



FCC 47 CFR PART 15 SUBPART E

CERTIFICATION TEST REPORT

FOR

BLUETOOTH & DTS/UNII a/b/g/n/ac

MODEL NUMBER: GG1

FCC ID: A4R-GG1

REPORT NUMBER: 15U19985-E2 Revision A

ISSUE DATE: MAY 27, 2015

Prepared for

GOOGLE INC.

**1600 AMPHITHEATRE PARKWAY
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NVLAP LAB CODE 200065-0

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: GOOGLE INC.
1600 AMPHITHEATRE PARKWAY
MOUNTAIN VIEW, CA, 94043, U.S.A

EUT DESCRIPTION: BLUETOOTH & DTS/UNII a/b/g/n/ac

MODEL: GG1

SERIAL NUMBER: LWPIA0EG15040115 (CONDUCTED)
LWP1A02A15110021 (RADIATED)
LWP1A01A15070081 (RADIATED)

DATE TESTED: MARCH 27, 2015 – MARCH 30, 2015

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Verification Services Inc. By:



FRANCISCO DE ANDA
PROJECT LEAD
UL Verification Services Inc.

Tested By:



CLIFFORD SUSA
EMC ENGINEER
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 06-96, FCC KDB 789033, and ANSI C63.4-2009.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☐ Chamber A	☐ Chamber D
☐ Chamber B	☐ Chamber E
☐ Chamber C	☐ Chamber F
	☐ Chamber G
	☒ Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned}\text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m}\end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	± 3.52 dB
Radiated Disturbance, 30 to 1000 MHz	± 4.94 dB
Radiated Disturbance, 1 to 6 GHz	± 3.86 dB
Radiated Disturbance, 6 to 18 GHz	± 4.23 dB
Radiated Disturbance, 18 to 26 GHz	± 5.30 dB
Radiated Disturbance, 26 to 40 GHz	± 5.23 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an accessory device that incorporates 2.4GHz, 5GHz WLAN, BT and BT-LE radio with integral antenna. The EUT is provided with an AC charger and a USB cable. When connected to a PC, the USB cable provides a path for charging and data transfer.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
5.2GHz Band			
5180 - 5240	802.11a	12.00	15.85
5180 - 5240	802.11n HT20	12.00	15.85
5190 - 5230	802.11n HT40	12.00	15.85
5210	802.11ac VHT80	12.00	15.85
5.3GHz Band			
5260 - 5320	802.11a	12.00	15.85
5260 - 5320	802.11n HT20	12.00	15.85
5270 - 5310	802.11n HT40	12.00	15.85
5290	802.11ac VHT80	12.00	15.85
5.6GHz Band			
5500 - 5700	802.11a	12.00	15.85
5500 - 5700	802.11n HT20	12.00	15.85
5510 - 5670	802.11n HT40	12.00	15.85
5530	802.11ac VHT80	12.00	15.85
5720	802.11a	12.00	15.85
5720	802.11n HT20	12.00	15.85
5.8GHz Band			
5745 - 5825	802.11a	12.00	15.85
5745 - 5825	802.11n HT20	11.90	15.49
5755-5795	802.11n HT40	11.90	15.49
5775	802.11ac VHT80	12.00	15.85

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PCB antenna with a maximum gain of 4dBi for 2.4GHz and 5dBi for 5GHz.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was v1.0.

The EUT driver software installed in the support equipment during testing was ver 6.37.32.34.1

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that Y-orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y-orientation.

Worst-case data rates as provided by the client were:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0
802.11ac HT80mode: MCS0

Note: EUT supports straddle channel 144 (5720 MHz) only.

Radiated emissions for EUT with antenna was performed and passed; therefore, antenna port spurious was not performed.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Apple	Macbook Air	C02FX0VTDJDJDK	N/A
AC Adapter	Apple	A1343	ADP-85EBT	N/A

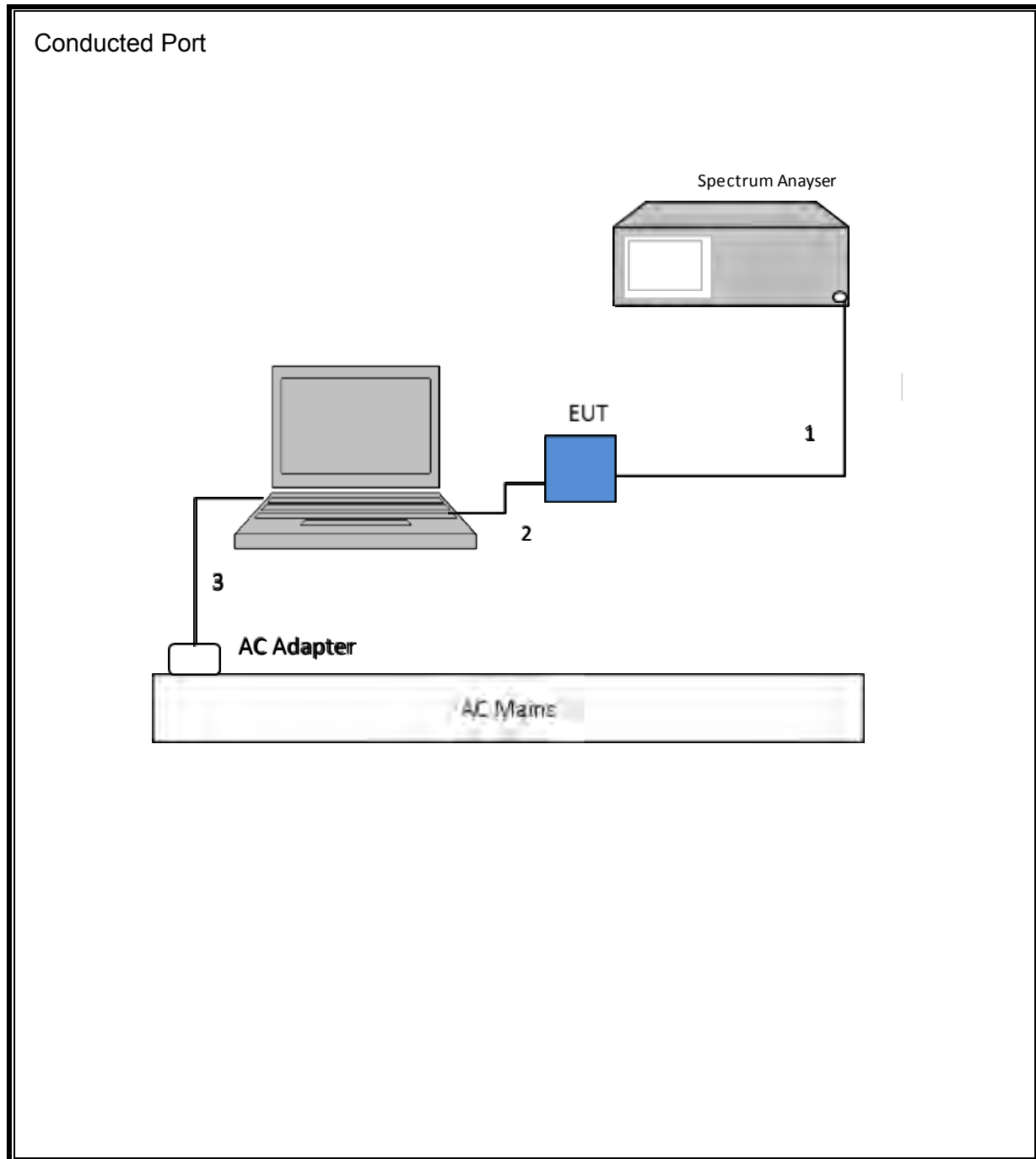
I/O CABLES

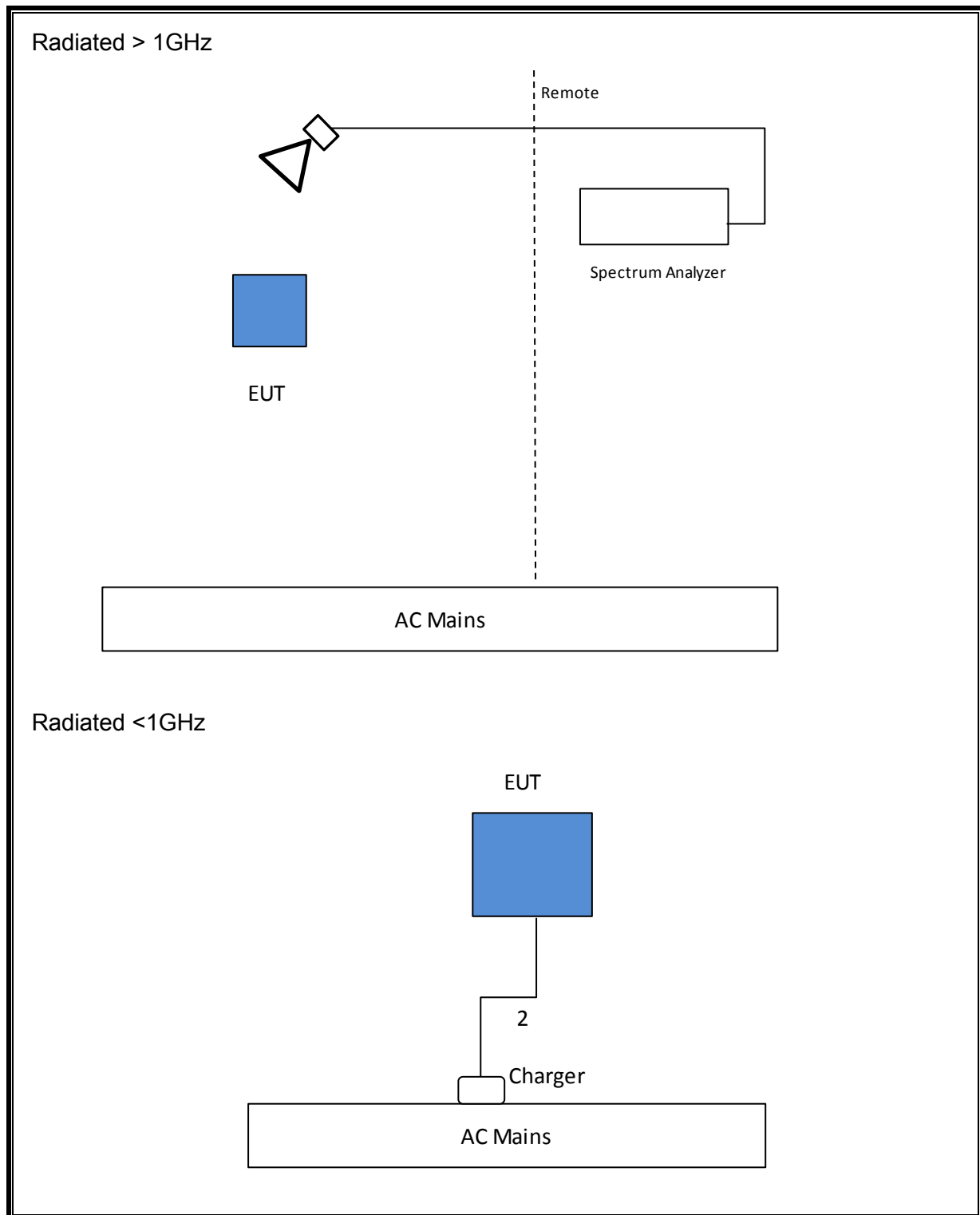
I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	coax	Shielded	0.2	
2	USB	1	USB	Shielded	0.5	
3	DC	1	DC	Shielded	1.5	

TEST SETUP

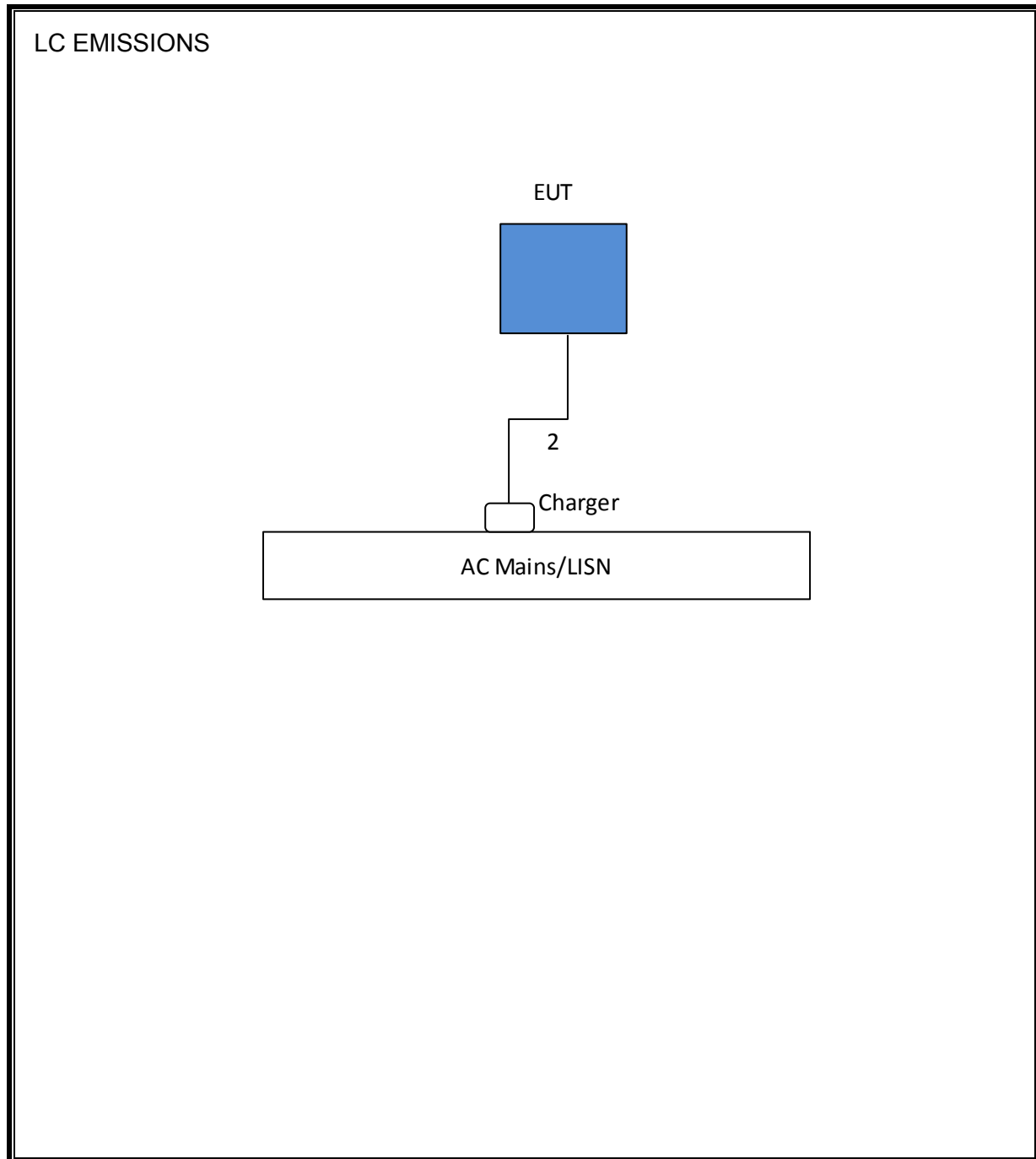
The EUT was connected to the support laptop via USB cable, test commands exercised the EUT.

SETUP DIAGRAM FOR TESTS





SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List					
Description	Manufacturer	Model	T No.	Cal Date	Cal Due
Radiated Software	UL	UL EMC	Ver 9.5, July 22, 2014		
Conducted Software	UL	UL EMC	Ver 2.1.4		
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	906	05/07/14	05/07/15
Antenna, Horn 18GHz	ETS Lindgren	3117	863	04/14/14	04/14/15
Antenna, Hybrid, 30MHz to 1GHz	Sunol Sciences	JB3	900	05/14/14	05/14/15
Amplifier, 1-18GHz	Miteq	AFS42-00101800-25-S-42	495	06/05/14	06/05/15
Amplifier, 10kHz - 1GHz	Sonoma	310N	835	06/05/14	06/05/15
Spectrum Analyzer, 40GHz	HP	8564E	106	08/06/14	08/06/15
Amplifier, 26-40GHz	Miteq	NSP4000-SP2	88	09/03/14	09/03/15
Antenna, Horn 18-26GHz	ARA	MWH-1826	89	12/17/14	12/17/15
Antenna, Horn, 40GHz	ARA	MWH-2640/B	90	07/15/14	07/15/15
Amplifier, 1 - 26GHz	Agilent	8449B	404	06/05/14	06/05/15
LISN, 30MHz	FCC	50/250-25-2	24	01/16/15	01/16/16
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	917	05/08/14	05/08/15

7. MEASUREMENT METHODS

26 dB Emission BW: KDB 789033 D02 v01, Section C.

99% Occupied BW: KDB 789033 D02 v01, Section D.

Conducted Output Power: KDB 789033 D02 v01, Section E.3.b.

Power Spectral Density: KDB 789033 D02 v01, Section F.

Unwanted emissions in restricted bands: KDB 789033 D02 v01, Sections G.3, G.4, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v01, Sections G.3, G.4, and G.5.

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

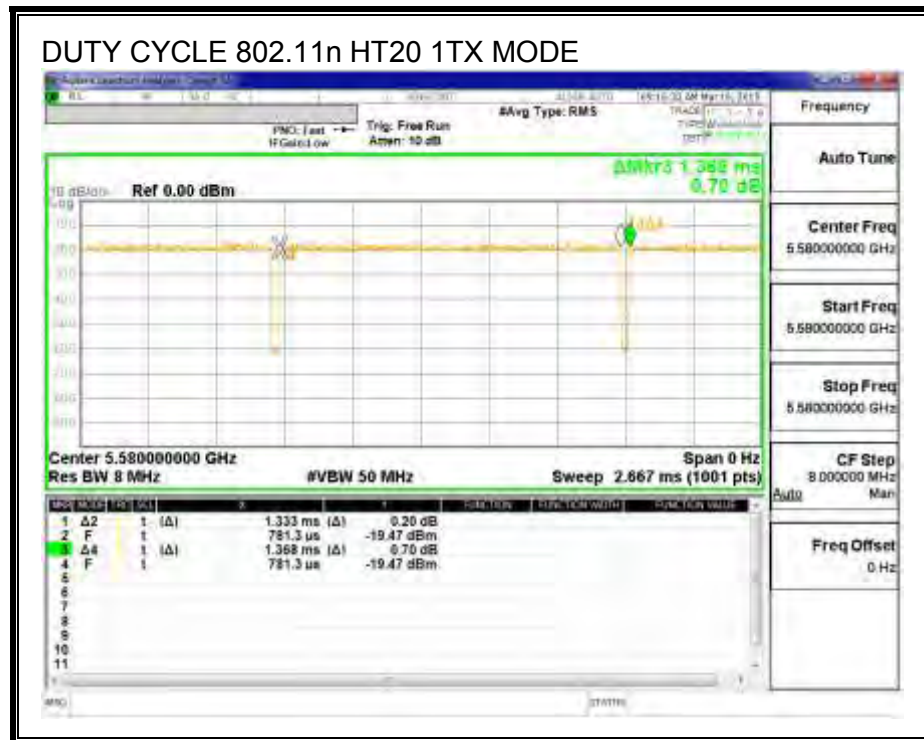
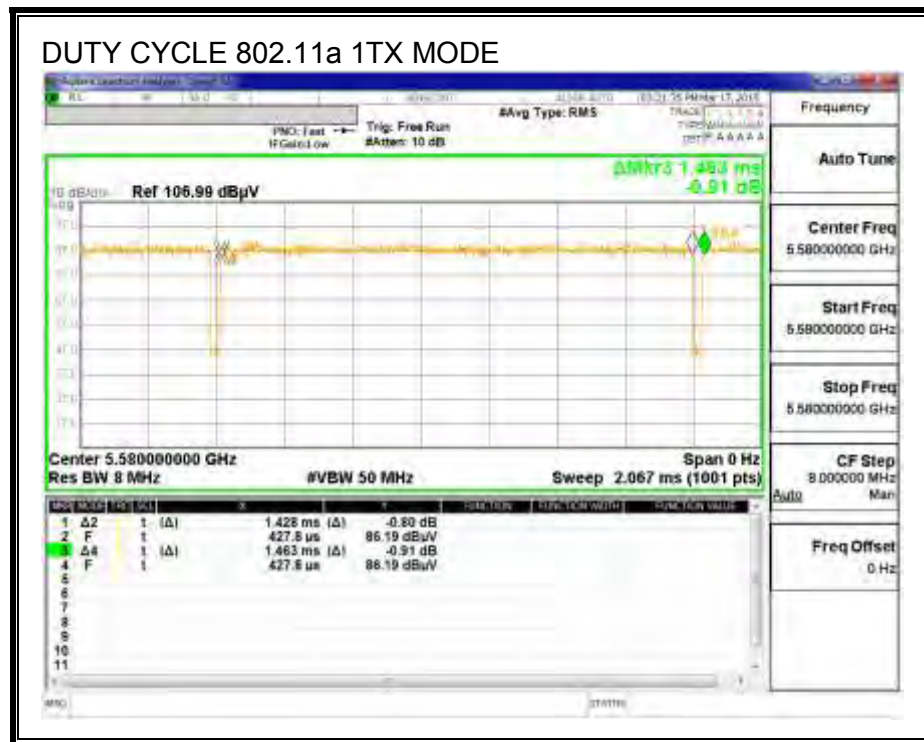
PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a 1TX	1.428	1.463	0.976	97.61%	0.11	0.700
802.11n HT20 1TX	1.333	1.368	0.974	97.44%	0.11	0.750
802.11n HT40 1TX	0.662	0.697	0.950	95.01%	0.22	1.510
802.11ac VHT80 1TX	0.3318	0.3658	0.907	90.71%	0.42	3.014

DUTY CYCLE PLOTS



DUTY CYCLE 802.11n HT40 1TX MODE



DUTY CYCLE 802.11ac VHT80 1TX MODE



8.2. 802.11a MODE IN THE 5.2 GHz BAND

8.2.1. 26 dB BANDWIDTH

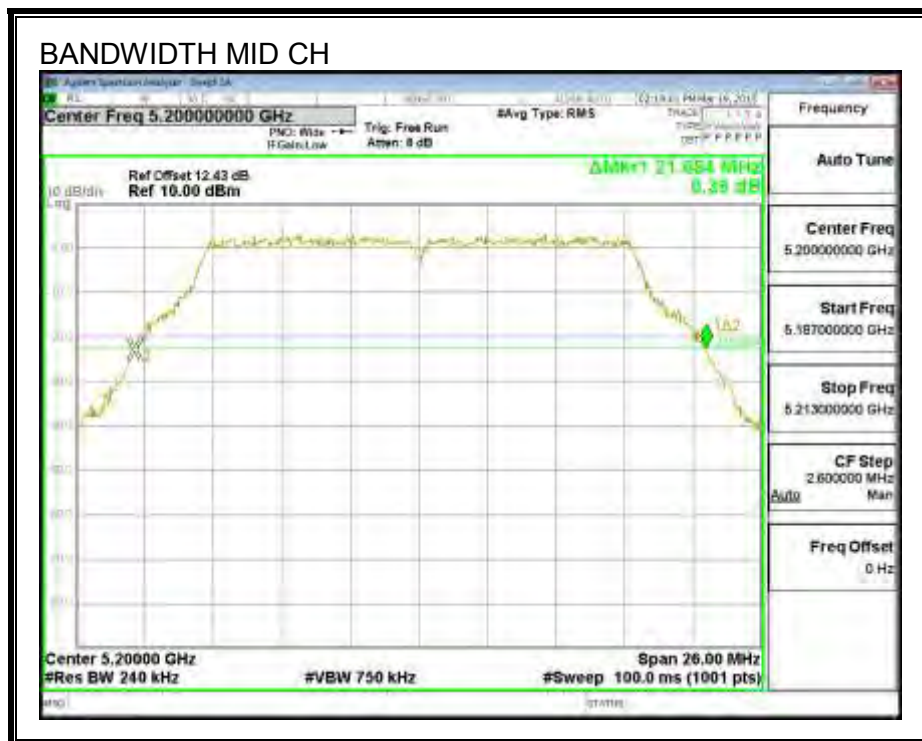
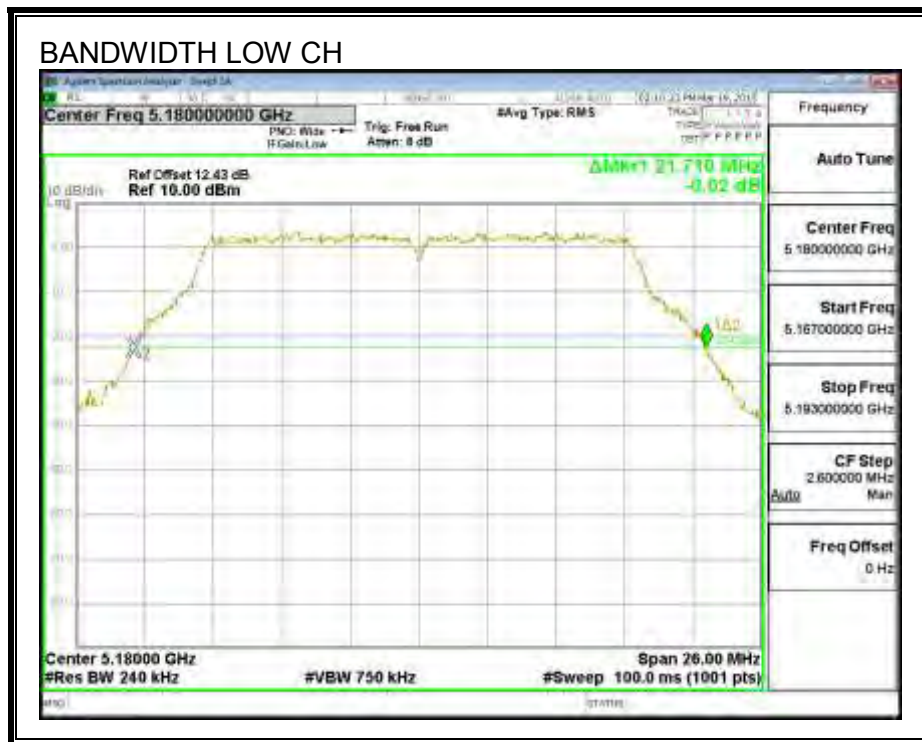
LIMITS

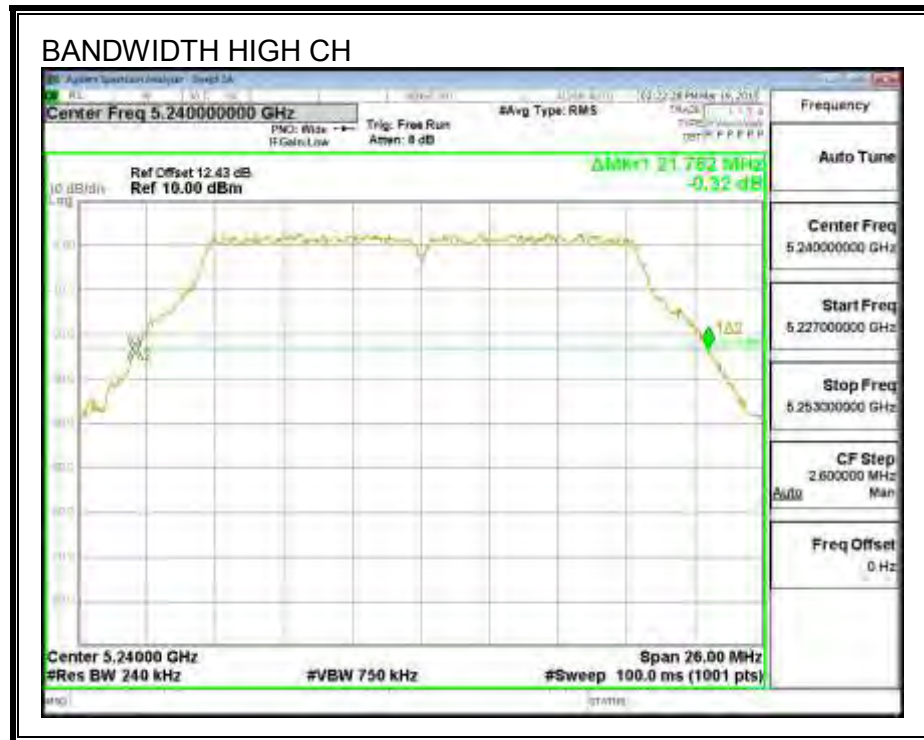
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	21.71
Mid	5200	21.68
High	5240	21.76

26 dB BANDWIDTH





8.2.2. 99% BANDWIDTH

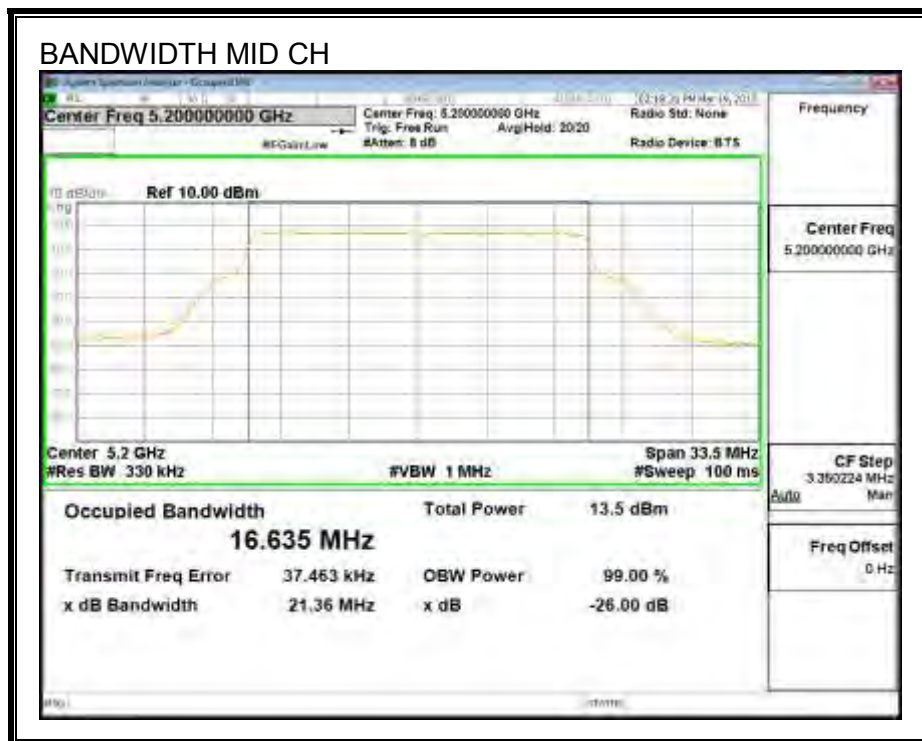
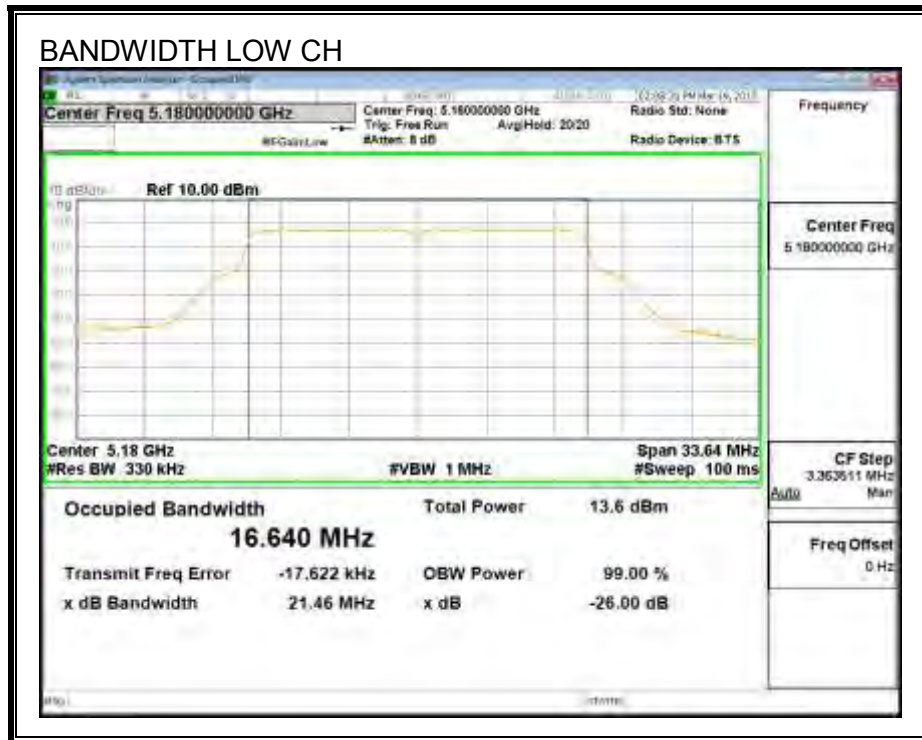
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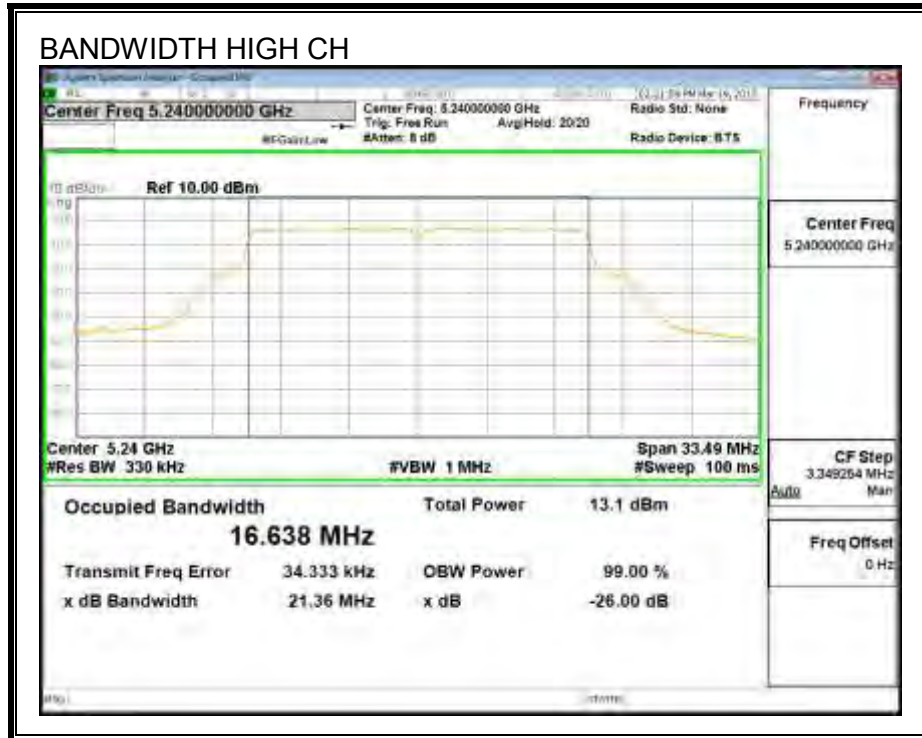
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	16.6400
Mid	5200	16.6350
High	5240	16.6380

99% BANDWIDTH





8.2.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5180	5.00	5.00	24.00	11.00
Mid	5200	5.00	5.00	24.00	11.00
High	5240	5.00	5.00	24.00	11.00

Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd PSD
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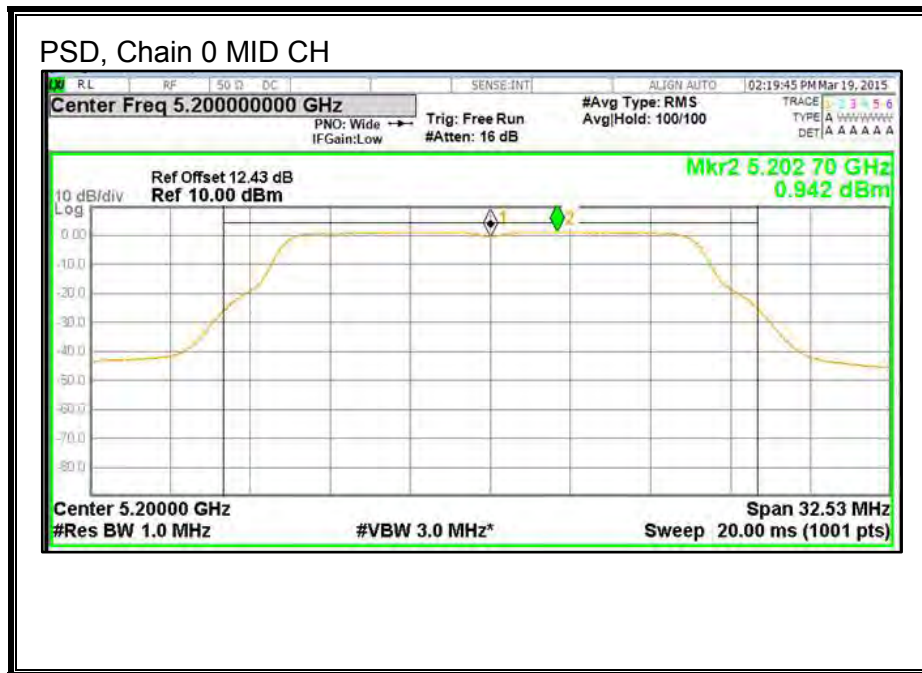
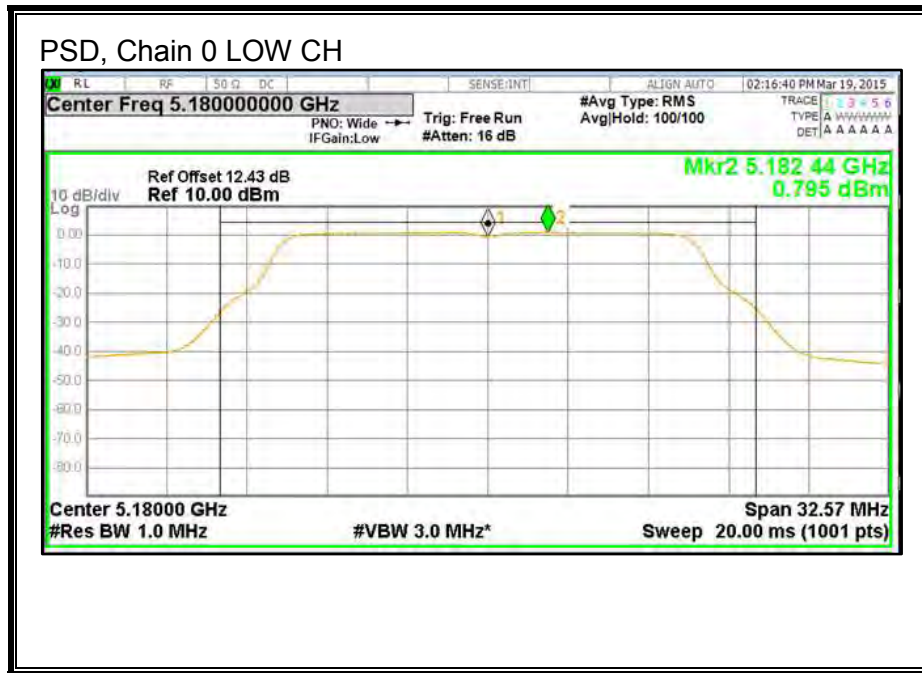
Output Power Results

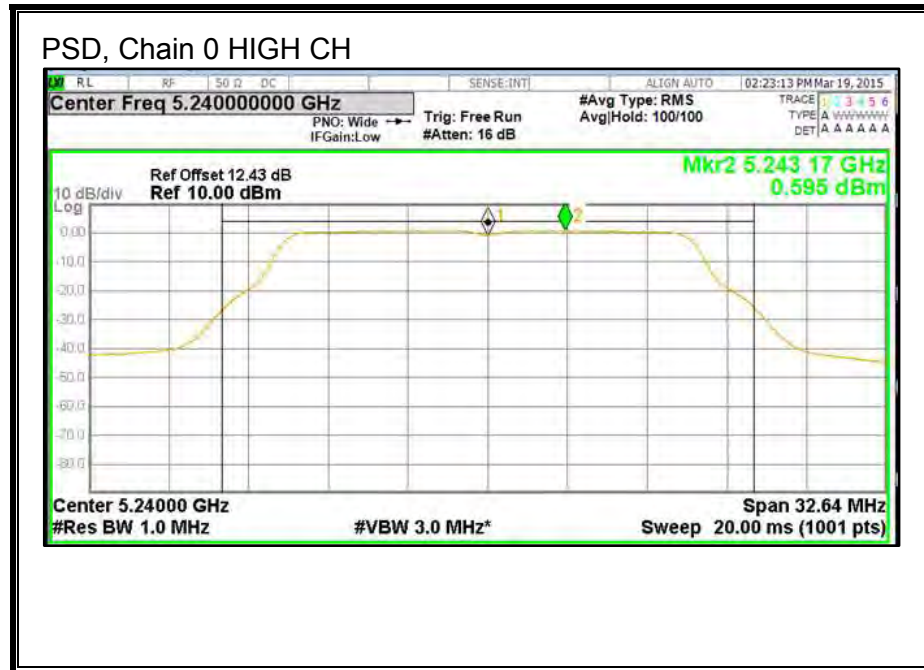
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	12.00	12.00	24.00	-12.00
Mid	5200	12.00	12.00	24.00	-12.00
High	5240	11.90	11.90	24.00	-12.10

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5180	0.80	0.91	11.00	-10.10
Mid	5200	0.94	1.05	11.00	-9.95
High	5240	0.60	0.71	11.00	-10.30

PSD, Chain 0





8.3. 802.11n HT20 MODE IN THE 5.2 GHz BAND

8.3.1. 26 dB BANDWIDTH

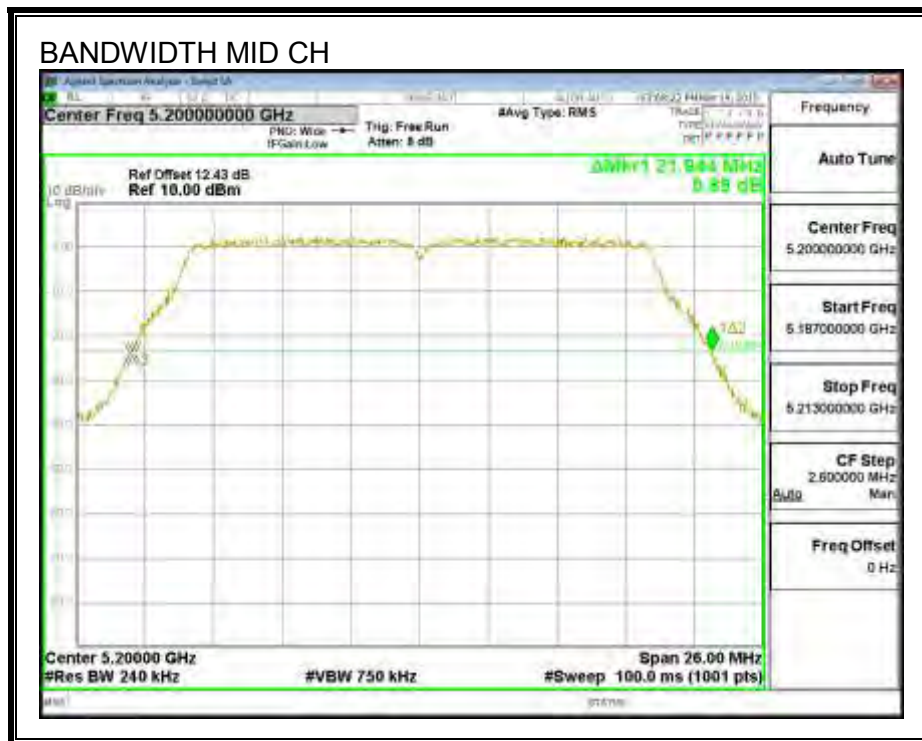
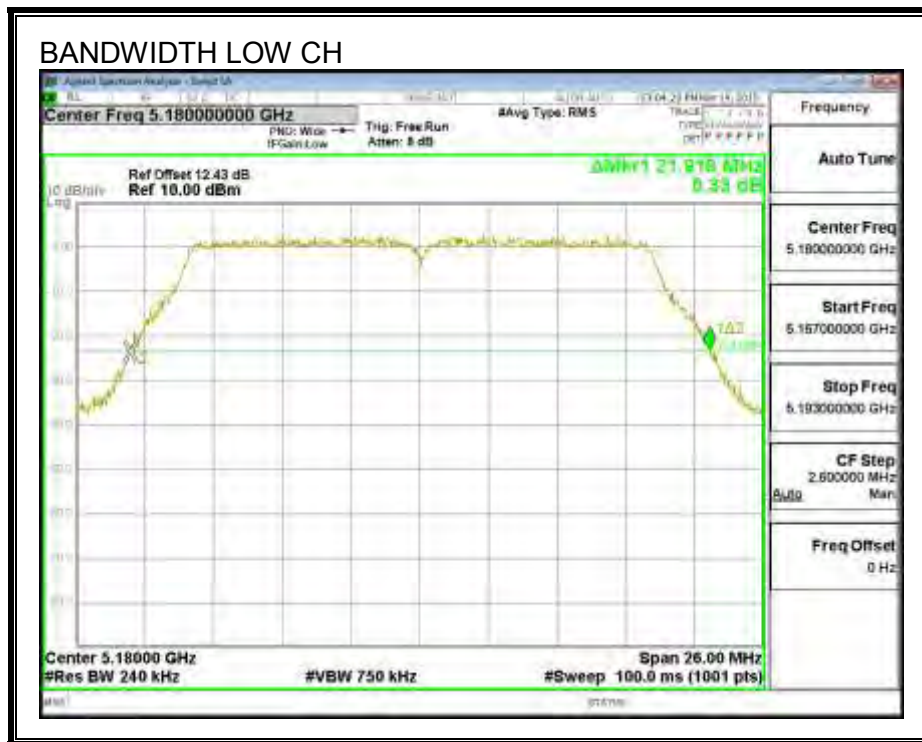
LIMITS

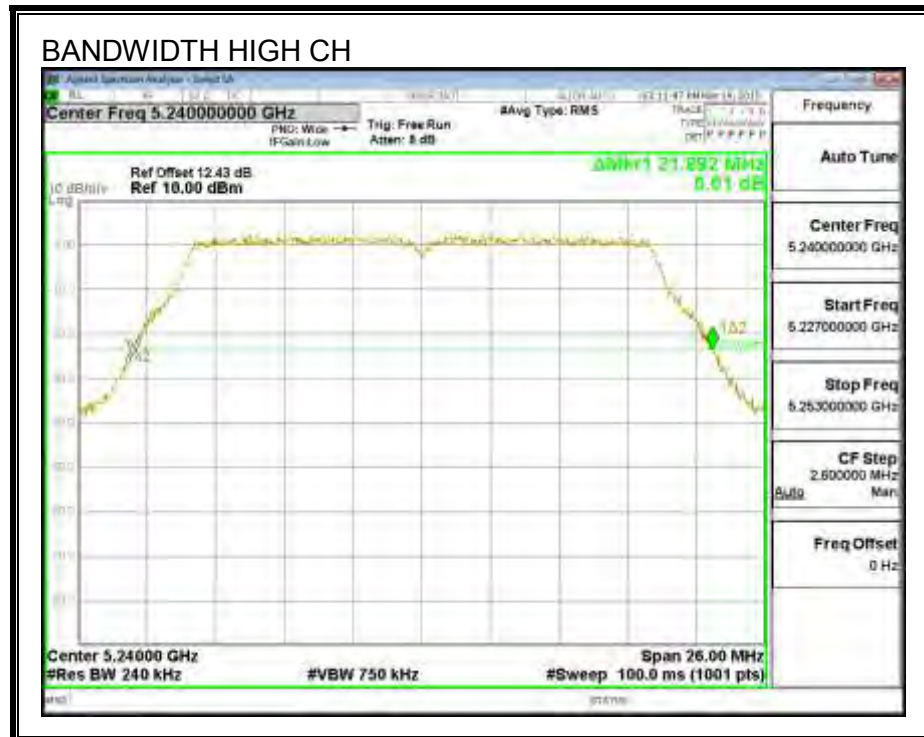
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5180	21.92
Mid	5200	21.94
High	5240	21.89

26 dB BANDWIDTH





8.3.2. 99% BANDWIDTH

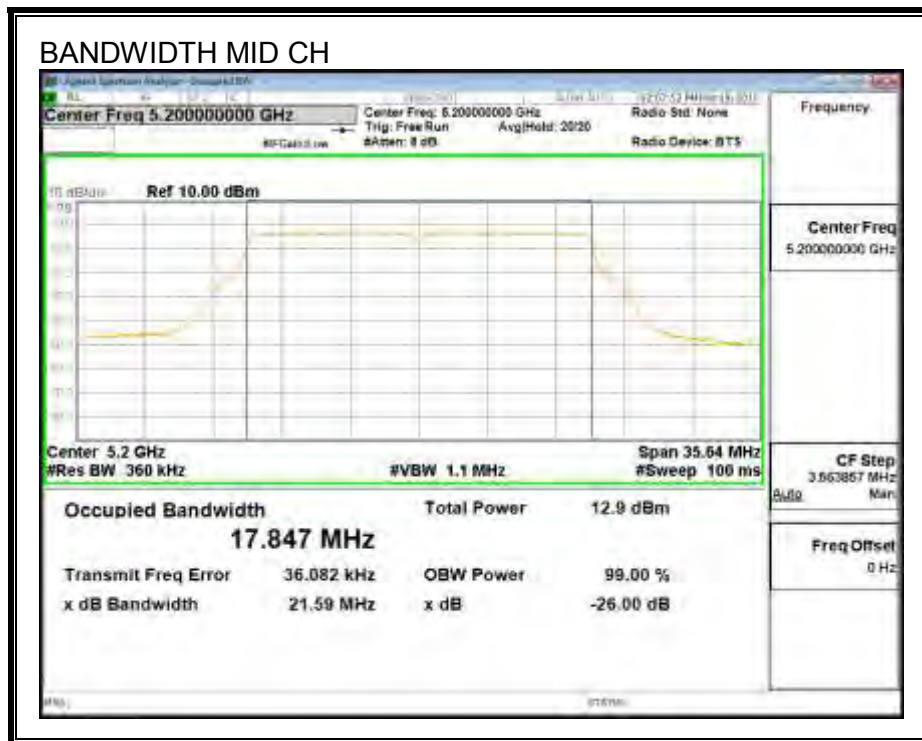
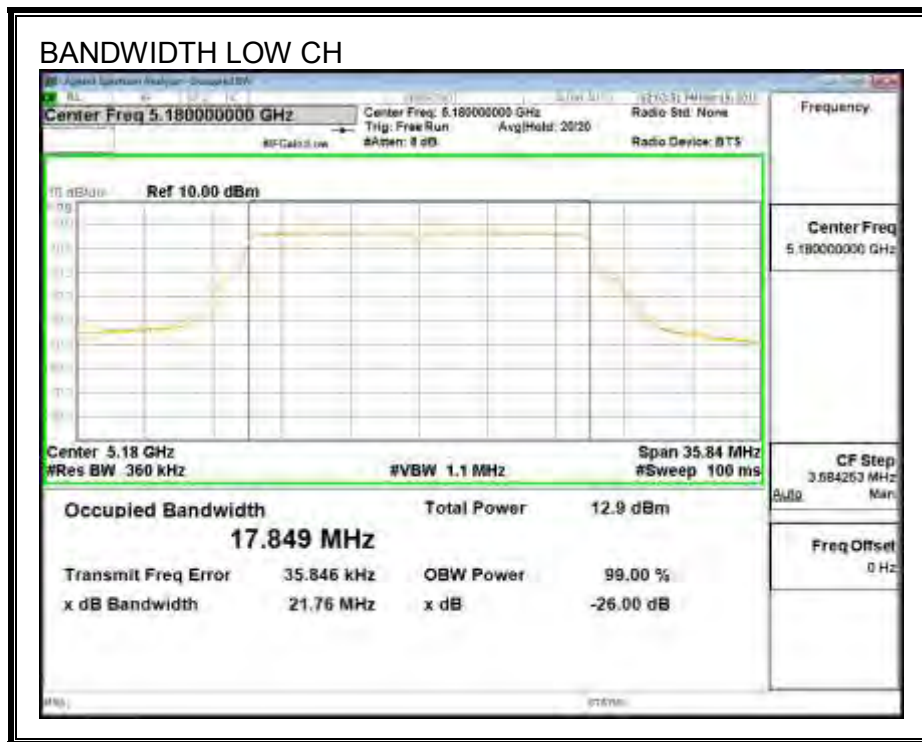
LIMITS

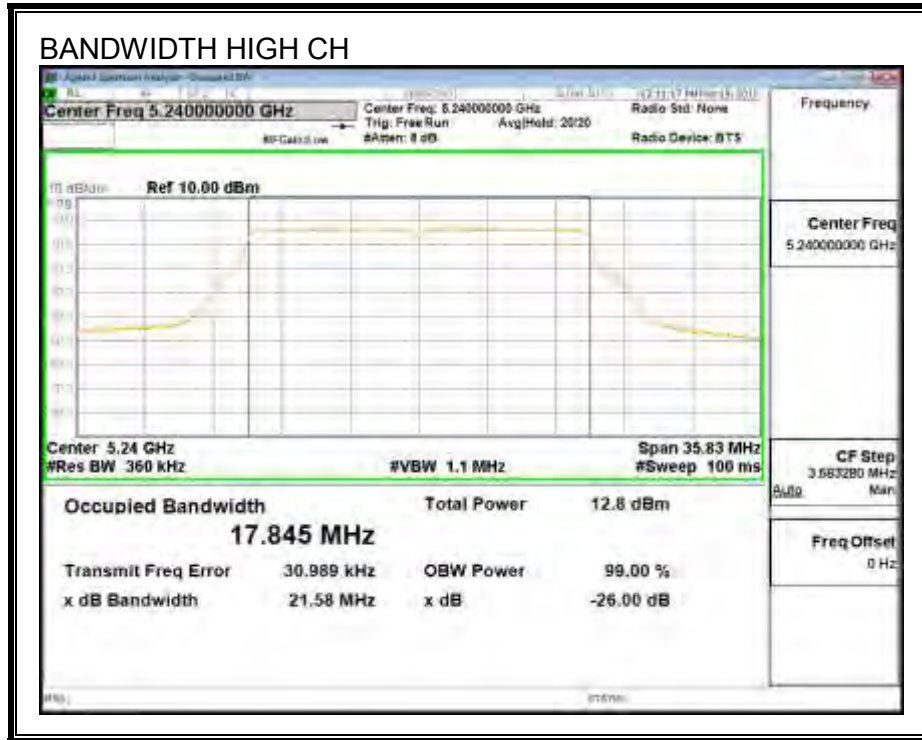
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5180	17.8490
Mid	5200	17.8470
High	5240	17.8450

99% BANDWIDTH





8.3.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5180	5.00	5.00	24.00	11.00
Mid	5200	5.00	5.00	24.00	11.00
High	5240	5.00	5.00	24.00	11.00

Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5180	12.00	12.00	24.00	-12.00
Mid	5200	11.92	11.92	24.00	-12.08
High	5240	12.00	12.00	24.00	-12.00

PSD Results

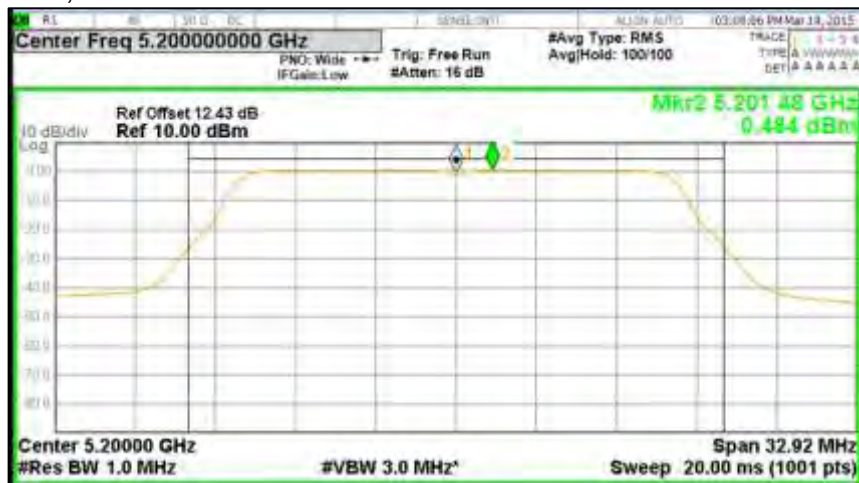
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5180	0.33	0.44	11.00	-10.56
Mid	5200	0.48	0.59	11.00	-10.41
High	5240	0.22	0.33	11.00	-10.67

PSD, Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 MID CH



PSD, Chain 0 HIGH CH



8.4. 802.11n HT40 MODE IN THE 5.2 GHz BAND

8.4.1. 26 dB BANDWIDTH

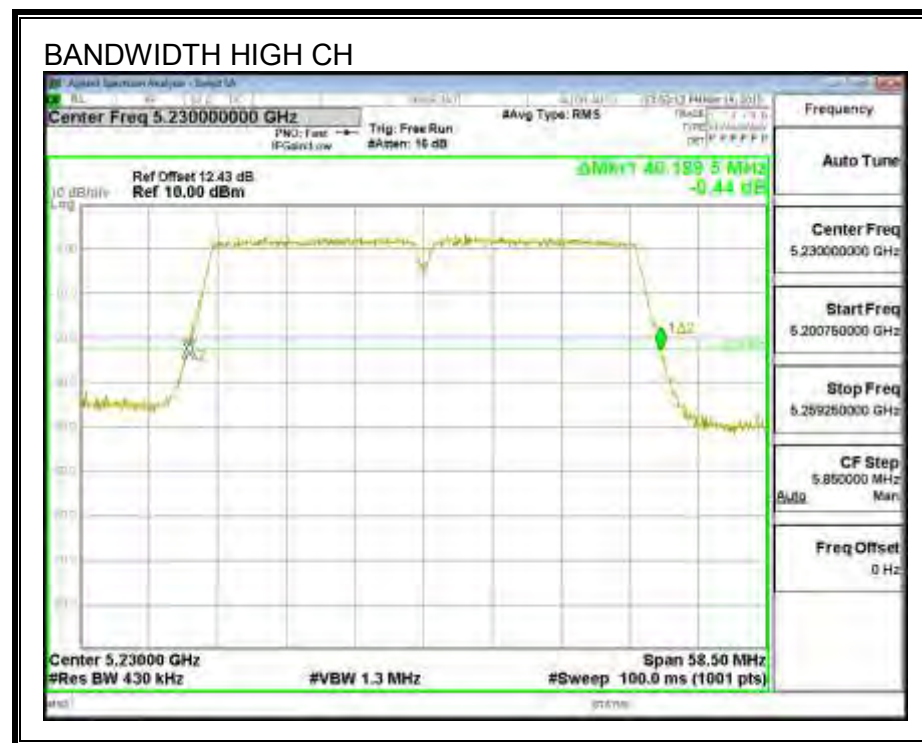
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5190	40.25
High	5230	40.19

26 dB BANDWIDTH



8.4.2. 99% BANDWIDTH

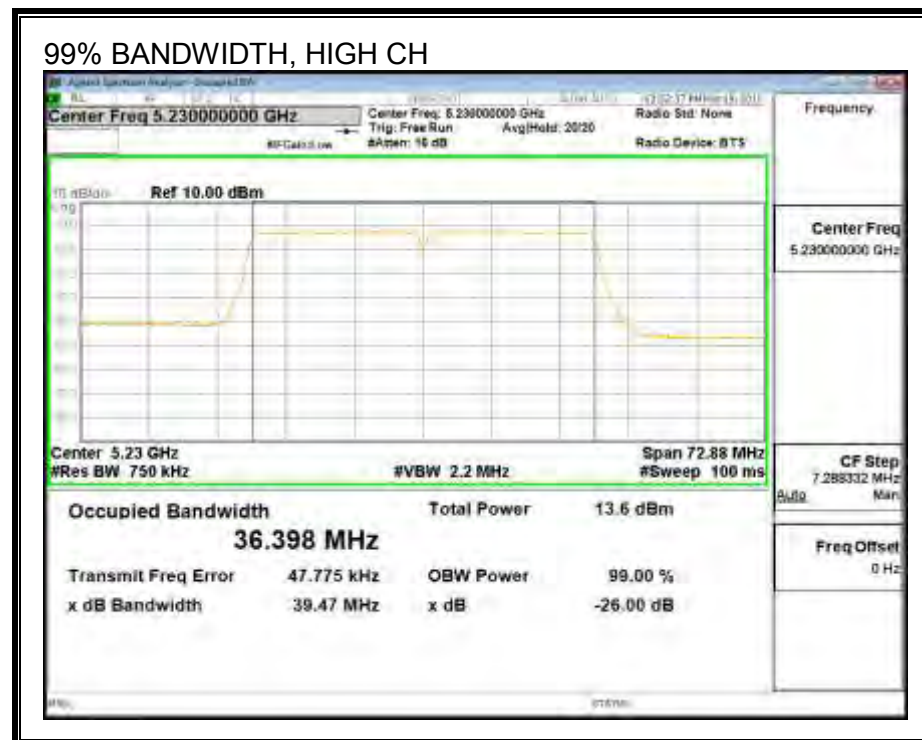
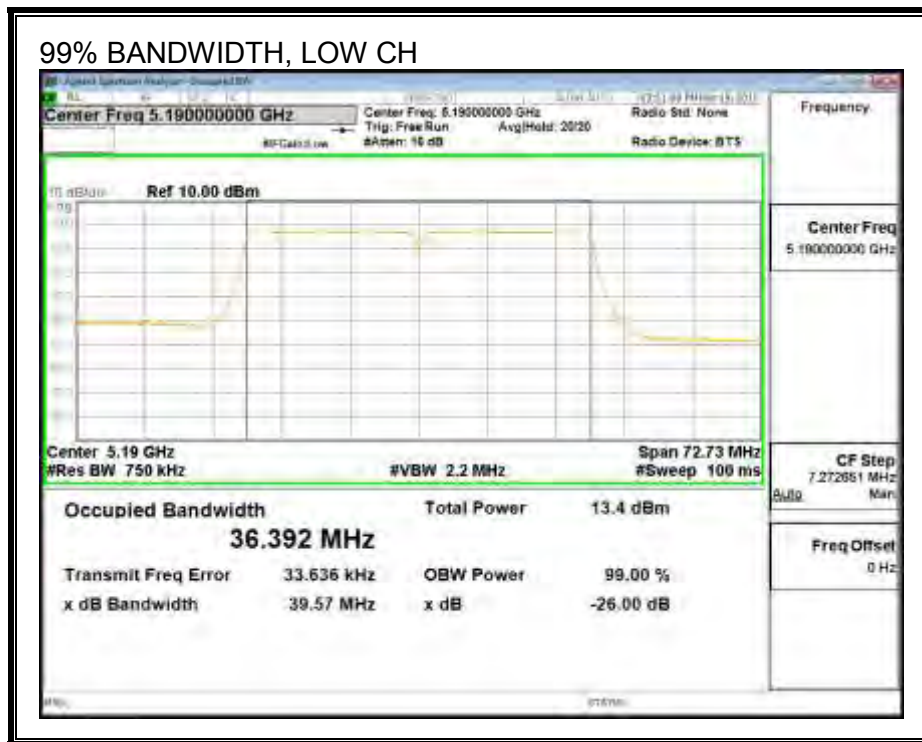
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5190	36.3920
High	5230	36.3980

99% BANDWIDTH



8.4.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5190	5.00	5.00	24.00	11.00
High	5230	5.00	5.00	24.00	11.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5190	12.00	12.00	24.00	-12.00
High	5230	11.90	11.90	24.00	-12.10

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5190	-2.43	-2.43	11.00	-13.43
High	5230	-2.53	-2.53	11.00	-13.53

PSD, Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 HIGH CH



8.5. 802.11ac HT80 MODE IN THE 5.2 GHz BAND

8.5.1. 26 dB BANDWIDTH

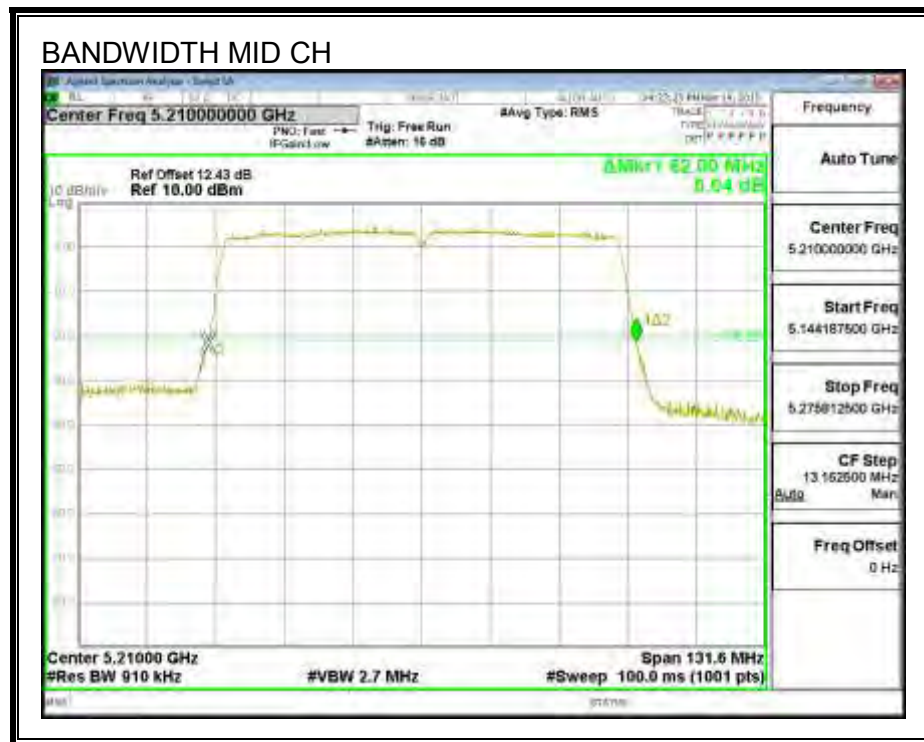
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5210	82.00

26 dB BANDWIDTH



8.5.2. 99% BANDWIDTH

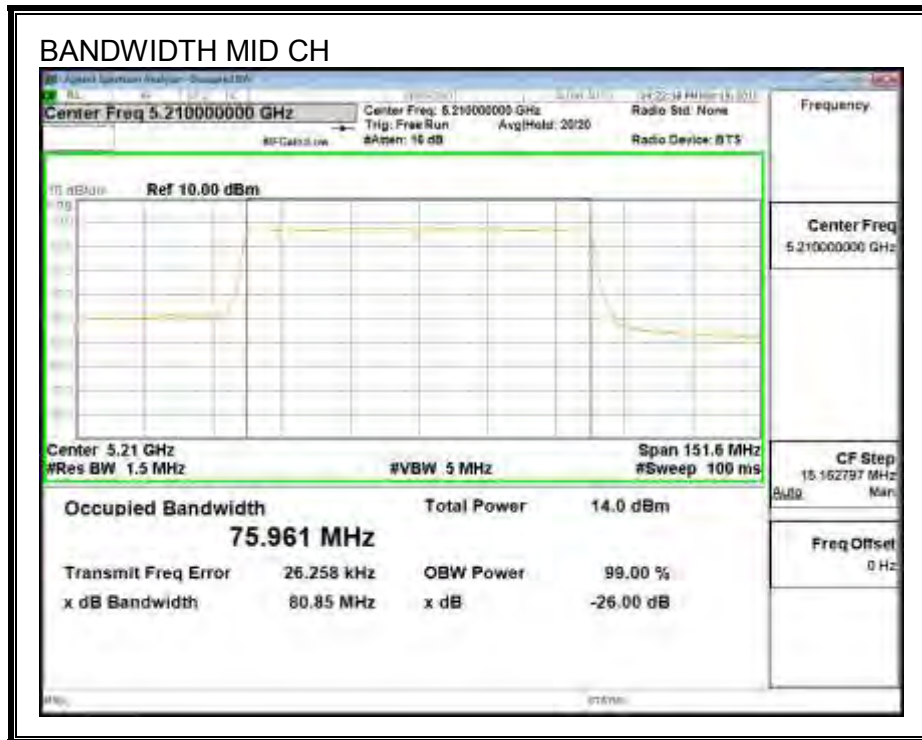
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5210	75.9610

99% BANDWIDTH



8.5.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limits

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Mid	5210	5.00	5.00	24.00	11.00

Duty Cycle CF (dB)	0.44	Included in Calculations of Corr'd PSD
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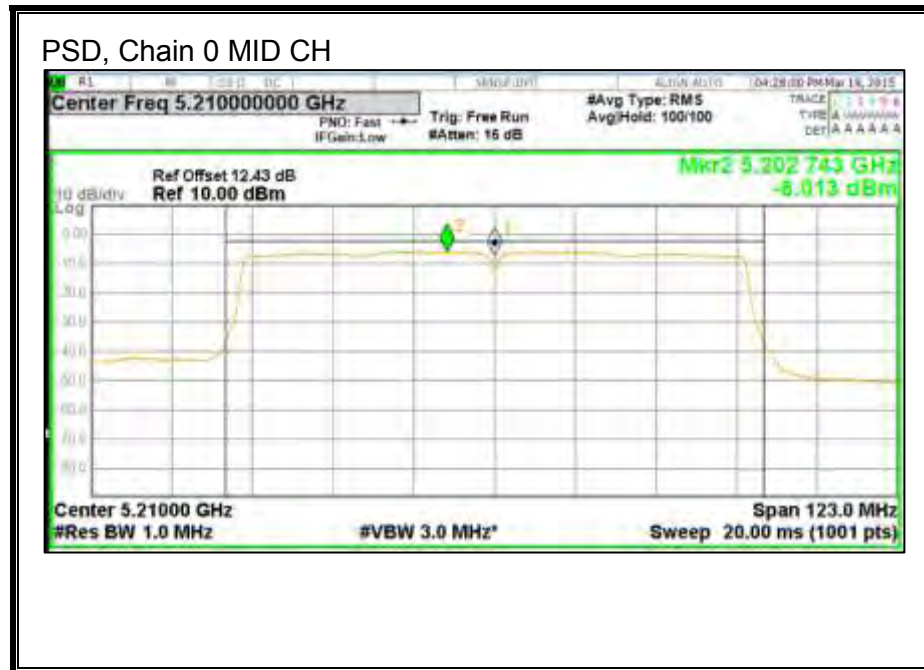
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5210	12.00	12.00	24.00	-12.00

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5210	-6.01	-5.57	11.00	-16.57

PSD, Chain 0



8.6. 802.11a MODE IN THE 5.3 GHz BAND

8.6.1. 26 dB BANDWIDTH

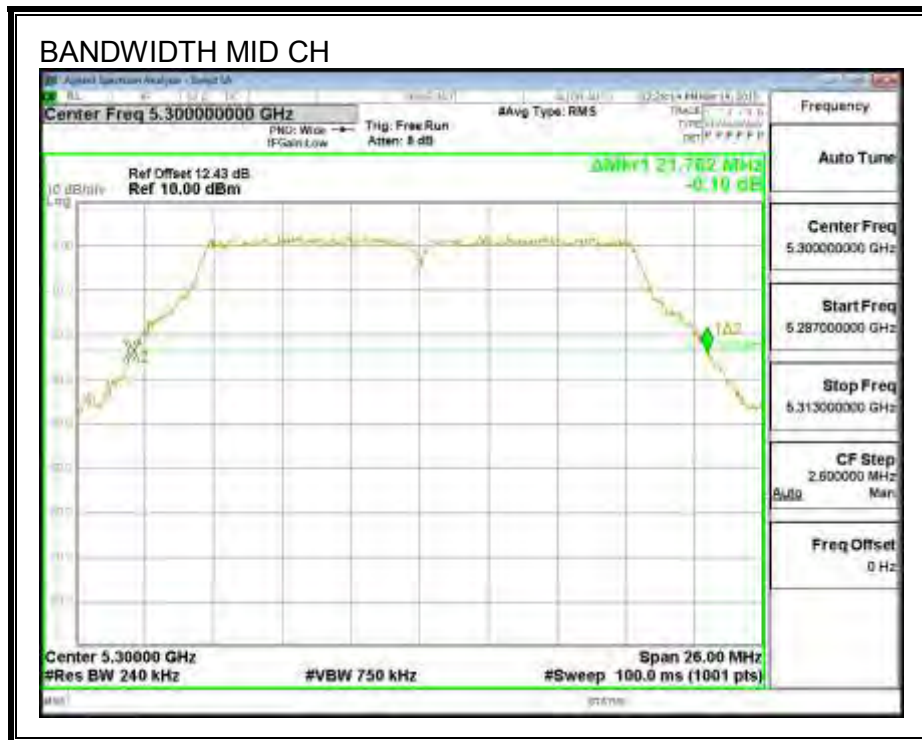
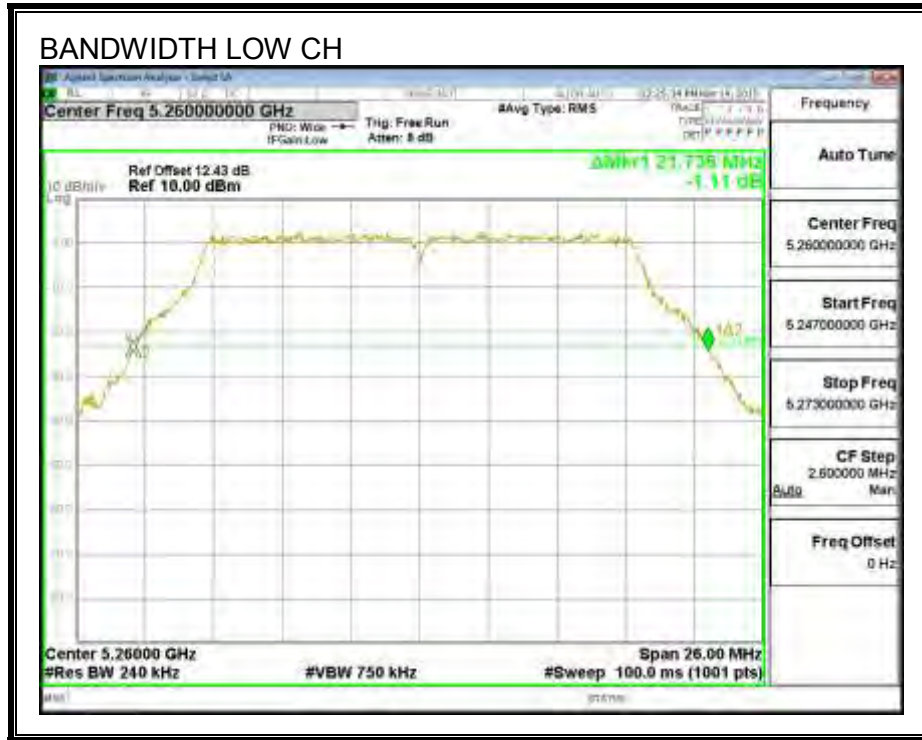
LIMITS

