



TEST REPORT

Report Number: R12761322-E8

Applicant : Weber-Stephen Products LLC
1415 S Roselle Rd
Palatine, IL 60067, U.S.A.

Model : PULSE 2000

FCC ID : 2AHSR-CONNECT1

IC : 21267-CONNECT1

EUT Description : Smart grill with 2.4 WLAN and BLE radio

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

Date of Issue:
2020-08-11

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2020-07-20	Initial Issue	Niklas Haydon
V2	2020-08-10	Added additional radiated emissions data	Niklas Haydon

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Weber-Stephen Products LLC
1415 S Roselle Rd
Palatine, IL 60067, U.S.A.

EUT DESCRIPTION: Smart grilling hub with 2.4 WLAN and BLE radio

MODEL: WEBER CONNECT SMART GRILLING HUB

SERIAL NUMBER: WLAN – 30190000000048, BLE - 30190000000118

SAMPLE RECEIPT DATE: 2020-06-25

DATE TESTED: 2020-07-14 to 2020-07-31
2019-04-29 (DUTY CYCLE FOR WLAN)
2019-05-14 (DUTY CYCLE FOR BLE)

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

*This report covers radiated emissions and ac power line conducted emissions. Refer to R12761322-E1 and R12761322-E2 for all other test data.

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.

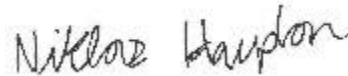
This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim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

Approved & Released For
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UL LLC

2. TEST RESULTS SUMMARY

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only.	ANSI C63.10 Section 11.6.
-	RSS-GEN 6.7	99% OBW	Not performed.	See UL LLC reports R12761322-E1 and R12761322-E2
15.247 (a) (2)	RSS-247 5.2 (a)	6dB BW	Not performed.	
15.247 (b) (3)	RSS-247 5.4 (d)	Output Power	Not performed.	
See Comment		Average power	Not performed.	
15.247 (e)	RSS-247 5.2 (b)	PSD	Not performed.	
15.247 (d)	RSS-247 5.5	Conducted Spurious Emissions	Not performed.	
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions	Compliant.	None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	Compliant.	None.

3. 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, KDB 414788 D01 Radiated Test Site v01r01, RSS-GEN Issue 5, and RSS-247 Issue 2.

4. 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 27560, 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

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

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U _{Lab}
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	1.94 dB
All emissions, radiated	4.88 dB
Conducted Emissions (0.150-30MHz) - LISN	3.07 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%.

5.4. 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.

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

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a smart grill with 2.4 WLAN and BLE radio.

6.2. MAXIMUM OUTPUT POWER

Refer to UL LLC reports R12761322-E1 and R12761322-E2 for maximum output power.

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an OnBoard SMD antenna, with a maximum gain of 4.9 dBi.

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was 01-68e4a7a6.
The test utility software used during testing was 7.45.98.50 (r688715 CY WLTEST).

6.5. 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 and data rate with highest power spectral density across all data rates 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 EUT only operates in one orientations X, therefore, all final radiated testing was performed with the EUT in X orientation.

Worst-case data rates were:

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

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Lenovo	L470	PF0ZV674	NA
Laptop Charger	Lenovo	ADLX65NDC2A	11S36200282ZZ20053B8X2	NA
Meat Temperature Probes	Weber Stephen	SKU 7211	Non-serialized	NA

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Probe	1	Barrel	Probe	<3m	none

TEST SETUP

The EUT is connected to a test laptop that has software to exercise the radio card.

SETUP DIAGRAMS

Please refer to R12761322-EP3 for setup diagrams

7. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10-2013 Section 11.6.

Emissions in non-restricted frequency bands: ANSI C63.10 Subclause -11.11 and 6.10.4

Emissions in restricted frequency bands: ANSI C63.10 Subclause -11.12.1 and 6.10.5

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

AC Power Line Conducted Emissions: ANSI C63.10-2013, Section 6.2.

8. TEST AND MEASUREMENT EQUIPMENT

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

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

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	1-18 GHz				
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2020-04-27	2021-04-27
	Gain-Loss Chains				
N-SAC03	Gain-loss string: 1-18GHz	Various	Various	2020-03-15	2021-03-15
	Receiver & Software				
SA0025	Spectrum Analyzer	Agilent	N9030A	2020-03-17	2021-03-17
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
s/n 200037635	Environmental Meter	Fisher Scientific	06-662-4	2020-1-22	2022-01-22

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	2020-03-26	2021-03-26
s/n 200037610	Environmental Meter	fisherbrand	06-662-4	2020-01-21	2022-01-21
LISN003	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2019-08-19	2020-08-19
75141 (PRE0101521)	EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESCI 7	2019-08-20	2020-08-20
ATA222	Transient Limiter, 0.009-100MHz	Electro-Metrics	EM-7600	2020-03-26	2021-03-26
PS214	AC Power Source	Elgar	CW2501M (s/n 1523A02396)	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA

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

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	(Loop Ant.)			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2019-08-08	2020-08-08
	30-1000 MHz				
AT0074	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2019-07-16	2020-07-16
	1-18 GHz				
AT0078	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2019-10-28	2020-10-28
	18-40 GHz				
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2019-11-07	2020-11-07
	Gain-Loss Chains				
S-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2020-04-23	2021-04-23
S-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2020-04-23	2021-04-23
S-SAC03	Gain-loss string: 1-18GHz	Various	Various	2020-05-15	2021-05-15
S-SAC04	Gain-loss string: 18-40GHz	Various	Various	2020-03-23	2021-03-23
	Receiver & Software				
SA0026	Spectrum Analyzer	Agilent	N9030A	2020-06-24	2021-06-24
197954	Spectrum Analyzer	Rohde & Schwarz	ESW44	2020-03-27	2021-03-27
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
s/n 200037610	Environmental Meter	Fisher Scientific	06-662-4	2020-1-22	2022-01-22
76022	DC Regulated Power Supply	CircuitSpecialists .Com	CSI3005X5	N/A	N/A

Note: All equipment was calibrated at time of test.

9. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

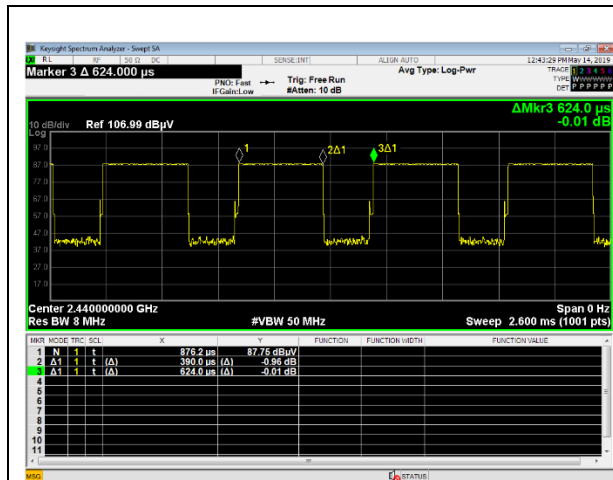
ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor Radiated (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
BLE	0.390	0.624	0.625	62.50%	4.08	2.564
802.11b 1TX	8.400	8.450	0.994	99.41%	0.00	0.010
802.11g 1TX	1.396	1.436	0.972	97.21%	0.25	0.716
802.11n HT20 1TX	1.307	1.350	0.968	96.81%	0.28	0.765

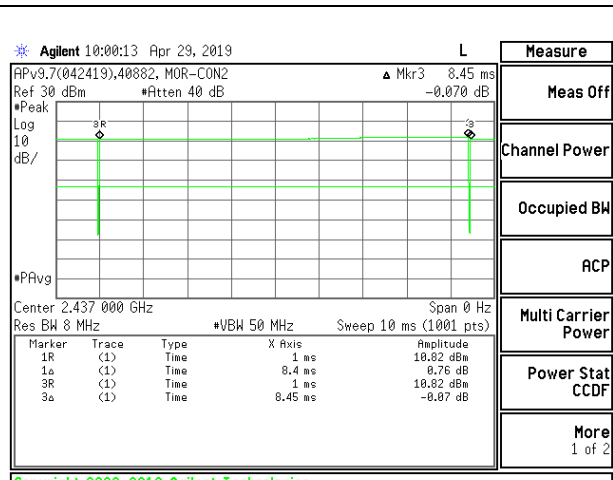
Note: This data has been referenced from UL LLC reports R12761322-E1 and R12761322-E2.

Tester: 12015/40882

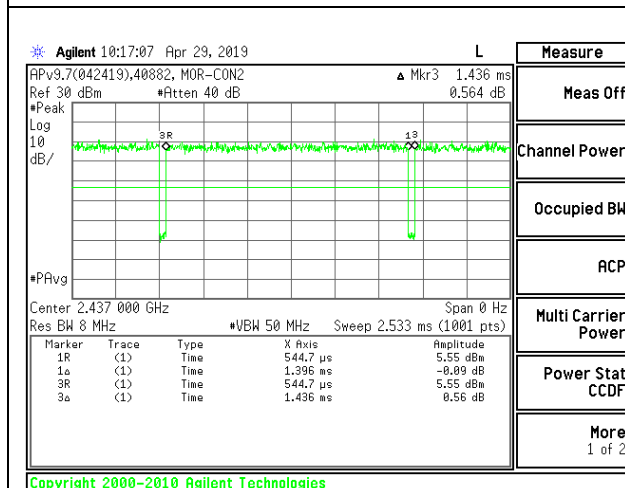
DUTY CYCLE PLOTS



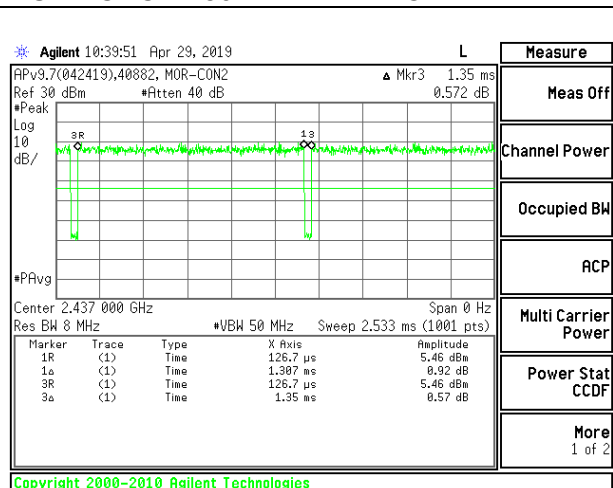
DUTY CYCLE BLE



DUTY CYCLE 802.11b 1TX MODE



DUTY CYCLE 802.11g 1TX MODE



DUTY CYCLE 802.11nHT20 1TX MODE

10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

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 and/or quasi-peak detection measurements in the 30-1000MHz range, 9kHz for peak and/or quasi-peak detection measurements in the 0.15-30MHz range and 200Hz for peak and/or quasi-peak detection measurements in the 9 to 150kHz 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 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. For this test program, voltage average detection was used.

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 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.

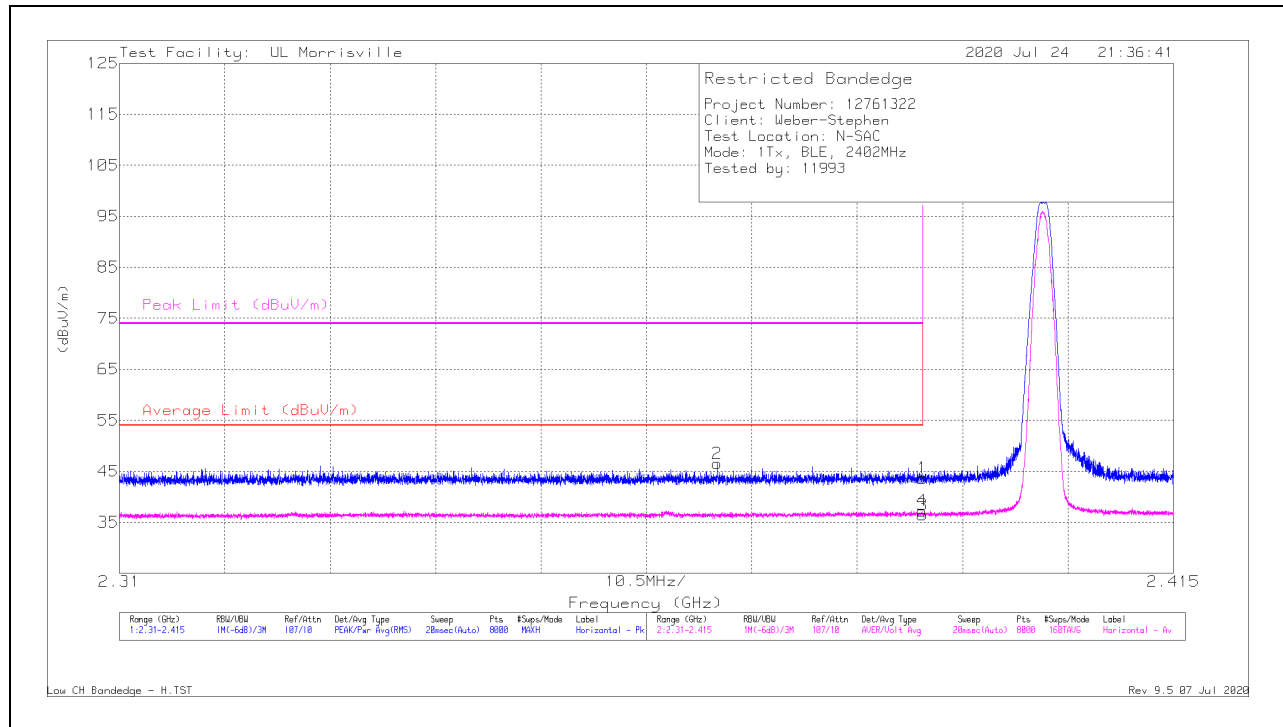
OFS and chamber correlation testing had been performed and chamber measured test result is the worst-case test result.

