FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

BT + ZIGBEE and WLAN DTS/UNII a/b/g/n MIMO

MODEL NUMBER: ID: 082

FCC ID: DKN1018

REPORT NUMBER: 15U20805-E2, Revision A

ISSUE DATE: SEPTEMBER 3, 2015

Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	08/10/15	Initial Issue	P. Zhang
A	9/3/15	Fixed Page Numbering to Separate Power Tables from Set-up Photos; Updated page 81, 134 for Duty cycle information; Updated B mode CSE data; Updated page 51 antenna info	P. Zhang

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Echostar Technologies LLC

EUT DESCRIPTION: BT+ZIGBEE+WLAN DTS/UNII a/b/g/n MIMO

MODEL: ID: 082

SERIAL NUMBER: 208117-02-095 (Conducted) ; 208117-02-117 (Radiated)

DATE TESTED: JULY 23 – AUGUST 10, 2015

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	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.

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LAB ENGINEER
UL VERIFICATION SERVICES INC

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, KDB 558074 D01 v03r03, ANSI C63.10-2009 for FCC.

ANSI C63.10-2009 Deviation

Radiated spurious emission above 1GHz EUT height is 1.5m not 0.8m.

3. FACILITIES AND ACCREDITATION

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(IC: 2324B-1)	☐ Chamber D(IC: 2324B-4)
☒ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☒ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☐ Chamber G(IC: 2324B-7)
	☐ Chamber H(IC: 2324B-8)

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 18000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a BLUETOOTH, ZIGBEE and DTS/UNII a/b/g/n MIMO Satellite setup box.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	17.9	61.66
2412 - 2462	802.11g	17.71	59.02
2412 - 2462	802.11n HT20	17.71	59.02
2422 - 2452	802.11n HT40	17.71	59.02

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes two Printed antennas, with maximum gain of 1.76dBi and 2.2dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

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

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

For SISO mode, chain 0 was the worst case determined during pre-scan. So all radiated and conducted measurement based on chain 0.

Based on the baseline scan, the worst-case data rates were:

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n HT20mode: MCS0

802.11n HT40mode: MCS0

Note: N HT40 MIMO mode cover SISO mode since the power setting will be leveraged.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop	HP	Elitebook 8570W	N/A	N/A
Router	NETGEAR	N150	N/A	N/A

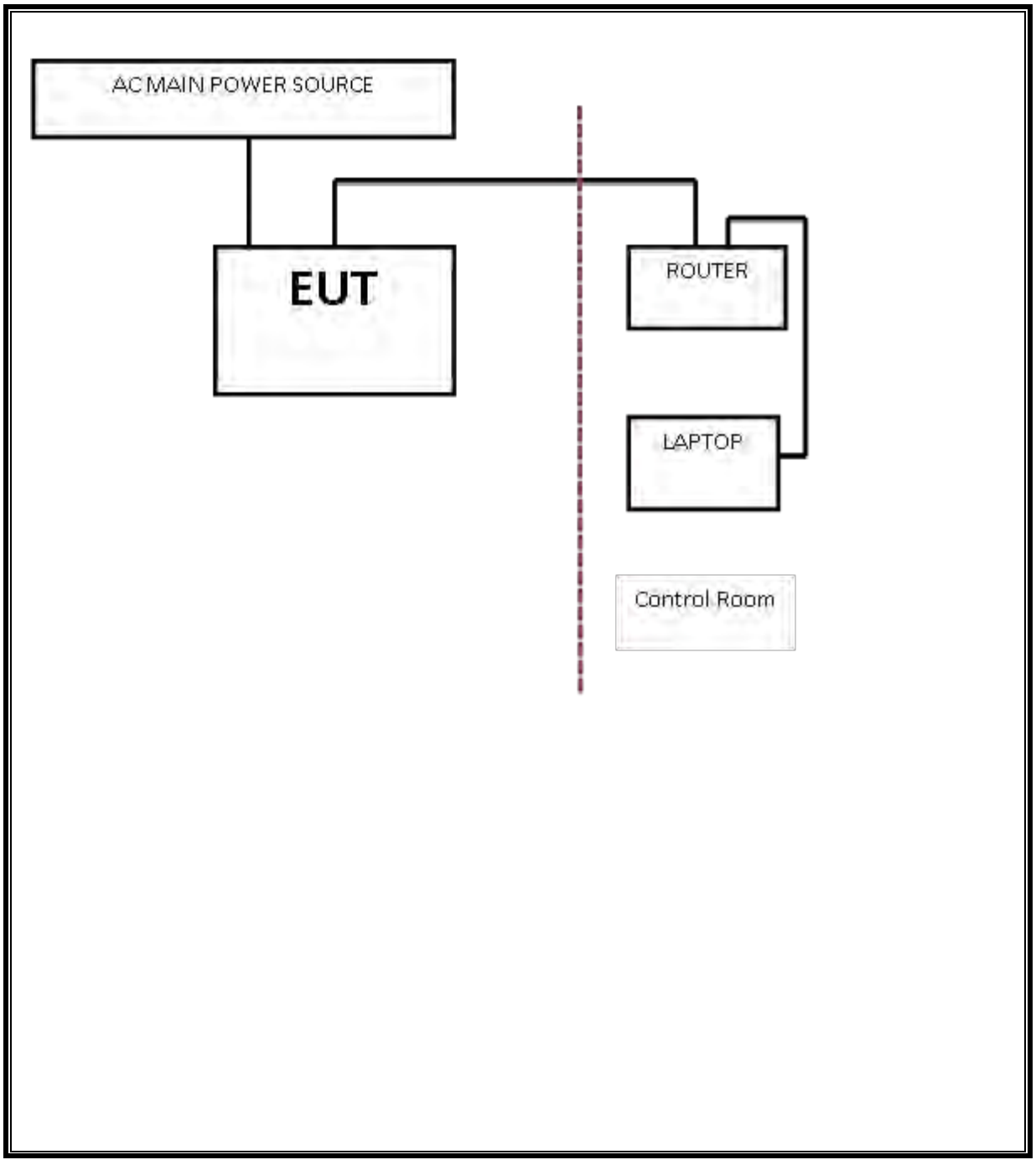
I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	Ethernet	1	RJ-45	Unshielded	5m	N/A

TEST SETUP

The EUT is a stand-alone unit during the tests. Test software exercised the radio card.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
Spectrum Analyzer,9KHz-40GHz	HP	8564E	C00986	04/01/16
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/15
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/16
Antenna, Horn,18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/16
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/16
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/16
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/16
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	T404	06/29/16
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/15
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/16
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/16
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/16
Radiated Software	UL	UL EMC	Ver 9.5, July 22, 2014	
Conducted Software	UL	UL EMC	Ver 9.5, May 17 2012	
CLT Software	UL	UL RF	Ver 1.0, Feb 2 2015	
Antenna Port Software	UL	UL RF	Ver 2.1.1.1, Jan 20 2015	

7. MEASUREMENT METHODS

KDB 558074 D01 DTS Meas Guidance v03r03: Measurement Procedure AVGPM-G is used for power and AVGPSD-3 is used for power spectral density.

Unwanted emissions within Restricted Bands are measured using traditional radiated procedures.

Band edge emissions within Restricted Bands are measured using RMS with duty cycle factor offset method.

8. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)(2)	RSS-247 5.2.1	Occupied Band width (6dB)	>500KHz	Conducted	Pass	8.06MHz
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-27.86dBm
15.247	RSS-247 5.4.4	TX conducted output power	<30dBm		Pass	17.9dBm
15.247	RSS-247 5.2.2	PSD	<8dBm		Pass	-3.22dBm
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	53.05dBuV/m
15.205, 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass	53.5dBuV/m

9. ANTENNA PORT TEST RESULTS SISO Chain 0

9.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

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

TEST PROCEDURE

Reference to KDB 558074 D01 DTS Meas Guidance v03r03: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

9.1.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	8.06	0.5
Mid	2437	8.10	0.5
High	2462	8.07	0.5
Worst		8.06	

9.1.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	15.13	0.5
Mid	2437	14.34	0.5
High	2462	14.74	0.5
Worst		14.34	

9.1.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

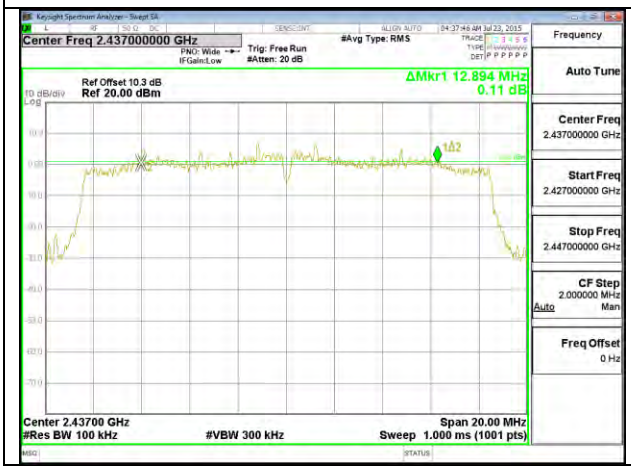
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	14.19	0.5
Mid	2437	12.89	0.5
High	2462	13.57	0.5
Worst		12.89	

9.1.4. 6 dB BANDWIDTH MID CH PLOTS

11b Mid Channel

11g Mid Channel

11n HT20 Mid Channel



9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

9.2.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	10.06
Mid	2437	10.17
High	2462	10.30
Worst		10.30

9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

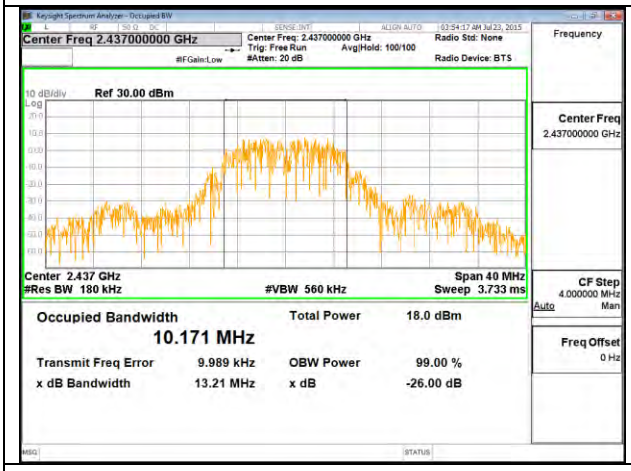
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.39
Mid	2437	16.39
High	2462	16.34
Worst		16.39

9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.53
Mid	2437	17.45
High	2462	17.52
Worst		17.53

9.2.4. 99% BANDWIDTH MID CH PLOTS

11b Mid Channel



11g Mid Channel

11n HT20 Mid Channel

9.3. OUTPUT POWER

LIMITS

FCC §15.247

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

SISO

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

RESULTS

9.3.1. 802.11b MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.20	30.00	30	36	30.00
Mid	2437	2.20	30.00	30	36	30.00
High	2462	2.20	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	17.60	17.60	30.00	-12.40
Mid	2437	17.70	17.70	30.00	-12.30
High	2462	17.90	17.90	30.00	-12.10
Worst		17.9	17.90		

9.3.2. 802.11g MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.20	30.00	30	36	30.00
Mid	2437	2.20	30.00	30	36	30.00
High	2462	2.20	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	5.80	5.80	30.00	-24.20
Mid	2437	17.40	17.40	30.00	-12.60
High	2462	10.30	10.30	30.00	-19.70
Worst		17.4	17.40		

9.3.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	2.20	30.00	30	36	30.00
Mid	2437	2.20	30.00	30	36	30.00
High	2462	2.20	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	5.50	5.50	30.00	-24.50
Mid	2437	17.10	17.10	30.00	-12.90
High	2462	10.90	10.90	30.00	-19.10
Worst		17.1	17.10		

9.4. PSD

LIMITS

FCC §15.247

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

9.4.1. 802.11b MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-3.74	8.0	-11.7
Mid	2437	-3.38	8.0	-11.4
High	2462	-3.22	8.0	-11.2

9.4.2. 802.11g MODE IN THE 2.4 GHz BAND

PSD Results

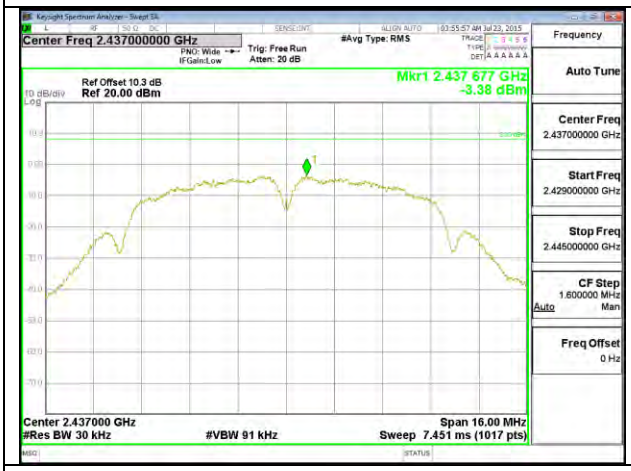
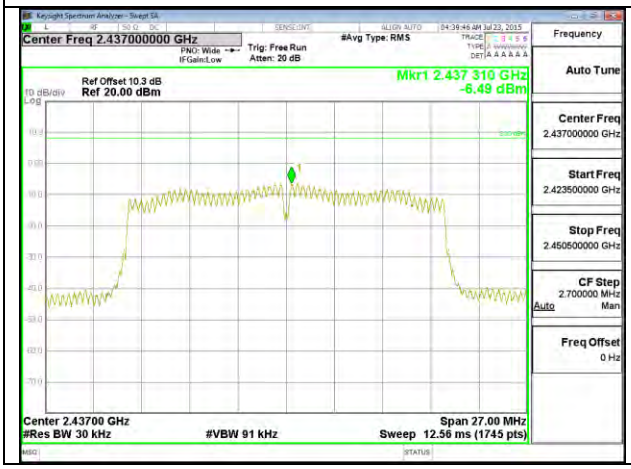
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-16.40	8.0	-24.4
Mid	2437	-5.81	8.0	-13.8
High	2462	-11.95	8.0	-20.0

9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-16.46	8.0	-24.5
Mid	2437	-6.49	8.0	-14.5
High	2462	-12.03	8.0	-20.0

9.4.4. PSD Chain 0 MID CH PLOTS

11b Mid Channel	11g Mid Channel
	
11n HT20 Mid Channel	**11n HT40 Mid Channel**
	

9.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST PROCEDURE

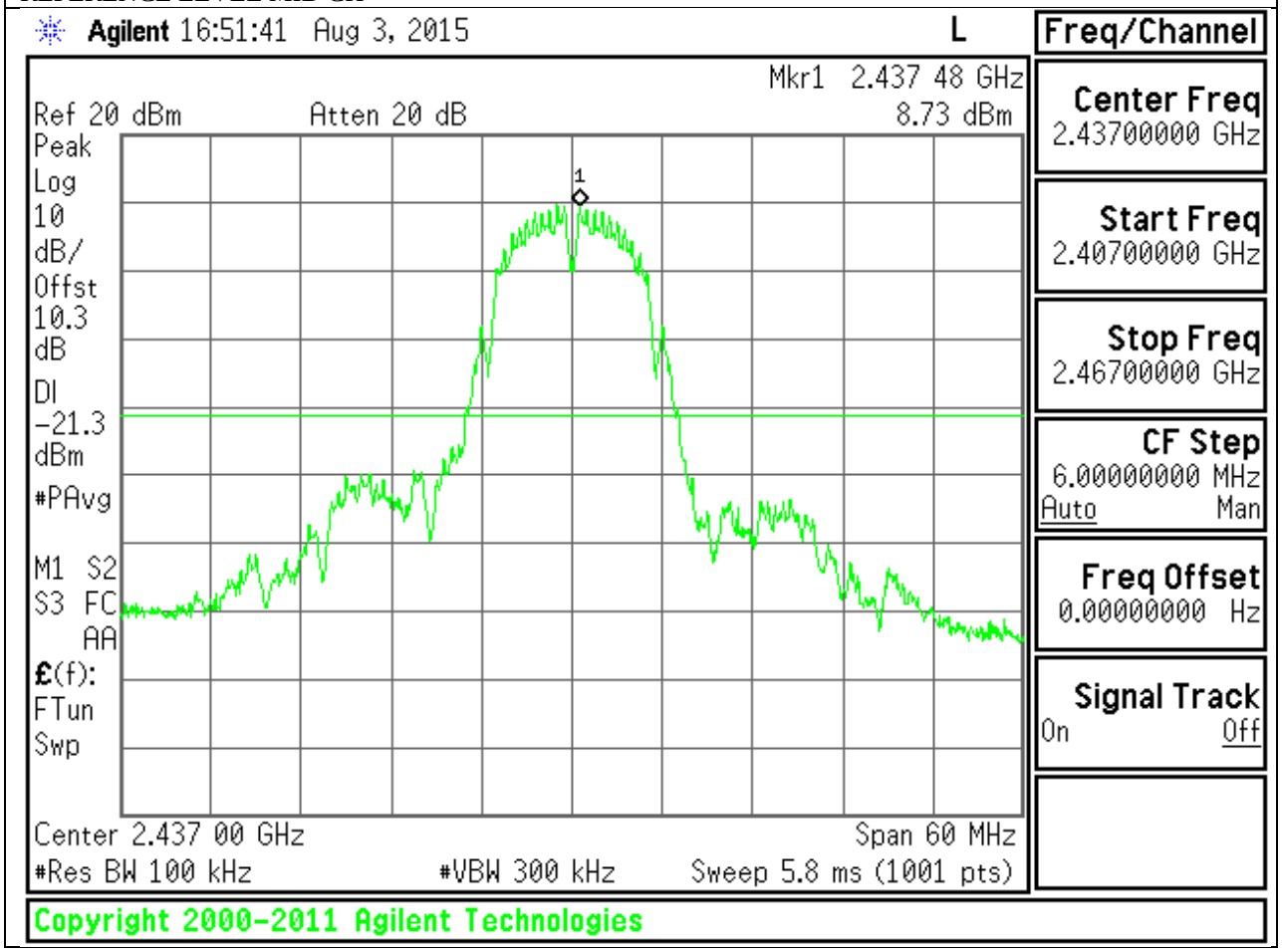
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

9.5.1. 802.11b MODE IN THE 2.4 GHz BAND

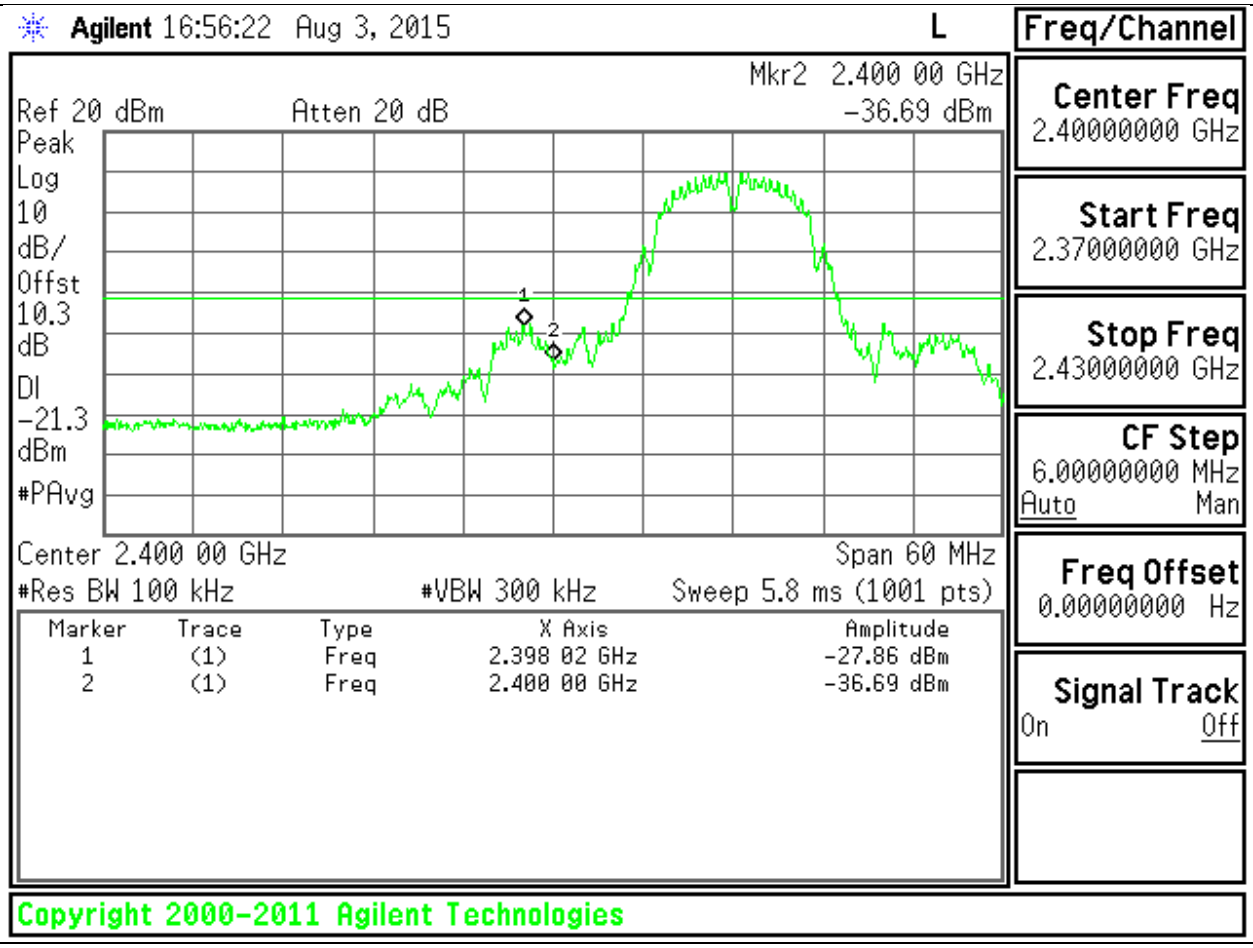
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



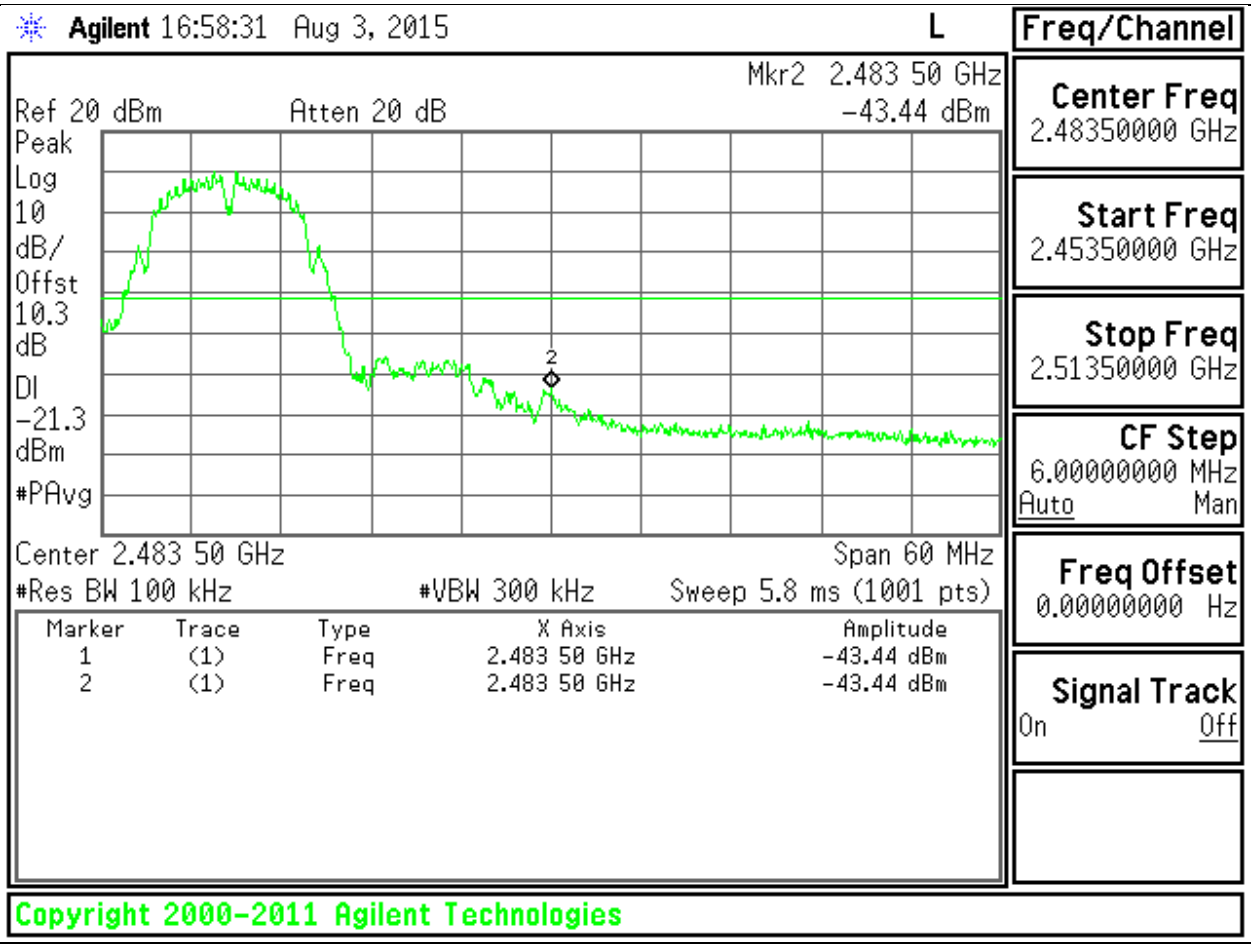
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



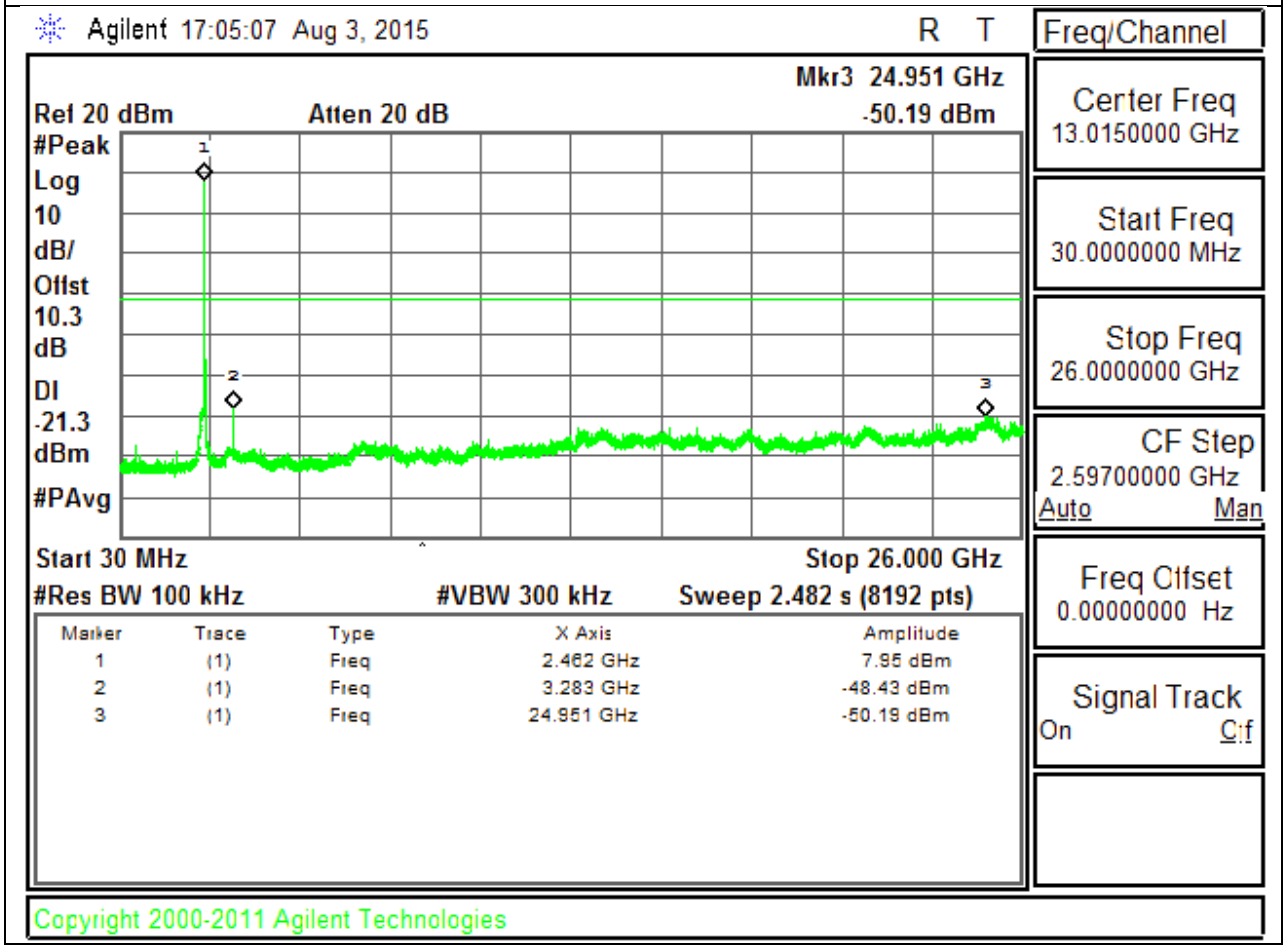
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

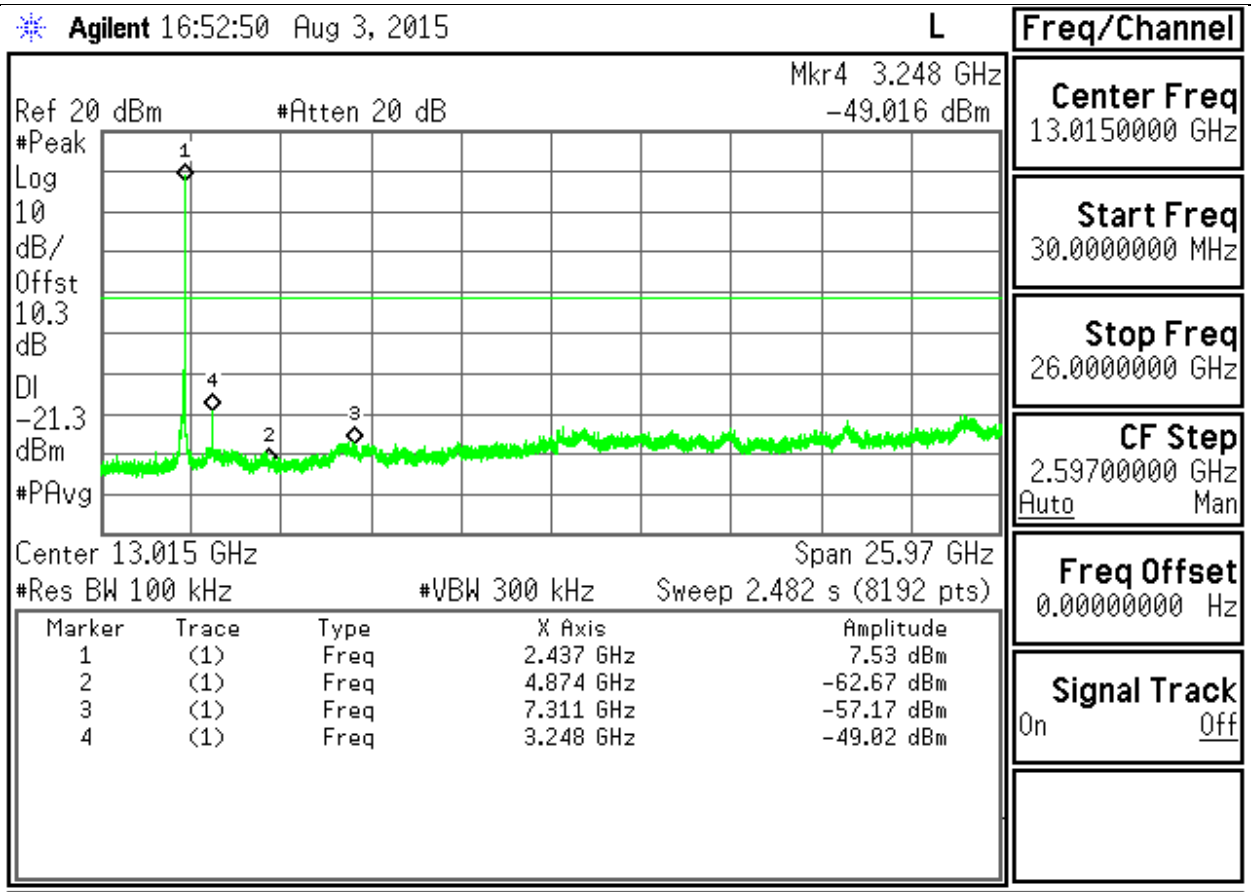


OUT-OF-BAND EMISSIONS

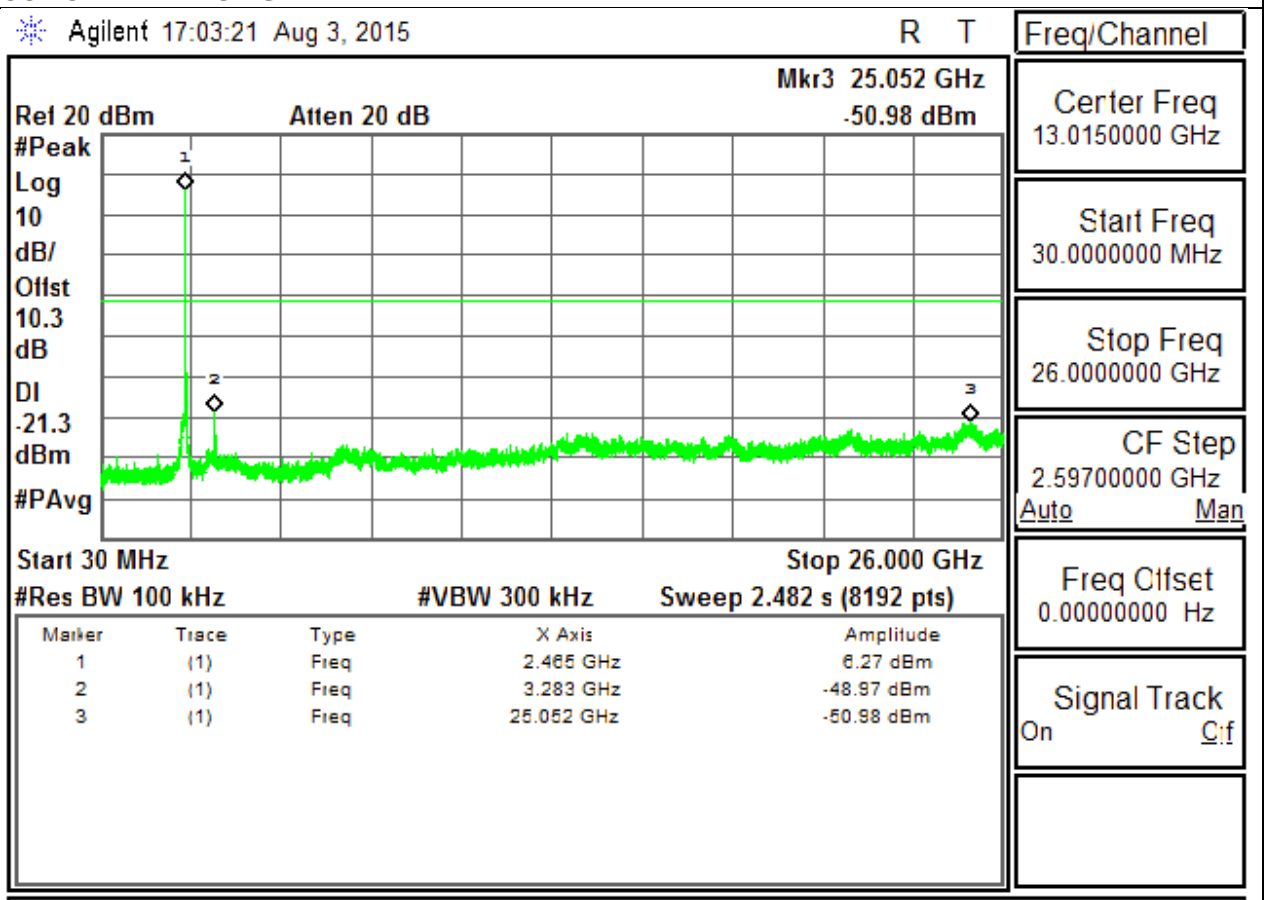
OUT OF BAND LOW CH



OUT OF BAND MID CH



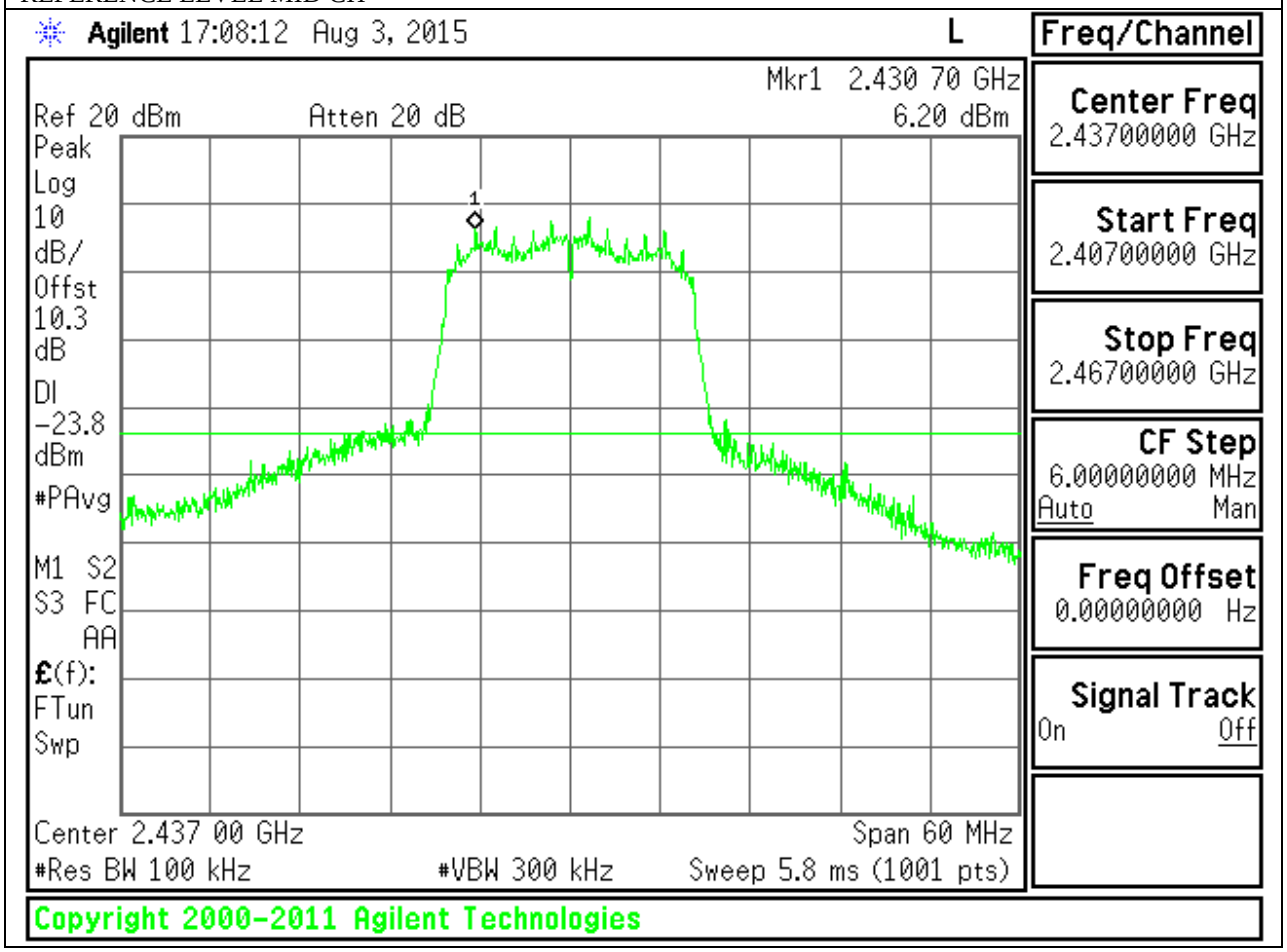
OUT OF BAND HIGH CH



9.5.2. 802.11g MODE IN THE 2.4 GHz BAND

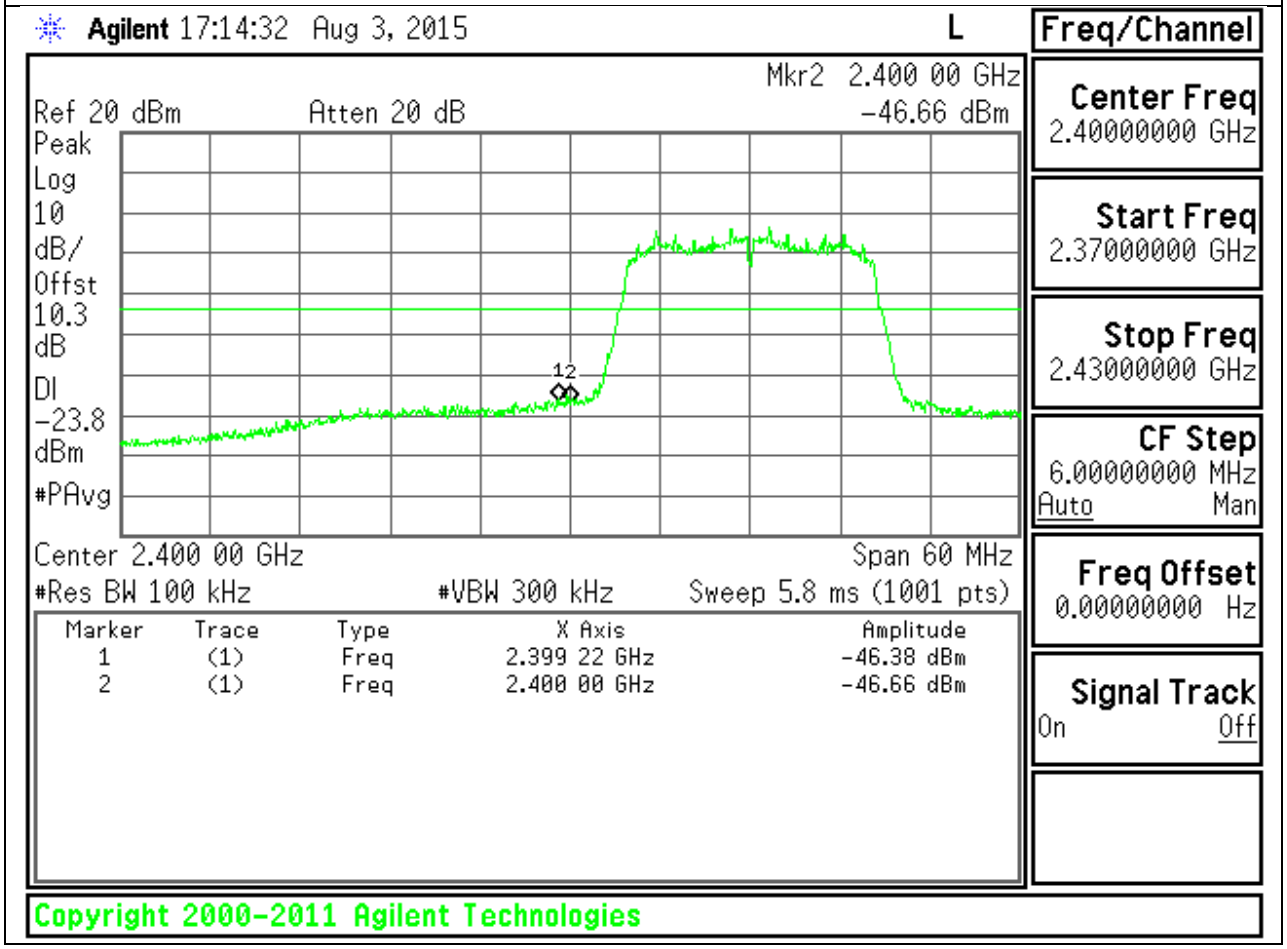
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



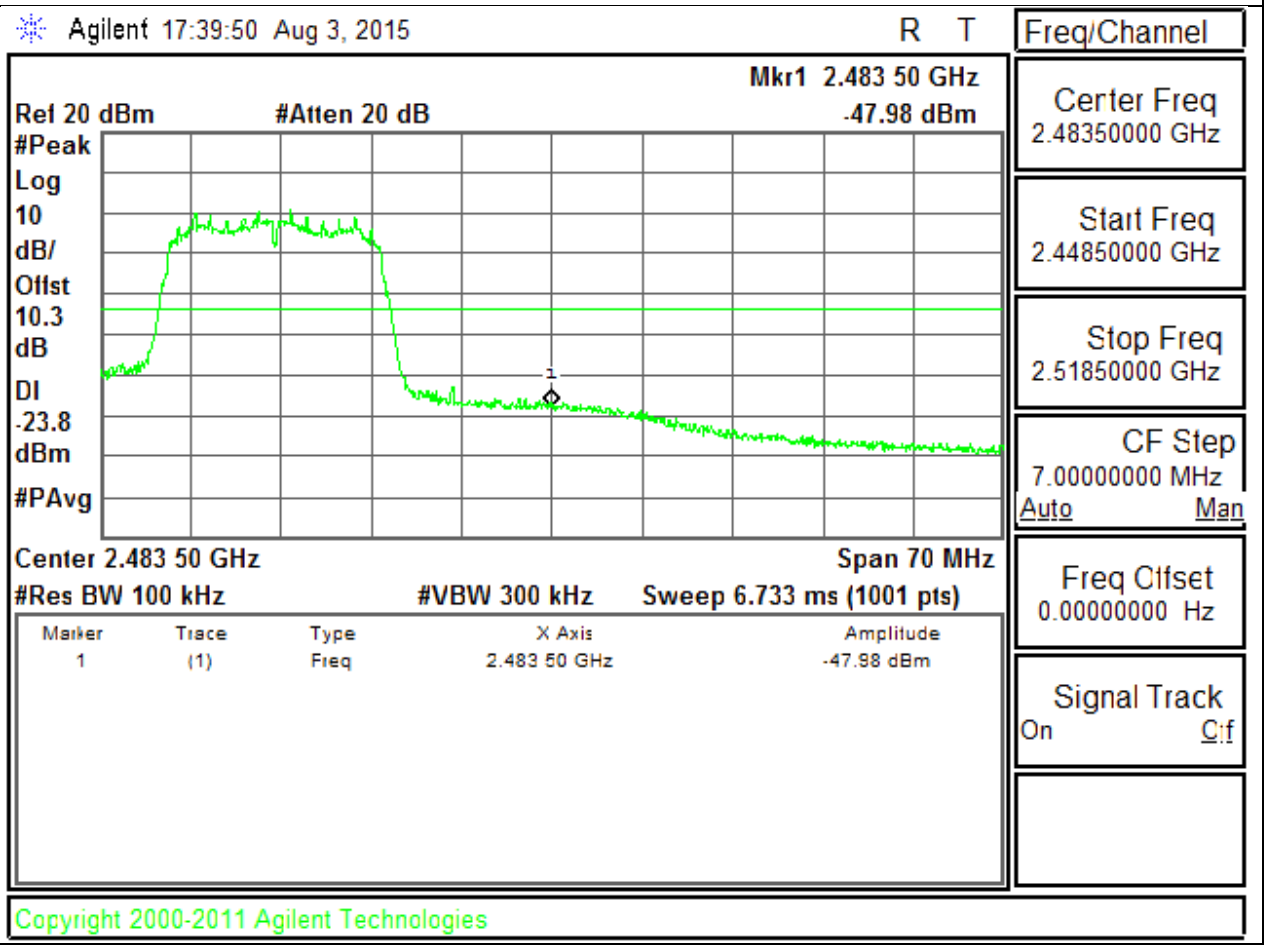
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



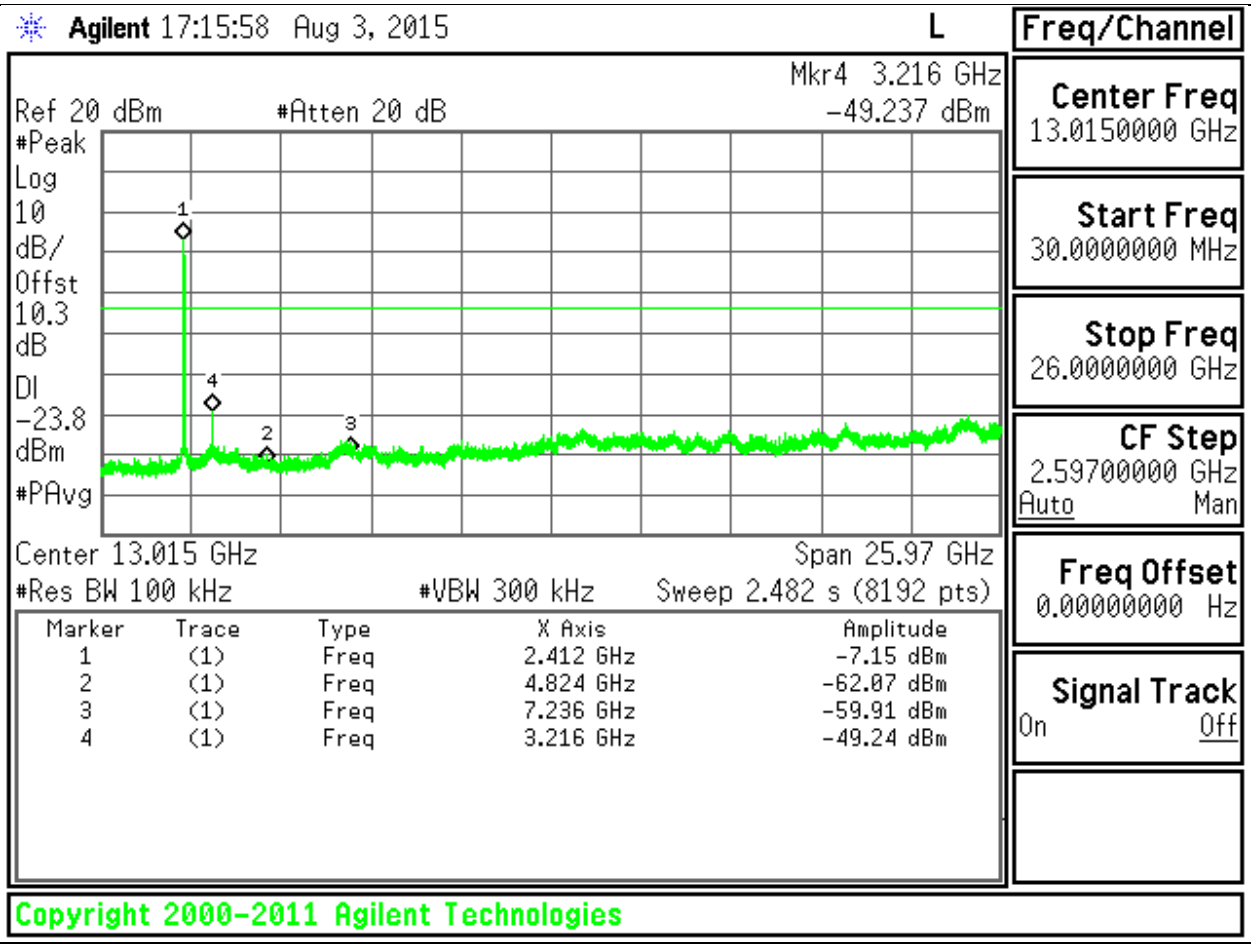
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

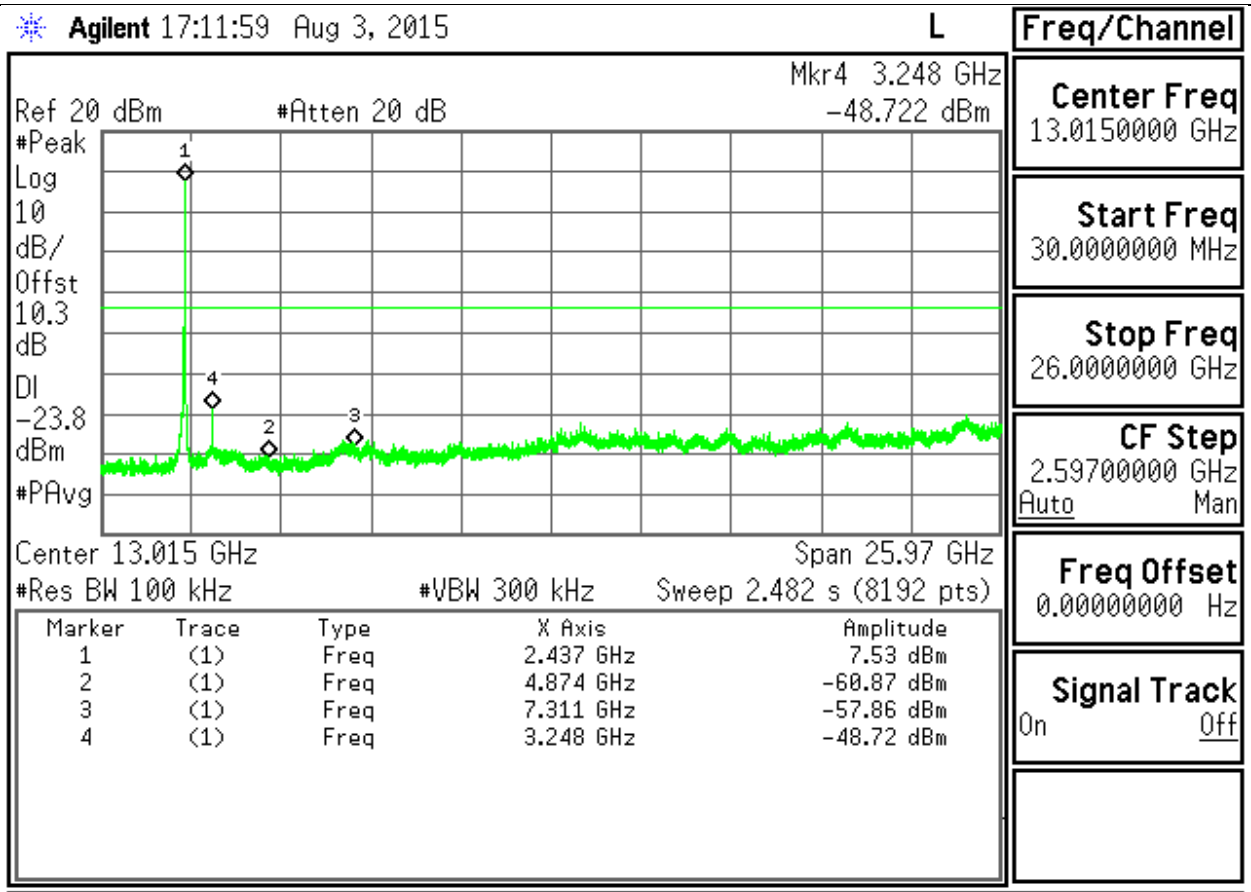


OUT-OF-BAND EMISSIONS

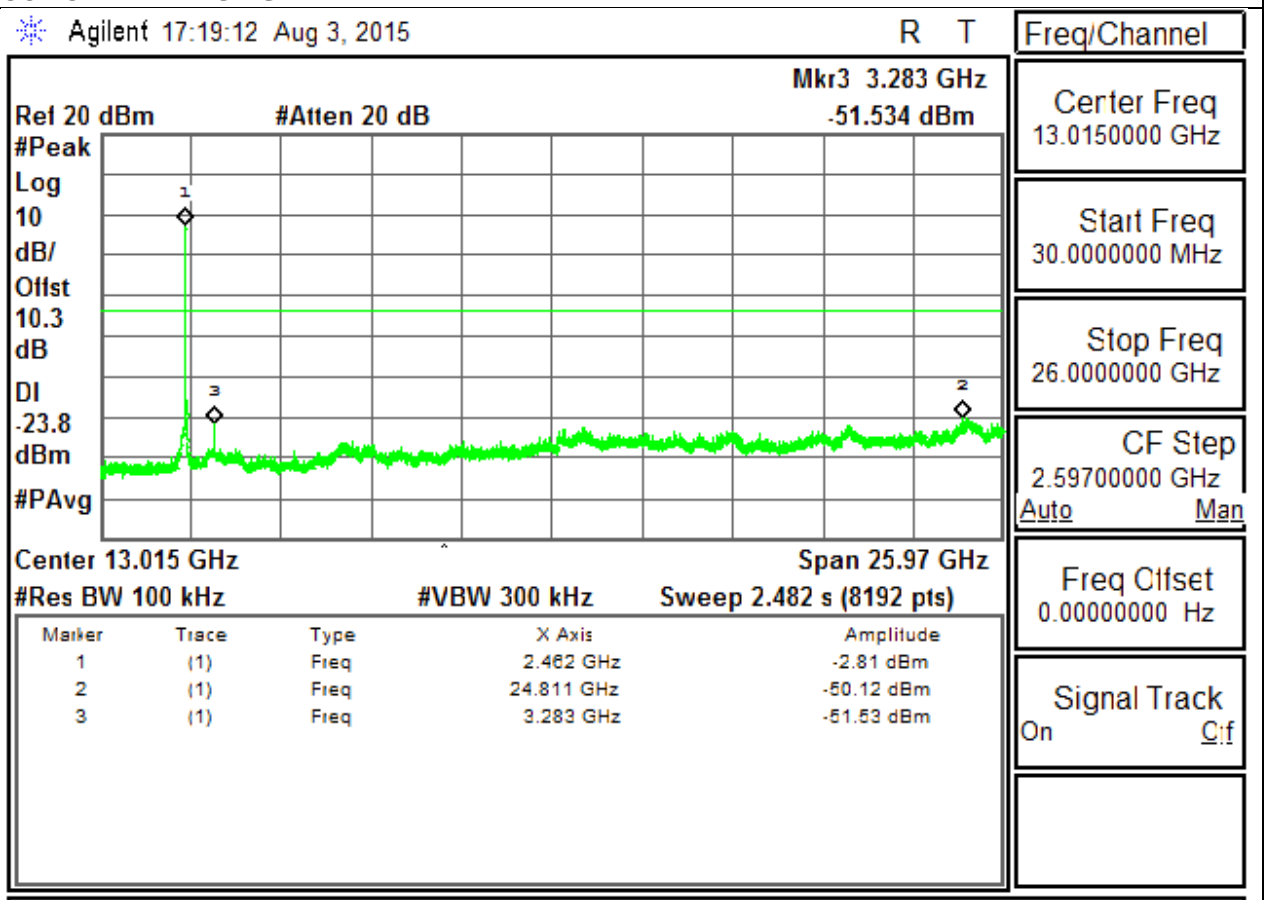
OUT OF BAND LOW CH



OUT OF BAND MID CH



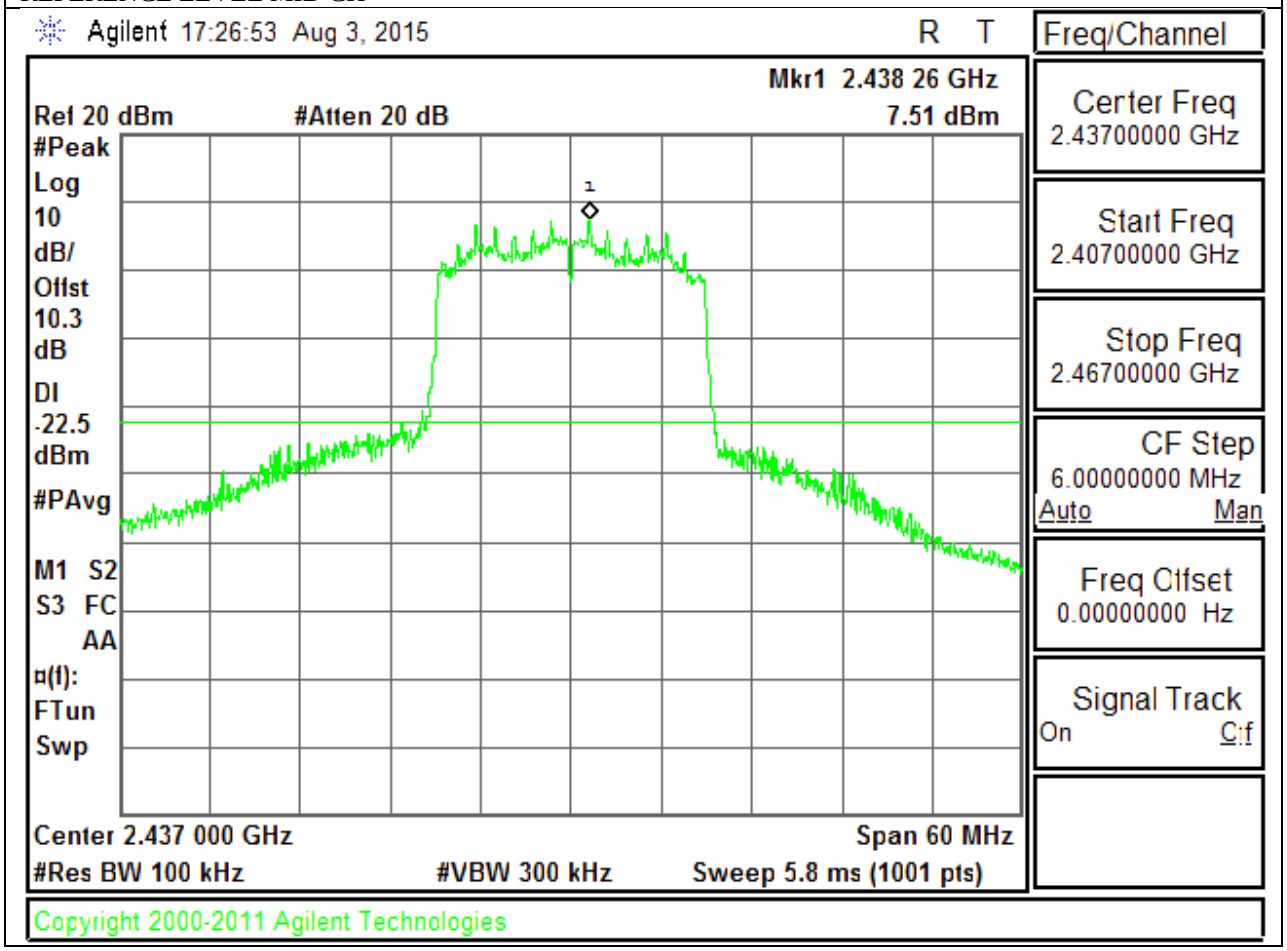
OUT OF BAND HIGH CH



9.5.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND (CHAIN 0)

