CERTIFICATION TEST REPORT

Report Number. : R12809879-E1

Applicant	:	Tosibox Oy Teknologiantie 12A 90590 OULU FINLAND
Model	:	Lock 150
FCC ID	:	2AHCN-LOCK150
IC	:	25009-LOCK150
EUT Description	:	Remote access device with wireless router functionality
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C ISED RSS-247 ISSUE 2 ISED RSS-GEN ISSUE 5

Date Of Issue:
2019-05-30

Prepared by:
UL LLC
12 Laboratory Dr.
Research Triangle Park, NC 27709 USA
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NVLAP TESTING

NVLAP Lab code: 200246-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	-	Initial Issue	-
V2	2019-07-23	Corrected “Antenna 1” and “Antenna 2” to “Chain 0” and “Chain 1” respectively.	Lariah Ijames

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Tosibox Oy
Teknologiantie 12A
90590 OULU
FINLAND

EUT DESCRIPTION: Remote access device with wireless router functionality

MODEL: Lock 150

SERIAL NUMBER: JA000591A1

DATE TESTED: 2019-05-17 to 2019-05-23

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5	Complies

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

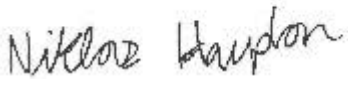
The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

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

Jeffrey Moser
Operations Leader
Consumer Technology Division
UL LLC

Prepared By:



Niklas Haydon
Engineer
Consumer Technology Division
UL LLC

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, KDB 558074 D01 15.247 Meas Guidance v05r02, RSS-GEN Issue 5, and RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 12 Laboratory Drive, Research Triangle Park, North Carolina, USA and 2800 Suite Perimeter Park Dr., Morrisville, North Carolina, USA. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

12 Laboratory Dr.	2800 Perimeter Park Dr., Suite B
ISED Site Code: 2180C	
☐ Chamber A RTP	☒ North Chamber
☐ Chamber C RTP	☒ South Chamber

The above test sites and facilities are covered under FCC Test Firm Registration # 703469. Chambers above are covered under Industry Canada company address and respective code.

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0

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

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:
Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)
36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:
Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.
36.5 dBuV + 0 dB +10.1 dB+ 0 dB = 46.6 dBuV

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Radio Frequency (Spectrum Analyzer)	141.2 Hz
Occupied Channel Bandwidth	2.00%
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
Power Spectral Density, conducted	2.47 dB
Unwanted Emissions, conducted	2.50 dB
All emissions, radiated	4.88 dB
Temperature	2.26°C
Humidity	6.79%
DC Supply voltages	1.70%
Time	3.39%

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

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5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a remote access device with wireless router functionality that contains an 802.11b/g/n (20 and 40 MHz, 2x2) radio.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

2.4GHz BAND

Chain 0

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
1Tx			
2412 - 2462	802.11b	14.20	26.30
2412 - 2462	802.11g	13.89	24.49
2412 - 2462	802.11n HT20	13.00	19.95
2422 - 2452	802.11n HT40	11.93	15.60

Chain 1

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
1Tx			
2412 - 2462	802.11b	12.48	17.70
2412 - 2462	802.11g	11.50	14.13
2412 - 2462	802.11n HT20	11.35	13.65
2422 - 2452	802.11n HT40	8.74	7.48

Chain 0 and 1

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2Tx			
2412 - 2462	802.11b	16.43	43.95
2412 - 2462	802.11g	15.87	38.64
2412 - 2462	802.11n HT20 CDD	15.17	32.89
2422 - 2452	802.11n HT40 CDD	13.43	22.03

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes two identical monopole antennas, with maximum gains of 2 dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 4.2.0, rev. 2.
The EUT driver software installed in the host support equipment during testing was MT7620QA, rev. 1.0.6.2

5.5. WORST-CASE CONFIGURATION AND MODE

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

Band edge and radiated emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power on low, middle and high channels.

The fundamental of the EUT was investigated in two orthogonal orientations (enclosure X and Z) and 3 different antenna configurations. It was determined that enclosure X orientation with the antenna configuration 1 was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation with the antenna configuration 1. Note – The two enclosure orientations represent table top and wall mount.

Worst-case data rates were determined to be:

802.11b mode: 1 Mbps
802.11g mode: 6 Mbps
802.11n HT20mode: MCS0
802.11n HT40mode: MCS0

For all modes the power setting and measured power per chain was the same for SISO and MIMO modes allowing the MIMO summed power to be worst-case. Therefore, all MIMO mode data represents SISO mode data.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Lenovo	T430	PB-C346V	N/A
Laptop Charger	Lenovo	45N0119	11S45N019Z1ZHXT161K5D	N/A

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Ethernet	5	Ethernet	Unshielded	<3m	None
2	USB	1	USB	USB Flash Drive		None
3	Power	1	Barrel	Power	<3m	None

TEST SETUP

The EUT is stand alone equipment. Test software exercised the radio.

SETUP DIAGRAM

Please refer to R12809879-EP1 for setup diagrams

6. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10 Section 11.6

6 dB BW: ANSI C63.10 Subclause -11.8.1

Occupied BW (99%): ANSI C63.10-2013 Section 6.9.3

Output Power: ANSI C63.10 Subclause -11.9.2.3.2 Method AVGPM-G (Measurement using a gated RF average-reading power meter)

PSD: ANSI C63.10 Subclause -11.10.2 Method PKPSD (peak PSD)

Out-of-band emissions in non-restricted bands: ANSI C63.10-2013 Section 11.11 & 6.10.4

Out-of-band emissions in restricted bands: ANSI C63.10-2013 Section 11.12.1 & 6.10.5

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

Power-Line Conducted Emissions: ANSI C63.10:2013 Sections 6.2

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7. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Conducted Room 1				
81018	Spectrum Analyzer	Agilent Technologies	E4446A	2019-04-22	2020-04-22
SN 181474341	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27
	Conducted Room 2				
PWM003 (PRE0137346)	RF Power Meter	Keysight Technologies	N1911A	2018-07-30	2019-07-30
PWS002	Peak and Avg Power Sensor, 50MHz to 6GHz	Keysight Technologies	N1921A	2018-07-30	2019-07-30
SN 181474341	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27

Test Equipment Used - Line-Conducted Emissions – Voltage (Morrisville – Conducted 1)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
CBL087	Coax cable, RG223, N-male to BNC-male, 20-ft.	Pasternack	PE3W06143-240	2018-06-19	2019-06-19
SN 181562858	Environmental Meter	Fisher Scientific	14-650-118	2018-09-04	2020-09-04
LISN003	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2018-08-21	2019-08-21
75141 (PRE0101521)	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2018-08-22	2019-08-22
TL001	Transient Limiter, 0.009-30MHz	Com-Power	LIT-930A	2018-06-13	2019-06-13
PS215	AC Power Source	Elgar	CW2501M (s/n 1523A02397)	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA

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	2019-01-24	2020-01-31
	30-1000 MHz				
AT0073	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2018-08-06	2019-08-06
	1-18 GHz				
AT0067	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2019-03-22	2020-03-22
	18-40 GHz				
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2018-11-08	2019-11-08
	Gain-Loss Chains				
N-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2019-05-02	2020-05-02
N-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2019-05-02	2020-05-02
N-SAC03	Gain-loss string: 1-18GHz	Various	Various	2019-03-15	2020-03-15
N-SAC04	Gain-loss string: 18-40GHz	Various	Various	2018-09-30	2019-09-30
	Receiver & Software				
SA0026	Spectrum Analyzer	Agilent	N9030A	2019-03-19	2020-03-19
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
s/n 181474409	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27
ATA174 (in N-SAC)	10dB, DC-18GHz, 5W	Mini-Circuits	BW-N10W5	2019-03-07	2020-03-07

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

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2019-04-22	2020-04-22
	Gain-Loss Chains				
S-SAC03	Gain-loss string: 1-18GHz	Various	Various	2019-03-13	2020-03-13
	Receiver & Software				
SA0025	Spectrum Analyzer	Agilent	N9030A	2019-02-28	2020-02-28
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
s/n 181474409	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

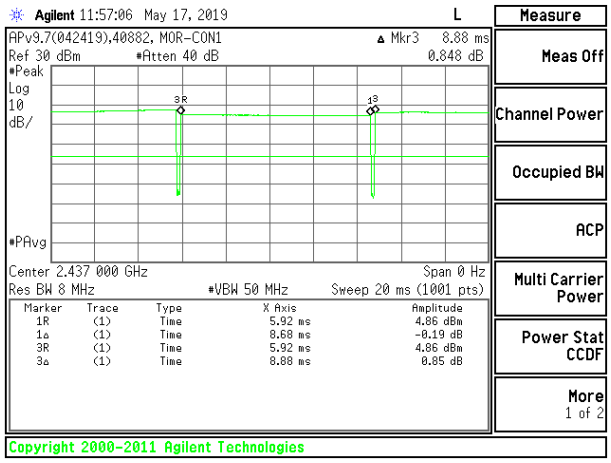
PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

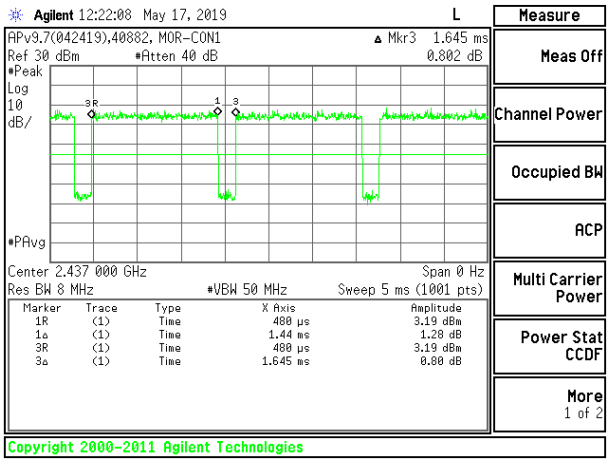
ON TIME AND DUTY CYCLE RESULTS

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						
802.11b CDD	8.680	8.880	0.977	97.75%	0.10	0.115
802.11g CDD	1.440	1.645	0.875	87.54%	0.58	0.694
802.11n HT20 CDD	1.350	1.550	0.871	87.10%	0.60	0.741
802.11n HT40 CDD	0.666	0.869	0.767	76.68%	1.15	1.501

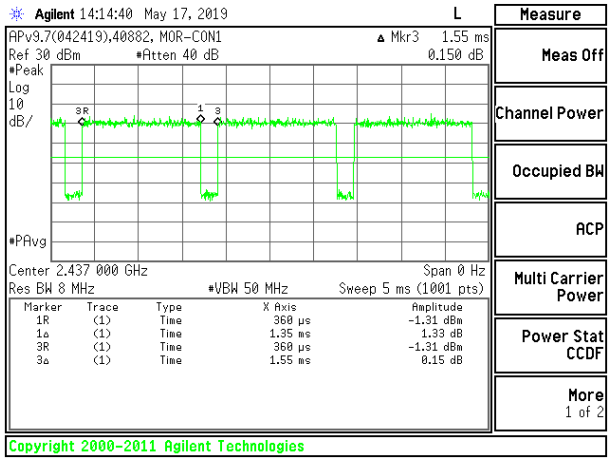
DUTY CYCLE PLOTS



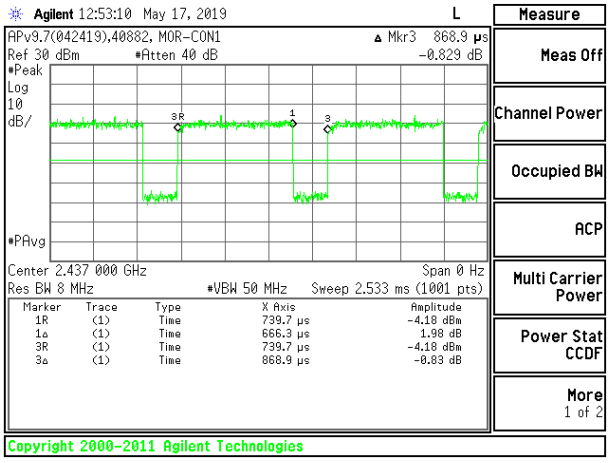
DUTY CYCLE 802.11b CDD MODE



DUTY CYCLE 802.11g CDD MODE



DUTY CYCLE 802.11n HT20 CDD MODE



UTY CYCLE 802.11n HT40 CDD MODE

8.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

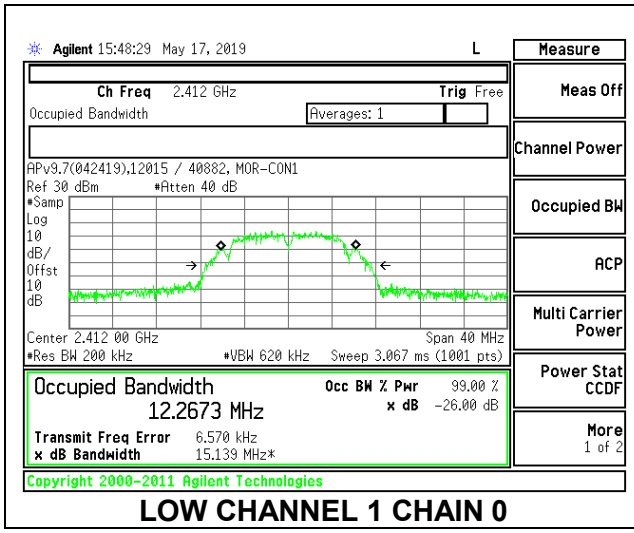
RESULTS

8.2.1. 802.11b MODE

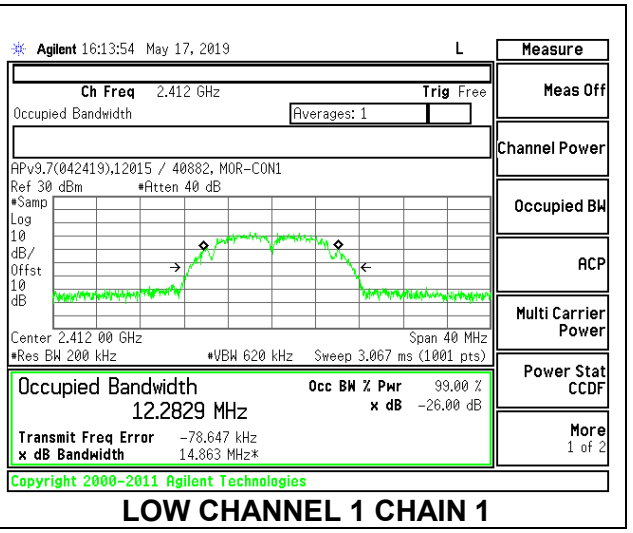
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low 1	2412	12.267	12.283
Mid 6	2437	12.284	12.160
High 11	2462	12.268	12.294
Worst		12.284	12.294

LOW CHANNEL 1

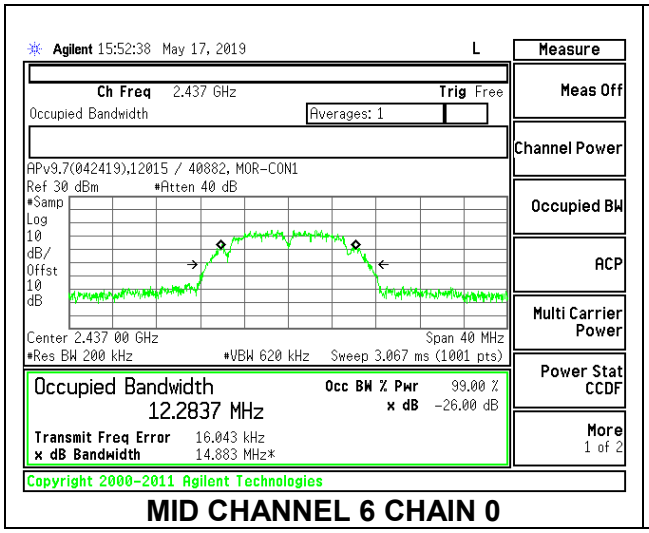


LOW CHANNEL 1 CHAIN 0

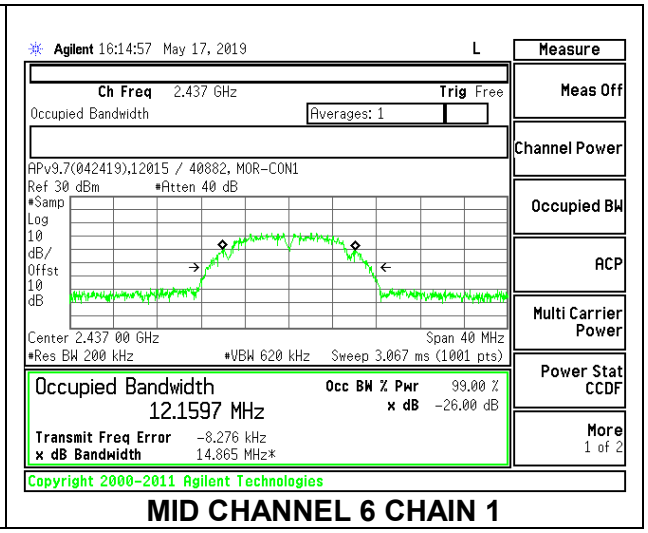


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

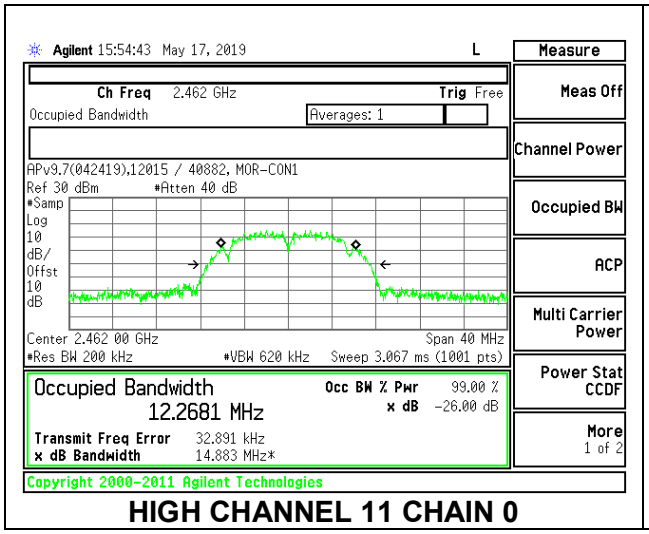


MID CHANNEL 6 CHAIN 0

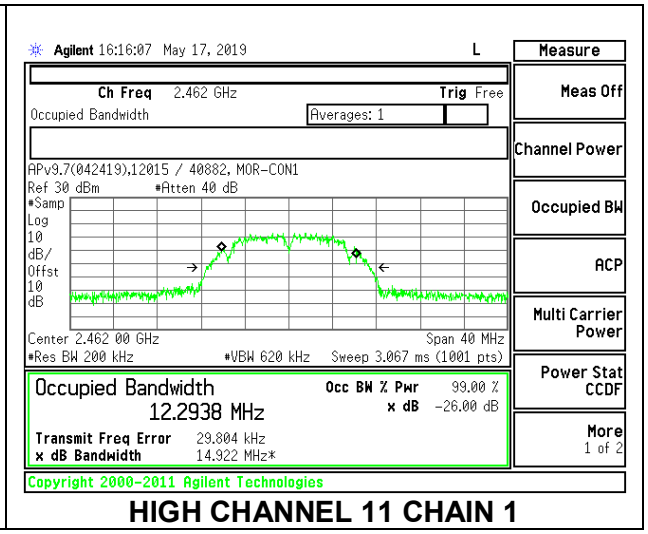


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



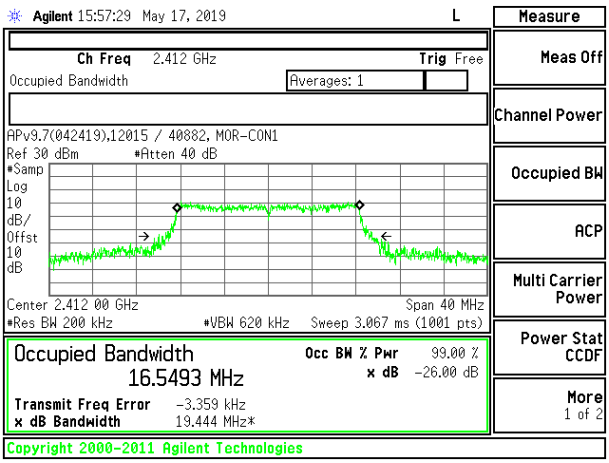
HIGH CHANNEL 11 CHAIN 1

8.2.2. 802.11g MODE

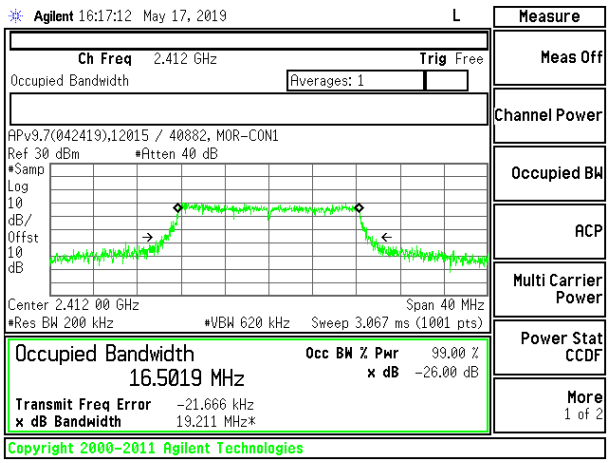
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Antenna 1 (MHz)	99% Bandwidth Antenna 2 (MHz)
Low 1	2412	16.549	16.502
Mid 6	2437	16.573	16.484
High 11	2462	16.527	16.591
Worst		16.573	16.591

LOW CHANNEL 1

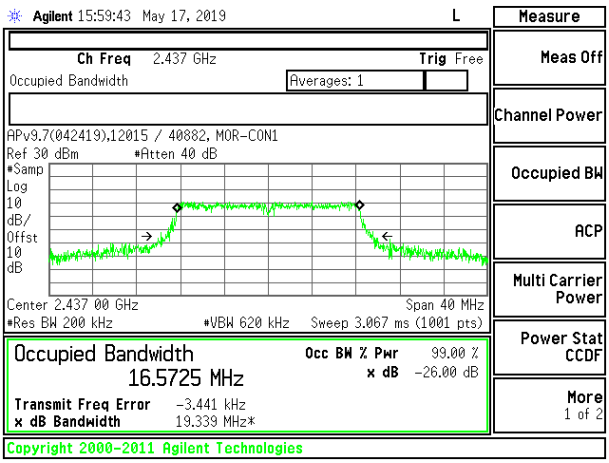


LOW CHANNEL 1 CHAIN 0

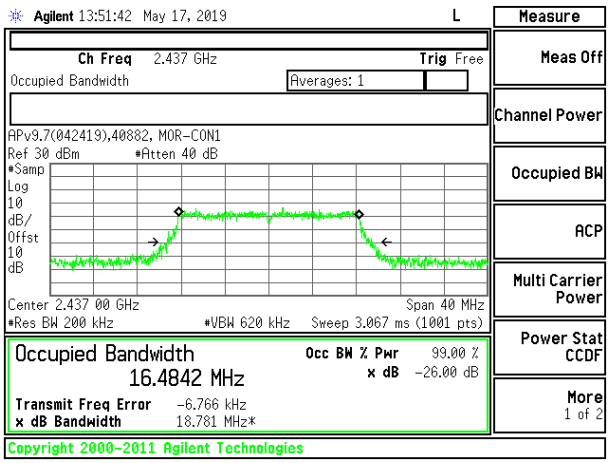


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

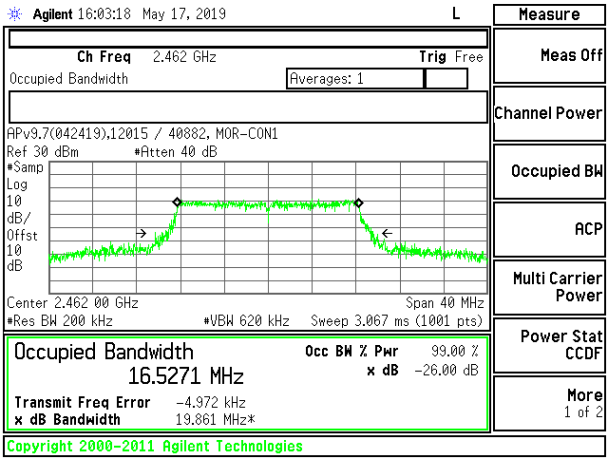


MID CHANNEL 6 CHAIN 0

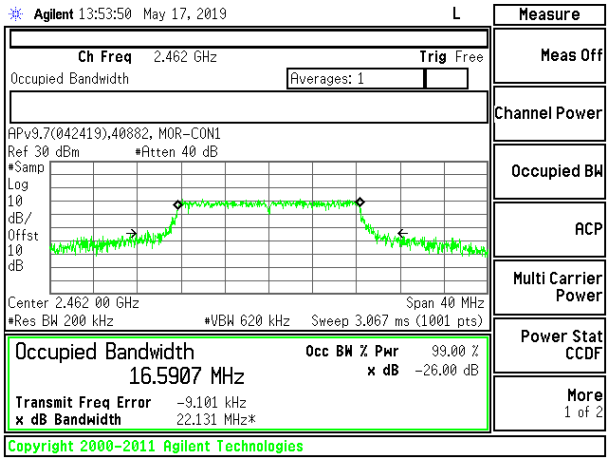


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



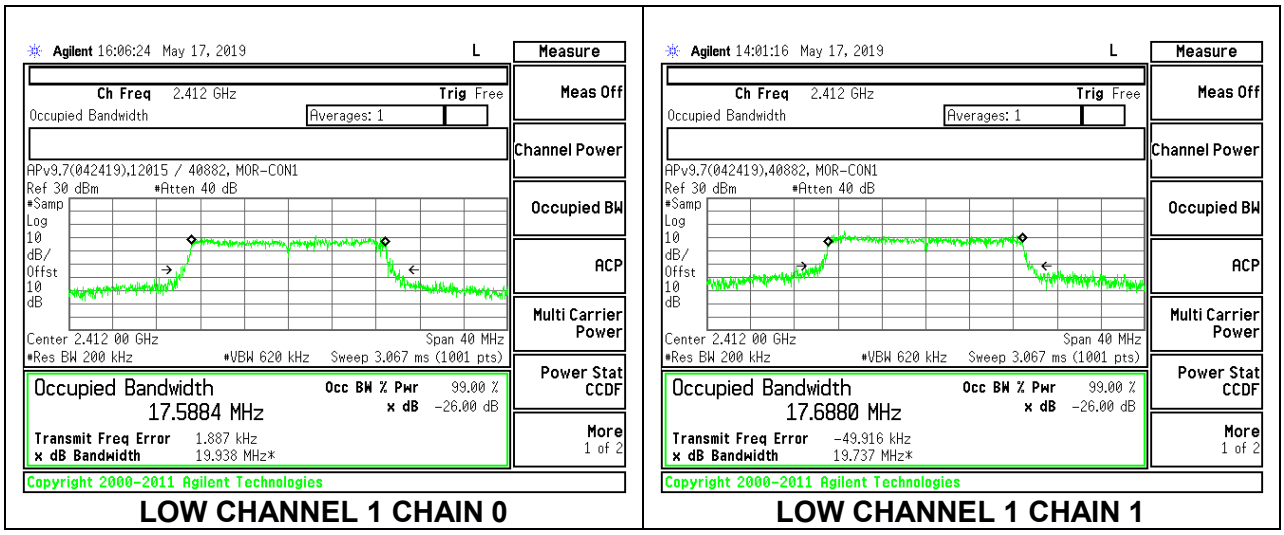
HIGH CHANNEL 11 CHAIN 1

8.2.3. 802.11n HT20 MODE

2TX Chain 0 + Chain 1 CDD MODE

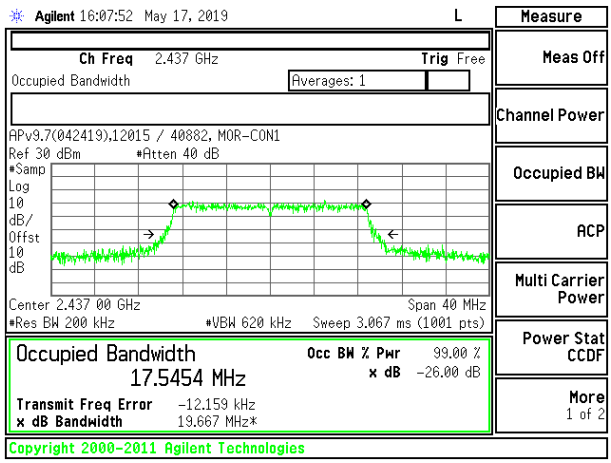
Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low 1	2412	17.588	17.688
Mid 6	2437	17.545	17.597
High 11	2462	17.568	17.660
Worst		17.588	17.688

LOW CHANNEL 1

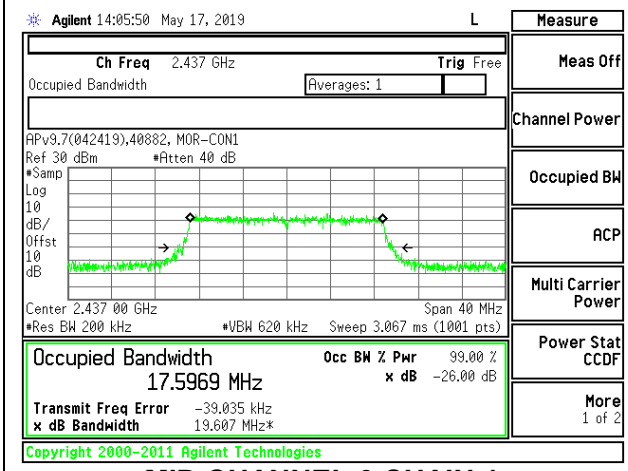


LOW CHANNEL 1 CHAIN 0 **LOW CHANNEL 1 CHAIN 1**

MID CHANNEL 6

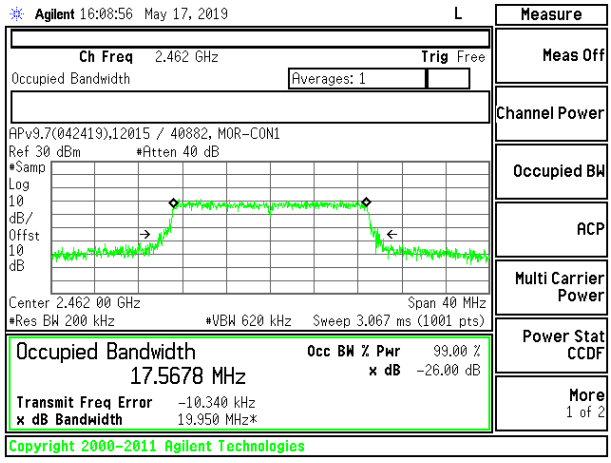


MID CHANNEL 6 CHAIN 0

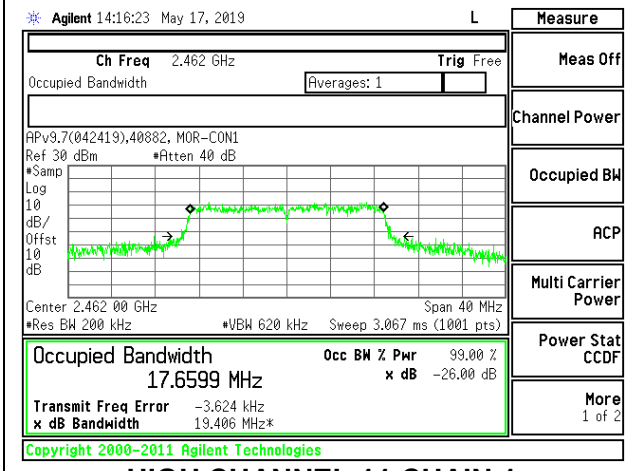


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



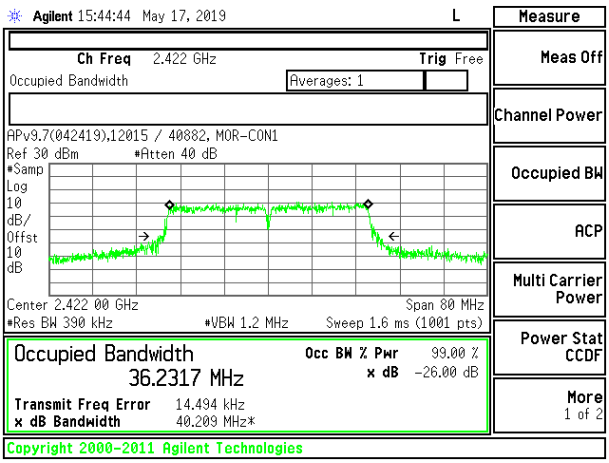
HIGH CHANNEL 11 CHAIN 1

8.2.4. 802.11n HT40 MODE

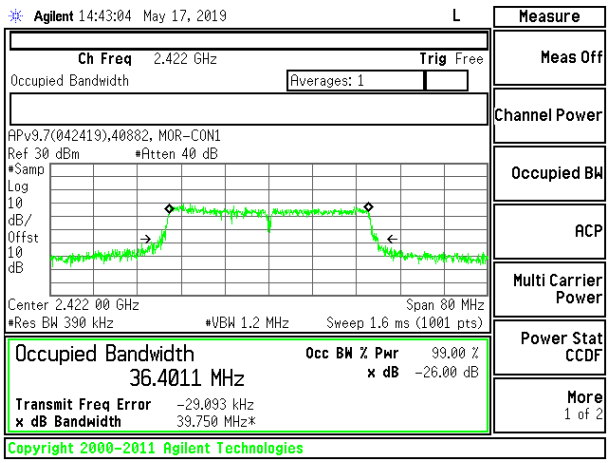
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	99% Bandwidth Chain 0 (MHz)	99% Bandwidth Chain 1 (MHz)
Low 3	2422	36.232	36.401
Mid 6	2437	36.207	36.226
High 9	2452	36.236	36.282
Worst		36.236	36.401

LOW CHANNEL 3

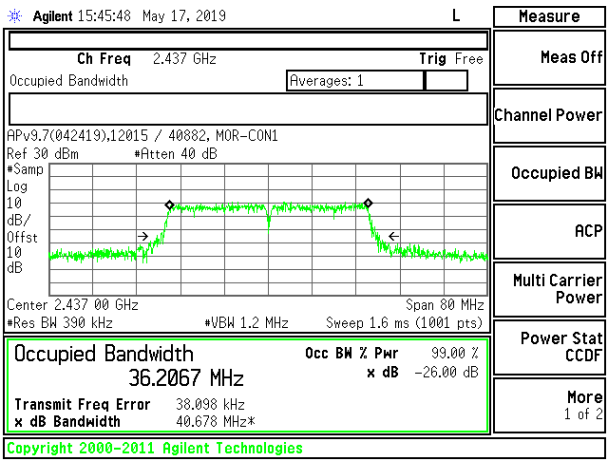


LOW CHANNEL 3 CHAIN 0

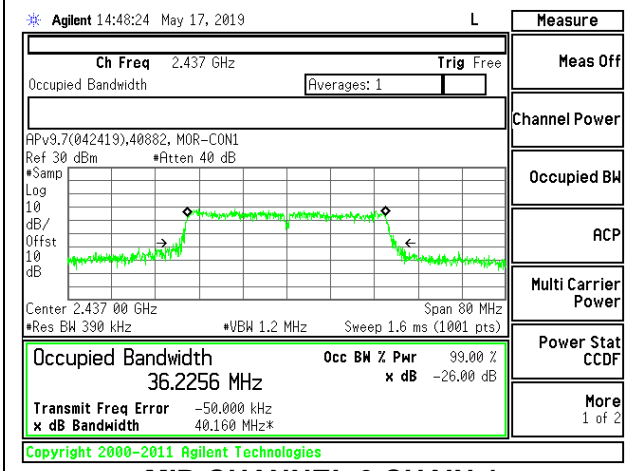


LOW CHANNEL 3 CHAIN 1

MID CHANNEL 6

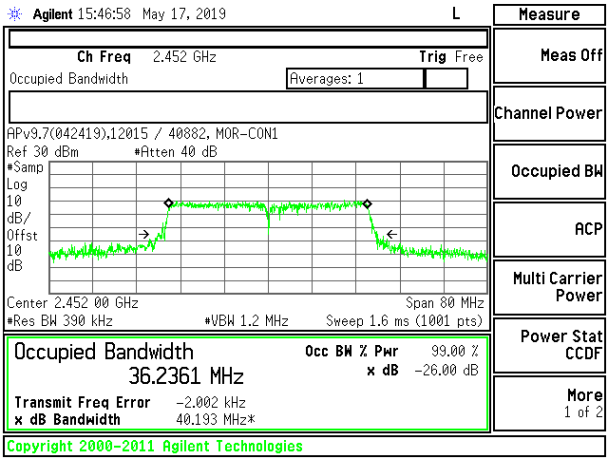


MID CHANNEL 6 CHAIN 0

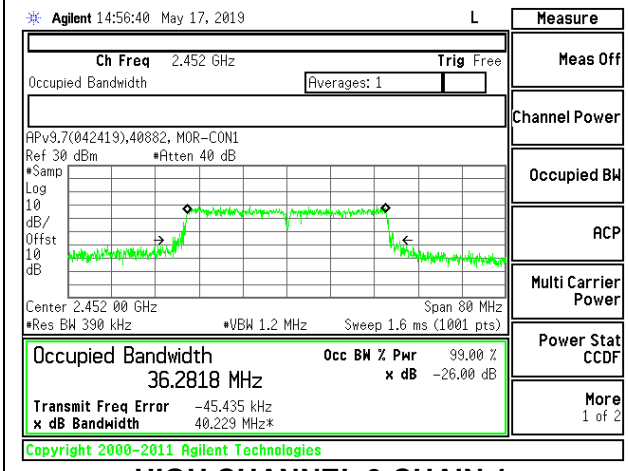


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 9



HIGH CHANNEL 9 CHAIN 0



HIGH CHANNEL 9 CHAIN 1

8.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

RSS-247 5.2 (a)

