FCC 47 CFR PART 15 SUBPART E

C2PC CERTIFICATION TEST REPORT

FOR

802.11 a/b/g/n WLAN, BT 2.1 and RF4CE SATELLITE SE

MODEL NUMBER: ID: 075

FCC ID: DKNCB1138

REPORT NUMBER: 16U22748-E2V2

ISSUE DATE: 3/25/2016

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	3/3/2016	Initial Issue	C. Vergonio
V2	3/25/16	Updated EUT Description and Updated Section 8.	C. Vergonio

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: WLAN 802.11 a/b/g/n, BT 2.1 and RF4CE Satellite Set Top Box

MODEL: ID: 075

SERIAL NUMBER: 200101R01292Y00110H (Conducted)
200101R01282Y00107H (Radiated)

DATE TESTED: FEBRUARY 29 –MARCH 3, 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:

CHARLES VERGONIO
WiSE ENGINEER
UL Verification Services Inc.

Tested By:

JONATHAN HSU
WiSE LAB ENGINEER
UL Verification Services Inc.

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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:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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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%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an 802.11a/b/g/n/ WLAN, BT 2.1 and RF4CE SATTELITE SE.

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	14.42	N/A	14.42	27.67
5745-5825	802.11n HT20	18.17	N/A	18.17	65.61
5755-5795	802.11n HT40	16.22	N/A	16.22	41.88
5.8 GHz band, 2TX					
5745-5825	802.11a CDD	11.22	11.56	14.40	27.57
5745-5825	802.11n HT20 CDD	18.62	19.19	21.92	155.76
5755-5795	802.11n HT40 CDD	15.72	15.95	18.85	76.68

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.

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5.6. WORST-CASE CONFIGURATION AND MODE

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

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

For SISO mode, the conducted & radiated testing was 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.

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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.

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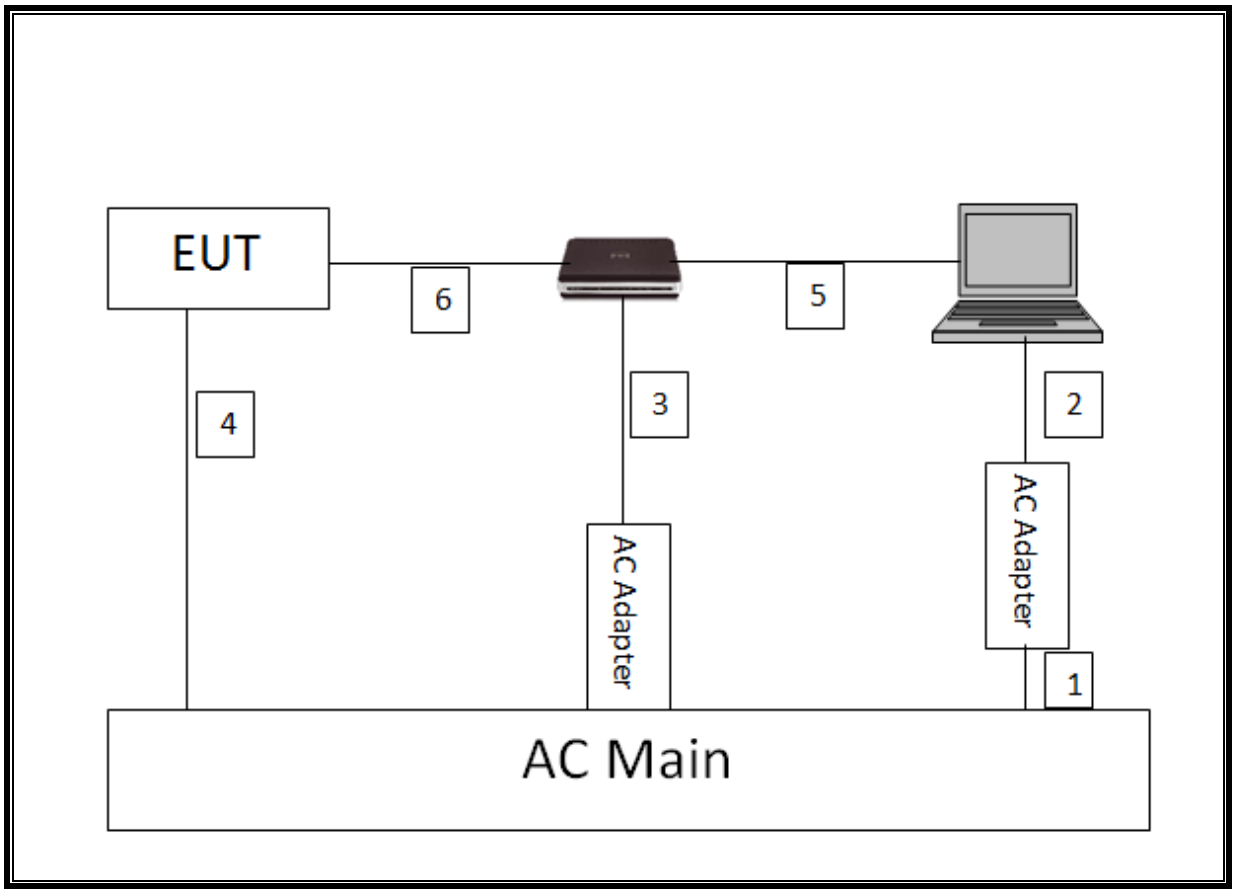
SETUP DIAGRAM FOR TESTS



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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 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	04/13/15	04/13/16
Amplifier, 26-40GHz	Miteq	NSP4000-SP2	88	04/07/15	04/07/16
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-1(	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 4.2, 02/02/16

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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. Power5.15-5.25	<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
§15.407 (h)(2)	RSS-247 6.3	Dynamic Frequency Selection	N/A	Radiated / Condcuted	Pass

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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.

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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	0.932	1.030	0.905	90.49%	0.43	1.073

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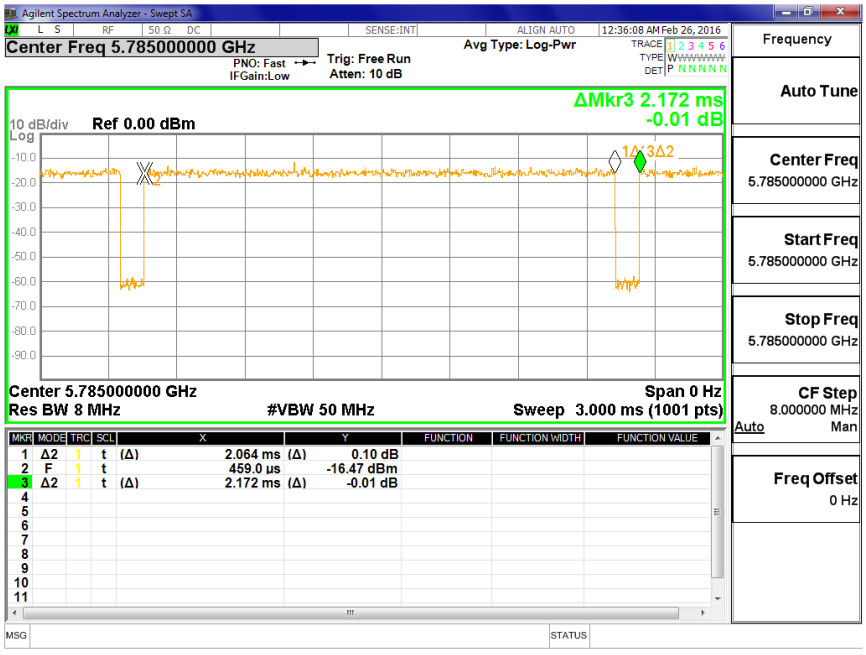
DUTY CYCLE PLOTS

DUTY CYCLE 802.11a



DUTY CYCLE 802.11n

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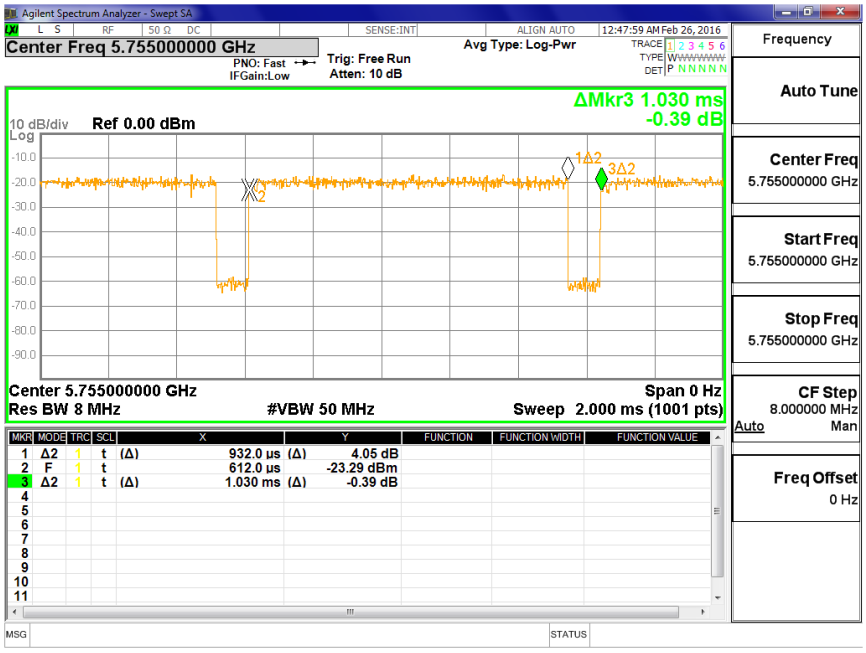
DUTY CYCLE 802.11n HT40



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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	15.2490	0.5
Mid	5785	16.3000	0.5
High	5825	16.3500	0.5

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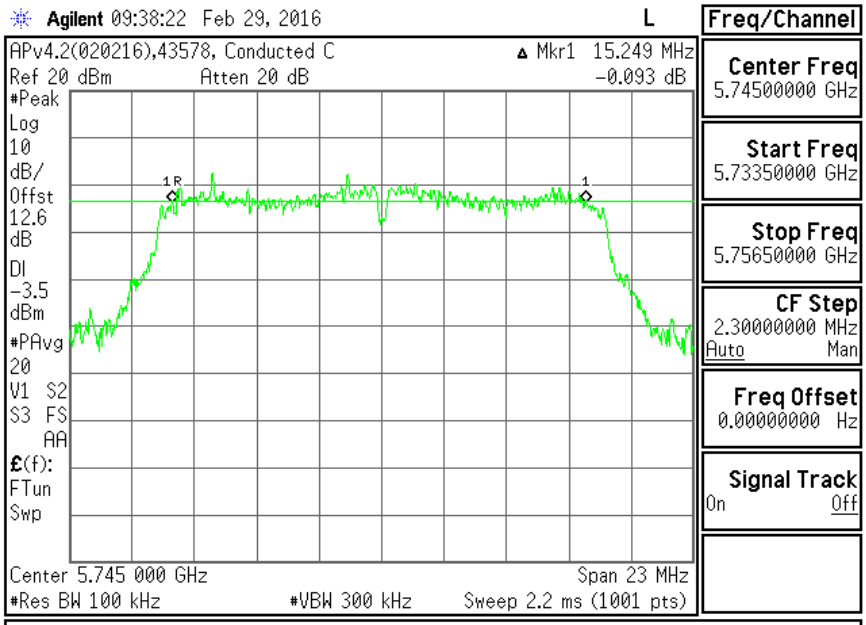
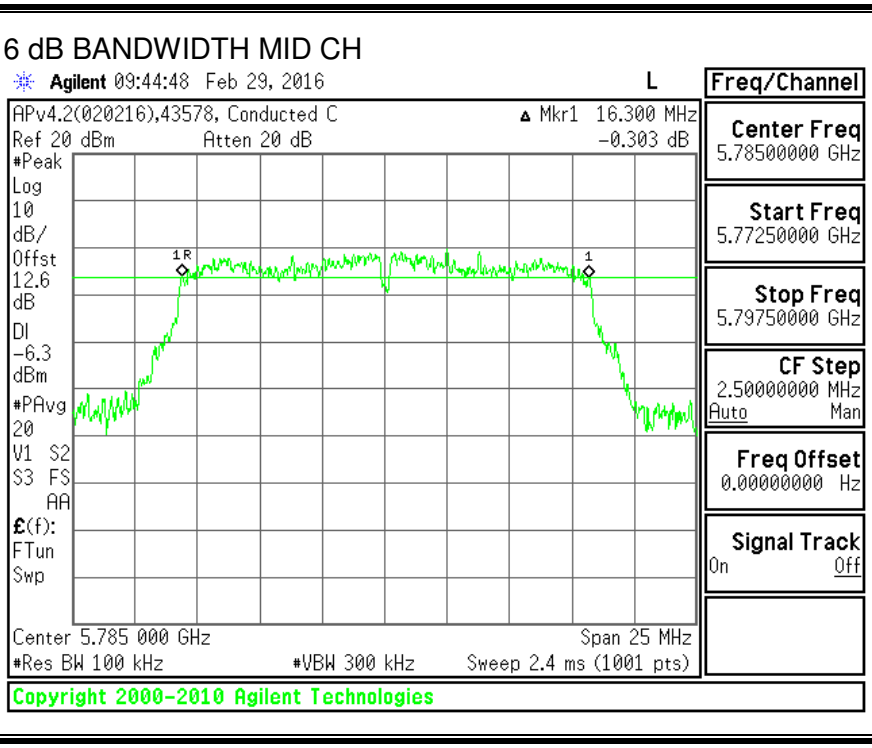
6 dB BANDWIDTH

6 dB BANDWIDTH LOW CH



6 dB BANDWIDTH MID CH



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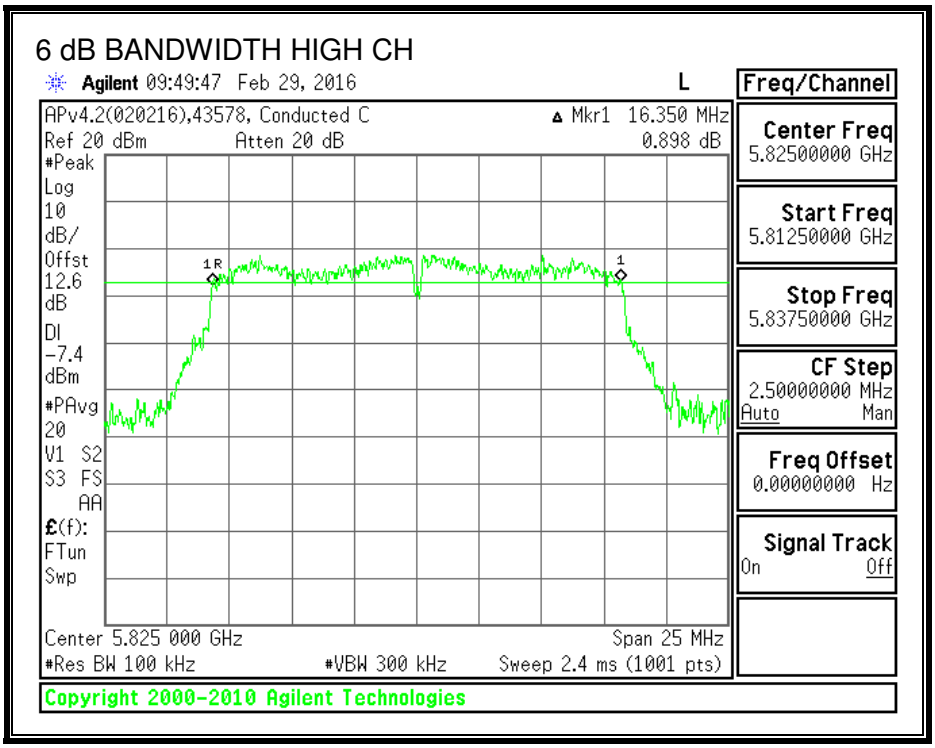

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9.2.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	16.3414
Mid	5785	16.3328
High	5825	16.1911

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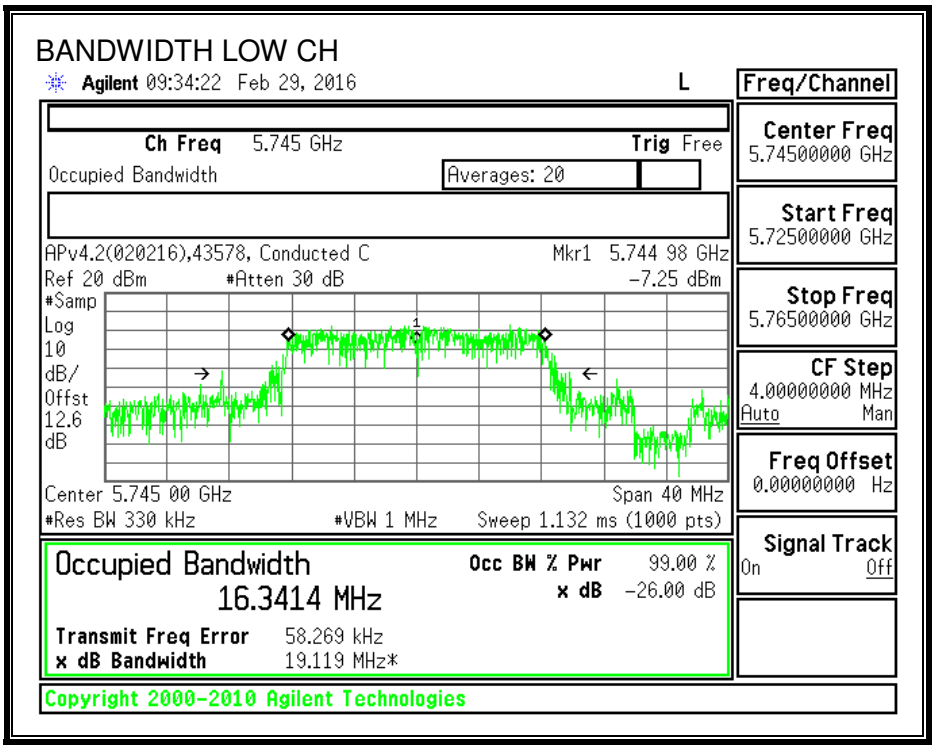
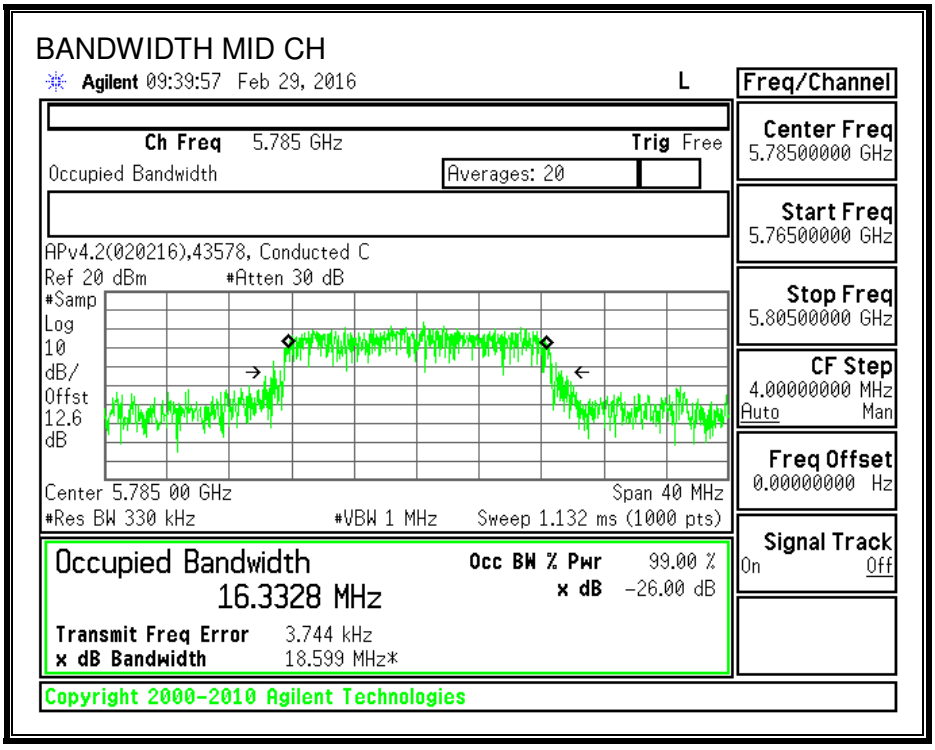
99% BANDWIDTH





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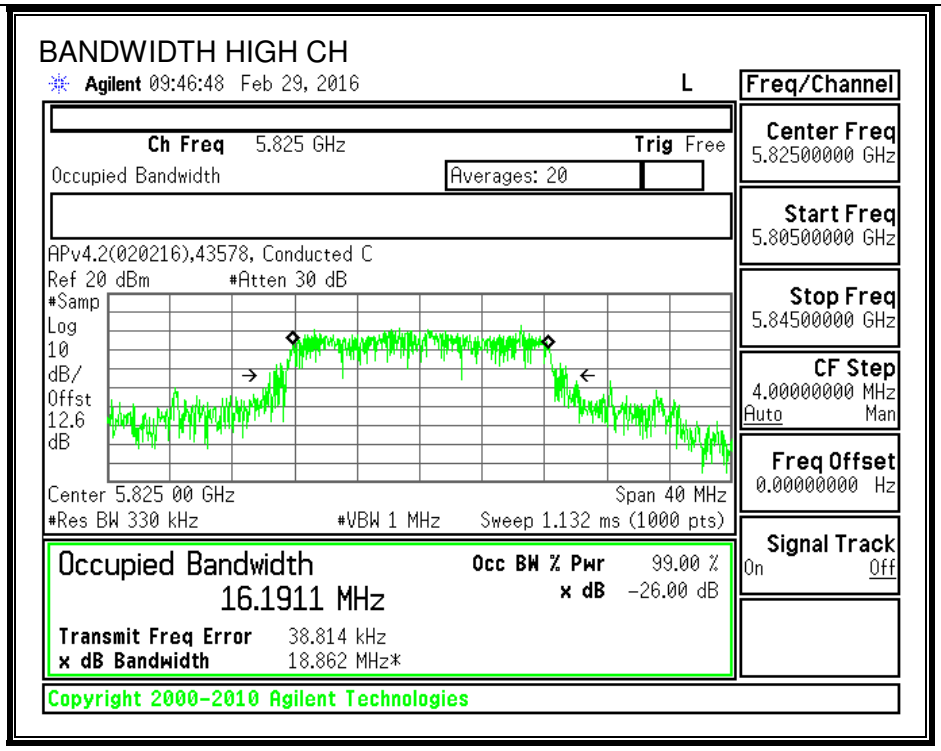

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9.2.3. OUTPUT POWER

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.

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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	14.08	14.08	30.00	-15.92
Mid	5785	14.42	14.42	30.00	-15.58
High	5825	14.27	14.27	30.00	-15.73

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.

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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.

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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	1.637	1.857	30.00	-28.14
Mid	5785	1.194	1.414	30.00	-28.59
High	5825	1.416	1.636	30.00	-28.36

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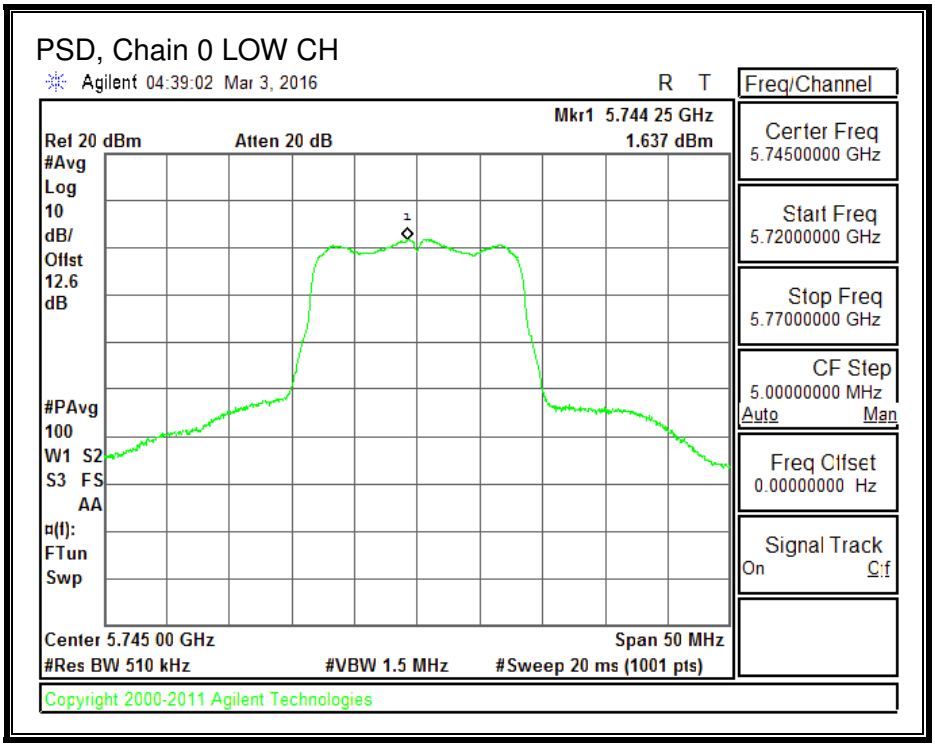
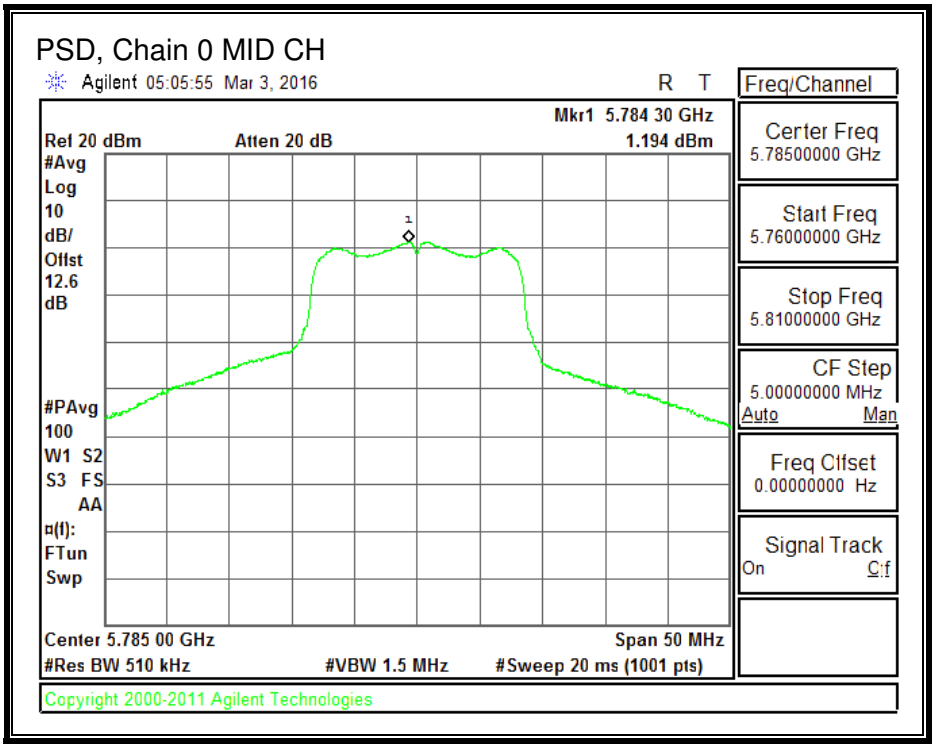
PSD, Chain 0





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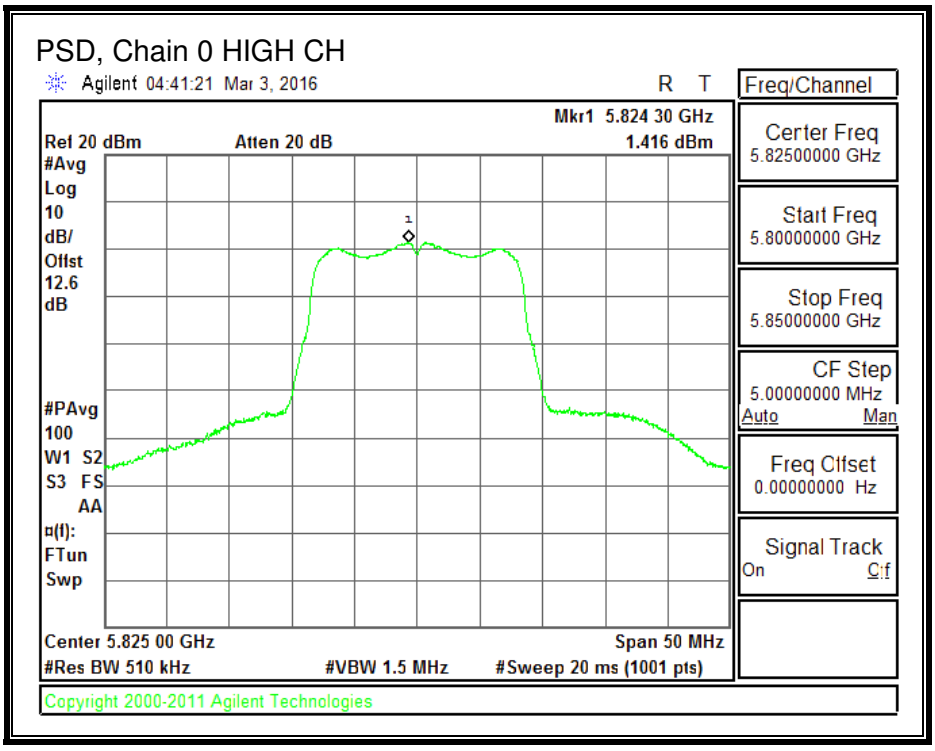

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9.3. 802.11a CDD 2TX MODE IN THE 5.8 GHz BAND

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	15.7920	16.3000	0.5
Mid	5785	15.6960	16.3000	0.5
High	5825	15.7680	16.0080	0.5

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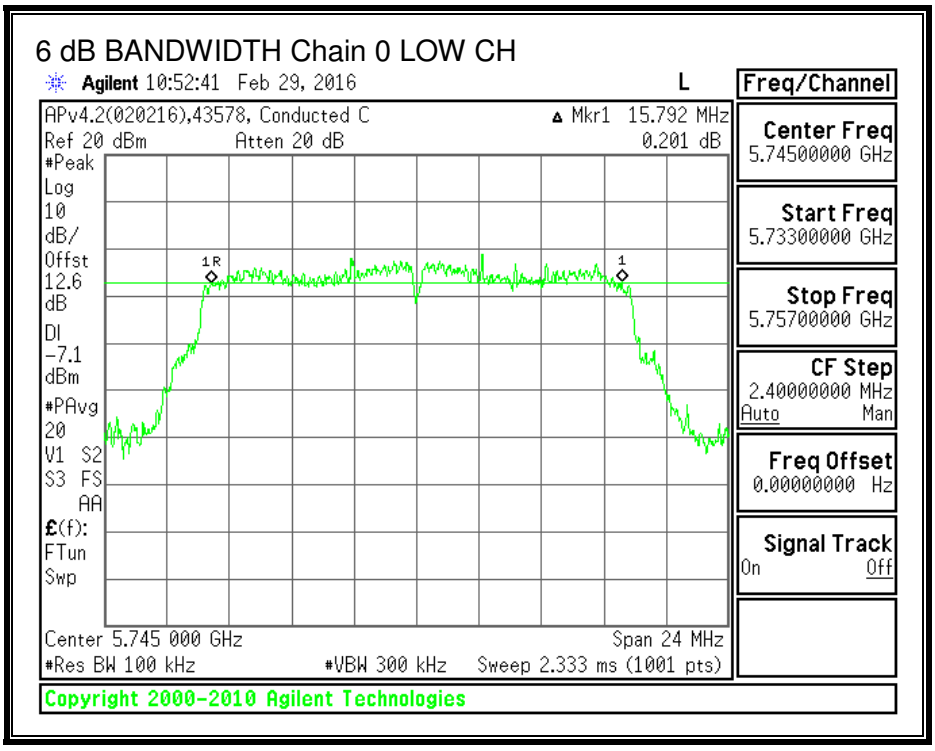
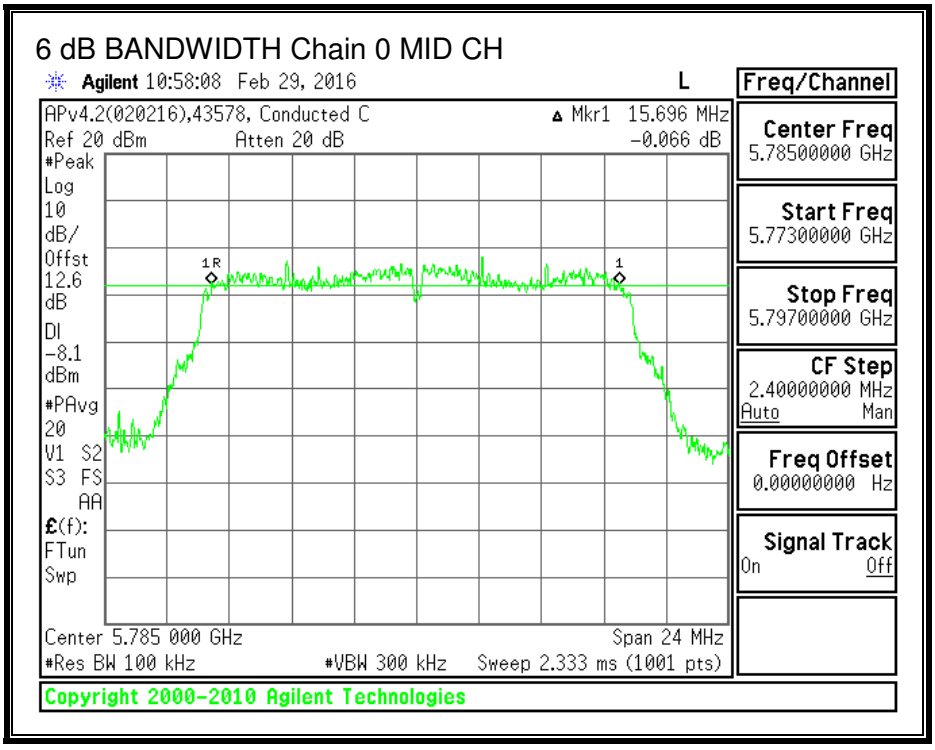
6 dB BANDWIDTH, Chain 0





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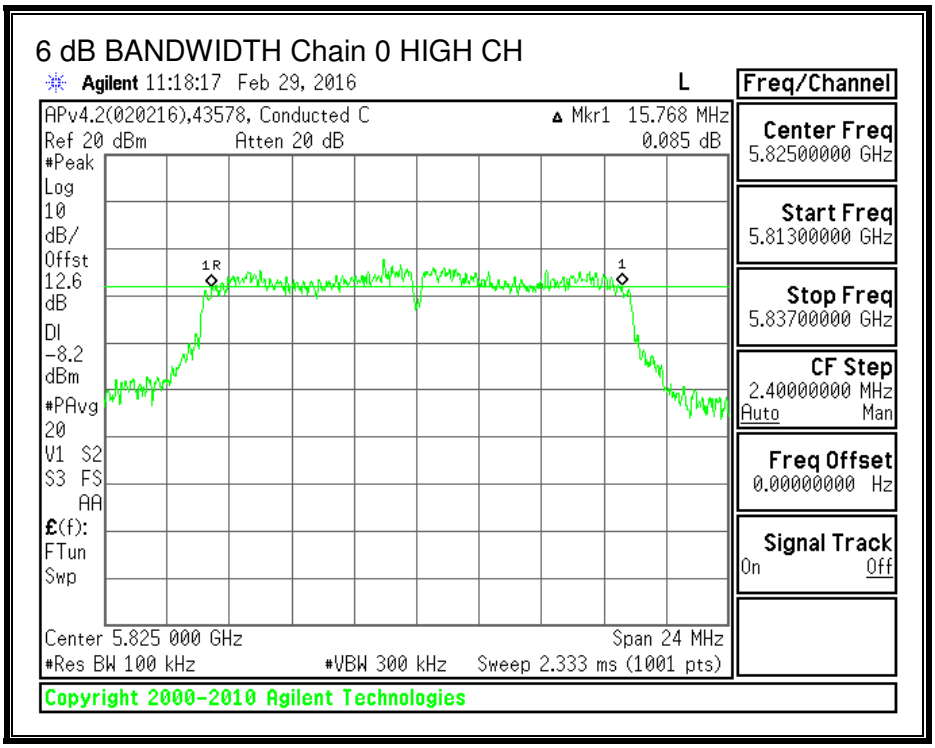
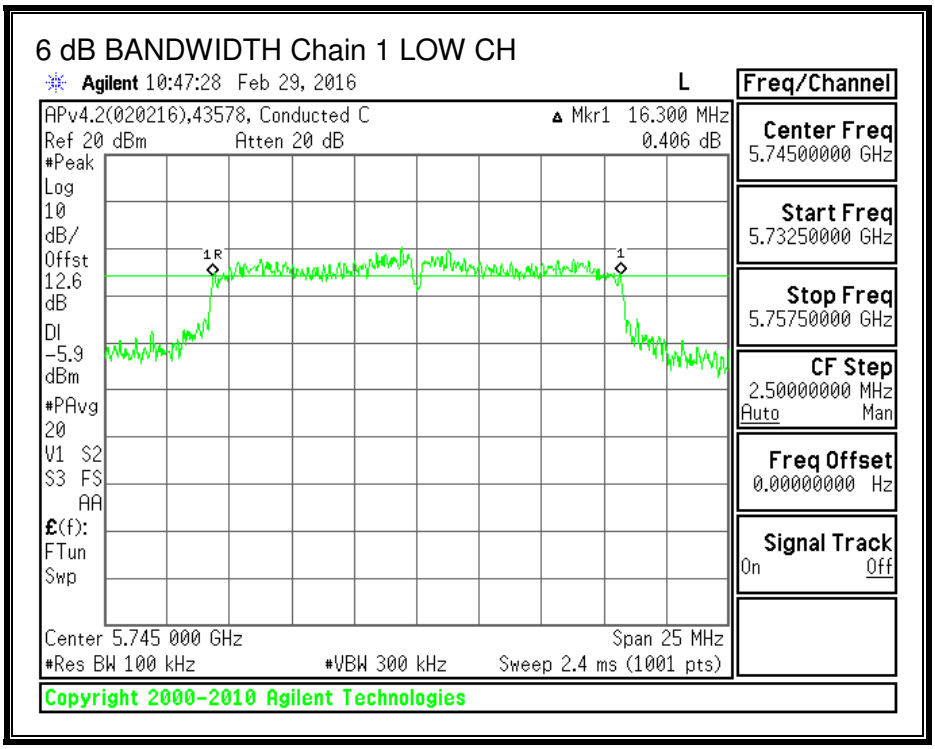


6 dB BANDWIDTH, Chain 1



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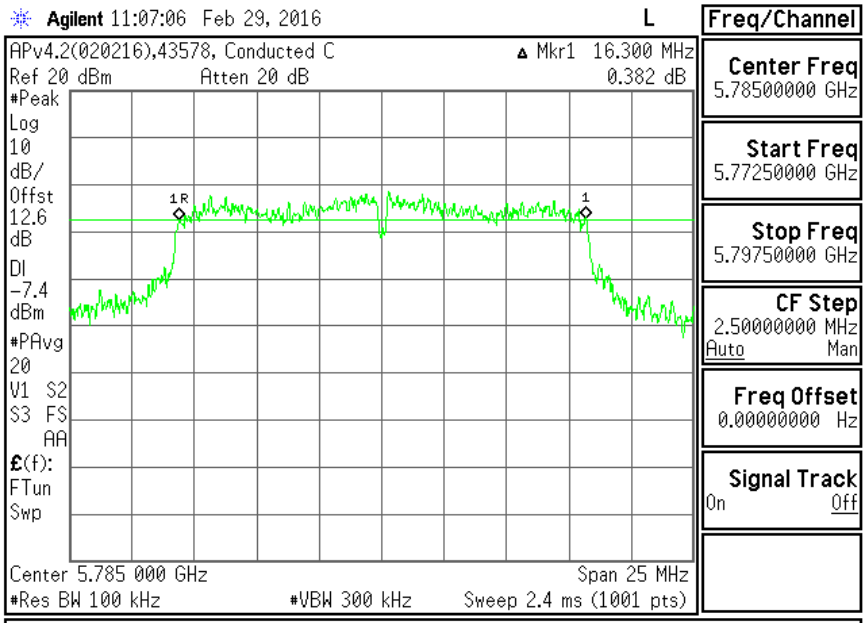
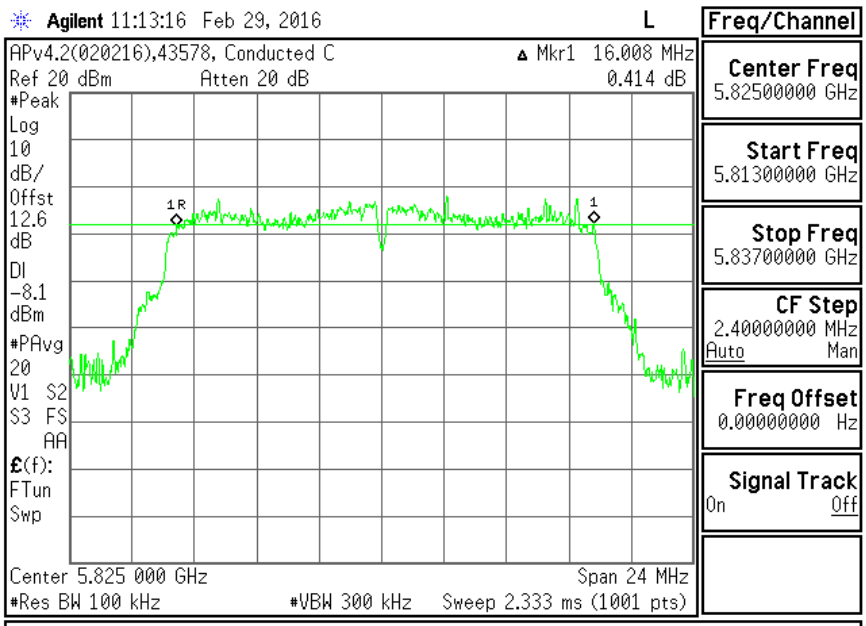
6 dB BANDWIDTH Chain 1 MID CH



6 dB BANDWIDTH Chain 1 HIGH CH



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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	16.2026	17.8193
Mid	5785	16.3538	16.5799
High	5825	16.1650	16.3721

