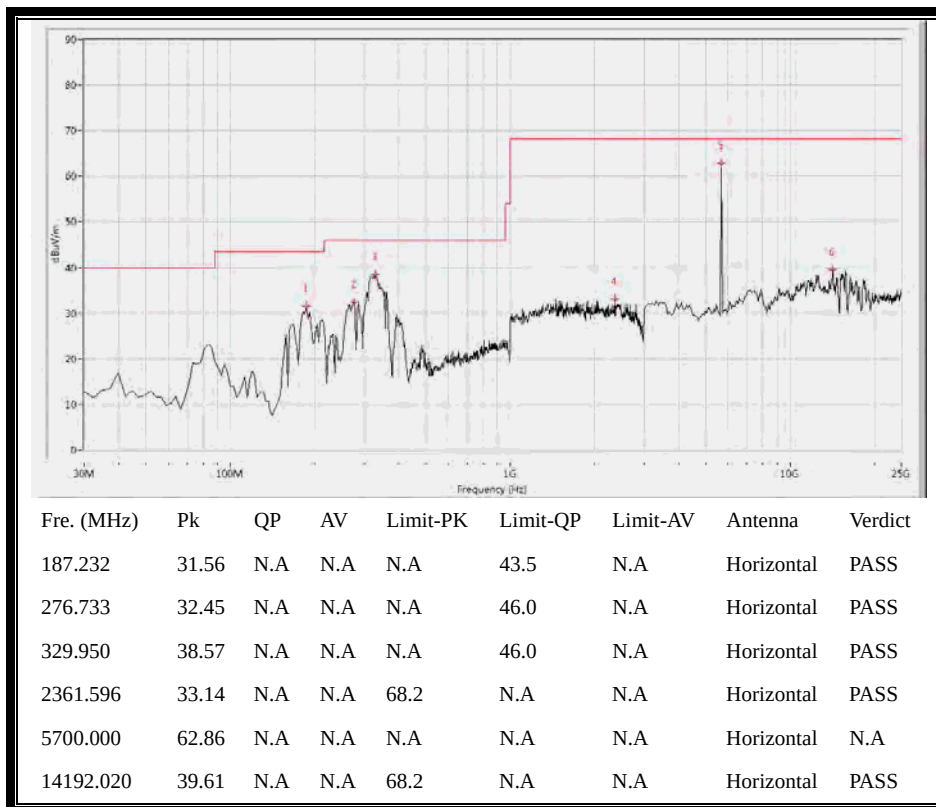
(Antenna Horizontal, 30MHz to 40GHz)

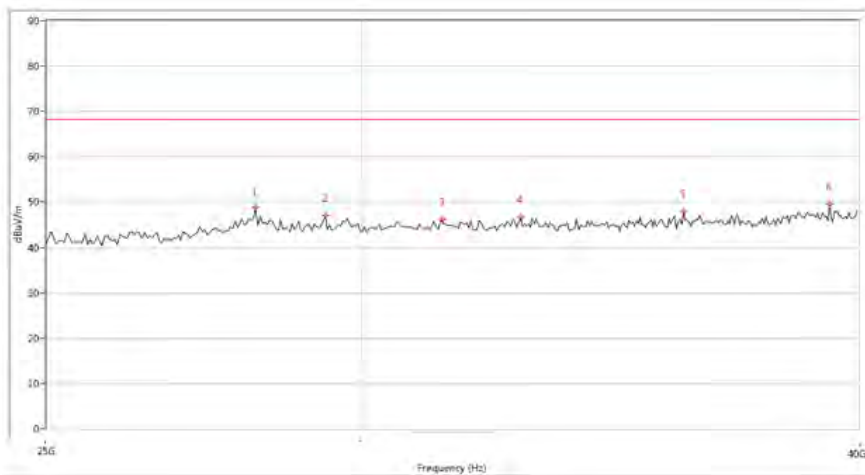




(Antenna Vertical, 30MHz to 40GHz)

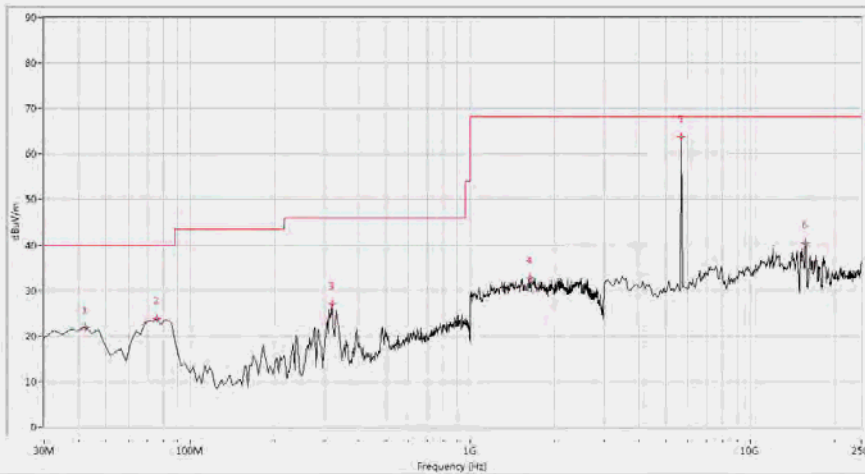
Plot for Channel = 140



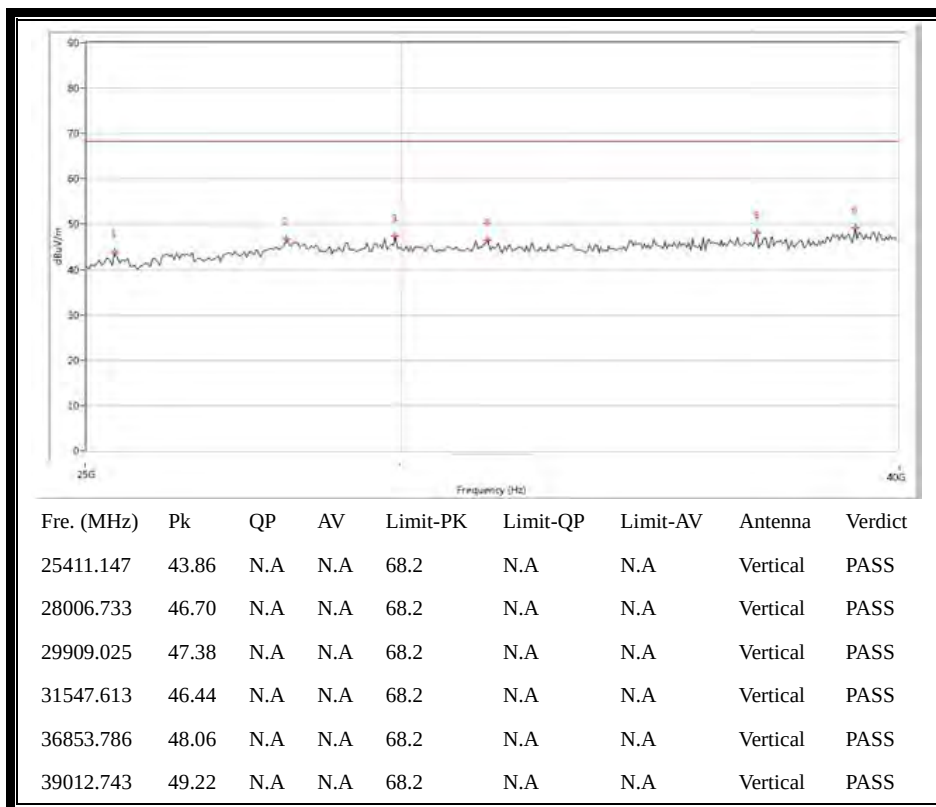


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28219.696	48.86	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
29307.656	47.07	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
31436.392	46.24	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
32891.277	46.66	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
36140.713	47.87	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
39312.668	49.52	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 40GHz)



Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
42.095	21.95	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
75.960	23.91	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
320.274	27.13	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1643.392	32.73	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5700.000	63.86	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15728.180	40.49	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

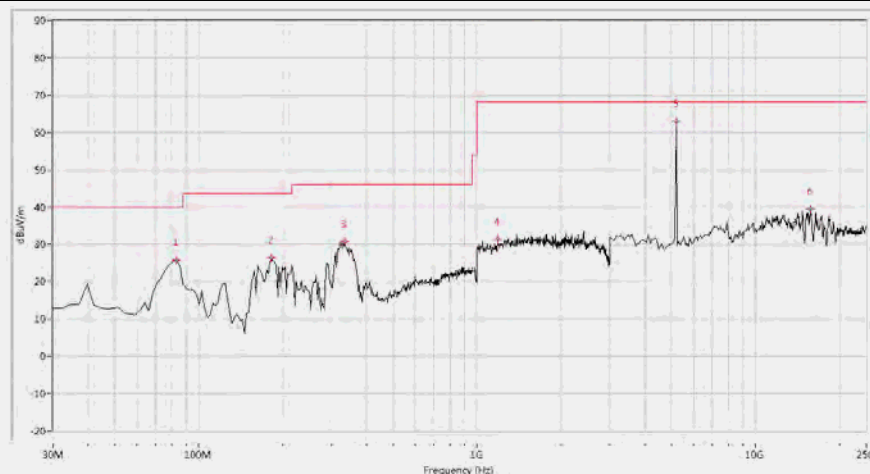


(Antenna Vertical, 30MHz to 40GHz)

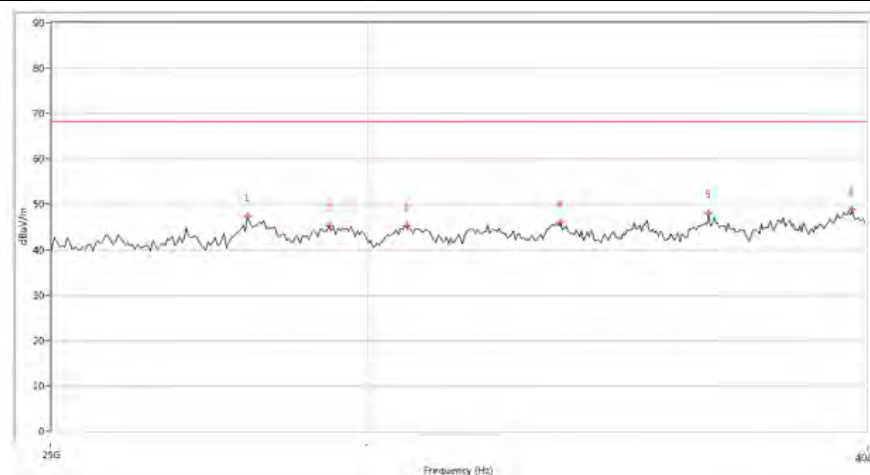
2.11.3.2. 802.11n-20MHz Test mode

B. Test Plots for the Whole Measurement Frequency Range:

Plots for Channel = 36

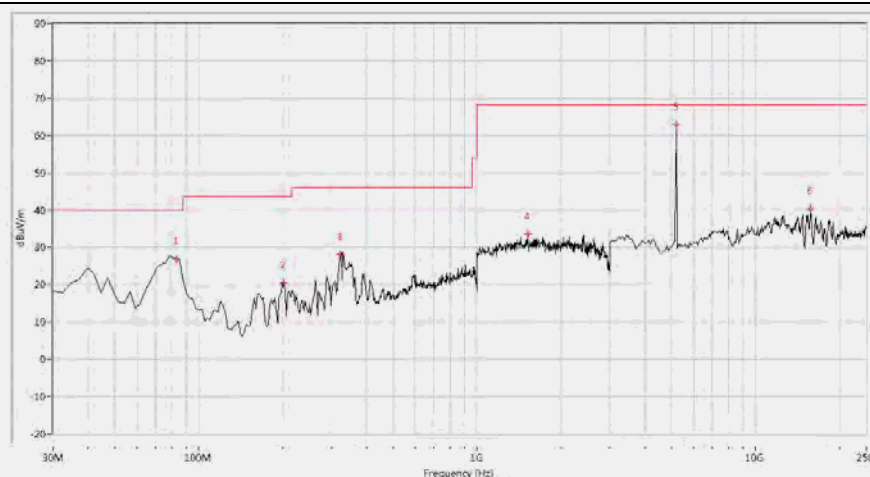


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	25.70	N.A	N.A	N.A	40.0	N.A	Horizontal	PASS
182.394	26.32	N.A	N.A	N.A	43.5	N.A	Horizontal	PASS
334.788	30.70	N.A	N.A	N.A	46.0	N.A	Horizontal	PASS
1184.539	31.42	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
5180.000	63.01	N.A	N.A	N.A	N.A	N.A	Horizontal	N.A
15728.180	39.56	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

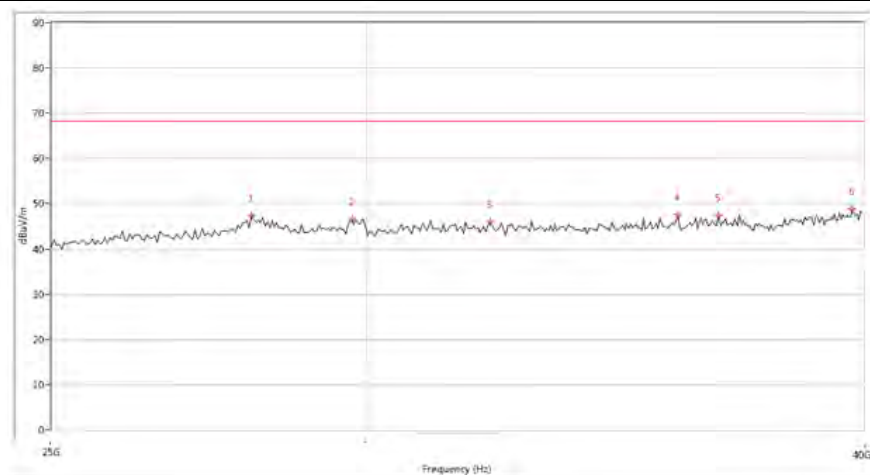


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
27991.252	47.36	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
29337.915	45.21	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
30683.579	45.33	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
33524.868	45.98	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
36542.120	48.12	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
39686.334	48.92	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 40GHz)



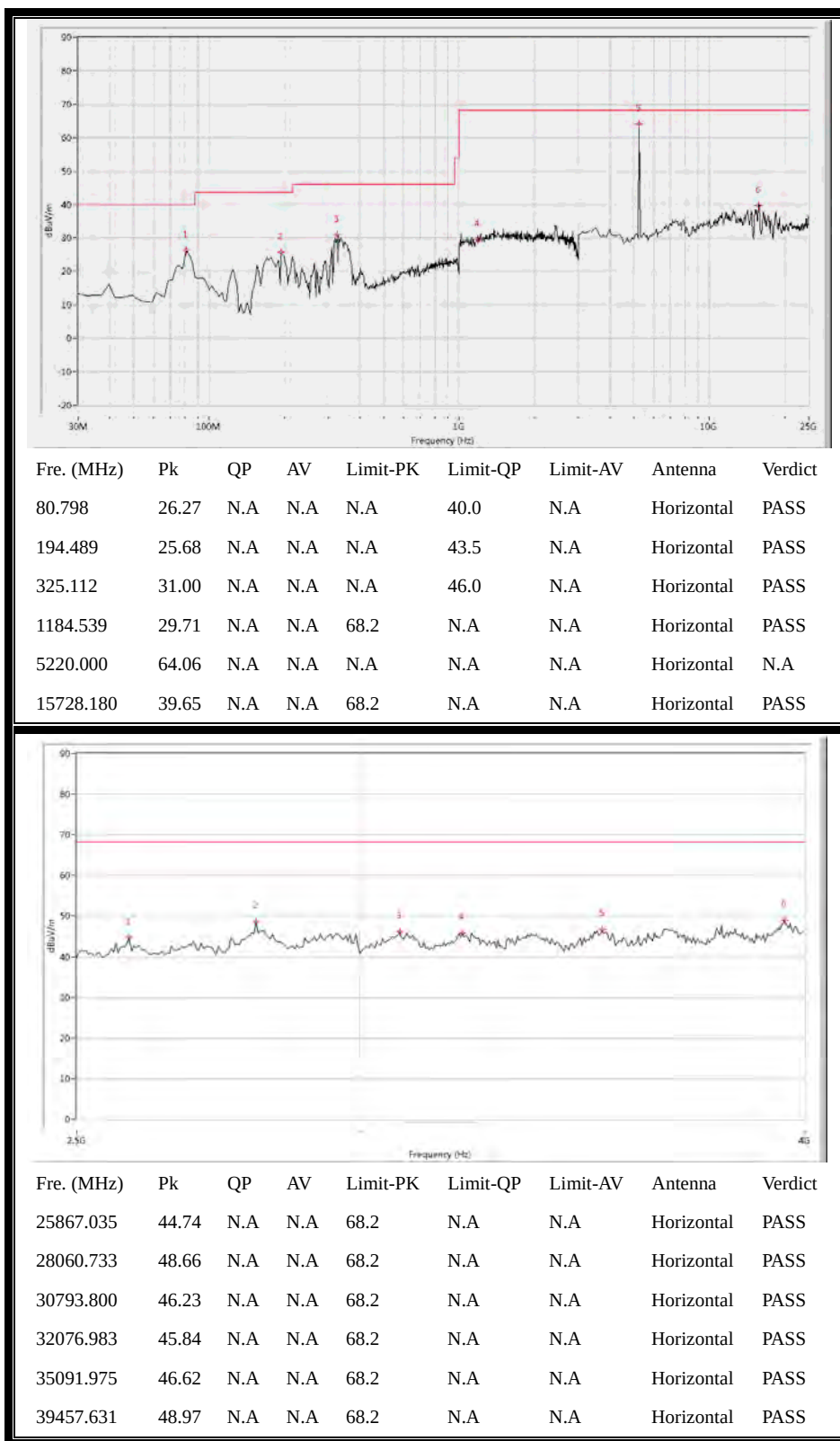
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	26.85	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
201.746	20.56	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	28.14	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1518.703	33.56	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5180.000	62.98	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.44	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



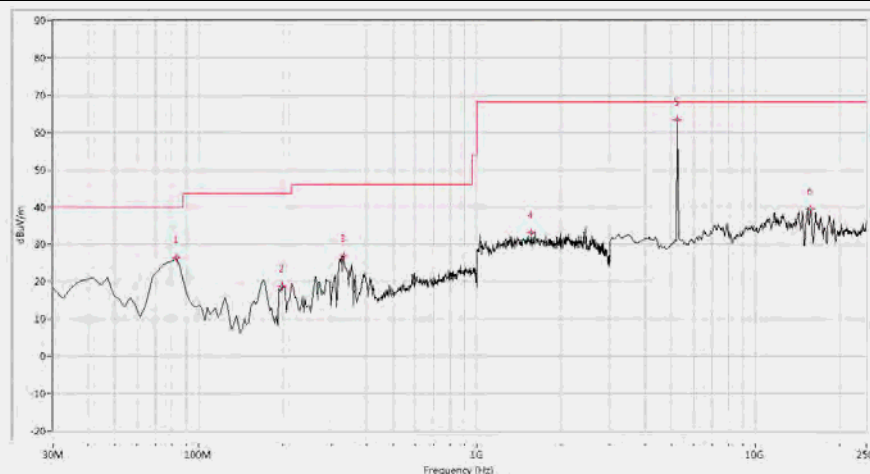
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28066.733	47.35	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29751.062	46.49	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
32216.945	46.02	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35932.269	47.52	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
36784.304	47.40	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39738.815	48.91	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

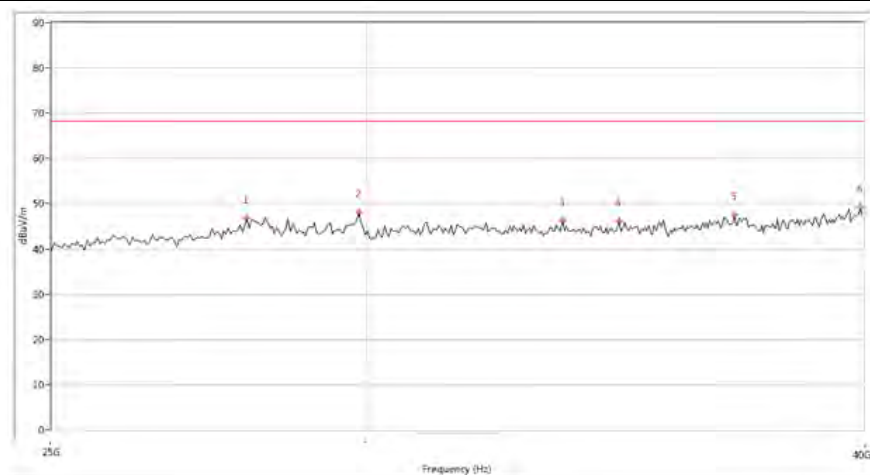
Plot for Channel = 44



(Antenna Horizontal, 30MHz to 40GHz)



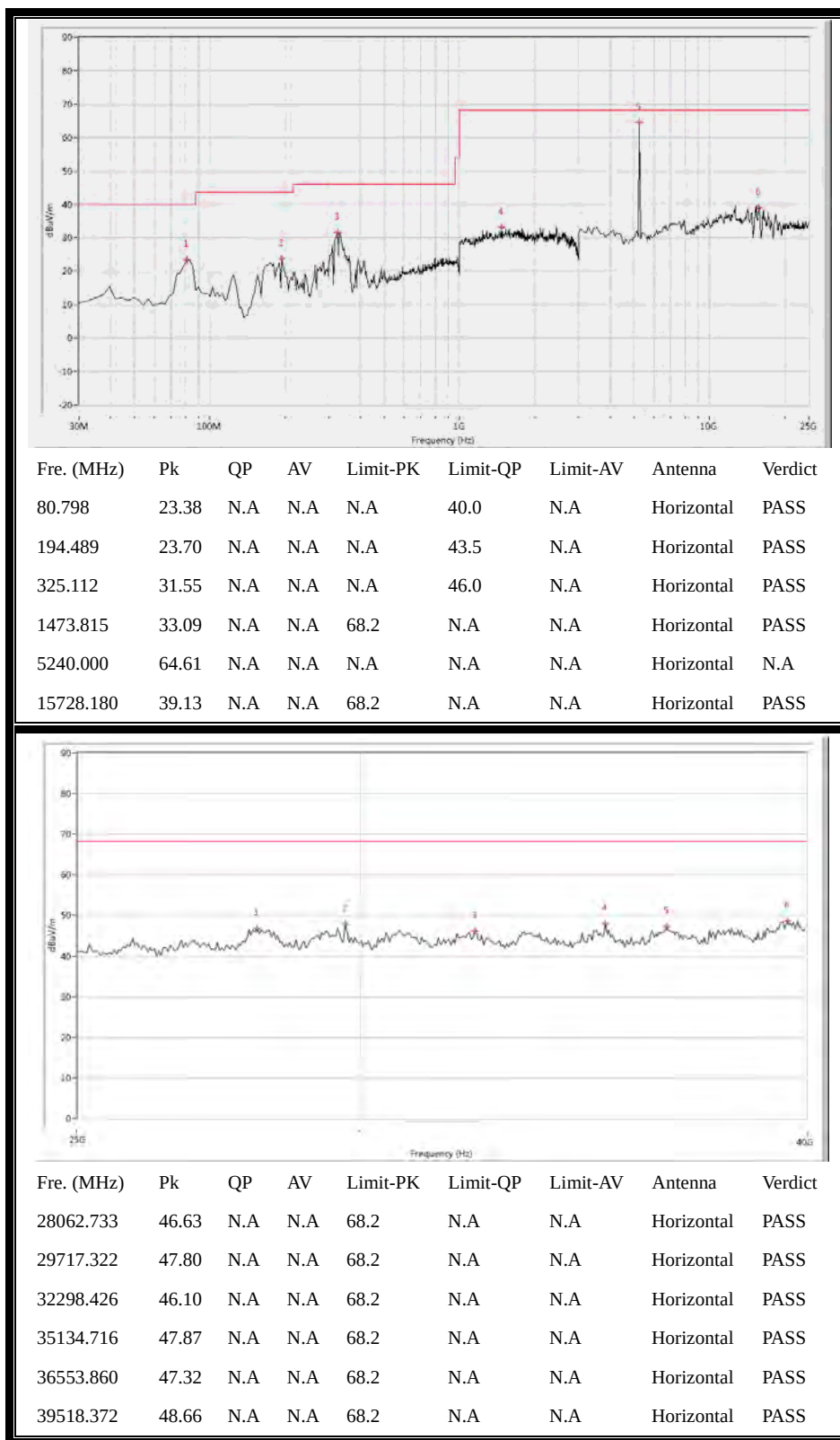
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	26.32	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
199.327	18.67	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
332.369	26.74	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1558.603	33.09	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5220.000	63.48	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.38	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



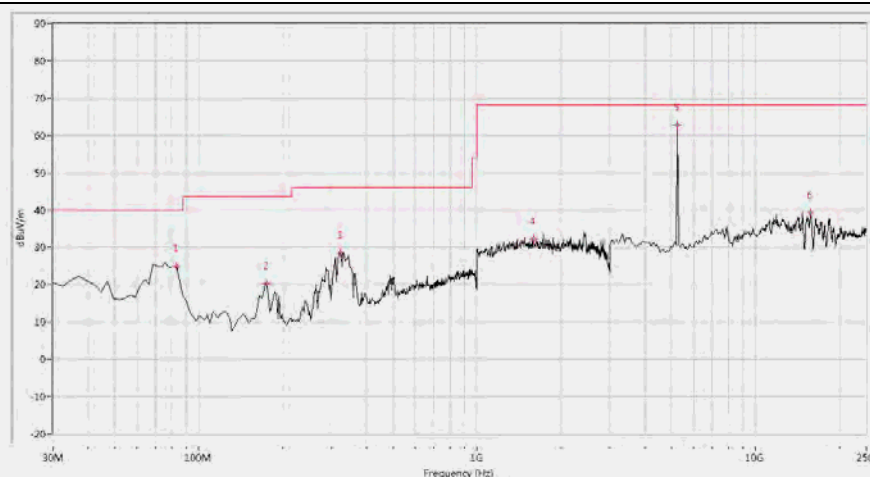
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
27996.252	46.83	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29876.284	48.11	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33670.349	46.25	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
34726.569	46.14	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
37113.970	47.60	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39912.519	49.14	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

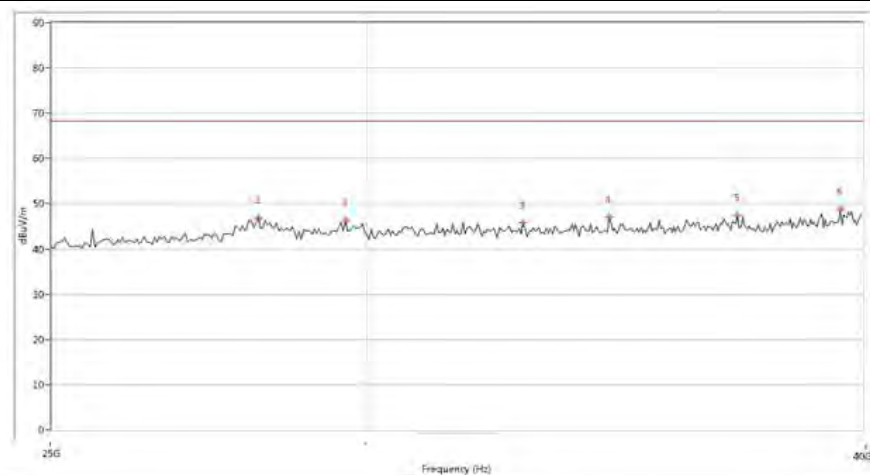
Plot for Channel = 48



(Antenna Horizontal, 30MHz to 40GHz)



