FCC CFR47 PART 15 SUBPART C
INDUSTRY CANADA RSS-247 ISSUE 1

CERTIFICATION TEST REPORT

FOR

BT + BLE+ NORDIC and WLAN DTS/UNII a/b/g/n/ac

MODEL NUMBER: 1003

REPORT NUMBER: 15U21133-E3 REVISION A

FCC ID: 2AES41003
IC ID: 20207-1003

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	7/21/15	Initial issue	P. ZHANG
A	8/18/15	Update section 5.2	P. ZHANG

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1. ATTESTATION OF TEST RESULTS

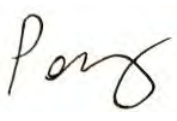
COMPANY NAME: VALVE
EUT DESCRIPTION: BT+BLE + NORDIC and WLAN DTS/UNII a/b/g/n/ac
MODEL: 1003
SERIAL NUMBER: FL524000A0 (Conducted); FL524000E3 (Radiated)
DATE TESTED: MAY 20 – JULY 21, 2015

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-247 Issue 1	Pass
INDUSTRY CANADA RSS-GEN Issue 4	Pass

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

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

Approved & Released
For UL Verification Services Inc. By:



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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 and ANSI C63.10-2013 for IC, RSS-GEN Issue 4, and RSS-247 Issue 1.

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 BT+ BLE + NORDIC and DTS/UNII a/b/g/n/ac.

UNIT support A/B/G/N/AC SISO and N/AC MIMO mode.

5.2. MAXIMUM OUTPUT POWER

Note: The power declared in the report are the worst case power & that production unit will not carry higher power listed in the report.

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	19.1	81.28
2412 - 2462	802.11g	14.3	26.92
2412 - 2462	802.11n HT20	17.27	53.33

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes two FPCB antennas, with a maximum gain of 3.5dBi and 2.5dBi.

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

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC ADAPTER	CHICONY	A15-012N1A	N/A	N/A
LAPTOP	DELL	N/A	N/A	N/A
LAPTOP	DELL	N/A	N/A	N/A
ROUTER	NETGEAR	N600	N/A	N/A
ROUTER	D-LINK	DIR-655B1	N/A	N/A

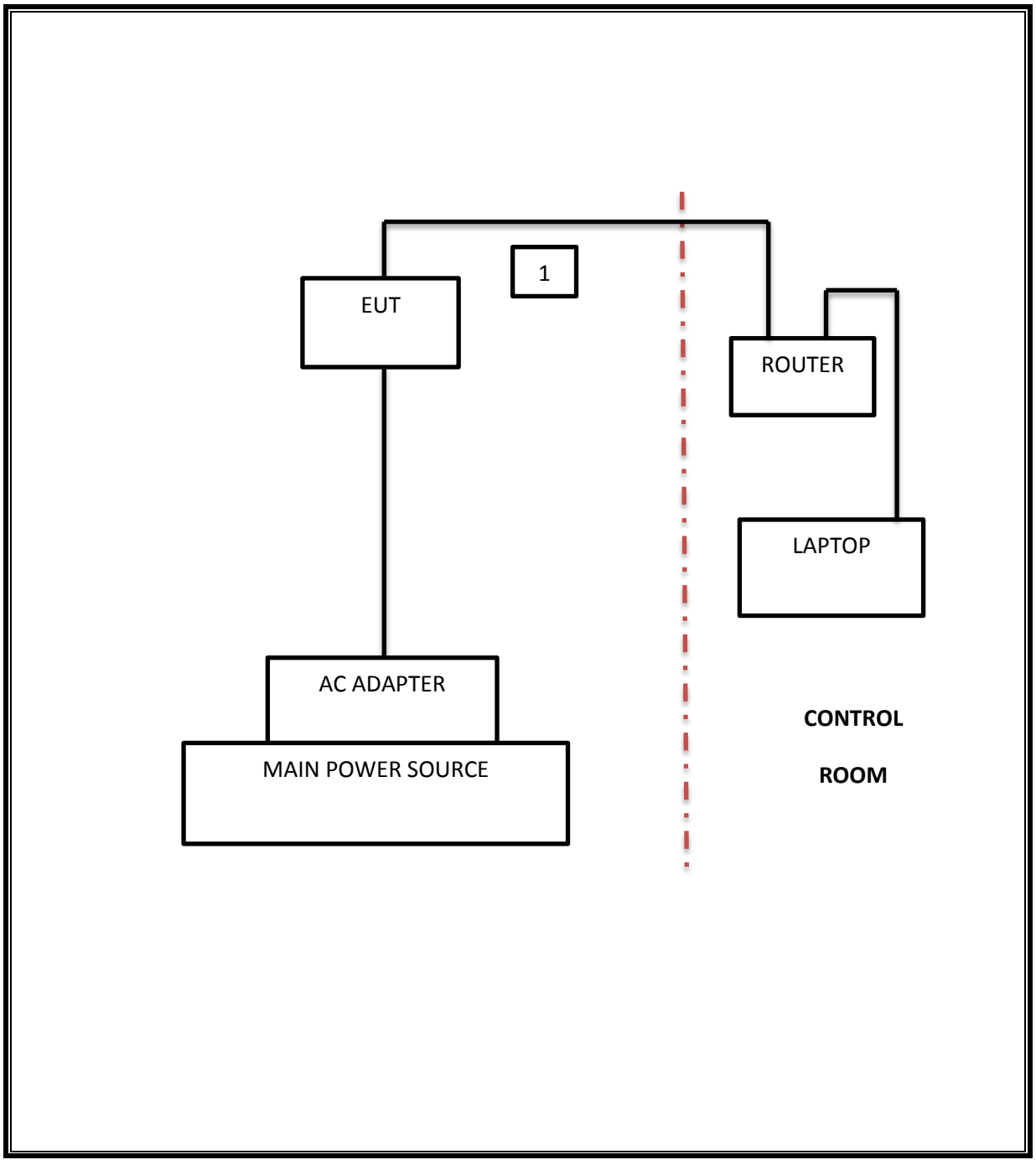
I/O CABLES

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	10.05MHz
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-32.16dBm
15.247	RSS-247 5.4.4	TX conducted output power	<30dBm		Pass	19.1 dBm
15.247	RSS-247 5.2.2	PSD	<8dBm		Pass	-2.38dBm
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	52.76dBuV
15.205, 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass	53.74dBuV/m

9. ANTENNA PORT TEST RESULTS SISO Chain 0

9.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 5.2.1

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	10.05	0.5
Mid	2437	10.08	0.5
High	2462	10.05	0.5
Worst		10.05	

9.1.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.48	0.5
Mid	2437	16.40	0.5
High	2462	16.35	0.5
Worst		16.35	

9.1.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

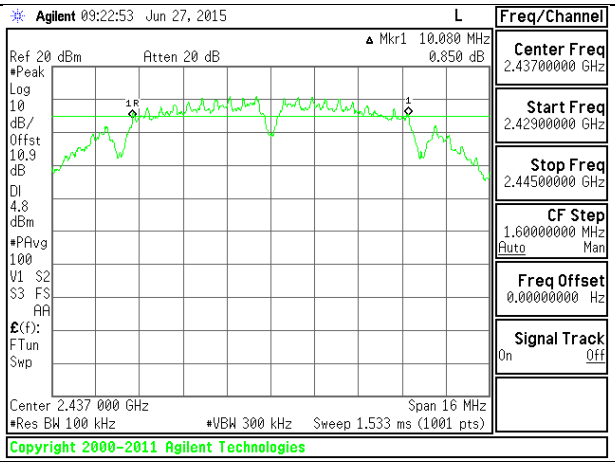
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.60	0.5
Mid	2437	17.69	0.5
High	2462	17.63	0.5
Worst		17.60	

9.1.4. 802.11n HT40 MODE IN THE 2.4 GHz BAND

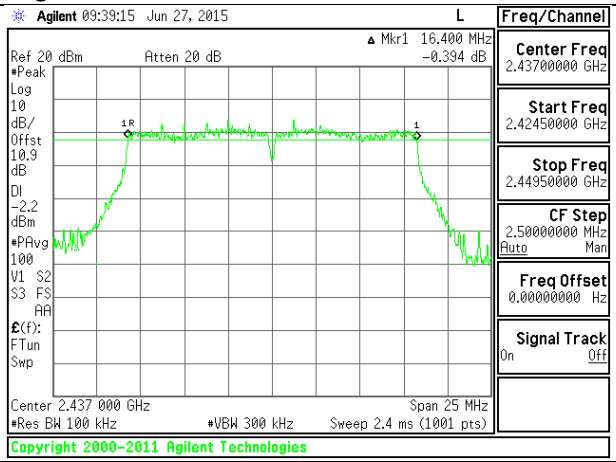
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2422	36.08	0.5
Mid	2437	35.80	0.5
High	2452	36.14	0.5
Worst		35.80	

9.1.5. 6 dB BANDWIDTH MID CH PLOTS

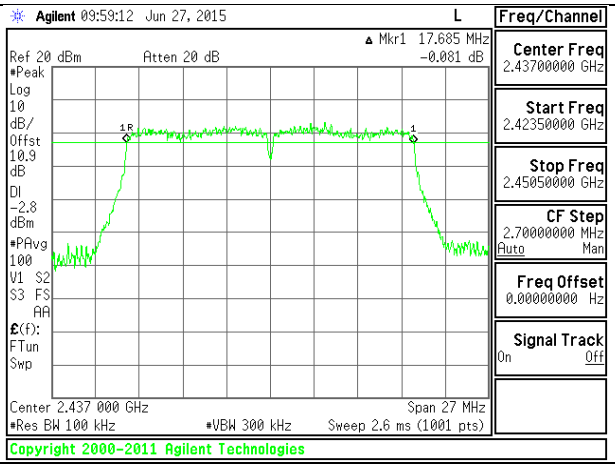
11b Mid Channel



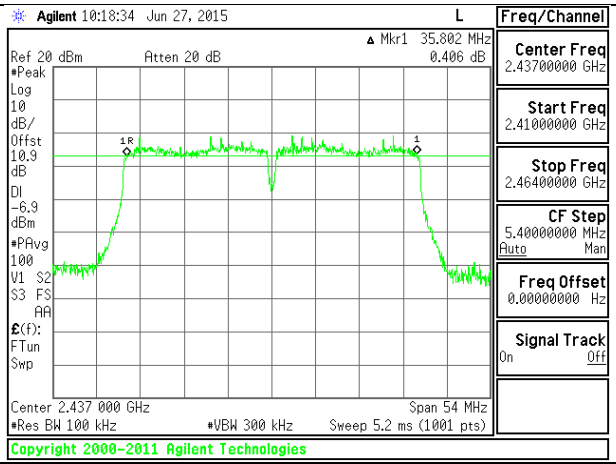
11g Mid Channel



11n HT20 Mid Channel



11n HT40 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	13.12
Mid	2437	13.38
High	2462	13.36
Worst		13.38

9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.51
Mid	2437	16.50
High	2462	16.50
Worst		16.51

9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

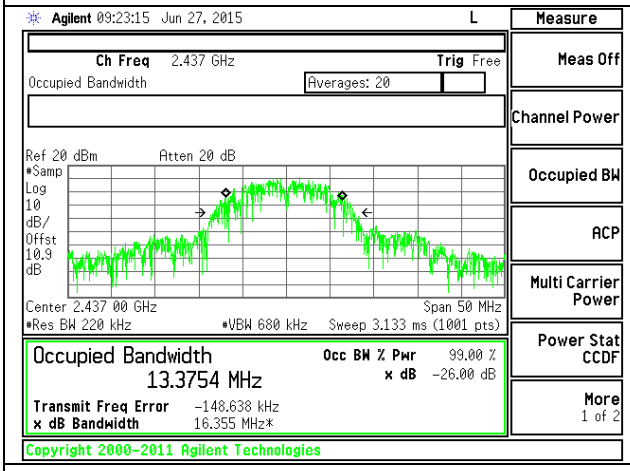
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.67
Mid	2437	17.68
High	2462	17.66
Worst		17.68

9.2.4. 802.11n HT40 MODE IN THE 2.4 GHz BAND

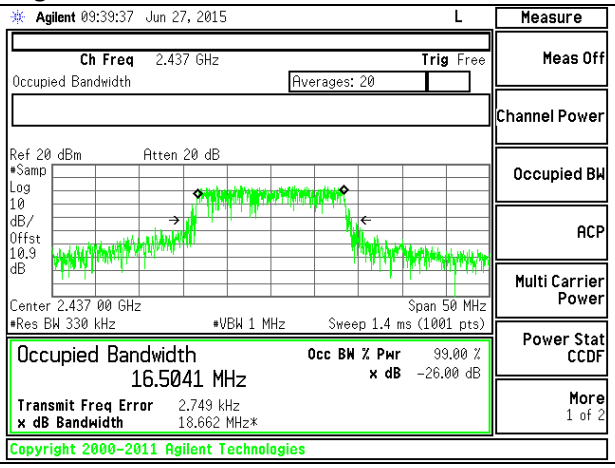
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2422	36.14
Mid	2437	36.10
High	2452	36.11
Worst		36.14

9.2.5. 99% BANDWIDTH MID CH PLOTS

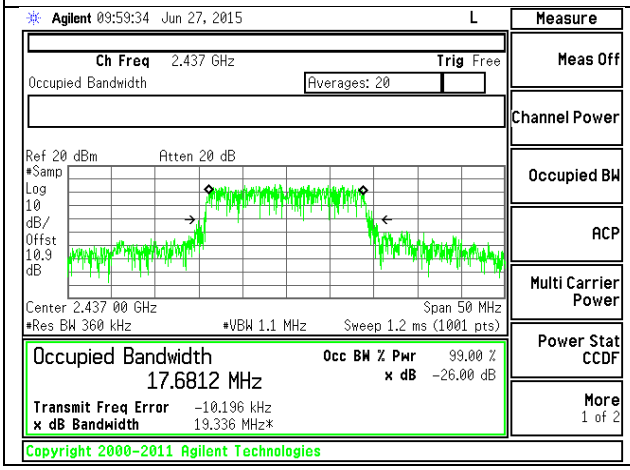
11b Mid Channel



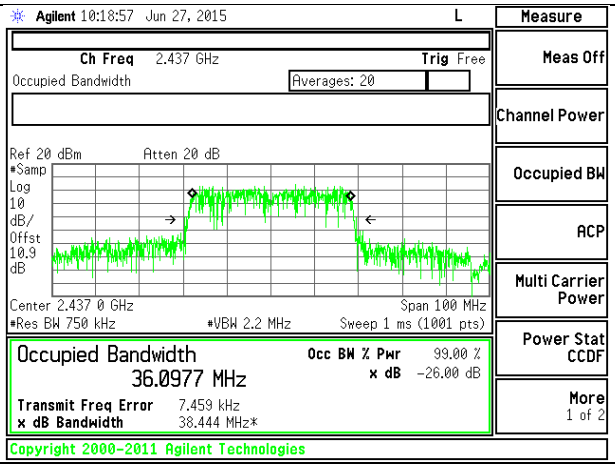
11g Mid Channel



11n HT20 Mid Channel



11n HT40 Mid Channel



9.3. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 5.4.4

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.

MIMO

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.50	2.50	6.02

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	3.50	30.00	30	36	30.00
Mid	2437	3.50	30.00	30	36	30.00
High	2462	3.50	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	18.40	18.40	30.00	-11.60
Mid	2437	19.10	19.10	30.00	-10.90
High	2462	19.00	19.00	30.00	-11.00
Worst			19.10		

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	3.50	30.00	30	36	30.00
Mid	2437	3.50	30.00	30	36	30.00
High	2462	3.50	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	12.20	12.20	30.00	-17.80
Mid	2437	14.30	14.30	30.00	-15.70
High	2462	8.80	8.80	30.00	-21.20
Worst			14.30		

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	3.50	30.00	30	36	30.00
Mid	2437	3.50	30.00	30	36	30.00
High	2462	3.50	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	12.50	12.50	30.00	-17.50
Mid	2437	15.50	15.50	30.00	-14.50
High	2462	13.50	13.50	30.00	-16.50
Worst			15.50		

9.3.4. 802.11n HT40 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	3.50	30.00	30	36	30.00
Mid	2437	3.50	30.00	30	36	30.00
High	2462	3.50	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	2422	10.20	10.20	30.00	-19.80
Mid	2437	12.30	12.30	30.00	-17.70
High	2452	10.40	10.40	30.00	-19.60
Worst			12.30		

9.4. PSD

LIMITS

FCC §15.247

IC RSS-247 5.2.2

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	-3.90	8.0	-11.9
Mid	2437	-2.38	8.0	-10.4
High	2462	-2.65	8.0	-10.6

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	-11.38	8.0	-19.4
Mid	2437	-8.64	8.0	-16.6
High	2462	-14.79	8.0	-22.8

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	-11.63	8.0	-19.6
Mid	2437	-8.26	8.0	-16.3
High	2462	-9.92	8.0	-17.9

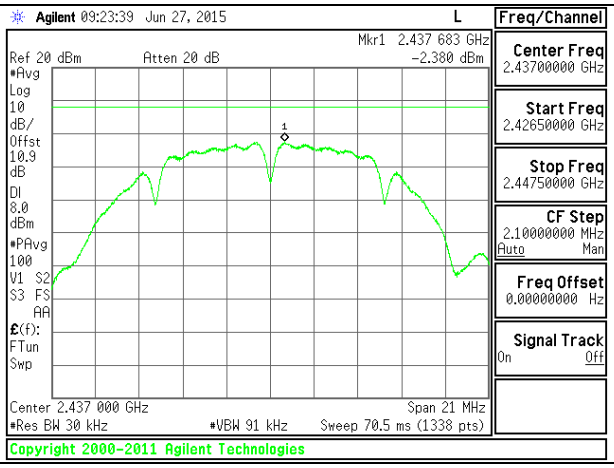
9.4.4. 802.11n HT40 MODE IN THE 2.4 GHz BAND

PSD Results

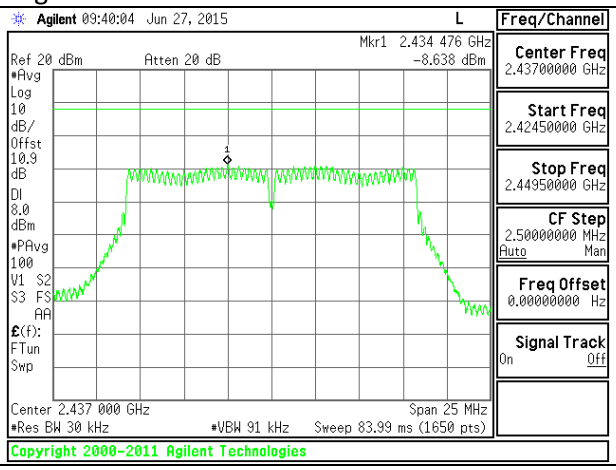
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2422	-16.58	8.0	-24.6
Mid	2437	-14.24	8.0	-22.2
High	2452	-16.29	8.0	-24.3

9.4.5. PSD Chain 0 MID CH PLOTS

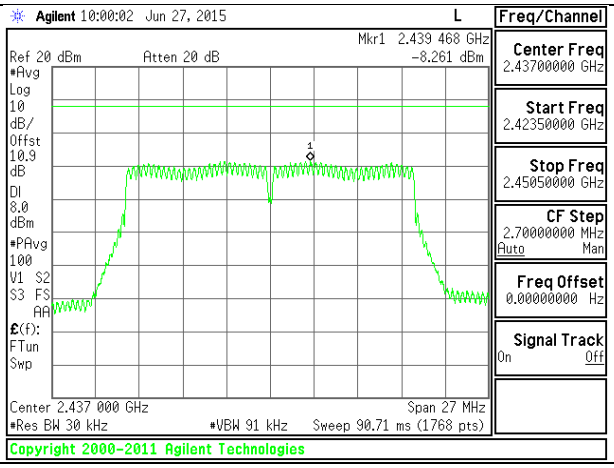
11b Mid Channel



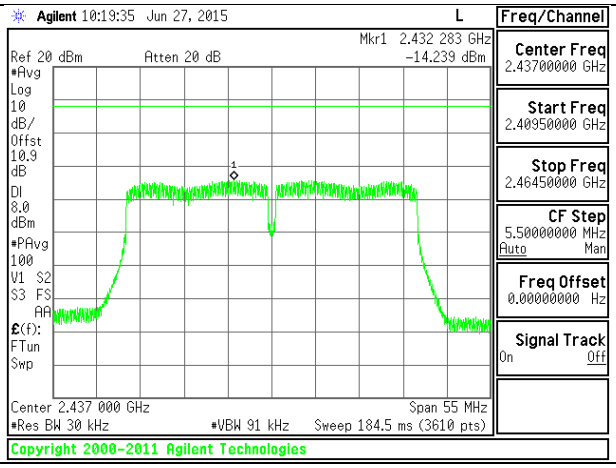
11g Mid Channel



11n HT20 Mid Channel



11n HT40 Mid Channel



9.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-247 5.5

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

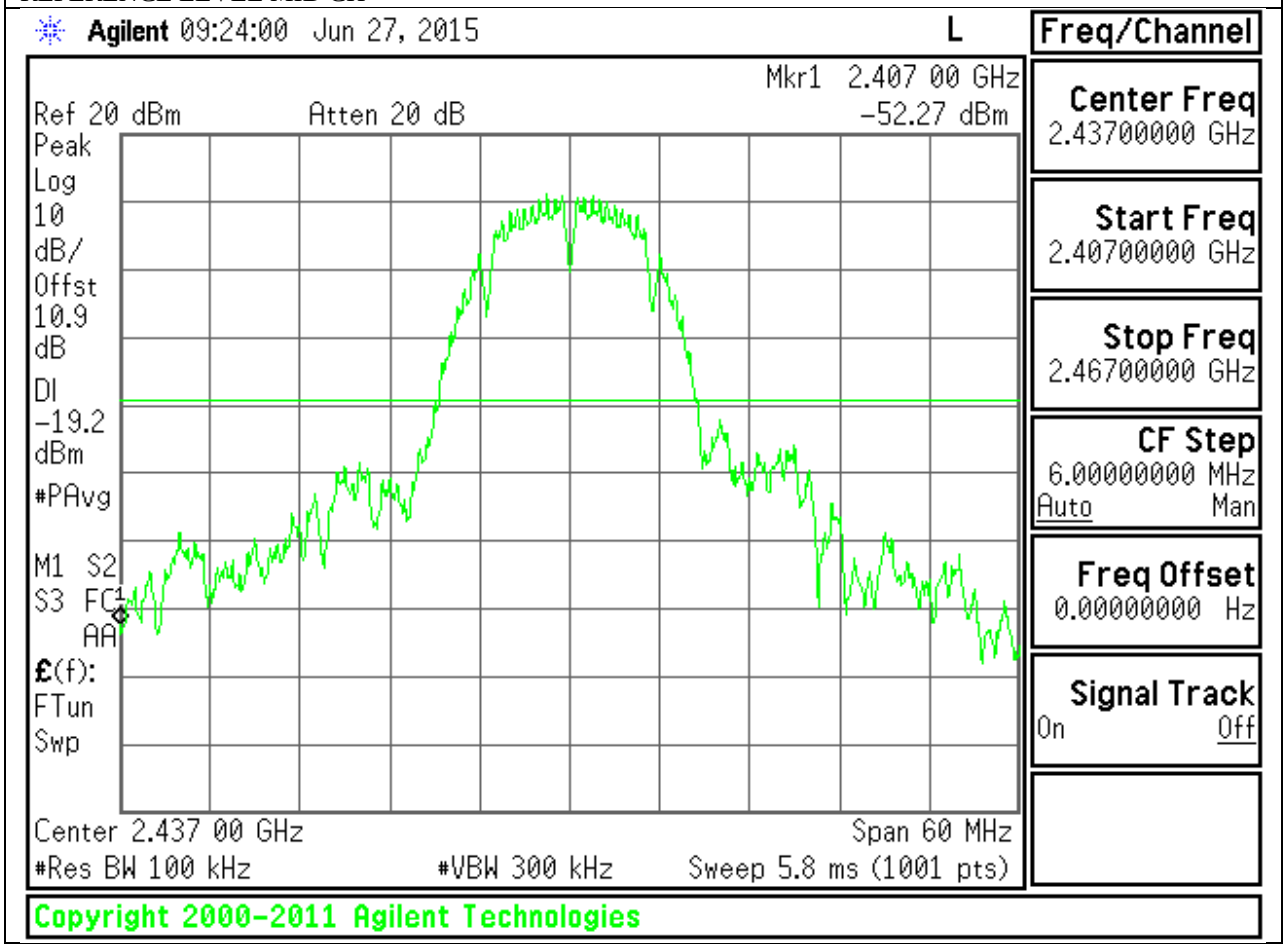
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

1.1.1. 802.11b MODE IN THE 2.4 GHz BAND

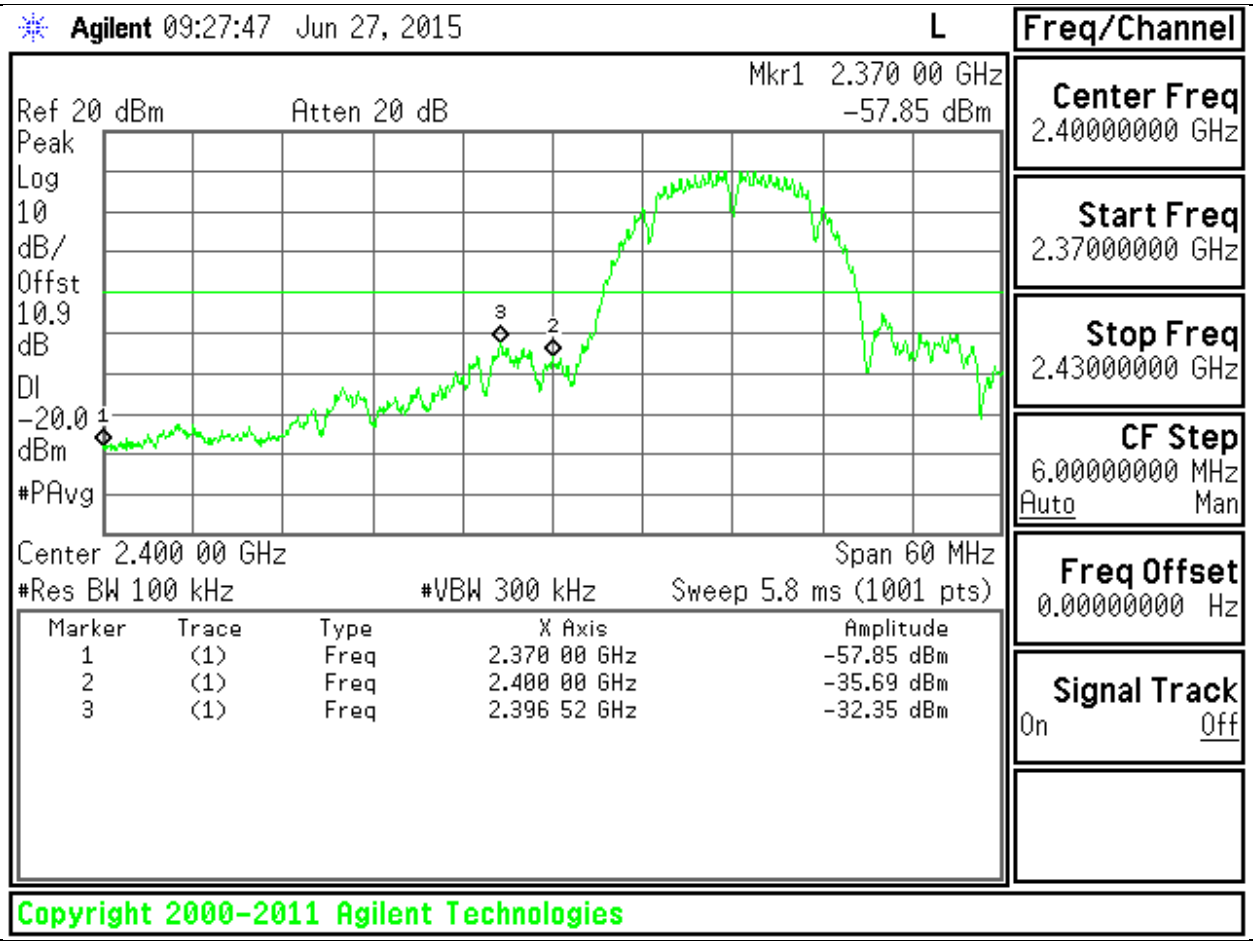
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



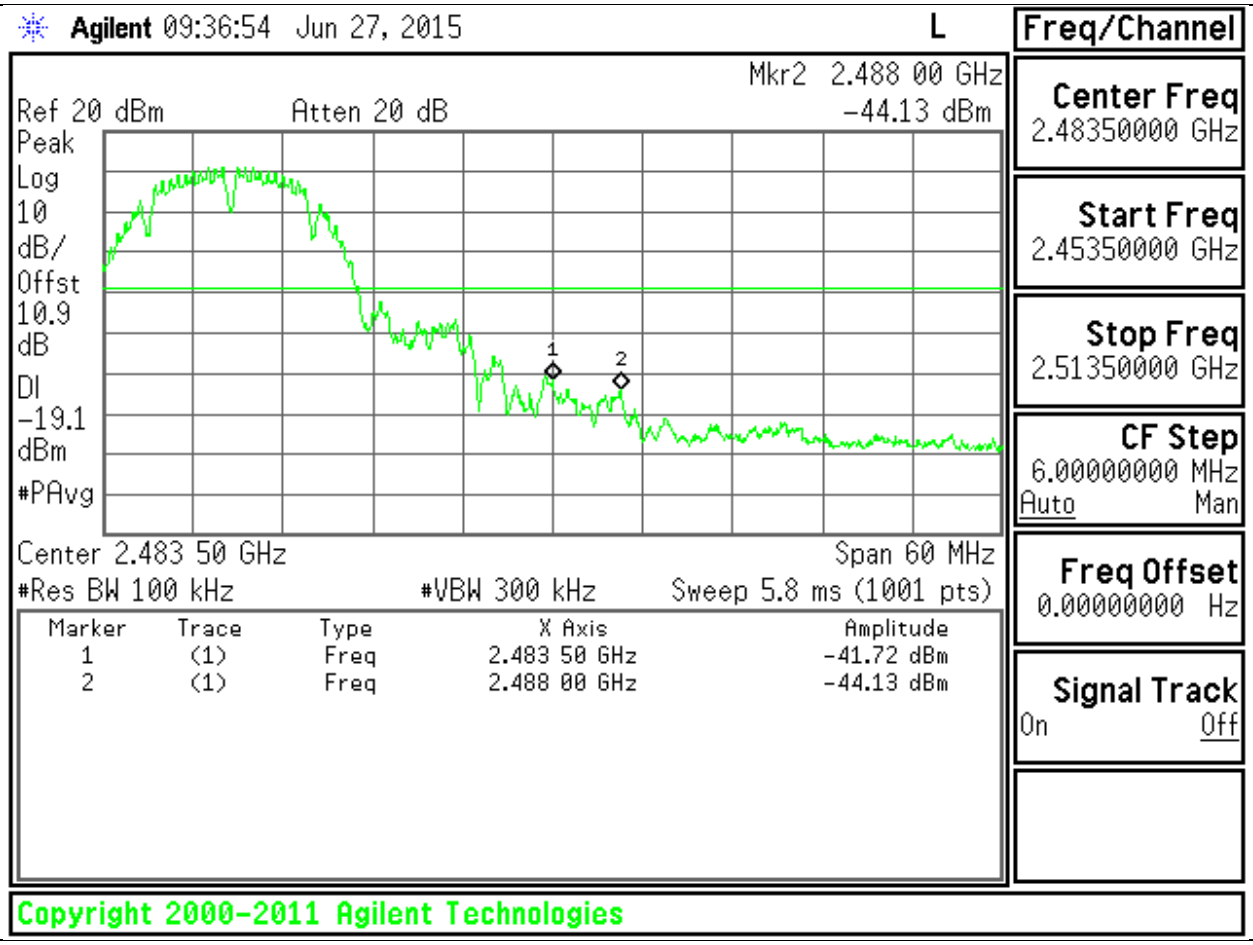
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



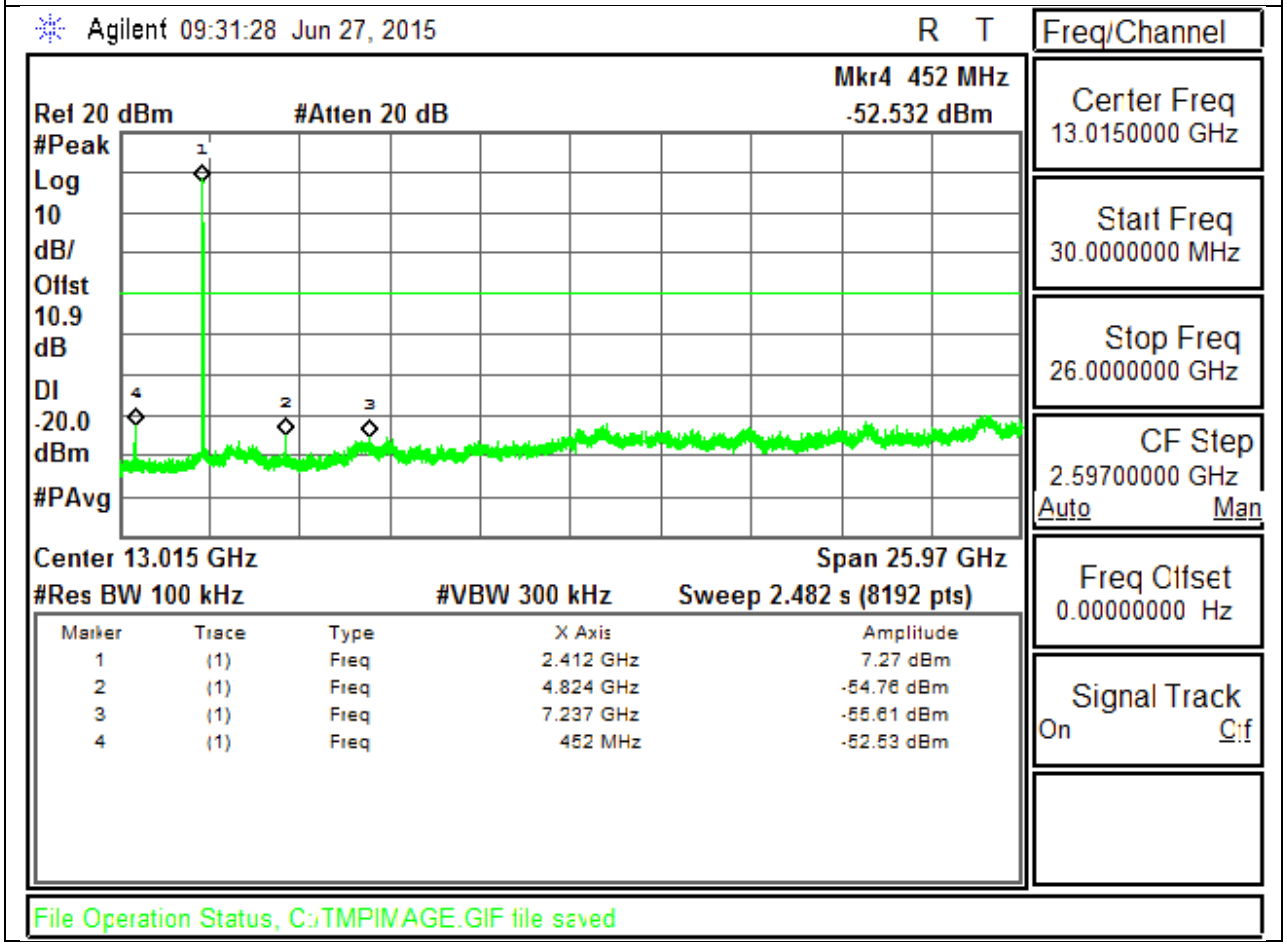
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

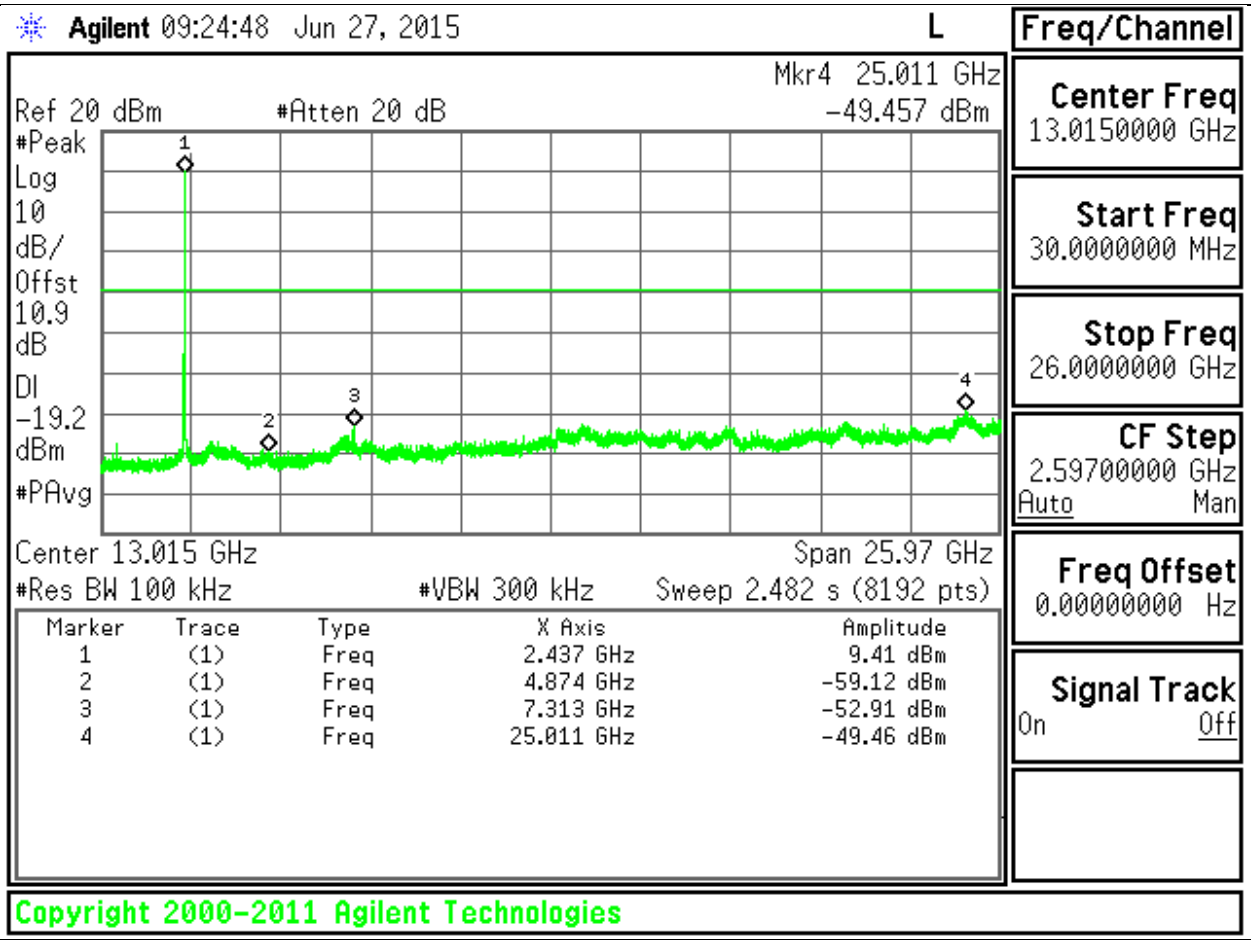


OUT-OF-BAND EMISSIONS

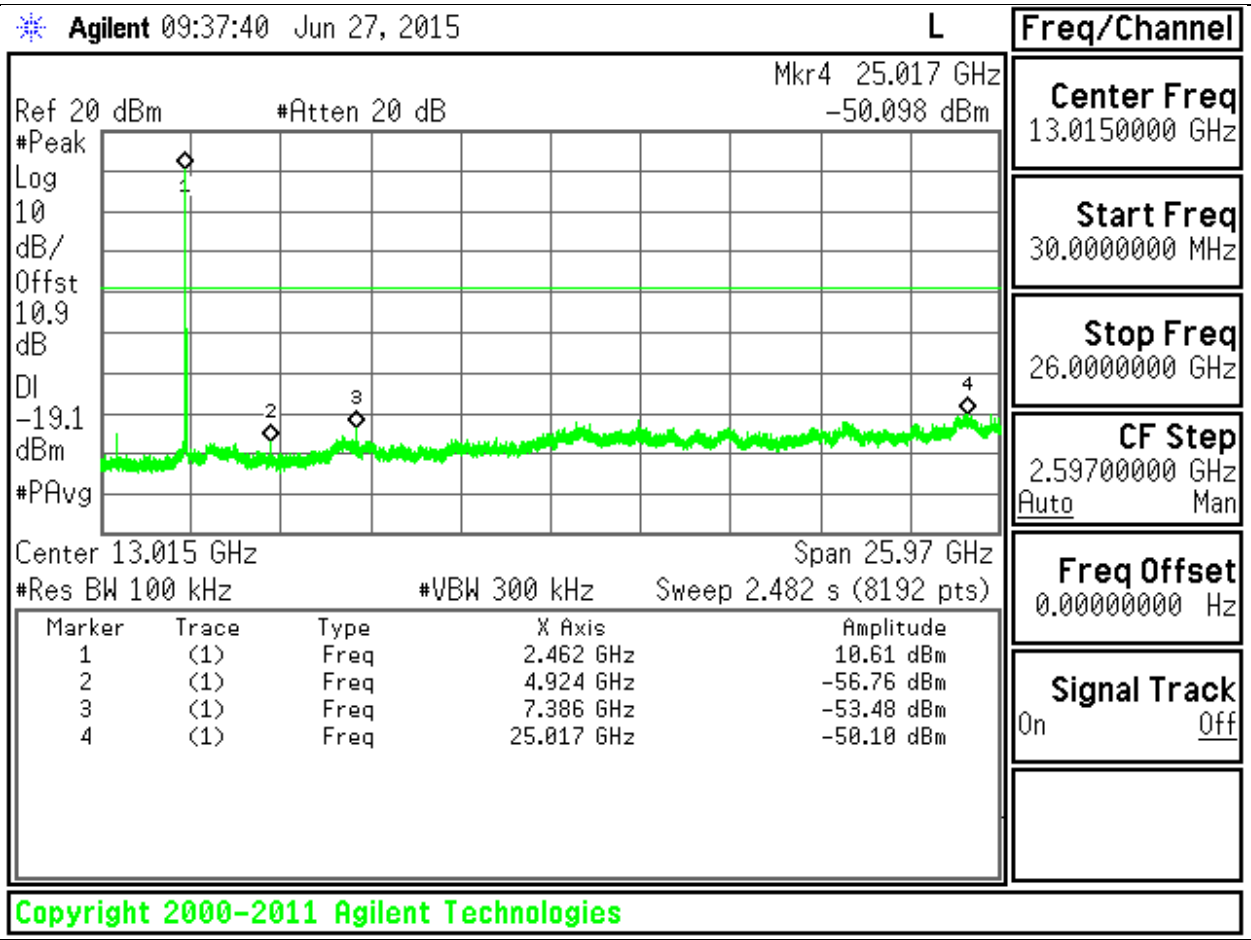
OUT OF BAND LOW CH



OUT OF BAND MID CH



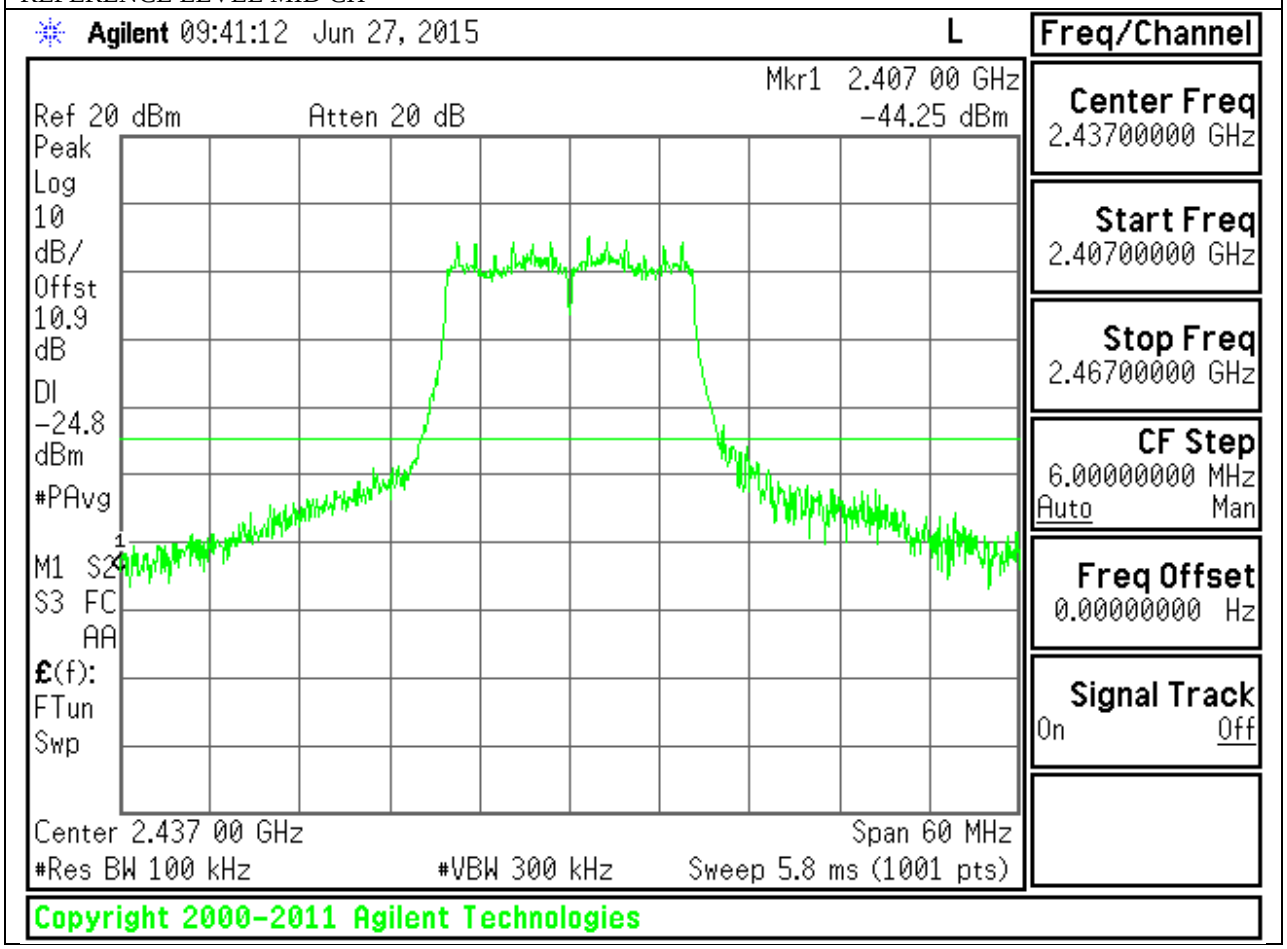
OUT OF BAND HIGH CH



9.5.1. 802.11g MODE IN THE 2.4 GHz BAND

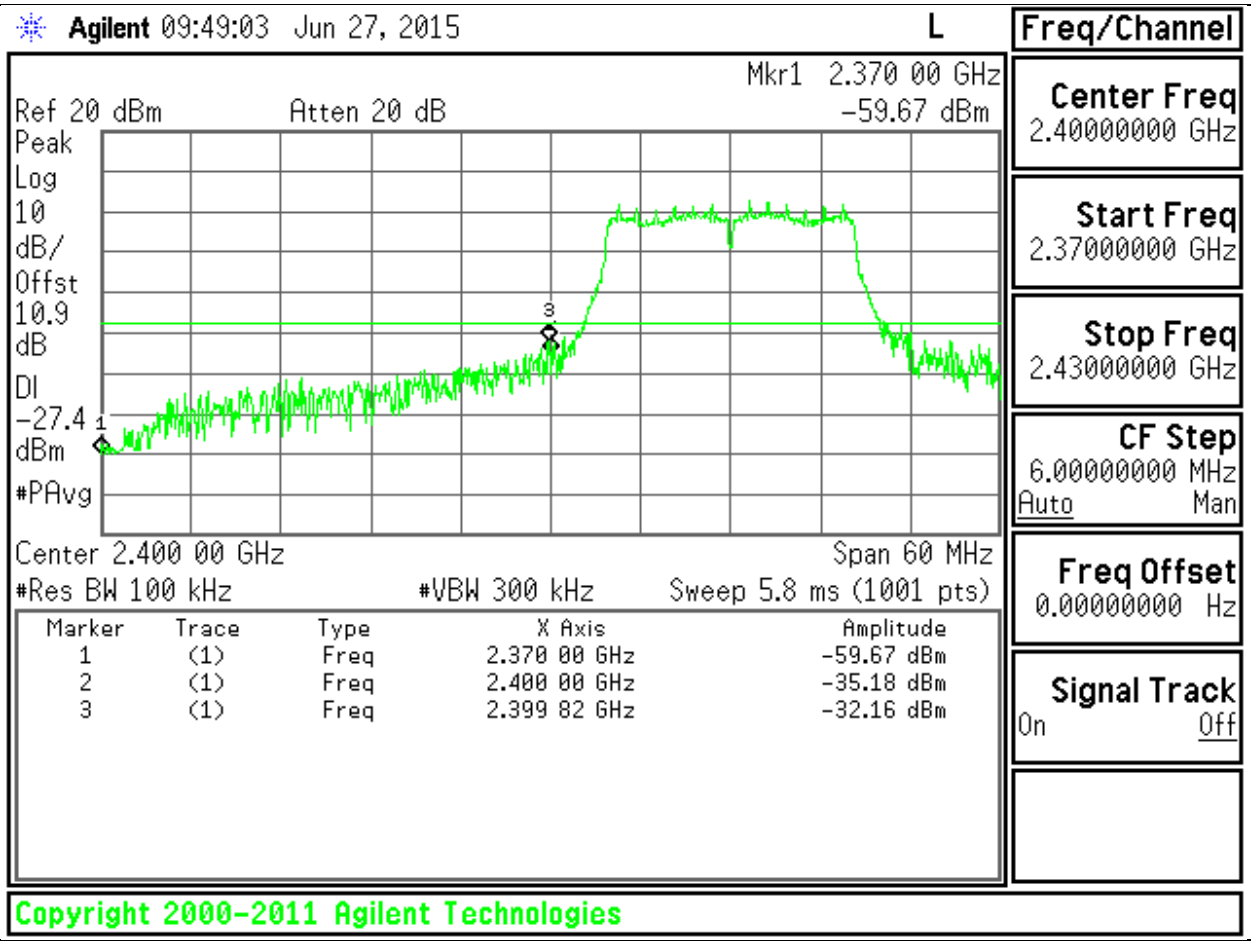
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



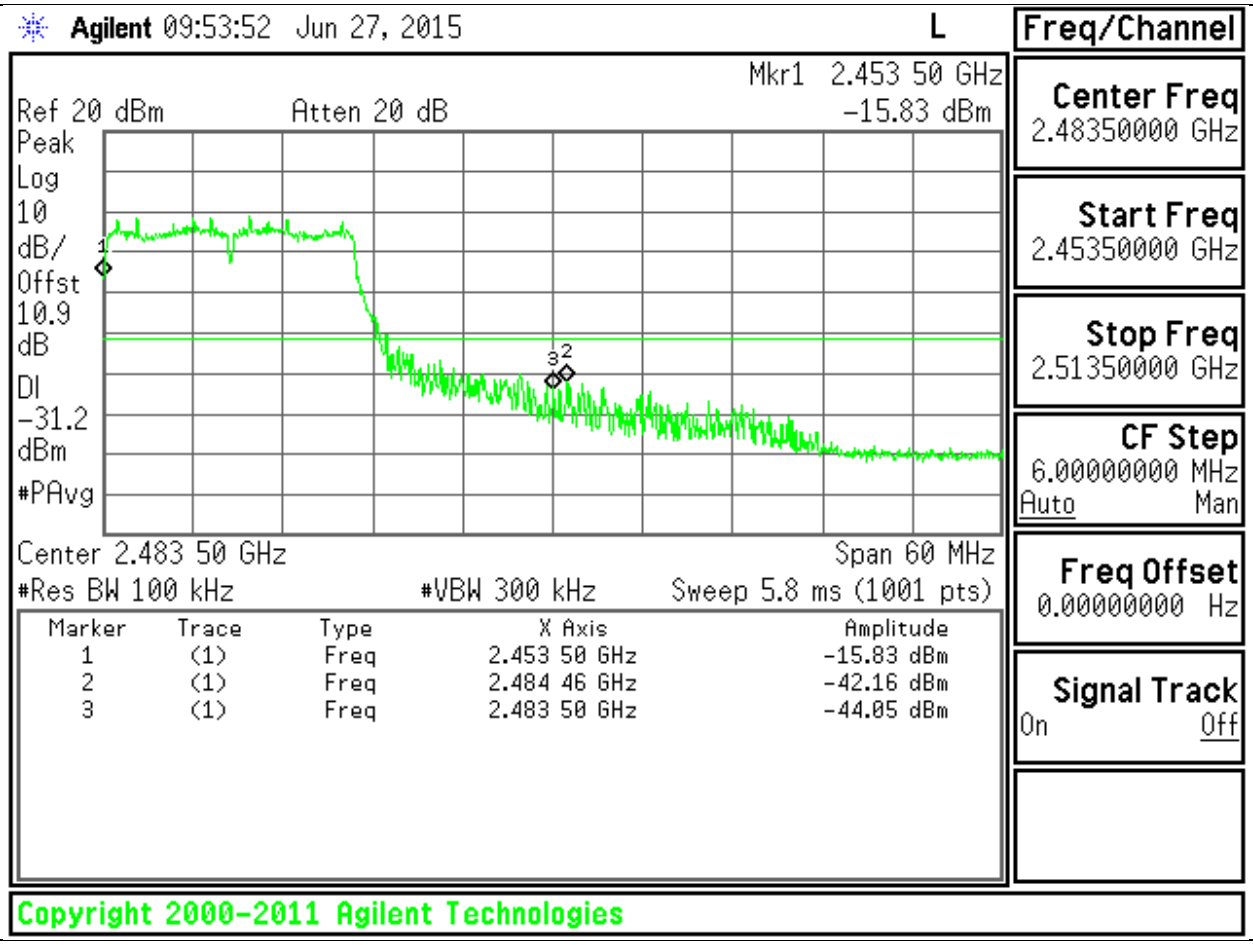
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