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

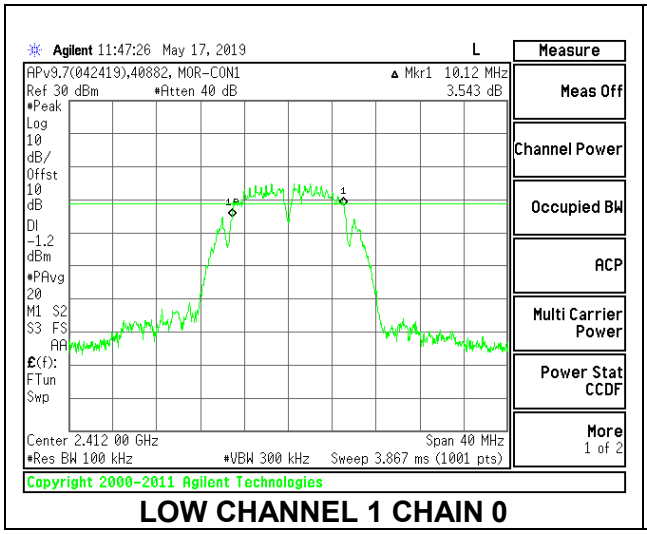
RESULTS

8.3.1. 802.11b MODE

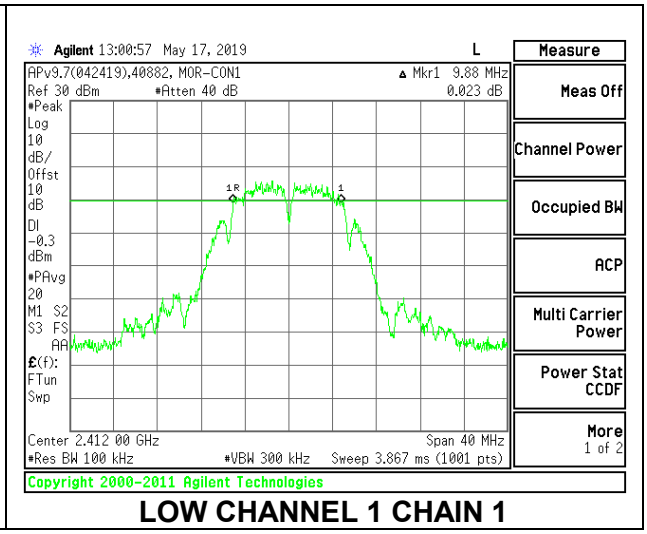
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low 1	2412	10.1200	9.8800	0.5
Mid 6	2437	10.1600	9.8800	0.5
High 11	2462	10.1600	10.1600	0.5

LOW CHANNEL 1

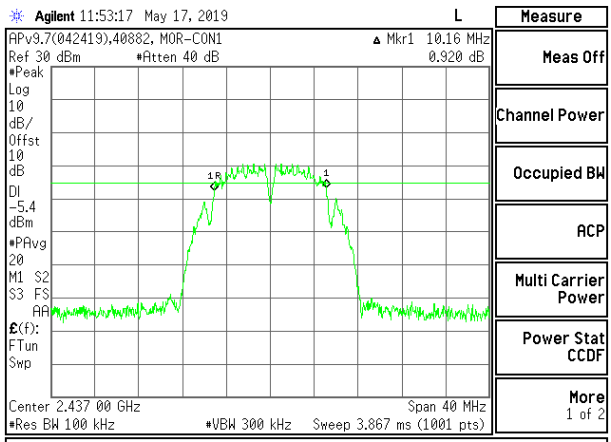


LOW CHANNEL 1 CHAIN 0

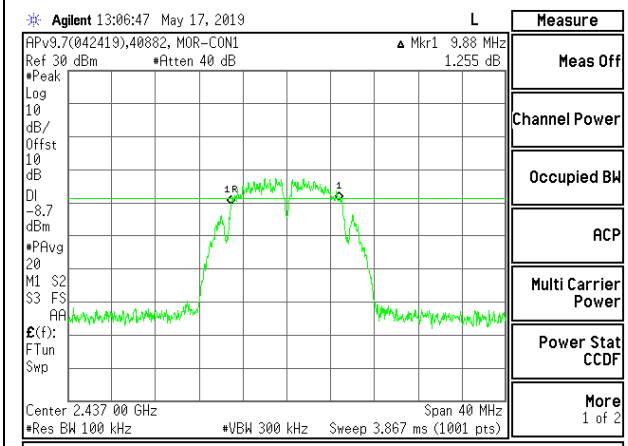


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

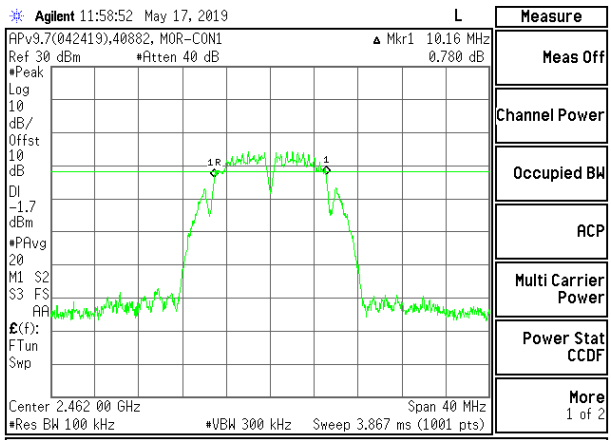


MID CHANNEL 6 CHAIN 0

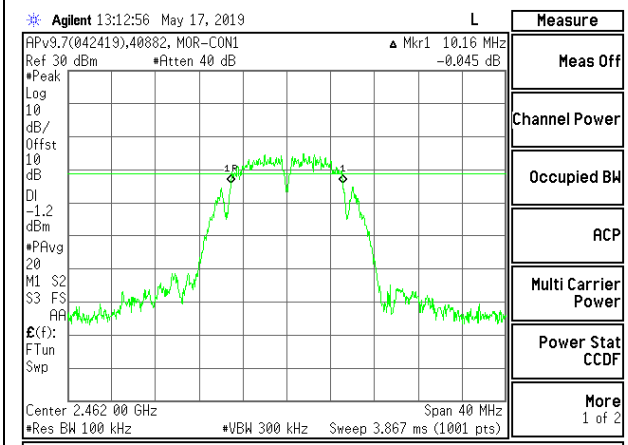


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



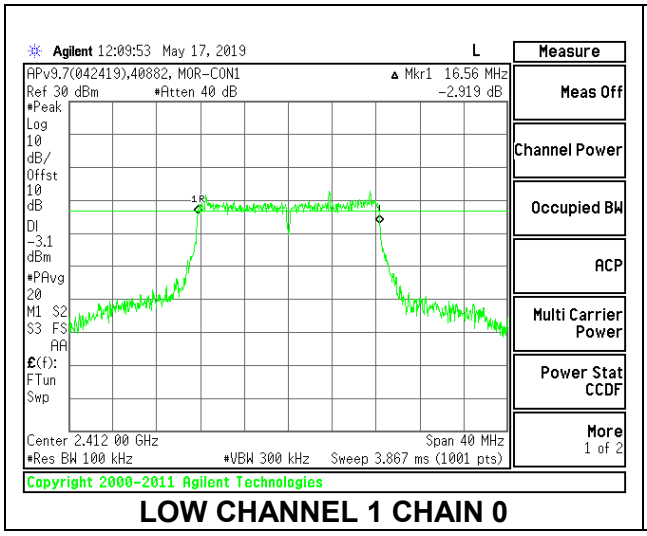
HIGH CHANNEL 11 CHAIN 1

8.3.2. 802.11g MODE

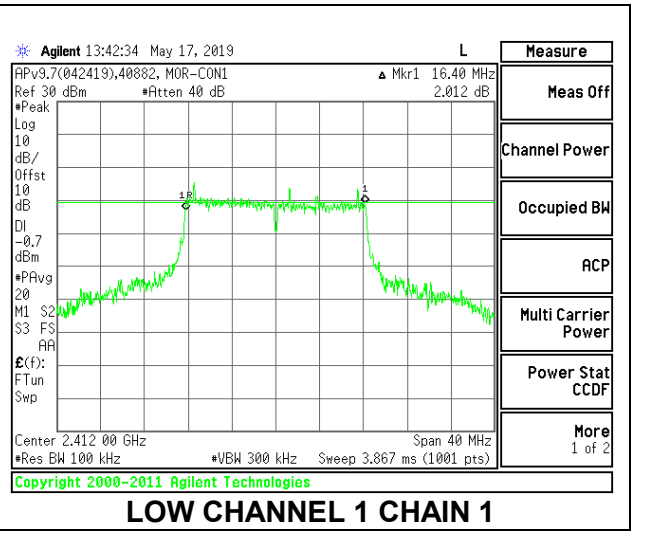
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low 1	2412	16.5600	16.4000	0.5
Mid 6	2437	16.5600	16.5200	0.5
High 11	2462	16.4800	16.4000	0.5

LOW CHANNEL 1

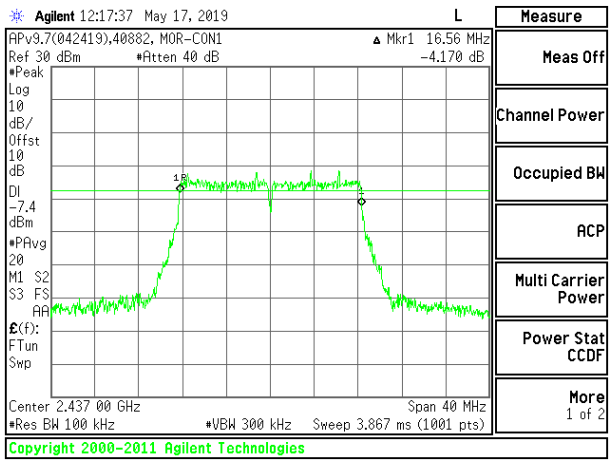


LOW CHANNEL 1 CHAIN 0

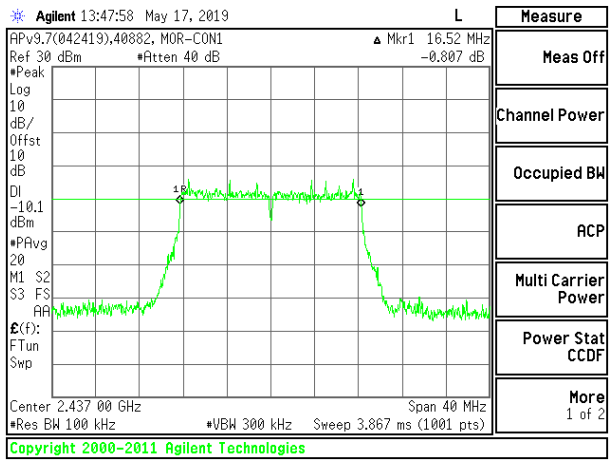


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

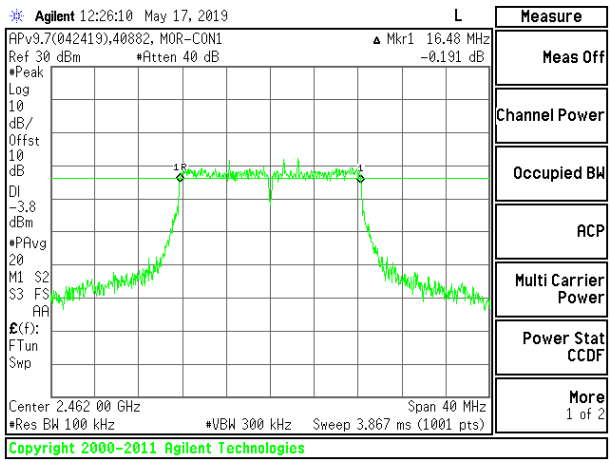


MID CHANNEL 6 CHAIN 0

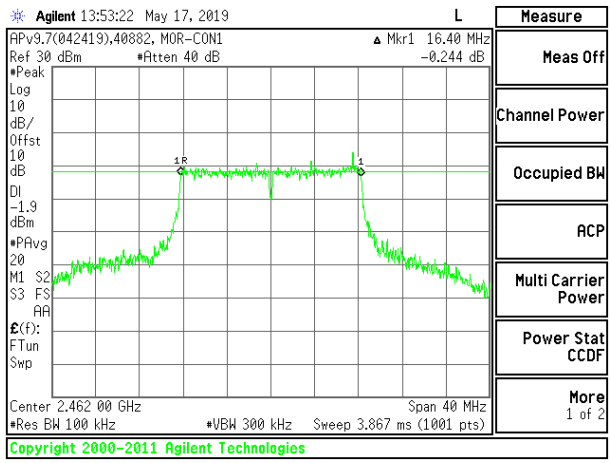


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



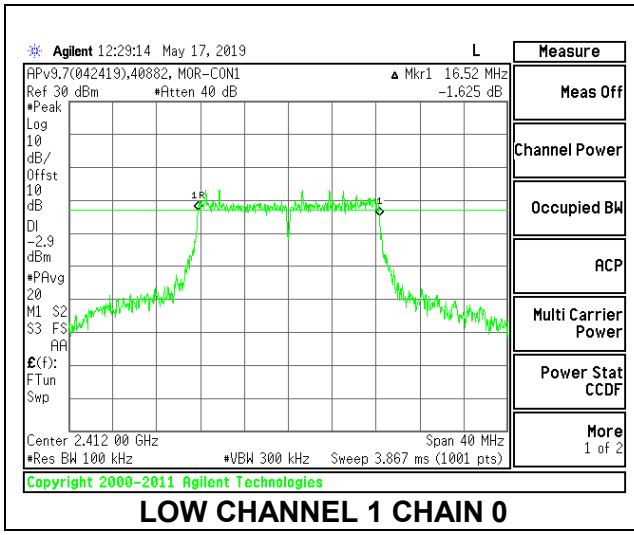
HIGH CHANNEL 11 CHAIN 1

8.3.3. 802.11n HT20 MODE

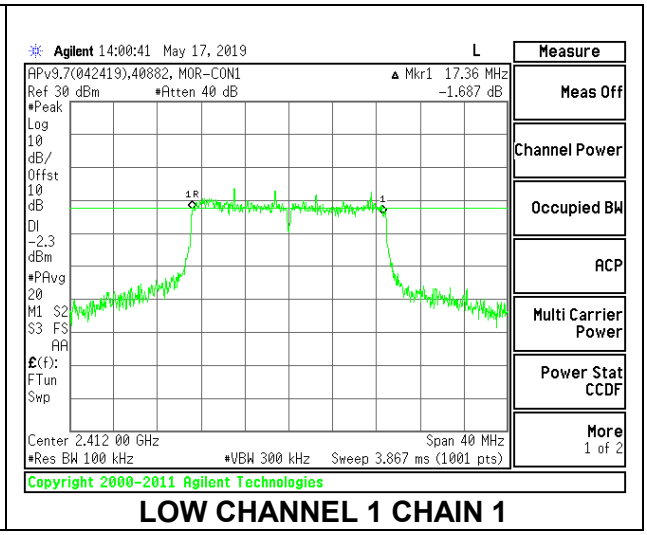
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low 1	2412	16.5200	17.3600	0.5
Mid 6	2437	16.4800	17.6800	0.5
High 11	2462	16.5600	17.6800	0.5

LOW CHANNEL 1

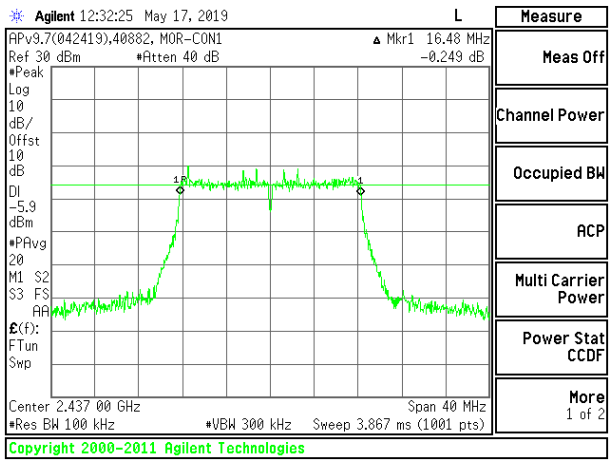


LOW CHANNEL 1 CHAIN 0

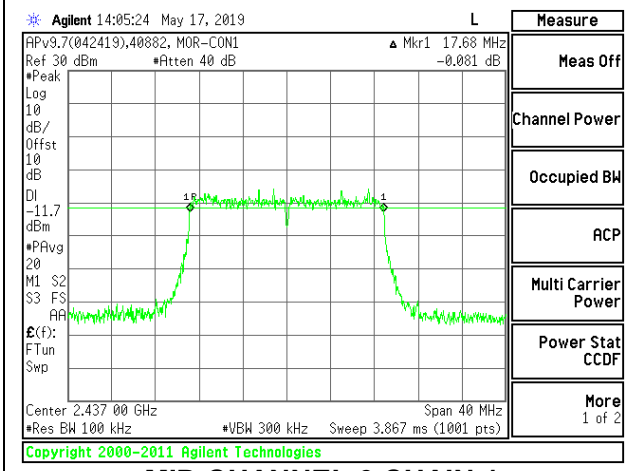


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

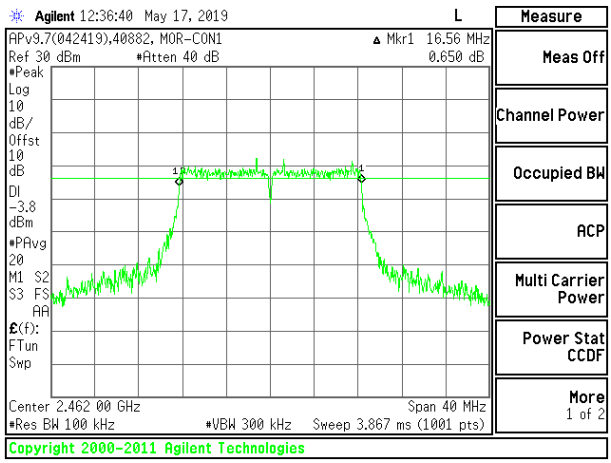


MID CHANNEL 6 CHAIN 0

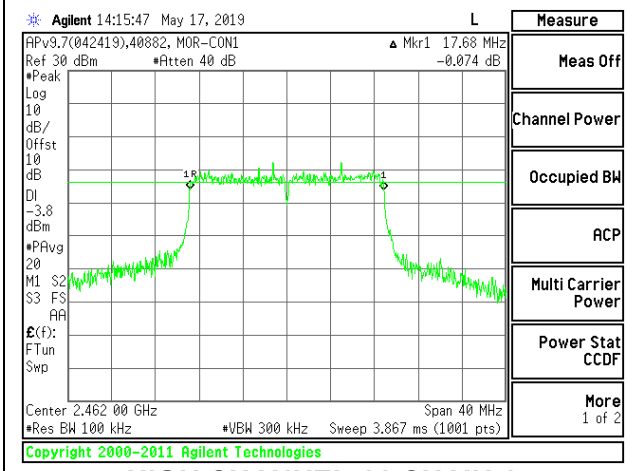


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



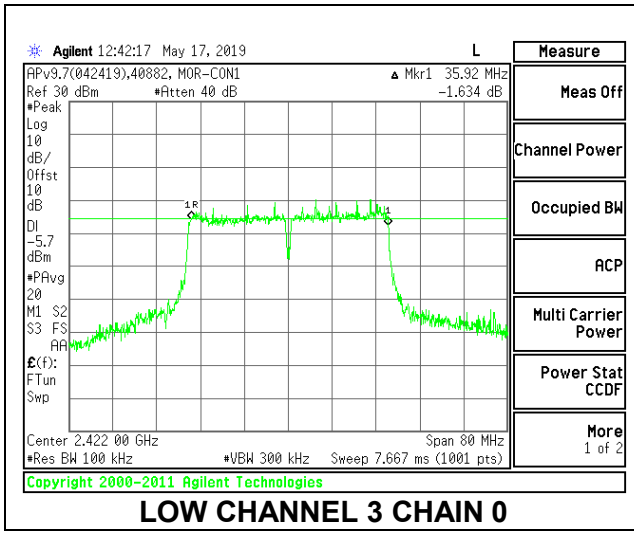
HIGH CHANNEL 11 CHAIN 1

8.3.4. 802.11n HT40 MODE

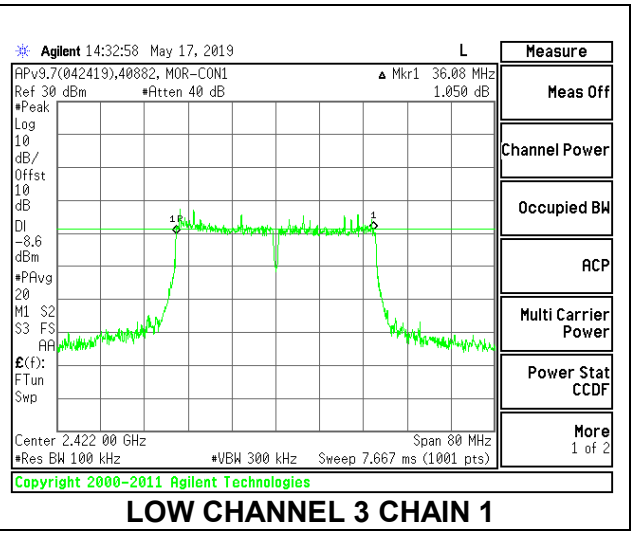
2TX Chain 0 + Chain 1 CDD MODE

Channel	Frequency (MHz)	6 dB BW Chain 0 (MHz)	6 dB BW Chain 1 (MHz)	Minimum Limit (MHz)
Low 3	2422	35.9200	36.0800	0.5
Mid 6	2437	36.0800	36.4800	0.5
High 9	2452	35.8400	36.4800	0.5

LOW CHANNEL 3

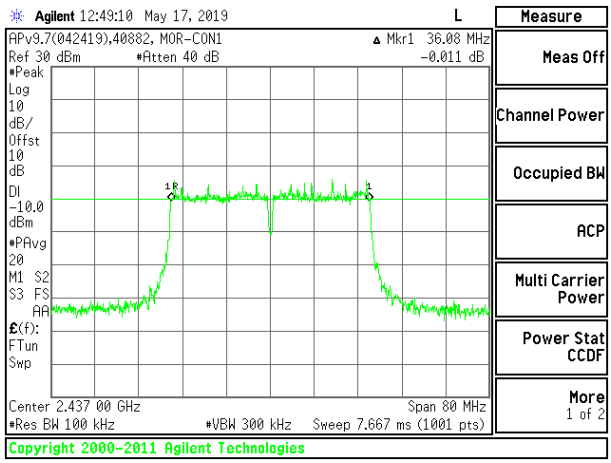


LOW CHANNEL 3 CHAIN 0

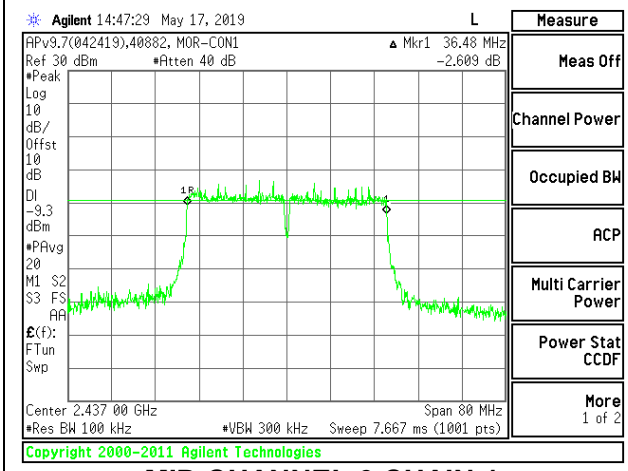


LOW CHANNEL 3 CHAIN 1

MID CHANNEL 6

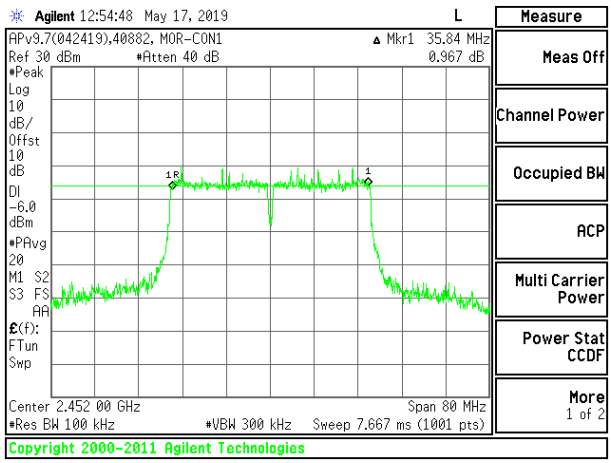


MID CHANNEL 6 CHAIN 0

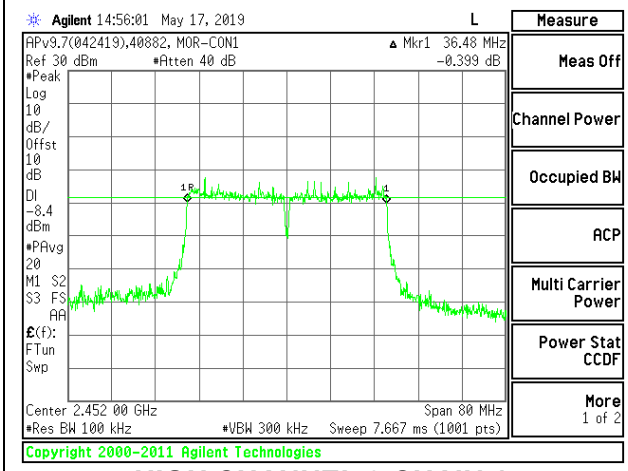


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 9



HIGH CHANNEL 9 CHAIN 0



HIGH CHANNEL 9 CHAIN 1

8.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

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.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10 dB (including 10 dB pad) was entered as an offset in the power meter to allow for a gated average reading of power.

DIRECTIONAL ANTENNA GAIN

For 1 TX:
There is only one transmitter output therefore the directional gain is equal to the antenna gain.

For 2 TX:

Tx chains are correlated for power due to the device supporting CDD in all MIMO modes. The directional gains are as follows:

Band (GHz)	Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Power Directional Gain (dBi)	PSD Directional Gain (dBi)
2.4	2.00	2.00	2.00	5.01

RESULTS

8.4.1. 802.11b MODE

2TX Chain 0 + Chain 1 CDD MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	2.00	30.00	36	30.00
Mid 6	2437	2.00	30.00	36	30.00
High 11	2462	2.00	30.00	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	12.79	11.65	15.27	30.00	-14.73
Mid 6	2437	14.07	11.55	16.00	30.00	-14.00
High 11	2462	14.20	12.48	16.43	30.00	-13.57

Tested by: 12015/40882
Test Date: 2019-05-17

8.4.2. 802.11g MODE

2TX Chain 0 + Chain 1 CDD MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	2.00	30.00	36	30.00
Mid 6	2437	2.00	30.00	36	30.00
High 11	2462	2.00	30.00	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	12.89	11.32	15.19	30.00	-14.81
Mid 6	2437	13.50	10.94	15.42	30.00	-14.58
High 11	2462	13.89	11.50	15.87	30.00	-14.13

Tested by: 46722
Test Date: 2019-05-23

8.4.3. 802.11n HT20 MODE

2TX Chain 0 + Chain 1 CDD MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	2.00	30.00	36	30.00
Mid 6	2437	2.00	30.00	36	30.00
High 11	2462	2.00	30.00	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	12.79	11.35	15.14	30.00	-14.86
Mid 6	2437	12.77	11.23	15.08	30.00	-14.92
High 11	2462	13.00	11.11	15.17	30.00	-14.83

Tested by: 46722
Test Date: 2019-05-23

8.4.4. 802.11n HT40 MODE

2TX Chain 0 + Chain 1 CDD MODE

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 3	2412	2.00	30.00	36	30.00
Mid 6	2437	2.00	30.00	36	30.00
High 9	2462	2.00	30.00	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Chain 1 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 3	2412	11.23	8.74	13.17	30.00	-16.83
Mid 6	2437	11.93	8.08	13.43	30.00	-16.57
High 9	2462	11.23	7.65	12.81	30.00	-17.19

Tested by: 46722
Test Date: 2019-05-23

8.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

RSS-247 (5.2) (b)

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

RESULTS

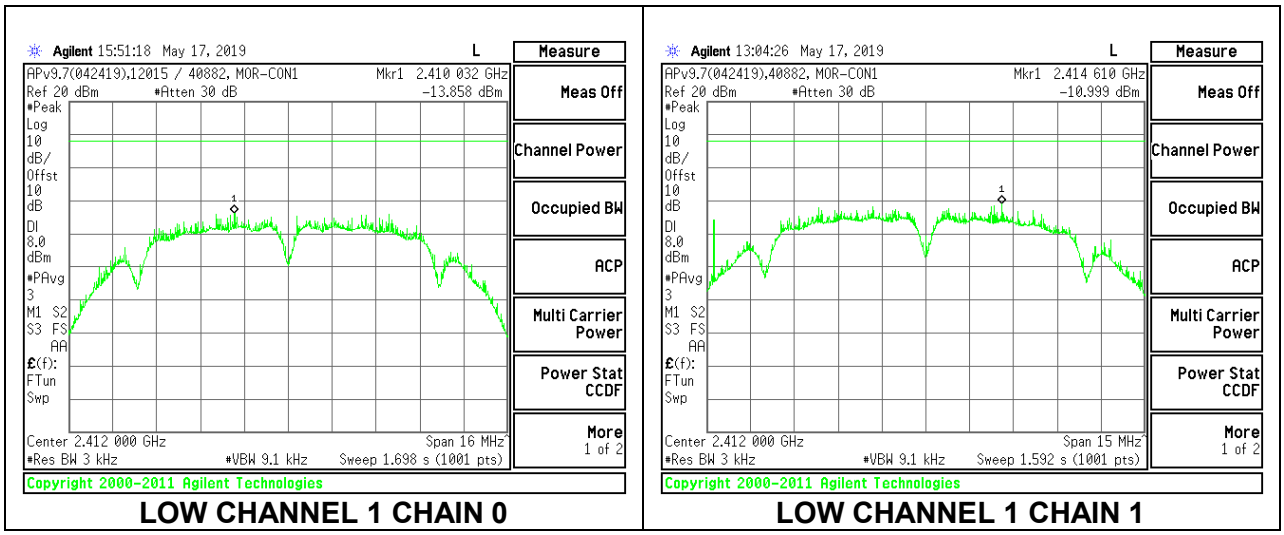
8.5.1. 802.11b MODE

2TX Chain 0 + Chain 1 CDD MODE

PSD Results

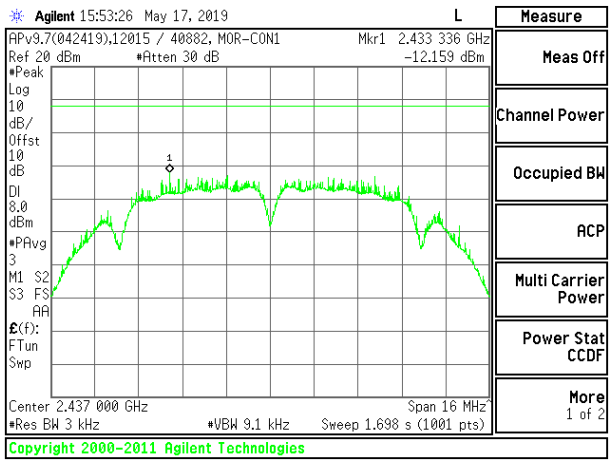
Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-13.86	-11.00	-9.19	8.0	-17.2
Mid 6	2437	-12.16	-18.53	-11.26	8.0	-19.3
High 11	2462	-11.26	-11.19	-8.21	8.0	-16.2

LOW CHANNEL 1

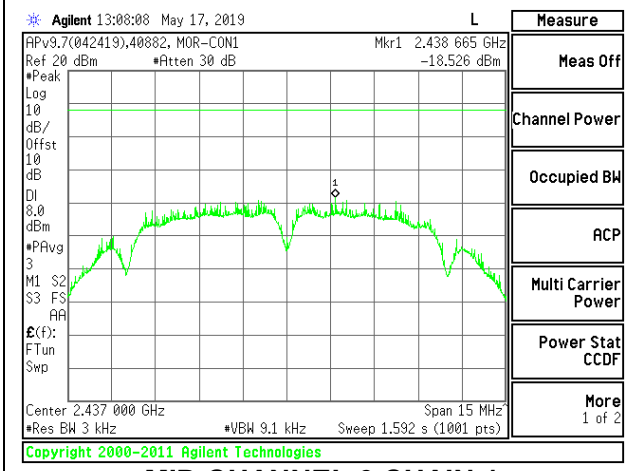


LOW CHANNEL 1 CHAIN 0 **LOW CHANNEL 1 CHAIN 1**

MID CHANNEL 6

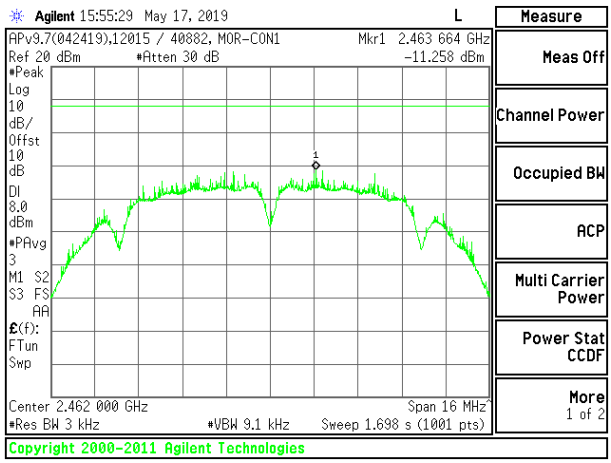


MID CHANNEL 6 CHAIN 0

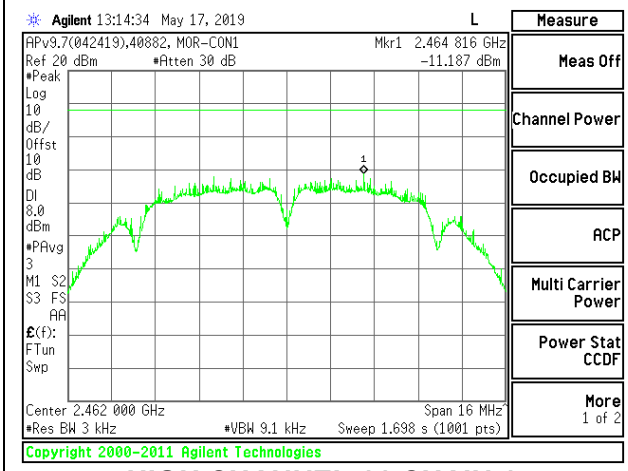


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



HIGH CHANNEL 11 CHAIN 1

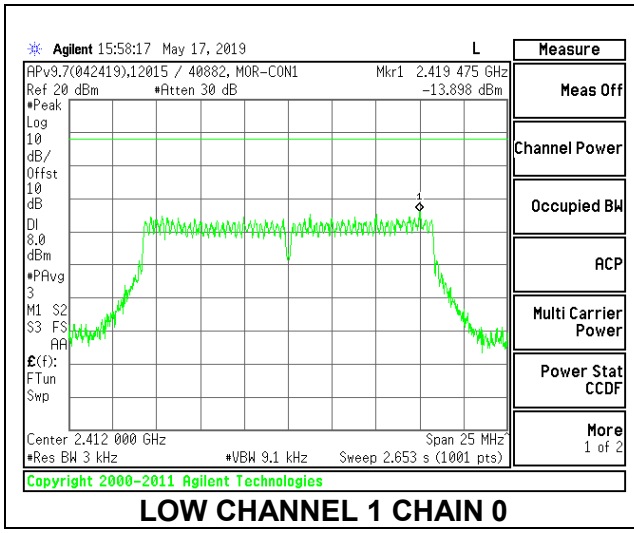
8.5.2. 802.11g MODE

2TX Chain 0 + Chain 1 CDD MODE

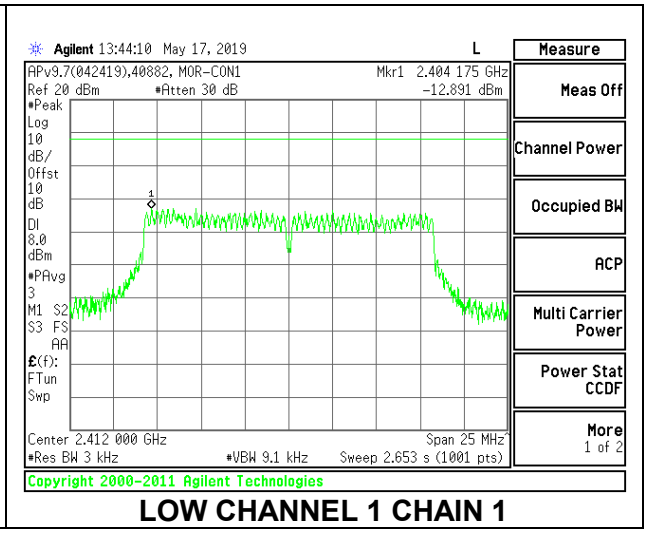
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-13.90	-12.89	-10.36	8.0	-18.4
Mid 6	2437	-17.31	-20.13	-15.48	8.0	-23.5
High 11	2462	-13.96	-13.04	-10.46	8.0	-18.5