10.2. TRANSMITTER ABOVE 1 GHz

10.2.1. BLE

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	* ** 2.39	35.46	Pk	31.8	-23.6	0	43.66	-	-	74	-30.34	125	101	H
2	* ** 2.36954	38.41	Pk	31.7	-23.6	0	46.51	-	-	74	-27.49	125	101	H
3	* ** 2.39	24.19	ADV	31.8	-23.6	4.08	36.47	54	-17.53	-	-	125	100	H
4	* ** 2.38996	24.98	ADV	31.8	-23.6	4.08	37.26	54	-16.74	-	-	125	100	H

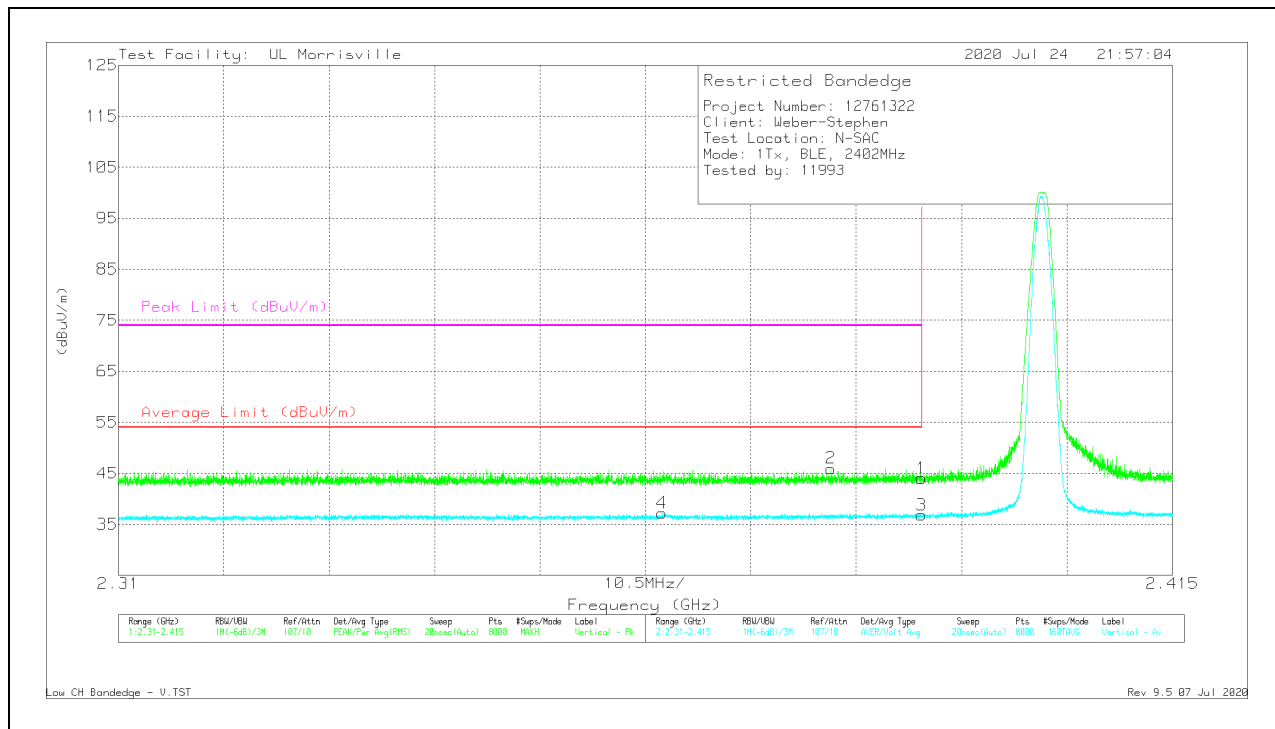
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



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

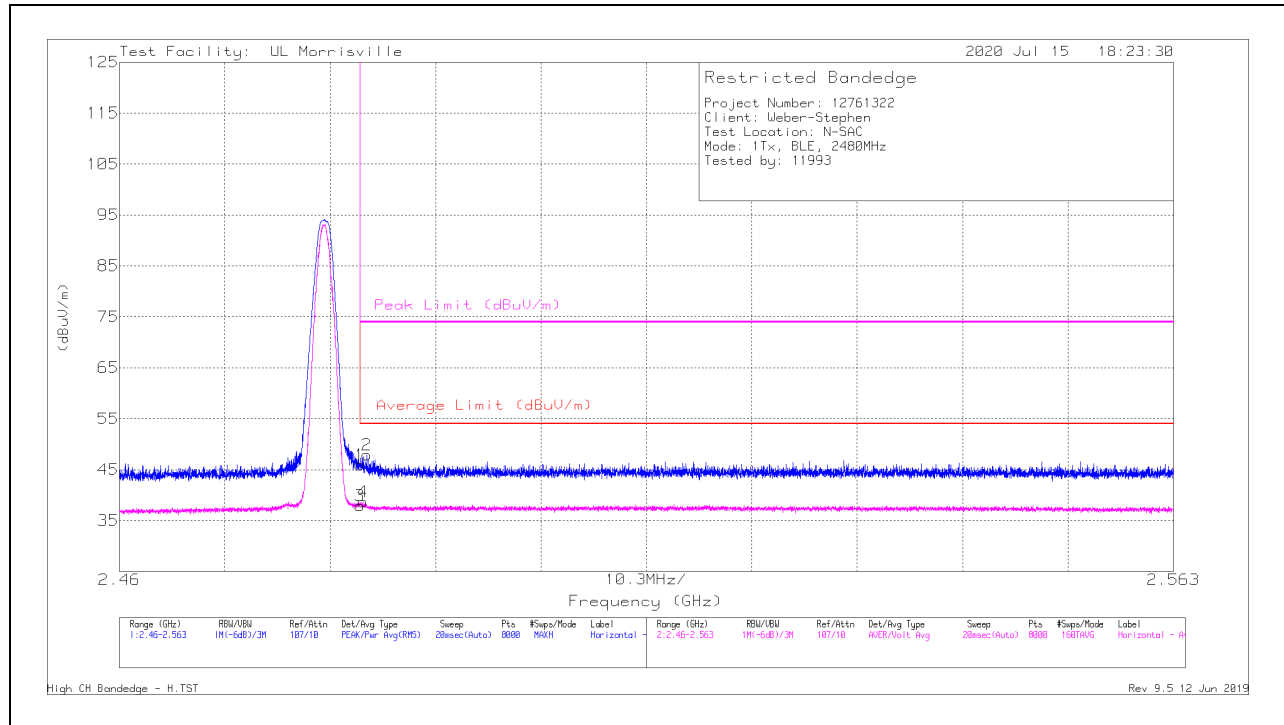
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

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	* ** 2.4835	36.92	Pk	32.4	-23.4	0	45.92	-	-	74	-28.08	33	329	H
2	* ** 2.48417	38.88	Pk	32.4	-23.4	0	47.88	-	-	74	-26.12	33	329	H
3	* ** 2.4835	24.79	ADV	32.4	-23.4	4.08	37.87	54	-16.13	-	-	33	329	H
4	* ** 2.48382	25.59	ADV	32.4	-23.4	4.08	38.67	54	-15.33	-	-	33	329	H

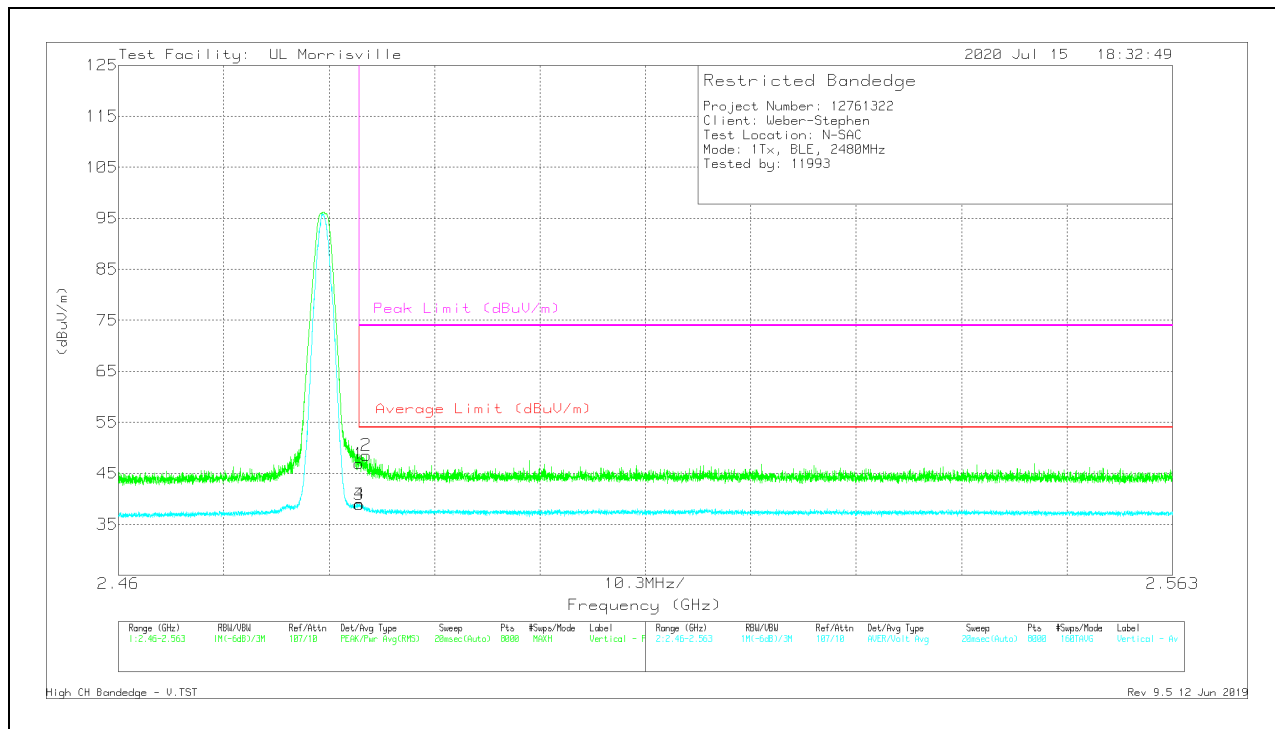
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

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	* ** 2.4835	37.86	Pk	32.4	-23.4	0	46.86	-	-	74	-27.14	114	365	V
2	* ** 2.48421	39.55	Pk	32.4	-23.4	0	48.55	-	-	74	-25.45	114	365	V
3	* ** 2.4835	25.84	ADV	32.4	-23.4	4.08	38.92	54	-15.08	-	-	114	365	V
4	* ** 2.48355	25.9	ADV	32.4	-23.4	4.08	38.98	54	-15.02	-	-	114	365	V

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

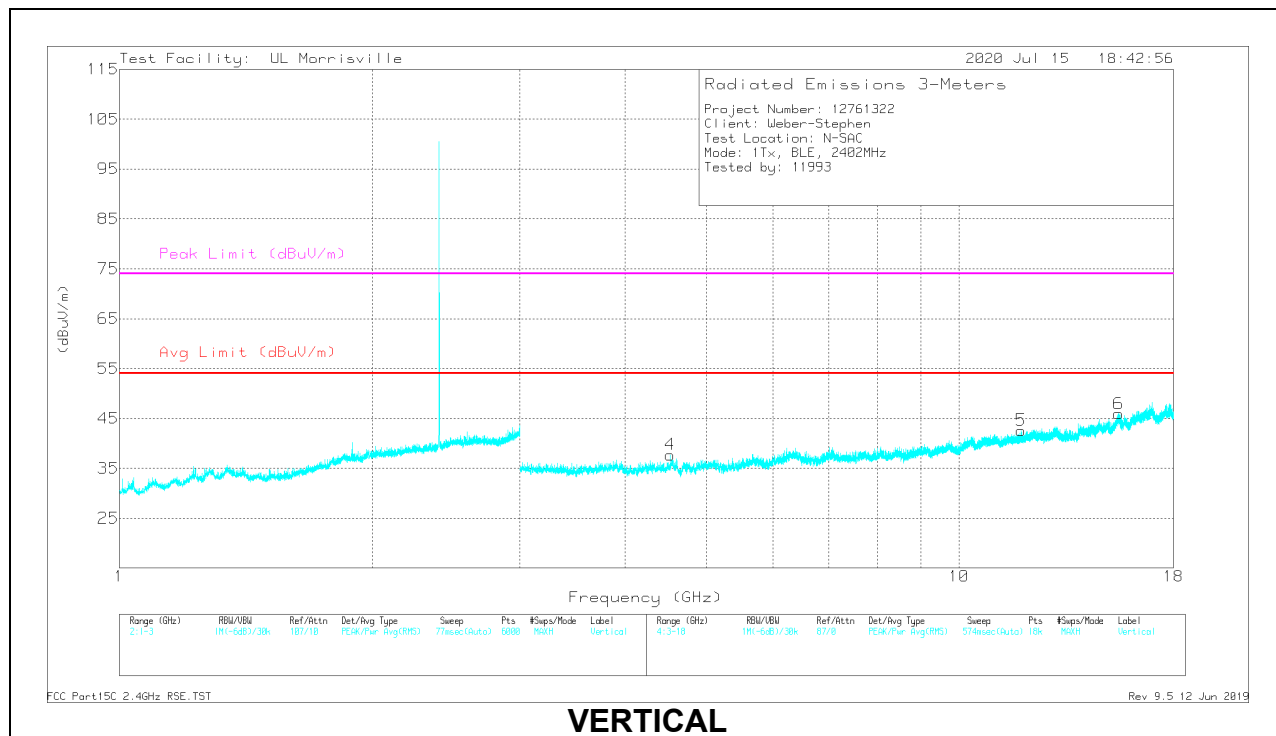
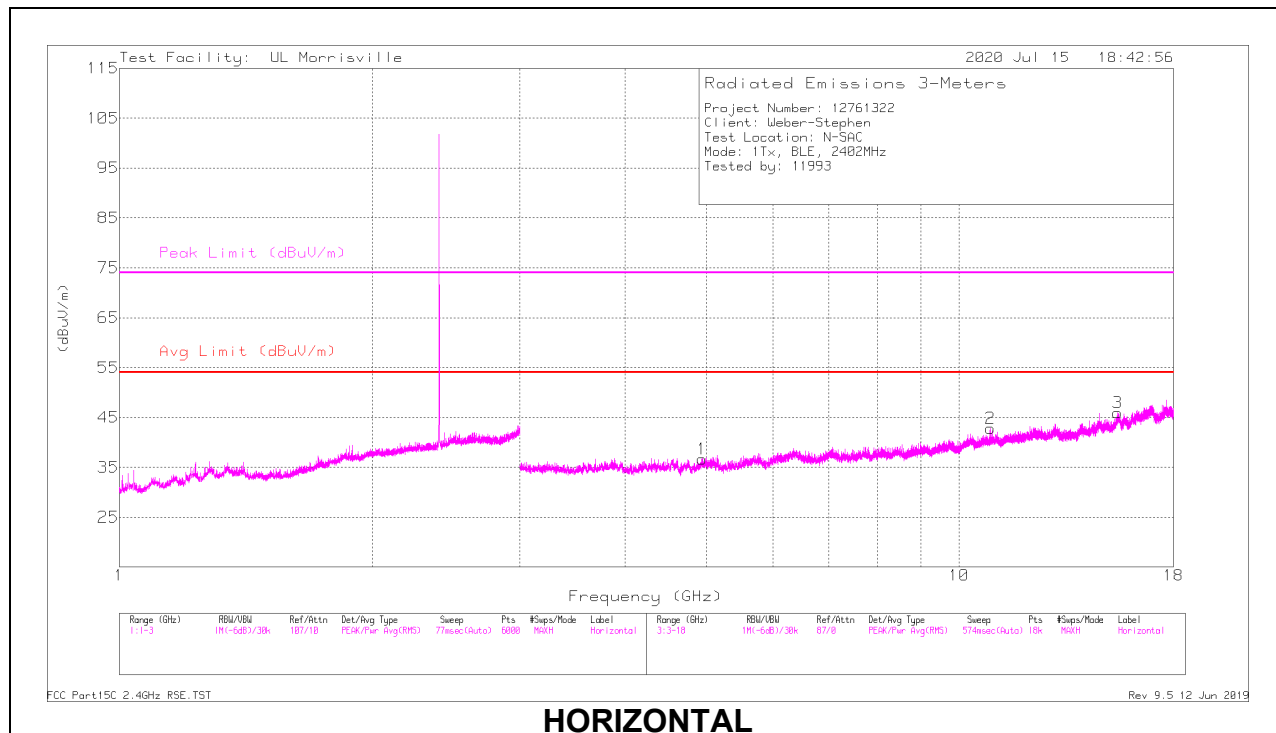
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