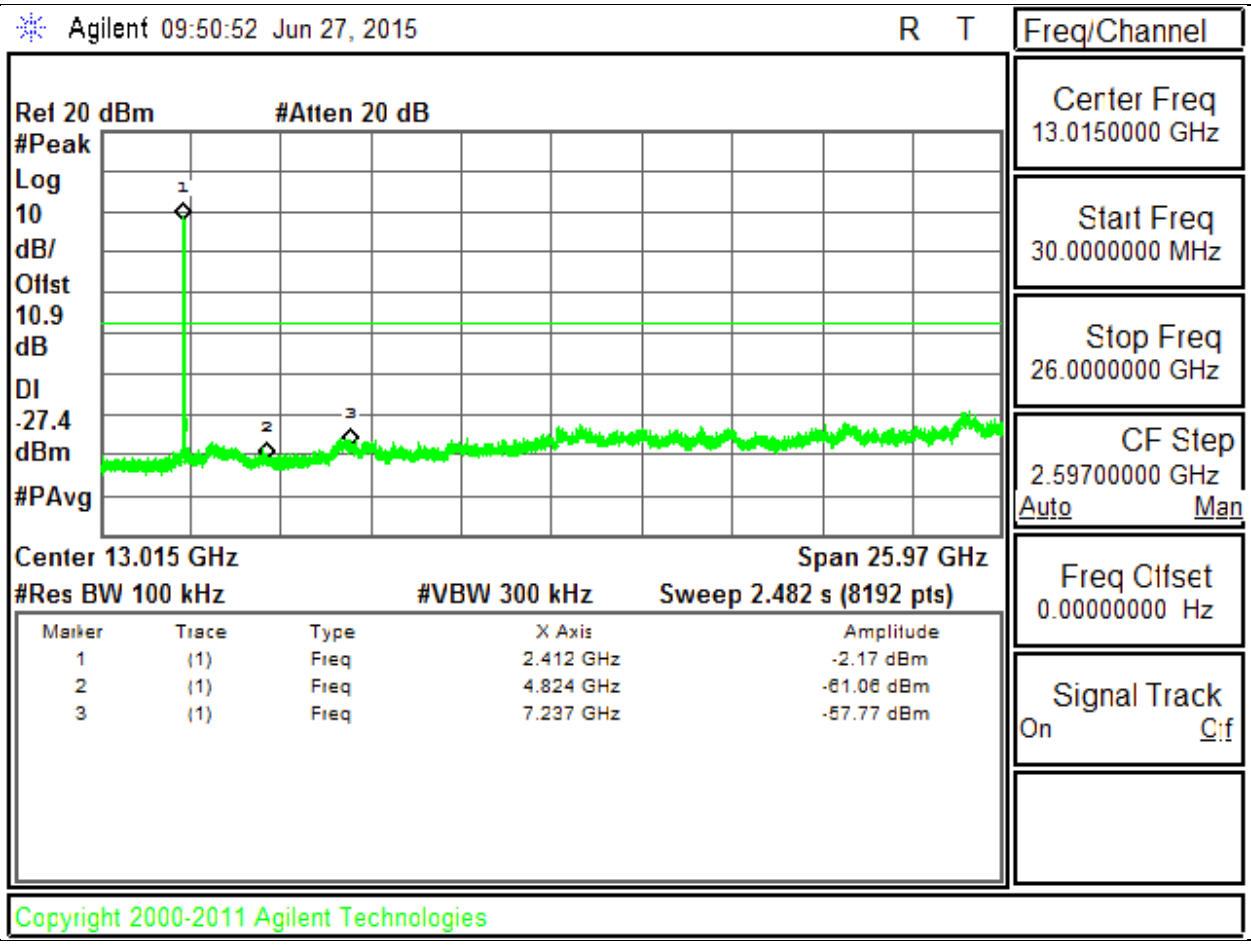
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

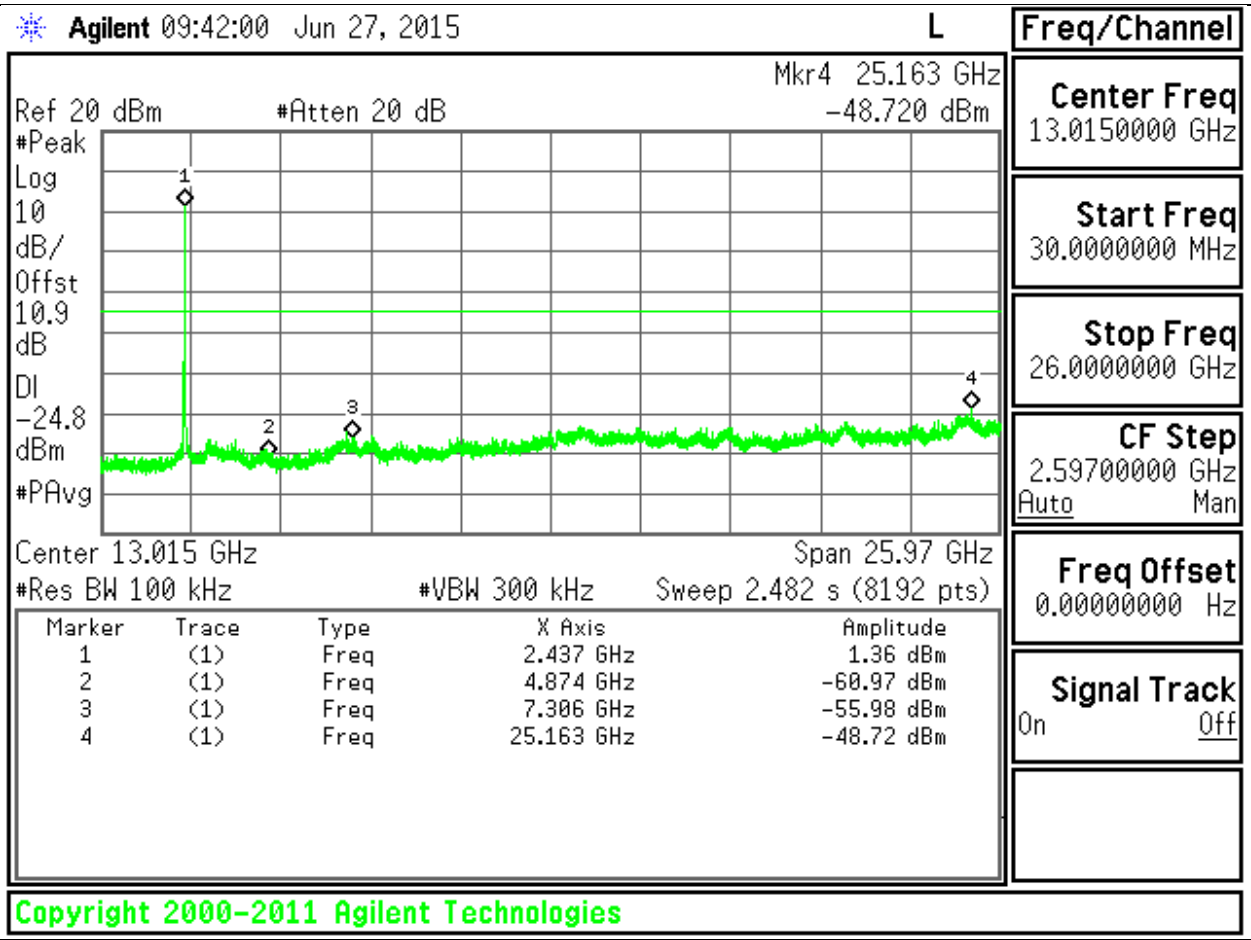


OUT-OF-BAND EMISSIONS

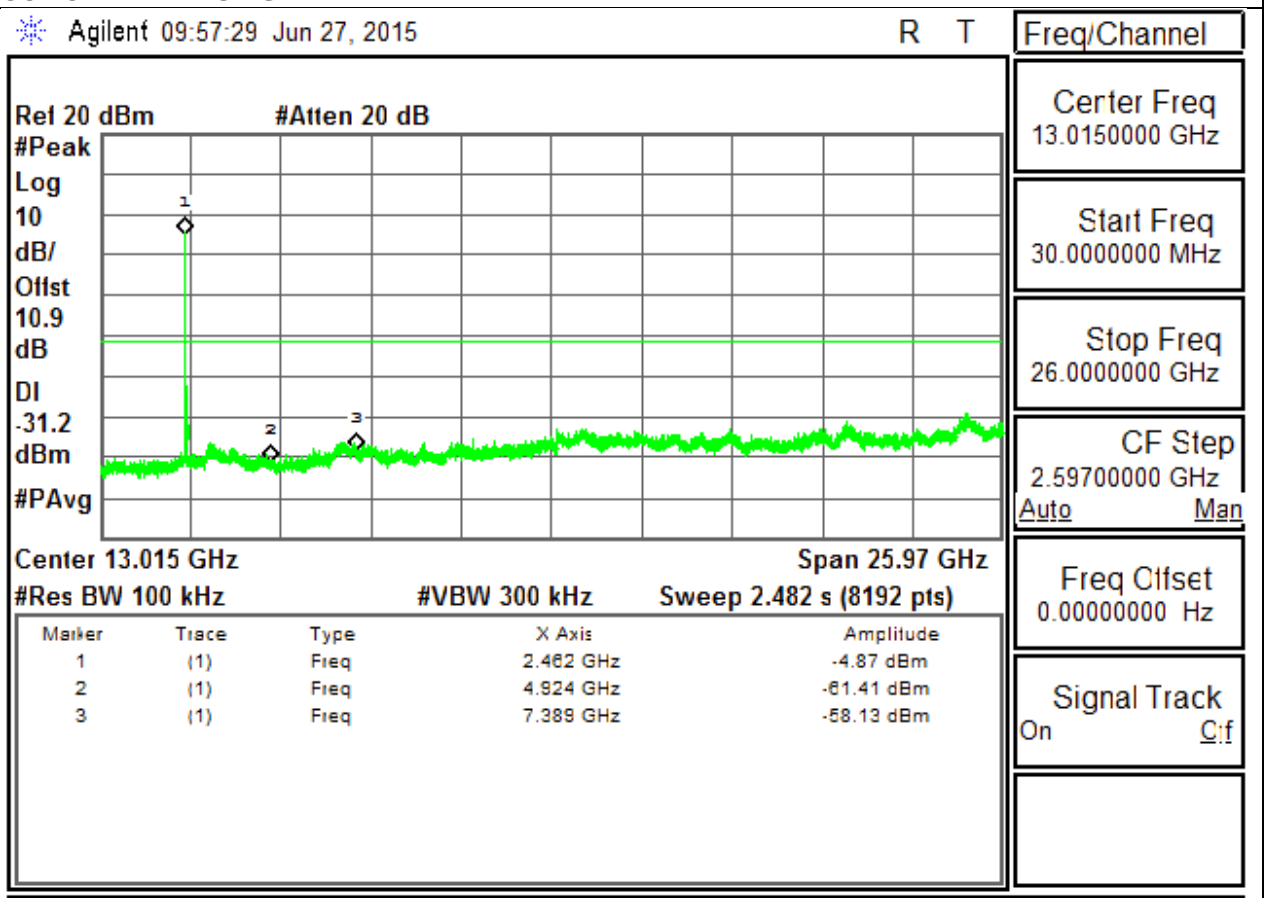
OUT OF BAND LOW CH



OUT OF BAND MID CH



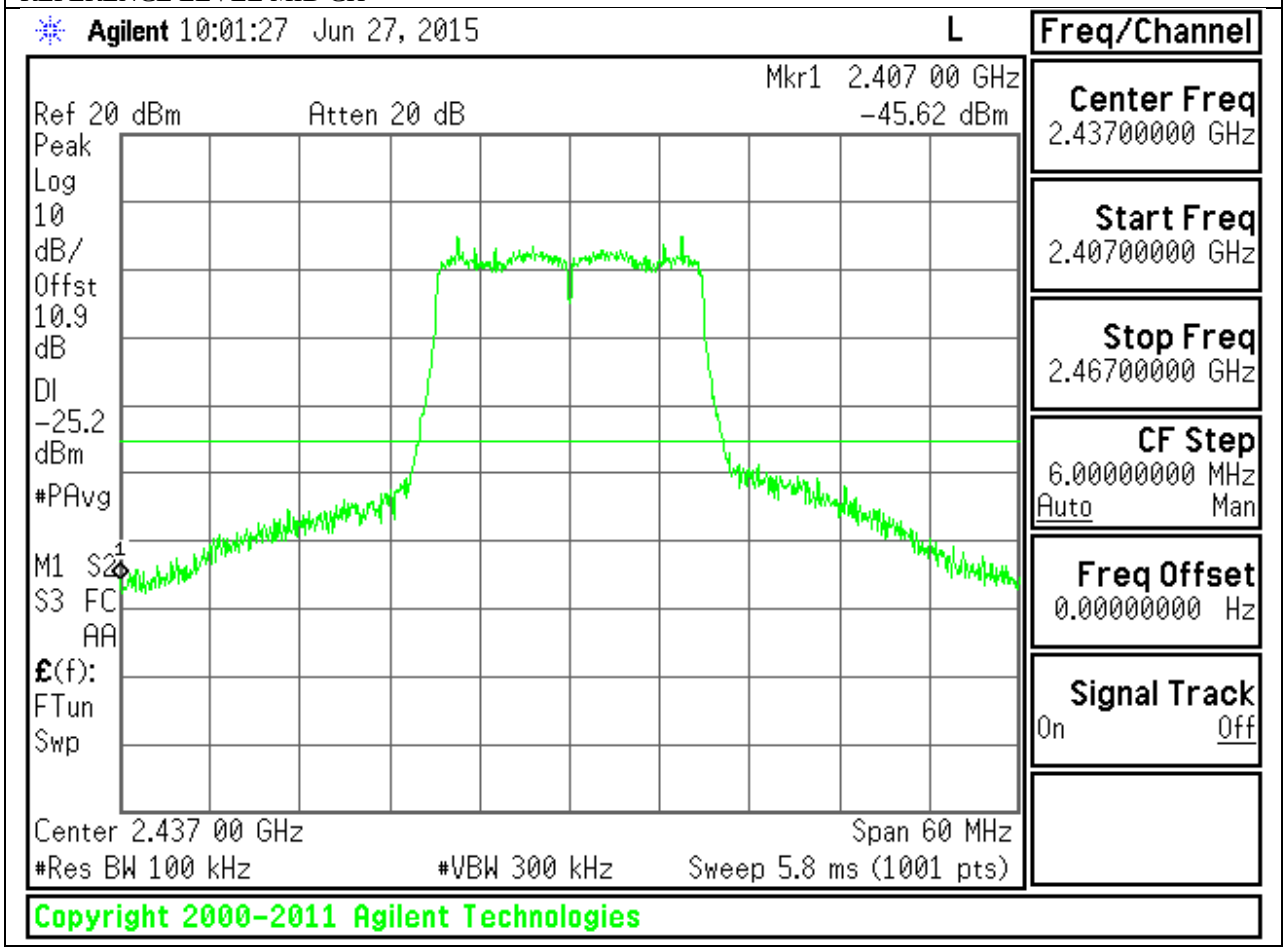
OUT OF BAND HIGH CH



1.1.2. 802.11n HT20 MODE IN THE 2.4 GHz BAND (CHAIN 0)

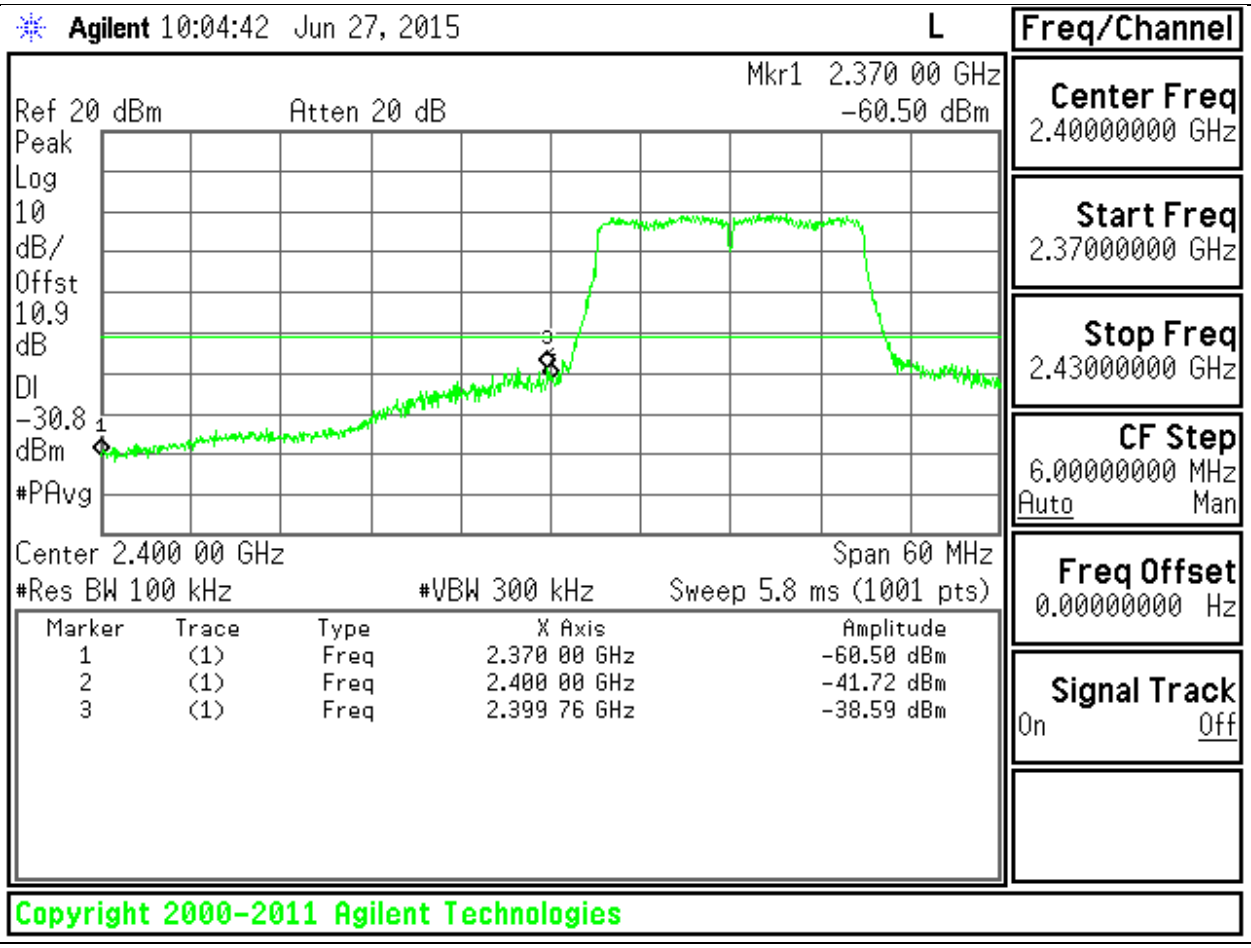
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



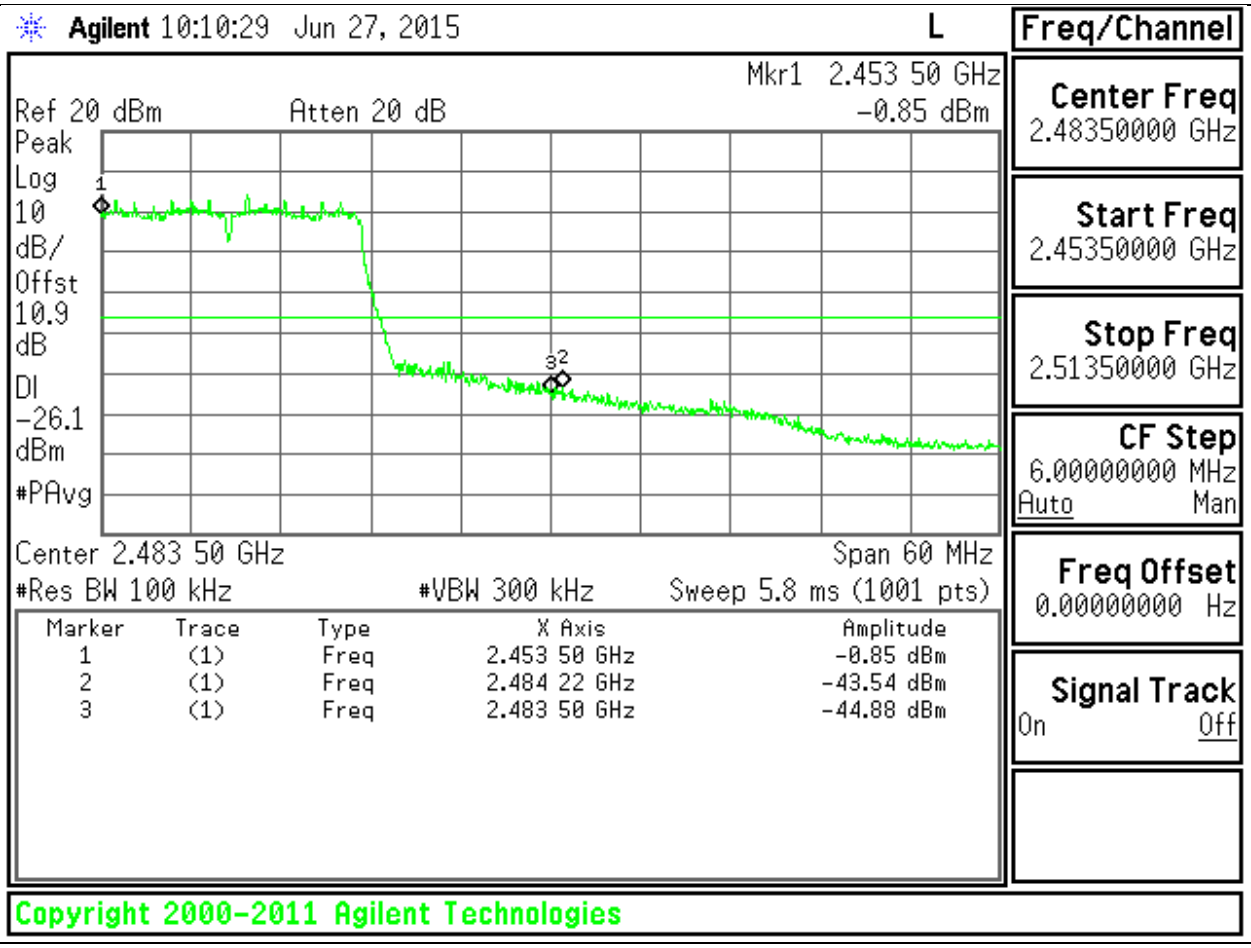
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



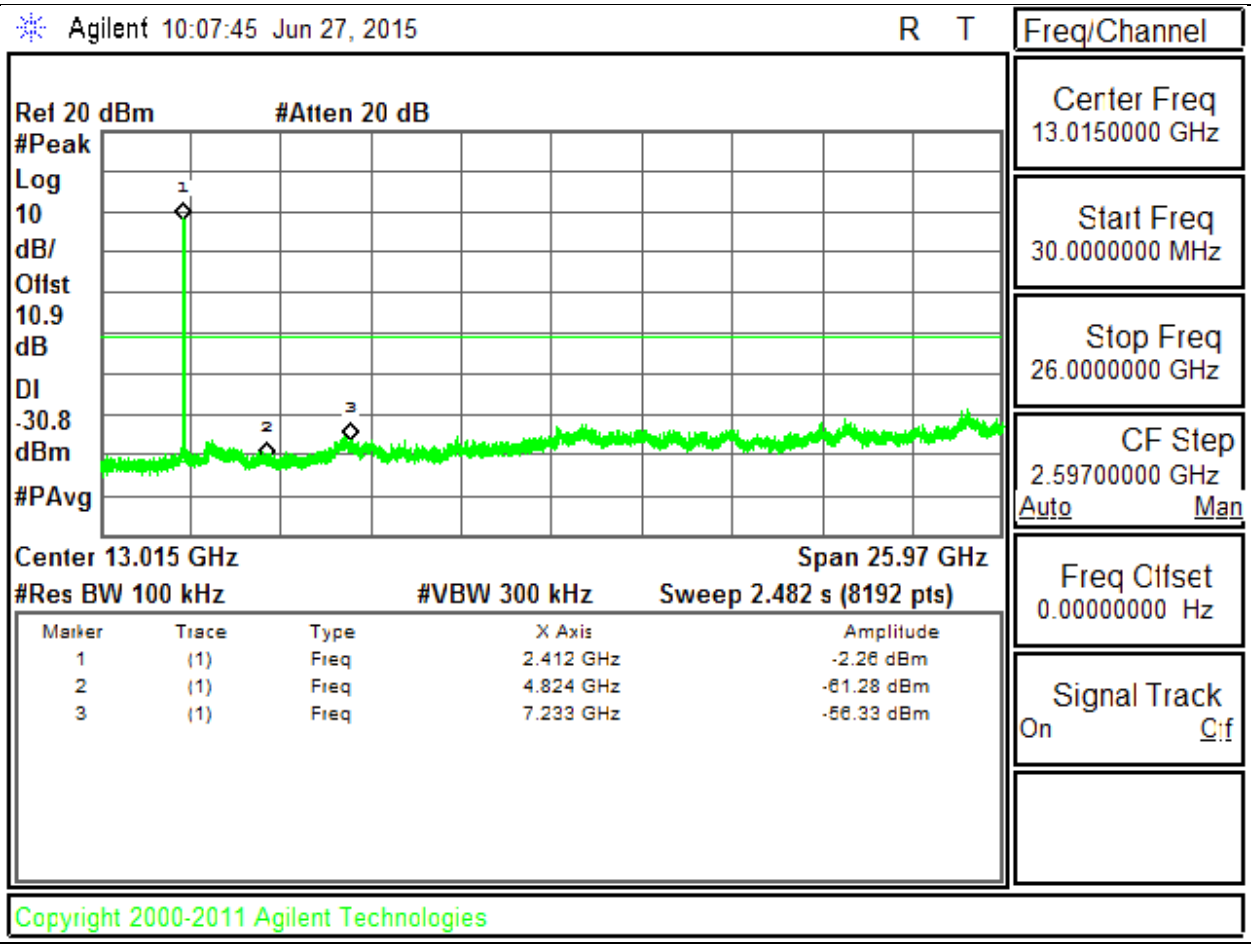
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

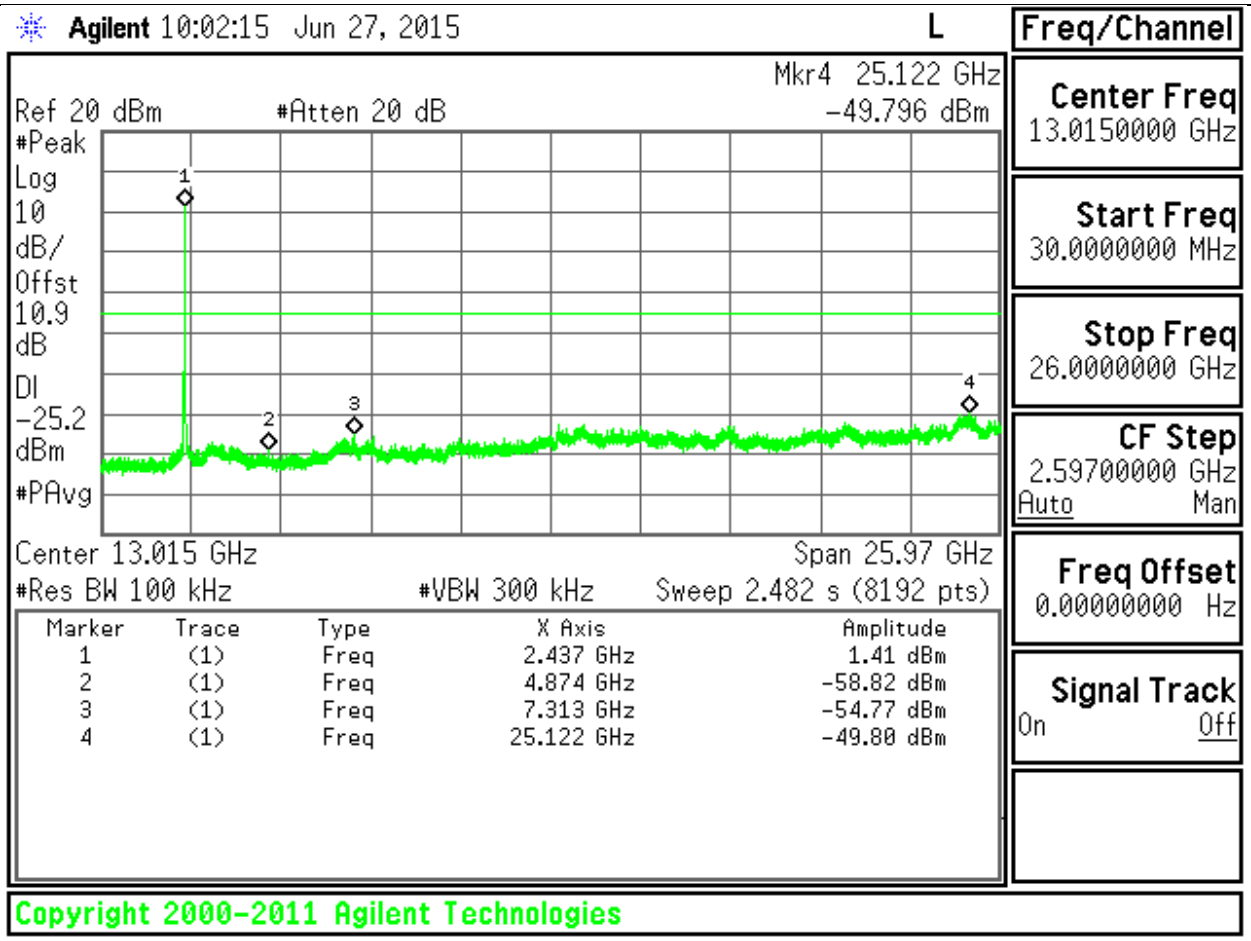


OUT-OF-BAND EMISSIONS

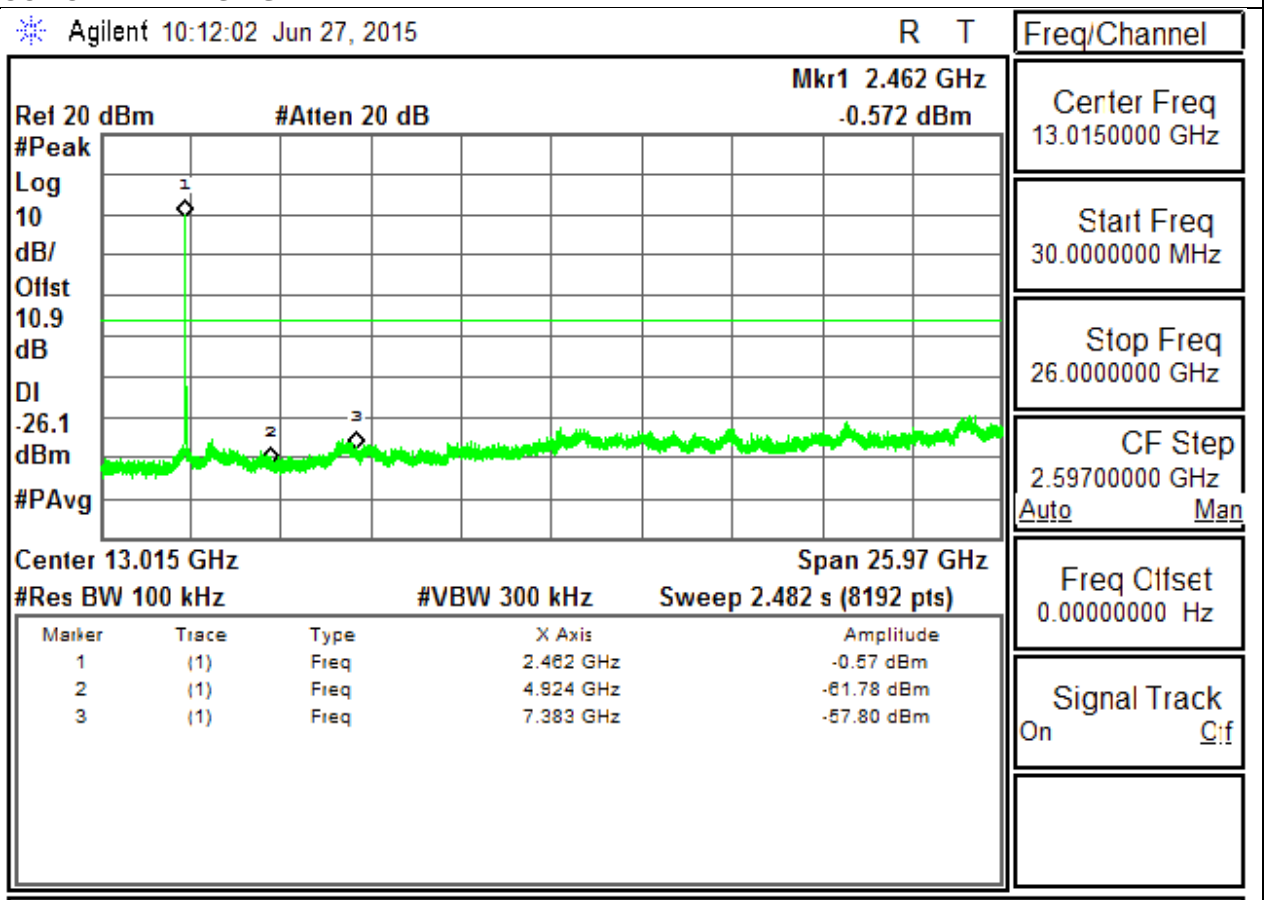
OUT OF BAND LOW CH



OUT OF BAND MID CH



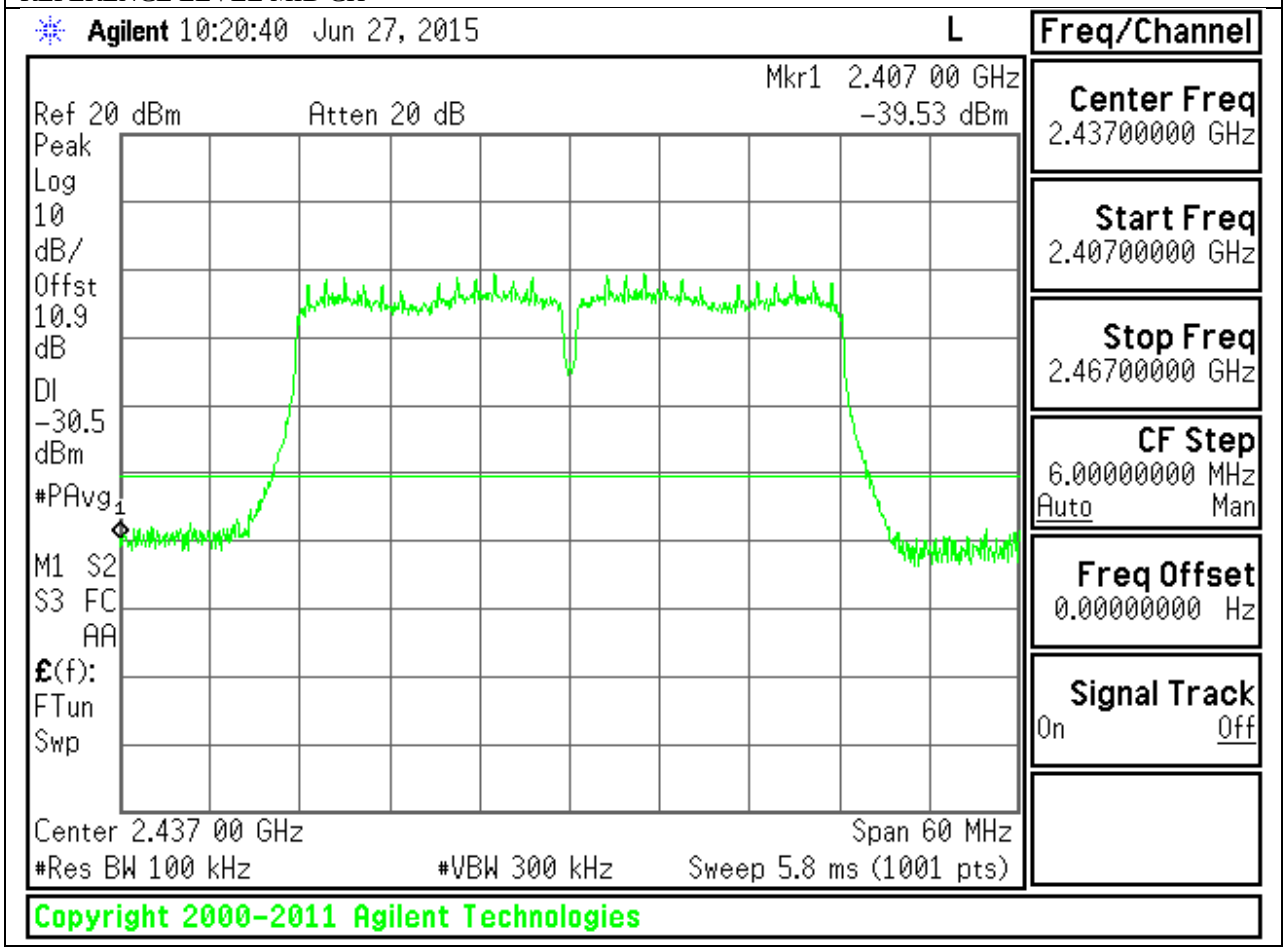
OUT OF BAND HIGH CH



1.1.1. 802.11n HT40 MODE IN THE 2.4 GHz BAND (CHAIN 0)

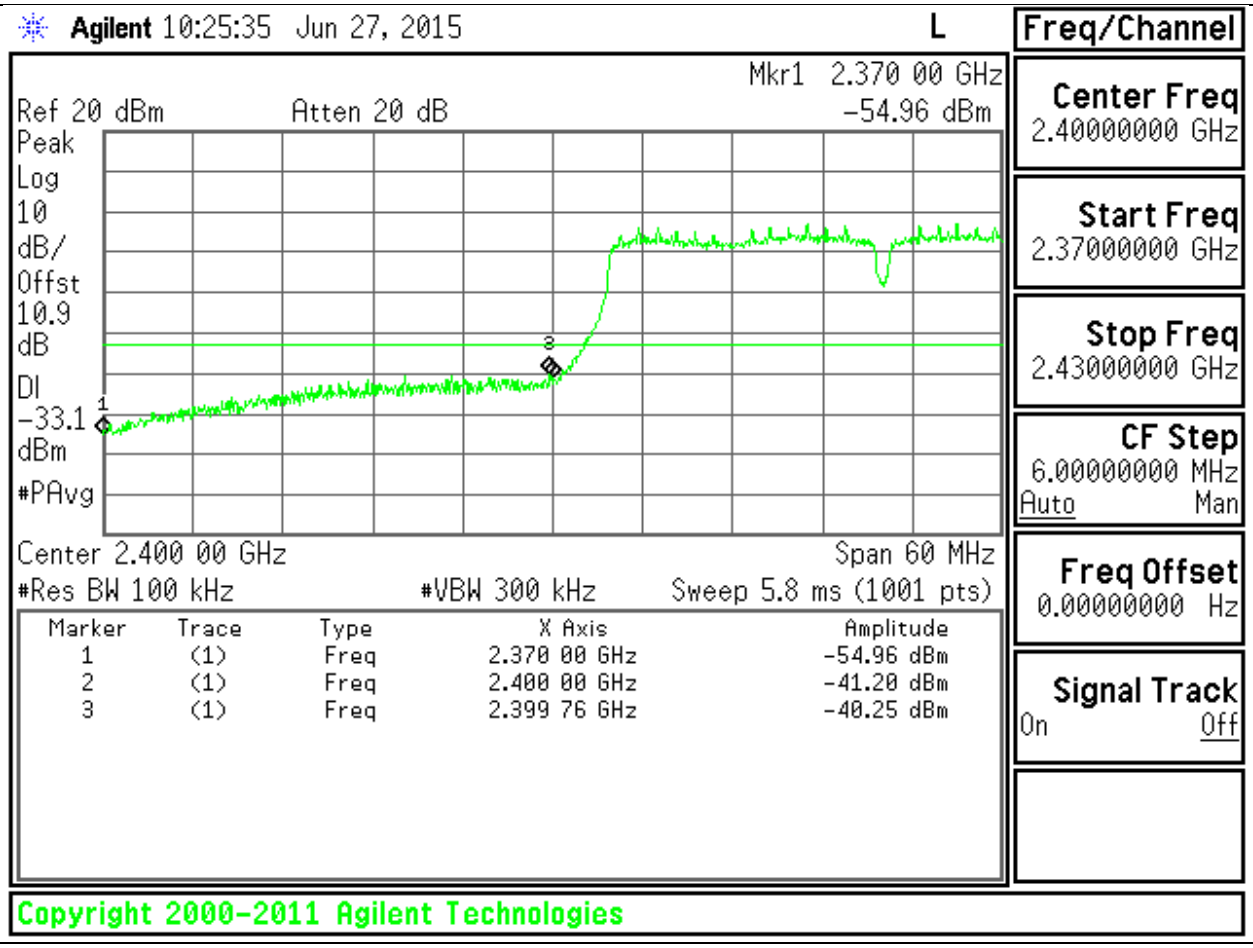
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



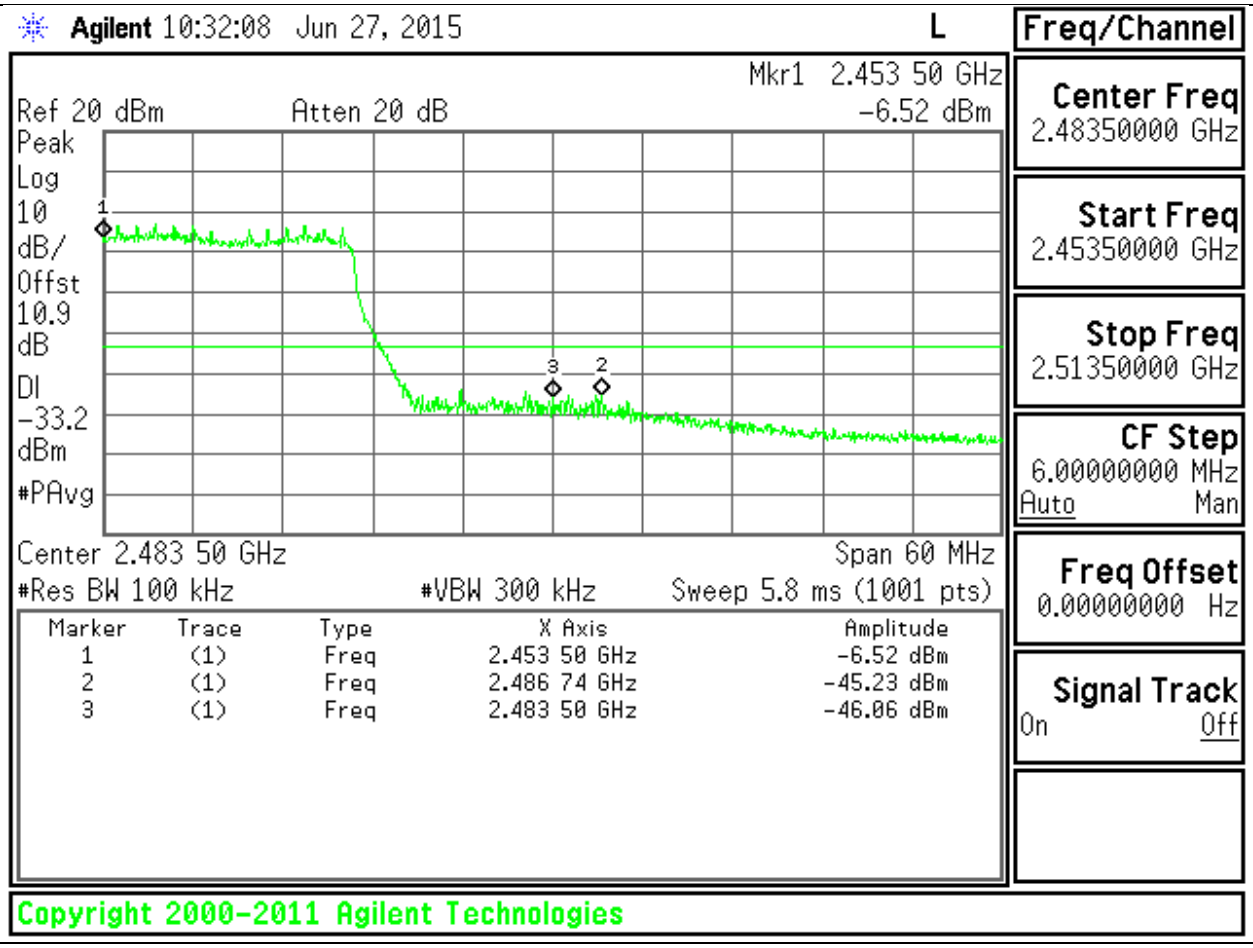
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



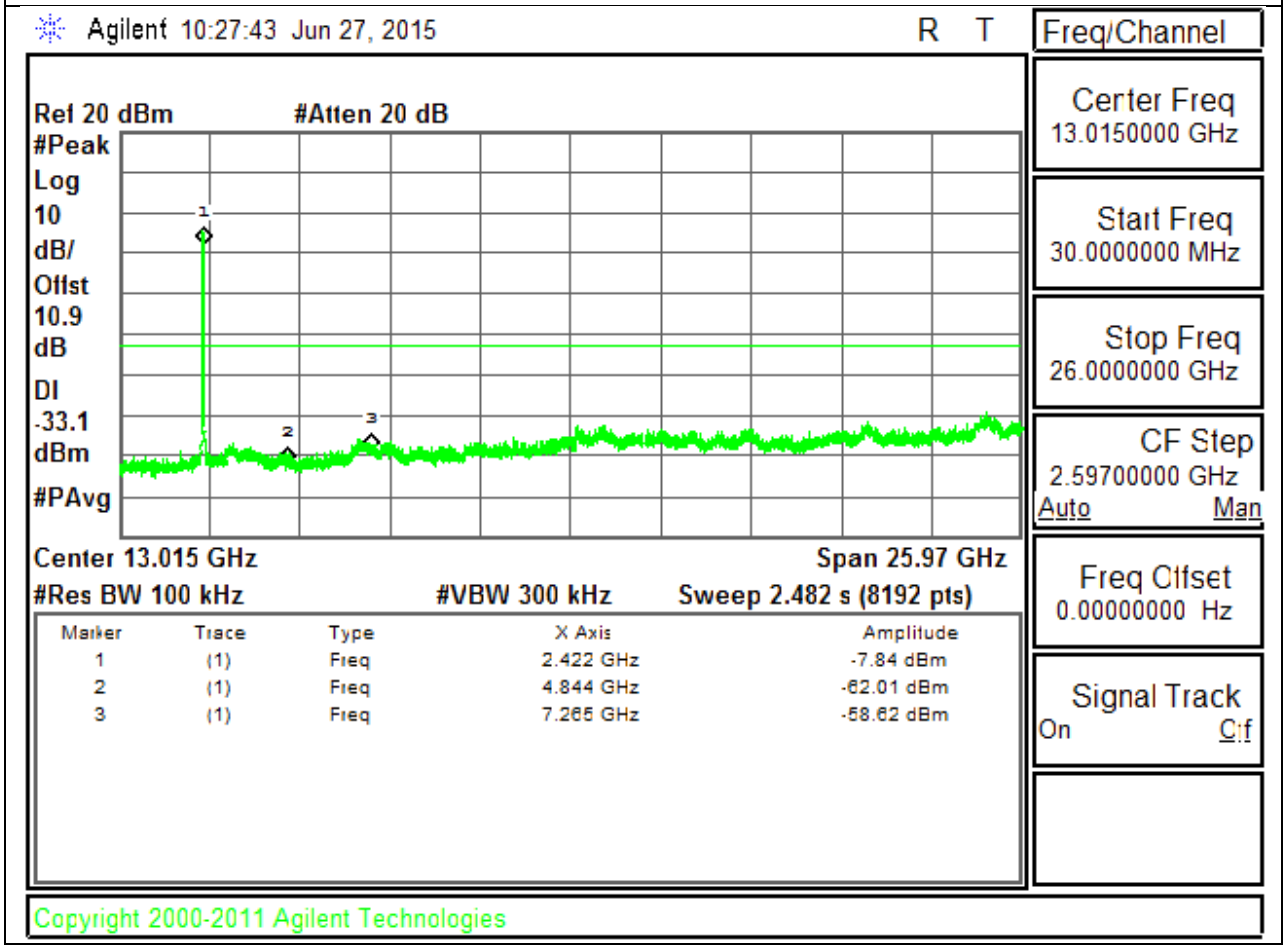
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

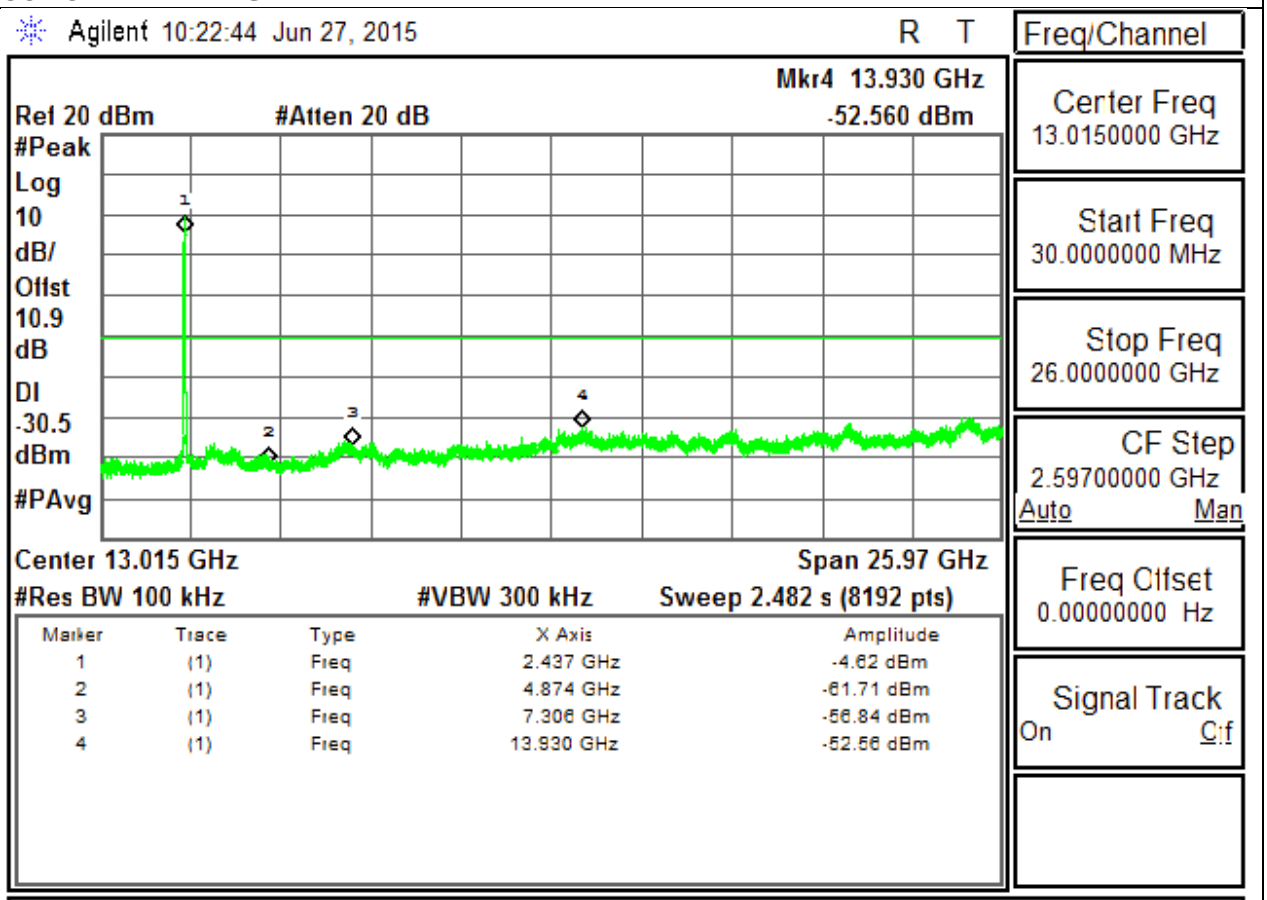


OUT-OF-BAND EMISSIONS

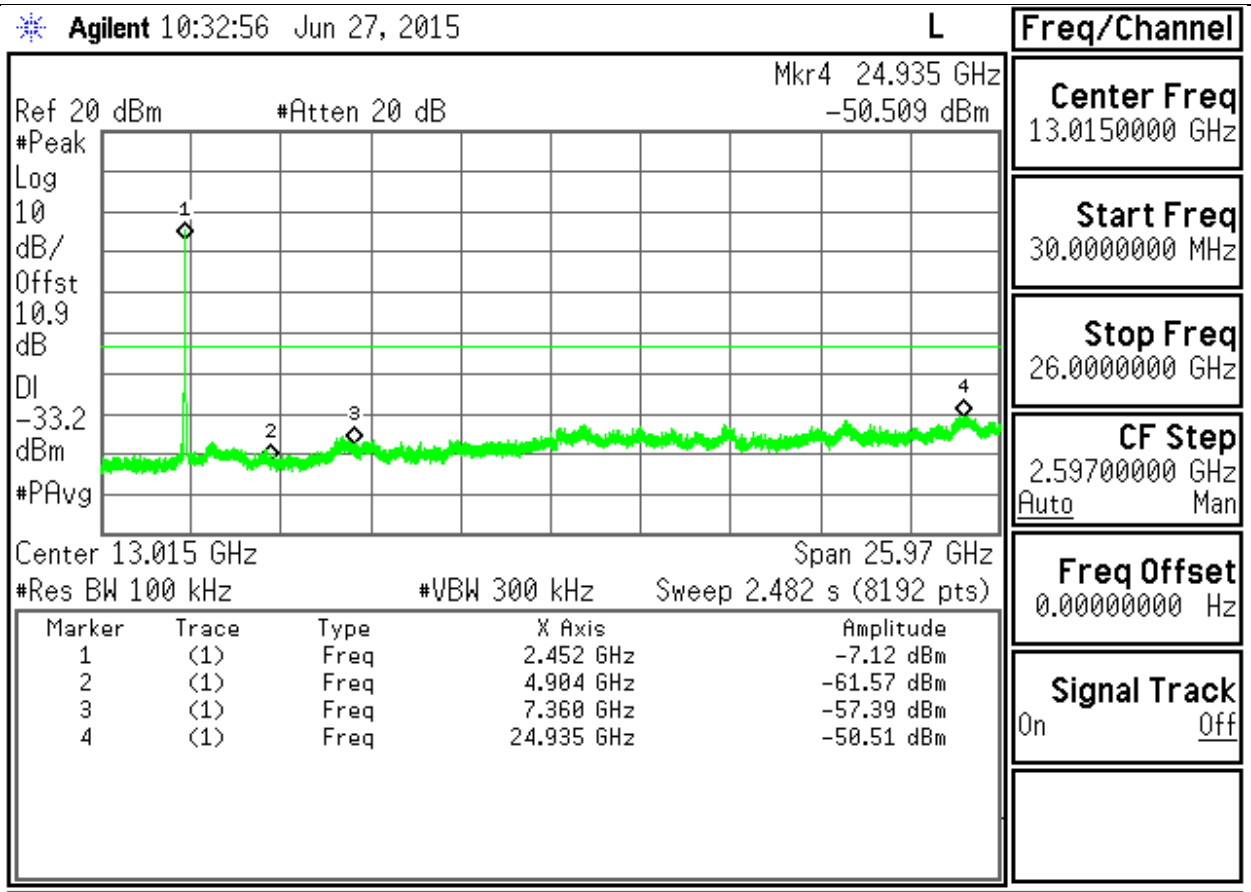
OUT OF BAND LOW CH



OUT OF BAND MID CH



OUT OF BAND HIGH CH



10. ANTENNA PORT TEST RESULTS MIMO

10.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-247 5.2.1

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

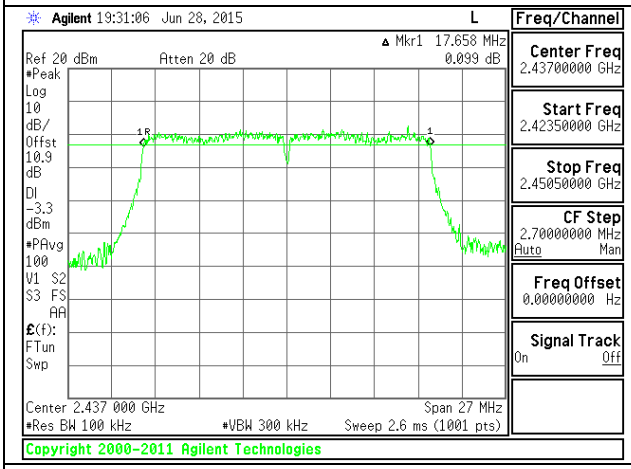
Channel	Frequency (MHz)	6 dB Bandwidth (MHz) C0	6 dB Bandwidth (MHz) C1	Minimum Limit (MHz)
Low	2412	16.58	17.66	0.5
Mid	2437	17.66	17.71	0.5
High	2462	17.58	17.66	0.5
Worst		16.58	17.66	

