



**FCC 47 CFR PART 15 SUBPART C
ISED CANADA RSS-247 ISSUE 2**

CERTIFICATION TEST REPORT

FOR

WIFI COMMUNICATIONS MODULE

MODEL NUMBER: COM2

FCC ID: 2AHES-COM2

IC: 21152-COM2

REPORT NUMBER: R11673430-E1

ISSUE DATE: 2017-12-19

**Prepared for
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NVLAP LAB CODE 200246-0

Revision History

Ver.	Issue Date	Revisions	Revised By
1	2017-09-28	Initial Issue	Brian Kiewra
		Added C63.10:2013 reference for AC Mains in Section 7.	
2	2017-12-19	Clarified radiated data using "internal chain 0, internal chain 1, and external chain 0" monikers.	Brian Kiewra

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: BSH Home Appliances Corp
100 Bosch Blvd
New Bern, North Carolina, 28562, USA

EUT DESCRIPTION: Wireless Module

MODEL: COM2

SERIAL NUMBER: Non-Serialized

DATE TESTED: 2017-06-20 to 2017-09-26

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
ISED CANADA RSS-247 Issue 2	Pass
ISED CANADA RSS-GEN Issue 4	Pass

UL LLC 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 LLC 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.

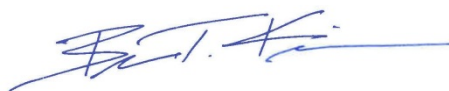
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC 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, or any agency of the U.S. Government.

Approved & Released
For UL LLC By:



Jeffrey Moser
Operations Leader
UL – Consumer Technology Division

Prepared By:



Brian T. Kiewra
Project Engineer
UL – Consumer Technology Division

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.10-2013, RSS-GEN Issue 4, RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

Research Triangle Park, NC 27709, USA and 2800 Suite B, Perimeter Park Drive, Morrisville, NC 27560.

12 Laboratory Dr., RTP, NC 27709	
<input type="checkbox"/>	Chamber A
<input type="checkbox"/>	Chamber C

2800 Suite B Perimeter Park Dr., Morrisville, NC 27560	
<input checked="" type="checkbox"/>	Chamber NORTH
<input checked="" type="checkbox"/>	Chamber SOUTH

The onsite chambers are covered under ISED Canada company address code 2180C with site numbers 2180C -1 through 2180C-4, respectively.

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0. The full scope of accreditation can be viewed at <http://www.nist.gov/nvlap/>

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY	Required by standard
Occupied Channel Bandwidth	2.00%	±5 %
RF output power, conducted	1.3 dB	±1,5 dB
Power Spectral Density, conducted	2.47 dB	±3 dB
Unwanted Emissions, conducted	2.94 dB	±3 dB
All emissions, radiated	5.36 dB	±6 dB
Temperature	2.26 °C	±3 °C
Supply voltages	2.40%	±3 %
Time	3.39%	±5 %

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an 802.11 a/b/g/n transceiver module. It is a SISO module that contains two internal antennas for diversity. Only one antenna operates at a time. Additionally, there is an option to install an external antenna on the available Antenna Port for improved performance. If the external antenna is installed, the internal antennas cannot be used.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	15.07	32.14
2412 - 2462	802.11g	14.34	27.16
2412 - 2462	802.11n HT20	13.73	23.60

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes two inverted-f antennas for diversity, with a maximum gain of -0.4 dBi. The radio also utilizes an external PCB slot antenna, with a maximum gain of -3 dBi. This external antenna is only intended to be installed on Chain 0.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 7.76.1.3 (r665631 WLTEST) FWID 01-f0b2ff00.

The EUT driver software installed during testing was FTDI CDM driver 2.12.26.

The test utility software used during testing was 7.16, RC99.19.

5.5. WORST-CASE CONFIGURATION AND MODE

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

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z for the two internal antennas, internal chains 0 and 1. It was determined that the X orientation for both internal antennas were the worst-case orientations, therefore, all final radiated testing was performed in the X orientation using the internal antennas.

Additionally, the fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, for the external antenna, external chain 0. It was determined that the Y orientation with the external antenna was worst-case orientation; therefore, all final radiated testing was performed with the EUT in the Y orientation using the external antenna.

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

802.11b mode: 11 Mbps

802.11g mode: 6 Mbps

802.11n HT20mode: MCS0

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Lenovo	T450s	PC-0A2UQS 16/01	NA
Power Supply	Lenovo	ADLX65NLC2A	11S45N0259Z1Z9743D21T	NA
USB-Serial Port Adaptor	N/A	N/A	N/A	N/A

I/O CABLES

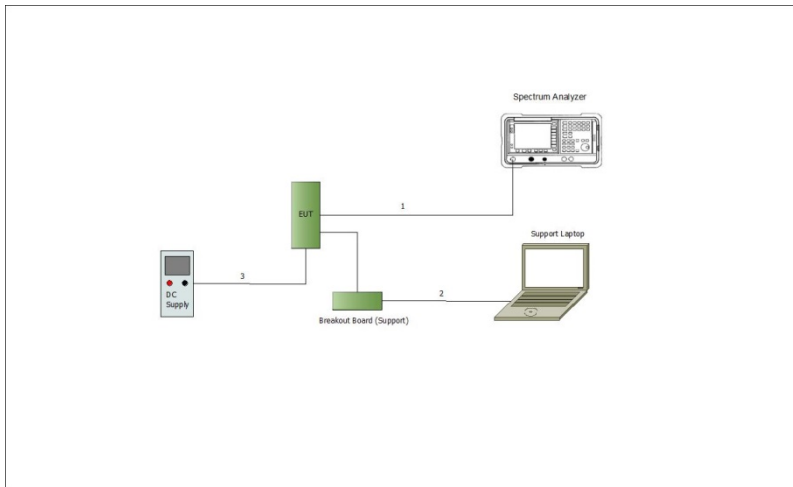
I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	SMA	RF	<3m	None
2	USB	1	USB	USB	<3m	Used to configure EUT
3	DC	1	DC	DC	<3m	N/A

TEST SETUP

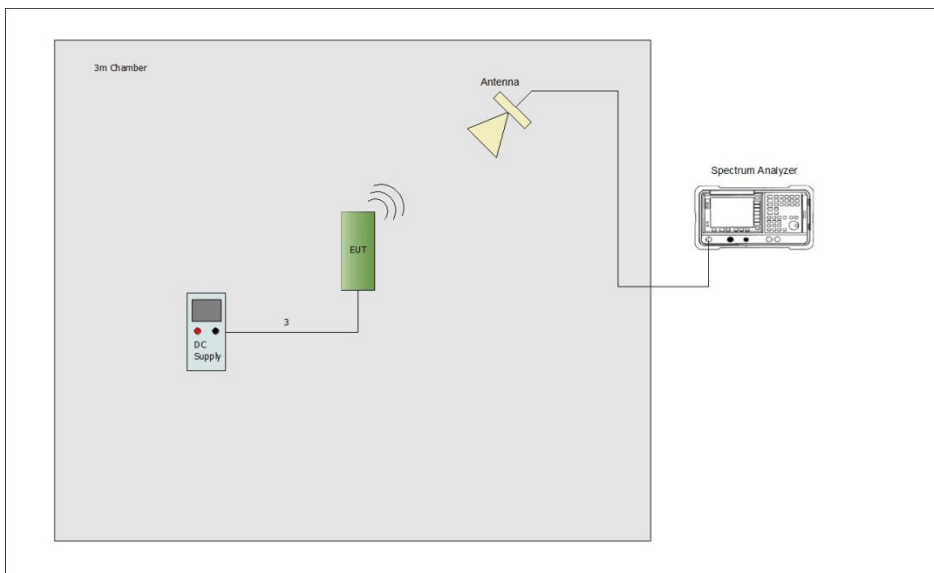
The EUT is a wireless communications module. Test software exercised the radio card. Two configurations were used during the testing. One configuration utilized the two internal trace antenna chains in a SISO mode for diversity. The second configuration utilized an external antenna on antenna chain 0 only for improved performance, while antenna chain 1 remained an internal trace antenna. Therefore, INTERNAL CHAIN 1 was only tested once.

SETUP DIAGRAM FOR TESTS

Conducted Setup



Radiated Setup



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - North Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	(Loop Ant.)			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2016-12-28	2017-12-31
	30-1000 MHz				
AT0073	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2016-06-27	2017-06-30
	Gain-Loss Chains				
N-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2016-10-04	2017-10-04
N-SAC02	Gain-loss string: 30-1000MHz	Various	Various	2017-06-11	2018-06-11
	Receiver & Software				
SA0027	Spectrum Analyzer	Agilent	N9030A	2017-03-16	2018-03-16
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
s/n 161024690	Environmental Meter	Fisher Scientific	15-077-963	2016-12-21	2018-12-21

Test Equipment Used - Radiated Disturbance Emissions Test Equipment (Morrisville - South Chamber)

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
AT0069	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2017-04-05	2018-04-05
	18-40 GHz				
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2016-09-06	2017-09-06
	Gain-Loss Chains				
S-SAC03	Gain-loss string: 1-18GHz	Various	Various	2016-08-28	2017-08-28
S-SAC04	Gain-loss string: 18-40GHz	Various	Various	2017-03-03	2018-03-03
	Receiver & Software				
SA0025	Spectrum Analyzer	Agilent	N9030A	2017-04-10	2018-04-10
SA0026 (18-40GHz RSE)	Spectrum Analyzer	Agilent	N9030A	2017-02-17	2018-02-28
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
s/n 161024887	Environmental Meter	Fisher Scientific	15-077-963	2016-12-23	2018-12-23

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Common Equipment				
	Conducted Room 1				
SA0020	Spectrum Analyzer	Agilent Technologies	E4446A	2017-04-25	2018-04-25
PWM004	RF Power Meter	Keysight Technologies	N1911A	2016-06-22	2017-06-22
PWS003	Peak and Avg Power Sensor, 50MHz to 6GHz	Keysight Technologies	E9323A	2016-06-21	2017-06-21
SN 161024885	Environmental Meter	Fisher Scientific	15-077-963	2016-12-23	2018-12-23
76022	DC Regulated Power Supply	CircuitSpecialist s.Com	CSI3005X5	N/A	N/A

7. MEASUREMENT METHODS

On Time and Duty Cycle: KDB 558074 D01 v04, Section 6.0

6 dB BW: KDB 558074 D01 v04 Section 8.5

99% Occupied Bandwidth: ANSI C63.10-2013, Section 6.9.3

Output Power: KDB 558074 D01 v04, Section 9.2.3.2.

Power Spectral Density: KDB 558074 D01 v04, Section 10.2.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v04, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v04, Section 12.1.

General Radiated Emissions: ANSI C63.10:2013 Sections 6.3 – 6.6

AC Mains: ANSI C63.10:2013 Sections 6.2

8. ANTENNA PORT TEST RESULTS

Note – This note is regarding all Antenna Port test results. The EUT has two internal antennas for diversity (includes an RF diversity switch) and can also be deployed with an external antenna. The EUT only employs one antenna port. Therefore, only one set of antenna port measurements were performed. If the external antenna is installed, the internal antennas are bypassed.

8.1. ON TIME AND DUTY CYCLE LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

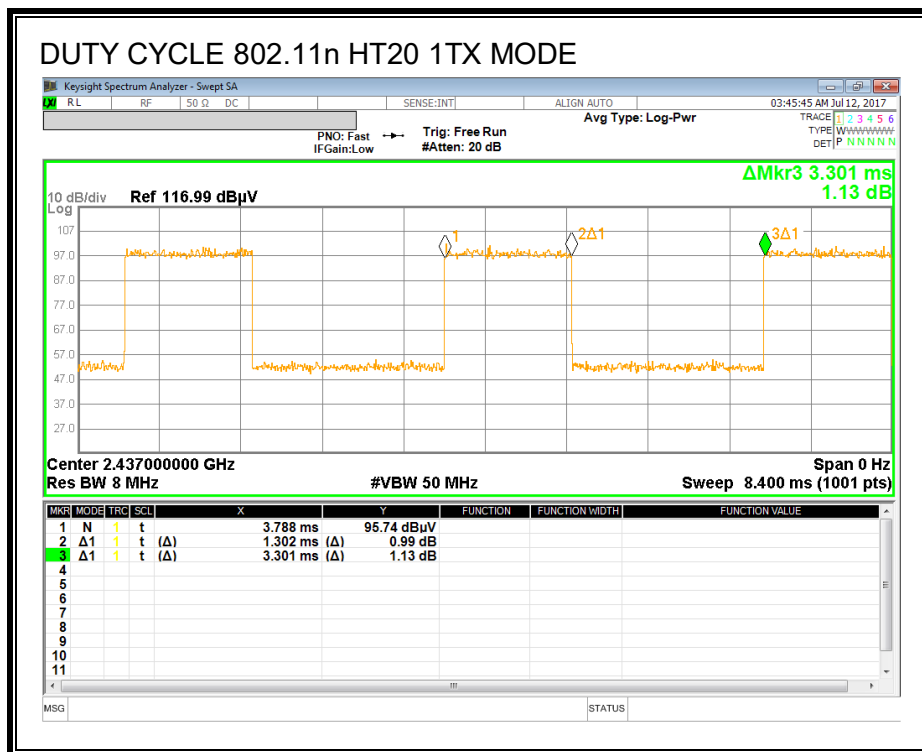
EUT initially had duty cycle of 96% (b/g/n very close), but during operation would drop to 40%. 40% DC was used for most of testing, but for some testing, customer had concerns for stability of the unit due to continual heating issues; therefore, duty cycle was lowered to 10% for remaining test. Differences in duty cycle noted throughout report. Duty cycle for b/g/n checked relative to each other and found to be the same. Therefore, the 11n plots represent 11b/g.

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
802.11n HT20 1TX	1.30	3.30	0.392	39.19%	4.07	0.772

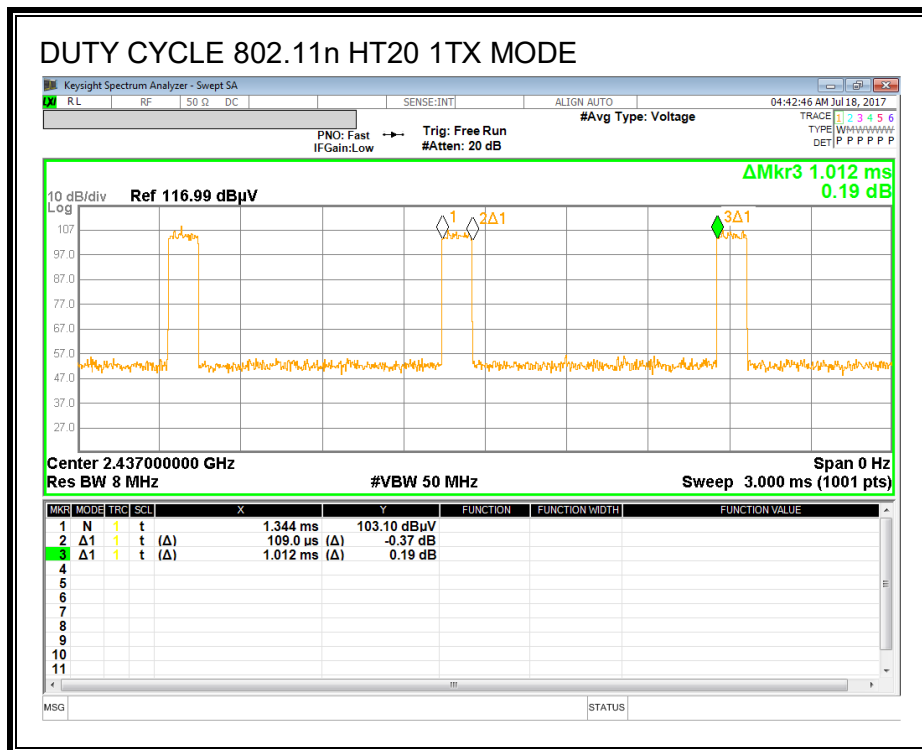
ON TIME AND DUTY CYCLE RESULTS FOR 10% DUTY CYCLE

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
802.11n HT20 1TX	0.109	1.012	0.108	10.77%	9.68	9.174

DUTY CYCLE PLOTS



DUTY CYCLE PLOTS FOR 10% DUTY CYCLE



8.2. 802.11b MODE IN THE 2.4 GHz BAND

8.2.1. 6 dB BANDWIDTH

LIMITS

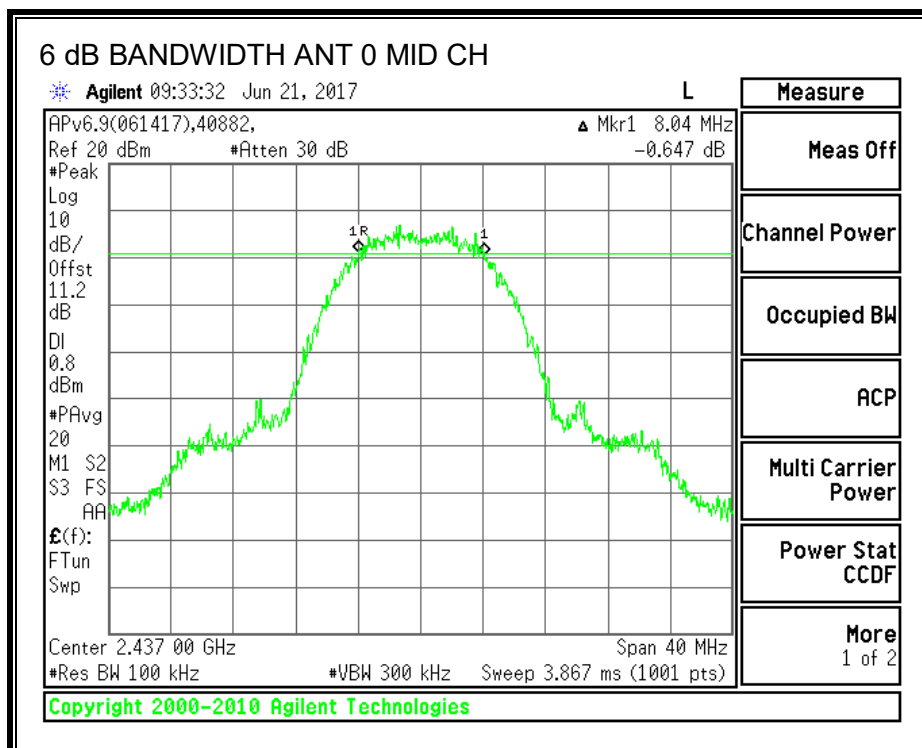
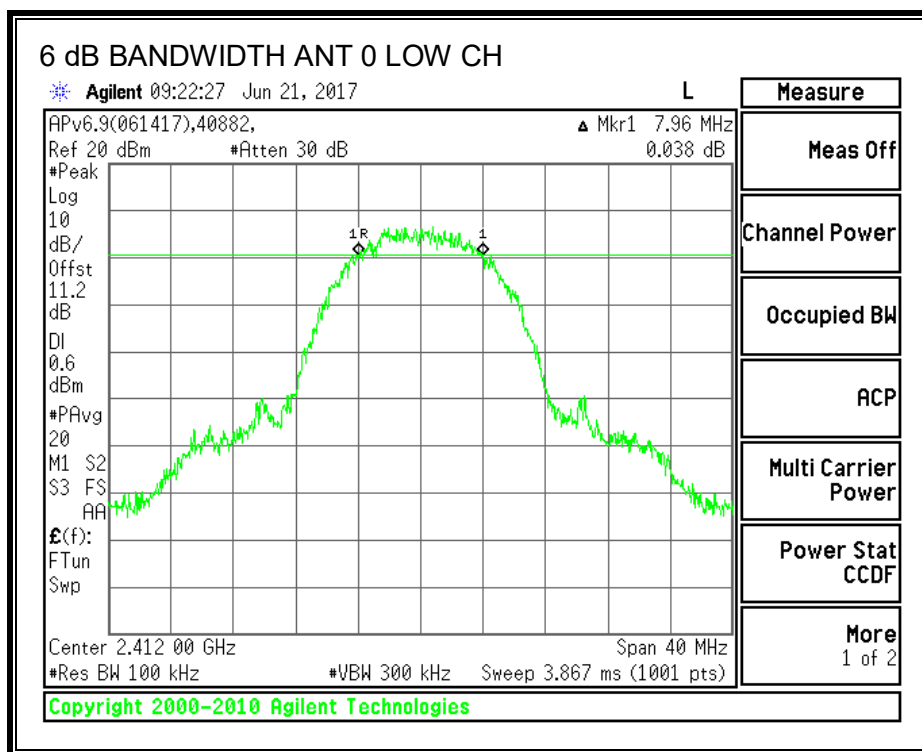
FCC §15.247 (a) (2)

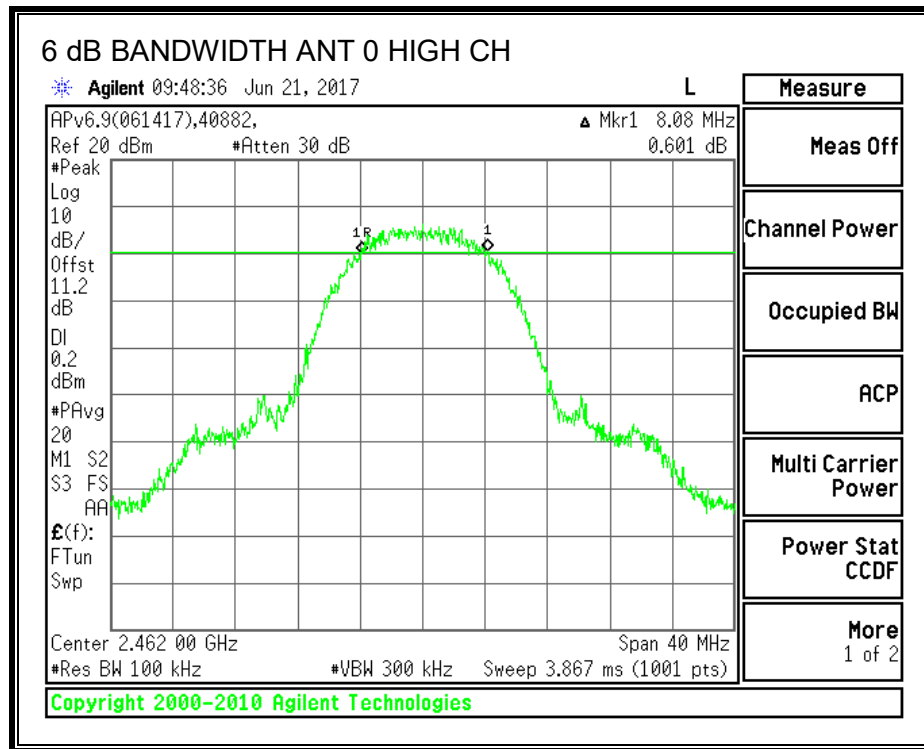
IC RSS-247 5.2 (a)

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

Channel	Frequency (MHz)	6 dB BW ANT 0 (MHz)	Minimum Limit (MHz)
Low	2412	7.960	0.5
Mid	2437	8.040	0.5
High	2462	8.080	0.5

6 dB BANDWIDTH, INT 0





Test Information

Date: 2017-06-21

Tester: Jeffrey Cabrera

8.2.1. 99% BANDWIDTH LIMITS

None; for reporting purposes only.

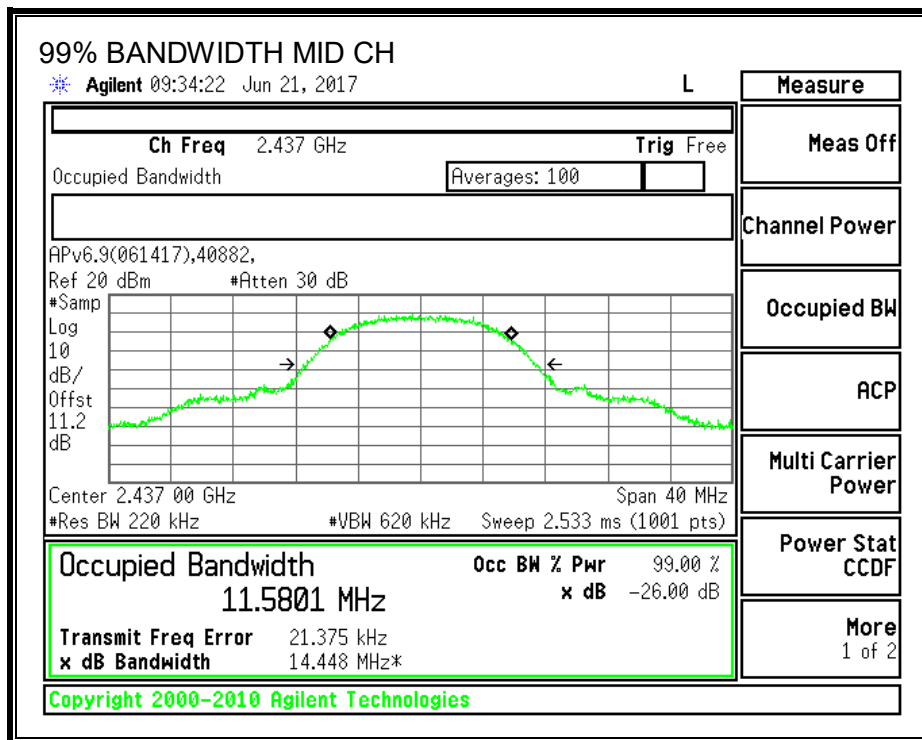
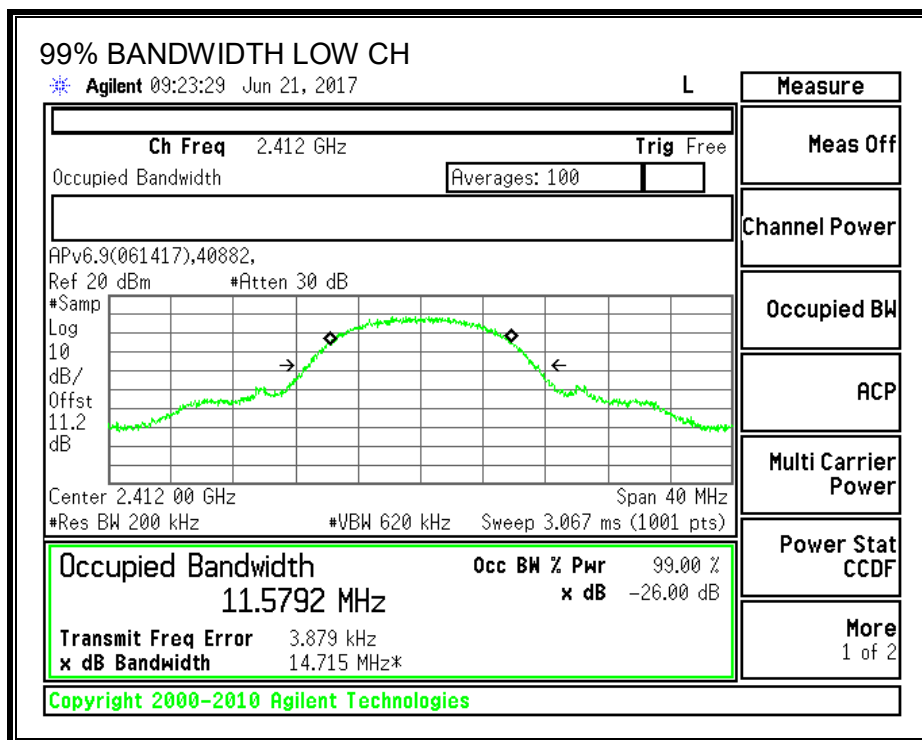
TEST PROCEDURE

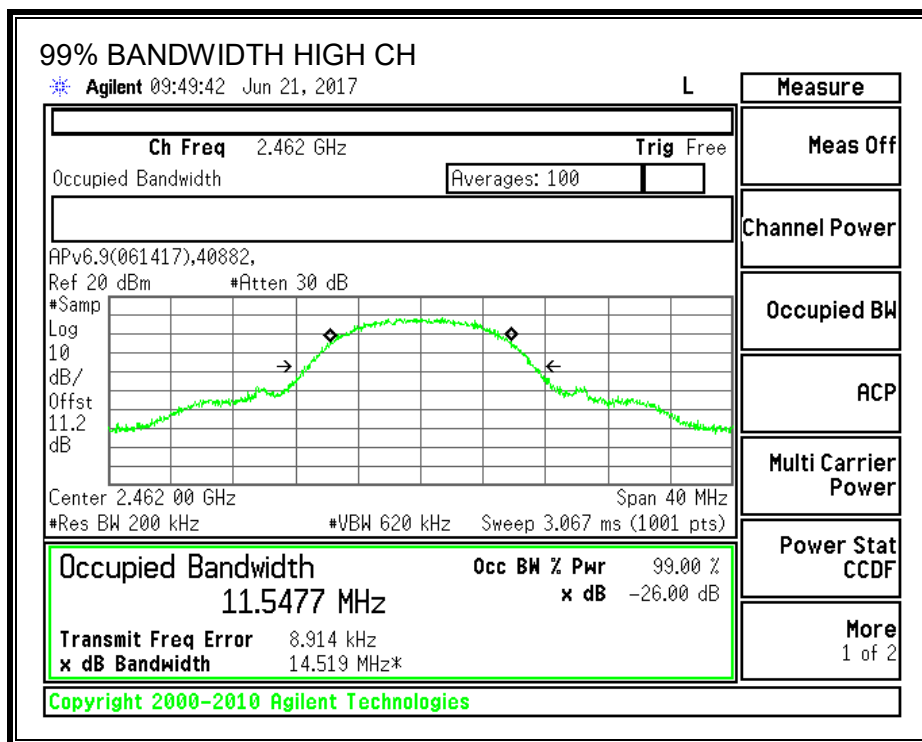
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	11.579
Middle	2437	11.580
High	2462	11.548

99% BANDWIDTH





Test Information

Date: 2017-06-21
Tester: Jeffrey Cabrera

8.2.2. OUTPUT POWER LIMITS

FCC §15.247 (b) (3)

IC RSS-247 5.4 (d)

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

Two antennas used for diversity, therefore the directional gain is equal to the antenna gain.

Power measurements were gated.

Limits

Channel	Frequency (MHz)	Directional Gain ANT 0 (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-0.40	30.00	30	36	30.00
Mid	2437	-0.40	30.00	30	36	30.00
High	2462	-0.40	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	ANT 0 Meas Power (dBm)	ANT 0 Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	14.98	14.98	30.00	-15.02
Mid	2437	15.07	15.07	30.00	-14.93
High	2462	14.87	14.87	30.00	-15.13

8.2.3. POWER SPECTRAL DENSITY LIMITS

FCC §15.247 (e)

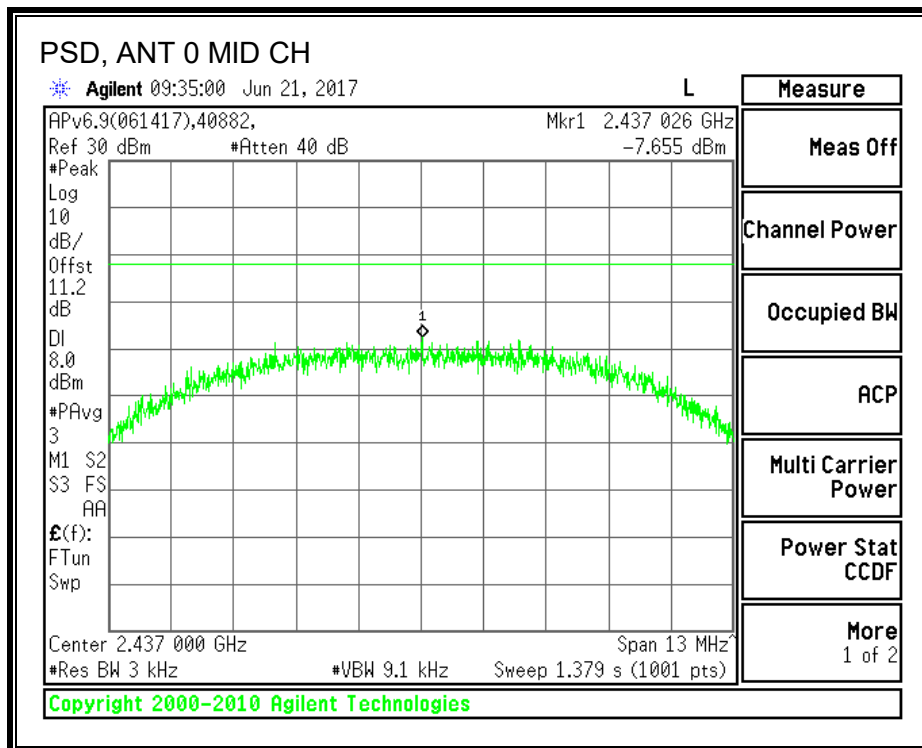
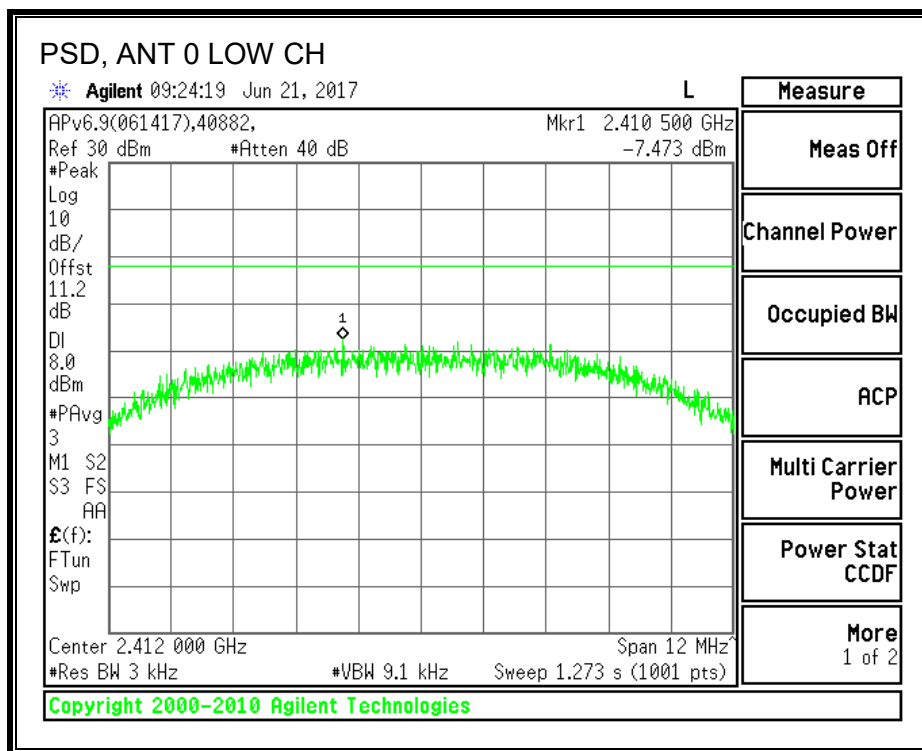
IC RSS-247 5.2 (b)

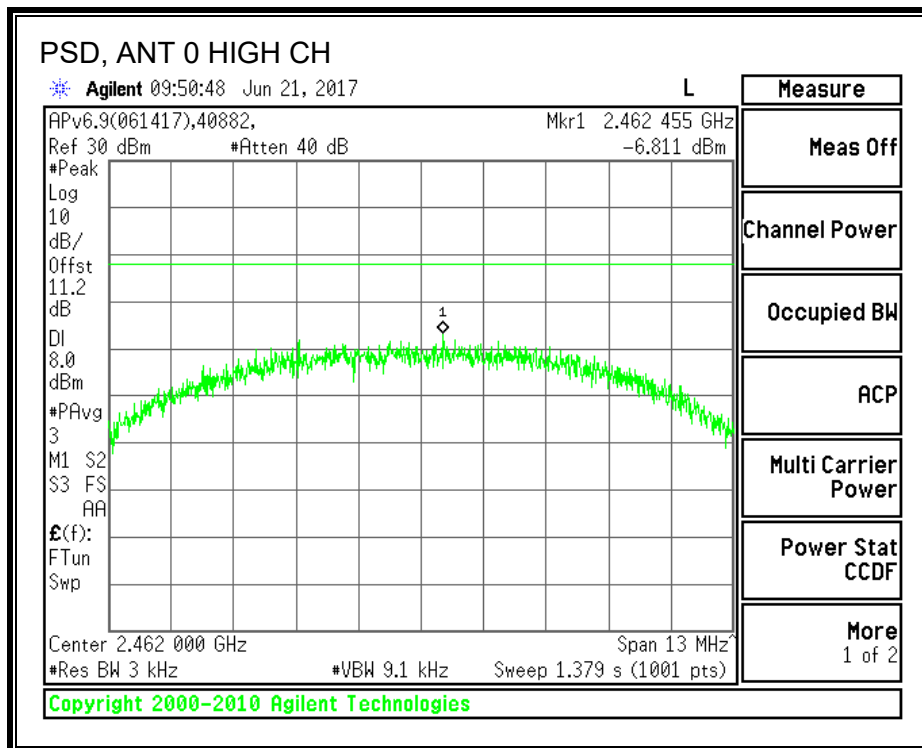
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Total Corr'd PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-7.47	-7.47	8.0	-15.5
Mid	2437	-7.66	-7.66	8.0	-15.7
High	2462	-6.81	-6.81	8.0	-14.8

PSD, INT A





Test Information

Date: 2017-06-21

Tester: Jeffrey Cabrera

8.2.4. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-247 5.5

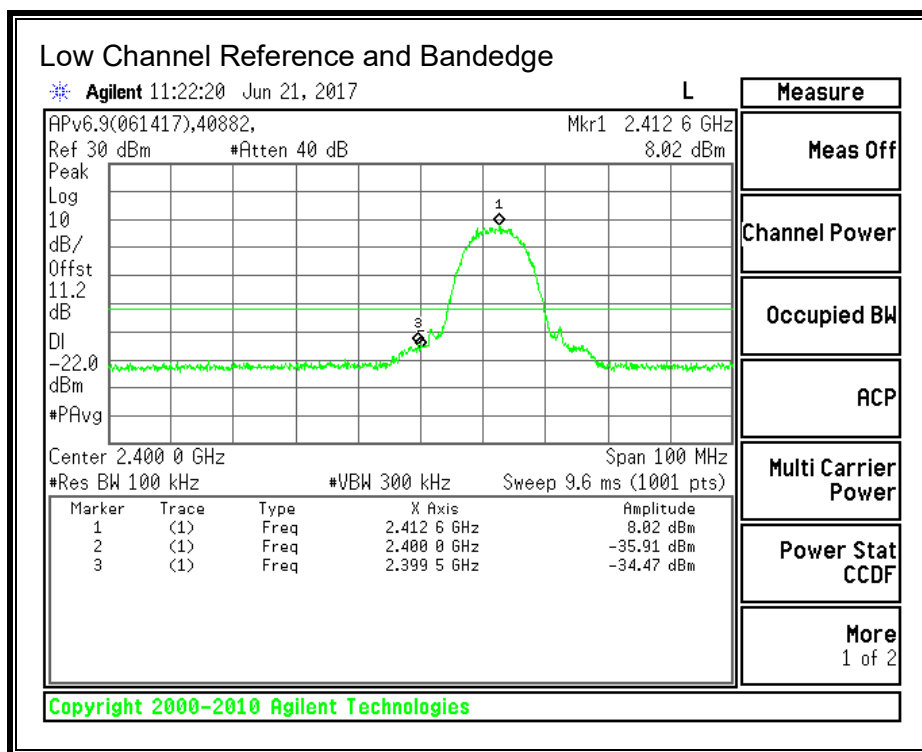
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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 Information

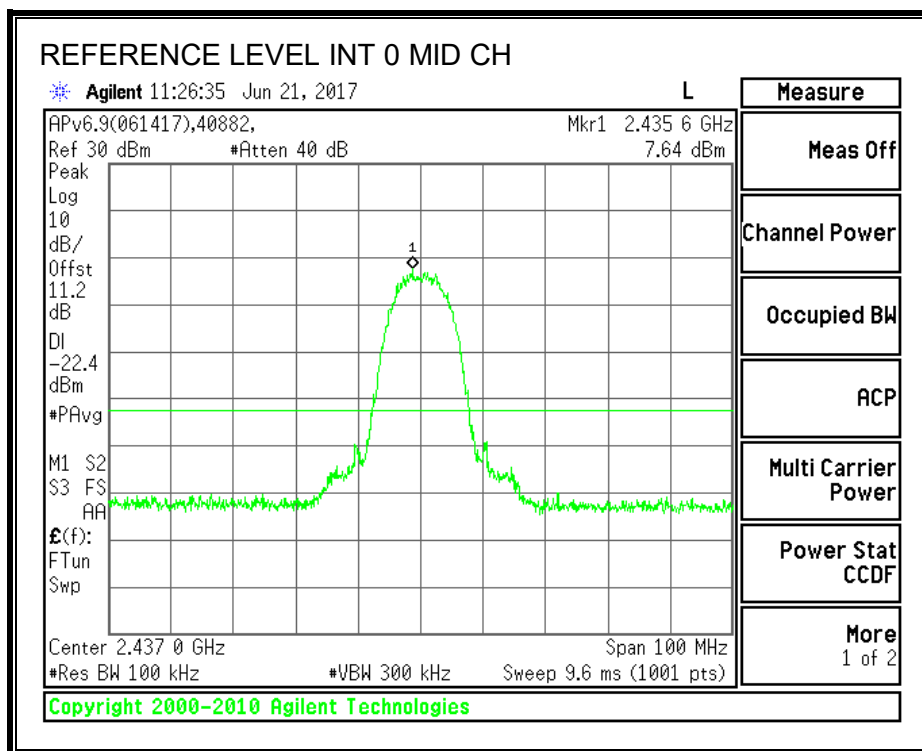
Date: 2017-06-21

Tester: Jeffrey Cabrera

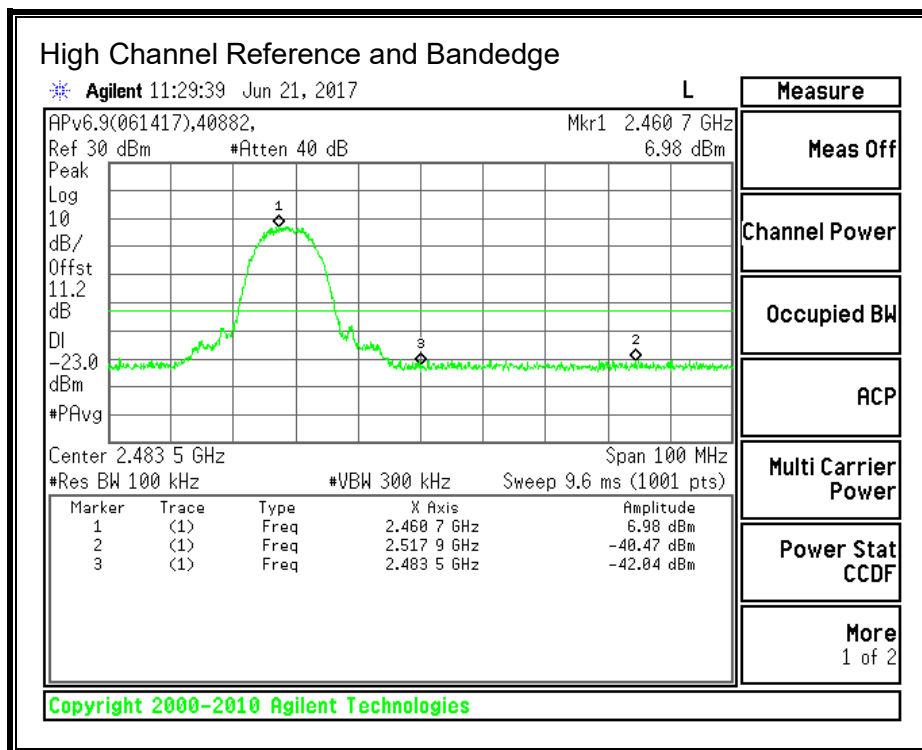
LOW CHANNEL REFERENCE AND BANDEDGE, ANT 0



