



CERTIFICATION TEST REPORT

Report Number: R12922855-E5

Applicant : Microsoft Corporation
One Microsoft Way
Redmond, WA 98052-6399
USA

Model : 1867

FCC ID : C3K1867

IC : 3048A-1867

EUT Description : Portable Computing Device

Test Standard(s) : FCC 47 CFR PART 15 SUBPART E
ISED RSS-247 ISSUE 2
ISED RSS-GEN ISSUE 5

Date Of Issue:
2019-09-09

Prepared by:
UL LLC
12 Laboratory Dr.
Research Triangle Park, NC 27709 U.S.A.
TEL: (919) 549-1400

REPORT REVISION HISTORY

Ver.	Issue Date	Revisions	Revised By
1	2019-08-29	Initial Issue	Brian T. Kiewra
2	2019-09-09	Added AC power adaptor to support equipment. Added "Intentionally Left Blank" to p. 16. Added model similarity explanation to Section 5.5	Brian T. Kiewra

TABLE OF CONTENTS

REPORT REVISION HISTORY	2
TABLE OF CONTENTS	3
1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION	5
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION	6
4.3. MEASUREMENT UNCERTAINTY	6
5. EQUIPMENT UNDER TEST	7
5.1. EUT DESCRIPTION	7
5.2. MAXIMUM OUTPUT POWER	7
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	7
5.4. SOFTWARE AND FIRMWARE	7
5.5. WORST-CASE CONFIGURATION AND MODE	8
5.6. DESCRIPTION OF TEST SETUP	9
6. TEST AND MEASUREMENT EQUIPMENT	10
7. MEASUREMENT METHOD	12
8. RADIATED TEST RESULTS	13
8.1. ON TIME AND DUTY CYCLE	14
8.2. TRANSMITTER ABOVE 1 GHz	17
8.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND	17
8.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND	25
8.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND	33
8.2.4. TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.2 GHz BAND	39
8.2.5. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND	43
8.2.6. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND	51
8.2.7. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND	59
8.2.8. TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.3 GHz BAND	65
8.2.1. TX ABOVE 1 GHz 802.11ac VHT160 MODE IN THE 5.2/5.3 GHz BAND	69
8.3. WORST-CASE BELOW 1GHz AND ABOVE 18 GHz	74
9. AC LINE CONDUCTED EMISSIONS	75
10. SETUP PHOTOS	75
END OF TEST REPORT	75

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Microsoft Corporation
One Microsoft Way
Redmond, WA 98052-6399
USA

EUT DESCRIPTION: Portable Computing Device

MODEL: 1867

SERIAL NUMBER: See Section 5.4

DATE TESTED: 2019-07-17 to 2019-08-08

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart E	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.

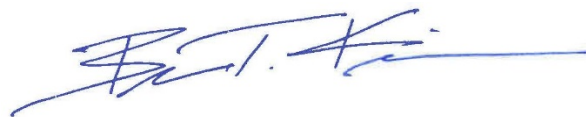
This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. government.

Approved & Released
For UL LLC By:



Jeffrey Moser
Operations Leader
UL – Consumer Technology Division

Prepared By:



Brian T. Kiewra
Project Engineer
UL – Consumer Technology Division

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, FCC 14-30, FCC KDB 662911 D01 v02r01, FCC KDB 789033 D02 v02r01, ANSI C63.10-2013, FCC 06-96, 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, NC 27709, USA and 2800 Perimeter Park Dr., Suite B, Morrisville, NC 27590, 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.	
Site Code: 2180C			
☐	Chamber A RTP	☒	North Chamber
☐	Chamber C RTP	☒	South Chamber

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)
 $36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$

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.
 $36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
All emissions, radiated	5.17 dB
Temperature	2.26°C
Humidity	6.79%

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

5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a Portable Computing Device that contains 802.11 a/ac/ax/b/g/n 20/40/80/160MHz 2x2 dual band and BT/BLE radios.

5.2. MAXIMUM OUTPUT POWER

Refer to Model 1868 (FCC ID: C3K1868, IC: 3048A-1868) report R12935938-E5 for output power.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency Range (GHz)	Antenna Type	Peak Gain (dBi) Chain 0 (Right)	Peak Gain (dBi) Chain 1 (Left)
Model 1867			
2.4 to 2.48	PIFA	0.7	2.6
5.15 to 5.25		4.9	4.4
5.25 to 5.35		6.1	5.0
5.47 to 5.72		7.2	5.5
5.725 to 5.85		9.4	5.6
Model 1868			
2.4 to 2.48	PIFA	0.4	1.0
5.15 to 5.25		3.6	2.2
5.25 to 5.35		5.2	3.5
5.47 to 5.72		6.4	4.7
5.725 to 5.85		7.8	4.5

5.4. SOFTWARE AND FIRMWARE

EUT	Serial Number	Radio Test Tool Version	OS Version	BT Driver Version	WiFi Driver Version	EUT's Power Supply (s/n)
R-557-1867-FCC-RADIATED-08	006438792757	11.1916.0-09531	MTEOS 1.652.0	21.0.19157.20088	99.0.43.8	0D130P028D596
R-557-1867-FCC-RADIATED-09	006439692757	11.1916.0-09531	MTEOS 1.652.0	21.0.19157.20088	99.0.43.8	0D130P01H1596

5.5. WORST-CASE CONFIGURATION AND MODE

As model 1868 and model 1867 contain the same radio, antenna port conducted testing is covered in model 1868 (FCC ID: C3K1868, IC: 3048A-1868) report R12935938-E5. Radiated emissions below 1GHz, above 18GHz, and power line conducted emissions were performed in worst-case test report R12922855-E11 (FCC ID: C3K1867, IC: 3048A-1867).

Models 1867 and 1868 are electrically and RF equivalent as they use the same motherboard, radio module and on-board RF components. Both models share a common WiFi and BT power table. The radio-related firmware and driver versions are the same for the two models. The peak antenna gains are in the antenna gain section of the report. Antenna port conducted emissions measurements are done on model 1868 (FCC ID: C3K1868, IC: 3048A-1868) and the data is leveraged for model 1867 (FCC ID: C3K1867, IC: 3048A-1867). Highest antenna gain across the two models in each band has been considered while doing the conducted emissions measurements. Separate radiated & SAR measurements are done on each model.

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 EUT has one intended orientations, X; therefore, all final radiated testing was performed with the EUT in X orientation.

Worst-case data rates as provided by the client were:

802.11a mode: 6 Mbps
802.11n HT20mode: MCS8
802.11n HT40mode: MCS8
802.11ac VHT80 mode: MCS0 (NSS=2)
802.11ac VHT160 mode: MCS0 (NSS=2)

All radios that can transmit simultaneously have been evaluated for radiated for all possible combinations of transmission and found to be in compliance.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
USB Hub	J5 Create	JCA374	AY2A1904000477 / AY6A1903004261	N/A
Earbuds	Sony	MDR-EX14AP	Non-Serialized	N/A
USB Flash Drive	Kingston	Data Traveler G4	Non-Serialized	N/A
AC Adaptor	Microsoft	1706	0D130P01H1596	N/A

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Mains	1	12-pin	Mains	<3m	None
2	USB-A	1	USB-A	USB	<3m	None
3	USB-C	1	USB-C	USB	<3m	None
4	Aux	1	Aux	Aux	<3m	None

TEST SETUP

The test utility software was located on the EUT during the tests and was used to exercised the radios.

SETUP DIAGRAMS

Please refer to 12922855-EP1 for setup diagrams

6. TEST AND MEASUREMENT EQUIPMENT

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

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

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
1-18 GHz					
AT0067	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2019-03-22	2020-03-22
Gain-Loss Chains					
N-SAC03	Gain-loss string: 1-18GHz	Various	Various	2019-03-15	2020-03-15
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 181474341	Environmental Meter	Fisher Scientific	15-077-963	2018-07-27	2020-07-27

NOTES:

1. For equipment listed above that was calibrated during the testing period, please note the equipment was used for testing after calibration.
2. For equipment listed above that has a calibration due date during the testing period, the testing was completed before the equipment expiration date.

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

Equipment 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

NOTES:

1. For equipment listed above that was calibrated during the testing period, please note the equipment was used for testing after calibration.
2. For equipment listed above that has a calibration due date during the testing period, the testing was completed before the equipment expiration date.

7. MEASUREMENT METHOD

On Time and Duty Cycle: KDB 789033 D02 v02r01, Section B.

Unwanted emissions in restricted bands: KDB 789033 D02 v02r01, Sections G.3, G.5, and G.6.

Unwanted emissions in non-restricted bands: KDB 789033 D02 v02r01, Sections G.3, and G.5.

8. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209 - Restricted bands
FCC §15.407(b)(1-4) - Non-Restricted bands

After January 01, 2019 for Outside of the Restricted Bands Emissions

RSS 247 Issue 2 Sections
6.2.1.2 (for 5150-5250 MHz band)
6.2.2.2 (for 5250-5350 MHz band)
6.2.3.2 (for 5470-5600 MHz and 5650-5725 MHz bands)
6.2.4.2 (for 5725-5850 MHz band)

NCC LP0002 §2.7 and §2.8

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 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 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 measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements. Detector used was RMS average detector.

The spectrum from 1GHz to 18GHz was investigated with the transmitter set to transmit the lowest, middle, and highest channels in the 5 GHz bands.

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.

Note: All frequencies were marked at the maximum emissions within the restricted band. This was due to the observed margins of the emissions to the non-restricted limit.

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

5.2 Band

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a CDD	2.087	2.131	0.979	97.94%	0.09	0.479
802.11n HT20 SDM	3.978	4.024	0.989	98.86%	0.00	0.010
802.11n HT40 SDM	3.9780	4.0240	0.989	98.86%	0.00	0.010
802.11ac VHT80 SDM	3.9660	4.0120	0.989	98.85%	0.00	0.010

5.3 Band

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
802.11a CDD	2.086	2.132	0.978	97.84%	0.09	0.479
802.11n HT20 SDM	3.976	4.022	0.989	98.86%	0.00	0.010
802.11n HT40 SDM	3.9810	4.0320	0.987	98.74%	0.00	0.010
802.11ac VHT80 SDM	3.9710	4.0140	0.989	98.93%	0.00	0.010
802.11ac VHT160 SDM	3.9600	4.0030	0.989	98.93%	0.00	0.010

DUTY CYCLE PLOTS – 5.2 Band



DUTY CYCLE PLOTS – 5.3 Band



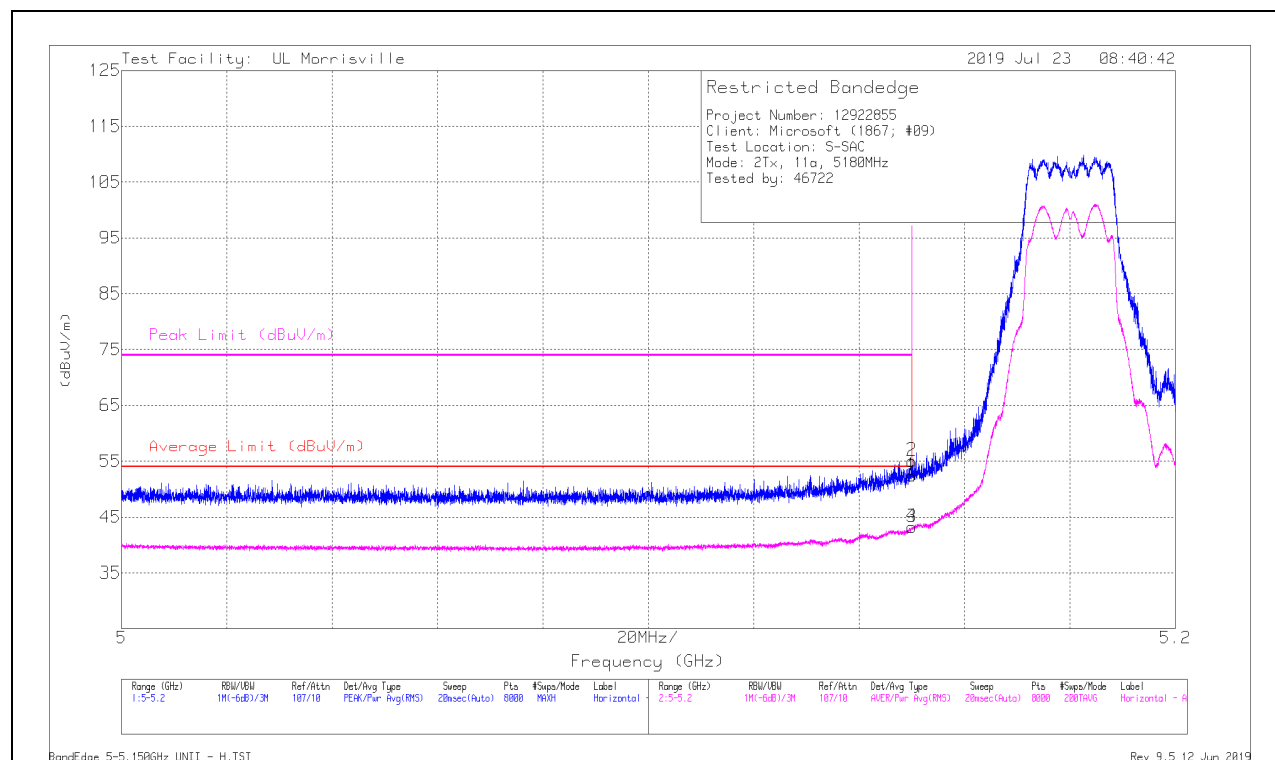
8.2. TRANSMITTER ABOVE 1 GHz

8.2.1. TX ABOVE 1 GHz 802.11a MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.14999	40.73	Pk	34.3	-22.6	0	52.43	-	-	74	-21.57	35	393	H
2	*** 5.14997	43.35	Pk	34.3	-22.6	0	55.05	-	-	74	-18.95	35	393	H
3	*** 5.14999	31.42	RMS	34.3	-22.6	.09	43.21	54	-10.79	-	-	35	393	H
4	*** 5.14997	31.49	RMS	34.3	-22.6	.09	43.28	54	-10.72	-	-	35	393	H

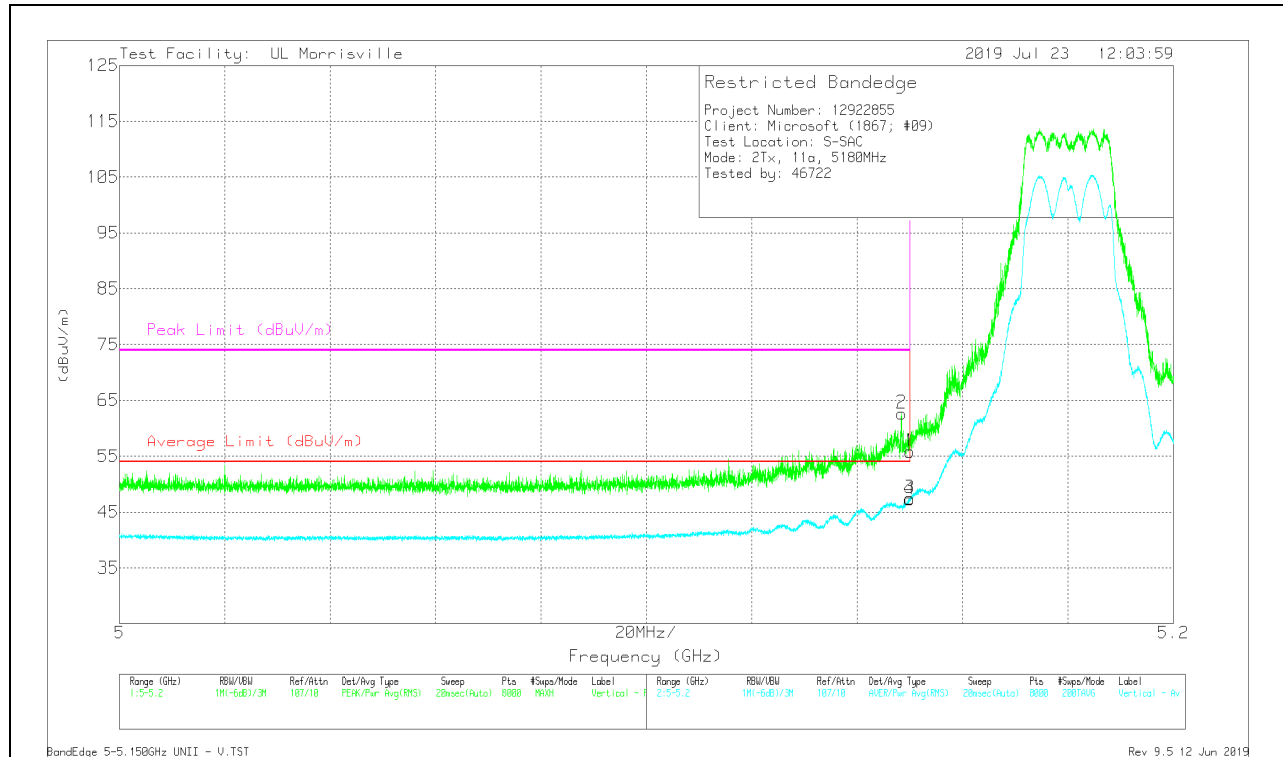
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.14999	44.13	Pk	34.3	-22.6	0	55.83	-	-	74	-18.17	46	244	V
2	*** 5.14839	50.99	Pk	34.3	-22.6	0	62.69	-	-	74	-11.31	46	244	V
3	*** 5.14999	35.68	RMS	34.3	-22.6	.09	47.47	54	-6.53	-	-	46	244	V
4	*** 5.14992	35.49	RMS	34.3	-22.6	.09	47.28	54	-6.72	-	-	46	244	V

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

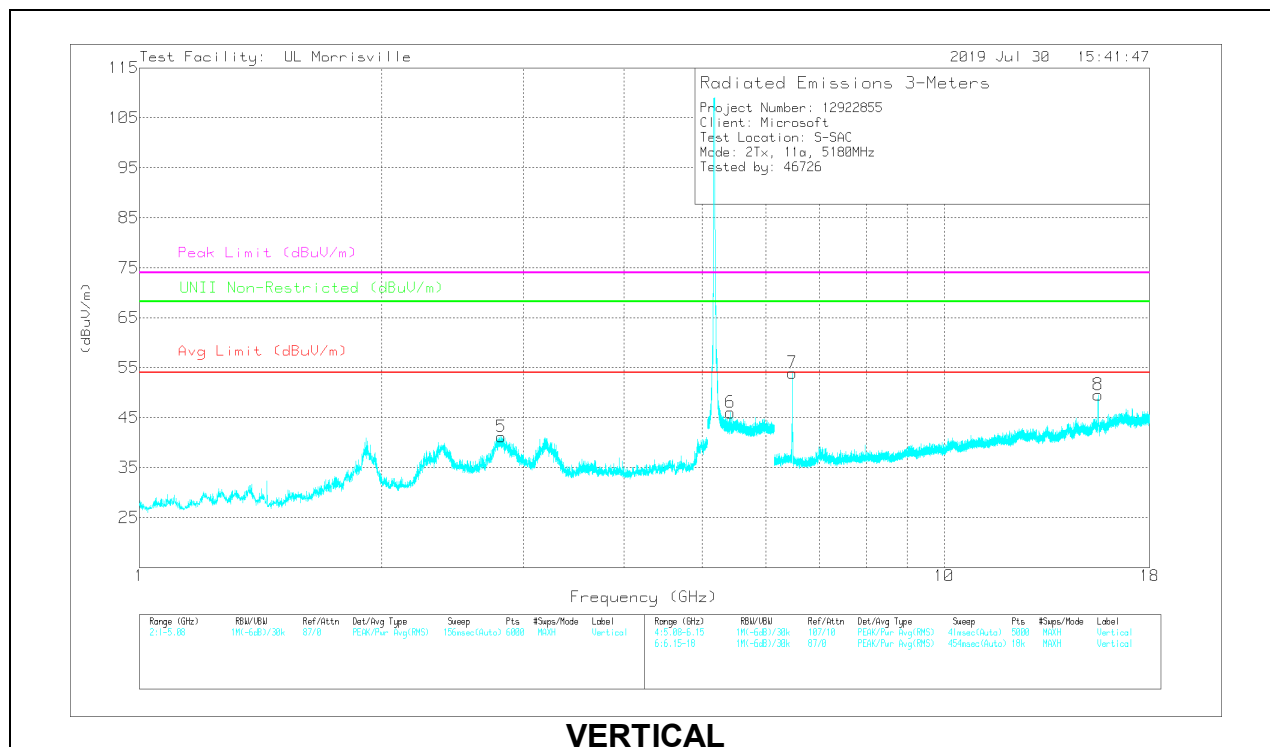
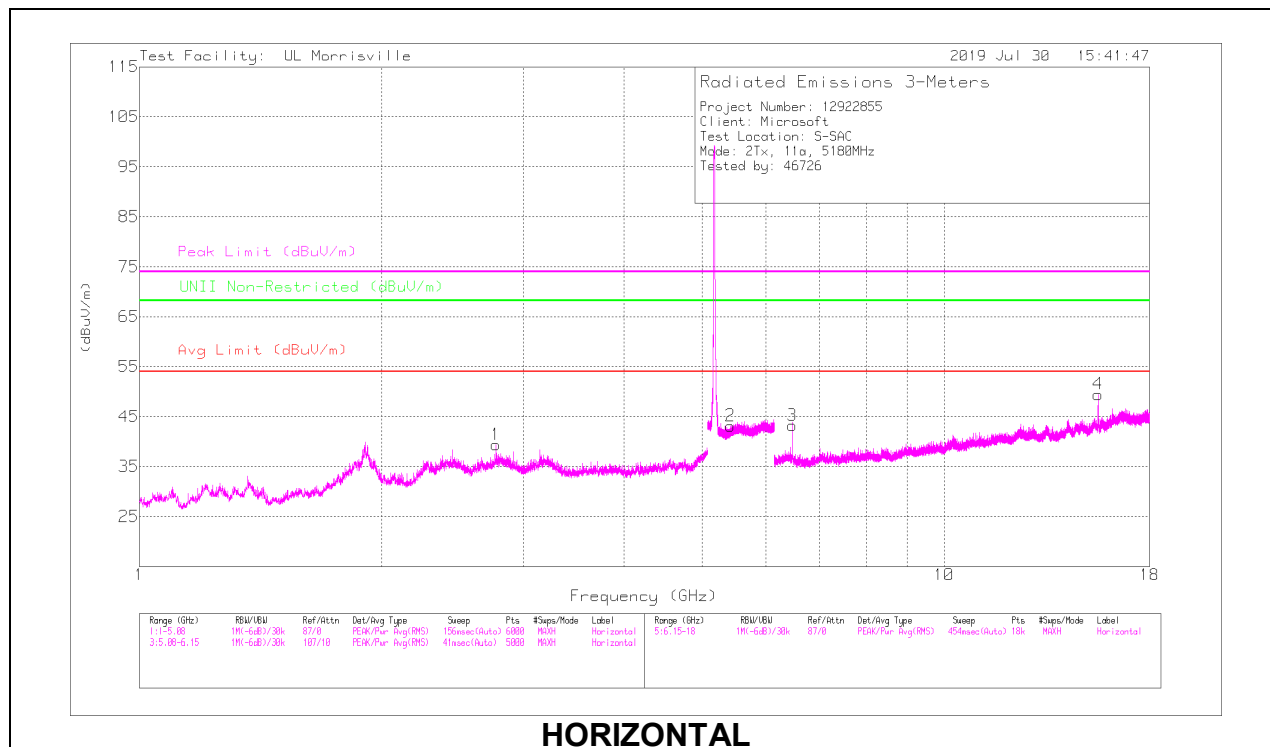
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.78316	46.51	PK-U	32.2	-33.5	0	45.21	-	-	74	-28.79	-	-	150	180	H
	* ** 2.7832	34.81	ADR	32.2	-33.5	.09	33.6	54	-20.4	-	-	-	-	150	180	H
5	* ** 2.80392	51.75	PK-U	32.2	-33.5	0	50.45	-	-	74	-23.55	-	-	101	232	V
	* ** 2.80385	40.35	ADR	32.2	-33.5	.09	39.14	54	-14.86	-	-	-	-	101	232	V
2	* ** 5.42684	39.66	PK-U	34.4	-23.4	0	50.66	-	-	74	-23.34	-	-	48	398	H
	* ** 5.42684	27.36	ADR	34.4	-23.4	.09	38.45	54	-15.55	-	-	-	-	48	398	H
6	* ** 5.41825	41.47	PK-U	34.4	-23.3	0	52.57	-	-	74	-21.43	-	-	15	221	V
	* ** 5.41825	29.46	ADR	34.4	-23.3	.09	40.65	54	-13.35	-	-	-	-	15	221	V
4	* ** 15.53867	40.77	PK-U	40	-24.4	0	56.37	-	-	74	-17.63	-	-	7	282	H
	* ** 15.53863	27.47	ADR	40	-24.4	.09	43.16	54	-10.84	-	-	-	-	7	282	H
8	* ** 15.54409	45.57	PK-U	40	-24.5	0	61.07	-	-	74	-12.93	-	-	17	337	V
	* ** 15.54415	32.5	ADR	40	-24.5	.09	48.09	54	-5.91	-	-	-	-	17	337	V
3	6.47495	50.53	PK-U	35.5	-28.6	0	57.43	-	-	-	-	68.2	-10.77	36	215	V
7	6.47503	39.45	PK-U	35.5	-28.6	0	46.35	-	-	-	-	68.2	-21.85	30	221	H