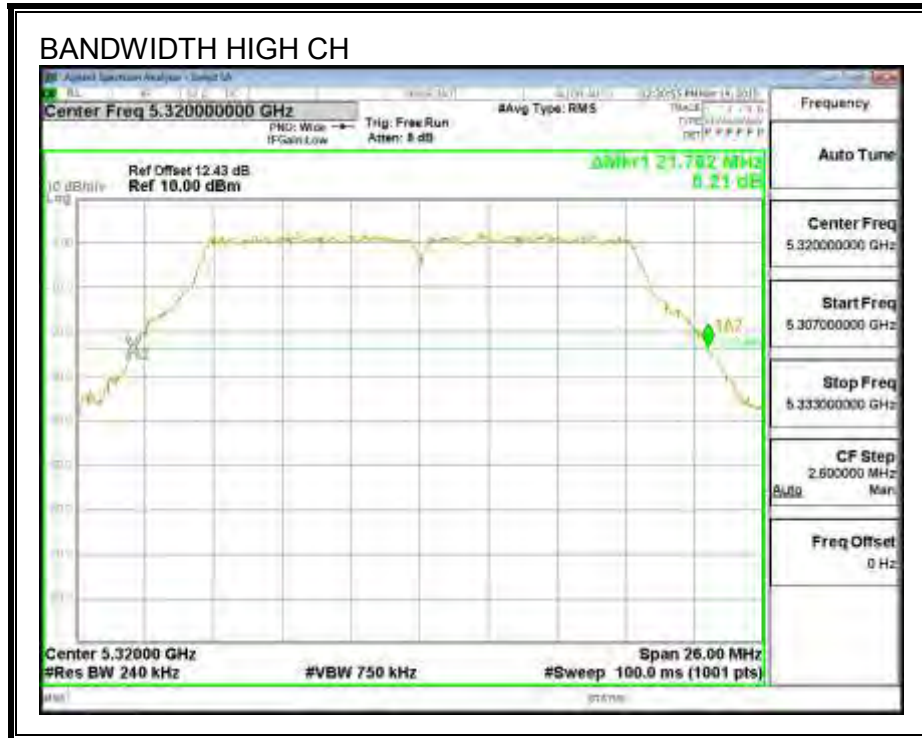
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	21.74
Mid	5300	21.76
High	5320	21.76

26 dB BANDWIDTH





8.6.2. 99% BANDWIDTH

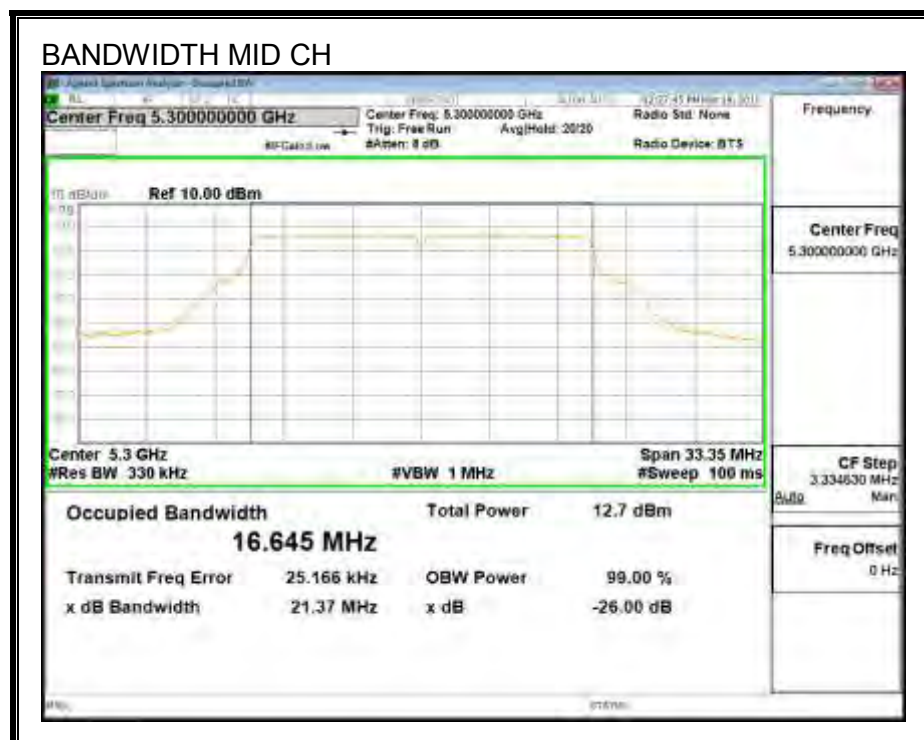
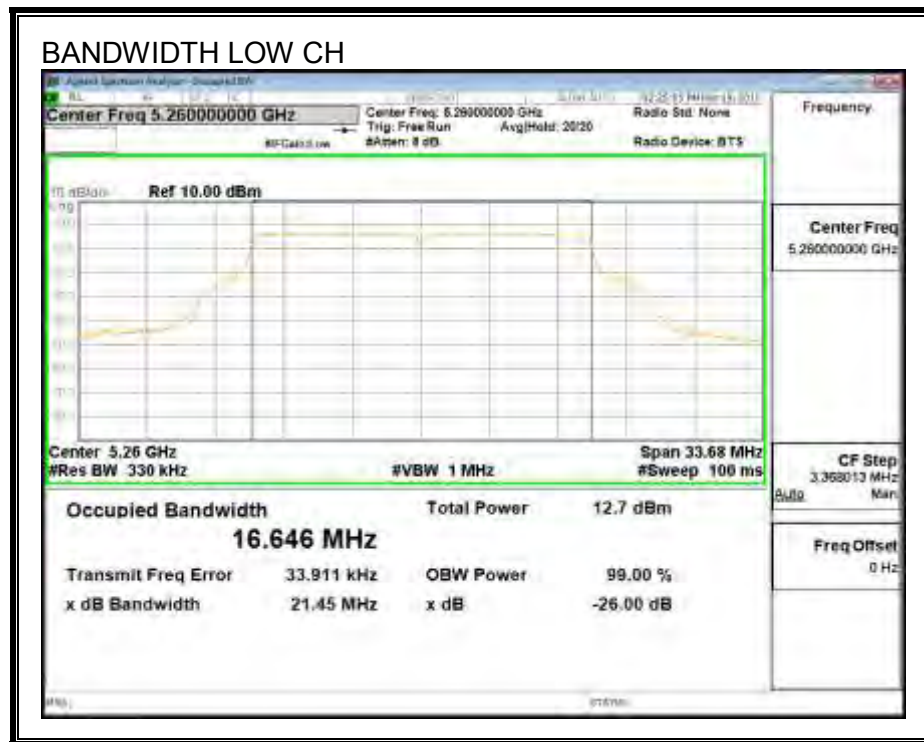
LIMITS

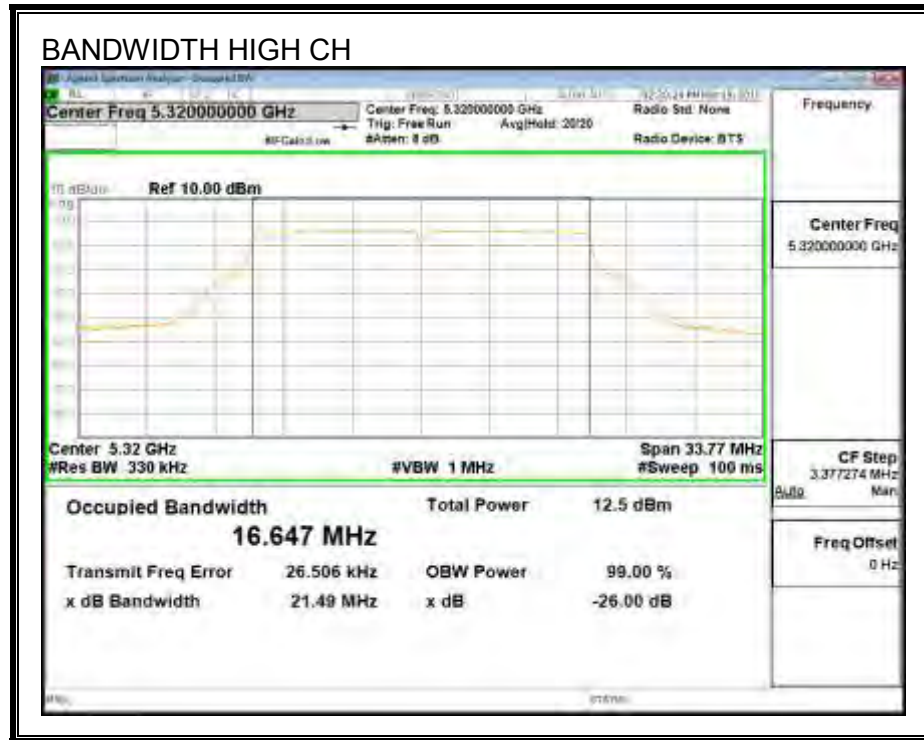
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	16.6460
Mid	5300	16.6450
High	5320	16.6470

99% BANDWIDTH





8.6.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26-dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5260	21.74	5.00	24.00	11.00
Mid	5300	21.76	5.00	24.00	11.00
High	5320	21.76	5.00	24.00	11.00

Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	12.00	12.00	24.00	-12.00
Mid	5300	12.00	12.00	24.00	-12.00
High	5320	12.00	12.00	24.00	-12.00

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5260	0.44	0.55	11.00	-10.45
Mid	5300	0.32	0.43	11.00	-10.57
High	5320	0.28	0.39	11.00	-10.61

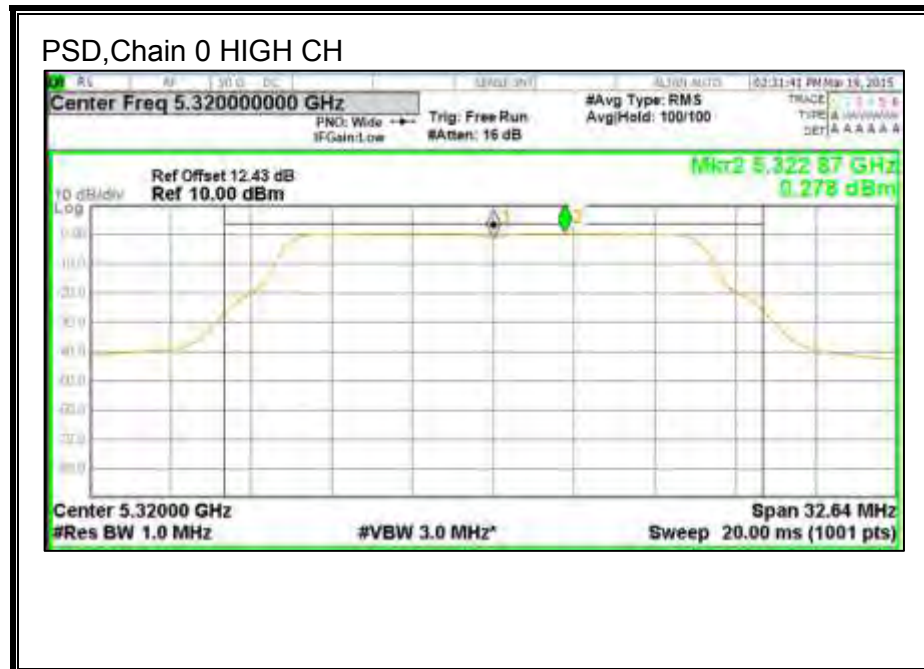
PSD, Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 MID CH





8.7. 802.11n HT20 MODE IN THE 5.3 GHz BAND

8.7.1. 26 dB BANDWIDTH

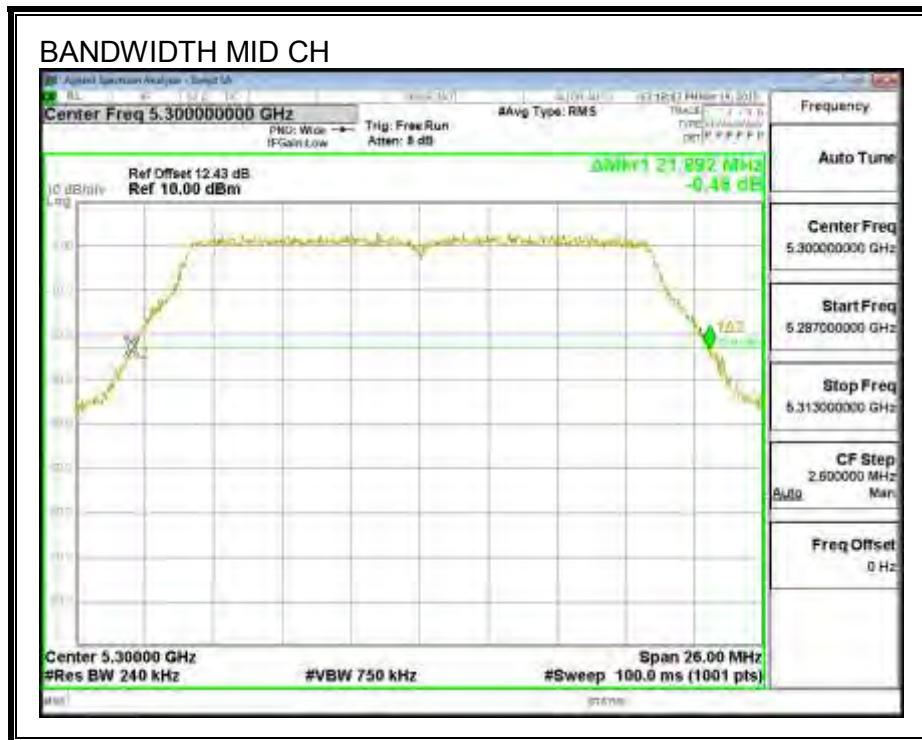
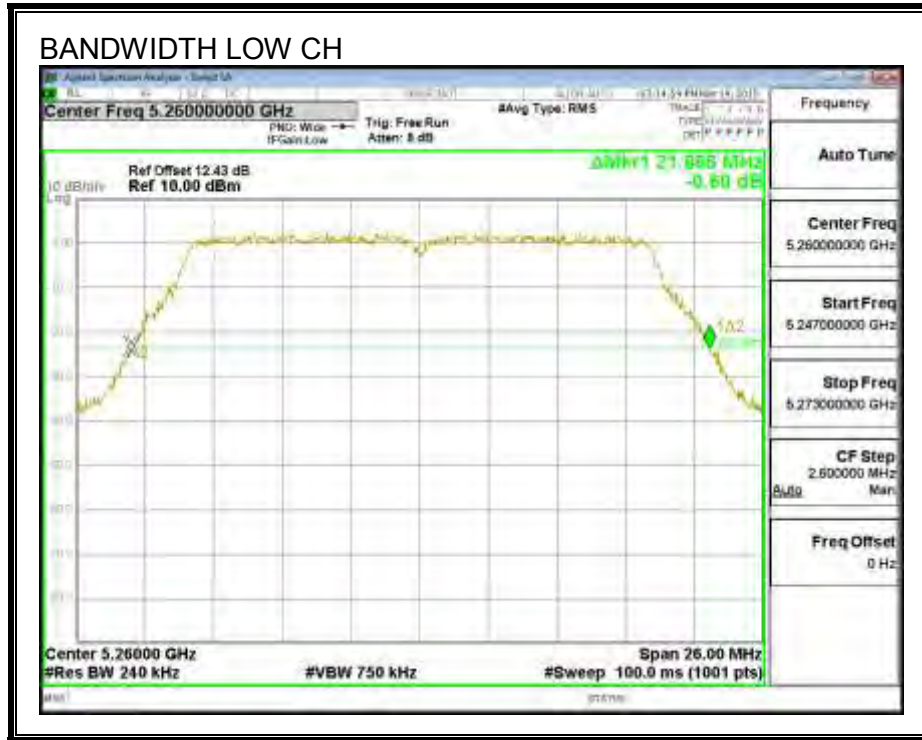
LIMITS

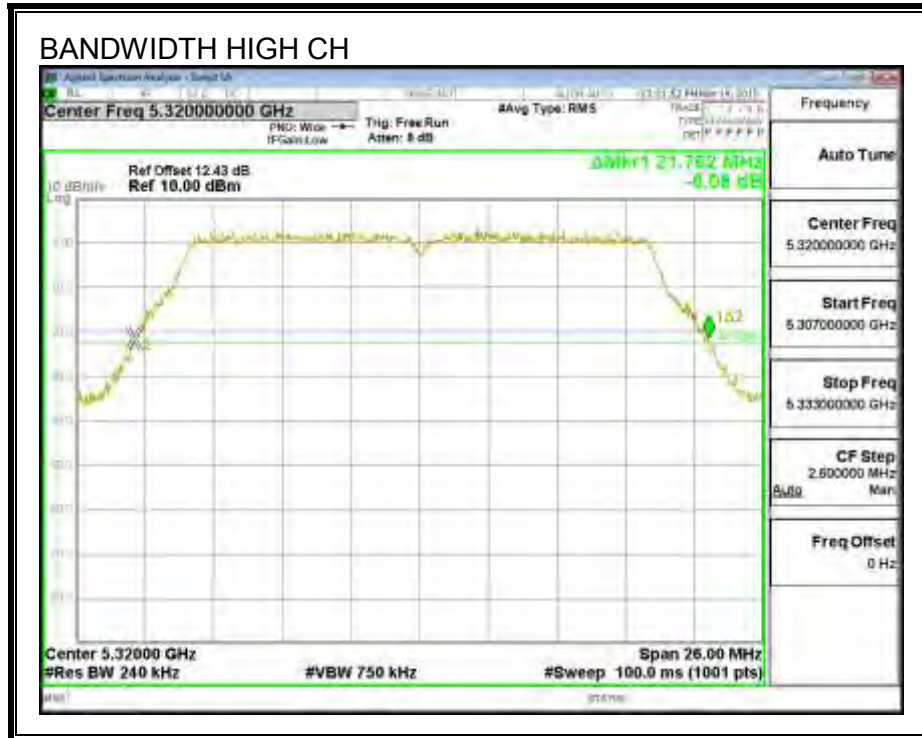
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5260	21.87
Mid	5300	21.89
High	5320	21.76

26 dB BANDWIDTH





8.7.2. 99% BANDWIDTH

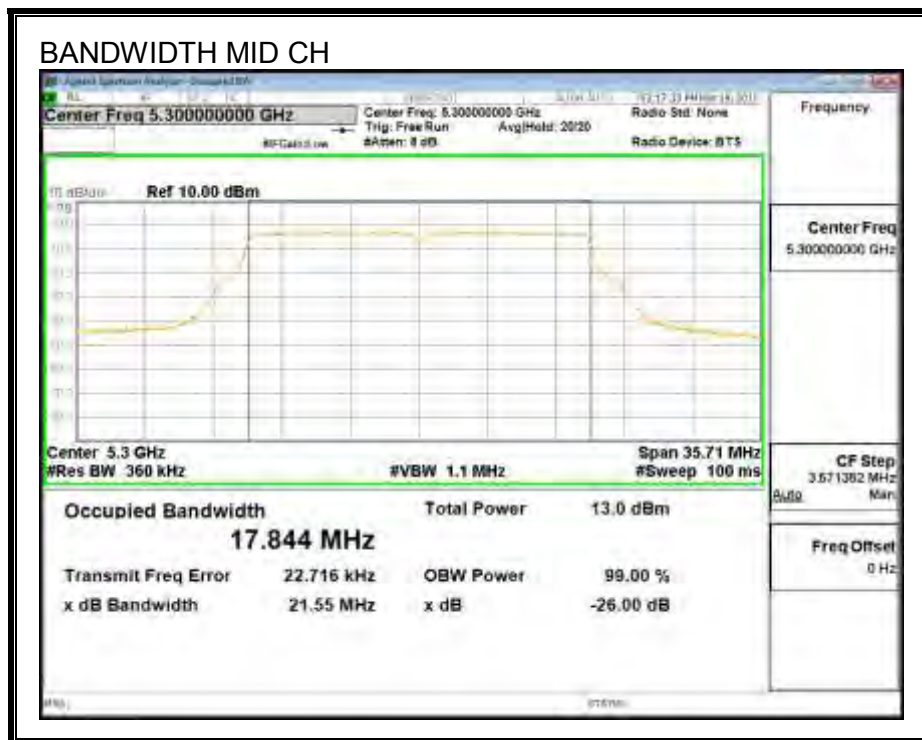
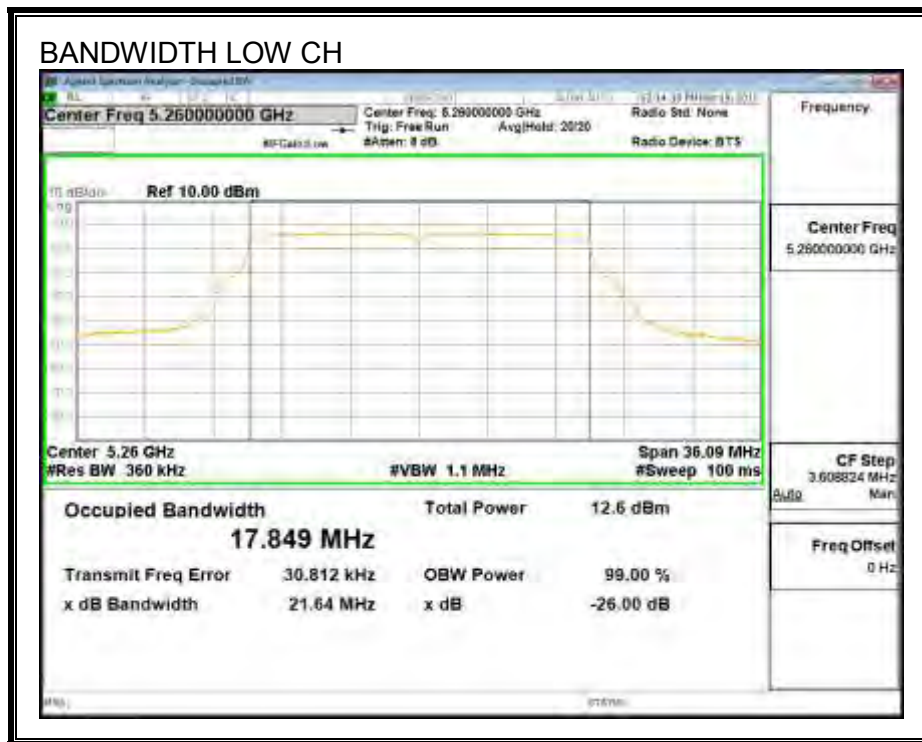
LIMITS

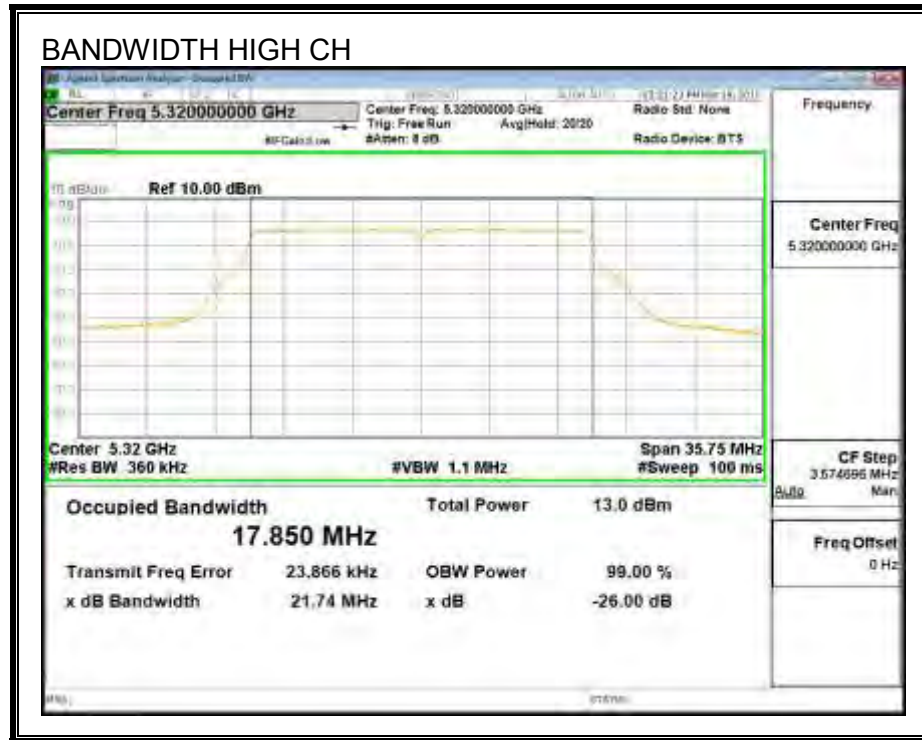
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5260	17.8490
Mid	5300	17.8440
High	5320	17.8500

99% BANDWIDTH





8.7.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26-dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5260	21.87	5.00	24.00	11.00
Mid	5300	21.89	5.00	24.00	11.00
High	5320	21.76	5.00	24.00	11.00

Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd PSD
--------------------	------	--

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5260	12.00	12.11	24.00	-11.89
Mid	5300	12.00	12.11	24.00	-11.89
High	5320	11.90	12.01	24.00	-11.99

PSD Results

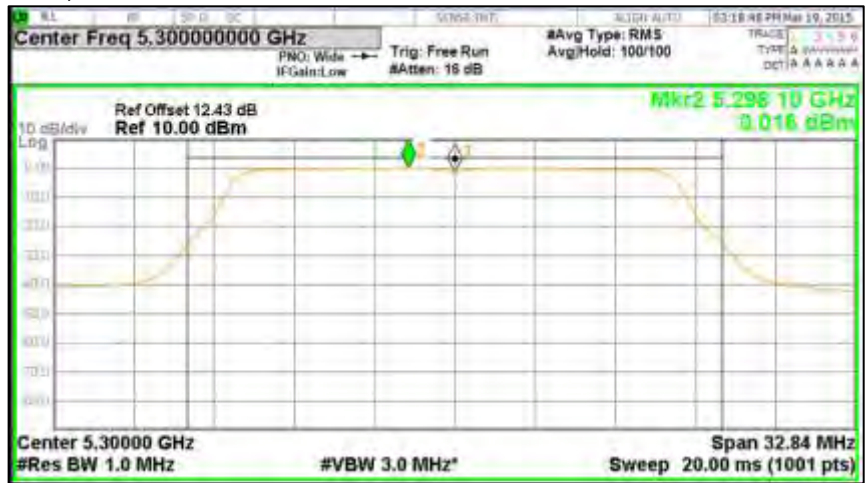
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5260	0.03	0.14	11.00	-10.86
Mid	5300	0.02	0.13	11.00	-10.87
High	5320	-0.07	0.04	11.00	-10.96

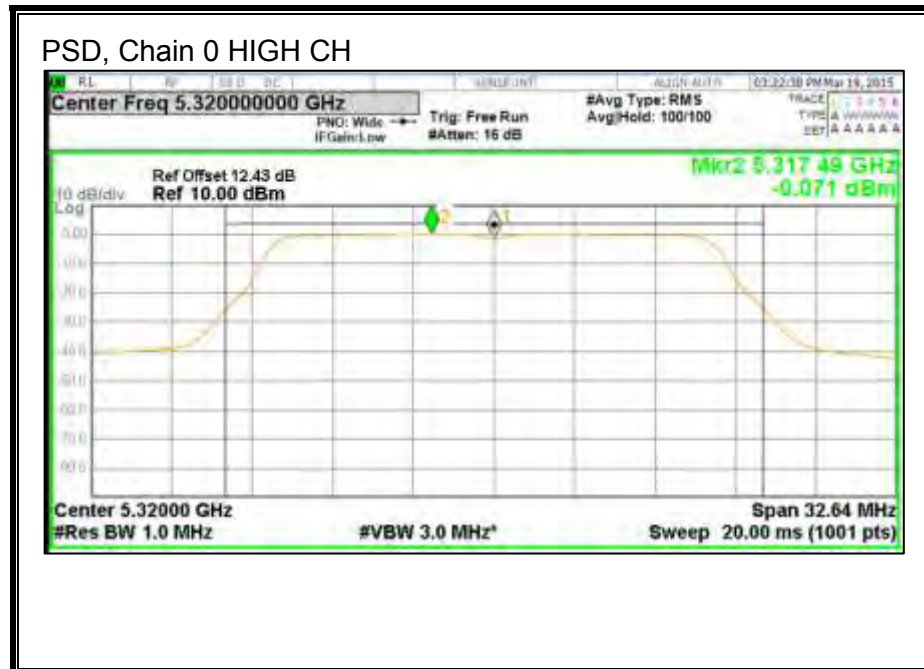
PSD,Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 MID CH





8.8. 802.11n HT40 MODE IN THE 5.3 GHz BAND

8.8.1. 26 dB BANDWIDTH

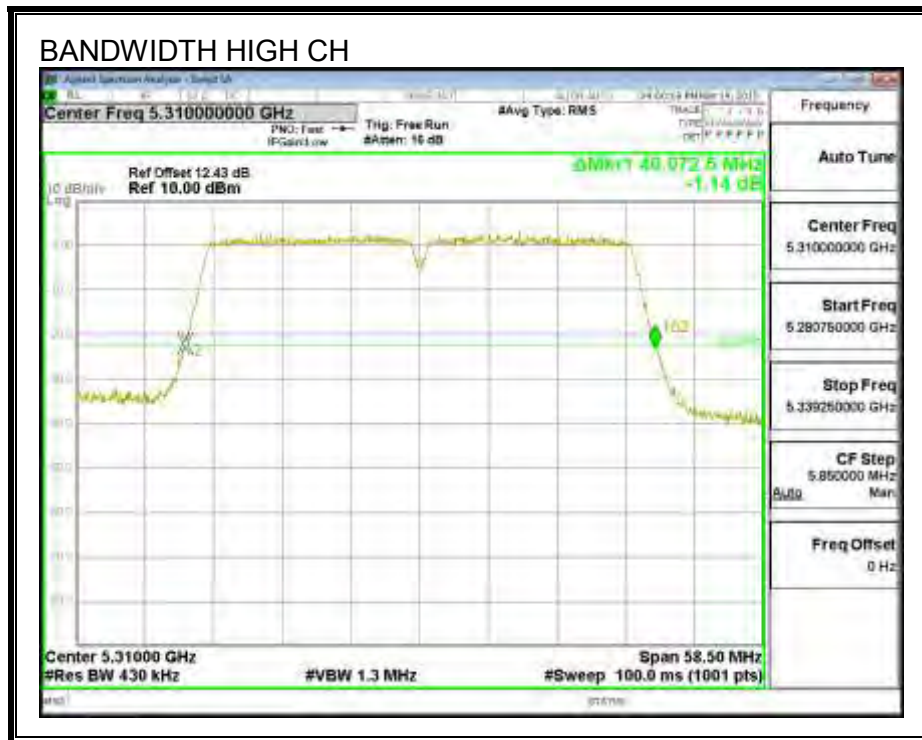
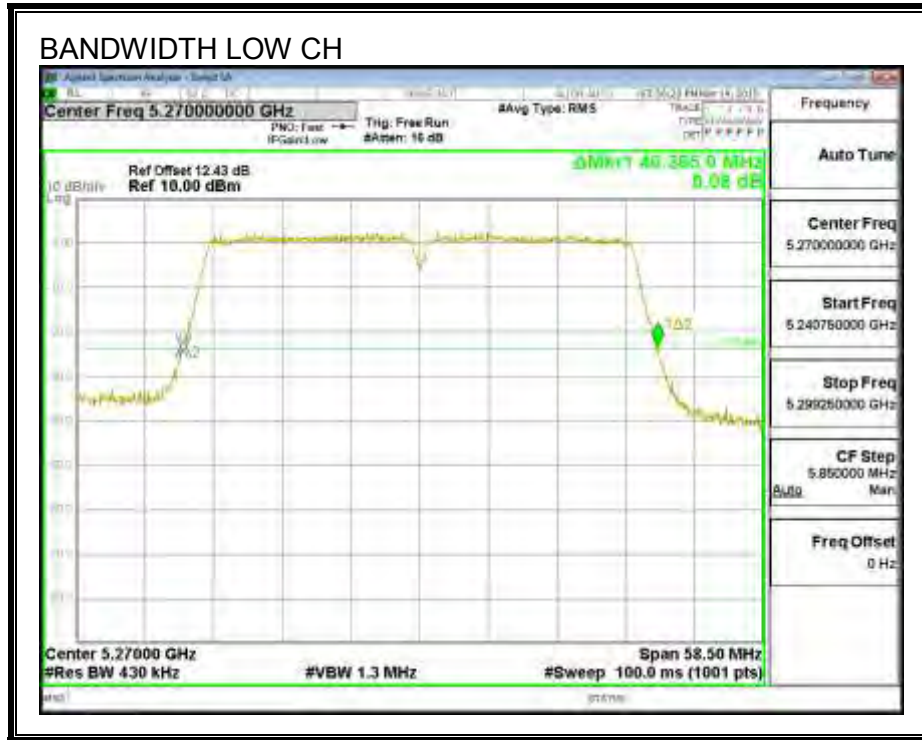
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5270	40.37
High	5310	40.07

26 dB BANDWIDTH



8.8.2. 99% BANDWIDTH

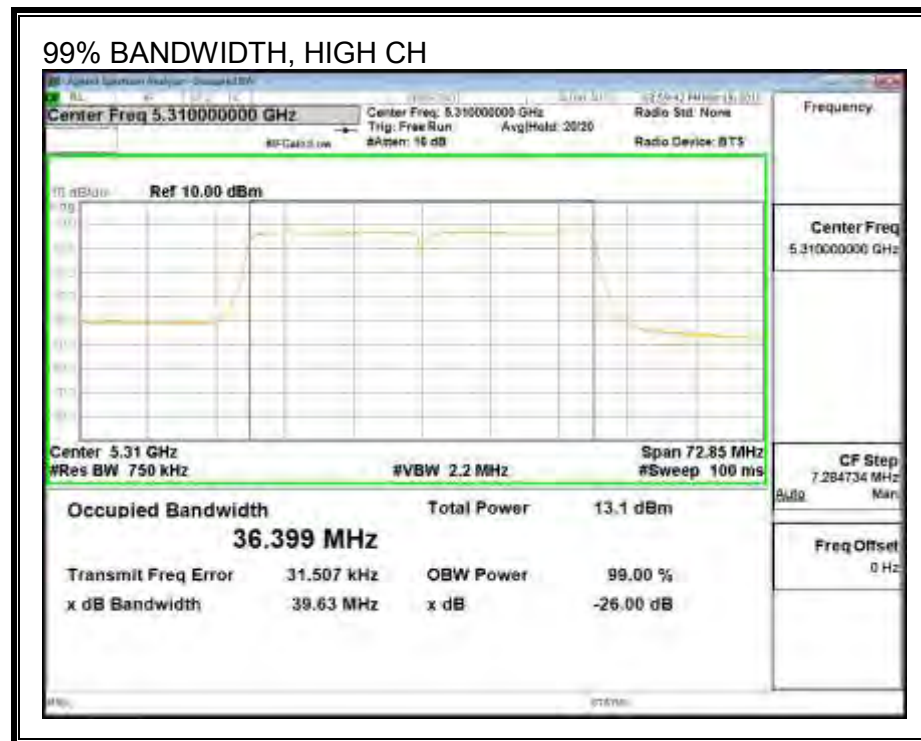
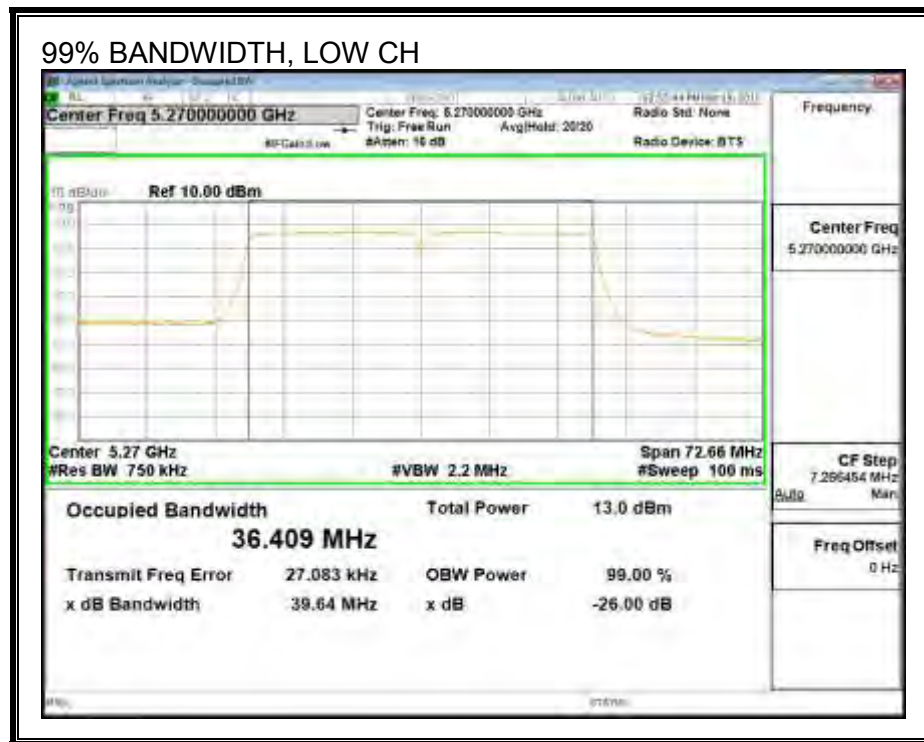
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5270	36.4090
High	5310	36.3990

99% BANDWIDTH



8.8.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26-dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5270	40.37	5.00	24.00	11.00
High	5310	40.07	5.00	24.00	11.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5270	12.00	12.00	24.00	-12.00
High	5310	11.90	11.90	24.00	-12.10

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5270	-2.82	-2.60	11.00	-13.60
High	5310	-3.00	-2.78	11.00	-13.78

PSD,Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 HIGH CH



8.9. 802.11ac HT80 MODE IN THE 5.3 GHz BAND

8.9.1. 26 dB BANDWIDTH

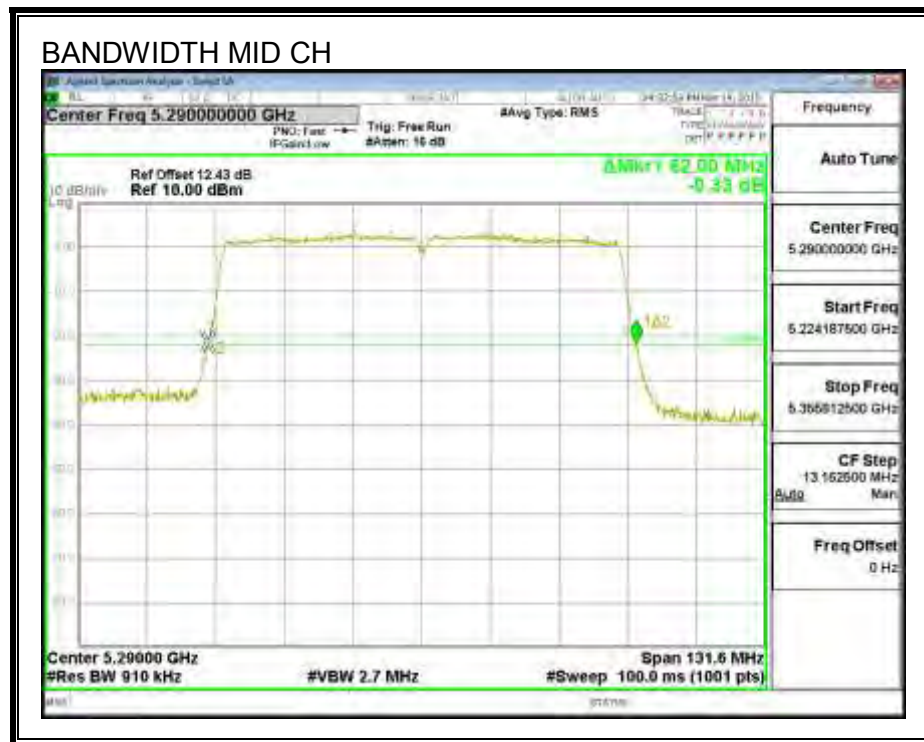
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Mid	5290	82.00

26 dB BANDWIDTH



8.9.2. 99% BANDWIDTH

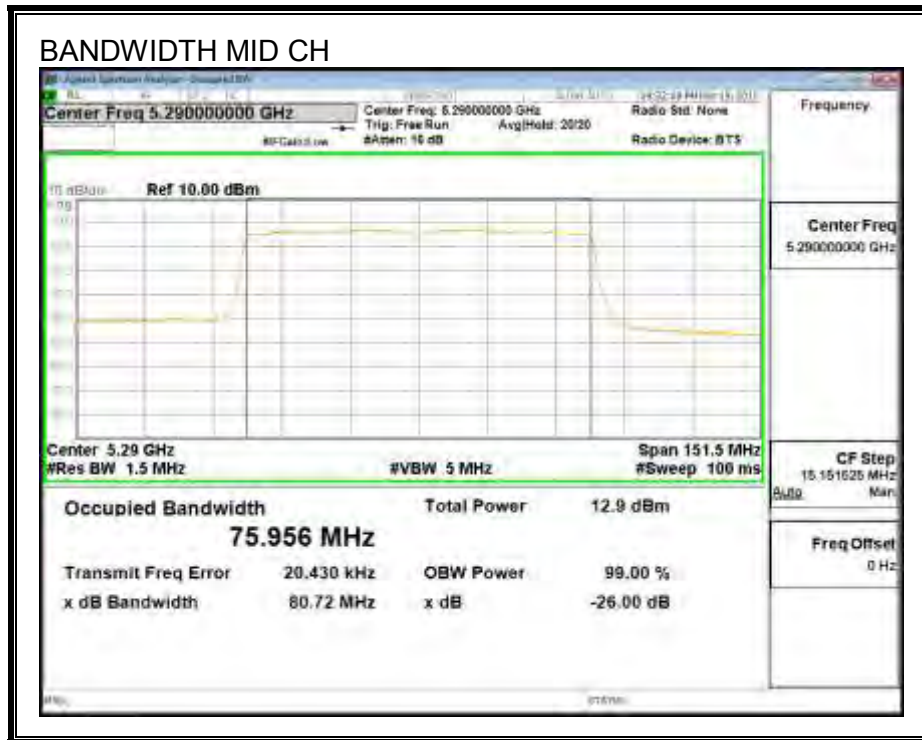
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5290	75.9560

99% BANDWIDTH



8.9.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.25–5.35 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26-dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Mid	5290	82.00	5.00	24.00	11.00

Duty Cycle CF (dB)	0.44	Included in Calculations of Corr'd PSD
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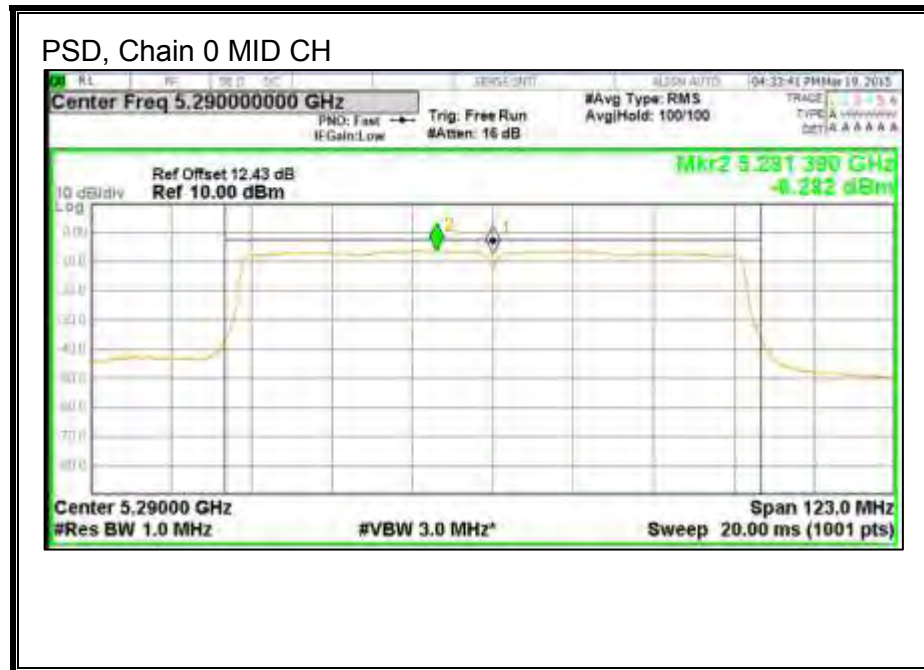
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5290	12.00	12.00	24.00	-12.00

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5290	-6.28	-5.84	11.00	-16.84

PSD, Chain 0



8.10. 802.11a MODE IN THE 5.6 GHz BAND

8.10.1. 26 dB BANDWIDTH

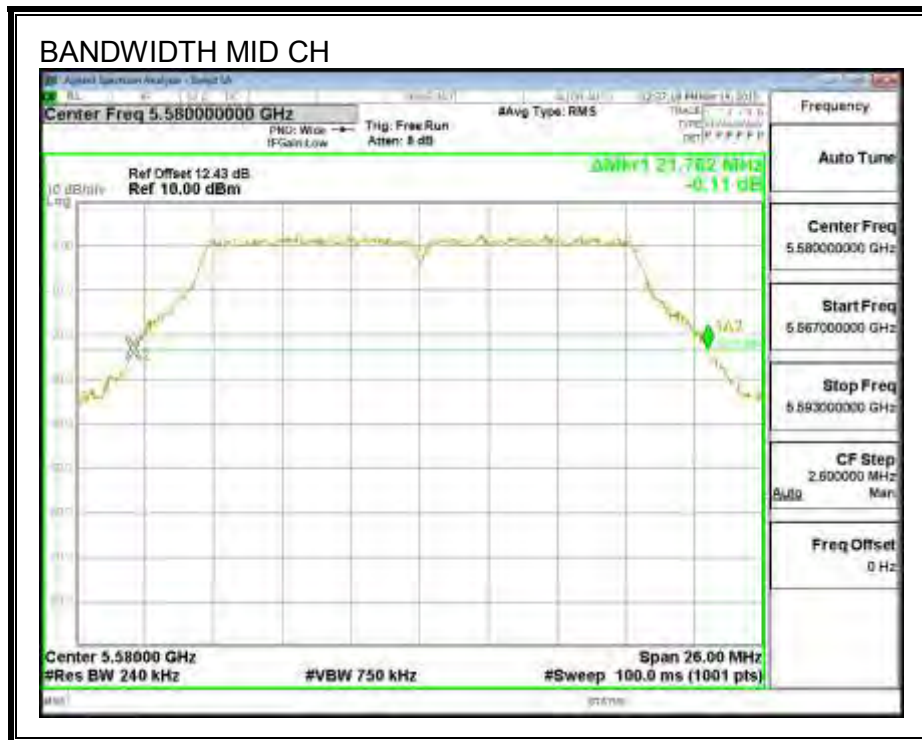
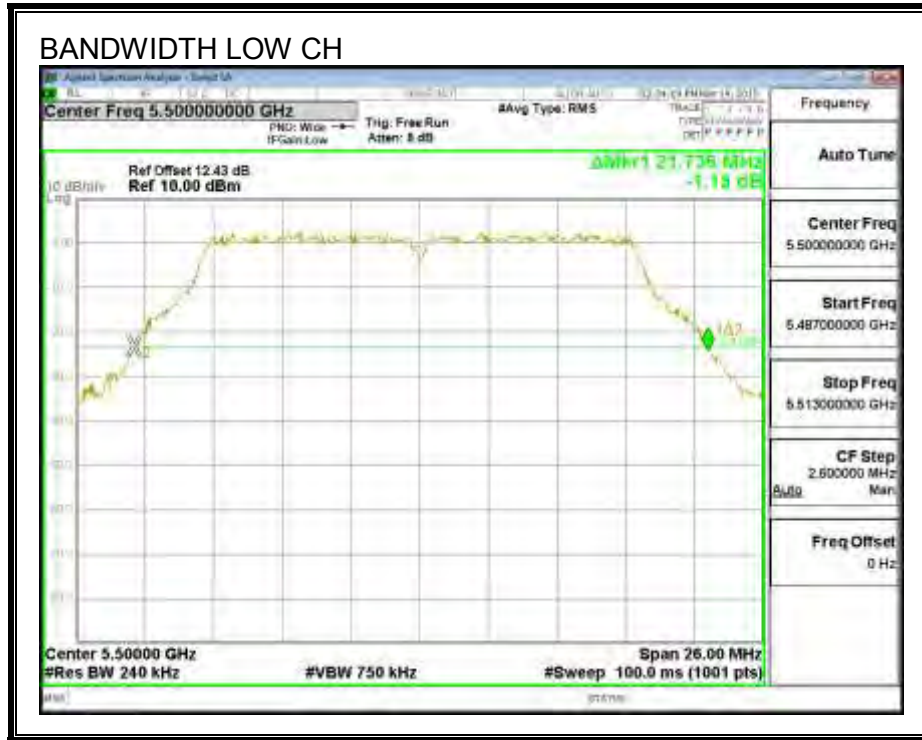
LIMITS

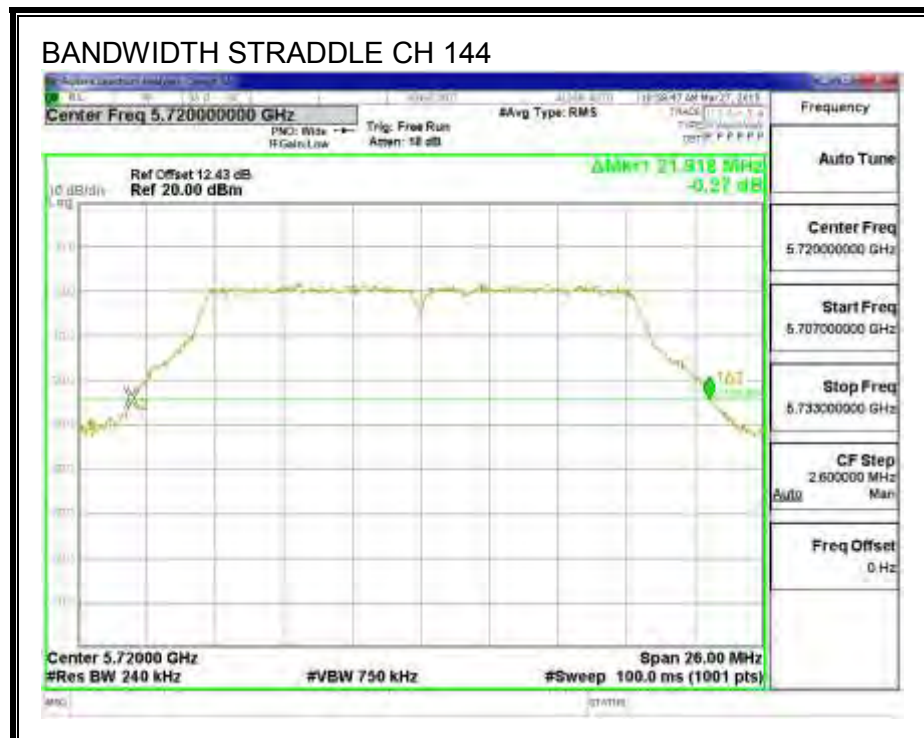
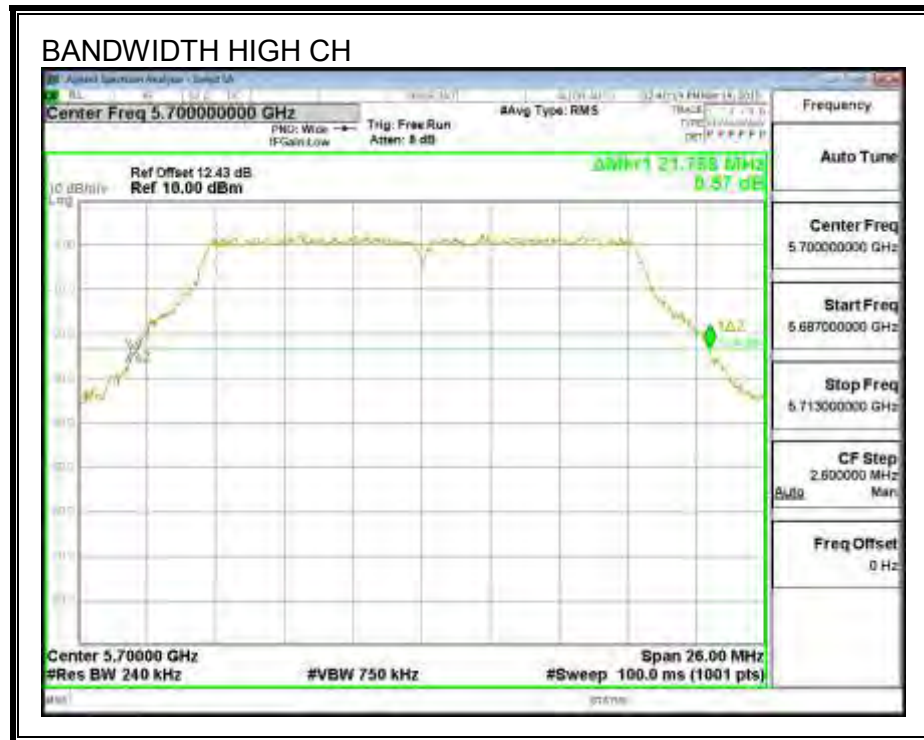
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	21.74
Mid	5580	21.76
High	5700	21.79
144	5720	21.92

26 dB BANDWIDTH





8.10.2. 99% BANDWIDTH

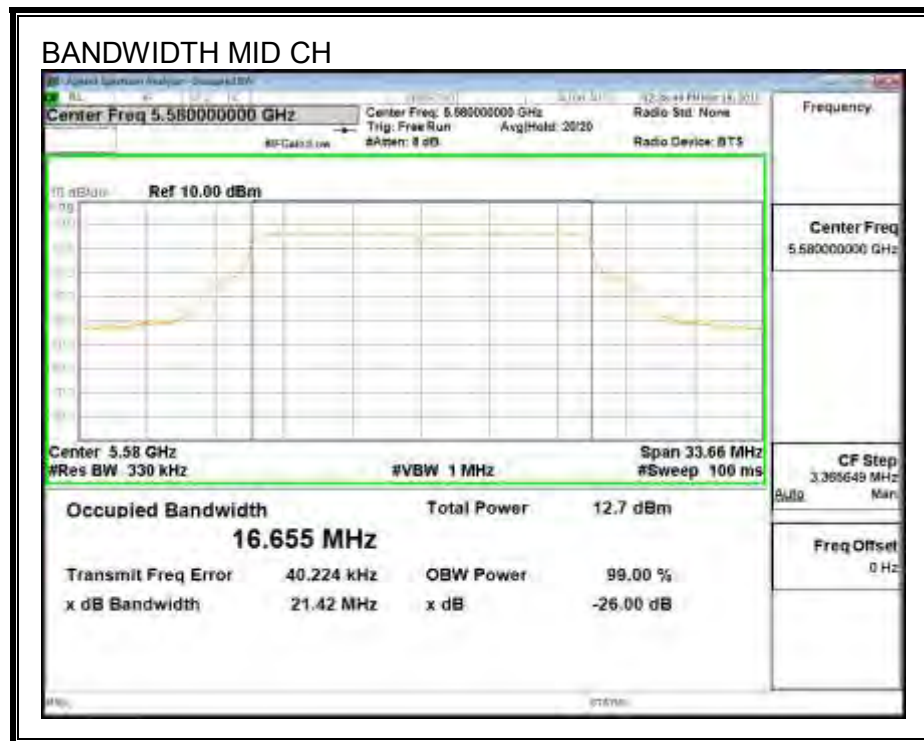
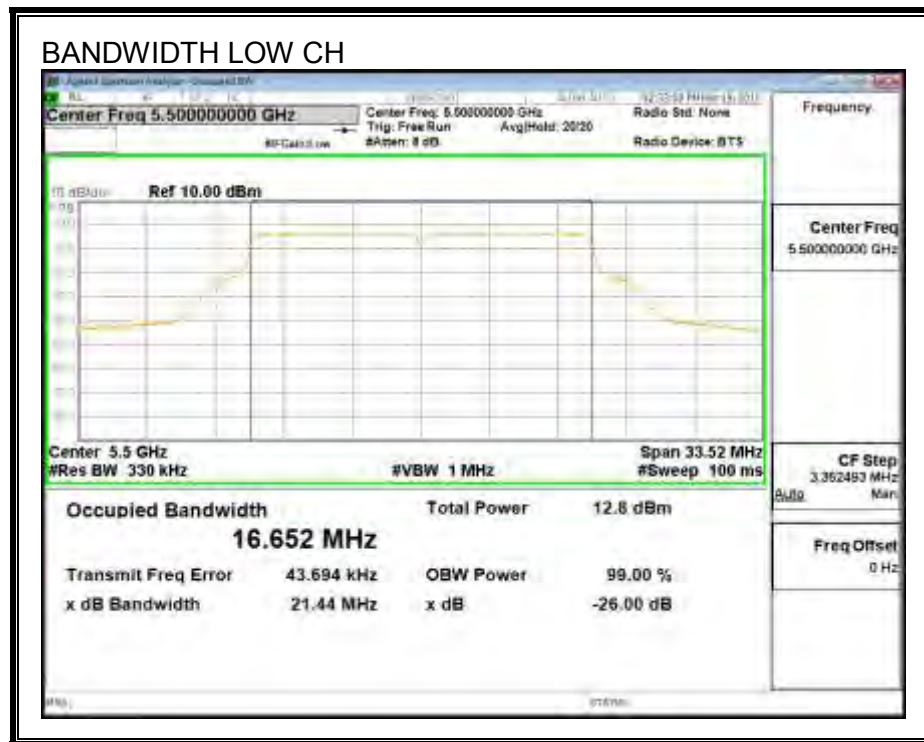
LIMITS

None; for reporting purposes only.

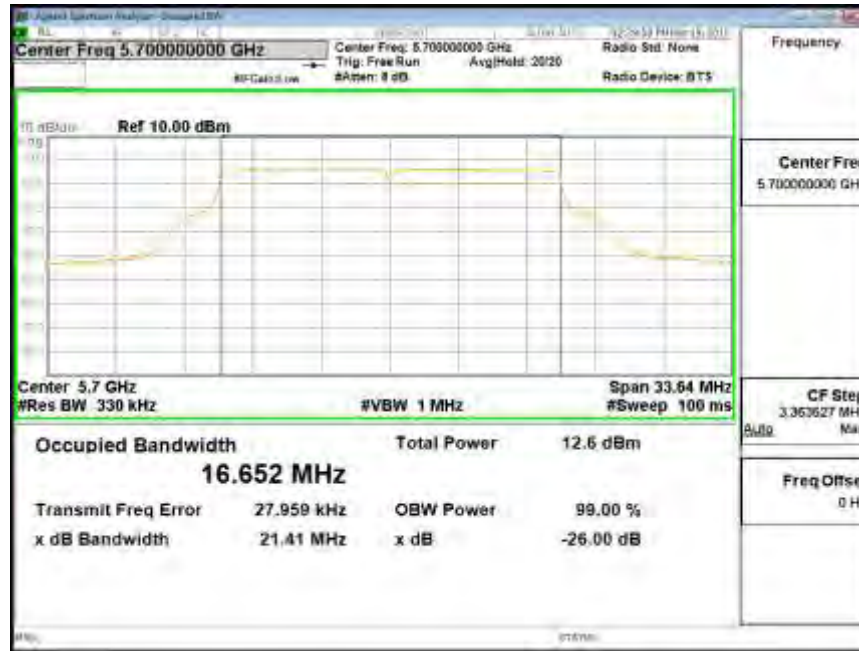
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	16.6520
Mid	5580	16.6550
High	5700	16.6520
144	5720	16.6530

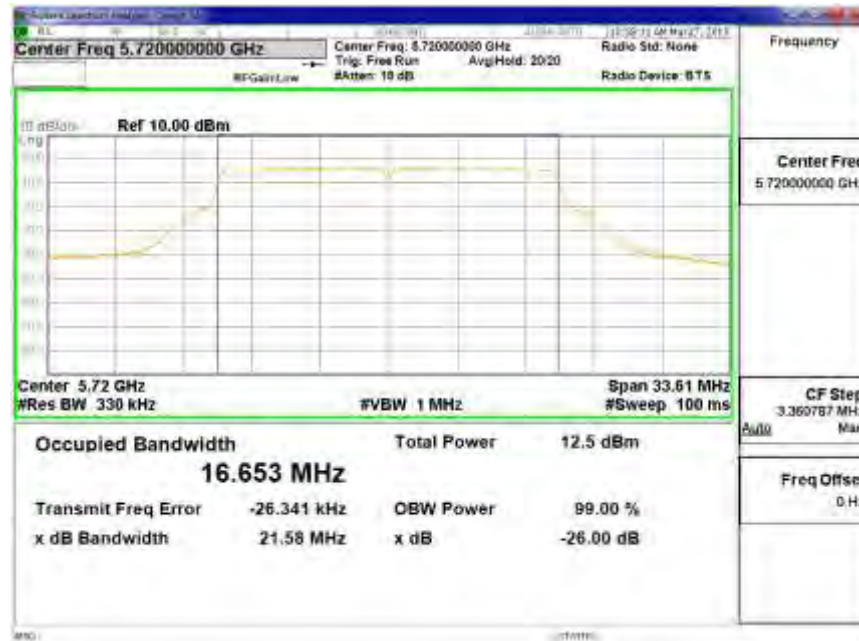
99% BANDWIDTH



BANDWIDTH HIGH CH



BANDWIDTH STRADDLE CH 144



8.10.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5500	21.74	5.00	24.00	11.00
Mid	5580	21.76	5.00	24.00	11.00
High	5700	21.79	5.00	24.00	11.00

Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd PSD
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Output Power Results

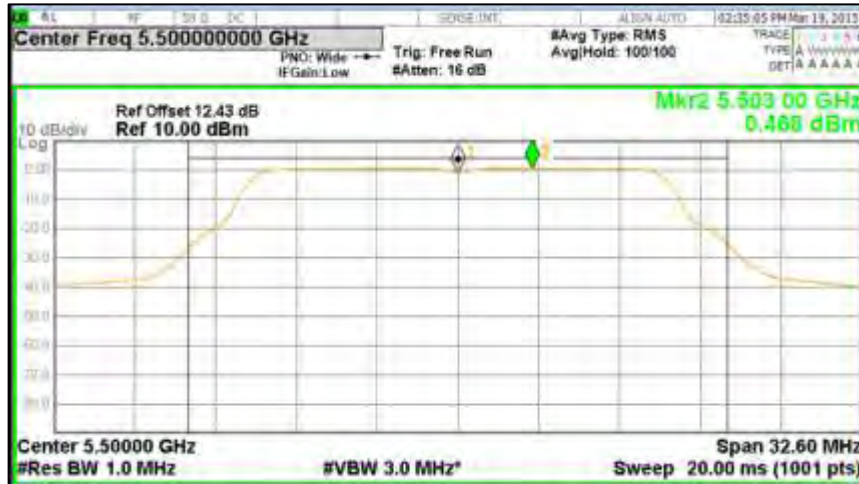
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	12.00	12.00	24.00	-12.00
Mid	5580	12.00	12.00	24.00	-12.00
High	5700	12.00	12.00	24.00	-12.00

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	0.47	0.58	11.00	-10.42
Mid	5580	0.74	0.85	11.00	-10.15
High	5700	0.41	0.52	11.00	-10.48

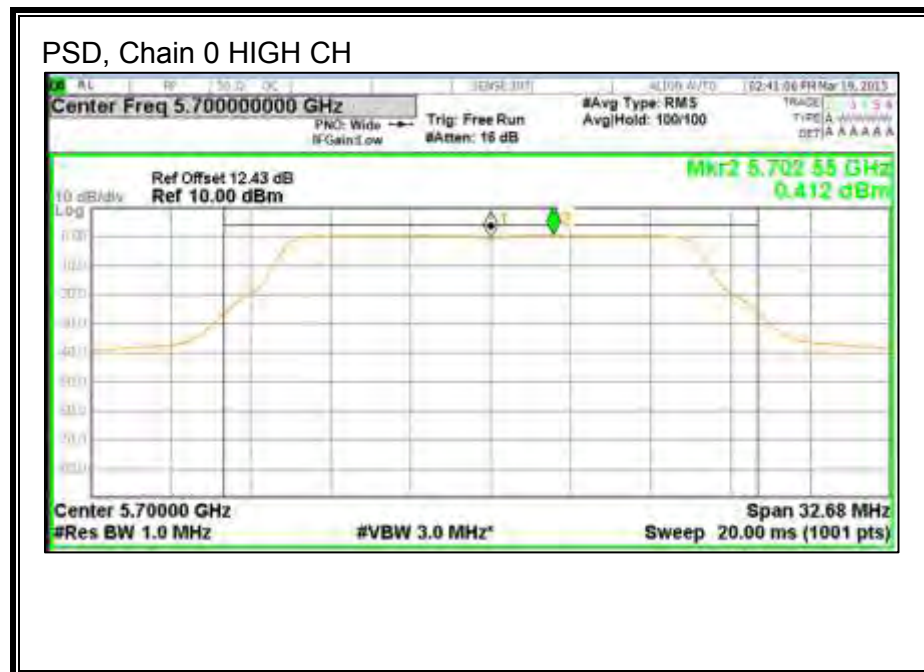
PSD,Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 MID CH





STRADDLE CHANNEL 144 RESULTS

Conducted Output Power: KDB 789033 D02 v01, Section E.2.d (Method SA-2).