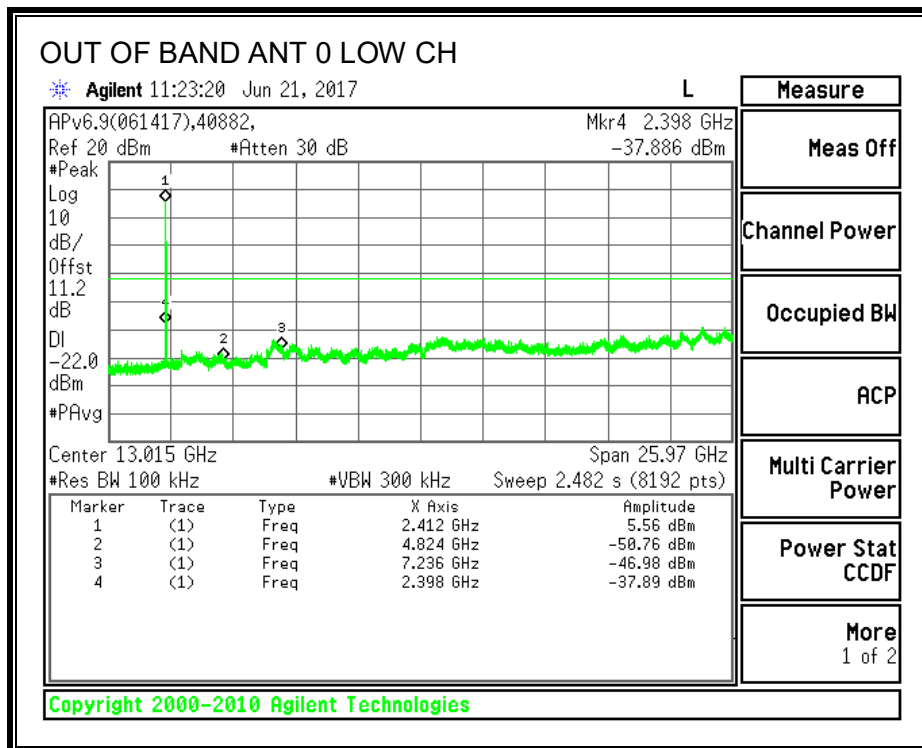
IN-BAND REFERENCE LEVEL, ANT 0

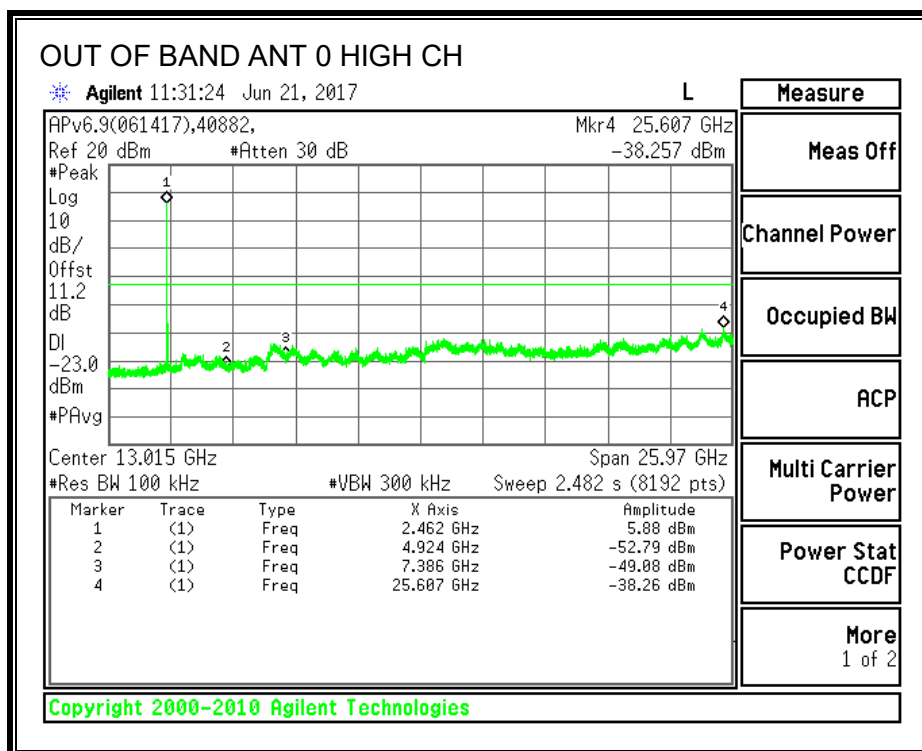
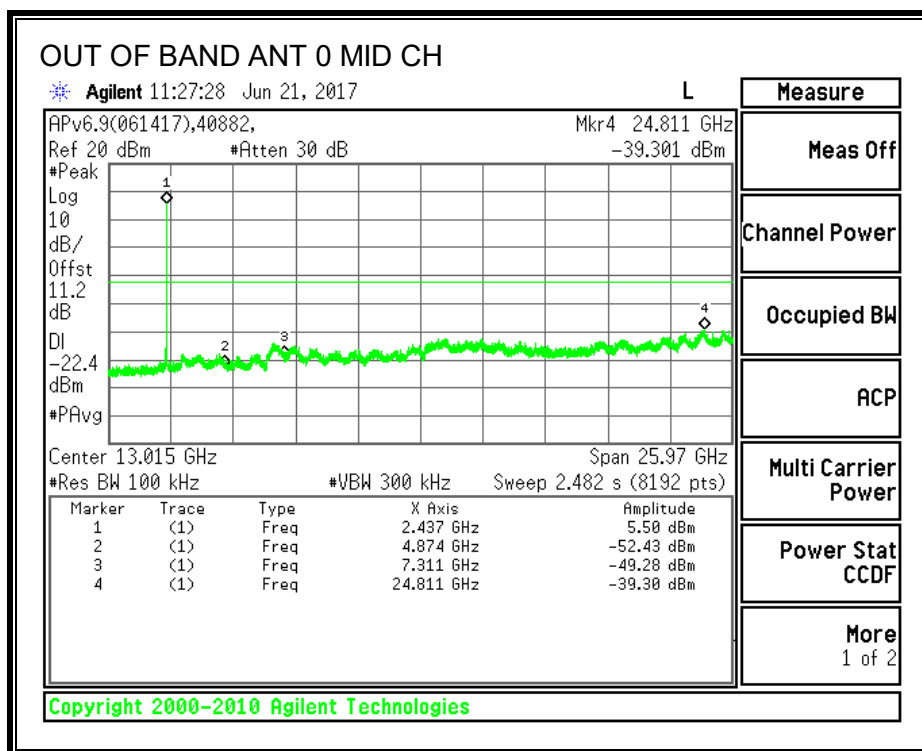


HIGH CHANNEL REFERENCE AND BANDEDGE, ANT 0



OUT-OF-BAND EMISSIONS, ANT 0





8.3. 802.11g MODE IN THE 2.4 GHz BAND

8.3.1. 6 dB BANDWIDTH LIMITS

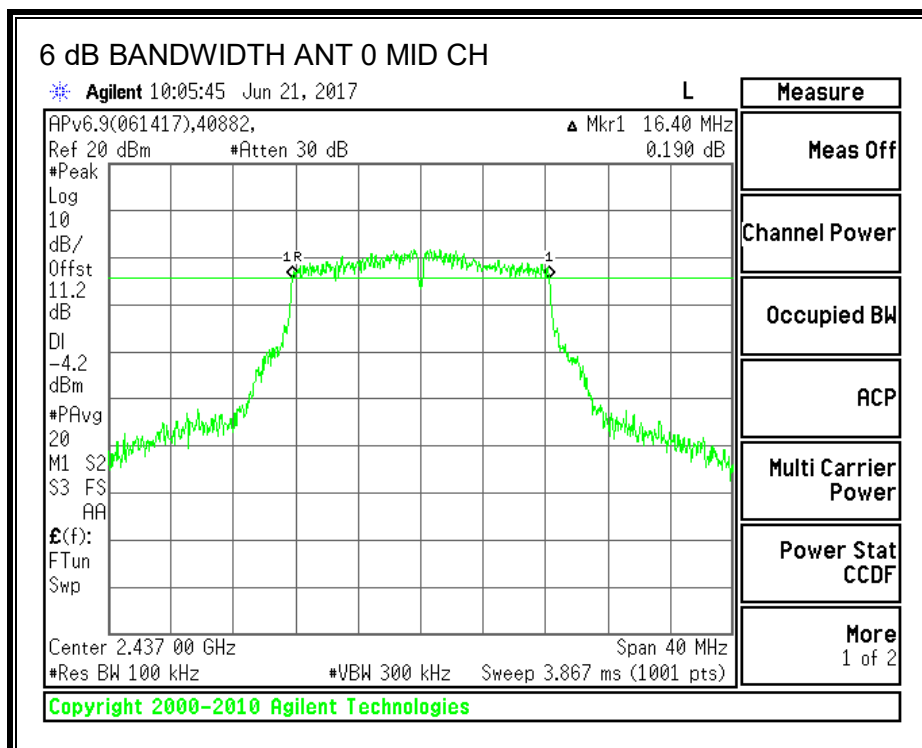
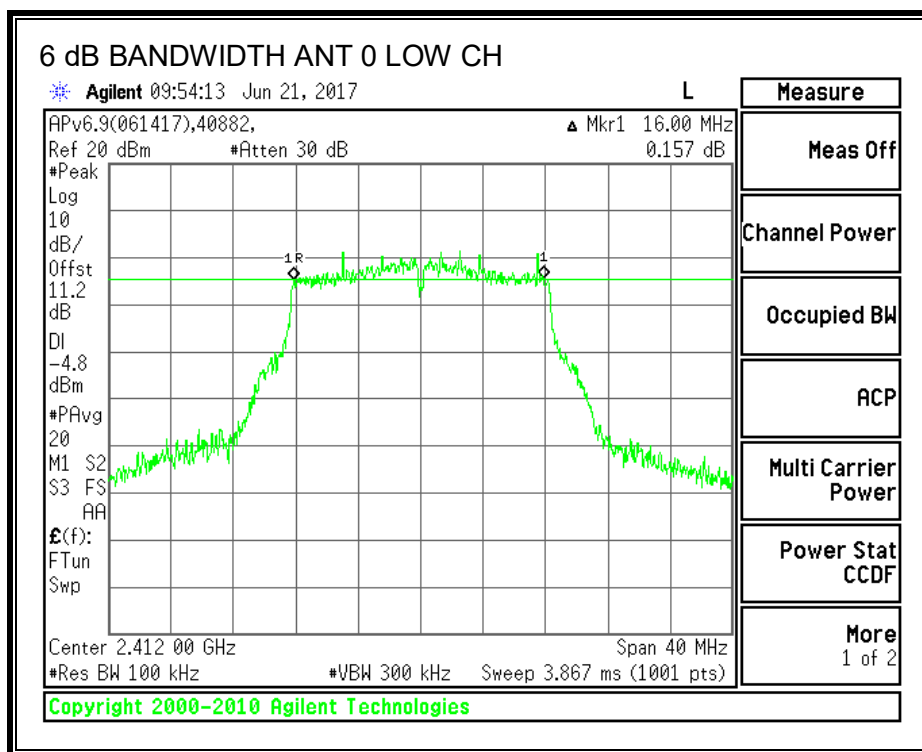
FCC §15.247 (a) (2)

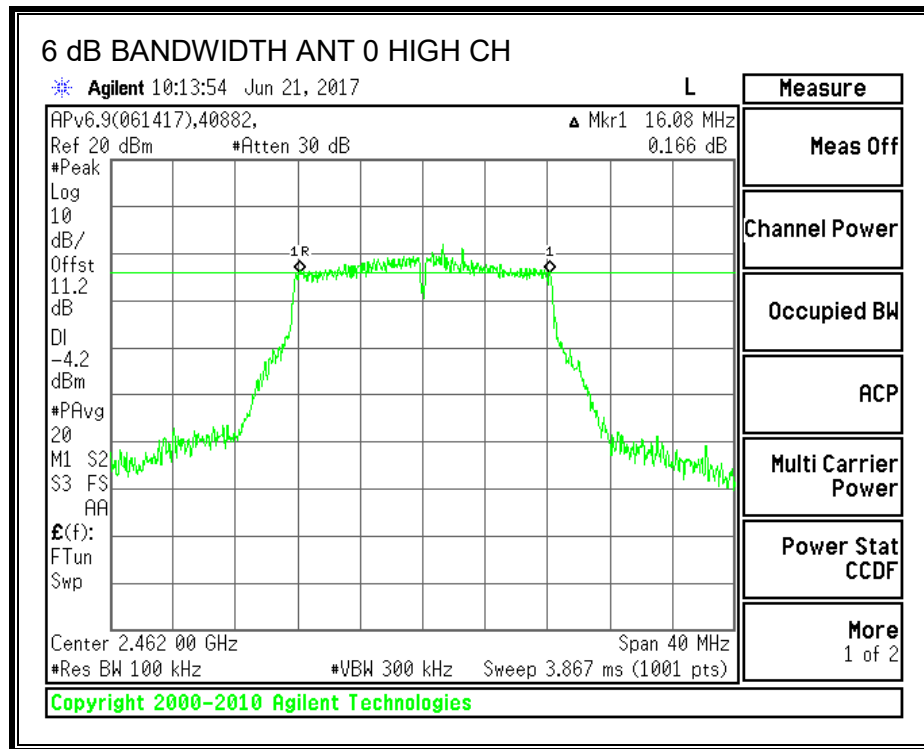
IC RSS-247 5.2 (a)

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

Channel	Frequency (MHz)	6 dB BW ANT 0 (MHz)	Minimum Limit (MHz)
Low	2412	16.000	0.5
Mid	2437	16.400	0.5
High	2462	16.080	0.5

6 dB BANDWIDTH, ANT 0





Test Information

Date: 2017-06-21
Tester: Jeffrey Cabrera

8.3.1. 99% BANDWIDTH LIMITS

None; for reporting purposes only.

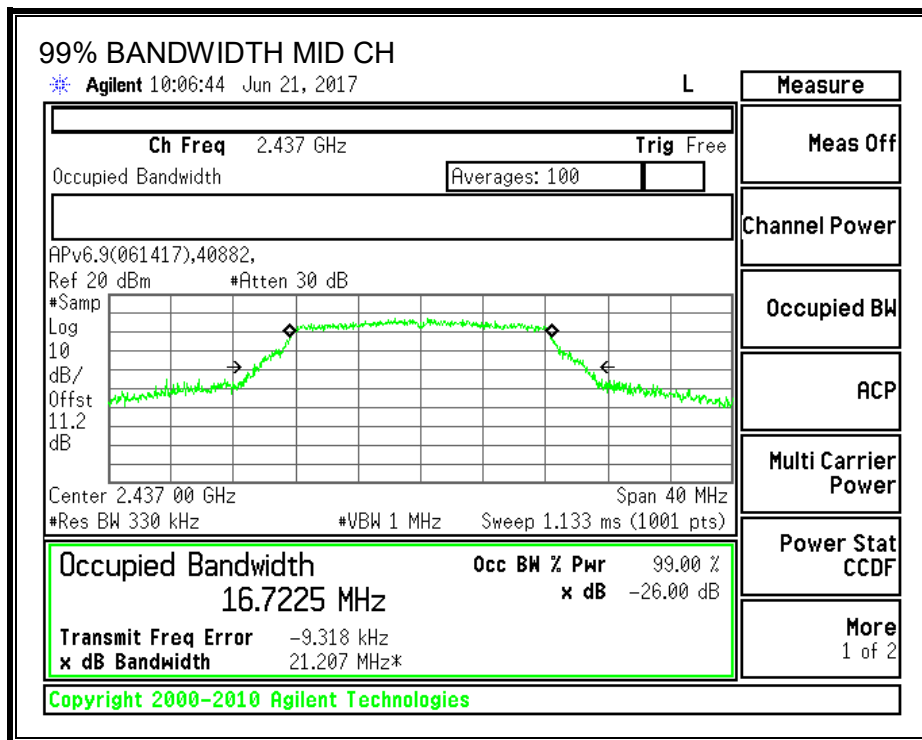
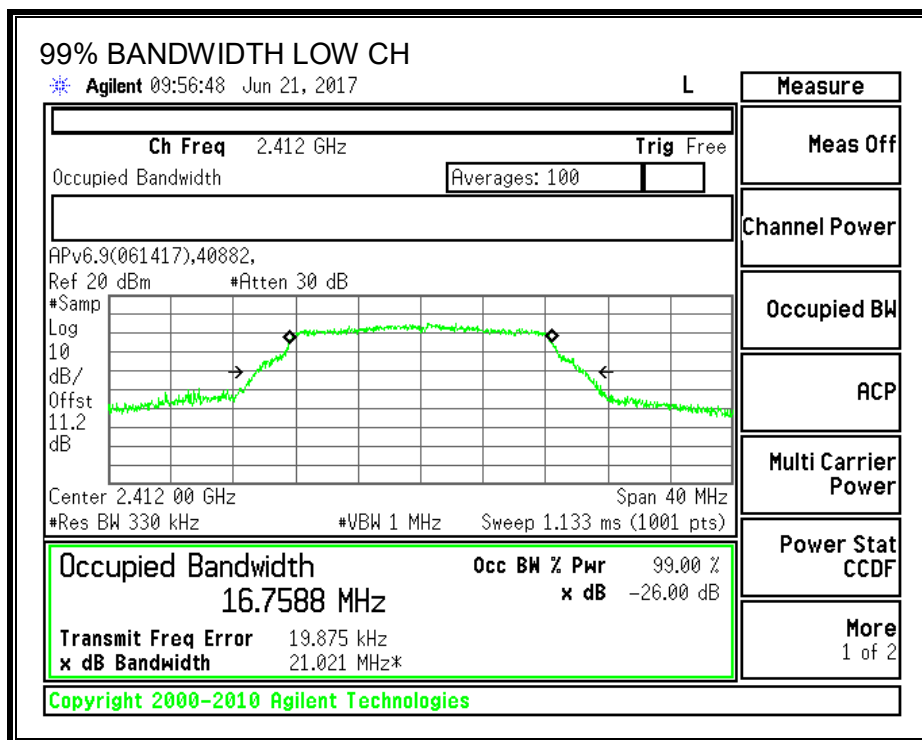
TEST PROCEDURE

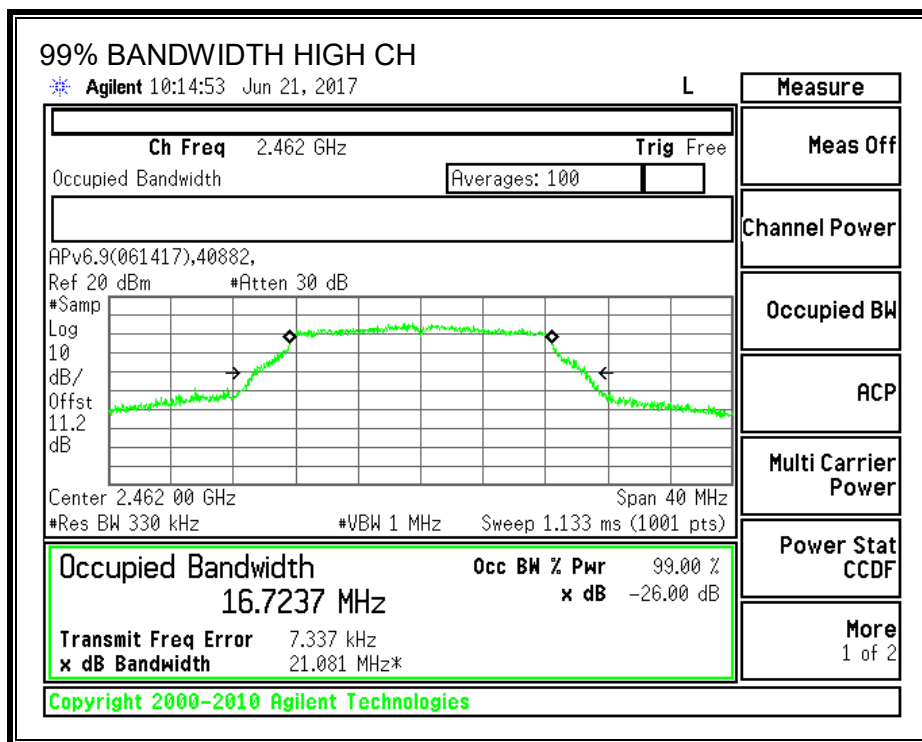
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.759
Middle	2437	16.723
High	2462	16.733

99% BANDWIDTH





Test Information

Date: 2017-06-21

Tester: Jeffrey Cabrera

8.3.2. OUTPUT POWER LIMITS

FCC §15.247 (b) (3)

IC RSS-247 5.4 (d)

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

Two antennas used for diversity, therefore the directional gain is equal to the antenna gain. Power is a gated measurement.

Limits

Channel	Frequency (MHz)	Directional Gain	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
		ANT 0 (dBi)				
Low	2412	-0.40	30.00	30	36	30.00
Mid	2437	-0.40	30.00	30	36	30.00
High	2462	-0.40	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	ANT 0 Meas Power (dBm)	ANT 0 Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	12.08	12.08	30.00	-17.92
Mid	2437	14.07	14.07	30.00	-15.93
High	2462	14.34	14.34	30.00	-15.66

8.3.3. POWER SPECTRAL DENSITY LIMITS

FCC §15.247 (e)

IC RSS-247 5.2 (b)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

PSD Results

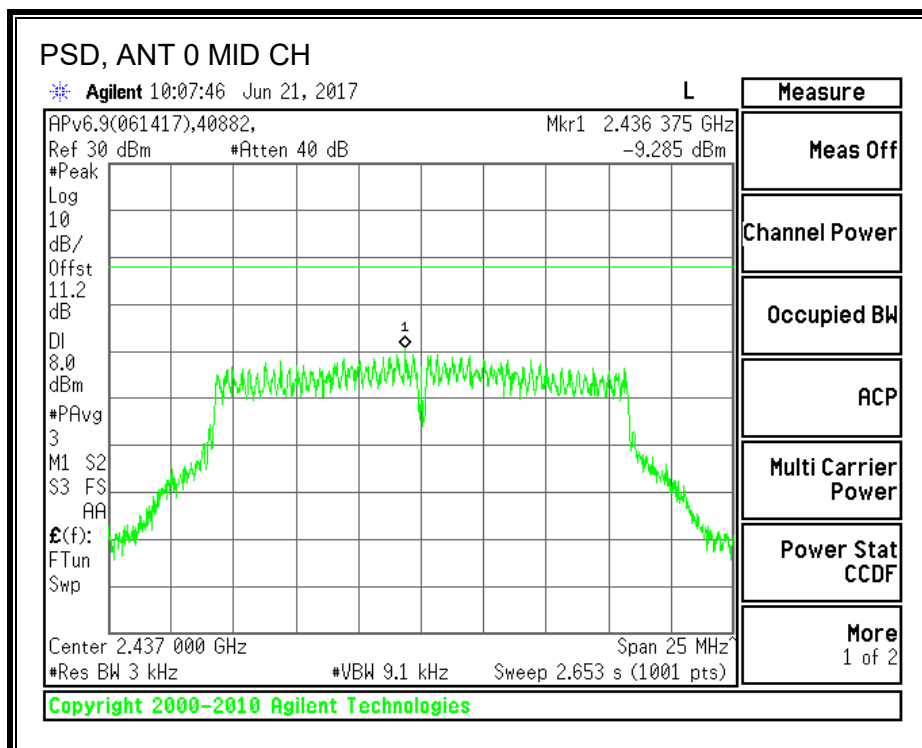
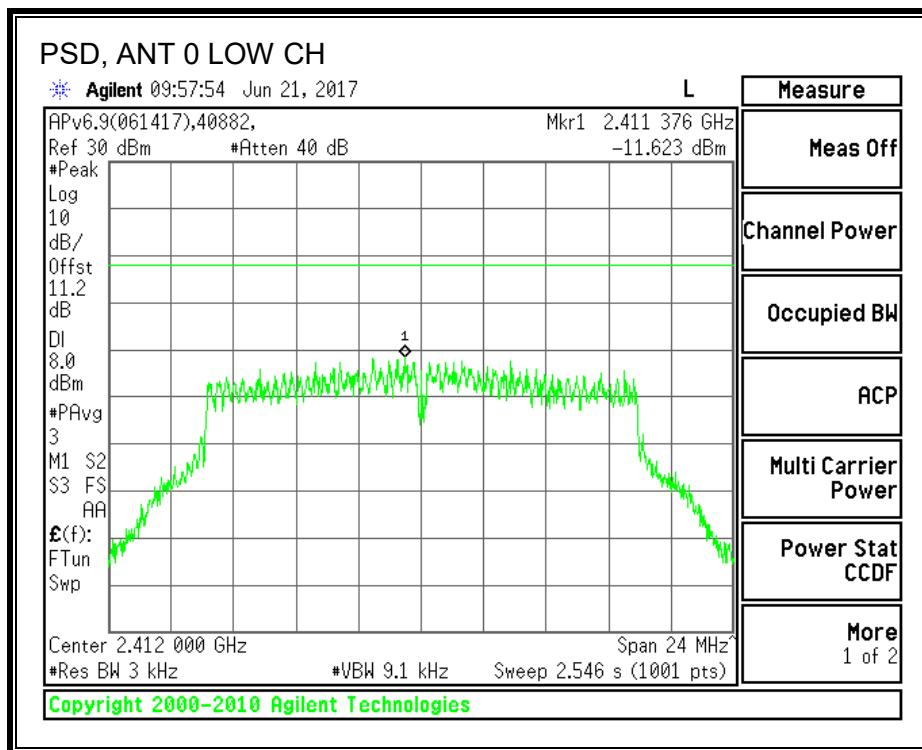
Channel	Frequency (MHz)	ANT 0 Meas (dBm)	Corr'd Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-11.62	-11.62	8.0	-19.6
Mid	2437	-9.29	-9.29	8.0	-17.3
High	2462	-12.27	-12.27	8.0	-20.3

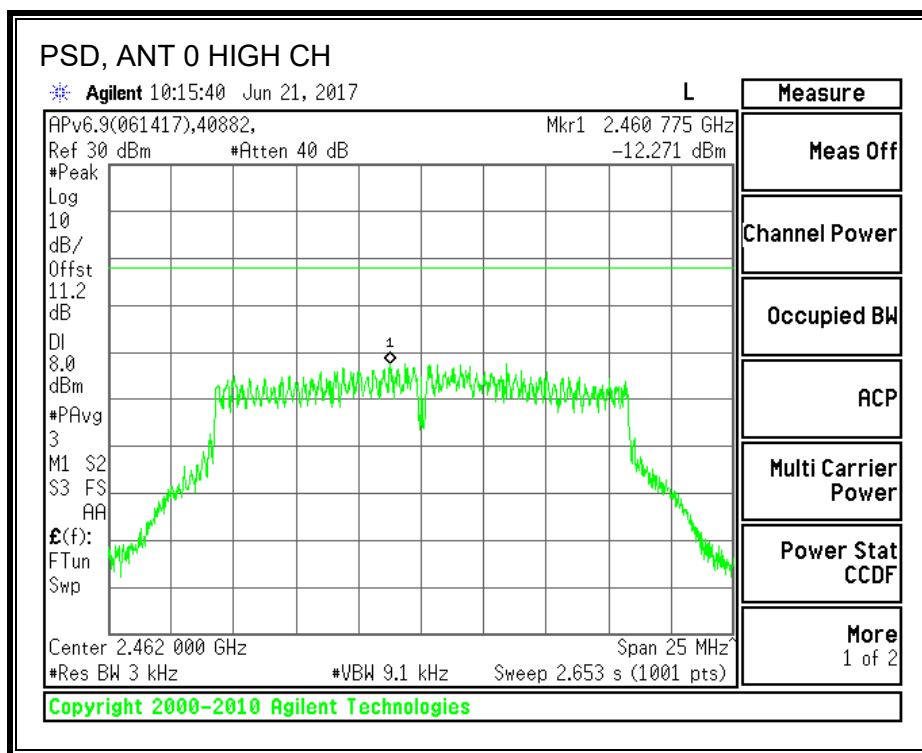
Test Information

Date: 2017-06-21

Tester: Jeffrey Cabrera

PSD, INT A





8.3.4. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-247 5.5

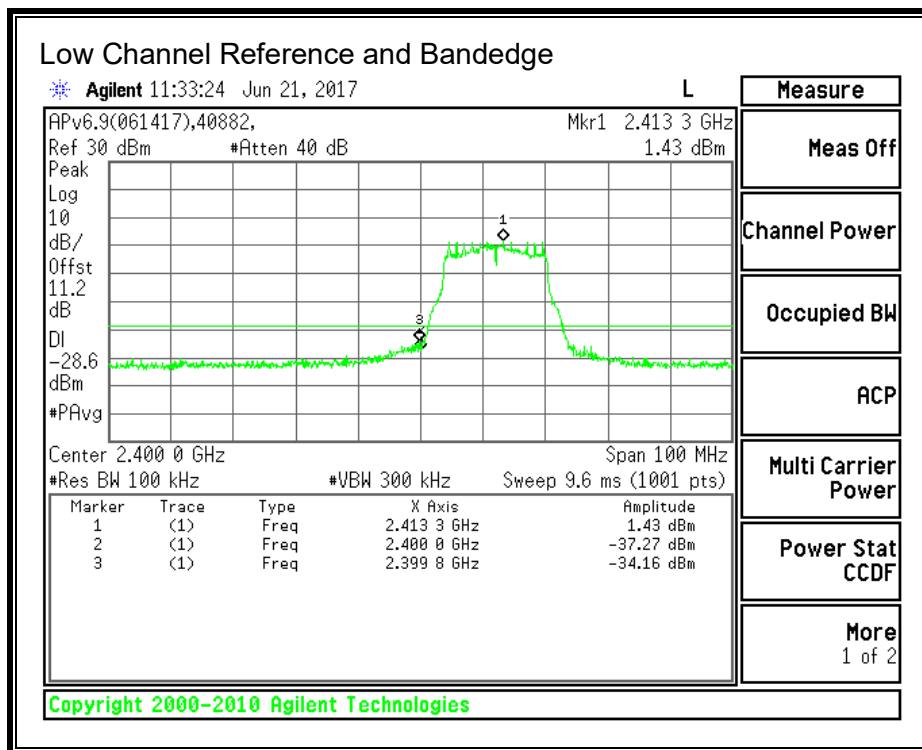
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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 Information

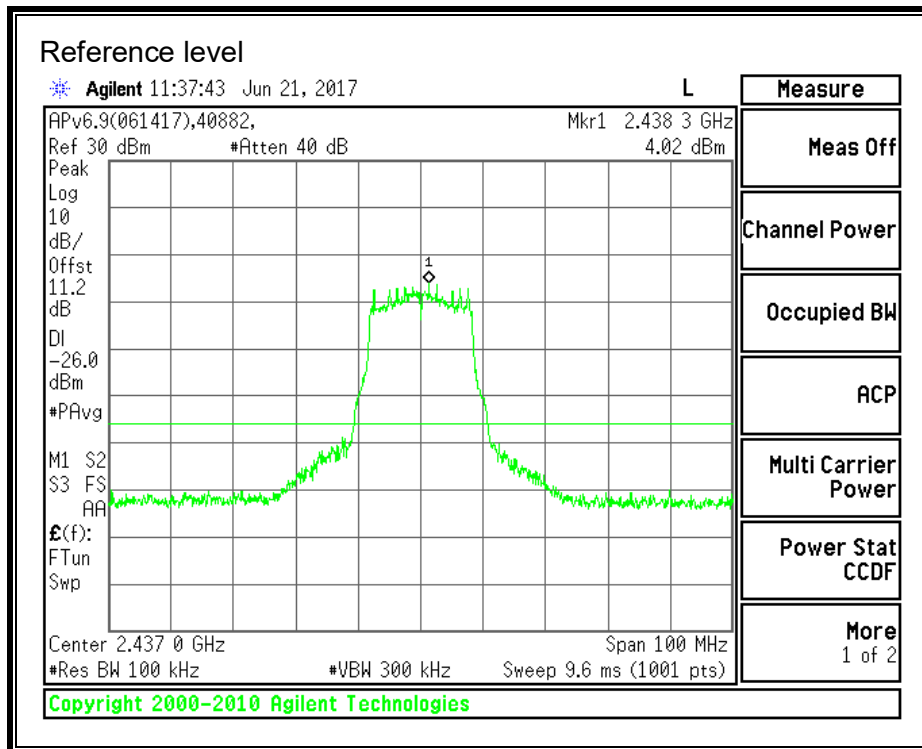
Date: 2017-06-21

Tester: Jeffrey Cabrera

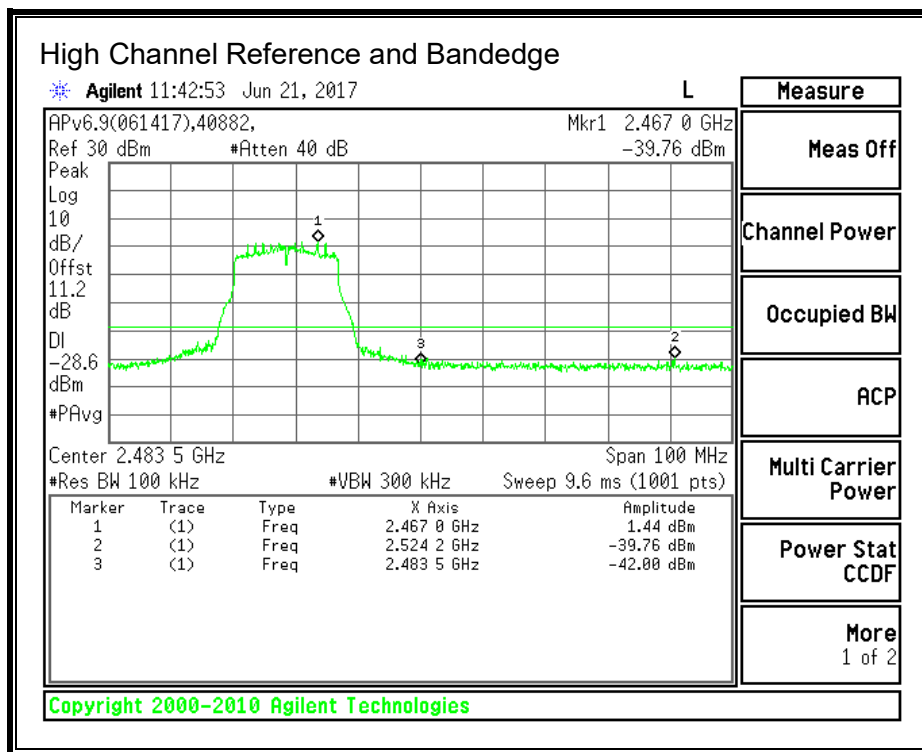
LOW CHANNEL REFERENC AND BANDEDGE, ANT 0



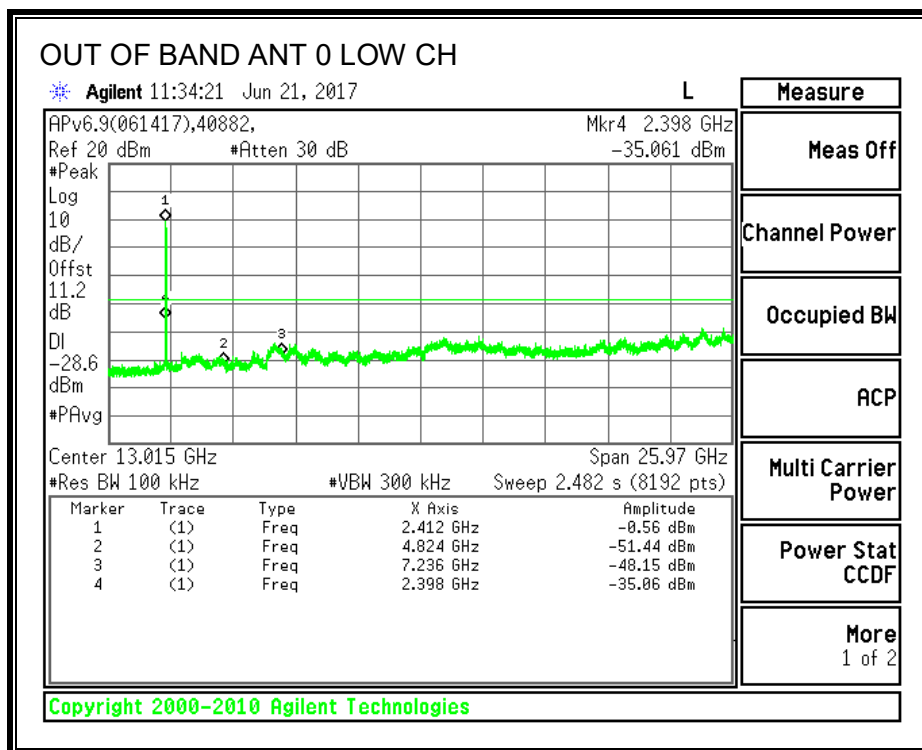
IN-BAND REFERENCE LEVEL, ANT 0

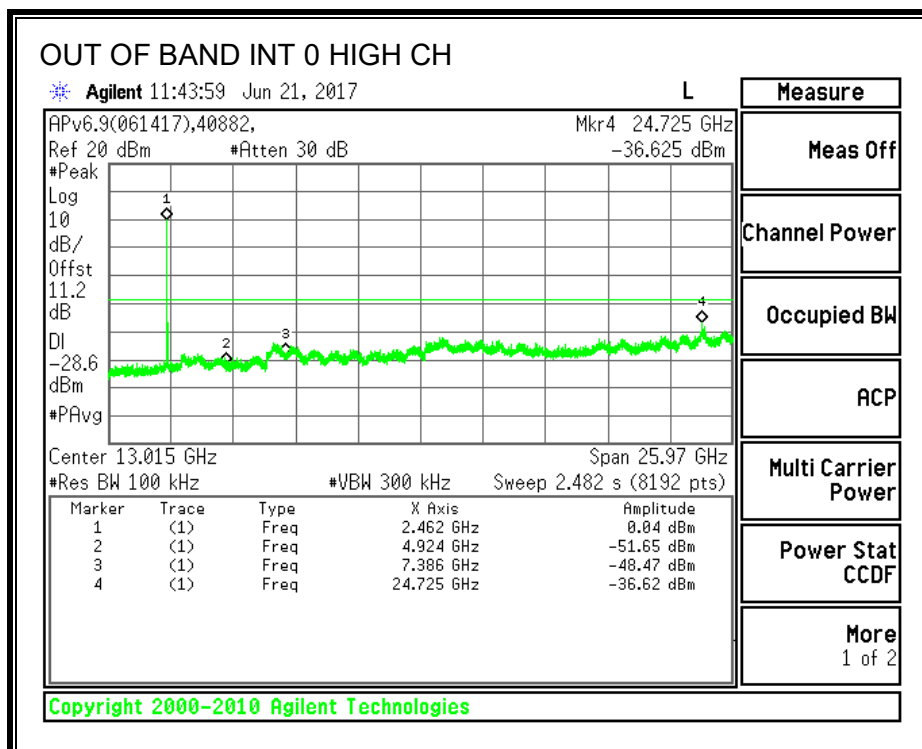
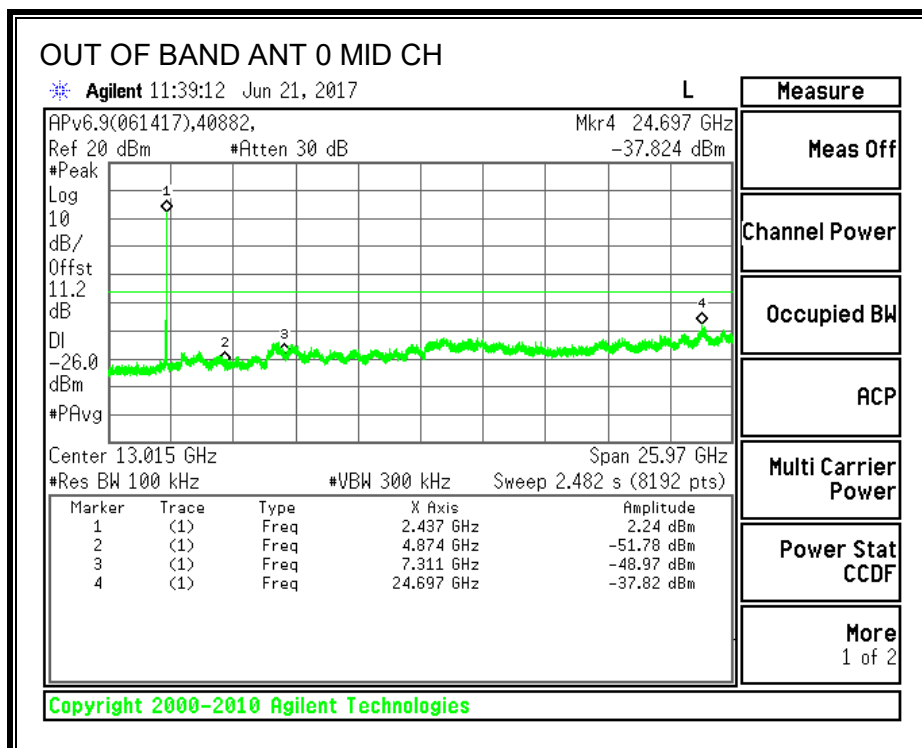


HIGH CHANNEL REFERENCE BANDEDGE, ANT 0



OUT-OF-BAND EMISSIONS, INT 0





8.4. 802.11n HT20 MODE IN THE 2.4 GHz BAND

8.4.1. 6 dB BANDWIDTH LIMITS

FCC §15.247 (a) (2)

IC RSS-247 5.2 (a)

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

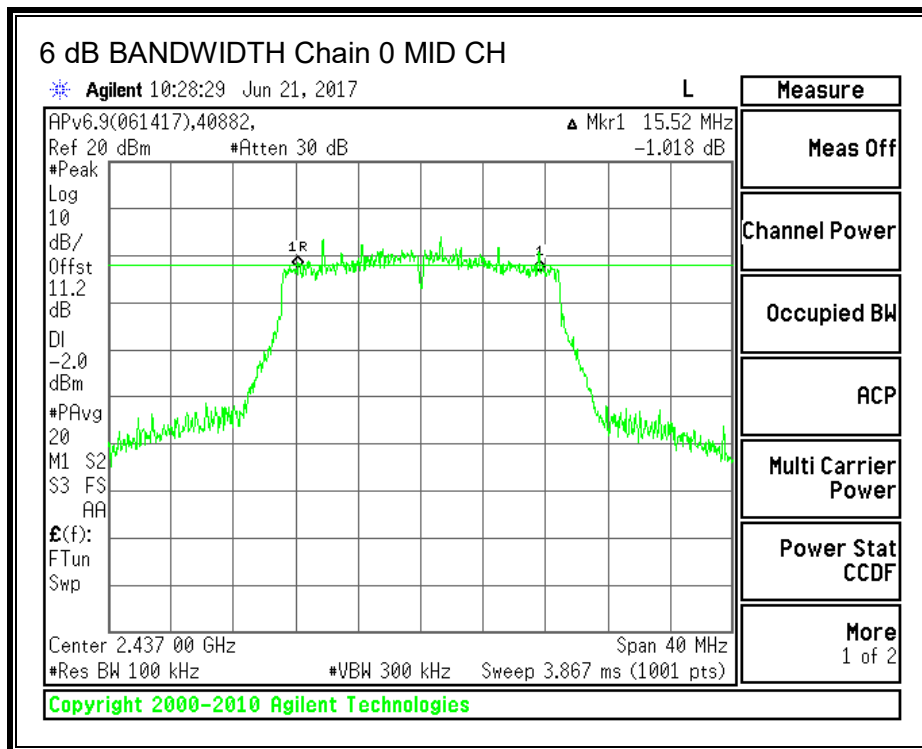
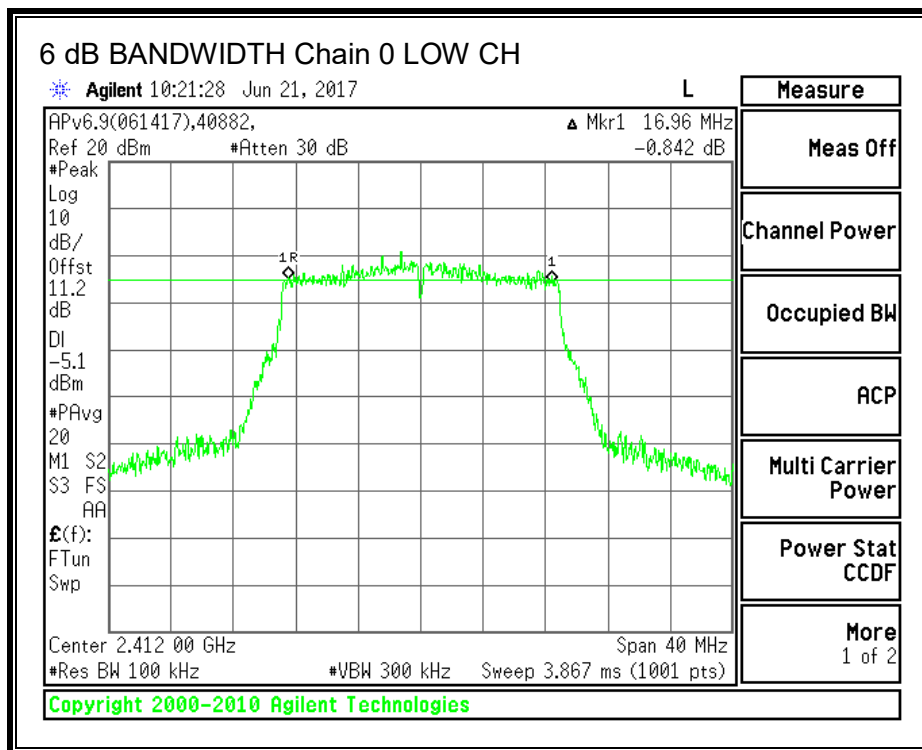
Channel	Frequency (MHz)	6 dB BW ANT 0 (MHz)	Minimum Limit (MHz)
Low	2412	16.960	0.5
Mid	2437	15.520	0.5
High	2462	16.640	0.5

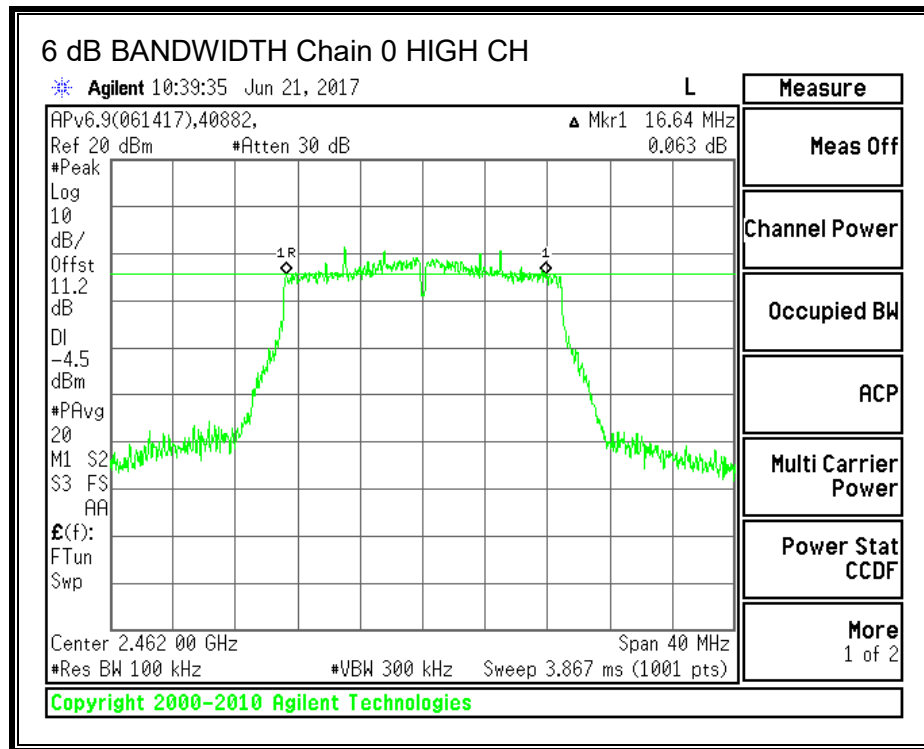
Test Information

Date: 2017-06-21

Tester: Jeffrey Cabrera

6 dB BANDWIDTH, Chain 0





8.4.1. 99% BANDWIDTH LIMITS

None; for reporting purposes only.