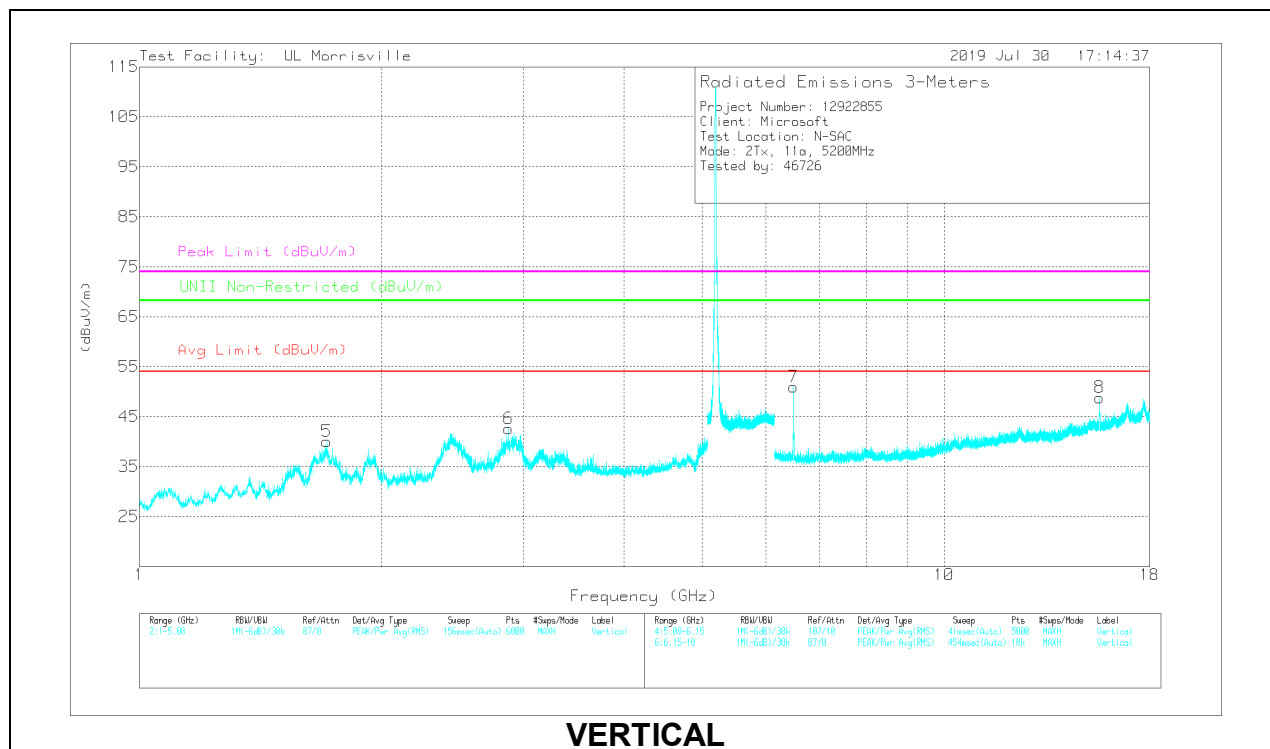
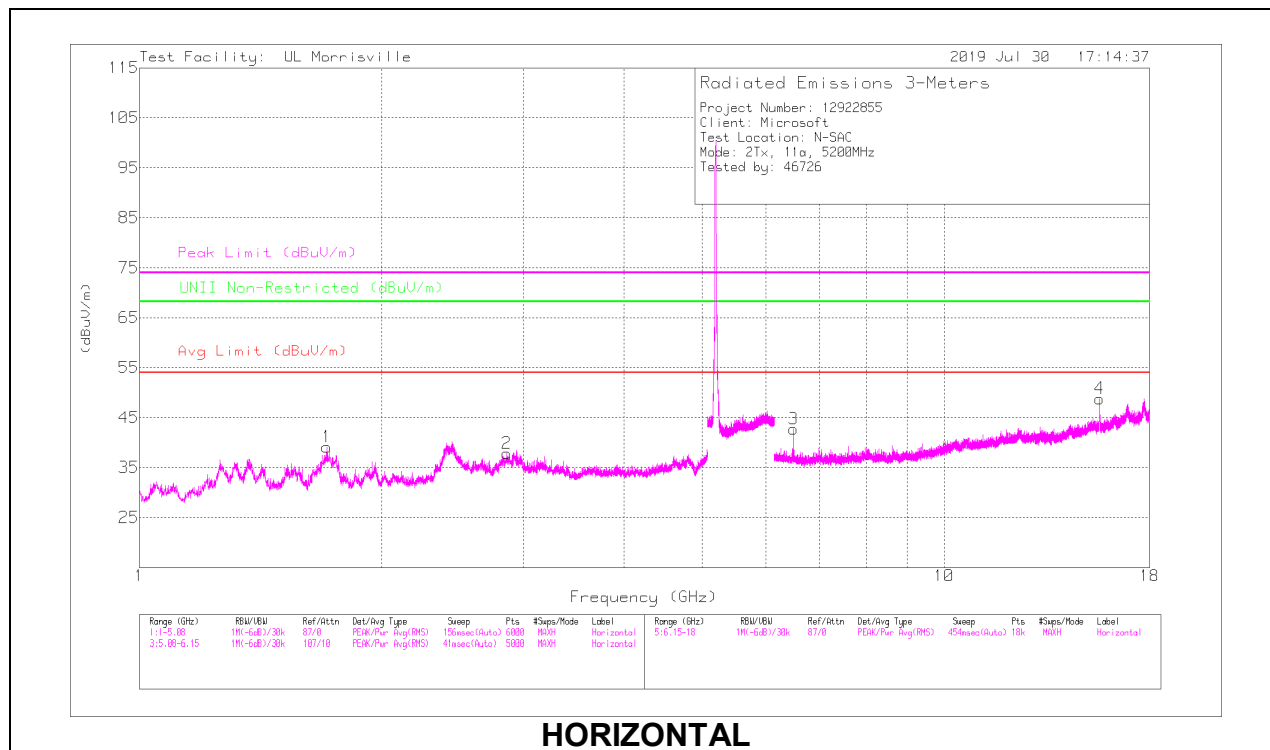
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 1.70775	52.83	PK-U	29.2	-35.4	0	46.63	-	-	74	-27.37	-	-	288	143	H
	*** 1.70773	41.29	ADR	29.2	-35.4	.09	35.18	54	-18.82	-	-	-	-	288	143	H
2	*** 2.85053	46.27	PK-U	32.4	-33.9	0	44.77	-	-	74	-29.23	-	-	297	108	H
	*** 2.85049	33.86	ADR	32.4	-33.9	.09	32.45	54	-21.55	-	-	-	-	297	108	H
5	*** 1.70729	52.6	PK-U	29.2	-35.4	0	46.4	-	-	74	-27.6	-	-	21	234	V
	*** 1.70729	40.68	ADR	29.2	-35.4	.09	34.57	54	-19.43	-	-	-	-	21	234	V
6	*** 2.87376	51.37	PK-U	32.5	-33.9	0	49.97	-	-	74	-24.03	-	-	35	227	V
	*** 2.87381	39.4	ADR	32.5	-33.9	.09	38.09	54	-15.91	-	-	-	-	35	227	V
4	*** 15.60426	46.54	PK-U	40.2	-26.6	0	60.14	-	-	74	-13.86	-	-	249	290	H
	*** 15.60427	33.76	ADR	40.2	-26.6	.09	47.45	54	-6.55	-	-	-	-	249	290	H
8	*** 15.60104	45.08	PK-U	40.2	-26.6	0	58.68	-	-	74	-15.32	-	-	327	320	V
	*** 15.60088	31.85	ADR	40.2	-26.6	.09	45.54	54	-8.46	-	-	-	-	327	320	V
7	6.49996	49.85	PK-U	35.5	-30.1	0	55.25	-	-	-	-	68.2	-12.95	319	259	V
3	6.50001	46.76	PK-U	35.5	-30.1	0	52.16	-	-	-	-	68.2	-16.04	328	375	H

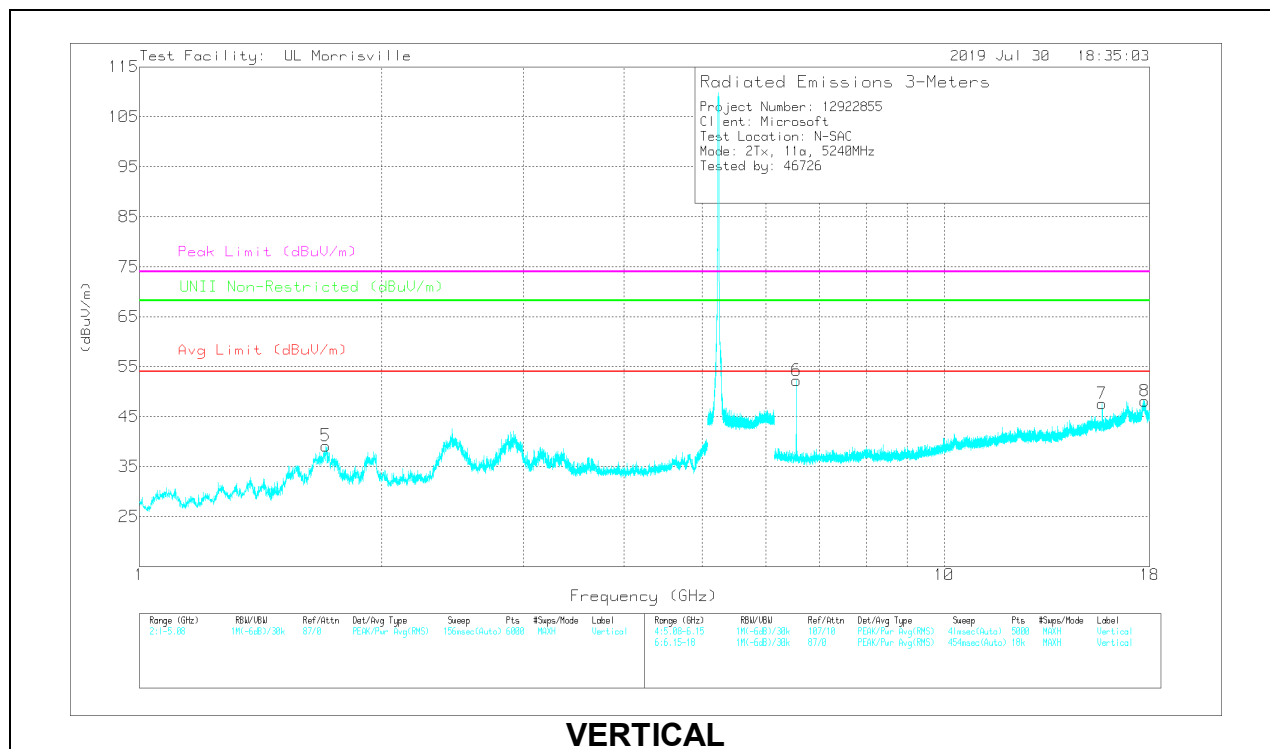
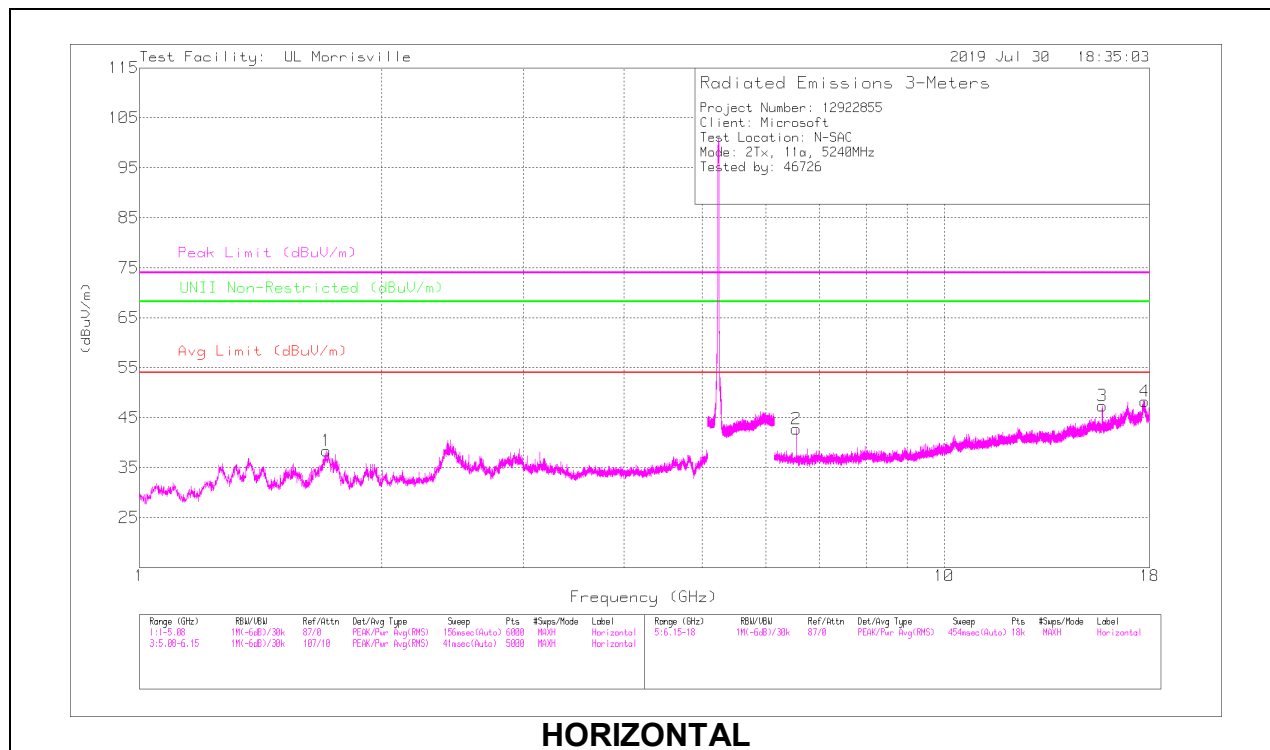
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 1.70956	52.46	PK-U	29.2	-35.4	0	46.26	-	-	74	-27.74	-	-	289	161	H
	*** 1.70952	41.08	ADR	29.2	-35.4	.09	34.97	54	-19.03	-	-	-	-	289	161	H
5	*** 1.70849	52.66	PK-U	29.2	-35.4	0	46.46	-	-	74	-27.54	-	-	33	232	V
	*** 1.70862	41	ADR	29.2	-35.4	.09	34.89	54	-19.11	-	-	-	-	33	232	V
3	*** 15.72334	45.57	PK-U	40.1	-25.3	0	60.37	-	-	74	-13.63	-	-	252	288	H
	*** 15.72331	32.09	ADR	40.1	-25.3	.09	46.98	54	-7.02	-	-	-	-	252	288	H
4	*** 17.73921	34.05	PK-U	41.1	-20.4	0	54.75	-	-	74	-19.25	-	-	58	322	H
	*** 17.73919	22.16	ADR	41.1	-20.4	.09	42.95	54	-11.05	-	-	-	-	58	322	H
7	*** 15.71318	45.69	PK-U	40.1	-25.5	0	60.29	-	-	74	-13.71	-	-	309	331	V
	*** 15.71312	32.32	ADR	40.1	-25.5	.09	47.01	54	-6.99	-	-	-	-	309	331	V
8	*** 17.74029	34.94	PK-U	41.1	-20.4	0	55.64	-	-	74	-18.36	-	-	234	238	V
	*** 17.74031	22.2	ADR	41.1	-20.4	.09	42.99	54	-11.01	-	-	-	-	234	238	V
2	6.54997	45.52	PK-U	35.5	-30.6	0	50.42	-	-	-	-	68.2	-17.78	324	394	H
6	6.55	51.1	PK-U	35.5	-30.6	0	56	-	-	-	-	68.2	-12.2	287	211	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

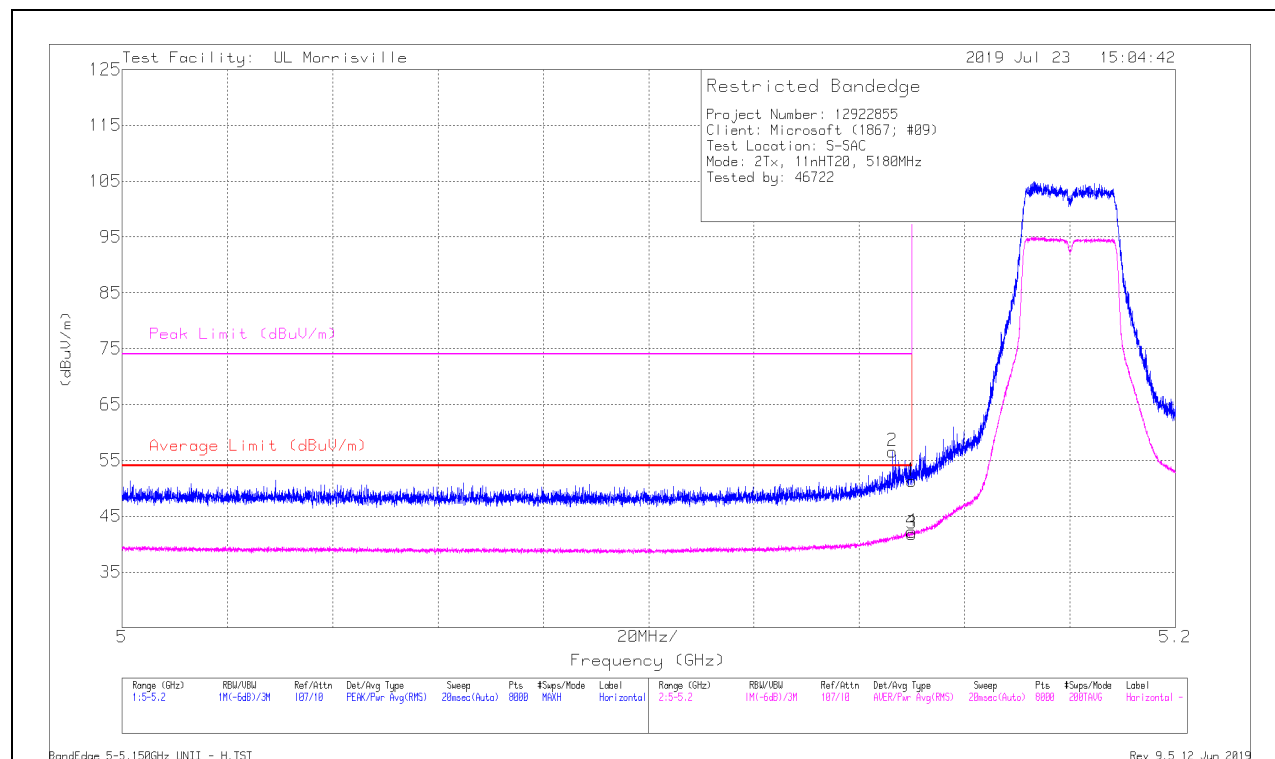
ADR - U-NII AD primary method, RMS average

8.2.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.14999	39.65	Pk	34.3	-22.6	0	51.35	-	-	74	-22.65	53	322	H
2	*** 5.14624	44.92	Pk	34.3	-22.6	0	56.62	-	-	74	-17.38	53	322	H
3	*** 5.14999	30.14	RMS	34.3	-22.6	0	41.84	54	-12.16	-	-	53	322	H
4	*** 5.14992	30.52	RMS	34.3	-22.6	0	42.22	54	-11.78	-	-	53	322	H

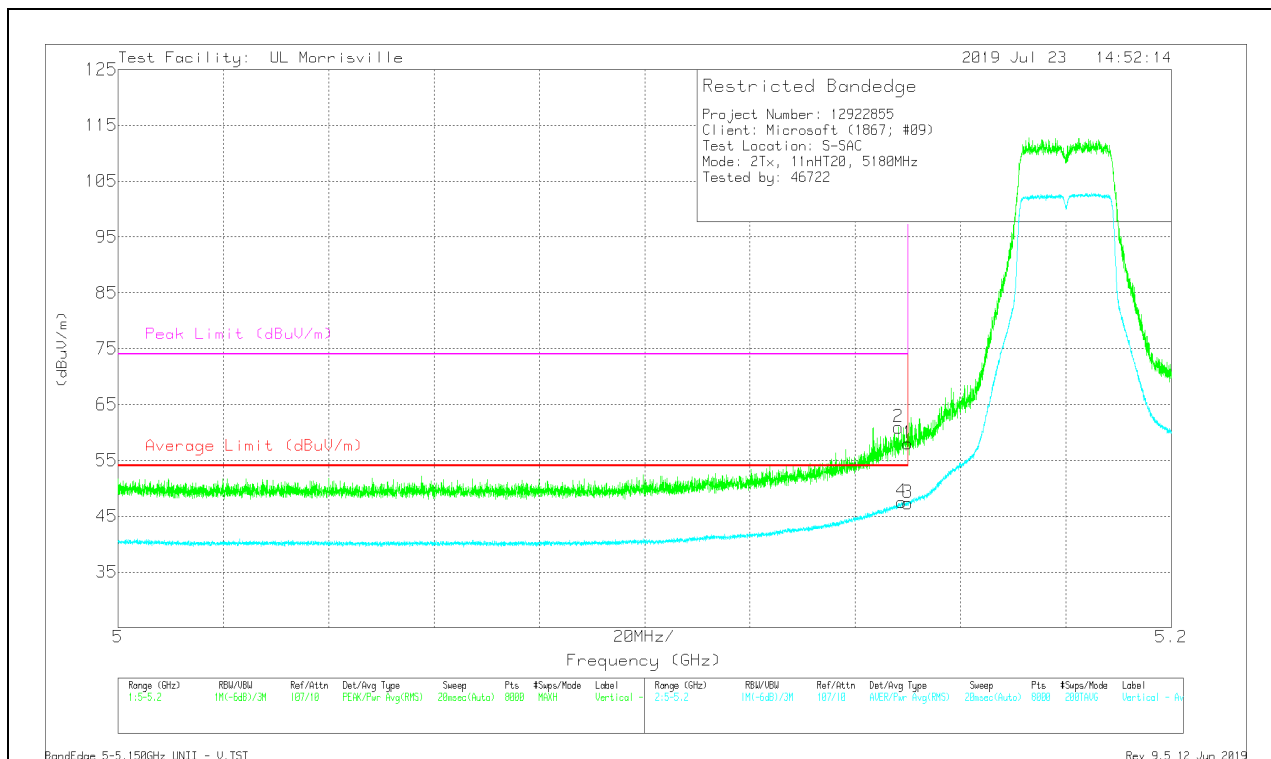
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.14999	46.32	Pk	34.3	-22.6	0	58.02	-	-	74	-15.98	49	218	V
2	*** 5.14814	49.21	Pk	34.3	-22.6	0	60.91	-	-	74	-13.09	49	218	V
3	*** 5.14999	35.65	RMS	34.3	-22.6	0	47.35	54	-6.65	-	-	49	218	V
4	*** 5.14877	35.88	RMS	34.3	-22.6	0	47.58	54	-6.42	-	-	49	218	V

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

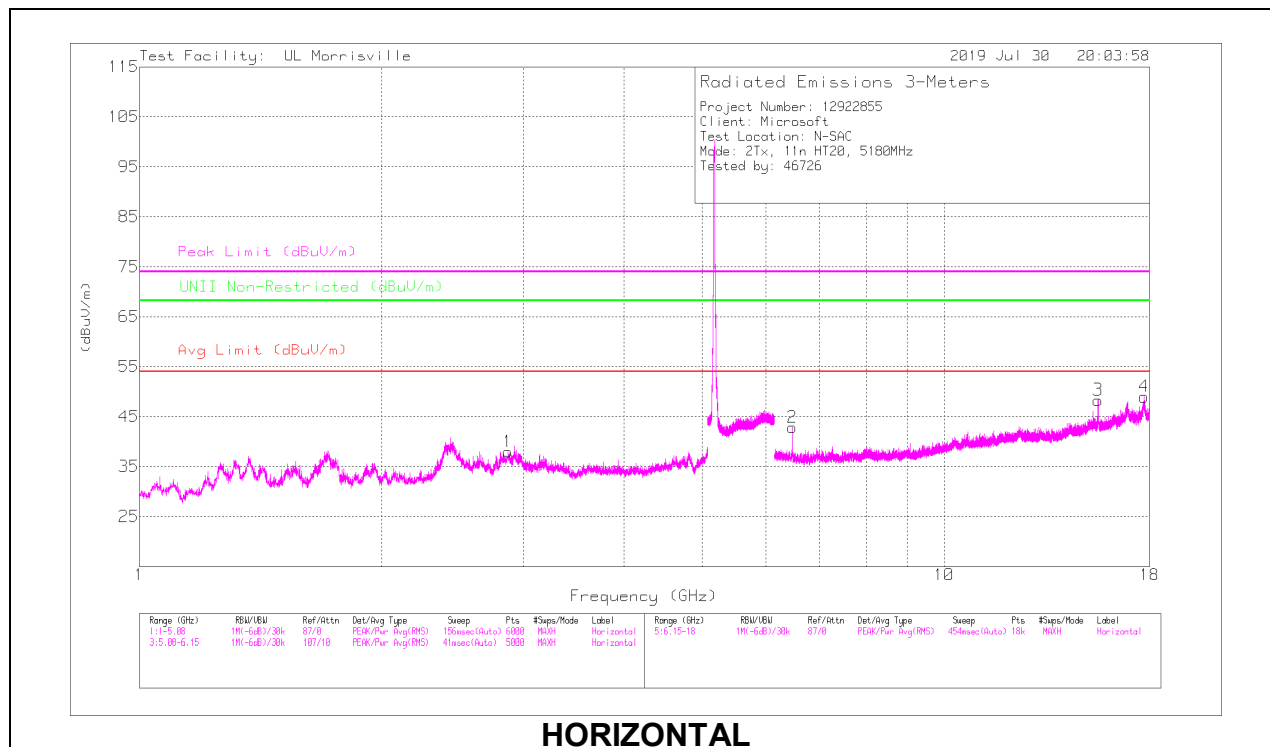
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

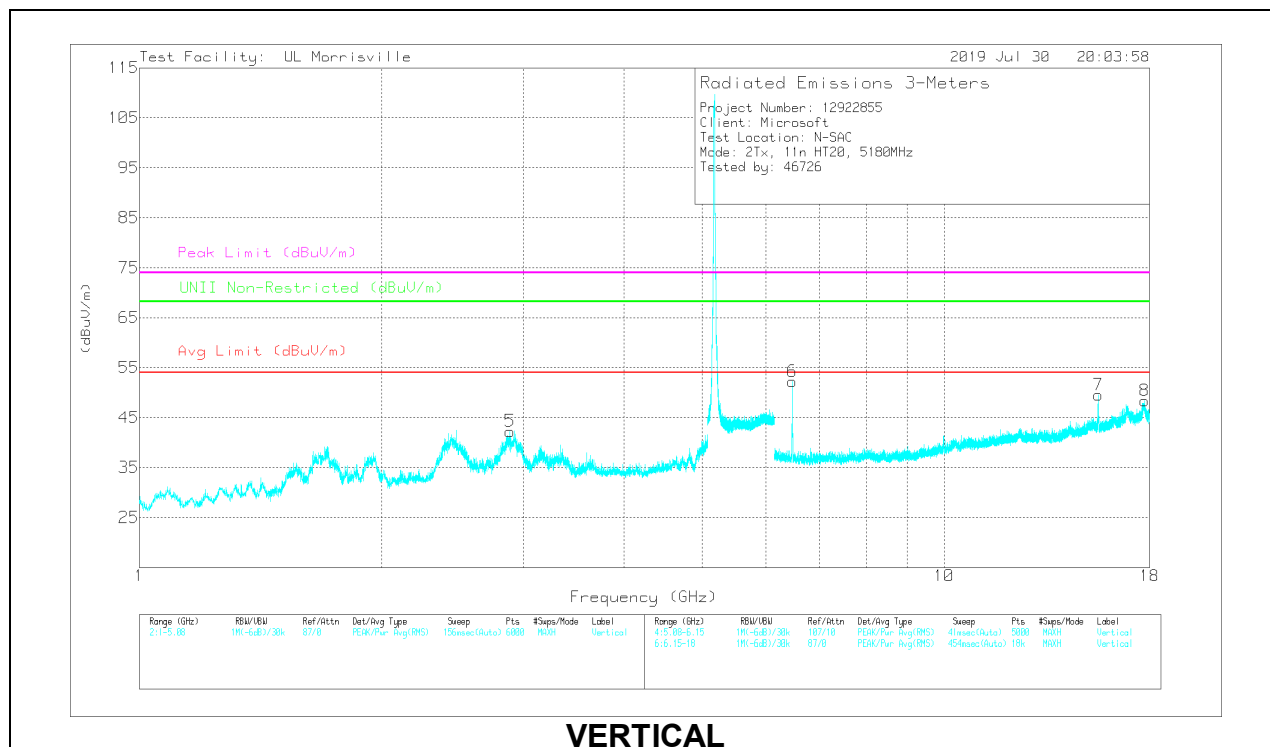
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.86256	47	PK-U	32.5	-33.8	45.7	-	-	74	-28.3	-	-	299	106	H
	* ** 2.86243	35.24	ADR	32.5	-33.8	33.94	54	-20.06	-	-	-	-	299	106	H
5	* ** 2.8805	51.12	PK-U	32.6	-33.8	49.92	-	-	74	-24.08	-	-	34	226	V
	* ** 2.88051	39.15	ADR	32.6	-33.8	37.95	54	-16.05	-	-	-	-	34	226	V
3	* ** 15.54292	46.68	PK-U	40.2	-25.2	61.68	-	-	74	-12.32	-	-	251	278	H
	* ** 15.54288	33.83	ADR	40.2	-25.2	48.83	54	-5.17	-	-	-	-	251	278	H
4	* ** 17.71368	34.21	PK-U	41.1	-20.8	54.51	-	-	74	-19.49	-	-	191	274	H
	* ** 17.7138	22.35	ADR	41.1	-20.8	42.65	54	-11.35	-	-	-	-	191	274	H
7	* ** 15.54127	44.21	PK-U	40.2	-25.1	59.31	-	-	74	-14.69	-	-	263	391	V
	* ** 15.54133	31.13	ADR	40.2	-25.1	46.23	54	-7.77	-	-	-	-	263	391	V
8	* ** 17.7393	34.37	PK-U	41.1	-20.4	55.07	-	-	74	-18.93	-	-	349	235	V
	* ** 17.73921	22.28	ADR	41.1	-20.4	42.98	54	-11.02	-	-	-	-	349	235	V
6	6.47498	52.13	PK-U	35.5	-30	57.63	-	-	-	-	68.2	-10.57	324	248	V
2	6.47506	35.34	ADR	35.5	-30	40.84	-	-	-	-	-	-	356	391	H