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	21.92	5.00	5.00	24.00	11.00

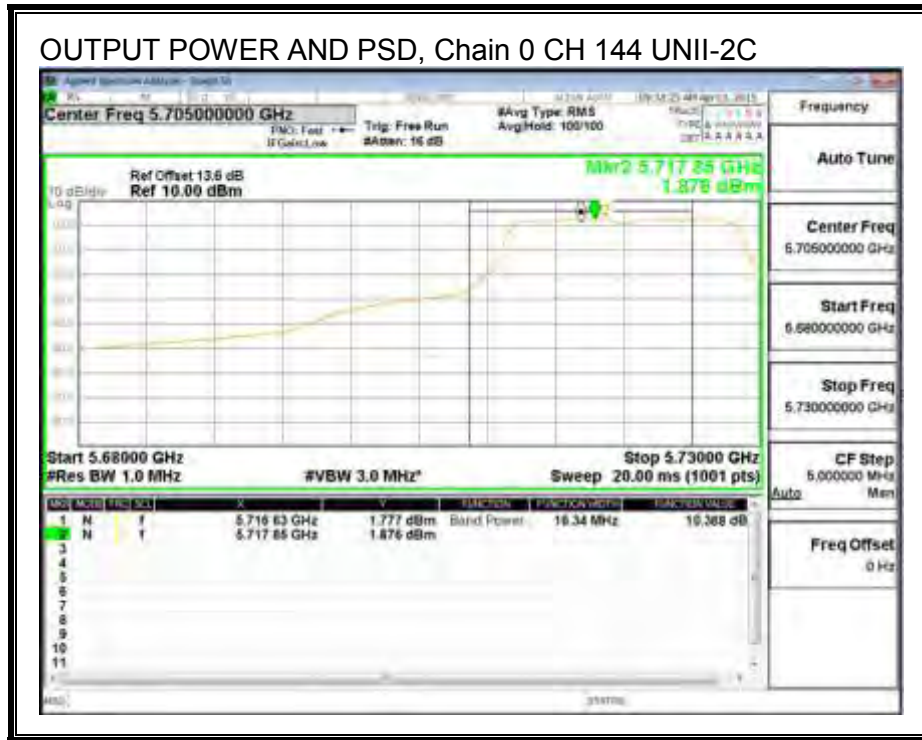
Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	10.37	10.48	24.00	-13.52

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	1.88	1.99	11.00	-9.01



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency	Directional Gain	Power Limit	PSD Limit
	(MHz)	(dBi)	(dBm)	(dBm)
144	5720	5.00	30.00	30.00

Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd Power & PSD
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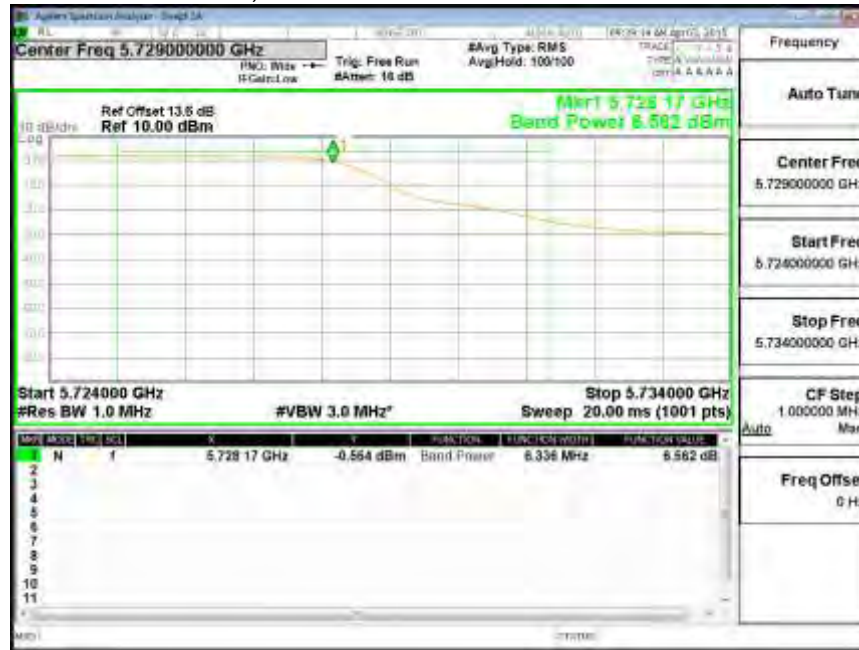
Output Power Results

Channel	Frequency	Chain 0 Meas Power	Total Corr'd Power	Power Limit	Power Margin
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
144	5720	6.56	6.67	30.00	-23.33

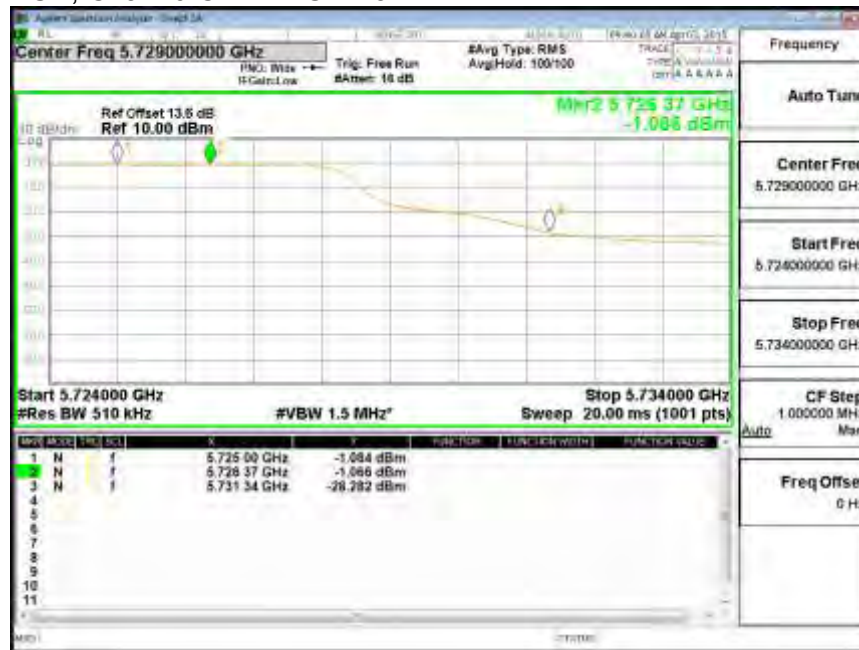
PSD Results

Channel	Frequency	Chain 0 Meas PSD	Total Corr'd PSD	PSD Limit	PSD Margin
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
144	5720	-1.07	-0.96	30.00	-30.96

OUTPUT POWER, Chain 0 CH 144 UNII-3



PSD, Chain 0 CH 144 UNII-3



Frequency Range (MHz)	Mode	Power, Chain 0 (dBm)	Output Power (dBm)	Output Power (mW)
5.6 GHz band, 11a, TX (Channels overlapping UNII 2C and UNII 3 bands)				
5720 (UNII 2C portion)	802.11n HT20 CDD	10.37	10.48	11.16
5720 UNII 3 portion)	802.11n HT20 CDD	6.56	6.67	4.65
5720 (Whole signal)	802.11n HT20 CDD	11.88	11.99	15.81

8.11. 802.11n HT20 MODE IN THE 5.6 GHz BAND

8.11.1. 26 dB BANDWIDTH

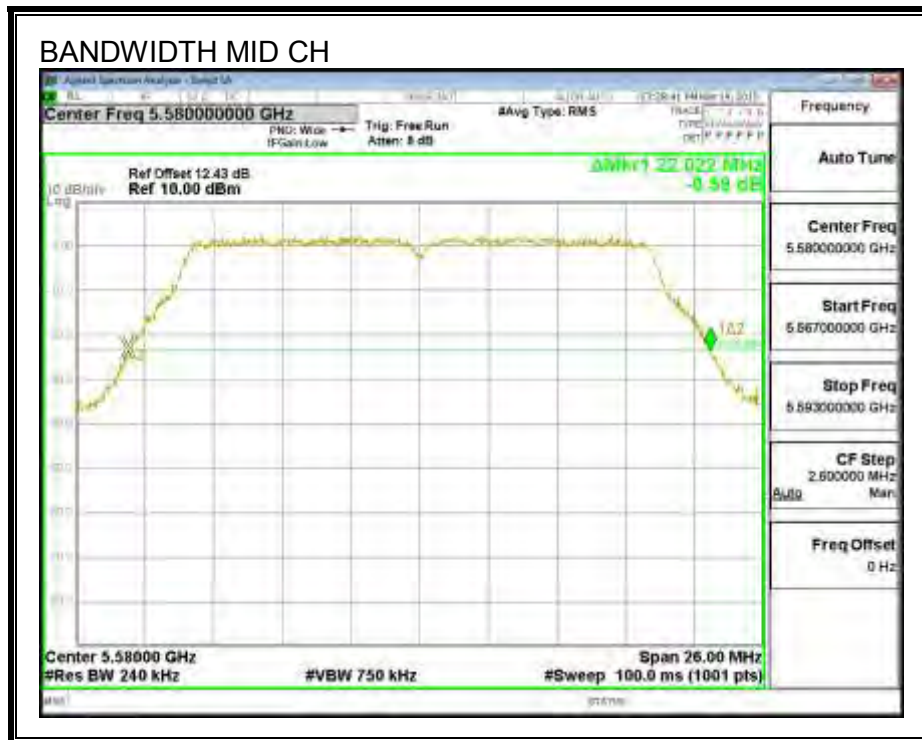
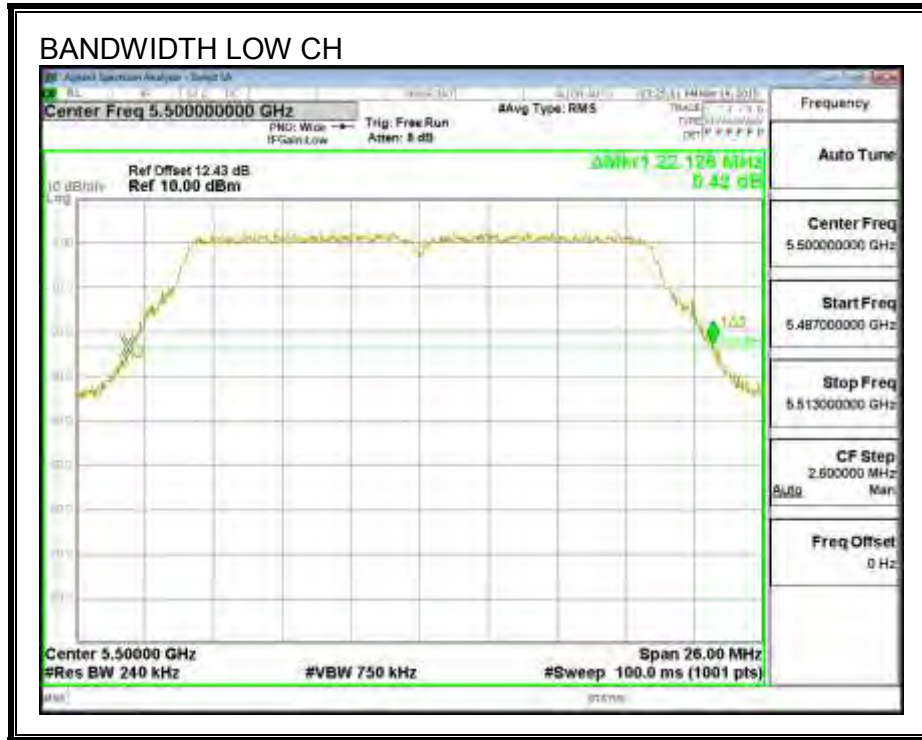
LIMITS

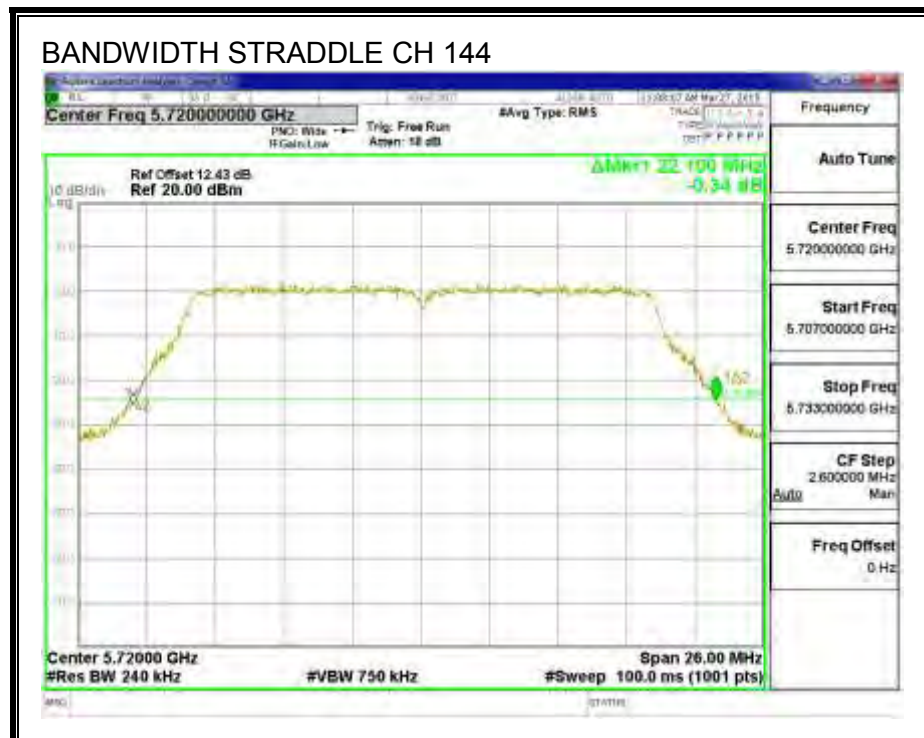
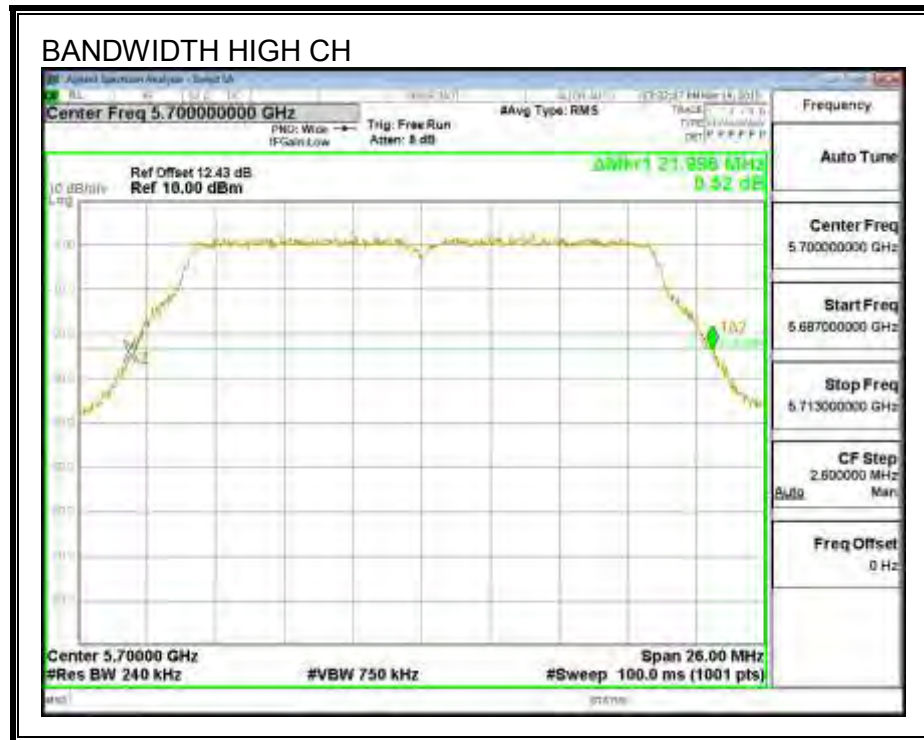
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5500	22.13
Mid	5580	22.02
High	5700	22.00
144	5720	22.10

26 dB BANDWIDTH





8.11.2. 99% BANDWIDTH

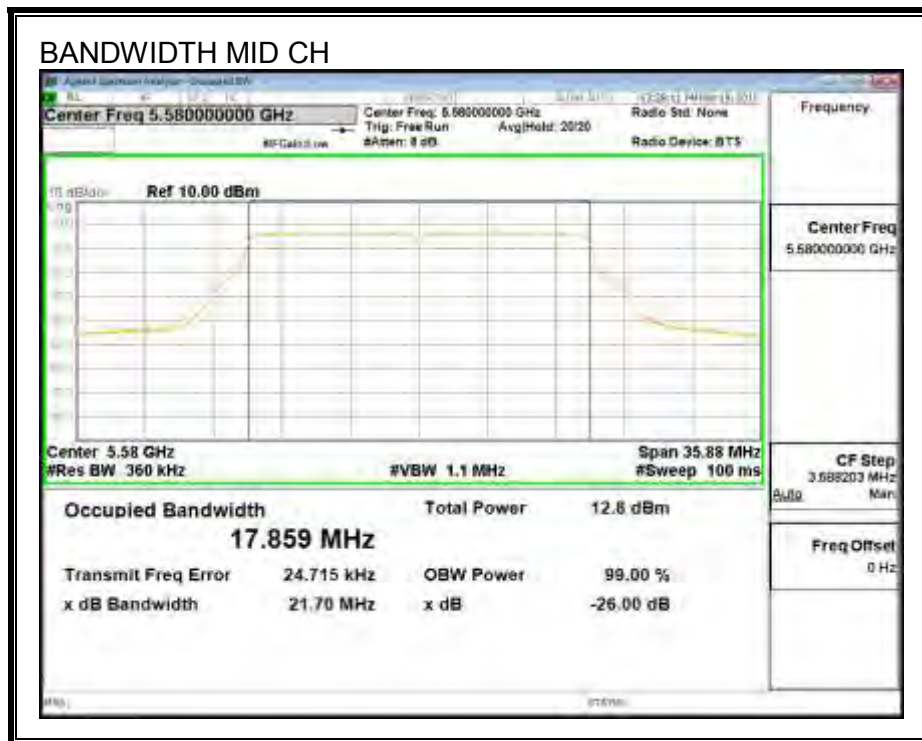
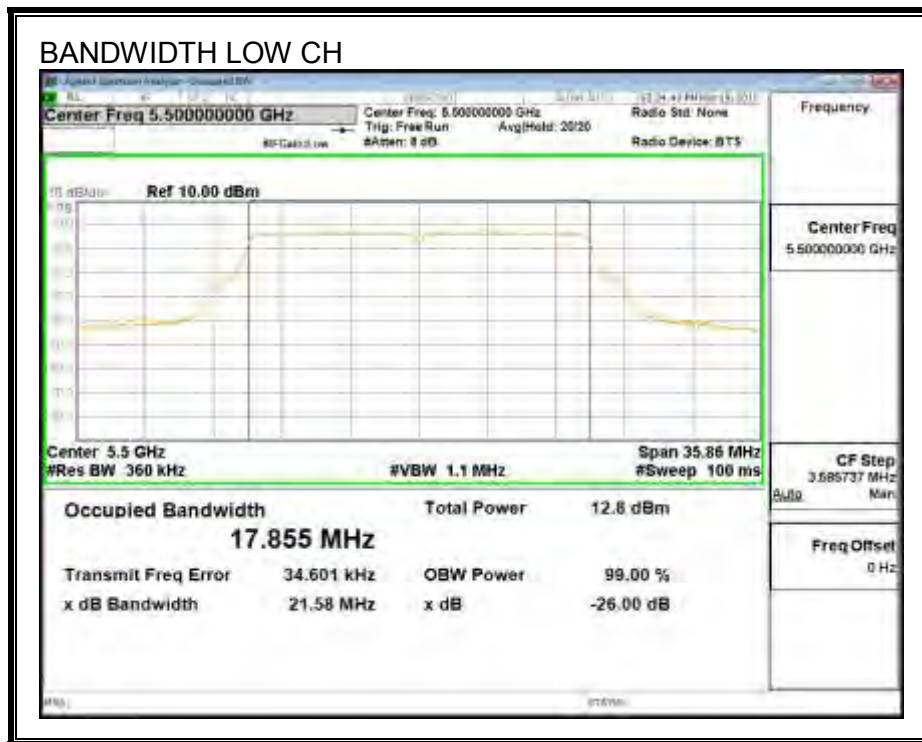
LIMITS

None; for reporting purposes only.

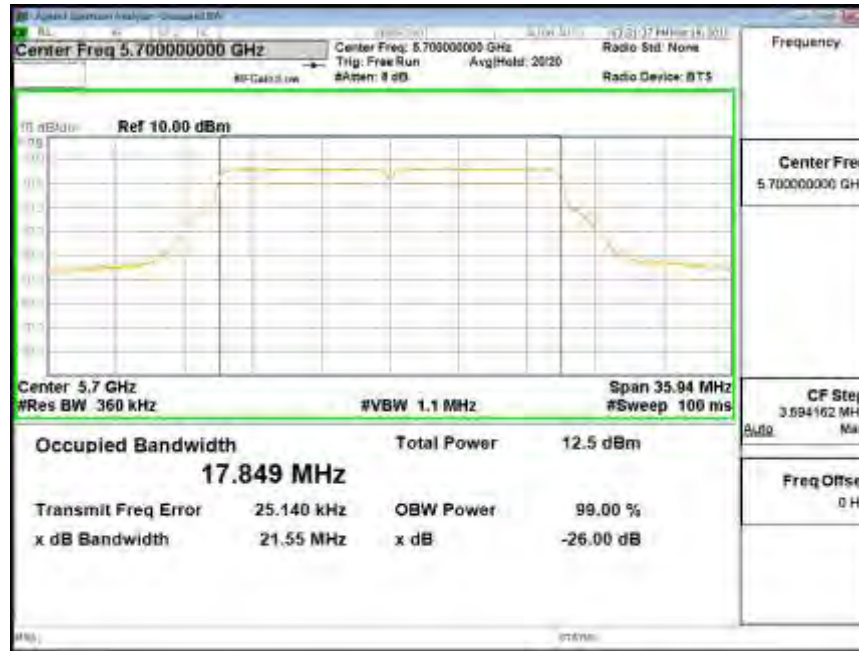
RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5500	17.8550
Mid	5580	17.8590
High	5700	17.8490
144	5720	17.8600

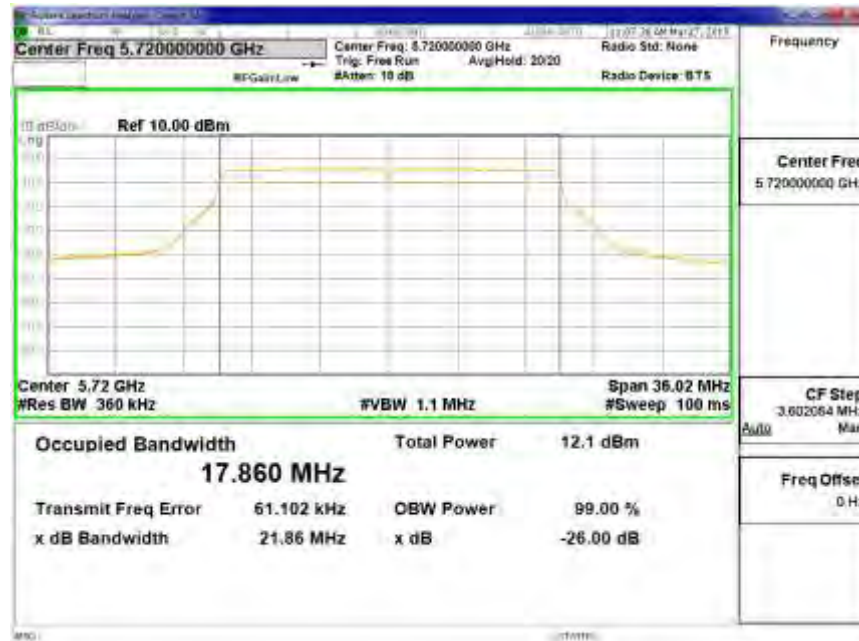
99% BANDWIDTH



BANDWIDTH HIGH CH



BANDWIDTH STRADDLE CH 144



8.11.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26-dB emission bandwidth in MHz. In addition, the maximum power spectral density shall not exceed 11 dBm 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5500	22.13	5.00	24.00	11.00
Mid	5580	22.02	5.00	24.00	11.00
High	5700	22.00	5.00	24.00	11.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5500	12.00	12.00	24.00	-12.00
Mid	5580	12.00	12.00	24.00	-12.00
High	5700	11.90	11.90	24.00	-12.10

PSD Results

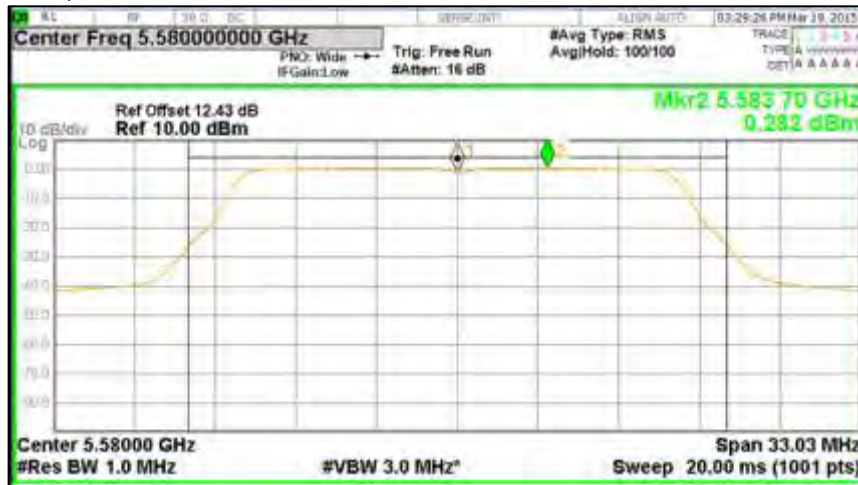
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5500	0.07	0.07	11.00	-10.93
Mid	5580	0.28	0.28	11.00	-10.72
High	5700	0.07	0.07	11.00	-10.93

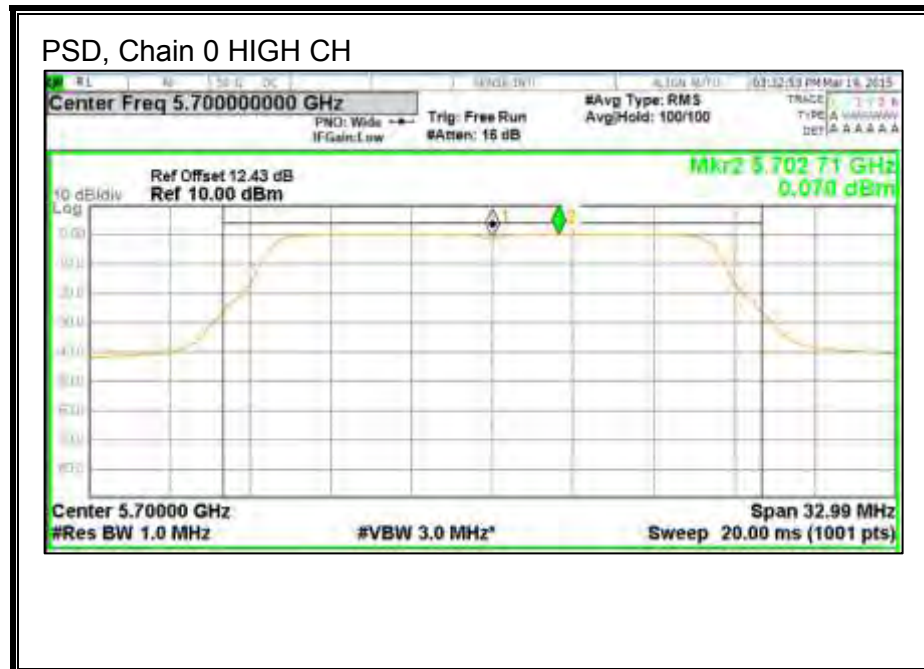
PSD,Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 MID CH





STRADDLE CHANNEL 144 RESULTS

Conducted Output Power: KDB 789033 D02 v01, Section E.2.d (Method SA-2).

UNII-2C BAND

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain for Power (dBi)	Directional Gain for PSD (dBi)	Power Limit (dBm)	PSD Limit (dBm)
144	5720	22.10	5.00	5.00	24.00	11.00

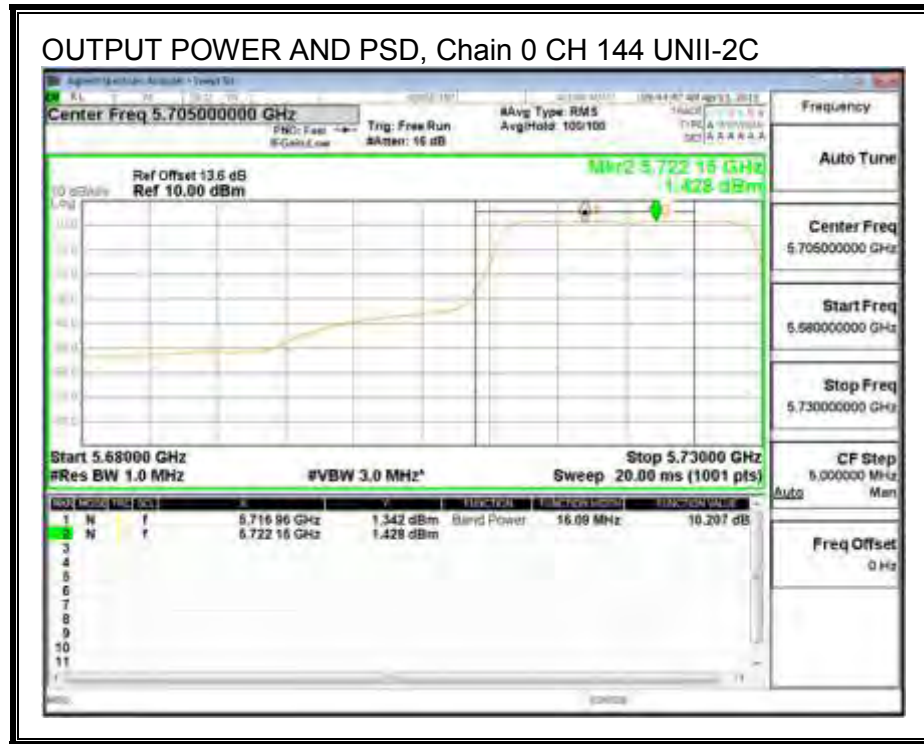
Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
144	5720	10.20	10.31	24.00	-13.69

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
144	5720	1.43	1.54	11.00	-9.46



UNII-3 BAND

Antenna Gain and Limit

Channel	Frequency	Directional Gain	Power Limit	PSD Limit
	(MHz)	(dBi)	(dBm)	(dBm)
144	5720	5.00	30.00	30.00

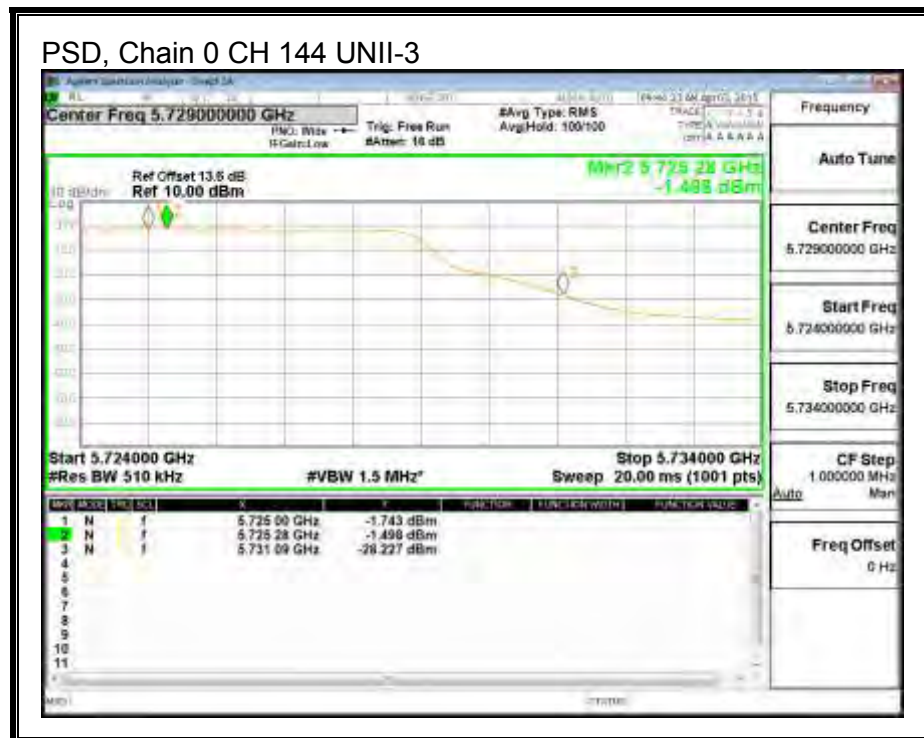
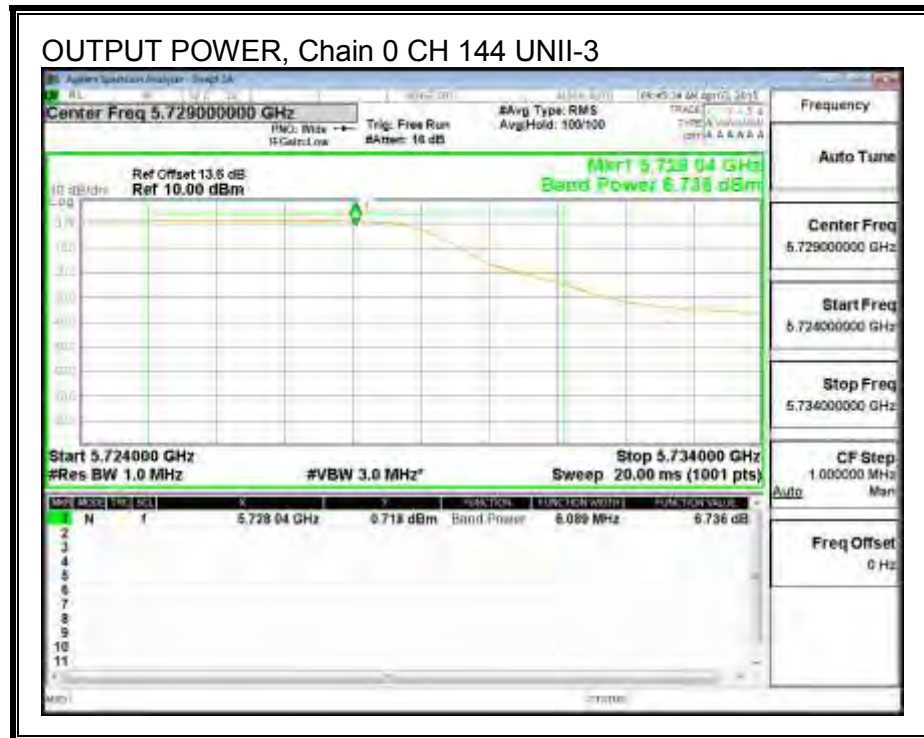
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd Power & PSD
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Output Power Results

Channel	Frequency	Chain 0 Meas Power	Total Corr'd Power	Power Limit	Power Margin
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
144	5720	6.74	6.96	30.00	-23.04

PSD Results

Channel	Frequency	Chain 0 Meas PSD	Total Corr'd PSD	PSD Limit	PSD Margin
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
144	5720	-1.50	-1.28	30.00	-31.28



Frequency Range (MHz)	Mode	Power, Chain 0 (dBm)	Output Power (dBm)	Output Power (mW)
5.6 GHz band, HT20,TX (Channels overlapping UNII 2C and UNII 3 bands)				
5720 (UNII 2C portion)	802.11n HT20 CDD	10.20	10.31	10.74
5720 UNII 3 portion)	802.11n HT20 CDD	6.96	7.07	5.09
5720 (Whole signal)	802.11n HT20 CDD	11.89	12.00	15.84

8.12. 802.11n HT40 MODE IN THE 5.6 GHz BAND

8.12.1. 26 dB BANDWIDTH

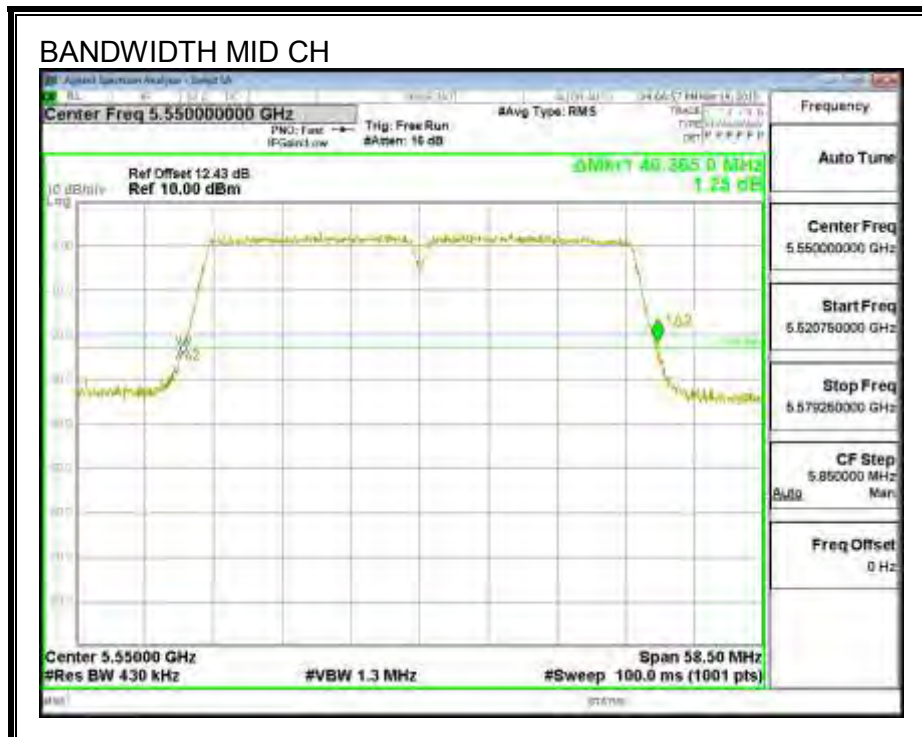
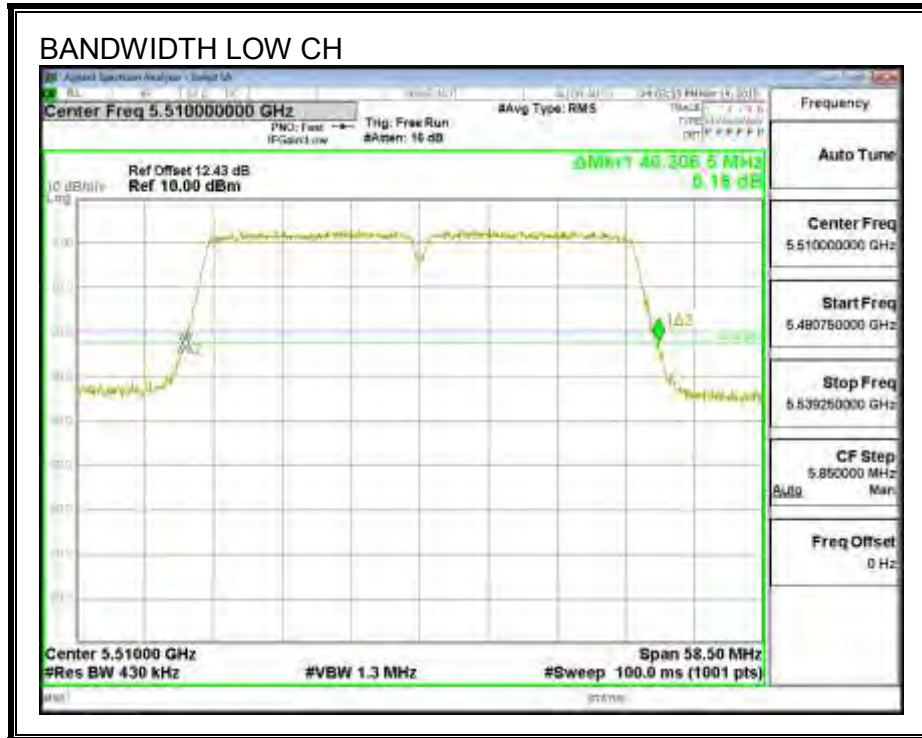
LIMITS

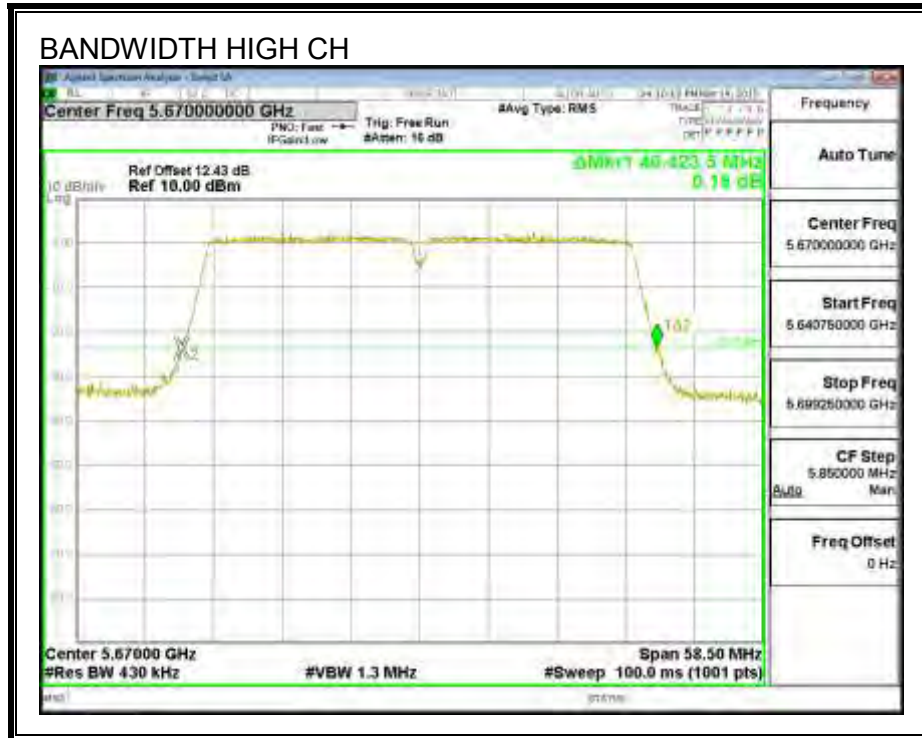
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5510	40.31
Mid	5550	40.37
High	5670	40.42

26 dB BANDWIDTH





8.12.2. 99% BANDWIDTH

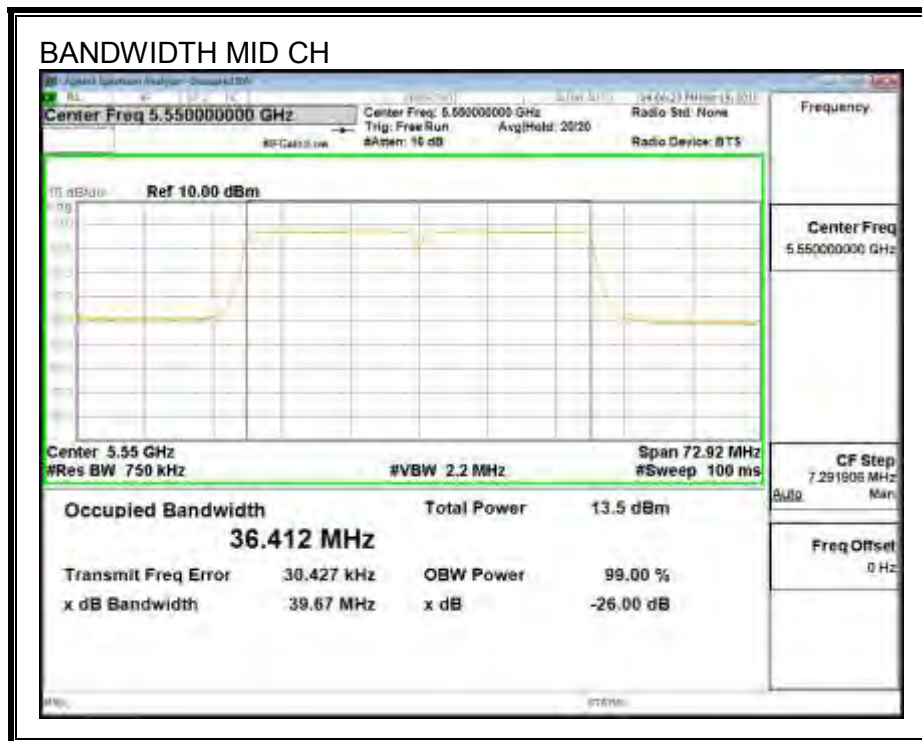
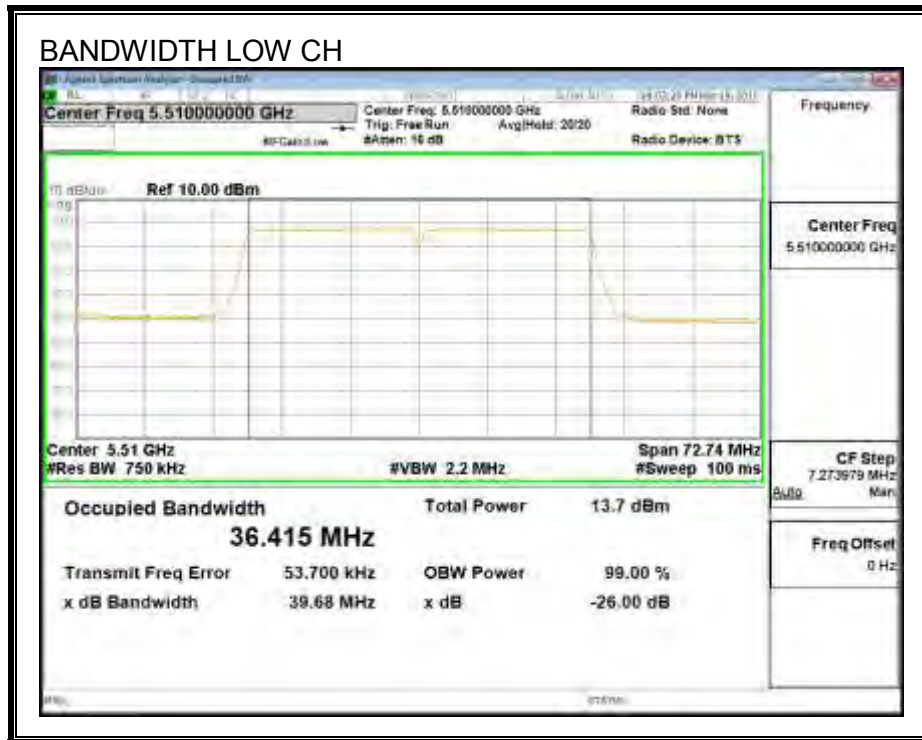
LIMITS

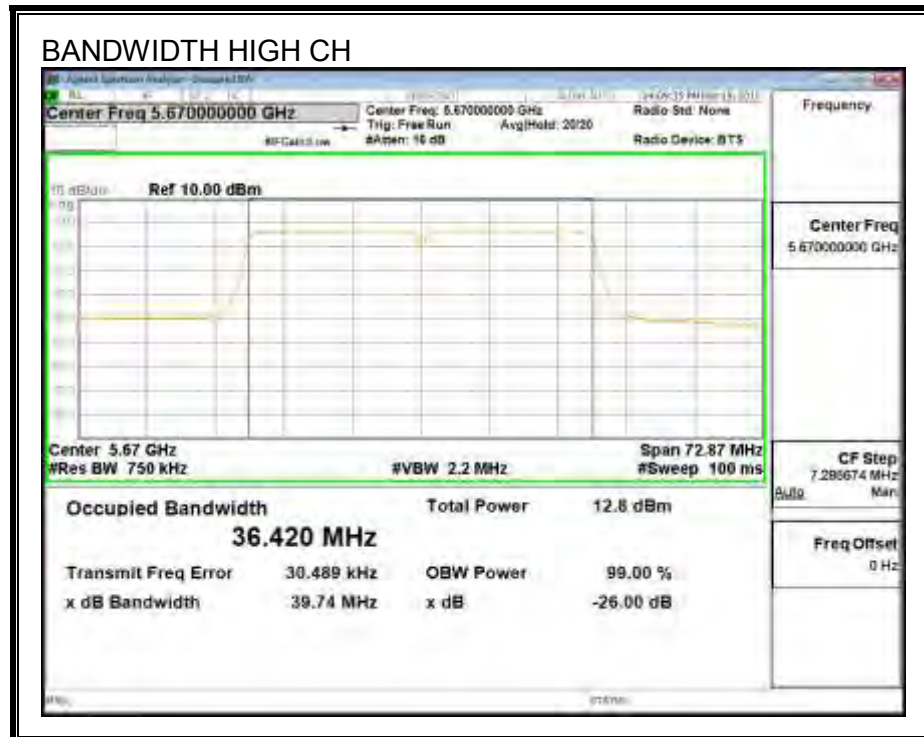
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5510	36.4150
Mid	5550	36.4120
High	5670	36.4200

99% BANDWIDTH





8.12.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26-dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5510	40.31	5.00	24.00	11.00
Mid	5550	40.37	5.00	24.00	11.00
High	5670	40.42	5.00	24.00	11.00

Output Power Results

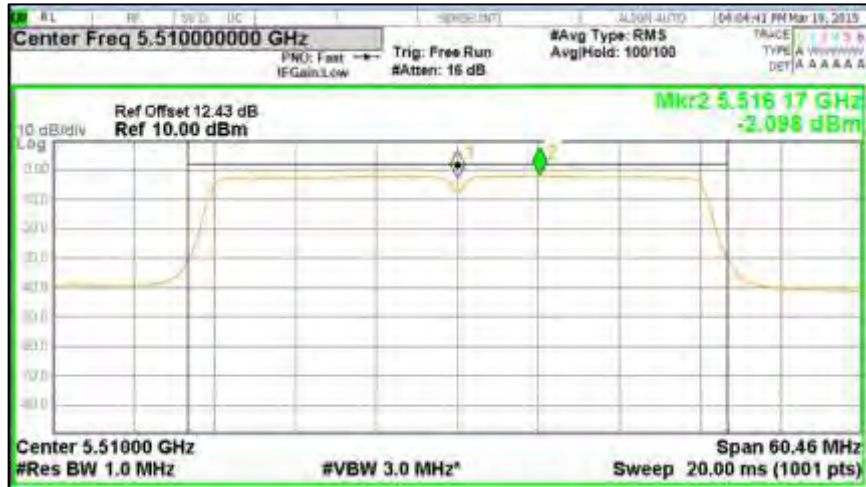
Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5510	12.00	12.00	24.00	-12.00
Mid	5550	12.00	12.00	24.00	-12.00
High	5670	12.00	12.00	24.00	-12.00

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5510	-2.10	-2.10	11.00	-13.10
Mid	5550	-2.19	-2.19	11.00	-13.19
High	5670	-2.44	-2.44	11.00	-13.44

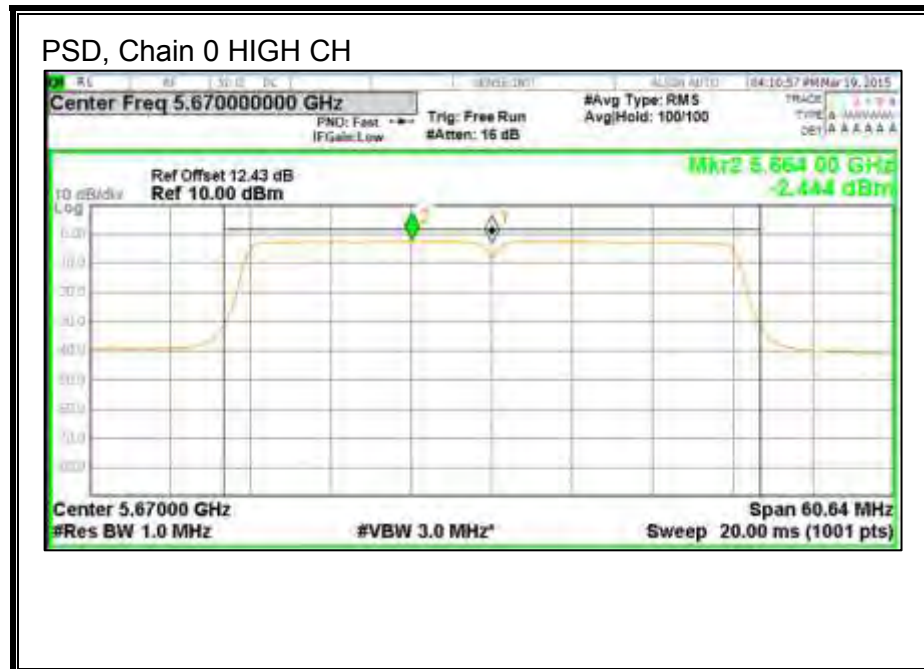
PSD,Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 MID CH





8.13. 802.11ac HT80 MODE IN THE 5.6 GHz BAND

8.13.1. 26 dB BANDWIDTH

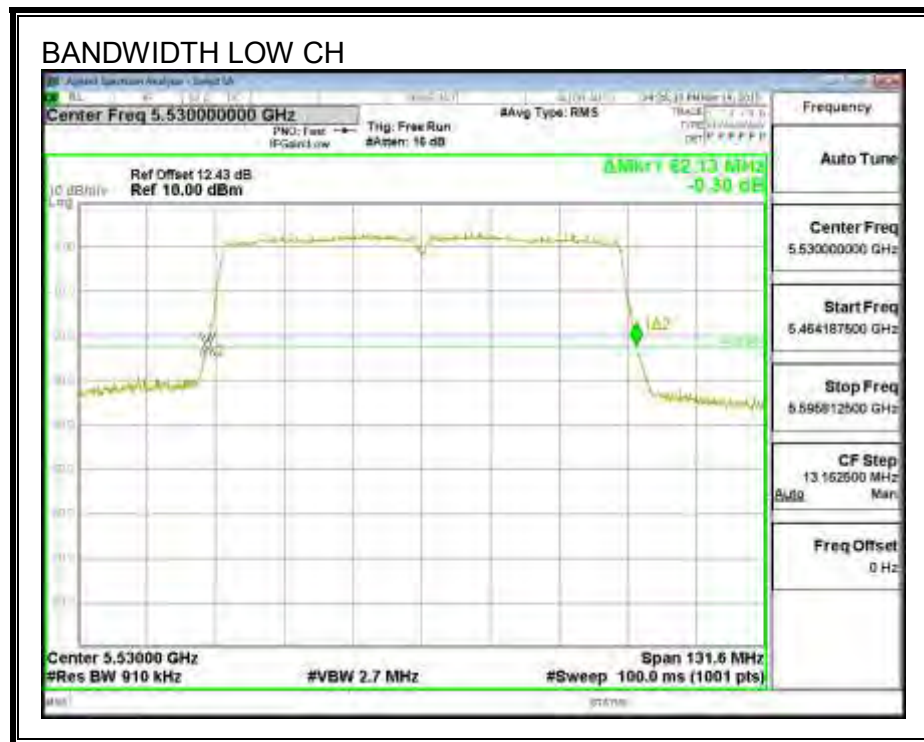
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)
Low	5530	82.13

26 dB BANDWIDTH



8.13.2. 99% BANDWIDTH

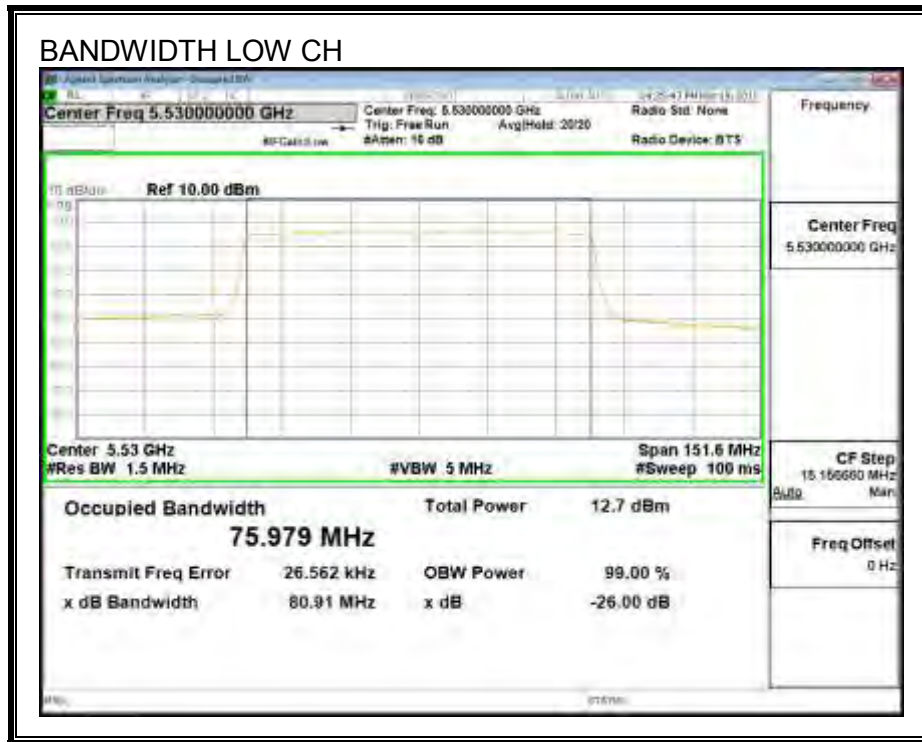
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5530	75.9790

99% BANDWIDTH



8.13.3. OUTPUT POWER AND PSD

LIMITS

FCC §15.407 (a) (2)

For the band 5.47–5.725 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26-dB emission bandwidth in MHz. In addition, the peak power spectral density shall not exceed 11 dBm 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.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Bandwidth, Antenna Gain, and Limits

Channel	Frequency (MHz)	Min 26 dB BW (MHz)	Directional Gain (dBi)	Power Limit (dBm)	PSD Limit (dBm)
Low	5530	82.13	5.00	24.00	11.00

Duty Cycle CF (dB)	0.44	Included in Calculations of Corr'd Power & PSD
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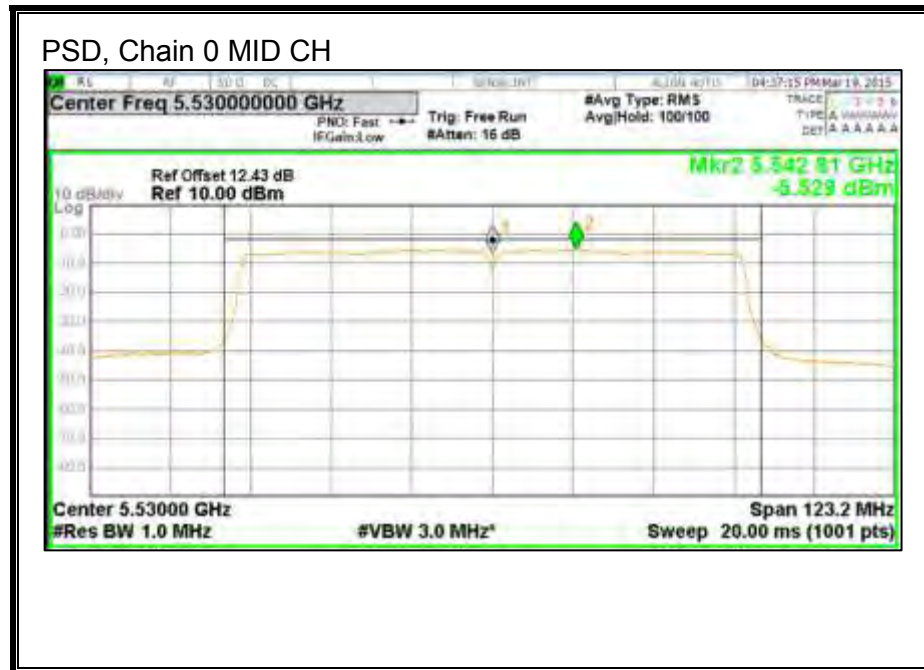
Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5530	12.00	12.00	24.00	-12.00

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5530	-5.53	-5.09	11.00	-16.09

PSD,Chain 0



8.14. 802.11a MODE IN THE 5.8 GHz BAND

8.14.1. 6 dB BANDWIDTH

LIMITS

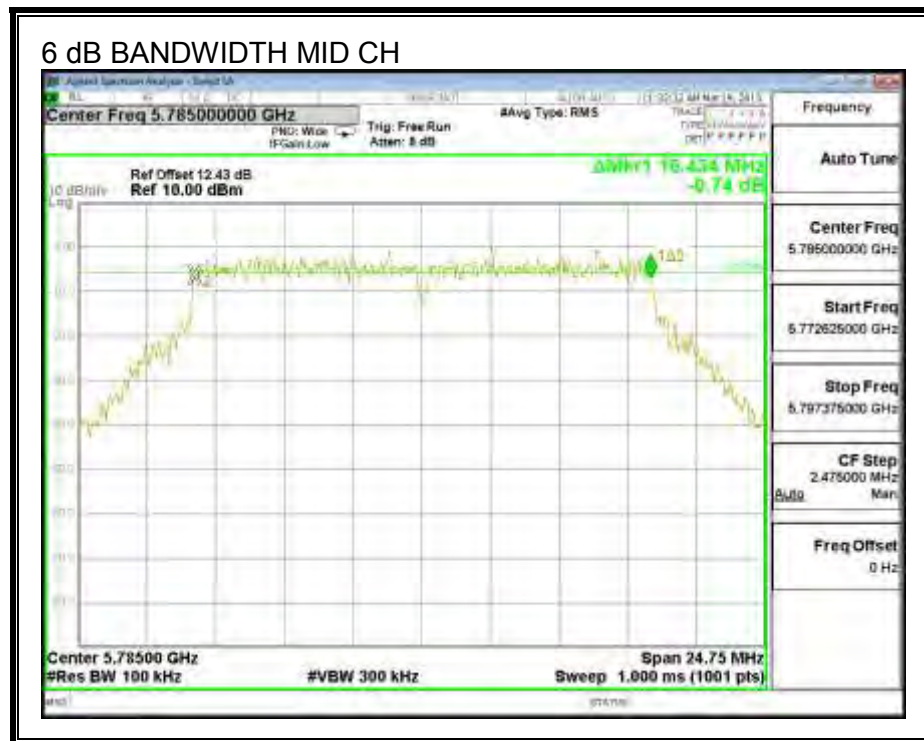
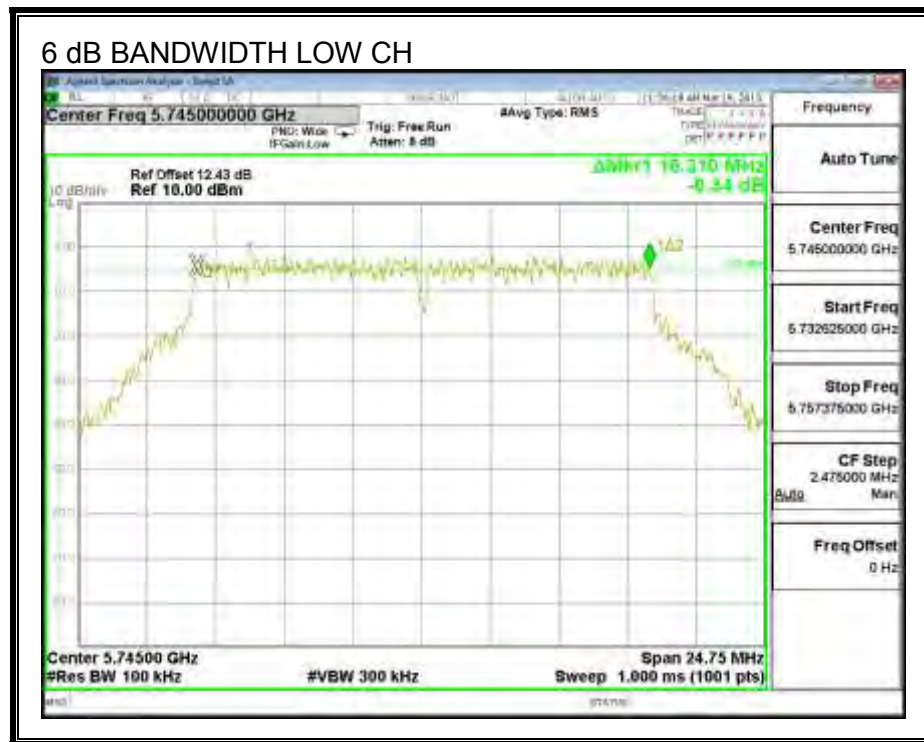
FCC §15.407 (e)

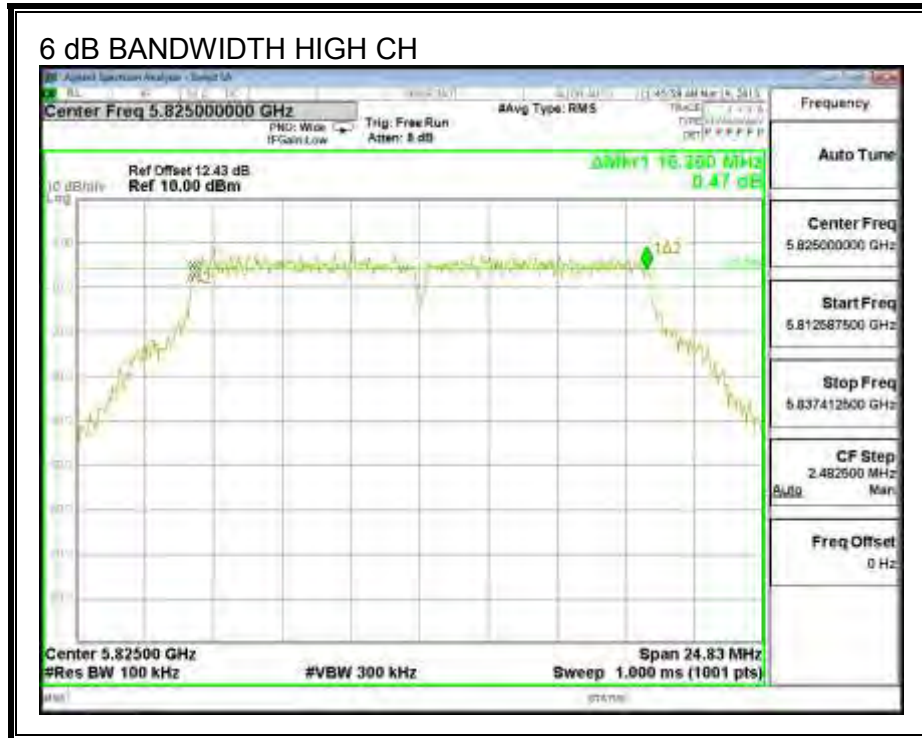
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	16.3100	0.5
Mid	5785	16.4340	0.5
High	5825	16.3600	0.5

6 dB BANDWIDTH





8.14.2. 99% BANDWIDTH

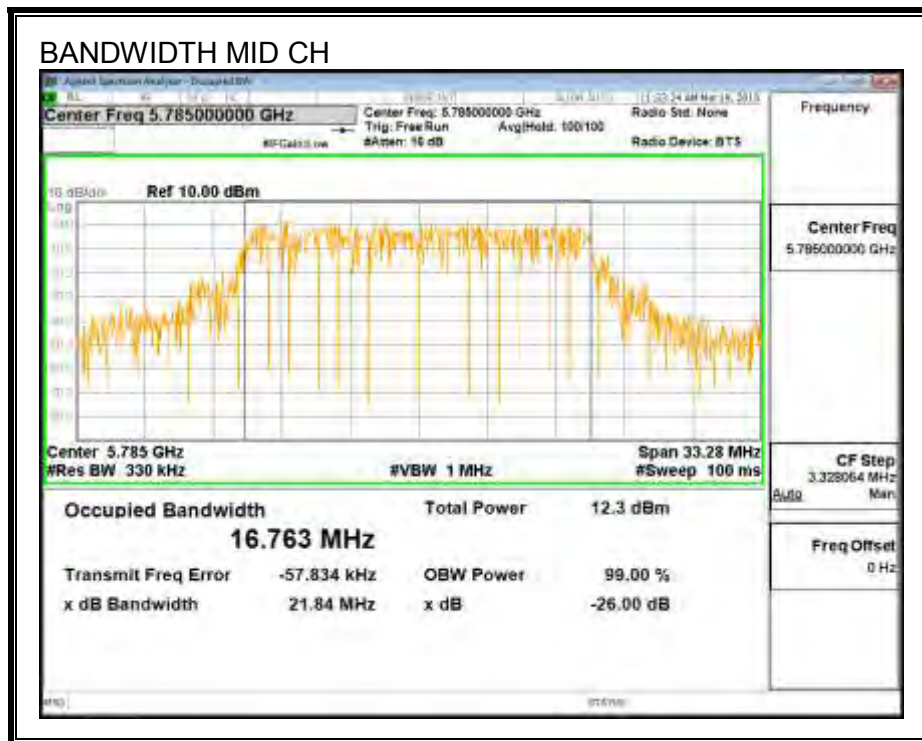
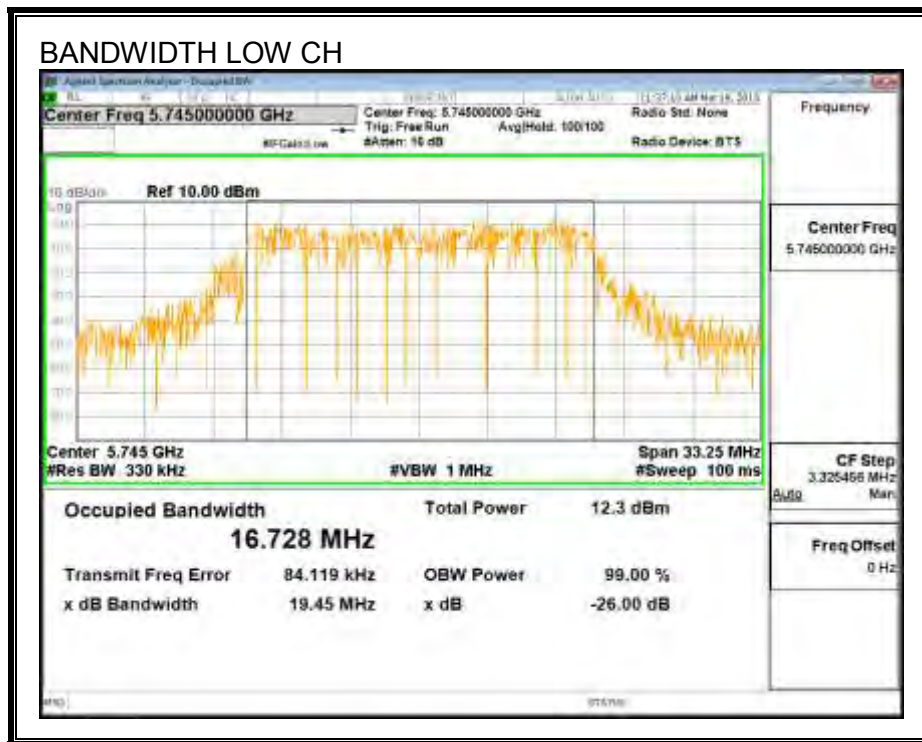
LIMITS

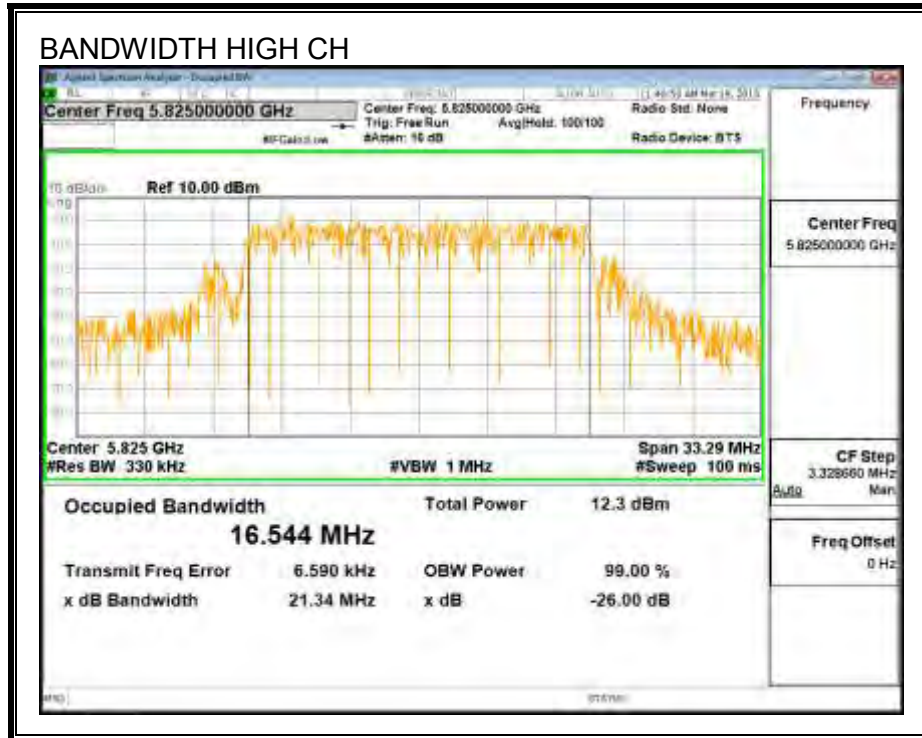
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.7280
Mid	5785	16.7630
High	5825	16.5440

99% BANDWIDTH





8.14.3. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	5.00	30.00
Mid	5785	5.00	30.00
High	5825	5.00	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	12.00	12.00	30.00	-18.00
Mid	5785	11.90	11.90	30.00	-18.10
High	5825	11.90	11.90	30.00	-18.10

8.14.4. Maximum Power Spectral Density (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limits

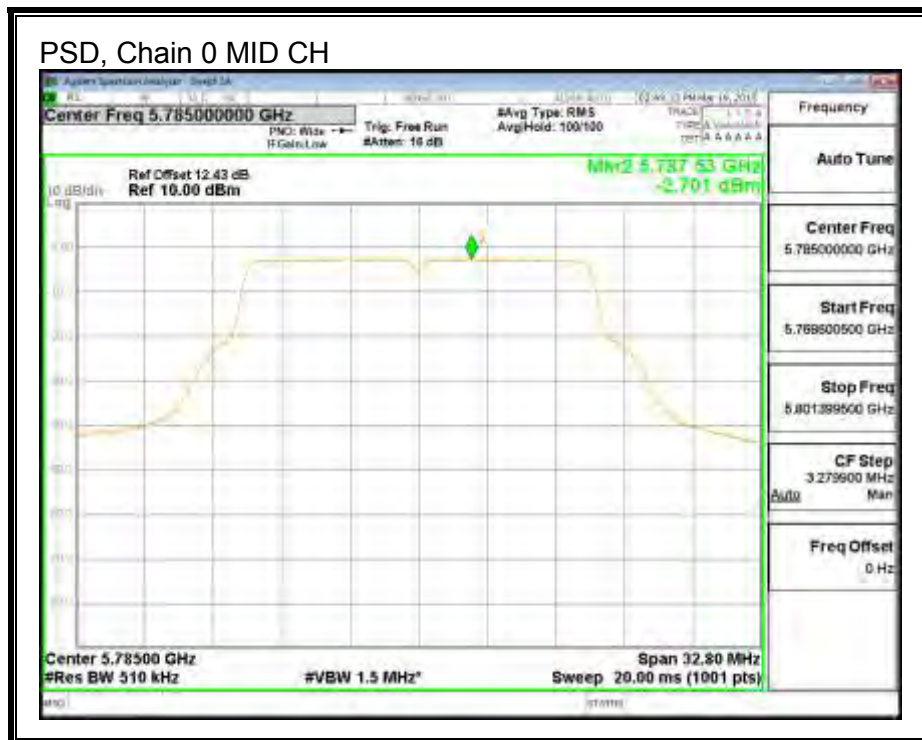
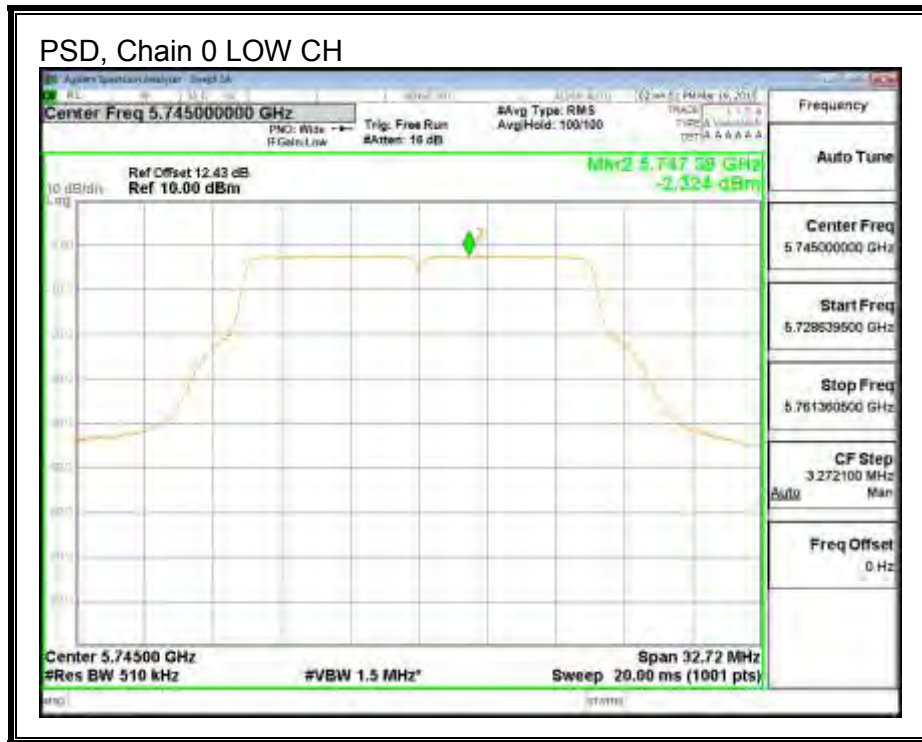
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	5.00	30.00
Mid	5785	5.00	30.00
High	5825	5.00	30.00

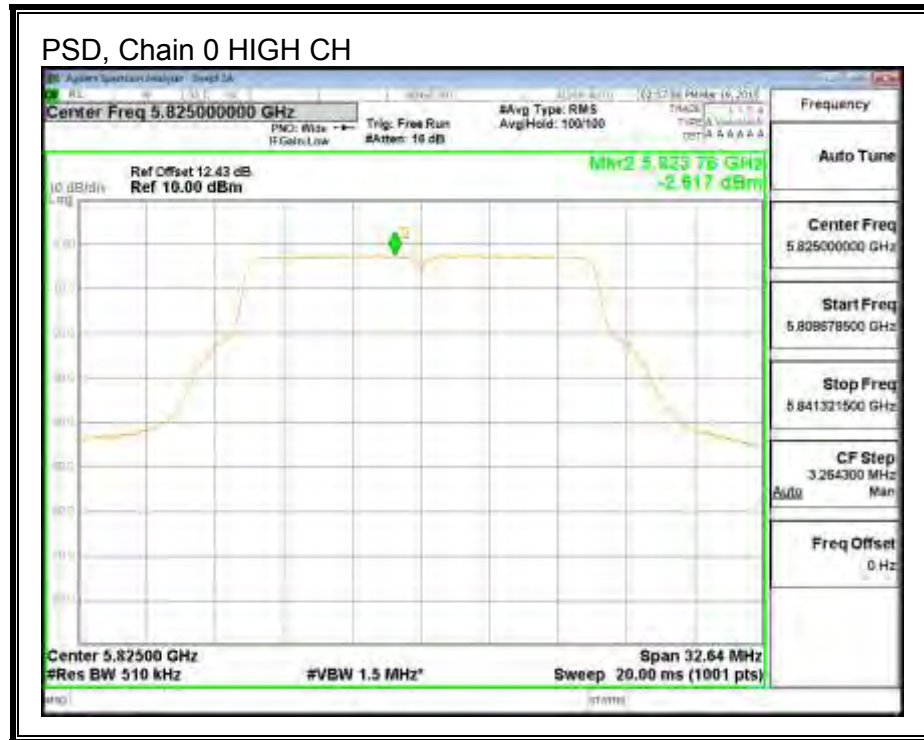
Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd PSD
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PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	-2.32	-2.21	30.00	-32.21
Mid	5785	-2.70	-2.59	30.00	-32.59
High	5825	-2.62	-2.51	30.00	-32.51

PSD, Chain 0





8.15. 802.11n HT20 MODE IN THE 5.8 GHz BAND

8.15.1. 6 dB BANDWIDTH

LIMITS

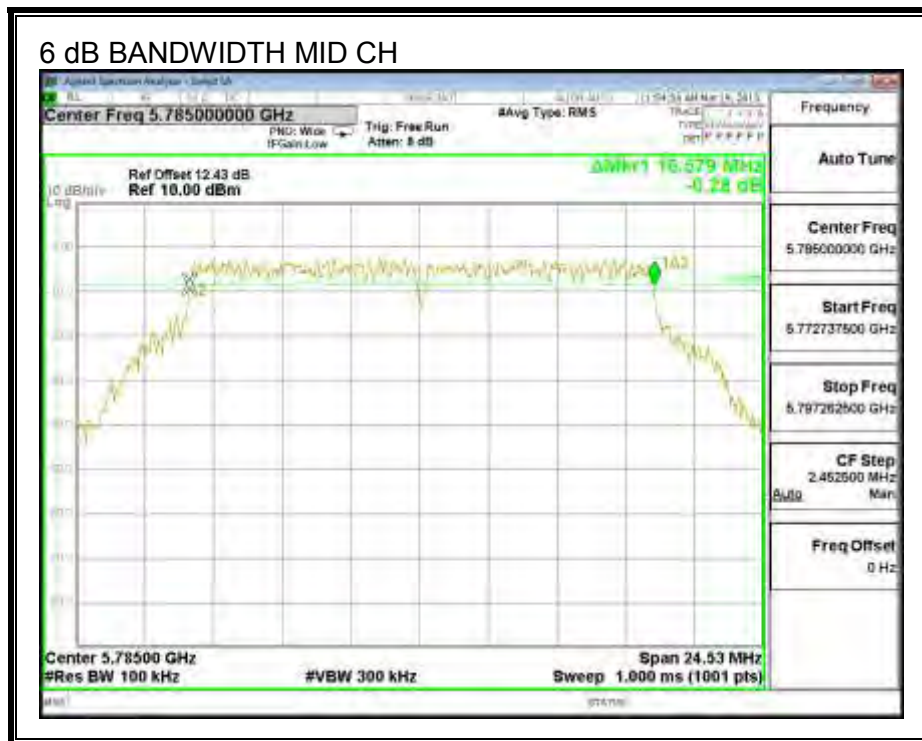
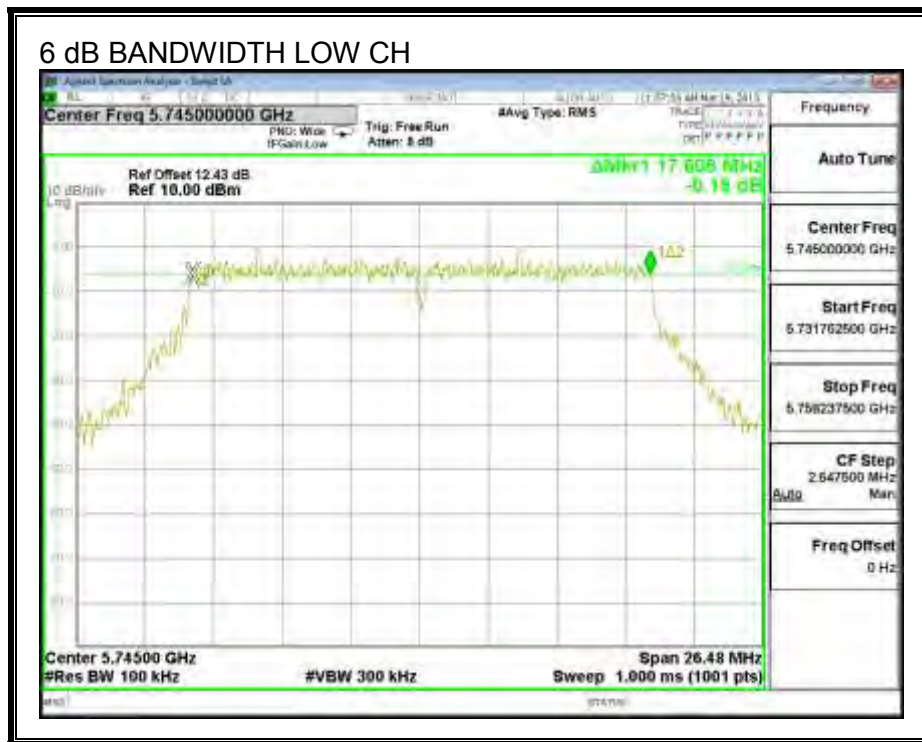
FCC §15.407 (e)