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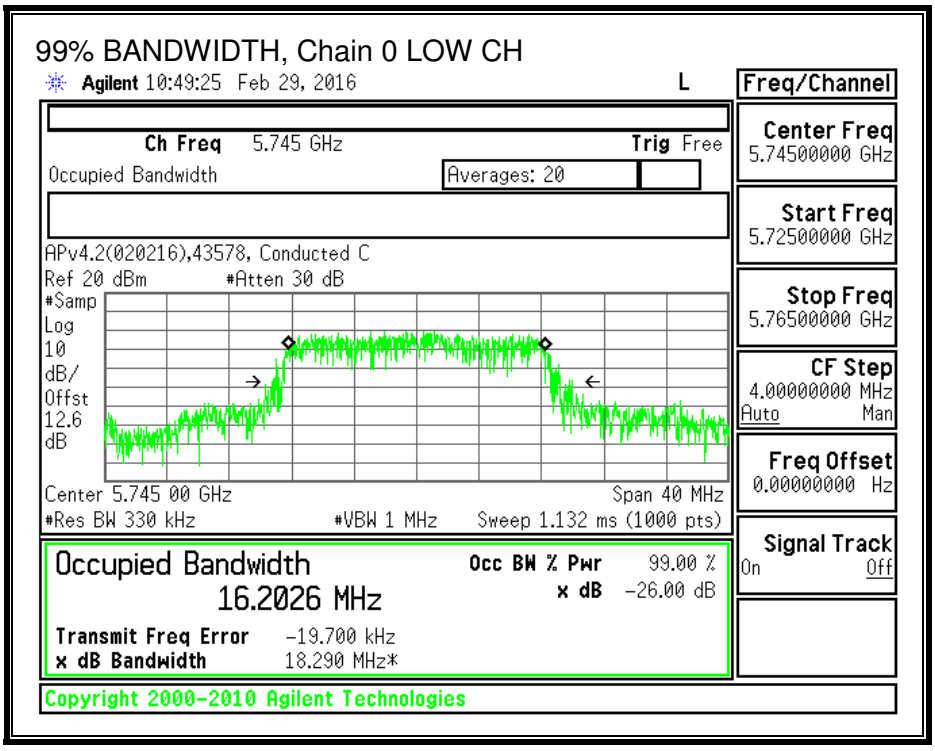
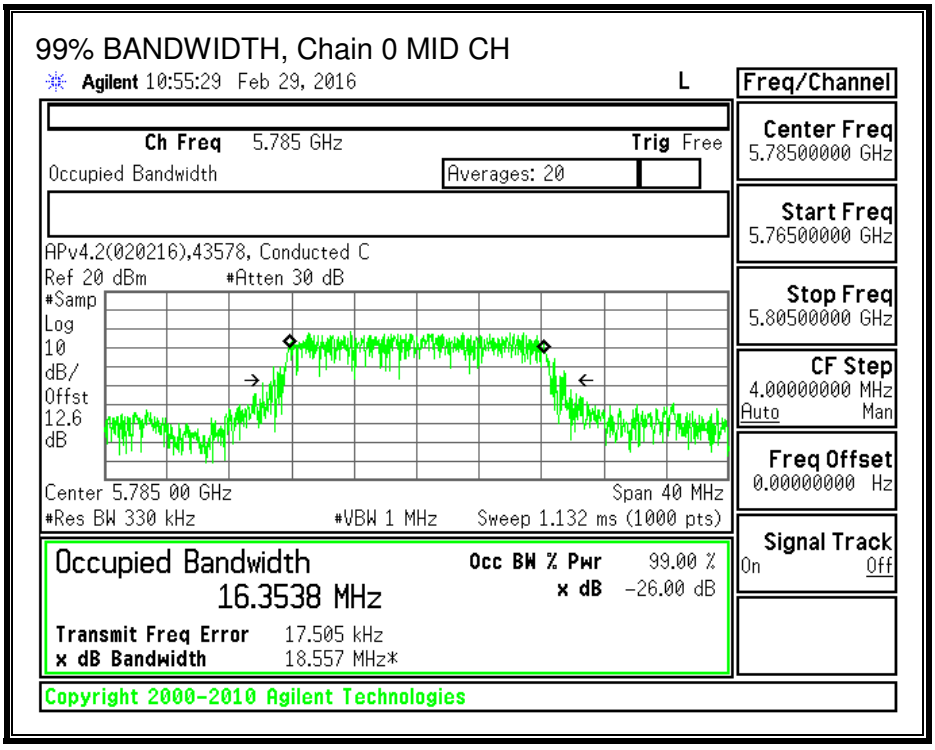
99% BANDWIDTH, Chain 0





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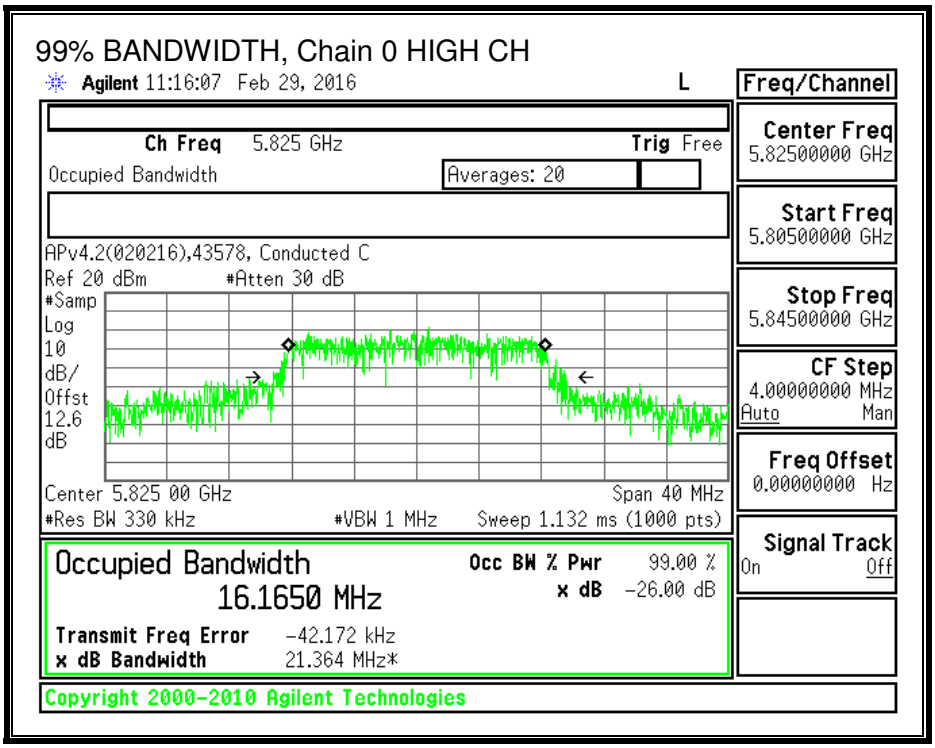
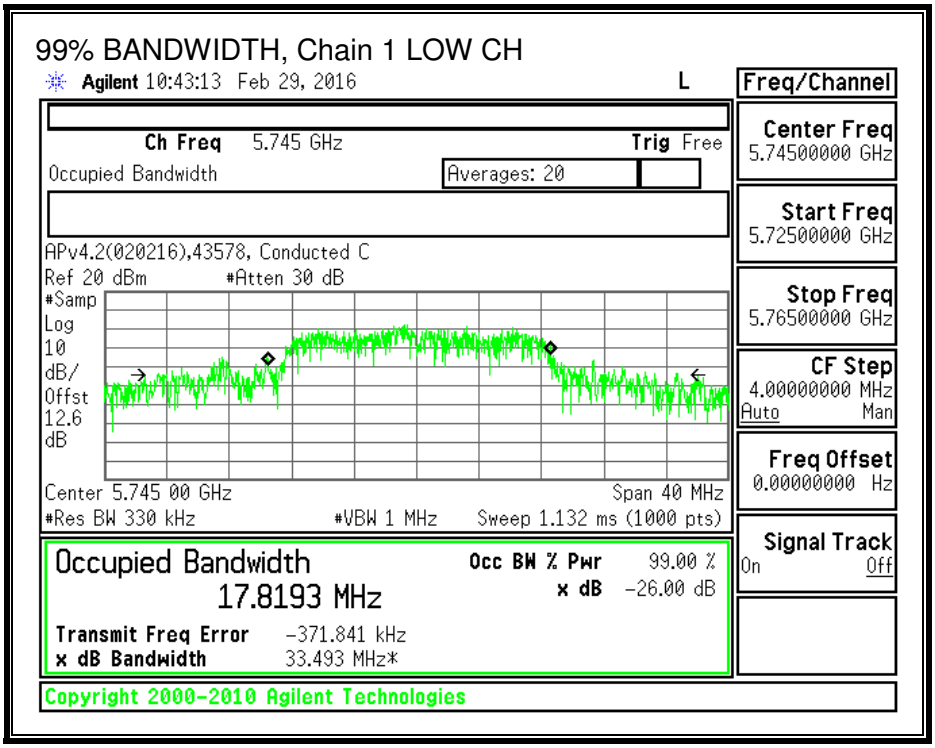


99% BANDWIDTH, Chain 1



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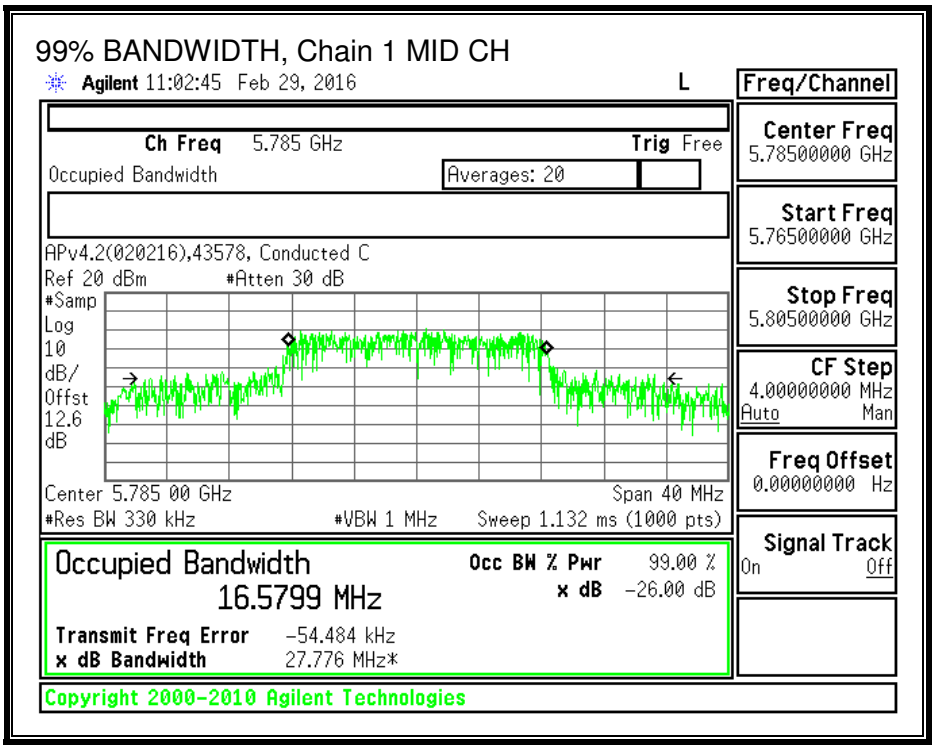

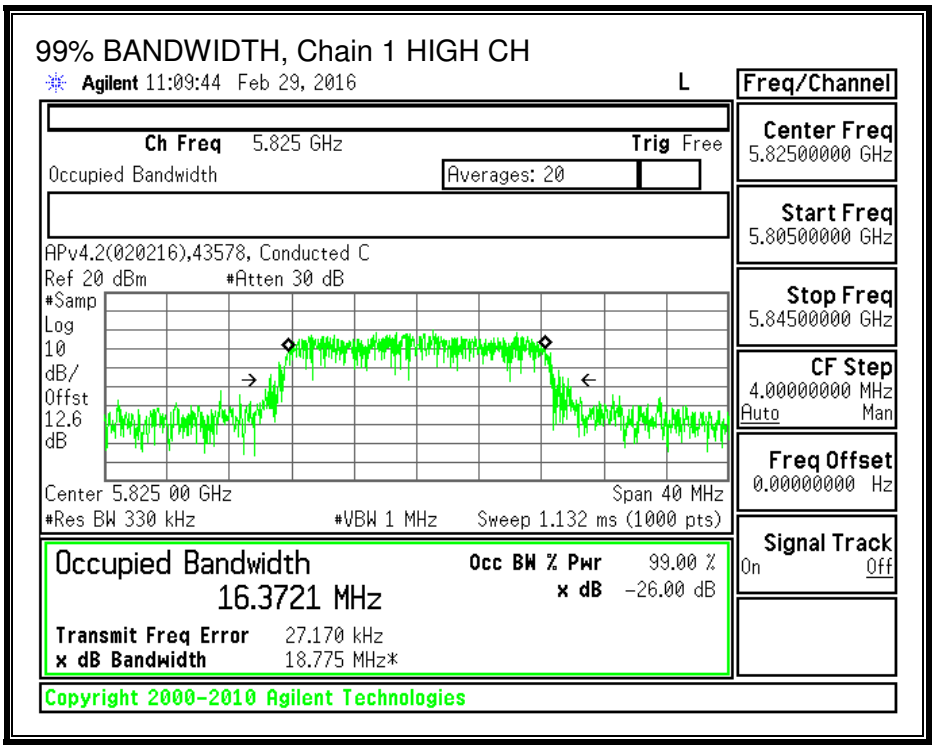

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9.3.3. OUTPUT POWER

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

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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	11.22	11.56	14.40	30.00	-15.60
Mid	5785	10.96	10.95	13.97	30.00	-16.03
High	5825	10.51	11.53	14.06	30.00	-15.94

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.

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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

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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	-1.070	-0.601	2.40	30.00	-27.60
Mid	5785	-1.688	-1.810	1.48	30.00	-28.52
High	5825	-1.671	-0.971	1.92	30.00	-28.08

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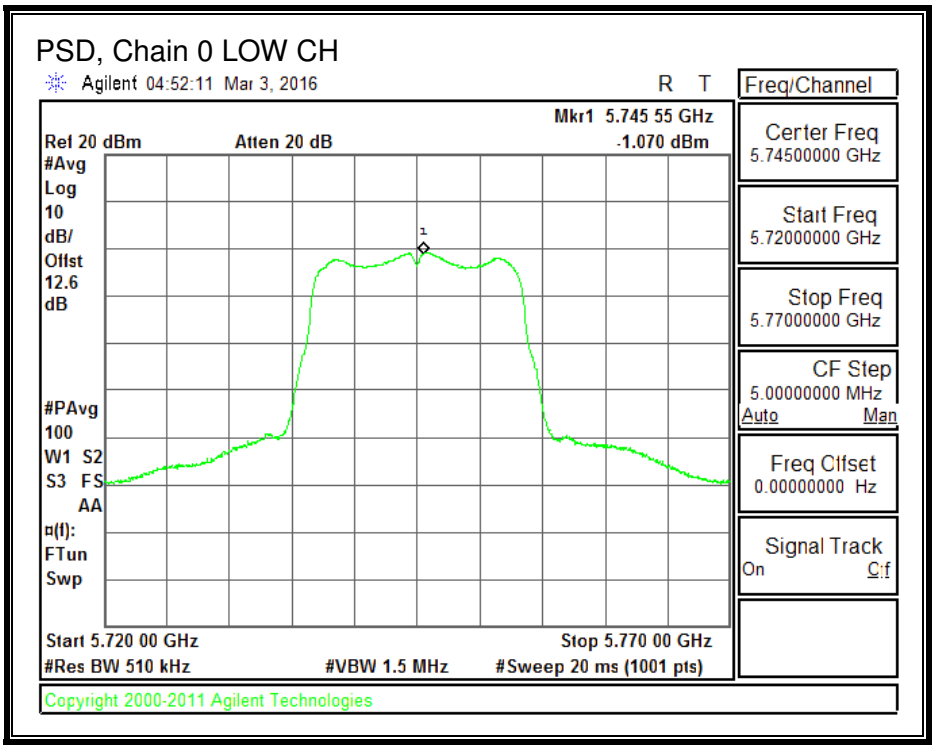
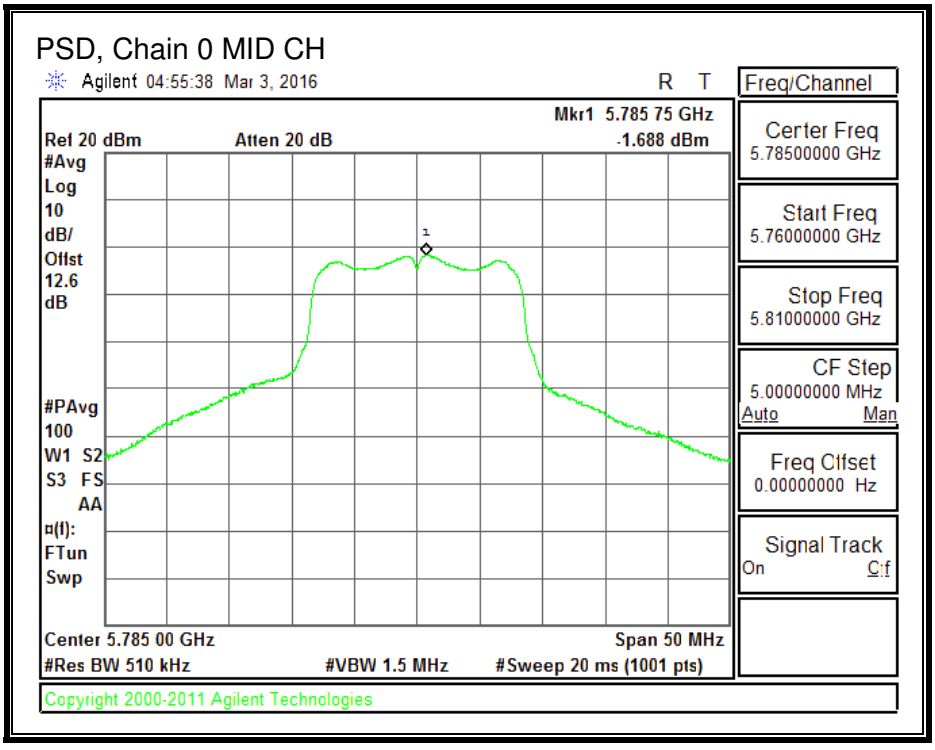
PSD, Chain 0





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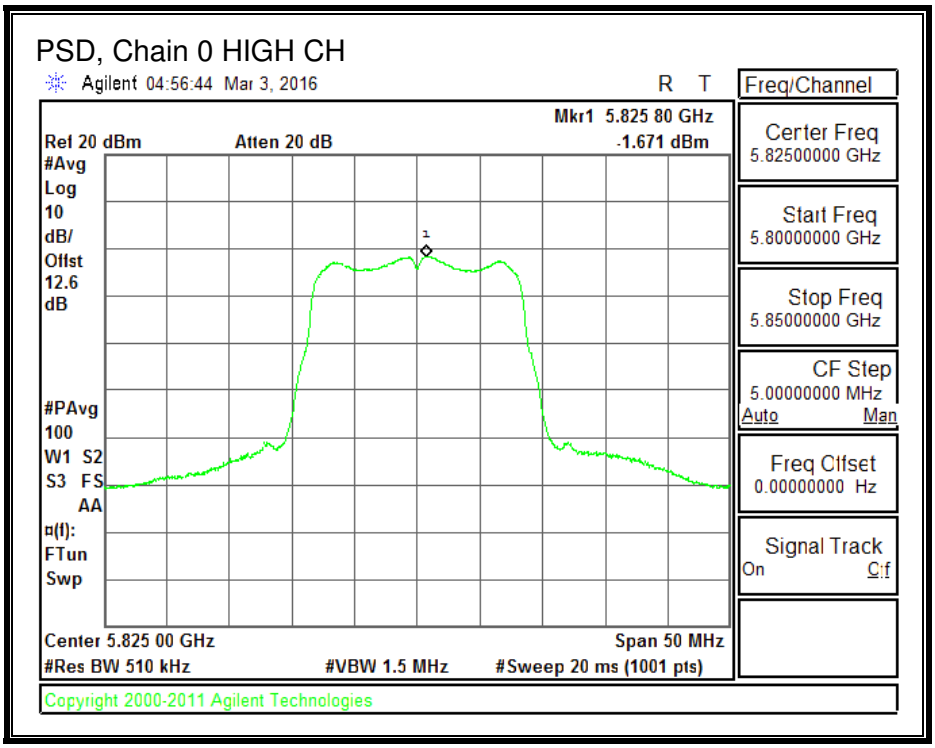
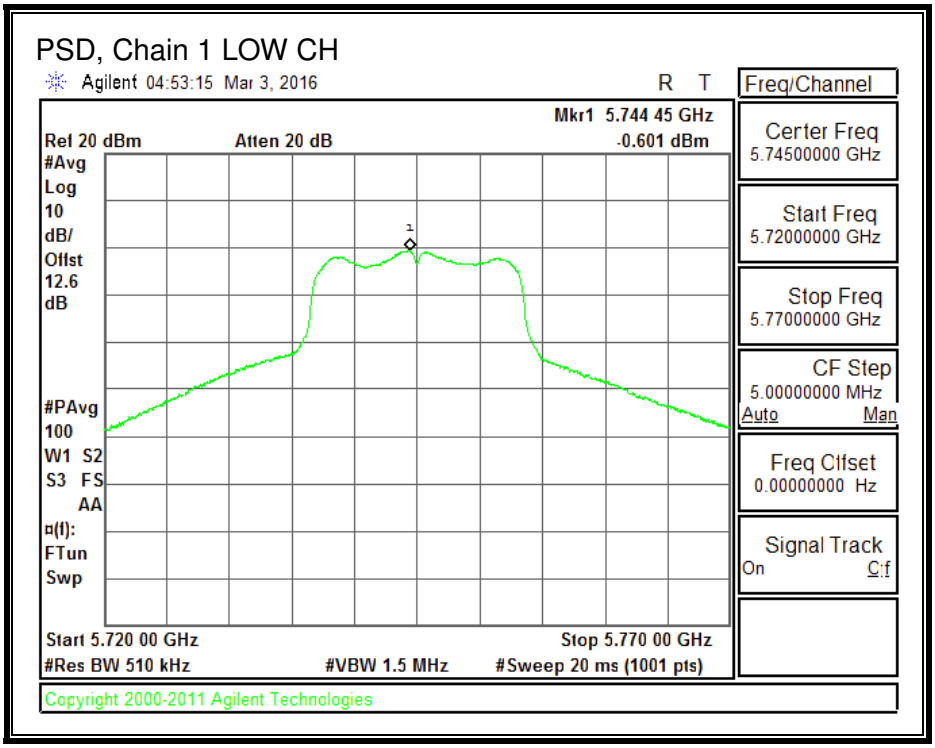


PSD, Chain 1



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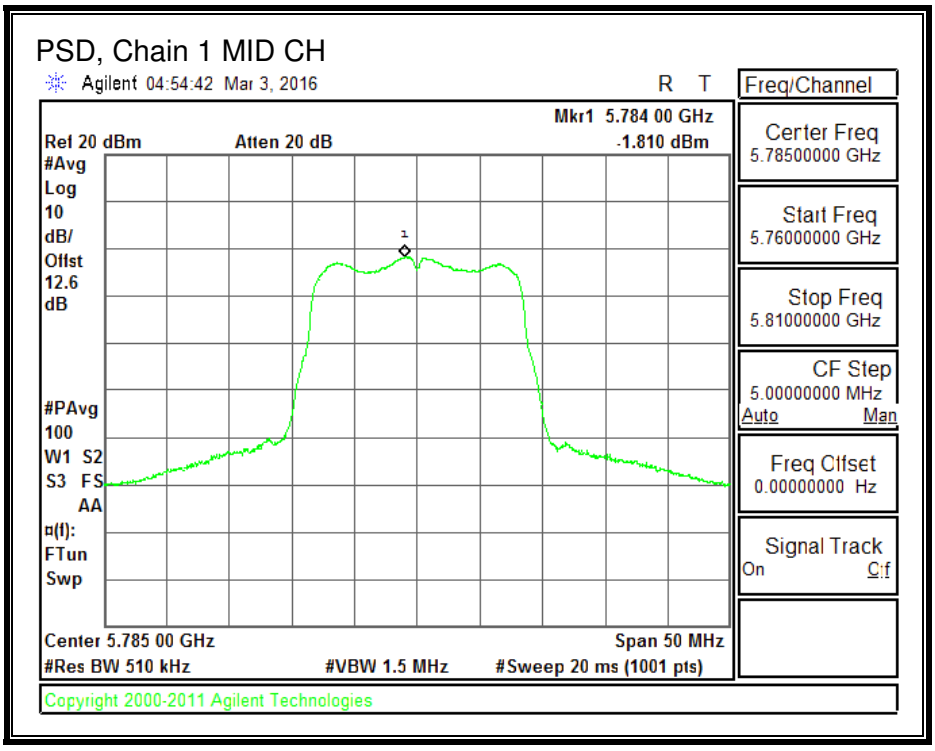

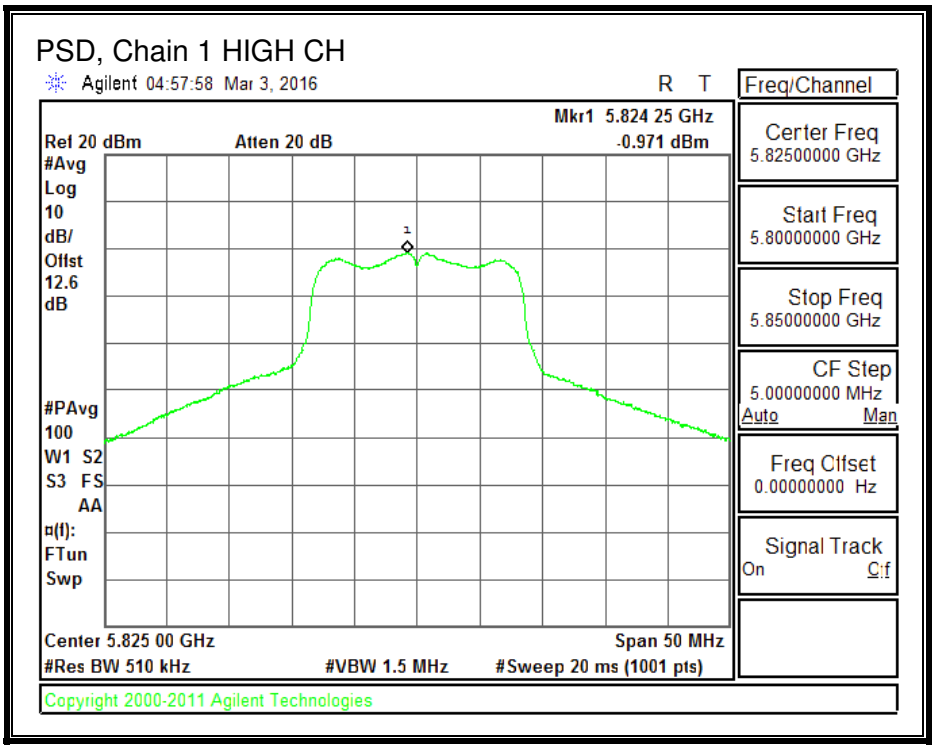

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9.4. 802.11n HT20 SISO MODE IN THE 5.8 GHz BAND

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	17.4980	0.5
Mid	5785	15.1110	0.5
High	5825	15.0680	0.5

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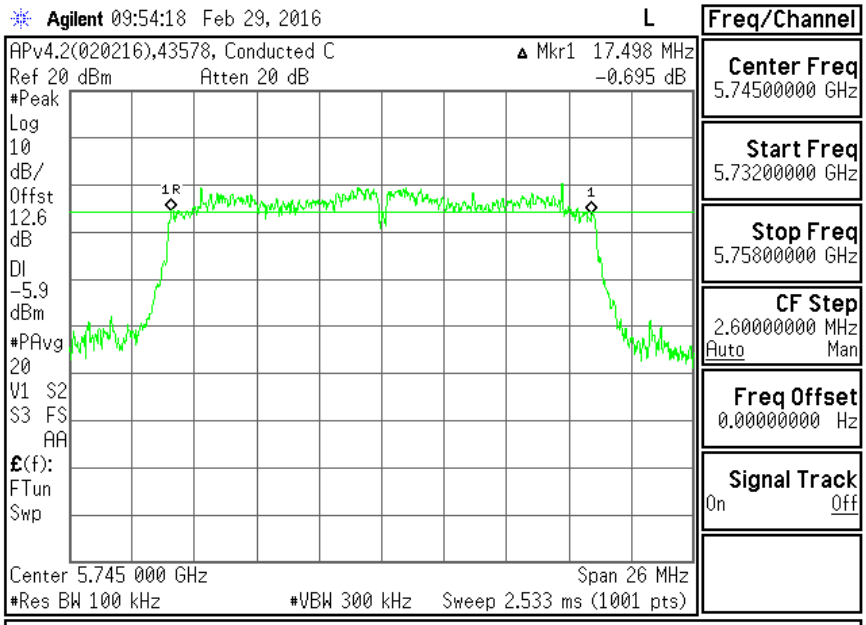
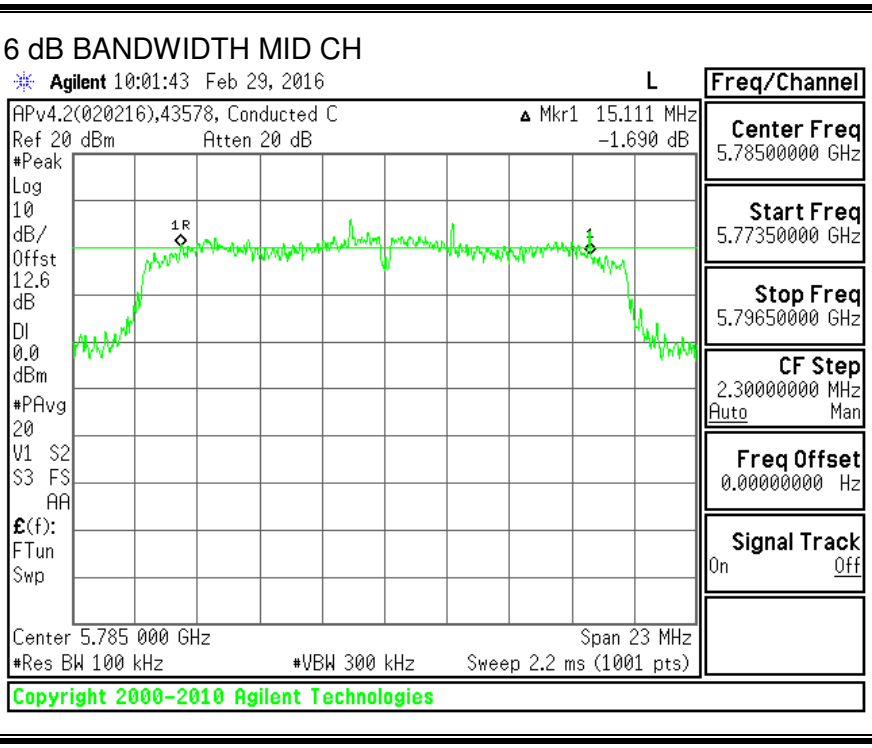
6 dB BANDWIDTH

6 dB BANDWIDTH LOW CH



6 dB BANDWIDTH MID CH



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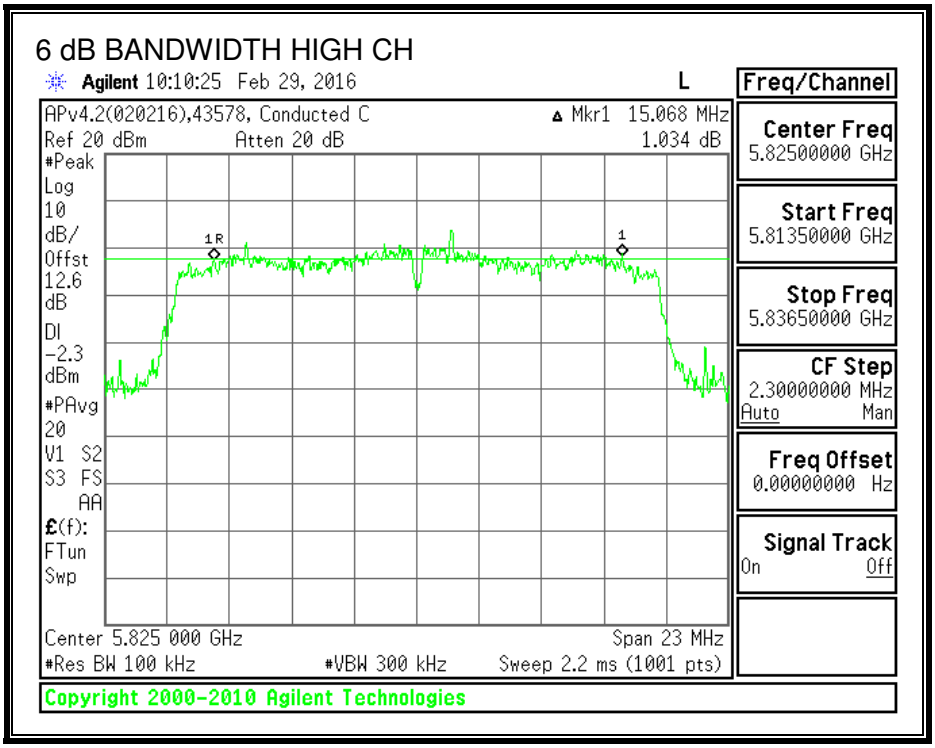

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9.4.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5745	17.5700
Mid	5785	17.4653
High	5825	17.5888

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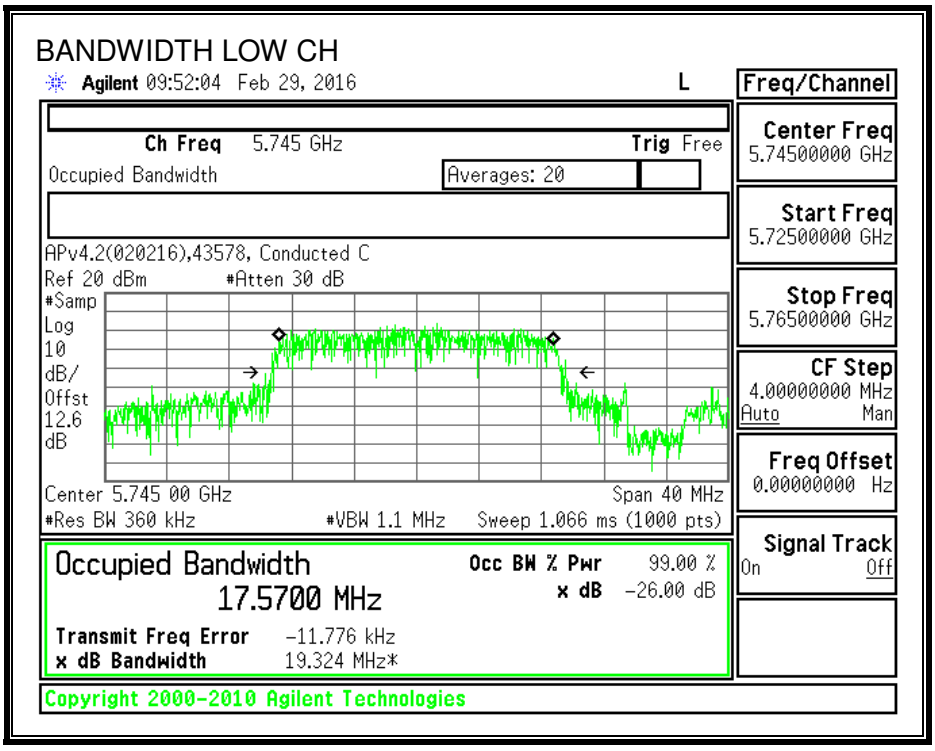
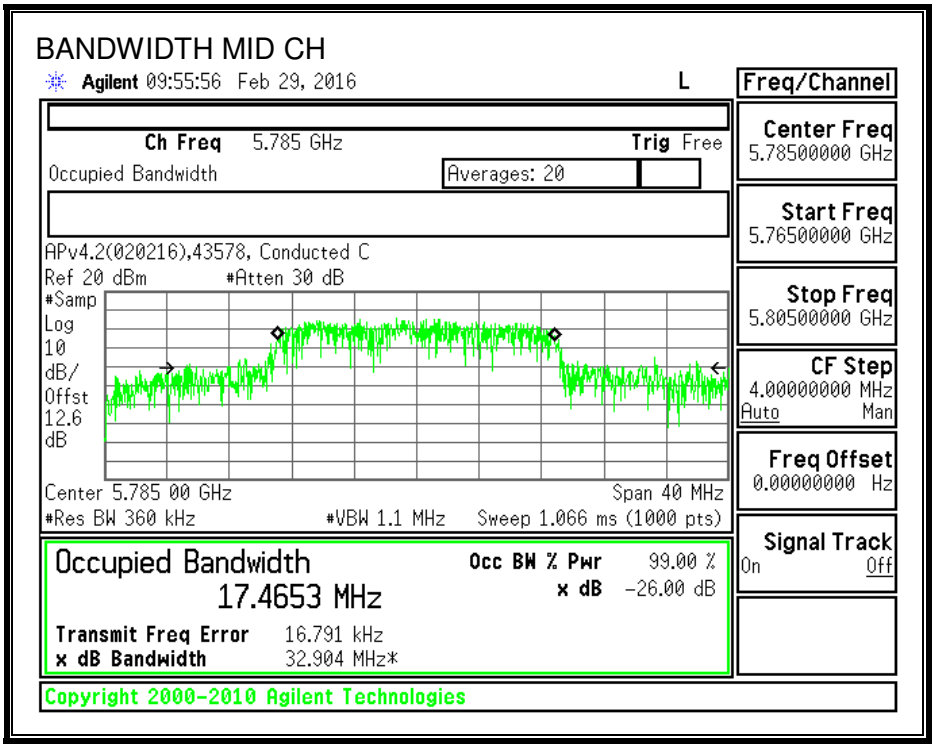
99% BANDWIDTH





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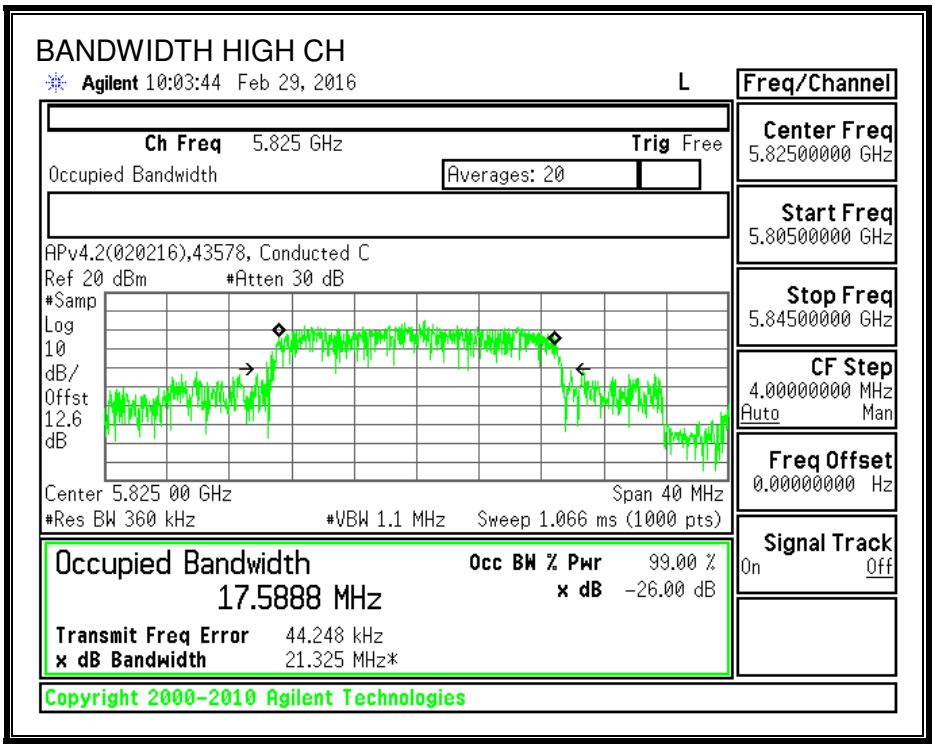

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9.4.3. OUTPUT POWER

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.

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RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	3.20	30.00
153	5765	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	13.87	13.87	30.00	-16.13
153	5765	18.17	18.17	30.00	-11.83
Mid	5785	17.26	17.26	30.00	-12.74
High	5825	15.63	15.63	30.00	-14.37

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.

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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.