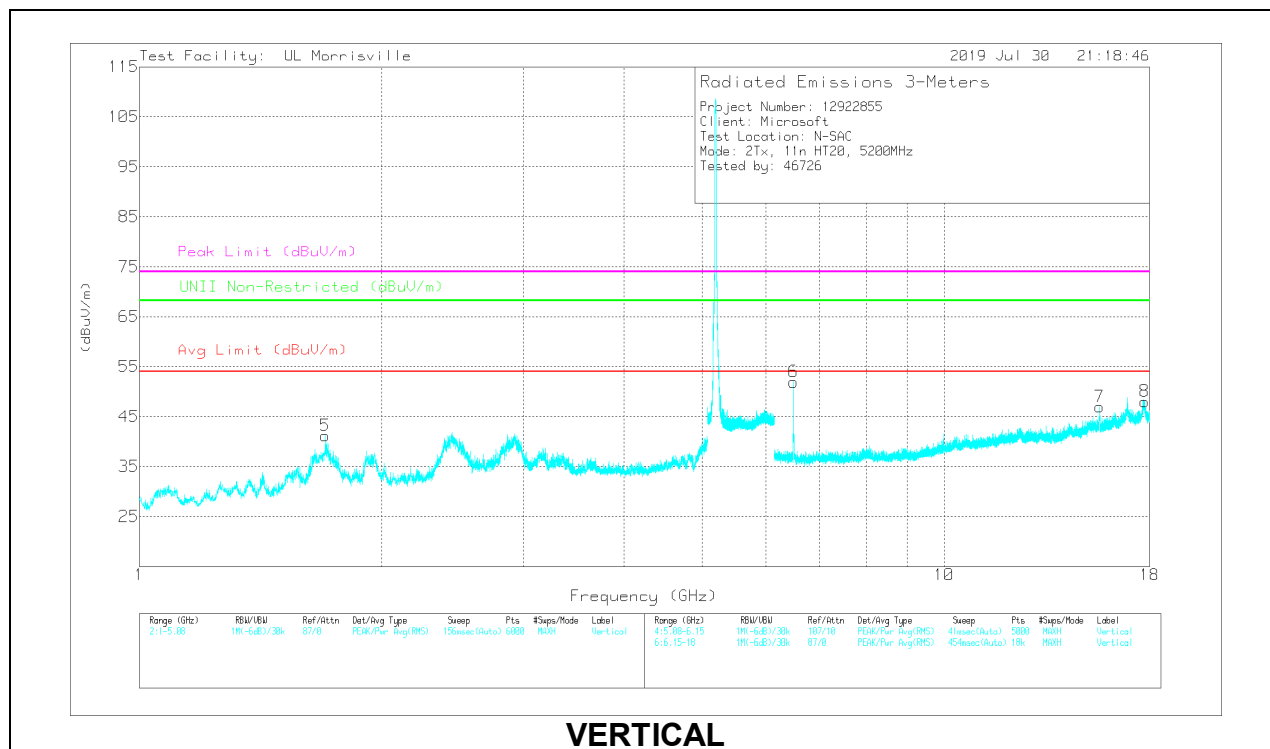
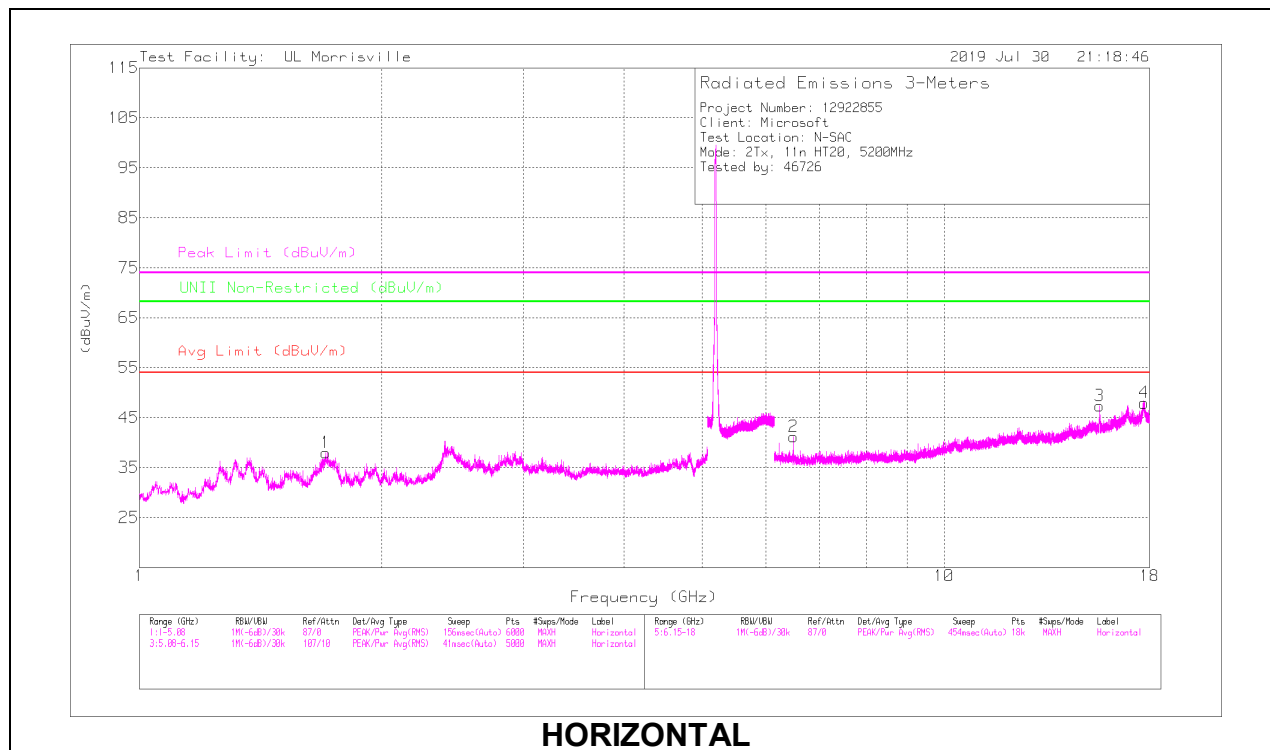
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.7004	53.63	PK-U	29	-35.3	47.33	-	-	74	-26.67	-	-	288	157	H
	* ** 1.70053	40.63	ADR	29	-35.3	34.33	54	-19.67	-	-	-	-	288	157	H
5	* ** 1.69795	53.43	PK-U	29	-35.3	47.13	-	-	74	-26.87	-	-	26	210	V
	* ** 1.69785	41.16	ADR	29	-35.3	34.86	54	-19.14	-	-	-	-	26	210	V
3	* ** 15.60003	48.25	PK-U	40.2	-26.6	61.85	-	-	74	-12.15	-	-	257	279	H
	* ** 15.59999	35.35	ADR	40.2	-26.6	48.95	54	-5.05	-	-	-	-	257	279	H
4	* ** 17.71437	34.21	PK-U	41.1	-20.8	54.51	-	-	74	-19.49	-	-	207	148	H
	* ** 17.7144	22.3	ADR	41.1	-20.8	42.6	54	-11.4	-	-	-	-	207	148	H
7	* ** 15.59618	44.72	PK-U	40.2	-26.5	58.42	-	-	74	-15.58	-	-	304	316	V
	* ** 15.59616	32.41	ADR	40.2	-26.5	46.11	54	-7.89	-	-	-	-	304	316	V
8	* ** 17.73809	34.26	PK-U	41.1	-20.3	55.06	-	-	74	-18.94	-	-	267	320	V
	* ** 17.73808	22.26	ADR	41.1	-20.3	43.06	54	-10.94	-	-	-	-	267	320	V
6	6.49999	50.58	PK-U	35.5	-30.1	55.98	-	-	-	-	68.2	-12.22	279	229	V
2	6.50009	42.47	PK-U	35.5	-30.1	47.87	-	-	-	-	68.2	-20.33	69	208	H

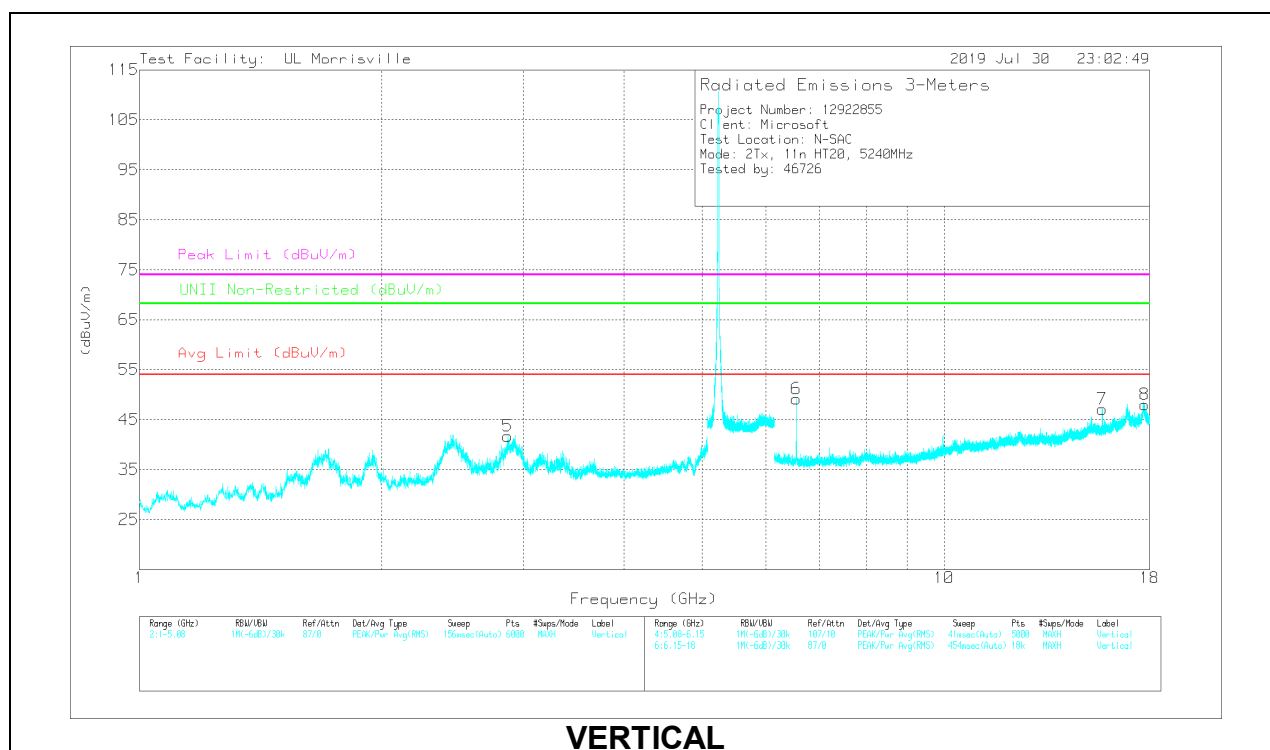
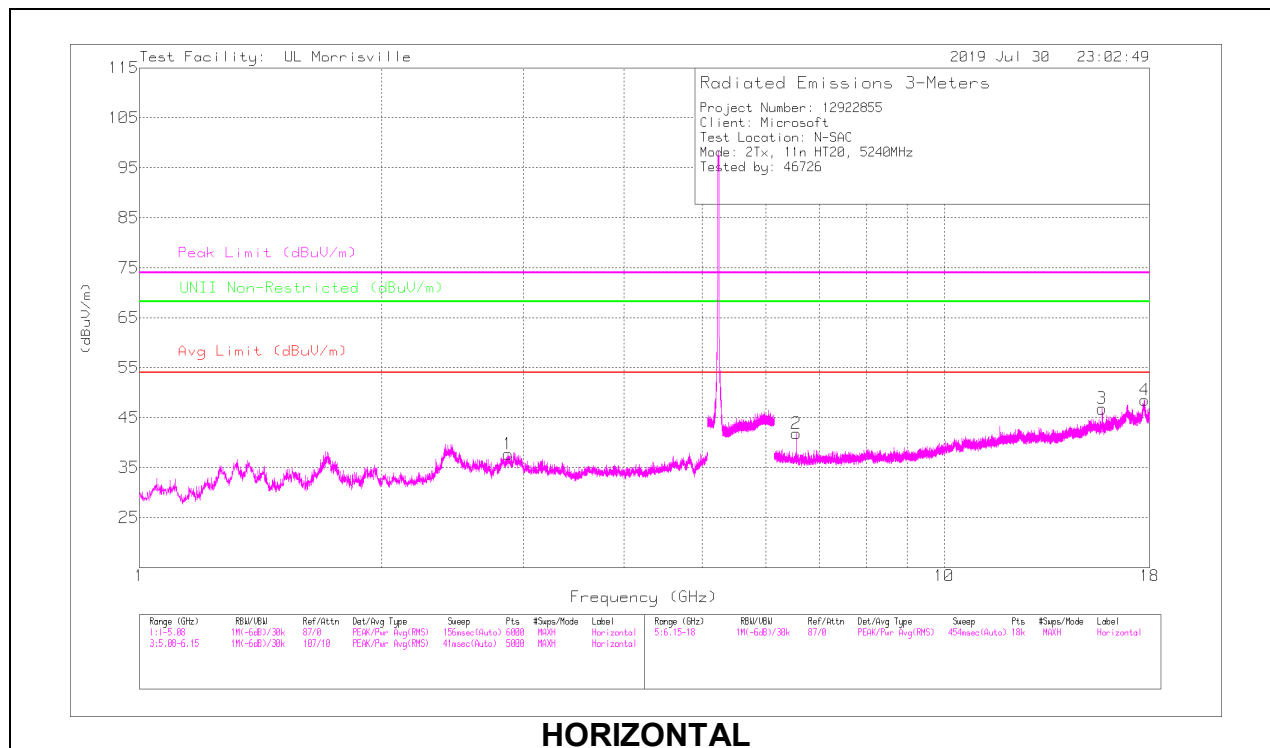
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.87061	46.83	PK-U	32.5	-33.9	45.43	-	-	74	-28.57	-	-	296	102	H
	* ** 2.87059	34.4	ADR	32.5	-33.9	33	54	-21	-	-	-	-	296	102	H
5	* ** 2.87178	51.46	PK-U	32.5	-33.9	50.06	-	-	74	-23.94	-	-	37	226	V
	* ** 2.87176	39.35	ADR	32.5	-33.9	37.95	54	-16.05	-	-	-	-	37	226	V
3	* ** 15.71639	44.66	PK-U	40.1	-25.4	59.36	-	-	74	-14.64	-	-	250	292	H
	* ** 15.71651	31.25	ADR	40.1	-25.4	45.95	54	-8.05	-	-	-	-	250	292	H
4	* ** 17.73879	34.25	PK-U	41.1	-20.4	54.95	-	-	74	-19.05	-	-	179	138	H
	* ** 17.73879	21.85	ADR	41.1	-20.4	42.55	54	-11.45	-	-	-	-	179	138	H
7	* ** 15.72272	44.88	PK-U	40.1	-25.3	59.68	-	-	74	-14.32	-	-	315	335	V
	* ** 15.7226	31.53	ADR	40.1	-25.3	46.33	54	-7.67	-	-	-	-	315	335	V
8	* ** 17.74566	34.56	PK-U	41.1	-20.5	55.16	-	-	74	-18.84	-	-	4	346	V
	* ** 17.74563	21.97	ADR	41.1	-20.5	42.57	54	-11.43	-	-	-	-	4	346	V
6	6.54994	50.87	PK-U	35.5	-30.6	55.77	-	-	-	-	68.2	-12.43	286	211	V
2	6.54999	44.4	PK-U	35.5	-30.6	49.3	-	-	-	-	68.2	-18.9	298	392	H

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

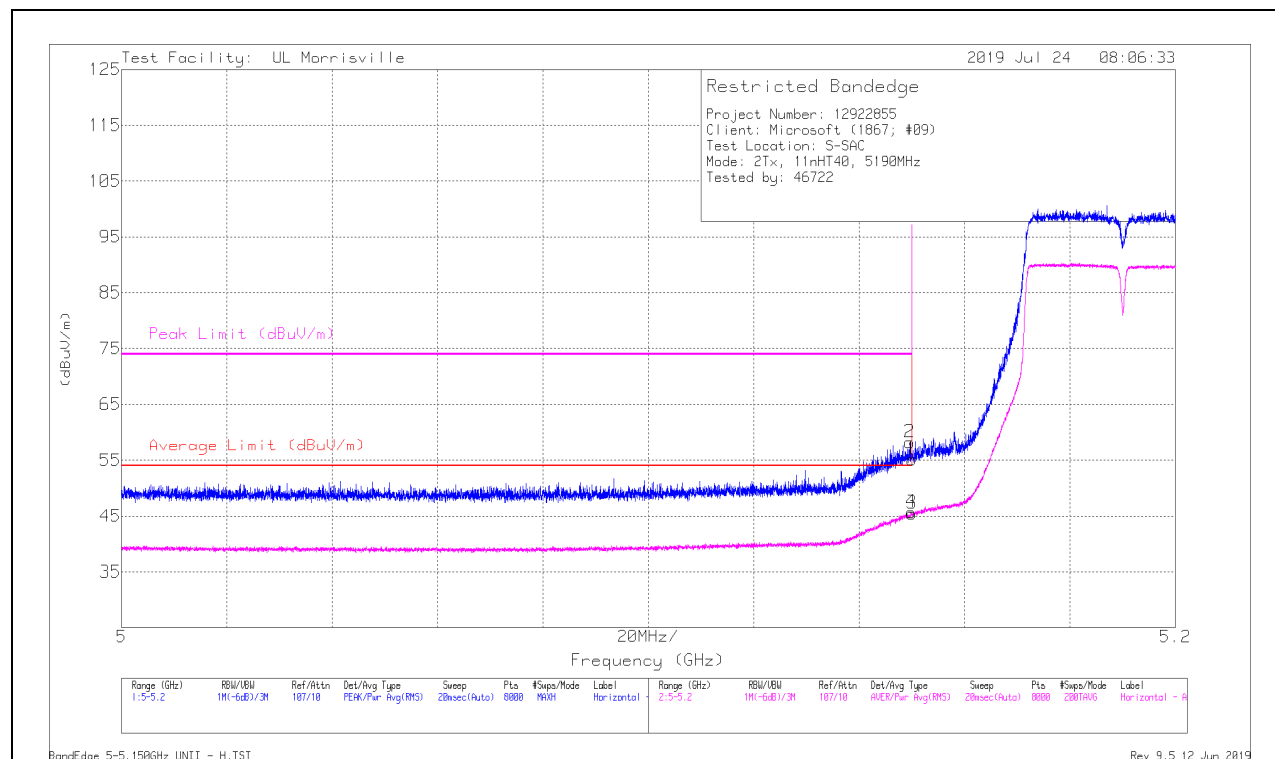
ADR - U-NII AD primary method, RMS average

8.2.3. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.14999	43.4	Pk	34.3	-22.6	0	55.1	-	-	74	-18.9	55	382	H
2	*** 5.14957	46.52	Pk	34.3	-22.6	0	58.22	-	-	74	-15.78	55	382	H
3	*** 5.14999	33.77	RMS	34.3	-22.6	0	45.47	54	-8.53	-	-	55	382	H
4	*** 5.14982	33.97	RMS	34.3	-22.6	0	45.67	54	-8.33	-	-	55	382	H

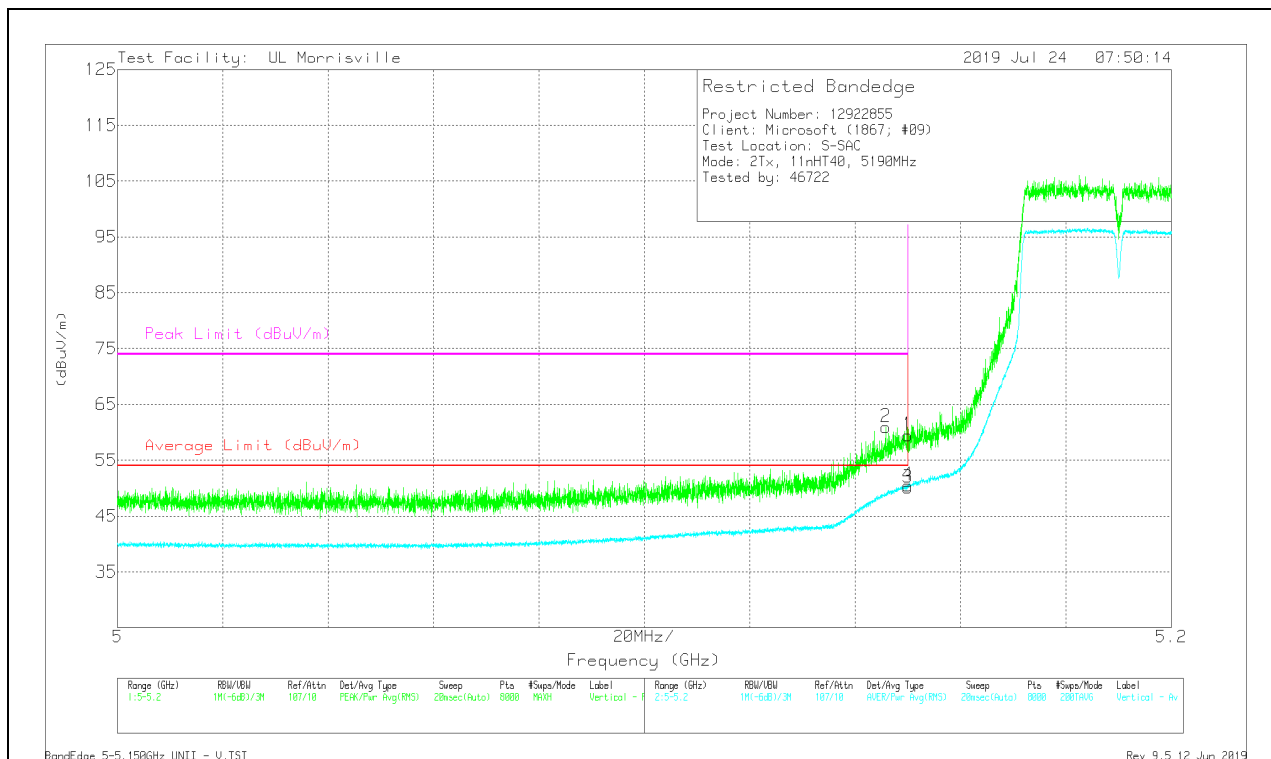
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.14999	47.79	Pk	34.3	-22.6	0	59.49	-	-	74	-14.51	37	228	V
2	*** 5.14577	49.25	Pk	34.3	-22.6	0	60.95	-	-	74	-13.05	37	228	V
3	*** 5.14999	38.42	RMS	34.3	-22.6	0	50.12	54	-3.88	-	-	37	228	V
4	*** 5.14997	38.81	RMS	34.3	-22.6	0	50.51	54	-3.49	-	-	37	228	V

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

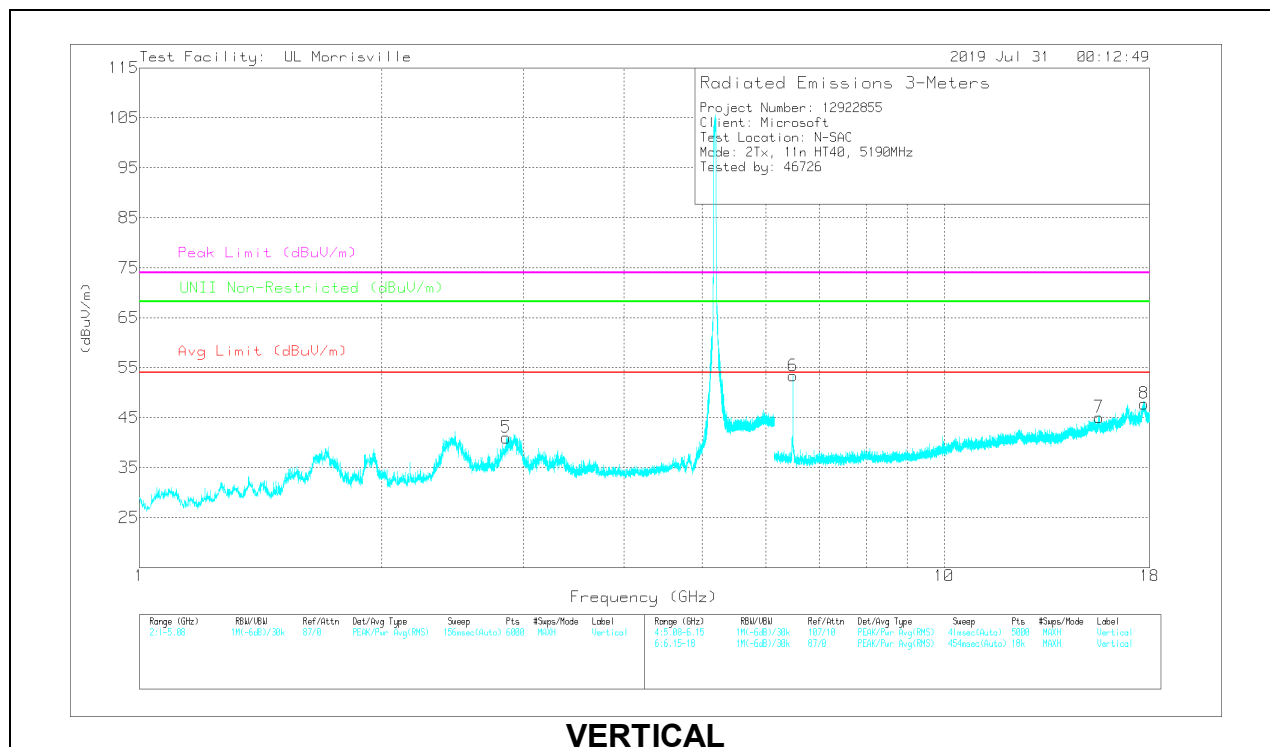
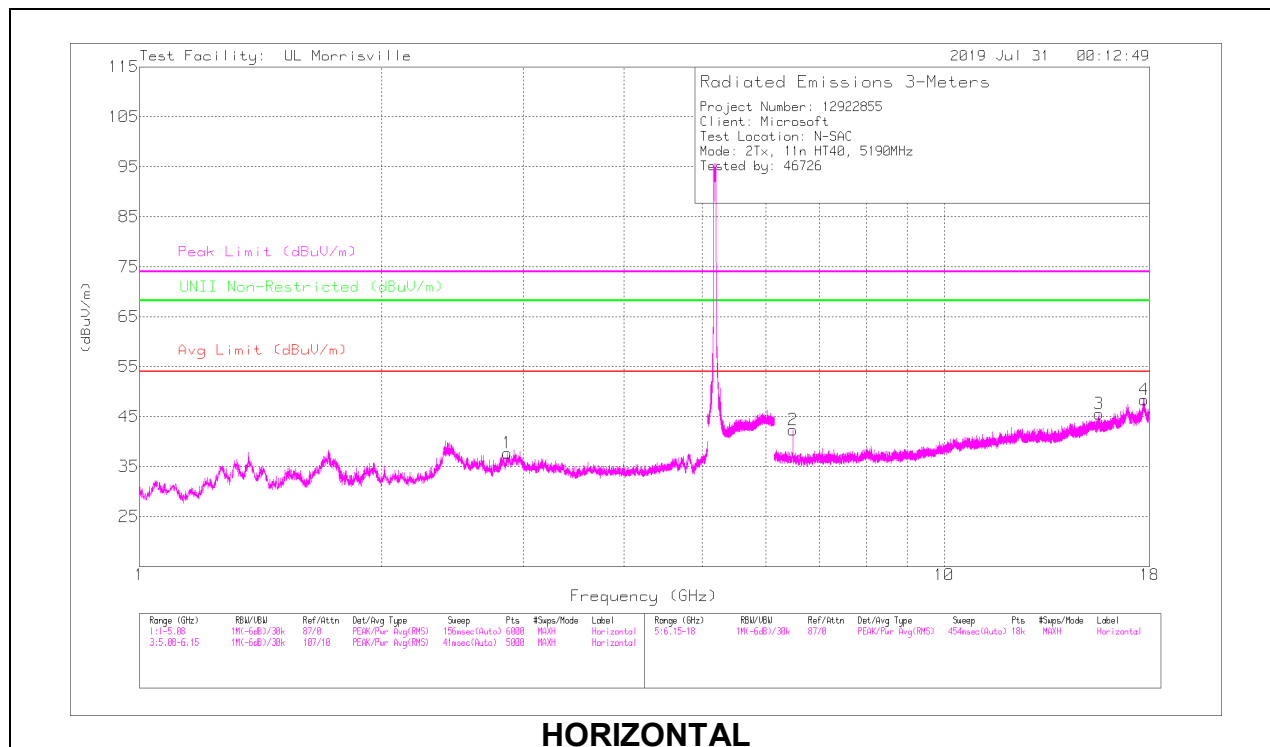
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS