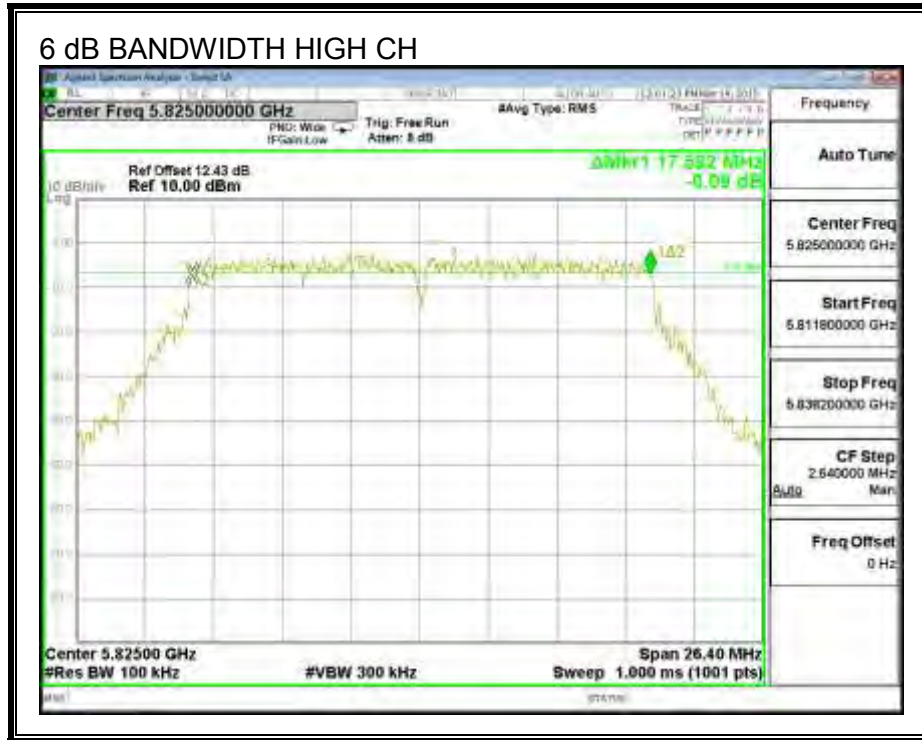
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	17.6060	0.5
Mid	5785	16.5790	0.5
High	5825	17.5820	0.5

6 dB BANDWIDTH





8.15.2. 99% BANDWIDTH

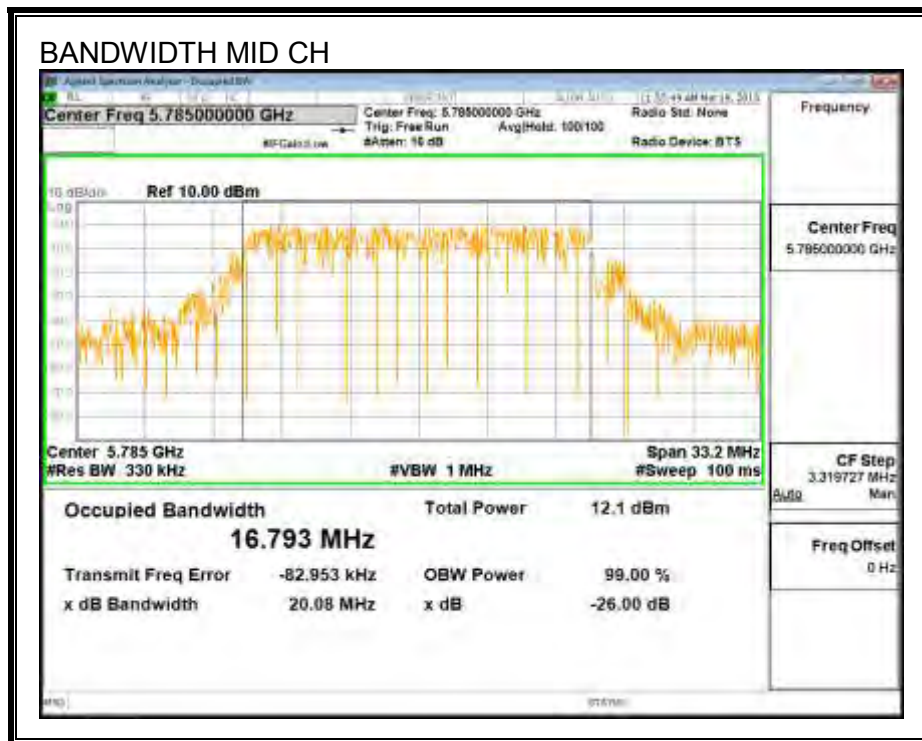
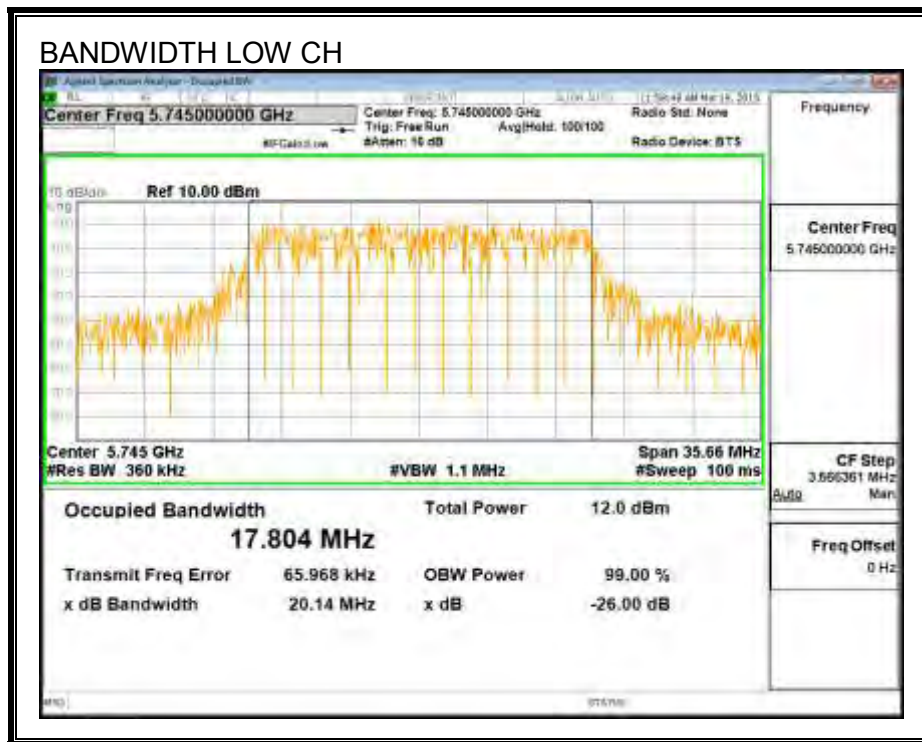
LIMITS

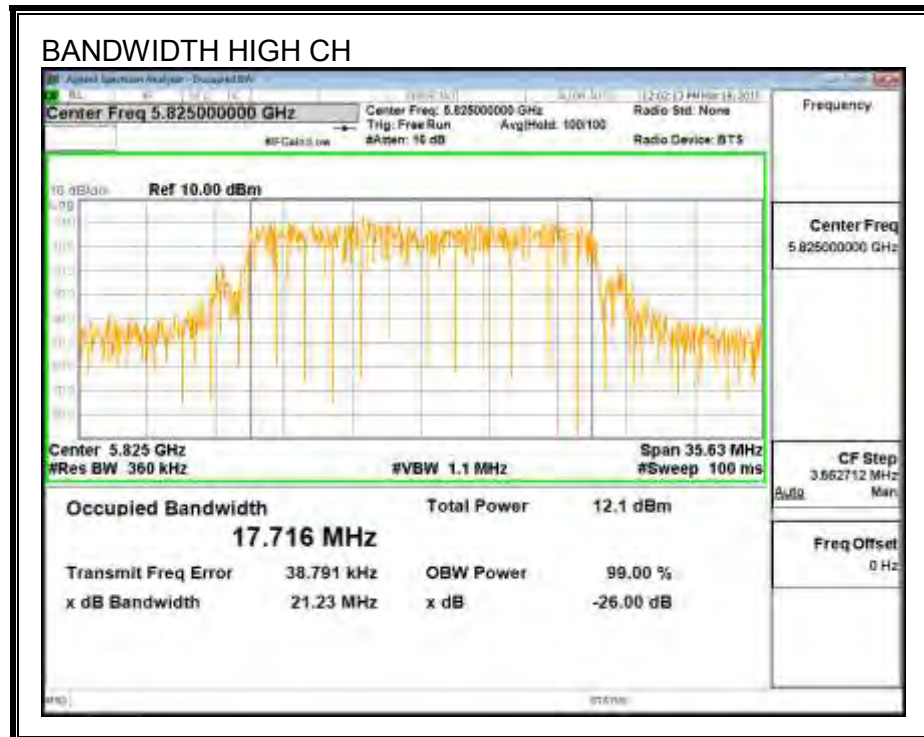
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.8040
Mid	5785	16.7930
High	5825	17.7160

99% BANDWIDTH





8.15.3. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	5.00	30.00
Mid	5785	5.00	30.00
High	5825	5.00	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	11.90	11.90	30.00	-18.10
Mid	5785	11.90	11.90	30.00	-18.10
High	5825	11.90	11.90	30.00	-18.10

8.15.4. Maximum Power Spectral Density (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limits

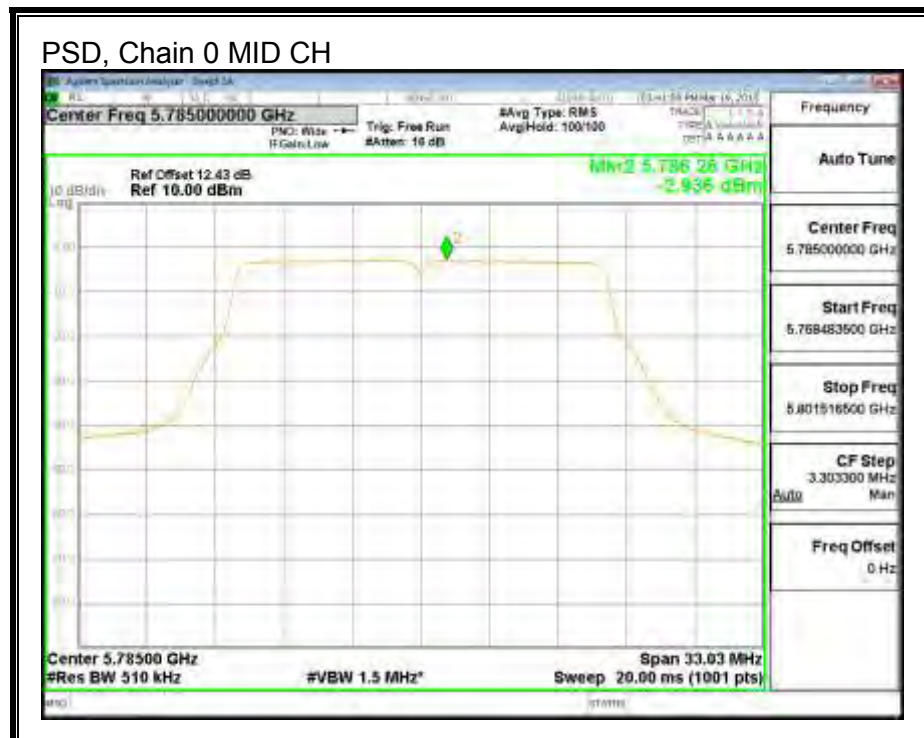
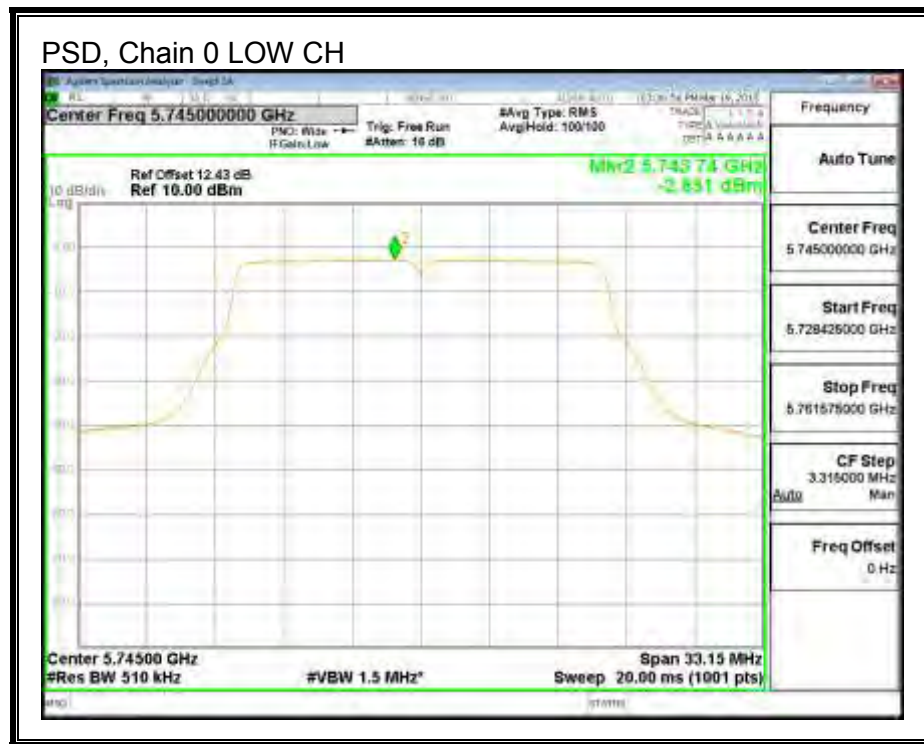
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	5.00	30.00
Mid	5785	5.00	30.00
High	5825	5.00	30.00

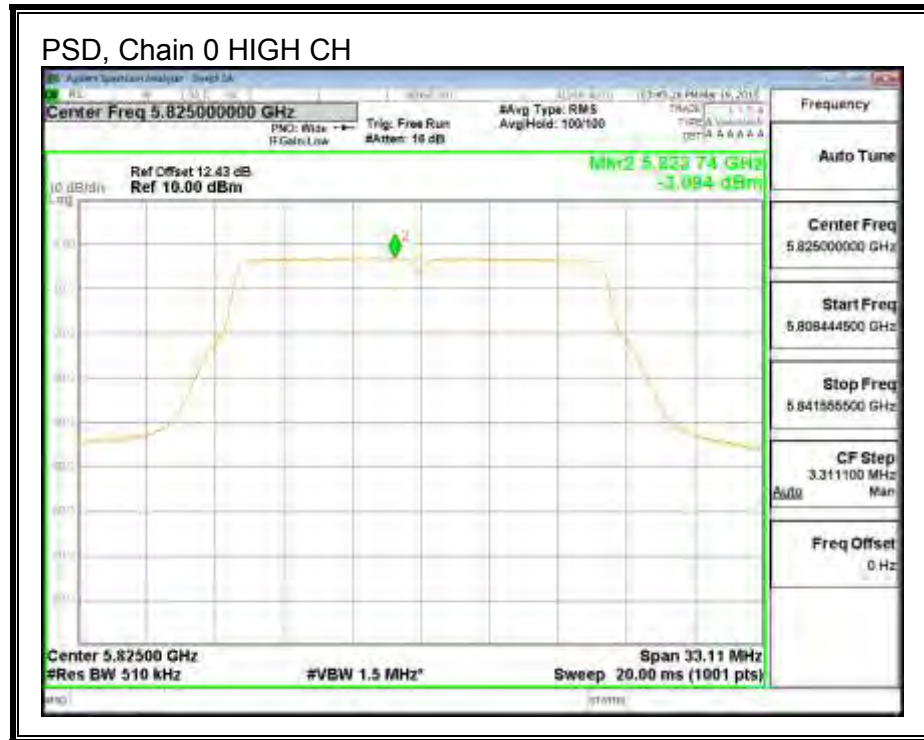
Duty Cycle CF (dB)	0.11	Included in Calculations of Corr'd PSD
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PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	-2.83	-2.72	30.00	-32.72
Mid	5785	-2.94	-2.83	30.00	-32.83
High	5825	-3.09	-2.98	30.00	-32.98

PSD, Chain 0





8.16. 802.11n HT40 MODE IN THE 5.8 GHz BAND

8.16.1. 6 dB BANDWIDTH

LIMITS

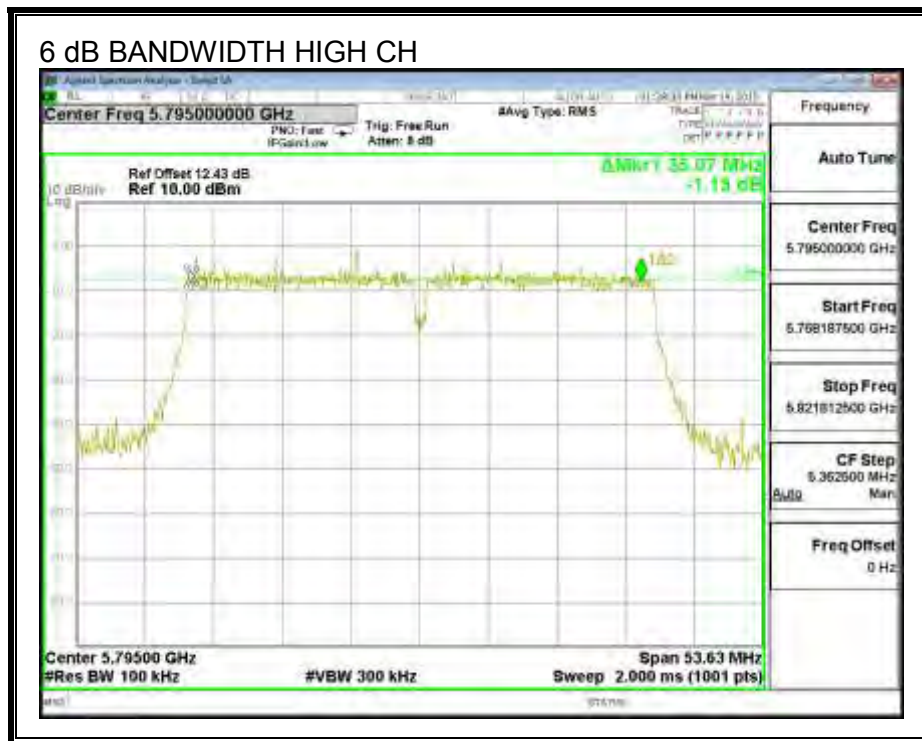
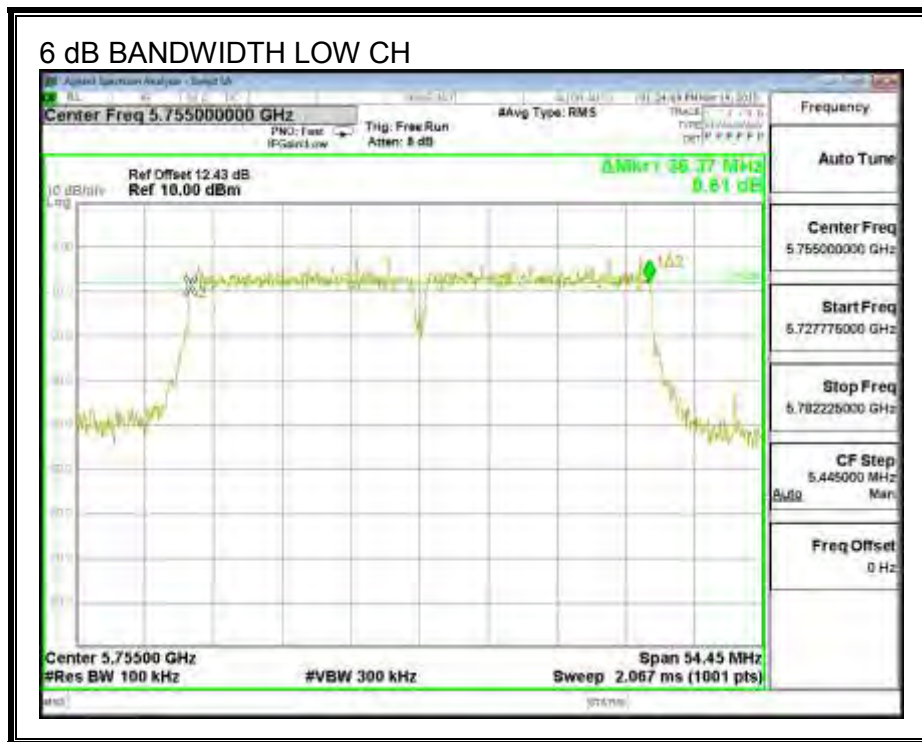
FCC §15.407 (e)

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	36.3700	0.5
High	5795	35.0700	0.5

6 dB BANDWIDTH



8.16.2. 99% BANDWIDTH

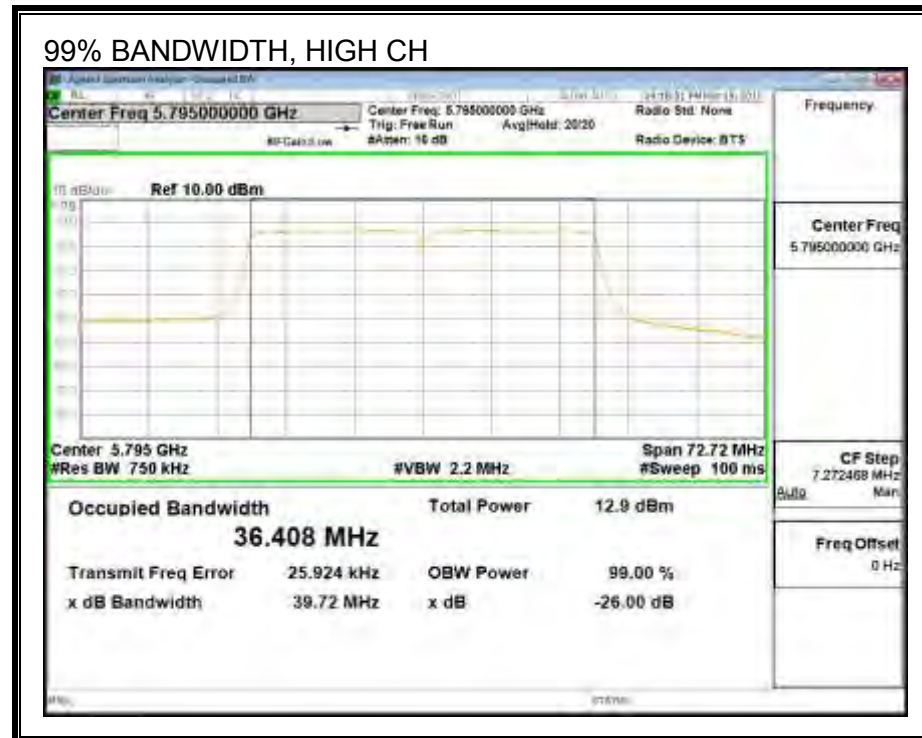
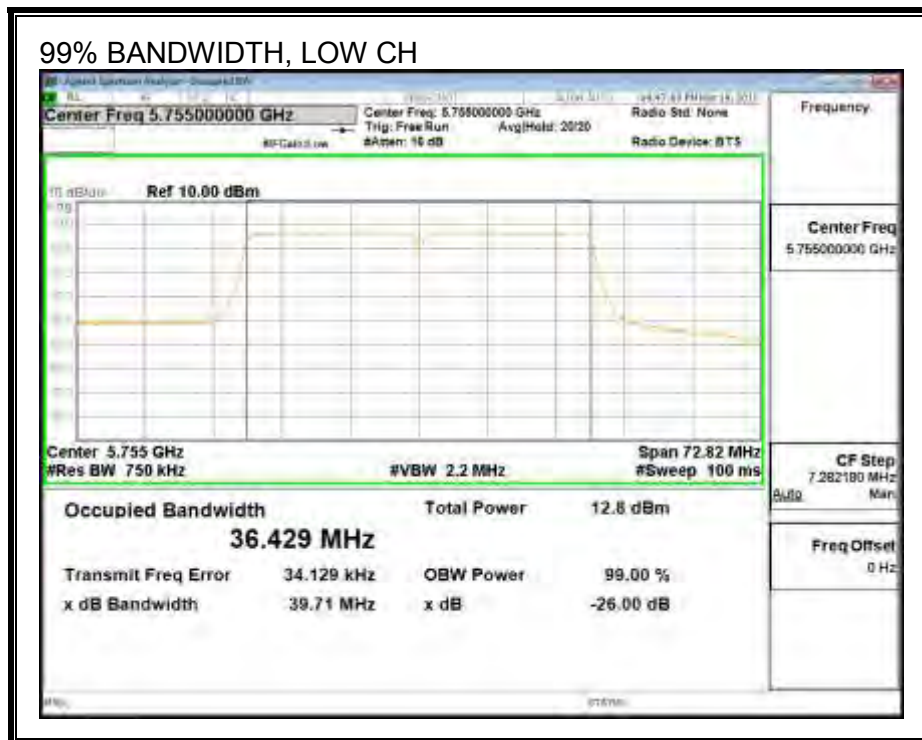
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	36.4290
High	5795	36.4080

99% BANDWIDTH



8.16.3. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	5.00	30.00
High	5795	5.00	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	11.90	11.90	30.00	-18.10
High	5795	11.90	11.90	30.00	-18.10

8.16.4. Maximum Power Spectral Density (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limits

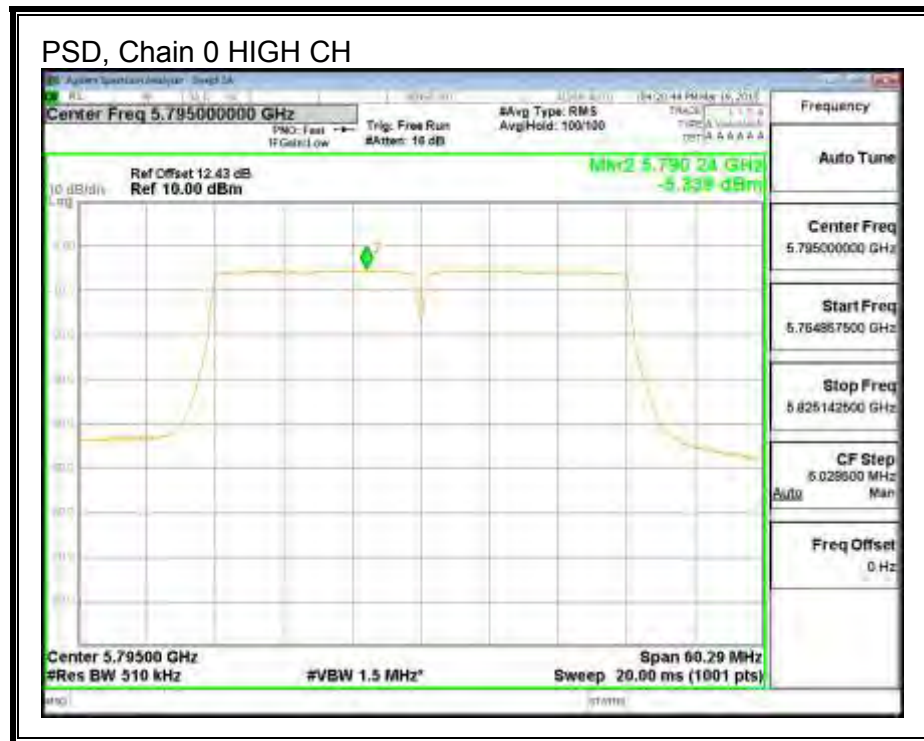
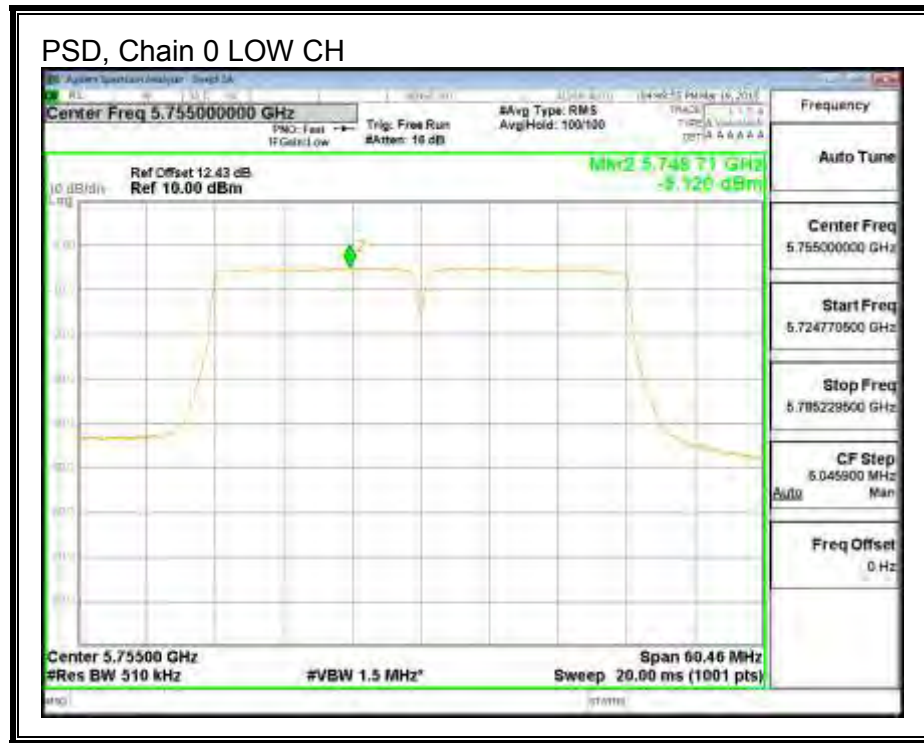
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	5.00	30.00
High	5795	5.00	30.00

Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PSD
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PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-5.12	-4.90	30.00	-34.90
High	5795	-5.34	-5.12	30.00	-35.12

PSD, Chain 0



8.17. 802.11ac HT80 MODE IN THE 5.8 GHz BAND

8.17.1. 6 dB BANDWIDTH

LIMITS

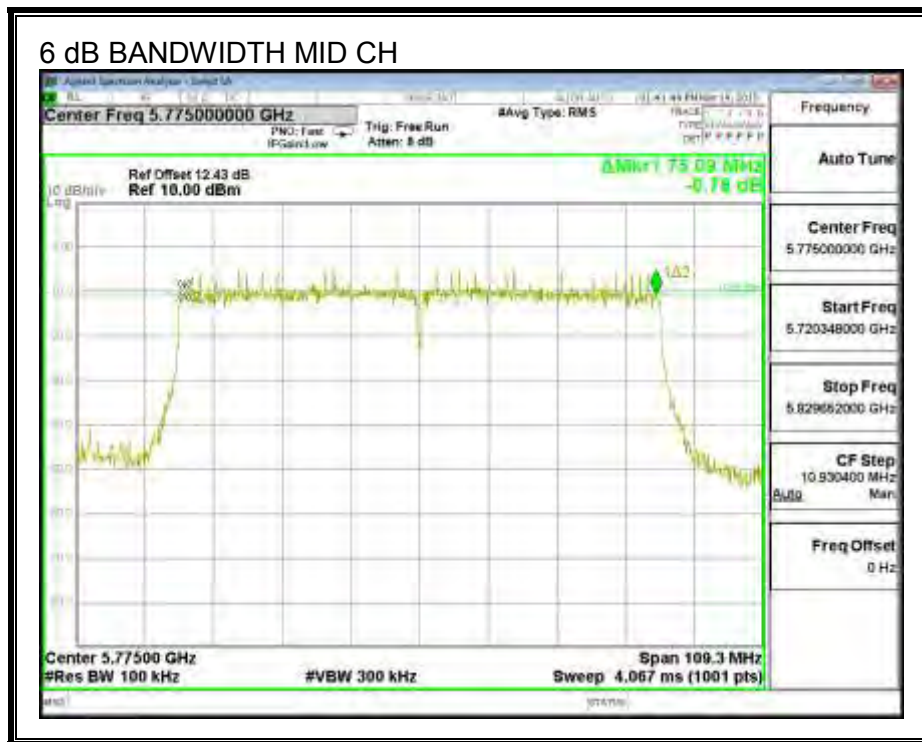
FCC §15.407 (e)

The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Mid	5775	75.0900	0.5

6 dB BANDWIDTH



8.17.2. 99% BANDWIDTH

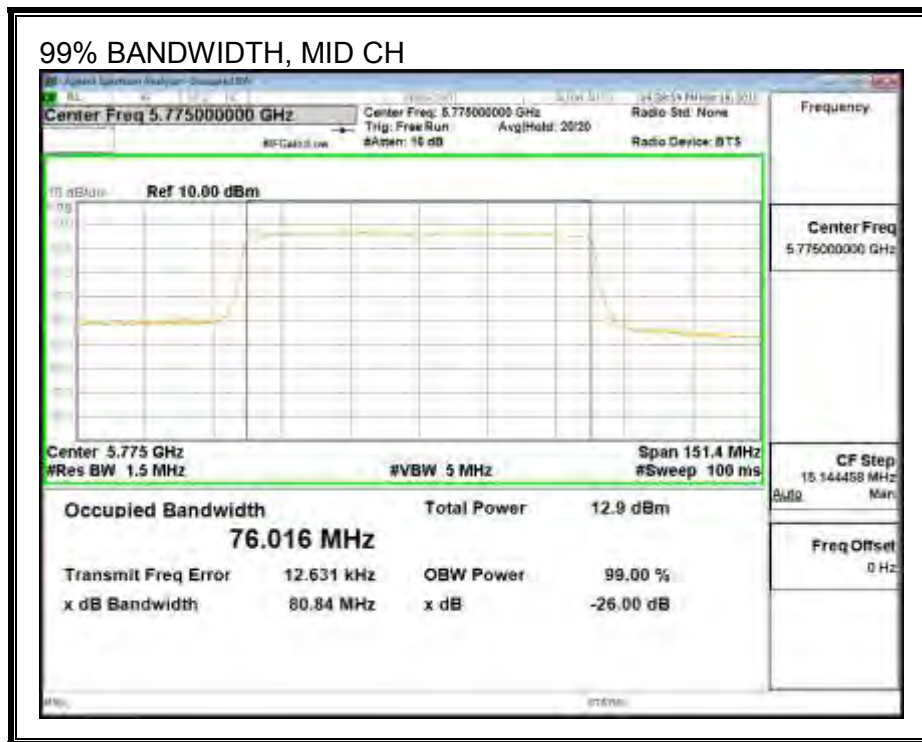
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Mid	5775	76.0160

99% BANDWIDTH



8.17.3. OUTPUT POWER

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Mid	5775	5.00	30.00

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Mid	5775	12.00	12.00	30.00	-18.00

8.17.4. Maximum Power Spectral Density (PSD)

LIMITS

FCC §15.407 (a) (3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

Antenna Gain and Limits

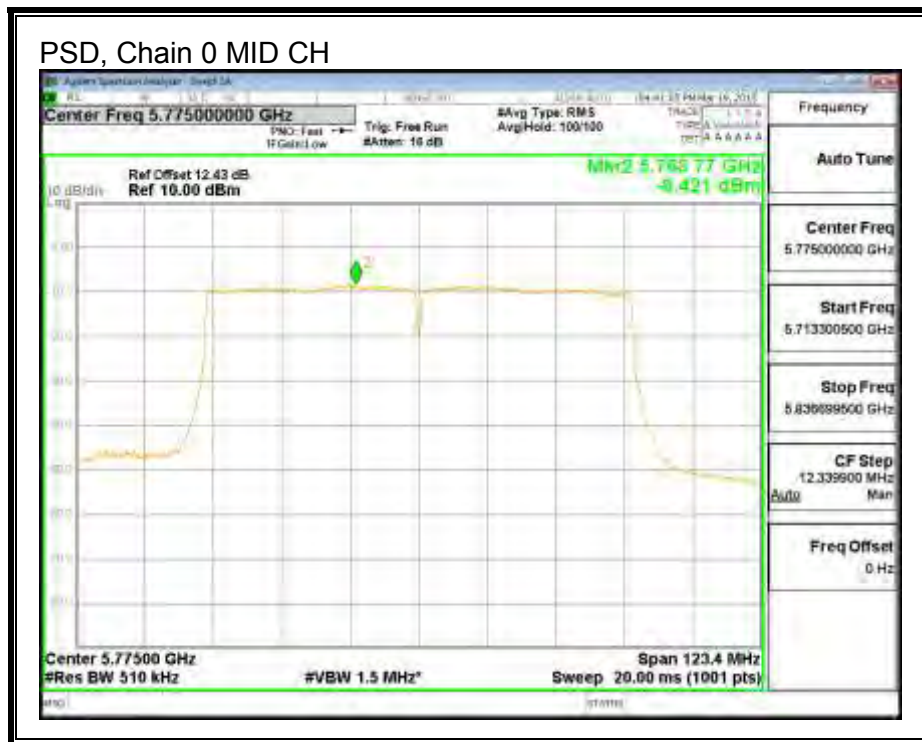
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Mid	5775	5.00	30.00

Duty Cycle CF (dB)	0.44	Included in Calculations of Corr'd PSD
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PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Mid	5775	-8.42	-7.98	30.00	-37.98

PSD, Chain 0



9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

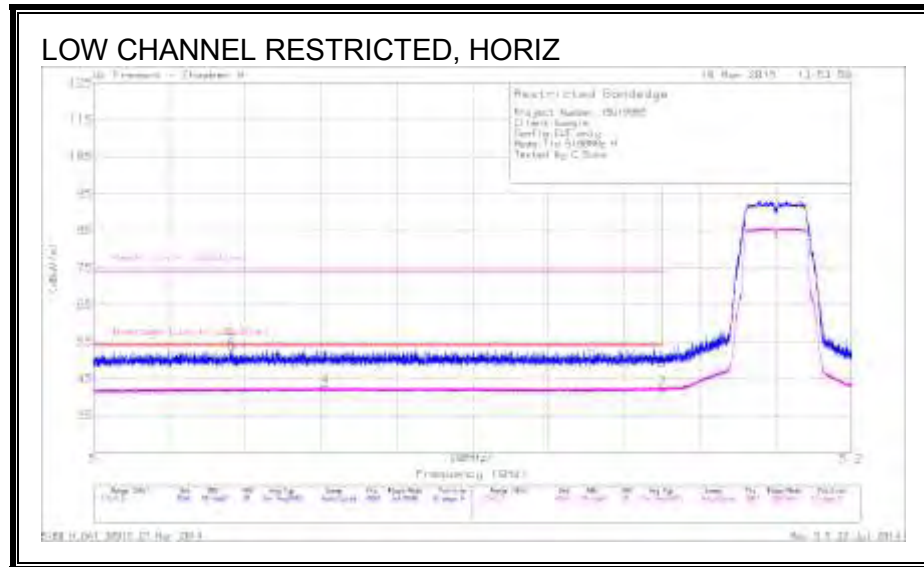
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

9.2. 802.11a MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

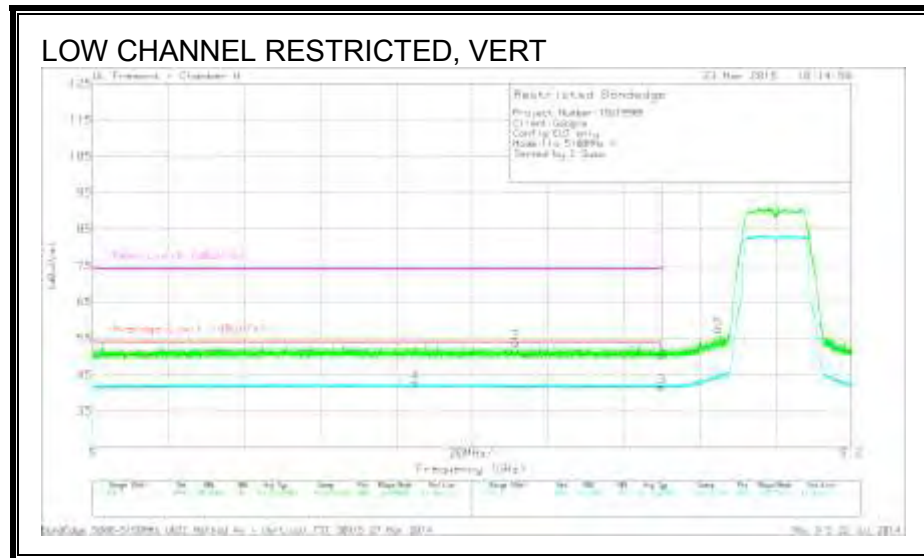


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.037	42.38	PK	34.4	-22.9	0	53.88	-	-	74	-20.12	43	108	H
4	* 5.061	31.14	RMS	34.4	-22.8	.11	42.85	54	-11.15	-	-	43	108	H
1	* 5.15	37.44	PK	34.5	-22.8	0	49.14	-	-	74	-24.86	43	108	H
3	* 5.15	30.62	RMS	34.5	-22.8	.11	42.43	54	-11.57	-	-	43	108	H

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.085	31.33	RMS	34.4	-22.9	.11	42.94	54	-11.06	-	-	61	324	V
2	* 5.112	42.26	PK	34.5	-22.9	0	53.86	-	-	74	-20.14	61	324	V
1	* 5.15	38.54	PK	34.5	-22.8	0	50.24	-	-	74	-23.76	61	324	V
3	* 5.15	29.86	RMS	34.5	-22.8	.11	41.67	54	-12.33	-	-	61	324	V
5	5.165	45.7	PK	34.6	-22.8	0	57.5	-	-	-	-	61	324	V

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 1.337	43.45	PK1	28.5	-35.6	0	36.35	-	-	74	-37.65	-	-	176	252	H
	* 1.336	32.3	AD1	28.6	-35.6	.11	25.41	54	-28.59	-	-	-	-	176	252	H
3	* 1.089	43.17	PK1	28.2	-35.6	0	35.77	-	-	74	-38.23	-	-	184	264	V
	* 1.088	33.05	AD1	28.2	-35.6	.11	25.76	54	-28.24	-	-	-	-	184	264	V
2	1.935	42.76	PK1	30.9	-34.6	0	39.06	-	-	-	-	68.2	-29.14	143	255	V
1	4.41	40.84	PK1	33.8	-31.6	0	43.04	-	-	-	-	68.2	-25.16	131	270	V
5	9.726	38.22	PK1	36.9	-26.8	0	48.32	-	-	-	-	68.2	-19.88	165	230	H
6	13.804	35.78	PK1	39.1	-26.1	0	48.78	-	-	-	-	68.2	-19.42	128	285	V

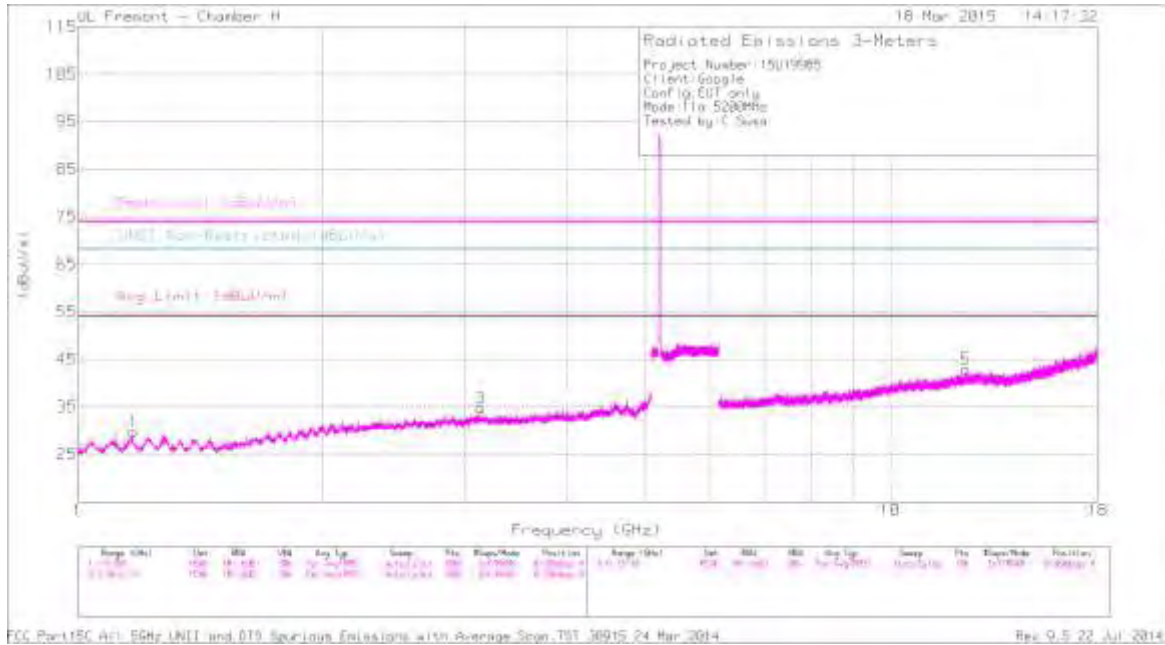
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

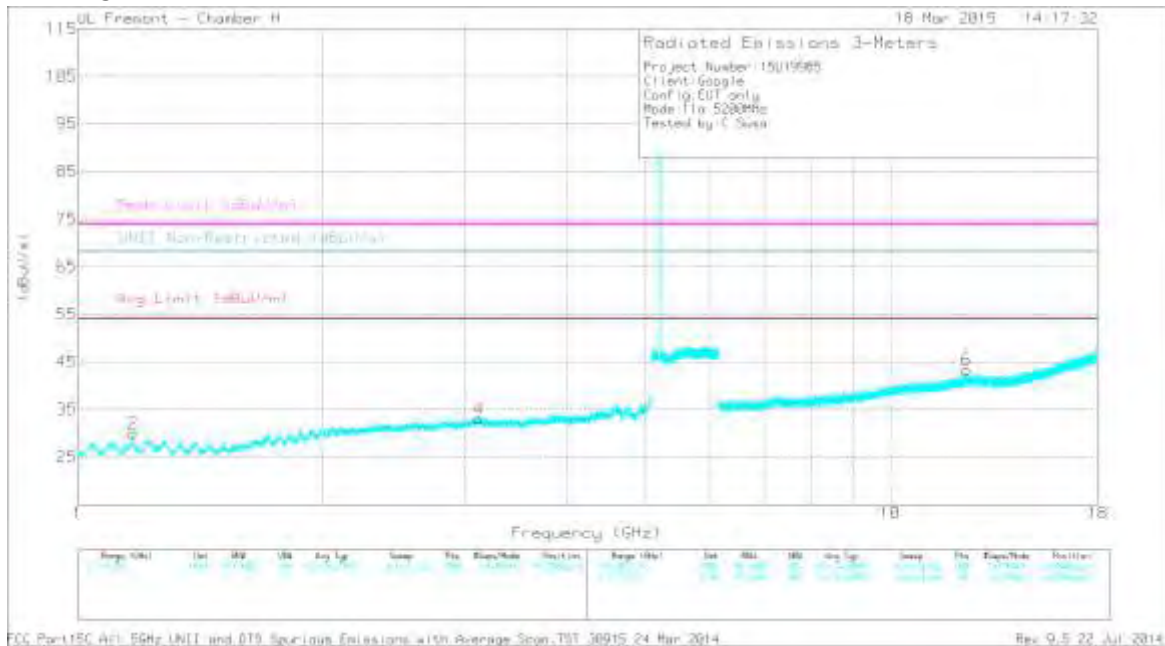
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.169	45.82	PK1	28.6	-35.6	0	38.82	-	-	74	-35.18	-	-	345	208	H
1	* 1.17	33.67	AD1	28.6	-35.6	.11	26.6	54	-27.4	-	-	-	-	345	208	H
	* 1.17	43.89	PK1	28.6	-35.6	0	36.89	-	-	74	-37.11	-	-	339	211	V
	* 1.169	32.97	AD1	28.6	-35.6	.11	26.08	54	-27.92	-	-	-	-	339	211	V
5	* 12.39	36.46	PK1	39.1	-25.2	0	50.36	-	-	74	-23.64	-	-	271	228	H
	* 12.389	25.25	AD1	39.1	-25.2	.11	39.26	54	-14.74	-	-	-	-	271	228	H
6	* 12.404	36.13	PK1	39.1	-25.2	0	50.03	-	-	74	-23.97	-	-	278	247	V
	* 12.402	25.1	AD1	39.1	-25.2	.11	39.11	54	-14.89	-	-	-	-	278	247	V
4	3.115	40.88	PK1	32.8	-32.5	0	41.18	-	-	-	-	68.2	-27.02	310	241	V
3	3.131	41.1	PK1	32.9	-32.7	0	41.3	-	-	-	-	68.2	-26.9	330	203	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.142	44.49	PK1	28.4	-35.6	0	37.29	-	-	74	-36.71	-	-	341	211	H
	* 1.142	34.78	AD1	28.4	-35.6	.11	27.69	54	-26.31	-	-	-	-	341	211	H
4	* 1.115	44.89	PK1	28.3	-35.6	0	37.59	-	-	74	-36.41	-	-	32	143	H
	* 1.115	33.44	AD1	28.3	-35.6	.11	26.25	54	-27.75	-	-	-	-	32	143	H
2	* 1.143	44.45	PK1	28.4	-35.6	0	37.25	-	-	74	-36.75	-	-	72	214	V
	* 1.142	35.1	AD1	28.4	-35.6	.11	28.01	54	-25.99	-	-	-	-	72	214	V
3	* 1.116	45.01	PK1	28.3	-35.5	0	37.81	-	-	74	-36.19	-	-	99	380	V
	* 1.115	35.54	AD1	28.3	-35.6	.11	28.35	54	-25.65	-	-	-	-	99	380	V
5	15.015	36.2	PK1	40.6	-25.4	0	51.4	-	-	-	-	68.2	-16.8	86	202	H
6	15.305	35.98	PK1	40.9	-25.9	0	50.98	-	-	-	-	68.2	-17.22	105	193	V

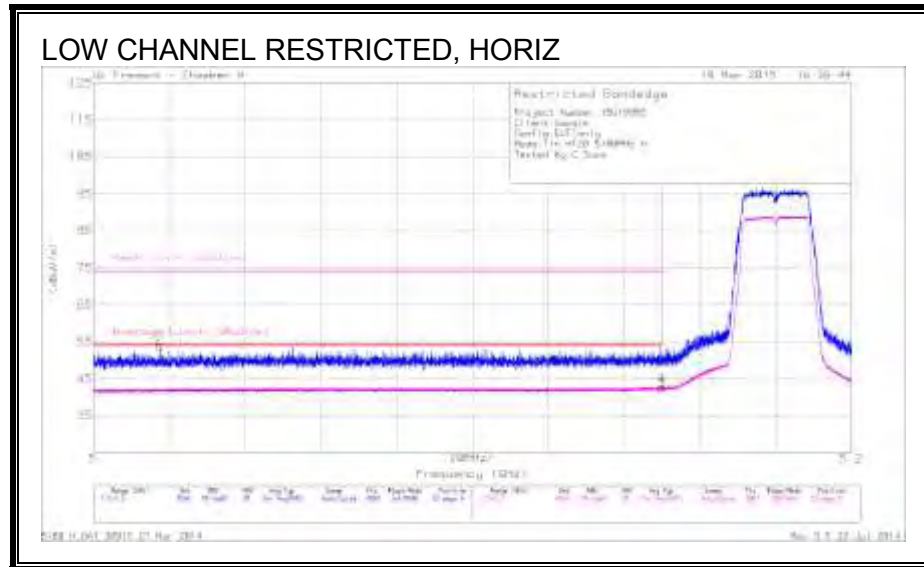
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.3. 802.11n HT20 MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

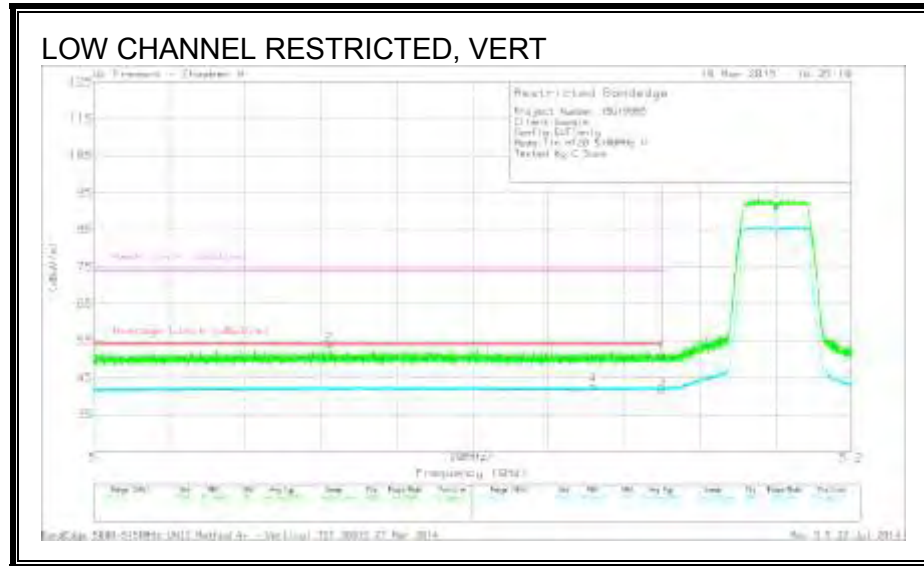


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.017	42.03	PK	34.3	-22.8	0	53.53	-	-	74	-20.47	53	262	H
1	* 5.15	38.41	PK	34.5	-22.8	0	50.11	-	-	74	-23.89	53	262	H
3	* 5.15	30.23	RMS	34.5	-22.8	.11	42.04	54	-11.96	-	-	53	262	H
4	* 5.15	31.12	RMS	34.5	-22.8	.11	42.93	54	-11.07	-	-	53	262	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	39.31	PK	34.5	-22.8	0	51.01	-	-	74	-22.99	272	268	V
2	* 5.062	42.47	PK	34.4	-22.9	0	53.97	-	-	74	-20.03	272	268	V
3	* 5.15	29.93	RMS	34.5	-22.8	.11	41.74	54	-12.26	-	-	272	268	V
4	* 5.132	31.02	RMS	34.5	-22.8	.11	42.83	54	-11.17	-	-	272	268	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.221	43.44	PK1	28.9	-35.6	0	36.74	-	-	74	-37.26	-	-	44	233	H
	* 1.223	31.8	AD1	28.9	-35.5	.11	25.31	54	-28.69	-	-	-	-	44	233	H
2	* 1.226	43.55	PK1	28.9	-35.5	0	36.95	-	-	74	-37.05	-	-	55	243	V
	* 1.224	32.31	AD1	28.9	-35.5	.11	26	54	-28	-	-	-	-	55	243	V
3	2.599	41.69	PK1	32.2	-33.3	0	40.59	-	-	-	-	68.2	-27.61	75	271	H
4	2.599	41.83	PK1	32.2	-33.3	0	40.73	-	-	-	-	68.2	-27.47	31	265	V
6	13.8	35.86	PK1	39.1	-26.1	0	48.86	-	-	-	-	68.2	-19.34	74	212	V
5	13.927	36.32	PK1	39.2	-26.5	0	49.02	-	-	-	-	68.2	-19.18	52	249	H

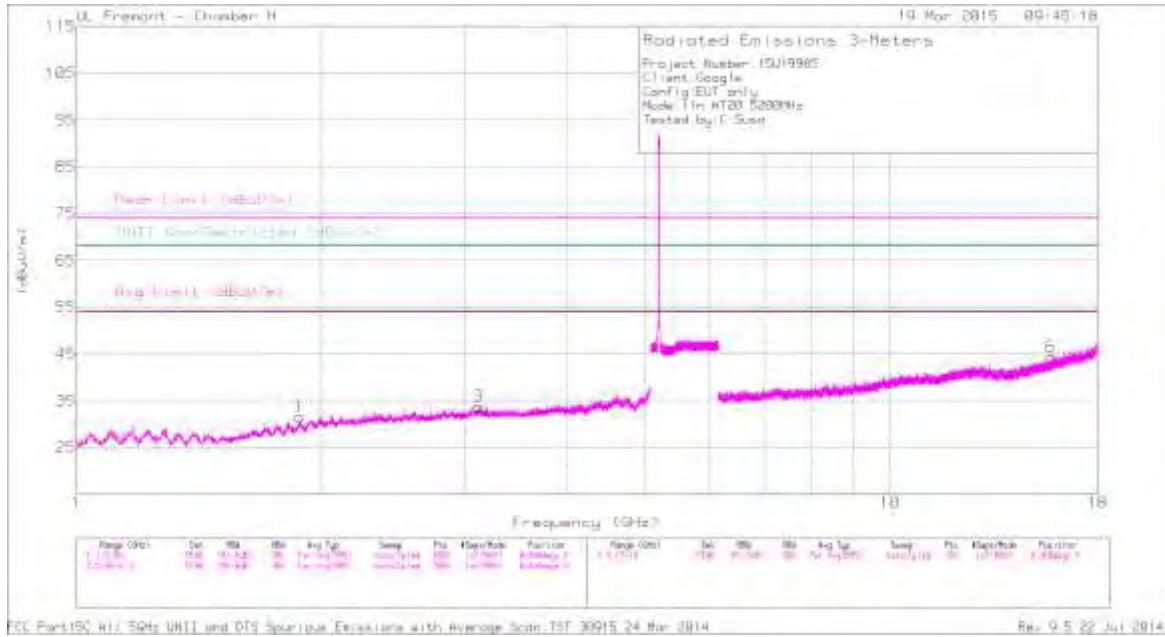
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

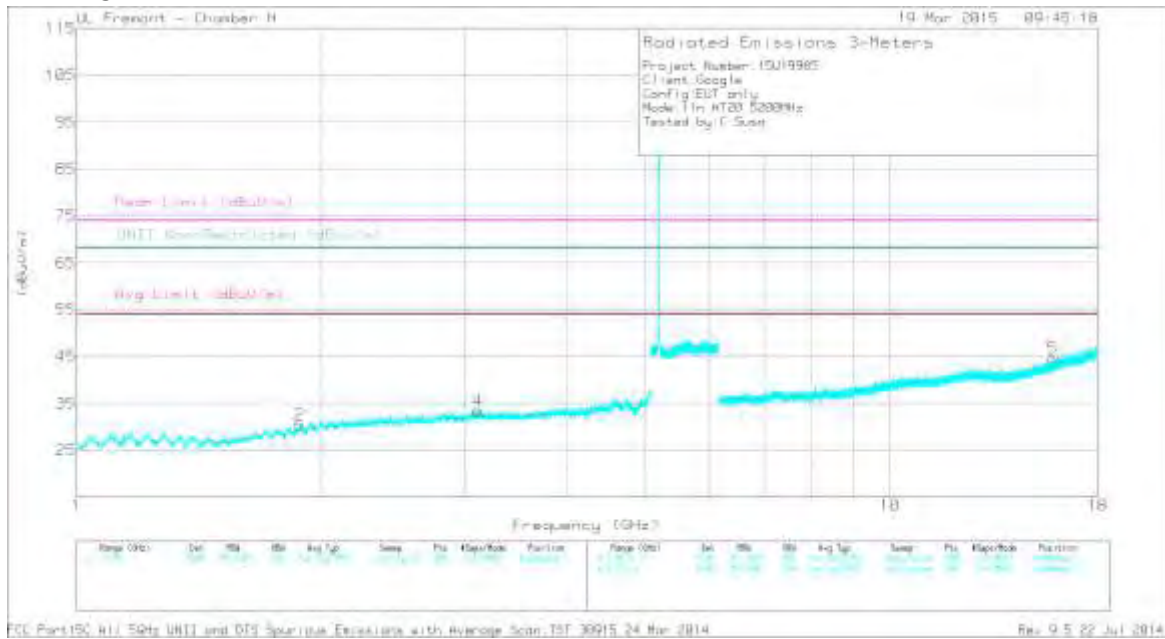
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 15.775	35.02	PK1	41	-24.7	0	51.32	-	-	74	-22.68	-	-	96	179	H
	* 15.774	23.8	AD1	41	-24.7	.11	40.21	54	-13.79	-	-	-	-	96	179	H
5	* 15.842	35.11	PK1	41.1	-24.6	0	51.61	-	-	74	-22.39	-	-	105	202	V
	* 15.84	24.53	AD1	41.1	-24.6	.11	41.14	54	-12.86	-	-	-	-	105	202	V
2	1.879	43.03	PK1	30.5	-34.8	0	38.73	-	-	-	-	68.2	-29.47	114	236	V
1	1.88	42.62	PK1	30.5	-34.8	0	38.32	-	-	-	-	68.2	-29.88	100	242	H
4	3.116	40.92	PK1	32.8	-32.5	0	41.22	-	-	-	-	68.2	-26.98	99	187	V
3	3.122	41.59	PK1	32.8	-32.7	0	41.69	-	-	-	-	68.2	-26.51	125	160	H

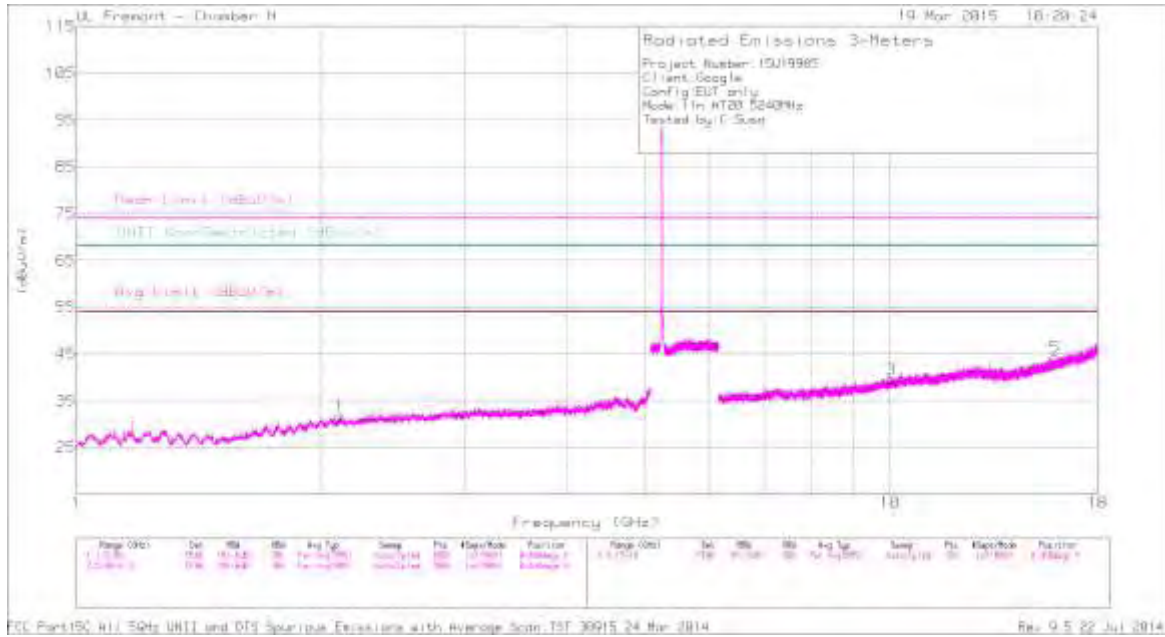
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

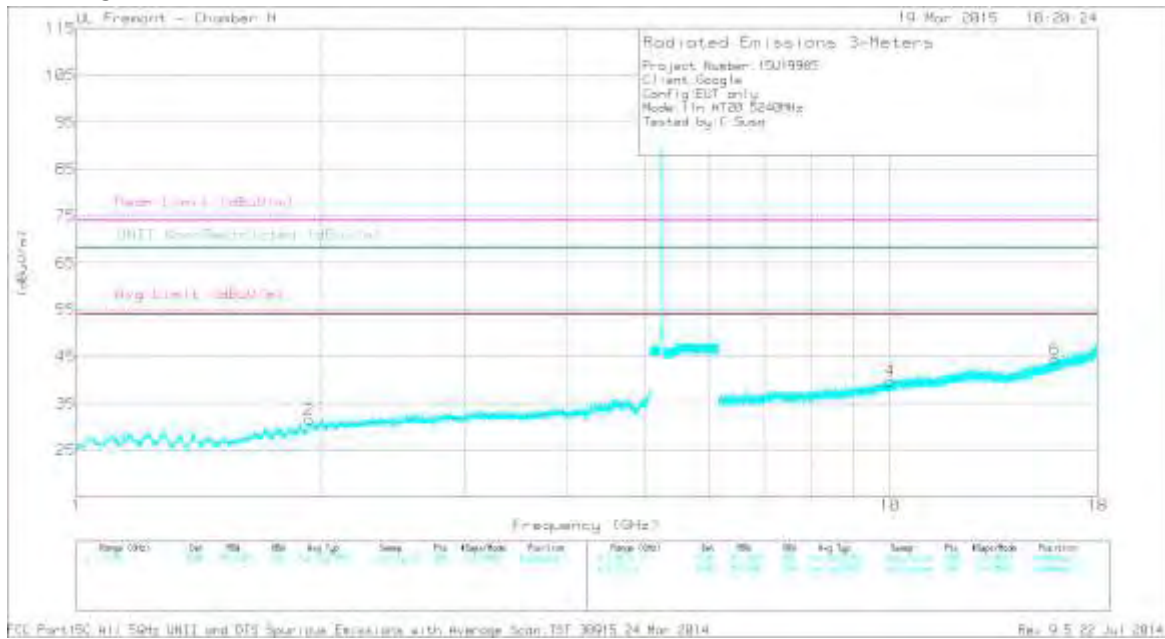
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Chl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 15.949	35.33	PK1	41.2	-25	0	51.53	-	-	74	-22.47	-	-	296	241	H
	* 15.948	24.47	AD1	41.2	-25	.11	40.78	54	-13.22	-	-	-	-	296	241	H
6	* 15.957	34.89	PK1	41.2	-24.8	0	51.29	-	-	74	-22.71	-	-	305	236	V
	* 15.956	24.19	AD1	41.2	-24.8	.11	40.7	54	-13.3	-	-	-	-	305	236	V
2	1.932	42.85	PK1	30.9	-34.6	0	39.15	-	-	-	-	68.2	-29.05	154	183	V
1	2.107	42.63	PK1	31.5	-34.5	0	39.63	-	-	-	-	68.2	-28.57	152	179	H
4	10.007	36.37	PK1	37.3	-26.2	0	47.47	-	-	-	-	68.2	-20.73	258	247	V
3	10.024	35.19	PK1	37.3	-25.8	0	46.69	-	-	-	-	68.2	-21.51	264	239	H

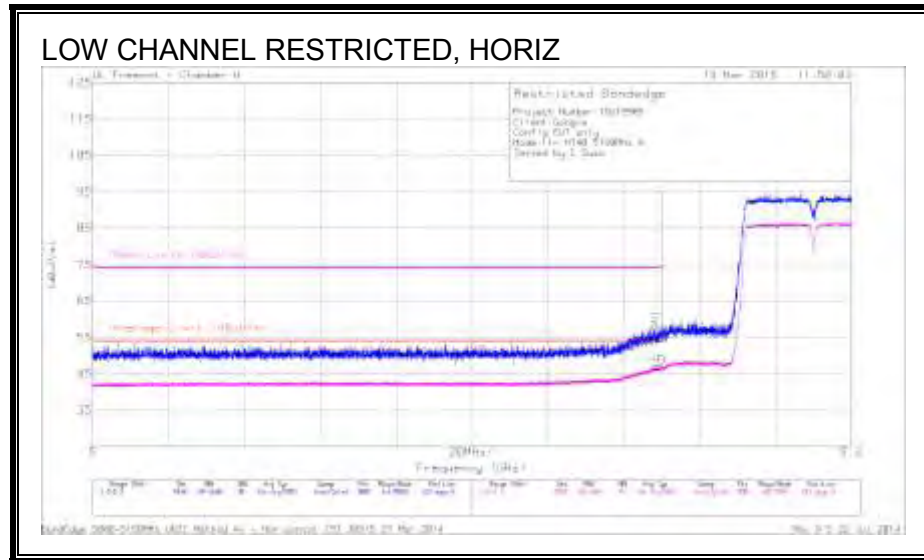
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.4. 802.11n HT40 MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

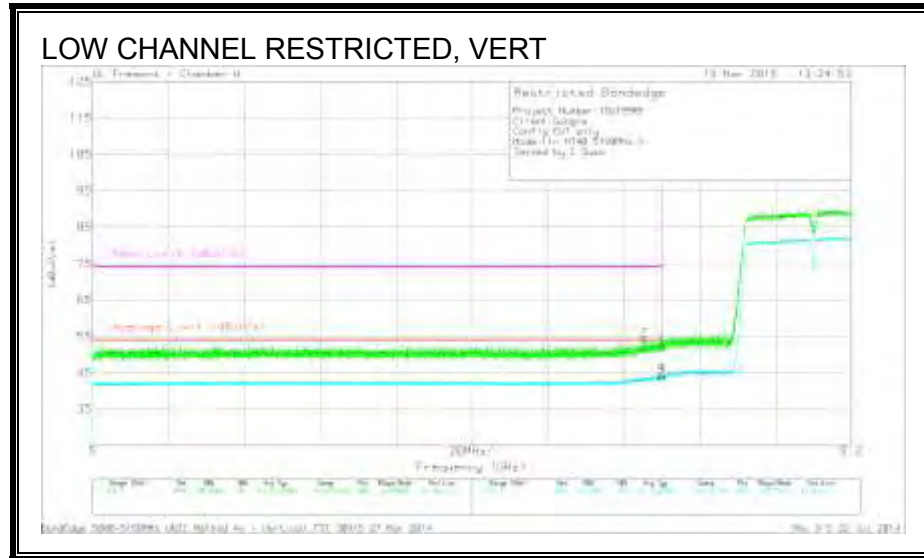


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	42.97	PK	34.5	-22.8	0	54.67	-	-	74	-19.33	233	260	H
2	* 5.148	46.71	PK	34.5	-22.8	0	58.41	-	-	74	-15.59	233	260	H
3	* 5.15	34.84	RMS	34.5	-22.8	.22	46.76	54	-7.24	-	-	233	260	H
4	* 5.149	35.24	RMS	34.5	-22.8	.22	47.16	54	-6.84	-	-	233	260	H

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.145	42.45	PK	34.5	-22.8	0	54.15	-	-	74	-19.85	61	314	V
1	* 5.15	40.18	PK	34.5	-22.8	0	51.88	-	-	74	-22.12	61	314	V
3	* 5.15	32.09	RMS	34.5	-22.8	.22	44.01	54	-9.99	-	-	61	314	V
4	* 5.15	32.43	RMS	34.5	-22.8	.22	44.35	54	-9.65	-	-	61	314	V

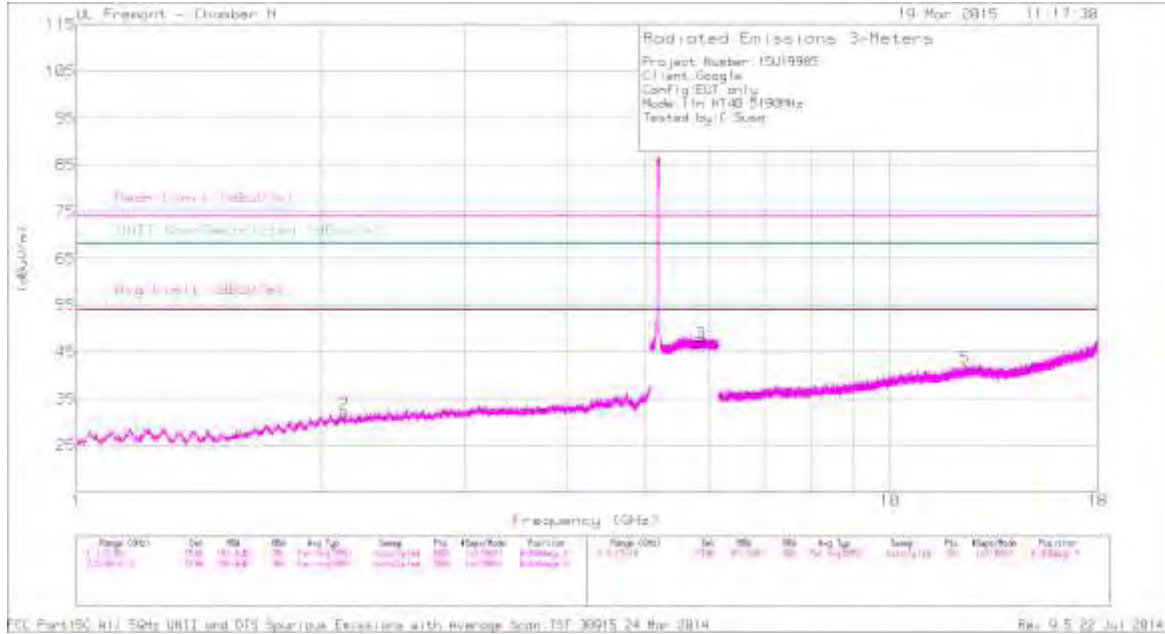
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