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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	-0.430	-0.210	30.00	-30.21
Mid	5785	4.221	4.441	30.00	-25.56
High	5825	0.605	0.825	30.00	-29.18

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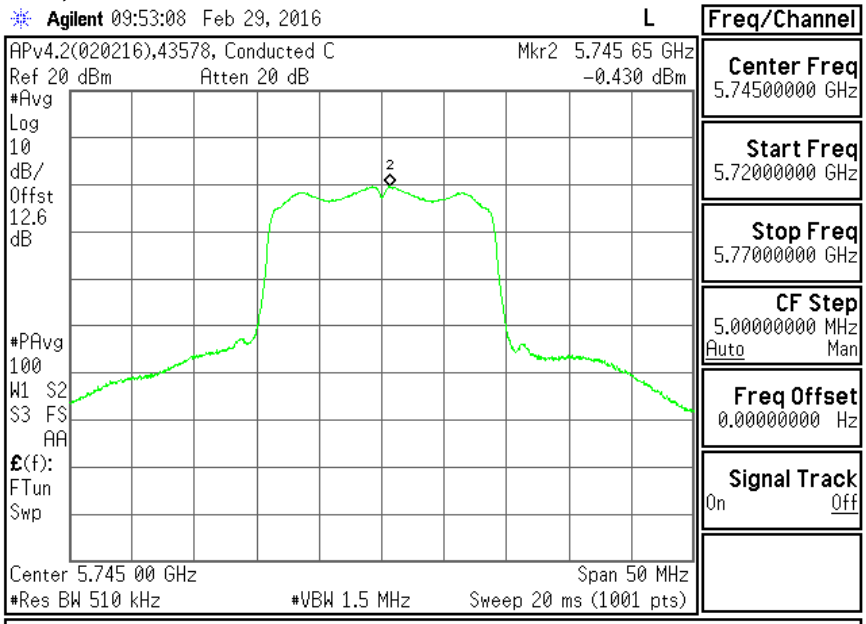
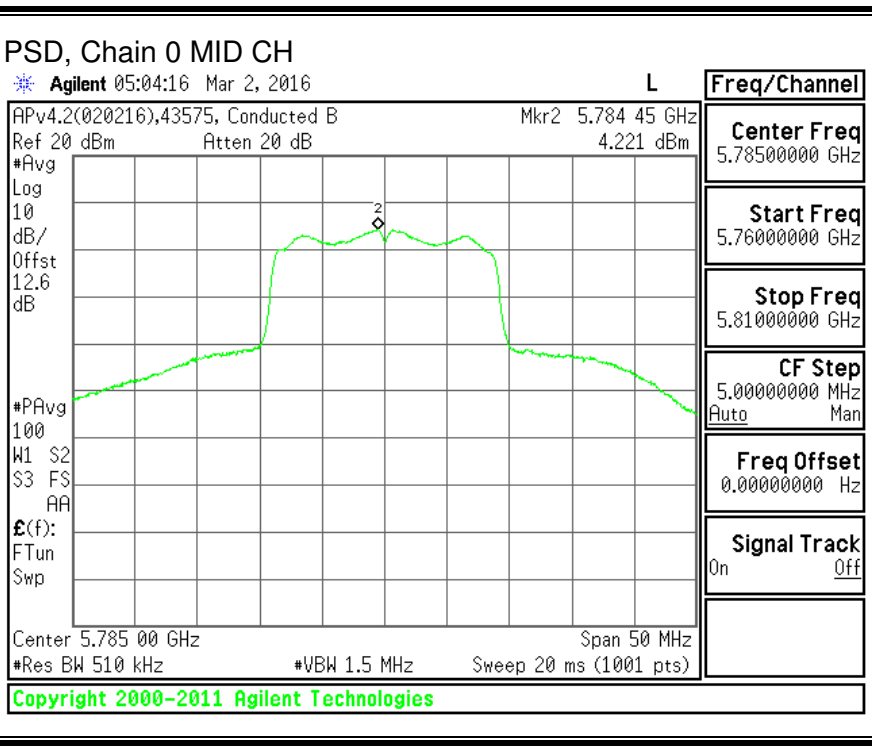
PSD, Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 MID CH



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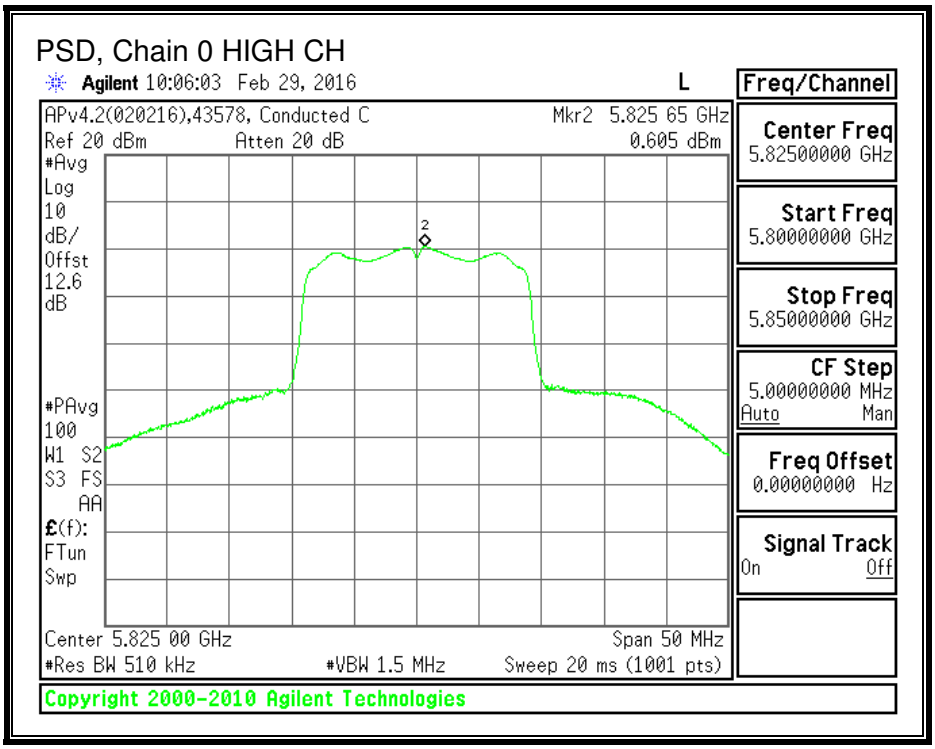
PSD, Chain 0 HIGH CH



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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	17.1500	17.5000	0.5
Mid	5785	14.8580	15.1340	0.5
High	5825	16.5280	16.4750	0.5

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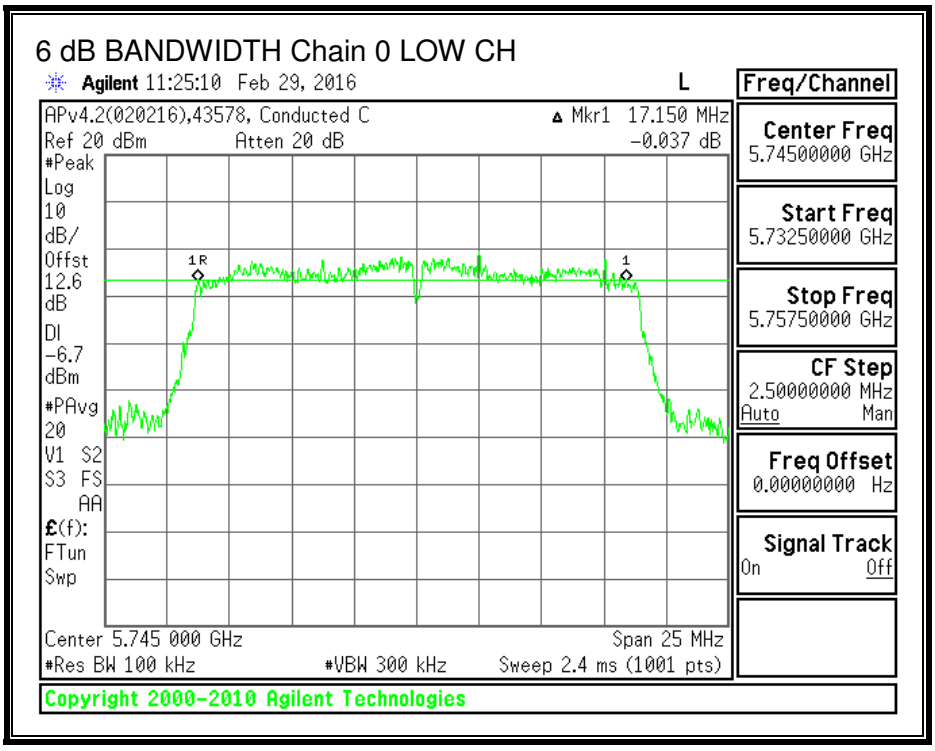
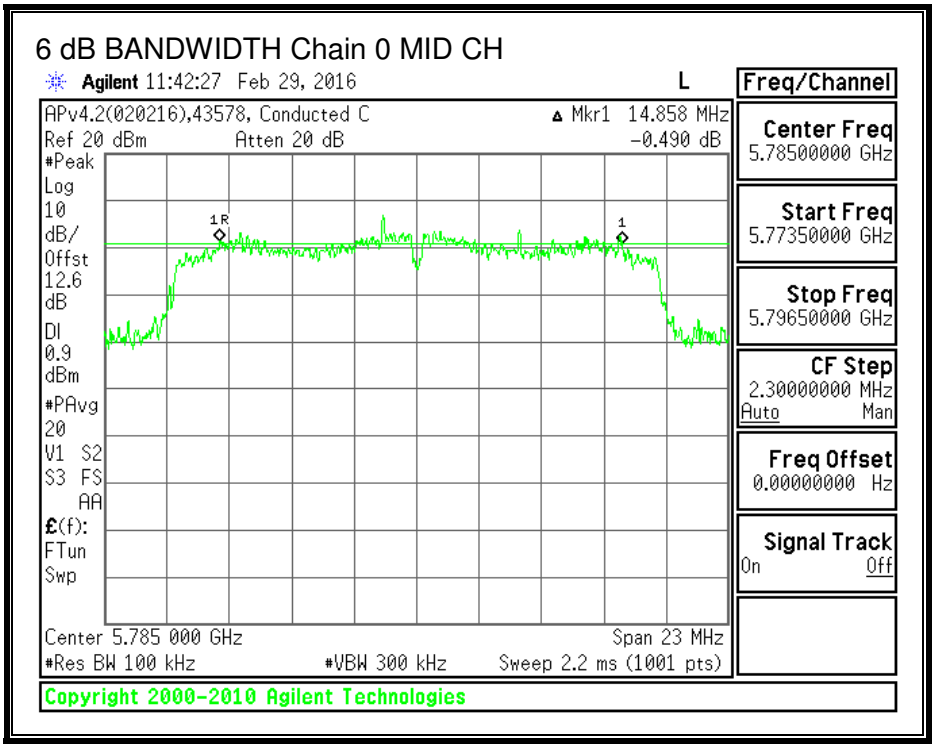
6 dB BANDWIDTH, Chain 0





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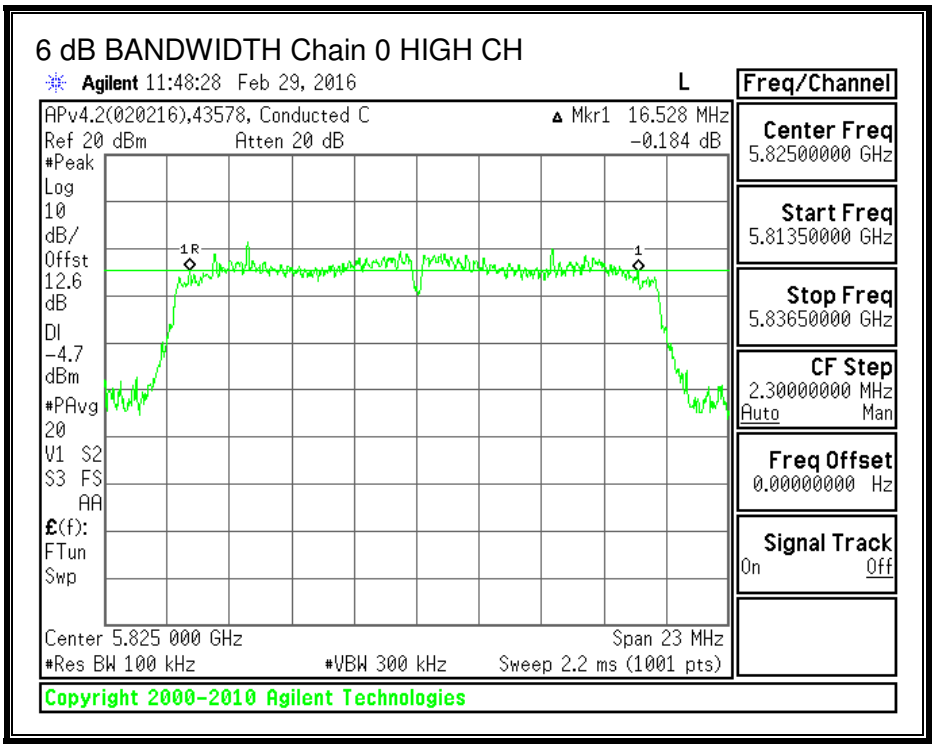
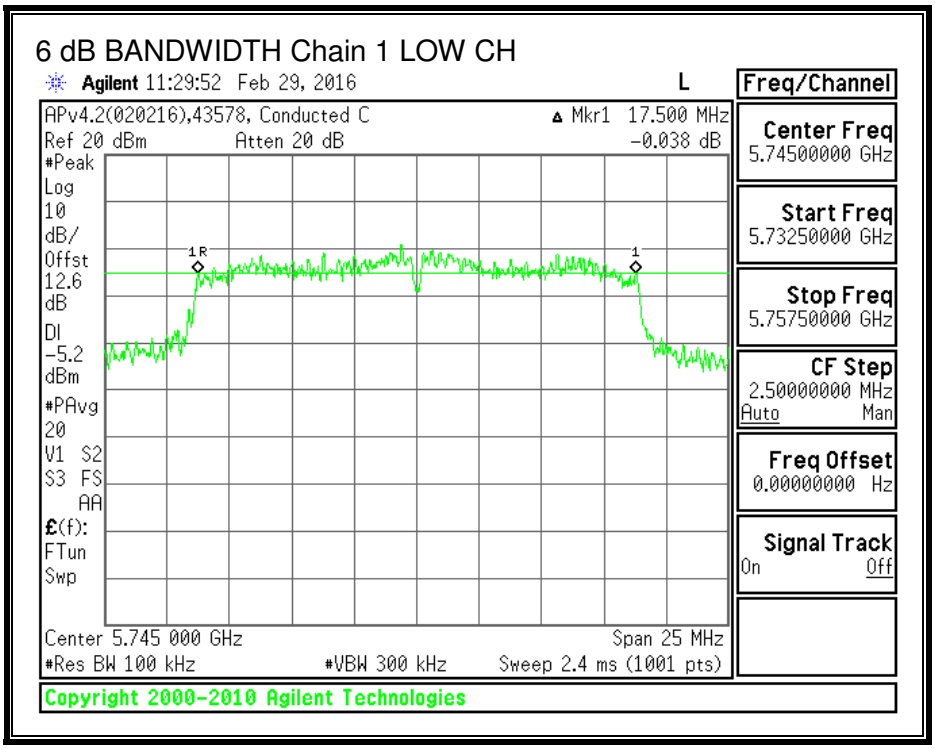


6 dB BANDWIDTH, Chain 1



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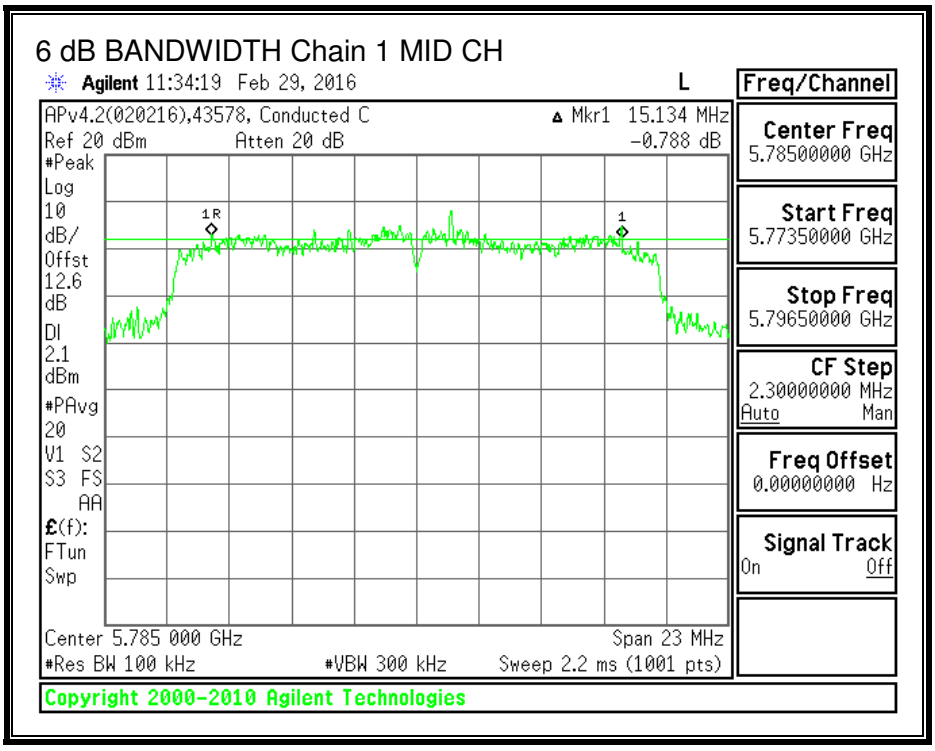

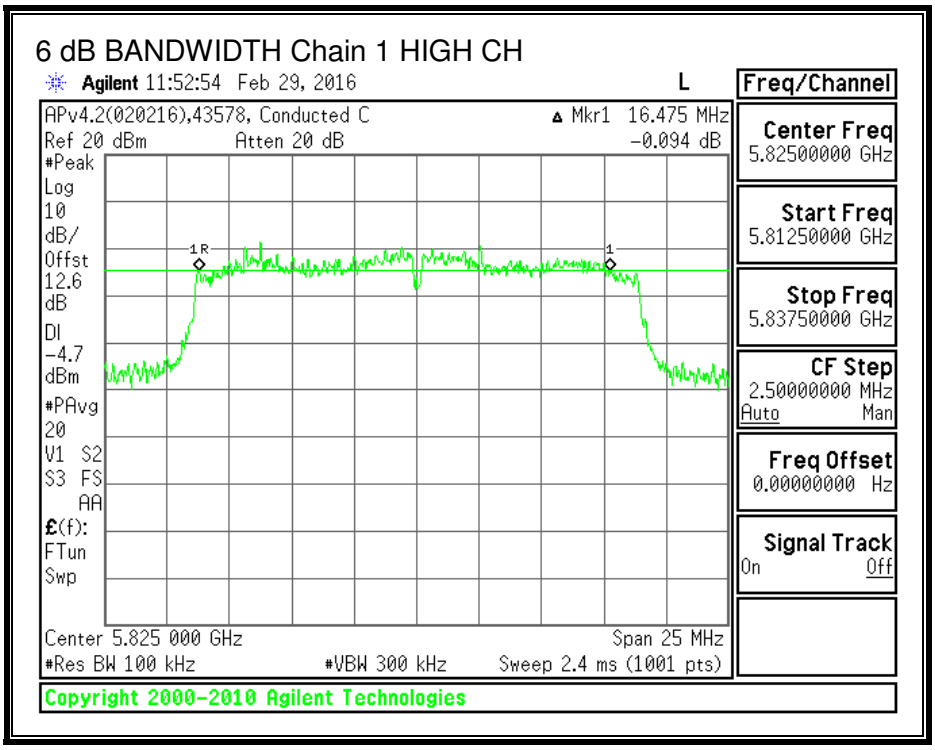

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9.5.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% BW Chain 0 (MHz)	99% BW Chain 1 (MHz)
Low	5745	17.4403	18.5488
Mid	5785	17.1848	19.7964
High	5825	17.2998	17.5886

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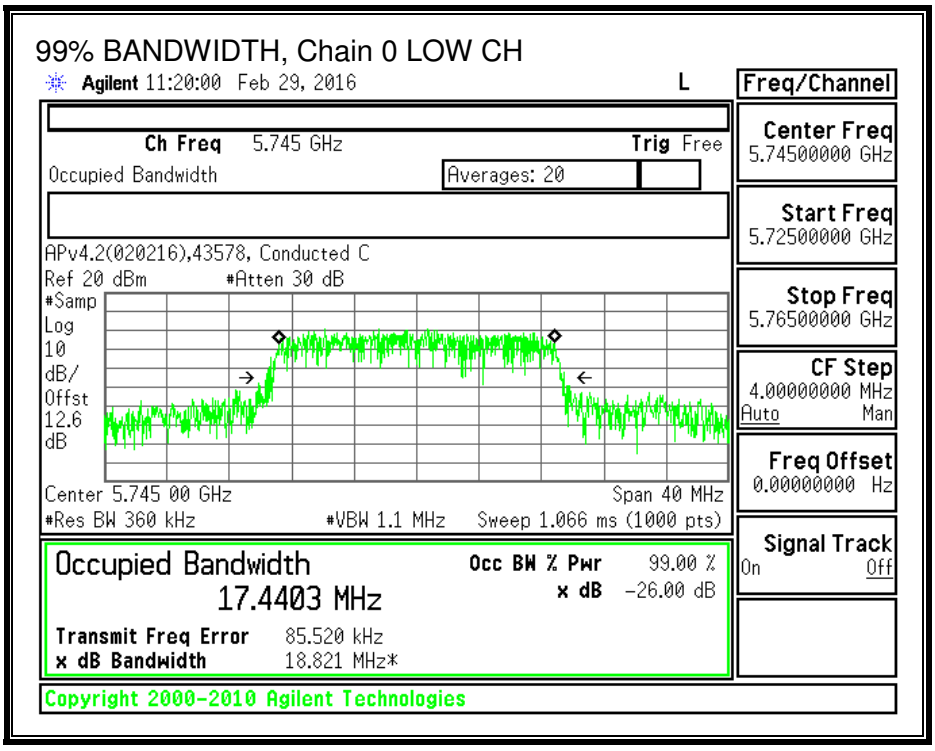
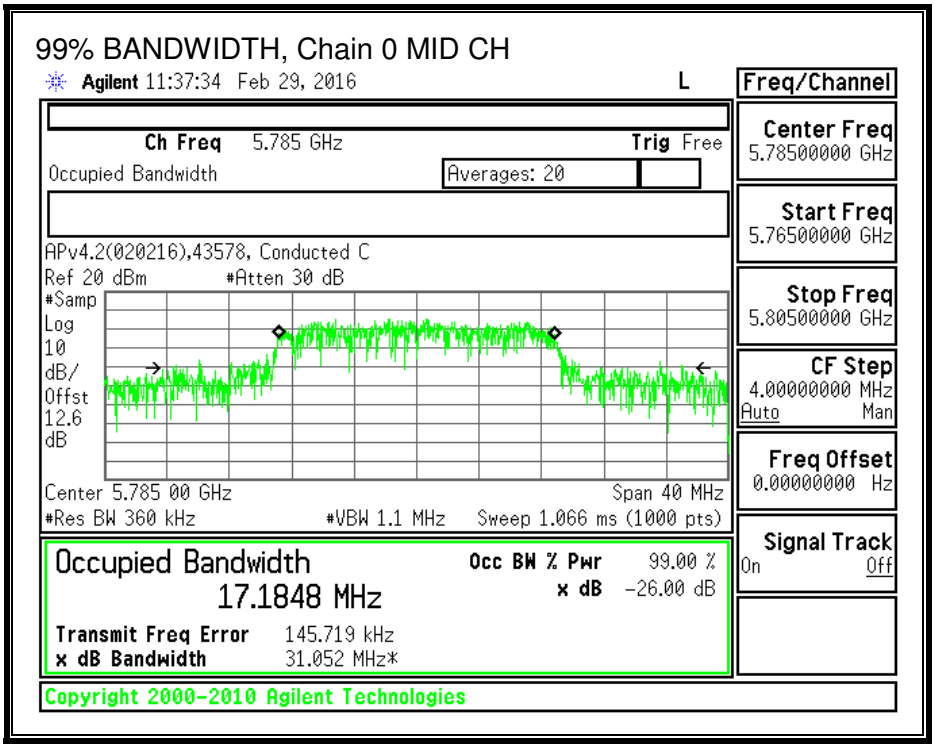
99% BANDWIDTH, Chain 0





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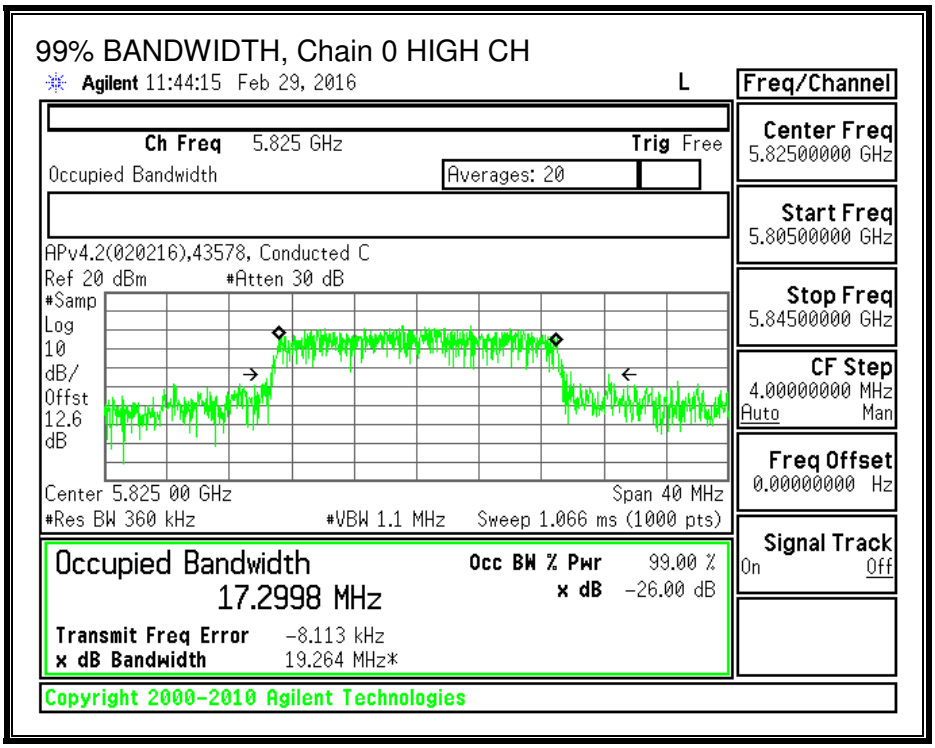
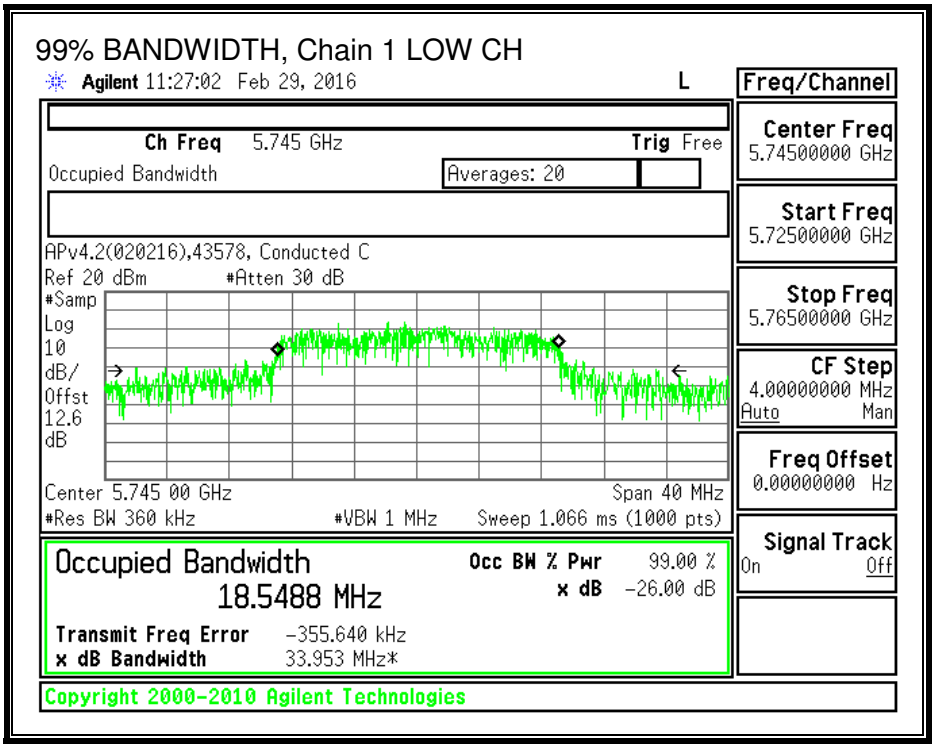


99% BANDWIDTH, Chain 1



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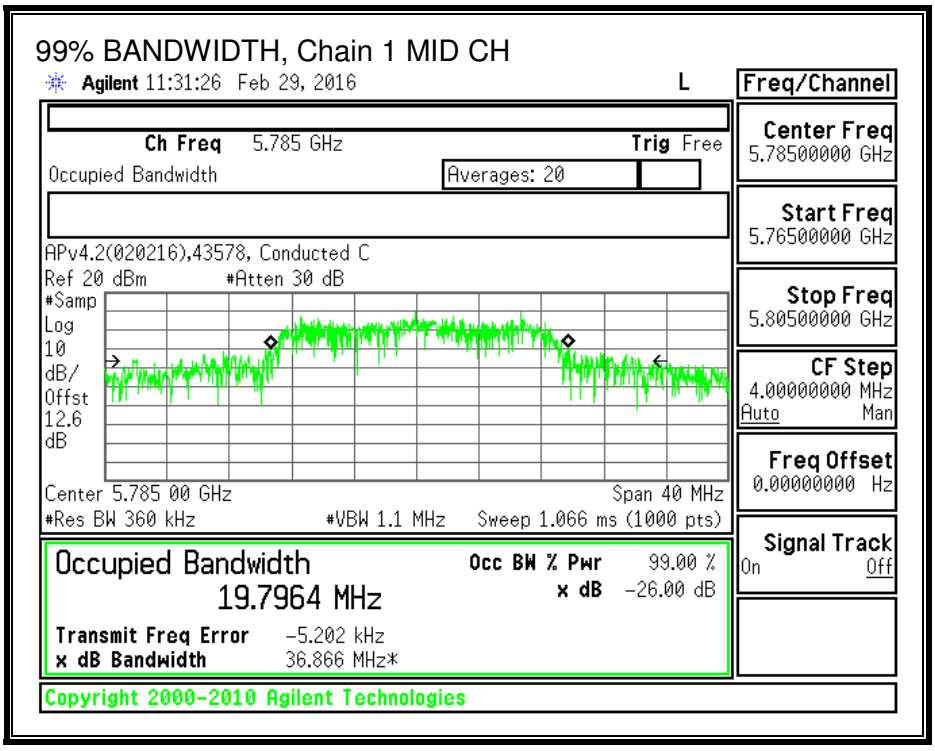

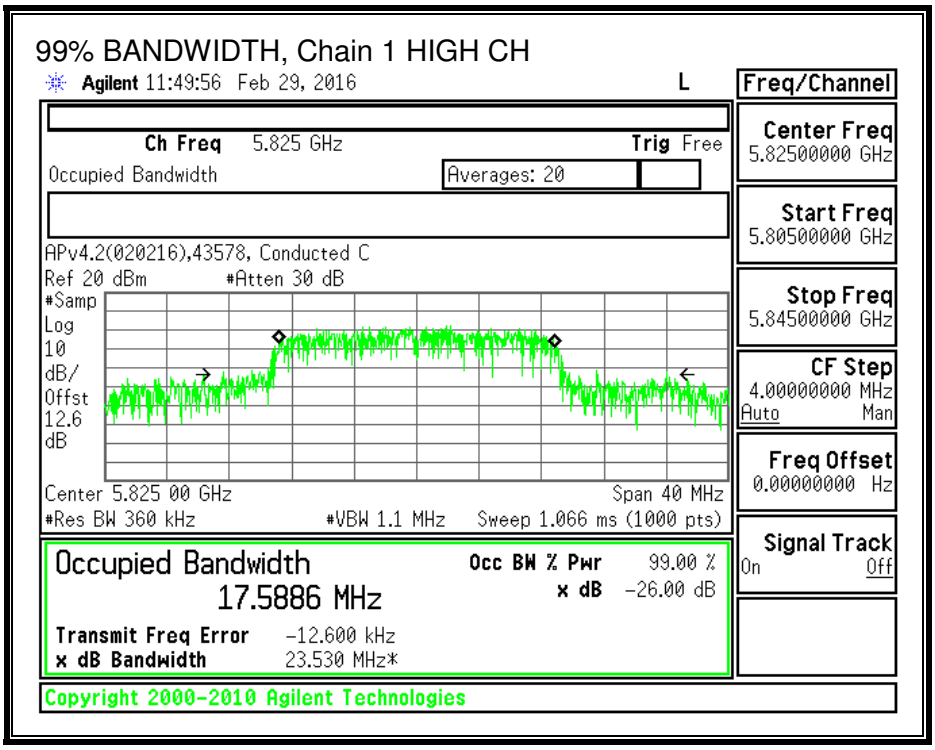

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9.5.3. OUTPUT POWER

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

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RESULTS

Antenna Gain and Limit

Channel	Frequency (MHz)	Directional Gain for Power (dBi)	Power Limit (dBm)
Low	5745	2.56	30.00
153	5765	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	13.71	13.22	16.48	30.00	-13.52
153	5765	18.62	19.19	21.92	30.00	-8.08
Mid	5785	14.72	14.83	17.79	30.00	-12.21
High	5825	14.70	14.72	17.72	30.00	-12.28

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.

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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

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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	0.572	0.835	3.94	30.00	-26.06
Mid	5785	2.118	1.734	5.16	30.00	-24.84
High	5825	2.309	2.083	5.43	30.00	-24.57

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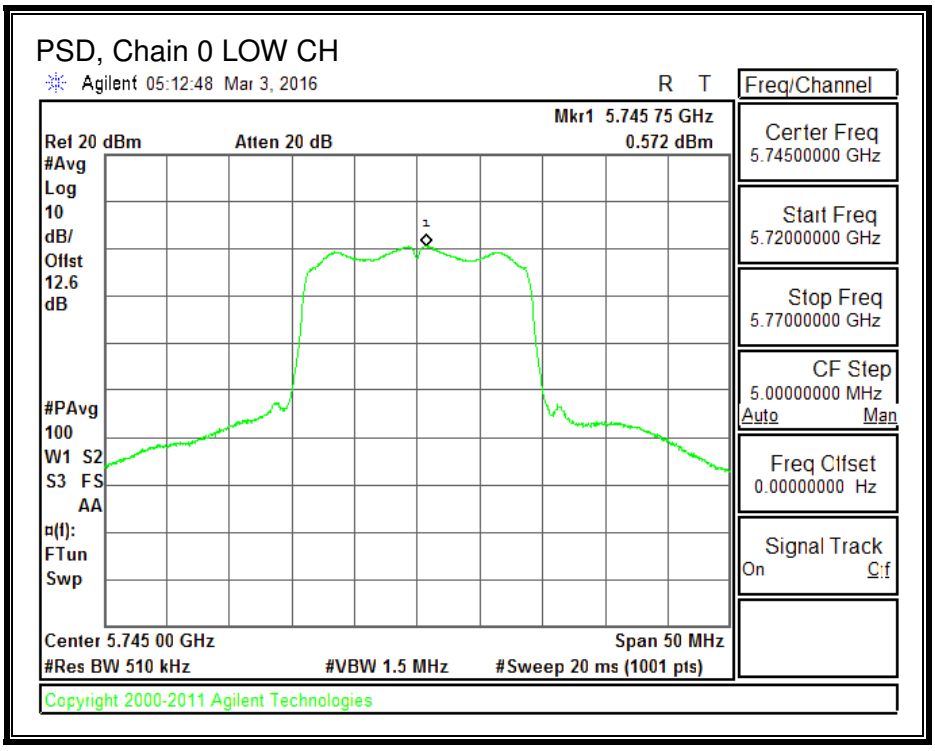
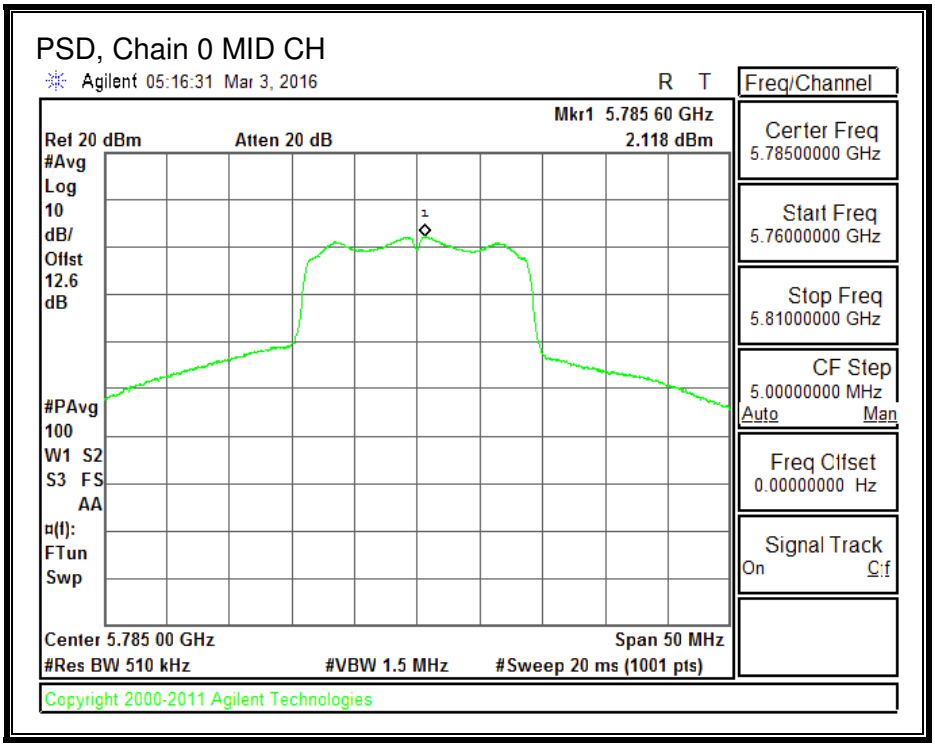
PSD, Chain 0





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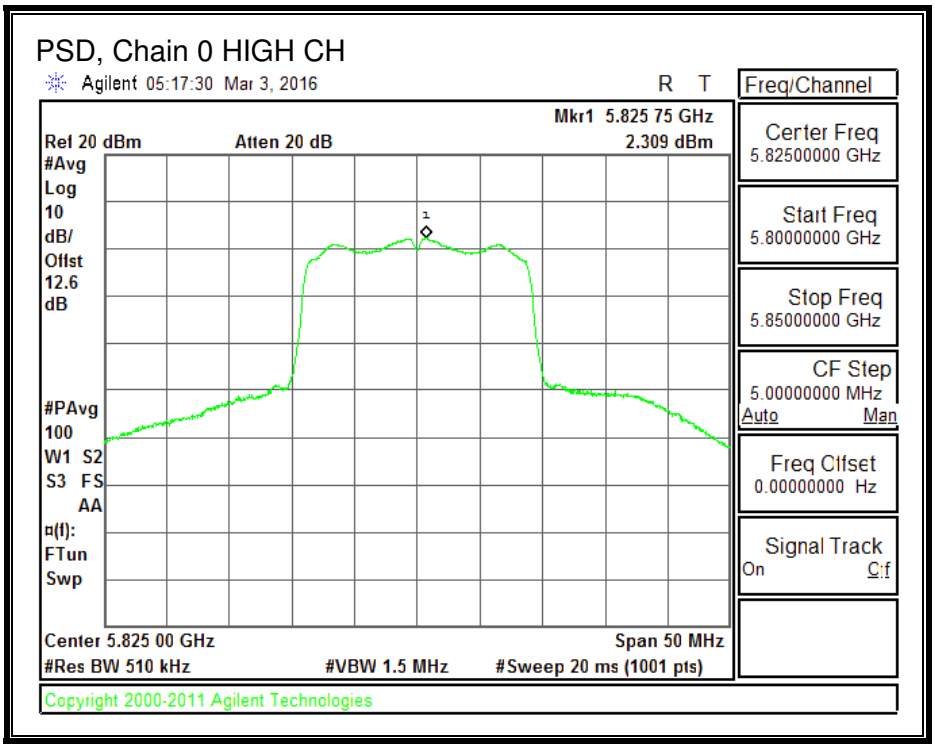
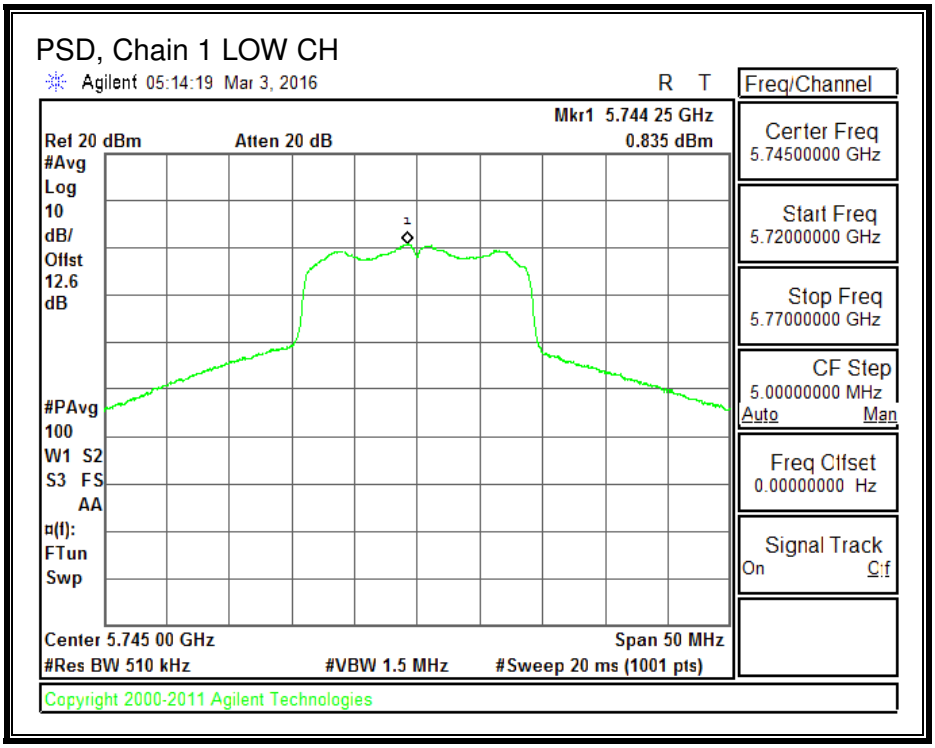


PSD, Chain 1



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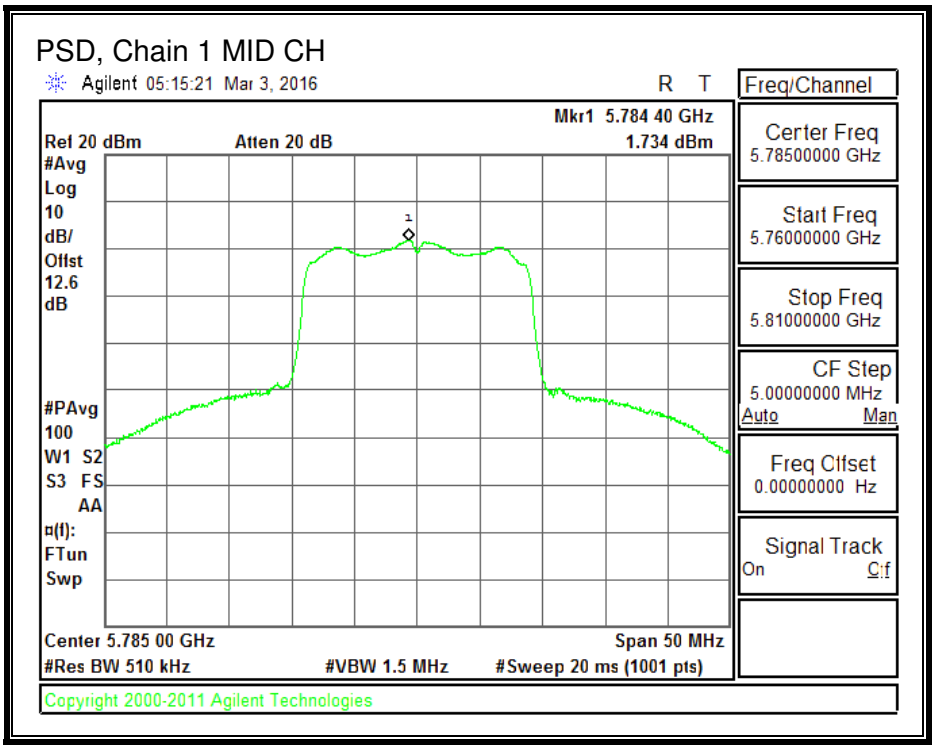

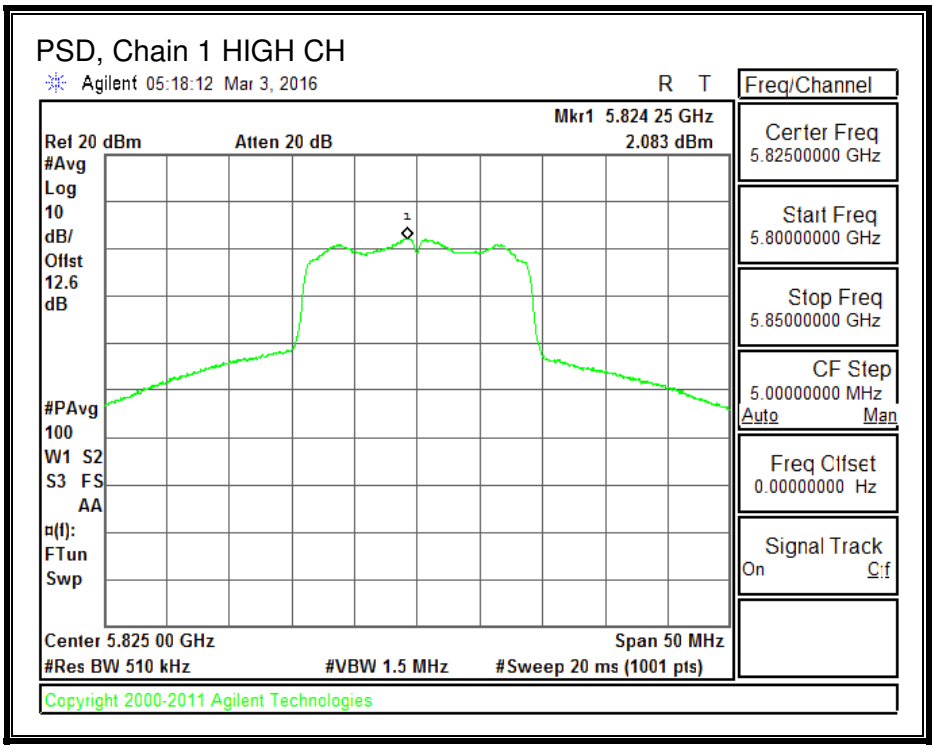

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9.6. 802.11n HT40 SISO MODE IN THE 5.8 GHz BAND

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	36.3600	0.5

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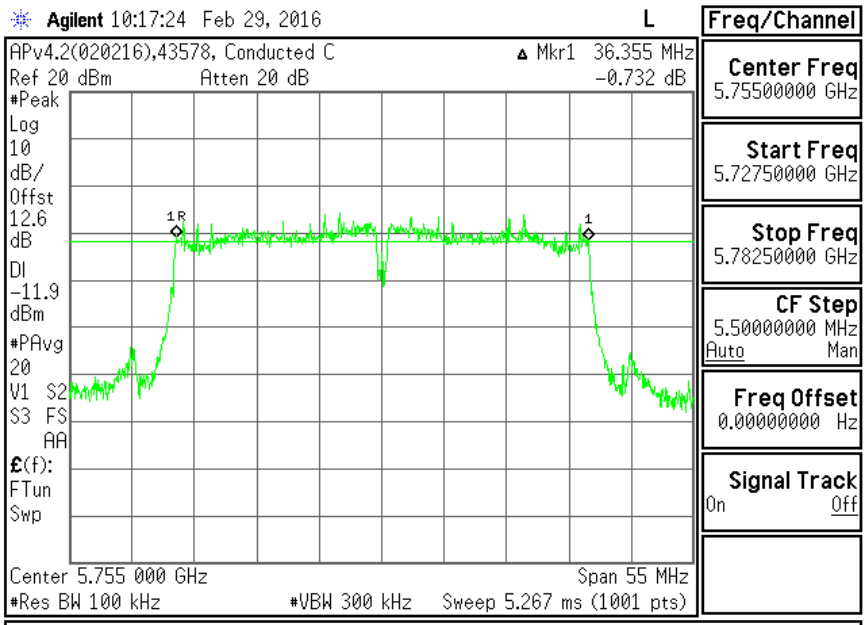
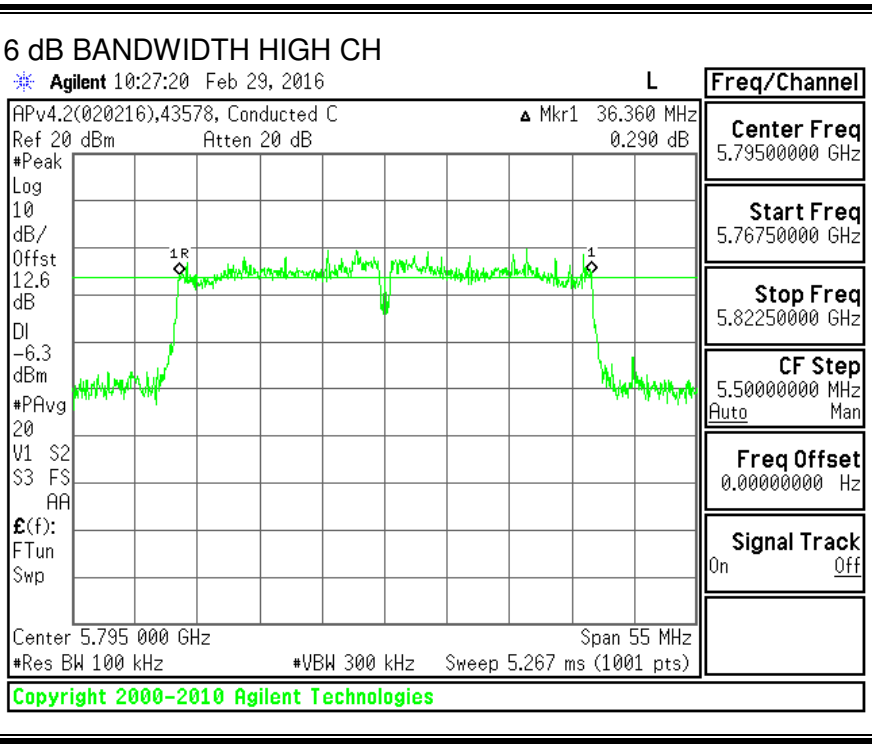
6 dB BANDWIDTH

6 dB BANDWIDTH LOW CH



6 dB BANDWIDTH HIGH CH



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9.6.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	5755	35.4107
High	5795	35.6759

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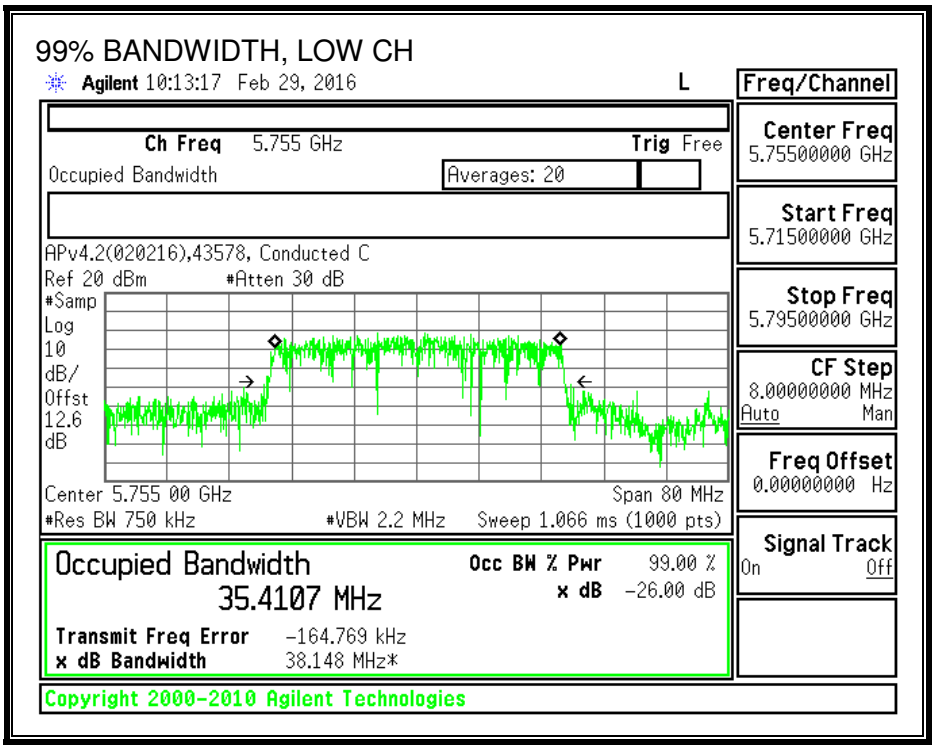
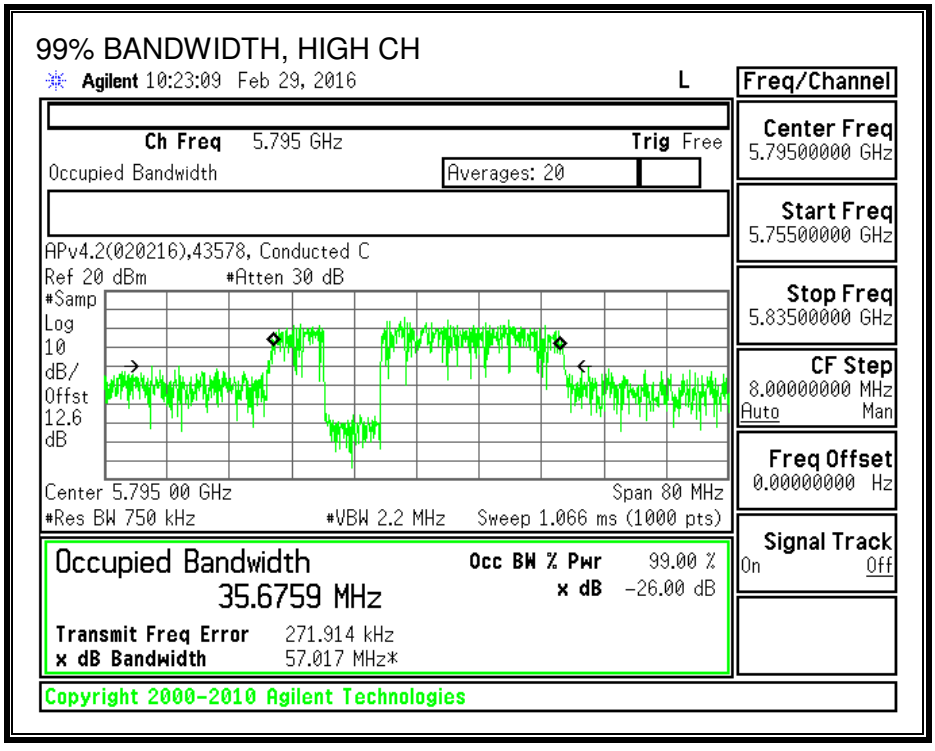
99% BANDWIDTH





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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.