10.1.2. 802.11n HT40 MODE IN THE 2.4 GHz BAND

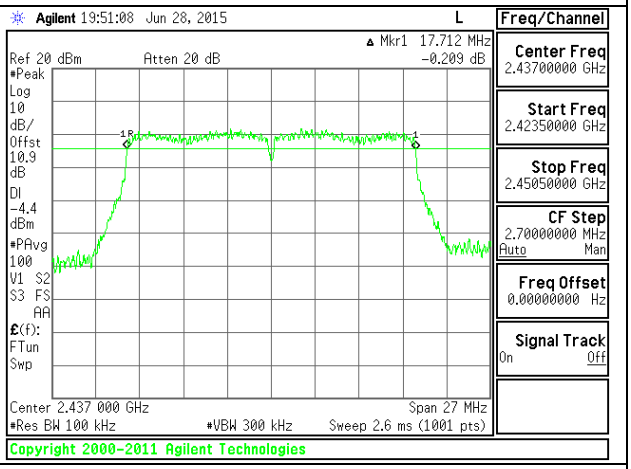
Channel	Frequency (MHz)	6 dB Bandwidth (MHz) C0	6 dB Bandwidth (MHz) C1	Minimum Limit (MHz)
Low	2422	35.75	36.30	0.5
Mid	2437	35.80	36.36	0.5
High	2452	35.75	36.30	0.5
Worst		35.75	36.30	

10.1.3. 6 dB BANDWIDTH MID CH PLOTS

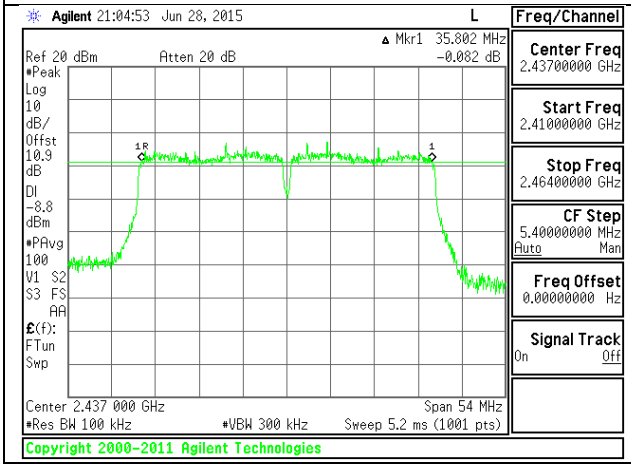
11n HT20 Mid Channel Chain 0



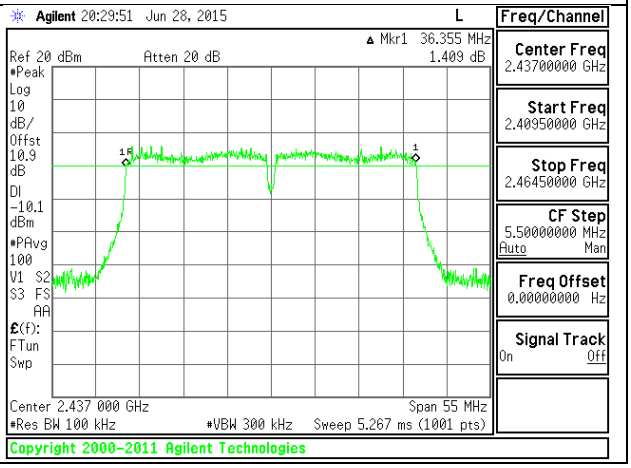
11n Mid Channel HT20 Chain 1



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

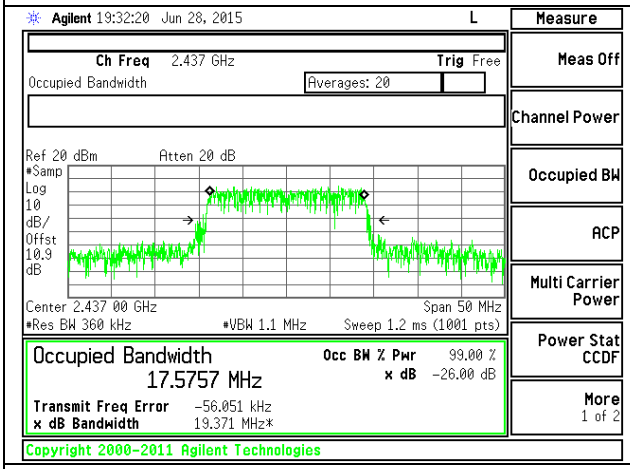
Channel	Frequency (MHz)	99% Bandwidth (MHz) C0	99% Bandwidth (MHz) C1
Low	2412	17.67	17.62
Mid	2437	17.58	17.67
High	2462	17.67	17.65
Worst		17.67	17.67

10.2.2. 802.11n HT40 MODE IN THE 2.4 GHz BAND

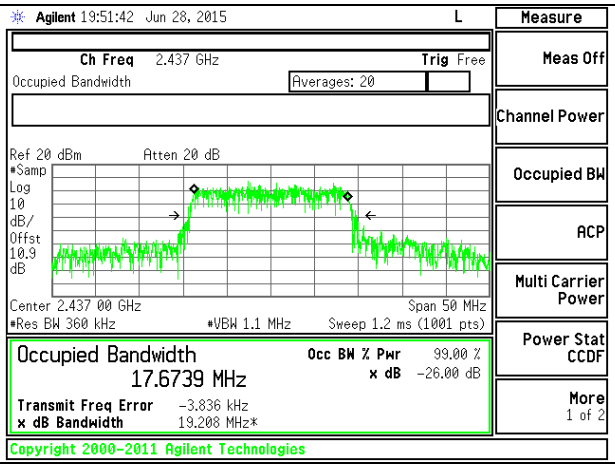
Channel	Frequency (MHz)	99% Bandwidth (MHz) C0	99% Bandwidth (MHz) C1
Low	2422	48.62	39.39
Mid	2437	42.46	36.07
High	2452	42.33	42.51
Worst		48.62	42.51

10.2.3. 99% BANDWIDTH MID CH PLOTS

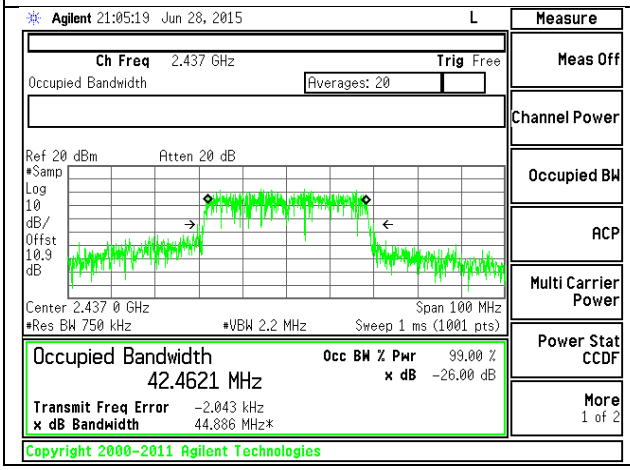
11n HT20 Mid Channel Chain 0



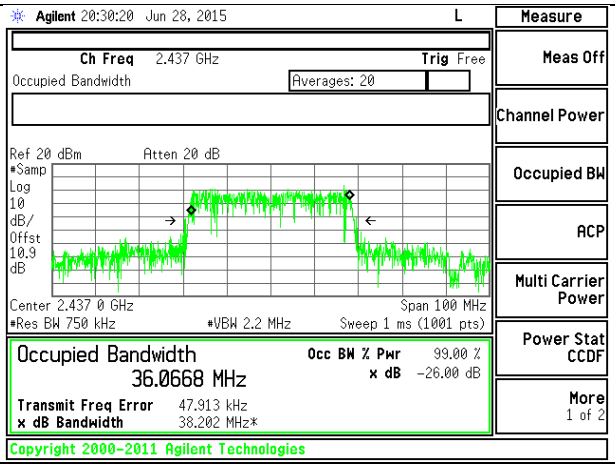
11n Mid Channel HT20 Chain 1



11n HT40 Mid Channel Chain 0



11n Mid Channel HT40 Chain 1



10.3. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-247 5.4.4

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.

MIMO

For power 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)	Correlated Chains Directional Gain (dBi)
3.50	2.50	3.02

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

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated Chains Directional Gain (dBi)
3.50	2.50	6.02

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	3.02	30.00	36	30.00
Mid	2437	3.02	30.00	36	30.00
High	2462	3.02	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	11.7	11	14.37	30.00	-15.63
Mid	2437	14.5	14	17.27	30.00	-12.73
High	2462	11.8	11	14.43	30.00	-15.57

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	3.02	30.00	36	30.00
Mid	2437	3.02	30.00	36	30.00
High	2462	3.02	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	9	8	11.54	30.00	-18.46
Mid	2437	10.8	10	13.43	30.00	-16.57
High	2452	11.8	11	14.43	30.00	-15.57

10.4. PSD

LIMITS

FCC §15.247

IC RSS-247 5.2.2

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

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-12.34	-12.08	-9.20	8.0	-17.2
Mid	2437	-9.32	-9.42	-6.36	8.0	-14.4
High	2462	-12.40	-11.64	-8.99	8.0	-17.0

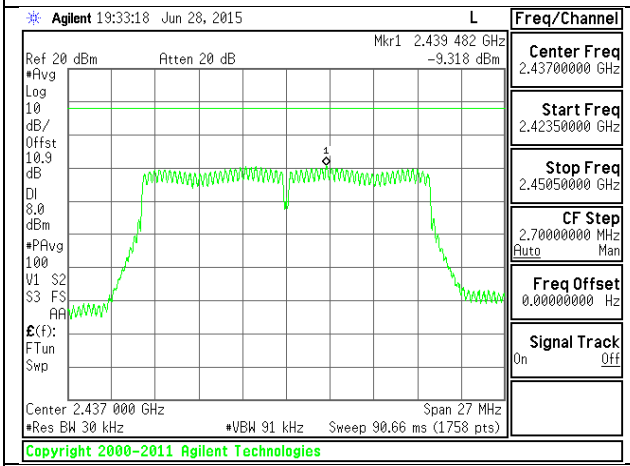
10.4.2. 802.11n HT40 MODE IN THE 2.4 GHz BAND

PSD Results

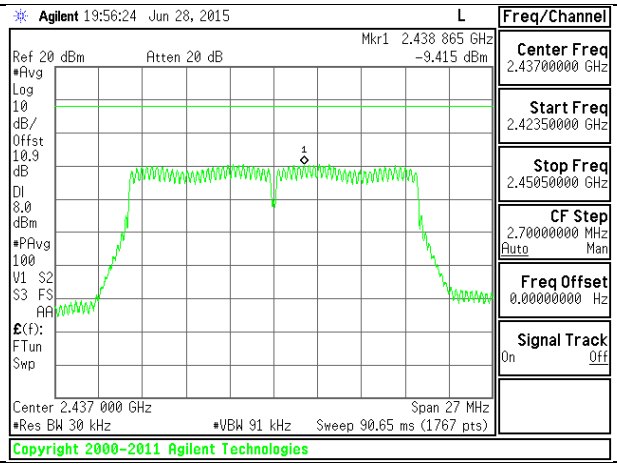
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Chain 1 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2422	-18.83	-17.95	-15.35	8.0	-23.4
Mid	2437	-16.67	-16.28	-13.46	8.0	-21.5
High	2452	-18.44	-18.16	-15.28	8.0	-23.3

10.4.3. PSD MID CH PLOTS

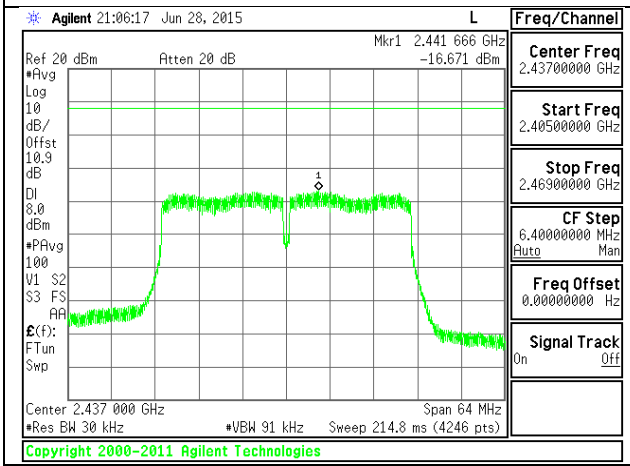
11n HT20 Chain 0



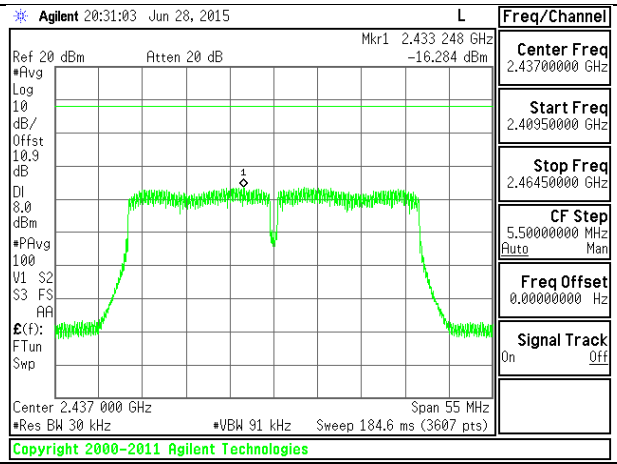
11n HT20 Chain 1



11n HT40 Chain 0



11n HT40 Chain 1



10.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-247 5.5

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

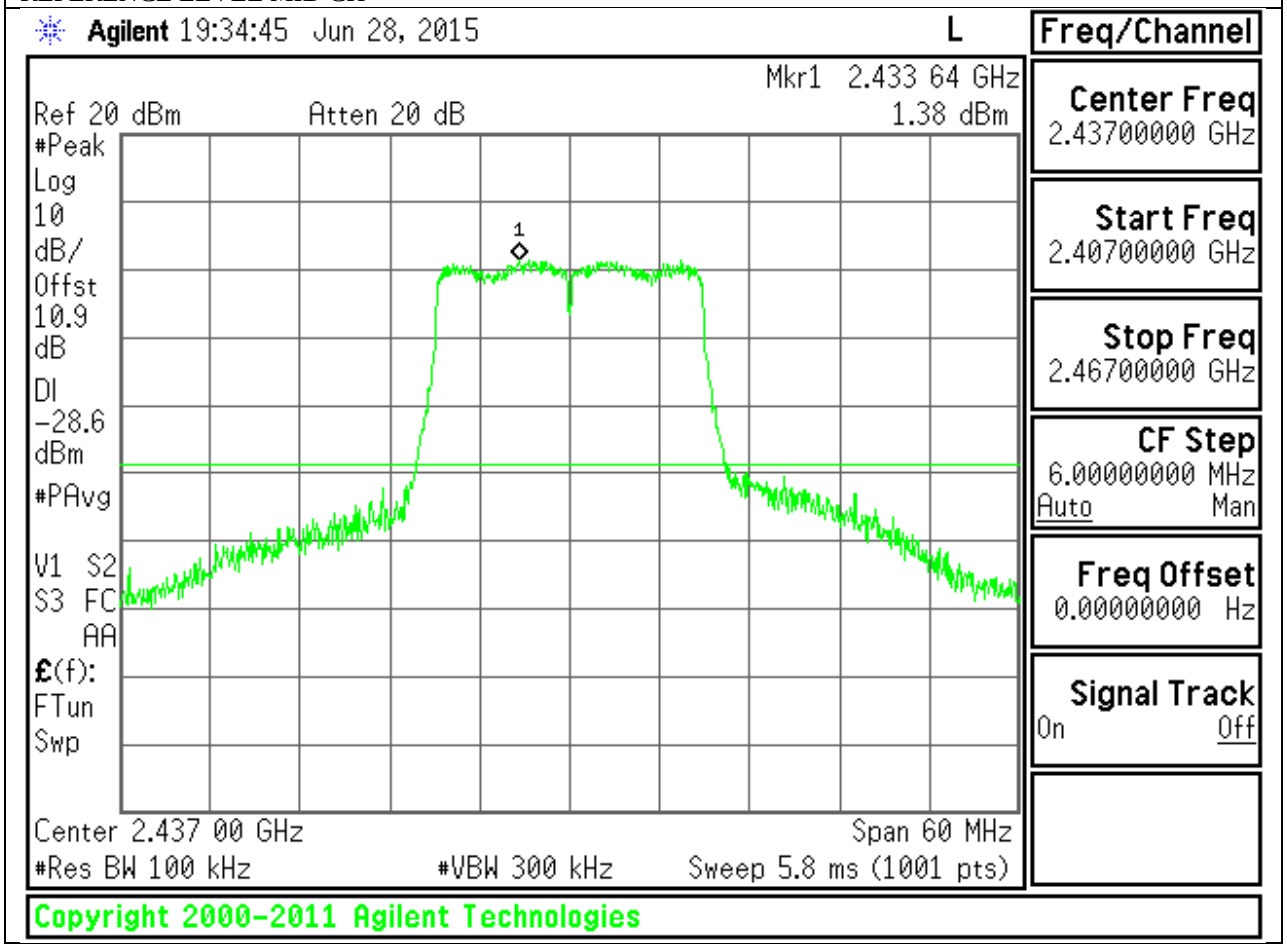
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

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

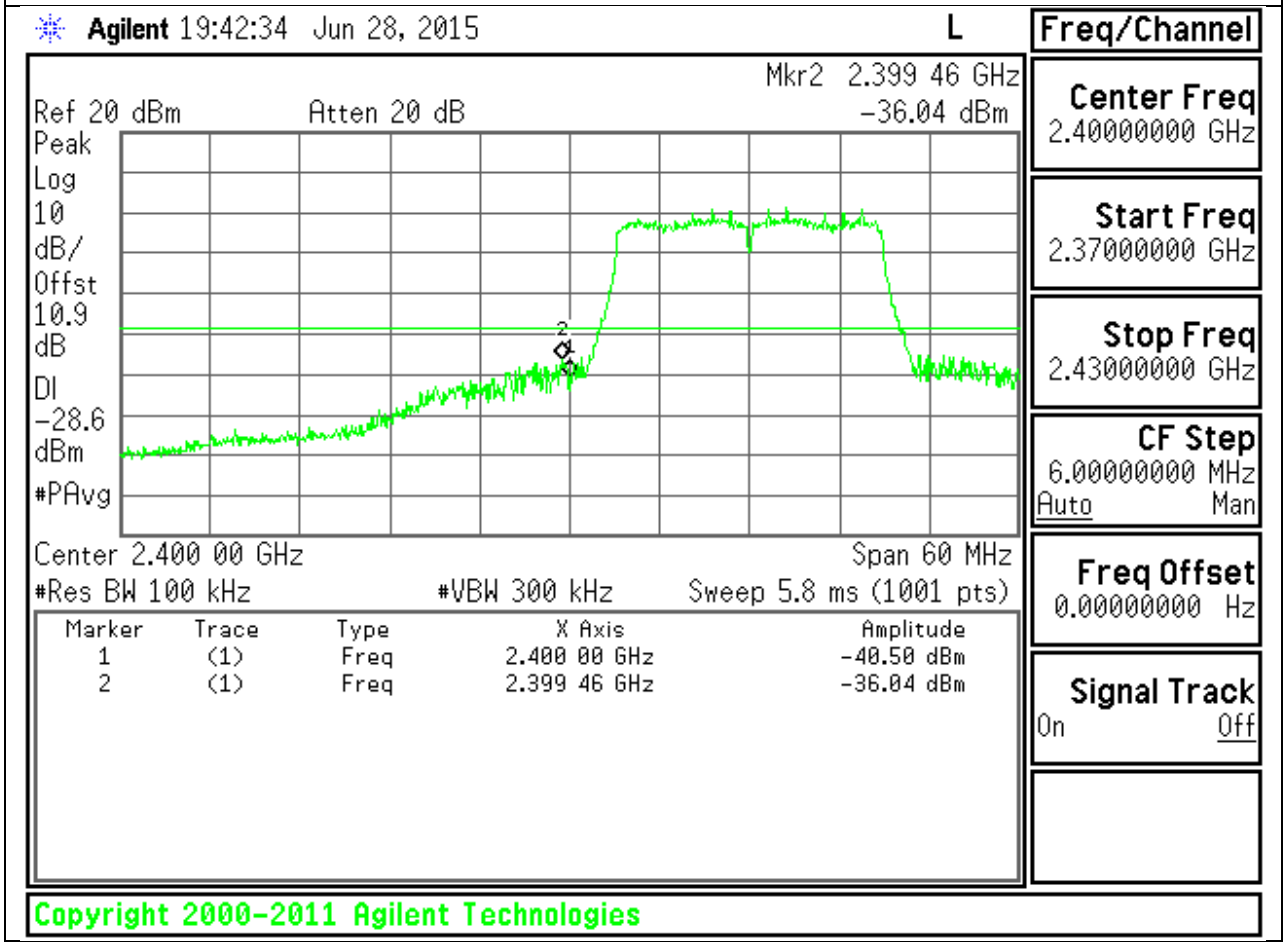
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



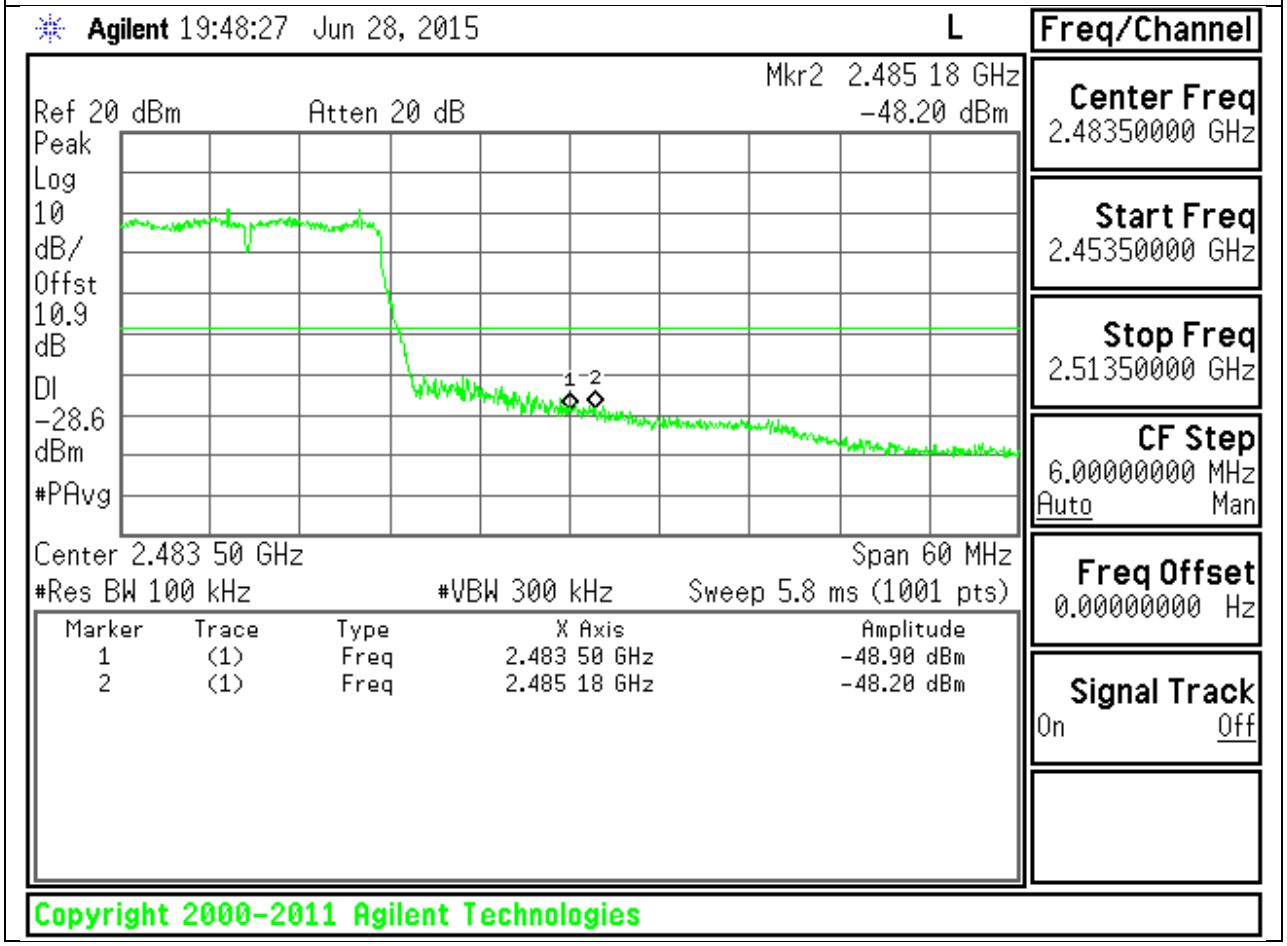
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



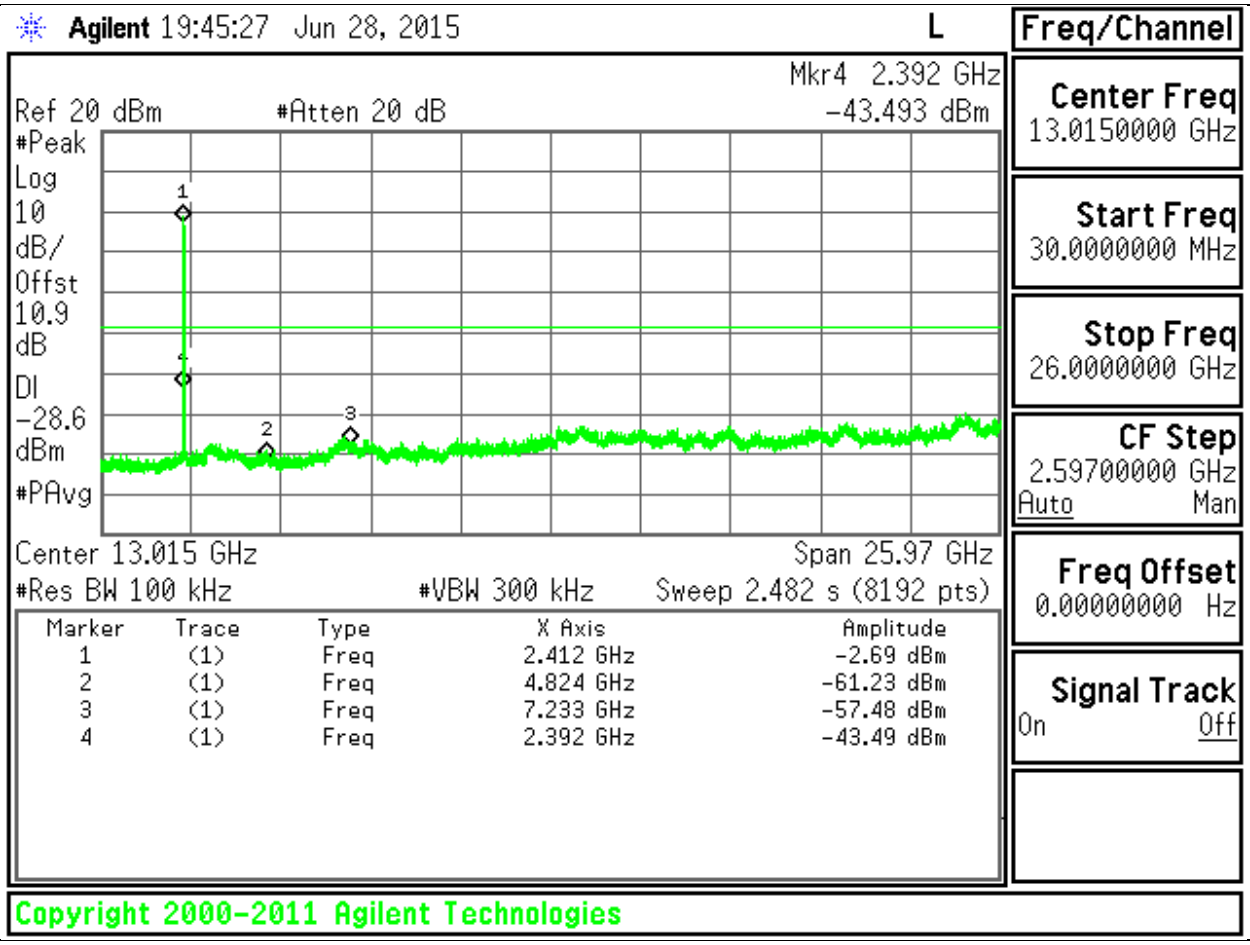
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

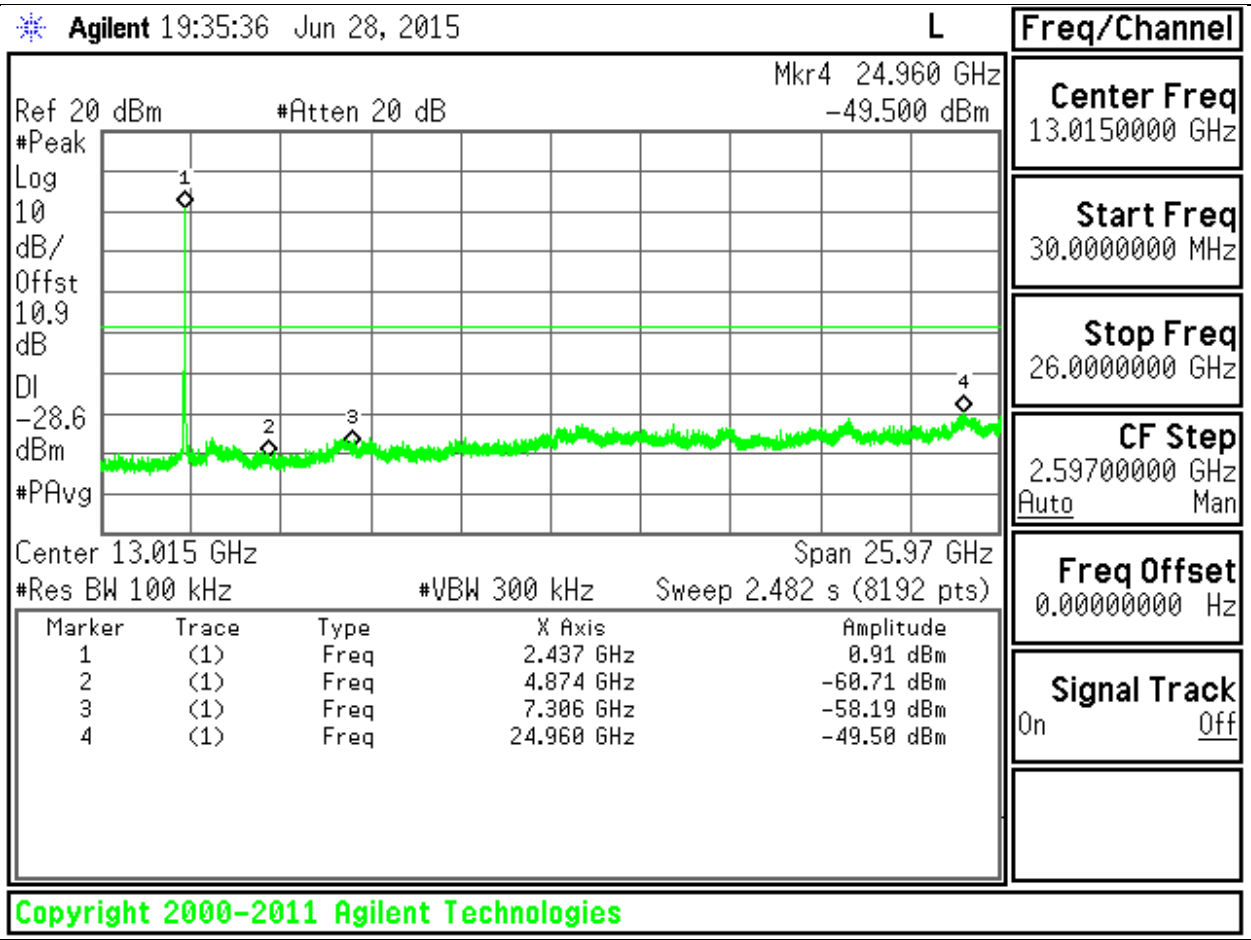


OUT-OF-BAND EMISSIONS

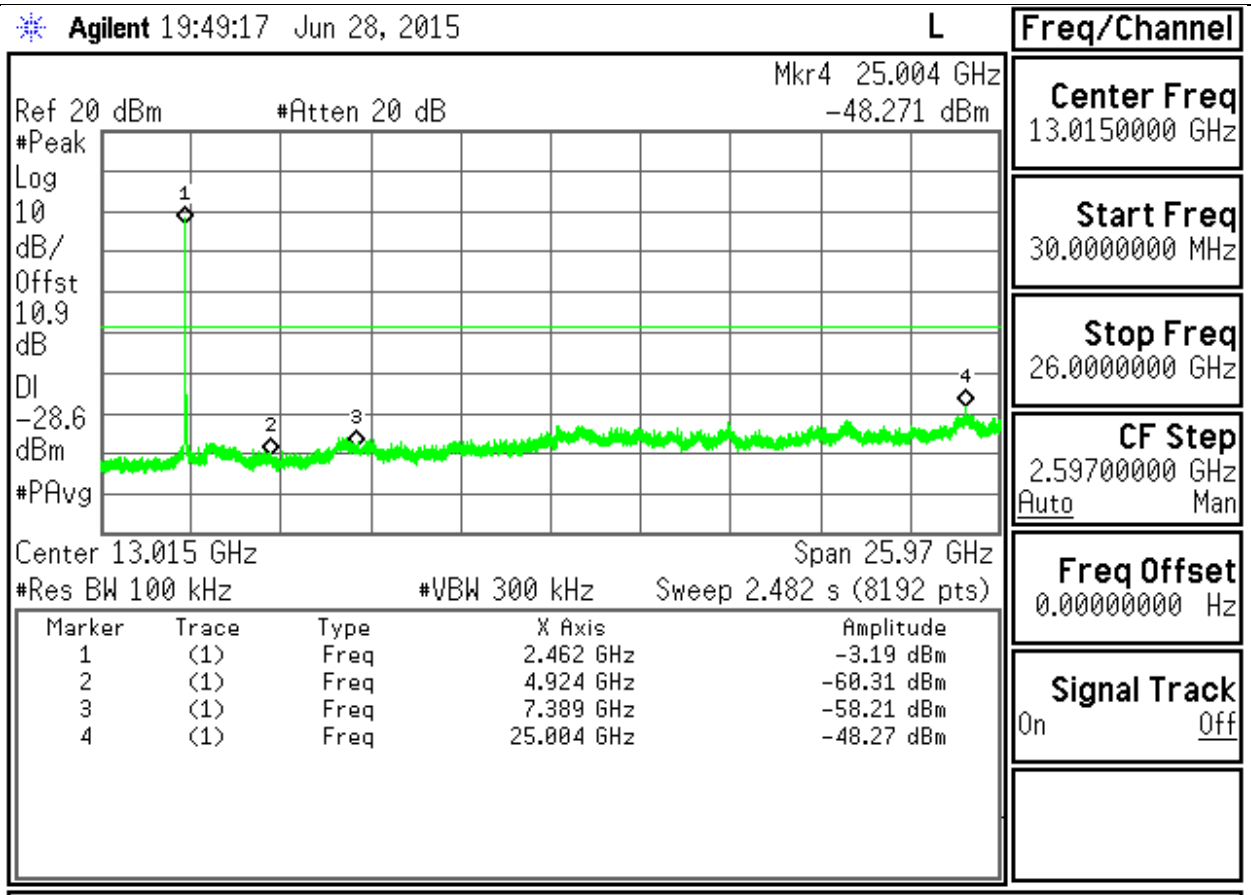
OUT OF BAND LOW CH



OUT OF BAND MID CH



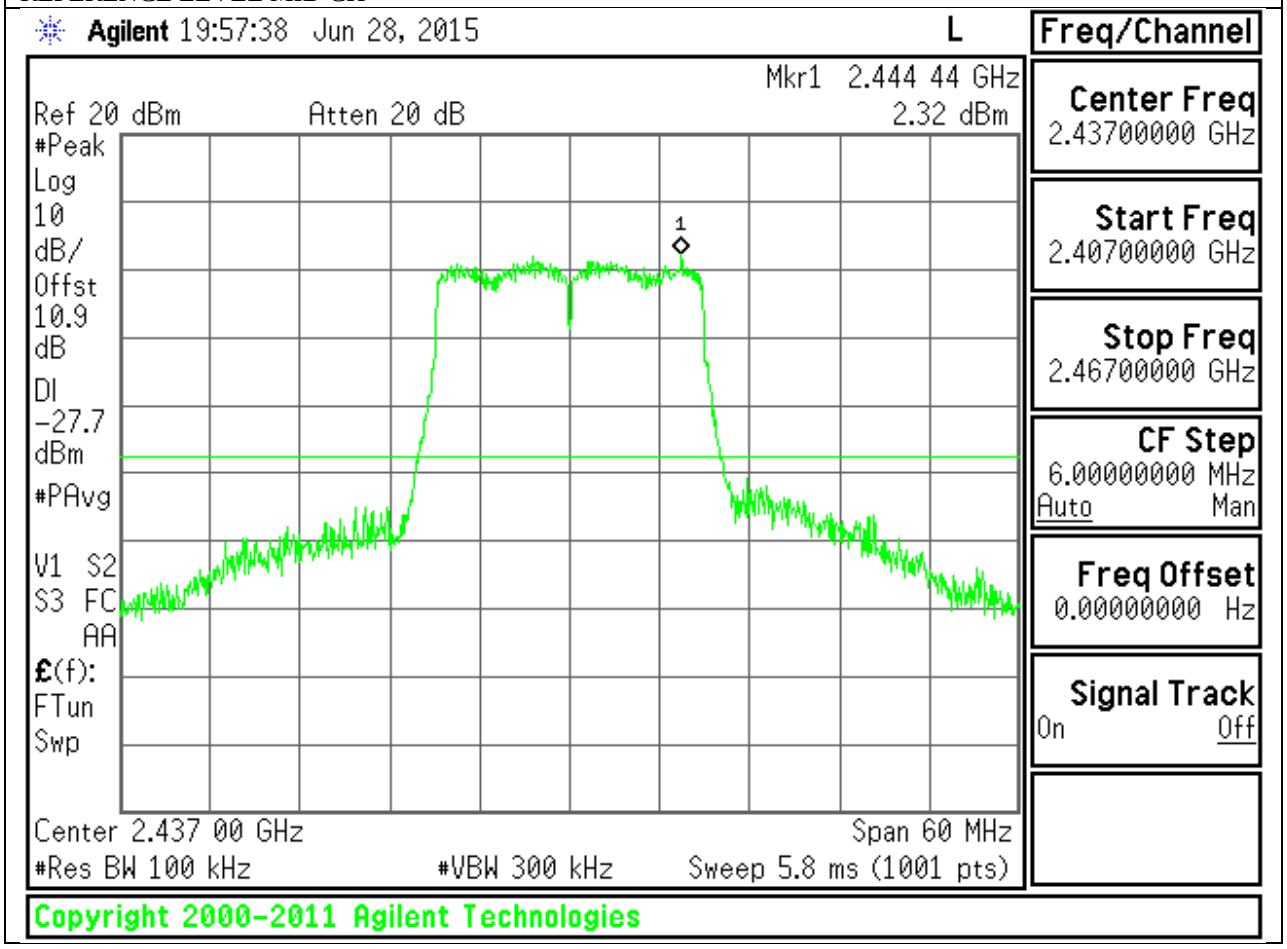
OUT OF BAND HIGH CH



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

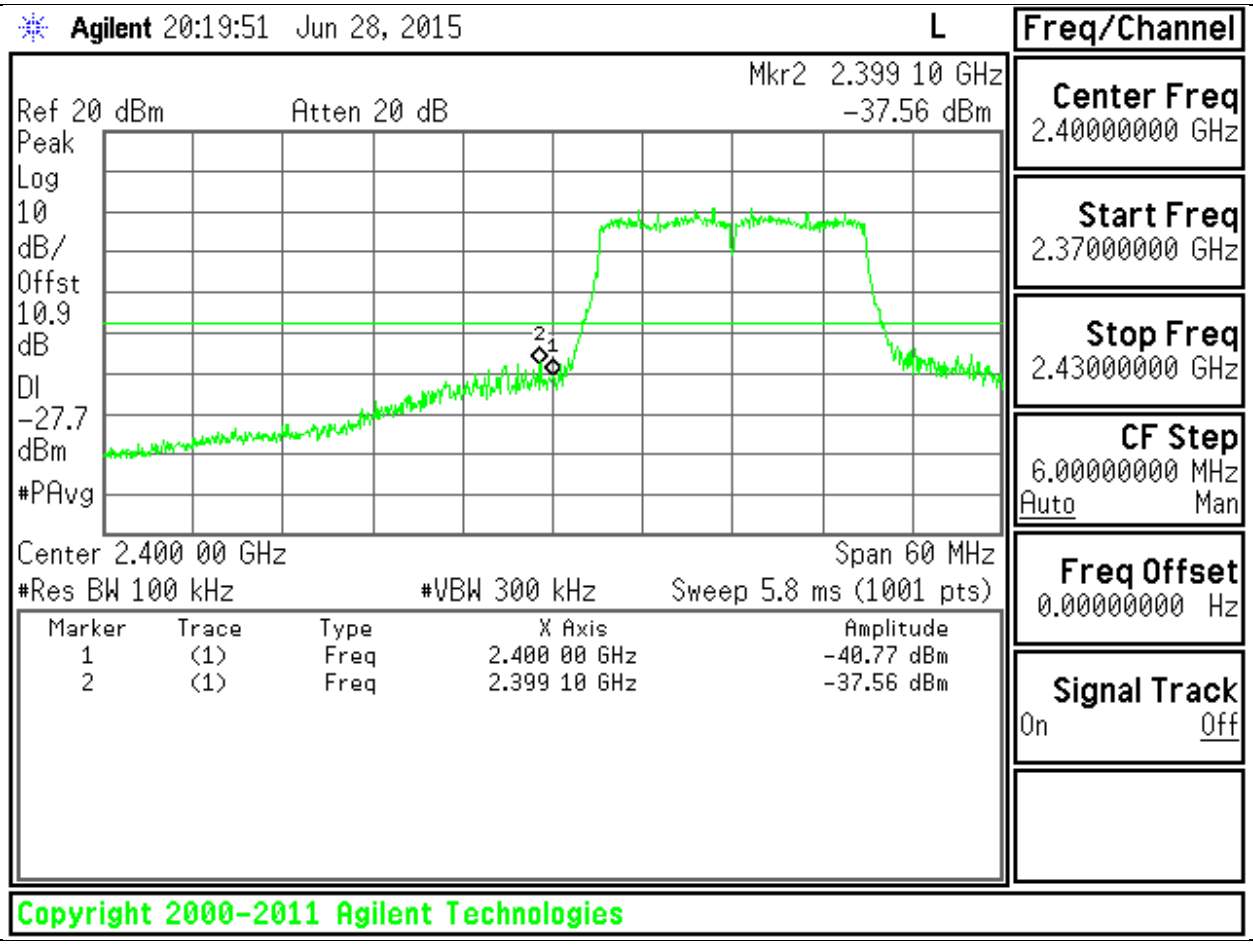
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



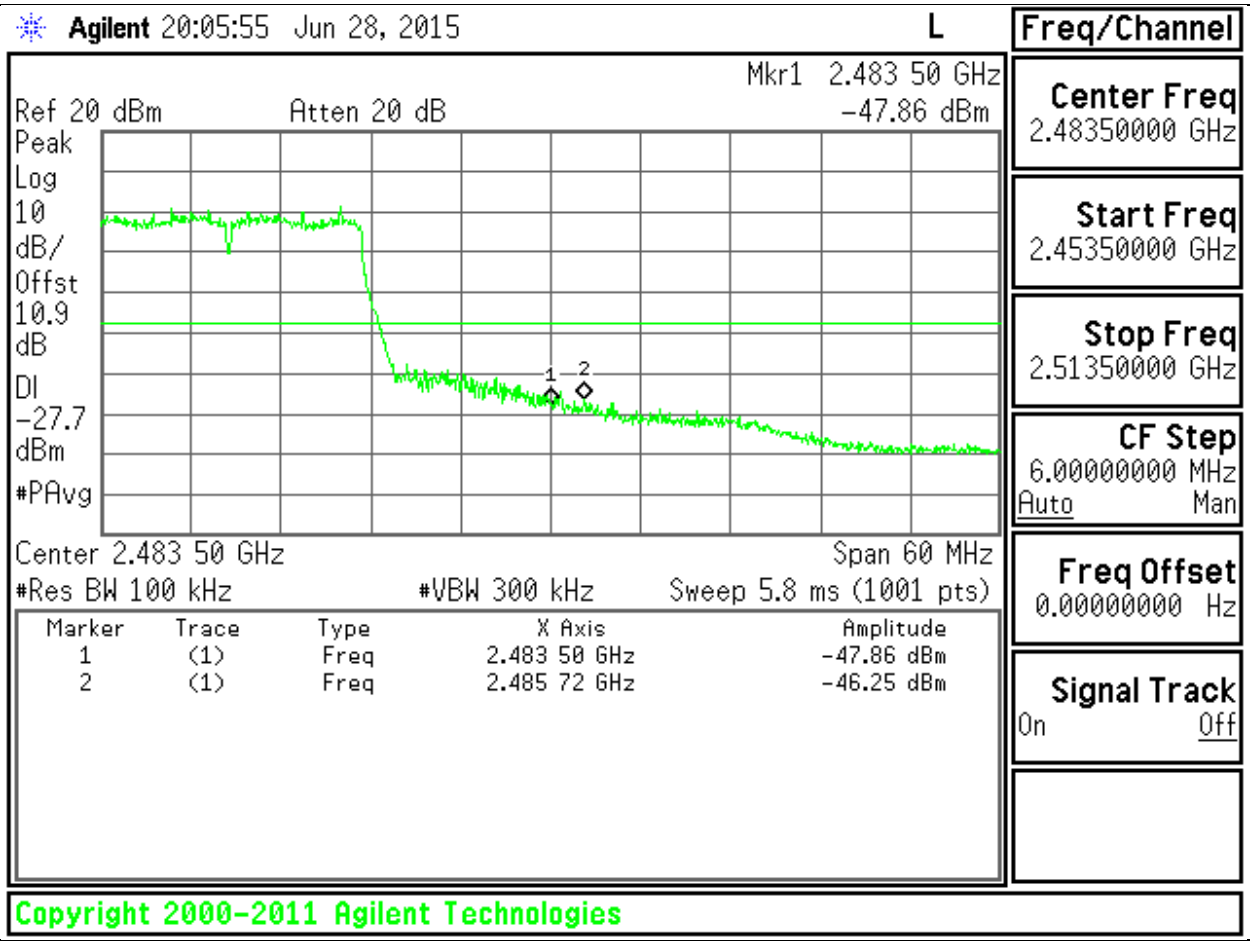
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



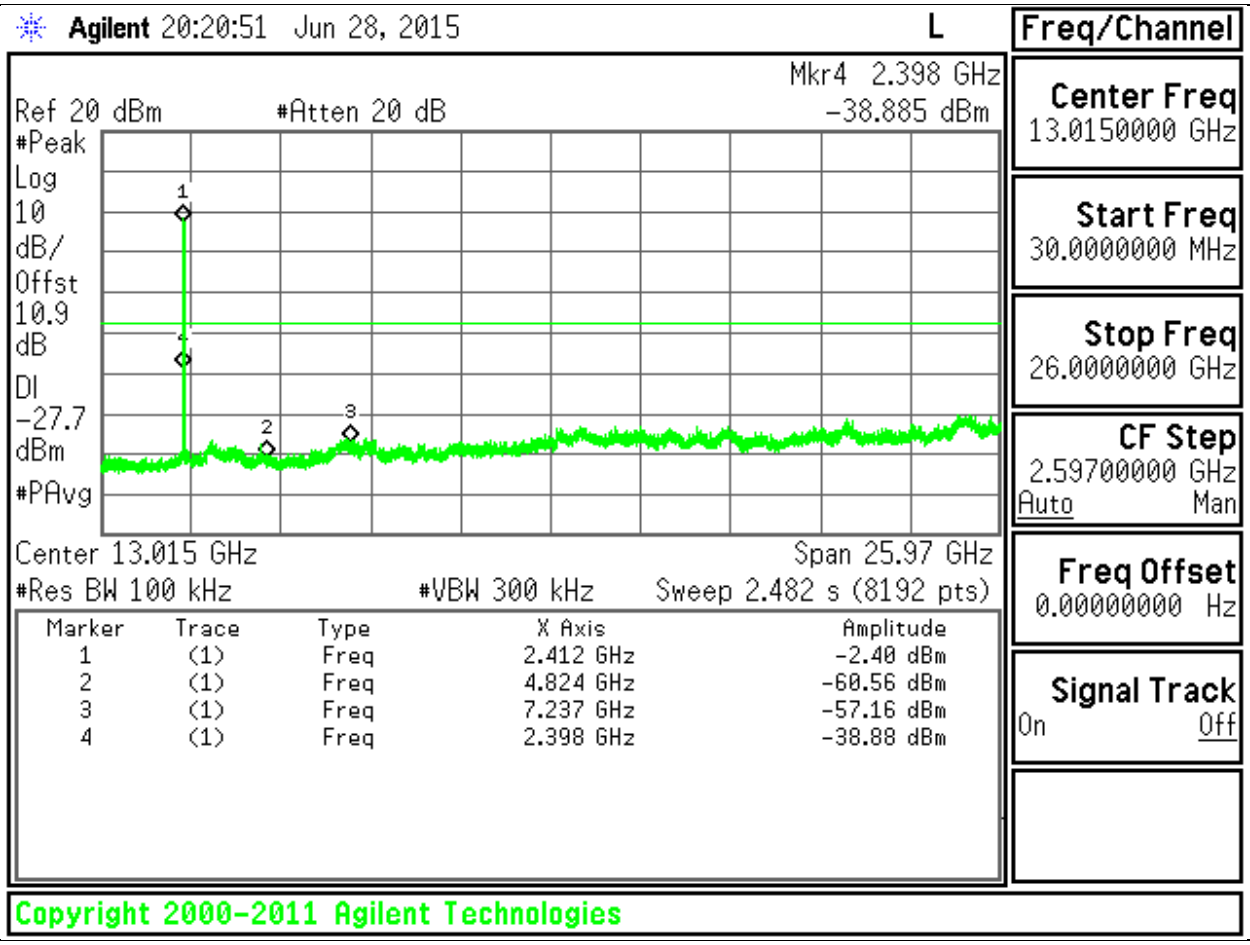
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