Marker	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)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.94126	40.99	PK2	34.1	-31.5	0	43.59	-	-	74	-30.41	54	235	H
	* ** 4.94087	27.57	ADV	34.1	-31.5	4.08	34.25	54	-19.75	-	-	54	235	H
2	* ** 10.90355	35.78	PK2	37.9	-25.2	0	48.48	-	-	74	-25.52	60	152	H
	* ** 10.90329	22.4	ADV	37.9	-25.2	4.08	39.18	54	-14.82	-	-	60	152	H
3	* ** 15.45629	36.64	PK2	40.2	-23.3	0	53.54	-	-	74	-20.46	71	160	H
	* ** 15.45585	22.81	ADV	40.2	-23.3	4.08	43.79	54	-10.21	-	-	71	160	H
4	* ** 4.52875	40.06	PK2	34	-31.5	0	42.56	-	-	74	-31.44	57	207	V
	* ** 4.52763	26.88	ADV	34	-31.6	4.08	33.36	54	-20.64	-	-	57	207	V
5	* ** 11.86086	35.61	PK2	38.5	-25.2	0	48.91	-	-	74	-25.09	169	316	V
	* ** 11.86169	22.06	ADV	38.5	-25.2	4.08	39.44	54	-14.56	-	-	169	316	V
6	* ** 15.48621	35.29	PK2	40.2	-23.1	0	52.39	-	-	74	-21.61	331	202	V
	* ** 15.48625	22.44	ADV	40.2	-23.1	4.08	43.62	54	-10.38	-	-	331	202	V

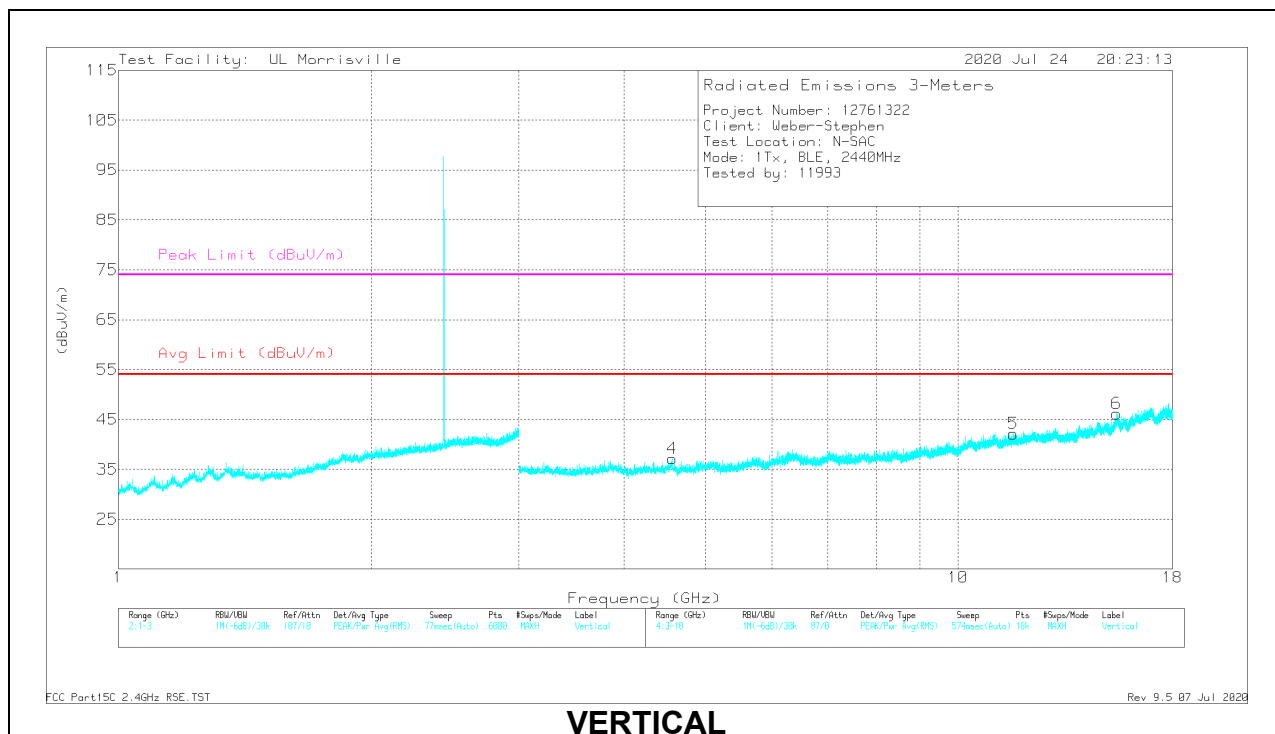
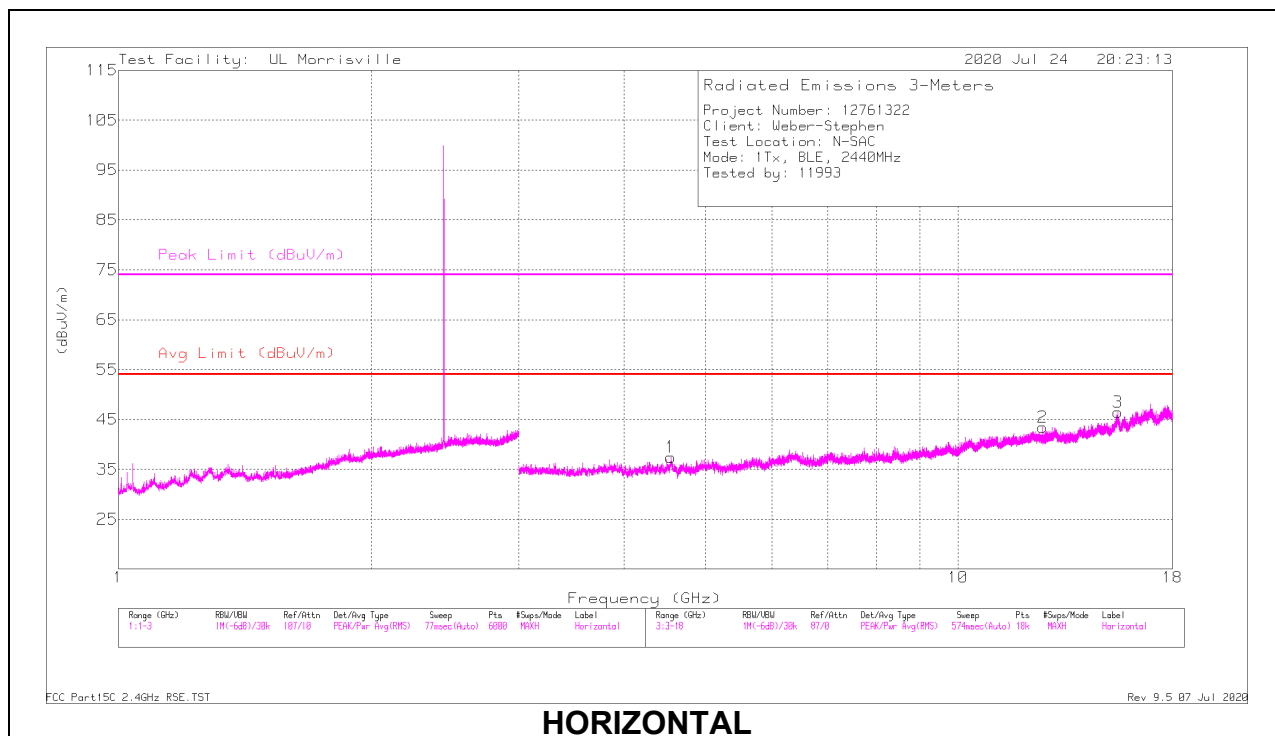
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

MID CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 4.54959	40.27	PK2	34	-31.5	0	42.77	-	-	74	-31.23	353	361	H
	*** 4.5493	27.85	ADV	34	-31.5	4.08	34.43	54	-19.57	-	-	353	361	H
2	*** 12.61969	35.16	PK2	39	-26.1	0	48.06	-	-	74	-25.94	303	114	H
	*** 12.6175	22.66	ADV	39	-26.1	4.08	39.64	54	-14.36	-	-	303	114	H
3	*** 15.49904	36.13	PK2	40.2	-23.1	0	53.23	-	-	74	-20.77	261	103	H
	*** 15.49902	22.33	ADV	40.2	-23.1	4.08	43.51	54	-10.49	-	-	261	103	H
4	*** 4.56176	41.66	PK2	34.1	-31.4	0	44.36	-	-	74	-29.64	191	345	V
	*** 4.56206	27.76	ADV	34.1	-31.4	4.08	34.54	54	-19.46	-	-	191	345	V
5	*** 11.63914	35.01	PK2	38.3	-25.3	0	48.01	-	-	74	-25.99	140	126	V
	*** 11.64098	22.23	ADV	38.3	-25.3	4.08	39.31	54	-14.69	-	-	140	126	V
6	*** 15.44763	34.75	PK2	40.1	-23.5	0	51.35	-	-	74	-22.65	159	346	V
	*** 15.44773	22.43	ADV	40.1	-23.5	4.08	43.11	54	-10.89	-	-	159	346	V

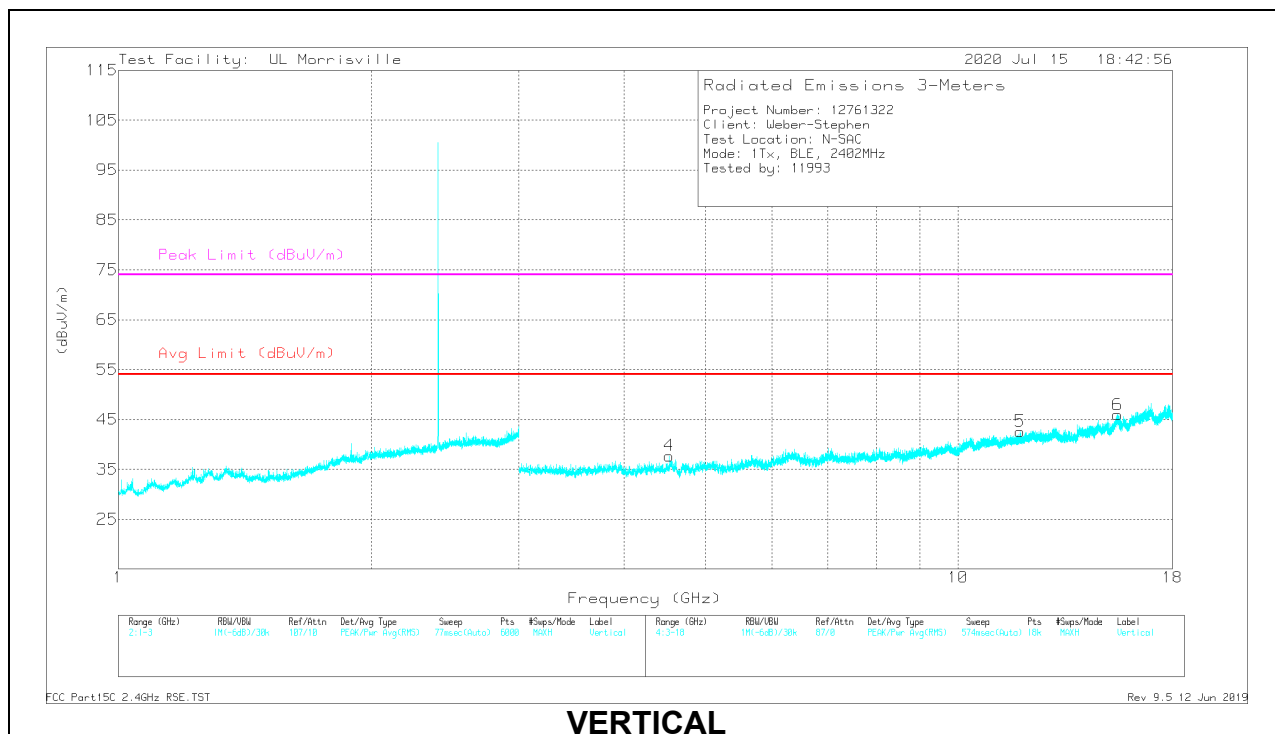
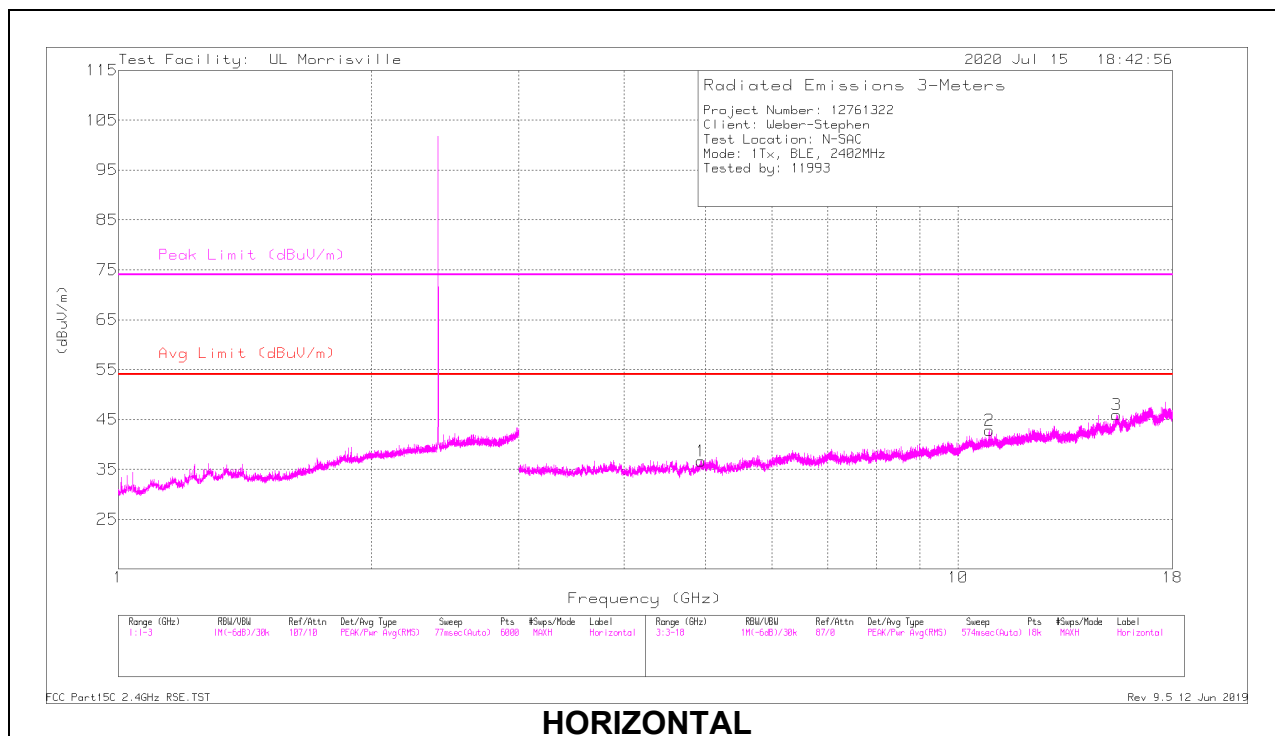
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 4.94126	40.99	PK2	34.1	-31.5	0	43.59	-	-	74	-30.41	54	235	H
	* ** 4.94087	27.57	ADV	34.1	-31.5	4.08	34.25	54	-19.75	-	-	54	235	H
2	* ** 10.90355	35.78	PK2	37.9	-25.2	0	48.48	-	-	74	-25.52	60	152	H
	* ** 10.90329	22.4	ADV	37.9	-25.2	4.08	39.18	54	-14.82	-	-	60	152	H
3	* ** 15.45629	36.64	PK2	40.2	-23.3	0	53.54	-	-	74	-20.46	71	160	H
	* ** 15.45585	22.81	ADV	40.2	-23.3	4.08	43.79	54	-10.21	-	-	71	160	H
4	* ** 4.52875	40.06	PK2	34	-31.5	0	42.56	-	-	74	-31.44	57	207	V
	* ** 4.52763	26.88	ADV	34	-31.6	4.08	33.36	54	-20.64	-	-	57	207	V
5	* ** 11.86086	35.61	PK2	38.5	-25.2	0	48.91	-	-	74	-25.09	169	316	V
	* ** 11.86169	22.06	ADV	38.5	-25.2	4.08	39.44	54	-14.56	-	-	169	316	V
6	* ** 15.48621	35.29	PK2	40.2	-23.1	0	52.39	-	-	74	-21.61	331	202	V
	* ** 15.48625	22.44	ADV	40.2	-23.1	4.08	43.62	54	-10.38	-	-	331	202	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