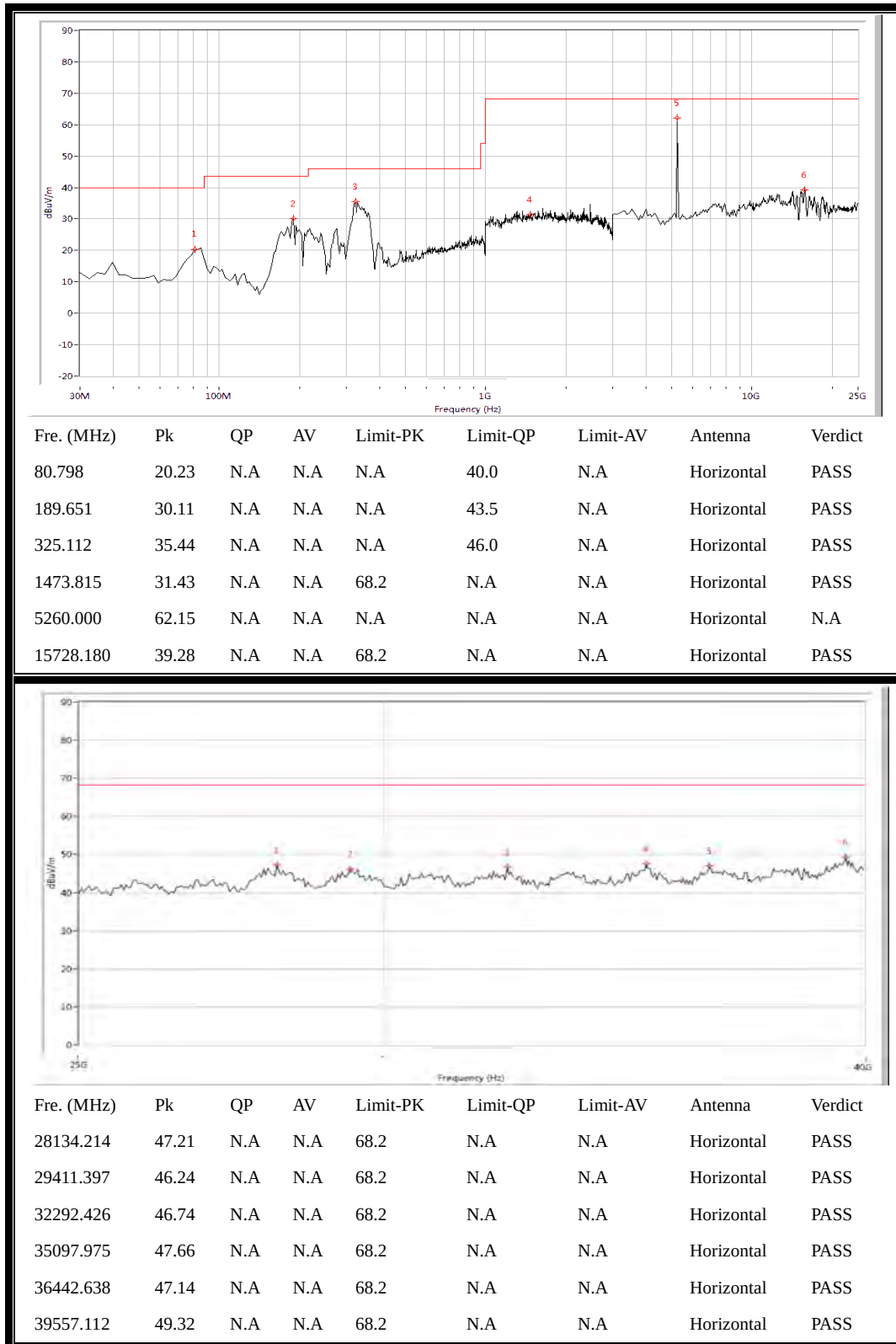
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	24.78	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
175.137	20.25	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	28.66	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1593.516	32.30	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5240.000	62.68	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.22	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



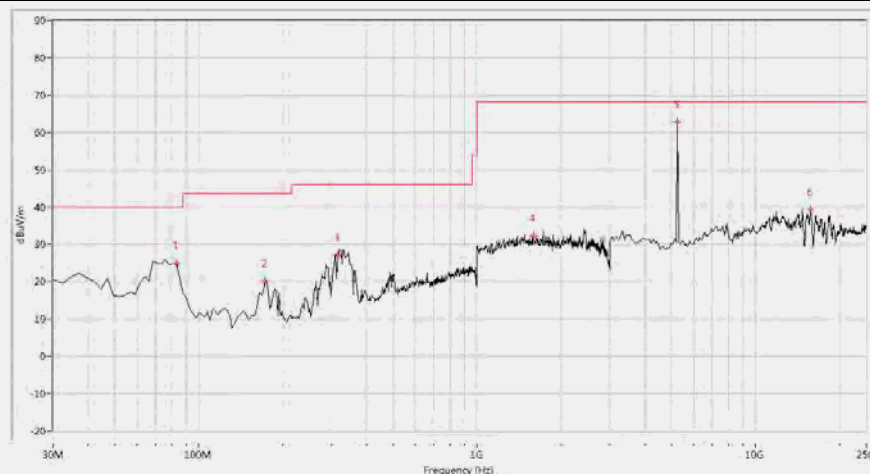
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28178.955	46.95	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29633.840	46.28	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
32857.536	45.84	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
34531.865	47.14	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
37193.451	47.33	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39471.631	48.74	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

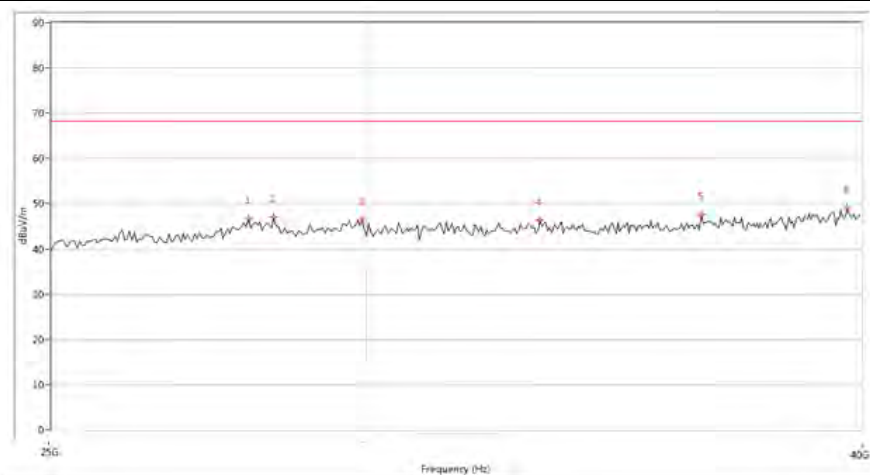
Plots for Channel = 52



(Antenna Horizontal, 30MHz to 40GHz)



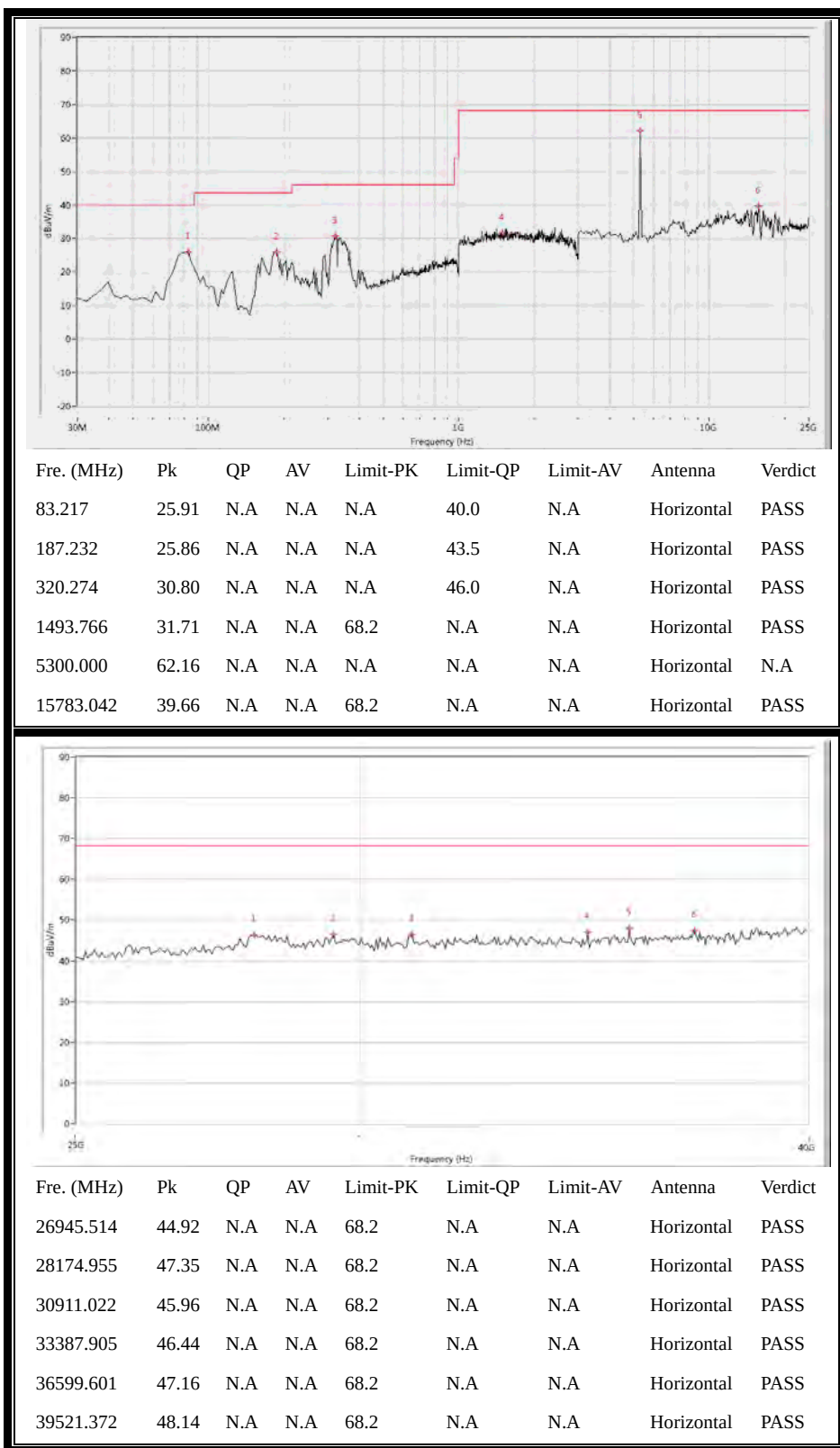
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	24.78	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
172.718	20.04	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
315.436	27.06	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1593.516	32.30	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5260.000	62.68	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.22	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



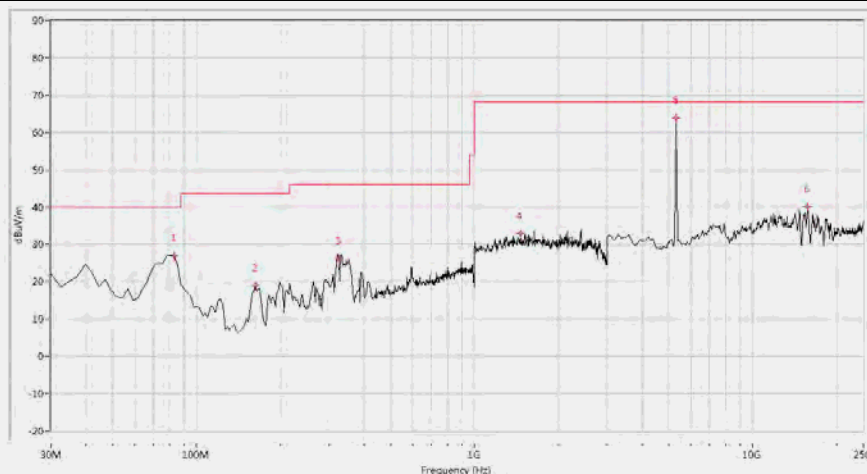
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28029.993	46.69	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
28444.140	46.99	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29937.766	46.54	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33193.202	46.31	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
36424.638	47.54	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39664.334	49.06	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

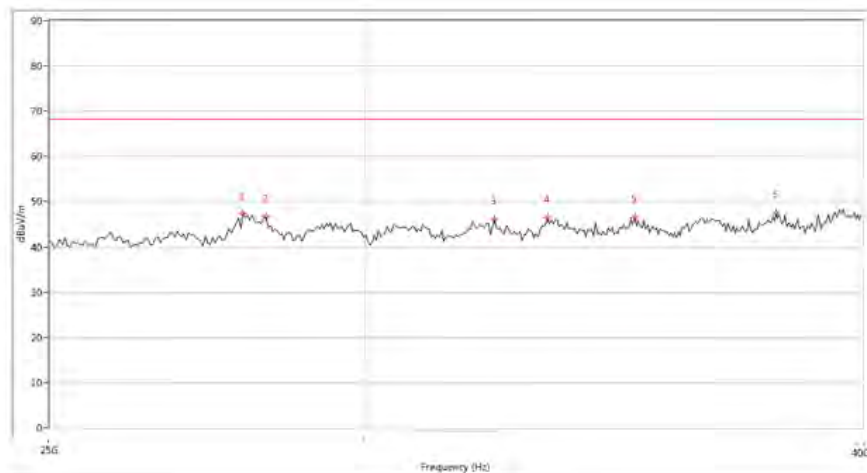
Plot for Channel = 60



(Antenna Horizontal, 30MHz to 40GHz)



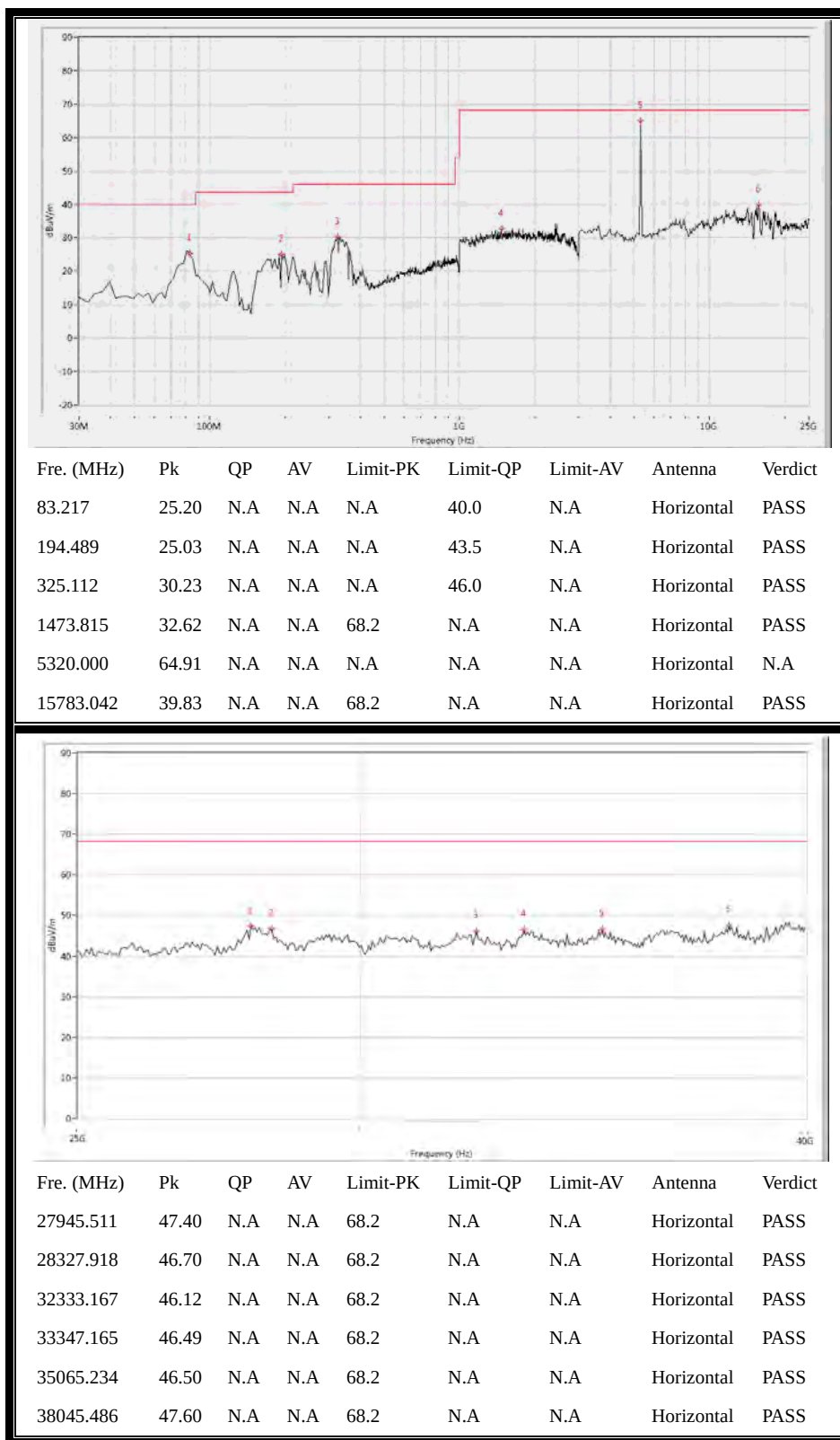
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	26.91	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
163.042	19.03	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
325.112	26.10	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1458.853	32.96	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5300.000	63.80	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.04	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



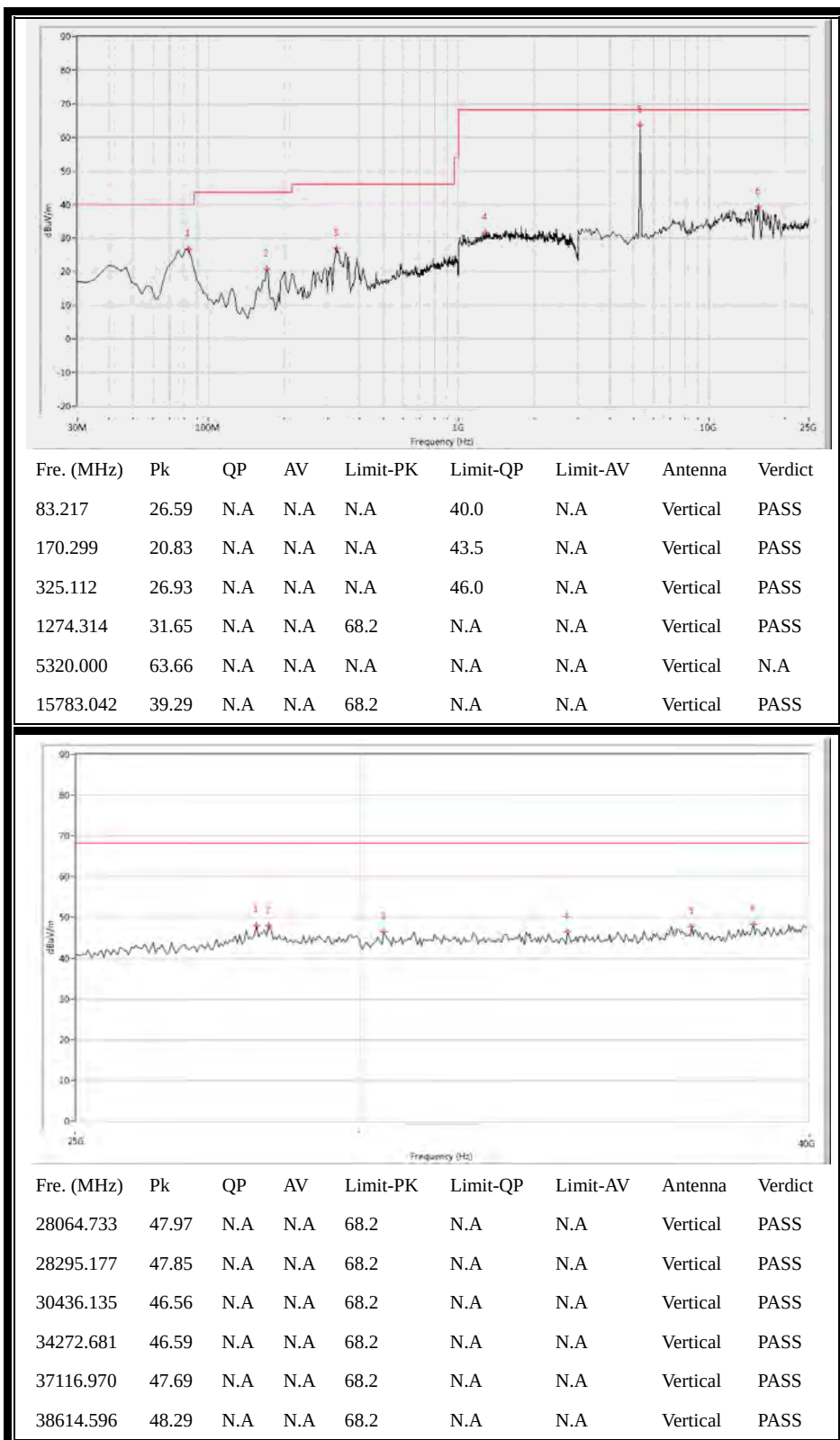
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28027.993	46.35	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29488.878	46.48	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
31022.244	46.46	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
34727.569	47.03	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35663.085	47.92	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
37194.451	47.42	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

Plot for Channel = 64

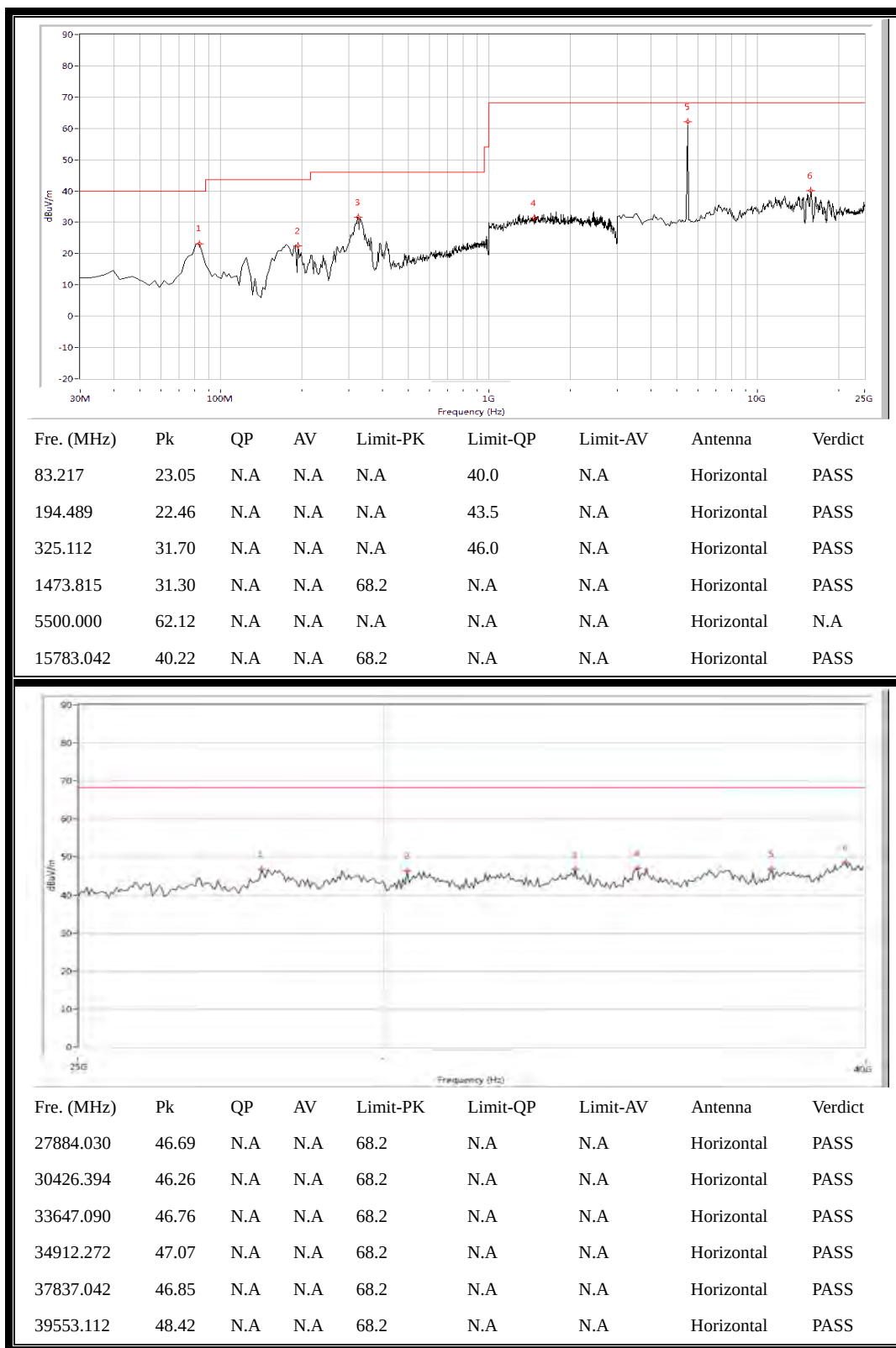


(Antenna Horizontal, 30MHz to 40GHz)

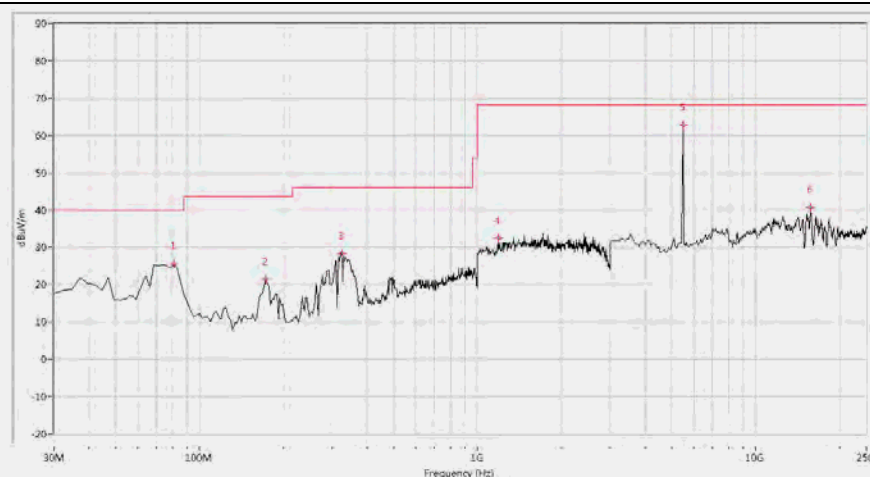


(Antenna Vertical, 30MHz to 40GHz)

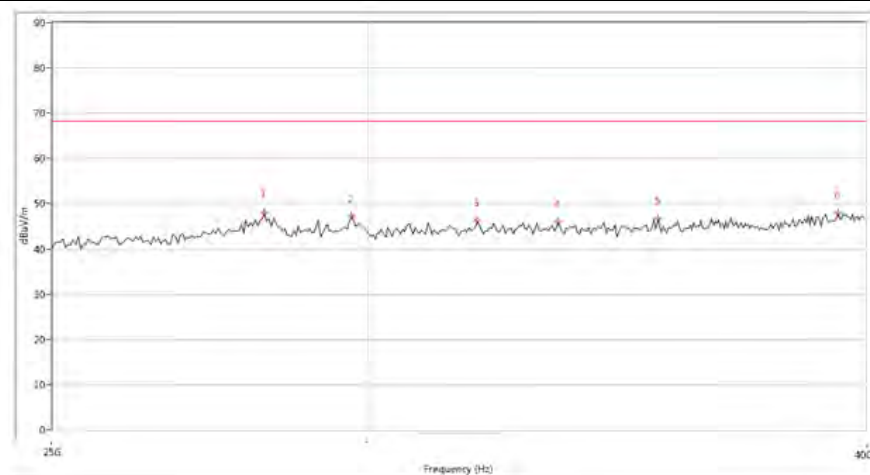
Plots for Channel = 100



(Antenna Horizontal, 30MHz to 40GHz)