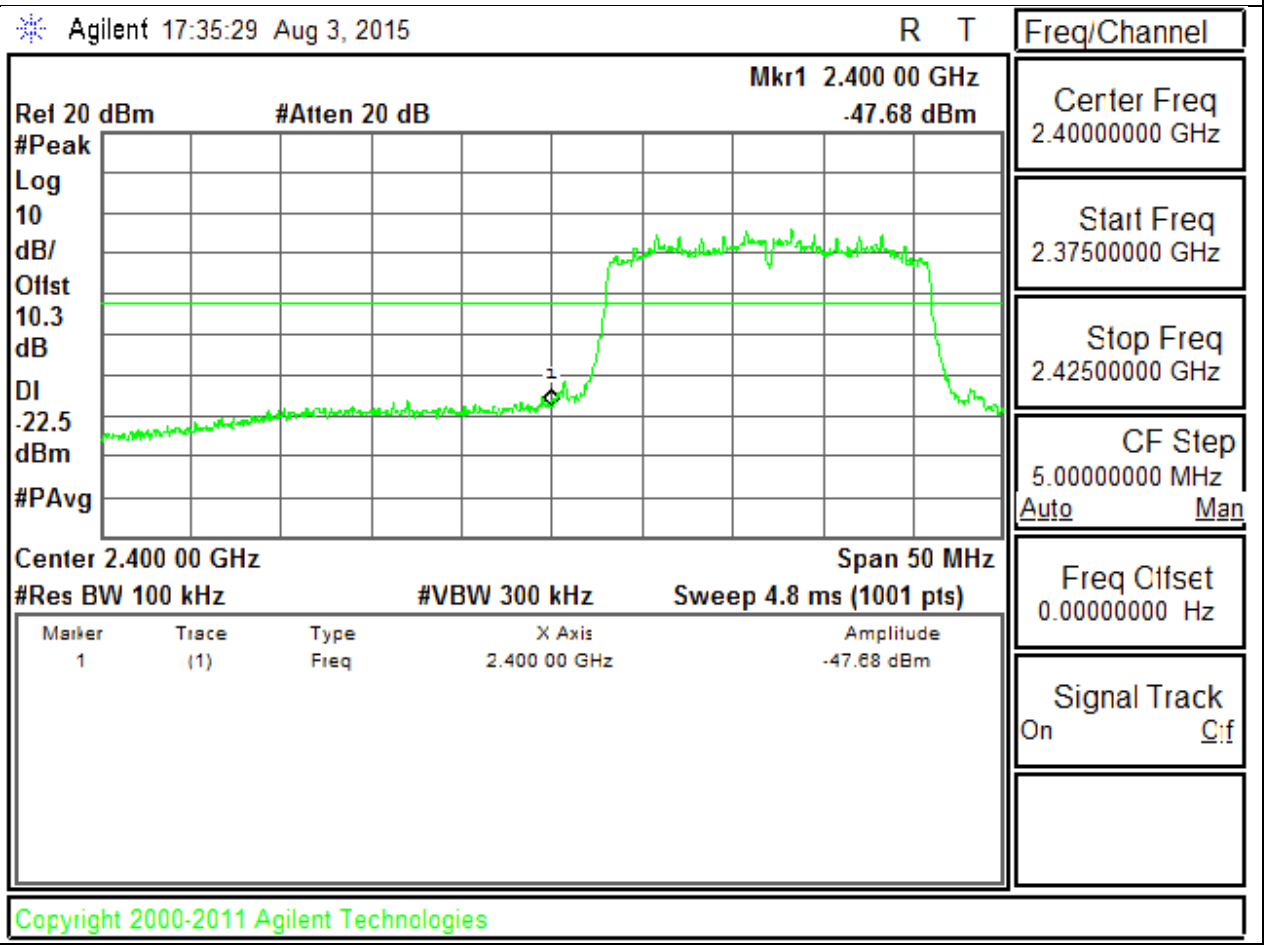
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



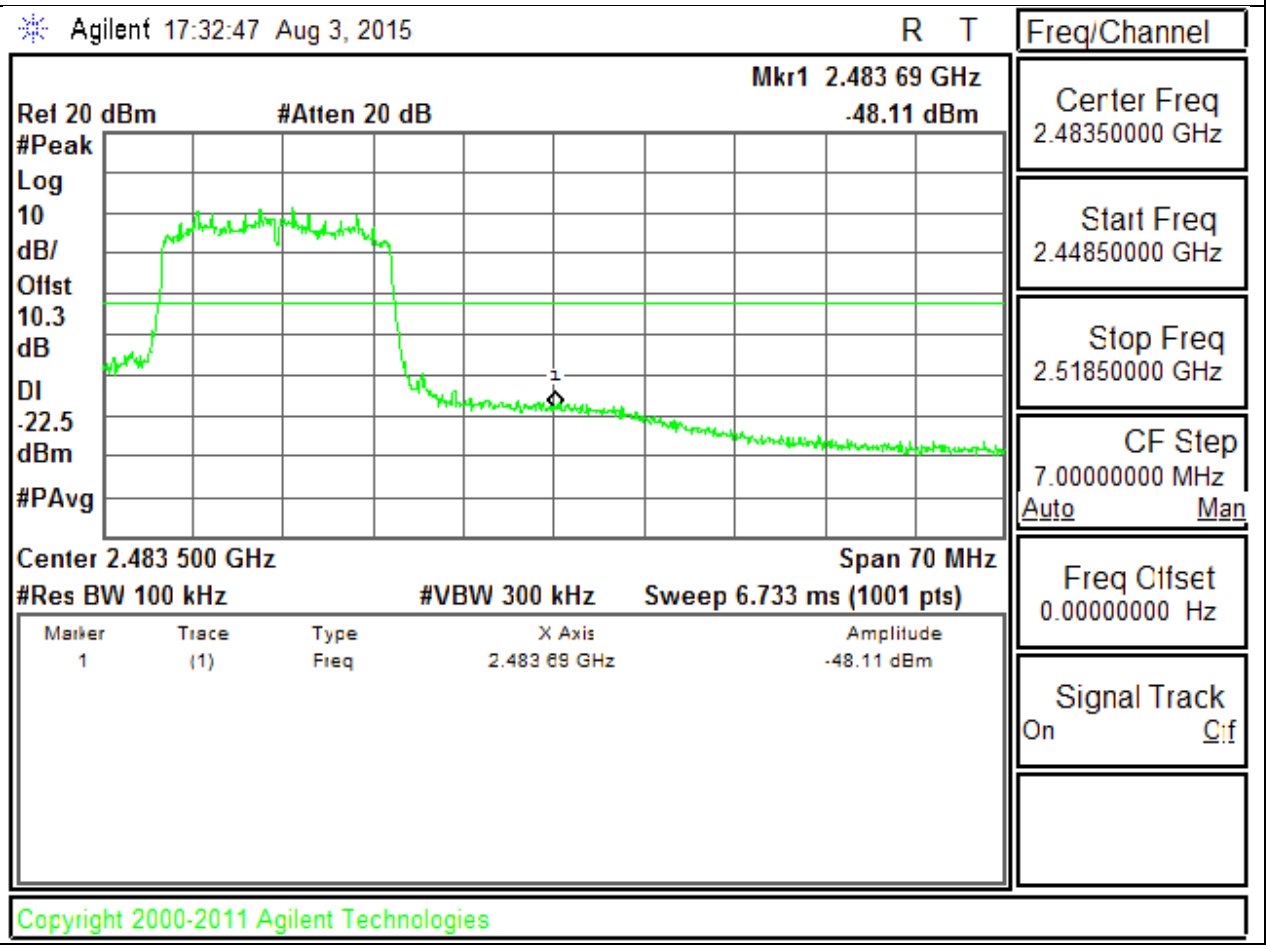
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



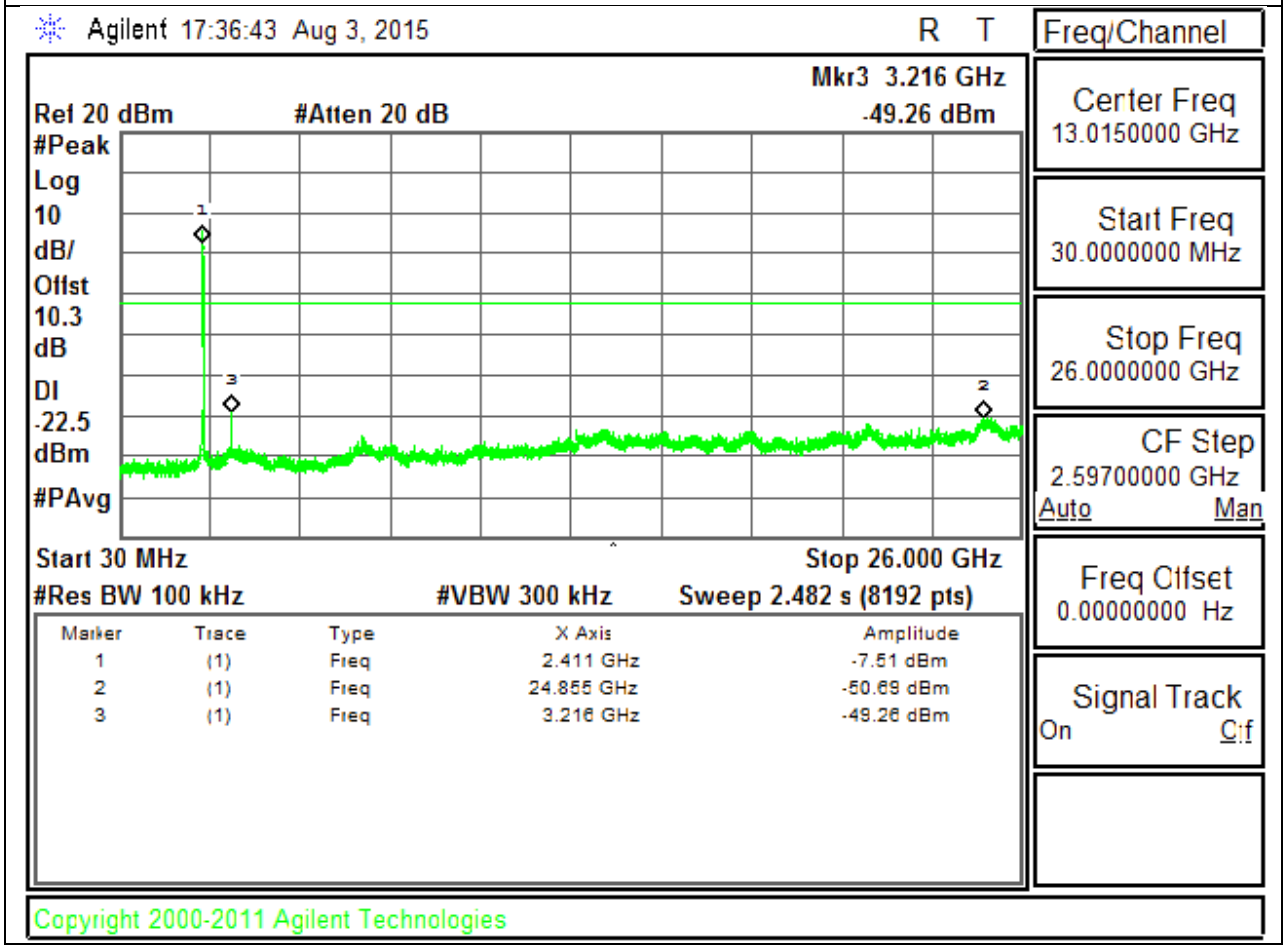
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

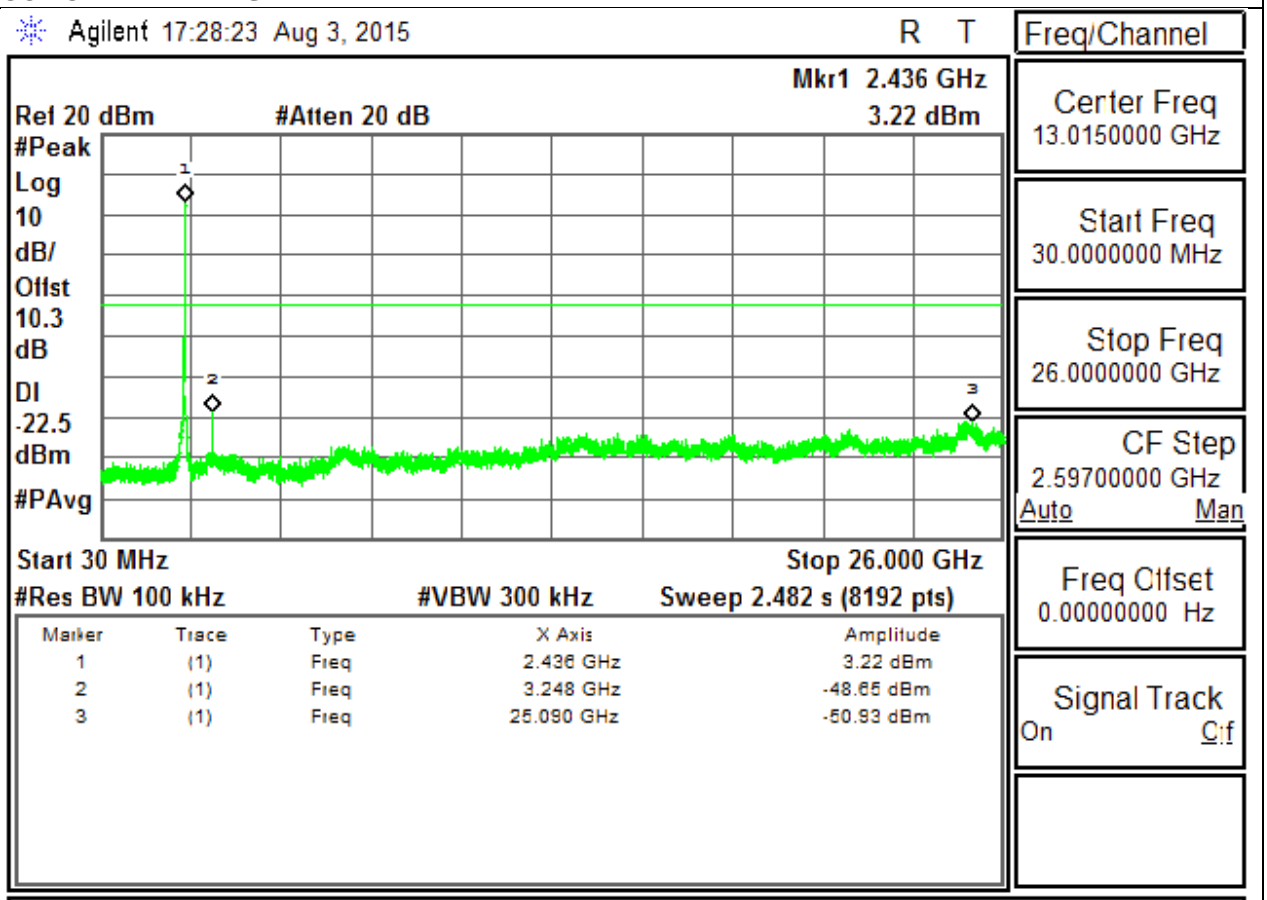


OUT-OF-BAND EMISSIONS

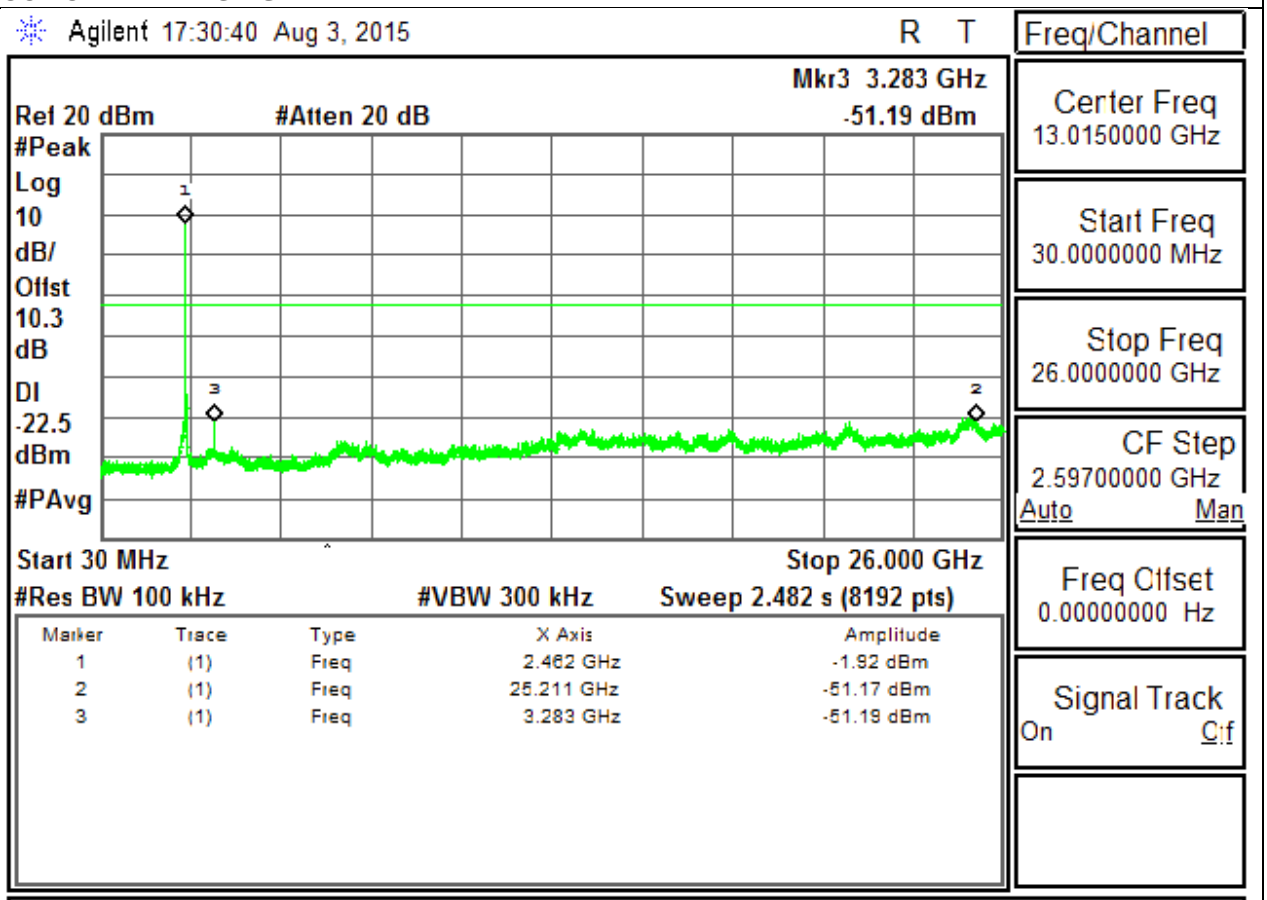
OUT OF BAND LOW CH



OUT OF BAND MID CH



OUT OF BAND HIGH CH



10. ANTENNA PORT TEST RESULTS MIMO

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

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

TEST PROCEDURE

Reference to KDB 558074 D01 DTS Meas Guidance v03r03: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x RBW, peak detector and max hold.

RESULTS

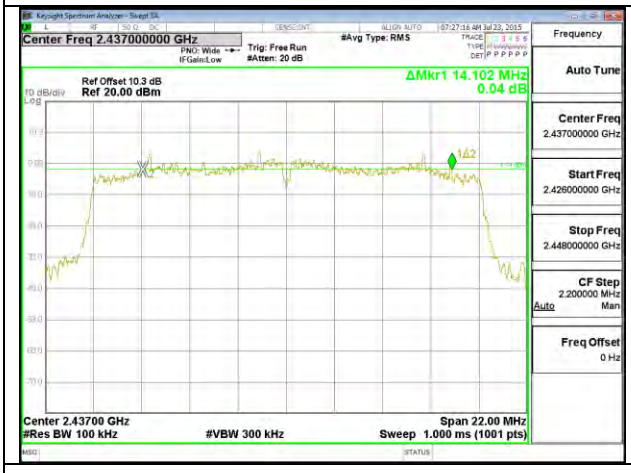
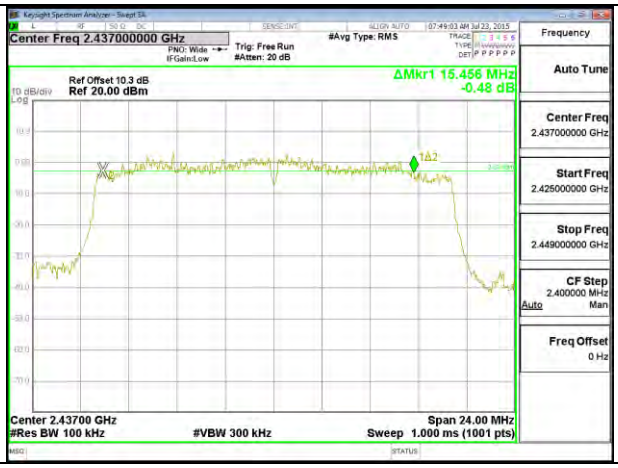
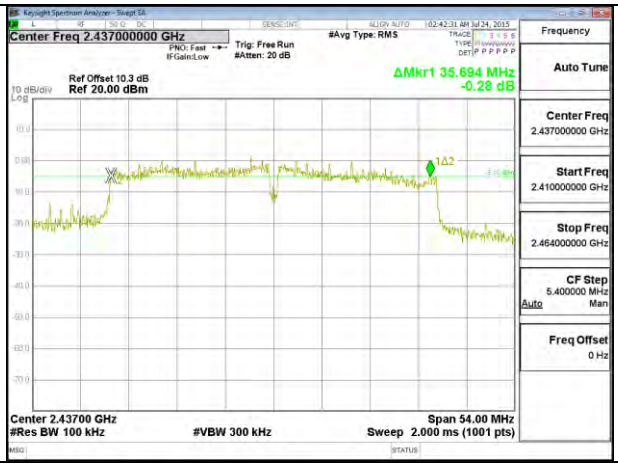
10.1.1. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz) C0	6 dB Bandwidth (MHz) C1	Minimum Limit (MHz)
Low	2412	14.39	15.79	0.5
Mid	2437	14.10	15.46	0.5
High	2462	13.99	14.67	0.5
Worst		13.99	14.67	

10.1.2. 802.11n HT40 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz) C0	6 dB Bandwidth (MHz) C1	Minimum Limit (MHz)
Low	2422	36.36	36.36	0.5
Mid	2437	36.36	35.69	0.5
High	2452	35.75	36.36	0.5
Worst		36.36	35.69	

10.1.3. 6 dB BANDWIDTH MID CH PLOTS

11n HT20 Mid Channel Chain 0	11n Mid Channel HT20 Chain 1
	
11n HT40 Mid Channel Chain 0	**11n Mid Channel HT40 Chain 1**
	

10.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

10.2.1. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz) C0	99% Bandwidth (MHz) C1
Low	2412	17.53	17.55
Mid	2437	17.46	17.50
High	2462	17.54	17.51
Worst		17.54	17.55

10.2.2. 802.11n HT40 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz) C0	99% Bandwidth (MHz) C1
Low	2422	35.98	36.34
Mid	2437	36.27	36.98
High	2452	36.30	36.32
Worst		36.30	36.98

10.2.3. 99% BANDWIDTH MID CH PLOTS

11n HT20 Mid Channel Chain 0	11n Mid Channel HT20 Chain 1
	
11n HT40 Mid Channel Chain 0	**11n Mid Channel HT40 Chain 1**
	

10.3. OUTPUT POWER

LIMITS

FCC §15.247

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

MIMO

The TX chains are uncorrelated and the antenna gain is the same for each chain. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
2.20	1.76	1.99

RESULTS

10.3.1. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	1.99	30.00	36	30.00
Mid	2437	1.99	30.00	36	30.00
High	2462	1.99	30.00	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	7.6	7.7	10.66	30.00	-19.34
Mid	2437	14.7	14.7	17.71	30.00	-12.29
High	2462	10	9.9	12.96	30.00	-17.04

10.3.2. 802.11n HT40 MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	1.99	30.00	36	30.00
Mid	2437	1.99	30.00	36	30.00
High	2462	1.99	30.00	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2422	5.6	5.7	8.66	30.00	-21.34
Mid	2437	10.6	14.8	16.20	30.00	-13.80
High	2452	8.8	8.7	11.76	30.00	-18.24

10.4. PSD

LIMITS

FCC §15.247

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

10.4.1. 802.11n HT20 MODE IN THE 2.4 GHz BAND

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

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-14.92	-15.09	-11.99	8.0	-20.0
Mid	2437	-8.76	-8.84	-5.79	8.0	-13.8
High	2462	-12.08	-12.21	-9.13	8.0	-17.1

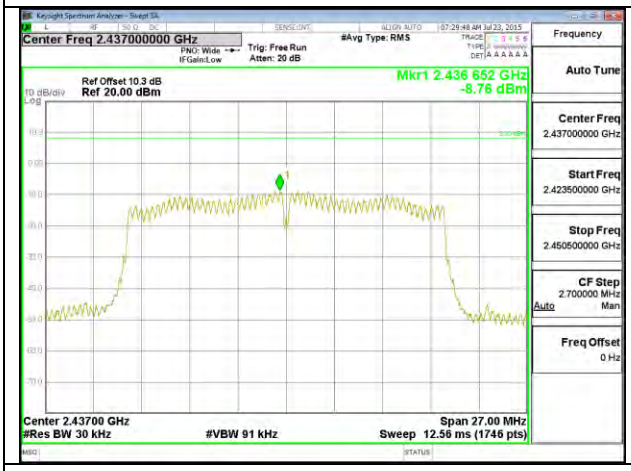
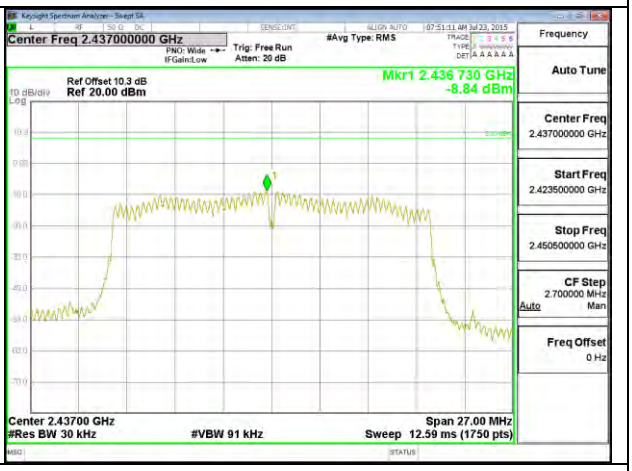
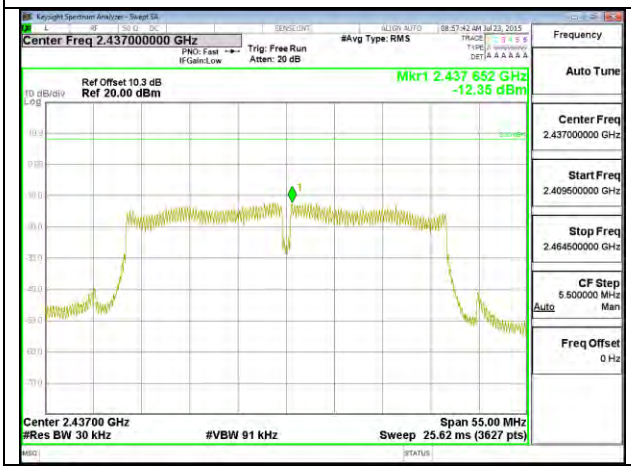
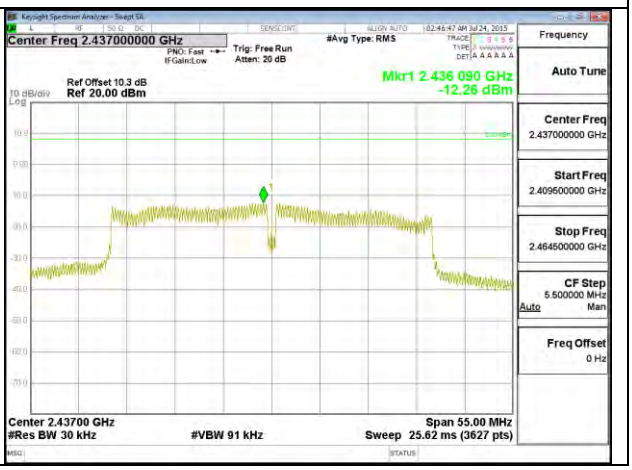
10.4.2. 802.11n HT40 MODE IN THE 2.4 GHz BAND

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

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2422	-20.42	-20.20	-17.30	8.0	-25.3
Mid	2437	-12.35	-12.26	-9.29	8.0	-17.3
High	2452	-17.95	-17.48	-14.70	8.0	-22.7

10.4.3. PSD MID CH PLOTS

11n HT20 Chain 0	11n HT20 Chain 1
	
11n HT40 Chain 0	**11n HT40 Chain 1**
	

10.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

TEST PROCEDURE

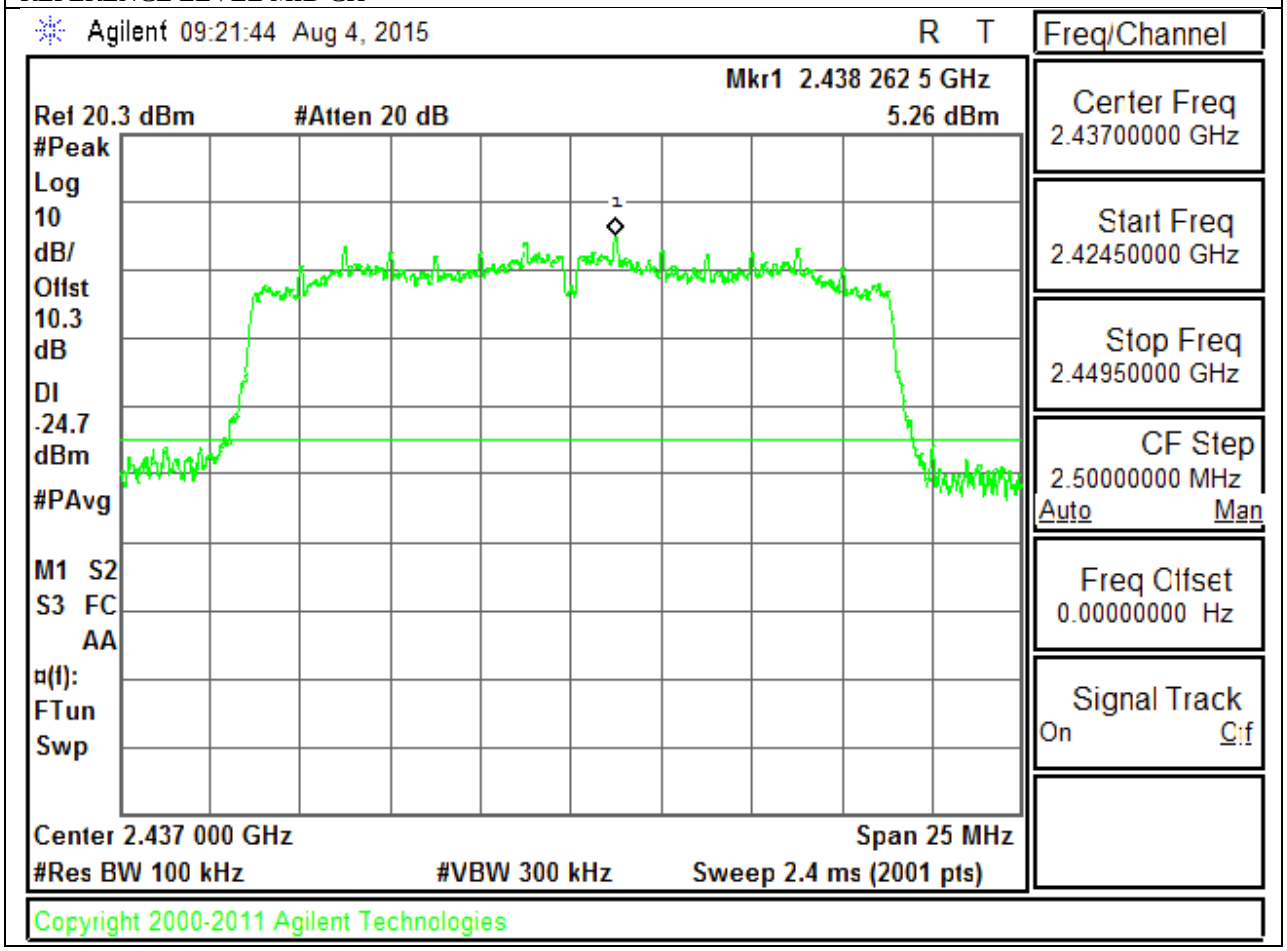
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

10.5.1. 802.11n HT20 MODE IN THE 2.4 GHz BAND (CHAIN 0)

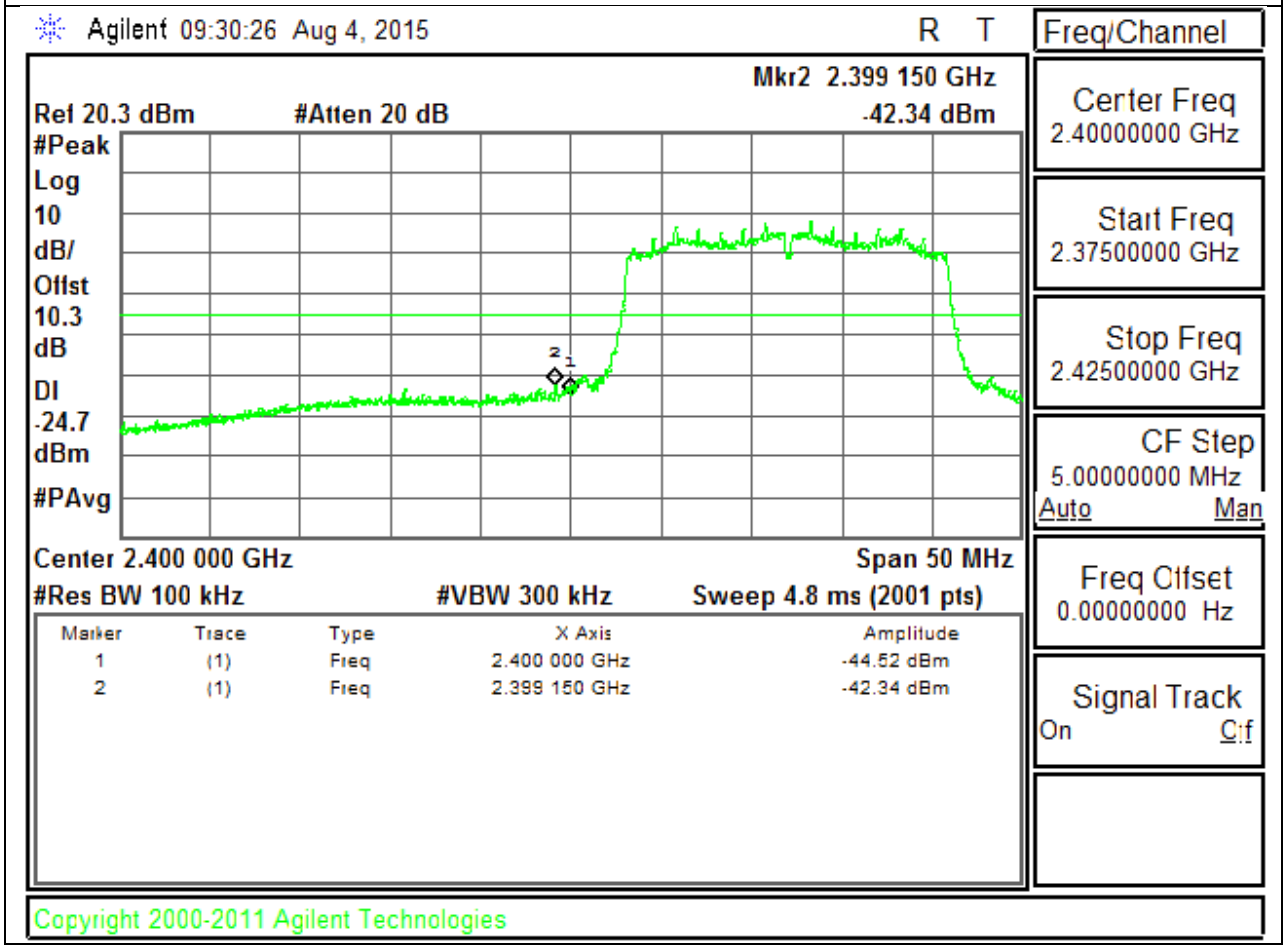
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



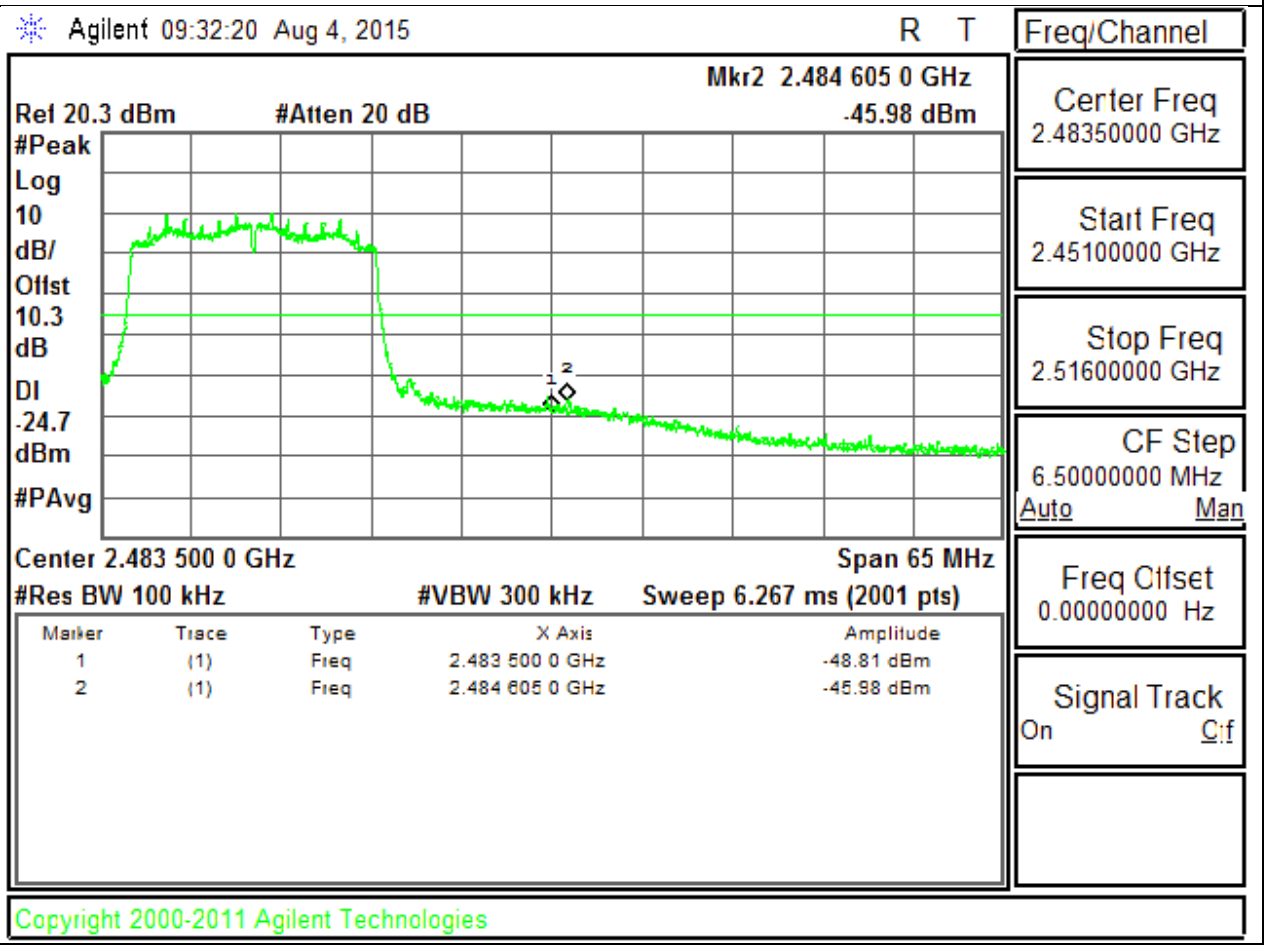
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



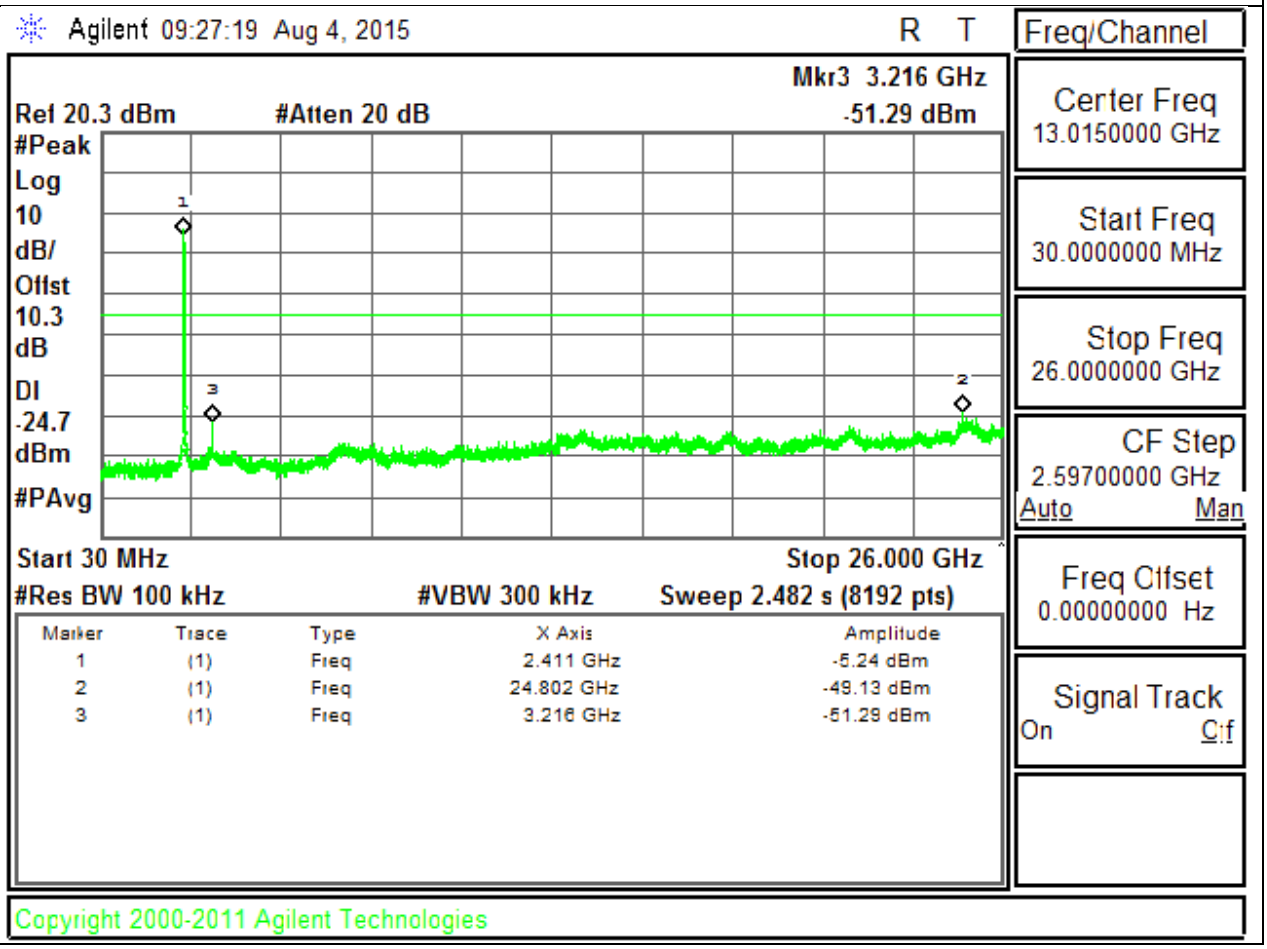
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

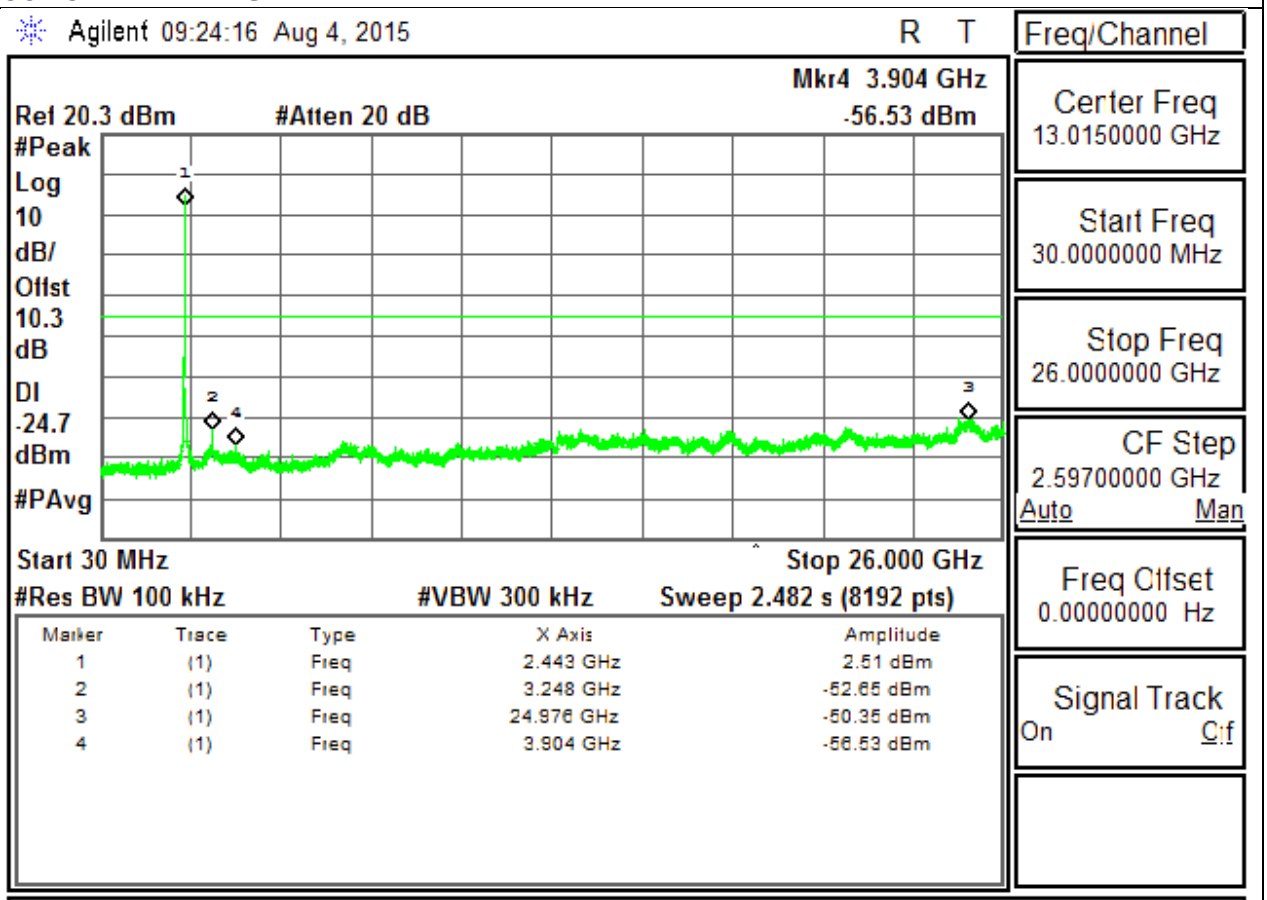


OUT-OF-BAND EMISSIONS

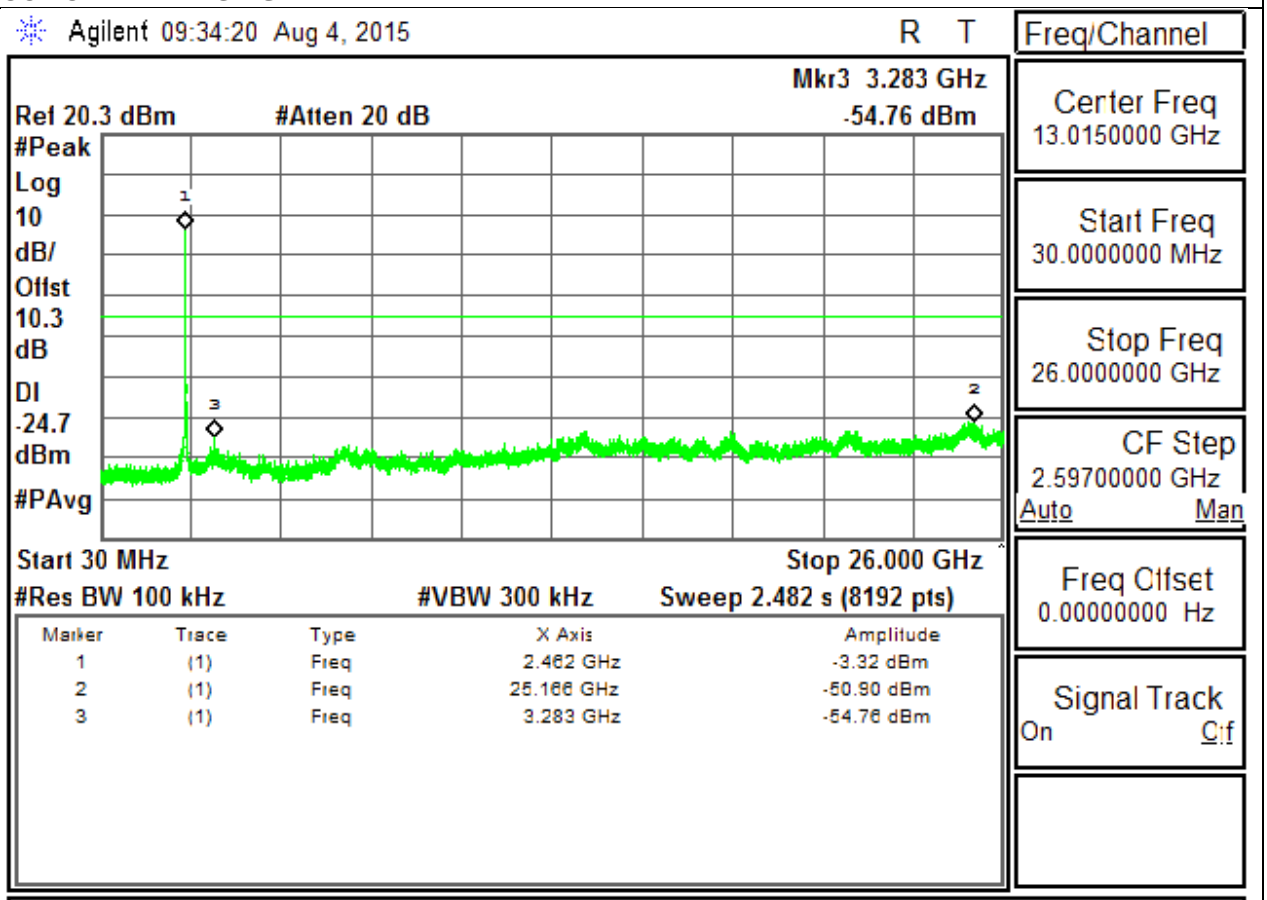
OUT OF BAND LOW CH



OUT OF BAND MID CH



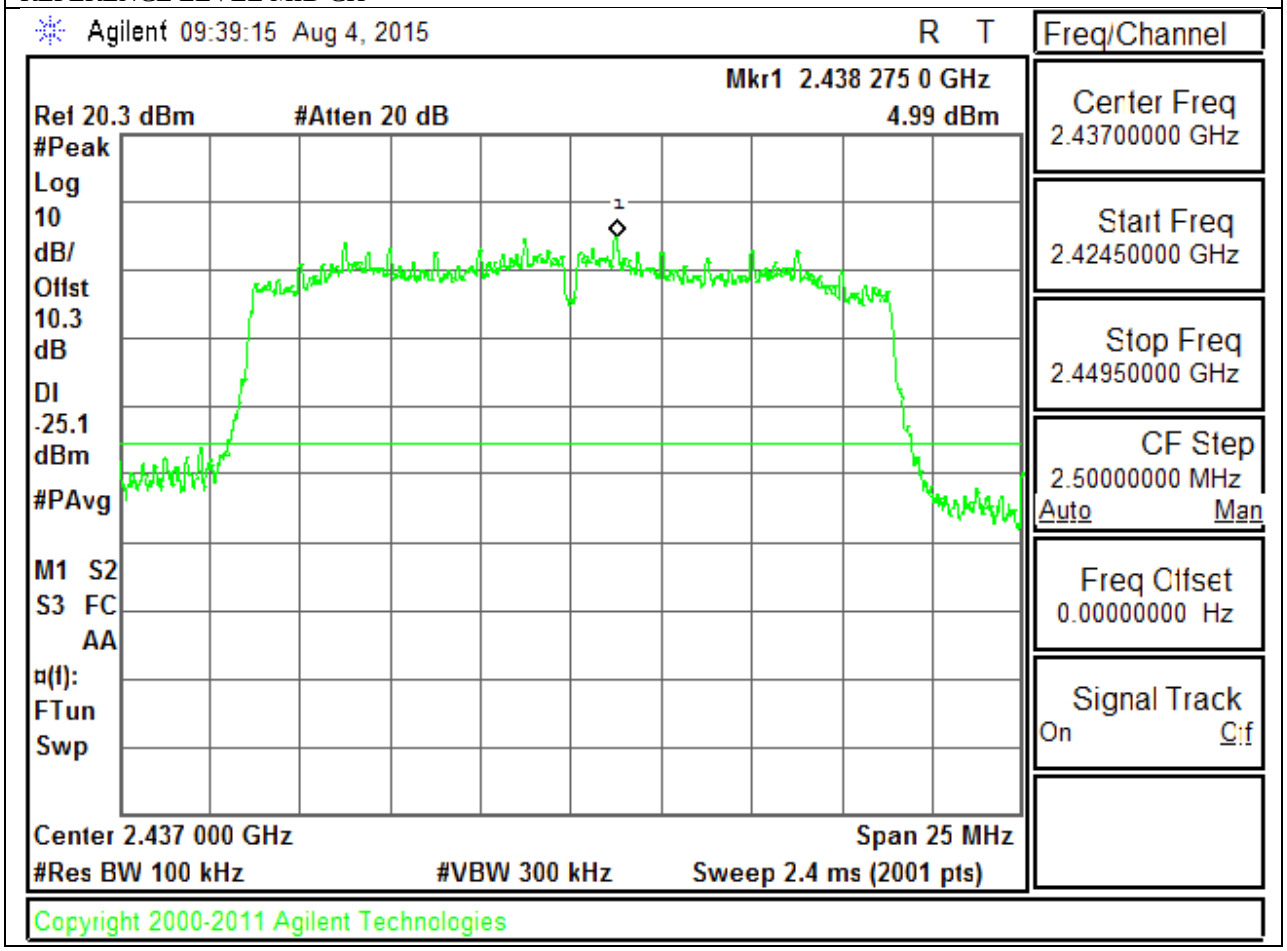
OUT OF BAND HIGH CH



10.5.2. 802.11n HT20 MODE IN THE 2.4 GHz BAND (CHAIN 1)