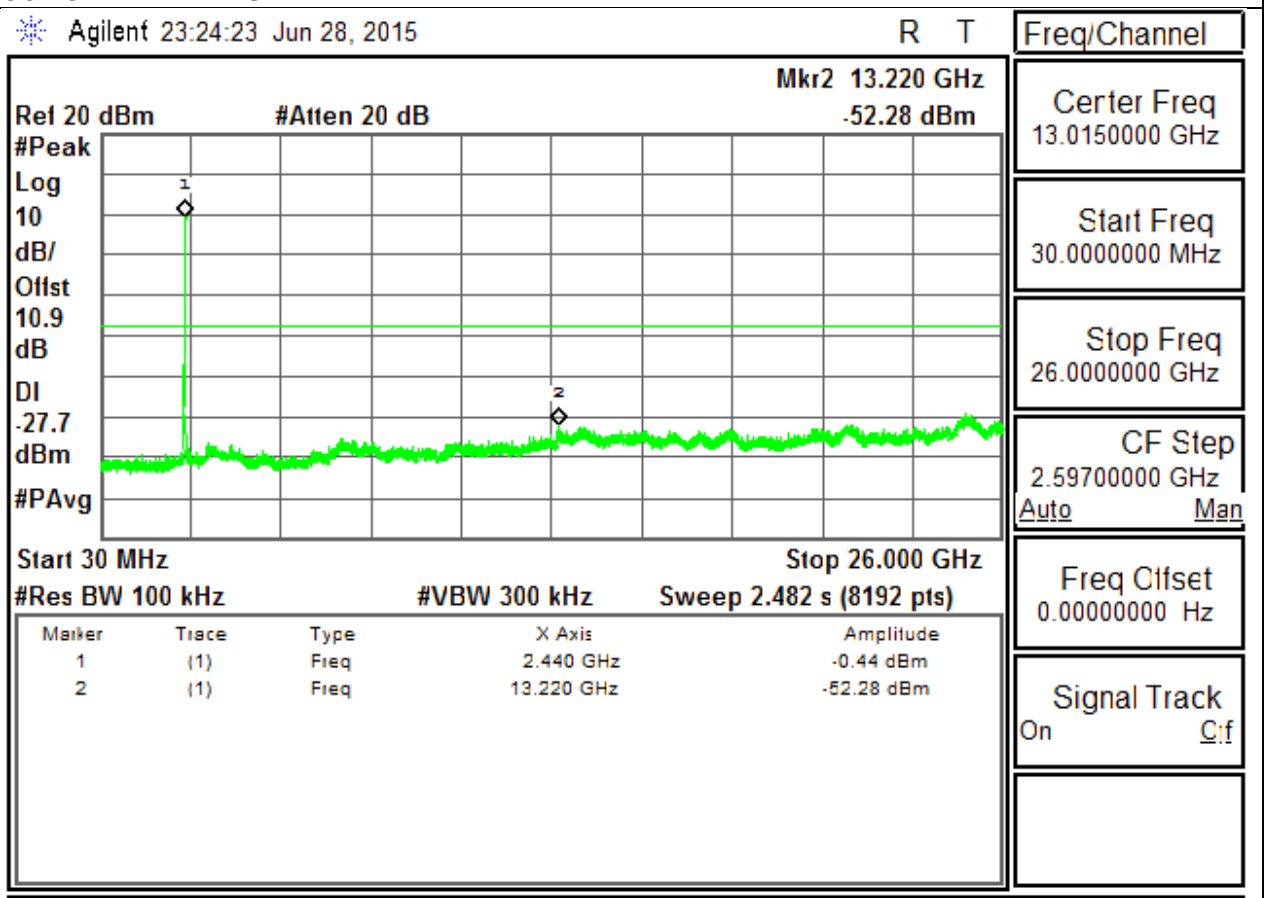


OUT-OF-BAND EMISSIONS

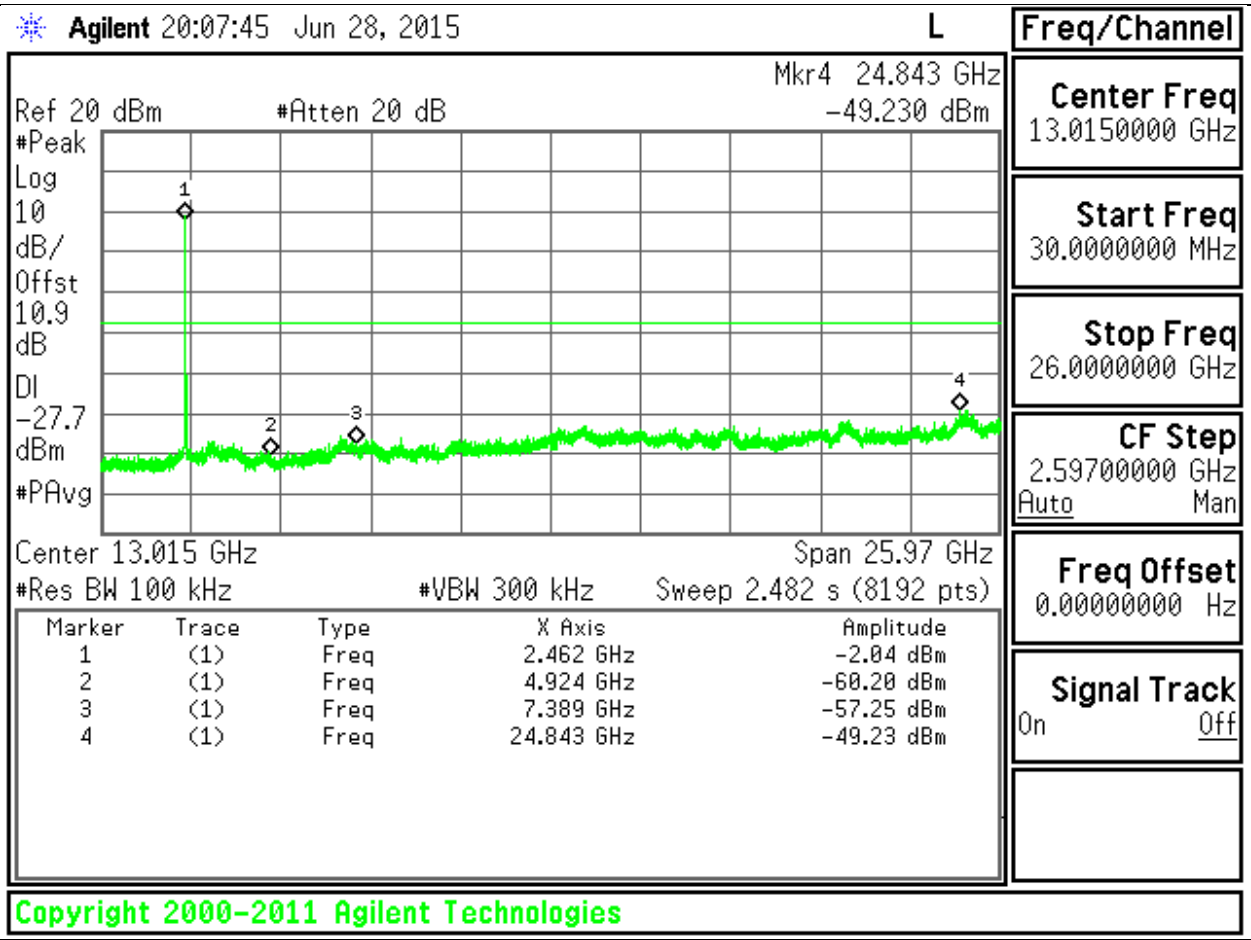
OUT OF BAND LOW CH



OUT OF BAND MID CH



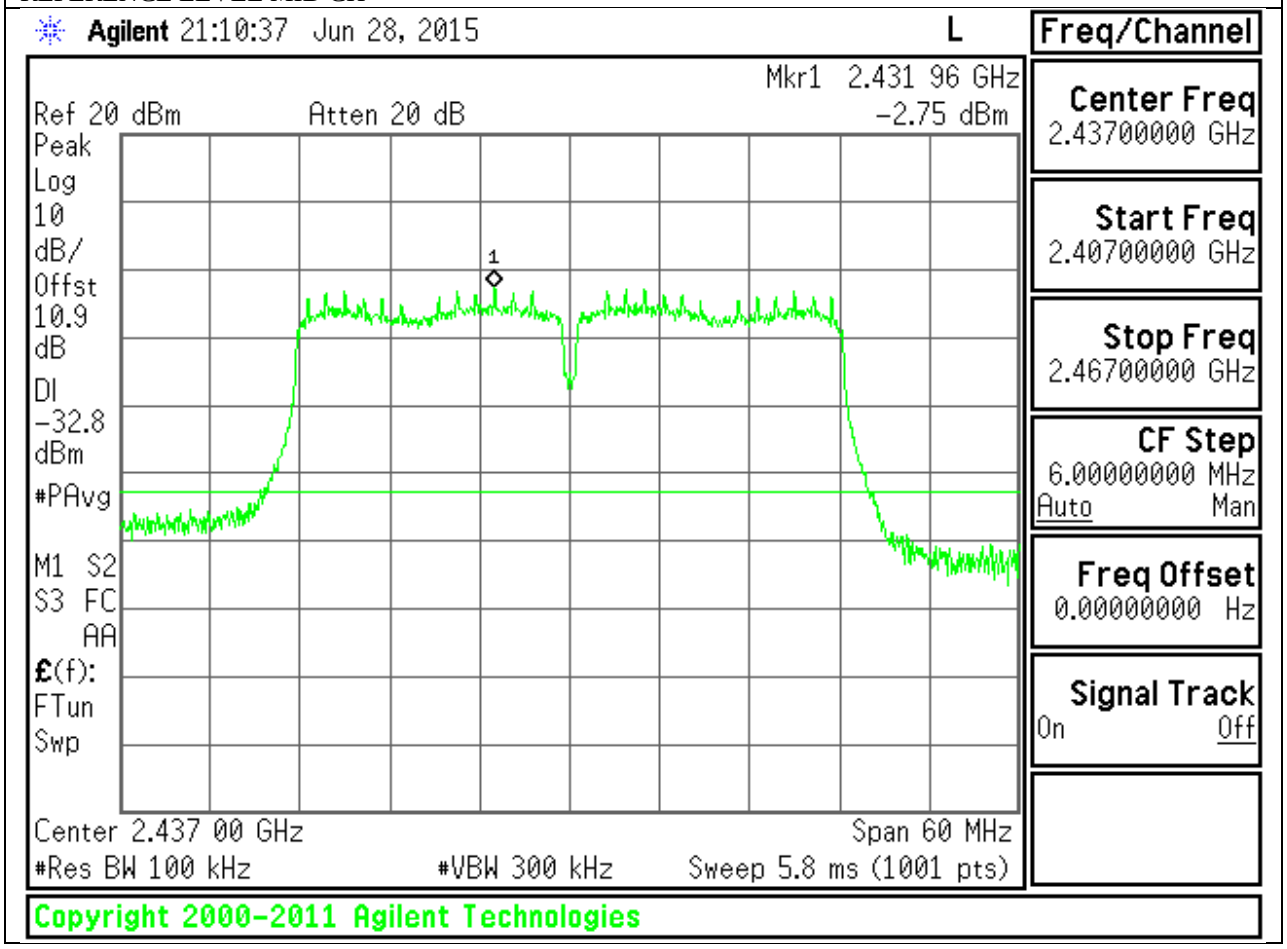
OUT OF BAND HIGH CH



1.1.2. 802.11n HT40 MODE IN THE 2.4 GHz BAND (CHAIN 0)

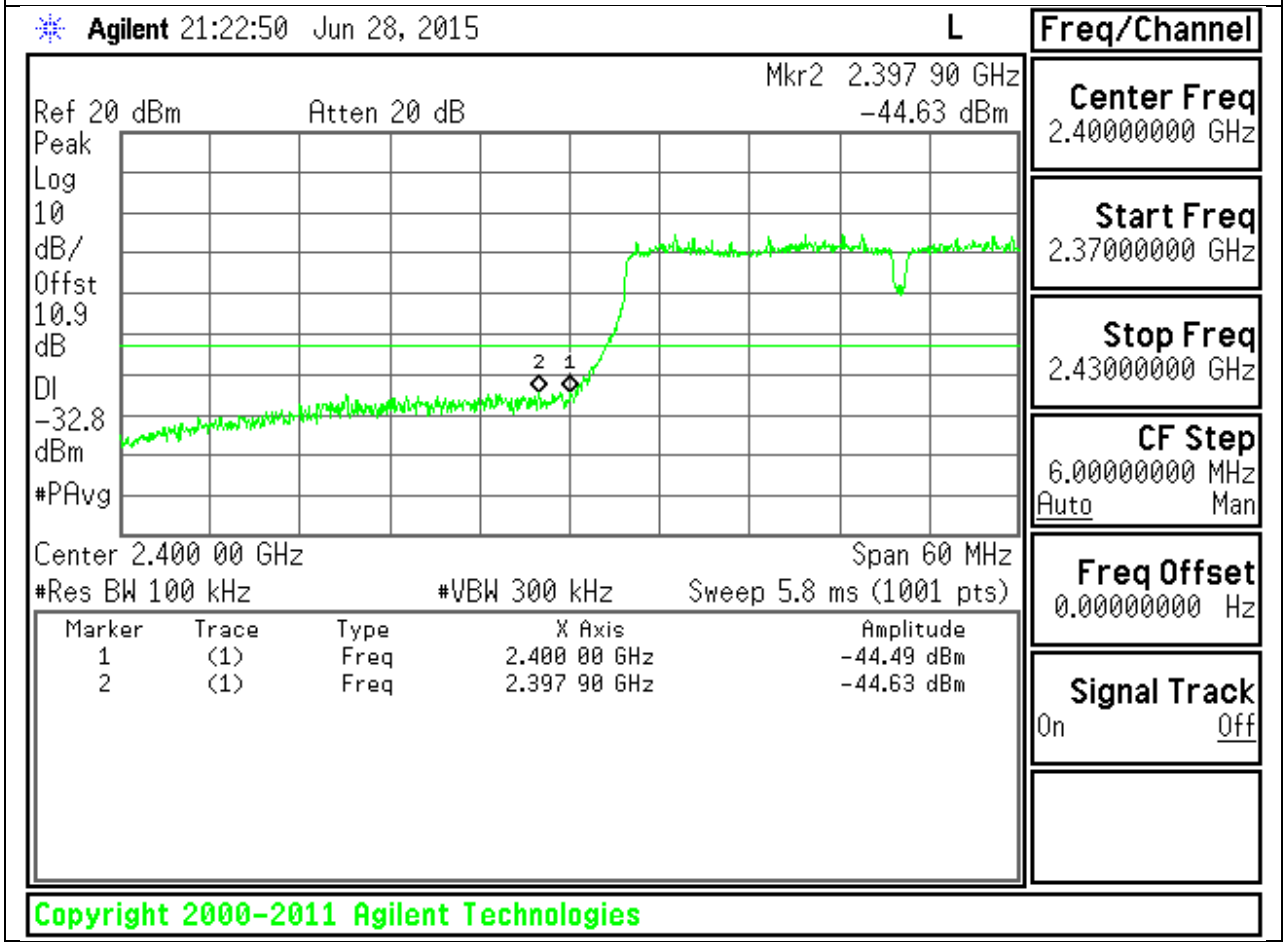
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



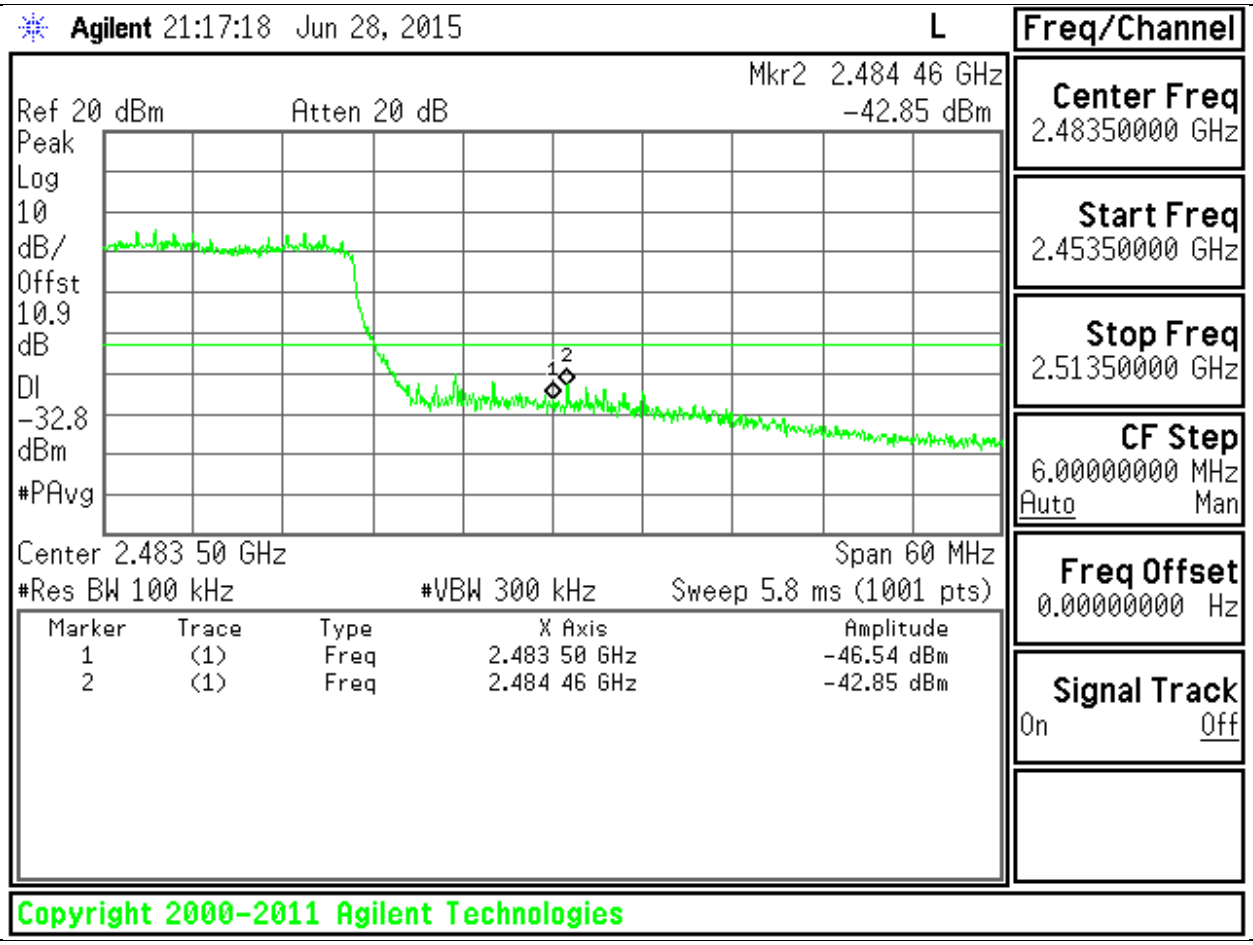
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



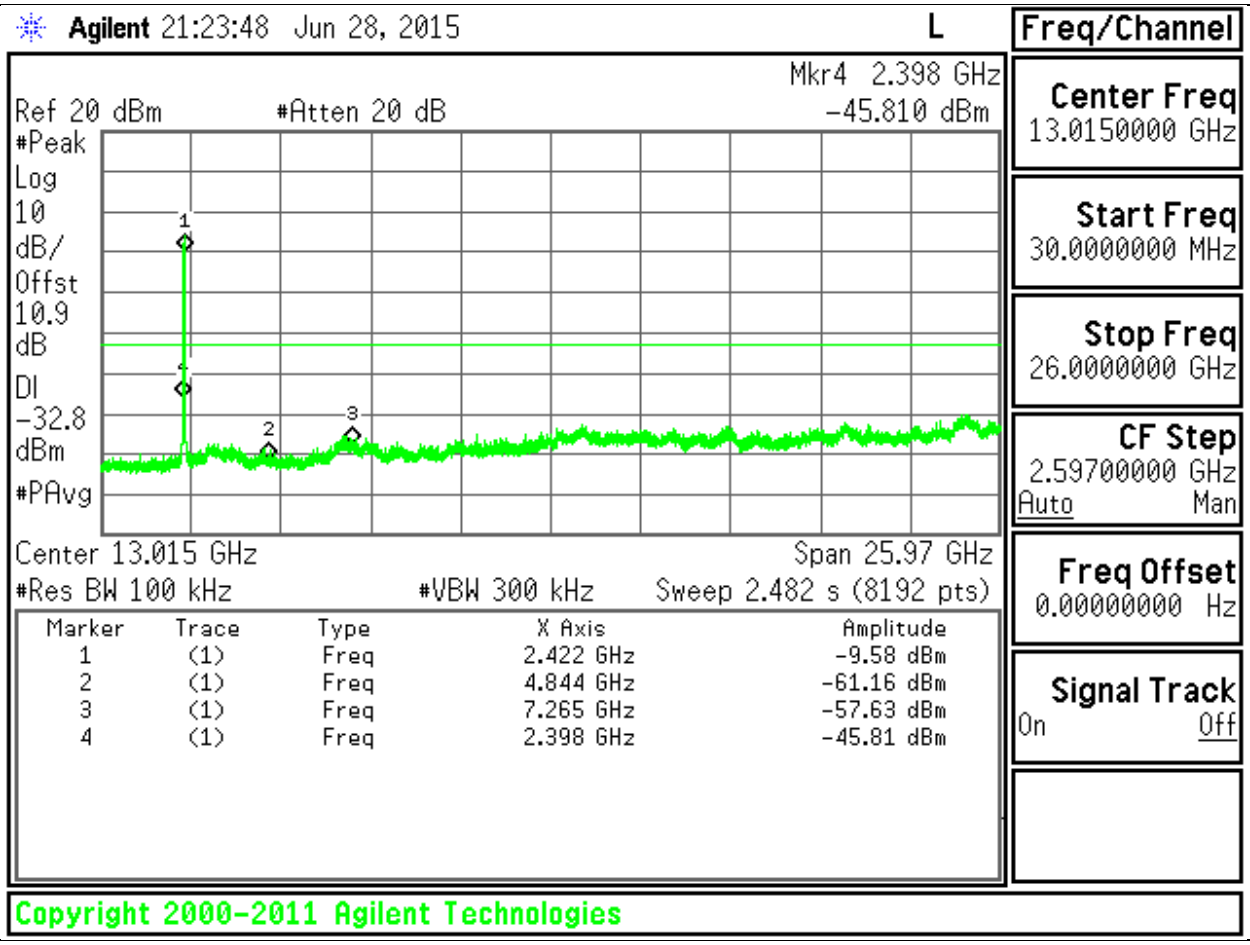
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

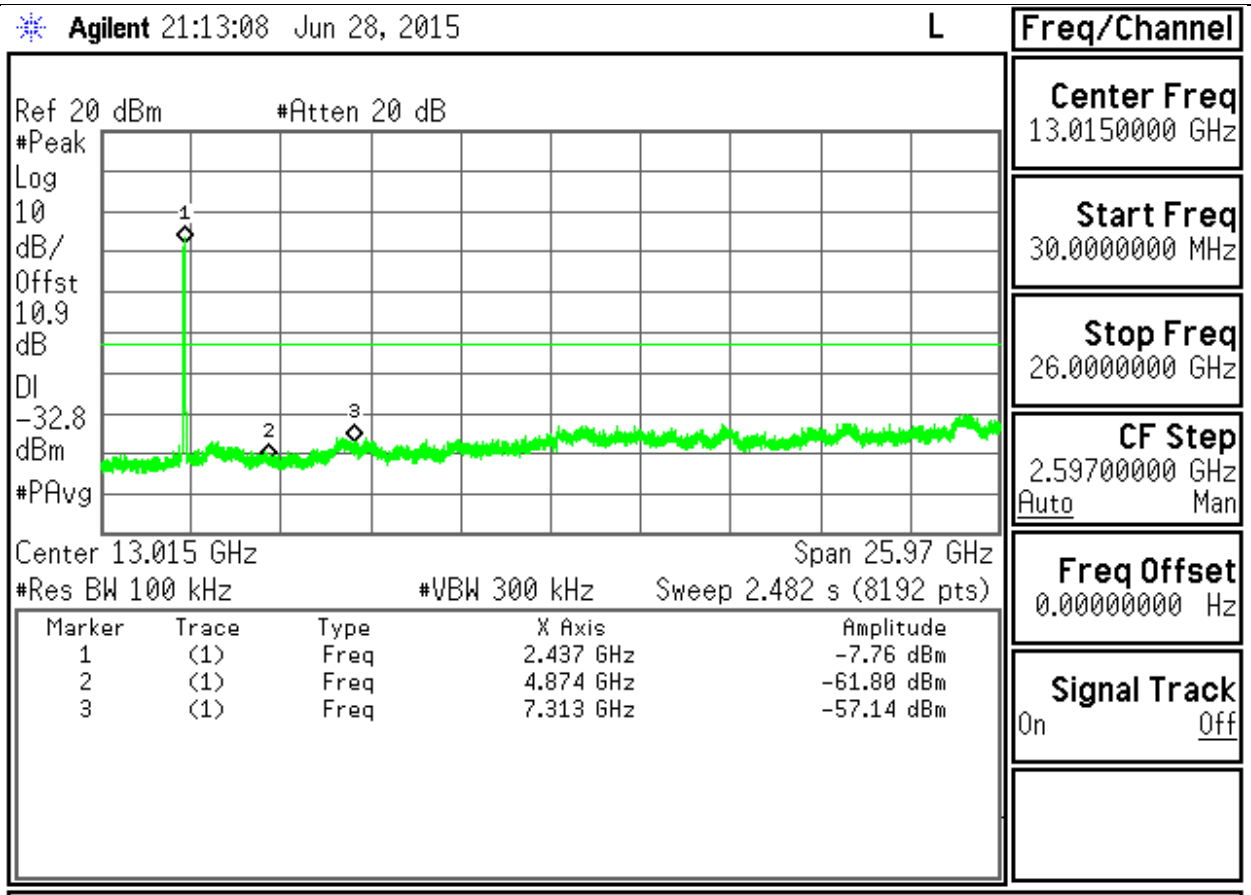


OUT-OF-BAND EMISSIONS

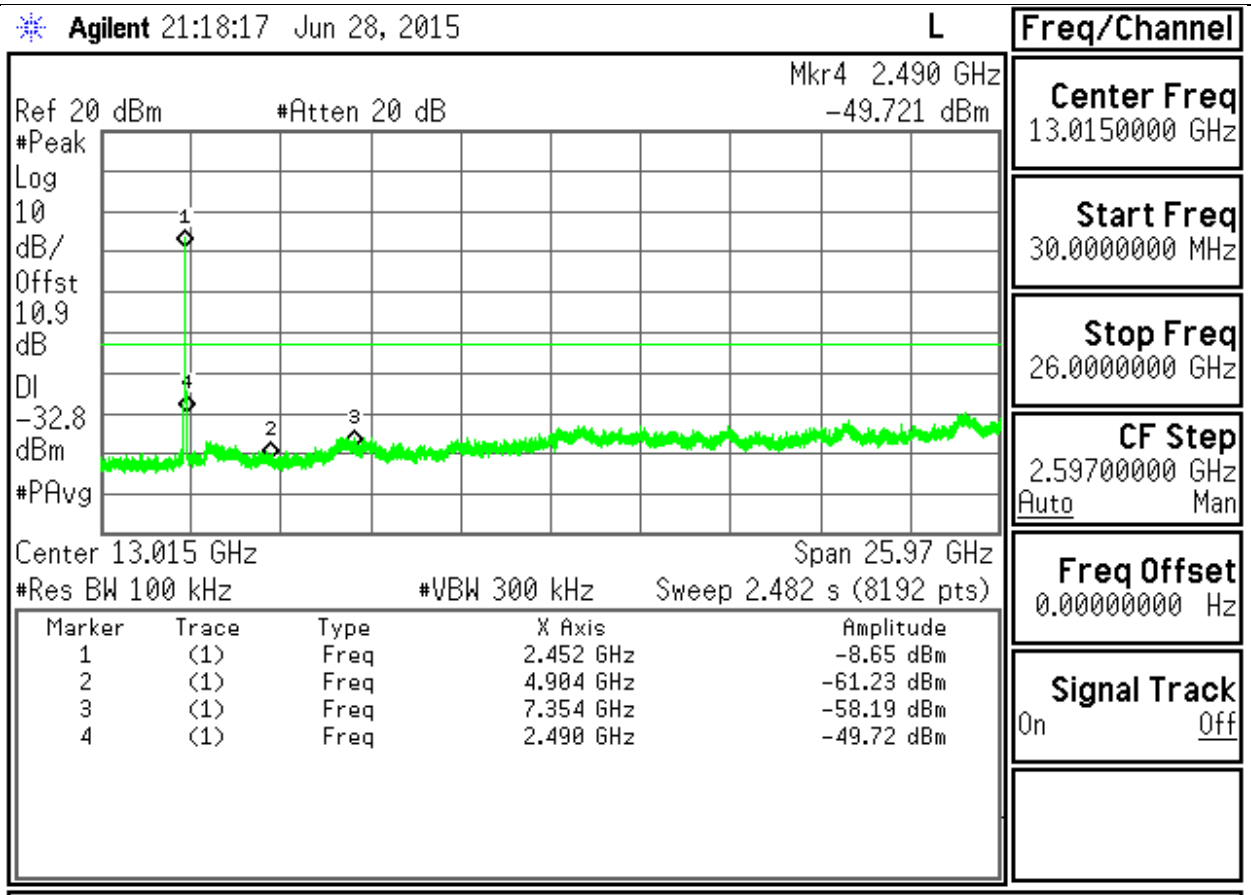
OUT OF BAND LOW CH



OUT OF BAND MID CH



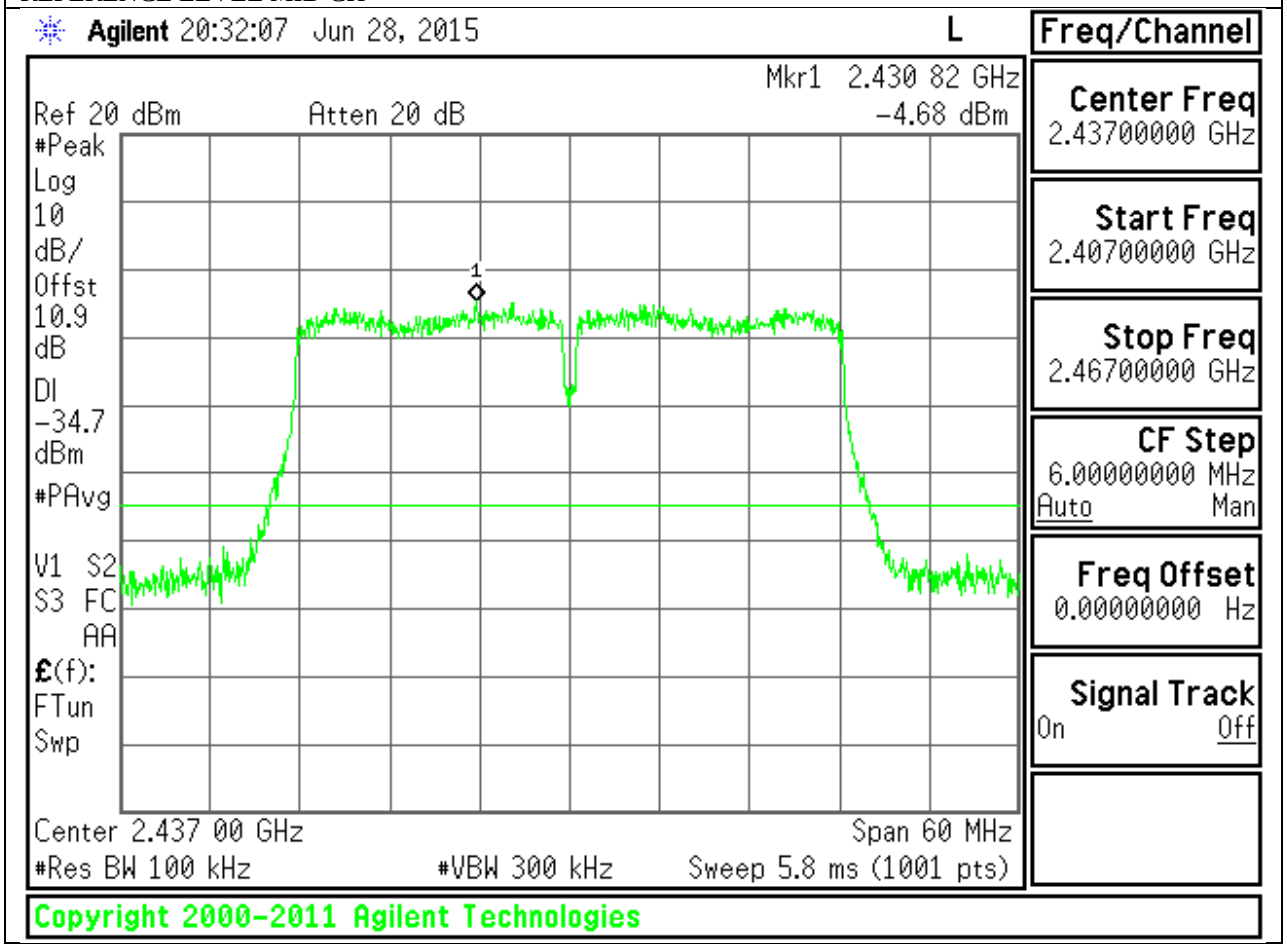
OUT OF BAND HIGH CH



1.1.3. 802.11n HT40 MODE IN THE 2.4 GHz BAND (CHAIN 1)

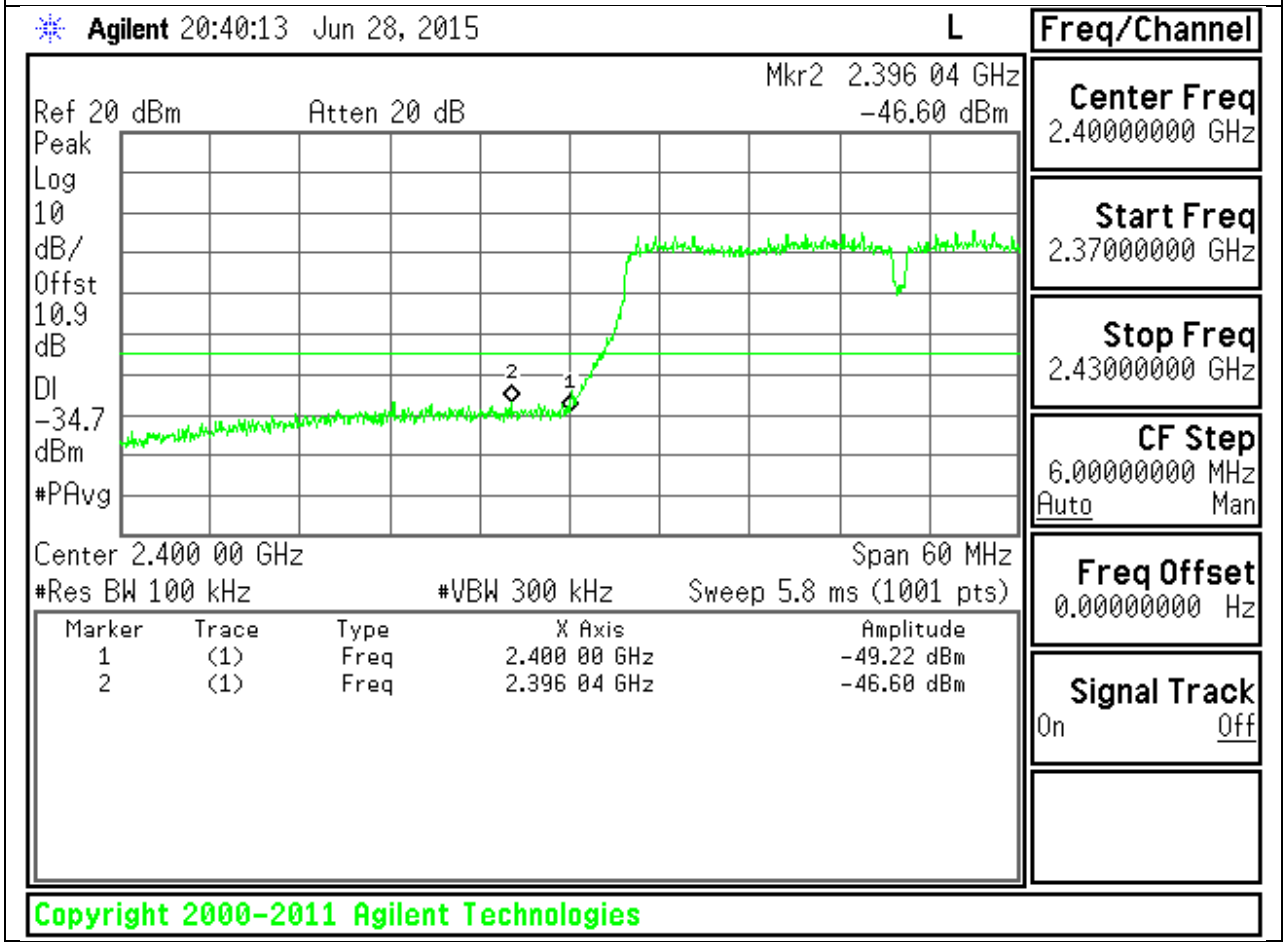
IN-BAND REFERENCE LEVEL

REFERENCE LEVEL MID CH



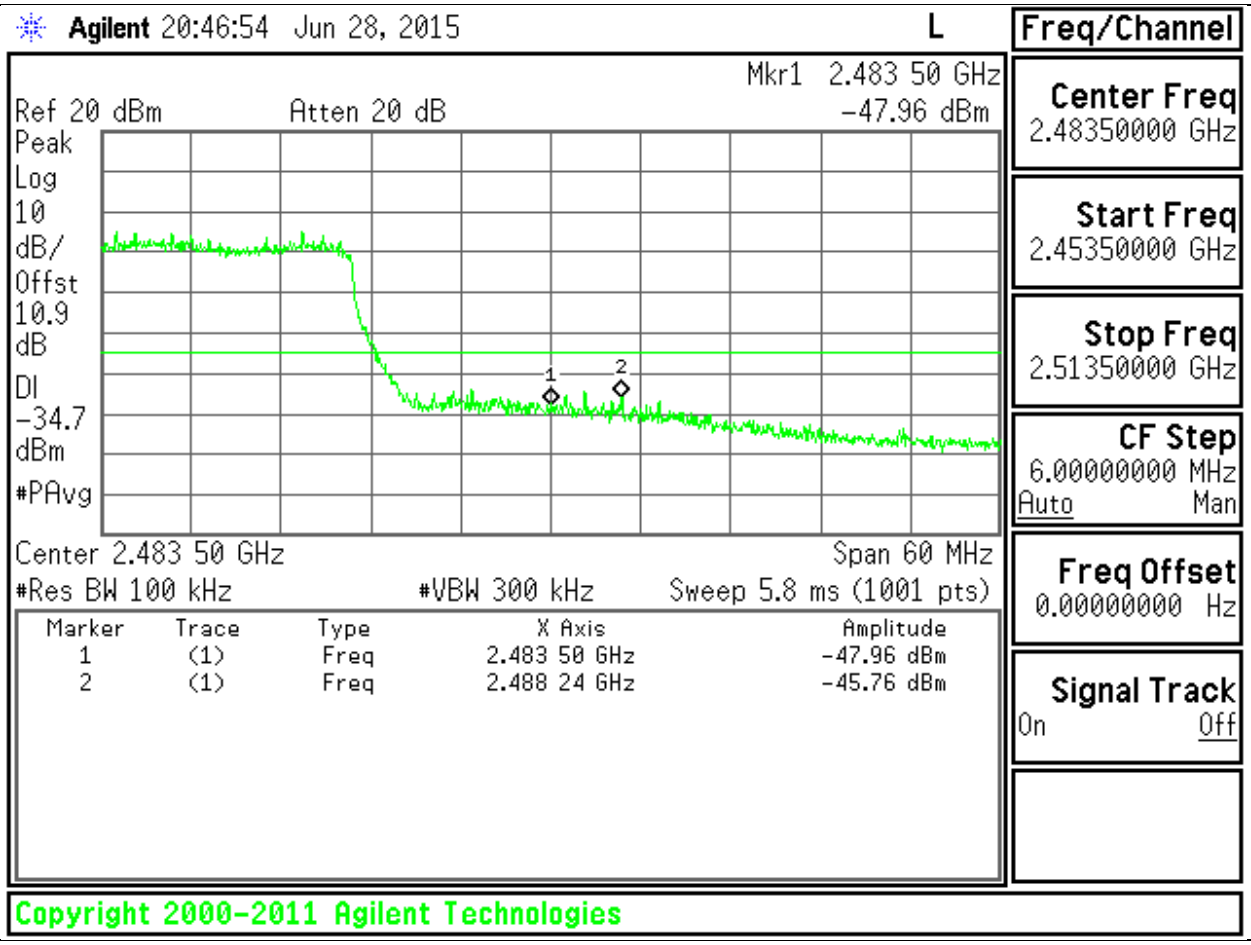
LOW CHANNEL BANDEDGE

AUTHORIZED BAND EDGE LOW CH



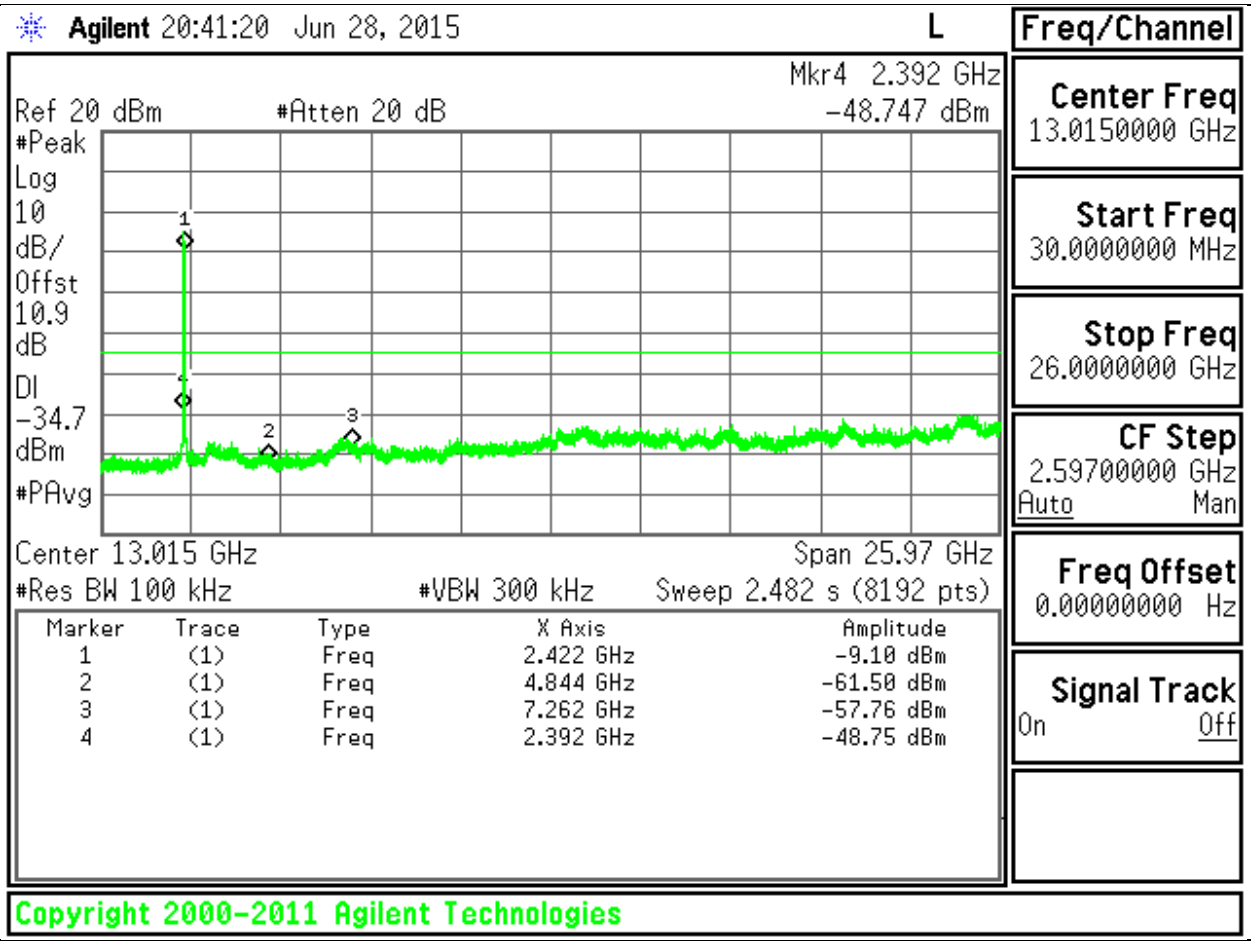
HIGH CHANNEL BANDEDGE

AUTHORIZED BAND EDGE HIGH CH

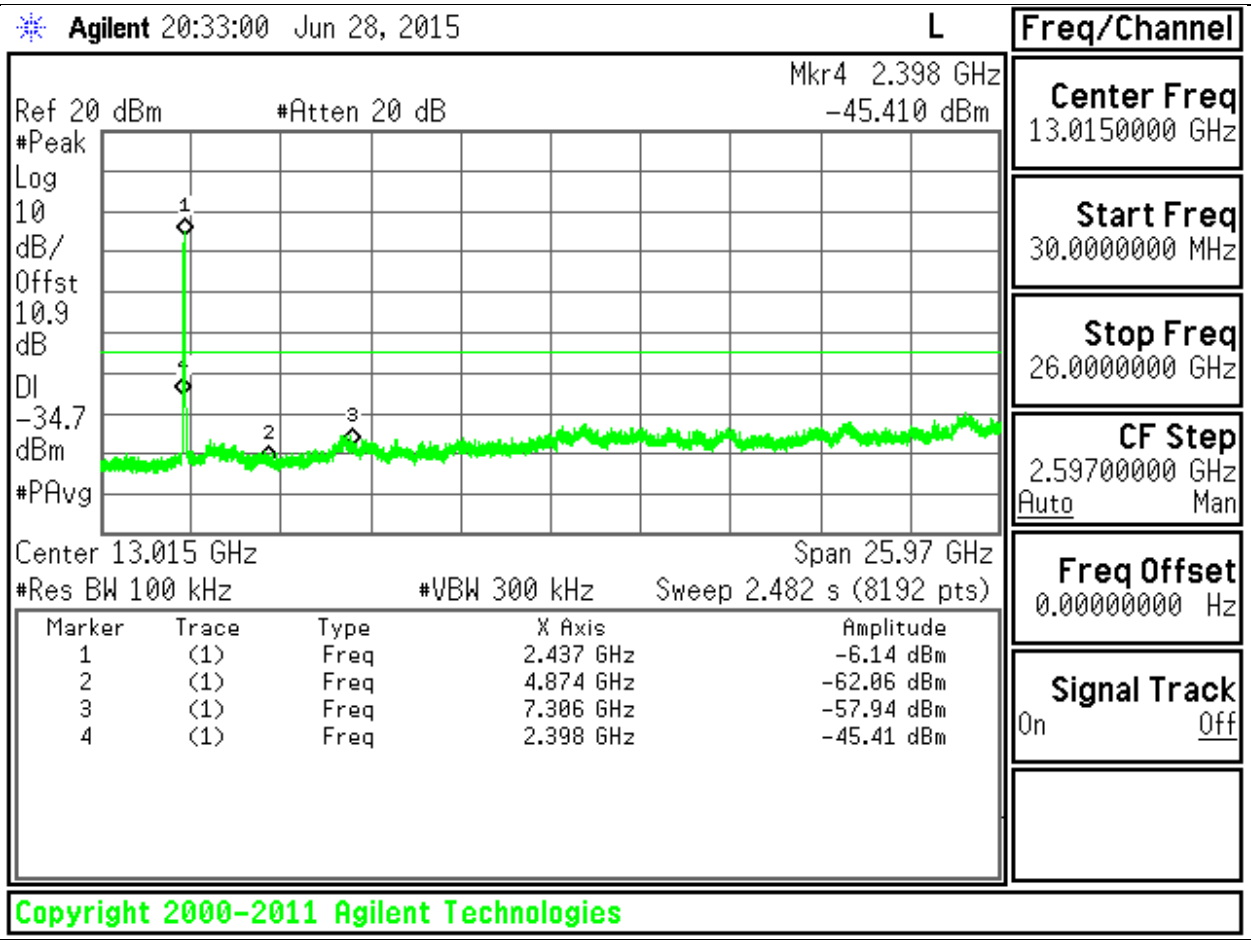


OUT-OF-BAND EMISSIONS

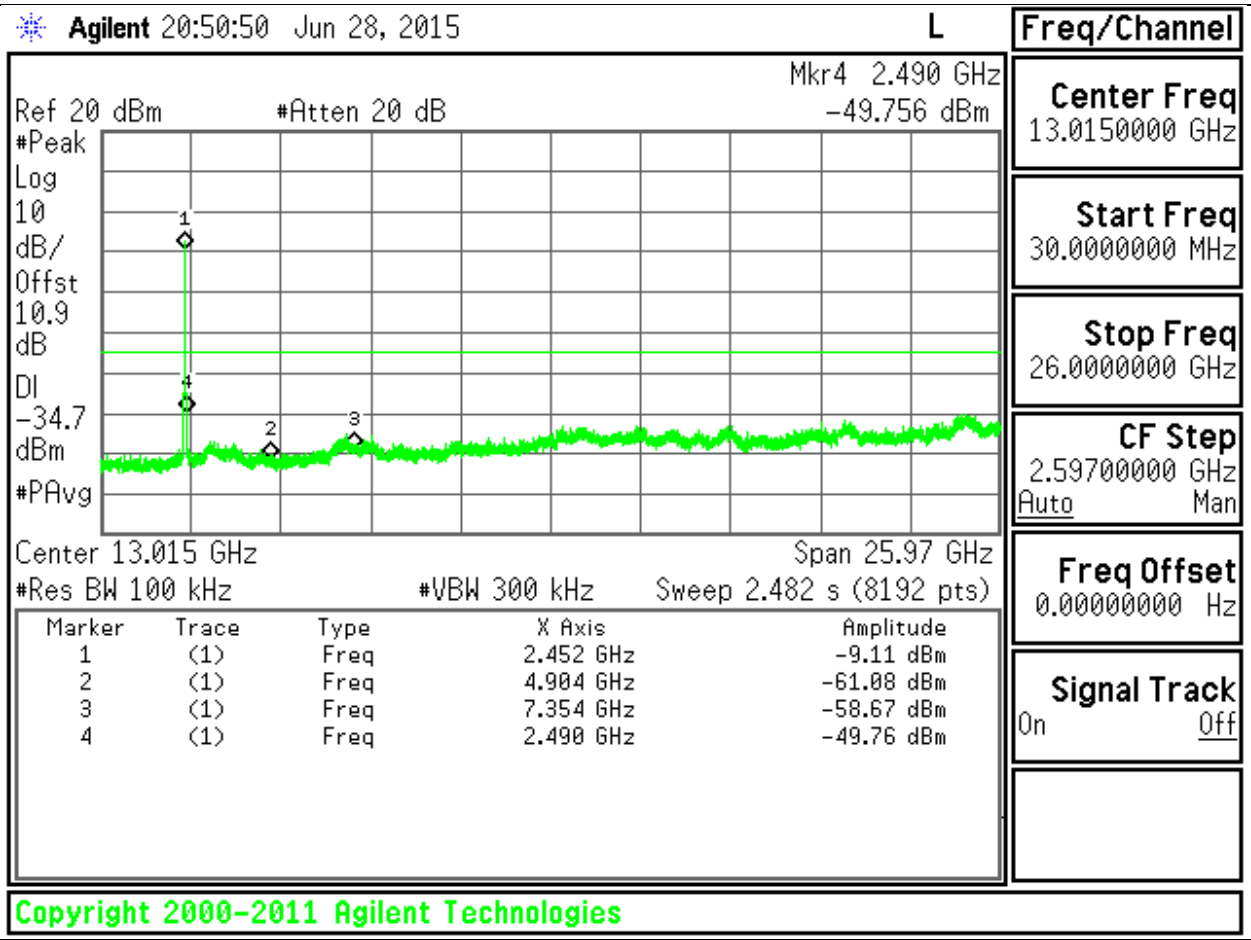
OUT OF BAND LOW CH



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

IC RSS-GEN Clause 8.9 (Transmitter)

IC RSS-GEN Clause 7 (Receiver)

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

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 = 0dB; N mode = 0dB.

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.