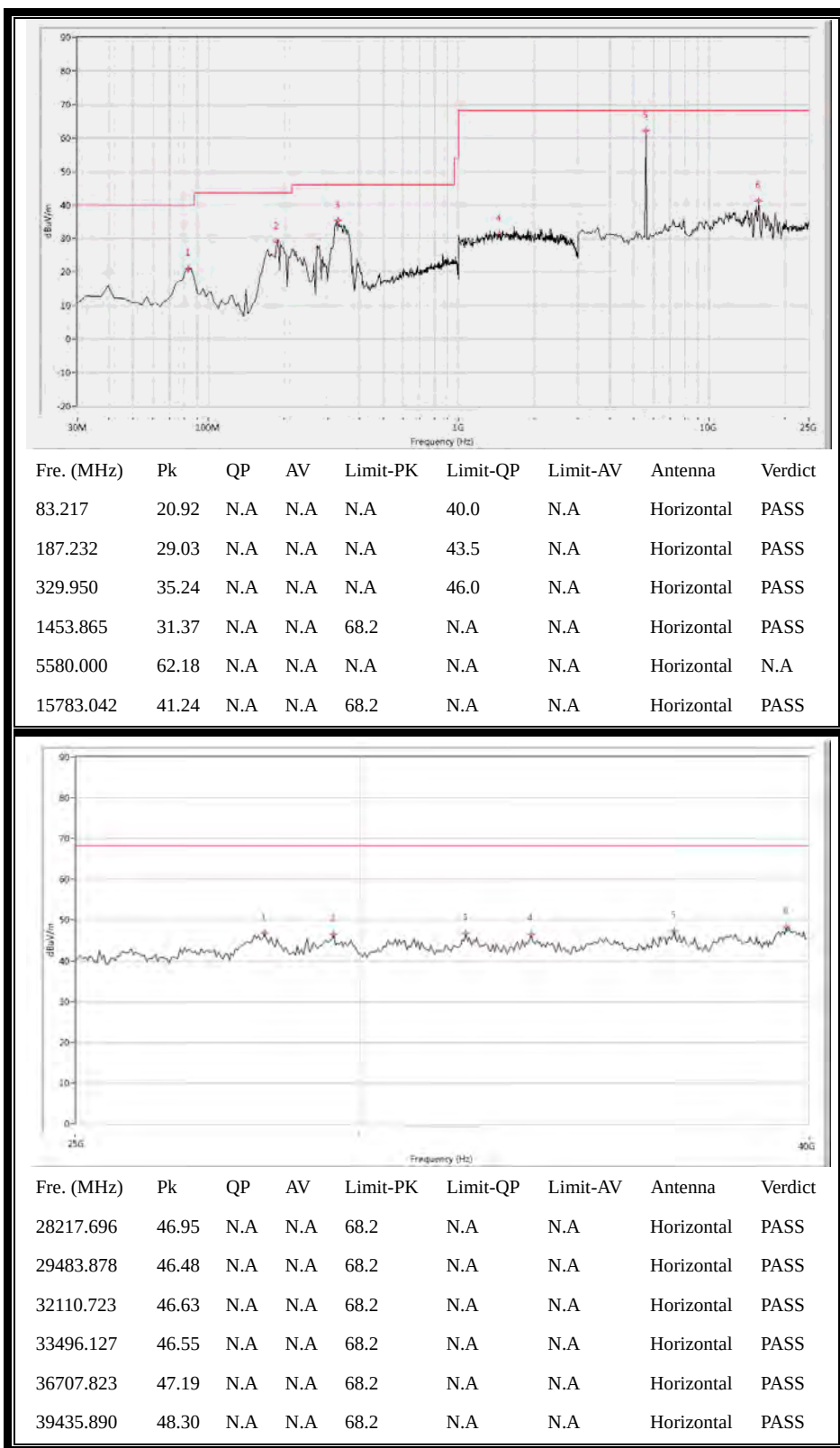
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
80.798	25.53	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
172.718	21.44	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
325.112	28.35	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1184.539	32.56	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5500.000	62.71	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.68	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



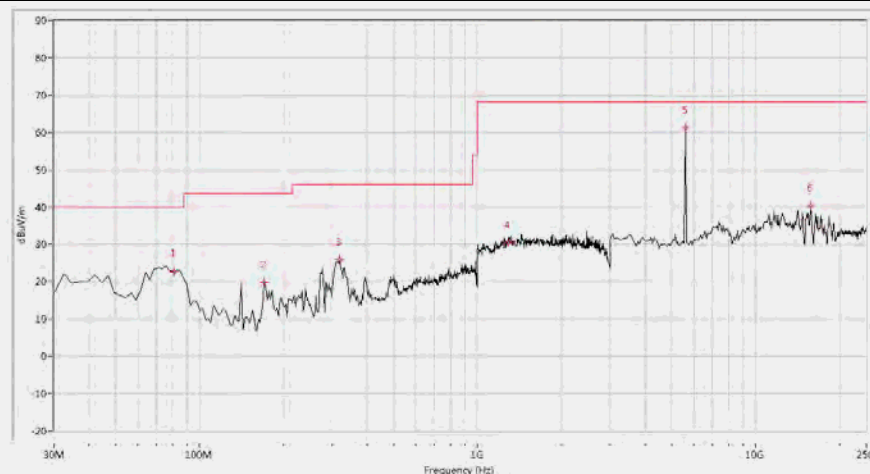
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28251.436	48.14	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29710.322	47.21	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
31956.761	46.38	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33494.127	45.98	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35473.382	46.65	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39367.409	47.88	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

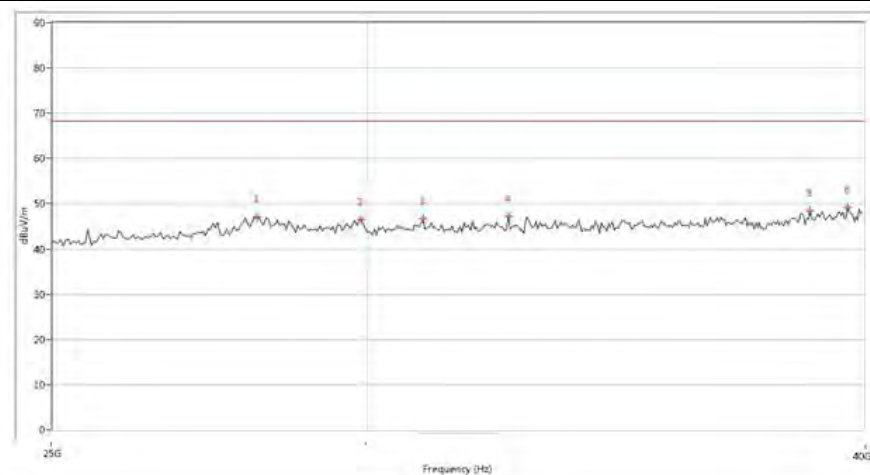
Plot for Channel = 116



(Antenna Horizontal, 30MHz to 40GHz)



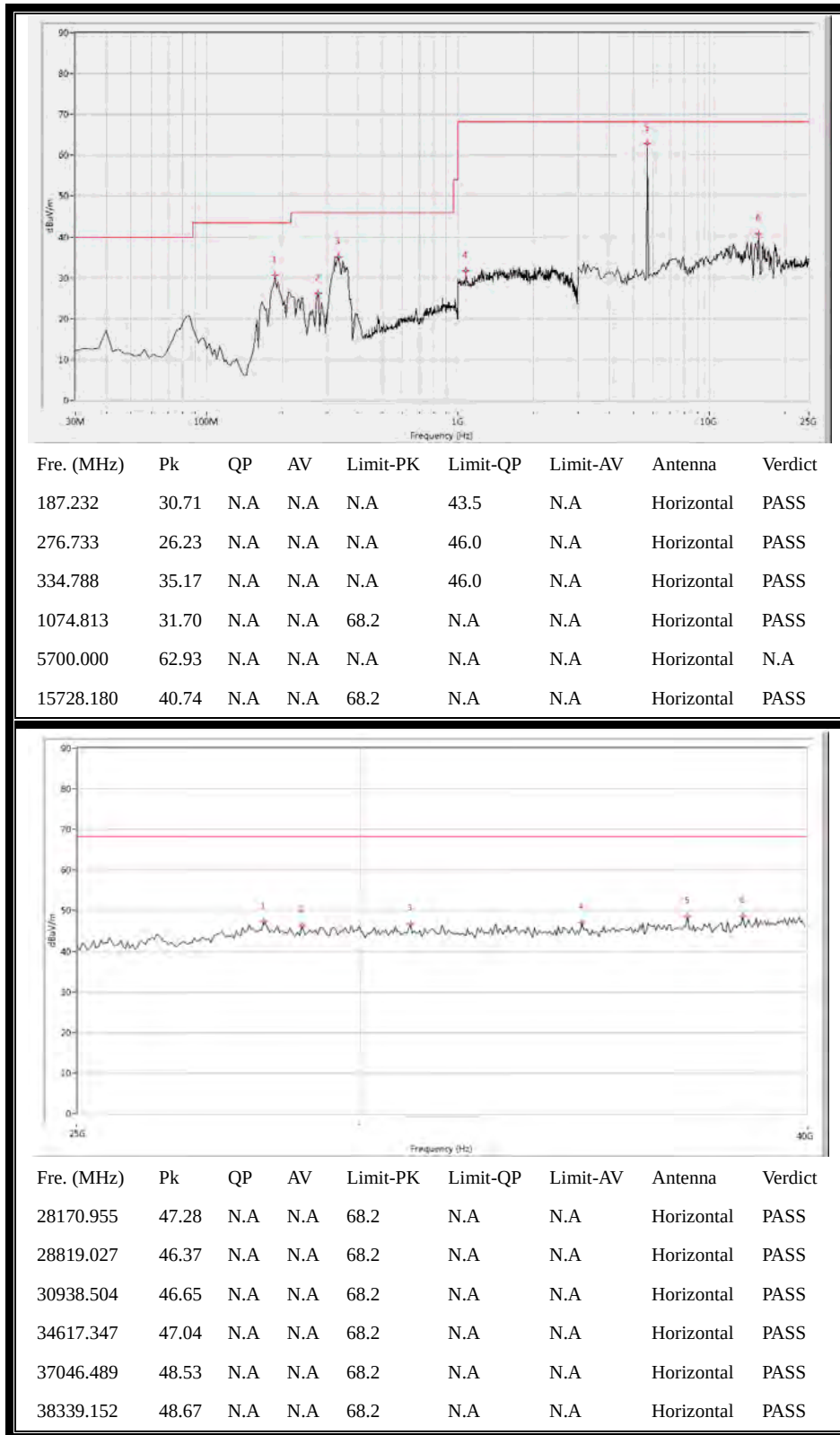
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
80.798	22.67	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
170.299	19.80	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
317.855	26.04	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1289.277	30.54	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5580.000	61.22	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.25	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



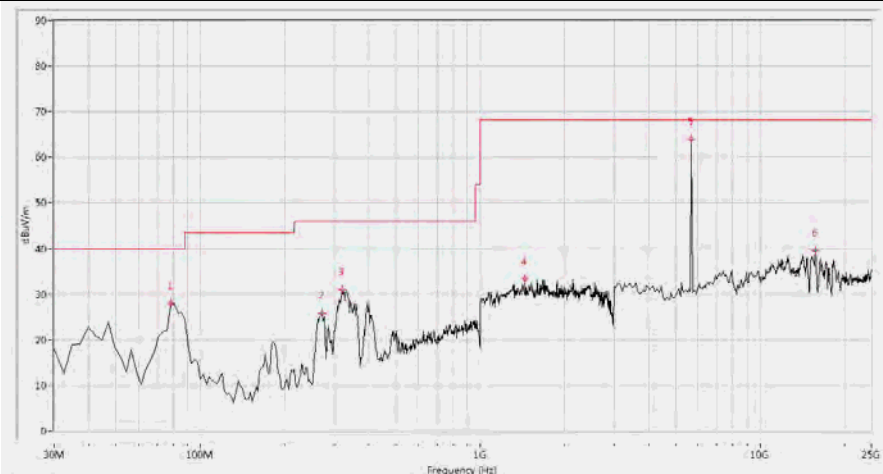
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28147.214	46.98	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29901.025	46.46	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
30985.504	46.68	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
32559.611	47.29	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
38763.559	48.45	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39672.594	49.28	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

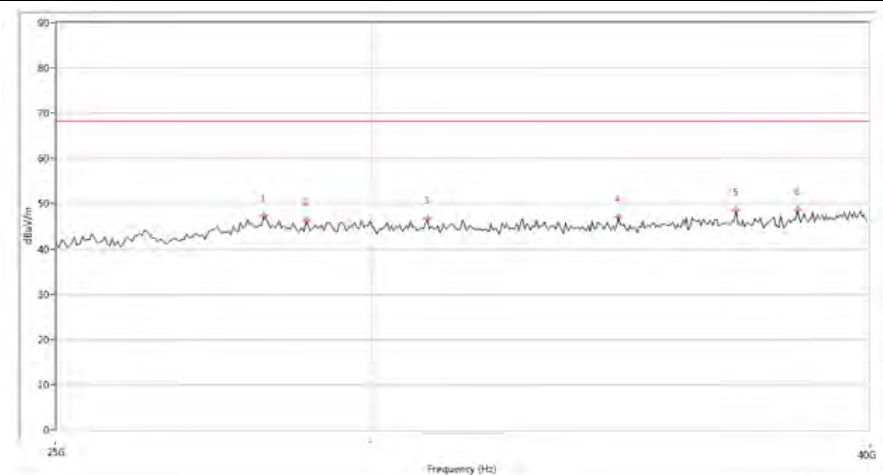
Plot for Channel = 140



(Antenna Horizontal, 30MHz to 40GHz)



Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
78.379	28.00	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
271.895	25.78	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
320.274	31.01	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1443.890	33.29	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5700.000	64.00	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.55	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



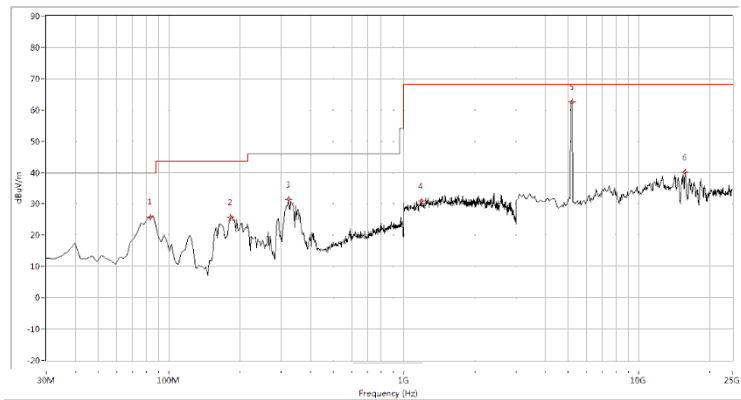
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28291.696	47.46	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29901.025	47.10	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33007.499	47.16	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35513.122	47.69	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
36809.526	47.91	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39477.631	48.61	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

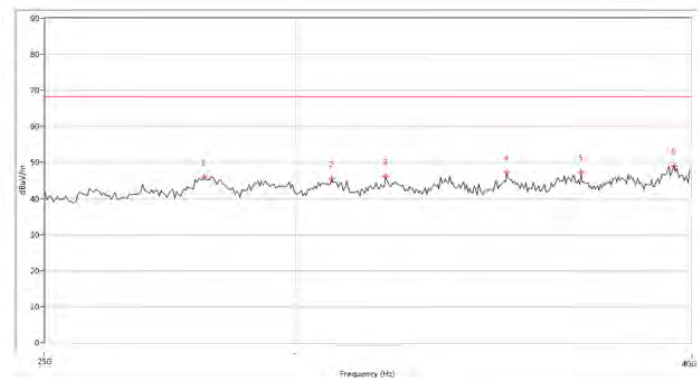
2.11.3.3. 802.11n-40MHz Test mode

A. Test Plots for the Whole Measurement Frequency Range:

Plots for Channel = 38

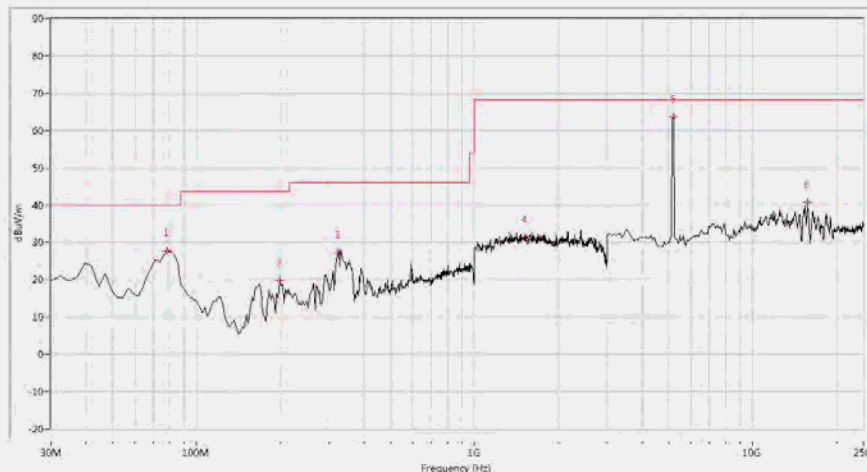


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	25.83	N.A	N.A	N.A	40.0	N.A	Horizontal	PASS
182.394	25.72	N.A	N.A	N.A	43.5	N.A	Horizontal	PASS
322.693	31.42	N.A	N.A	N.A	46.0	N.A	Horizontal	PASS
1184.539	31.05	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
5190.000	62.46	N.A	N.A	N.A	N.A	N.A	Horizontal	N.A
15728.180	40.11	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

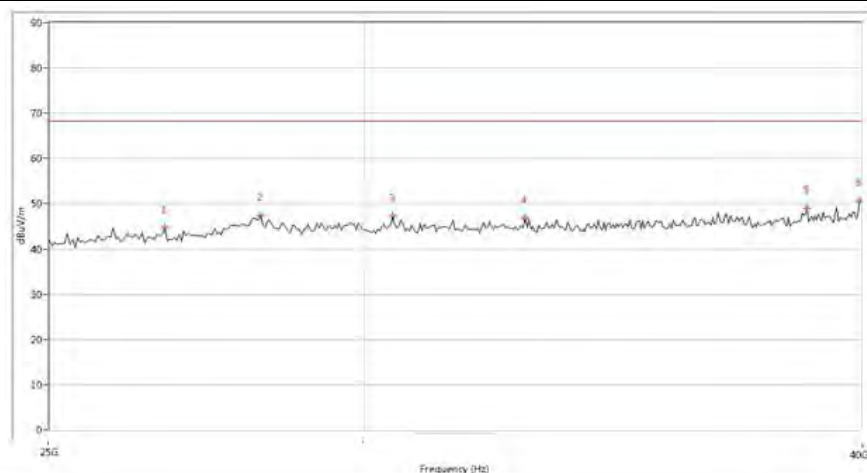


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28067.733	46.06	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
30794.800	45.42	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
32036.242	46.18	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
34981.753	47.19	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
36937.267	47.25	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
39514.372	48.93	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 40GHz)



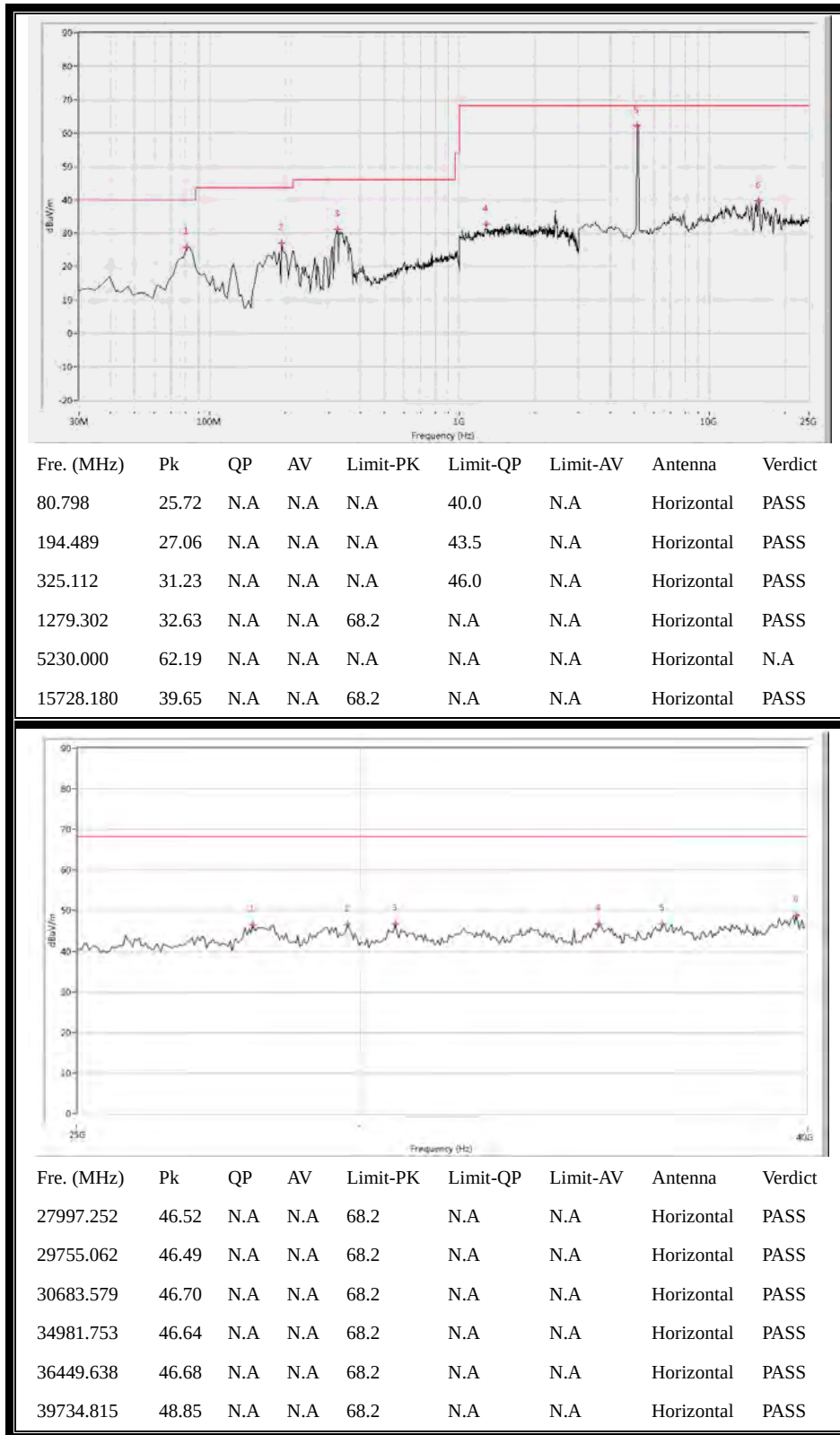
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
78.379	27.64	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
199.327	19.96	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	27.33	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1518.703	31.42	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5190.000	63.70	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.72	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



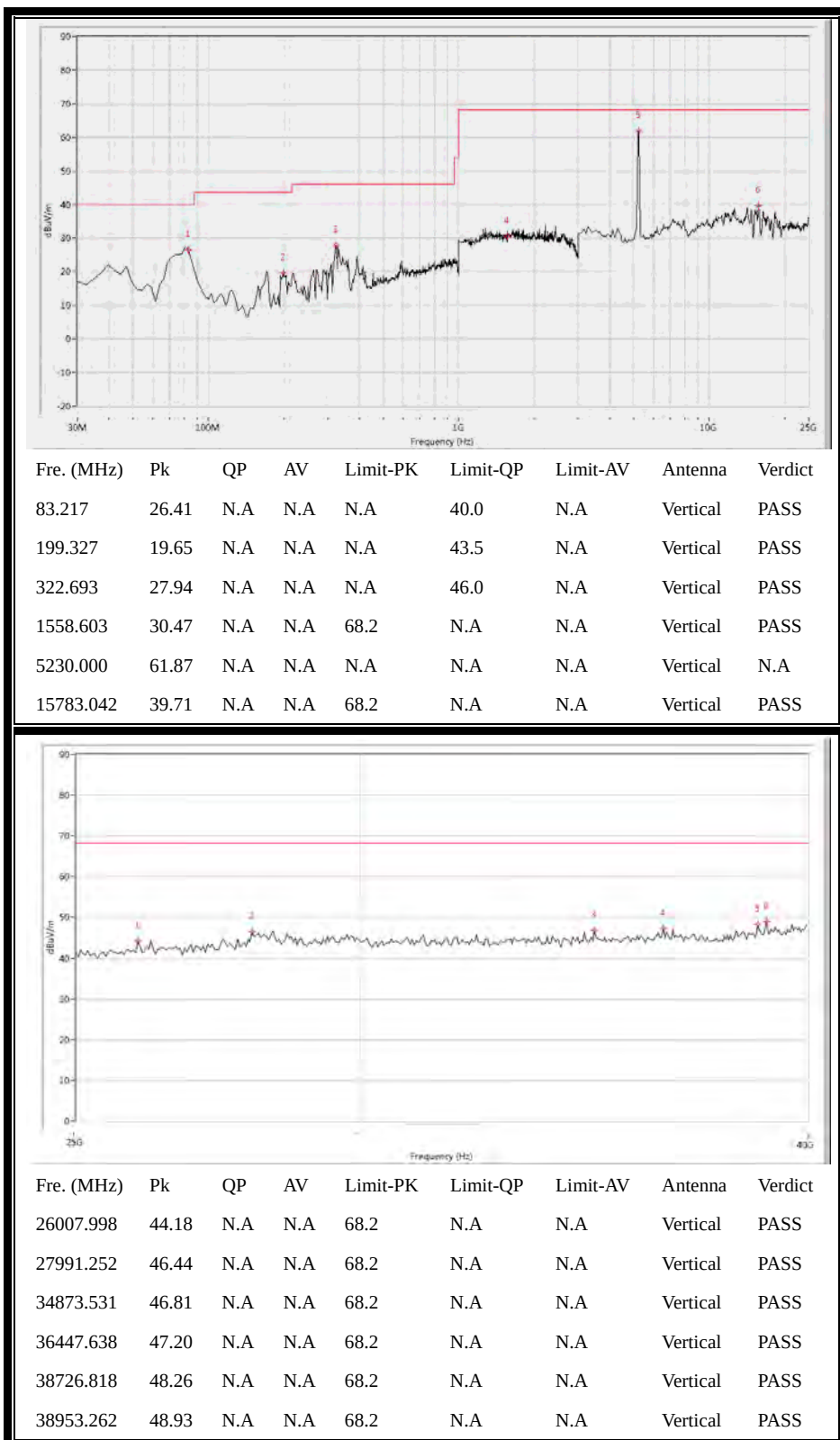
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
26727.070	44.79	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
28256.436	47.38	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
30498.875	47.15	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
32933.017	46.86	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
38765.559	48.96	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39969.259	50.59	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