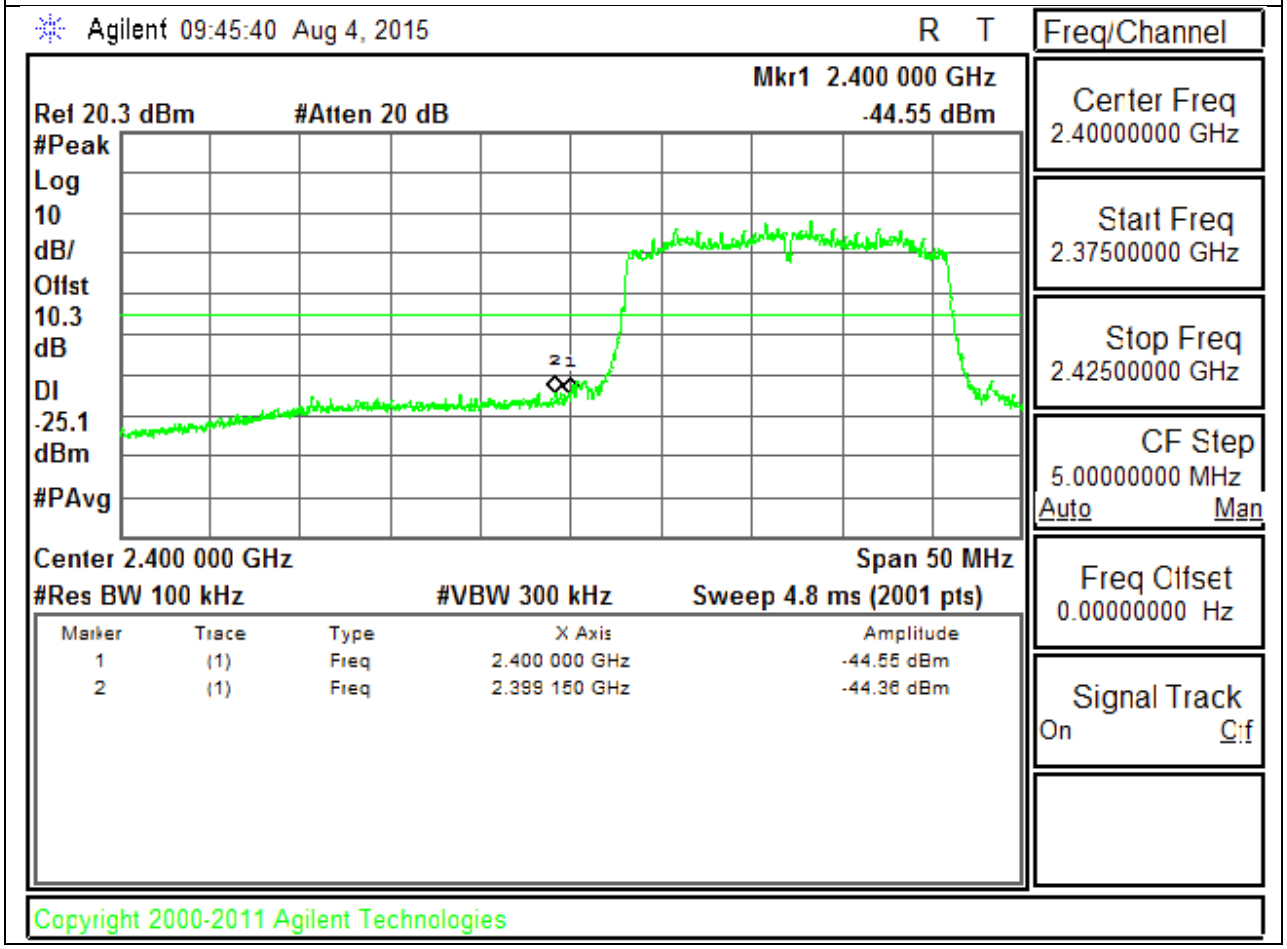
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



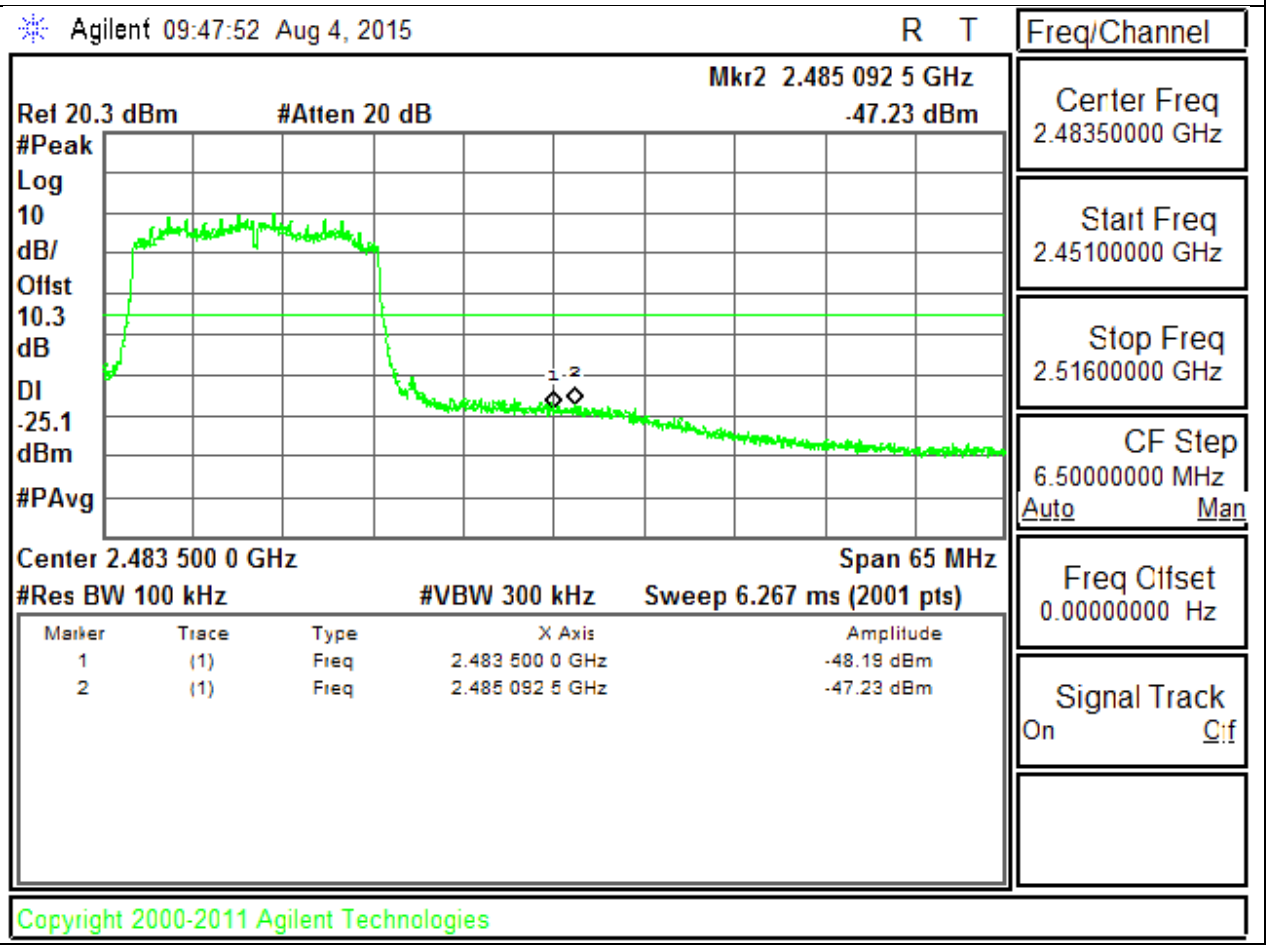
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



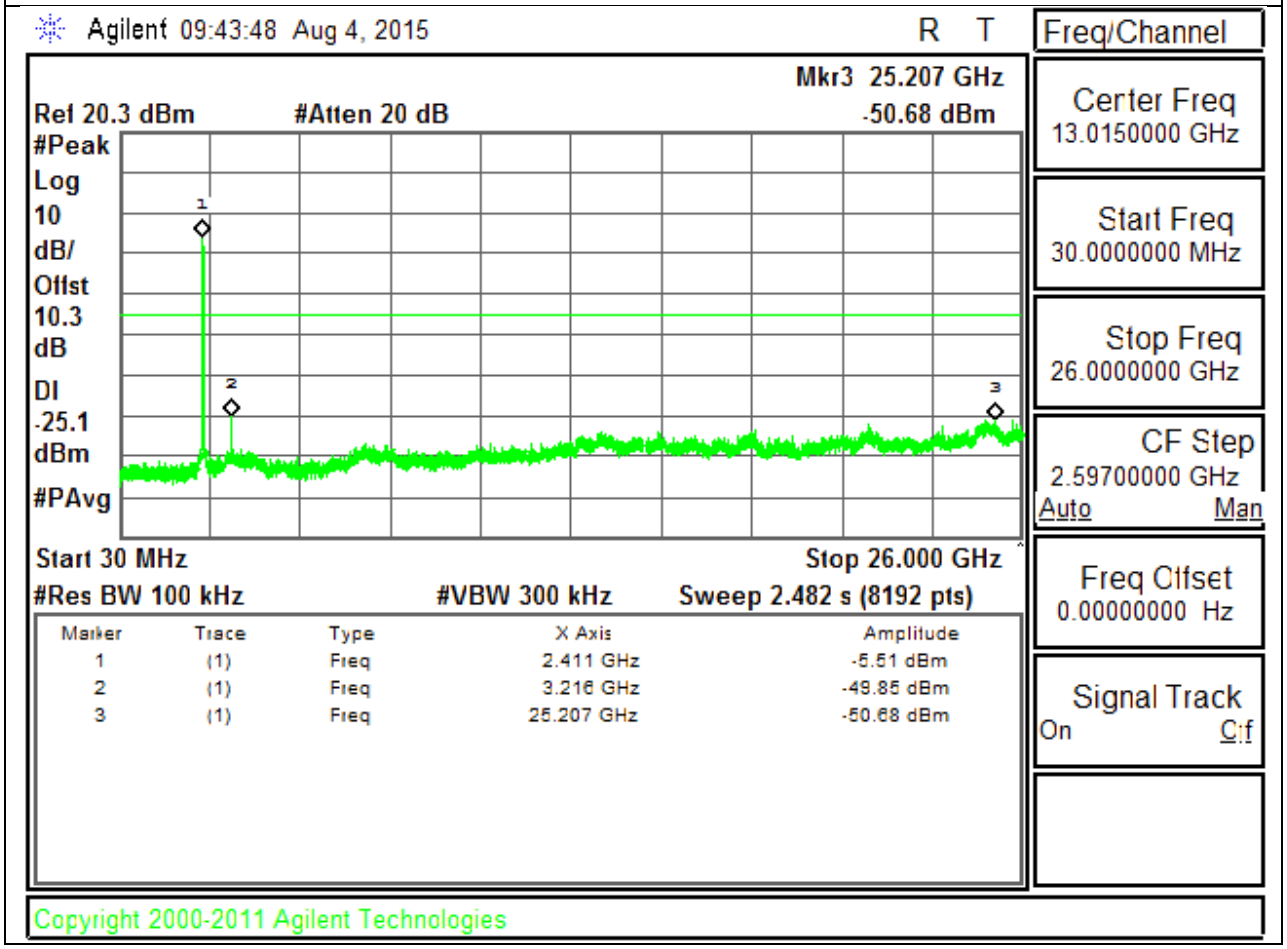
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

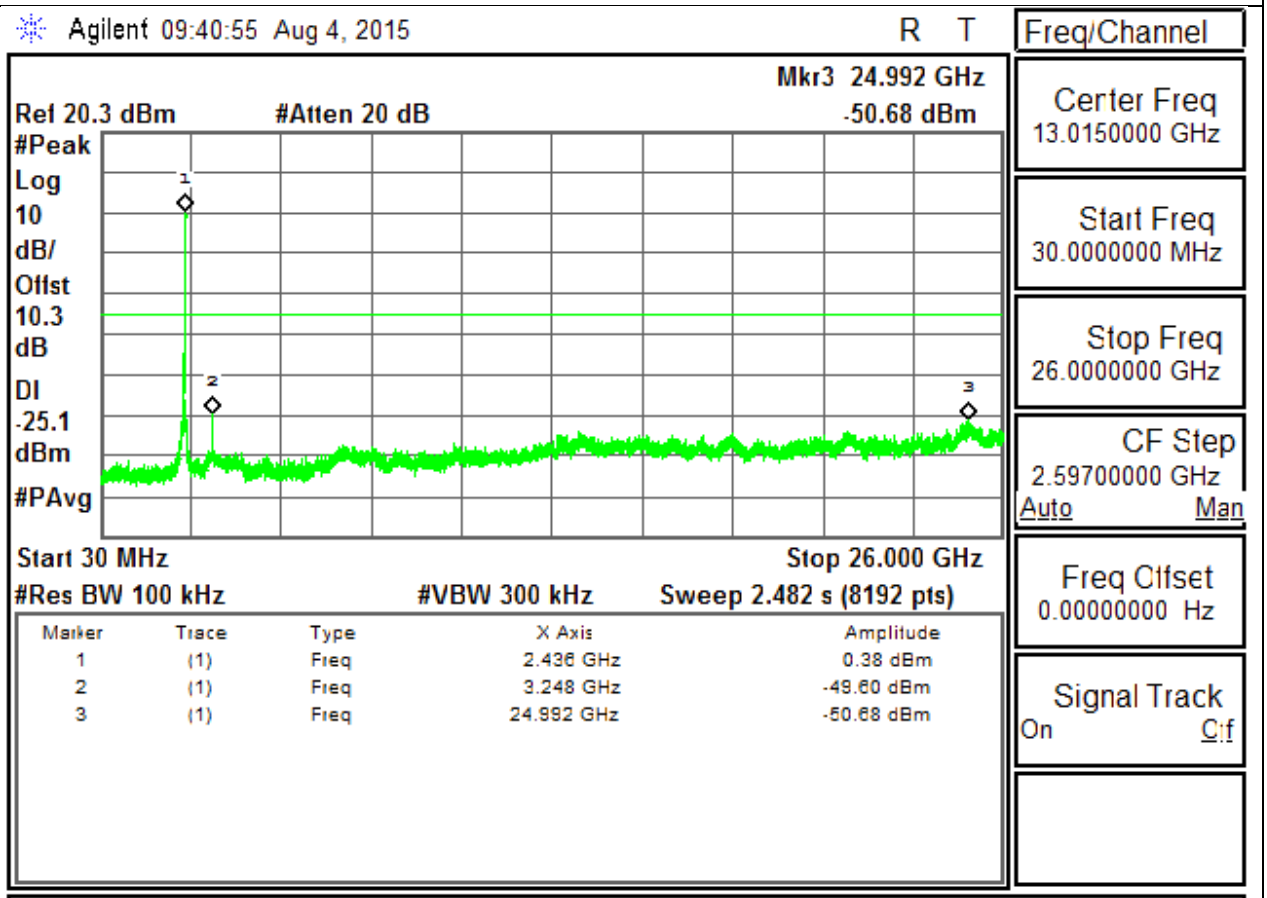


OUT-OF-BAND EMISSIONS

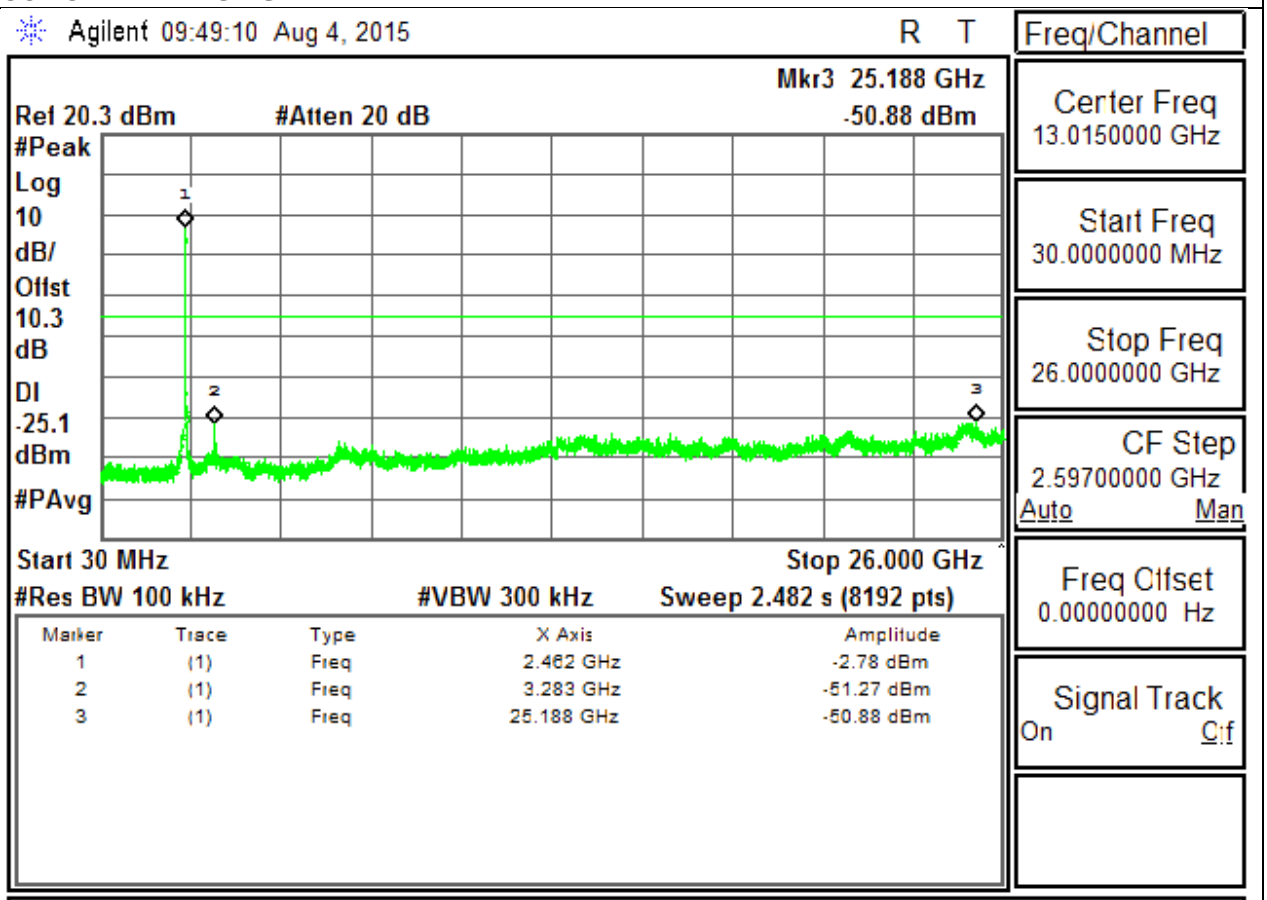
OUT OF BAND LOW CH



OUT OF BAND MID CH



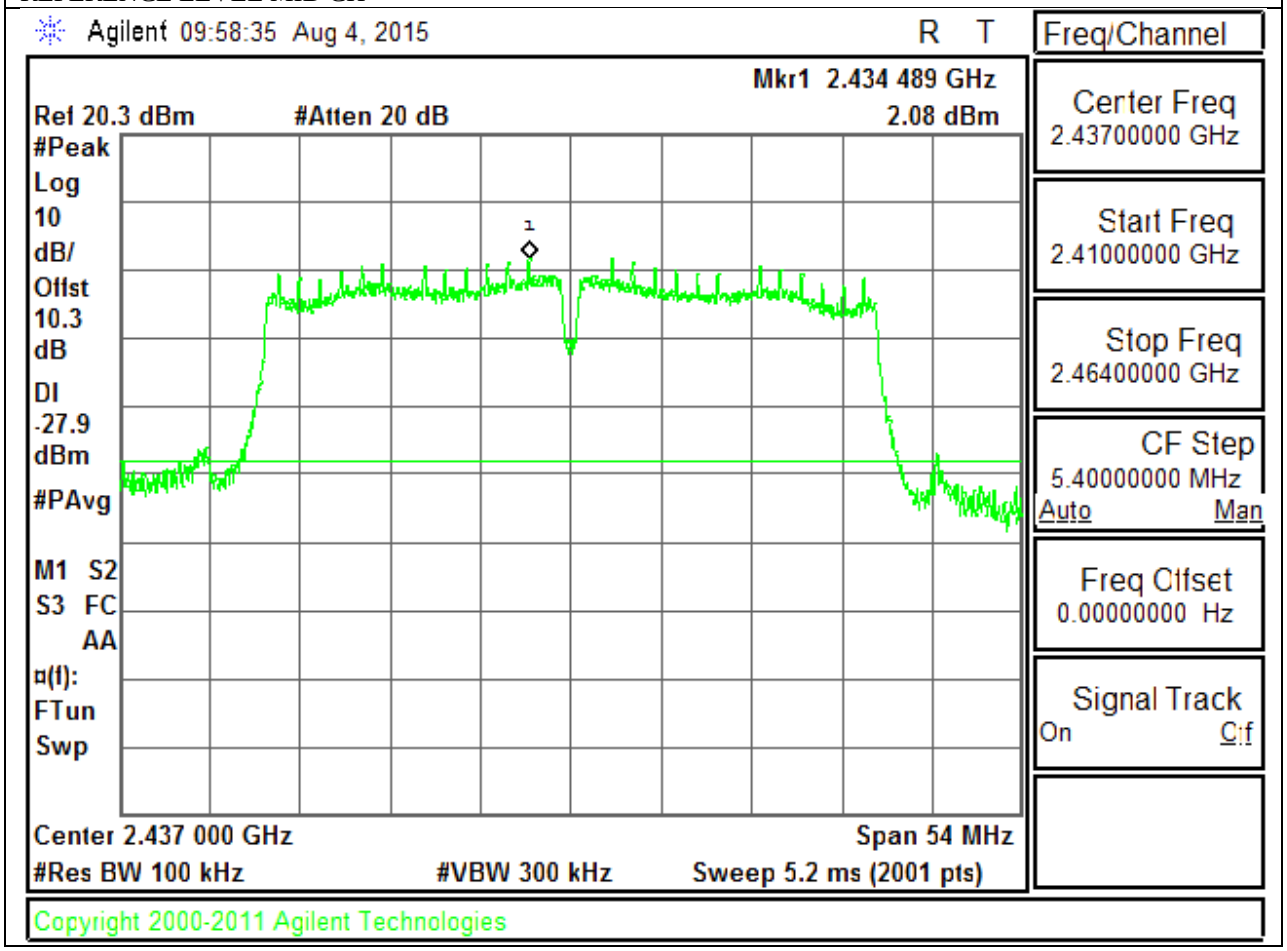
OUT OF BAND HIGH CH



10.5.3. 802.11n HT40 MODE IN THE 2.4 GHz BAND (CHAIN 0)

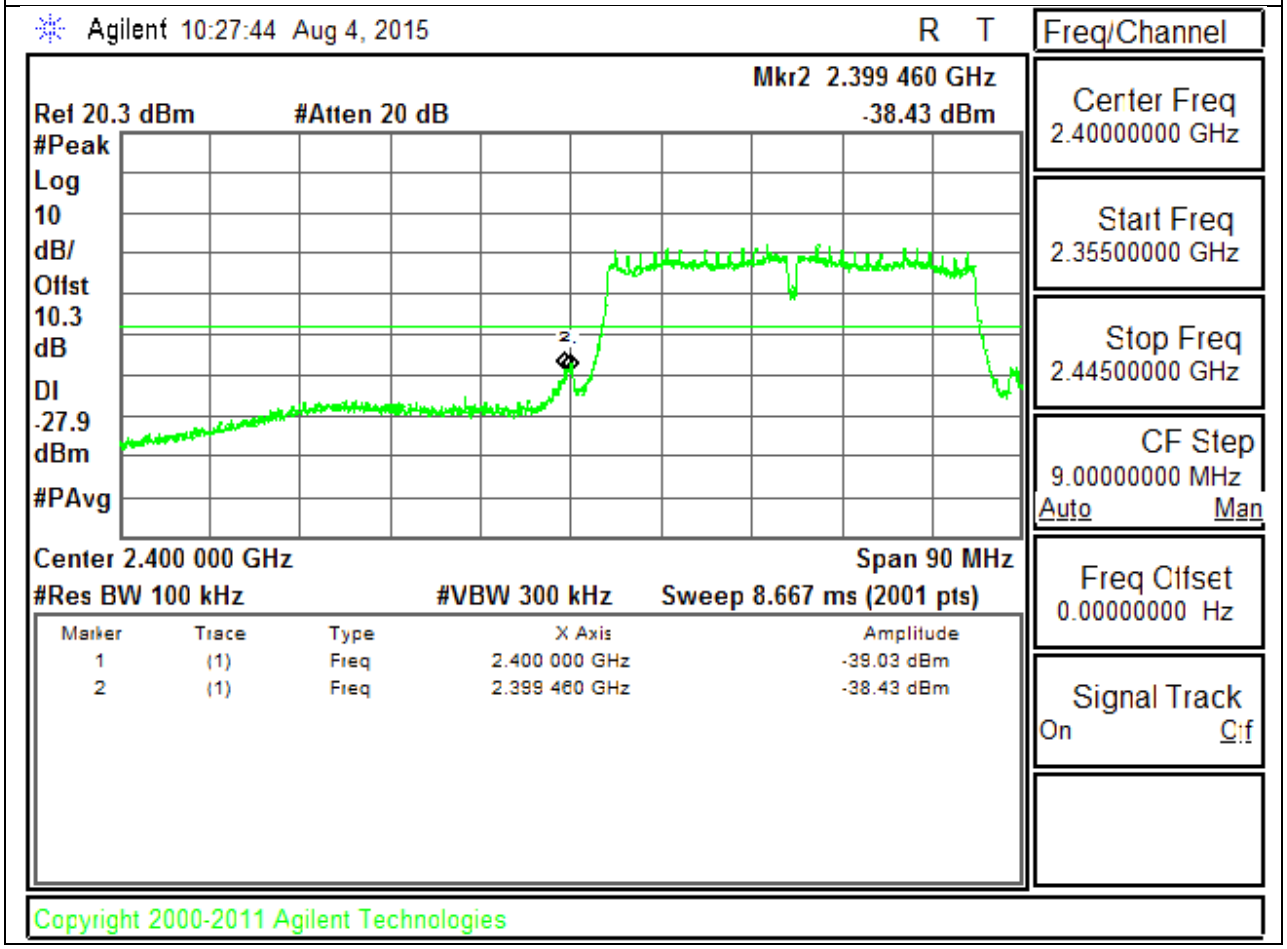
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



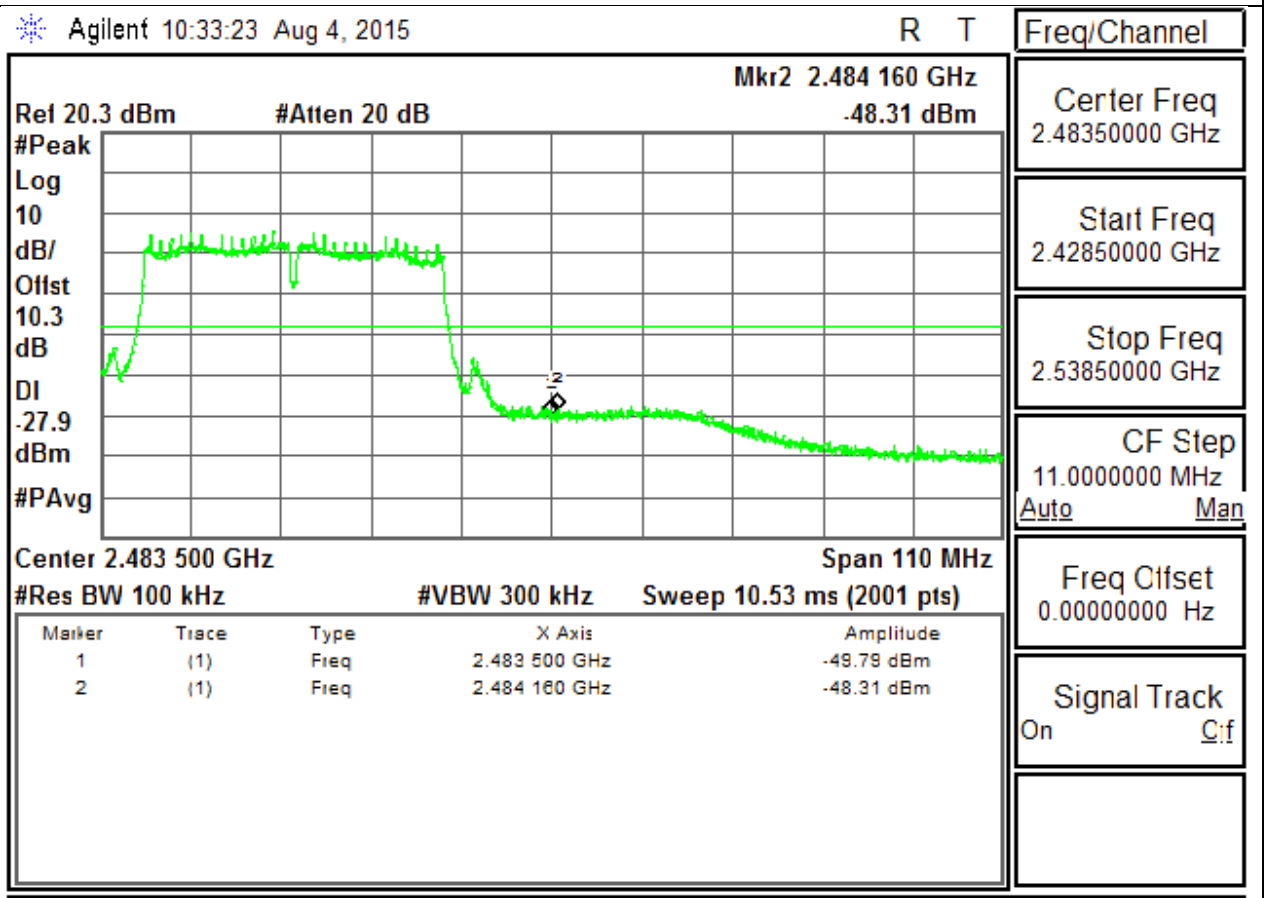
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



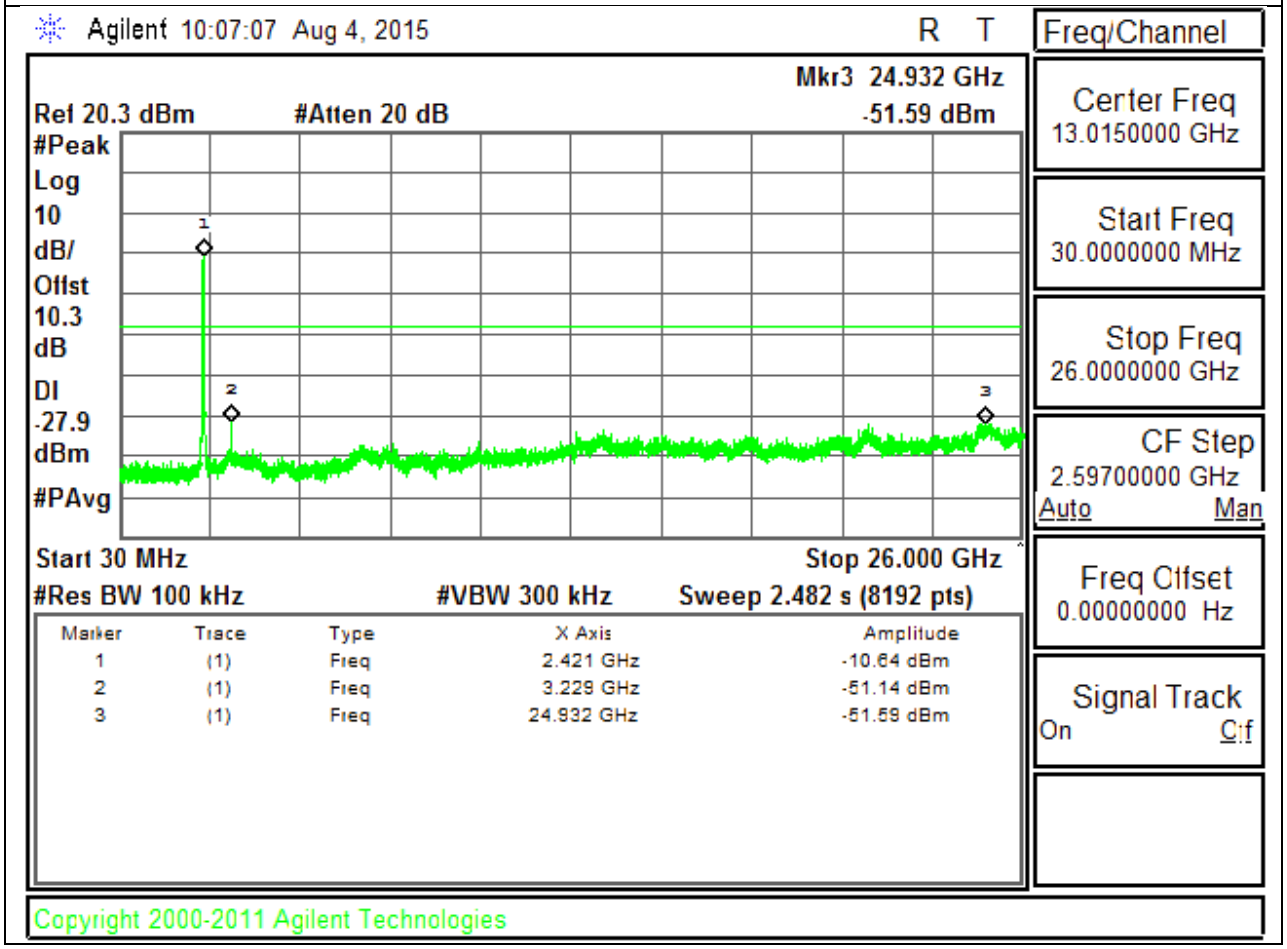
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

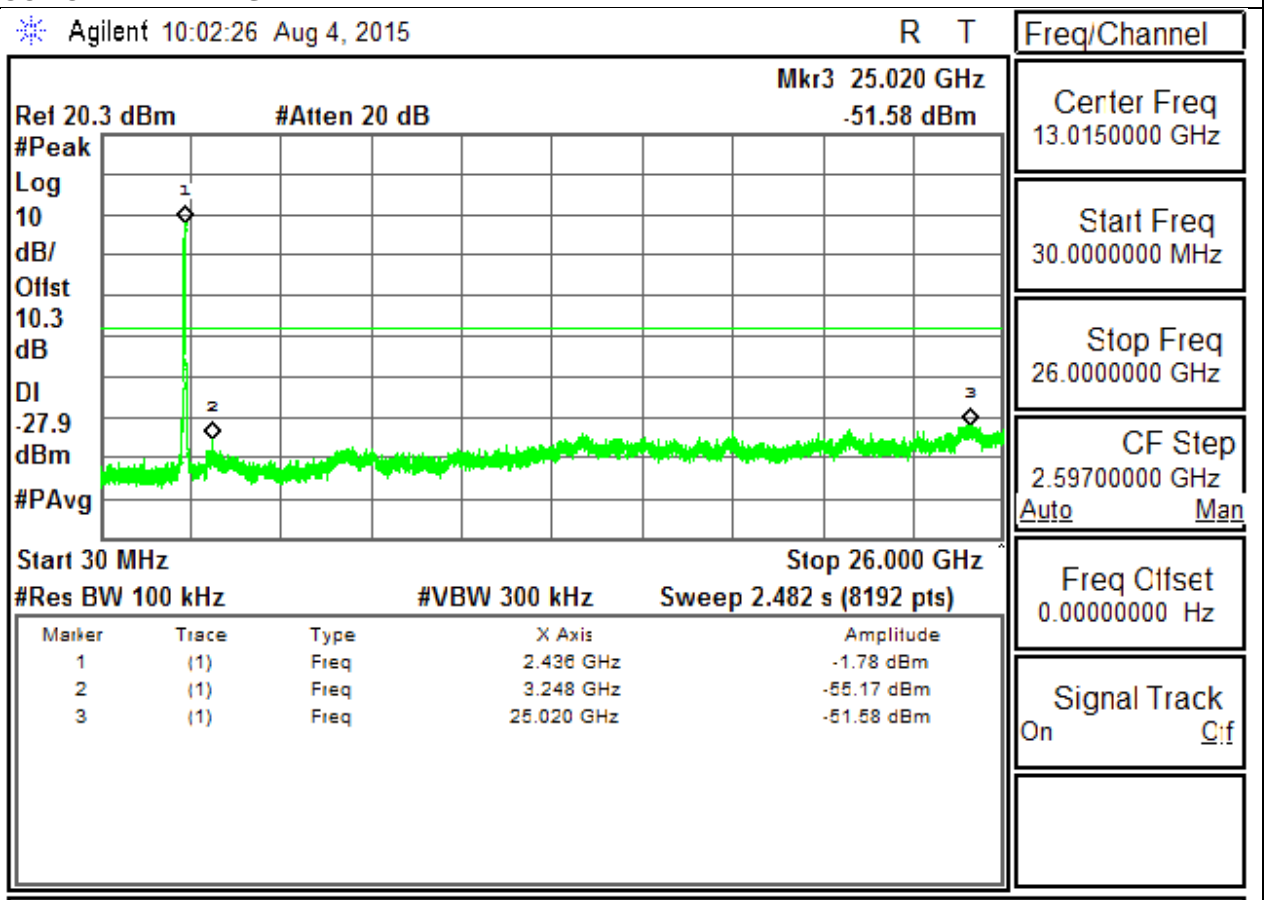


OUT-OF-BAND EMISSIONS

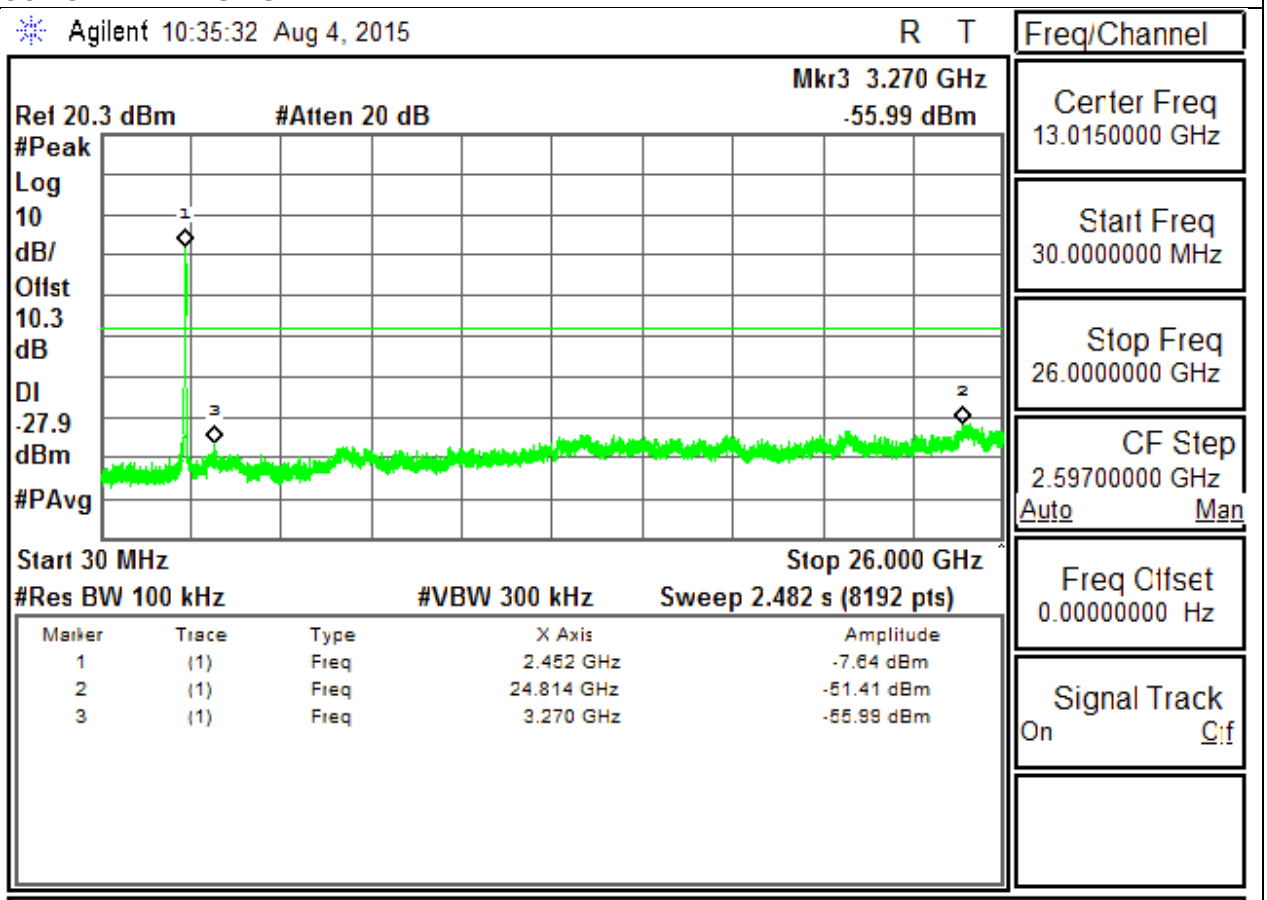
OUT OF BAND LOW CH



OUT OF BAND MID CH



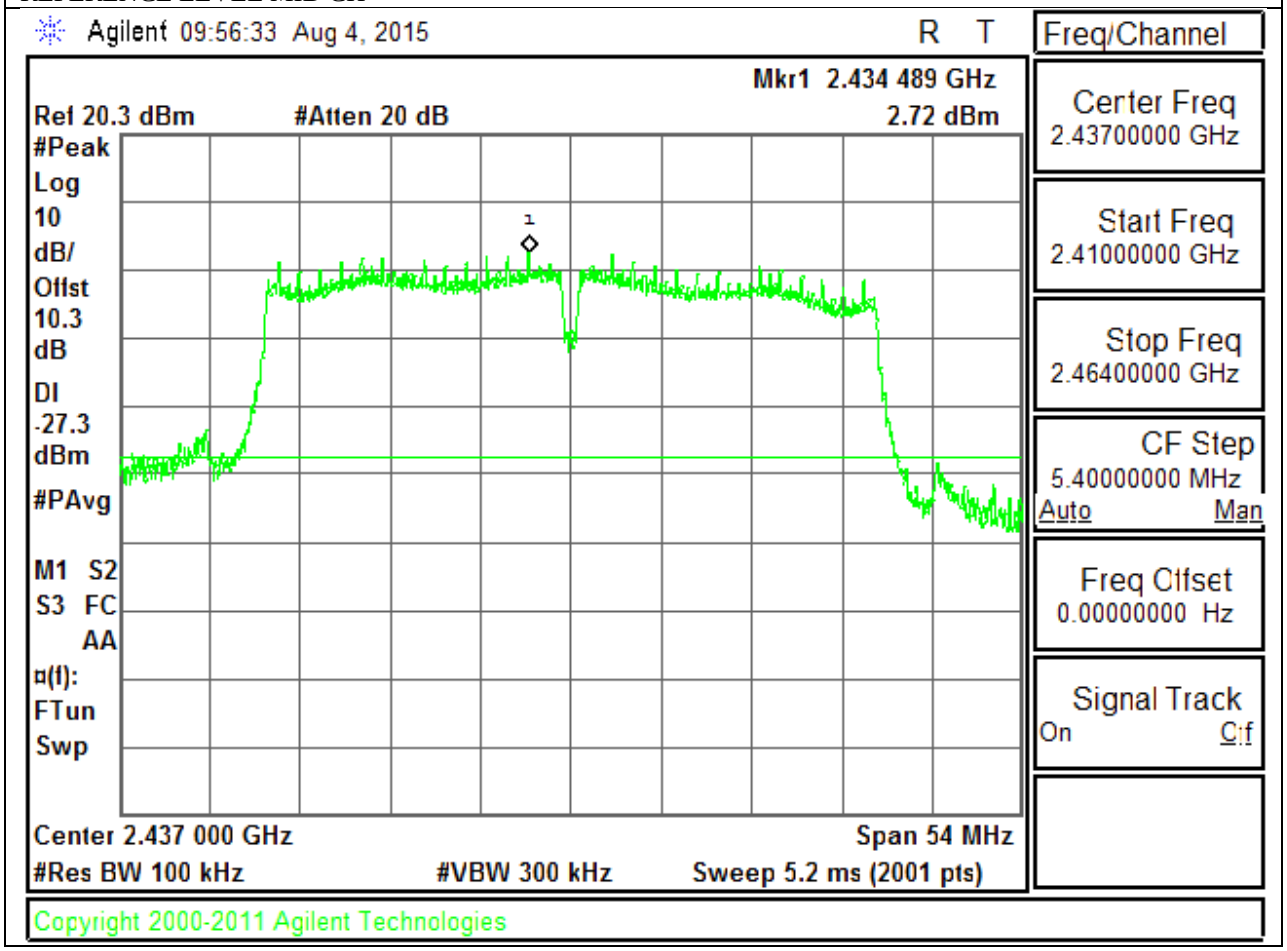
OUT OF BAND HIGH CH



10.5.4. 802.11n HT40 MODE IN THE 2.4 GHz BAND (CHAIN 1)

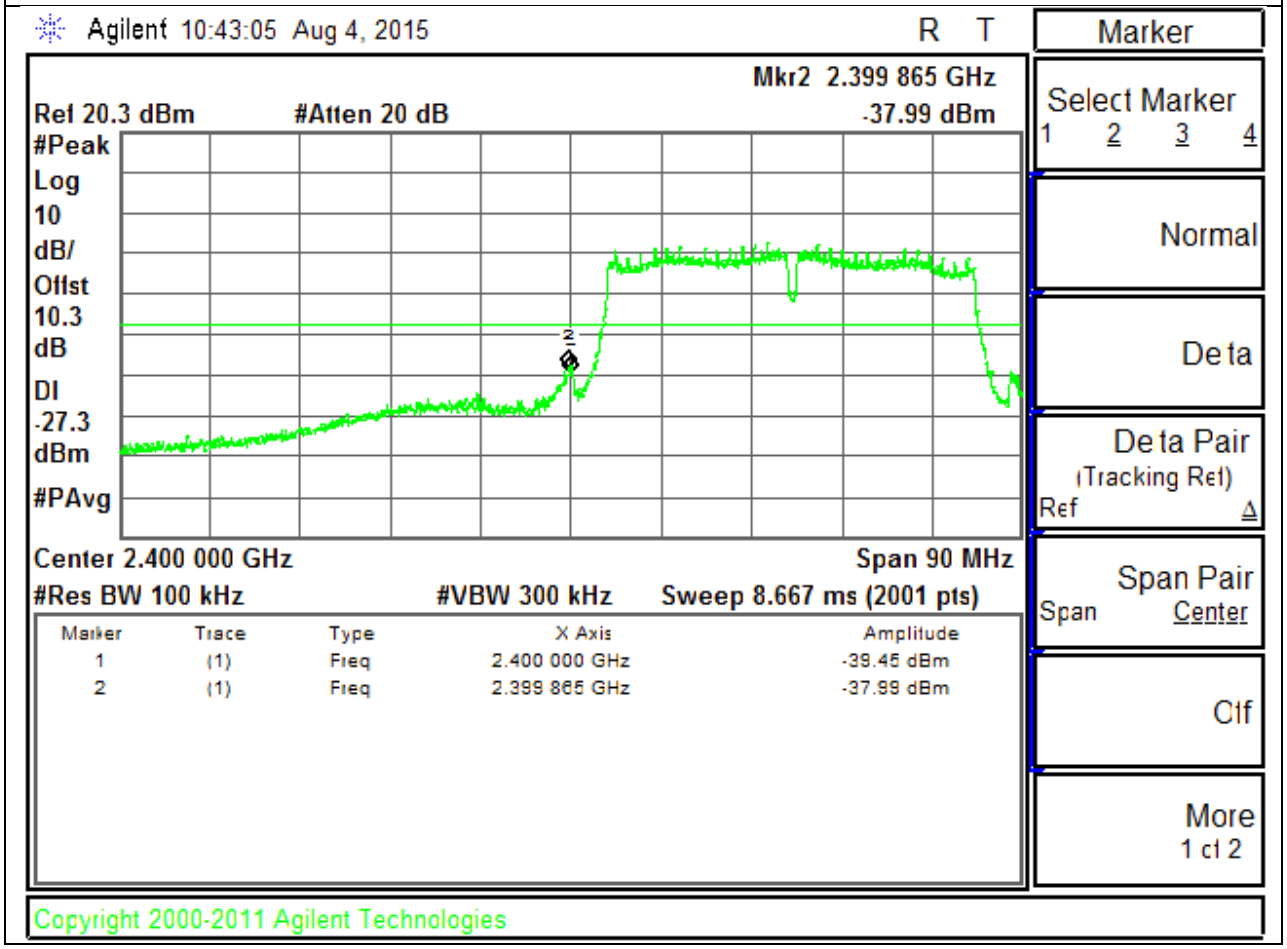
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



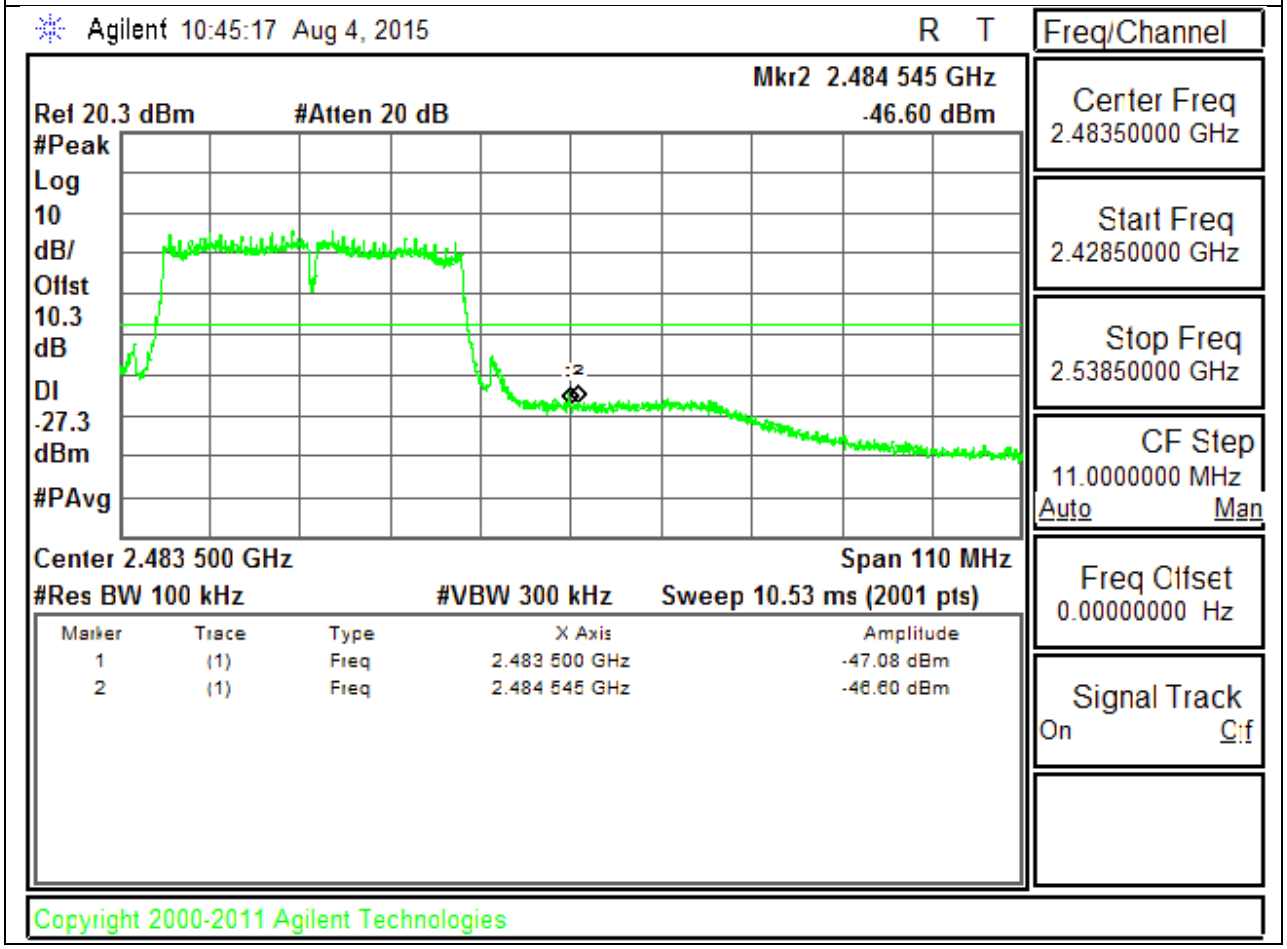
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



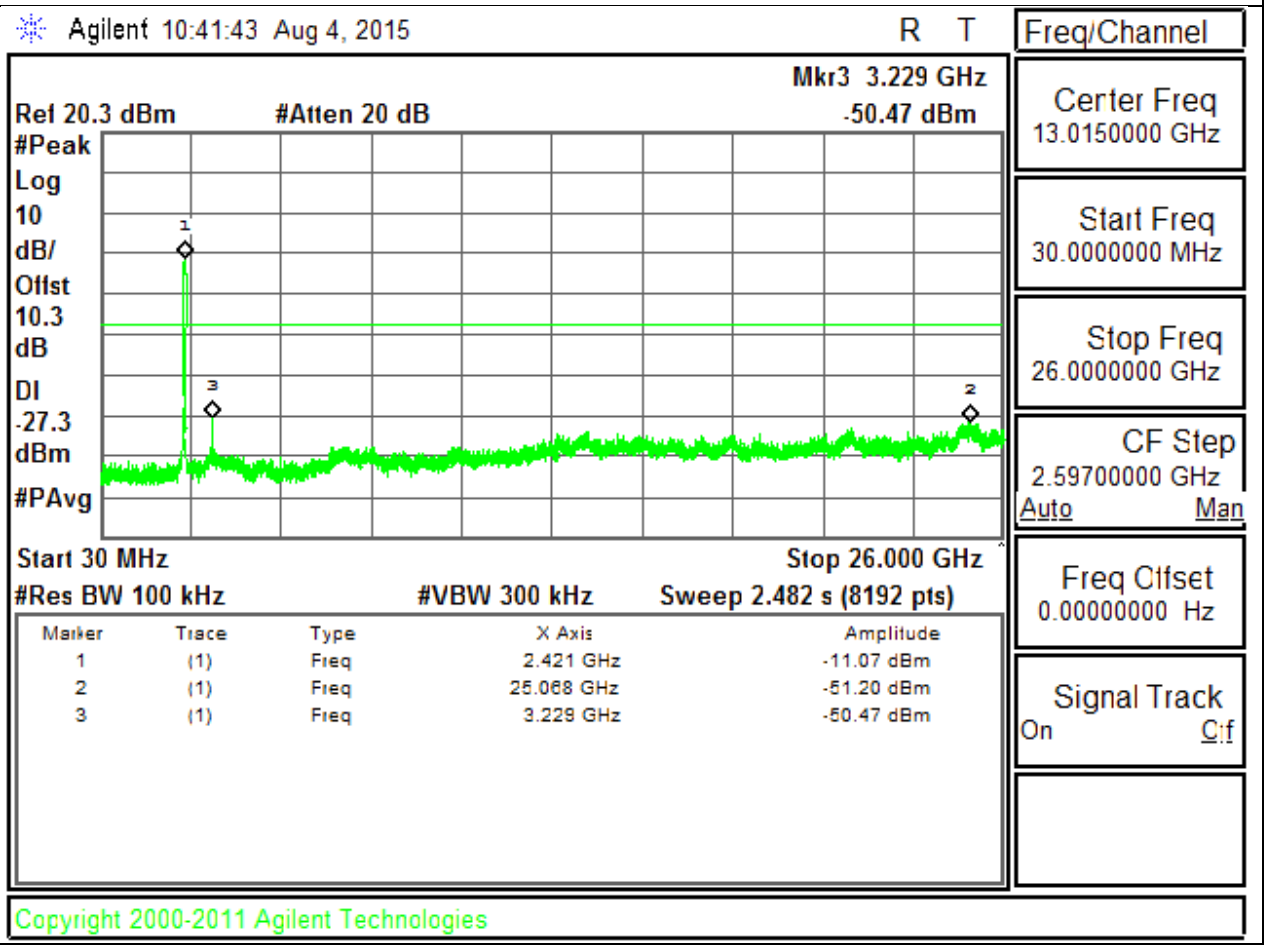
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

