



**FCC 47 CFR PART 15 SUBPART E
C2PC CERTIFICATION TEST REPORT
FOR**

Satellite Receiver

MODEL NUMBER: ID:058

FCC ID: DKNX34

REPORT NUMBER: 16U23276-E1V2

ISSUE DATE: 5/17/2016

Prepared for
**Echostar Technologies LLC
94 Inverness Terrace East
Englewood, CO 80112**

Prepared by
**UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888**



NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	5/11/2016	Initial Issue	C. Vergonio
V2	5/17/2016	Updated page 119.	C. Vergonio

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION	6
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION	6
4.3. MEASUREMENT UNCERTAINTY	7
5. EQUIPMENT UNDER TEST	8
5.1. DESCRIPTION OF EUT	8
5.2. MAXIMUM OUTPUT POWER.....	8
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	8
5.4. SOFTWARE AND FIRMWARE.....	8
5.5. DESCRIPTION OF CLASS II PERMISSIVE CHANGE	8
5.6. WORST-CASE CONFIGURATION AND MODE	9
5.7. DESCRIPTION OF TEST SETUP.....	10
6. TEST AND MEASUREMENT EQUIPMENT	12
7. SUMMARY TABLE	13
8. MEASUREMENT METHODS	14
9. ANTENNA PORT TEST RESULTS	15
9.1. ON TIME AND DUTY CYCLE.....	15
9.2. 802.11a SISO MODE IN THE 5.8 GHz BAND	18
9.2.1. 6 dB BANDWIDTH.....	18
9.2.2. 99% BANDWIDTH.....	21
9.2.3. OUTPUT POWER	24
9.2.4. Maximum Power Spectral Density (PSD).....	26
9.3. 802.11a CDD 2TX MODE IN THE 5.8 GHz BAND.....	30
9.3.1. 6 dB BANDWIDTH.....	30
9.3.2. 99% BANDWIDTH.....	34
9.3.3. OUTPUT POWER	38
9.3.4. Maximum Power Spectral Density (PSD).....	40
9.4. 802.11n HT20 SISO MODE IN THE 5.8 GHz BAND	46
9.4.1. 6 dB BANDWIDTH.....	46
9.4.2. 99% BANDWIDTH.....	49
9.4.3. OUTPUT POWER	52

9.4.4.	Maximum Power Spectral Density (PSD).....	54
9.5.	802.11n HT20 CDD 2TX MODE IN THE 5.8 GHz BAND	58
9.5.1.	6 dB BANDWIDTH.....	58
9.5.2.	99% BANDWIDTH.....	62
9.5.3.	OUTPUT POWER	66
9.5.4.	Maximum Power Spectral Density (PSD).....	68
9.6.	802.11n HT40 SISO MODE IN THE 5.8 GHz BAND	74
9.6.1.	6 dB BANDWIDTH.....	74
9.6.2.	99% BANDWIDTH.....	76
9.6.3.	OUTPUT POWER	78
9.6.4.	Maximum Power Spectral Density (PSD).....	80
9.7.	802.11n HT40 CDD 2TX MODE IN THE 5.8 GHz BAND	83
9.7.1.	6 dB BANDWIDTH.....	83
9.7.2.	99% BANDWIDTH.....	86
9.7.3.	OUTPUT POWER	89
9.7.4.	Maximum Power Spectral Density (PSD).....	91
10.	RADIATED TEST RESULTS	95
10.1.	LIMITS AND PROCEDURE.....	95
10.2.	TX ABOVE 1 GHz 802.11a SISO MODE IN THE 5.8 GHz BAND	96
10.3.	TX ABOVE 1 GHz 802.11a CDD 2TX MODE IN THE 5.8 GHz BAND.....	106
10.4.	TX ABOVE 1 GHz 802.11n HT20 SISO MODE IN THE 5.8 GHz BAND.....	116
10.5.	TX ABOVE 1 GHz 802.11n HT20 CDD 2TX MODE IN THE 5.8 GHz BAND	126
10.6.	TX ABOVE 1 GHz 802.11n HT40 SISO MODE IN THE 5.8 GHz BAND.....	136
10.7.	TX ABOVE 1 GHz 802.11n HT40 CDD 2TX MODE IN THE 5.8 GHz BAND	144
10.8.	WORST-CASE BELOW 1 GHz	152
11.	AC POWER LINE CONDUCTED EMISSIONS	155
12.	SETUP PHOTOS	158

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Echostar Technologies LLC
94 Inverness Terrace East
Englewood, CO 80112

EUT DESCRIPTION: Satellite Receiver

MODEL: ID:058

SERIAL NUMBER: R5ZXDX00422J(Radiated)
BCM7425Y T B2(Conducted)

DATE TESTED: February 23 – May 4, 2016

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:

Prepared By:



CHARLES VERGONIO
WISE ENGINEER
UL Verification Services Inc.



JONATHAN HSU
WISE LAB 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, and ANSI C63.10-2013.

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.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, respectively.

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, 9KHz to 30 MHz	2.14 dB
Radiated Disturbance, 30 to 1000 MHz	4.98 dB
Radiated Disturbance, 1000 to 6000 MHz	3.86 dB
Radiated Disturbance, 6000 to 18000 MHz	4.23 dB
Radiated Disturbance, 18000 to 26000 MHz	5.30 dB
Radiated Disturbance, 26000 to 40000 MHz	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 a Satellite Receiver.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Power, Chain 0 (dBm)	Power, Chain 1 (dBm)	Output Power (dBm)	Output Power (mW)
5.8 GHz band, 1TX					
5745-5825	802.11a	16.98	N/A	16.98	49.89
5745-5825	802.11n HT20	17.04	N/A	17.04	50.58
5755-5795	802.11n HT40	16.99	N/A	16.99	50.00
5.8 GHz band, 2TX					
5745-5825	802.11a CDD	15.84	16.77	19.34	85.90
5745-5825	802.11n HT20 CDD	15.51	17.00	19.33	85.68
5755-5795	802.11n HT40 CDD	15.97	16.80	19.42	87.40

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency (MHz)	Antenna Gain (J0) dBi	Antenna Gain (J1) dBi
5745-5825	3.2	1.8

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was Broadcom, rev. 5.102 RC98.37

The EUT driver software installed during testing was Broadcom, rev. 5.102.98.37 (WLTEST)

The test utility software used during testing was Broadcom MTool, rev 2.0.1.1

5.5. DESCRIPTION OF CLASS II PERMISSIVE CHANGE

Please refer to Echostar Technologies L.L.C Class II Change Description Letter for details.

5.6. WORST-CASE CONFIGURATION AND MODE

The EUT can only be setup in desktop orientation; therefore, all radiated testing was performed with the EUT in desktop orientation.

Radiated emission below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

For SISO mode, the conducted & radiated testing were only performed with the highest antenna gain chain, J0.

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

802.11a mode: 6 Mbps

802.11n HT20mode: MCS0

802.11n HT40mode: MCS0

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

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	HP	EliteBook 8470	CNU342CP2Y	N/A
Laptop AC adapter	HP	PPP009L-E	WCNXA0C3U5IA7F	N/A
Router	Netgear	WNR1000	28C2035S0B654	N/A
Router AC adapter	Netgear	T012LF1209	N/A	N/A

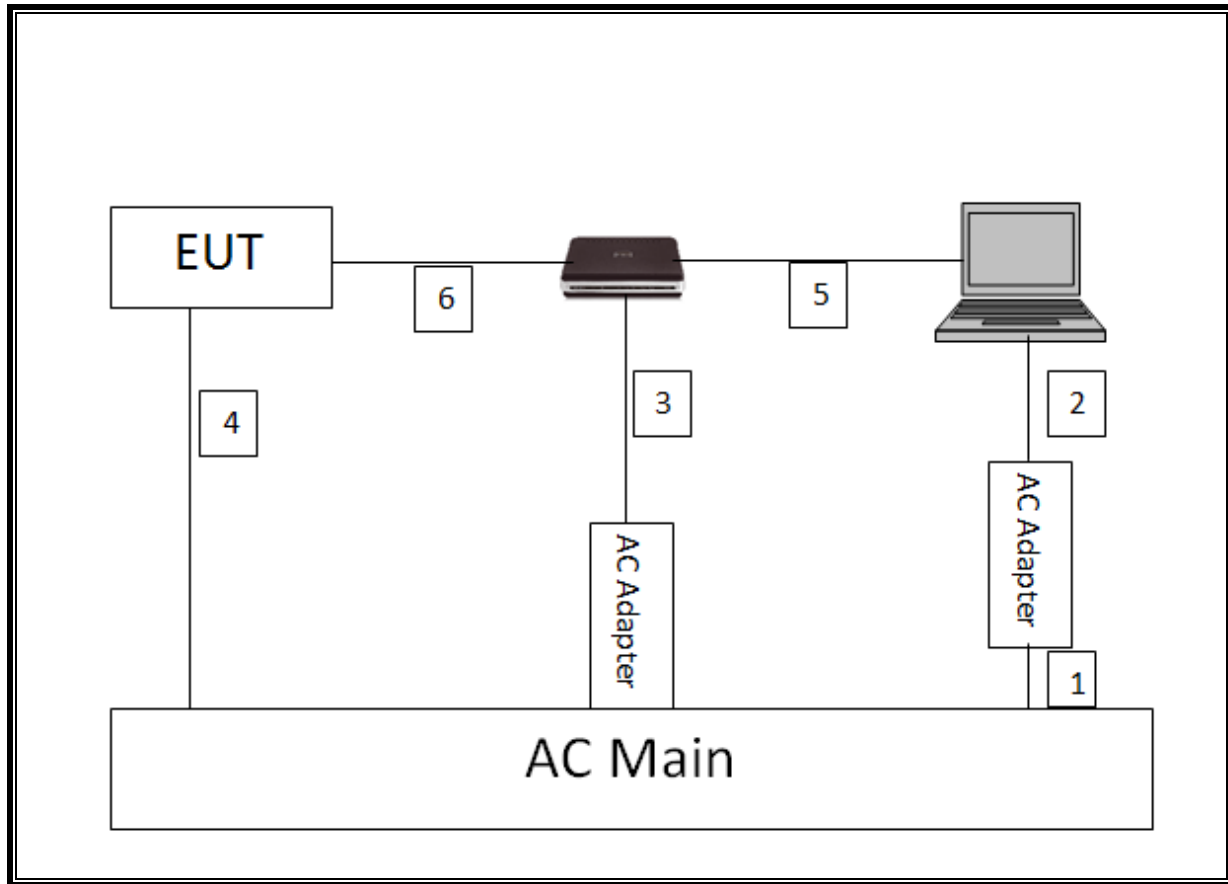
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	US115V	Un-shielded	1.8	N/A
2	DC	1	19.5VDC	Un-shielded	1.8	N/A
3	DC	1	12VDC	Un-shielded	1.8	N/A
4	AC	1	US115V	Un-shielded	1.8	N/A
5	LAN	1	RJ45	Un-shielded	2	N/A
6	LAN	1	RJ45	Un-shielded	2	N/A

TEST SETUP

The EUT was tested stand alone and the communication was established via RJ45 cable between EUT and support laptop. Test software exercised the radio.

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
Bilog Antenna 30-1000MHz	Sunol	JB1	130	09/01/15	09/01/16
Horn Antenna 1-18GHz	ETS	3117	344	02/22/16	02/22/17
Horn Antenna 1-18GHz	ETS	3117	345	03/27/16	03/27/17
Horn Antenna 18-26.5GHz	ARA	MWH-1826	447	05/12/15	05/12/16
Horn Antenna 26.5- 40GHz	ARA	MWH-2640/B	90	07/28/15	07/28/16
Preamp 10kHz-1000MHz	Sonoma	310	300	11/05/15	11/05/16
Preamp 1-8GHz	Miteq	AMF-4D-01000800-30-29P	782	12/17/15	12/17/16
Preamp 1-18GHz	Miteq	AFS42-00101800-25-2-42	493	07/23/15	07/23/16
Preamp 1-26.5GHz	Agilent	8449B	404	06/28/15	06/28/16
Amplifier, 26-40GHz	Miteq	NSP4000-SP2	88	04/07/16	04/07/17
Spectrum Analyzer 3kHz - 44GHz	Keysight	E4440A	119	07/22/15	07/22/16
Spectrum Analyzer 3kHz - 44GHz	Keysight	N9030A	908	05/26/15	05/26/16
Spectrum Analyzer 3kHz - 44GHz	Keysight	N9030A	907	01/06/16	01/06/17
Spectrum Analyzer 9kHz - 40GHz	HP	8564E	106	08/14/15	08/14/16
3GHz HPF	Micro-Tronics	HPM17543	487	01/26/16	01/27/17
EMI Test Receiver	Rohde & Schwarz	ESR	1436	12/19/15	12/19/16
Power Meter	Keysight	N1911A	1264	07/01/15	07/01/16
Power Sensor	Keysight	N1921A	750	09/17/15	09/17/16
LISN for Conducted Emission CISPR-11	Fischer	FCC-LISN-50/250-25-2-01-C	1310	09/16/15	09/16/16

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Version 9.5, 06/24/15
Conducted Software	UL	UL EMC	Version 9.5, 05/26/15
Antenna Port Software	UL	UL RF	Version 4.7, 04/28/16

7. SUMMARY TABLE

FCC Part Section	RSS Section	Test Description	Test Limit	Test Condition	Test Result
§15.407 (a)	RSS-247	Occupied Band width (26dB)	N/A	Conducted	N/A
§15.407	RSS-247 6.2.4	6dB Band width (5.8Ghz)	>500KHz		Pass
§15.407 (a)(1)	RSS-247 6.2	TX Cond. Power 5.15-5.25	<24dBm (FCC) / <23 dBm or <10+10Log(99% BW) (IC)		N/A
§15.407 (a)(2)	RSS-247 6.2	TX Cond. Power 5.25-5.35 & 5.47-5.725	<24dBm or <11+10log (OBW) (FCC) / <24 dBm or <11+10Log(99% BW) (IC)		N/A
§15.407 (a)(3)	RSS-247 6.2.4	TX Cond. Power 5.725-5.850	<30dBm		Pass
§15.407 (a)(1)	RSS-247 6.2	PSD (5.15-5.25)	<11dBm/MHz (FCC) <10dBm/MHz EIRP (IC)		N/A
§15.407 (a)(2)	RSS-247 6.2	PSD (5.3,5.5GHz)	<11dBm/MHz		N/A
§15.407 (a)(3)	RSS-247 6.2.4	PSD (5.8GHz)	<30dBm per 500kHz		Pass
§15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10		Pass
§15.407 (b) & 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	<54dBuV/m	Radiated	Pass

8. MEASUREMENT METHODS

On Time and Duty Cycle: KDB 789033 D02 v01r01, Section B.

6 dB Emission BW: KDB 789033 D02 v01r01, Section C and KDB 662911 D01 v02r01.

26 dB Emission BW: KDB 789033 D02 v01r01, Section C and KDB 662911 D01 v02r01.

99% Occupied BW: KDB 789033 D02 v01r01, Section D and KDB 662911 D01 v02r01.

Conducted Output Power: KDB 789033 D02 v01r01, Section E.3.b (Method PM-G), and KDB 662911 D01 v02r01.

Power Spectral Density: KDB 789033 D02 v01r01, Section F, and KDB 662911 D01 v02r01.

Unwanted emissions in restricted bands: KDB 789033 D02 v01r01, Sections G.3, G.4, G.5, and G.6 and KDB 662911 D01 v02r01.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v01r01, Sections G.3, G.4, and G.5 and KDB 662911 D01 v02r01.

AC Power Line Conducted Emissions: ANSI C63.10-2013, Section 6.2.

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

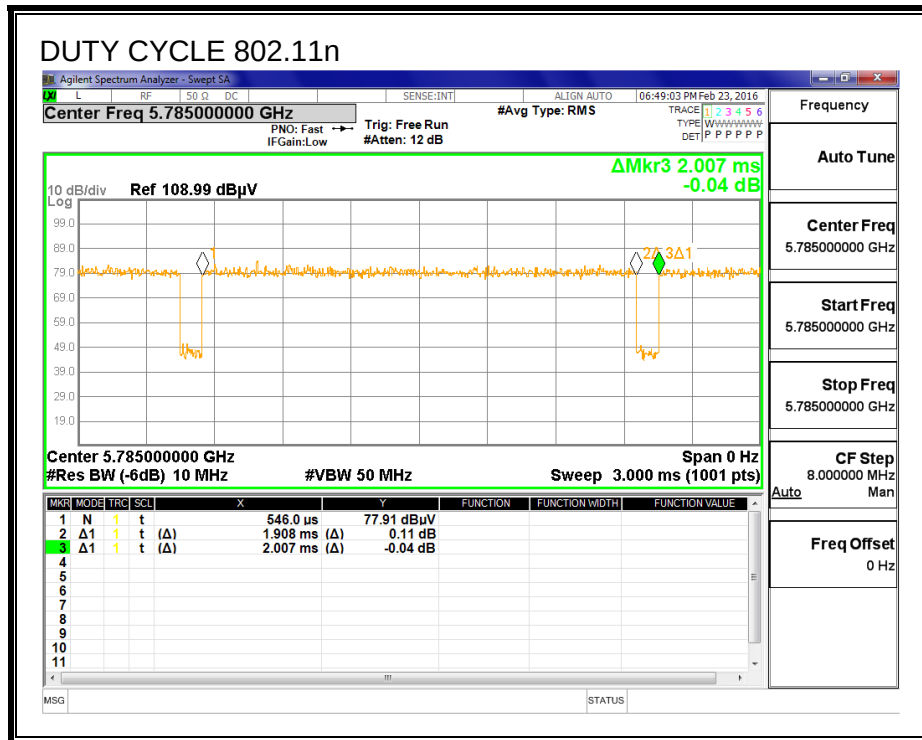
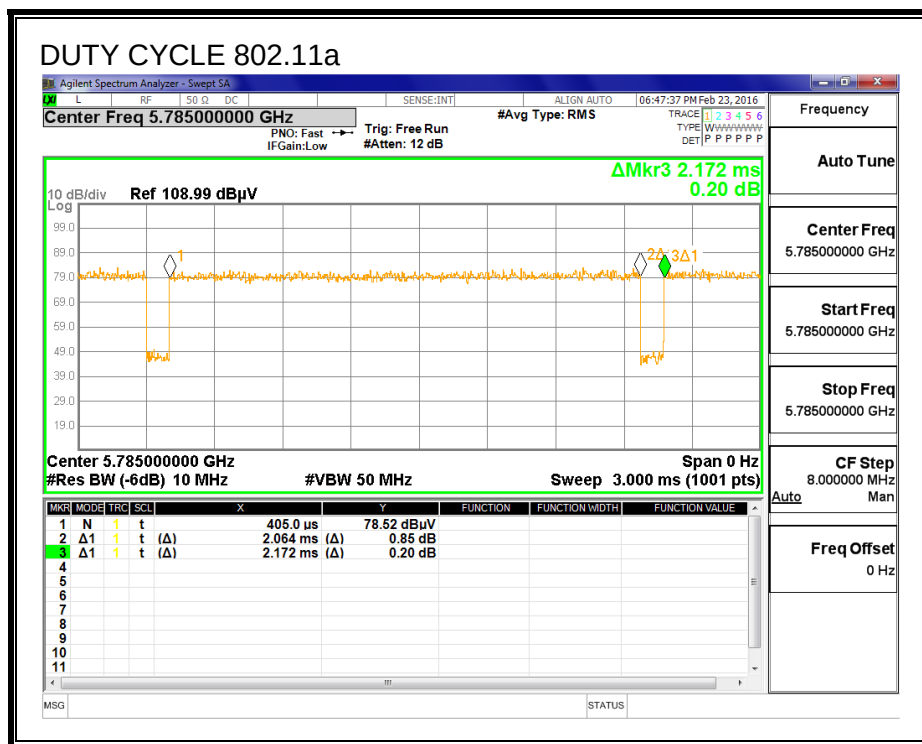
PROCEDURE

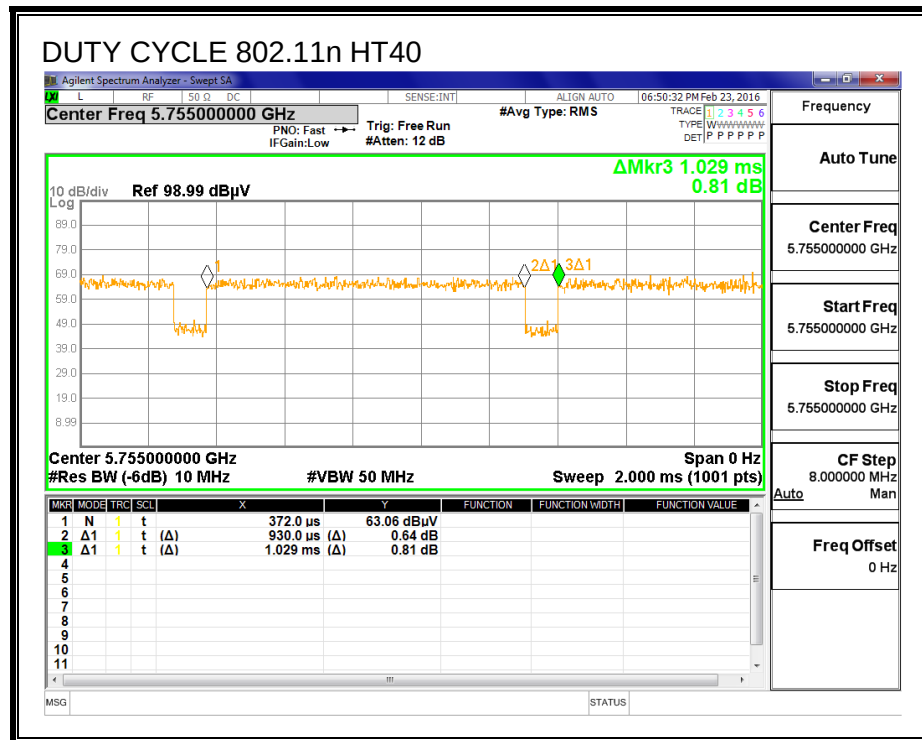
KDB 789033 Zero-Span Spectrum Analyzer Method.

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	2.064	2.172	0.950	95.03%	0.22	0.484
802.11n HT20	1.908	2.007	0.951	95.07%	0.22	0.524
802.11n HT40	0.930	1.029	0.904	90.38%	0.44	1.075

DUTY CYCLE PLOTS





9.2. 802.11a SISO MODE IN THE 5.8 GHz BAND

9.2.1. 6 dB BANDWIDTH

LIMITS

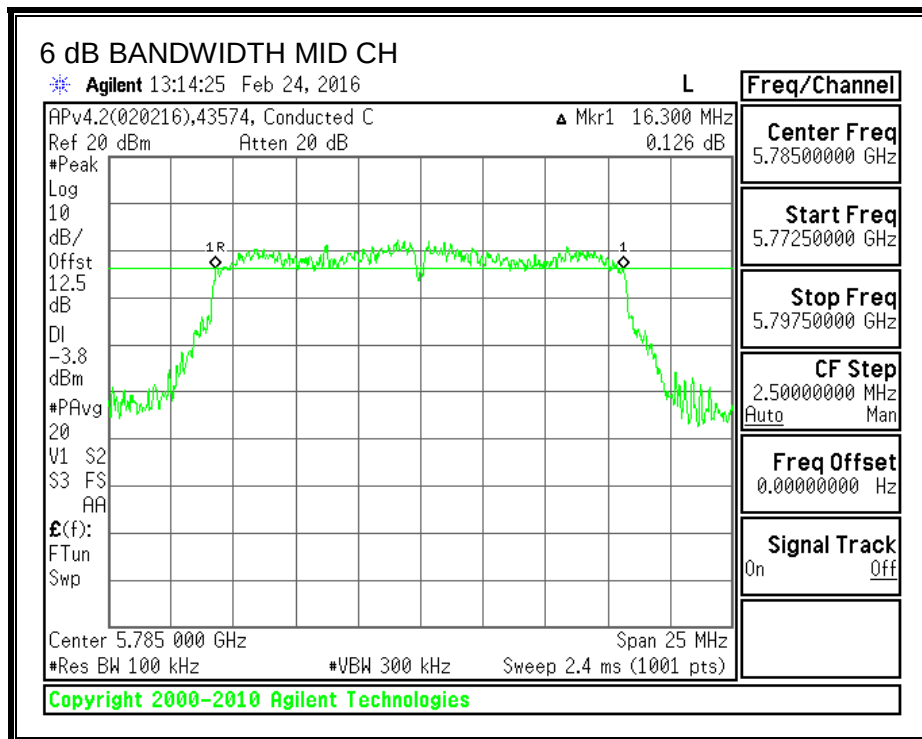
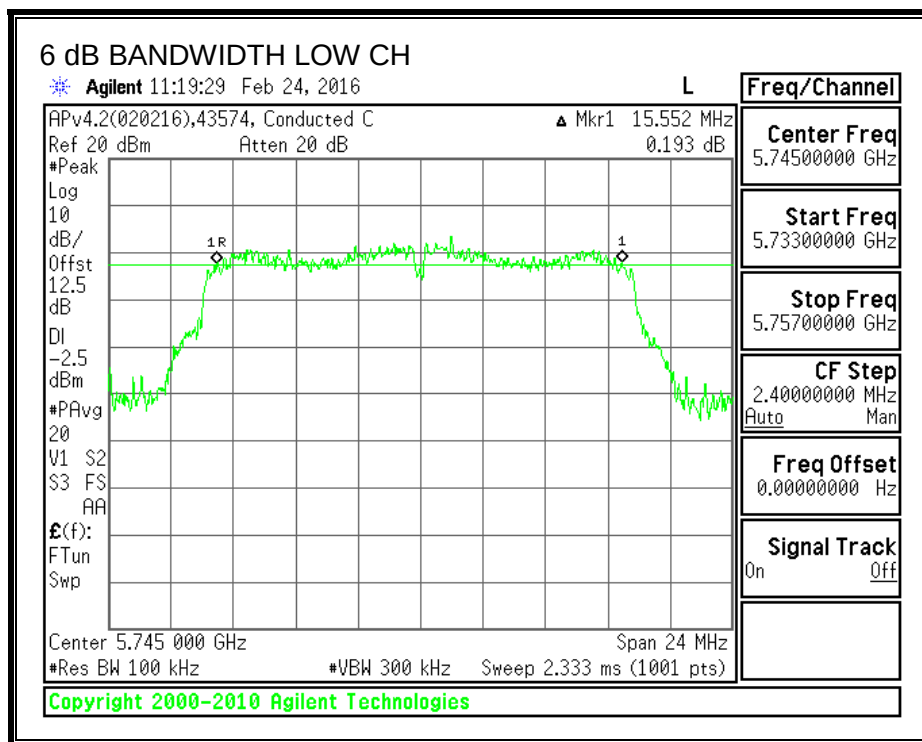
FCC §15.407 (e)

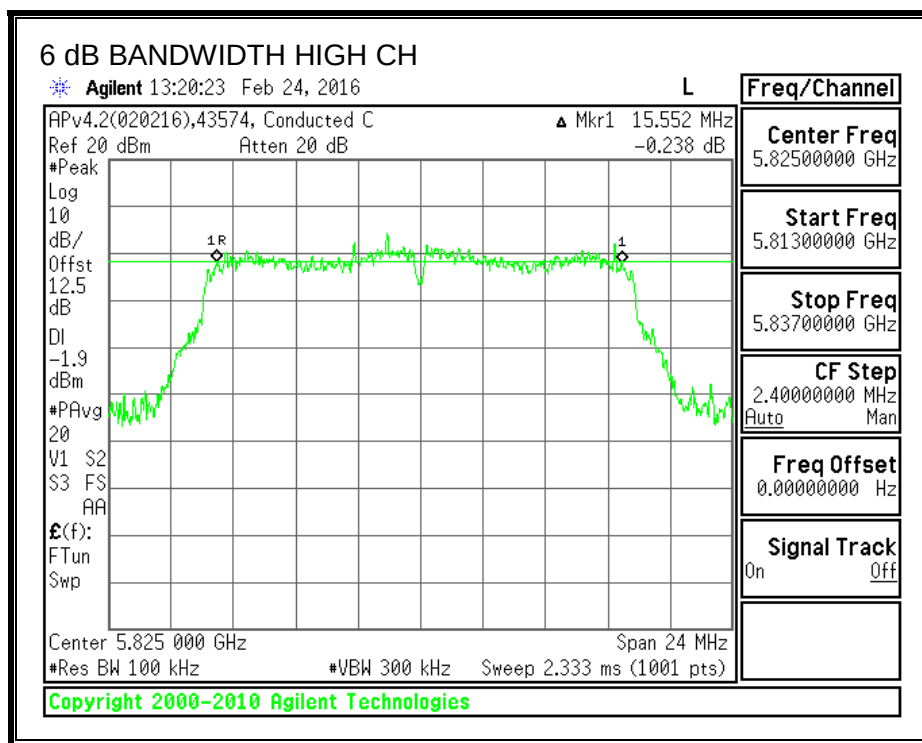
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	15.5520	0.5
Mid	5785	16.3000	0.5
High	5825	15.5520	0.5

6 dB BANDWIDTH





9.2.2. 99% BANDWIDTH

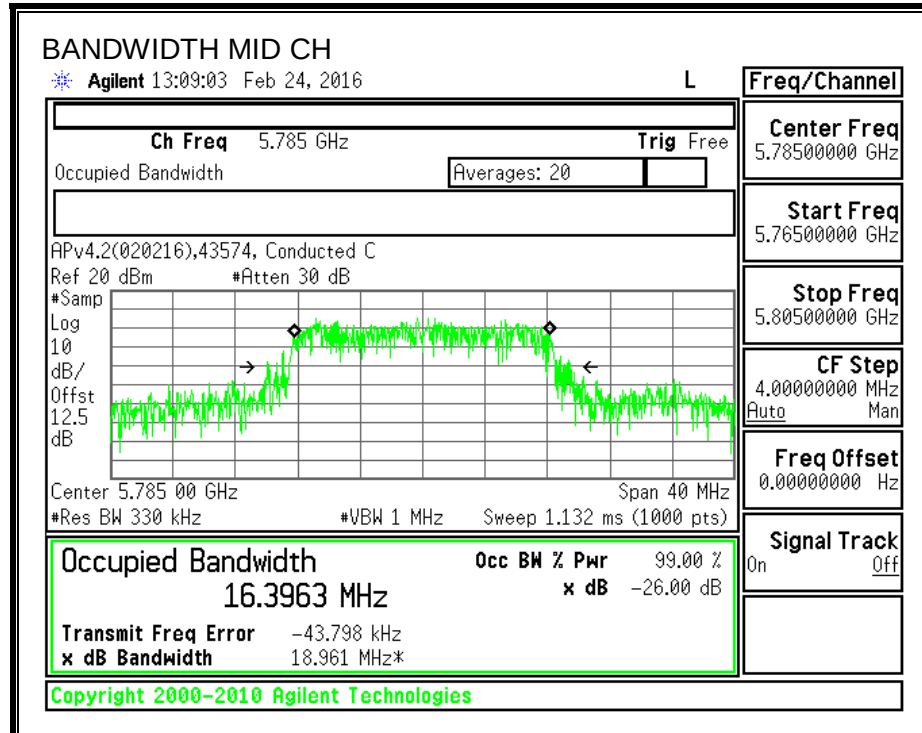
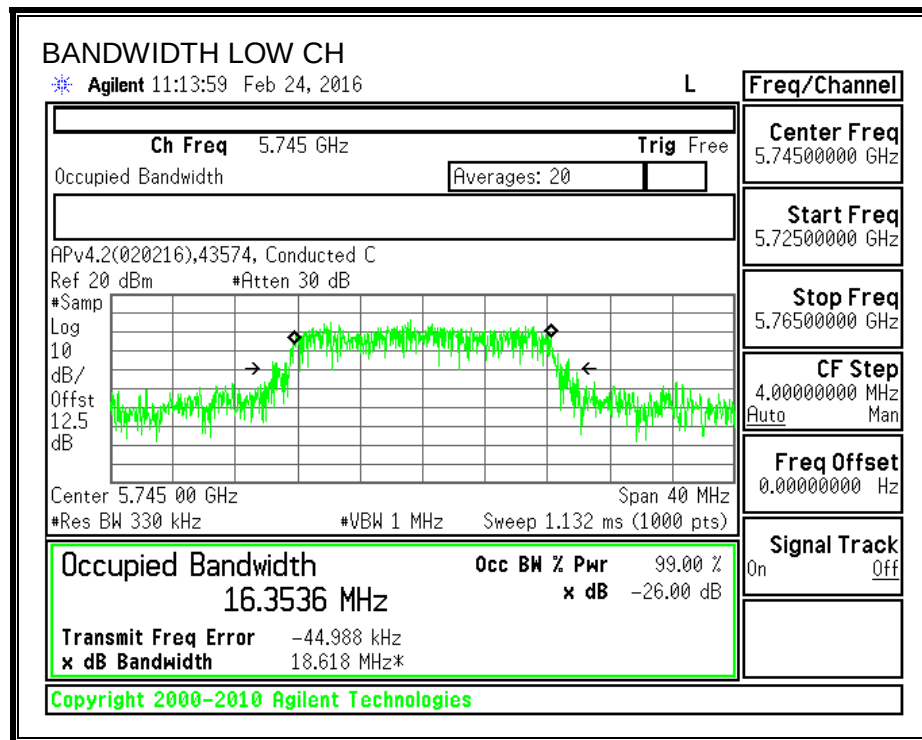
LIMITS

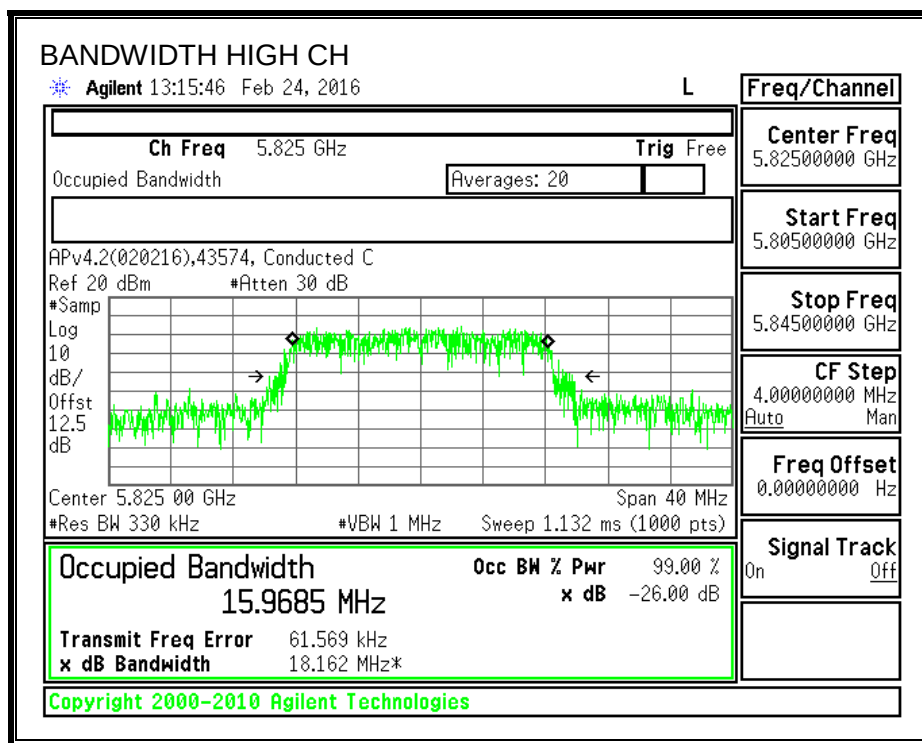
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.3536
Mid	5785	16.3963
High	5825	15.9685

99% BANDWIDTH





9.2.3. 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	3.20	30.00
Mid	5785	3.20	30.00
High	5825	3.20	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
--------------------	------	--

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	16.49	16.49	30.00	-13.51
Mid	5785	16.78	16.78	30.00	-13.22
High	5825	16.98	16.98	30.00	-13.02

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

9.2.4. 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

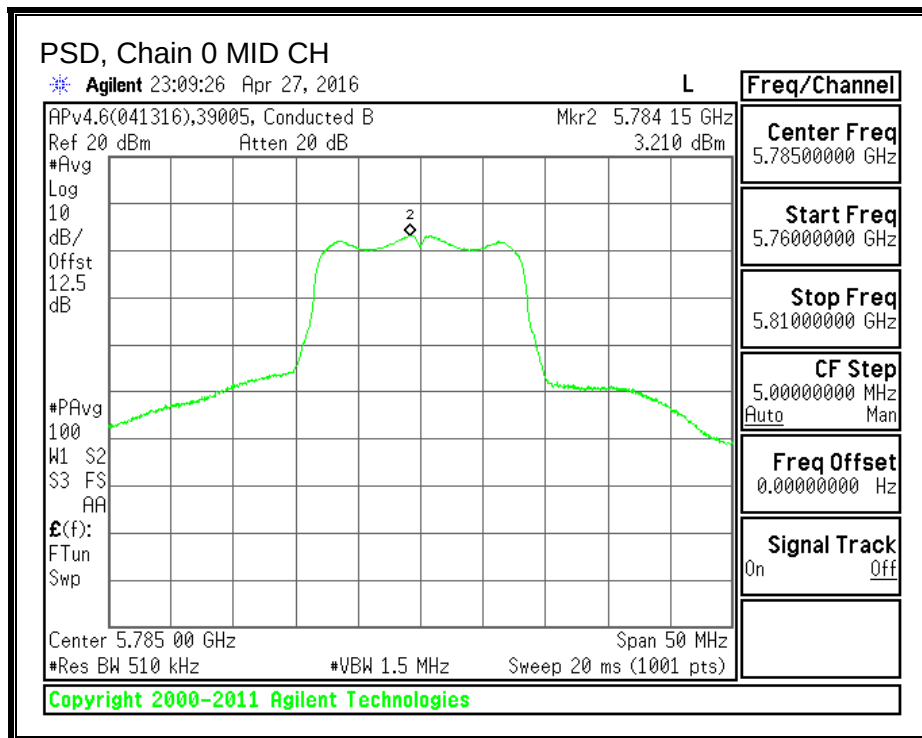
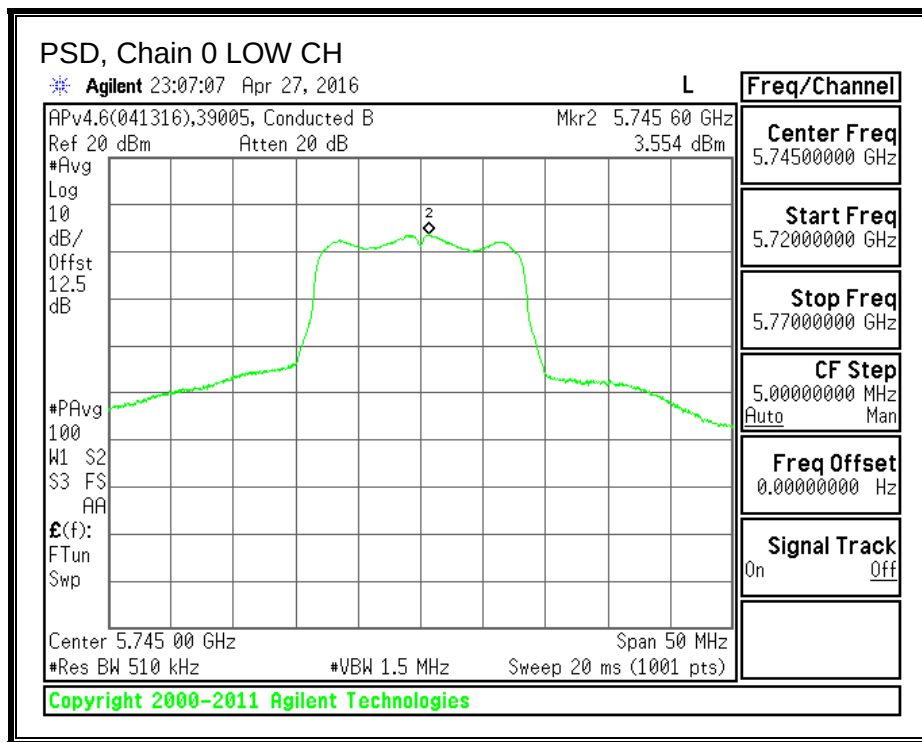
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	3.20	30.00
Mid	5785	3.20	30.00
High	5825	3.20	30.00

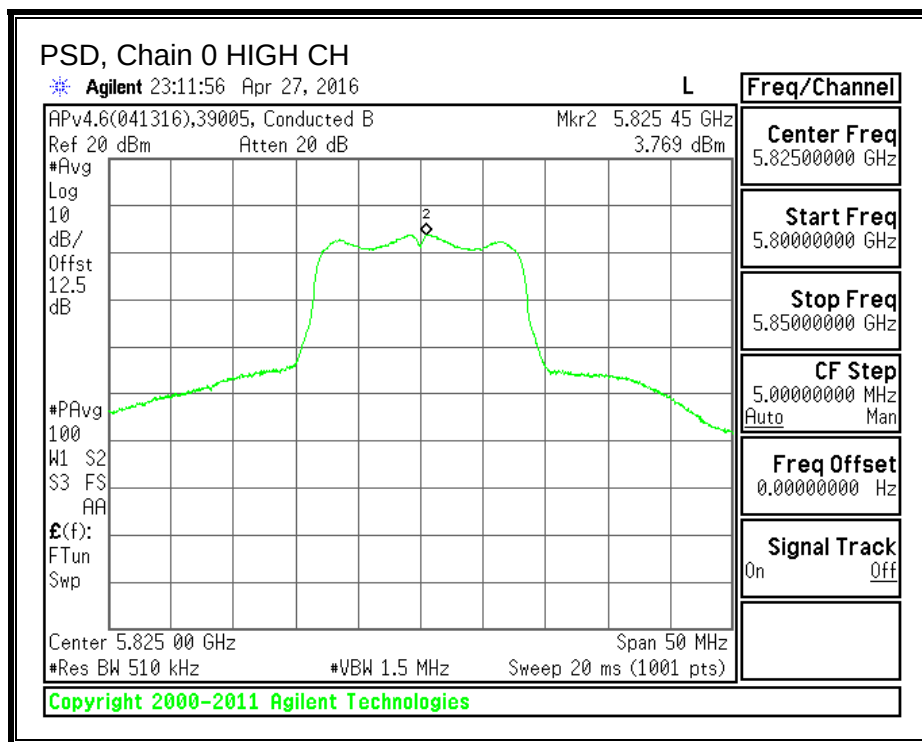
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PSD
--------------------	------	--

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	3.554	3.774	30.00	-26.23
Mid	5785	3.210	3.430	30.00	-26.57
High	5825	3.769	3.989	30.00	-26.01