Plot for Channel = 46

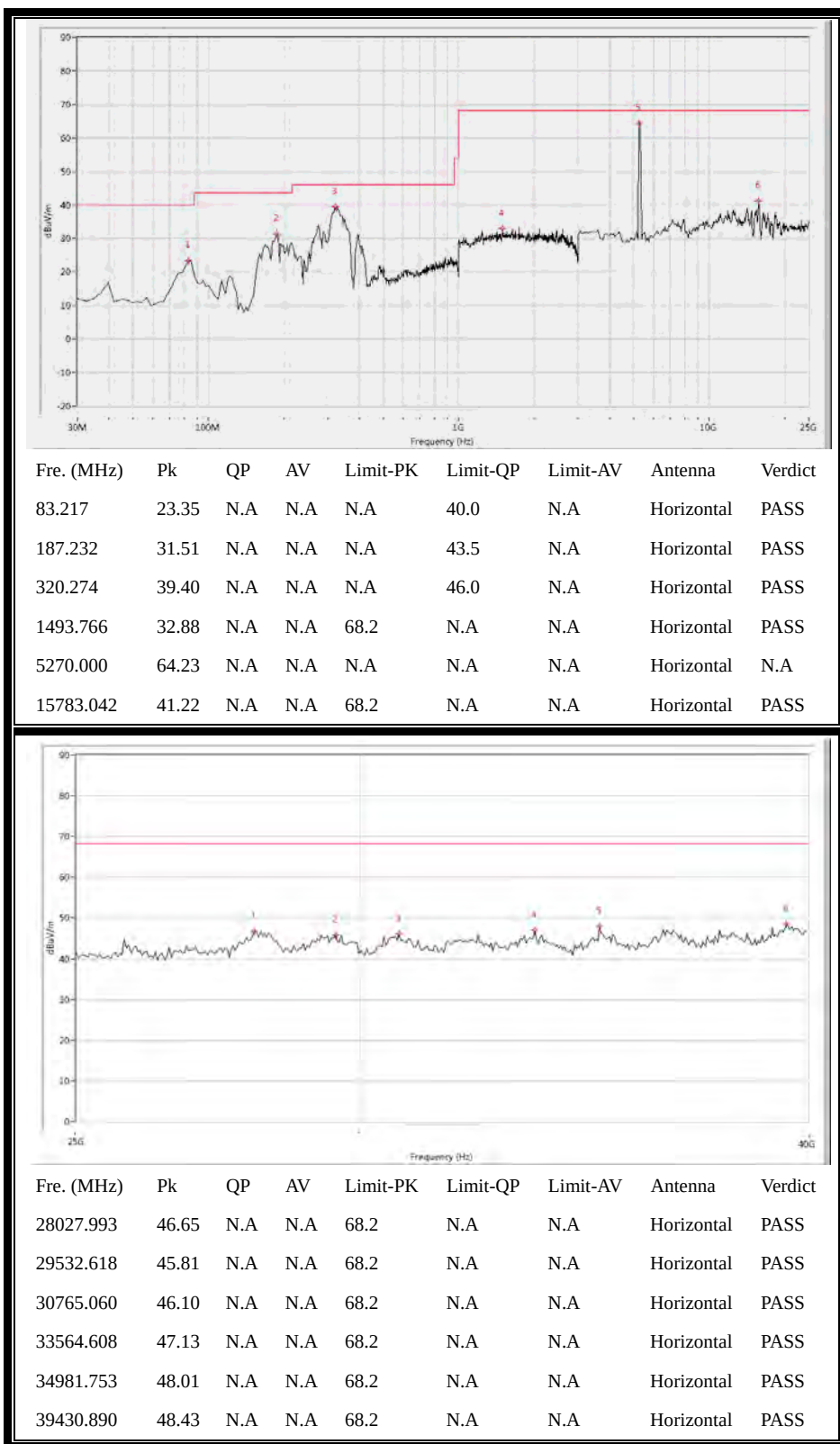


(Antenna Horizontal, 30MHz to 40GHz)

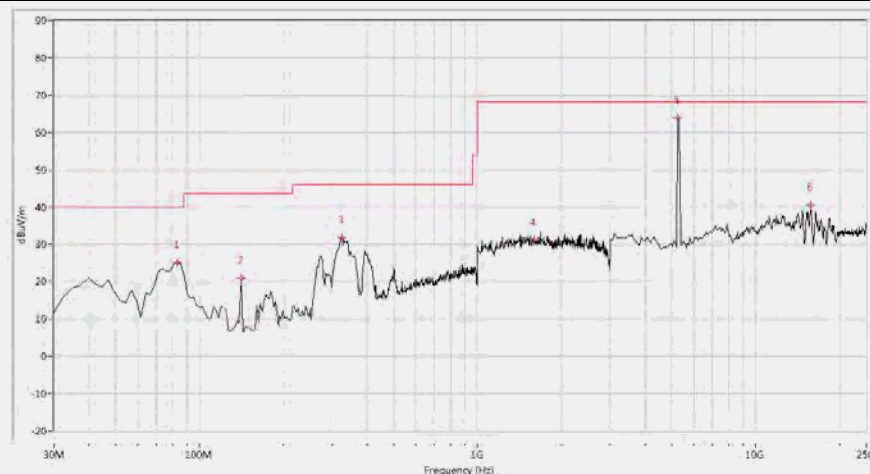


(Antenna Vertical, 30MHz to 40GHz)

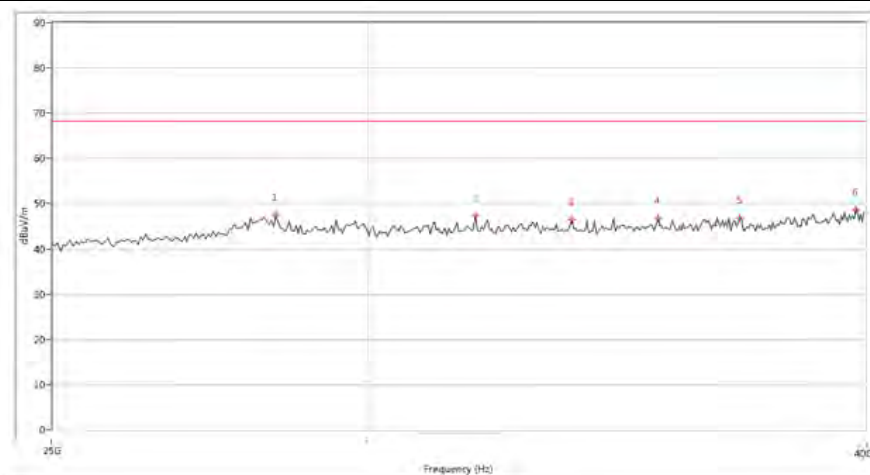
Plot for Channel = 54



(Antenna Horizontal, 30MHz to 40GHz)



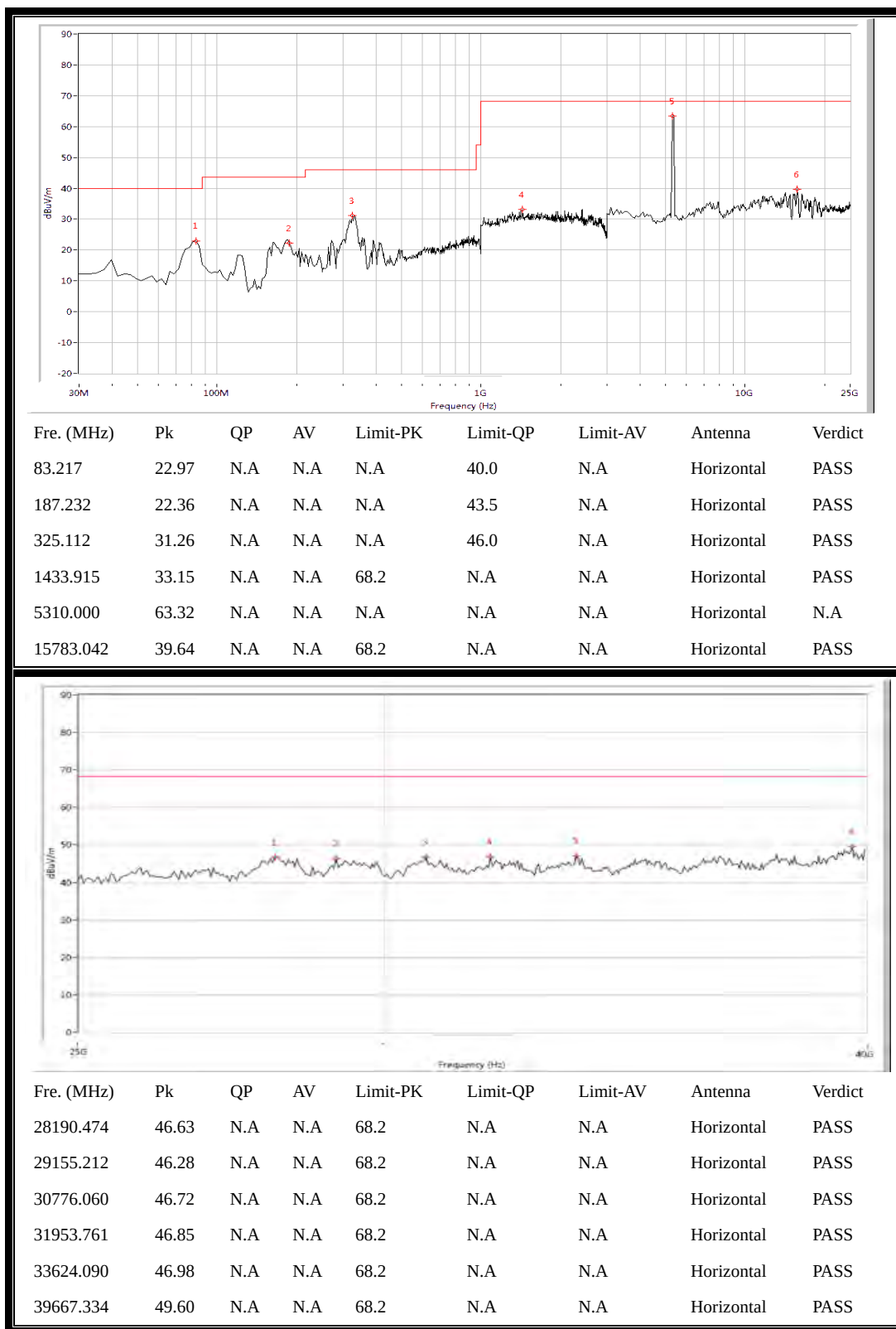
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	24.99	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
141.272	20.93	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
325.112	31.74	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1593.516	31.16	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5270.000	63.88	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.48	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



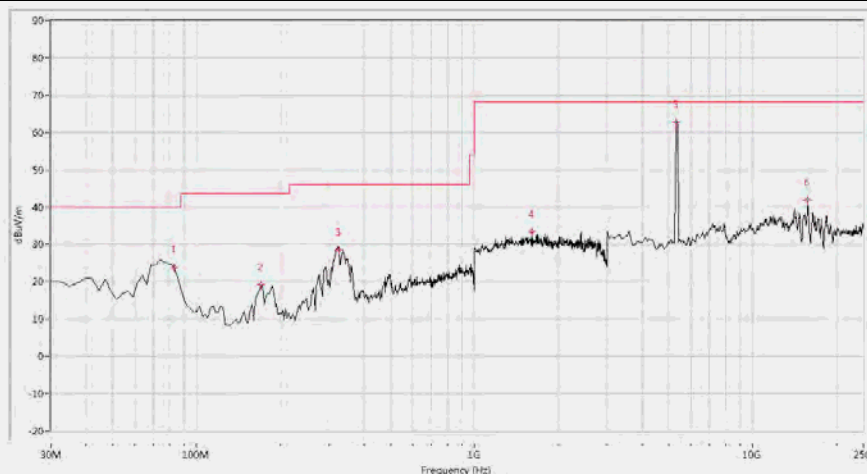
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28445.140	47.54	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
31926.020	47.37	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33753.312	46.55	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35477.382	46.87	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
37196.451	46.91	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39770.556	48.61	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

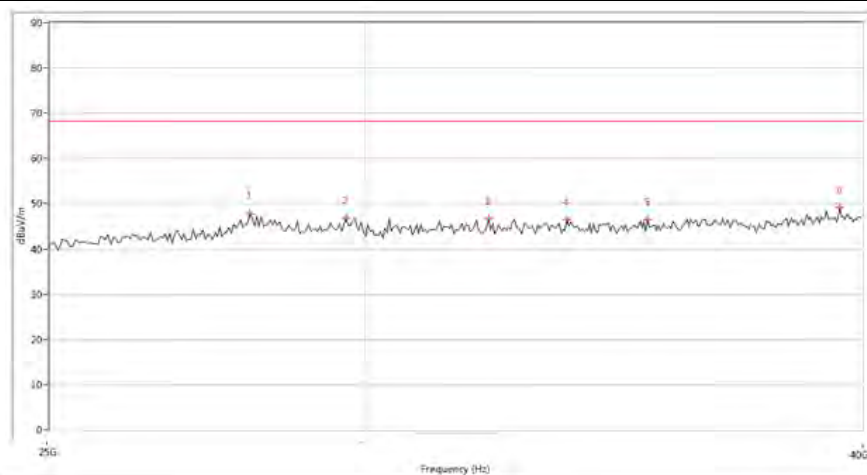
Plots for Channel = 62



(Antenna Horizontal, 30MHz to 40GHz)



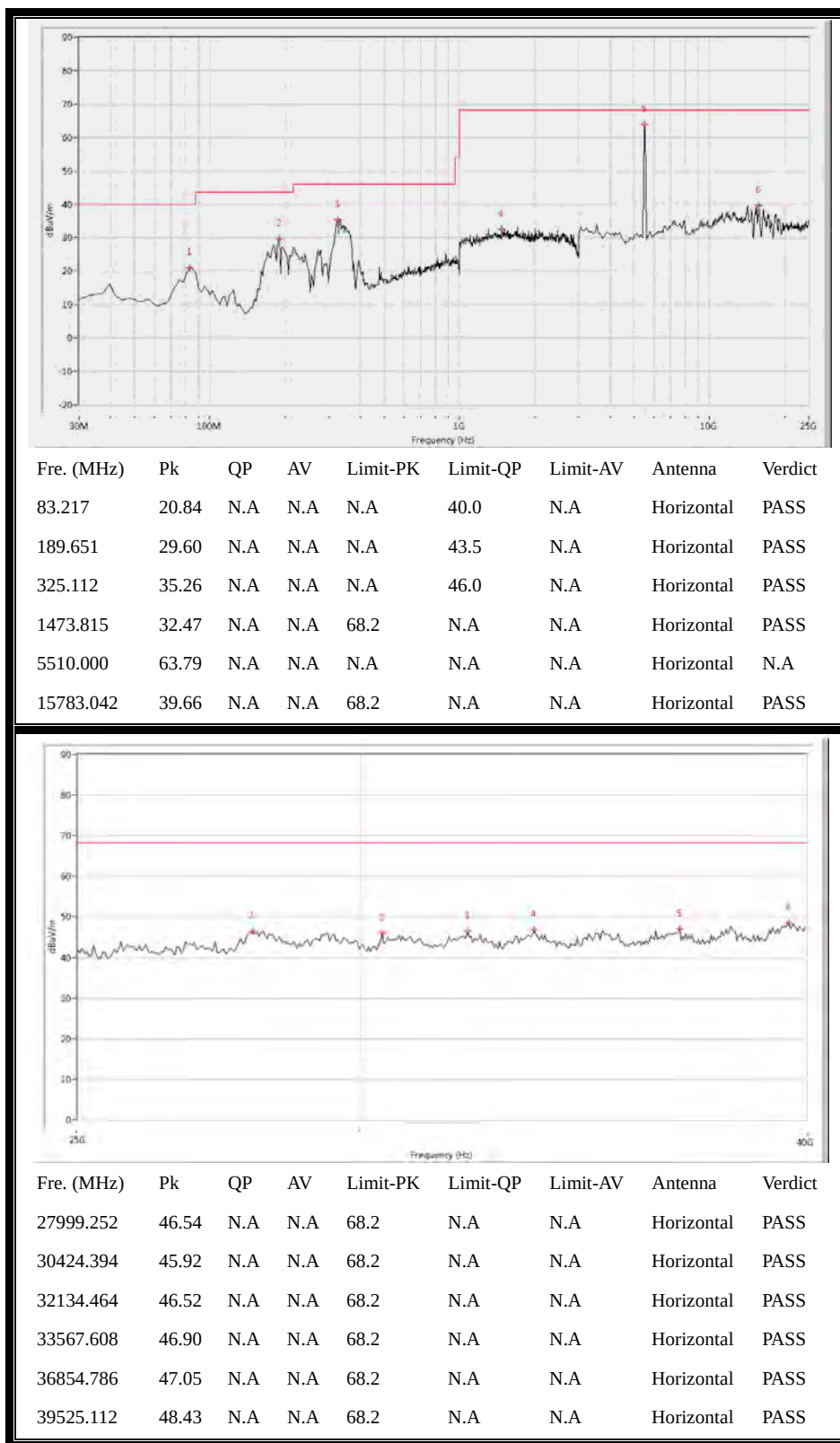
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	23.77	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
170.299	19.14	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
325.112	28.48	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1603.491	33.30	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5310.000	62.68	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	41.89	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



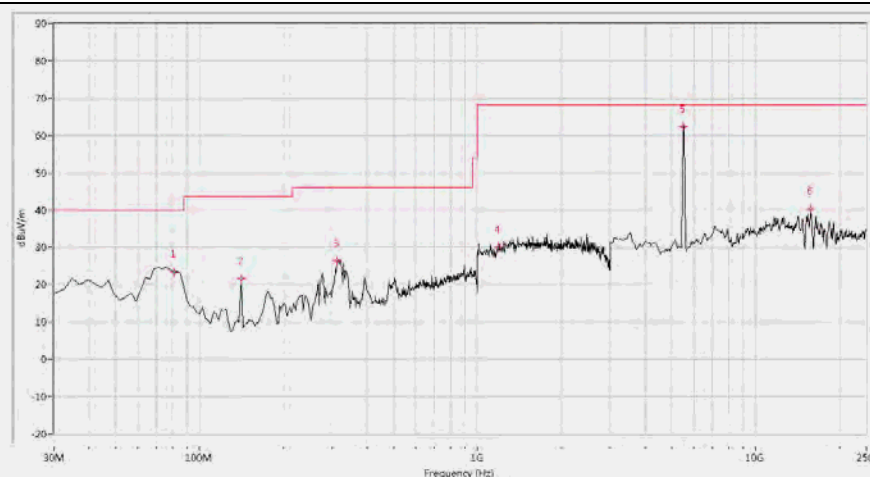
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28068.733	47.81	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29673.581	46.95	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
32217.945	46.68	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33715.571	46.48	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35321.419	46.55	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39470.631	49.20	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

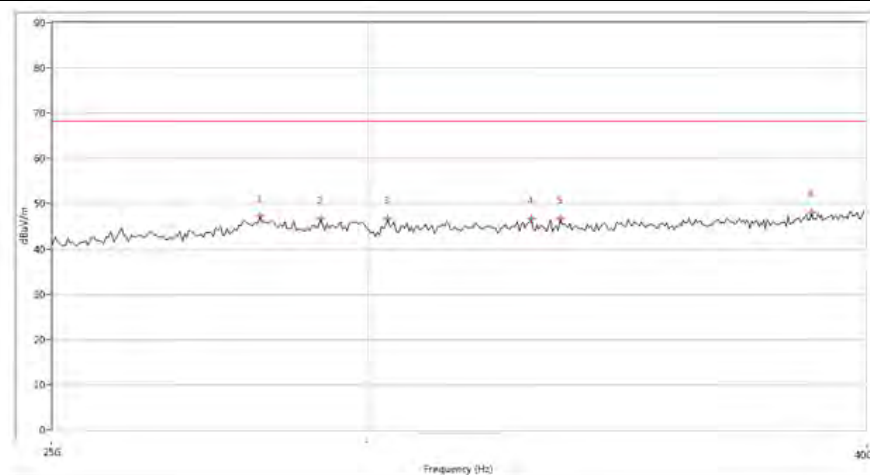
Plot for Channel = 102



(Antenna Horizontal, 30MHz to 40GHz)



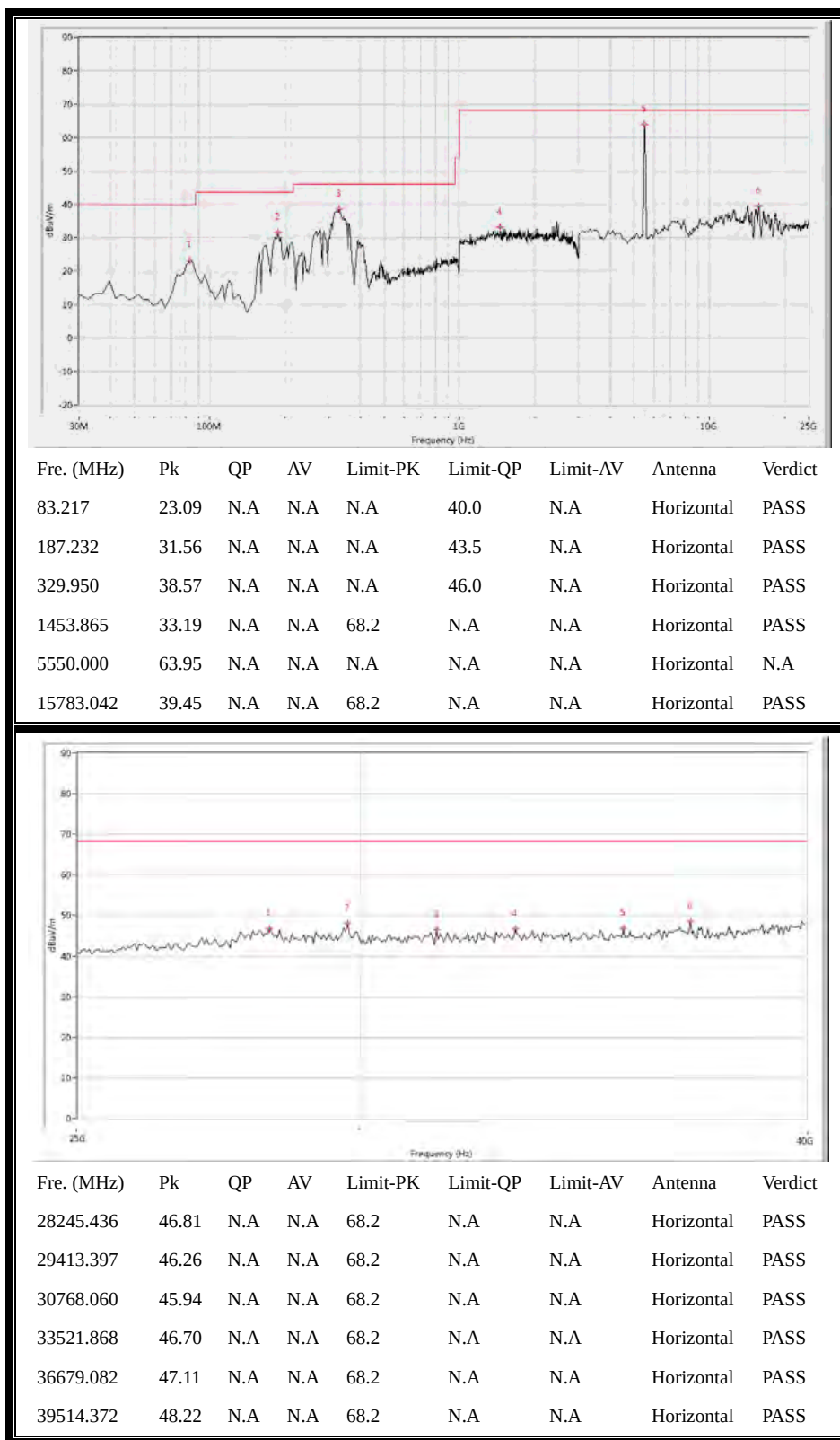
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
80.798	23.36	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
141.272	21.53	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
313.017	26.39	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1184.539	30.03	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5510.000	62.25	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.31	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



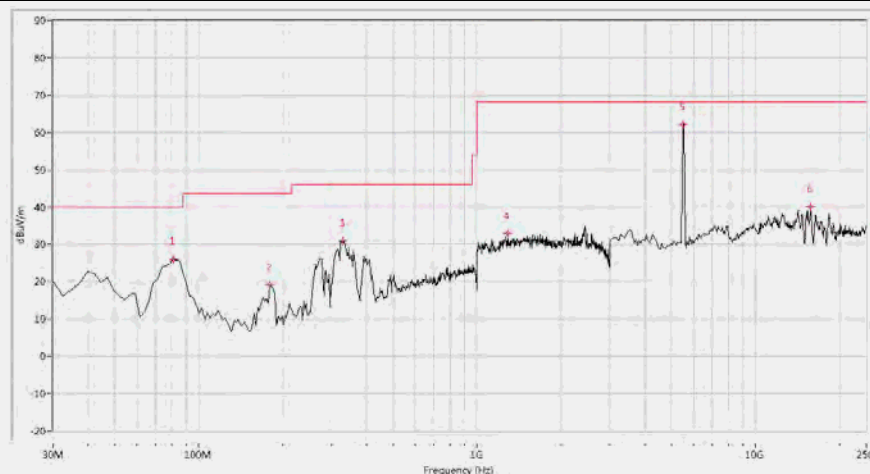
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28176.955	47.18	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29181.953	46.61	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
30347.913	46.62	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
32965.758	46.76	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33523.868	46.69	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
38769.559	48.04	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

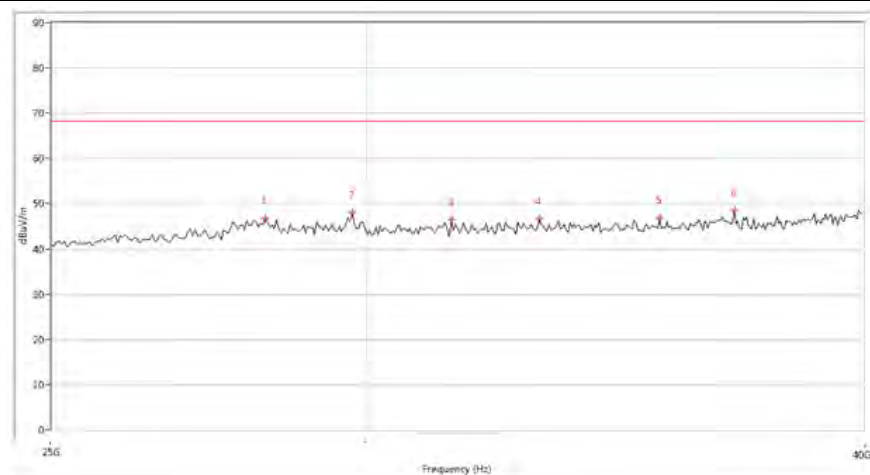
Plot for Channel = 110



(Antenna Horizontal, 30MHz to 40GHz)