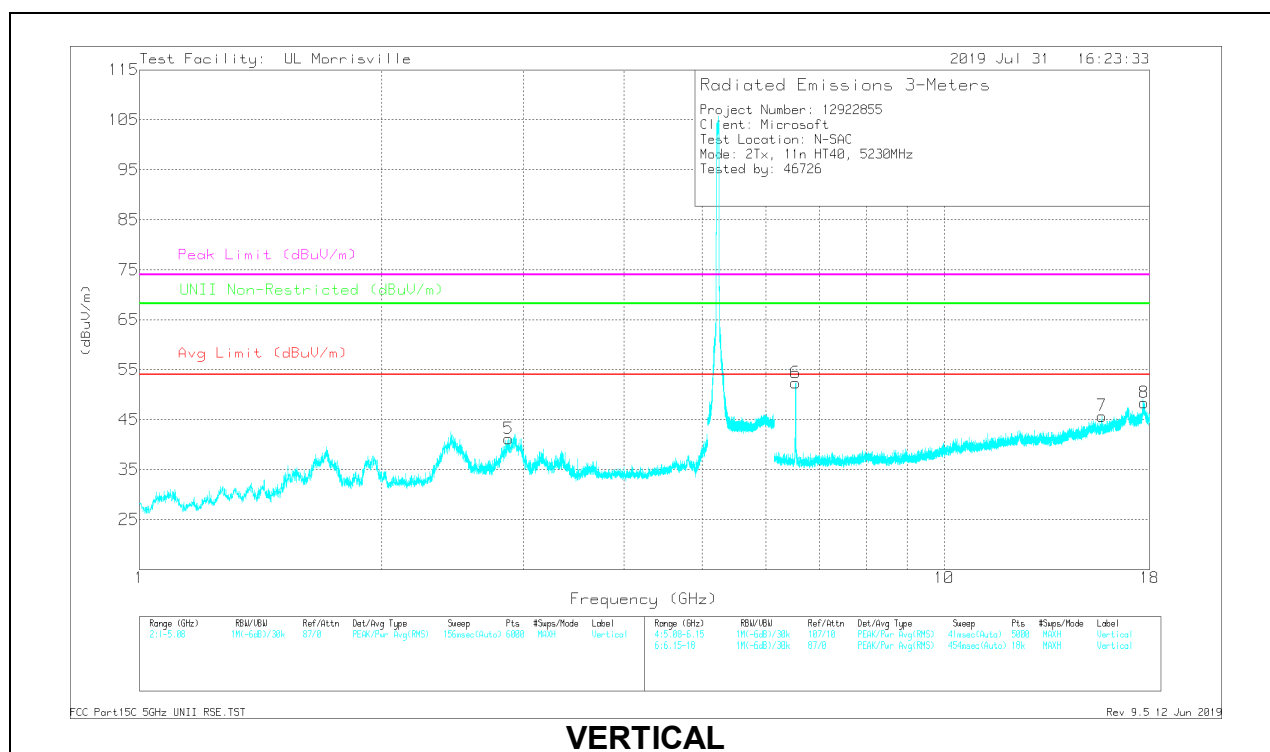
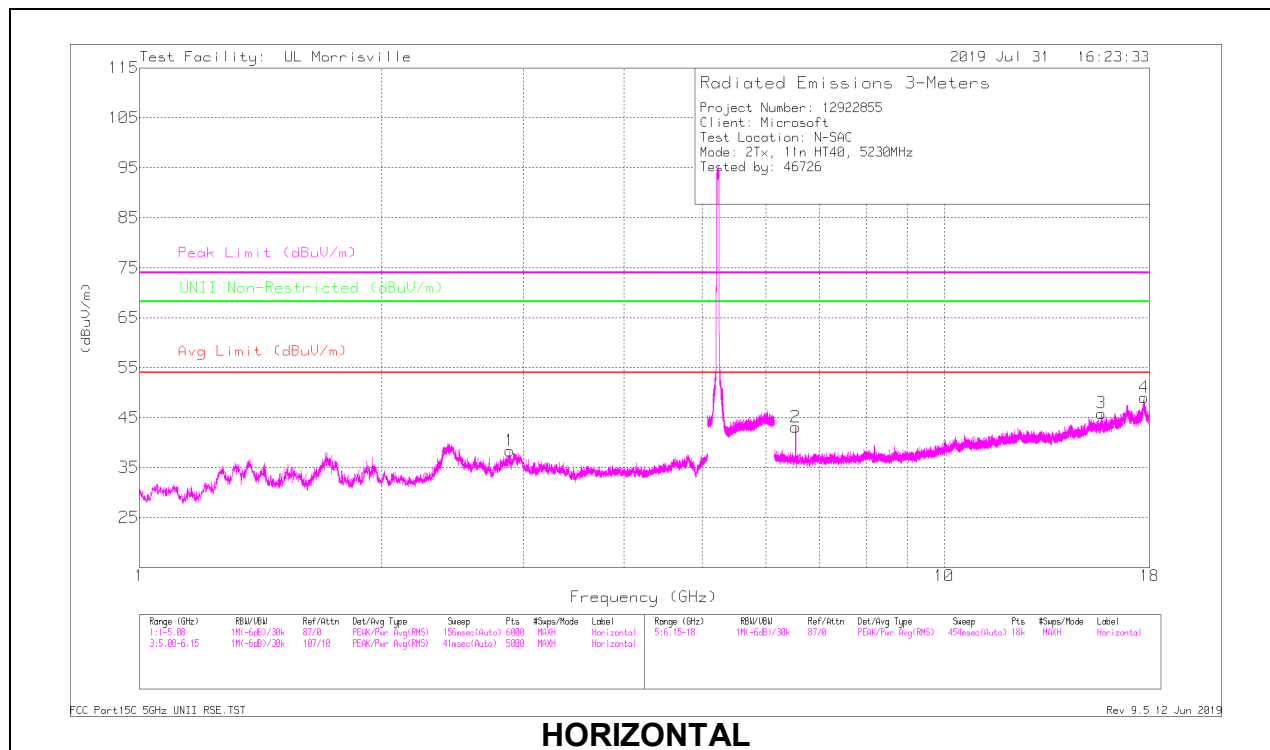


RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.87141	47.02	PK-U	32.5	-33.9	45.62	-	-	74	-28.38	-	-	301	112	H
	* ** 2.87133	34.77	ADR	32.5	-33.9	33.37	54	-20.63	-	-	-	-	301	112	H
5	* ** 2.86123	50.2	PK-U	32.4	-33.8	48.8	-	-	74	-25.2	-	-	33	230	V
	* ** 2.86118	38.51	ADR	32.4	-33.8	37.11	54	-16.89	-	-	-	-	33	230	V
3	* ** 15.57999	41.63	PK-U	40.2	-25.9	55.93	-	-	74	-18.07	-	-	251	261	H
	* ** 15.57998	29.43	ADR	40.2	-25.9	43.73	54	-10.27	-	-	-	-	251	261	H
4	* ** 17.73335	34.22	PK-U	41.1	-20.3	55.02	-	-	74	-18.98	-	-	40	301	H
	* ** 17.73341	22.07	ADR	41.1	-20.3	42.87	54	-11.13	-	-	-	-	40	301	H
7	* ** 15.5801	42.02	PK-U	40.2	-25.9	56.32	-	-	74	-17.68	-	-	315	335	V
	* ** 15.58004	29.31	ADR	40.2	-25.9	43.61	54	-10.39	-	-	-	-	315	335	V
8	* ** 17.73175	33.79	PK-U	41.1	-20.3	54.59	-	-	74	-19.41	-	-	196	248	V
	* ** 17.73174	21.87	ADR	41.1	-20.3	42.67	54	-11.33	-	-	-	-	196	248	V
2	6.48752	46.96	PK-U	35.5	-30.1	52.36	-	-	-	-	68.2	-15.84	335	349	H
	6.48752	38.84	ADR	35.5	-30.1	44.24	-	-	-	-	-	-	335	349	H
6	6.48753	44.36	ADR	35.5	-30.1	49.76	-	-	-	-	-	-	324	259	V
	6.48754	51.12	PK-U	35.5	-30.1	56.52	-	-	-	-	68.2	-11.68	324	259	V

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
 ** - indicates frequency in Taiwan NCC LP0002 Restricted Band
 PK-U - U-NII: Maximum Peak
 ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.88472	47.73	PK-U	32.6	-33.8	46.53	-	-	74	-27.47	-	-	76	167	H
	* ** 2.88471	35.51	ADR	32.6	-33.8	34.31	54	-19.69	-	-	-	-	76	167	H
5	* ** 2.87669	51.57	PK-U	32.6	-33.8	50.37	-	-	74	-23.63	-	-	37	225	V
	* ** 2.87676	39.18	ADR	32.6	-33.8	37.98	54	-16.02	-	-	-	-	37	225	V
3	* ** 15.6827	41.03	PK-U	40.1	-25.9	55.23	-	-	74	-18.77	-	-	250	303	H
	* ** 15.68276	28.83	ADR	40.1	-25.9	43.03	54	-10.97	-	-	-	-	250	303	H
4	* ** 17.73322	33.86	PK-U	41.1	-20.3	54.66	-	-	74	-19.34	-	-	44	118	H
	* ** 17.73316	22	ADR	41.1	-20.3	42.8	54	-11.2	-	-	-	-	44	118	H
7	* ** 15.69755	41.65	PK-U	40.1	-25.7	56.05	-	-	74	-17.95	-	-	307	321	V
	* ** 15.69755	29.65	ADR	40.1	-25.7	44.05	54	-9.95	-	-	-	-	307	321	V
8	* ** 17.83766	35.86	PK-U	41	-24.1	52.76	-	-	74	-21.24	-	-	358	220	V
	* ** 17.83738	23.79	ADR	41	-24.1	40.69	54	-13.31	-	-	-	-	358	220	V
6	6.5375	51.01	PK-U	35.5	-30.5	56.01	-	-	-	-	68.2	-12.19	335	259	V
2	6.53753	46.81	PK-U	35.5	-30.5	51.81	-	-	-	-	68.2	-16.39	336	340	H

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

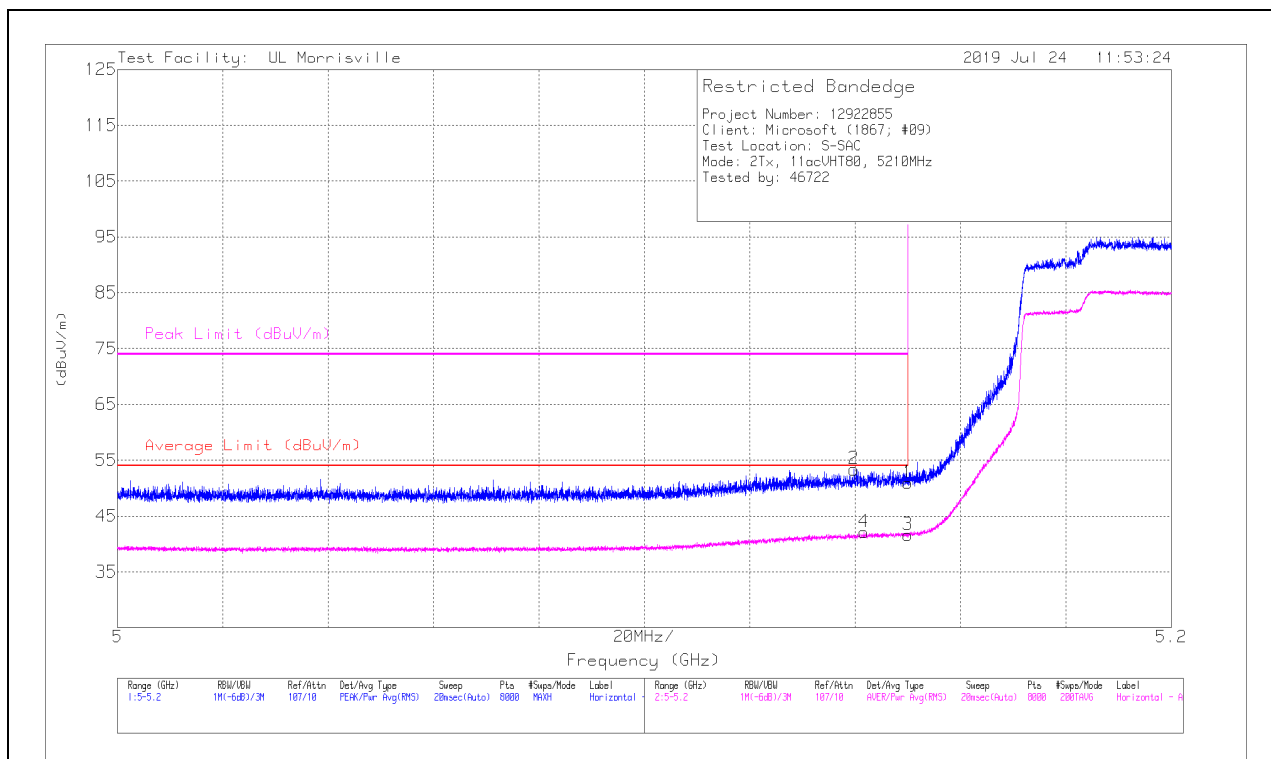
ADR - U-NII AD primary method, RMS average

8.2.4. TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

BANDEDGE (LOW CHANNEL)

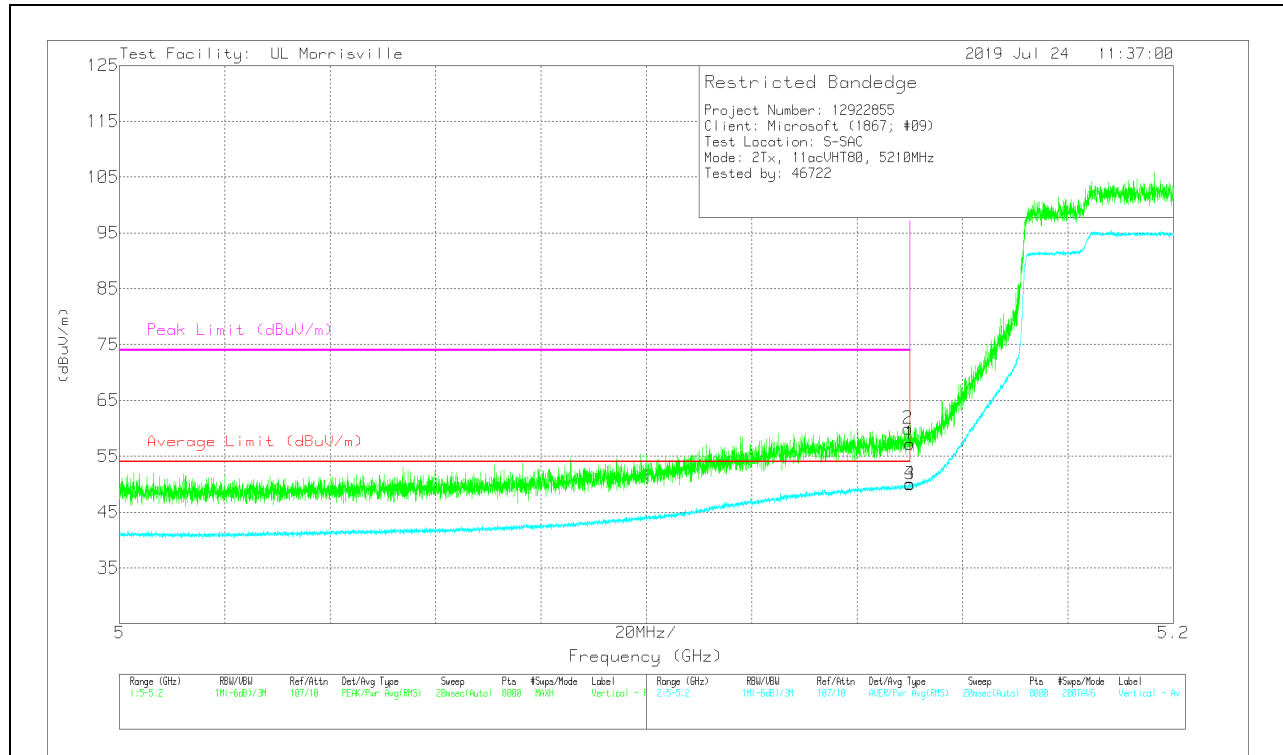
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.14999	39.25	Pk	34.3	-22.6	0	50.95	-	-	74	-23.05	55	262	H
2	*** 5.13977	41.57	Pk	34.3	-22.5	0	53.37	-	-	74	-20.63	55	262	H
3	*** 5.14999	29.88	RMS	34.3	-22.6	0	41.58	54	-12.42	-	-	55	262	H
4	*** 5.14164	30.3	RMS	34.3	-22.5	0	42.1	54	-11.9	-	-	55	262	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	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.14999	45.5	Pk	34.3	-22.6	0	57.2	-	-	74	-16.8	55	262	V
2	*** 5.14967	48.22	Pk	34.3	-22.6	0	59.92	-	-	74	-14.08	55	262	V
3	*** 5.14999	38.3	RMS	34.3	-22.6	0	50	54	-4	-	-	55	262	V
4	*** 5.14997	38.36	RMS	34.3	-22.6	0	50.06	54	-3.94	-	-	55	262	V

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

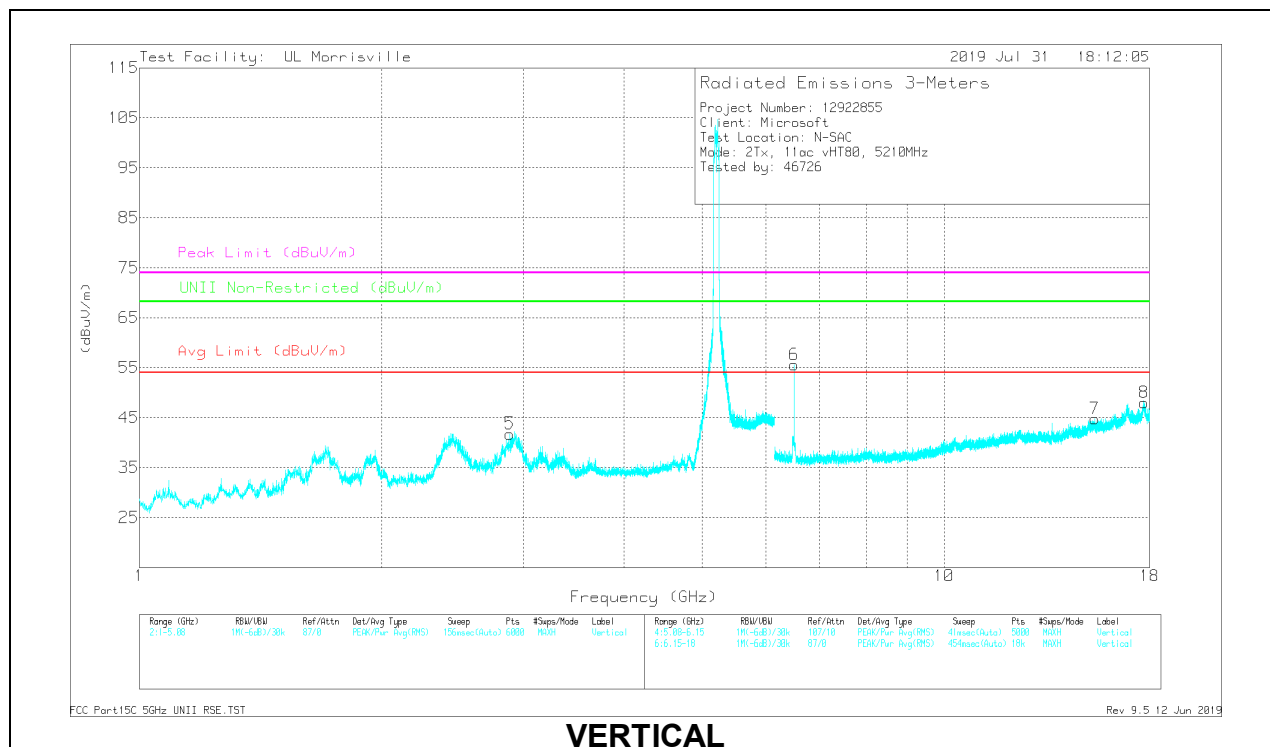
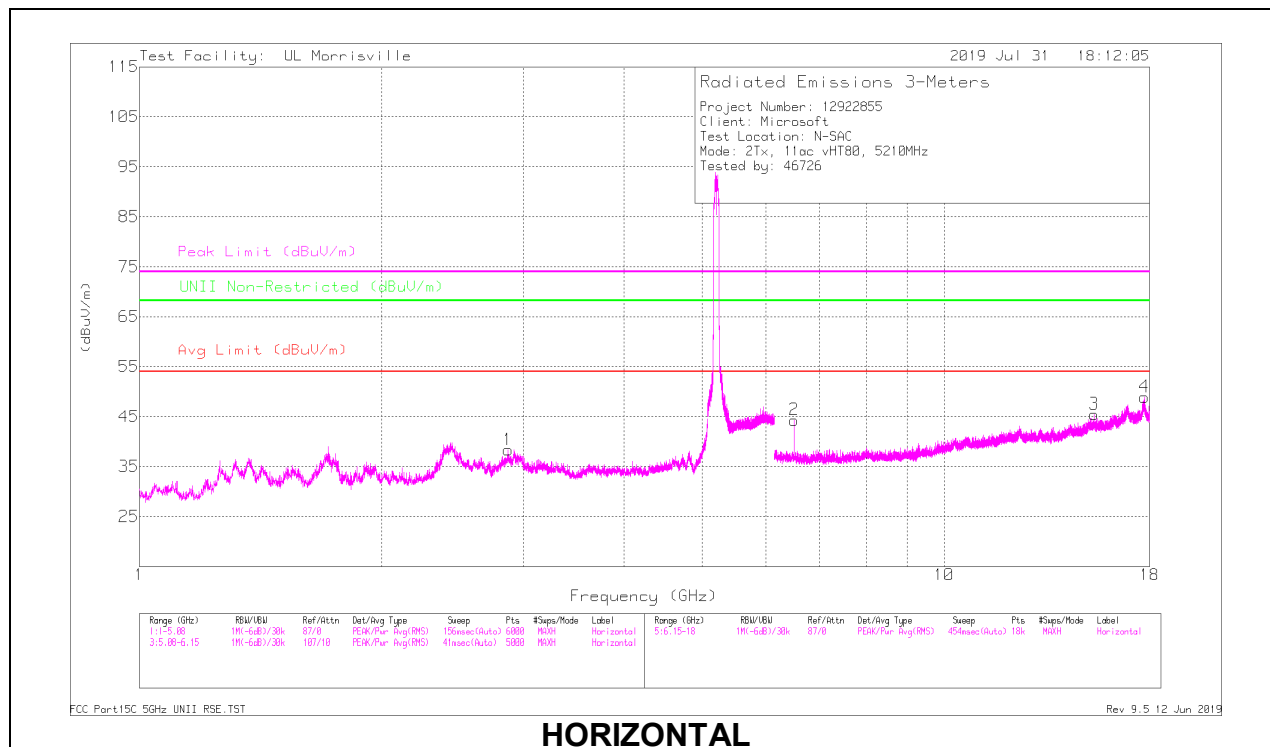
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.86765	47.2	PK-U	32.5	-33.9	45.8	-	-	74	-28.2	-	-	300	142	H
	* ** 2.86762	34.55	ADR	32.5	-33.9	33.15	54	-20.85	-	-	-	-	300	142	H
5	* ** 2.87558	51.43	PK-U	32.5	-33.8	50.13	-	-	74	-23.87	-	-	37	226	V
	* ** 2.87559	39.14	ADR	32.5	-33.8	37.84	54	-16.16	-	-	-	-	37	226	V
3	* ** 15.35942	37.19	PK-U	40	-26.4	50.79	-	-	74	-23.21	-	-	337	256	H
	* ** 15.3594	25.15	ADR	40	-26.4	38.75	54	-15.25	-	-	-	-	337	256	H
4	* ** 17.7429	34.3	PK-U	41.1	-20.4	55	-	-	74	-19	-	-	250	328	H
	* ** 17.74293	21.97	ADR	41.1	-20.4	42.67	54	-11.33	-	-	-	-	250	328	H
7	* ** 15.37678	36.66	PK-U	40.1	-26.3	50.46	-	-	74	-23.54	-	-	272	314	V
	* ** 15.37676	25.09	ADR	40.1	-26.3	38.89	54	-15.11	-	-	-	-	272	314	V
8	* ** 17.7254	34.29	PK-U	41.1	-20.4	54.99	-	-	74	-19.01	-	-	4	230	V
	* ** 17.72514	22.13	ADR	41.1	-20.4	42.83	54	-11.17	-	-	-	-	4	230	V
2	6.5125	45.8	PK-U	35.5	-30.3	51	-	-	-	-	68.2	-17.2	356	389	H
6	6.51253	52.57	PK-U	35.5	-30.3	57.77	-	-	-	-	68.2	-10.43	325	249	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

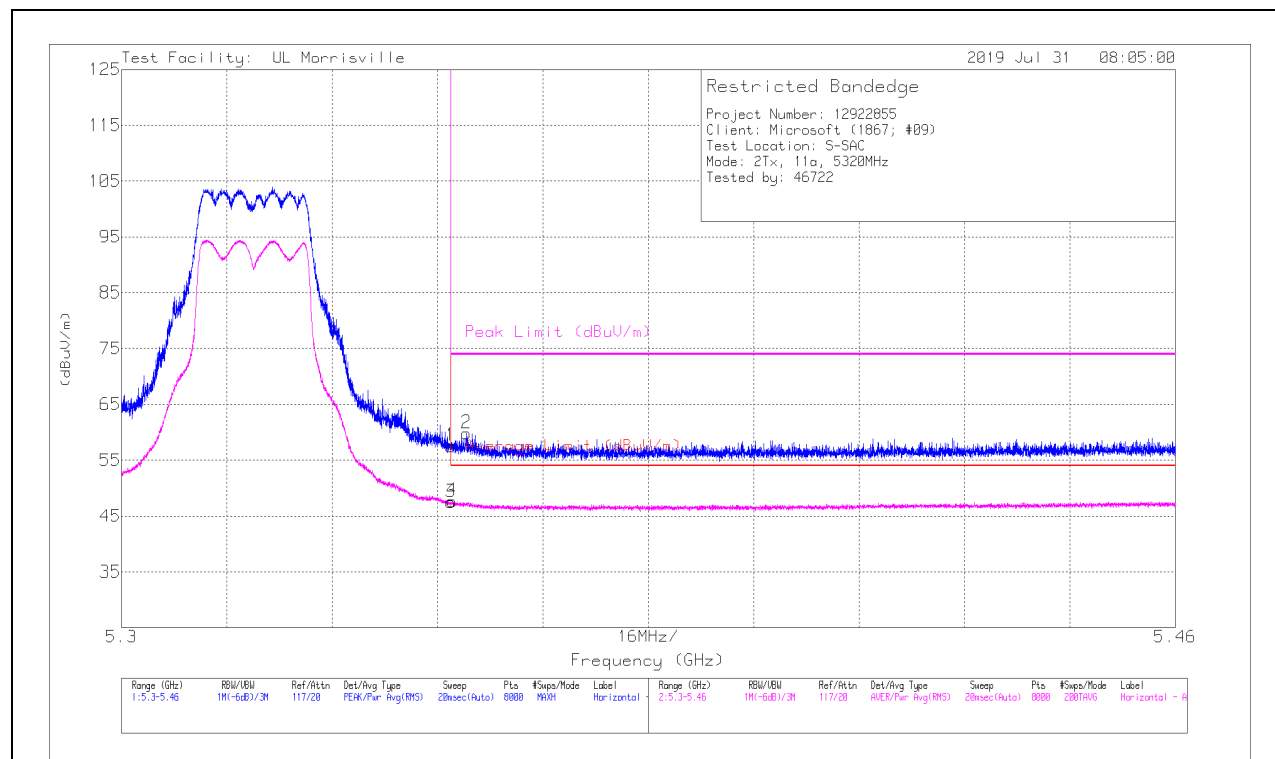
ADR - U-NII AD primary method, RMS average

8.2.5. TX ABOVE 1 GHz 802.11a MODE IN THE 5.3 GHz BAND

2TX Antenna 1 + Antenna 2 CDD MODE

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35001	46.33	Pk	34.4	-23.2	0	57.53	-	-	74	-16.47	86	290	H
2	*** 5.35233	48.64	Pk	34.4	-23.2	0	59.84	-	-	74	-14.16	86	290	H
3	*** 5.35001	36.21	RMS	34.4	-23.2	.09	47.5	54	-6.5	-	-	86	290	H
4	*** 5.35017	36.41	RMS	34.4	-23.2	.09	47.7	54	-6.3	-	-	86	290	H

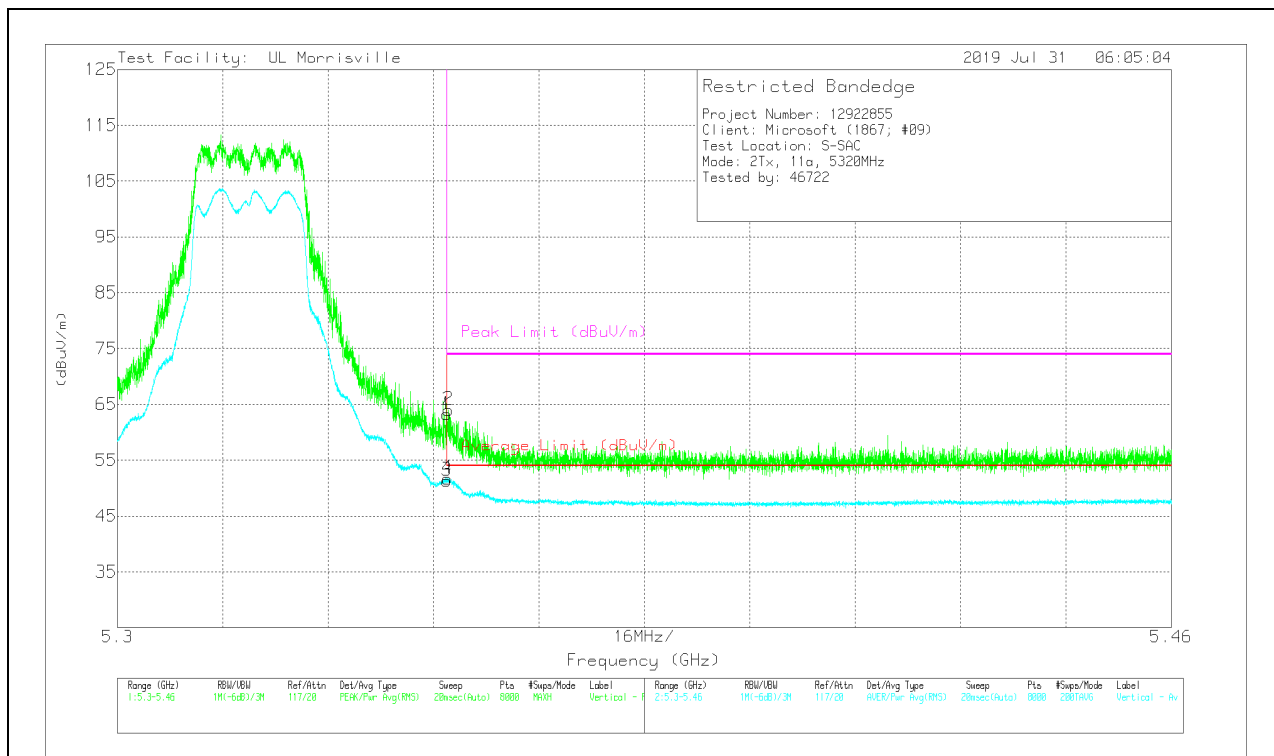
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35001	52.02	Pk	34.4	-23.2	0	63.22	-	-	74	-10.78	57	226	V
2	*** 5.35023	52.84	Pk	34.4	-23.2	0	64.04	-	-	74	-9.96	57	226	V
3	*** 5.35001	40.07	RMS	34.4	-23.2	.09	51.36	54	-2.64	-	-	57	226	V
4	*** 5.35009	40.44	RMS	34.4	-23.2	.09	51.73	54	-2.27	-	-	57	226	V