PSD, Chain 0





9.3. 802.11a CDD 2TX MODE IN THE 5.8 GHz BAND

9.3.1. 6 dB BANDWIDTH

LIMITS

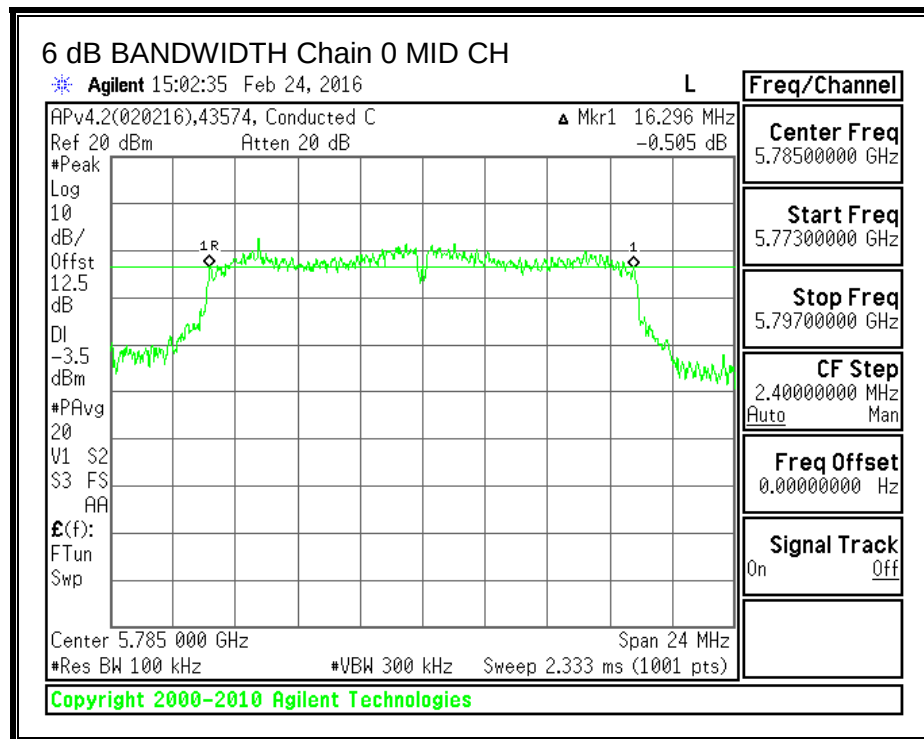
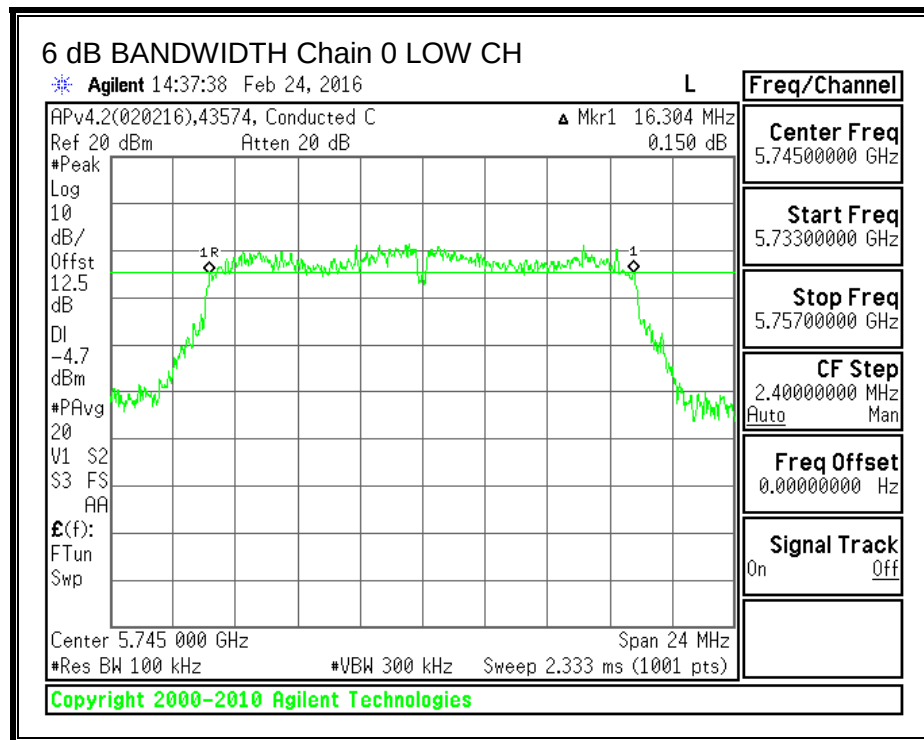
FCC §15.407 (e)

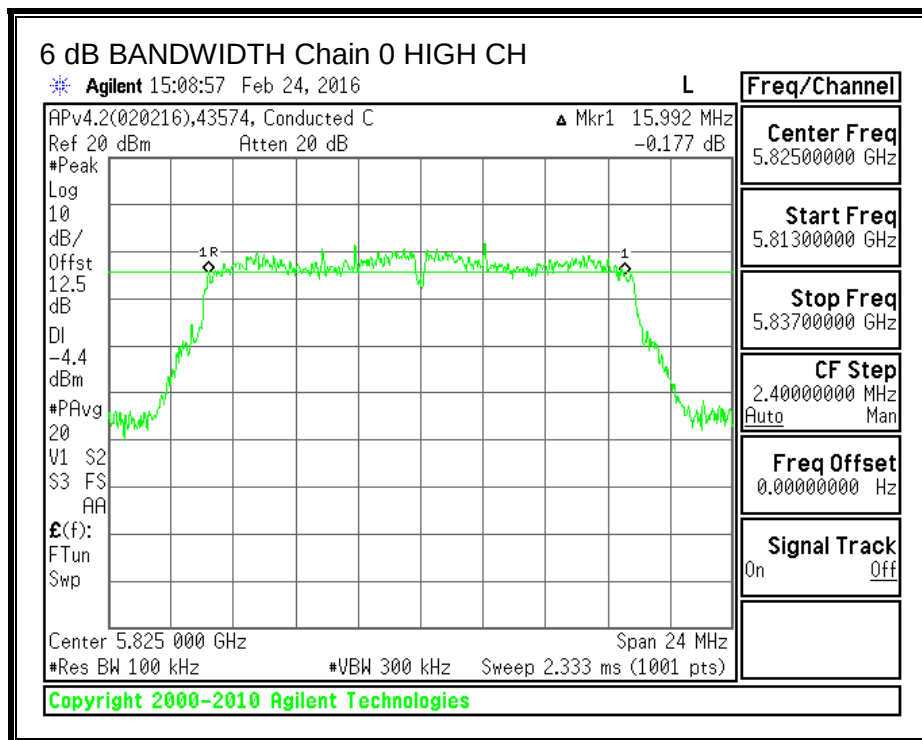
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

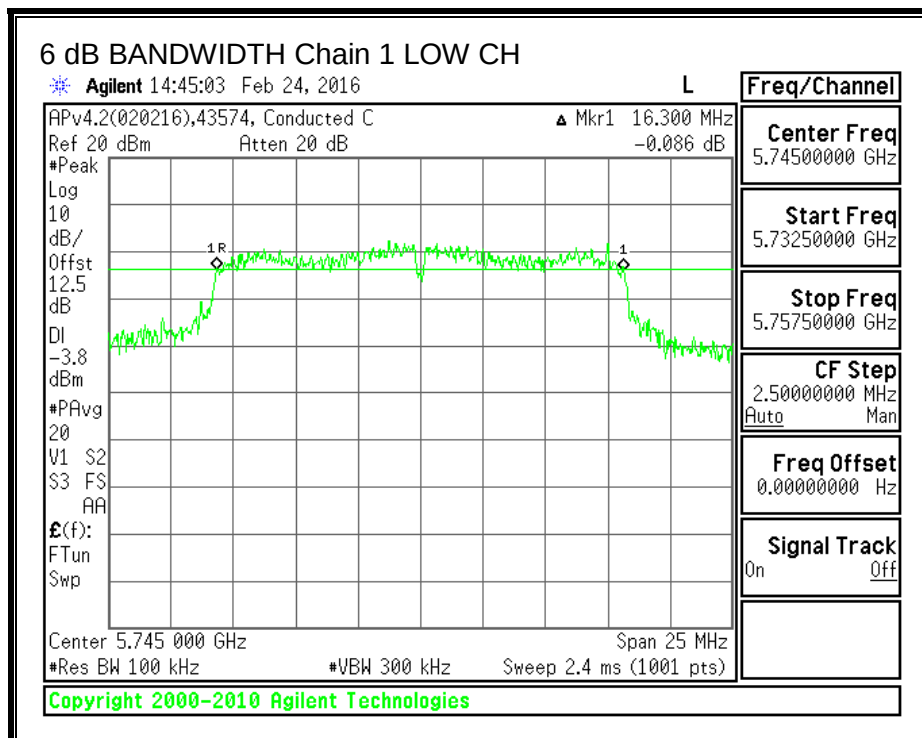
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	5745	16.3040	16.3000	0.5
Mid	5785	16.2960	16.0800	0.5
High	5825	15.9920	16.0080	0.5

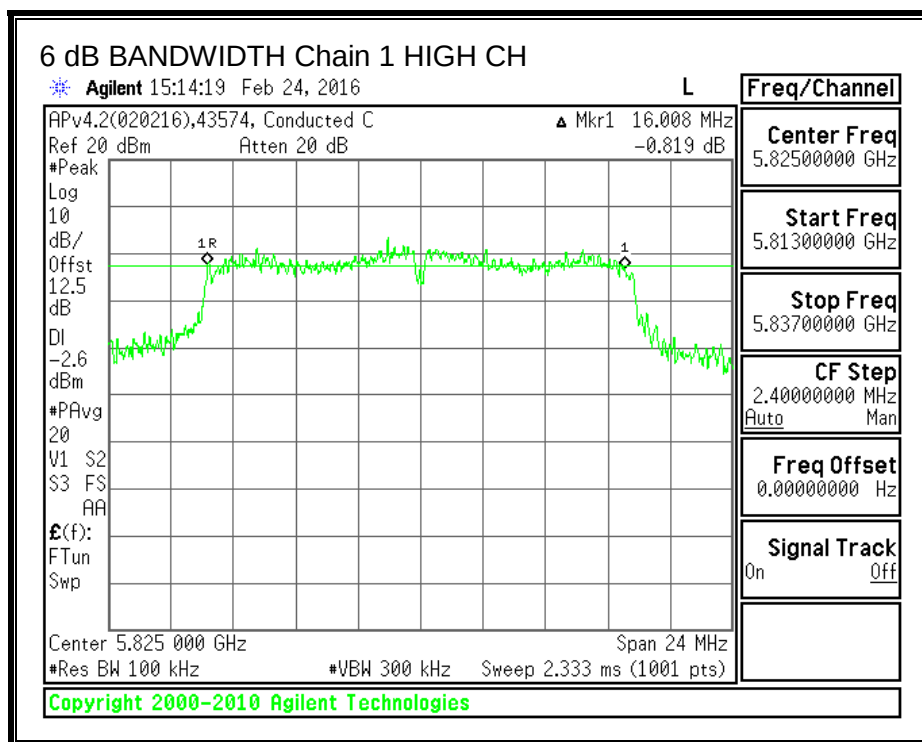
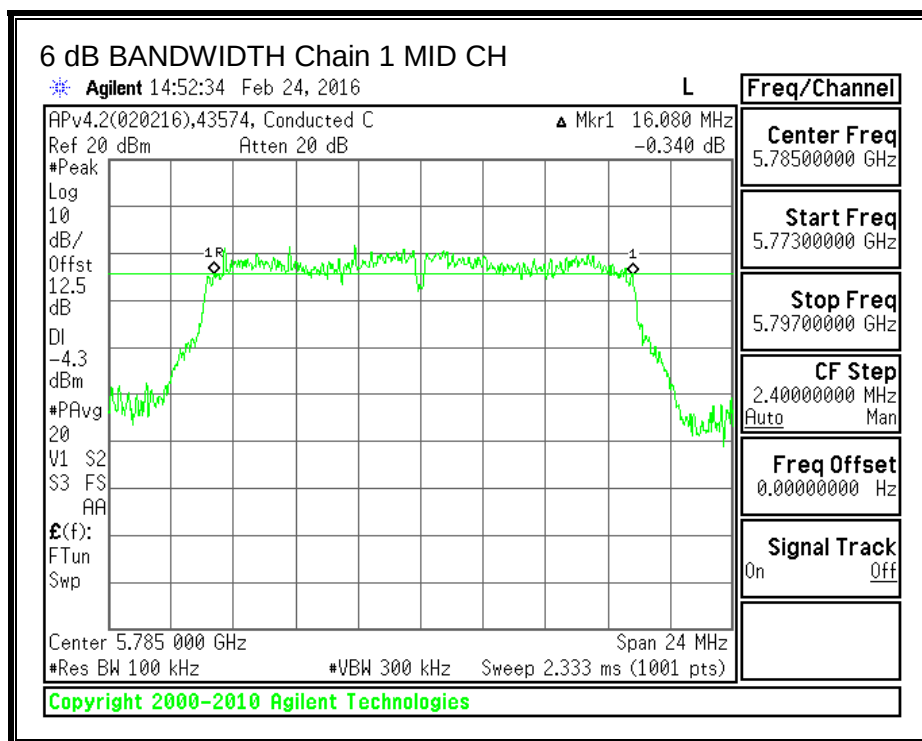
6 dB BANDWIDTH, Chain 0





6 dB BANDWIDTH, Chain 1





9.3.2. 99% BANDWIDTH

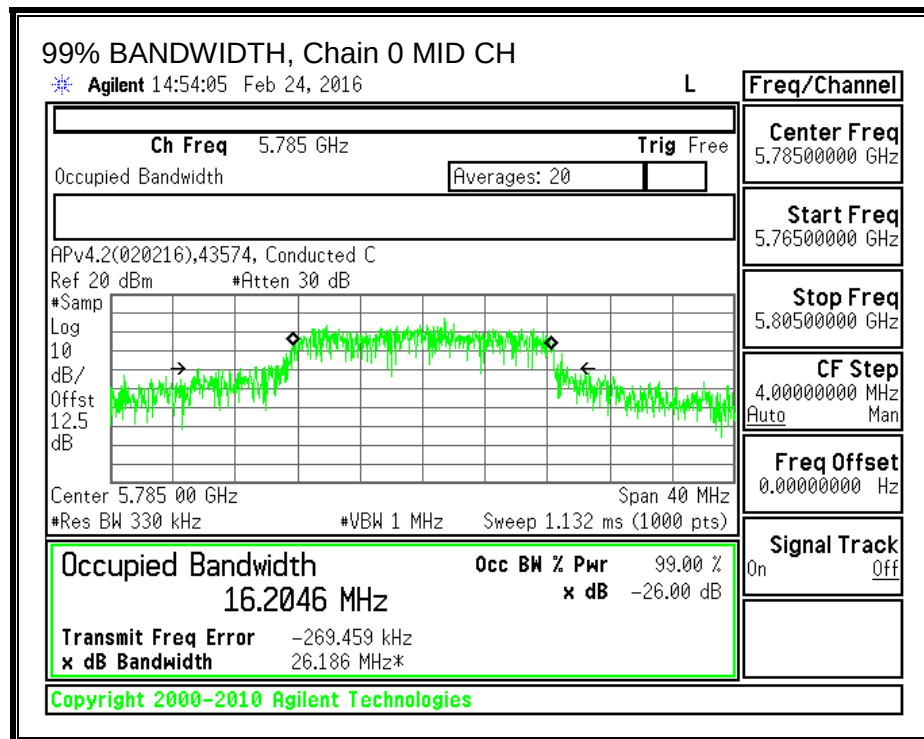
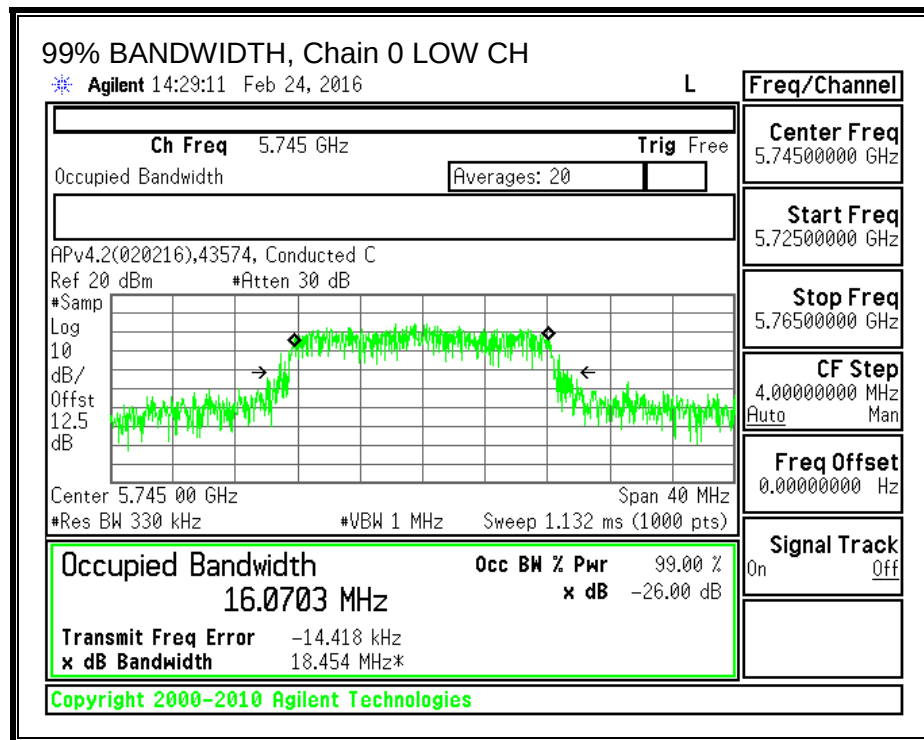
LIMITS

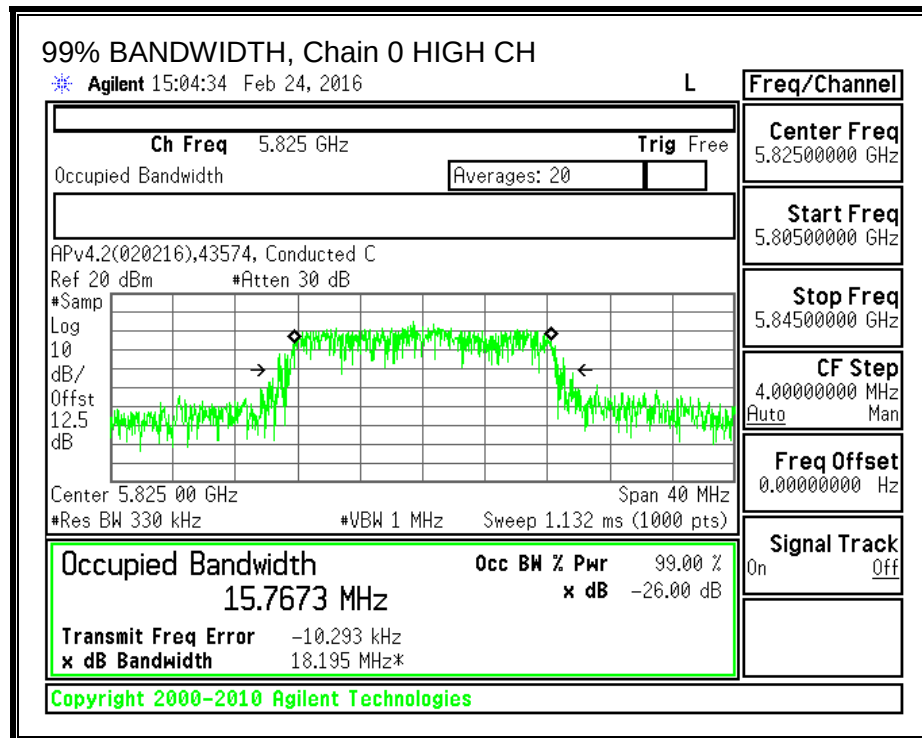
None; for reporting purposes only.

RESULTS

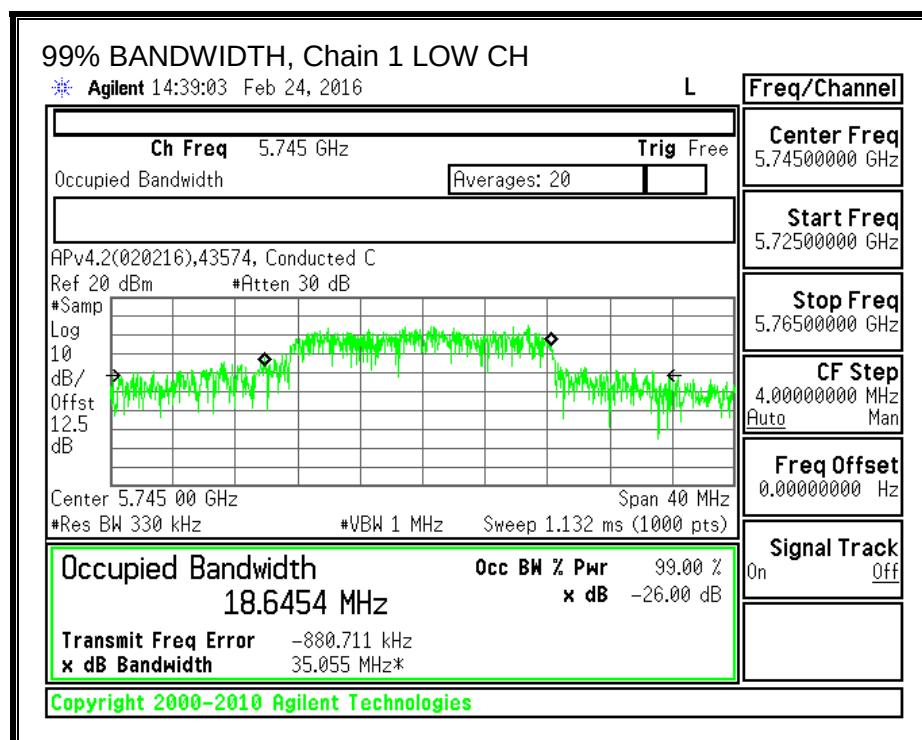
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5745	16.0703	18.6454
Mid	5785	16.2046	16.2751
High	5825	15.7673	17.0592

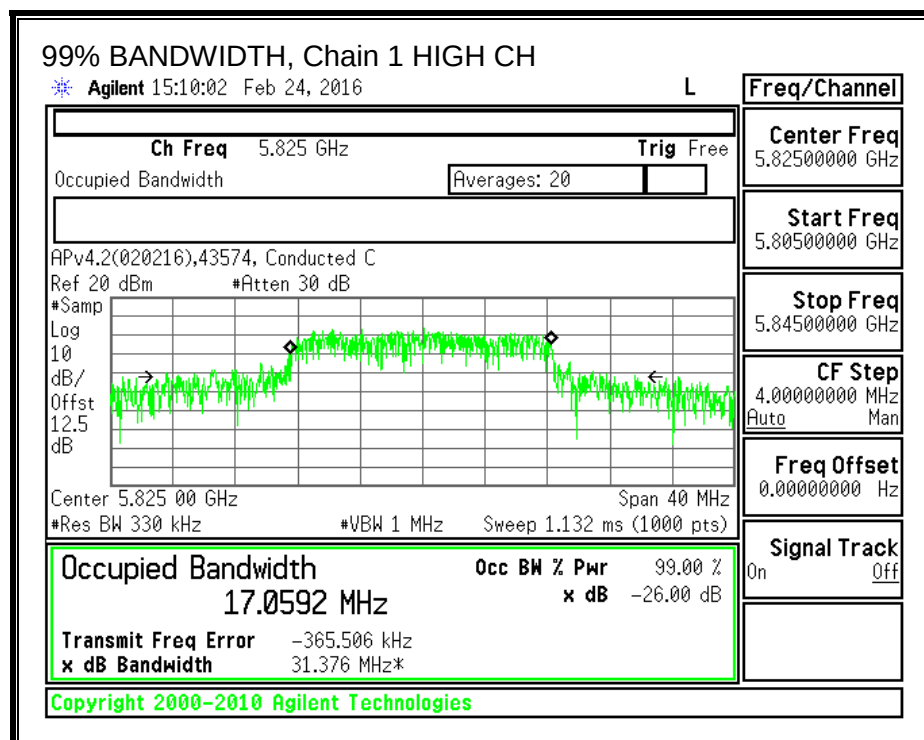
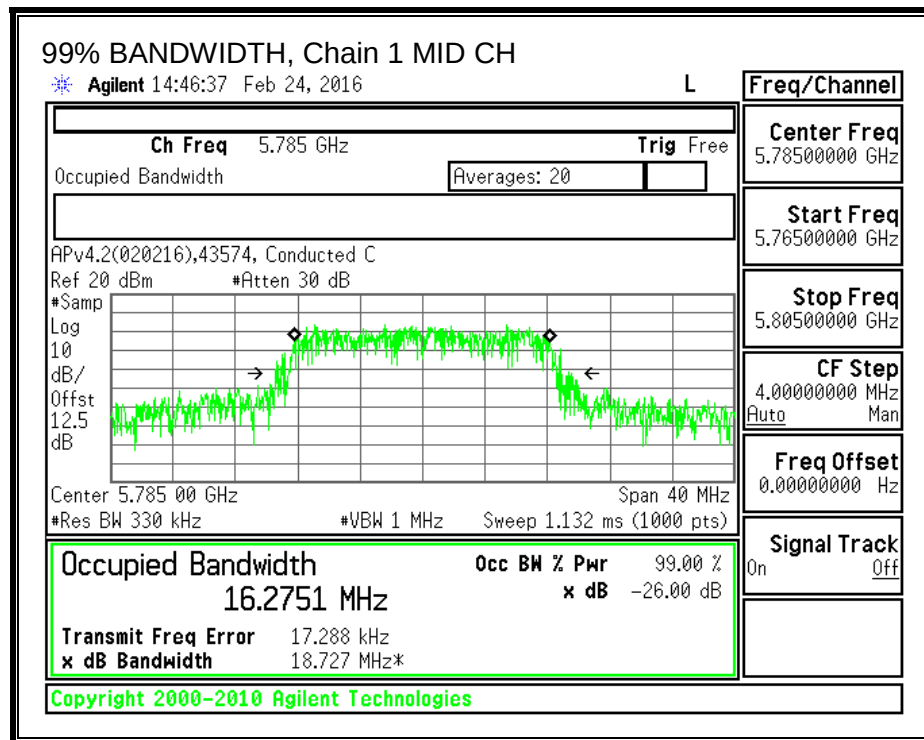
99% BANDWIDTH, Chain 0





99% BANDWIDTH, Chain 1





9.3.3. 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

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.20	1.80	2.56

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	2.56	30.00
Mid	5785	2.56	30.00
High	5825	2.56	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
--------------------	------	--

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	15.35	16.98	19.25	30.00	-10.75
Mid	5785	15.23	16.79	19.09	30.00	-10.91
High	5825	15.84	16.77	19.34	30.00	-10.66

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

9.3.4. 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

The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.20	1.80	5.54

RESULTS

Antenna Gain and Limits

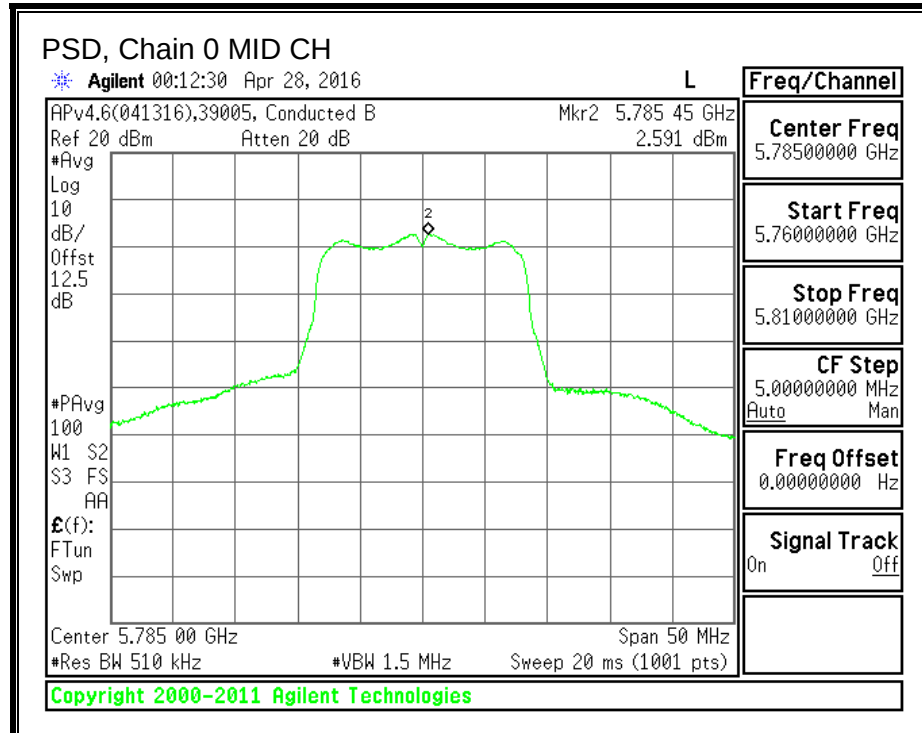
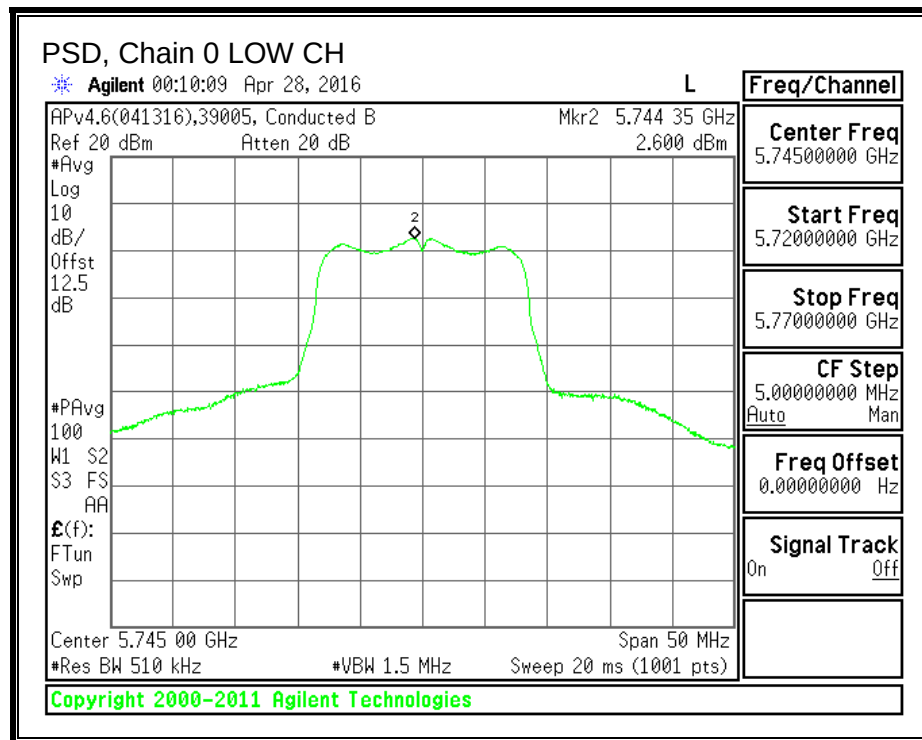
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	5.54	30.00
Mid	5785	5.54	30.00
High	5825	5.54	30.00

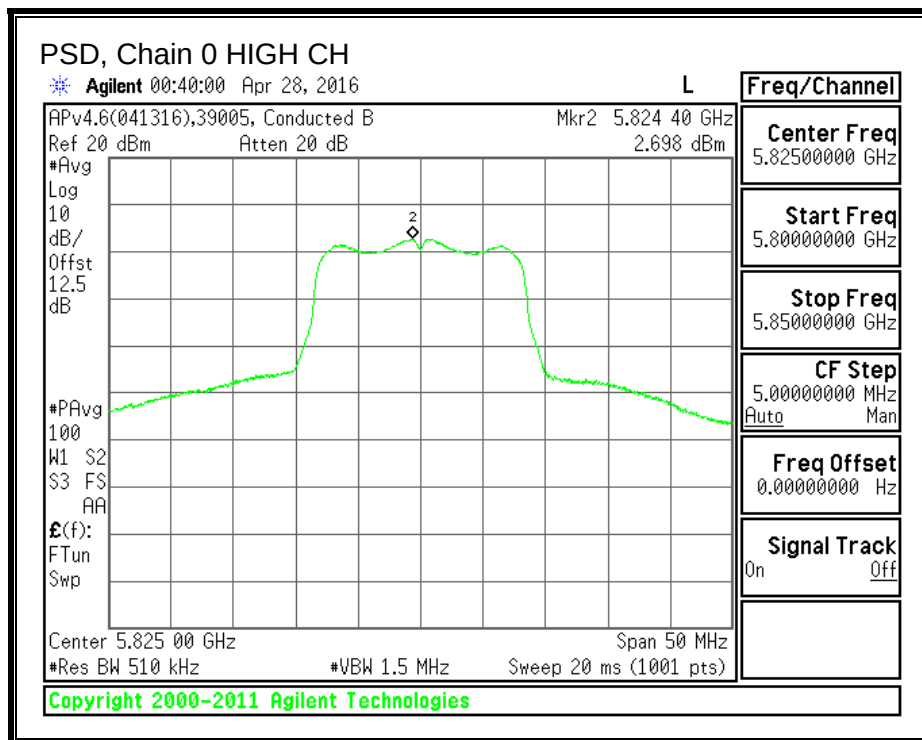
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PSD
--------------------	------	--

PSD Results

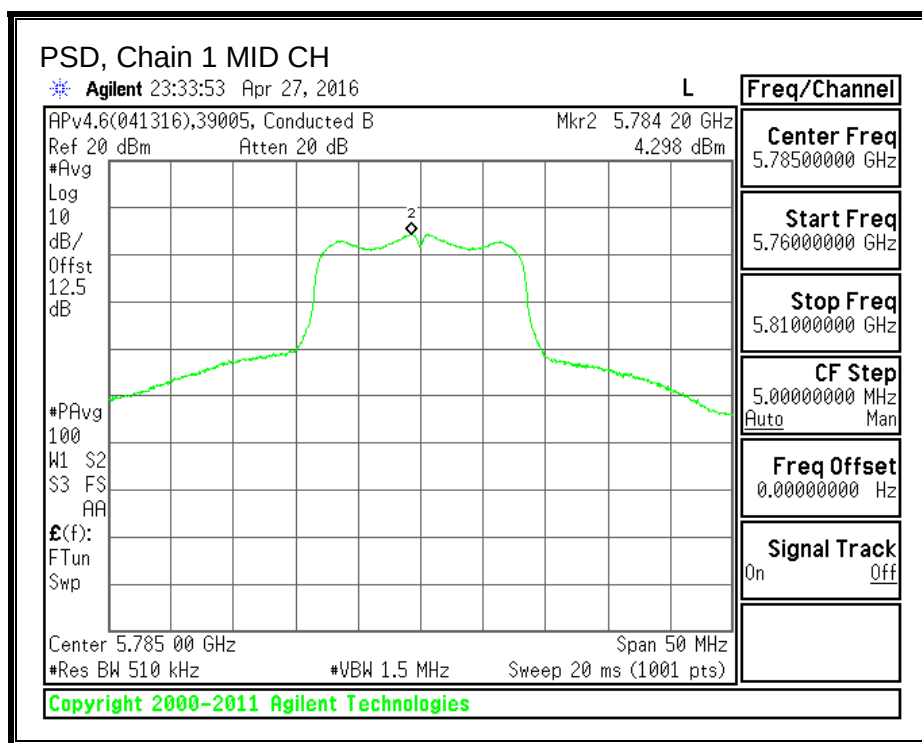
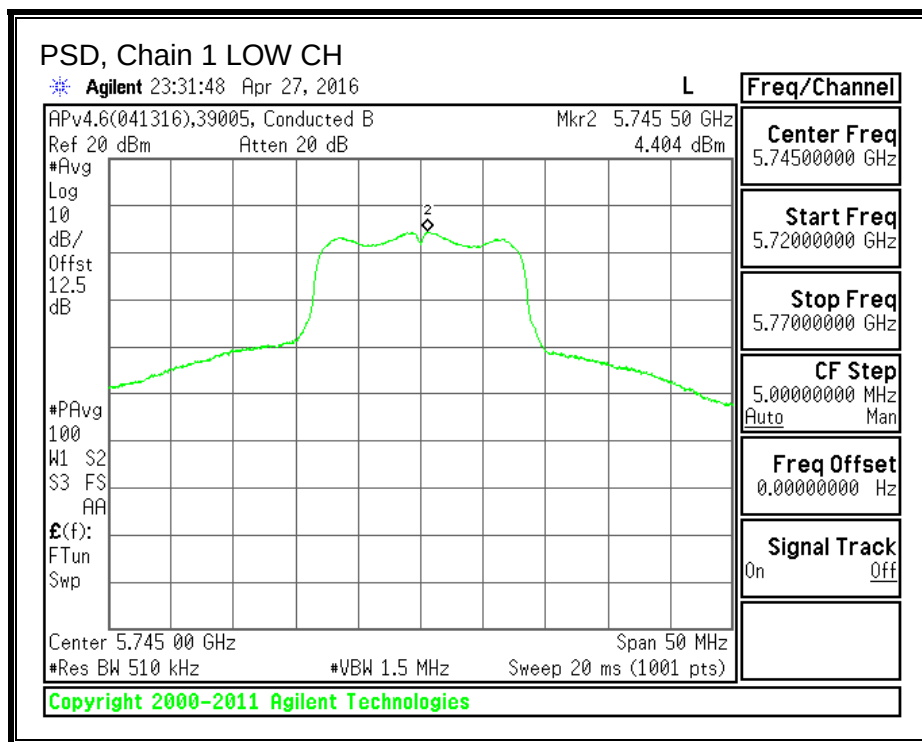
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	2.600	4.404	6.83	30.00	-23.17
Mid	5785	2.591	4.298	6.76	30.00	-23.24
High	5825	2.698	4.728	7.06	30.00	-22.94

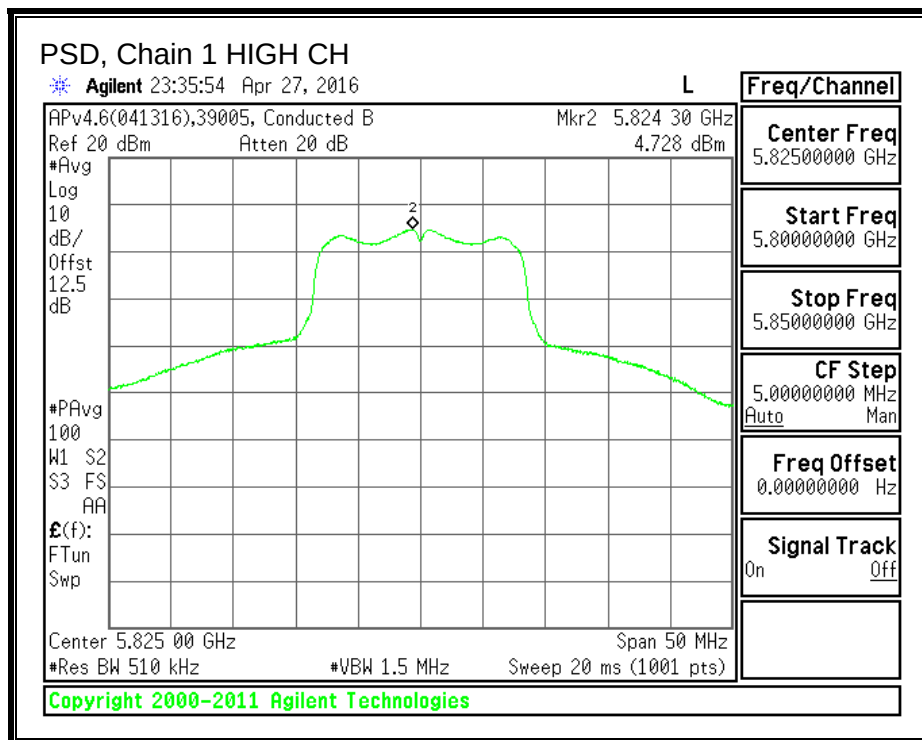
PSD, Chain 0





PSD, Chain 1





9.4. 802.11n HT20 SISO MODE IN THE 5.8 GHz BAND

9.4.1. 6 dB BANDWIDTH

LIMITS

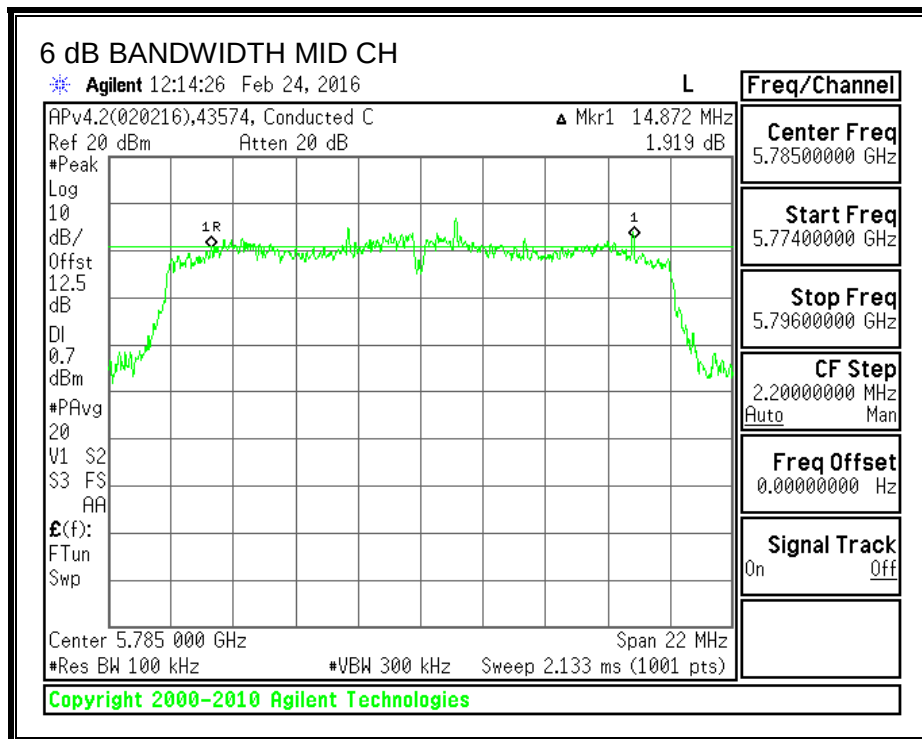
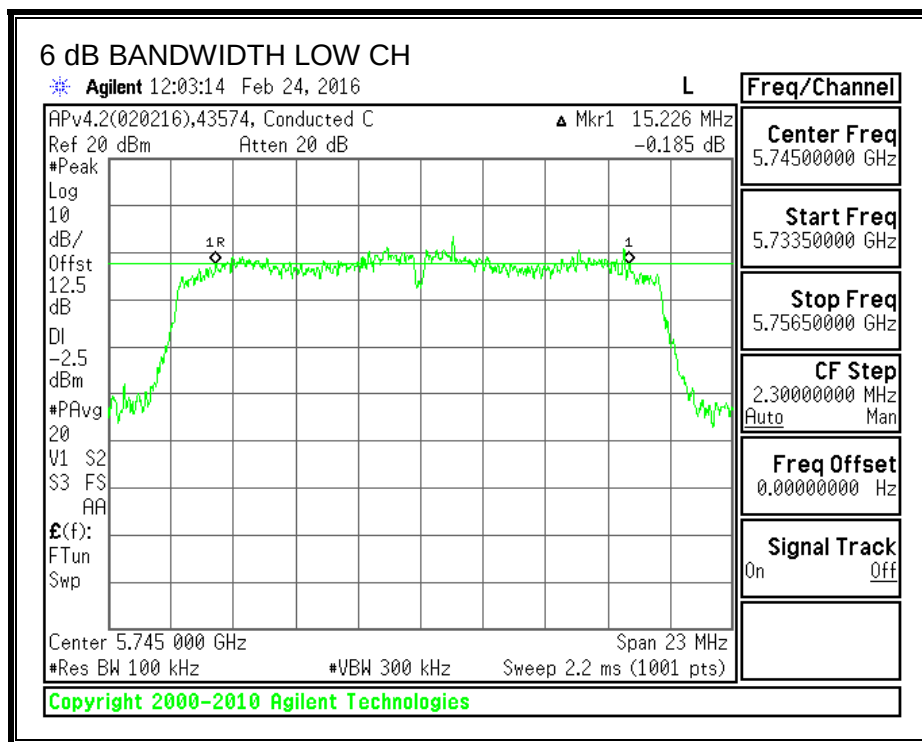
FCC §15.407 (e)

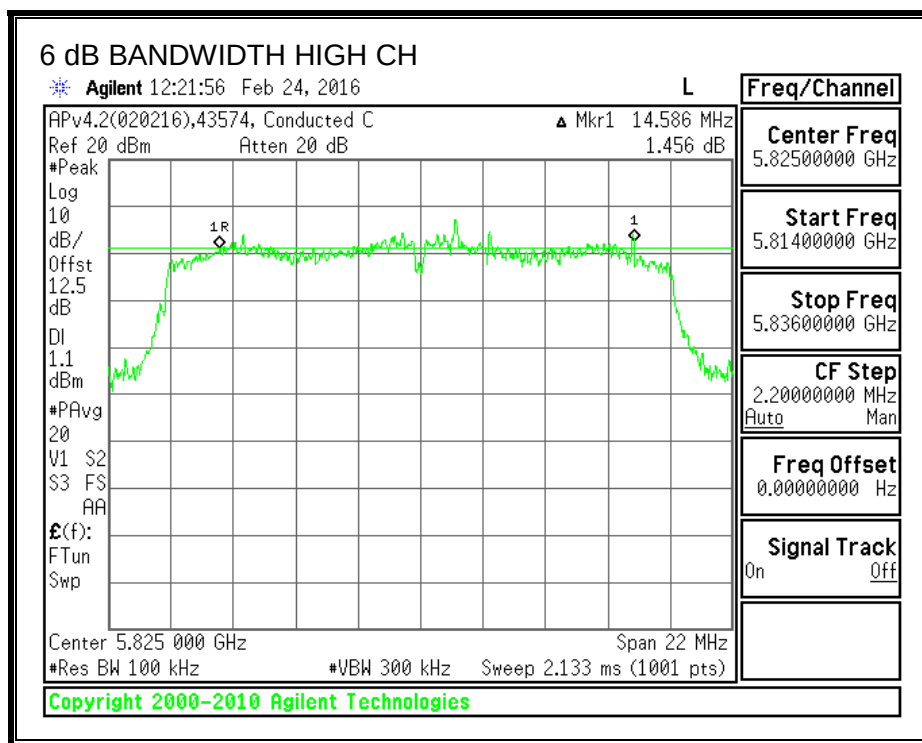
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5745	15.2260	0.5
Mid	5785	14.8720	0.5
High	5825	14.5860	0.5