LOW CHANNEL 1

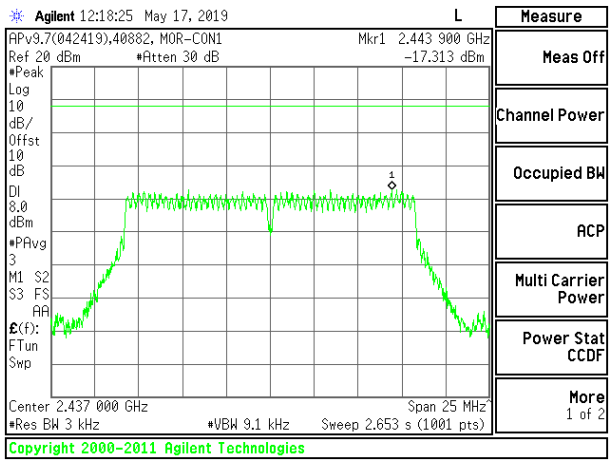


LOW CHANNEL 1 CHAIN 0

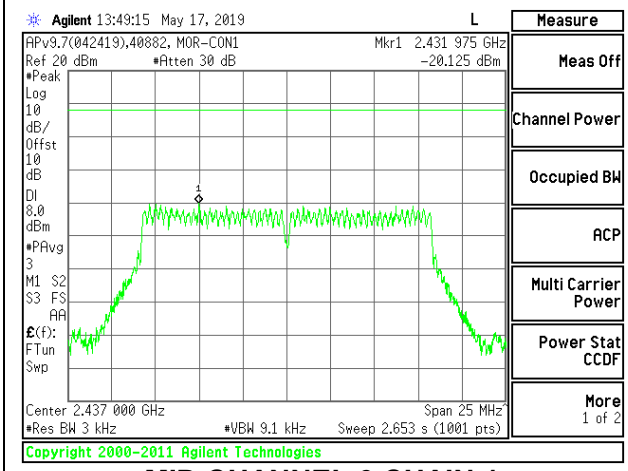


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

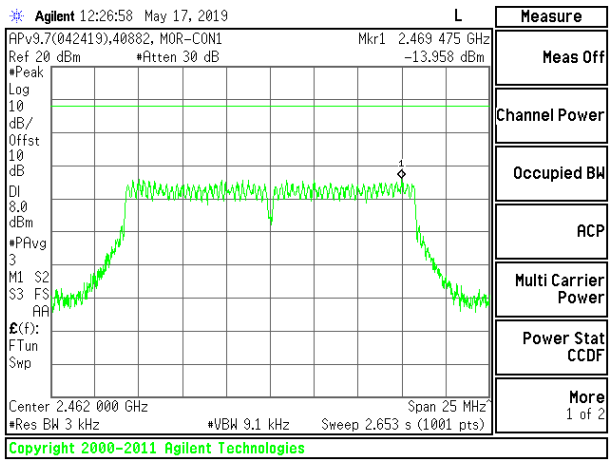


MID CHANNEL 6 CHAIN 0

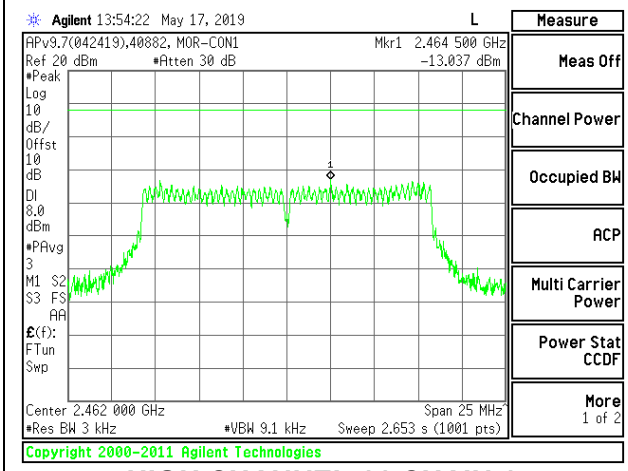


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



HIGH CHANNEL 11 CHAIN 1

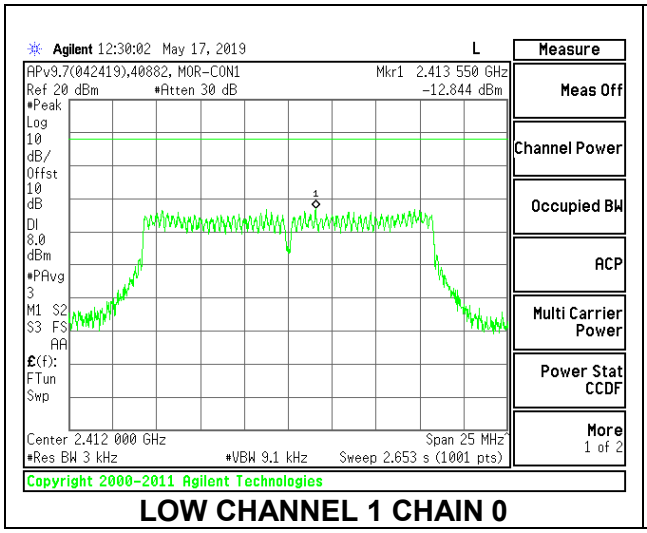
8.5.3. 802.11n HT20 MODE

2TX Chain 0 + Chain 1 CDD MODE

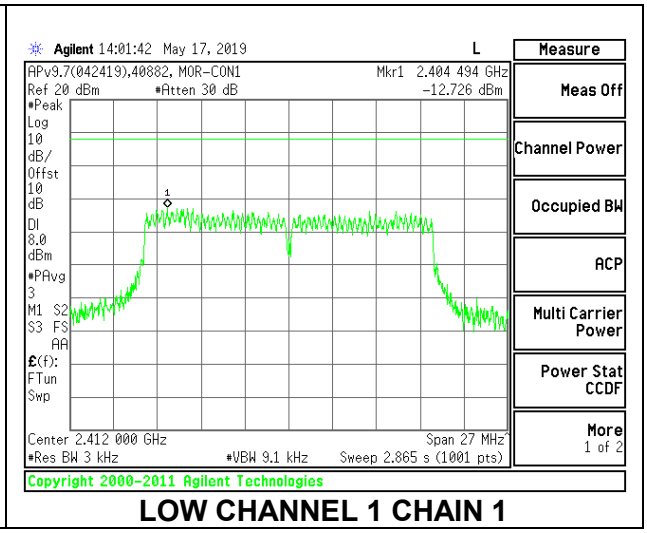
PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-12.84	-12.73	-9.77	8.0	-17.8
Mid 6	2437	-16.98	-20.69	-15.44	8.0	-23.4
High 11	2462	-13.76	-12.71	-10.19	8.0	-18.2

LOW CHANNEL 1

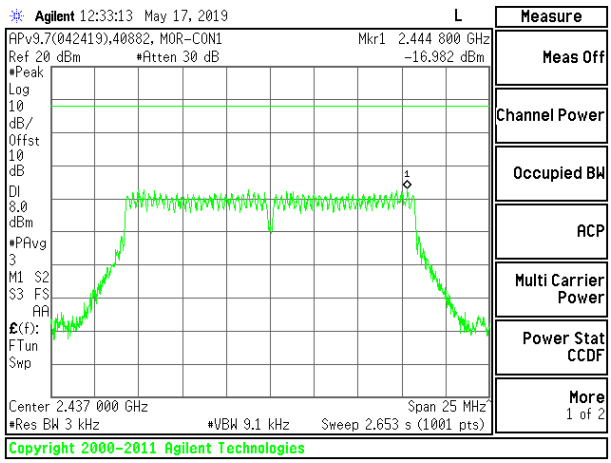


LOW CHANNEL 1 CHAIN 0

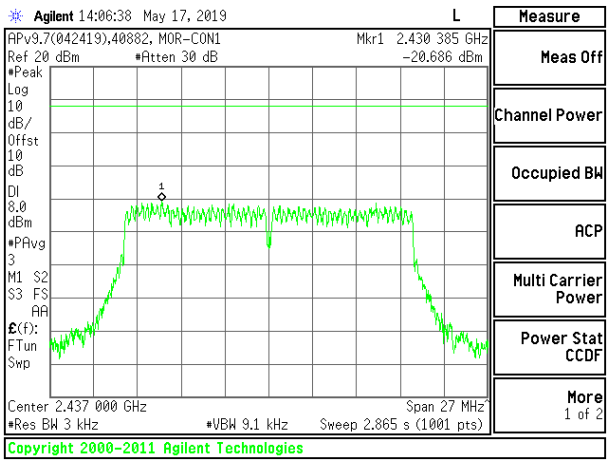


LOW CHANNEL 1 CHAIN 1

MID CHANNEL 6

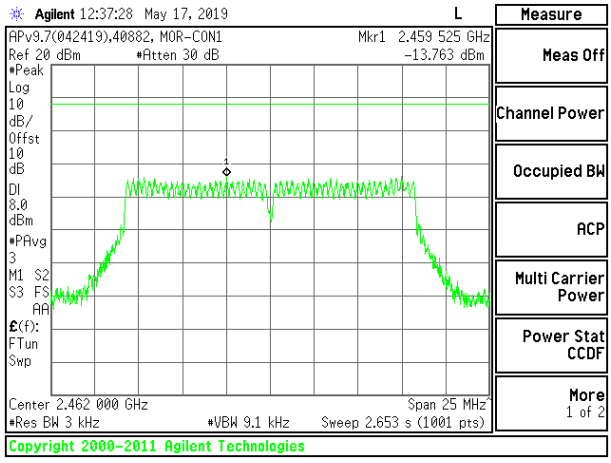


MID CHANNEL 6 CHAIN 0

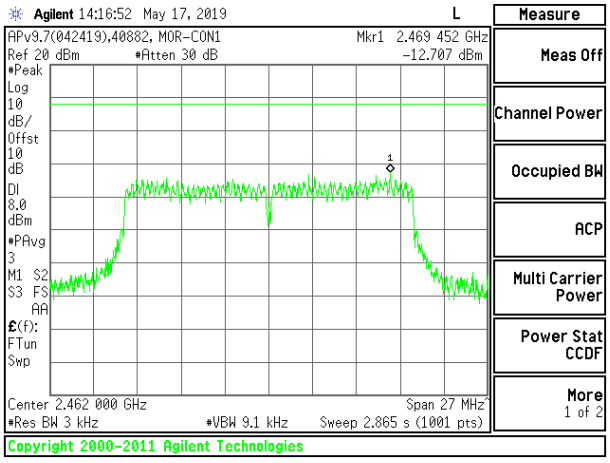


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 11



HIGH CHANNEL 11 CHAIN 0



HIGH CHANNEL 11 CHAIN 1

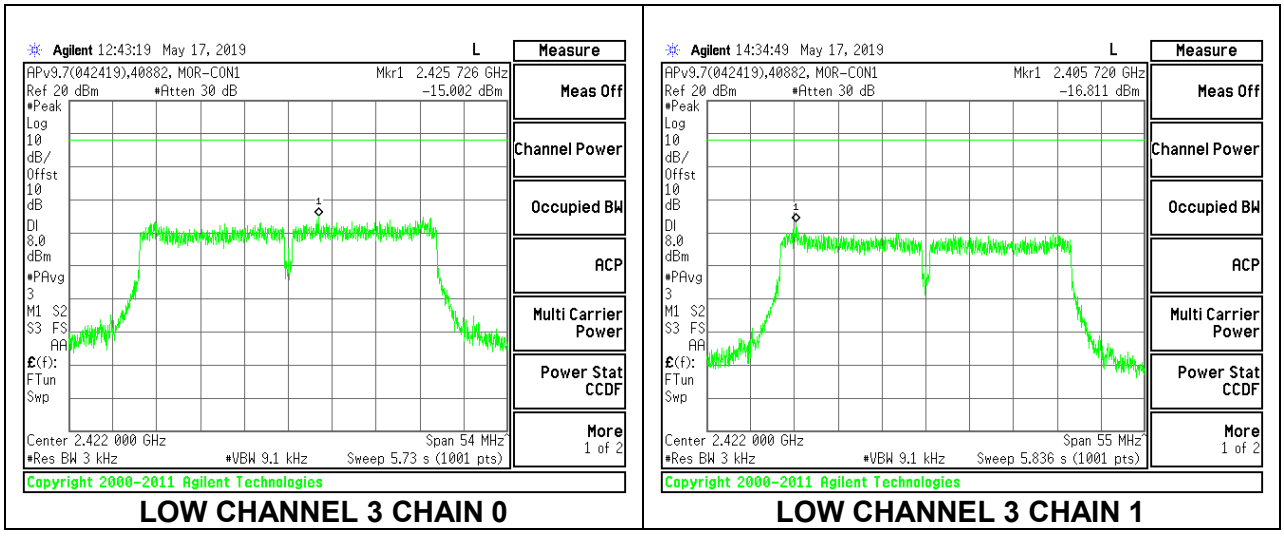
8.5.4. 802.11n HT40 MODE

2TX Chain 0 + Chain 1 CDD MODE

PSD Results

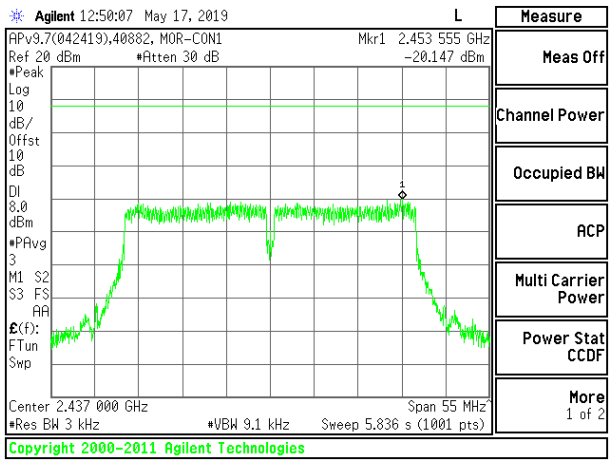
Channel	Frequency (MHz)	Chain 0 Meas (dBm/ 3kHz)	Chain 1 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 3	2422	-15.00	-16.81	-12.80	8.0	-20.8
Mid 6	2437	-20.15	-19.45	-16.77	8.0	-24.8
High 9	2452	-16.16	-17.69	-13.85	8.0	-21.8

LOW CHANNEL 3

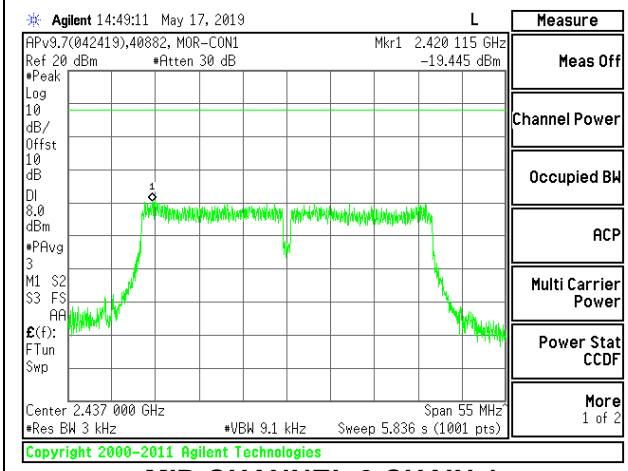


LOW CHANNEL 3 CHAIN 0 **LOW CHANNEL 3 CHAIN 1**

MID CHANNEL 6

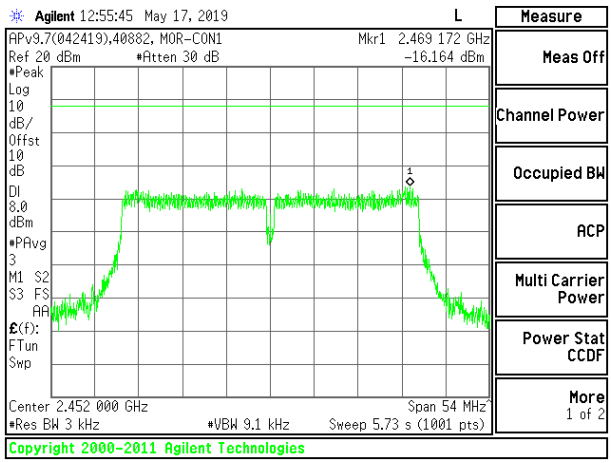


MID CHANNEL 6 CHAIN 0

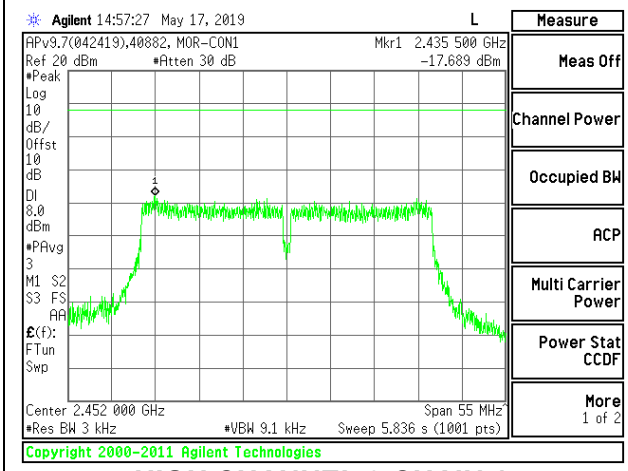


MID CHANNEL 6 CHAIN 1

HIGH CHANNEL 9



HIGH CHANNEL 9 CHAIN 0



HIGH CHANNEL 9 CHAIN 1

8.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

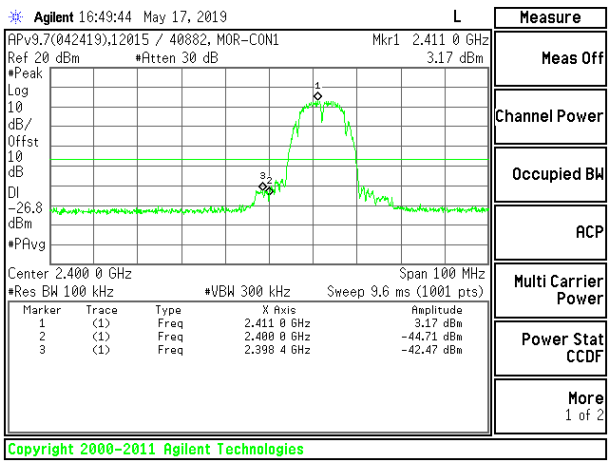
RSS-247 5.5

Output power was measured based on the use of average measurement, therefore the required attenuation is 30 dB.

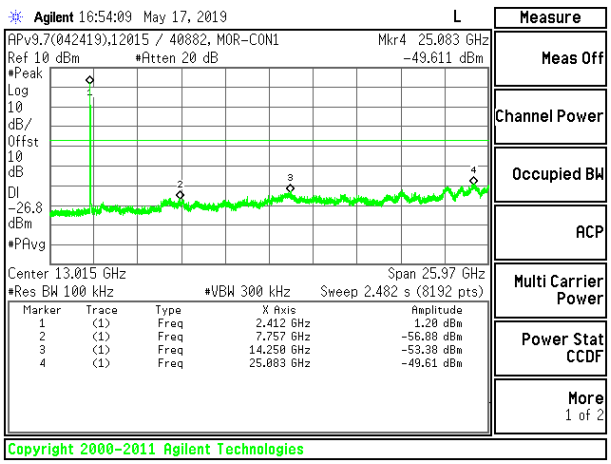
RESULTS

8.6.1. 802.11b MODE

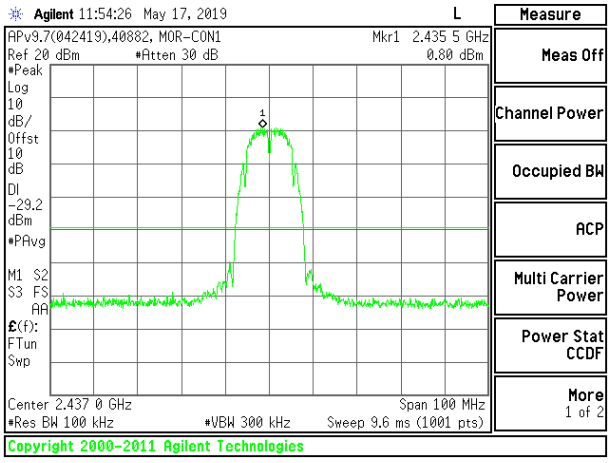
2TX Chain 0 + Chain 1 CDD MODE



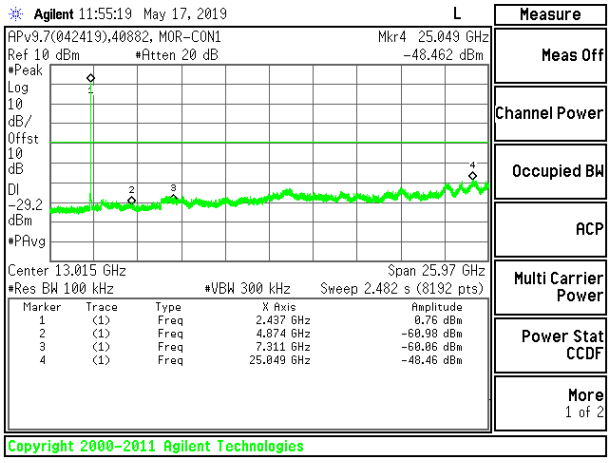
LOW CHANNEL 1 BANDEDGE CHAIN 0



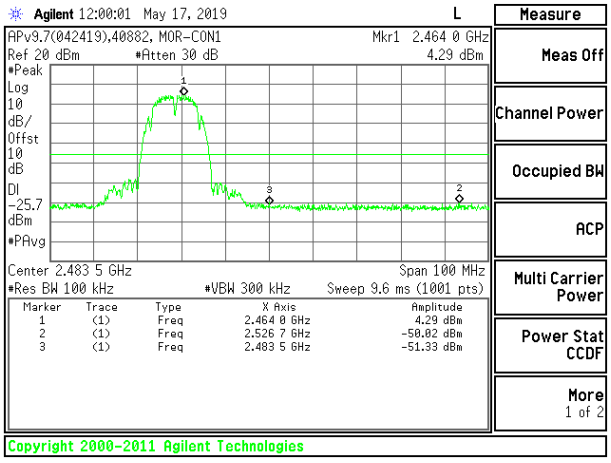
OUT-OF-BAND LOW CHANNEL 1 CHAIN 0



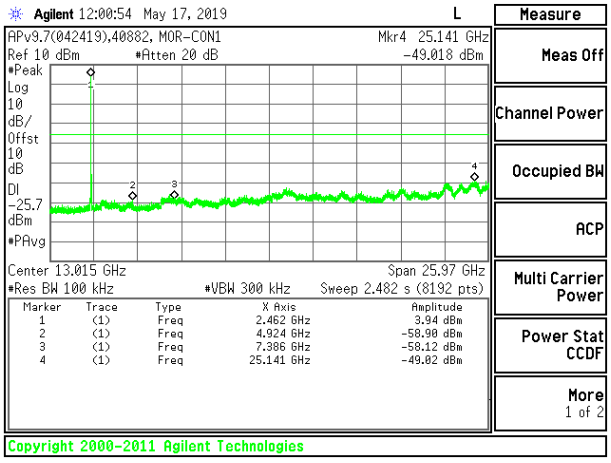
IN-BAND REFERENCE LEVEL CHAIN 0



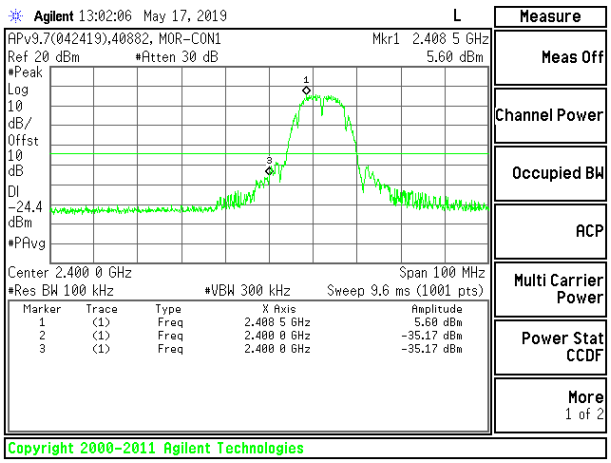
OUT-OF-BAND MID CHANNEL CHAIN 0



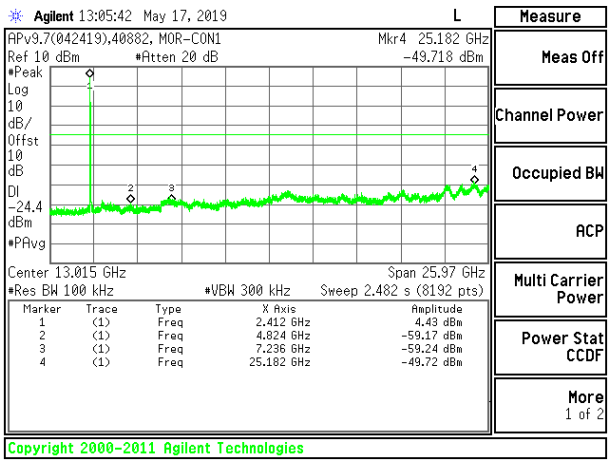
HIGH CHANNEL 11 BANDEDGE CHAIN 0



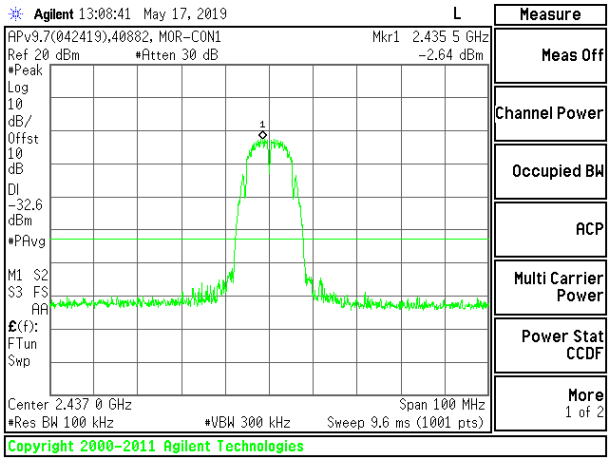
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 0



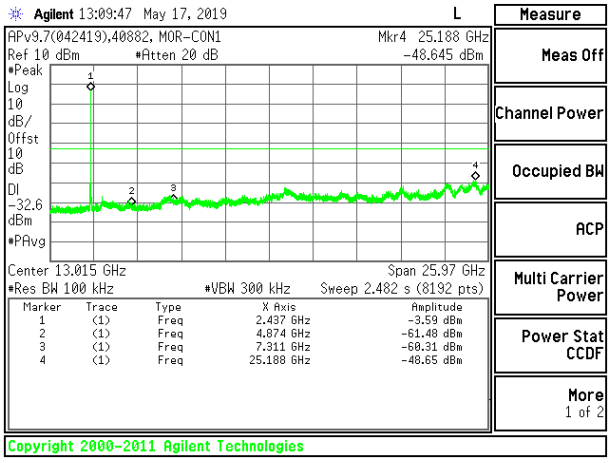
LOW CHANNEL 1 BANDEDGE CHAIN 1



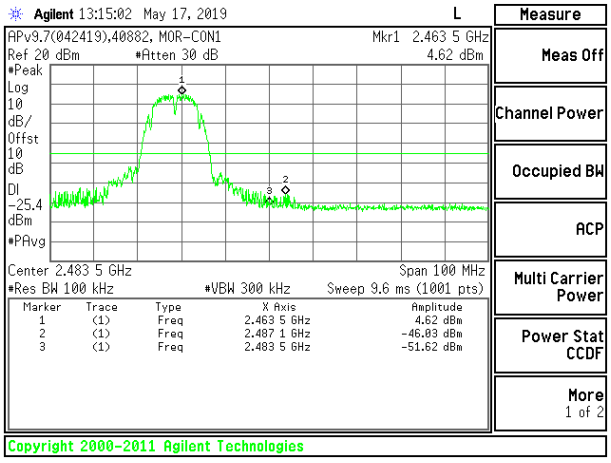
OUT-OF-BAND LOW CHANNEL 1 CHAIN 1



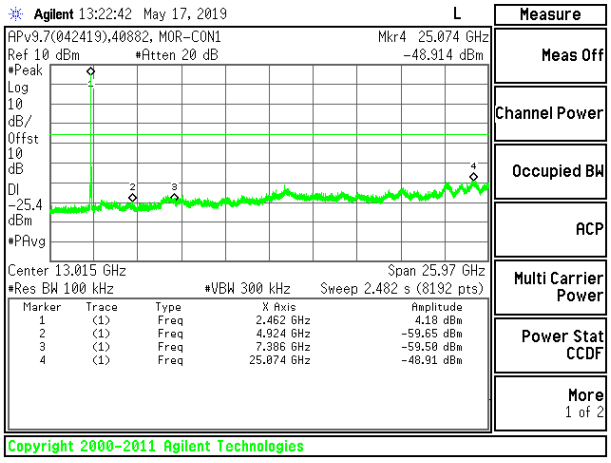
IN-BAND REFERENCE LEVEL CHAIN 1



OUT-OF-BAND MID CHANNEL CHAIN 1



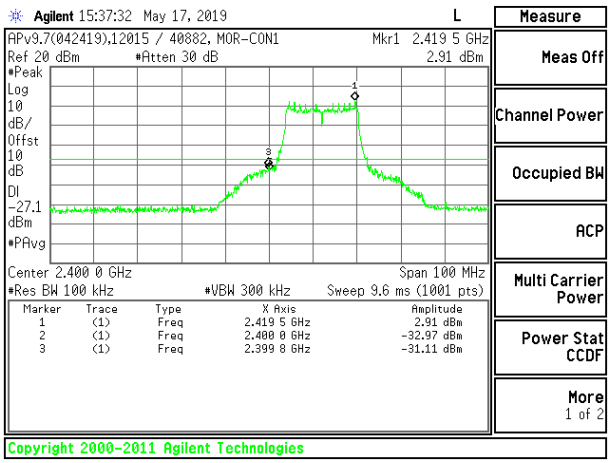
HIGH CHANNEL 11 BANDEDGE CHAIN 1



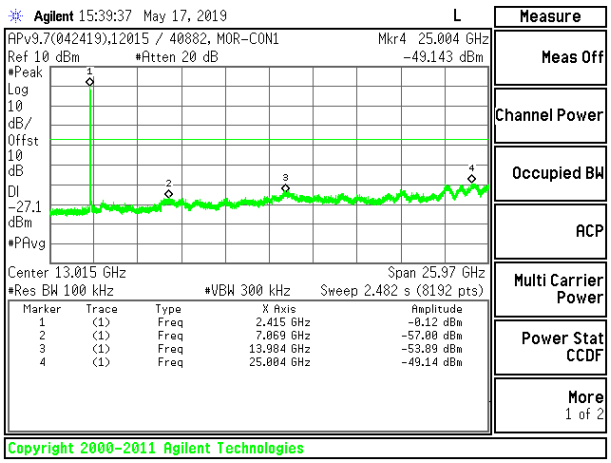
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 1

8.6.2. 802.11g MODE

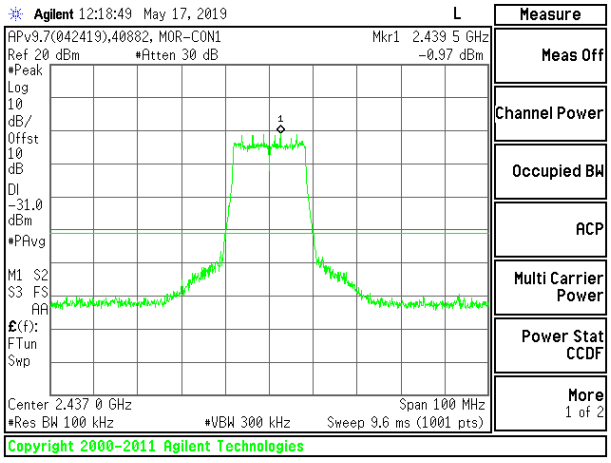
2TX Chain 0 + Chain 1 CDD MODE



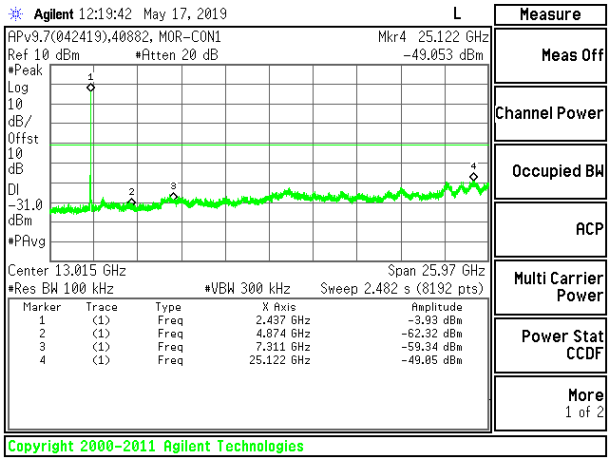
LOW CHANNEL 1 BANDEDGE CHAIN 0



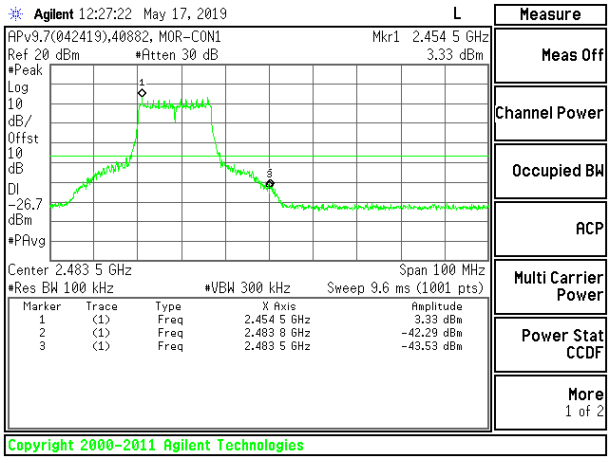
OUT-OF-BAND LOW CHANNEL 1 CHAIN 0



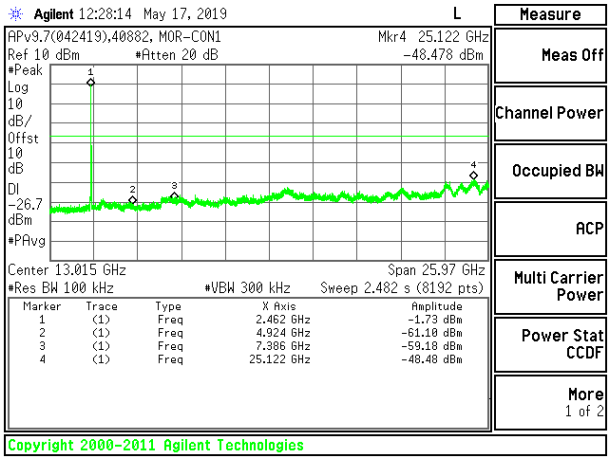
IN-BAND REFERENCE LEVEL CHAIN 0



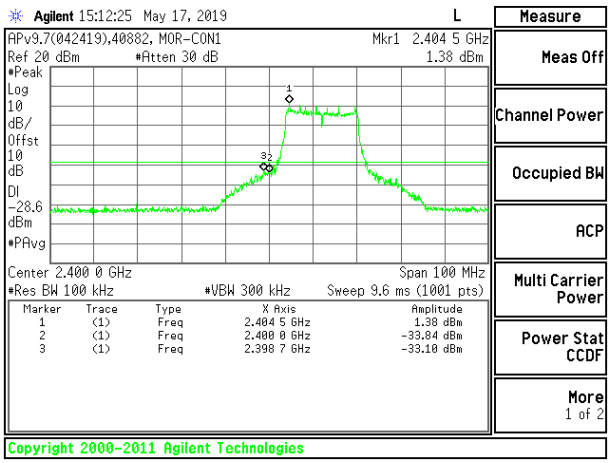
OUT-OF-BAND MID CHANNEL CHAIN 0



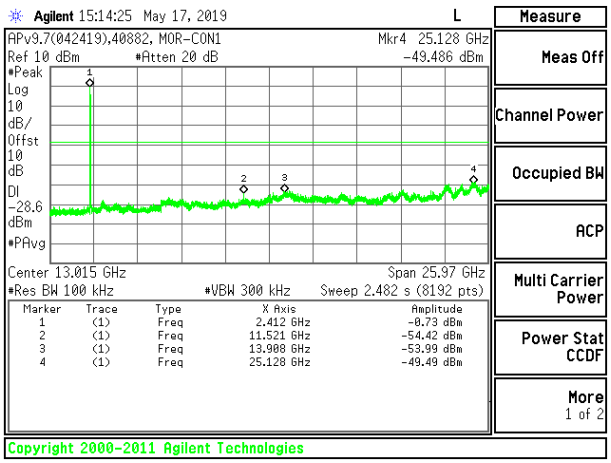
HIGH CHANNEL 11 BANDEDGE CHAIN 0



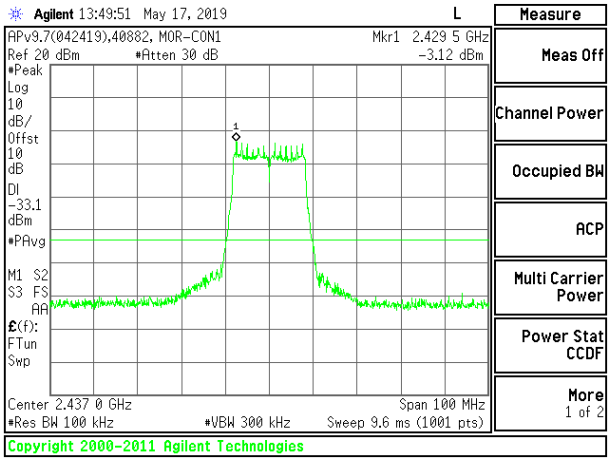
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 0