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

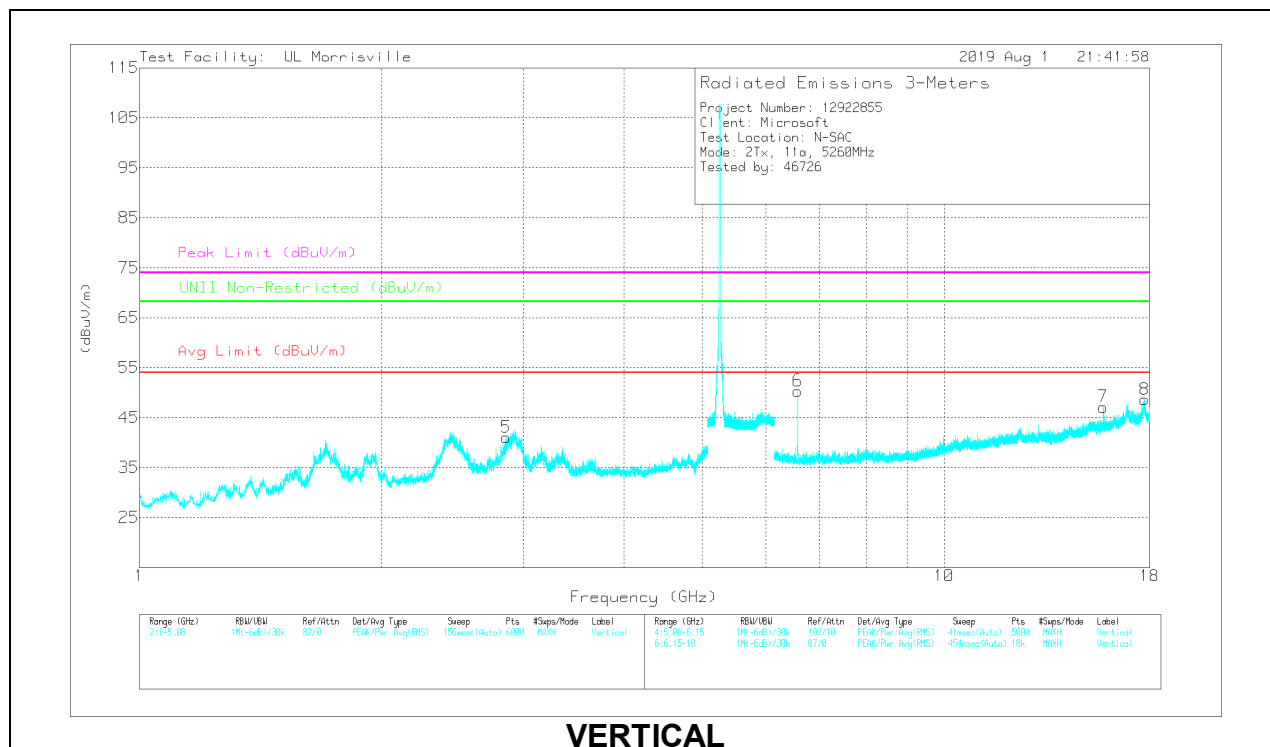
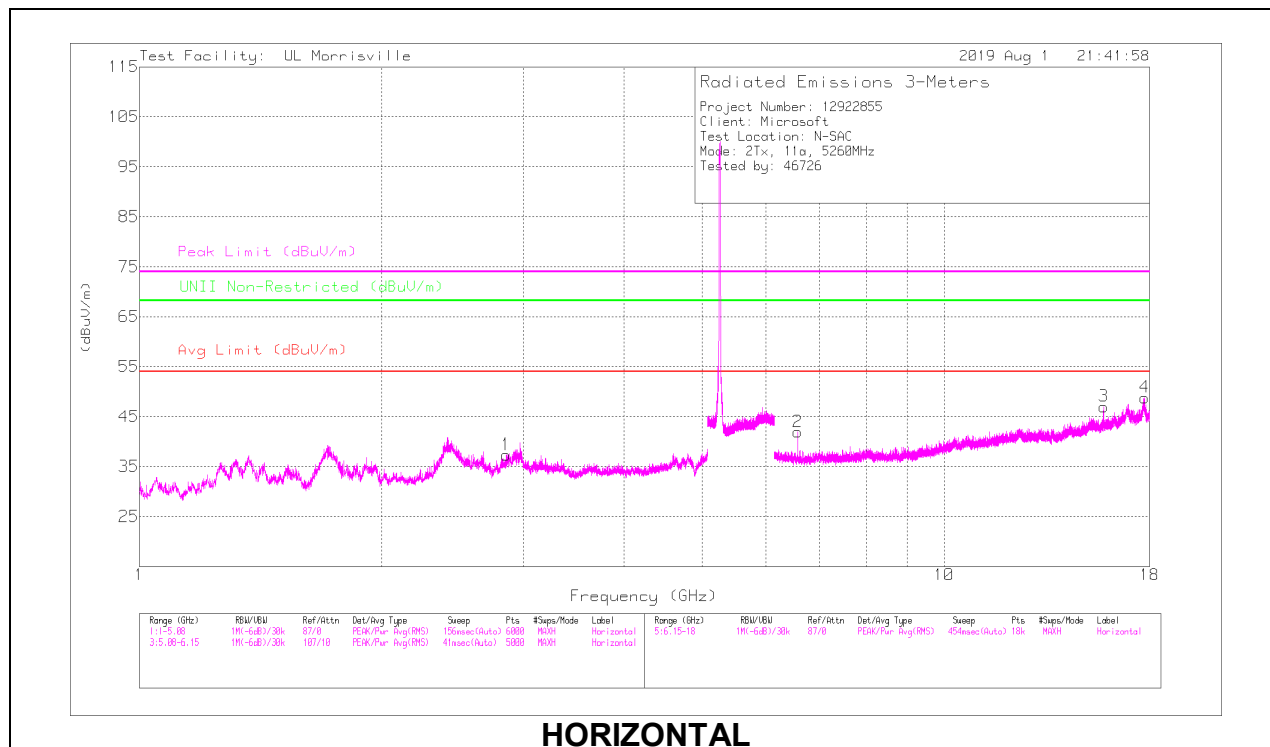
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.8737	45.3	PK-U	32.5	-33.9	0	43.9	-	-	74	-30.1	-	-	299	298	H
	* ** 2.87359	33.23	ADR	32.5	-33.9	.09	31.92	54	-22.08	-	-	-	-	299	298	H
5	* ** 2.85598	50.8	PK-U	32.4	-33.8	0	49.4	-	-	74	-24.6	-	-	35	231	V
	* ** 2.85607	39.12	ADR	32.4	-33.8	.09	37.81	54	-16.19	-	-	-	-	35	231	V
3	* ** 15.77578	35.99	PK-U	40.1	-25.6	0	50.49	-	-	74	-23.51	-	-	259	291	H
	* ** 15.77579	23.98	ADR	40.1	-25.6	.09	38.57	54	-15.43	-	-	-	-	259	291	H
4	* ** 17.74525	34.27	PK-U	41.1	-20.5	0	54.87	-	-	74	-19.13	-	-	55	114	H
	* ** 17.7452	22.1	ADR	41.1	-20.5	.09	42.79	54	-11.21	-	-	-	-	55	114	H
7	* ** 15.76741	36.32	PK-U	40.1	-25.5	0	50.92	-	-	74	-23.08	-	-	53	174	V
	* ** 15.76734	23.94	ADR	40.1	-25.5	.09	38.63	54	-15.37	-	-	-	-	53	174	V
8	* ** 17.7365	34.26	PK-U	41.1	-20.3	0	55.06	-	-	74	-18.94	-	-	124	247	V
	* ** 17.73634	22.13	ADR	41.1	-20.3	.09	43.02	54	-10.98	-	-	-	-	124	247	V
6	6.57129	39.93	PK-U	35.5	-30.7	0	44.73	-	-	-	-	68.2	-23.47	51	266	V
2	6.57506	44.08	PK-U	35.5	-30.7	0	48.88	-	-	-	-	68.2	-19.32	70	353	H

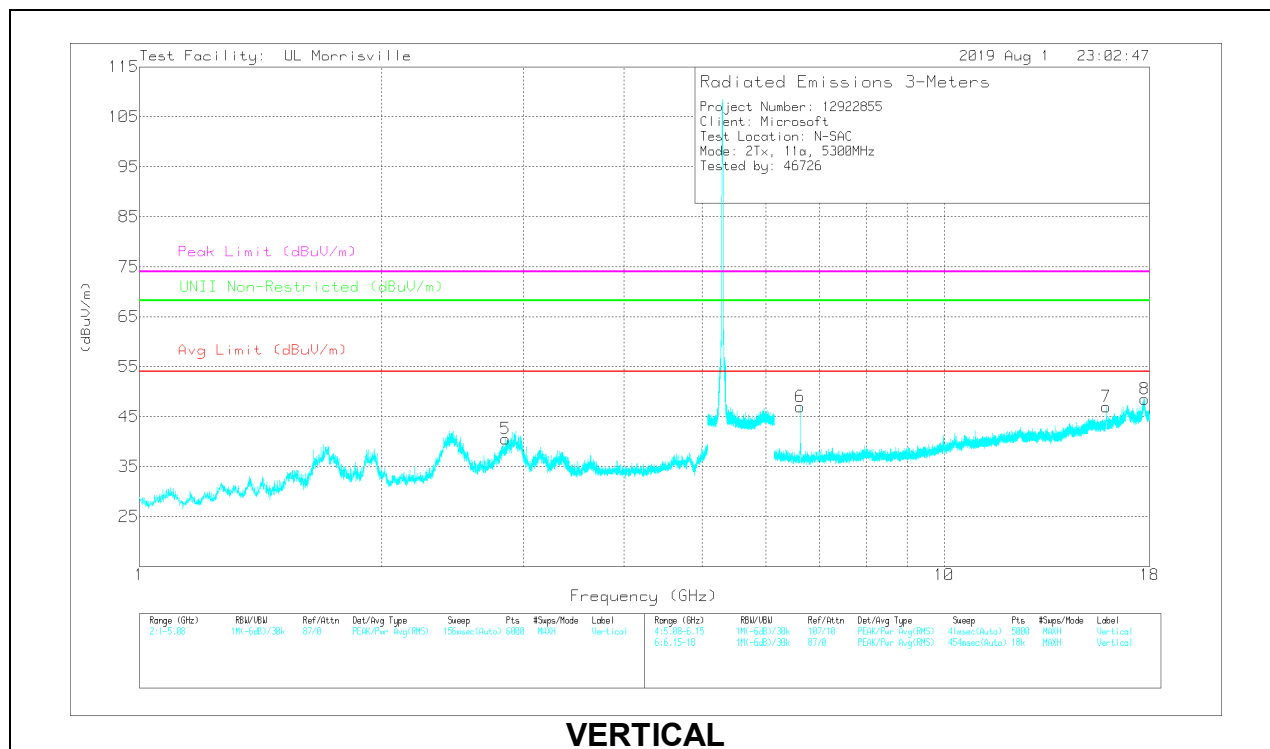
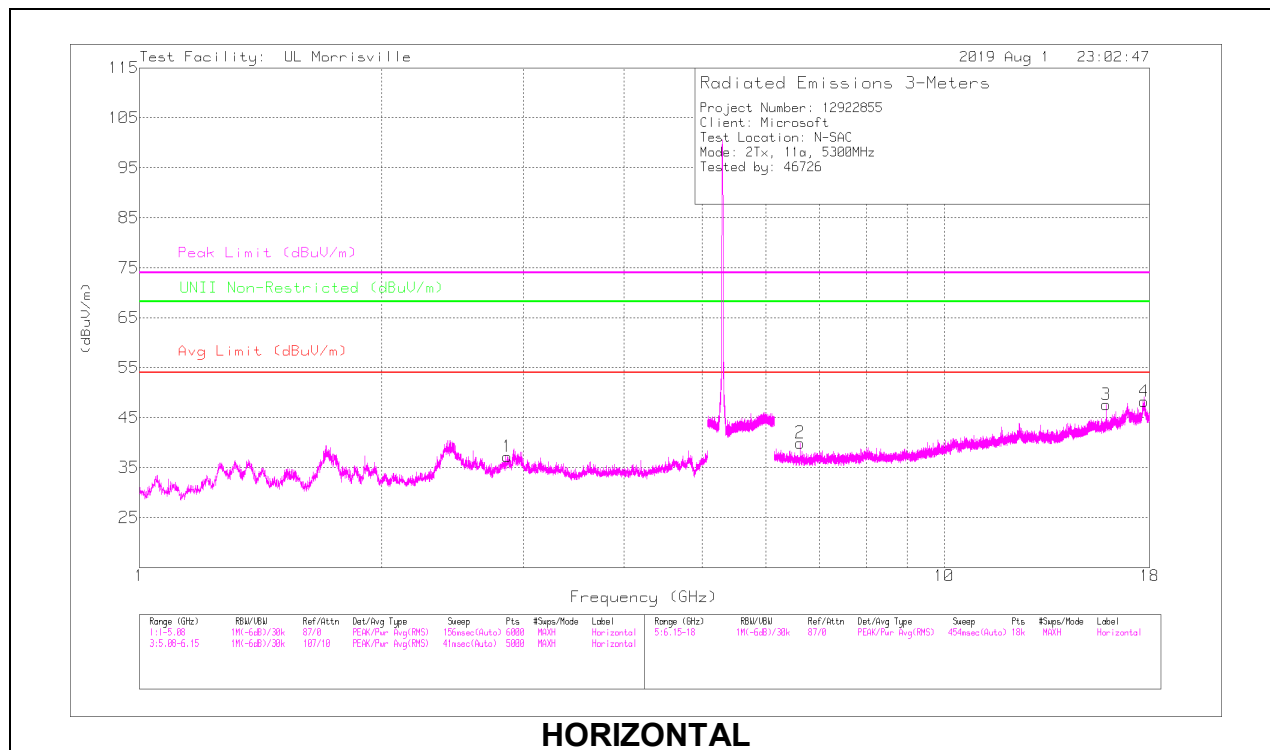
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.87323	47.12	PK-U	32.5	-33.9	0	45.72	-	-	74	-28.28	-	-	299	108	H
	*** 2.87324	34.45	ADR	32.5	-33.9	.09	33.14	54	-20.86	-	-	-	-	299	108	H
5	*** 2.86016	42.55	PK-U	32.4	-33.8	0	41.15	-	-	74	-32.85	-	-	299	198	V
	*** 2.86076	30.84	ADR	32.4	-33.8	.09	29.53	54	-24.47	-	-	-	-	299	198	V
3	*** 15.90018	45.23	PK-U	40.3	-26	0	59.53	-	-	74	-14.47	-	-	265	252	H
	*** 15.90021	32.16	ADR	40.3	-26	.09	46.55	54	-7.45	-	-	-	-	265	252	H
4	*** 17.72552	34.72	PK-U	41.1	-20.4	0	55.42	-	-	74	-18.58	-	-	4	117	H
	*** 17.72549	21.98	ADR	41.1	-20.4	.09	42.77	54	-11.23	-	-	-	-	4	117	H
7	*** 15.89978	46.2	PK-U	40.3	-26	0	60.5	-	-	74	-13.5	-	-	303	322	V
	*** 15.89985	31.6	ADR	40.3	-26	.09	45.99	54	-8.01	-	-	-	-	303	322	V
8	*** 17.74396	34.34	PK-U	41.1	-20.5	0	54.94	-	-	74	-19.06	-	-	307	346	V
	*** 17.74395	22.14	ADR	41.1	-20.5	.09	42.83	54	-11.17	-	-	-	-	307	346	V
6	6.62504	49.62	PK-U	35.5	-30.7	0	54.42	-	-	-	-	68.2	-13.78	336	255	V
2	6.62515	43.85	PK-U	35.5	-30.7	0	48.65	-	-	-	-	68.2	-19.55	23	382	H

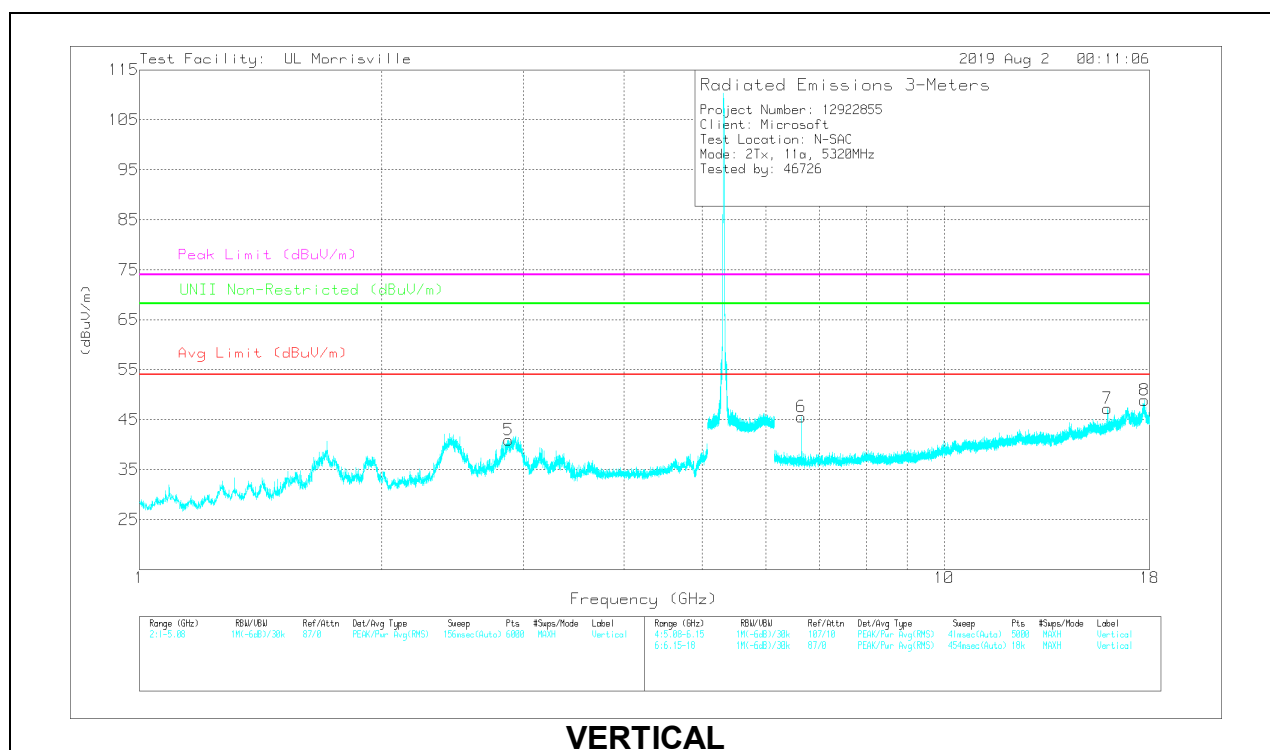
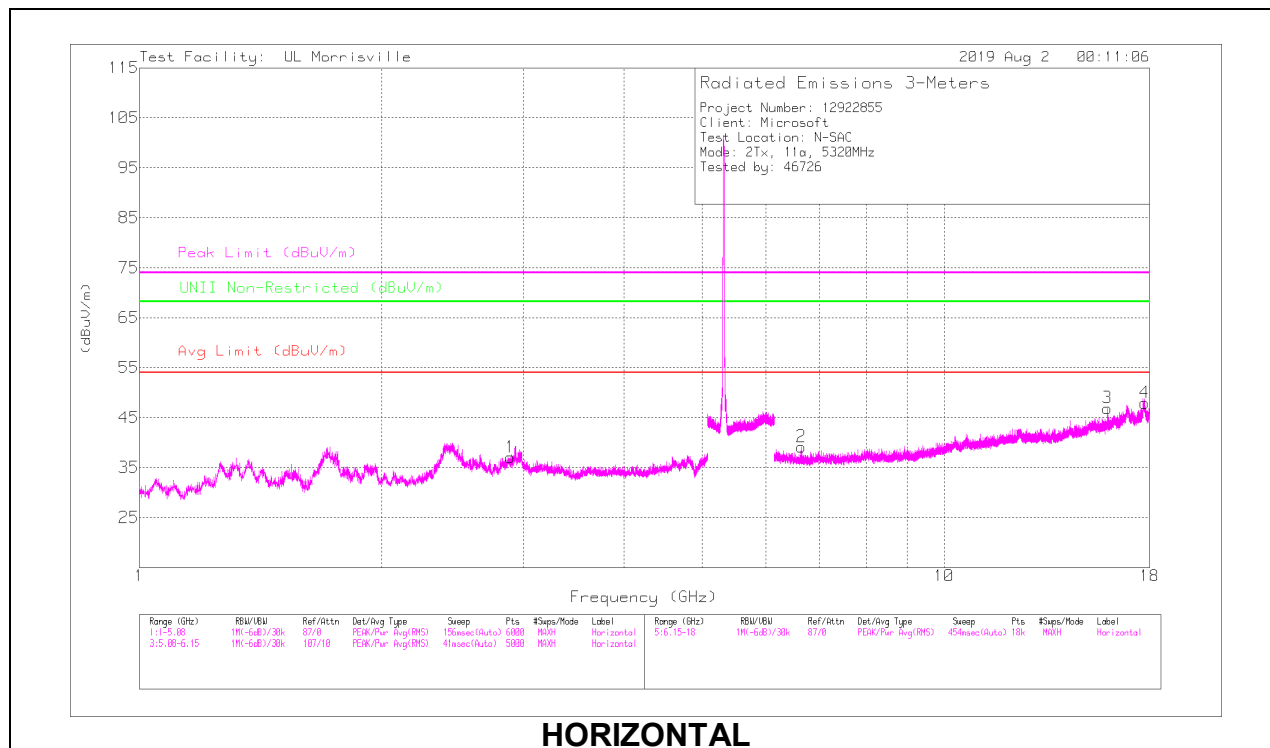
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.88571	44.83	PK-U	32.6	-33.8	0	43.63	-	-	74	-30.37	-	-	295	181	H
	*** 2.88564	32.73	ADR	32.6	-33.8	.09	31.62	54	-22.38	-	-	-	-	295	181	H
5	*** 2.87287	41.91	PK-U	32.5	-33.9	0	40.51	-	-	74	-33.49	-	-	295	198	V
	*** 2.87266	30.92	ADR	32.5	-33.9	.09	29.61	54	-24.39	-	-	-	-	295	198	V
3	*** 15.95612	48.07	PK-U	40.4	-27	0	61.47	-	-	74	-12.53	-	-	260	317	H
	*** 15.95611	34.43	ADR	40.4	-27	.09	47.92	54	-6.08	-	-	-	-	260	317	H
4	*** 17.74417	34.68	PK-U	41.1	-20.5	0	55.28	-	-	74	-18.72	-	-	282	400	H
	*** 17.74419	22.29	ADR	41.1	-20.5	.09	42.98	54	-11.02	-	-	-	-	282	400	H
7	*** 15.95997	49.12	PK-U	40.4	-27.1	0	62.42	-	-	74	-11.58	-	-	310	303	V
	*** 15.96014	34.33	ADR	40.4	-27.1	.09	47.72	54	-6.28	-	-	-	-	310	303	V
8	*** 17.73711	34.36	PK-U	41.1	-20.3	0	55.16	-	-	74	-18.84	-	-	320	289	V
	*** 17.73719	22.11	ADR	41.1	-20.3	.09	43	54	-11	-	-	-	-	320	289	V
2	6.6499	42.29	PK-U	35.5	-30.8	0	46.99	-	-	-	-	68.2	-21.21	290	391	H
6	6.65006	47.93	PK-U	35.5	-30.8	0	52.63	-	-	-	-	68.2	-15.57	329	214	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

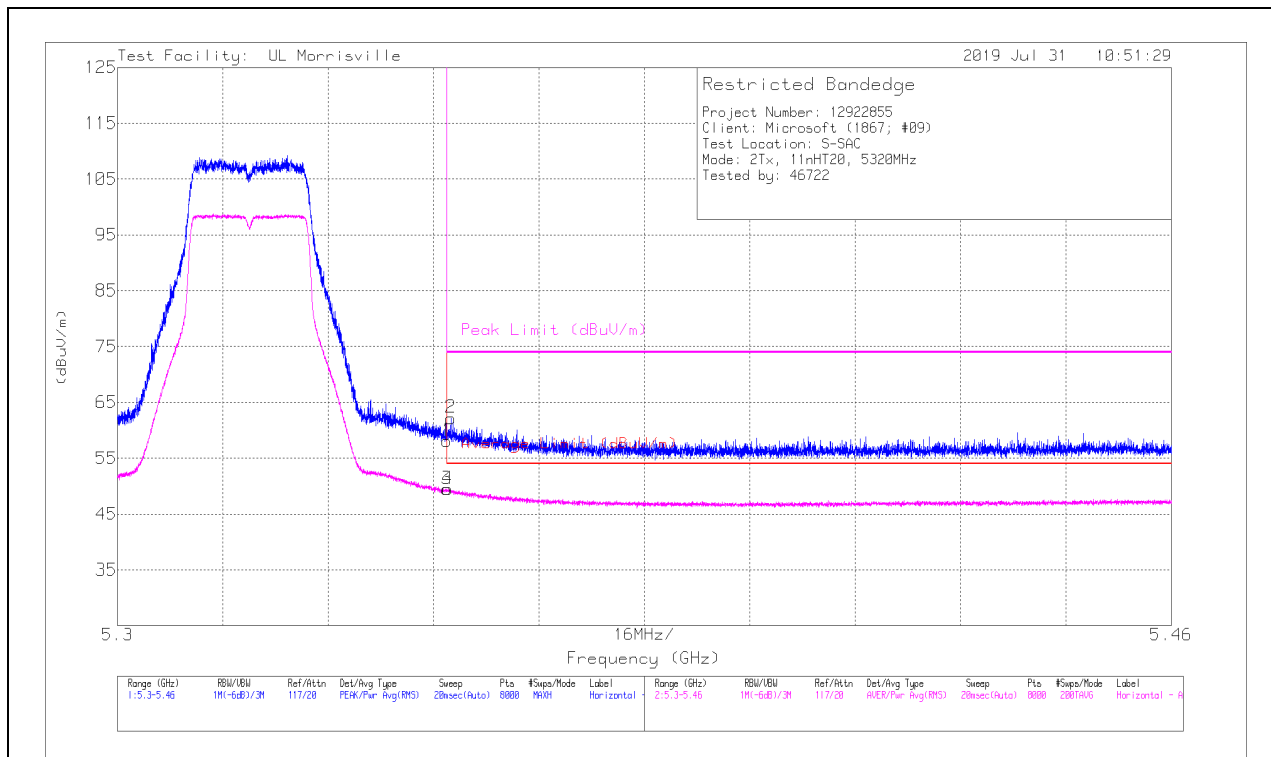
ADR - U-NII AD primary method, RMS average

8.2.6. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 5.3 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35001	46.91	Pk	34.4	-23.2	0	58.11	-	-	74	-15.89	23	390	H
2	*** 5.35061	51	Pk	34.4	-23.2	0	62.2	-	-	74	-11.8	23	390	H
3	*** 5.35001	38.28	RMS	34.4	-23.2	0	49.48	54	-4.52	-	-	23	390	H
4	*** 5.35013	38.28	RMS	34.4	-23.2	0	49.48	54	-4.52	-	-	23	390	H