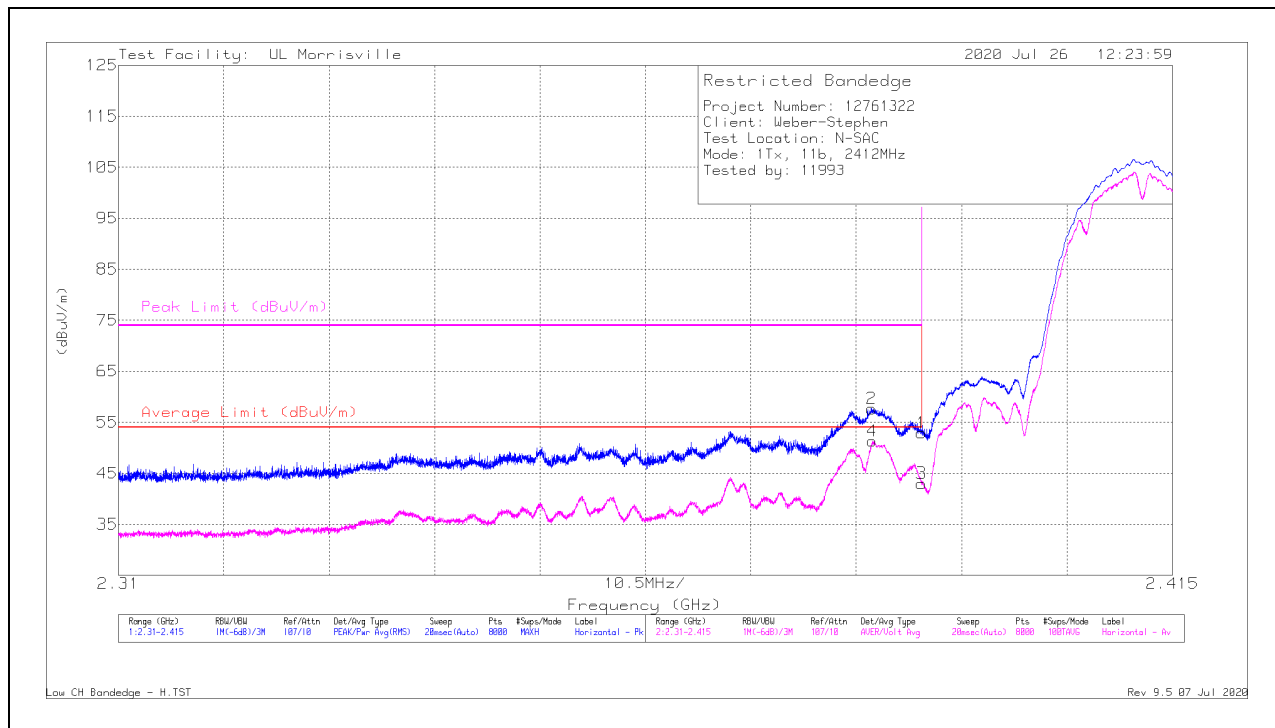
ADV - Linear Voltage Average

Pk - Peak detector

10.2.2. 2.4 WLAN 802.11b

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	* ** 2.39	44.71	Pk	31.8	-23.6	52.91	-	-	74	-21.09	87	120	H
2	* ** 2.38501	49.47	Pk	31.8	-23.6	57.67	-	-	74	-16.33	87	120	H
3	* ** 2.39	34.82	ADV	31.8	-23.6	43.02	54	-10.98	-	-	87	120	H
4	* ** 2.38511	43.12	ADV	31.8	-23.6	51.32	54	-2.68	-	-	87	120	H

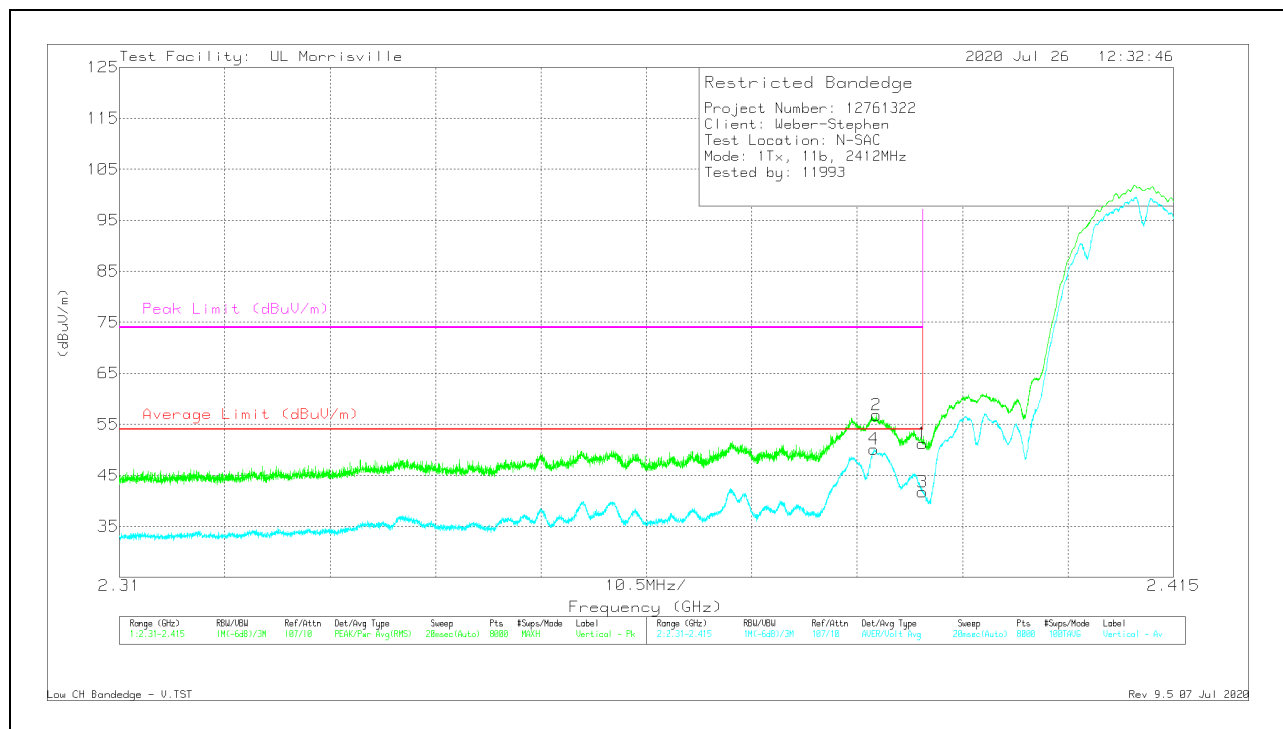
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

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	* ** 2.39	43.04	Pk	31.8	-23.6	51.24	-	-	74	-22.76	324	118	V
2	* ** 2.38539	48.61	Pk	31.8	-23.6	56.81	-	-	74	-17.19	324	118	V
3	* ** 2.39	33.56	ADV	31.8	-23.6	41.76	54	-12.24	-	-	324	118	V
4	* ** 2.38518	41.95	ADV	31.8	-23.6	50.15	54	-3.85	-	-	324	118	V

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

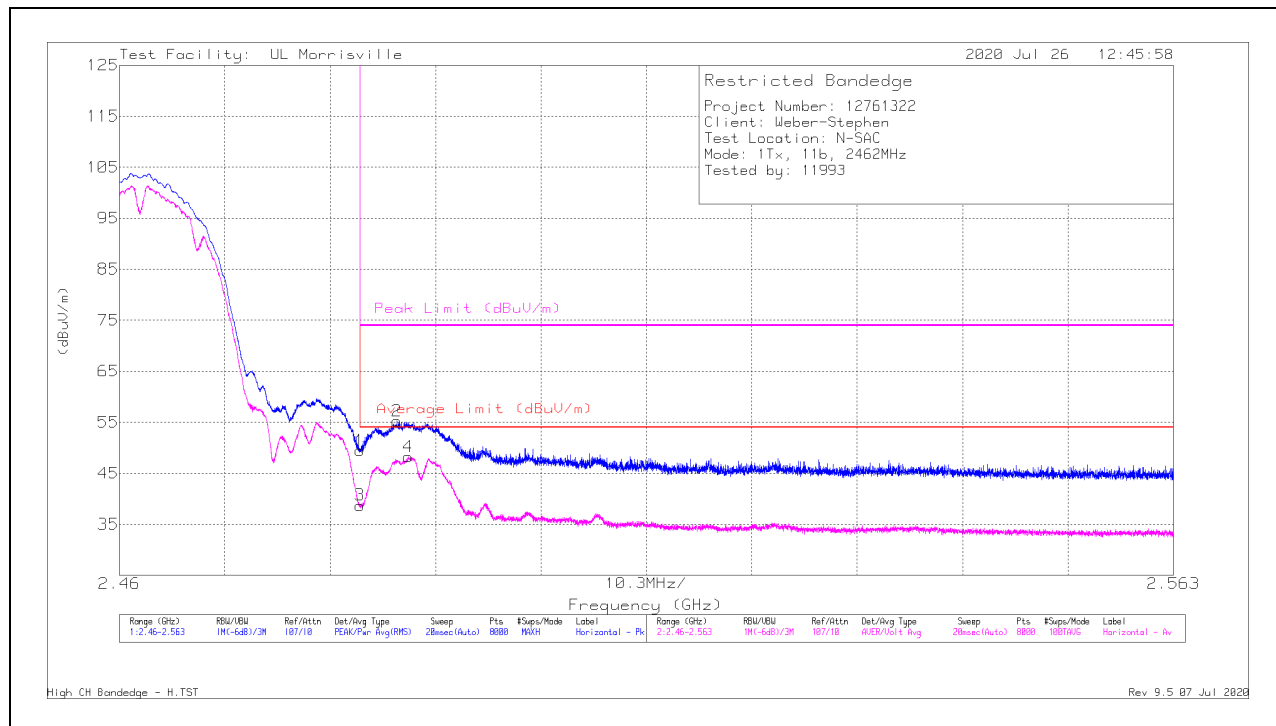
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (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	* ** 2.4835	40.46	Pk	32.4	-23.4	49.46	-	-	74	-24.54	227	104	H
2	* ** 2.48713	46.14	Pk	32.5	-23.4	55.24	-	-	74	-18.76	227	104	H
3	* ** 2.4835	29.73	ADV	32.4	-23.4	38.73	54	-15.27	-	-	227	104	H
4	* ** 2.48821	39.12	ADV	32.5	-23.4	48.22	54	-5.78	-	-	227	104	H

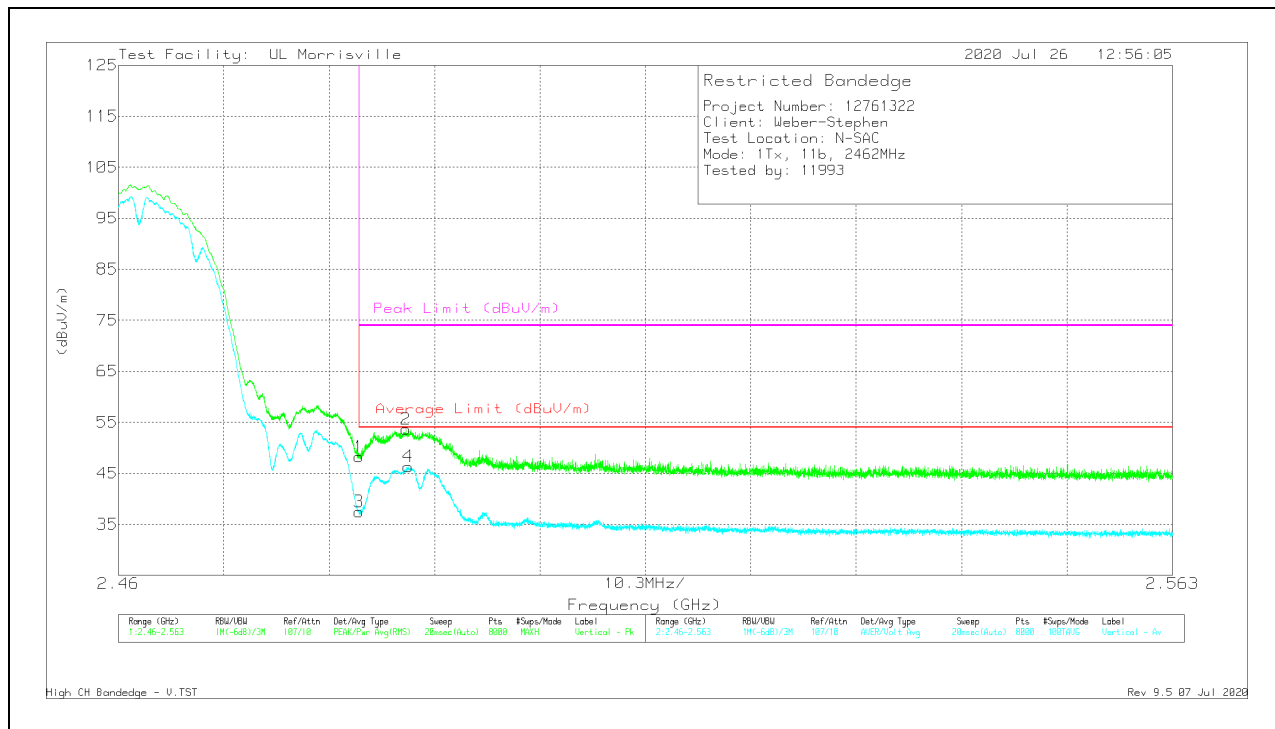
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