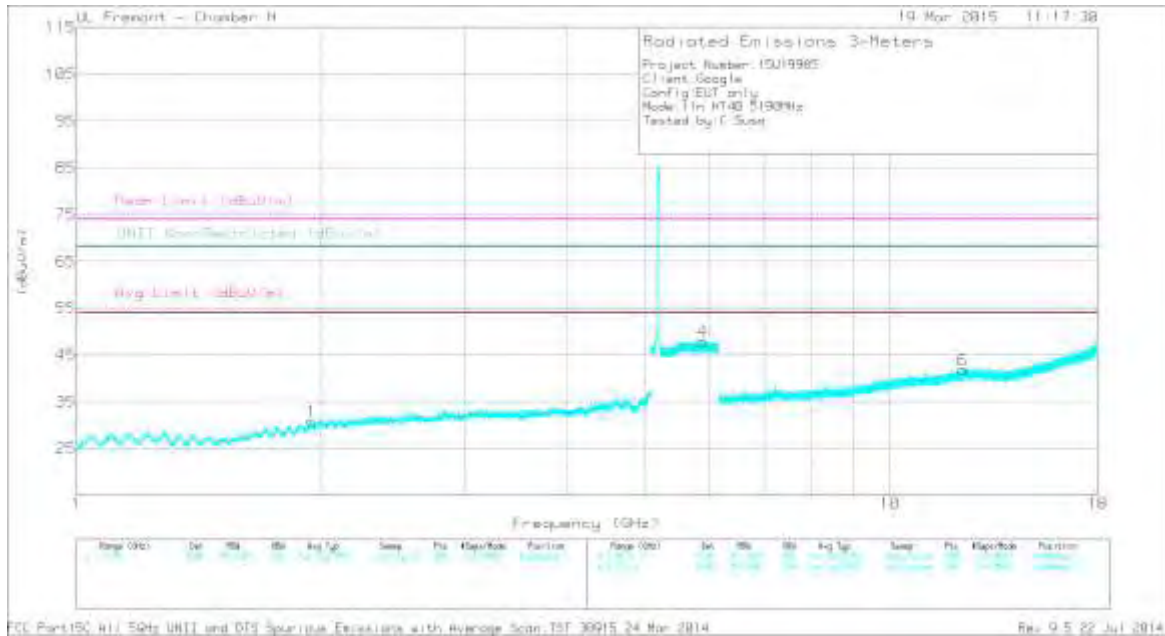
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Chl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 12.372	35.31	PK1	39	-25.7	0	48.61	-	-	74	-25.39	-	-	105	178	H
	* 12.371	24.52	AD1	39	-25.7	.22	38.04	54	-15.96	-	-	-	-	105	178	H
6	* 12.286	36.31	PK1	39	-25.7	0	49.61	-	-	74	-24.39	-	-	187	251	V
	* 12.286	24.5	AD1	39	-25.7	.22	38.02	54	-15.98	-	-	-	-	187	251	V
1	1.944	42.6	PK1	30.9	-34.5	0	39	-	-	-	-	68.2	-29.2	169	269	V
2	2.134	42.23	PK1	31.5	-34.5	0	39.23	-	-	-	-	68.2	-28.97	193	265	H
3	5.844	42.65	PK1	35.1	-22.2	0	55.55	-	-	-	-	68.2	-12.65	142	202	H
4	5.886	42.49	PK1	35.1	-22.2	0	55.39	-	-	-	-	68.2	-12.81	176	220	V

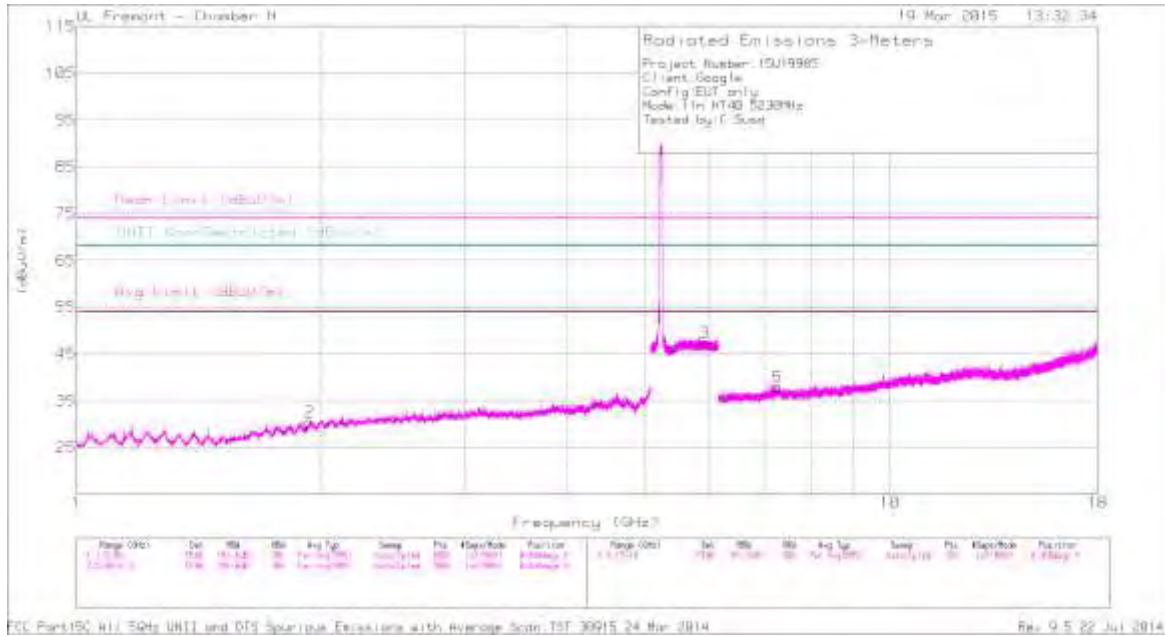
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

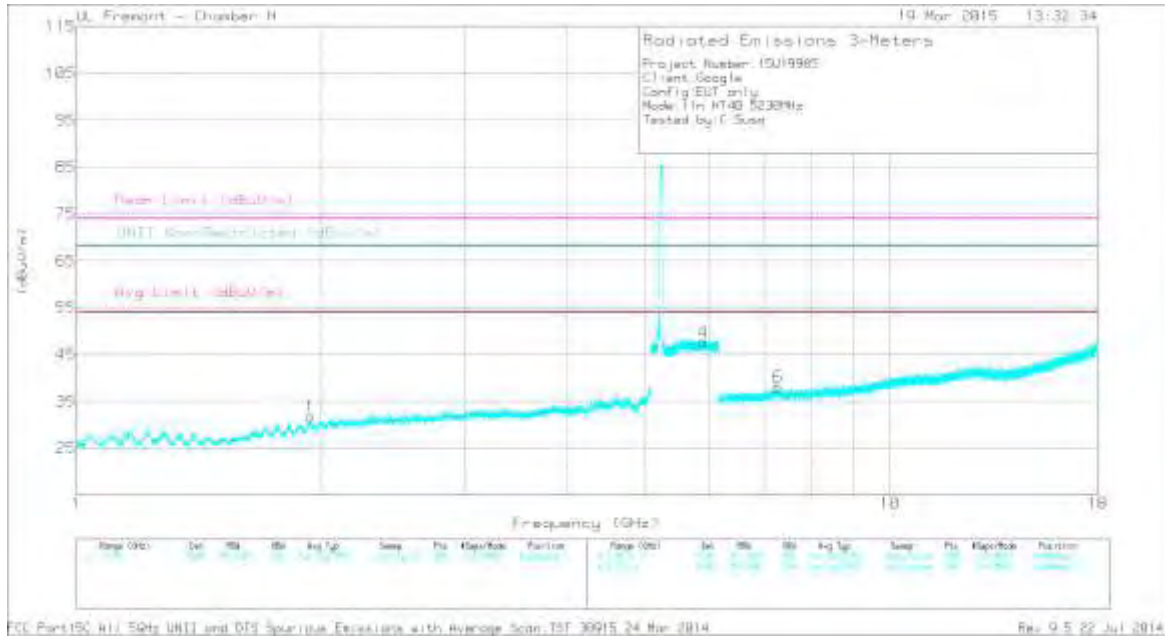
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 7.273	38.68	PK1	36.2	-29.3	0	45.58	-	-	74	-28.42	-	-	153	225	H
	* 7.273	28.01	AD1	36.2	-29.3	.22	35.13	54	-18.87	-	-	-	-	153	225	H
6	* 7.282	39.05	PK1	36.2	-29.5	0	45.75	-	-	74	-28.25	-	-	140	243	V
	* 7.285	28.02	AD1	36.2	-29.5	.22	34.94	54	-19.06	-	-	-	-	140	243	V
2	1.936	42.85	PK1	30.9	-34.6	0	39.15	-	-	-	-	68.2	-29.05	128	201	H
1	1.937	42.54	PK1	30.9	-34.6	0	38.84	-	-	-	-	68.2	-29.36	174	187	V
4	5.894	42.75	PK1	35.1	-22.2	0	55.65	-	-	-	-	68.2	-12.55	107	185	V
3	5.919	42.83	PK1	35.1	-22.3	0	55.63	-	-	-	-	68.2	-12.57	167	264	H

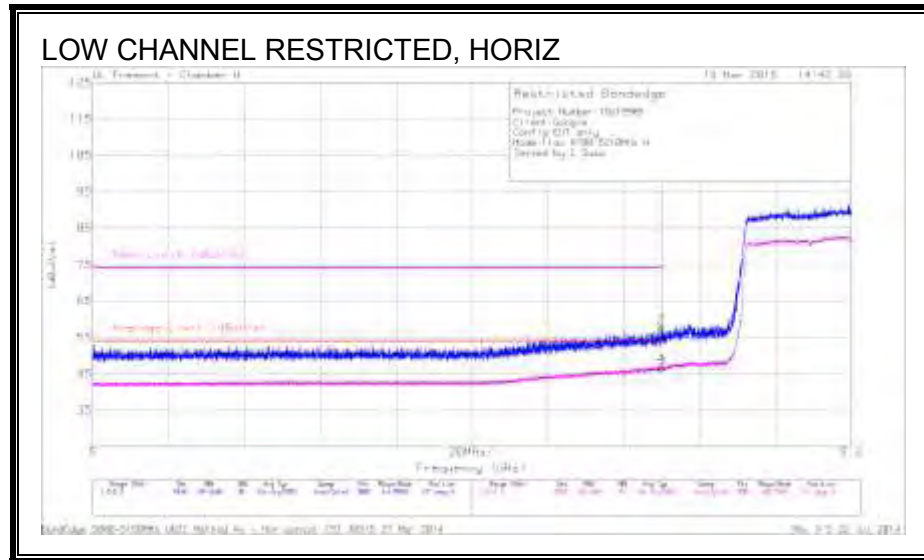
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.5. 802.11ac HT80 MODE IN THE 5.2 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

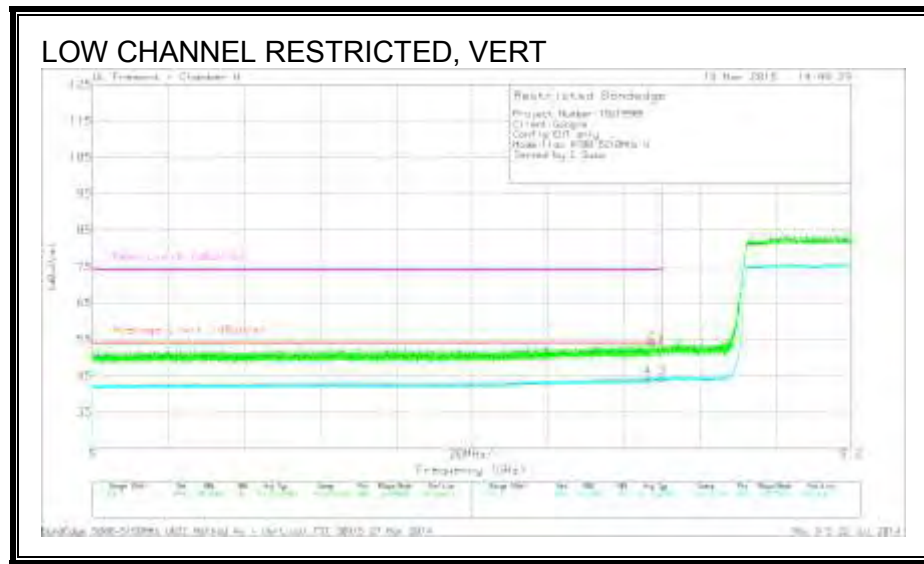


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.15	43.07	PK	34.5	-22.8	0	54.77	-	-	74	-19.23	211	285	H
2	* 5.15	46.16	PK	34.5	-22.8	0	57.86	-	-	74	-16.14	211	285	H
3	* 5.15	34.39	RMS	34.5	-22.8	.42	46.51	54	-7.49	-	-	211	285	H
4	* 5.15	34.83	RMS	34.5	-22.8	.42	46.95	54	-7.05	-	-	211	285	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

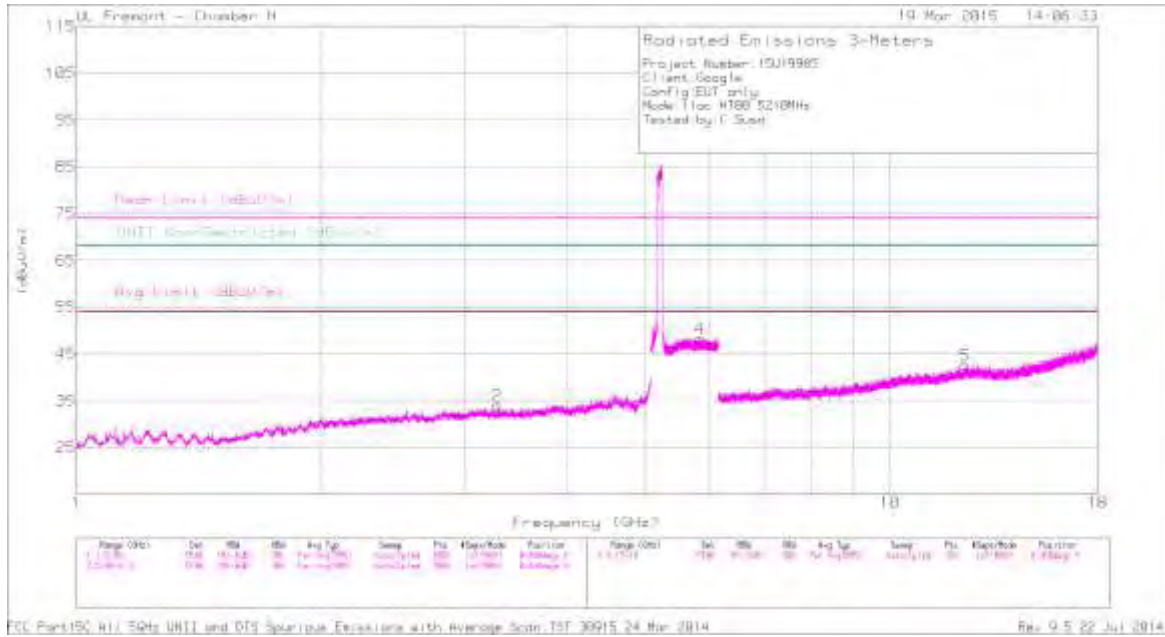
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 5.146	32.37	RMS	34.5	-22.8	.42	44.49	54	-9.51	-	-	239	292	V
2	* 5.147	42.41	PK	34.5	-22.8	0	54.11	-	-	74	-19.89	239	292	V
1	* 5.15	41.25	PK	34.5	-22.8	0	52.95	-	-	74	-21.05	239	292	V
3	* 5.15	32.3	RMS	34.5	-22.8	.42	44.42	54	-9.58	-	-	239	292	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

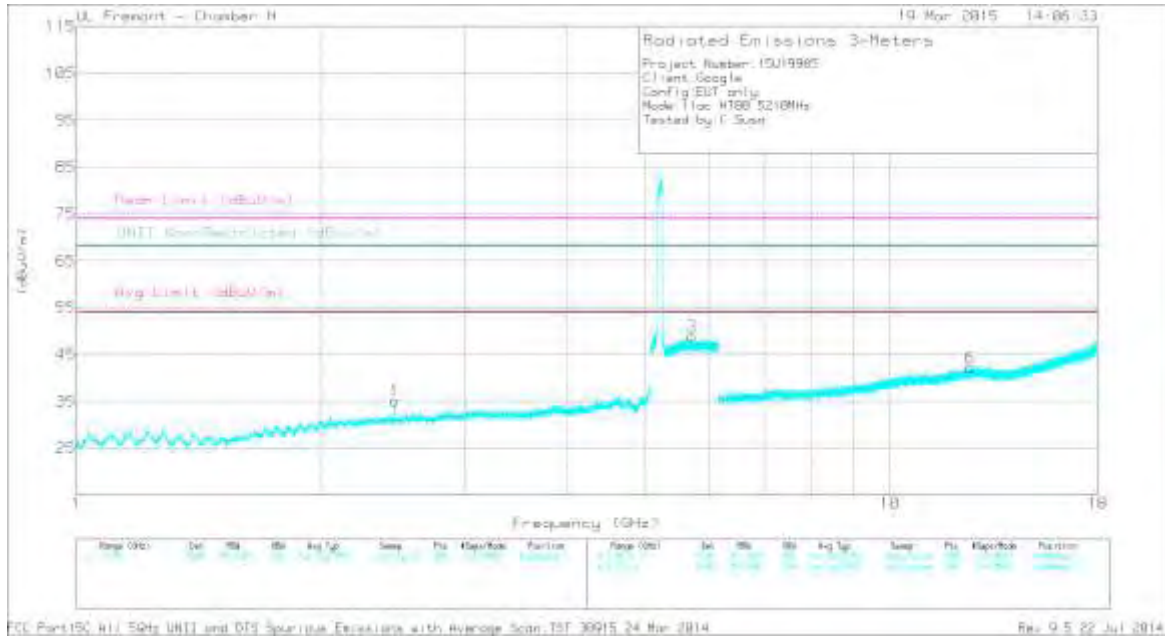
PK - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 12.369	35.9	PK1	39	-25.7	0	49.2	-	-	74	-24.8	-	-	251	212	H
	* 12.37	25.12	AD1	39	-25.7	.42	38.84	54	-15.16	-	-	-	-	251	212	H
6	* 12.55	35.9	PK1	39.1	-25.8	0	49.2	-	-	74	-24.8	-	-	237	191	V
	* 12.549	25.13	AD1	39.1	-25.8	.42	38.85	54	-15.15	-	-	-	-	237	191	V
1	2.464	41.79	PK1	32.1	-34.3	0	39.59	-	-	-	-	68.2	-28.61	133	207	V
2	3.293	41.81	PK1	32.9	-33.5	0	41.21	-	-	-	-	68.2	-26.99	119	264	H
3	5.705	42.27	PK1	35	-22.5	0	54.77	-	-	-	-	68.2	-13.43	178	220	V
4	5.838	42.57	PK1	35.1	-22.2	0	55.47	-	-	-	-	68.2	-12.73	264	193	H

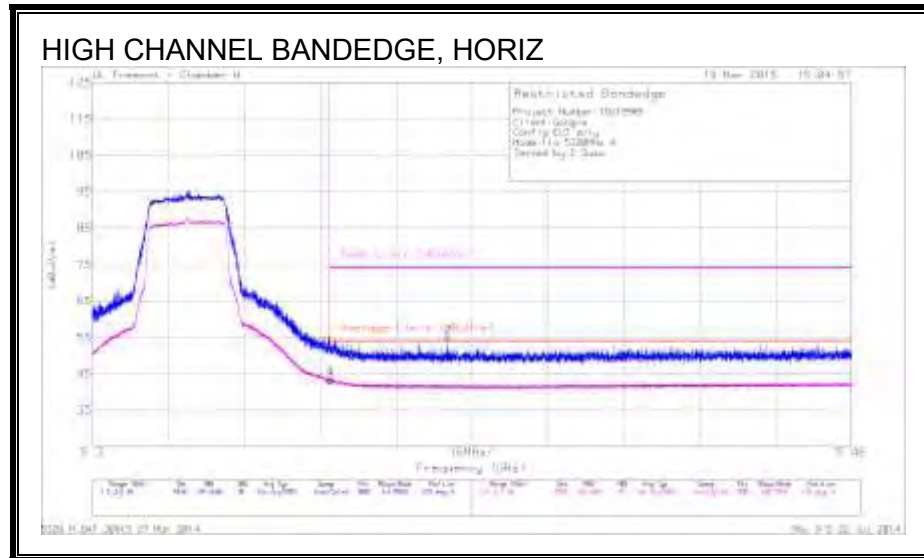
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.6. 802.11a MODE IN THE 5.3 GHZ BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

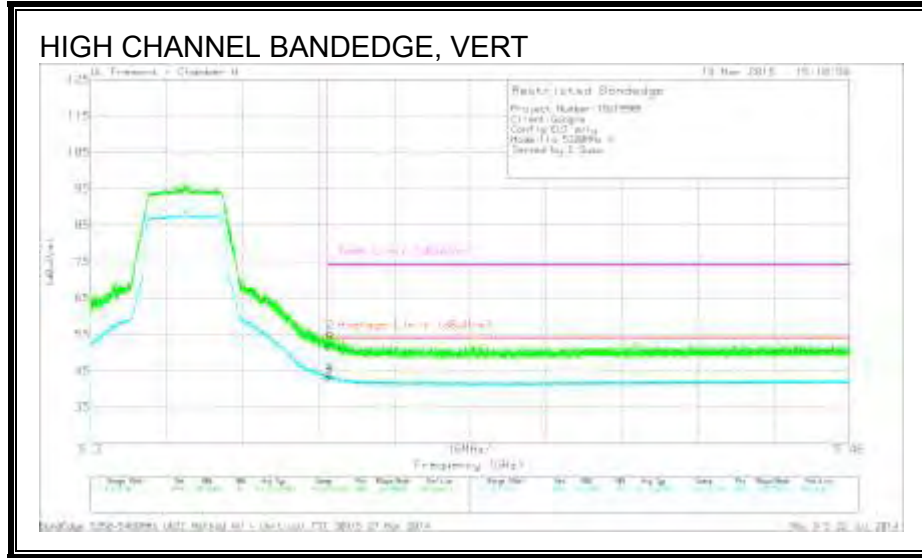


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.87	PK	34.9	-22.7	0	52.07	-	-	74	-21.93	129	215	H
3	* 5.35	30.93	RMS	34.9	-22.7	.11	43.24	54	-10.76	-	-	129	215	H
4	* 5.35	31.2	RMS	34.9	-22.7	.11	43.51	54	-10.49	-	-	129	215	H
2	* 5.375	42.88	PK	34.9	-22.7	0	55.08	-	-	74	-18.92	129	215	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	39.53	PK	34.9	-22.7	0	51.73	-	-	74	-22.27	298	183	V
3	* 5.35	31	RMS	34.9	-22.7	.11	43.31	54	-10.69	-	-	298	183	V
4	* 5.35	31.4	RMS	34.9	-22.7	.11	43.71	54	-10.29	-	-	298	183	V
2	* 5.351	43.14	PK	34.9	-22.7	0	55.34	-	-	74	-18.66	298	183	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.142	45.17	PK1	28.4	-35.6	0	37.97	-	-	74	-36.03	-	-	242	127	H
	* 1.142	35.36	AD1	28.4	-35.6	.11	28.27	54	-25.73	-	-	-	-	242	127	H
2	1.849	42.27	PK1	30.3	-35.1	0	37.47	-	-	-	-	68.2	-30.73	12	139	H
3	6.542	39.08	PK1	35.6	-30.8	0	43.88	-	-	-	-	68.2	-24.32	1	100	H
4	1.752	42.26	PK1	29.7	-34.6	0	37.36	-	-	-	-	68.2	-30.84	27	115	V
5	5.631	43.29	PK1	35	-22.6	0	55.69	-	-	-	-	68.2	-12.51	1	100	V
6	7.228	38.22	PK1	36.2	-29	0	45.42	-	-	-	-	68.2	-22.78	1	100	V

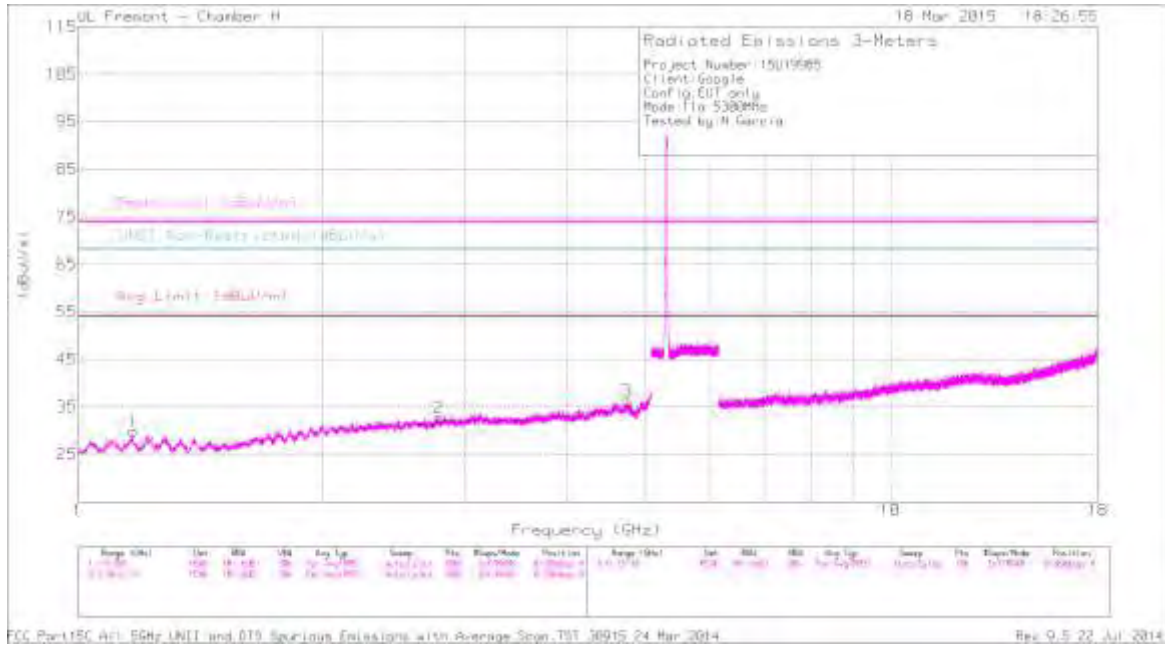
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

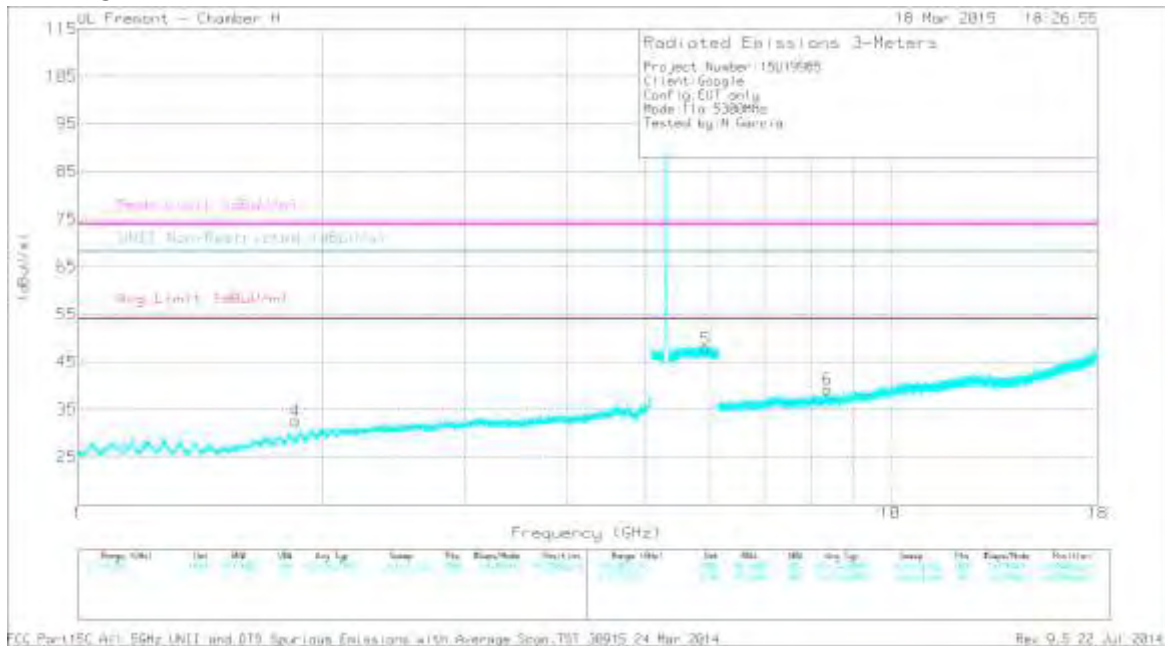
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.17	44.15	PK1	28.6	-35.6	0	37.15	-	-	74	-36.85	-	-	13	134	H
	* 1.17	32.46	AD1	28.6	-35.6	.11	25.57	54	-28.43	-	-	-	-	13	134	H
2	* 2.787	41.94	PK1	32.4	-33.6	0	40.74	-	-	74	-33.26	-	-	37	143	H
	* 2.787	30.19	AD1	32.4	-33.6	.11	29.1	54	-24.9	-	-	-	-	37	143	H
3	* 4.744	40.42	PK1	34.3	-31.7	0	43.02	-	-	74	-30.98	-	-	26	110	H
	* 4.745	29.82	AD1	34.3	-31.7	.11	32.53	54	-21.47	-	-	-	-	26	110	H
4	1.857	42.42	PK1	30.4	-35	0	37.82	-	-	-	-	68.2	-30.38	1	100	V
5	5.928	31.48	AD1	35.1	-22.2	.11	44.49	-	-	-	-	-	-	1	100	V
6	* 8.371	37.46	PK1	36.1	-27.9	0	45.66	-	-	74	-28.34	-	-	47	117	V
	* 8.372	26.93	AD1	36.1	-27.9	.11	35.24	54	-18.76	-	-	-	-	47	117	V

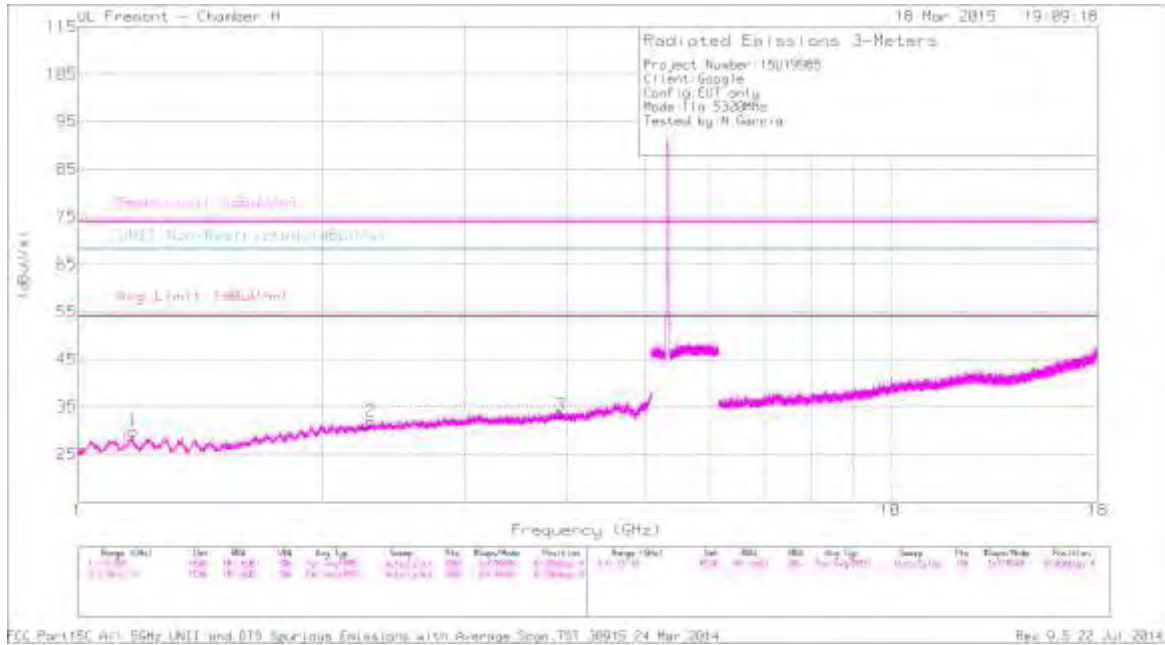
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

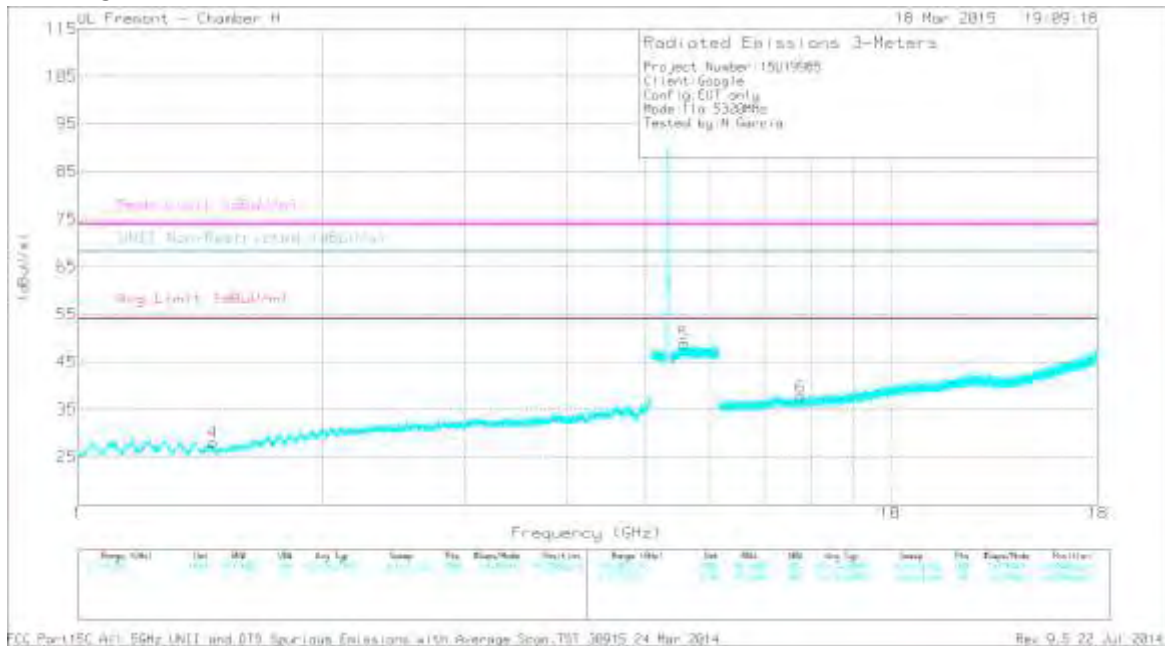
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.169	43.71	PK1	28.6	-35.6	0	36.71	-	-	74	-37.29	-	-	16	112	H
	* 1.167	32.12	AD1	28.6	-35.5	.11	25.33	54	-28.67	-	-	-	-	16	112	H
2	* 2.296	42.14	PK1	31.8	-34	0	39.94	-	-	74	-34.06	-	-	19	116	H
	* 2.297	30.58	AD1	31.8	-34	.11	28.49	54	-25.51	-	-	-	-	19	116	H
3	* 3.919	40.65	PK1	33.4	-32.9	0	41.15	-	-	74	-32.85	-	-	31	128	H
	* 3.92	30.24	AD1	33.4	-32.9	.11	30.85	54	-23.15	-	-	-	-	31	128	H
4	* 1.47	42.21	PK1	27.9	-34.9	0	35.21	-	-	74	-38.79	-	-	26	152	V
	* 1.47	30.95	AD1	27.9	-34.9	.11	24.06	54	-29.94	-	-	-	-	26	152	V
5	5.575	43.09	PK1	35.1	-22.5	0	55.69	-	-	-	-	68.2	-12.51	0	101	V
6	7.754	38.9	PK1	36.1	-29.5	0	45.5	-	-	-	-	68.2	-22.7	0	101	V

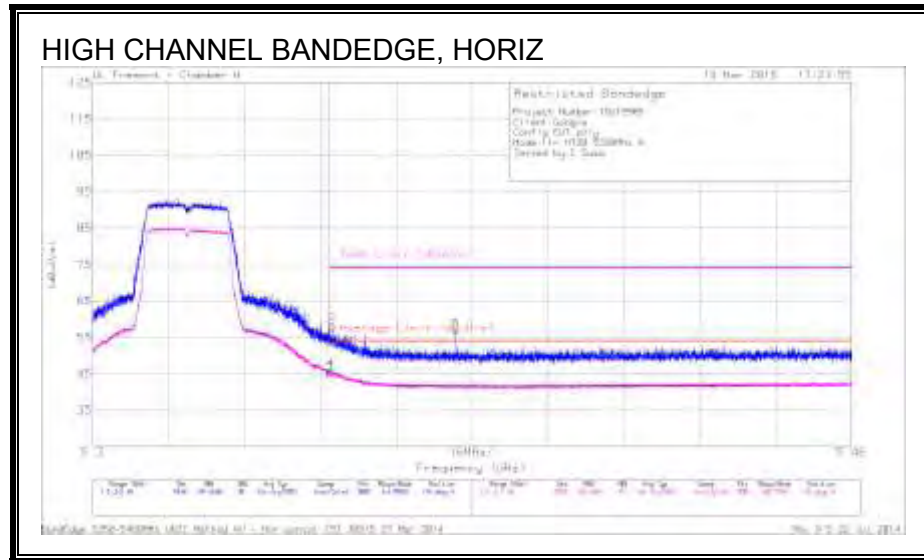
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.7. 802.11n HT20 MODE IN THE 5.3 GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

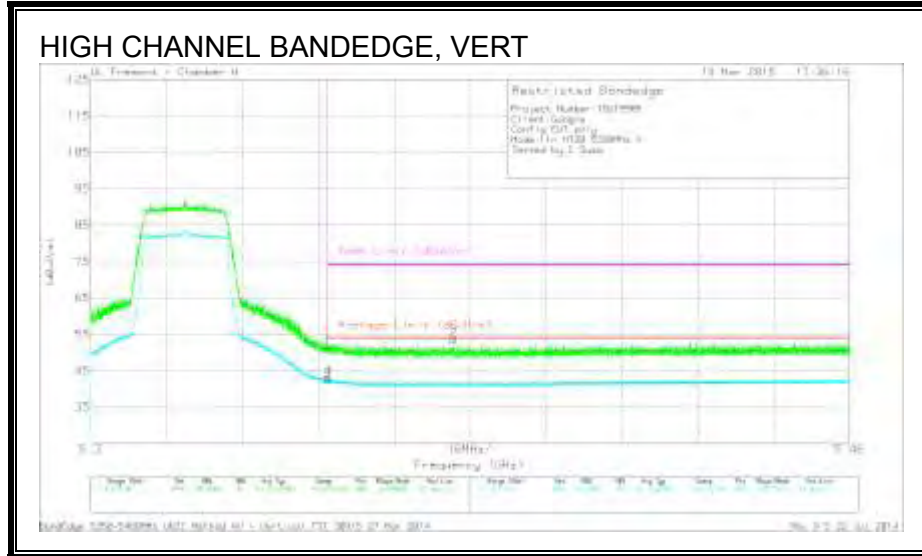


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	41.61	PK	34.9	-22.7	0	53.81	-	-	74	-20.19	176	220	H
2	* 5.351	45.85	PK	34.9	-22.7	0	58.05	-	-	74	-15.95	176	220	H
5	* 5.377	44.71	PK	34.9	-22.7	0	56.91	-	-	74	-17.09	176	220	H
3	* 5.35	33.04	RMS	34.9	-22.7	.11	45.35	54	-8.65	-	-	176	220	H
4	* 5.35	33.45	RMS	34.9	-22.7	.11	45.76	54	-8.24	-	-	176	220	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	38.81	PK	34.9	-22.7	0	51.01	-	-	74	-22.99	67	154	V
3	* 5.35	30.12	RMS	34.9	-22.7	.11	42.43	54	-11.57	-	-	67	154	V
4	* 5.35	30.68	RMS	34.9	-22.7	.11	42.99	54	-11.01	-	-	67	154	V
2	* 5.377	41.43	PK	34.9	-22.7	0	53.63	-	-	74	-20.37	67	154	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Chl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 12.467	36.18	PK1	39.1	-25.6	0	49.68	-	-	74	-24.32	-	-	234	231	H
	* 12.467	25.31	AD1	39.1	-25.6	.11	38.92	54	-15.08	-	-	-	-	234	231	H
6	* 12.418	36.2	PK1	39.1	-25.5	0	49.8	-	-	74	-24.2	-	-	178	210	V
	* 12.417	25.19	AD1	39.1	-25.4	.11	39	54	-15	-	-	-	-	178	210	V
2	3.132	41.44	PK1	32.9	-32.7	0	41.64	-	-	-	-	68.2	-26.56	190	246	V
1	3.139	41.3	PK1	32.9	-32.8	0	41.4	-	-	-	-	68.2	-26.8	277	217	H
4	5.969	42.81	PK1	35.2	-22.2	0	55.81	-	-	-	-	68.2	-12.39	162	280	V
3	5.975	42.42	PK1	35.2	-22.2	0	55.42	-	-	-	-	68.2	-12.78	202	252	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.115	44.78	PK1	28.3	-35.6	0	37.48	-	-	74	-36.52	-	-	54	131	H
	* 1.115	34.82	AD1	28.3	-35.6	.11	27.63	54	-26.37	-	-	-	-	54	131	H
2	* 1.142	43.05	PK1	28.4	-35.6	0	35.85	-	-	74	-38.15	-	-	116	188	H
	* 1.143	31.45	AD1	28.4	-35.6	.11	24.36	54	-29.64	-	-	-	-	116	188	H
3	* 1.115	44.76	PK1	28.3	-35.6	0	37.46	-	-	74	-36.54	-	-	113	388	V
	* 1.115	35.01	AD1	28.3	-35.6	.11	27.82	54	-26.18	-	-	-	-	113	388	V
4	* 1.169	43.82	PK1	28.6	-35.6	0	36.82	-	-	74	-37.18	-	-	152	352	V
	* 1.17	32.78	AD1	28.6	-35.6	.11	25.89	54	-28.11	-	-	-	-	152	352	V
6	13.973	36.48	PK1	39.2	-25.9	0	49.78	-	-	-	-	68.2	-18.42	211	240	V
5	13.978	36.32	PK1	39.2	-26	0	49.52	-	-	-	-	68.2	-18.68	243	264	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.143	35.58	PK	28.4	-35.6	0	28.38	-	-	74	-45.62	-	-	0-360	201	H
2	* 1.224	35.97	PK	28.9	-35.5	0	29.37	-	-	74	-44.63	-	-	0-360	100	H
3	* 1.115	37.16	PK	28.3	-35.6	0	29.86	-	-	74	-44.14	-	-	0-360	201	V
4	* 1.143	37.03	PK	28.4	-35.6	0	29.83	-	-	74	-44.17	-	-	0-360	201	V
5	2.461	35.77	PK	32.1	-34.3	0	33.57	-	-	-	-	68.2	-34.63	0-360	201	V
6	13.746	29.65	PK	39.1	-25.7	0	43.05	-	-	-	-	68.2	-25.15	0-360	100	H

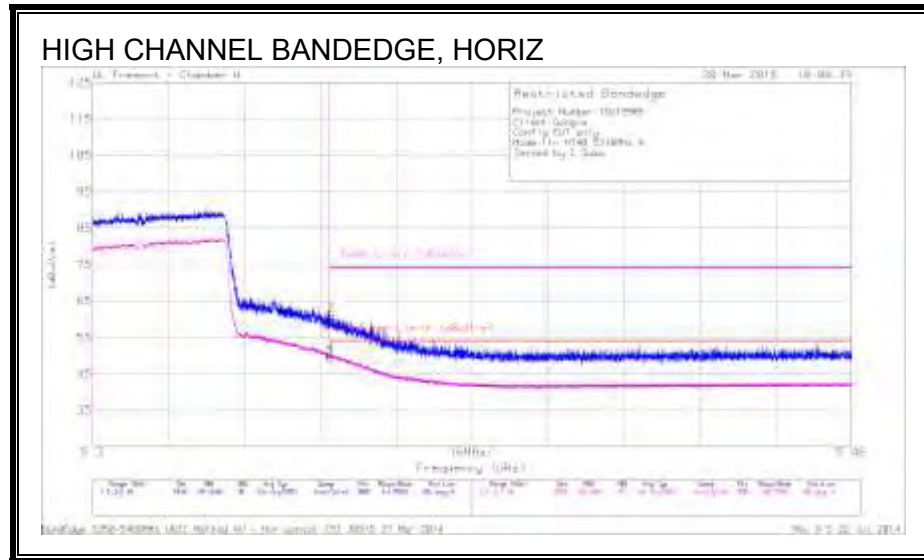
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.8. 802.11n HT40 MODE IN THE 5.3 GHz BAND

AUTHORIZED BANDEDGE (HIGH CHANNEL)

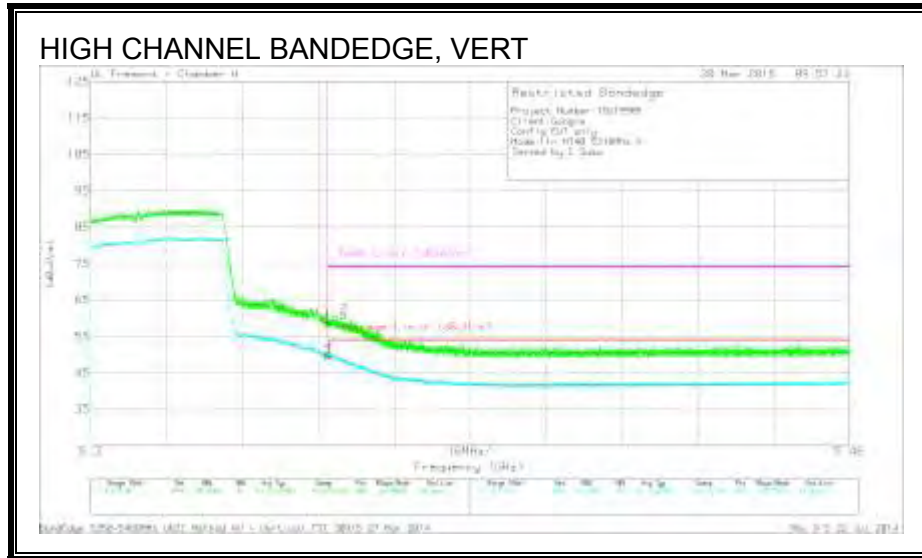


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	46.44	PK	34.9	-22.7	0	58.64	-	-	74	-15.36	106	320	H
2	* 5.35	48.81	PK	34.9	-22.7	0	61.01	-	-	74	-12.99	106	320	H
3	* 5.35	36.66	RMS	34.9	-22.7	.22	49.08	54	-4.92	-	-	106	320	H
4	* 5.35	37.78	RMS	34.9	-22.7	.22	50.2	54	-3.8	-	-	106	320	H

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	46.51	PK	34.9	-22.7	0	58.71	-	-	74	-15.29	69	358	V
3	* 5.35	37.29	RMS	34.9	-22.7	.22	49.71	54	-4.29	-	-	69	358	V
4	* 5.35	37.79	RMS	34.9	-22.7	.22	50.21	54	-3.79	-	-	69	358	V
2	* 5.353	48.54	PK	34.9	-22.7	0	60.74	-	-	74	-13.26	69	358	V

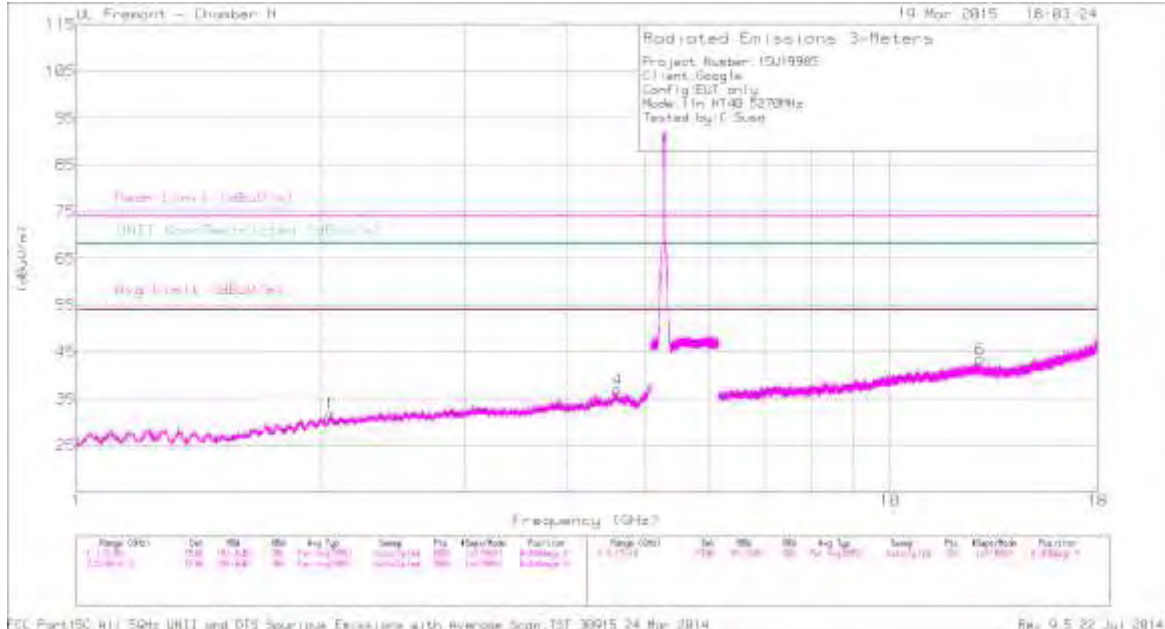
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

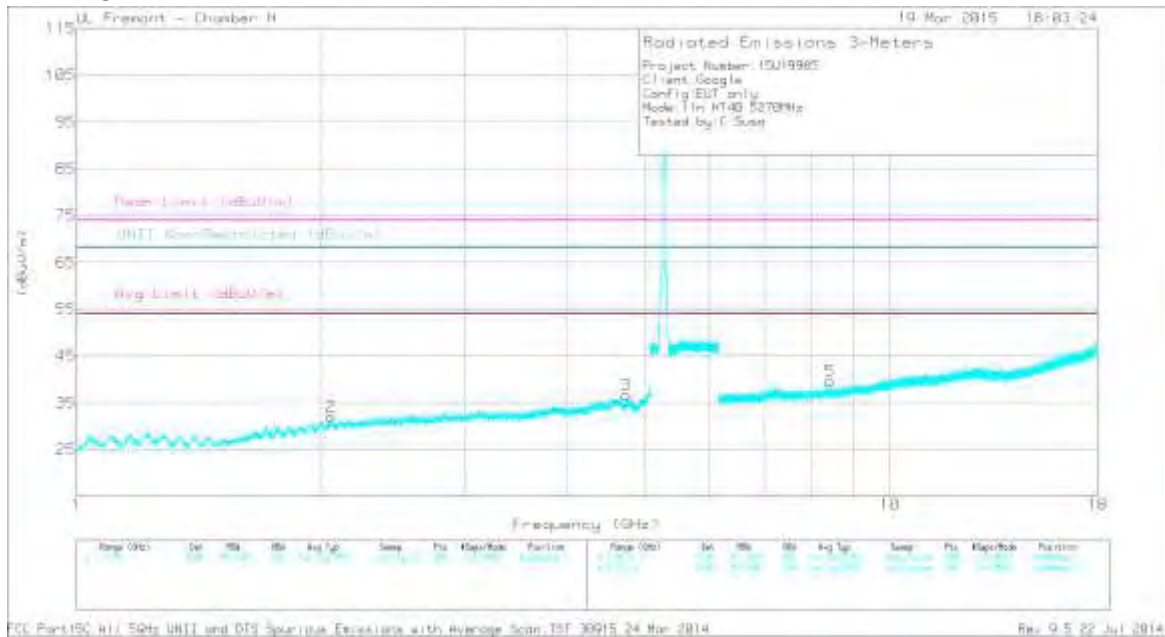
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.62	41.56	PK1	34.1	-31.9	0	43.76	-	-	74	-30.24	-	-	175	228	H
	* 4.622	30.34	AD1	34.1	-31.9	.22	32.76	54	-21.24	-	-	-	-	175	228	H
3	* 4.744	41.28	PK1	34.3	-31.7	0	43.88	-	-	74	-30.12	-	-	201	246	V
	* 4.745	29.73	AD1	34.3	-31.7	.22	32.55	54	-21.45	-	-	-	-	201	246	V
5	* 8.445	38.37	PK1	36.1	-29.1	0	45.37	-	-	74	-28.63	-	-	278	266	V
	* 8.446	27.54	AD1	36.1	-29.1	.22	34.76	54	-19.24	-	-	-	-	278	266	V
1	2.053	42.85	PK1	31.4	-34.4	0	39.85	-	-	-	-	68.2	-28.35	119	211	H
2	2.056	42.17	PK1	31.4	-34.4	0	39.17	-	-	-	-	68.2	-29.03	239	226	V
6	12.92	35.56	PK1	39.2	-24.8	0	49.96	-	-	-	-	68.2	-18.24	244	232	H

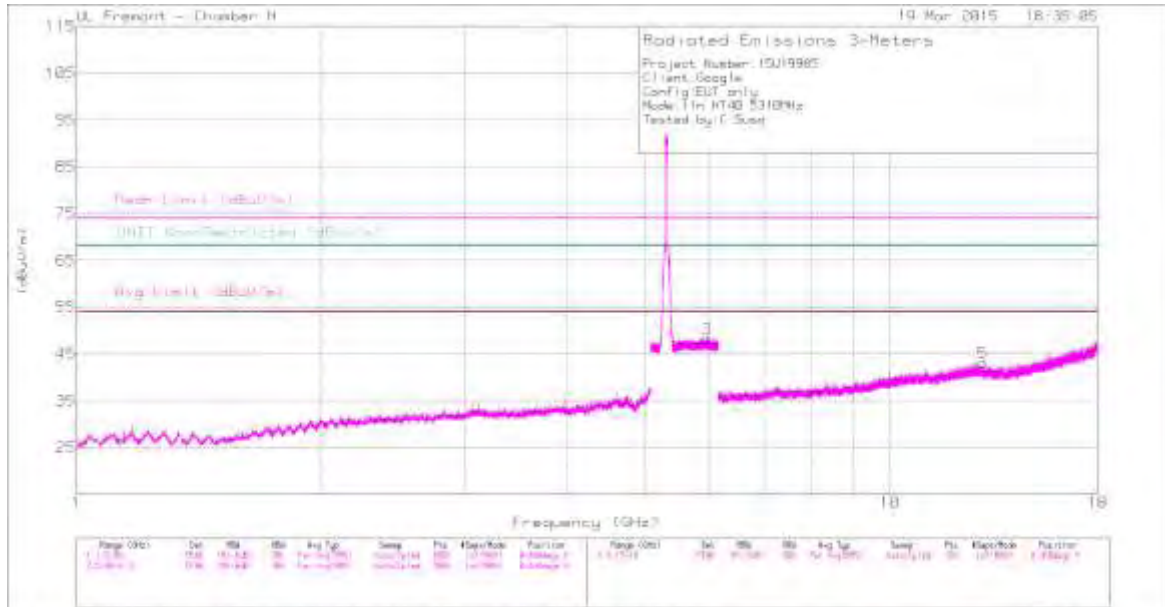
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL

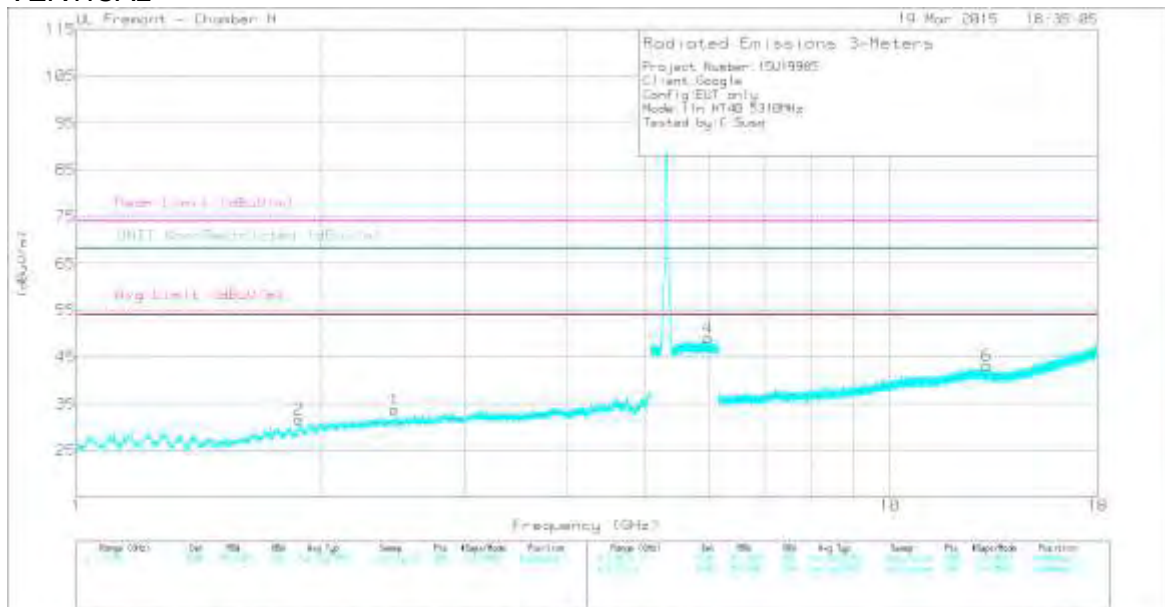
HORIZONTAL



FCC Part 15C, 411 5GHz UNII and DTS Spurious Emissions with Average Scan, TSF 30915, 24 Mar 2014

Rev: 9.5 22 Jul 2014

VERTICAL



FCC Part 15C, 411 5GHz UNII and DTS Spurious Emissions with Average Scan, TSF 30915, 24 Mar 2014

Rev: 9.5 22 Jul 2014

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	1.877	42.97	PK1	30.5	-34.8	0	38.67	-	-	-	-	68.2	-29.53	154	257	V
1	2.462	41.58	PK1	32.1	-34.3	0	39.38	-	-	-	-	68.2	-28.82	256	191	V
3	5.96	42.48	PK1	35.2	-22.2	0	55.48	-	-	-	-	68.2	-12.72	108	229	H
4	5.973	43.07	PK1	35.2	-22.2	0	56.07	-	-	-	-	68.2	-12.13	178	258	V
5	13.004	35.94	PK1	39.2	-25.9	0	49.24	-	-	-	-	68.2	-18.96	288	237	H
6	13.166	36.37	PK1	39.1	-25.8	0	49.67	-	-	-	-	68.2	-18.53	351	249	V

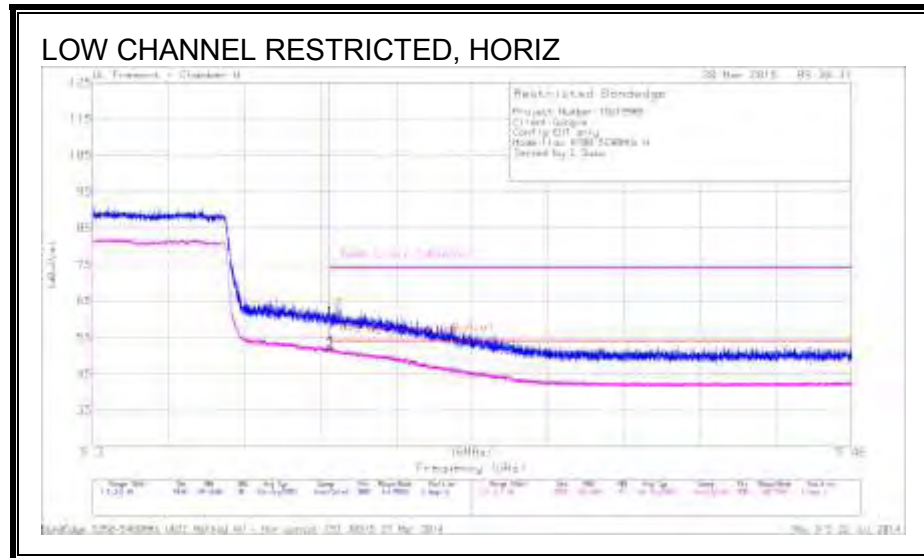
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.9. 802.11ac HT80 MODE IN THE 5.3 GHz BAND

RESTRICTED BANDEDGE (HIGH CHANNEL)

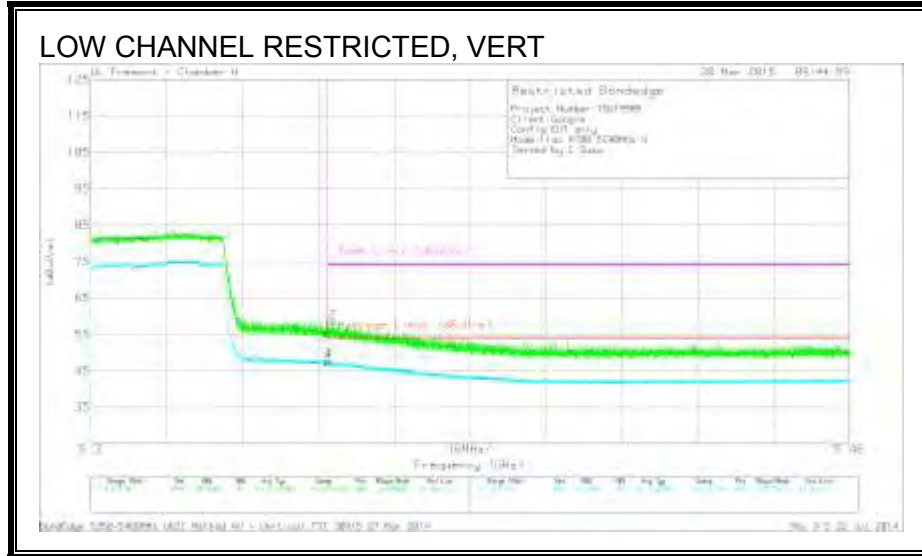


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	48.17	PK	34.9	-22.7	0	60.37	-	-	74	-13.63	6	331	H
2	* 5.352	50.31	PK	34.9	-22.7	0	62.51	-	-	74	-11.49	6	331	H
3	* 5.35	39.3	RMS	34.9	-22.7	.42	51.92	54	-2.08	-	-	6	331	H
4	* 5.35	39.77	RMS	34.9	-22.7	.42	52.39	54	-1.61	-	-	6	331	H

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

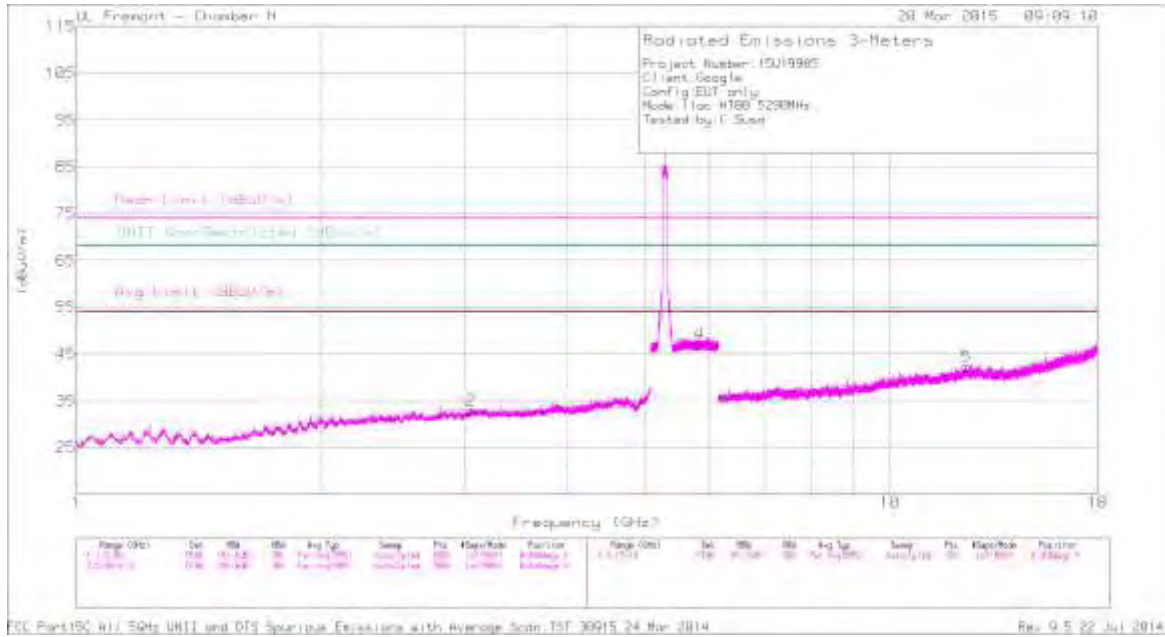
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.35	43.14	PK	34.9	-22.7	0	55.34	-	-	74	-18.66	61	329	V
3	* 5.35	35.12	RMS	34.9	-22.7	.42	47.74	54	-6.26	-	-	61	329	V
4	* 5.35	35.04	RMS	34.9	-22.7	.42	47.66	54	-6.34	-	-	61	329	V
2	* 5.351	46.24	PK	34.9	-22.7	0	58.44	-	-	74	-15.56	61	329	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

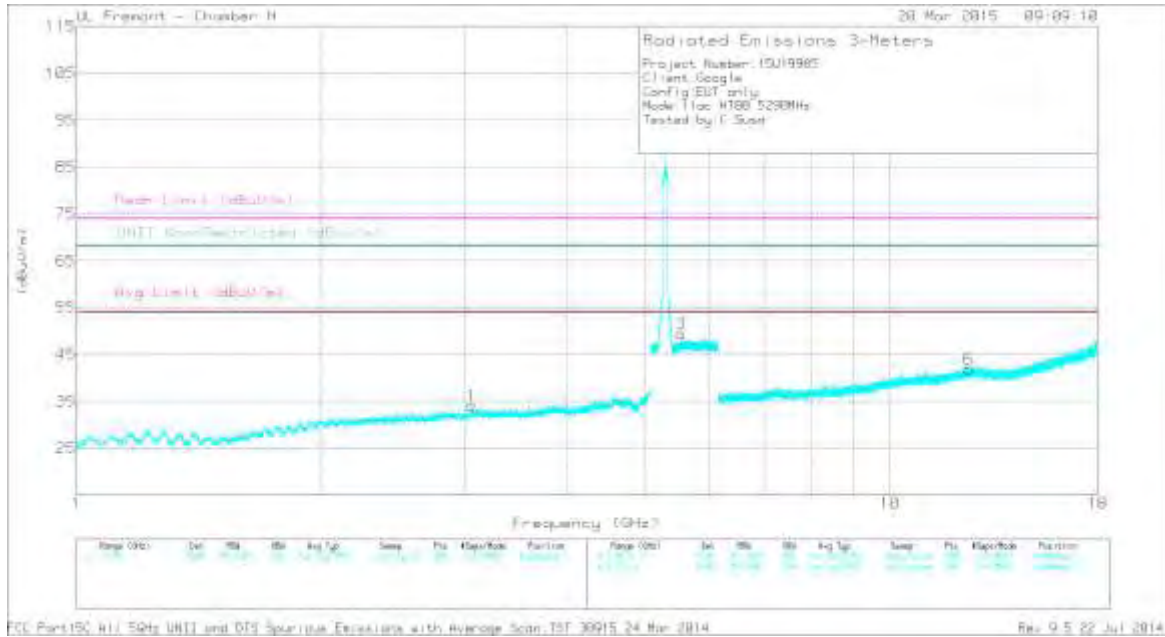
PK - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 12.406	28.48	PK	39.1	-25.3	0	42.28	-	-	74	-31.72	-	-	0-360	100	H
6	* 12.506	28.68	PK	39.1	-25.8	0	41.98	-	-	74	-32.02	-	-	0-360	100	V
2	3.057	33.32	PK	32.8	-33.2	0	32.92	-	-	-	-	68.2	-35.28	0-360	201	H
1	3.057	34.58	PK	32.8	-33.2	0	34.18	-	-	-	-	68.2	-34.02	0-360	201	V
3	5.534	36.72	PK	35.1	-22.4	0	49.42	-	-	-	-	68.2	-18.78	0-360	201	V
4	5.824	34.43	PK	35.1	-22.3	0	47.23	-	-	-	-	68.2	-20.97	0-360	201	H

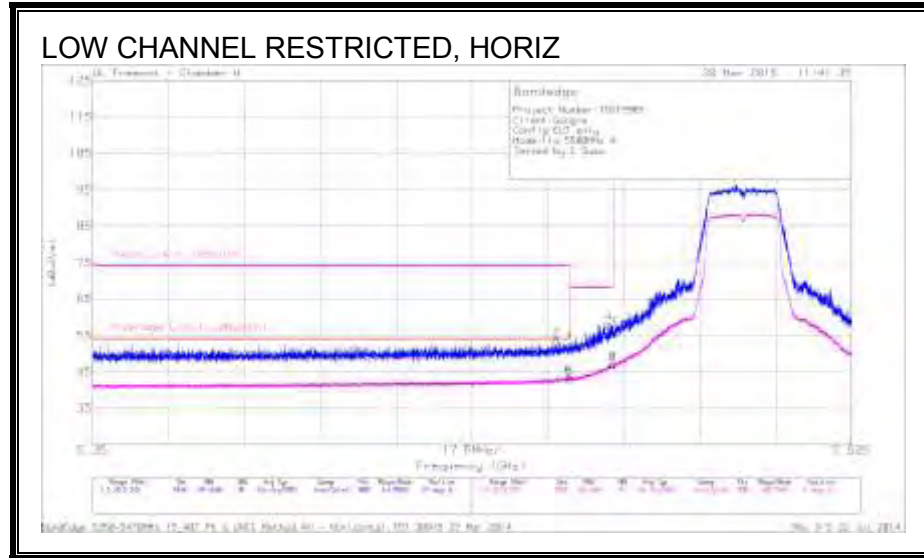
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.10. 802.11a MODE IN THE 5.6 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

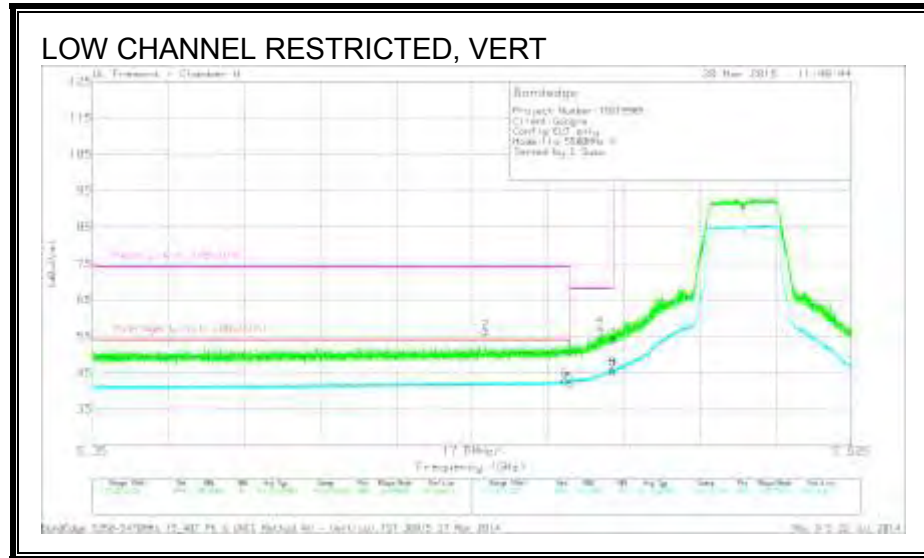


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.457	40.96	PK	35	-22.5	0	53.46	-	-	74	-20.54	37	317	H
1	* 5.46	40.09	PK	35	-22.5	0	52.59	-	-	74	-21.41	37	317	H
5	* 5.46	30.35	RMS	35	-22.5	.11	42.96	54	-11.04	-	-	37	317	H
6	* 5.46	30.93	RMS	35	-22.5	.11	43.54	54	-10.46	-	-	37	317	H
4	5.469	45.57	PK	35.1	-22.4	0	58.27	-	-	68.2	-9.93	37	317	H
3	5.47	44.05	PK	35.1	-22.4	0	56.75	-	-	68.2	-11.45	37	317	H
7	5.47	34.19	RMS	35.1	-22.4	.11	47	-	-	-	-	37	317	H
8	5.47	34.12	RMS	35.1	-22.4	.11	46.93	-	-	-	-	37	317	H

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



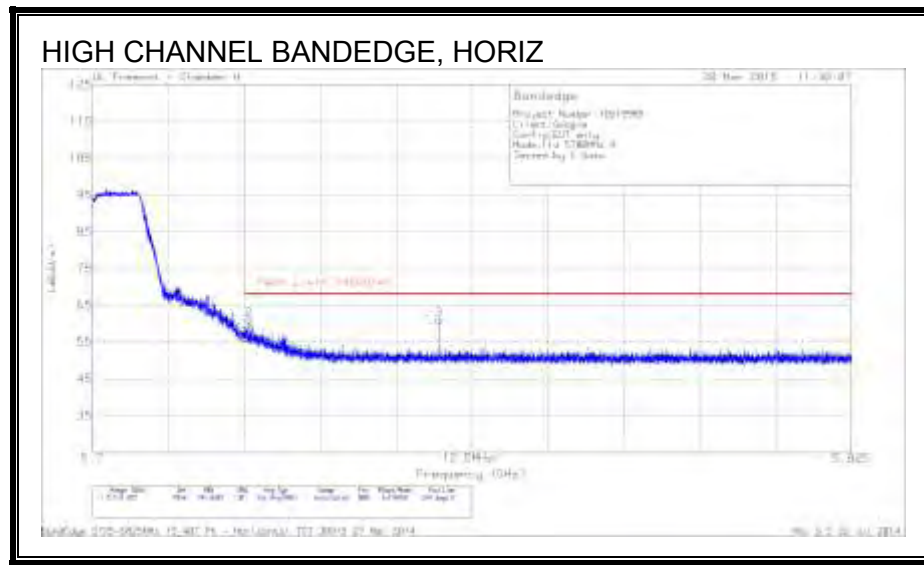
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.441	43.75	PK	35	-22.5	0	56.25	-	-	74	-17.75	235	280	V
6	* 5.459	30.33	RMS	35	-22.5	.11	42.94	54	-11.06	-	-	235	280	V
1	* 5.46	38.38	PK	35	-22.5	0	50.88	-	-	74	-23.12	235	280	V
5	* 5.46	29.26	RMS	35	-22.5	.11	41.87	54	-12.13	-	-	235	280	V
4	5.467	44.83	PK	35	-22.4	0	57.43	-	-	68.2	-10.77	235	280	V
3	5.47	41.42	PK	35.1	-22.4	0	54.12	-	-	68.2	-14.08	235	280	V
7	5.47	32.35	RMS	35.1	-22.4	.11	45.16	-	-	-	-	235	280	V
8	5.47	33.12	RMS	35.1	-22.4	.11	45.93	-	-	-	-	235	280	V