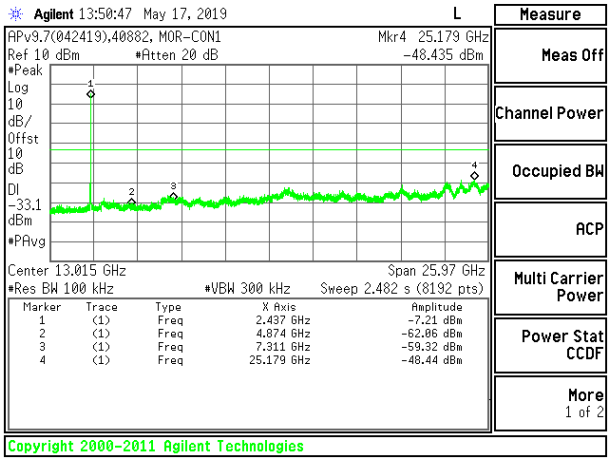
LOW CHANNEL 1 BANDEDGE CHAIN 1



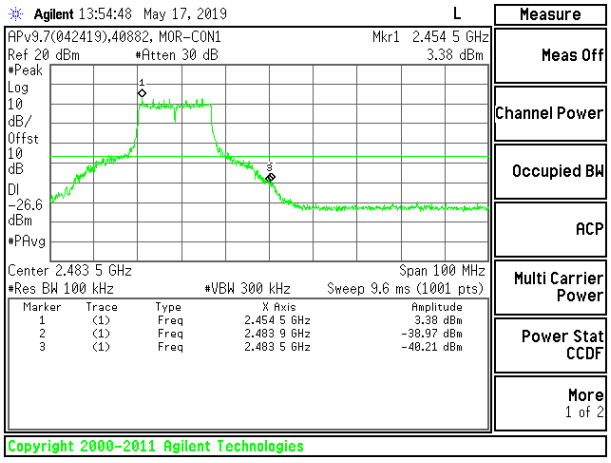
OUT-OF-BAND LOW CHANNEL 1 CHAIN 1



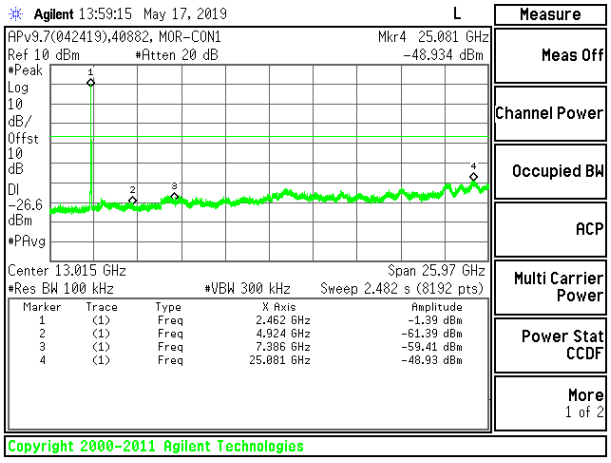
IN-BAND REFERENCE LEVEL CHAIN 1



OUT-OF-BAND MID CHANNEL CHAIN 1



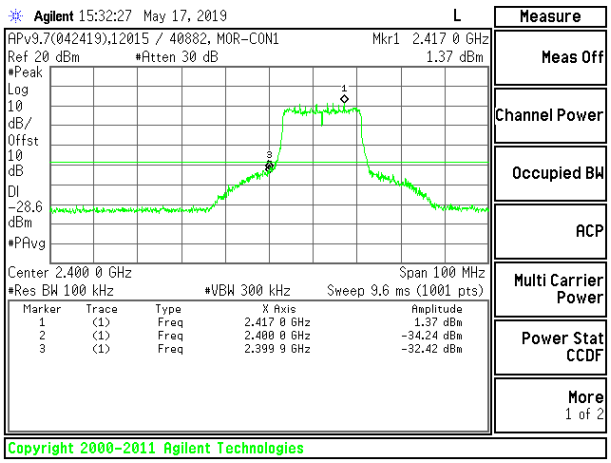
HIGH CHANNEL 11 BANDEDGE CHAIN 1



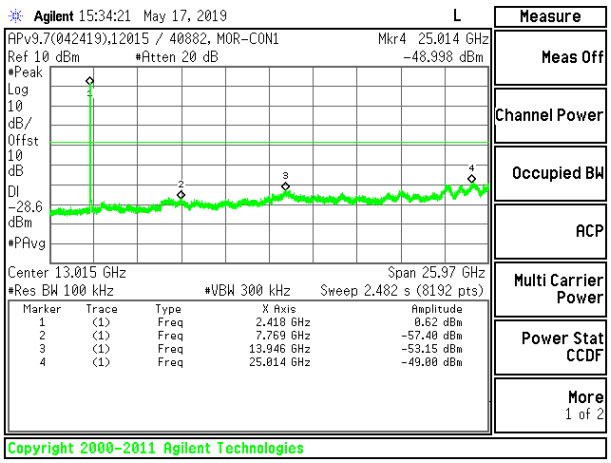
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 1

8.6.3. 802.11n HT20 MODE

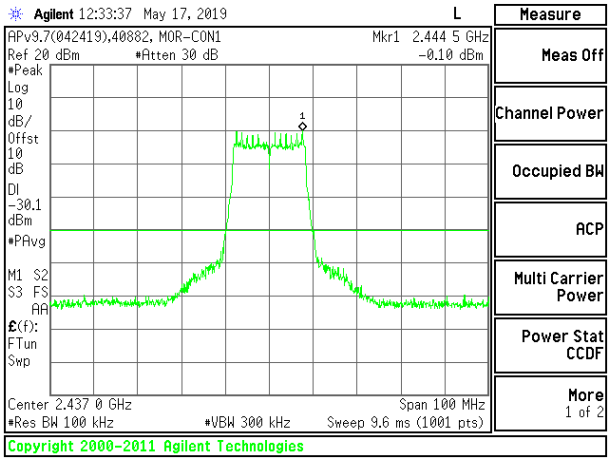
2TX Chain 0 + Chain 1 CDD MODE



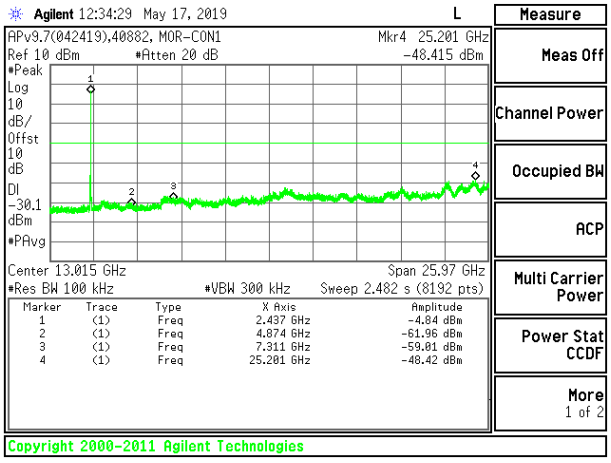
LOW CHANNEL 1 BANDEDGE CHAIN 0



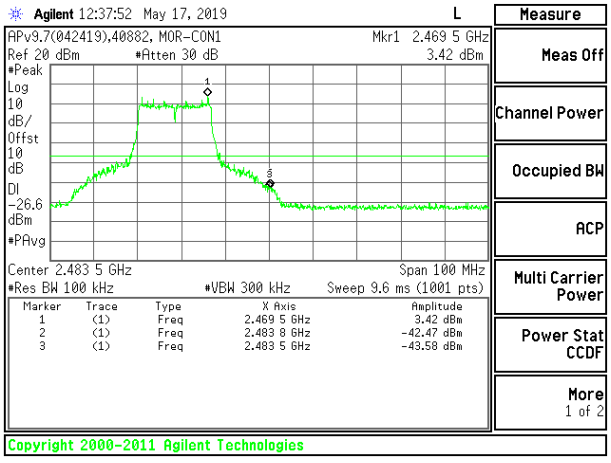
OUT-OF-BAND LOW CHANNEL 1 CHAIN 0



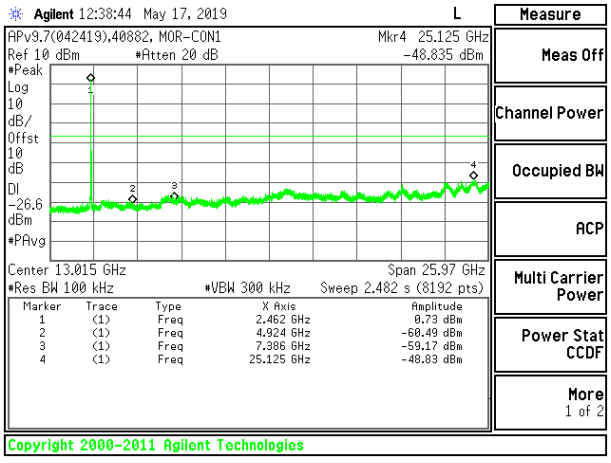
IN-BAND REFERENCE LEVEL CHAIN 0



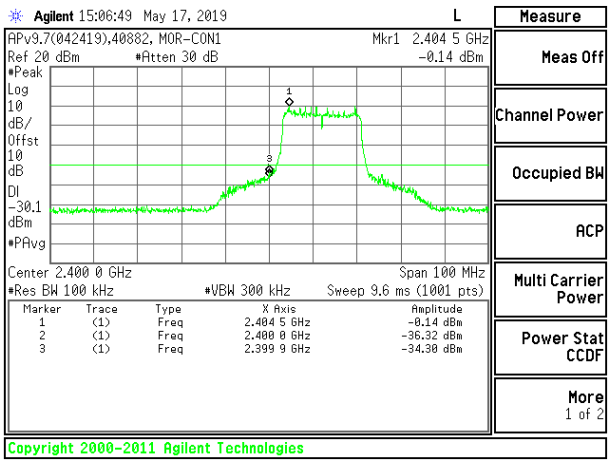
OUT-OF-BAND MID CHANNEL CHAIN 0



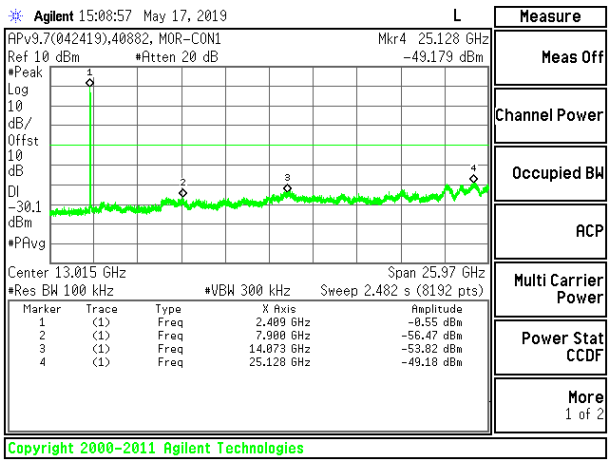
HIGH CHANNEL 11 BANDEDGE CHAIN 0



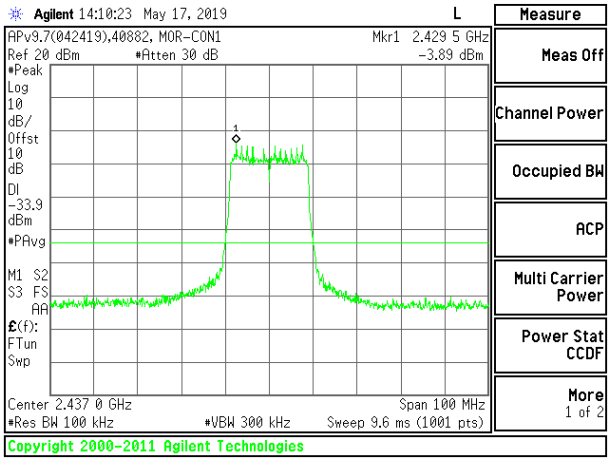
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 0



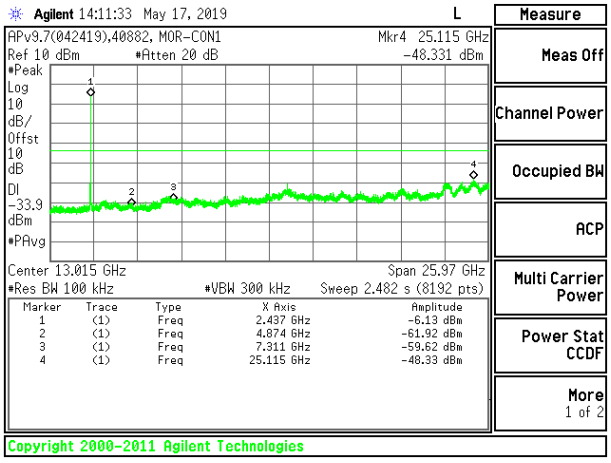
LOW CHANNEL 1 BANDEDGE CHAIN 1



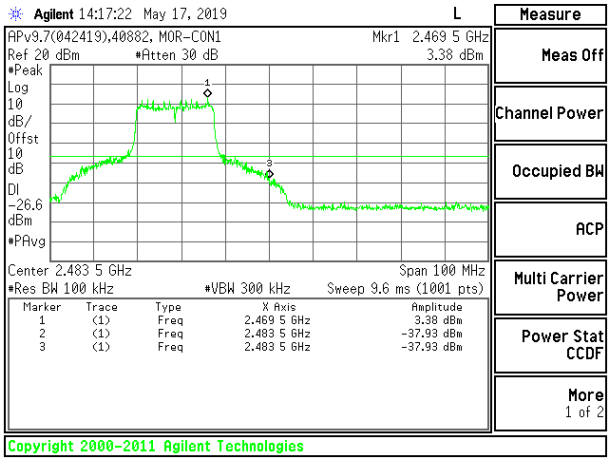
OUT-OF-BAND LOW CHANNEL 1 CHAIN 1



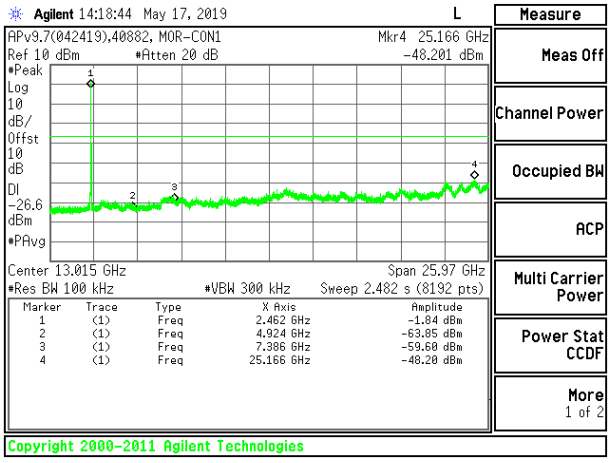
IN-BAND REFERENCE LEVEL CHAIN 1



OUT-OF-BAND MID CHANNEL CHAIN 1



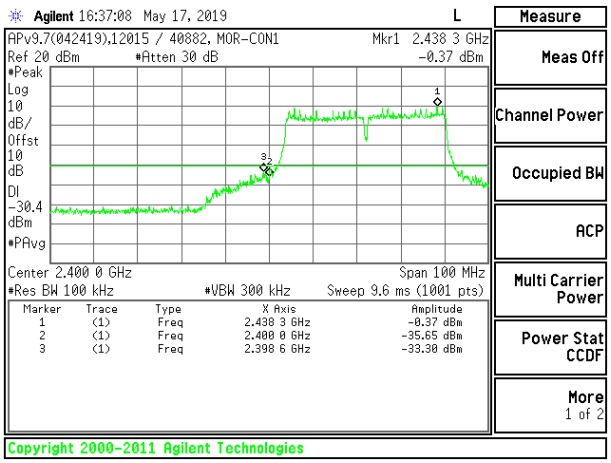
HIGH CHANNEL 11 BANDEDGE CHAIN 1



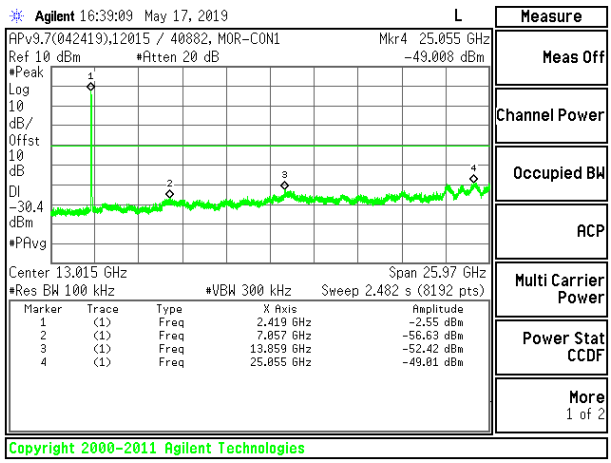
OUT-OF-BAND HIGH CHANNEL 11 CHAIN 1

8.6.4. 802.11n HT40 MODE

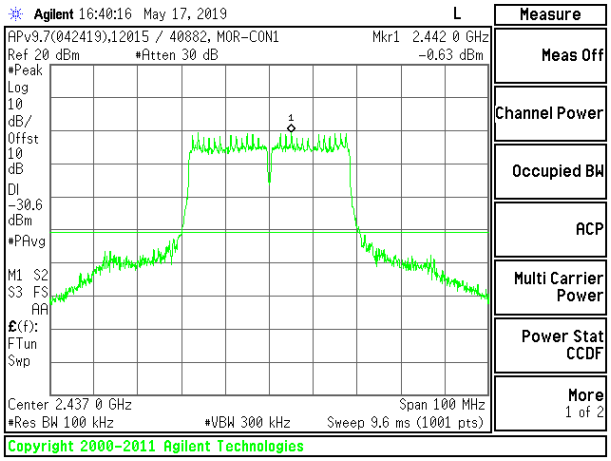
2TX Chain 0 + Chain 1 CDD MODE



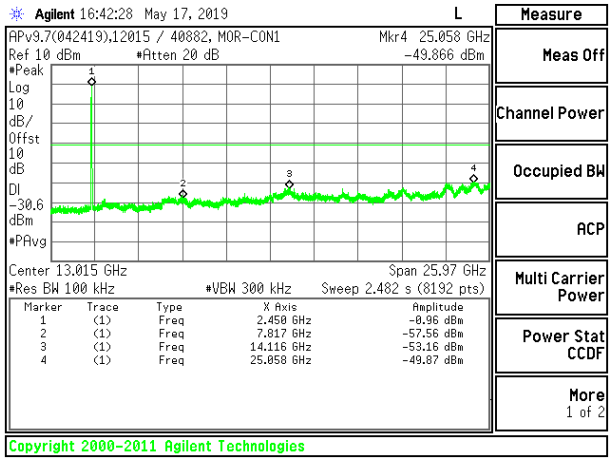
LOW CHANNEL 3 BANDEDGE CHAIN 0



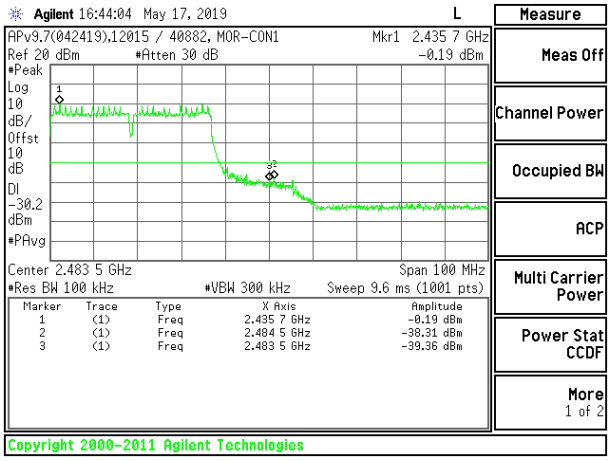
OUT-OF-BAND LOW CHANNEL 3 CHAIN 0



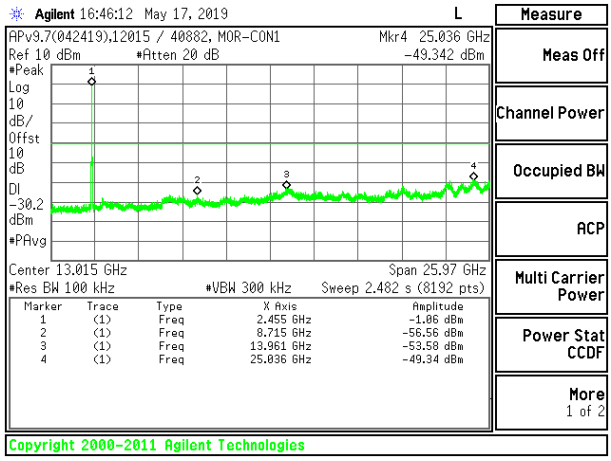
IN-BAND REFERENCE LEVEL CHAIN 0



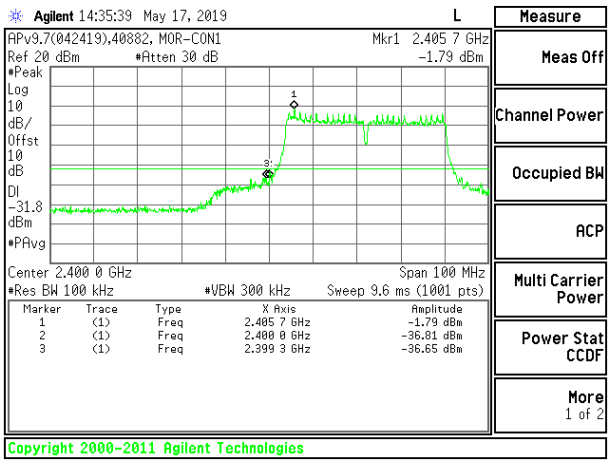
OUT-OF-BAND MID CHANNEL CHAIN 0



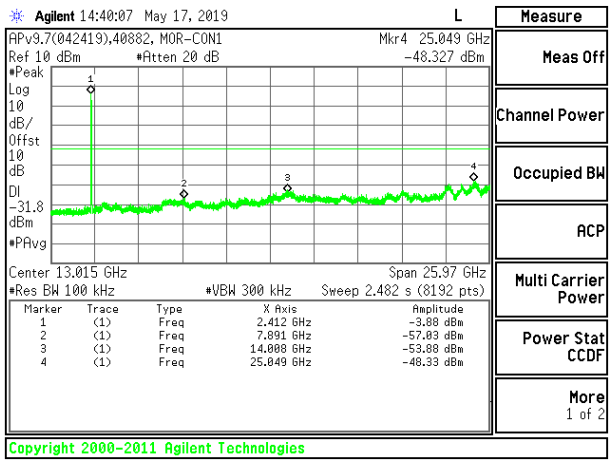
HIGH CHANNEL 9 BANDEDGE CHAIN 0



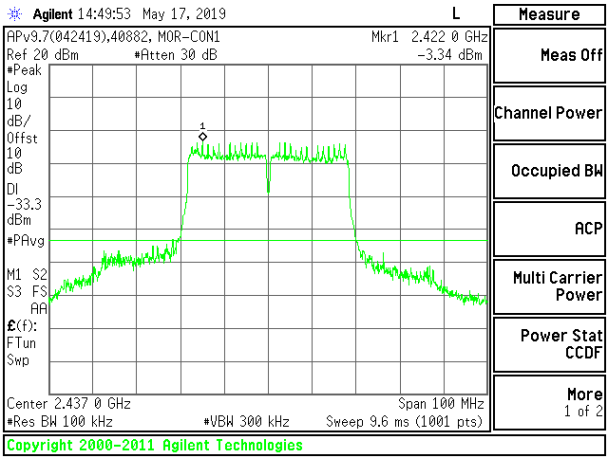
OUT-OF-BAND HIGH CHANNEL 9 CHAIN 0



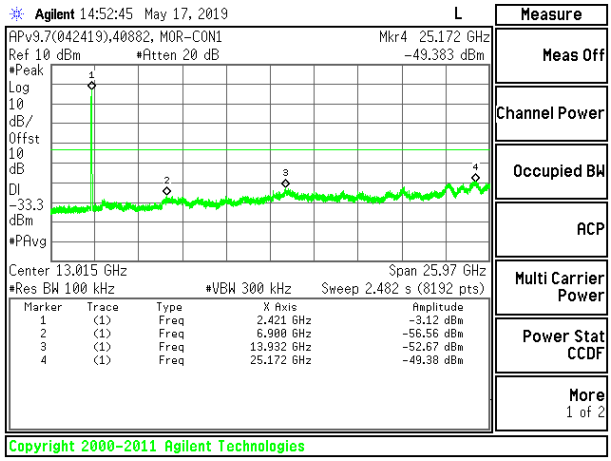
LOW CHANNEL 3 BANDEDGE CHAIN 1



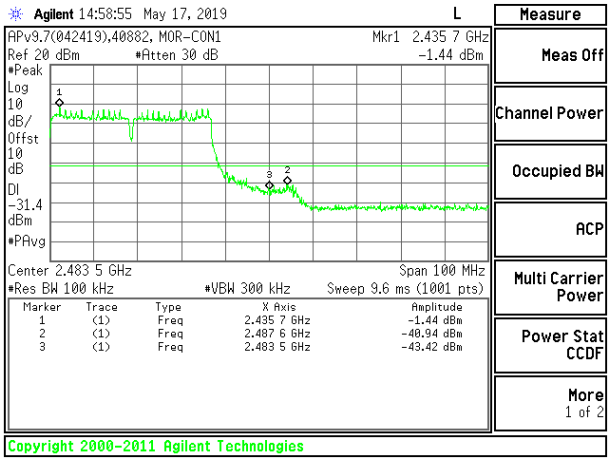
OUT-OF-BAND LOW CHANNEL 3 CHAIN 1



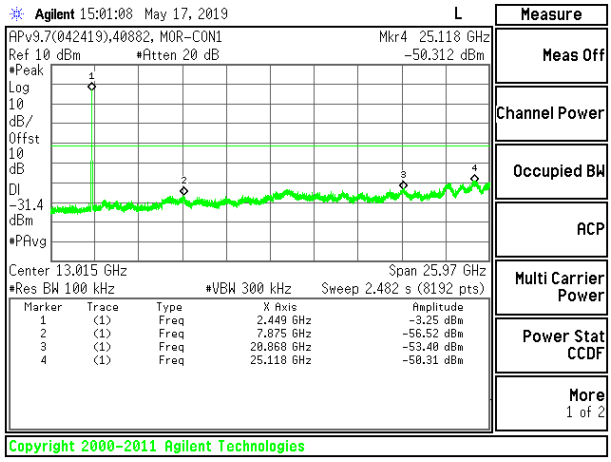
IN-BAND REFERENCE LEVEL CHAIN 1



OUT-OF-BAND MID CHANNEL CHAIN 1



HIGH CHANNEL 9 BANDEDGE CHAIN 1



OUT-OF-BAND HIGH CHANNEL 9 CHAIN 1

9. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

RSS-GEN, Section 8.9 and 8.10

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 measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

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 pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final peak measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz. For final 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 RMS averaging.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power and PSD was tested.

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.

3D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel).

KDB 414788 Open Field Site(OFS) and Chamber Correlation Justification

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

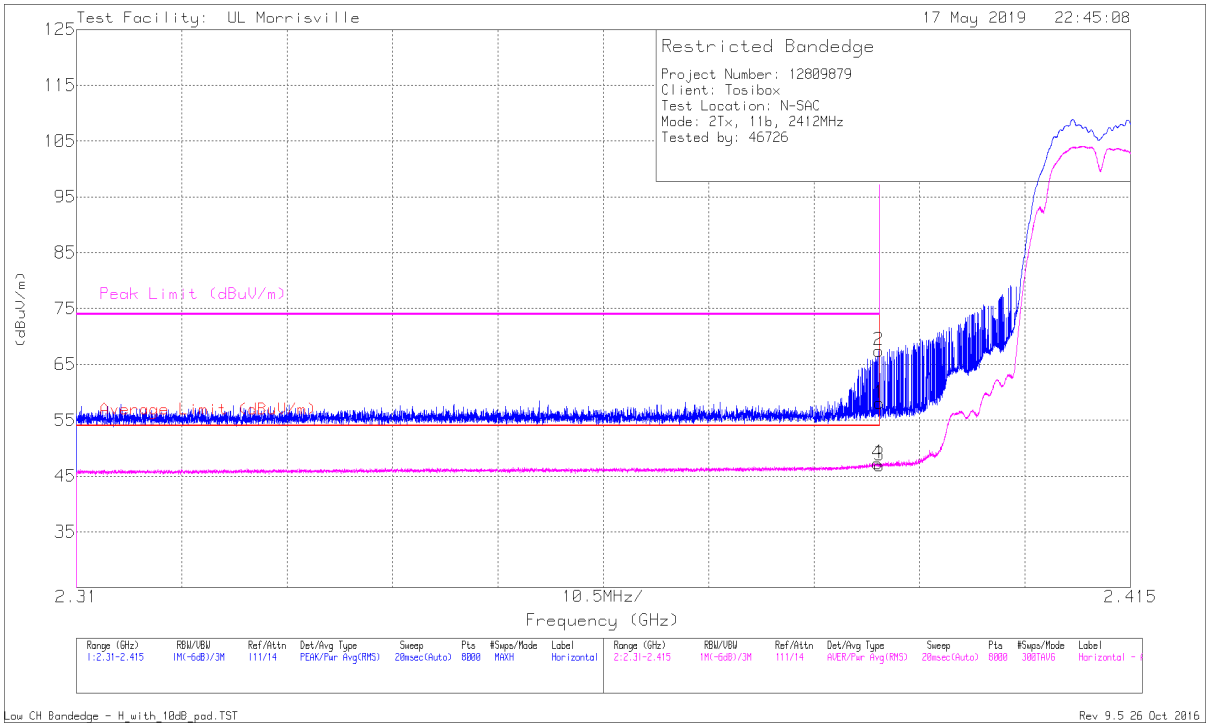
9.1. TRANSMITTER ABOVE 1 GHz

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

2TX Chain 0 + Chain 1 CDD MODE

BANDEDGE (LOW CHANNEL, CH 1)

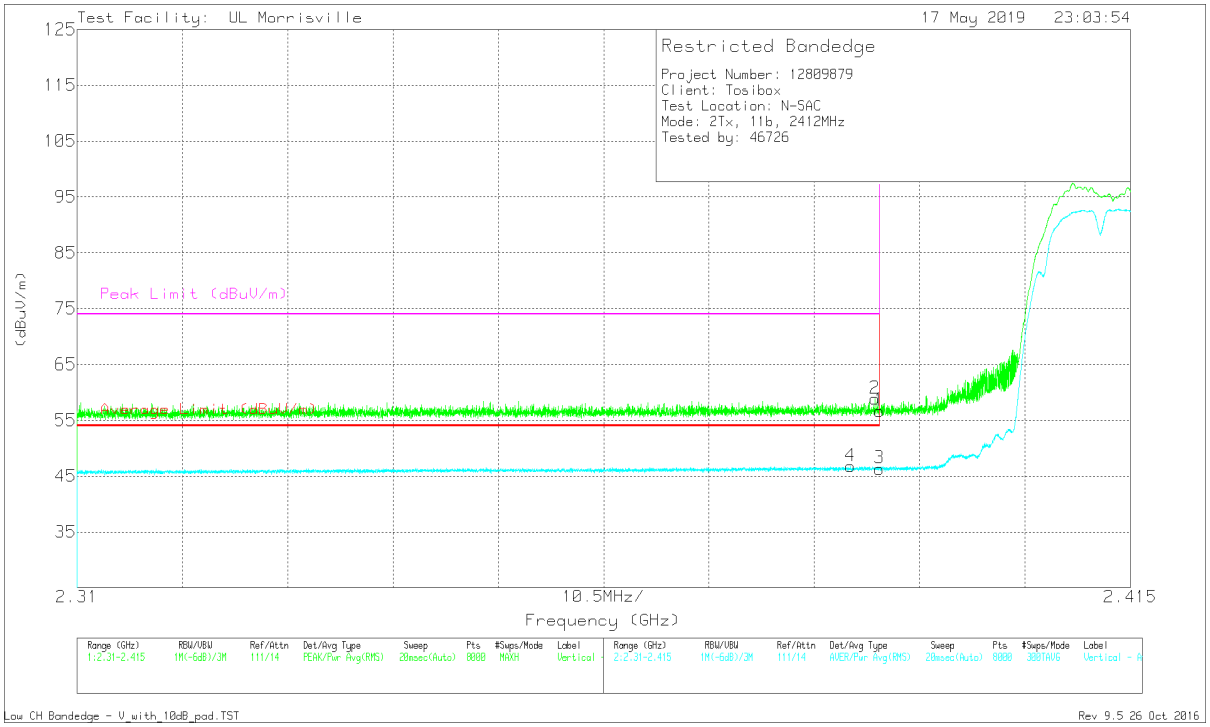
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	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	40.35	Pk	32	-24.4	10.1	0	58.05	-	-	74	-15.95	316	286	H
2	* ** 2.39	49.79	Pk	32	-24.4	10.1	0	67.49	-	-	74	-6.51	316	286	H
3	* ** 2.39	29.14	RMS	32	-24.4	10.1	.1	46.94	54	-7.06	-	-	316	286	H
4	* ** 2.39	29.51	RMS	32	-24.4	10.1	.1	47.31	54	-6.69	-	-	316	286	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

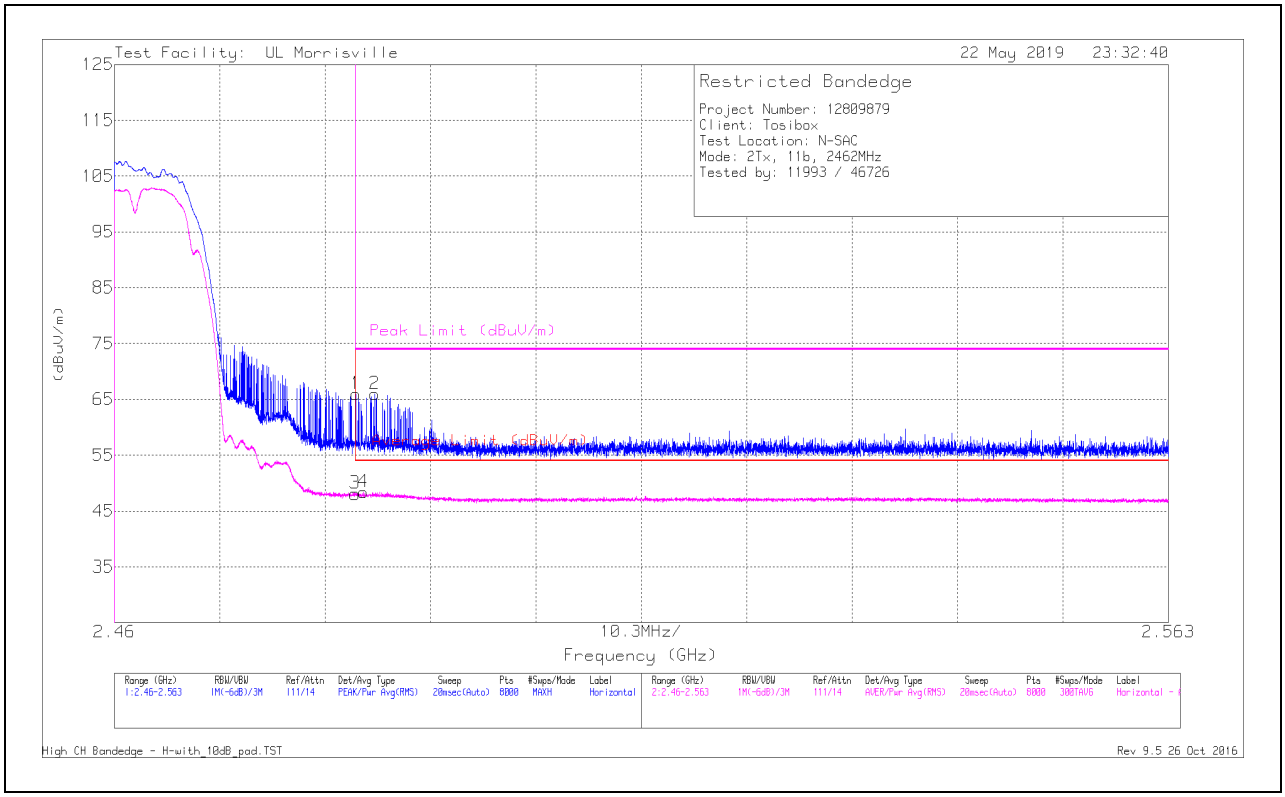


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	39.02	Pk	32	-24.4	10.1	0	56.72	-	-	74	-17.28	4	376	V
2	* ** 2.39	41.15	Pk	32	-24.4	10.1	0	58.85	-	-	74	-15.15	4	376	V
3	* ** 2.39	28.56	RMS	32	-24.4	10.1	.1	46.36	54	-7.64	-	-	4	376	V
4	* ** 2.387	28.99	RMS	32	-24.4	10.1	.1	46.79	54	-7.21	-	-	4	376	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

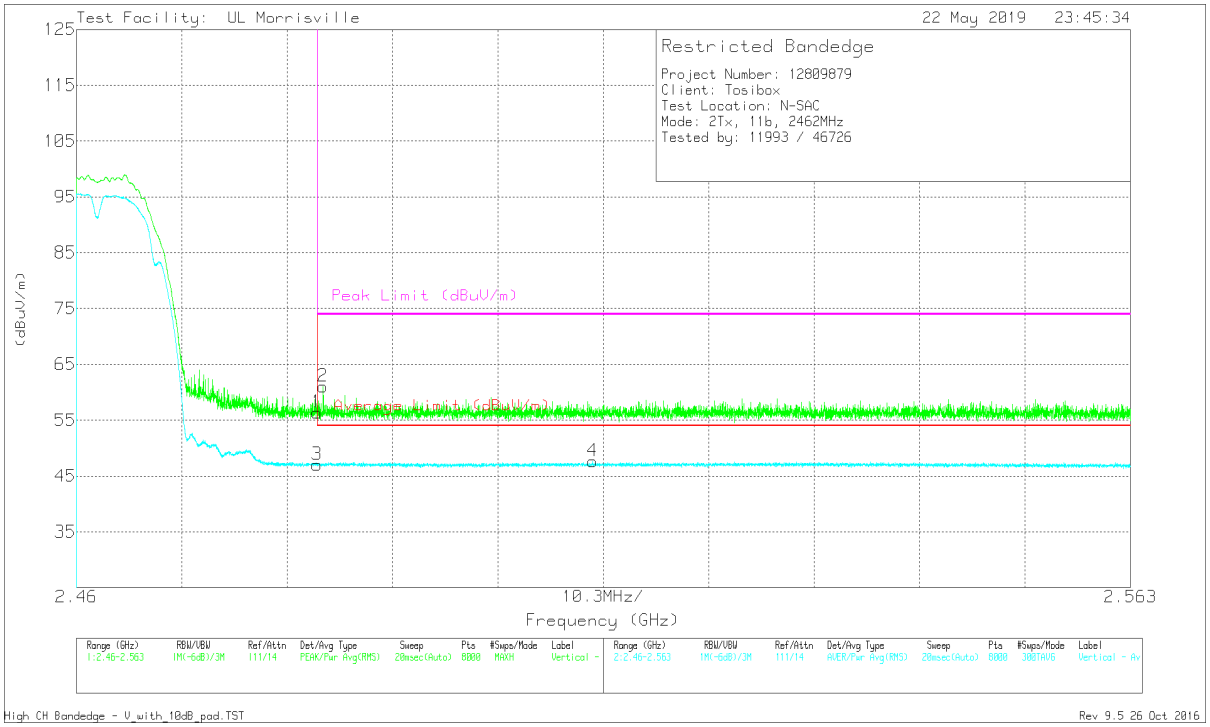
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	47.75	Pk	32.4	-24.3	10.1	0	65.95	-	-	74	-8.05	343	191	H
2	* ** 2.485	47.78	Pk	32.4	-24.3	10.1	0	65.98	-	-	74	-8.02	343	191	H
3	* ** 2.484	29.78	RMS	32.4	-24.3	10.1	.1	48.08	54	-5.92	-	-	343	191	H
4	* ** 2.484	30.07	RMS	32.4	-24.3	10.1	.1	48.37	54	-5.63	-	-	343	191	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