6 dB BANDWIDTH





9.4.2. 99% BANDWIDTH

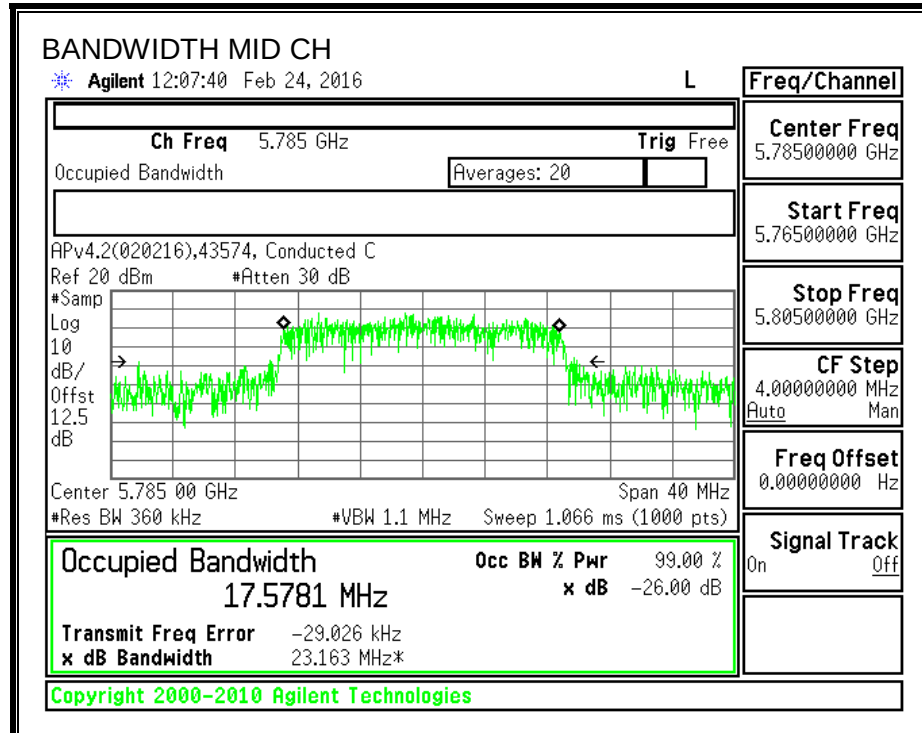
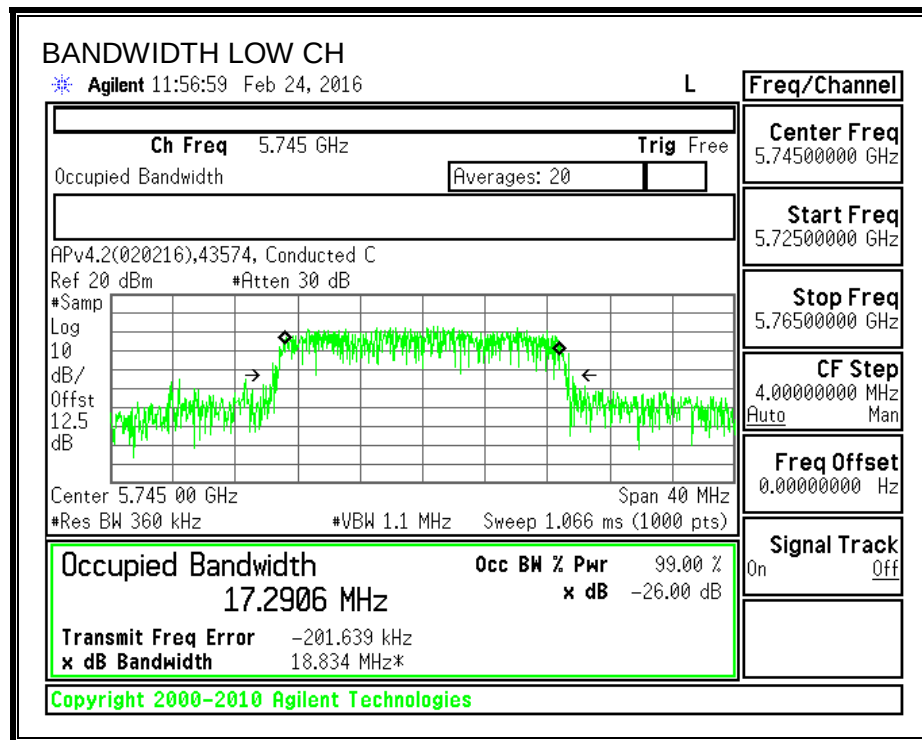
LIMITS

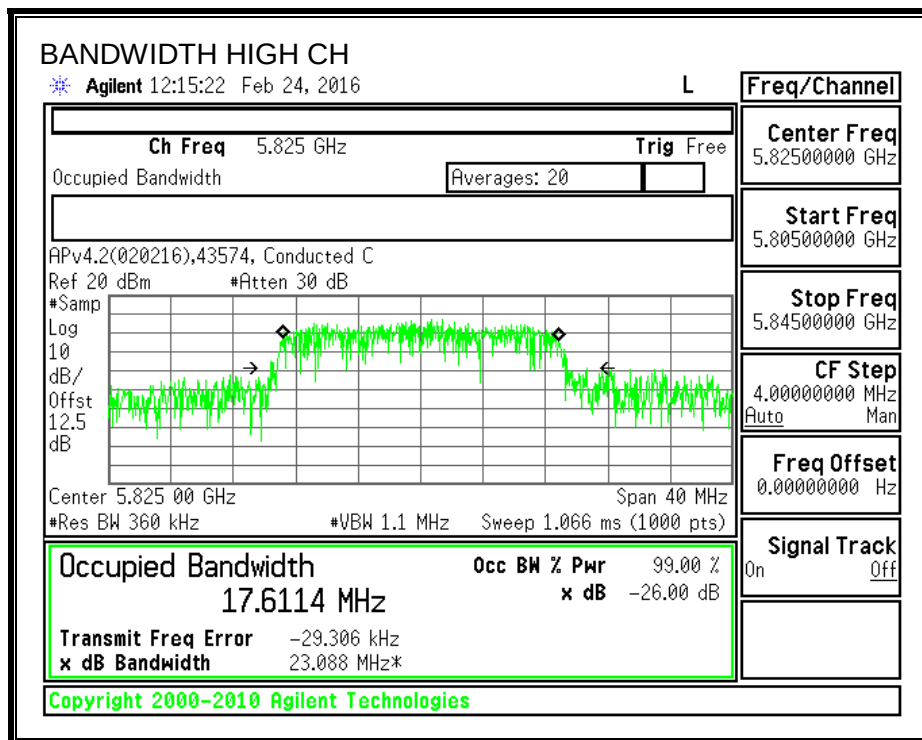
None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.2906
Mid	5785	17.5781
High	5825	17.6114

99% BANDWIDTH





9.4.3. 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	3.20	30.00
Mid	5785	3.20	30.00
High	5825	3.20	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
--------------------	------	--

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	16.91	16.91	30.00	-13.09
Mid	5785	16.61	16.61	30.00	-13.39
High	5825	17.04	17.04	30.00	-12.96

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

9.4.4. 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

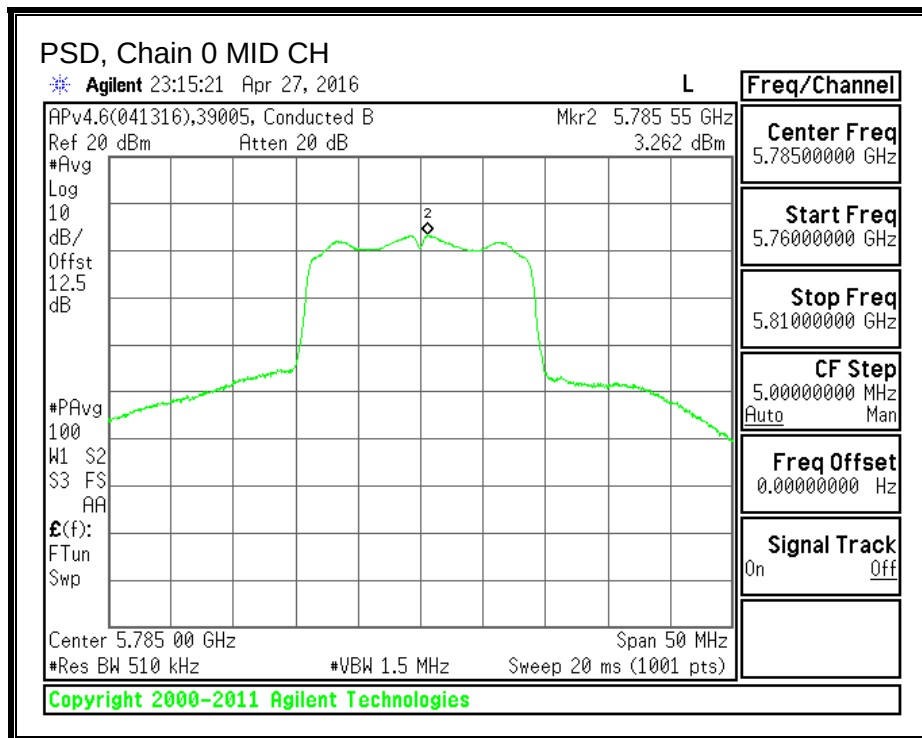
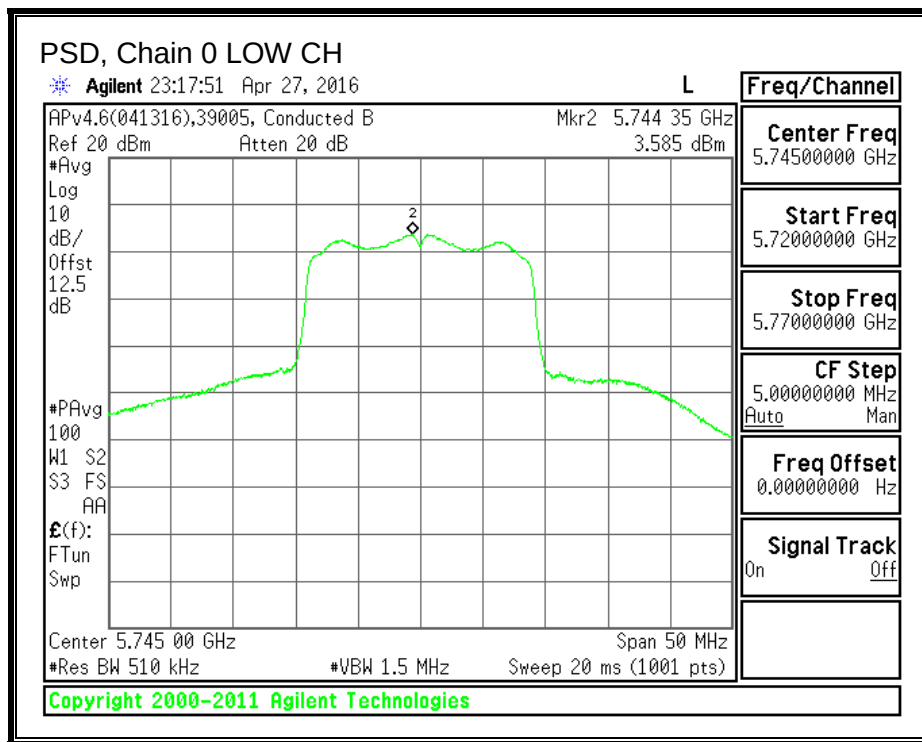
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	3.20	30.00
Mid	5785	3.20	30.00
High	5825	3.20	30.00

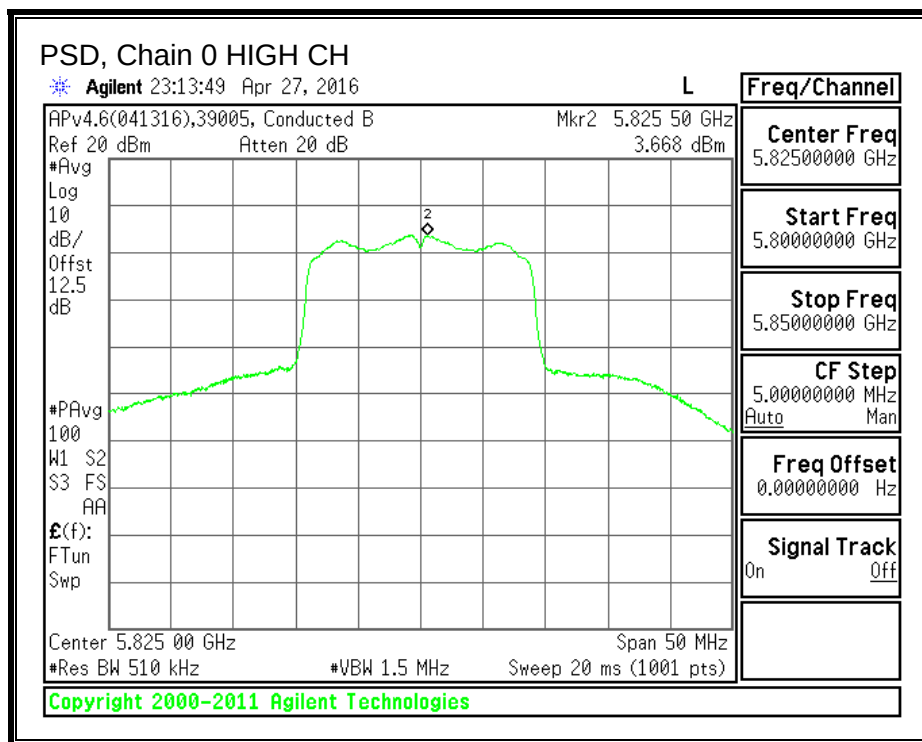
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PSD
--------------------	------	--

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	3.585	3.805	30.00	-26.20
Mid	5785	3.262	3.482	30.00	-26.52
High	5825	3.668	3.888	30.00	-26.11

PSD, Chain 0





9.5. 802.11n HT20 CDD 2TX MODE IN THE 5.8 GHz BAND

9.5.1. 6 dB BANDWIDTH

LIMITS

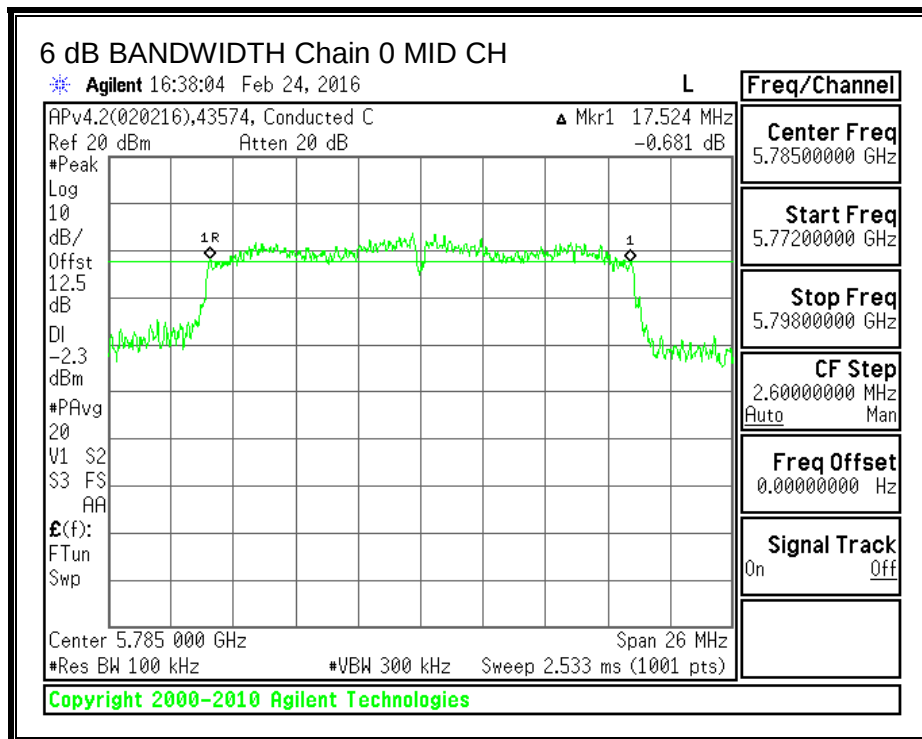
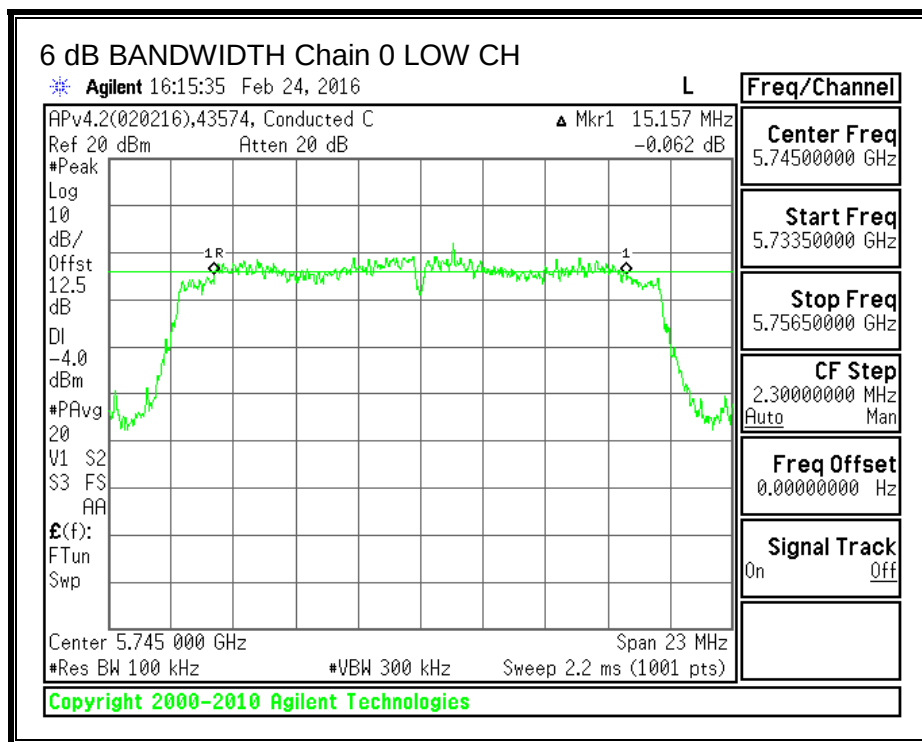
FCC §15.407 (e)

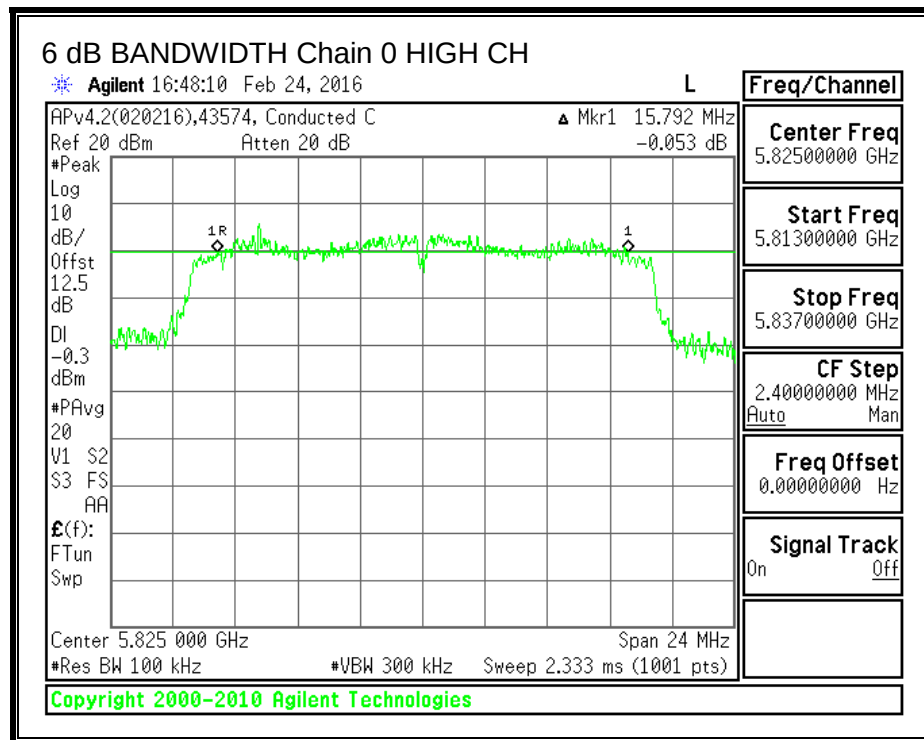
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

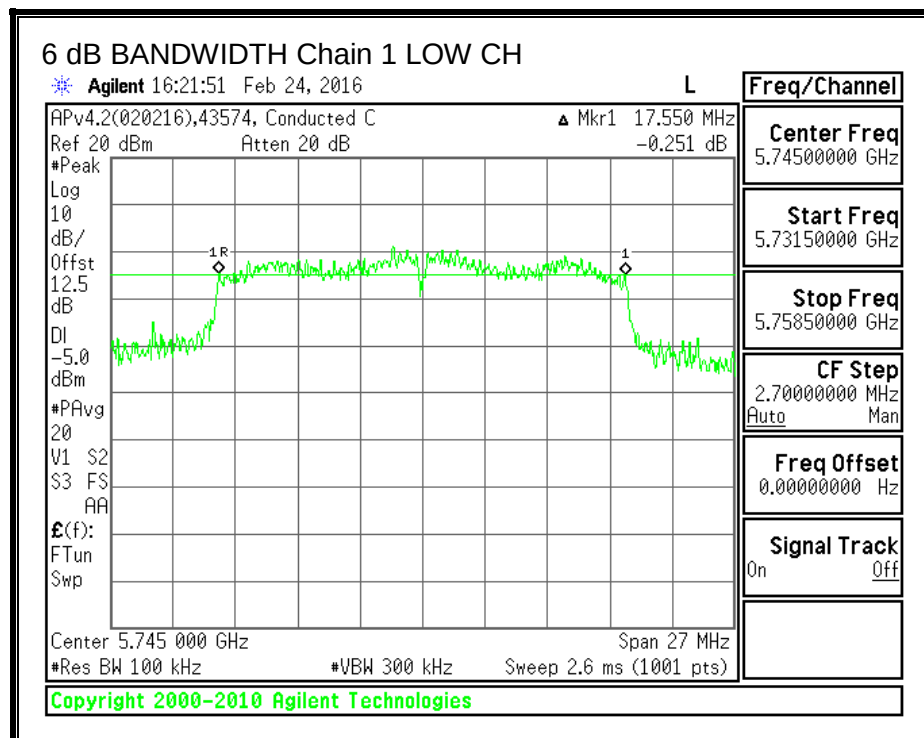
Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	5745	15.1570	17.5500	0.5
Mid	5785	17.5240	16.6500	0.5
High	5825	15.7920	15.8160	0.5

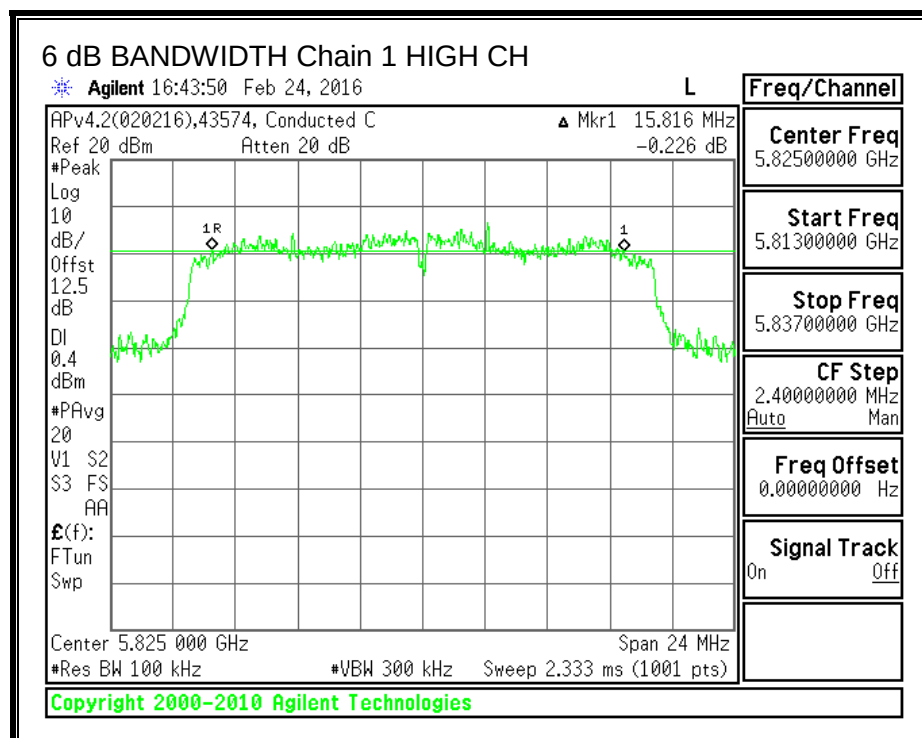
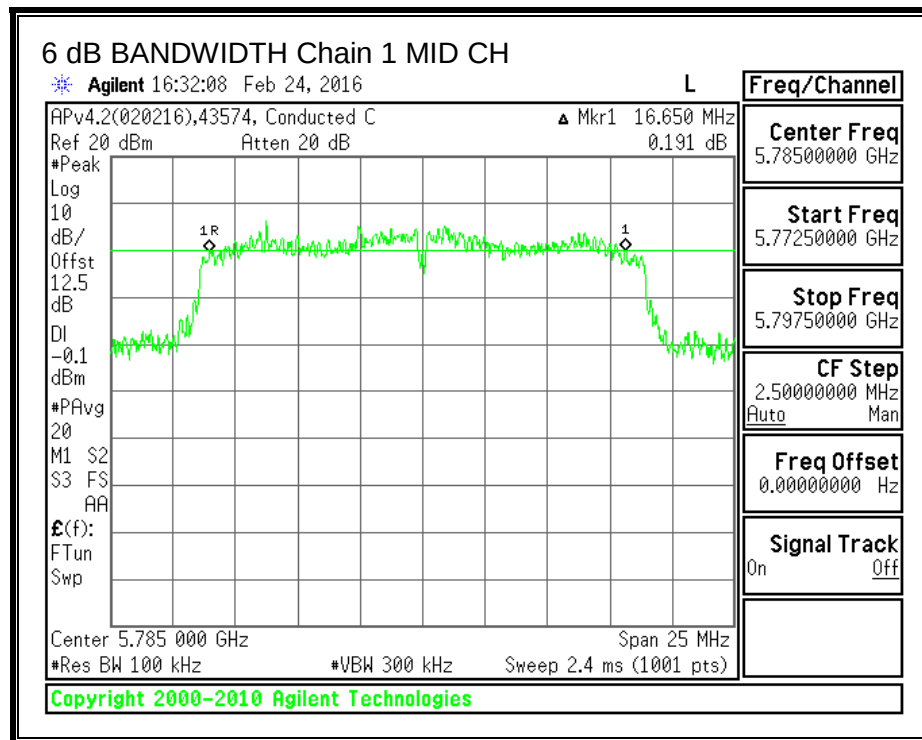
6 dB BANDWIDTH, Chain 0





6 dB BANDWIDTH, Chain 1





9.5.2. 99% BANDWIDTH

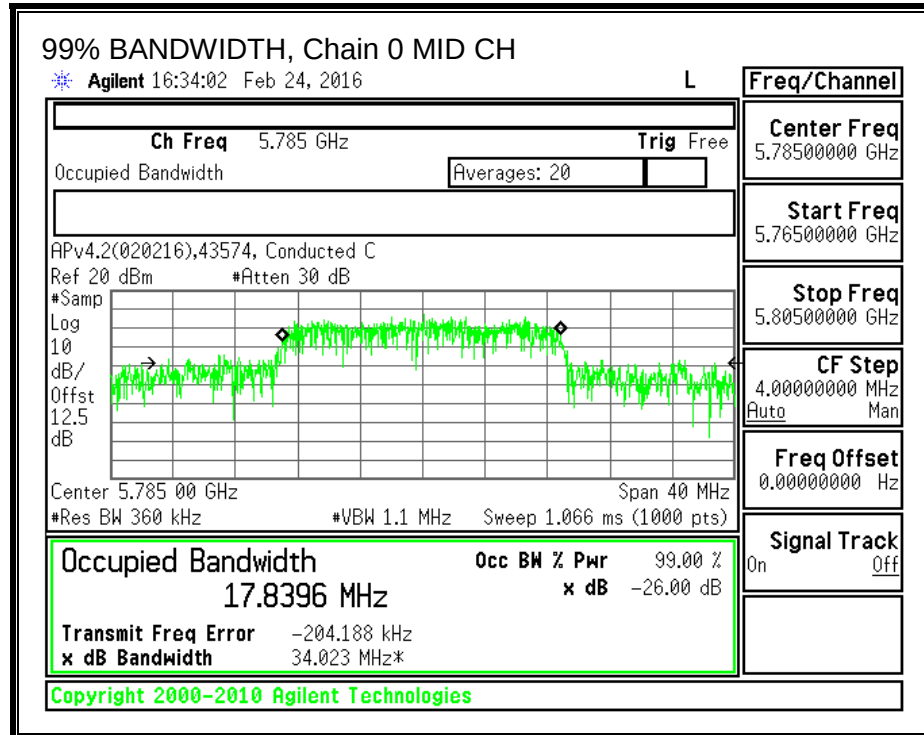
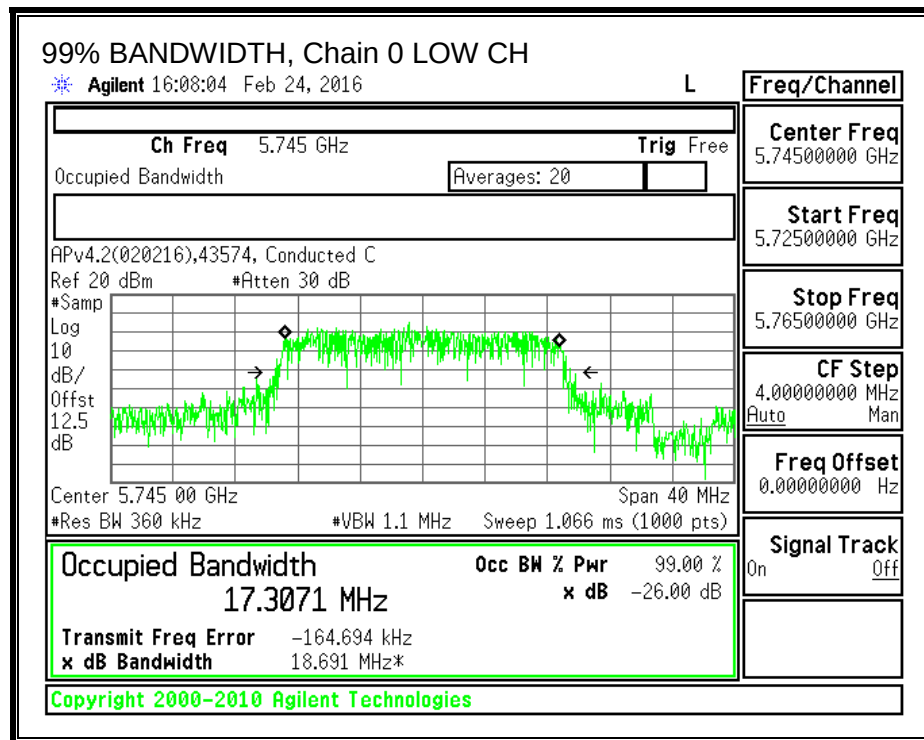
LIMITS

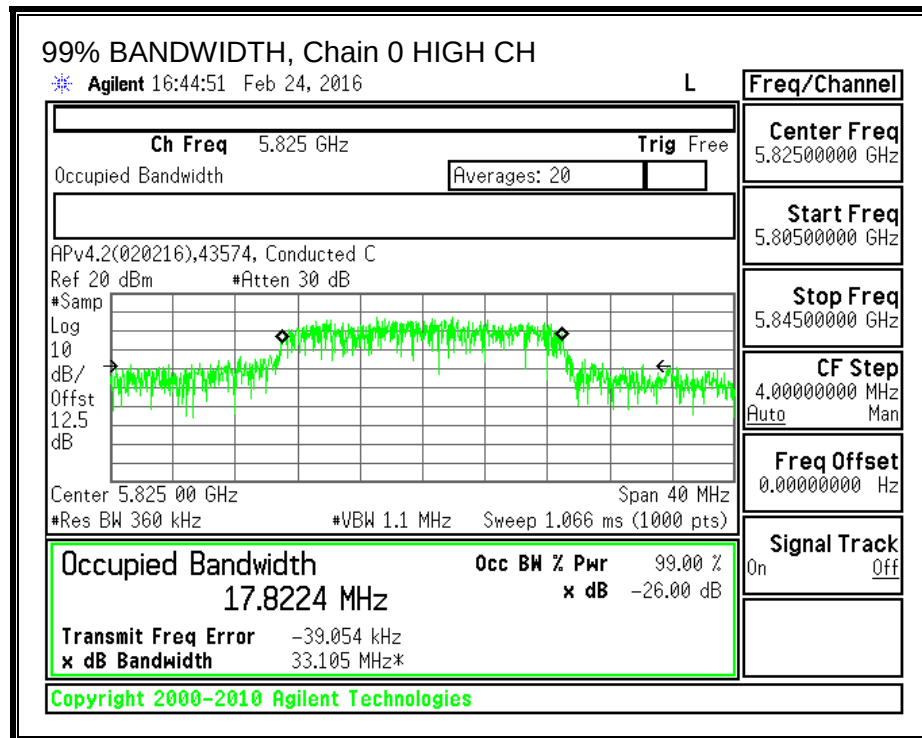
None; for reporting purposes only.

RESULTS

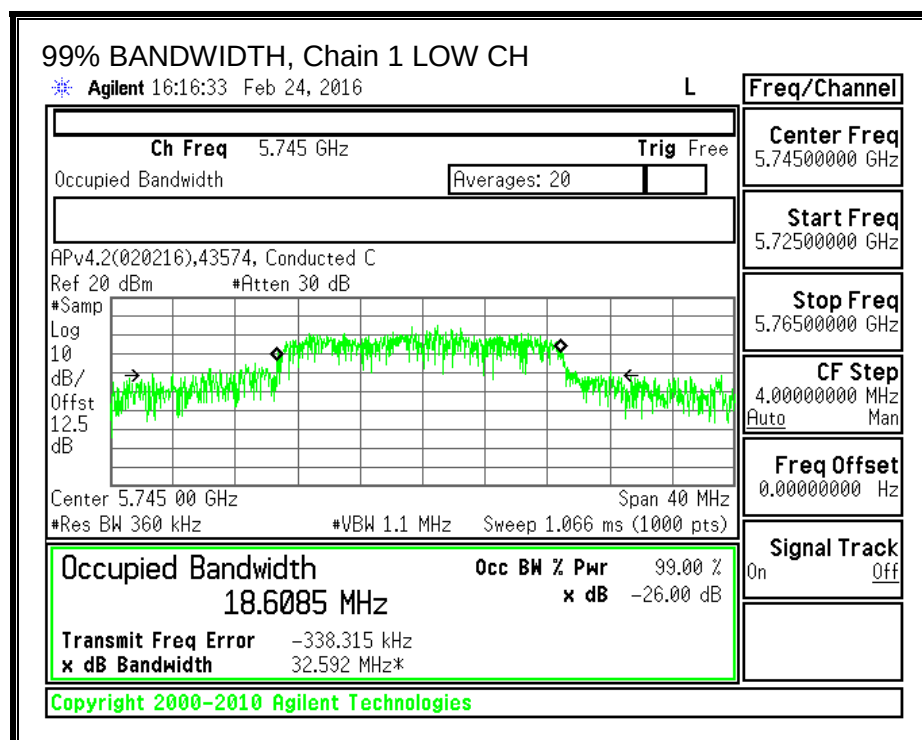
Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5745	17.3071	18.6085
Mid	5785	17.8396	17.6591
High	5825	17.8224	17.6436

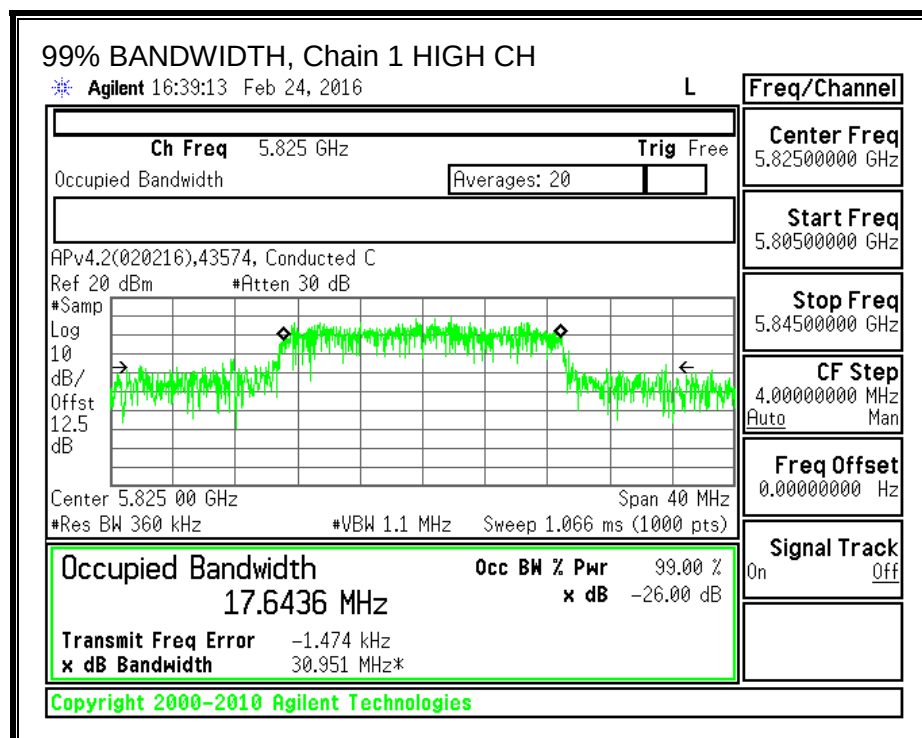
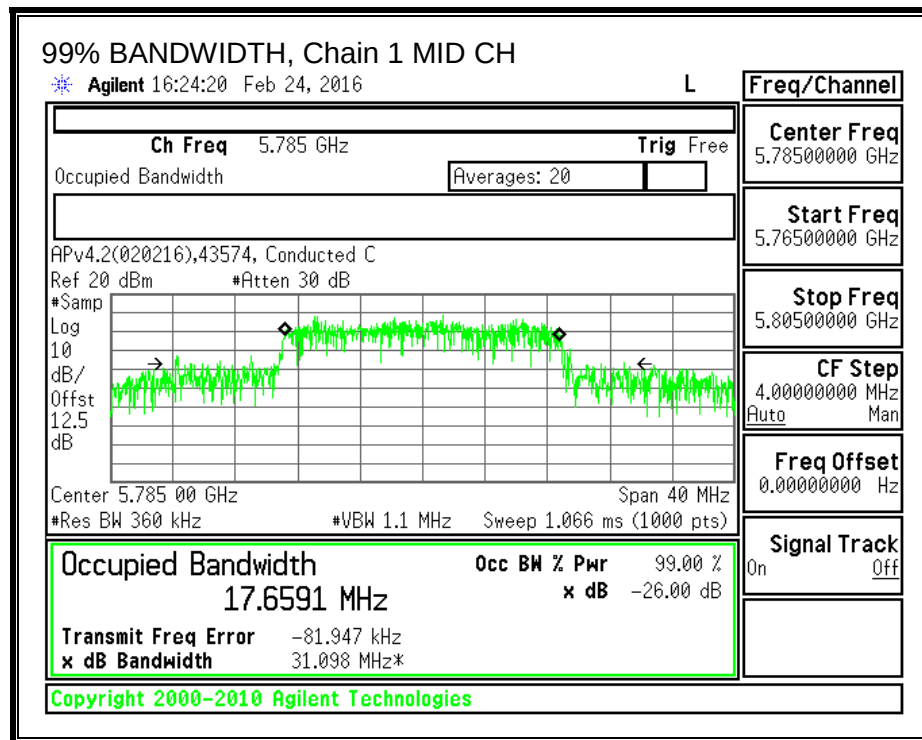
99% BANDWIDTH, Chain 0





99% BANDWIDTH, Chain 1





9.5.3. 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

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.20	1.80	2.56

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	2.56	30.00
Mid	5785	2.56	30.00
High	5825	2.56	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
--------------------	------	--

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5745	15.51	17.00	19.33	30.00	-10.67
Mid	5785	15.19	16.66	19.00	30.00	-11.00
High	5825	15.31	16.80	19.13	30.00	-10.87

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

9.5.4. 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

The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.20	1.80	5.54

RESULTS

Antenna Gain and Limits

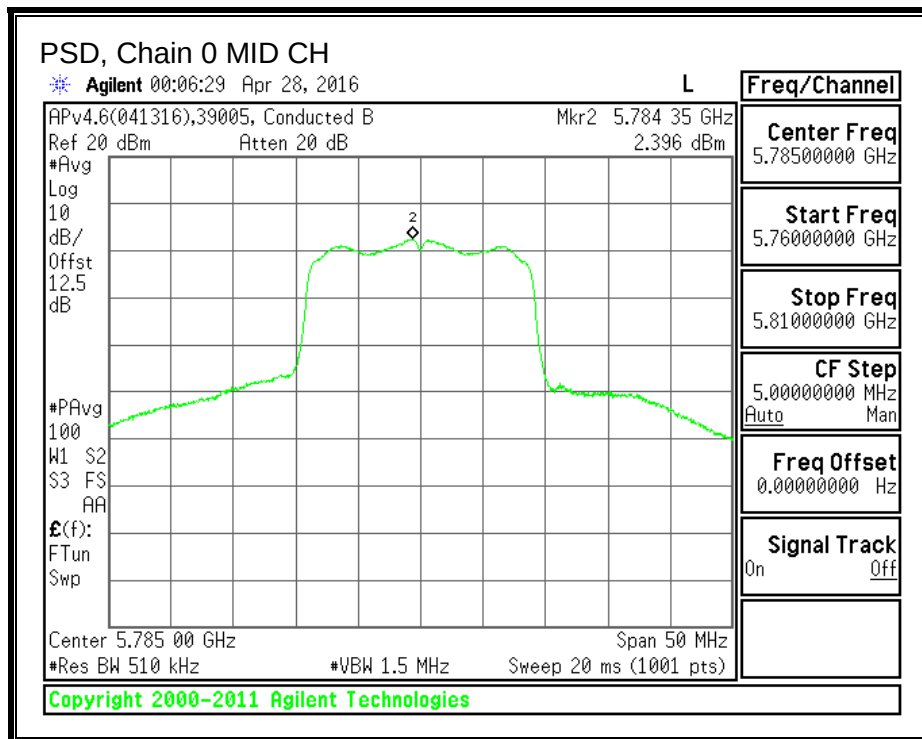
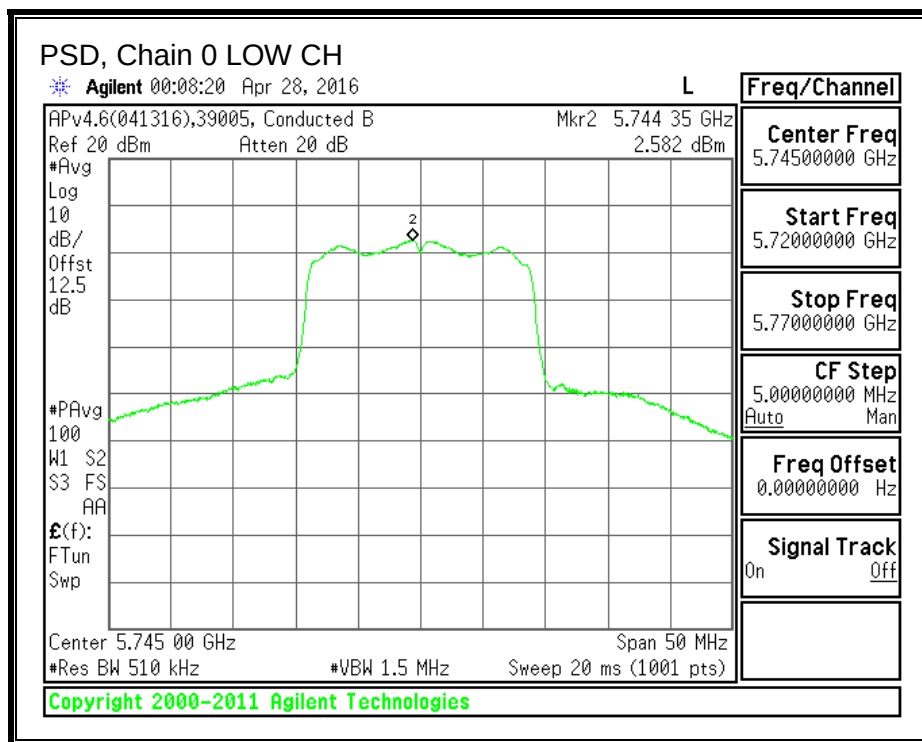
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5745	5.54	30.00
Mid	5785	5.54	30.00
High	5825	5.54	30.00