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

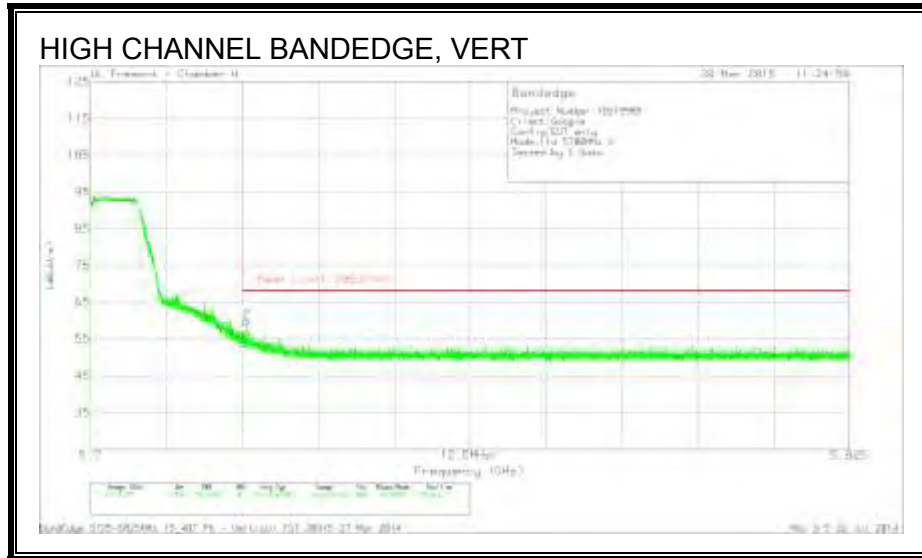


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	43.5	PK	35	-22.4	0	56.1	68.2	-12.1	244	289	H
2	5.726	48.61	PK	35	-22.4	0	61.21	68.2	-6.99	244	289	H
3	5.757	48.43	PK	35	-22.3	0	61.13	68.2	-7.07	244	289	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	41.38	PK	35	-22.4	0	53.98	68.2	-14.22	50	344	V
2	5.726	47.24	PK	35	-22.4	0	59.84	68.2	-8.36	50	344	V

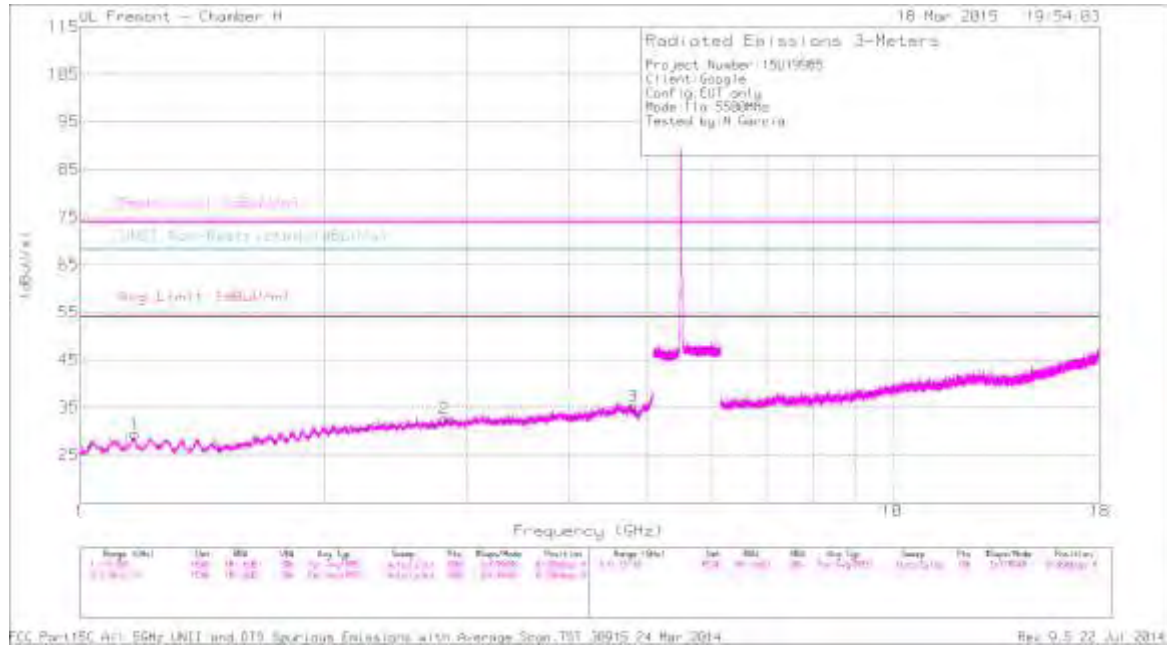
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

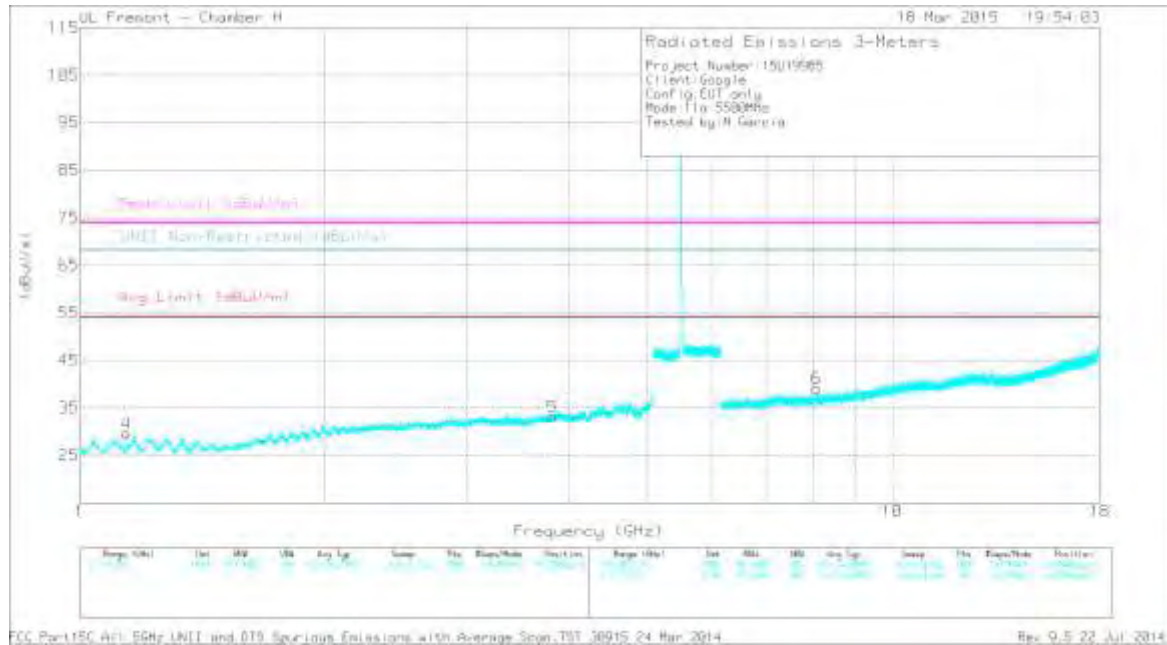
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

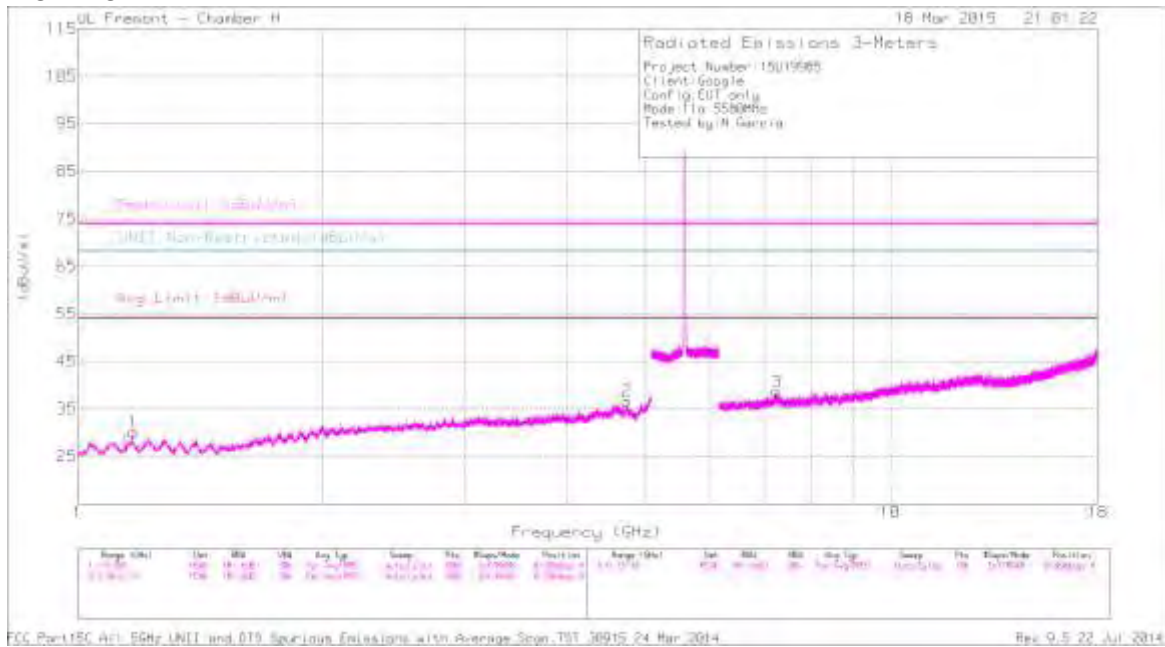
Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.169	43.03	PK1	28.6	-35.6	0	36.03	-	-	74	-37.97	-	-	64	126	H
	* 1.169	32	AD1	28.6	-35.6	.11	25.11	54	-28.89	-	-	-	-	64	126	H
2	* 2.808	41.21	PK1	32.4	-33.1	0	40.51	-	-	74	-33.49	-	-	25	135	H
	* 2.807	29.7	AD1	32.4	-33.1	.11	29.11	54	-24.89	-	-	-	-	25	135	H
3	* 4.795	41.03	PK1	34.3	-32.1	0	43.23	-	-	74	-30.77	-	-	77	114	H
	* 4.796	30.08	AD1	34.3	-32.1	.11	32.39	54	-21.61	-	-	-	-	77	114	H
4	* 1.144	41.64	PK1	28.4	-35.6	0	34.44	-	-	74	-39.56	-	-	62	131	V
	* 1.143	30.98	AD1	28.4	-35.6	.11	23.89	54	-30.11	-	-	-	-	62	131	V
5	* 3.822	41.25	PK1	33.3	-32.7	0	41.85	-	-	74	-32.15	-	-	81	112	V
	* 3.822	30.26	AD1	33.3	-32.7	.11	30.97	54	-23.03	-	-	-	-	81	112	V
6	* 8.075	37.65	PK1	36	-28.1	0	45.55	-	-	74	-28.45	-	-	34	112	V
	* 8.076	27.07	AD1	36	-28.1	.11	35.08	54	-18.92	-	-	-	-	34	112	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

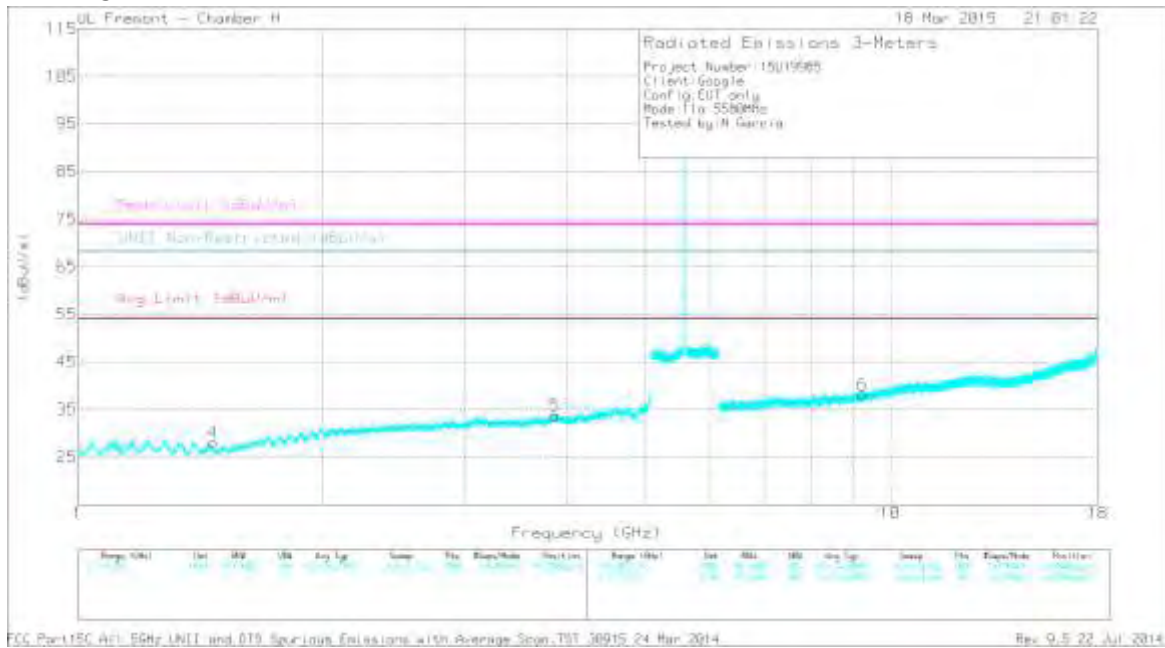
PK1 - KDB789033 Method: Peak
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.171	43.92	PK1	28.6	-35.6	0	36.92	-	-	74	-37.08	-	-	29	138	H
	* 1.167	32.11	AD1	28.6	-35.5	.11	25.32	54	-28.68	-	-	-	-	29	138	H
2	* 4.742	41.3	PK1	34.3	-31.6	0	44	-	-	74	-30	-	-	35	121	H
	* 4.744	30.04	AD1	34.3	-31.7	.11	32.75	54	-21.25	-	-	-	-	35	121	H
3	7.247	38.23	PK1	36.2	-28.9	0	45.53	-	-	-	-	68.2	-22.67	53	114	H
4	* 1.47	42.34	PK1	27.9	-34.9	0	35.34	-	-	74	-38.66	-	-	40	140	V
	* 1.467	31	AD1	27.9	-34.8	.11	24.21	54	-29.79	-	-	-	-	40	140	V
5	* 3.866	40.81	PK1	33.3	-32.7	0	41.41	-	-	74	-32.59	-	-	24	124	V
	* 3.866	30.26	AD1	33.3	-32.7	.11	30.97	54	-23.03	-	-	-	-	24	124	V
6	9.238	37.1	PK1	36.6	-27.5	0	46.2	-	-	-	-	68.2	-22	0	100	V

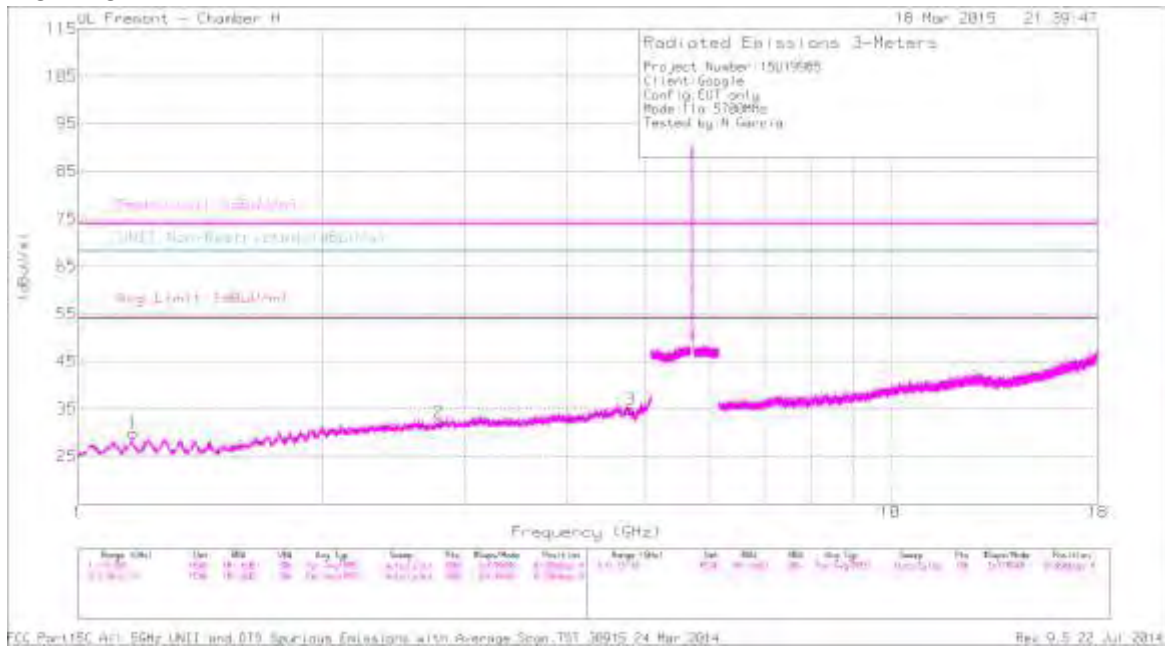
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

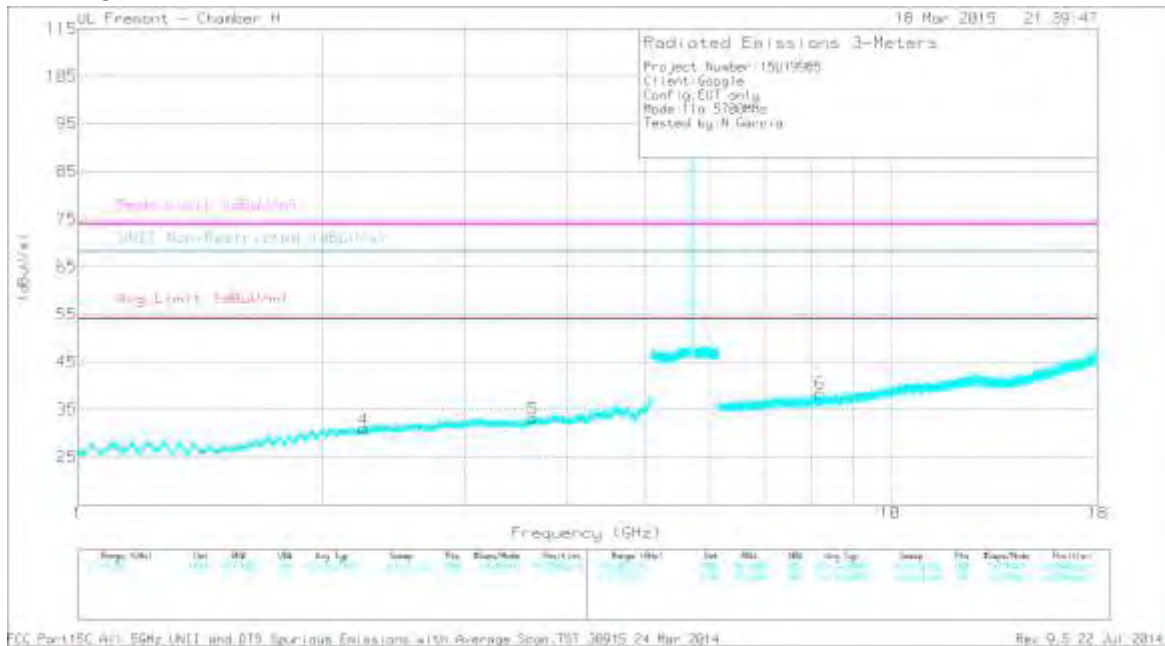
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.169	36.9	PK	28.6	-35.6	0	29.9	-	-	74	-44.1	-	-	0-360	100	H
2	* 2.786	33.38	PK	32.4	-33.6	0	32.18	-	-	74	-41.82	-	-	0-360	201	H
3	* 4.795	32.73	PK	34.3	-32.1	0	34.93	-	-	74	-39.07	-	-	0-360	100	H
4	* 2.248	33.51	PK	31.7	-34.3	0	30.91	-	-	74	-43.09	-	-	0-360	201	V
5	* 3.634	32.53	PK	33	-32.4	0	33.13	-	-	74	-40.87	-	-	0-360	100	V
6	* 8.191	31.61	PK	36.1	-29.3	0	38.41	-	-	74	-35.59	-	-	0-360	201	V

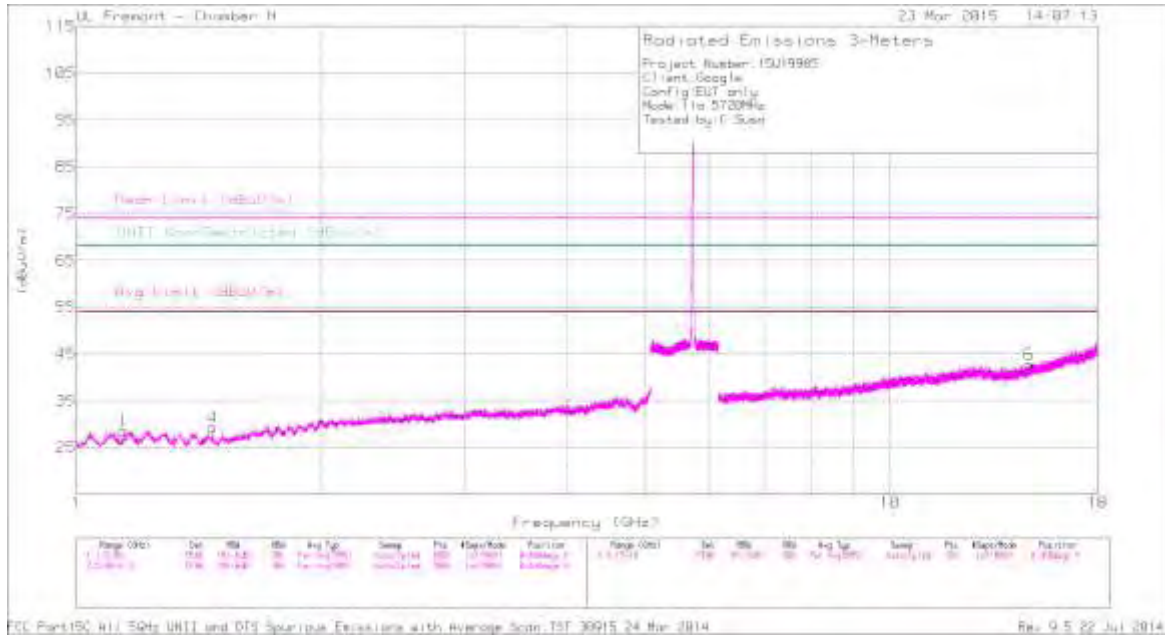
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

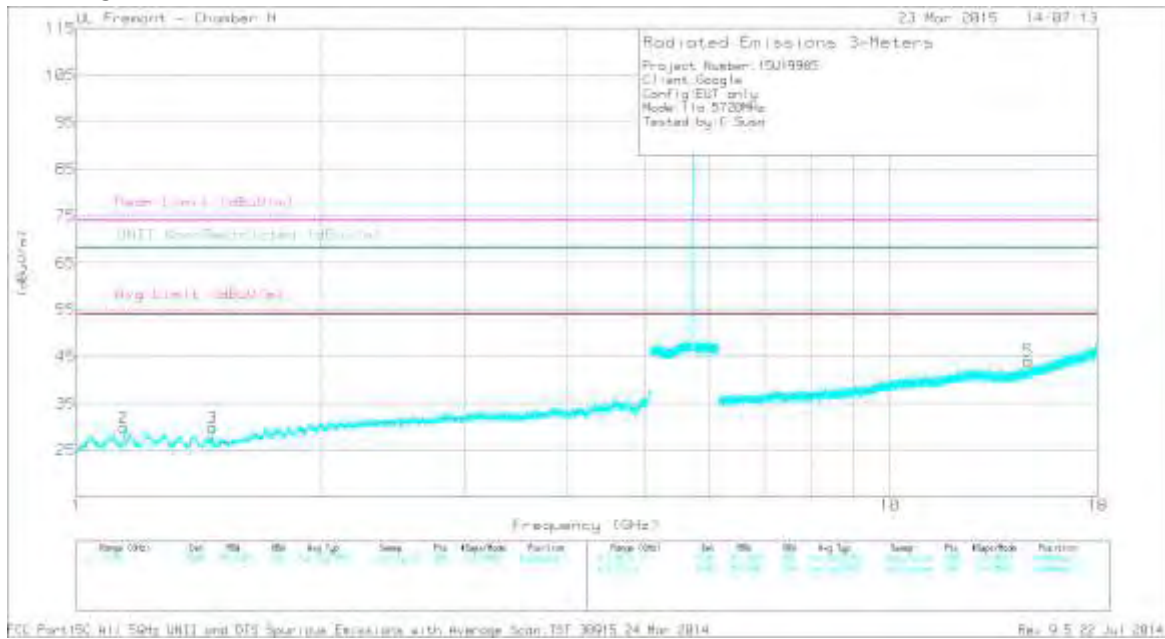
AD1 - KDB789033 Method: AD Primary Power Average

STRADDLE CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Chl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.142	44.73	PK1	28.4	-35.6	0	37.53	-	-	74	-36.47	-	-	242	217	H
	* 1.142	35.23	AD1	28.4	-35.6	.11	28.14	54	-25.86	-	-	-	-	242	217	H
4	* 1.469	43.97	PK1	27.9	-34.9	0	36.97	-	-	74	-37.03	-	-	333	104	H
	* 1.469	33.94	AD1	27.9	-34.9	.11	27.05	54	-26.95	-	-	-	-	333	104	H
2	* 1.142	44.68	PK1	28.4	-35.6	0	37.48	-	-	74	-36.52	-	-	256	333	V
	* 1.142	35.39	AD1	28.4	-35.6	.11	28.3	54	-25.7	-	-	-	-	256	333	V
3	* 1.469	44.44	PK1	27.9	-34.9	0	37.44	-	-	74	-36.56	-	-	286	302	V
	* 1.469	34.68	AD1	27.9	-34.9	.11	27.79	54	-26.21	-	-	-	-	286	302	V
5	14.805	35.76	PK1	40.3	-26.7	0	49.36	-	-	-	-	68.2	-18.84	8	175	V
6	14.814	35.8	PK1	40.3	-26.6	0	49.5	-	-	-	-	68.2	-18.7	162	263	H

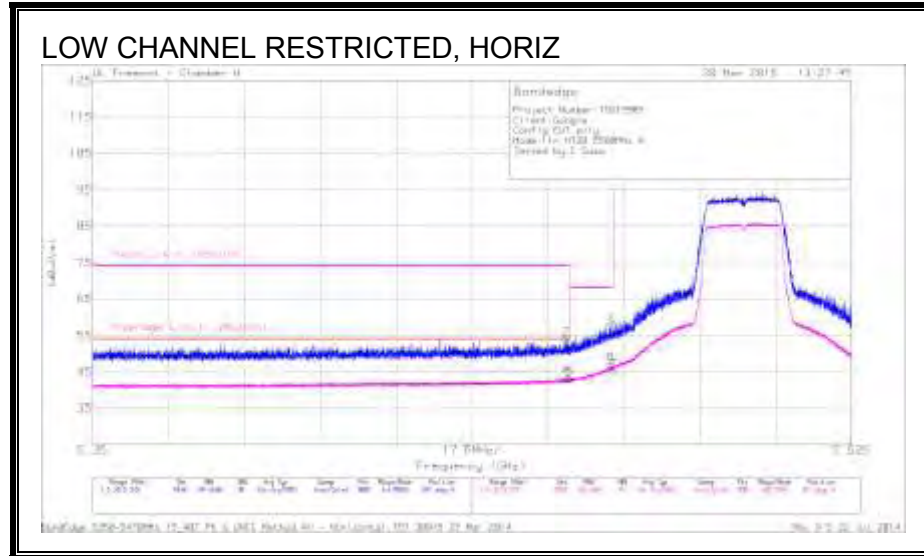
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.11. 802.11n HT20 MODE IN THE 5.6 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

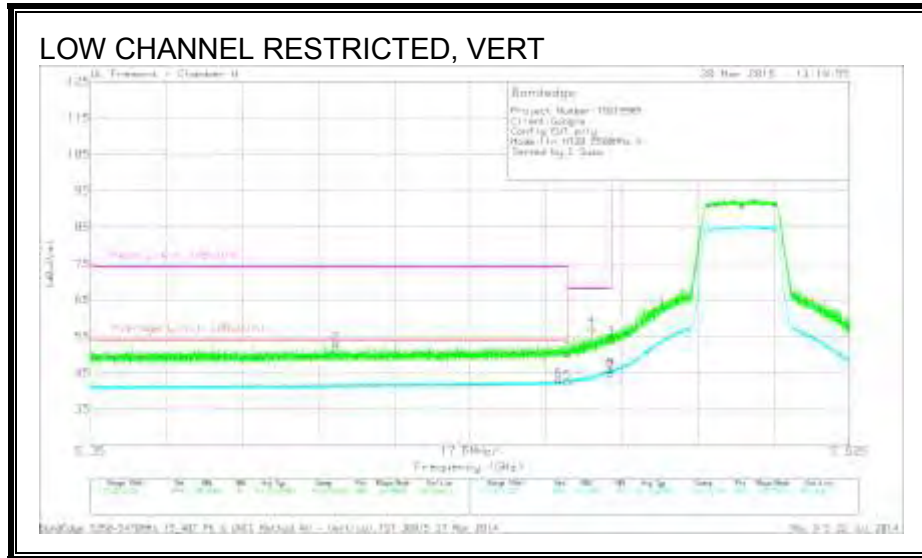


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.459	41.58	PK	35	-22.5	0	54.08	-	-	74	-19.92	297	112	H
1	* 5.46	38.43	PK	35	-22.5	0	50.93	-	-	74	-23.07	297	112	H
5	* 5.46	30.43	RMS	35	-22.5	.11	43.04	54	-10.96	-	-	297	112	H
6	* 5.46	30.55	RMS	35	-22.5	.11	43.16	54	-10.84	-	-	297	112	H
4	5.469	45.19	PK	35.1	-22.4	0	57.89	-	-	68.2	-10.31	297	112	H
8	5.469	34.11	RMS	35.1	-22.4	.11	46.92	-	-	-	-	297	112	H
3	5.47	43	PK	35.1	-22.4	0	55.7	-	-	68.2	-12.5	297	112	H
7	5.47	32.35	RMS	35.1	-22.4	.11	45.16	-	-	-	-	297	112	H

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



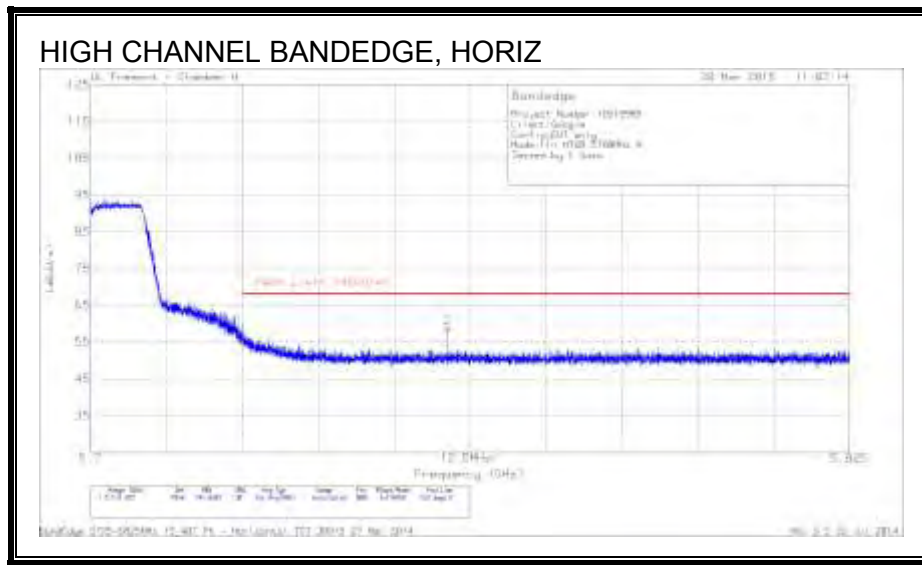
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.407	40.47	PK	35	-22.5	0	52.97	-	-	74	-21.03	262	226	V
6	* 5.458	30.43	RMS	35	-22.5	.11	43.04	54	-10.96	-	-	262	226	V
1	* 5.46	37.82	PK	35	-22.5	0	50.32	-	-	74	-23.68	262	226	V
5	* 5.46	29.86	RMS	35	-22.5	.11	42.47	54	-11.53	-	-	262	226	V
4	5.466	44.82	PK	35	-22.4	0	57.42	-	-	68.2	-10.78	262	226	V
3	5.47	41.86	PK	35.1	-22.4	0	54.56	-	-	68.2	-13.64	262	226	V
7	5.47	32.24	RMS	35.1	-22.4	.11	45.05	-	-	-	-	262	226	V
8	5.47	33.02	RMS	35.1	-22.4	.11	45.83	-	-	-	-	262	226	V

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

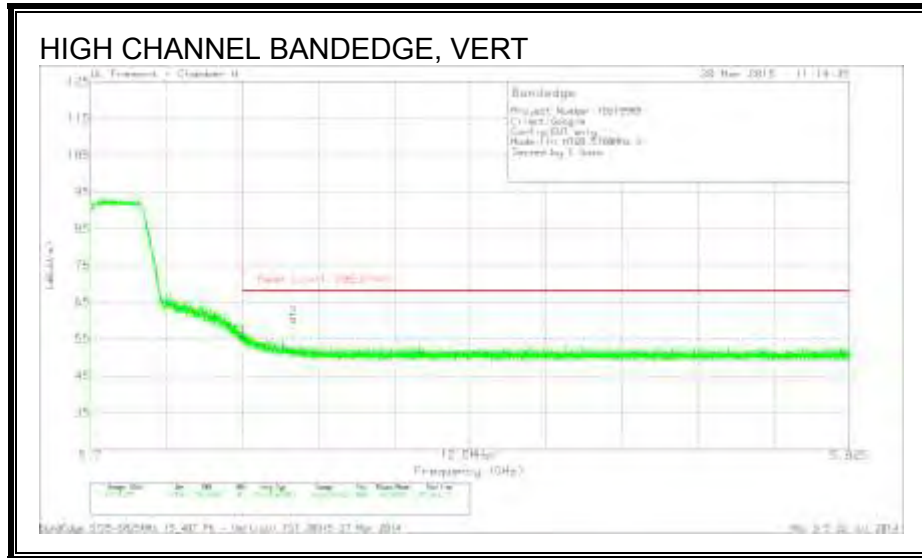


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	42.64	PK	35	-22.4	0	55.24	68.2	-12.96	163	260	H
2	5.759	46.15	PK	35	-22.2	0	58.95	68.2	-9.25	163	260	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBUV)	Det	AF T863 (dB/m)	Amp/Cb/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBUV/m)	Peak Limit (dBUV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	42.79	PK	35	-22.4	0	55.39	68.2	-12.81	45	344	V
2	5.733	48.01	PK	35	-22.4	0	60.61	68.2	-7.59	45	344	V

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.469	36.09	PK	27.9	-34.9	0	29.09	-	-	74	-44.91	-	-	0-360	100	H
2	* 4.361	34.05	PK	33.7	-31.5	0	36.25	-	-	74	-37.75	-	-	0-360	100	V
6	* 10.772	29.07	PK	37.6	-24.9	0	41.77	-	-	74	-32.23	-	-	0-360	100	V
3	6.047	35.31	PK	35.2	-22	0	48.51	-	-	-	-	68.2	-19.69	0-360	201	H
4	6.14	34.6	PK	35.3	-22.1	0	47.8	-	-	-	-	68.2	-20.4	0-360	201	V
5	12.812	29.43	PK	39.3	-25.3	0	43.43	-	-	-	-	68.2	-24.77	0-360	201	H

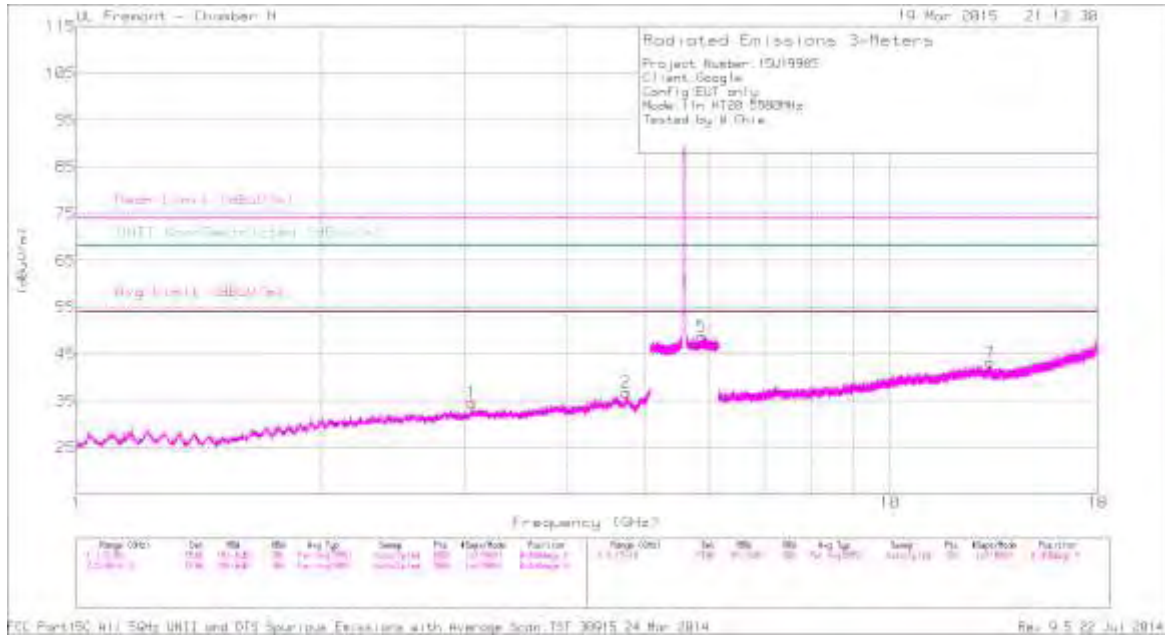
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

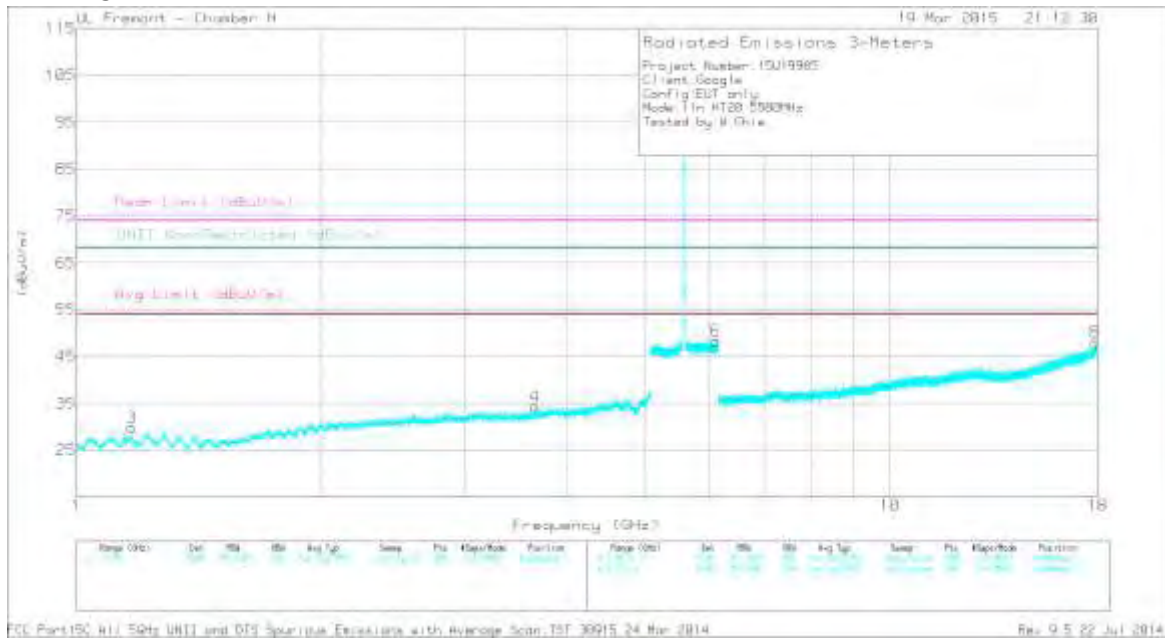
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.742	40	PK1	34.3	-31.6	0	42.7	-	-	74	-31.3	-	-	89	164	H
	* 4.74	29.15	AD1	34.3	-31.6	.11	31.96	54	-22.04	-	-	-	-	89	164	H
3	* 1.171	44.8	PK1	28.6	-35.6	0	37.8	-	-	74	-36.2	-	-	248	336	V
	* 1.17	33.87	AD1	28.6	-35.6	.11	26.98	54	-27.02	-	-	-	-	248	336	V
4	* 3.659	41.35	PK1	33.1	-32.4	0	42.05	-	-	74	-31.95	-	-	107	183	V
	* 3.661	29.66	AD1	33.1	-32.4	.11	30.47	54	-23.53	-	-	-	-	107	183	V
7	* 13.284	35.76	PK1	39.1	-25.2	0	49.66	-	-	74	-24.34	-	-	119	210	H
	* 13.283	24.87	AD1	39.1	-25.2	.11	38.88	54	-15.12	-	-	-	-	119	210	H
8	* 17.871	34.57	PK1	42.4	-21.7	0	55.27	-	-	74	-18.73	-	-	96	176	V
	* 17.871	23	AD1	42.4	-21.7	.11	43.81	54	-10.19	-	-	-	-	96	176	V
1	3.062	41.85	PK1	32.8	-33.1	0	41.55	-	-	-	-	68.2	-26.65	137	238	H
5	5.86	43.17	PK1	35.1	-22.2	0	56.07	-	-	-	-	68.2	-12.13	331	119	H
6	6.105	42.26	PK1	35.3	-22	0	55.56	-	-	-	-	68.2	-12.64	167	370	V

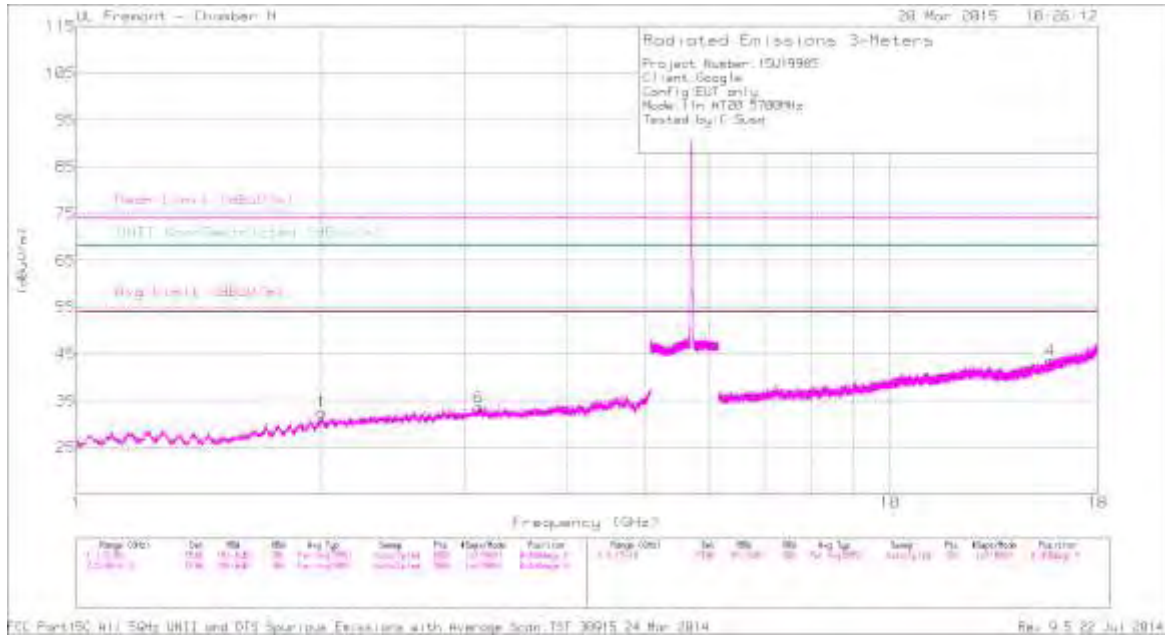
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

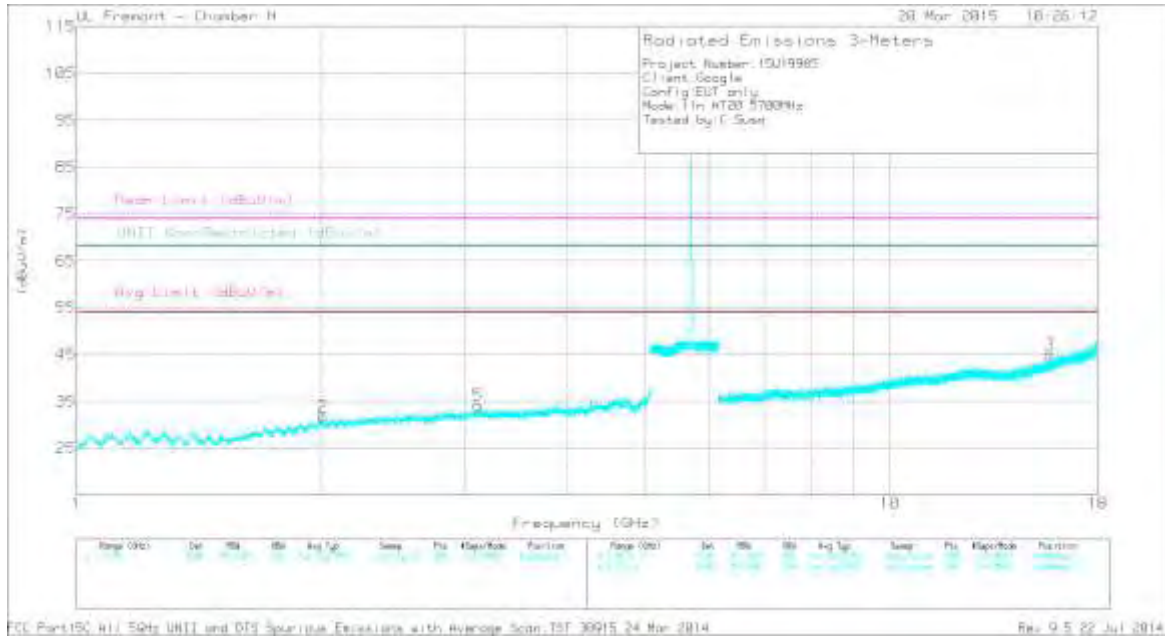
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 15.728	35.15	PK1	41	-25	0	51.15	-	-	74	-22.85	-	-	218	276	H
	* 15.728	24.29	AD1	41	-25	.11	40.4	54	-13.6	-	-	-	-	218	276	H
3	* 15.72	35.27	PK1	41	-25	0	51.27	-	-	74	-22.73	-	-	249	231	V
	* 15.719	24.73	AD1	41	-25	.11	40.84	54	-13.16	-	-	-	-	249	231	V
1	2.002	43.08	PK1	31.3	-34.5	0	39.88	-	-	-	-	68.2	-28.32	123	158	H
2	2.006	42.42	PK1	31.3	-34.5	0	39.22	-	-	-	-	68.2	-28.98	197	209	V
5	3.115	40.76	PK1	32.8	-32.5	0	41.06	-	-	-	-	68.2	-27.14	344	323	V
6	3.118	41.11	PK1	32.8	-32.5	0	41.41	-	-	-	-	68.2	-26.79	173	281	H

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Ch/Fl tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.169	44.49	PK1	28.6	-35.6	0	37.49	-	-	74	-36.51	-	-	52	216	H
	* 1.17	34.28	AD1	28.6	-35.6	.11	27.39	54	-26.61	-	-	-	-	52	216	H
4	* 4.736	41.34	PK1	34.3	-31.5	0	44.14	-	-	74	-29.86	-	-	62	358	H
	* 4.734	29.28	AD1	34.3	-31.5	.11	32.19	54	-21.81	-	-	-	-	62	358	H
1	* 1.169	44.63	PK1	28.6	-35.6	0	37.63	-	-	74	-36.37	-	-	306	300	V
	* 1.17	34.02	AD1	28.6	-35.6	.11	27.13	54	-26.87	-	-	-	-	306	300	V
5	* 10.773	35.38	PK1	37.6	-24.8	0	48.18	-	-	74	-25.82	-	-	160	278	H
	* 10.773	24.55	AD1	37.6	-24.8	.11	37.46	54	-16.54	-	-	-	-	160	278	H
6	* 10.78	36.25	PK1	37.6	-24.5	0	49.35	-	-	74	-24.65	-	-	103	236	V
	* 10.782	24.76	AD1	37.6	-24.5	.11	37.97	54	-16.03	-	-	-	-	103	236	V
3	2.05	42.15	PK1	31.4	-34.4	0	39.15	-	-	-	-	68.2	-29.05	206	267	V

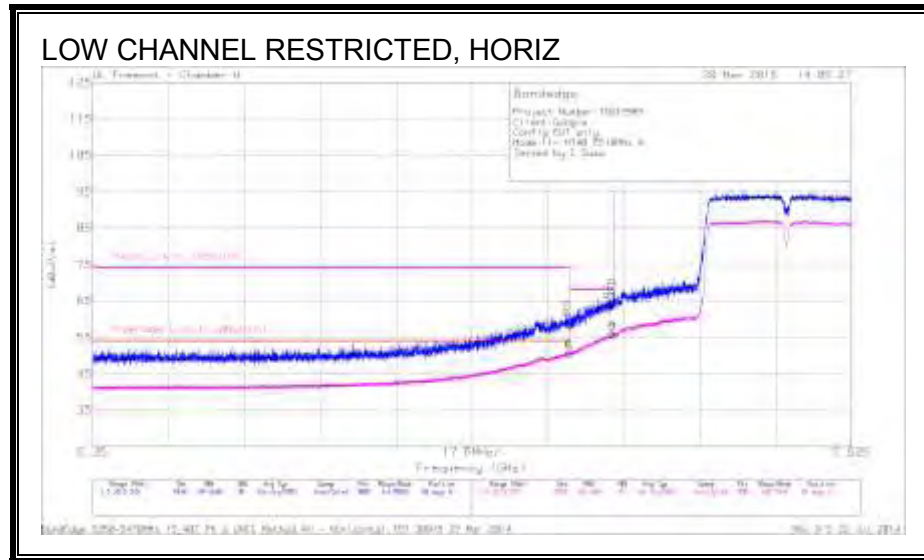
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.12. 802.11n HT40 MODE IN THE 5.6 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

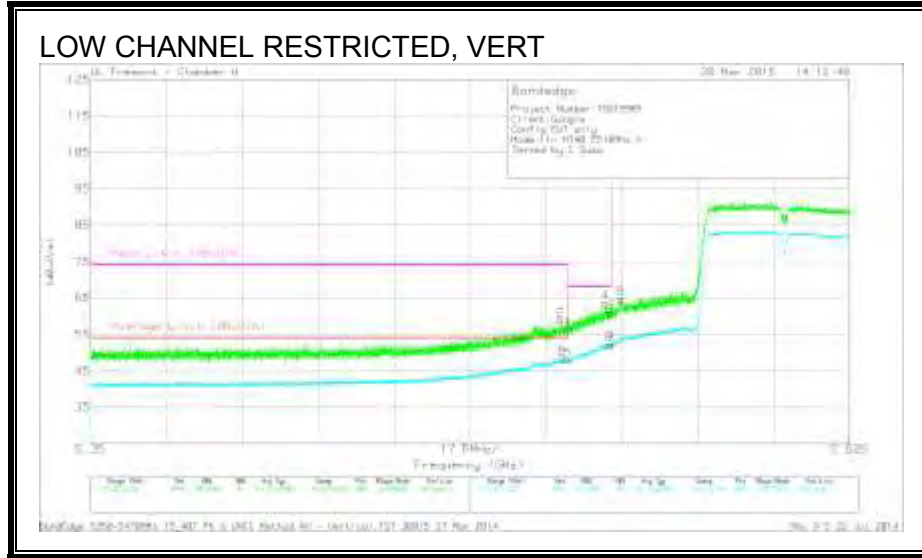


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	45.97	PK	35	-22.5	0	58.47	-	-	74	-15.53	58	317	H
2	* 5.459	49.32	PK	35	-22.5	0	61.82	-	-	74	-12.18	58	317	H
5	* 5.46	37.65	RMS	35	-22.5	.22	50.37	54	-3.63	-	-	58	317	H
6	* 5.46	38.41	RMS	35	-22.5	.22	51.13	54	-2.87	-	-	58	317	H
4	5.469	54.35	PK	35	-22.4	0	66.95	-	-	68.2	-1.25	58	317	H
3	5.47	51.23	PK	35.1	-22.4	0	63.93	-	-	68.2	-4.27	58	317	H
9	5.47	55.05	PK	35.1	-22.4	0	67.75	-	-	-	-	58	317	H
7	5.47	42.7	RMS	35.1	-22.4	.22	55.62	-	-	-	-	58	317	H
8	5.47	43.22	RMS	35.1	-22.4	.22	56.14	-	-	-	-	58	317	H

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



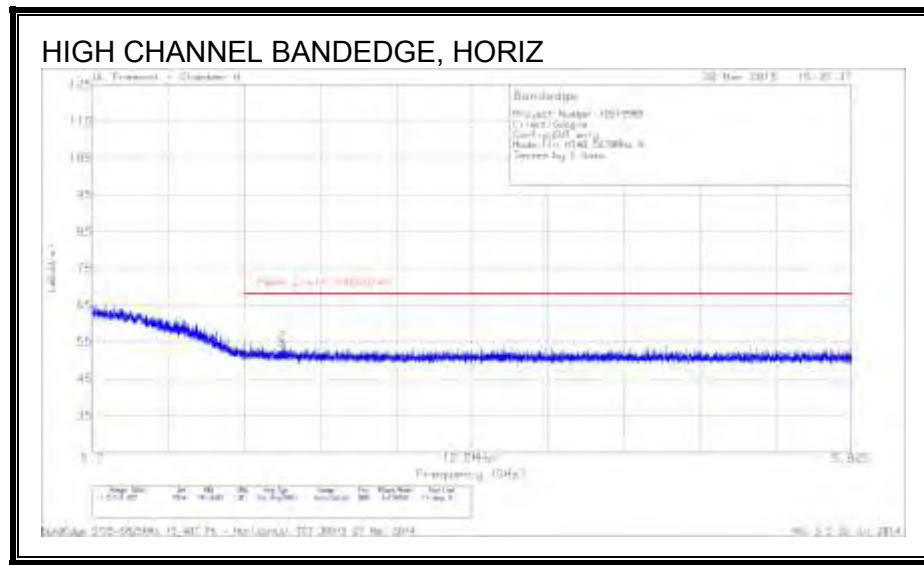
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.458	46.51	PK	35	-22.5	0	59.01	-	-	74	-14.99	236	339	V
6	* 5.459	35.77	RMS	35	-22.5	.22	48.49	54	-5.51	-	-	236	339	V
1	* 5.46	44.04	PK	35	-22.5	0	56.54	-	-	74	-17.46	236	339	V
5	* 5.46	35.37	RMS	35	-22.5	.22	48.09	54	-5.91	-	-	236	339	V
4	5.469	51.09	PK	35	-22.4	0	63.69	-	-	68.2	-4.51	236	339	V
3	5.47	48.26	PK	35.1	-22.4	0	60.96	-	-	68.2	-7.24	236	339	V
7	5.47	39.19	RMS	35.1	-22.4	.22	52.11	-	-	-	-	236	339	V
8	5.47	39.27	RMS	35.1	-22.4	.22	52.19	-	-	-	-	236	339	V
9	5.472	52.17	PK	35.1	-22.4	0	64.87	-	-	-	-	236	339	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

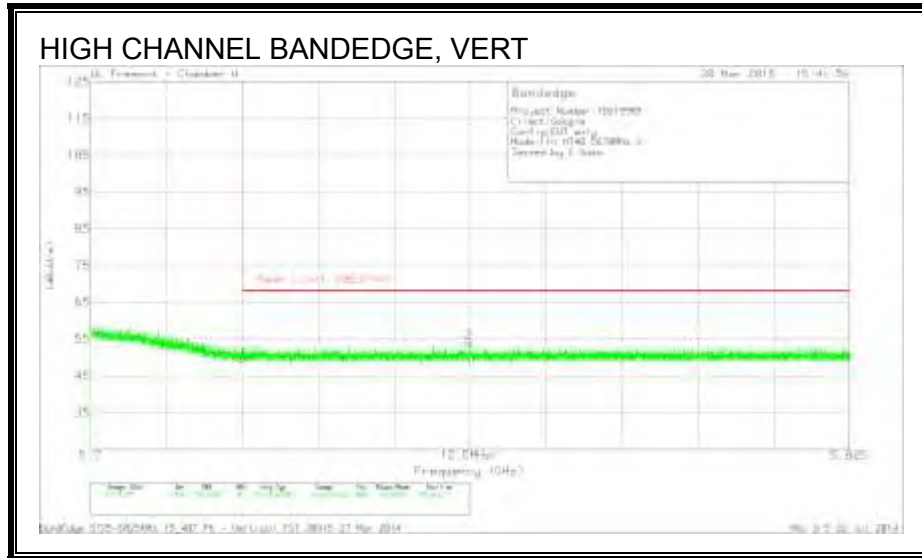


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	38.77	PK	35	-22.4	0	51.37	68.2	-16.83	71	290	H
2	5.731	42.32	PK	35	-22.4	0	54.92	68.2	-13.28	71	290	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/F ltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.725	36.95	PK	35	-22.4	0	49.55	68.2	-18.65	60	289	V
2	5.762	41.21	PK	35	-22.2	0	54.01	68.2	-14.19	60	289	V

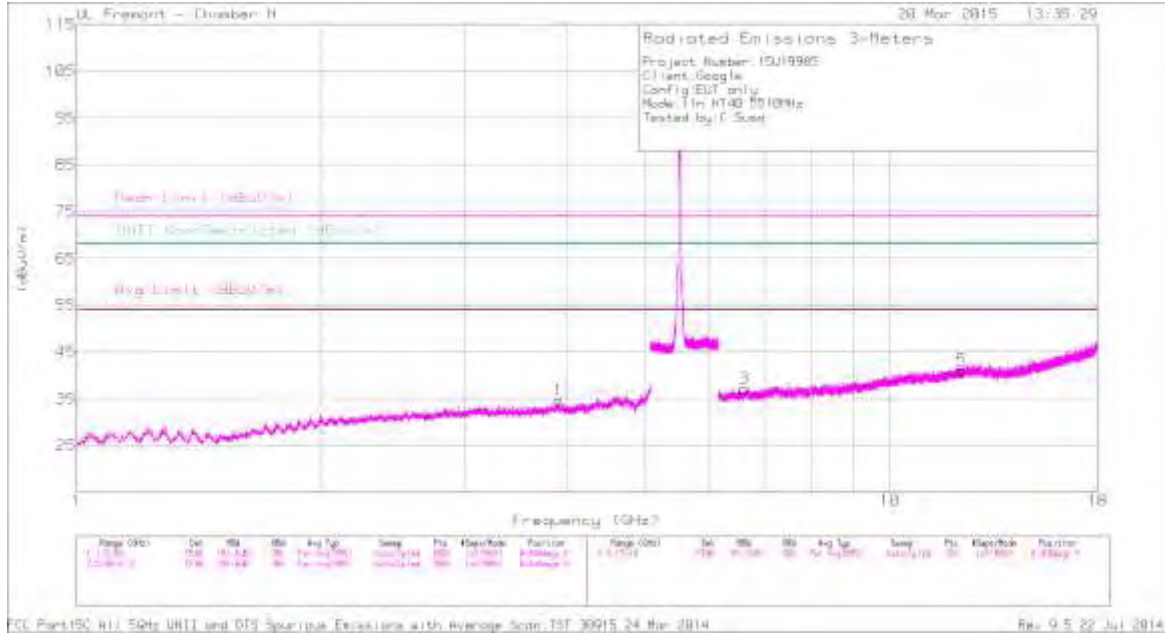
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

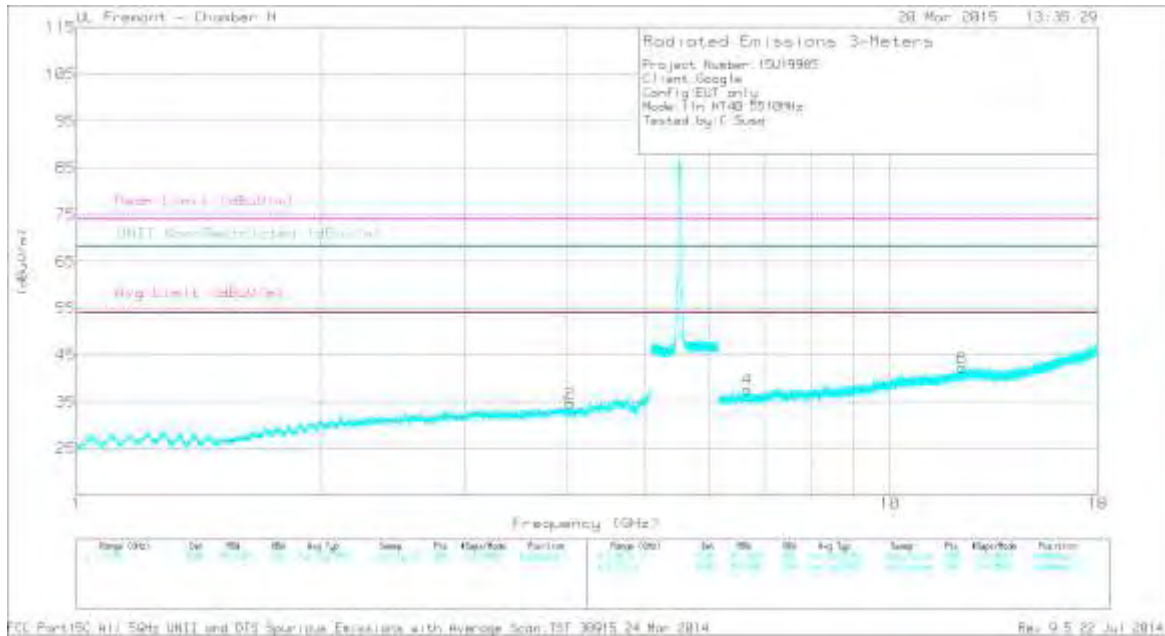
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.916	41.03	PK1	33.4	-32.9	0	41.53	-	-	74	-32.47	-	-	236	214	H
	* 3.915	30.32	AD1	33.4	-32.9	.22	31.04	54	-22.96	-	-	-	-	236	214	H
2	* 4.043	39.76	PK1	33.5	-32.8	0	40.46	-	-	74	-33.54	-	-	160	269	V
	* 4.044	29.4	AD1	33.5	-32.8	.22	30.32	54	-23.68	-	-	-	-	160	269	V
5	* 12.241	35.25	PK1	39	-25.8	0	48.45	-	-	74	-25.55	-	-	148	278	H
	* 12.239	24.73	AD1	39	-25.8	.22	38.15	54	-15.85	-	-	-	-	148	278	H
6	* 12.258	35.53	PK1	39	-25.9	0	48.63	-	-	74	-25.37	-	-	190	315	V
	* 12.26	25	AD1	39	-25.9	.22	38.32	54	-15.68	-	-	-	-	190	315	V
3	6.62	39.91	PK1	35.7	-30.5	0	45.11	-	-	-	-	68.2	-23.09	195	248	H
4	6.667	39.63	PK1	35.7	-30.1	0	45.23	-	-	-	-	68.2	-22.97	36	217	V

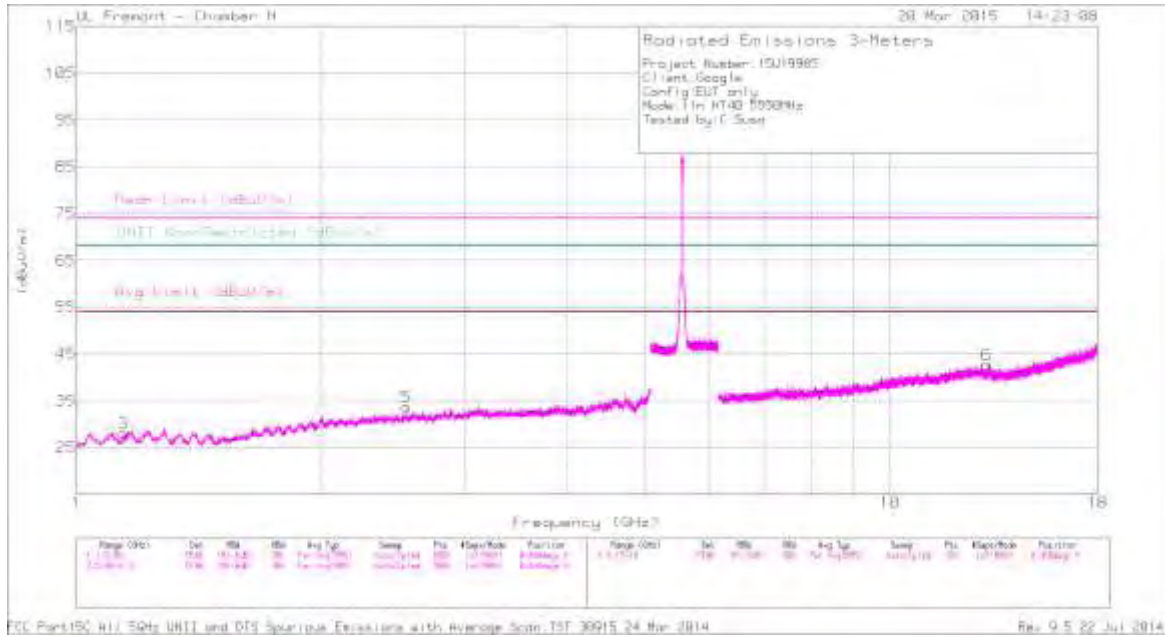
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

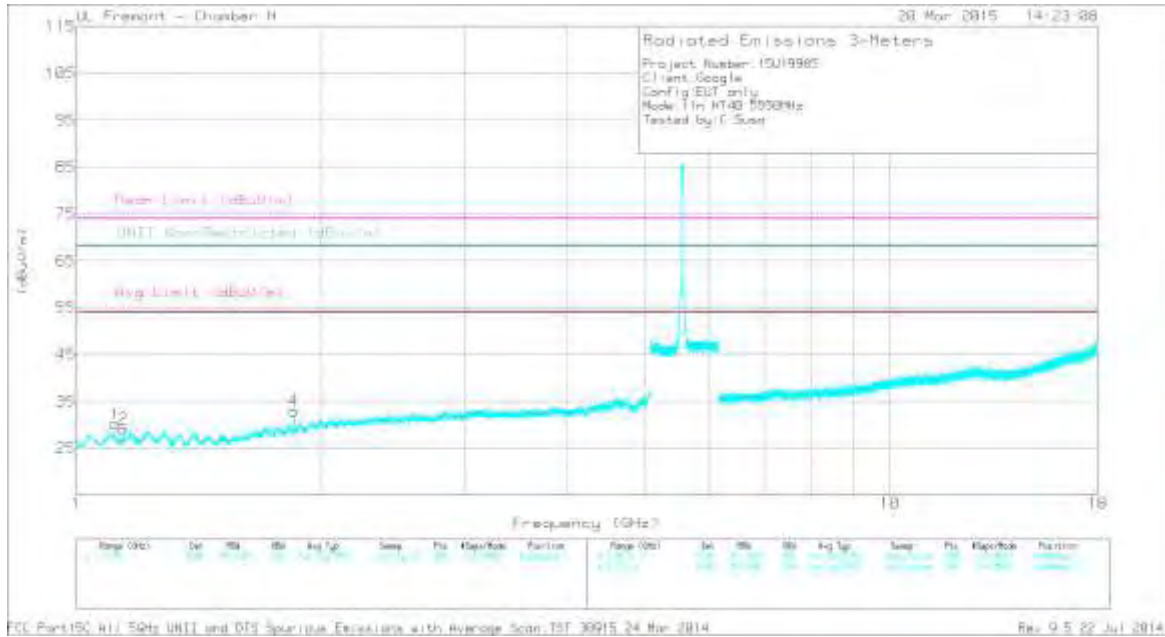
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.115	37.6	PK	28.3	-35.6	0	30.3	-	-	74	-43.7	-	-	0-360	201	V
3	* 1.142	35.3	PK	28.4	-35.6	0	28.1	-	-	74	-45.9	-	-	0-360	201	H
2	* 1.142	36.39	PK	28.4	-35.6	0	29.19	-	-	74	-44.81	-	-	0-360	201	V
4	1.851	37.77	PK	30.3	-35.1	0	32.97	-	-	-	-	68.2	-35.23	0-360	201	V
6	13.148	29.23	PK	39.1	-25.6	0	42.73	-	-	-	-	68.2	-25.47	0-360	201	H
5	2.542	35.47	PK	32.2	-33.9	0	33.77	-	-	-	-	68.2	-34.43	0-360	100	H

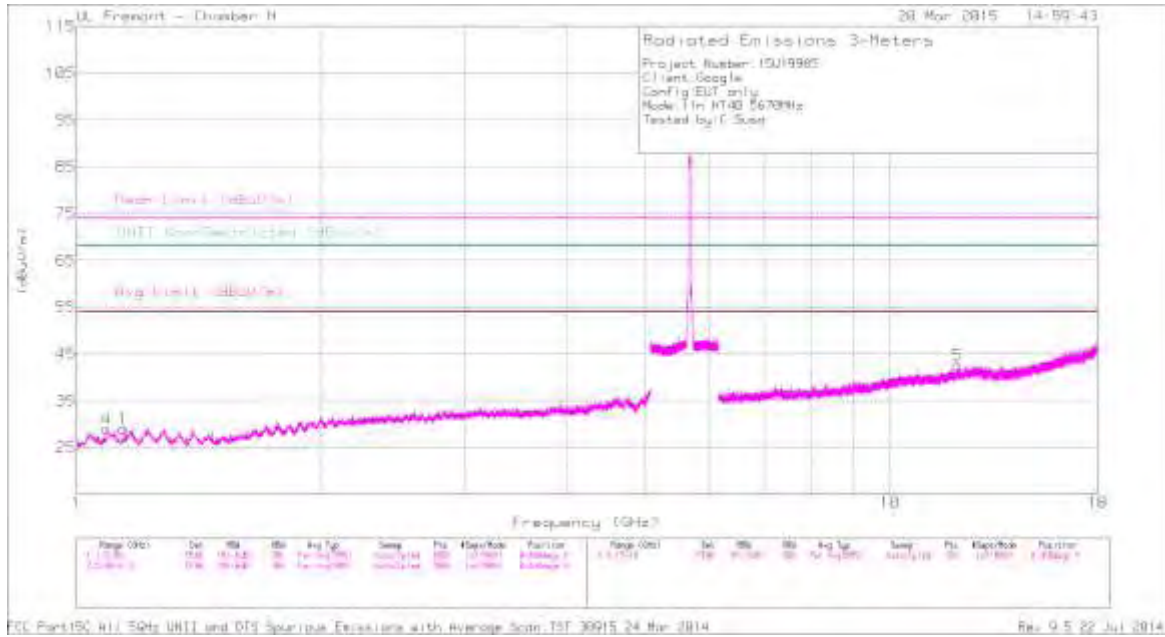
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

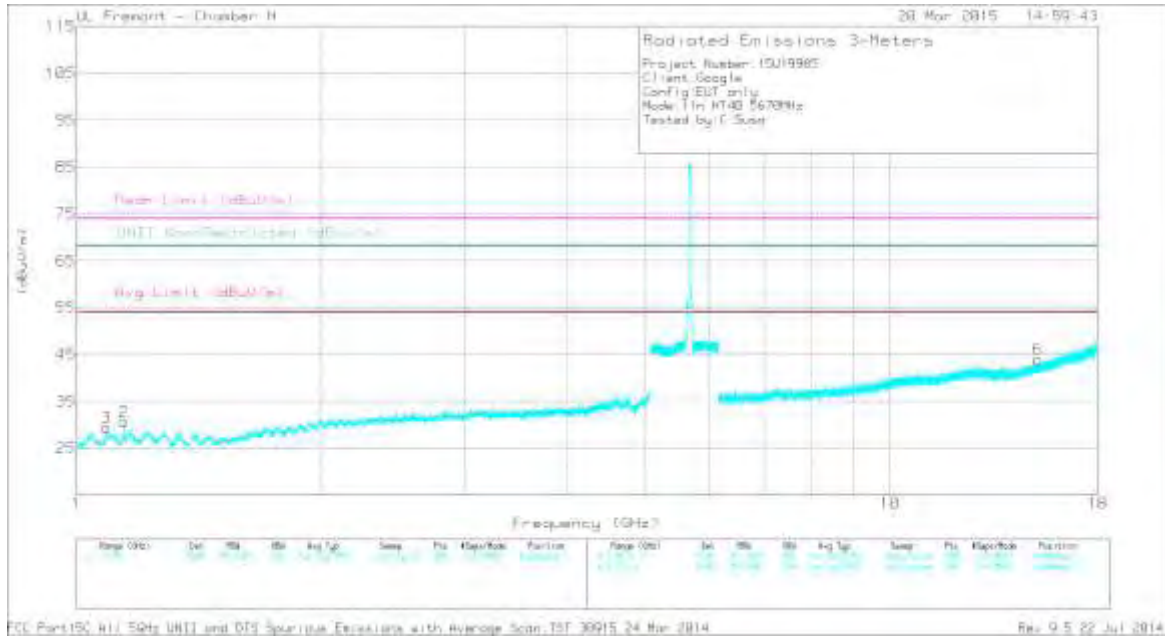
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.142	45.72	PK1	28.4	-35.6	0	38.52	-	-	74	-35.48	-	-	231	130	H
	* 1.142	35.79	AD1	28.4	-35.6	.22	28.81	54	-25.19	-	-	-	-	231	130	H
4	* 1.087	43.71	PK1	28.2	-35.6	0	36.31	-	-	74	-37.69	-	-	202	188	H
	* 1.088	31.81	AD1	28.2	-35.6	.22	24.63	54	-29.37	-	-	-	-	202	188	H
2	* 1.142	45.78	PK1	28.4	-35.6	0	38.58	-	-	74	-35.42	-	-	280	335	V
	* 1.142	36.42	AD1	28.4	-35.6	.22	29.44	54	-24.56	-	-	-	-	280	335	V
3	* 1.089	46.21	PK1	28.2	-35.6	0	38.81	-	-	74	-35.19	-	-	287	355	V
	* 1.088	36.44	AD1	28.2	-35.6	.22	29.26	54	-24.74	-	-	-	-	287	355	V
5	* 12.095	36.46	PK1	38.9	-25.1	0	50.26	-	-	74	-23.74	-	-	151	156	H
	* 12.097	24.62	AD1	38.9	-25.1	.22	38.64	54	-15.36	-	-	-	-	151	156	H
6	15.217	35.7	PK1	40.9	-26.2	0	50.4	-	-	-	-	68.2	-17.8	300	246	V