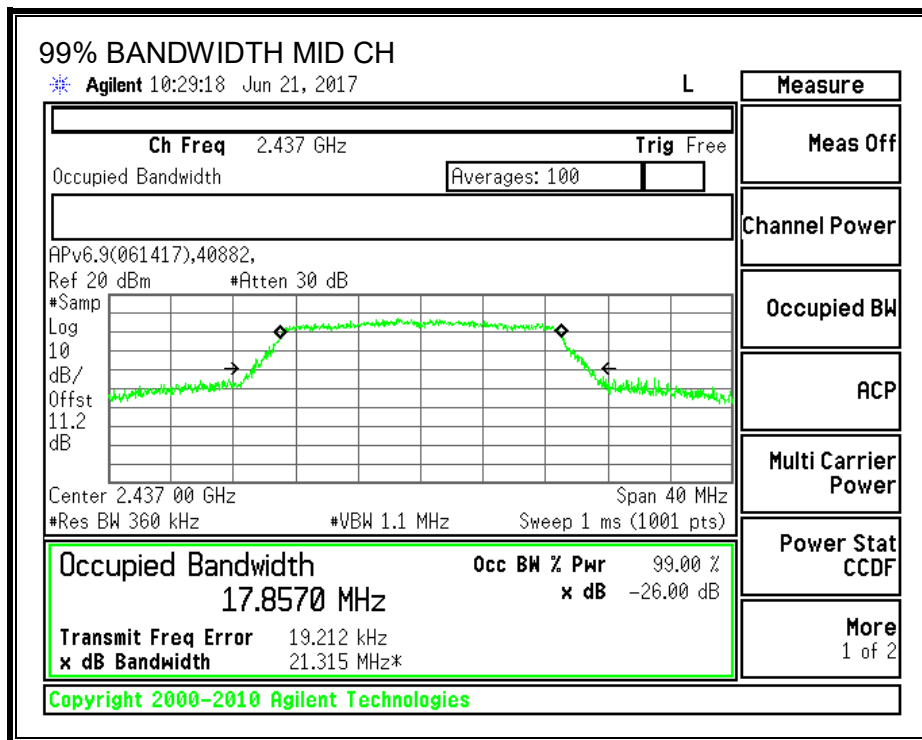
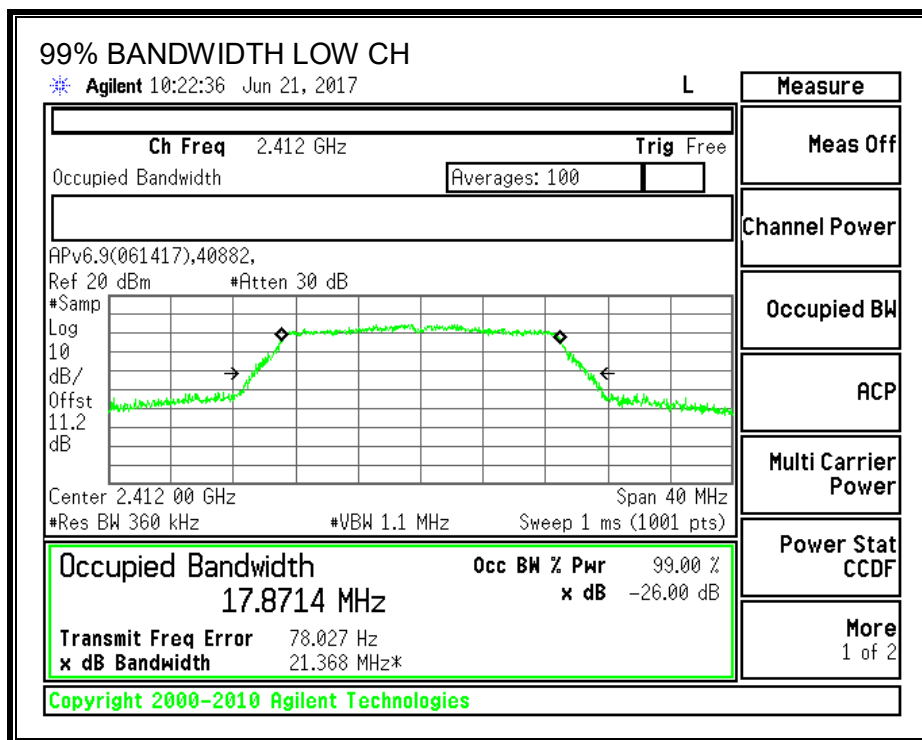
TEST PROCEDURE

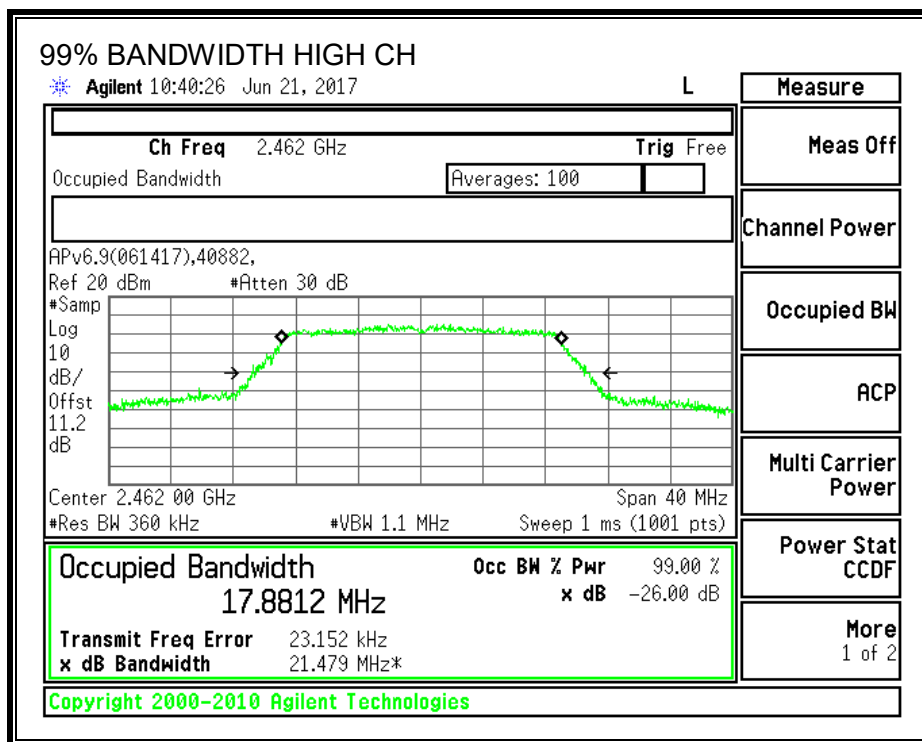
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.871
Middle	2437	17.857
High	2462	17.881

99% BANDWIDTH





Test Information

Date: 2017-06-21

Tester: Jeffrey Cabrera

8.4.2. OUTPUT POWER LIMITS

FCC §15.247 (b) (3)

IC RSS-247 5.4 (d)

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

Two antennas used for diversity, therefore the directional gain is equal to the antenna gain. Power measurement gated.

RESULTS

Limits

Channel	Frequency (MHz)	Directional Gain INT 0 (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-0.40	30	30	36	30.00
Mid	2437	-0.40	30	30	36	30.00
High	2462	-0.40	30	30	36	30.00

Results

Channel	Frequency (MHz)	INT 0 Meas Power (dBm)	INT A Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	11.92	11.92	30	-18.08
Mid	2437	13.73	13.73	30	-16.27
High	2462	11.76	11.76	30	-18.24

8.4.3. POWER SPECTRAL DENSITY LIMITS

FCC §15.247 (e)

IC RSS-247 5.2 (b)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

PSD Results

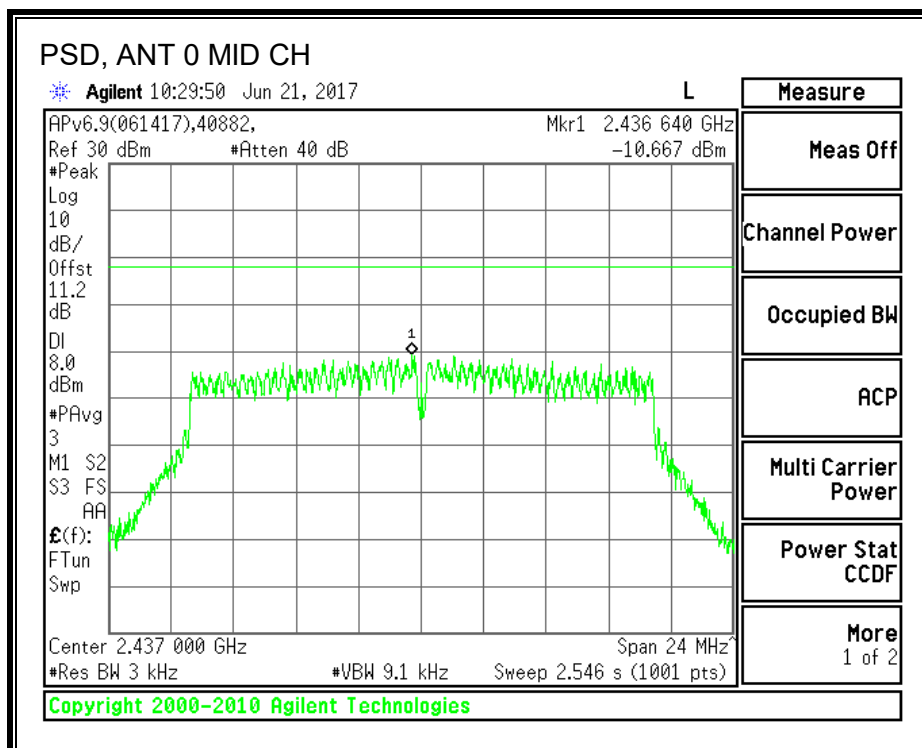
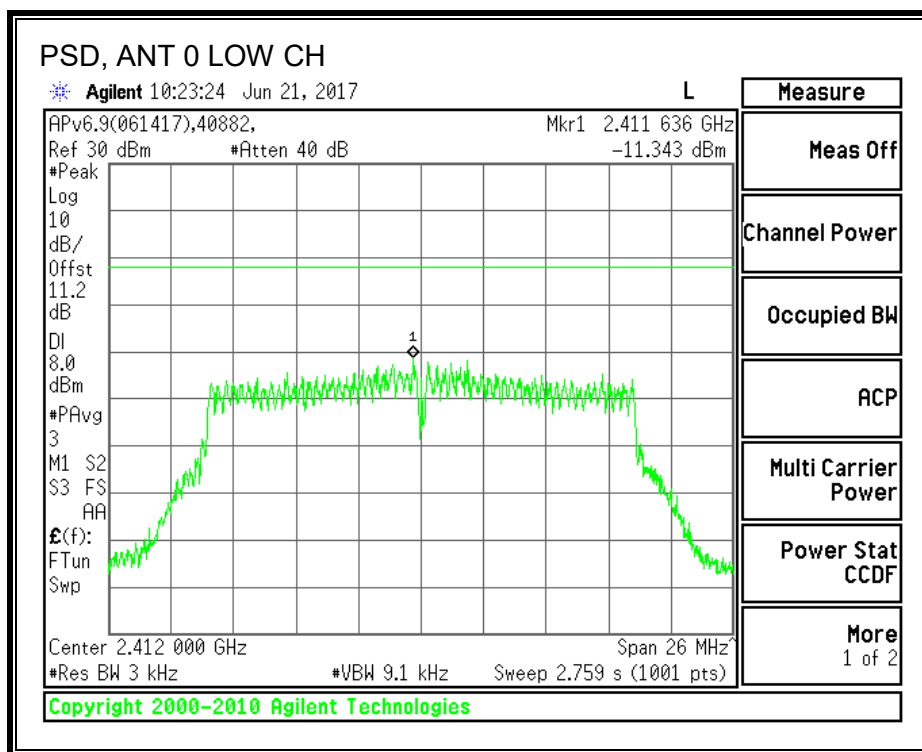
Channel	Frequency (MHz)	INT 0 Meas (dBm)	Corr'd Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-11.34	-11.34	8.0	-19.3
Mid	2437	-10.67	-10.67	8.0	-18.7
High	2462	-12.92	-12.92	8.0	-20.9

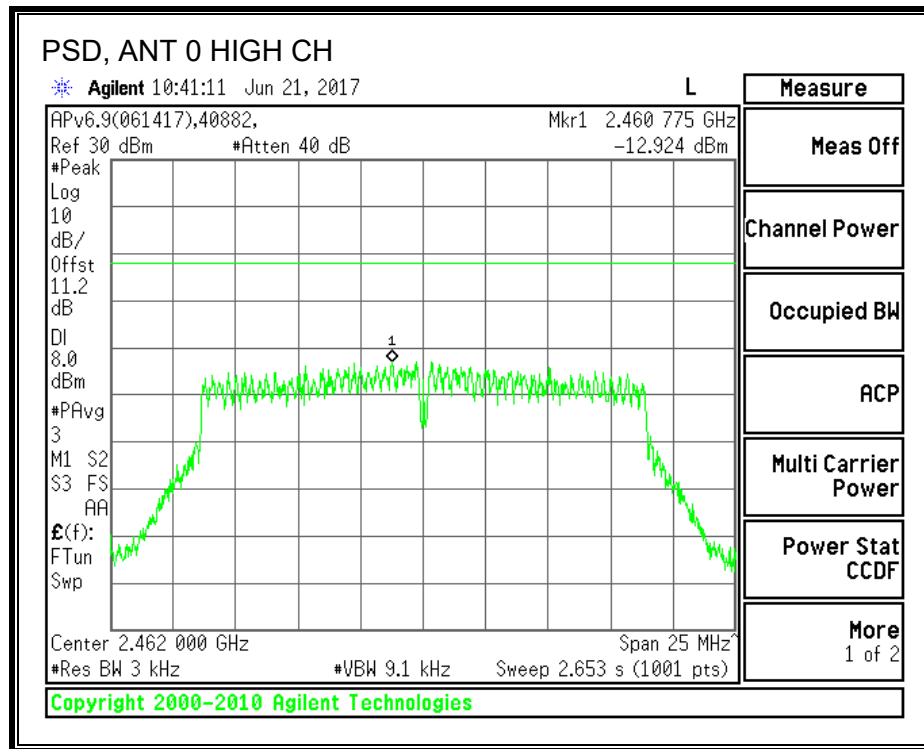
Test Information

Date: 2017-06-21

Tester: Jeffrey Cabrera

PSD, ANT 0





8.4.4. OUT-OF-BAND EMISSIONS LIMITS

FCC §15.247 (d)

IC RSS-247 5.5

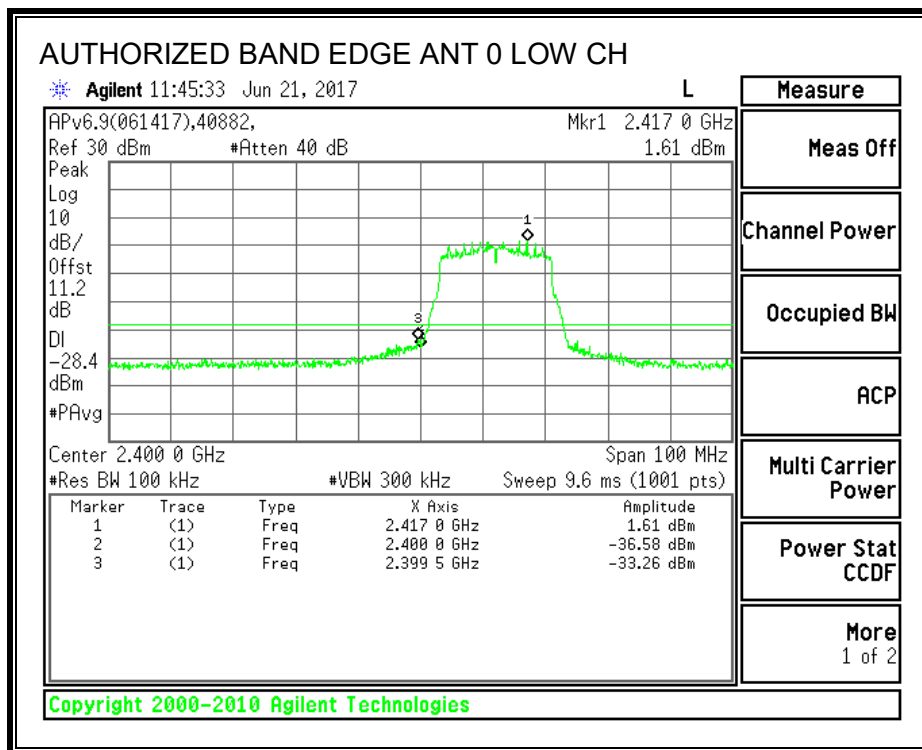
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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 Information

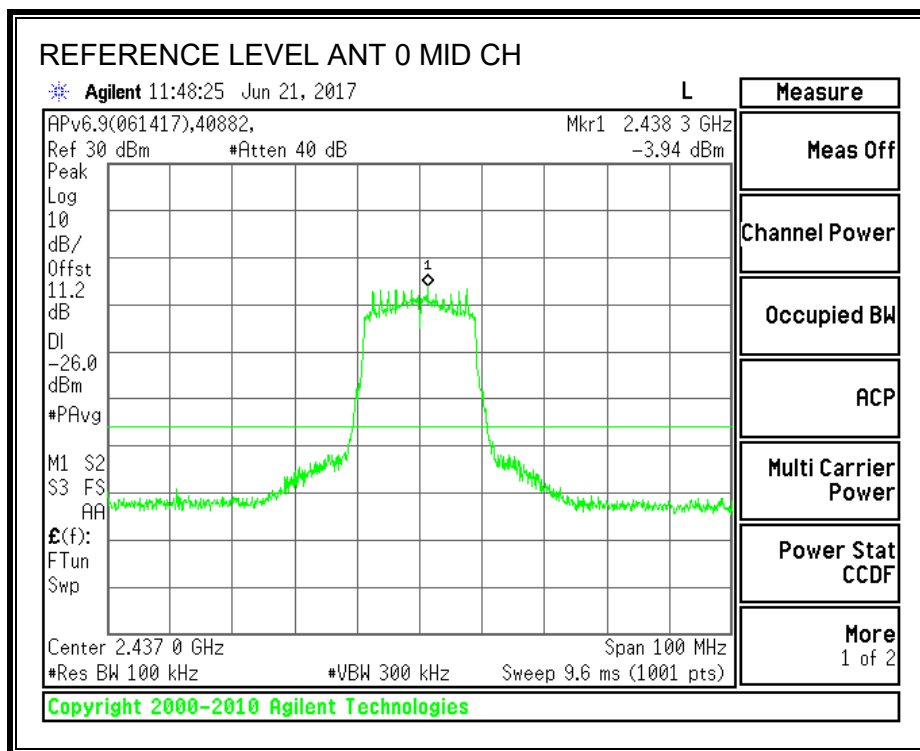
Date: 2017-06-21

Tester: Jeffrey Cabrera

LOW CHANNEL BANDEDGE, ANT 0

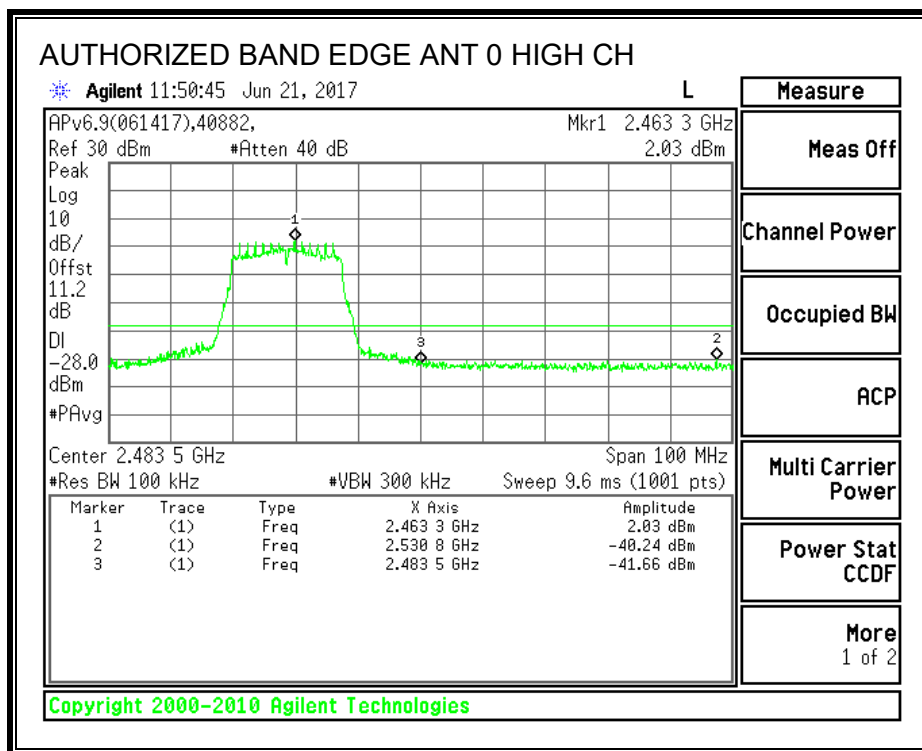


IN-BAND REFERENCE LEVEL, ANT 0

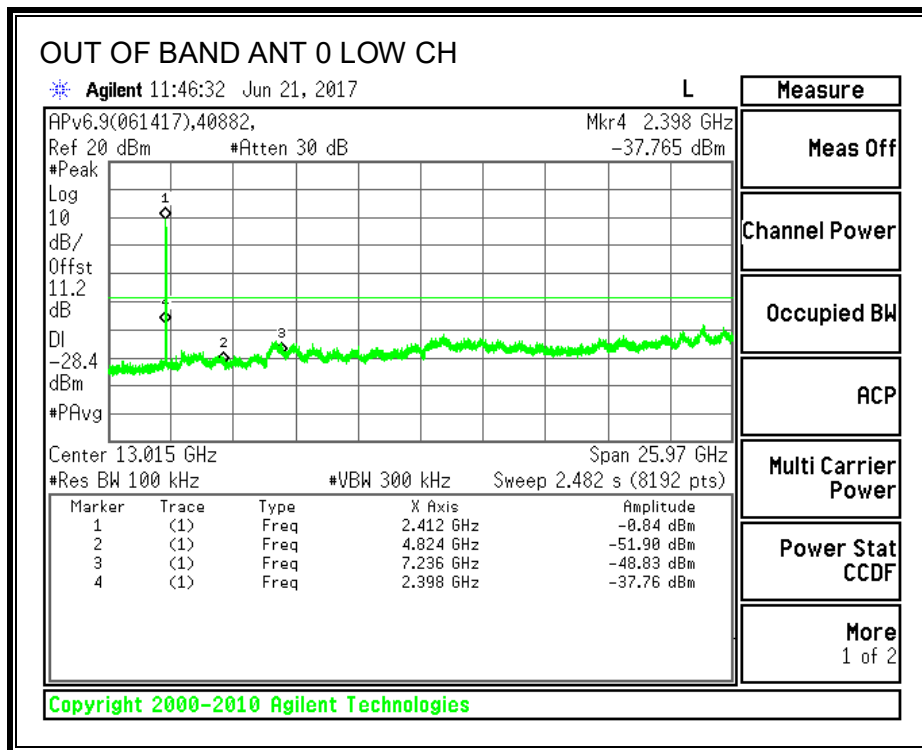


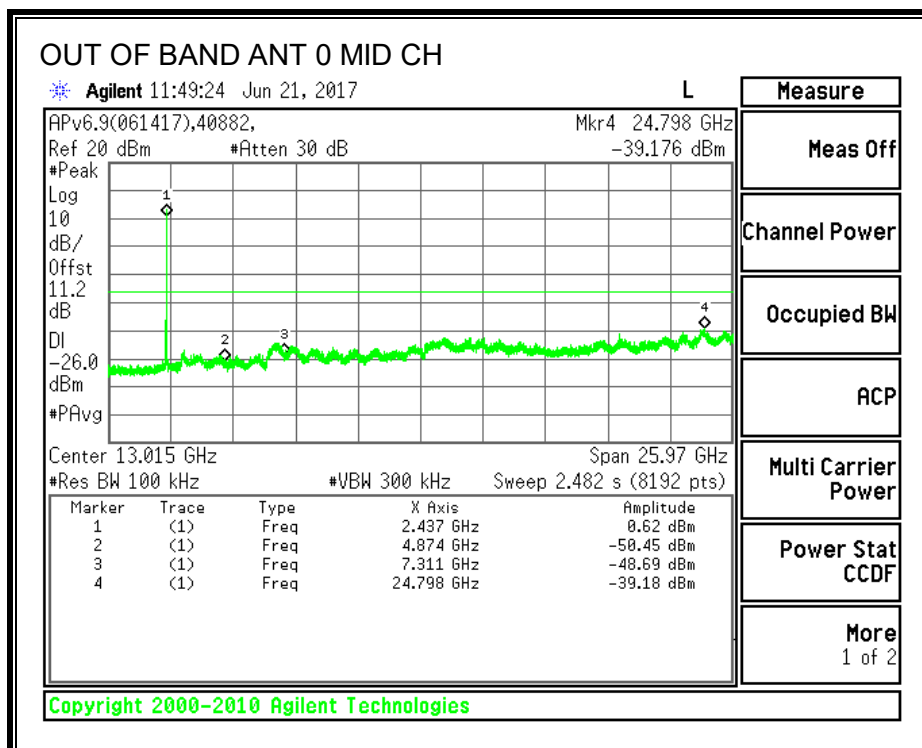
Note: The calculated limit should be -33.9dBm NOT -26dBm.

HIGH CHANNEL BANDEDGE, ANT 0

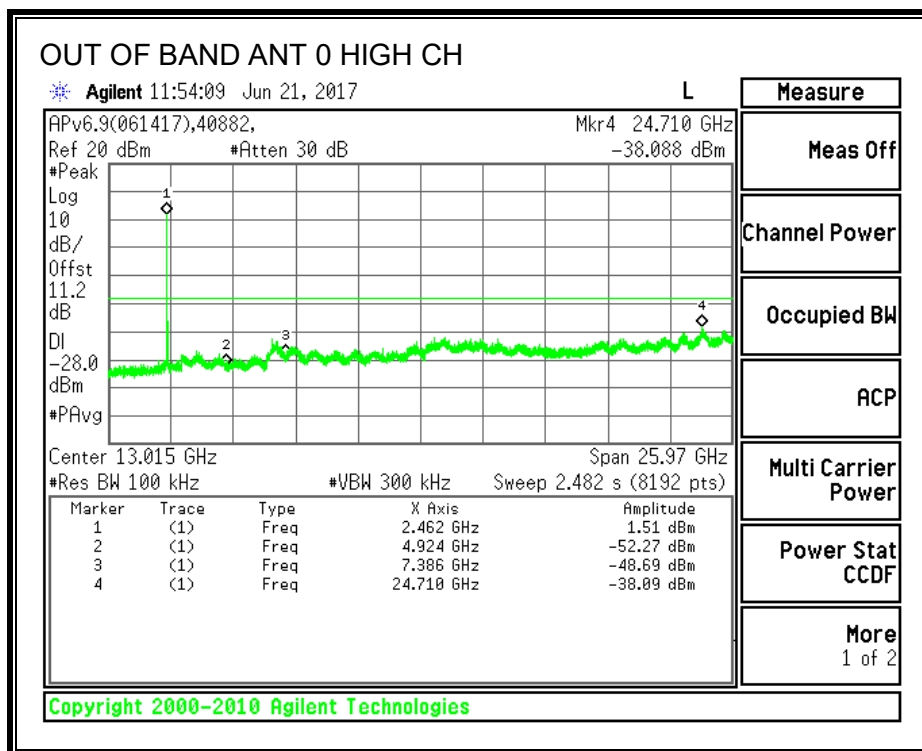


OUT-OF-BAND EMISSIONS, ANT 0





Note: The calculated limit should be -33.9dBm NOT -26dBm.



9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE LIMITS

FCC §15.205 and §15.209
IC RSS-GEN Clause 8.9

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz measurements and 1.5 m above the ground plane for above 1GHz measurements. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements for the 30-1000 MHz range, 9 kHz for peak detection measurements or 9 kHz for quasi-peak detection measurements for the 0.15-30 MHz range and 200 Hz for peak detection measurements or 200 Hz for quasi-peak detection measurements for the 9 to 150 kHz range. Peak detection is used unless otherwise noted as quasi-peak.

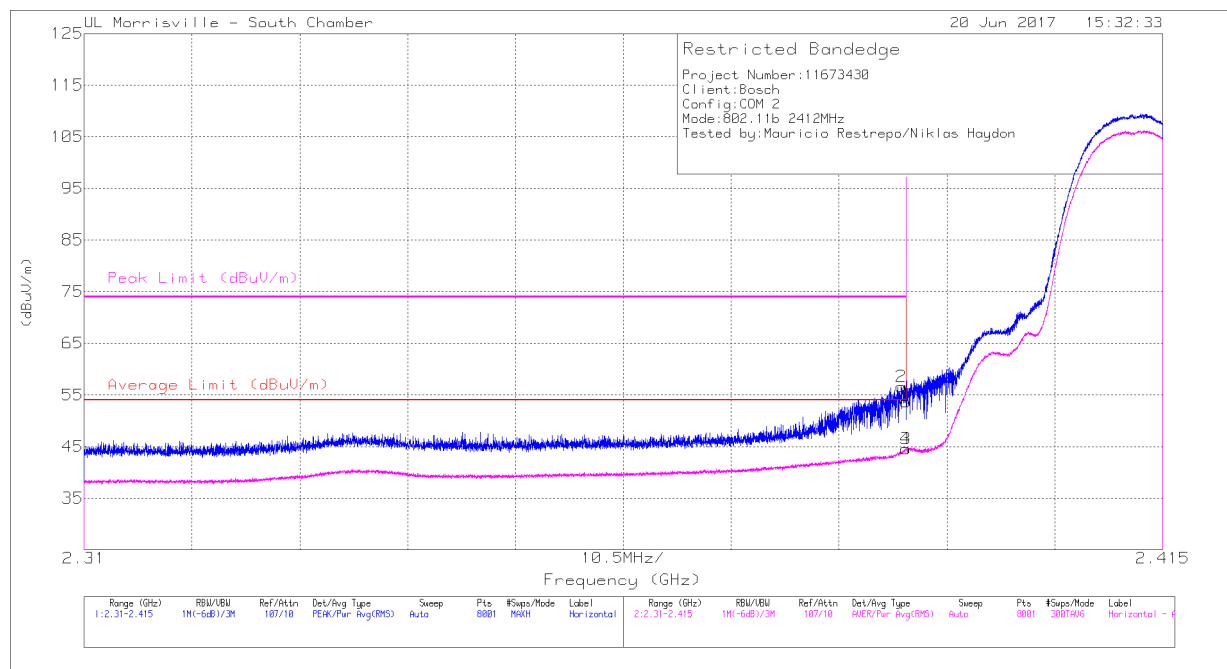
For peak measurements above 1 GHz, the resolution bandwidth is set to 1 MHz and the video bandwidth is set to 3 MHz. For average measurements above 1GHz, the resolution bandwidth and video bandwidth are set as described in ANSI C63.10:2013 for the applicable measurement. The particular averaging method used for this test program was by RMS Averaging.

The spectrum from 1 to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. For below 1GHz and above 18 GHz, the worst-case channel was measured.

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

9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL INTERNAL CHAIN 0)

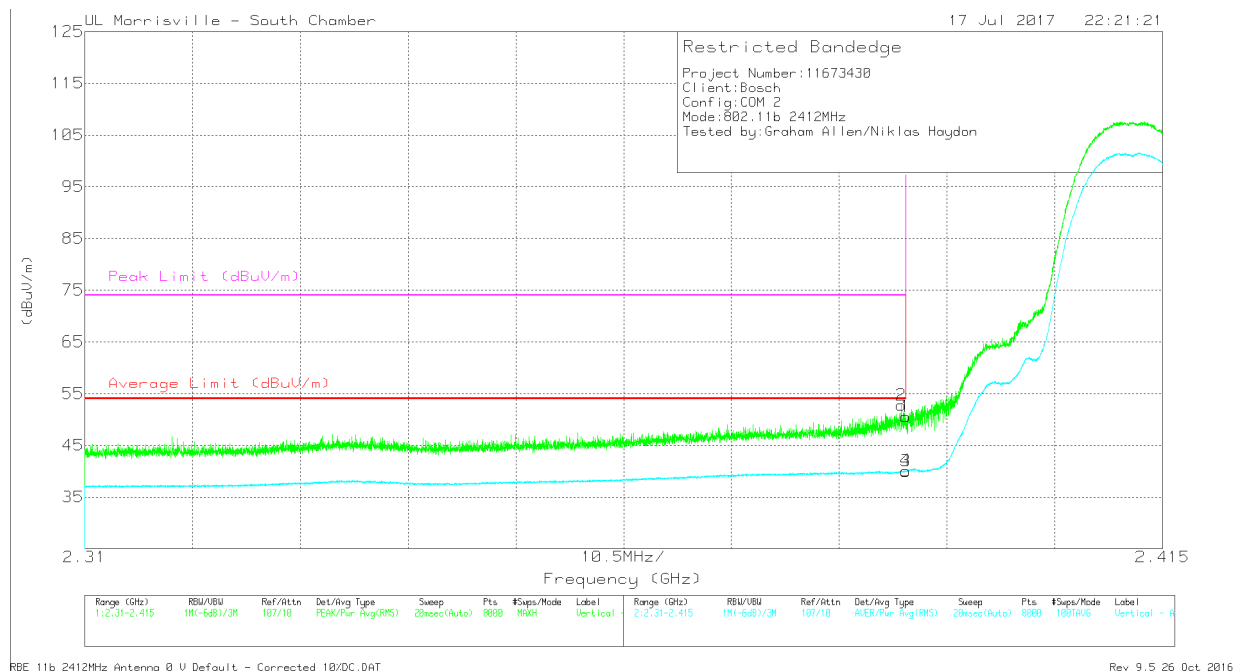


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	45.88	Pk	31.9	-24.1	0	53.68	-	-	74	-20.32	174	128	H
2	* 2.39	48.78	Pk	31.9	-24.1	0	56.58	-	-	74	-17.42	174	128	H
3	* 2.39	32.69	RMS	31.9	-24.1	4.07	44.56	54	-9.44	-	-	174	128	H
4	* 2.39	32.67	RMS	31.9	-24.1	4.07	44.54	54	-9.46	-	-	174	128	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



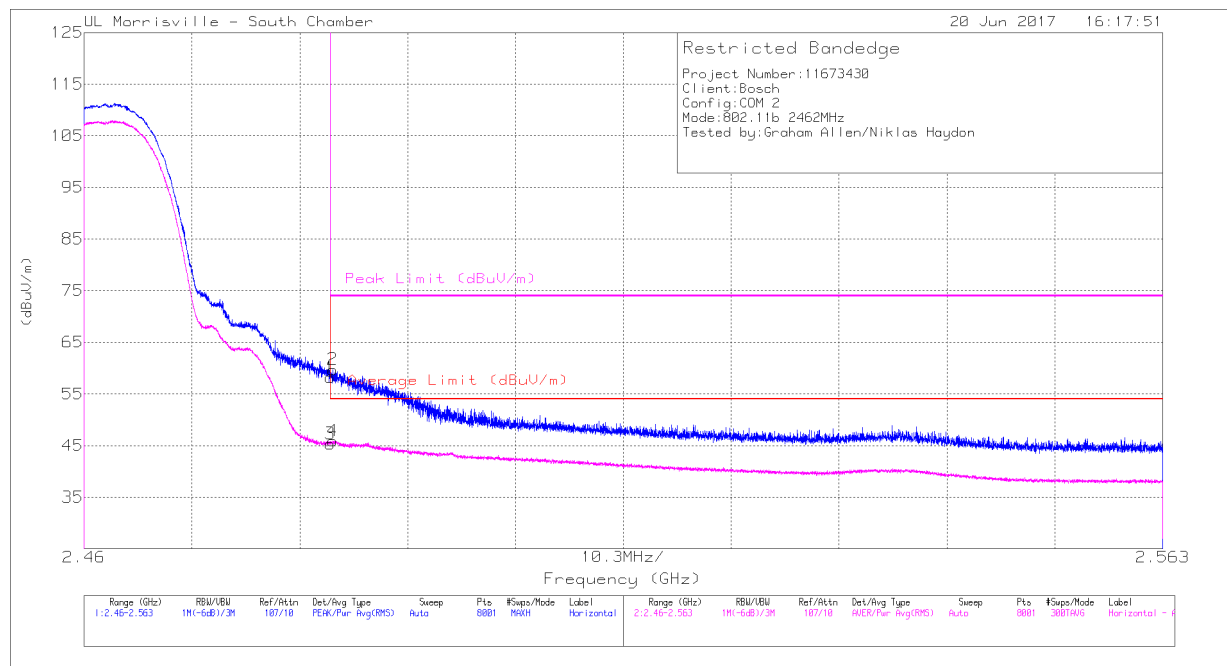
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	42.75	Pk	31.9	-24.1	0	50.55	-	-	74	-23.45	132	259	V
2	* 2.39	44.94	Pk	31.9	-24.1	0	52.74	-	-	74	-21.26	132	259	V
3	* 2.39	28.12	RMS	31.9	-24.1	4.07	39.99	54	-14.01	-	-	132	259	V
4	* 2.39	28.21	RMS	31.9	-24.1	4.07	40.08	54	-13.92	-	-	132	259	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL INTERNAL CHAIN 0)

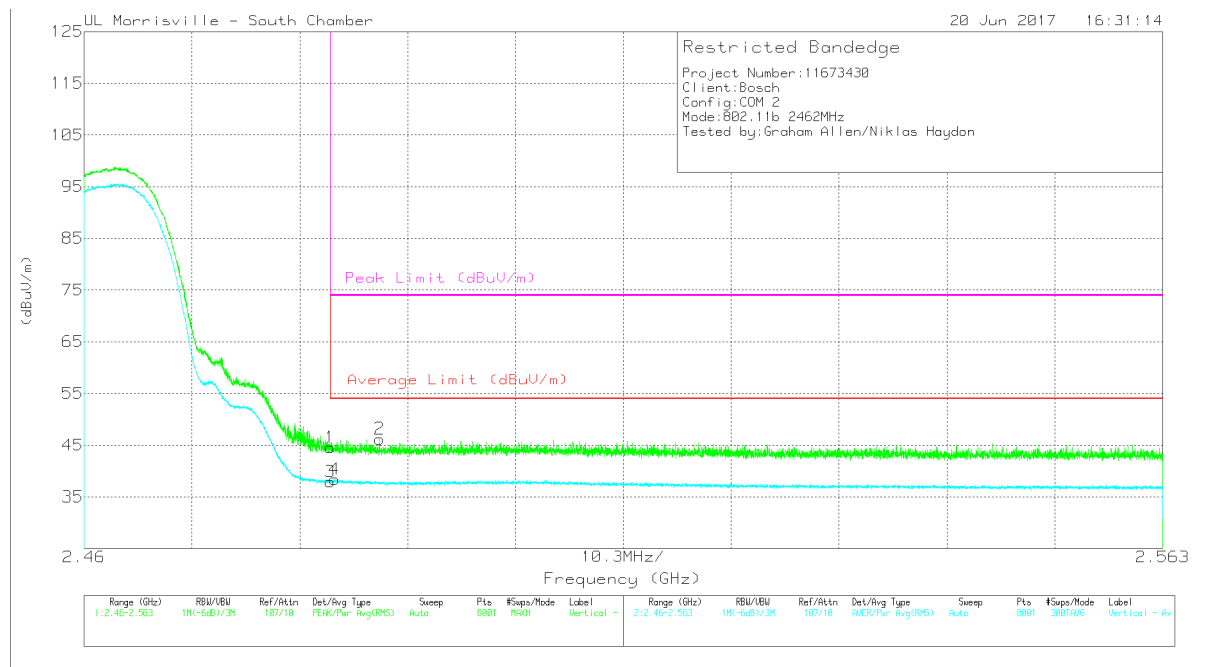


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	50.44	Pk	32.4	-24.6	0	58.24	-	-	74	-15.76	163	182	H
2	* 2.484	51.94	Pk	32.4	-24.6	0	59.74	-	-	74	-14.26	163	182	H
3	* 2.484	33.45	RMS	32.4	-24.6	4.07	45.32	54	-8.68	-	-	163	182	H
4	* 2.484	34.05	RMS	32.4	-24.6	4.07	45.92	54	-8.08	-	-	163	182	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



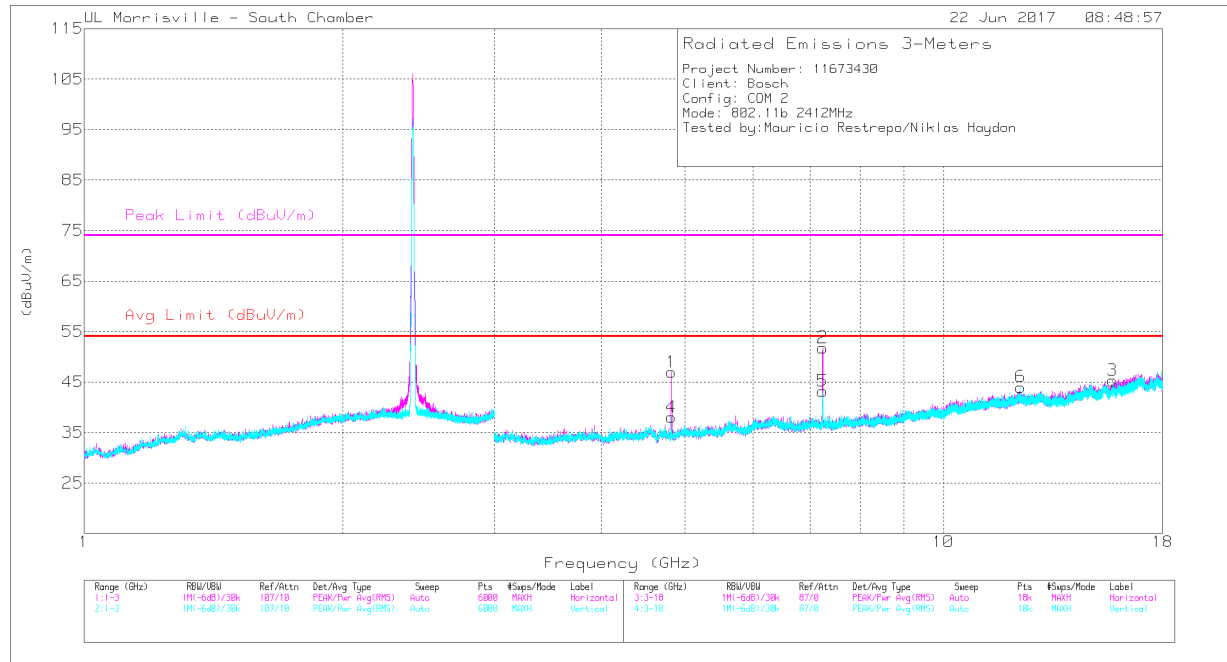
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	36.73	Pk	32.4	-24.6	0	44.53	-	-	74	-29.47	1	237	V
2	* 2.488	38.41	Pk	32.4	-24.6	0	46.21	-	-	74	-27.79	1	237	V
3	* 2.484	26.06	RMS	32.4	-24.6	4.07	37.93	54	-16.07	-	-	1	237	V
4	* 2.484	26.53	RMS	32.4	-24.6	4.07	38.4	54	-15.6	-	-	1	237	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (INTERNAL CHAIN 0)



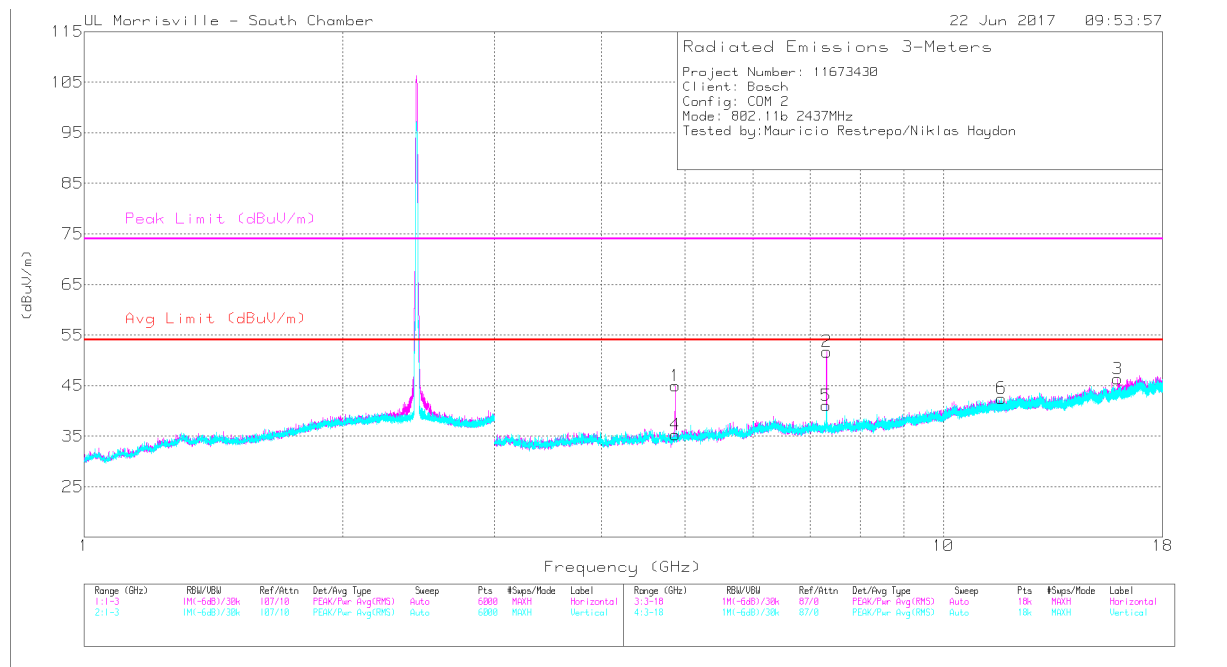
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.824	47.93	PK2	34	-31.1	0	50.83	-	-	74	-23.17	355	102	H
	* 4.824	38.26	MAv1	34	-31.1	4.07	45.23	54	-8.77	-	-	355	102	H
3	* 15.737	35.13	PK2	40.3	-23.3	0	52.13	-	-	74	-21.87	235	322	H
	* 15.737	22.49	MAv1	40.3	-23.3	4.07	43.56	54	-10.44	-	-	235	322	H
4	* 4.824	44.12	PK2	34	-31.1	0	47.02	-	-	74	-26.98	285	249	V
	* 4.824	33.45	MAv1	34	-31.1	4.07	40.42	54	-13.58	-	-	285	249	V
6	* 12.311	34.36	PK2	38.9	-24.6	0	48.66	-	-	74	-25.34	272	279	V
	* 12.313	22.86	MAv1	38.9	-24.6	4.07	41.23	54	-12.77	-	-	272	279	V
5	7.236	35.79	Pk	35.5	-28.1	0	43.19	-	-	-	-	0-360	101	V
2	7.237	44.4	Pk	35.5	-28.1	0	51.8	-	-	-	-	0-360	101	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