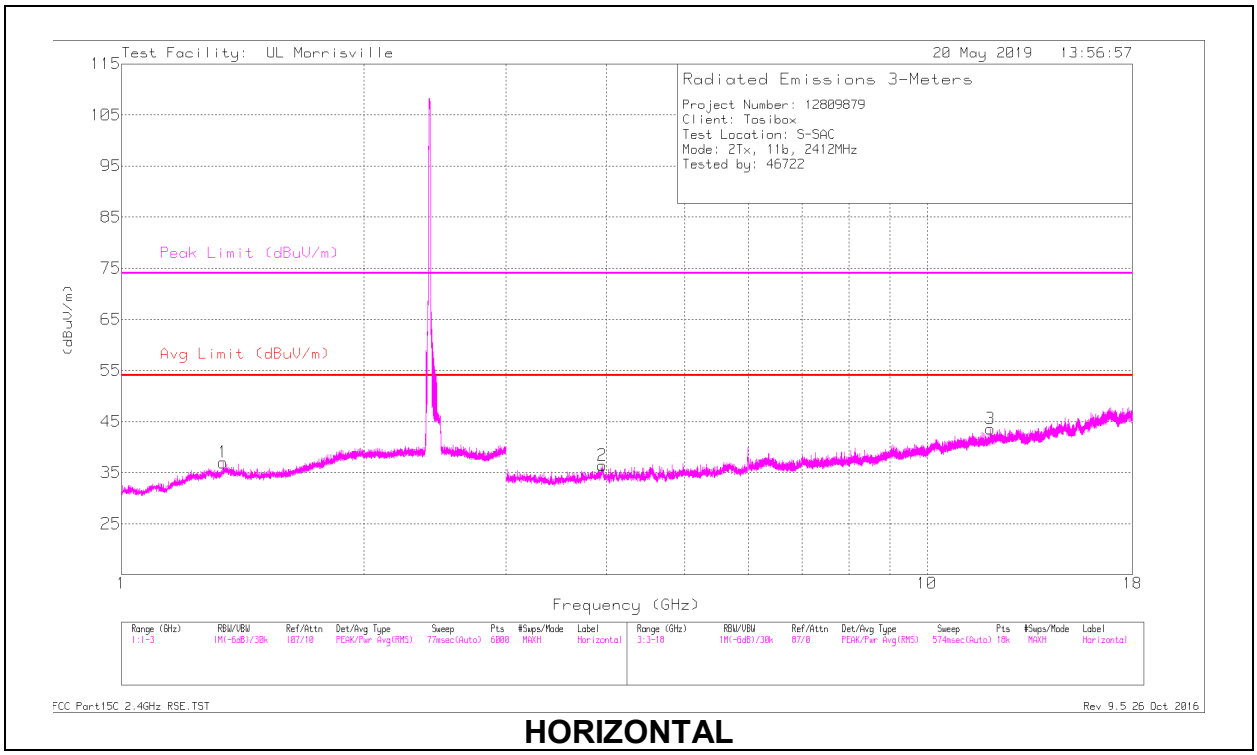


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	38.16	Pk	32.4	-24.3	10.1	0	56.36	-	-	74	-17.64	111	226	V
2	* ** 2.484	42.8	Pk	32.4	-24.3	10.1	0	61	-	-	74	-13	111	226	V
3	* ** 2.484	28.74	RMS	32.4	-24.3	10.1	.1	47.04	54	-6.96	-	-	111	226	V
4	2.51	29.21	RMS	32.5	-24.3	10.1	.1	47.61	54	-6.39	-	-	111	226	V

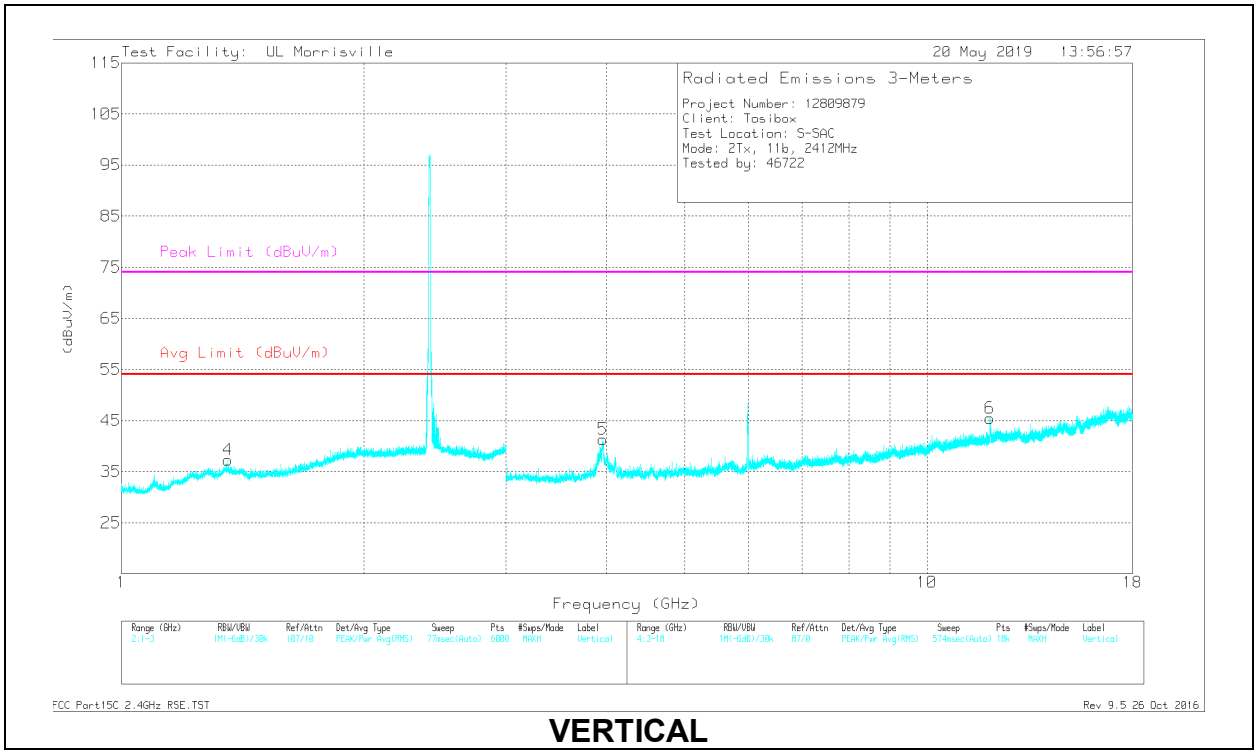
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



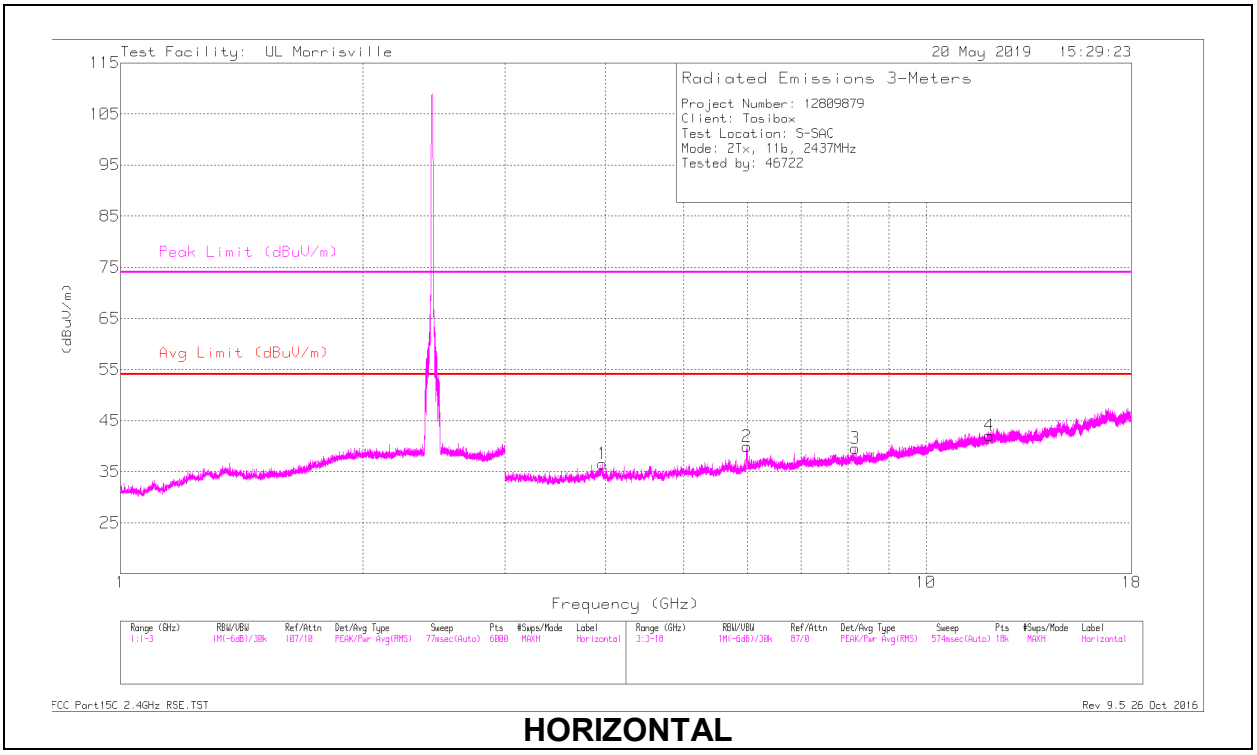
VERTICAL

RADIATED EMISSIONS

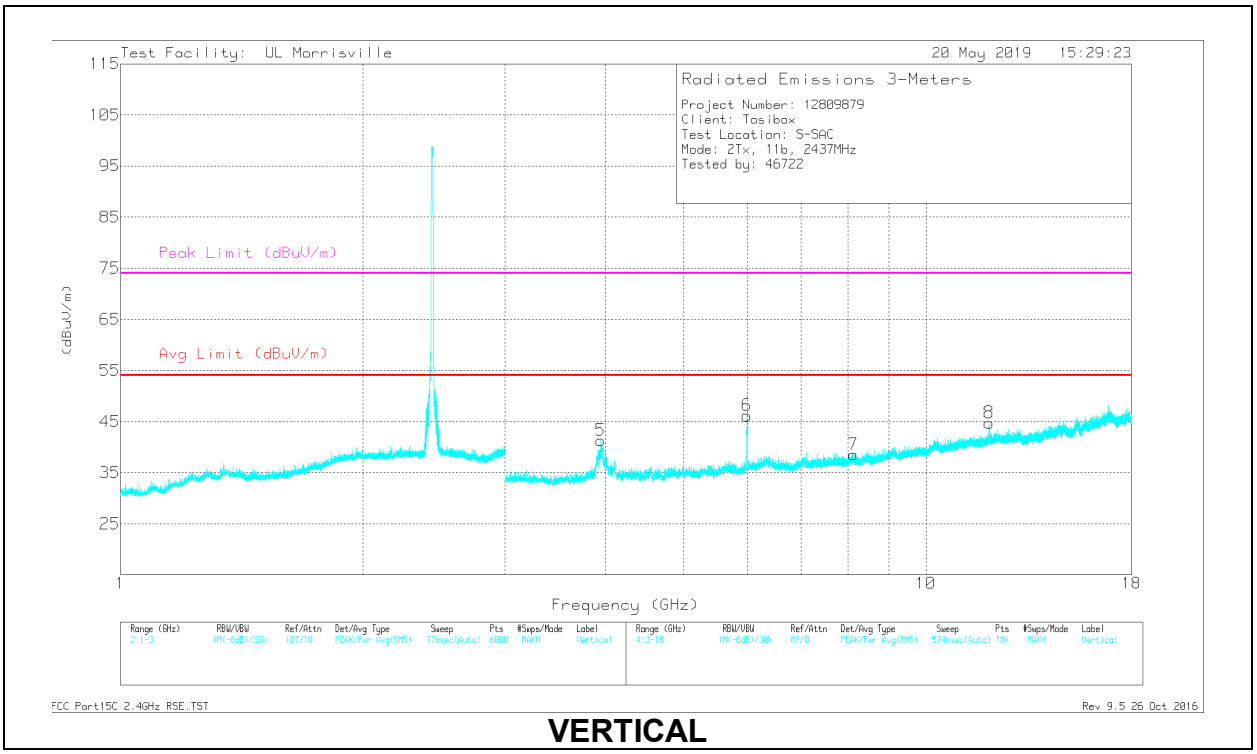
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.336	36.82	PK2	29	-23	0	42.82	-	-	74	-31.18	119	199	H
	* ** 1.338	23.99	MAv1	29.1	-23	.1	30.19	54	-23.81	-	-	119	199	H
4	* ** 1.357	37.21	PK2	29.3	-22.9	0	43.61	-	-	74	-30.39	98	145	V
	* ** 1.354	23.97	MAv1	29.3	-22.9	.1	30.47	54	-23.53	-	-	98	145	V
2	* ** 3.953	41.5	PK2	33.4	-31.6	0	43.3	-	-	74	-30.7	248	385	H
	* ** 3.953	29.61	MAv1	33.4	-31.6	.1	31.51	54	-22.49	-	-	248	385	H
3	* ** 11.992	35.56	PK2	38.7	-23.7	0	50.56	-	-	74	-23.44	100	132	H
	* ** 11.989	22.43	MAv1	38.7	-23.8	.1	37.43	54	-16.57	-	-	100	132	H
5	* ** 3.957	48.45	PK2	33.4	-31.6	0	50.25	-	-	74	-23.75	191	232	V
	* ** 3.957	36.36	MAv1	33.4	-31.6	.1	38.26	54	-15.74	-	-	191	232	V
6	* ** 11.976	37.54	PK2	38.6	-23.8	0	52.34	-	-	74	-21.66	95	108	V
	* ** 11.976	23.62	MAv1	38.7	-23.8	.1	38.62	54	-15.38	-	-	95	108	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.967	42.94	PK2	33.4	-31.5	0	44.84	-	-	74	-29.16	162	357	H
	* ** 3.967	30.14	MAv1	33.4	-31.5	.1	32.14	54	-21.86	-	-	162	357	H
3	* ** 8.169	35.9	PK2	36	-27.1	0	44.8	-	-	74	-29.2	325	107	H
	* ** 8.169	23.99	MAv1	36	-27.1	.1	32.99	54	-21.01	-	-	325	107	H
4	* ** 11.992	34.77	PK2	38.7	-23.7	0	49.77	-	-	74	-24.23	182	264	H
	* ** 11.992	22.15	MAv1	38.7	-23.7	.1	37.25	54	-16.75	-	-	182	264	H
5	* ** 3.949	47.32	PK2	33.4	-31.7	0	49.02	-	-	74	-24.98	188	212	V
	* ** 3.949	34.73	MAv1	33.4	-31.7	.1	36.53	54	-17.47	-	-	188	212	V
7	* ** 8.13	36.35	PK2	36	-27.1	0	45.25	-	-	74	-28.75	80	175	V
	* ** 8.13	24.25	MAv1	36	-27.1	.1	33.25	54	-20.75	-	-	80	175	V
8	* ** 11.983	38.98	PK2	38.7	-23.8	0	53.88	-	-	74	-20.12	97	104	V
	* ** 11.983	24.1	MAv1	38.7	-23.8	.1	39.1	54	-14.9	-	-	97	104	V
6	5.99	39.26	Pk	35	-28.1	0	46.16	-	-	-	-	0-360	199	V
2	5.992	33.03	Pk	35	-28.1	0	39.93	-	-	-	-	0-360	102	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average
Pk - Peak detector

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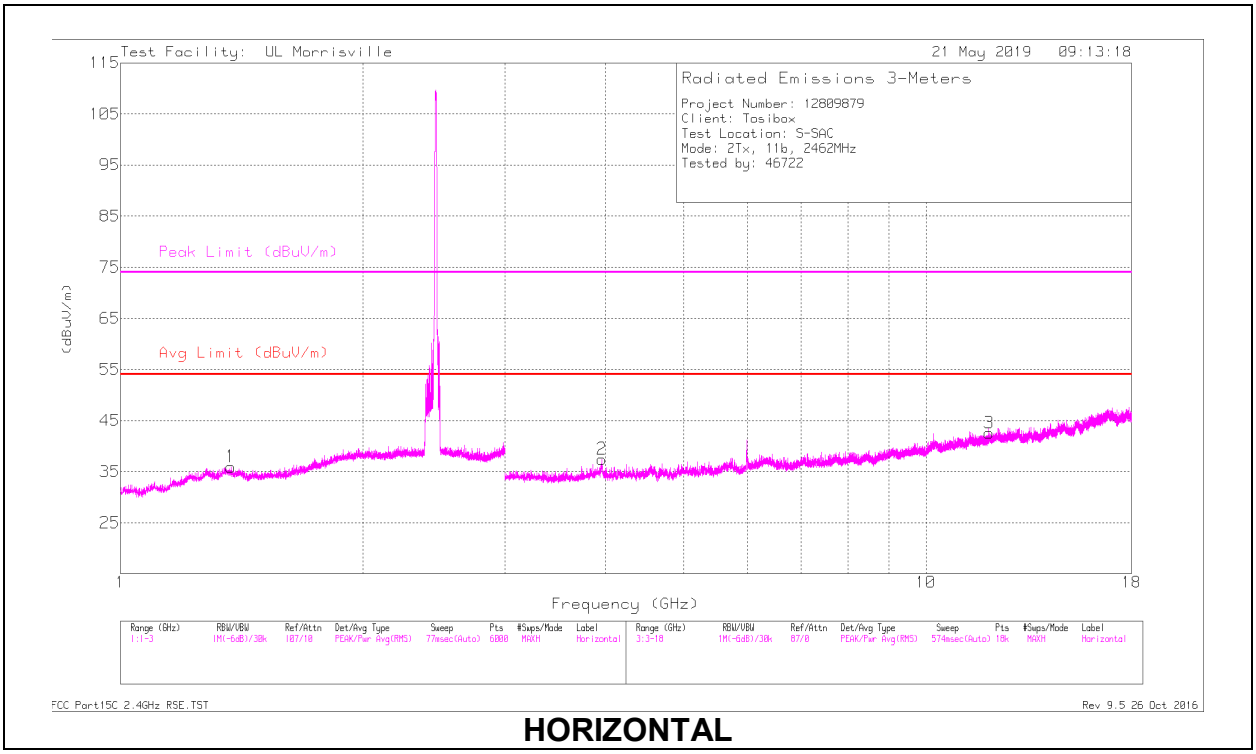
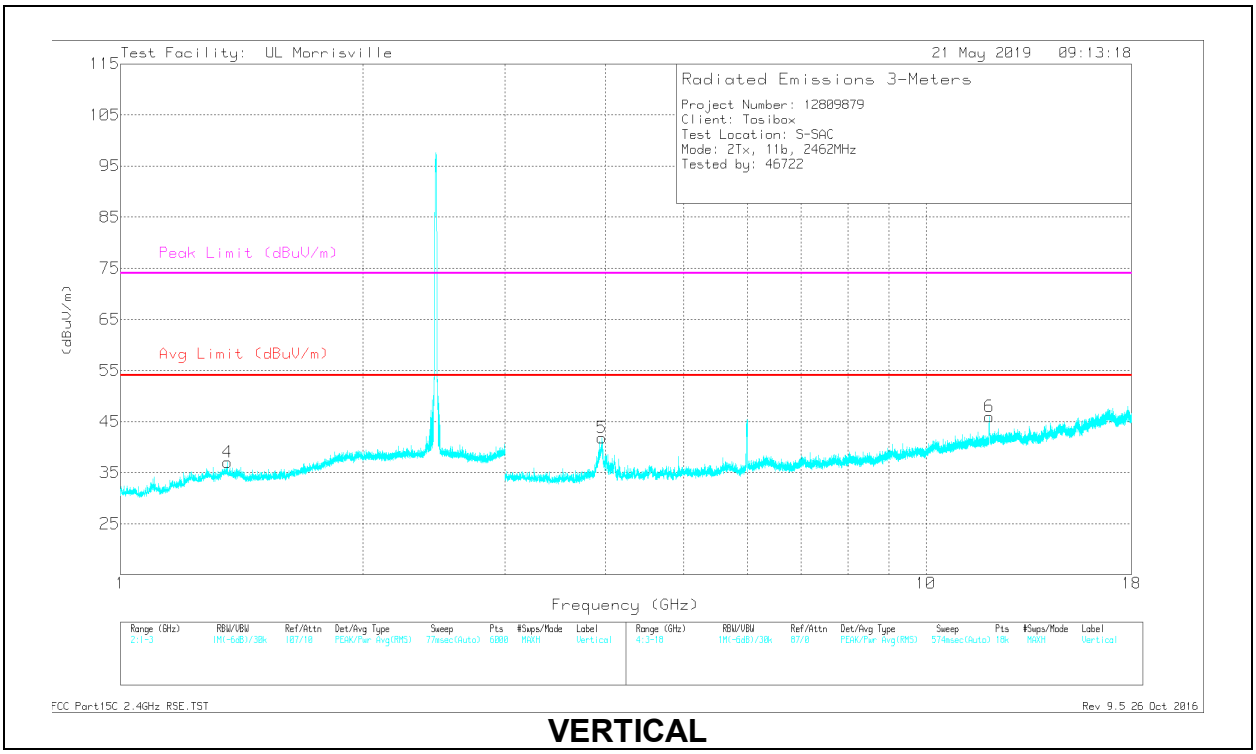
HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.369	35.06	PK2	29.3	-22.8	0	41.56	-	-	74	-32.44	283	114	H
	* ** 1.369	23.26	MAv1	29.3	-22.8	.1	29.86	54	-24.14	-	-	283	114	H
4	* ** 1.356	36.15	PK2	29.3	-22.9	0	42.55	-	-	74	-31.45	114	123	V
	* ** 1.357	23.66	MAv1	29.3	-22.9	.1	30.16	54	-23.84	-	-	114	123	V
2	* ** 3.96	42.04	PK2	33.4	-31.6	0	43.84	-	-	74	-30.16	77	175	H
	* ** 3.96	30.65	MAv1	33.4	-31.6	.1	32.55	54	-21.45	-	-	77	175	H
3	* ** 11.98	35.75	PK2	38.7	-23.8	0	50.65	-	-	74	-23.35	96	224	H
	* ** 11.978	22.44	MAv1	38.7	-23.8	.1	37.44	54	-16.56	-	-	96	224	H
5	* ** 3.957	46.88	PK2	33.4	-31.6	0	48.68	-	-	74	-25.32	196	179	V
	* ** 3.958	35.54	MAv1	33.4	-31.6	.1	37.44	54	-16.56	-	-	196	179	V
6	* ** 11.983	38.34	PK2	38.7	-23.8	0	53.24	-	-	74	-20.76	112	268	V
	* ** 11.983	24.5	MAv1	38.7	-23.8	.1	39.5	54	-14.5	-	-	112	268	V

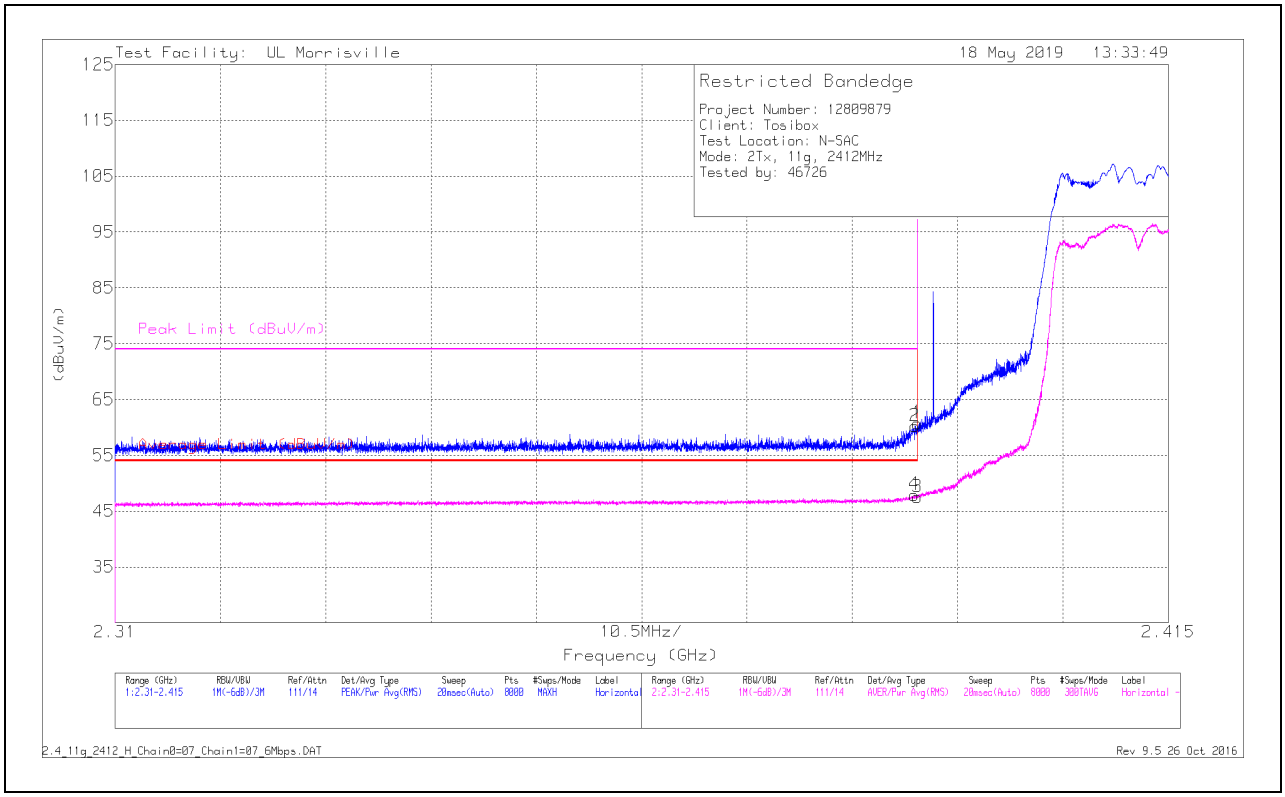
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average

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

2TX Chain 0 + Chain 1 CDD MODE

BANDEDGE (LOW CHANNEL, CH 1)

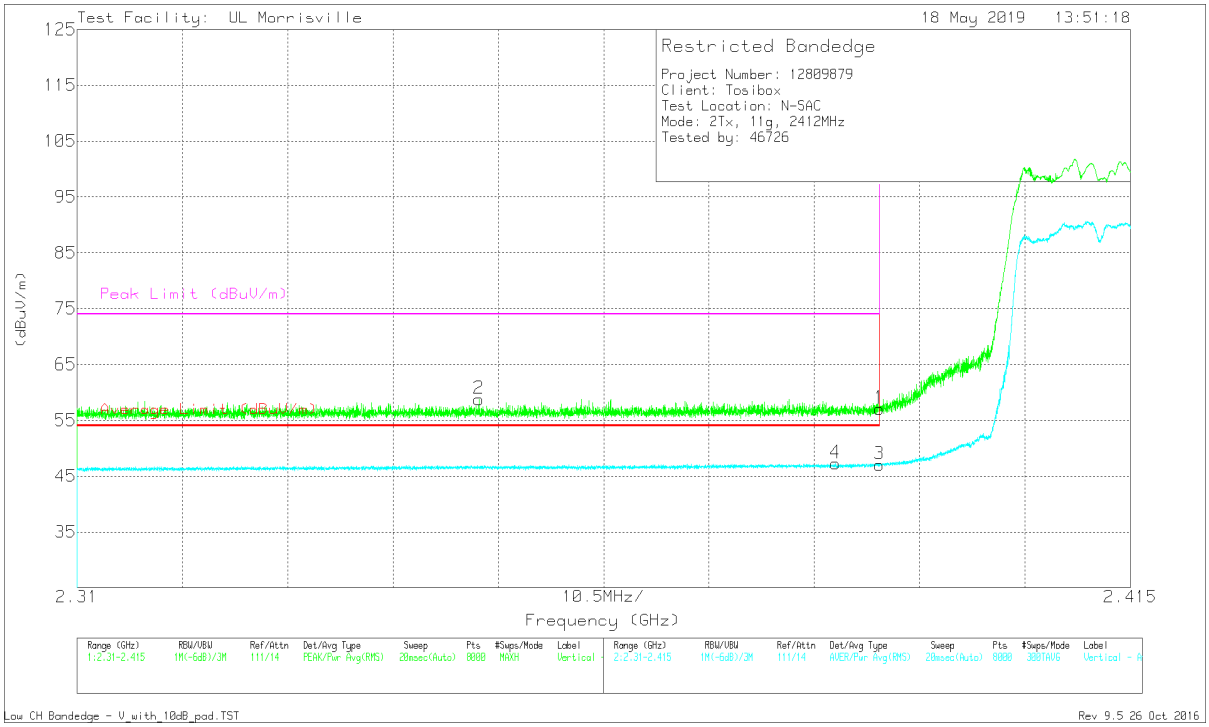
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	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	43.03	Pk	32	-24.4	10.1	0	60.73	-	-	74	-13.27	328	224	H
2	* ** 2.39	42.51	Pk	32	-24.4	10.1	0	60.21	-	-	74	-13.79	328	224	H
3	* ** 2.39	29.21	RMS	32	-24.4	10.1	.58	47.49	54	-6.51	-	-	328	224	H
4	* ** 2.39	29.64	RMS	32	-24.4	10.1	.58	47.92	54	-6.08	-	-	328	224	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

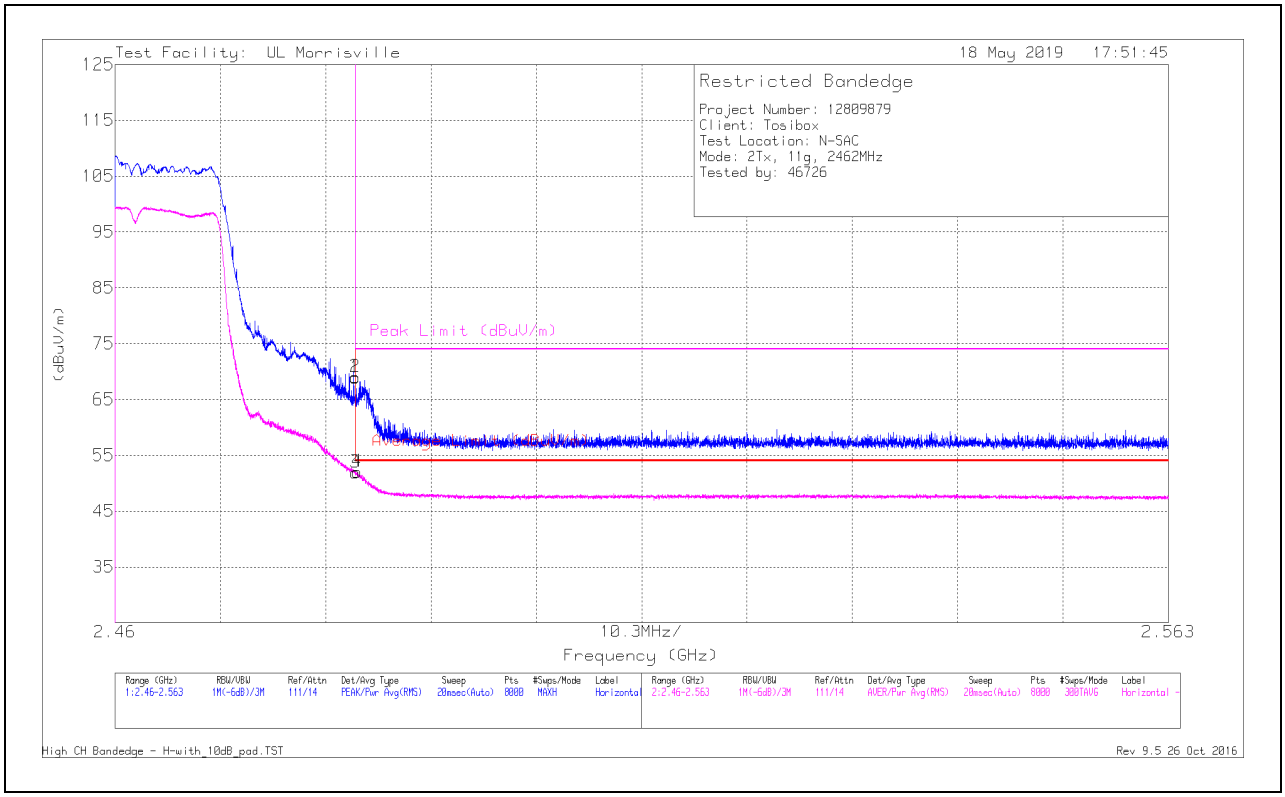


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	39.37	Pk	32	-24.4	10.1	0	57.07	-	-	74	-16.93	126	254	V
2	* ** 2.35	41.32	Pk	31.8	-24.4	10.1	0	58.82	-	-	74	-15.18	126	254	V
3	* ** 2.39	28.81	RMS	32	-24.4	10.1	.58	47.09	54	-6.91	-	-	126	254	V
4	* ** 2.386	29.01	RMS	32	-24.4	10.1	.58	47.29	54	-6.71	-	-	126	254	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

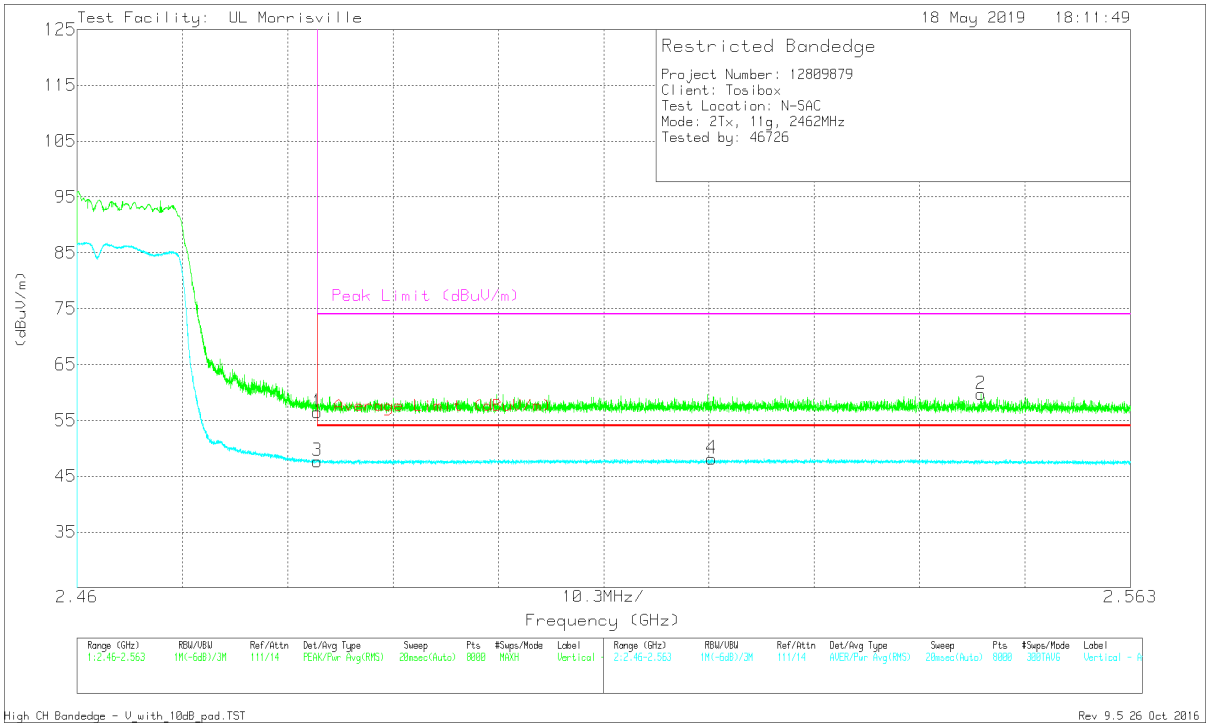
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	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	50.69	Pk	32.4	-24.3	10.1	0	68.89	-	-	74	-5.11	326	173	H
2	* ** 2.484	50.79	Pk	32.4	-24.3	10.1	0	68.99	-	-	74	-5.01	326	173	H
3	* ** 2.484	33.12	RMS	32.4	-24.3	10.1	.58	51.9	54	-2.1	-	-	326	173	H
4	* ** 2.484	33.23	RMS	32.4	-24.3	10.1	.58	52.01	54	-1.99	-	-	326	173	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

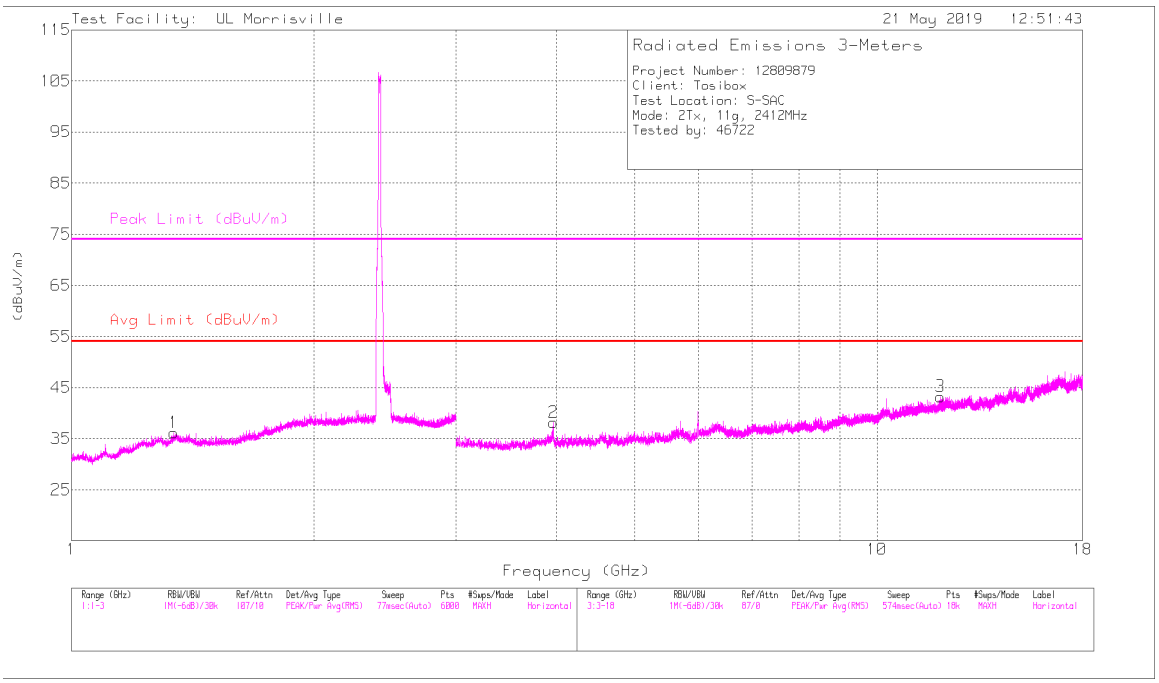


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	38.25	Pk	32.4	-24.3	10.1	0	56.45	-	-	74	-17.55	63	262	V
3	* ** 2.484	28.92	RMS	32.4	-24.3	10.1	.58	47.7	54	-6.3	-	-	63	262	V
4	2.522	29.28	RMS	32.5	-24.3	10.1	.58	48.16	54	-5.84	-	-	63	262	V
2	2.548	41.43	Pk	32.5	-24.3	10.1	0	59.73	-	-	74	-14.27	63	262	V