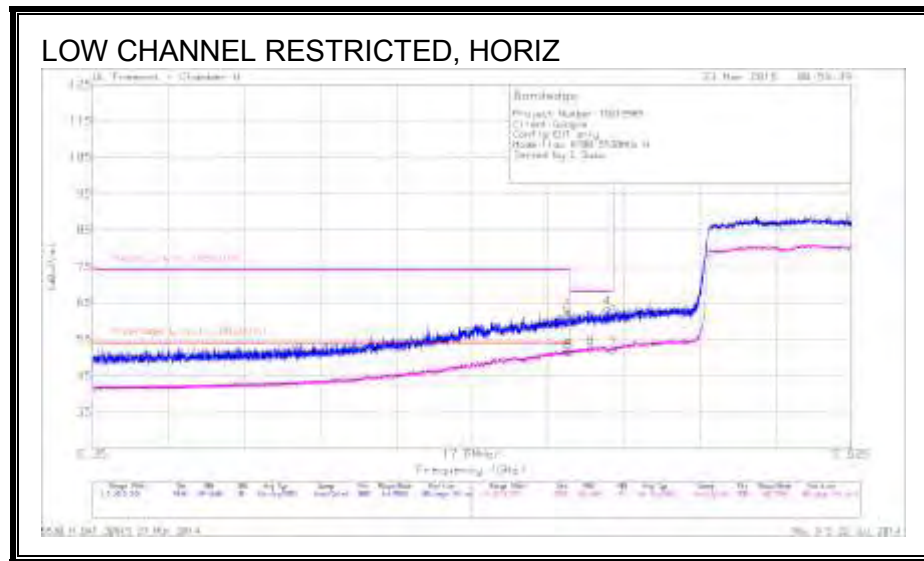
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.13. 802.11ac HT80 MODE IN THE 5.6 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

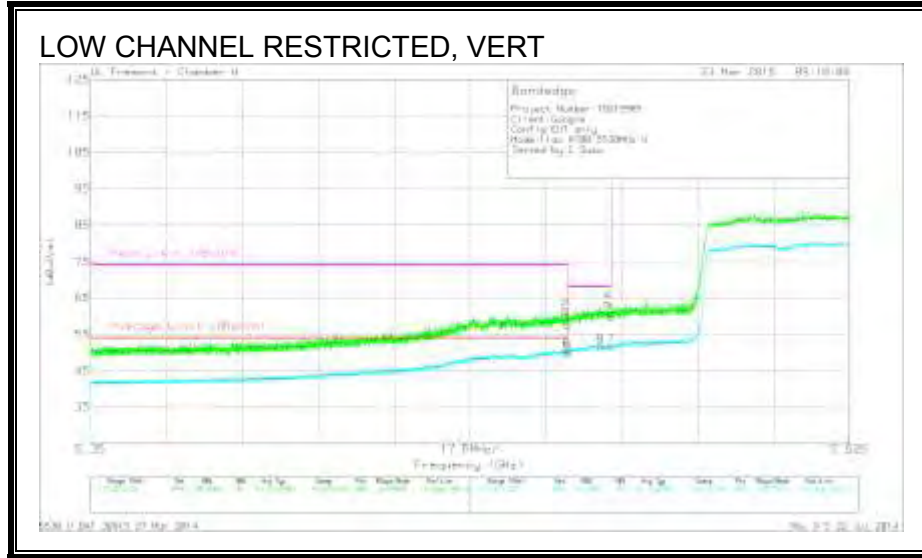


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 5.459	50.02	PK	35	-22.5	0	62.52	-	-	74	-11.48	306	167	H
1	* 5.46	47.23	PK	35	-22.5	0	59.73	-	-	74	-14.27	306	167	H
5	* 5.46	38.85	RMS	35	-22.5	.42	51.77	54	-2.23	-	-	306	167	H
6	* 5.46	39.11	RMS	35	-22.5	.42	52.03	54	-1.97	-	-	306	167	H
8	5.465	40.12	RMS	35	-22.4	.42	53.14	-	-	-	-	306	167	H
4	5.469	51.02	PK	35	-22.4	0	63.62	-	-	68.2	-4.58	306	167	H
3	5.47	48.39	PK	35.1	-22.4	0	61.09	-	-	68.2	-7.11	306	167	H
7	5.47	39.35	RMS	35.1	-22.4	.42	52.47	-	-	-	-	306	167	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 5.46	45.14	PK	35	-22.5	0	57.64	-	-	74	-16.36	115	182	V
2	* 5.459	48.81	PK	35	-22.5	0	61.31	-	-	74	-12.69	115	182	V
5	* 5.46	37.23	RMS	35	-22.5	.42	50.15	54	-3.85	-	-	115	182	V
6	* 5.46	38.12	RMS	35	-22.5	.42	51.04	54	-2.96	-	-	115	182	V
8	5.468	39.19	RMS	35	-22.4	.42	52.21	-	-	-	-	115	182	V
4	5.469	50.95	PK	35.1	-22.4	0	63.65	-	-	68.2	-4.55	115	182	V
3	5.47	47.17	PK	35.1	-22.4	0	59.87	-	-	68.2	-8.33	115	182	V
7	5.47	39.06	RMS	35.1	-22.4	.42	52.18	-	-	-	-	115	182	V

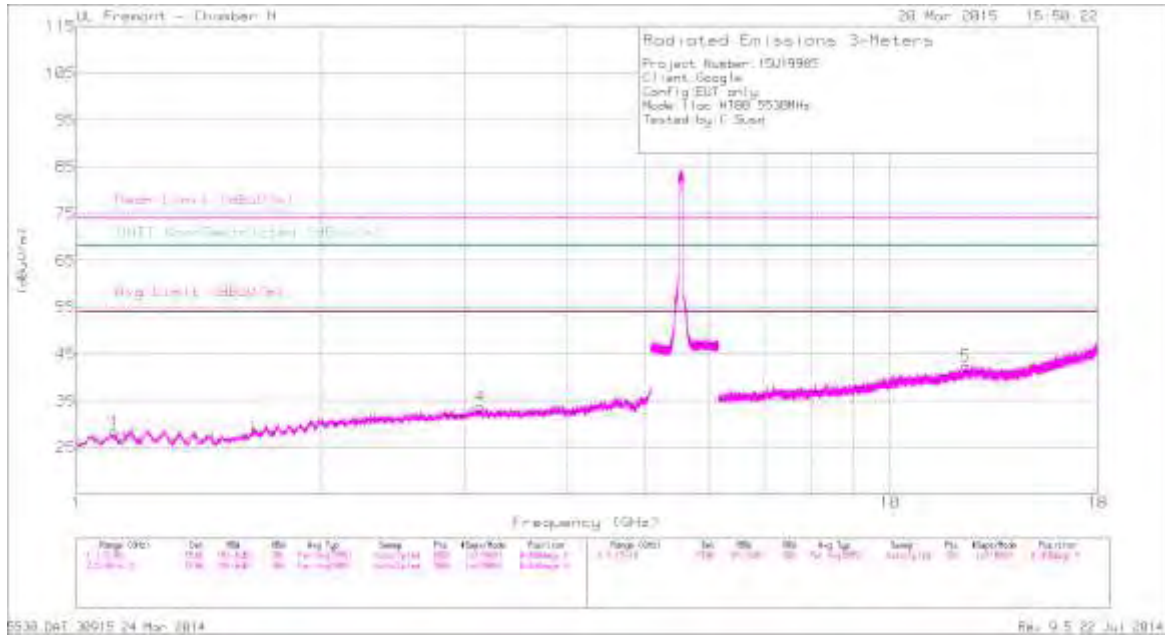
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

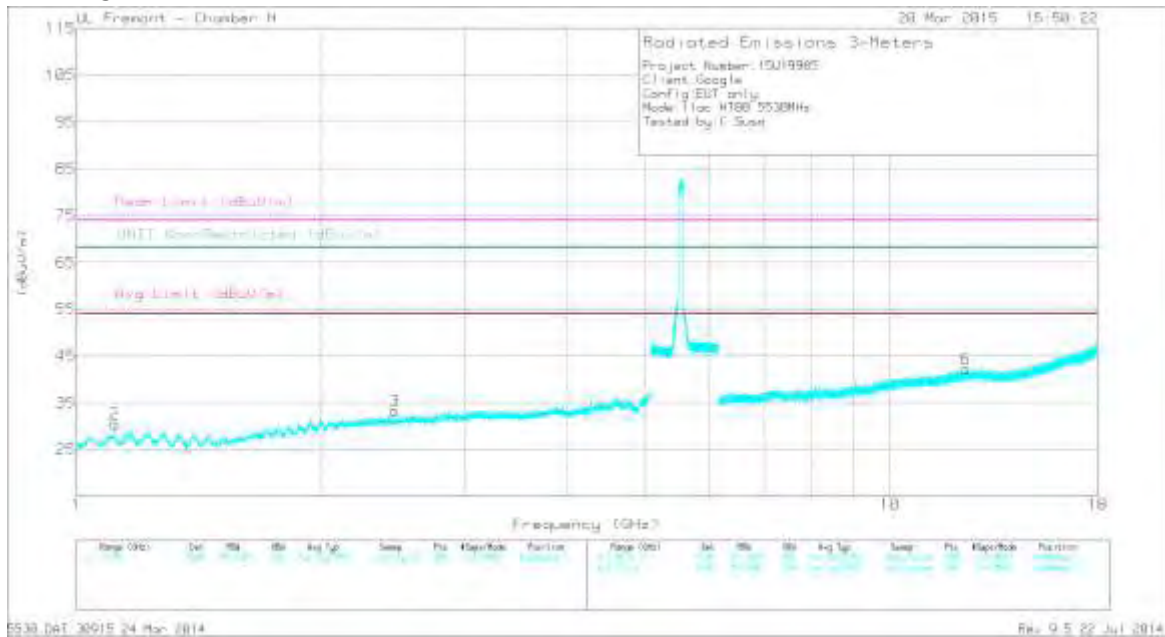
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.115	44.31	PK1	28.3	-35.6	0	37.01	-	-	74	-36.99	-	-	83	218	H
	* 1.115	32.45	AD1	28.3	-35.6	.42	25.57	54	-28.43	-	-	-	-	83	218	H
2	* 1.115	45.53	PK1	28.3	-35.6	0	38.23	-	-	74	-35.77	-	-	102	382	V
	* 1.115	35.48	AD1	28.3	-35.6	.42	28.6	54	-25.4	-	-	-	-	102	382	V
5	* 12.39	35.82	PK1	39.1	-25.2	0	49.72	-	-	74	-24.28	-	-	146	187	H
	* 12.39	25.37	AD1	39.1	-25.2	.42	39.69	54	-14.31	-	-	-	-	146	187	H
6	* 12.398	36.52	PK1	39.1	-25.1	0	50.52	-	-	74	-23.48	-	-	24	260	V
	* 12.398	25.25	AD1	39.1	-25.1	.42	39.67	54	-14.33	-	-	-	-	24	260	V
3	2.46	44.29	PK1	32.1	-34.3	0	42.09	-	-	-	-	68.2	-26.11	303	281	V
4	3.136	41.42	PK1	32.9	-32.7	0	41.62	-	-	-	-	68.2	-26.58	189	233	H

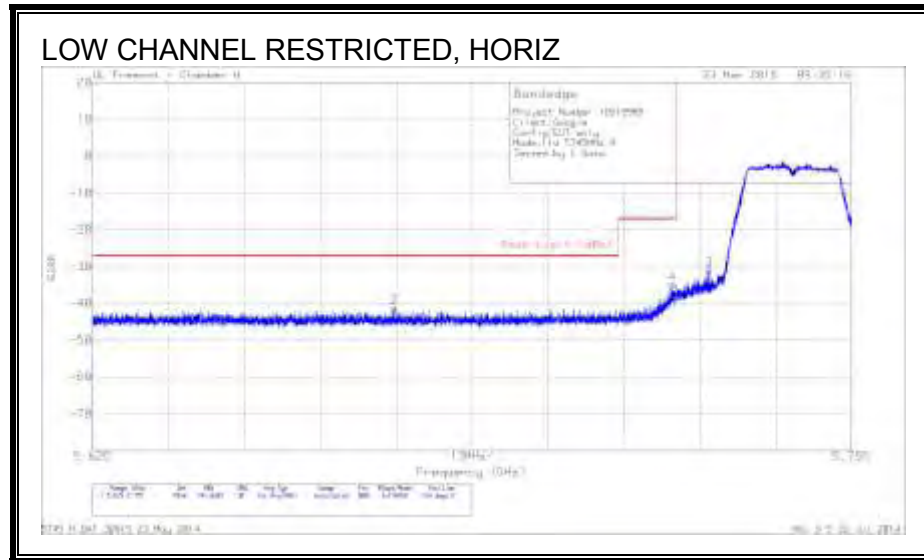
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.14. 802.11a MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

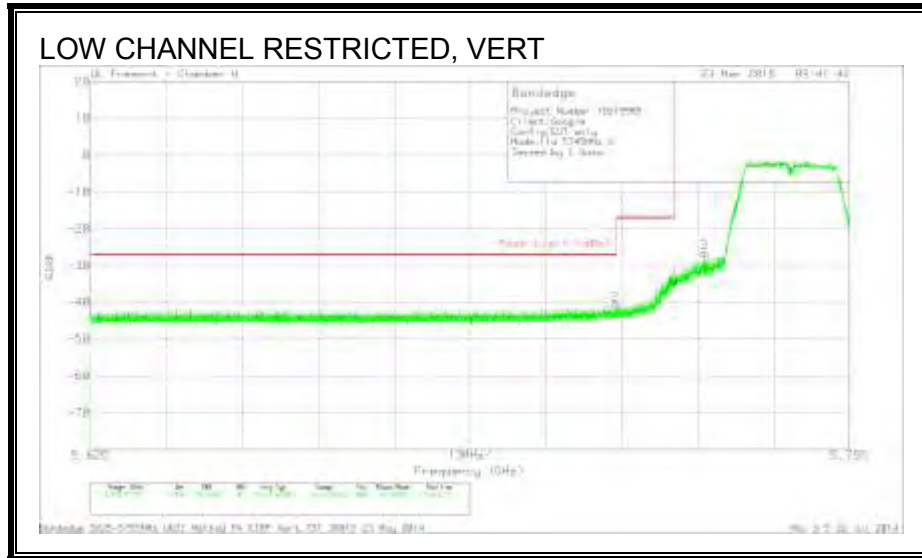


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.677	-65.46	PK	35	-22.5	11.8	0	-41.16	-27	-14.16	164	346	H
4	5.724	-59.16	PK	35	-22.4	11.8	0	-34.76	-17	-17.76	164	346	H
1	5.725	-62.53	PK	35	-22.4	11.8	0	-38.13	-17	-21.13	164	346	H
3	5.731	-55.05	PK	35	-22.4	11.8	0	-30.65	-	-	164	346	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



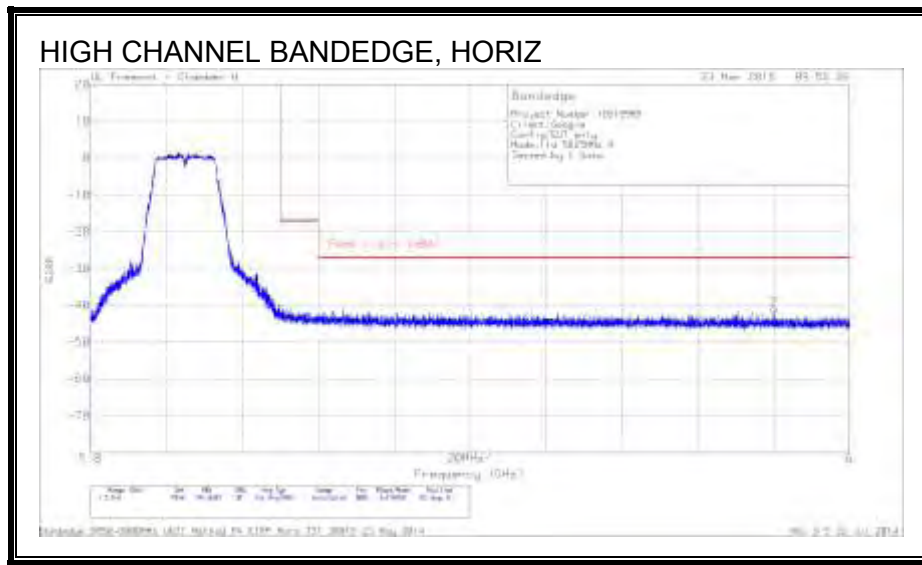
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AFT863 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.715	-64.89	PK	35	-22.4	11.8	0	-40.49	-27	-13.49	41	312	V
1	5.725	-58.31	PK	35	-22.4	11.8	0	-33.91	-17	-16.91	41	312	V
3	5.73	-50.93	PK	35	-22.4	11.8	0	-26.53	-	-	41	312	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F Itr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.72	PK	35.1	-22.2	11.8	-43.02	-17	-26.02	82	371	H
2	5.98	-65.84	PK	35.2	-22.2	11.8	-41.04	-27	-14.04	82	371	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



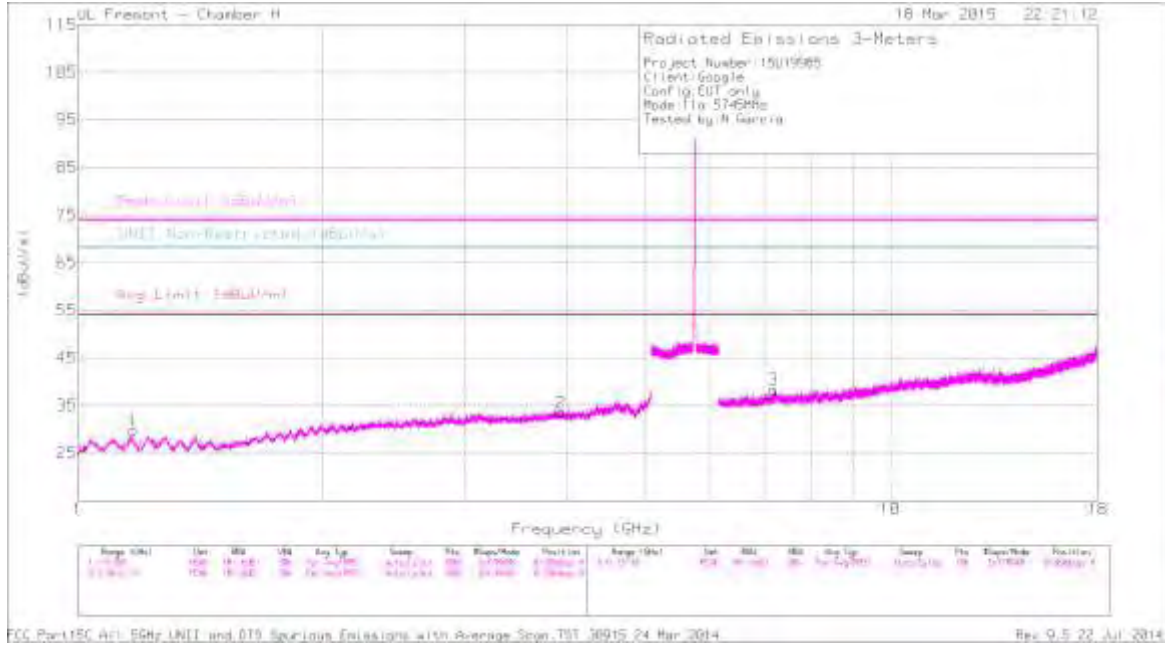
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-70.61	PK	35.1	-22.2	11.8	-45.91	-17	-28.91	346	302	V
2	5.892	-65.31	PK	35.1	-22.3	11.8	-40.71	-27	-13.71	346	302	V

PK - Peak detector
RMS - RMS detection

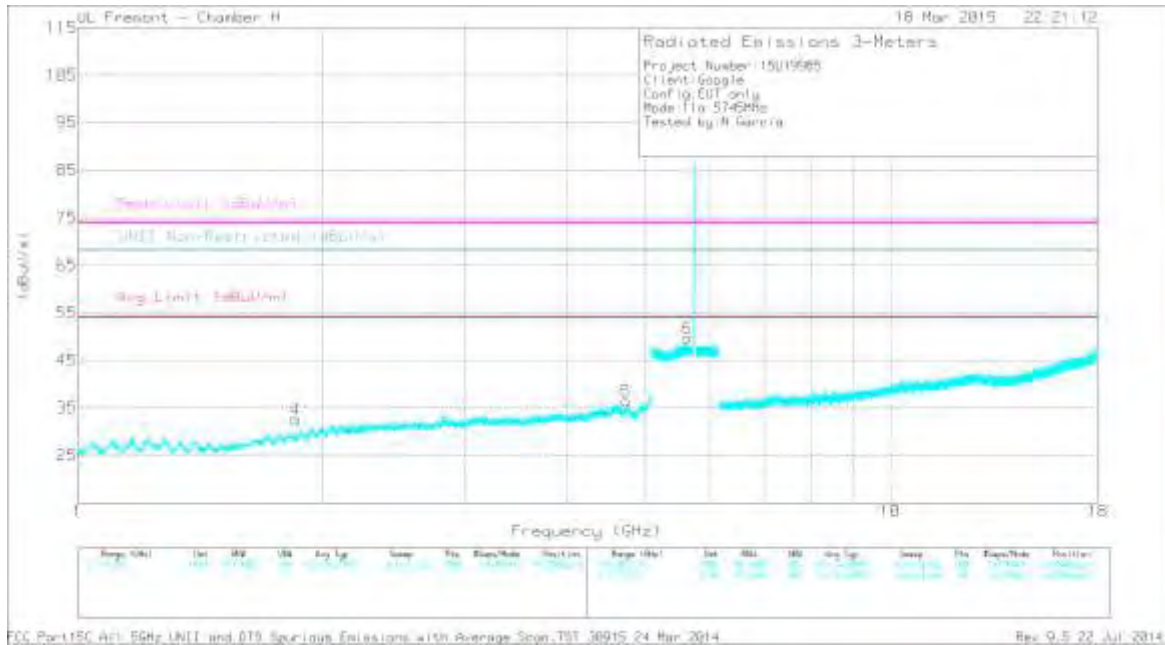
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.169	44.77	PK1	28.6	-35.6	0	37.77	-	-	74	-36.23	-	-	58	122	H
	* 1.169	34.59	AD1	28.6	-35.6	.11	27.7	54	-26.3	-	-	-	-	58	122	H
2	* 3.932	41.44	PK1	33.4	-32.6	0	42.24	-	-	74	-31.76	-	-	317	105	H
	* 3.931	29.98	AD1	33.4	-32.6	.11	30.89	54	-23.11	-	-	-	-	317	105	H
5	* 4.732	40.51	PK1	34.3	-31.5	0	43.31	-	-	74	-30.69	-	-	0	120	V
	* 4.732	29.33	AD1	34.3	-31.5	.11	32.24	54	-21.76	-	-	-	-	0	120	V
4	1.856	42.21	PK1	30.4	-35	0	37.61	-	-	-	-	68.2	-30.59	0	101	V
6	5.623	43.46	PK1	35.1	-22.5	0	56.06	-	-	-	-	68.2	-12.14	24	131	V
3	7.178	40.43	PK1	36.1	-30.2	0	46.33	-	-	-	-	68.2	-21.87	17	131	H

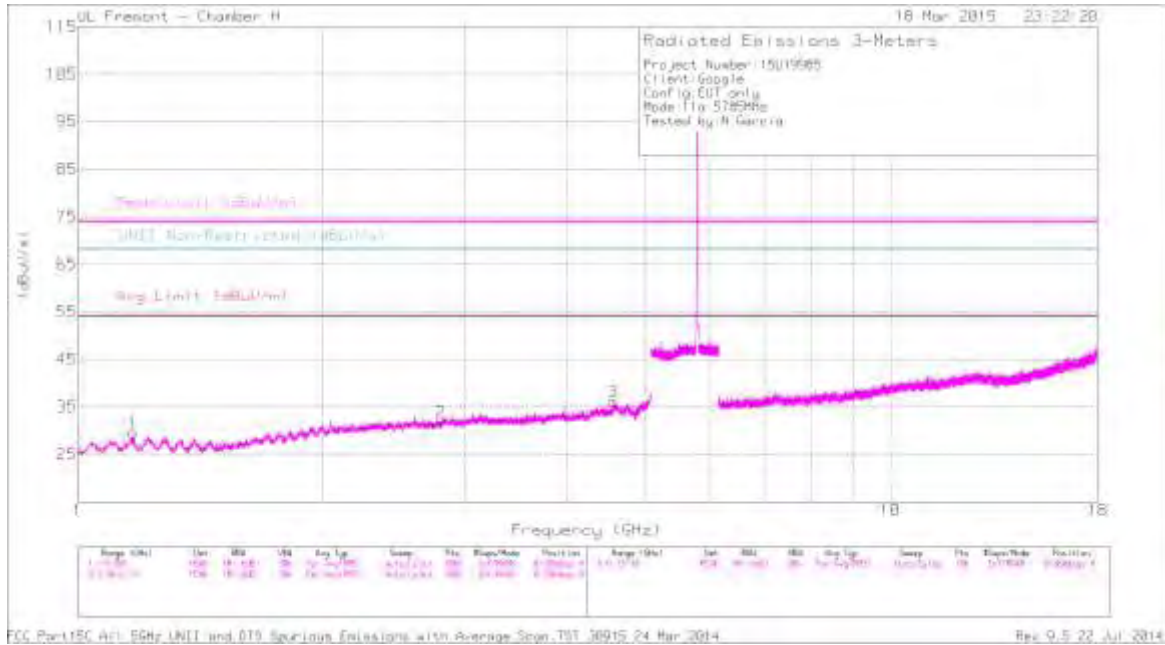
* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

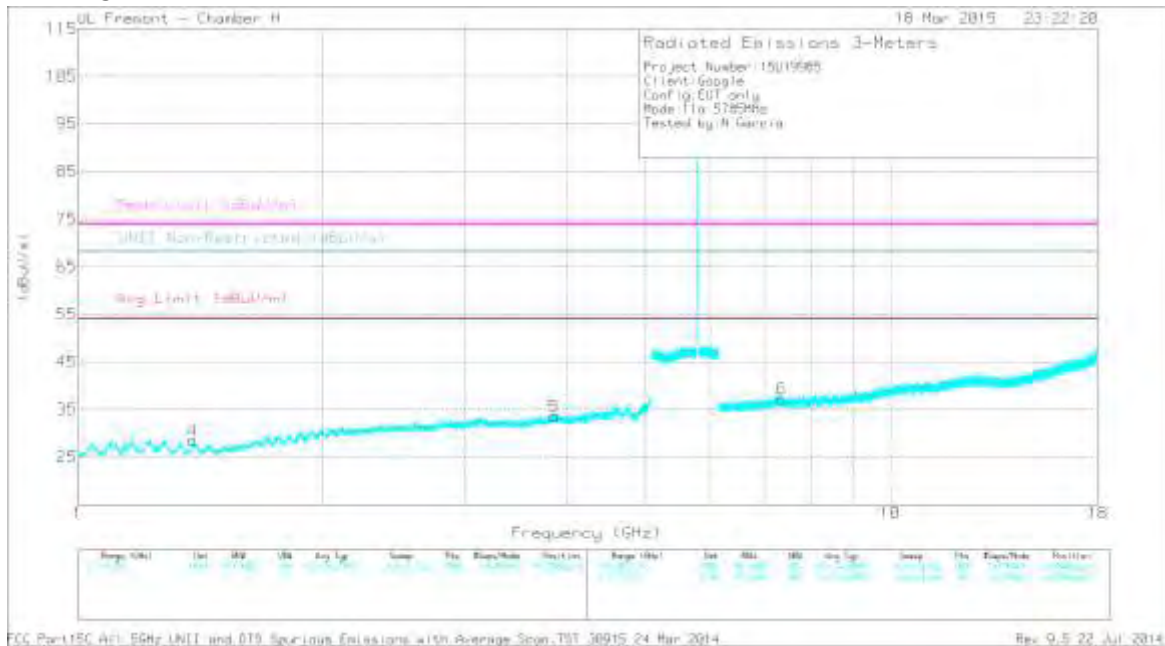
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.17	44.47	PK1	28.6	-35.6	0	37.47	-	-	74	-36.53	-	-	152	128	H
	* 1.17	34.48	AD1	28.6	-35.6	.11	27.59	54	-26.41	-	-	-	-	152	128	H
2	* 2.8	41.43	PK1	32.4	-33.4	0	40.43	-	-	74	-33.57	-	-	14	116	H
	* 2.798	29.86	AD1	32.4	-33.4	.11	28.97	54	-25.03	-	-	-	-	14	116	H
3	* 4.561	40.5	PK1	34.1	-31.8	0	42.8	-	-	74	-31.2	-	-	18	132	H
	* 4.56	29.72	AD1	34.1	-31.8	.11	32.13	54	-21.87	-	-	-	-	18	132	H
4	* 1.386	43.13	PK1	28.3	-35.1	0	36.33	-	-	74	-37.67	-	-	16	120	V
	* 1.386	31.72	AD1	28.3	-35.1	.11	25.03	54	-28.97	-	-	-	-	16	120	V
5	* 3.859	41.13	PK1	33.3	-32.8	0	41.63	-	-	74	-32.37	-	-	32	136	V
	* 3.861	30.4	AD1	33.3	-32.8	.11	31.01	54	-22.99	-	-	-	-	32	136	V
6	* 7.354	38.82	PK1	36.2	-29.8	0	45.22	-	-	74	-28.78	-	-	13	114	V
	* 7.354	28.01	AD1	36.2	-29.8	.11	34.52	54	-19.48	-	-	-	-	13	114	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.169	44.24	PK1	28.6	-35.6	0	37.24	-	-	74	-36.76	-	-	24	125	H
	* 1.169	33.31	AD1	28.6	-35.6	.11	26.42	54	-27.58	-	-	-	-	24	125	H
2	* 3.943	41.19	PK1	33.4	-32.8	0	41.79	-	-	74	-32.21	-	-	40	125	H
	* 3.945	30.01	AD1	33.4	-32.8	.11	30.72	54	-23.28	-	-	-	-	40	125	H
3	* 4.598	41.33	PK1	34.1	-31.8	0	43.63	-	-	74	-30.37	-	-	11	125	H
	* 4.599	29.96	AD1	34.1	-31.8	.11	32.37	54	-21.63	-	-	-	-	11	125	H
4	* 1.143	43.28	PK1	28.4	-35.6	0	36.08	-	-	74	-37.92	-	-	37	128	V
	* 1.142	32.9	AD1	28.4	-35.6	.11	25.81	54	-28.19	-	-	-	-	37	128	V
5	* 2.273	41.75	PK1	31.7	-34.2	0	39.25	-	-	74	-34.75	-	-	10	111	V
	* 2.272	30.55	AD1	31.7	-34.2	.11	28.16	54	-25.84	-	-	-	-	10	111	V
6	1.766	43.44	PK1	29.8	-34.7	0	38.54	-	-	-	-	68.2	-29.66	40	121	V

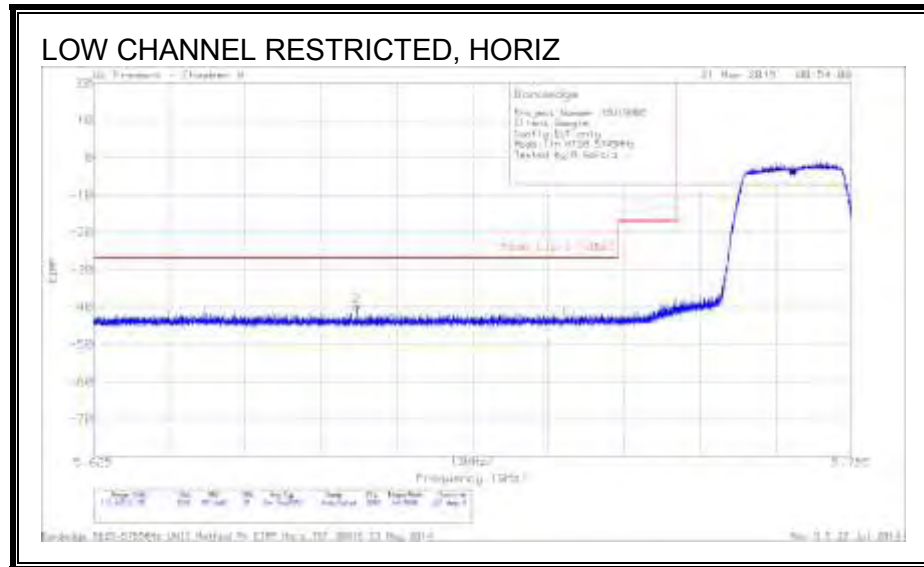
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.15. 802.11n HT20 MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

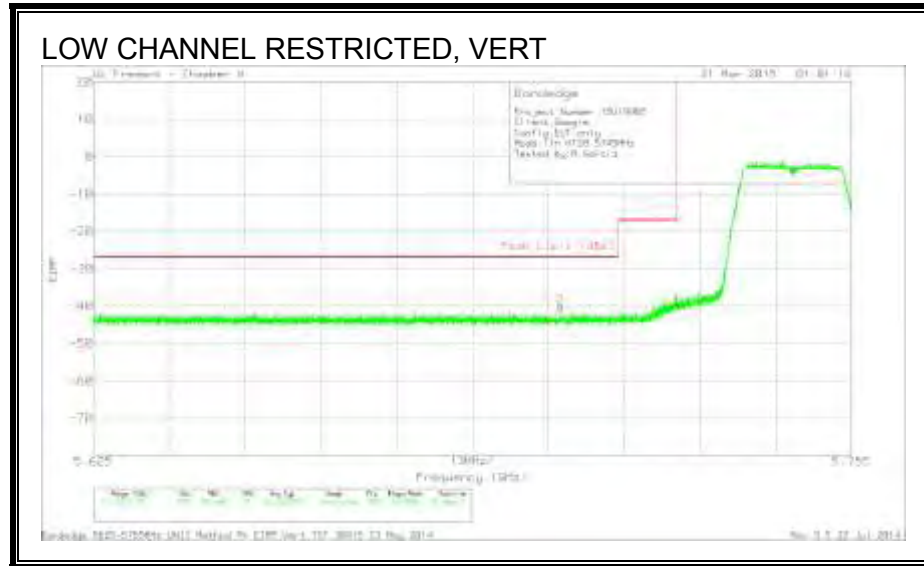


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.67	-64.03	PK	35	-22.5	11.8	-39.73	-27	-12.73	337	195	H
1	5.725	-65.12	PK	35	-22.4	11.8	-40.72	-17	-23.72	337	195	H

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



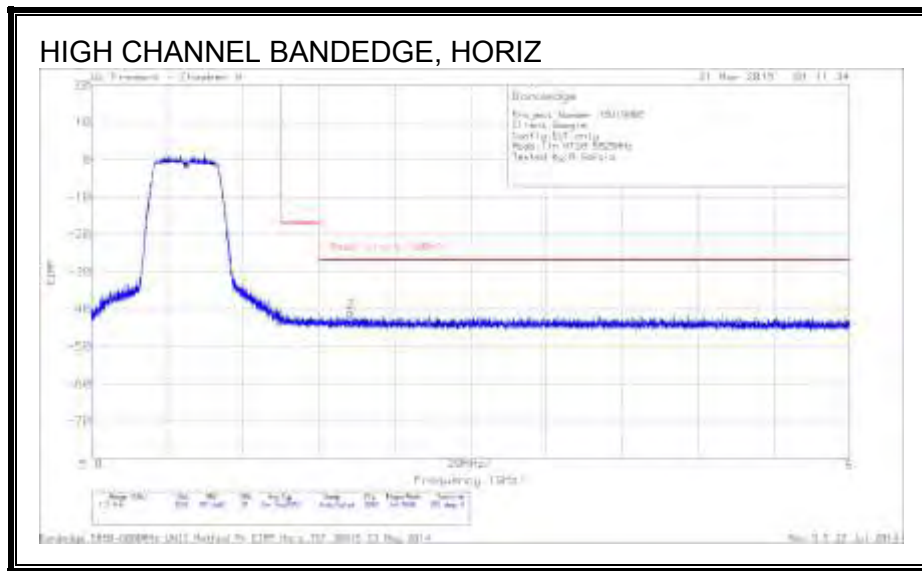
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.705	-64.73	PK	35	-22.5	11.8	-40.43	-27	-13.43	95	161	V
1	5.725	-64.54	PK	35	-22.4	11.8	-40.14	-17	-23.14	95	161	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

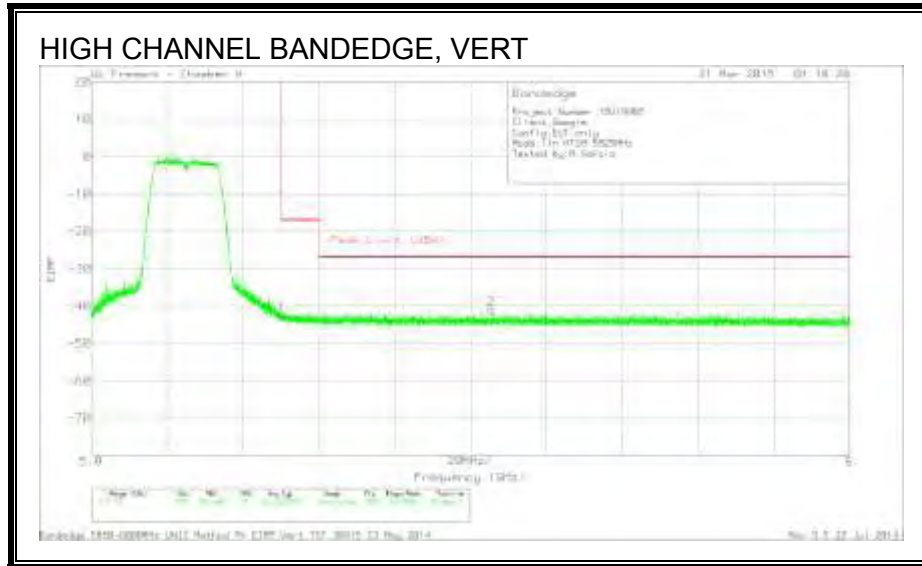


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.99	PK	35.1	-22.2	11.8	-43.29	-17	-26.29	285	375	H
2	5.868	-65.49	PK	35.1	-22.2	11.8	-40.79	-27	-13.79	285	375	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.21	PK	35.1	-22.2	11.8	-42.51	-17	-25.51	44	329	V
2	5.905	-65.51	PK	35.1	-22.2	11.8	-40.81	-27	-13.81	44	329	V

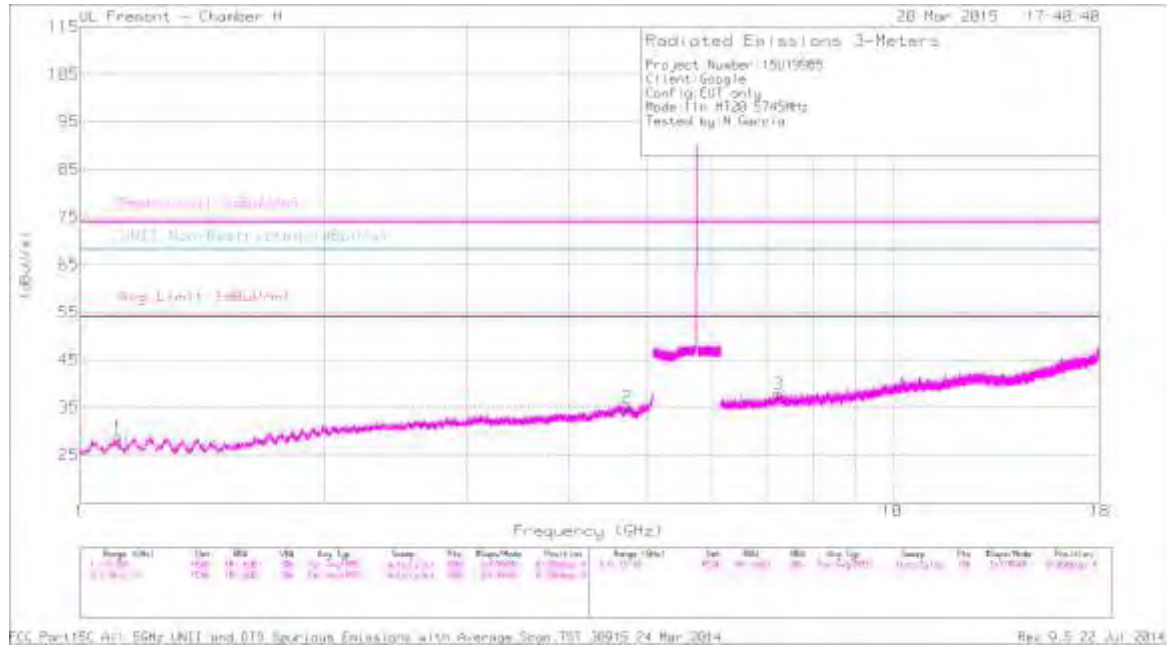
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

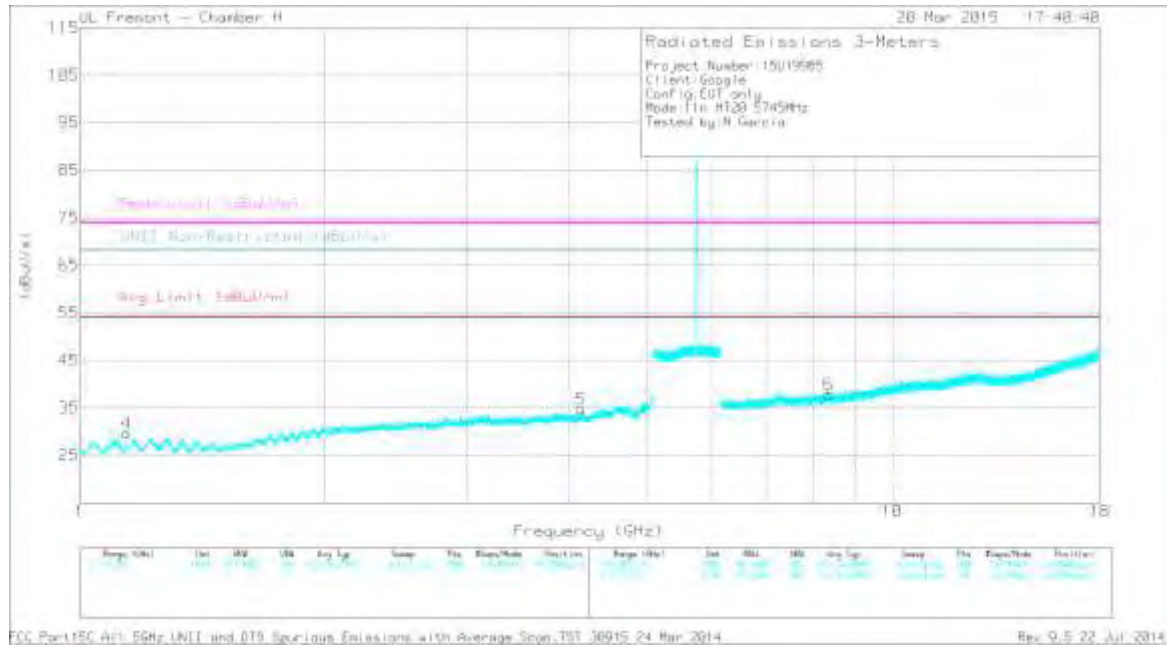
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.113	43.06	PK1	28.3	-35.6	0	35.76	-	-	74	-38.24	-	-	21	119	H
	* 1.113	31.55	AD1	28.3	-35.6	.11	24.36	54	-29.64	-	-	-	-	21	119	H
2	* 4.722	40.07	PK1	34.3	-31.4	0	42.97	-	-	74	-31.03	-	-	13	119	H
	* 4.722	29.04	AD1	34.3	-31.4	.11	32.05	54	-21.95	-	-	-	-	13	119	H
3	* 7.244	37.85	PK1	36.2	-28.9	0	45.15	-	-	-	-	68.2	-23.05	10	113	H
4	* 1.144	42.56	PK1	28.4	-35.6	0	35.36	-	-	74	-38.64	-	-	37	143	V
	* 1.143	30.96	AD1	28.4	-35.6	.11	23.87	54	-30.13	-	-	-	-	37	143	V
5	* 4.139	40.19	PK1	33.5	-32.2	0	41.49	-	-	74	-32.51	-	-	54	122	V
	* 4.14	29.38	AD1	33.5	-32.2	.11	30.79	54	-23.21	-	-	-	-	54	122	V
6	* 8.351	37.34	PK1	36.1	-27.8	0	45.64	-	-	74	-28.36	-	-	20	137	V
	* 8.351	26.33	AD1	36.1	-27.8	.11	34.74	54	-19.26	-	-	-	-	20	137	V

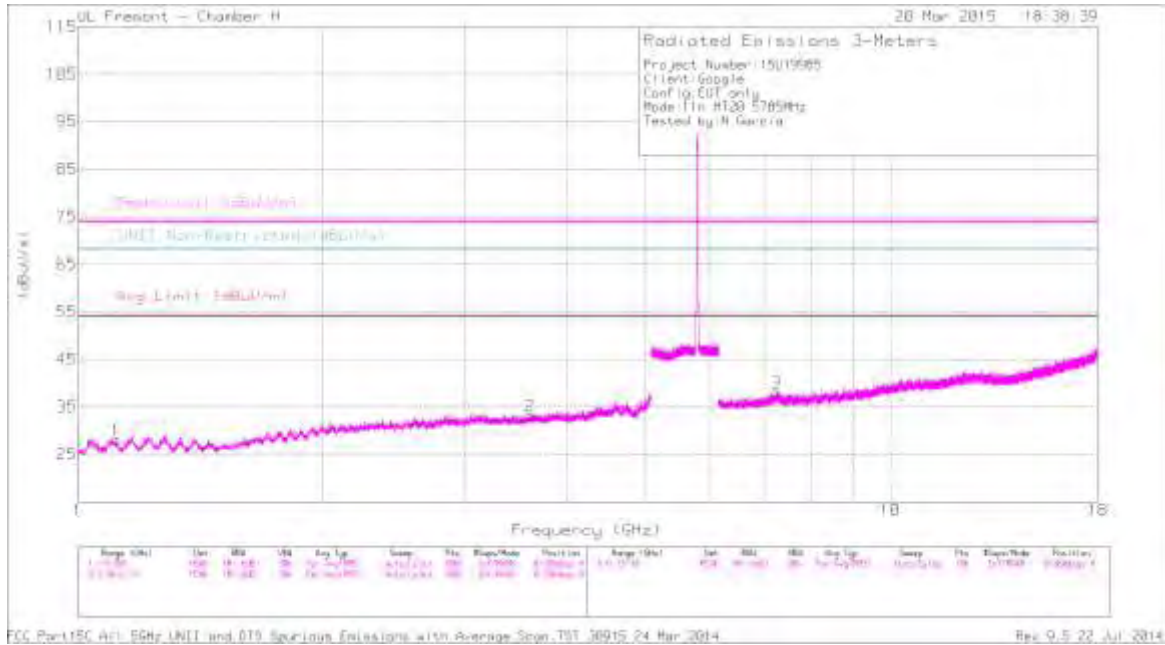
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

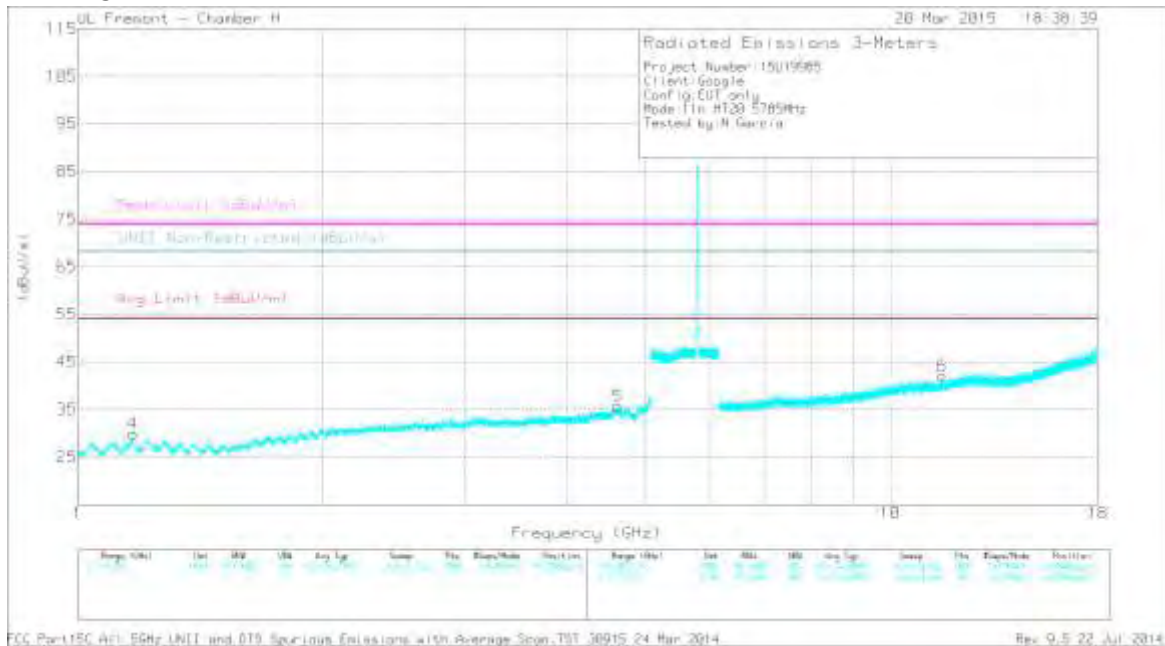
AD1 - KDB789033 Method: AD Primary Power Average

MID CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.116	42.77	PK1	28.3	-35.5	0	35.57	-	-	74	-38.43	-	-	37	120	H
	* 1.114	31.72	AD1	28.3	-35.6	.11	24.53	54	-29.47	-	-	-	-	37	120	H
2	* 3.608	40.8	PK1	33	-32.9	0	40.9	-	-	74	-33.1	-	-	67	126	H
	* 3.609	29.73	AD1	33	-32.9	.11	29.94	54	-24.06	-	-	-	-	67	126	H
3	7.238	38.39	PK1	36.2	-28.9	0	45.69	-	-	-	-	68.2	-22.51	11	124	H
4	* 1.168	43.29	PK1	28.6	-35.5	0	36.39	-	-	74	-37.61	-	-	15	108	V
	* 1.168	32.01	AD1	28.6	-35.5	.11	25.22	54	-28.78	-	-	-	-	15	108	V
5	* 4.621	41.47	PK1	34.1	-31.9	0	43.67	-	-	74	-30.33	-	-	34	131	V
	* 4.622	30.17	AD1	34.1	-31.9	.11	32.48	54	-21.52	-	-	-	-	34	131	V
6	* 11.586	36.07	PK1	38.2	-25.1	0	49.17	-	-	74	-24.83	-	-	31	128	V
	* 11.586	24.77	AD1	38.2	-25.1	.11	37.98	54	-16.02	-	-	-	-	31	128	V

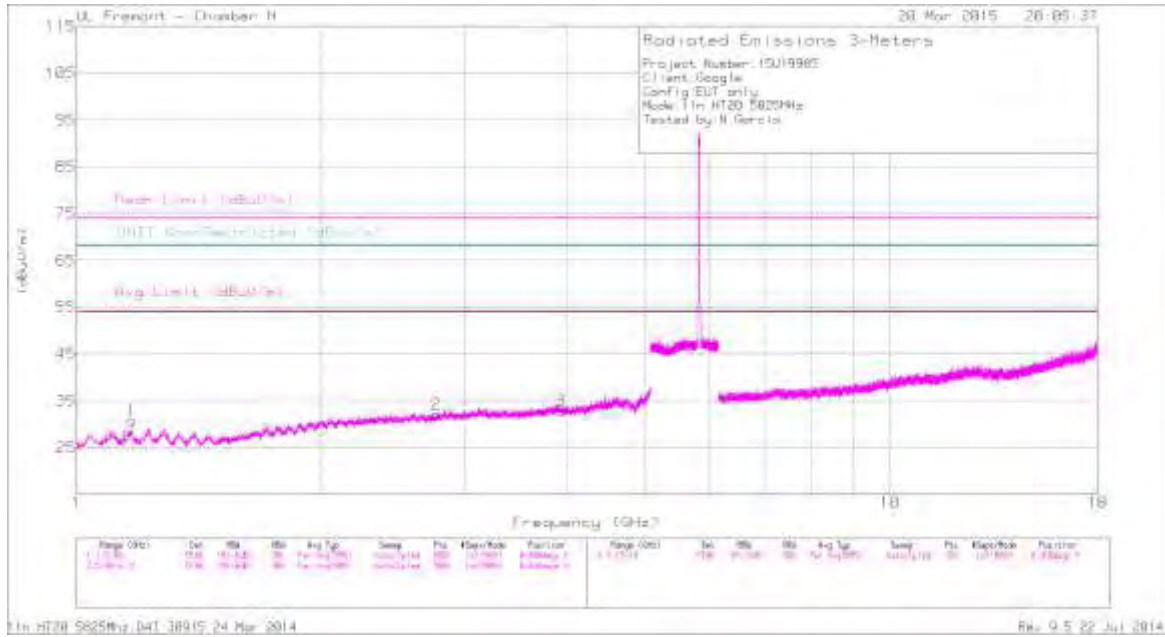
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

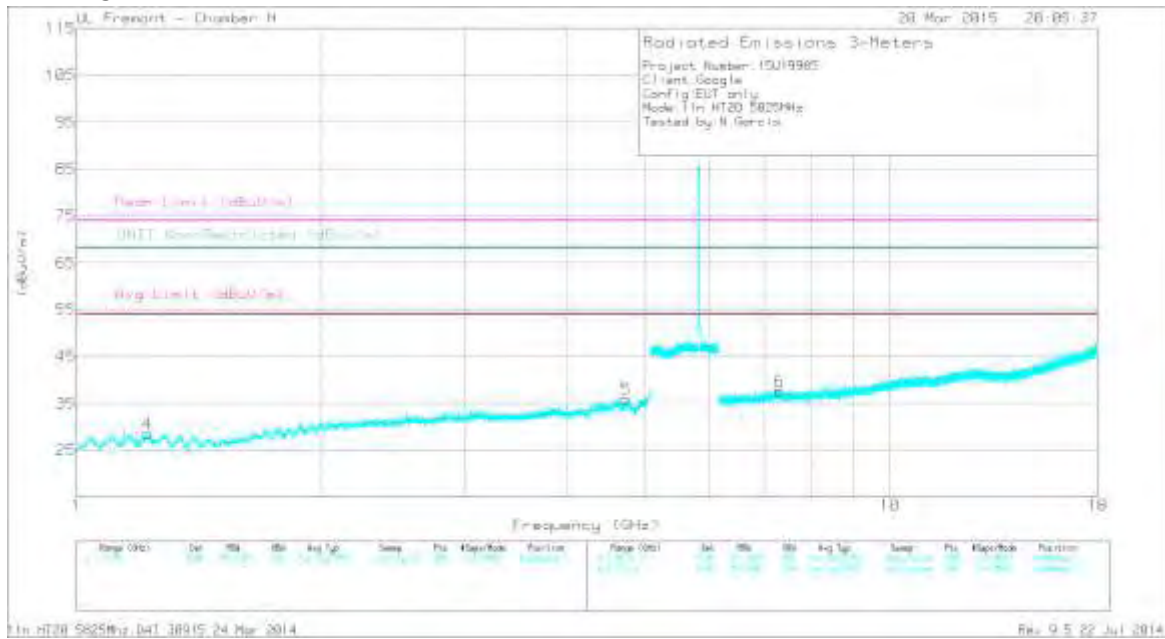
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.17	43.45	PK1	28.6	-35.6	0	36.45	-	-	74	-37.55	-	-	15	116	H
	* 1.17	32.57	AD1	28.6	-35.6	.11	25.68	54	-28.32	-	-	-	-	15	116	H
2	* 2.766	42.19	PK1	32.3	-33.9	0	40.59	-	-	74	-33.41	-	-	25	122	H
	* 2.767	30.6	AD1	32.3	-33.9	.11	29.11	54	-24.89	-	-	-	-	25	122	H
3	* 3.932	41.39	PK1	33.4	-32.6	0	42.19	-	-	74	-31.81	-	-	35	154	H
	* 3.935	30.01	AD1	33.4	-32.7	.11	30.82	54	-23.18	-	-	-	-	35	154	H
4	* 1.222	43.89	PK1	28.9	-35.5	0	37.29	-	-	74	-36.71	-	-	24	118	V
	* 1.222	32.24	AD1	28.9	-35.6	.11	25.65	54	-28.35	-	-	-	-	24	118	V
5	* 4.733	40.36	PK1	34.3	-31.5	0	43.16	-	-	74	-30.84	-	-	18	113	V
	* 4.735	29.55	AD1	34.3	-31.5	.11	32.46	54	-21.54	-	-	-	-	18	113	V
6	* 7.308	38.54	PK1	36.2	-29.8	0	44.94	-	-	74	-29.06	-	-	27	128	V
	* 7.307	28.05	AD1	36.2	-29.8	.11	34.56	54	-19.44	-	-	-	-	27	128	V

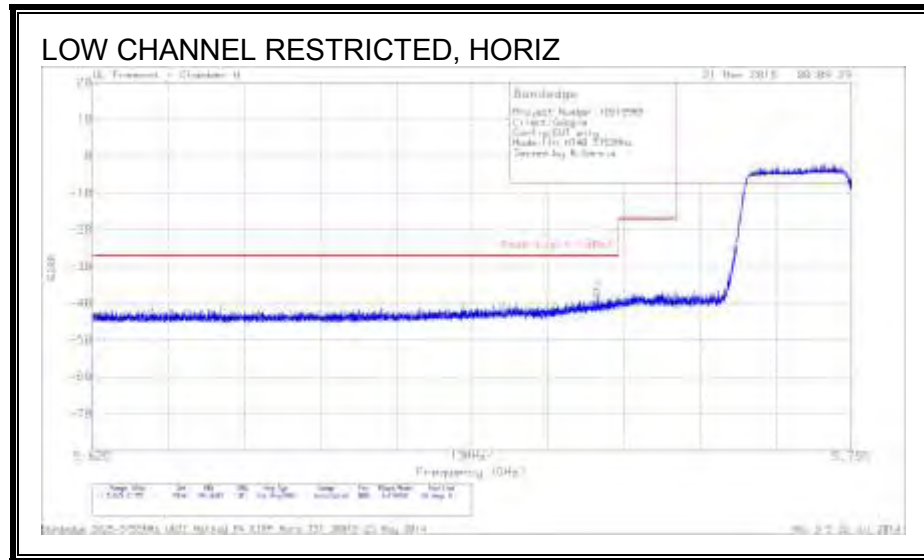
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.16. 802.11n HT40 MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

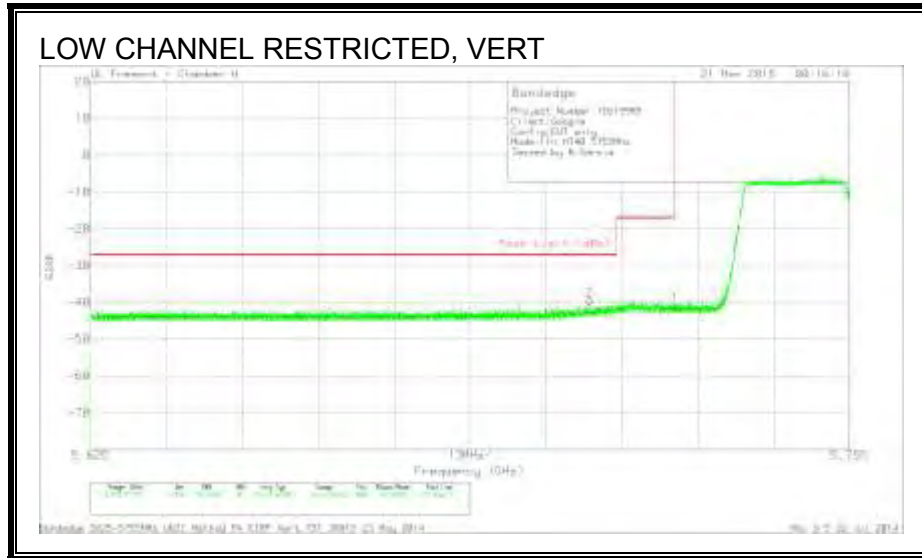


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.711	-61.67	PK	35	-22.4	11.8	-37.27	-27	-10.27	93	141	H
1	5.725	-64.43	PK	35	-22.4	11.8	-40.03	-17	-23.03	93	141	H

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



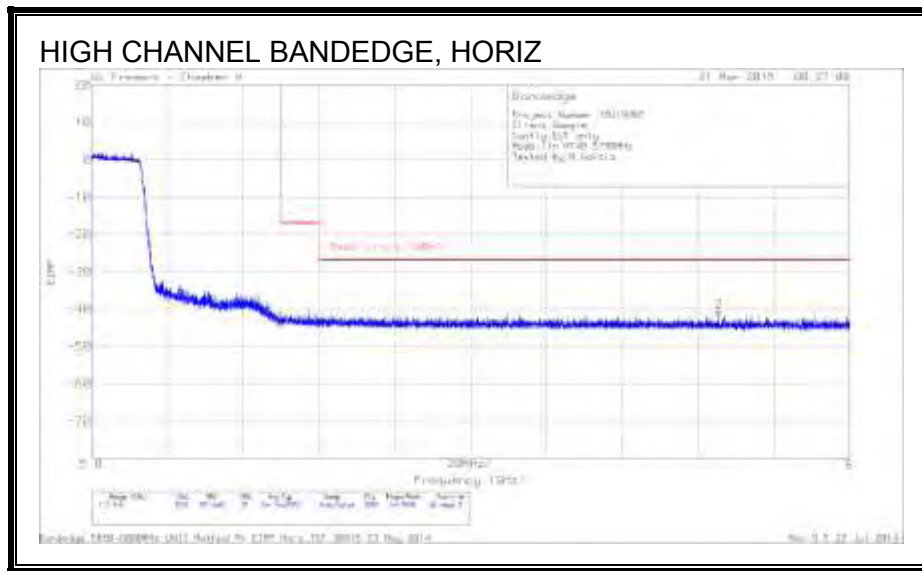
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cb/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.71	-63.82	PK	35	-22.4	11.8	-39.42	-27	-12.42	317	393	V
1	5.725	-65.02	PK	35	-22.4	11.8	-40.62	-17	-23.62	317	393	V

* - indicates frequency in CFR 47, Part 15 Restricted Band" and "Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

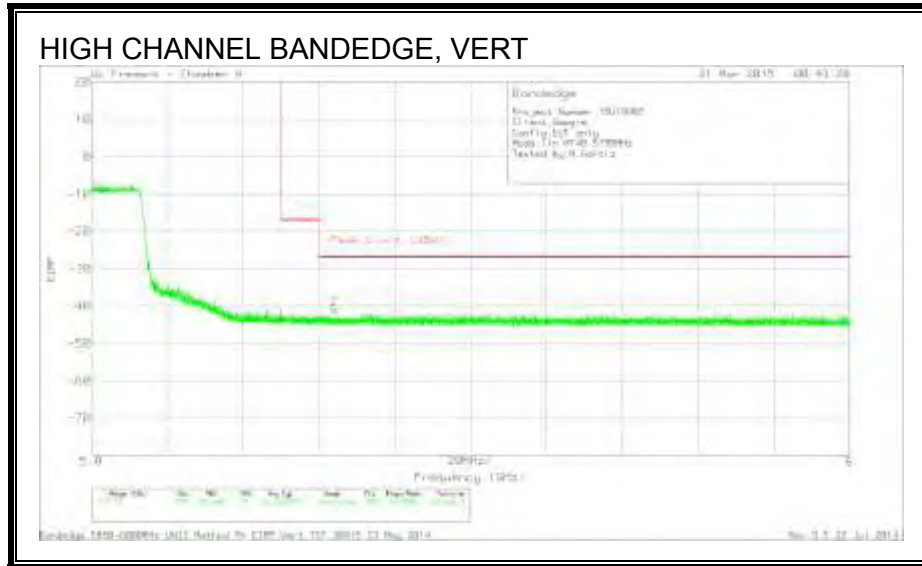


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-68.49	PK	35.1	-22.2	11.8	-43.79	-17	-26.79	66	286	H
2	5.966	-65.59	PK	35.2	-22.2	11.8	-40.79	-27	-13.79	66	286	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-68.59	PK	35.1	-22.2	11.8	-43.89	-17	-26.89	333	340	V
2	5.864	-65.54	PK	35.1	-22.2	11.8	-40.84	-27	-13.84	333	340	V

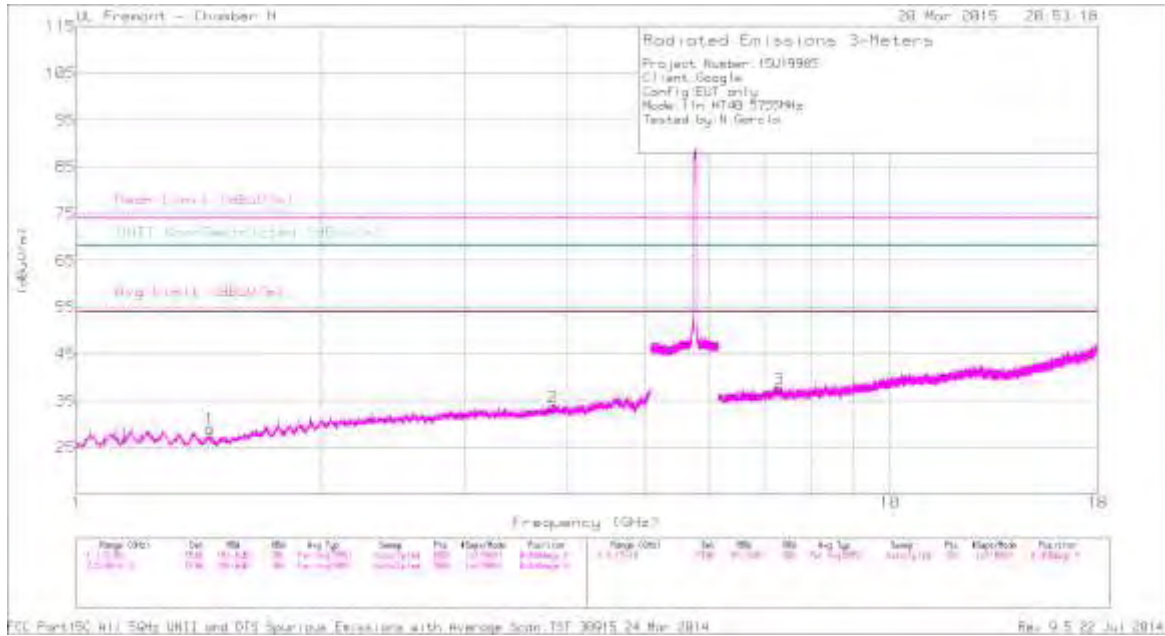
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

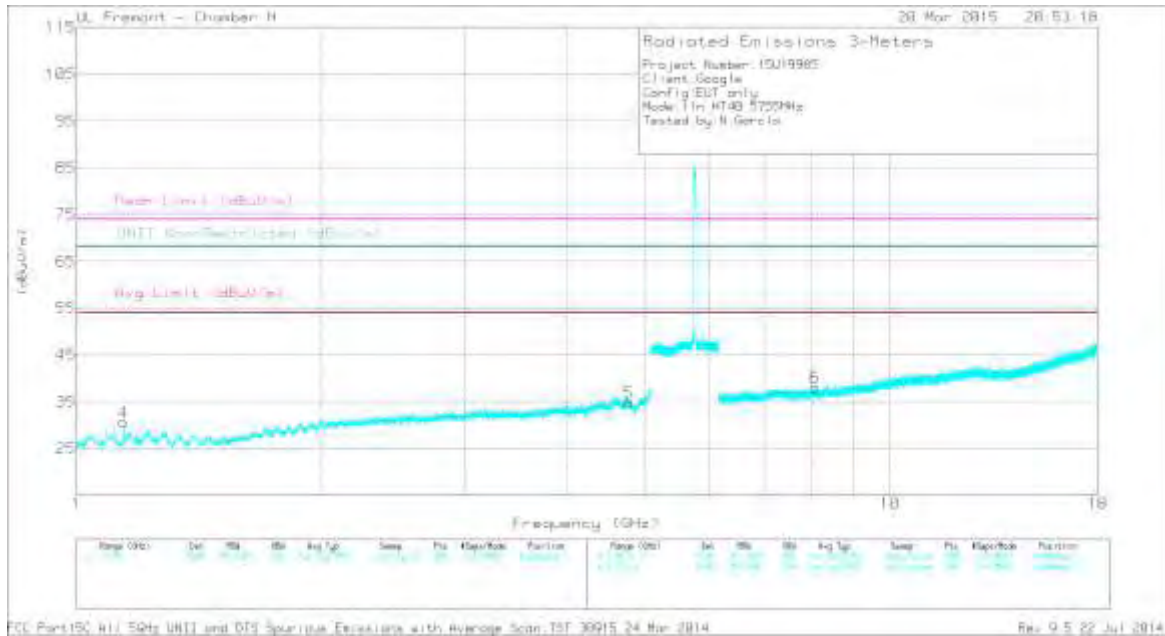
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.458	42.95	PK1	27.9	-34.9	0	35.95	-	-	74	-38.05	-	-	293	125	H
	* 1.457	31.71	AD1	27.9	-34.9	.22	24.93	54	-29.07	-	-	-	-	293	125	H
2	* 3.856	41.24	PK1	33.3	-32.8	0	41.74	-	-	74	-32.26	-	-	57	109	H
	* 3.855	30.51	AD1	33.3	-32.9	.22	31.13	54	-22.87	-	-	-	-	57	109	H
3	* 7.309	38.74	PK1	36.2	-29.8	0	45.14	-	-	74	-28.86	-	-	16	130	H
	* 7.307	28.01	AD1	36.2	-29.8	.22	34.63	54	-19.37	-	-	-	-	16	130	H
4	* 1.142	43.56	PK1	28.4	-35.6	0	36.36	-	-	74	-37.64	-	-	72	136	V
	* 1.144	30.91	AD1	28.4	-35.6	.22	23.93	54	-30.07	-	-	-	-	72	136	V
5	* 4.774	41.49	PK1	34.3	-31.8	0	43.99	-	-	74	-30.01	-	-	36	114	V
	* 4.774	29.94	AD1	34.3	-31.8	.22	32.66	54	-21.34	-	-	-	-	36	114	V
6	* 8.084	37.85	PK1	36	-28.1	0	45.75	-	-	74	-28.25	-	-	38	120	V
	* 8.084	27.09	AD1	36	-28.1	.22	35.21	54	-18.79	-	-	-	-	38	120	V

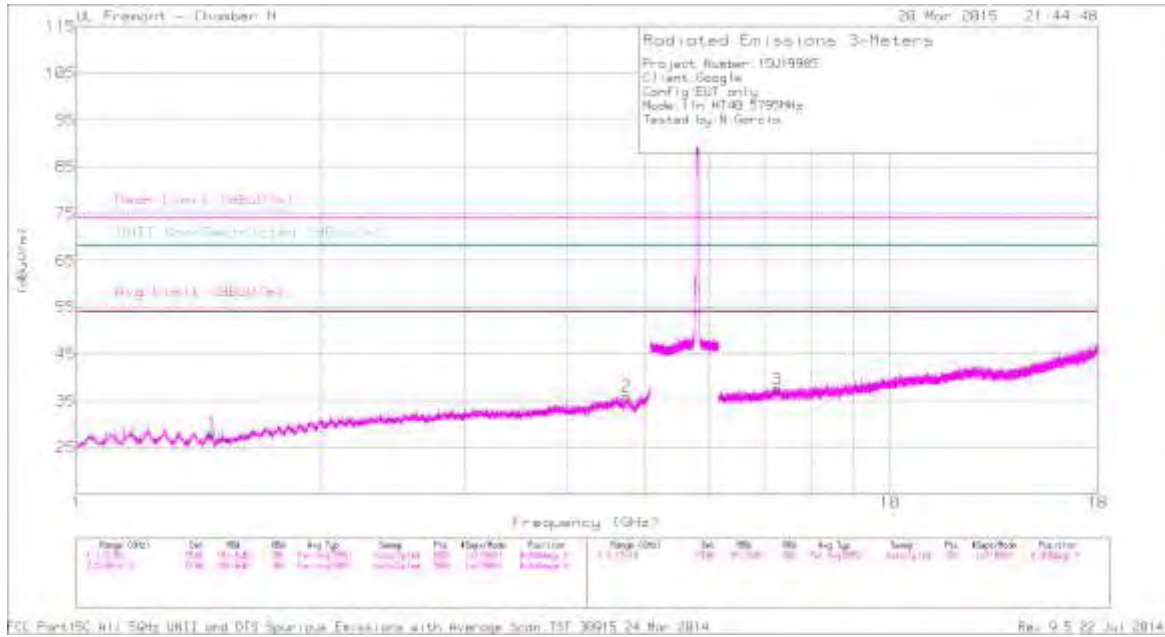
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