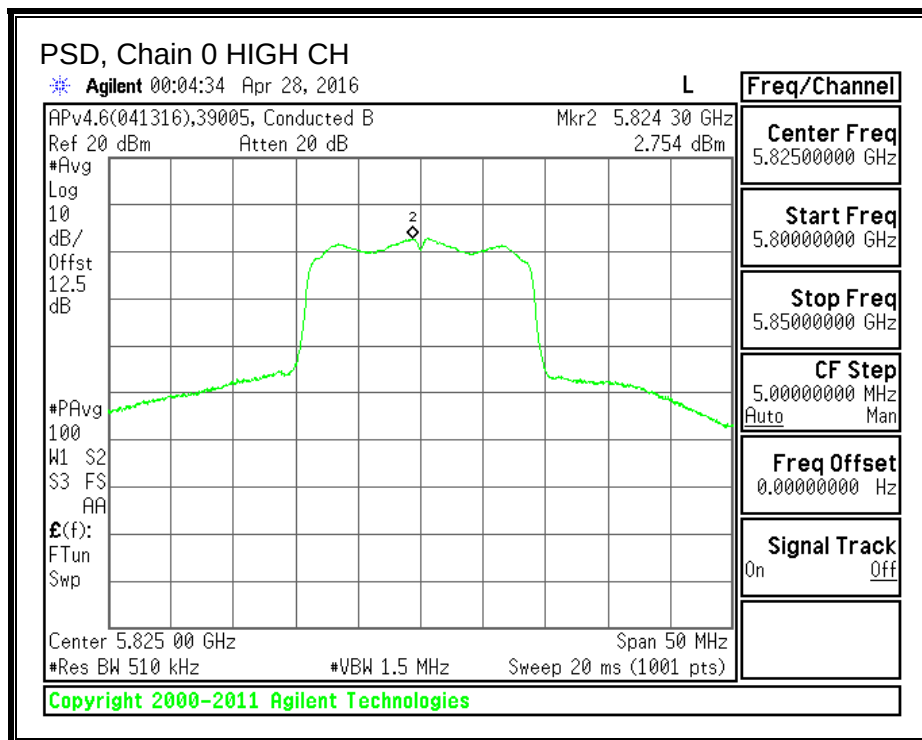
Duty Cycle CF (dB)	0.22	Included in Calculations of Corr'd PSD
--------------------	------	--

PSD Results

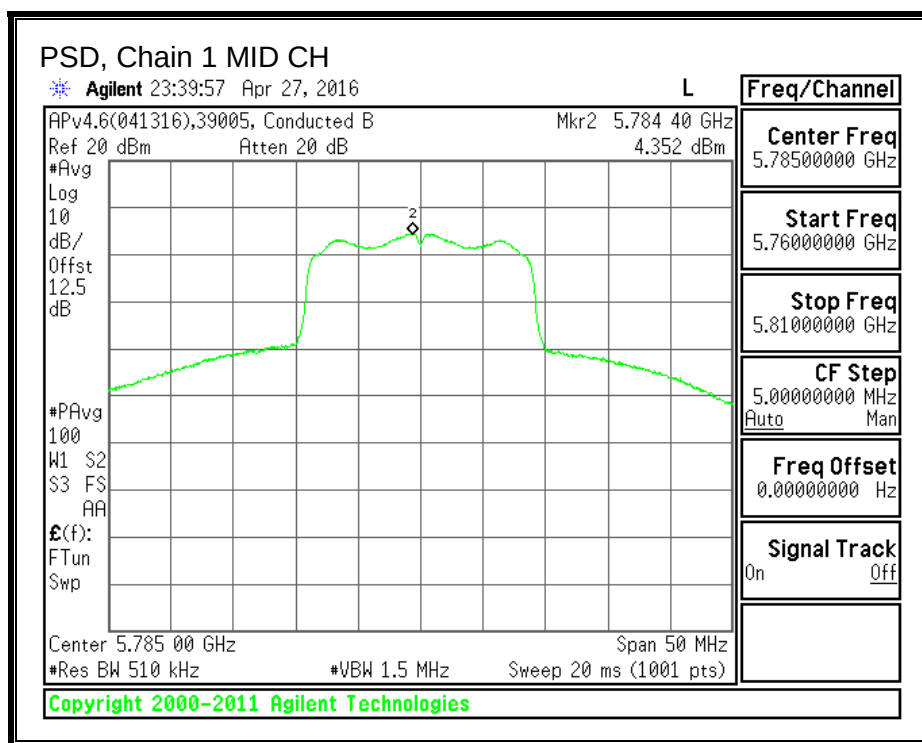
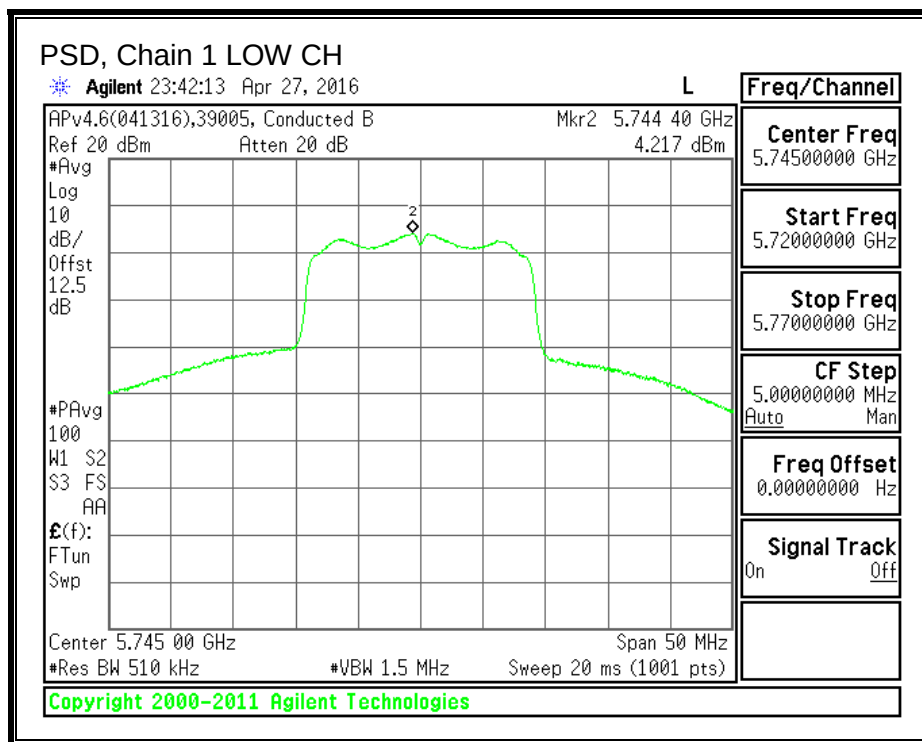
Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5745	2.582	4.217	6.71	30.00	-23.29
Mid	5785	2.396	4.352	6.71	30.00	-23.29
High	5825	2.754	4.474	6.93	30.00	-23.07

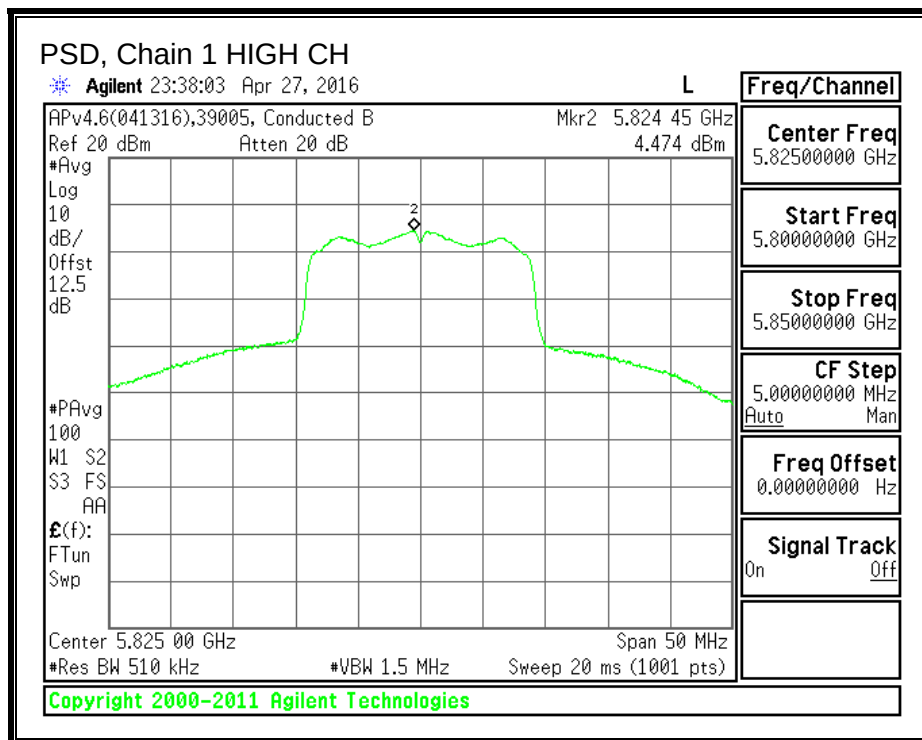
PSD, Chain 0





PSD, Chain 1





9.6. 802.11n HT40 SISO MODE IN THE 5.8 GHz BAND

9.6.1. 6 dB BANDWIDTH

LIMITS

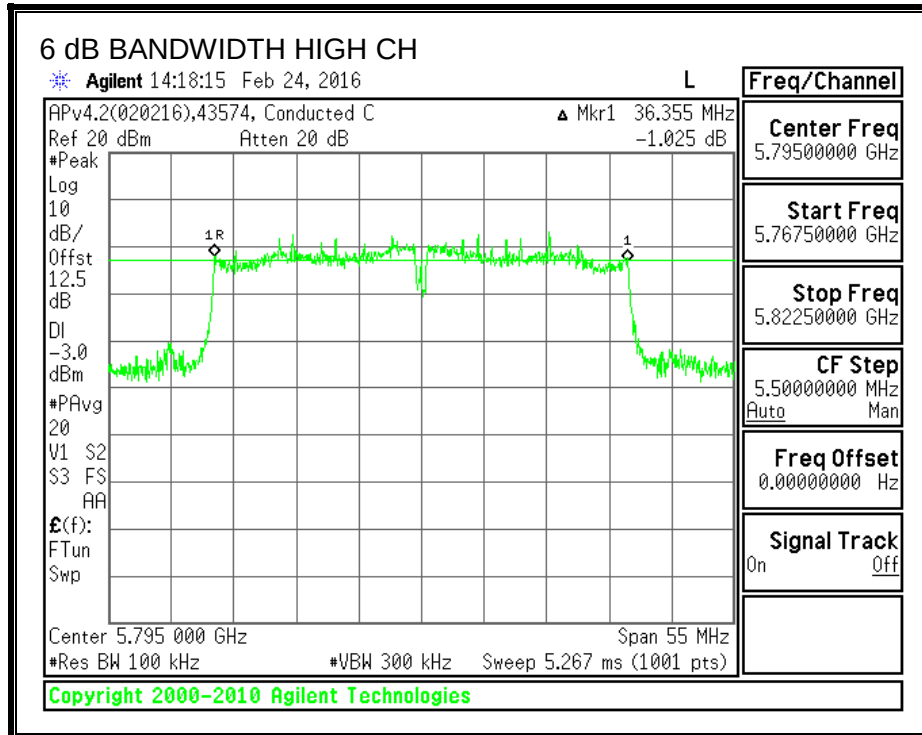
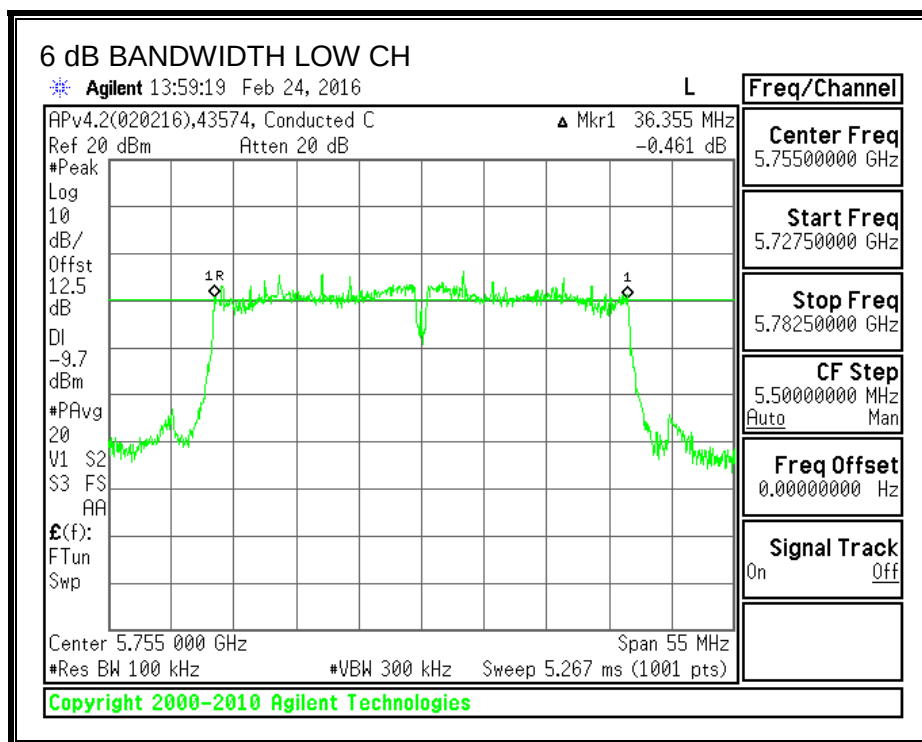
FCC §15.407 (e)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	5755	36.3550	0.5
High	5795	36.3550	0.5

6 dB BANDWIDTH



9.6.2. 99% BANDWIDTH

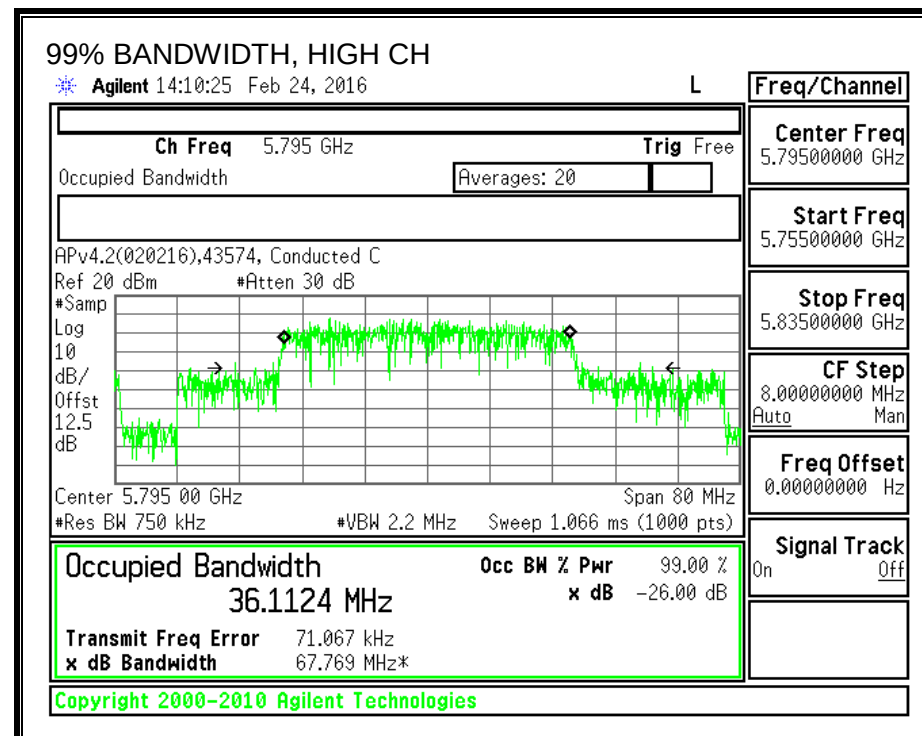
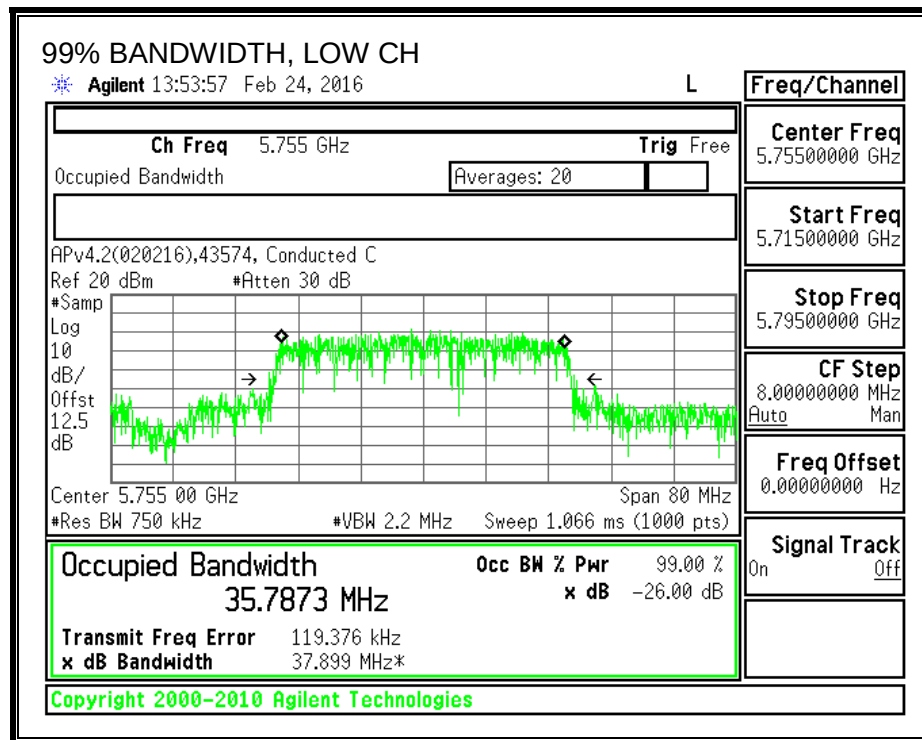
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	35.7873
High	5795	36.1124

99% BANDWIDTH



9.6.3. 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	3.20	30.00
High	5795	3.20	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
--------------------	------	--

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	16.99	16.99	30.00	-13.01
High	5795	16.88	16.88	30.00	-13.12

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

9.6.4. 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

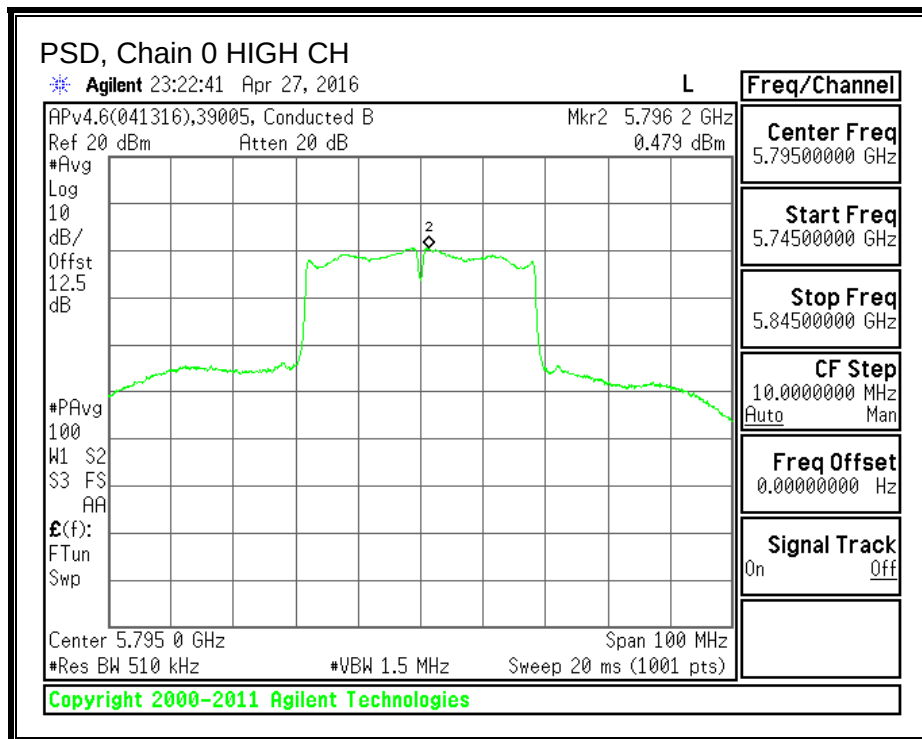
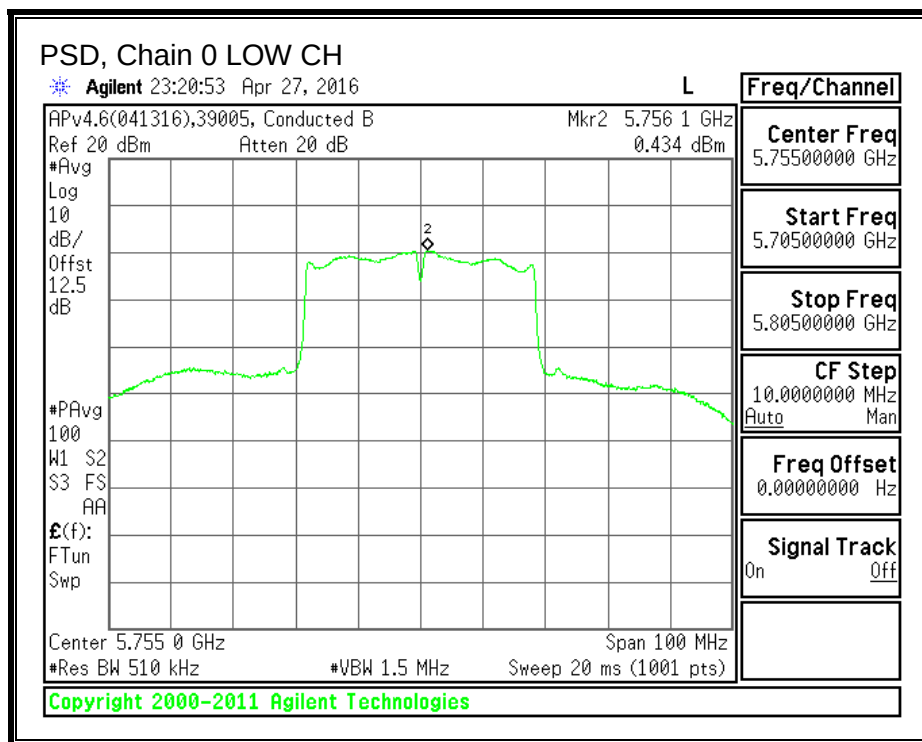
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	3.20	30.00
High	5795	3.20	30.00

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

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	0.434	0.87	30.00	-29.13
High	5795	0.479	0.92	30.00	-29.08

PSD, Chain 0



9.7. 802.11n HT40 CDD 2TX MODE IN THE 5.8 GHz BAND

9.7.1. 6 dB BANDWIDTH

LIMITS

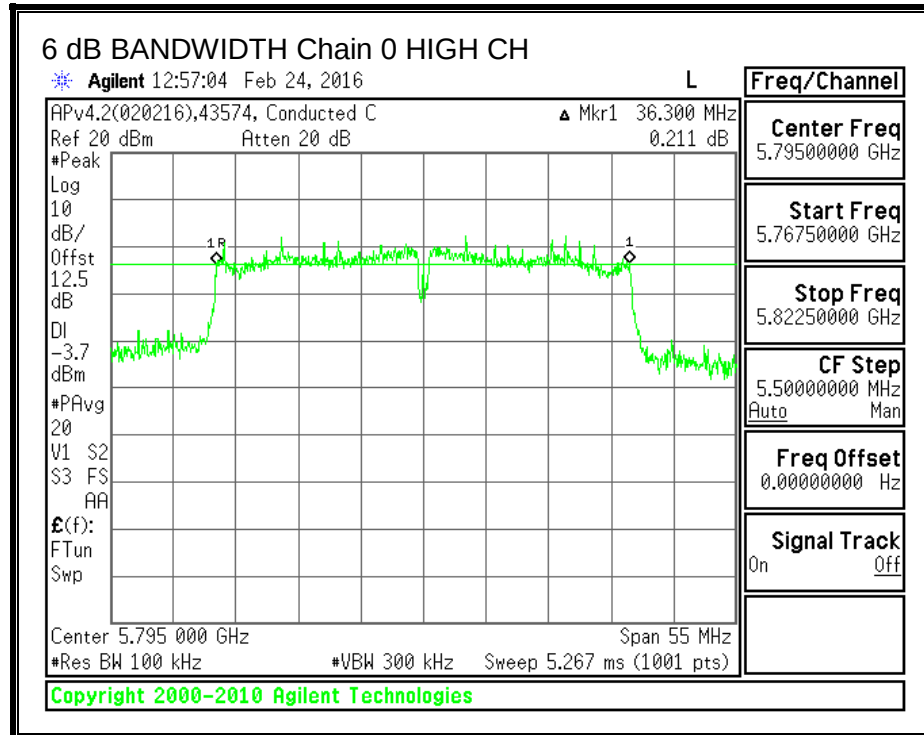
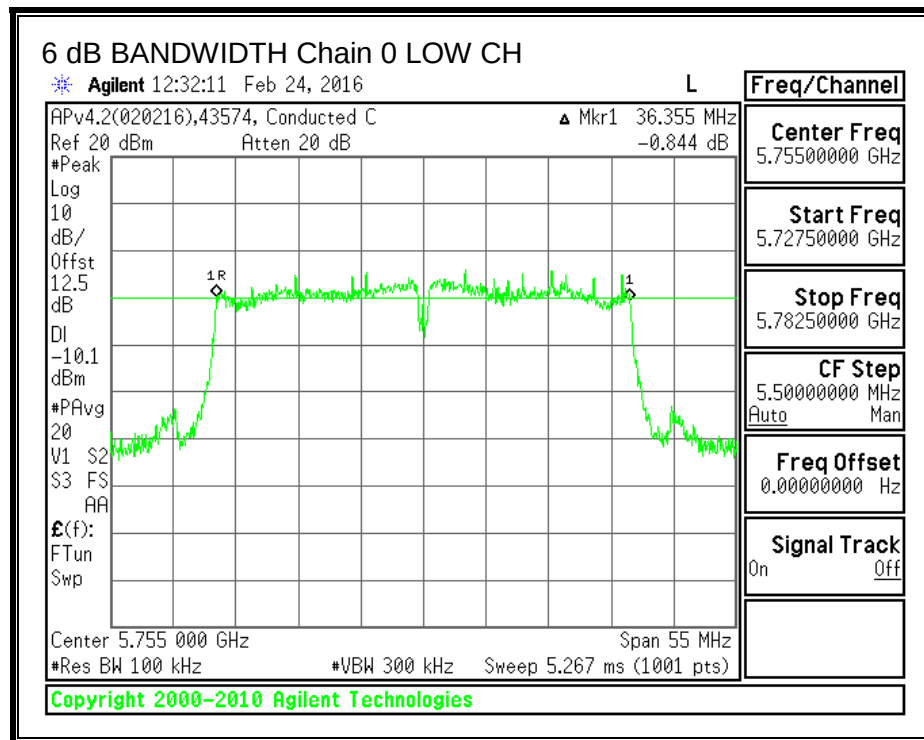
FCC §15.407 (e)

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

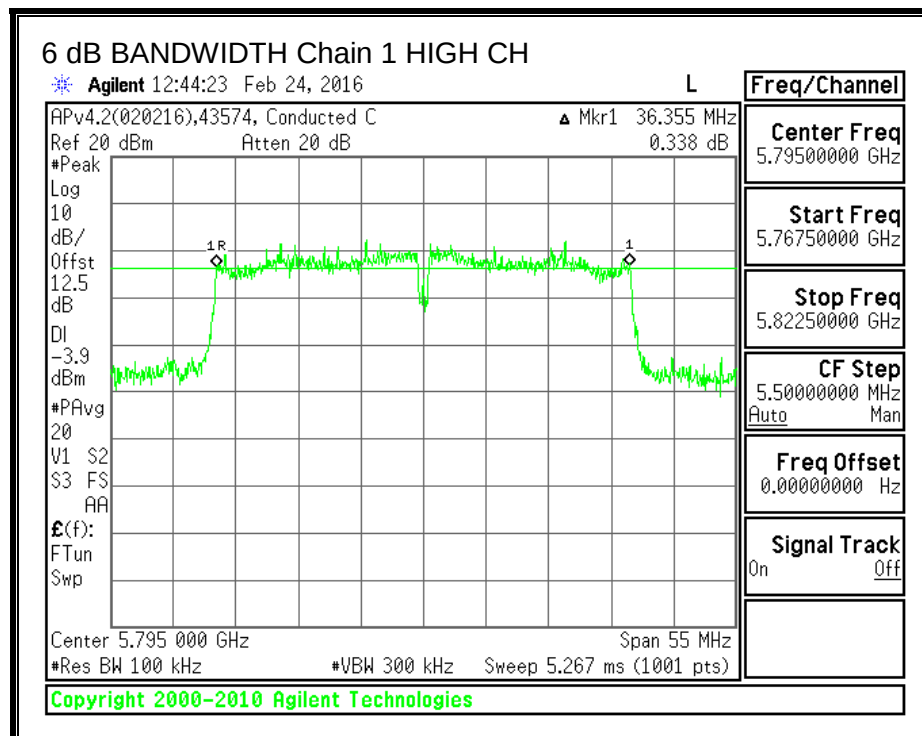
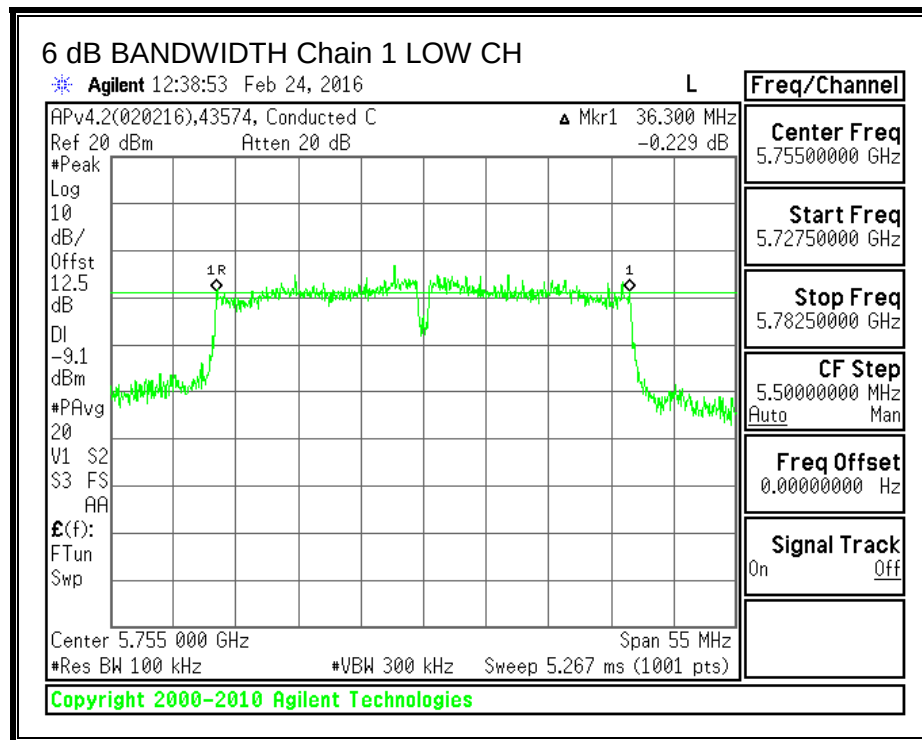
RESULTS

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low	5755	36.3550	36.3000	0.5
High	5795	36.3000	36.3550	0.5

6 dB BANDWIDTH, Chain 0



6 dB BANDWIDTH, Chain 1



9.7.2. 99% BANDWIDTH

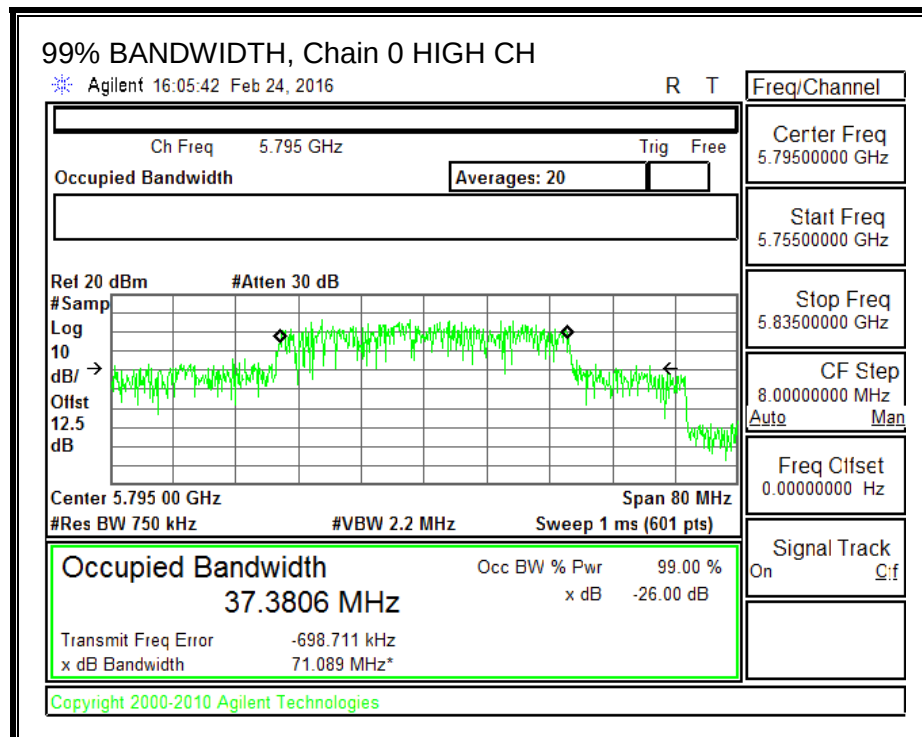
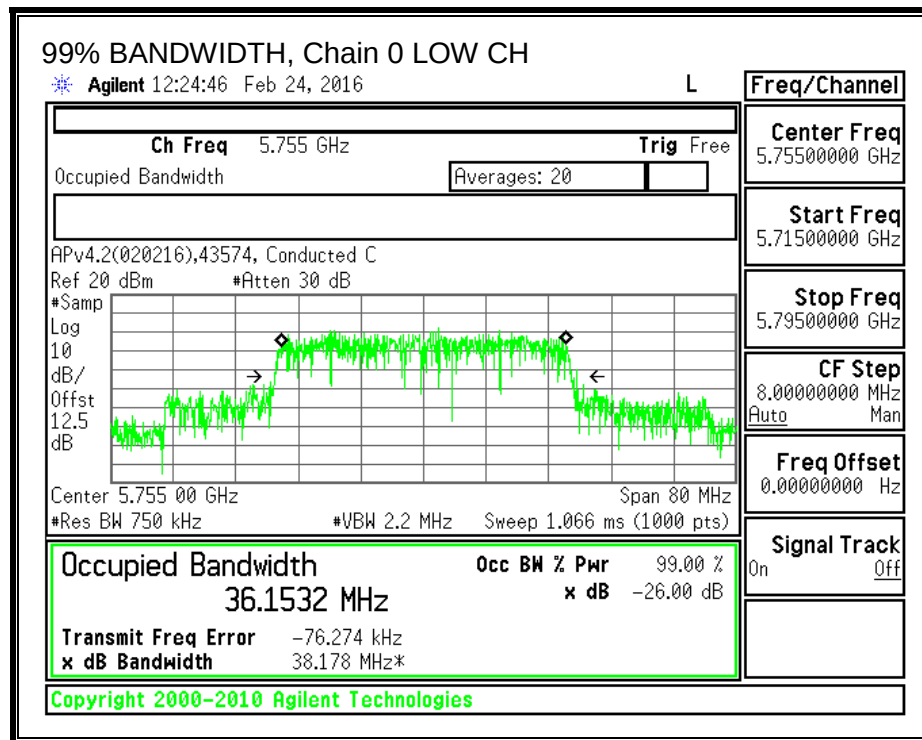
LIMITS

None; for reporting purposes only.

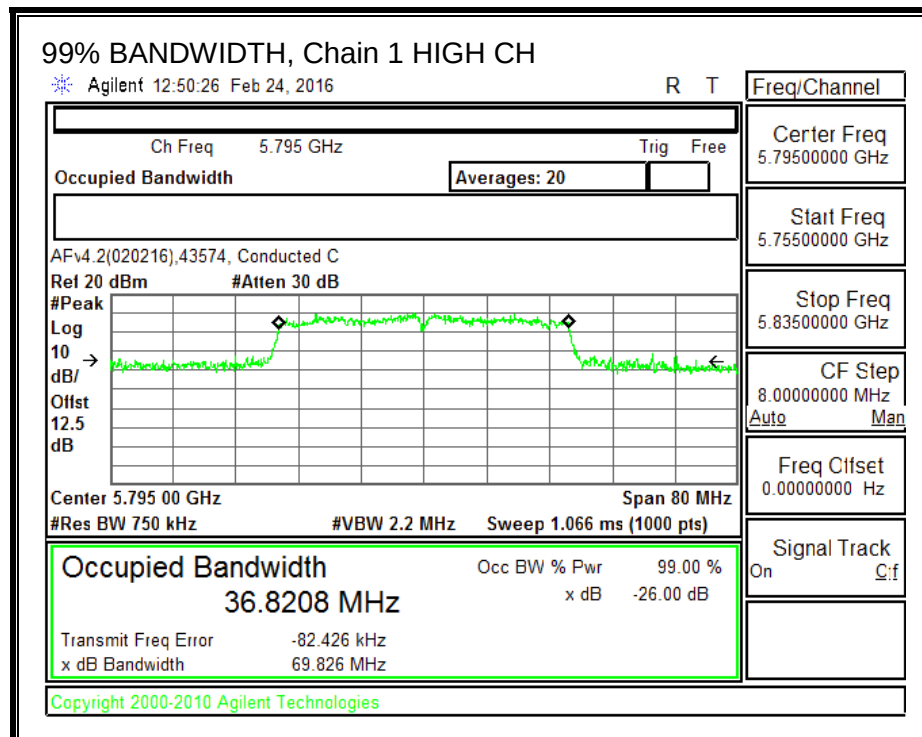
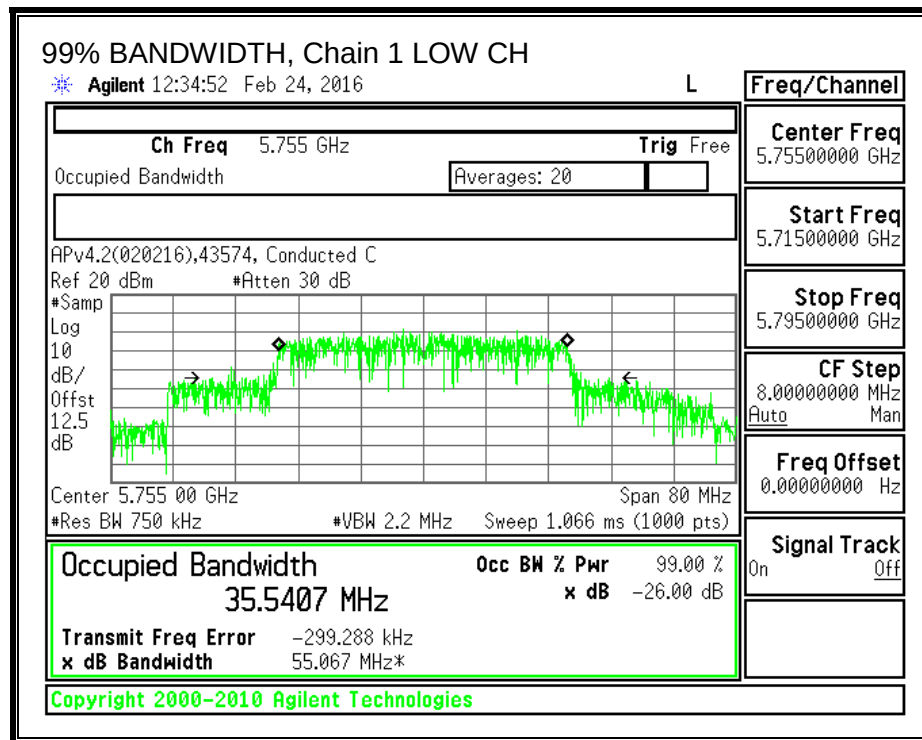
RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5755	36.1532	35.5407
High	5795	37.3806	36.8208

99% BANDWIDTH, Chain 0



99% BANDWIDTH, Chain 1



9.7.3. 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

The TX chains are uncorrelated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.20	1.80	2.56

RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain (dBi)	Power Limit (dBm)
Low	5755	2.56	30.00
High	5795	2.56	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
--------------------	------	--

Output Power Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Power Margin (dB)
Low	5755	15.97	16.80	19.42	30.00	-10.58
High	5795	15.98	16.77	19.40	30.00	-10.60

Note: the power readings above were measured with gated method, and the measurement was taken only during the ON time. No duty cycle correction was necessary.