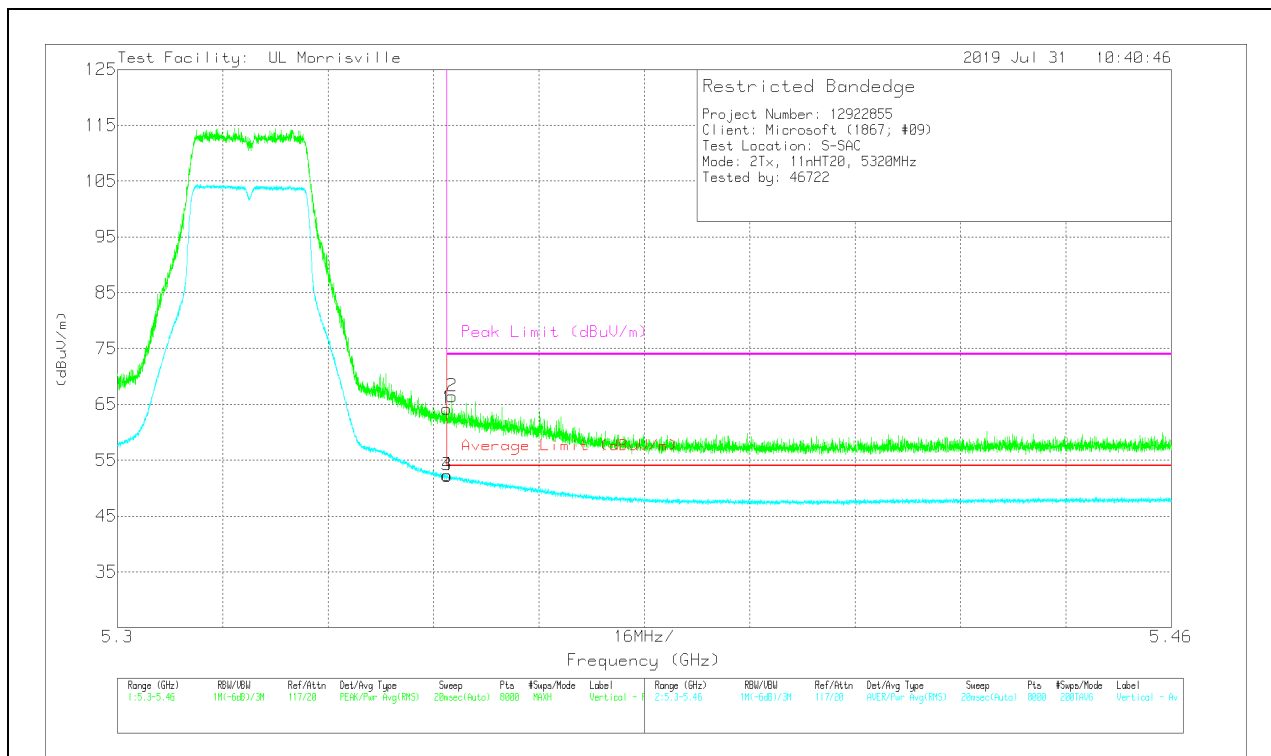
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35001	52.99	Pk	34.4	-23.2	0	64.19	-	-	74	-9.81	18	251	V
2	*** 5.35079	55.26	Pk	34.4	-23.2	0	66.46	-	-	74	-7.54	18	251	V
3	*** 5.35001	41.11	RMS	34.4	-23.2	0	52.31	54	-1.69	-	-	18	251	V
4	*** 5.35007	41.06	RMS	34.4	-23.2	0	52.26	54	-1.74	-	-	18	251	V

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

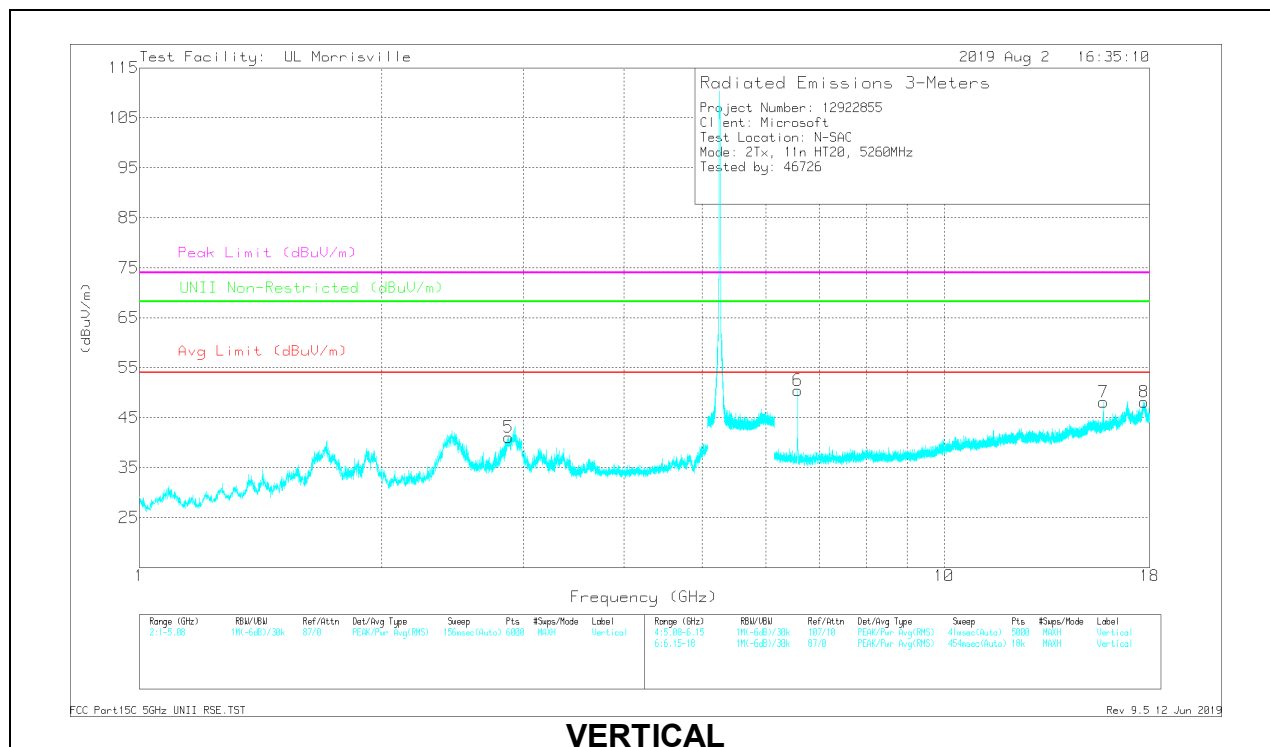
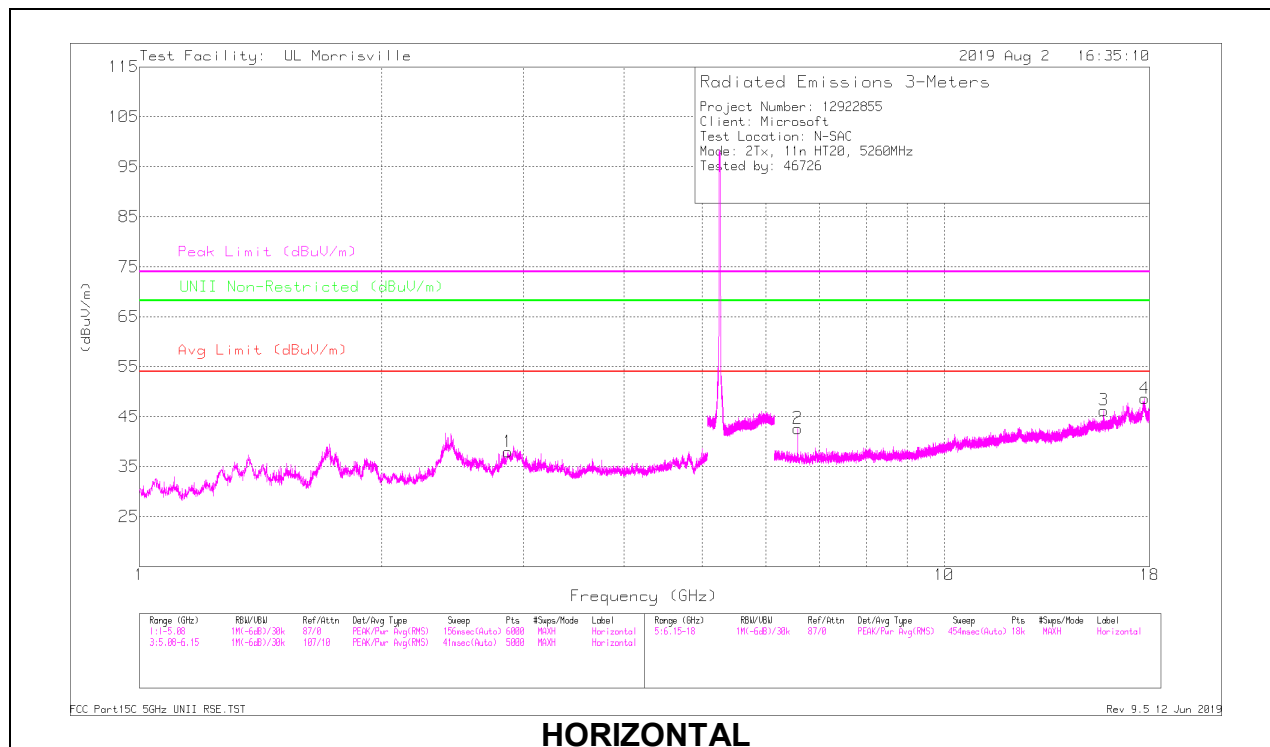
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.87097	43.7	PK-U	32.5	-33.9	42.3	-	-	74	-31.7	-	-	300	391	H
	* ** 2.8711	31.8	ADR	32.5	-33.9	30.4	54	-23.6	-	-	-	-	300	391	H
5	* ** 2.86992	50.9	PK-U	32.5	-33.9	49.5	-	-	74	-24.5	-	-	31	207	V
	* ** 2.87008	38.69	ADR	32.5	-33.9	37.29	54	-16.71	-	-	-	-	31	207	V
3	* ** 15.78733	36.05	PK-U	40.2	-25.6	50.65	-	-	74	-23.35	-	-	336	311	H
	* ** 15.78699	23.85	ADR	40.2	-25.6	38.45	54	-15.55	-	-	-	-	336	311	H
4	* ** 17.74355	33.84	PK-U	41.1	-20.4	54.54	-	-	74	-19.46	-	-	59	330	H
	* ** 17.74364	22.14	ADR	41.1	-20.4	42.84	54	-11.16	-	-	-	-	59	330	H
7	* ** 15.78066	36.09	PK-U	40.2	-25.6	50.69	-	-	74	-23.31	-	-	121	299	V
	* ** 15.78047	23.85	ADR	40.2	-25.6	38.45	54	-15.55	-	-	-	-	121	299	V
8	* ** 17.73504	33.84	PK-U	41.1	-20.3	54.64	-	-	74	-19.36	-	-	202	306	V
	* ** 17.73493	21.94	ADR	41.1	-20.3	42.74	54	-11.26	-	-	-	-	202	306	V
6	6.54995	50.82	PK-U	35.5	-30.6	55.72	-	-	-	-	68.2	-12.48	330	223	V
2	6.56266	39.12	PK-U	35.5	-30.7	43.92	-	-	-	-	68.2	-24.28	22	249	H

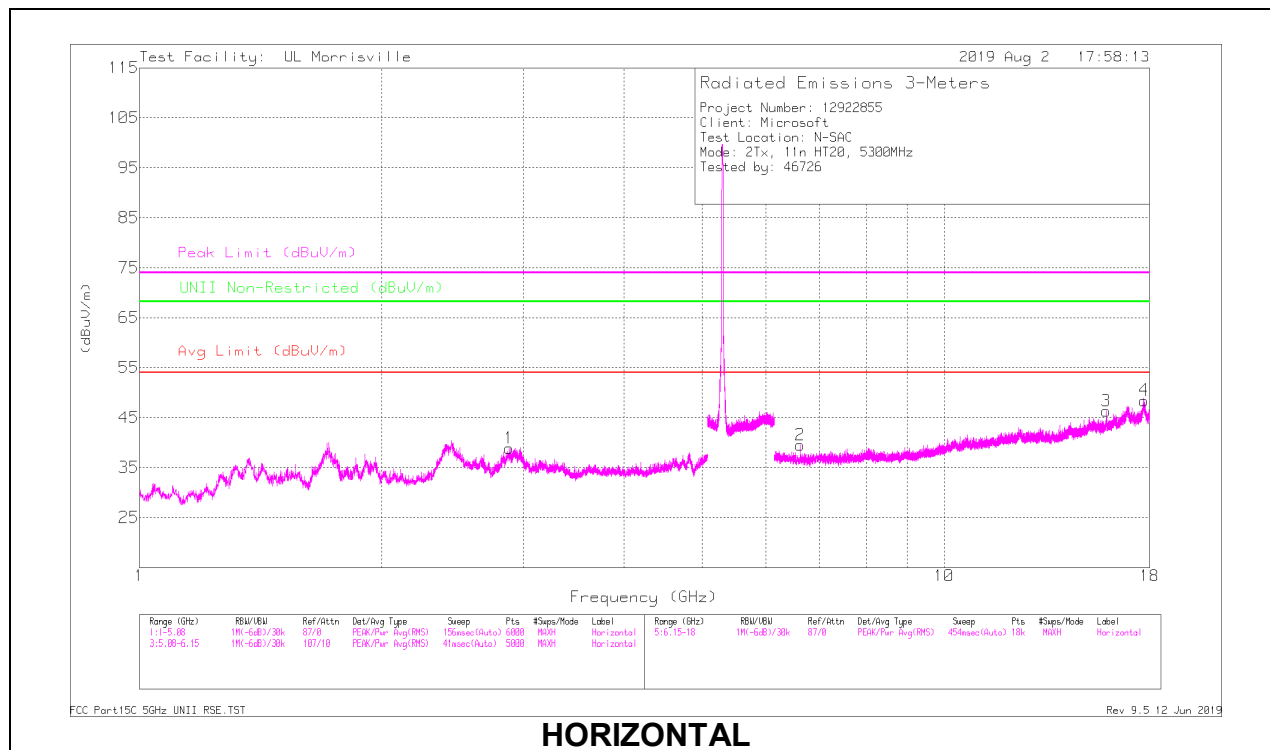
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

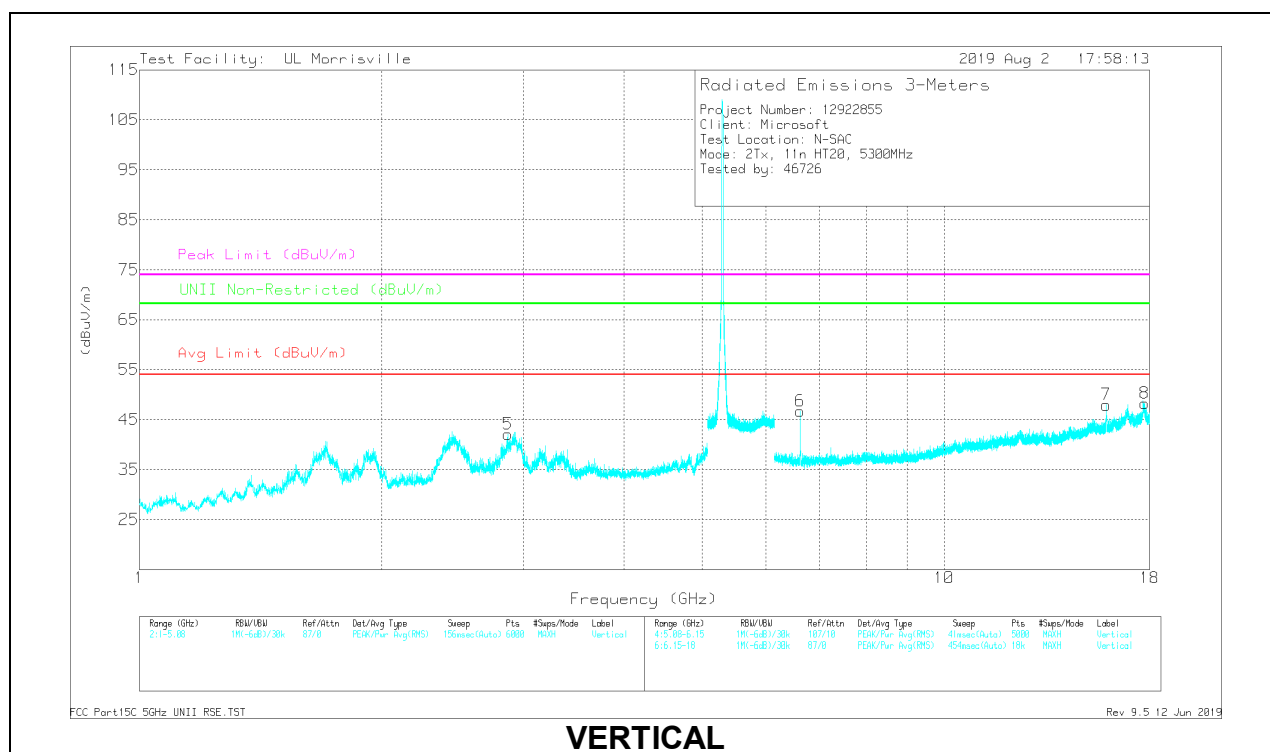
PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

MID CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.87021	48.28	PK-U	32.5	-33.9	46.88	-	-	74	-27.12	-	-	298	105	H
	* ** 2.87015	35.87	ADR	32.5	-33.9	34.47	54	-19.53	-	-	-	-	298	105	H
5	* ** 2.87349	46.39	PK-U	32.5	-33.9	44.99	-	-	74	-29.01	-	-	29	166	V
	* ** 2.87354	33.85	ADR	32.5	-33.9	32.45	54	-21.55	-	-	-	-	29	166	V
3	* ** 15.90061	43.56	PK-U	40.3	-26	57.86	-	-	74	-16.14	-	-	261	296	H
	* ** 15.90061	30.97	ADR	40.3	-26	45.27	54	-8.73	-	-	-	-	261	296	H
4	* ** 17.72916	34.23	PK-U	41.1	-20.3	55.03	-	-	74	-18.97	-	-	77	335	H
	* ** 17.72909	22.04	ADR	41.1	-20.3	42.84	54	-11.16	-	-	-	-	77	335	H
7	* ** 15.9019	46.41	PK-U	40.3	-26.1	60.61	-	-	74	-13.39	-	-	316	322	V
	* ** 15.90187	33.18	ADR	40.3	-26.1	47.38	54	-6.62	-	-	-	-	316	322	V
8	* ** 17.74868	33.98	PK-U	41.1	-20.6	54.48	-	-	74	-19.52	-	-	33	322	V
	* ** 17.74858	22.16	ADR	41.1	-20.6	42.66	54	-11.34	-	-	-	-	33	322	V
6	6.62502	48.61	PK-U	35.5	-30.7	53.41	-	-	-	-	68.2	-14.79	334	259	V
2	6.62503	43.44	PK-U	35.5	-30.7	48.24	-	-	-	-	68.2	-19.96	252	366	H

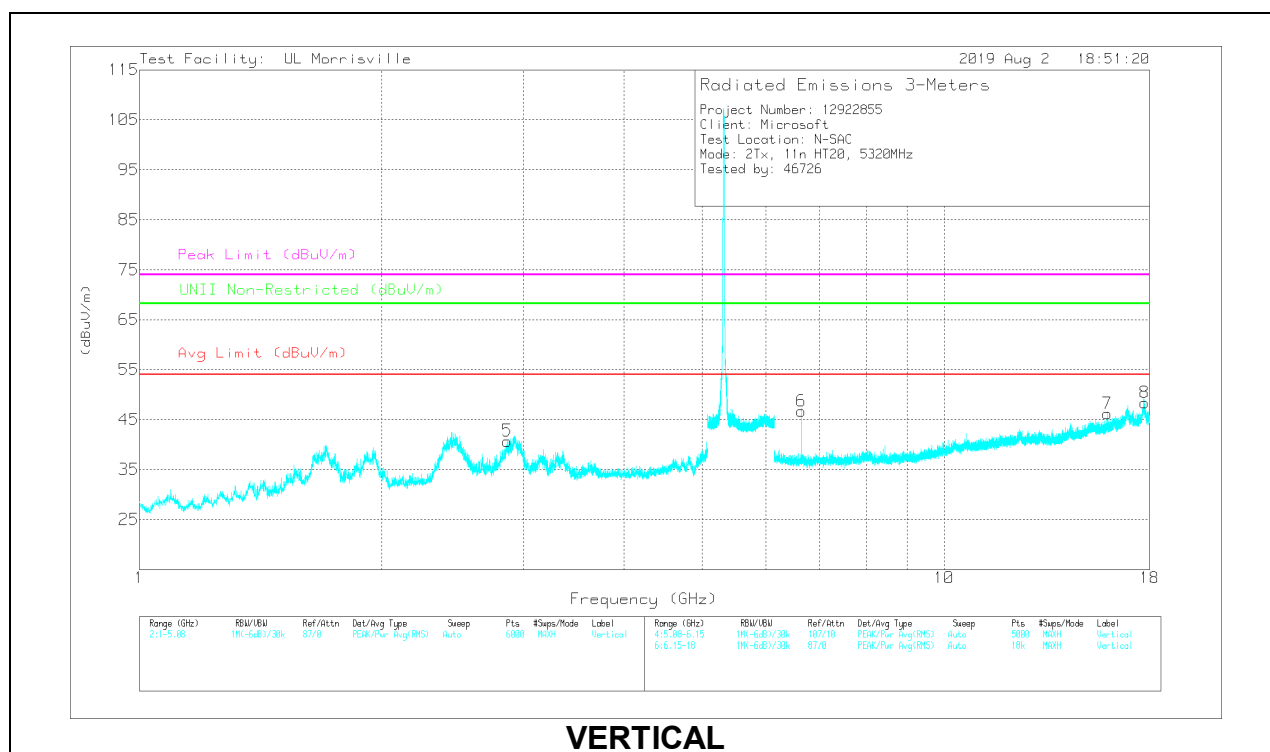
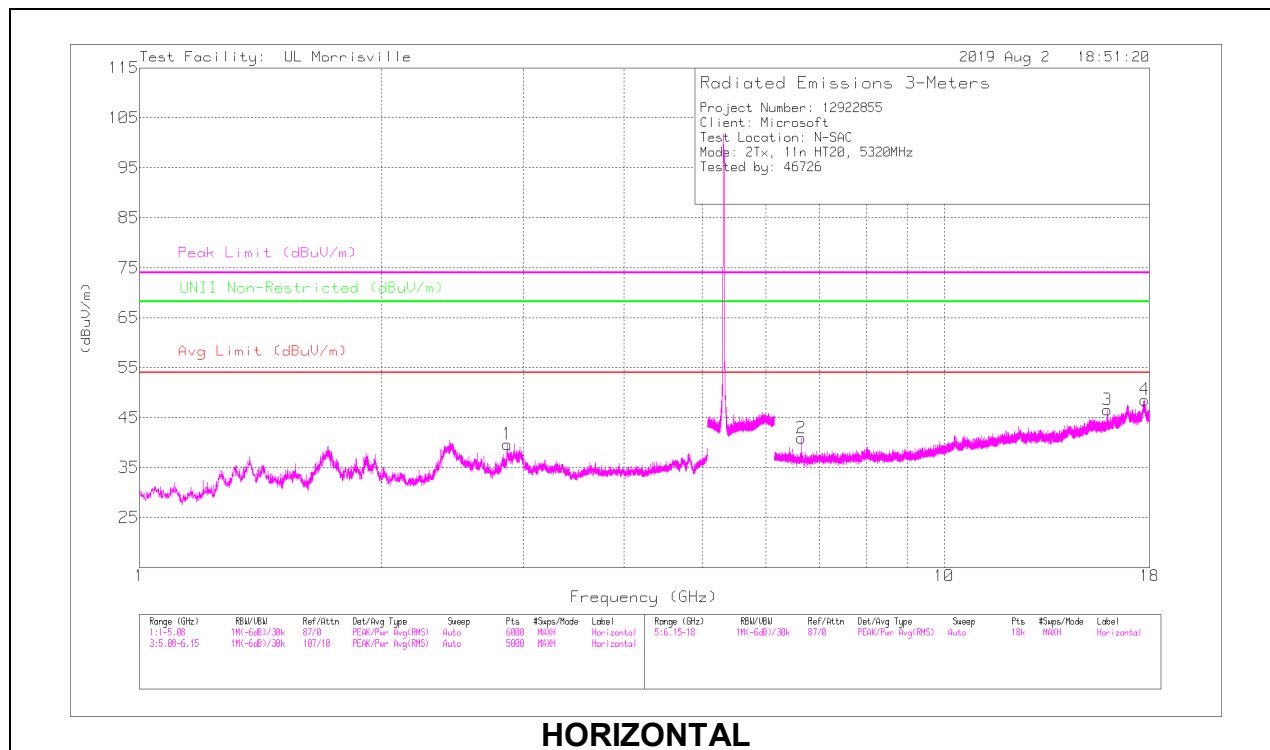
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.87176	47.98	PK-U	32.5	-33.9	46.58	-	-	74	-27.42	-	-	302	120	H
	* ** 2.87172	35.83	ADR	32.5	-33.9	34.43	54	-19.57	-	-	-	-	302	120	H
5	* ** 2.85959	47.41	PK-U	32.4	-33.8	46.01	-	-	74	-27.99	-	-	30	274	V
	* ** 2.85961	36	ADR	32.4	-33.8	34.6	54	-19.4	-	-	-	-	30	274	V
3	* ** 15.96257	44.74	PK-U	40.4	-27.1	58.04	-	-	74	-15.96	-	-	262	313	H
	* ** 15.96256	31.85	ADR	40.4	-27.1	45.15	54	-8.85	-	-	-	-	262	313	H
4	* ** 17.73649	35.35	PK-U	41.1	-20.3	56.15	-	-	74	-17.85	-	-	4	325	H
	* ** 17.73648	22.06	ADR	41.1	-20.3	42.86	54	-11.14	-	-	-	-	4	325	H
7	* ** 15.96003	41.98	PK-U	40.4	-27.1	55.28	-	-	74	-18.72	-	-	355	310	V
	* ** 15.96002	29.58	ADR	40.4	-27.1	42.88	54	-11.12	-	-	-	-	355	310	V
8	* ** 17.7489	34.14	PK-U	41.1	-20.6	54.64	-	-	74	-19.36	-	-	55	182	V
	* ** 17.74896	22.1	ADR	41.1	-20.6	42.6	54	-11.4	-	-	-	-	55	182	V
2	6.64997	42.26	PK-U	35.5	-30.8	46.96	-	-	-	-	68.2	-21.24	300	399	H
6	6.65017	46.91	PK-U	35.5	-30.8	51.61	-	-	-	-	68.2	-16.59	336	207	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

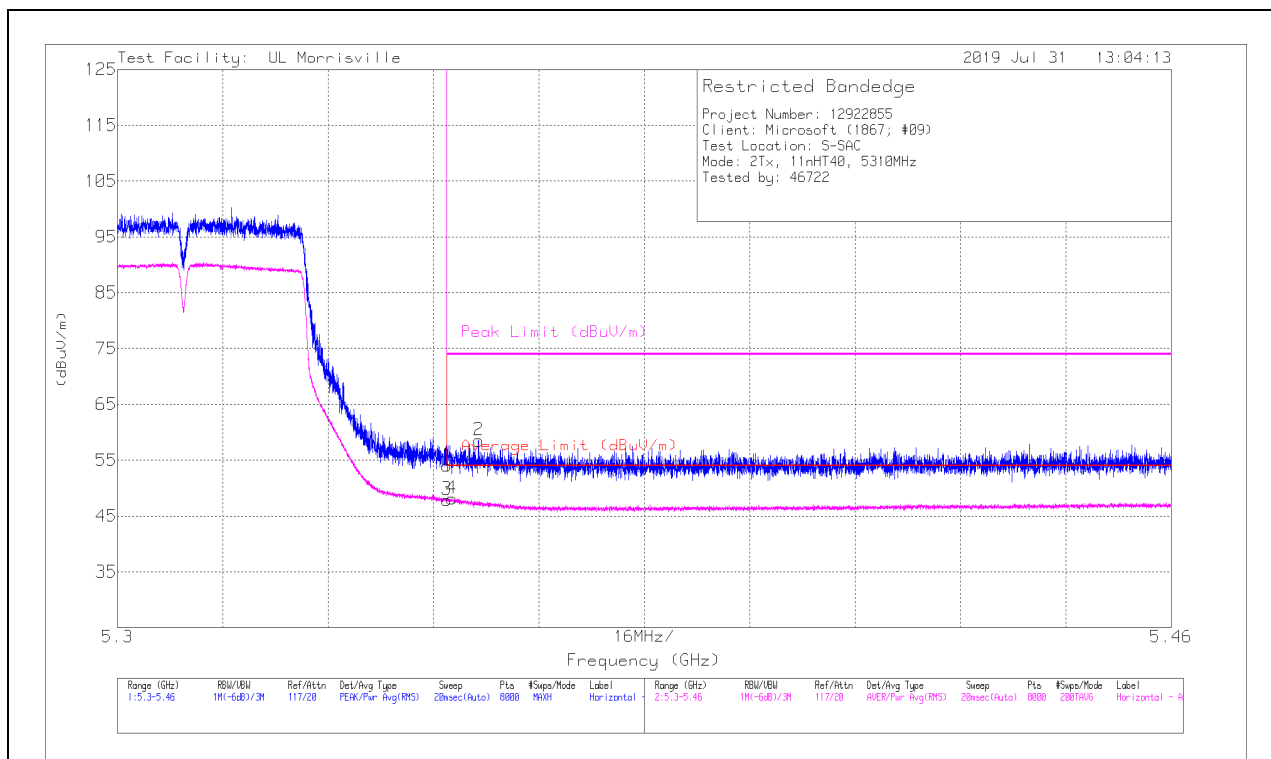
ADR - U-NII AD primary method, RMS average