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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	10.14	10.14	30.00	-19.86
High	5795	16.22	16.22	30.00	-13.78

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.

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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.

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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)	0.43	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	-9.448	-9.02	30.00	-39.02
High	5795	-2.382	-1.95	30.00	-31.95

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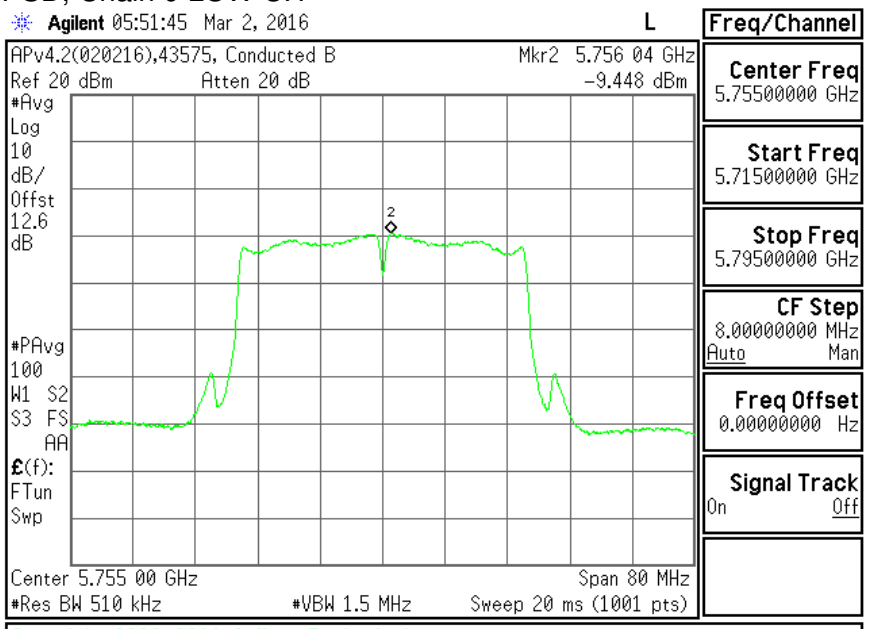
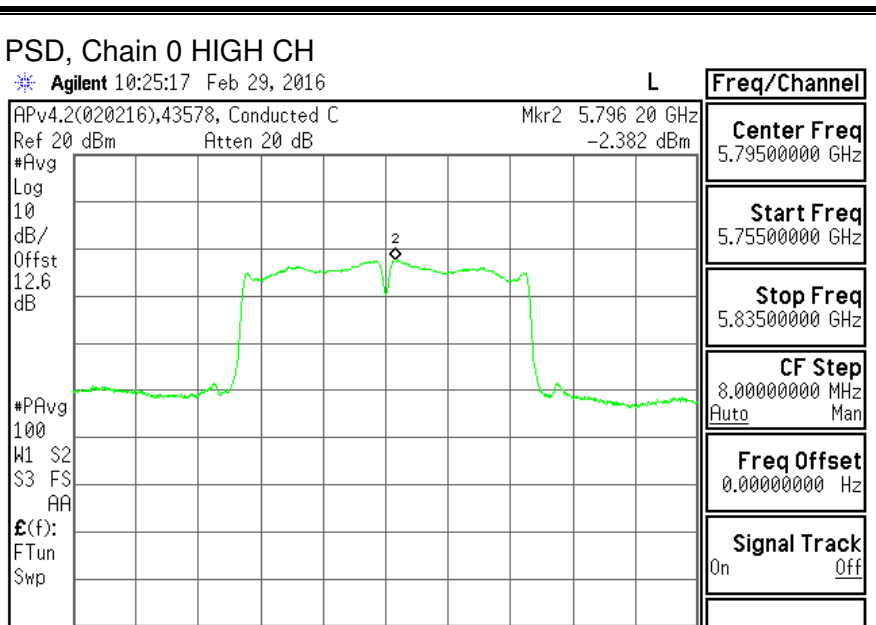
PSD, Chain 0

PSD, Chain 0 LOW CH



PSD, Chain 0 HIGH CH



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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	36.4100	0.5
High	5795	36.0360	36.3350	0.5

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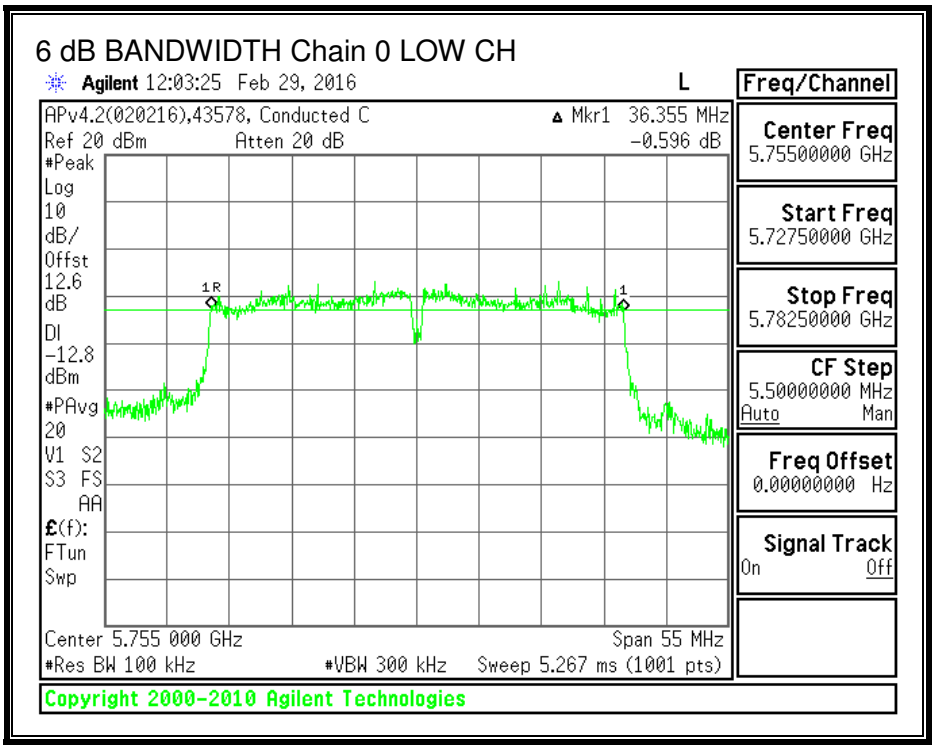
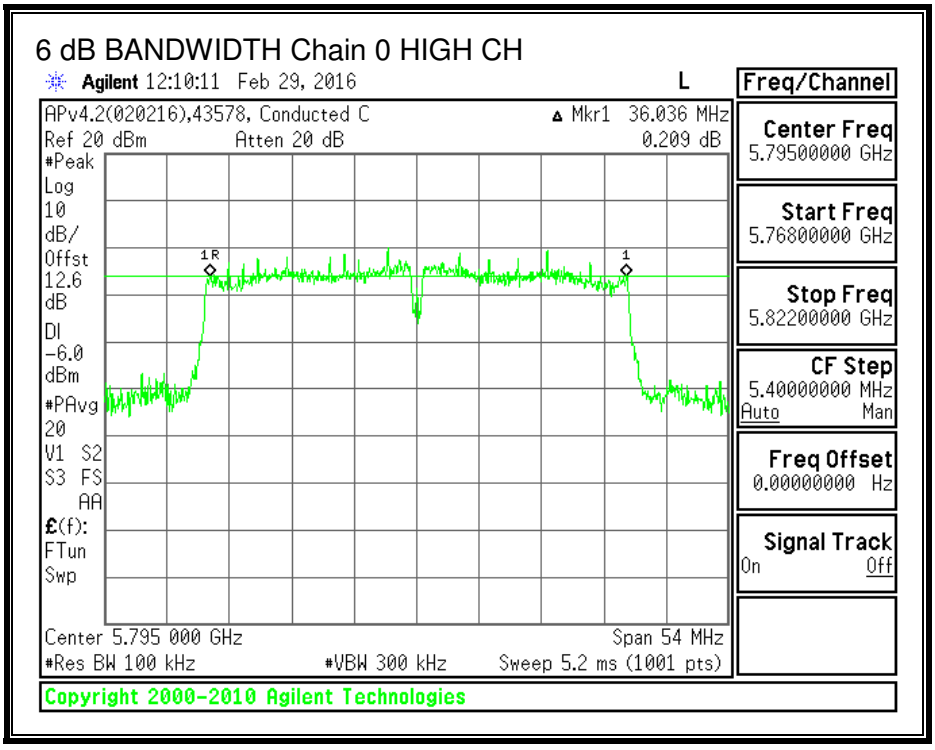
6 dB BANDWIDTH, Chain 0





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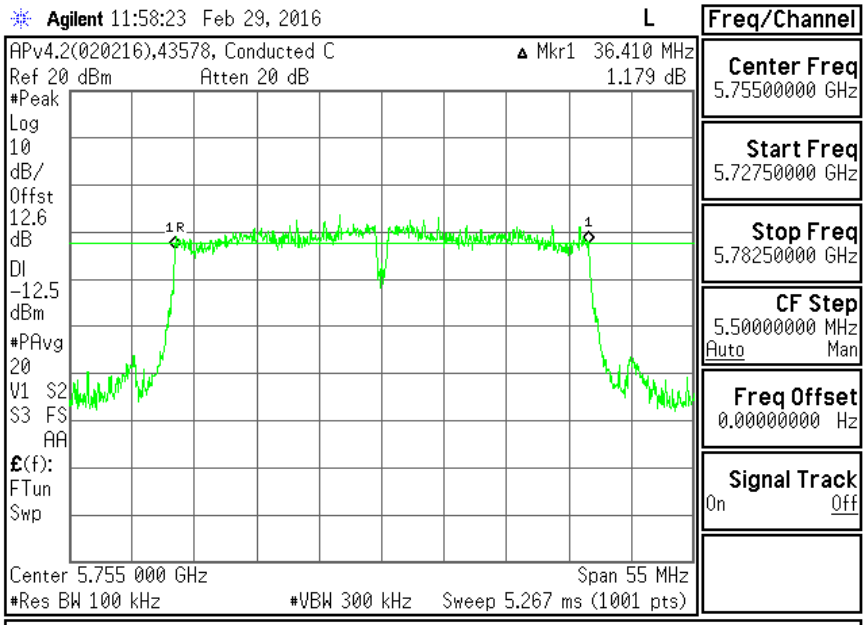
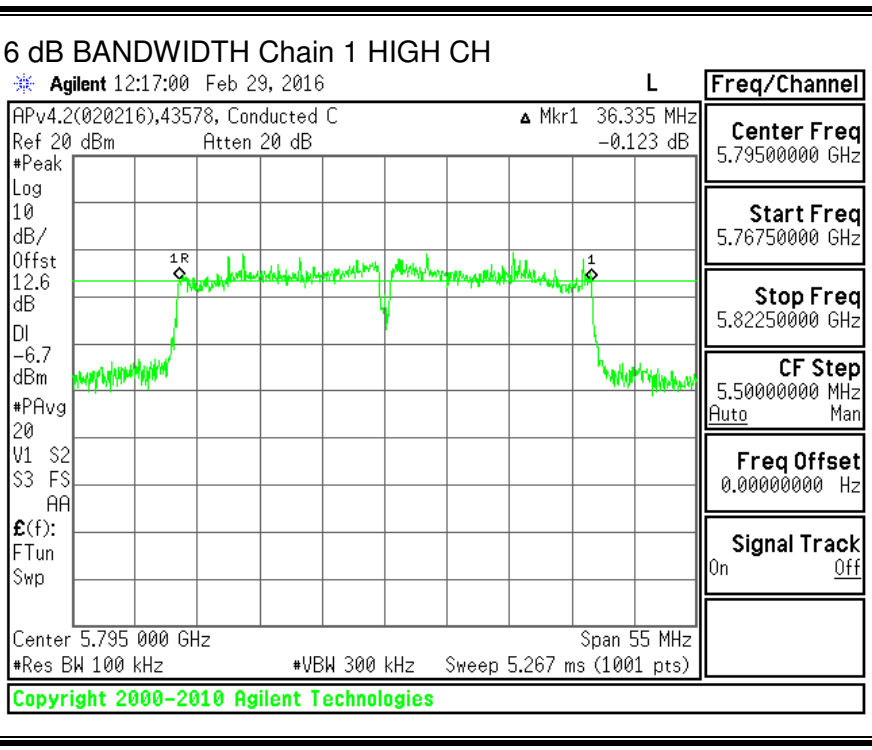
6 dB BANDWIDTH, Chain 1

6 dB BANDWIDTH Chain 1 LOW CH



6 dB BANDWIDTH Chain 1 HIGH CH



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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	35.5900	36.0996
High	5795	35.8931	35.6608

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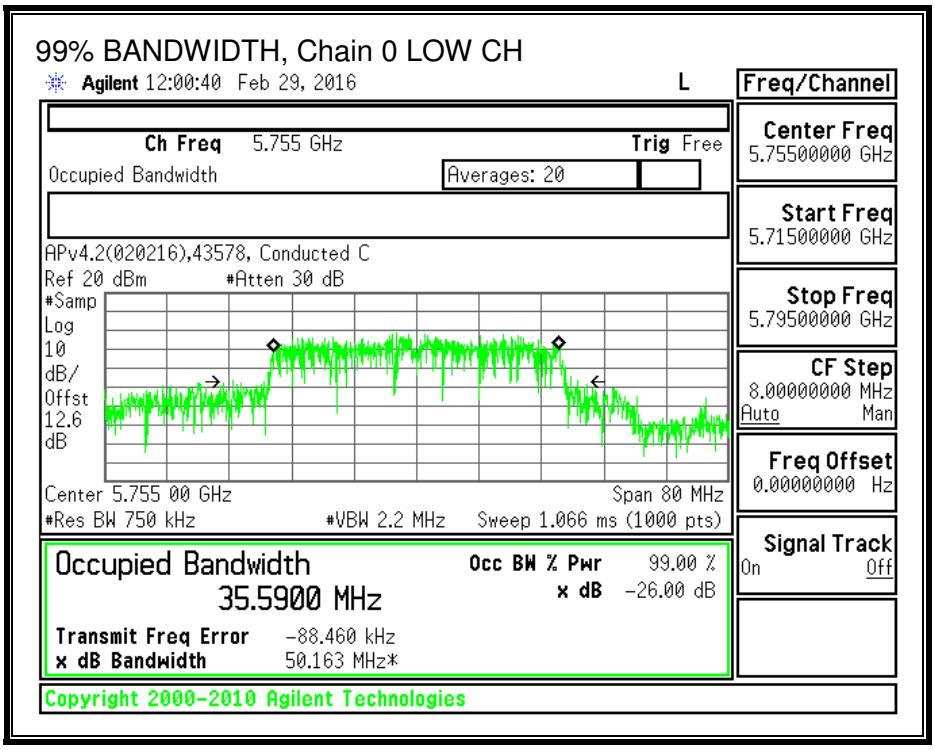
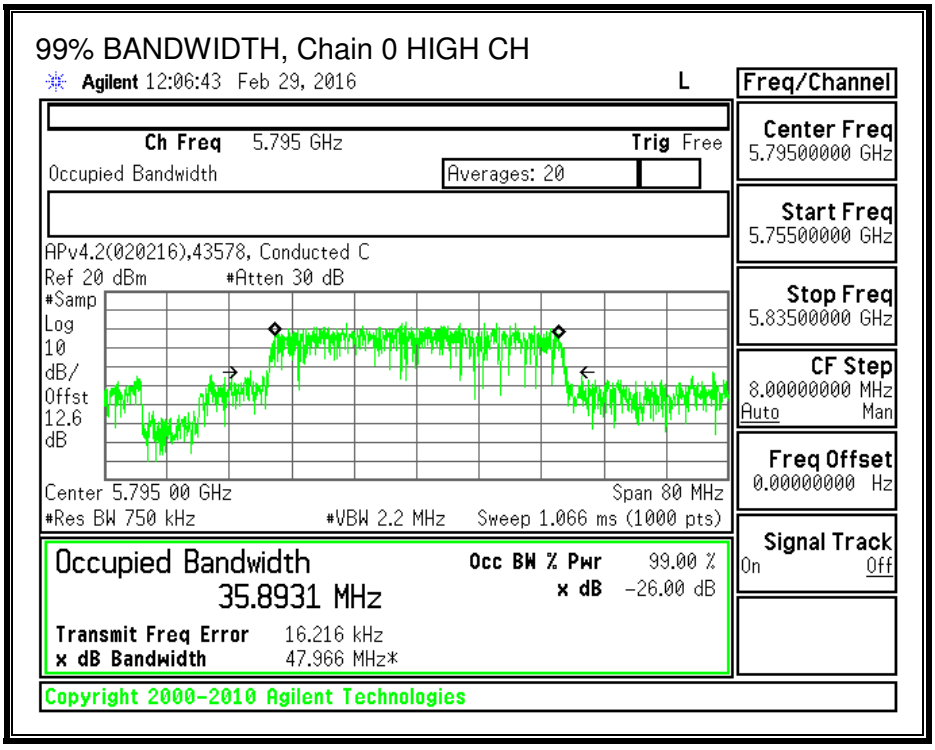
99% BANDWIDTH, Chain 0





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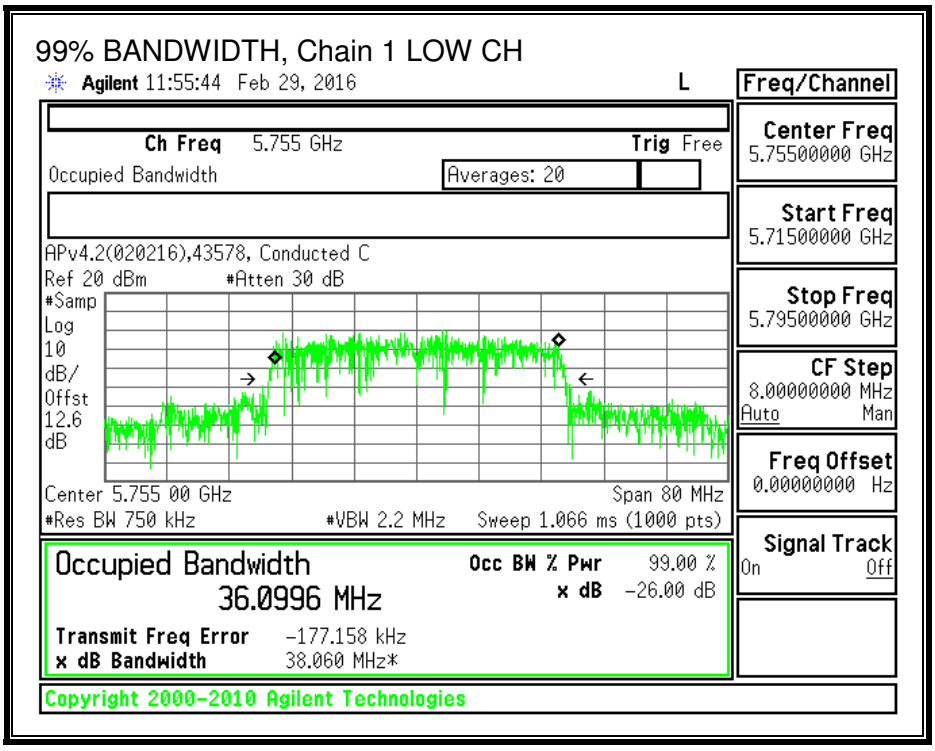
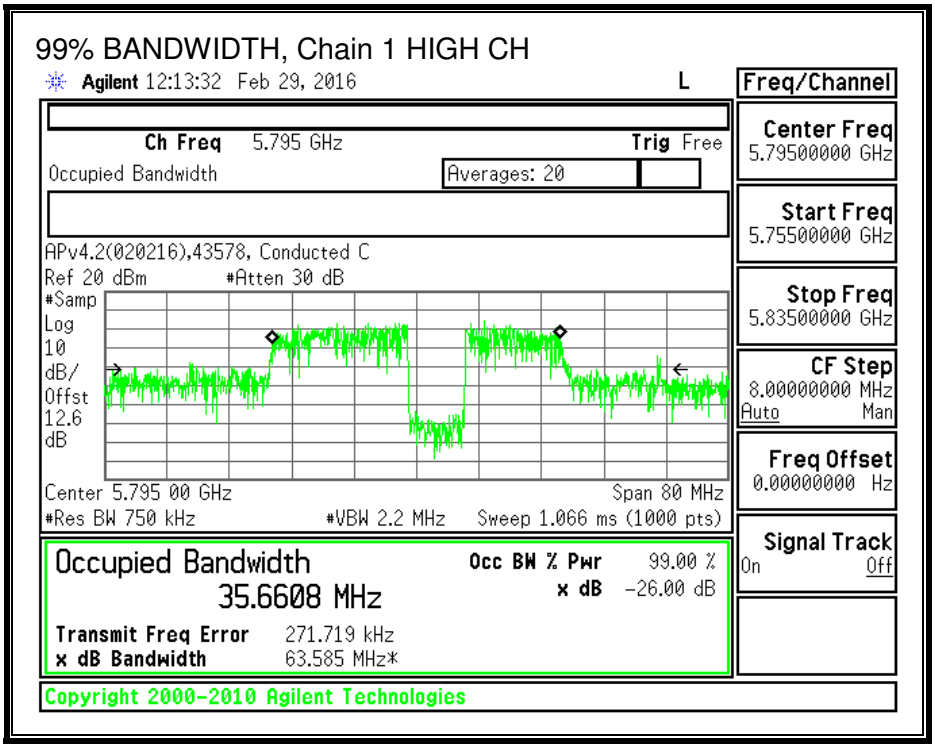
99% BANDWIDTH, Chain 1





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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

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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	10.52	10.31	13.43	30.00	-16.57
High	5795	15.72	15.95	18.85	30.00	-11.15

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.

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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

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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)	0.43	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	-6.281	-6.434	-2.92	30.00	-32.92
High	5795	-1.183	-0.988	2.36	30.00	-27.64

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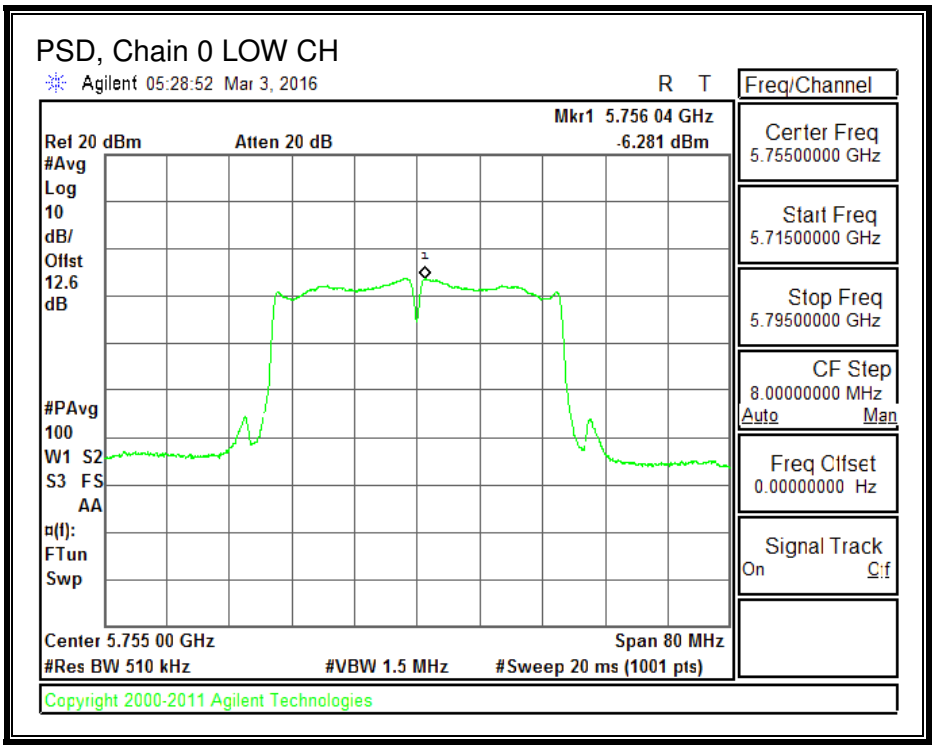
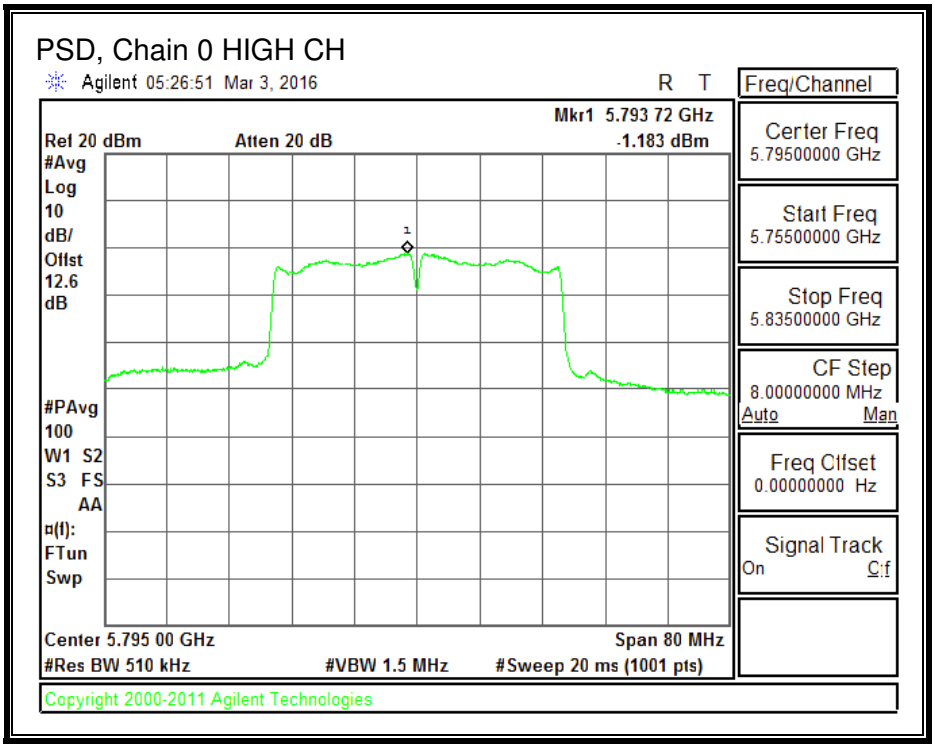
PSD, Chain 0





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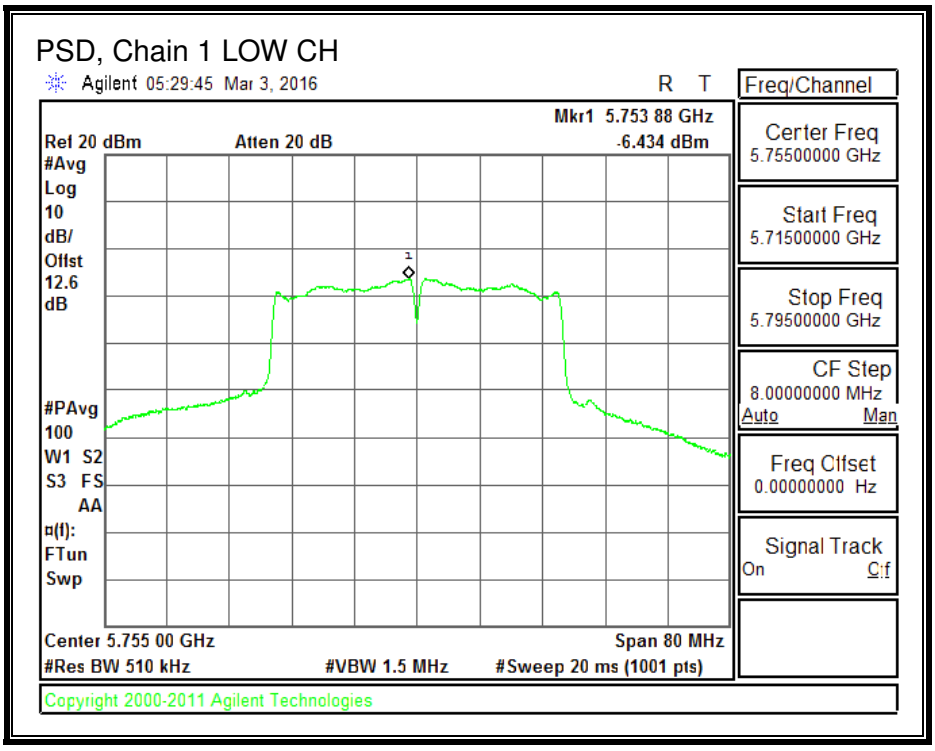
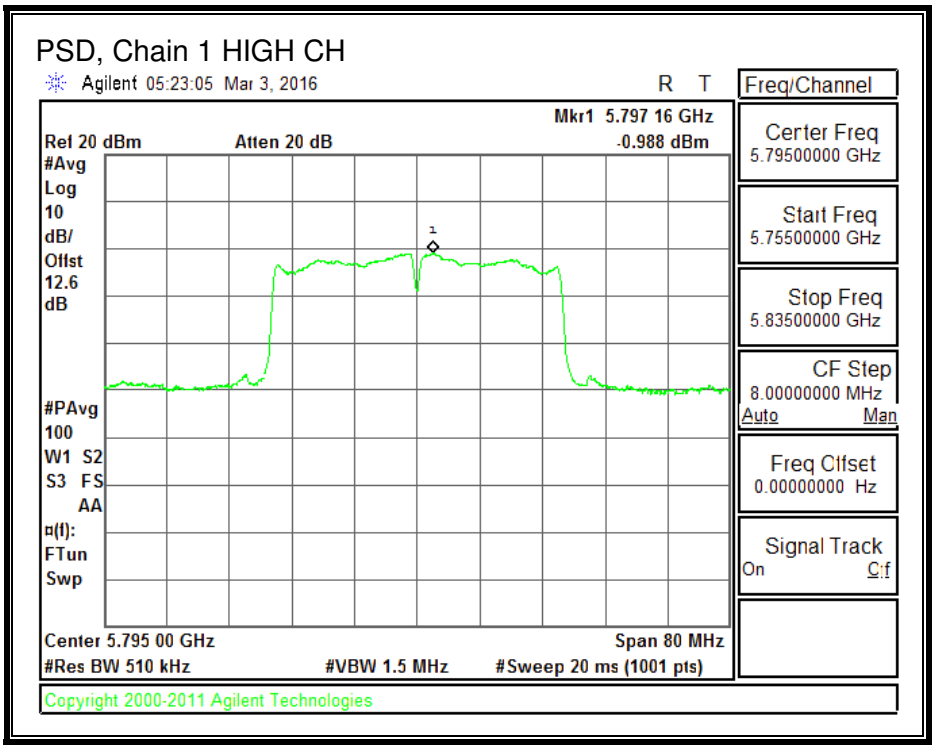
PSD, Chain 1

PSD, Chain 1 LOW CH



PSD, Chain 1 HIGH CH



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10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

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

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.

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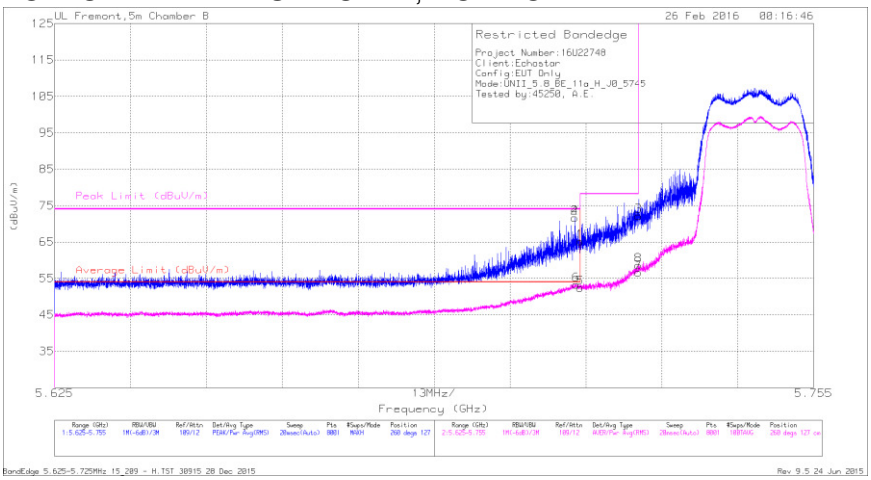
10.2. TX ABOVE 1 GHz 802.11a SISO MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	57.47	Pk	35	-20.8	0	71.67	-	-	74	-2.33	260	127	H
4	5.714	57.47	Pk	35	-20.8	0	71.67	-	-	74	-2.33	260	127	H
6	5.714	39.07	RMS	35	-20.8	.22	53.49	54	-.51	-	-	260	127	H
1	5.715	51.19	Pk	35	-21	0	65.19	-	-	74	-8.81	260	127	H
5	5.715	38.44	RMS	35	-21	.22	52.66	54	-1.34	-	-	260	127	H
3	5.725	58	Pk	35	-20.8	0	72.2	-	-	78.2	-6	260	127	H

Pk - Peak detector
RMS - RMS detection

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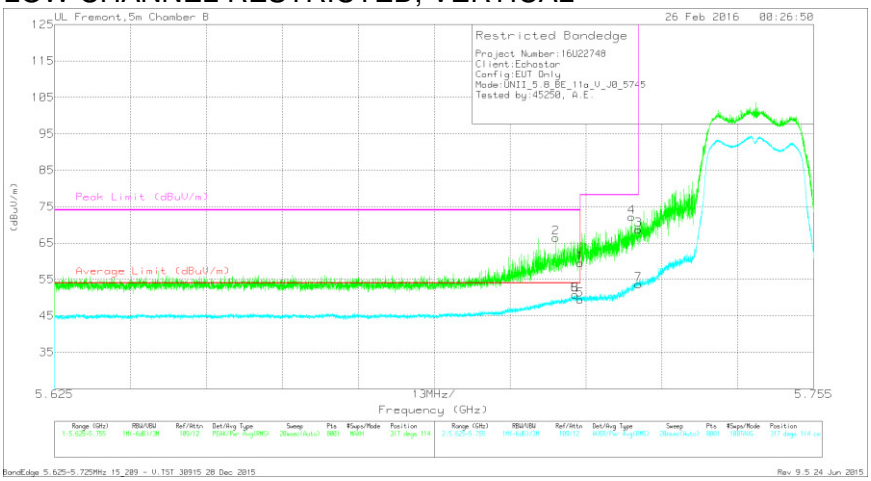
LOW CHANNEL RESTRICTED, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.711	52.51	Pk	35	-21.1	0	66.41	-	-	74	-7.59	317	114	V
6	5.714	36.36	RMS	35	-20.8	.22	50.78	54	-3.22	-	-	317	114	V
8	5.714	36.36	RMS	35	-20.8	.22	50.78	54	-3.22	-	-	317	114	V
1	5.715	45.47	Pk	35	-21	0	59.47	-	-	74	-14.53	317	114	V
5	5.715	35.22	RMS	35	-21	.22	49.44	54	-4.56	-	-	317	114	V
4	5.724	58.19	Pk	35	-21.1	0	72.09	-	-	78.2	-6.11	317	114	V
3	5.725	54.47	Pk	35	-20.8	0	68.67	-	-	78.2	-9.53	317	114	V

Pk - Peak detector
RMS - RMS detection

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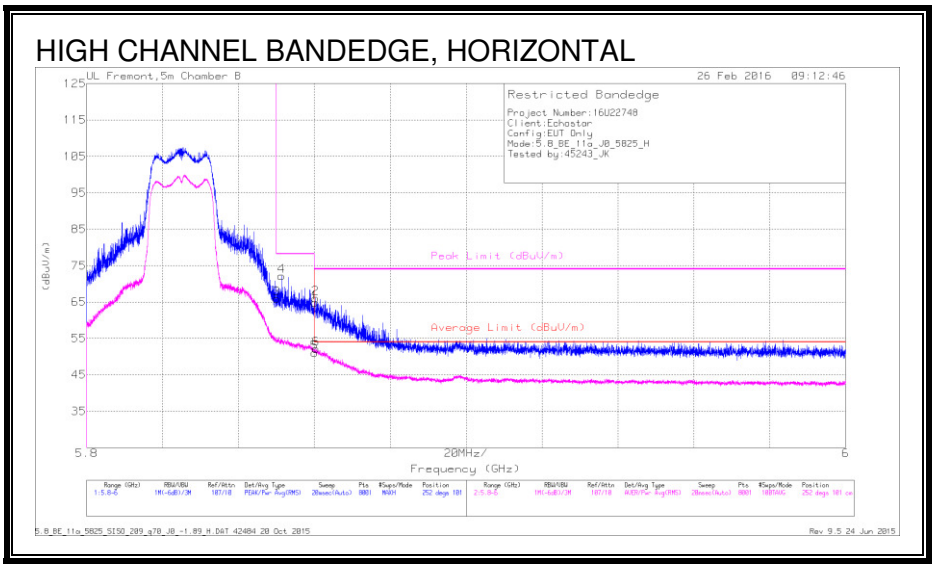
AUTHORIZED BANDEDGE (HIGH CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	5.85	51.4	Pk	35.4	-20.9	0	65.9	-	-	78.2	-12.3	252	101	H
4	5.851	57.43	Pk	35.4	-20.7	0	72.13	-	-	78.2	-6.07	252	101	H
1	5.86	50.36	Pk	35.4	-20.9	0	64.86	-	-	74	-9.14	252	101	H
2	5.86	51.7	Pk	35.4	-21	0	66.1	-	-	74	-7.9	252	101	H
5	5.86	36.37	RMS	35.4	-20.9	.22	51.09	54	-2.91	-	-	252	101	H
6	5.86	37.49	RMS	35.4	-21	.22	52.11	54	-1.89	-	-	252	101	H