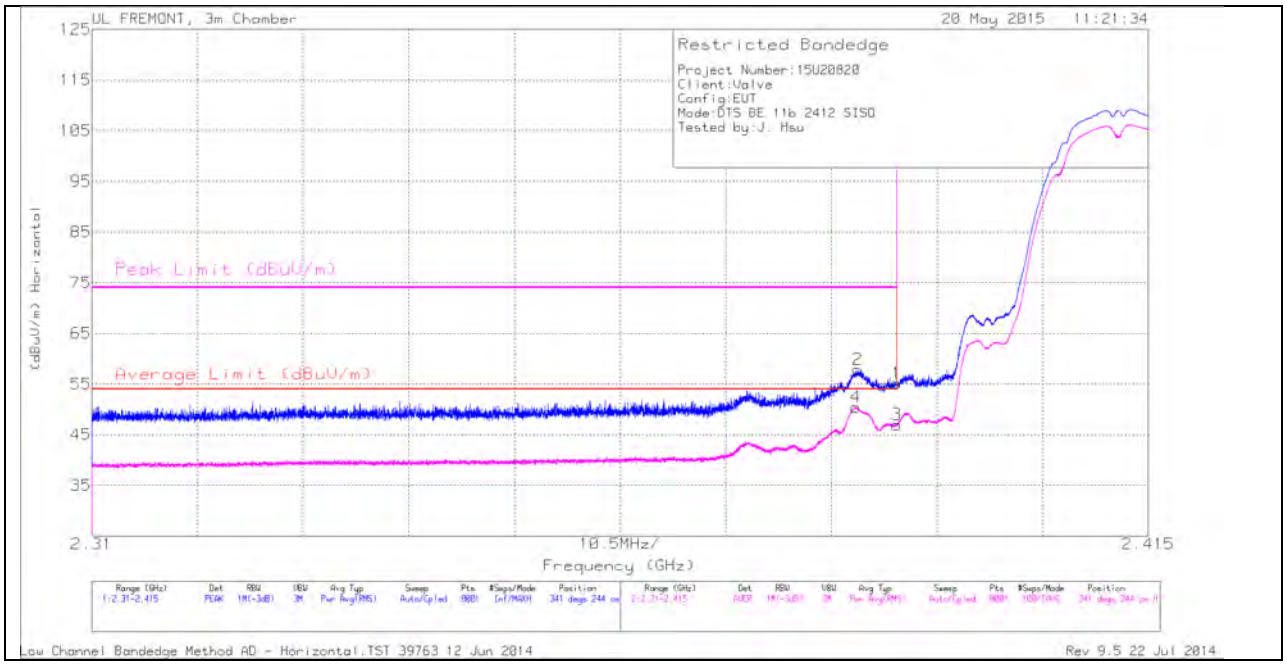
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

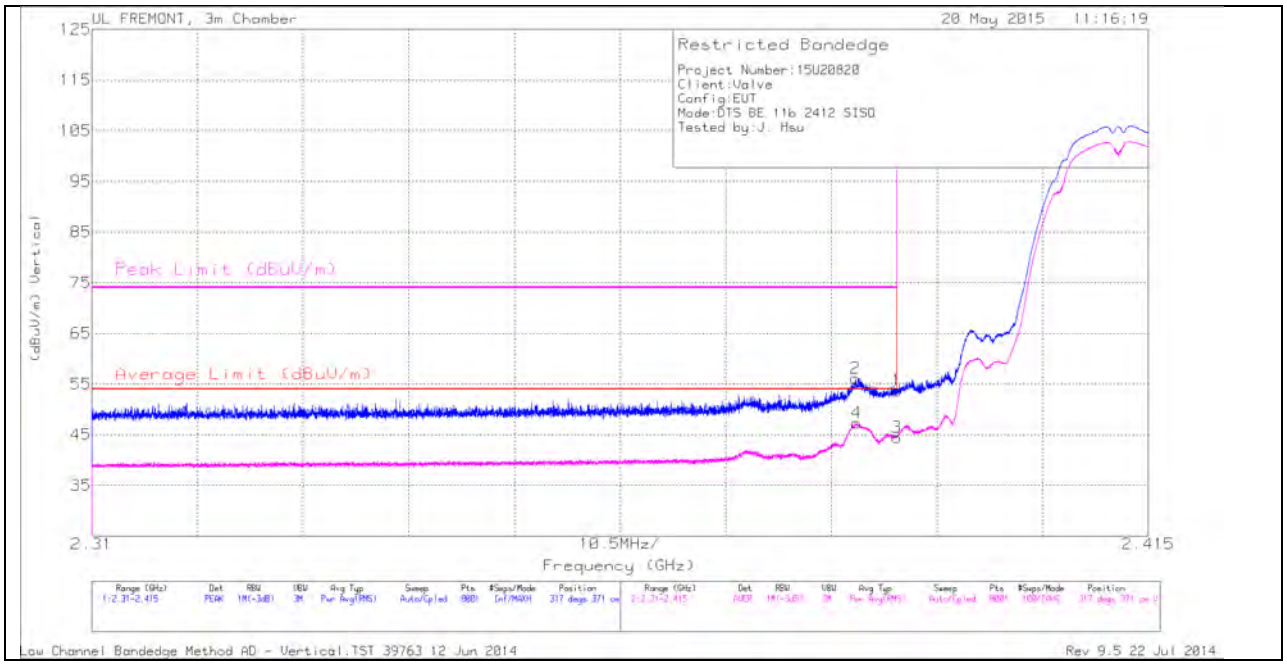
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.386	48.96	PK	32	-23.1	57.86	-	-	74	-16.14	341	244	H
4	2.386	41.46	RMS	32	-23.1	50.36	54	-3.64	-	-	341	244	H
1	2.39	46.22	PK	32	-23.1	55.12	-	-	74	-18.88	341	244	H
3	2.39	38.1	RMS	32	-23.1	47	54	-7	-	-	341	244	H

VERTICAL PEAK AND AVERAGE PLOT

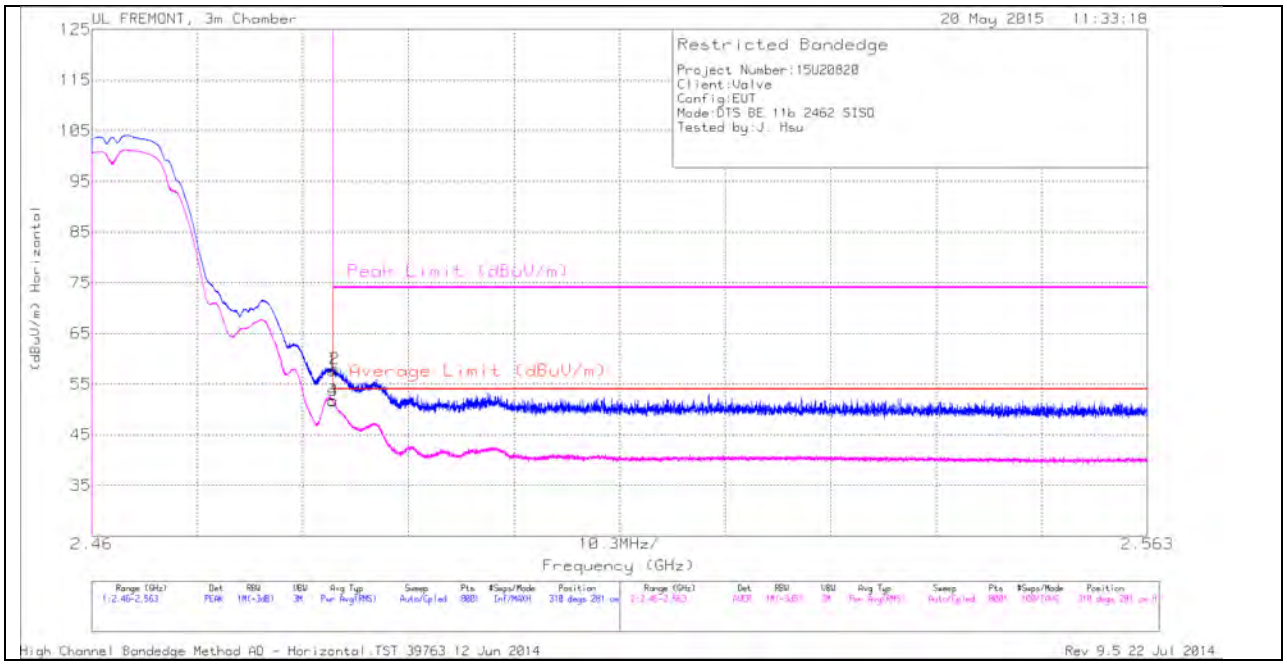


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.386	47.19	PK	32	-23.1	56.09	-	-	74	-17.91	317	371	V
4	2.386	38.36	RMS	32	-23.1	47.26	54	-6.74	-	-	317	371	V
1	2.39	44.81	PK	32	-23.1	53.71	-	-	74	-20.29	317	371	V
3	2.39	35.61	RMS	32	-23.1	44.51	54	-9.49	-	-	317	371	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

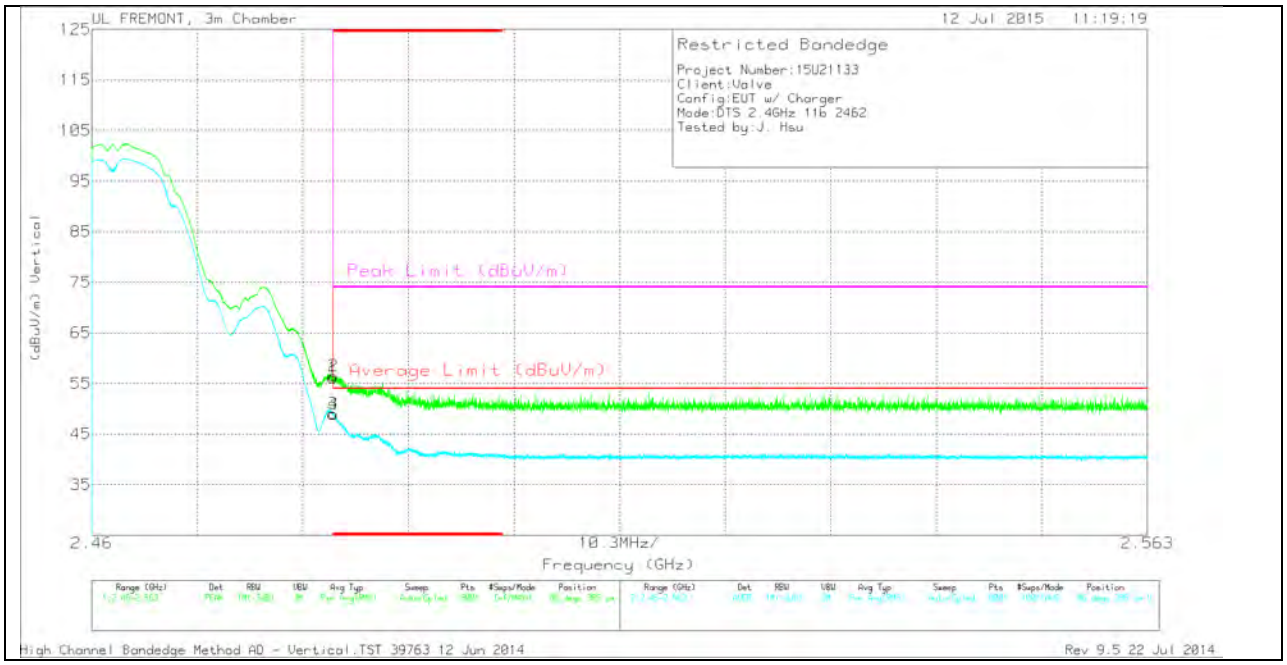
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	48.08	PK	32.3	-22.8	57.58	-	-	74	-16.42	310	281	H
2	2.484	48.45	PK	32.3	-22.8	57.95	-	-	74	-16.05	310	281	H
3	2.484	42.24	RMS	32.3	-22.8	51.74	54	-2.26	-	-	310	281	H
4	2.484	42.18	RMS	32.3	-22.8	51.68	54	-2.32	-	-	310	281	H

VERTICAL PEAK AND AVERAGE PLOT

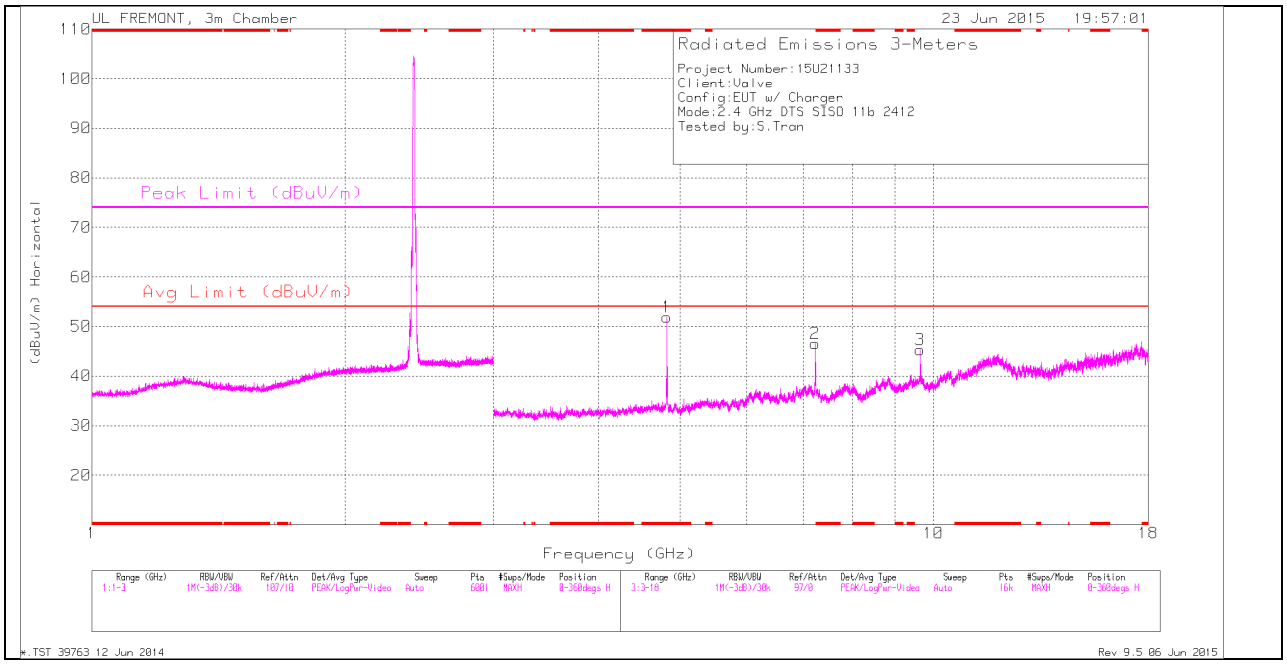


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	45.94	PK	32.3	-22.1	56.14	-	-	74	-17.86	86	385	V
2	* 2.484	46.34	PK	32.3	-22.1	56.54	-	-	74	-17.46	86	385	V
3	* 2.484	38.9	RMS	32.3	-22.1	49.1	54	-4.9	-	-	86	385	V
4	* 2.484	38.77	RMS	32.3	-22.1	48.97	54	-5.03	-	-	86	385	V

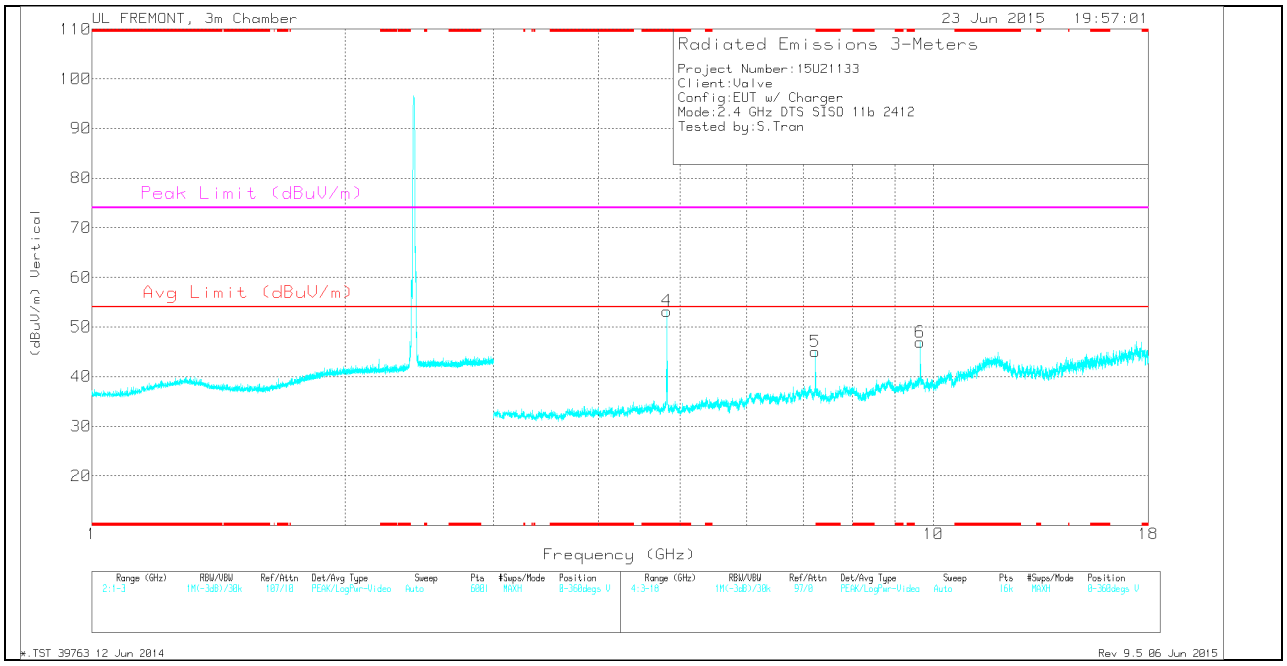
HARMONICS AND SPURIOUS EMISSIONS

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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.824	47.31	Avg	34	-29.4	51.91	54	-2.09	-	-	0-360	100	H
4	* 4.824	48.63	Avg	34	-29.4	53.23	54	-.77	-	-	0-360	100	V
5	7.236	38.25	Avg	35.6	-28.8	45.05	54	-8.95	-	-	0-360	100	V
2	7.237	39.77	Avg	35.6	-28.8	46.57	54	-7.43	-	-	0-360	100	H
3	9.647	32.39	Avg	36.8	-23.9	45.29	54	-8.71	-	-	0-360	100	H
6	9.647	34.02	Avg	36.8	-23.9	46.92	54	-7.08	-	-	0-360	100	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

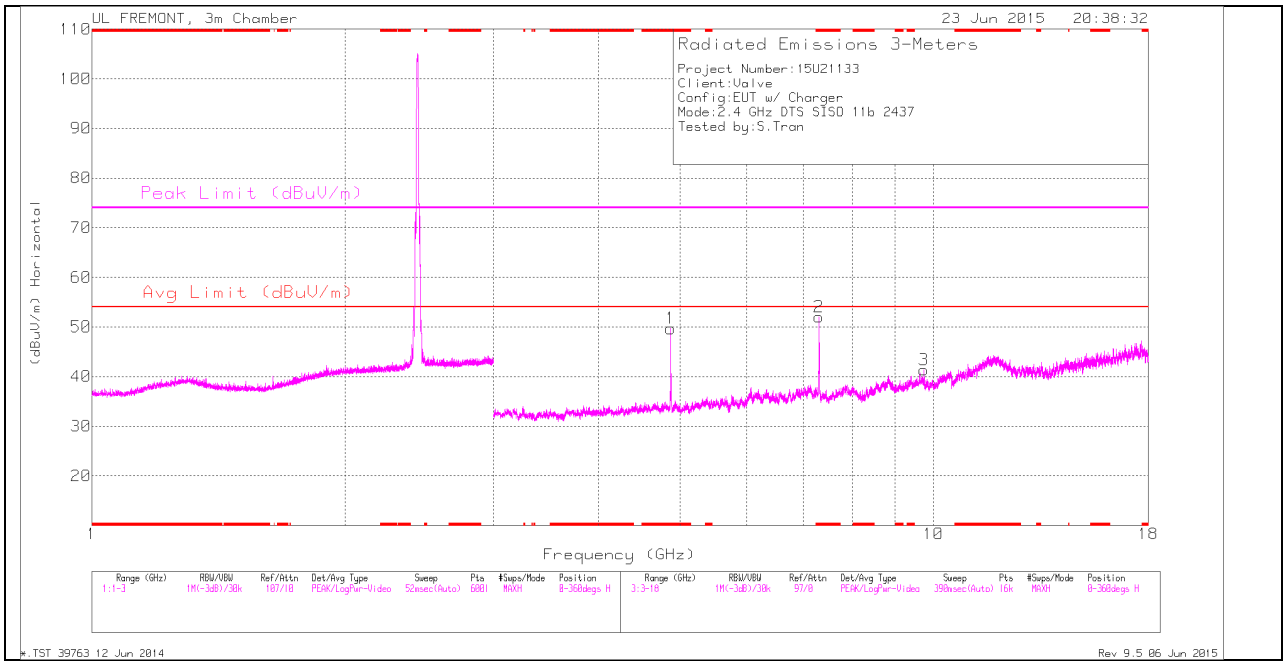
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.824	51.46	PK2	34	-29.4	56.06	-	-	74	-17.94	194	161	H
* 4.824	48.8	MAv1	34	-29.4	53.4	54	-.6	-	-	194	161	H
* 4.824	44.03	PK2	34	-29.4	48.63	-	-	74	-25.37	194	100	V
* 4.824	37.53	MAv1	34	-29.4	42.13	54	-11.87	-	-	194	100	V
7.236	41.34	PK2	35.6	-28.8	48.14	-	-	74	-25.86	194	100	H
7.237	34.25	MAv1	35.6	-28.8	41.05	54	-12.95	-	-	194	100	H
7.237	42.38	PK2	35.6	-28.8	49.18	-	-	74	-24.82	194	100	V
7.237	32.26	MAv1	35.6	-28.8	39.06	54	-14.94	-	-	194	100	V
9.648	38.86	PK2	36.8	-23.9	51.76	-	-	74	-22.24	194	100	H
9.648	31.57	MAv1	36.8	-23.9	44.47	54	-9.53	-	-	194	100	H
9.648	37.97	PK2	36.8	-23.9	50.87	-	-	74	-23.13	194	100	V
9.648	29.4	MAv1	36.8	-23.9	42.3	54	-11.7	-	-	194	100	V

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

PK2 - KDB558074 Method: Maximum Peak

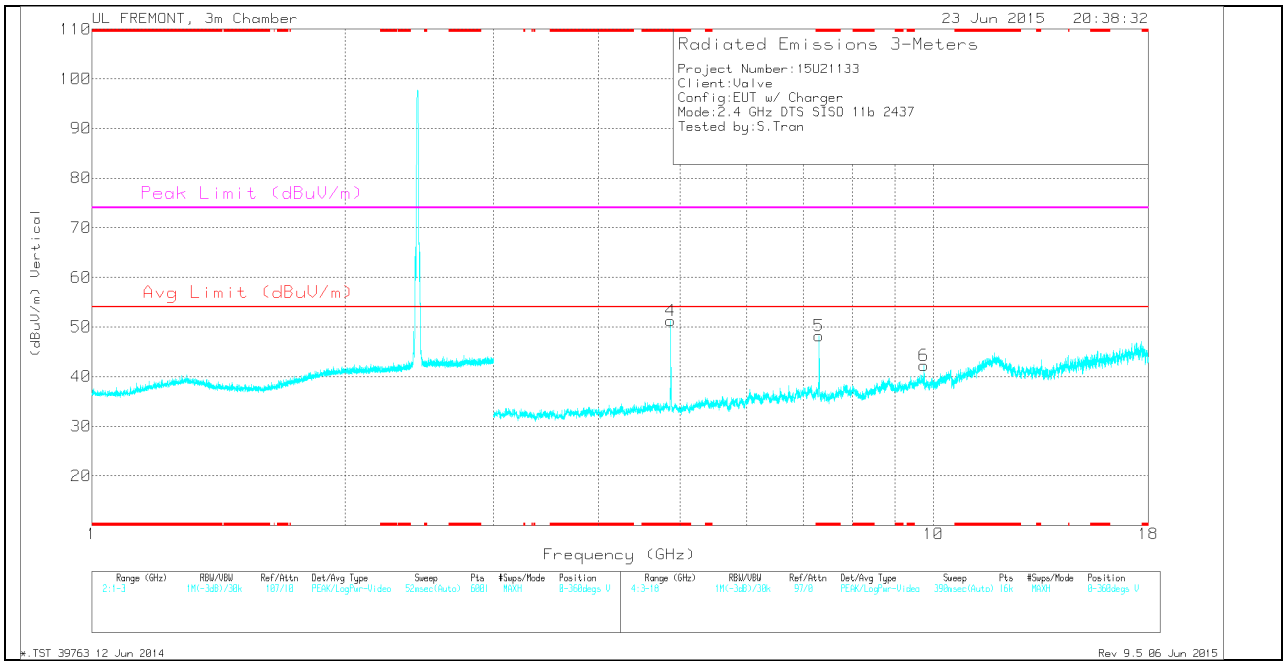
MAv1 - KDB558074 Option 1 Maximum RMS Average

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 T119 (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
1	* 4.874	44.78	Avg	34	-29.1	49.68	54	-4.32	-	-	0-360	200	H
2	* 7.31	43.88	Avg	35.6	-27.4	52.08	54	-1.92	-	-	0-360	100	H
4	* 4.874	46.41	Avg	34	-29.1	51.31	54	-2.69	-	-	0-360	100	V
5	* 7.311	40	Avg	35.6	-27.4	48.2	54	-5.8	-	-	0-360	100	V
3	9.748	28.75	Avg	36.9	-24.3	41.35	54	-12.65	-	-	0-360	100	H
6	9.748	29.65	Avg	36.9	-24.3	42.25	54	-11.75	-	-	0-360	100	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

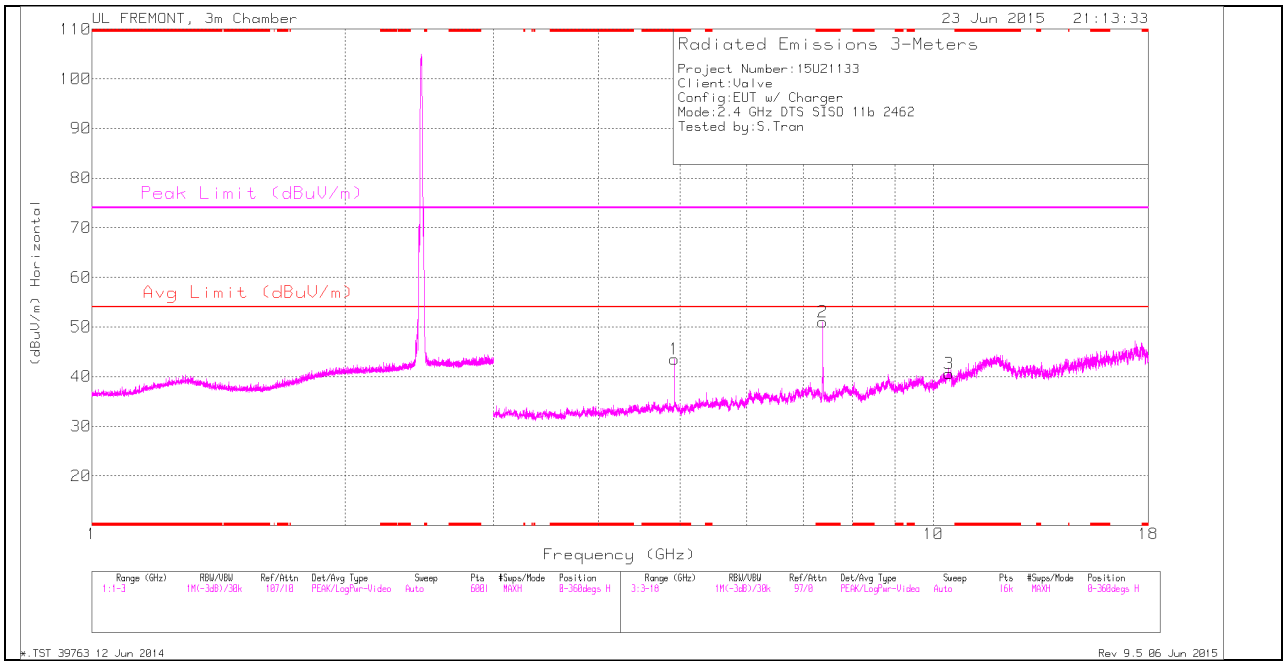
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.874	50.03	PK2	34	-29.1	54.93	-	-	74	-19.07	45	335	H
* 4.874	47.24	MAv1	34	-29.1	52.14	54	-1.86	-	-	45	335	H
* 7.311	42.98	PK2	35.6	-27.4	51.18	-	-	74	-22.82	45	100	H
* 7.312	34.77	MAv1	35.6	-27.4	42.97	54	-11.03	-	-	45	100	H
* 4.874	50.51	PK2	34	-29.1	55.41	-	-	74	-18.59	283	102	V
* 4.874	47.71	MAv1	34	-29.1	52.61	54	-1.39	-	-	283	102	V
* 7.311	47.21	PK2	35.6	-27.4	55.41	-	-	74	-18.59	156	100	V
* 7.312	39.26	MAv1	35.6	-27.4	47.46	54	-6.54	-	-	156	100	V
9.747	35.99	PK2	36.9	-24.3	48.59	-	-	74	-25.41	45	100	H
9.748	24.87	MAv1	36.9	-24.3	37.47	54	-16.53	-	-	45	100	H
9.748	36.23	PK2	36.9	-24.3	48.83	-	-	74	-25.17	156	100	V
9.748	25.41	MAv1	36.9	-24.3	38.01	54	-15.99	-	-	156	100	V

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

PK2 - KDB558074 Method: Maximum Peak

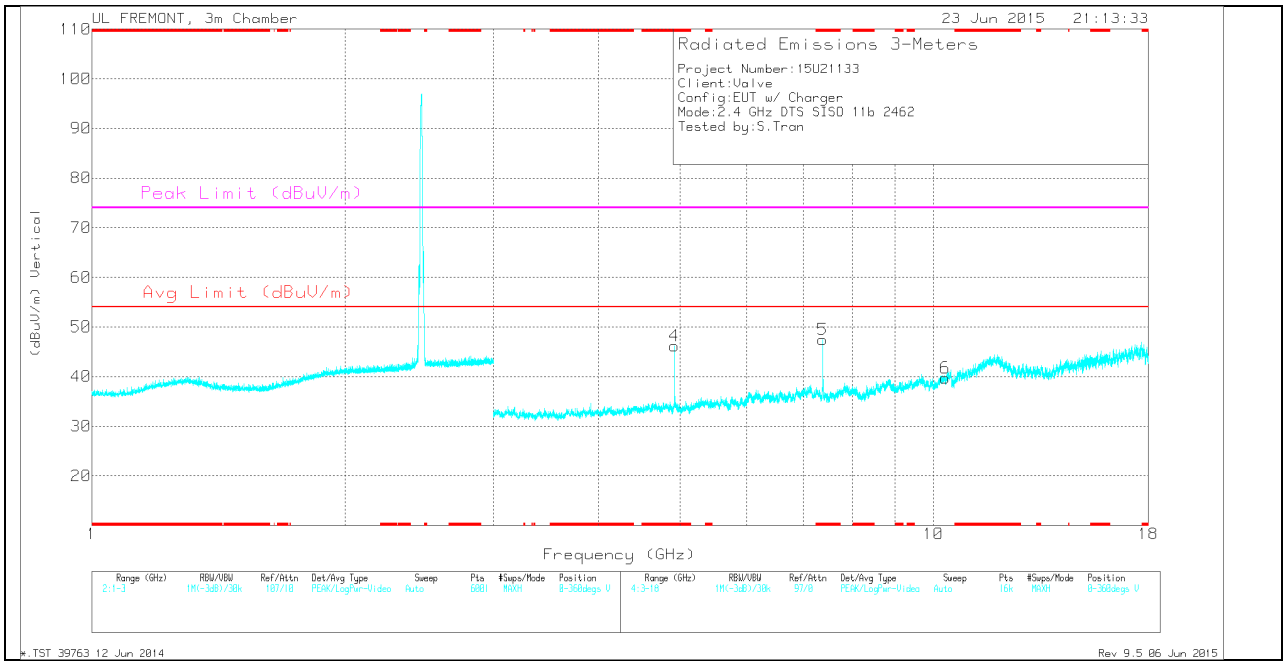
MAv1 - KDB558074 Option 1 Maximum RMS Average

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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.924	39.12	Avg	34	-29.6	43.52	54	-10.48	-	-	0-360	200	H
2	* 7.385	42.52	Avg	35.6	-27.1	51.02	54	-2.98	-	-	0-360	100	H
4	* 4.924	41.83	Avg	34	-29.6	46.23	54	-7.77	-	-	0-360	100	V
5	* 7.385	38.92	Avg	35.6	-27.1	47.42	54	-6.58	-	-	0-360	100	V
6	10.329	26.99	Avg	37.1	-24.4	39.69	54	-14.31	-	-	0-360	200	V
3	10.429	26.76	Avg	37.3	-23.5	40.56	54	-13.44	-	-	0-360	200	H

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 4.924	47.08	PK2	34	-29.6	51.48	-	-	74	-22.52	55	348	H
* 4.924	42.38	MAv1	34	-29.6	46.78	54	-7.22	-	-	55	348	H
* 7.386	48.01	PK2	35.6	-27.1	56.51	-	-	74	-17.49	98	147	H
* 7.385	42.19	MAv1	35.6	-27.1	50.69	54	-3.31	-	-	98	147	H
* 4.924	47.4	PK2	34	-29.6	51.8	-	-	74	-22.2	87	393	V
* 4.924	38.3	MAv1	34	-29.6	42.7	54	-11.3	-	-	87	393	V
* 7.386	45.92	PK2	35.6	-27.1	54.42	-	-	74	-19.58	157	100	V
* 7.385	38.83	MAv1	35.6	-27.1	47.33	54	-6.67	-	-	157	100	V
10.328	36.2	PK2	37.1	-24.4	48.9	-	-	74	-25.1	157	200	V
10.329	24.38	MAv1	37.1	-24.4	37.08	54	-16.92	-	-	157	200	V
10.431	35.8	PK2	37.3	-23.6	49.5	-	-	74	-24.5	98	200	H
10.431	24.46	MAv1	37.3	-23.6	38.16	54	-15.84	-	-	98	200	H

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

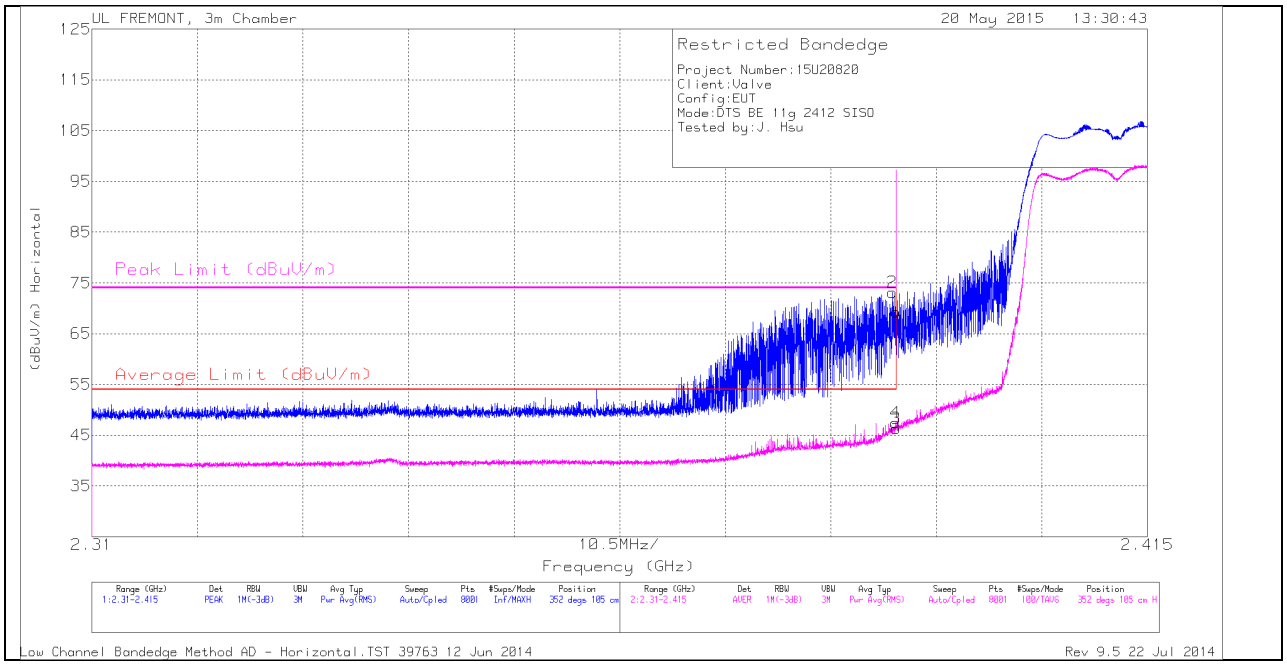
PK2 - KDB558074 Method: Maximum Peak

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)

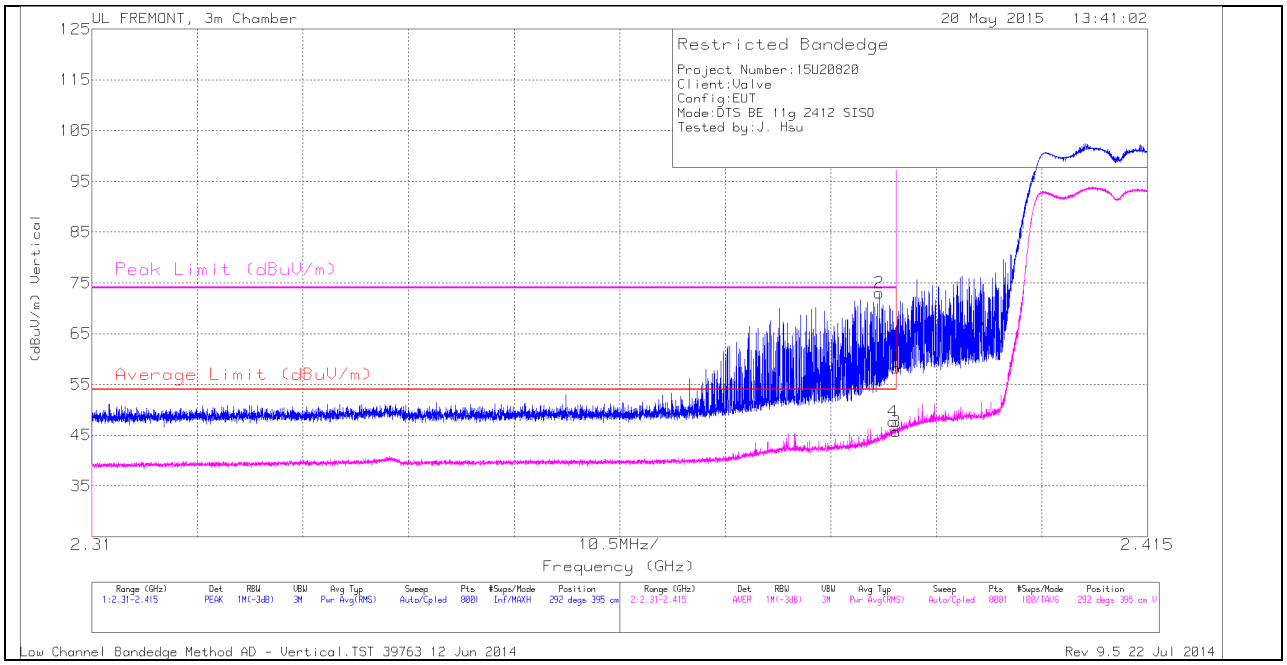
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	60.36	PK	32	-23.1	69.26	-	-	74	-4.74	352	105	H
2	2.39	64.2	PK	32	-23.1	73.1	-	-	74	-.9	352	105	H
3	2.39	37.47	RMS	32	-23.1	46.37	54	-7.63	-	-	352	105	H
4	2.39	38.48	RMS	32	-23.1	47.38	54	-6.62	-	-	352	105	H

VERTICAL PEAK AND AVERAGE PLOT

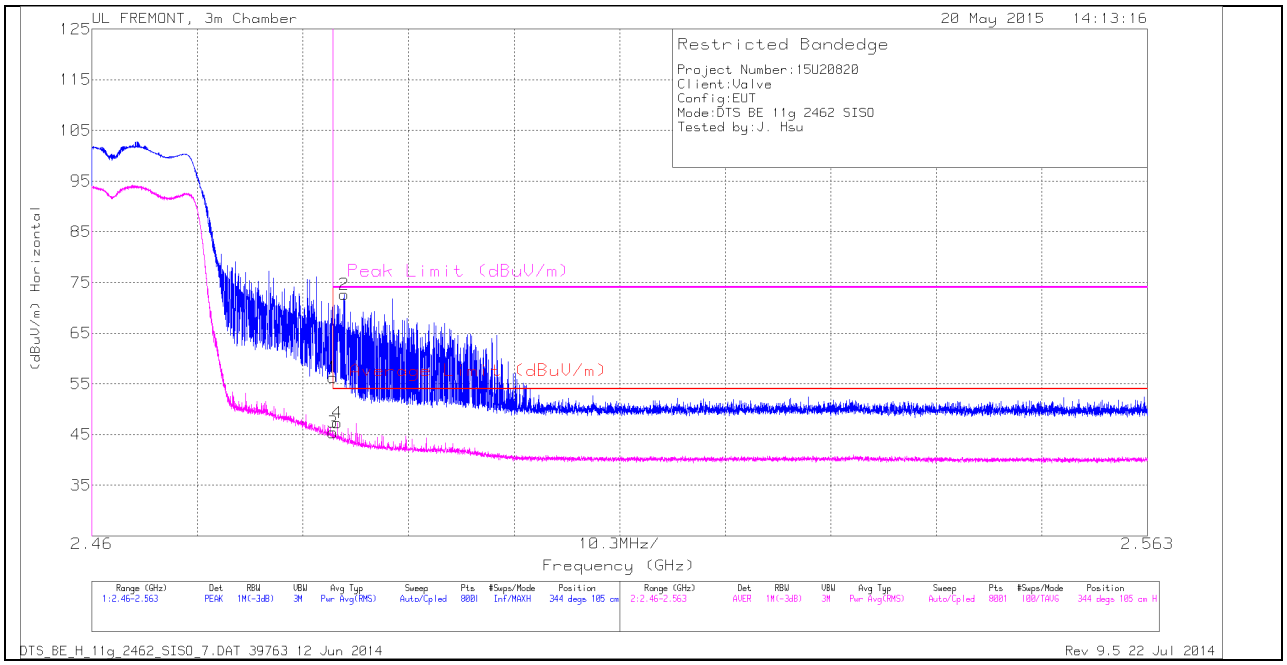


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	64.08	PK	32	-23.1	72.98	-	-	74	-1.02	292	395	V
1	2.39	49.31	PK	32	-23.1	58.21	-	-	74	-15.79	292	395	V
3	2.39	36.81	RMS	32	-23.1	45.71	54	-8.29	-	-	292	395	V
4	2.39	38.78	RMS	32	-23.1	47.68	54	-6.32	-	-	292	395	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

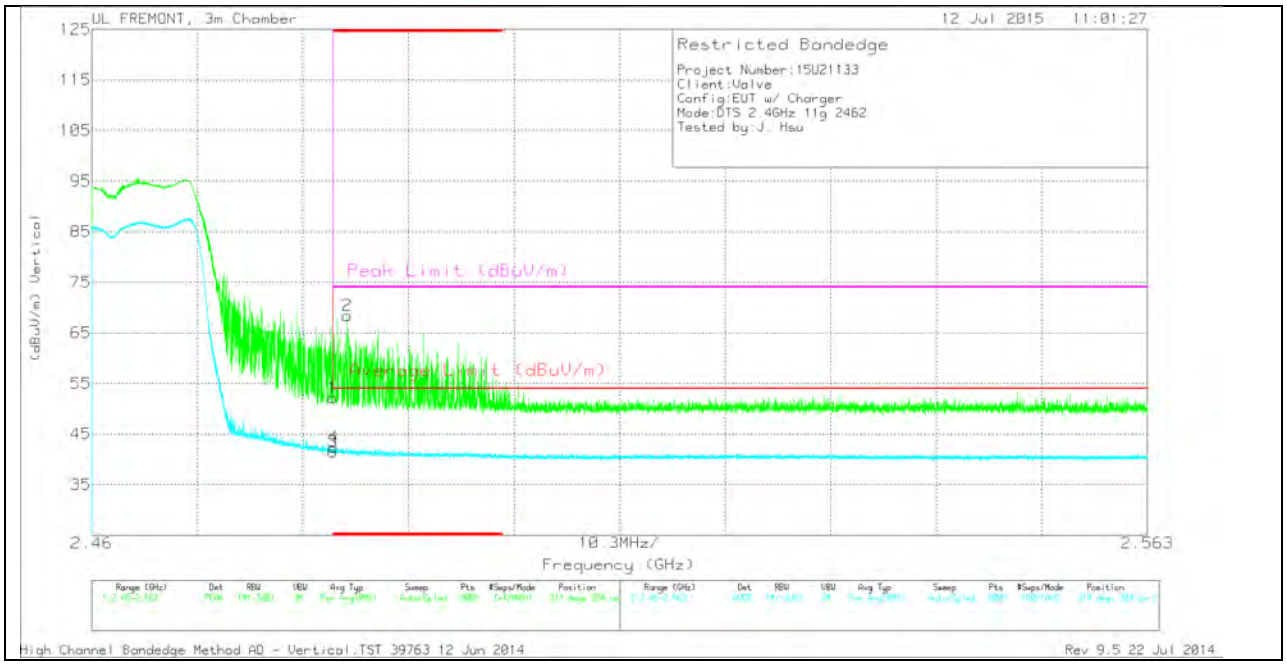
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	46.75	PK	32.3	-22.8	56.25	-	-	74	-17.75	344	105	H
3	2.484	35.89	RMS	32.3	-22.8	45.39	54	-8.61	-	-	344	105	H
4	2.484	37.83	RMS	32.3	-22.8	47.33	54	-6.67	-	-	344	105	H
2	2.485	63.19	PK	32.3	-22.8	72.69	-	-	74	-1.31	344	105	H

VERTICAL PEAK AND AVERAGE PLOT

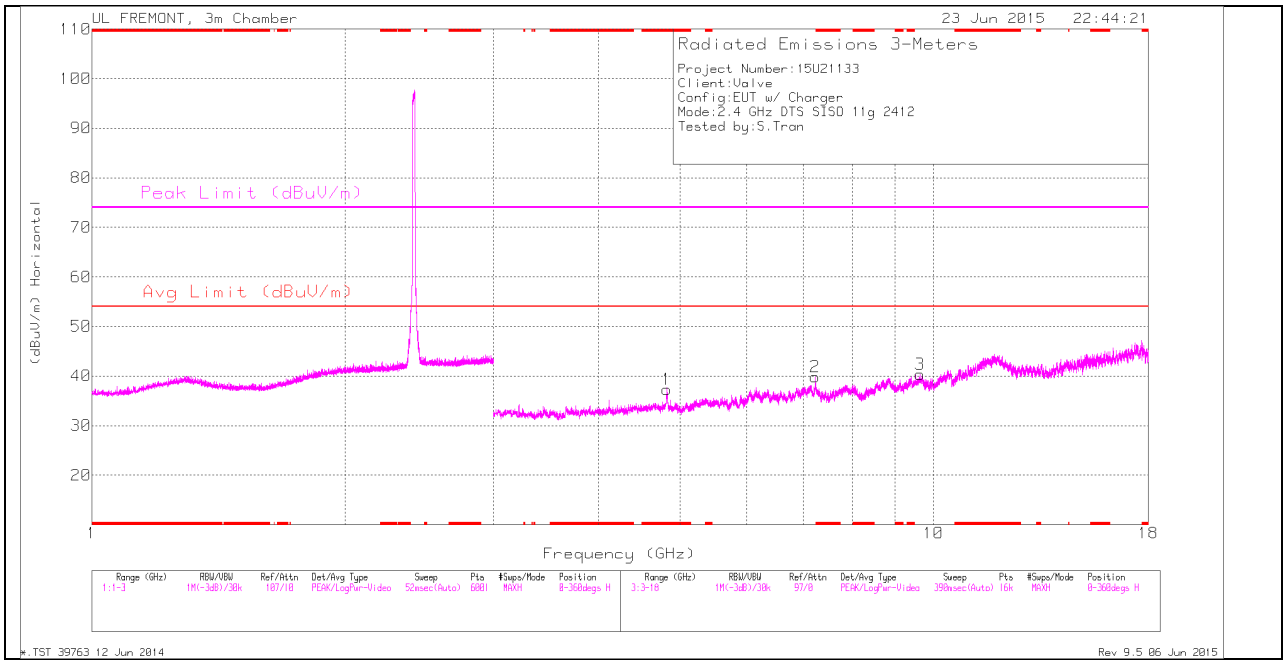


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	41.96	PK	32.3	-22.1	52.16	-	-	74	-21.84	314	304	V
2	* 2.485	58.24	PK	32.3	-22.1	68.44	-	-	74	-5.56	314	304	V
3	* 2.484	31.29	RMS	32.3	-22.1	41.49	54	-12.51	-	-	314	304	V
4	* 2.484	32.18	RMS	32.3	-22.1	42.38	54	-11.62	-	-	314	304	V

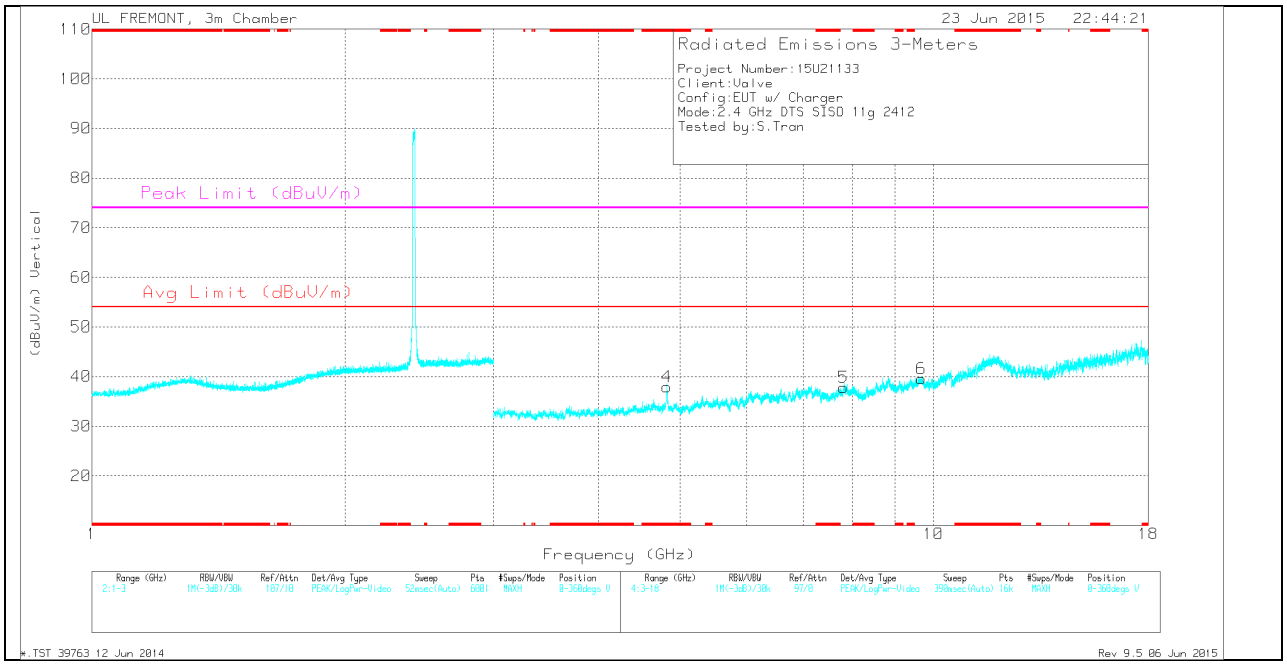
HARMONICS AND SPURIOUS EMISSIONS

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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.825	32.67	Avg	34	-29.4	37.27	54	-16.73	-	-	0-360	100	H
4	* 4.825	33.36	Avg	34	-29.4	37.96	54	-16.04	-	-	0-360	100	V
2	7.234	33.14	Avg	35.6	-28.9	39.84	54	-14.16	-	-	0-360	100	H
5	7.819	28.68	Avg	35.8	-26.7	37.78	54	-16.22	-	-	0-360	200	V
3	9.636	27.22	Avg	36.8	-23.7	40.32	54	-13.68	-	-	0-360	100	H
6	9.674	26.55	Avg	36.8	-23.8	39.55	54	-14.45	-	-	0-360	200	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

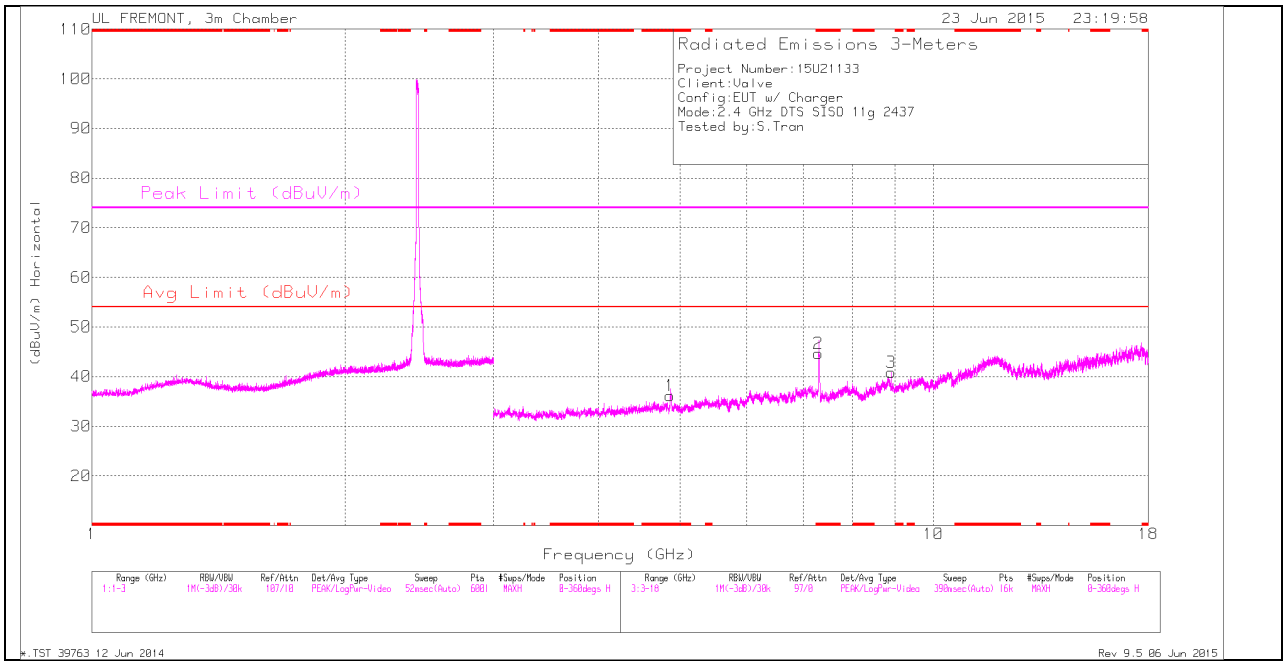
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.824	45.55	PK2	34	-29.4	50.15	-	-	74	-23.85	194	100	H
* 4.824	32	MAv1	34	-29.4	36.6	54	-17.4	-	-	194	100	H
* 4.824	40.53	PK2	34	-29.4	45.13	-	-	74	-28.87	194	100	V
* 4.823	29.06	MAv1	34	-29.4	33.66	54	-20.34	-	-	194	100	V
7.236	40.16	PK2	35.6	-28.9	46.86	-	-	74	-27.14	194	100	H
7.236	28.37	MAv1	35.6	-28.8	35.17	54	-18.83	-	-	194	100	H
7.818	38.12	PK2	35.8	-26.8	47.12	-	-	74	-26.88	194	200	V
7.82	26.73	MAv1	35.8	-26.7	35.83	54	-18.17	-	-	194	200	V
9.637	24.7	MAv1	36.8	-23.7	37.8	54	-16.2	-	-	194	100	H
9.638	36.52	PK2	36.8	-23.7	49.62	-	-	74	-24.38	194	100	H
9.675	35.89	PK2	36.8	-23.7	48.99	-	-	74	-25.01	194	200	V
9.675	24.54	MAv1	36.8	-23.7	37.64	54	-16.36	-	-	194	200	V

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

PK2 - KDB558074 Method: Maximum Peak

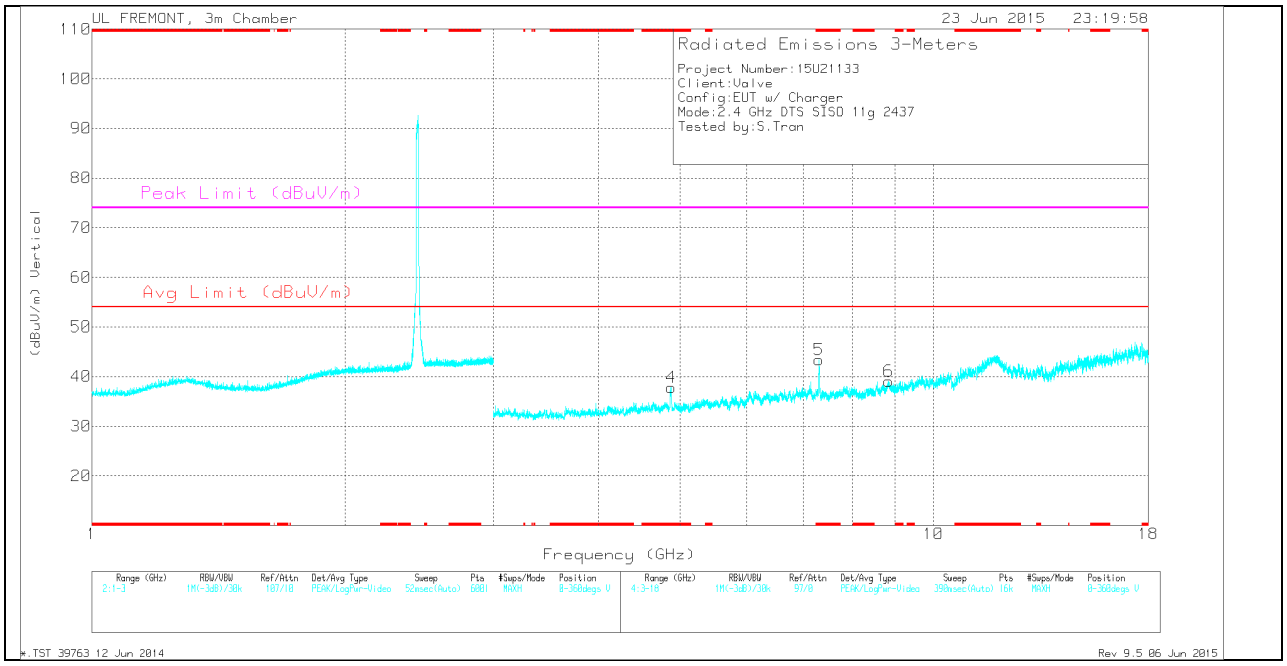
MAv1 - KDB558074 Option 1 Maximum RMS Average

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 T119 (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
1	* 4.866	31.24	Avg	34	-29.1	36.14	54	-17.86	-	-	0-360	100	H
2	* 7.301	36.9	Avg	35.6	-27.8	44.7	54	-9.3	-	-	0-360	100	H
4	* 4.876	32.86	Avg	34	-29.1	37.76	54	-16.24	-	-	0-360	100	V
5	* 7.308	35.28	Avg	35.6	-27.5	43.38	54	-10.62	-	-	0-360	100	V
6	8.845	28.07	Avg	35.9	-24.9	39.07	54	-14.93	-	-	0-360	100	V
3	8.906	30.24	Avg	35.9	-25.3	40.84	54	-13.16	-	-	0-360	100	H