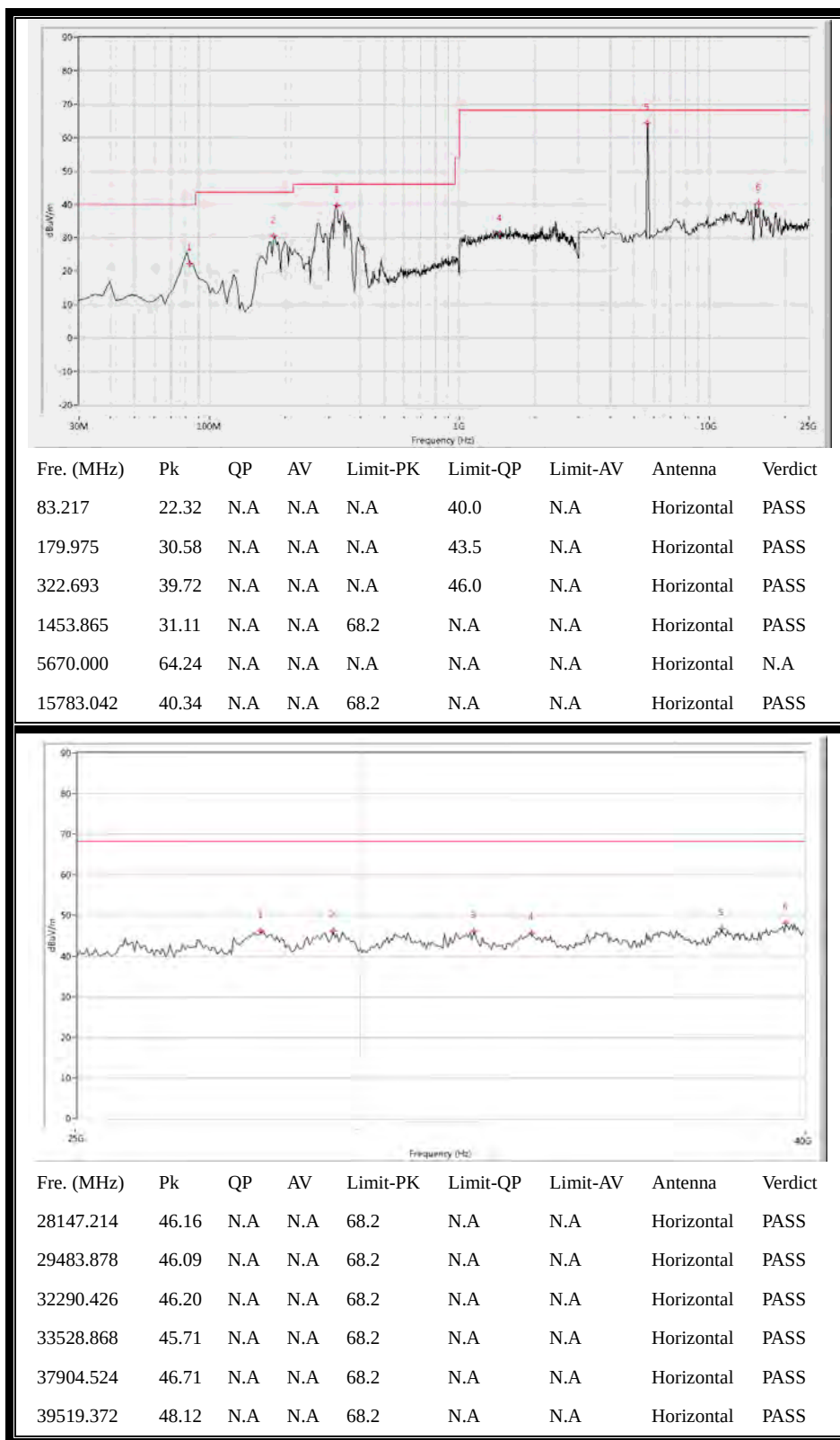
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
80.798	26.02	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
179.975	19.27	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
329.950	30.87	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1289.277	32.98	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5550.000	62.15	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.21	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



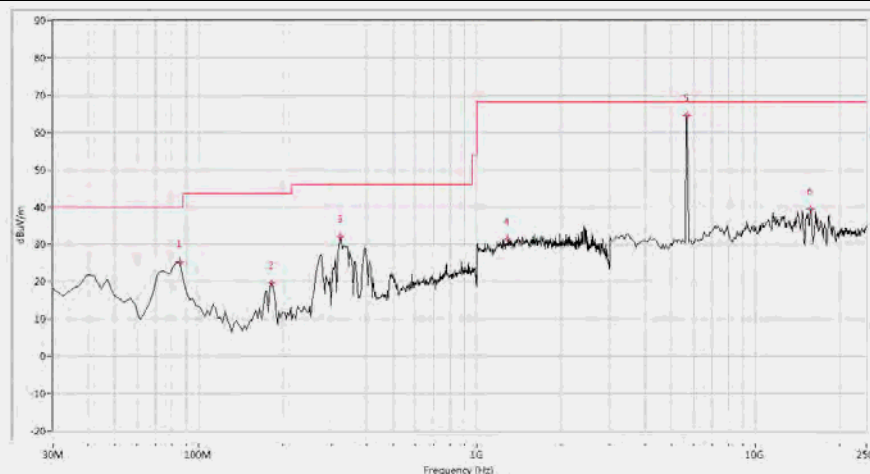
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28297.177	46.68	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29752.062	48.03	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
31503.873	46.43	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33157.461	46.69	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35544.863	46.79	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
37101.970	48.40	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

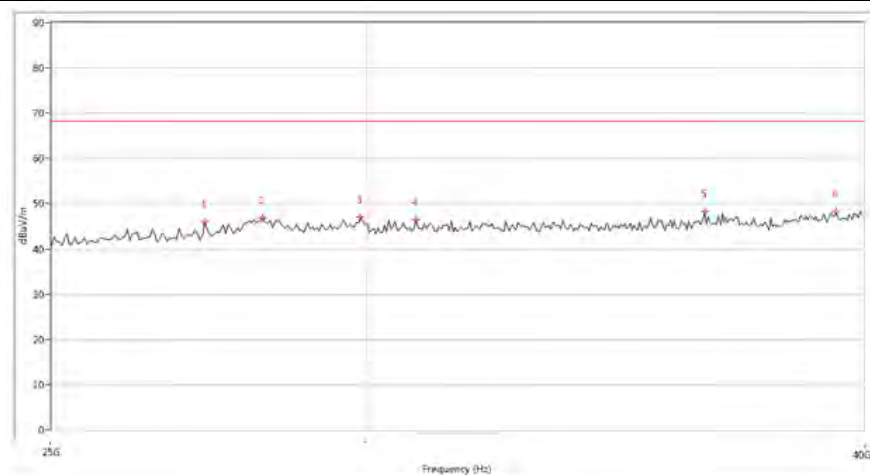
Plot for Channel = 134



(Antenna Horizontal, 30MHz to 40GHz)



Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
85.636	25.23	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
182.394	19.54	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	32.14	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1289.277	31.48	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5670.000	64.42	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.55	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



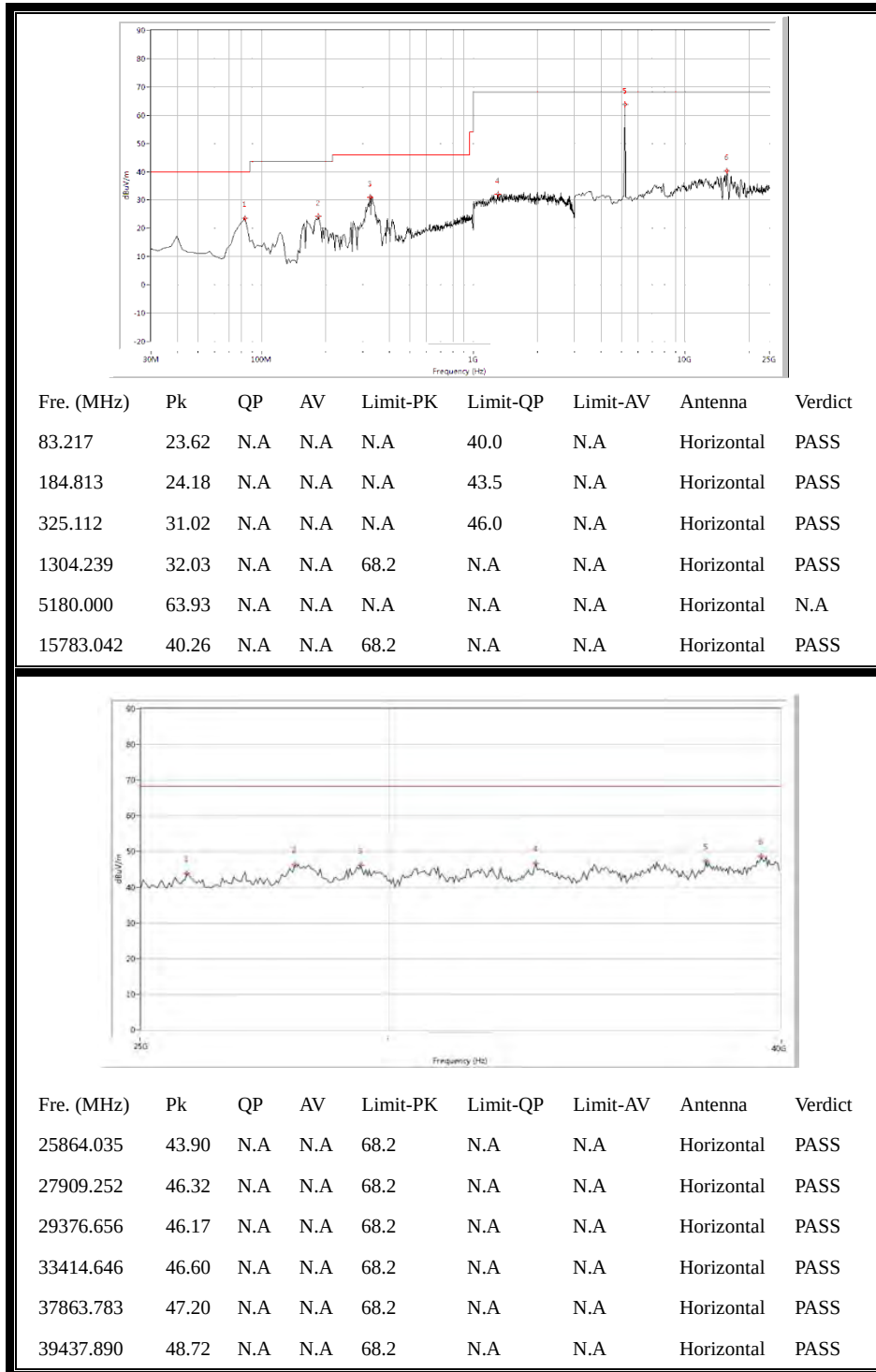
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
27318.920	45.93	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
28253.436	46.90	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29907.025	47.14	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
30874.282	46.49	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
36486.379	48.31	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39360.409	48.34	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

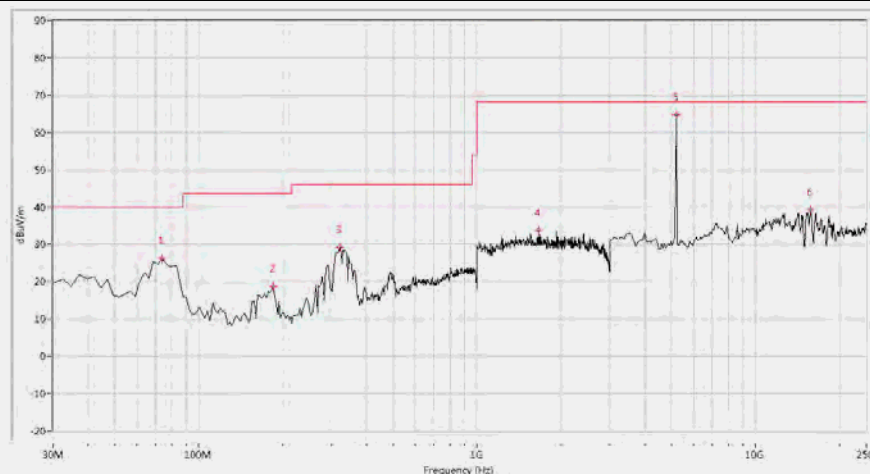
2.11.3.4. 802.11ac-20MHz Test mode

B. Test Plots for the Whole Measurement Frequency Range:

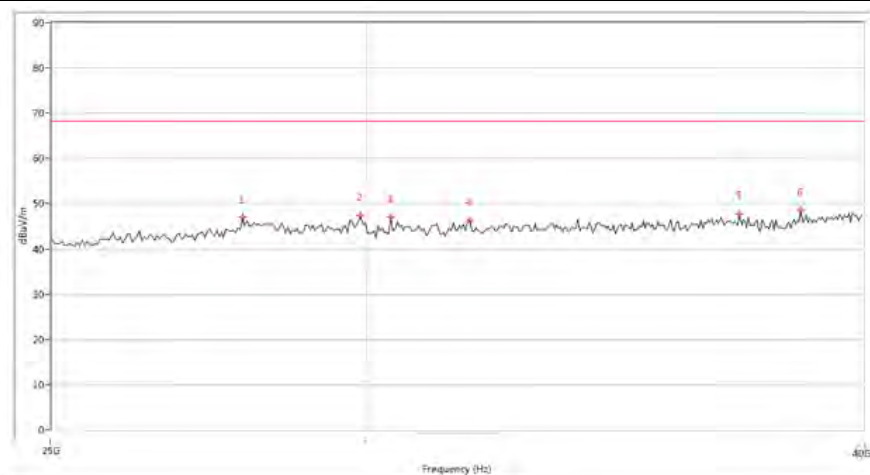
Plots for Channel = 36



(Antenna Horizontal, 30MHz to 40GHz)



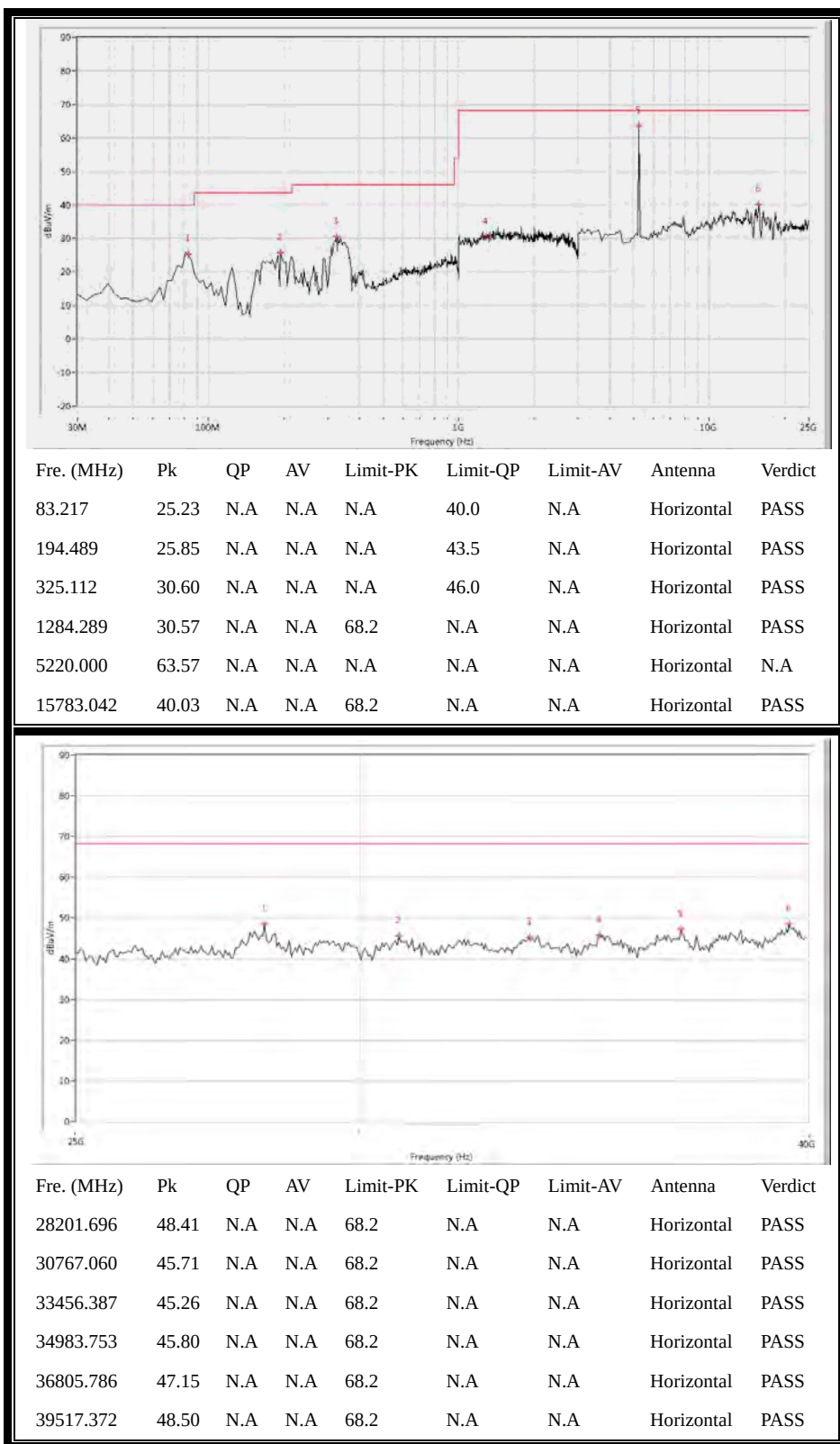
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
73.541	26.11	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
184.813	18.77	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
320.274	29.25	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1663.342	33.79	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5180.000	64.71	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.35	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



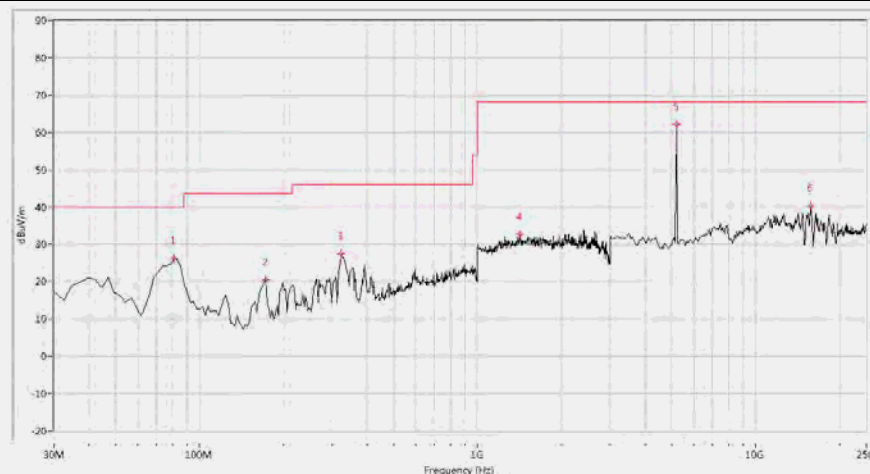
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
27919.771	47.00	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29910.025	47.43	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
30424.394	47.01	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
31844.539	46.34	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
37263.192	47.70	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
38507.855	48.39	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

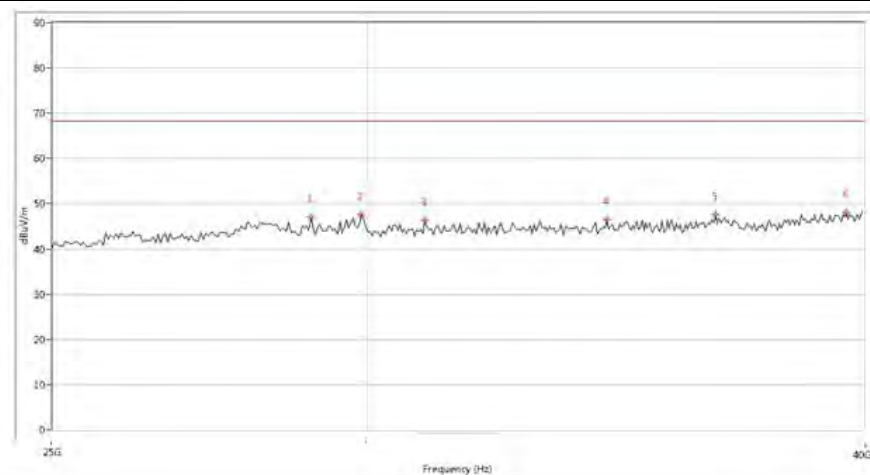
Plot for Channel = 44



(Antenna Horizontal, 30MHz to 40GHz)



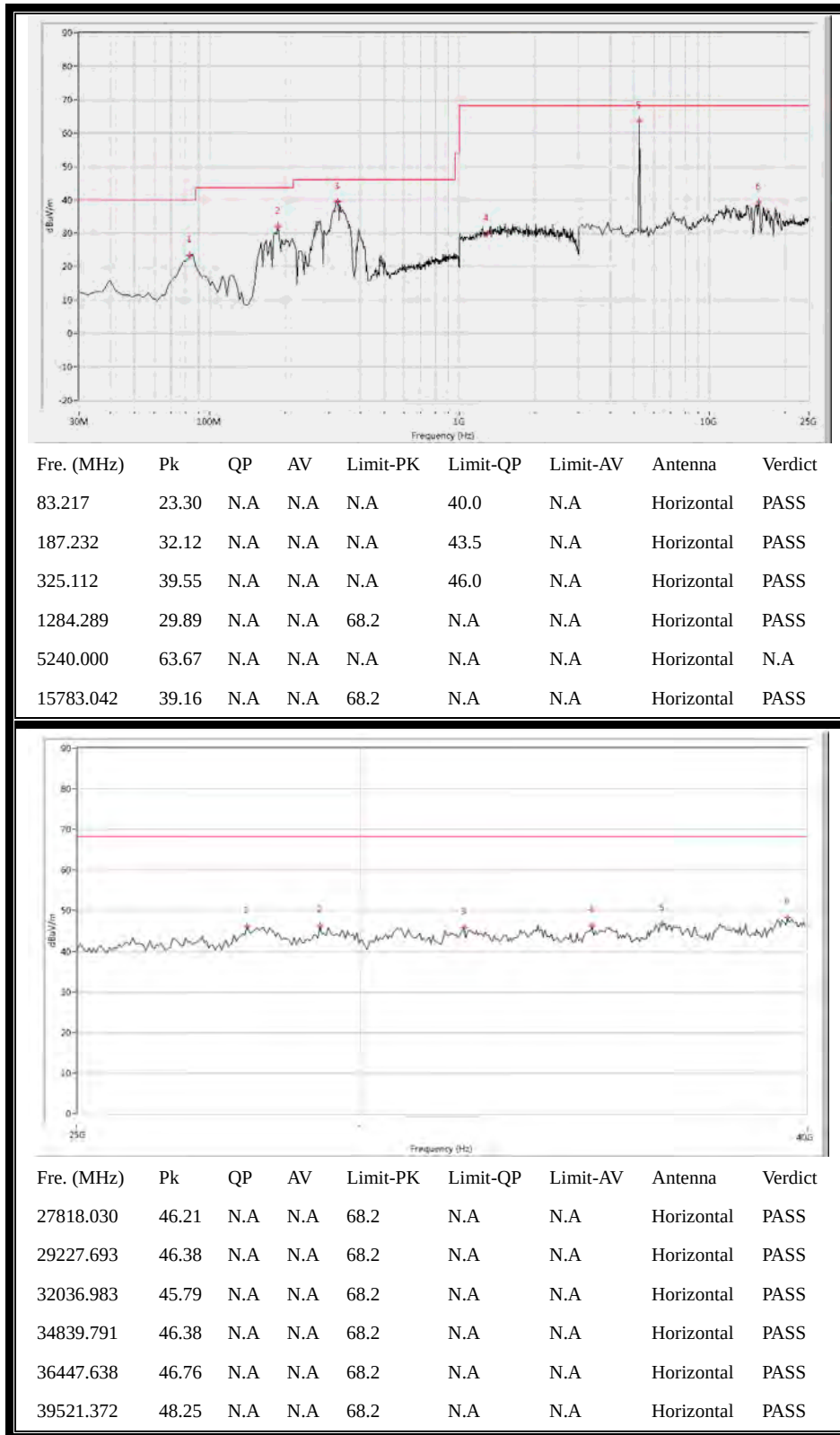
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
80.798	26.20	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
172.718	20.61	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	27.46	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1423.940	32.72	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5220.000	62.17	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.44	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



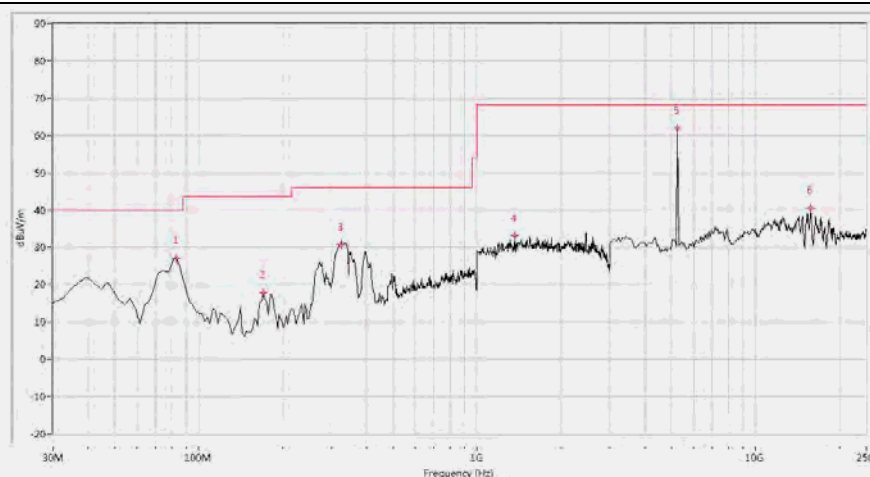
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
29039.990	47.04	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29940.025	47.54	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
31012.244	46.40	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
34463.384	46.54	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
36770.823	47.50	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39585.853	48.08	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

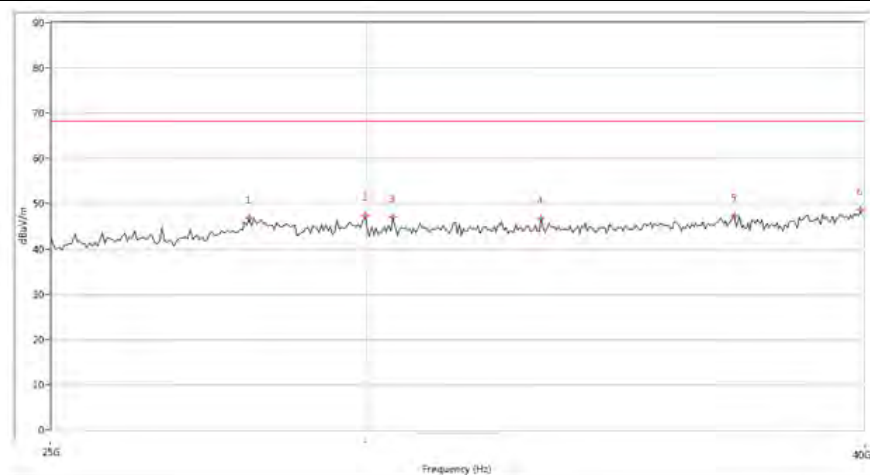
Plot for Channel = 48



(Antenna Horizontal, 30MHz to 40GHz)