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	* ** 2.4835	39.22	Pk	32.4	-23.4	48.22	-	-	74	-25.78	186	108	V
2	* ** 2.48808	44.57	Pk	32.5	-23.4	53.67	-	-	74	-20.33	186	108	V
3	* ** 2.4835	28.48	ADV	32.4	-23.4	37.48	54	-16.52	-	-	186	108	V
4	* ** 2.48832	37.24	ADV	32.5	-23.4	46.34	54	-7.66	-	-	186	108	V

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

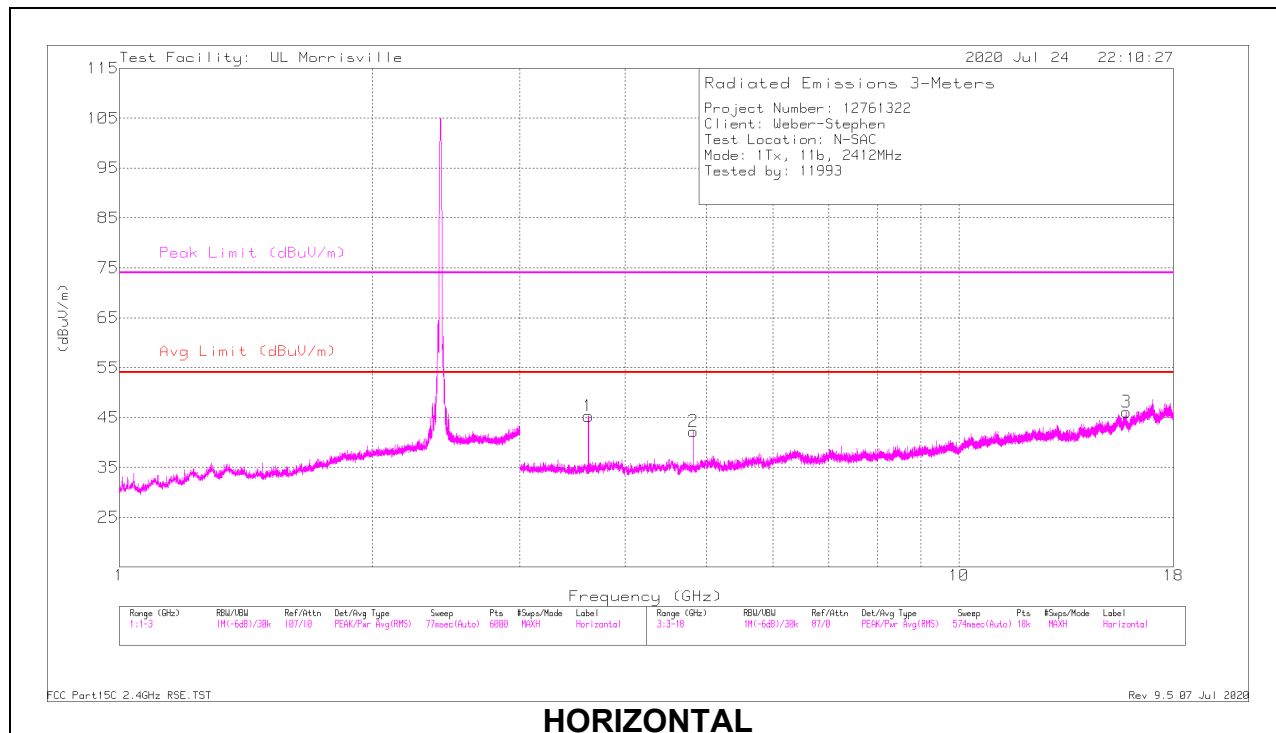
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

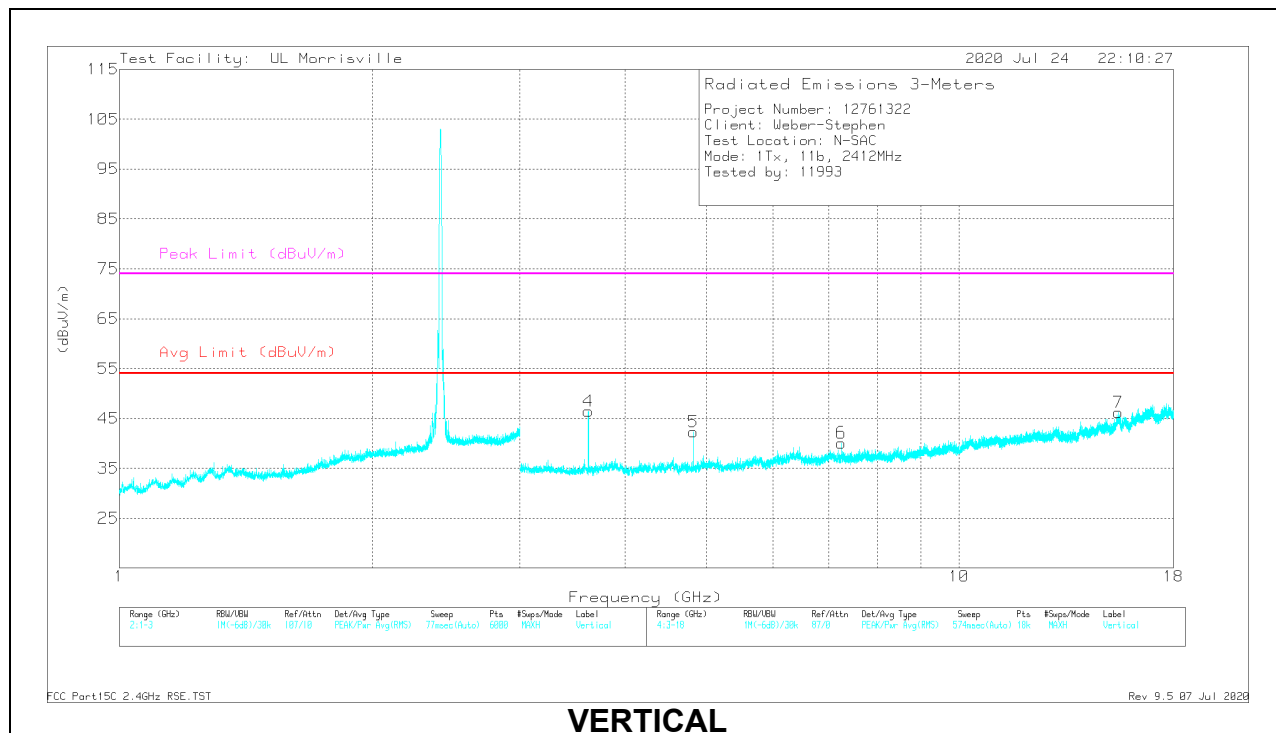
ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.61811	46.72	PK2	33	-31.1	48.62	-	-	74	-25.38	153	101	H
	* ** 3.61803	42.34	ADV	33	-31.1	44.24	54	-9.76	-	-	153	101	H
2	* ** 4.82397	44.65	PK2	34.2	-30.8	48.05	-	-	74	-25.95	82	111	H
	* ** 4.82401	38.68	ADV	34.2	-30.8	42.08	54	-11.92	-	-	82	111	H
3	* ** 15.82541	37.01	PK2	40.2	-24.4	52.81	-	-	74	-21.19	98	339	H
	* ** 15.82638	22.87	ADV	40.2	-24.5	38.57	54	-15.43	-	-	98	339	H
4	* ** 3.61796	47.64	PK2	33	-31.1	49.54	-	-	74	-24.46	164	101	V
	* ** 3.61802	43.9	ADV	33	-31.1	45.8	54	-8.2	-	-	164	101	V
5	* ** 4.82401	43.91	PK2	34.2	-30.8	47.31	-	-	74	-26.69	90	194	V
	* ** 4.82402	38.18	ADV	34.2	-30.8	41.58	54	-12.42	-	-	90	194	V
7	* ** 15.48108	34.82	PK2	40.2	-23.1	51.92	-	-	74	-22.08	76	322	V
	* ** 15.48391	22.55	ADV	40.2	-23.1	39.65	54	-14.35	-	-	76	322	V
6	7.23524	33.21	Pk	35.7	-28.8	40.11	-	-	-	-	0-360	101	V

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

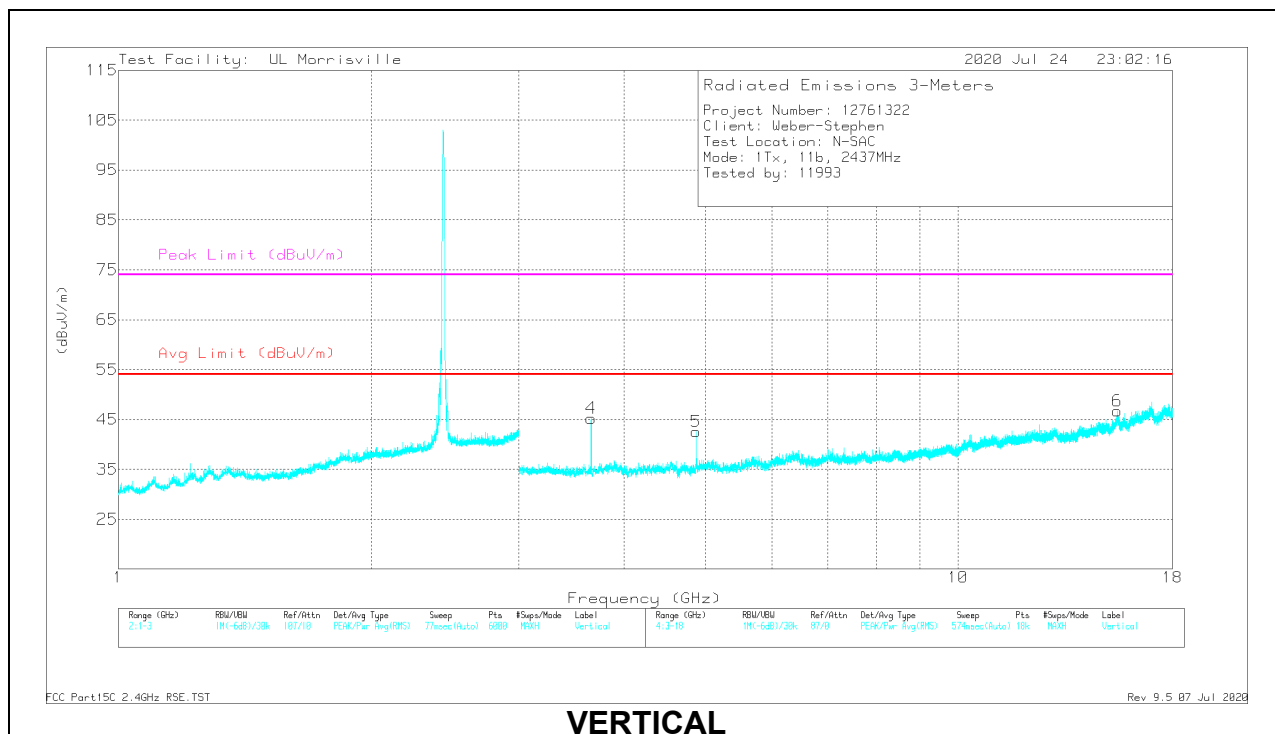
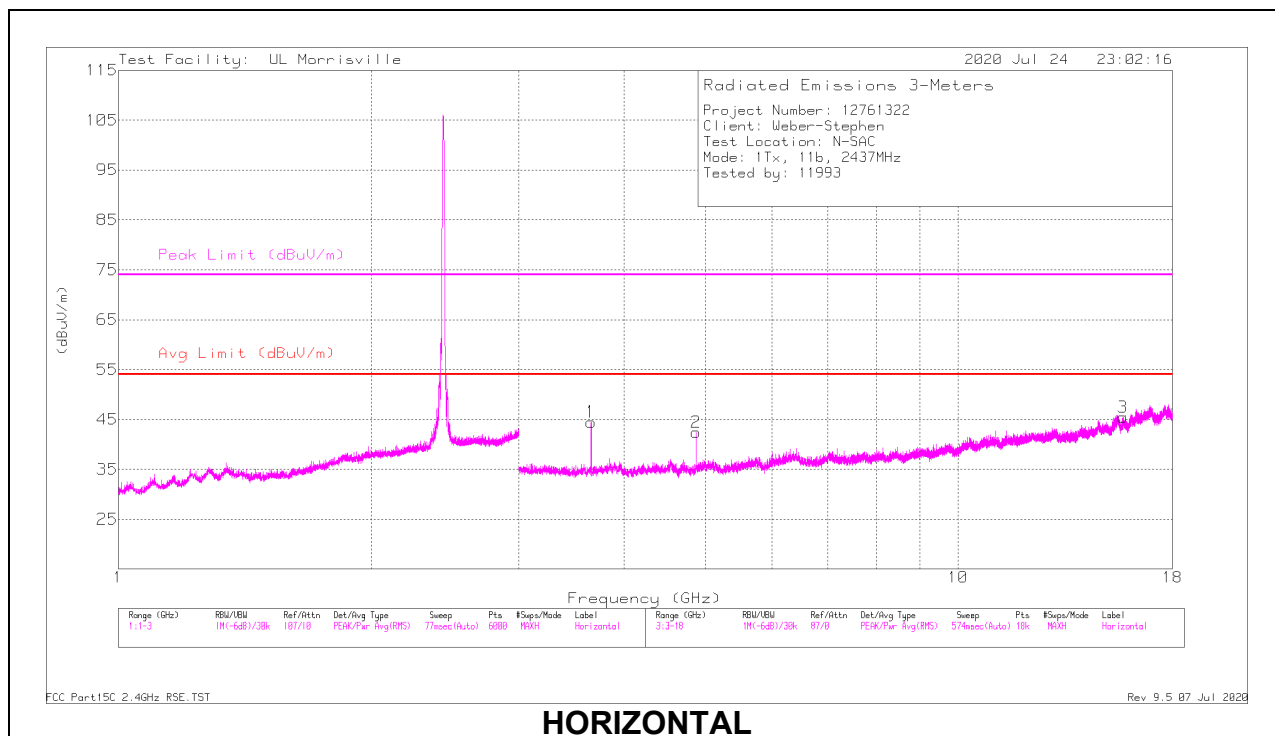
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