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

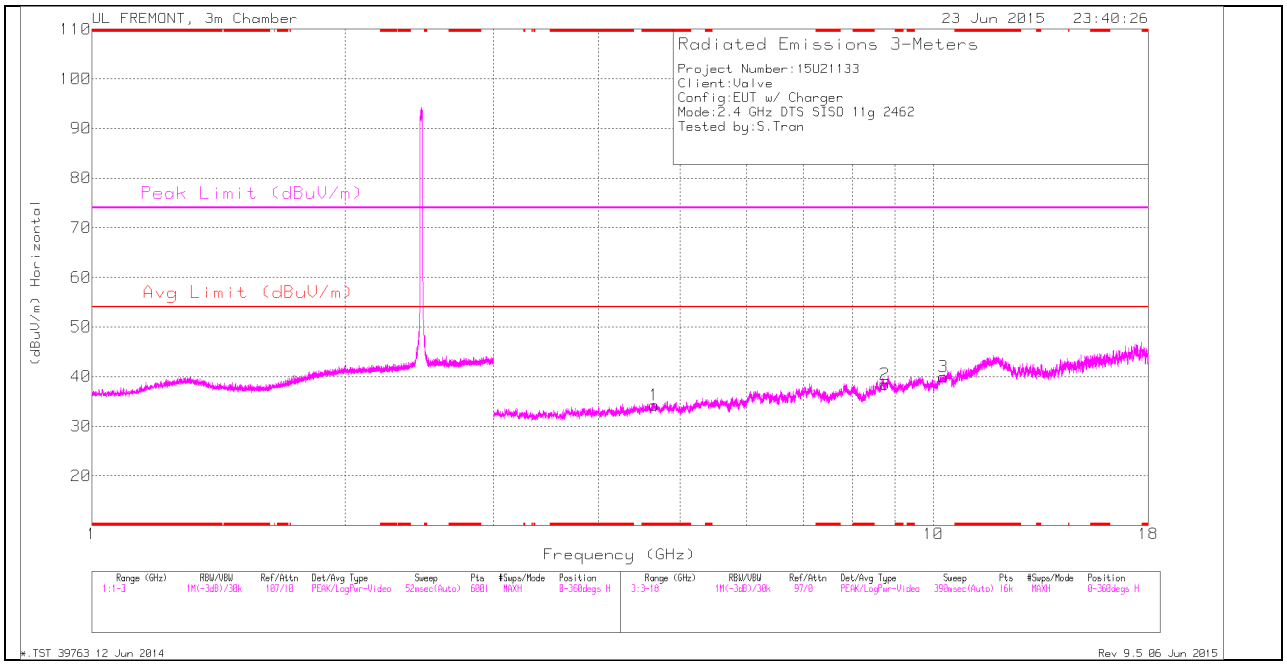
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.868	41.22	PK2	34	-29.1	46.12	-	-	74	-27.88	360	100	H
* 4.865	28.4	MAv1	34	-29.1	33.3	54	-20.7	-	-	360	100	H
* 7.303	49.17	PK2	35.6	-27.8	56.97	-	-	74	-17.03	20	400	H
* 7.303	33.3	MAv1	35.6	-27.7	41.2	54	-12.8	-	-	20	400	H
* 4.875	39.23	PK2	34	-29.1	44.13	-	-	74	-29.87	20	100	V
* 4.874	27.73	MAv1	34	-29.1	32.63	54	-21.37	-	-	20	100	V
* 7.307	39.56	PK2	35.6	-27.5	47.66	-	-	74	-26.34	20	100	V
* 7.308	27.48	MAv1	35.6	-27.5	35.58	54	-18.42	-	-	20	100	V
8.847	37.64	PK2	35.9	-24.9	48.64	-	-	74	-25.36	20	100	V
8.847	26.15	MAv1	35.9	-24.9	37.15	54	-16.85	-	-	20	100	V
8.908	36.73	PK2	36	-25.3	47.43	-	-	74	-26.57	20	100	H
8.908	25.37	MAv1	36	-25.3	36.07	54	-17.93	-	-	20	100	H

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

PK2 - KDB558074 Method: Maximum Peak

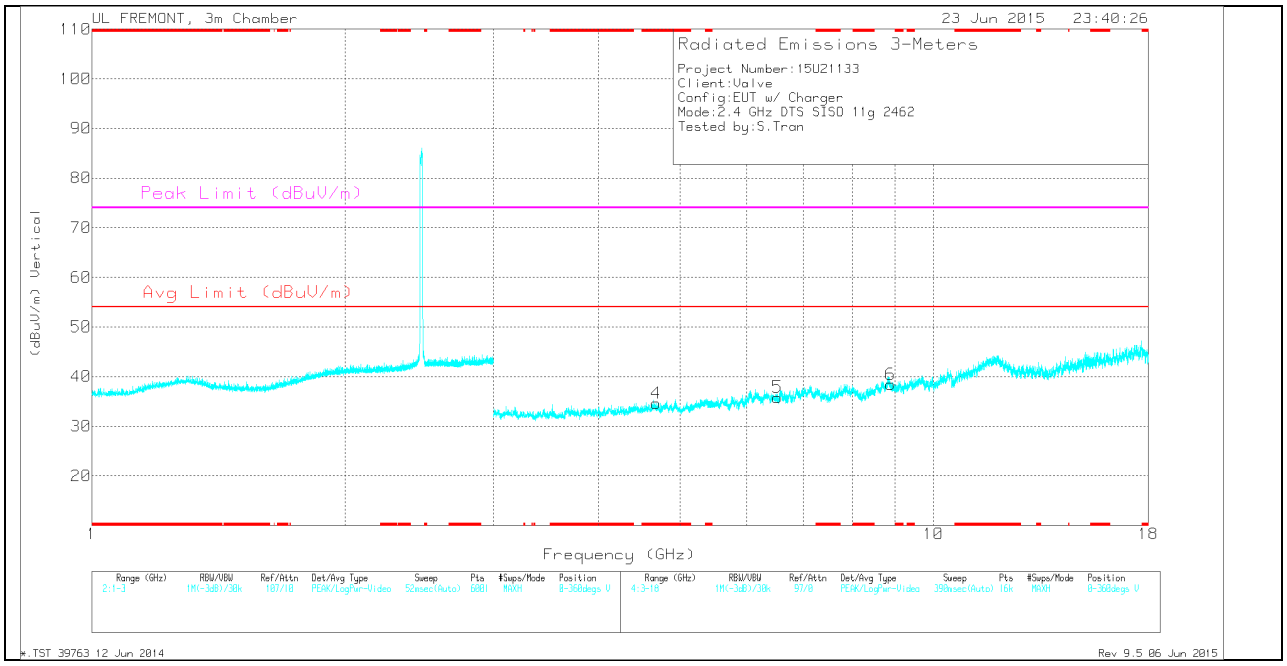
MAv1 - KDB558074 Option 1 Maximum RMS Average

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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.662	30.24	Avg	34	-30	34.24	54	-19.76	-	-	0-360	200	H
4	* 4.686	30.77	Avg	34	-30.1	34.67	54	-19.33	-	-	0-360	200	V
5	6.527	28.84	Avg	35.6	-28.6	35.84	54	-18.16	-	-	0-360	100	V
2	8.76	28.87	Avg	35.9	-26.3	38.47	54	-15.53	-	-	0-360	200	H
6	8.89	27.72	Avg	35.9	-25.2	38.42	54	-15.58	-	-	0-360	100	V
3	10.275	26.93	Avg	37.1	-24.1	39.93	54	-14.07	-	-	0-360	200	H

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 4.662	41.17	PK2	34	-30	45.17	-	-	74	-28.83	0	200	H
* 4.664	28.71	MAv1	34	-30.1	32.61	54	-21.39	-	-	0	200	H
* 4.686	40.46	PK2	34	-30.1	44.36	-	-	74	-29.64	0	200	V
* 4.684	28.61	MAv1	34	-30.1	32.51	54	-21.49	-	-	0	200	V
6.528	27.5	MAv1	35.6	-28.6	34.5	54	-19.5	-	-	0	100	V
6.529	39.27	PK2	35.6	-28.6	46.27	-	-	74	-27.73	0	100	V
8.76	37.27	PK2	35.9	-26.3	46.87	-	-	74	-27.13	0	200	H
8.762	25.56	MAv1	35.9	-26.2	35.26	54	-18.74	-	-	0	200	H
8.889	36.55	PK2	35.9	-25.2	47.25	-	-	74	-26.75	0	100	V
8.892	25.08	MAv1	35.9	-25.2	35.78	54	-18.22	-	-	0	100	V
10.274	36.3	PK2	37.1	-24.1	49.3	-	-	74	-24.7	0	200	H
10.276	24.45	MAv1	37.1	-24.1	37.45	54	-16.55	-	-	0	200	H

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

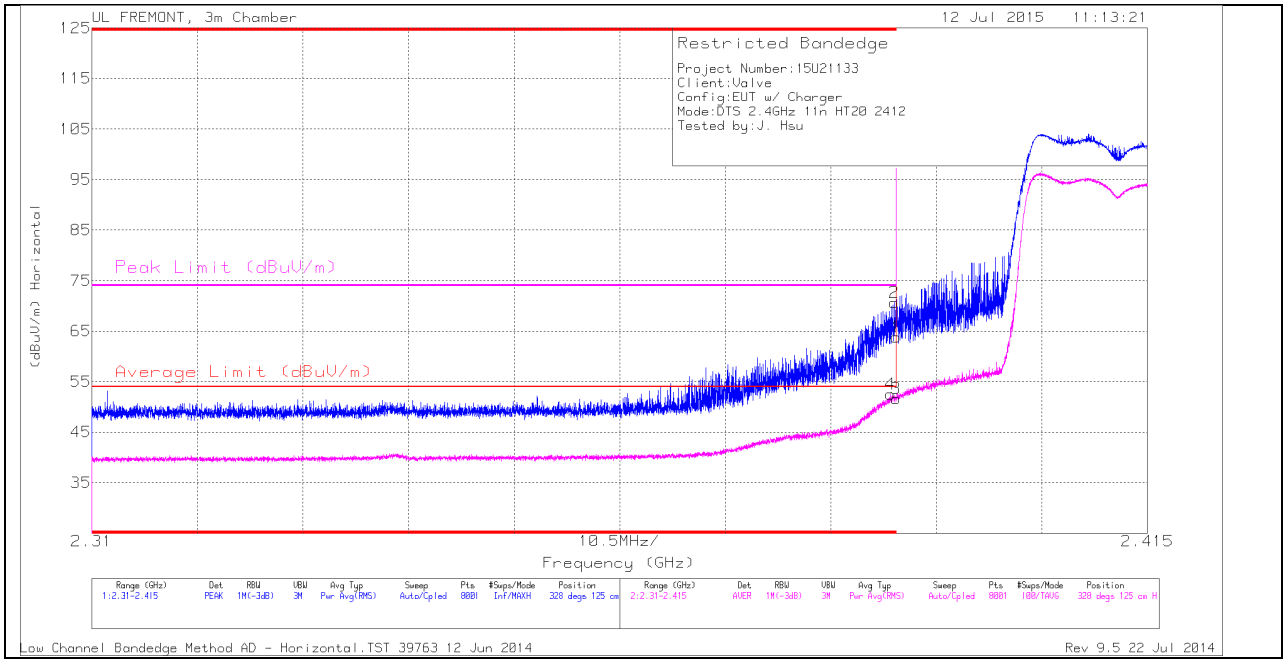
PK2 - KDB558074 Method: Maximum Peak

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



HORIZONTAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	54.24	PK	32	-22.4	63.84	-	-	74	-10.16	328	125	H
2	* 2.39	61.02	PK	32	-22.4	70.62	-	-	74	-3.38	328	125	H
3	* 2.39	42.08	RMS	32	-22.4	51.68	54	-2.32	-	-	328	125	H
4	* 2.389	42.89	RMS	32	-22.4	52.49	54	-1.51	-	-	328	125	H

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

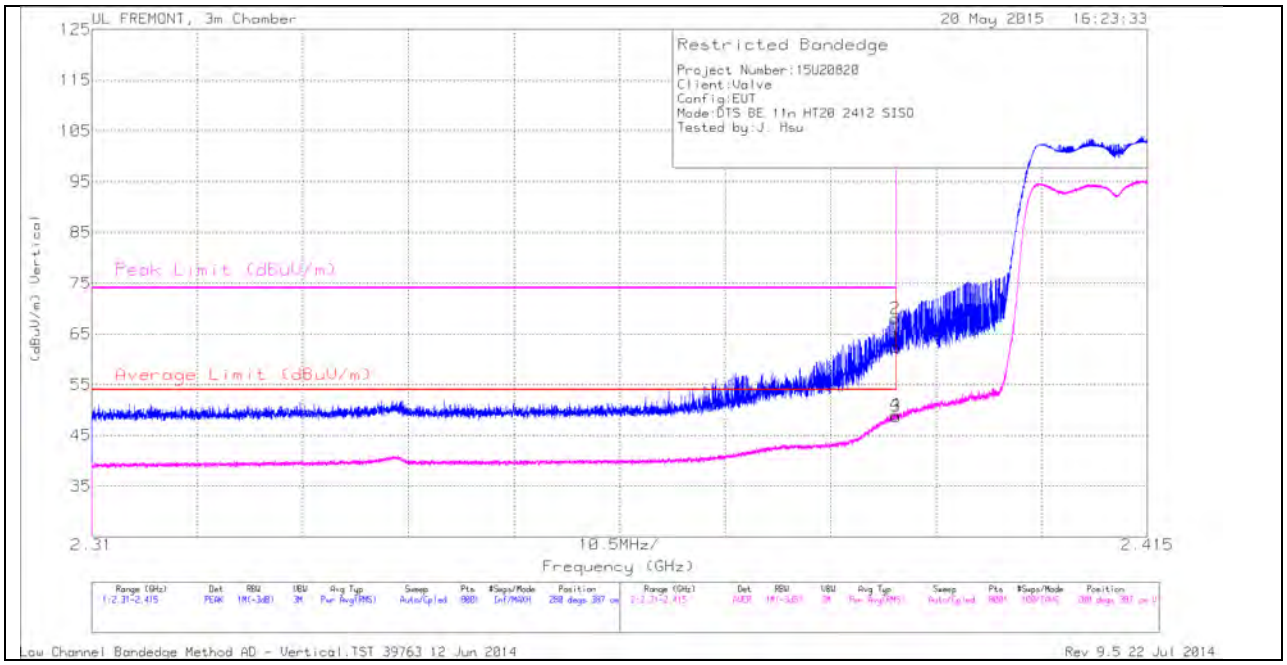
PK - Peak detector

RMS - RMS detection

Low Channel Bandedge Method AD - Horizontal.TST 39763 12 Jun 2014

Rev 9.5 22 Jul 2014

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)	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	53.47	PK	32	-23.1	62.37	-	-	74	-11.63	280	387	V
2	2.39	59.09	PK	32	-23.1	67.99	-	-	74	-6.01	280	387	V
3	2.39	39.84	RMS	32	-23.1	48.74	54	-5.26	-	-	280	387	V
4	2.39	40.21	RMS	32	-23.1	49.11	54	-4.89	-	-	280	387	V

PK - Peak detector

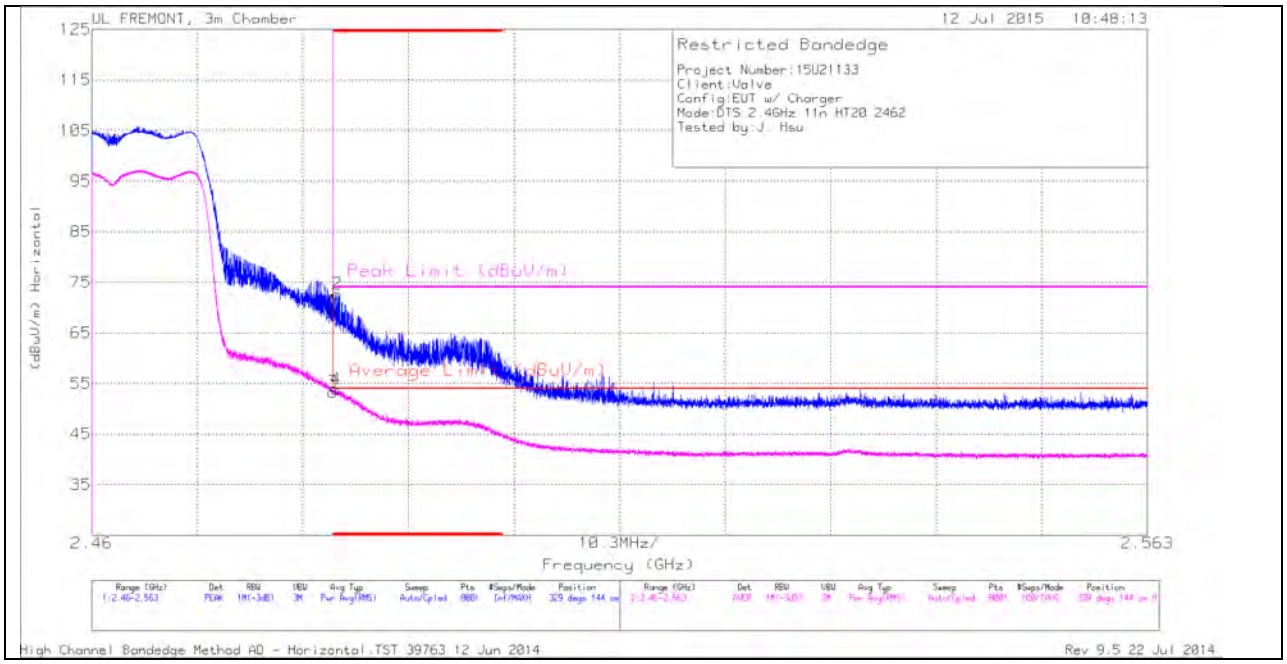
RMS - RMS detection

Low Channel Bandedge Method AD - Vertical.TST 39763 12 Jun 2014

Rev 9.5 22 Jul 2014

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)	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	59.26	PK	32.3	-22.1	69.46	-	-	74	-4.54	329	144	H
2	* 2.484	62.5	PK	32.3	-22.1	72.7	-	-	74	-1.3	329	144	H
3	* 2.484	43.13	RMS	32.3	-22.1	53.33	54	-.67	-	-	329	144	H
4	* 2.484	43.71	RMS	32.3	-22.1	53.91	54	-.09	-	-	329	144	H

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

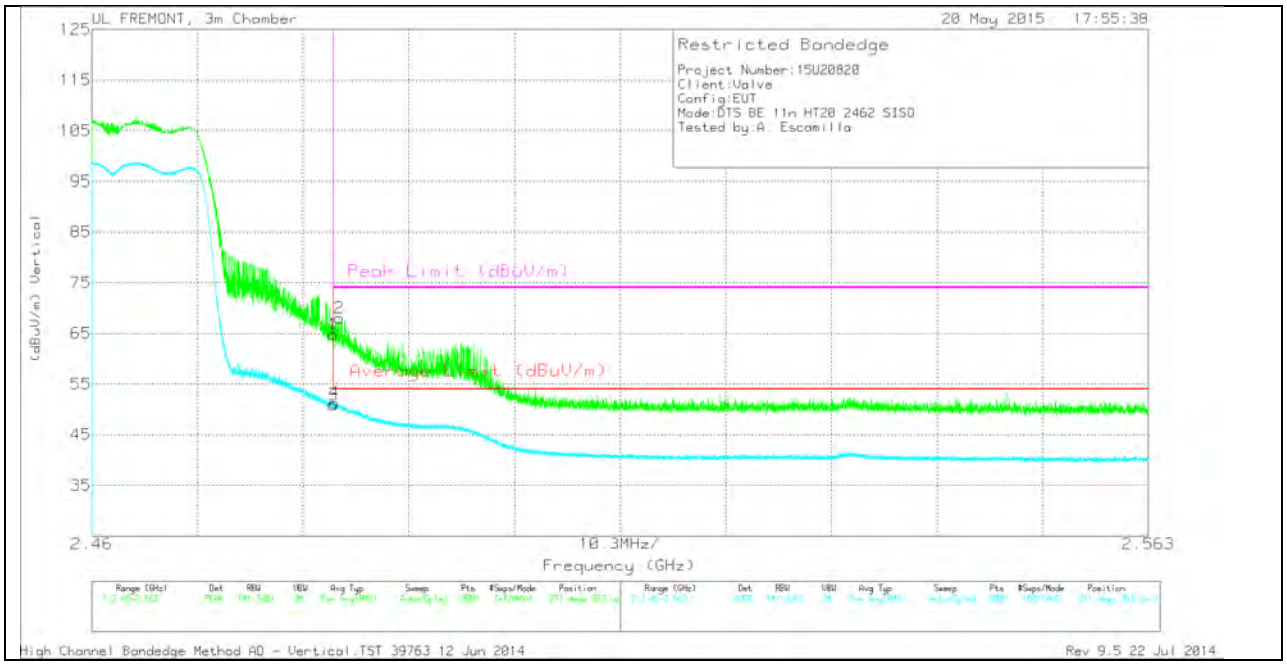
PK - Peak detector

RMS - RMS detection

High Channel Bandedge Method AD - Horizontal.TST 39763 12 Jun 2014

Rev 9.5 22 Jul 2014

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)	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	55.32	PK	32.3	-22.8	64.82	-	-	74	-9.18	271	353	V
2	2.484	58.59	PK	32.3	-22.8	68.09	-	-	74	-5.91	271	353	V
3	2.484	41.37	RMS	32.3	-22.8	50.87	54	-3.13	-	-	271	353	V
4	2.484	41.74	RMS	32.3	-22.8	51.24	54	-2.76	-	-	271	353	V

PK - Peak detector

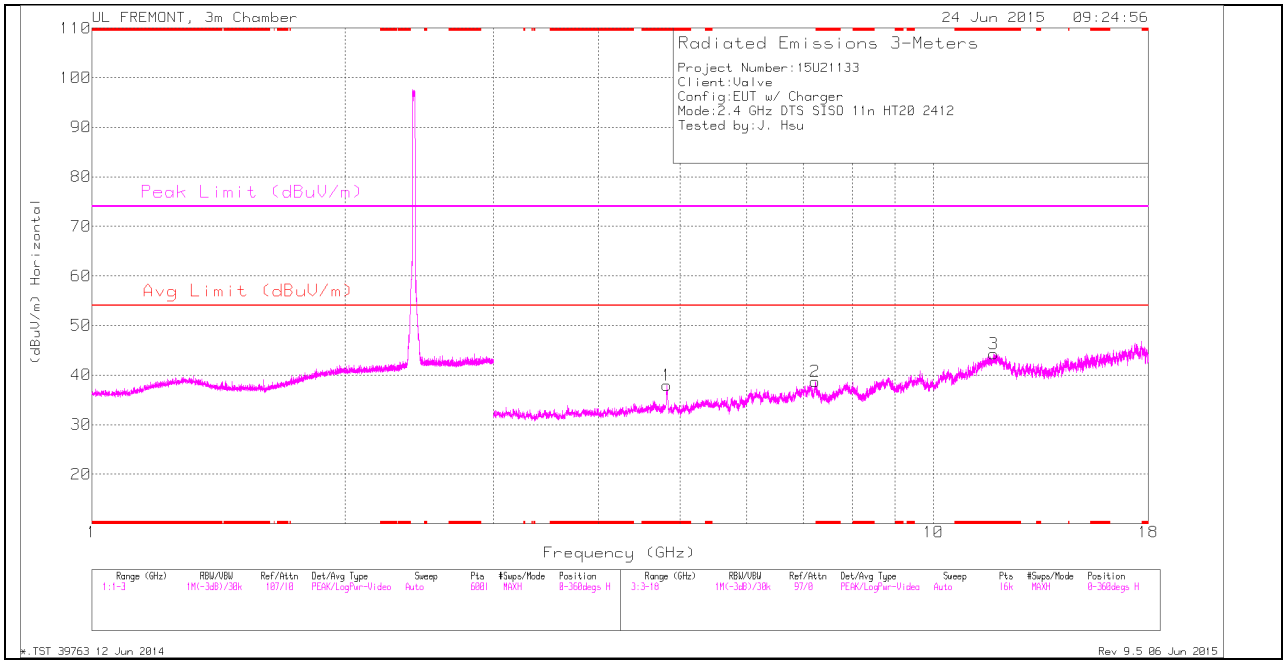
RMS - RMS detection

High Channel Bandedge Method AD - Vertical.TST 39763 12 Jun 2014

Rev 9.5 22 Jul 2014

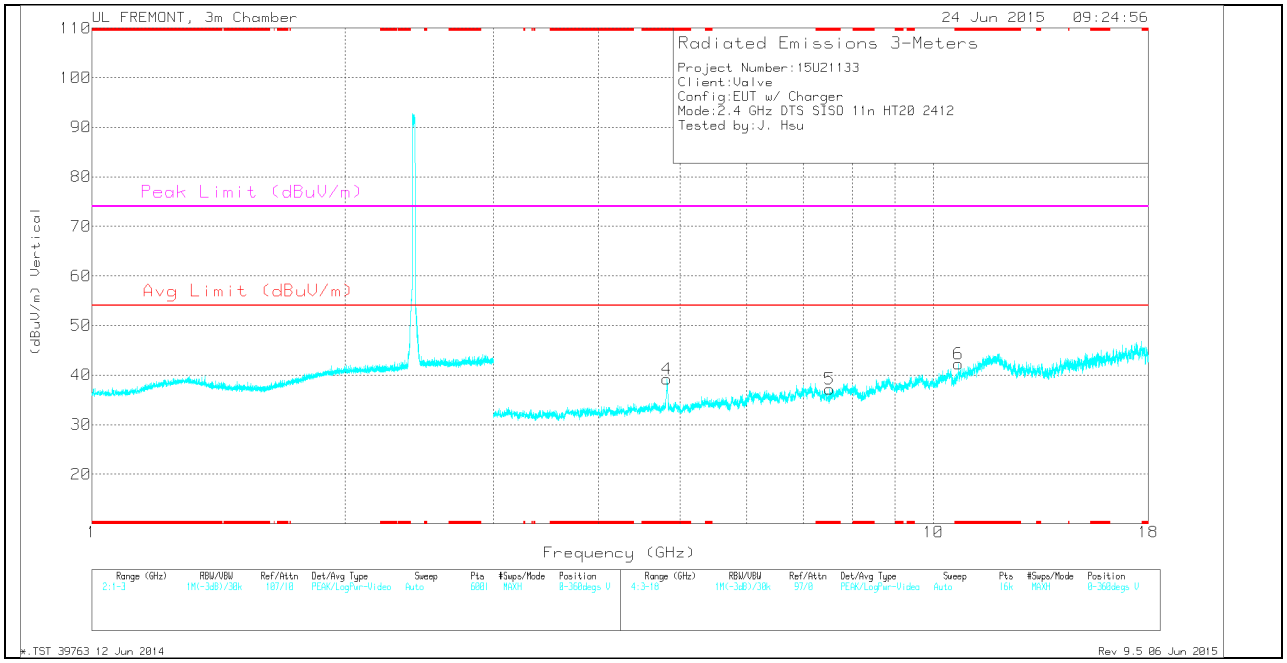
HARMONICS AND SPURIOUS EMISSIONS

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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.823	33.3	Avg	34	-29.4	37.9	54	-16.1	-	-	0-360	200	H
3	* 11.786	27.54	Avg	39	-22.3	44.24	54	-9.76	-	-	0-360	100	H
4	* 4.825	34.64	Avg	34	-29.4	39.24	54	-14.76	-	-	0-360	200	V
5	* 7.532	29.22	Avg	35.7	-27.7	37.22	54	-16.78	-	-	0-360	200	V
6	* 10.711	27.27	Avg	37.8	-22.8	42.27	54	-11.73	-	-	0-360	200	V
2	7.234	32.05	Avg	35.6	-28.9	38.75	54	-15.25	-	-	0-360	100	H

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 4.823	46.2	PK2	34	-29.4	50.8	-	-	74	-23.2	50	142	H
* 4.824	32.52	MAv1	34	-29.4	37.12	54	-16.88	-	-	50	142	H
* 11.784	37.19	PK2	39	-22.3	53.89	-	-	74	-20.11	50	142	H
* 11.784	25.66	MAv1	39	-22.3	42.36	54	-11.64	-	-	50	142	H
* 4.823	49.87	PK2	34	-29.4	54.47	-	-	74	-19.53	98	391	V
* 4.824	35.9	MAv1	34	-29.4	40.5	54	-13.5	-	-	98	391	V
* 7.531	39.05	PK2	35.7	-27.7	47.05	-	-	74	-26.95	98	391	V
* 7.53	27.3	MAv1	35.7	-27.8	35.2	54	-18.8	-	-	98	391	V
* 10.712	36.73	PK2	37.8	-22.8	51.73	-	-	74	-22.27	98	391	V
* 10.711	24.54	MAv1	37.8	-22.8	39.54	54	-14.46	-	-	98	391	V
7.234	40.59	PK2	35.6	-28.9	47.29	-	-	74	-26.71	50	142	H
7.236	28.28	MAv1	35.6	-28.9	34.98	54	-19.02	-	-	50	142	H

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

*.TST 39763 12 Jun 2014

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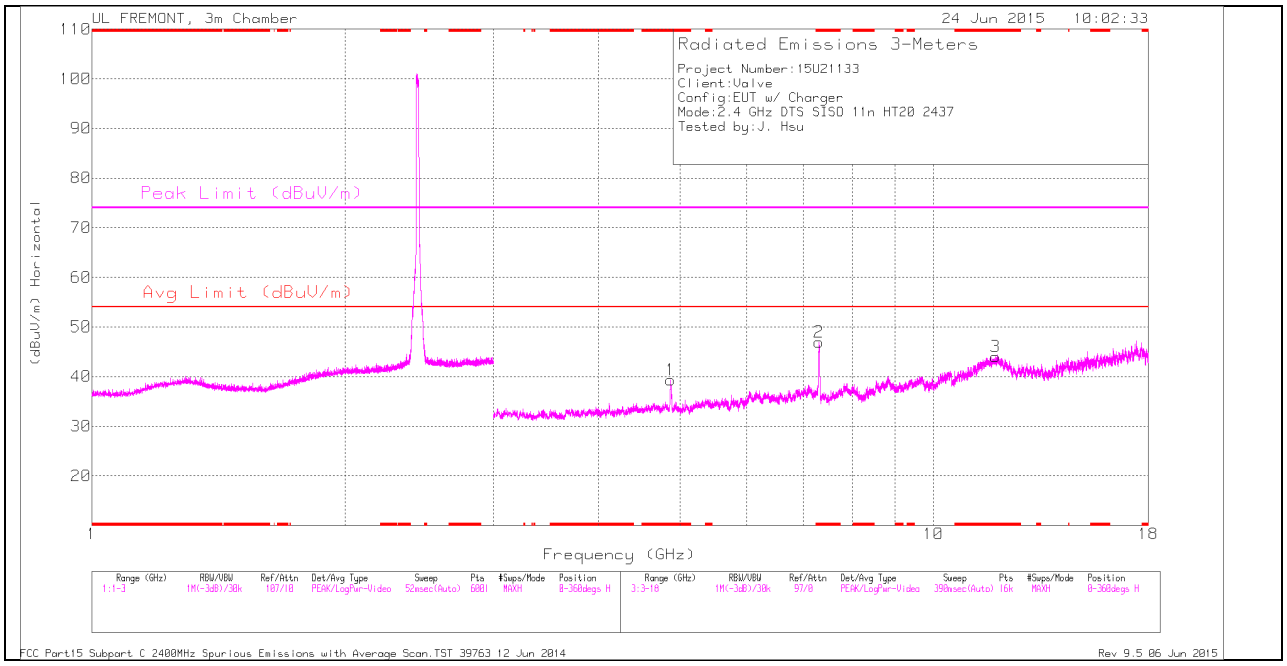
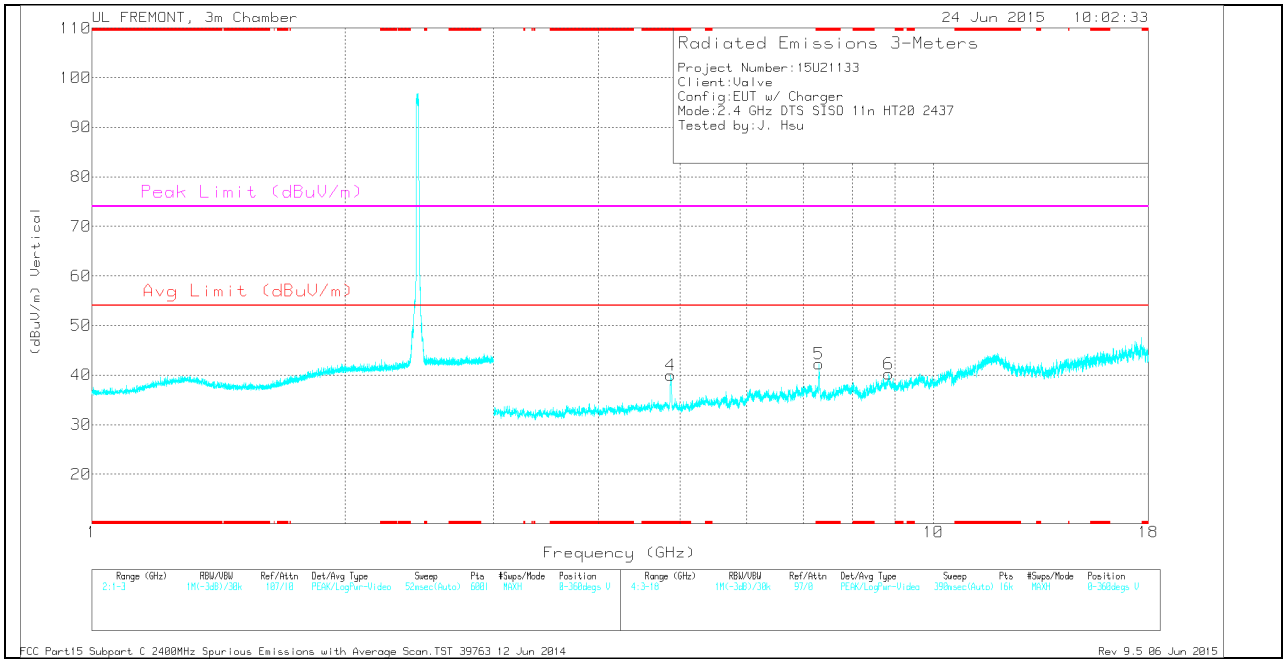
MID CHANNEL HORIZONTAL



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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.874	34.45	Avg	34	-29.1	39.35	54	-14.65	-	-	0-360	200	H
2	* 7.308	38.83	Avg	35.6	-27.5	46.93	54	-7.07	-	-	0-360	100	H
3	* 11.849	27.59	Avg	39.1	-22.7	43.99	54	-10.01	-	-	0-360	100	H
4	* 4.873	35.01	Avg	34	-29.1	39.91	54	-14.09	-	-	0-360	200	V
5	* 7.309	34.17	Avg	35.6	-27.5	42.27	54	-11.73	-	-	0-360	200	V
6	8.843	29.29	Avg	35.9	-25	40.19	54	-13.81	-	-	0-360	100	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 4.873	48.21	PK2	34	-29.1	53.11	-	-	74	-20.89	57	211	H
* 4.873	34.38	MAv1	34	-29.1	39.28	54	-14.72	-	-	57	211	H
* 7.306	54.36	PK2	35.6	-27.6	62.36	-	-	74	-11.64	24	203	H
* 7.308	38.74	MAv1	35.6	-27.5	46.84	54	-7.16	-	-	24	203	H
* 11.849	37.25	PK2	39.1	-22.7	53.65	-	-	74	-20.35	24	203	H
* 11.848	25.69	MAv1	39.1	-22.7	42.09	54	-11.91	-	-	24	203	H
* 4.871	51.19	PK2	34	-29.1	56.09	-	-	74	-17.91	115	349	V
* 4.872	36.91	MAv1	34	-29.1	41.81	54	-12.19	-	-	115	349	V
* 7.305	47.96	PK2	35.6	-27.6	55.96	-	-	74	-18.04	256	267	V
* 7.311	32.53	MAv1	35.6	-27.4	40.73	54	-13.27	-	-	256	267	V
8.845	38.12	PK2	35.9	-24.9	49.12	-	-	74	-24.88	256	267	V
8.845	26.07	MAv1	35.9	-24.9	37.07	54	-16.93	-	-	256	267	V

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

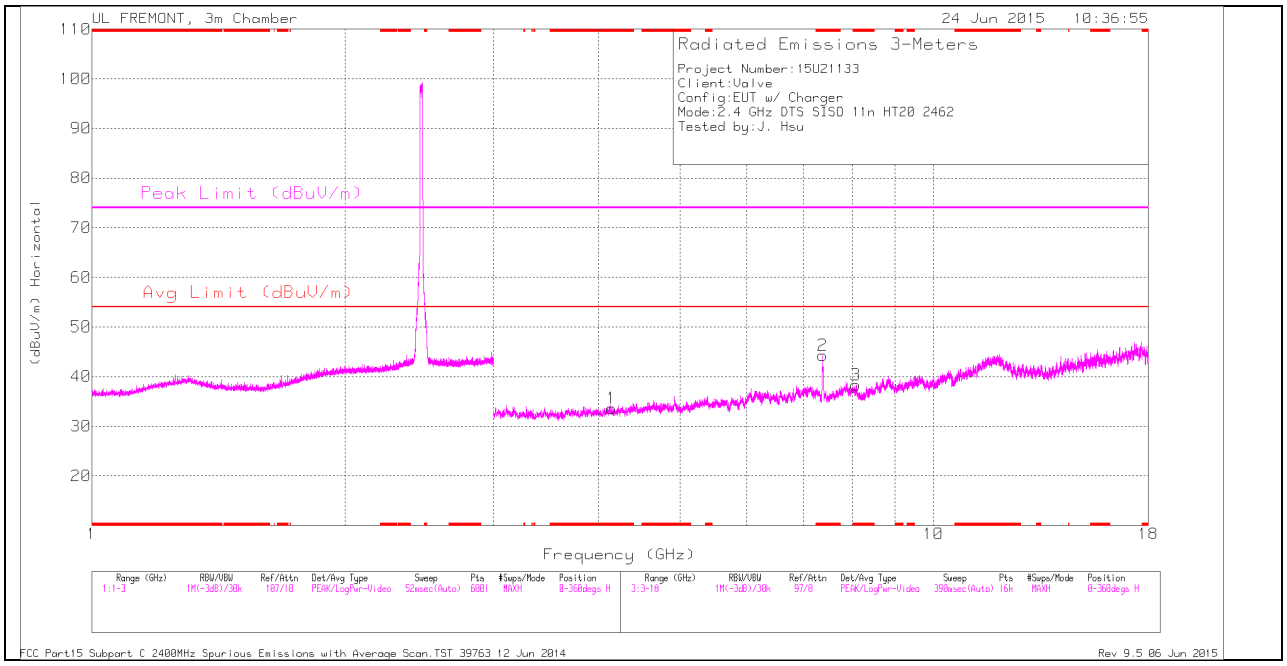
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

FCC Part15 Subpart C 2400MHz Spurious Emissions with Average Scan.TST 39763 12 Jun 2014

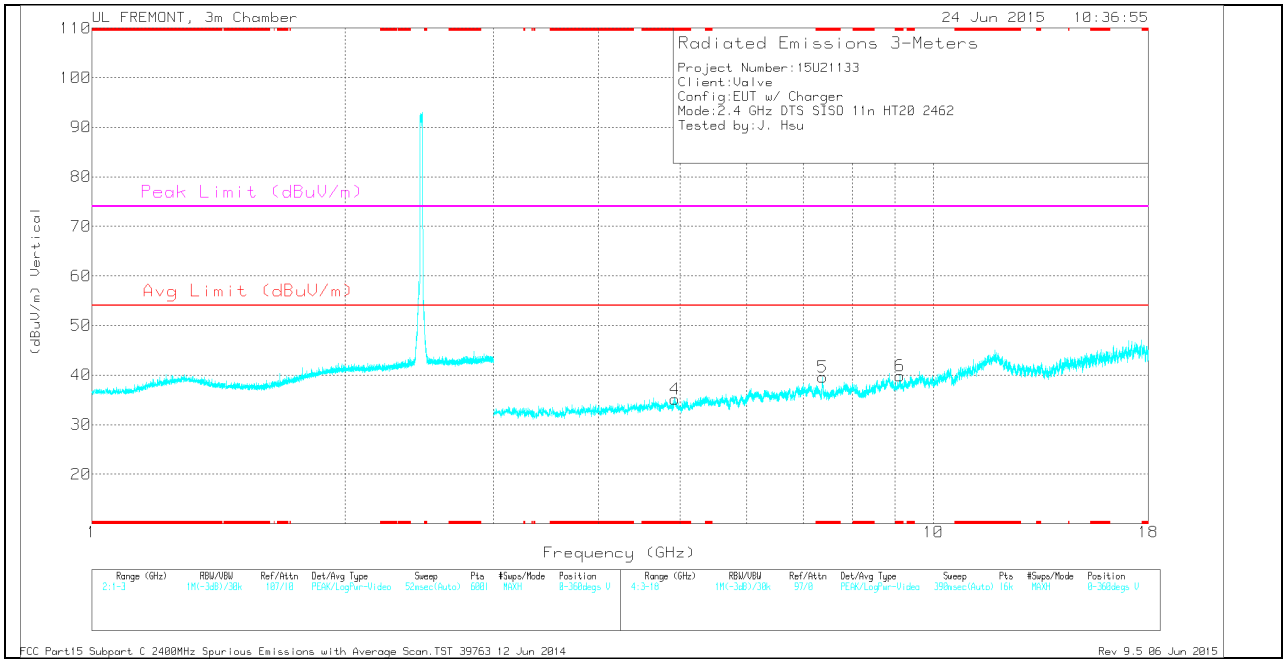
Rev 9.5 06 Jun 2015

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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.143	30.36	Avg	33.3	-30	33.66	54	-20.34	-	-	0-360	200	H
2	* 7.383	35.74	Avg	35.6	-27	44.34	54	-9.66	-	-	0-360	200	H
3	* 8.083	29.48	Avg	35.7	-26.9	38.28	54	-15.72	-	-	0-360	100	H
4	* 4.934	30.92	Avg	34	-29.8	35.12	54	-18.88	-	-	0-360	100	V
5	* 7.386	31.03	Avg	35.6	-27.1	39.53	54	-14.47	-	-	0-360	200	V
6	* 9.121	28.22	Avg	36.1	-24.5	39.82	54	-14.18	-	-	0-360	200	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 4.144	40.27	PK2	33.3	-30	43.57	-	-	74	-30.43	360	100	H
* 4.141	28.8	MAv1	33.3	-30.1	32	54	-22	-	-	360	100	H
* 7.375	51.84	PK2	35.6	-26.9	60.54	-	-	74	-13.46	98	234	H
* 7.386	34.52	MAv1	35.6	-27.1	43.02	54	-10.98	-	-	98	234	H
* 8.085	37.81	PK2	35.7	-26.9	46.61	-	-	74	-27.39	98	234	H
* 8.085	26.38	MAv1	35.7	-26.9	35.18	54	-18.82	-	-	98	234	H
* 4.934	40.75	PK2	34	-29.7	45.05	-	-	74	-28.95	98	234	V
* 4.933	29.23	MAv1	34	-29.7	33.53	54	-20.47	-	-	98	234	V
* 7.385	39.18	PK2	35.6	-27.1	47.68	-	-	74	-26.32	133	147	V
* 7.386	26.39	MAv1	35.6	-27.1	34.89	54	-19.11	-	-	133	147	V
* 9.121	37.48	PK2	36.1	-24.5	49.08	-	-	74	-24.92	133	147	V
* 9.12	25.97	MAv1	36.1	-24.5	37.57	54	-16.43	-	-	133	147	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

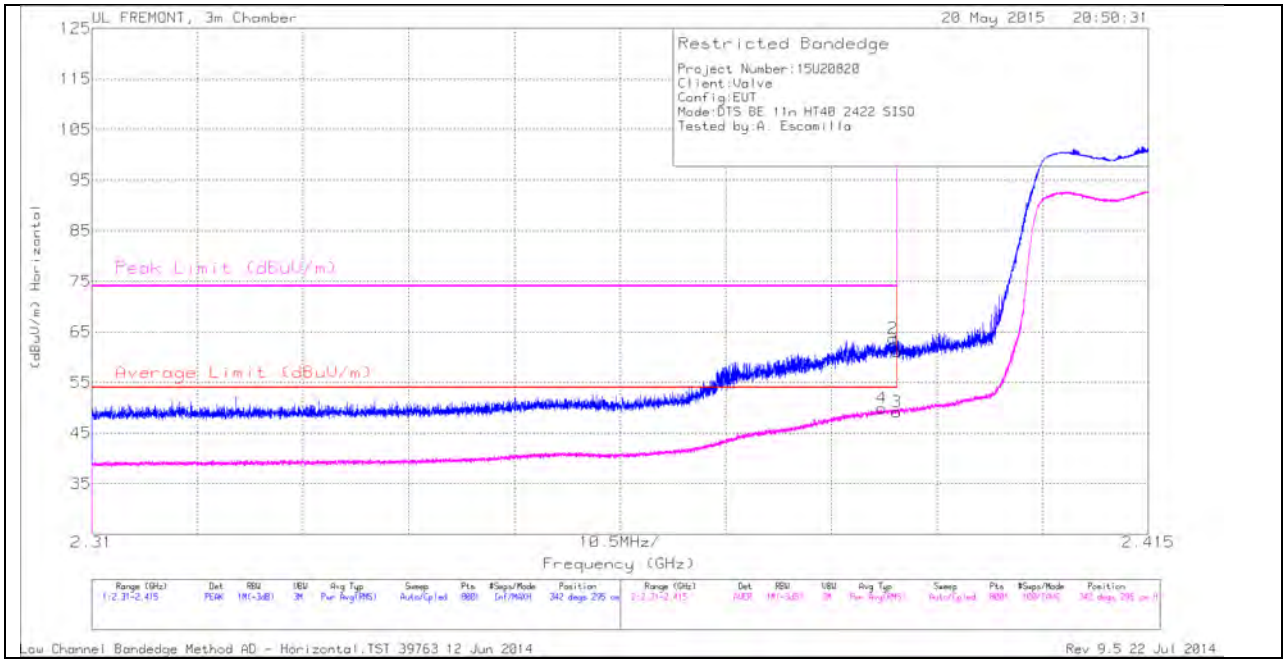
FCC Part15 Subpart C 2400MHz Spurious Emissions with Average Scan.TST 39763 12 Jun 2014

Rev 9.5 06 Jun 2015

11.2.4. 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)	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	40.99	RMS	32	-23.1	49.89	54	-4.11	-	-	342	295	H
1	2.39	52.19	PK	32	-23.1	61.09	-	-	74	-12.91	342	295	H
2	2.39	54.75	PK	32	-23.1	63.65	-	-	74	-10.35	342	295	H
3	2.39	40.27	RMS	32	-23.1	49.17	54	-4.83	-	-	342	295	H

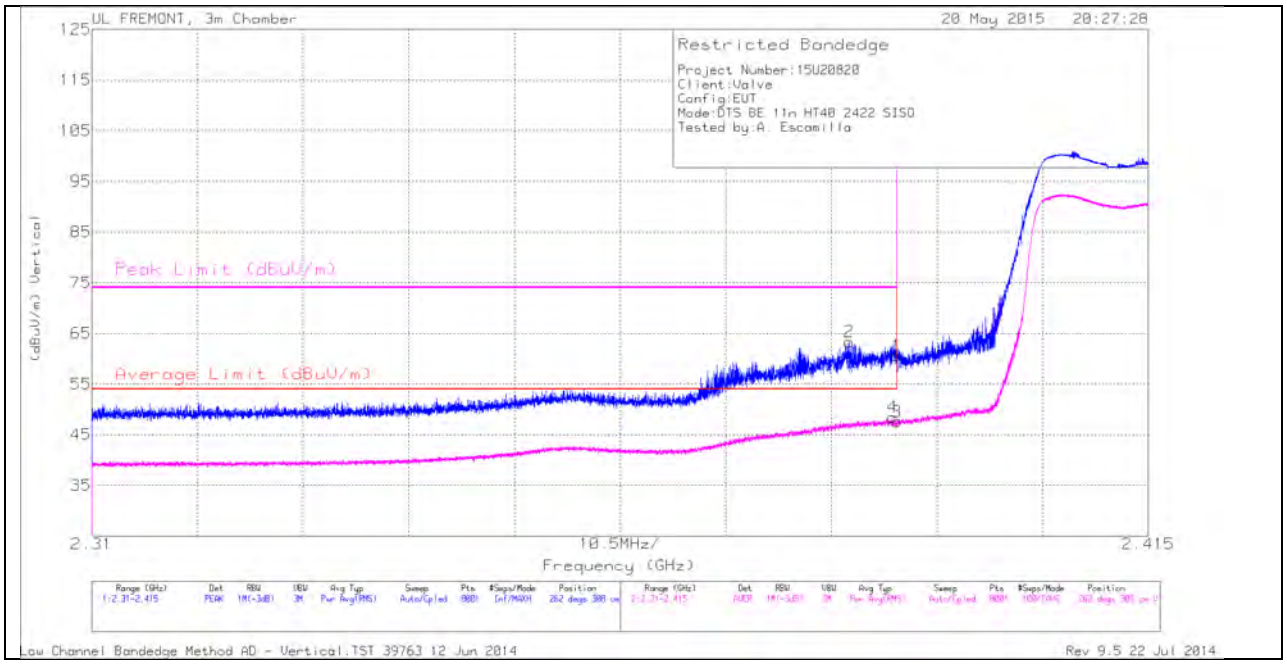
PK - Peak detector

RMS - RMS detection

Low Channel Bandedge Method AD - Horizontal.TST 39763 12 Jun 2014

Rev 9.5 22 Jul 2014

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)	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	54.4	PK	32	-23.1	63.3	-	-	74	-10.7	262	308	V
1	2.39	51.73	PK	32	-23.1	60.63	-	-	74	-13.37	262	308	V
3	2.39	38.71	RMS	32	-23.1	47.61	54	-6.39	-	-	262	308	V
4	2.39	39.51	RMS	32	-23.1	48.41	54	-5.59	-	-	262	308	V

PK - Peak detector

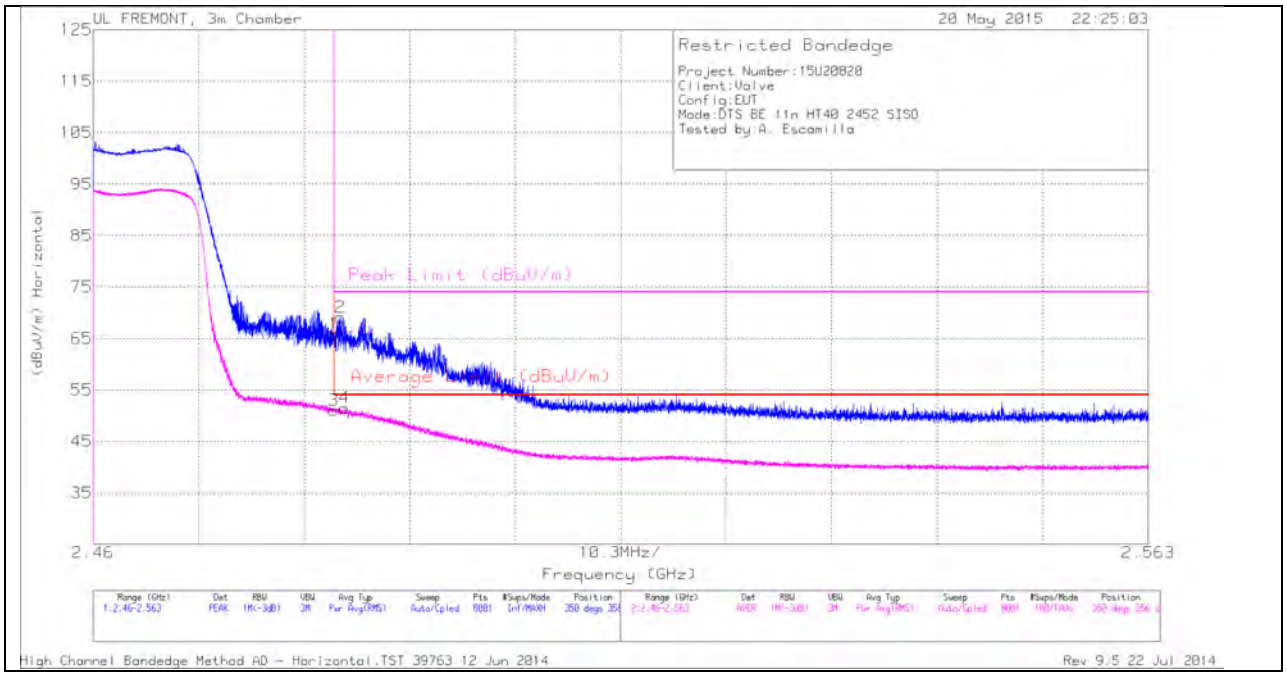
RMS - RMS detection

Low Channel Bandedge Method AD - Vertical.TST 39763 12 Jun 2014

Rev 9.5 22 Jul 2014

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)	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	56.32	PK	32.3	-22.8	65.82	-	-	74	-8.18	350	356	H
2	2.484	59.6	PK	32.3	-22.8	69.1	-	-	74	-4.9	350	356	H
3	2.484	41.56	RMS	32.3	-22.8	51.06	54	-2.94	-	-	350	356	H
4	2.485	41.99	RMS	32.3	-22.8	51.49	54	-2.51	-	-	350	356	H

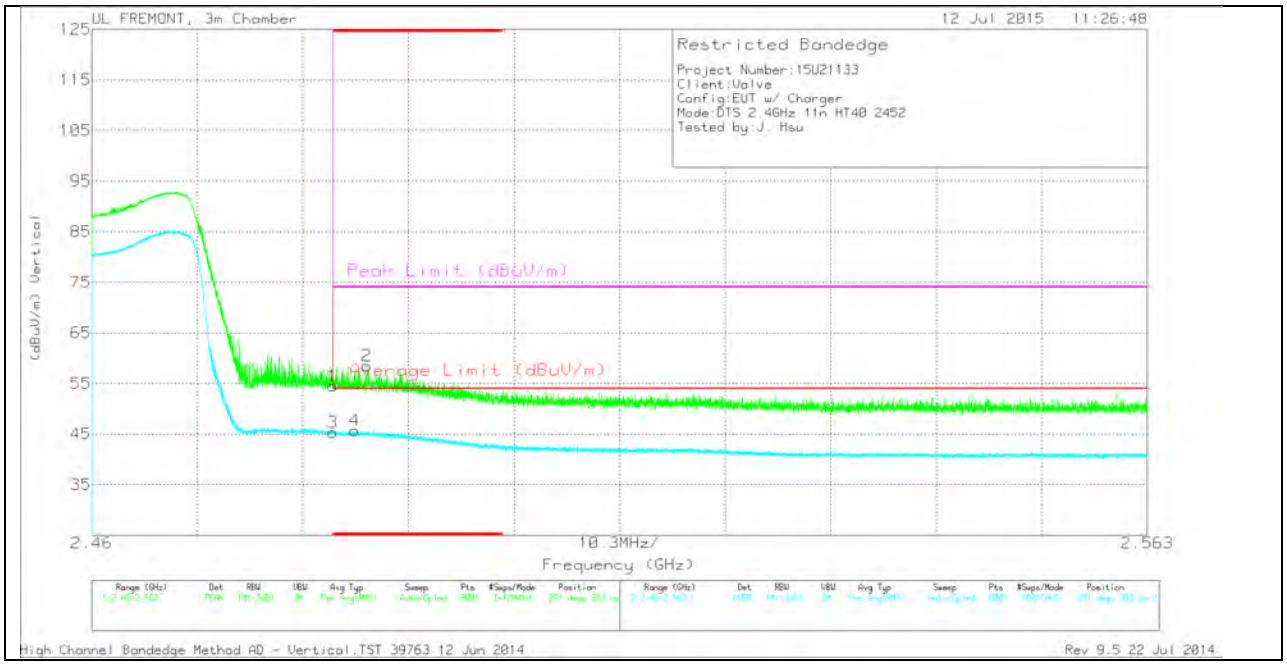
PK - Peak detector

RMS - RMS detection

High Channel Bandedge Method AD - Horizontal.TST 39763 12 Jun 2014

Rev 9.5 22 Jul 2014

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)	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	44.32	PK	32.3	-22.1	54.52	-	-	74	-19.48	291	383	V
2	* 2.487	48.39	PK	32.3	-22.2	58.49	-	-	74	-15.51	291	383	V
3	* 2.484	34.82	RMS	32.3	-22.1	45.34	54	-8.66	-	-	291	383	V
4	* 2.486	35.18	RMS	32.3	-22.1	45.7	54	-8.3	-	-	291	383	V