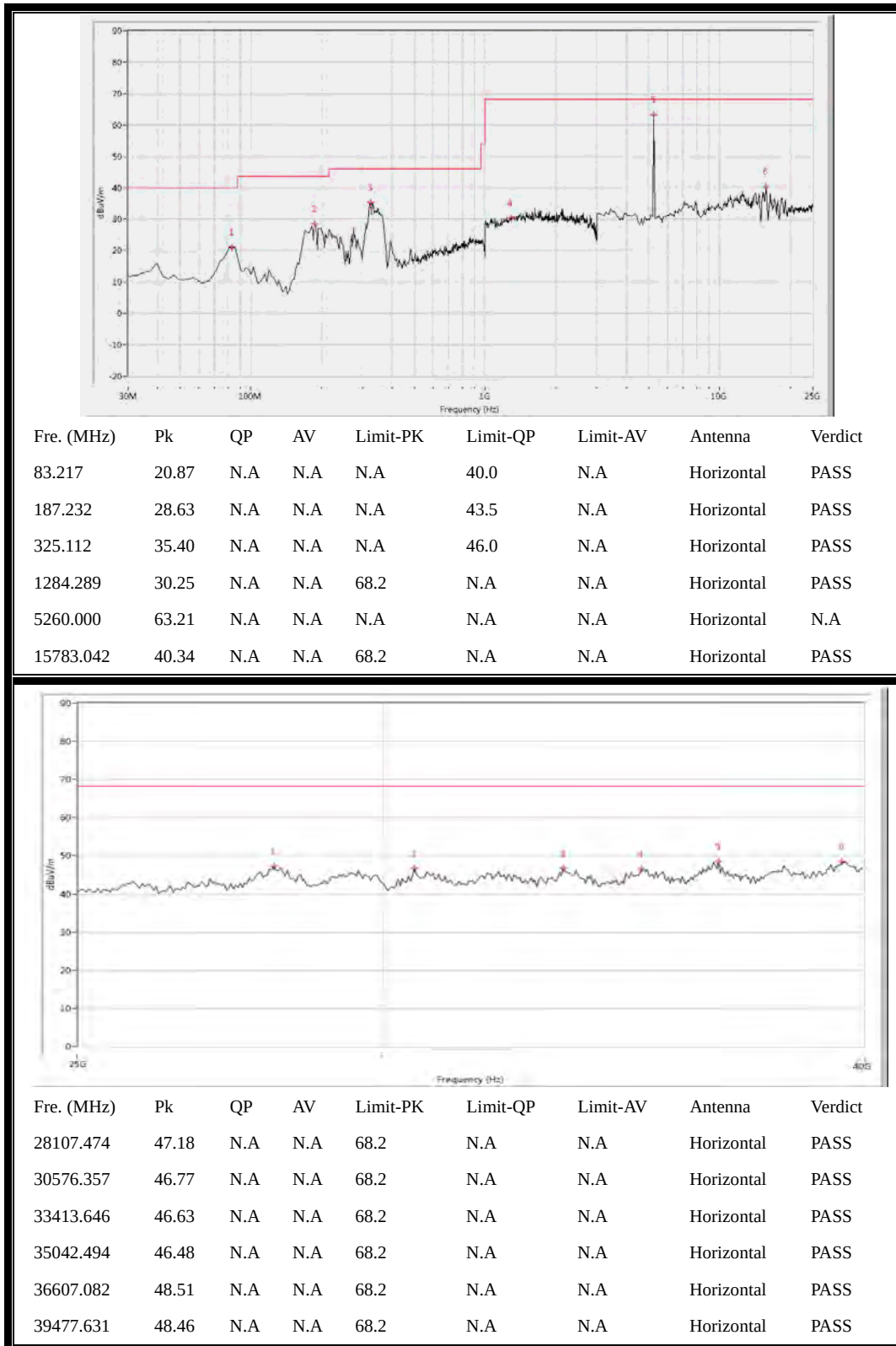
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	26.99	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
170.299	17.95	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
325.112	30.85	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1364.090	33.09	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5240.000	61.87	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.45	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



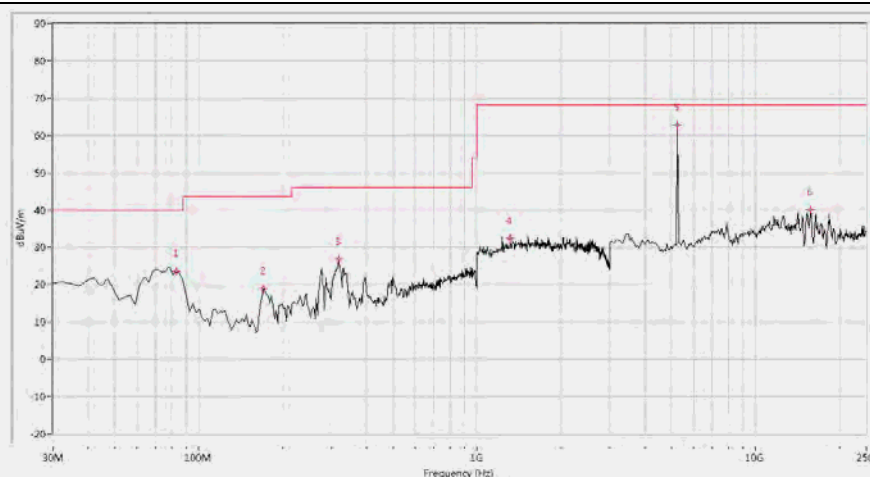
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28027.993	46.83	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29937.506	47.49	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
30465.135	47.10	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33190.202	46.63	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
37141.970	47.15	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39902.519	48.65	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

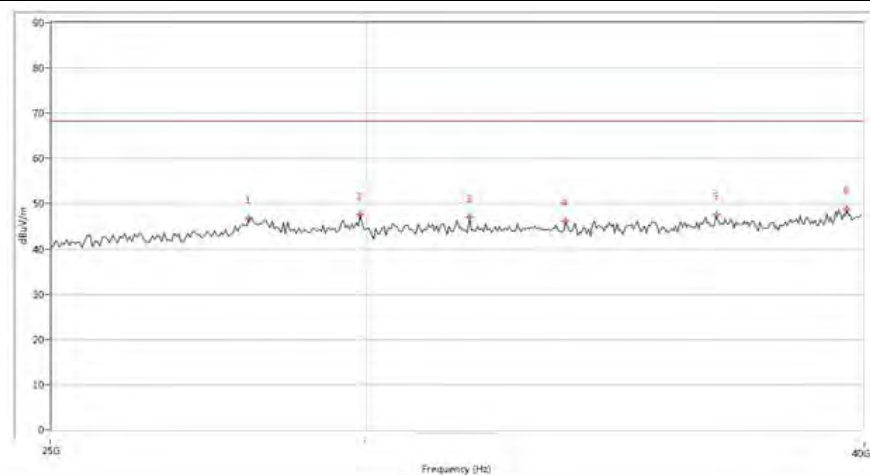
Plots for Channel = 52



(Antenna Horizontal, 30MHz to 40GHz)



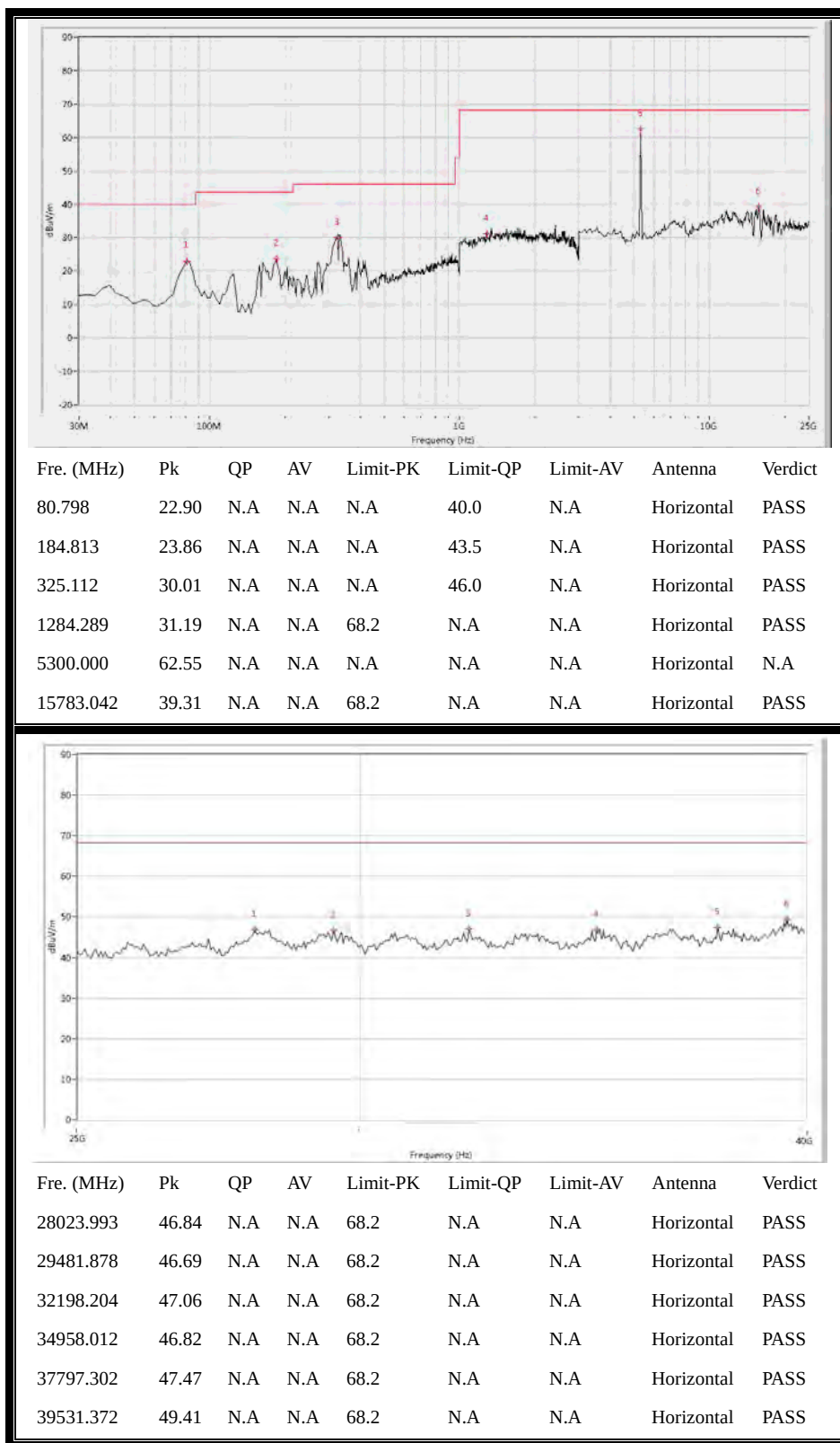
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	23.54	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
170.299	19.03	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
317.855	26.86	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1314.214	32.42	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5260.000	62.84	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.10	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



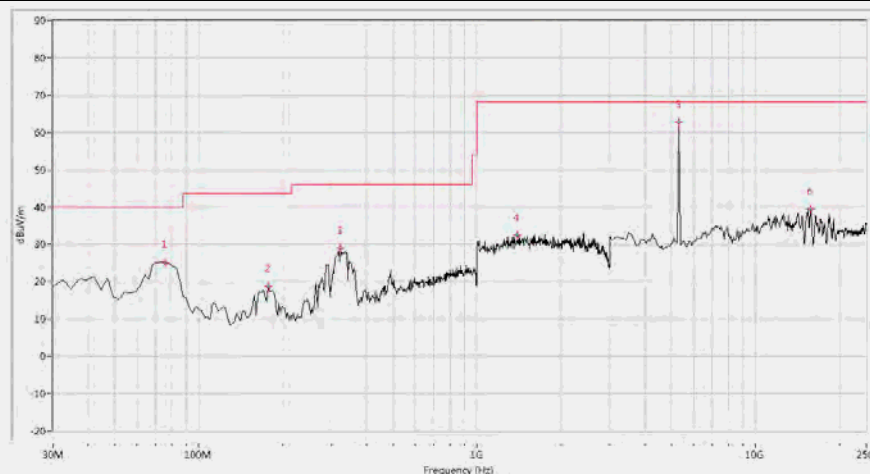
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28062.993	46.67	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29904.025	47.54	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
31843.539	46.98	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33607.830	46.09	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
36744.564	47.66	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39627.594	48.75	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

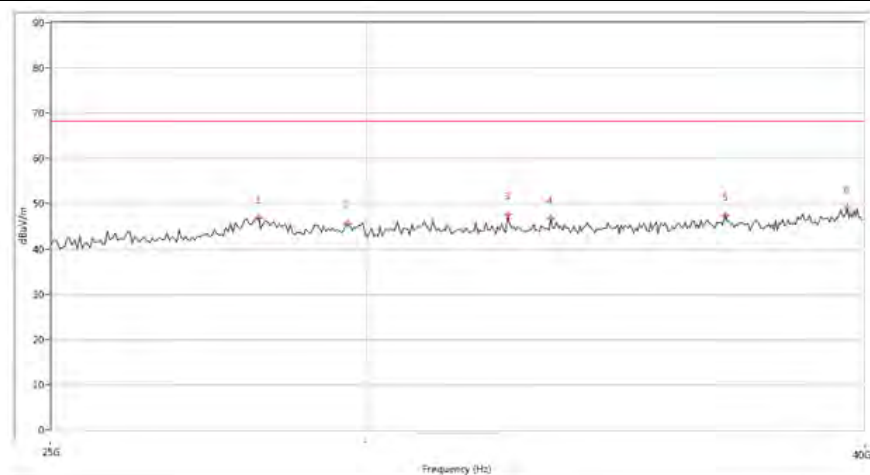
Plot for Channel = 60



(Antenna Horizontal, 30MHz to 40GHz)



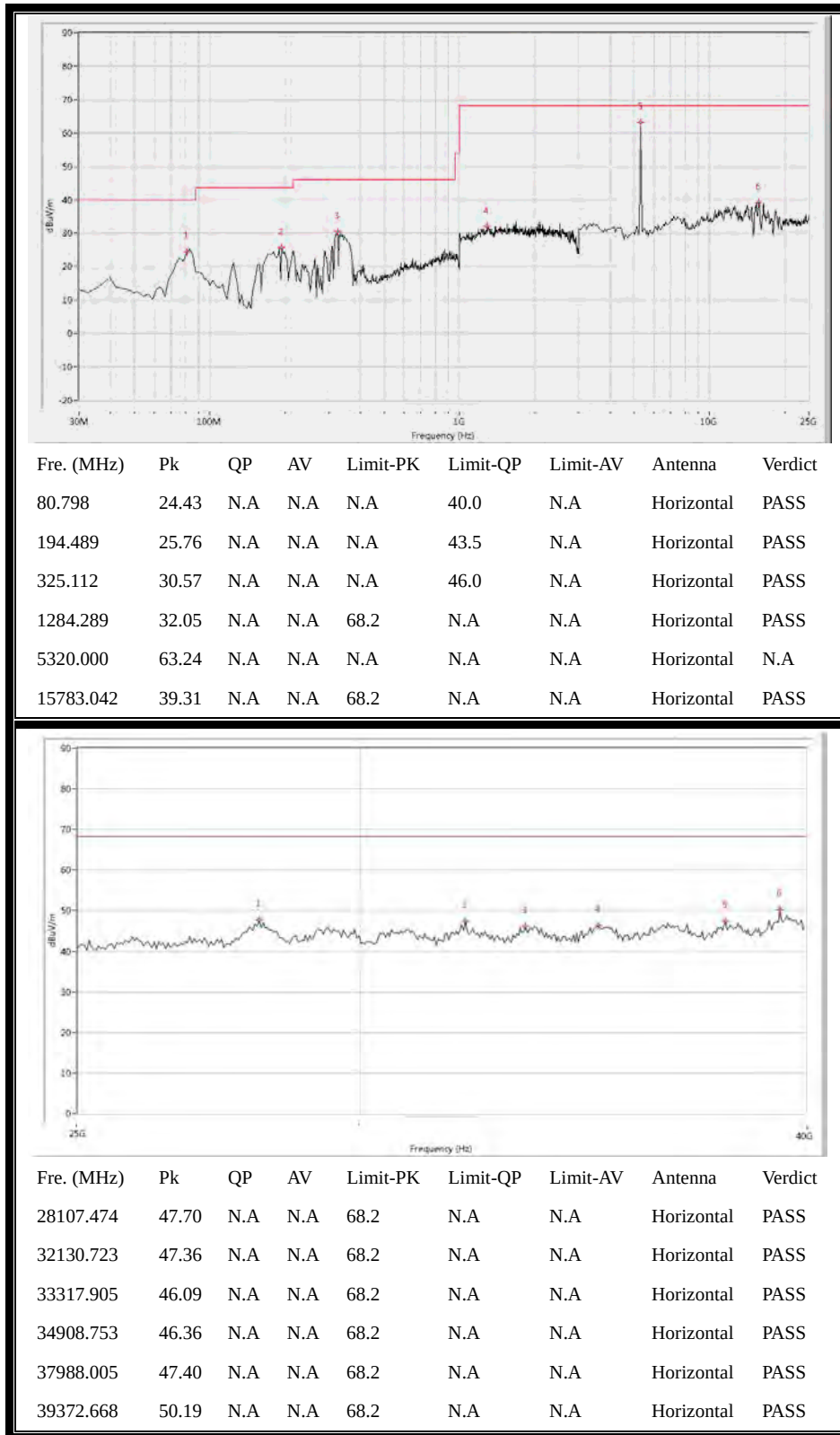
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
75.960	25.07	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
177.556	18.75	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	28.99	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1399.002	32.40	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5300.000	62.81	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.39	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



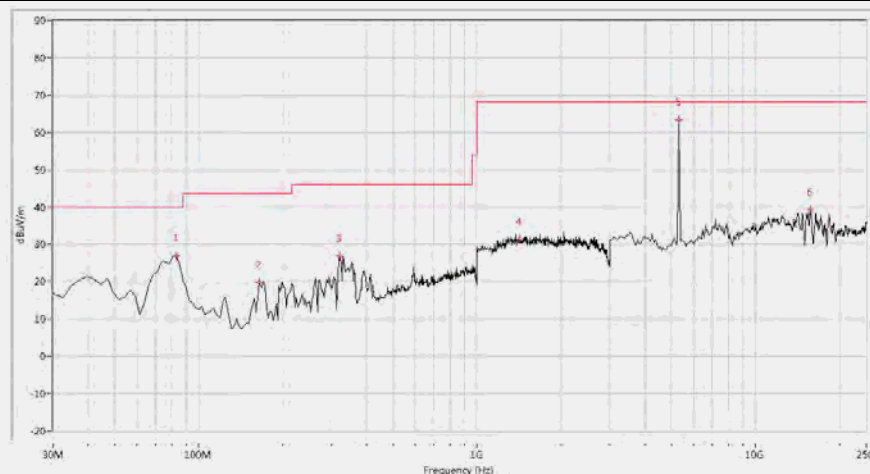
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28177.955	46.95	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29667.581	45.62	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
32559.611	47.60	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33374.905	46.71	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
36993.267	47.47	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39672.594	49.09	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

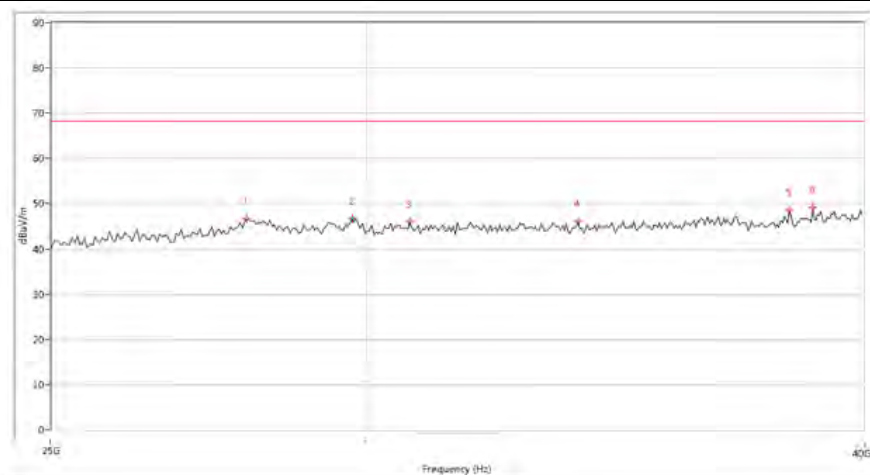
Plot for Channel = 64



(Antenna Horizontal, 30MHz to 40GHz)



Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	26.76	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
165.461	19.76	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
320.274	26.81	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1418.953	31.47	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5320.000	63.53	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.24	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



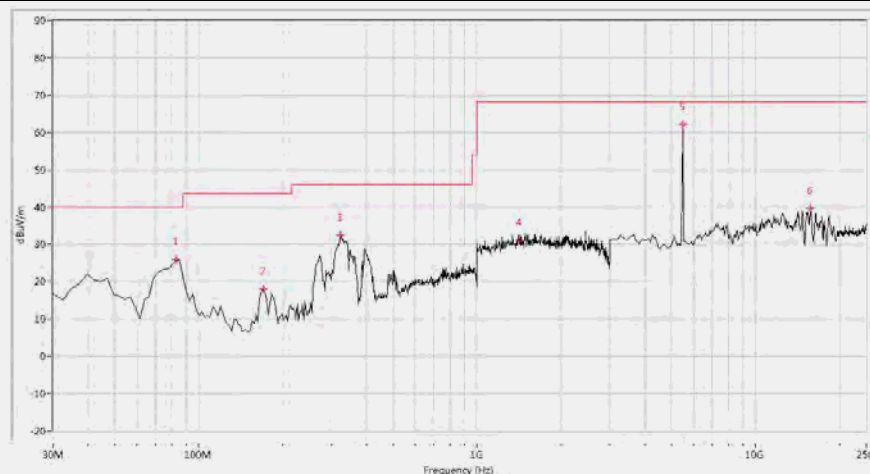
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
27989.252	46.74	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29751.062	46.69	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
30756.060	45.90	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33930.274	46.17	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
38301.671	48.44	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
38845.040	49.16	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

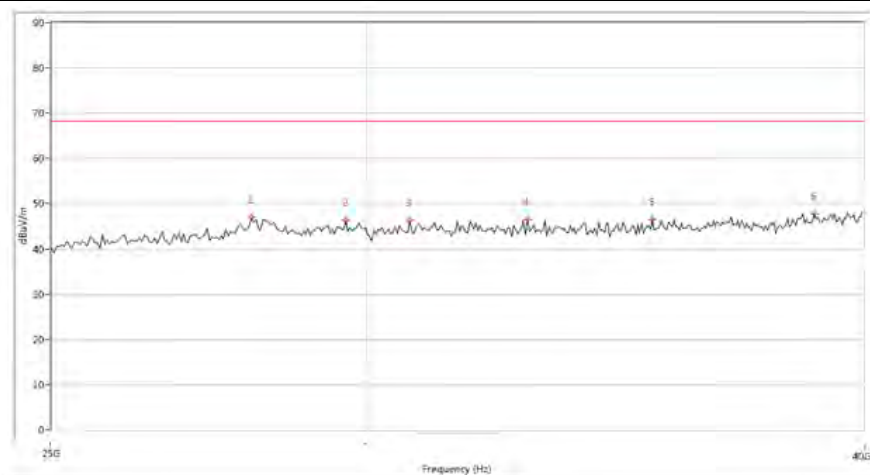
Plots for Channel = 100



(Antenna Horizontal, 30MHz to 40GHz)



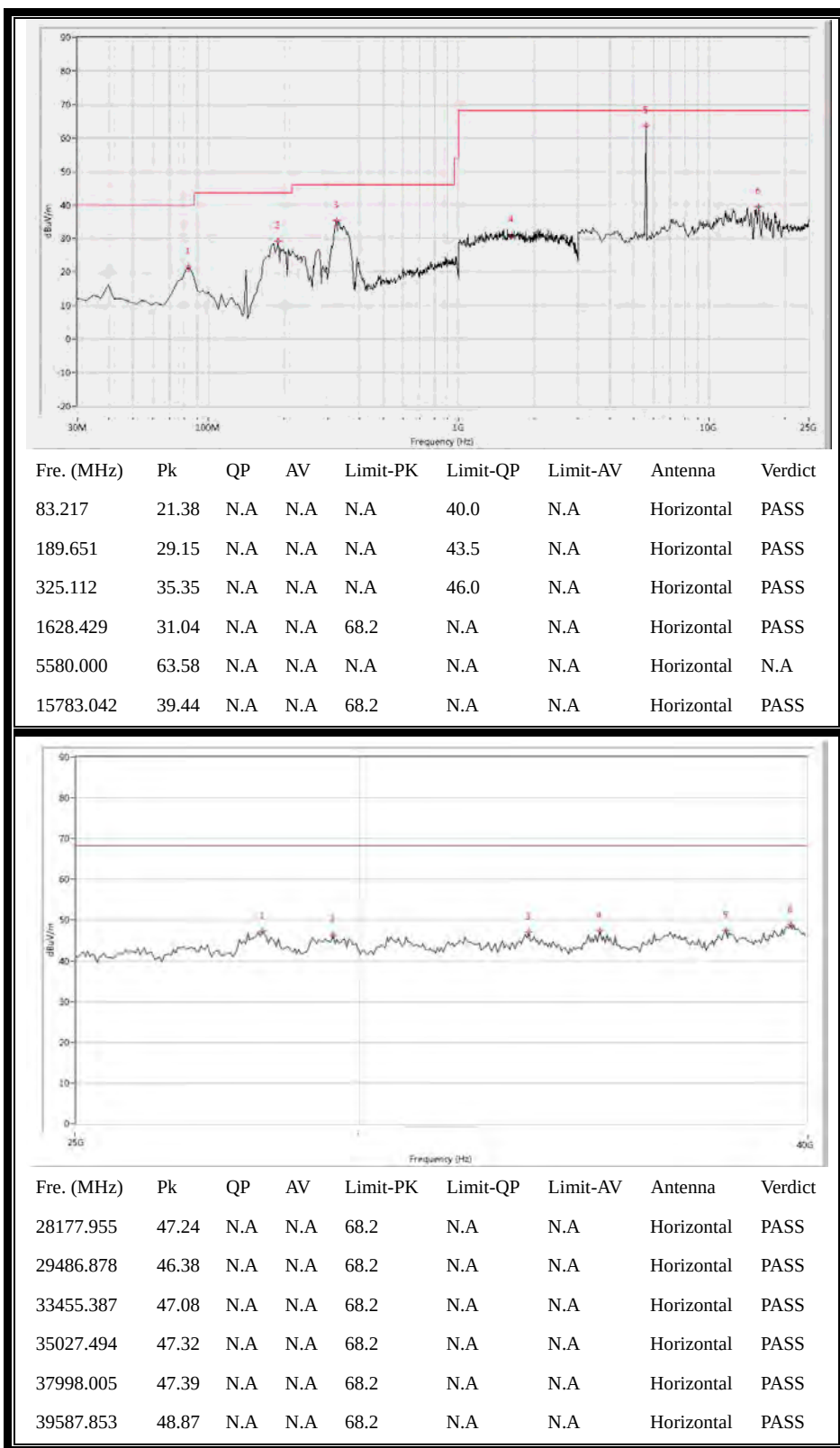
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	25.98	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
170.299	18.09	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	32.42	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1418.953	31.18	N.A	N.A	68.2	N.A	68.2	Vertical	PASS
5500.000	62.15	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.76	N.A	N.A	68.2	N.A	68.2	Vertical	PASS