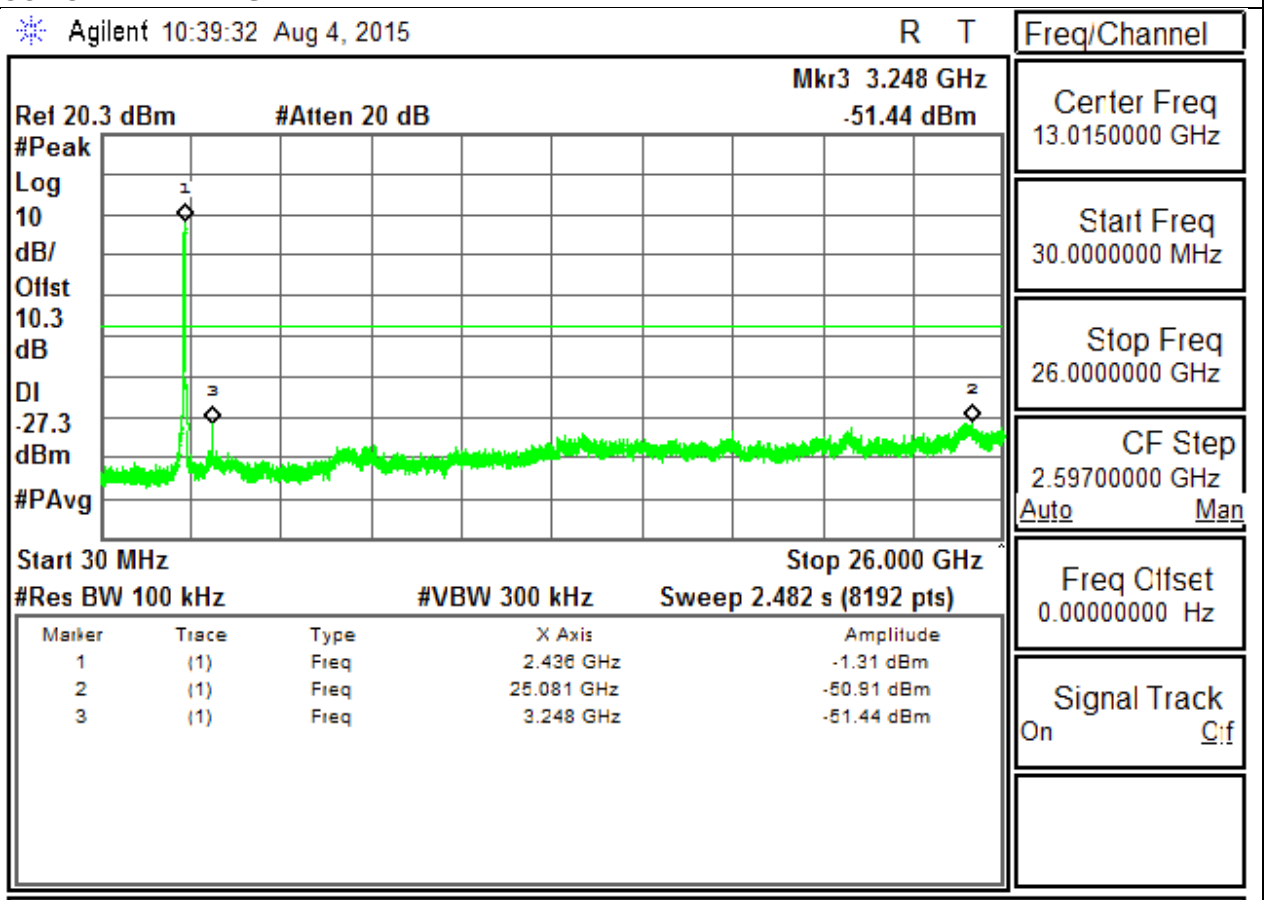


OUT-OF-BAND EMISSIONS

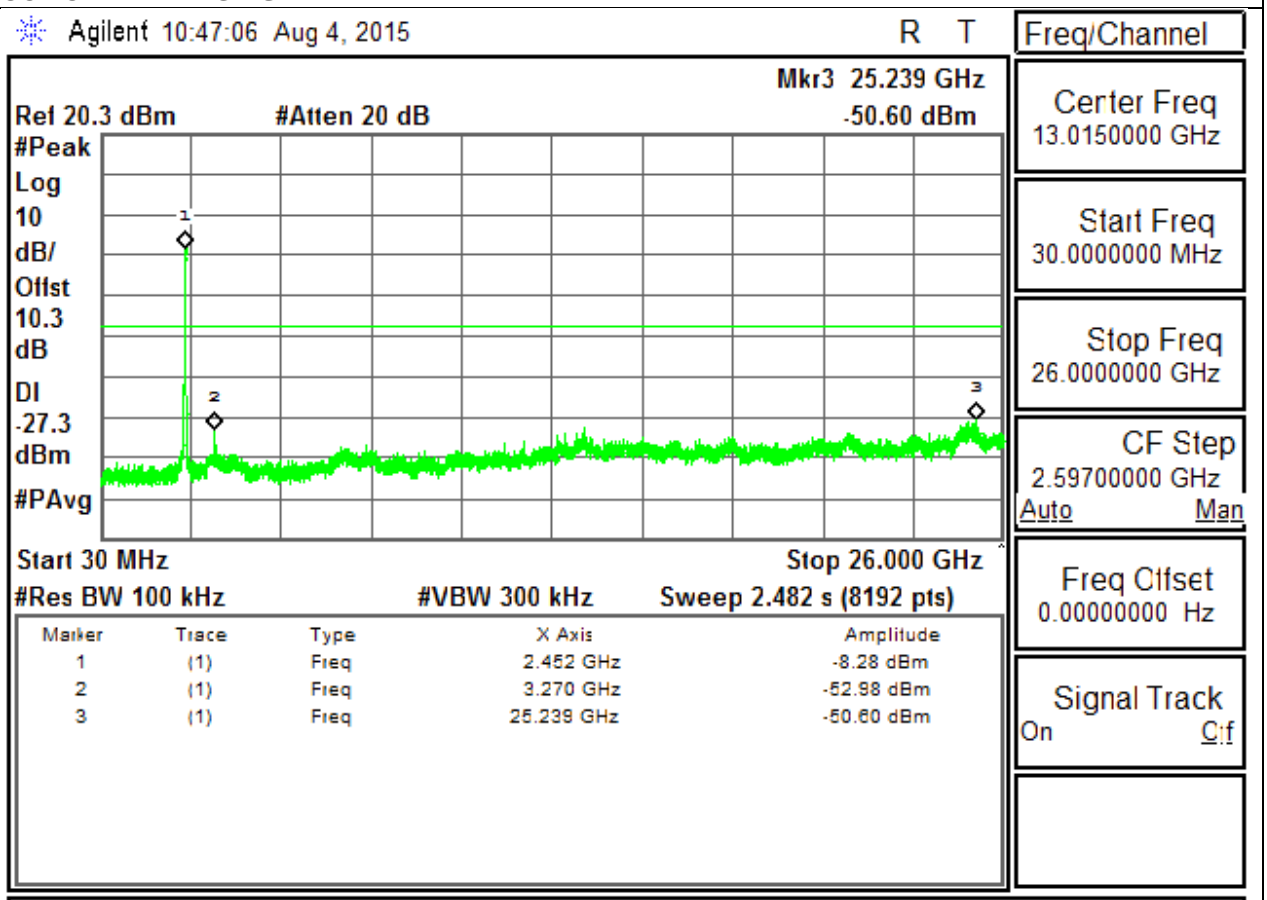
OUT OF BAND LOW CH



OUT OF BAND MID CH



OUT OF BAND HIGH CH



11. RADIATED TEST RESULTS SISO Chain 0

11.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150cm for above 1GHz. The antenna to EUT distance is 3 meters.

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

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor= 10log (1/x). For this sample B mode = 0dB (duty cycle >98%); G mode = 0.22dB; N mode = 0.22dB.

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

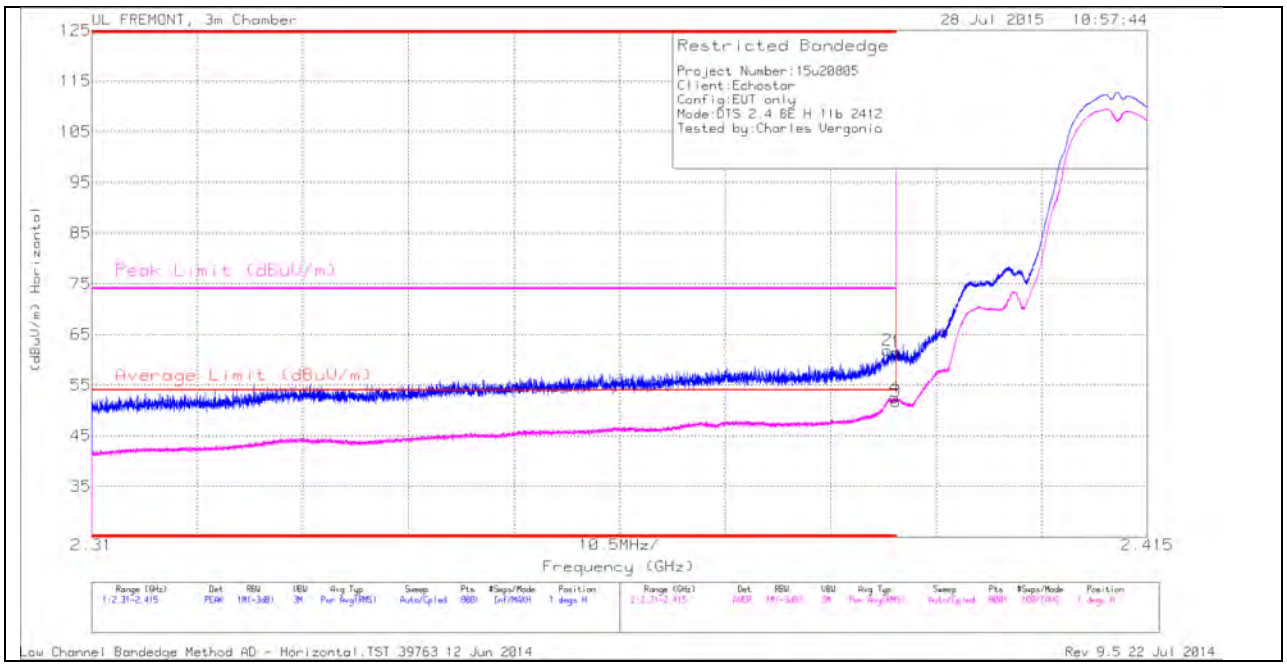
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

11.2. TRANSMITTER ABOVE 1 GHz

11.2.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



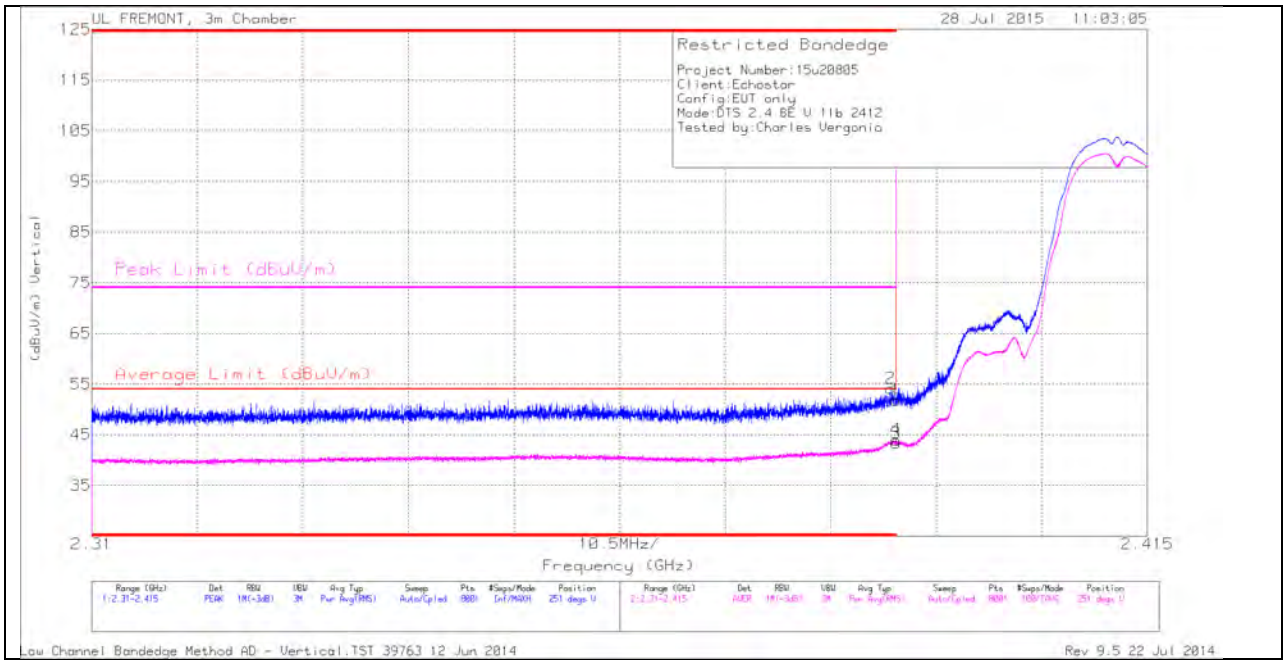
HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.39	51.85	PK	32	-22.4	0	61.45	-	-	74	-12.55	1	214	H
2	* 2.389	52.26	PK	32	-22.4	0	61.86	-	-	74	-12.14	1	214	H
3	* 2.39	41.94	RMS	32	-22.4	0	51.75	54	-2.25	-	-	1	214	H
4	* 2.39	42.67	RMS	32	-22.4	0	52.48	54	-1.52	-	-	1	214	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

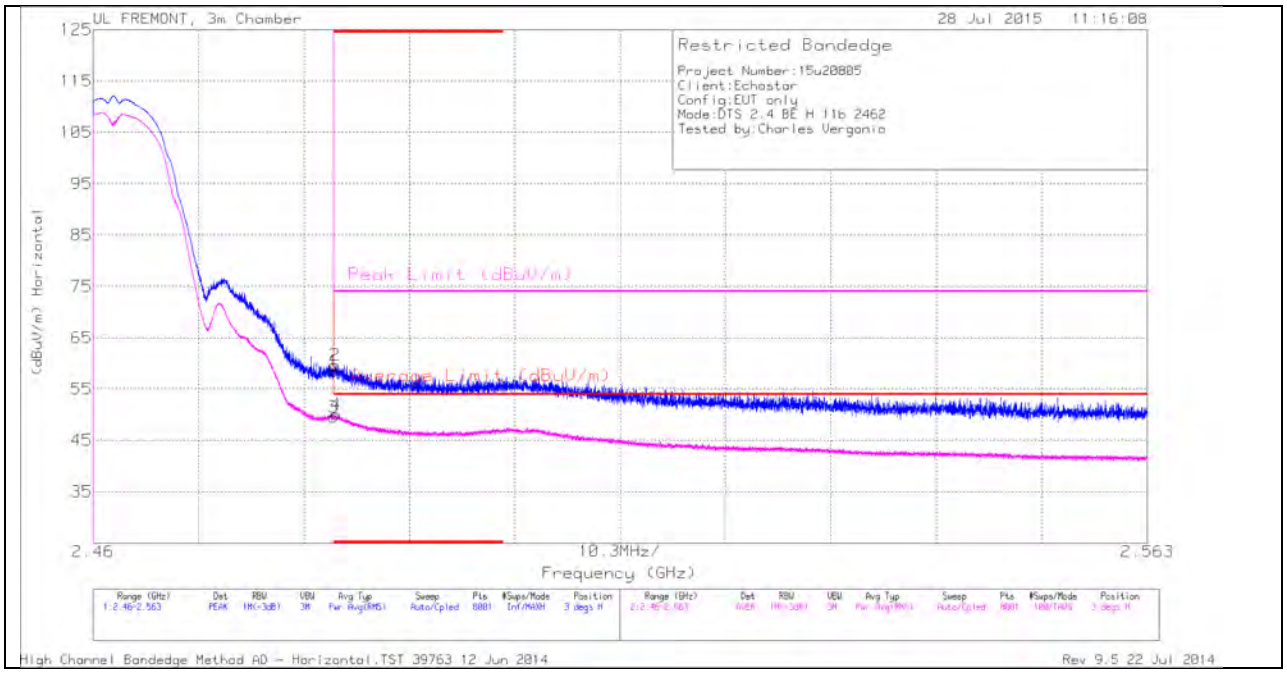
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.389	44.5	PK	32	-22.4	0	54.1	-	-	74	-19.9	251	385	V
1	* 2.39	42.22	PK	32	-22.4	0	51.82	-	-	74	-22.18	251	385	V
3	* 2.39	33.51	RMS	32	-22.4	0	43.32	54	-10.68	-	-	251	385	V
4	* 2.39	34.21	RMS	32	-22.4	0	44.02	54	-9.98	-	-	251	385	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



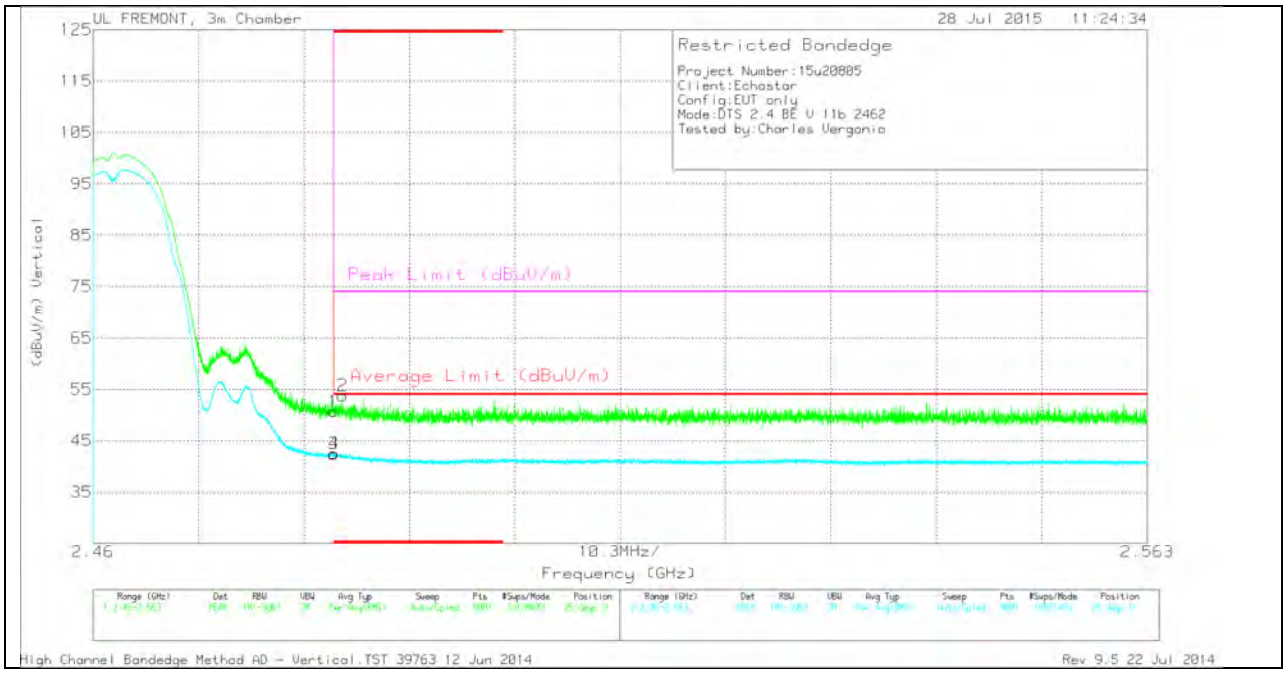
HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	48.26	PK	32.3	-22.1	0	58.46	-	-	74	-15.54	3	131	H
2	* 2.484	49.44	PK	32.3	-22.1	0	59.64	-	-	74	-14.36	3	131	H
3	* 2.484	39.13	RMS	32.3	-22.1	0	49.54	54	-4.46	-	-	3	131	H
4	* 2.484	39.62	RMS	32.3	-22.1	0	50.03	54	-3.97	-	-	3	131	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

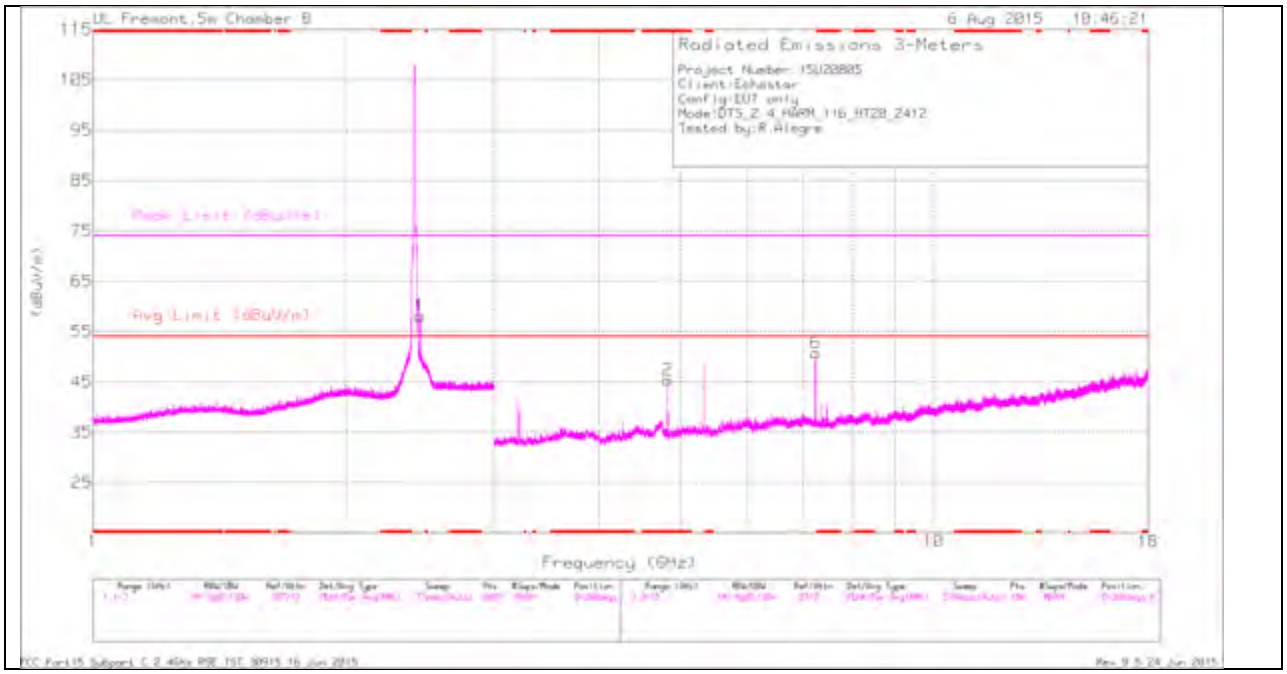
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	40.49	PK	32.3	-22.1	0	50.69	-	-	74	-23.31	25	132	V
2	* 2.484	43.57	PK	32.3	-22.1	0	53.77	-	-	74	-20.23	25	132	V
3	* 2.484	32.03	RMS	32.3	-22.1	0	42.44	54	-11.56	-	-	25	132	V
4	* 2.484	32.13	RMS	32.3	-22.1	0	42.54	54	-11.46	-	-	25	132	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

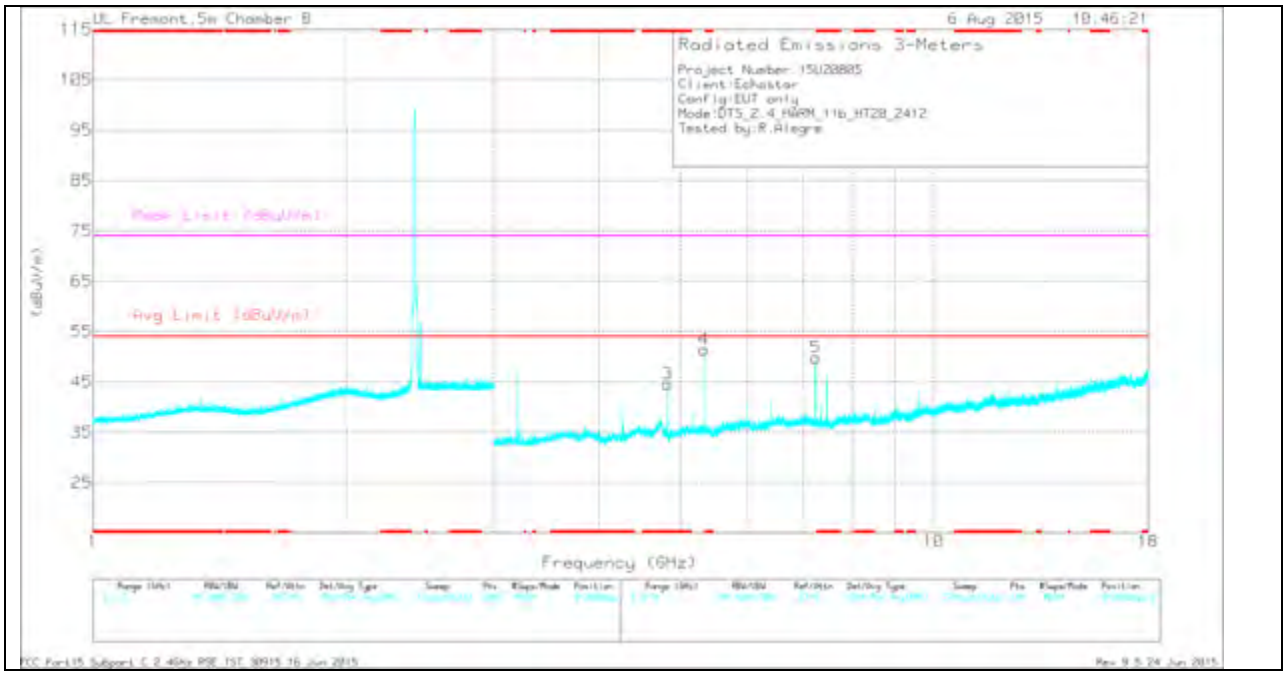
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.824	42.73	Pk	34.3	-31.6	45.43	-	-	-	-	0-360	100	H
3	* 4.824	41.9	Pk	34.3	-31.6	44.6	-	-	-	-	0-360	101	V
1	2.45	49.85	Pk	32.3	-24	58.15	-	-	74	-15.85	0-360	199	H
4	5.33	47.74	Pk	34.4	-30.7	51.44	-	-	74	-22.56	0-360	101	V
6	7.236	45.25	Pk	35.3	-29.8	50.75	-	-	74	-23.25	0-360	100	H
5	7.237	44.46	Pk	35.3	-29.9	49.86	-	-	74	-24.14	0-360	200	V

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

Pk - Peak detector

Radiated Emissions

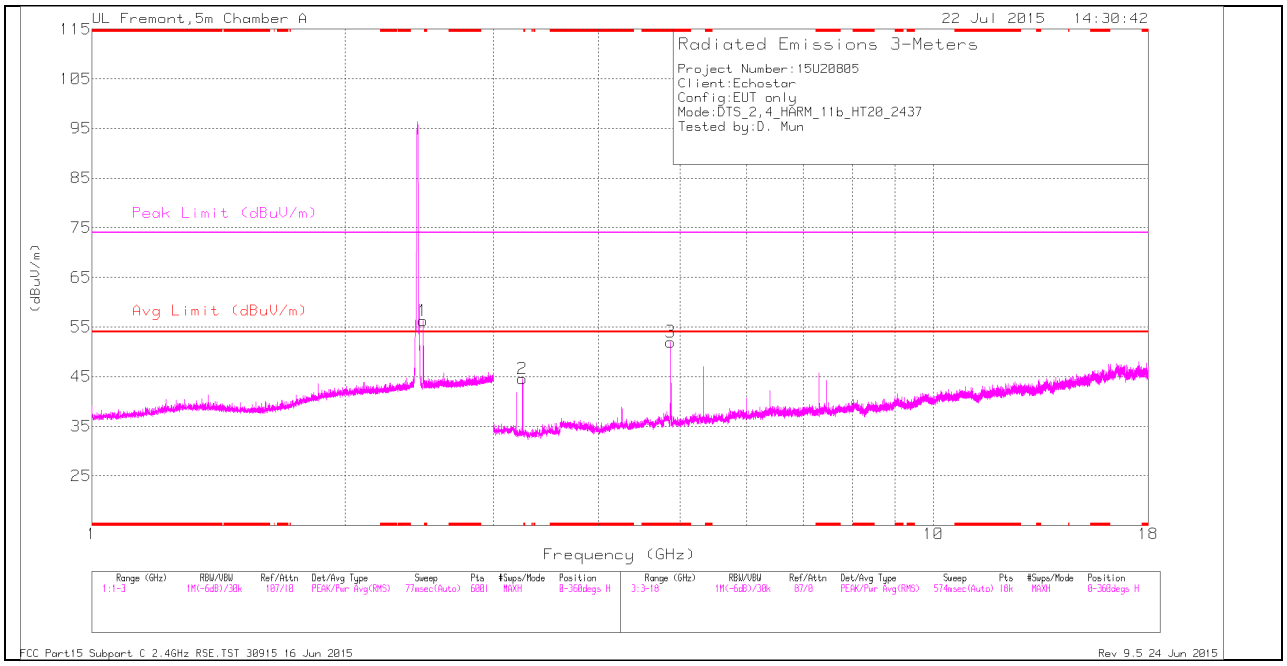
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.824	44.89	PK2	34.3	-31.6	47.59	-	-	74	-26.41	357	171	H
* 4.824	42.38	MAv1	34.3	-31.6	45.08	54	-8.92	-	-	357	171	H
* 4.824	43.99	PK2	34.3	-31.6	46.69	-	-	74	-27.31	0	154	V
* 4.824	41.28	MAv1	34.3	-31.6	43.98	54	-10.02	-	-	0	154	V
2.45	52.01	PK2	32.3	-24	60.31	-	-	74	-13.69	215	113	H
5.33	48.84	PK2	34.4	-30.7	52.54	-	-	74	-21.46	243	101	V
7.236	49.57	PK2	35.3	-29.8	55.07	-	-	74	-18.93	34	112	H
7.236	47.63	PK2	35.3	-29.8	53.13	-	-	74	-20.87	37	218	V

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

PK2 - KDB558074 Method: Maximum Peak

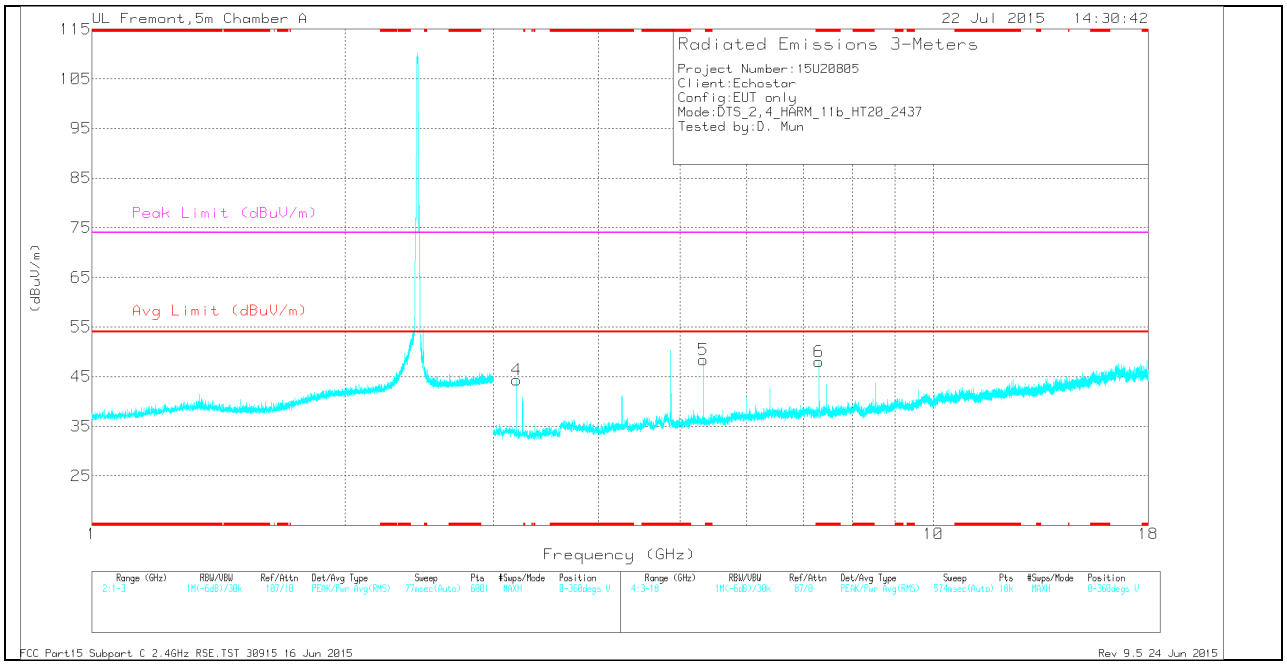
MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.874	47.41	Pk	33.9	-29.3	52.01	-	-	74	-21.99	0-360	100	H
6	* 7.31	39.06	Pk	35.5	-26.6	47.96	-	-	74	-26.04	0-360	200	V
1	2.475	48.7	Pk	32.1	-24.5	56.3	-	-	-	-	0-360	201	H
4	3.197	43.41	Pk	32.7	-31.8	44.31	-	-	-	-	0-360	200	V
2	3.249	44.29	Pk	32.8	-32.5	44.59	-	-	-	-	0-360	100	H
5	5.33	43.58	Pk	34.6	-29.8	48.38	-	-	-	-	0-360	200	V

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

Pk - Peak detector

Radiated Emissions

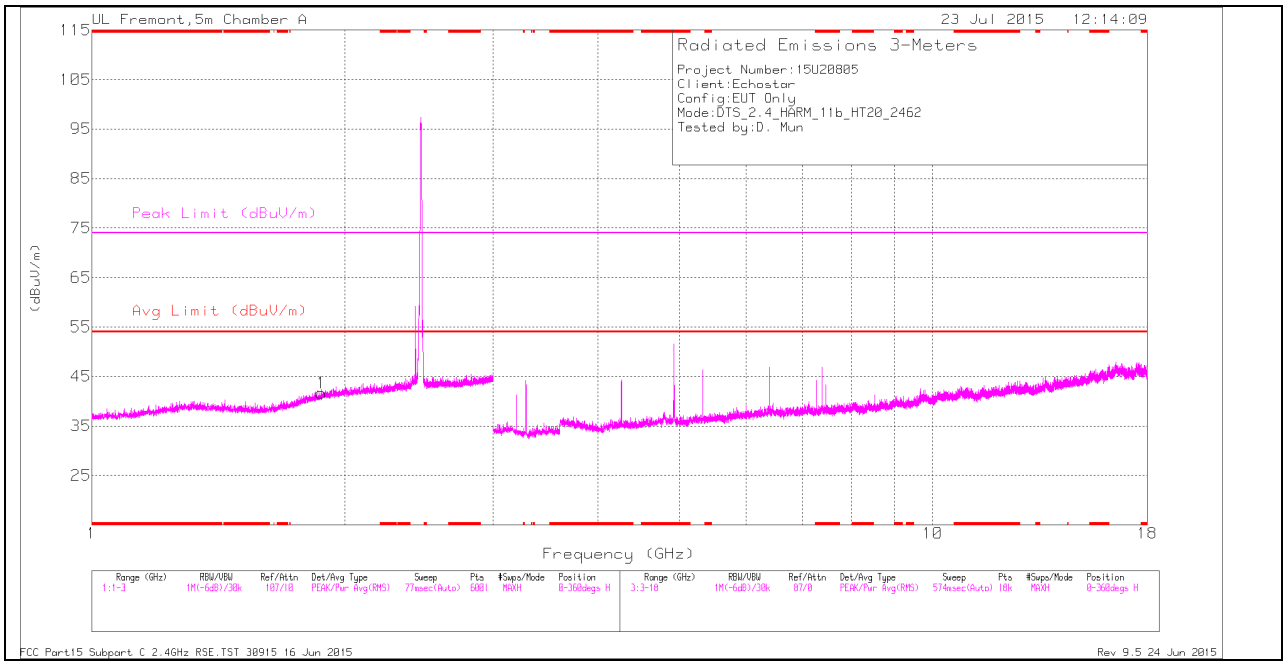
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.874	43.77	PK2	33.9	-29.3	48.37	-	-	74	-25.63	0	138	H
* 4.874	36.14	MAv1	33.9	-29.3	40.74	54	-13.26	-	-	0	150	H
* 7.31	40.18	PK2	35.5	-26.6	49.08	-	-	74	-24.92	0	142	V
* 7.31	30.63	MAv1	35.5	-26.6	39.53	54	-14.47	-	-	0	152	V
2.476	47.22	PK2	32.1	-24.5	54.82	-	-	74	-19.18	0	202	H
3.198	42.8	PK2	32.7	-31.8	43.7	-	-	74	-30.3	0	201	V
3.249	46.27	PK2	32.8	-32.5	46.57	-	-	74	-27.43	0	100	H
5.33	42.82	PK2	34.6	-29.8	47.62	-	-	74	-26.38	0	201	V

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

PK2 - KDB558074 Method: Maximum Peak

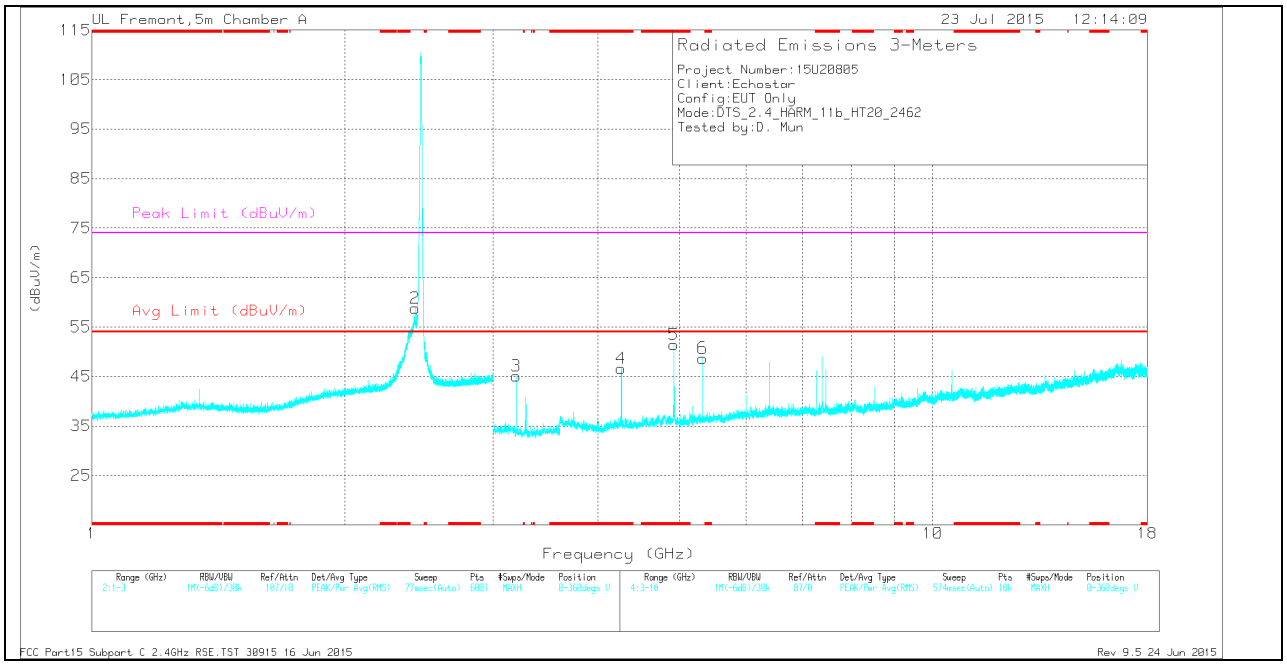
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.263	43.69	Pk	33.4	-30.5	46.59	-	-	74	-27.41	0-360	100	V
5	* 4.924	46.83	Pk	33.9	-29.3	51.43	-	-	74	-22.57	0-360	100	V
1	1.874	36.27	Pk	30.6	-25.2	41.67	-	-	-	-	0-360	100	H
2	2.425	51.41	Pk	32	-24.6	58.81	-	-	-	-	0-360	200	V
3	3.197	44.25	Pk	32.7	-31.8	45.15	-	-	-	-	0-360	100	V
6	5.33	43.91	Pk	34.6	-29.8	48.71	-	-	-	-	0-360	100	V

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

Pk - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.264	41.78	PK2	33.4	-30.5	44.68	-	-	74	-29.32	1	100	V
* 4.264	32.28	MAv1	33.4	-30.5	35.18	54	-18.82	-	-	1	100	V
* 4.925	40.56	PK2	33.9	-29.3	45.16	-	-	74	-28.84	1	100	V
* 4.924	28.9	MAv1	33.9	-29.3	33.5	54	-20.5	-	-	1	100	V
1.874	44.58	PK2	30.6	-25.2	49.98	-	-	74	-24.02	1	100	H
2.426	44.68	PK2	32	-24.6	52.08	-	-	74	-21.92	1	201	V
3.198	44.39	PK2	32.7	-31.8	45.29	-	-	74	-28.71	1	100	V
5.33	43.57	PK2	34.6	-29.8	48.37	-	-	74	-25.63	1	100	V

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

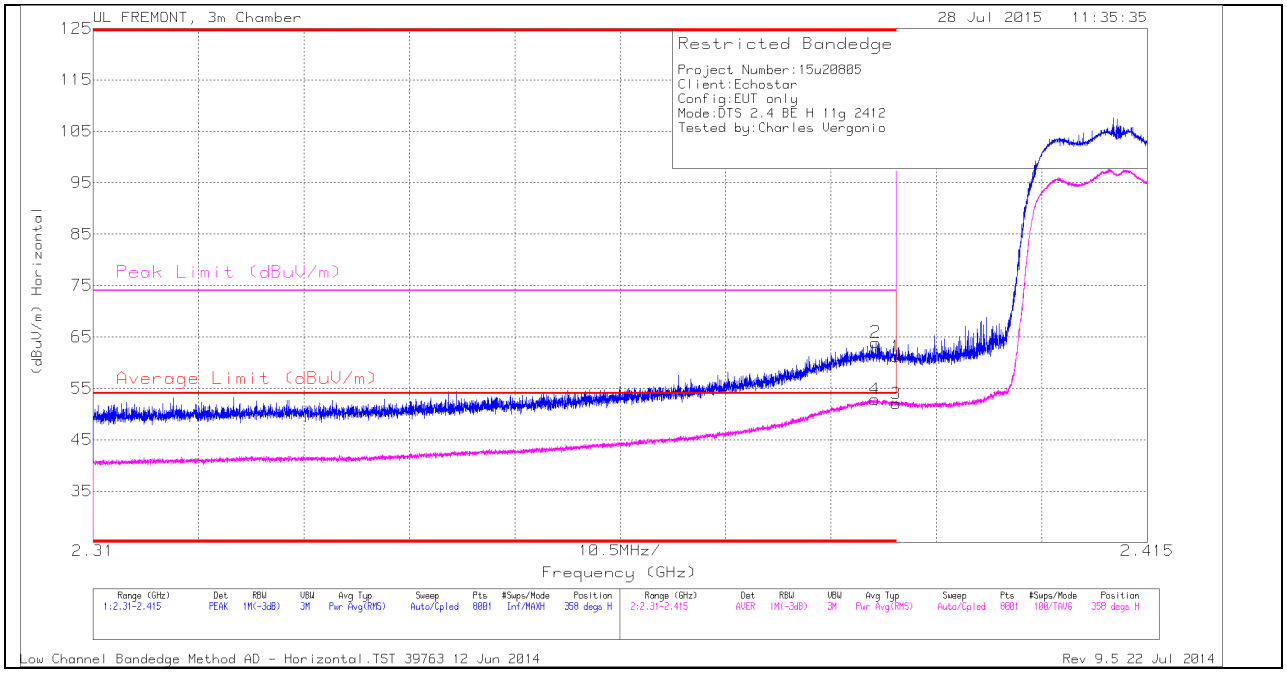
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

11.2.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

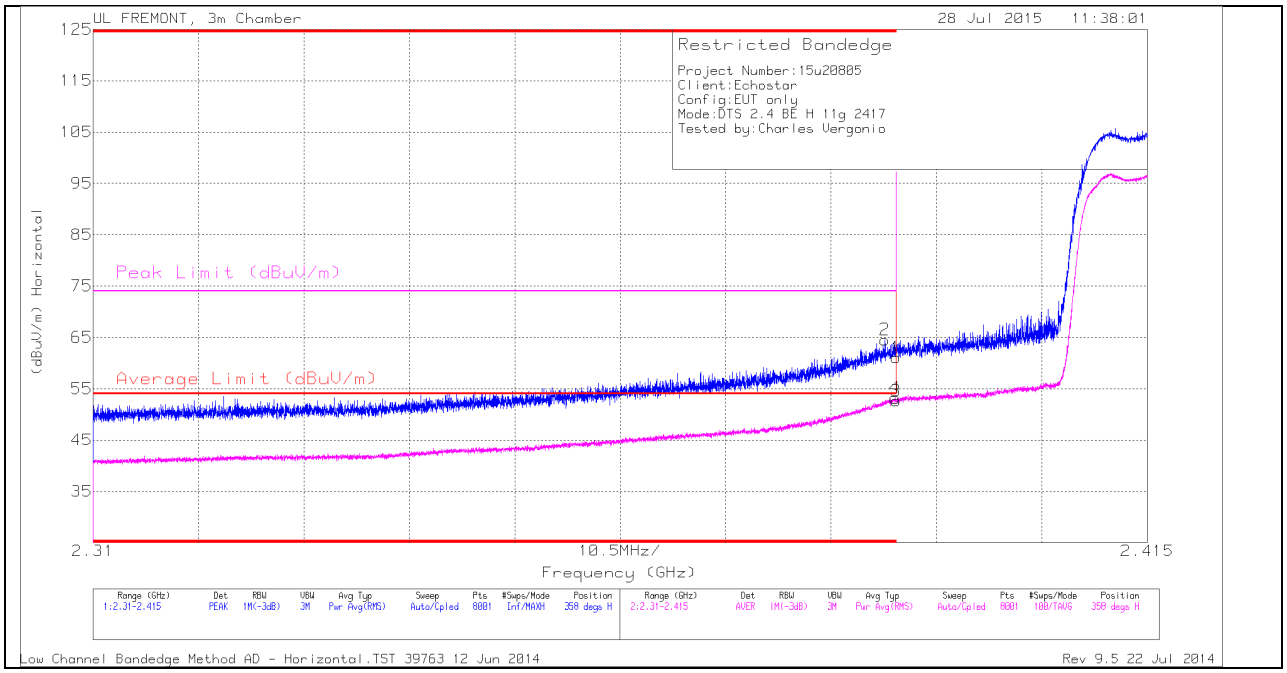


CH 1 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.388	54.32	PK	32	-22.4	0	63.92	-	-	74	-10.08	358	192	H
4	* 2.388	43.03	RMS	32	-22.4	.22	52.85	54	-1.15	-	-	358	192	H
1	* 2.39	51.58	PK	32	-22.4	0	61.18	-	-	74	-12.82	358	192	H
3	* 2.39	42.2	RMS	32	-22.4	.22	52.02	54	-1.98	-	-	358	192	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

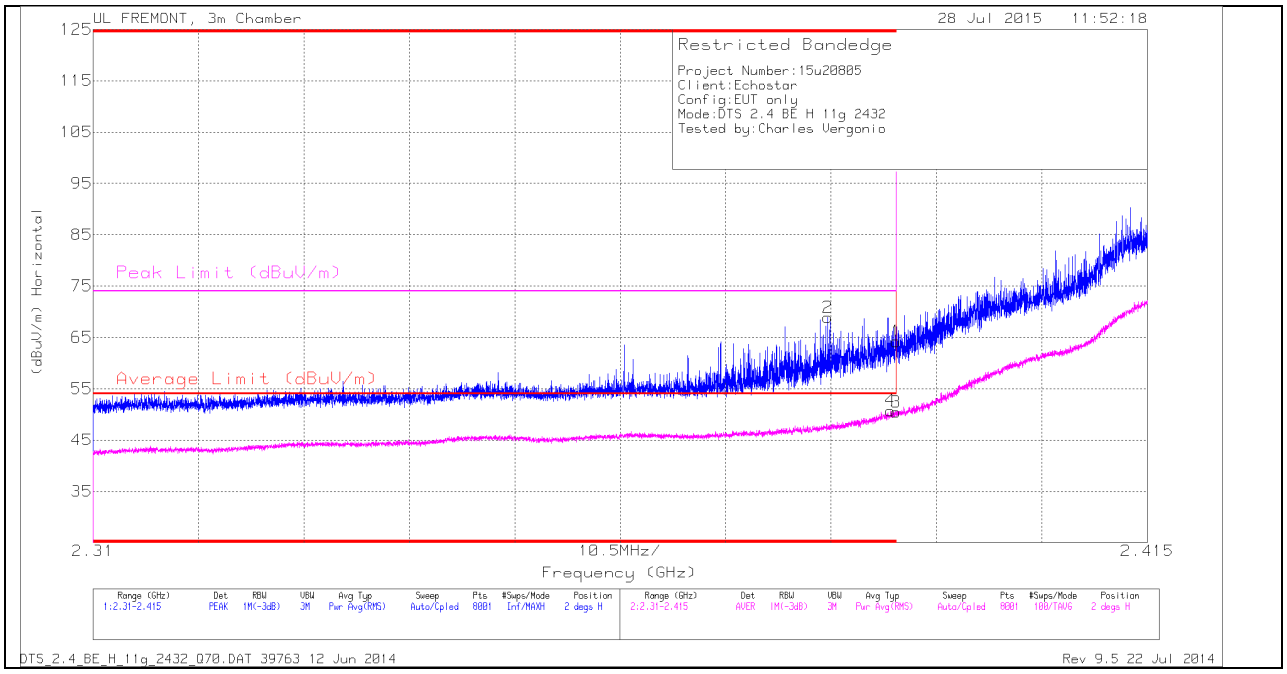


CH2 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.389	54.92	PK	32	-22.4	0	64.52	-	-	74	-9.48	358	192	H
1	* 2.39	51.45	PK	32	-22.4	0	61.05	-	-	74	-12.95	358	192	H
3	* 2.39	42.82	RMS	32	-22.4	.22	52.64	54	-1.36	-	-	358	192	H
4	* 2.39	43.4	RMS	32	-22.4	.22	53.22	54	-.78	-	-	358	192	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



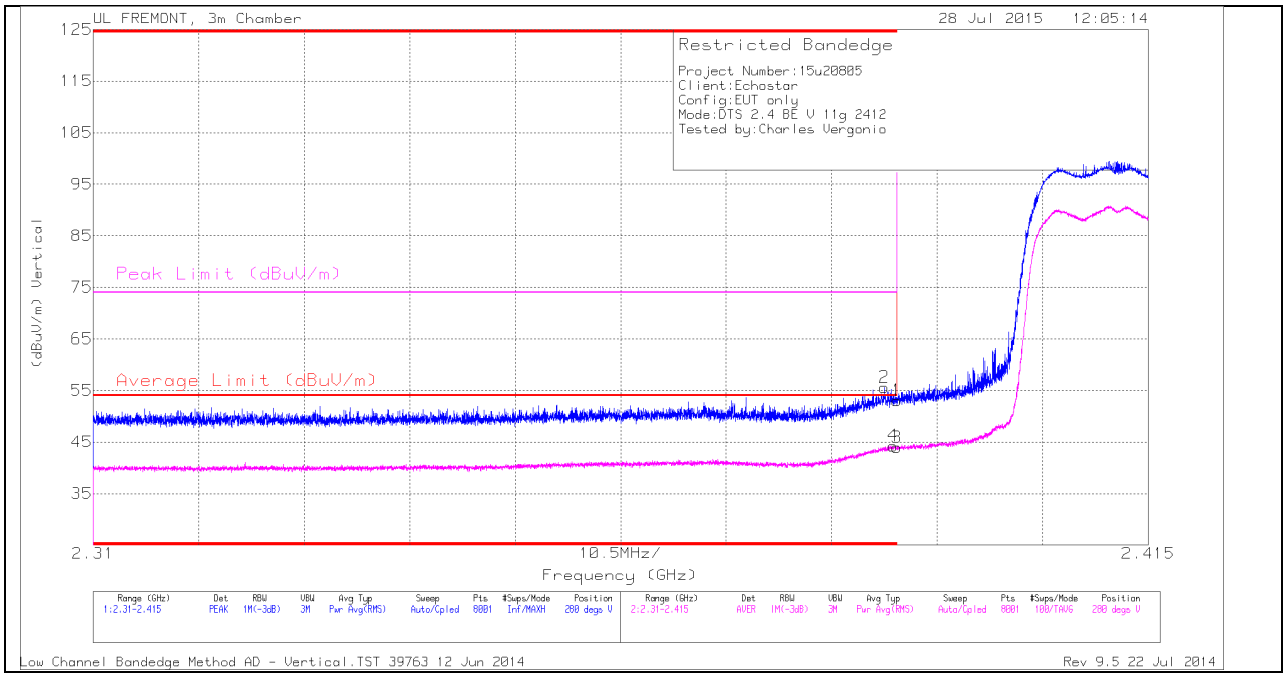
CH 5 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.383	59.3	PK	32	-22.4	0	68.9	-	-	74	-5.1	2	294	H
4	* 2.389	40.92	RMS	32	-22.4	.22	50.74	54	-3.26	-	-	2	294	H
1	* 2.39	54.61	PK	32	-22.4	0	64.21	-	-	74	-9.79	2	294	H
3	* 2.39	40.6	RMS	32	-22.4	.22	50.42	54	-3.58	-	-	2	294	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT

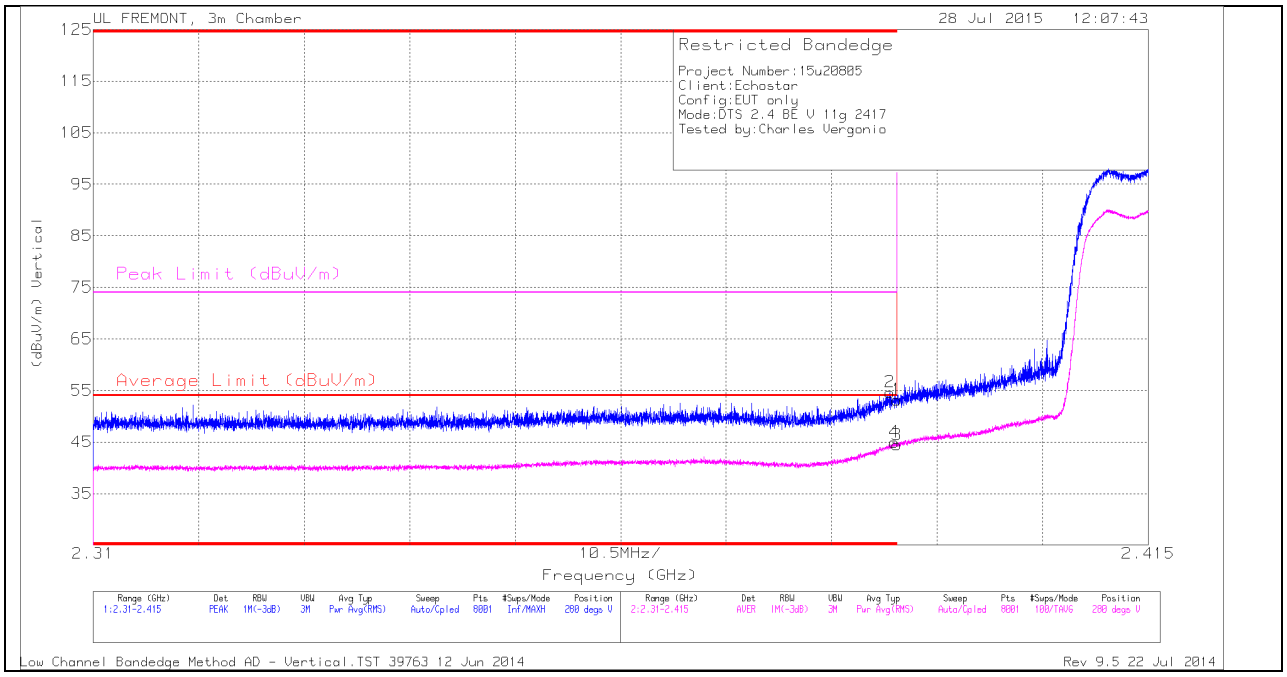


CH1 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.389	46	PK	32	-22.4	0	55.6	-	-	74	-18.4	280	371	V
1	* 2.39	43.46	PK	32	-22.4	0	53.06	-	-	74	-20.94	280	371	V
3	* 2.39	34.16	RMS	32	-22.4	.22	43.98	54	-10.02	-	-	280	371	V
4	* 2.39	34.44	RMS	32	-22.4	.22	44.26	54	-9.74	-	-	280	371	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