Pk - Peak detector

MID CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.6555	46.95	PK2	32.9	-30.9	48.95	-	-	74	-25.05	118	111	H
	* ** 3.65552	42.9	ADV	32.9	-30.9	44.9	54	-9.1	-	-	118	111	H
2	* ** 4.87391	43.93	PK2	34.1	-30.9	47.13	-	-	74	-26.87	16	106	H
	* ** 4.87401	37.26	ADV	34.1	-30.9	40.46	54	-13.54	-	-	16	106	H
3	* ** 15.72229	36.05	PK2	40.1	-23.8	52.35	-	-	74	-21.65	150	241	H
	* ** 15.72221	22.87	ADV	40.1	-23.8	39.17	54	-14.83	-	-	150	241	H
4	* ** 3.6557	46.99	PK2	32.9	-30.9	48.99	-	-	74	-25.01	164	101	V
	* ** 3.6555	42.46	ADV	32.9	-30.9	44.46	54	-9.54	-	-	164	101	V
5	* ** 4.87399	43.91	PK2	34.1	-30.9	47.11	-	-	74	-26.89	116	102	V
	* ** 4.87405	37.13	ADV	34.1	-30.9	40.33	54	-13.67	-	-	116	102	V
6	* ** 15.46457	35.02	PK2	40.3	-23.1	52.22	-	-	74	-21.78	47	256	V
	* ** 15.46251	22.71	ADV	40.2	-23.2	39.71	54	-14.29	-	-	47	256	V

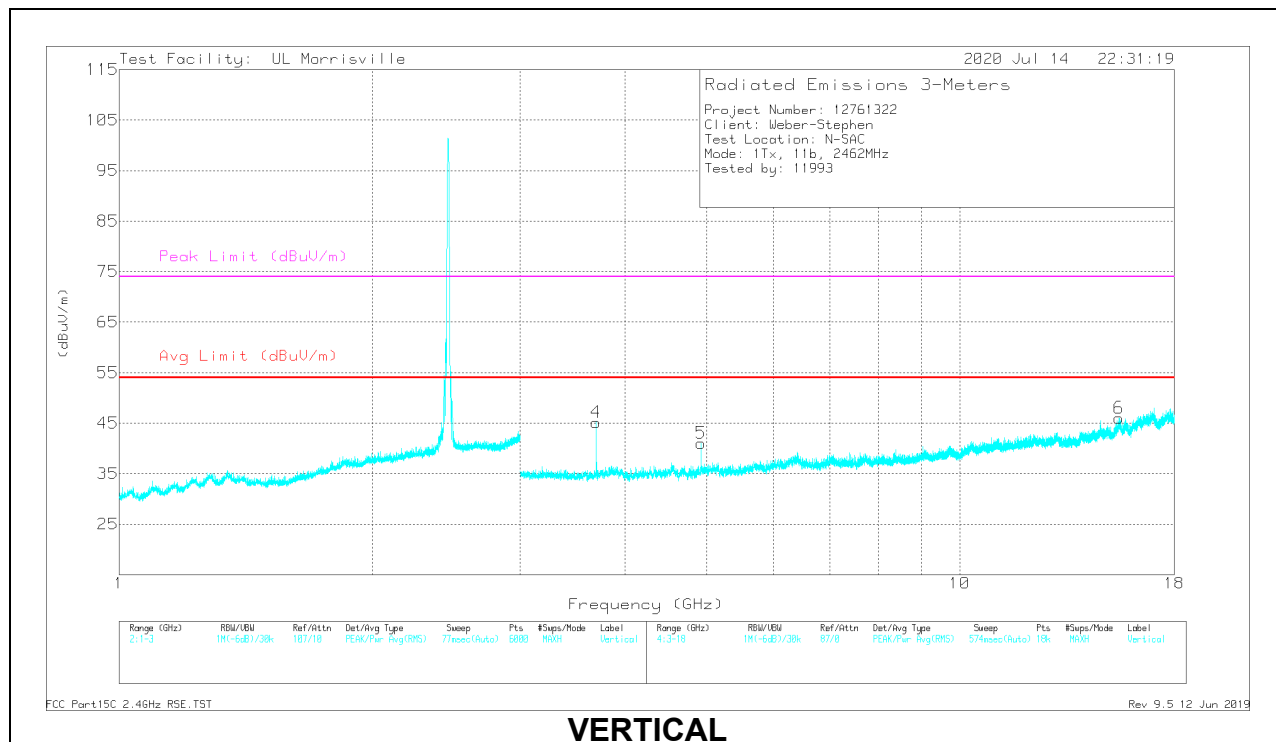
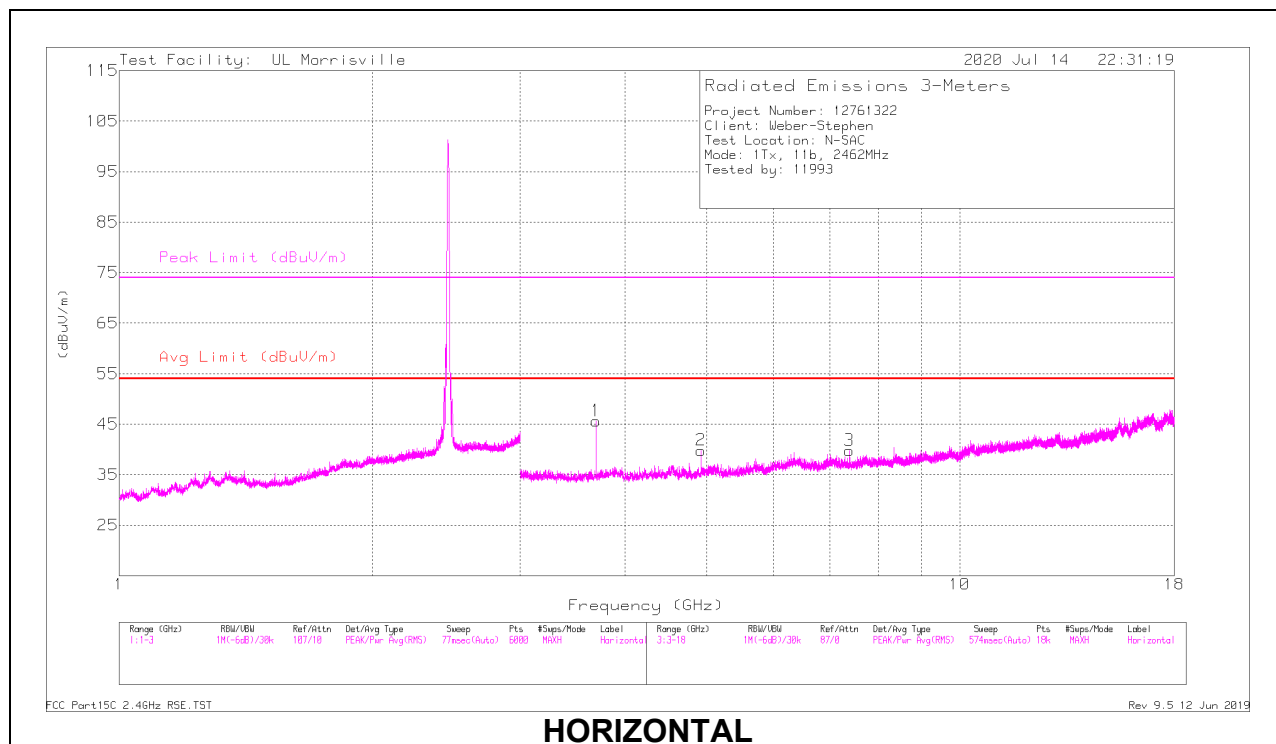
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.69309	48.42	PK2	33.1	-31.5	50.02	-	-	74	-23.98	128	153	H
	* ** 3.69303	44.53	ADV	33.1	-31.5	46.13	54	-7.87	-	-	128	153	H
2	* ** 4.9242	42.72	PK2	34	-31.2	45.52	-	-	74	-28.48	13	128	H
	* ** 4.92403	34.03	ADV	34	-31.2	36.83	54	-17.17	-	-	13	128	H
3	* ** 7.38622	38.7	PK2	35.7	-28.4	46	-	-	74	-28	127	102	H
	* ** 7.38602	27.66	ADV	35.7	-28.4	34.96	54	-19.04	-	-	127	102	H
4	* ** 3.69289	47.53	PK2	33.1	-31.5	49.13	-	-	74	-24.87	175	109	V
	* ** 3.693	43.06	ADV	33.1	-31.5	44.66	54	-9.34	-	-	175	109	V
5	* ** 4.924	44.05	PK2	34	-31.2	46.85	-	-	74	-27.15	178	207	V
	* ** 4.92407	37.44	ADV	34	-31.2	40.24	54	-13.76	-	-	178	207	V
6	* ** 15.46133	35.74	PK2	40.2	-23.2	52.74	-	-	74	-21.26	243	166	V
	* ** 15.46132	22.51	ADV	40.2	-23.2	39.51	54	-14.49	-	-	243	166	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

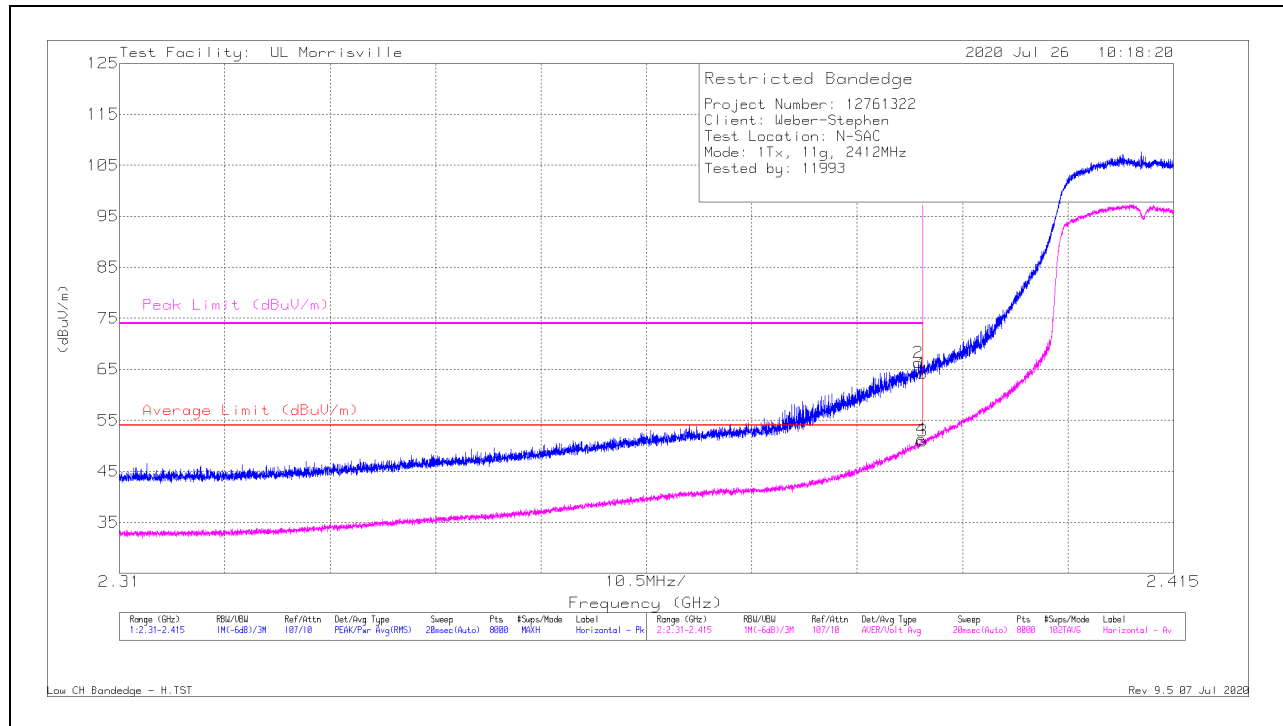
PK2 - Maximum Peak

ADV - Linear Voltage Average

10.2.3. 2.4 WLAN 802.11g

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	* ** 2.39	56	Pk	31.8	-23.6	0	64.2	-	-	74	-9.8	89	116	H
2	* ** 2.38958	58.15	Pk	31.8	-23.6	0	66.35	-	-	74	-7.65	89	116	H
3	* ** 2.39	42.53	ADV	31.8	-23.6	.25	50.98	54	-3.02	-	-	89	116	H
4	* ** 2.38989	42.83	ADV	31.8	-23.6	.25	51.28	54	-2.72	-	-	89	116	H

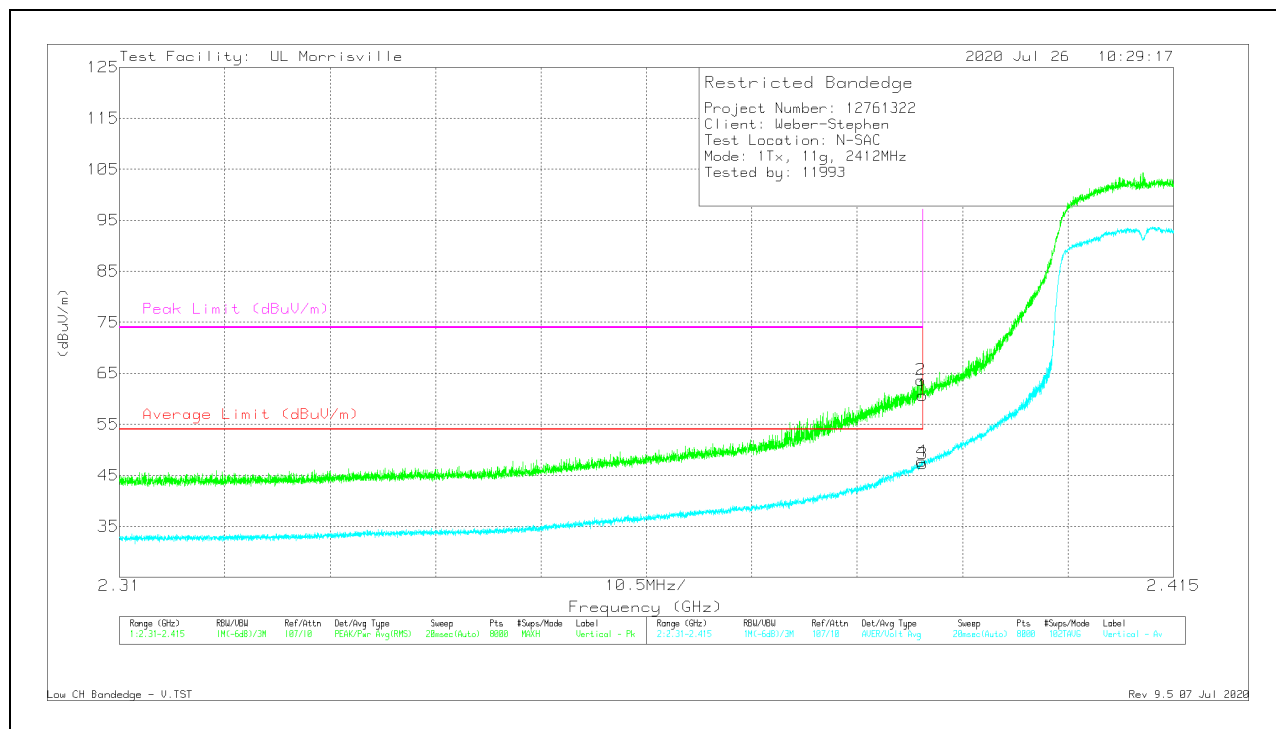
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