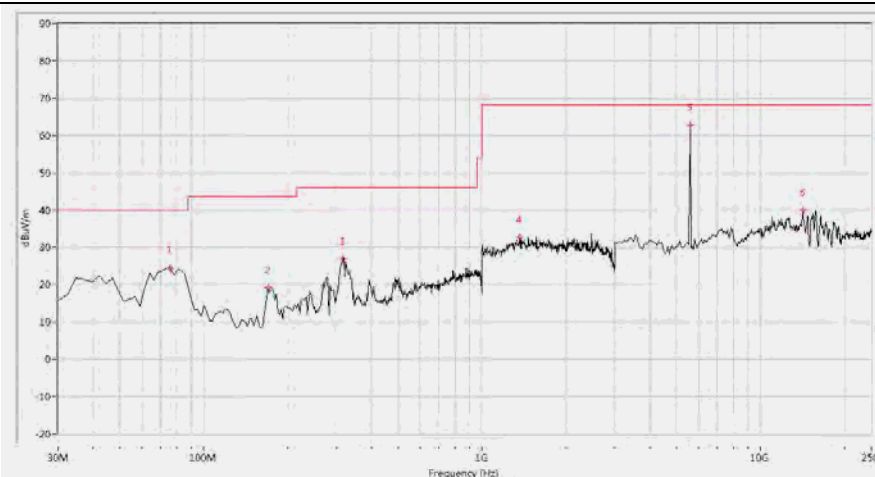
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28066.733	47.03	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29633.840	46.30	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
30769.060	46.29	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
32937.017	46.58	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35396.900	46.48	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
38874.781	47.71	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

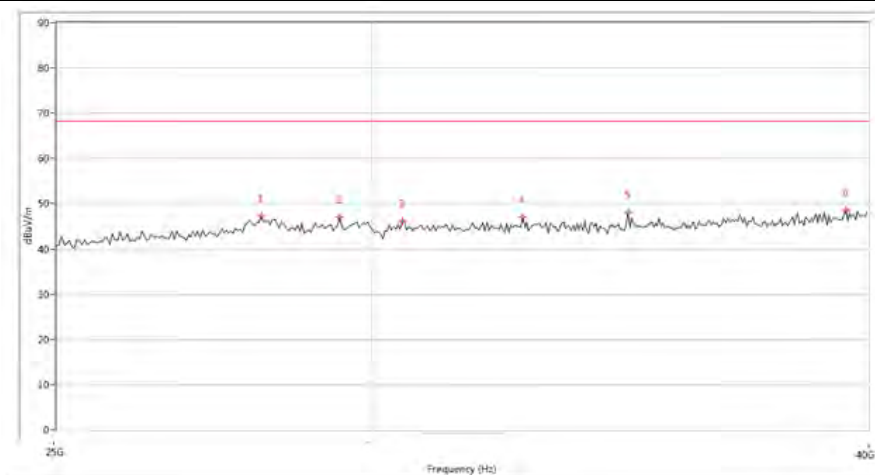
Plot for Channel = 116



(Antenna Horizontal, 30MHz to 40GHz)



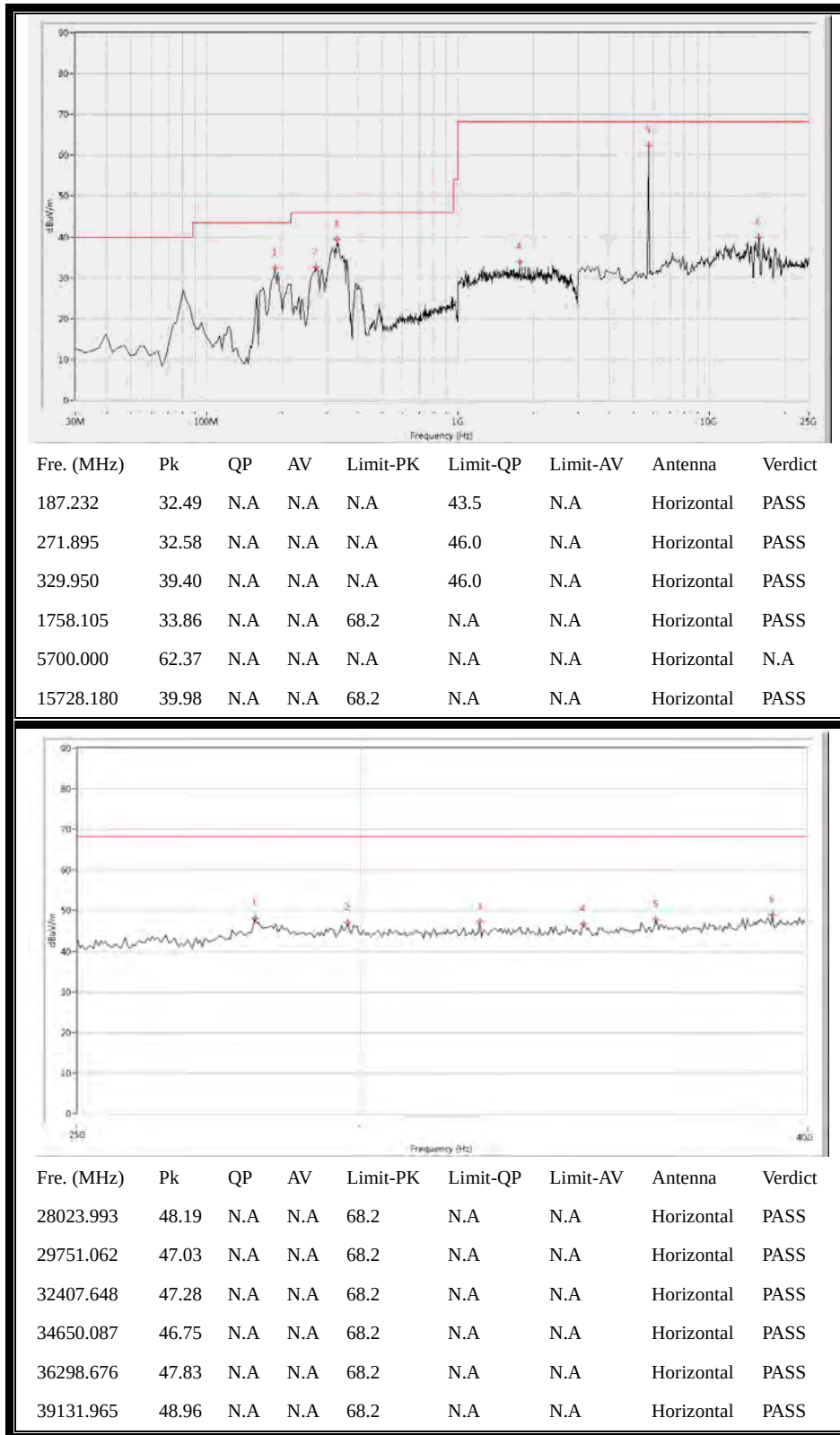
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
75.960	24.45	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
170.299	19.19	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
315.436	26.93	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1369.077	32.76	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5580.000	62.79	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
14192.020	39.97	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



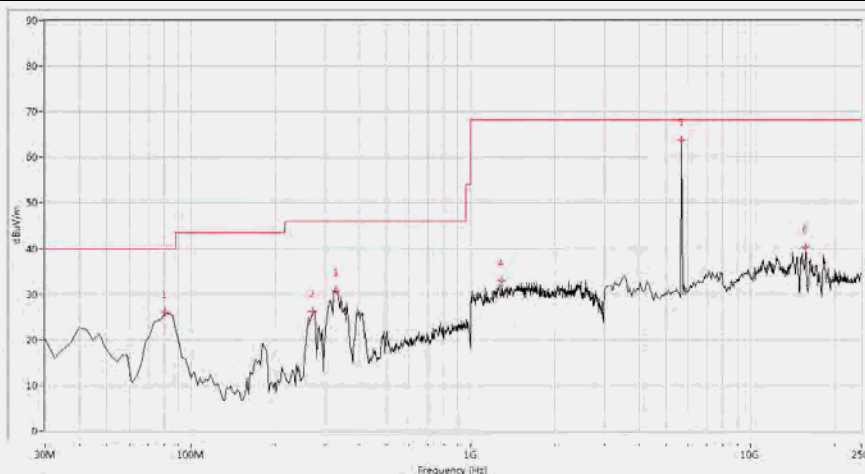
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28143.214	47.17	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29454.137	46.97	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
30553.616	46.23	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
32714.314	47.10	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
34890.050	48.06	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39417.631	48.47	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

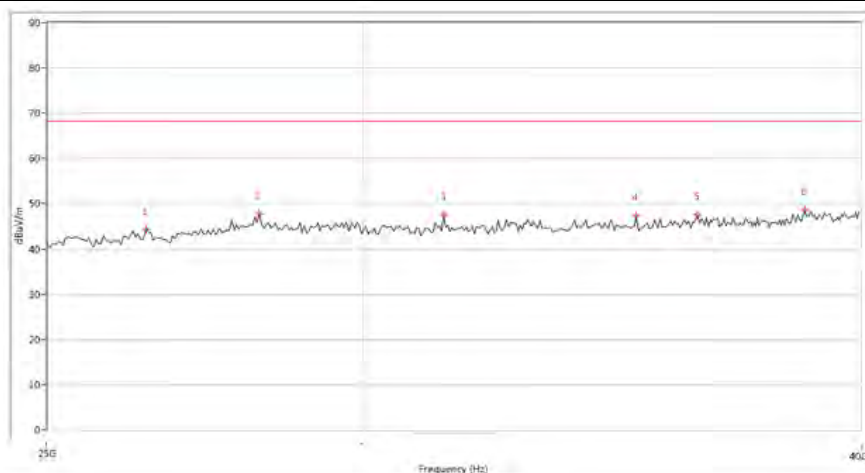
Plot for Channel = 140



(Antenna Horizontal, 30MHz to 40GHz)



Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
80.798	26.02	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
271.895	26.15	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
329.950	30.87	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1289.277	32.98	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5700.000	63.76	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.21	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



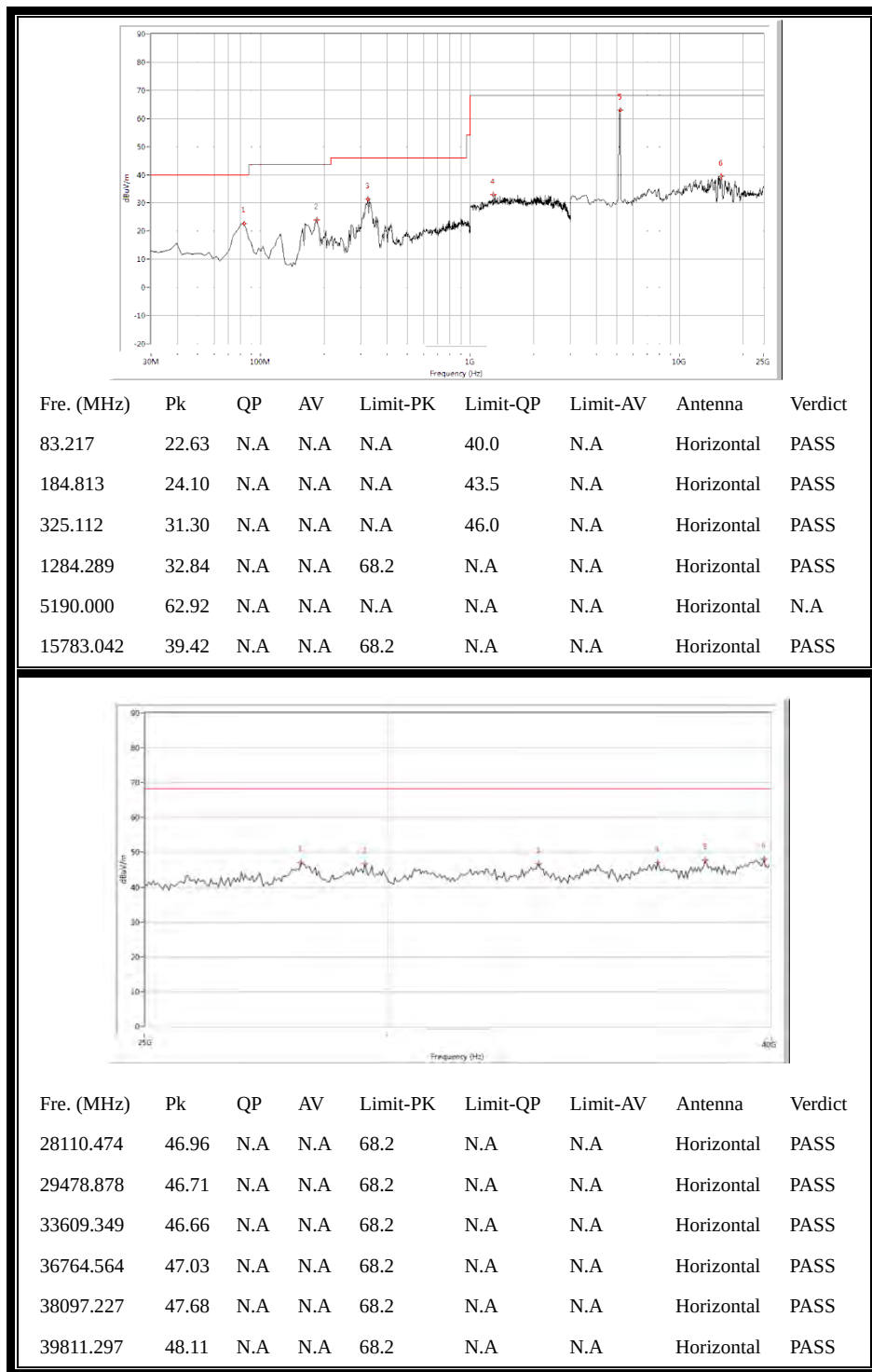
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
26457.885	44.41	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
28205.436	47.73	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
31431.392	47.62	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35135.716	47.37	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
36400.898	47.51	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
38792.818	48.67	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

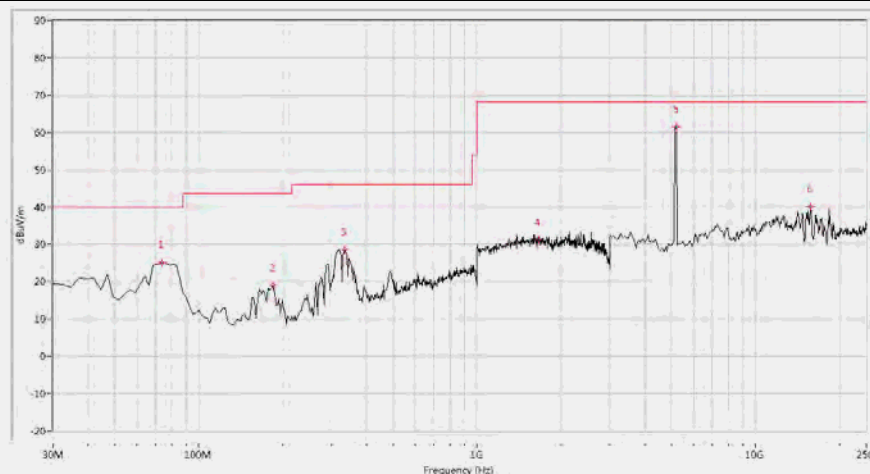
2.11.3.5. 802.11ac-40MHz Test mode

A. Test Plots for the Whole Measurement Frequency Range:

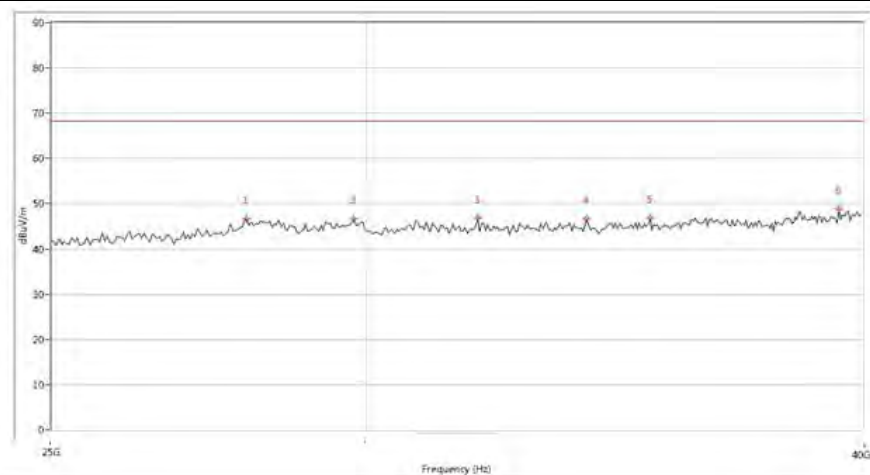
Plots for Channel = 38



(Antenna Horizontal, 30MHz to 40GHz)



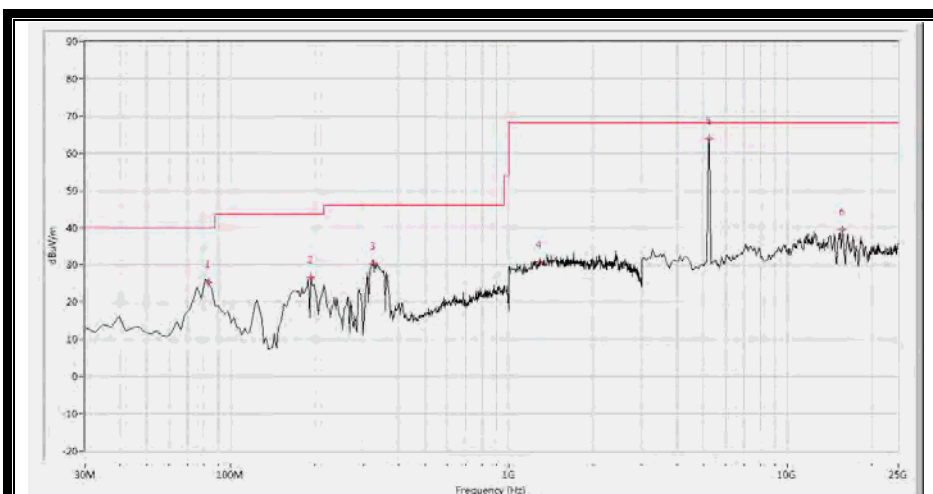
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
73.541	24.99	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
184.813	18.97	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
334.788	28.60	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1663.342	31.16	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5190.000	61.44	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	40.08	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



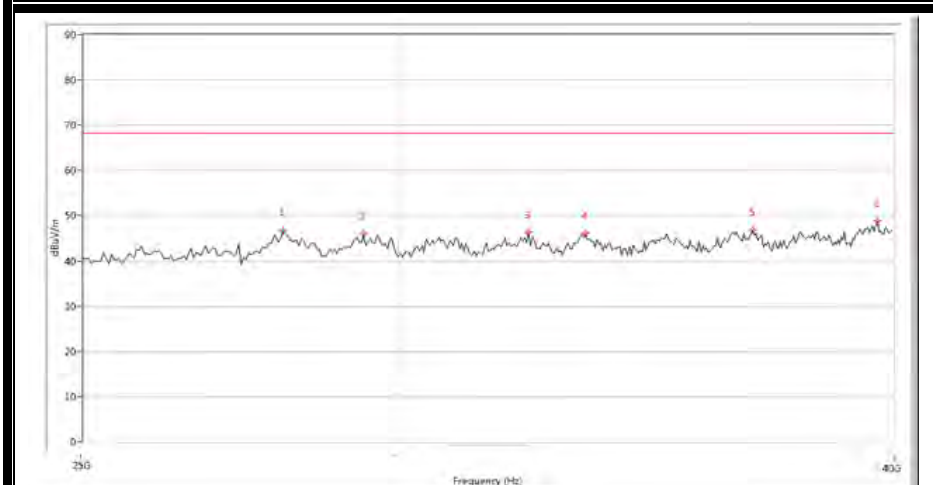
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
27999.252	46.61	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29786.803	46.70	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
31991.501	46.79	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
34083.978	46.67	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35346.160	46.84	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39463.890	48.80	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

Plot for Channel = 46

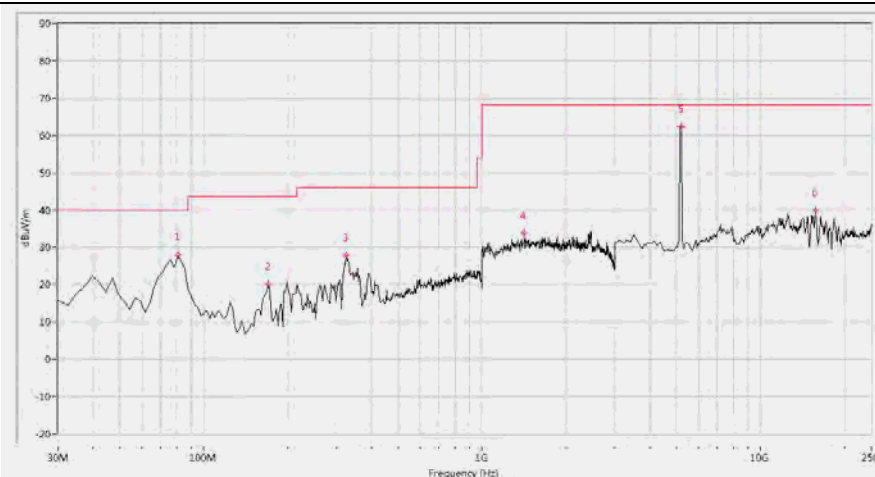


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
83.217	25.32	N.A	N.A	N.A	40.0	N.A	Horizontal	PASS
194.489	26.59	N.A	N.A	N.A	43.5	N.A	Horizontal	PASS
325.112	30.37	N.A	N.A	N.A	46.0	N.A	Horizontal	PASS
1284.289	30.65	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
5230.000	63.81	N.A	N.A	N.A	N.A	N.A	Horizontal	N.A
15783.042	39.50	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

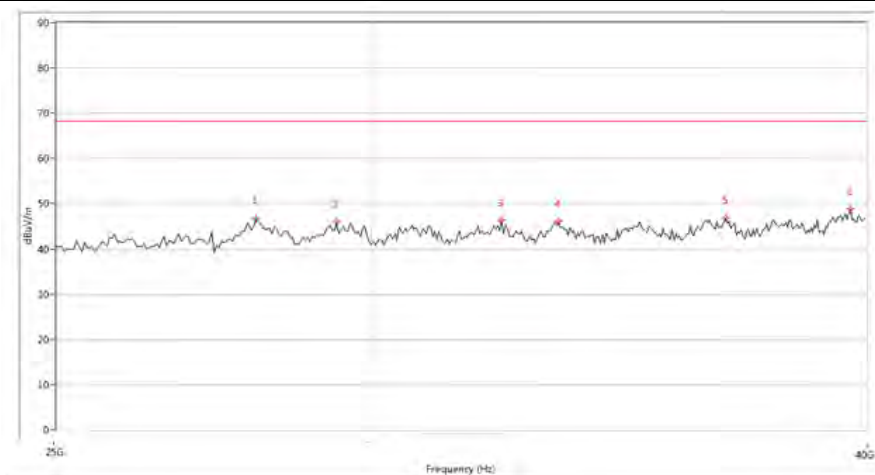


Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28066.733	46.66	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
29419.397	46.06	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
32364.908	46.37	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
33465.387	46.09	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
36855.786	46.80	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
39620.594	48.84	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

(Antenna Horizontal, 30MHz to 40GHz)



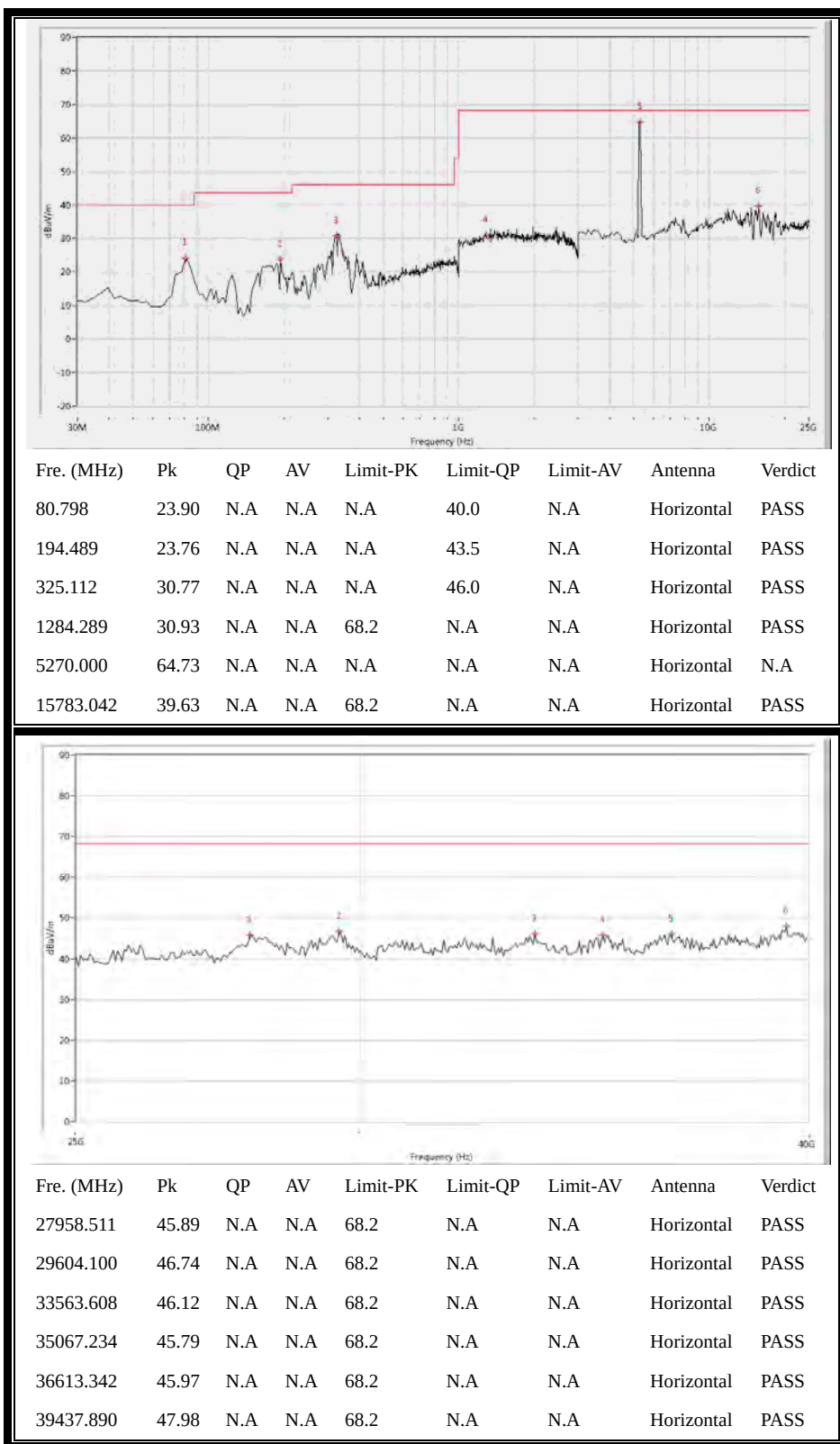
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
80.798	27.84	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
170.299	20.04	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
325.112	27.88	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1413.965	33.84	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5230.000	62.34	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.94	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



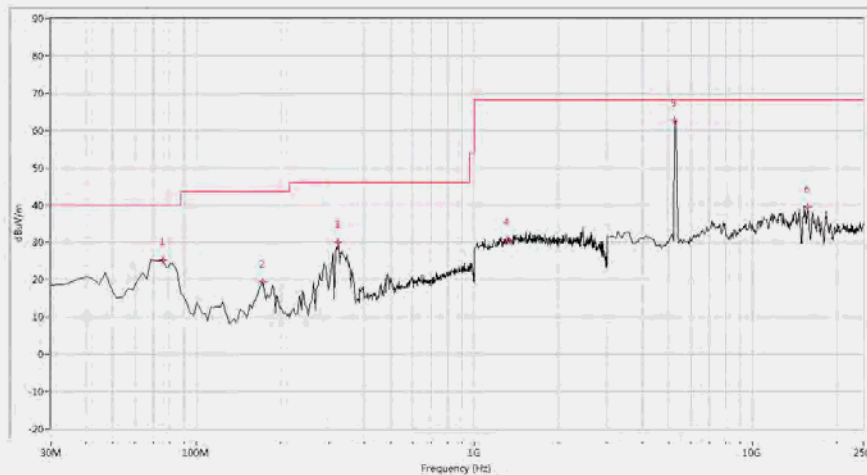
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28171.955	47.72	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
28599.102	46.64	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
32447.389	45.71	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
34276.681	46.19	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
37145.711	47.42	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39963.259	48.94	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