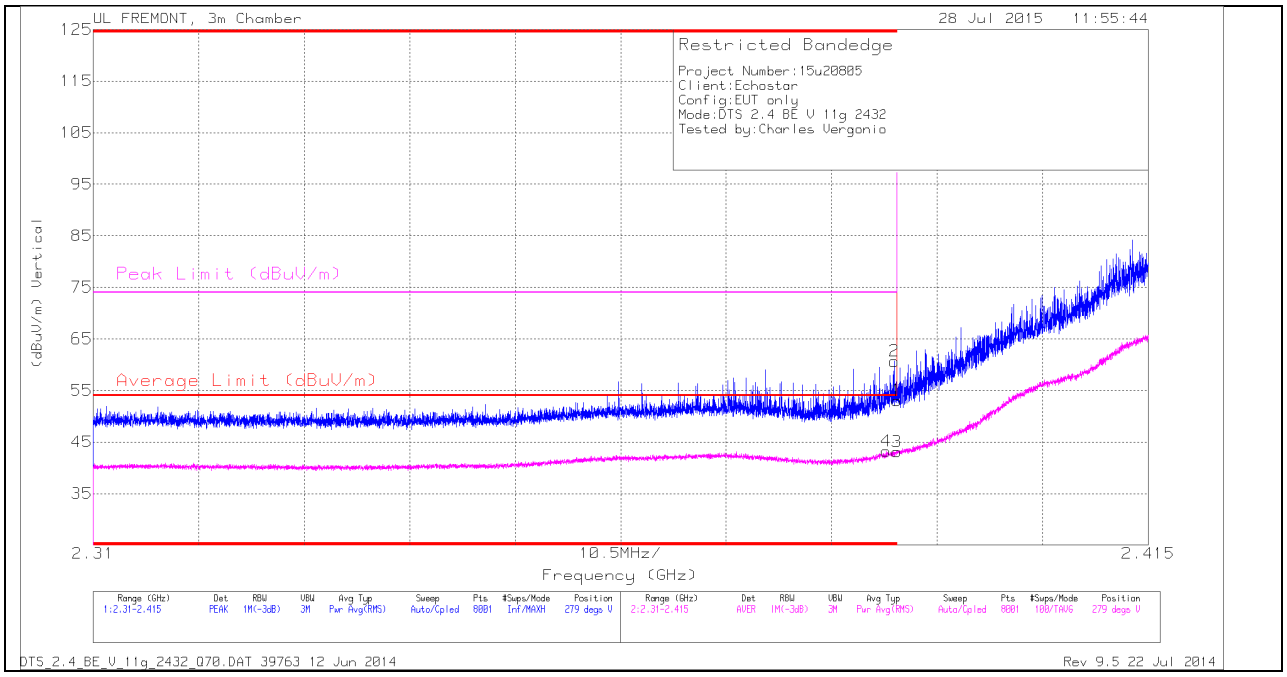


CH2 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.389	45.06	PK	32	-22.4	0	54.66	-	-	74	-19.34	280	371	V
1	* 2.39	43.6	PK	32	-22.4	0	53.2	-	-	74	-20.8	280	371	V
3	* 2.39	34.64	RMS	32	-22.4	.22	44.46	54	-9.54	-	-	280	371	V
4	* 2.39	35.16	RMS	32	-22.4	.22	44.98	54	-9.02	-	-	280	371	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



CH 5 VERTICAL DATA

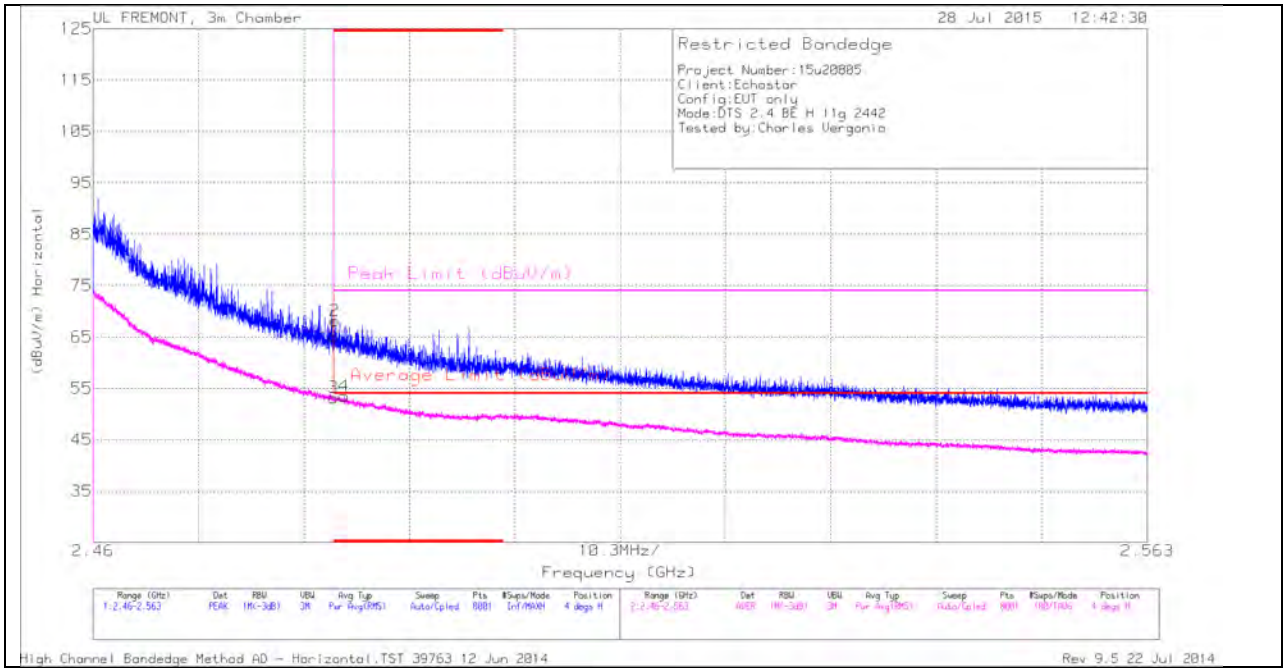
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
4	* 2.389	33.42	RMS	32	-22.4	.22	43.24	54	-10.76	-	-	279	372	V
1	* 2.39	43.45	PK	32	-22.4	0	53.05	-	-	74	-20.95	279	372	V
2	* 2.39	51.07	PK	32	-22.4	0	60.67	-	-	74	-13.33	279	372	V
3	* 2.39	33.27	RMS	32	-22.4	.22	43.09	54	-10.91	-	-	279	372	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

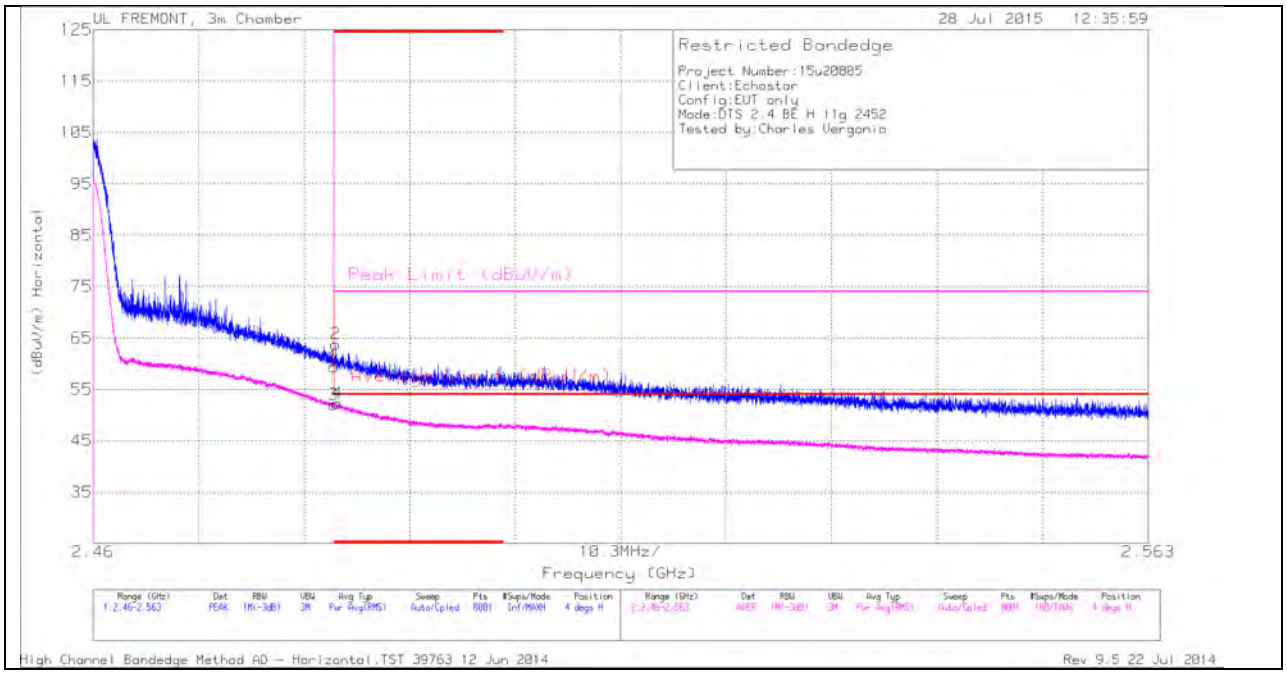


CH 7 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	54.93	PK	32.3	-22.1	0	65.13	-	-	74	-8.87	4	132	H
2	* 2.484	57.96	PK	32.3	-22.1	0	68.16	-	-	74	-5.84	4	132	H
3	* 2.484	42.77	RMS	32.3	-22.1	.22	53.19	54	-.81	-	-	4	132	H
4	* 2.485	43.06	RMS	32.3	-22.1	.22	53.48	54	-.52	-	-	4	132	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

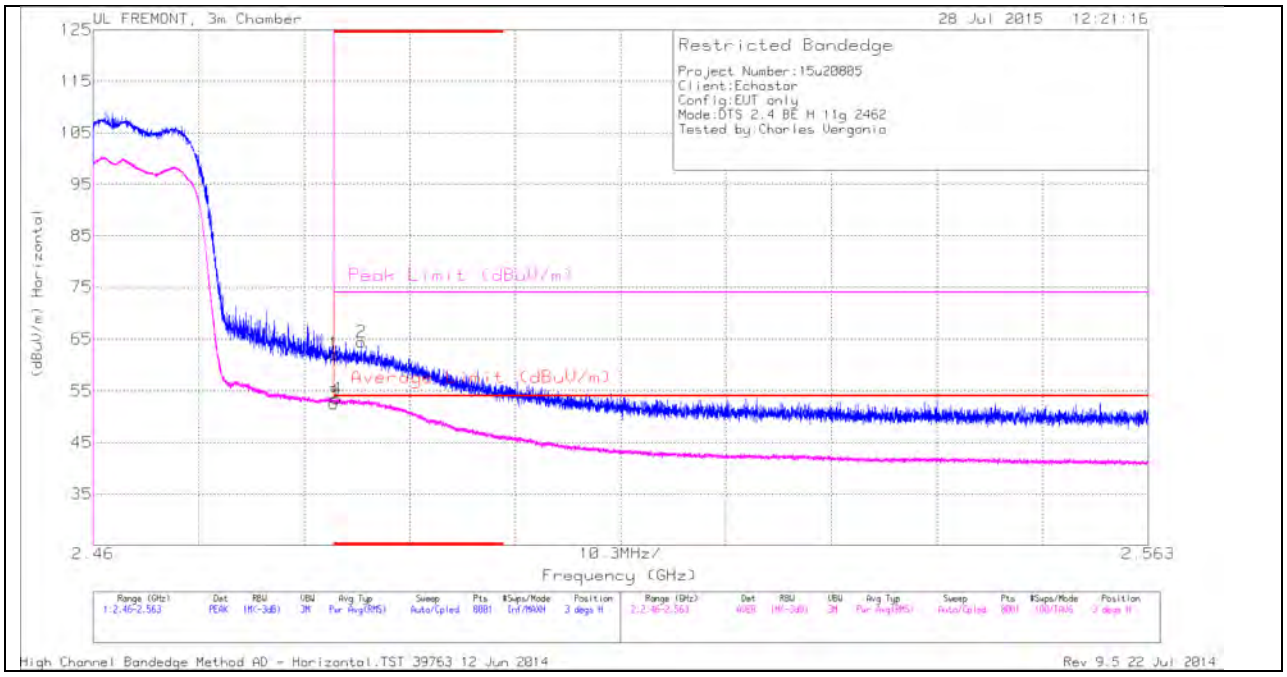


CH 9 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	49.23	PK	32.3	-22.1	0	59.43	-	-	74	-14.57	4	132	H
2	* 2.484	53.62	PK	32.3	-22.1	0	63.82	-	-	74	-10.18	4	132	H
3	* 2.484	41.59	RMS	32.3	-22.1	.22	52.01	54	-1.99	-	-	4	132	H
4	* 2.484	41.87	RMS	32.3	-22.1	.22	52.29	54	-1.71	-	-	4	132	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



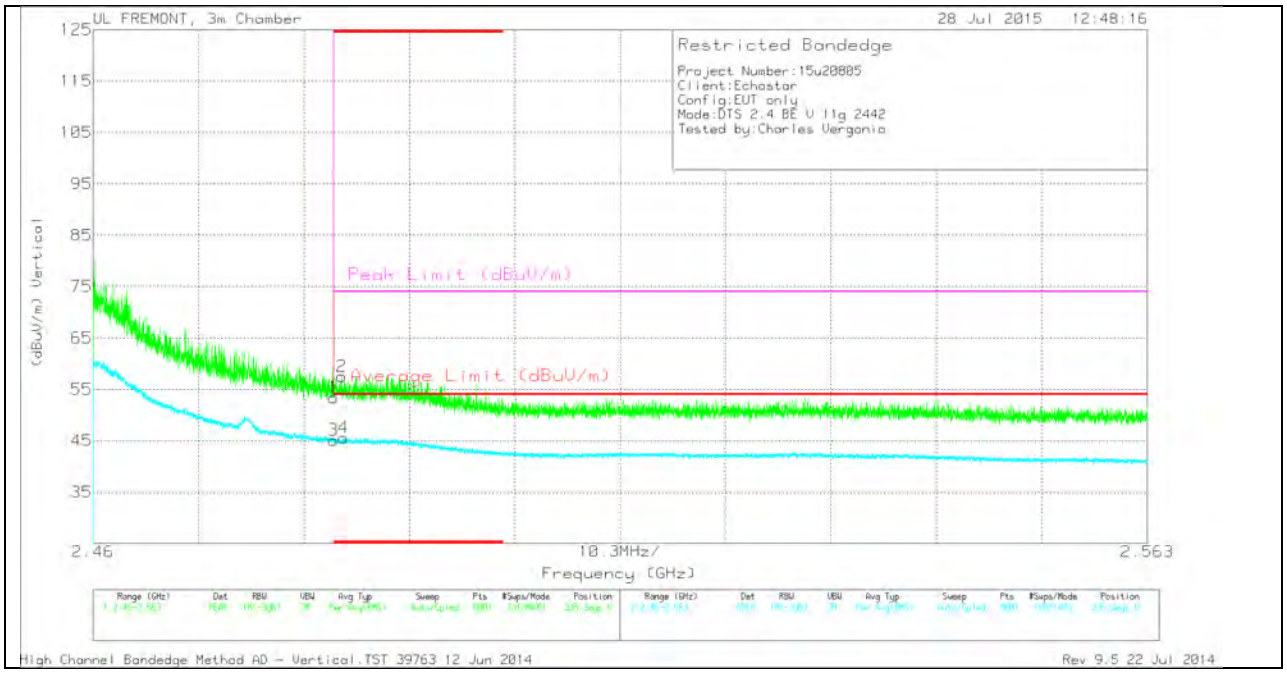
CH 11 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	51.88	PK	32.3	-22.1	0	62.08	-	-	74	-11.92	3	128	H
2	* 2.486	54.29	PK	32.3	-22.2	0	64.39	-	-	74	-9.61	3	128	H
3	* 2.484	42.19	RMS	32.3	-22.1	.22	52.61	54	-1.39	-	-	3	128	H
4	* 2.484	43.07	RMS	32.3	-22.1	.22	53.49	54	-.51	-	-	3	128	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT

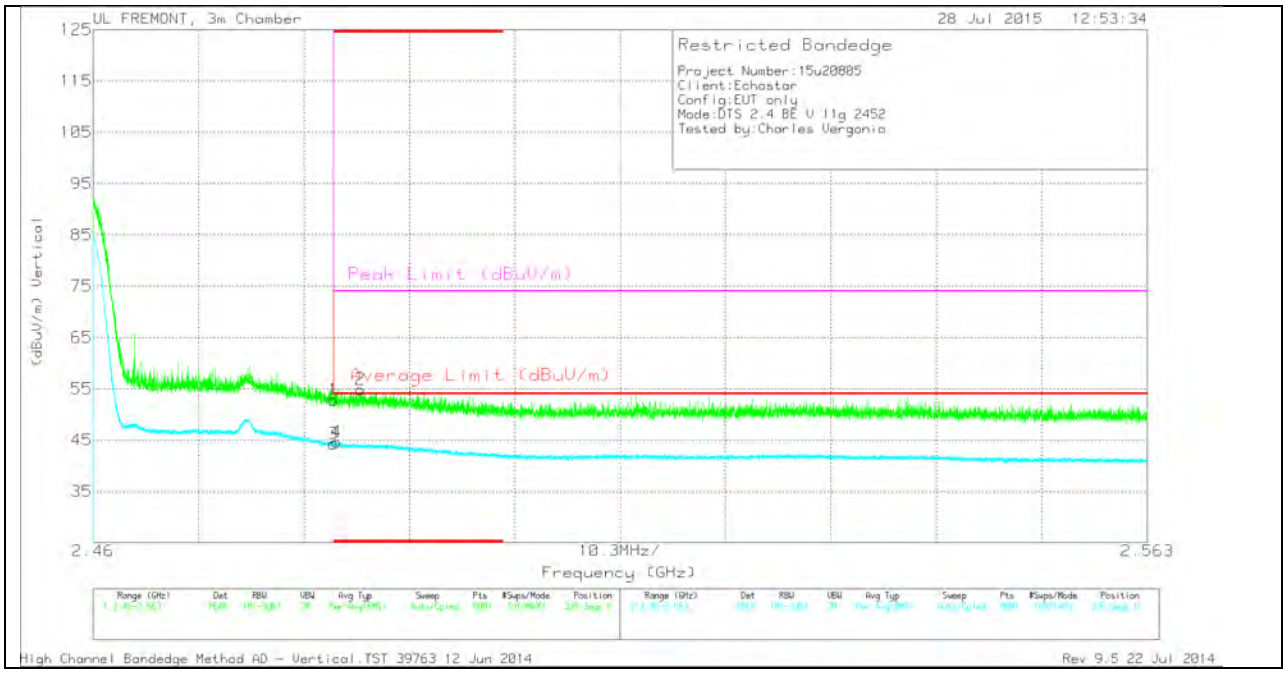


CH 7 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	43.24	PK	32.3	-22.1	0	53.44	-	-	74	-20.56	335	292	V
2	* 2.484	47.32	PK	32.3	-22.1	0	57.52	-	-	74	-16.48	335	292	V
3	* 2.484	34.69	RMS	32.3	-22.1	.22	45.11	54	-8.89	-	-	335	292	V
4	* 2.485	35.13	RMS	32.3	-22.1	.22	45.55	54	-8.45	-	-	335	292	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

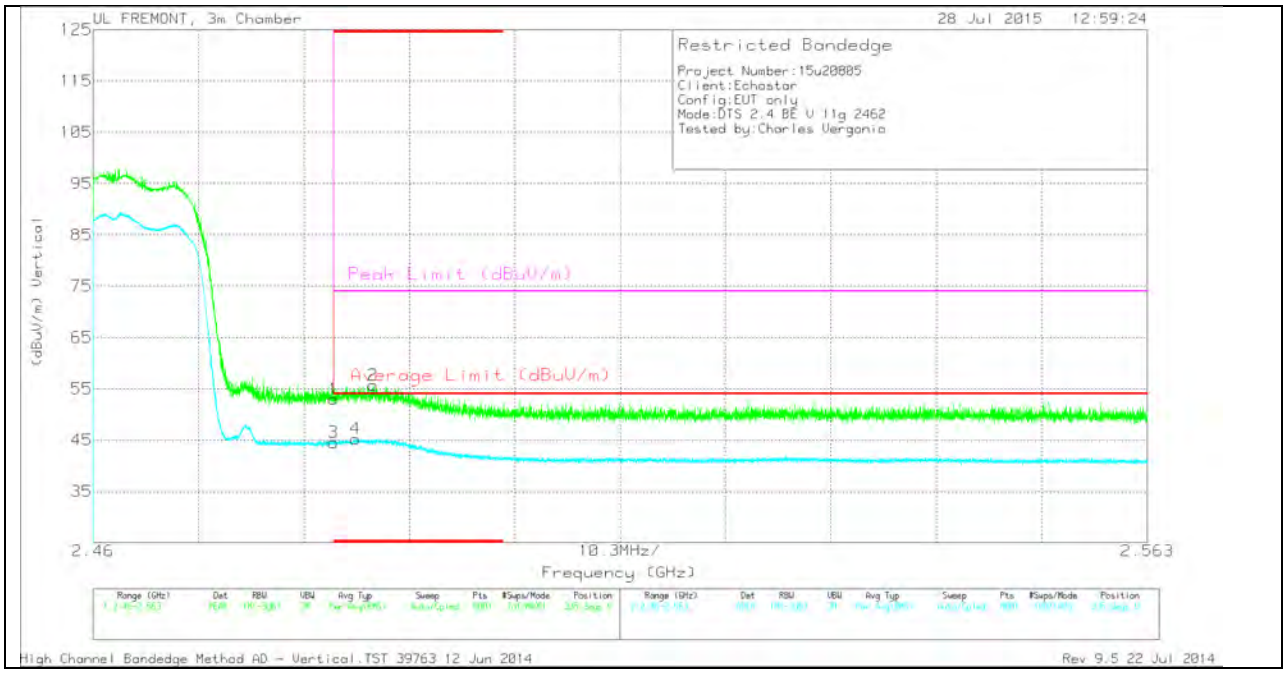


CH 9 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	42.64	PK	32.3	-22.1	0	52.84	-	-	74	-21.16	335	292	V
2	* 2.486	44.79	PK	32.3	-22.2	0	54.89	-	-	74	-19.11	335	292	V
3	* 2.484	33.88	RMS	32.3	-22.1	.22	44.3	54	-9.7	-	-	335	292	V
4	* 2.484	34.2	RMS	32.3	-22.1	.22	44.62	54	-9.38	-	-	335	292	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



CH 11 VERTICAL DATA

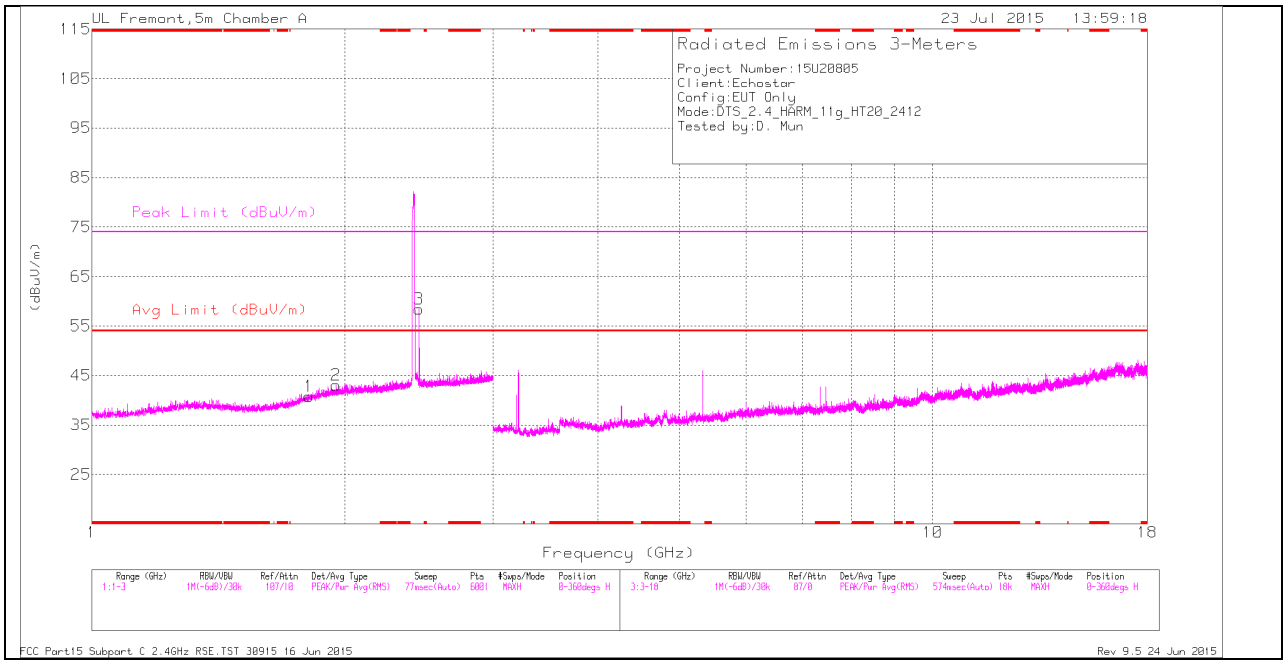
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	42.78	PK	32.3	-22.1	0	52.98	-	-	74	-21.02	335	292	V
2	* 2.487	45.6	PK	32.3	-22.2	0	55.7	-	-	74	-18.3	335	292	V
3	* 2.484	34.12	RMS	32.3	-22.1	.22	44.54	54	-9.46	-	-	335	292	V
4	* 2.486	34.84	RMS	32.3	-22.1	.22	45.26	54	-8.74	-	-	335	292	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

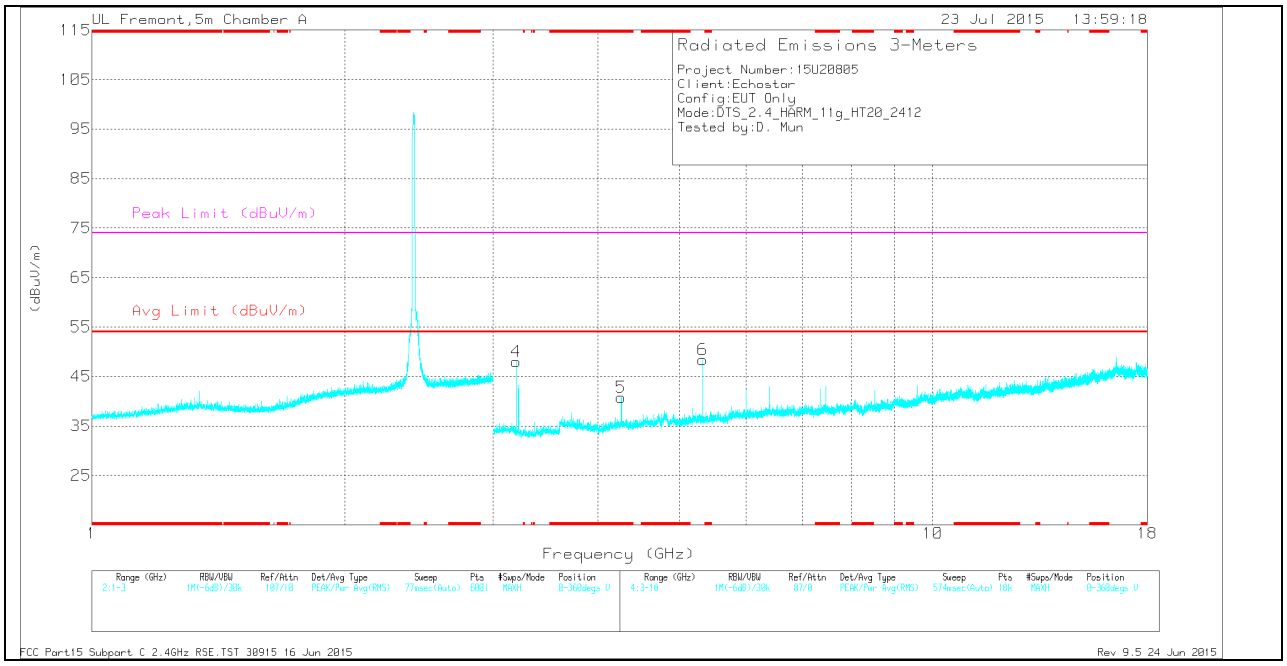
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL 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)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.263	37.93	Pk	33.4	-30.5	0	40.83	-	-	74	-33.17	0-360	100	V
1	1.812	36.01	Pk	30.1	-25.3	0	40.81	-	-	-	-	0-360	100	H
2	1.951	37.13	Pk	31	-25.1	0	43.03	-	-	-	-	0-360	100	H
3	2.45	50.98	Pk	32	-24.6	0	58.38	-	-	-	-	0-360	100	H
4	3.198	47.17	Pk	32.7	-31.8	0	48.07	-	-	-	-	0-360	100	V
6	5.33	43.65	Pk	34.6	-29.8	0	48.45	-	-	-	-	0-360	200	V

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

Pk - Peak detector

Radiated Emissions

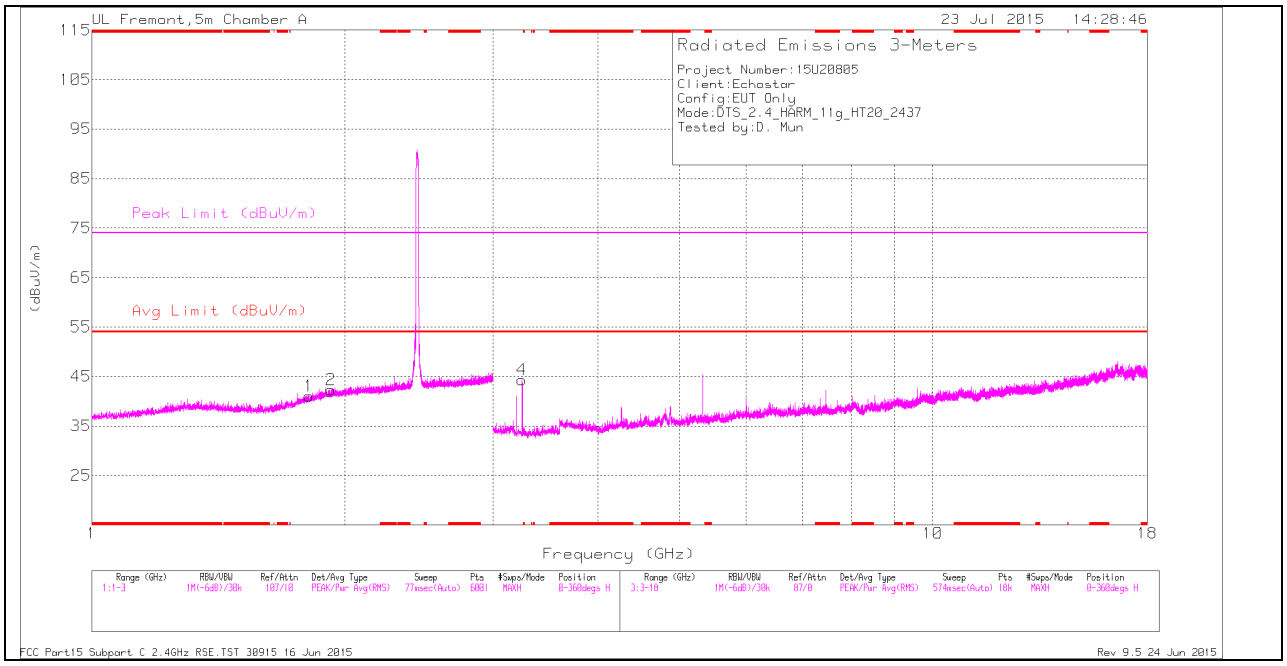
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.264	46.77	PK2	33.4	-30.5	0	49.67	-	-	74	-24.33	301	240	V
* 4.264	42.05	MAv1	33.4	-30.5	.22	45.17	54	-8.83	-	-	301	240	V
1.811	44.25	PK2	30.1	-25.3	0	49.05	-	-	74	-24.95	1	100	H
1.949	44.69	PK2	31	-25.1	0	50.59	-	-	74	-23.41	1	100	H
2.45	49.25	PK2	32	-24.6	0	56.65	-	-	74	-17.35	1	100	H
3.198	44.64	PK2	32.7	-31.8	0	45.54	-	-	74	-28.46	1	100	V
5.329	41.59	PK2	34.6	-29.8	0	46.39	-	-	74	-27.61	301	200	V

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

PK2 - KDB558074 Method: Maximum Peak

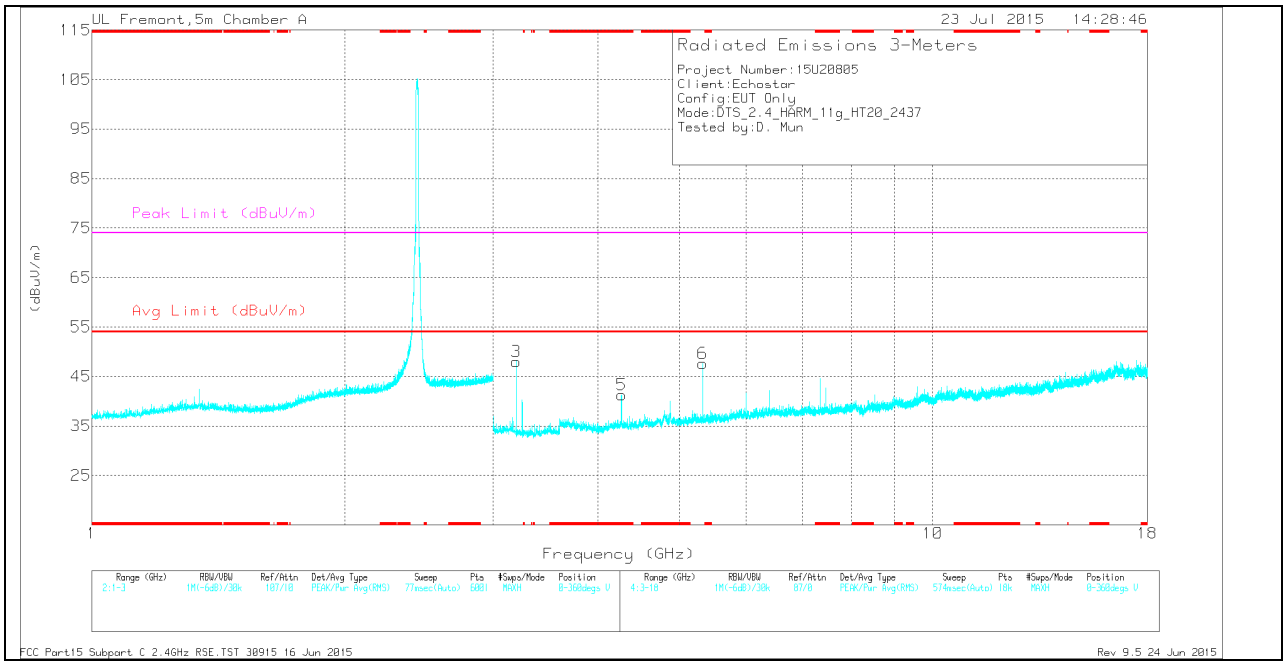
MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL 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)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.264	38.38	Pk	33.4	-30.5	0	41.28	-	-	74	-32.72	0-360	100	V
1	1.812	36.26	Pk	30.1	-25.3	0	41.06	-	-	-	-	0-360	100	H
2	1.925	36.61	Pk	30.9	-25.2	0	42.31	-	-	-	-	0-360	100	H
3	3.198	47.07	Pk	32.7	-31.8	0	47.97	-	-	-	-	0-360	100	V
4	3.249	43.98	Pk	32.8	-32.5	0	44.28	-	-	-	-	0-360	100	H
6	5.33	42.82	Pk	34.6	-29.8	0	47.62	-	-	-	-	0-360	100	V

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

Pk - Peak detector

Radiated Emissions

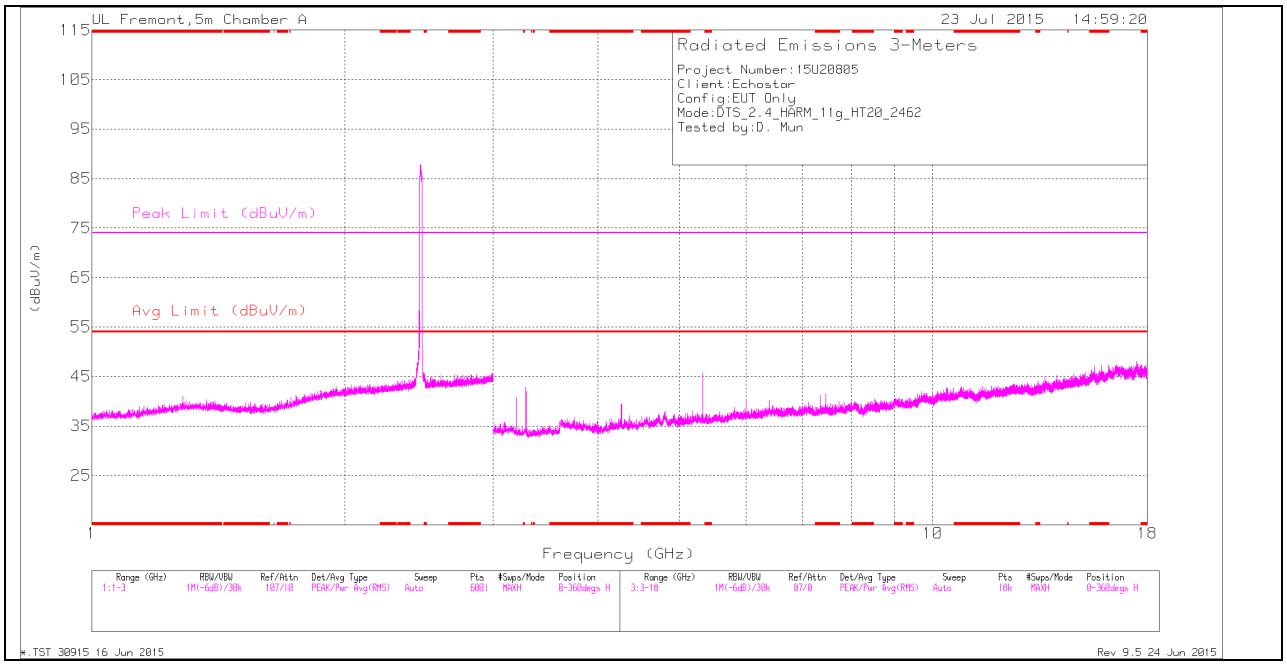
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.263	44.32	PK2	33.4	-30.5	0	47.22	-	-	74	-26.78	328	118	V
* 4.264	37.13	MAv1	33.4	-30.5	.22	40.25	54	-13.75	-	-	328	118	V
1.81	44.52	PK2	30.1	-25.3	0	49.32	-	-	74	-24.68	360	100	H
1.923	44.06	PK2	30.9	-25.2	0	49.76	-	-	74	-24.24	360	100	H
3.198	43.74	PK2	32.7	-31.8	0	44.64	-	-	74	-29.36	360	100	V
3.249	47.93	PK2	32.8	-32.5	0	48.23	-	-	74	-25.77	360	100	H
5.33	44.26	PK2	34.6	-29.8	0	49.06	-	-	74	-24.94	328	100	V

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

PK2 - KDB558074 Method: Maximum Peak

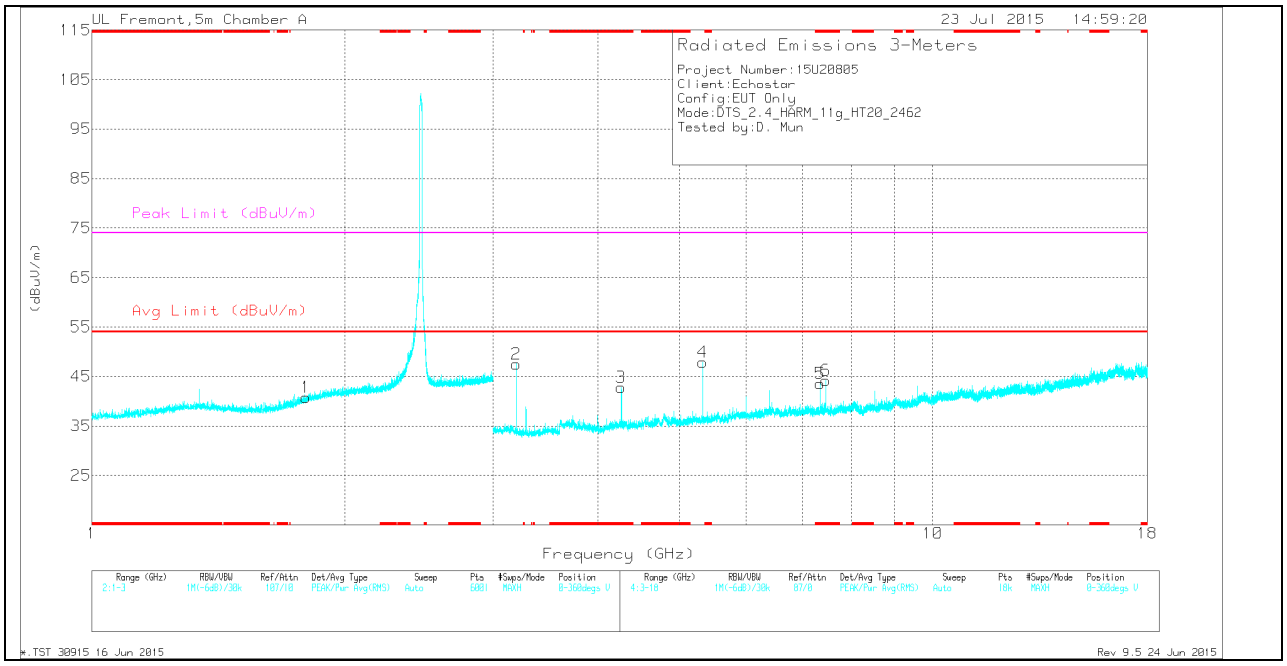
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL 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)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.263	39.87	Pk	33.4	-30.5	0	42.77	-	-	74	-31.23	0-360	100	V
5	* 7.35	34.4	Pk	35.5	-26.3	0	43.6	-	-	74	-30.4	0-360	200	V
6	* 7.461	33.48	Pk	35.5	-24.8	0	44.18	-	-	74	-29.82	0-360	200	V
1	1.797	36.12	Pk	29.9	-25.3	0	40.72	-	-	-	-	0-360	100	V
2	3.198	46.59	Pk	32.7	-31.8	0	47.49	-	-	-	-	0-360	100	V
4	5.329	43.04	Pk	34.6	-29.8	0	47.84	-	-	-	-	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 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)	Azimuth (Degs)	Height (cm)	Polarity
* 4.263	42.02	PK2	33.4	-30.5	0	44.92	-	-	74	-29.08	360	100	V
* 4.264	32.22	MAv1	33.4	-30.5	.22	35.34	54	-18.46	-	-	360	100	V
* 7.35	38.43	PK2	35.5	-26.2	0	47.73	-	-	74	-26.27	360	201	V
* 7.35	27.99	MAv1	35.5	-26.2	.22	37.51	54	-16.49	-	-	360	201	V
* 7.462	36.89	PK2	35.5	-24.8	0	47.59	-	-	74	-26.41	360	201	V
* 7.461	25.67	MAv1	35.5	-24.8	.22	36.59	54	-17.41	-	-	360	201	V
1.798	44.78	PK2	29.9	-25.3	0	49.38	-	-	74	-24.62	360	100	V
3.198	43.77	PK2	32.7	-31.8	0	44.67	-	-	74	-29.33	360	100	V
5.33	43.59	PK2	34.6	-29.8	0	48.39	-	-	74	-25.61	360	100	V
5.33	43.66	PK2	34.6	-29.8	0	48.46	-	-	74	-25.54	360	100	V

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

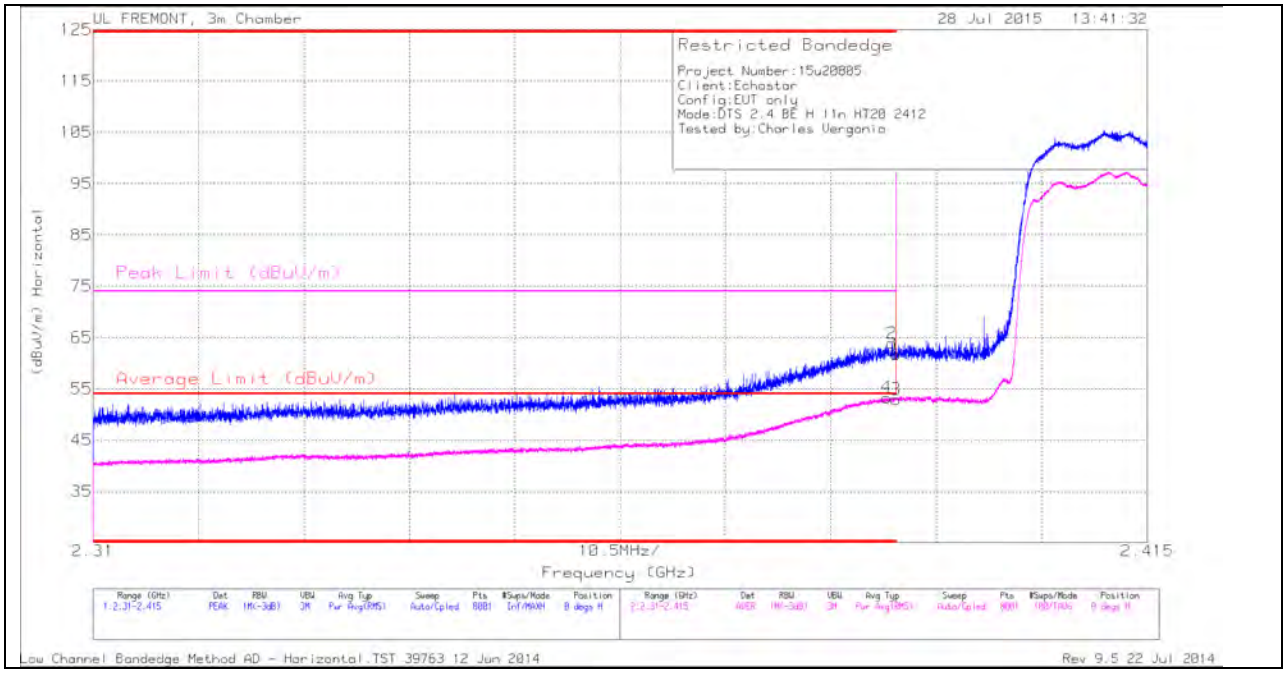
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

11.2.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

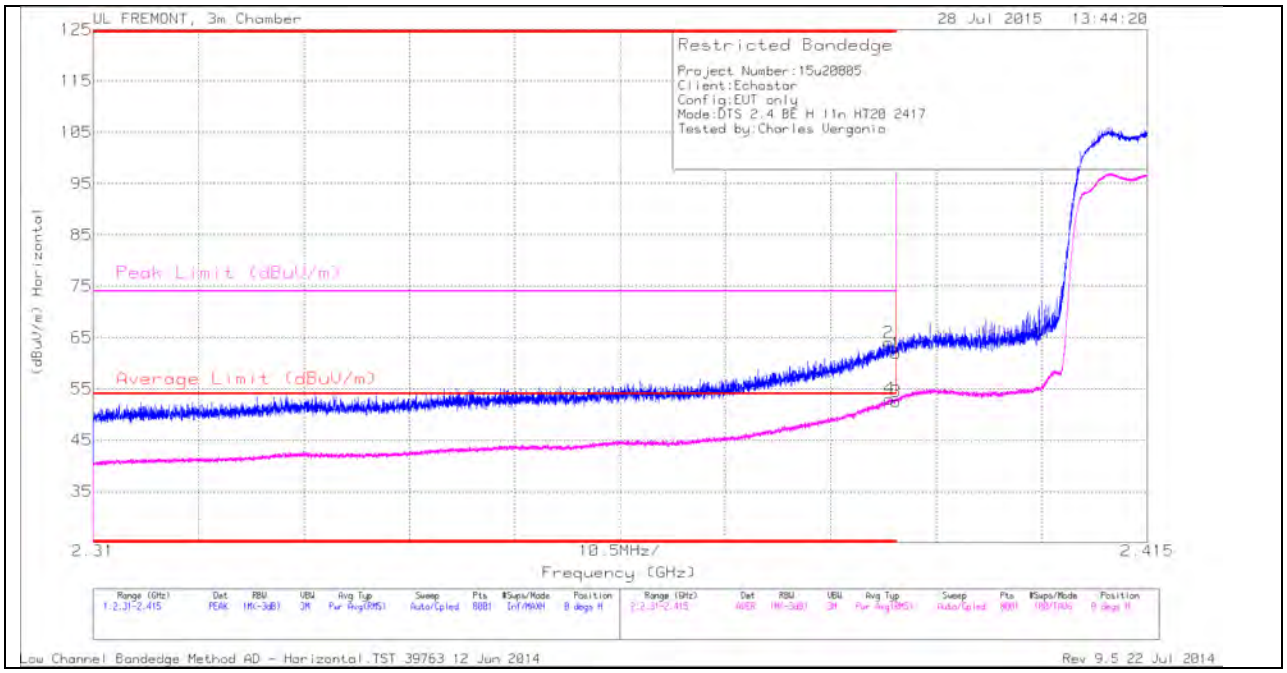


CH 1 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.39	52.09	PK	32	-22.4	0	61.69	-	-	74	-12.31	0	217	H
2	* 2.39	54.28	PK	32	-22.4	0	63.88	-	-	74	-10.12	0	217	H
3	* 2.39	43.09	RMS	32	-22.4	.22	52.91	54	-1.09	-	-	0	217	H
4	* 2.389	43.49	RMS	32	-22.4	.22	53.31	54	-.69	-	-	0	217	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

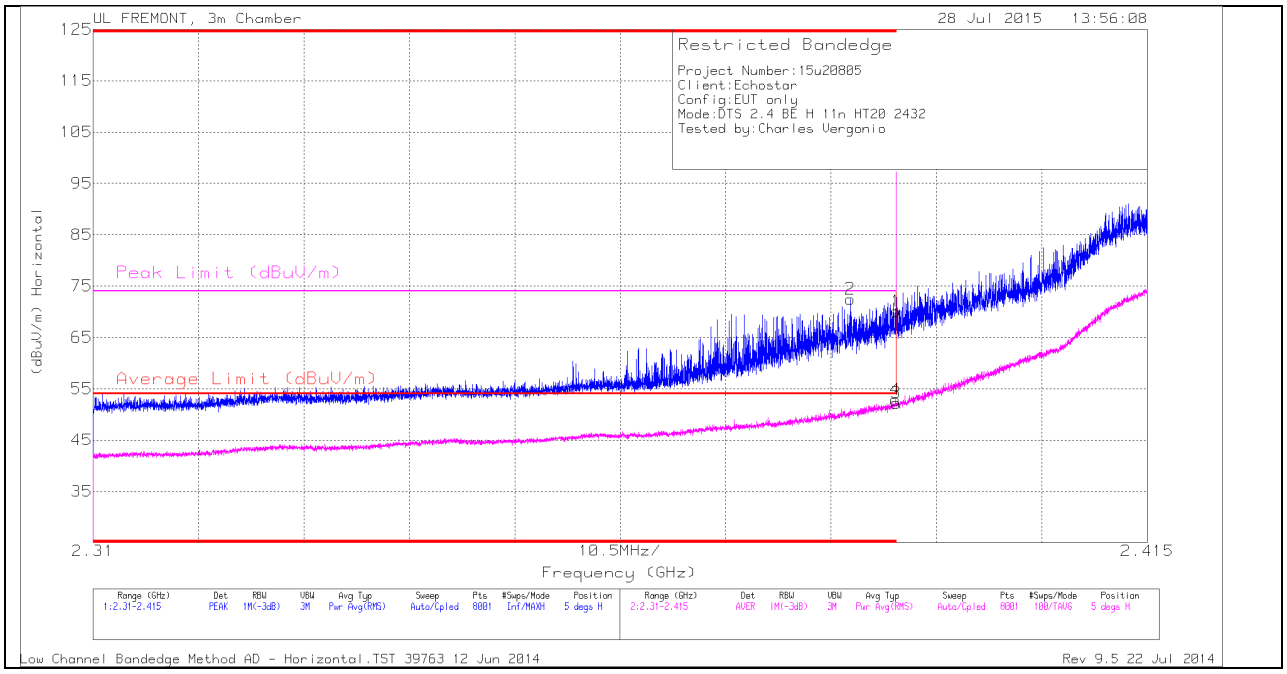


CH 2 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.389	54.42	PK	32	-22.4	0	64.02	-	-	74	-9.98	0	217	H
4	* 2.389	43.25	RMS	32	-22.4	.22	53.07	54	-.93	-	-	0	217	H
1	* 2.39	52.3	PK	32	-22.4	0	61.9	-	-	74	-12.1	0	217	H
3	* 2.39	42.7	RMS	32	-22.4	.22	52.52	54	-1.48	-	-	0	217	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



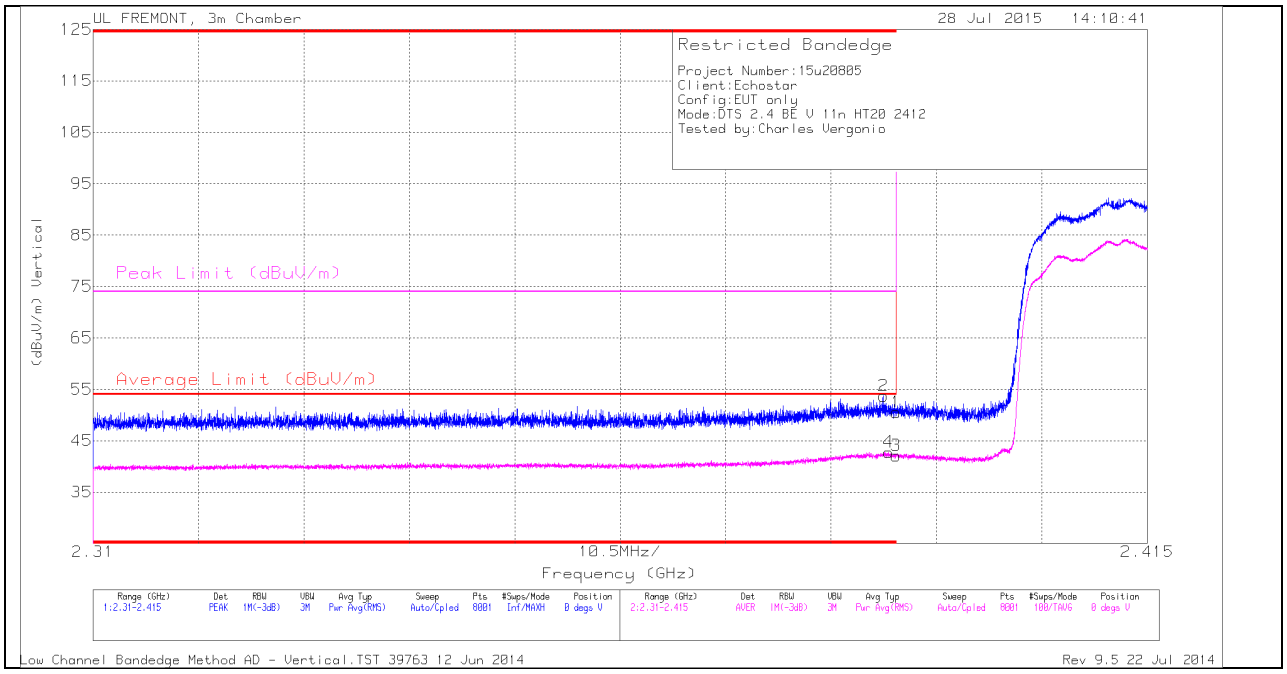
CH 5 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.385	62.87	PK	32	-22.4	0	72.47	-	-	74	-1.53	5	106	H
1	* 2.39	60.48	PK	32	-22.4	0	70.08	-	-	74	-3.92	5	106	H
3	* 2.39	42.42	RMS	32	-22.4	.22	52.24	54	-1.76	-	-	5	106	H
4	* 2.39	43.03	RMS	32	-22.4	.22	52.85	54	-1.15	-	-	5	106	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT