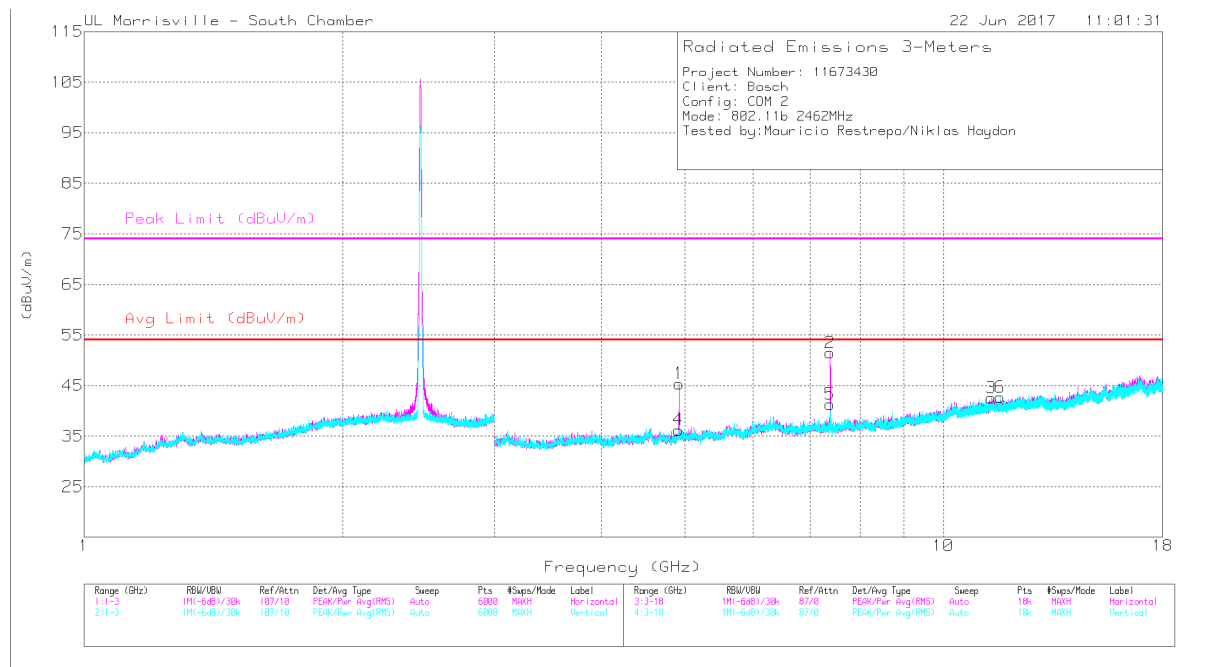


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.874	47.31	PK2	34	-31.1	0	50.21	-	-	74	-23.79	356	102	H
	* 4.874	37.64	MAv1	34	-31.1	4.07	44.61	54	-9.39	-	-	356	102	H
2	* 7.311	51.27	PK2	35.5	-27.9	0	58.87	-	-	74	-15.13	338	109	H
	* 7.312	40.44	MAv1	35.5	-27.9	4.07	52.11	54	-1.89	-	-	338	109	H
3	* 15.946	34.83	PK2	40.5	-24.2	0	51.13	-	-	74	-22.87	266	246	H
	* 15.947	23.29	MAv1	40.5	-24.2	4.07	43.66	54	-10.34	-	-	266	246	H
4	* 4.874	42.55	PK2	34	-31.1	0	45.45	-	-	74	-28.55	337	390	V
	* 4.874	30.69	MAv1	34	-31.1	4.07	37.66	54	-16.34	-	-	337	390	V
5	* 7.309	41.8	PK2	35.5	-27.9	0	49.4	-	-	74	-24.6	268	378	V
	* 7.31	31.59	MAv1	35.5	-27.9	4.07	43.26	54	-10.74	-	-	268	378	V
6	* 11.684	34.32	PK2	38.4	-24.6	0	48.12	-	-	74	-25.88	127	343	V
	* 11.683	22.58	MAv1	38.4	-24.6	4.07	40.45	54	-13.55	-	-	127	343	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average



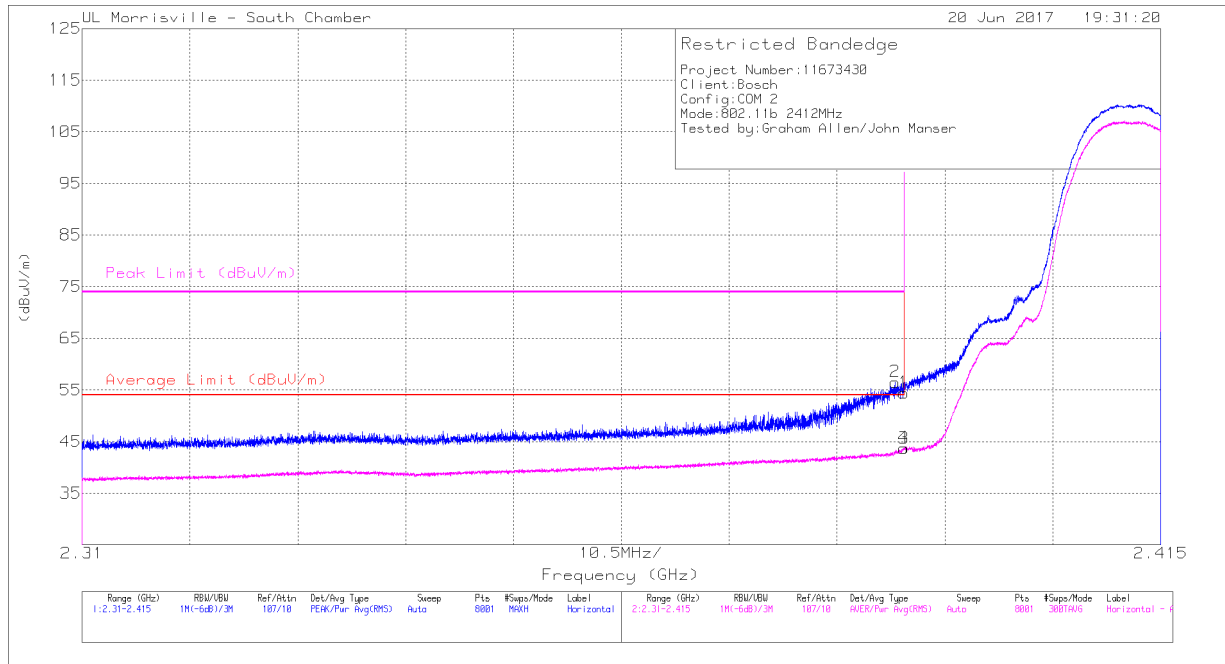
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1	* 4.924	46.39	PK2	34	-31.1	0	49.29	-	-	74	-24.71	357	117	H
	* 4.924	36.61	MAv1	34	-31.1	4.07	43.58	54	-10.42	-	-	357	117	H
2	* 7.386	50.49	PK2	35.5	-27.9	0	58.09	-	-	74	-15.91	336	108	H
	* 7.385	39.72	MAv1	35.5	-27.9	4.07	51.39	54	-2.61	-	-	336	108	H
3	* 11.374	33.63	PK2	38.1	-23.7	0	48.03	-	-	74	-25.97	223	258	H
	* 11.374	22.08	MAv1	38.1	-23.7	4.07	40.55	54	-13.45	-	-	223	258	H
4	* 4.923	40.93	PK2	34	-31.1	0	43.83	-	-	74	-30.17	285	241	V
	* 4.923	29.44	MAv1	34	-31.1	4.07	36.41	54	-17.59	-	-	285	241	V
5	* 7.386	41.7	PK2	35.5	-27.9	0	49.3	-	-	74	-24.7	30	386	V
	* 7.387	30.62	MAv1	35.5	-27.9	4.07	42.29	54	-11.71	-	-	30	386	V
6	* 11.64	34.49	PK2	38.4	-24.7	0	48.19	-	-	74	-25.81	321	196	V
	* 11.641	22.63	MAv1	38.4	-24.7	4.07	40.4	54	-13.6	-	-	321	196	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

RESTRICTED BANDEDGE (LOW CHANNEL INTERNAL CHAIN 1)

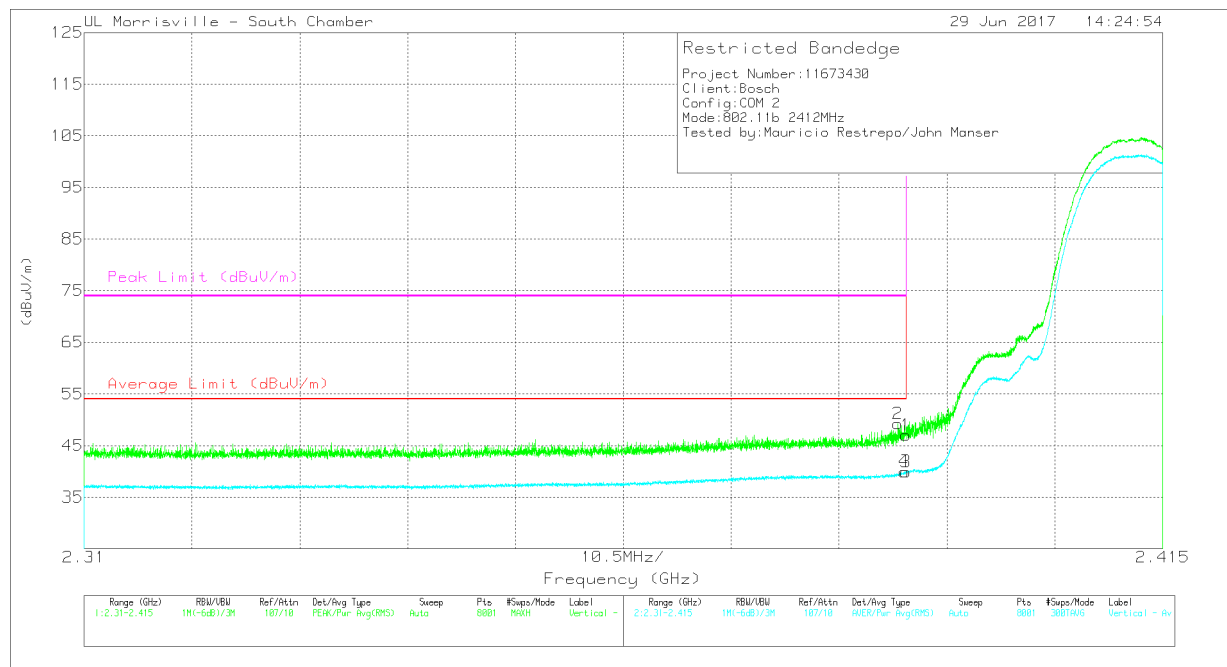


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1	* 2.39	46.66	Pk	31.9	-24.1	0	54.46	-	-	74	-19.54	168	119	H
2	* 2.389	48.75	Pk	31.9	-24.1	0	56.55	-	-	74	-17.45	168	119	H
3	* 2.39	31.79	RMS	31.9	-24.1	4.07	43.66	54	-10.34	-	-	168	119	H
4	* 2.39	31.87	RMS	31.9	-24.1	4.07	43.74	54	-10.26	-	-	168	119	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



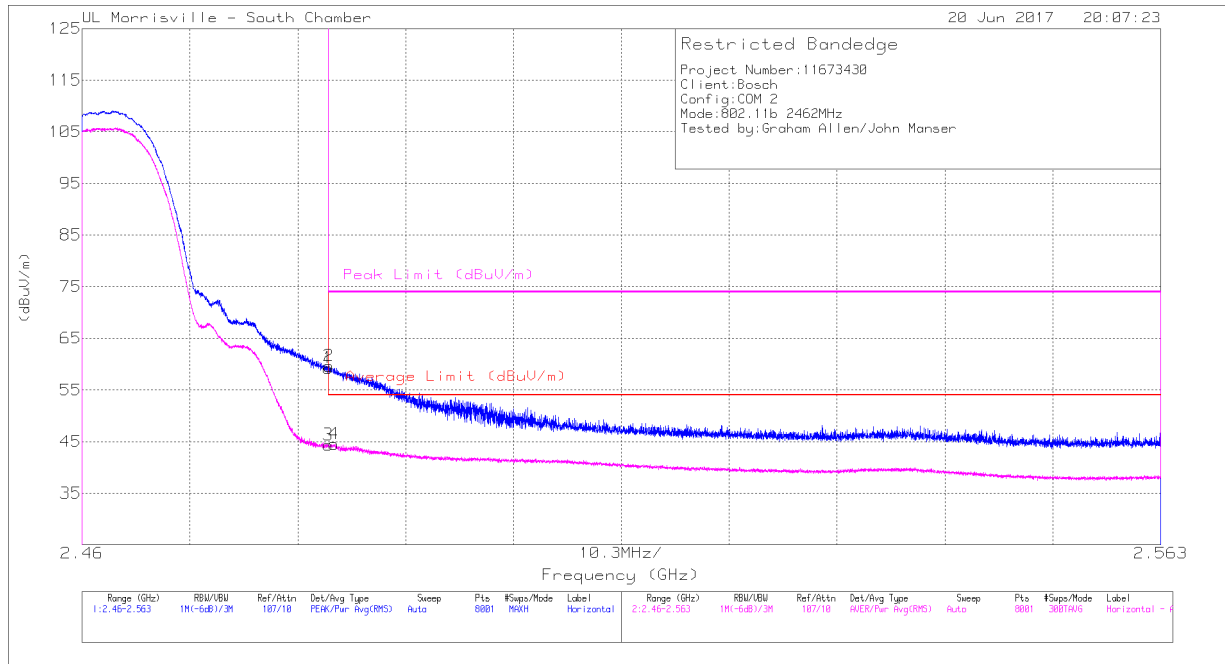
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1	* 2.39	39.22	Pk	31.9	-24.1	0	47.02	-	-	74	-26.98	289	401	V
2	* 2.389	41.46	Pk	31.9	-24.1	0	49.26	-	-	74	-24.74	289	401	V
3	* 2.39	28.04	RMS	31.9	-24.1	4.07	39.91	54	-14.09	-	-	289	401	V
4	* 2.39	28.06	RMS	31.9	-24.1	4.07	39.93	54	-14.07	-	-	289	401	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL INTERNAL CHAIN 1)

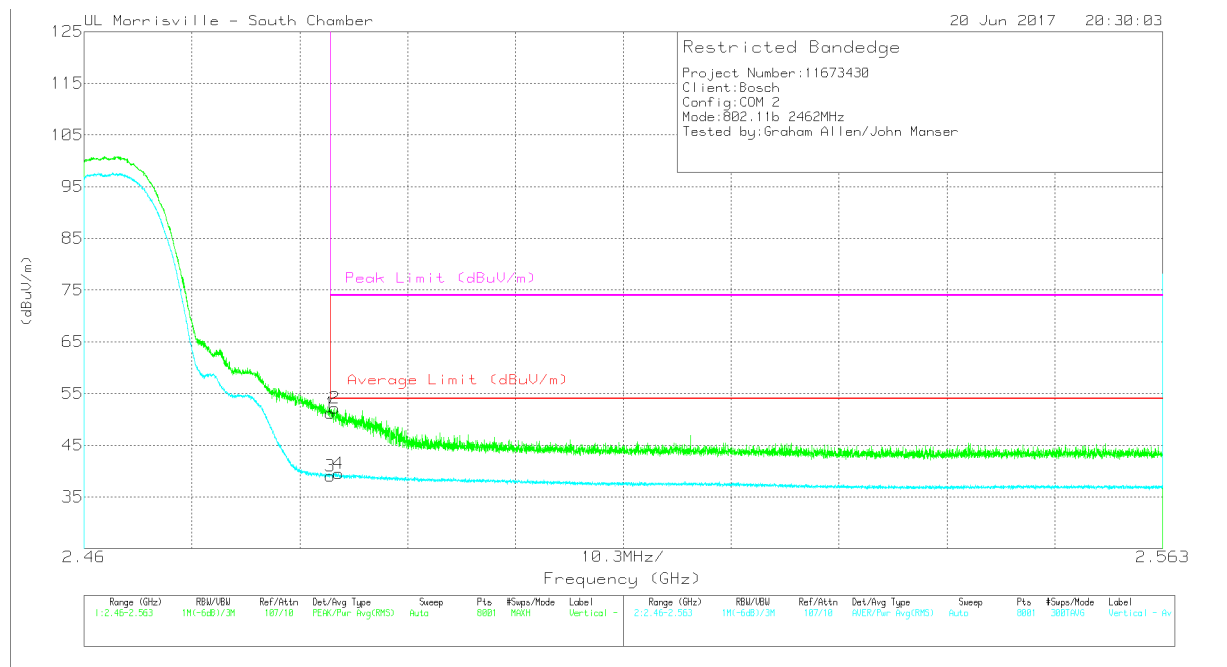


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	51.45	Pk	32.4	-24.6	0	59.25	-	-	74	-14.75	191	175	H
2	* 2.484	51.84	Pk	32.4	-24.6	0	59.64	-	-	74	-14.36	191	175	H
3	* 2.484	32.47	RMS	32.4	-24.6	4.07	44.34	54	-9.66	-	-	191	175	H
4	* 2.484	32.62	RMS	32.4	-24.6	4.07	44.49	54	-9.51	-	-	191	175	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



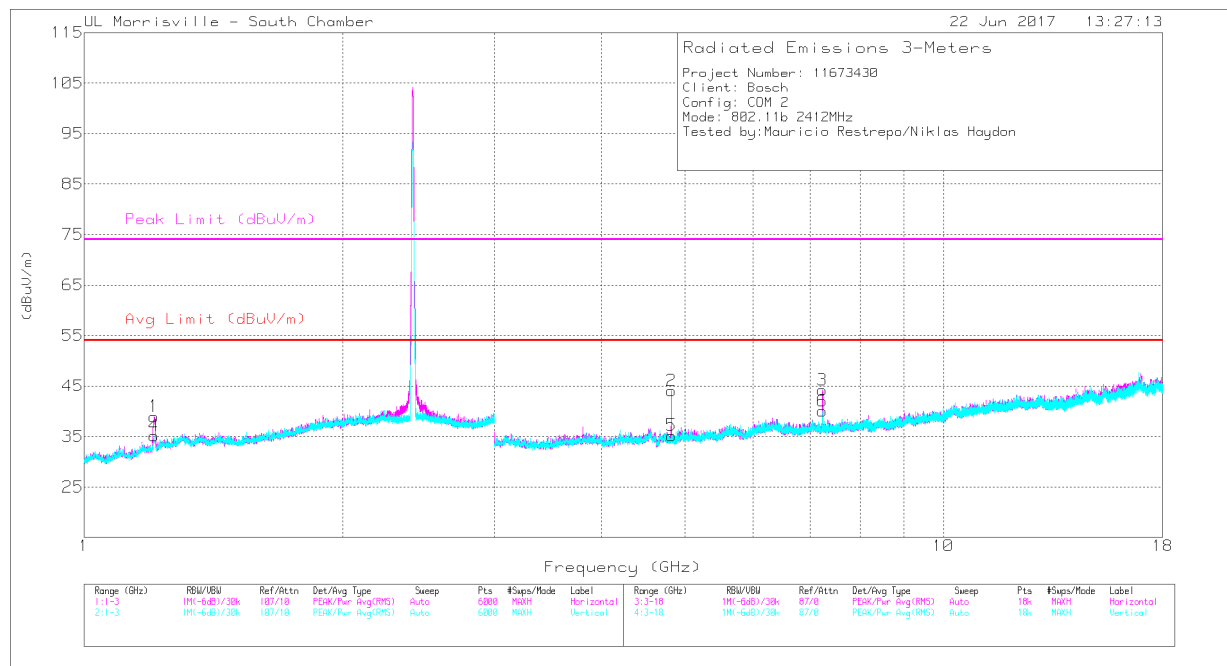
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1	* 2.484	43.42	Pk	32.4	-24.6	0	51.22	-	-	74	-22.78	230	325	V
2	* 2.484	44.38	Pk	32.4	-24.6	0	52.18	-	-	74	-21.82	230	325	V
3	* 2.484	27.12	RMS	32.4	-24.6	4.07	38.99	54	-15.01	-	-	230	325	V
4	* 2.484	27.66	RMS	32.4	-24.6	4.07	39.53	54	-14.47	-	-	230	325	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (INTERNAL CHAIN 1)



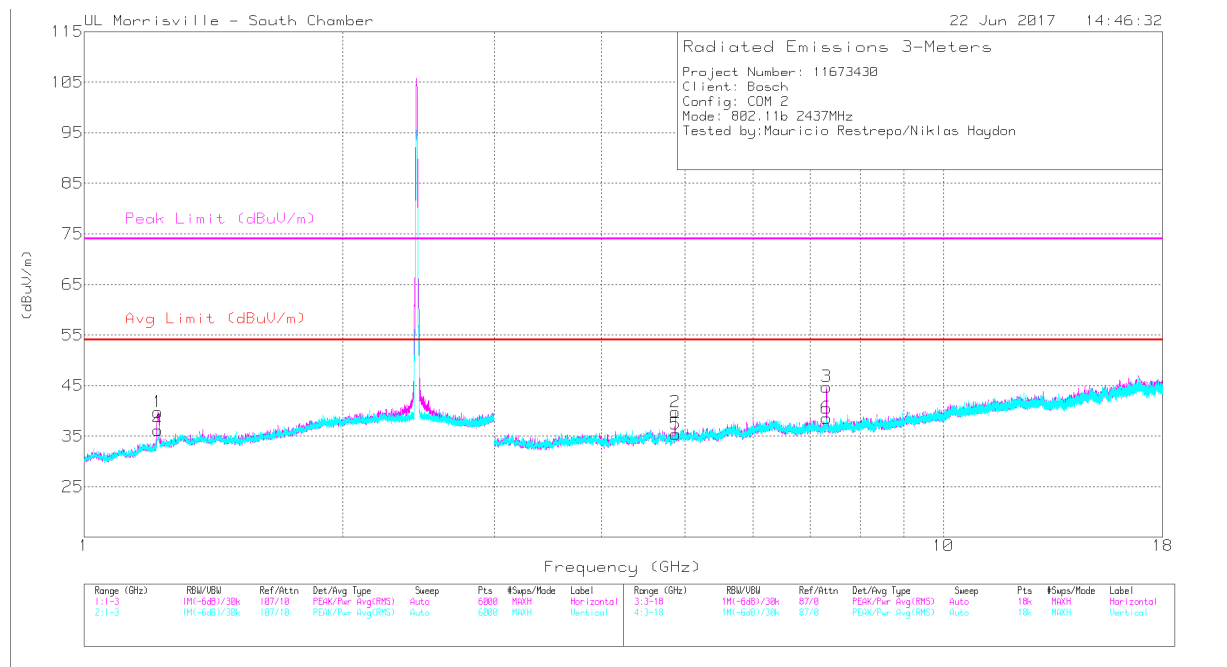
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1	* 1.206	41.53	PK2	28.3	-23.7	0	46.13	-	-	74	-27.87	266	159	H
	* 1.207	31.91	MAv1	28.3	-23.7	4.07	40.58	54	-13.42	-	-	266	159	H
4	* 1.206	38.96	PK2	28.3	-23.7	0	43.56	-	-	74	-30.44	292	312	V
	* 1.207	28.32	MAv1	28.3	-23.7	4.07	36.99	54	-17.01	-	-	292	312	V
2	* 4.824	44.66	PK2	34	-31.1	0	47.56	-	-	74	-26.44	299	109	H
	* 4.824	34.71	MAv1	34	-31.1	4.07	41.68	54	-12.32	-	-	299	109	H
5	* 4.824	41.4	PK2	34	-31.1	0	44.3	-	-	74	-29.7	14	349	V
	* 4.824	30.17	MAv1	34	-31.1	4.07	37.14	54	-16.86	-	-	14	349	V
3	7.234	36.8	Pk	35.5	-28.1	0	44.2	-	-	-	-	0-360	102	H
6	7.235	32.67	Pk	35.5	-28.1	0	40.07	-	-	-	-	0-360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

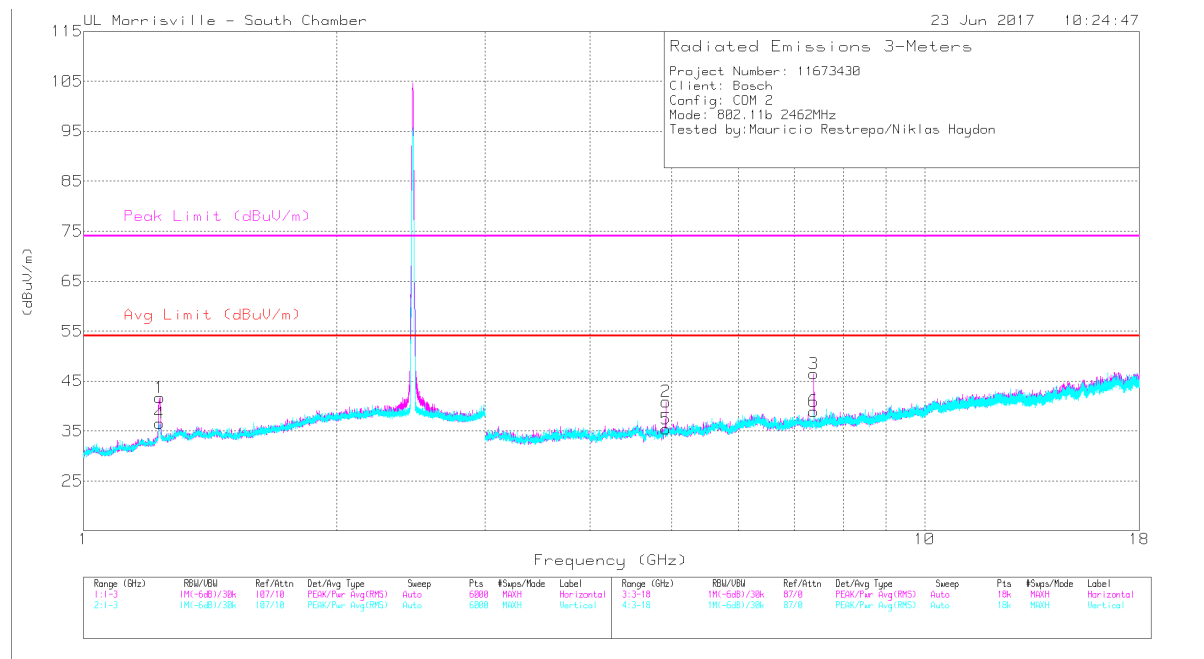


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.216	42.02	PK2	28.3	-23.6	0	46.72	-	-	74	-27.28	269	162	H
	* 1.219	31.91	MAv1	28.3	-23.6	4.07	40.68	54	-13.32	-	-	269	162	H
2	* 4.874	43.78	PK2	34	-31.1	0	46.68	-	-	74	-27.32	305	244	H
	* 4.874	33.17	MAv1	34	-31.1	4.07	40.14	54	-13.86	-	-	305	244	H
3	* 7.311	43.8	PK2	35.5	-27.9	0	51.4	-	-	74	-22.6	338	102	H
	* 7.311	36.2	MAv1	35.5	-27.9	4.07	47.87	54	-6.13	-	-	338	102	H
4	* 1.219	40.31	PK2	28.3	-23.6	0	45.01	-	-	74	-28.99	316	330	V
	* 1.219	29.45	MAv1	28.3	-23.6	4.07	38.22	54	-15.78	-	-	316	330	V
5	* 4.88	38.66	PK2	34	-31	0	41.66	-	-	74	-32.34	93	244	V
	* 4.88	26.96	MAv1	34	-31	4.07	34.03	54	-19.97	-	-	93	244	V
6	* 7.313	38.32	PK2	35.5	-27.9	0	45.92	-	-	74	-28.08	221	322	V
	* 7.311	27.53	MAv1	35.5	-27.9	4.07	39.2	54	-14.8	-	-	221	322	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average



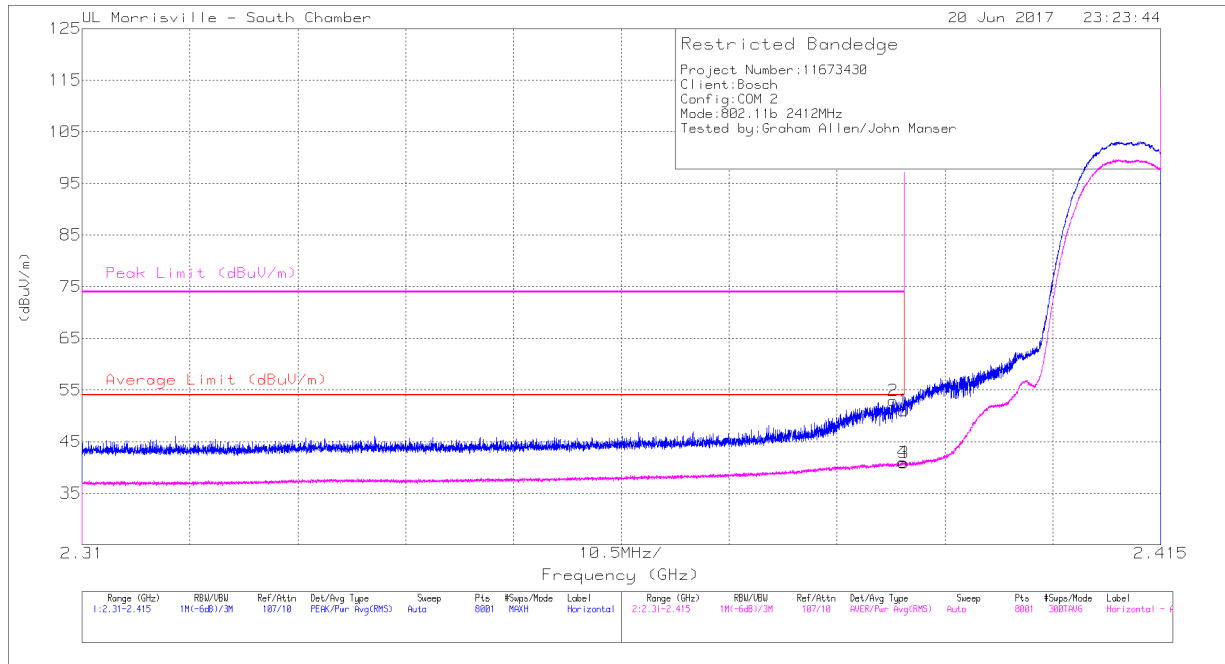
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.23	37.65	PK2	28.4	-23.6	0	42.45	-	-	74	-31.55	1	175	H
	* 1.232	26.34	MAv1	28.4	-23.5	4.07	35.31	54	-18.69	-	-	1	175	H
2	* 4.924	43.41	PK2	34	-31.1	0	46.31	-	-	74	-27.69	301	120	H
	* 4.924	32.88	MAv1	34	-31.1	4.07	39.85	54	-14.15	-	-	301	120	H
3	* 7.386	43.72	PK2	35.5	-27.9	0	51.32	-	-	74	-22.68	345	102	H
	* 7.386	35.16	MAv1	35.5	-27.9	4.07	46.83	54	-7.17	-	-	345	102	H
4	* 1.231	40.22	PK2	28.4	-23.5	0	45.12	-	-	74	-28.88	300	326	V
	* 1.23	30.08	MAv1	28.4	-23.6	4.07	38.95	54	-15.05	-	-	300	326	V
5	* 4.924	42.95	PK2	34	-31.1	0	45.85	-	-	74	-28.15	35	360	V
	* 4.924	31.74	MAv1	34	-31.1	4.07	38.71	54	-15.29	-	-	35	360	V
6	* 7.386	38.06	PK2	35.5	-27.9	0	45.66	-	-	74	-28.34	119	103	V
	* 7.387	27	MAv1	35.5	-27.9	4.07	38.67	54	-15.33	-	-	119	103	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

RESTRICTED BANDEDGE (LOW CHANNEL EXTERNAL CHAIN 0)

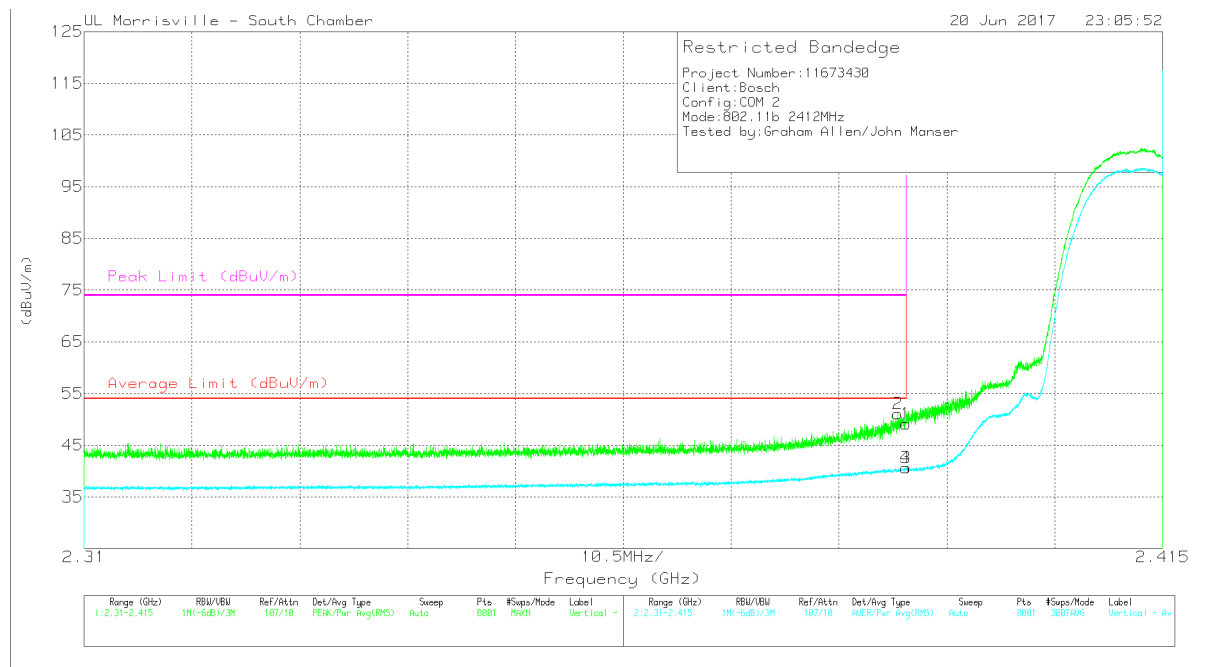


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	43.2	Pk	31.9	-24.1	0	51	-	-	74	-23	206	165	H
2	* 2.389	45.15	Pk	31.9	-24.1	0	52.95	-	-	74	-21.05	206	165	H
3	* 2.39	28.95	RMS	31.9	-24.1	4.07	40.82	54	-13.18	-	-	206	165	H
4	* 2.39	29.13	RMS	31.9	-24.1	4.07	41	54	-13	-	-	206	165	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



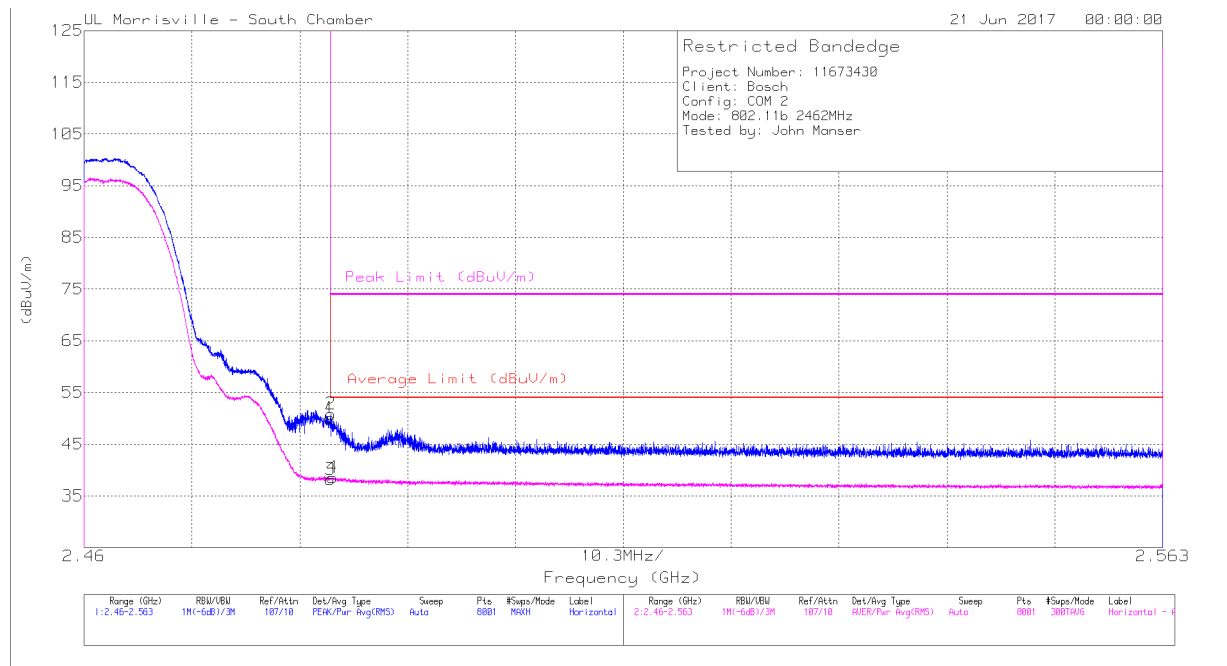
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	41.28	Pk	31.9	-24.1	0	49.08	-	-	74	-24.92	111	256	V
2	* 2.389	43.26	Pk	31.9	-24.1	0	51.06	-	-	74	-22.94	111	256	V
3	* 2.39	28.73	RMS	31.9	-24.1	4.07	40.6	54	-13.4	-	-	111	256	V
4	* 2.39	28.73	RMS	31.9	-24.1	4.07	40.6	54	-13.4	-	-	111	256	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEGE (HIGH CHANNEL EXTERNAL CHAIN 0)

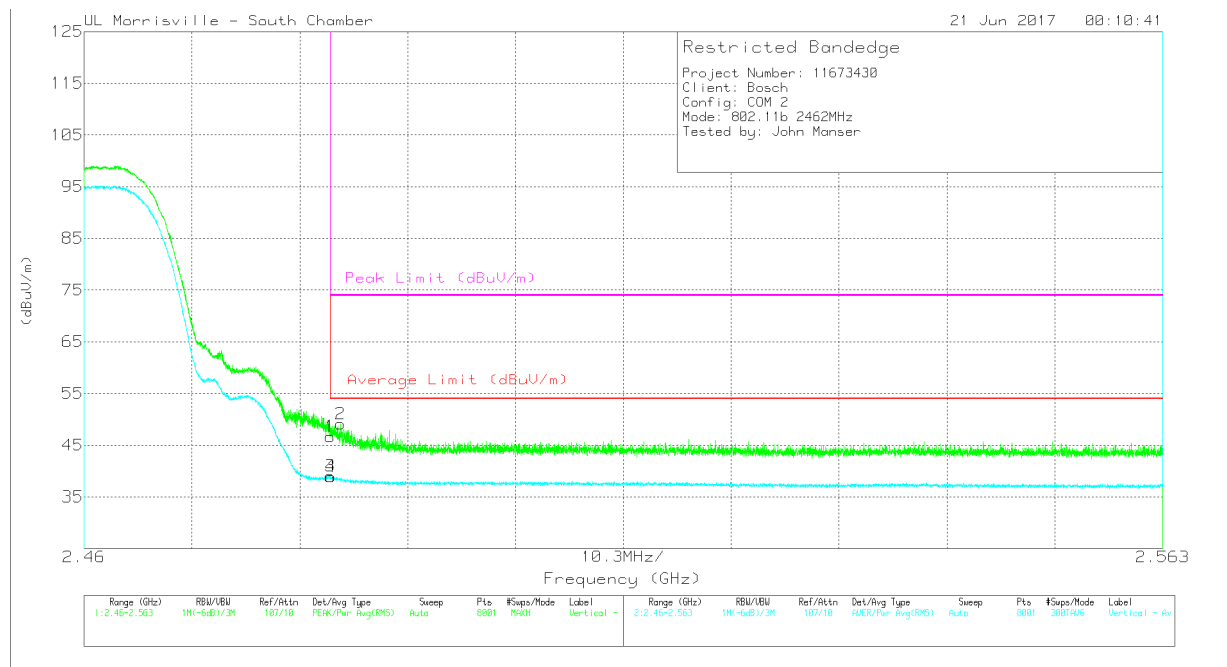


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.27	Pk	32.4	-24.6	0	50.07	-	-	74	-23.93	241	134	H
2	* 2.484	43.08	Pk	32.4	-24.6	0	50.88	-	-	74	-23.12	241	134	H
3	* 2.484	26.32	RMS	32.4	-24.6	4.07	38.19	54	-15.81	-	-	241	134	H
4	* 2.484	26.71	RMS	32.4	-24.6	4.07	38.58	54	-15.42	-	-	241	134	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



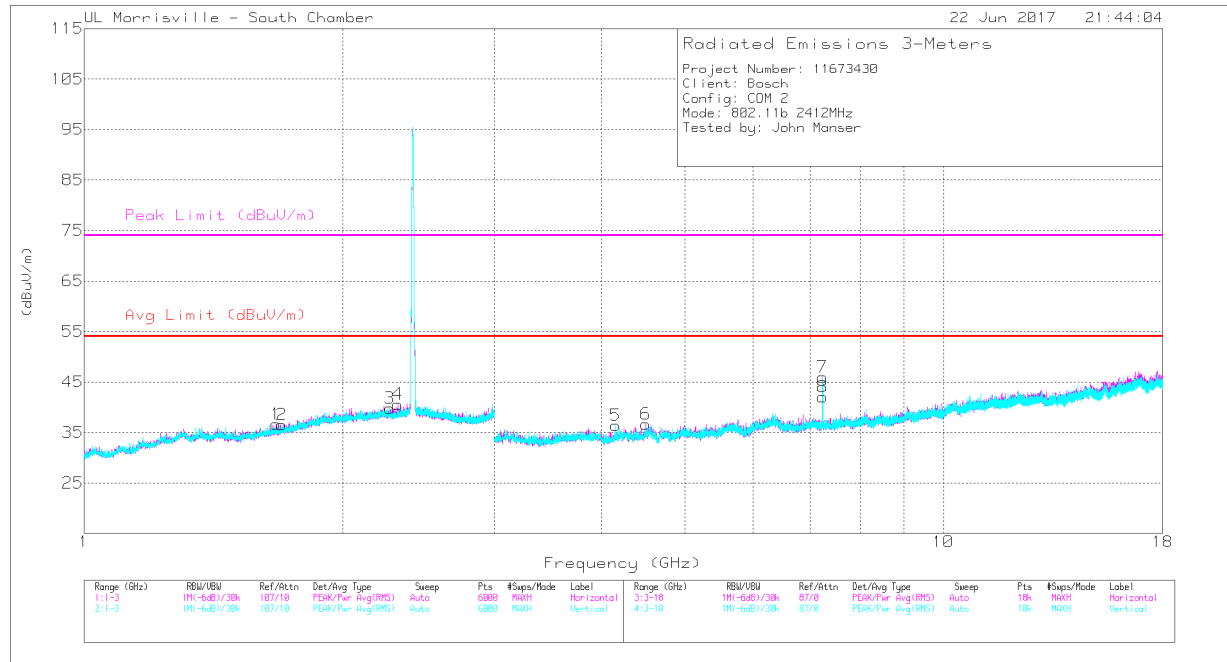
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1	* 2.484	38.84	Pk	32.4	-24.6	0	46.64	-	-	74	-27.36	48	161	V
2	* 2.484	41.3	Pk	32.4	-24.6	0	49.1	-	-	74	-24.9	48	161	V
3	* 2.484	27.1	RMS	32.4	-24.6	4.07	38.97	54	-15.03	-	-	48	161	V
4	* 2.484	27.06	RMS	32.4	-24.6	4.07	38.93	54	-15.07	-	-	48	161	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (EXTERNAL CHAIN 0)



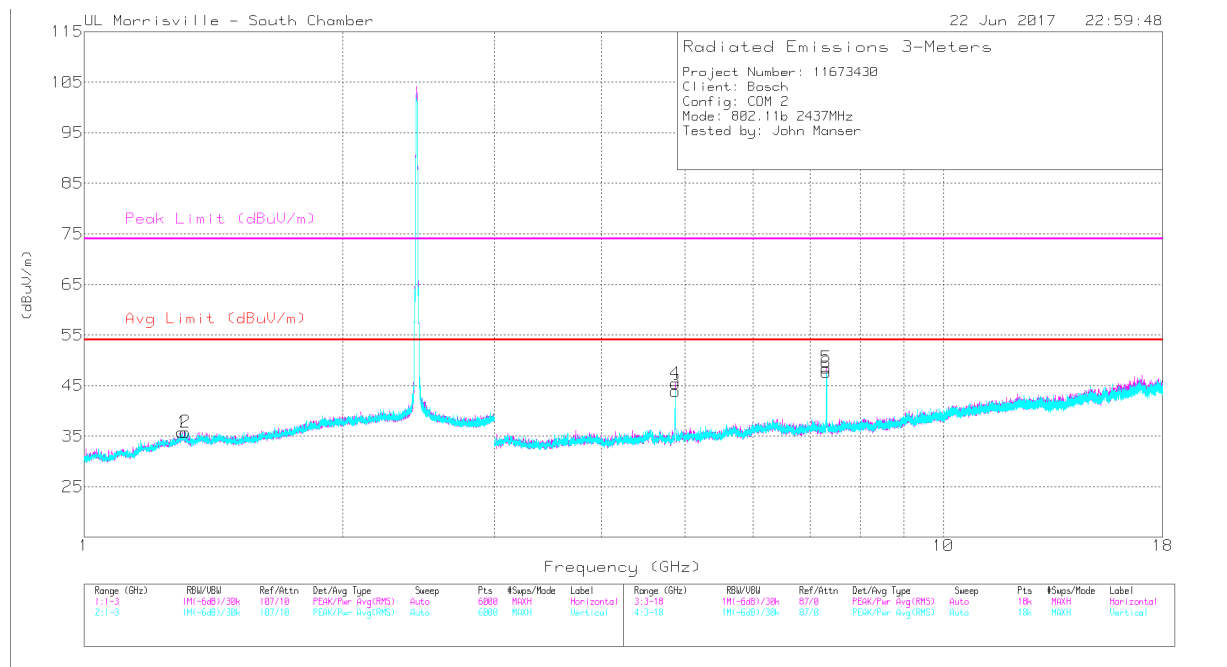
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.673	35.15	PK2	28.7	-22.1	0	41.75	-	-	74	-32.25	315	332	H
	* 1.671	23.65	MAv1	28.7	-22.1	4.07	34.32	54	-19.68	-	-	315	332	H
4	* 2.318	37.82	PK2	31.6	-23.7	0	45.72	-	-	74	-28.28	57	139	H
	* 2.318	25.57	MAv1	31.6	-23.7	4.07	37.54	54	-16.46	-	-	57	139	H
6	* 4.501	39.79	PK2	33.9	-31.7	0	41.99	-	-	74	-32.01	86	128	H
	* 4.501	28.16	MAv1	33.9	-31.7	4.07	34.43	54	-19.57	-	-	86	128	H
2	* 1.697	35.33	PK2	28.8	-22.2	0	41.93	-	-	74	-32.07	186	147	V
	* 1.699	23.73	MAv1	28.8	-22.2	4.07	34.4	54	-19.6	-	-	186	147	V
3	* 2.27	37.08	PK2	31.8	-23.6	0	45.28	-	-	74	-28.72	231	211	V
	* 2.267	24.87	MAv1	31.8	-23.5	4.07	37.24	54	-16.76	-	-	231	211	V
5	* 4.158	40.57	PK2	33.3	-31.7	0	42.17	-	-	74	-31.83	248	254	V
	* 4.157	28.42	MAv1	33.3	-31.7	4.07	34.09	54	-19.91	-	-	248	254	V
8	7.237	34.65	Pk	35.5	-28.1	0	42.05	-	-	-	-	0-360	101	H
7	7.236	38.58	Pk	35.5	-28.1	0	45.98	-	-	-	-	0-360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