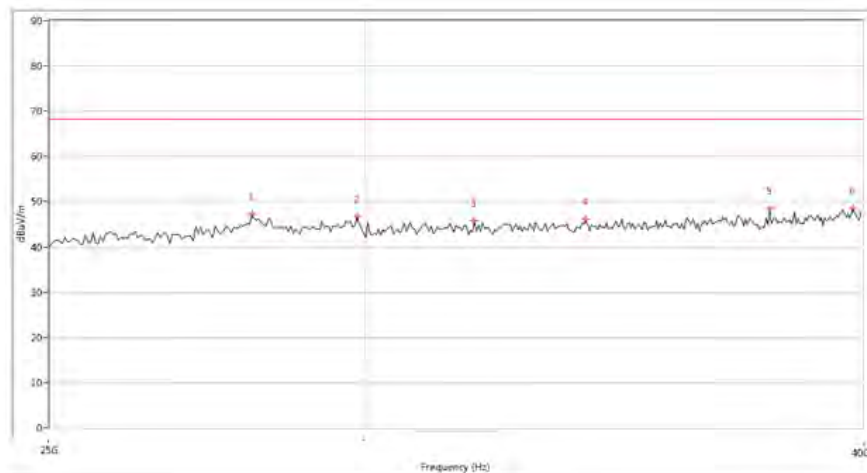
Plot for Channel = 54



(Antenna Horizontal, 30MHz to 40GHz)



Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
75.960	25.31	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
172.718	19.41	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	30.10	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1314.214	30.84	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5270.000	62.45	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.43	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



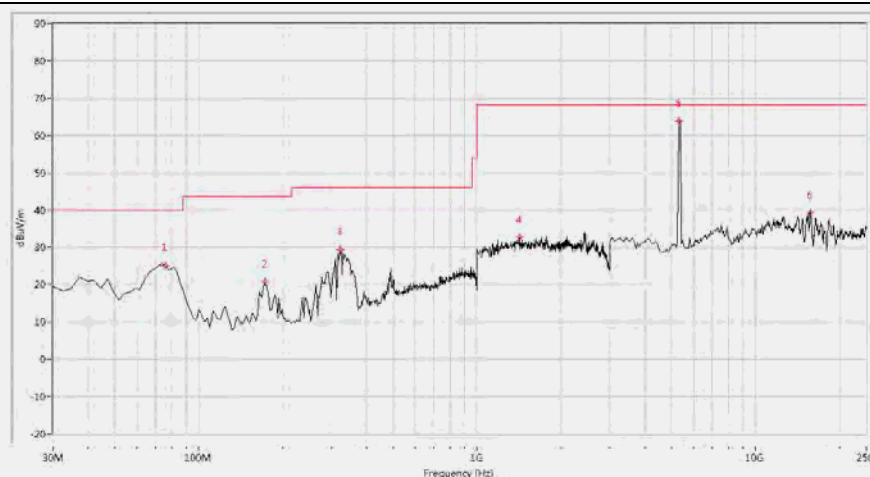
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28109.474	47.17	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29863.284	46.62	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
31945.761	45.78	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
34081.978	46.18	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
37907.524	48.48	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39767.556	48.44	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

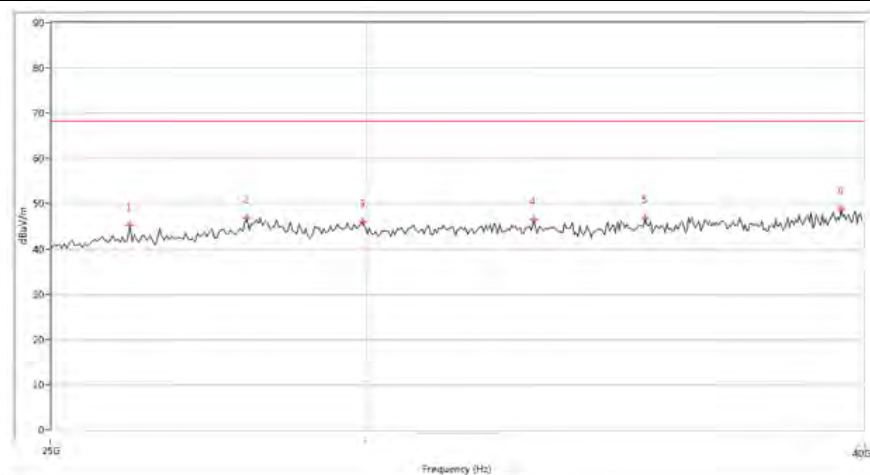
Plots for Channel = 62



(Antenna Horizontal, 30MHz to 40GHz)



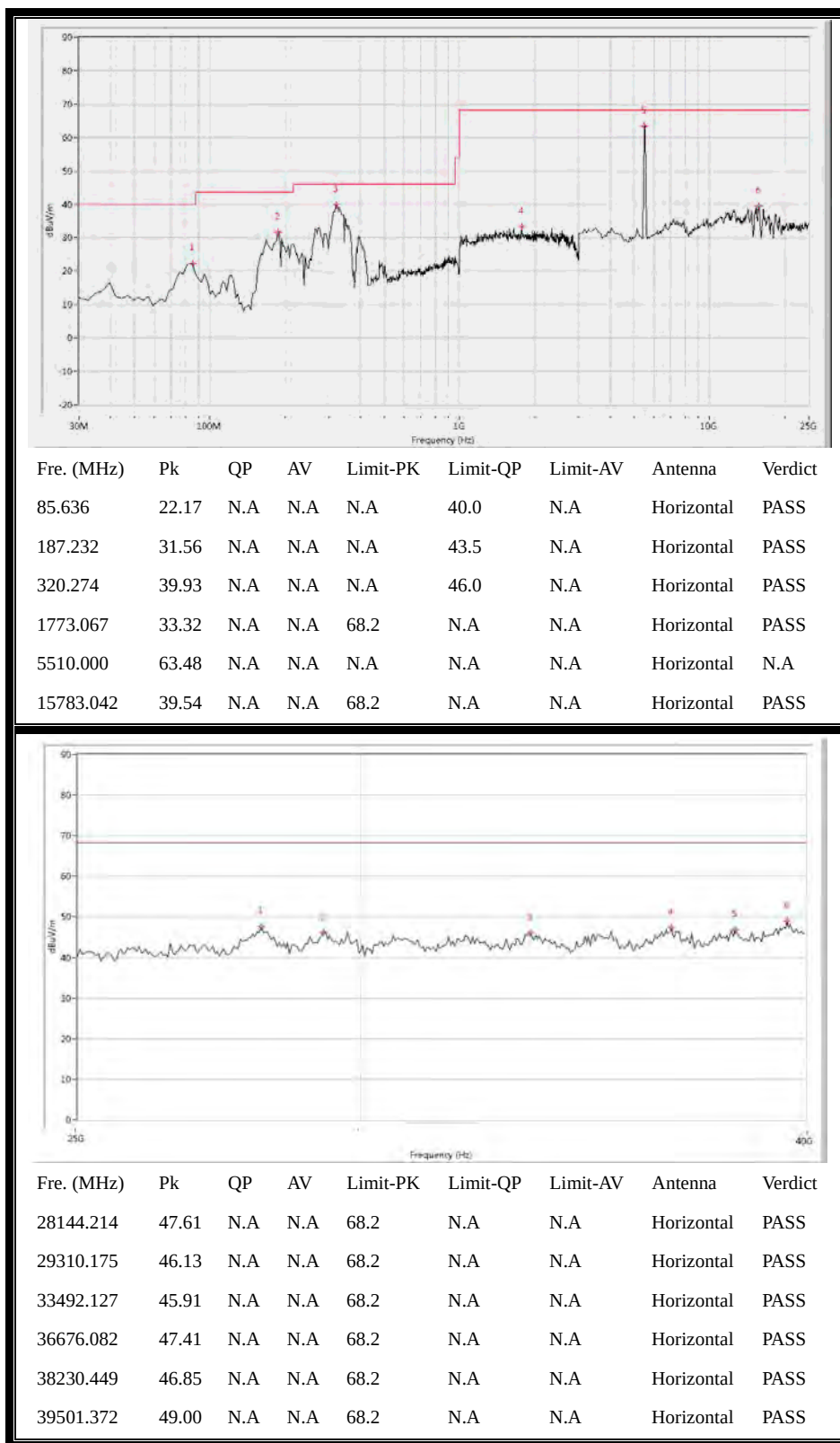
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
75.960	25.17	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
172.718	20.73	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	29.38	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1418.953	32.81	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5310.000	63.77	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.25	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



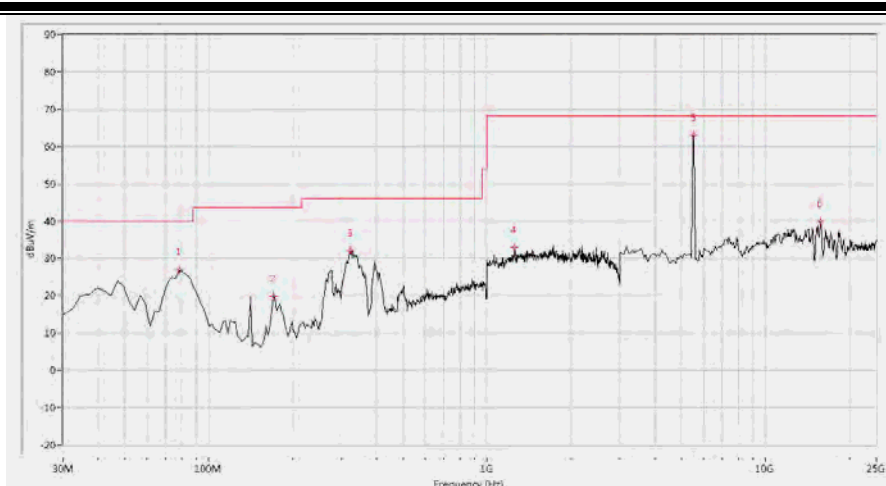
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
26157.960	45.32	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
27989.252	46.88	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29936.766	46.05	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33044.239	46.47	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
35241.938	46.93	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39437.631	48.92	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

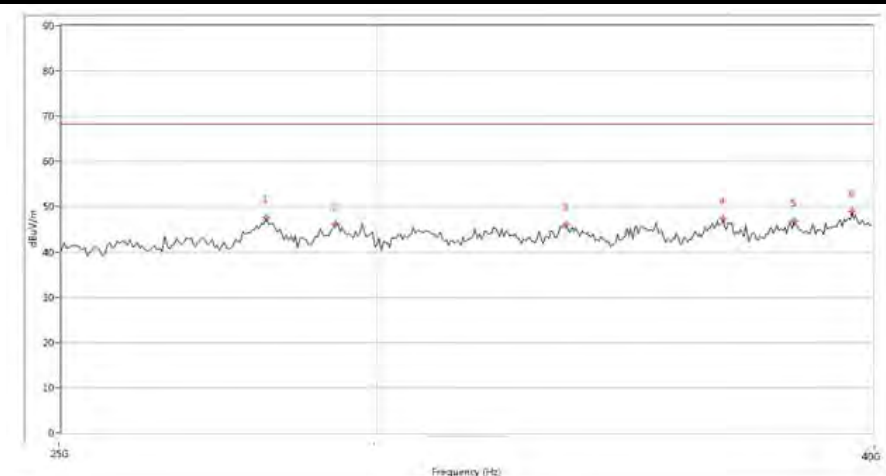
Plot for Channel = 102



(Antenna Horizontal, 30MHz to 40GHz)



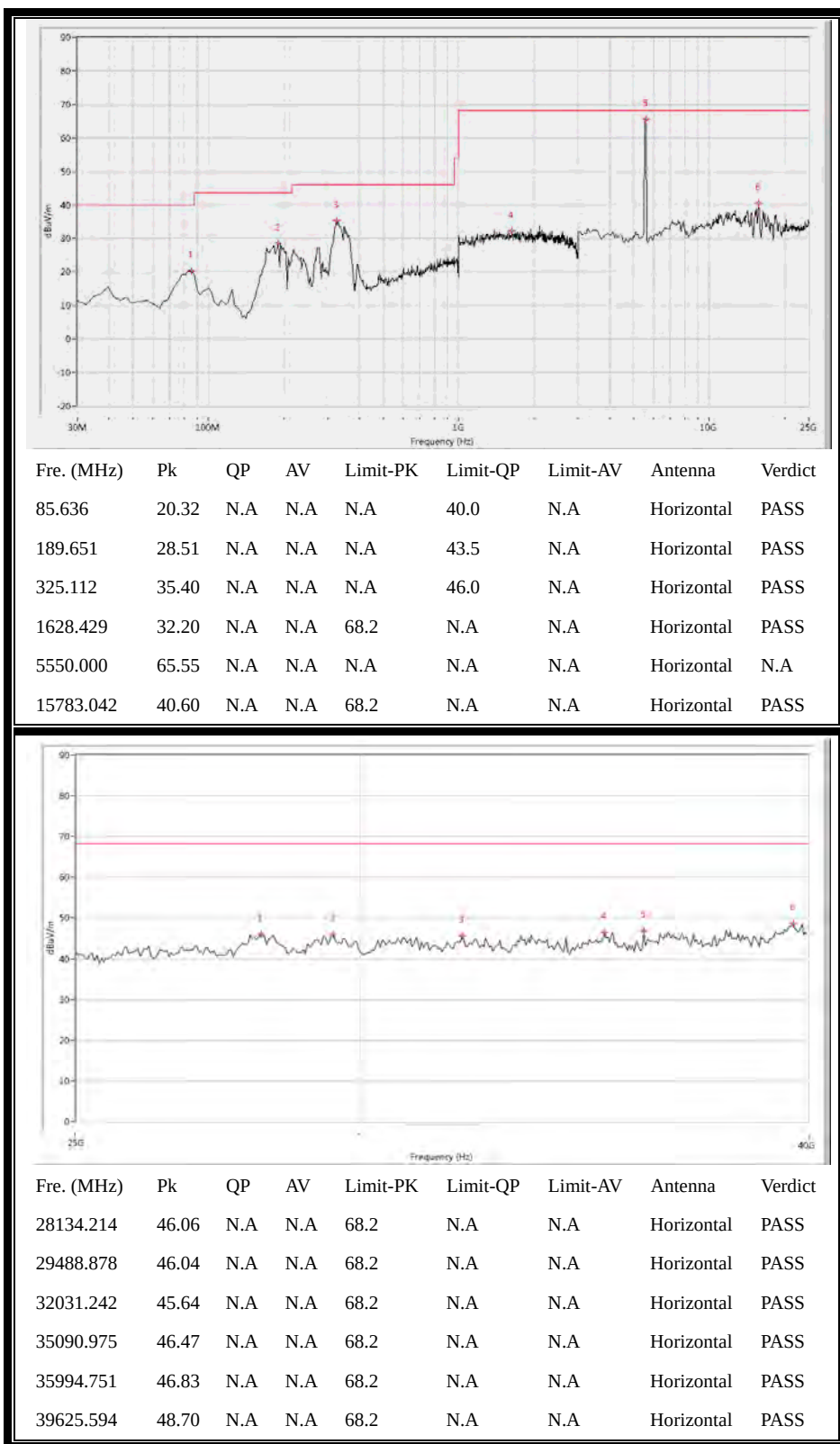
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
78.379	26.93	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
170.299	19.92	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
322.693	32.12	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1254.364	32.85	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5510.000	62.98	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.97	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



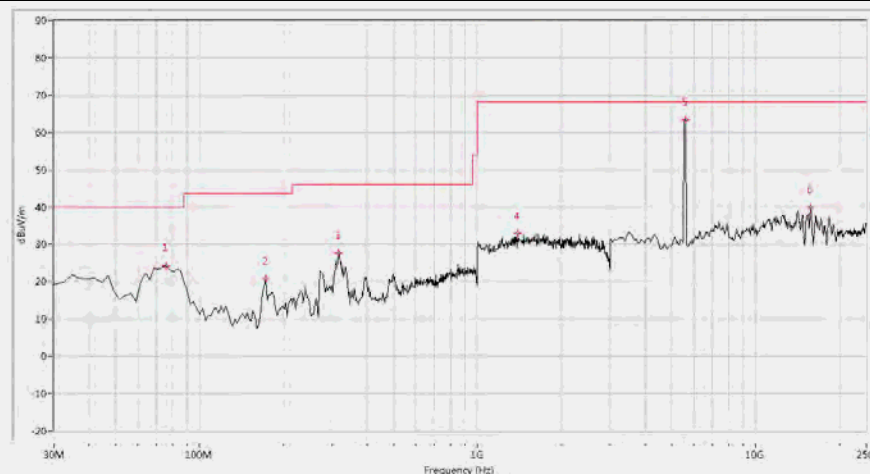
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28144.214	47.61	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
29310.175	46.13	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
33492.127	45.91	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
36676.082	47.41	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
38230.449	46.85	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS
39501.372	49.00	N.A	N.A	68.2	N.A	N.A	Horizontal	PASS

Antenna Vertical, 30MHz to 40GHz)

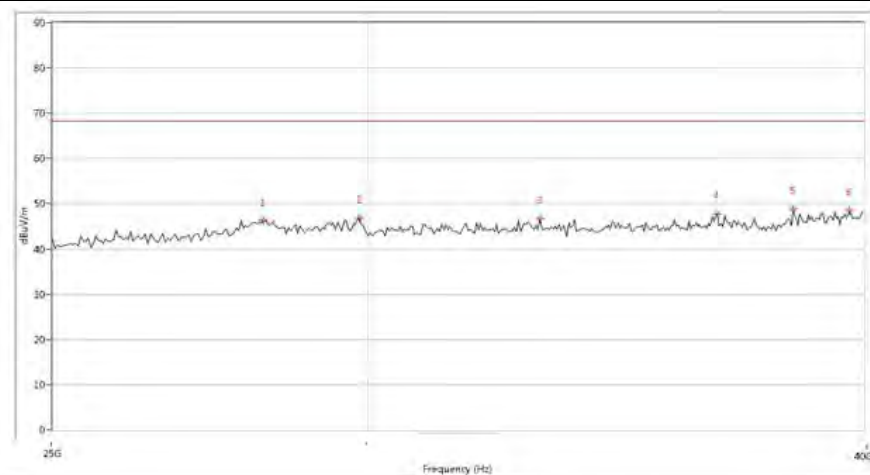
Plot for Channel = 110



(Antenna Horizontal, 30MHz to 40GHz)



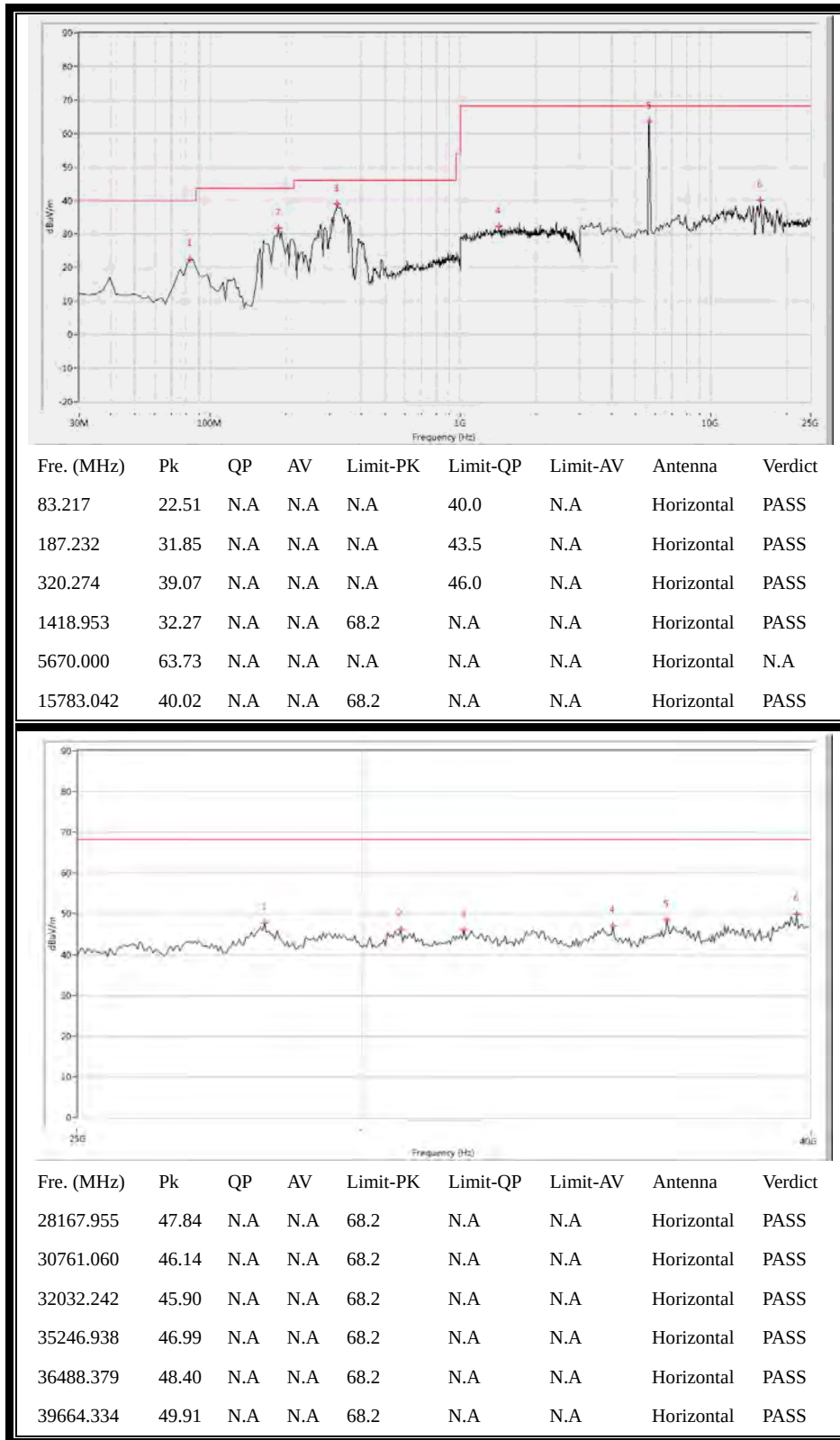
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
75.960	24.22	N.A	N.A	N.A	40.0	N.A	Vertical	PASS
172.718	20.62	N.A	N.A	N.A	43.5	N.A	Vertical	PASS
315.436	27.72	N.A	N.A	N.A	46.0	N.A	Vertical	PASS
1399.002	32.99	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
5550.000	63.41	N.A	N.A	N.A	N.A	N.A	Vertical	N.A
15783.042	39.95	N.A	N.A	68.2	N.A	N.A	Vertical	PASS



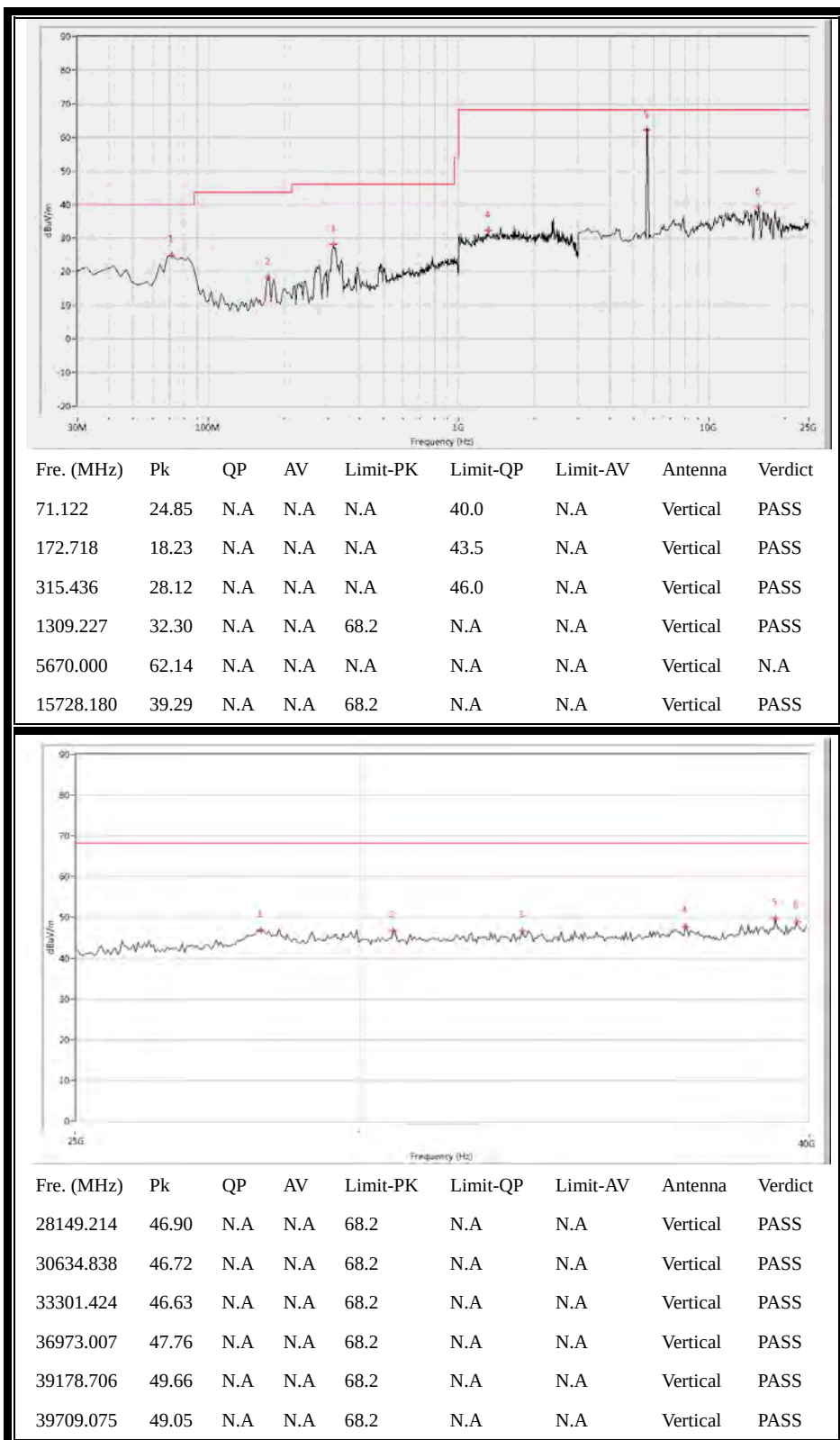
Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
28255.436	46.39	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
29861.284	46.79	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
33157.461	46.67	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
36784.564	47.78	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
38399.152	48.81	N.A	N.A	68.2	N.A	N.A	Vertical	PASS
39660.334	48.49	N.A	N.A	68.2	N.A	N.A	Vertical	PASS

(Antenna Vertical, 30MHz to 40GHz)

Plot for Channel = 134



(Antenna Horizontal, 30MHz to 40GHz)



(Antenna Vertical, 30MHz to 40GHz)

2.12. RF exposure evaluation

2.12.1. Requirement

According to § 1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of Commission's guideline.

2.12.2. Result

Please refer to SAR report.

**** END OF REPORT ****