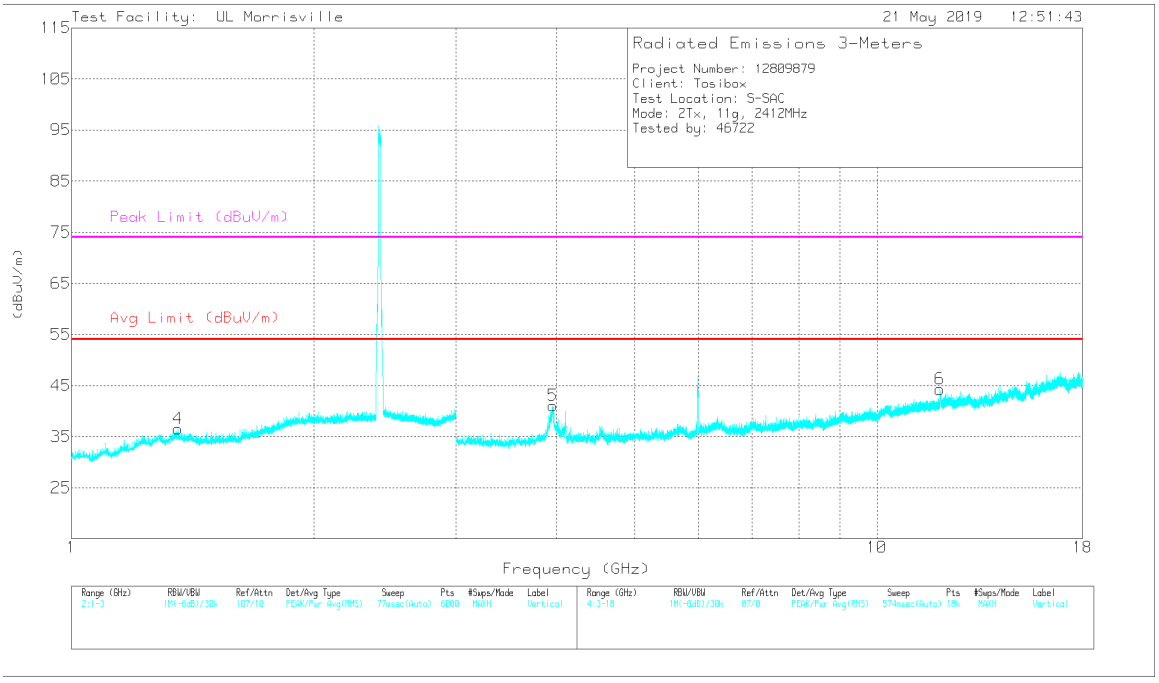
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.338	36.01	PK2	29.1	-23	0	42.11	-	-	74	-31.89	37	231	H
	* ** 1.342	23.91	MAv1	29.1	-22.9	.58	30.69	54	-23.31	-	-	37	231	H
4	* ** 1.355	35.26	PK2	29.3	-22.9	0	41.66	-	-	74	-32.34	348	262	V
	* ** 1.354	23.77	MAv1	29.3	-22.9	.58	30.75	54	-23.25	-	-	348	262	V
2	* ** 3.963	41.31	PK2	33.4	-31.5	0	43.21	-	-	74	-30.79	65	110	H
	* ** 3.962	30.17	MAv1	33.4	-31.5	.58	32.65	54	-21.35	-	-	65	110	H
3	* ** 11.99	36.92	PK2	38.7	-23.8	0	51.82	-	-	74	-22.18	195	238	H
	* ** 11.991	23.31	MAv1	38.7	-23.8	.58	38.79	54	-15.21	-	-	195	238	H
5	* ** 3.959	48.08	PK2	33.4	-31.6	0	49.88	-	-	74	-24.12	187	356	V
	* ** 3.957	36.36	MAv1	33.4	-31.6	.58	38.74	54	-15.26	-	-	187	356	V
6	* ** 11.977	37.59	PK2	38.7	-23.8	0	52.49	-	-	74	-21.51	161	250	V
	* ** 11.978	23.78	MAv1	38.7	-23.8	.58	39.26	54	-14.74	-	-	161	250	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average

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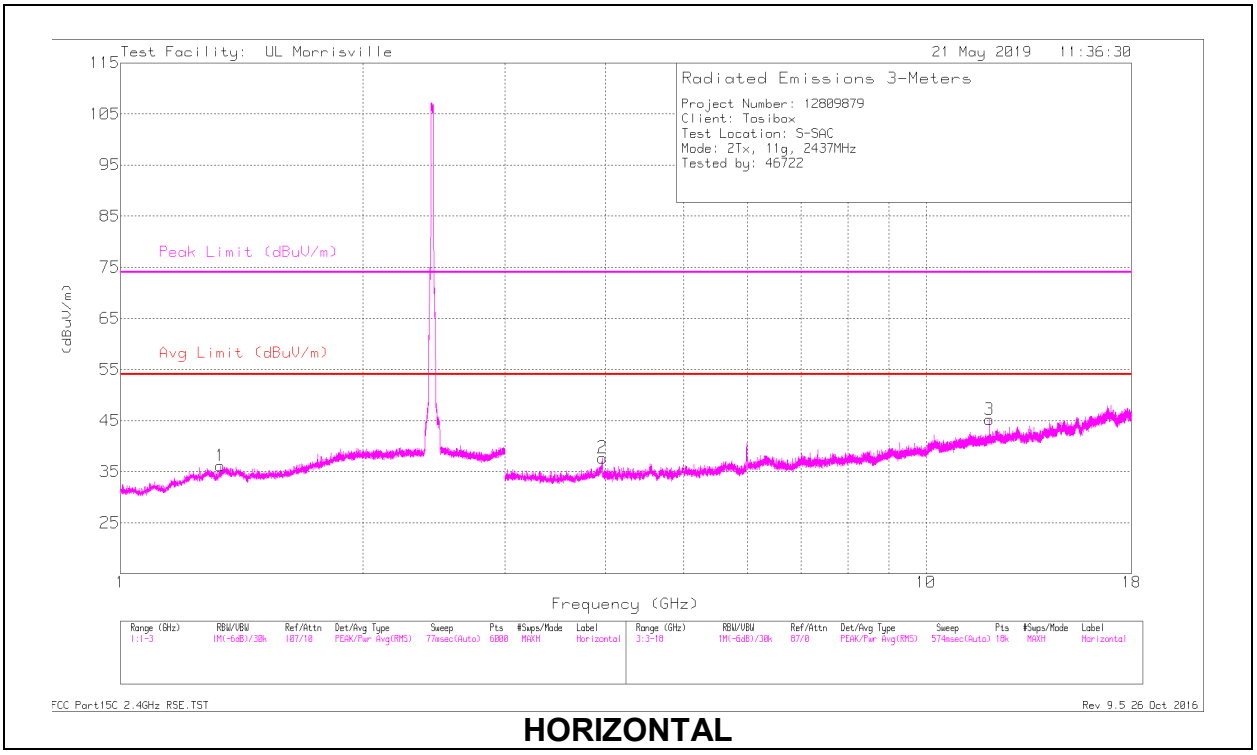
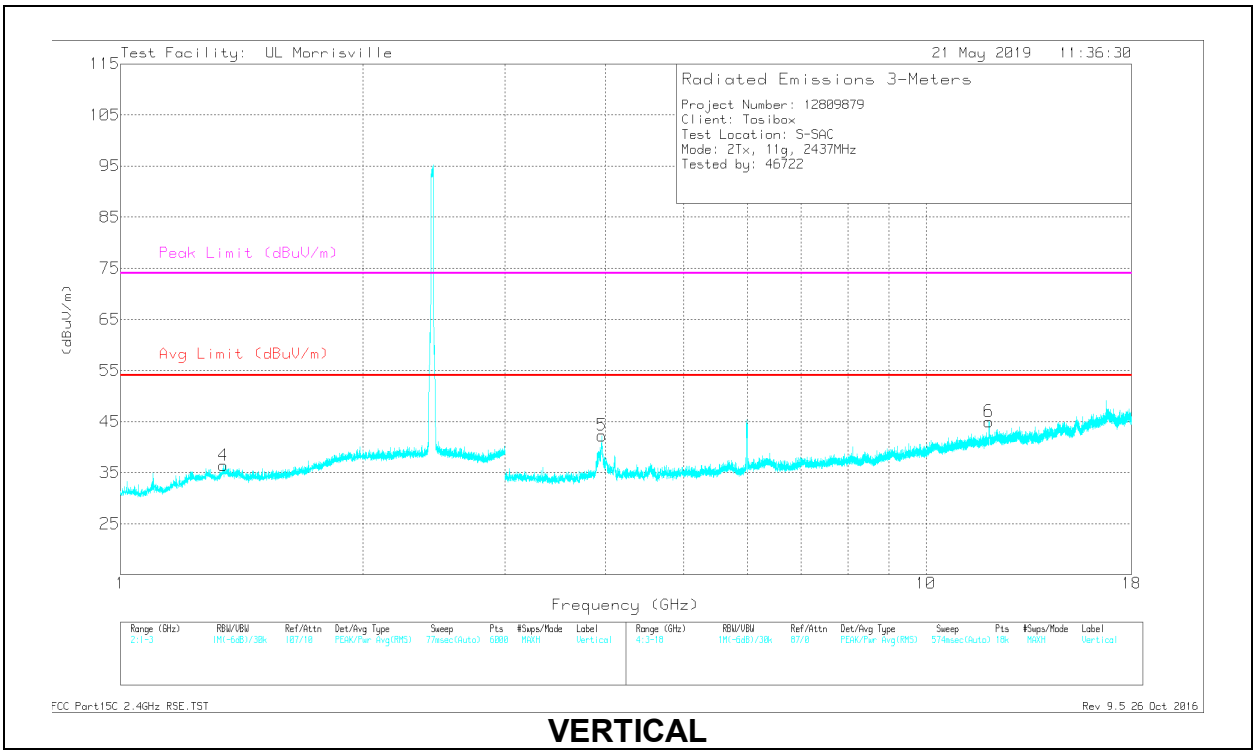
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.329	35.65	PK2	28.9	-23	0	41.55	-	-	74	-32.45	104	189	H
	* ** 1.33	23.55	MAv1	28.9	-23	.58	30.03	54	-23.97	-	-	104	189	H
4	* ** 1.342	37.3	PK2	29.1	-22.9	0	43.5	-	-	74	-30.5	205	230	V
	* ** 1.344	23.92	MAv1	29.1	-22.9	.58	30.7	54	-23.3	-	-	205	230	V
2	* ** 3.964	43.35	PK2	33.4	-31.5	0	45.25	-	-	74	-28.75	142	327	H
	* ** 3.964	31.58	MAv1	33.4	-31.5	.58	34.06	54	-19.94	-	-	142	327	H
3	* ** 11.989	35.25	PK2	38.7	-23.8	0	50.15	-	-	74	-23.85	198	173	H
	* ** 11.989	22.66	MAv1	38.7	-23.8	.58	38.14	54	-15.86	-	-	198	173	H
5	* ** 3.958	48.1	PK2	33.4	-31.6	0	49.9	-	-	74	-24.1	189	366	V
	* ** 3.959	35.71	MAv1	33.4	-31.6	.58	38.09	54	-15.91	-	-	189	366	V
6	* ** 11.975	42.13	PK2	38.6	-23.8	0	56.93	-	-	74	-17.07	116	268	V
	* ** 11.977	26.99	MAv1	38.7	-23.8	.58	42.47	54	-11.53	-	-	116	268	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average

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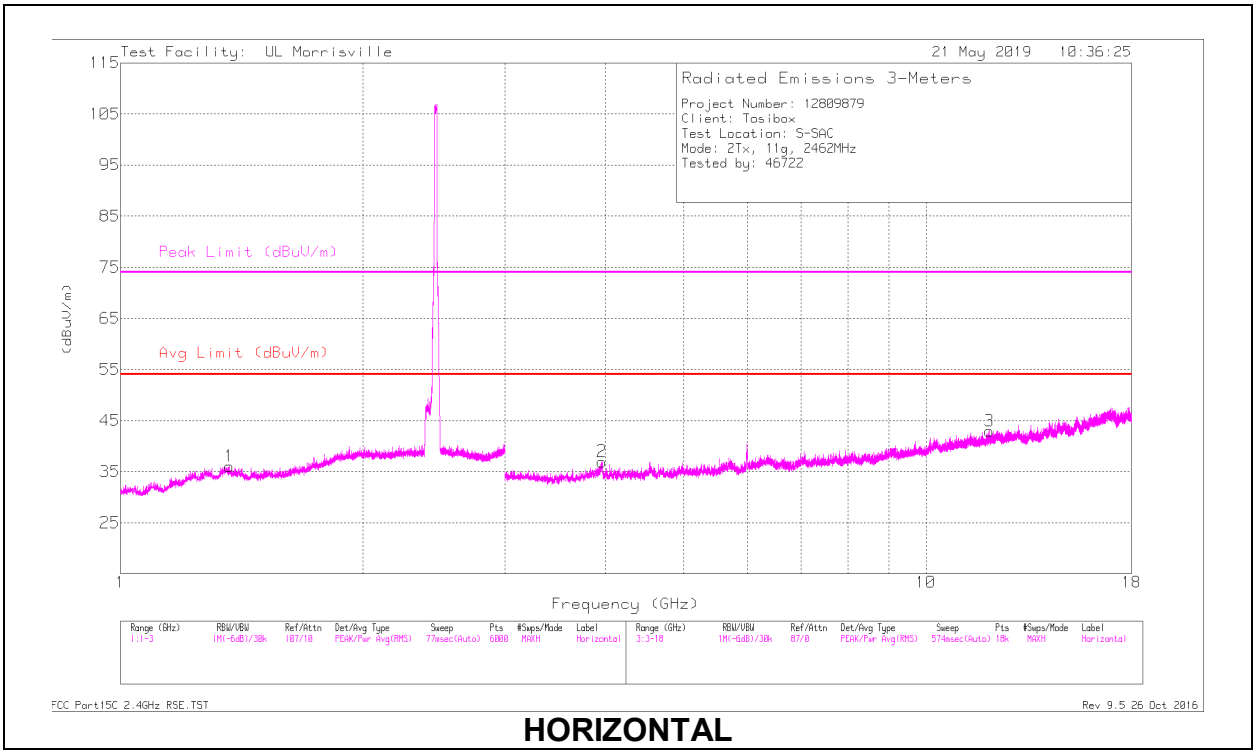
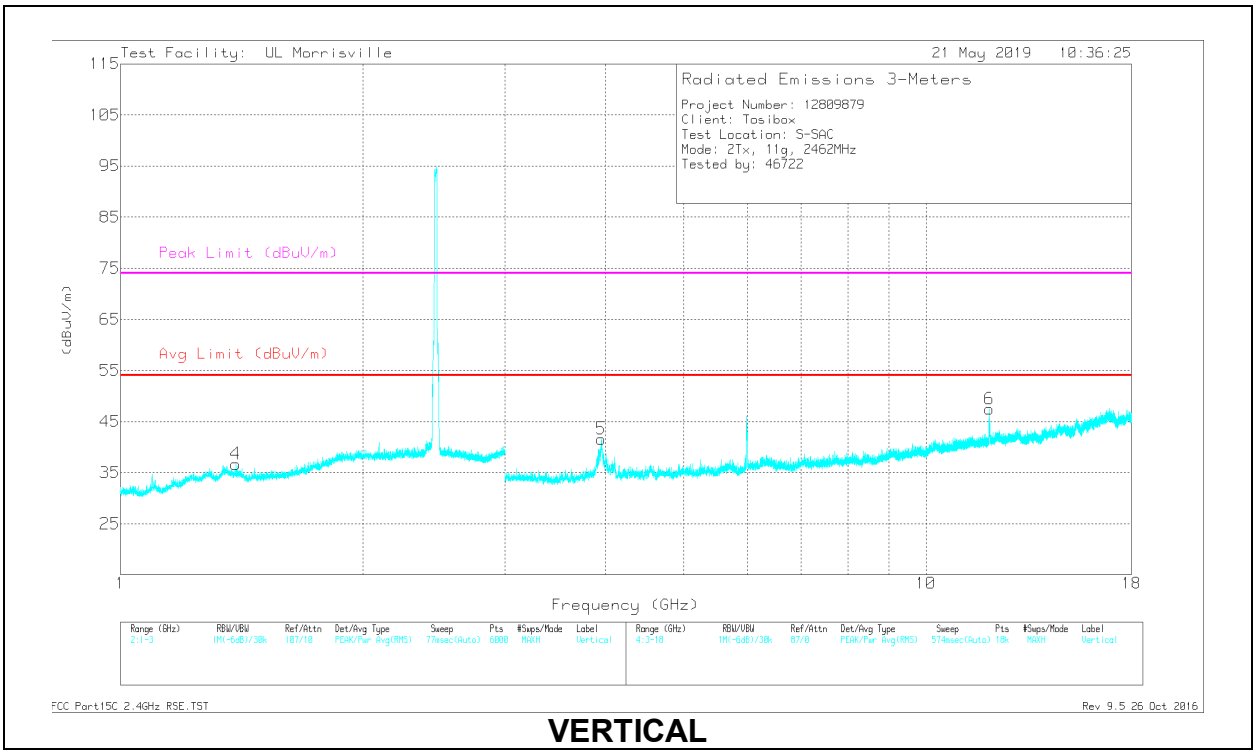
HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.367	35.99	PK2	29.3	-22.9	0	42.39	-	-	74	-31.61	53	170	H
	* ** 1.364	23.43	MAv1	29.3	-22.9	.58	30.41	54	-23.59	-	-	53	170	H
4	* ** 1.389	38.36	PK2	28.9	-22.7	0	44.56	-	-	74	-29.44	104	180	V
	* ** 1.39	23.52	MAv1	28.9	-22.7	.58	30.3	54	-23.7	-	-	104	180	V
2	* ** 3.955	44.76	PK2	33.4	-31.6	0	46.56	-	-	74	-27.44	144	329	H
	* ** 3.957	33.34	MAv1	33.4	-31.6	.58	35.72	54	-18.28	-	-	144	329	H
3	* ** 11.984	36.24	PK2	38.7	-23.8	0	51.14	-	-	74	-22.86	255	376	H
	* ** 11.986	23.17	MAv1	38.7	-23.8	.58	38.65	54	-15.35	-	-	255	376	H
5	* ** 3.952	47.6	PK2	33.4	-31.6	0	49.4	-	-	74	-24.6	192	205	V
	* ** 3.953	36.01	MAv1	33.4	-31.6	.58	38.39	54	-15.61	-	-	192	205	V
6	* ** 11.997	38.21	PK2	38.7	-23.7	0	53.21	-	-	74	-20.79	205	351	V
	* ** 11.996	24.06	MAv1	38.7	-23.7	.58	39.64	54	-14.36	-	-	205	351	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average

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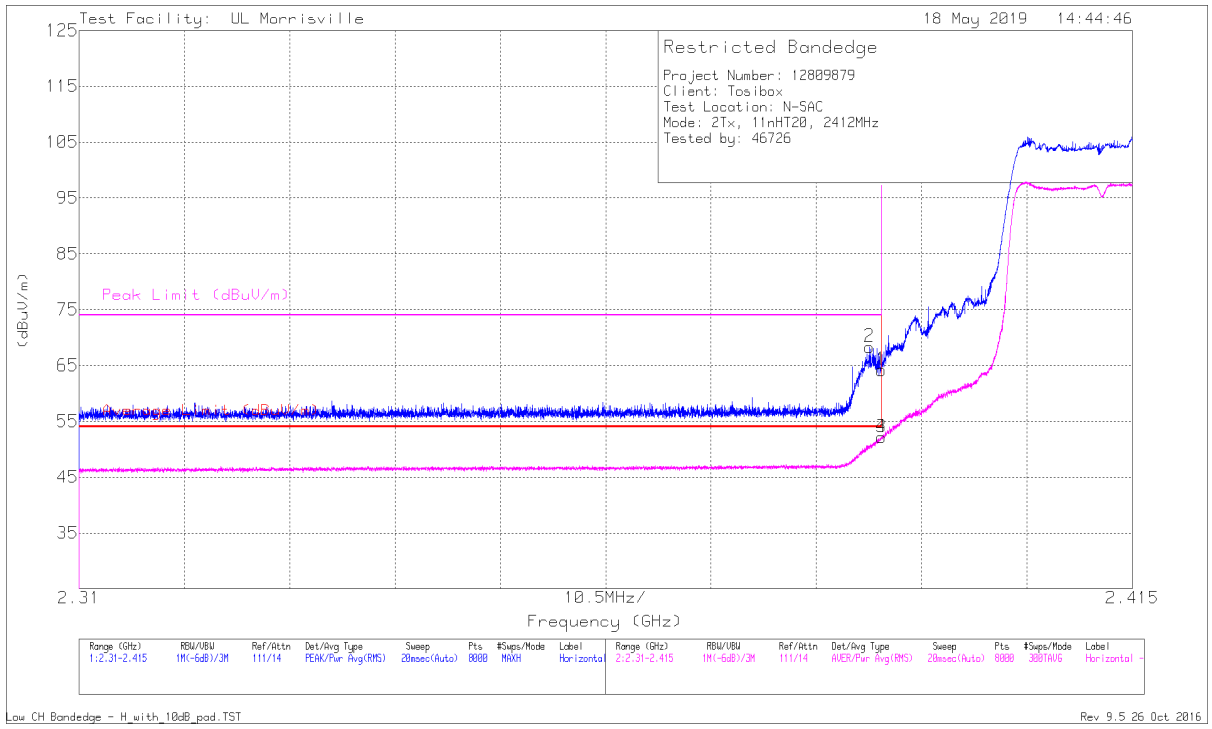
9.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

2TX Chain 0 + Chain 1 CDD MODE

BANDEDGE (LOW CHANNEL, CH 1)

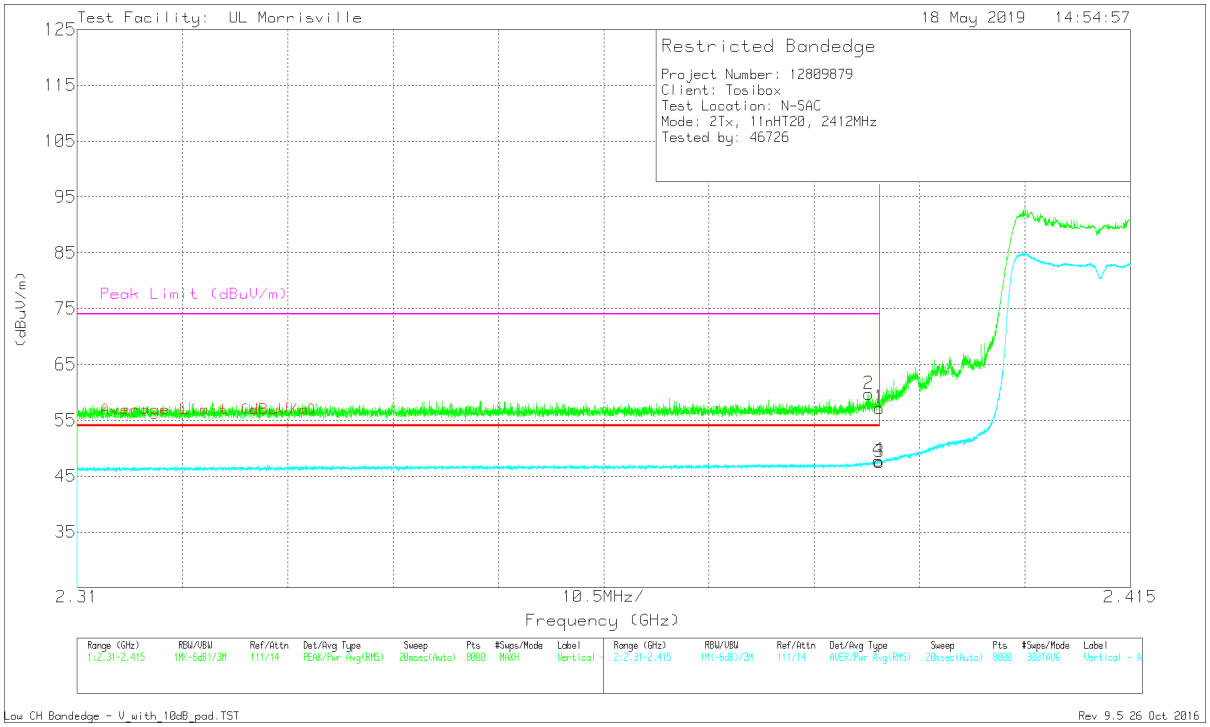
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	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	46.51	Pk	32	-24.4	10.1	0	64.21	-	-	74	-9.79	309	203	H
2	* ** 2.389	50.62	Pk	32	-24.4	10.1	0	68.32	-	-	74	-5.68	309	203	H
3	* ** 2.39	33.86	RMS	32	-24.4	10.1	.6	52.16	54	-1.84	-	-	309	203	H
4	* ** 2.39	33.87	RMS	32	-24.4	10.1	.6	52.17	54	-1.83	-	-	309	203	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

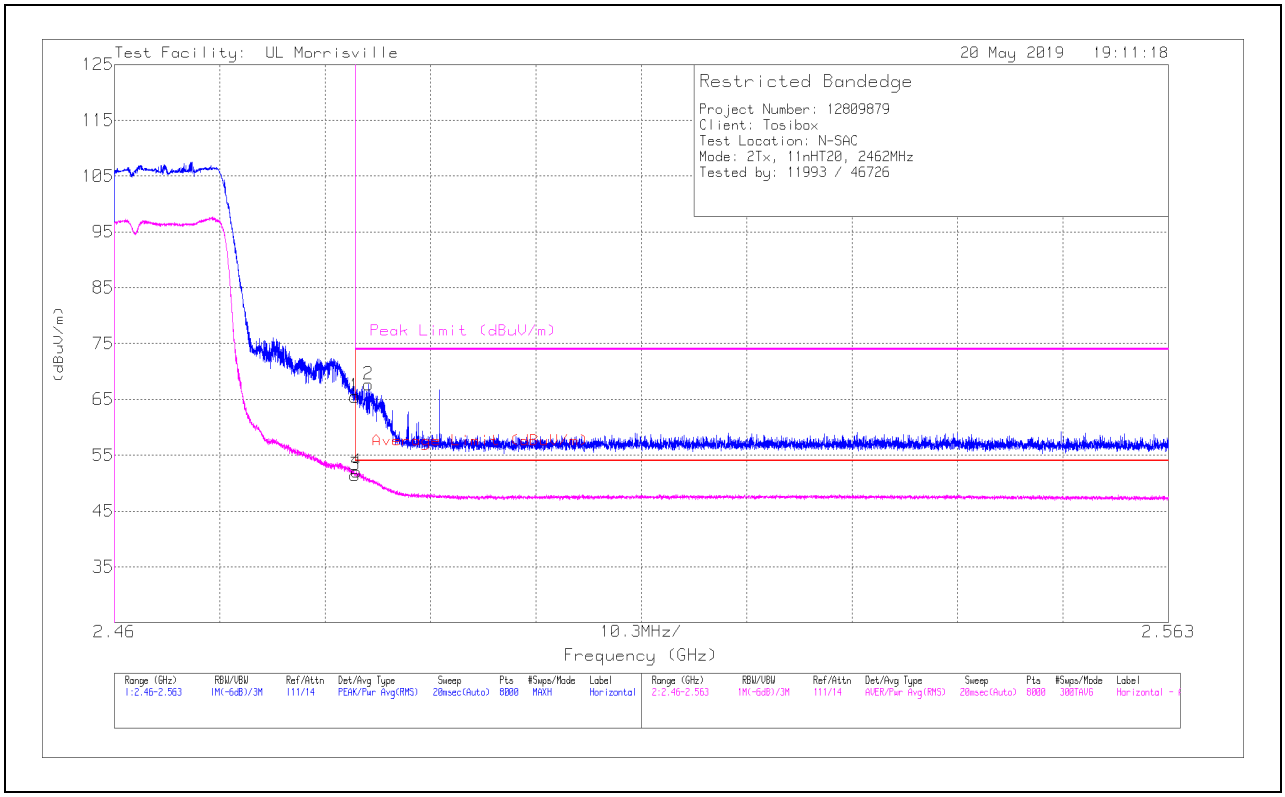


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	39.52	Pk	32	-24.4	10.1	0	57.22	-	-	74	-16.78	5	123	V
2	* ** 2.389	42.04	Pk	32	-24.4	10.1	0	59.74	-	-	74	-14.26	5	123	V
3	* ** 2.39	29.22	RMS	32	-24.4	10.1	.6	47.52	54	-6.48	-	-	5	123	V
4	* ** 2.39	29.5	RMS	32	-24.4	10.1	.6	47.8	54	-6.2	-	-	5	123	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

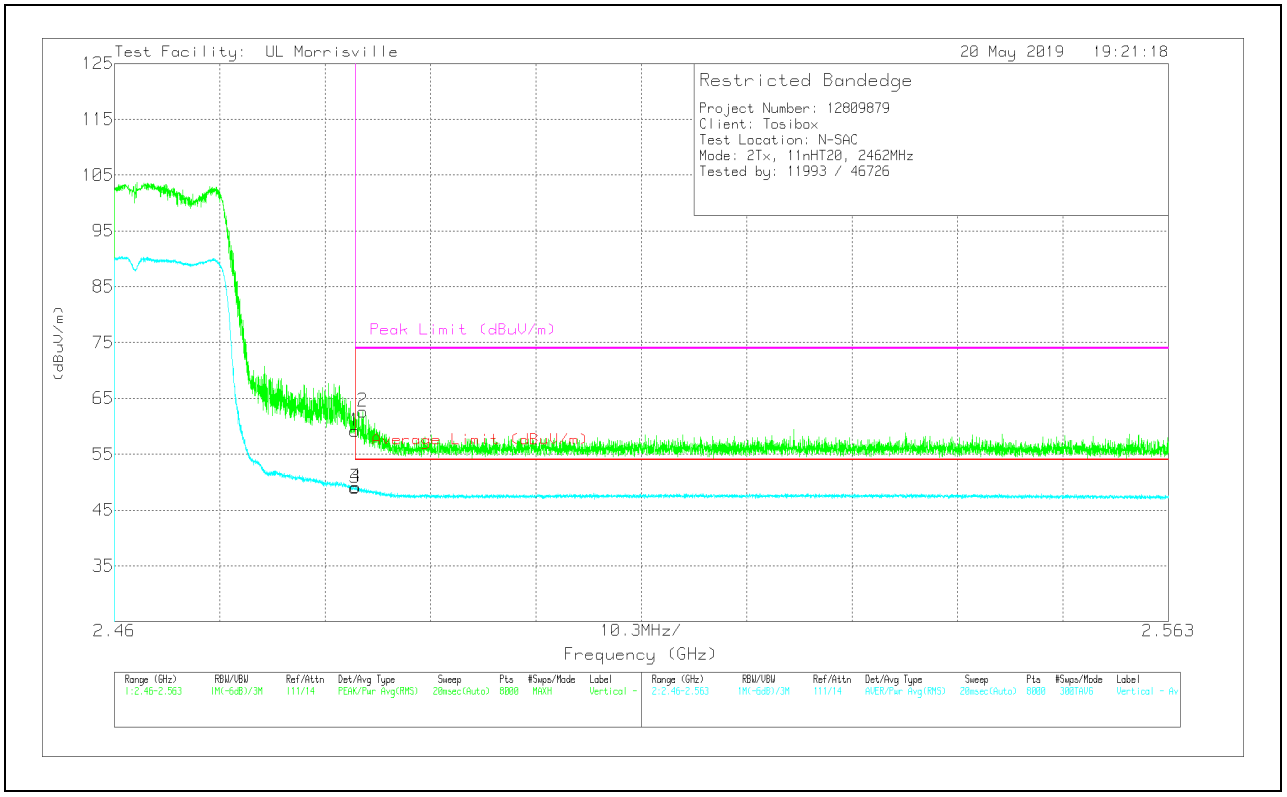
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	47.33	Pk	32.4	-24.3	10.1	0	65.53	-	-	74	-8.47	310	385	H
2	* ** 2.485	49.46	Pk	32.4	-24.3	10.1	0	67.66	-	-	74	-6.34	310	385	H
3	* ** 2.484	32.67	RMS	32.4	-24.3	10.1	.6	51.47	54	-2.53	-	-	310	385	H
4	* ** 2.484	33.25	RMS	32.4	-24.3	10.1	.6	52.05	54	-1.95	-	-	310	385	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

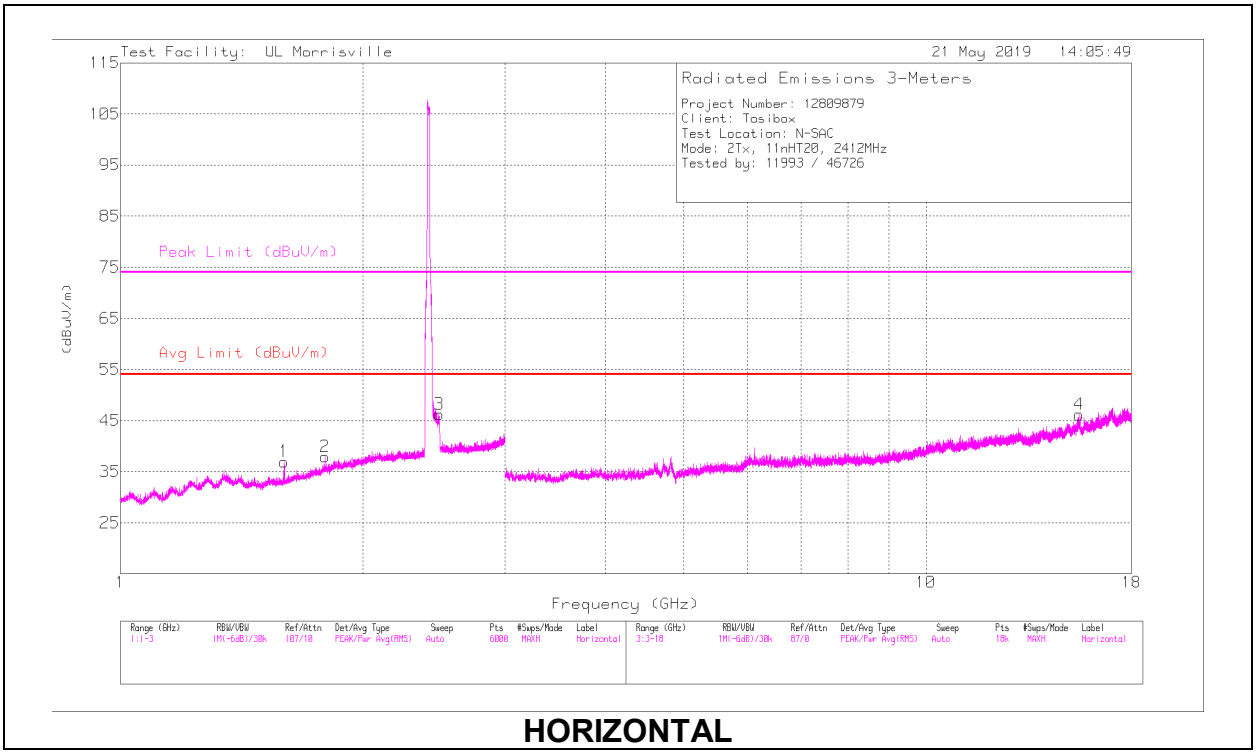


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	40.98	Pk	32.4	-24.3	10.1	0	59.18	-	-	74	-14.82	260	349	V
2	* ** 2.484	44.49	Pk	32.4	-24.3	10.1	0	62.69	-	-	74	-11.31	260	349	V
3	* ** 2.484	30.24	RMS	32.4	-24.3	10.1	.6	49.04	54	-4.96	-	-	260	349	V
4	* ** 2.484	30.35	RMS	32.4	-24.3	10.1	.6	49.15	54	-4.85	-	-	260	349	V

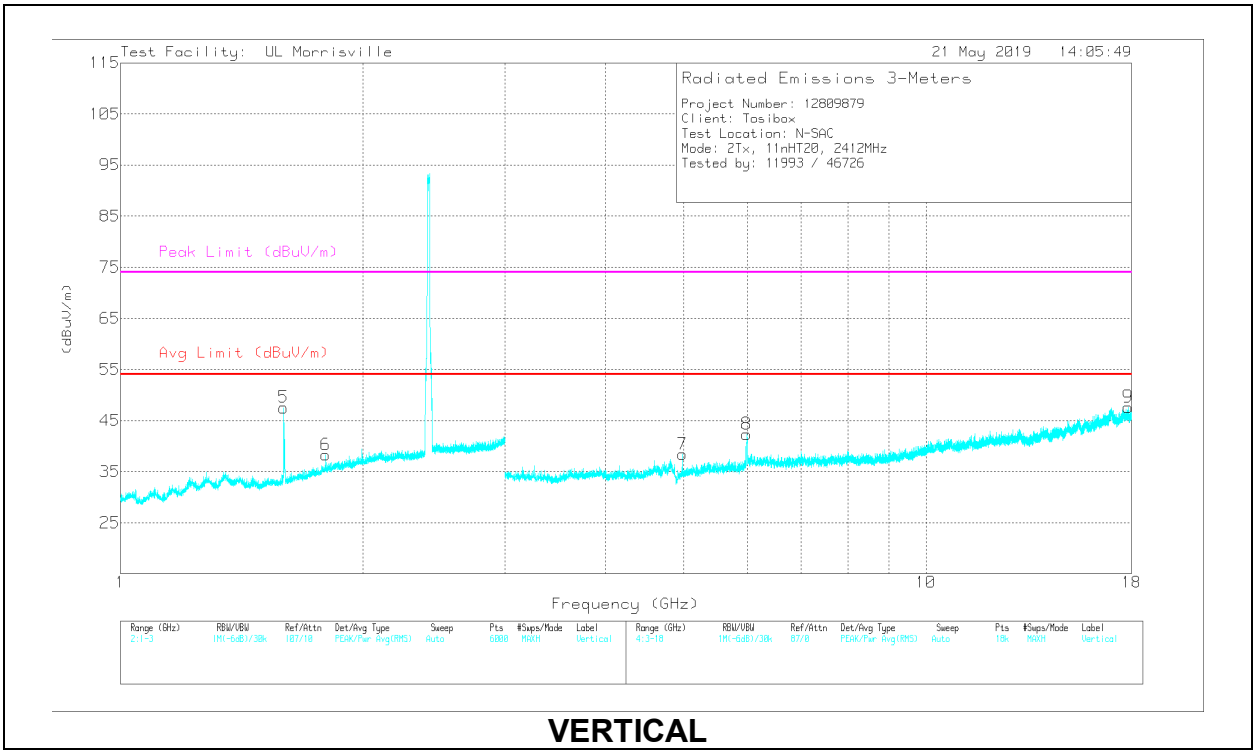
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.598	42.56	PK2	28.1	-24.6	0	46.06	-	-	74	-27.94	82	223	H
	* ** 1.598	24.68	MAv1	28.1	-24.6	.6	28.78	54	-25.22	-	-	82	223	H
3	* ** 2.484	44.63	PK2	32.4	-24.3	0	52.73	-	-	74	-21.27	318	154	H
	* ** 2.484	32.57	MAv1	32.4	-24.3	.6	41.27	54	-12.73	-	-	318	154	H
5	* ** 1.594	49.02	PK2	28.1	-24.6	0	52.52	-	-	74	-21.48	150	102	V
	* ** 1.593	26.71	MAv1	28.1	-24.6	.6	30.81	54	-23.19	-	-	150	102	V
4	* ** 15.497	35.02	PK2	40.2	-23.7	0	51.52	-	-	74	-22.48	88	175	H
	* ** 15.497	23.05	MAv1	40.2	-23.7	.6	40.15	54	-13.85	-	-	88	175	H
7	* ** 4.988	44.43	PK2	34	-32.6	0	45.83	-	-	74	-28.17	185	184	V
	* ** 4.986	28.87	MAv1	34	-32.6	.6	30.87	54	-23.13	-	-	185	184	V
9	* ** 17.827	35.39	PK2	41.1	-22.1	0	54.39	-	-	74	-19.61	195	295	V
	* ** 17.826	22.92	MAv1	41.1	-22.1	.6	42.52	54	-11.48	-	-	195	295	V
2	1.795	32.12	Pk	30.2	-24.4	0	37.92	-	-	-	-	0-360	102	H
6	1.796	32.52	Pk	30.2	-24.4	0	38.32	-	-	-	-	0-360	199	V
8	5.989	37.45	Pk	35	-30.1	0	42.35	-	-	-	-	0-360	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average
Pk - Peak detector