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

PK - Peak detector

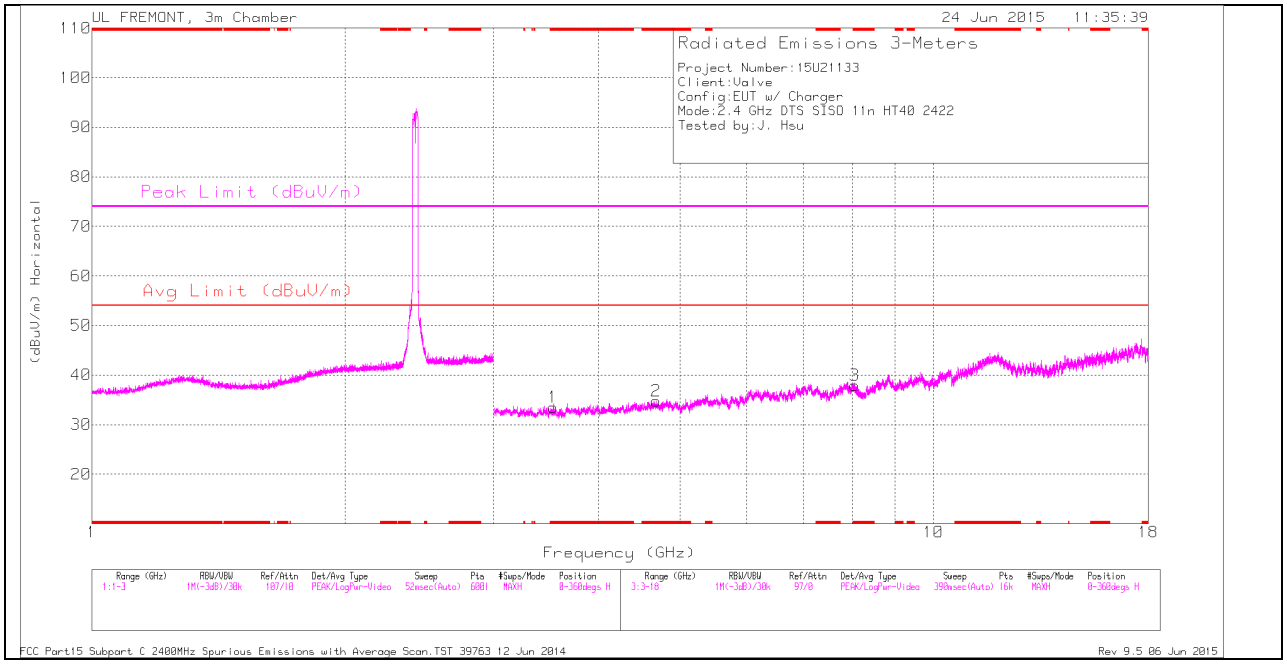
RMS - RMS detection

High Channel Bandedge Method AD - Vertical.TST 39763 12 Jun 2014

Rev 9.5 22 Jul 2014

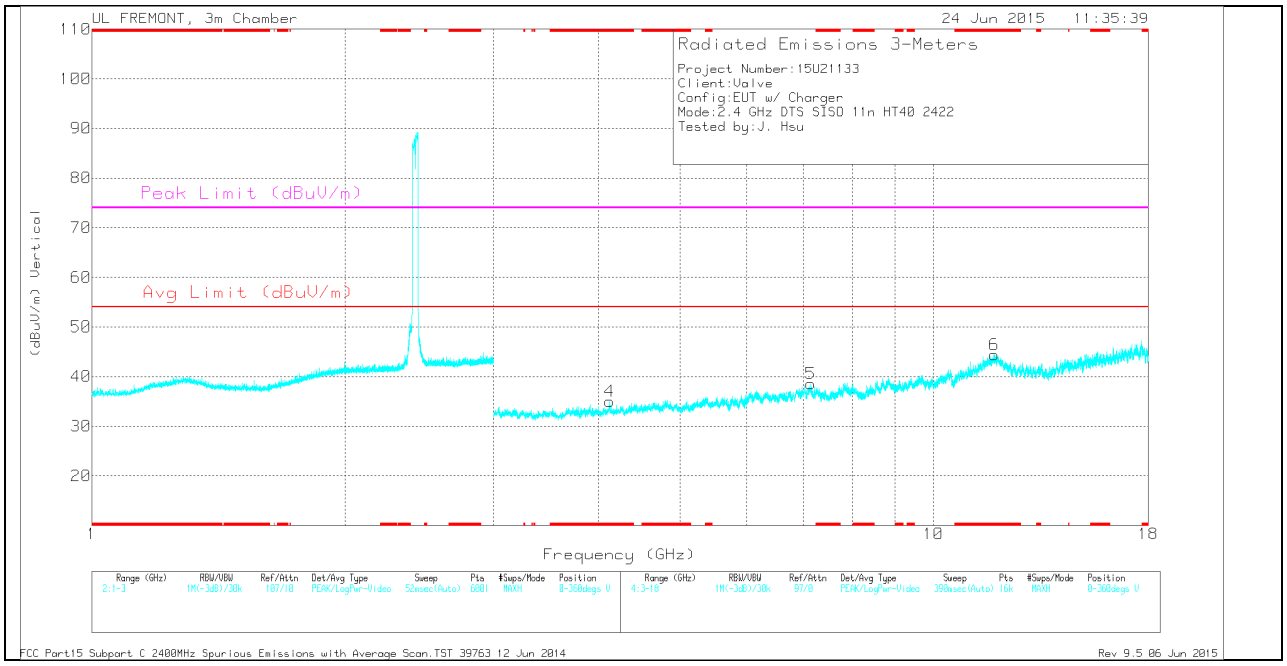
HARMONICS AND SPURIOUS EMISSIONS

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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.531	31.15	Avg	32.8	-30.4	33.55	54	-20.45	-	-	0-360	200	H
2	* 4.685	30.82	Avg	34	-30.1	34.72	54	-19.28	-	-	0-360	100	H
3	* 8.061	29.15	Avg	35.7	-26.9	37.95	54	-16.05	-	-	0-360	100	H
4	* 4.12	32.08	Avg	33.3	-30.4	34.98	54	-19.02	-	-	0-360	200	V
6	* 11.808	27.87	Avg	39	-22.5	44.37	54	-9.63	-	-	0-360	100	V
5	7.149	29.97	Avg	35.6	-27	38.57	54	-15.43	-	-	0-360	200	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 3.532	40.45	PK2	32.8	-30.5	42.75	-	-	74	-31.25	1	100	H
* 3.533	28.78	MAv1	32.8	-30.5	31.08	54	-22.92	-	-	1	100	H
* 4.684	41.37	PK2	34	-30.2	45.17	-	-	74	-28.83	1	100	H
* 4.684	28.73	MAv1	34	-30.2	32.53	54	-21.47	-	-	1	100	H
* 8.063	38.27	PK2	35.7	-26.9	47.07	-	-	74	-26.93	1	100	H
* 8.063	26.47	MAv1	35.7	-26.9	35.27	54	-18.73	-	-	1	100	H
* 4.121	41.1	PK2	33.3	-30.4	44	-	-	74	-30	1	100	V
* 4.119	29.39	MAv1	33.3	-30.5	32.19	54	-21.81	-	-	1	100	V
* 11.807	37.42	PK2	39	-22.5	53.92	-	-	74	-20.08	1	100	V
* 11.806	25.95	MAv1	39	-22.5	42.45	54	-11.55	-	-	1	100	V
7.15	27.29	MAv1	35.6	-27	35.89	54	-18.11	-	-	1	100	V
7.151	39.22	PK2	35.6	-26.9	47.92	-	-	74	-26.08	1	100	V

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

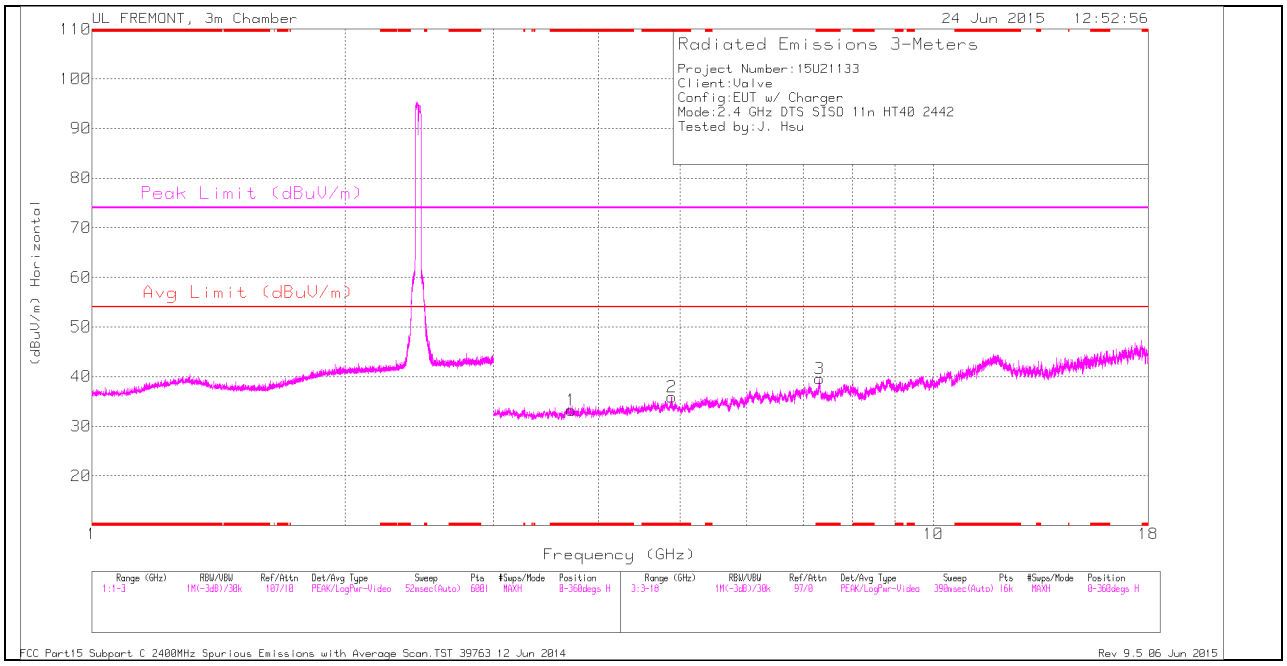
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

FCC Part15 Subpart C 2400MHz Spurious Emissions with Average Scan.TST 39763 12 Jun 2014

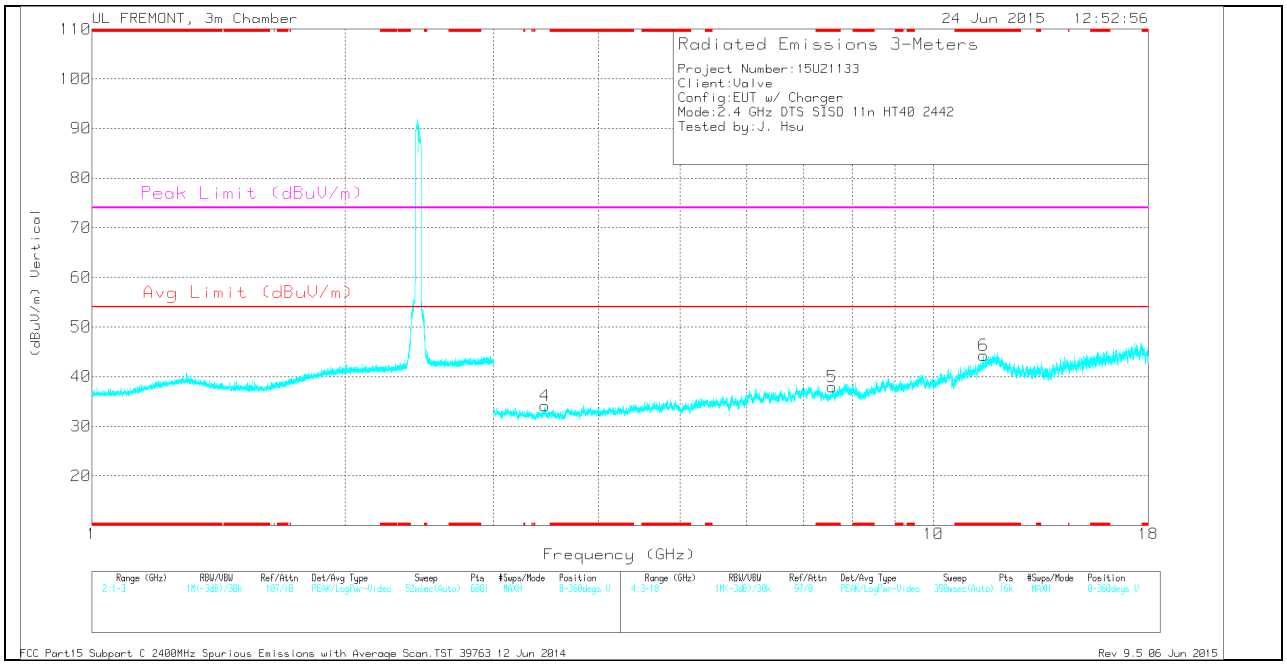
Rev 9.5 06 Jun 2015

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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.713	30.22	Avg	33	-30	33.22	54	-20.78	-	-	0-360	200	H
2	* 4.884	31.16	Avg	34	-29.2	35.96	54	-18.04	-	-	0-360	100	H
3	* 7.317	31.21	Avg	35.6	-27.2	39.61	54	-14.39	-	-	0-360	100	H
5	* 7.577	29.63	Avg	35.7	-27.4	37.93	54	-16.07	-	-	0-360	100	V
6	* 11.459	27.92	Avg	38.3	-21.9	44.32	54	-9.68	-	-	0-360	100	V
4	3.457	31.89	Avg	32.8	-30.6	34.09	54	-19.91	-	-	0-360	200	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 3.713	40.38	PK2	33	-30	43.38	-	-	74	-30.62	1	100	H
* 3.714	28.67	MAv1	33	-30	31.67	54	-22.33	-	-	1	100	H
* 4.883	40.36	PK2	34	-29.1	45.26	-	-	74	-28.74	1	100	H
* 4.884	29.68	MAv1	34	-29.1	34.58	54	-19.42	-	-	1	100	H
* 7.316	39.16	PK2	35.6	-27.2	47.56	-	-	74	-26.44	1	100	H
* 7.316	27.11	MAv1	35.6	-27.2	35.51	54	-18.49	-	-	1	100	H
* 7.576	38.9	PK2	35.7	-27.4	47.2	-	-	74	-26.8	1	100	V
* 7.575	27.31	MAv1	35.7	-27.5	35.51	54	-18.49	-	-	1	100	V
* 11.459	37.21	PK2	38.3	-21.9	53.61	-	-	74	-20.39	1	100	V
* 11.46	25.25	MAv1	38.3	-21.9	41.65	54	-12.35	-	-	1	100	V
3.457	41.5	PK2	32.8	-30.6	43.7	-	-	74	-30.3	1	100	V
3.457	29.18	MAv1	32.8	-30.6	31.38	54	-22.62	-	-	1	100	V

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

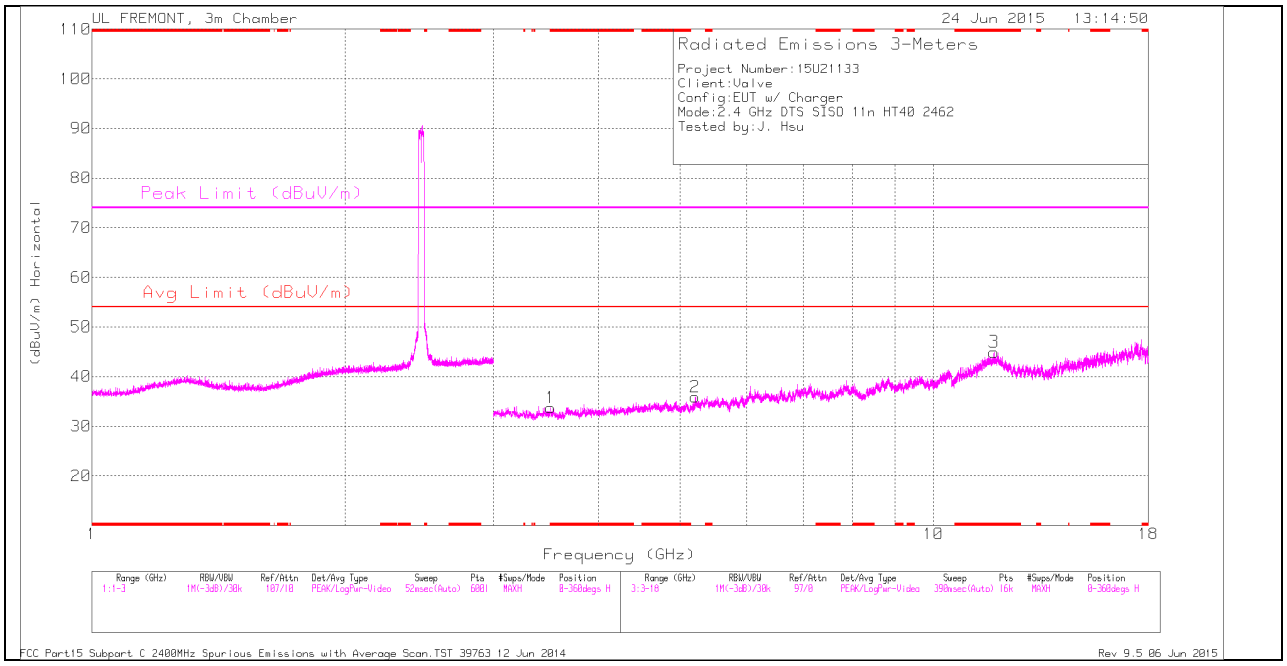
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

FCC Part15 Subpart C 2400MHz Spurious Emissions with Average Scan.TST 39763 12 Jun 2014

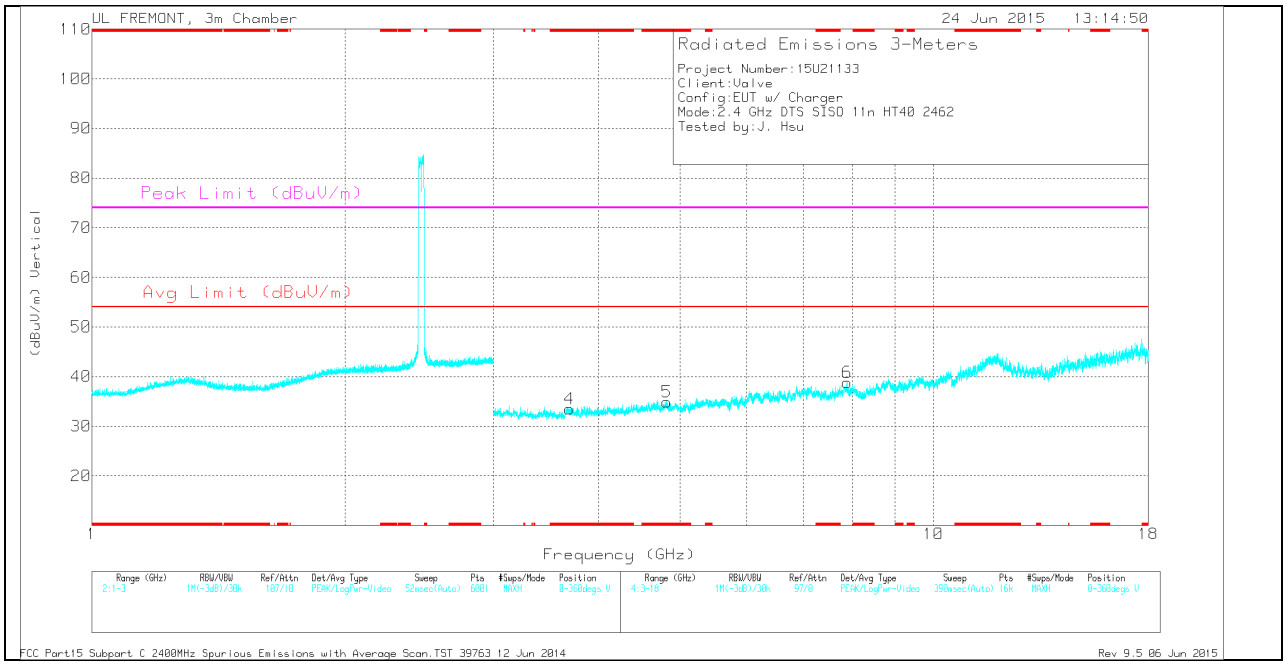
Rev 9.5 06 Jun 2015

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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 3.509	30.83	Avg	32.8	-29.9	33.73	54	-20.27	-	-	0-360	200	H
3	* 11.799	28.38	Avg	39	-22.4	44.98	54	-9.02	-	-	0-360	200	H
4	* 3.694	30.71	Avg	33	-30.2	33.51	54	-20.49	-	-	0-360	100	V
5	* 4.821	30.28	Avg	34	-29.4	34.88	54	-19.12	-	-	0-360	200	V
2	5.205	31.83	Avg	34.3	-30.2	35.93	54	-18.07	-	-	0-360	100	H
6	7.893	29.01	Avg	35.8	-26	38.81	54	-15.19	-	-	0-360	200	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (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
* 3.507	39.85	PK2	32.8	-29.9	42.75	-	-	74	-31.25	0	100	H
* 3.507	28.46	MAv1	32.8	-29.9	31.36	54	-22.64	-	-	0	100	H
* 11.797	37.77	PK2	39	-22.4	54.37	-	-	74	-19.63	0	100	H
* 11.797	26.02	MAv1	39	-22.4	42.62	54	-11.38	-	-	0	100	H
* 3.693	40.84	PK2	33	-30.2	43.64	-	-	74	-30.36	0	100	V
* 3.693	28.66	MAv1	33	-30.2	31.46	54	-22.54	-	-	0	100	V
* 4.82	40.37	PK2	34	-29.4	44.97	-	-	74	-29.03	0	100	V
* 4.821	28.41	MAv1	34	-29.4	33.01	54	-20.99	-	-	0	100	V
5.205	40.43	PK2	34.3	-30.2	44.53	-	-	74	-29.47	0	100	H
5.207	28.93	MAv1	34.3	-30.2	33.03	54	-20.97	-	-	0	100	H
7.895	38.32	PK2	35.8	-26	48.12	-	-	74	-25.88	0	100	V
7.895	26.24	MAv1	35.8	-26	36.04	54	-17.96	-	-	0	100	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

FCC Part15 Subpart C 2400MHz Spurious Emissions with Average Scan.TST 39763 12 Jun 2014

Rev 9.5 06 Jun 2015

12. RADIATED TEST RESULTS MIMO

12.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-GEN Clause 8.9 (Transmitter)

IC RSS-GEN Clause 7 (Receiver)

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

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 = 0dB; N HT20mode = 0dB; N HT40 mode = 0.81dB.

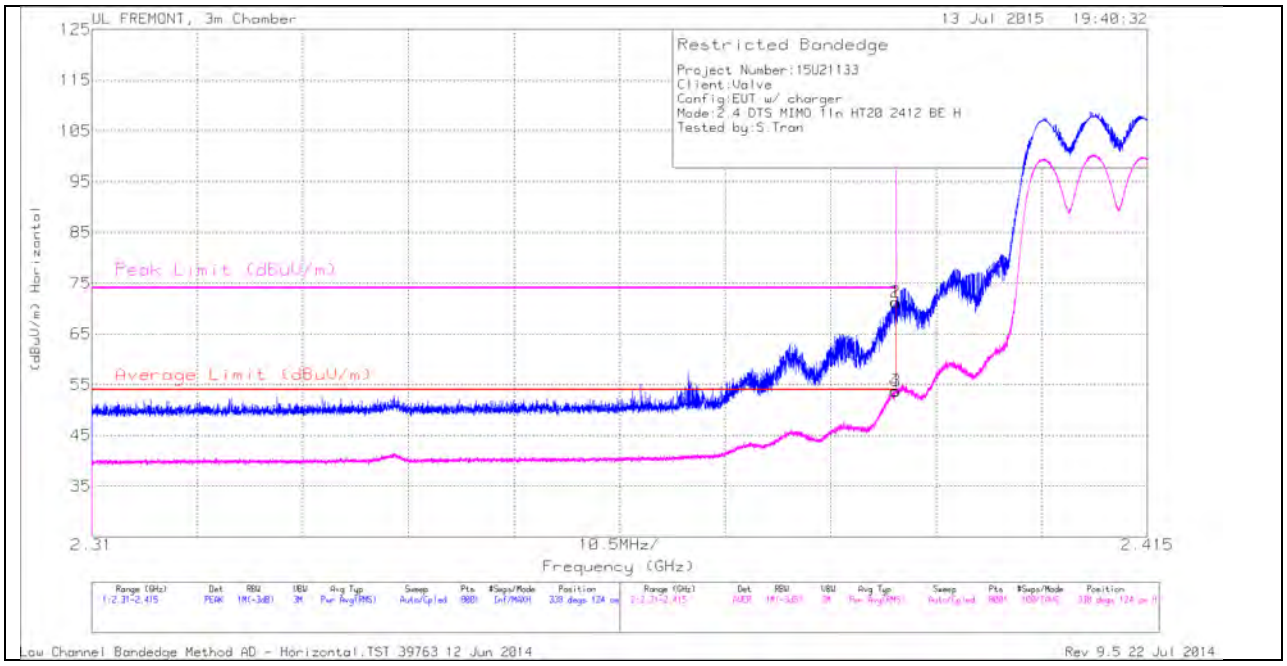
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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)

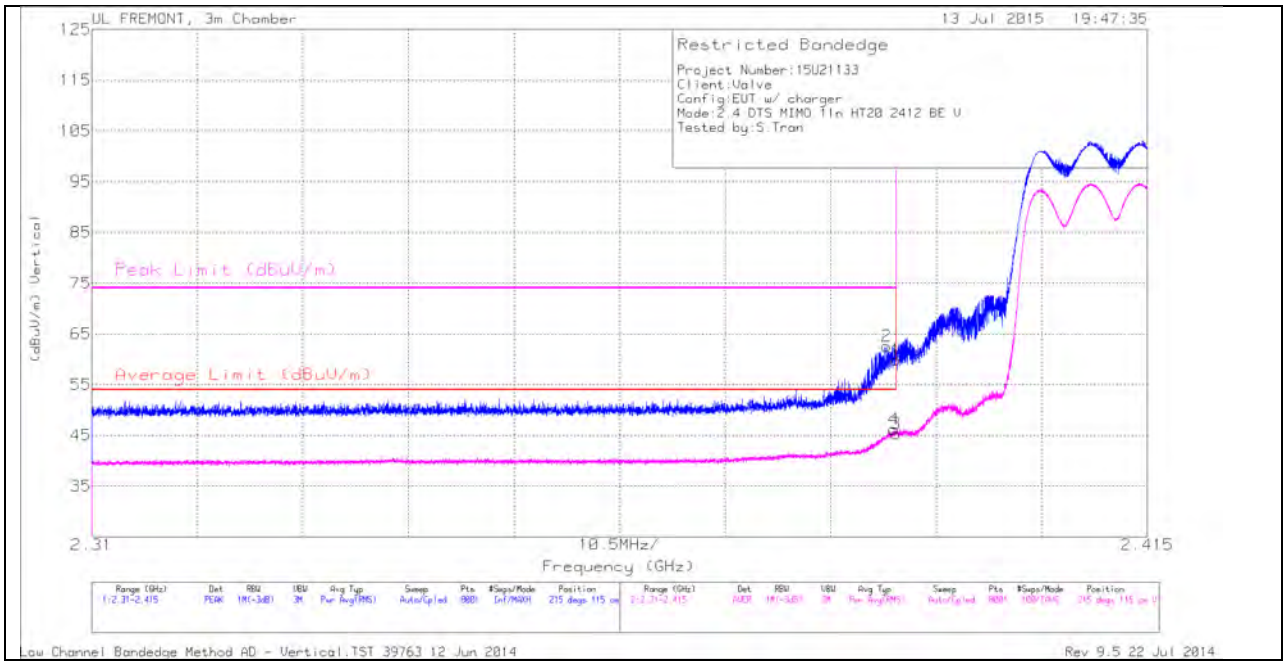
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	61.66	PK	32	-22.4	71.26	-	-	74	-2.74	338	124	H
2	2.39	61.72	PK	32	-22.4	71.32	-	-	74	-2.68	338	124	H
3	2.39	44.14	RMS	32	-22.4	53.74	54	-.26	-	-	338	124	H
4	2.39	44.09	RMS	32	-22.4	53.69	54	-.31	-	-	338	124	H

VERTICAL PEAK AND AVERAGE PLOT

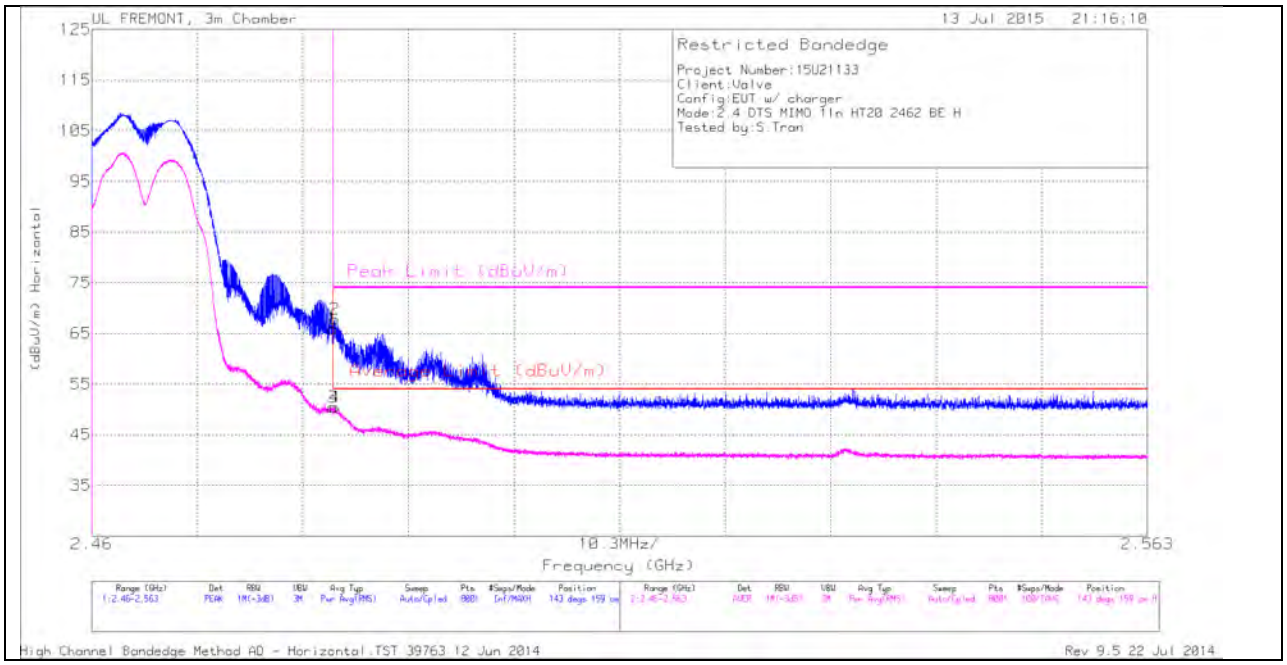


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	53.01	PK	32	-22.4	62.61	-	-	74	-11.39	215	115	V
1	2.39	50.28	PK	32	-22.4	59.88	-	-	74	-14.12	215	115	V
3	2.39	35.78	RMS	32	-22.4	45.38	54	-8.62	-	-	215	115	V
4	2.39	36.54	RMS	32	-22.4	46.14	54	-7.86	-	-	215	115	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

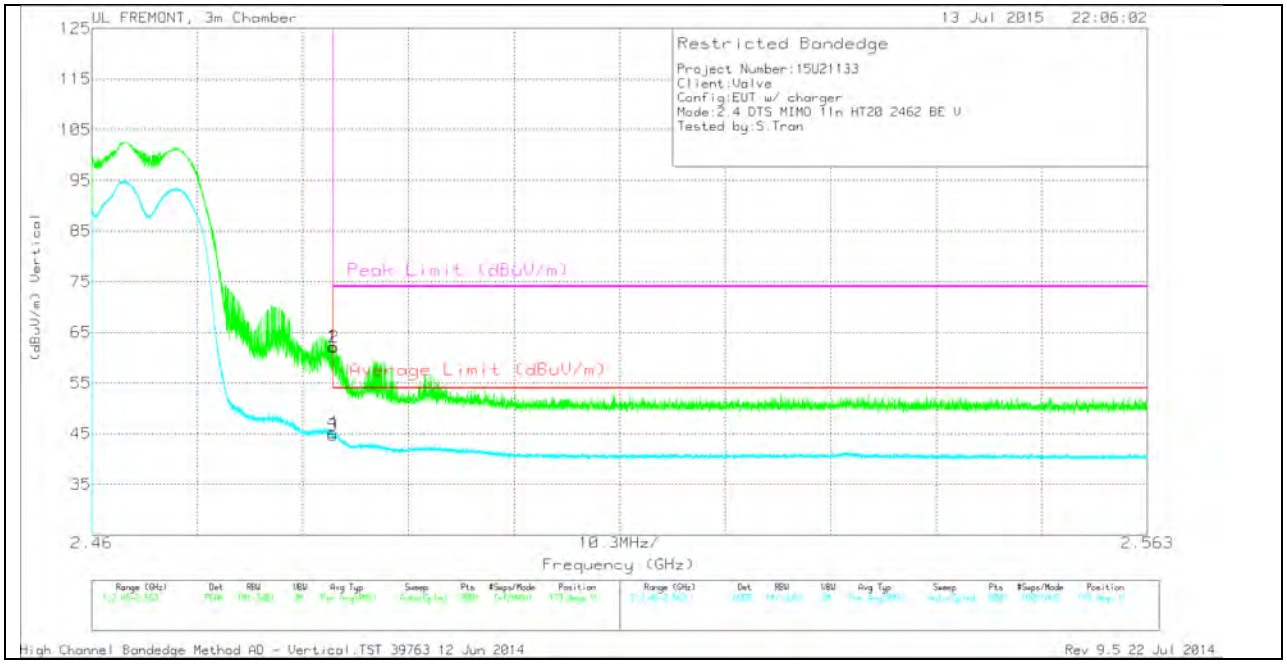
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	55.79	PK	32.3	-22.1	65.99	-	-	74	-8.01	143	159	H
2	2.484	57.59	PK	32.3	-22.1	67.79	-	-	74	-6.21	143	159	H
3	2.484	40.21	RMS	32.3	-22.1	50.41	54	-3.59	-	-	143	159	H
4	2.484	40.21	RMS	32.3	-22.1	50.41	54	-3.59	-	-	143	159	H

VERTICAL PEAK AND AVERAGE PLOT

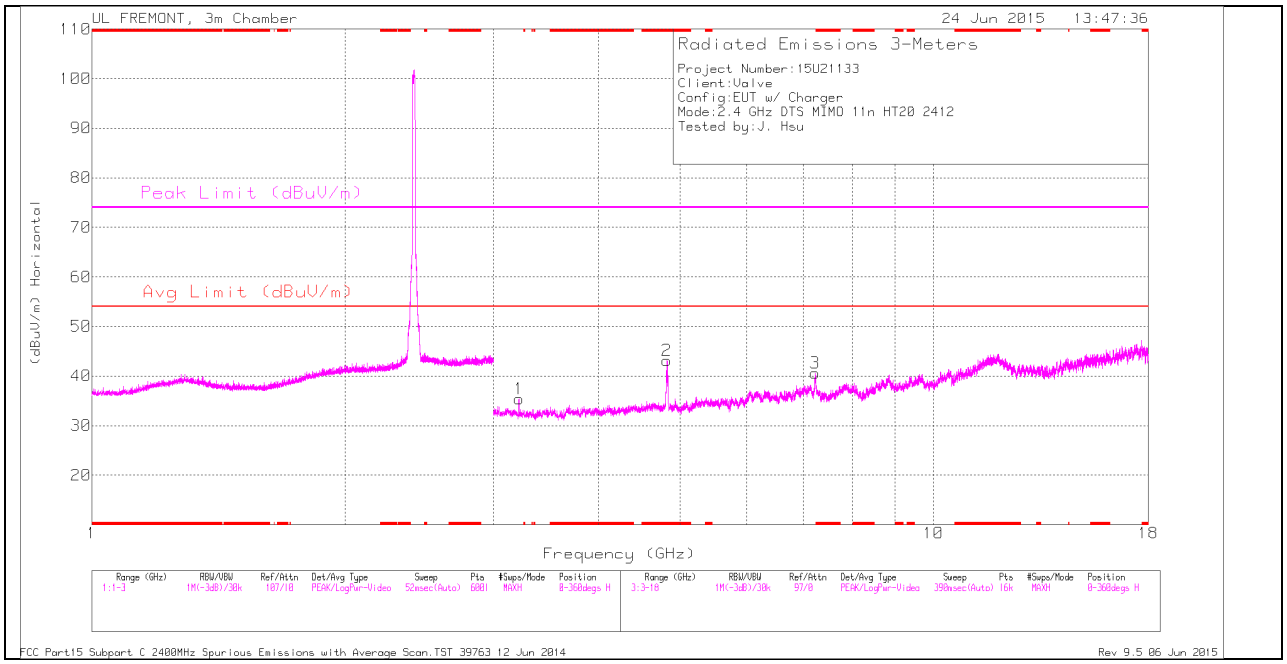


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (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	52.03	PK	32.3	-22.1	62.23	-	-	74	-11.77	179	100	V
2	2.484	51.88	PK	32.3	-22.1	62.08	-	-	74	-11.92	179	100	V
3	2.484	34.46	RMS	32.3	-22.1	44.66	54	-9.34	-	-	179	100	V
4	2.484	34.99	RMS	32.3	-22.1	45.19	54	-8.81	-	-	179	100	V

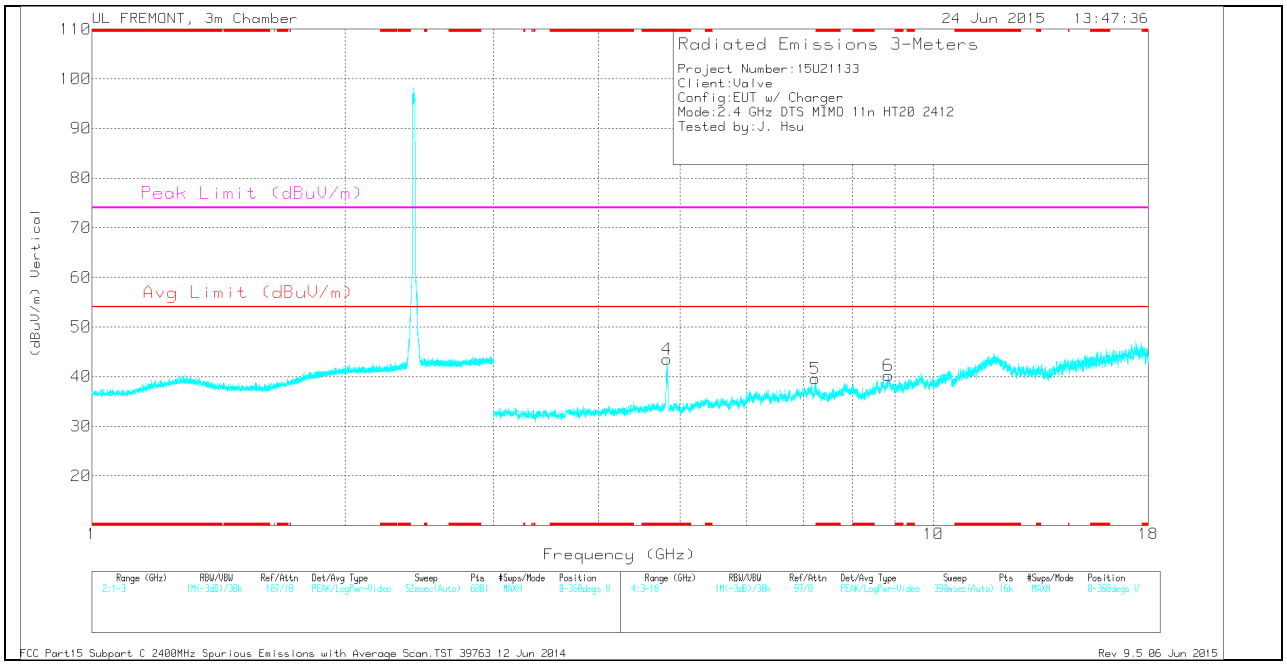
HARMONICS AND SPURIOUS EMISSIONS

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)	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	38.5	Avg	34	-29.4	43.1	54	-10.9	-	-	0-360	200	H
4	* 4.824	38.93	Avg	34	-29.4	43.53	54	-10.47	-	-	0-360	200	V
1	3.217	33.56	Avg	32.6	-30.8	35.36	54	-18.64	-	-	0-360	100	H
3	7.238	33.77	Avg	35.6	-28.8	40.57	54	-13.43	-	-	0-360	100	H
5	7.238	32.78	Avg	35.6	-28.8	39.58	54	-14.42	-	-	0-360	200	V
6	8.838	29.33	Avg	35.9	-25	40.23	54	-13.77	-	-	0-360	200	V

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

Avg - Video bandwidth < Resolution bandwidth

Radiated Emissions

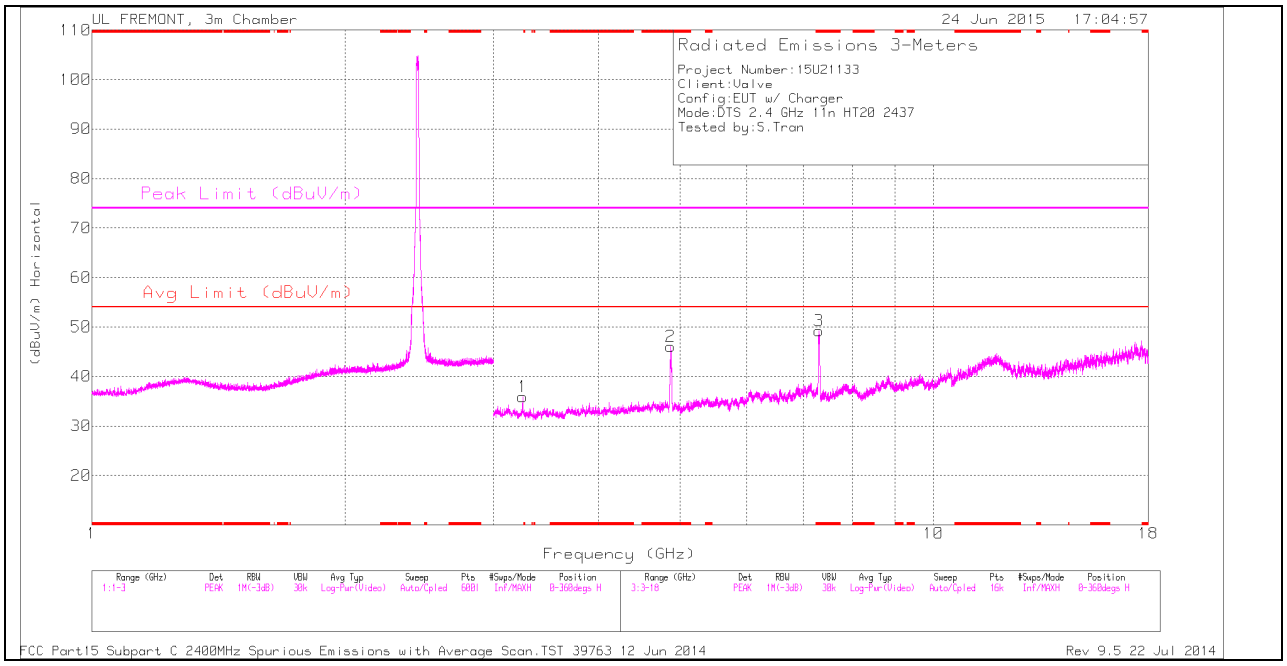
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.825	54.26	PK2	34	-29.4	58.86	-	-	74	-15.14	123	334	H
* 4.825	40.51	MAv1	34	-29.4	45.11	54	-8.89	-	-	123	334	H
* 4.833	53.23	PK2	34	-29.4	57.83	-	-	74	-16.17	102	315	V
* 4.824	40.01	MAv1	34	-29.4	44.61	54	-9.39	-	-	102	315	V
3.216	40.6	PK2	32.6	-30.8	42.4	-	-	74	-31.6	0	100	H
3.216	29.35	MAv1	32.6	-30.8	31.15	54	-22.85	-	-	0	100	H
7.239	44.81	PK2	35.6	-28.8	51.61	-	-	74	-22.39	123	334	H
7.239	43.86	PK2	35.6	-28.8	50.66	-	-	74	-23.34	102	315	V
7.239	29.55	MAv1	35.6	-28.8	36.35	54	-17.65	-	-	102	315	V
7.24	30.71	MAv1	35.6	-28.8	37.51	54	-16.49	-	-	123	334	H
8.839	37.35	PK2	35.9	-25	48.25	-	-	74	-25.75	102	315	V
8.84	25.82	MAv1	35.9	-25	36.72	54	-17.28	-	-	102	315	V

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

PK2 - KDB558074 Method: Maximum Peak

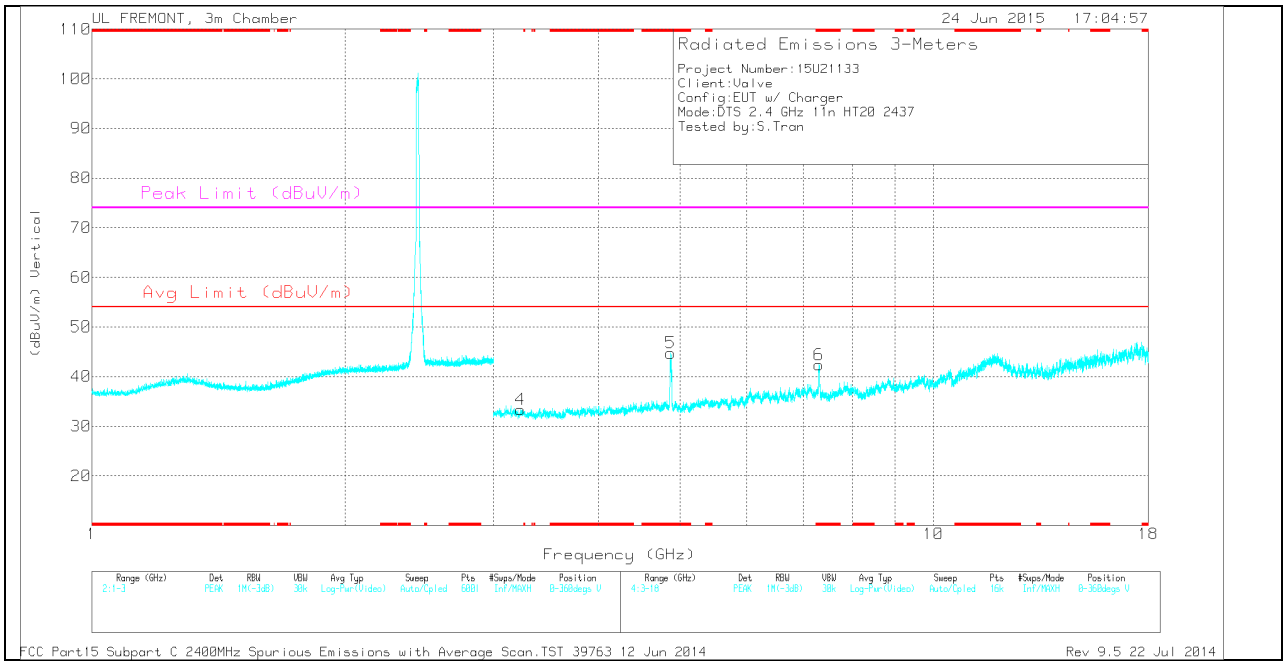
MAv1 - KDB558074 Option 1 Maximum RMS Average

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 T119 (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	* 4.875	41.12	PK	34	-29.1	46.02	-	-	74	-27.98	0-360	200	H
3	* 7.304	41.34	PK	35.6	-27.7	49.24	-	-	74	-24.76	0-360	100	H
5	* 4.875	39.83	PK	34	-29.1	44.73	-	-	74	-29.27	0-360	200	V
6	* 7.313	34.06	PK	35.6	-27.3	42.36	-	-	74	-31.64	0-360	200	V
4	3.231	31.52	PK	32.6	-30.8	33.32	-	-	-	-	0-360	200	V
1	3.249	34.15	PK	32.6	-30.9	35.85	-	-	-	-	0-360	100	H

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

PK - Peak detector

Radiated Emissions

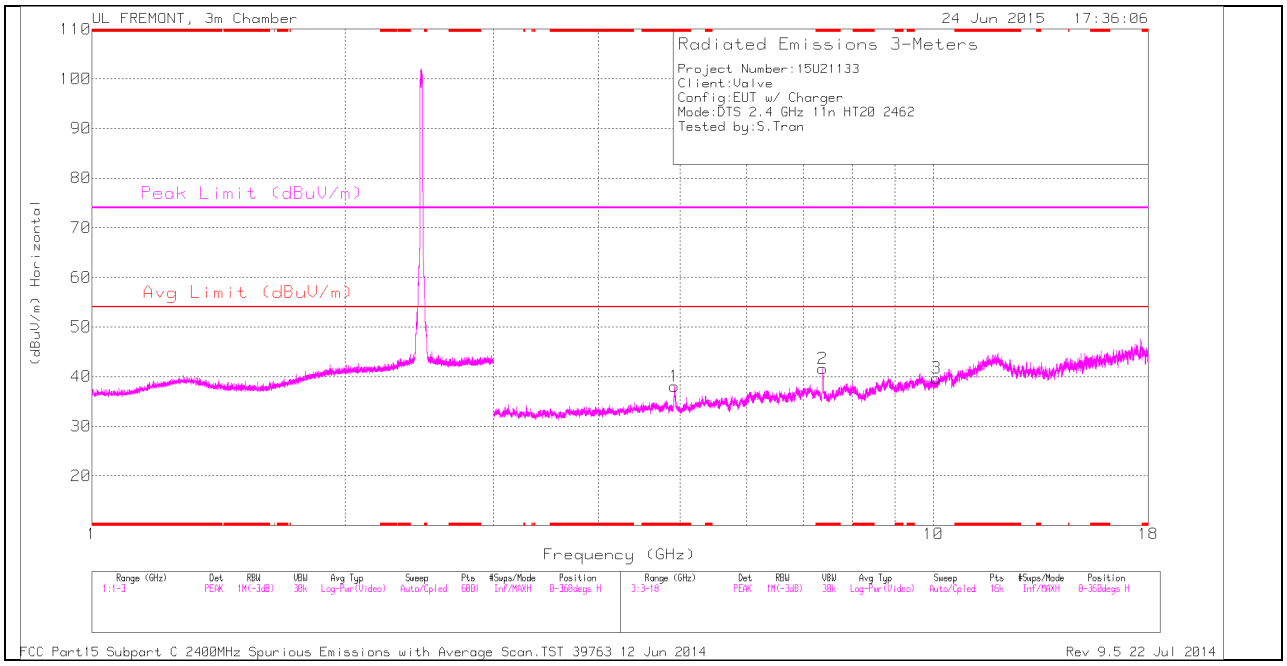
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.875	54.48	PK2	34	-29.1	59.38	-	-	74	-14.62	135	301	H
* 4.875	42.06	MAv1	34	-29.1	46.96	54	-7.04	-	-	135	301	H
* 7.306	55.8	PK2	35.6	-27.6	63.8	-	-	74	-10.2	24	287	H
* 7.305	40.63	MAv1	35.6	-27.6	48.63	54	-5.37	-	-	24	287	H
* 4.874	54.4	PK2	34	-29.1	59.3	-	-	74	-14.7	114	255	V
* 4.874	42.04	MAv1	34	-29.1	46.94	54	-7.06	-	-	114	255	V
* 7.313	53.22	PK2	35.6	-27.3	61.52	-	-	74	-12.48	120	286	V
* 7.314	38.22	MAv1	35.6	-27.3	46.52	54	-7.48	-	-	120	286	V
3.23	40.89	PK2	32.6	-30.8	42.69	-	-	-	-	24	200	V
3.23	29.36	MAv1	32.6	-30.8	31.16	-	-	-	-	24	200	V
3.249	41.53	PK2	32.6	-30.9	43.23	-	-	-	-	360	100	H
3.249	30.47	MAv1	32.6	-30.9	32.17	-	-	-	-	360	100	H

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

PK2 - KDB558074 Method: Maximum Peak

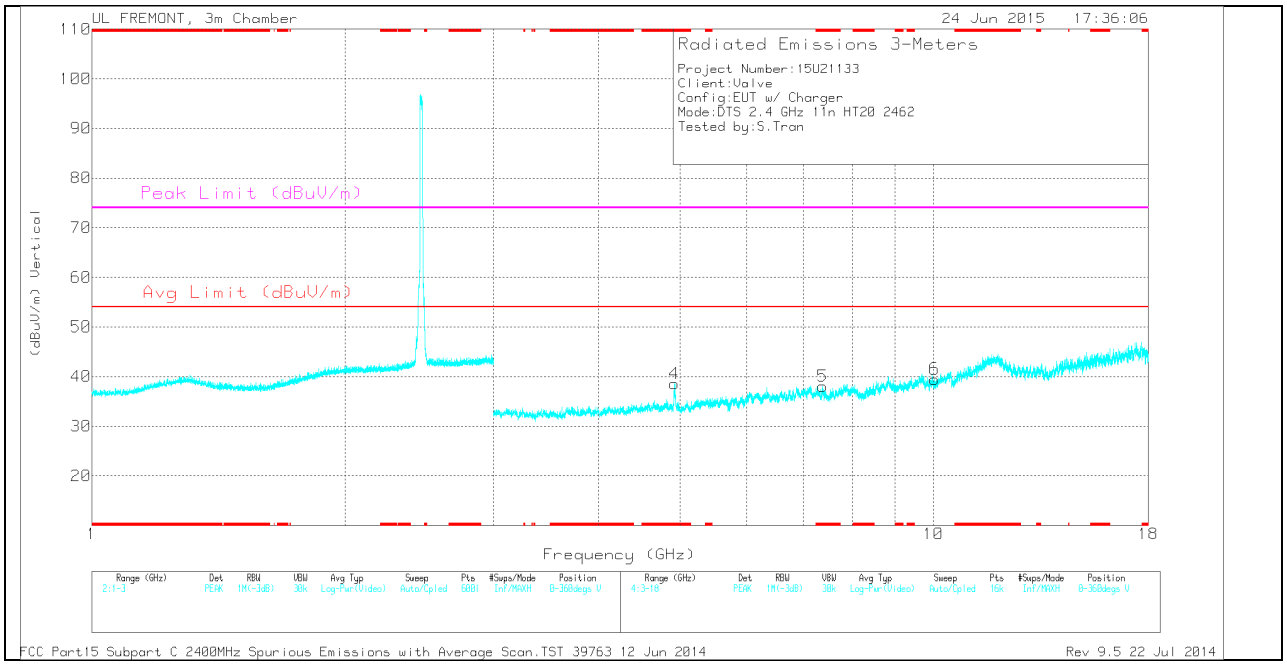
MAv1 - KDB558074 Option 1 Maximum RMS Average