8.2.7. TX ABOVE 1 GHz 802.11n HT40 MODE IN THE 5.3 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35001	42.8	Pk	34.4	-23.2	0	54	-	-	74	-20	63	359	H
2	*** 5.35481	47.33	Pk	34.4	-23.2	0	58.53	-	-	74	-15.47	63	359	H
3	*** 5.35001	36.74	RMS	34.4	-23.2	0	47.94	54	-6.06	-	-	63	359	H
4	*** 5.35079	36.96	RMS	34.4	-23.2	0	48.16	54	-5.84	-	-	63	359	H

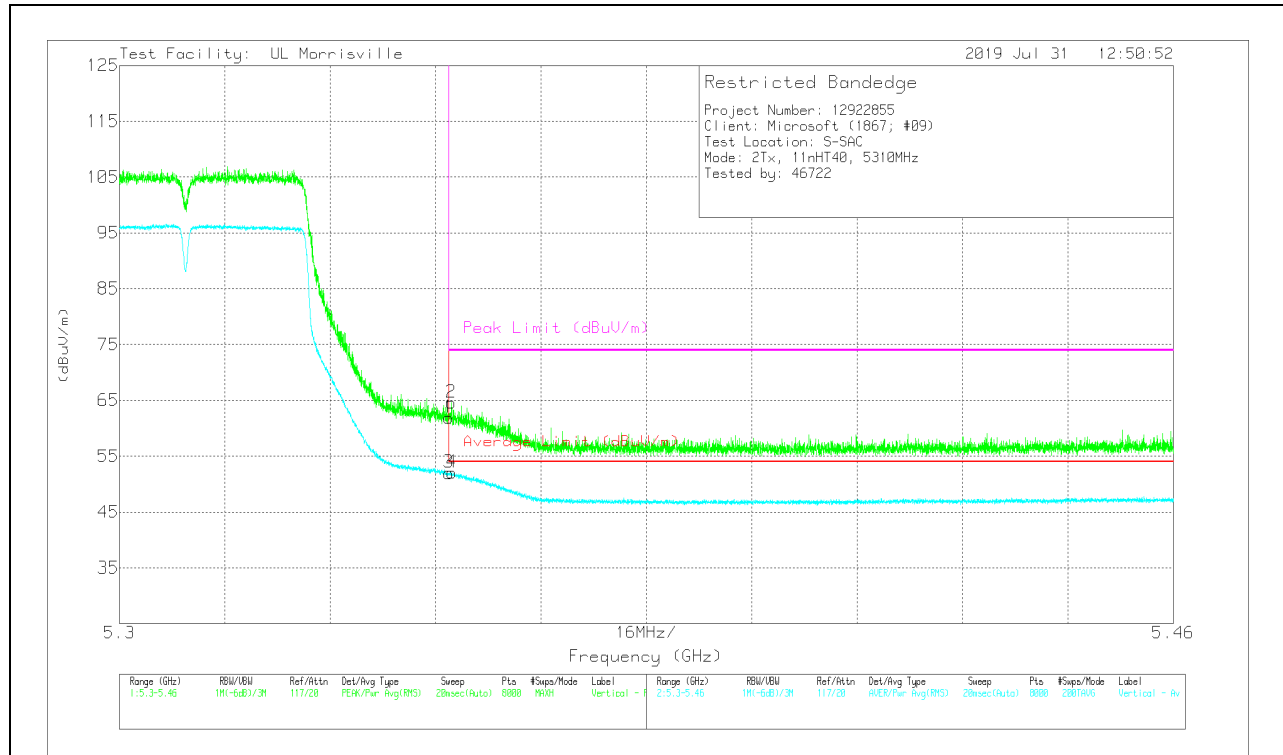
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35001	50.72	Pk	34.4	-23.2	0	61.92	-	-	74	-12.08	18	246	V
2	*** 5.35039	53.41	Pk	34.4	-23.2	0	64.61	-	-	74	-9.39	18	246	V
3	*** 5.35001	40.81	RMS	34.4	-23.2	0	52.01	54	-1.99	-	-	18	246	V
4	*** 5.35047	40.88	RMS	34.4	-23.2	0	52.08	54	-1.92	-	-	18	246	V

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

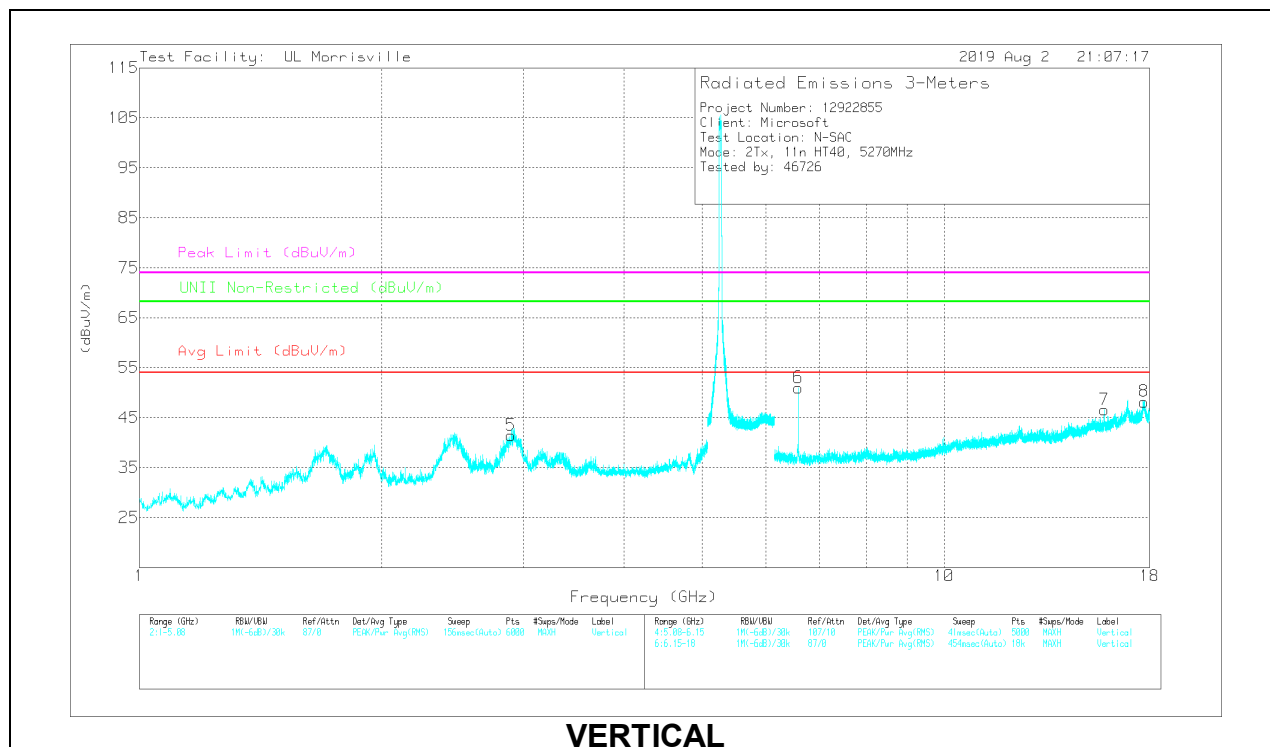
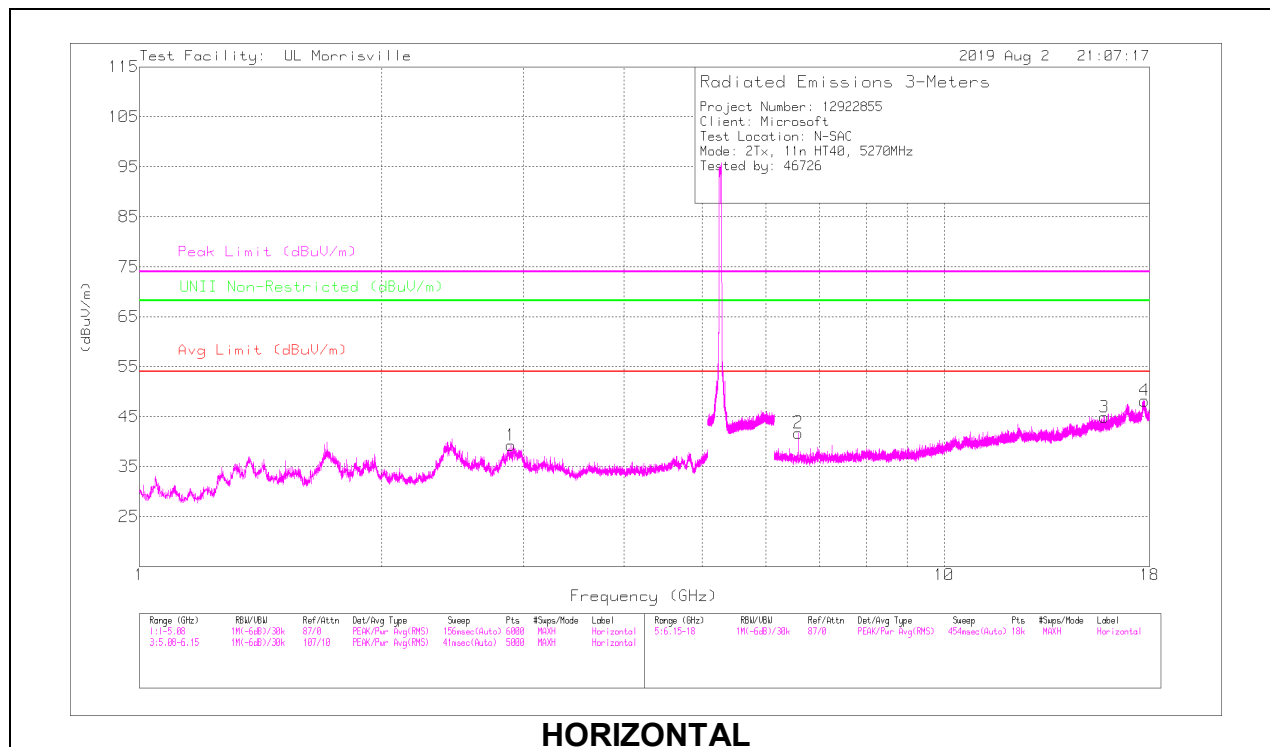
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.89603	45.3	PK-U	32.6	-33.7	44.2	-	-	74	-29.8	-	-	308	121	H
	* ** 2.89599	33.55	ADR	32.6	-33.7	32.45	54	-21.55	-	-	-	-	308	121	H
5	* ** 2.8968	49.91	PK-U	32.6	-33.7	48.81	-	-	74	-25.19	-	-	30	210	V
	* ** 2.89681	38.19	ADR	32.6	-33.7	37.09	54	-16.91	-	-	-	-	30	210	V
3	* ** 15.82007	40.51	PK-U	40.2	-25.5	55.21	-	-	74	-18.79	-	-	256	304	H
	* ** 15.82011	27.58	ADR	40.2	-25.5	42.28	54	-11.72	-	-	-	-	256	304	H
4	* ** 17.74098	34.59	PK-U	41.1	-20.4	55.29	-	-	74	-18.71	-	-	185	391	H
	* ** 17.74099	22.25	ADR	41.1	-20.4	42.95	54	-11.05	-	-	-	-	185	391	H
7	* ** 15.82003	40.99	PK-U	40.2	-25.5	55.69	-	-	74	-18.31	-	-	314	300	V
	* ** 15.82001	28.37	ADR	40.2	-25.5	43.07	54	-10.93	-	-	-	-	314	300	V
8	* ** 17.72696	33.92	PK-U	41.1	-20.3	54.72	-	-	74	-19.28	-	-	187	388	V
	* ** 17.72696	22.07	ADR	41.1	-20.3	42.87	54	-11.13	-	-	-	-	187	388	V
2	6.58749	44.39	PK-U	35.5	-30.8	49.09	-	-	-	-	68.2	-19.11	294	362	H
6	6.58761	49.54	PK-U	35.5	-30.8	54.24	-	-	-	-	68.2	-13.96	323	244	V

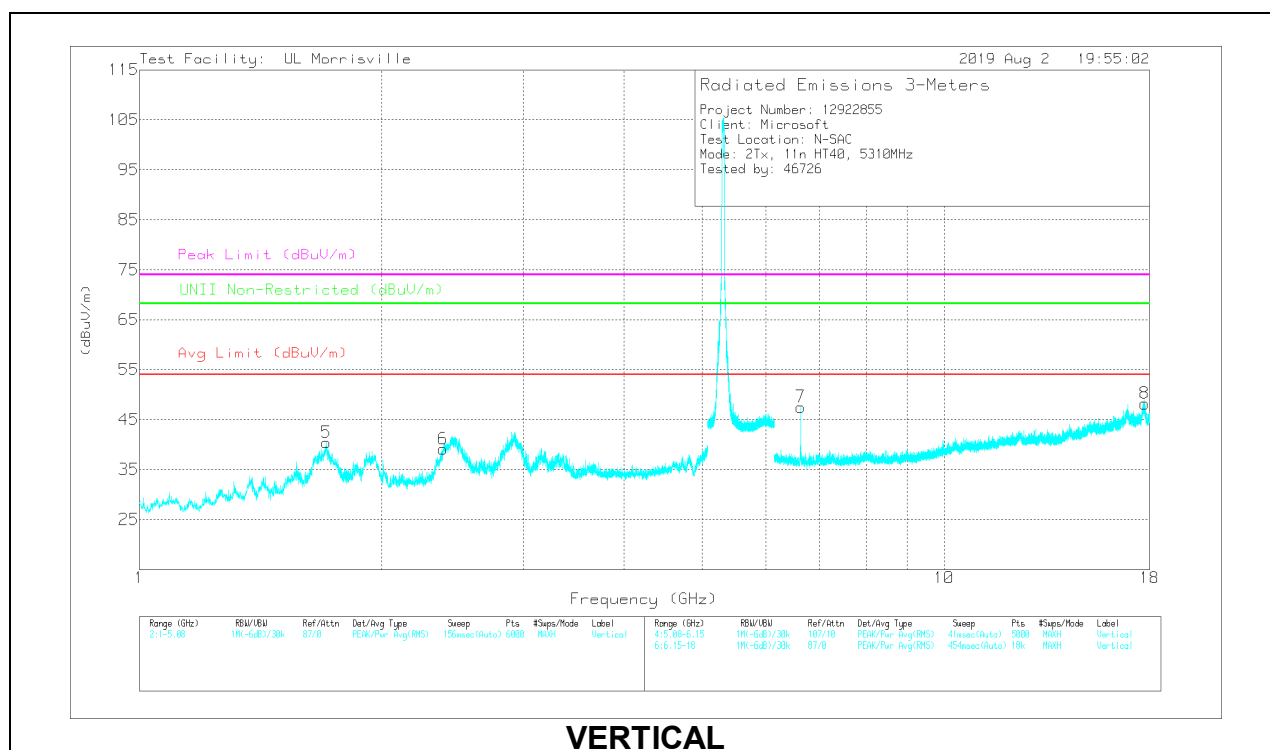
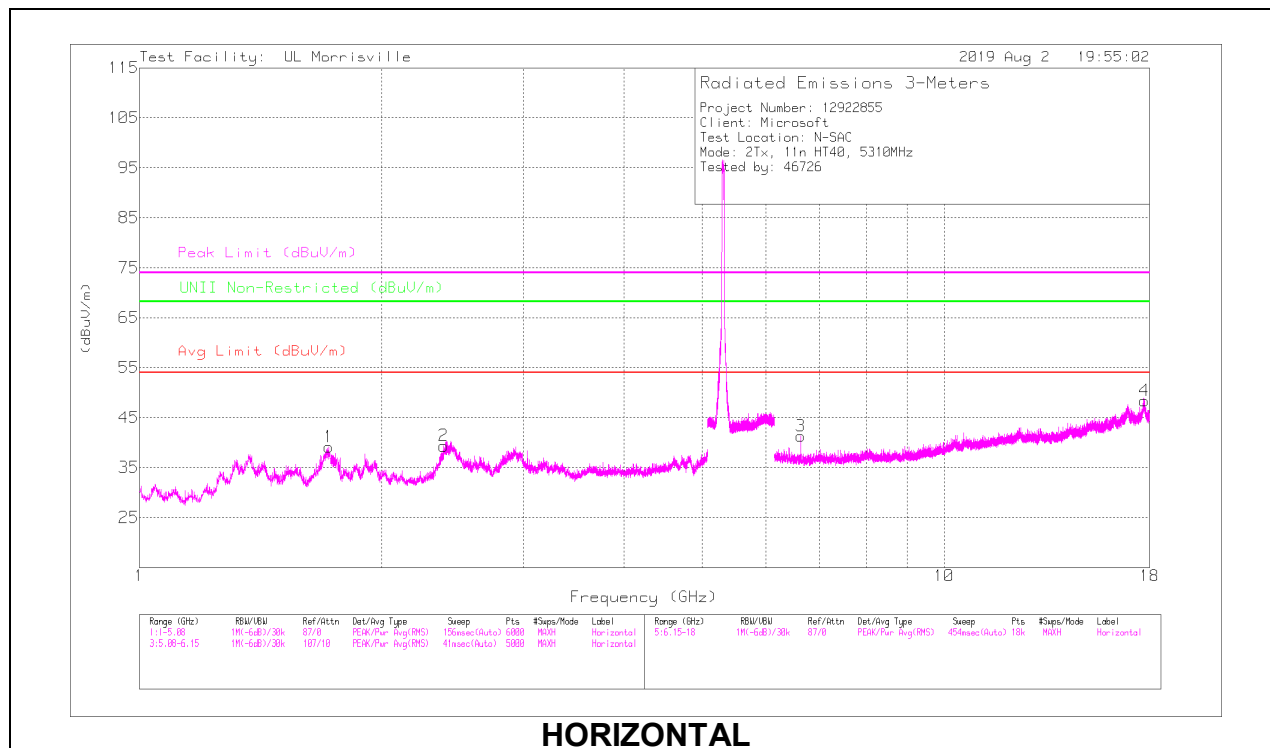
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.70965	53.86	PK-U	29.2	-35.4	47.66	-	-	74	-26.34	-	-	292	157	H
	* ** 1.70949	41.99	ADR	29.2	-35.4	35.79	54	-18.21	-	-	-	-	292	157	H
2	* ** 2.36589	44.28	PK-U	31.8	-34.2	41.88	-	-	74	-32.12	-	-	80	332	H
	* ** 2.36605	32.06	ADR	31.8	-34.2	29.66	54	-24.34	-	-	-	-	80	332	H
5	* ** 1.70124	54.53	PK-U	29.1	-35.3	48.33	-	-	74	-25.67	-	-	23	198	V
	* ** 1.70195	42.19	ADR	29.1	-35.3	35.99	54	-18.01	-	-	-	-	23	198	V
6	* ** 2.38296	50.42	PK-U	32	-34	48.42	-	-	74	-25.58	-	-	39	190	V
	* ** 2.3831	38.6	ADR	32	-34	36.6	54	-17.4	-	-	-	-	39	190	V
4	* ** 17.72967	34.45	PK-U	41.1	-20.3	55.25	-	-	74	-18.75	-	-	54	191	H
	* ** 17.7296	22.17	ADR	41.1	-20.3	42.97	54	-11.03	-	-	-	-	54	191	H
8	* ** 17.74604	34.32	PK-U	41.1	-20.5	54.92	-	-	74	-19.08	-	-	80	391	V
	* ** 17.74609	22.13	ADR	41.1	-20.5	42.73	54	-11.27	-	-	-	-	80	391	V
3	6.63751	43.84	PK-U	35.5	-30.8	48.54	-	-	-	-	68.2	-19.66	337	317	H
7	6.63751	47.39	PK-U	35.5	-30.8	52.09	-	-	-	-	68.2	-16.11	292	203	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

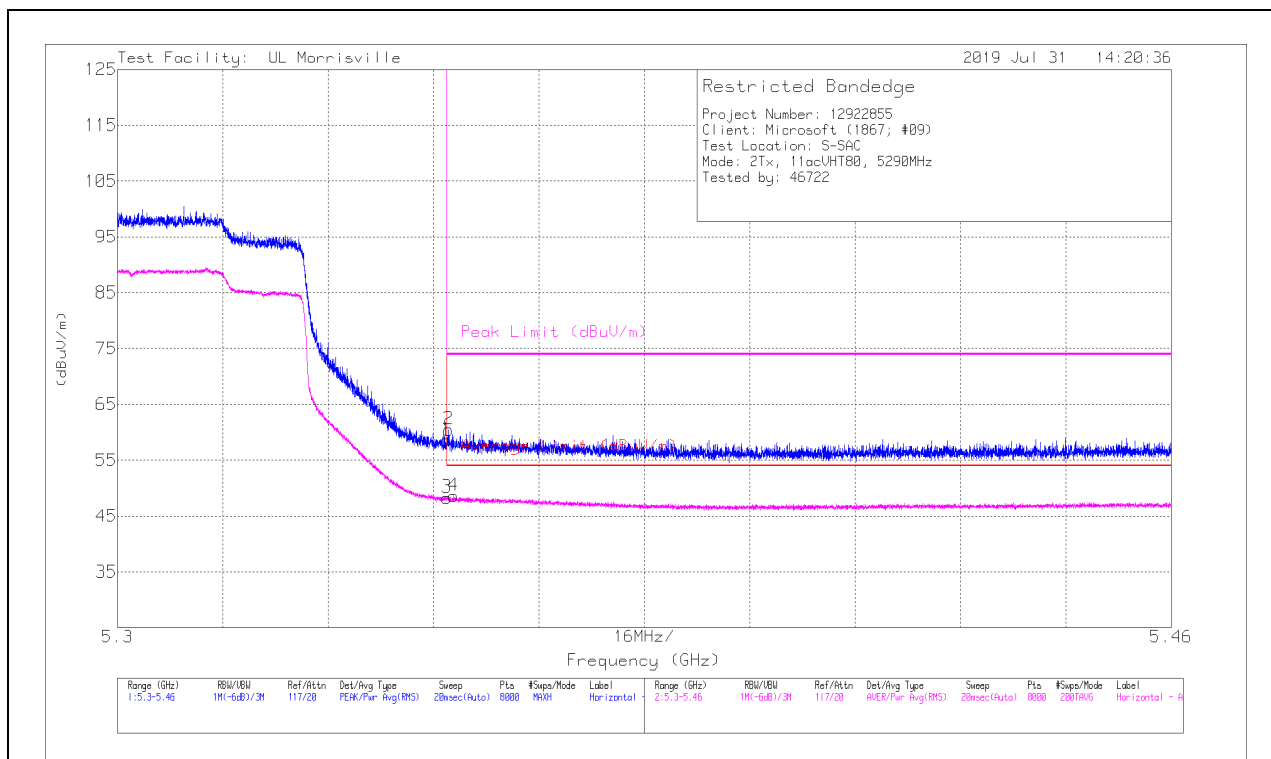
ADR - U-NII AD primary method, RMS average

8.2.8. TX ABOVE 1 GHz 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

BANDEDGE (HIGH CHANNEL)

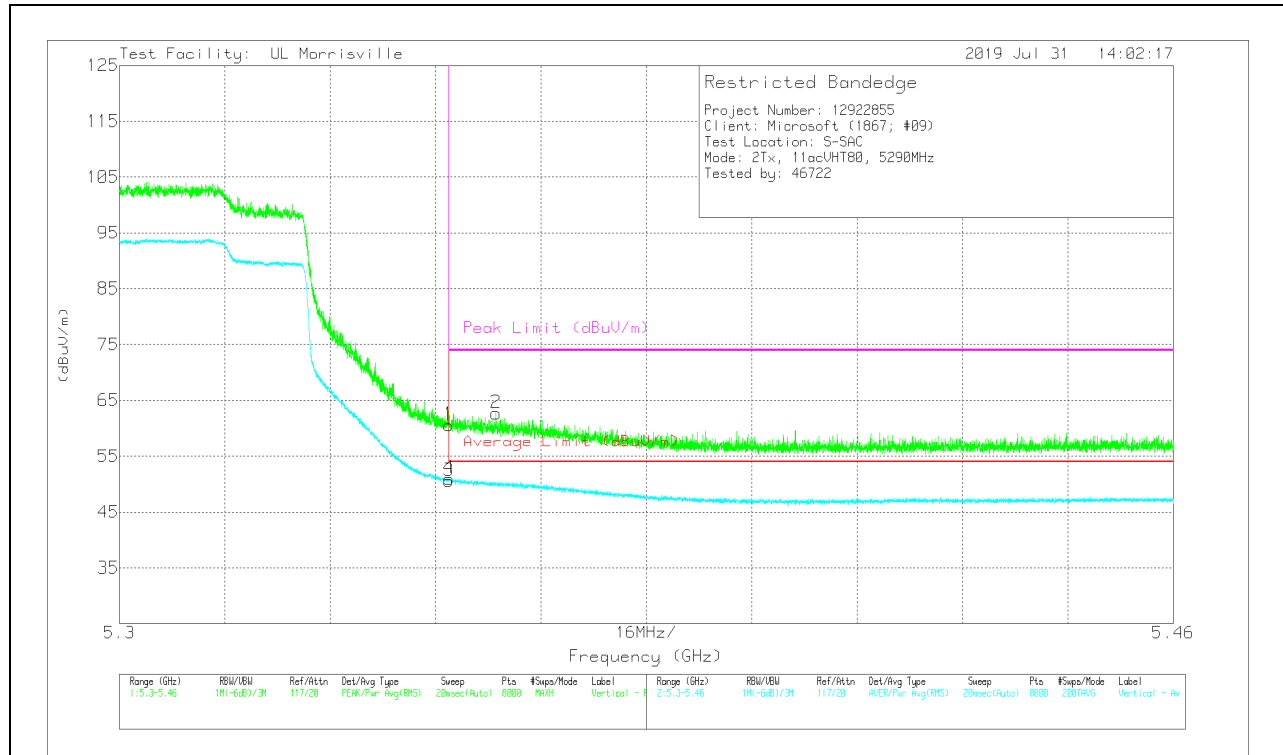
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35001	47.4	Pk	34.4	-23.2	0	58.6	-	-	74	-15.4	24	341	H
2	*** 5.35031	49.29	Pk	34.4	-23.2	0	60.49	-	-	74	-13.51	24	341	H
3	*** 5.35001	37.1	RMS	34.4	-23.2	0	48.3	54	-5.7	-	-	24	341	H
4	*** 5.35105	37.39	RMS	34.4	-23.2	0	48.59	54	-5.41	-	-	24	341	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	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35001	49.39	Pk	34.4	-23.2	0	60.59	-	-	74	-13.41	23	219	V
2	*** 5.35717	51.51	Pk	34.4	-23.2	0	62.71	-	-	74	-11.29	23	219	V
3	*** 5.35001	39.4	RMS	34.4	-23.2	0	50.6	54	-3.4	-	-	23	219	V
4	*** 5.35003	39.82	RMS	34.4	-23.2	0	51.02	54	-2.98	-	-	23	219	V