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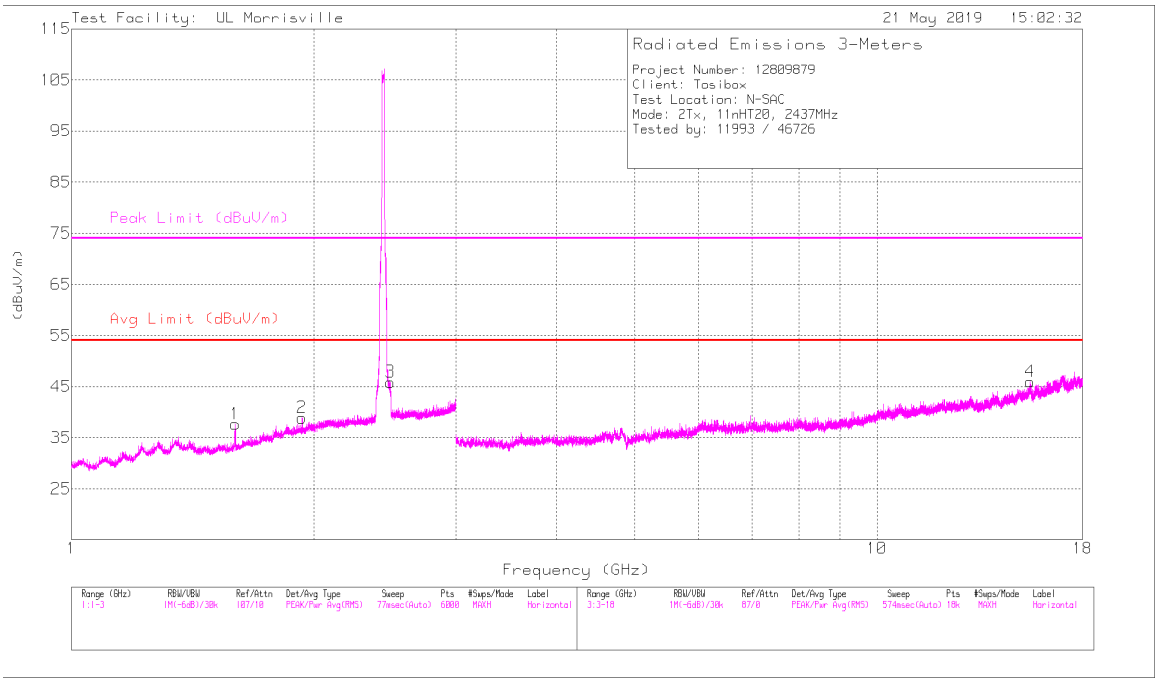
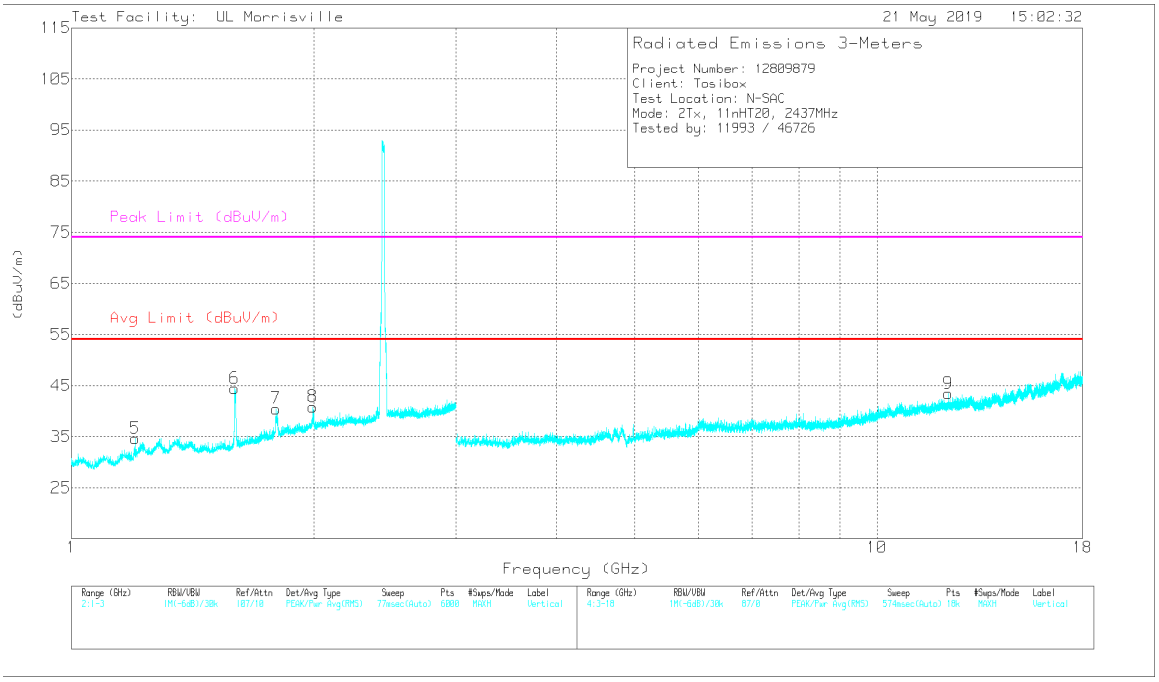
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



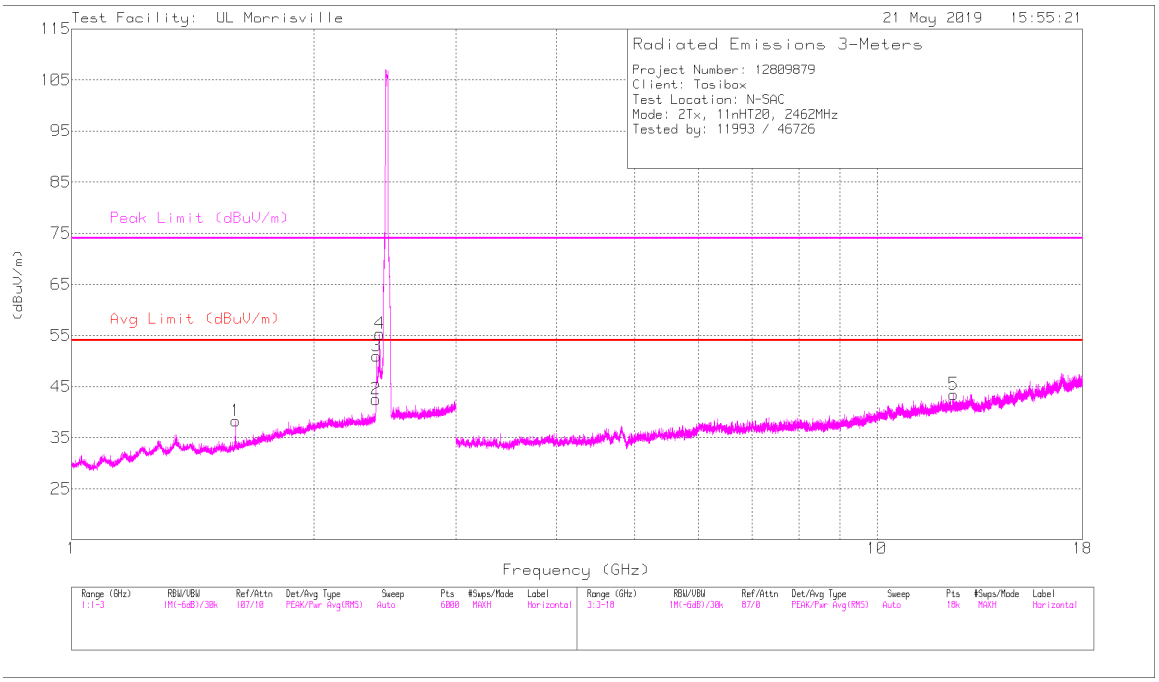
VERTICAL

RADIATED EMISSIONS

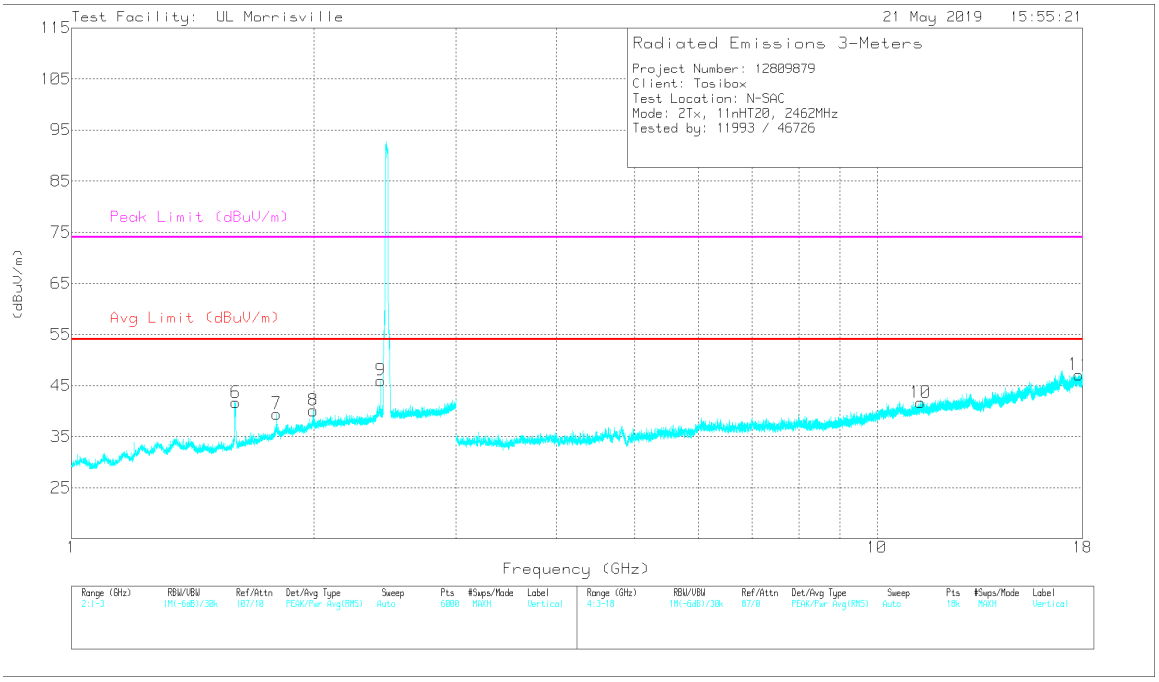
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.598	43.06	PK2	28.1	-24.6	0	46.56	-	-	74	-27.44	211	399	H
	* ** 1.599	25.81	MAv1	28.1	-24.6	.6	29.91	54	-24.09	-	-	211	399	H
3	* ** 2.488	44.52	PK2	32.4	-24.3	0	52.62	-	-	74	-21.38	323	263	H
	* ** 2.489	32.39	MAv1	32.4	-24.3	.6	41.09	54	-12.91	-	-	323	263	H
5	* ** 1.199	38.01	PK2	28.4	-26.1	0	40.31	-	-	74	-33.69	321	108	V
	* ** 1.199	23.86	MAv1	28.4	-26.1	.6	26.76	54	-27.24	-	-	321	108	V
6	* ** 1.594	48.74	PK2	28.1	-24.6	0	52.24	-	-	74	-21.76	149	156	V
	* ** 1.594	27.22	MAv1	28.1	-24.6	.6	31.32	54	-22.68	-	-	149	156	V
4	* ** 15.487	35.46	PK2	40.1	-23.6	0	51.96	-	-	74	-22.04	245	205	H
	* ** 15.487	23.45	MAv1	40.1	-23.6	.6	40.55	54	-13.45	-	-	245	205	H
9	* ** 12.263	34.84	PK2	38.8	-25.6	0	48.04	-	-	74	-25.96	183	287	V
	* ** 12.259	23.44	MAv1	38.8	-25.7	.6	37.14	54	-16.86	-	-	183	287	V
7	1.794	34.7	Pk	30.2	-24.4	0	40.5	-	-	-	-	0-360	102	V
2	1.933	32.28	Pk	31	-24.4	0	38.88	-	-	-	-	0-360	199	H
8	1.992	33.96	Pk	31.4	-24.5	0	40.86	-	-	-	-	0-360	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average
Pk - Peak detector

HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.6	42.72	PK2	28.1	-24.6	0	46.22	-	-	74	-27.78	206	166	H
	* ** 1.597	25.72	MAv1	28.1	-24.6	.6	29.82	54	-24.18	-	-	206	166	H
2	* ** 2.389	50.1	PK2	32	-24.4	0	57.7	-	-	74	-16.3	314	110	H
	* ** 2.389	34.83	MAv1	32	-24.4	.6	43.03	54	-10.97	-	-	314	110	H
6	* ** 1.599	48.48	PK2	28.1	-24.6	0	51.98	-	-	74	-22.02	130	193	V
	* ** 1.6	27.6	MAv1	28.1	-24.6	.6	31.7	54	-22.3	-	-	130	193	V
5	* ** 12.46	35.34	PK2	38.8	-25.7	0	48.44	-	-	74	-25.56	355	369	H
	* ** 12.457	23.61	MAv1	38.8	-25.8	.6	37.21	54	-16.79	-	-	355	369	H
10	* ** 11.333	34.14	PK2	38	-24.7	0	47.44	-	-	74	-26.56	355	105	V
	* ** 11.336	23.53	MAv1	38	-24.7	.6	37.43	54	-16.57	-	-	355	105	V
11	* ** 17.821	35.71	PK2	41.1	-22.1	0	54.71	-	-	74	-19.29	8	349	V
	* ** 17.82	23.01	MAv1	41.1	-22.1	.6	42.61	54	-11.39	-	-	8	349	V
7	1.797	33.68	Pk	30.2	-24.4	0	39.48	-	-	-	-	0-360	199	V
8	1.997	33.23	Pk	31.4	-24.5	0	40.13	-	-	-	-	0-360	199	V
3	2.393	43.39	Pk	32	-24.4	0	50.99	-	-	-	-	0-360	103	H
4	2.414	47.73	Pk	32	-24.4	0	55.33	-	-	-	-	0-360	103	H
9	2.419	38.32	Pk	32.1	-24.4	0	46.02	-	-	-	-	0-360	199	V

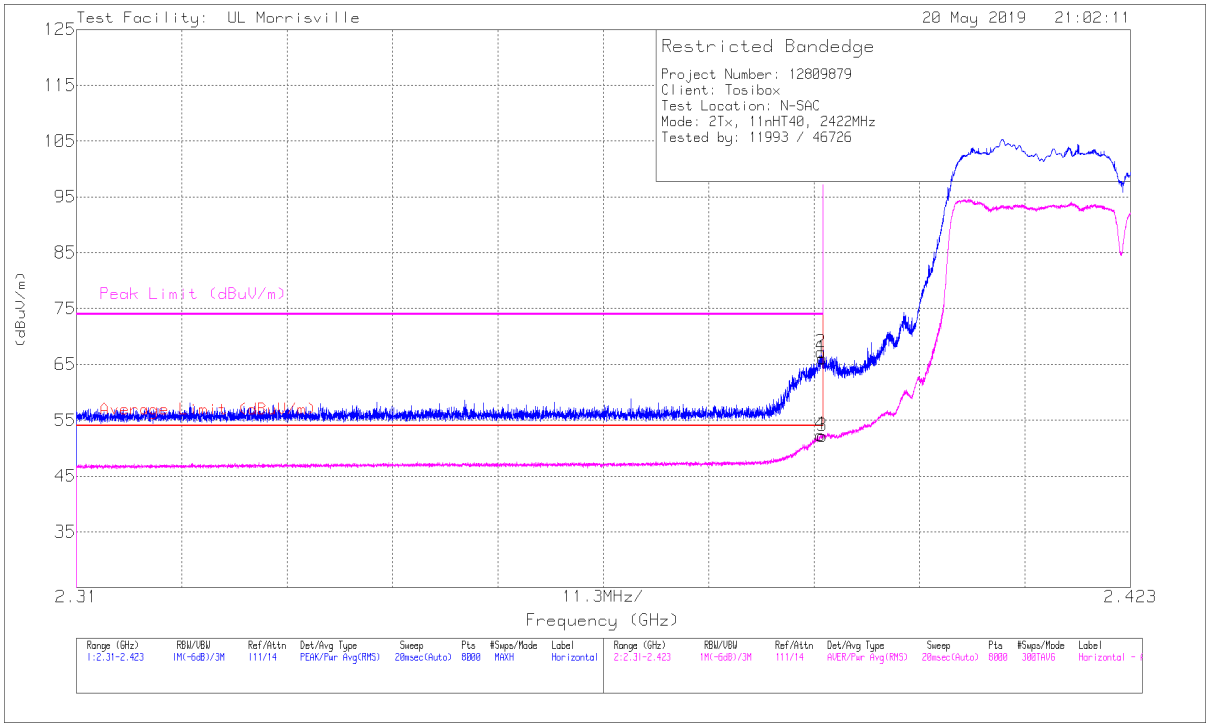
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average
Pk - Peak detector

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

2TX Chain 0 + Chain 1 CDD MODE

BANDEDGE (LOW CHANNEL, CH 3)

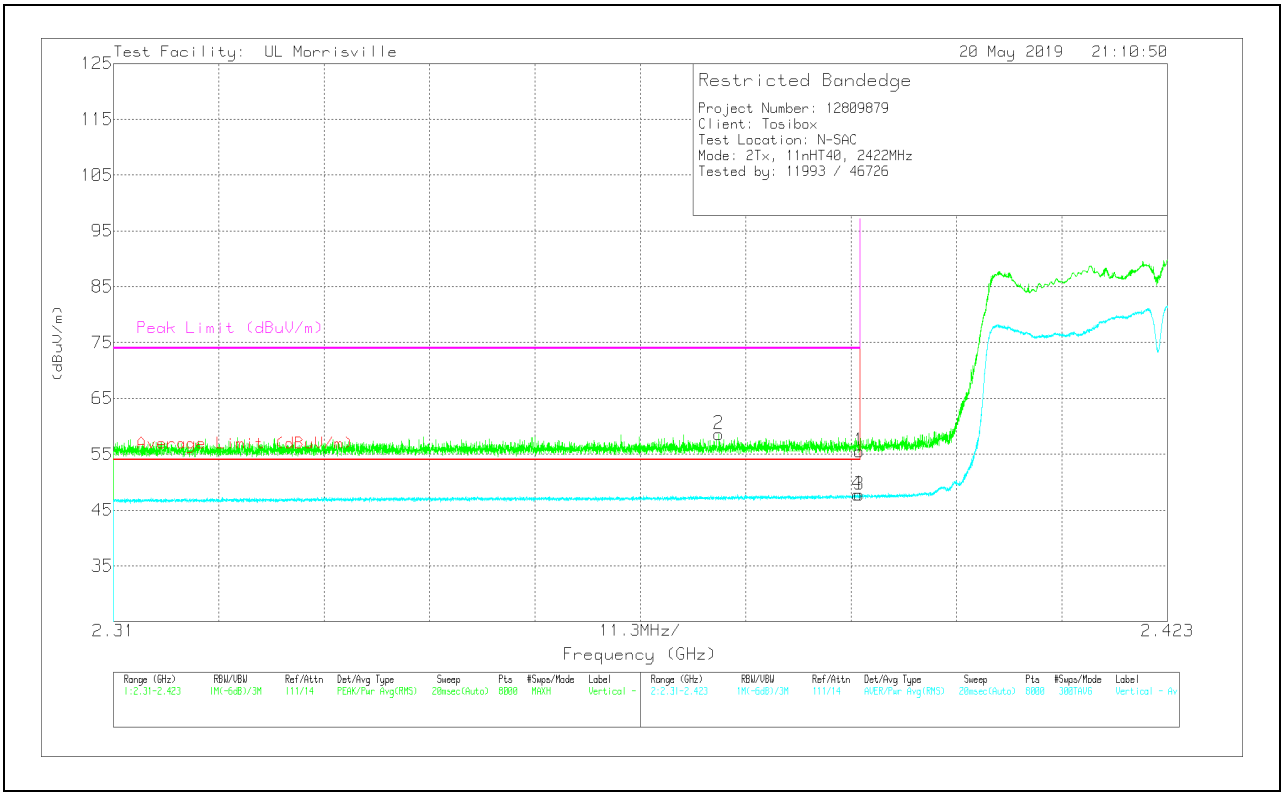
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	48.35	Pk	32	-24.4	10.1	0	66.05	-	-	74	-7.95	321	139	H
2	* ** 2.39	49.45	Pk	32	-24.4	10.1	0	67.15	-	-	74	-6.85	321	139	H
3	* ** 2.39	33.32	RMS	32	-24.4	10.1	1.15	52.17	54	-1.83	-	-	321	139	H
4	* ** 2.39	33.52	RMS	32	-24.4	10.1	1.15	52.37	54	-1.63	-	-	321	139	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

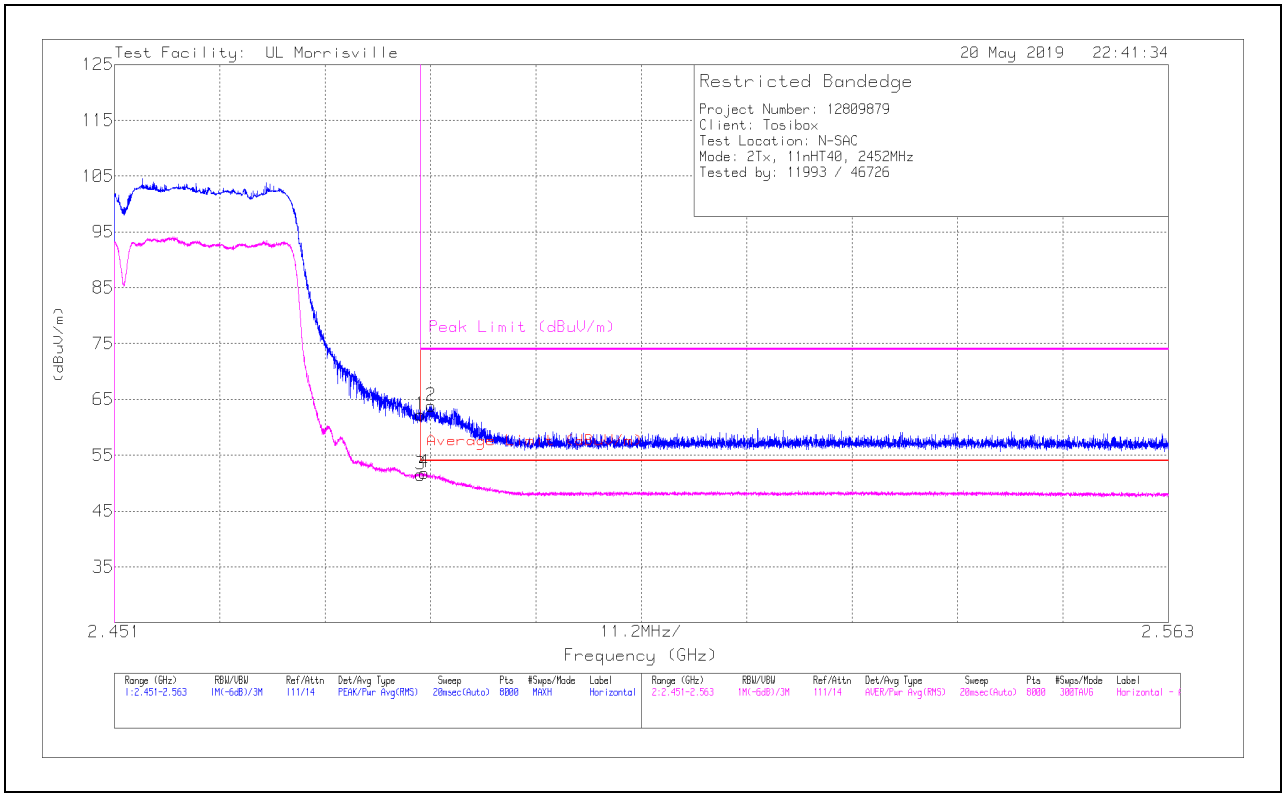


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	37.87	Pk	32	-24.4	10.1	0	55.57	-	-	74	-18.43	47	369	V
2	* ** 2.375	41.02	Pk	31.9	-24.4	10.1	0	58.62	-	-	74	-15.38	47	369	V
3	* ** 2.39	28.91	RMS	32	-24.4	10.1	1.15	47.76	54	-6.24	-	-	47	369	V
4	* ** 2.39	28.97	RMS	32	-24.4	10.1	1.15	47.82	54	-6.18	-	-	47	369	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 9)

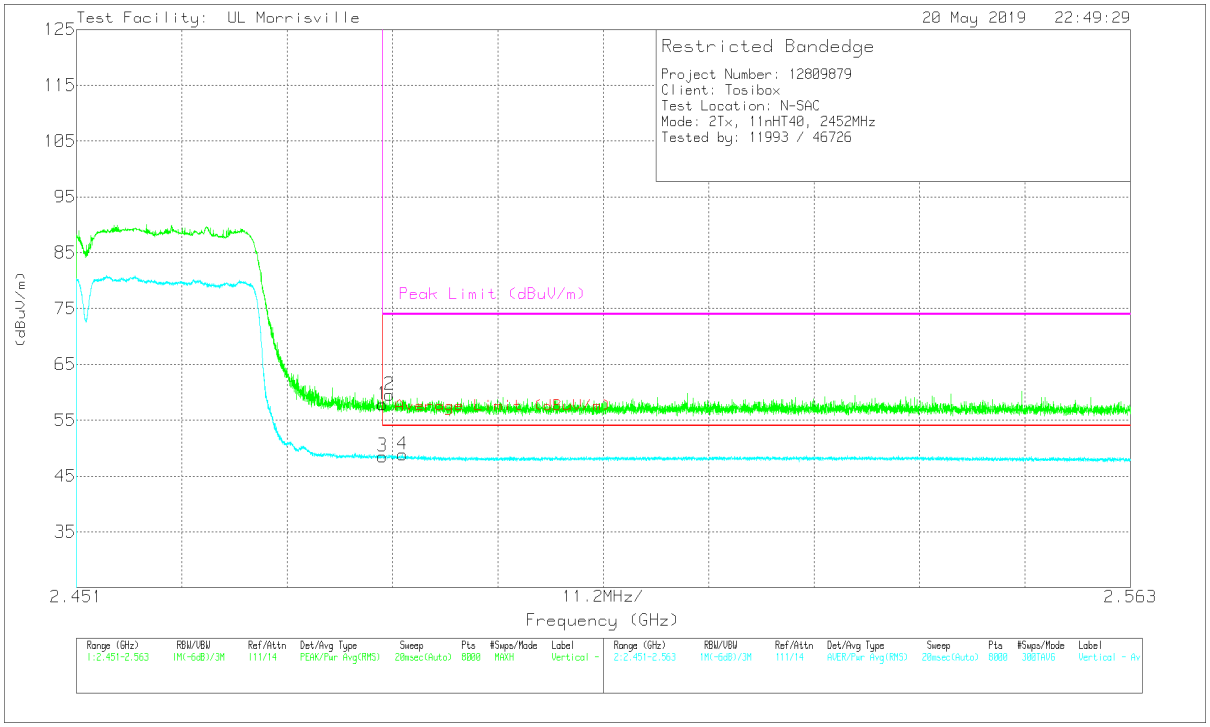
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	44.03	Pk	32.4	-24.3	10.1	0	62.23	-	-	74	-11.77	323	320	H
2	* ** 2.485	45.64	Pk	32.4	-24.3	10.1	0	63.84	-	-	74	-10.16	323	320	H
3	* ** 2.484	32.18	RMS	32.4	-24.3	10.1	1.15	51.53	54	-2.47	-	-	323	320	H
4	* ** 2.484	32.53	RMS	32.4	-24.3	10.1	1.15	51.88	54	-2.12	-	-	323	320	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

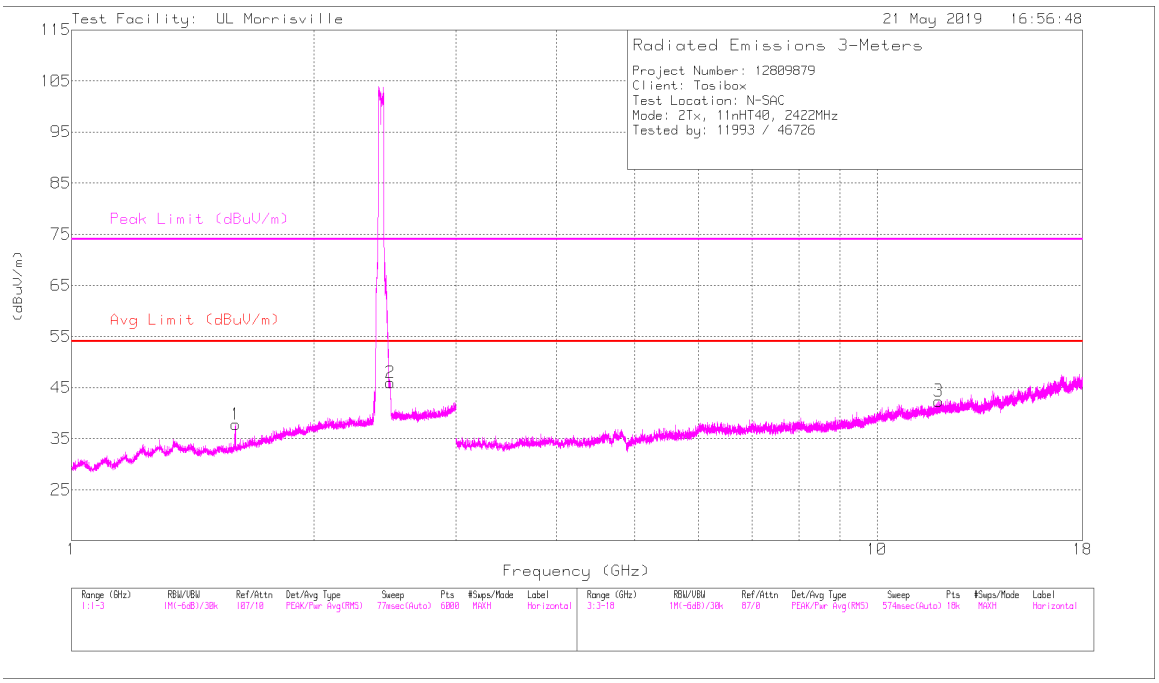


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	39.67	Pk	32.4	-24.3	10.1	0	57.87	-	-	74	-16.13	118	188	V
2	* ** 2.484	41.38	Pk	32.4	-24.3	10.1	0	59.58	-	-	74	-14.42	118	188	V
3	* ** 2.484	29.19	RMS	32.4	-24.3	10.1	1.15	48.54	54	-5.46	-	-	118	188	V
4	* ** 2.486	29.48	RMS	32.4	-24.3	10.1	1.15	48.83	54	-5.17	-	-	118	188	V

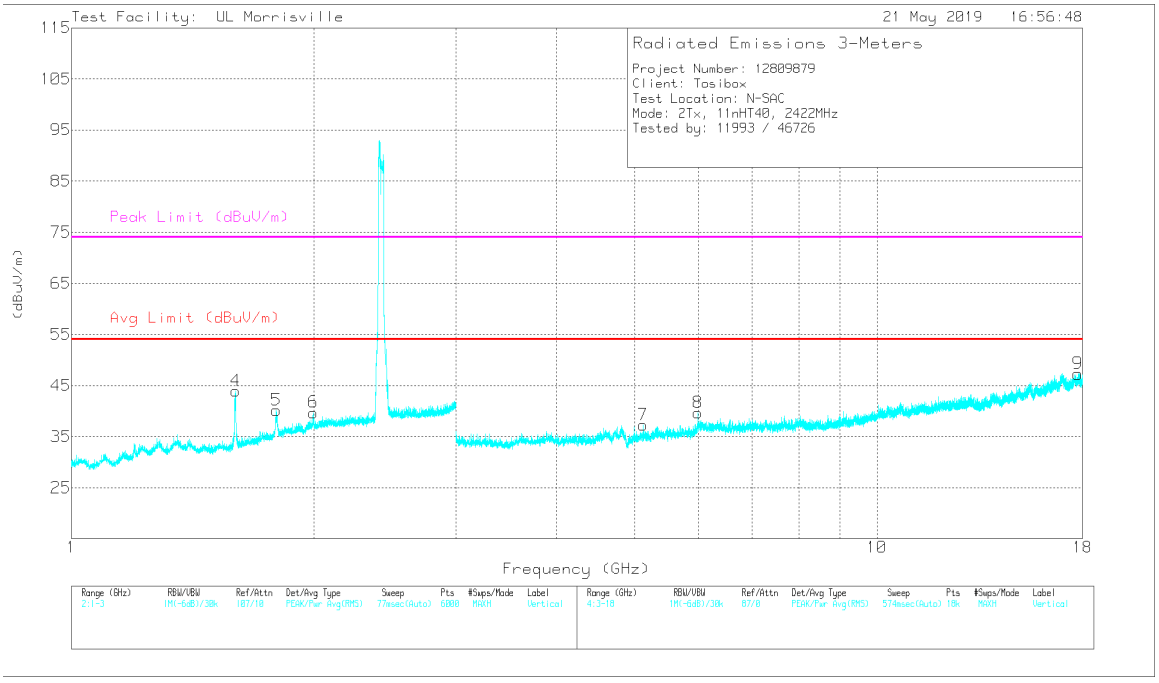
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 3 RESULTS