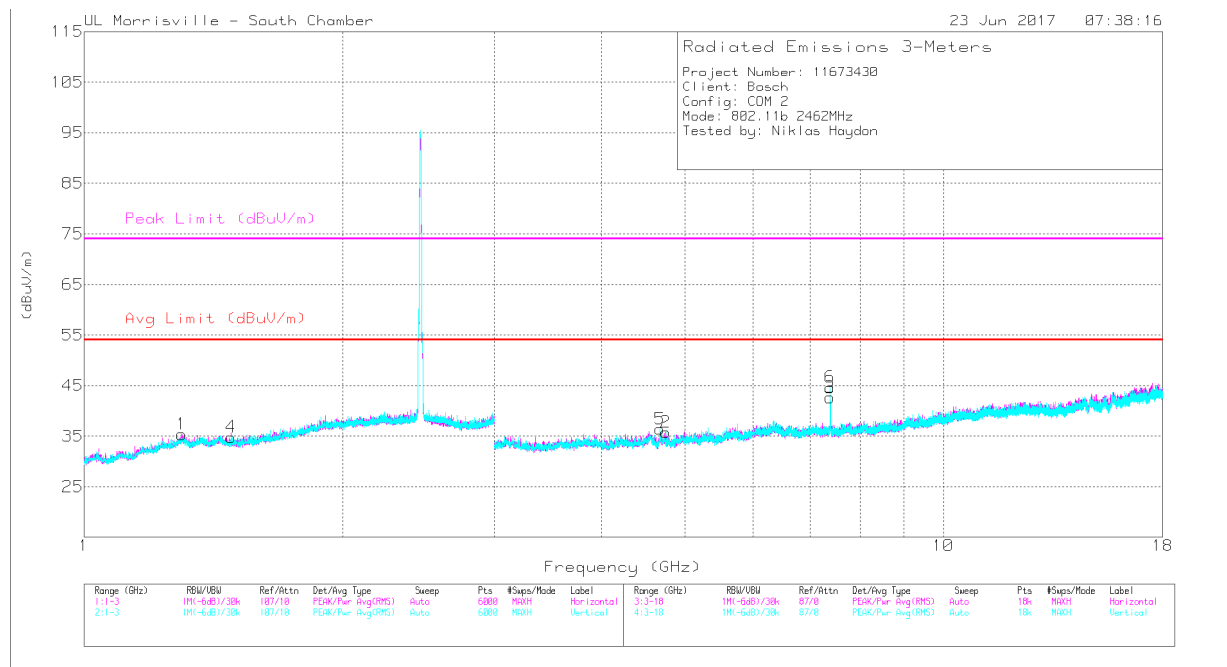


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.3	35.99	PK2	29.2	-23.2	0	41.99	-	-	74	-32.01	300	378	H
	* 1.3	23.93	MAv1	29.2	-23.2	4.07	34	54	-20	-	-	300	378	H
4	* 4.874	45.89	PK2	34	-31.1	0	48.79	-	-	74	-25.21	232	109	H
	* 4.874	36.41	MAv1	34	-31.1	4.07	43.38	54	-10.62	-	-	232	109	H
5	* 7.311	46.76	PK2	35.5	-27.9	0	54.36	-	-	74	-19.64	255	108	H
	* 7.31	35.72	MAv1	35.5	-27.9	4.07	47.39	54	-6.61	-	-	255	108	H
2	* 1.312	35.6	PK2	29.1	-23.1	0	41.6	-	-	74	-32.4	251	387	V
	* 1.312	23.66	MAv1	29.1	-23.1	4.07	33.73	54	-20.27	-	-	251	387	V
3	* 4.874	46.3	PK2	34	-31.1	0	49.2	-	-	74	-24.8	300	114	V
	* 4.874	37.15	MAv1	34	-31.1	4.07	44.12	54	-9.88	-	-	300	114	V
6	* 7.311	46.65	PK2	35.5	-27.9	0	54.25	-	-	74	-19.75	296	102	V
	* 7.31	36.16	MAv1	35.5	-27.9	4.07	47.83	54	-6.17	-	-	296	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/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	* 1.298	36.08	PK2	29.2	-23.2	0	42.08	-	-	74	-31.92	257	249	H
	* 1.298	24.03	MAv1	29.2	-23.2	4.07	34.1	54	-19.9	-	-	257	249	H
4	* 1.48	35.53	PK2	28	-22.5	0	41.03	-	-	74	-32.97	358	211	V
	* 1.483	23.62	MAv1	28	-22.5	4.07	33.19	54	-20.81	-	-	358	211	V
2	* 4.748	39.49	PK2	34	-31.8	0	41.69	-	-	74	-32.31	277	262	H
	* 4.747	28.03	MAv1	34	-31.8	4.07	34.3	54	-19.7	-	-	277	262	H
3	* 7.386	42.25	PK2	35.5	-27.9	0	49.85	-	-	74	-24.15	319	228	H
	* 7.386	30.3	MAv1	35.5	-27.9	4.07	41.97	54	-12.03	-	-	319	228	H
5	* 4.678	39.56	PK2	34	-31.9	0	41.66	-	-	74	-32.34	310	238	V
	* 4.68	28.2	MAv1	34	-31.9	4.07	34.37	54	-19.63	-	-	310	238	V
6	* 7.386	45.46	PK2	35.5	-27.9	0	53.06	-	-	74	-20.94	203	107	V
	* 7.386	34.68	MAv1	35.5	-27.9	4.07	46.35	54	-7.65	-	-	203	107	V

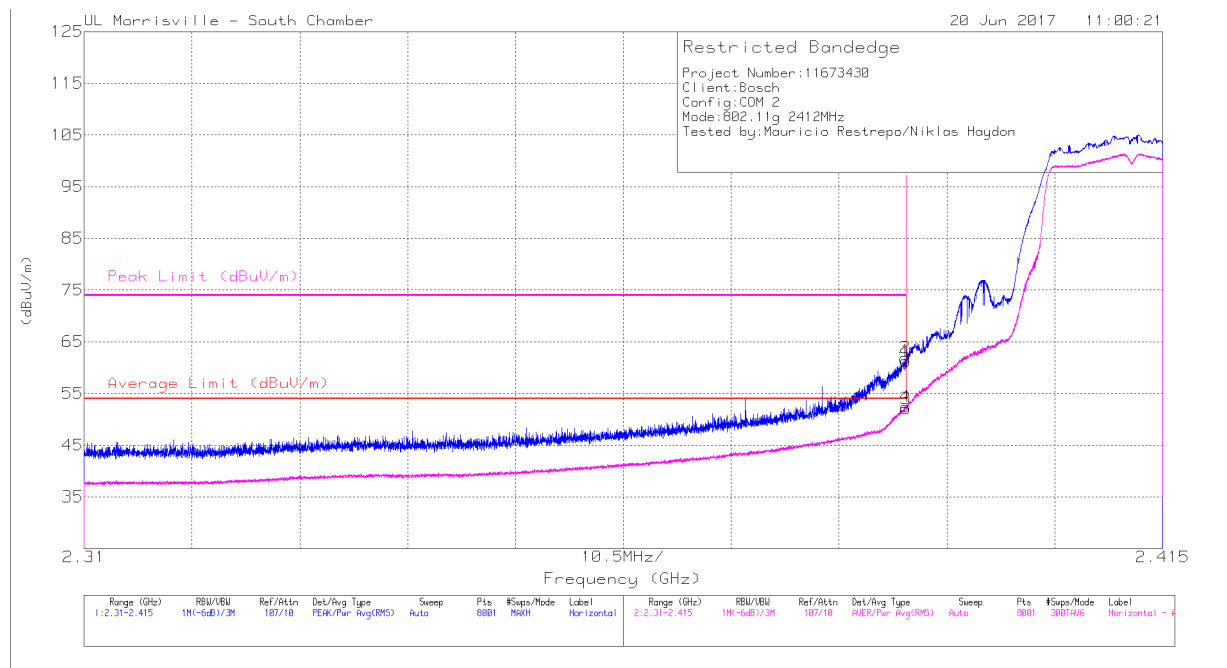
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

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

RESTRICTED BANDEDGE (LOW CHANNEL INTERNAL CHAIN 0)

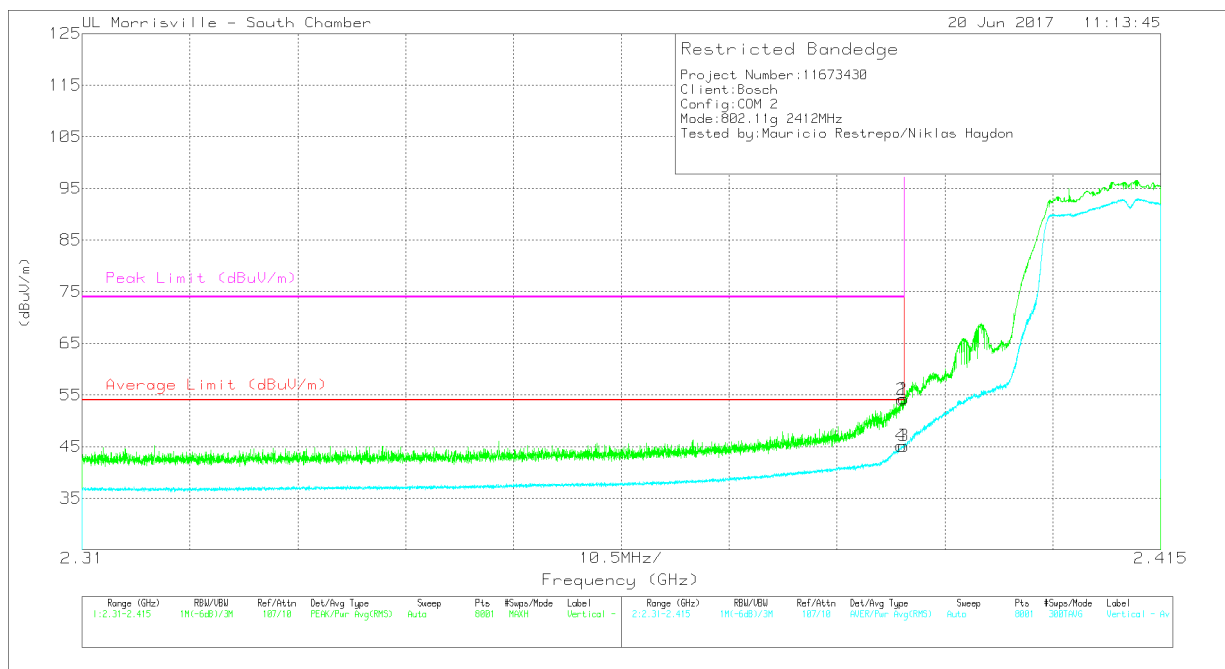


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	53.46	Pk	31.9	-24.1	0	61.26	-	-	74	-12.74	171	114	H
2	* 2.39	54.04	Pk	31.9	-24.1	0	61.84	-	-	74	-12.16	171	114	H
3	* 2.39	40.14	RMS	31.9	-24.1	4.07	52.01	54	-1.99	-	-	171	114	H
4	* 2.39	40.52	RMS	31.9	-24.1	4.07	52.39	54	-1.61	-	-	171	114	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



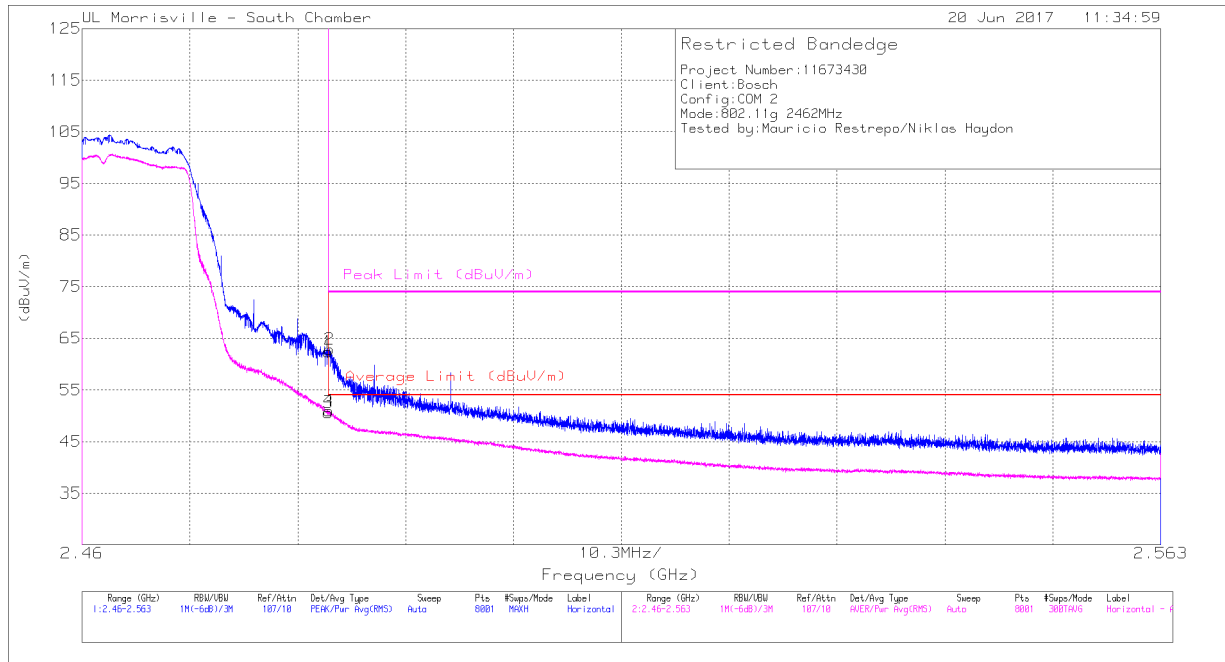
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	46.49	Pk	31.9	-24.1	0	54.29	-	-	74	-19.71	254	390	V
2	* 2.39	46.31	Pk	31.9	-24.1	0	54.11	-	-	74	-19.89	254	390	V
3	* 2.39	33.24	RMS	31.9	-24.1	4.07	45.11	54	-8.89	-	-	254	390	V
4	* 2.39	33.24	RMS	31.9	-24.1	4.07	45.11	54	-8.89	-	-	254	390	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL INTERNAL CHAIN 0)

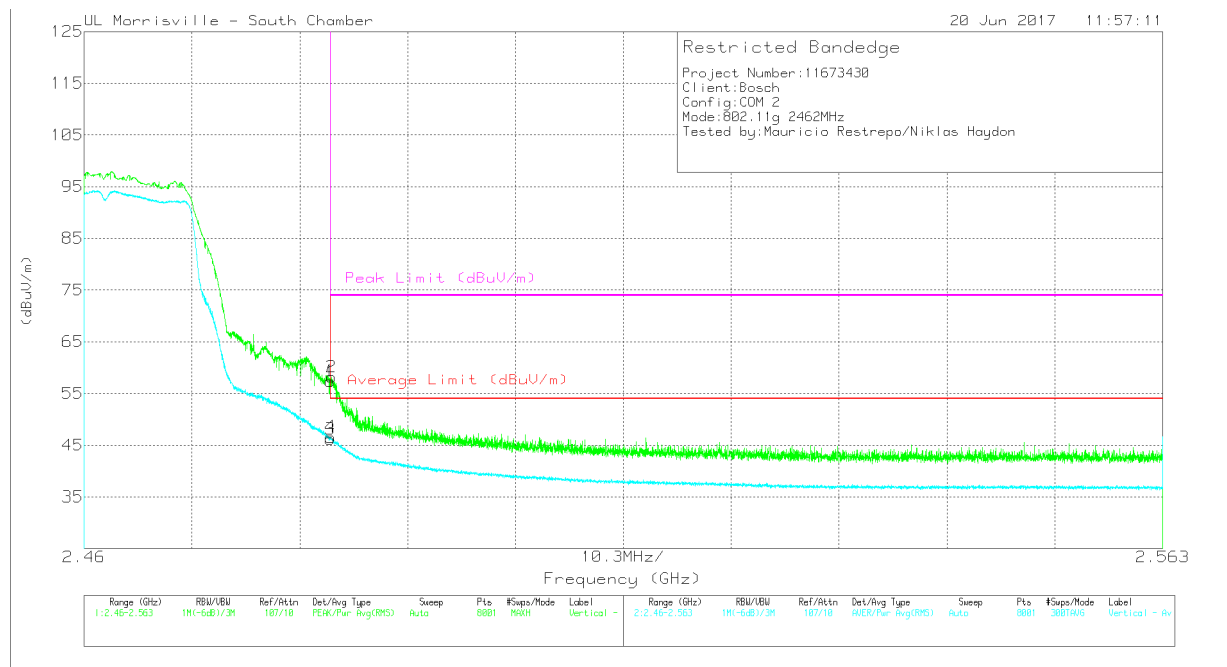


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	54.61	Pk	32.4	-24.6	0	62.41	-	-	74	-11.59	165	155	H
2	* 2.484	55.1	Pk	32.4	-24.6	0	62.9	-	-	74	-11.1	165	155	H
3	* 2.484	38.75	RMS	32.4	-24.6	4.07	50.62	54	-3.38	-	-	165	155	H
4	* 2.484	39.07	RMS	32.4	-24.6	4.07	50.94	54	-3.06	-	-	165	155	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



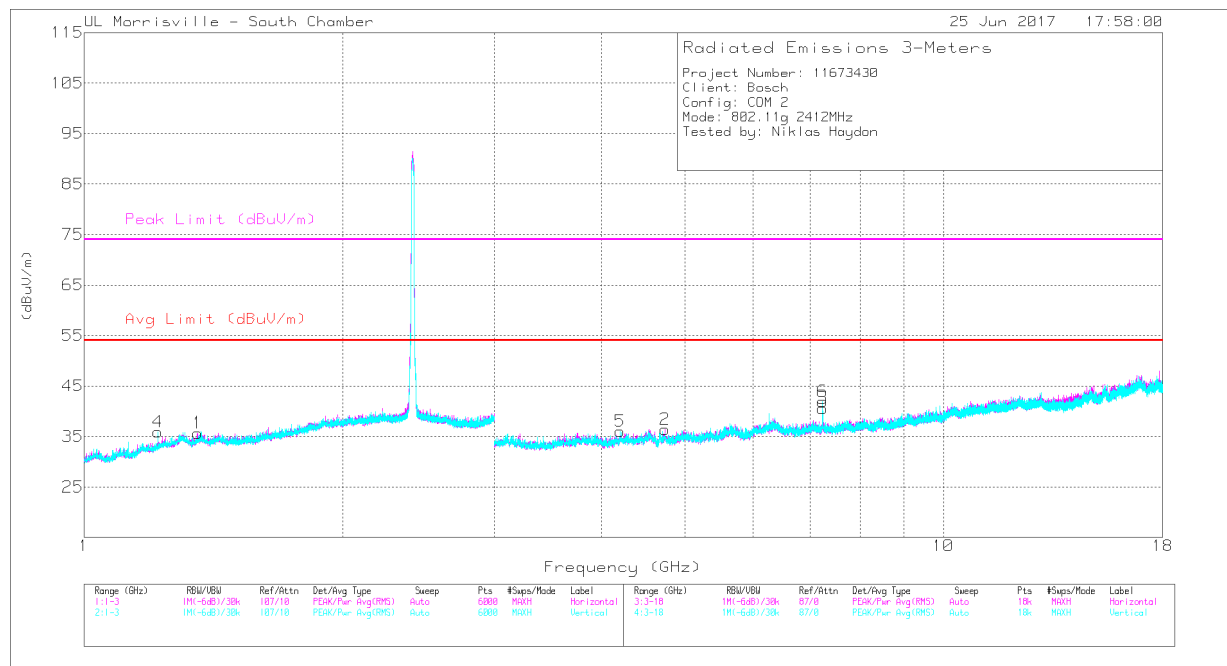
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1	* 2.484	49.58	Pk	32.4	-24.6	0	57.38	-	-	74	-16.62	250	327	V
2	* 2.484	50.42	Pk	32.4	-24.6	0	58.22	-	-	74	-15.78	250	327	V
3	* 2.484	34.29	RMS	32.4	-24.6	4.07	46.16	54	-7.84	-	-	250	327	V
4	* 2.484	34.68	RMS	32.4	-24.6	4.07	46.55	54	-7.45	-	-	250	327	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (INTERNAL CHAIN 0)



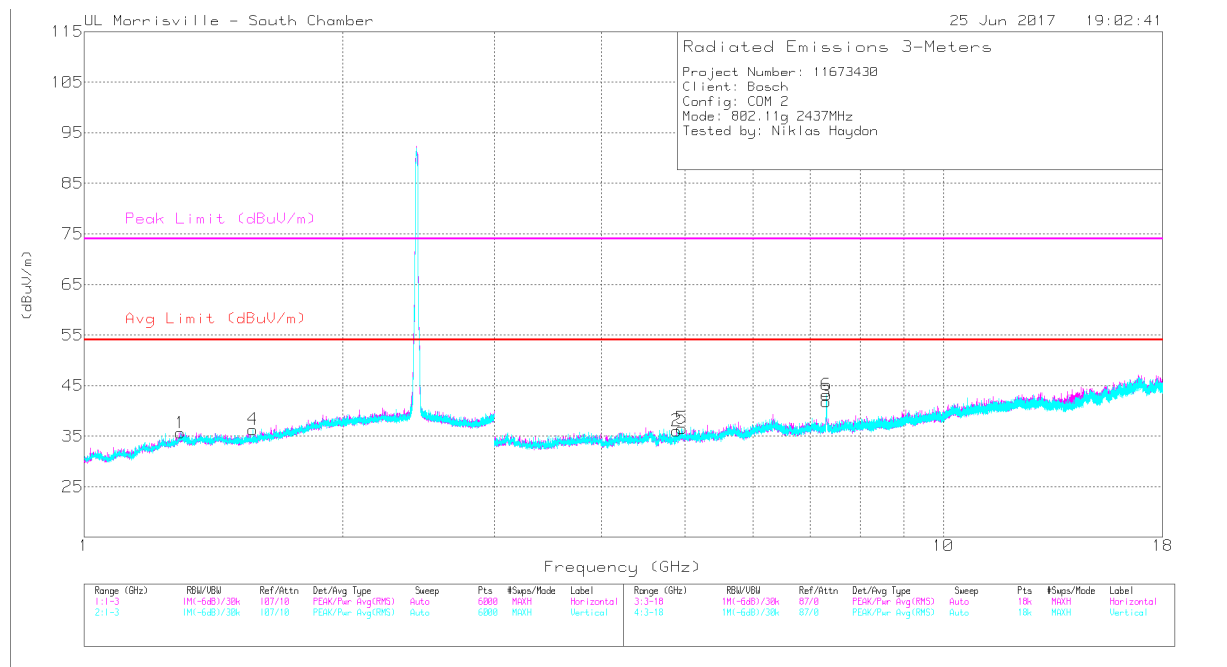
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.354	35.75	PK2	28.7	-23	0	41.45	-	-	74	-32.55	138	317	H
	* 1.357	23.61	MAv1	28.7	-23	4.07	33.38	54	-20.62	-	-	138	317	H
4	* 1.218	36.85	PK2	28.3	-23.6	0	41.55	-	-	74	-32.45	122	391	V
	* 1.219	23.66	MAv1	28.3	-23.6	4.07	32.43	54	-21.57	-	-	122	391	V
2	* 4.744	39.68	PK2	34	-31.8	0	41.88	-	-	74	-32.12	228	174	H
	* 4.742	27.89	MAv1	34	-31.8	4.07	34.16	54	-19.84	-	-	228	174	H
5	* 4.204	39.6	PK2	33.3	-31.3	0	41.6	-	-	74	-32.4	55	228	V
	* 4.206	28.03	MAv1	33.3	-31.3	4.07	34.1	54	-19.9	-	-	55	228	V
3	7.236	33.21	Pk	35.5	-28.1	0	40.61	-	-	-	-	0-360	101	H
6	7.236	34.57	Pk	35.5	-28.1	0	41.97	-	-	-	-	0-360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 Maximum RMS Average

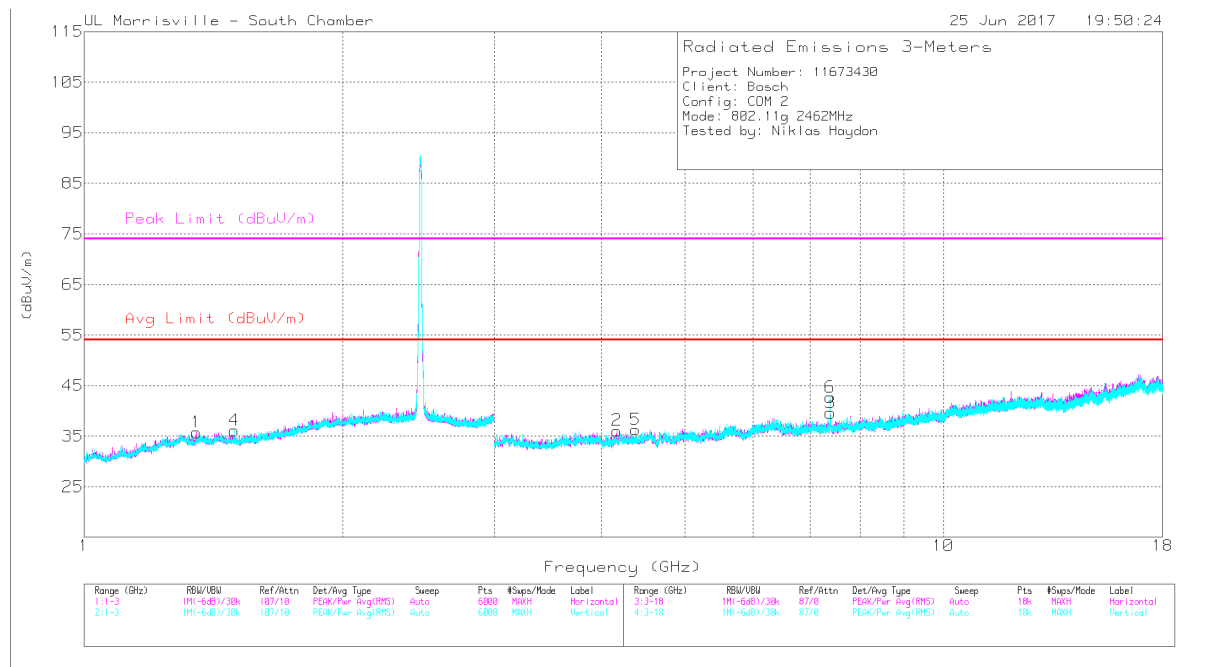


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.294	36	PK2	29.1	-23.2	0	41.9	-	-	74	-32.1	41	254	H
	* 1.294	23.88	MAv1	29.1	-23.2	4.07	33.85	54	-20.15	-	-	41	254	H
4	* 1.57	35.48	PK2	28.1	-22.4	0	41.18	-	-	74	-32.82	357	299	V
	* 1.573	23.57	MAv1	28.1	-22.4	4.07	33.34	54	-20.66	-	-	357	299	V
2	* 4.891	38.37	PK2	34	-31.1	0	41.27	-	-	74	-32.73	237	256	H
	* 4.892	26.83	MAv1	34	-31.1	4.07	33.8	54	-20.2	-	-	237	256	H
3	* 7.311	41.71	PK2	35.5	-27.9	0	49.31	-	-	74	-24.69	1	103	H
	* 7.311	30.84	MAv1	35.5	-27.9	4.07	42.51	54	-11.49	-	-	1	103	H
5	* 4.965	39.5	PK2	34	-31.3	0	42.2	-	-	74	-31.8	205	119	V
	* 4.965	27.9	MAv1	34	-31.3	4.07	34.67	54	-19.33	-	-	205	119	V
6	* 7.311	43.37	PK2	35.5	-27.9	0	50.97	-	-	74	-23.03	39	114	V
	* 7.311	33.94	MAv1	35.5	-27.9	4.07	45.61	54	-8.39	-	-	39	114	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average



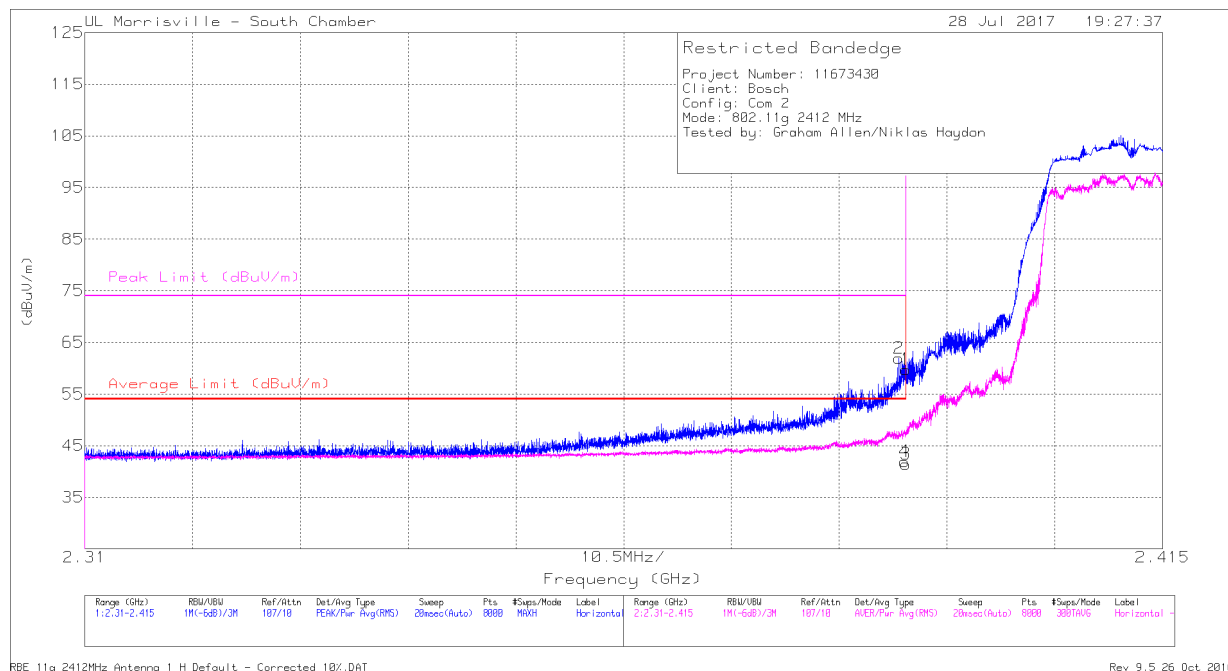
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.351	35.67	PK2	28.7	-23	0	41.37	-	-	74	-32.63	63	309	H
	* 1.353	23.49	MAv1	28.7	-23	4.07	33.26	54	-20.74	-	-	63	309	H
2	* 4.17	39.74	PK2	33.3	-31.6	0	41.44	-	-	74	-32.56	353	109	H
	* 4.167	27.91	MAv1	33.3	-31.5	4.07	33.78	54	-20.22	-	-	353	109	H
3	* 7.386	40.22	PK2	35.5	-27.9	0	47.82	-	-	74	-26.18	358	101	H
	* 7.386	28.88	MAv1	35.5	-27.9	4.07	40.55	54	-13.45	-	-	358	101	H
4	* 1.494	35.7	PK2	27.9	-22.5	0	41.1	-	-	74	-32.9	79	375	V
	* 1.494	23.67	MAv1	27.9	-22.5	4.07	33.14	54	-20.86	-	-	79	375	V
5	* 4.381	41.39	PK2	33.5	-32.3	0	42.59	-	-	74	-31.41	288	282	V
	* 4.382	28.83	MAv1	33.5	-32.4	4.07	34	54	-20	-	-	288	282	V
6	* 7.386	41.31	PK2	35.5	-27.9	0	48.91	-	-	74	-25.09	42	106	V
	* 7.386	31.11	MAv1	35.5	-27.9	4.07	42.78	54	-11.22	-	-	42	106	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

RESTRICTED BANDEDGE (LOW CHANNEL INTERNAL CHAIN 1)



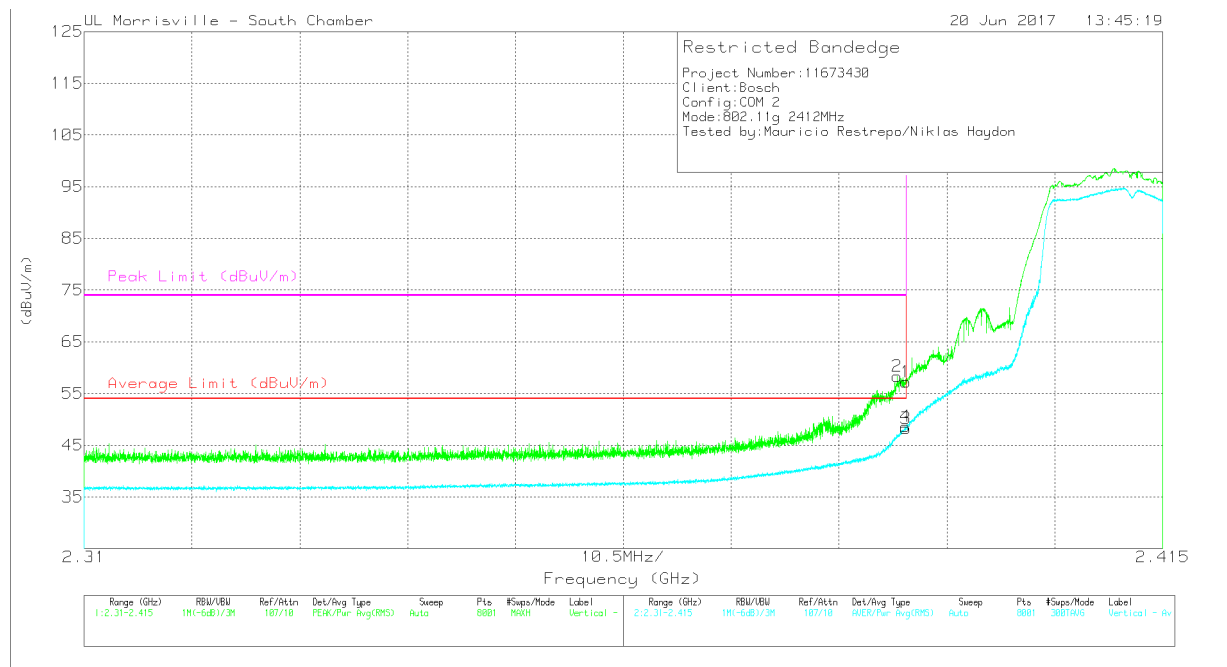
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	51.96	Pk	31.9	-24.1	0	59.76	-	-	74	-14.24	224	303	H
2	* 2.389	54.13	Pk	31.9	-24.1	0	61.93	-	-	74	-12.07	224	303	H
3	* 2.39	29.57	RMS	31.9	-24.1	9.68	47.05	54	-6.95	-	-	224	303	H
4	* 2.39	30.02	RMS	31.9	-24.1	9.68	47.5	54	-6.5	-	-	224	303	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

Ran at 10% DC due to overheating.



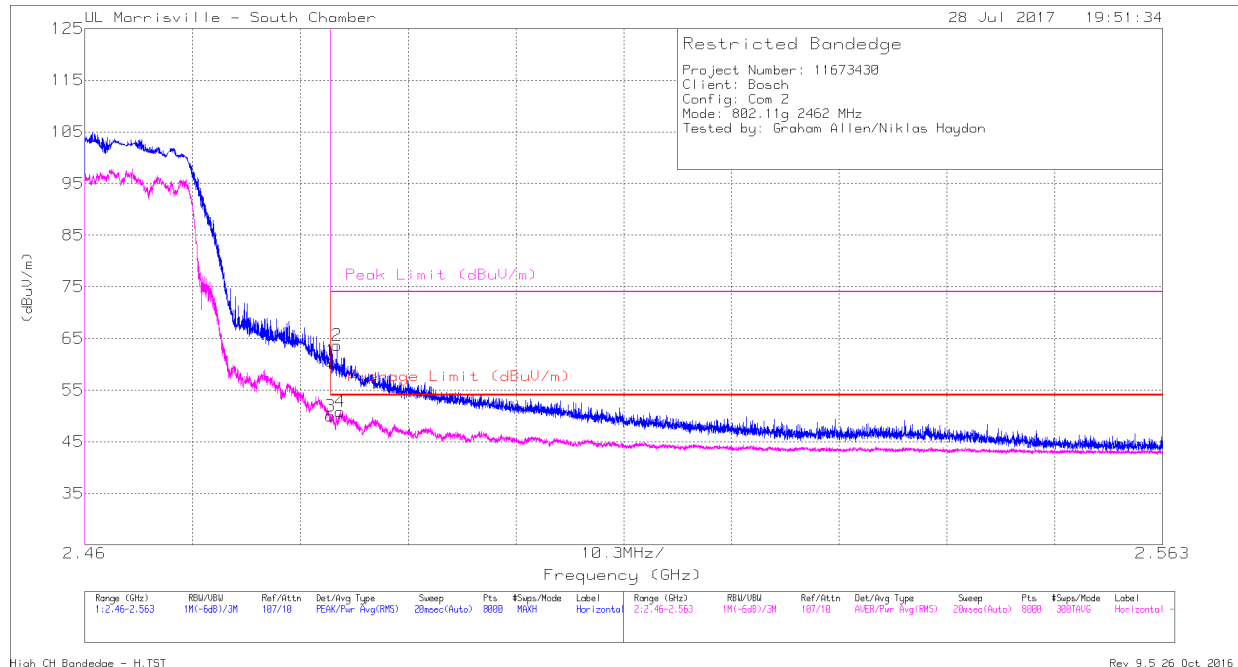
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	49.45	Pk	31.9	-24.1	0	57.25	-	-	74	-16.75	86	350	V
2	* 2.389	50.53	Pk	31.9	-24.1	0	58.33	-	-	74	-15.67	86	350	V
3	* 2.39	36.38	RMS	31.9	-24.1	4.07	48.25	54	-5.75	-	-	86	350	V
4	* 2.39	36.7	RMS	31.9	-24.1	4.07	48.57	54	-5.43	-	-	86	350	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL INTERNAL CHAIN 1)



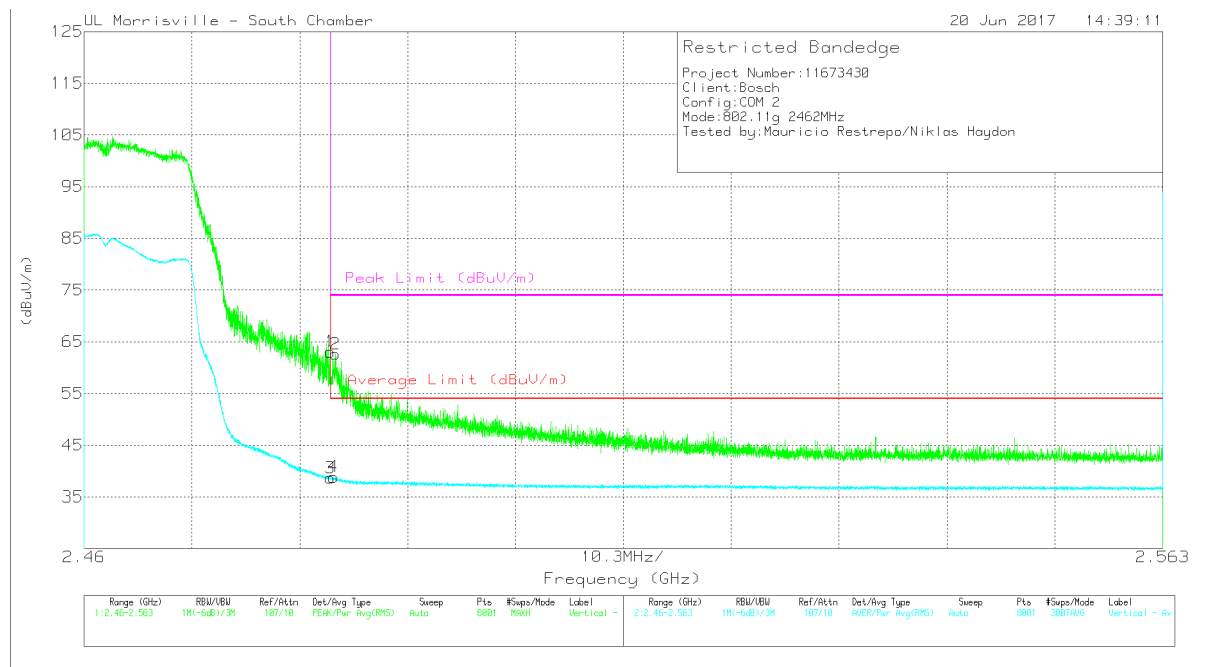
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	52.87	Pk	32.4	-24.6	0	60.67	-	-	74	-13.33	223	276	H
2	* 2.484	55.86	Pk	32.4	-24.6	0	63.66	-	-	74	-10.34	223	276	H
3	* 2.484	31.96	RMS	32.4	-24.6	9.68	49.44	54	-4.56	-	-	223	276	H
4	* 2.484	32.8	RMS	32.4	-24.6	9.68	50.28	54	-3.72	-	-	223	276	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

Ran at 10% DC due to overheating.