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	* ** 2.39	52.5	Pk	31.8	-23.6	0	60.7	-	-	74	-13.3	195	104	V
2	* ** 2.38986	55.48	Pk	31.8	-23.6	0	63.68	-	-	74	-10.32	195	104	V
3	* ** 2.39	38.79	ADV	31.8	-23.6	.25	47.24	54	-6.76	-	-	195	104	V
4	* ** 2.38993	39.33	ADV	31.8	-23.6	.25	47.78	54	-6.22	-	-	195	104	V

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

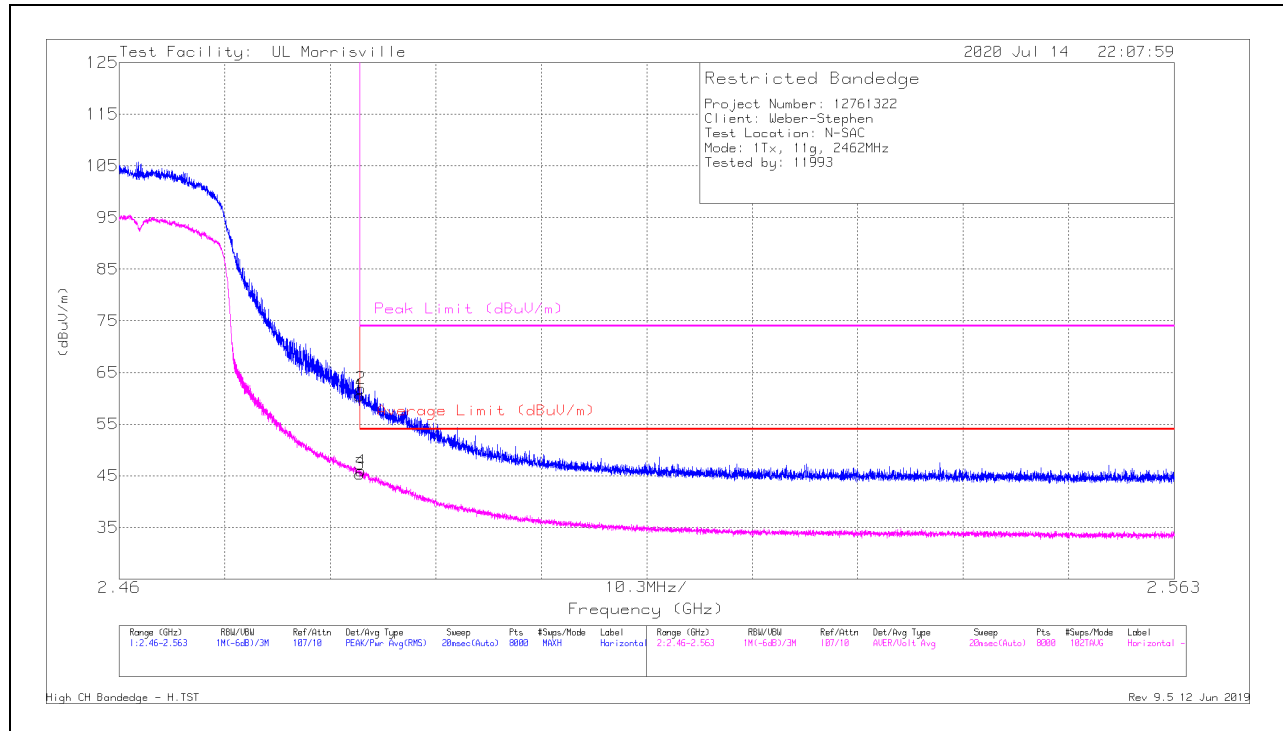
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

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	* ** 2.4835	51.48	Pk	32.4	-23.4	0	60.48	-	-	74	-13.52	82	189	H
2	* ** 2.48359	52.9	Pk	32.4	-23.4	0	61.9	-	-	74	-12.1	82	189	H
3	* ** 2.4835	36.08	ADV	32.4	-23.4	.25	45.33	54	-8.67	-	-	82	189	H
4	* ** 2.48362	36.69	ADV	32.4	-23.4	.25	45.94	54	-8.06	-	-	82	189	H

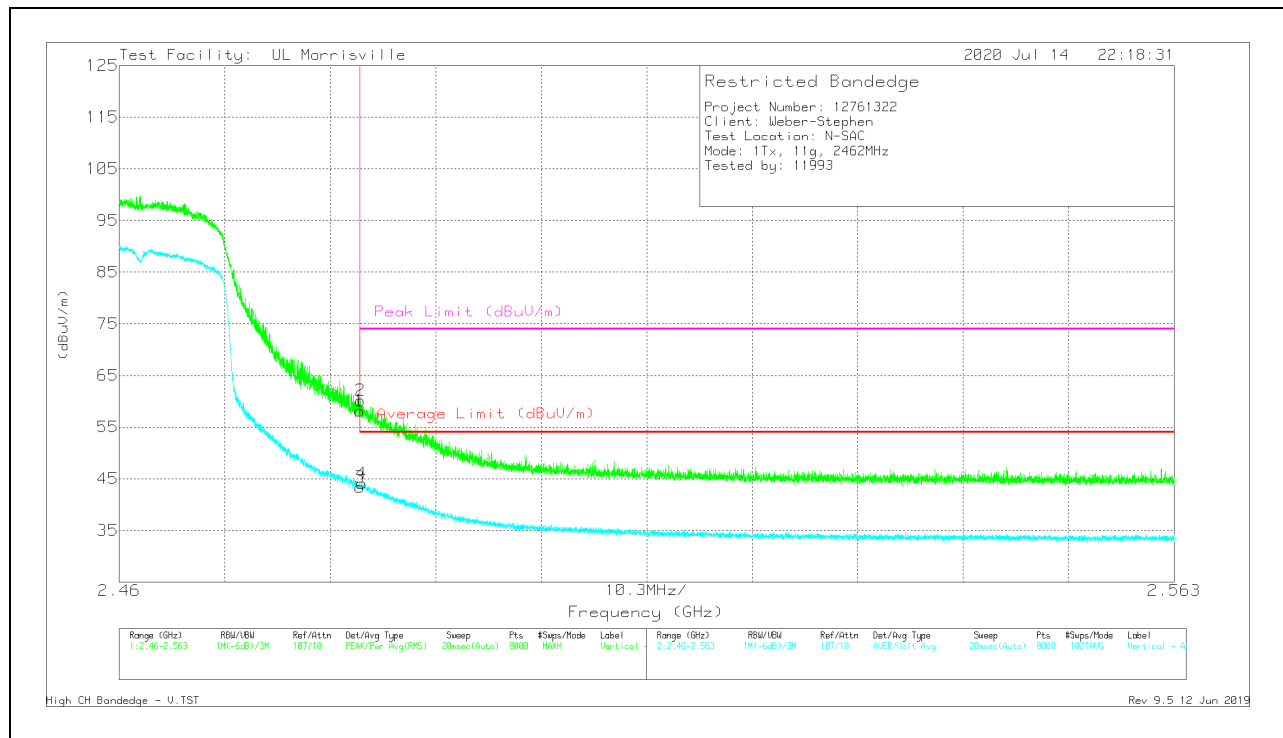
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

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	*** 2.4835	49.14	Pk	32.4	-23.4	0	58.14	-	-	74	-15.86	98	346	V
2	*** 2.48353	51.13	Pk	32.4	-23.4	0	60.13	-	-	74	-13.87	98	346	V
3	*** 2.4835	34.11	ADV	32.4	-23.4	.25	43.36	54	-10.64	-	-	98	346	V
4	*** 2.48369	34.87	ADV	32.4	-23.4	.25	44.12	54	-9.88	-	-	98	346	V

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

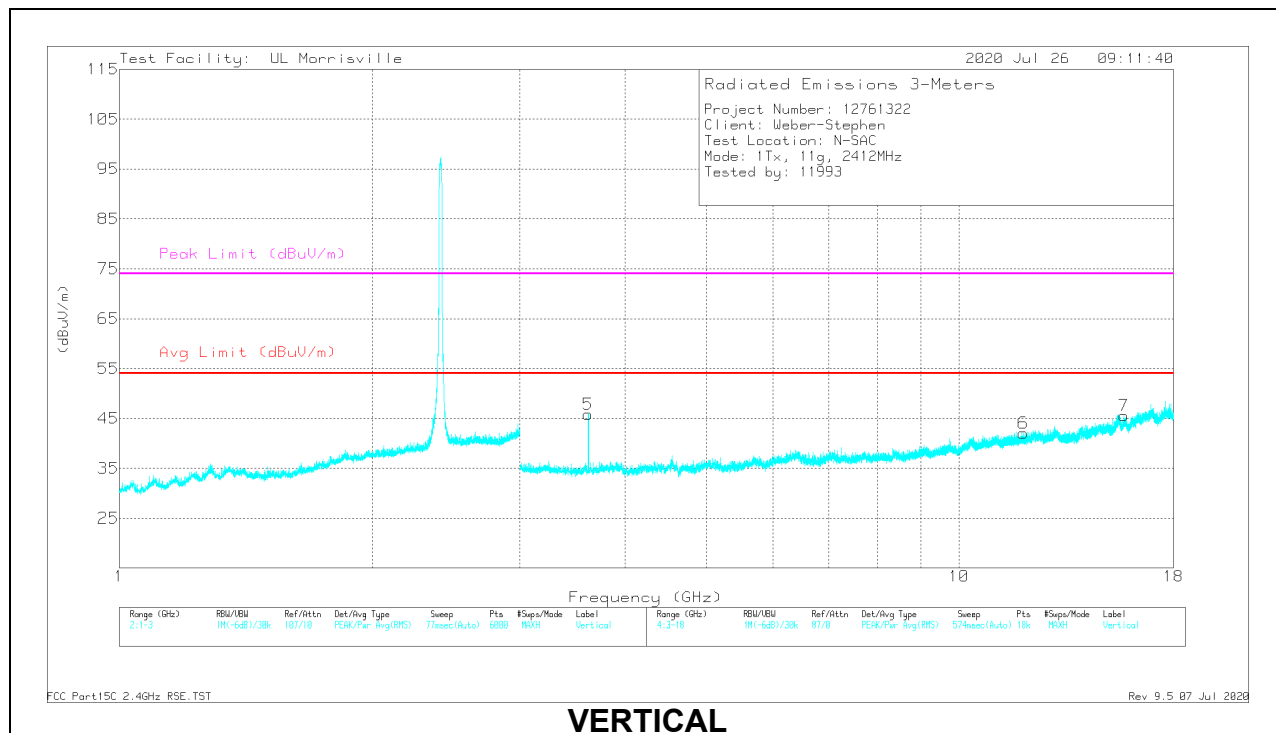
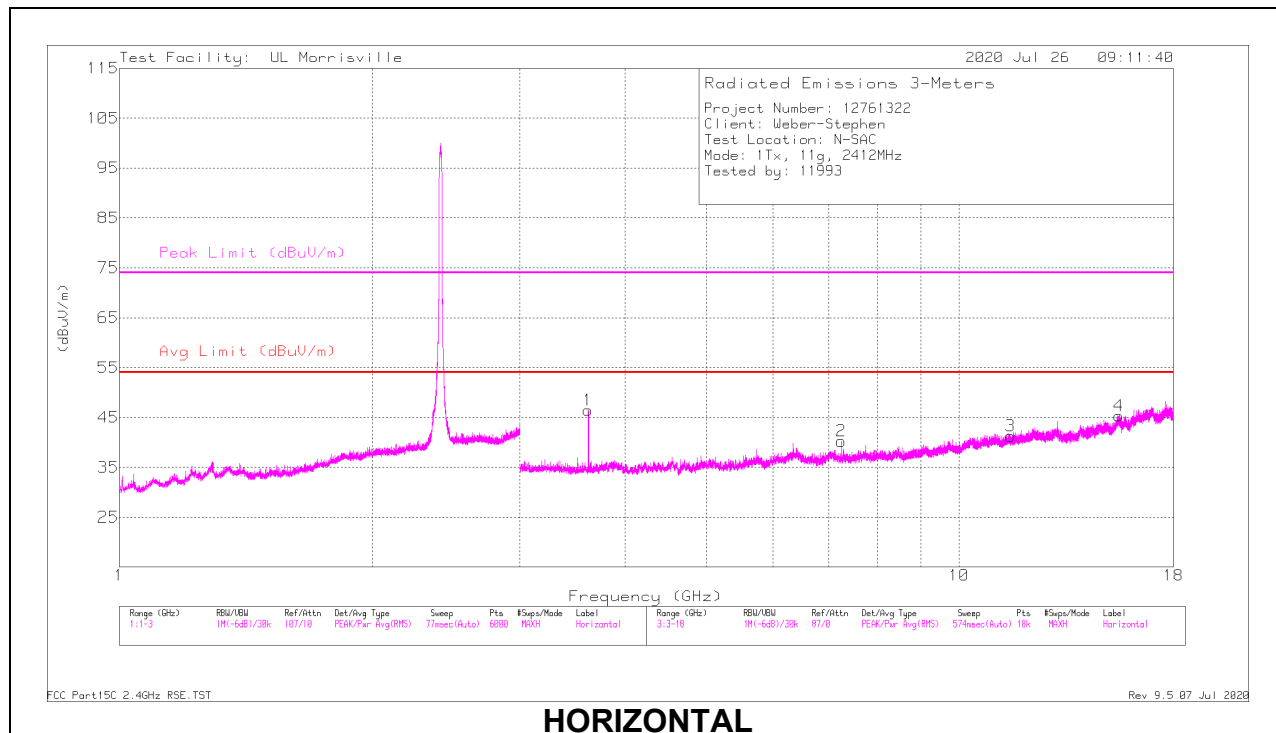
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 3.61794	47.77	PK2	33	-31.1	0	49.67	-	-	74	-24.33	153	121	H
	*** 3.61801	43.94	ADV	33	-31.1	.25	46.09	54	-7.91	-	-	153	121	H
4	*** 15.49322	35.04	PK2	40.2	-23	0	52.24	-	-	74	-21.76	37	259	H
	*** 15.49091	22.28	ADV	40.2	-23	.25	39.73	54	-14.27	-	-	37	259	H
3	*** 11.51701	35.26	PK2	38.2	-25.1	0	48.36	-	-	74	-25.64	0	266	H
	*** 11.51639	22.11	ADV	38.2	-25.1	.25	35.46	54	-18.54	-	-	0	266	H
5	*** 3.618	47.36	PK2	33	-31.1	0	49.26	-	-	74	-24.74	155	116	V
	*** 3.61799	43.54	ADV	33	-31.1	.25	45.69	54	-8.31	-	-	155	116	V
6	*** 11.92933	34.36	PK2	38.6	-25.5	0	47.46	-	-	74	-26.54	184	315	V
	*** 11.92985	22.31	ADV	38.6	-25.5	.25	35.66	54	-18.34	-	-	184	315	V
7	*** 15.71117	35.18	PK2	40.1	-24.2	0	51.08	-	-	74	-22.92	227	133	V
	*** 15.71251	22.73	ADV	40.1	-24.1	.25	38.98	54	-15.02	-	-	227	133	V
2	7.23607	33.45	Pk	35.6	-28.8	0	40.25	-	-	-	-	0-360	101	H