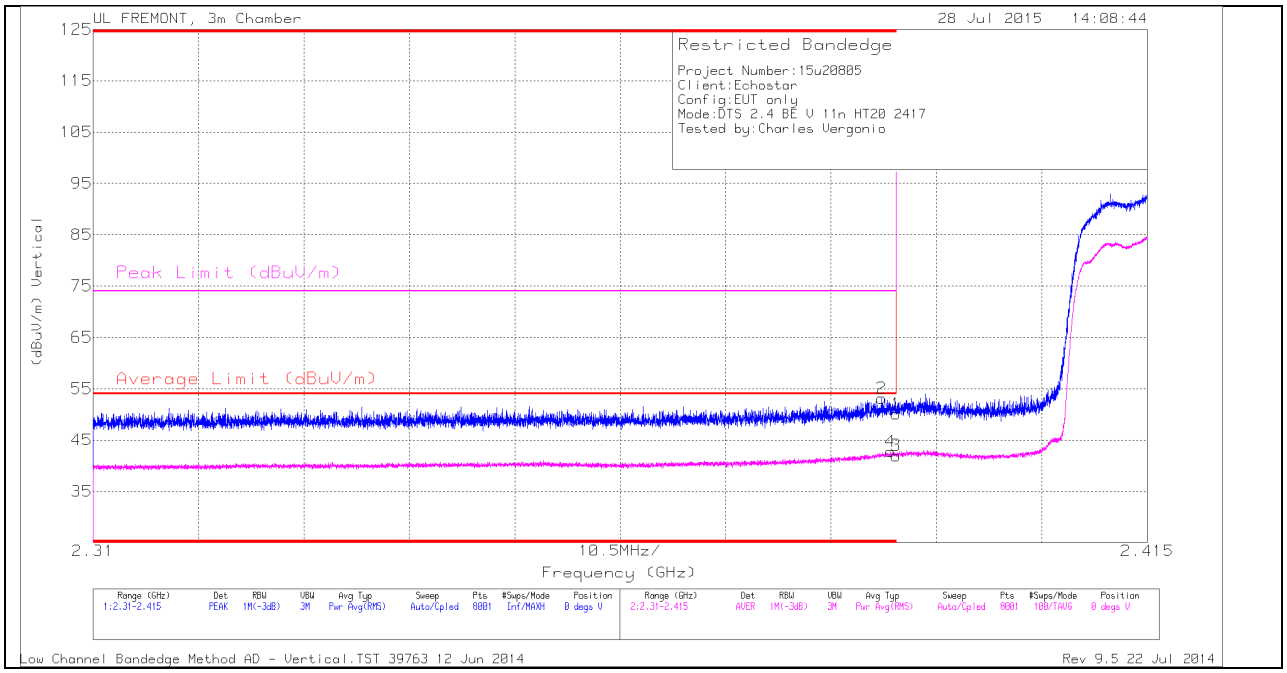


CH 1 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.389	44.11	PK	32	-22.4	0	53.71	-	-	74	-20.29	0	259	V
4	* 2.389	32.97	RMS	32	-22.4	.22	42.79	54	-11.21	-	-	0	259	V
1	* 2.39	40.93	PK	32	-22.4	0	50.53	-	-	74	-23.47	0	259	V
3	* 2.39	32.27	RMS	32	-22.4	.22	42.09	54	-11.91	-	-	0	259	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

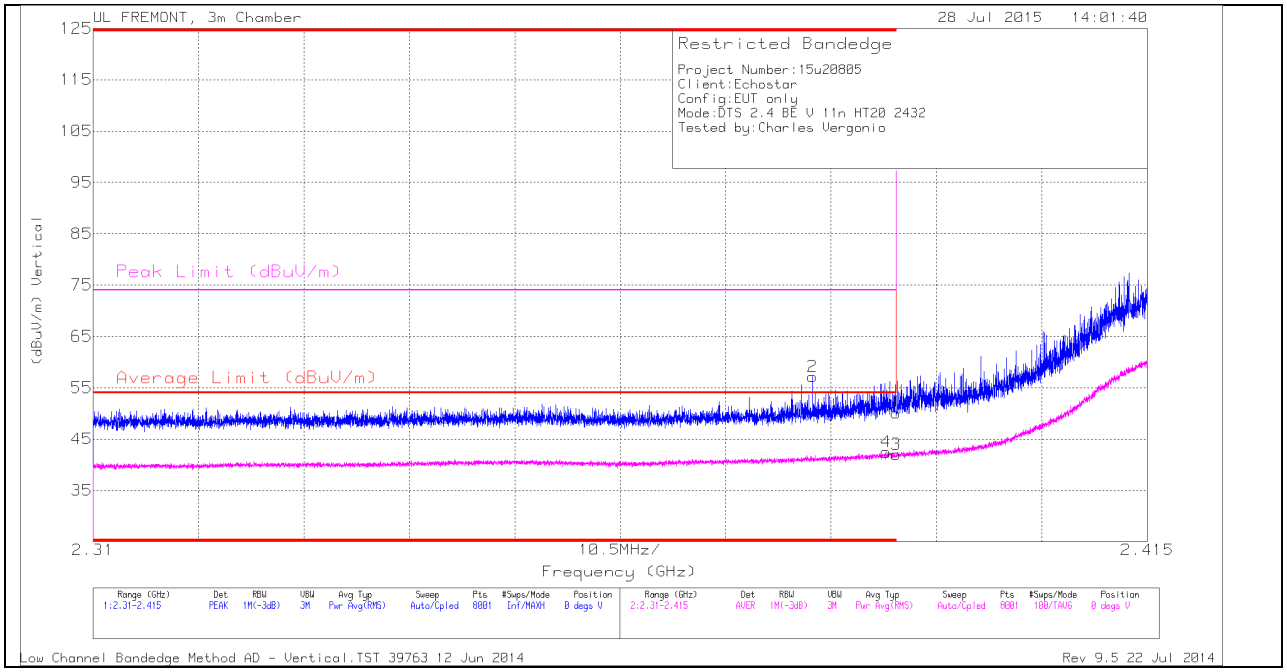


CH 2 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.389	43.51	PK	32	-22.4	0	53.11	-	-	74	-20.89	0	259	V
4	* 2.389	32.94	RMS	32	-22.4	.22	42.76	54	-11.24	-	-	0	259	V
1	* 2.39	40.45	PK	32	-22.4	0	50.05	-	-	74	-23.95	0	259	V
3	* 2.39	32.13	RMS	32	-22.4	.22	41.95	54	-12.05	-	-	0	259	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



CH 5 VERTICAL DATA

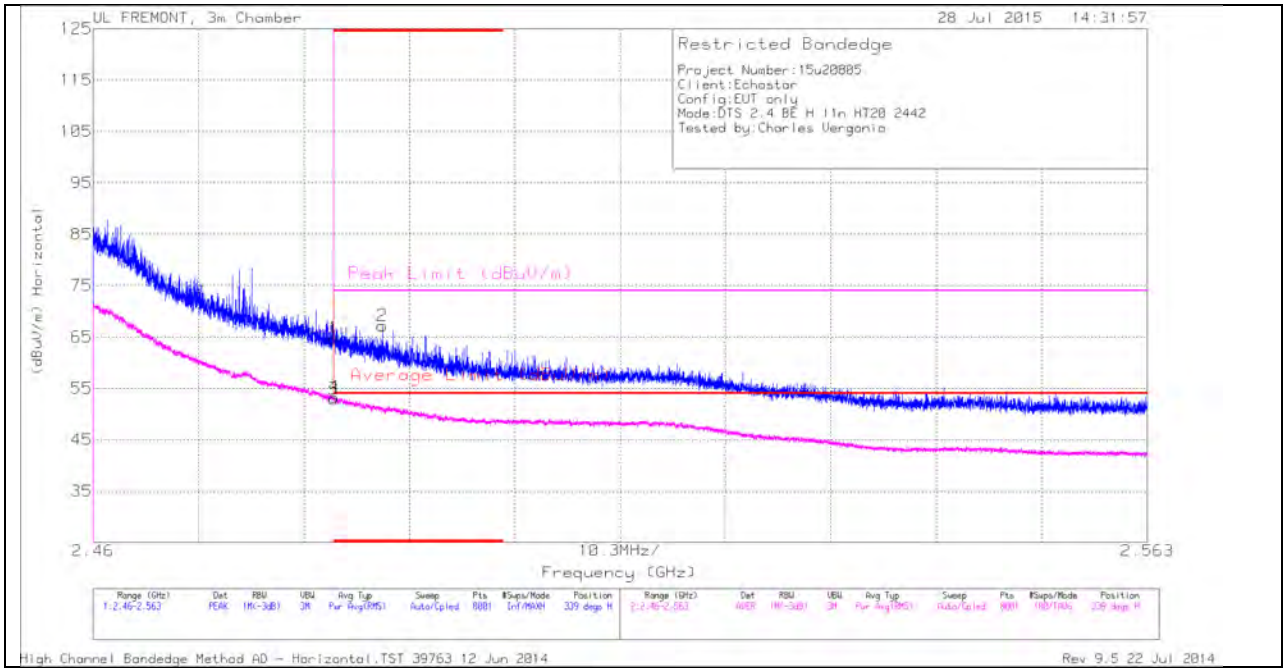
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.382	47.58	PK	32	-22.4	0	57.18	-	-	74	-16.82	0	259	V
4	* 2.389	32.64	RMS	32	-22.4	.22	42.46	54	-11.54	-	-	0	259	V
1	* 2.39	40.49	PK	32	-22.4	0	50.09	-	-	74	-23.91	0	259	V
3	* 2.39	32.18	RMS	32	-22.4	.22	42	54	-12	-	-	0	259	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

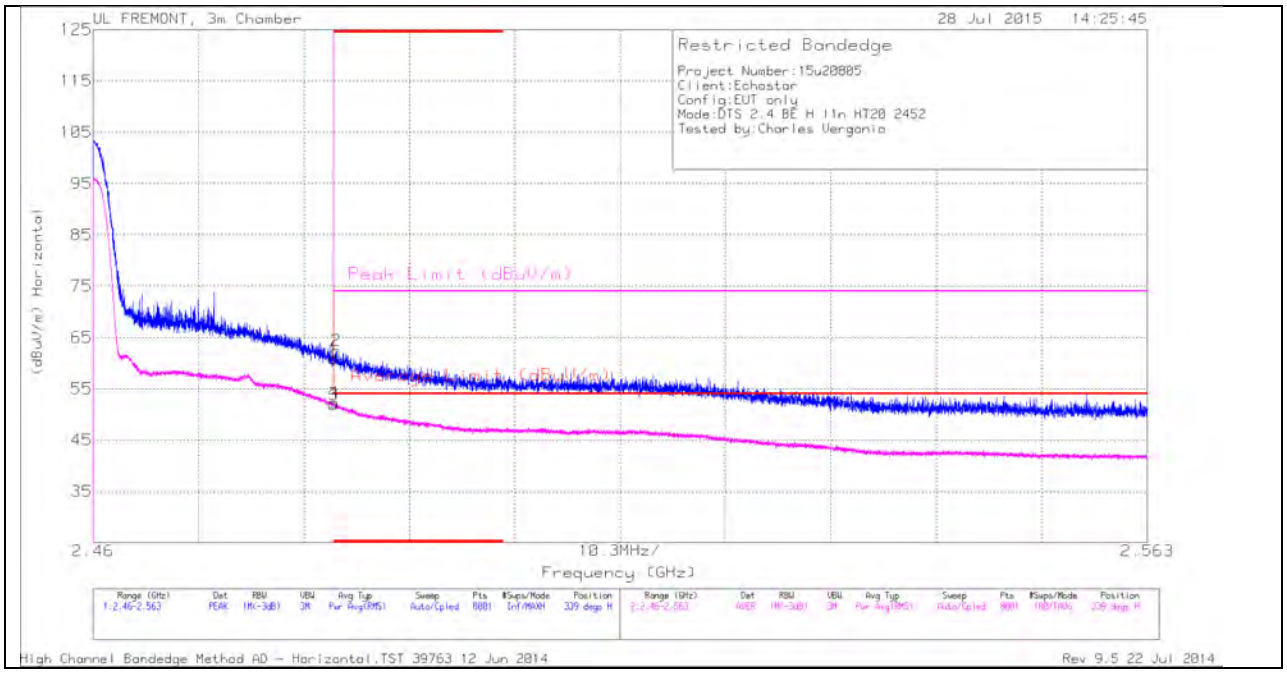


CH 7 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	54.57	PK	32.3	-22.1	0	64.77	-	-	74	-9.23	339	203	H
3	* 2.484	42.52	RMS	32.3	-22.1	.22	52.94	54	-1.06	-	-	339	203	H
4	* 2.484	42.9	RMS	32.3	-22.1	.22	53.32	54	-.68	-	-	339	203	H
2	* 2.488	57.1	PK	32.3	-22.2	0	67.2	-	-	74	-6.8	339	203	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

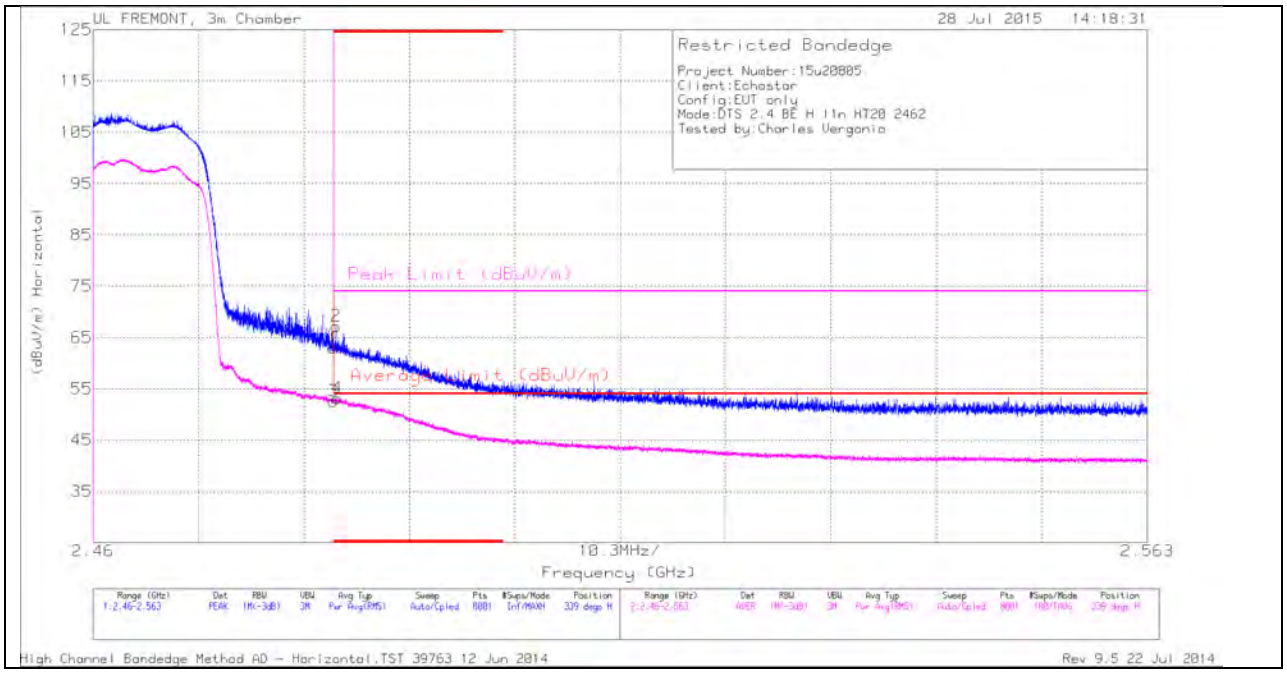


CH 9 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	50.63	PK	32.3	-22.1	0	60.83	-	-	74	-13.17	339	203	H
2	* 2.484	52.18	PK	32.3	-22.1	0	62.38	-	-	74	-11.62	339	203	H
3	* 2.484	41.53	RMS	32.3	-22.1	.22	51.95	54	-2.05	-	-	339	203	H
4	* 2.484	41.83	RMS	32.3	-22.1	.22	52.25	54	-1.75	-	-	339	203	H

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



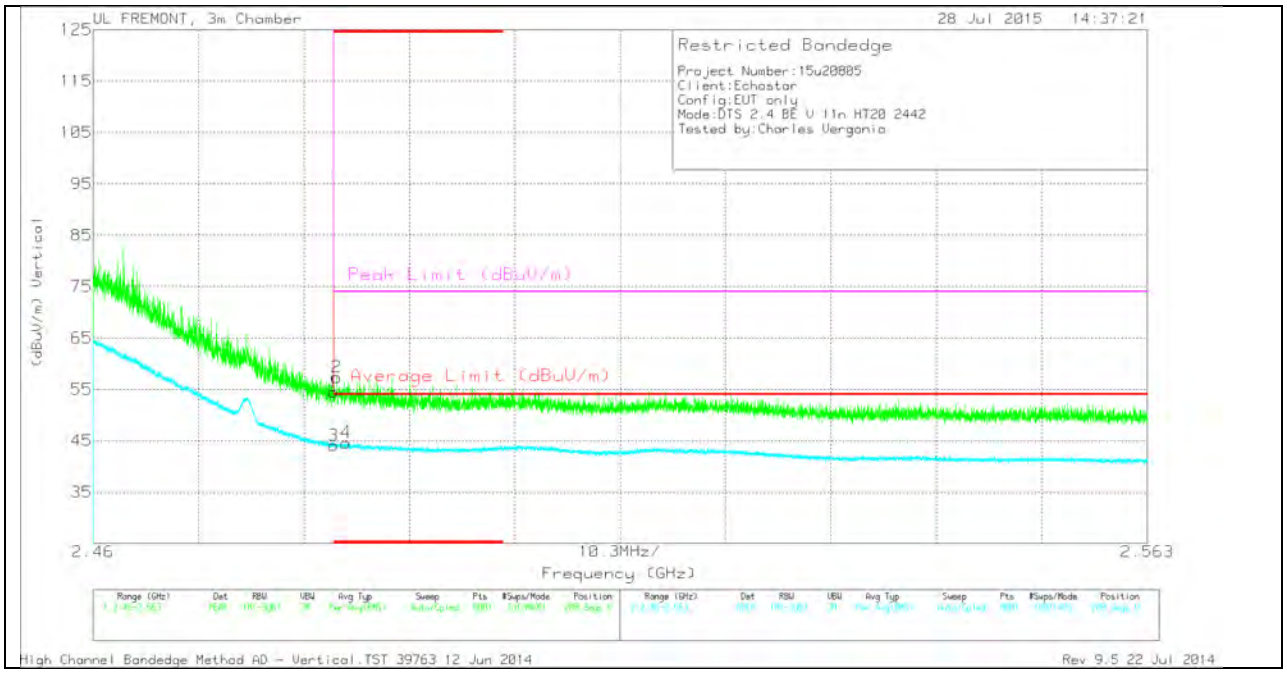
CH 11 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	52.68	PK	32.3	-22.1	0	62.88	-	-	74	-11.12	339	203	H
2	* 2.484	57.02	PK	32.3	-22.1	0	67.22	-	-	74	-6.78	339	203	H
3	* 2.484	42.18	RMS	32.3	-22.1	.22	52.6	54	-1.4	-	-	339	203	H
4	* 2.484	42.73	RMS	32.3	-22.1	.22	53.15	54	-.85	-	-	339	203	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT

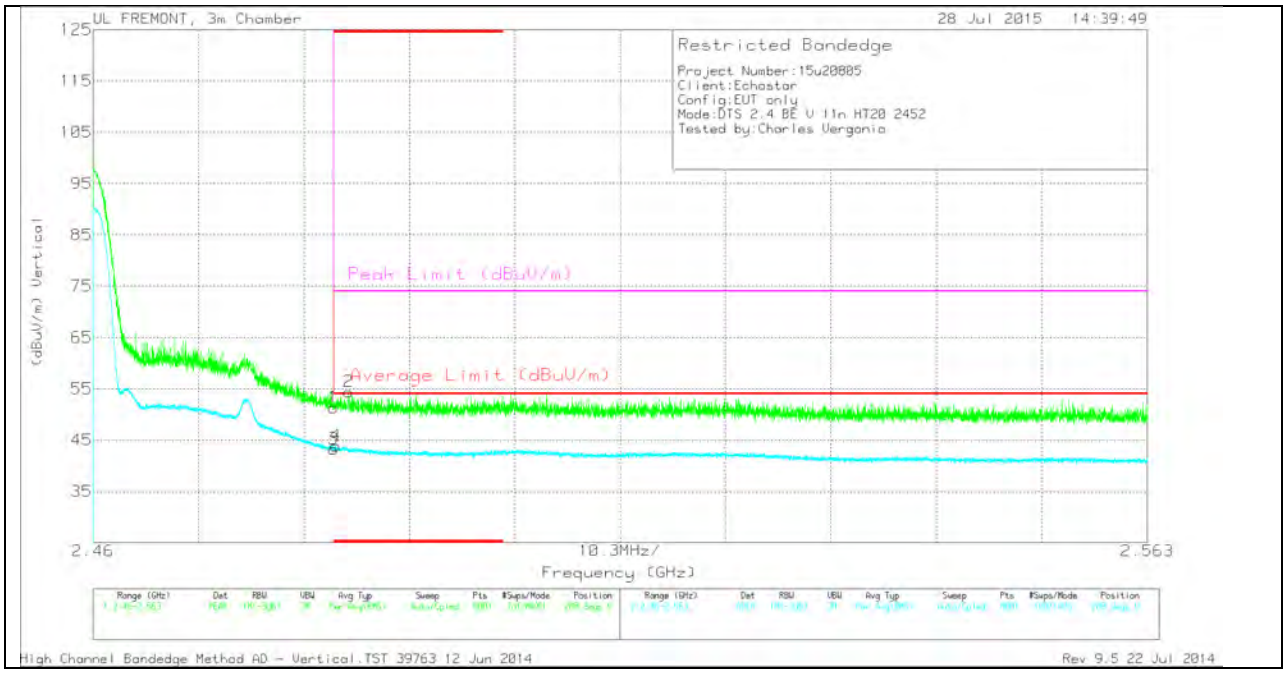


CH 7 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	44.29	PK	32.3	-22.1	0	54.49	-	-	74	-19.51	288	400	V
2	* 2.484	47.17	PK	32.3	-22.1	0	57.37	-	-	74	-16.63	288	400	V
3	* 2.484	33.68	RMS	32.3	-22.1	.22	44.1	54	-9.9	-	-	288	400	V
4	* 2.485	34.19	RMS	32.3	-22.1	.22	44.61	54	-9.39	-	-	288	400	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

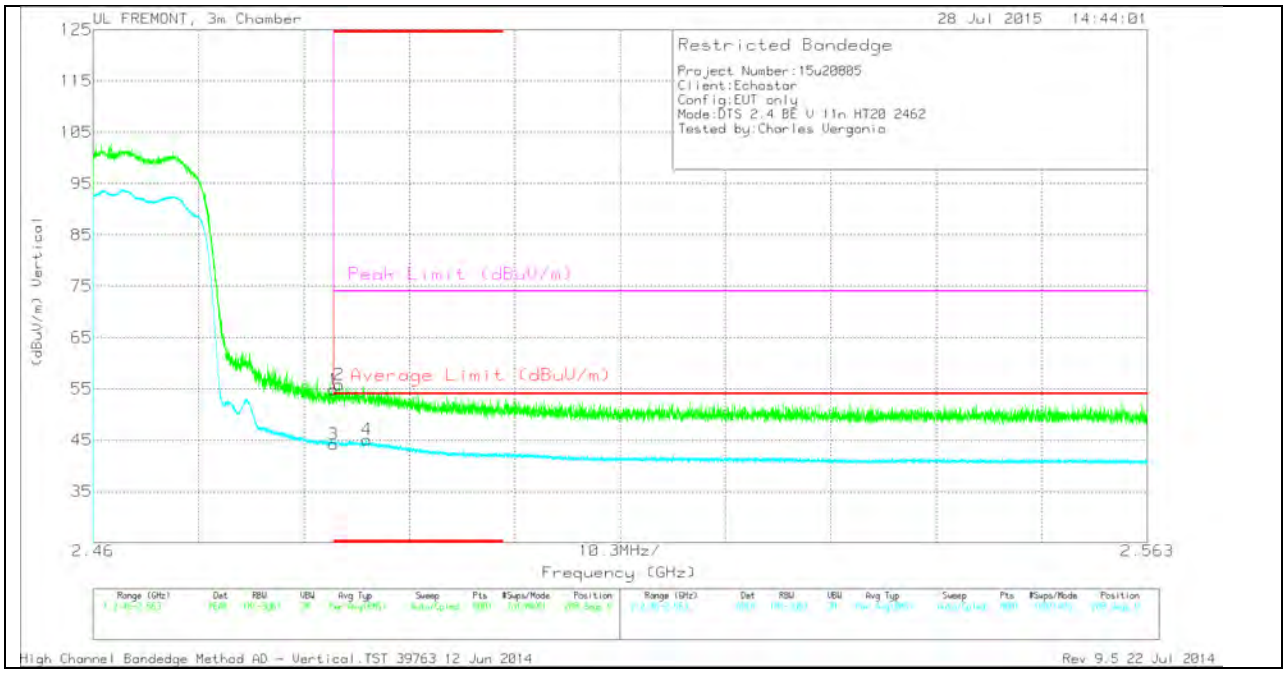


CH 9 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	41.16	PK	32.3	-22.1	0	51.36	-	-	74	-22.64	288	400	V
3	* 2.484	32.87	RMS	32.3	-22.1	.22	43.29	54	-10.71	-	-	288	400	V
4	* 2.484	33.48	RMS	32.3	-22.1	.22	43.9	54	-10.1	-	-	288	400	V
2	* 2.485	44.22	PK	32.3	-22.1	0	54.42	-	-	74	-19.58	288	400	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



CH 11 VERTICAL DATA

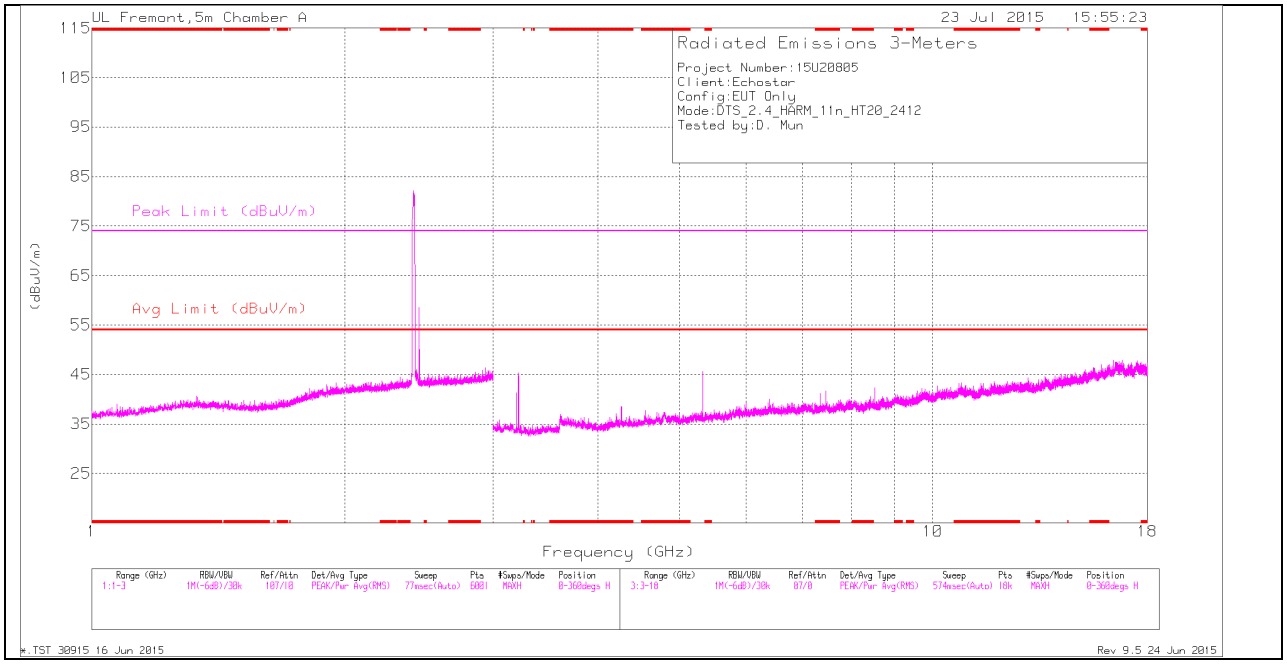
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	44.62	PK	32.3	-22.1	0	54.82	-	-	74	-19.18	288	400	V
2	* 2.484	45.63	PK	32.3	-22.1	0	55.83	-	-	74	-18.17	288	400	V
3	* 2.484	33.81	RMS	32.3	-22.1	.22	44.23	54	-9.77	-	-	288	400	V
4	* 2.487	34.77	RMS	32.3	-22.2	.22	45.09	54	-8.91	-	-	288	400	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

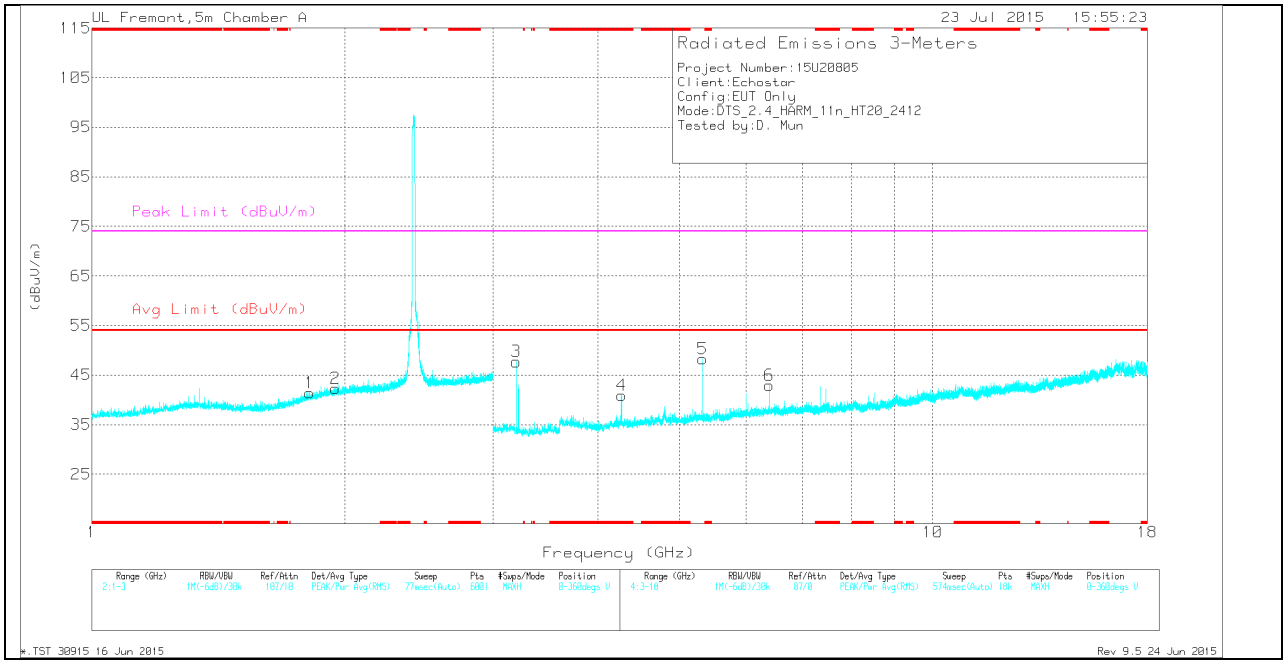
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL 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)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.264	38.03	Pk	33.4	-30.5	0	40.93	-	-	74	-33.07	0-360	100	V
1	1.816	36.61	Pk	30.1	-25.3	0	41.41	-	-	-	-	0-360	200	V
2	1.949	36.38	Pk	31	-25.1	0	42.28	-	-	-	-	0-360	100	V
3	3.197	46.8	Pk	32.7	-31.8	0	47.7	-	-	-	-	0-360	100	V
5	5.33	43.5	Pk	34.6	-29.8	0	48.3	-	-	-	-	0-360	200	V
6	6.396	34.61	Pk	35.5	-27.2	0	42.91	-	-	-	-	0-360	200	V

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

Pk - Peak detector

Radiated Emissions

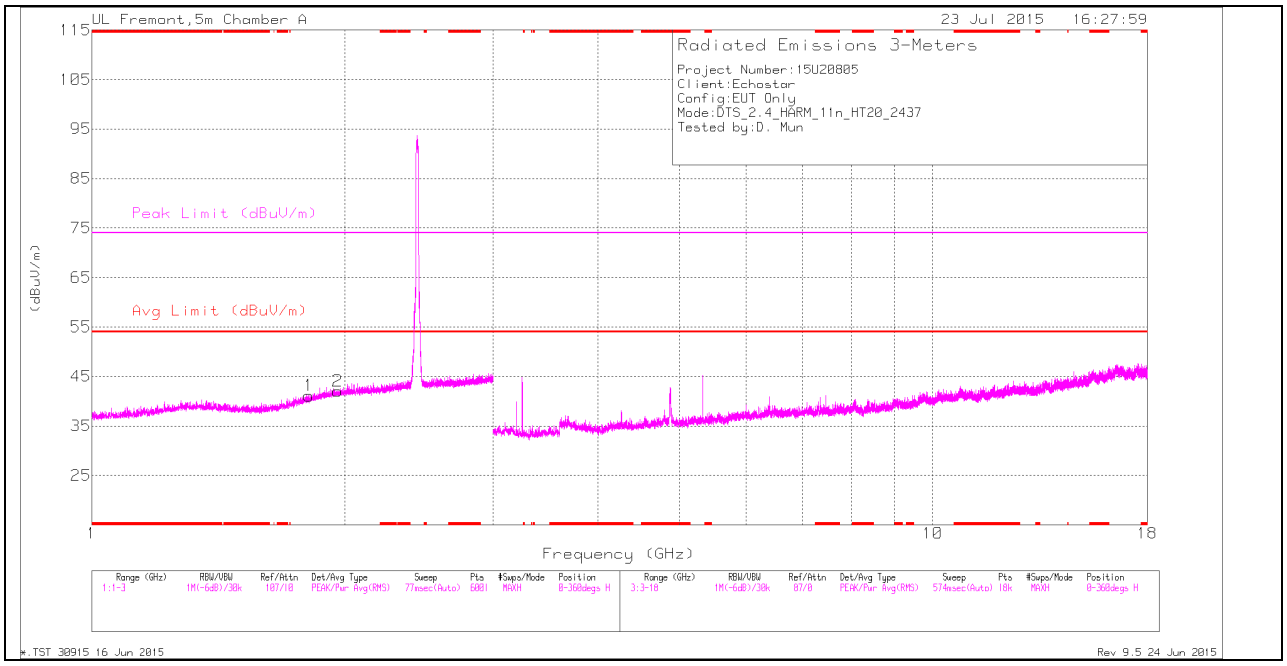
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.264	42	PK2	33.4	-30.5	0	44.9	-	-	74	-29.1	359	100	V
* 4.264	32.31	MAv1	33.4	-30.5	.22	35.43	54	-18.57	-	-	359	100	V
* 4.263	42.01	PK2	33.4	-30.5	0	44.91	-	-	74	-29.09	359	100	V
* 4.264	32.22	MAv1	33.4	-30.5	.22	35.34	54	-18.66	-	-	359	100	V
1.815	44.65	PK2	30.1	-25.3	0	49.45	-	-	74	-24.55	359	201	V
1.947	44.76	PK2	31	-25.1	0	50.66	-	-	74	-23.34	359	100	V
3.198	43.86	PK2	32.7	-31.8	0	44.76	-	-	74	-29.24	359	100	V
5.329	41.5	PK2	34.6	-29.8	0	46.3	-	-	74	-27.7	359	201	V
6.395	39.39	PK2	35.5	-27.2	0	47.69	-	-	74	-26.31	359	201	V

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

PK2 - KDB558074 Method: Maximum Peak

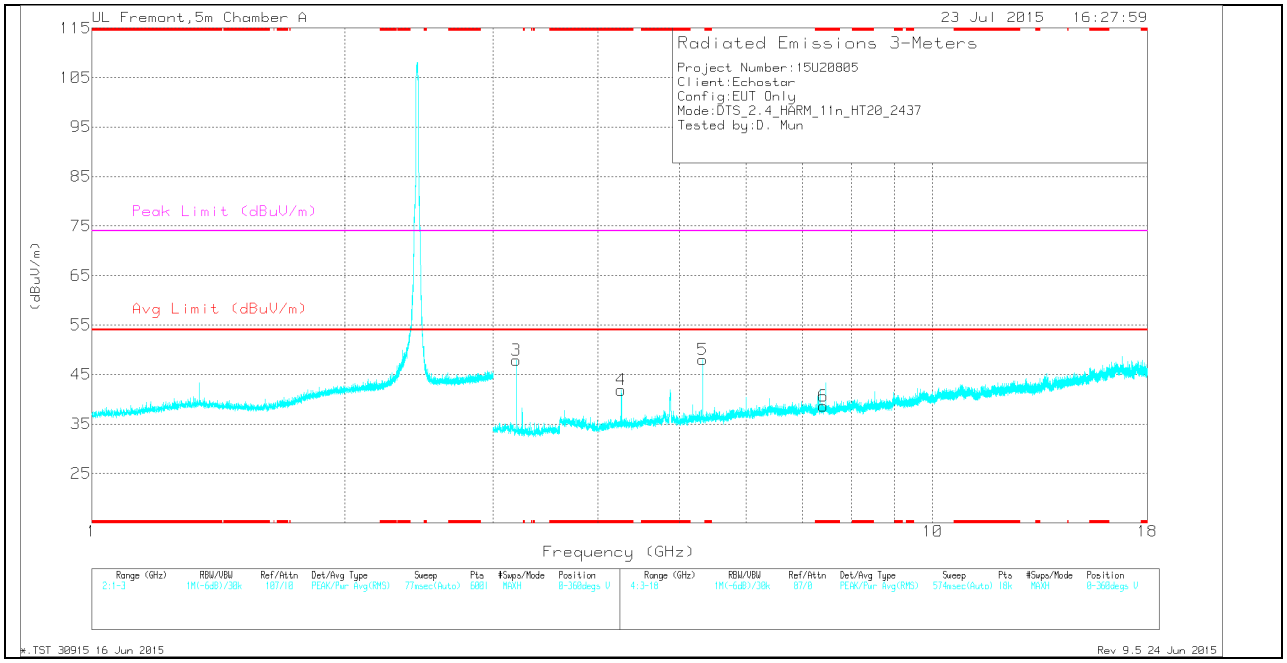
MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL 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)	Azimuth (Degs)	Height (cm)	Polarity
4	* 4.263	38.96	Pk	33.4	-30.5	0	41.86	-	-	74	-32.14	0-360	100	V
6	* 7.406	28.42	Pk	35.6	-25.4	0	38.62	-	-	74	-35.38	0-360	100	V
1	1.811	36.3	Pk	30.1	-25.3	0	41.1	-	-	-	-	0-360	201	H
2	1.96	36.1	Pk	31	-25.1	0	42	-	-	-	-	0-360	201	H
3	3.197	47.01	Pk	32.7	-31.8	0	47.91	-	-	-	-	0-360	100	V
5	5.33	43.16	Pk	34.6	-29.8	0	47.96	-	-	-	-	0-360	100	V

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

Pk - Peak detector

Radiated Emissions

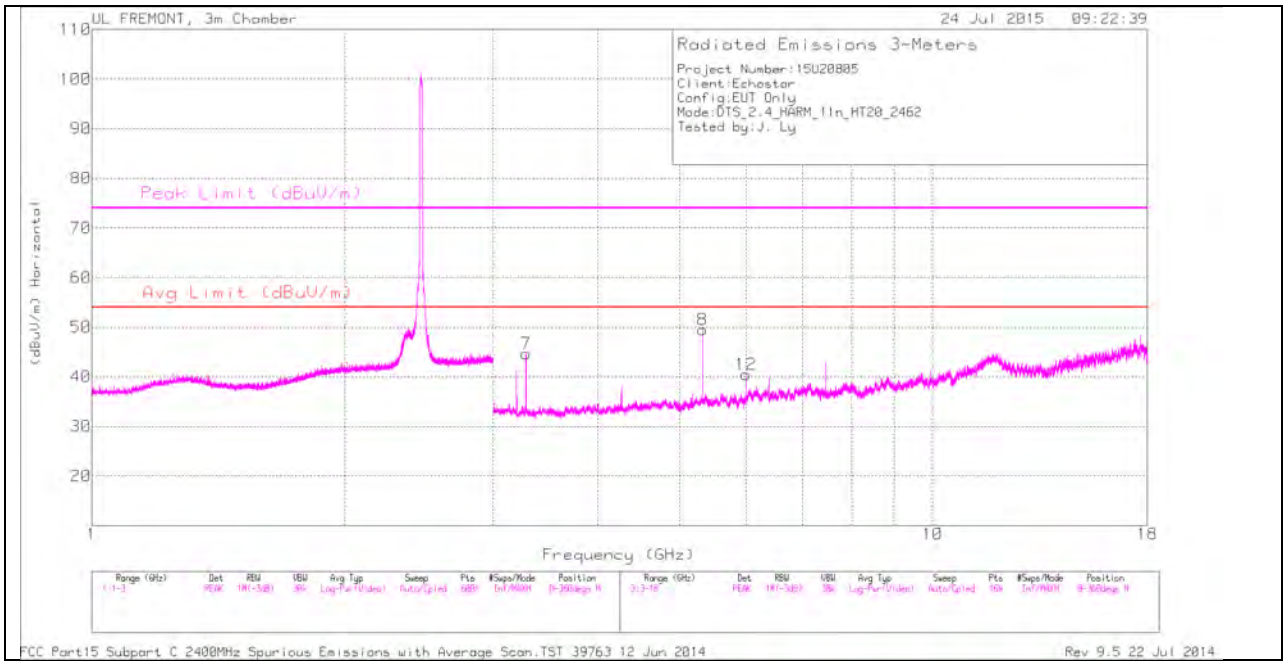
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.264	42.39	PK2	33.4	-30.5	0	45.29	-	-	74	-28.71	360	100	V
* 4.264	32.46	MAv1	33.4	-30.5	.22	35.58	54	-18.42	-	-	360	100	V
* 7.406	36.86	PK2	35.6	-25.4	0	47.06	-	-	74	-26.94	360	100	V
* 7.407	25.67	MAv1	35.6	-25.4	.22	36.09	54	-17.91	-	-	360	100	V
* 7.407	36.51	PK2	35.6	-25.4	0	46.71	-	-	74	-27.29	360	100	V
* 7.405	25.75	MAv1	35.6	-25.5	.22	36.07	54	-17.93	-	-	360	100	V
1.812	44.72	PK2	30.1	-25.3	0	49.52	-	-	74	-24.48	360	202	H
1.959	44.48	PK2	31	-25.1	0	50.38	-	-	74	-23.62	360	202	H
3.198	43.57	PK2	32.7	-31.8	0	44.47	-	-	74	-29.53	360	100	V
5.329	43.64	PK2	34.6	-29.8	0	48.44	-	-	74	-25.56	360	100	V

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

PK2 - KDB558074 Method: Maximum Peak

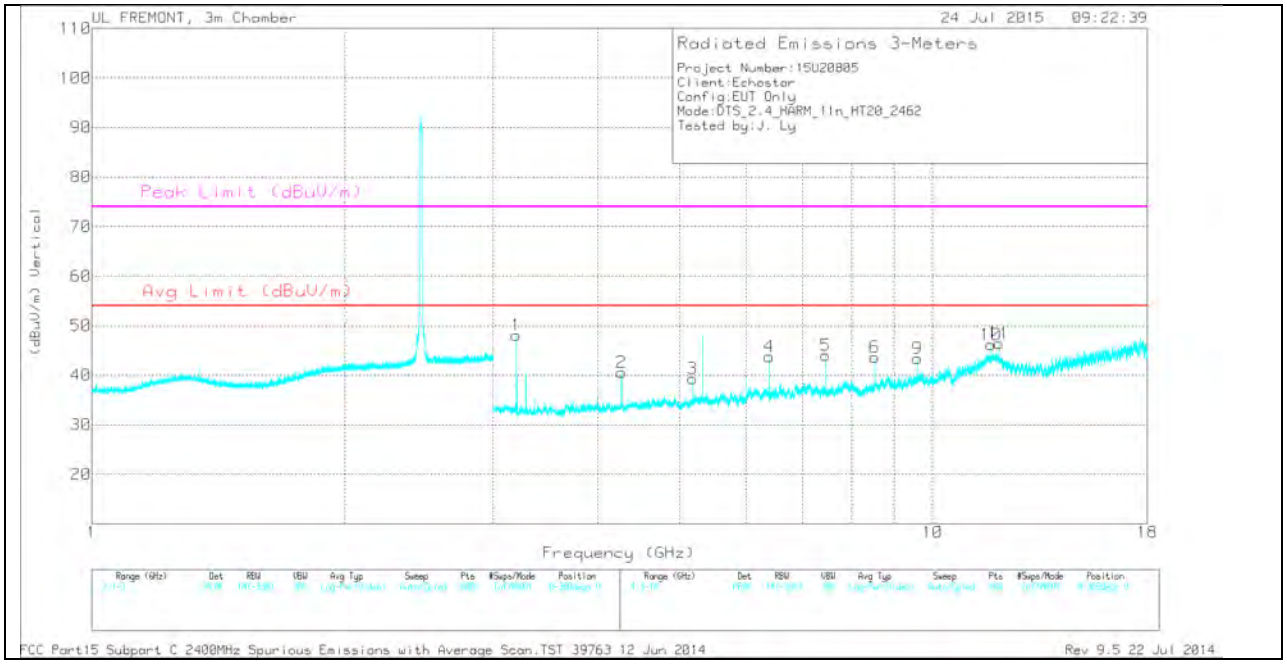
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
1	3.198	46.01	PK	32.6	-30.5	0	48.11	-	-	-	-	0-360	100	V
7	3.283	42.92	PK	32.6	-30.9	0	44.62	-	-	-	-	0-360	100	H
2	4.264	37.81	PK	33.4	-30.6	0	40.61	-	-	74	-33.39	0-360	100	V
3	5.184	35.25	PK	34.3	-30.2	0	39.35	-	-	-	-	0-360	200	V
8	5.33	44.11	PK	34.5	-29.1	0	49.51	-	-	-	-	0-360	100	H
12	6	34.88	PK	35.2	-29.6	0	40.48	-	-	-	-	0-360	100	H
4	6.395	36.73	PK	35.5	-28.5	0	43.73	-	-	-	-	0-360	100	V
5	7.461	36.42	PK	35.7	-28.1	0	44.02	-	-	74	-29.98	0-360	100	V
6	8.527	34.9	PK	35.8	-27	0	43.7	-	-	-	-	0-360	100	V
9	9.593	31.13	PK	36.7	-24.4	0	43.43	-	-	-	-	0-360	100	V
10	11.726	29.2	PK	38.9	-21.9	0	46.2	-	-	74	-27.8	0-360	100	V
11	11.988	30.3	PK	39.1	-22.9	0	46.5	-	-	74	-27.5	0-360	100	V

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
3.198	49.12	PK2	32.6	-30.5	0	51.22	-	-	74	-22.78	238	103	V
3.283	47.64	PK2	32.6	-30.9	0	49.34	-	-	74	-24.66	336	122	H
4.264	45.29	PK2	33.4	-30.6	0	48.09	-	-	74	-25.91	323	117	V
4.264	37.3	MAv1	33.4	-30.6	.23	40.33	54	-13.67	-	-	323	117	V
5.184	42.24	PK2	34.3	-30.2	0	46.34	-	-	74	-27.66	264	182	V
5.33	47.24	PK2	34.5	-29.1	0	52.64	-	-	74	-21.36	32	102	H
6	42.71	PK2	35.2	-29.5	0	48.41	-	-	74	-25.59	316	100	H
6.396	42.68	PK2	35.5	-28.5	0	49.68	-	-	74	-24.32	253	106	V
7.461	43.45	PK2	35.7	-28.1	0	51.05	-	-	74	-22.95	181	119	V
7.461	37.09	MAv1	35.7	-28.1	.23	44.92	54	-9.08	-	-	181	119	V
8.527	40.52	PK2	35.8	-27	0	49.32	-	-	74	-24.68	144	107	V
9.594	38.98	PK2	36.7	-24.4	0	51.28	-	-	74	-22.72	303	106	V
11.725	30	MAv1	38.9	-21.9	.23	47.23	54	-6.77	-	-	12	110	V
11.726	38.57	PK2	38.9	-21.9	0	55.57	-	-	74	-18.43	12	110	V
11.988	38.78	PK2	39.1	-22.9	0	54.98	-	-	74	-19.02	16	102	V
11.988	29.75	MAv1	39.1	-22.9	.23	46.18	54	-7.82	-	-	16	102	V

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

12. RADIATED TEST RESULTS MIMO

12.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150cm for above 1GHz. The antenna to EUT distance is 3 meters.

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

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor= 10log (1/x). For this sample B mode = 0dB (duty cycle >98%); G mode = 0.22dB; N HT20mode = 0.22dB; N HT40 mode = 0.43dB.

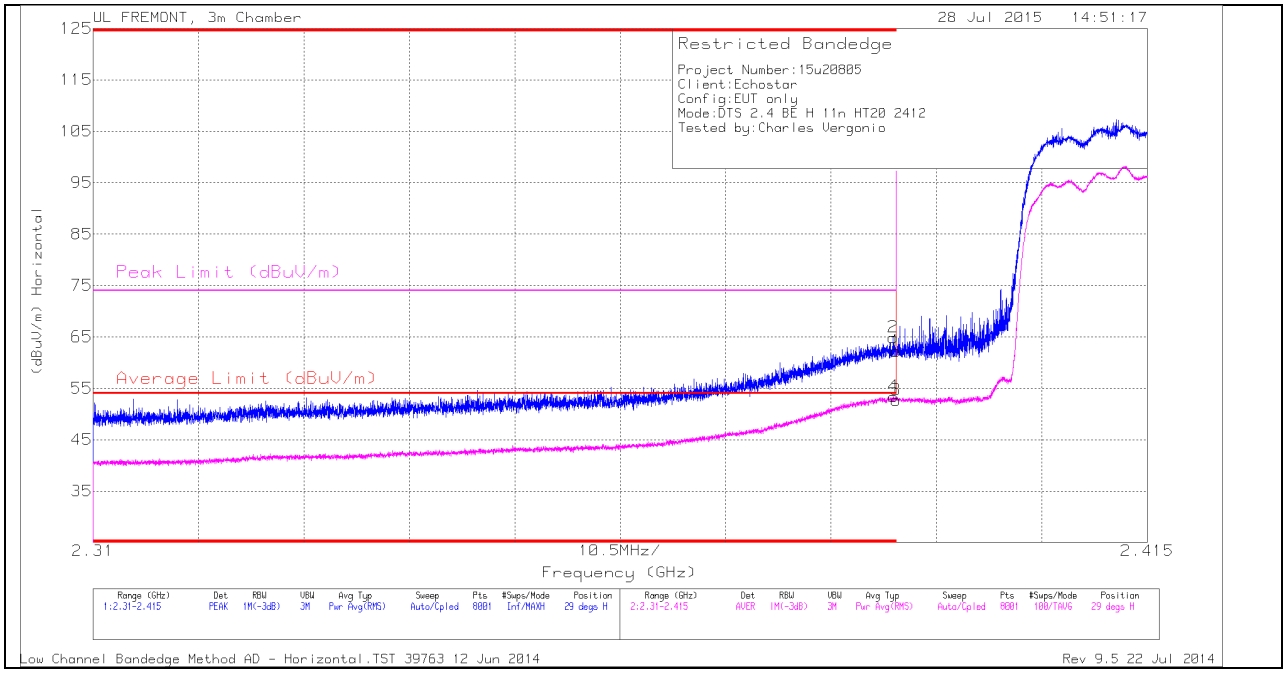
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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

12.1.1. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

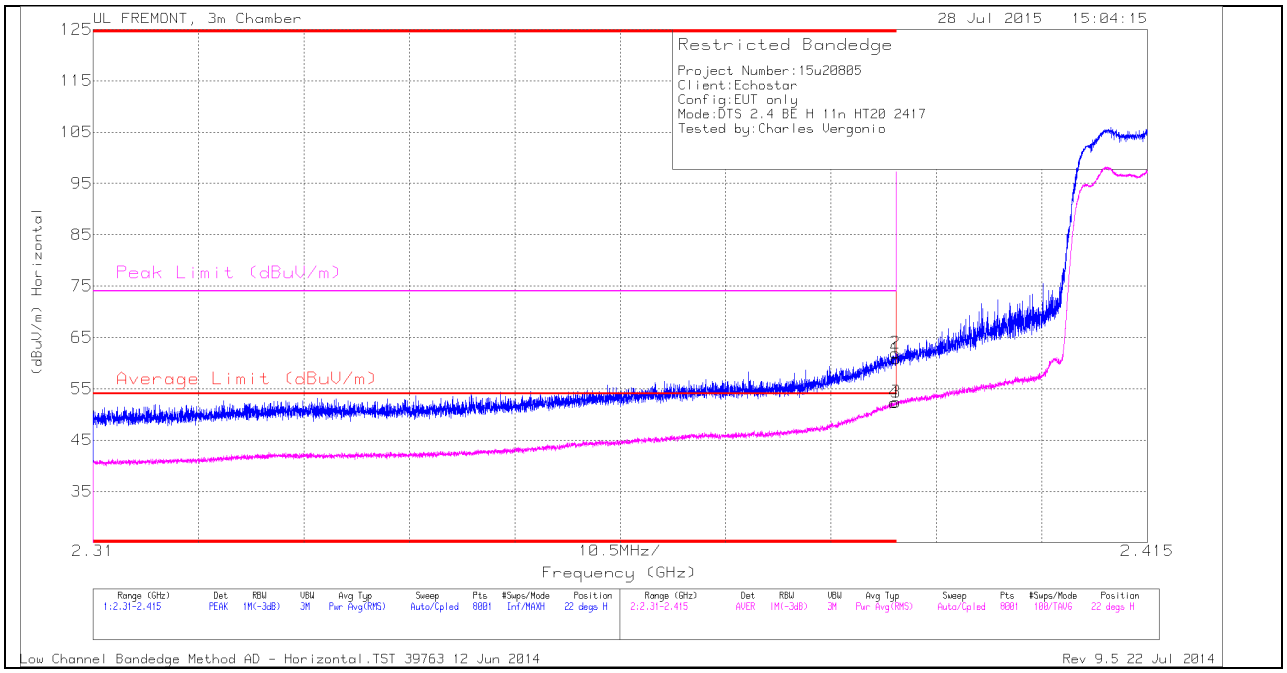


CH 1 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.39	52.65	PK	32	-22.4	0	62.25	-	-	74	-11.75	29	199	H
2	* 2.39	55.33	PK	32	-22.4	0	64.93	-	-	74	-9.07	29	199	H
3	* 2.39	42.9	RMS	32	-22.4	.22	52.72	54	-1.28	-	-	29	199	H
4	* 2.39	43.59	RMS	32	-22.4	.22	53.41	54	-.59	-	-	29	199	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

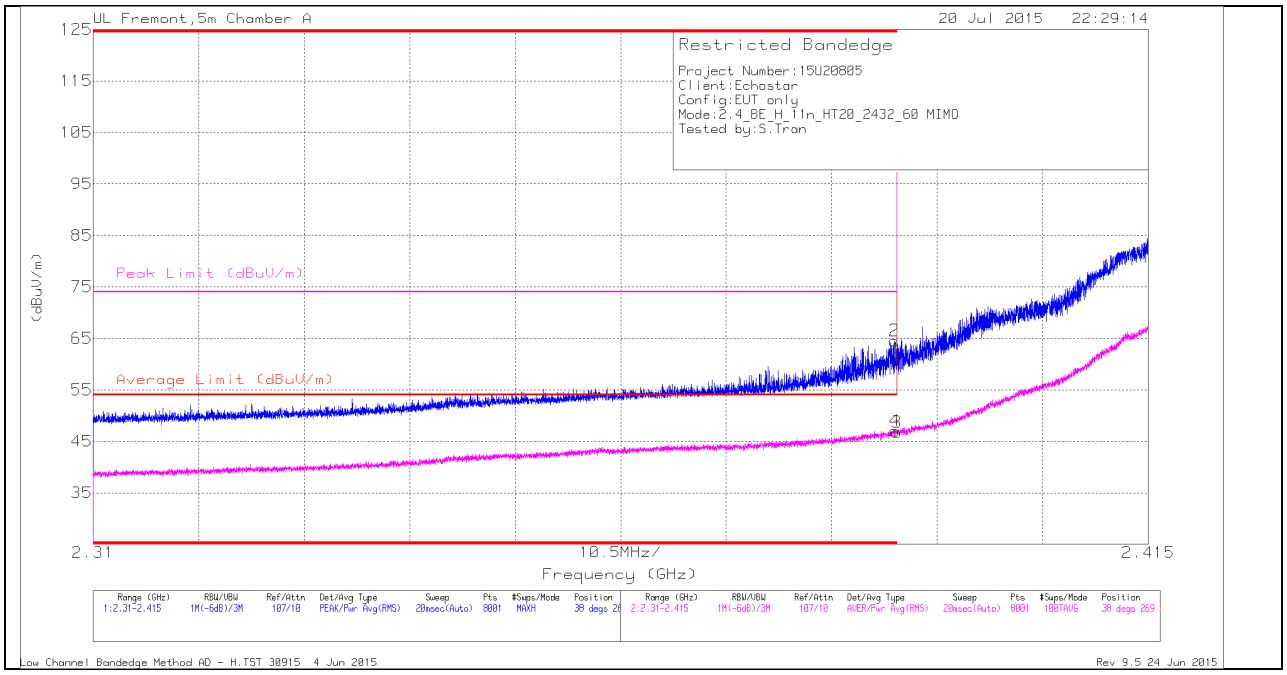


CH 2 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.39	51.29	PK	32	-22.4	0	60.89	-	-	74	-13.11	22	197	H
2	* 2.39	52.37	PK	32	-22.4	0	61.97	-	-	74	-12.03	22	197	H
3	* 2.39	42.6	RMS	32	-22.4	.22	52.42	54	-1.58	-	-	22	197	H
4	* 2.39	42.46	RMS	32	-22.4	.22	52.28	54	-1.72	-	-	22	197	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