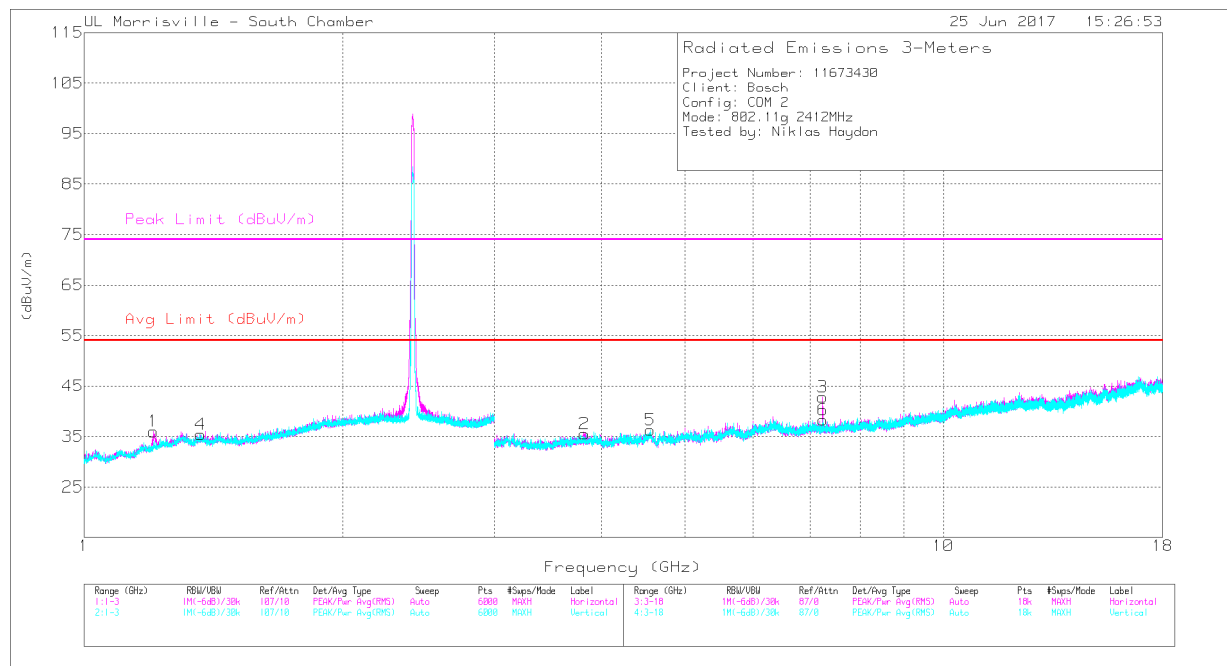
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	55.28	Pk	32.4	-24.6	0	63.08	-	-	74	-10.92	195	203	V
2	* 2.484	54.8	Pk	32.4	-24.6	0	62.6	-	-	74	-11.4	195	203	V
3	* 2.484	26.8	RMS	32.4	-24.6	4.07	38.67	54	-15.33	-	-	195	203	V
4	* 2.484	26.97	RMS	32.4	-24.6	4.07	38.84	54	-15.16	-	-	195	203	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (INTERNAL CHAIN 1)



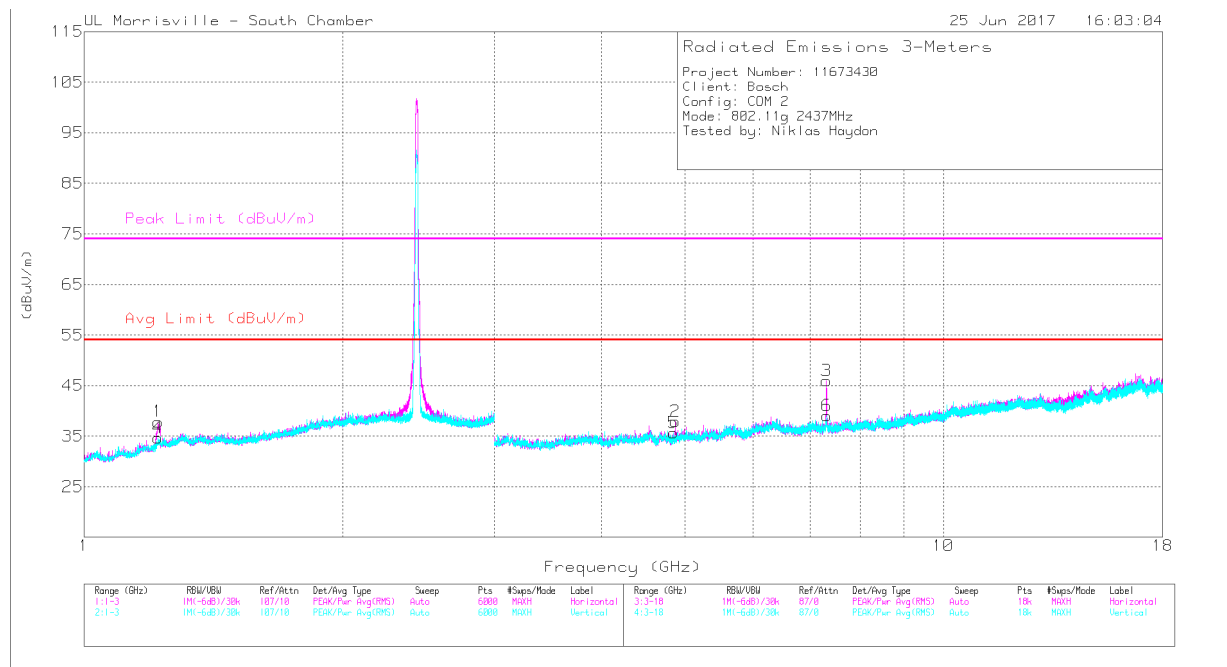
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.204	38.03	PK2	28.3	-23.8	0	42.53	-	-	74	-31.47	272	107	H
	* 1.205	27.37	MAv1	28.3	-23.7	4.07	36.04	54	-17.96	-	-	272	107	H
2	* 3.82	40.57	PK2	33.4	-32.6	0	41.37	-	-	74	-32.63	255	231	H
	* 3.822	28.94	MAv1	33.4	-32.6	4.07	33.81	54	-20.19	-	-	255	231	H
4	* 1.365	35.72	PK2	28.8	-23	0	41.52	-	-	74	-32.48	292	316	V
	* 1.365	23.74	MAv1	28.8	-23	4.07	33.61	54	-20.39	-	-	292	316	V
5	* 4.559	40.44	PK2	33.9	-31.7	0	42.64	-	-	74	-31.36	287	191	V
	* 4.56	28.47	MAv1	33.9	-31.7	4.07	34.74	54	-19.26	-	-	287	191	V
3	7.236	35.45	Pk	35.5	-28.1	0	42.85	-	-	-	-	0-360	102	H
6	7.248	30.86	Pk	35.5	-28.1	0	38.26	-	-	-	-	0-360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

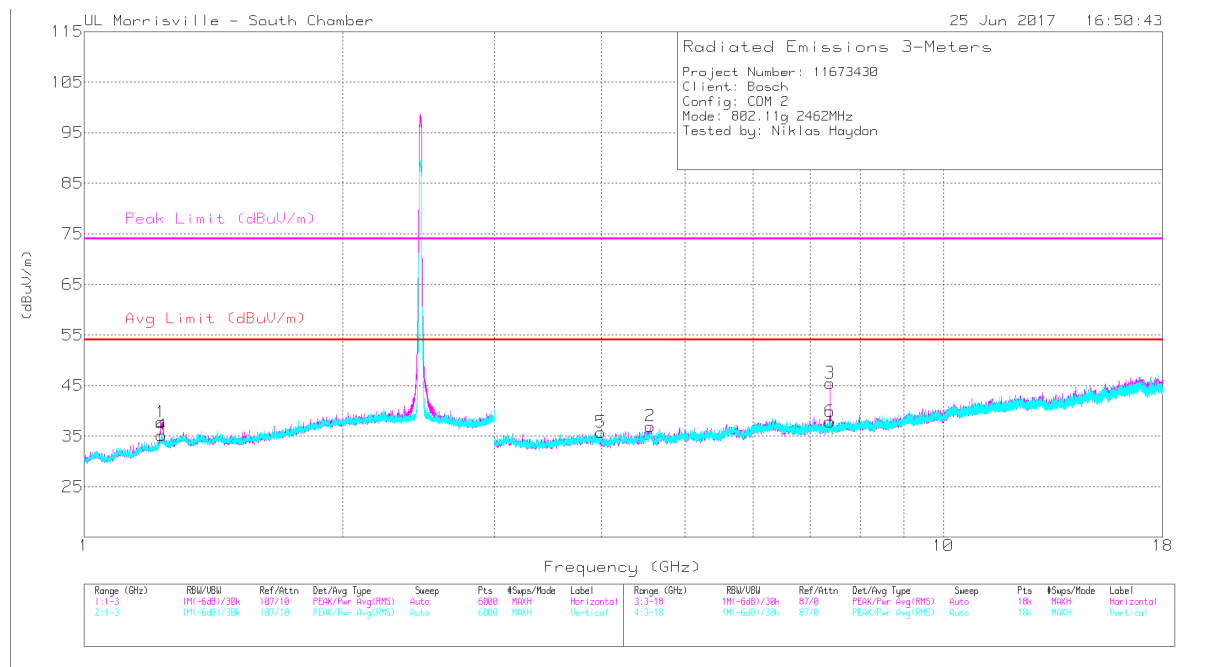


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.218	40.31	PK2	28.3	-23.6	0	45.01	-	-	74	-28.99	270	167	H
	* 1.219	29.39	MAv1	28.3	-23.6	4.07	38.16	54	-15.84	-	-	270	167	H
4	* 1.219	36.9	PK2	28.3	-23.6	0	41.6	-	-	74	-32.4	216	241	V
	* 1.219	24.97	MAv1	28.3	-23.6	4.07	33.74	54	-20.26	-	-	216	241	V
2	* 4.874	40.55	PK2	34	-31.1	0	43.45	-	-	74	-30.55	323	207	H
	* 4.876	28.41	MAv1	34	-31.1	4.07	35.38	54	-18.62	-	-	323	207	H
3	* 7.311	43.16	PK2	35.5	-27.9	0	50.76	-	-	74	-23.24	335	111	H
	* 7.311	34.83	MAv1	35.5	-27.9	4.07	46.5	54	-7.5	-	-	335	111	H
5	* 4.854	38.86	PK2	34	-31	0	41.86	-	-	74	-32.14	74	237	V
	* 4.854	26.91	MAv1	34	-31	4.07	33.98	54	-20.02	-	-	74	237	V
6	* 7.319	38.25	PK2	35.5	-27.9	0	45.85	-	-	74	-28.15	84	123	V
	* 7.316	25.88	MAv1	35.5	-27.9	4.07	37.55	54	-16.45	-	-	84	123	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average



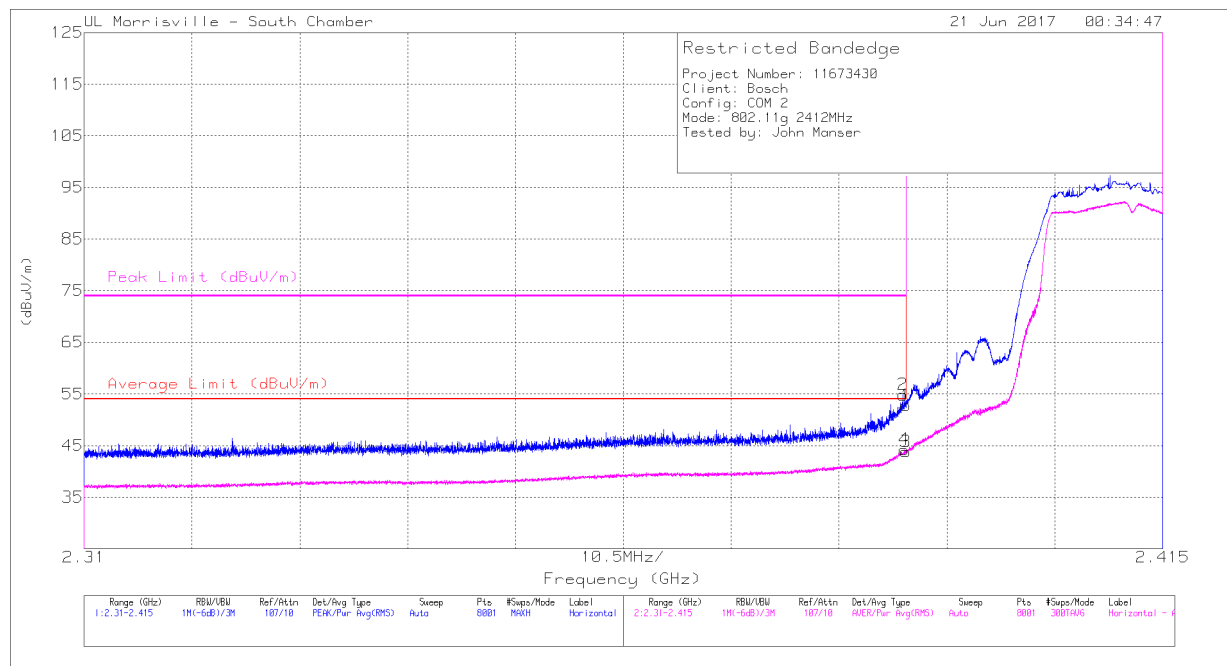
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.229	40.69	PK2	28.4	-23.6	0	45.49	-	-	74	-28.51	198	196	H
	* 1.23	29.12	MAv1	28.4	-23.6	4.07	37.99	54	-16.01	-	-	198	196	H
4	* 1.23	39.14	PK2	28.4	-23.6	0	43.94	-	-	74	-30.06	312	321	V
	* 1.23	28.17	MAv1	28.4	-23.6	4.07	37.04	54	-16.96	-	-	312	321	V
2	* 4.562	40.45	PK2	33.9	-31.7	0	42.65	-	-	74	-31.35	77	167	H
	* 4.56	28.55	MAv1	33.9	-31.7	4.07	34.82	54	-19.18	-	-	77	167	H
3	* 7.386	42.74	PK2	35.5	-27.9	0	50.34	-	-	74	-23.66	339	110	H
	* 7.386	35.7	MAv1	35.5	-27.9	4.07	47.37	54	-6.63	-	-	339	110	H
5	* 3.991	39.83	PK2	33.3	-32	0	41.13	-	-	74	-32.87	168	268	V
	* 3.991	28.33	MAv1	33.3	-32	4.07	33.7	54	-20.3	-	-	168	268	V
6	* 7.383	37.31	PK2	35.5	-27.9	0	44.91	-	-	74	-29.09	210	400	V
	* 7.384	24.96	MAv1	35.5	-27.9	4.07	36.63	54	-17.37	-	-	210	400	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

RESTRICTED BANDEDGE (LOW CHANNEL EXTERNAL CHAIN 0)

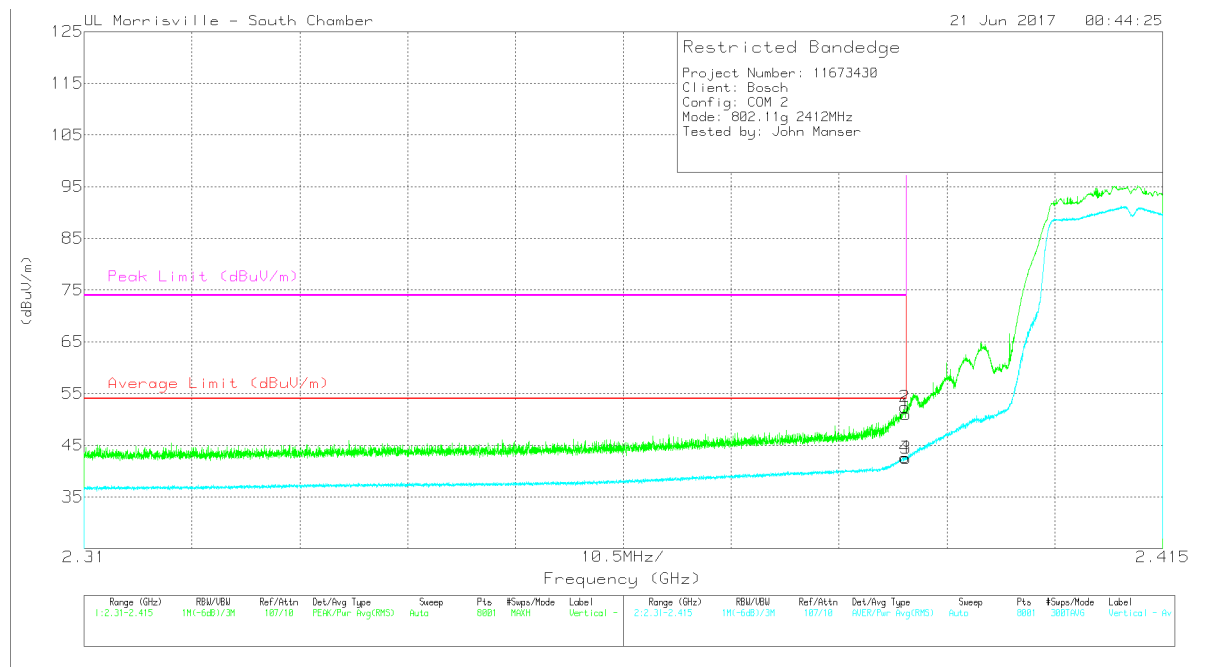


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	44.96	Pk	31.9	-24.1	0	52.76	-	-	74	-21.24	221	112	H
2	* 2.39	47.04	Pk	31.9	-24.1	0	54.84	-	-	74	-19.16	221	112	H
3	* 2.39	31.9	RMS	31.9	-24.1	4.07	43.77	54	-10.23	-	-	221	112	H
4	* 2.39	32.35	RMS	31.9	-24.1	4.07	44.22	54	-9.78	-	-	221	112	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



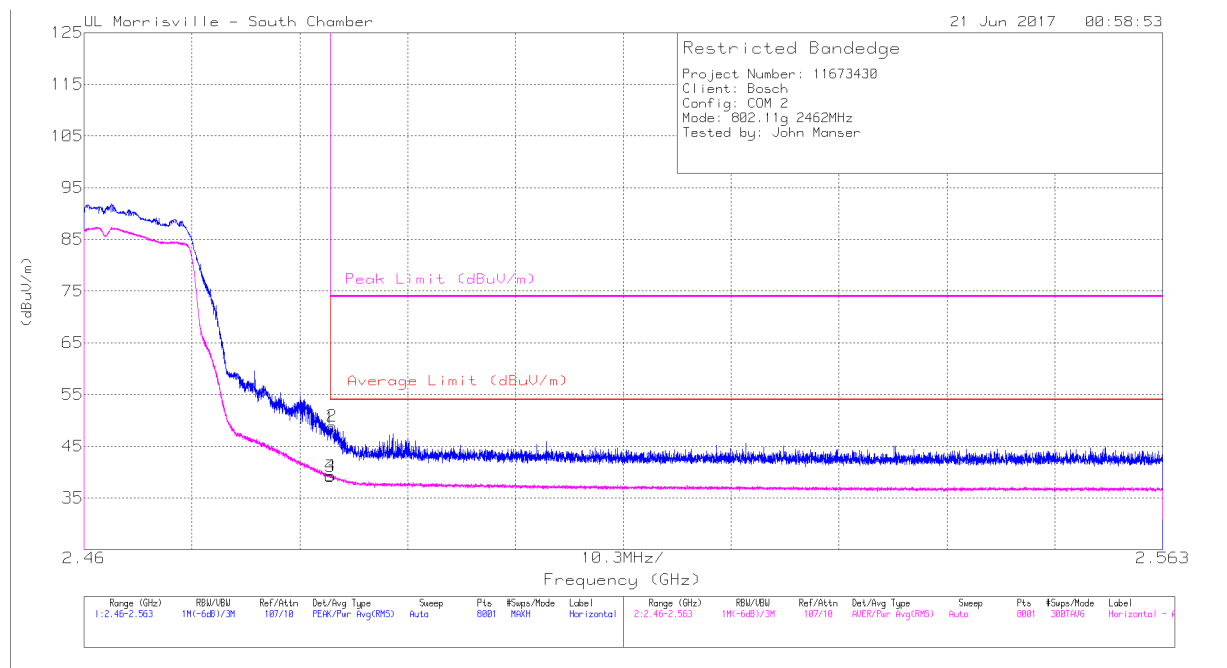
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	43.12	Pk	31.9	-24.1	0	50.92	-	-	74	-23.08	190	115	V
2	* 2.39	44.59	Pk	31.9	-24.1	0	52.39	-	-	74	-21.61	190	115	V
3	* 2.39	30.64	RMS	31.9	-24.1	4.07	42.51	54	-11.49	-	-	190	115	V
4	* 2.39	30.75	RMS	31.9	-24.1	4.07	42.62	54	-11.38	-	-	190	115	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL EXTERNAL CHAIN 0)

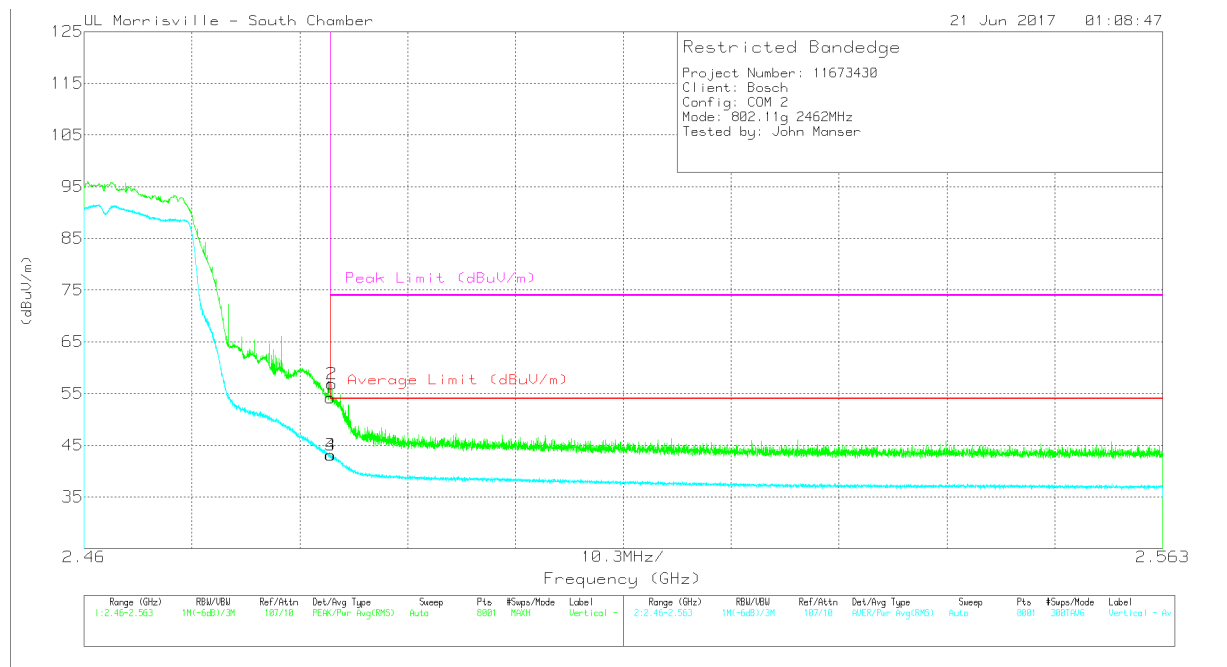


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	40.73	Pk	32.4	-24.6	0	48.53	-	-	74	-25.47	241	136	H
2	* 2.484	41.06	Pk	32.4	-24.6	0	48.86	-	-	74	-25.14	241	136	H
3	* 2.484	27.27	RMS	32.4	-24.6	4.07	39.14	54	-14.86	-	-	241	136	H
4	* 2.484	27.39	RMS	32.4	-24.6	4.07	39.26	54	-14.74	-	-	241	136	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



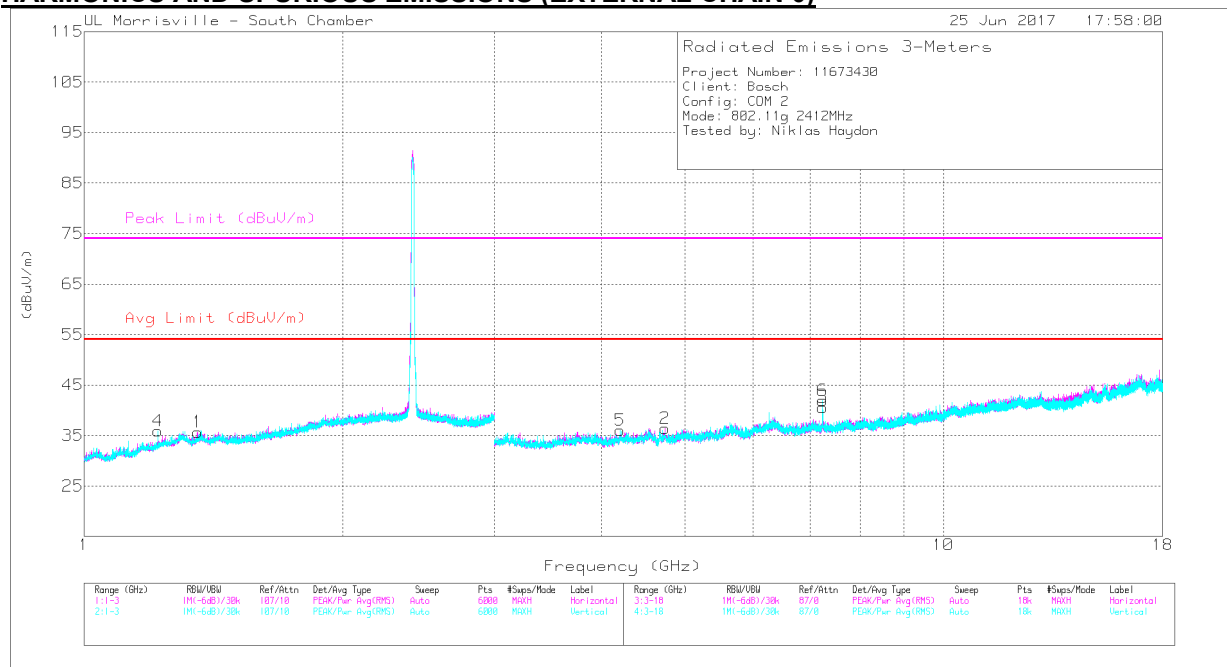
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	46.35	Pk	32.4	-24.6	0	54.15	-	-	74	-19.85	52	162	V
2	* 2.484	49.06	Pk	32.4	-24.6	0	56.86	-	-	74	-17.14	52	162	V
3	* 2.484	31.23	RMS	32.4	-24.6	4.07	43.1	54	-10.9	-	-	52	162	V
4	* 2.484	31.21	RMS	32.4	-24.6	4.07	43.08	54	-10.92	-	-	52	162	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (EXTERNAL CHAIN 0)



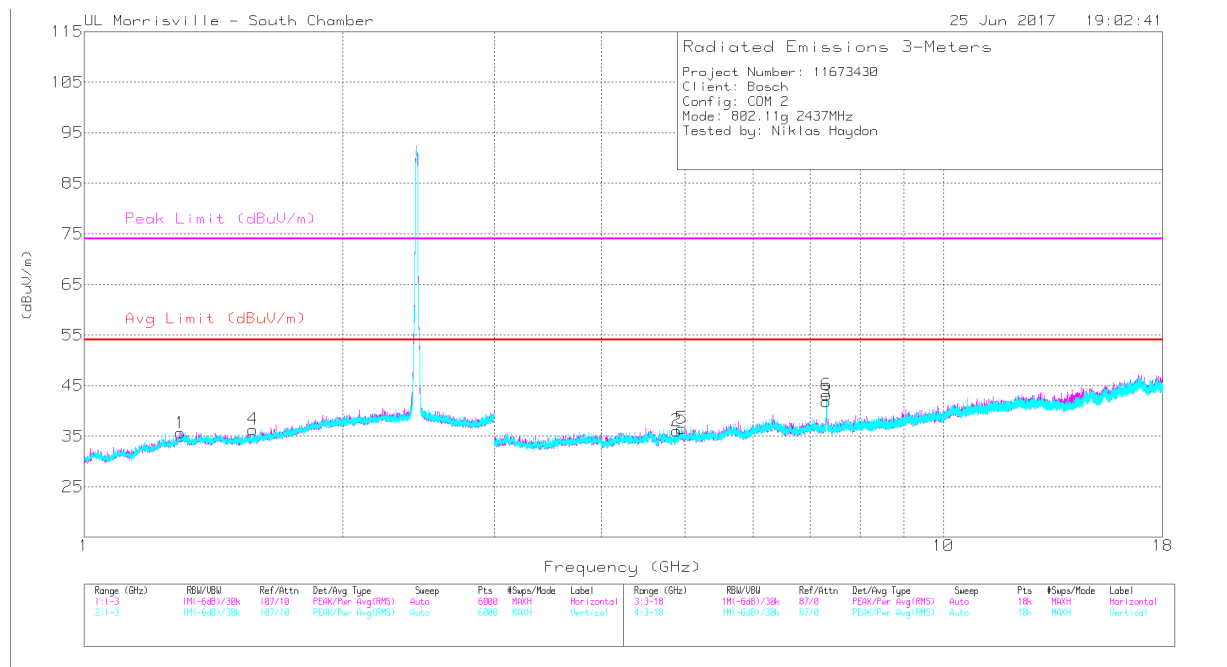
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.354	35.75	PK2	28.7	-23	0	41.45	-	-	74	-32.55	138	317	H
	* 1.357	23.61	MAv1	28.7	-23	4.07	33.38	54	-20.62	-	-	138	317	H
2	* 4.744	39.68	PK2	34	-31.8	0	41.88	-	-	74	-32.12	228	174	H
	* 4.742	27.89	MAv1	34	-31.8	4.07	34.16	54	-19.84	-	-	228	174	H
4	* 1.218	36.85	PK2	28.3	-23.6	0	41.55	-	-	74	-32.45	122	391	V
	* 1.219	23.66	MAv1	28.3	-23.6	4.07	32.43	54	-21.57	-	-	122	391	V
5	* 4.204	39.6	PK2	33.3	-31.3	0	41.6	-	-	74	-32.4	55	228	V
	* 4.206	28.03	MAv1	33.3	-31.3	4.07	34.1	54	-19.9	-	-	55	228	V
3	7.236	33.21	Pk	35.5	-28.1	0	40.61	-	-	-	-	0-360	101	H
6	7.236	34.57	Pk	35.5	-28.1	0	41.97	-	-	-	-	0-360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

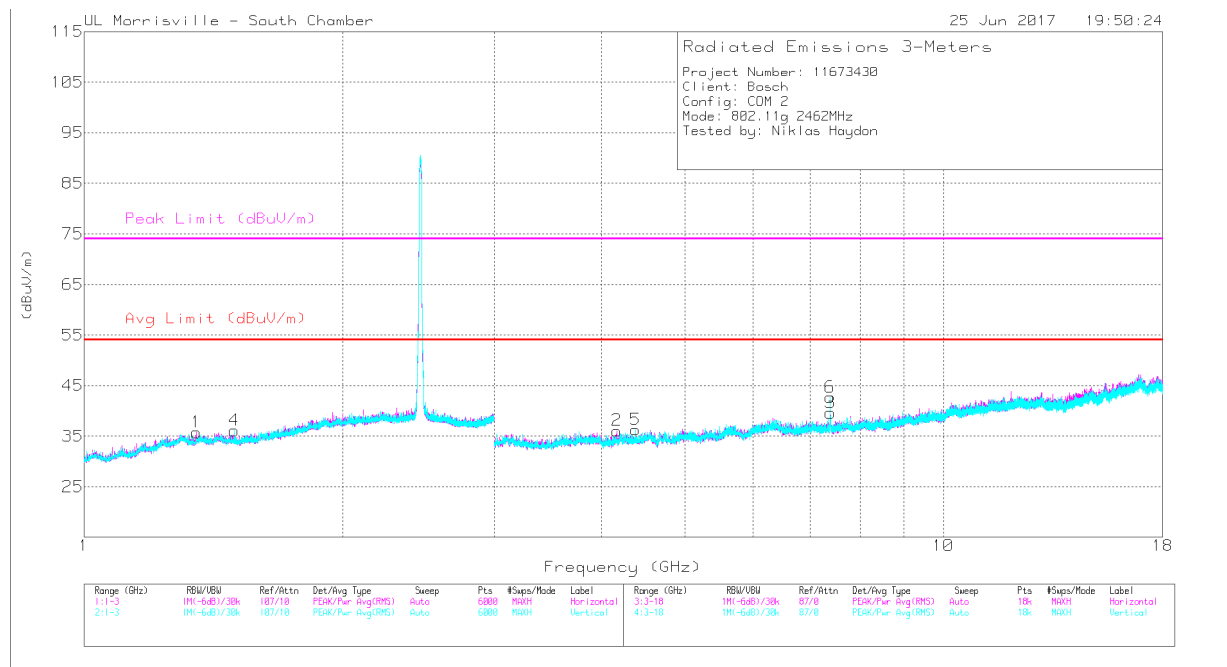


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.294	36	PK2	29.1	-23.2	0	41.9	-	-	74	-32.1	41	254	H
	* 1.294	23.88	MAv1	29.1	-23.2	4.07	33.85	54	-20.15	-	-	41	254	H
2	* 4.891	38.37	PK2	34	-31.1	0	41.27	-	-	74	-32.73	237	256	H
	* 4.892	26.83	MAv1	34	-31.1	4.07	33.8	54	-20.2	-	-	237	256	H
3	* 7.311	41.71	PK2	35.5	-27.9	0	49.31	-	-	74	-24.69	1	103	H
	* 7.311	30.84	MAv1	35.5	-27.9	4.07	42.51	54	-11.49	-	-	1	103	H
4	* 1.57	35.48	PK2	28.1	-22.4	0	41.18	-	-	74	-32.82	357	299	V
	* 1.573	23.57	MAv1	28.1	-22.4	4.07	33.34	54	-20.66	-	-	357	299	V
5	* 4.965	39.5	PK2	34	-31.3	0	42.2	-	-	74	-31.8	205	119	V
	* 4.965	27.9	MAv1	34	-31.3	4.07	34.67	54	-19.33	-	-	205	119	V
6	* 7.311	43.37	PK2	35.5	-27.9	0	50.97	-	-	74	-23.03	39	114	V
	* 7.311	33.94	MAv1	35.5	-27.9	4.07	45.61	54	-8.39	-	-	39	114	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/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	* 1.351	35.67	PK2	28.7	-23	0	41.37	-	-	74	-32.63	63	309	H
	* 1.353	23.49	MAv1	28.7	-23	4.07	33.26	54	-20.74	-	-	63	309	H
2	* 4.17	39.74	PK2	33.3	-31.6	0	41.44	-	-	74	-32.56	353	109	H
	* 4.167	27.91	MAv1	33.3	-31.5	4.07	33.78	54	-20.22	-	-	353	109	H
3	* 7.386	40.22	PK2	35.5	-27.9	0	47.82	-	-	74	-26.18	358	101	H
	* 7.386	28.88	MAv1	35.5	-27.9	4.07	40.55	54	-13.45	-	-	358	101	H
4	* 1.494	35.7	PK2	27.9	-22.5	0	41.1	-	-	74	-32.9	79	375	V
	* 1.494	23.67	MAv1	27.9	-22.5	4.07	33.14	54	-20.86	-	-	79	375	V
5	* 4.381	41.39	PK2	33.5	-32.3	0	42.59	-	-	74	-31.41	288	282	V
	* 4.382	28.83	MAv1	33.5	-32.4	4.07	34	54	-20	-	-	288	282	V
6	* 7.386	41.31	PK2	35.5	-27.9	0	48.91	-	-	74	-25.09	42	106	V
	* 7.386	31.11	MAv1	35.5	-27.9	4.07	42.78	54	-11.22	-	-	42	106	V

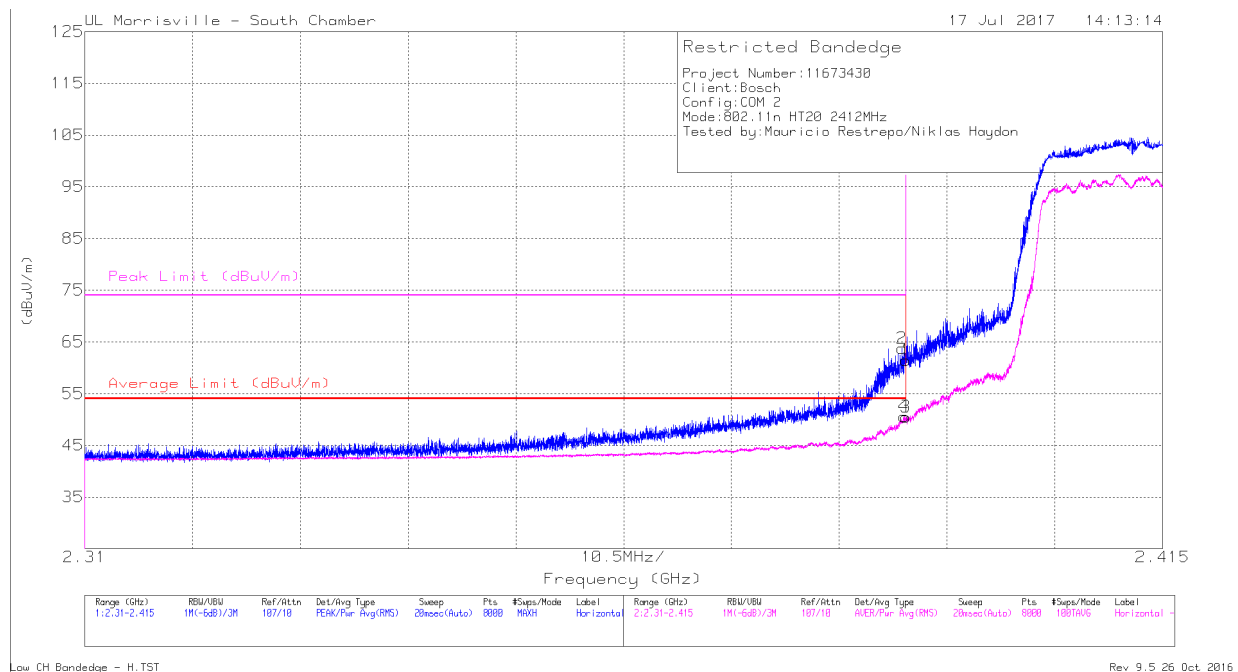
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

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

RESTRICTED BANDEDGE (LOW CHANNEL INTERNAL CHAIN 0)

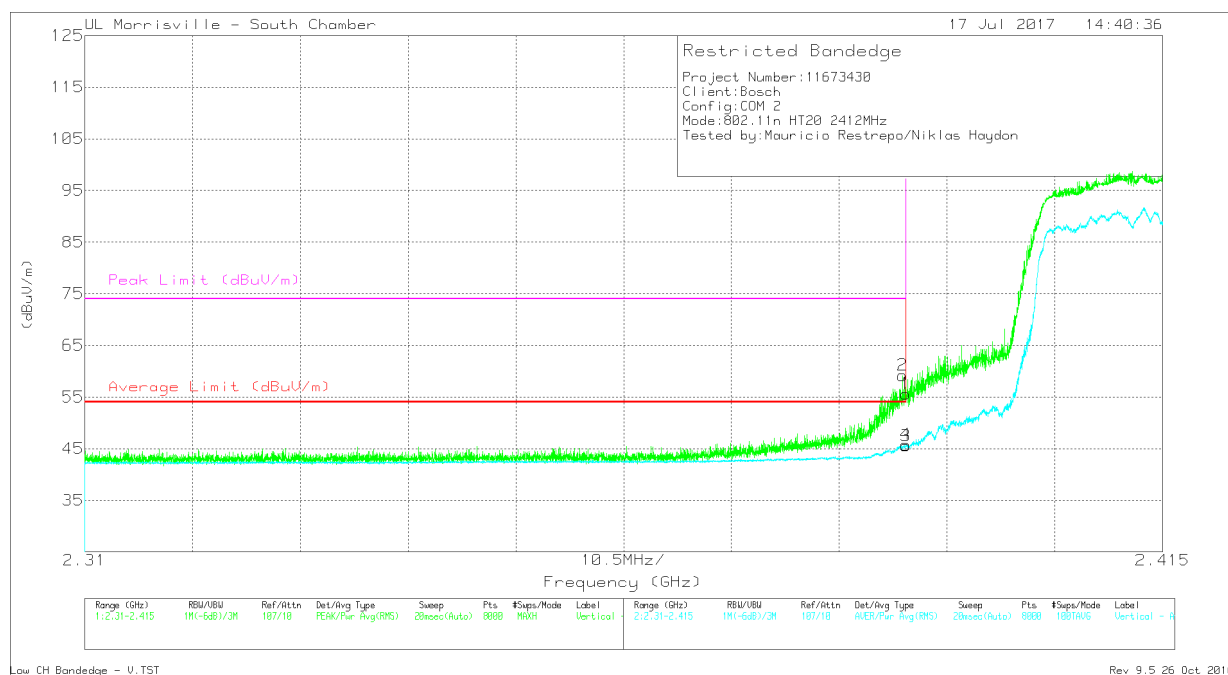


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	53.63	Pk	31.9	-24.1	0	61.43	-	-	74	-12.57	173	243	H
2	* 2.39	55.97	Pk	31.9	-24.1	0	63.77	-	-	74	-10.23	173	243	H
3	* 2.39	33.02	RMS	31.9	-24.1	9.68	50.5	54	-3.5	-	-	173	243	H
4	* 2.39	33.13	RMS	31.9	-24.1	9.68	50.61	54	-3.39	-	-	173	243	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



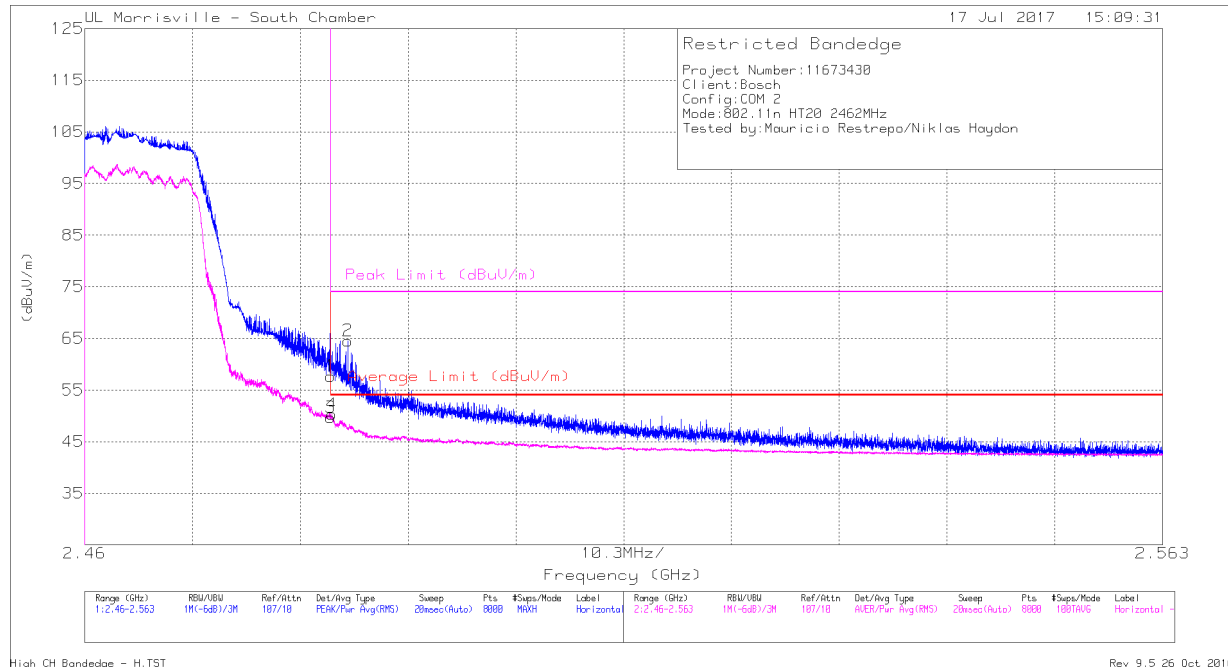
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	47.81	Pk	31.9	-24.1	0	55.61	-	-	74	-18.39	123	351	V
2	* 2.39	51.39	Pk	31.9	-24.1	0	59.19	-	-	74	-14.81	123	351	V
3	* 2.39	28.06	RMS	31.9	-24.1	9.68	45.54	54	-8.46	-	-	123	351	V
4	* 2.39	28.29	RMS	31.9	-24.1	9.68	45.77	54	-8.23	-	-	123	351	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL INTERNAL CHAIN 0)

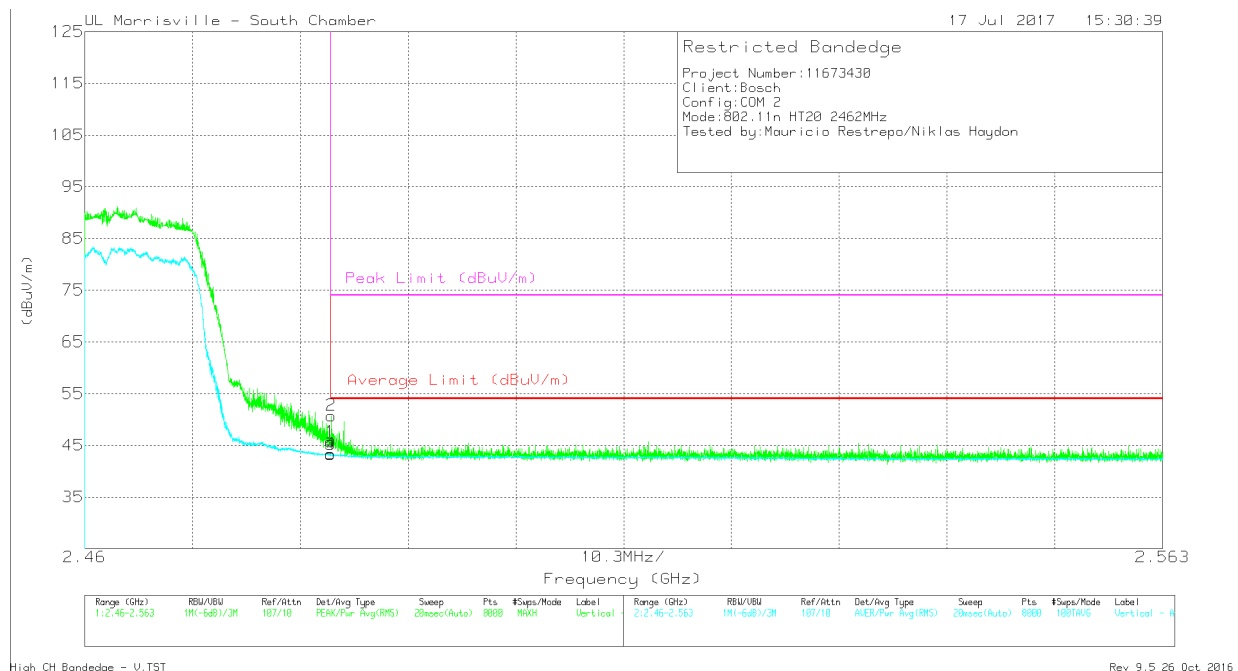


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.9	Pk	32.4	-24.6	0	57.7	-	-	74	-16.3	165	114	H
2	* 2.485	56.74	Pk	32.4	-24.6	0	64.54	-	-	74	-9.46	165	114	H
3	* 2.484	32.24	RMS	32.4	-24.6	9.68	49.72	54	-4.28	-	-	165	114	H
4	* 2.484	32.82	RMS	32.4	-24.6	9.68	50.3	54	-3.7	-	-	165	114	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



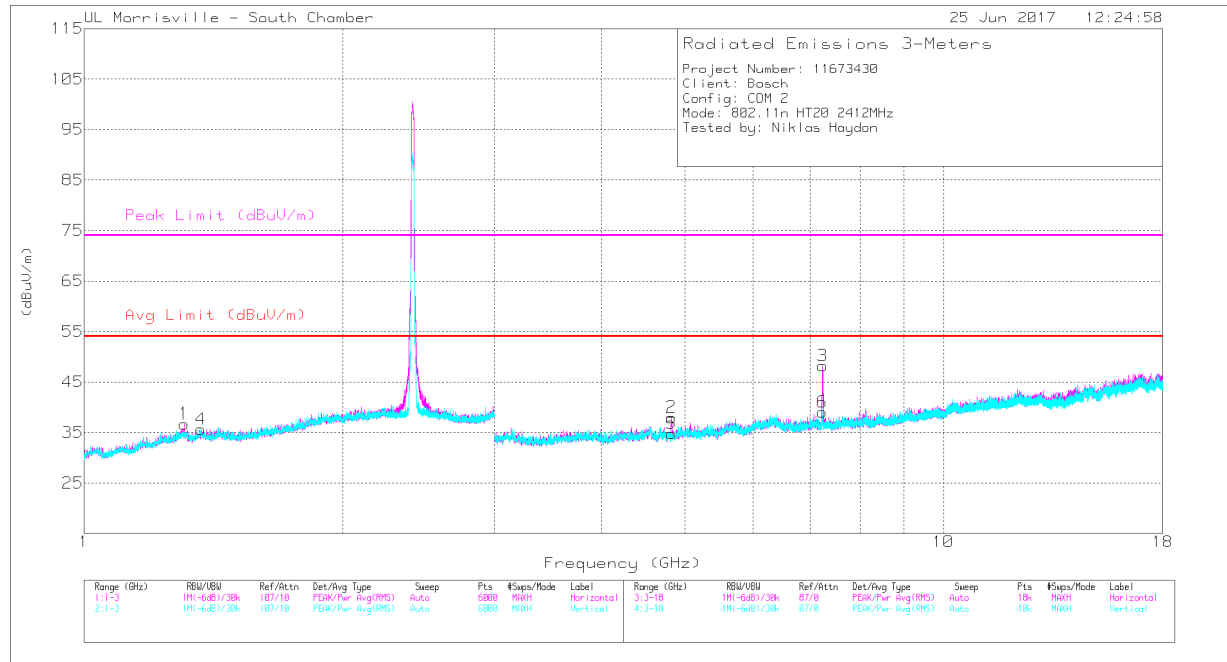
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1	* 2.484	37.88	Pk	32.4	-24.6	0	45.68	-	-	74	-28.32	80	158	V
2	* 2.484	42.95	Pk	32.4	-24.6	0	50.75	-	-	74	-23.25	80	158	V
3	* 2.484	25.74	RMS	32.4	-24.6	9.68	43.22	54	-10.78	-	-	80	158	V
4	* 2.484	25.85	RMS	32.4	-24.6	9.68	43.33	54	-10.67	-	-	80	158	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (INTERNAL CHAIN 0)