9.7.4. 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

The TX chains are correlated and the antenna gain is unequal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.20	1.80	5.54

RESULTS

Antenna Gain and Limit

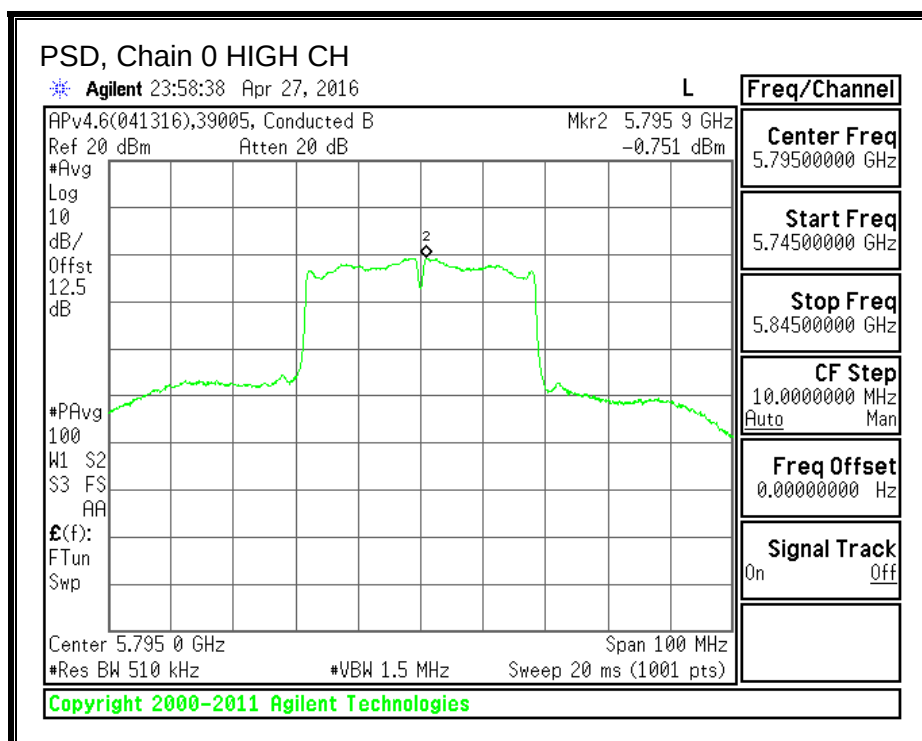
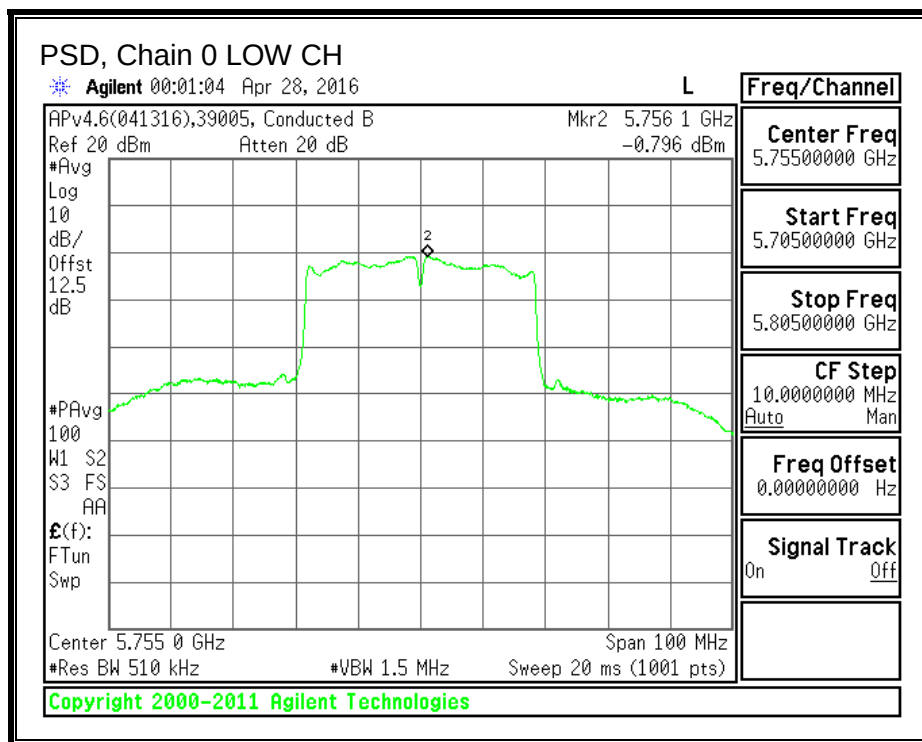
Channel	Frequency (MHz)	Directional Gain (dBi)	PSD Limit (dBm)
Low	5755	5.54	30.00
High	5795	5.54	30.00

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

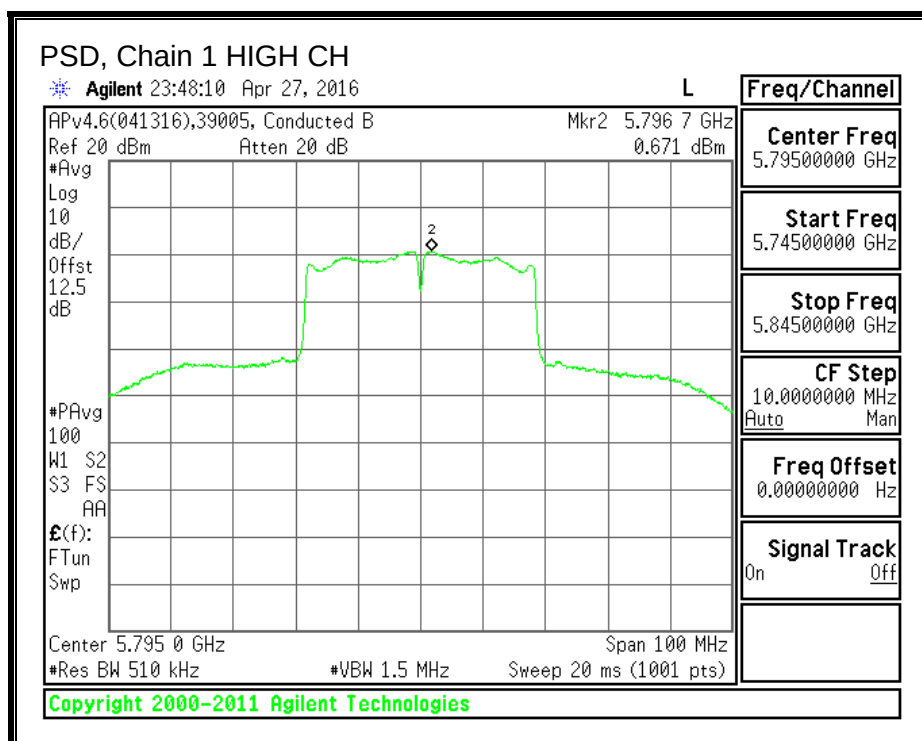
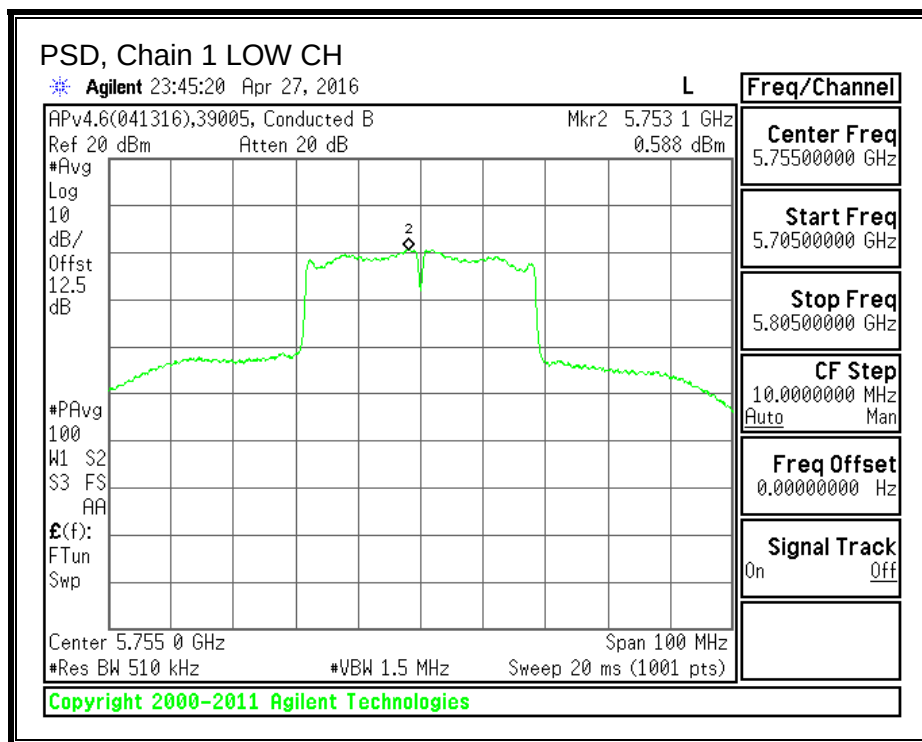
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas PSD (dBm)	Chain 1 Meas PSD (dBm)	Total Corr'd PSD (dBm)	PSD Limit (dBm)	PSD Margin (dB)
Low	5755	-0.796	0.588	3.40	30.00	-26.60
High	5795	-0.751	0.671	3.47	30.00	-26.53

PSD, Chain 0



PSD, Chain 1



10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

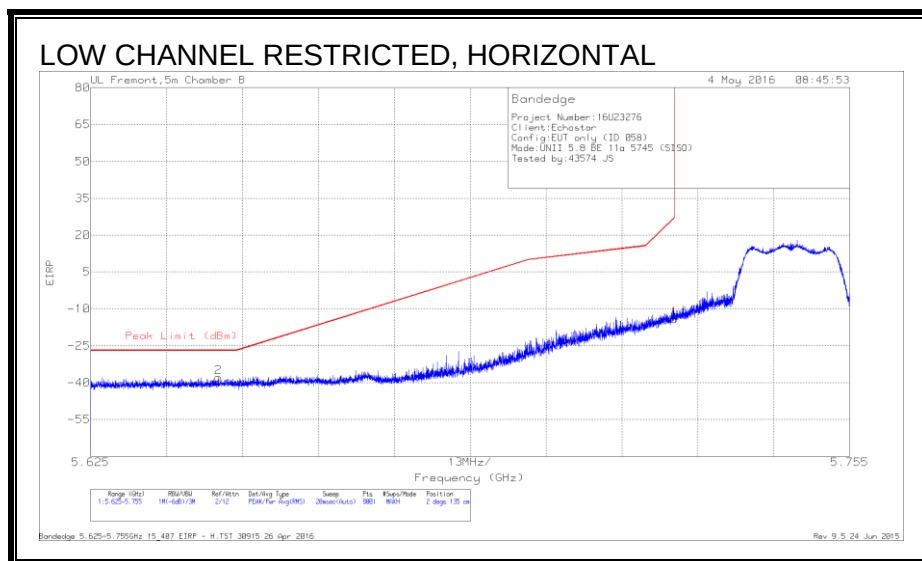
FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit ($\mu\text{V}/\text{m}$) at 3 m	Field Strength Limit (dB $\mu\text{V}/\text{m}$) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

NOTE: for below 1 GHz emission scan, the RJ45 cable was unplugged from the router end after the RF transmission started; and the EUT was stayed on transmit mode during the scan.

10.2. TX ABOVE 1 GHz 802.11a SISO MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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	5.647	-62.85	Pk	34.7	-21.5	11.8	0	-37.85	-27	-10.85	2	135	H
1	5.725	-39.14	Pk	34.9	-21.7	11.8	0	-14.14	26.97	-41.11	2	135	H

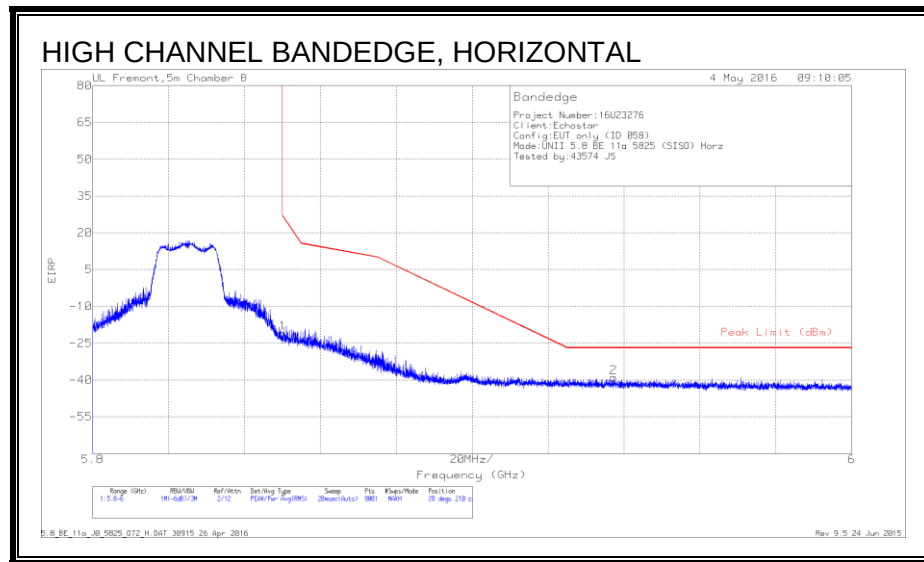
Pk - Peak detector



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.634	-63.18	Pk	34.6	-21.5	11.8	0	-38.28	-27	-11.28	69	103	V
1	5.725	-40.77	Pk	34.9	-21.7	11.8	0	-15.77	26.97	-42.74	69	103	V

Pk - Peak detector

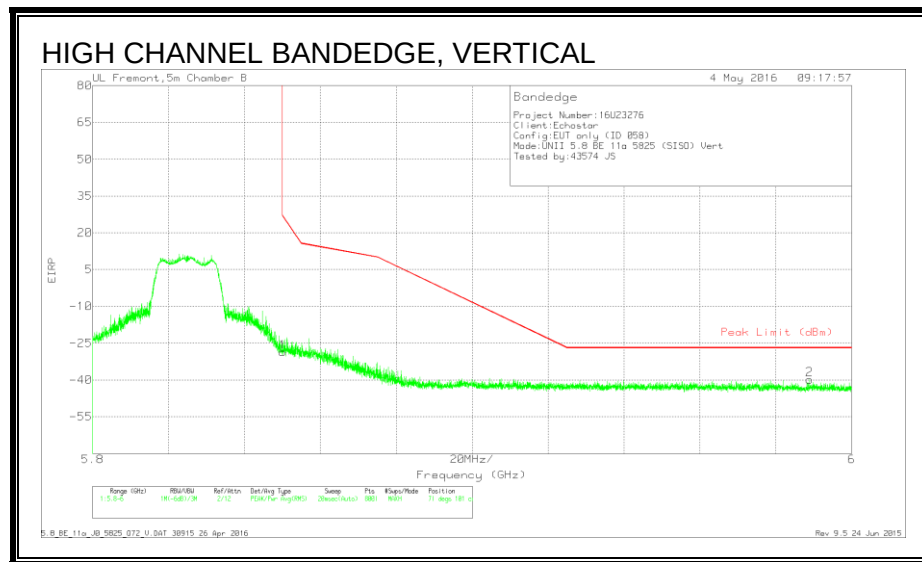
AUTHORIZED BANDEDGE (HIGH CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cb/ Ftr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-46.31	Pk	35.2	-21.6	11.8	0	-20.91	26.94	-47.85	28	210	H
2	5.937	-64.81	Pk	35.3	-21.2	11.8	0	-38.91	-27	-11.91	28	210	H

Pk - Peak detector

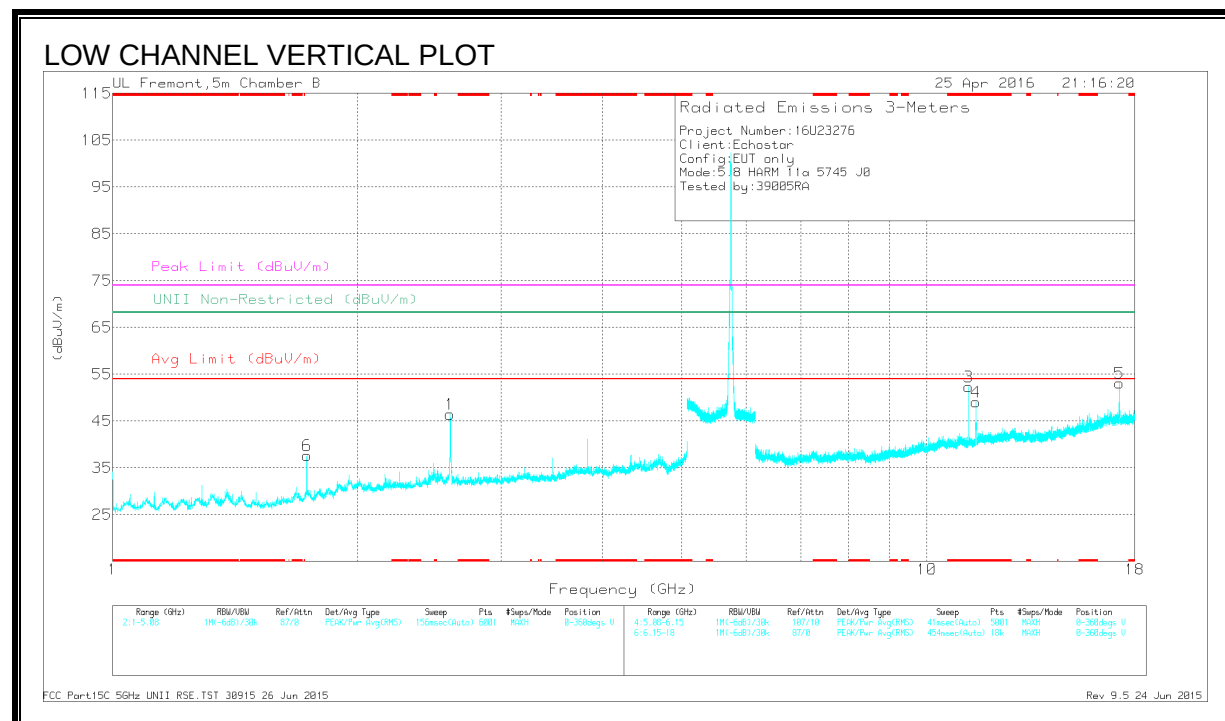
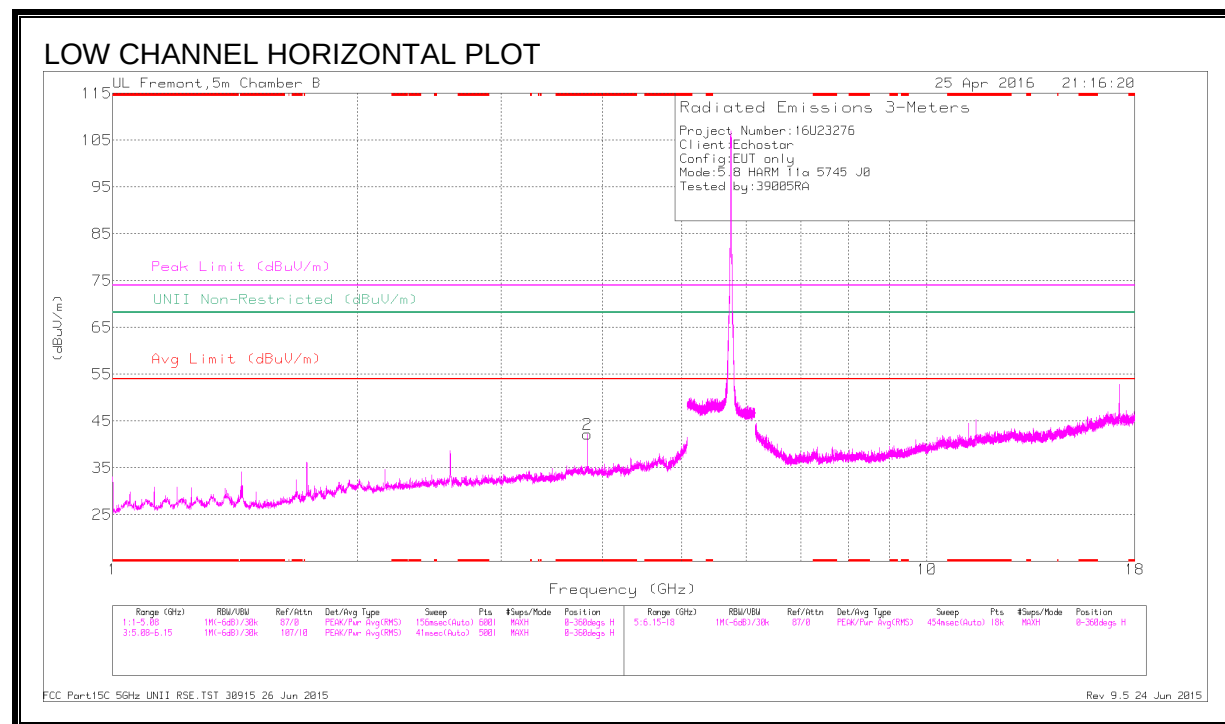


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-54.09	Pk	35.2	-21.6	11.8	0	-28.69	26.94	-55.63	71	101	V
2	5.989	-65.49	Pk	35.2	-21.3	11.8	0	-39.79	-27	-12.79	71	101	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil 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	* 3.83	41.74	Pk	33.4	-33	0	42.14	-	-	74	-31.86	-	-	0-360	199	H
3	* 11.249	39.72	Pk	38.1	-25.5	0	52.32	-	-	74	-21.68	-	-	0-360	101	V
4	* 11.495	36.53	Pk	38.3	-25.8	0	49.03	-	-	74	-24.97	-	-	0-360	200	V
6	1.732	42.79	Pk	29.5	-34.6	0	37.69	-	-	-	-	68.2	-30.51	0-360	101	V
1	2.598	48.12	Pk	32.2	-33.9	0	46.42	-	-	-	-	68.2	-21.78	0-360	101	V
5	17.24	35	Pk	41.3	-23.2	0	53.1	-	-	-	-	68.2	-15.1	0-360	101	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

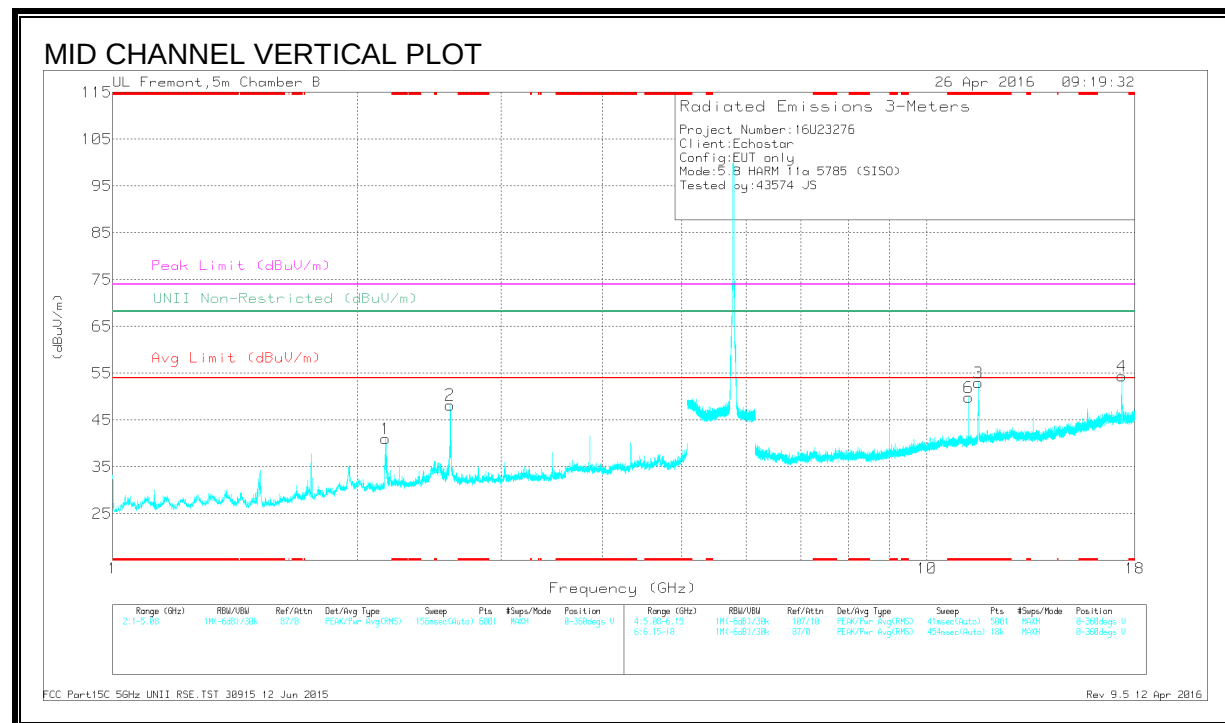
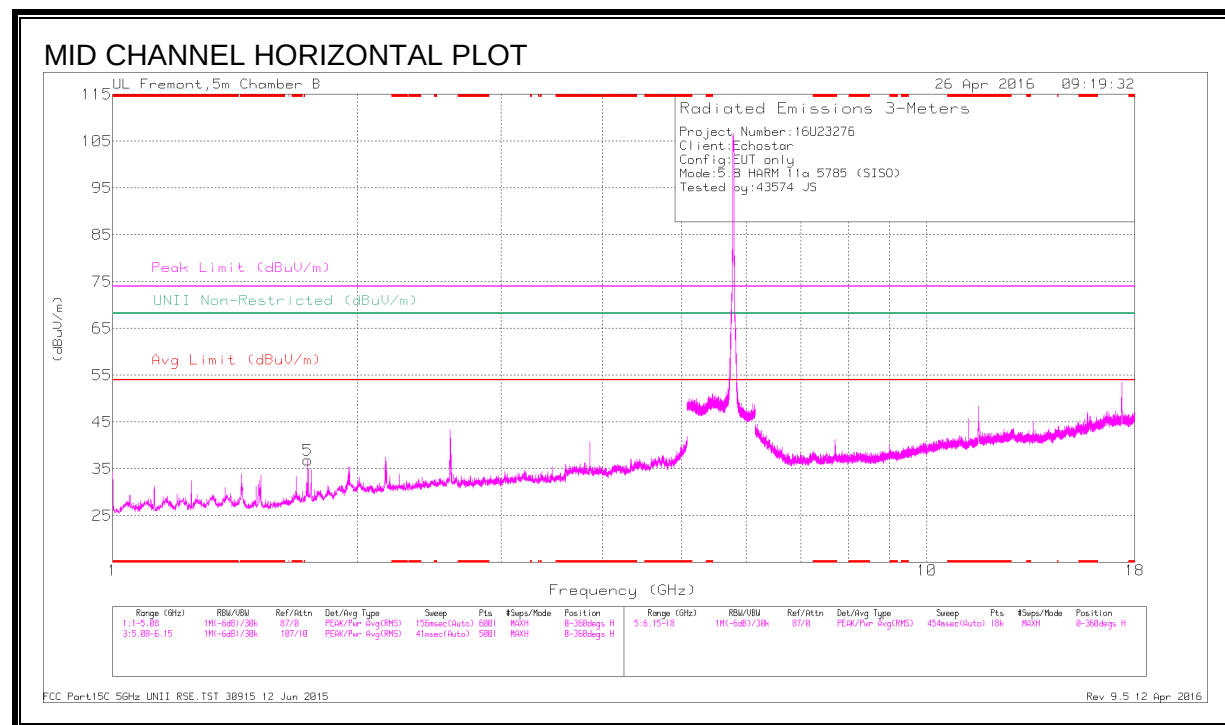
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil 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
* 3.83	47.28	PK-U	33.4	-33	0	47.68	-	-	74	-26.32	-	-	2	288	H
* 3.83	39.76	ADR	33.4	-33	.22	40.38	54	-13.62	-	-	-	-	2	288	H
* 11.25	43.66	PK-U	38.1	-25.5	0	56.26	-	-	74	-17.74	-	-	10	109	V
* 11.25	39.39	ADR	38.1	-25.5	.22	52.21	54	-1.79	-	-	-	-	10	109	V
* 11.489	47.63	PK-U	38.3	-25.8	0	60.13	-	-	74	-13.87	-	-	18	158	V
* 11.49	32.38	ADR	38.3	-25.8	.22	45.1	54	-8.9	-	-	-	-	18	158	V
1.732	49.44	PK-U	29.5	-34.6	0	44.34	-	-	-	-	68.2	-23.86	37	140	V
2.598	53.56	PK-U	32.2	-33.9	0	51.86	-	-	-	-	68.2	-16.34	193	330	V
17.24	45.57	PK-U	41.3	-23.2	0	63.67	-	-	-	-	68.2	-4.53	350	118	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 11.568	39.58	Pk	38.4	-25	0	52.98	-	-	74	-21.02	68.2	-15.22	0-360	199	V
6	* 11.249	37.24	Pk	38.1	-25.5	0	49.84	-	-	74	-24.16	68.2	-18.36	0-360	101	V
5	1.737	42.02	Pk	29.5	-34.6	0	36.92	-	-	74	-37.08	68.2	-31.28	0-360	102	H
1	2.165	44.33	Pk	31.5	-34.8	0	41.03	-	-	74	-32.97	68.2	-27.17	0-360	101	V
2	2.598	49.93	Pk	32.2	-33.9	0	48.23	-	-	74	-25.77	68.2	-19.97	0-360	199	V
4	17.354	35.95	Pk	41.3	-22.9	0	54.35	-	-	74	-19.65	68.2	-13.85	0-360	101	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

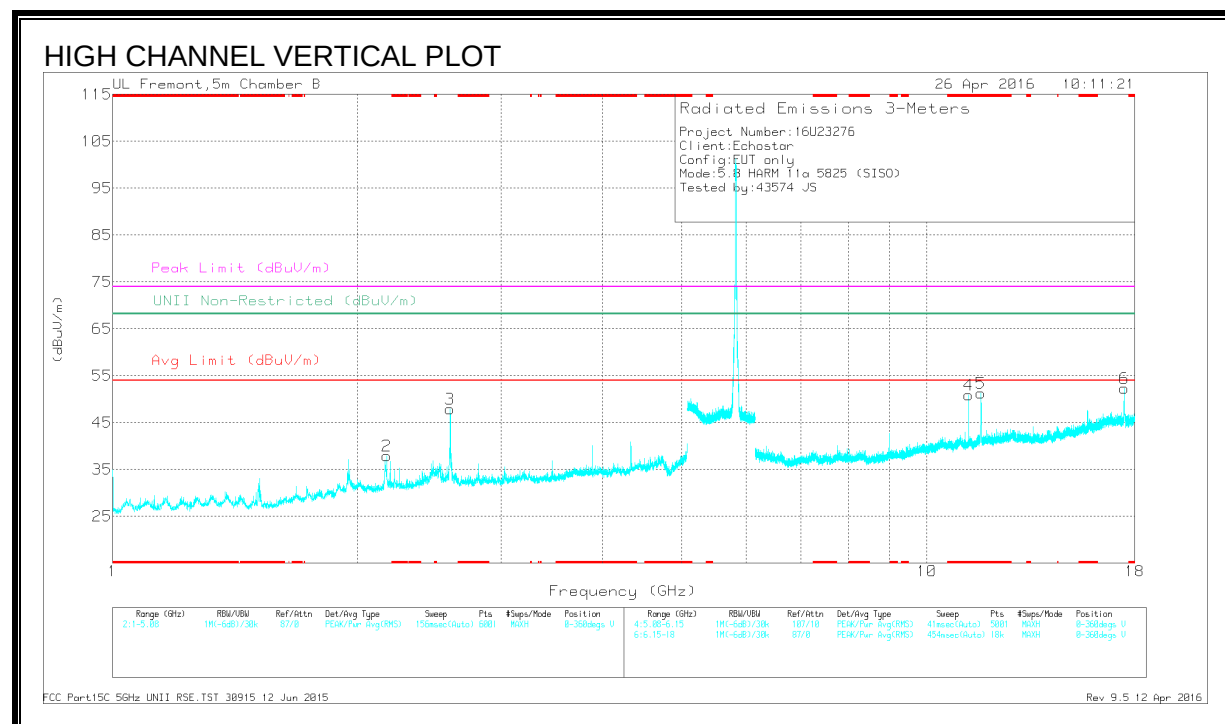
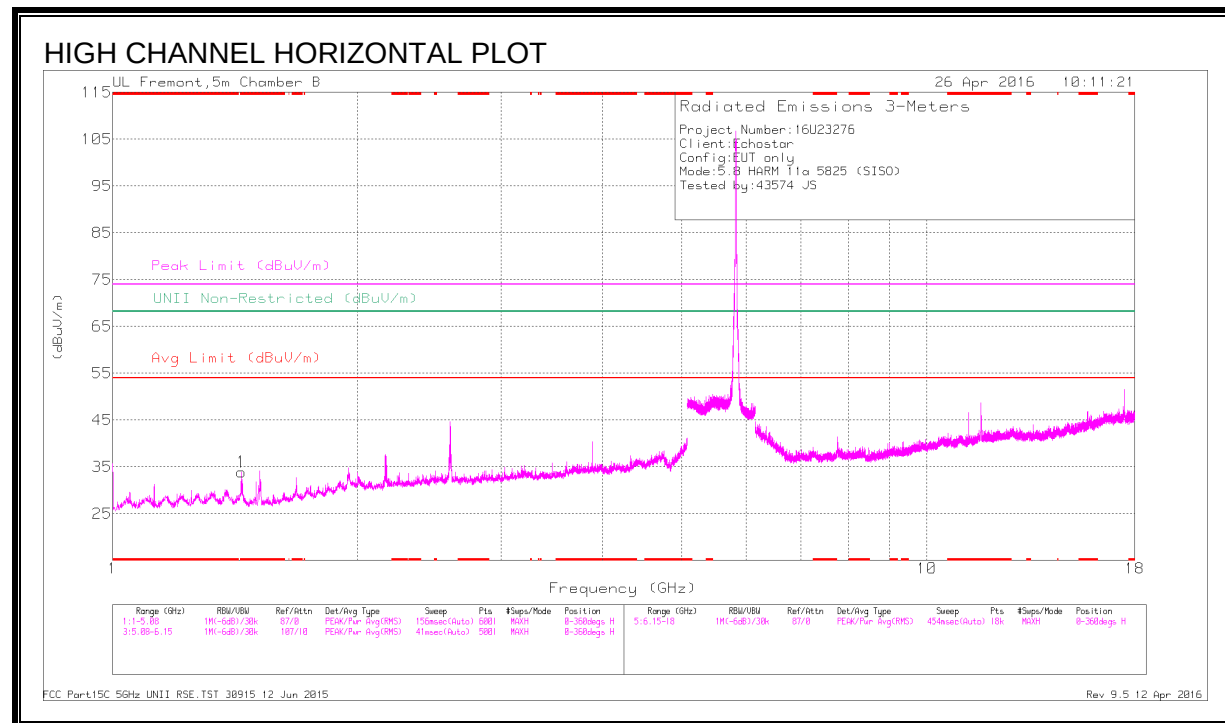
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.569	47.03	PK-U	38.4	-24.9	0	60.53	-	-	74	-13.47	-	-	48	173	V
* 11.569	34.34	ADR	38.4	-24.9	22	48.06	54	-5.94	-	-	-	-	48	173	V
* 11.25	41.74	PK-U	38.1	-25.5	0	54.34	-	-	74	-19.66	-	-	238	104	V
* 11.25	38.43	ADR	38.1	-25.5	22	51.25	54	-2.75	-	-	-	-	238	104	V
1.738	43.01	PK-U	29.5	-34.6	0	37.91	-	-	-	-	68.2	-30.29	314	256	H
2.165	49.18	PK-U	31.5	-34.8	0	45.88	-	-	-	-	68.2	-22.32	10	134	V
2.598	57.08	PK-U	32.2	-33.9	0	55.38	-	-	-	-	68.2	-12.82	55	106	V
17.355	44.55	PK-U	41.3	-22.9	0	62.95	-	-	-	-	68.2	-5.25	23	241	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Ch/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	* 1.44	40.65	PK	28.4	-35.1	0	33.95	-	-	74	-40.05	68.2	-34.25	0-360	102	H
4	* 11.249	38.29	PK	38.1	-25.5	0	50.89	-	-	74	-23.11	68.2	-17.31	0-360	101	V
5	* 11.652	37.99	PK	38.5	-25.2	0	51.29	-	-	74	-22.71	68.2	-16.91	0-360	199	V
2	2.17	41.19	PK	31.5	-34.8	0	37.89	-	-	74	-36.11	68.2	-30.31	0-360	101	V
3	2.598	49.56	PK	32.2	-33.9	0	47.86	-	-	74	-26.14	68.2	-20.34	0-360	199	V
6	17.469	33.97	PK	41.3	-23	0	52.27	-	-	74	-21.73	68.2	-15.93	0-360	101	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Ch/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
* 1.44	47.94	PK-U	28.4	-35.1	0	41.24	-	-	74	-32.76	-	-	359	139	H
* 1.44	37.27	ADR	28.4	-35.1	.22	30.79	54	-23.21	-	-	-	-	359	139	H
* 11.25	40.5	PK-U	38.1	-25.5	0	53.1	-	-	74	-20.9	-	-	241	101	V
* 11.25	36.47	ADR	38.1	-25.5	.22	49.29	54	-4.71	-	-	-	-	241	101	V
* 11.651	43.45	PK-U	38.5	-25.2	0	56.75	-	-	74	-17.25	-	-	68	243	V
* 11.651	31.64	ADR	38.5	-25.2	.22	45.16	54	-8.84	-	-	-	-	68	243	V
2.171	49.23	PK-U	31.5	-34.8	0	45.93	-	-	-	-	68.2	-22.27	28	131	V
2.598	57.35	PK-U	32.2	-33.9	0	55.65	-	-	-	-	68.2	-12.55	58	149	V
17.469	41.92	PK-U	41.3	-23	0	60.22	-	-	-	-	68.2	-7.98	354	122	V

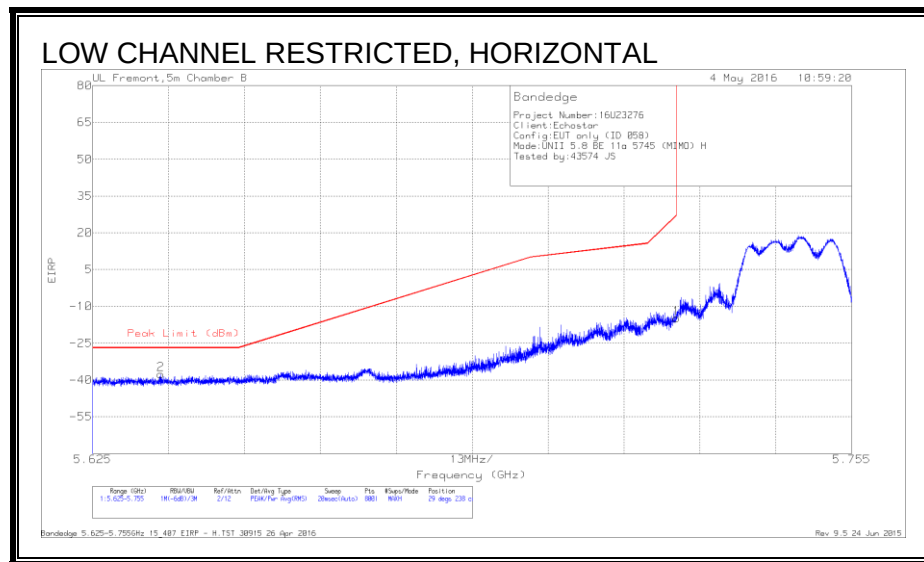
* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

10.3. TX ABOVE 1 GHz 802.11a CDD 2TX MODE IN THE 5.8 GHz BAND

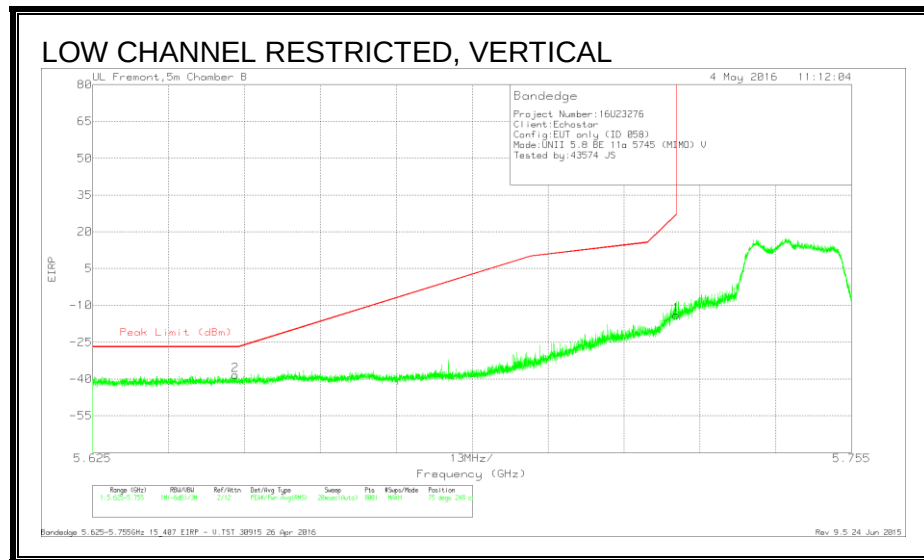
RESTRICTED BANDEDGE (LOW CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.637	-62.69	Pk	34.6	-21.4	11.8	0	-37.69	-27	-10.69	29	238	H
1	5.725	-39.86	Pk	34.9	-21.7	11.8	0	-14.86	26.97	-41.83	29	238	H

Pk - Peak detector

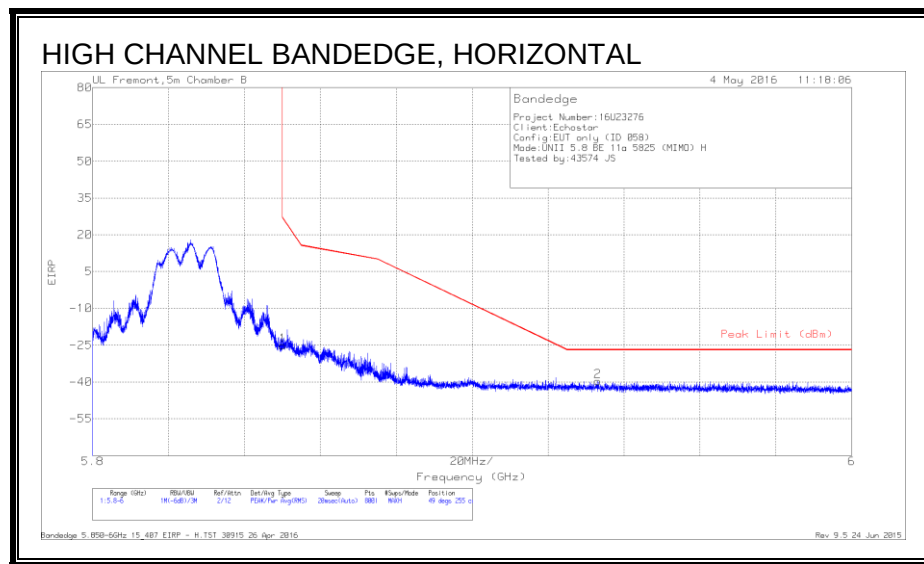


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.649	-63.28	Pk	34.7	-21.6	11.8	0	-38.38	-27	-11.38	75	248	V
1	5.725	-38.91	Pk	34.9	-21.7	11.8	0	-13.91	26.97	-40.88	75	248	V

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)



Trace Markers

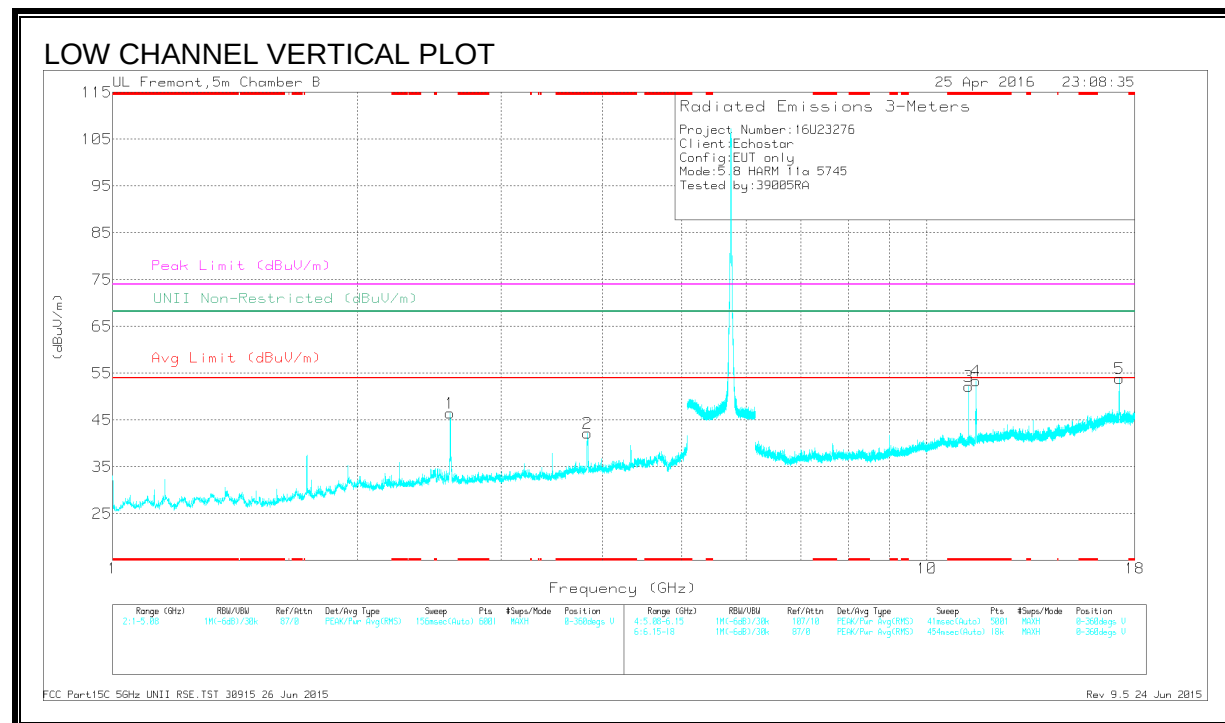
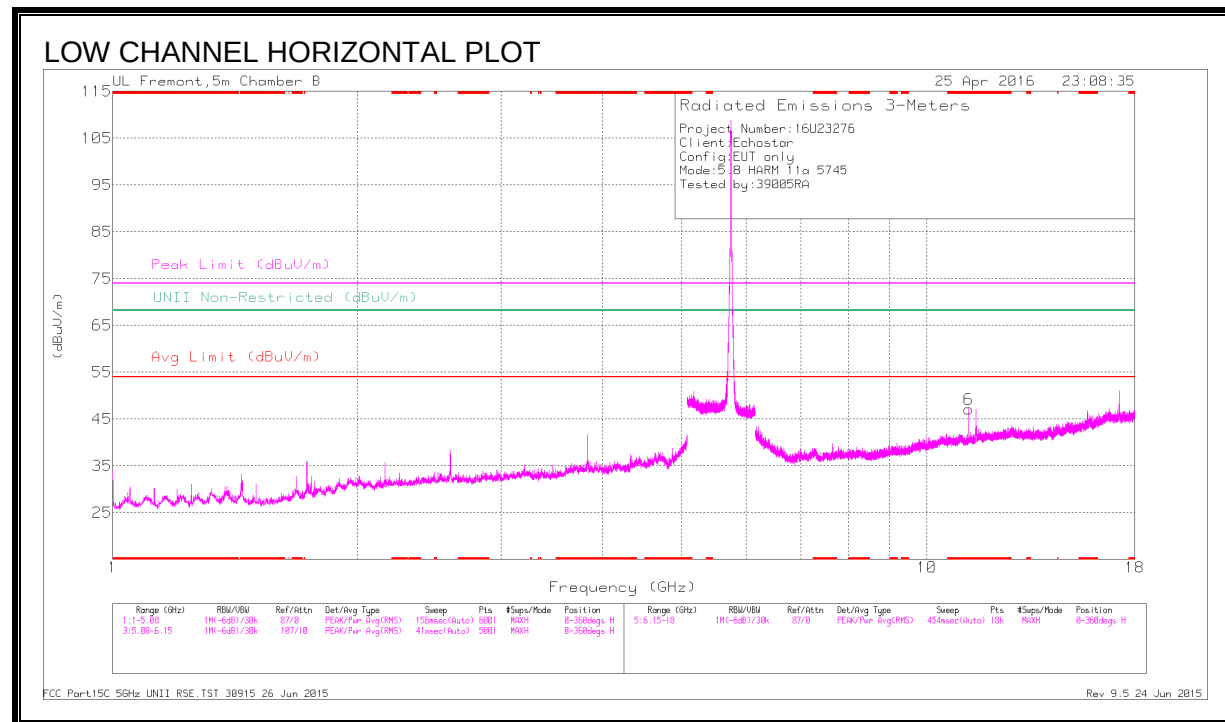
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cb/Fl tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-50.59	Pk	35.2	-21.6	11.8	0	-25.19	26.94	-52.13	49	255	H
2	5.933	-65.36	Pk	35.3	-21.4	11.8	0	-39.66	-27	-12.66	49	255	H