Pk - Peak detector
RMS - RMS detection

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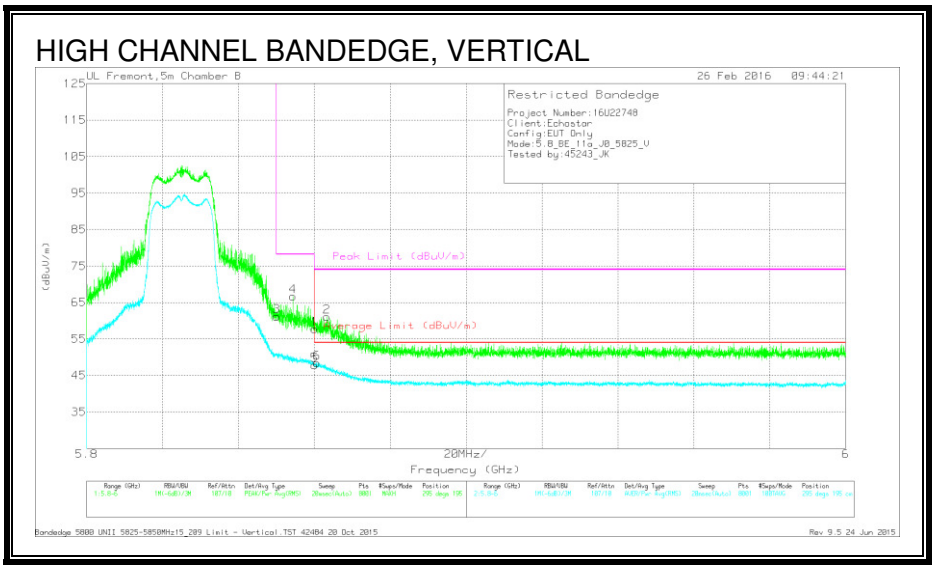

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	5.85	46.66	Pk	35.4	-20.9	0	61.16	-	-	78.2	-17.04	295	195	V
4	5.854	52.18	Pk	35.4	-20.9	0	66.68	-	-	78.2	-11.52	295	195	V
1	5.86	43.24	Pk	35.4	-20.9	0	57.74	-	-	74	-16.26	295	195	V
5	5.86	33.11	RMS	35.4	-20.9	.22	47.83	54	-6.17	-	-	295	195	V
6	5.861	33.84	RMS	35.4	-21	.22	48.46	54	-5.54	-	-	295	195	V
2	5.863	46.35	Pk	35.4	-20.7	0	61.05	-	-	74	-12.95	295	195	V

Pk - Peak detector
RMS - RMS detection

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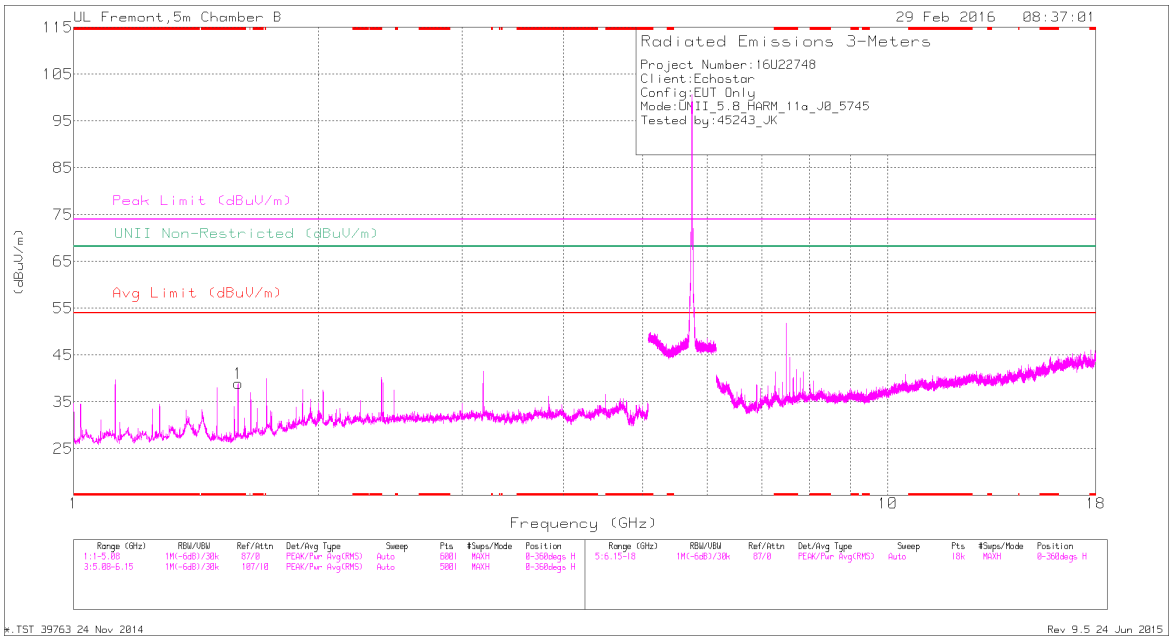
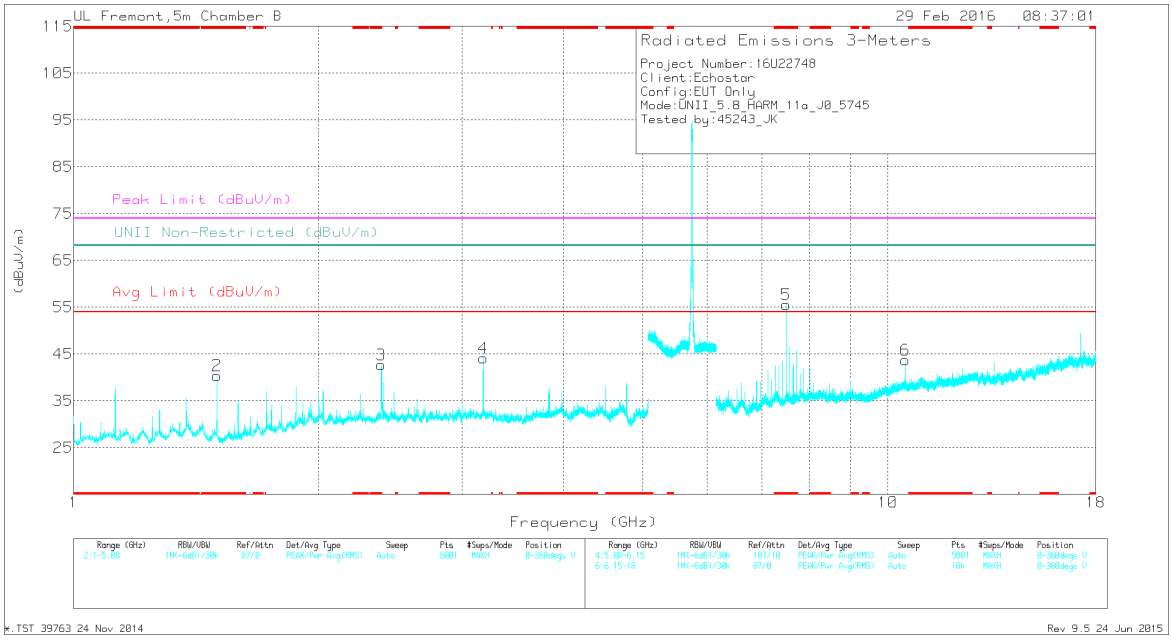
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 1.592	46.09	Pk	28.1	-35.3	0	38.89	-	-	74	-35.11	68.2	-29.31	0-360	100	H
2	* 1.5	47.94	Pk	28	-35.5	0	40.44	-	-	74	-33.56	68.2	-27.76	0-360	199	V
3	* 2.388	45.07	Pk	32.1	-34.4	0	42.77	-	-	74	-31.23	68.2	-25.43	0-360	101	V
5	* 7.5	48.92	Pk	35.6	-29	0	55.52	-	-	74	-18.48	68.2	-12.68	0-360	102	V
4	3.183	44.06	Pk	33.2	-33.1	0	44.16	-	-	74	-29.84	68.2	-24.04	0-360	199	V
6	10.5	31.88	Pk	37.4	-25.5	0	43.78	-	-	74	-30.22	68.2	-24.42	0-360	102	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 1.592	51.68	PK-U	28.1	-35.3	0	44.48	-	-	74	-29.52	-	-	292	106	H
* 1.592	46.09	ADR	28.1	-35.3	.22	39.11	54	-14.89	-	-	-	-	292	106	H
* 1.5	51.86	PK-U	28	-35.5	0	44.36	-	-	74	-29.64	-	-	14	165	V
* 1.5	44.91	ADR	28	-35.5	.22	37.63	54	-16.37	-	-	-	-	14	165	V
* 2.388	49.57	PK-U	32.1	-34.4	0	47.27	-	-	74	-26.73	-	-	5	371	V
* 2.388	40.61	ADR	32.1	-34.4	.22	38.53	54	-15.47	-	-	-	-	5	371	V
* 7.5	49.9	PK-U	35.6	-29	0	56.5	-	-	74	-17.5	-	-	187	102	V
* 7.5	47.12	ADR	35.6	-29	.22	53.94	54	-.06	-	-	-	-	187	102	V
3.184	48.49	PK-U	33.2	-33.1	0	48.59	-	-	-	-	68.2	-19.61	1	291	V
3.184	48.67	PK-U	33.2	-33.1	0	48.77	-	-	-	-	68.2	-19.43	1	291	V
10.5	38.09	PK-U	37.4	-25.5	0	49.99	-	-	-	-	68.2	-18.21	20	109	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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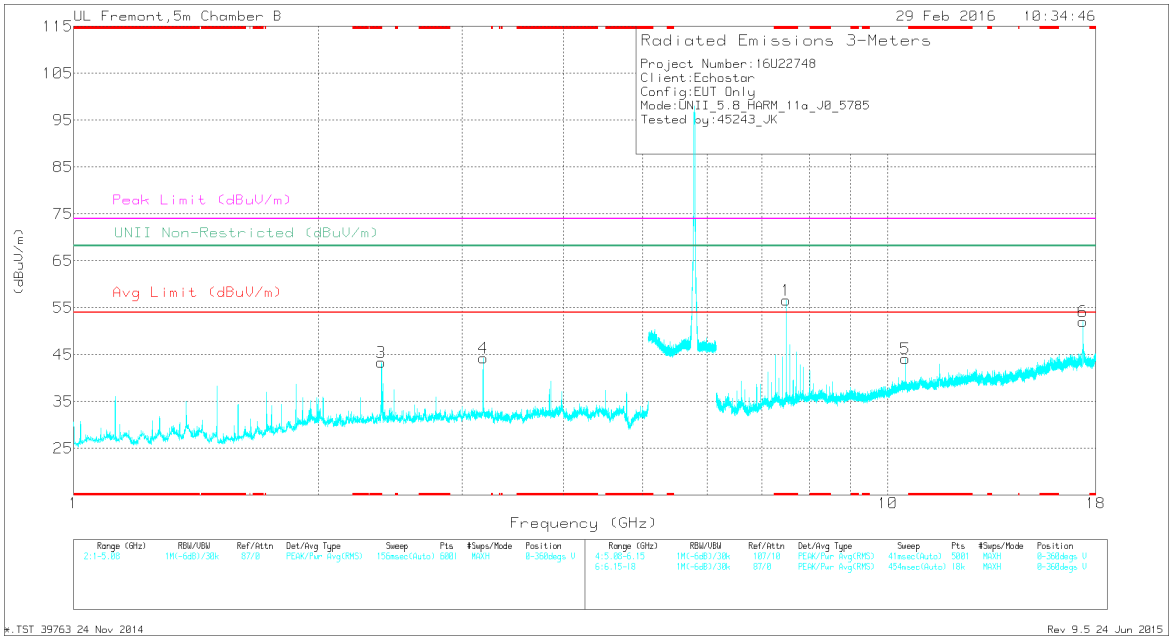
MID CHANNEL HORIZONTAL PLOT

MID CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 2.388	45.65	Pk	32.1	-34.4	0	43.35	-	-	74	-30.65	68.2	-24.85	0-360	101	V
1	* 7.5	50.02	Pk	35.6	-29	0	56.62	-	-	74	-17.38	68.2	-11.58	0-360	101	V
2	1.725	45.79	Pk	29.3	-34.5	0	40.59	-	-	74	-33.41	68.2	-27.61	0-360	199	H
4	3.183	44.17	Pk	33.2	-33.1	0	44.27	-	-	74	-29.73	68.2	-23.93	0-360	101	V
5	10.5	32.27	Pk	37.4	-25.5	0	44.17	-	-	74	-29.83	68.2	-24.03	0-360	101	V
6	17.356	32.08	Pk	41.2	-21.2	0	52.08	-	-	74	-21.92	68.2	-16.12	0-360	101	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 2.388	54.37	PK-U	32.1	-34.4	0	52.07	-	-	74	-21.93	-	-	335	274	V
* 2.388	42.99	ADR	32.1	-34.4	.22	40.91	54	-13.09	-	-	-	-	335	274	V
* 7.5	49.87	PK-U	35.6	-29	0	56.47	-	-	74	-17.53	-	-	4	105	V
* 7.5	47.03	ADR	35.6	-29	.22	53.85	54	-.15	-	-	-	-	4	105	V
1.725	49.08	PK-U	29.3	-34.5	0	43.88	-	-	-	-	68.2	-24.32	292	124	H
3.184	48.06	PK-U	33.2	-33.1	0	48.16	-	-	-	-	68.2	-20.04	334	131	V
10.5	36.34	PK-U	37.4	-25.5	0	48.24	-	-	-	-	68.2	-19.96	178	286	V
17.355	41.39	PK-U	41.2	-21.2	0	61.39	-	-	-	-	68.2	-6.81	8	252	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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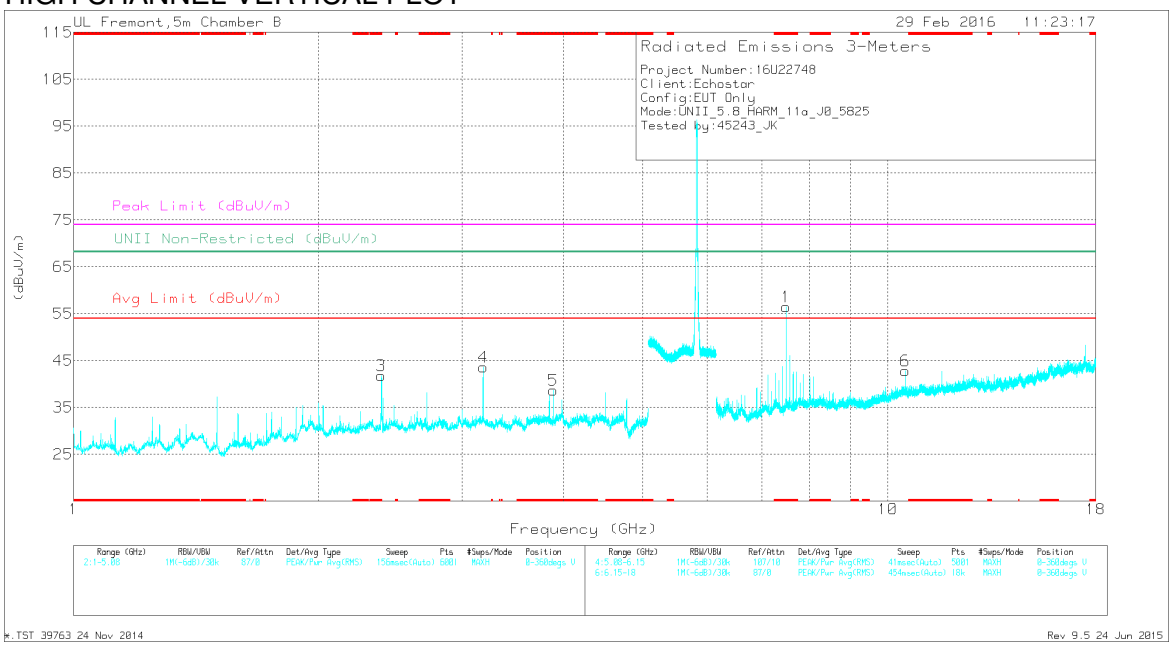
HIGH CHANNEL HORIZONTAL PLOT

HIGH CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 2.388	44.15	Pk	32.1	-34.4	0	41.85	-	-	74	-32.15	68.2	-26.35	0-360	200	V
5	* 3.883	37.85	Pk	33.4	-32.6	0	38.65	-	-	74	-35.35	68.2	-29.55	0-360	200	V
1	* 7.5	49.9	Pk	35.6	-29	0	56.5	-	-	74	-17.5	68.2	-11.7	0-360	101	V
2	1.725	45.79	Pk	29.3	-34.5	0	40.59	-	-	74	-33.41	68.2	-27.61	0-360	101	H
4	3.184	43.42	Pk	33.2	-33	0	43.62	-	-	74	-30.38	68.2	-24.58	0-360	200	V
6	10.5	31	Pk	37.4	-25.5	0	42.9	-	-	74	-31.1	68.2	-25.3	0-360	200	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 2.388	53.27	PK-U	32.1	-34.4	0	50.97	-	-	74	-23.03	-	-	334	153	V
* 2.388	45.02	ADR	32.1	-34.4	.22	42.94	54	-11.06	-	-	-	-	334	153	V
* 3.883	45.38	PK-U	33.4	-32.6	0	46.18	-	-	74	-27.82	-	-	333	250	V
* 3.883	39	ADR	33.4	-32.6	.22	40.02	54	-13.98	-	-	-	-	333	250	V
* 7.5	47.78	PK-U	35.6	-29	0	54.38	-	-	74	-19.62	-	-	186	122	V
* 7.5	44.99	ADR	35.6	-29	.22	51.81	54	-2.19	-	-	-	-	186	122	V
1.725	49.49	PK-U	29.3	-34.5	0	44.29	-	-	-	-	68.2	-23.91	308	149	H
3.184	48.7	PK-U	33.2	-33.1	0	48.8	-	-	-	-	68.2	-19.4	0	267	V
10.5	36.82	PK-U	37.4	-25.5	0	48.72	-	-	-	-	68.2	-19.48	12	109	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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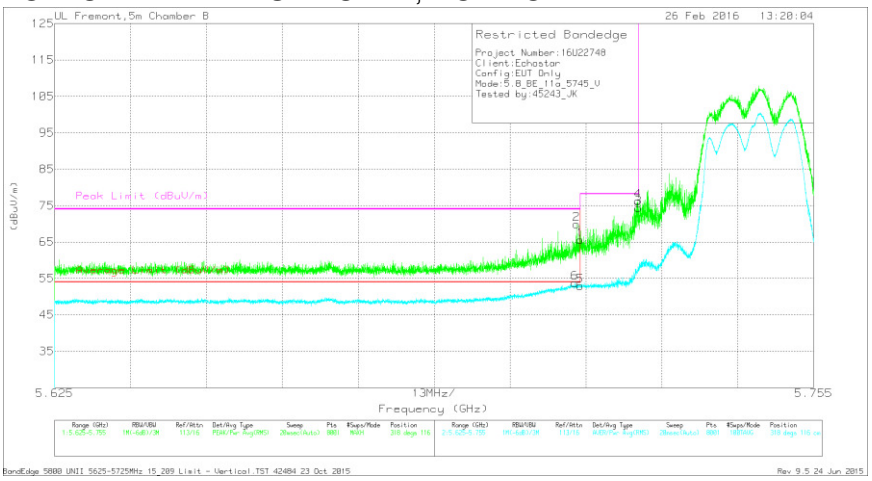
10.3. TX ABOVE 1 GHz 802.11a CDD 2TX MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	55.78	Pk	35	-20.9	0	69.88	-	-	74	-4.12	318	116	V
6	5.714	39.29	RMS	35	-20.8	.22	53.71	54	-.29	-	-	318	116	V
1	5.715	51.59	Pk	35	-21	0	65.59	-	-	74	-8.41	318	116	V
5	5.715	38.71	RMS	35	-21	.22	52.93	54	-1.07	-	-	318	116	V
3	5.725	60.21	Pk	35	-20.8	0	74.41	-	-	78.2	-3.79	318	116	V
4	5.725	62.1	Pk	35	-20.9	0	76.2	-	-	78.2	-2	318	116	V

Pk - Peak detector
RMS - RMS detection

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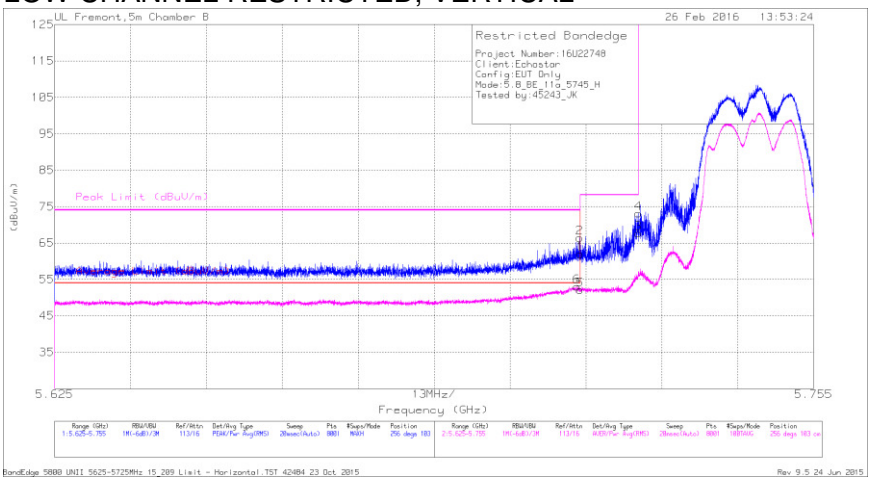
LOW CHANNEL RESTRICTED, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	5.714	38.66	RMS	35	-20.9	.22	52.98	54	-1.02	-	-	256	103	H
1	5.715	47.95	Pk	35	-21	0	61.95	-	-	74	-12.05	256	103	H
2	5.715	52.4	Pk	35	-21	0	66.4	-	-	74	-7.6	256	103	H
5	5.715	37.96	RMS	35	-21	.22	52.18	54	-1.82	-	-	256	103	H
3	5.725	53.49	Pk	35	-20.8	0	67.69	-	-	78.2	-10.51	256	103	H
4	5.725	59.08	Pk	35	-20.9	0	73.18	-	-	78.2	-5.02	256	103	H

Pk - Peak detector
RMS - RMS detection

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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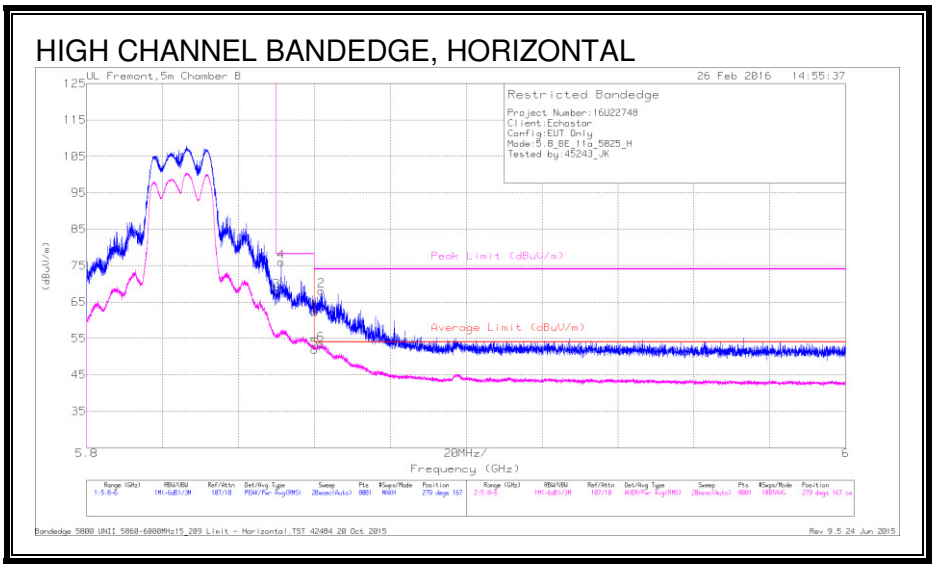
AUTHORIZED BANDEDGE (HIGH CHANNEL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	5.85	53.52	Pk	35.4	-20.9	0	68.02	-	-	78.2	-10.18	279	167	H
4	5.851	61.39	Pk	35.4	-20.8	0	75.99	-	-	78.2	-2.21	279	167	H
1	5.86	47.78	Pk	35.4	-20.9	0	62.28	-	-	74	-11.72	279	167	H
5	5.86	37.14	RMS	35.4	-20.9	.22	51.86	54	-2.14	-	-	279	167	H
2	5.862	53.51	Pk	35.4	-20.8	0	68.11	-	-	74	-5.89	279	167	H
6	5.862	38.59	RMS	35.4	-20.8	.22	53.41	54	-.59	-	-	279	167	H

Pk - Peak detector
RMS - RMS detection

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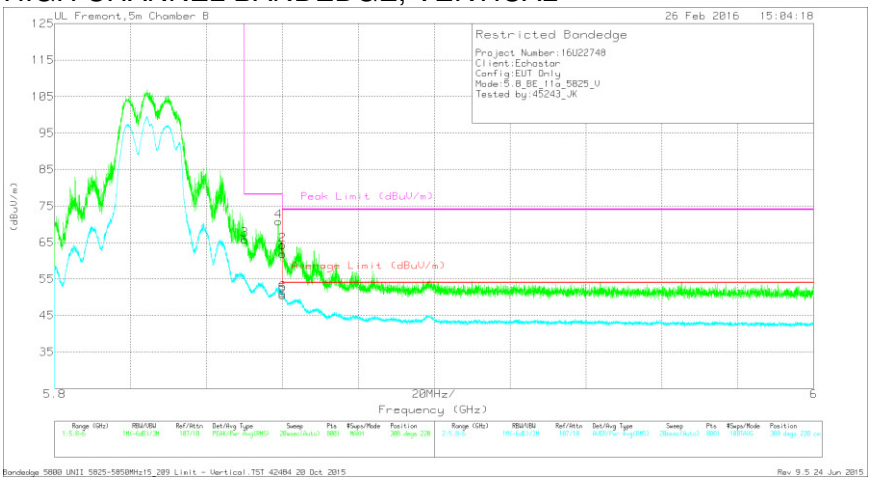
HIGH CHANNEL BANDEDGE, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	5.85	51.36	Pk	35.4	-20.9	0	65.86	-	-	78.2	-12.34	308	220	V
4	5.859	56.17	Pk	35.4	-20.8	0	70.77	-	-	78.2	-7.43	308	220	V
1	5.86	47.34	Pk	35.4	-20.9	0	61.84	-	-	74	-12.16	308	220	V
2	5.86	49.87	Pk	35.4	-20.9	0	64.37	-	-	74	-9.63	308	220	V
5	5.86	35.8	RMS	35.4	-20.9	.22	50.52	54	-3.48	-	-	308	220	V
6	5.86	36.46	RMS	35.4	-21	.22	51.08	54	-2.92	-	-	308	220	V

Pk - Peak detector
RMS - RMS detection

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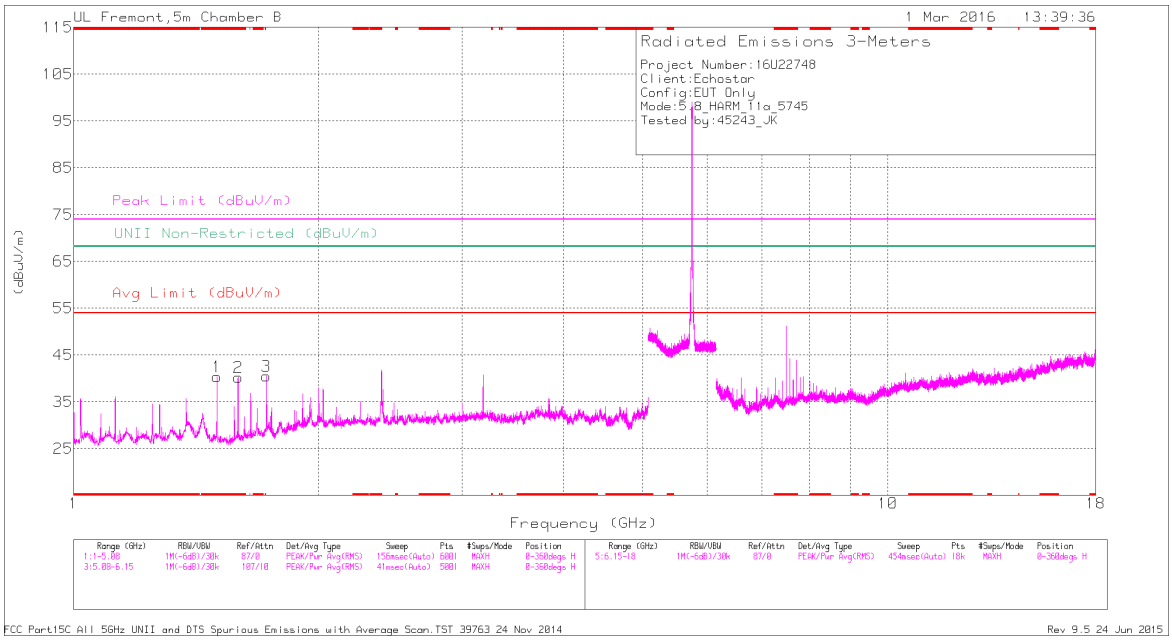
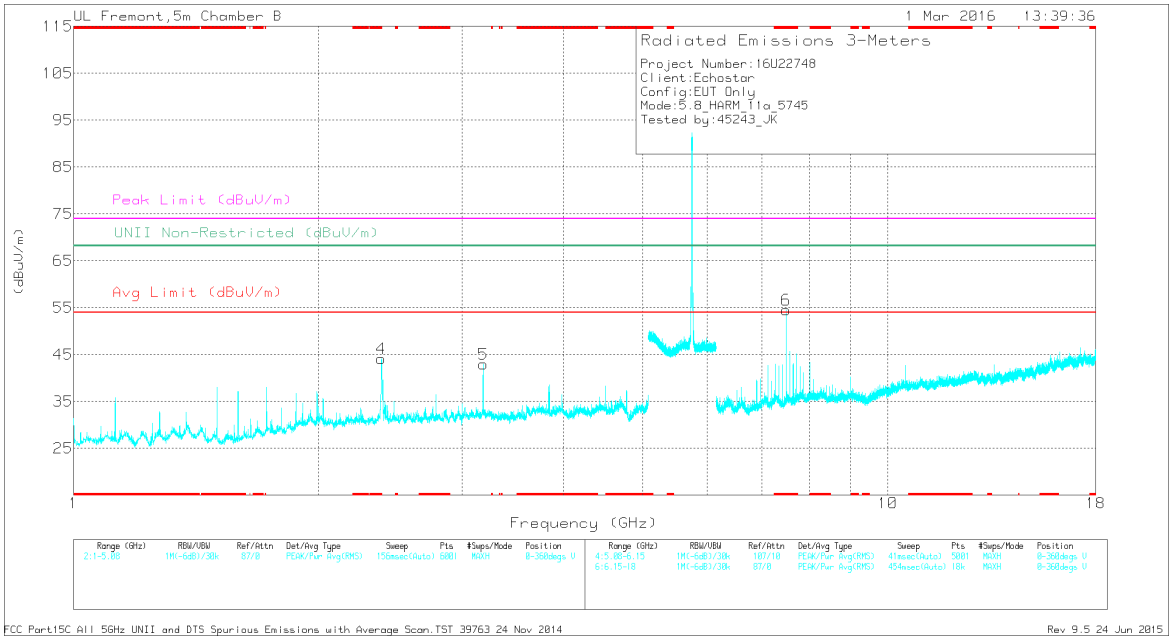
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 1.5	47.88	Pk	28	-35.5	0	40.38	-	-	74	-33.62	68.2	-27.82	0-360	200	H
2	* 1.592	47.39	Pk	28.1	-35.3	0	40.19	-	-	74	-33.81	68.2	-28.01	0-360	200	H
4	* 2.388	46.49	Pk	32.1	-34.4	0	44.19	-	-	74	-29.81	68.2	-24.01	0-360	101	V
6	* 7.5	47.97	Pk	35.6	-29	0	54.57	-	-	74	-19.43	68.2	-13.63	0-360	101	V
3	1.725	45.68	Pk	29.3	-34.5	0	40.48	-	-	74	-33.52	68.2	-27.72	0-360	200	H
5	3.183	42.82	Pk	33.2	-33.1	0	42.92	-	-	74	-31.08	68.2	-25.28	0-360	101	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 1.5	52.24	PK-U	28	-35.5	0	44.74	-	-	74	-29.26	-	-	58	314	H
* 1.5	44.73	ADR	28	-35.5	.22	37.45	54	-16.55	-	-	-	-	58	314	H
* 1.592	53.44	PK-U	28.1	-35.3	0	46.24	-	-	74	-27.76	-	-	206	143	H
* 1.592	48.23	ADR	28.1	-35.3	.22	41.25	54	-12.75	-	-	-	-	206	143	H
* 2.389	58.33	PK-U	32.1	-34.4	0	56.03	-	-	74	-17.97	-	-	111	262	V
* 2.388	40.72	ADR	32.1	-34.4	.22	38.64	54	-15.36	-	-	-	-	111	262	V
* 7.5	52.17	PK-U	35.6	-29	0	58.77	-	-	74	-15.23	-	-	96	110	H
* 7.5	38.95	ADR	35.6	-29	.22	45.77	54	-8.23	-	-	-	-	96	110	H
1.725	47.85	PK-U	29.3	-34.5	0	42.65	-	-	-	-	68.2	-25.55	13	193	H
3.184	47.17	PK-U	33.2	-33	0	47.37	-	-	-	-	68.2	-20.83	323	130	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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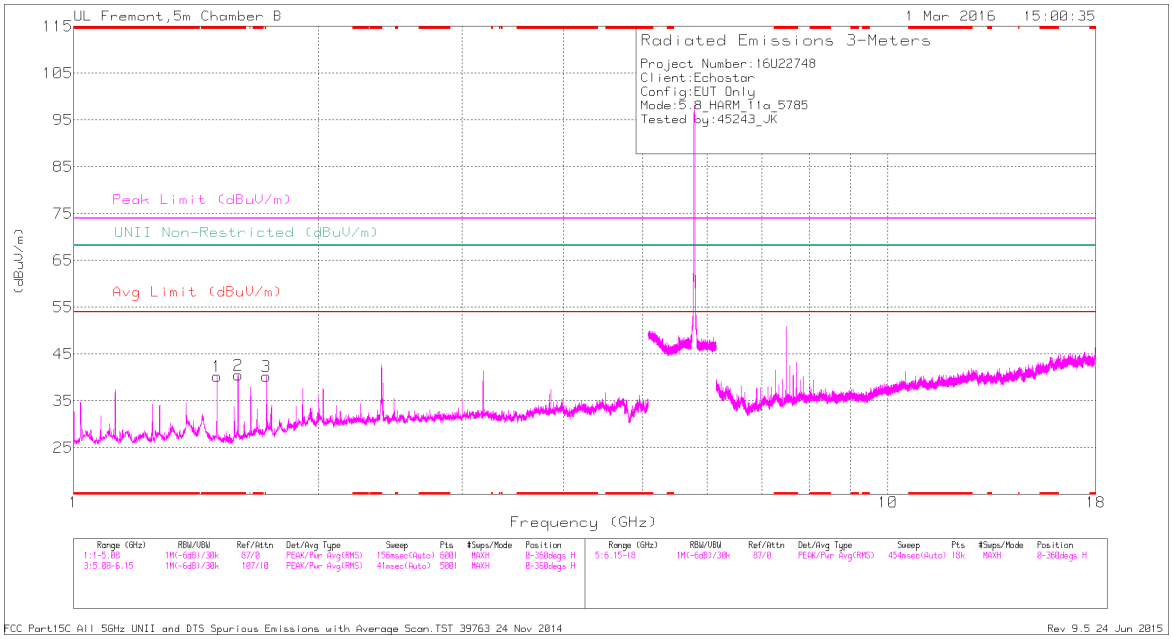
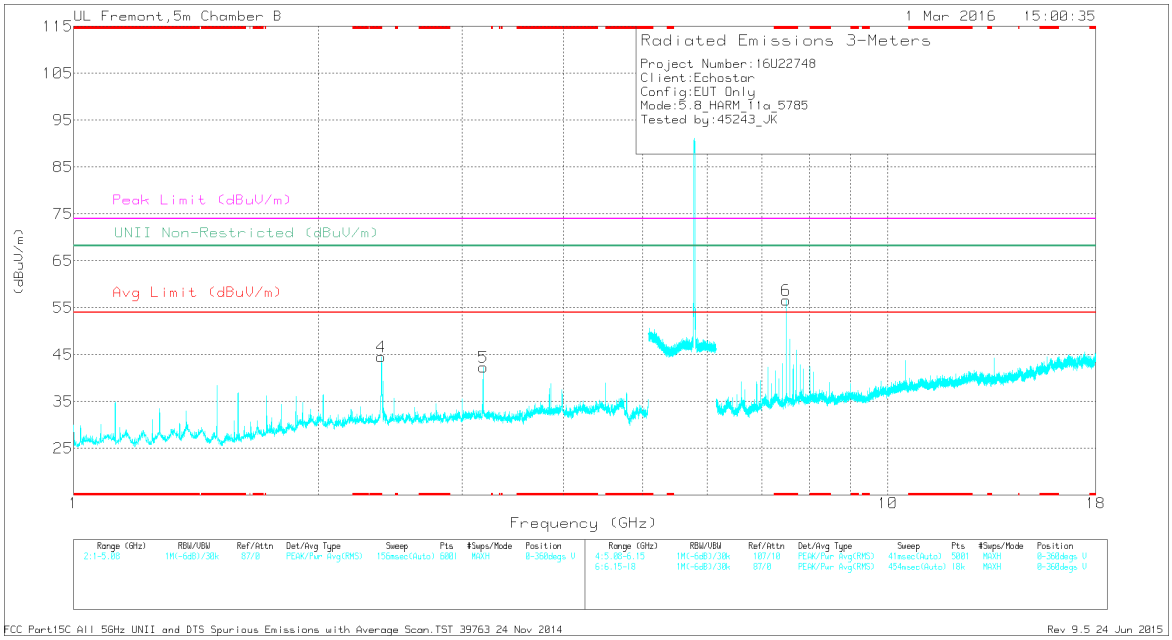
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 1.5	47.69	Pk	28	-35.5	0	40.19	-	-	74	-33.81	68.2	-28.01	0-360	199	H
2	* 1.592	47.76	Pk	28.1	-35.3	0	40.56	-	-	74	-33.44	68.2	-27.64	0-360	199	H
4	* 2.388	46.83	Pk	32.1	-34.4	0	44.53	-	-	74	-29.47	68.2	-23.67	0-360	199	V
6	* 7.5	49.95	Pk	35.6	-29	0	56.55	-	-	74	-17.45	68.2	-11.65	0-360	101	V
3	1.725	45.49	Pk	29.3	-34.5	0	40.29	-	-	74	-33.71	68.2	-27.91	0-360	199	H
5	3.183	42.17	Pk	33.2	-33.1	0	42.27	-	-	74	-31.73	68.2	-25.93	0-360	199	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 1.592	53.34	PK-U	28.1	-35.3	0	46.14	-	-	74	-27.86	-	-	206	140	H
* 1.592	47.83	ADR	28.1	-35.3	.22	40.85	54	-13.15	-	-	-	-	206	140	H
* 1.5	50.24	PK-U	28	-35.5	0	42.74	-	-	74	-31.26	-	-	53	244	H
* 1.5	41.68	ADR	28	-35.5	.22	34.4	54	-19.6	-	-	-	-	53	244	H
* 2.389	57.81	PK-U	32.1	-34.4	0	55.51	-	-	74	-18.49	-	-	108	123	H
* 2.388	34.15	ADR	32.1	-34.4	.22	32.07	54	-21.93	-	-	-	-	108	123	H
* 7.5	49.27	PK-U	35.6	-29	0	55.87	-	-	74	-18.13	68.2	-12.33	99	115	V
* 7.5	46.93	ADR	35.6	-29	.22	53.75	54	-.25	-	-	-	-	99	115	V
1.725	48.63	PK-U	29.3	-34.5	0	43.43	-	-	-	-	68.2	-24.77	193	161	H
3.183	47.64	PK-U	33.2	-33.1	0	47.74	-	-	-	-	68.2	-20.46	268	224	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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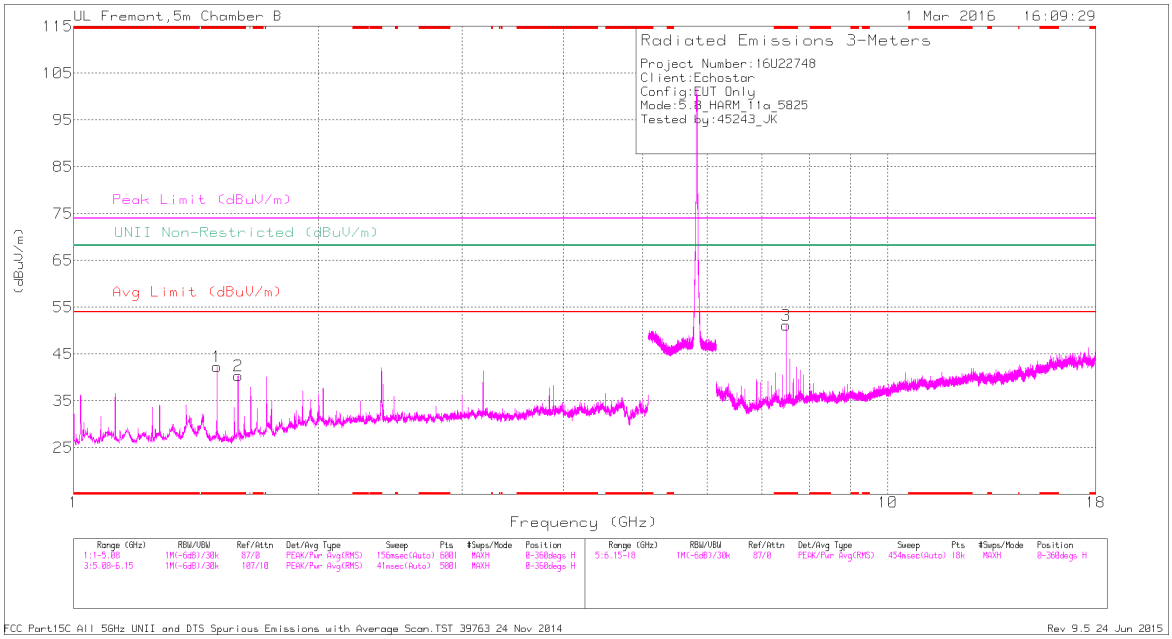
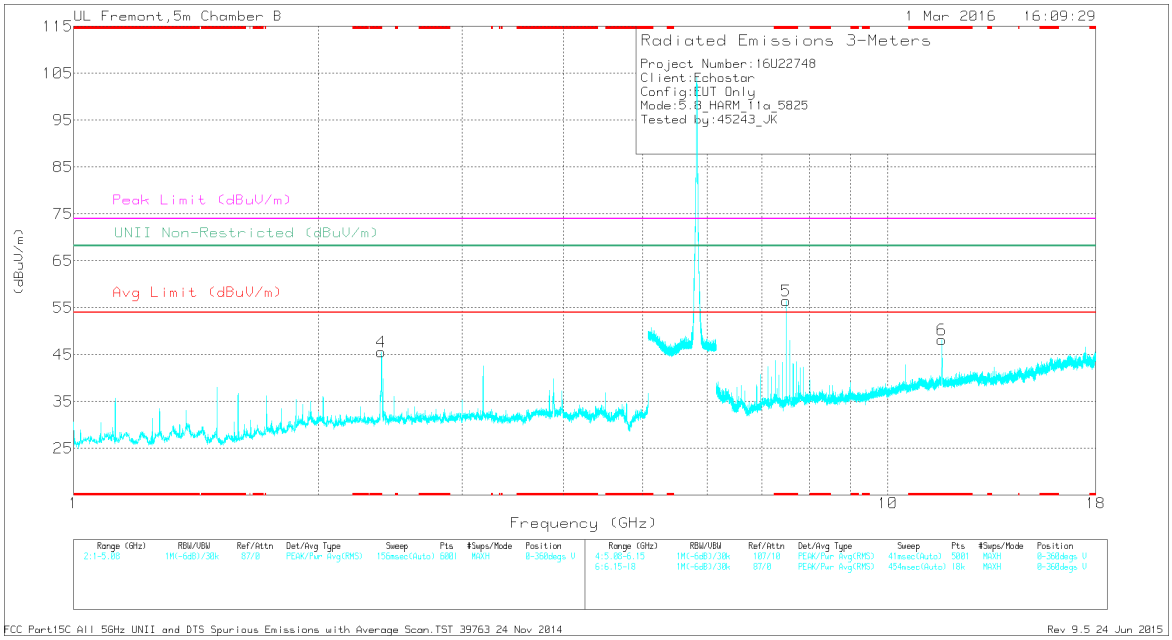
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 1.5	49.87	Pk	28	-35.5	0	42.37	-	-	74	-31.63	68.2	-25.83	0-360	101	H
2	* 1.592	47.53	Pk	28.1	-35.3	0	40.33	-	-	74	-33.67	68.2	-27.87	0-360	200	H
4	* 2.388	47.85	Pk	32.1	-34.4	0	45.55	-	-	74	-28.45	68.2	-22.65	0-360	200	V
3	* 7.5	44.56	Pk	35.6	-29	0	51.16	-	-	74	-22.84	68.2	-17.04	0-360	101	H
5	* 7.5	49.86	Pk	35.6	-29	0	56.46	-	-	74	-17.54	68.2	-11.74	0-360	101	V
6	* 11.654	34.86	Pk	38.2	-24.9	0	48.16	-	-	74	-25.84	68.2	-20.04	0-360	200	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 1.592	52.56	PK-U	28.1	-35.3	0	45.36	-	-	74	-28.64	-	-	205	131	H
* 1.592	47.92	ADR	28.1	-35.3	.22	40.94	54	-13.06	-	-	-	-	205	131	H
* 1.5	52.45	PK-U	28	-35.5	0	44.95	-	-	74	-29.05	-	-	143	103	H
* 1.5	44.92	ADR	28	-35.5	.22	37.64	54	-16.36	-	-	-	-	143	103	H
* 2.388	53.69	PK-U	32.1	-34.4	0	51.39	-	-	74	-22.61	-	-	238	122	V
* 2.388	45.4	ADR	32.1	-34.4	.22	43.32	54	-10.68	-	-	-	-	238	122	V
* 7.5	45.34	PK-U	35.6	-29	0	51.94	-	-	74	-22.06	-	-	57	109	H
* 7.5	41.38	ADR	35.6	-29	.22	48.2	54	-5.8	-	-	-	-	57	109	H
* 7.5	49.47	PK-U	35.6	-29	0	56.07	-	-	74	-17.93	-	-	99	103	V
* 7.5	47.03	ADR	35.6	-29	.22	53.85	54	-.15	-	-	-	-	99	103	V
* 11.654	45.37	PK-U	38.2	-24.9	0	58.67	-	-	74	-15.33	-	-	282	174	V
* 11.655	29.67	ADR	38.2	-24.9	.22	43.19	54	-10.81	-	-	-	-	282	174	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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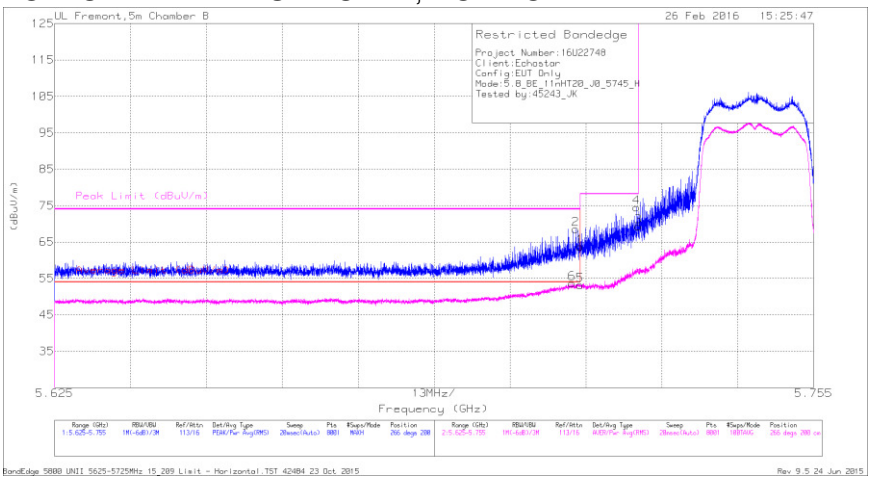
10.4. TX ABOVE 1 GHz 802.11n HT20 SISO MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	54.34	Pk	35	-20.8	0	68.54	-	-	74	-5.46	266	200	H
6	5.714	39.33	RMS	35	-20.9	.22	53.65	54	-.35	-	-	266	200	H
1	5.715	49.66	Pk	35	-21	0	63.66	-	-	74	-10.34	266	200	H
5	5.715	38.92	RMS	35	-21	.22	53.14	54	-.86	-	-	266	200	H
3	5.725	55.1	Pk	35	-20.8	0	69.3	-	-	78.2	-8.9	266	200	H
4	5.725	60.45	Pk	35	-20.9	0	74.55	-	-	78.2	-3.65	266	200	H