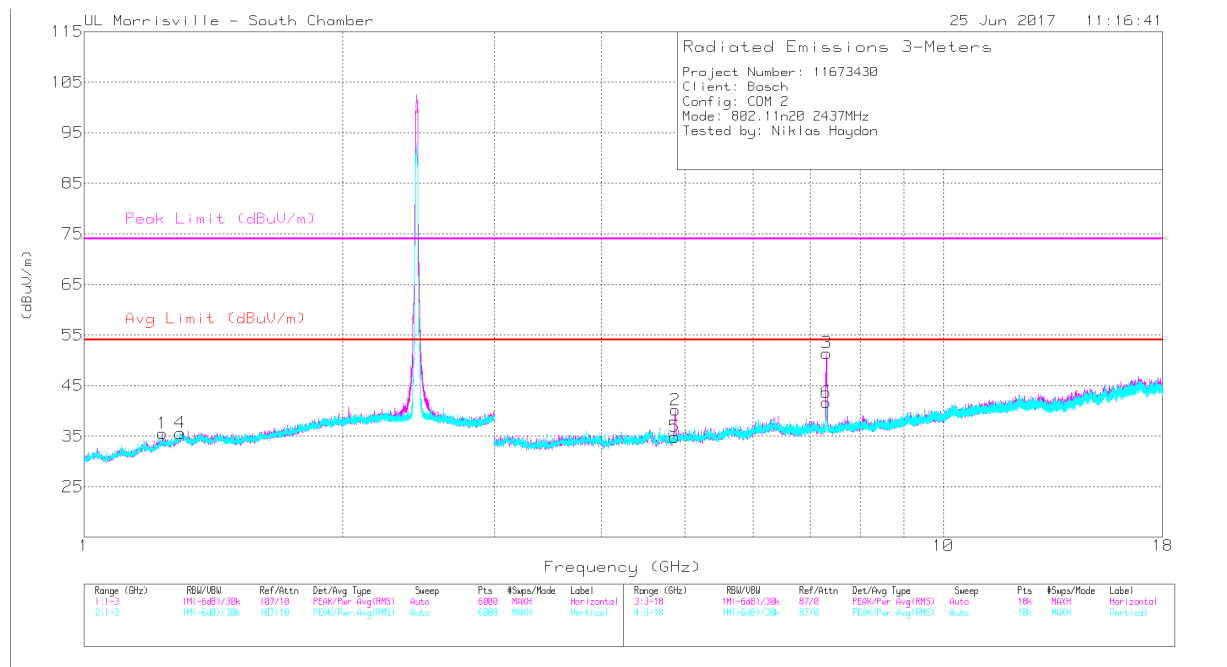
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.309	36.4	PK2	29.1	-23.1	0	42.4	-	-	74	-31.6	267	107	H
	* 1.306	23.86	MAv1	29.1	-23.1	4.07	33.93	54	-20.07	-	-	267	107	H
2	* 4.826	44.04	PK2	34	-31.1	0	46.94	-	-	74	-27.06	355	109	H
	* 4.825	30.55	MAv1	34	-31.1	4.07	37.52	54	-16.48	-	-	355	109	H
4	* 1.365	35.38	PK2	28.8	-23	0	41.18	-	-	74	-32.82	326	120	V
	* 1.365	23.69	MAv1	28.8	-23	4.07	33.56	54	-20.44	-	-	326	120	V
5	* 4.824	39.72	PK2	34	-31.1	0	42.62	-	-	74	-31.38	217	260	V
	* 4.823	26.82	MAv1	34	-31.1	4.07	33.79	54	-20.21	-	-	217	260	V
6	7.234	31.64	Pk	35.5	-28.1	0	39.04	-	-	-	-	0-360	101	V
3	7.236	40.82	Pk	35.5	-28.1	0	48.22	-	-	-	-	0-360	101	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

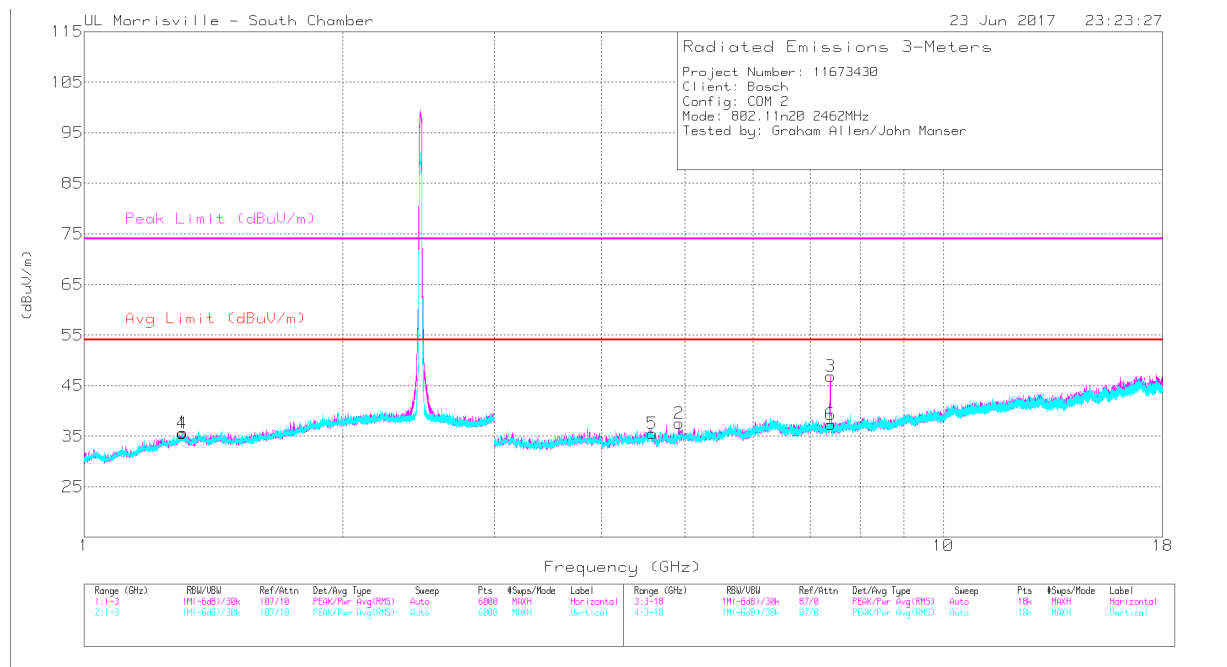


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.233	36.1	PK2	28.4	-23.5	0	41	-	-	74	-33	335	133	H
	* 1.231	24	MAv1	28.4	-23.5	4.07	32.97	54	-21.03	-	-	335	133	H
2	* 4.876	47.1	PK2	34	-31.1	0	50	-	-	74	-24	347	109	H
	* 4.874	32.71	MAv1	34	-31.1	4.07	39.68	54	-14.32	-	-	347	109	H
3	* 7.31	55.03	PK2	35.5	-27.9	0	62.63	-	-	74	-11.37	337	106	H
	* 7.311	38.82	MAv1	35.5	-27.9	4.07	50.49	54	-3.51	-	-	337	106	H
4	* 1.295	36.47	PK2	29.1	-23.2	0	42.37	-	-	74	-31.63	288	292	V
	* 1.294	23.86	MAv1	29.1	-23.2	4.07	33.83	54	-20.17	-	-	288	292	V
5	* 4.868	38.68	PK2	34	-31.1	0	41.58	-	-	74	-32.42	316	370	V
	* 4.868	27.12	MAv1	34	-31.1	4.07	34.09	54	-19.91	-	-	316	370	V
6	* 7.303	45.88	PK2	35.5	-27.9	0	53.48	-	-	74	-20.52	281	380	V
	* 7.303	29.39	MAv1	35.5	-27.9	4.07	41.06	54	-12.94	-	-	281	380	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average



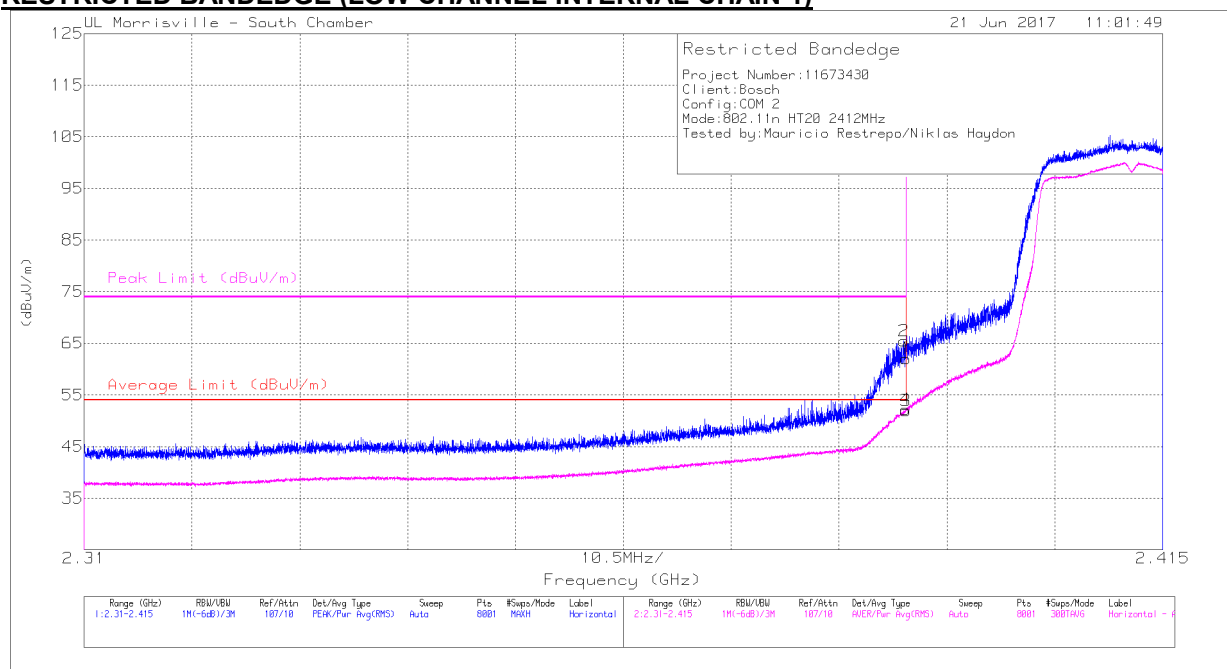
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.301	35.94	PK2	29.2	-23.2	0	41.94	-	-	74	-32.06	356	365	H
	* 1.301	23.94	MAv1	29.2	-23.2	4.07	34.01	54	-19.99	-	-	356	365	H
2	* 4.925	43.14	PK2	34	-31	0	46.14	-	-	74	-27.86	351	141	H
	* 4.925	29.55	MAv1	34	-31	4.07	36.62	54	-17.38	-	-	351	141	H
3	* 7.385	50.02	PK2	35.5	-27.9	0	57.62	-	-	74	-16.38	340	106	H
	* 7.386	34.18	MAv1	35.5	-27.9	4.07	45.85	54	-8.15	-	-	340	106	H
4	* 1.302	36.18	PK2	29.2	-23.1	0	42.28	-	-	74	-31.72	230	317	V
	* 1.302	23.89	MAv1	29.2	-23.1	4.07	34.06	54	-19.94	-	-	230	317	V
5	* 4.587	40.23	PK2	33.9	-31.9	0	42.23	-	-	74	-31.77	43	235	V
	* 4.586	27.85	MAv1	33.9	-31.9	4.07	33.92	54	-20.08	-	-	43	235	V
6	* 7.392	39.25	PK2	35.5	-27.9	0	46.85	-	-	74	-27.15	340	111	V
	* 7.392	25.54	MAv1	35.5	-27.9	4.07	37.21	54	-16.79	-	-	340	111	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

RESTRICTED BANDEDGE (LOW CHANNEL INTERNAL CHAIN 1)

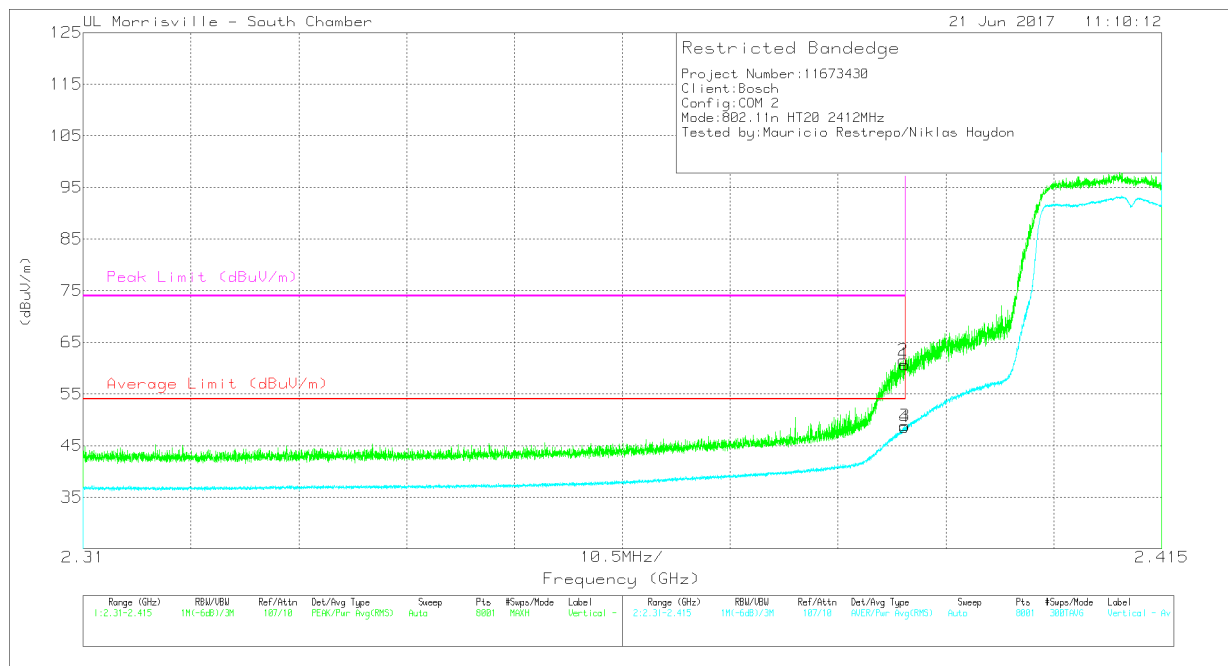


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	54.25	Pk	31.9	-24.1	0	62.05	-	-	74	-11.95	175	222	H
2	* 2.39	57.64	Pk	31.9	-24.1	0	65.44	-	-	74	-8.56	175	222	H
3	* 2.39	40.08	RMS	31.9	-24.1	4.07	51.95	54	-2.05	-	-	175	222	H
4	* 2.39	40.26	RMS	31.9	-24.1	4.07	52.13	54	-1.87	-	-	175	222	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



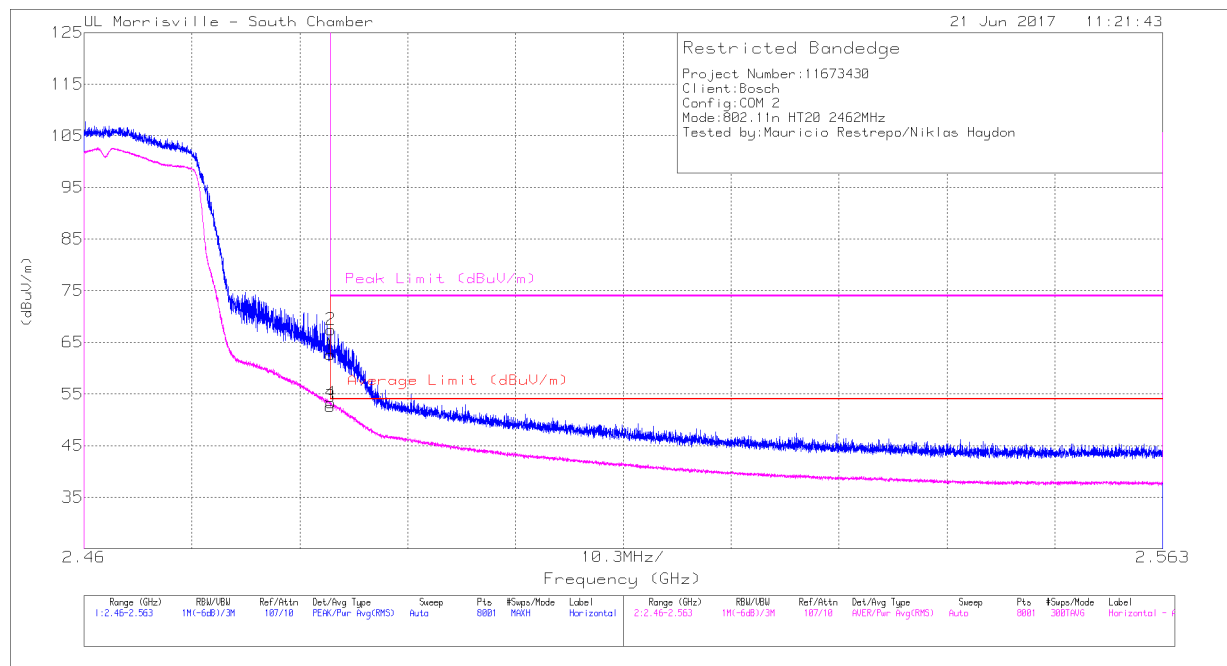
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	52.93	Pk	31.9	-24.1	0	60.73	-	-	74	-13.27	123	398	V
2	* 2.39	53.75	Pk	31.9	-24.1	0	61.55	-	-	74	-12.45	123	398	V
3	* 2.39	36.98	RMS	31.9	-24.1	4.07	48.85	54	-5.15	-	-	123	398	V
4	* 2.39	36.69	RMS	31.9	-24.1	4.07	48.56	54	-5.44	-	-	123	398	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL INTERNAL CHAIN 1)

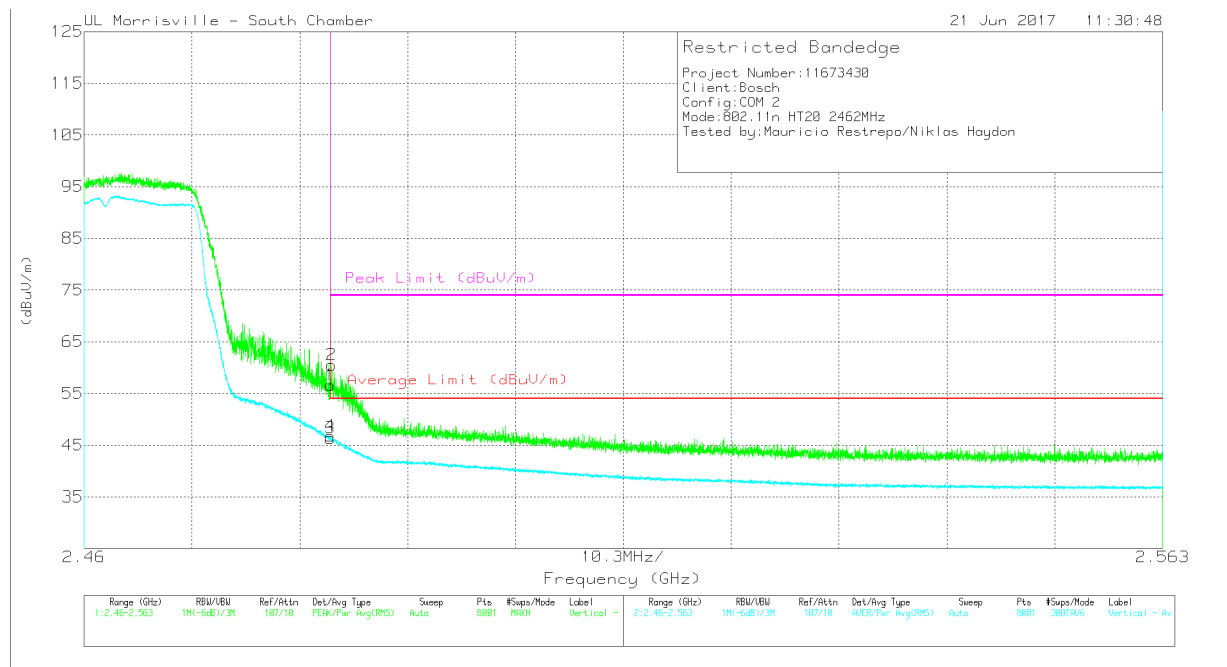


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	54.84	Pk	32.4	-24.6	0	62.64	-	-	74	-11.36	175	137	H
2	* 2.484	59.67	Pk	32.4	-24.6	0	67.47	-	-	74	-6.53	175	137	H
3	* 2.484	40.71	RMS	32.4	-24.6	4.07	52.58	54	-1.42	-	-	175	137	H
4	* 2.484	41.37	RMS	32.4	-24.6	4.07	53.24	54	-0.76	-	-	175	137	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



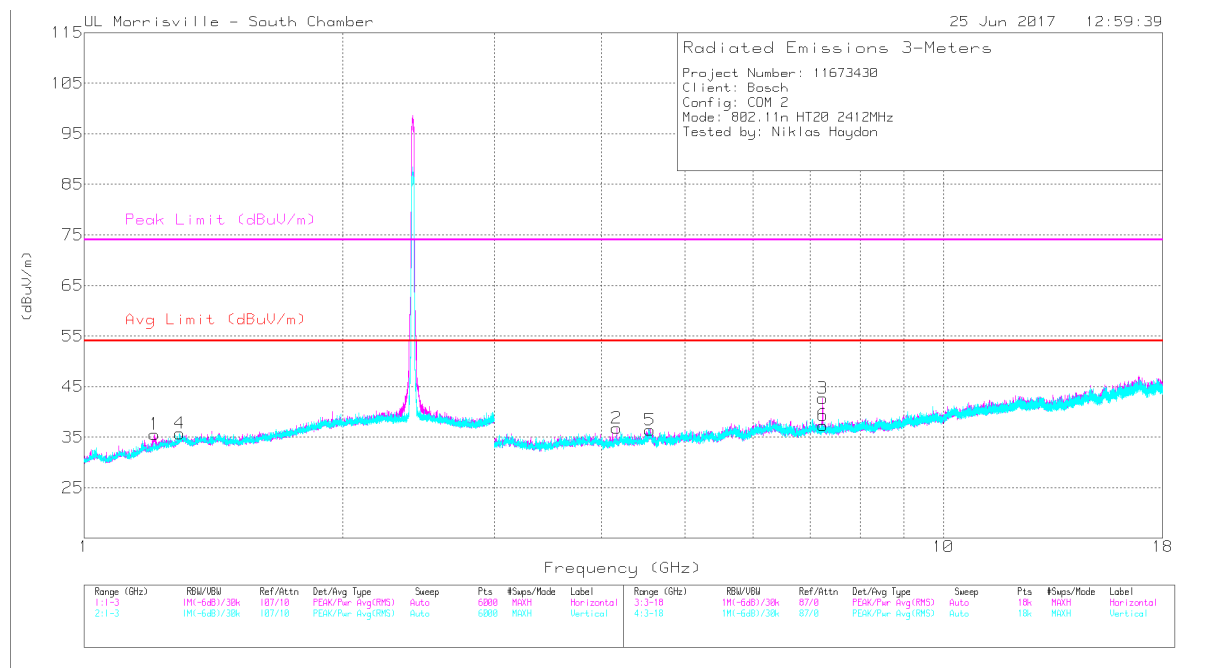
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	48.84	Pk	32.4	-24.6	0	56.64	-	-	74	-17.36	287	364	V
2	* 2.484	52.7	Pk	32.4	-24.6	0	60.5	-	-	74	-13.5	287	364	V
3	* 2.484	34.47	RMS	32.4	-24.6	4.07	46.34	54	-7.66	-	-	287	364	V
4	* 2.484	34.85	RMS	32.4	-24.6	4.07	46.72	54	-7.28	-	-	287	364	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (INTERNAL CHAIN 1)



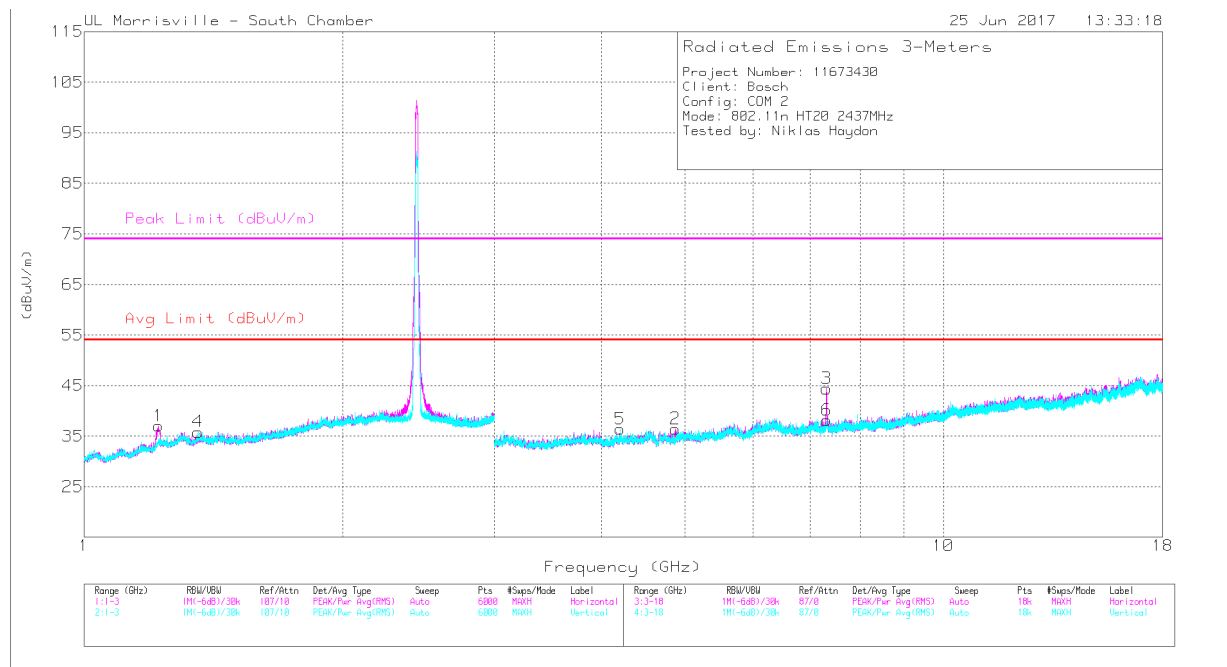
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.206	38.12	PK2	28.3	-23.7	0	42.72	-	-	74	-31.28	269	146	H
	* 1.207	26.79	MAv1	28.3	-23.7	4.07	35.46	54	-18.54	-	-	269	146	H
4	* 1.292	35.91	PK2	29.1	-23.2	0	41.81	-	-	74	-32.19	338	295	V
	* 1.291	23.86	MAv1	29.1	-23.2	4.07	33.83	54	-20.17	-	-	338	295	V
2	* 4.168	39.69	PK2	33.3	-31.5	0	41.49	-	-	74	-32.51	316	246	H
	* 4.164	28.08	MAv1	33.3	-31.6	4.07	33.85	54	-20.15	-	-	316	246	H
5	* 4.553	39.99	PK2	33.9	-31.7	0	42.19	-	-	74	-31.81	122	320	V
	* 4.555	28.39	MAv1	33.9	-31.7	4.07	34.66	54	-19.34	-	-	122	320	V
3	7.236	35.32	Pk	35.5	-28.1	0	42.72	-	-	-	-	0-360	102	H
6	7.239	29.94	Pk	35.5	-28.1	0	37.34	-	-	-	-	0-360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

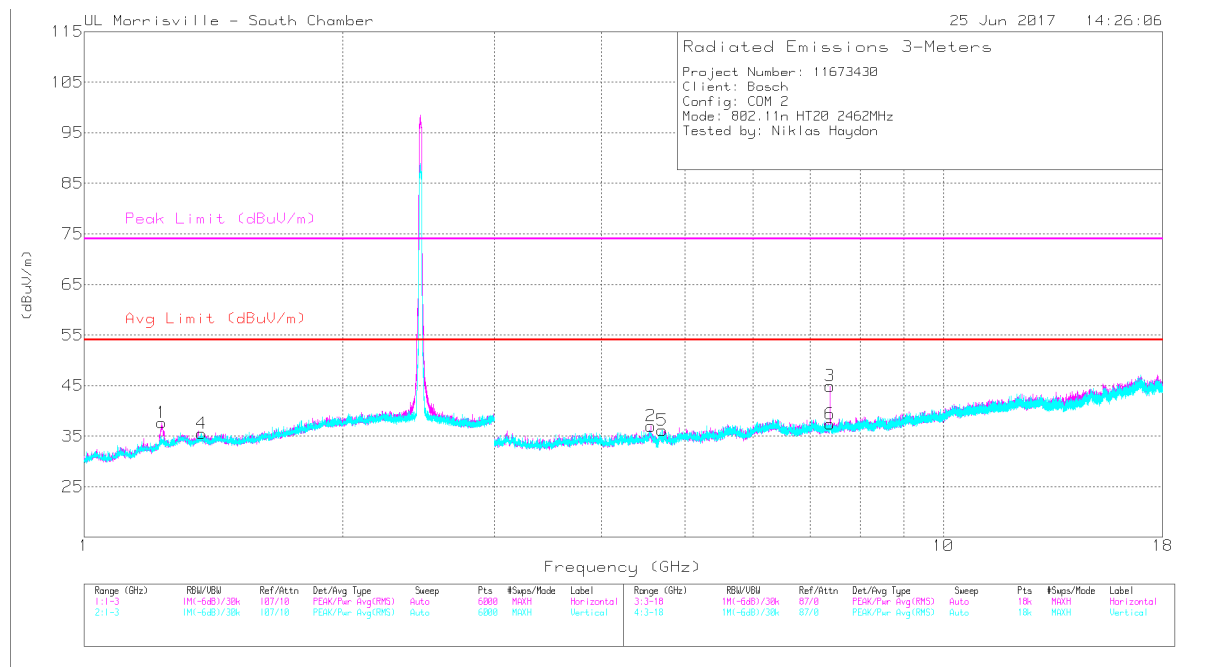


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.222	39.36	PK2	28.3	-23.6	0	44.06	-	-	74	-29.94	270	159	H
	* 1.219	28.72	MAv1	28.3	-23.6	4.07	37.49	54	-16.51	-	-	270	159	H
4	* 1.356	36.45	PK2	28.7	-23	0	42.15	-	-	74	-31.85	114	190	V
	* 1.359	23.67	MAv1	28.7	-23	4.07	33.44	54	-20.56	-	-	114	190	V
2	* 4.877	41.03	PK2	34	-31	0	44.03	-	-	74	-29.97	344	111	H
	* 4.877	28.99	MAv1	34	-31	4.07	36.06	54	-17.94	-	-	344	111	H
3	* 7.311	44.83	PK2	35.5	-27.9	0	52.43	-	-	74	-21.57	341	105	H
	* 7.311	35.49	MAv1	35.5	-27.9	4.07	47.16	54	-6.84	-	-	341	105	H
5	* 4.206	39.55	PK2	33.3	-31.3	0	41.55	-	-	74	-32.45	143	227	V
	* 4.208	28.17	MAv1	33.3	-31.3	4.07	34.24	54	-19.76	-	-	143	227	V
6	* 7.317	38.66	PK2	35.5	-27.9	0	46.26	-	-	74	-27.74	114	111	V
	* 7.315	26.04	MAv1	35.5	-27.9	4.07	37.71	54	-16.29	-	-	114	111	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average



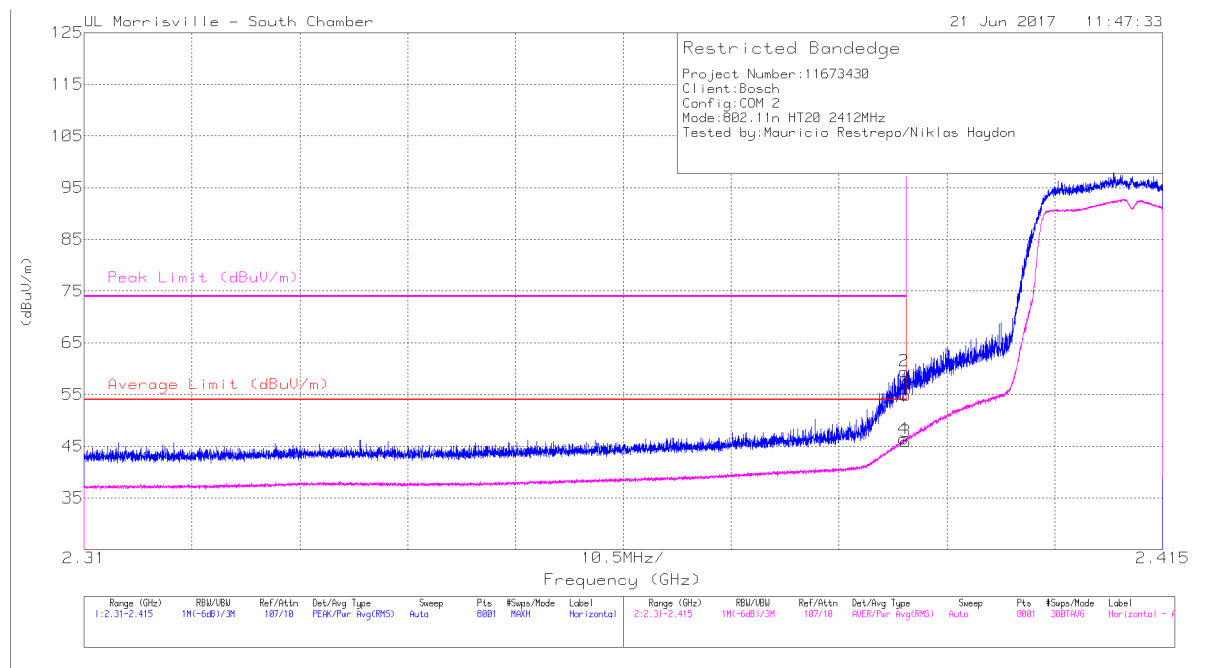
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.232	41.14	PK2	28.4	-23.5	0	46.04	-	-	74	-27.96	175	186	H
	* 1.232	29.4	MAv1	28.4	-23.5	4.07	38.37	54	-15.63	-	-	175	186	H
4	* 1.369	35.75	PK2	28.9	-23	0	41.65	-	-	74	-32.35	133	356	V
	* 1.367	23.68	MAv1	28.8	-23	4.07	33.55	54	-20.45	-	-	133	356	V
2	* 4.567	40.17	PK2	33.9	-31.7	0	42.37	-	-	74	-31.63	67	328	H
	* 4.565	28.31	MAv1	33.9	-31.7	4.07	34.58	54	-19.42	-	-	67	328	H
3	* 7.386	42.54	PK2	35.5	-27.9	0	50.14	-	-	74	-23.86	342	123	H
	* 7.386	35.2	MAv1	35.5	-27.9	4.07	46.87	54	-7.13	-	-	342	123	H
5	* 4.708	40.07	PK2	34	-32	0	42.07	-	-	74	-31.93	89	202	V
	* 4.705	27.85	MAv1	34	-32	4.07	33.92	54	-20.08	-	-	89	202	V
6	* 7.376	36.04	PK2	35.5	-27.8	0	43.74	-	-	74	-30.26	84	326	V
	* 7.378	24.22	MAv1	35.5	-27.8	4.07	35.99	54	-18.01	-	-	84	326	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

RESTRICTED BANDEDGE (LOW CHANNEL EXTERNAL CHAIN 0)

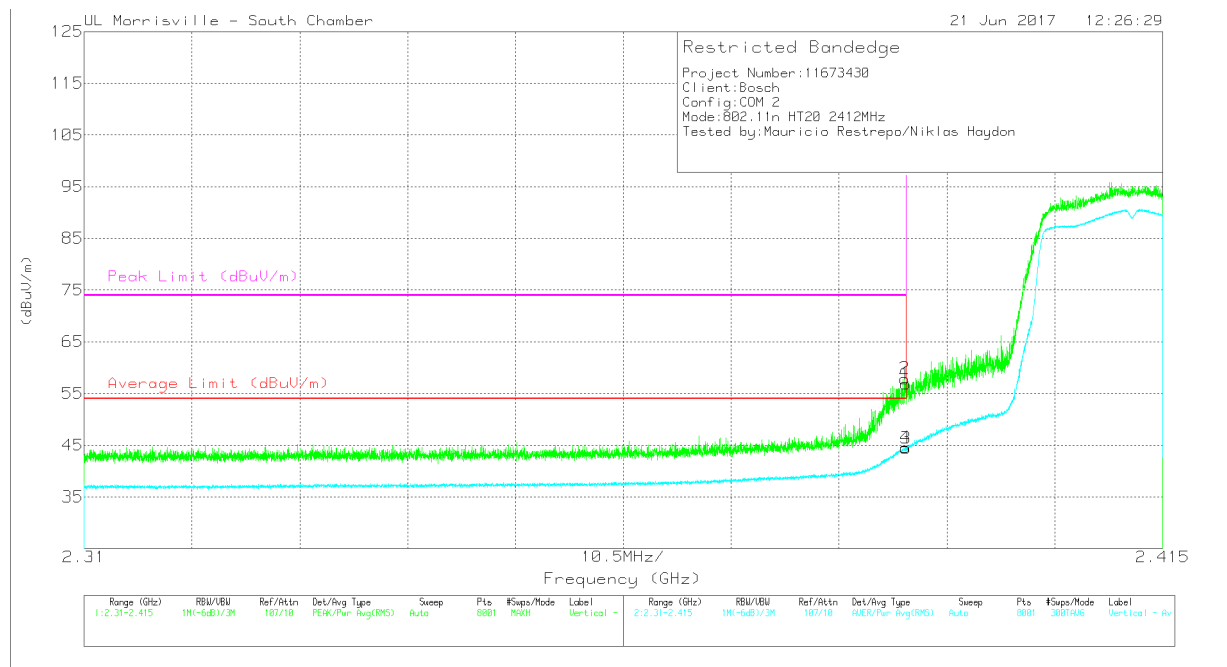


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	47.08	Pk	31.9	-24.1	0	54.88	-	-	74	-19.12	5	189	H
2	* 2.39	51.7	Pk	31.9	-24.1	0	59.5	-	-	74	-14.5	5	189	H
3	* 2.39	34.04	RMS	31.9	-24.1	4.07	45.91	54	-8.09	-	-	5	189	H
4	* 2.39	34.5	RMS	31.9	-24.1	4.07	46.37	54	-7.63	-	-	5	189	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



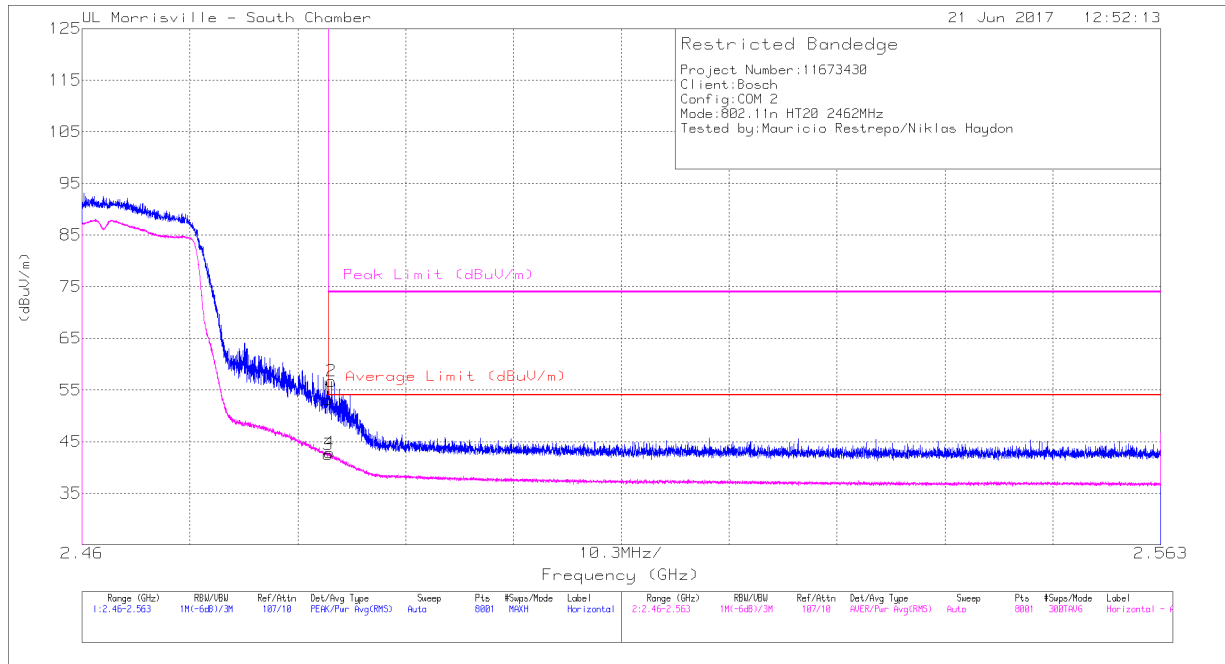
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	49.11	Pk	31.9	-24.1	0	56.91	-	-	74	-17.09	21	169	V
2	* 2.39	50.09	Pk	31.9	-24.1	0	57.89	-	-	74	-16.11	21	169	V
3	* 2.39	32.52	RMS	31.9	-24.1	4.07	44.39	54	-9.61	-	-	21	169	V
4	* 2.39	32.68	RMS	31.9	-24.1	4.07	44.55	54	-9.45	-	-	21	169	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL EXTERNAL CHAIN 0)

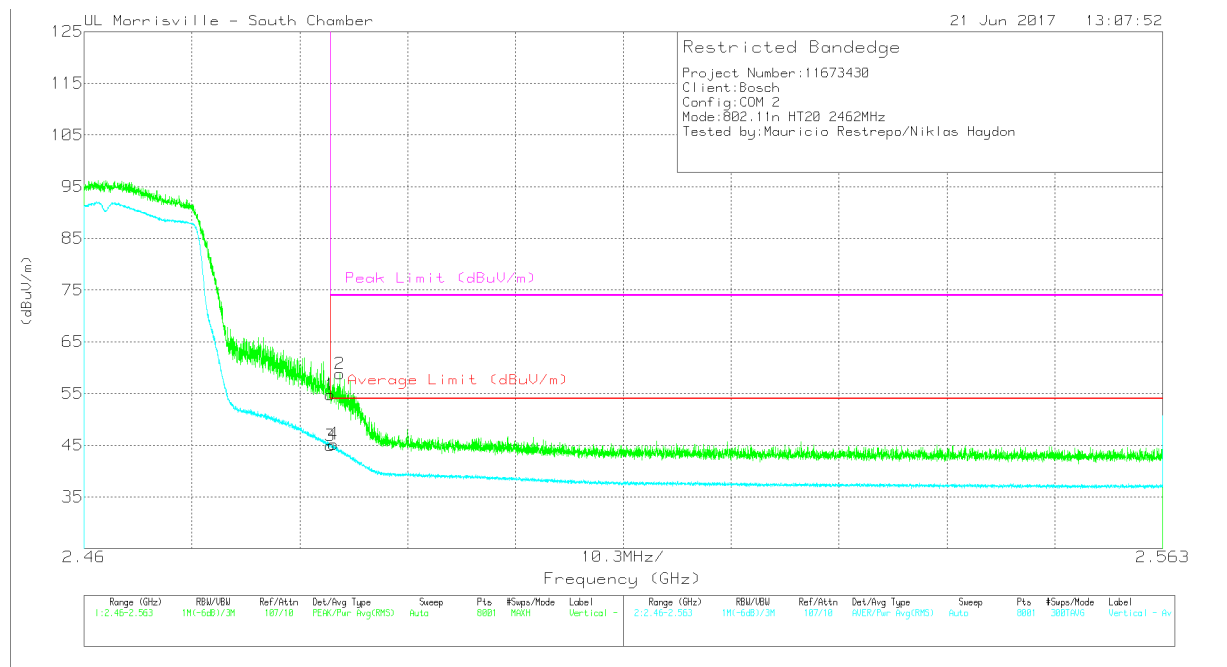


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	45.42	Pk	32.4	-24.6	0	53.22	-	-	74	-20.78	344	251	H
2	* 2.484	48.88	Pk	32.4	-24.6	0	56.68	-	-	74	-17.32	344	251	H
3	* 2.484	30.56	RMS	32.4	-24.6	4.07	42.43	54	-11.57	-	-	344	251	H
4	* 2.484	30.92	RMS	32.4	-24.6	4.07	42.79	54	-11.21	-	-	344	251	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection



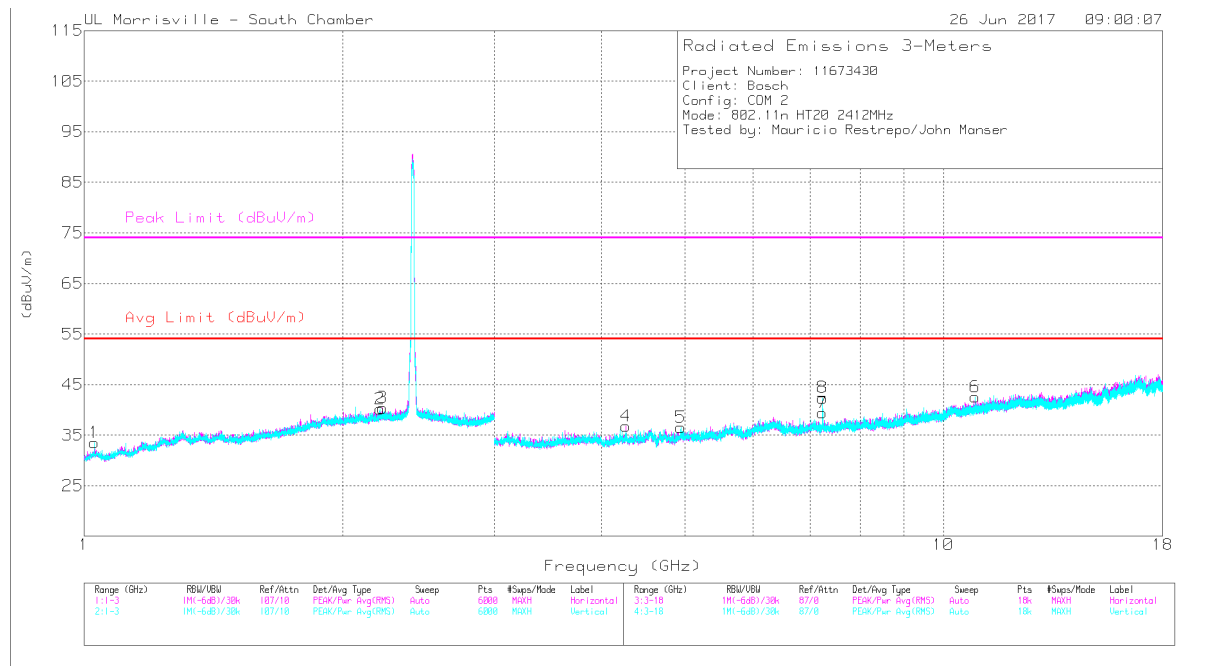
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	46.96	Pk	32.4	-24.6	0	54.76	-	-	74	-19.24	22	152	V
2	* 2.484	51.01	Pk	32.4	-24.6	0	58.81	-	-	74	-15.19	22	152	V
3	* 2.484	33.02	RMS	32.4	-24.6	4.07	44.89	54	-9.11	-	-	22	152	V
4	* 2.484	33.33	RMS	32.4	-24.6	4.07	45.2	54	-8.8	-	-	22	152	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS (EXTERNAL CHAIN 0)