CH5 HORIZONTAL DATA

Trace Markers

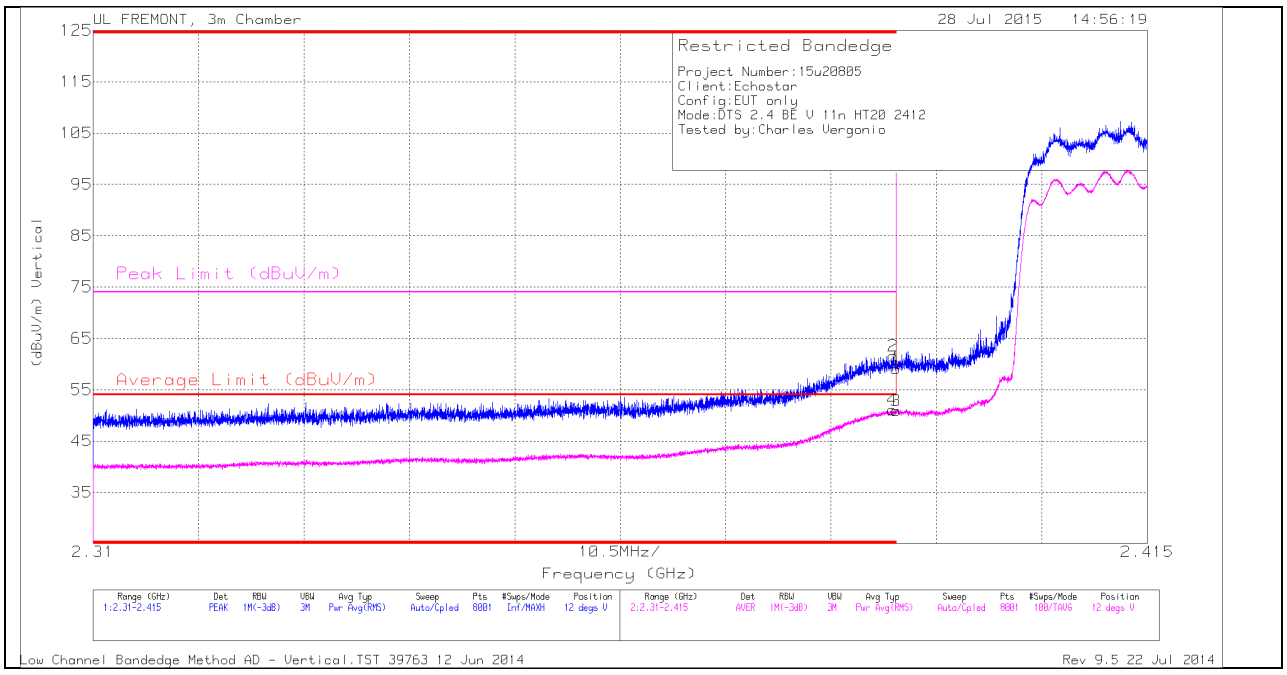
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	53.6	Pk	32	-24.6	0	61	-	-	74	-13	38	269	H
2	* 2.39	57.12	Pk	32	-24.6	0	64.52	-	-	74	-9.48	38	269	H
3	* 2.39	39.38	RMS	32	-24.6	.22	47	54	-7	-	-	38	269	H
4	* 2.39	39.6	RMS	32	-24.6	.22	47.22	54	-6.78	-	-	38	269	H

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

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT

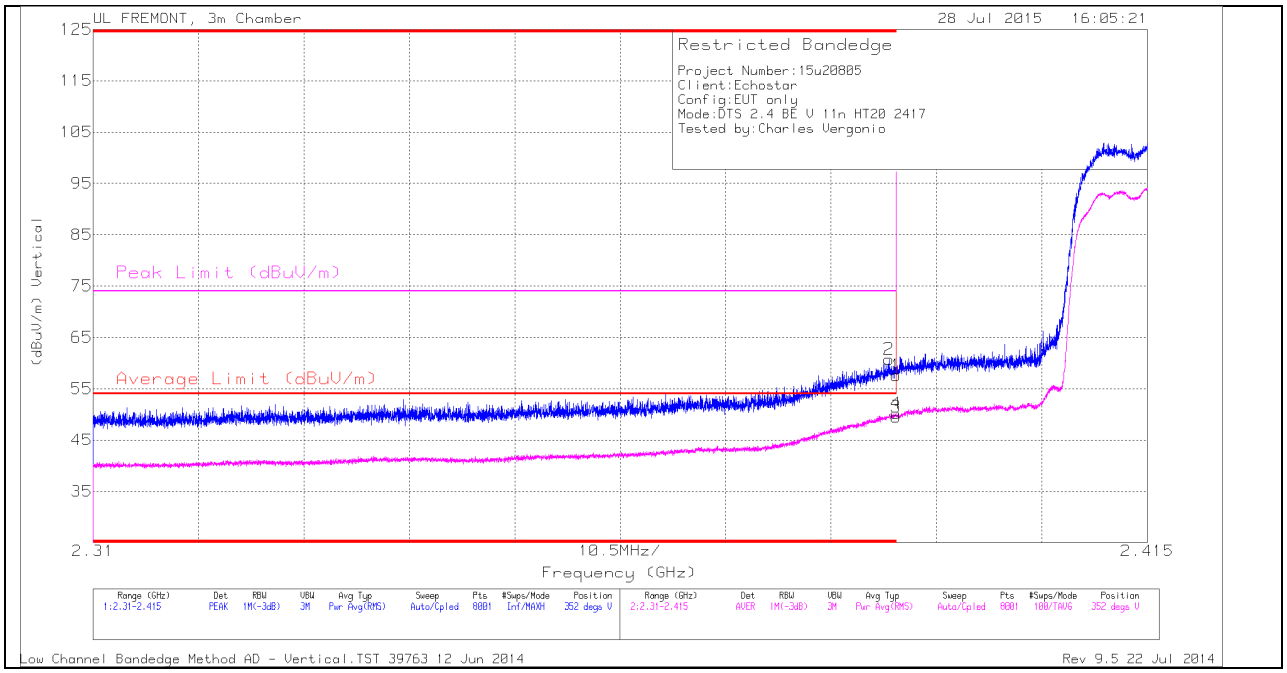


CH 1 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.39	49.54	PK	32	-22.4	0	59.14	-	-	74	-14.86	12	198	V
2	* 2.39	51.97	PK	32	-22.4	0	61.57	-	-	74	-12.43	12	198	V
3	* 2.39	41.09	RMS	32	-22.4	.22	50.91	54	-3.09	-	-	12	198	V
4	* 2.39	41.24	RMS	32	-22.4	.22	51.06	54	-2.94	-	-	12	198	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

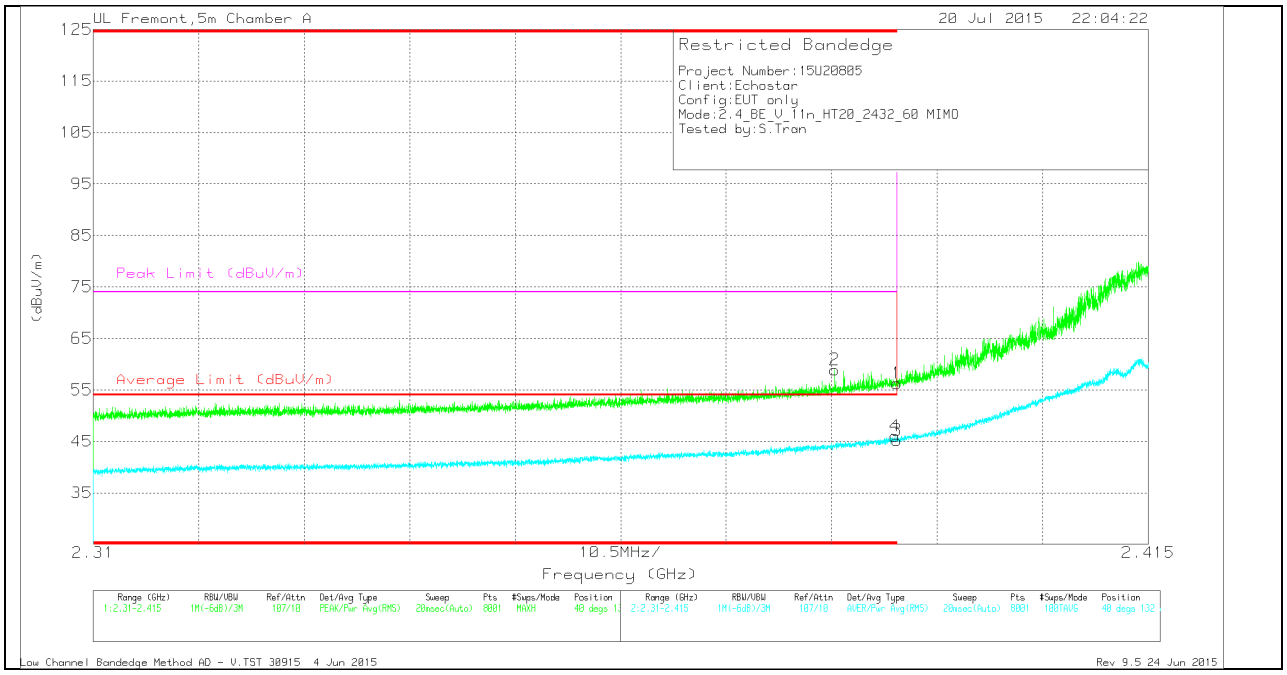


CH 2 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.39	48.01	PK	32	-22.4	0	57.61	-	-	74	-16.39	352	130	V
2	* 2.389	51.14	PK	32	-22.4	0	60.74	-	-	74	-13.26	352	130	V
3	* 2.39	39.7	RMS	32	-22.4	.22	49.52	54	-4.48	-	-	352	130	V
4	* 2.39	40.39	RMS	32	-22.4	.22	50.21	54	-3.79	-	-	352	130	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



CH 5 VERTICAL 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)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.384	51.6	Pk	31.9	-24.6	0	58.9	-	-	74	-15.1	40	132	V
1	* 2.39	48.86	Pk	32	-24.6	0	56.26	-	-	74	-17.74	40	132	V
3	* 2.39	37.61	RMS	32	-24.6	.22	45.23	54	-8.77	-	-	40	132	V
4	* 2.39	38.38	RMS	32	-24.6	.22	46	54	-8	-	-	40	132	V

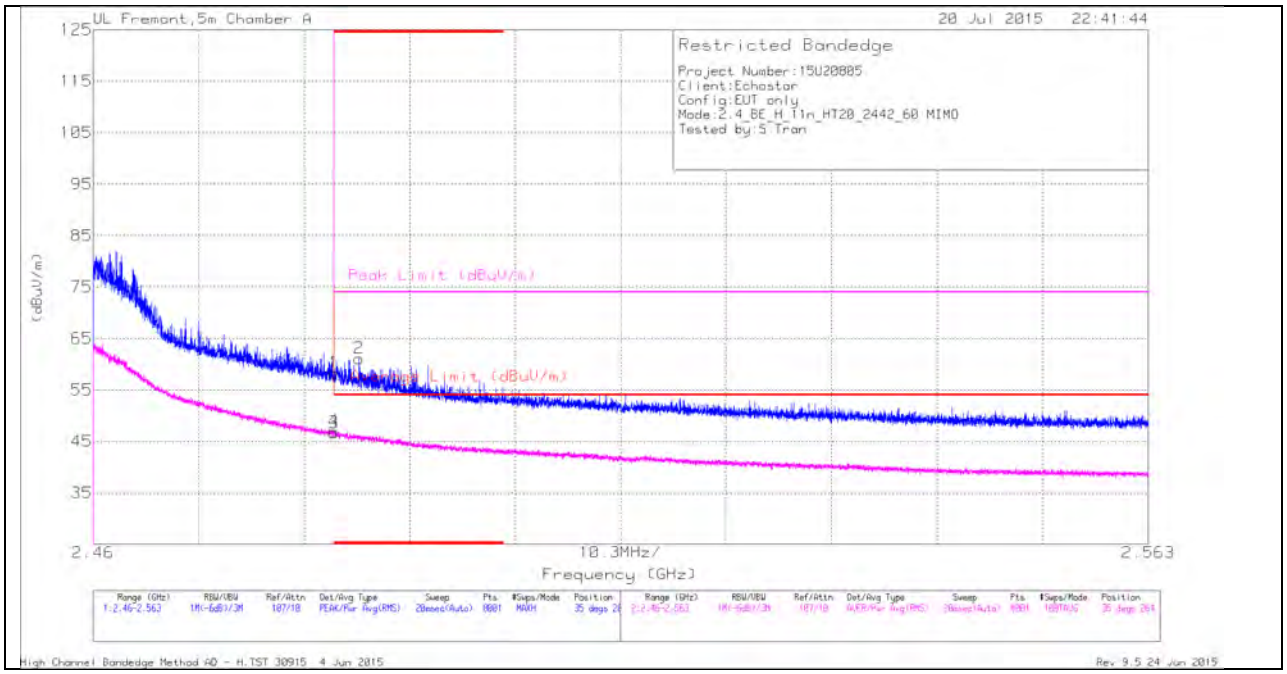
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



CH 7 HORIZONTAL DATA

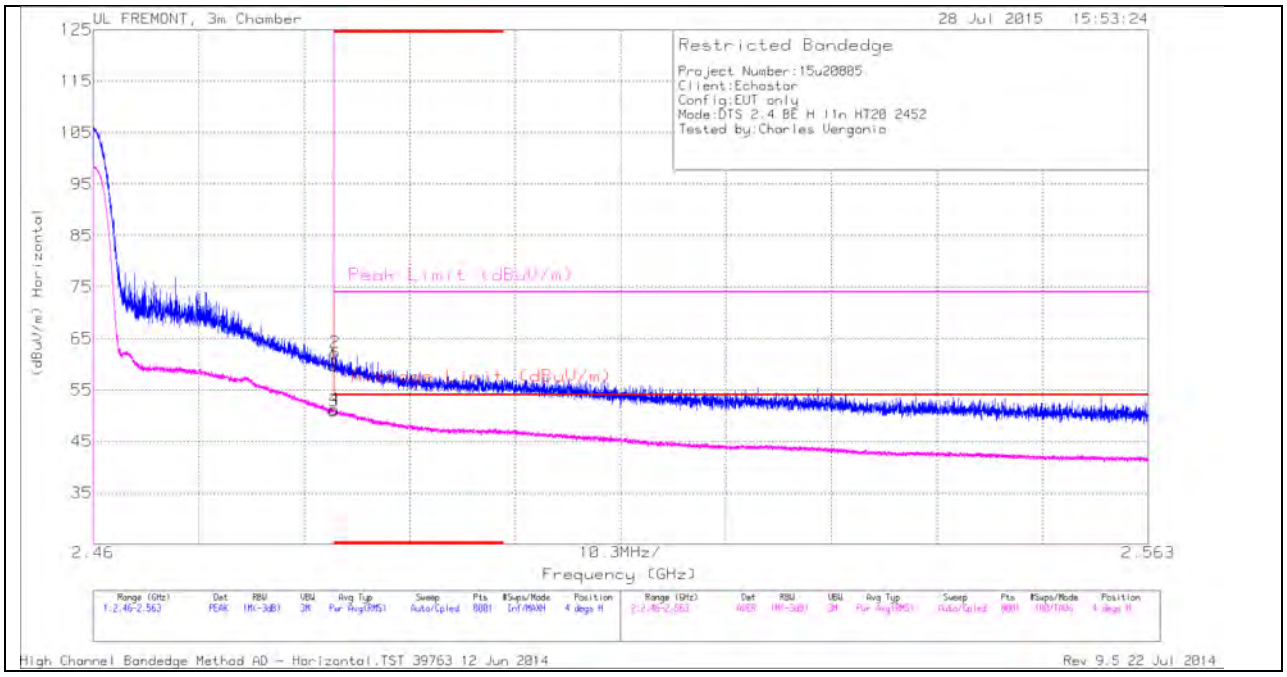
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	50.73	Pk	32.1	-24.5	0	58.33	-	-	74	-15.67	35	264	H
3	* 2.484	38.88	RMS	32.1	-24.5	.22	46.7	54	-7.3	-	-	35	264	H
4	* 2.484	39.12	RMS	32.1	-24.5	.22	46.94	54	-7.06	-	-	35	264	H
2	* 2.486	53.54	Pk	32.1	-24.5	0	61.14	-	-	74	-12.86	35	264	H

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

Pk - Peak detector

RMS - RMS detection

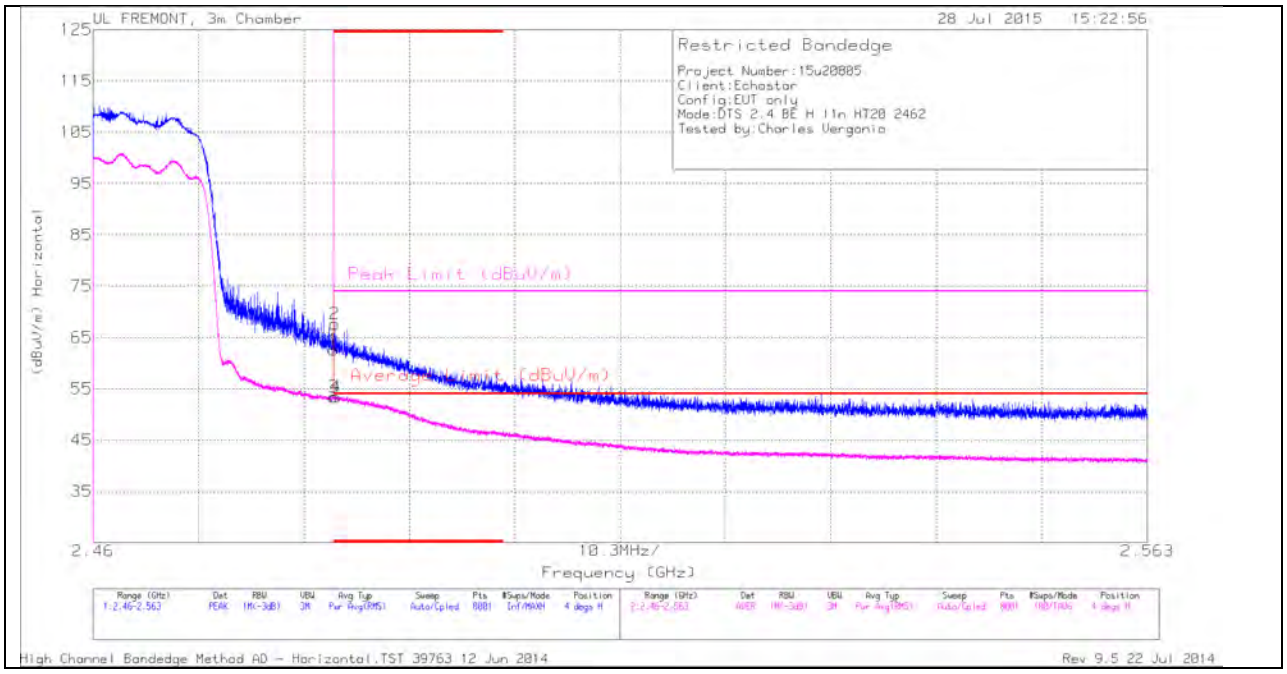


CH 9 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	49.58	PK	32.3	-22.1	0	59.78	-	-	74	-14.22	4	131	H
2	* 2.484	52.05	PK	32.3	-22.1	0	62.25	-	-	74	-11.75	4	131	H
3	* 2.484	40.53	RMS	32.3	-22.1	.22	50.95	54	-3.05	-	-	4	131	H
4	* 2.484	40.83	RMS	32.3	-22.1	.22	51.25	54	-2.75	-	-	4	131	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



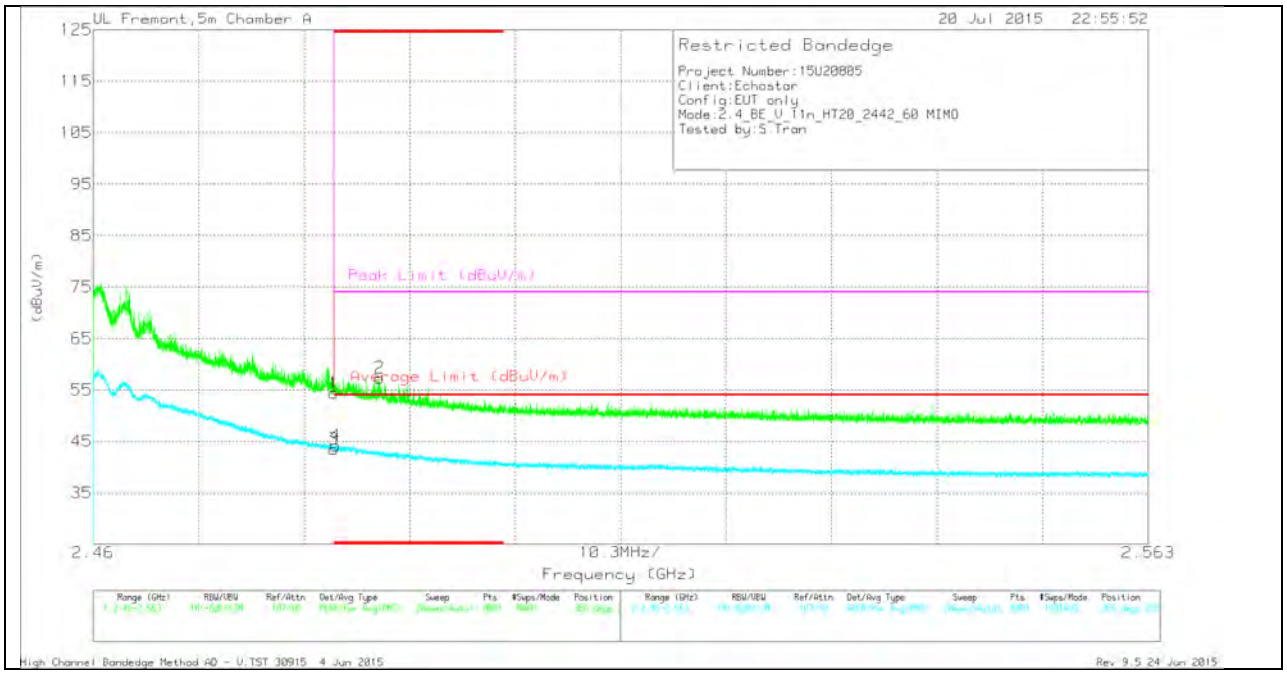
CH 11 HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	52.4	PK	32.3	-22.1	0	62.6	-	-	74	-11.4	4	132	H
2	* 2.484	57.43	PK	32.3	-22.1	0	67.63	-	-	74	-6.37	4	132	H
3	* 2.484	42.98	RMS	32.3	-22.1	.22	53.5	54	-.5	-	-	4	132	H
4	* 2.484	43.04	RMS	32.3	-22.1	.22	53.46	54	-.54	-	-	4	132	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



CH 7 VERTICAL DATA

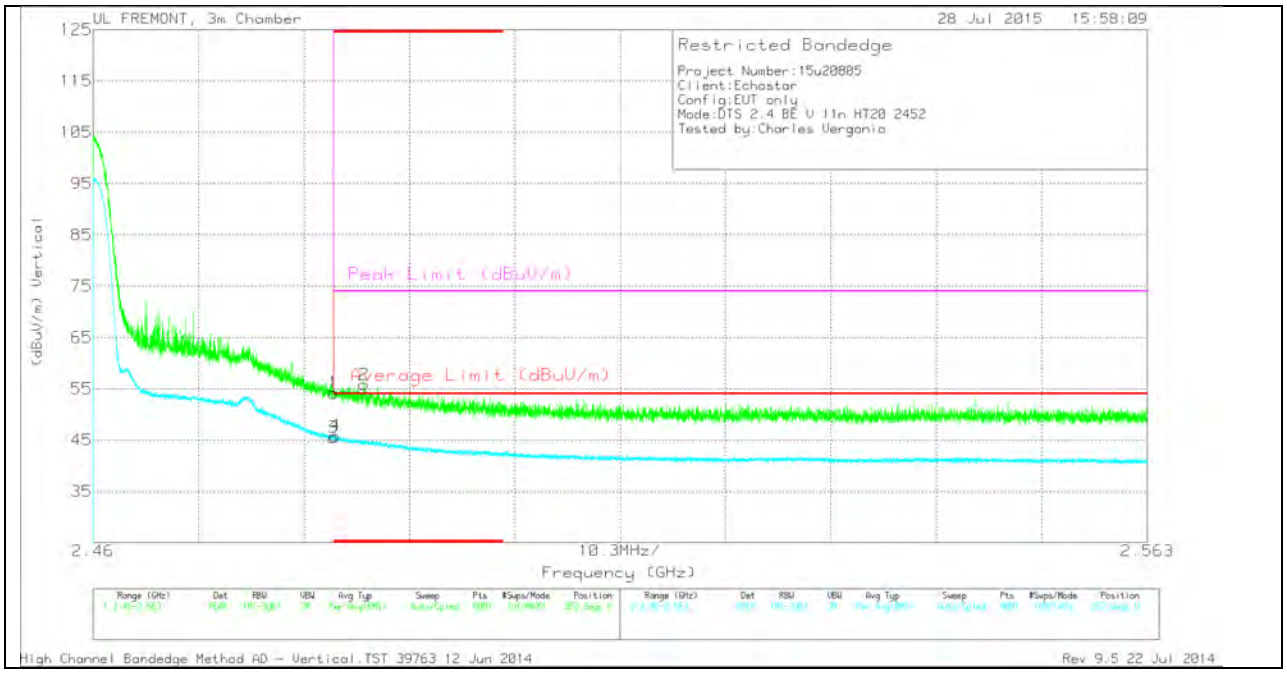
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	46.84	Pk	32.1	-24.5	0	54.44	-	-	74	-19.56	356	255	V
3	* 2.484	35.67	RMS	32.1	-24.5	.22	43.49	54	-10.51	-	-	356	255	V
4	* 2.484	36.35	RMS	32.1	-24.5	.22	44.17	54	-9.83	-	-	356	255	V
2	* 2.488	49.72	Pk	32.1	-24.5	0	57.32	-	-	74	-16.68	356	255	V

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

Pk - Peak detector

RMS - RMS detection

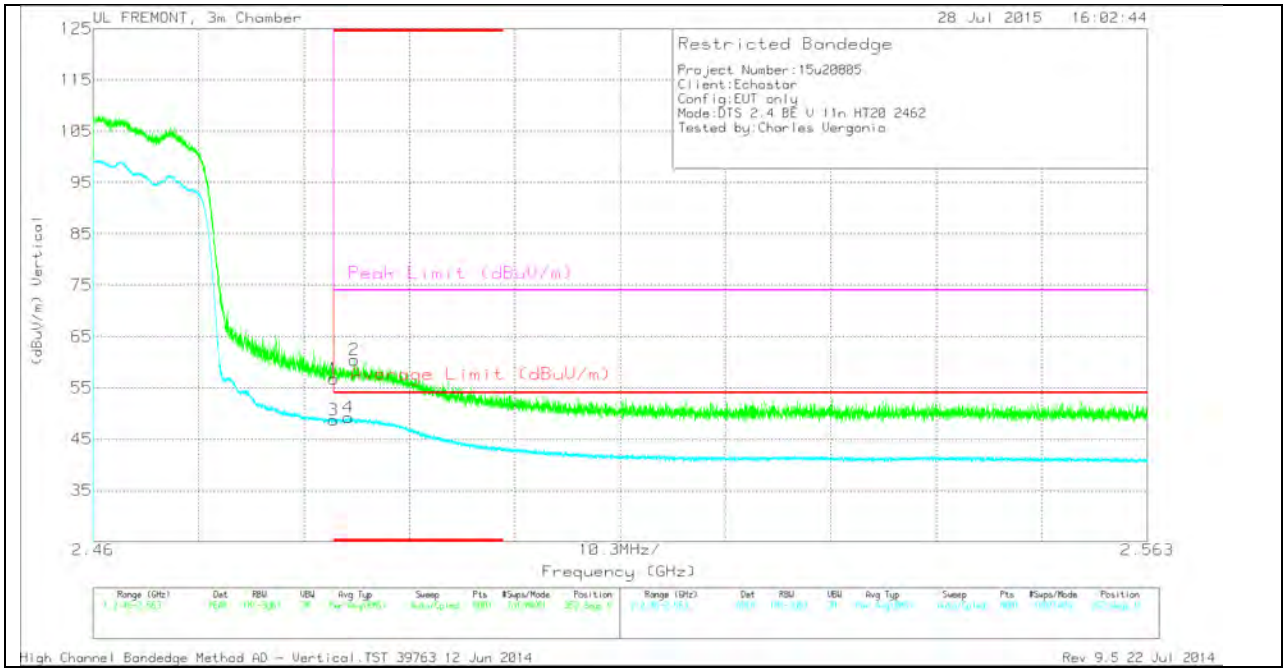


CH 9 VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	43.98	PK	32.3	-22.1	0	54.18	-	-	74	-19.82	352	130	V
2	* 2.486	45.7	PK	32.3	-22.2	0	55.8	-	-	74	-18.2	352	130	V
3	* 2.484	35.09	RMS	32.3	-22.1	.22	45.51	54	-8.49	-	-	352	130	V
4	* 2.484	35.45	RMS	32.3	-22.1	.22	45.87	54	-8.13	-	-	352	130	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



CH 11 VERTICAL DATA

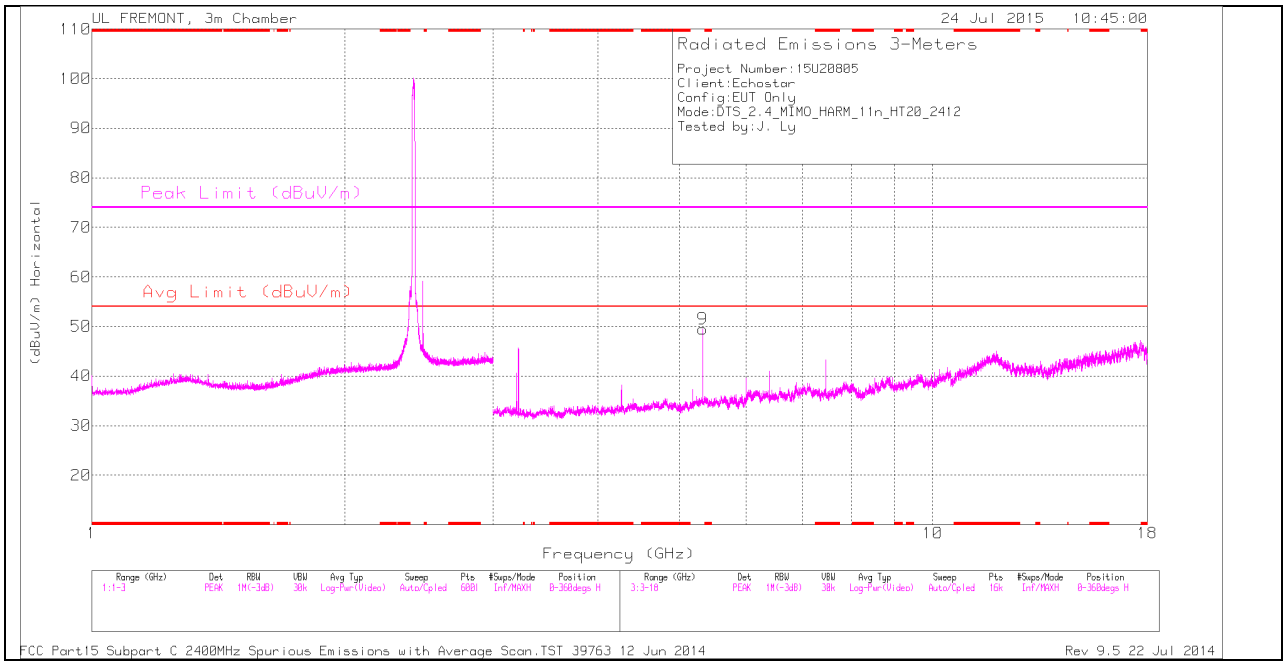
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	46.56	PK	32.3	-22.1	0	56.76	-	-	74	-17.24	352	130	V
2	* 2.486	50.23	PK	32.3	-22.1	0	60.43	-	-	74	-13.57	352	130	V
3	* 2.484	38.32	RMS	32.3	-22.1	.22	48.74	54	-5.26	-	-	352	130	V
4	* 2.485	38.82	RMS	32.3	-22.1	.22	49.24	54	-4.76	-	-	352	130	V

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

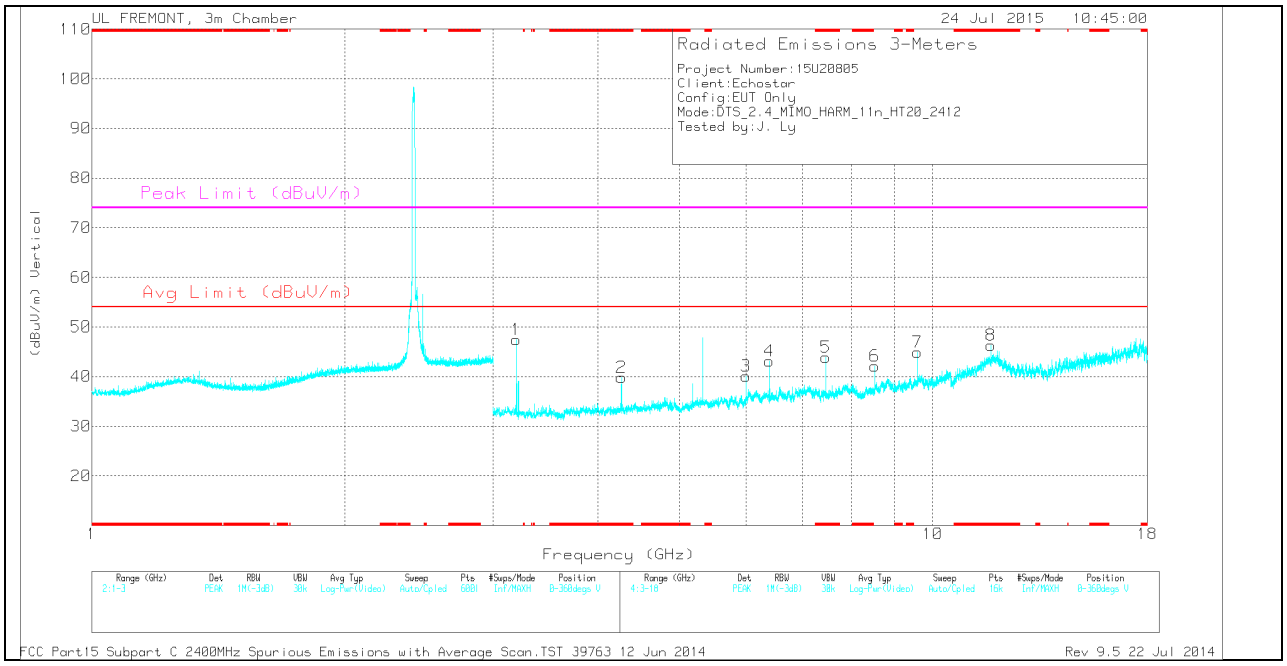
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
2	* 4.264	37.06	PK	33.4	-30.6	0	39.86	-	-	74	-34.14	0-360	100	V
5	* 7.461	36.27	PK	35.7	-28.1	0	43.87	-	-	74	-30.13	0-360	100	V
8	* 11.726	29.33	PK	38.9	-21.9	0	46.33	-	-	74	-27.67	0-360	100	V
1	3.198	45.4	PK	32.6	-30.5	0	47.5	-	-	-	-	0-360	100	V
9	5.33	44.05	PK	34.5	-29.1	0	49.45	-	-	-	-	0-360	100	H
3	6	34.54	PK	35.2	-29.6	0	40.14	-	-	-	-	0-360	200	V
4	6.395	36.12	PK	35.5	-28.5	0	43.12	-	-	-	-	0-360	100	V
6	8.527	33.35	PK	35.8	-27	0	42.15	-	-	-	-	0-360	100	V
7	9.593	32.6	PK	36.7	-24.4	0	44.9	-	-	-	-	0-360	100	V

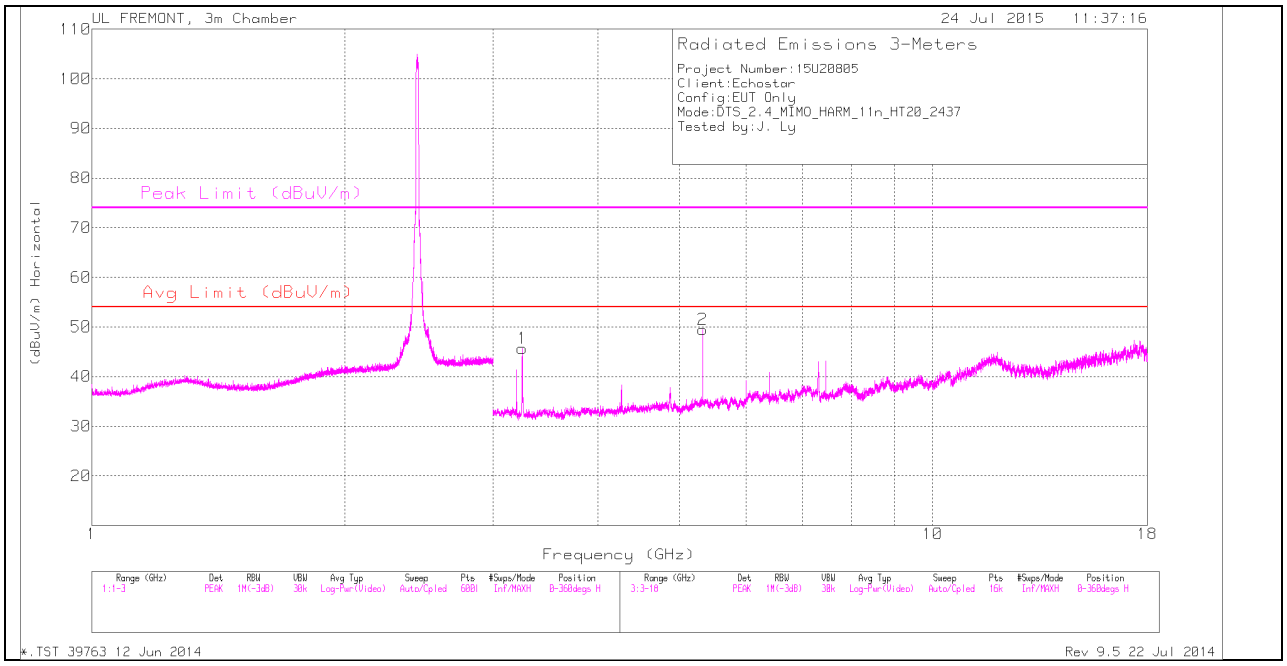
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

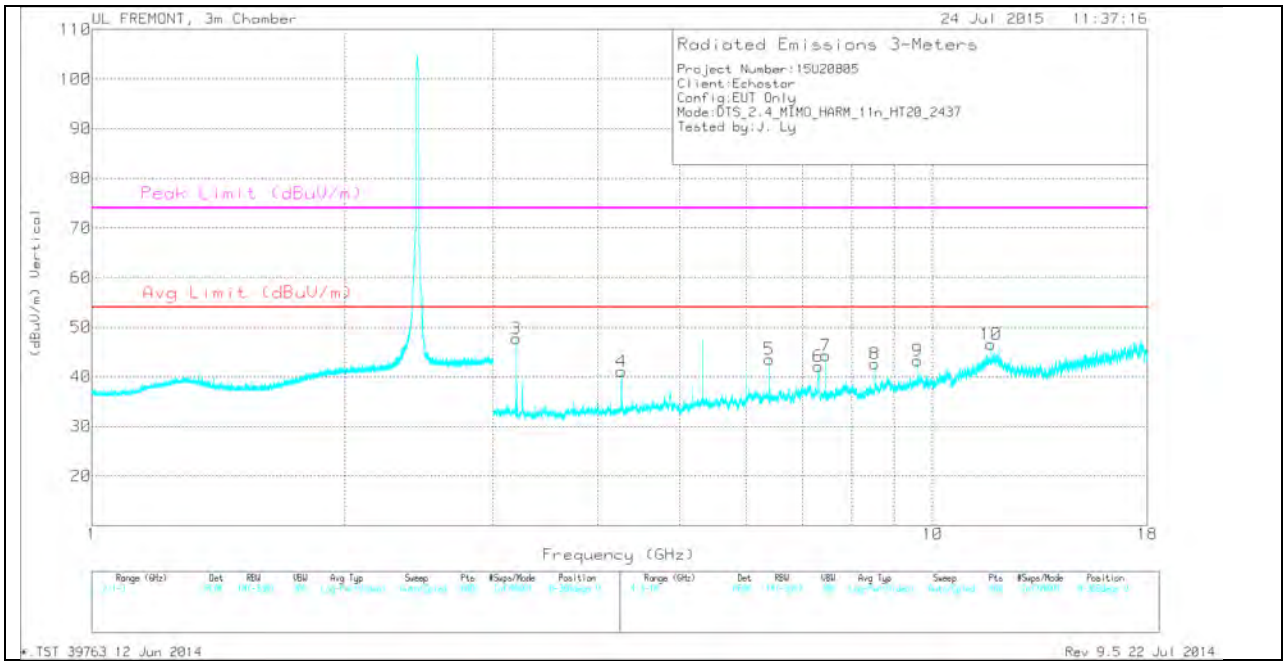
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.264	44.39	PK2	33.4	-30.6	0	47.19	-	-	74	-26.81	243	108	V
* 4.264	37.83	MAv1	33.4	-30.6	.22	40.88	54	-13.12	-	-	243	108	V
* 7.462	43.52	PK2	35.7	-28.1	0	51.12	-	-	74	-22.88	180	100	V
* 7.462	37.61	MAv1	35.7	-28.1	.22	45.46	54	-8.54	-	-	180	100	V
* 11.725	38.54	PK2	38.9	-22	0	55.44	-	-	74	-18.56	12	120	V
* 11.725	29.68	MAv1	38.9	-21.9	.22	46.93	54	-7.07	-	-	12	120	V
3.198	49.35	PK2	32.6	-30.5	0	51.45	-	-	74	-22.55	235	144	V
5.329	47.68	PK2	34.5	-29.1	0	53.08	-	-	74	-20.92	29	101	H
6	42.28	PK2	35.2	-29.6	0	47.88	-	-	74	-26.12	280	369	V
6.396	42.57	PK2	35.5	-28.5	0	49.57	-	-	74	-24.43	254	107	V
8.528	40.66	PK2	35.8	-27	0	49.46	-	-	74	-24.54	144	100	V
9.593	39.01	PK2	36.7	-24.4	0	51.31	-	-	74	-22.69	303	104	V

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
3	3.198	45.63	PK	32.6	-30.5	0	47.73	-	-	-	-	0-360	100	V
1	3.249	43.93	PK	32.6	-30.9	0	45.63	-	-	-	-	0-360	200	H
4	4.264	38.32	PK	33.4	-30.6	0	41.12	-	-	74	-32.88	0-360	100	V
2	5.33	44.08	PK	34.5	-29.1	0	49.48	-	-	-	-	0-360	100	H
5	6.395	36.58	PK	35.5	-28.5	0	43.58	-	-	-	-	0-360	100	V
6	7.307	34.15	PK	35.6	-27.6	0	42.15	-	-	74	-31.85	0-360	100	V
7	7.461	36.73	PK	35.7	-28.1	0	44.33	-	-	74	-29.67	0-360	100	V
8	8.527	33.79	PK	35.8	-27	0	42.59	-	-	-	-	0-360	100	V
9	9.593	30.91	PK	36.7	-24.4	0	43.21	-	-	-	-	0-360	100	V
10	11.726	29.51	PK	38.9	-21.9	0	46.51	-	-	74	-27.49	0-360	100	V

PK - Peak detector

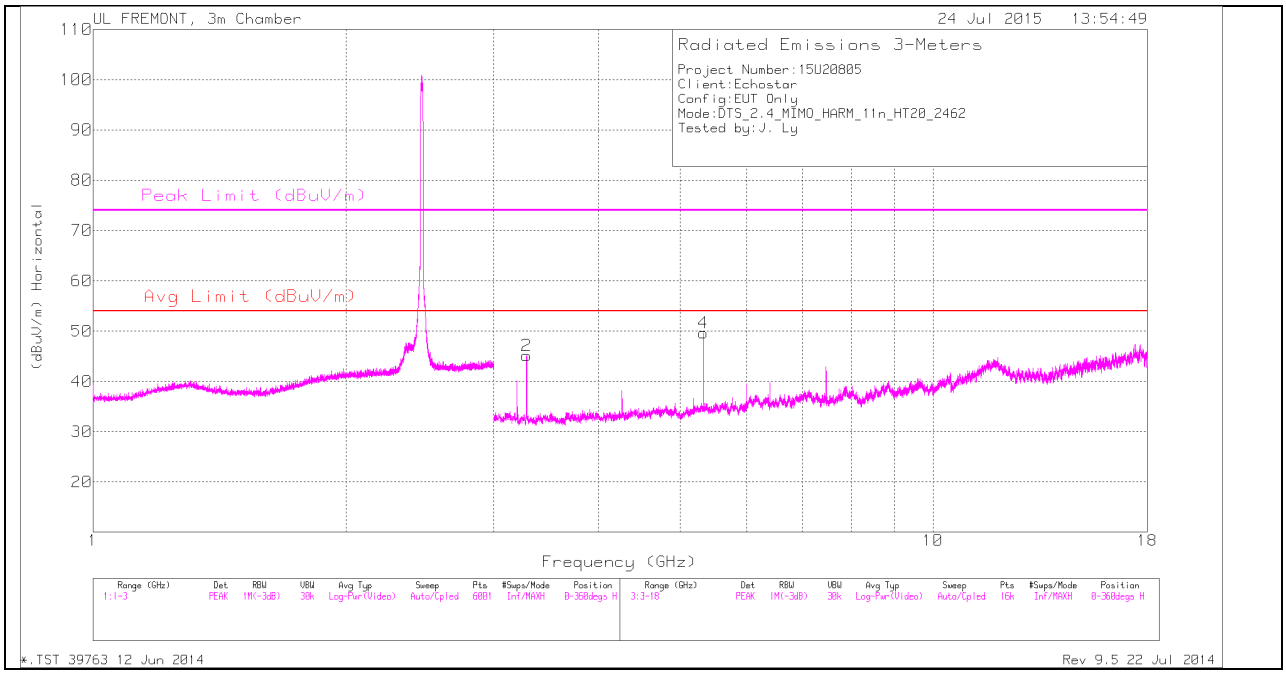
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
3.198	43.76	PK2	32.6	-30.5	0	48.86	-	-	74	-25.14	31	106	V
3.249	49.2	PK2	32.6	-30.9	0	45.9	-	-	74	-28.1	338	183	H
4.264	41.43	PK2	33.4	-30.6	0	41.23	-	-	74	-32.33	137	77	V
4.264	31.07	MAv1	33.4	-30.6	.22	34.09	54	-19.91	-	-	137	77	V
5.33	47.45	PK2	34.5	-29.1	0	50.85	-	-	74	-23.15	253	125	H
6.396	40.13	PK2	35.5	-28.5	0	43.13	-	-	74	-30.87	99	169	V
7.307	27.41	MAv1	35.6	-27.5	.22	35.73	54	-18.27	-	-	62	221	V
7.308	38.65	PK2	35.6	-27.5	0	43.75	-	-	74	-30.25	62	221	V
7.461	39.77	PK2	35.7	-28.1	0	41.37	-	-	74	-32.63	145	195	V
7.462	29.64	MAv1	35.7	-28.1	.22	37.46	54	-16.54	-	-	145	195	V
8.528	37.89	PK2	35.8	-27	0	44.69	-	-	74	-29.31	227	351	V
9.593	36.21	PK2	36.7	-24.4	0	48.51	-	-	74	-25.49	310	175	V
11.724	24.81	MAv1	38.8	-22	.22	39.83	54	-12.17	-	-	118	264	V
11.726	36.66	PK2	38.9	-21.9	0	43.66	-	-	74	-30.34	118	264	V

PK2 - KDB558074 Method: Maximum Peak

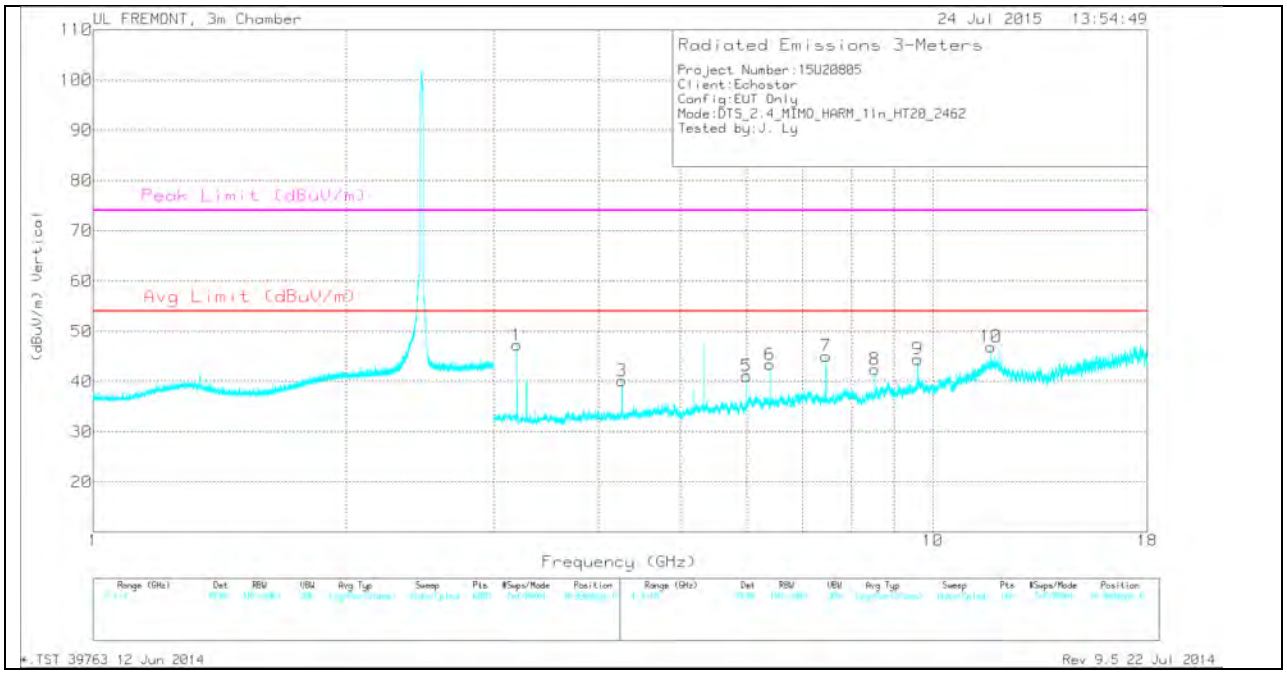
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
1	3.198	45.15	PK	32.6	-30.5	0	47.25	-	-	-	-	0-360	100	V
2	3.283	43.46	PK	32.6	-30.9	0	45.16	-	-	-	-	0-360	200	H
3	4.264	37.38	PK	33.4	-30.6	0	40.18	-	-	74	-33.82	0-360	100	V
4	5.33	44.22	PK	34.5	-29.1	0	49.62	-	-	-	-	0-360	100	H
5	6	35.5	PK	35.2	-29.6	0	41.1	-	-	-	-	0-360	200	V
6	6.395	36.38	PK	35.5	-28.5	0	43.38	-	-	-	-	0-360	100	V
7	7.461	37.48	PK	35.7	-28.1	0	45.08	-	-	74	-28.92	0-360	100	V
8	8.527	33.63	PK	35.8	-27	0	42.43	-	-	-	-	0-360	100	V
9	9.593	32.16	PK	36.7	-24.4	0	44.46	-	-	-	-	0-360	100	V
10	11.726	29.95	PK	38.9	-21.9	0	46.95	-	-	74	-27.05	0-360	100	V

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
3.198	49.37	PK2	32.6	-30.5	0	51.47	-	-	74	-22.53	236	144	V
3.283	48.56	PK2	32.6	-30.9	0	50.26	-	-	74	-23.74	338	260	H
4.264	44.37	PK2	33.4	-30.6	0	47.17	-	-	74	-26.83	323	121	V
4.264	38.21	MAv1	33.4	-30.6	.22	41.23	54	-12.77	-	-	323	121	V
5.33	47.46	PK2	34.5	-29.1	0	52.86	-	-	74	-21.14	31	100	H
6	42.72	PK2	35.2	-29.5	0	48.42	-	-	74	-25.58	278	219	V
6.395	42.68	PK2	35.5	-28.5	0	49.68	-	-	74	-24.32	255	105	V
7.461	42.64	PK2	35.7	-28.1	0	50.24	-	-	74	-23.76	184	118	V
7.462	35.85	MAv1	35.7	-28.1	.22	43.67	54	-10.33	-	-	184	118	V
8.527	40.58	PK2	35.8	-27	0	49.38	-	-	74	-24.62	145	100	V
9.594	39.18	PK2	36.7	-24.4	0	51.48	-	-	74	-22.52	304	106	V
11.725	38.82	PK2	38.9	-21.9	0	55.82	-	-	74	-18.18	14	100	V
11.725	29.37	MAv1	38.9	-21.9	.22	46.59	54	-7.41	-	-	14	100	V

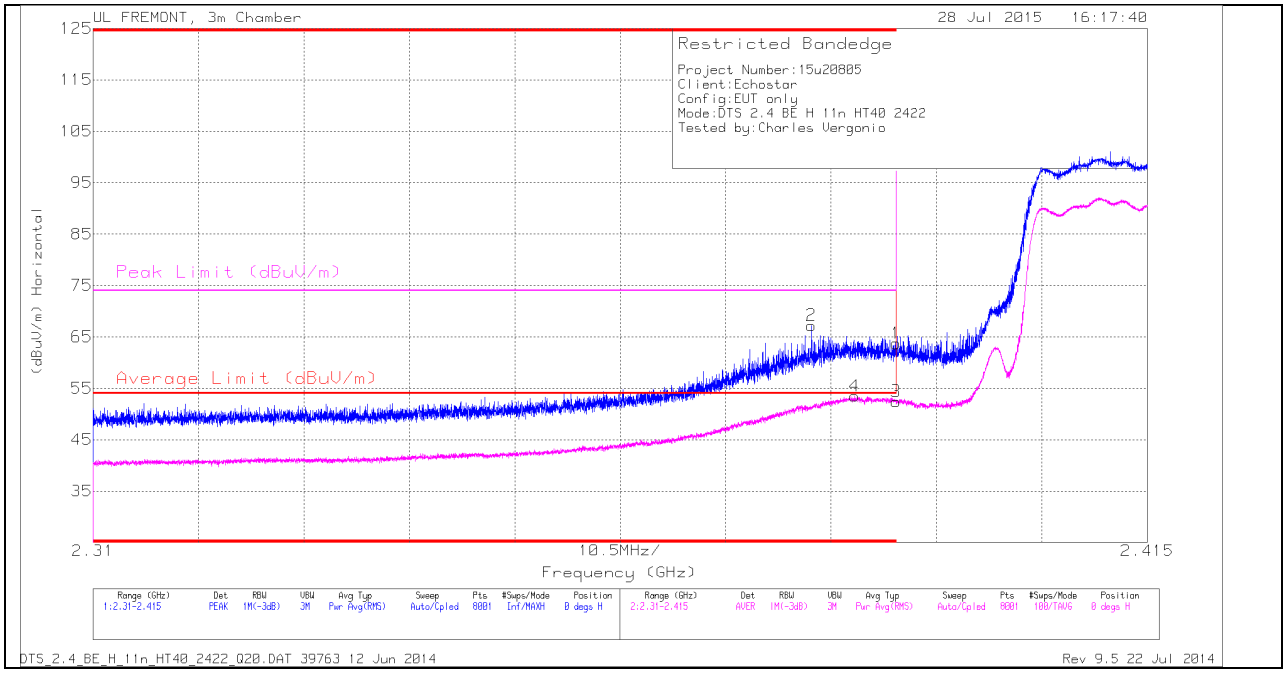
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

12.1.2. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



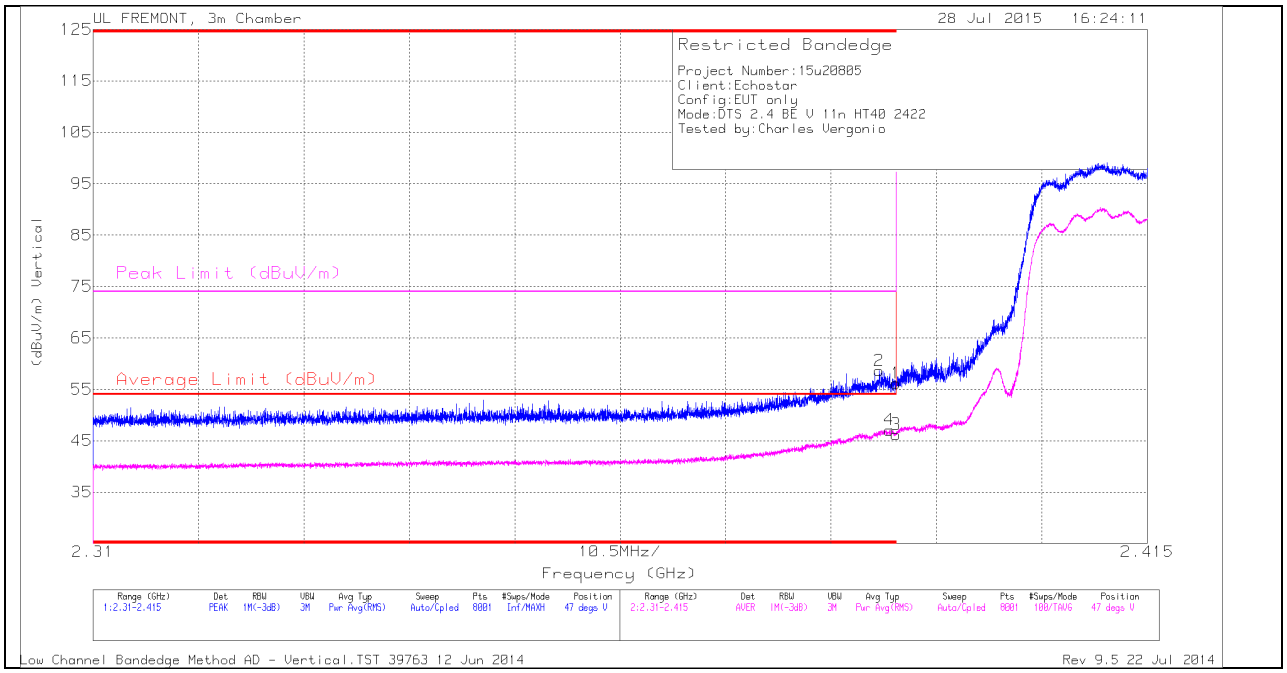
HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.382	57.63	PK	32	-22.4	0	67.23	-	-	74	-6.77	0	190	H
4	* 2.386	43.45	RMS	32	-22.4	.43	53.48	54	-.52	-	-	0	190	H
1	* 2.39	54.13	PK	32	-22.4	0	63.73	-	-	74	-10.27	0	190	H
3	* 2.39	42.39	RMS	32	-22.4	.43	52.42	54	-1.58	-	-	0	190	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