Pk - Peak detector



Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil 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	* 3.83	41.76	Pk	33.4	-33	0	42.16	-	-	74	-31.84	-	-	0-360	199	V
6	* 11.249	34.5	Pk	38.1	-25.5	0	47.1	-	-	74	-26.9	-	-	0-360	199	H
3	* 11.249	39.62	Pk	38.1	-25.5	0	52.22	-	-	74	-21.78	-	-	0-360	101	V
4	* 11.489	40.83	Pk	38.3	-25.8	0	53.33	-	-	74	-20.67	-	-	0-360	199	V
1	2.598	48.21	Pk	32.2	-33.9	0	46.51	-	-	-	-	68.2	-21.69	0-360	199	V
5	17.237	35.76	Pk	41.3	-23.2	0	53.86	-	-	-	-	68.2	-14.34	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

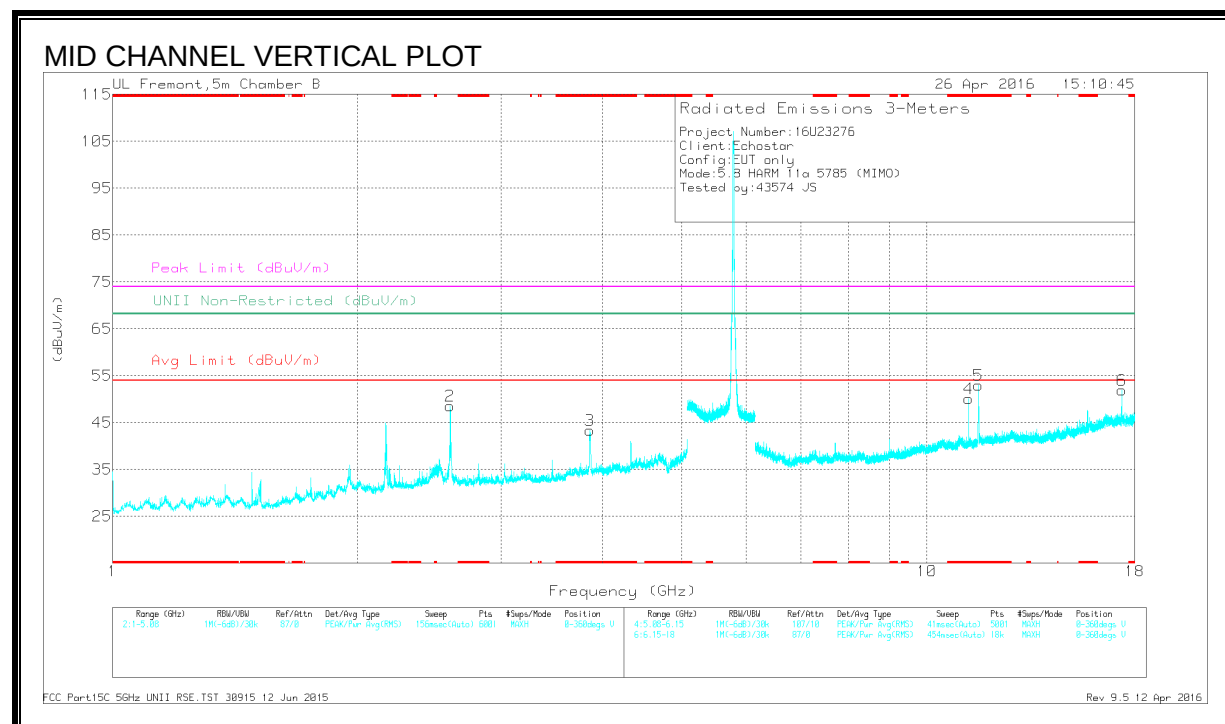
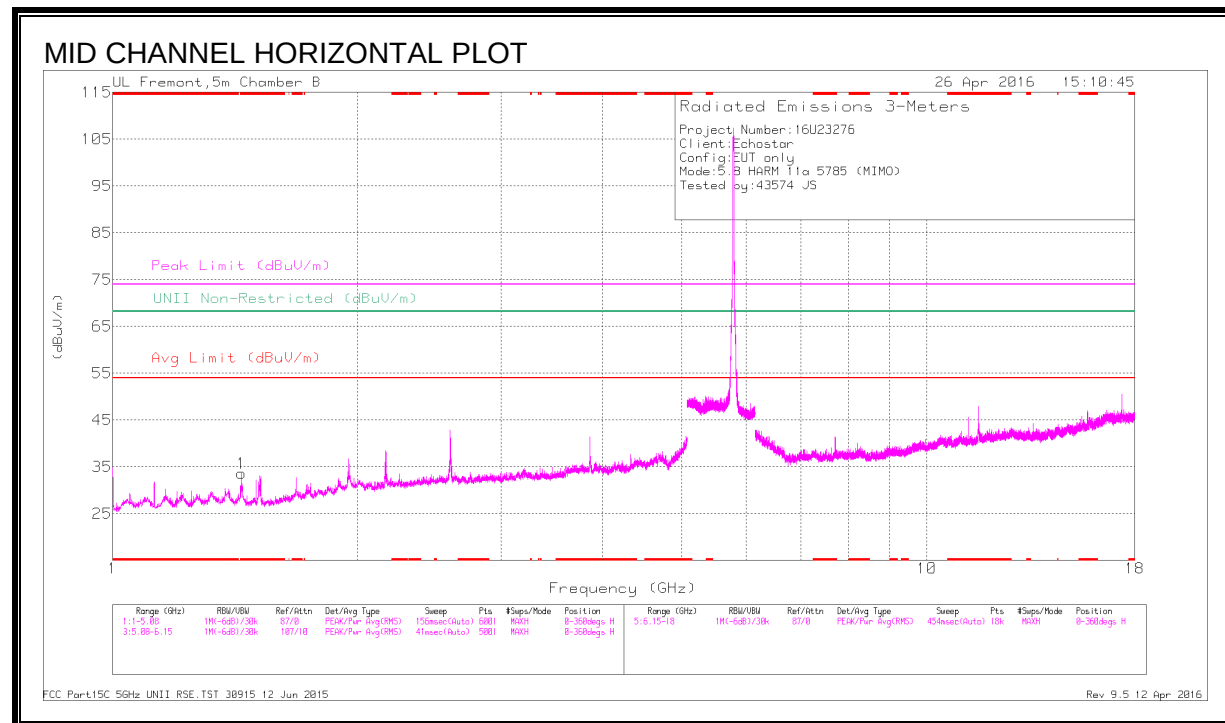
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil 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
* 3.83	51.28	PK-U	33.4	-33	0	51.68	-	-	74	-22.32	-	-	41	106	V
* 3.83	41.5	ADR	33.4	-33	.22	42.12	54	-11.88	-	-	-	-	41	106	V
* 11.25	40.53	PK-U	38.1	-25.5	0	53.13	-	-	74	-20.87	-	-	189	216	H
* 11.25	33.43	ADR	38.1	-25.5	.22	46.25	54	-7.75	-	-	-	-	189	216	H
* 11.488	51.56	PK-U	38.3	-25.8	0	64.06	-	-	74	-9.94	-	-	40	213	V
* 11.489	38.18	ADR	38.3	-25.8	.22	50.9	54	-3.1	-	-	-	-	40	213	V
* 11.25	43.37	PK-U	38.1	-25.5	0	55.97	-	-	74	-18.03	-	-	9	105	V
* 11.25	38.94	ADR	38.1	-25.5	.22	51.76	54	-2.24	-	-	-	-	9	105	V
2.598	60.88	PK-U	32.2	-33.9	0	59.18	-	-	-	-	68.2	-9.02	55	251	V
17.237	48.27	PK-U	41.3	-23.2	0	66.37	-	-	-	-	68.2	-1.83	10	354	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Ch/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 1.44	40.3	PK	28.4	-35.1	0	33.6	-	-	74	-40.4	68.2	-34.6	0-360	101	H
3	* 3.857	43.11	PK	33.4	-33.1	0	43.41	-	-	74	-30.59	68.2	-24.79	0-360	199	V
4	* 11.249	37.47	PK	38.1	-25.5	0	50.07	-	-	74	-23.93	68.2	-18.13	0-360	101	V
5	* 11.574	39.41	PK	38.4	-24.8	0	53.01	-	-	74	-20.99	68.2	-15.19	0-360	199	V
2	2.598	50.27	PK	32.2	-33.9	0	48.57	-	-	74	-25.43	68.2	-19.63	0-360	199	V
6	17.352	33.62	PK	41.3	-23	0	51.92	-	-	74	-22.08	68.2	-16.28	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK - Peak detector

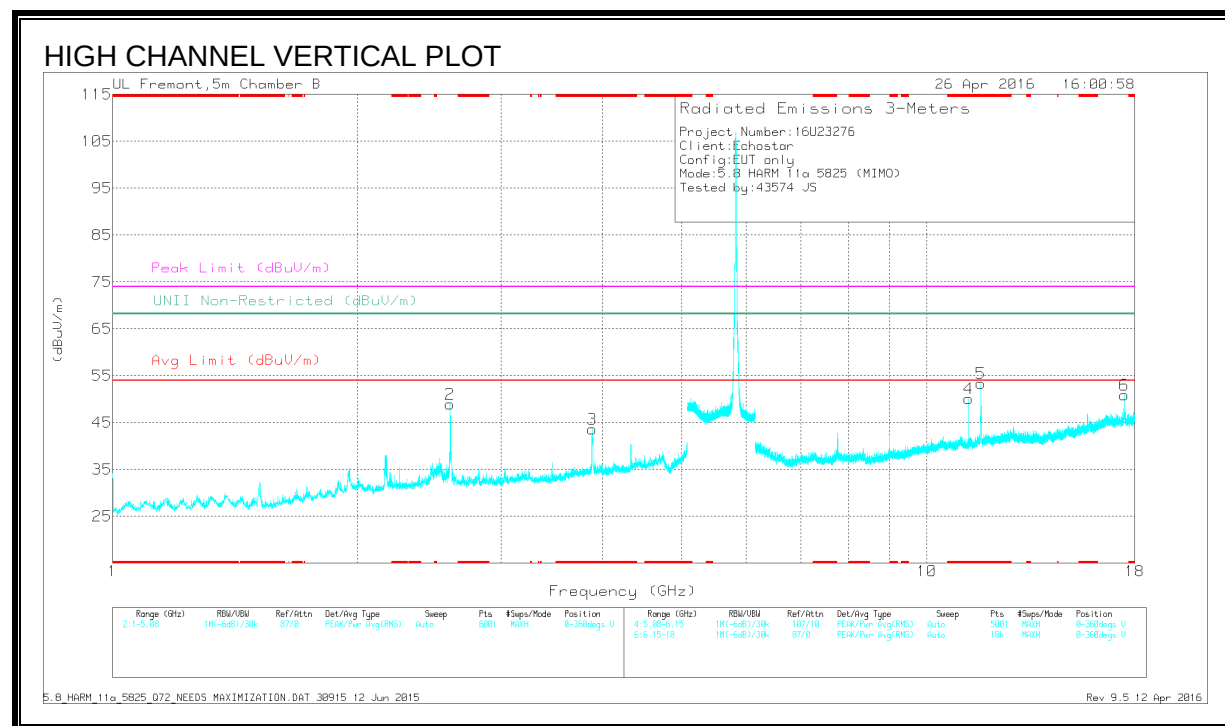
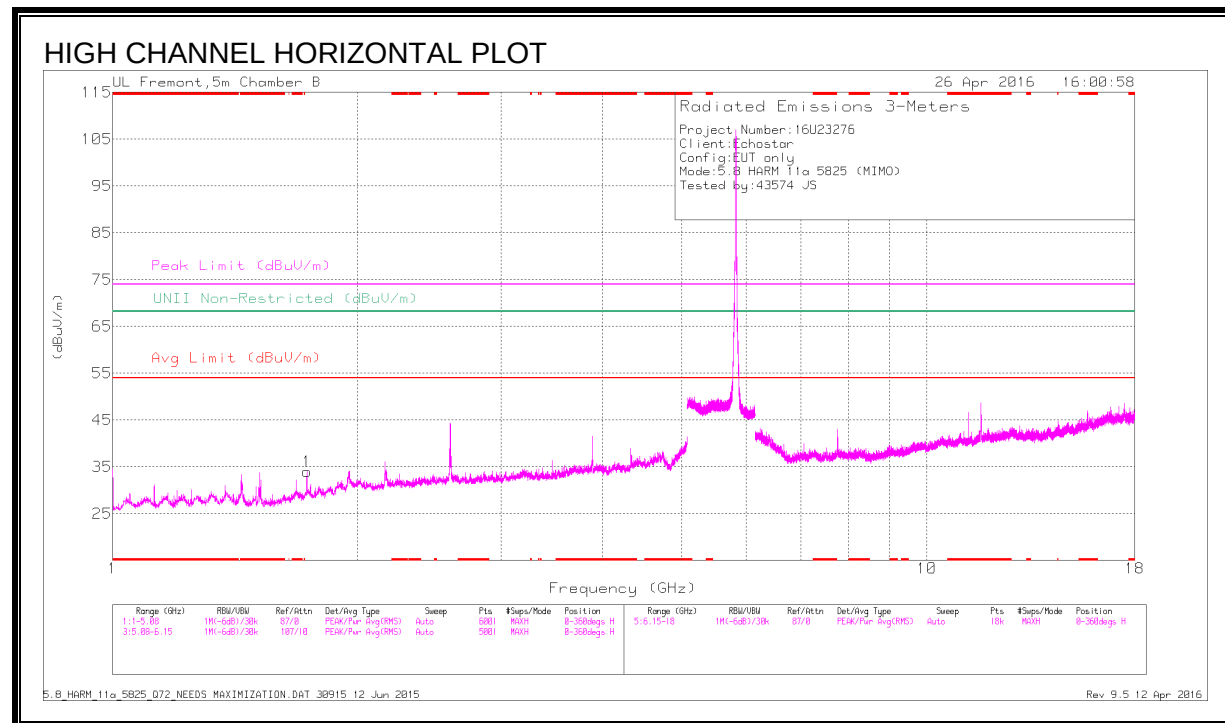
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Ch/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
* 1.44	47.77	PK-U	28.4	-35.1	0	41.07	-	-	74	-32.93	-	-	335	102	H
* 1.44	37.33	ADR	28.4	-35.1	.22	30.85	54	-23.15	-	-	-	-	335	102	H
* 3.857	49.93	PK-U	33.4	-33.1	0	50.23	-	-	74	-23.77	-	-	41	134	V
* 3.857	42.7	ADR	33.4	-33.1	.22	43.22	54	-10.78	-	-	-	-	41	134	V
* 11.25	39.64	PK-U	38.1	-25.5	0	52.24	-	-	74	-21.76	-	-	41	102	V
* 11.25	35.82	ADR	38.1	-25.5	.22	48.64	54	-5.36	-	-	-	-	41	102	V
* 11.574	45.77	PK-U	38.4	-24.8	0	59.37	-	-	74	-14.63	-	-	45	209	V
* 11.574	32.09	ADR	38.4	-24.8	.22	45.91	54	-8.09	-	-	-	-	45	209	V
* 11.574	44.85	PK-U	38.4	-24.8	0	58.45	-	-	74	-15.55	-	-	45	209	V
* 11.574	32.15	ADR	38.4	-24.8	.22	45.97	54	-8.03	-	-	-	-	45	209	V
2.598	56.23	PK-U	32.2	-33.9	0	54.53	-	-	-	-	68.2	-13.67	61	170	V
17.352	43.65	PK-U	41.3	-23	0	61.95	-	-	-	-	68.2	-6.25	21	235	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/CM/Hz/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
3	* 3.883	43.14	Pk	33.3	-32.8	0	-43.64	-	-	74	-30.36	68.2	-24.56	0-360	199	V
4	* 11.249	37.49	Pk	38.1	-25.5	0	-50.09	-	-	74	-23.91	68.2	-18.11	0-360	101	V
5	* 11.648	40.02	Pk	38.5	-25.1	0	-53.42	-	-	74	-20.58	68.2	-14.78	0-360	199	V
1	1.732	39.1	Pk	29.5	-34.6	0	-34	-	-	74	-40	68.2	-34.2	0-360	101	H
2	2.598	50.68	Pk	32.2	-33.9	0	-48.98	-	-	74	-25.02	68.2	-19.22	0-360	199	V
6	17.475	32.55	Pk	41.3	-22.9	0	-50.95	-	-	74	-23.05	68.2	-17.25	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/CM/Hz/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
* 3.884	49.27	PK-U	33.3	-32.8	0	49.77	-	-	74	-24.23	-	-	40	128	V
* 3.883	40.22	ADR	33.3	-32.8	.22	40.94	54	-13.06	-	-	-	-	40	128	V
* 11.25	41.01	PK-U	38.1	-25.5	0	53.61	-	-	74	-20.39	-	-	23	104	V
* 11.25	36.32	ADR	38.1	-25.5	.22	49.14	54	-4.86	-	-	-	-	23	104	V
* 11.649	49.96	PK-U	38.5	-25.1	0	63.36	-	-	74	-10.64	-	-	36	186	V
* 11.649	36.43	ADR	38.5	-25.1	.22	50.05	54	-3.95	-	-	-	-	36	186	V
1.732	45.12	PK-U	29.5	-34.6	0	40.02	-	-	-	-	68.2	-28.18	297	206	H
2.598	55.69	PK-U	32.2	-33.9	0	53.99	-	-	-	-	68.2	-14.21	53	160	V
17.475	40.34	PK-U	41.3	-22.9	0	58.74	-	-	-	-	68.2	-9.46	351	162	V

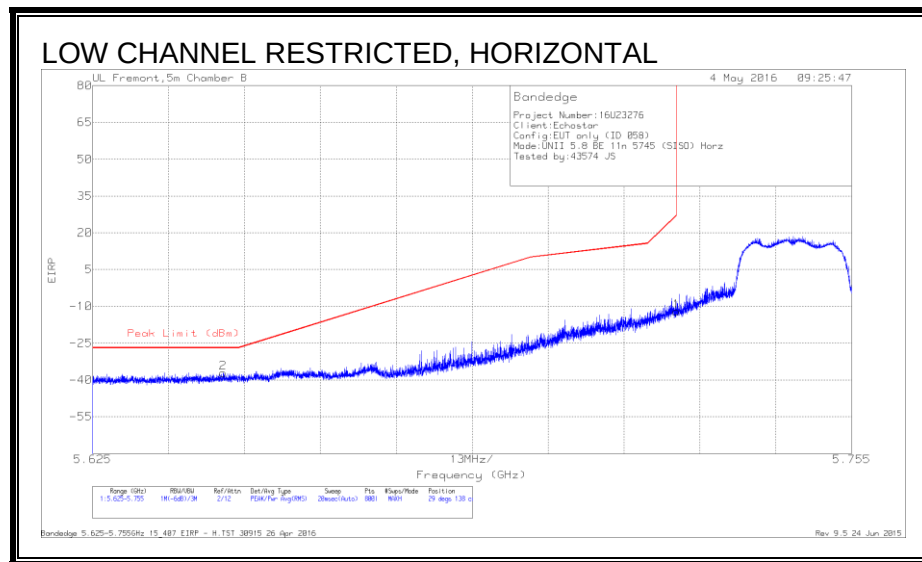
* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

10.4. TX ABOVE 1 GHz 802.11n HT20 SISO MODE IN THE 5.8 GHz BAND

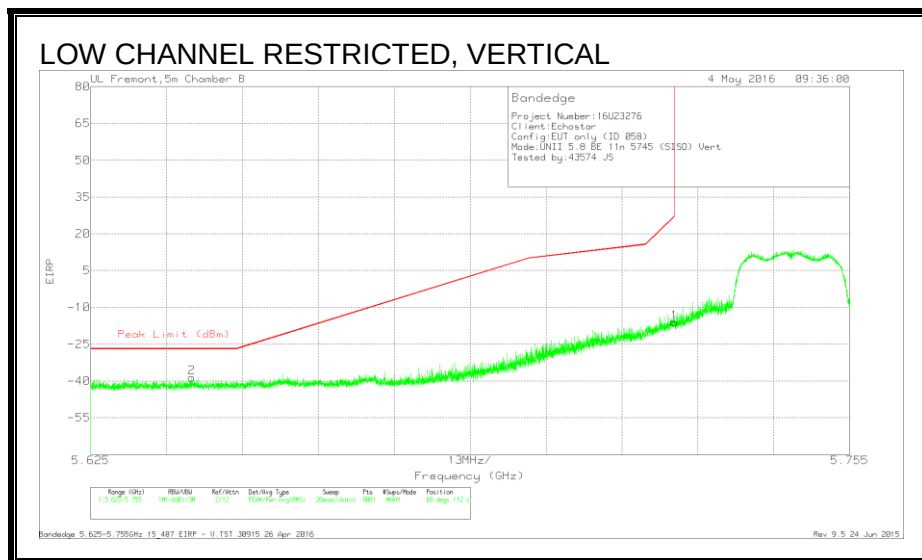
RESTRICTED BANDEDGE (LOW CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.647	-62.05	Pk	34.7	-21.5	11.8	0	-37.05	-27	-10.05	29	138	H
1	5.725	-37.12	Pk	34.9	-21.7	11.8	0	-12.12	26.97	-39.09	29	138	H

Pk - Peak detector

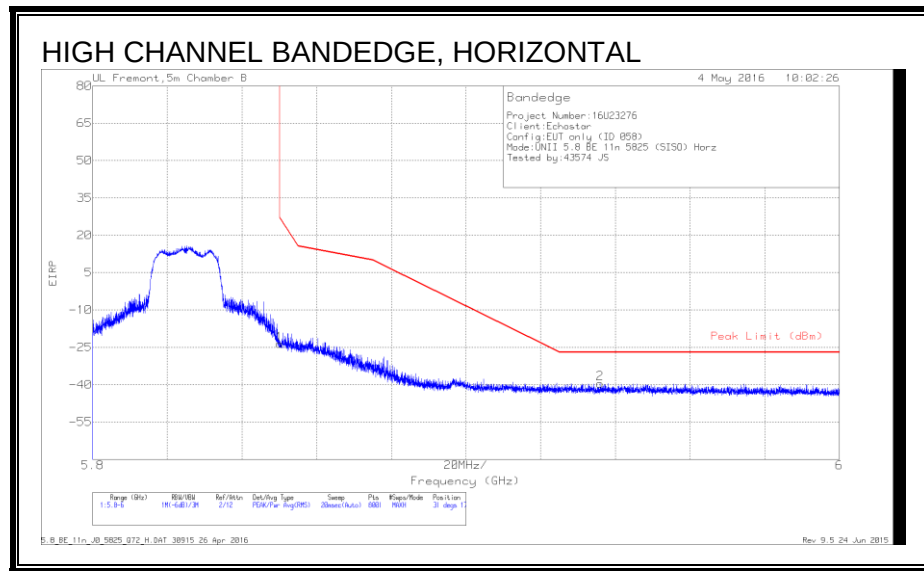


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fi tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.642	-63.72	Pk	34.7	-21.3	11.8	0	-38.52	-27	-11.52	68	112	V
1	5.725	-41.06	Pk	34.9	-21.7	11.8	0	-16.06	26.97	-43.03	68	112	V

Pk - Peak detector

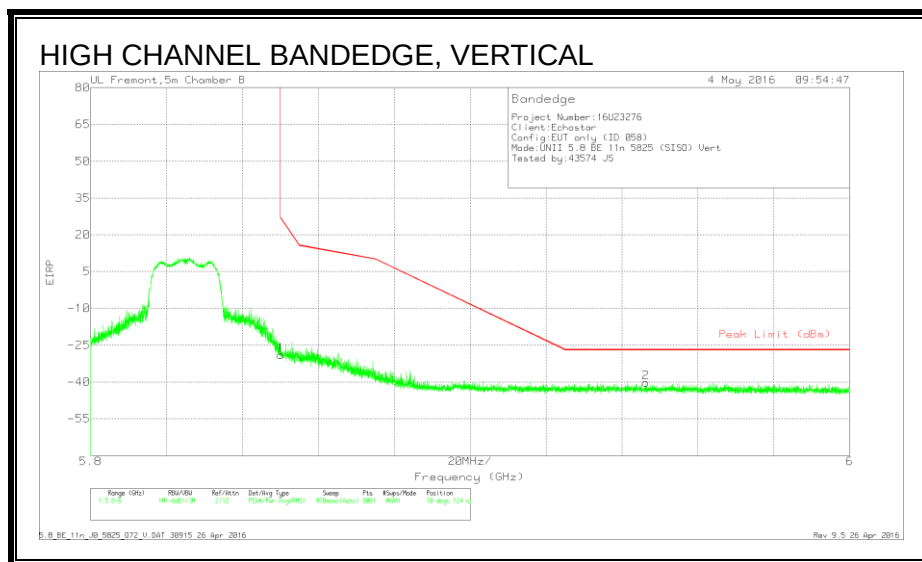
AUTHORIZED BANDEDGE (HIGH CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AFT345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-49.04	Pk	35.2	-21.6	11.8	0	-23.64	26.94	-50.58	31	172	H
2	5.936	-65.14	Pk	35.3	-21.5	11.8	0	-39.54	-27	-12.54	31	172	H

Pk - Peak detector

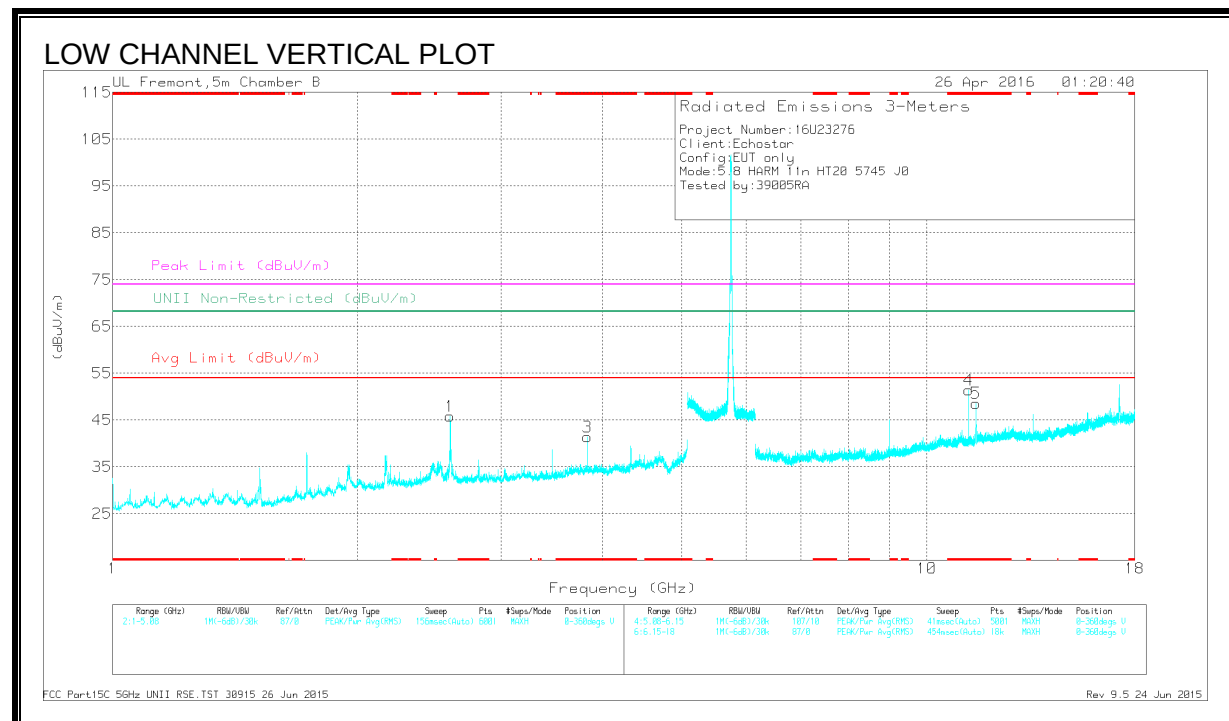
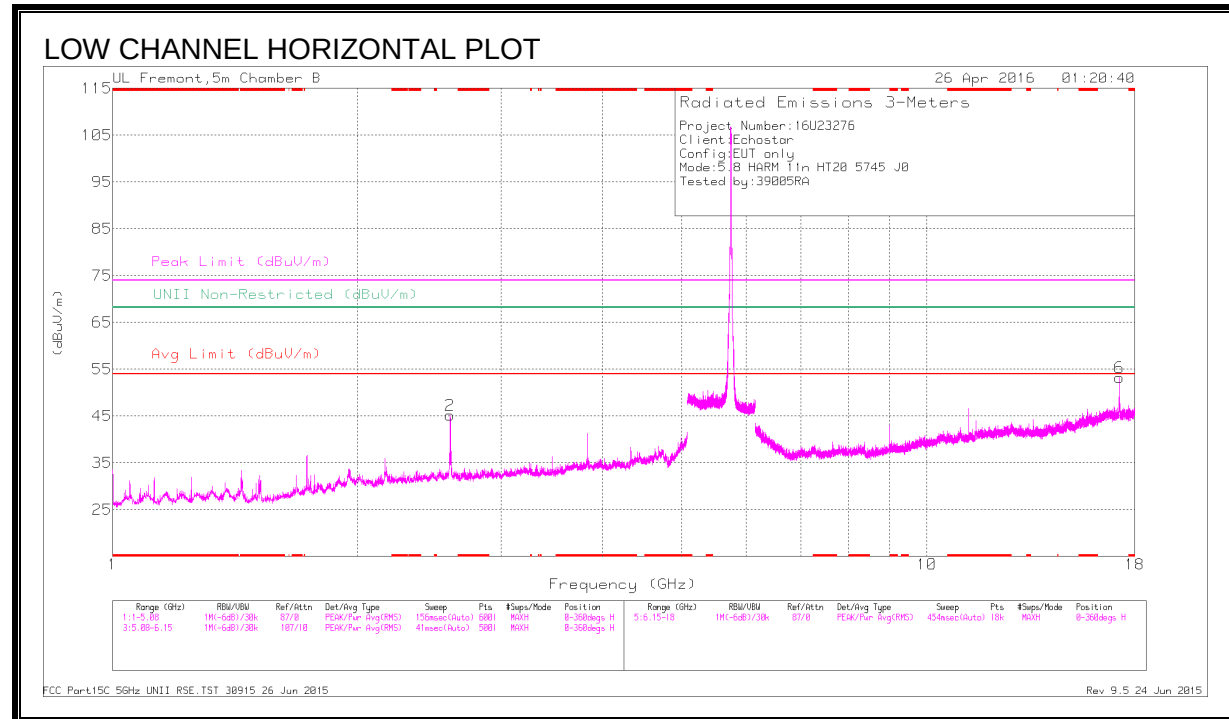


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
1	5.85	-54.33	Pk	35.2	-21.6	11.8	0	-28.93	26.94	-55.87	70	124	V
2	5.946	-65.68	Pk	35.2	-21.5	11.8	0	-40.18	-27	-13.18	70	124	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil 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
3	* 3.83	41.02	Pk	33.4	-33	0	41.42	-	-	74	-32.58	-	-	0-360	101	V
4	* 11.249	38.84	Pk	38.1	-25.5	0	51.44	-	-	74	-22.56	-	-	0-360	101	V
5	* 11.49	36.12	Pk	38.3	-25.8	0	48.62	-	-	74	-25.38	-	-	0-360	101	V
2	2.598	46.92	Pk	32.2	-33.9	0	45.22	-	-	-	-	68.2	-22.98	0-360	101	H
1	2.598	47.56	Pk	32.2	-33.9	0	45.86	-	-	-	-	68.2	-22.34	0-360	199	V
6	17.234	35.14	Pk	41.3	-23.2	0	53.24	-	-	-	-	68.2	-14.96	0-360	199	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

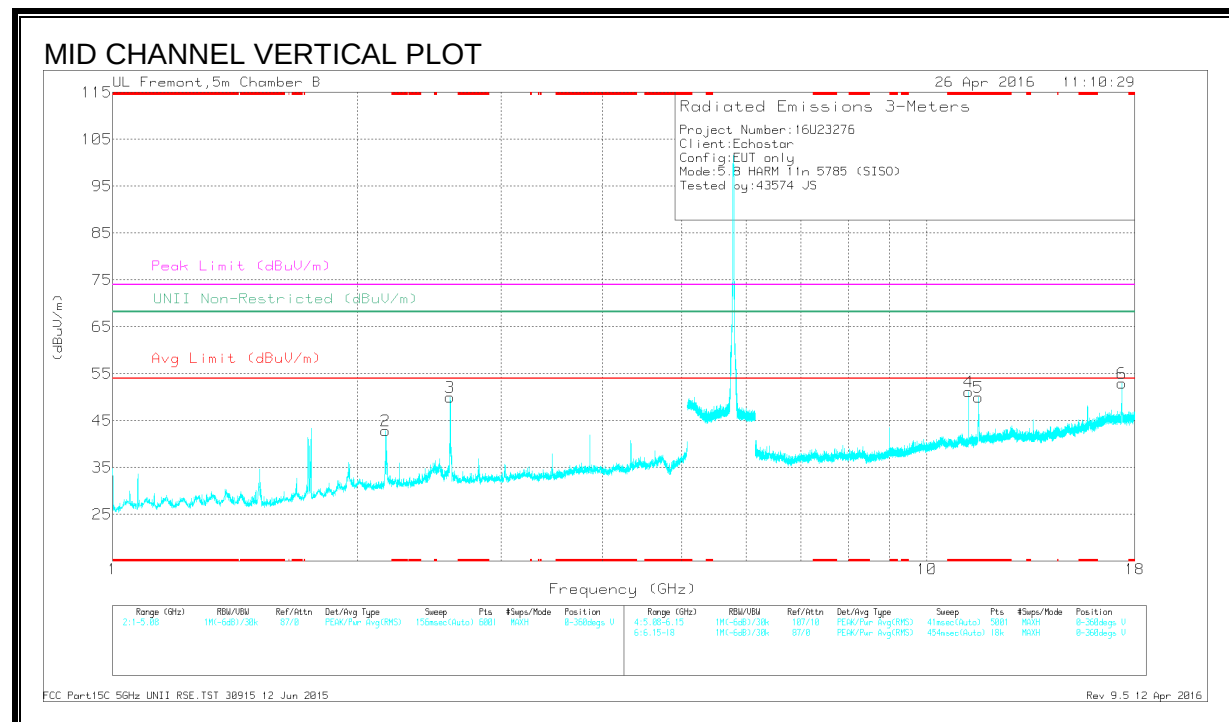
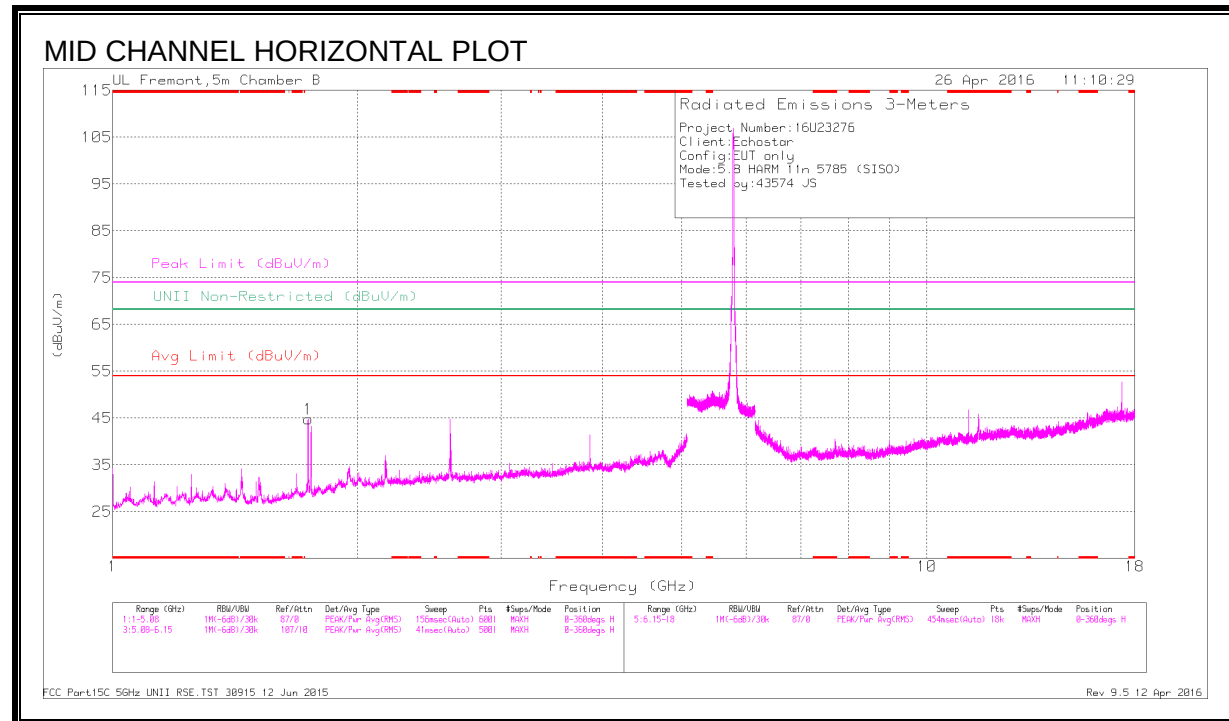
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil 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
* 3.83	46.56	PK-U	33.4	-33	0	46.96	-	-	74	-27.04	-	-	44	176	V
* 3.83	38.56	ADR	33.4	-33	.22	39.18	54	-14.82	-	-	-	-	44	176	V
* 11.25	42.25	PK-U	38.1	-25.5	0	54.85	-	-	74	-19.15	-	-	7	107	V
* 11.25	36.95	ADR	38.1	-25.5	.22	49.77	54	-4.23	-	-	-	-	7	107	V
* 11.49	40.91	PK-U	38.3	-25.8	0	53.41	-	-	74	-20.59	-	-	7	108	V
* 11.49	27.28	ADR	38.3	-25.8	.22	40	54	-14	-	-	-	-	7	108	V
2.598	54.69	PK-U	32.2	-33.9	0	52.99	-	-	-	-	68.2	-15.21	8	257	H
2.598	57.81	PK-U	32.2	-33.9	0	56.11	-	-	-	-	68.2	-12.09	53	180	V
17.234	46.3	PK-U	41.3	-23.2	0	64.4	-	-	-	-	68.2	-3.8	350	237	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Ch/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 11.249	38.58	PK	38.1	-25.5	0	-51.18	-	-	74	-22.82	68.2	-17.02	0-360	101	V
5	* 11.569	36.47	PK	38.4	-24.9	0	-49.97	-	-	74	-24.03	68.2	-18.23	0-360	199	V
1	1.738	49.86	PK	29.5	-34.6	0	-44.76	-	-	74	-29.24	68.2	-23.44	0-360	101	H
2	2.165	46.16	PK	31.5	-34.8	0	-42.86	-	-	74	-31.14	68.2	-25.34	0-360	199	V
3	2.598	51.64	PK	32.2	-33.9	0	-49.94	-	-	74	-24.06	68.2	-18.26	0-360	101	V
6	17.359	34.52	PK	41.3	-22.8	0	-53.02	-	-	74	-20.98	68.2	-15.18	0-360	101	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK - Peak detector

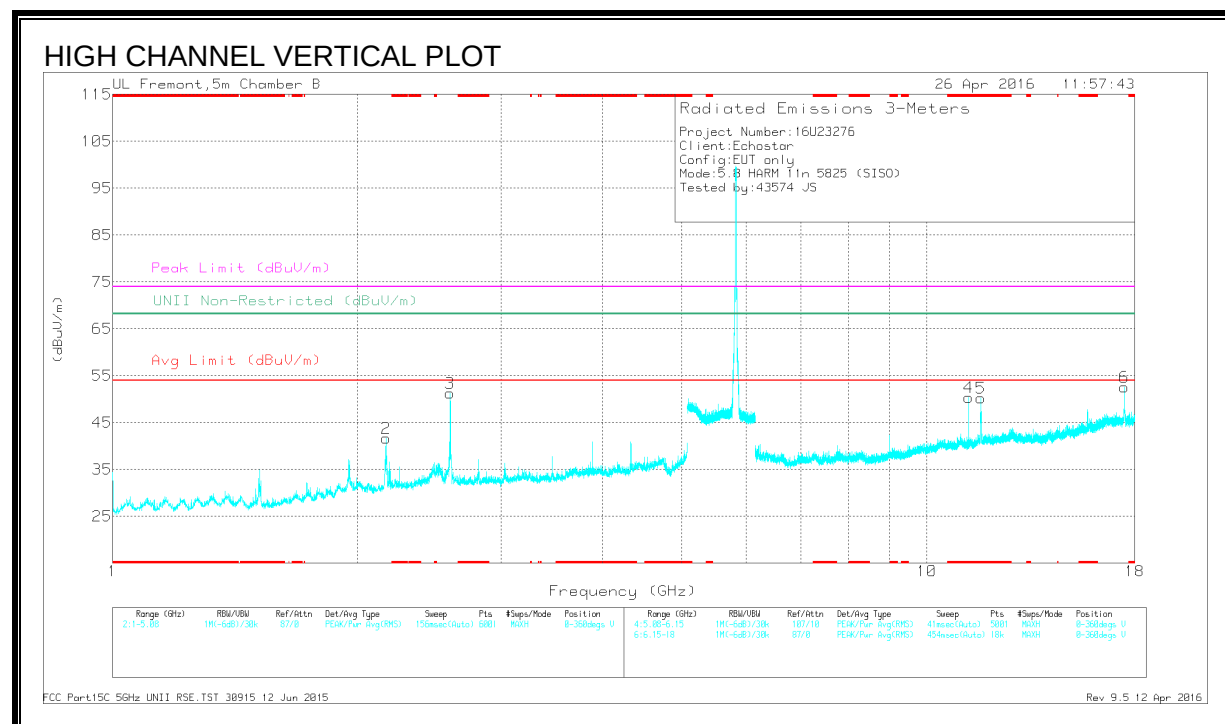
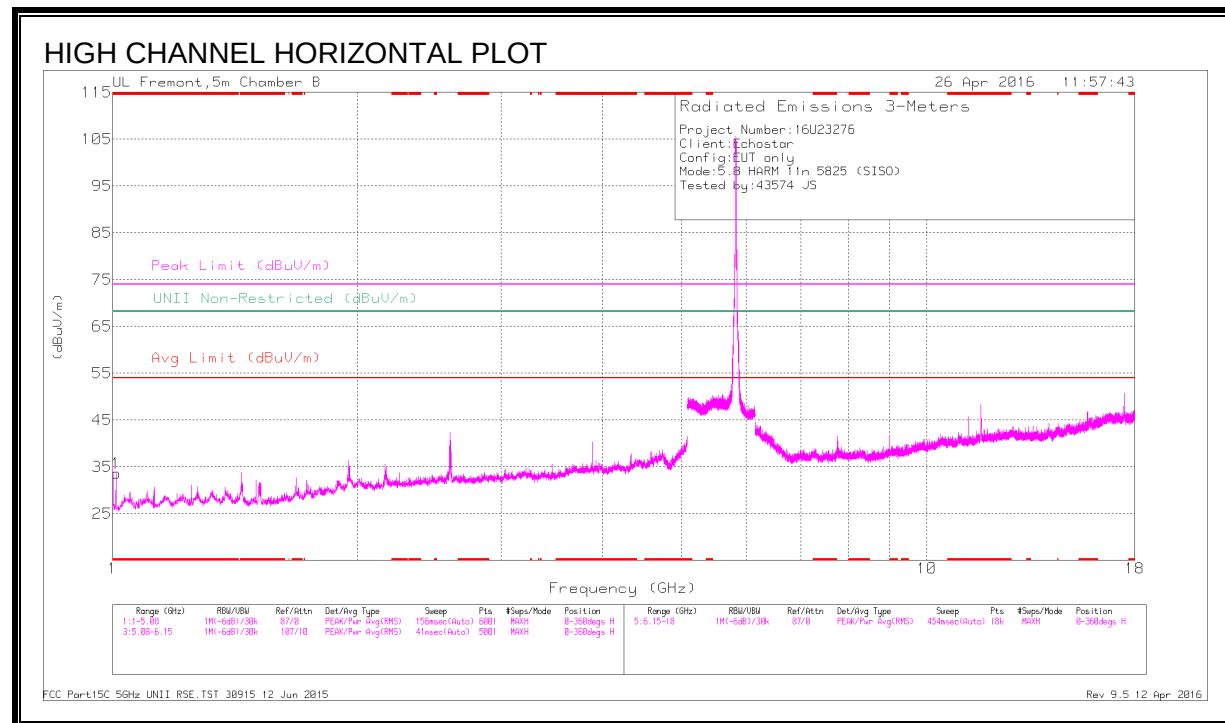
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Ch/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.25	39.47	PK-U	38.1	-25.5	0	-52.07	-	-	74	-21.93	-	-	85	104	V
* 11.25	35.45	ADR	38.1	-25.5	.22	-48.27	54	-5.73	-	-	-	-	85	104	V
* 11.568	46.64	PK-U	38.4	-25	0	-60.04	-	-	74	-13.96	-	-	42	168	V
* 11.57	33.2	ADR	38.4	-24.9	.22	-46.92	54	-7.08	-	-	-	-	42	168	V
1.737	56.56	PK-U	29.5	-34.6	0	-51.46	-	-	-	-	68.2	-16.74	294	400	H
2.165	51.12	PK-U	31.5	-34.8	0	-47.82	-	-	-	-	68.2	-20.38	21	111	V
2.598	57.27	PK-U	32.2	-33.9	0	-55.57	-	-	-	-	68.2	-12.63	57	136	V
17.36	44.5	PK-U	41.3	-22.7	0	-63.1	-	-	-	-	68.2	-5.1	22	226	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Ch/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
1	* 1.01	42.15	Pk	27.7	-36.2	0	33.65	-	-	74	-40.35	68.2	-34.55	0-360	101	H
4	* 11.249	37.8	Pk	38.1	-25.5	0	50.4	-	-	74	-23.6	68.2	-17.8	0-360	101	V
5	* 11.651	36.9	Pk	38.5	-25.2	0	50.2	-	-	74	-23.8	68.2	-18	0-360	199	V
2	2.167	44.92	Pk	31.5	-34.8	0	41.62	-	-	74	-32.38	68.2	-26.58	0-360	101	V
3	2.598	52.94	Pk	32.2	-33.9	0	51.24	-	-	74	-22.76	68.2	-16.96	0-360	101	V
6	17.471	34.29	Pk	41.3	-23	0	52.59	-	-	74	-21.41	68.2	-15.61	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Ch/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
* 1.008	41.71	PK-U	27.7	-36.2	0	33.21	-	-	74	-40.79	-	-	2	208	H
* 1.009	30.5	ADR	27.7	-36.2	.22	22.22	54	-31.78	-	-	-	-	2	208	H
* 11.249	39.81	PK-U	38.1	-25.5	0	52.41	-	-	74	-21.59	-	-	8	123	V
* 11.25	35.92	ADR	38.1	-25.5	.22	48.74	54	-5.26	-	-	-	-	8	123	V
* 11.652	45.02	PK-U	38.5	-25.2	0	58.32	-	-	74	-15.68	-	-	49	116	V
* 11.65	32.51	ADR	38.5	-25.1	.22	46.13	54	-7.87	-	-	-	-	49	116	V
2.165	48.47	PK-U	31.5	-34.8	0	45.17	-	-	-	-	68.2	-23.03	360	115	V
2.598	56.53	PK-U	32.2	-33.9	0	54.83	-	-	-	-	68.2	-13.37	57	164	V
17.472	41.87	PK-U	41.3	-22.9	0	60.27	-	-	-	-	68.2	-7.93	2	331	V