Pk - Peak detector
RMS - RMS detection

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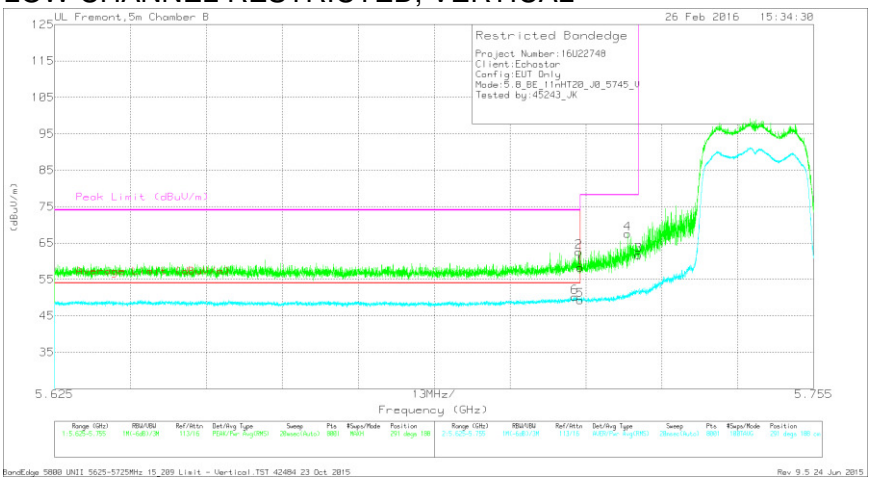
LOW CHANNEL RESTRICTED, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	5.714	35.77	RMS	35	-20.8	.22	50.19	54	-3.81	-	-	291	188	V
1	5.715	44.26	Pk	35	-21	0	58.26	-	-	74	-15.74	291	188	V
2	5.715	48.54	Pk	35	-20.9	0	62.64	-	-	74	-11.36	291	188	V
5	5.715	35.12	RMS	35	-21	.22	49.34	54	-4.66	-	-	291	188	V
4	5.723	53.75	Pk	35	-21.2	0	67.55	-	-	78.2	-10.65	291	188	V
3	5.725	47.55	Pk	35	-20.8	0	61.75	-	-	78.2	-16.45	291	188	V

Pk - Peak detector
RMS - RMS detection

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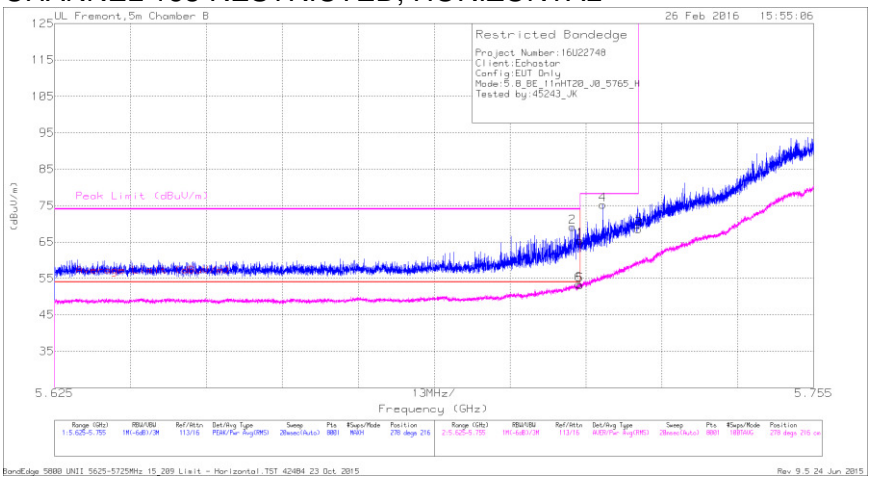
RESTRICTED BANDEDGE (CHANNEL 153)

CHANNEL 153 RESTRICTED, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	55.09	Pk	35	-20.9	0	69.19	-	-	74	-4.81	278	216	H
1	5.715	51.5	Pk	35	-21	0	65.5	-	-	74	-8.5	278	216	H
5	5.715	38.94	RMS	35	-21	.22	53.16	54	-.84	-	-	278	216	H
6	5.715	39.1	RMS	35	-20.9	.22	53.42	54	-.58	-	-	278	216	H
4	5.719	61.21	Pk	35	-21	0	75.21	-	-	78.2	-2.99	278	216	H
3	5.725	54.33	Pk	35	-20.8	0	68.53	-	-	78.2	-9.67	278	216	H

Pk - Peak detector
RMS - RMS detection

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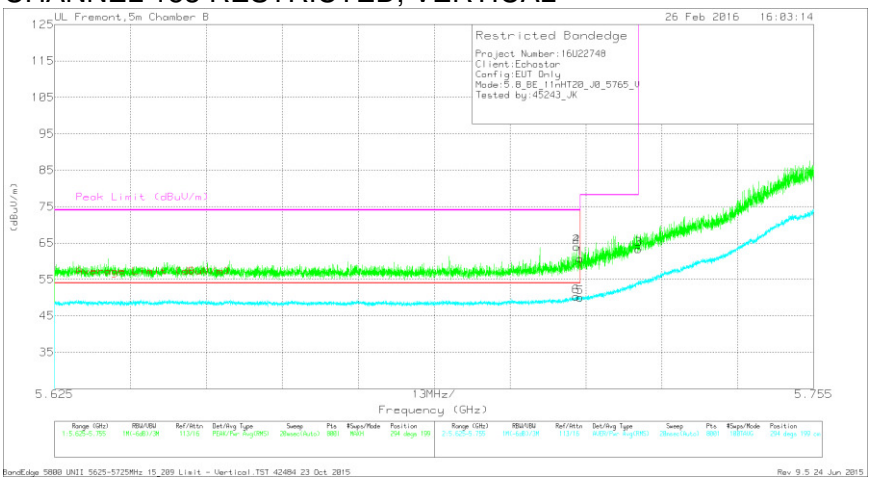
CHANNEL 153 RESTRICTED, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	49.87	Pk	35	-20.9	0	63.97	-	-	74	-10.03	294	199	V
4	5.714	49.87	Pk	35	-20.9	0	63.97	-	-	74	-10.03	294	199	V
6	5.714	35.89	RMS	35	-20.8	.22	50.31	54	-3.69	-	-	294	199	V
1	5.715	46.74	Pk	35	-21	0	60.74	-	-	74	-13.26	294	199	V
5	5.715	35.84	RMS	35	-21	.22	50.06	54	-3.94	-	-	294	199	V
3	5.725	49.14	Pk	35	-20.8	0	63.34	-	-	78.2	-14.86	294	199	V

Pk - Peak detector
RMS - RMS detection

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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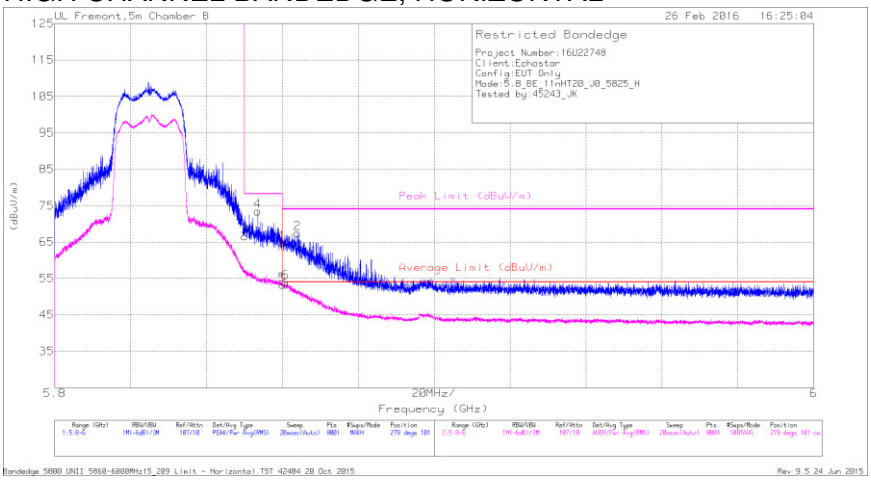
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	5.85	52.01	Pk	35.4	-20.9	0	66.51	-	-	78.2	-11.69	279	101	H
4	5.854	58.85	Pk	35.4	-20.8	0	73.45	-	-	78.2	-4.75	279	101	H
1	5.86	50.32	Pk	35.4	-20.9	0	64.82	-	-	74	-9.18	279	101	H
5	5.86	38.59	RMS	35.4	-20.9	.22	53.31	54	-.69	-	-	279	101	H
6	5.861	39.27	RMS	35.4	-21	.22	53.89	54	-.11	-	-	279	101	H
2	5.864	52.83	Pk	35.4	-20.8	0	67.43	-	-	74	-6.57	279	101	H

Pk - Peak detector
RMS - RMS detection

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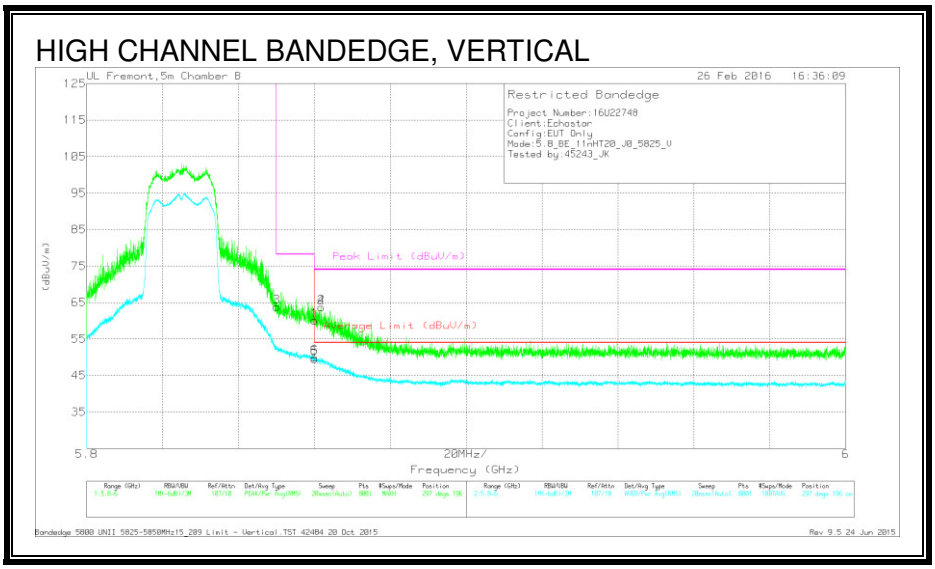

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	5.85	49.35	Pk	35.4	-20.9	0	63.85	-	-	78.2	-14.35	297	196	V
1	5.86	45.6	Pk	35.4	-20.9	0	60.1	-	-	74	-13.9	297	196	V
5	5.86	34.89	RMS	35.4	-20.9	.22	49.61	54	-4.39	-	-	297	196	V
6	5.86	35.26	RMS	35.4	-20.9	.22	49.98	54	-4.02	-	-	297	196	V
2	5.862	49.09	Pk	35.4	-20.8	0	63.69	-	-	74	-10.31	297	196	V
4	5.862	49.09	Pk	35.4	-20.8	0	63.69	-	-	74	-10.31	297	196	V

Pk - Peak detector
RMS - RMS detection

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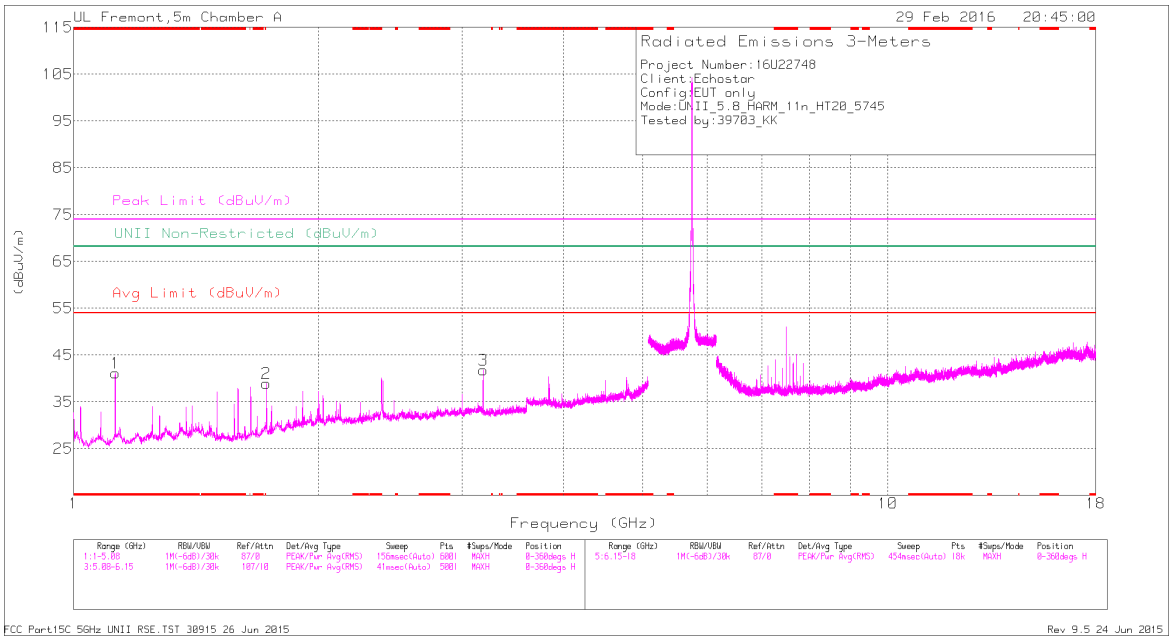
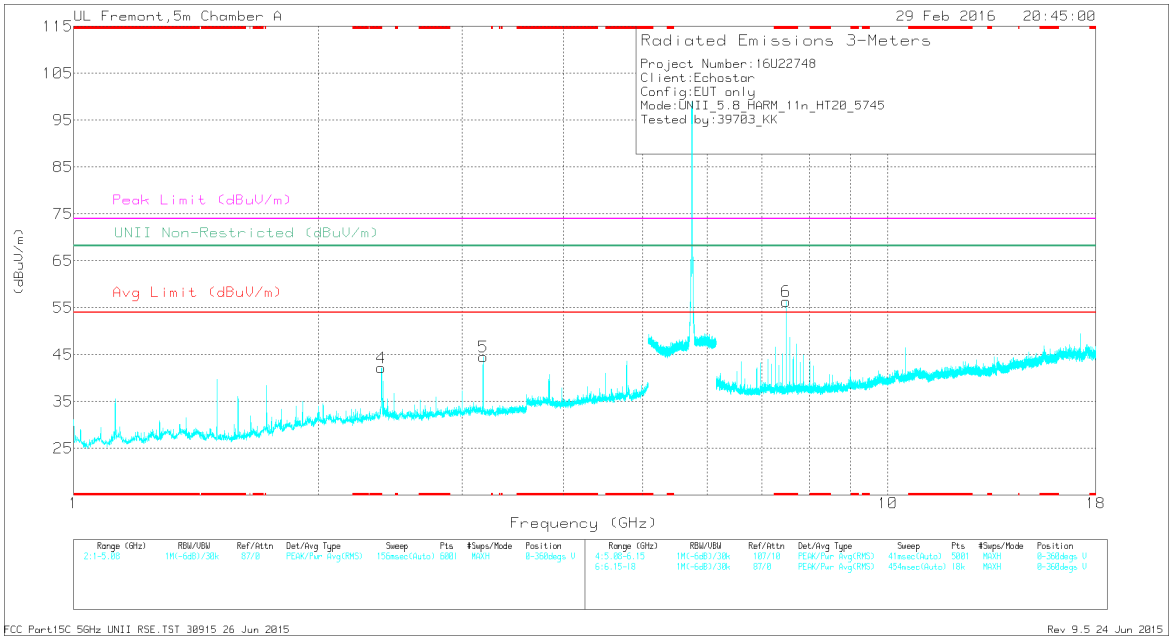
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/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	* 1.125	49.46	Pk	27.4	-35.7	0	41.16	-	-	74	-32.84	-	-	0-360	201	H
4	* 2.388	44.25	Pk	32	-34	0	42.25	-	-	74	-31.75	-	-	0-360	100	V
6	* 7.5	47.21	Pk	35.5	-26.4	0	56.31	-	-	74	-17.69	-	-	0-360	100	V
2	1.725	44.5	Pk	29	-34.5	0	39	-	-	-	-	68.2	-29.2	0-360	102	H
3	3.183	41.93	Pk	32.7	-32.8	0	41.83	-	-	-	-	68.2	-26.37	0-360	102	H
5	3.183	44.67	Pk	32.7	-32.8	0	44.57	-	-	-	-	68.2	-23.63	0-360	200	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/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
* 1.125	52.89	PK-U	27.4	-35.7	0	44.59	-	-	74	-29.41	-	-	341	206	H
* 1.125	46.07	ADR	27.4	-35.7	.22	37.99	54	-16.01	-	-	-	-	341	206	H
* 2.389	58.41	PK-U	32	-34	0	56.41	-	-	74	-17.59	-	-	206	134	V
* 2.388	42.05	ADR	32	-34	.22	40.27	54	-13.73	-	-	-	-	206	134	V
* 7.5	46.86	PK-U	35.5	-26.4	0	55.96	-	-	74	-18.04	-	-	183	102	V
* 7.5	43.83	ADR	35.5	-26.4	.22	53.15	54	-.85	-	-	-	-	183	102	V
1.725	50.77	PK-U	29	-34.5	0	45.27	-	-	-	-	68.2	-22.93	122	126	H
3.184	48.56	PK-U	32.7	-32.9	0	48.36	-	-	-	-	68.2	-19.84	12	102	H
3.185	51.23	PK-U	32.7	-32.9	0	51.03	-	-	-	-	68.2	-17.17	182	195	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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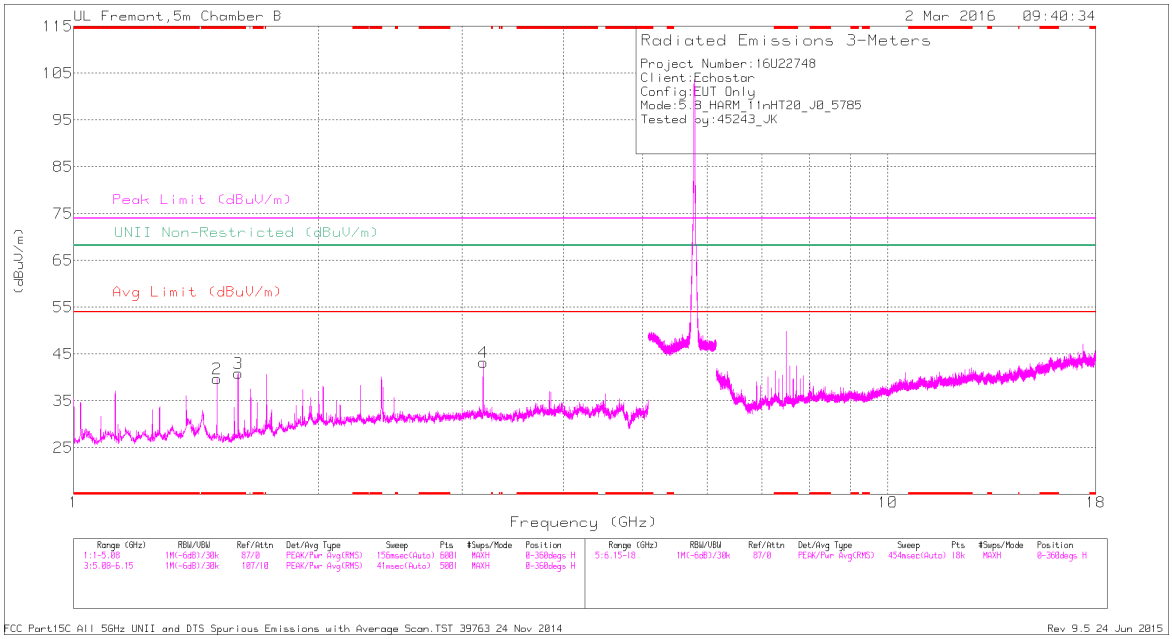
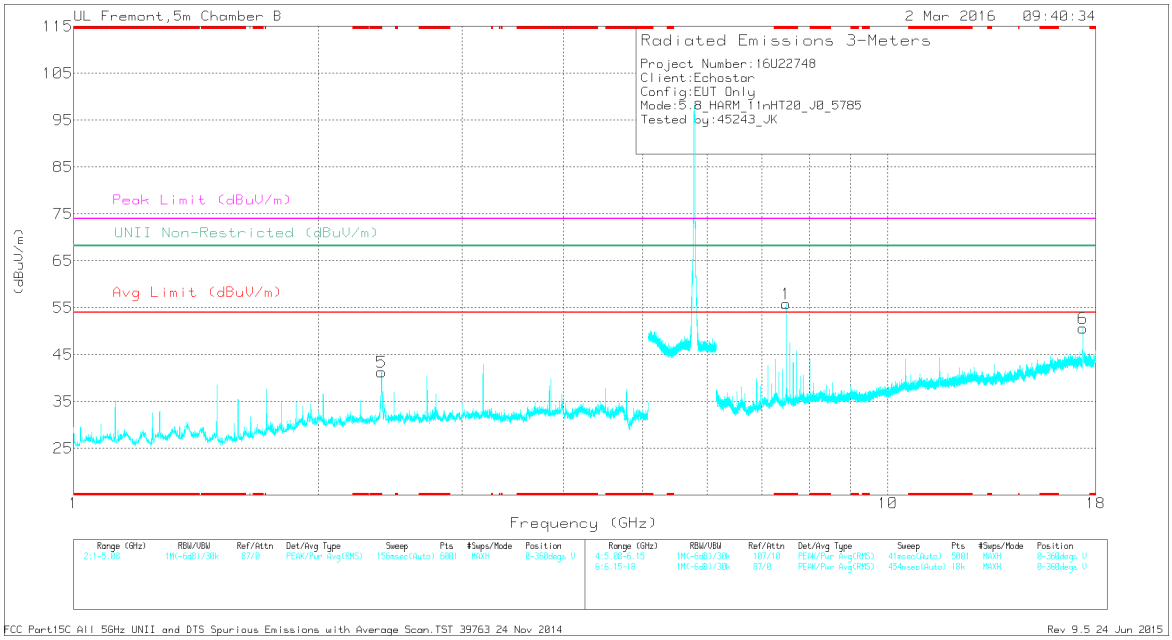
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.5	47.23	Pk	28	-35.5	0	39.73	-	-	74	-34.27	68.2	-28.47	0-360	101	H
3	* 1.592	48.13	Pk	28.1	-35.3	0	40.93	-	-	74	-33.07	68.2	-27.27	0-360	199	H
5	* 2.389	43.63	Pk	32.1	-34.4	0	41.33	-	-	74	-32.67	68.2	-26.87	0-360	101	V
1	* 7.5	49.18	Pk	35.6	-29	0	55.78	-	-	74	-18.22	68.2	-12.42	0-360	199	V
4	3.184	43.03	Pk	33.2	-33	0	43.23	-	-	74	-30.77	68.2	-24.97	0-360	199	H
6	17.356	30.65	Pk	41.2	-21.2	0	50.65	-	-	74	-23.35	68.2	-17.55	0-360	101	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 1.5	51.32	PK-U	28	-35.5	0	43.82	-	-	74	-30.18	-	-	75	104	H
* 1.5	43.71	ADR	28	-35.5	.22	36.43	54	-17.57	-	-	-	-	75	104	H
* 1.592	53.89	PK-U	28.1	-35.3	0	46.69	-	-	74	-27.31	-	-	200	141	H
* 1.592	48.36	ADR	28.1	-35.3	.22	41.38	54	-12.62	-	-	-	-	200	141	H
* 2.389	56.49	PK-U	32.1	-34.4	0	54.19	-	-	74	-19.81	-	-	81	334	V
* 2.389	38.85	ADR	32.1	-34.4	.22	36.77	54	-17.23	-	-	-	-	81	334	V
* 7.5	48.64	PK-U	35.6	-29	0	55.24	-	-	74	-18.76	-	-	299	190	V
* 7.5	45.83	ADR	35.6	-29	.22	52.65	54	-1.35	-	-	-	-	299	190	V
3.184	49.05	PK-U	33.2	-33.1	0	49.15	-	-	-	-	68.2	-19.05	175	246	H
17.357	41.9	PK-U	41.2	-21.1	0	62	-	-	-	-	68.2	-6.2	269	236	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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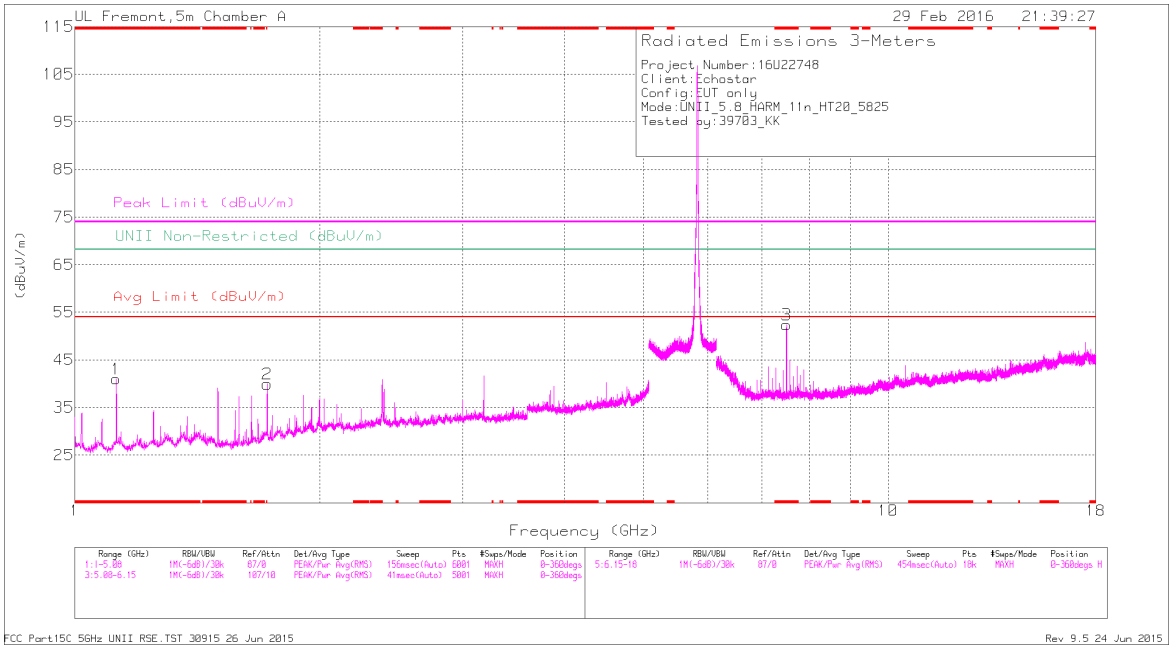
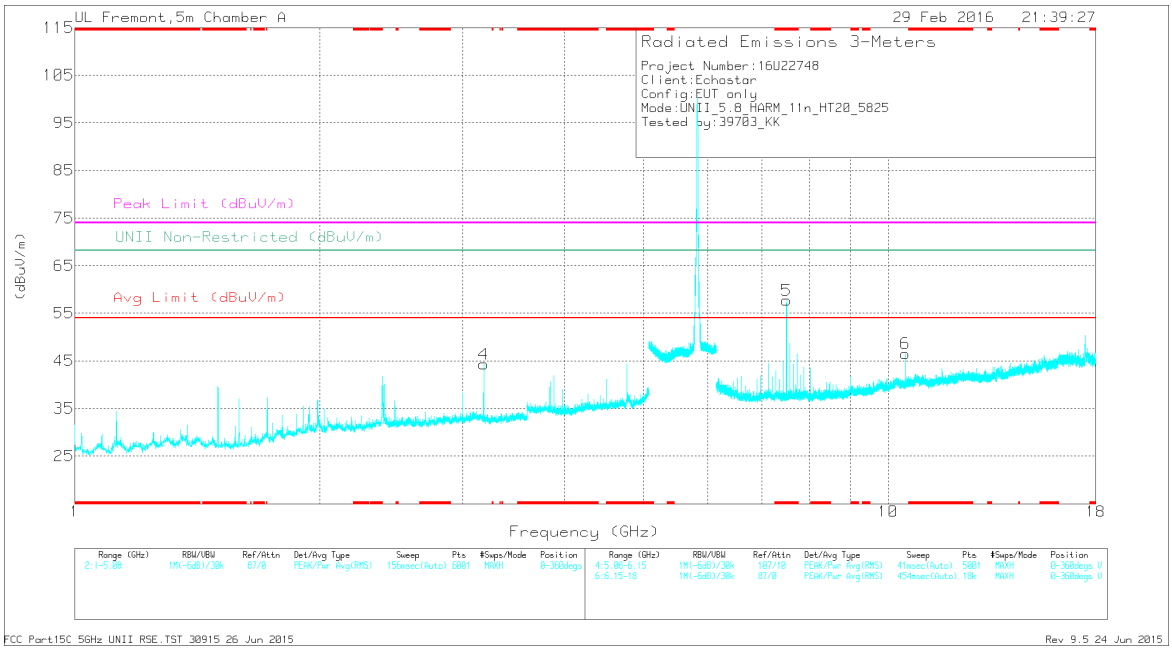
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/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	* 1.125	49.31	Pk	27.4	-35.7	0	41.01	-	-	74	-32.99	-	-	0-360	201	H
3	* 7.5	43.29	Pk	35.5	-26.4	0	52.39	-	-	74	-21.61	-	-	0-360	100	H
5	* 7.5	48.64	Pk	35.5	-26.4	0	57.74	-	-	74	-16.26	-	-	0-360	100	V
2	1.725	45.44	Pk	29	-34.5	0	39.94	-	-	-	-	68.2	-28.26	0-360	201	H
4	3.183	44.42	Pk	32.7	-32.8	0	44.32	-	-	-	-	68.2	-23.88	0-360	200	V
6	10.5	32.35	Pk	37.5	-23.3	0	46.55	-	-	-	-	68.2	-21.65	0-360	100	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/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
* 1.125	52.64	PK-U	27.4	-35.7	0	44.34	-	-	74	-29.66	-	-	346	201	H
* 1.125	45.86	ADR	27.4	-35.7	.22	37.78	54	-16.22	-	-	-	-	346	201	H
* 7.5	45.9	PK-U	35.5	-26.4	0	55	-	-	74	-19	-	-	199	109	H
* 7.5	42.35	ADR	35.5	-26.4	.22	51.67	54	-2.33	-	-	-	-	199	109	H
* 7.5	47.73	PK-U	35.5	-26.4	0	56.83	-	-	74	-17.17	-	-	145	102	V
* 7.5	44.38	ADR	35.5	-26.4	.22	53.7	54	-.3	-	-	-	-	145	102	V
1.725	49.2	PK-U	29	-34.5	0	43.7	-	-	-	-	68.2	-24.5	104	125	H
3.183	51.38	PK-U	32.7	-32.8	0	51.28	-	-	-	-	68.2	-16.92	181	251	V
10.5	36.32	PK-U	37.5	-23.3	0	50.52	-	-	-	-	68.2	-17.68	196	206	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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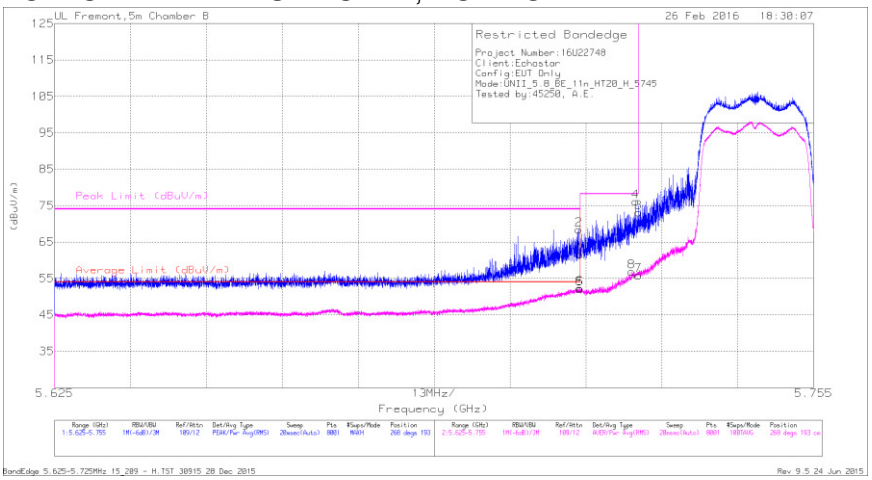
10.5. TX ABOVE 1 GHz 802.11n HT20 CDD 2TX MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.715	47.59	Pk	35	-21	0	61.59	-	-	74	-12.41	268	193	H
2	5.715	54.34	Pk	35	-20.9	0	68.44	-	-	74	-5.56	268	193	H
5	5.715	37.88	RMS	35	-21	.22	52.1	54	-1.9	-	-	268	193	H
6	5.715	38.1	RMS	35	-21	.22	52.32	54	-1.68	-	-	268	193	H
3	5.725	58.96	Pk	35	-20.8	0	73.16	-	-	78.2	-5.04	268	193	H
4	5.725	61.98	Pk	35	-20.9	0	76.08	-	-	78.2	-2.12	268	193	H

Pk - Peak detector
RMS - RMS detection

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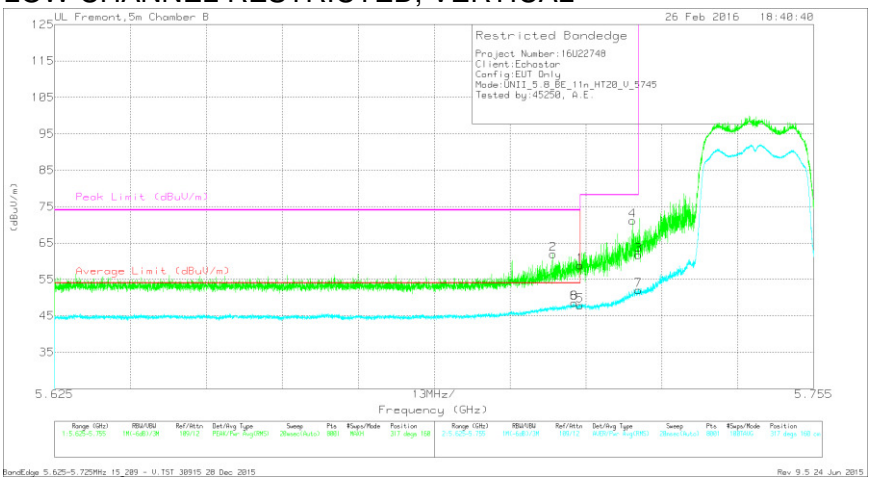
LOW CHANNEL RESTRICTED, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.71	47.94	Pk	35	-21	0	61.94	-	-	74	-12.06	317	160	V
6	5.714	34.38	RMS	35	-20.8	.22	48.8	54	-5.2	-	-	317	160	V
8	5.714	34.38	RMS	35	-20.8	.22	48.8	54	-5.2	-	-	317	160	V
1	5.715	44.86	Pk	35	-21	0	58.86	-	-	74	-15.14	317	160	V
5	5.715	33.84	RMS	35	-21	.22	48.06	54	-5.94	-	-	317	160	V
4	5.724	57.12	Pk	35	-21	0	71.12	-	-	78.2	-7.08	317	160	V
3	5.725	47.56	Pk	35	-20.8	0	61.76	-	-	78.2	-16.44	317	160	V

Pk - Peak detector
RMS - RMS detection

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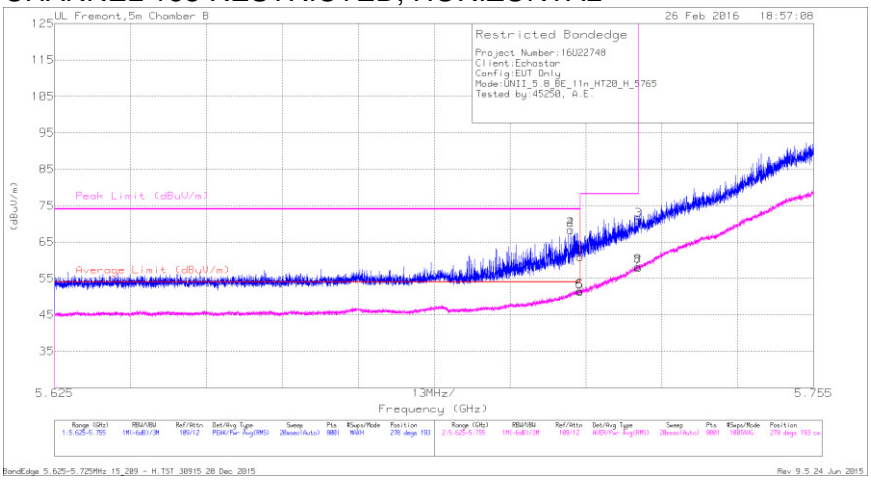
RESTRICTED BANDEDGE (CHANNEL 153)

CHANNEL 153 RESTRICTED, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.713	54.26	Pk	35	-20.9	0	68.36	-	-	74	-5.64	278	193	H
4	5.713	54.26	Pk	35	-20.9	0	68.36	-	-	74	-5.64	278	193	H
1	5.715	46.81	Pk	35	-21	0	60.81	-	-	74	-13.19	278	193	H
5	5.715	37.28	RMS	35	-21	.22	51.5	54	-2.5	-	-	278	193	H
6	5.715	37.55	RMS	35	-21	.22	51.77	54	-2.23	-	-	278	193	H
3	5.725	56.88	Pk	35	-20.8	0	71.08	-	-	78.2	-7.12	278	193	H

Pk - Peak detector
RMS - RMS detection

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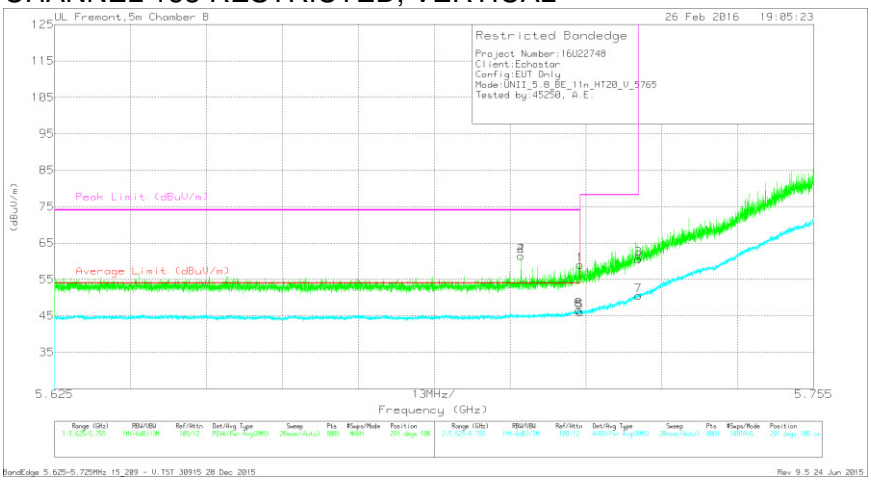
CHANNEL 153 RESTRICTED, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.705	47.41	Pk	35	-21	0	61.41	-	-	74	-12.59	291	108	V
4	5.705	47.41	Pk	35	-21	0	61.41	-	-	74	-12.59	291	108	V
1	5.715	44.99	Pk	35	-21	0	58.99	-	-	74	-15.01	291	108	V
5	5.715	32.03	RMS	35	-21	.22	46.25	54	-7.75	-	-	291	108	V
6	5.715	32.41	RMS	35	-20.9	.22	46.73	54	-7.27	-	-	291	108	V
8	5.715	32.41	RMS	35	-20.9	.22	46.73	54	-7.27	-	-	291	108	V
3	5.725	46.41	Pk	35	-20.8	0	60.61	-	-	78.2	-17.59	291	108	V