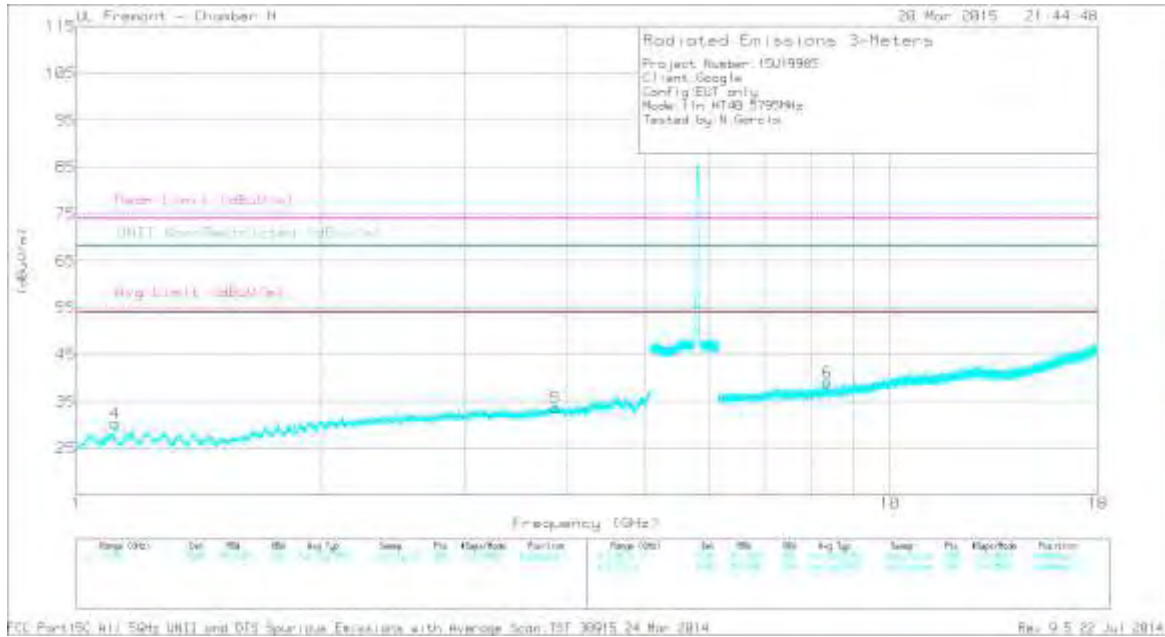
AD1 - KDB789033 Method: AD Primary Power Average

HIGH CHANNEL

HORIZONTAL



VERTICAL



Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.468	42.64	PK1	27.9	-34.8	0	35.74	-	-	74	-38.26	-	-	28	117	H
	* 1.469	31.56	AD1	27.9	-34.9	.22	24.78	54	-29.22	-	-	-	-	28	117	H
2	* 4.745	42.01	PK1	34.3	-31.7	0	44.61	-	-	74	-29.39	-	-	39	123	H
	* 4.744	29.92	AD1	34.3	-31.7	.22	32.74	54	-21.26	-	-	-	-	39	123	H
4	* 1.115	43.41	PK1	28.3	-35.6	0	36.11	-	-	74	-37.89	-	-	19	140	V
	* 1.115	32.42	AD1	28.3	-35.6	.22	25.34	54	-28.66	-	-	-	-	19	140	V
5	* 3.883	41.64	PK1	33.4	-32.8	0	42.24	-	-	74	-31.76	-	-	12	111	V
	* 3.882	30.39	AD1	33.4	-32.8	.22	31.21	54	-22.79	-	-	-	-	12	111	V
3	* 7.265	38.47	PK1	36.2	-29.1	0	45.57	-	-	74	-28.43	-	-	43	125	H
	* 7.267	27.52	AD1	36.2	-29.1	.22	34.84	54	-19.16	-	-	-	-	43	125	H
6	* 8.377	37.95	PK1	36.1	-27.8	0	46.25	-	-	74	-27.75	-	-	14	118	V
	* 8.378	27.06	AD1	36.1	-27.8	.22	35.58	54	-18.42	-	-	-	-	14	118	V

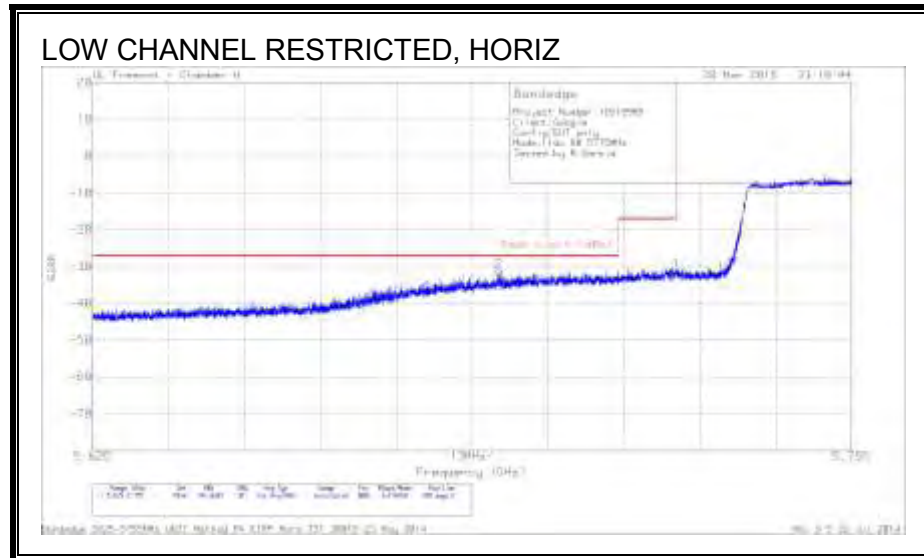
* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

9.17. 802.11ac HT80 MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

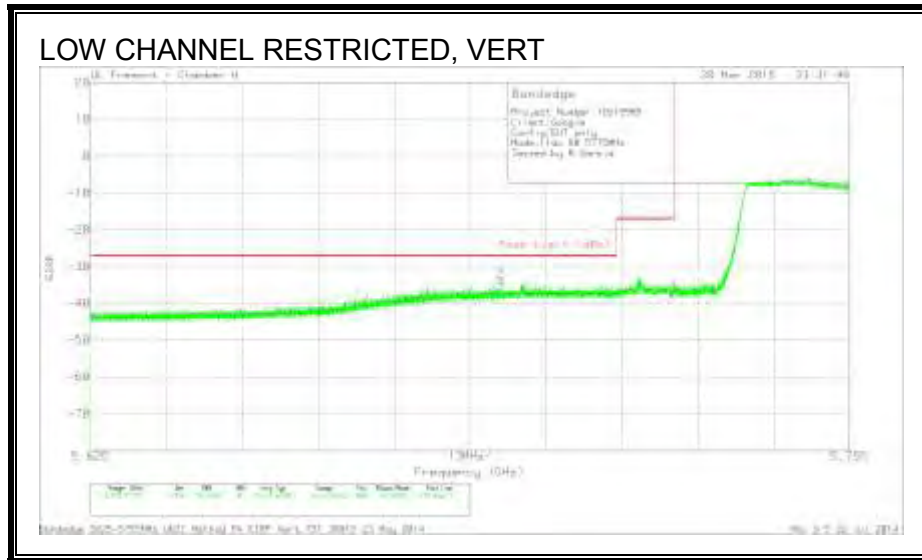


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.695	-55.54	PK	35	-22.4	11.8	0	-31.14	-27	-4.14	100	161	H
1	5.725	-55.61	PK	35	-22.4	11.8	0	-31.21	-17	-14.21	100	161	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



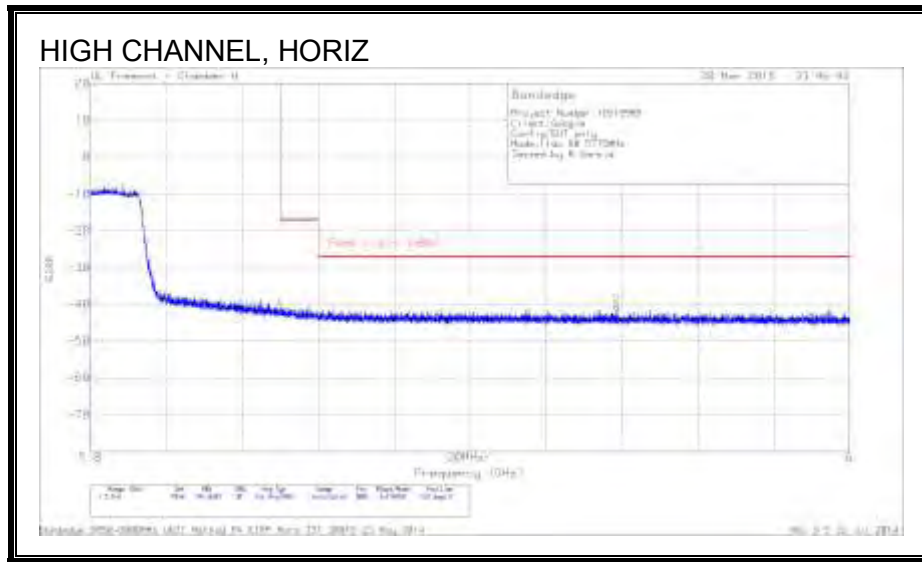
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.695	-58.19	PK	35	-22.4	11.8	-33.79	-27	-6.79	279	154	V
1	5.725	-61.56	PK	35	-22.4	11.8	-37.16	-17	-20.16	279	154	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

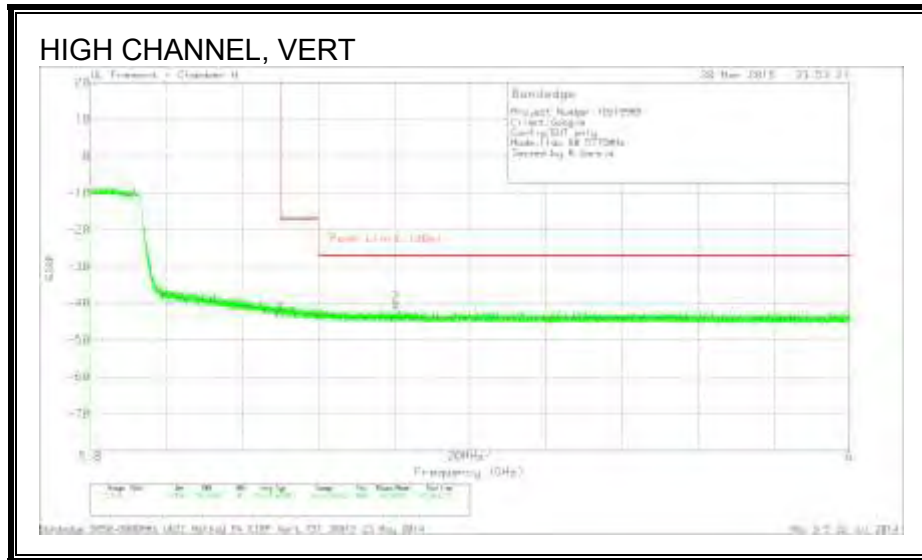


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-66.66	PK	35.1	-22.2	11.8	-41.96	-17	-24.96	163	276	H
2	5.939	-65.42	PK	35.2	-22.2	11.8	-40.62	-27	-13.62	163	276	H

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T863 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-67.37	PK	35.1	-22.2	11.8	-42.67	-17	-25.67	42	275	V
2	5.881	-64.91	PK	35.1	-22.2	11.8	-40.21	-27	-13.21	42	275	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

PK - Peak detector
RMS - RMS detection

Trace Markers

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dBm)	Amp/CbI/F Itr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.17	43.44	PK1	28.6	-35.6	0	36.44	-	-	74	-37.56	-	-	10	112	H
	* 1.169	32.27	AD1	28.6	-35.6	.42	25.69	54	-28.31	-	-	-	-	10	112	H
2	* 4.791	41.06	PK1	34.3	-32.1	0	43.26	-	-	74	-30.74	-	-	19	122	H
	* 4.794	29.85	AD1	34.3	-32.1	.42	32.47	54	-21.53	-	-	-	-	19	122	H
3	* 7.252	38.42	PK1	36.2	-29	0	45.62	-	-	74	-28.38	-	-	16	142	H
	* 7.252	27.36	AD1	36.2	-29.1	.42	34.88	54	-19.12	-	-	-	-	16	142	H
4	* 1.142	43.53	PK1	28.4	-35.6	0	36.33	-	-	74	-37.67	-	-	16	141	V
	* 1.142	32.48	AD1	28.4	-35.6	.42	25.7	54	-28.3	-	-	-	-	16	141	V
5	* 3.935	41.14	PK1	33.4	-32.7	0	41.84	-	-	74	-32.16	-	-	28	111	V
	* 3.936	29.9	AD1	33.4	-32.7	.42	31.02	54	-22.98	-	-	-	-	28	111	V
6	* 8.243	38.2	PK1	36.1	-28.6	0	45.7	-	-	74	-28.3	-	-	29	112	V
	* 8.245	27.34	AD1	36.1	-28.6	.42	35.26	54	-18.74	-	-	-	-	29	112	V

* - indicates frequency in CFR 47, Part 15 Restricted Band” and “Industry Canada RSS-Restricted Band

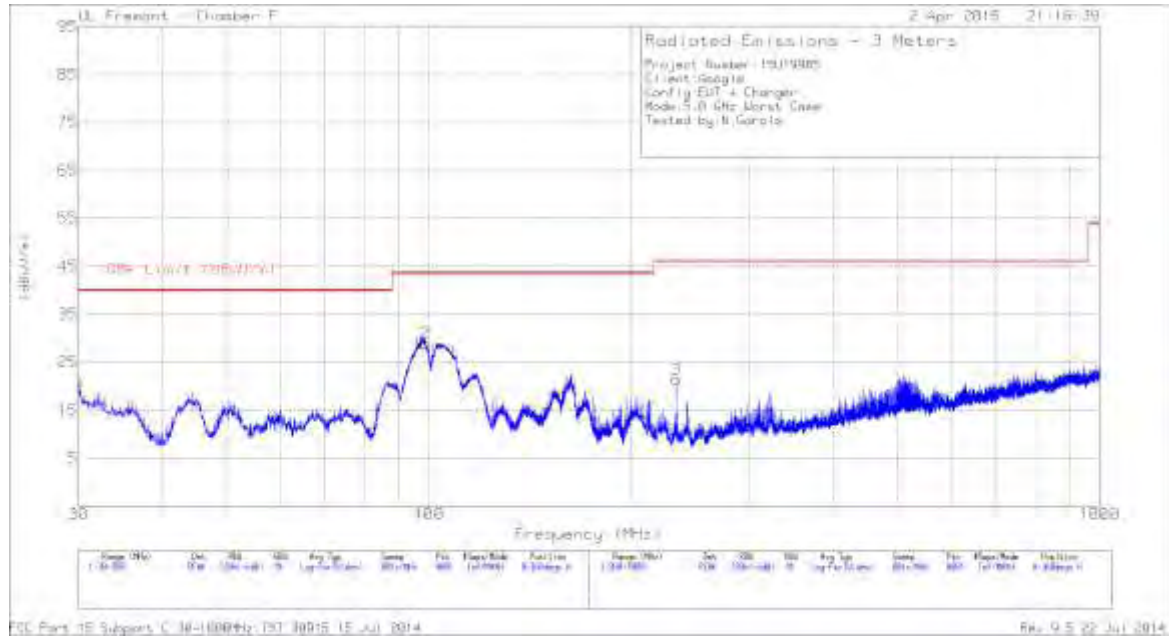
PK1 - KDB789033 Method: Peak

AD1 - KDB789033 Method: AD Primary Power Average

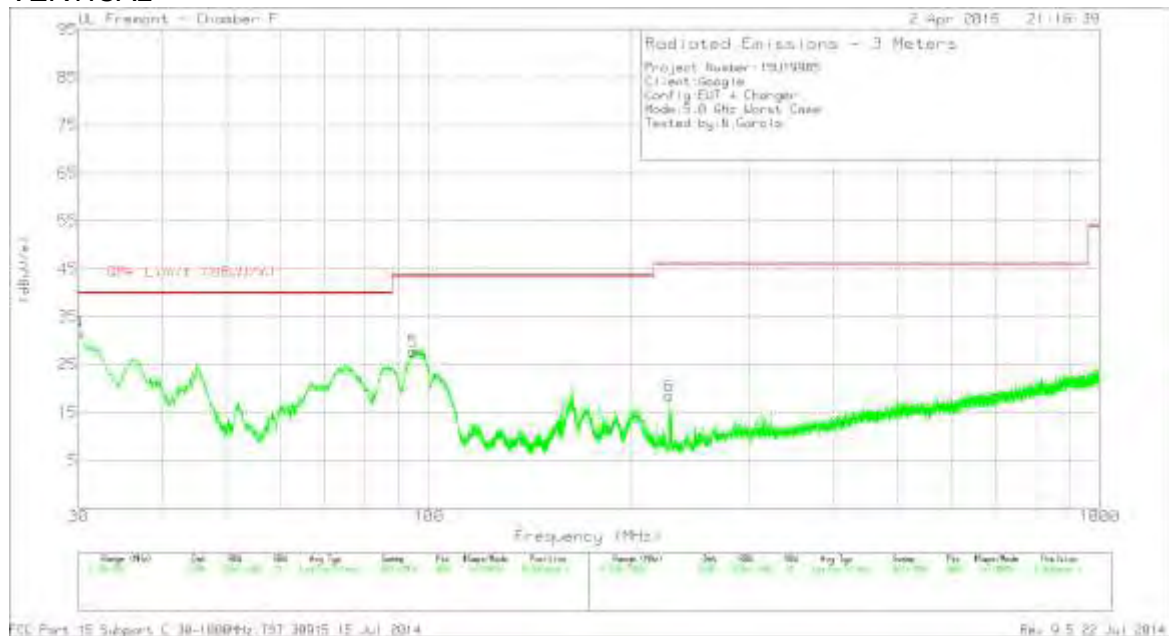
9.18. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL



VERTICAL



DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T122 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.085	32.03	PK	20.9	-31.9	21.03	40	-18.97	0-360	202	H
2	98.68	50.65	PK	9.7	-31.3	29.05	43.52	-14.47	0-360	302	H
4	30.0425	42.57	PK	21	-31.9	31.67	40	-8.33	0-360	100	V
5	94.685	50.41	PK	8.7	-31.3	27.81	43.52	-15.71	0-360	100	V
3	233.7	40.66	PK	11.2	-30.4	21.46	46.02	-24.56	0-360	99	H
6	228	37.92	PK	11	-30.4	18.52	46.02	-27.5	0-360	99	V

PK - Peak detector

9.19. WORST-CASE ABOVE 18 GHz

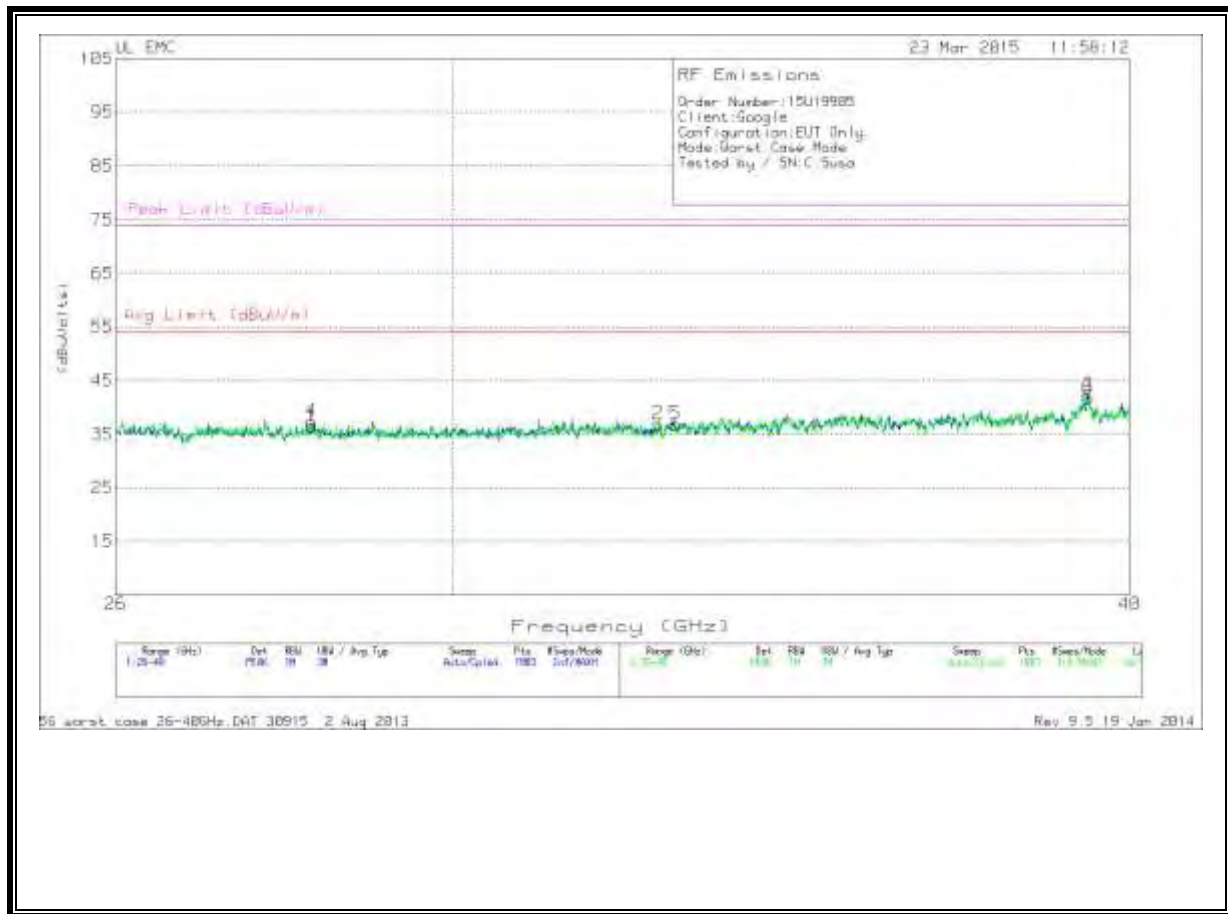
SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION)



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T89 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
3	23.995	43.33	PK	34.2	-22.7	-9.5	45.33	54	-8.67	74	-28.67
4	25.074	43.47	PK	34.5	-22.8	-9.5	45.67	54	-8.33	74	-28.33
5	19.509	40.5	PK	32.8	-24.3	-9.5	39.5	54	-14.5	74	-34.5
1	24.008	43.93	PK	34.2	-22.8	-9.5	45.83	54	-8.17	74	-28.17
2	25.041	43.93	PK	34.5	-22.6	-9.5	46.33	54	-7.67	74	-27.67
6	19.505	40.17	PK	32.8	-24.3	-9.5	39.17	54	-14.83	74	-34.83

SPURIOUS EMISSIONS 26 TO 40 GHz (WORST-CASE CONFIGURATION)



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	28.261	45.3	PK	35.9	-35.2	-9.5	36.5	54	-17.5	74	-37.5
2	32.736	47.13	PK	36.6	-37.4	-9.5	36.83	54	-17.17	74	-37.17
3	39.301	49.37	PK	38.3	-36	-9.5	42.17	54	-11.83	74	-31.83
4	28.253	46.03	PK	35.9	-35.1	-9.5	37.33	54	-16.67	74	-36.67
5	32.984	46.93	PK	36.7	-37.3	-9.5	36.83	54	-17.17	74	-37.17
6	39.293	48.57	PK	38.4	-35.8	-9.5	41.67	54	-12.33	74	-32.33

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

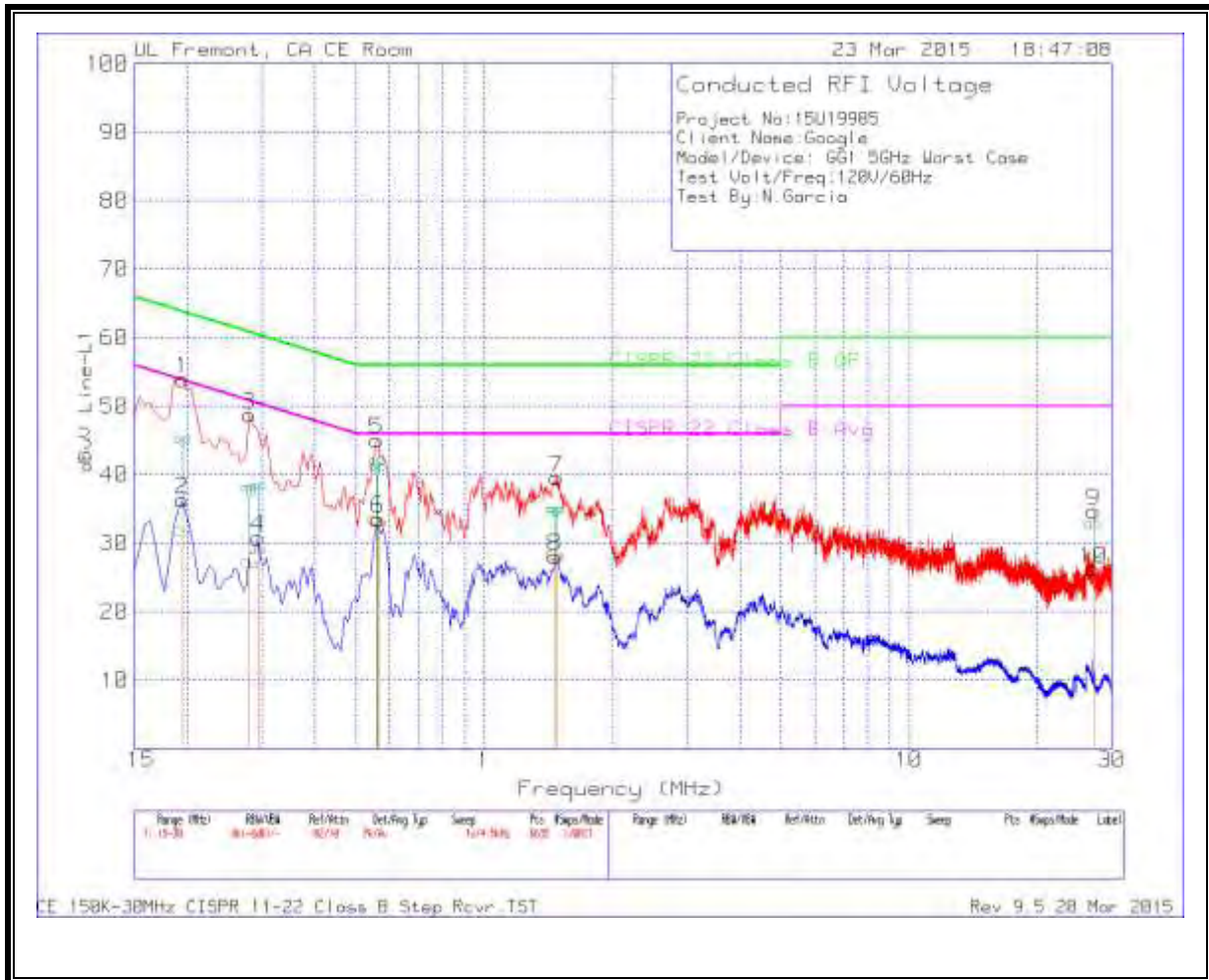
FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

RESULTS

LINE 1 RESULTS

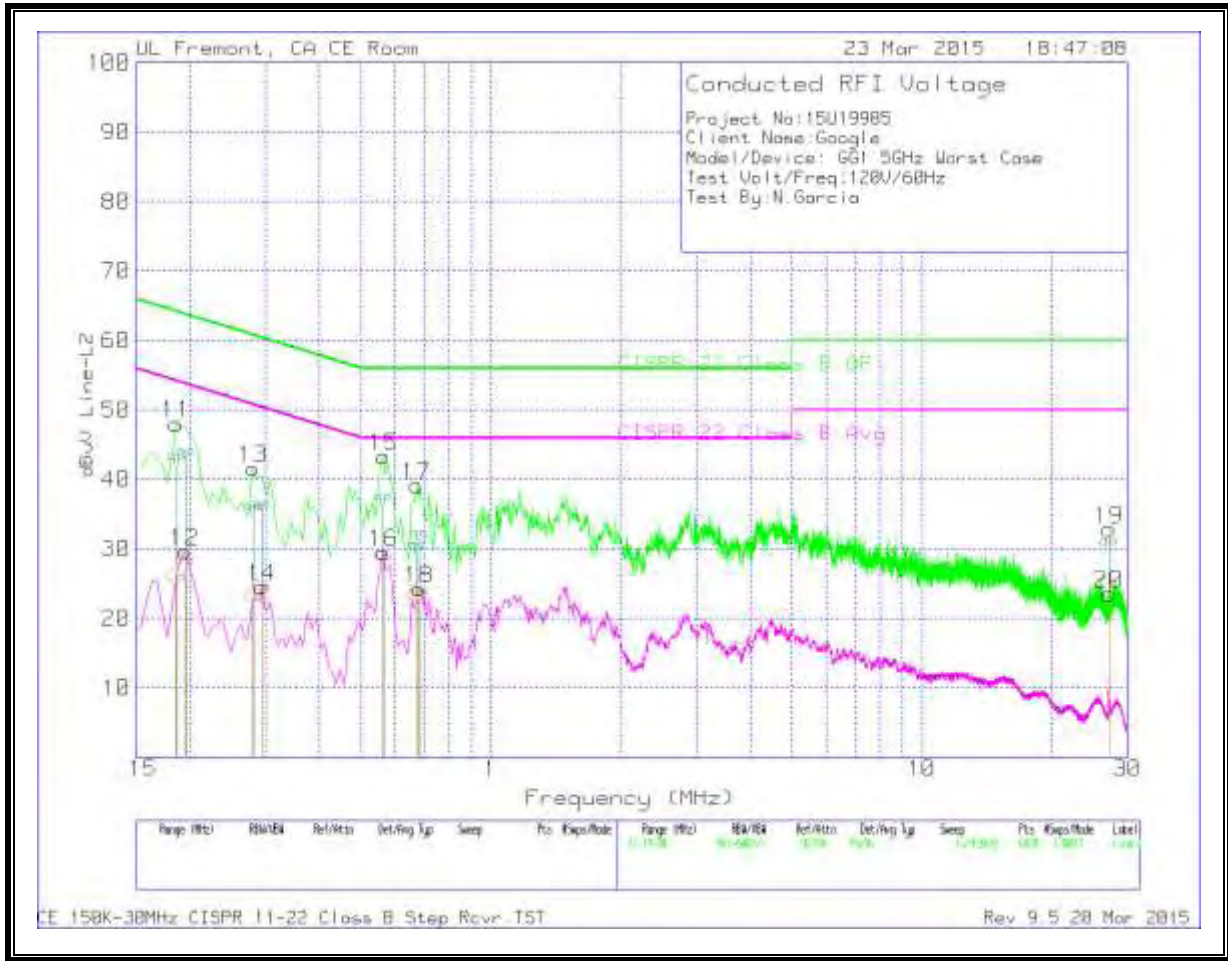


Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.195	52.96	Pk	1	0	53.96	63.82	-9.86	--	--
2	.195	35.34	Av	1	0	36.34	--	--	53.82	-17.48
3	.2805	48.18	Pk	.6	0	48.78	60.8	-12.02	--	--
4	.294	30.21	Av	.6	0	30.81	--	--	50.41	-19.6
5	.5595	44.77	Pk	.3	0	45.07	56	-10.93	--	--
6	.564	33.28	Av	.3	0	33.58	--	--	46	-12.42
7	1.482	39.29	Pk	.2	.1	39.59	56	-16.41	--	--
8	1.4685	27.77	Av	.2	.1	28.07	--	--	46	-17.93
9	27.1995	34.1	Pk	.3	.3	34.7	60	-25.3	--	--
10	27.1995	25.61	Av	.3	.3	26.21	--	--	50	-23.79

Pk - Peak detector

Av - Average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
11	.186	46.95	Pk	1.1	0	48.05	64.21	-16.16	--	--
12	.195	28.67	Av	1	0	29.67	--	--	53.82	-24.15
13	.2805	41.06	Pk	.6	0	41.66	60.8	-19.14	--	--
14	.294	23.94	Av	.6	0	24.54	--	--	50.41	-25.87
15	.564	43.02	Pk	.3	0	43.32	56	-12.68	--	--
16	.564	29.23	Av	.3	0	29.53	--	--	46	-16.47
17	.672	38.88	Pk	.3	0	39.18	56	-16.82	--	--
18	.681	23.97	Av	.3	0	24.27	--	--	46	-21.73
19	27.1995	32.26	Pk	.3	.3	32.86	60	-27.14	--	--
20	27.1995	22.97	Av	.3	.3	23.57	--	--	50	-26.43

Pk - Peak detector
Av - Average detection

11. DYNAMIC FREQUENCY SELECTION

11.1. OVERVIEW

11.1.1. LIMITS

INDUSTRY CANADA

IC RSS-210 is closely harmonized with FCC Part 15 DFS rules. The deviations are as follows:

RSS-210 Issue 8 A9.3

Note: For the band 5600–5650 MHz, no operation is permitted.

Until further notice, devices subject to this annex shall not be capable of transmitting in the band 5600–5650 MHz. This restriction is for the protection of Environment Canada weather radars operating in this band.

FCC

§15.407 (h), FCC KDB 905462 D02 “COMPLIANCE MEASUREMENT PROCEDURES FOR UNLICENSED-NATIONAL INFORMATION INFRASTRUCTURE DEVICES OPERATING IN THE 5250-5350 MHz AND 5470-5725 MHz BANDS INCORPORATING DYNAMIC FREQUENCY SELECTION” and KDB 905462 D03 “U-NII CLIENT DEVICES WITHOUT RADAR DETECTION CAPABILITY”.

Table 1: Applicability of DFS requirements prior to use of a channel

Requirement	Operational Mode		
	Master	Client (without radar detection)	Client (with radar detection)
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client (without DFS)	Client (with DFS)
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes

Additional requirements for devices with multiple bandwidth modes	Master Device or Client with Radar DFS	Client (without DFS)
<i>U-NII Detection Bandwidth and Statistical Performance Check</i>	All BW modes must be tested	Not required
<i>Channel Move Time and Channel Closing Transmission Time</i>	Test using widest BW mode available	Test using the widest BW mode available for the link
<i>All other tests</i>	Any single BW mode	Not required
Note: Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in all 20 MHz channel blocks and a null frequency between the bonded 20 MHz channel blocks.		

Table 3: Interference Threshold values, Master or Client incorporating In-Service Monitoring

Maximum Transmit Power	Value (see notes)
E.I.R.P. $\geq$ 200 mill watt	-64 dBm
E.I.R.P. $<$ 200 mill watt and power spectral density $<$ 10 dBm/MHz	-62 dBm
E.I.R.P. $<$ 200 mill watt that do not meet power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note 3: E.I.R.P. is based on the highest antenna gain. For MIMO devices refer to KDB publication 662911 D01.	

Table 4: DFS Response requirement values

Parameter	Value
<i>Non-occupancy period</i>	30 minutes
<i>Channel Availability Check Time</i>	60 seconds
<i>Channel Move Time</i>	10 seconds (See Note 1)
<i>Channel Closing Transmission Time</i>	200 milliseconds + approx. 60 milliseconds over remaining 10 second period. (See Notes 1 and 2)
<i>U-NII Detection Bandwidth</i>	Minimum 100% of the U- NII 99% transmission power bandwidth. (See Note 3)
Note 1: <i>Channel Move Time</i> and the <i>Channel Closing Transmission Time</i> should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. Note 2: The <i>Channel Closing Transmission Time</i> is comprised of 200 milliseconds starting at the beginning of the <i>Channel Move Time</i> plus any additional intermittent control signals required to facilitate a <i>Channel</i> move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. Note 3: During the <i>U-NII Detection Bandwidth</i> detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

Table 5 – Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (usec)	PRI (usec)	Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in table 5a	Roundup: $\{(1/360) \times (19 \times 10^6 \text{ PRI}_{\text{usec}})\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 usec. With a minimum increment of 1 usec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the <i>Detection Bandwidth</i> test, <i>Channel Move Time</i> , and <i>Channel Closing Time</i> tests.					

Table 6 – Long Pulse Radar Test Signal

Radar Waveform Type	Pulse Width (μsec)	Chirp Width (MHz)	PRI (μsec)	Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

Table 7 – Frequency Hopping Radar Test Signal

Radar Waveform Type	Pulse Width (μsec)	PRI (μsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Trials
6	1	333	9	0.333	300	70%	30

SYSTEM OVERVIEW

The short pulse and long pulse signal generating system utilizes the NTIA software. The Vector Signal Generator has been validated by the NTIA. The hopping signal generating system utilizes the CCS simulated hopping method and system, which has been validated by the DoD, FCC and NTIA. The software selects waveform parameters from within the bounds of the signal type on a random basis using uniform distribution.

The short pulse types 1, 2, 3 and 4, and the long pulse type 5 parameters are randomized at run-time.

The hopping type 6 pulse parameters are fixed while the hopping sequence is based on the August 2005 NTIA Hopping Frequency List. The initial starting point randomized at run-time and each subsequent starting point is incremented by 475. Each frequency in the 100-length segment is compared to the boundaries of the EUT Detection Bandwidth and the software creates a hopping burst pattern in accordance with Section 7.4.1.3 Method #2 Simulated Frequency Hopping Radar Waveform Generating Subsystem of KDB 905462 D02. The frequency of the signal generator is incremented in 1 MHz steps from F_L to F_H for each successive trial. This incremental sequence is repeated as required to generate a minimum of 30 total trials and to maintain a uniform frequency distribution over the entire Detection Bandwidth.

The signal monitoring equipment consists of a spectrum analyzer. The aggregate ON time is calculated by multiplying the number of bins above a threshold during a particular observation period by the dwell time per bin, with the analyzer set to peak detection and max hold.

SYSTEM CALIBRATION

A 50-ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to a horn antenna via a coaxial cable, with the reference level offset set to (horn antenna gain – coaxial cable loss). The signal generator is set to CW mode. The amplitude of the signal generator is adjusted to yield a level of –64 dBm as measured on the spectrum analyzer.

Without changing any of the instrument settings, the spectrum analyzer is reconnected to the Common port of the Spectrum Analyzer Combiner/Divider. The Reference Level Offset of the spectrum analyzer is adjusted so that the displayed amplitude of the signal is –64 dBm.

The spectrum analyzer displays the level of the signal generator as received at the antenna ports of the Master Device. The interference detection threshold may be varied from the calibrated value of –64 dBm and the spectrum analyzer will still indicate the level as received by the Master Device.

ADJUSTMENT OF DISPLAYED TRAFFIC LEVEL

A link is established between the Master and Slave and the distance between the units is adjusted as needed to provide a suitable received level at the Master and Slave devices. The video test file is streamed to generate WLAN traffic. The monitoring antenna is adjusted so that the WLAN traffic level, as displayed on the spectrum analyzer, is at lower amplitude than the radar detection threshold.

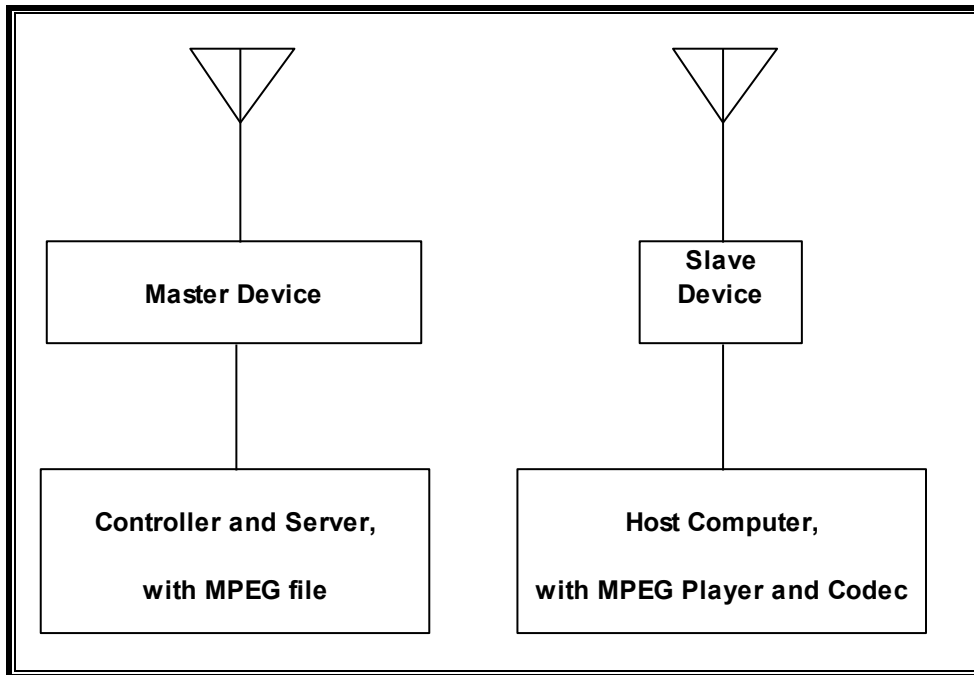
TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the DFS tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset Number	Cal Due
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01178	09/05/15
Vector Signal Generator, 20GHz	Agilent / HP	E8267C	C01066	09/03/15

11.1.3. SETUP OF EUT

RADIATED METHOD EUT TEST SETUP



SUPPORT EQUIPMENT

The following support equipment was utilized for the DFS tests documented in this report:

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
Notebook PC (EUT Host)	Apple	A1369	C02FX0VTDJDK	QDS-BRCN1052
AC Adapter (Host PC)	Apple	A1343	C0444626JE2F1Y7AV	DoC
802.11ac Dual Band Wireless Access Point	Cisco	AIR-CAP3702E-A-K9	FTX181570A6	LDK102087
P.O.E. Injector	Phihong	POE30U-560(G)	PHI170102N2	DoC
Notebook PC (Controller/Console)	Lenovo	Type 20B7-S0A200	PF-02JN9J 14/06	DoC
AC Adapter (Controller/Console PC)	Lenovo	ADLX65NLC2A	11S45N0259Z1ZS974594 A9	DoC

11.1.4. DESCRIPTION OF EUT

For FCC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges.

For IC the EUT operates over the 5250-5350 MHz and 5470-5725 MHz ranges, excluding the 5600-5650 MHz range.

The EUT is a Slave Device without Radar Detection.

The highest power level within these bands is 12.21 dBm EIRP in the 5250-5350 MHz band and 12.92 dBm EIRP in the 5470-5725 MHz band.

The only antenna assembly utilized with the EUT has a gain of 5 dBi.

The rated output power of the Master unit is > 23dBm (EIRP). Therefore the required interference threshold level is -64 dBm. After correction for procedural adjustments, the required radiated threshold at the antenna port is $-64 + 1 = -63$ dBm.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm. The tested level is lower than the required level hence it provides a margin to the limit.

The EUT uses one transmitter/receiver chain connected to an antenna to perform radiated tests.

WLAN traffic that meets or exceeds the minimum required loading was generated by transferring a data stream from the controller/server PC to the EUT using iPerf version 2.0.5 software package.

TPC is not required since the maximum EIRP is less than 500 mW (27 dBm).

The EUT utilizes the 802.11ac architecture. Three nominal channel bandwidths are implemented: 20 MHz, 40 MHz and 80 MHz. Therefore, pursuant to FCC KDB Publication 905462 D3, "Client devices with 80 MHz BW mode can be tested with an approved master operating in 40 MHz BW mode". Therefore, 80MHz BW DFS testing was not performed and has been excluded from this report.

The software installed in the access point is AP3G2-K9W7-M version 15.2(4)JB4.

UNIFORM CHANNEL SPREADING

This is requirement not applicable to Slave Devices.

OVERVIEW OF MASTER DEVICE WITH RESPECT TO §15.407 (h) REQUIREMENTS

The Master Device is a Cisco Access Point, FCC ID: LDK102087. The minimum antenna gain for the Master Device is 6 dBi.

The rated output power of the Master unit is $> 23\text{dBm}$ (EIRP). Therefore the required interference threshold level is -64 dBm . After correction for procedural adjustments, the required radiated threshold at the antenna port is $-64 + 1 = -63\text{ dBm}$.

The calibrated radiated DFS Detection Threshold level is set to -64 dBm . The tested level is lower than the required level hence it provides a margin to the limit.

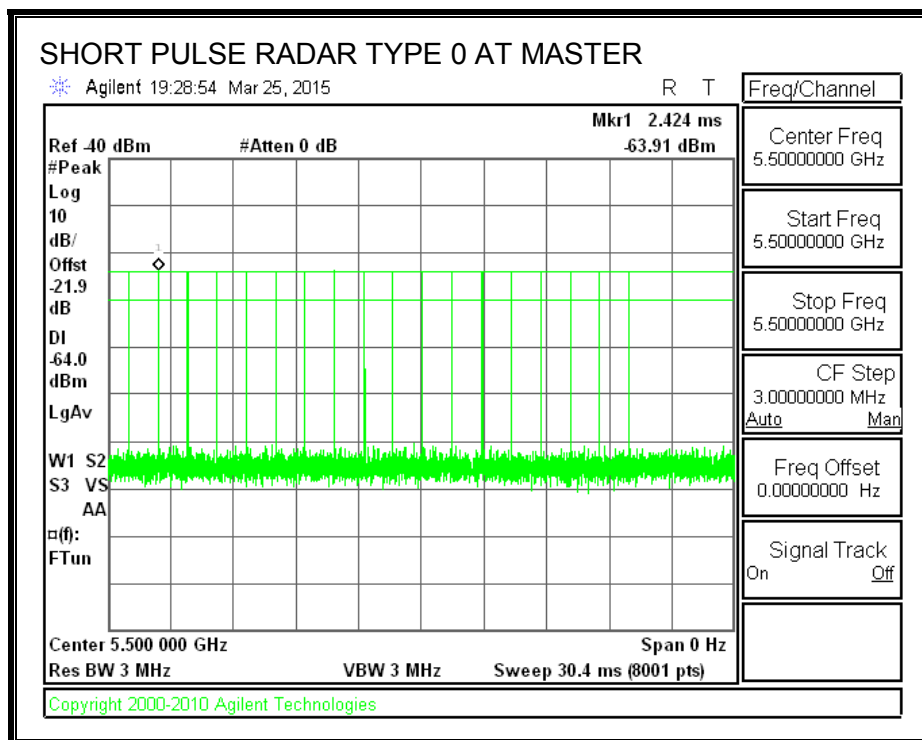
11.2. RESULTS FOR 20 MHz BANDWIDTH

11.2.1. TEST CHANNEL

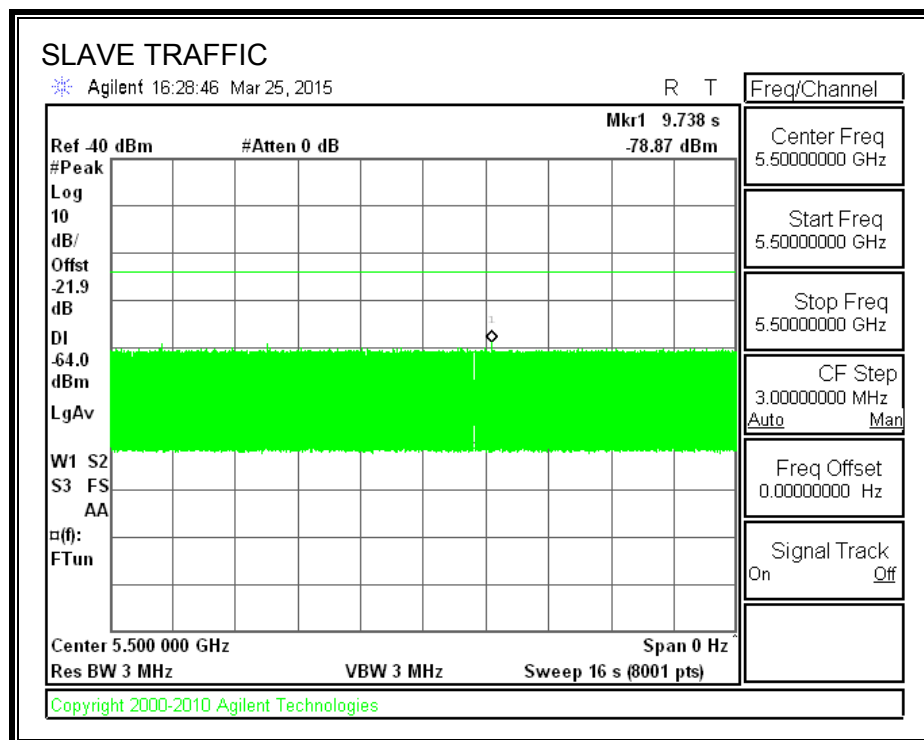
All tests were performed at a channel center frequency of 5500 MHz.

11.2.2. RADAR WAVEFORM AND TRAFFIC

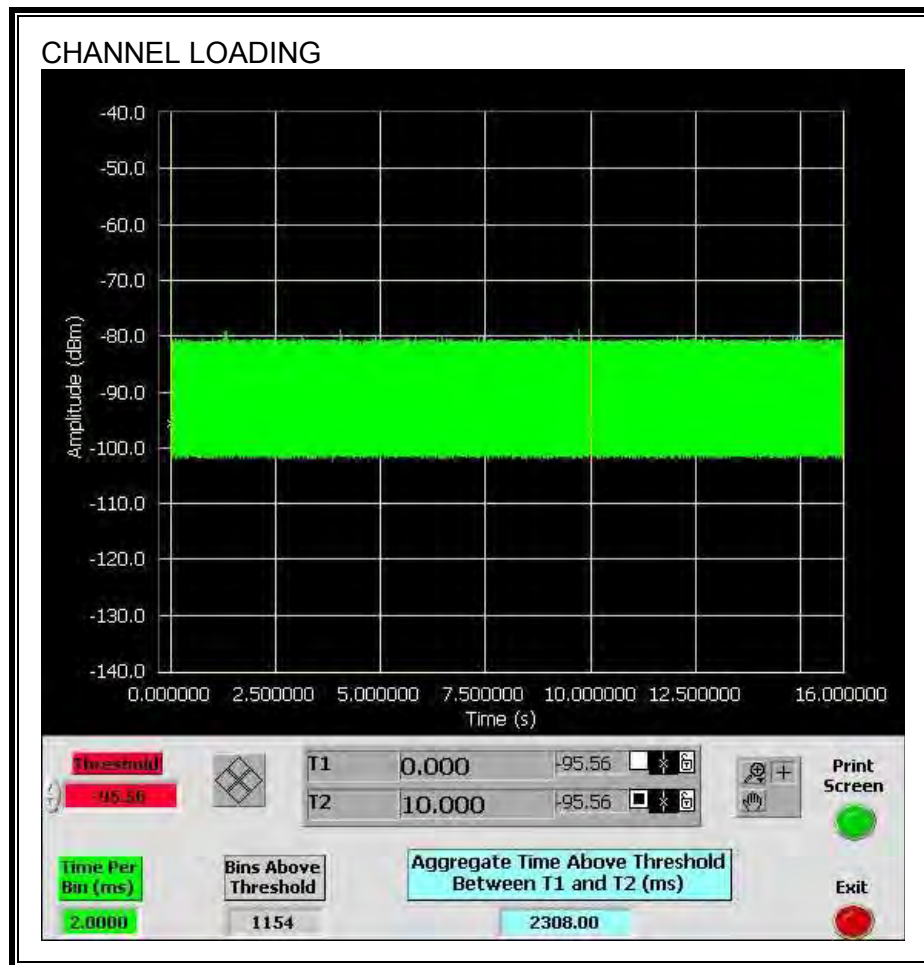
RADAR WAVEFORM



TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 23.08%

11.2.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.2.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

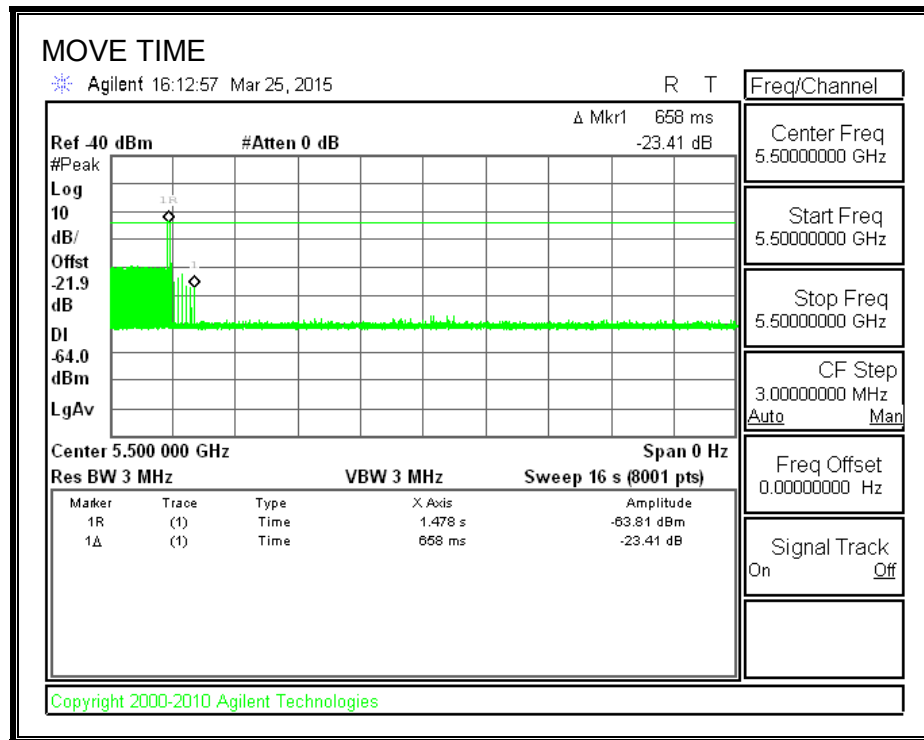
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

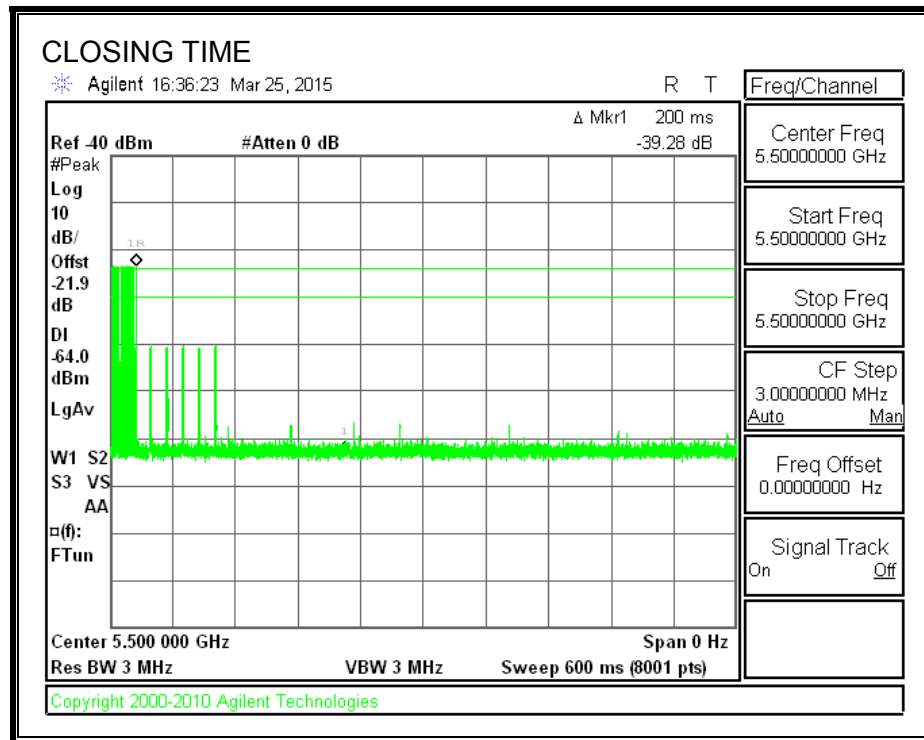
Channel Move Time (sec)	Limit (sec)
0.658	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
14.0	60

MOVE TIME

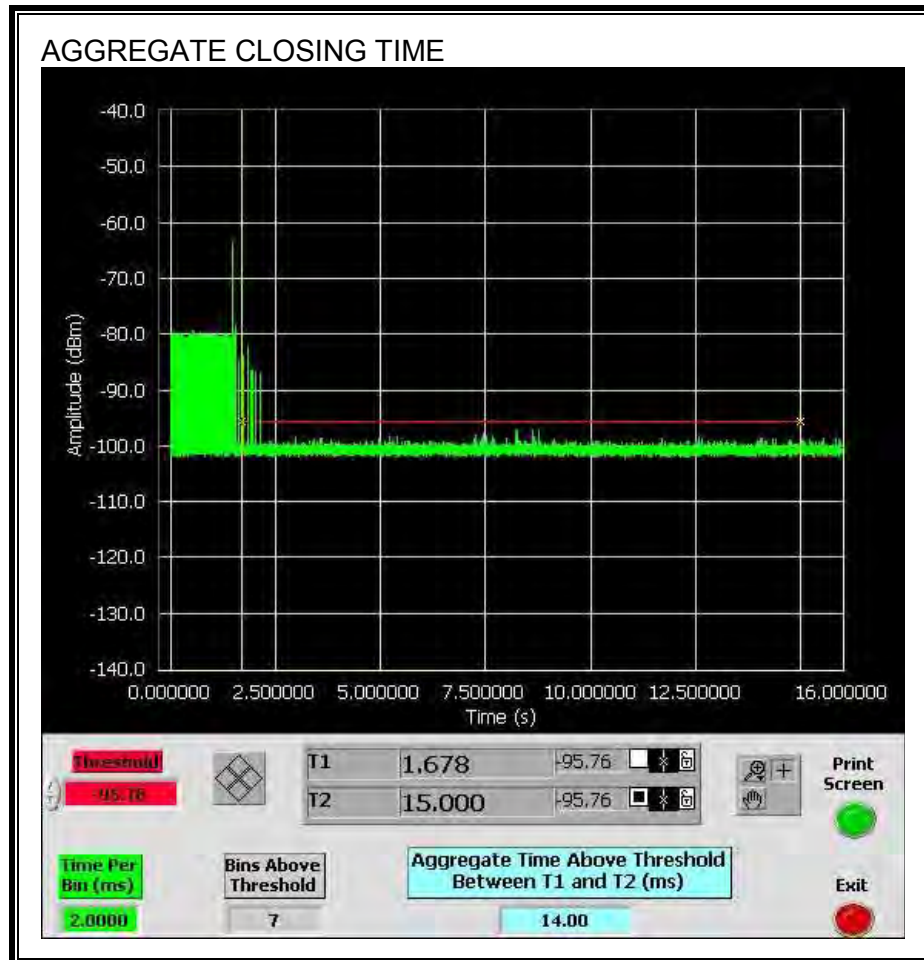


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

Only intermittent transmissions are observed during the aggregate monitoring period.



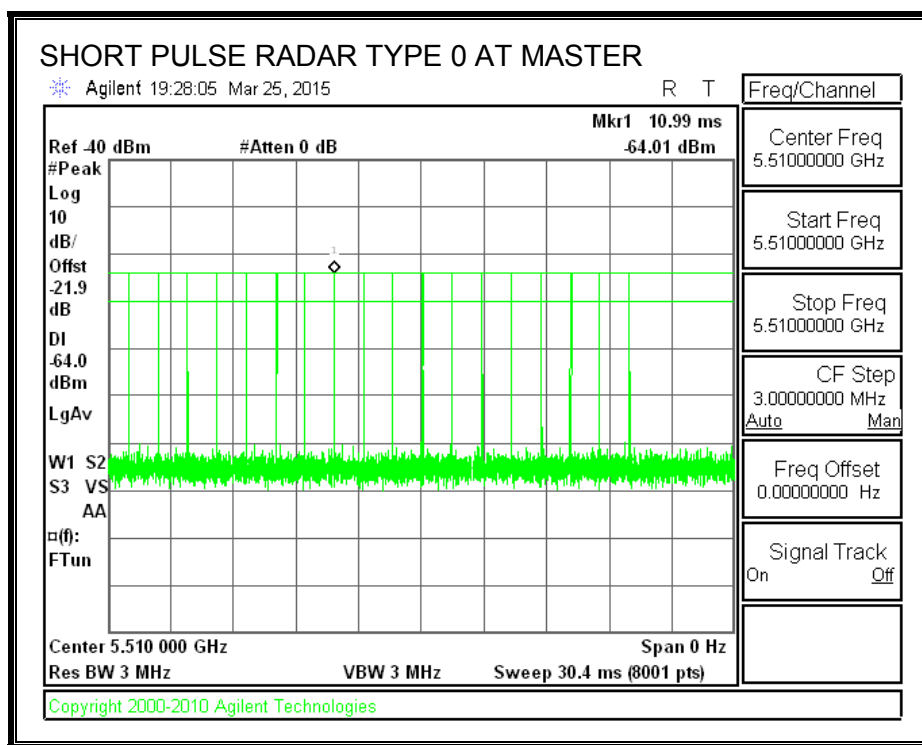
11.3. RESULTS FOR 40 MHz BANDWIDTH

11.3.1. TEST CHANNEL

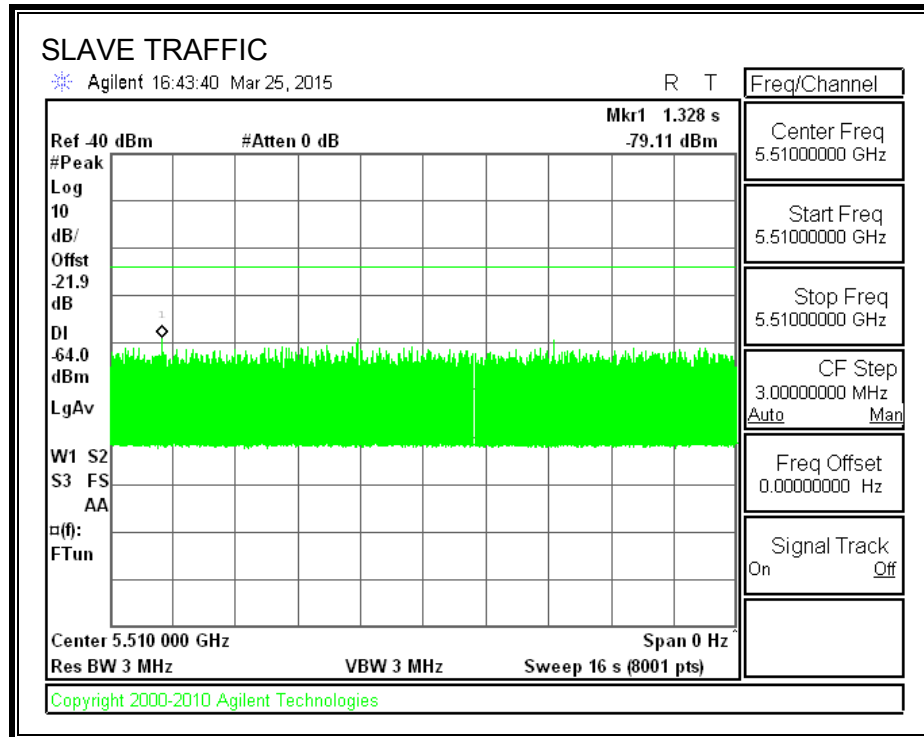
All tests were performed at a channel center frequency of 5510 MHz.

11.3.2. RADAR WAVEFORM AND TRAFFIC

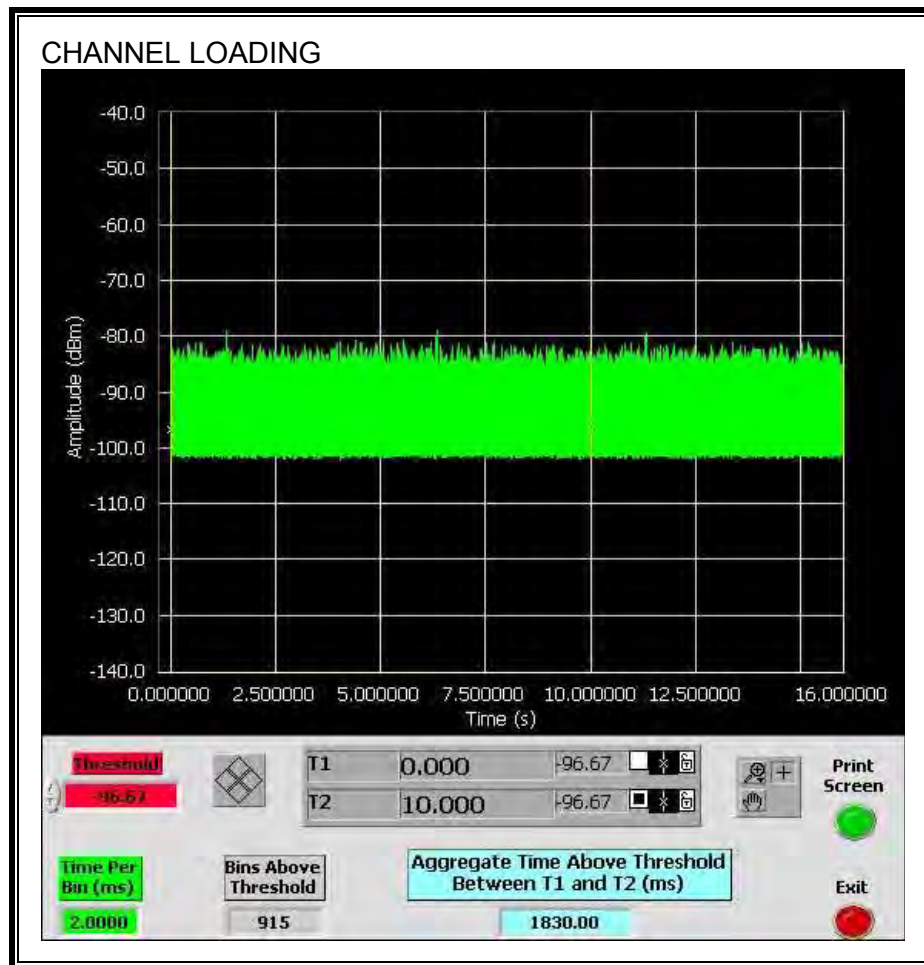
RADAR WAVEFORM



TRAFFIC



CHANNEL LOADING



The level of traffic loading on the channel by the EUT is 18.3 %

11.3.3. OVERLAPPING CHANNEL TESTS

RESULTS

These tests are not applicable.

11.3.4. MOVE AND CLOSING TIME

REPORTING NOTES

The reference marker is set at the end of last radar pulse.

The delta marker is set at the end of the last WLAN transmission following the radar pulse. This delta is the channel move time.

The aggregate channel closing transmission time is calculated as follows:

Aggregate Transmission Time =
(Number of analyzer bins showing transmission) * (dwell time per bin)

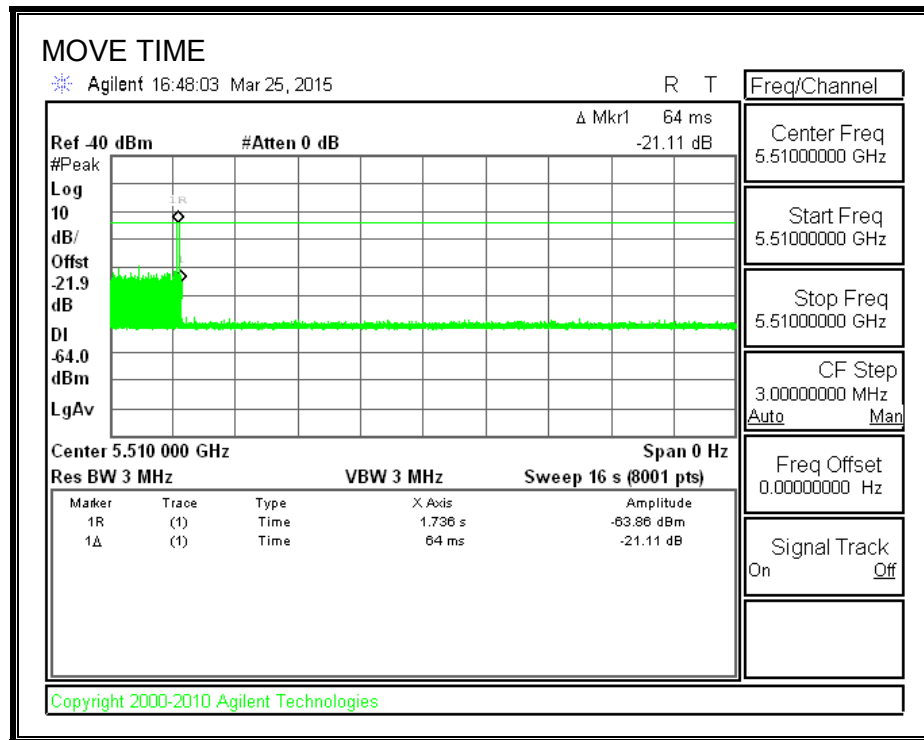
The observation period over which the aggregate time is calculated begins at (Reference Marker + 200 msec) and ends no earlier than (Reference Marker + 10 sec).

RESULTS

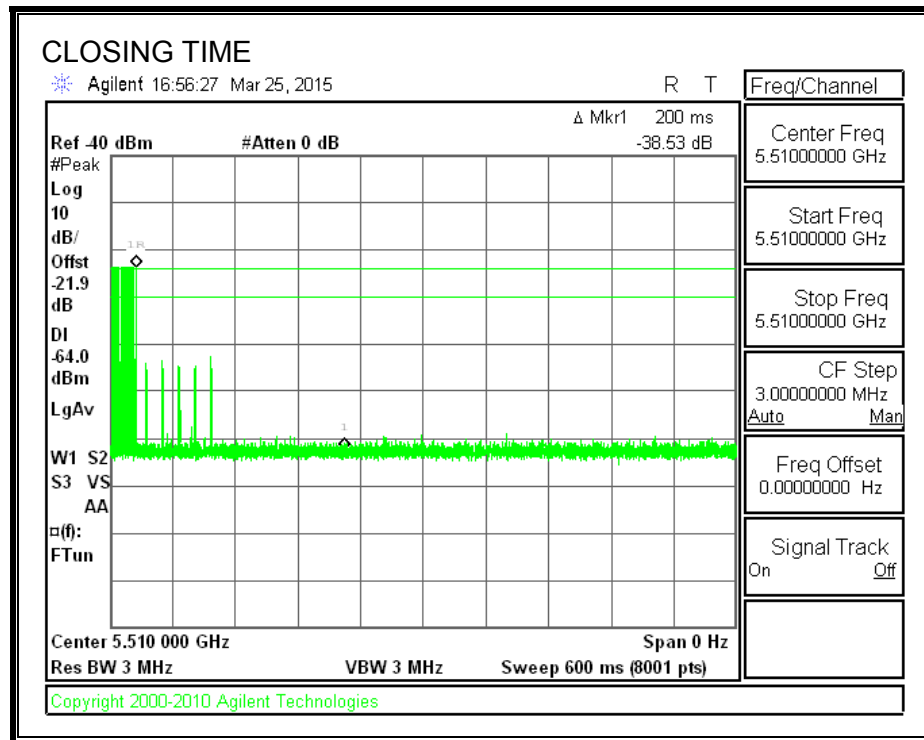
Channel Move Time (sec)	Limit (sec)
0.064	10

Aggregate Channel Closing Transmission Time (msec)	Limit (msec)
0.0	60

MOVE TIME

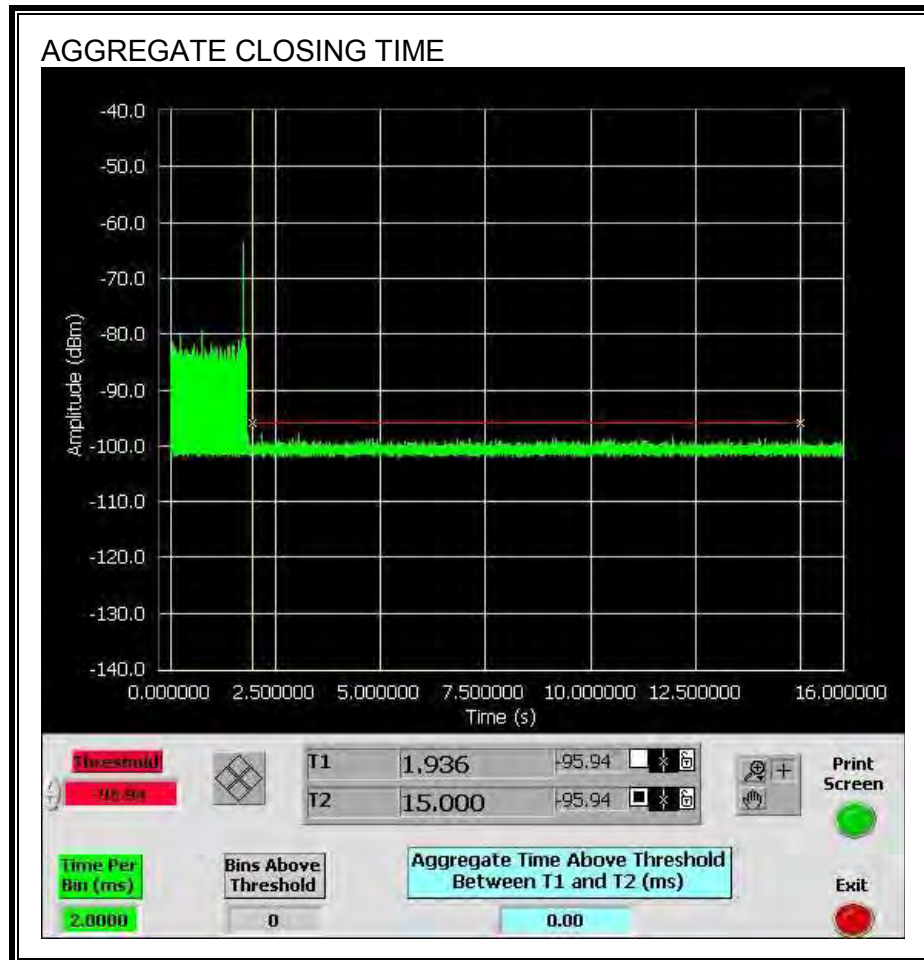


CHANNEL CLOSING TIME



AGGREGATE CHANNEL CLOSING TRANSMISSION TIME

No transmissions are observed during the aggregate monitoring period.



11.3.5. 10-MINUTE BEACON MONITORING PERIOD

RESULTS

No EUT transmissions were observed on the test channel during the 10-minute observation time.