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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.921	33.69	PK	34	-29.6	38.09	-	-	74	-35.91	0-360	200	H
2	* 7.384	33.15	PK	35.6	-27.1	41.65	-	-	74	-32.35	0-360	100	H
4	* 4.926	34.18	PK	34	-29.6	38.58	-	-	74	-35.42	0-360	200	V
5	* 7.38	29.5	PK	35.6	-27	38.1	-	-	74	-35.9	0-360	200	V
6	10.033	26.92	PK	36.9	-24.3	39.52	-	-	-	-	0-360	200	V
3	10.084	27.06	PK	37	-24.4	39.66	-	-	-	-	0-360	100	H

* - 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)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.919	41.83	PK2	34	-29.6	46.23	-	-	74	-27.77	0	200	H
* 4.92	29.86	MAv1	34	-29.6	34.26	54	-19.74	-	-	0	200	H
* 7.386	47.13	PK2	35.6	-27.1	55.63	-	-	74	-18.37	25	100	H
* 7.386	31.91	MAv1	35.6	-27.1	40.41	54	-13.59	-	-	25	100	H
* 4.924	45.16	PK2	34	-29.6	49.56	-	-	74	-24.44	25	200	V
* 4.924	32.7	MAv1	34	-29.6	37.1	54	-16.9	-	-	25	200	V
* 7.378	38.57	PK2	35.6	-27	47.17	-	-	74	-26.83	25	200	V
* 7.381	26.72	MAv1	35.6	-27	35.32	54	-18.68	-	-	25	200	V
10.031	25.25	MAv1	36.9	-24.3	37.85	-	-	-	-	25	200	V
10.032	36.6	PK2	36.9	-24.3	49.2	-	-	-	-	25	200	V
10.083	37.24	PK2	37	-24.4	49.84	-	-	-	-	25	100	H
10.083	25.47	MAv1	37	-24.4	38.07	-	-	-	-	25	100	H

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

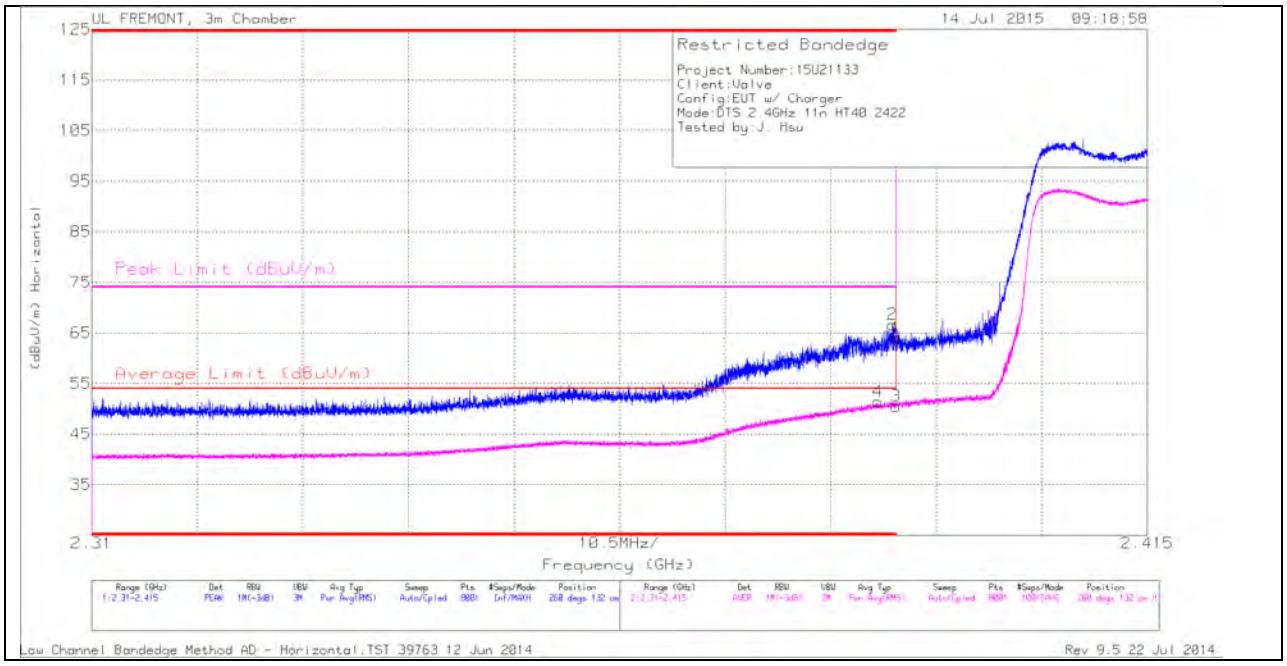
PK2 - KDB558074 Method: Maximum Peak

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)

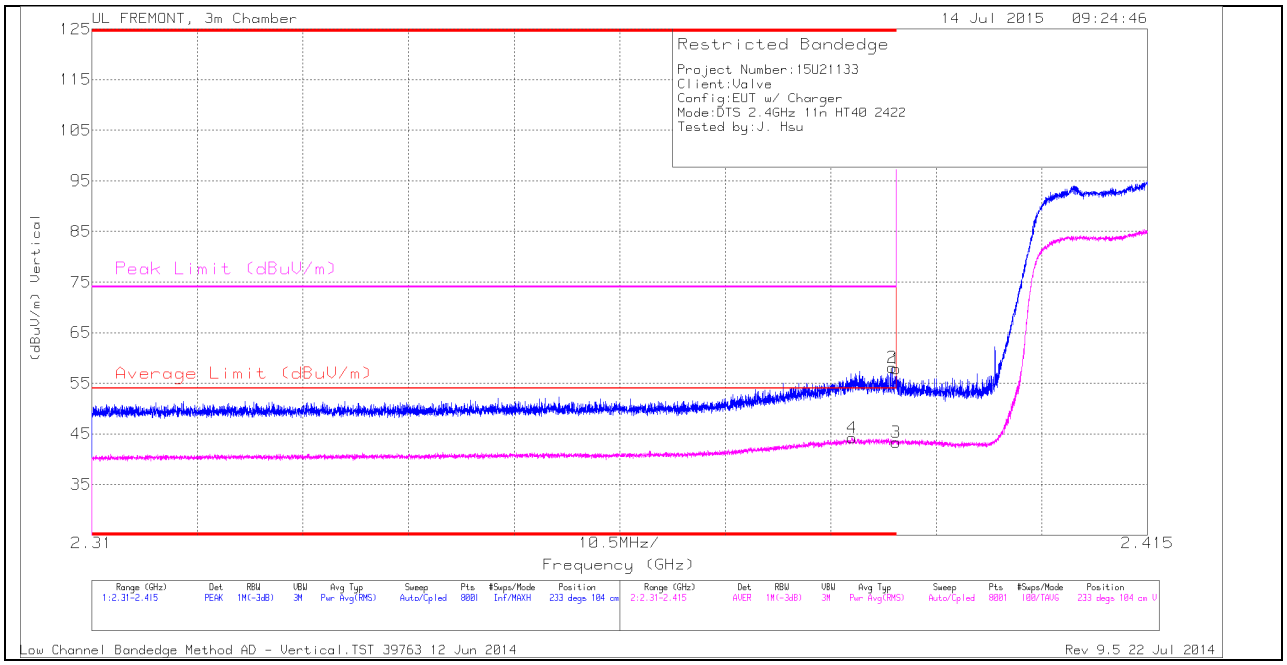
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

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	54.4	PK	32	-22.4	0	64	-	-	74	-10	260	132	H
2	* 2.39	57.02	PK	32	-22.4	0	66.62	-	-	74	-7.38	260	132	H
3	* 2.39	40.07	RMS	32	-22.4	.81	50.48	54	-3.52	-	-	260	132	H
4	* 2.388	41.02	RMS	32	-22.4	.81	51.43	54	-2.57	-	-	260	132	H

VERTICAL PEAK AND AVERAGE PLOT

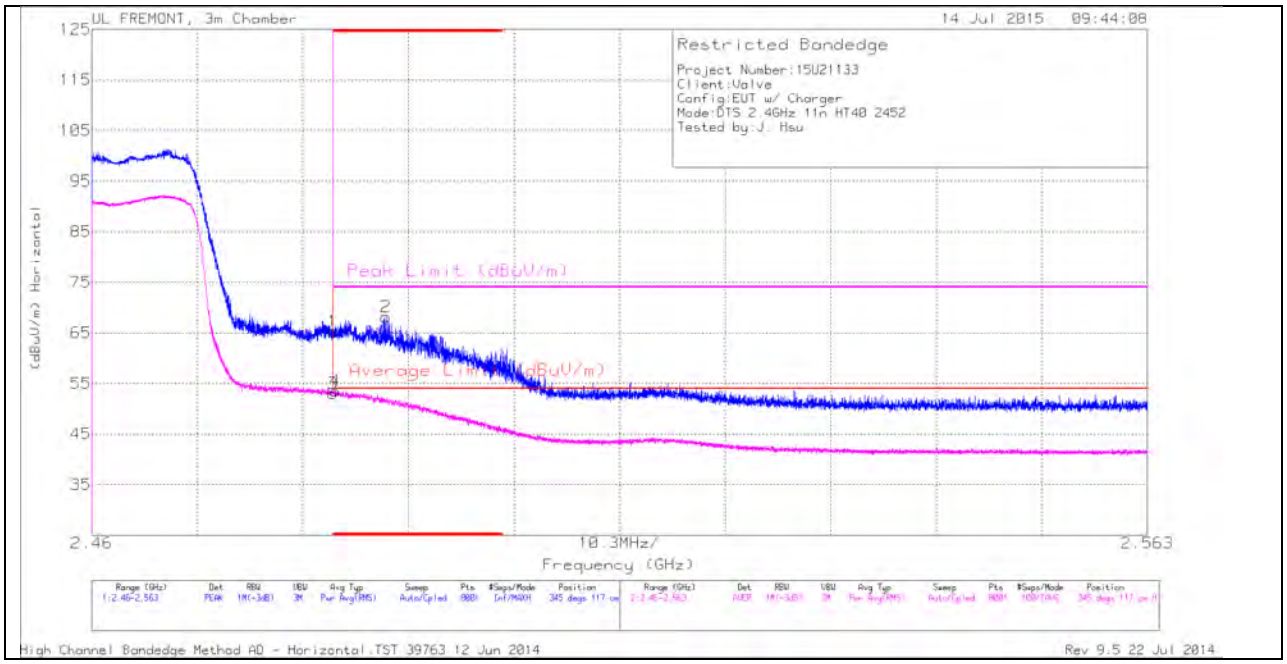


VERTICAL DATA

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	48.27	PK	32	-22.4	0	57.87	-	-	74	-16.13	233	104	V
2	* 2.39	48.48	PK	32	-22.4	0	58.08	-	-	74	-15.92	233	104	V
3	* 2.39	32.96	RMS	32	-22.4	.81	43.37	54	-10.63	-	-	233	104	V
4	* 2.386	33.81	RMS	32	-22.4	.81	44.22	54	-9.78	-	-	233	104	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

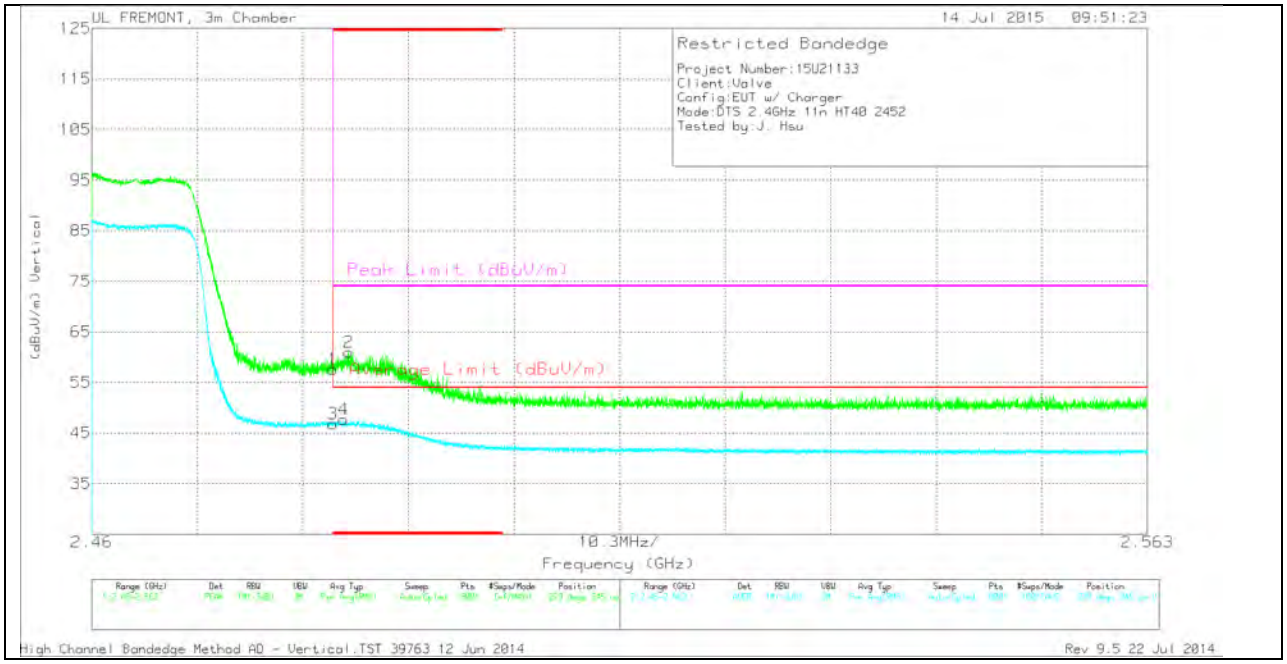
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

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	55.12	PK	32.3	-22.1	0	65.32	-	-	74	-8.68	345	117	H
2	* 2.489	58.03	PK	32.3	-22.2	0	68.13	-	-	74	-5.87	345	117	H
3	* 2.484	42.03	RMS	32.3	-22.1	.81	53.04	54	-.96	-	-	345	117	H
4	* 2.484	42.55	RMS	32.3	-22.1	.81	53.56	54	-.44	-	-	345	117	H

VERTICAL PEAK AND AVERAGE PLOT

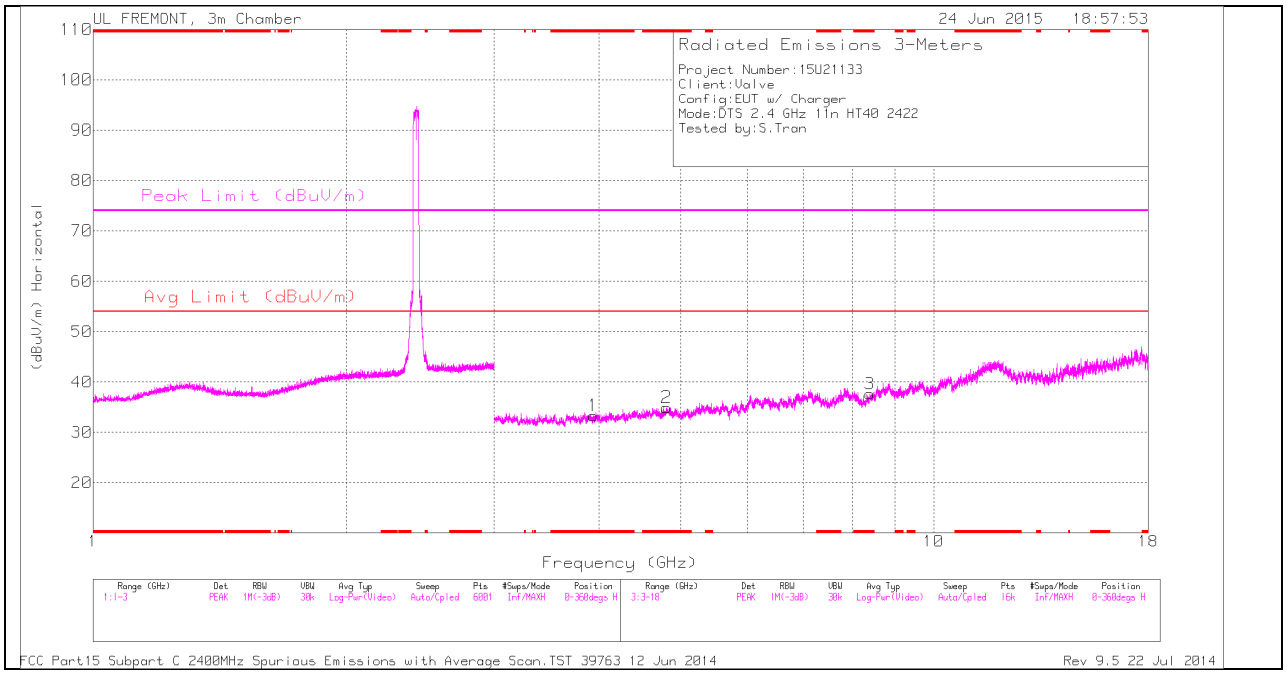


VERTICAL DATA

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	47.46	PK	32.3	-22.1	0	57.66	-	-	74	-16.34	229	345	V
2	* 2.485	50.75	PK	32.3	-22.1	0	60.95	-	-	74	-13.05	229	345	V
3	* 2.484	35.8	RMS	32.3	-22.1	.81	46.81	54	-7.19	-	-	229	345	V
4	* 2.485	36.62	RMS	32.3	-22.1	.81	47.63	54	-6.37	-	-	229	345	V

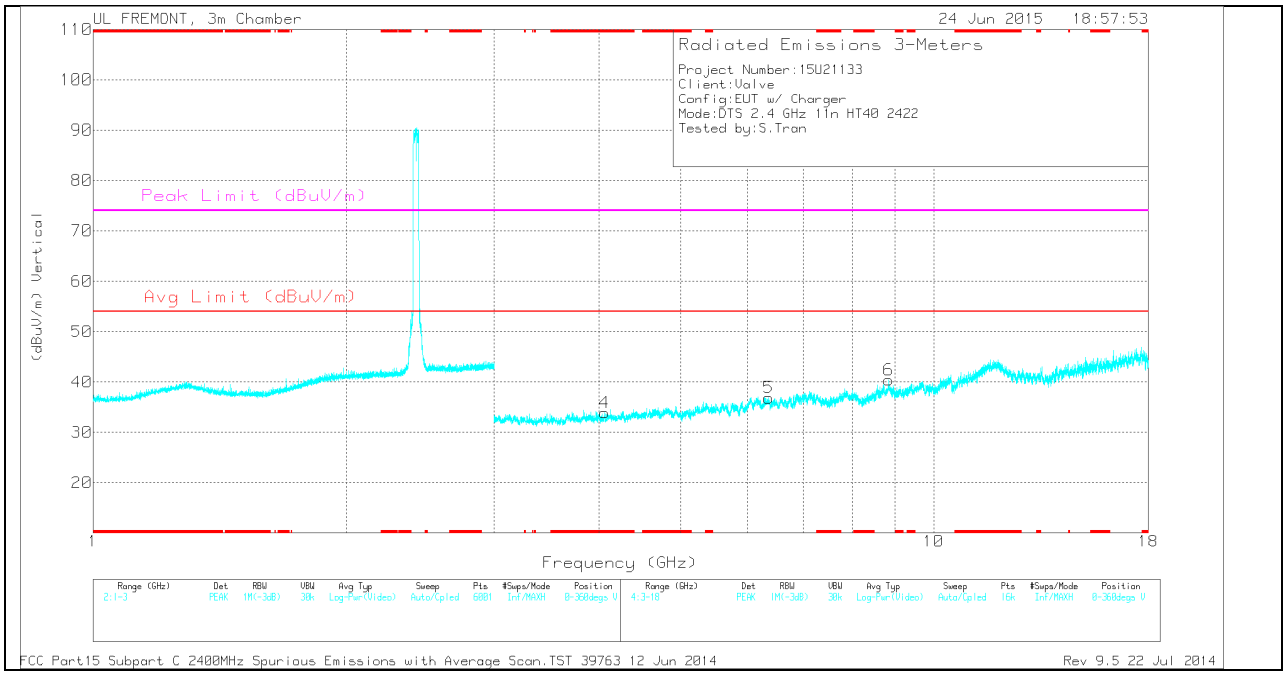
HARMONICS AND SPURIOUS EMISSIONS

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
1	* 3.937	30.32	PK	33.2	-30.2	0	33.32	-	-	74	-40.68	0-360	100	H
2	* 4.811	30.33	PK	34	-29.4	0	34.93	-	-	74	-39.07	0-360	200	H
3	* 8.391	27.64	PK	35.8	-25.8	0	37.64	-	-	74	-36.36	0-360	100	H
4	* 4.06	31.31	PK	33.3	-30.7	0	33.91	-	-	74	-40.09	0-360	200	V
5	6.364	29.36	PK	35.5	-28	0	36.86	-	-	-	-	0-360	200	V
6	8.835	29.48	PK	35.9	-25	0	40.38	-	-	-	-	0-360	100	V

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

PK - Peak detector

Radiated Emissions

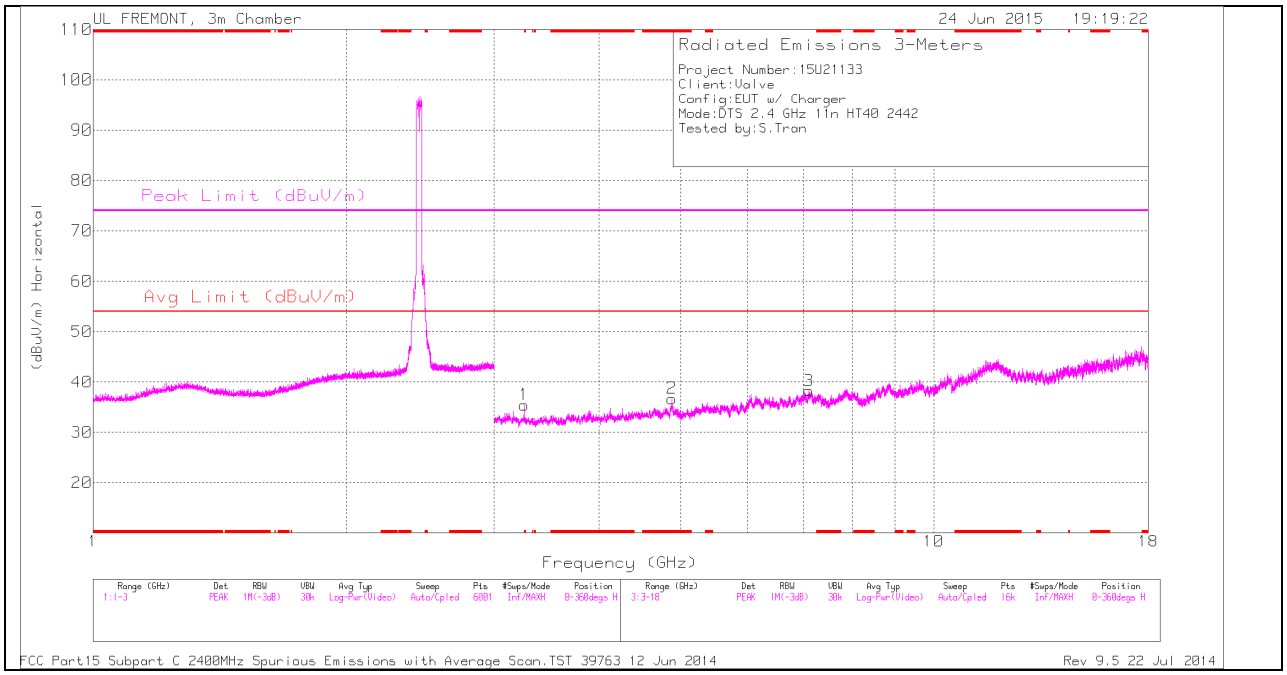
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.937	40.12	PK2	33.2	-30.2	0	43.12	-	-	74	-30.88	3	100	H
* 3.938	28.65	MAv1	33.2	-30.2	.81	32.46	54	-21.54	-	-	3	100	H
* 4.811	40.25	PK2	34	-29.4	0	44.85	-	-	74	-29.15	3	200	H
* 4.811	28.65	MAv1	34	-29.5	.81	33.96	54	-20.04	-	-	3	200	H
* 8.393	37.94	PK2	35.8	-25.8	0	47.94	-	-	74	-26.06	3	100	H
* 8.391	26.3	MAv1	35.8	-25.8	.81	37.11	54	-16.89	-	-	3	100	H
* 4.062	40.59	PK2	33.3	-30.7	0	43.19	-	-	74	-30.81	3	200	V
* 4.058	29.33	MAv1	33.3	-30.6	.81	32.84	54	-21.16	-	-	3	200	V
6.365	38.65	PK2	35.5	-28.1	0	46.05	-	-	-	-	3	200	V
6.365	27.11	MAv1	35.5	-28.1	.81	35.32	-	-	-	-	3	200	V

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

PK2 - KDB558074 Method: Maximum Peak

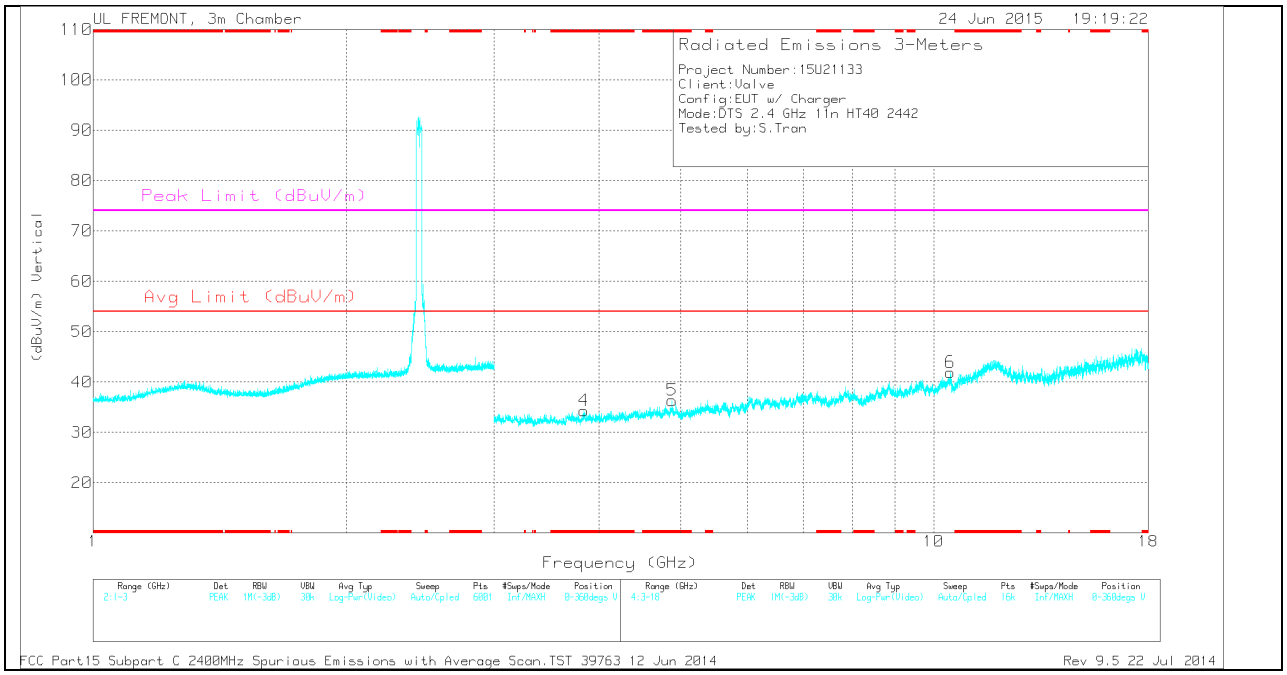
MAv1 - KDB558074 Option 1 Maximum RMS Average

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 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	* 4.884	31.92	PK	34	-29.2	0	36.72	-	-	74	-37.28	0-360	200	H
4	* 3.837	31.53	PK	33.1	-30.3	0	34.33	-	-	74	-39.67	0-360	200	V
5	* 4.885	31.55	PK	34	-29.2	0	36.35	-	-	74	-37.65	0-360	200	V
1	3.256	33.86	PK	32.6	-31	0	35.46	-	-	-	-	0-360	100	H
3	7.099	29.56	PK	35.6	-26.9	0	38.26	-	-	-	-	0-360	100	H
6	10.47	28.22	PK	37.4	-23.7	0	41.92	-	-	-	-	0-360	100	V

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

PK - Peak detector

Radiated Emissions

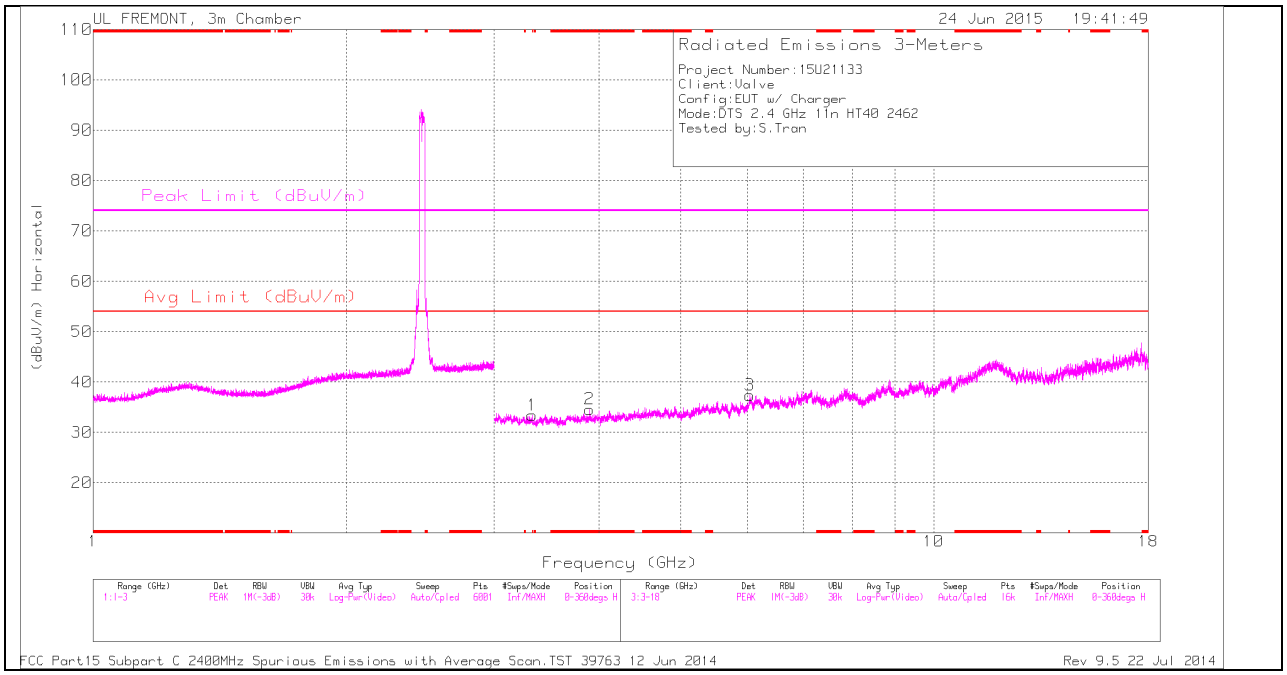
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.884	40.49	PK2	34	-29.2	0	45.29	-	-	74	-28.71	0	200	H
* 4.884	29.58	MAv1	34	-29.2	.81	35.19	54	-18.81	-	-	0	200	H
* 3.836	40.64	PK2	33.1	-30.3	0	43.44	-	-	74	-30.56	0	200	V
* 3.839	28.92	MAv1	33.1	-30.3	.81	32.53	54	-21.47	-	-	0	200	V
* 4.885	40.6	PK2	34	-29.2	0	45.4	-	-	74	-28.6	0	200	V
* 4.884	29.15	MAv1	34	-29.1	.81	34.86	54	-19.14	-	-	0	200	V
3.255	40.93	PK2	32.6	-31	0	42.53	-	-	-	-	0	100	H
3.256	30.42	MAv1	32.6	-31	.81	32.83	-	-	-	-	0	100	H
7.1	38.38	PK2	35.6	-26.9	0	47.08	-	-	-	-	0	100	H
7.101	26.65	MAv1	35.6	-26.9	.81	36.16	-	-	-	-	0	100	H
10.471	24.67	MAv1	37.4	-23.7	.81	39.18	-	-	-	-	0	100	V
10.472	36.77	PK2	37.4	-23.6	0	50.57	-	-	-	-	0	100	V

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

PK2 - KDB558074 Method: Maximum Peak

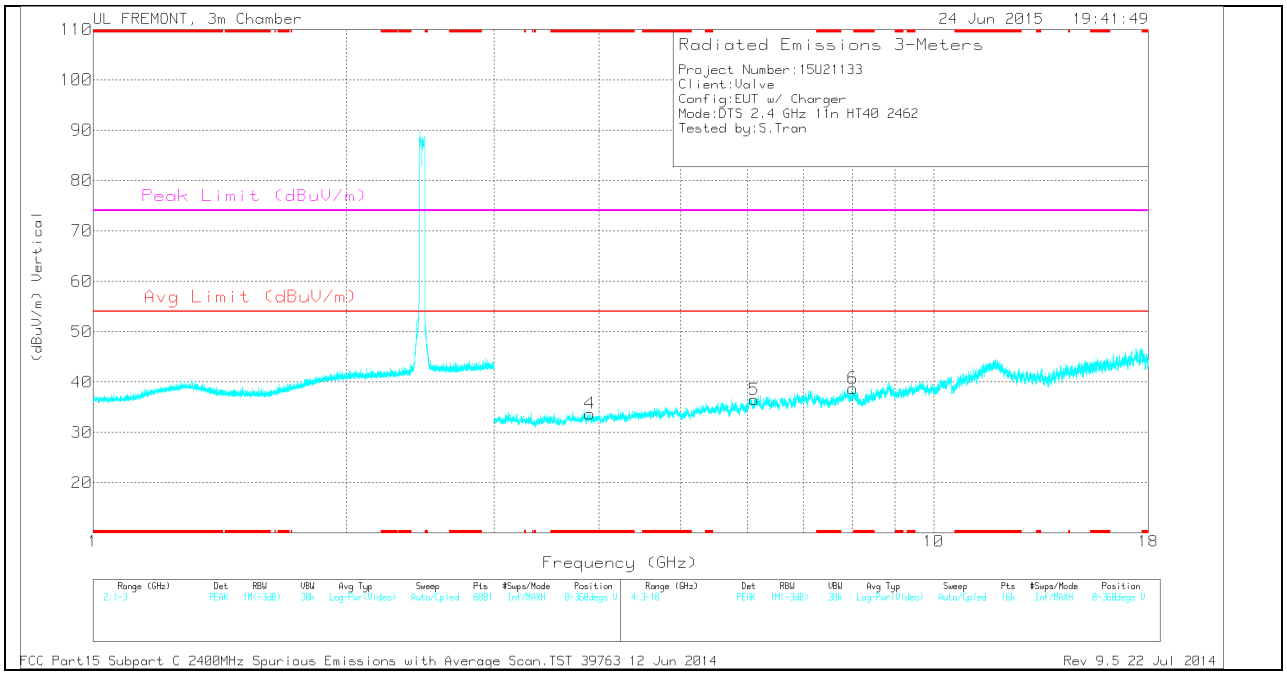
MAv1 - KDB558074 Option 1 Maximum RMS Average

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
2	* 3.894	31.59	PK	33.2	-30.2	0	34.59	-	-	74	-39.41	0-360	100	H
4	* 3.9	31.02	PK	33.2	-30.5	0	33.72	-	-	74	-40.28	0-360	200	V
1	3.329	31.39	PK	32.6	-30.6	0	33.39	-	-	-	-	0-360	100	H
3	6.042	30.66	PK	35.2	-28.5	0	37.36	-	-	-	-	0-360	200	H
5	6.12	29.63	PK	35.2	-28.3	0	36.53	-	-	-	-	0-360	100	V
6	8.012	30.23	PK	35.8	-27.3	0	38.73	-	-	-	-	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
* 3.895	40.1	PK2	33.2	-30.2	0	43.1	-	-	74	-30.9	0	100	H
* 3.895	28.64	MAv1	33.2	-30.2	.81	32.45	54	-21.55	-	-	0	100	H
* 3.899	40.68	PK2	33.2	-30.4	0	43.48	-	-	74	-30.52	0	200	V
* 3.898	29.11	MAv1	33.2	-30.4	.81	32.72	54	-21.28	-	-	0	200	V
3.328	40.26	PK2	32.6	-30.7	0	42.16	-	-	-	-	0	100	H
3.328	29.03	MAv1	32.6	-30.7	.81	31.74	-	-	-	-	0	100	H
6.041	39.71	PK2	35.2	-28.5	0	46.41	-	-	-	-	0	200	H
6.041	28.2	MAv1	35.2	-28.5	.81	35.71	-	-	-	-	0	200	H
6.119	38.41	PK2	35.2	-28.3	0	45.31	-	-	-	-	0	100	V
6.12	27.11	MAv1	35.2	-28.3	.81	34.82	-	-	-	-	0	100	V
8.013	39.12	PK2	35.8	-27.2	0	47.72	-	-	-	-	0	100	V
8.013	27.5	MAv1	35.8	-27.3	.81	36.81	-	-	-	-	0	100	V

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

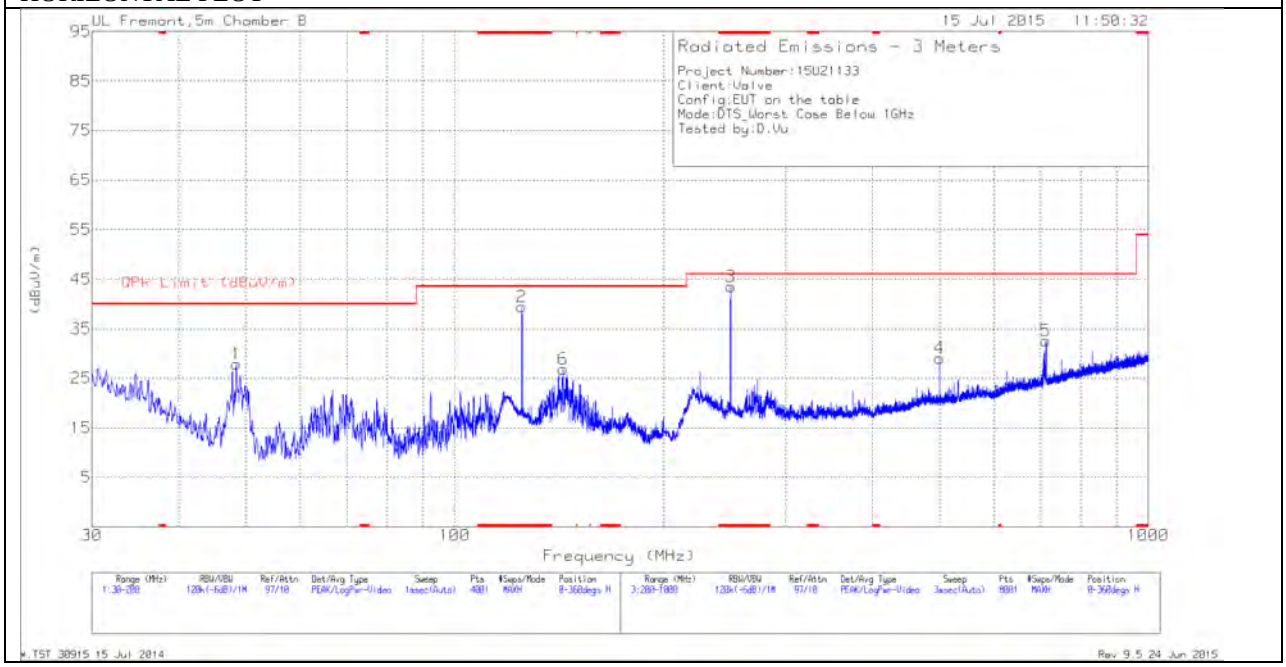
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

13. WORST-CASE BELOW 1 GHz

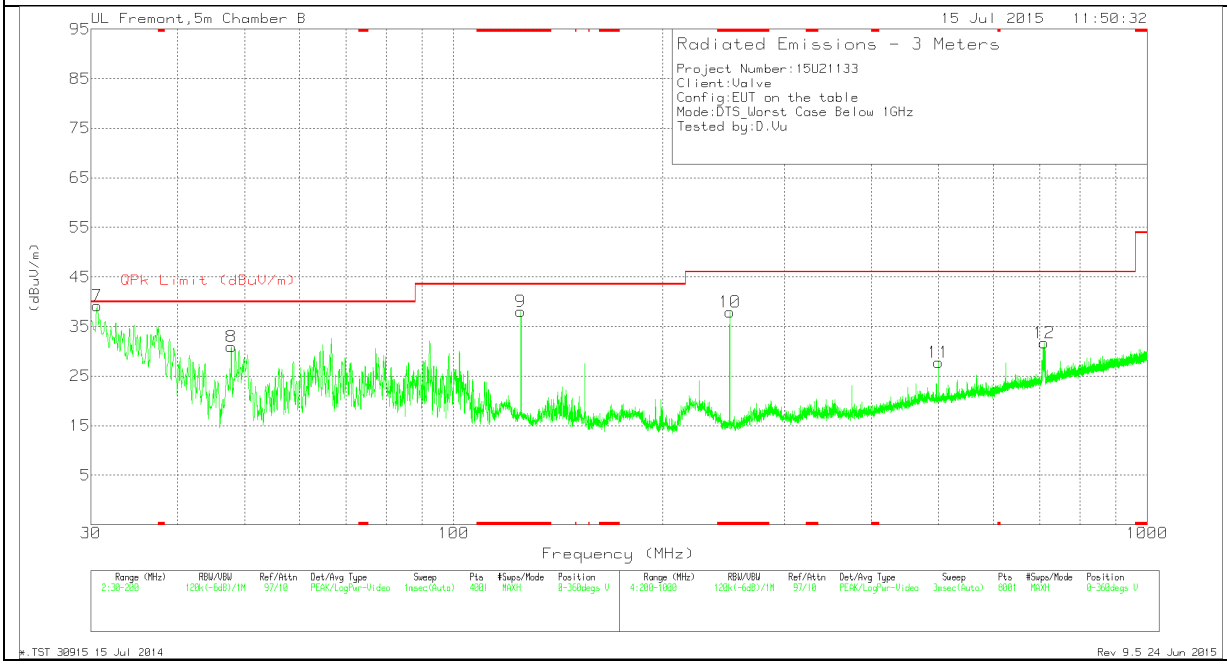
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



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

VERTICAL PLOT



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 124.9875	52.99	Pk	14.2	-27.7	39.49	43.52	-4.03	0-360	199	H
9	* 124.9875	51.53	Pk	14.2	-27.7	38.03	43.52	-5.49	0-360	101	V
3	* 250	58.17	Pk	11.6	-26.3	43.47	46.02	-2.55	0-360	101	H
10	* 250	52.65	Pk	11.6	-26.3	37.95	46.02	-8.07	0-360	101	V
7	30.595	47.65	Pk	20.3	-28.8	39.15	40	-.85	0-360	101	V
8	47.8075	50.37	Pk	9.1	-28.5	30.97	40	-9.03	0-360	101	V
1	48.445	47.65	Pk	8.8	-28.6	27.85	40	-12.15	0-360	399	H
6	143.305	41.59	Pk	12.8	-27.5	26.89	43.52	-16.63	0-360	199	H
4	500	36.99	Pk	17.8	-25.7	29.09	46.02	-16.93	0-360	199	H
11	500	35.66	Pk	17.8	-25.7	27.76	46.02	-18.26	0-360	101	V
12	709.9	35.58	Pk	20.4	-24.3	31.68	46.02	-14.34	0-360	101	V
5	712	36.43	Pk	20.4	-24.3	32.53	46.02	-13.49	0-360	299	H

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

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 125.007	52.56	Qp	14.2	-27.7	39.06	43.52	-4.46	14	169	H
* 125.0049	51.51	Qp	14.2	-27.7	38.01	43.52	-5.51	111	103	V
* 250.0095	52.88	Qp	11.6	-26.3	38.18	46.02	-7.84	292	141	H
30.6106	44.74	Qp	20.3	-28.8	36.24	40	-3.76	355	102	V

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

Qp - Quasi-Peak detector

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

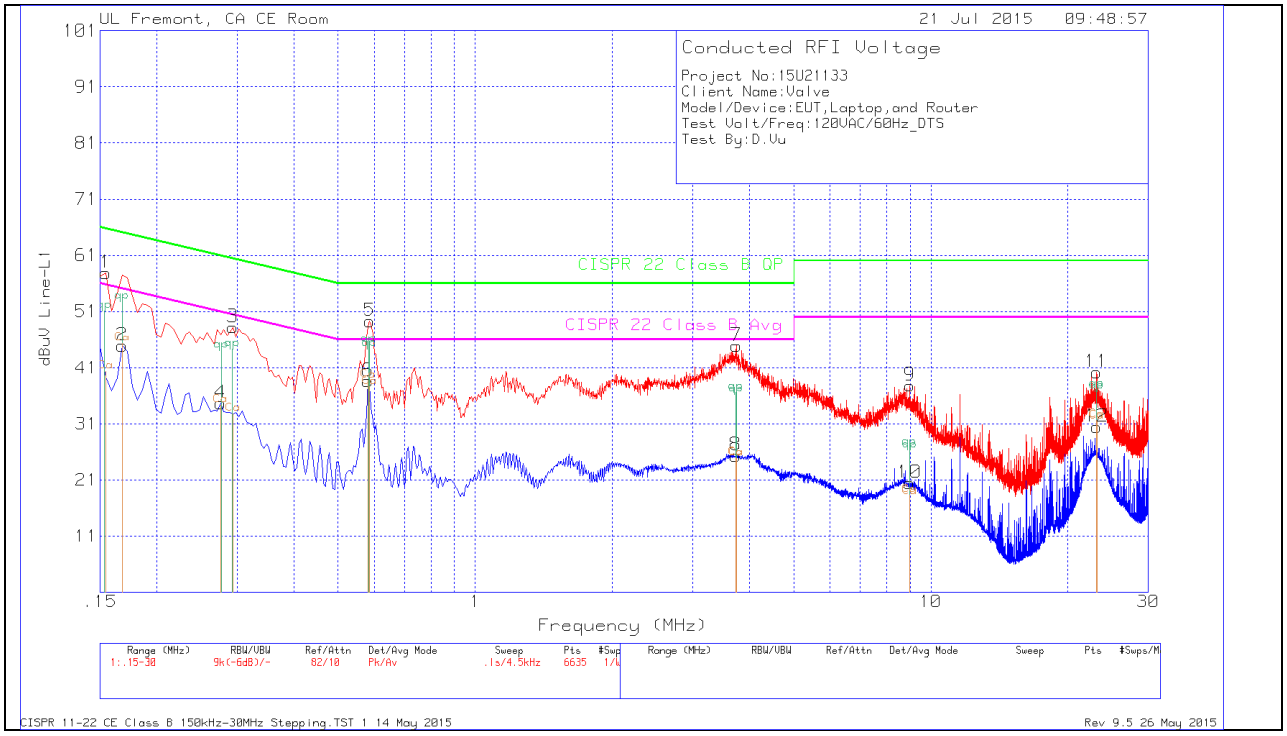
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.15338	38.96	Ca	1.4	0	40.36	-	-	55.81	-15.45
.16778	44.11	Ca	1.2	0	45.31	-	-	55.07	-9.76
.29288	32.18	Ca	.6	0	32.78	-	-	50.44	-17.66
.27713	33.72	Ca	.6	0	34.32	-	-	50.9	-16.58
.58538	37.28	Ca	.3	0	37.58	-	-	46	-8.42
.58313	38.45	Ca	.3	0	38.75	-	-	46	-7.25
3.73988	24.56	Ca	.2	.1	24.86	-	-	46	-21.14
3.73313	24.65	Ca	.2	.1	24.95	-	-	46	-21.05
8.99678	17.68	Ca	.2	.1	17.98	-	-	50	-32.02
8.97788	18.03	Ca	.2	.1	18.33	-	-	50	-31.67
23.1281	31.16	Ca	.3	.2	31.66	-	-	50	-18.34
23.1304	30.93	Ca	.3	.2	31.43	-	-	50	-18.57

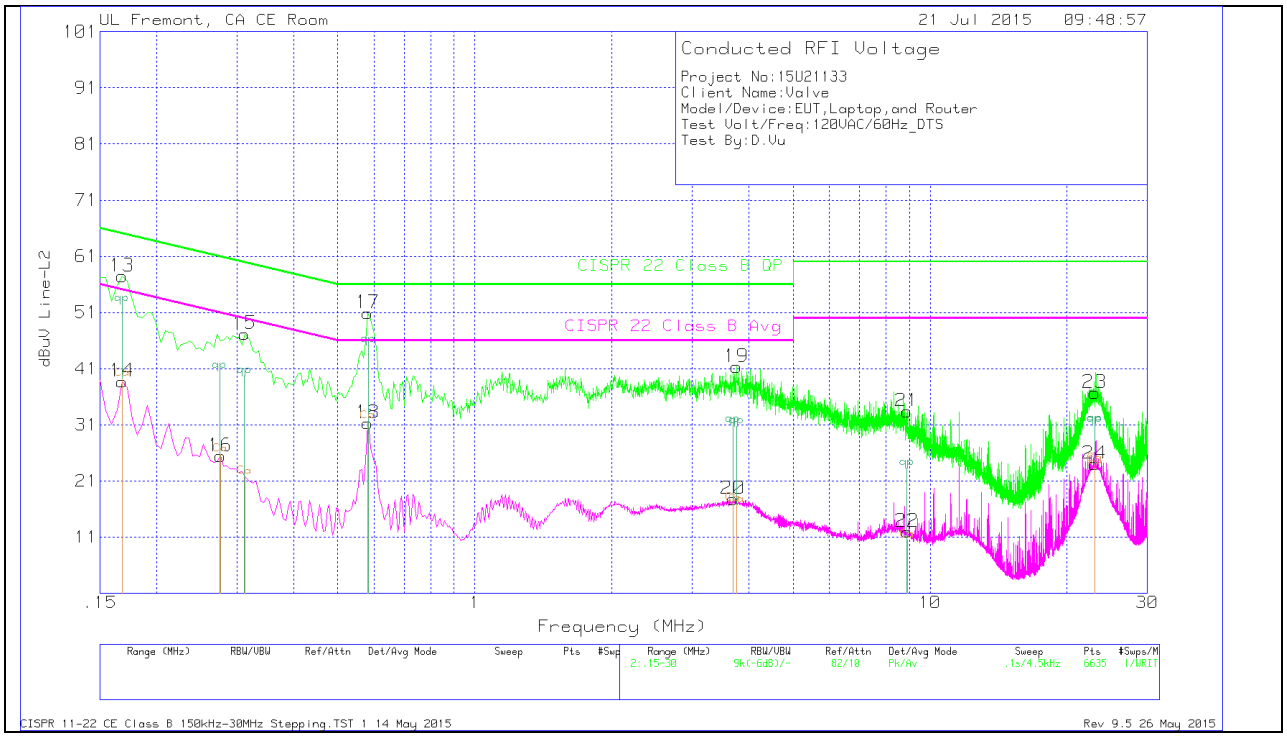
Ca - CISPR average detection

Range 1: Line-L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.15338	49.73	Qp	1.4	0	51.13	65.81	-14.68	-	-
.16778	51.56	Qp	1.2	0	52.76	65.07	-12.31	-	-
.29288	43.73	Qp	.6	0	44.33	60.44	-16.11	-	-
.27713	43.45	Qp	.6	0	44.05	60.9	-16.85	-	-
.58538	44.06	Qp	.3	0	44.36	56	-11.64	-	-
.58313	44.88	Qp	.3	0	45.18	56	-10.82	-	-
3.73988	35.92	Qp	.2	.1	36.22	56	-19.78	-	-
3.73313	36.31	Qp	.2	.1	36.61	56	-19.39	-	-
8.99678	26.04	Qp	.2	.1	26.34	60	-33.66	-	-
8.97788	26.51	Qp	.2	.1	26.81	60	-33.19	-	-
23.1281	36.64	Qp	.3	.2	37.14	60	-22.86	-	-
23.1304	36.31	Qp	.3	.2	36.81	60	-23.19	-	-

Qp - Quasi-Peak detector

LINE 2 PLOT



LINE 2 RESULTS

Range 2: Line-L2 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.16778	37.88	Ca	1.3	0	39.18	-	-	55.07	-15.89
.31178	21.15	Ca	.6	0	21.75	-	-	49.92	-28.17
.27488	25.01	Ca	.7	0	25.71	-	-	50.97	-25.26
.58313	31.35	Ca	.3	0	31.65	-	-	46	-14.35
3.75878	16.42	Ca	.2	.1	16.72	-	-	46	-29.28
3.69038	16.68	Ca	.2	.1	16.98	-	-	46	-29.02
8.90138	10.15	Ca	.2	.1	10.45	-	-	50	-39.55
22.9954	23.05	Ca	.3	.2	23.55	-	-	50	-26.45
23.0089	23.47	Ca	.3	.2	23.97	-	-	50	-26.03

Ca - CISPR average detection

Range 2: Line-L2 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.16778	51.2	Qp	1.3	0	52.5	65.07	-12.57	-	-
.31178	39.15	Qp	.6	0	39.75	59.92	-20.17	-	-
.27488	39.9	Qp	.7	0	40.6	60.97	-20.37	-	-
.58313	44.9	Qp	.3	0	45.2	56	-10.8	-	-
3.75878	30.47	Qp	.2	.1	30.77	56	-25.23	-	-
3.69038	30.73	Qp	.2	.1	31.03	56	-24.97	-	-
8.90138	23.01	Qp	.2	.1	23.31	60	-36.69	-	-
22.9954	30.53	Qp	.3	.2	31.03	60	-28.97	-	-
23.0089	30.72	Qp	.3	.2	31.22	60	-28.78	-	-

Qp - Quasi-Peak detector