HORIZONTAL



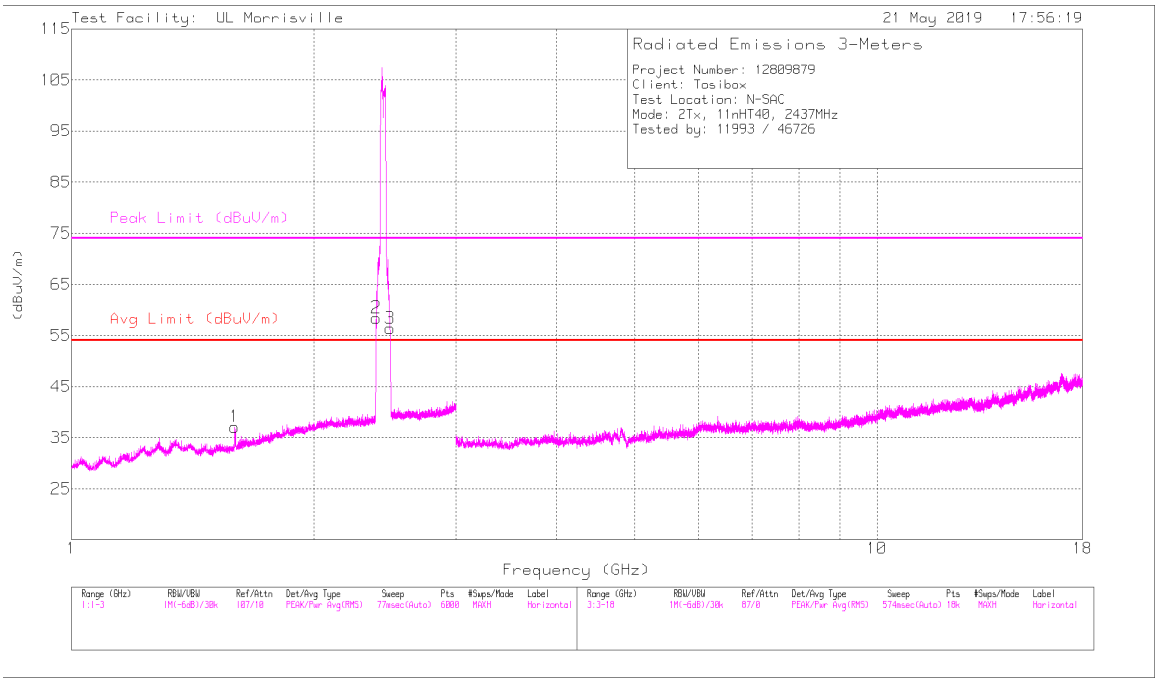
VERTICAL

RADIATED EMISSIONS

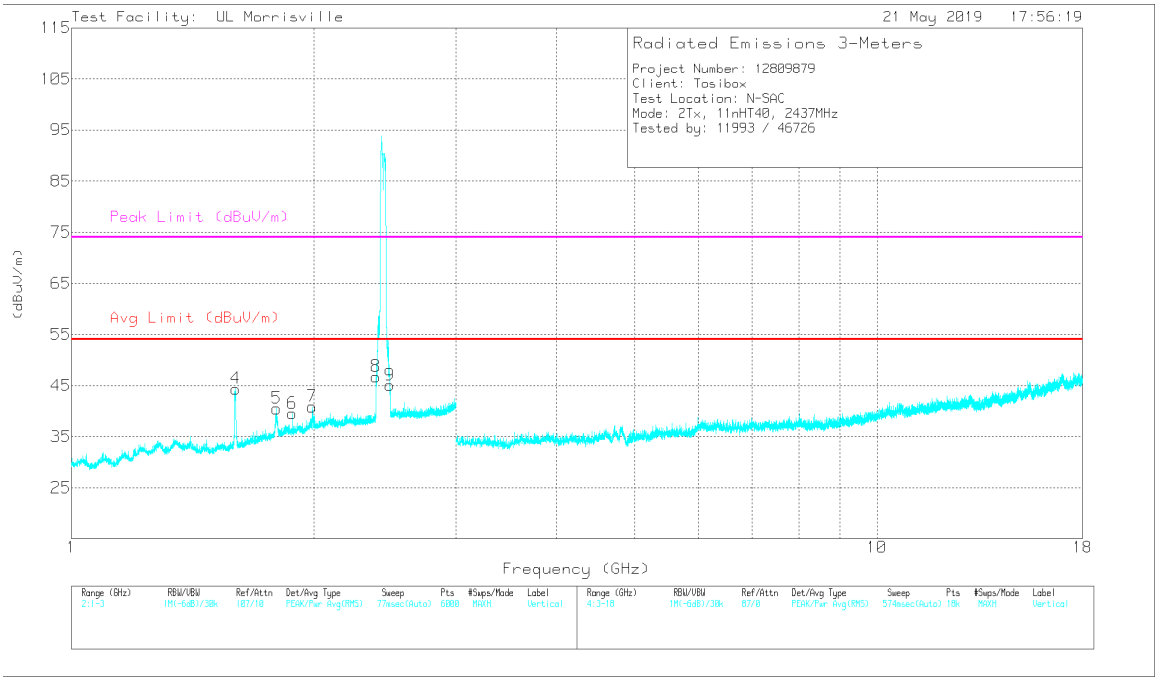
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.6	40.9	PK2	28.1	-24.6	0	44.4	-	-	74	-29.6	196	165	H
	* ** 1.599	25	MAv1	28.1	-24.6	1.15	29.65	54	-24.35	-	-	196	165	H
2	* ** 2.484	50.9	PK2	32.4	-24.3	0	59	-	-	74	-15	323	268	H
	* ** 2.485	33.09	MAv1	32.4	-24.3	1.15	42.34	54	-11.66	-	-	323	268	H
4	* ** 1.598	50.65	PK2	28.1	-24.6	0	54.15	-	-	74	-19.85	139	141	V
	* ** 1.599	29.53	MAv1	28.1	-24.6	1.15	34.18	54	-19.82	-	-	139	141	V
3	* ** 11.931	35.64	PK2	38.6	-26	0	48.24	-	-	74	-25.76	86	285	H
	* ** 11.932	23.67	MAv1	38.6	-26	1.15	37.42	54	-16.58	-	-	86	285	H
7	* ** 5.122	40.38	PK2	34.1	-31.5	0	42.98	-	-	74	-31.02	295	283	V
	* ** 5.123	27.78	MAv1	34.1	-31.5	1.15	31.53	54	-22.47	-	-	295	283	V
9	* ** 17.766	35.44	PK2	41.1	-22.7	0	53.84	-	-	74	-20.16	6	293	V
	* ** 17.765	23.19	MAv1	41.1	-22.7	1.15	42.74	54	-11.26	-	-	6	293	V
5	1.796	34.34	Pk	30.2	-24.4	0	40.14	-	-	-	-	0-360	102	V
6	1.997	32.84	Pk	31.4	-24.5	0	39.74	-	-	-	-	0-360	102	V
8	5.994	34.7	Pk	35	-30	0	39.7	-	-	-	-	0-360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average
Pk - Peak detector

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.595	44.63	PK2	28.1	-24.6	0	48.13	-	-	74	-25.87	239	400	H
	* ** 1.595	25.89	MAv1	28.1	-24.6	1.15	30.54	54	-23.46	-	-	239	400	H
2	* ** 2.389	62	PK2	32	-24.4	0	69.6	-	-	74	-4.4	330	129	H
	* ** 2.39	42.07	MAv1	32	-24.4	1.15	50.82	54	-3.18	-	-	330	129	H
3	* ** 2.485	62.96	PK2	32.4	-24.3	0	71.06	-	-	74	-2.94	324	117	H
	* ** 2.484	42.71	MAv1	32.4	-24.3	1.15	51.96	54	-2.04	-	-	324	117	H
4	* ** 1.6	48.36	PK2	28.1	-24.6	0	51.86	-	-	74	-22.14	142	196	V
	* ** 1.6	26.78	MAv1	28.1	-24.6	1.15	31.43	54	-22.57	-	-	142	196	V
8	* ** 2.39	50.79	PK2	32	-24.4	0	58.39	-	-	74	-15.61	22	325	V
	* ** 2.39	33.18	MAv1	32	-24.4	1.15	41.93	54	-12.07	-	-	22	325	V
9	* ** 2.485	55.79	PK2	32.4	-24.3	0	63.89	-	-	74	-10.11	124	339	V
	* ** 2.484	36.47	MAv1	32.4	-24.3	1.15	45.72	54	-8.28	-	-	124	339	V
5	1.797	34.71	Pk	30.2	-24.4	0	40.51	-	-	-	-	0-360	102	V
6	1.879	32.98	Pk	30.9	-24.3	0	39.58	-	-	-	-	0-360	200	V
7	1.991	33.98	Pk	31.4	-24.5	0	40.88	-	-	-	-	0-360	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average
Pk - Peak detector

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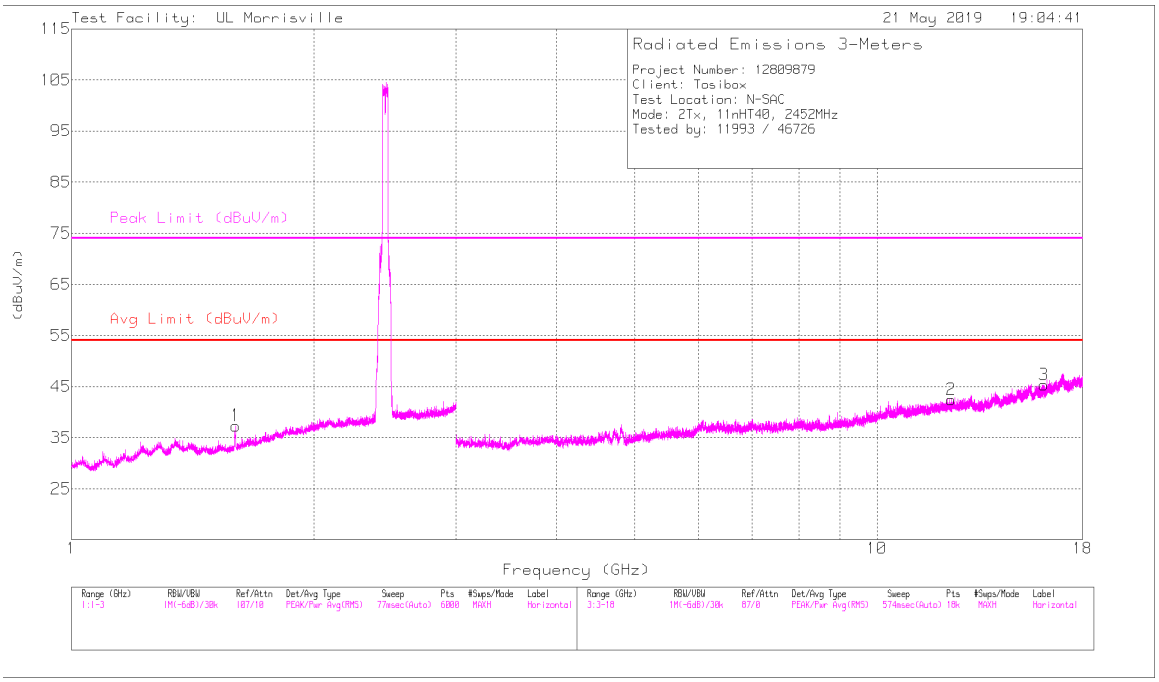
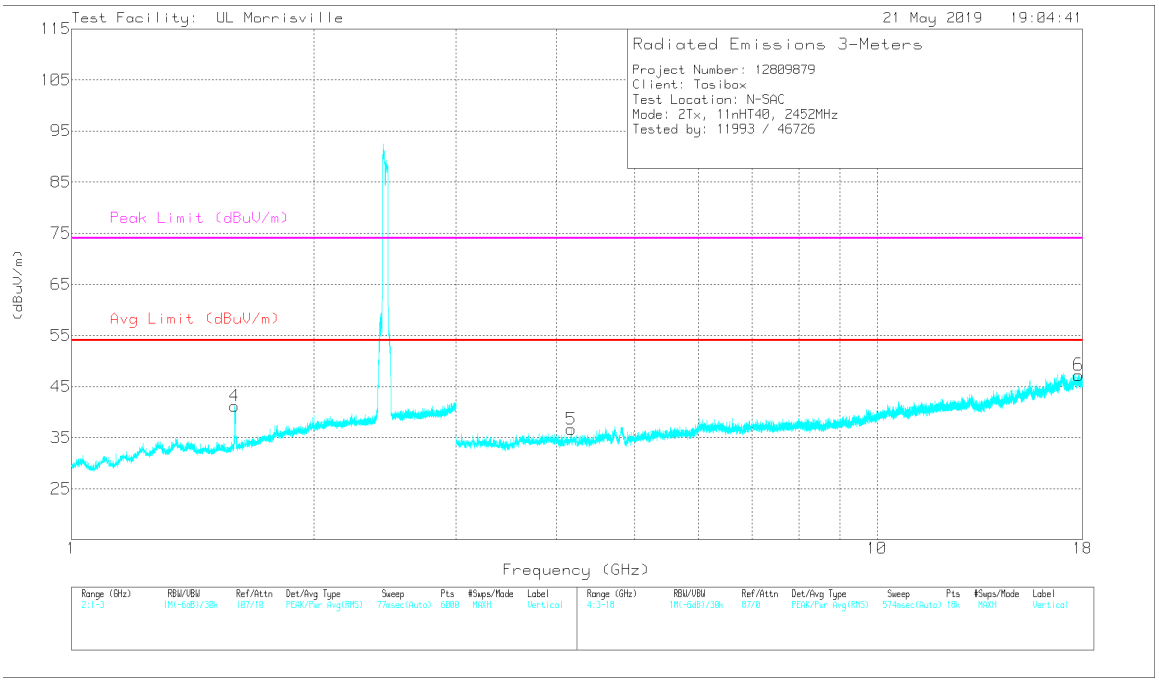
12 Laboratory Dr., RTP, NC 27709; USA TEL: (919) 549-1400

HIGH CHANNEL, CH 9 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

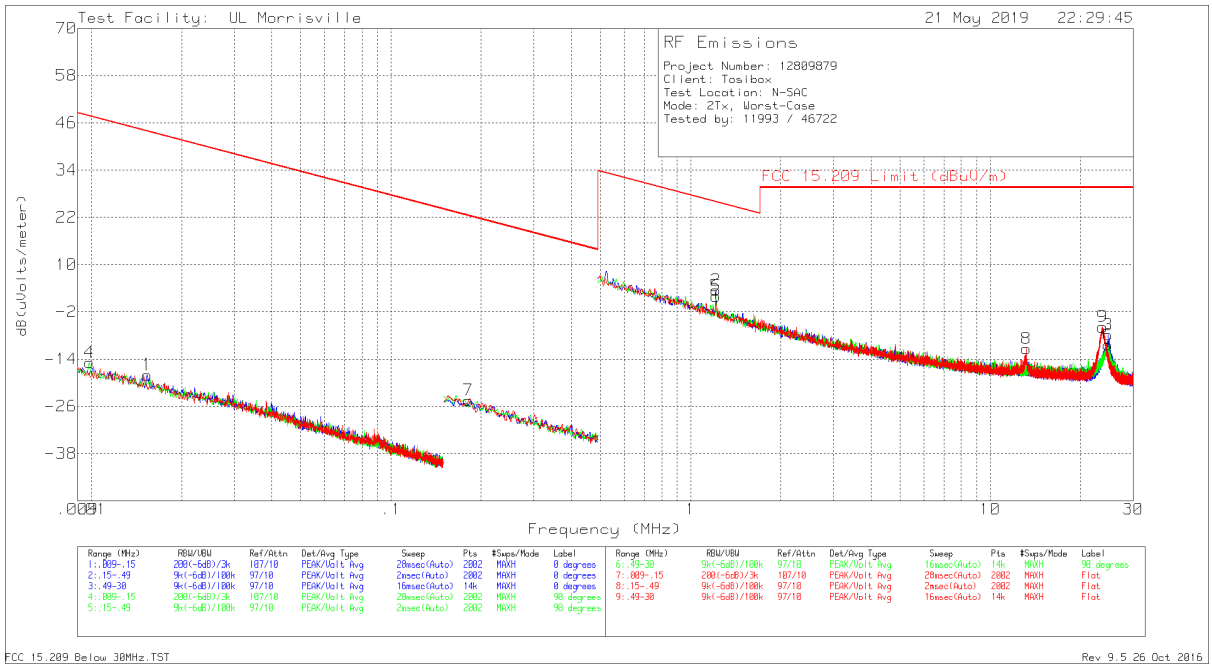
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.599	44.09	PK2	28.1	-24.6	0	47.59	-	-	74	-26.41	207	336	H
	* ** 1.599	25.31	MAv1	28.1	-24.6	1.15	29.96	54	-24.04	-	-	207	336	H
4	* ** 1.596	49.41	PK2	28.1	-24.6	0	52.91	-	-	74	-21.09	136	265	V
	* ** 1.593	29.16	MAv1	28.1	-24.6	1.15	33.81	54	-20.19	-	-	136	265	V
2	* ** 12.37	35.01	PK2	38.8	-26.3	0	47.51	-	-	74	-26.49	48	321	H
	* ** 12.372	23.7	MAv1	38.8	-26.3	1.15	37.35	54	-16.65	-	-	48	321	H
3	* ** 16.129	35.59	PK2	40.4	-25.1	0	50.89	-	-	74	-23.11	301	373	H
	* ** 16.129	23.57	MAv1	40.4	-25.1	1.15	40.02	54	-13.98	-	-	301	373	H
5	* ** 4.172	40.34	PK2	33.4	-31.8	0	41.94	-	-	74	-32.06	145	356	V
	* ** 4.171	28.36	MAv1	33.4	-31.8	1.15	31.11	54	-22.89	-	-	145	356	V
6	* ** 17.797	34.37	PK2	41.1	-22.4	0	53.07	-	-	74	-20.93	100	316	V
	* ** 17.797	22.51	MAv1	41.1	-22.4	1.15	42.36	54	-11.64	-	-	100	316	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
PK2 - Maximum Peak
MAv1 - Maximum RMS Average

9.2. WORST CASE BELOW 30MHZ

Note: All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) 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 (test distance / specification distance).

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



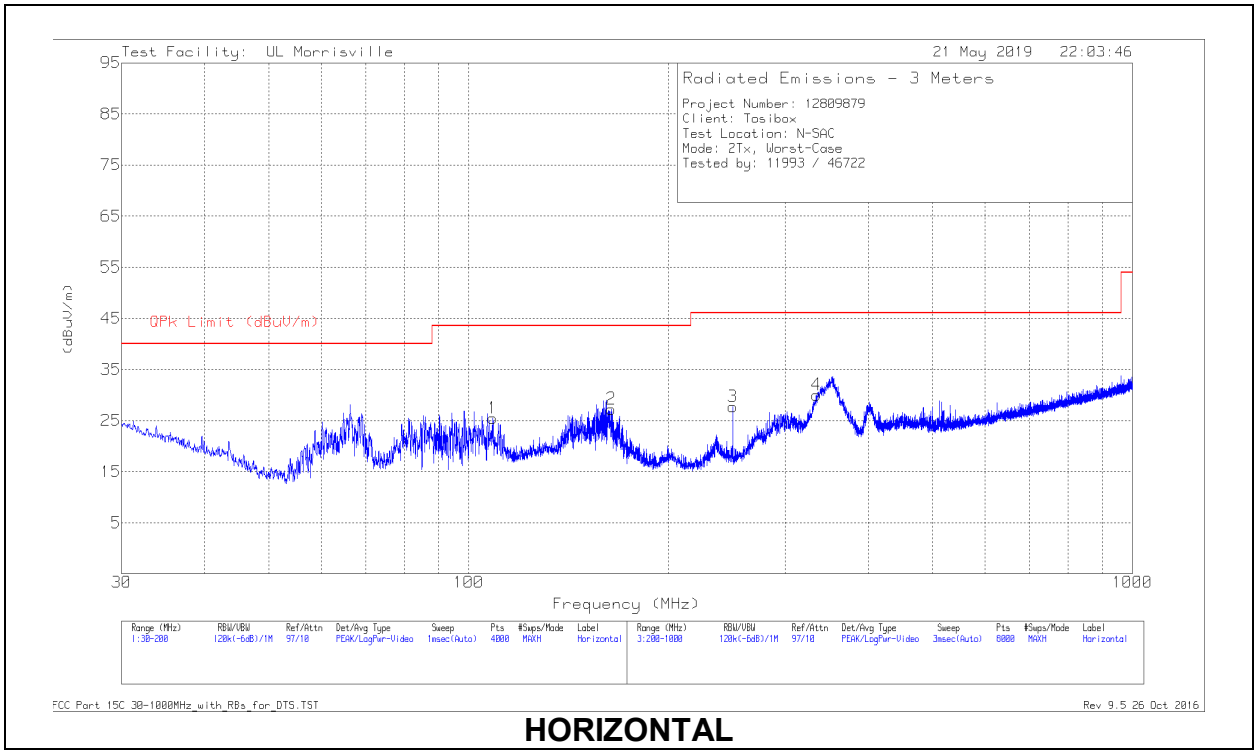
ANTENNA- THREE ORIENTATIONS

Below 30MHz Data

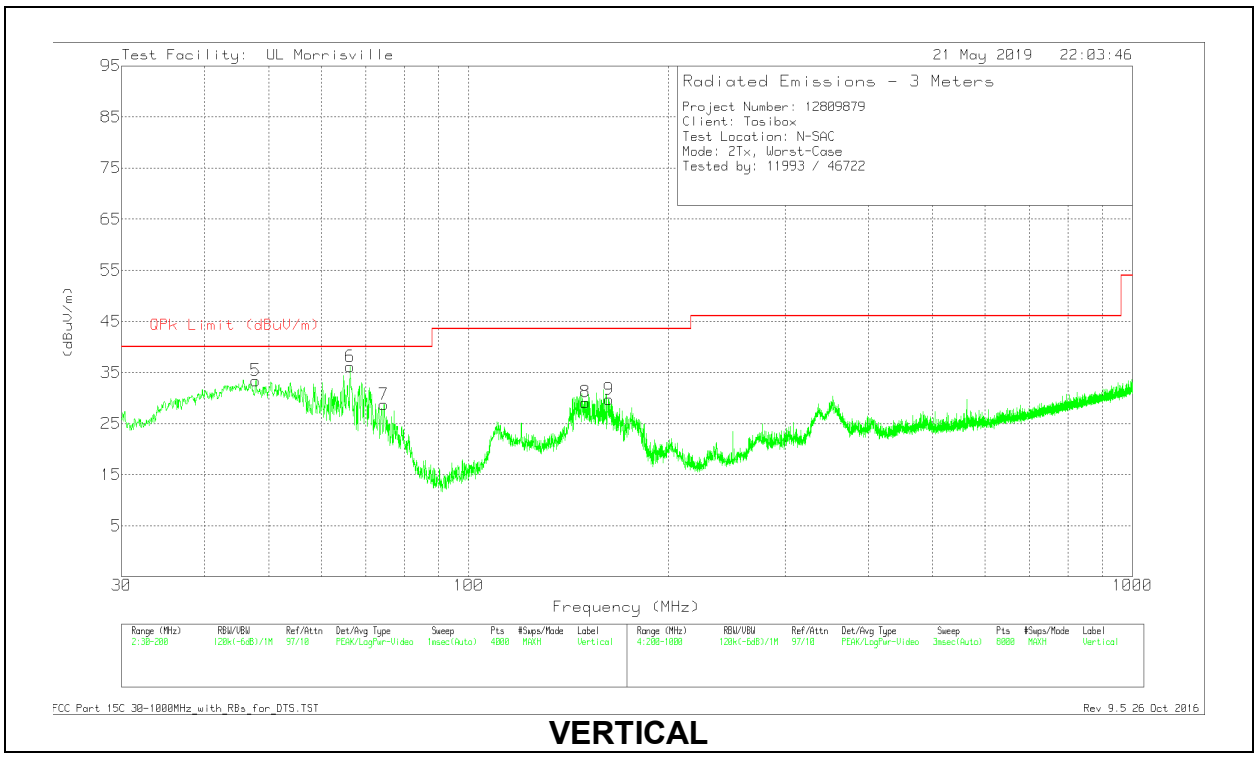
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	Qp/Avg FCC 15.209 Limit (dBuV/m)	Pk FCC 15.209 Limit (dBuV/m)	Worst-Case Margin (dB)	Azimuth (Degs)	Antenna Face
4	.00984	46.47	Pk	18.5	.1	-80	-14.93	47.74	67.74	-62.67	0-360	Off
1	.01537	45.89	Pk	16	.1	-80	-18.01	43.87	63.87	-61.88	0-360	On
7	.18128	44.66	Pk	10.7	.1	-80	-24.54	22.44	42.44	-46.98	0-360	Flat
2	1.21304	32.28	Pk	11	.2	-40	3.48	25.93	-	-22.45	0-360	On
5	1.21515	30.79	Pk	11	.2	-40	1.99	25.91	-	-23.92	0-360	Off
8	13.16751	17.64	Pk	10.4	.6	-40	-11.36	29.54	-	-40.9	0-360	Flat
9	23.71384	24.06	Pk	9.3	.8	-40	-5.84	29.54	-	-35.38	0-360	Flat
6	24.70881	19.71	Pk	9.1	.8	-40	-10.39	29.54	-	-39.93	0-360	Off
3	24.73622	22.21	Pk	9.1	.8	-40	-7.89	29.54	-	-37.43	0-360	On

Pk - Peak detector

9.3. WORST CASE BELOW 1 GHZ



HORIZONTAL



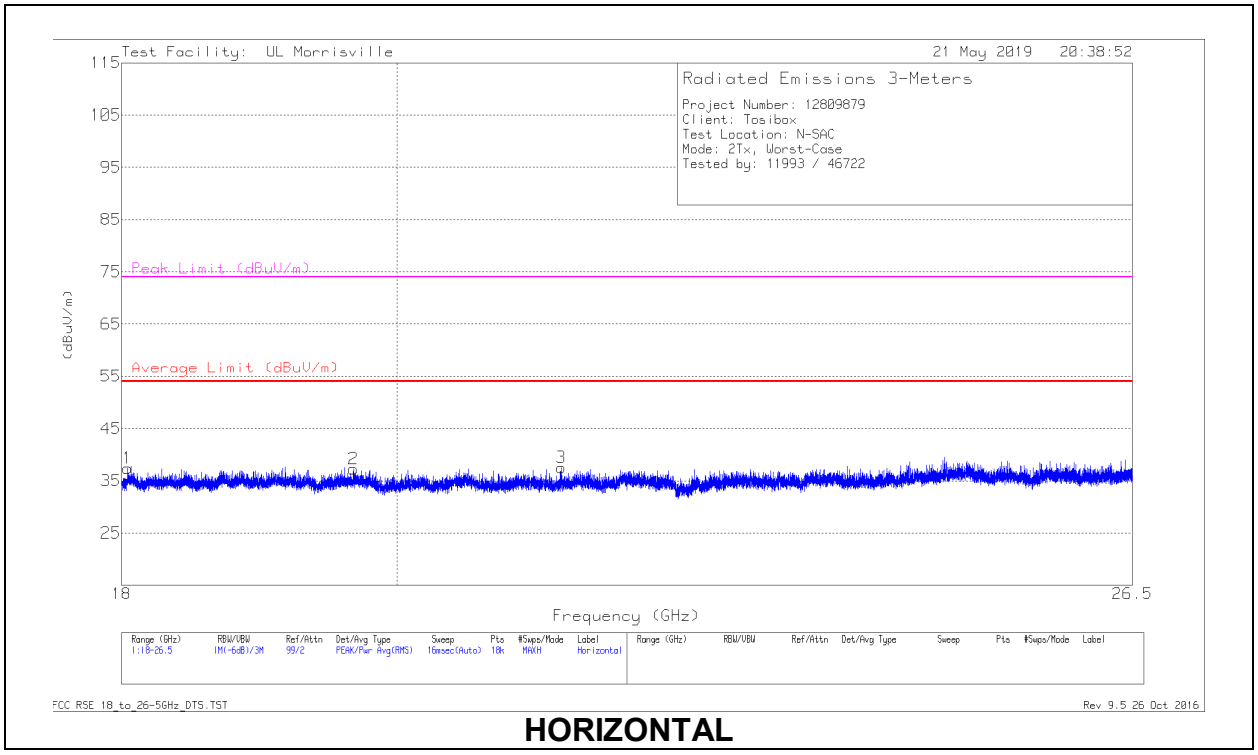
VERTICAL

Below 1GHz DATA

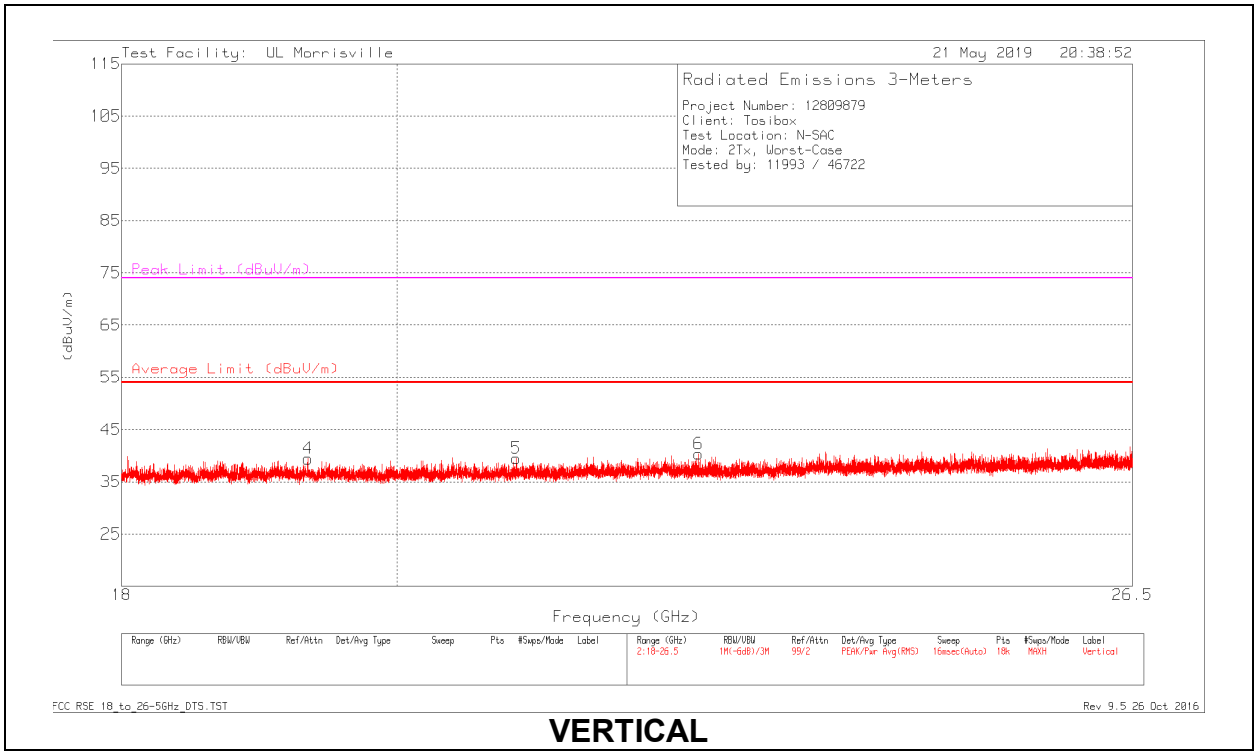
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 ACF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 108.7729	37.58	Pk	18.8	-30.9	25.48	43.52	-18.04	0-360	299	H
8	* ** 149.9235	40.67	Pk	19	-30.5	29.17	43.52	-14.35	0-360	101	V
9	* ** 162.528	41.42	Pk	18.7	-30.4	29.72	43.52	-13.8	0-360	101	V
2	* ** 163.9522	39.05	Pk	18.6	-30.4	27.25	43.52	-16.27	0-360	199	H
3	* ** 250.0065	39.18	Pk	18.2	-29.7	27.68	46.02	-18.34	0-360	102	H
4	* ** 334.0174	38.62	Pk	20.7	-29.3	30.02	46.02	-16	0-360	102	H
7	* ** 74.5515	45.54	Pk	14.3	-31.1	28.74	-	-	0-360	101	V
5	47.7696	49.41	Pk	15.5	-31.5	33.41	-	-	0-360	101	V
6	66.2619	53.27	Pk	14.2	-31.3	36.17	-	-	0-360	101	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

9.4. WORST CASE 18-26 GHZ



HORIZONTAL



VERTICAL

18 – 26GHz DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0076 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 18.043	44.01	Pk	32.5	-39.1	37.41	54	-16.59	74	-36.59	0-360	299	H
2	* ** 19.67	44.43	Pk	32.6	-39.8	37.23	54	-16.77	74	-36.77	0-360	299	H
3	* ** 21.297	44.14	Pk	33.1	-39.7	37.54	54	-16.46	74	-36.46	0-360	102	H
4	* ** 19.329	46.03	Pk	32.8	-39.4	39.43	54	-14.57	74	-34.57	0-360	251	V
5	* ** 20.935	45.99	Pk	33.2	-39.7	39.49	54	-14.51	74	-34.51	0-360	299	V
6	* ** 22.447	46.02	Pk	33.5	-39.2	40.32	54	-13.68	74	-33.68	0-360	102	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
** - indicates frequency in Taiwan NCC LP0002 Restricted Band
Pk - Peak detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

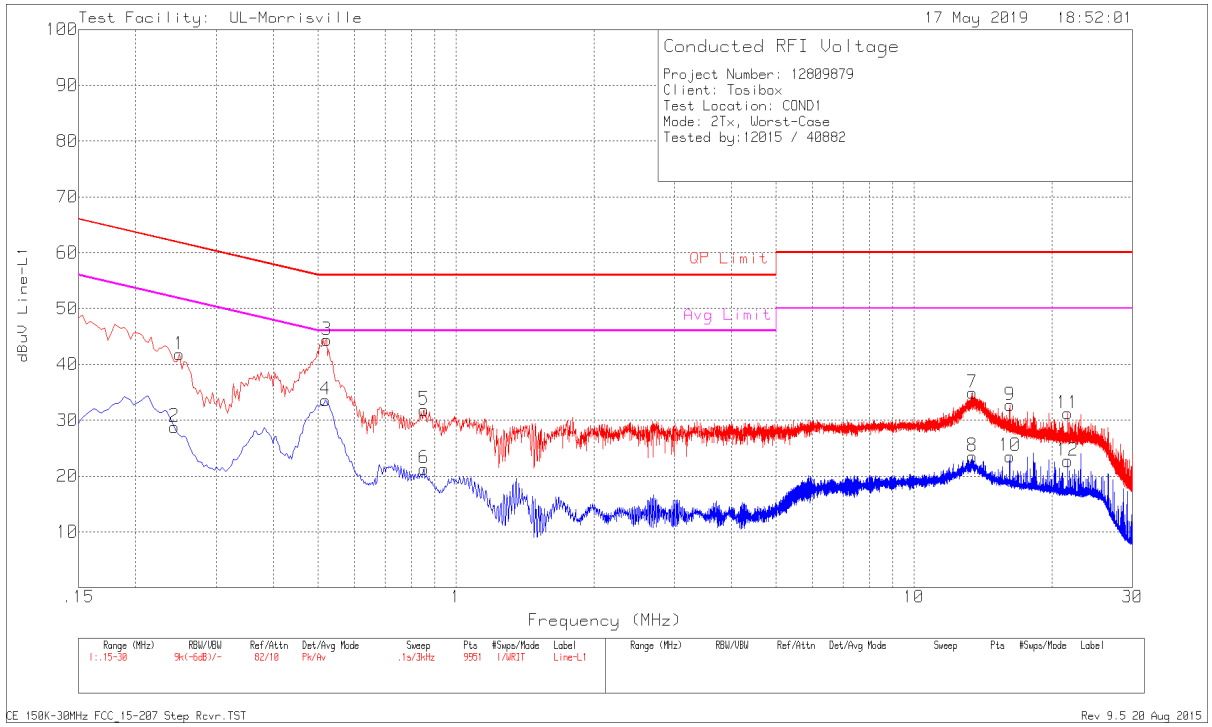
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

10.1. AC Power Line Host

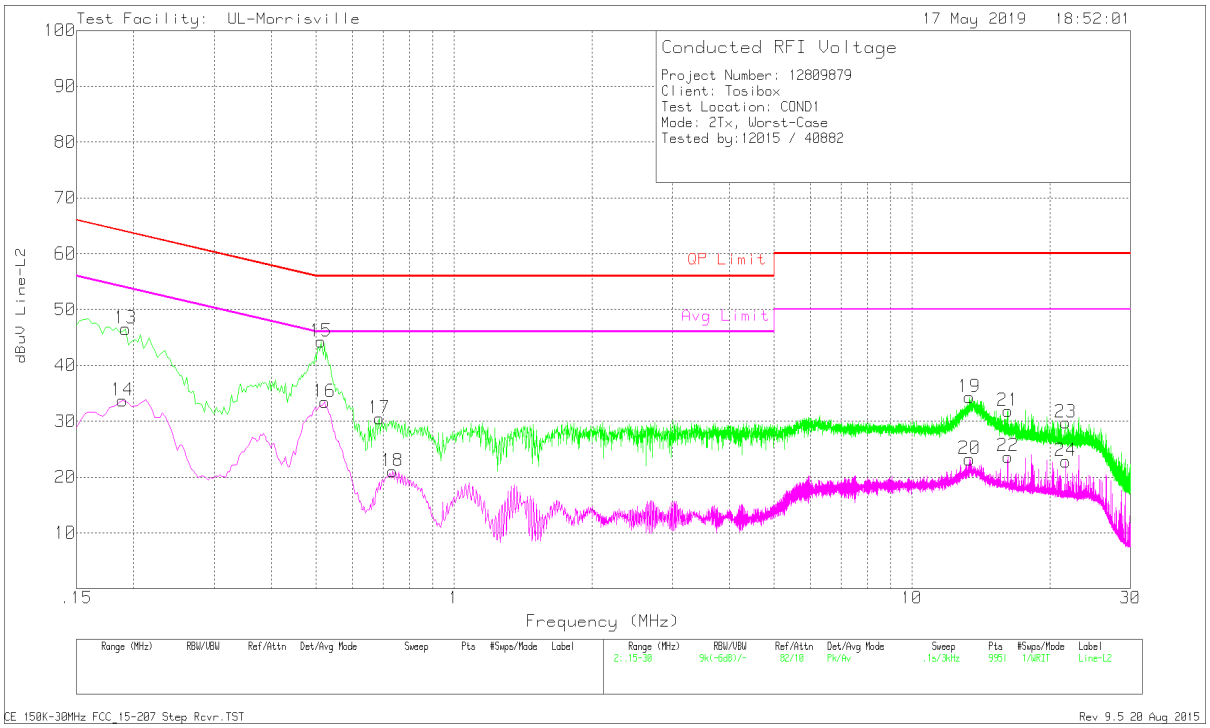
LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz										
Marker	**Frequency (MHz)**	**Meter Reading (dBuV)**	**Det**	**LISN VCF (dB)**	**Cbl/Limiter (dB)**	**Corrected Reading dBuV**	**QP Limit**	**Margin (dB)**	**Avg Limit**	**Margin (dB)**
1	.249	31.72	Pk	.1	10	41.82	61.79	-19.97	-	-
2	.243	18.73	Av	.1	10	28.83	-	-	51.99	-23.16
3	.522	34.4	Pk	0	10	44.4	56	-11.6	-	-
4	.519	23.64	Av	0	10	33.64	-	-	46	-12.36
5	.852	21.9	Pk	0	10	31.9	56	-24.1	-	-
6	.852	11.35	Av	0	10	21.35	-	-	46	-24.65
7	13.416	24.44	Pk	.1	10.4	34.94	60	-25.06	-	-
8	13.419	13.04	Av	.1	10.4	23.54	-	-	50	-26.46
9	16.23	22.09	Pk	.1	10.5	32.69	60	-27.31	-	-
10	16.227	12.96	Av	.1	10.5	23.56	-	-	50	-26.44
11	21.663	20.47	Pk	.2	10.6	31.27	60	-28.73	-	-
12	21.663	11.91	Av	.2	10.6	22.71	-	-	50	-27.29

Pk - 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**	**QP Limit**	**Margin (dB)**	**Avg Limit**	**Margin (dB)**
13	.192	36.35	Pk	.2	10	46.55	63.95	-17.4	-	-
14	.189	23.46	Av	.2	10	33.66	-	-	54.08	-20.42
15	.513	34.24	Pk	0	10	44.24	56	-11.76	-	-
16	.522	23.42	Av	0	10	33.42	-	-	46	-12.58
17	.687	20.51	Pk	0	10	30.51	56	-25.49	-	-
18	.735	11.03	Av	0	10	21.03	-	-	46	-24.97
19	13.356	23.82	Pk	.1	10.4	34.32	60	-25.68	-	-
20	13.356	12.7	Av	.1	10.4	23.2	-	-	50	-26.8
21	16.227	21.22	Pk	.1	10.5	31.82	60	-28.18	-	-
22	16.227	13.08	Av	.1	10.5	23.68	-	-	50	-26.32
23	21.663	18.97	Pk	.2	10.6	29.77	60	-30.23	-	-
24	21.663	12.03	Av	.2	10.6	22.83	-	-	50	-27.17

Pk - Peak detector
Av - Average detection

11. SETUP PHOTOS

Please refer to R12809879-EP1 for setup photos

END OF TEST REPORT

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