Pk - Peak detector
RMS - RMS detection

UL VERIFICATION SERVICES INC. FORM NO: CCSUP4701J
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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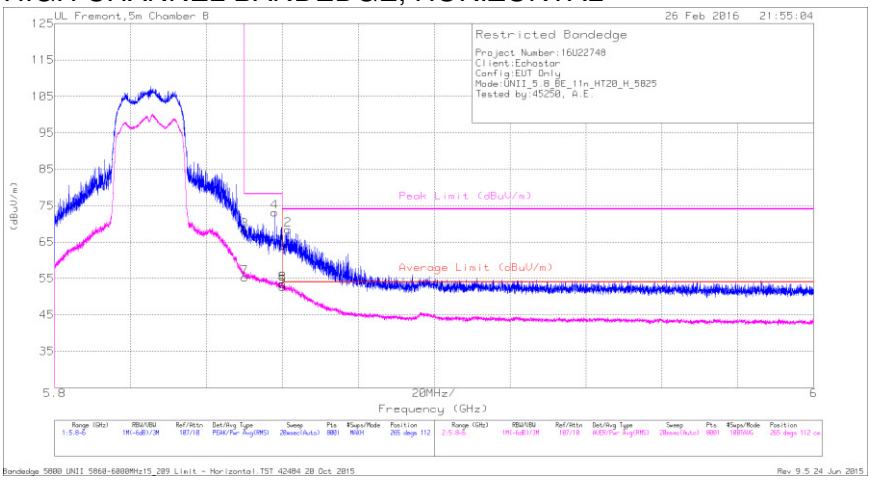
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	5.85	53.7	Pk	35.4	-20.9	0	68.2	-	-	78.2	-10	265	112	H
4	5.858	58.6	Pk	35.4	-20.8	0	73.2	-	-	78.2	-5	265	112	H
1	5.86	49.46	Pk	35.4	-20.9	0	63.96	-	-	74	-10.04	265	112	H
5	5.86	37.75	RMS	35.4	-20.9	.22	52.47	54	-1.53	-	-	265	112	H
6	5.86	38.62	RMS	35.4	-20.9	.22	53.34	54	-.66	-	-	265	112	H
8	5.86	38.62	RMS	35.4	-20.9	.22	53.34	54	-.66	-	-	265	112	H
2	5.862	53.91	Pk	35.4	-20.9	0	68.41	-	-	74	-5.59	265	112	H

Pk - Peak detector
RMS - RMS detection

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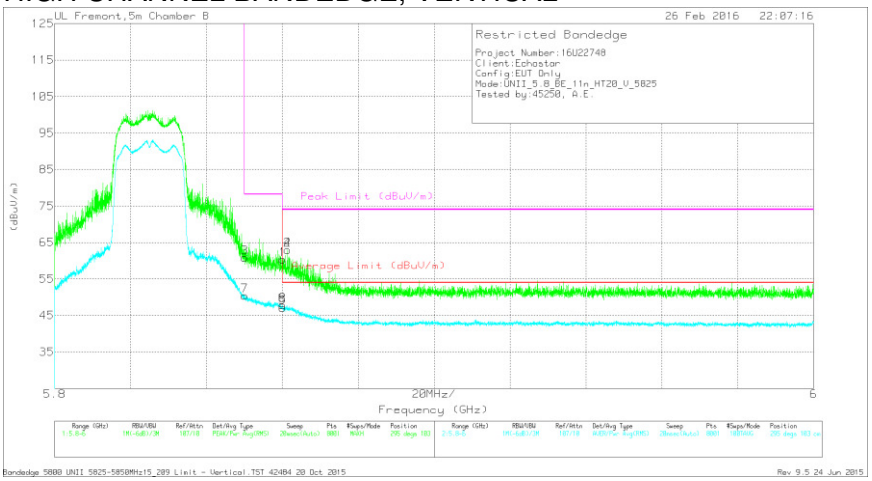
HIGH CHANNEL BANDEDGE, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	5.85	46.34	Pk	35.4	-20.9	0	60.84	-	-	78.2	-17.36	295	103	V
1	5.86	45.82	Pk	35.4	-20.9	0	60.32	-	-	74	-13.68	295	103	V
5	5.86	32.41	RMS	35.4	-20.9	.22	47.13	54	-6.87	-	-	295	103	V
6	5.86	33.06	RMS	35.4	-20.9	.22	47.78	54	-6.22	-	-	295	103	V
8	5.86	33.06	RMS	35.4	-20.9	.22	47.78	54	-6.22	-	-	295	103	V
2	5.861	48.48	Pk	35.4	-20.9	0	62.98	-	-	74	-11.02	295	103	V
4	5.861	48.48	Pk	35.4	-20.9	0	62.98	-	-	74	-11.02	295	103	V

Pk - Peak detector
RMS - RMS detection

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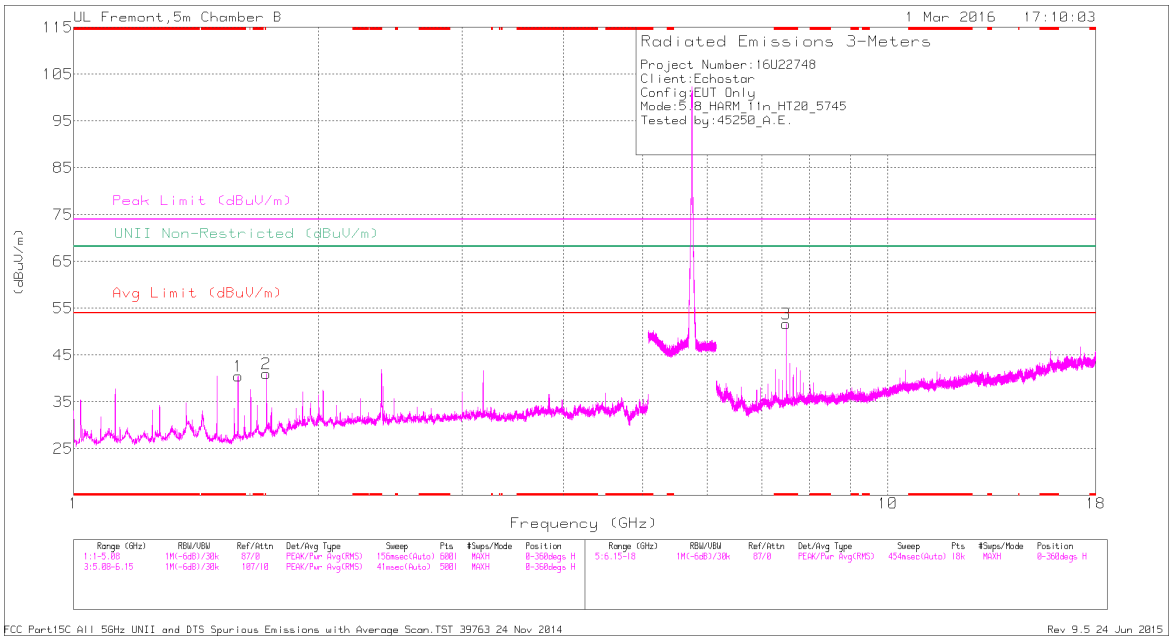
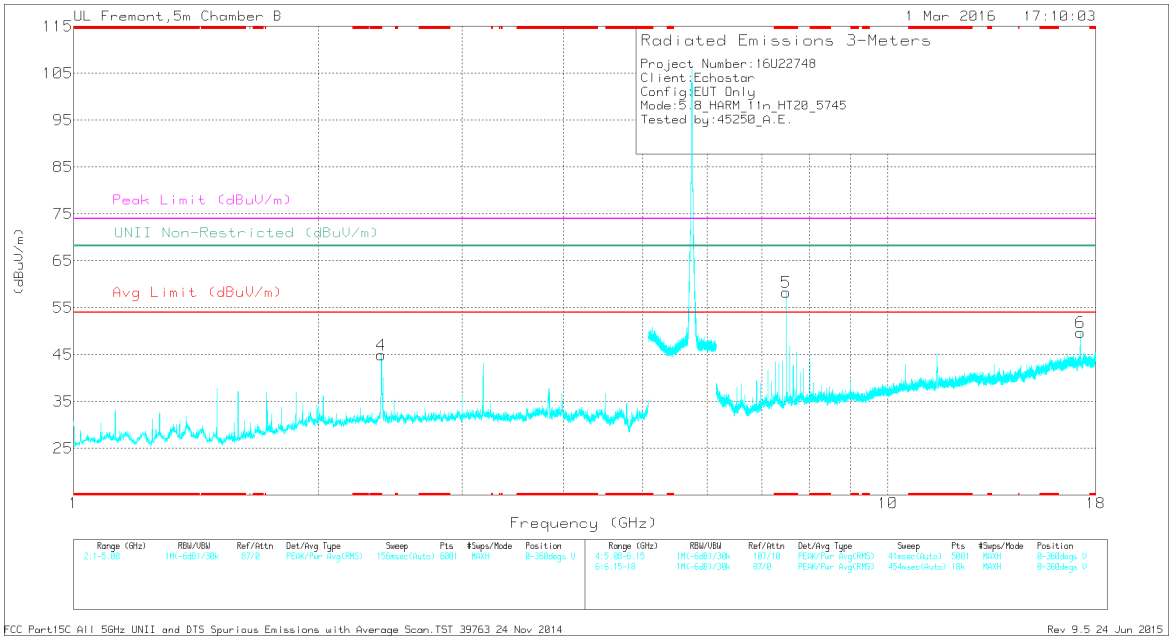
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 1.592	47.66	Pk	28.1	-35.3	0	40.46	-	-	74	-33.54	68.2	-27.74	0-360	101	H
4	* 2.388	47.24	Pk	32.1	-34.4	0	44.94	-	-	74	-29.06	68.2	-23.26	0-360	101	V
3	* 7.5	45.08	Pk	35.6	-29	0	51.68	-	-	74	-22.32	68.2	-16.52	0-360	101	H
5	* 7.5	51.69	Pk	35.6	-29	0	58.29	-	-	74	-15.71	68.2	-9.91	0-360	101	V
2	1.725	46.25	Pk	29.3	-34.5	0	41.05	-	-	74	-32.95	68.2	-27.15	0-360	200	H
6	17.228	30	Pk	41.4	-21.7	0	49.7	-	-	74	-24.3	68.2	-18.5	0-360	199	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 1.592	51.84	PK-U	28.1	-35.3	0	44.64	-	-	74	-29.36	-	-	208	164	H
* 1.592	45.11	ADR	28.1	-35.3	.22	38.13	54	-15.87	-	-	-	-	208	164	H
* 2.388	59.25	PK-U	32.1	-34.4	0	56.95	-	-	74	-17.05	-	-	113	179	V
* 2.388	43.8	ADR	32.1	-34.4	.22	41.72	54	-12.28	-	-	-	-	113	179	V
* 7.5	42.75	PK-U	35.6	-29	0	49.35	-	-	74	-24.65	-	-	233	394	H
* 7.5	37.44	ADR	35.6	-29	.22	44.26	54	-9.74	-	-	-	-	233	394	H
* 7.5	49.21	PK-U	35.6	-29	0	55.81	-	-	74	-18.19	-	-	91	101	V
* 7.5	46.32	ADR	35.6	-29	.22	53.14	54	-.86	-	-	-	-	91	101	V
1.725	48.84	PK-U	29.3	-34.5	0	43.64	-	-	-	-	68.2	-24.56	199	193	H
17.229	39.96	PK-U	41.4	-21.7	0	59.66	-	-	-	-	68.2	-8.54	250	195	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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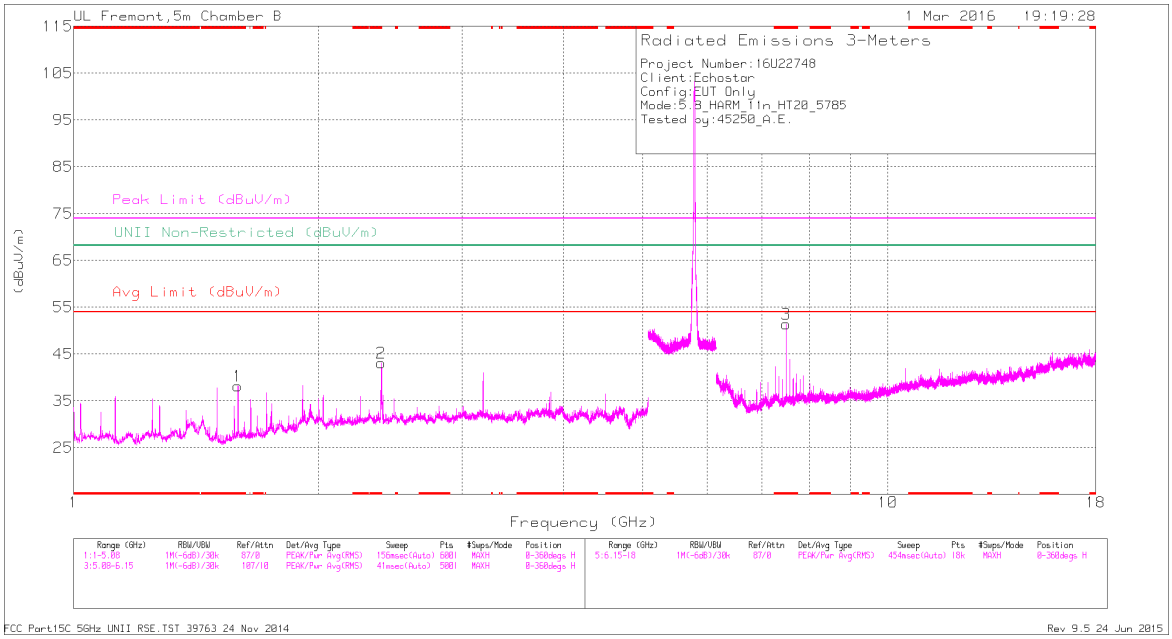
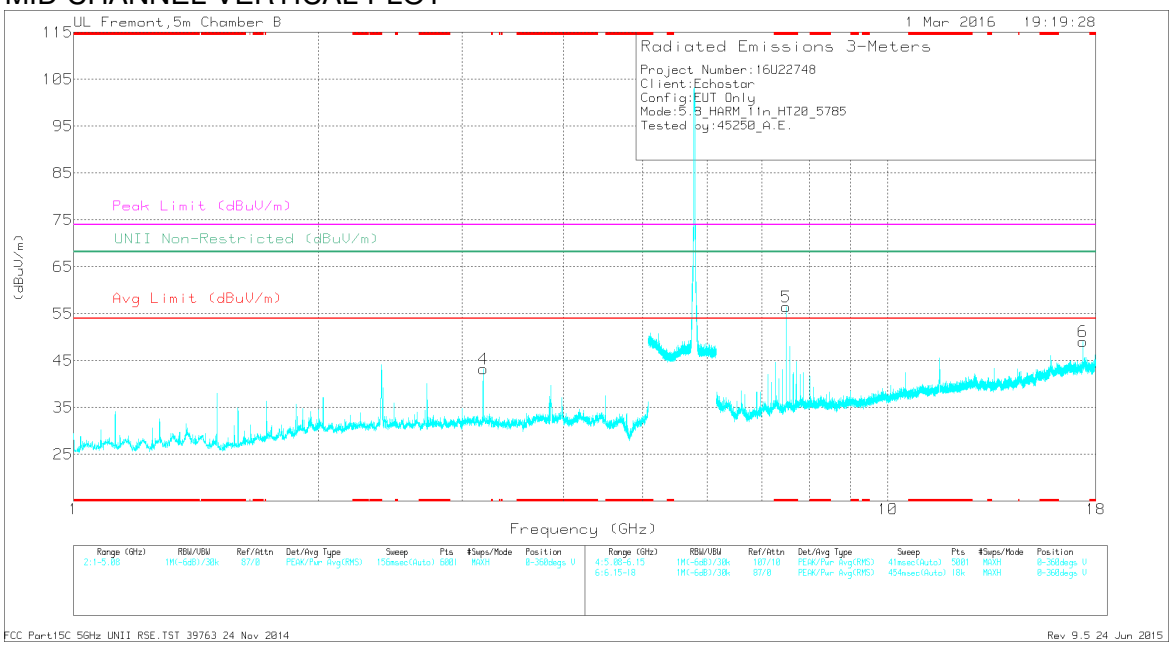
MID CHANNEL HORIZONTAL PLOT



MID CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 1.592	45.39	Pk	28.1	-35.3	0	38.19	-	-	74	-35.81	68.2	-30.01	0-360	200	H
2	* 2.388	45.4	Pk	32.1	-34.4	0	43.1	-	-	74	-30.9	68.2	-25.1	0-360	200	H
3	* 7.5	44.85	Pk	35.6	-29	0	51.45	-	-	74	-22.55	68.2	-16.75	0-360	101	H
5	* 7.5	49.92	Pk	35.6	-29	0	56.52	-	-	74	-17.48	68.2	-11.68	0-360	101	V
4	3.183	43.17	Pk	33.2	-33.1	0	43.27	-	-	74	-30.73	68.2	-24.93	0-360	101	V
6	17.353	29.17	Pk	41.2	-21.3	0	49.07	-	-	74	-24.93	68.2	-19.13	0-360	199	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 2.389	56.8	PK-U	32.1	-34.4	0	54.5	-	-	74	-19.5	-	-	66	105	H
* 2.388	42.42	ADR	32.1	-34.4	.22	40.34	54	-13.66	-	-	-	-	66	105	H
* 1.592	51.58	PK-U	28.1	-35.3	0	44.38	-	-	74	-29.62	-	-	210	137	H
* 1.592	44.9	ADR	28.1	-35.3	.22	37.92	54	-16.08	-	-	-	-	210	137	H
* 7.5	45.2	PK-U	35.6	-29	0	51.8	-	-	74	-22.2	-	-	228	108	H
* 7.5	41.06	ADR	35.6	-29	.22	47.88	54	-6.12	-	-	-	-	228	108	H
* 7.5	49.17	PK-U	35.6	-29	0	55.77	-	-	74	-18.23	-	-	99	103	V
* 7.5	46.64	ADR	35.6	-29	.22	53.46	54	-.54	-	-	-	-	99	103	V
3.184	47.12	PK-U	33.2	-33.1	0	47.22	-	-	-	-	68.2	-20.98	233	120	V
17.353	37.75	PK-U	41.2	-21.3	0	57.65	-	-	-	-	68.2	-10.55	251	213	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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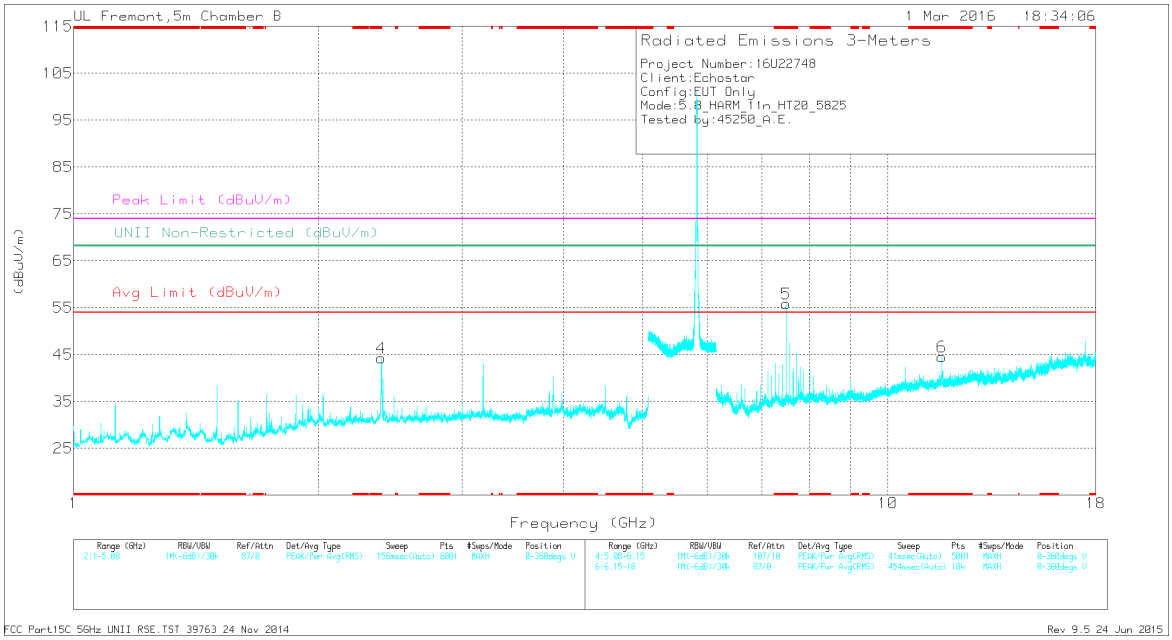
HIGH CHANNEL HORIZONTAL PLOT

HIGH CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 1.125	44.85	Pk	28.1	-35.4	0	37.55	-	-	74	-36.45	68.2	-30.65	0-360	102	H
2	* 1.592	46.19	Pk	28.1	-35.3	0	38.99	-	-	74	-35.01	68.2	-29.21	0-360	200	H
4	* 2.388	46.52	Pk	32.1	-34.4	0	44.22	-	-	74	-29.78	68.2	-23.98	0-360	101	V
3	* 7.5	44.78	Pk	35.6	-29	0	51.38	-	-	74	-22.62	68.2	-16.82	0-360	101	H
5	* 7.5	49.23	Pk	35.6	-29	0	55.83	-	-	74	-18.17	68.2	-12.37	0-360	102	V
6	* 11.652	31.19	Pk	38.2	-24.9	0	44.49	-	-	74	-29.51	68.2	-23.71	0-360	199	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 1.592	51.7	PK-U	28.1	-35.3	0	44.5	-	-	74	-29.5	-	-	208	137	H
* 1.592	45.29	ADR	28.1	-35.3	.22	38.31	54	-15.69	-	-	-	-	208	137	H
* 1.125	49.94	PK-U	28.1	-35.4	0	42.64	-	-	74	-31.36	-	-	39	111	H
* 1.125	42.46	ADR	28.1	-35.4	.22	35.38	54	-18.62	-	-	-	-	39	111	H
* 2.388	54.22	PK-U	32.1	-34.4	0	51.92	-	-	74	-22.08	-	-	310	285	V
* 2.388	40.59	ADR	32.1	-34.4	.22	38.51	54	-15.49	-	-	-	-	310	285	V
* 7.5	44.6	PK-U	35.6	-29	0	51.2	-	-	74	-22.8	-	-	57	109	H
* 7.5	40.22	ADR	35.6	-29	.22	47.04	54	-6.96	-	-	-	-	57	109	H
* 7.5	49.81	PK-U	35.6	-29	0	56.41	-	-	74	-17.59	-	-	90	102	V
* 7.5	47.06	ADR	35.6	-29	.22	53.88	54	-.12	-	-	-	-	90	102	V
* 11.652	39.15	PK-U	38.2	-24.9	0	52.45	-	-	74	-21.55	-	-	297	167	V
* 11.651	26.62	ADR	38.2	-24.8	.22	40.24	54	-13.76	-	-	-	-	297	167	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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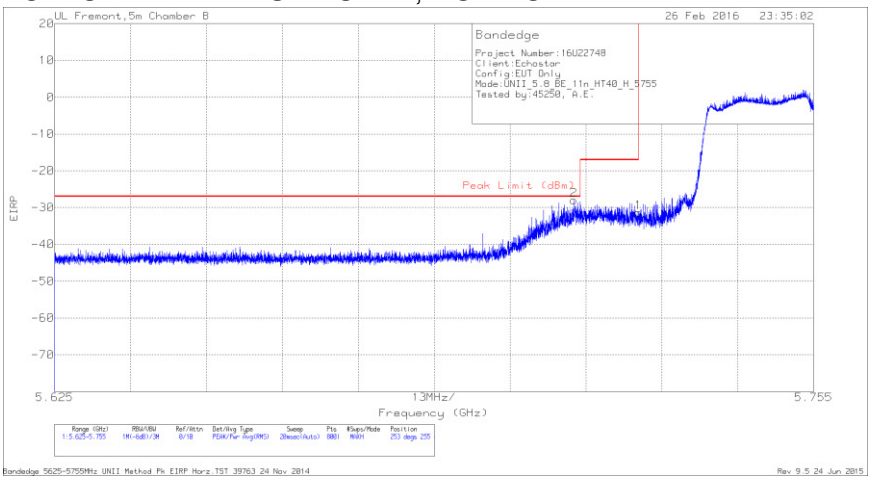
10.6. TX ABOVE 1 GHz 802.11n HT40 SISO MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	-54.01	Pk	35	-20.8	11.8	-28.01	-27	-1.01	253	255	H
1	5.725	-57.34	Pk	35	-20.8	11.8	-31.34	-17	-14.34	253	255	H

Pk - Peak detector

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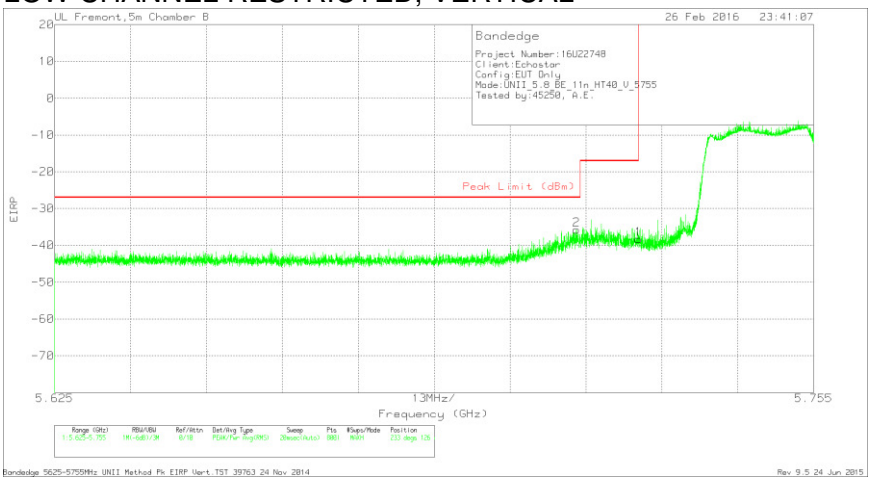
LOW CHANNEL RESTRICTED, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	-61.58	Pk	35	-20.9	11.8	-35.68	-27	-8.68	233	126	V
1	5.725	-64.3	Pk	35	-20.8	11.8	-38.3	-17	-21.3	233	126	V

Pk - Peak detector

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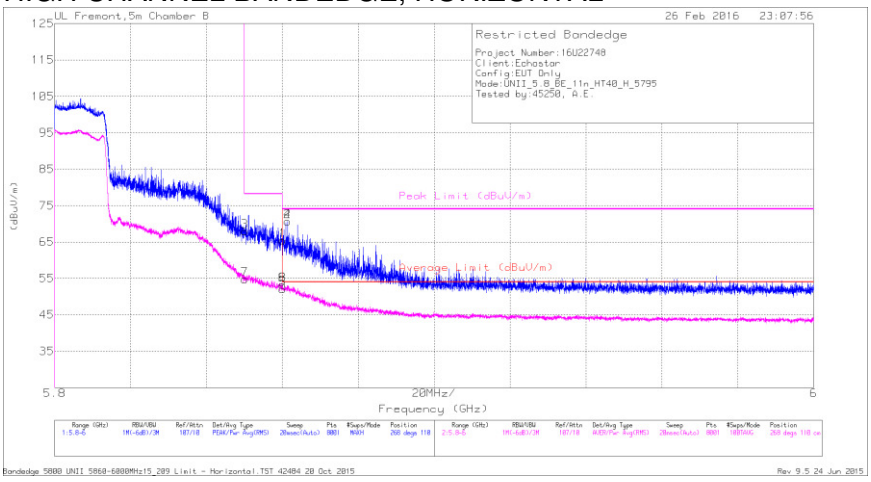
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	5.85	53.46	Pk	35.4	-20.9	0	67.96	-	-	78.2	-10.24	268	110	H
1	5.86	50.9	Pk	35.4	-20.9	0	65.4	-	-	74	-8.6	268	110	H
5	5.86	37.09	RMS	35.4	-20.9	.43	52.02	54	-1.98	-	-	268	110	H
6	5.86	38.3	RMS	35.4	-20.9	.43	53.23	54	-.77	-	-	268	110	H
8	5.86	38.3	RMS	35.4	-20.9	.43	53.23	54	-.77	-	-	268	110	H
2	5.861	56.17	Pk	35.4	-20.9	0	70.67	-	-	74	-3.33	268	110	H
4	5.861	56.17	Pk	35.4	-20.9	0	70.67	-	-	74	-3.33	268	110	H

Pk - Peak detector
RMS - RMS detection

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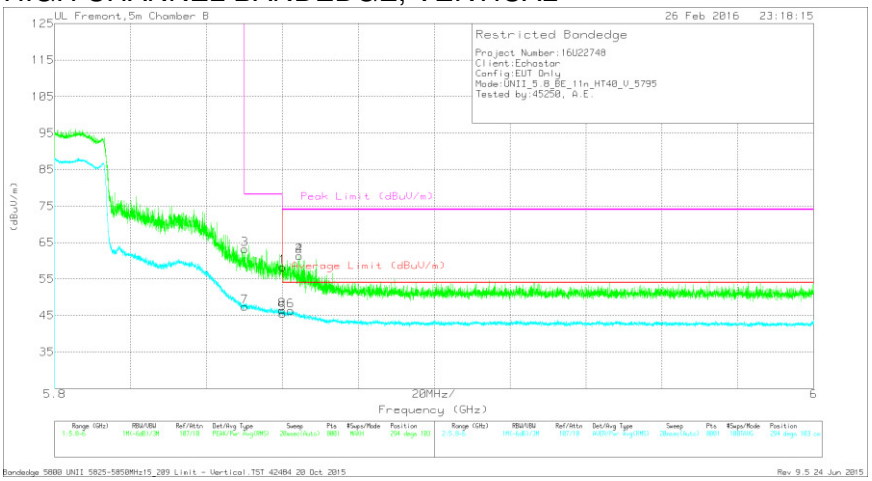
HIGH CHANNEL BANDEDGE, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	5.85	48.72	Pk	35.4	-20.9	0	63.22	-	-	78.2	-14.98	294	103	V
1	5.86	43.8	Pk	35.4	-20.9	0	58.3	-	-	74	-15.7	294	103	V
5	5.86	30.51	RMS	35.4	-20.9	.43	45.44	54	-8.56	-	-	294	103	V
8	5.86	31.55	RMS	35.4	-20.9	.43	46.48	54	-7.52	-	-	294	103	V
6	5.862	31.23	RMS	35.4	-20.8	.43	46.26	54	-7.74	-	-	294	103	V
2	5.864	46.73	Pk	35.4	-20.8	0	61.33	-	-	74	-12.67	294	103	V
4	5.864	46.73	Pk	35.4	-20.8	0	61.33	-	-	74	-12.67	294	103	V

Pk - Peak detector
RMS - RMS detection

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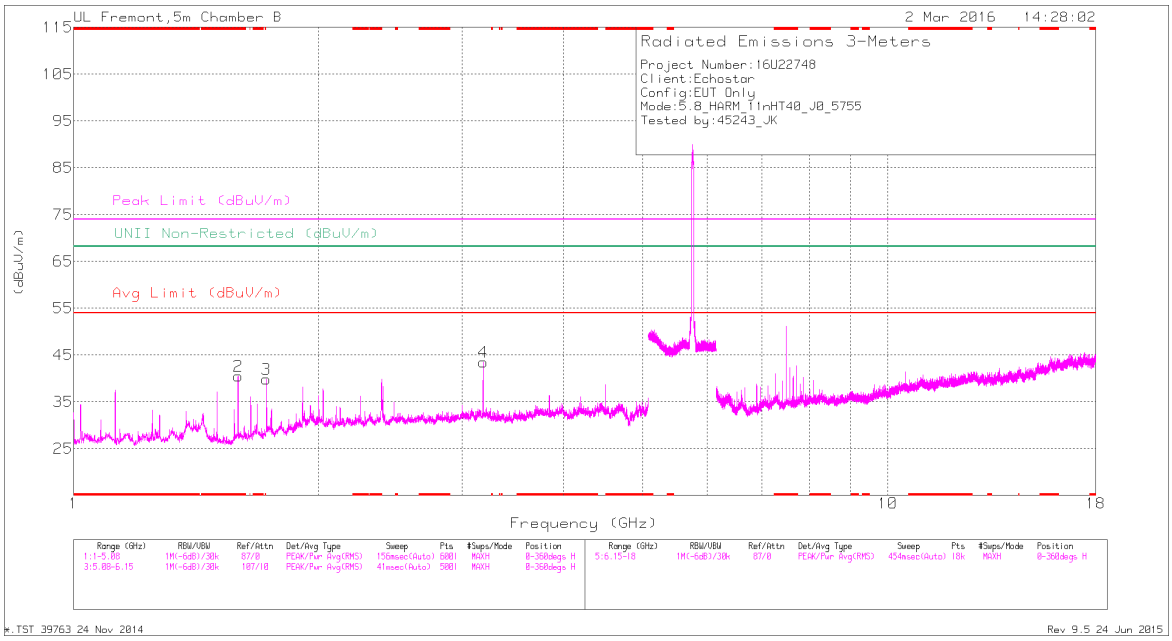
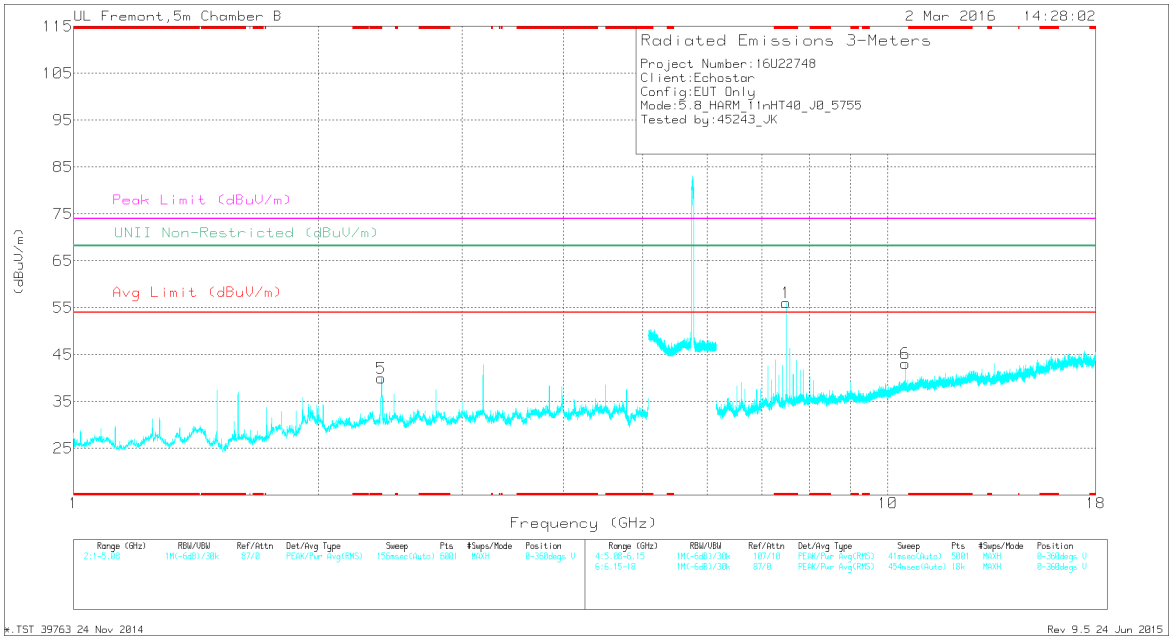
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.592	47.75	Pk	28.1	-35.3	0	40.55	-	-	74	-33.45	68.2	-27.65	0-360	200	H
5	* 2.388	42.27	Pk	32.1	-34.4	0	39.97	-	-	74	-34.03	68.2	-28.23	0-360	200	V
1	* 7.5	49.45	Pk	35.6	-29	0	56.05	-	-	74	-17.95	68.2	-12.15	0-360	101	V
3	1.725	45.02	Pk	29.3	-34.5	0	39.82	-	-	74	-34.18	68.2	-28.38	0-360	200	H
4	3.184	43.25	Pk	33.2	-33	0	43.45	-	-	74	-30.55	68.2	-24.75	0-360	200	H
6	10.5	31.19	Pk	37.4	-25.5	0	43.09	-	-	74	-30.91	68.2	-25.11	0-360	101	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 1.592	52.58	PK-U	28.1	-35.3	0	45.38	-	-	74	-28.62	-	-	206	143	H
* 1.592	47.24	ADR	28.1	-35.3	.43	40.47	54	-13.53	-	-	-	-	206	143	H
* 2.389	55.08	PK-U	32.1	-34.4	0	52.78	-	-	74	-21.22	-	-	78	330	V
* 2.388	38.76	ADR	32.1	-34.4	.43	36.89	54	-17.11	-	-	-	-	78	330	V
* 7.5	48.25	PK-U	35.6	-29	0	54.85	-	-	74	-19.15	-	-	270	117	V
* 7.5	45.56	ADR	35.6	-29	.43	52.59	54	-1.41	-	-	-	-	270	117	V
1.725	50.05	PK-U	29.3	-34.5	0	44.85	-	-	-	-	68.2	-23.35	202	121	H
3.184	47.87	PK-U	33.2	-33	0	48.07	-	-	-	-	68.2	-20.13	175	220	H
10.5	37.84	PK-U	37.4	-25.5	0	49.74	-	-	-	-	68.2	-18.46	282	138	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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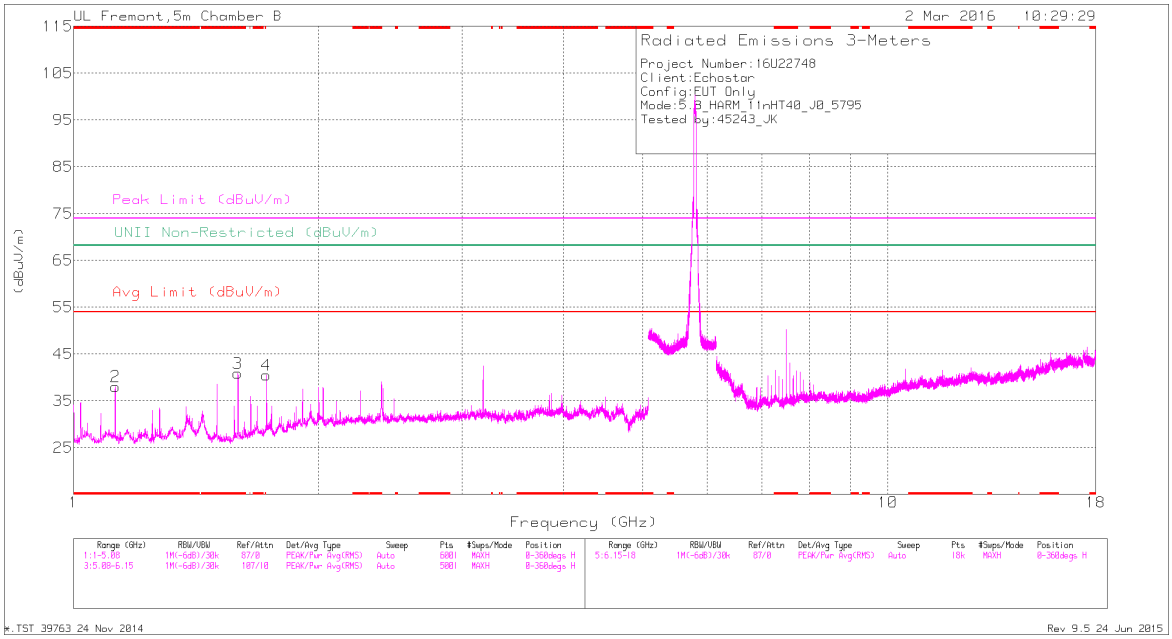
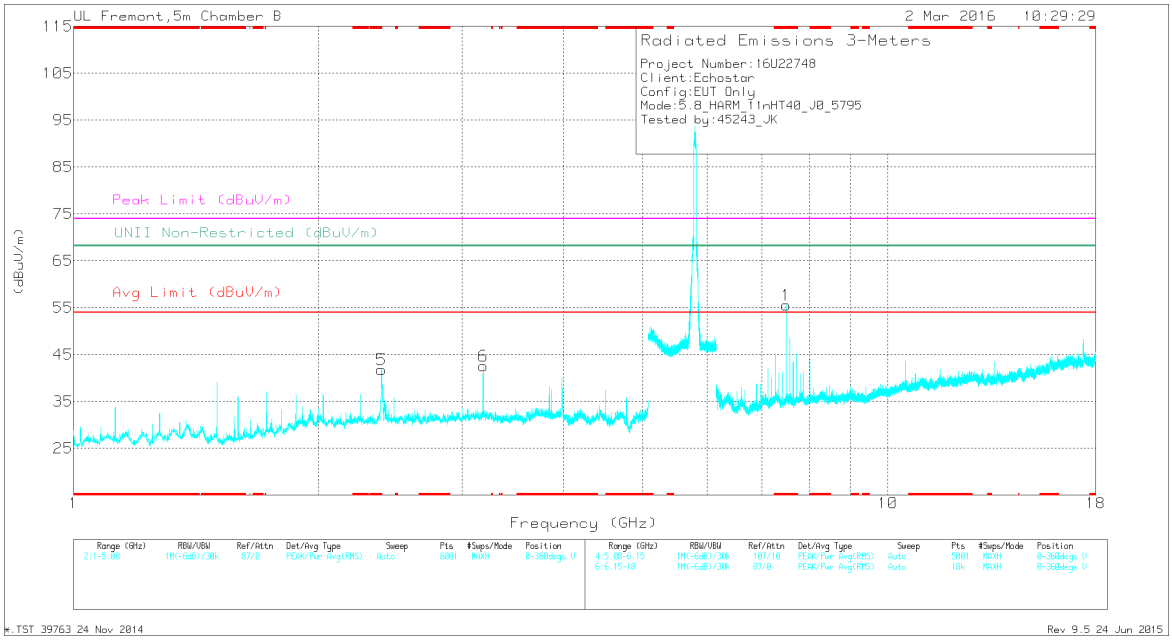
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.125	45.4	Pk	28.1	-35.4	0	38.1	-	-	74	-35.9	68.2	-30.1	0-360	200	H
3	* 1.592	48.05	Pk	28.1	-35.3	0	40.85	-	-	74	-33.15	68.2	-27.35	0-360	200	H
5	* 2.389	44.12	Pk	32.1	-34.4	0	41.82	-	-	74	-32.18	68.2	-26.38	0-360	101	V
1	* 7.5	48.97	Pk	35.6	-29	0	55.57	-	-	74	-18.43	68.2	-12.63	0-360	101	V
4	1.725	45.69	Pk	29.3	-34.5	0	40.49	-	-	74	-33.51	68.2	-27.71	0-360	200	H
6	3.183	42.54	Pk	33.2	-33.1	0	42.64	-	-	74	-31.36	68.2	-25.56	0-360	200	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 1.125	49.81	PK-U	28.1	-35.4	0	42.51	-	-	74	-31.49	-	-	146	209	H
* 1.125	42.54	ADR	28.1	-35.4	.43	35.67	54	-18.33	-	-	-	-	146	209	H
* 1.592	53.49	PK-U	28.1	-35.3	0	46.29	-	-	74	-27.71	-	-	199	211	H
* 1.592	47.95	ADR	28.1	-35.3	.43	41.18	54	-12.82	-	-	-	-	199	211	H
* 2.389	59.05	PK-U	32.1	-34.4	0	56.75	-	-	74	-17.25	68.2	-11.45	84	208	V
* 2.389	38.96	ADR	32.1	-34.4	.43	37.09	54	-16.91	-	-	-	-	84	208	V
* 7.5	47.74	PK-U	35.6	-29	0	54.34	-	-	74	-19.66	68.2	-13.86	265	316	V
* 7.5	44.55	ADR	35.6	-29	.43	51.58	54	-2.42	-	-	-	-	265	316	V
1.725	49.97	PK-U	29.3	-34.5	0	44.77	-	-	-	-	68.2	-23.43	199	122	H
3.183	47.87	PK-U	33.2	-33.1	0	47.97	-	-	-	-	68.2	-20.23	292	386	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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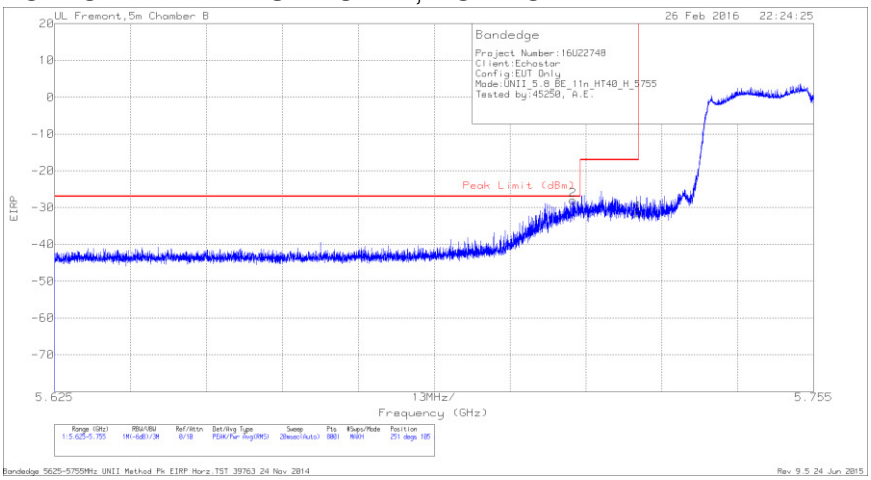
10.7. TX ABOVE 1 GHz 802.11n HT40 CDD 2TX MODE IN THE 5.8 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