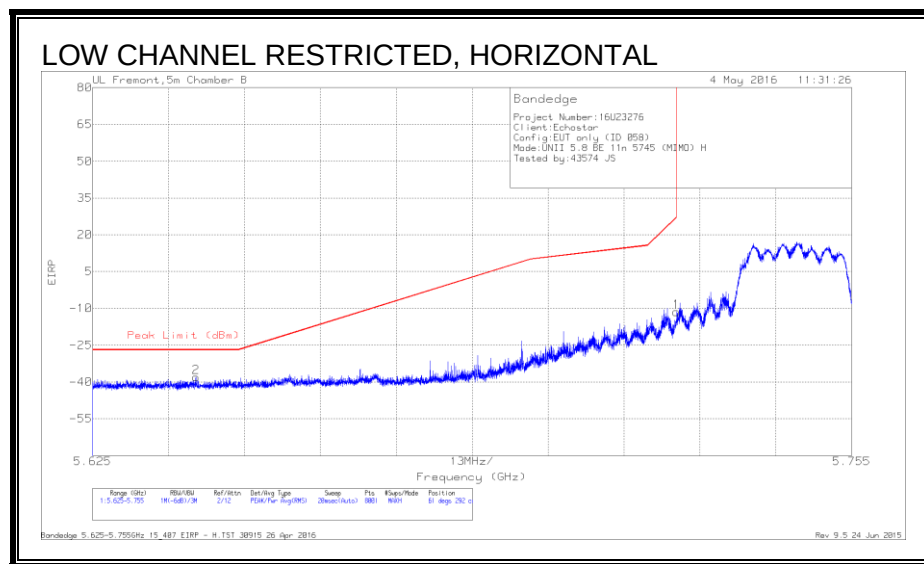
* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

10.5. TX ABOVE 1 GHz 802.11n HT20 CDD 2TX MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.643	-63.31	Pk	34.7	-21.3	11.8	0	-38.11	-27	-11.11	61	292	H
1	5.725	-36.41	Pk	34.9	-21.7	11.8	0	-11.41	26.97	-38.38	61	292	H

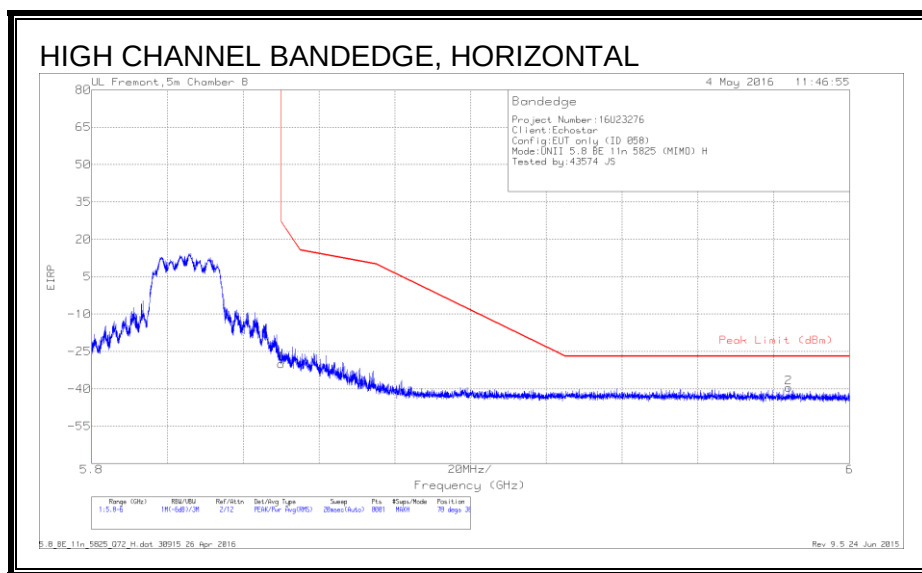
Pk - Peak detector



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cb/Fl tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.632	-63.53	Pk	34.6	-21.3	11.8	0	-38.43	-27	-11.43	84	369	V
1	5.725	-44.62	Pk	34.9	-21.7	11.8	0	-19.62	26.97	-46.59	84	369	V

Pk - Peak detector

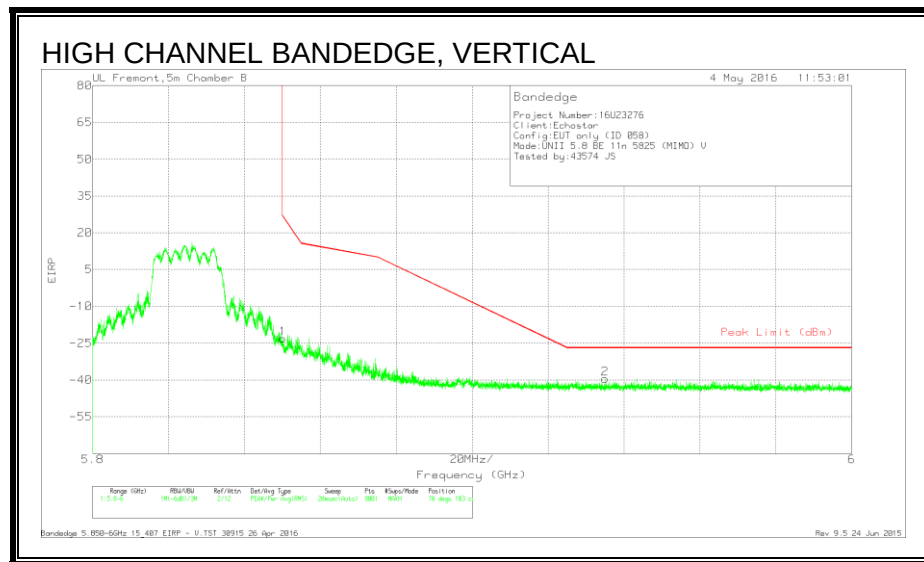
AUTHORIZED BANDEGE (HIGH CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
1	5.85	-55.37	Pk	35.2	-21.6	11.8	0	-29.97	26.94	-56.91	78	369	H
2	5.984	-65.11	Pk	35.2	-21.4	11.8	0	-39.51	-27	-12.51	78	369	H

Pk - Peak detector

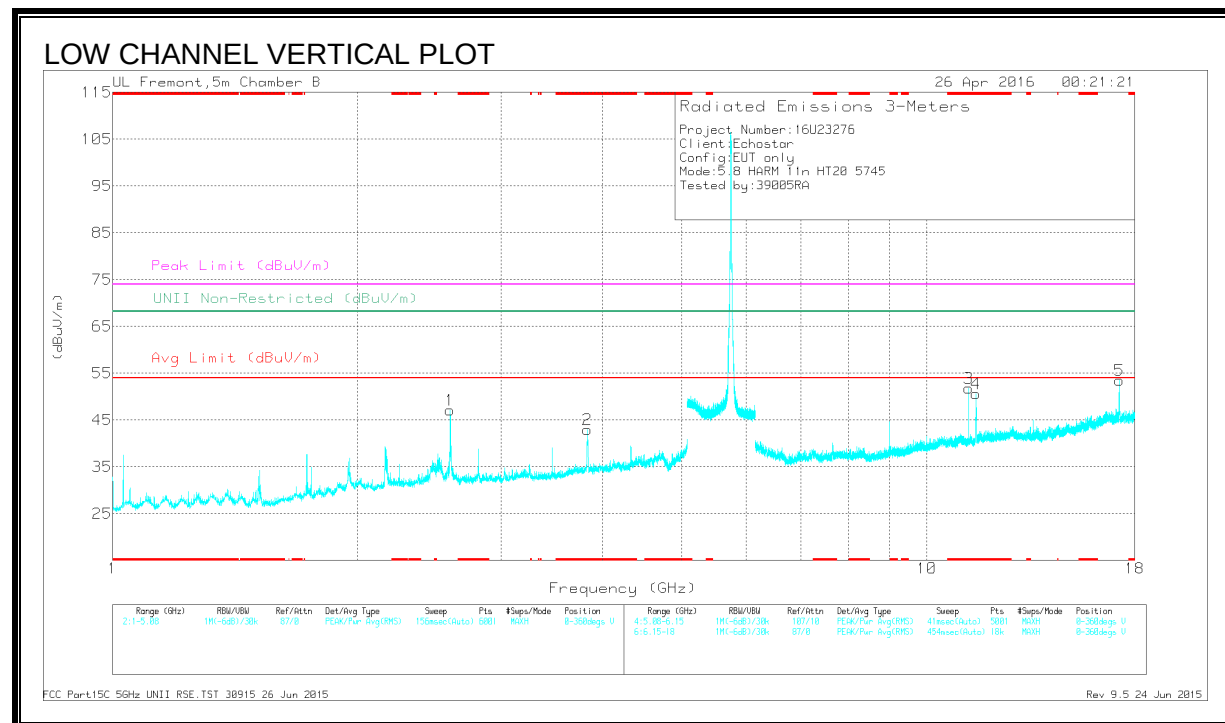
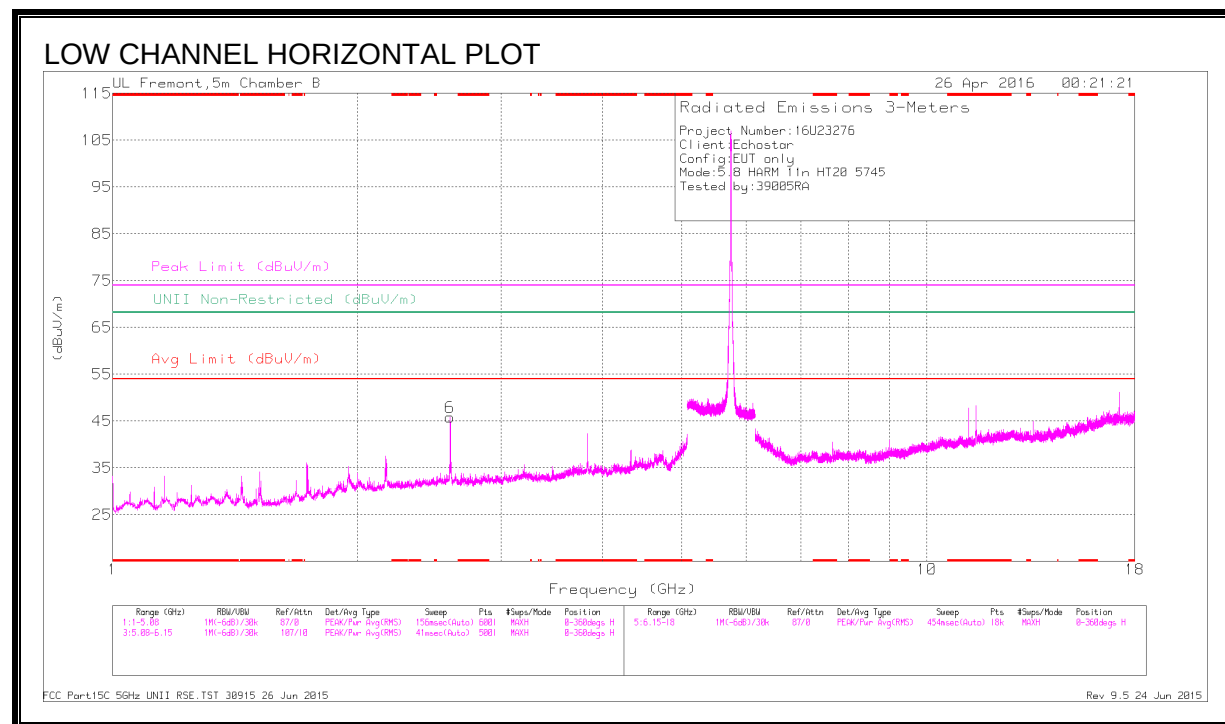


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-48.58	Pk	35.2	-21.6	11.8	0	-23.18	26.94	-50.12	70	103	V
2	5.935	-64.97	Pk	35.3	-21.7	11.8	0	-39.57	-27	-12.57	70	103	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil 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	* 3.83	42.58	Pk	33.4	-33	0	42.98	-	-	74	-31.02	-	-	0-360	101	V
3	* 11.249	39.15	Pk	38.1	-25.5	0	51.75	-	-	74	-22.25	-	-	0-360	101	V
4	* 11.487	38.17	Pk	38.3	-25.8	0	50.67	-	-	74	-23.33	-	-	0-360	200	V
6	2.598	47.5	Pk	32.2	-33.9	0	45.8	-	-	-	-	68.2	-22.4	0-360	199	H
1	2.598	48.86	Pk	32.2	-33.9	0	47.16	-	-	-	-	68.2	-21.04	0-360	199	V
5	17.231	35.45	Pk	41.3	-23.3	0	53.45	-	-	-	-	68.2	-14.75	0-360	200	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

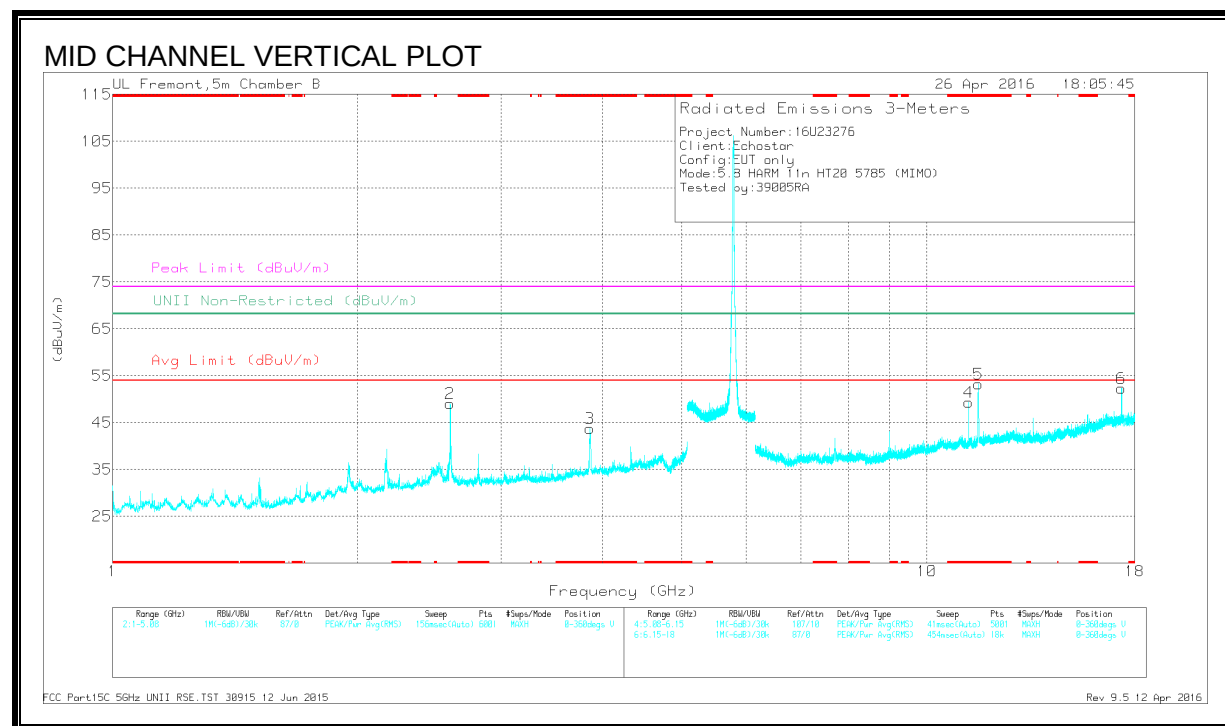
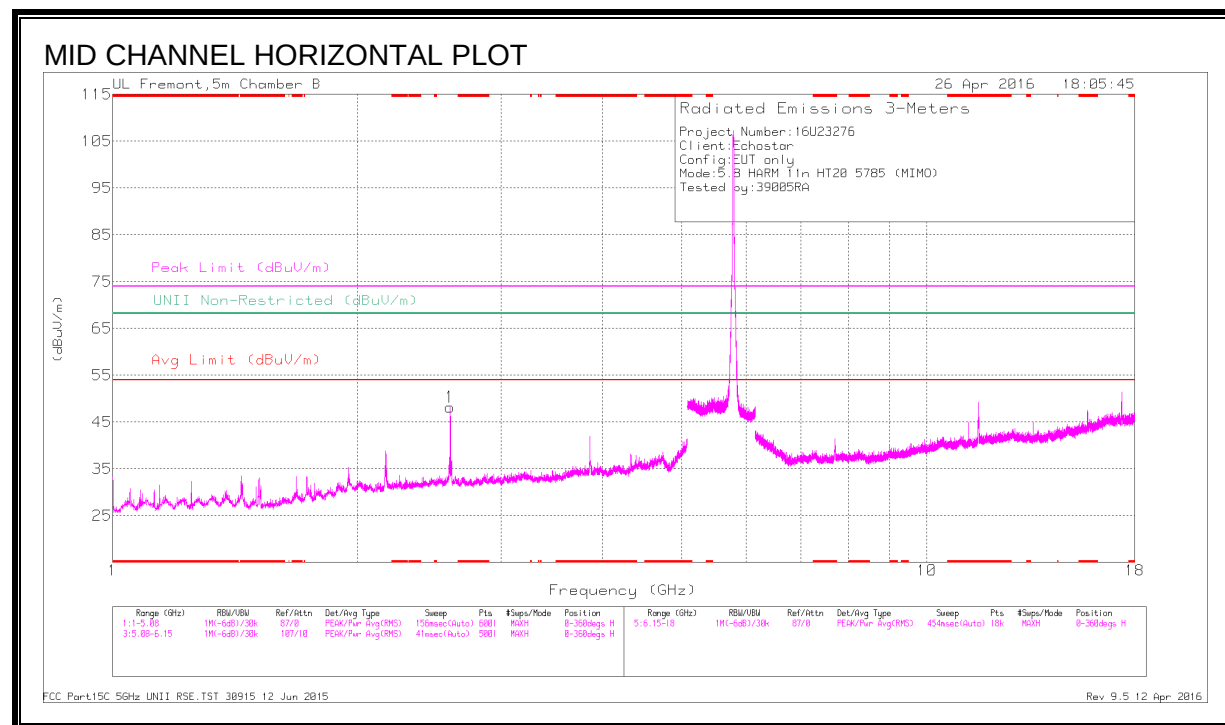
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fil 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
* 3.83	51.64	PK-U	33.4	-33	0	52.04	-	-	74	-21.96	-	-	46	209	V
* 3.83	41.7	ADR	33.4	-33	.22	42.32	54	-11.68	-	-	-	-	46	209	V
* 11.25	42.18	PK-U	38.1	-25.5	0	54.78	-	-	74	-19.22	-	-	24	102	V
* 11.25	36.64	ADR	38.1	-25.5	.22	49.46	54	-4.54	-	-	-	-	24	102	V
* 11.487	50.25	PK-U	38.3	-25.8	0	62.75	-	-	74	-11.25	-	-	38	180	V
* 11.487	36.1	ADR	38.3	-25.8	.22	48.82	54	-5.18	-	-	-	-	38	180	V
2.598	52.37	PK-U	32.2	-33.9	0	50.67	-	-	-	-	68.2	-17.53	68	288	H
2.598	57.82	PK-U	32.2	-33.9	0	56.12	-	-	-	-	68.2	-12.08	15	244	V
17.234	46.3	PK-U	41.3	-23.2	0	64.4	-	-	-	-	68.2	-3.8	9	362	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Ch/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.857	43.43	PK	33.4	-33.1	0	43.73	-	-	74	-30.27	68.2	-24.47	0-360	101	V
4	* 11.249	36.74	PK	38.1	-25.5	0	49.34	-	-	74	-24.66	68.2	-18.86	0-360	101	V
5	* 11.564	39.76	PK	38.4	-24.9	0	53.26	-	-	74	-20.74	68.2	-14.94	0-360	199	V
1	2.598	49.93	PK	32.2	-33.9	0	48.23	-	-	74	-25.77	68.2	-19.97	0-360	101	H
2	2.598	50.78	PK	32.2	-33.9	0	49.08	-	-	74	-24.92	68.2	-19.12	0-360	101	V
6	17.334	33.98	PK	41.3	-23	0	52.28	-	-	74	-21.72	68.2	-15.92	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK - Peak detector

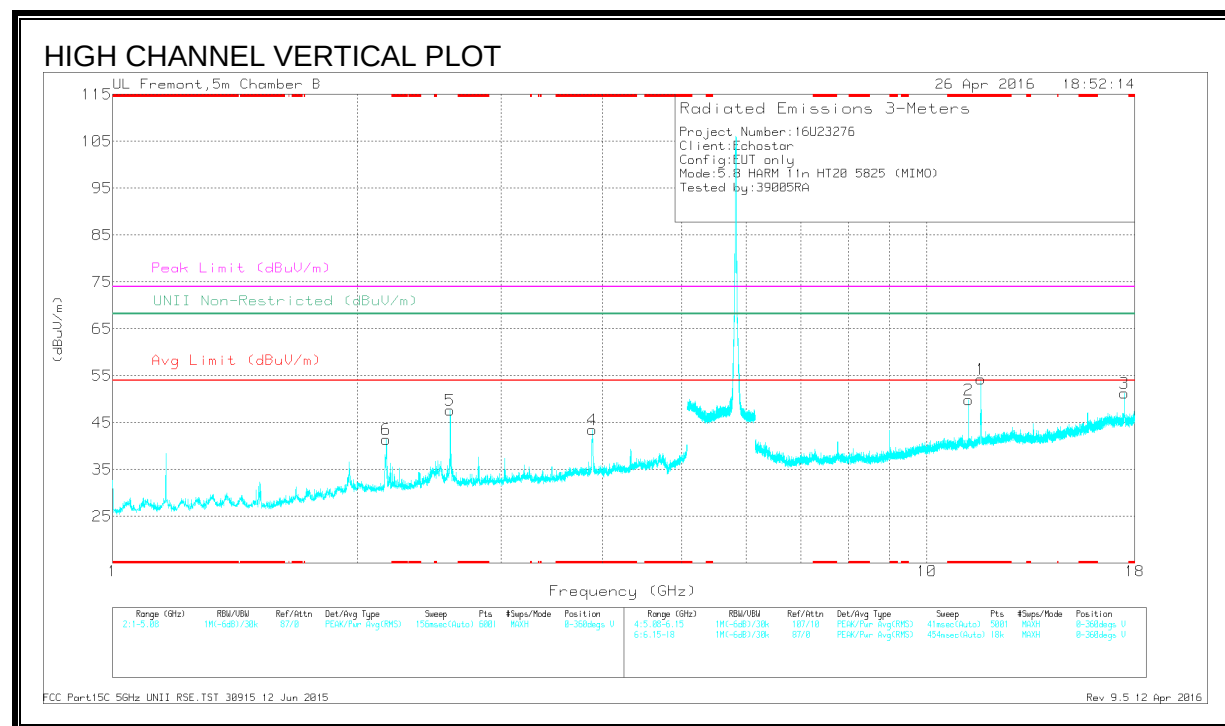
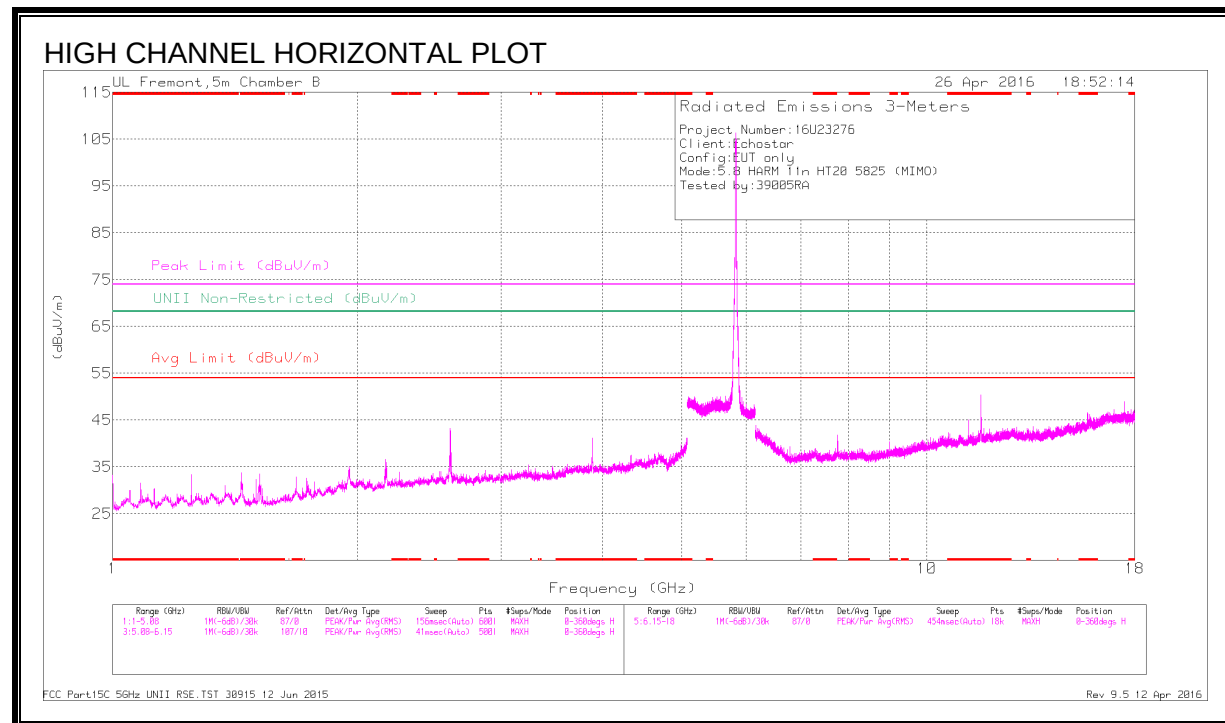
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Ch/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.853	50.04	PK-U	33.4	-33.2	0	50.24	-	-	74	-23.76	-	-	64	248	V
* 3.853	39.56	ADR	33.4	-33.2	.22	39.98	54	-14.02	-	-	-	-	64	248	V
* 11.25	40.71	PK-U	38.1	-25.5	0	53.31	-	-	74	-20.69	-	-	23	102	V
* 11.25	35.79	ADR	38.1	-25.5	.22	48.61	54	-5.39	-	-	-	-	23	102	V
* 11.557	48.35	PK-U	38.4	-25	0	61.75	-	-	74	-12.25	-	-	44	205	V
* 11.555	34.48	ADR	38.4	-25.1	.22	48	54	-6	-	-	-	-	44	205	V
2.598	52.74	PK-U	32.2	-33.9	0	51.04	-	-	-	-	68.2	-17.16	24	194	H
2.598	55.44	PK-U	32.2	-33.9	0	53.74	-	-	-	-	68.2	-14.46	41	109	V
17.334	46.71	PK-U	41.3	-23	0	65.01	-	-	-	-	68.2	-3.19	24	237	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cb/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
4	* 3.883	43	PK	33.3	-32.8	0	43.5	-	-	74	-30.5	68.2	-24.7	0-360	101	V
1	* 11.651	40.98	PK	38.5	-25.2	0	54.28	-	-	74	-19.72	68.2	-13.92	0-360	199	V
2	* 11.249	37.27	PK	38.1	-25.5	0	49.87	-	-	74	-24.13	68.2	-18.33	0-360	101	V
6	2.166	44.7	PK	31.5	-34.8	0	41.4	-	-	74	-32.6	68.2	-26.8	0-360	101	V
5	2.598	49.38	PK	32.2	-33.9	0	47.68	-	-	74	-26.32	68.2	-20.52	0-360	101	V
3	17.471	32.94	PK	41.3	-23	0	51.24	-	-	74	-22.76	68.2	-16.96	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
* 3.882	49.86	PK-U	33.3	-32.8	0	50.36	-	-	74	-23.64	-	-	50	152	V
* 3.882	39.65	ADR	33.3	-32.8	.22	40.37	54	-13.63	-	-	-	-	50	152	V
* 11.649	48.89	PK-U	38.5	-25.1	0	62.29	-	-	74	-11.71	-	-	33	185	V
* 11.649	35.14	ADR	38.5	-25.1	.22	48.76	54	-5.24	-	-	-	-	33	185	V
* 11.25	41.33	PK-U	38.1	-25.5	0	53.93	-	-	74	-20.07	-	-	10	119	V
* 11.25	36.46	ADR	38.1	-25.5	.22	49.28	54	-4.72	-	-	-	-	10	119	V
2.165	50.16	PK-U	31.5	-34.8	0	46.86	-	-	-	-	68.2	-21.34	28	227	V
2.598	56.96	PK-U	32.2	-33.9	0	55.26	-	-	-	-	68.2	-12.94	33	106	V
17.474	43.54	PK-U	41.3	-22.9	0	61.94	-	-	-	-	68.2	-6.26	35	105	V

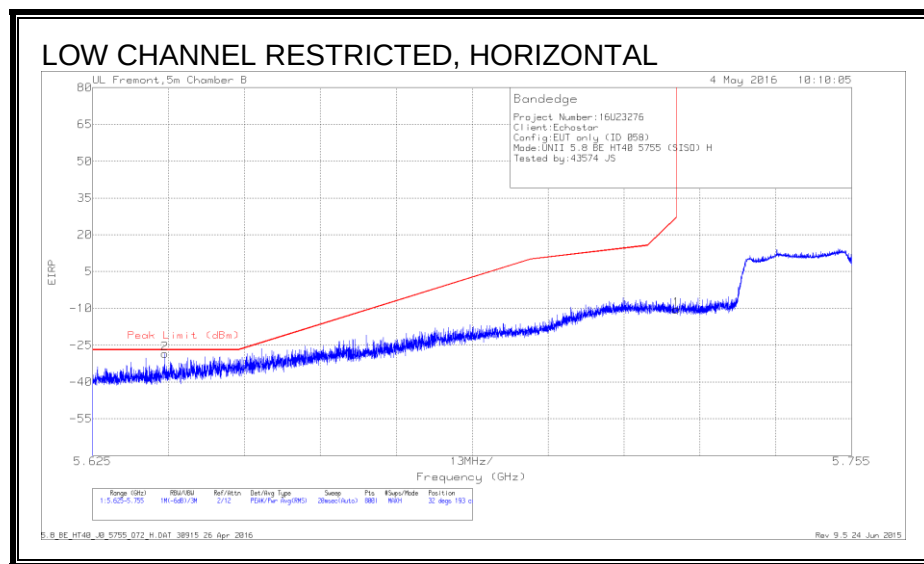
* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

10.6. TX ABOVE 1 GHz 802.11n HT40 SISO MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)



Trace Markers

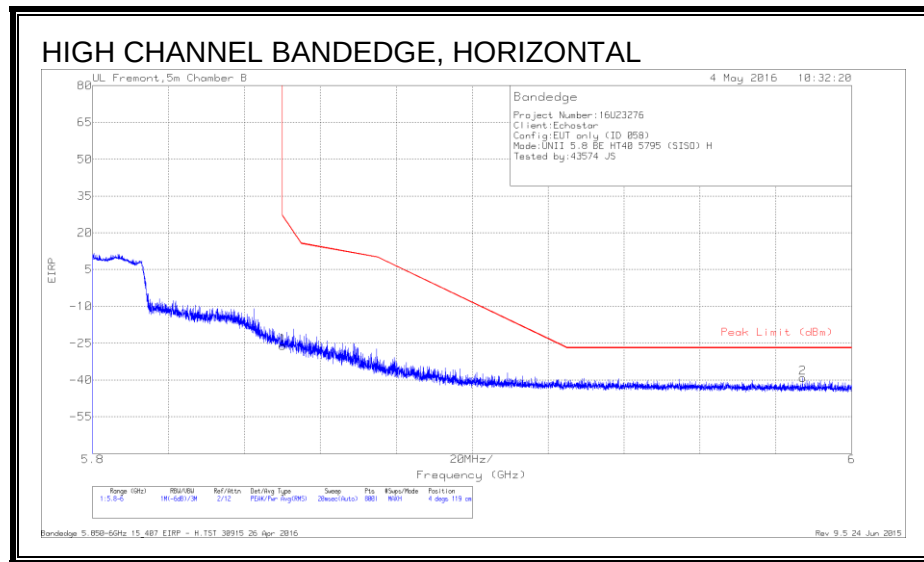
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.637	-53.73	Pk	34.7	-21.3	11.8	0	-28.53	-27	-1.53	32	193	H
1	5.725	-35.47	Pk	34.9	-21.7	11.8	0	-10.47	26.97	-37.44	32	193	H

Pk - Peak detector



Pk - Peak detector

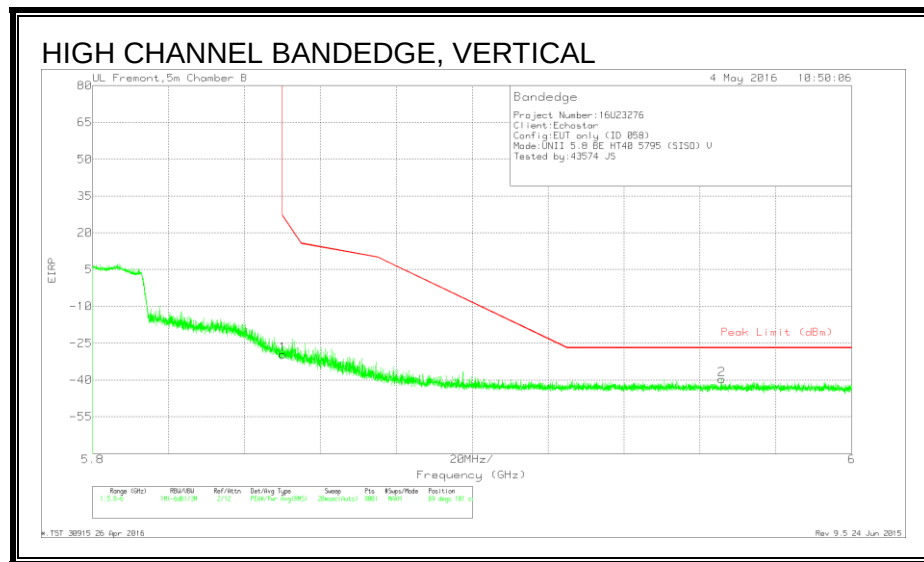
AUTHORIZED BANDEDGE (HIGH CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T34S (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-51.44	Pk	35.2	-21.6	11.8	0	-26.04	26.94	-52.98	4	119	H
2	5.987	-64.62	Pk	35.2	-21.6	11.8	0	-39.22	-27	-12.22	4	119	H

Pk - Peak detector

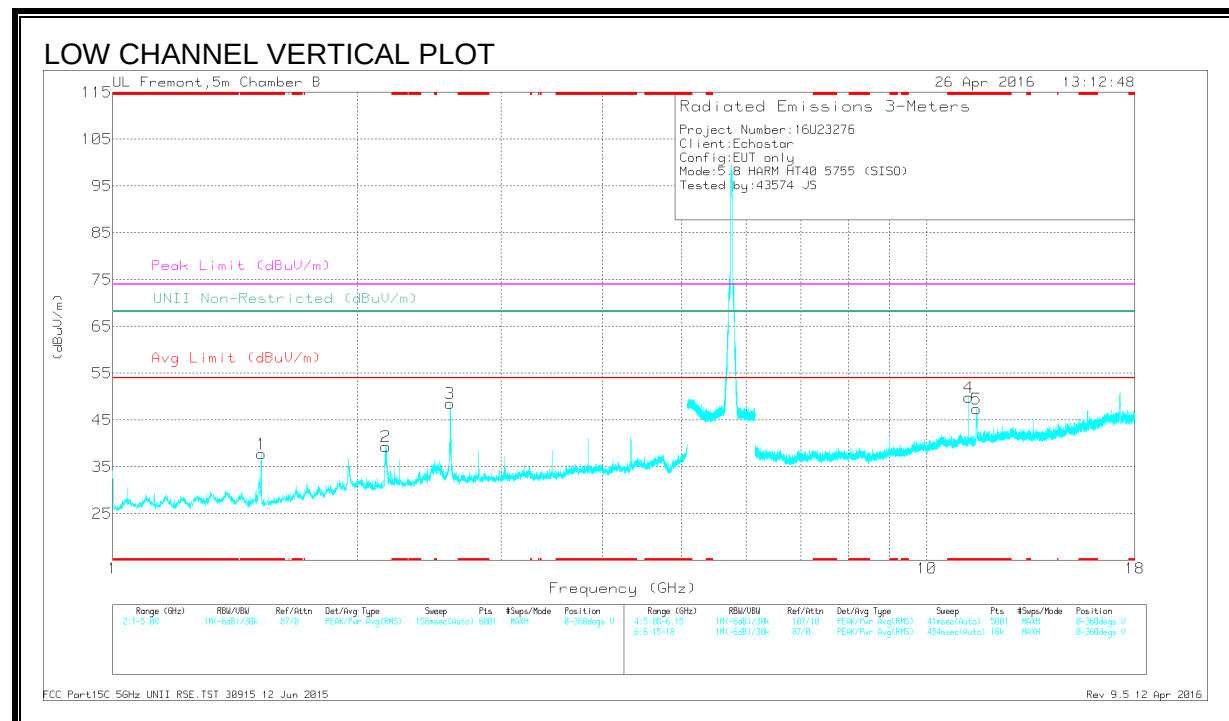
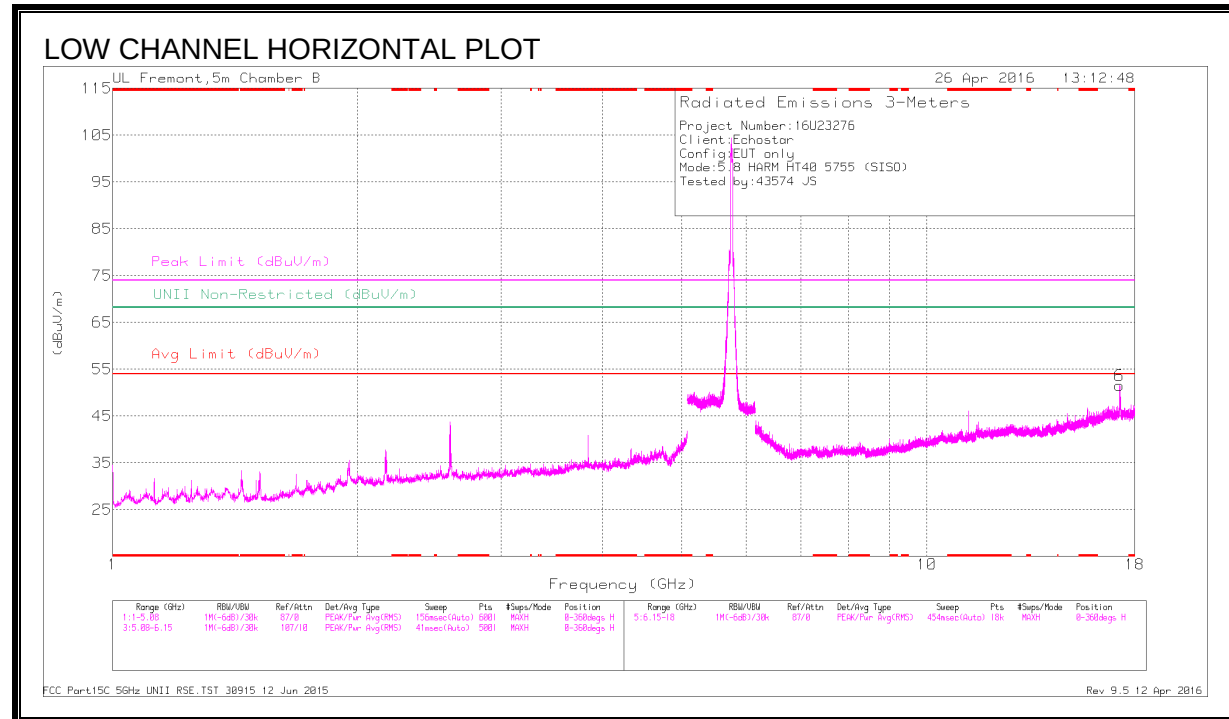


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (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
1	5.85	-54.98	Pk	35.2	-21.6	11.8	0	-29.58	26.94	-56.52	69	101	V
2	5.966	-65.16	Pk	35.2	-21.5	11.8	0	-39.66	-27	-12.66	69	101	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cm/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
1	* 1.523	45.69	Pk	27.9	-35.8	0	-37.79	-	-	74	-36.21	68.2	-30.41	0-360	201	V
4	* 11.249	37.24	Pk	38.1	-25.5	0	-49.84	-	-	74	-24.16	68.2	-18.36	0-360	101	V
5	* 11.516	34.83	Pk	38.3	-25.7	0	-47.43	-	-	74	-26.57	68.2	-20.77	0-360	199	V
2	2.166	42.59	Pk	31.5	-34.8	0	-39.29	-	-	74	-34.71	68.2	-28.91	0-360	201	V
3	2.598	50.21	Pk	32.2	-33.9	0	-48.51	-	-	74	-25.49	68.2	-19.69	0-360	201	V
6	17.252	33.33	Pk	41.3	-23.1	0	-51.53	-	-	74	-22.47	68.2	-16.67	0-360	199	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