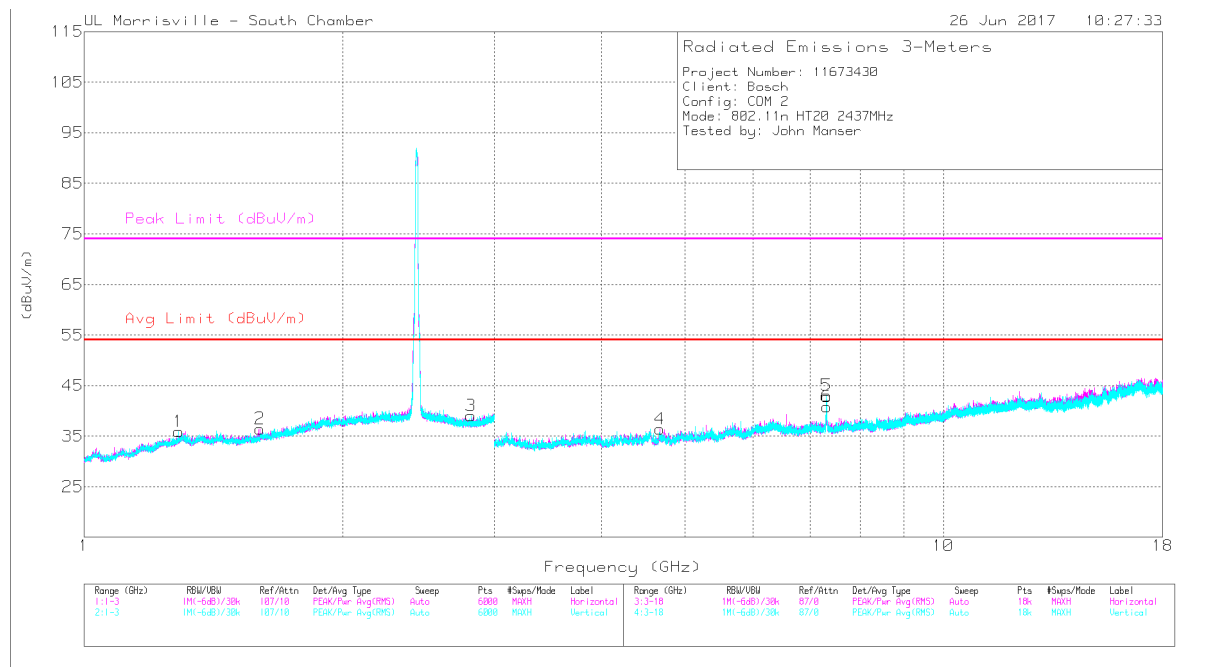
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Ftr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 2.224	37.12	PK2	32	-23.3	0	45.82	-	-	74	-28.18	0	104	H
	* 2.224	25.41	MAv1	32	-23.3	4.07	38.18	54	-15.82	-	-	0	104	H
4	* 4.272	40.22	PK2	33.4	-31.5	0	42.12	-	-	74	-31.88	32	245	H
	* 4.272	28.19	MAv1	33.4	-31.5	4.07	34.16	54	-19.84	-	-	32	245	H
1	* 1.028	42.27	PK2	27.2	-24.7	0	44.77	-	-	74	-29.23	318	259	V
	* 1.03	24.07	MAv1	27.2	-24.7	4.07	30.64	54	-23.36	-	-	318	259	V
2	* 2.209	36.76	PK2	31.8	-23.3	0	45.26	-	-	74	-28.74	112	287	V
	* 2.209	24.8	MAv1	31.8	-23.3	4.07	37.37	54	-16.63	-	-	112	287	V
5	* 4.946	38.59	PK2	34	-31.2	0	41.39	-	-	74	-32.61	335	224	V
	* 4.946	27.52	MAv1	34	-31.2	4.07	34.39	54	-19.61	-	-	335	224	V
6	* 10.887	34.21	PK2	37.9	-24.9	0	47.21	-	-	74	-26.79	29	155	V
	* 10.888	22.86	MAv1	37.9	-24.9	4.07	39.93	54	-14.07	-	-	29	155	V
7	7.235	32.02	Pk	35.5	-28.1	0	39.42	-	-	-	-	0-360	102	H
8	7.236	34.98	Pk	35.5	-28.1	0	42.38	-	-	-	-	0-360	100	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

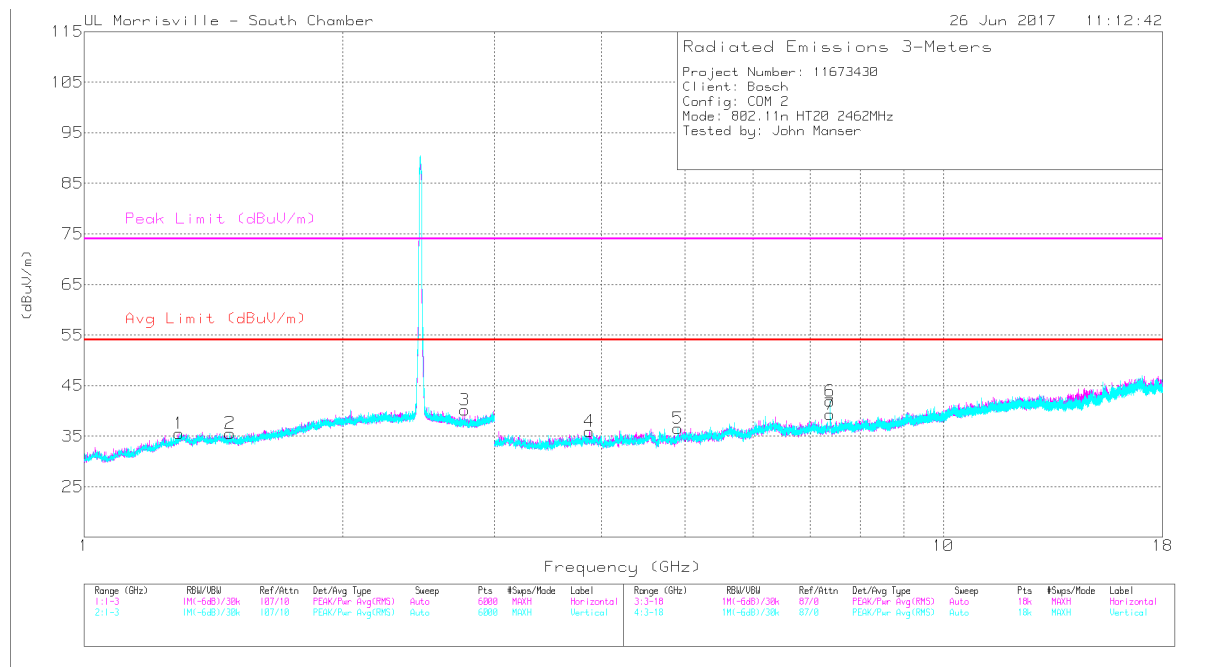


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.6	35.97	PK2	28.4	-22.3	0	42.07	-	-	74	-31.93	207	181	H
	* 1.602	23.7	MAv1	28.4	-22.3	4.07	33.87	54	-20.13	-	-	207	181	H
4	* 4.676	39.85	PK2	34	-31.9	0	41.95	-	-	74	-32.05	89	287	H
	* 4.676	28.11	MAv1	34	-31.9	4.07	34.28	54	-19.72	-	-	89	287	H
6	* 7.311	42.86	PK2	35.5	-27.9	0	50.46	-	-	74	-23.54	356	104	H
	* 7.311	30.84	MAv1	35.5	-27.9	4.07	42.51	54	-11.49	-	-	356	104	H
1	* 1.289	35.46	PK2	29.1	-23.2	0	41.36	-	-	74	-32.64	212	392	V
	* 1.289	23.71	MAv1	29.1	-23.2	4.07	33.68	54	-20.32	-	-	212	392	V
3	* 2.819	37.56	PK2	32.2	-26	0	43.76	-	-	74	-30.24	342	274	V
	* 2.818	25.77	MAv1	32.2	-26	4.07	36.04	54	-17.96	-	-	342	274	V
5	* 7.311	42.25	PK2	35.5	-27.9	0	49.85	-	-	74	-24.15	38	112	V
	* 7.311	33.76	MAv1	35.5	-27.9	4.07	45.43	54	-8.57	-	-	38	112	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0069 AF (dB/m)	Amp/Cbl/Filtr/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	* 1.289	35.85	PK2	29.1	-23.2	0	41.75	-	-	74	-32.25	27	239	H
	* 1.289	23.76	MAv1	29.1	-23.2	4.07	33.73	54	-20.27	-	-	27	239	H
3	* 2.772	37.85	PK2	32.2	-26	0	44.05	-	-	74	-29.95	113	193	H
	* 2.773	25.94	MAv1	32.2	-26	4.07	36.21	54	-17.79	-	-	113	193	H
4	* 3.872	40.44	PK2	33.3	-32.3	0	41.44	-	-	74	-32.56	117	391	H
	* 3.872	28.66	MAv1	33.3	-32.3	4.07	33.73	54	-20.27	-	-	117	391	H
7	* 7.386	38.92	PK2	35.5	-27.9	0	46.52	-	-	74	-27.48	1	105	H
	* 7.386	27.74	MAv1	35.5	-27.9	4.07	39.41	54	-14.59	-	-	1	105	H
2	* 1.479	35.43	PK2	28.1	-22.5	0	41.03	-	-	74	-32.97	231	306	V
	* 1.478	23.54	MAv1	28.1	-22.5	4.07	33.21	54	-20.79	-	-	231	306	V
5	* 4.91	39.31	PK2	34	-31	0	42.31	-	-	74	-31.69	105	252	V
	* 4.91	27.38	MAv1	34	-31	4.07	34.45	54	-19.55	-	-	105	252	V
6	* 7.386	39.85	PK2	35.5	-27.9	0	47.45	-	-	74	-26.55	42	145	V
	* 7.386	29.91	MAv1	35.5	-27.9	4.07	41.58	54	-12.42	-	-	42	145	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

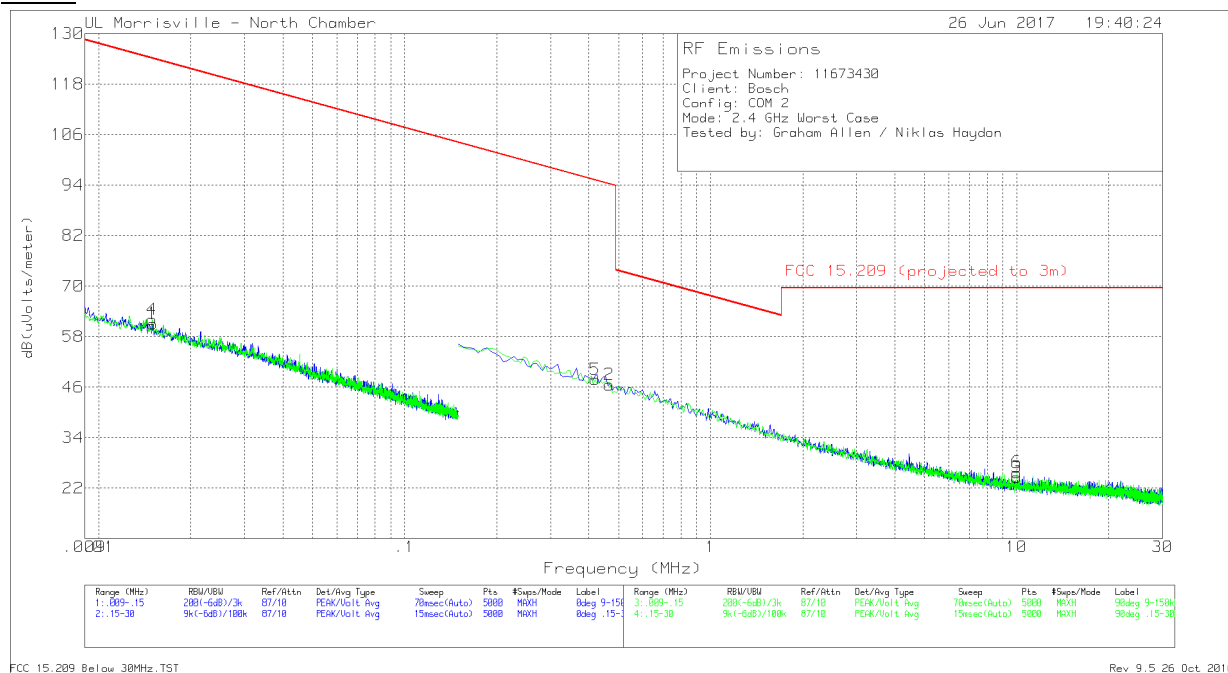
9.3. WORST-CASE CONFIGURATIONS (BELOW 1GHz AND ABOVE 18GHz)

SPURIOUS EMISSIONS 9kHz TO 30 MHz (WORST-CASE CONFIGURATION)

Note: All measurements were made at a test distance of 3 m. The limits in the plots and tabular data are the FCC/IC limits extrapolated from the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to the measurement distance to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were 40*Log (specification distance / test distance).

Although these tests were performed at a test site other than an open area test site, adequate comparison measurements were confirmed against an open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

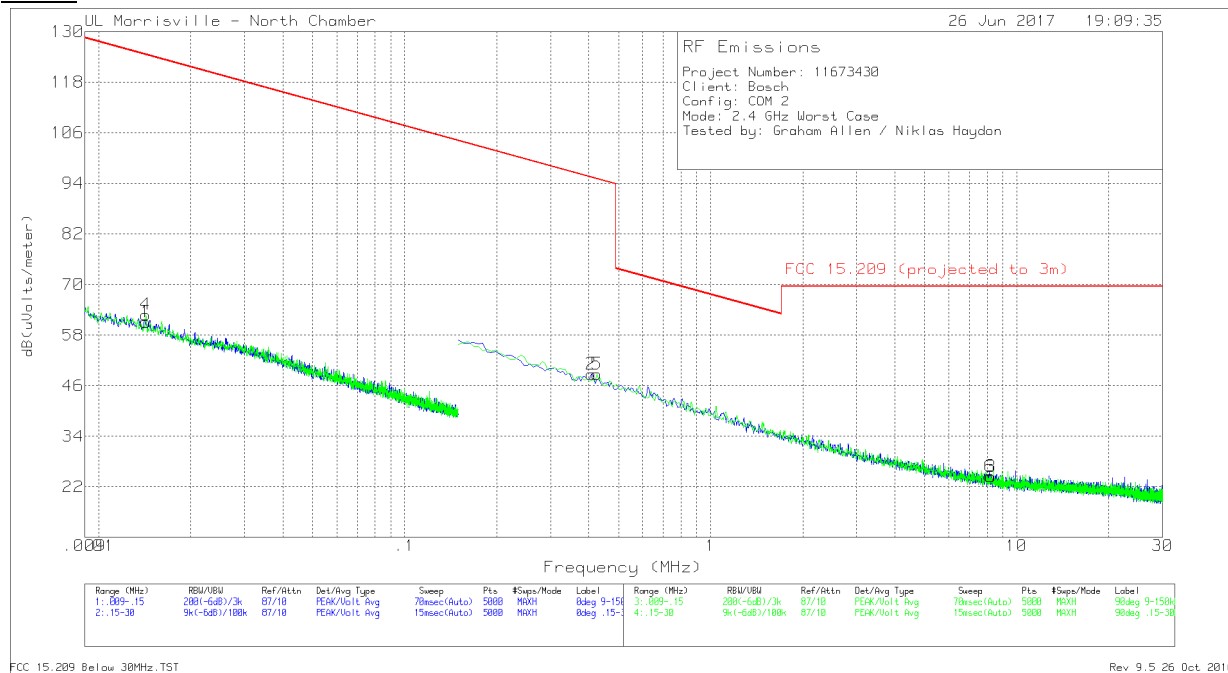
ANTO



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 (projected to 3m)	Margin (dB)	Azimuth (Degs)	Face On/Off
1	.01505	44.88	Pk	16.1	.1	61.08	124.06	-62.98	0-360	On
2	.46646	35.78	Pk	10.7	.1	46.58	94.23	-47.65	0-360	On
3	10.00215	13.61	Pk	10.5	.5	24.61	69.54	-44.93	0-360	On
4	.01496	45.77	Pk	16.2	.1	62.07	124.1	-62.03	0-360	Off
5	.4187	37.09	Pk	10.6	.1	47.79	95.17	-47.38	0-360	Off
6	10.03201	14.67	Pk	10.5	.5	25.67	69.54	-43.87	0-360	Off

Pk - Peak detector

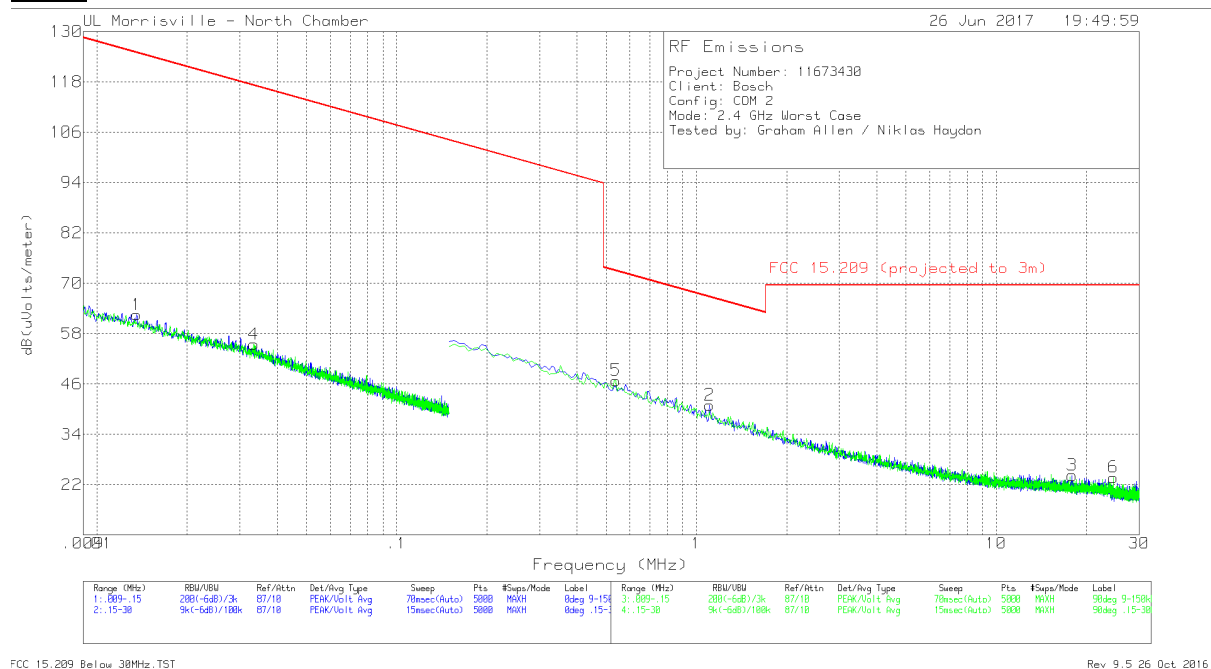
ANT 1



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 (projected to 3m)	Margin (dB)	Azimuth (Degs)	Face On/Off
1	.01424	44.51	Pk	16.5	.1	61.11	124.54	-63.43	0-360	On
2	.40675	38.07	Pk	10.6	.1	48.77	95.42	-46.65	0-360	On
3	8.23473	13.36	Pk	10.6	.5	24.46	69.54	-45.08	0-360	On
4	.01426	46.29	Pk	16.5	.1	62.89	124.52	-61.63	0-360	Off
5	.42467	38.08	Pk	10.6	.1	48.78	95.04	-46.26	0-360	Off
6	8.19891	13.45	Pk	10.6	.5	24.55	69.54	-44.99	0-360	Off

Pk - Peak detector

ANT 2



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 (projected to 3m)	Margin (dB)	Azimuth (Degs)
1	.01359	45.61	Pk	16.8	.1	62.51	124.94	-62.43	0-360
4	.03342	42.27	Pk	13.1	.1	55.47	117.13	-61.66	0-360
5	.53812	35.94	Pk	10.8	.1	46.84	72.99	-26.15	0-360
2	1.10536	29.76	Pk	11	.2	40.96	66.73	-25.77	0-360
3	17.9197	13.43	Pk	10.1	.7	24.23	69.54	-45.31	0-360
6	24.60722	13.88	Pk	9.1	.8	23.78	69.54	-45.76	0-360

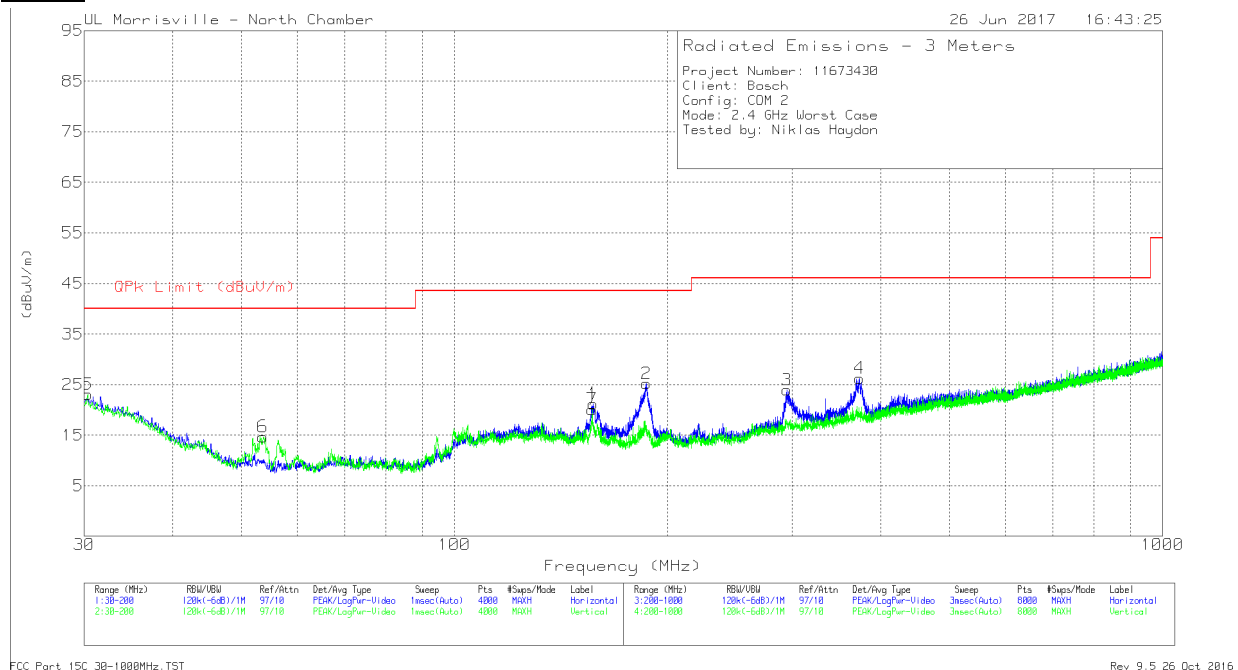
Pk - Peak detector

FCC 15.209 Below 30MHz.TST

Rev 9.5 26 Oct 2016

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

ANT 0



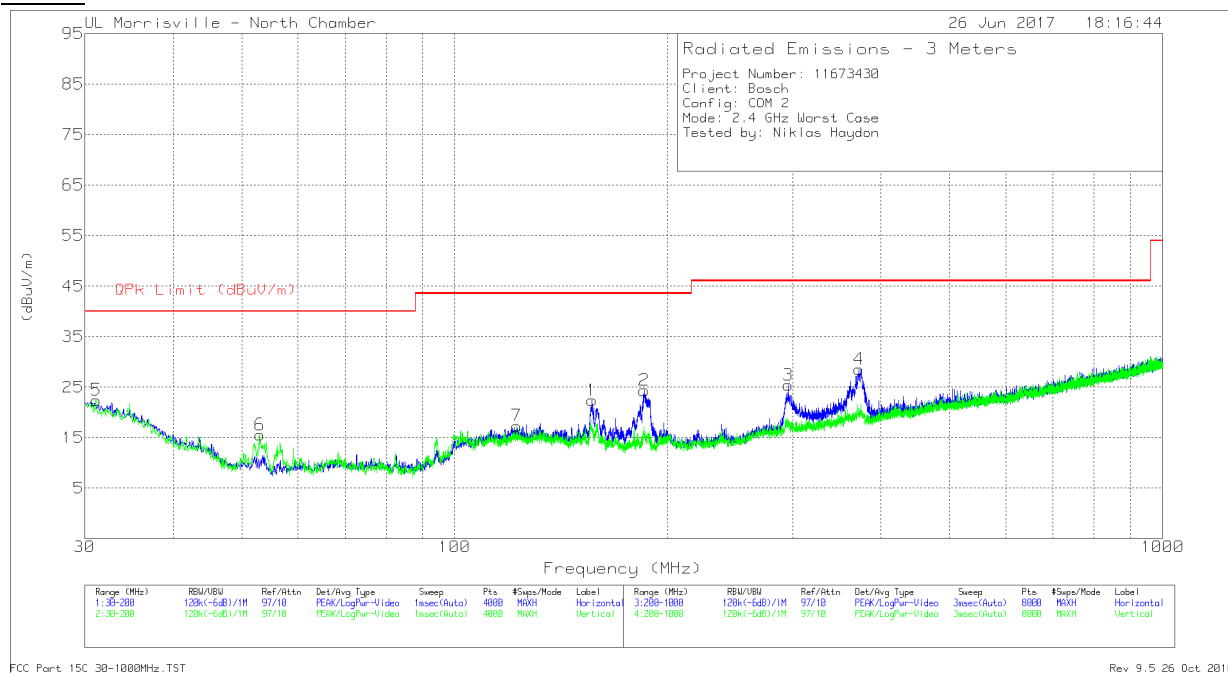
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 156.7616	29.64	Qp	16.8	-30.4	16.04	43.52	-27.48	326	171	H
5	30.3401	28.99	Pk	25.8	-31.7	23.09	40	-16.91	0-360	102	V
6	53.6361	34.19	Pk	11.9	-31.4	14.69	40	-25.31	0-360	102	V
7	156.4915	33.69	Pk	16.8	-30.4	20.09	43.52	-23.43	0-360	102	V
2	186.6105	39.71	Pk	15.8	-30.3	25.21	43.52	-18.31	0-360	102	H
3	294.8123	35.47	Pk	18	-29.5	23.97	46.02	-22.05	0-360	102	H
4	373.4225	35.66	Pk	19.7	-29.1	26.26	46.02	-19.76	0-360	102	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Qp - Quasi-Peak detector

ANT 1



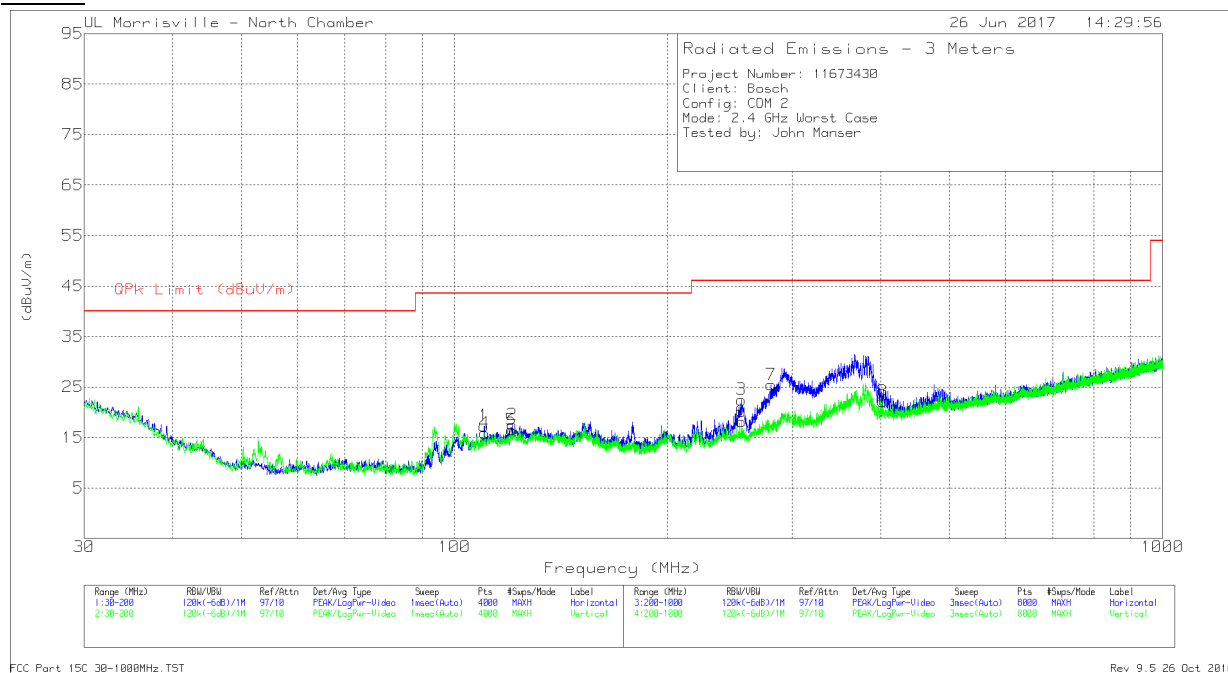
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	* 122.3764	23.9	Qp	18.1	-30.7	11.30	43.52	-32.22	237	219	V
5	31.1478	28.92	Pk	25.2	-31.7	22.42	40	-17.58	0-360	102	V
6	53.041	34.95	Pk	12	-31.4	15.55	40	-24.45	0-360	102	V
1	156.3427	35.99	Pk	16.8	-30.4	22.39	43.52	-21.13	0-360	198	H
2	185.2077	38.86	Pk	15.8	-30.3	24.36	43.52	-19.16	0-360	198	H
3	295.9125	36.91	Pk	18	-29.5	25.41	46.02	-20.61	0-360	102	H
4	372.2224	37.84	Pk	19.8	-29.1	28.54	46.02	-17.48	0-360	102	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Qp - Quasi-Peak detector

ANT 2



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 110.2583	24.15	Qp	17	-30.8	.19	10.54	43.52	-32.98	27	315	H
2	* 120.7648	23.97	Qp	18.1	-30.8	.19	11.46	43.52	-32.06	155	395	H
4	* 110.3784	24.15	Qp	17	-30.9	.19	10.44	43.52	-33.08	283	209	V
5	* 120.5483	24.02	Qp	18.1	-30.8	.19	11.51	43.52	-32.01	26	386	V
3	* 254.312	27.04	Qp	16.4	-29.8	.19	13.83	46.02	-32.19	204	110	H
7	* 280.0014	33.74	Qp	17.9	-29.6	.19	22.23	46.02	-23.79	218	105	H
6	* 254.1518	25.33	Qp	16.4	-29.8	.19	12.12	46.02	-33.9	255	134	V
8	* 402.7449	24.52	Qp	20.4	-28.9	.19	16.21	46.02	-29.81	258	235	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Qp - Quasi-Peak detector

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



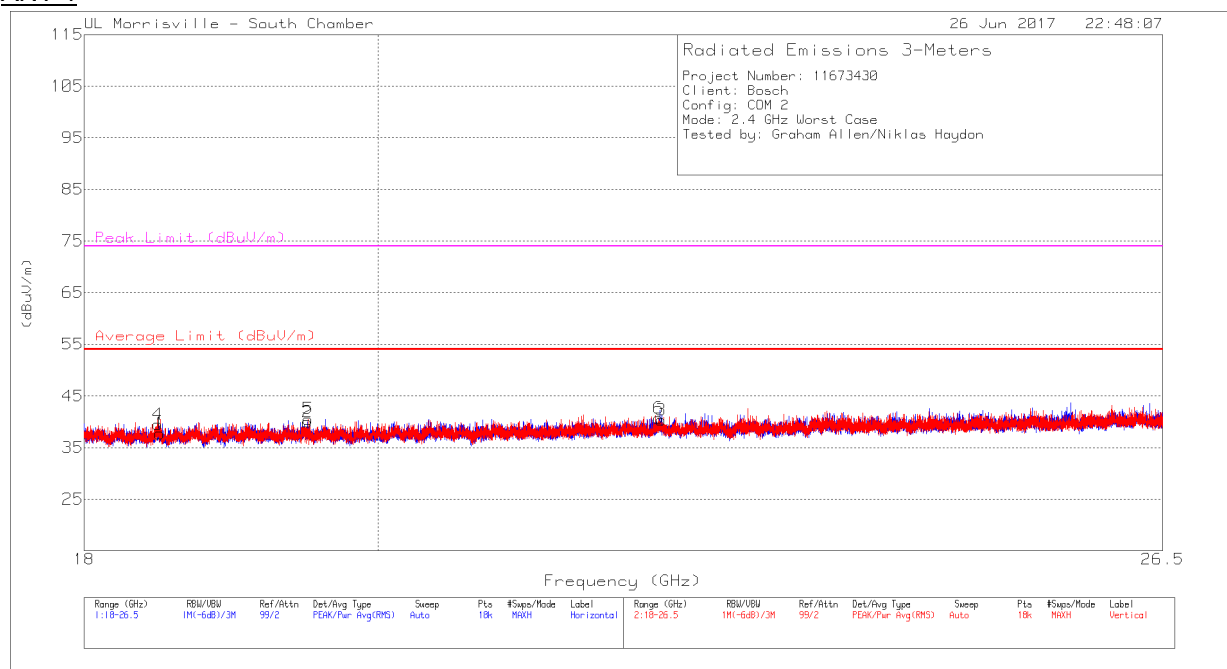
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0076 (dB/m)	Amp/Cbl (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 18.828	47.66	PK2	32.7	-40.2	0	40.16	-	-	74	-33.84	327	341	H
	* 18.828	35.63	MAv1	32.7	-40.2	4.07	32.2	54	-21.8	-	-	327	341	H
2	* 20.507	47.66	PK2	33	-39.7	0	40.96	-	-	74	-33.04	31	103	H
	* 20.507	35.67	MAv1	33	-39.7	4.07	33.04	54	-20.96	-	-	31	103	H
3	* 22.769	47.77	PK2	33.6	-39	0	42.37	-	-	74	-31.63	330	382	H
	* 22.768	35.58	MAv1	33.6	-39	4.07	34.25	54	-19.75	-	-	330	382	H
4	* 19.048	48.03	PK2	32.8	-40.2	0	40.63	-	-	74	-33.37	181	277	V
	* 19.048	35.54	MAv1	32.8	-40.2	4.07	32.21	54	-21.79	-	-	181	277	V
5	* 21.001	48	PK2	33.3	-39.7	0	41.6	-	-	74	-32.4	252	359	V
	* 21.001	35.53	MAv1	33.3	-39.7	4.07	33.2	54	-20.8	-	-	252	359	V
6	* 23.863	46.79	PK2	34	-38.6	0	42.19	-	-	74	-31.81	159	342	V
	* 23.864	34.93	MAv1	34	-38.6	4.07	34.4	54	-19.6	-	-	159	342	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

ANT 1



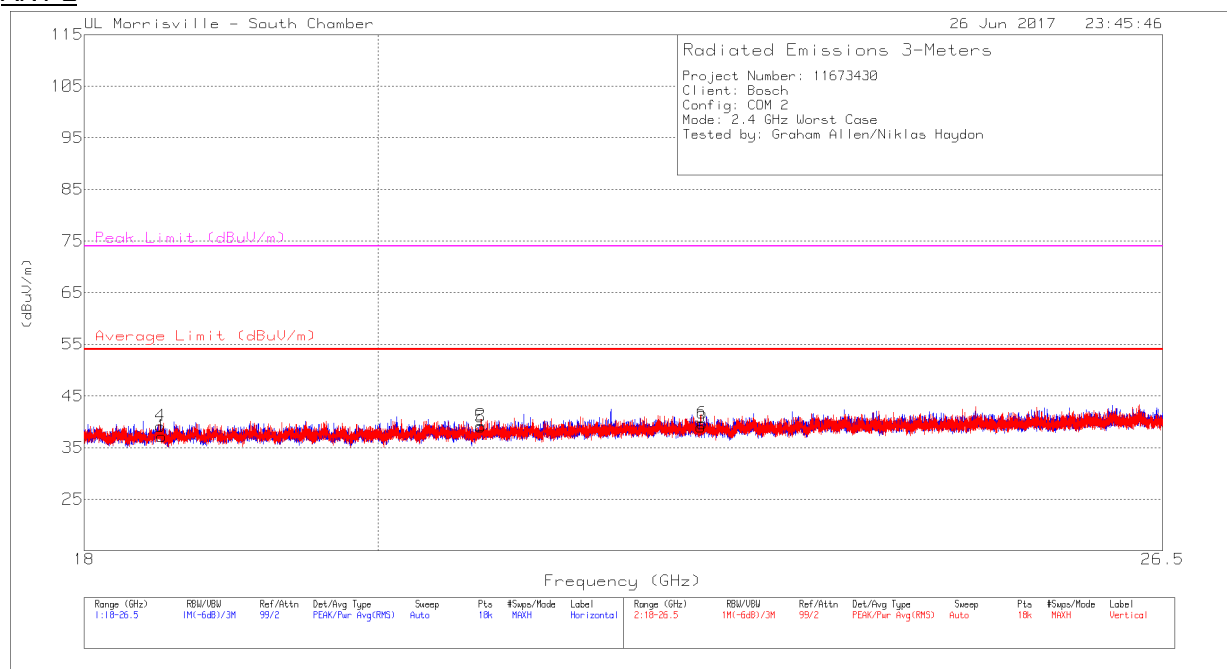
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0076 (dB/m)	Amp/Cbl (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 18.493	47.41	PK2	32.7	-40.5	0	39.61	-	-	74	-34.39	156	162	H
	* 18.492	36.13	MAv1	32.7	-40.5	4.07	32.4	54	-21.6	-	-	156	162	H
2	* 19.5	47.35	PK2	32.7	-40.2	0	39.85	-	-	74	-34.15	233	137	H
	* 19.498	35.81	MAv1	32.7	-40.2	4.07	32.38	54	-21.62	-	-	233	137	H
3	* 22.135	47.13	PK2	33.5	-39.4	0	41.23	-	-	74	-32.77	13	373	H
	* 22.137	36.03	MAv1	33.5	-39.4	4.07	34.2	54	-19.8	-	-	13	373	H
4	* 18.483	48.11	PK2	32.7	-40.3	0	40.51	-	-	74	-33.49	294	288	V
	* 18.483	36.16	MAv1	32.7	-40.3	4.07	32.63	54	-21.37	-	-	294	288	V
5	* 19.502	48.03	PK2	32.7	-40.2	0	40.53	-	-	74	-33.47	333	134	V
	* 19.503	35.83	MAv1	32.7	-40.2	4.07	32.4	54	-21.6	-	-	333	134	V
6	* 22.118	47.41	PK2	33.6	-39.3	0	41.71	-	-	74	-32.29	60	357	V
	* 22.119	35.83	MAv1	33.6	-39.3	4.07	30.31	54	-23.69	-	-	60	357	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

ANT 2



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0076 (dB/m)	Amp/Cbl (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 18.509	47.82	PK2	32.7	-40.5	0	40.02	-	-	74	-33.98	98	119	H
	* 18.509	36.06	MAv1	32.7	-40.5	4.07	32.33	54	-21.67	-	-	98	119	H
2	* 20.752	47.47	PK2	33.1	-39.7	0	40.87	-	-	74	-33.13	168	273	H
	* 20.753	35.65	MAv1	33.1	-39.7	4.07	33.12	54	-20.88	-	-	168	273	H
3	* 22.456	46.39	PK2	33.6	-39.2	0	40.79	-	-	74	-33.21	189	294	H
	* 22.458	35.25	MAv1	33.6	-39.2	4.07	33.72	54	-20.28	-	-	189	294	H
4	* 18.5	47.3	PK2	32.7	-40.5	0	39.5	-	-	74	-34.5	302	171	V
	* 18.499	36.21	MAv1	32.7	-40.5	4.07	32.48	54	-21.52	-	-	302	171	V
5	* 20.753	46.71	PK2	33.1	-39.7	0	40.11	-	-	74	-33.89	65	277	V
	* 20.751	35.6	MAv1	33.1	-39.7	4.07	33.07	54	-20.93	-	-	65	277	V
6	* 22.469	46.68	PK2	33.5	-39.3	0	40.88	-	-	74	-33.12	218	146	V
	* 22.469	35.41	MAv1	33.5	-39.3	4.07	33.68	54	-20.32	-	-	218	146	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PK2 - Maximum Peak

MAv1 - Maximum RMS Average

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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.

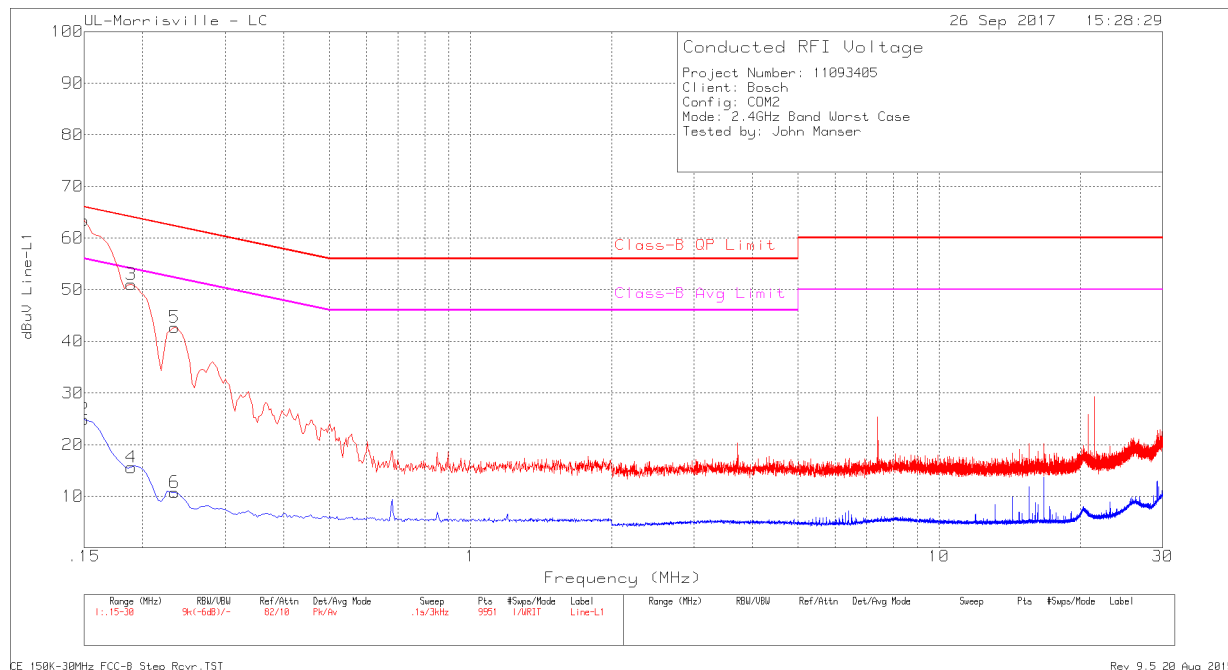
TEST PROCEDURE

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 lines.

LINE 1 RESULTS



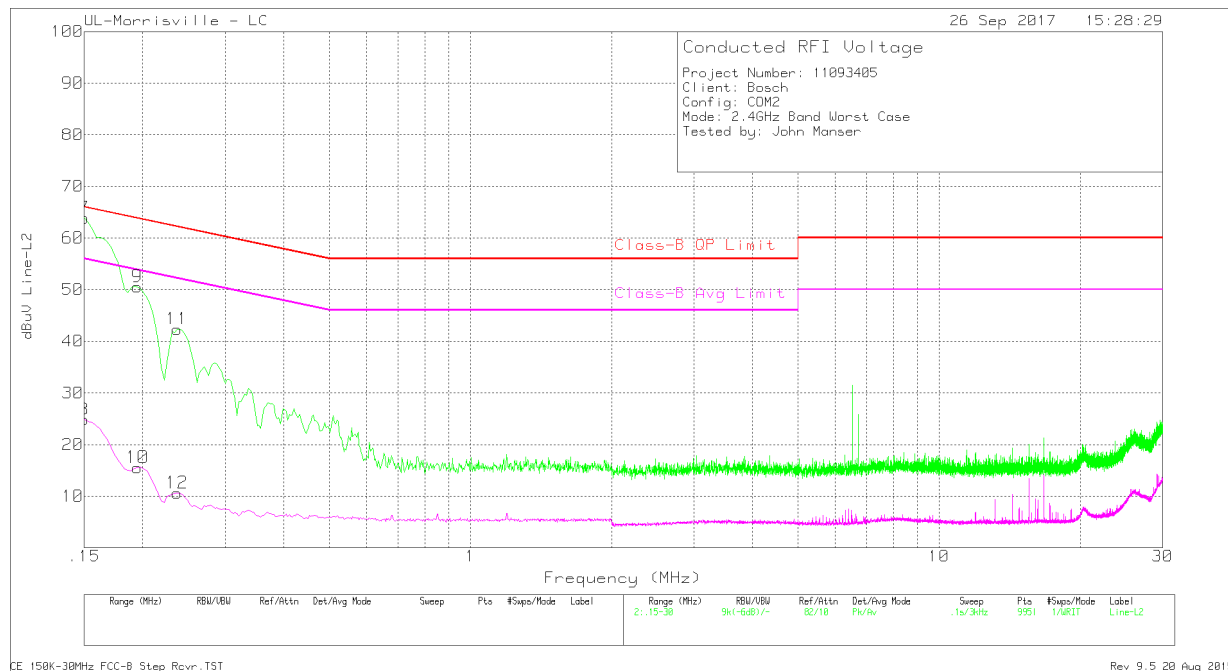
Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	Class-B QP Limit	Margin (dB)	Class-B Avg Limit	Margin (dB)
1	.15064	46.06	Qp	.2	10	56.26	65.96	-9.7	-	-
2	.15	14.69	Av	.2	10	24.89	-	-	56	-31.11
3	.189	40.83	Pk	.2	10	51.03	64.08	-13.05	-	-
4	.189	5.38	Av	.2	10	15.58	-	-	54.08	-38.5
5	.234	32.71	Pk	.1	9.9	42.71	62.31	-19.6	-	-
6	.234	.75	Av	.1	9.9	10.75	-	-	52.31	-41.56

Pk - Peak detector

Qp - Quasi-Peak detector

Av - Average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	Class-B QP Limit	Margin (dB)	Class-B Avg Limit	Margin (dB)
7	.15714	44.77	Qp	.2	10	54.97	65.61	-10.64	-	-
8	.15	14.65	Av	.2	10	24.85	-	-	56	-31.15
9	.195	40.38	Pk	.2	10	50.58	63.82	-13.24	-	-
10	.195	5.35	Av	.2	10	15.55	-	-	53.82	-38.27
11	.237	32.37	Pk	.1	9.9	42.37	62.2	-19.83	-	-
12	.237	.65	Av	.1	9.9	10.65	-	-	52.2	-41.55

Pk - Peak detector

Qp - Quasi-Peak detector

Av - Average detection