LOW CHANNEL RESTRICTED, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.714	-53.94	Pk	35	-20.9	11.8	-28.04	-27	-1.04	251	105	H
1	5.725	-57.58	Pk	35	-20.8	11.8	-31.58	-17	-14.58	251	105	H

Pk - Peak detector

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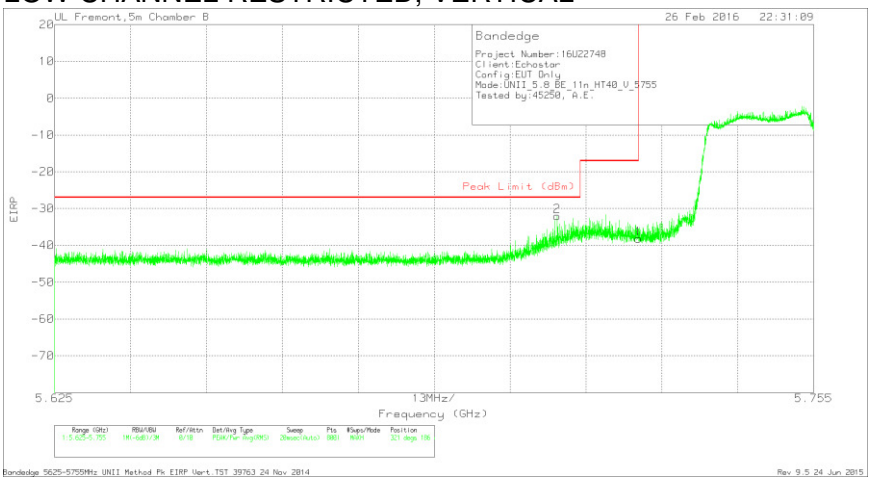
LOW CHANNEL RESTRICTED, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	5.711	-57.76	Pk	35	-21.1	11.8	-32.06	-27	-5.06	321	186	V
1	5.725	-64.14	Pk	35	-20.8	11.8	-38.14	-17	-21.14	321	186	V

Pk - Peak detector

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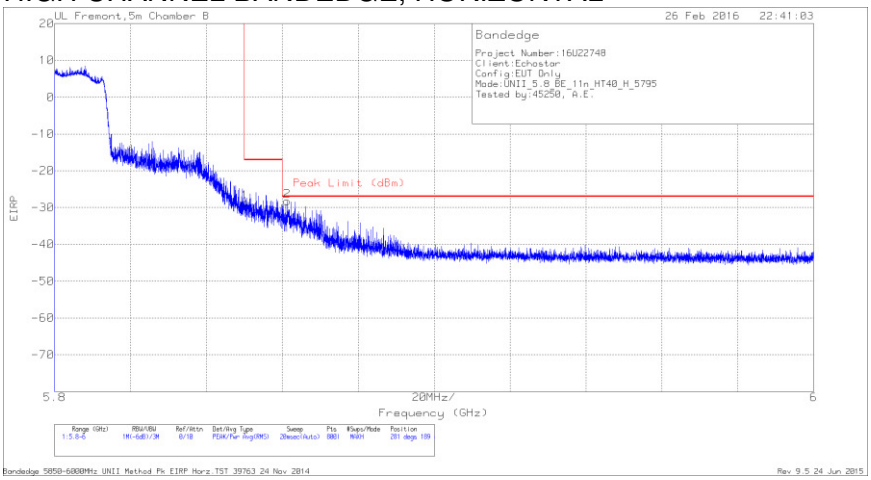
AUTHORIZED BANDEDGE (HIGH CHANNEL)

HIGH CHANNEL BANDEDGE, HORIZONTAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-54.9	Pk	35.4	-20.9	11.8	-28.6	-17	-11.6	281	189	H
2	5.861	-54.58	Pk	35.4	-20.9	11.8	-28.28	-27	-1.28	281	189	H

Pk - Peak detector

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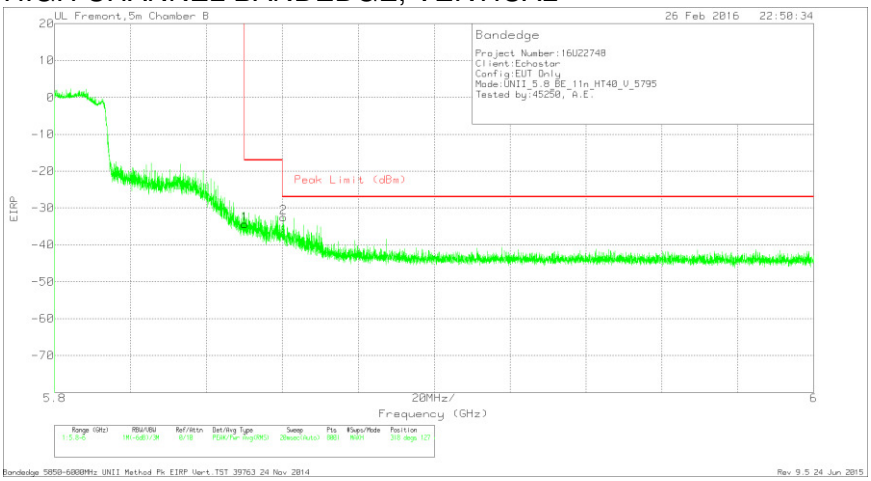
HIGH CHANNEL BANDEDGE, VERTICAL



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Conversion Factor (dB)	Corrected Reading EIRP	Peak Limit (dBm)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.85	-60.67	Pk	35.4	-20.9	11.8	-34.37	-17	-17.37	318	127	V
2	5.86	-58.73	Pk	35.4	-21	11.8	-32.53	-27	-5.53	318	127	V

Pk - Peak detector

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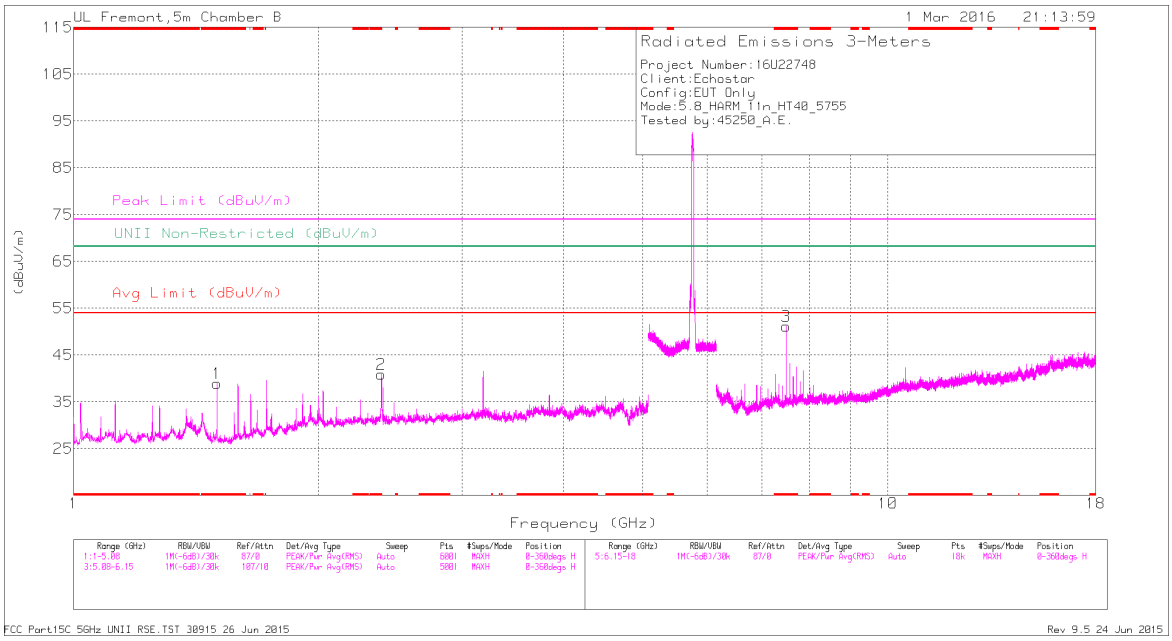
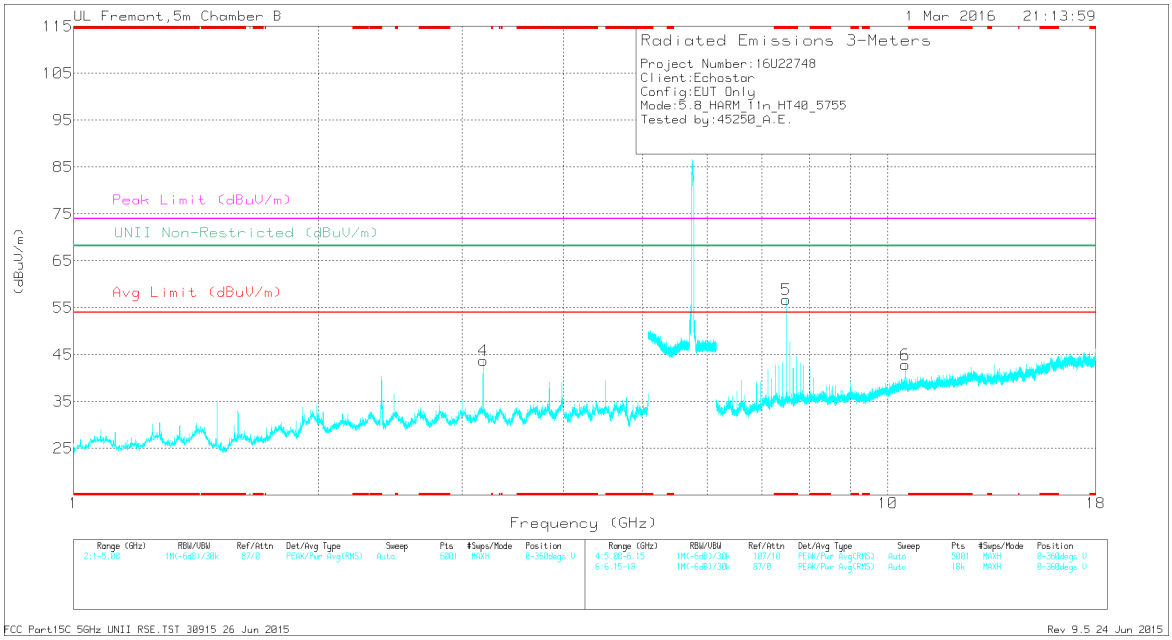
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL PLOT



LOW CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 1.5	46.44	Pk	28	-35.5	0	38.94	-	-	74	-35.06	-	-	0-360	199	H
2	* 2.388	43.21	Pk	32.1	-34.4	0	40.91	-	-	74	-33.09	-	-	0-360	199	H
3	* 7.5	44.54	Pk	35.6	-29	0	51.14	-	-	74	-22.86	-	-	0-360	101	H
5	* 7.5	50.17	Pk	35.6	-29	0	56.77	-	-	74	-17.23	-	-	0-360	101	V
4	3.183	43.7	Pk	33.2	-33.1	0	43.8	-	-	-	-	68.2	-24.4	0-360	101	V
6	10.5	30.93	Pk	37.4	-25.5	0	42.83	-	-	-	-	68.2	-25.37	0-360	101	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 2.388	51.25	PK-U	32.1	-34.4	0	48.95	-	-	74	-25.05	-	-	66	210	H
* 2.388	37.94	ADR	32.1	-34.4	.43	36.07	54	-17.93	-	-	-	-	66	210	H
* 1.5	51.58	PK-U	28	-35.5	0	44.08	-	-	74	-29.92	-	-	53	247	H
* 1.5	43.81	ADR	28	-35.5	.43	36.74	54	-17.26	-	-	-	-	53	247	H
* 7.5	42.62	PK-U	35.6	-29	0	49.22	-	-	74	-24.78	-	-	233	366	H
* 7.5	36.31	ADR	35.6	-29	.43	43.34	54	-10.66	-	-	-	-	233	366	H
* 7.5	49.24	PK-U	35.6	-29	0	55.84	-	-	74	-18.16	-	-	100	102	V
* 7.5	46.46	ADR	35.6	-29	.43	53.49	54	-.51	-	-	-	-	100	102	V
3.183	46.56	PK-U	33.2	-33.1	0	46.66	-	-	-	-	68.2	-21.54	235	111	V
10.5	35.95	PK-U	37.4	-25.5	0	47.85	-	-	-	-	68.2	-20.35	288	133	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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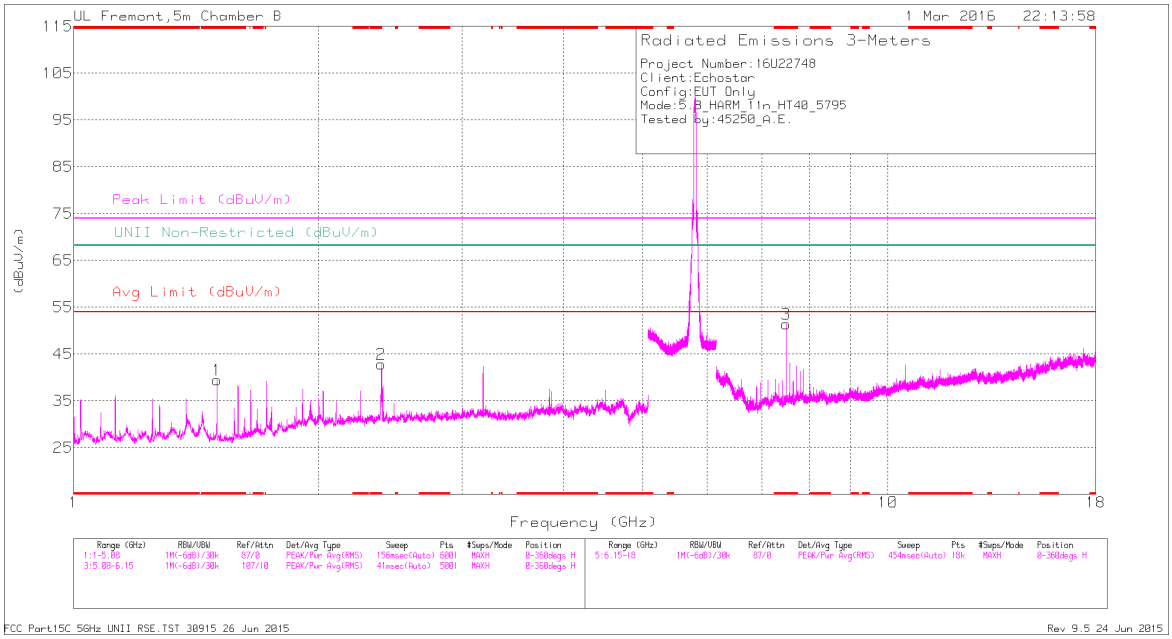
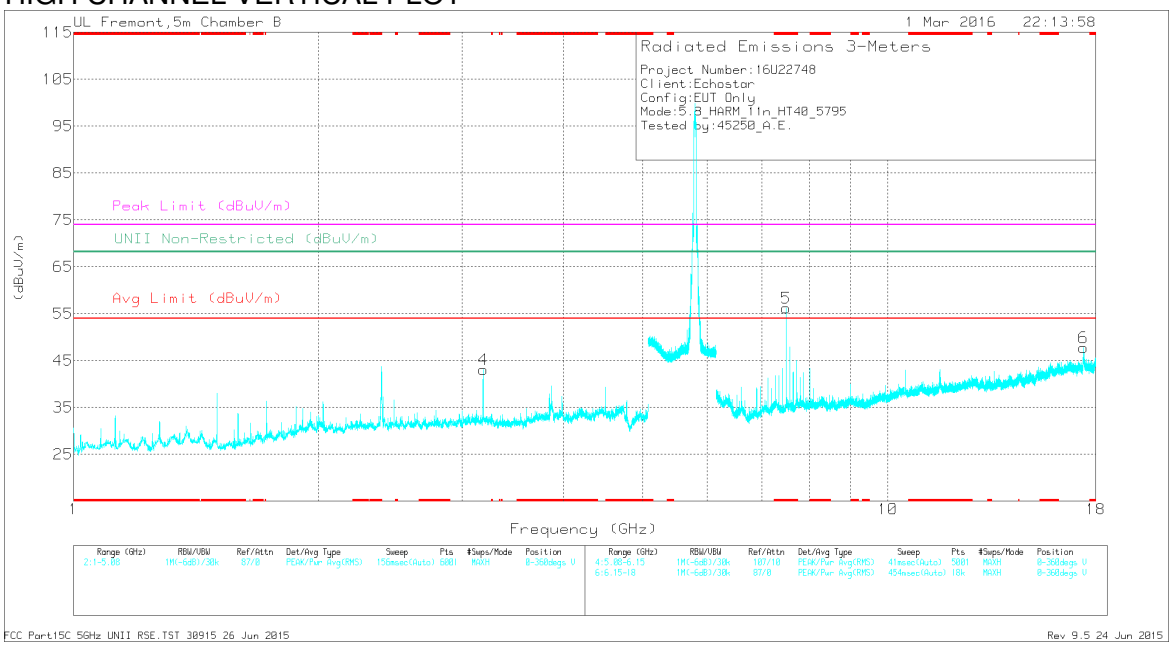
HIGH CHANNEL HORIZONTAL PLOT



HIGH CHANNEL VERTICAL PLOT



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DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Fltr/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	* 1.5	46.91	Pk	28	-35.5	0	39.41	-	-	74	-34.59	-	-	0-360	199	H
2	* 2.388	45.16	Pk	32.1	-34.4	0	42.86	-	-	74	-31.14	-	-	0-360	199	H
3	* 7.5	44.84	Pk	35.6	-29	0	51.44	-	-	74	-22.56	-	-	0-360	101	H
5	* 7.5	49.62	Pk	35.6	-29	0	56.22	-	-	74	-17.78	-	-	0-360	101	V
4	3.183	42.98	Pk	33.2	-33.1	0	43.08	-	-	-	-	68.2	-25.12	0-360	199	V
6	17.386	27.41	Pk	41.2	-20.8	0	47.81	-	-	-	-	68.2	-20.39	0-360	101	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Fltr/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
* 2.388	56.13	PK-U	32.1	-34.4	0	53.83	-	-	74	-20.17	-	-	132	371	H
* 2.388	39.22	ADR	32.1	-34.4	.43	37.35	54	-16.65	-	-	-	-	132	371	H
* 1.5	51.21	PK-U	28	-35.5	0	43.71	-	-	74	-30.29	-	-	55	309	H
* 1.5	43.76	ADR	28	-35.5	.43	36.69	54	-17.31	-	-	-	-	55	309	H
* 7.5	42.56	PK-U	35.6	-29	0	49.16	-	-	74	-24.84	-	-	233	395	H
* 7.5	37.05	ADR	35.6	-29	.43	44.08	54	-9.92	-	-	-	-	233	395	H
* 7.5	49.18	PK-U	35.6	-29	0	55.78	-	-	74	-18.22	-	-	100	101	V
* 7.5	46.41	ADR	35.6	-29	.43	53.44	54	-.56	-	-	-	-	100	101	V
3.184	47.93	PK-U	33.2	-33.1	0	48.03	-	-	-	-	68.2	-20.17	268	197	V
17.384	35.48	PK-U	41.2	-20.8	0	55.88	-	-	-	-	68.2	-12.32	341	289	V

* - indicates frequency in CFR15.205/IC8.10 Restricted Band
PK-U - U-NII: Maximum Peak
ADR - U-NII AD primary method, RMS average

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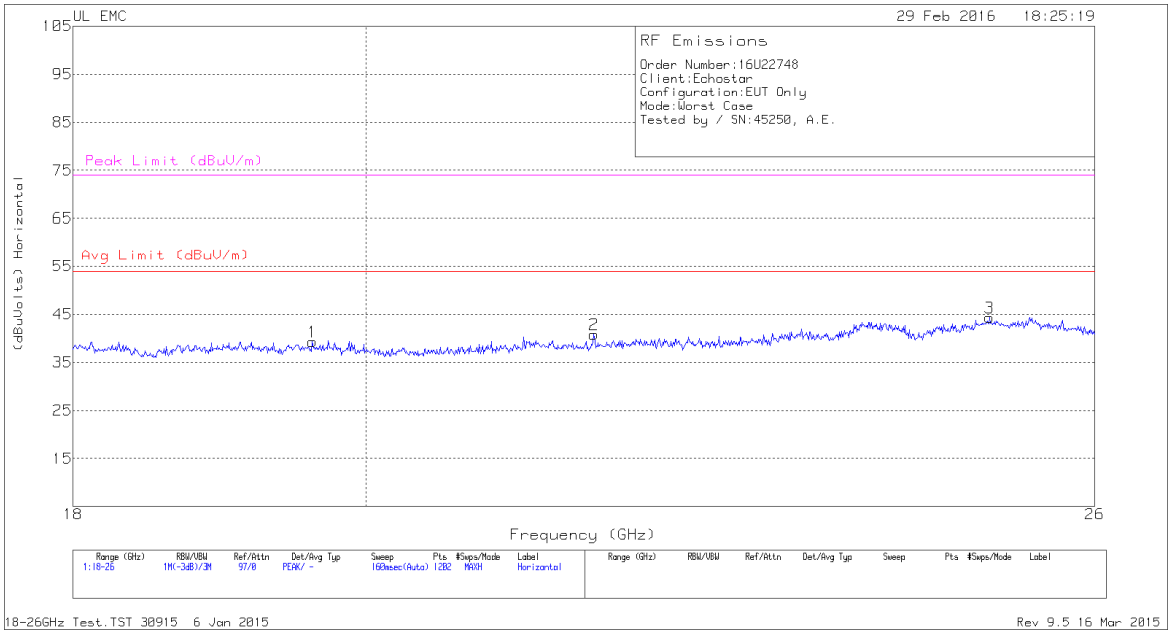
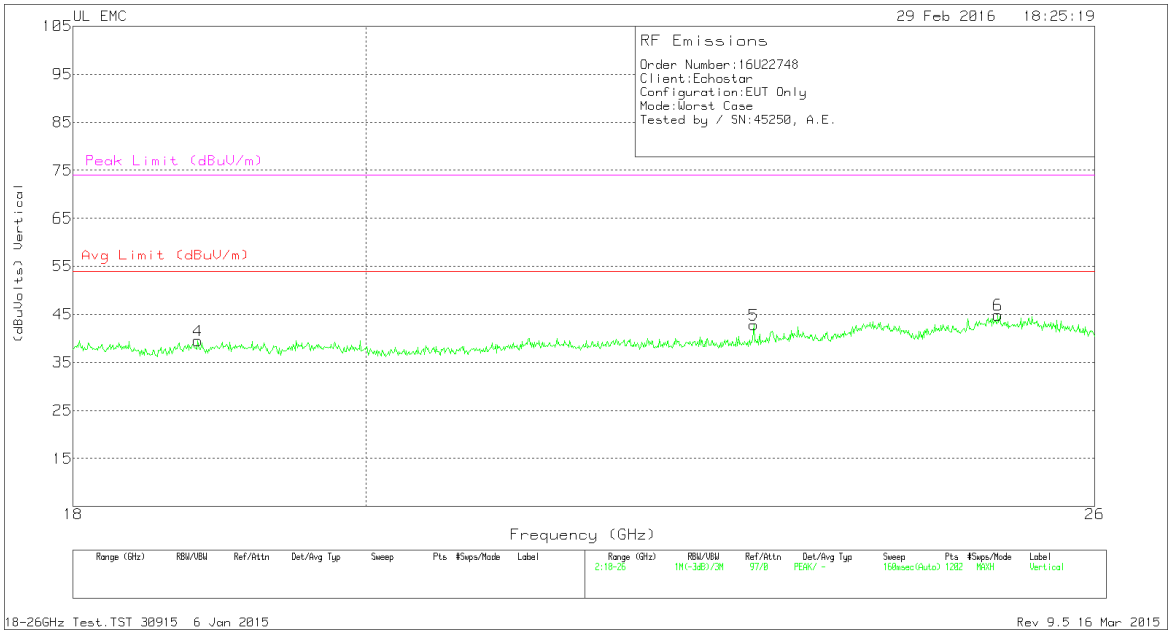
10.8. WORST-CASE ABOVE 18GHz

SPURIOUS EMISSIONS 18 – 26GHz

HORIZONTAL



VERTICAL



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Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T477 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.619	41.03	Pk	32.7	-24.9	-9.5	39.33	54	-14.67	74	-34.67
2	21.71	42.03	Pk	33	-24.7	-9.5	40.83	54	-13.17	74	-33.17
3	25.034	44.53	Pk	34.1	-24.8	-9.5	44.33	54	-9.67	74	-29.67
4	18.826	41.60	Pk	32.4	-25	-9.5	39.50	54	-14.50	74	-34.5
5	22.996	44.23	Pk	33.1	-25	-9.5	42.83	54	-11.17	74	-31.17
6	25.107	44.63	Pk	34.2	-24.5	-9.5	44.83	54	-9.17	74	-29.17

Pk - Peak detector

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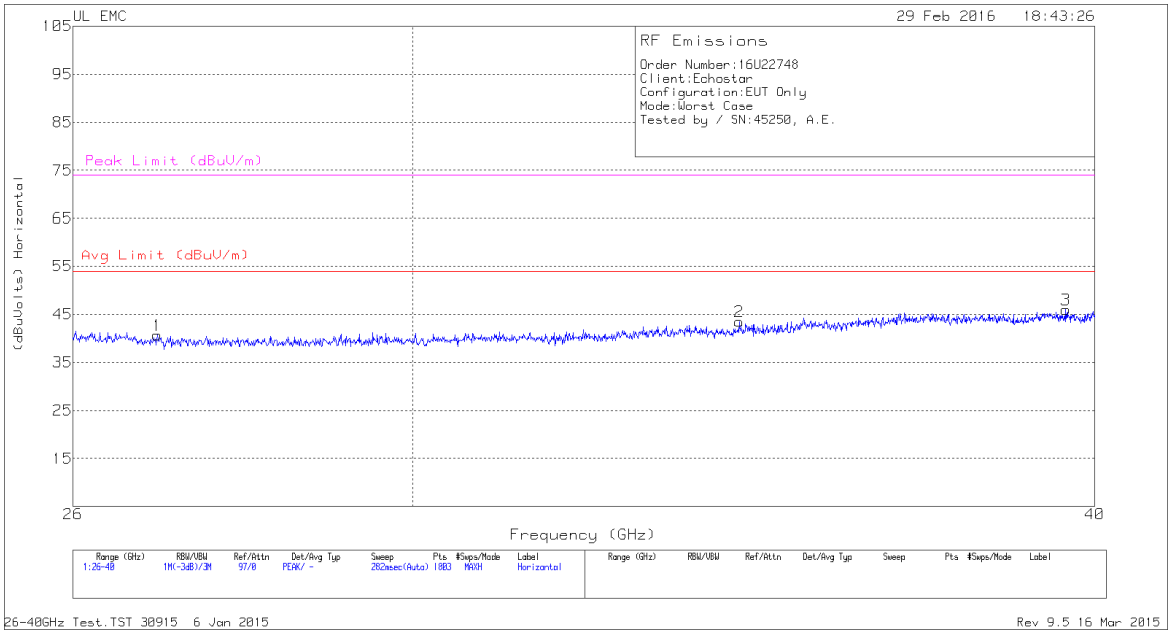
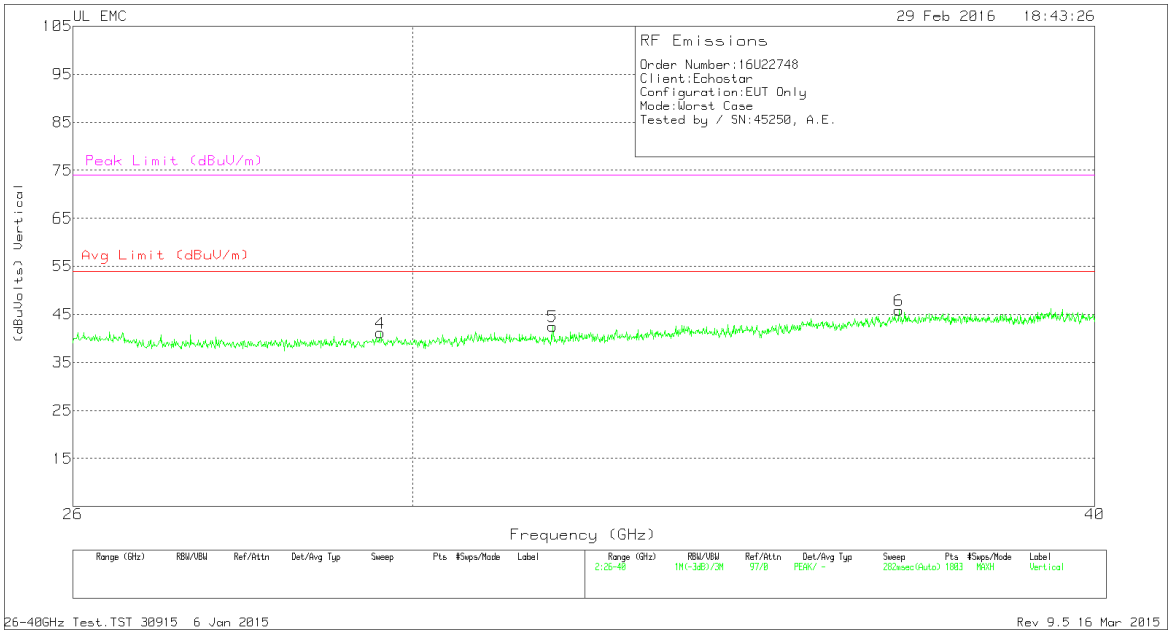
SPURIOUS EMISSIONS 26 – 40GHz

HORIZONTAL



VERTICAL



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Trace Markers

PK - Peak detector

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T90 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	26.94	45.97	Pk	35.4	-31.2	-9.5	40.607	54	-13.33	74	-33.33
2	34.430	48.80	Pk	37.3	-33.1	-9.5	43.50	54	-10.50	74	-30.50
3	39.511	50.00	Pk	37.3	-31.8	-9.5	46.00	54	-8.00	74	-28.00
4	29.597	46.87	Pk	36.0	-32.2	-9.5	41.17	54	-12.83	74	-32.83
5	31.827	48.50	Pk	36.3	-32.8	-9.5	42.50	54	-11.50	74	-31.50
6	36.830	51.13	Pk	37.1	-32.9	-9.5	45.83	54	-8.17	74	-28.17

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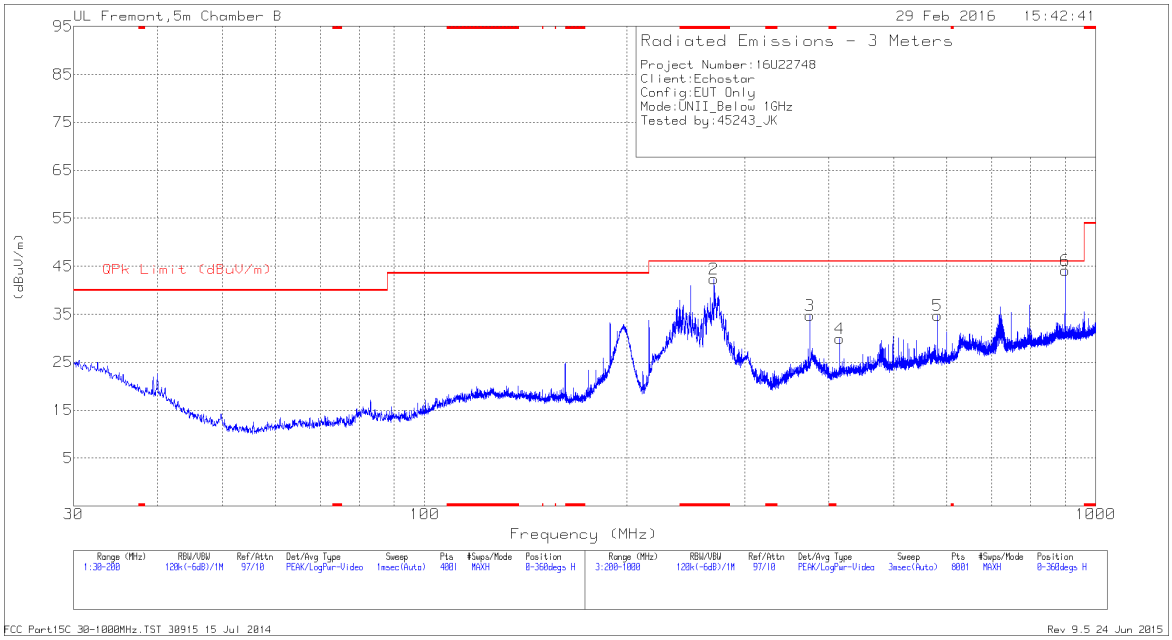
10.9. WORST-CASE BELOW 1 GHz

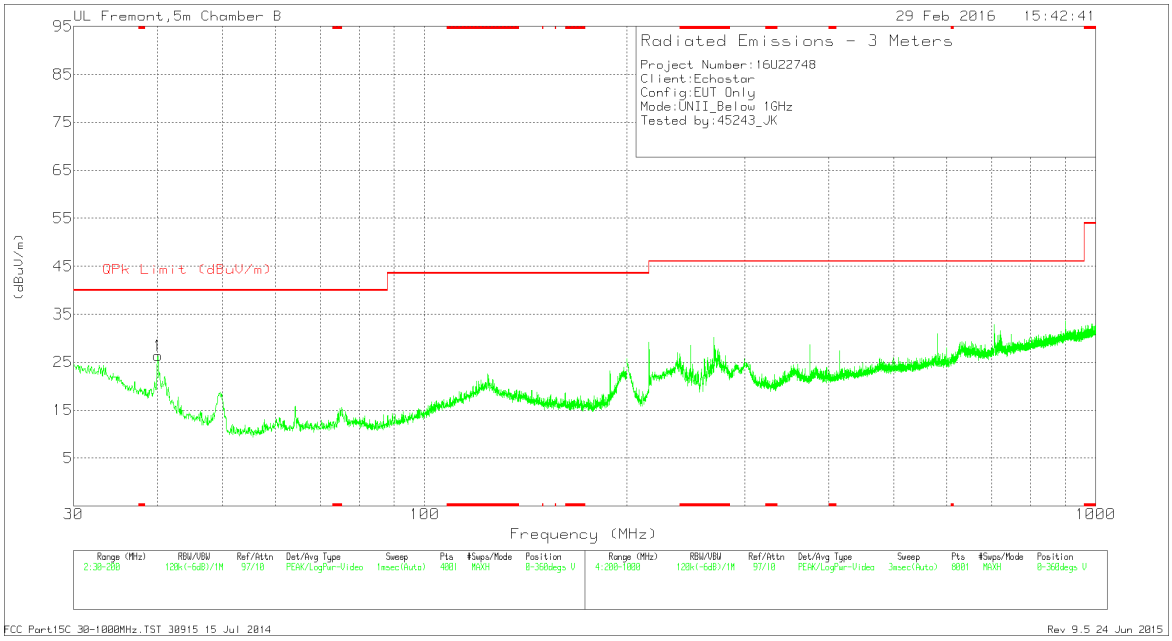
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



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

VERTICAL PLOT



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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
2	* 270	51.71	Pk	17.1	-26.4	42.41	46.02	-3.61	0-360	101	H
1	40.0725	37.21	Pk	17.8	-28.7	26.31	40	-13.69	0-360	101	V
3	375	42	Pk	18.9	-26.2	34.7	46.02	-11.32	0-360	101	H
4	415.4	36.08	Pk	20.1	-26.3	29.88	46.02	-16.14	0-360	101	H
5	581.5	38.13	Pk	22.6	-26	34.73	46.02	-11.29	0-360	199	H
6	900	41.51	Pk	26.4	-23.8	44.11	46.02	-1.91	0-360	101	H

Pk - Peak detector

Radiated Emissions

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
* 270.011	50.91	Qp	17.1	-26.4	41.61	46.02	-4.41	228	110	H
900.011	40.9	Qp	26.4	-23.8	43.5	46.02	-2.52	189	101	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Qp - Quasi-Peak detector

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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.

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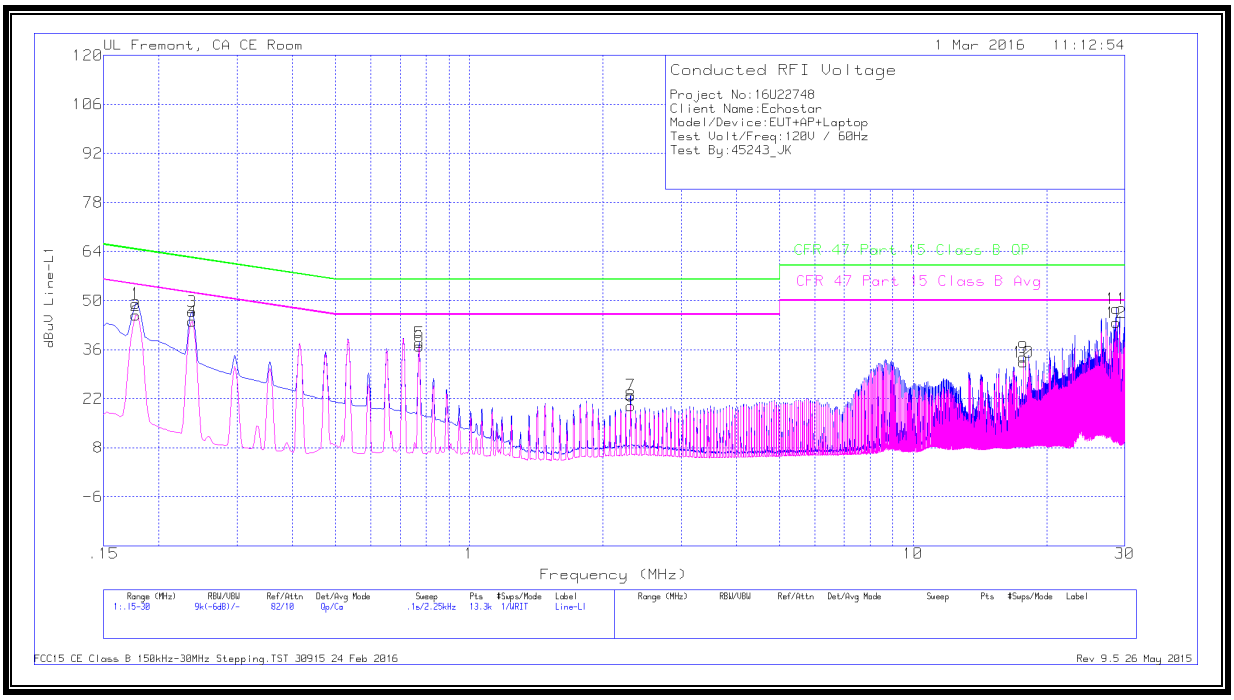
RESULTS

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	.177	39.11	Qp	0	0	10.1	49.21	64.63	-15.42	-	-
2	.177	35.77	Ca	0	0	10.1	45.87	-	-	54.63	-8.76
3	.23775	36.8	Qp	0	0	10.1	46.9	62.17	-15.27	-	-
4	.23775	34.02	Ca	0	0	10.1	44.12	-	-	52.17	-8.05
5	.771	27.83	Qp	0	0	10.1	37.93	56	-18.07	-	-
6	.771	26.85	Ca	0	0	10.1	36.95	-	-	46	-9.05
7	2.31	12.87	Qp	0	.1	10.1	23.07	56	-32.93	-	-
8	2.31	9.81	Ca	0	.1	10.1	20.01	-	-	46	-25.99
9	17.69325	23.3	Qp	0	.2	10.3	33.8	60	-26.2	-	-
10	17.69325	21.9	Ca	0	.2	10.3	32.4	-	-	50	-17.6
11	28.6845	37.1	Qp	0	.3	10.4	47.8	60	-12.2	-	-
12	28.6845	33.08	Ca	0	.3	10.4	43.78	-	-	50	-6.22

Qp - Quasi-Peak detector

Ca - CISPR average detection

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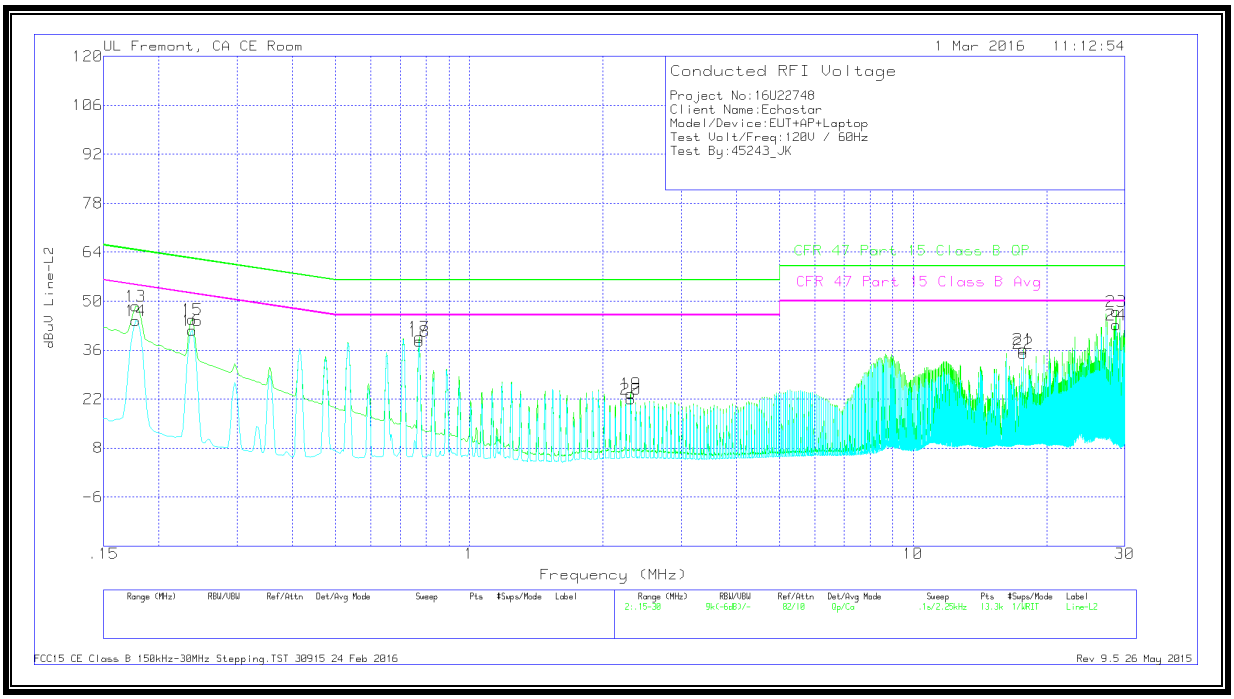
LINE 2 RESULTS



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	.177	38.56	Qp	0	0	10.1	48.66	64.63	-15.97	-	-
14	.177	34.41	Ca	0	0	10.1	44.51	-	-	54.63	-10.12
15	.23775	34.63	Qp	0	0	10.1	44.73	62.17	-17.44	-	-
16	.23775	31.55	Ca	0	0	10.1	41.65	-	-	52.17	-10.52
17	.771	29.56	Qp	0	0	10.1	39.66	56	-16.34	-	-
18	.771	28.39	Ca	0	0	10.1	38.49	-	-	46	-7.51
19	2.31225	13.43	Qp	0	.1	10.1	23.63	56	-32.37	-	-
20	2.31225	11.81	Ca	0	.1	10.1	22.01	-	-	46	-23.99
21	17.69325	25.75	Qp	0	.2	10.3	36.25	60	-23.75	-	-
22	17.69325	24.63	Ca	0	.2	10.3	35.13	-	-	50	-14.87
23	28.68675	36.17	Qp	.1	.3	10.4	46.97	60	-13.03	-	-
24	28.68675	32.37	Ca	.1	.3	10.4	43.17	-	-	50	-6.83

Qp - Quasi-Peak detector

Ca - CISPR average detection

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