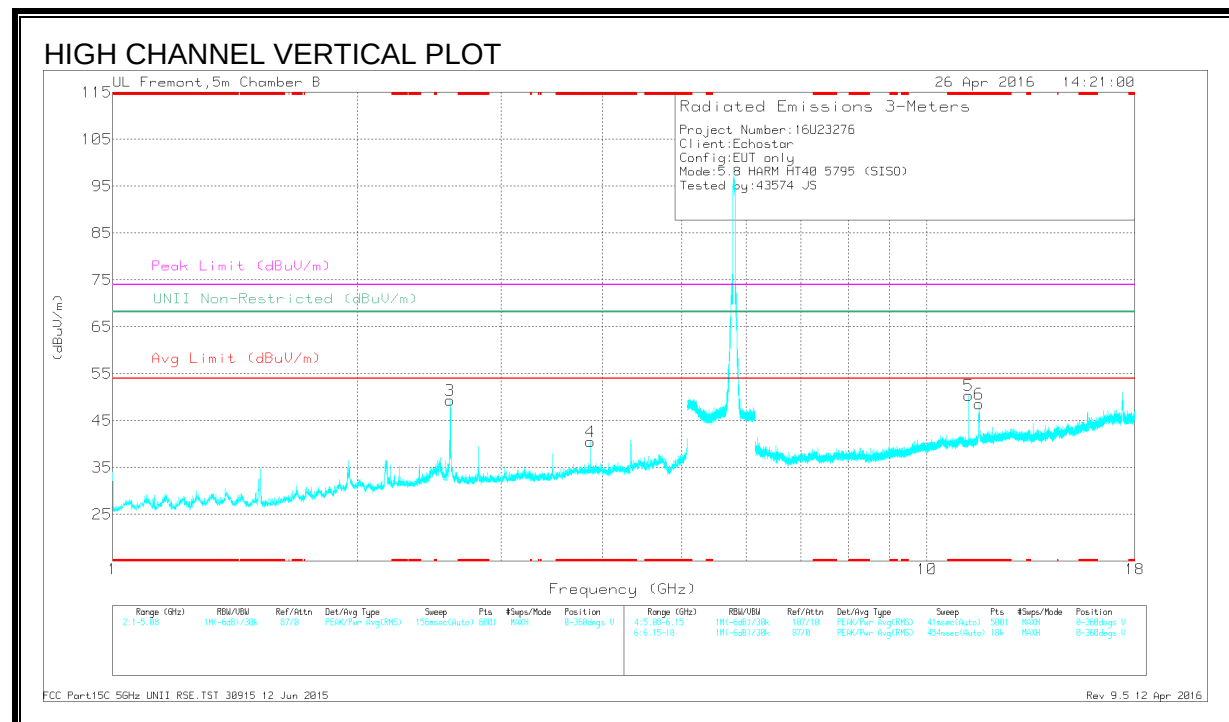
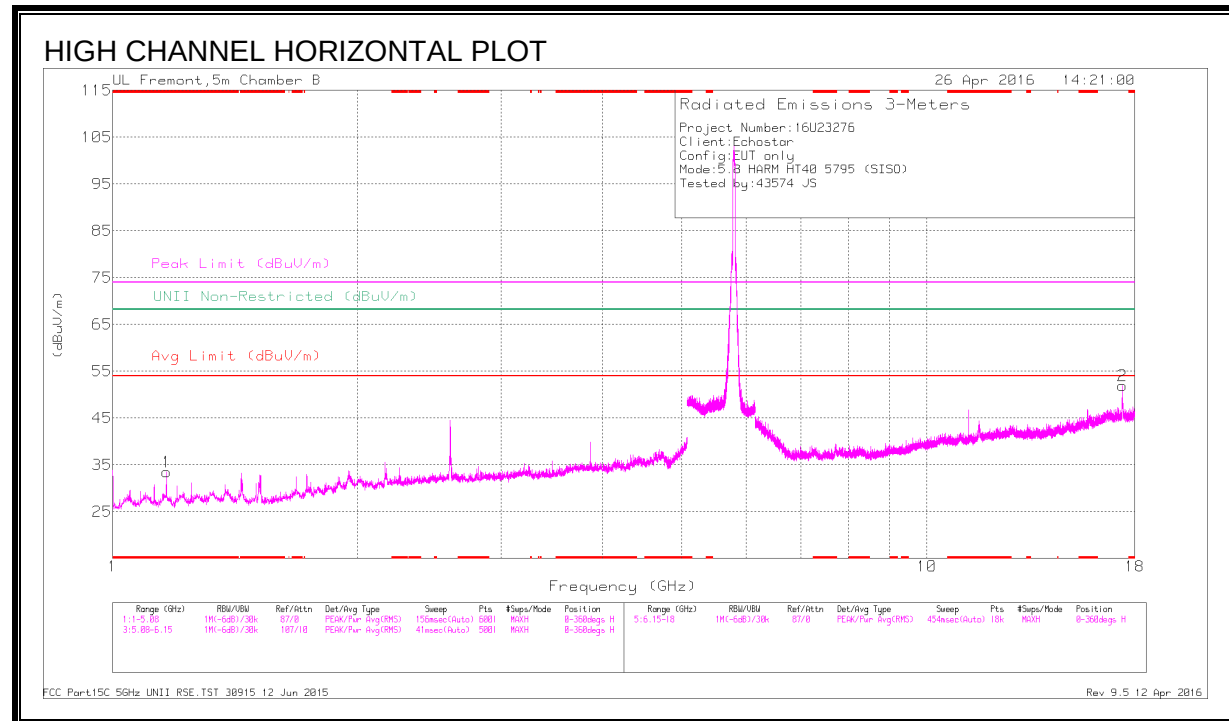
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cm/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
* 1.521	45.04	PK-U	27.8	-35.8	0	37.04	-	-	74	-36.96	-	-	356	106	V
* 1.521	31.99	ADR	27.8	-35.8	.44	24.43	54	-29.57	-	-	-	-	356	106	V
* 11.25	38.77	PK-U	38.1	-25.5	0	51.37	-	-	74	-22.63	-	-	82	118	V
* 11.25	33.64	ADR	38.1	-25.5	.44	46.68	54	-7.32	-	-	-	-	82	118	V
* 11.516	41.14	PK-U	38.3	-25.7	0	53.74	-	-	74	-20.26	-	-	41	214	V
* 11.516	30.16	ADR	38.3	-25.7	.44	43.2	54	-10.8	-	-	-	-	41	214	V
2.165	50.93	PK-U	31.5	-34.8	0	47.63	-	-	-	-	68.2	-20.57	33	160	V
2.598	55.77	PK-U	32.2	-33.9	0	54.07	-	-	-	-	68.2	-14.13	17	239	V
17.253	40.46	PK-U	41.3	-23.1	0	58.66	-	-	-	-	68.2	-9.54	353	227	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/CM/Plt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
1	* 1.165	40.85	PK	28.2	-35.6	0	33.45	-	-	74	-40.55	68.2	-34.75	0-360	199	H
4	* 3.863	40.06	PK	33.4	-33	0	40.46	-	-	74	-33.54	68.2	-27.74	0-360	101	V
5	* 11.249	37.74	PK	38.1	-25.5	0	50.34	-	-	74	-23.66	68.2	-17.86	0-360	101	V
6	* 11.591	35.02	PK	38.4	-24.9	0	48.52	-	-	74	-25.48	68.2	-19.68	0-360	199	V
3	2.598	51.08	PK	32.2	-33.9	0	49.38	-	-	74	-24.62	68.2	-18.82	0-360	101	V
2	17.394	33.53	PK	41.3	-22.9	0	51.93	-	-	74	-22.07	68.2	-16.27	0-360	199	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/CM/Plt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
* 1.166	43.34	PK-U	28.2	-35.6	0	35.94	-	-	74	-38.06	-	-	164	345	H
* 1.163	31.86	ADR	28.2	-35.6	.44	24.9	54	-29.1	-	-	-	-	164	345	H
* 3.863	44.8	PK-U	33.4	-33	0	45.2	-	-	74	-28.8	-	-	41	103	V
* 3.863	38.91	ADR	33.4	-33	.44	39.75	54	-14.25	-	-	-	-	41	103	V
* 11.25	39.07	PK-U	38.1	-25.5	0	51.67	-	-	74	-22.33	-	-	18	101	V
* 11.25	33.74	ADR	38.1	-25.5	.44	46.78	54	-7.22	-	-	-	-	18	101	V
2.598	56.44	PK-U	32.2	-33.9	0	54.74	-	-	-	-	68.2	-13.46	49	116	V
17.392	38.75	PK-U	41.3	-22.9	0	57.15	-	-	-	-	68.2	-11.05	354	205	H

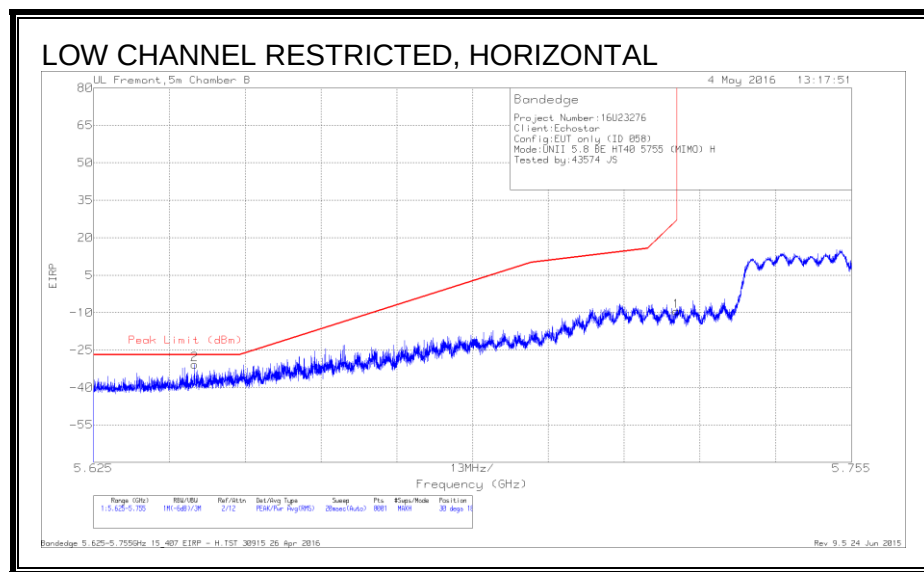
* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

10.7. TX ABOVE 1 GHz 802.11n HT40 CDD 2TX MODE IN THE 5.8 GHz BAND

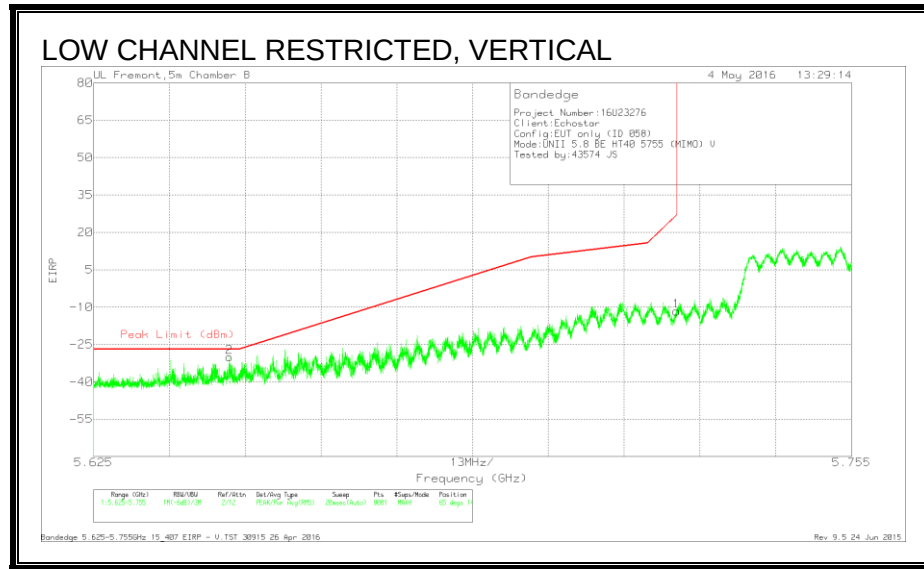
RESTRICTED BANDEDGE (LOW CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.642	-55.93	Pk	34.7	-21.3	11.8	0	-30.73	-27	-3.73	30	181	H
1	5.725	-34.41	Pk	34.9	-21.7	11.8	0	-9.41	26.97	-36.38	30	181	H

Pk - Peak detector

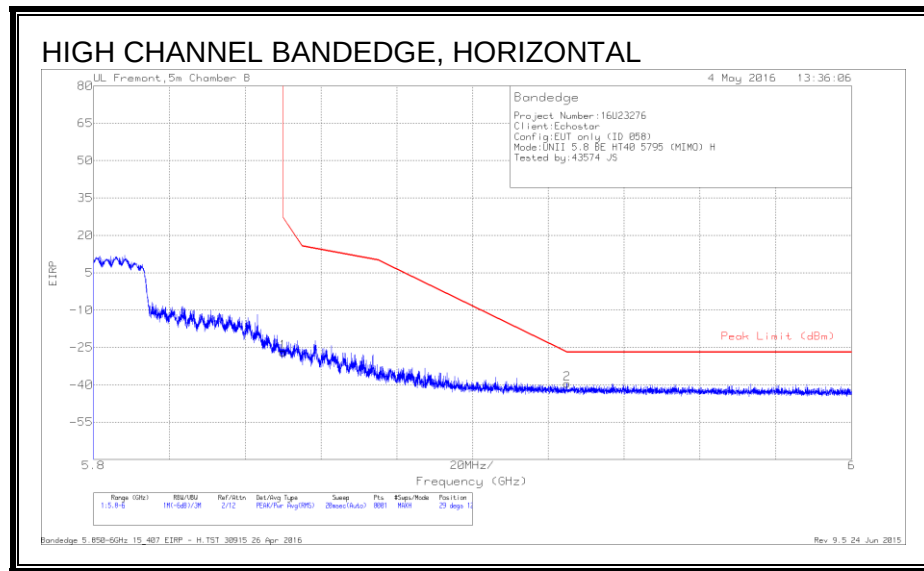


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.648	-55.2	Pk	34.7	-21.4	11.8	0	-30.1	-27	-3.1	65	143	V
1	5.725	-36.66	Pk	34.9	-21.7	11.8	0	-11.66	26.97	-38.63	65	143	V

Pk - Peak detector

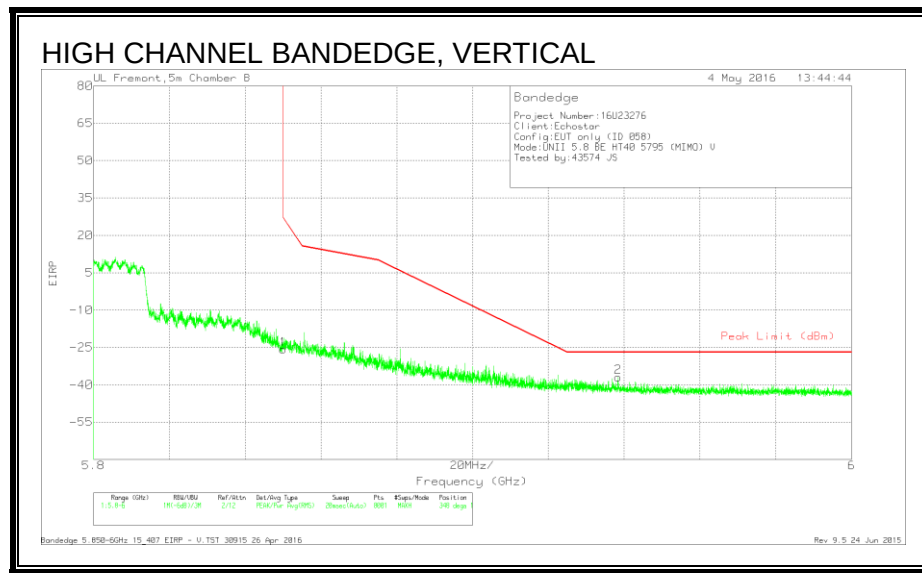
AUTHORIZED BANDEGE (HIGH CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-52.27	Pk	35.2	-21.6	11.8	0	-26.87	26.94	-53.81	29	127	H
2	5.925	-65.1	Pk	35.3	-21.5	11.8	0	-39.5	-26.96	-12.54	29	127	H

Pk - Peak detector

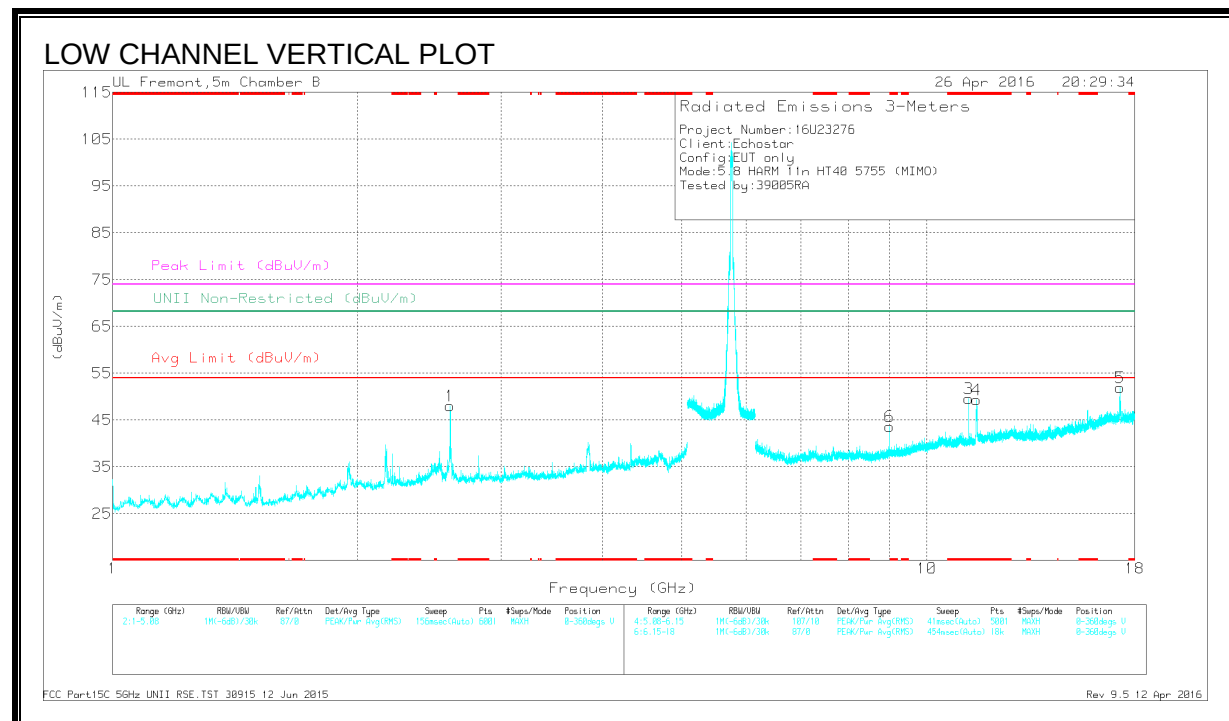
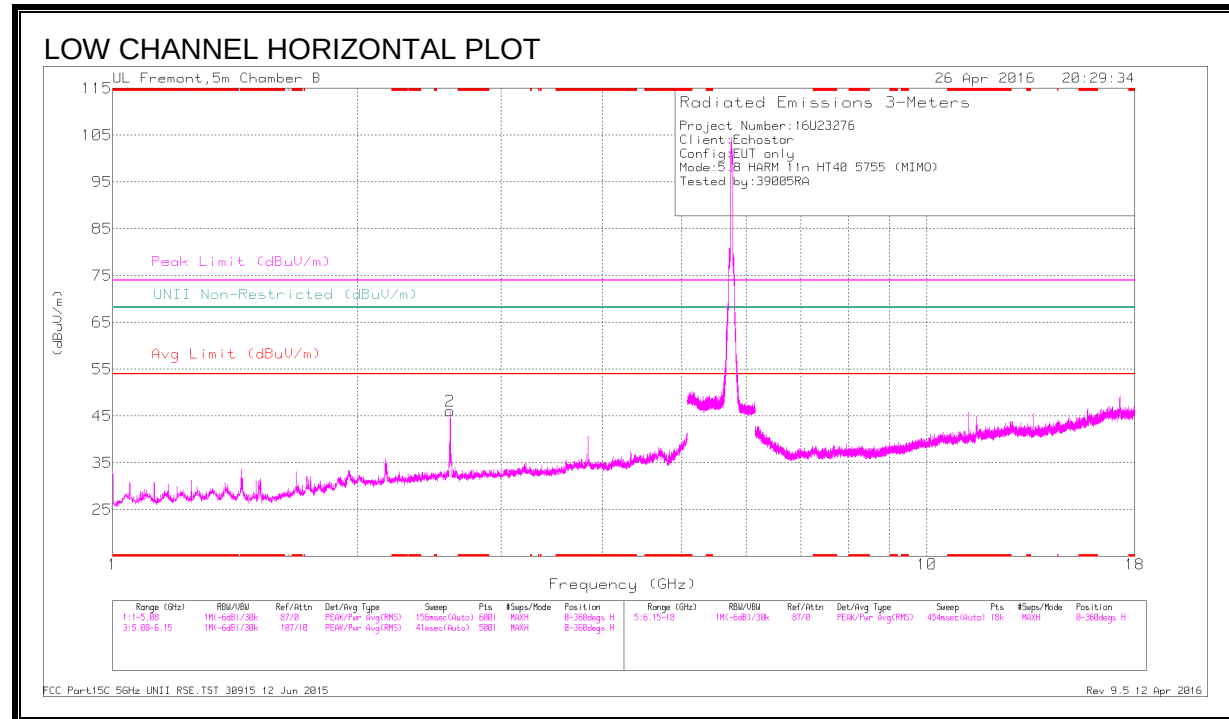


Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	Conversion Factor (dB)	DC Corr (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-51.12	Pk	35.2	-21.6	11.8	0	-25.72	26.94	-52.66	348	101	V
2	5.938	-62.57	Pk	35.3	-21.4	11.8	0	-36.87	-27	-9.87	348	101	V

Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Plt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
3	* 11.249	37.01	Pk	38.1	-25.5	0	49.61	-	-	74	-24.39	68.2	-18.59	0-360	101	V
4	* 11.509	36.77	Pk	38.3	-25.7	0	49.37	-	-	74	-24.63	68.2	-18.83	0-360	199	V
2	2.598	47.84	Pk	32.2	-33.9	0	46.14	-	-	74	-27.86	68.2	-22.06	0-360	199	H
1	2.598	49.72	Pk	32.2	-33.9	0	48.02	-	-	74	-25.98	68.2	-20.18	0-360	101	V
6	9	35.22	Pk	36.1	-27.7	0	43.62	-	-	74	-30.38	68.2	-24.58	0-360	101	V
5	17.266	33.77	Pk	41.3	-23.1	0	51.97	-	-	74	-22.03	68.2	-16.23	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

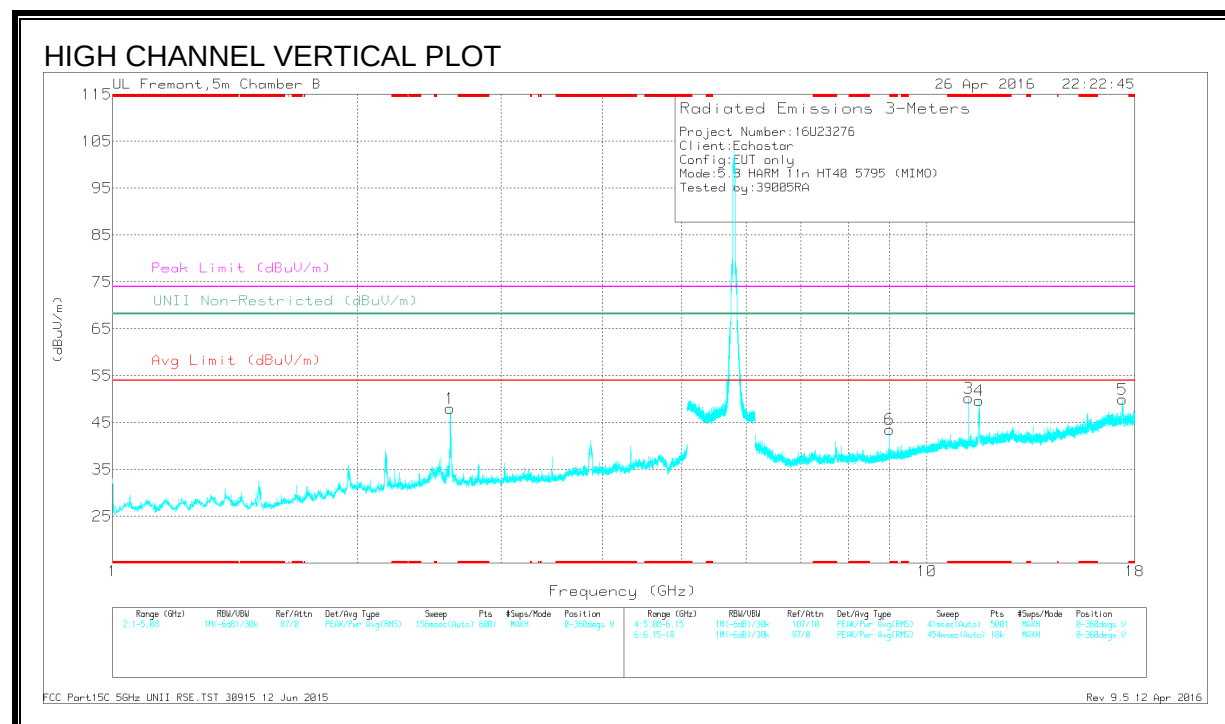
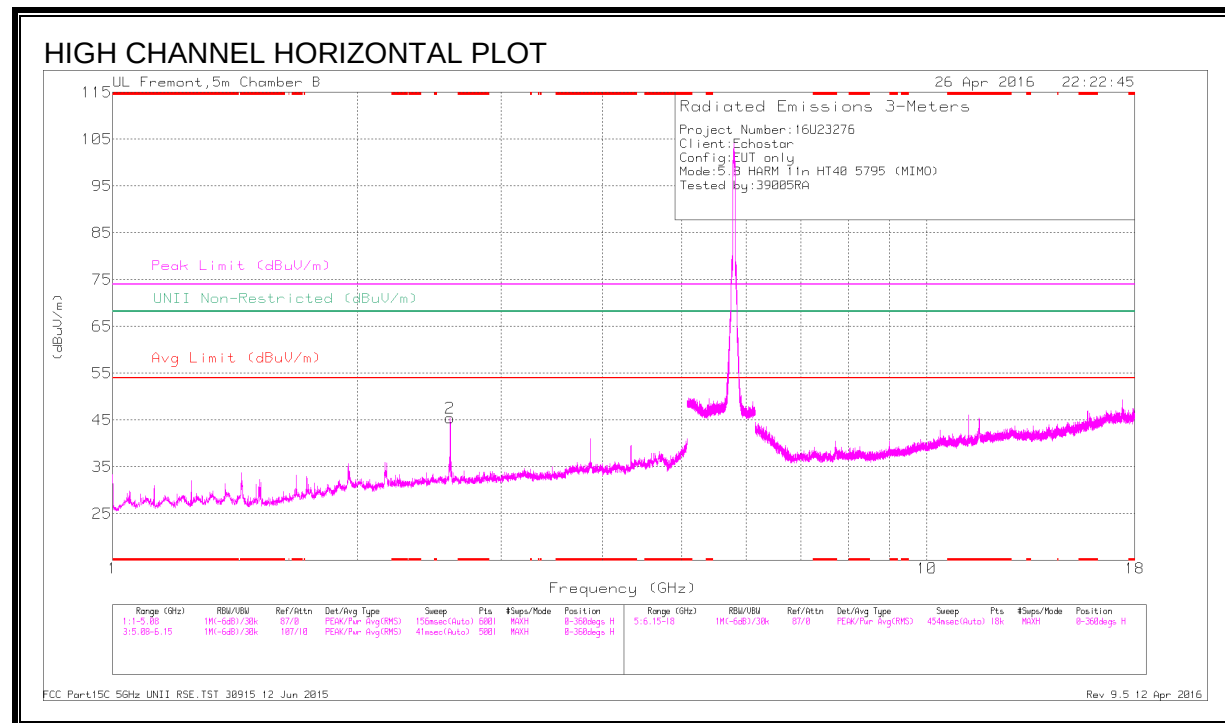
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Plt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
* 11.25	41.45	PK-U	38.1	-25.5	0	54.05	-	-	74	-19.95	-	-	41	102	V
* 11.25	37.06	ADR	38.1	-25.5	.44	50.1	54	-3.9	-	-	-	-	41	102	V
* 11.51	43.95	PK-U	38.3	-25.8	0	56.45	-	-	74	-17.55	-	-	37	231	V
* 11.51	33.27	ADR	38.3	-25.8	.44	46.21	54	-7.79	-	-	-	-	37	231	V
2.598	52.58	PK-U	32.2	-33.9	0	50.88	-	-	-	-	68.2	-17.32	28	163	H
2.598	56.66	PK-U	32.2	-33.9	0	54.96	-	-	-	-	68.2	-13.24	37	129	V
9	37.13	PK-U	36.1	-27.7	0	45.53	-	-	-	-	68.2	-22.67	23	104	V
17.264	43.7	PK-U	41.3	-23.1	0	61.9	-	-	-	-	68.2	-6.3	21	222	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average



Note: Emission was scanned up to 40GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Pt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
3	* 11.249	37.62	Pk	38.1	-25.5	0	50.22	-	-	74	-23.78	68.2	-17.98	0-360	101	V
4	* 11.582	36.38	Pk	38.4	-25	0	49.78	-	-	74	-24.22	68.2	-18.42	0-360	199	V
2	2.598	47.15	Pk	32.2	-33.9	0	45.45	-	-	74	-28.55	68.2	-22.75	0-360	199	H
1	2.598	49.71	Pk	32.2	-33.9	0	48.01	-	-	74	-25.99	68.2	-20.19	0-360	101	V
6	9	35.16	Pk	36.1	-27.7	0	43.56	-	-	74	-30.44	68.2	-24.64	0-360	101	V
5	17.381	31.51	Pk	41.3	-22.8	0	50.01	-	-	74	-23.99	68.2	-18.19	0-360	199	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cb/Pt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Aug Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	U/NII Non-Restricted (dBuV/m)	PK Margin (dB)	Asimuth (Degs)	Height (cm)	Polarity
* 11.25	41.5	PK-U	38.1	-25.5	0	54.1	-	-	74	-19.9	-	-	45	123	V
* 11.25	37.18	ADR	38.1	-25.5	.44	50.22	54	-3.78	-	-	-	-	45	123	V
* 11.59	46.36	PK-U	38.4	-24.9	0	59.86	-	-	74	-14.14	-	-	41	210	V
* 11.59	32.66	ADR	38.4	-24.9	.44	46.6	54	-7.4	-	-	-	-	41	210	V
2.598	53.18	PK-U	32.2	-33.9	0	51.48	-	-	-	-	68.2	-16.72	19	130	H
2.598	56.68	PK-U	32.2	-33.9	0	54.98	-	-	-	-	68.2	-13.22	39	110	V
9	36.22	PK-U	36.1	-27.7	0	44.62	-	-	-	-	68.2	-23.58	23	105	V
17.382	41.36	PK-U	41.3	-22.8	0	59.86	-	-	-	-	68.2	-8.34	8	368	V

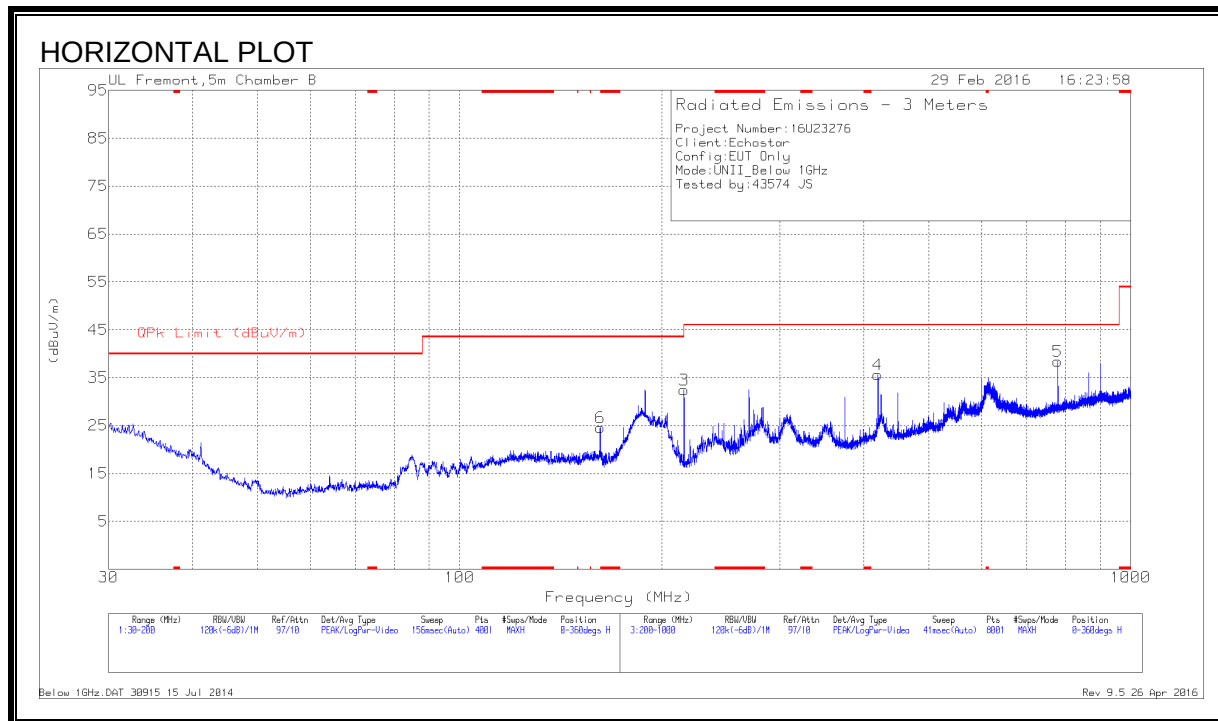
* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK-U - U-NII: Maximum Peak

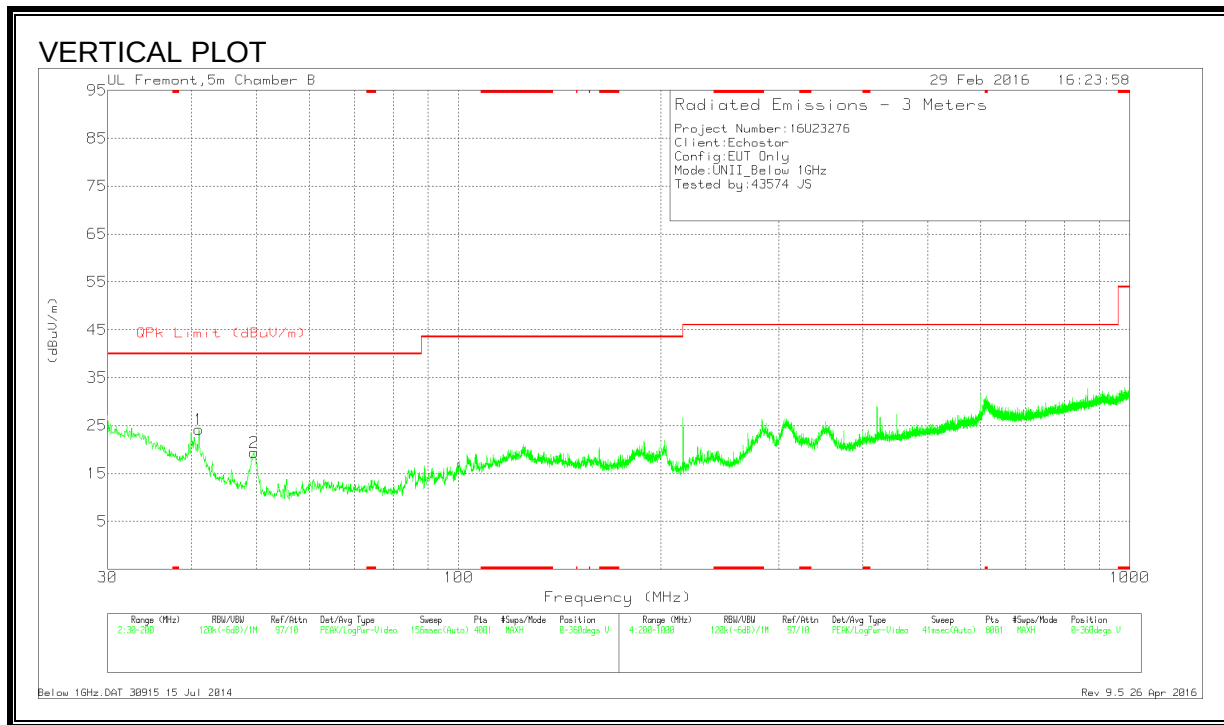
ADR - U-NII AD primary method, RMS average

10.8. WORST-CASE BELOW 1 GHz

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



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



DATA

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	41.05	35.75	Pk	17.2	-28.8	24.15	40	-15.85	0-360	101	V
2	49.5925	36.26	Pk	11.7	-28.6	19.36	40	-20.64	0-360	101	V
6	162.005	35.95	Pk	16	-27.4	24.55	43.52	-18.97	0-360	199	H
3	216	44.85	Pk	14.5	-26.9	32.45	43.52	-11.07	0-360	199	H
4	420	41.73	Pk	20.2	-26.3	35.63	46.02	-10.39	0-360	101	H
5	779	38.15	Pk	25.1	-24.8	38.45	46.02	-7.57	0-360	299	H

Pk - Peak detector

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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.

TEST PROCEDURE

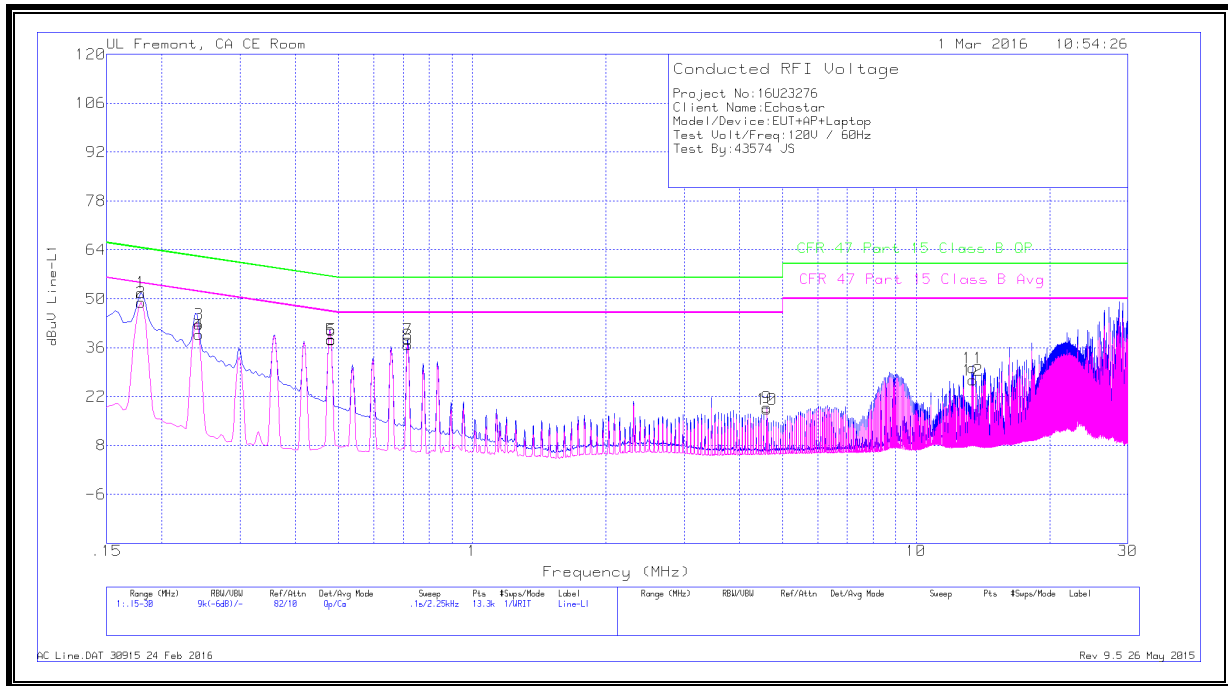
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

LINE 1 RESULTS



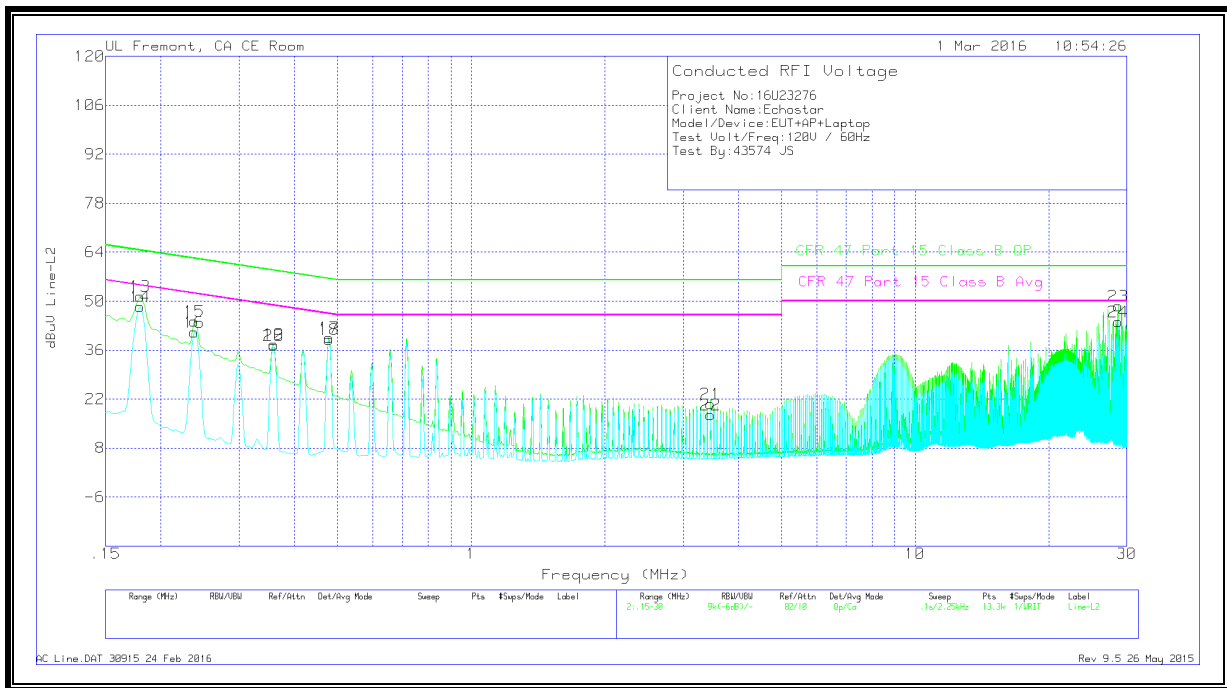
Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T1310 IL L1	LC Cables 1&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
1	.17925	41.72	Qp	0	0	10.1	51.82	64.52	-12.7	-	-
2	.17925	38.85	Ca	0	0	10.1	48.95	-	-	54.52	-5.57
3	.24225	32.58	Qp	0	0	10.1	42.68	62.02	-19.34	-	-
4	.24225	29.7	Ca	0	0	10.1	39.8	-	-	52.02	-12.22
5	.48075	28.25	Qp	0	0	10.1	38.35	56.33	-17.98	-	-
6	.48075	28	Ca	0	0	10.1	38.1	-	-	46.33	-8.23
7	.717	28.28	Qp	0	0	10.1	38.38	56	-17.62	-	-
8	.717	26.69	Ca	0	0	10.1	36.79	-	-	46	-9.21
9	4.61625	8.61	Qp	0	.1	10.1	18.81	56	-37.19	-	-
10	4.61625	8.22	Ca	0	.1	10.1	18.42	-	-	46	-27.58
11	13.4205	19.73	Qp	.1	.2	10.2	30.23	60	-29.77	-	-
12	13.4205	16.28	Ca	.1	.2	10.2	26.78	-	-	50	-23.22

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T1310 IL L2	LC Cables 2&3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
13	.17925	41.32	Qp	0	0	10.1	51.42	64.52	-13.1	-	-
14	.17925	38.39	Ca	0	0	10.1	48.49	-	-	54.52	-6.03
15	.23775	34.22	Qp	0	0	10.1	44.32	62.17	-17.85	-	-
16	.23775	31.1	Ca	0	0	10.1	41.2	-	-	52.17	-10.97
17	.4785	29.43	Qp	0	0	10.1	39.53	56.37	-16.84	-	-
18	.4785	29	Ca	0	0	10.1	39.1	-	-	46.37	-7.27
19	.35925	27.52	Qp	0	0	10.1	37.62	58.75	-21.13	-	-
20	.35925	27.17	Ca	0	0	10.1	37.27	-	-	48.75	-11.48
21	3.46425	10.46	Qp	0	.1	10.1	20.66	56	-35.34	-	-
22	3.46425	7.27	Ca	0	.1	10.1	17.47	-	-	46	-28.53
23	28.68675	37.76	Qp	.1	.3	10.4	48.56	60	-11.44	-	-
24	28.68675	33.3	Ca	.1	.3	10.4	44.1	-	-	50	-5.9

Qp - Quasi-Peak detector

Ca - CISPR average detection