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

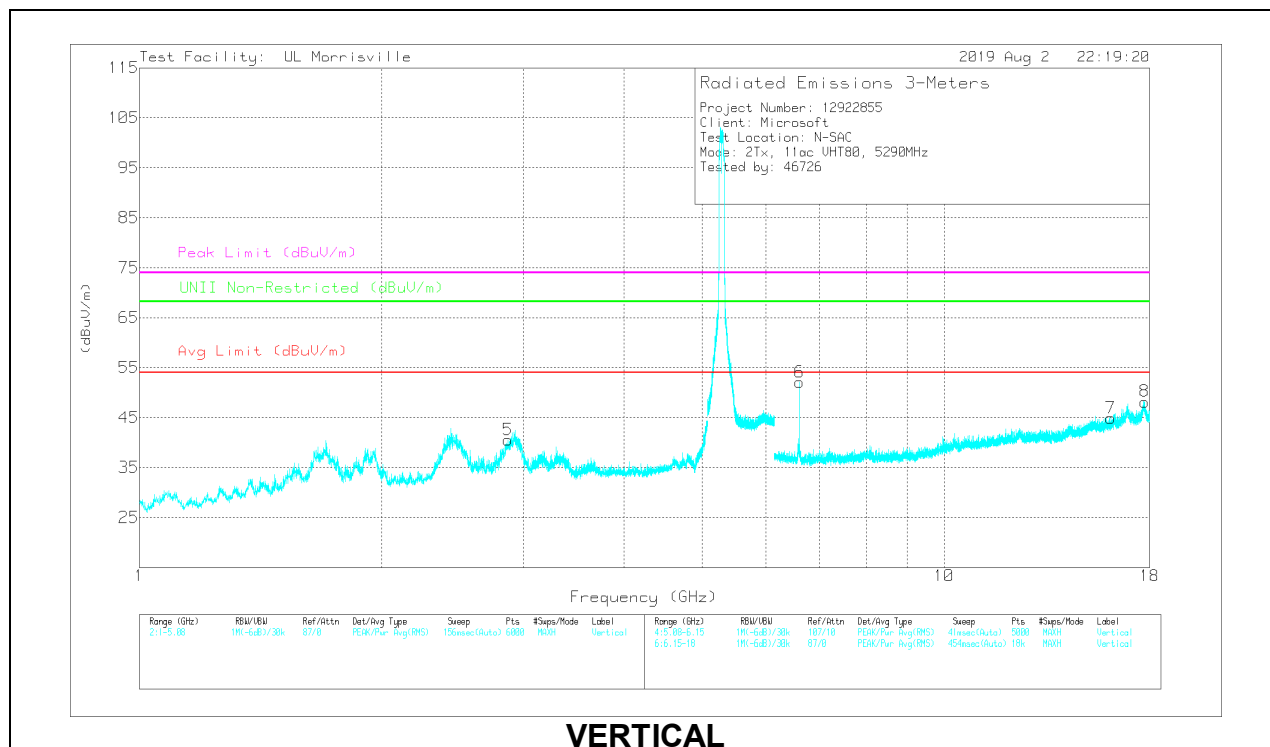
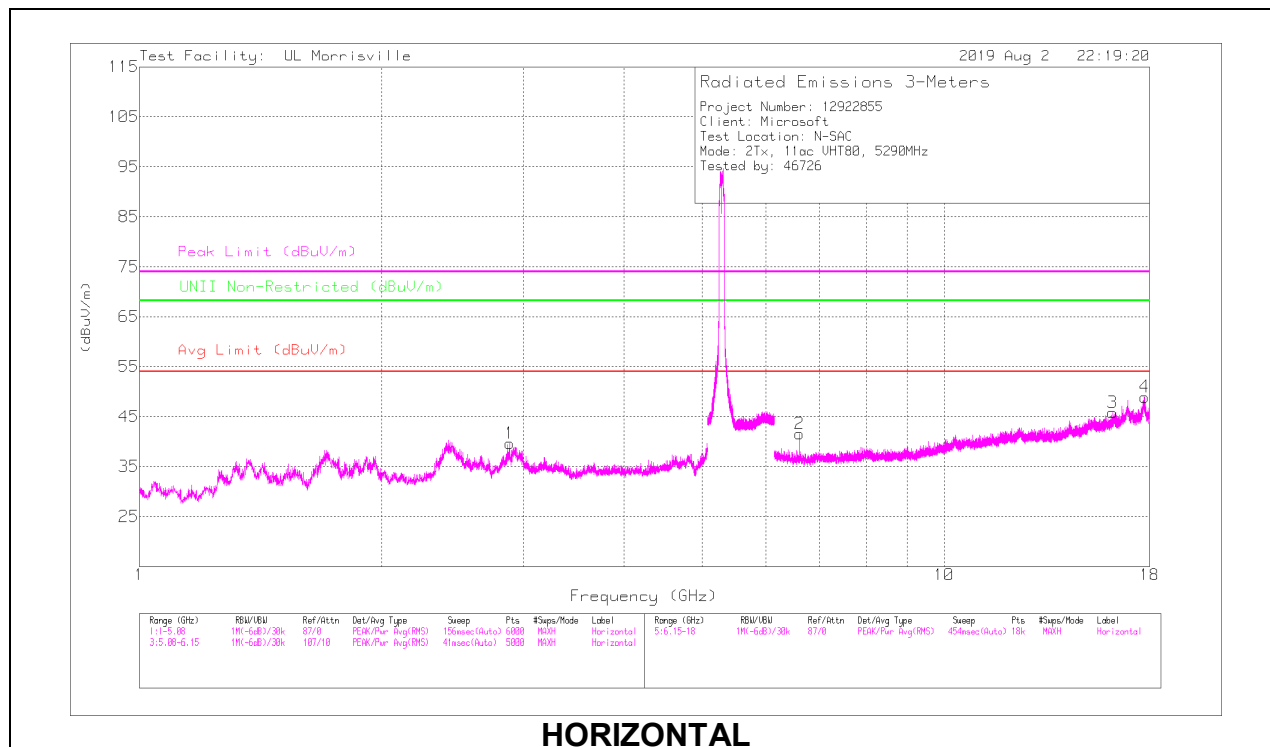
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.88177	47.41	PK-U	32.6	-33.8	46.21	-	-	74	-27.79	-	-	300	119	H
	* ** 2.88177	35.58	ADR	32.6	-33.8	34.38	54	-19.62	-	-	-	-	300	119	H
5	* ** 2.87245	51.13	PK-U	32.5	-33.9	49.73	-	-	74	-24.27	-	-	33	226	V
	* ** 2.87246	39.02	ADR	32.5	-33.9	37.62	54	-16.38	-	-	-	-	33	226	V
3	* ** 16.19528	36.47	PK-U	40.5	-25.8	51.17	-	-	74	-22.83	-	-	9	170	H
	* ** 16.19532	24.49	ADR	40.5	-25.8	39.19	54	-14.81	-	-	-	-	9	170	H
4	* ** 17.7486	34.32	PK-U	41.1	-20.6	54.82	-	-	74	-19.18	-	-	38	291	H
	* ** 17.74856	21.97	ADR	41.1	-20.6	42.47	54	-11.53	-	-	-	-	38	291	H
7	* ** 16.11351	36.61	PK-U	40.5	-25.4	51.71	-	-	74	-22.29	-	-	148	217	V
	* ** 16.11346	23.91	ADR	40.5	-25.4	39.01	54	-14.99	-	-	-	-	148	217	V
8	* ** 17.74441	34.79	PK-U	41.1	-20.5	55.39	-	-	74	-18.61	-	-	24	138	V
	* ** 17.74433	22.07	ADR	41.1	-20.5	42.67	54	-11.33	-	-	-	-	24	138	V
2	6.61246	44.13	PK-U	35.5	-30.8	48.83	-	-	-	-	68.2	-19.37	69	354	H
6	6.61252	49.79	PK-U	35.5	-30.8	54.49	-	-	-	-	68.2	-13.71	333	257	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

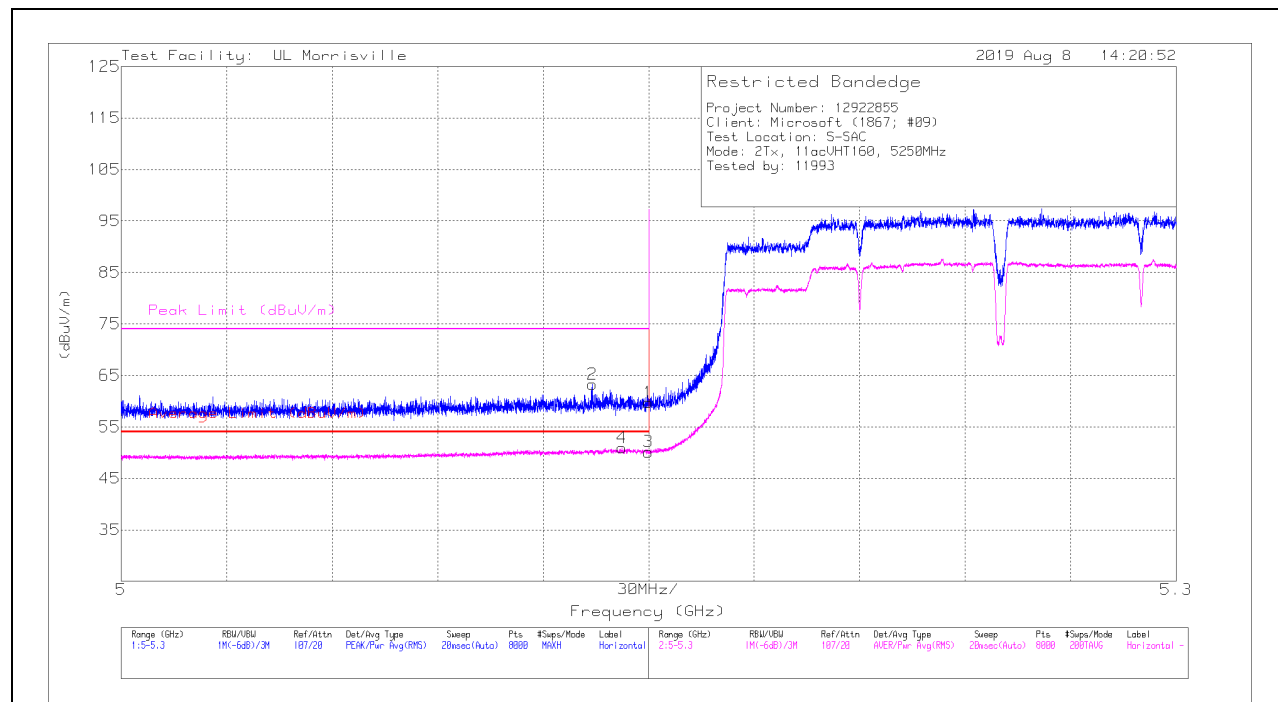
ADR - U-NII AD primary method, RMS average

8.2.1. TX ABOVE 1 GHz 802.11ac VHT160 MODE IN THE 5.2/5.3 GHz BAND

2TX Antenna 1 + Antenna 2 SDM MODE

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.14998	48.03	Pk	34.3	-22.6	59.73	-	-	74	-14.27	49	391	H
2	* ** 5.13408	51.58	Pk	34.2	-22.5	63.28	-	-	74	-10.72	49	391	H
3	* ** 5.14998	38.45	RMS	34.3	-22.6	50.15	54	-3.85	-	-	49	391	H
4	* ** 5.14241	39.14	RMS	34.3	-22.5	50.94	54	-3.06	-	-	49	391	H

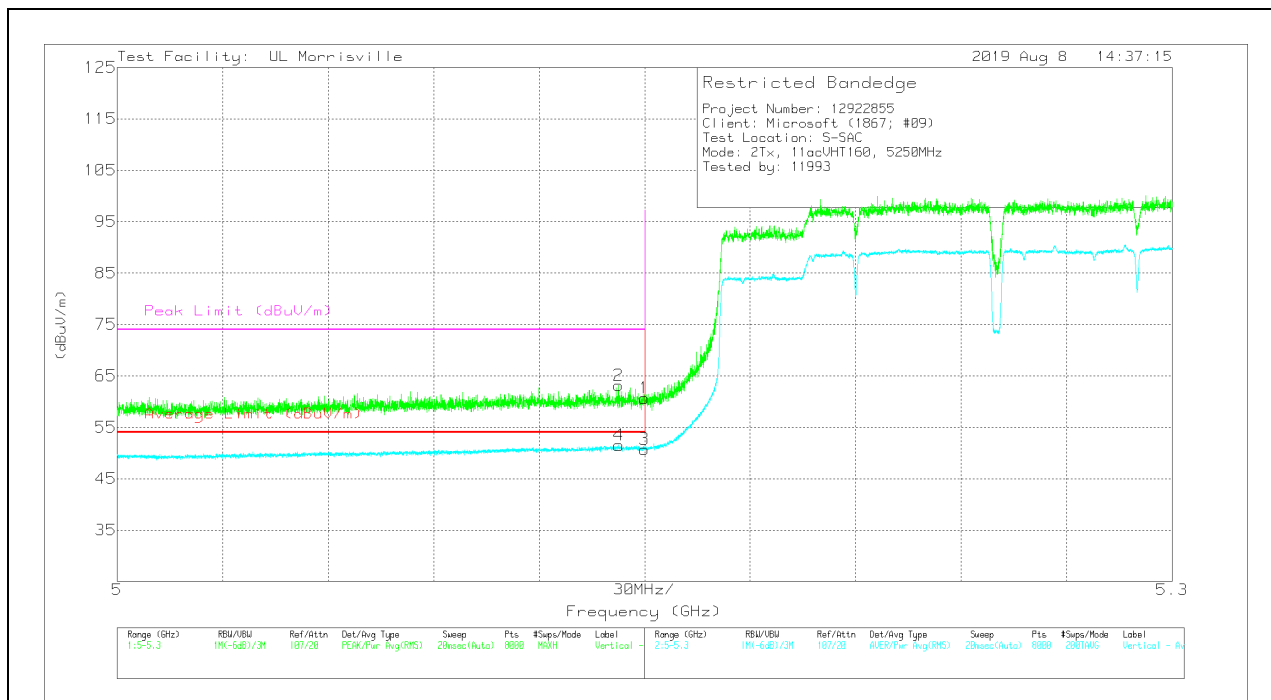
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.14998	48.96	Pk	34.3	-22.6	60.66	-	-	74	-13.34	0	218	V
2	* ** 5.14263	51.32	Pk	34.3	-22.5	63.12	-	-	74	-10.88	0	218	V
3	* ** 5.14998	39.04	RMS	34.3	-22.6	50.74	54	-3.26	-	-	0	218	V
4	* ** 5.14267	39.7	RMS	34.3	-22.5	51.5	54	-2.5	-	-	0	218	V

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

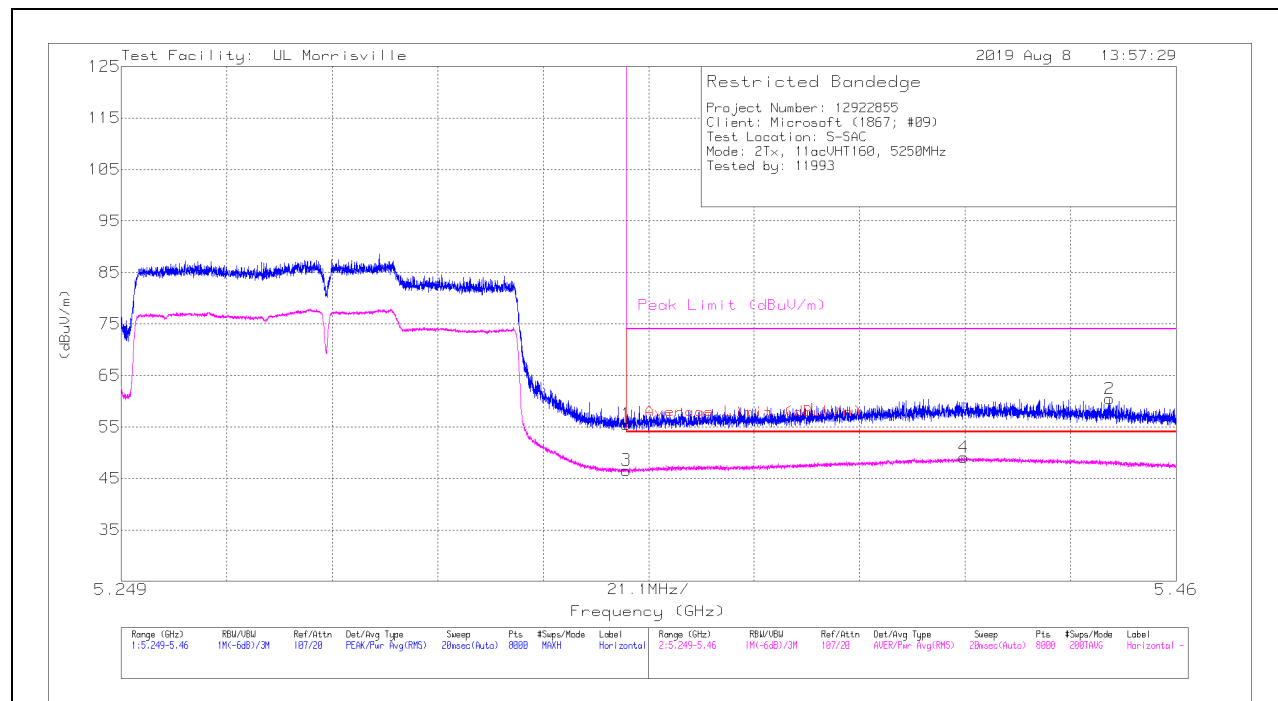
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

BANEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 5.35	44.32	Pk	34.4	-23.2	55.52	-	-	74	-18.48	332	138	H
2	*** 5.44662	49.35	Pk	34.5	-23.4	60.45	-	-	74	-13.55	332	138	H
3	*** 5.35	35.39	RMS	34.4	-23.2	46.59	54	-7.41	-	-	332	138	H
4	*** 5.41748	37.99	RMS	34.4	-23.3	49.09	54	-4.91	-	-	332	138	H

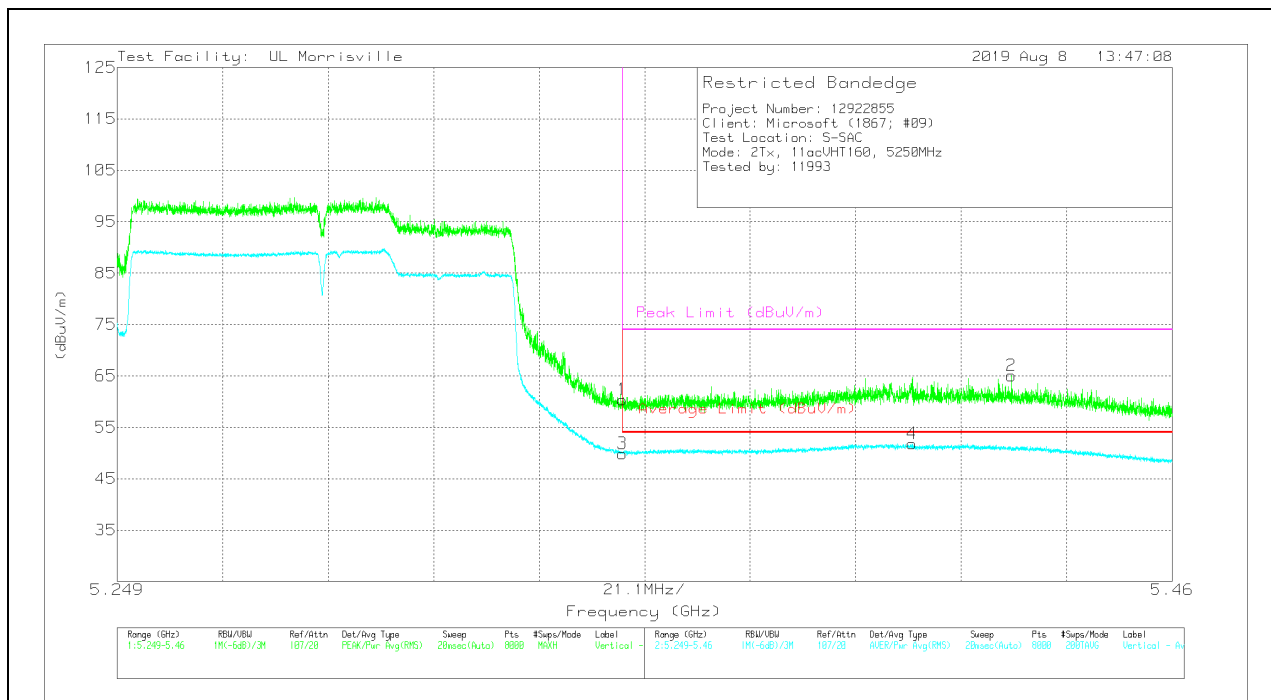
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 5.35	49.18	Pk	34.4	-23.2	60.38	-	-	74	-13.62	6	211	V
2	* ** 5.42779	54.07	Pk	34.4	-23.4	65.07	-	-	74	-8.93	6	211	V
3	* ** 5.35	38.69	RMS	34.4	-23.2	49.89	54	-4.11	-	-	6	211	V
4	* ** 5.40793	40.82	RMS	34.4	-23.4	51.82	54	-2.18	-	-	6	211	V

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

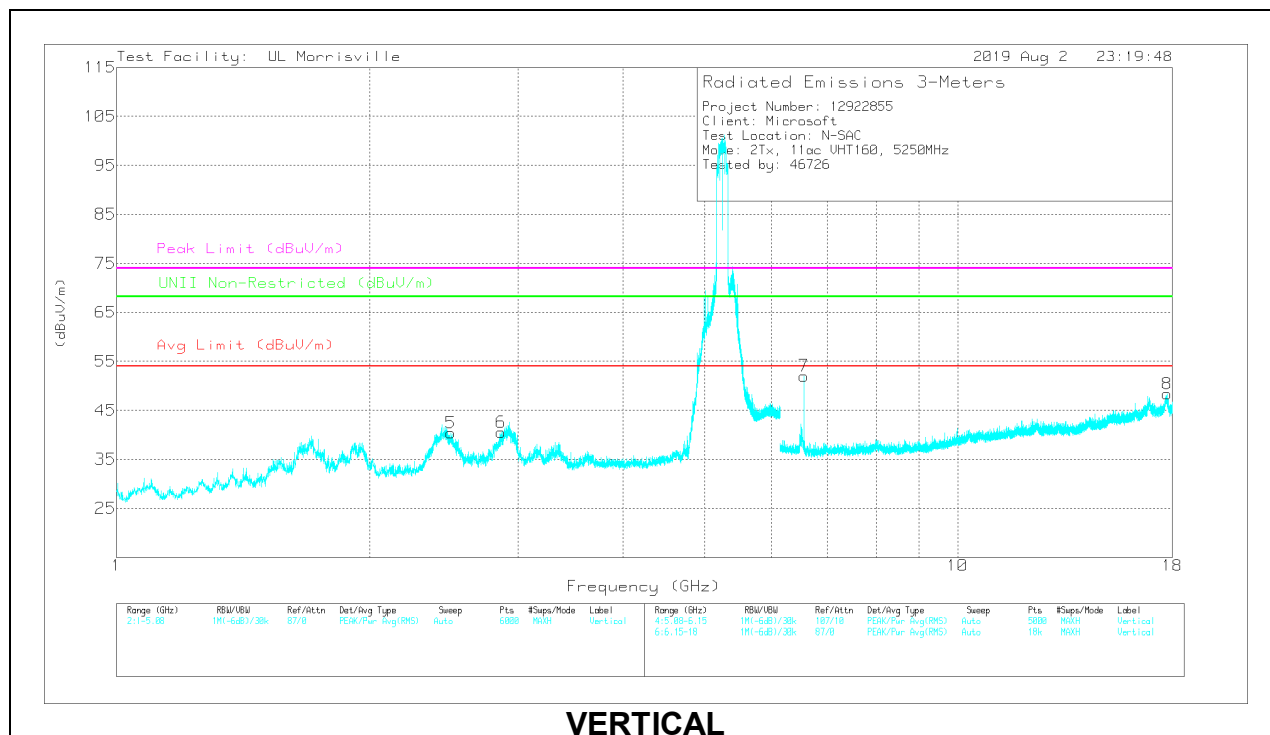
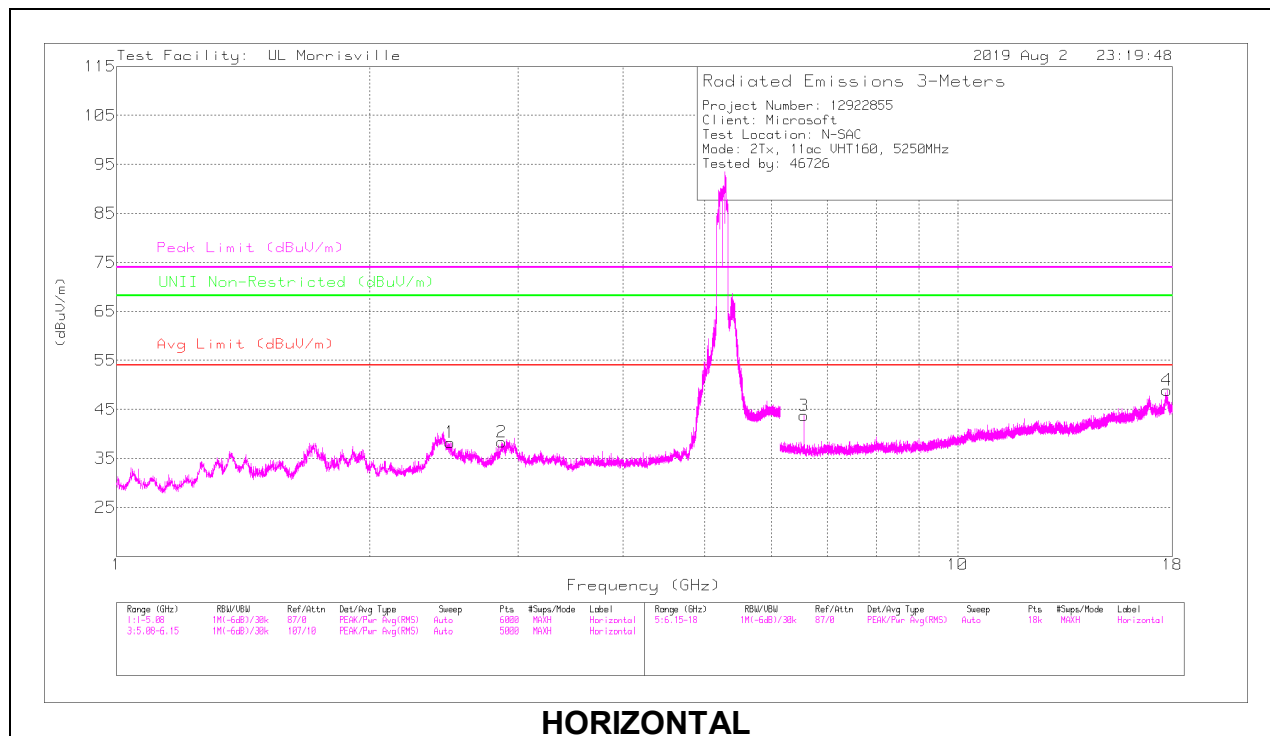
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

MID CHANNEL RESULTS



RADIATED EMISSIONS

Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 AF (dBuV/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	UNII Non-Restricted (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.49206	48.36	PK-U	32.5	-34.2	46.66	-	-	74	-27.34	-	-	266	115	H
	* ** 2.49193	35.71	ADR	32.4	-34.2	33.91	54	-20.09	-	-	-	-	266	115	H
2	* ** 2.8735	48.79	PK-U	32.5	-33.9	47.39	-	-	74	-26.61	-	-	301	102	H
	* ** 2.8735	36.43	ADR	32.5	-33.9	35.03	54	-18.97	-	-	-	-	301	102	H
5	* ** 2.48909	50.22	PK-U	32.4	-34.2	48.42	-	-	74	-25.58	-	-	39	257	V
	* ** 2.48918	38.09	ADR	32.4	-34.2	36.29	54	-17.71	-	-	-	-	39	257	V
6	* ** 2.87251	50.99	PK-U	32.5	-33.9	49.59	-	-	74	-24.41	-	-	36	202	V
	* ** 2.87255	38.72	ADR	32.5	-33.9	37.32	54	-16.68	-	-	-	-	36	202	V
4	* ** 17.73868	34.55	PK-U	41.1	-20.3	55.35	-	-	74	-18.65	-	-	27	174	H
	* ** 17.73872	22.17	ADR	41.1	-20.4	42.87	54	-11.13	-	-	-	-	27	174	H
8	* ** 17.73837	34.31	PK-U	41.1	-20.3	55.11	-	-	74	-18.89	-	-	61	288	V
	* ** 17.73828	22.09	ADR	41.1	-20.3	42.89	54	-11.11	-	-	-	-	61	288	V
3	6.56253	45.23	PK-U	35.5	-30.7	50.03	-	-	-	-	68.2	-18.17	295	371	H
7	6.56253	50.61	PK-U	35.5	-30.7	55.41	-	-	-	-	68.2	-12.79	356	203	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK-U - U-NII: Maximum Peak

ADR - U-NII AD primary method, RMS average

8.3. WORST-CASE BELOW 1GHz AND ABOVE 18 GHz

Radiated emissions below 1GHz, above 18GHz, and power line conducted emissions were performed in worst-case test report R12922855-E11 (FCC ID: C3K1867, IC: 3048A-1867)

9. AC LINE CONDUCTED EMISSIONS

Radiated emissions below 1GHz, above 18GHz, and power line conducted emissions were performed in worst-case test report R12922855-E11 (FCC ID: C3K1867, IC: 3048A-1867).

10. SETUP PHOTOS

Please refer to 12922855-EP1 for setup photos

END OF TEST REPORT