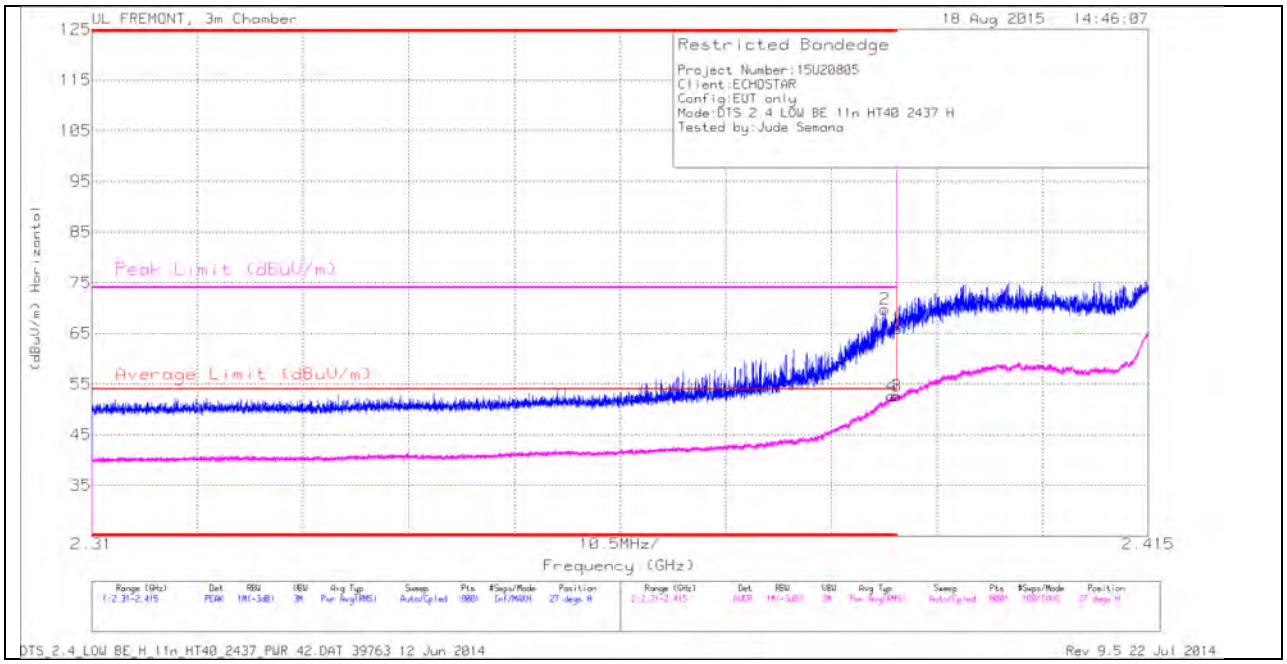
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.39	46.59	PK	32	-22.4	0	56.19	-	-	74	-17.81	47	171	V
2	* 2.388	49.03	PK	32	-22.4	0	58.63	-	-	74	-15.37	47	171	V
3	* 2.39	36.16	RMS	32	-22.4	.43	46.19	54	-7.81	-	-	47	171	V
4	* 2.389	37.06	RMS	32	-22.4	.43	47.09	54	-6.91	-	-	47	171	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

LOW BANDEDGE (MID CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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	* 2.389	60.16	PK	32	-22.4	0	69.76	-	-	74	-4.24	27	349	H
1	* 2.39	56.31	PK	32	-22.4	0	65.91	-	-	74	-8.09	27	349	H
3	* 2.39	43.01	RMS	32	-22.4	0	52.61	54	-1.39	-	-	27	349	H
4	* 2.39	43	RMS	32	-22.4	0	52.6	54	-1.4	-	-	27	349	H

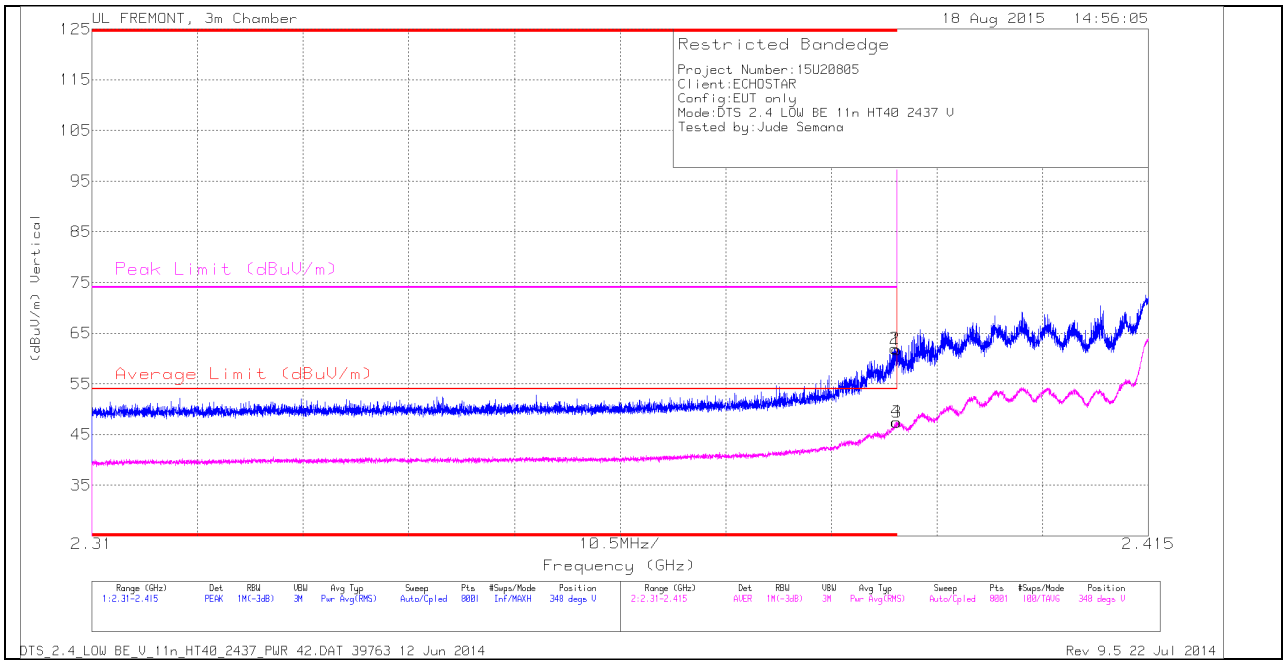
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

LOW BANDEDGE (MID CHANNEL)

VERTICAL PEAK AND AVERAGE PLOT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.39	52.14	PK	32	-22.4	0	61.74	-	-	74	-12.26	348	384	V
2	* 2.39	52.34	PK	32	-22.4	0	61.94	-	-	74	-12.06	348	384	V
3	* 2.39	37.8	RMS	32	-22.4	0	47.4	54	-6.6	-	-	348	384	V
4	* 2.39	37.9	RMS	32	-22.4	0	47.5	54	-6.5	-	-	348	384	V

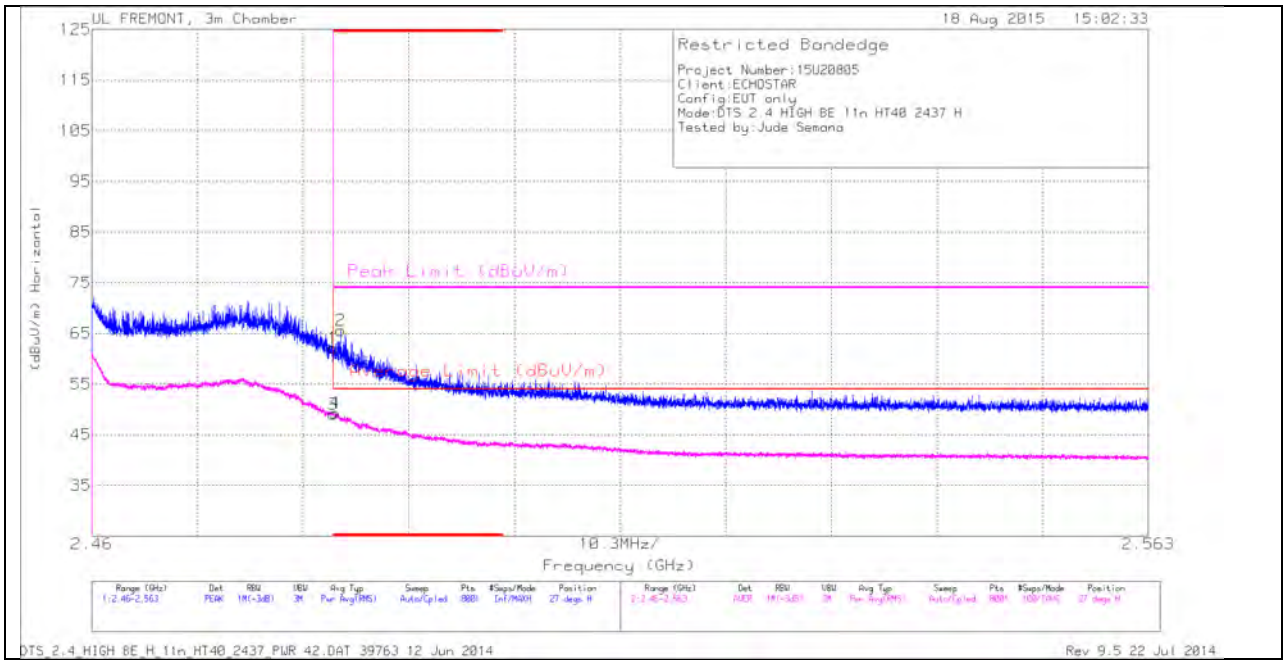
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

HIGH BANDEDGE (MID CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	51.84	PK	32.3	-22.1	0	62.04	-	-	74	-11.96	27	173	H
2	* 2.484	55.38	PK	32.3	-22.1	0	65.58	-	-	74	-8.42	27	173	H
3	* 2.484	38.8	RMS	32.3	-22.1	0	49	54	-5	-	-	27	173	H
4	* 2.484	39.15	RMS	32.3	-22.1	0	49.35	54	-4.65	-	-	27	173	H

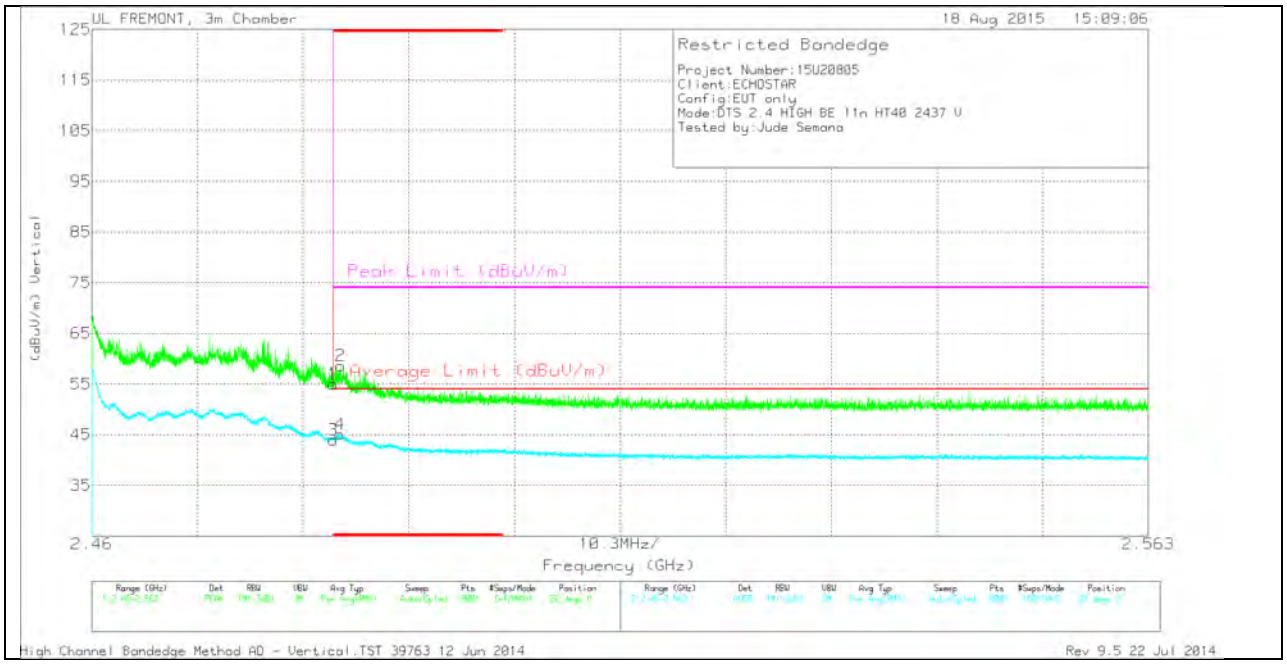
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

LOW BANDEDGE (MID CHANNEL)

VERTICAL PEAK AND AVERAGE PLOT



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	44.77	PK	32.3	-22.1	0	54.97	-	-	74	-19.03	22	173	V
2	* 2.484	48.37	PK	32.3	-22.1	0	58.57	-	-	74	-15.43	22	173	V
3	* 2.484	33.81	RMS	32.3	-22.1	0	44.01	54	-9.99	-	-	22	173	V
4	* 2.484	34.92	RMS	32.3	-22.1	0	45.12	54	-8.88	-	-	22	173	V

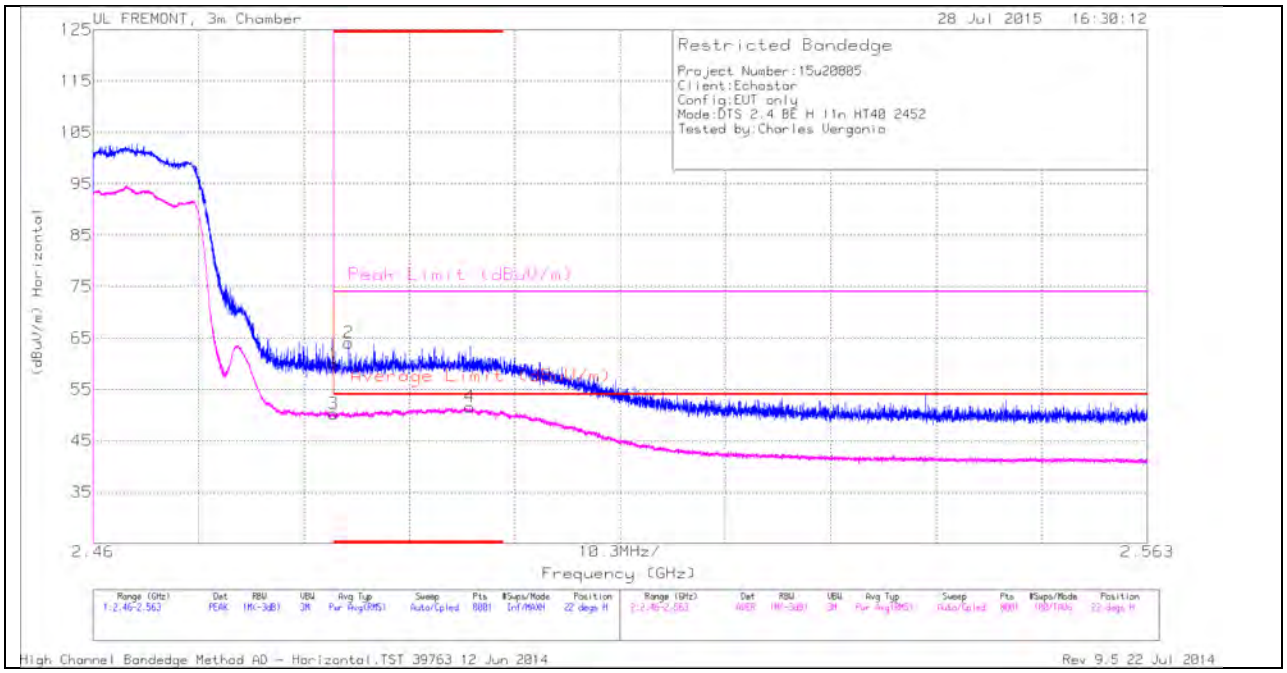
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



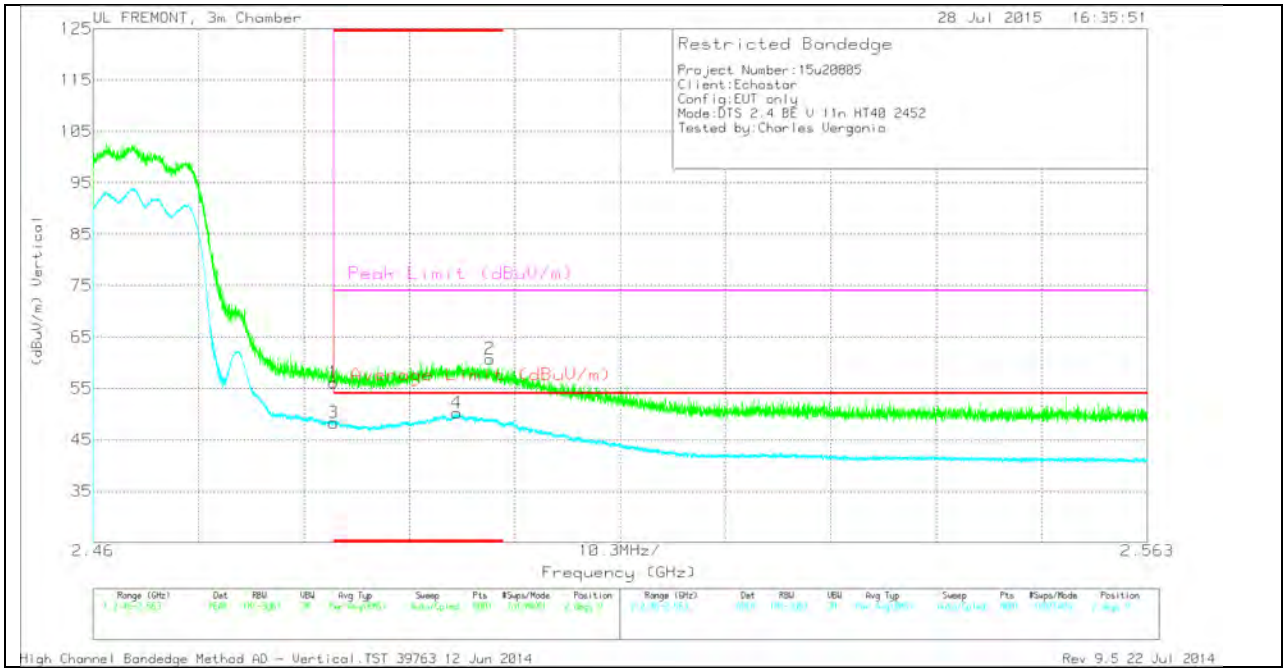
HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	49.75	PK	32.3	-22.1	0	59.95	-	-	74	-14.05	22	143	H
3	* 2.484	39.66	RMS	32.3	-22.1	.43	50.29	54	-3.71	-	-	22	143	H
2	* 2.485	53.89	PK	32.3	-22.1	0	64.09	-	-	74	-9.91	22	143	H
4	* 2.497	40.97	RMS	32.3	-22.1	.43	51.6	54	-2.4	-	-	22	143	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

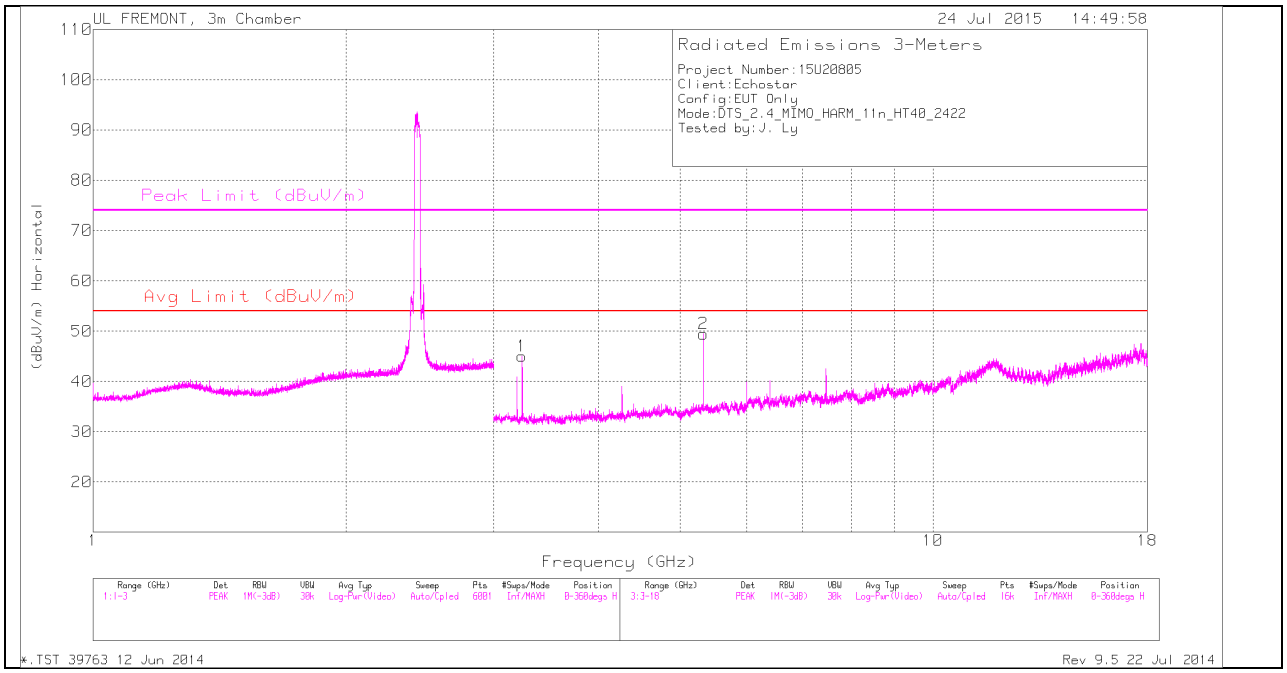
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
1	* 2.484	45.91	PK	32.3	-22.1	0	56.11	-	-	74	-17.89	2	230	V
3	* 2.484	37.69	RMS	32.3	-22.1	.43	48.32	54	-5.68	-	-	2	230	V
4	* 2.496	39.61	RMS	32.3	-22.1	.43	50.24	54	-3.76	-	-	2	230	V
2	* 2.499	50.56	PK	32.3	-22.1	0	60.76	-	-	74	-13.24	2	230	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

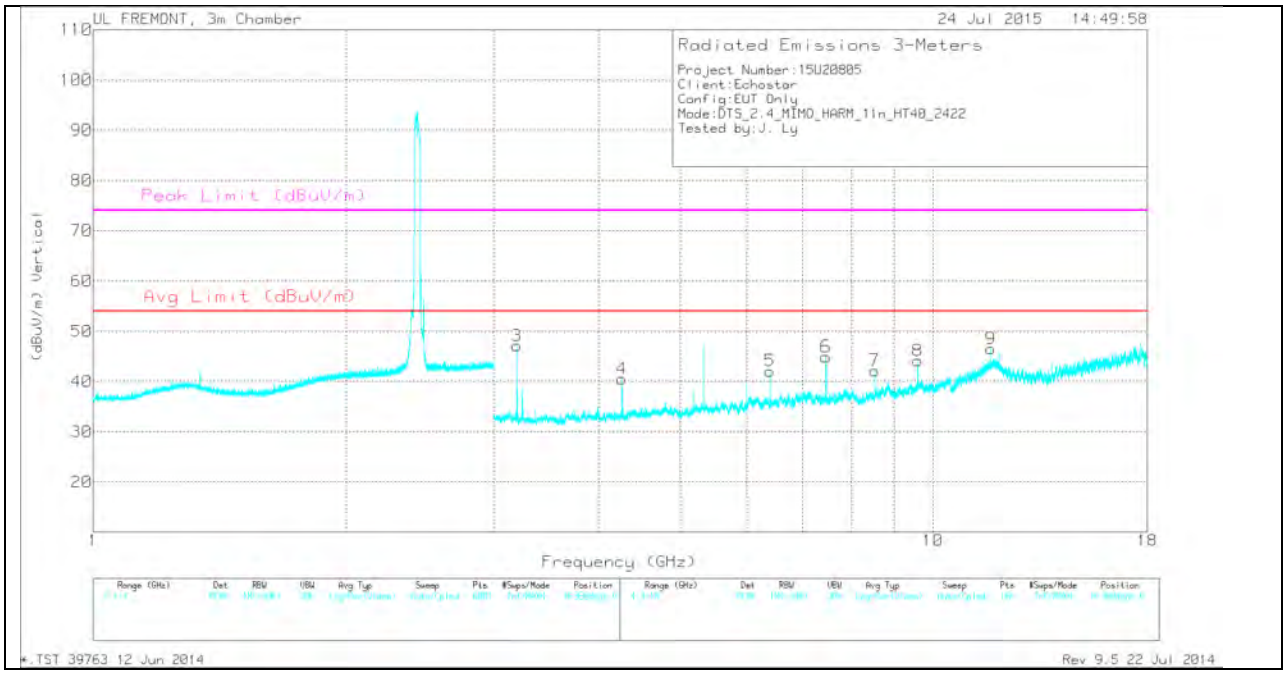
HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
3	3.198	45.04	PK	32.6	-30.5	0	47.14	-	-	-	-	0-360	100	V
1	3.243	43.31	PK	32.6	-30.9	0	45.01	-	-	-	-	0-360	200	H
4	4.264	37.71	PK	33.4	-30.6	0	40.51	-	-	74	-33.49	0-360	100	V
2	5.33	44.07	PK	34.5	-29.1	0	49.47	-	-	-	-	0-360	100	H
5	6.395	35.09	PK	35.5	-28.5	0	42.09	-	-	-	-	0-360	100	V
6	7.461	37.32	PK	35.7	-28.1	0	44.92	-	-	74	-29.08	0-360	100	V
7	8.527	33.37	PK	35.8	-27	0	42.17	-	-	-	-	0-360	100	V
8	9.593	31.82	PK	36.7	-24.4	0	44.12	-	-	-	-	0-360	100	V
9	11.726	29.53	PK	38.9	-21.9	0	46.53	-	-	74	-27.47	0-360	100	V

PK - Peak detector

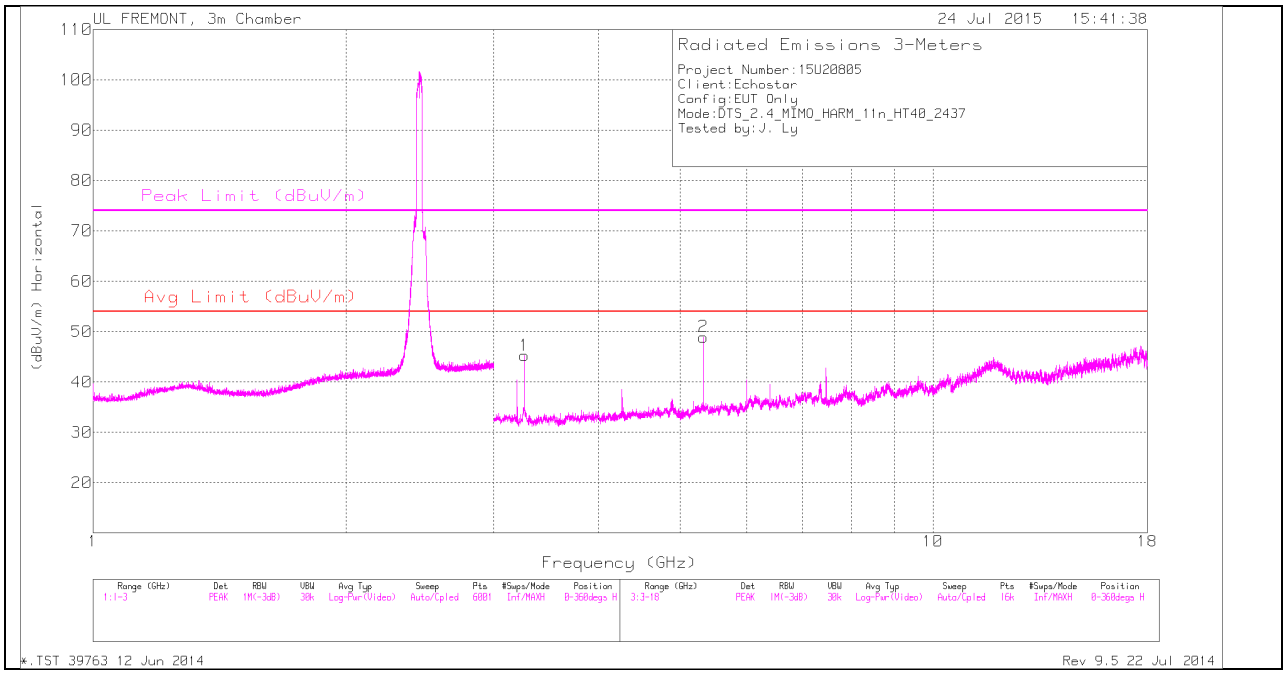
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
3.198	49.62	PK2	32.6	-30.5	0	51.72	-	-	74	-22.28	266	102	V
3.243	47.9	PK2	32.6	-30.9	0	49.6	-	-	74	-24.4	338	282	H
4.264	44.33	PK2	33.4	-30.6	0	47.13	-	-	74	-26.87	322	123	V
4.264	38.01	MAv1	33.4	-30.6	.43	41.24	54	-12.76	-	-	322	123	V
5.33	47.43	PK2	34.5	-29.1	0	52.83	-	-	74	-21.17	32	100	H
6.395	42.67	PK2	35.5	-28.5	0	49.67	-	-	74	-24.33	255	111	V
7.462	43.61	PK2	35.7	-28.1	0	51.21	-	-	74	-22.79	182	102	V
7.462	37.65	MAv1	35.7	-28.1	.43	45.68	54	-8.32	-	-	182	102	V
8.527	41.12	PK2	35.8	-27	0	49.92	-	-	74	-24.08	145	101	V
9.593	38.5	PK2	36.7	-24.4	0	50.8	-	-	74	-23.2	304	103	V
11.725	38.43	PK2	38.9	-21.9	0	55.43	-	-	74	-18.57	14	104	V
11.725	29.33	MAv1	38.9	-21.9	.43	46.76	54	-7.24	-	-	14	104	V

PK2 - KDB558074 Method: Maximum Peak

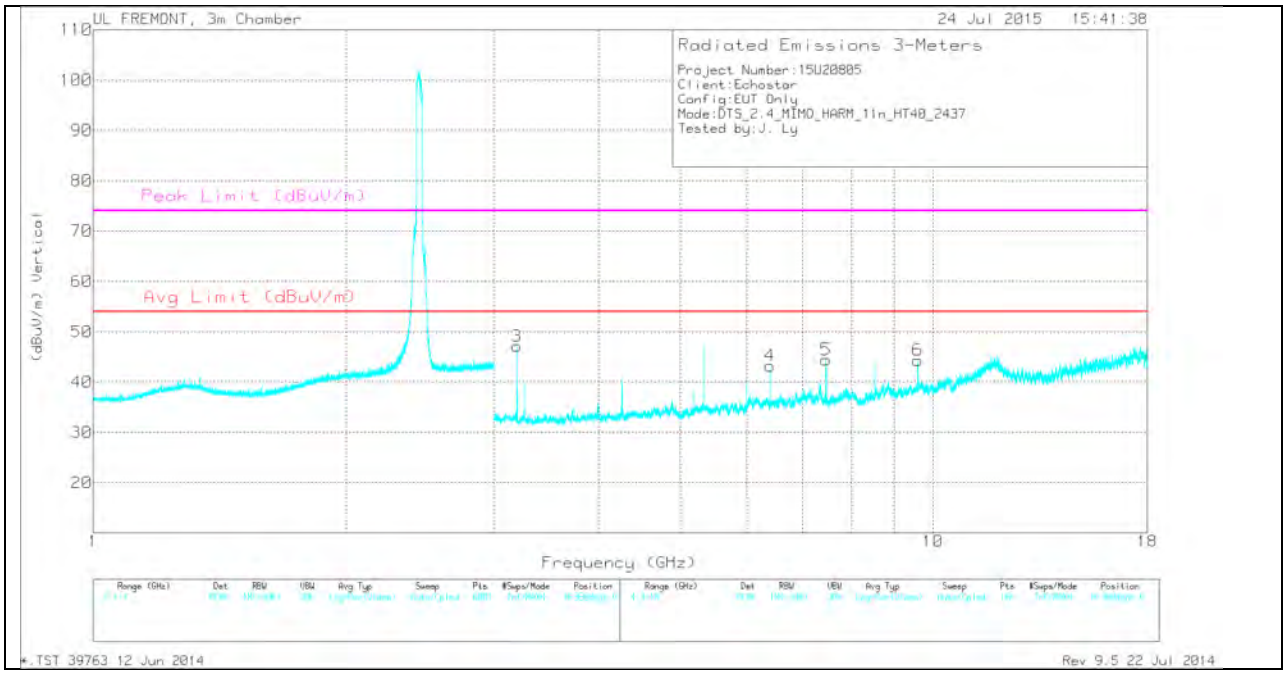
MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
3	3.198	45.02	PK	32.6	-30.5	0	47.12	-	-	-	-	0-360	100	V
1	3.262	43.54	PK	32.6	-30.9	0	45.24	-	-	74	-28.76	0-360	100	H
2	5.33	43.55	PK	34.5	-29.1	0	48.95	-	-	-	-	0-360	100	H
4	6.395	36.23	PK	35.5	-28.5	0	43.23	-	-	-	-	0-360	100	V
5	7.461	36.83	PK	35.7	-28.1	0	44.43	-	-	74	-29.57	0-360	100	V
6	9.593	32.03	PK	36.7	-24.4	0	44.33	-	-	-	-	0-360	100	V

PK - Peak detector

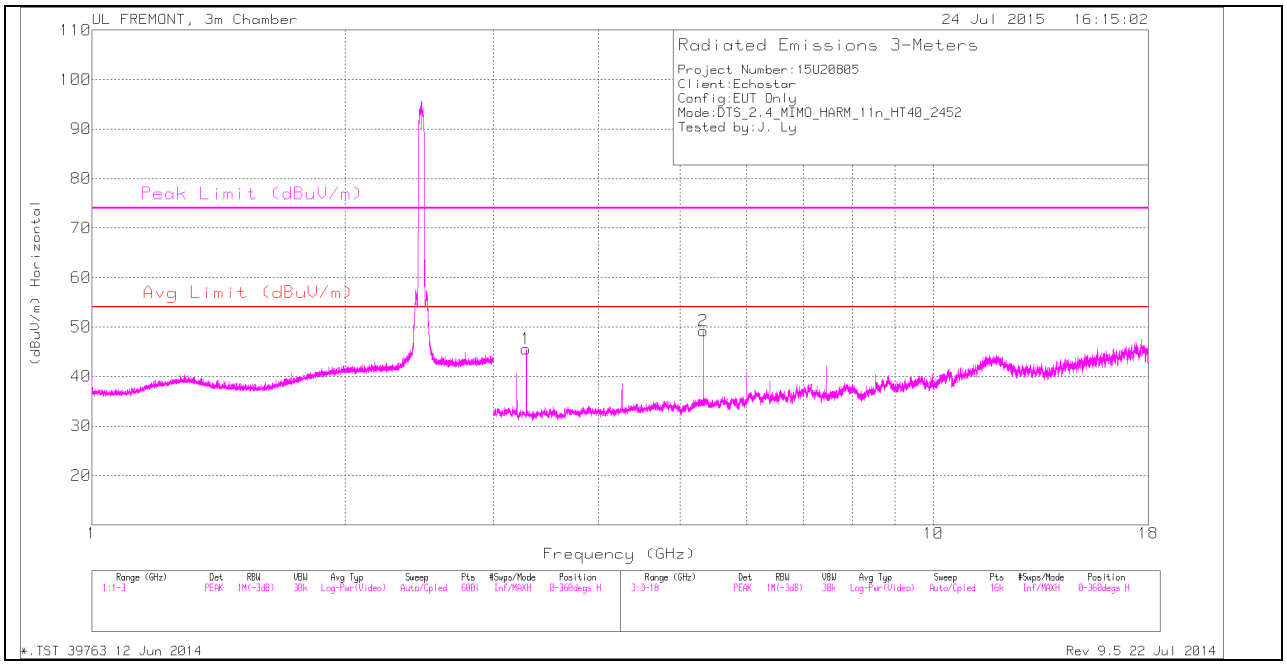
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
3.198	49.05	PK2	32.6	-30.5	0	51.15	-	-	74	-22.85	266	101	V
3.263	48.49	PK2	32.6	-30.9	0	50.19	-	-	74	-23.81	340	137	H
3.263	43.85	MAv1	32.6	-30.9	.43	45.98	54	-8.02	-	-	340	137	H
5.33	47.09	PK2	34.5	-29.1	0	52.49	-	-	74	-21.51	33	101	H
6.395	42.7	PK2	35.5	-28.5	0	49.7	-	-	74	-24.3	256	107	V
7.461	43.83	PK2	35.7	-28.1	0	51.43	-	-	74	-22.57	182	101	V
7.461	37.84	MAv1	35.7	-28.1	.43	45.87	54	-8.13	-	-	182	101	V
9.594	38.67	PK2	36.7	-24.4	0	50.97	-	-	74	-23.03	307	109	V

PK2 - KDB558074 Method: Maximum Peak

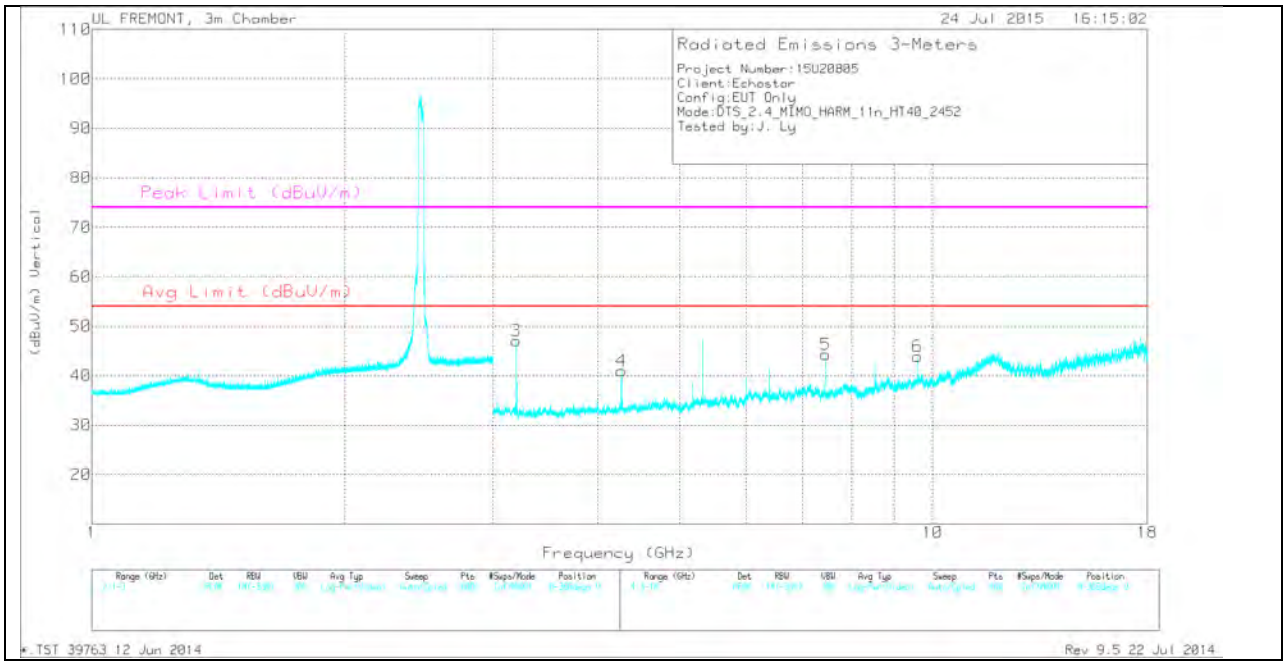
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
3	3.198	45.01	PK	32.6	-30.5	0	47.11	-	-	-	-	0-360	100	V
1	3.282	43.83	PK	32.6	-30.9	0	45.53	-	-	-	-	0-360	100	H
4	4.264	38.16	PK	33.4	-30.6	0	40.96	-	-	74	-33.04	0-360	100	V
2	5.33	43.85	PK	34.5	-29.1	0	49.25	-	-	-	-	0-360	100	H
5	7.461	36.68	PK	35.7	-28.1	0	44.28	-	-	74	-29.72	0-360	100	V
6	9.593	31.56	PK	36.7	-24.4	0	43.86	-	-	-	-	0-360	100	V

PK - Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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)	Azimuth (Degs)	Height (cm)	Polarity
3	40.84	PK2	32.7	-30.4	0	43.14	-	-	74	-30.86	14	192	H
3.198	49.13	PK2	32.6	-30.5	0	51.23	-	-	74	-22.77	237	145	V
4.264	44.93	PK2	33.4	-30.6	0	47.73	-	-	74	-26.27	244	107	V
4.264	37.9	MAv1	33.4	-30.6	.43	41.13	54	-12.87	-	-	244	107	V
5.33	47.27	PK2	34.5	-29.1	0	52.67	-	-	74	-21.33	31	100	H
7.461	36.43	MAv1	35.7	-28.1	.43	44.46	54	-9.54	-	-	184	116	V
7.462	43.26	PK2	35.7	-28.1	0	50.86	-	-	74	-23.14	184	116	V
9.593	39.35	PK2	36.7	-24.4	0	51.65	-	-	74	-22.35	306	100	V

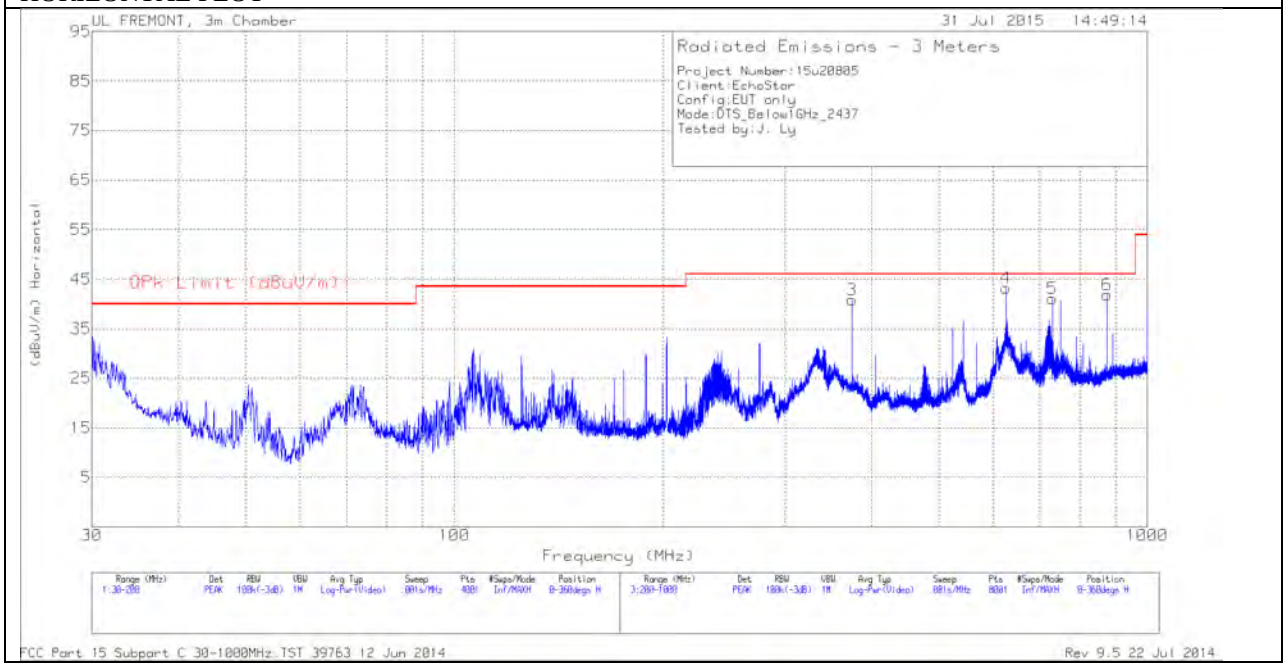
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

12.2. WORST-CASE BELOW 1 GHz

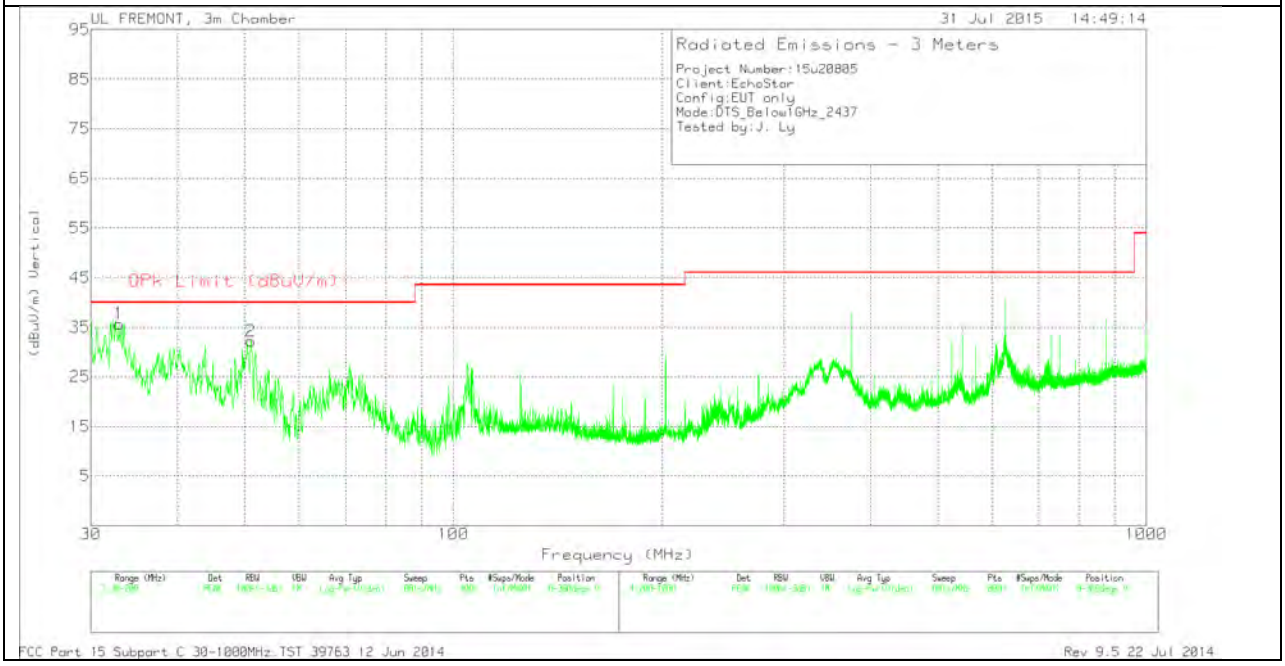
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



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

VERTICAL PLOT



Below 1G Data

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T185 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.9325	43.19	PK	19.6	-27.1	35.69	40	-4.31	0-360	100	V
2	51.0375	51.33	PK	7.9	-27	32.23	40	-7.77	0-360	100	V
3	375	50.47	PK	15.1	-24.7	40.87	46.02	-5.15	0-360	100	H
4	625	48.79	PK	19	-24.6	43.19	46.02	-2.83	0-360	300	H
5	729	45.04	PK	19.9	-23.9	41.04	46.02	-4.98	0-360	100	H
6	875	42.94	PK	21.8	-22.9	41.84	46.02	-4.18	0-360	100	H

PK - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T185 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
374.9916	50.78	QP	15.1	-24.7	41.18	46.02	-4.84	132	102	H
624.9883	49.03	QP	19	-24.6	43.43	46.02	-2.59	273	152	H
875.0076	43.08	QP	21.8	-22.9	41.98	46.02	-4.04	139	100	H

QP - Quasi-Peak detector

13. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

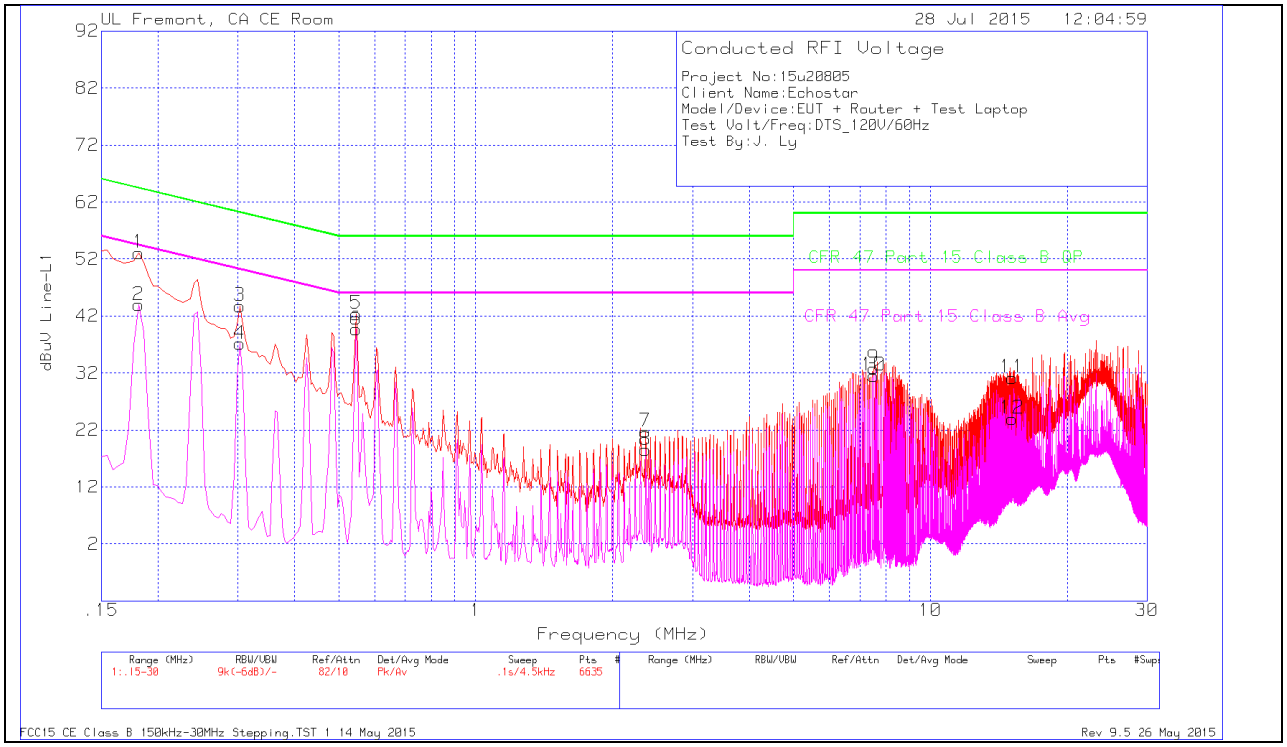
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



LINE 1 RESULTS

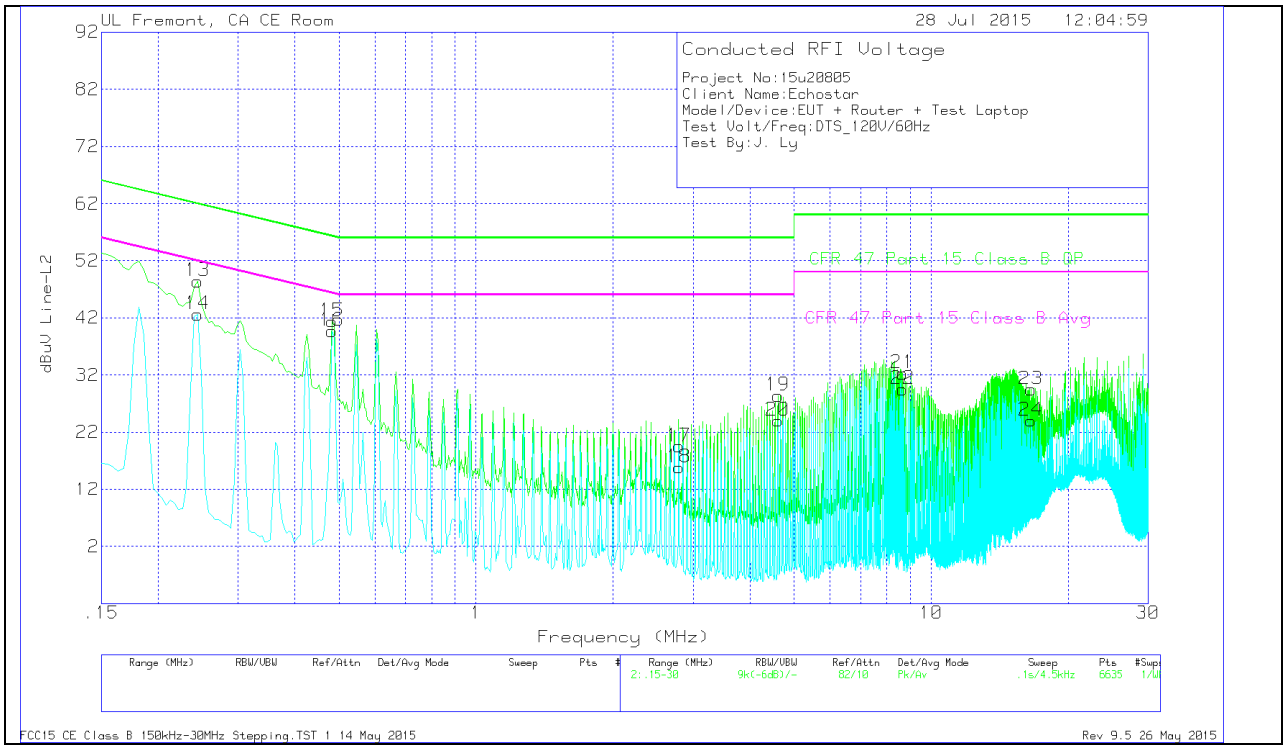
Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.1815	51.95	Pk	1.1	0	53.05	64.42	-11.37		
2	.1815	42.83	Av	1.1	0	43.93	-	-	54.42	-10.49
3	.303	43.23	Pk	.5	0	43.73	60.16	-16.43		
4	.303	36.63	Av	.5	0	37.13	-	-	50.16	-13.03
5	.546	42.07	Pk	.3	0	42.37	56	-13.63		
6	.546	39.35	Av	.3	0	39.65	-	-	46	-6.35
7	2.364	21.45	Pk	.2	.1	21.75	56	-34.25		
8	2.364	18.19	Av	.2	.1	18.49	-	-	46	-27.51
9	7.512	32.54	Pk	.2	.1	32.84	60	-27.16		
10	7.512	31.24	Av	.2	.1	31.54	-	-	50	-18.46
11	15.1485	30.62	Pk	.3	.2	31.12	60	-28.88		
12	15.1485	23.47	Av	.3	.2	23.97	-	-	50	-26.03

Pk - Peak detector

Av - Average detection

LINE 2 PLOT



LINE 2 RESULTS

Pk - Peak detector

Av - Average detection

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
13	.2445	47.61	Pk	.8	0	48.41	61.94	-13.53		
14	.2445	41.8	Av	.8	0	42.6	-	-	51.94	-9.34
15	.483	41	Pk	.4	0	41.4	56.29	-14.89		
16	.483	39.31	Av	.4	0	39.71	-	-	46.29	-6.58
17	2.7915	19.2	Pk	.2	.1	19.5	56	-36.5		
18	2.7915	15.54	Av	.2	.1	15.84	-	-	46	-30.16
19	4.605	28.11	Pk	.2	.1	28.41	56	-27.59		
20	4.605	23.72	Av	.2	.1	24.02	-	-	46	-21.98
21	8.664	32	Pk	.2	.1	32.3	60	-27.7		
22	8.664	29.22	Av	.2	.1	29.52	-	-	50	-20.48
23	16.5975	28.96	Pk	.3	.2	29.46	60	-30.54		
24	16.5975	23.52	Av	.3	.2	24.02	-	-	50	-25.98

Pk - Peak detector

Av - Average detection

15. POWER SETTING TABLE

SISO

Channel ID	1	2	3	4	5	6	7	8	9	10	11
Center Freq.	2412	2417	2422	2427	2432	2437	2442	2447	2452	2457	2462
11b	68	68	68	68	68	68	68	68	68	68	68
11g	24	26	26	26	70	70	70	44	44	40	40
11n 20	22	26	26	26	68	68	68	44	44	42	42

MIMO

Channel ID	1	2	3	4	5	6	7	8	9	10	11
Center Freq.	2412	2417	2422	2427	2432	2437	2442	2447	2452	2457	2462
11b											
11g											
11n 20	30	32	32	32	60	60	60	44	44	38	38
11n 40			22			42		34			

END OF REPORT