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

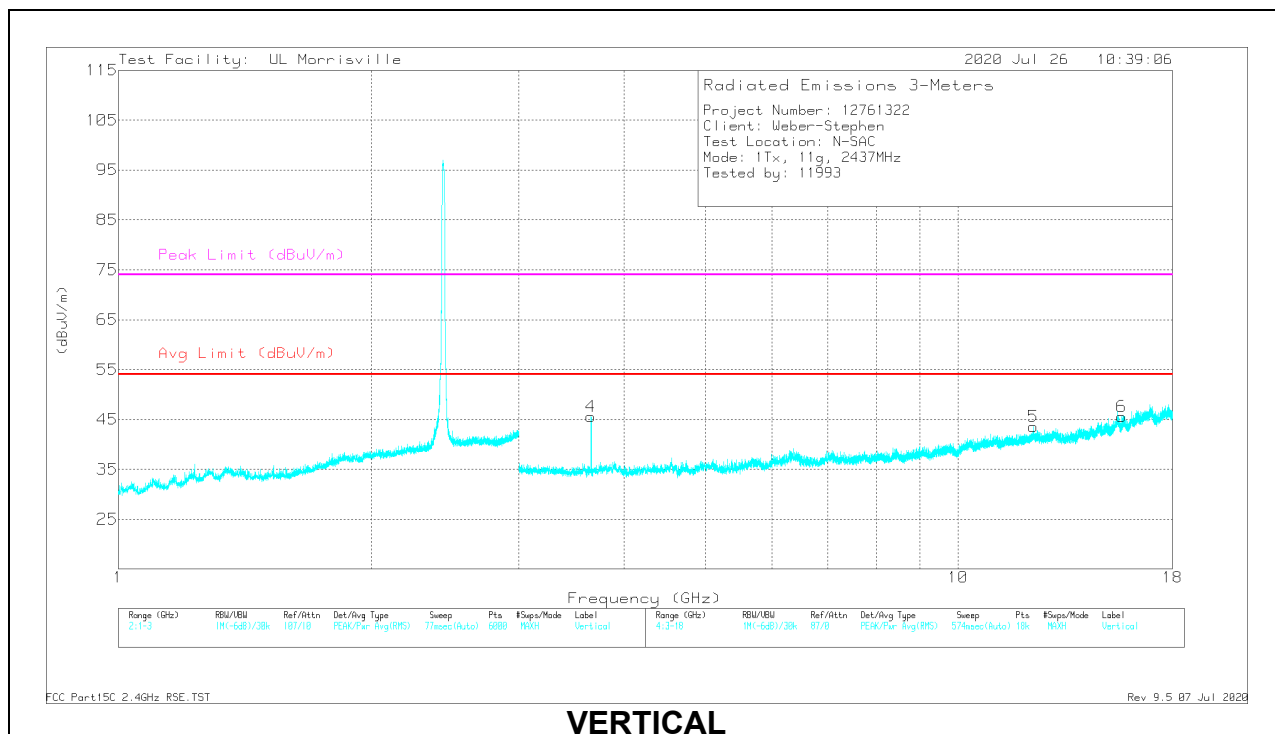
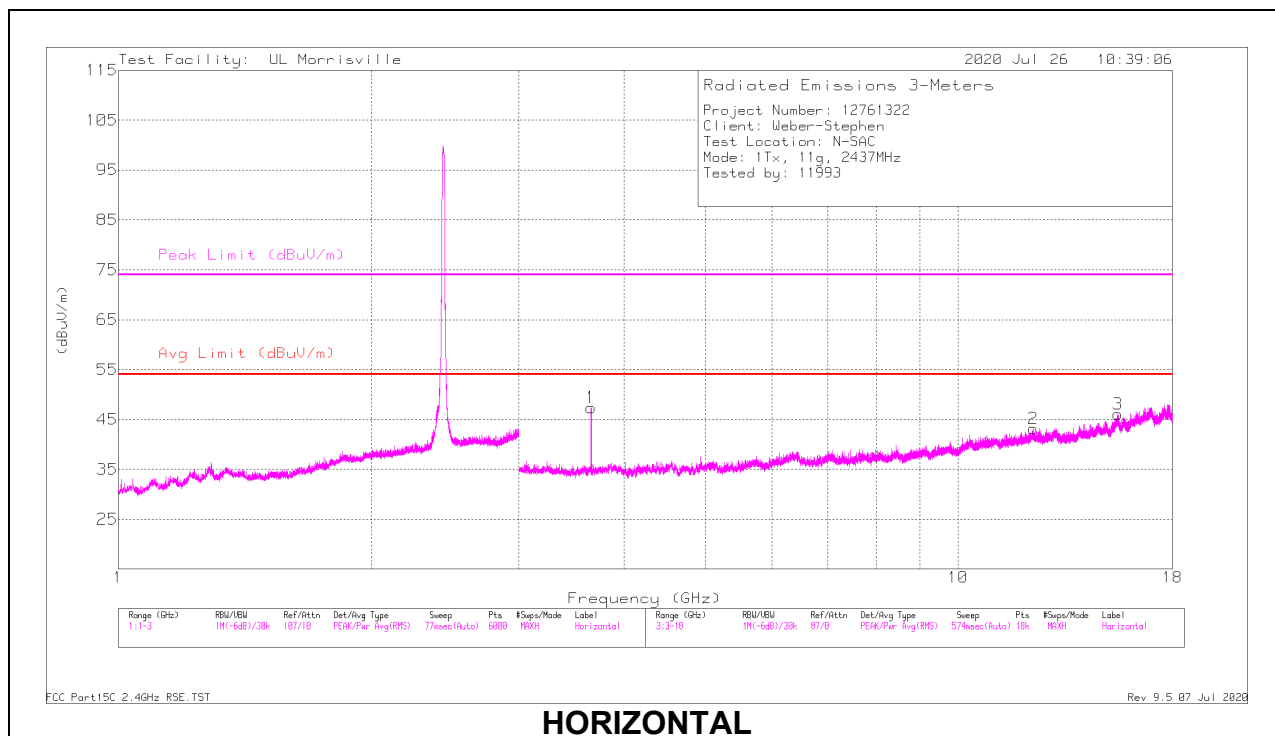
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

Pk - Peak detector

MID CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 3.65554	47.89	PK2	32.9	-30.9	0	49.89	-	-	74	-24.11	125	125	H
	*** 3.65552	44.68	ADV	32.9	-30.9	.25	46.93	54	-7.07	-	-	125	125	H
2	*** 12.29913	34.94	PK2	38.9	-25.1	0	48.74	-	-	74	-25.26	92	152	H
	*** 12.29707	22.3	ADV	38.9	-25.1	.25	36.35	54	-17.65	-	-	92	152	H
3	*** 15.49002	36.14	PK2	40.1	-23.1	0	53.14	-	-	74	-20.86	159	161	H
	*** 15.48957	22.45	ADV	40.2	-23.1	.25	39.8	54	-14.2	-	-	159	161	H
4	*** 3.65552	47.33	PK2	32.9	-30.9	0	49.33	-	-	74	-24.67	180	112	V
	*** 3.6555	43.25	ADV	32.9	-30.9	.25	45.5	54	-8.5	-	-	180	112	V
5	*** 12.29337	34.83	PK2	38.9	-25	0	48.73	-	-	74	-25.27	261	136	V
	*** 12.29296	22.35	ADV	38.9	-25.1	.25	36.4	54	-17.6	-	-	261	136	V
6	*** 15.66997	35.61	PK2	40.1	-25.3	0	50.41	-	-	74	-23.59	209	339	V
	*** 15.66994	22.65	ADV	40.1	-25.3	.25	37.7	54	-16.3	-	-	209	339	V

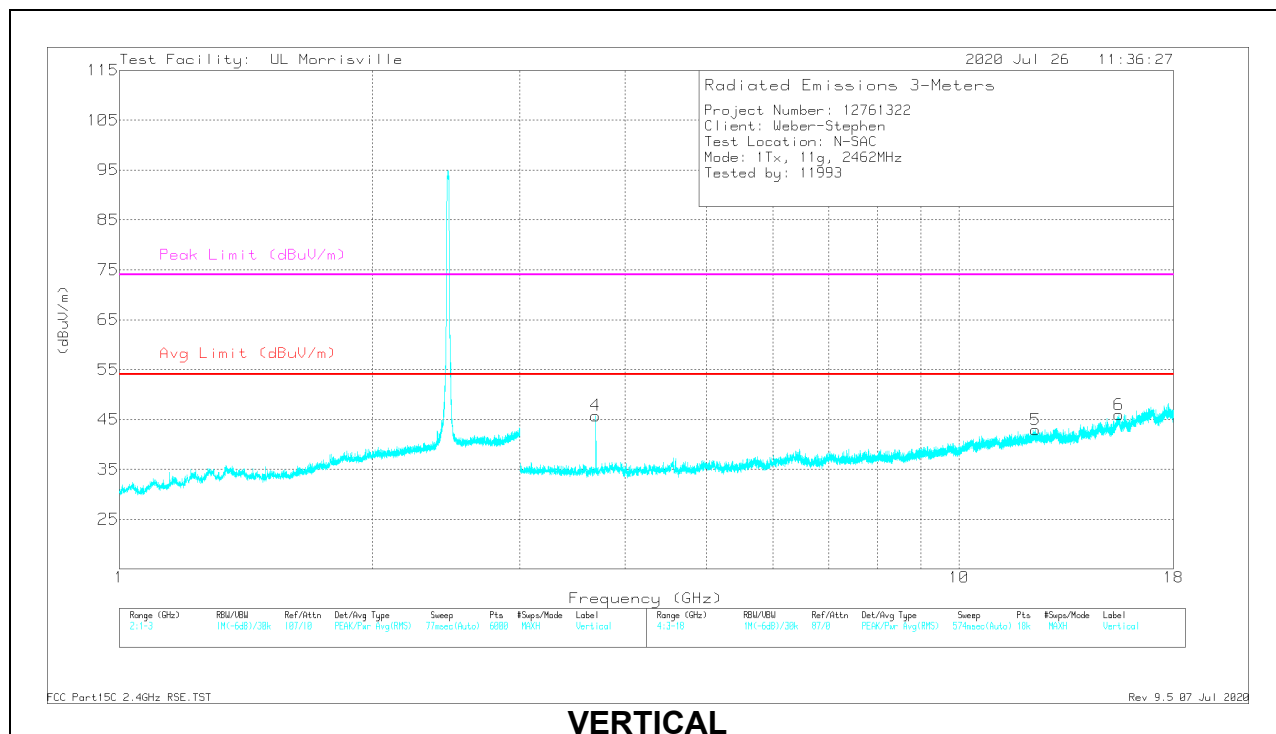
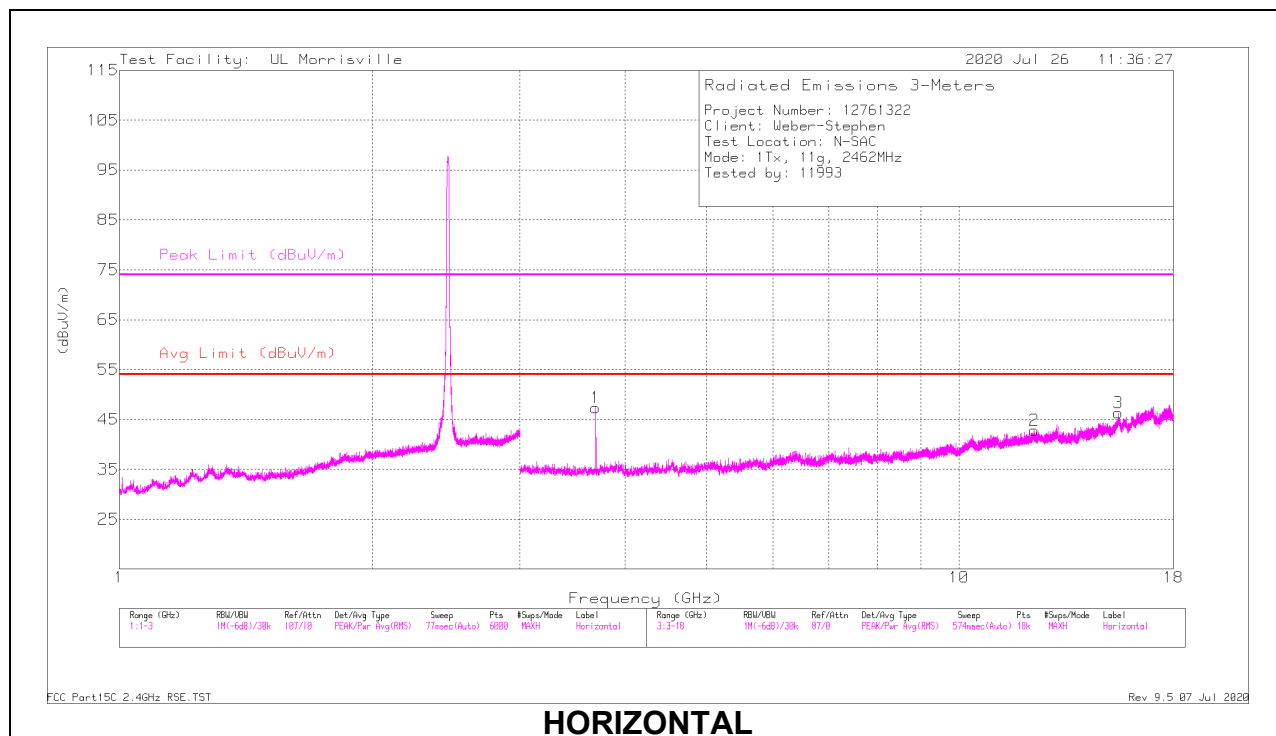
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.693	49.37	PK2	33.1	-31.5	0	50.97	-	-	74	-23.03	125	121	H
	* ** 3.693	45.85	ADV	33.1	-31.5	.25	47.7	54	-6.3	-	-	125	121	H
2	* ** 12.28125	35.29	PK2	39	-25.1	0	49.19	-	-	74	-24.81	308	135	H
	* ** 12.2812	22.32	ADV	39	-25.1	.25	36.47	54	-17.53	-	-	308	135	H
3	* ** 15.47241	35.13	PK2	40.3	-23.1	0	52.33	-	-	74	-21.67	225	124	H
	* ** 15.47231	22.52	ADV	40.3	-23.1	.25	39.97	54	-14.03	-	-	225	124	H
4	* ** 3.69305	42.59	PK2	33.1	-31.5	0	44.19	-	-	74	-29.81	225	101	V
	* ** 3.69301	33.95	ADV	33.1	-31.5	.25	35.8	54	-18.2	-	-	225	101	V
5	* ** 12.32458	35.75	PK2	38.9	-25.1	0	49.55	-	-	74	-24.45	112	303	V
	* ** 12.32456	22.35	ADV	38.9	-25.1	.25	36.4	54	-17.6	-	-	112	303	V
6	* ** 15.48955	35.44	PK2	40.2	-23.1	0	52.54	-	-	74	-21.46	333	114	V
	* ** 15.48997	22.32	ADV	40.1	-23.1	.25	39.57	54	-14.43	-	-	333	114	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

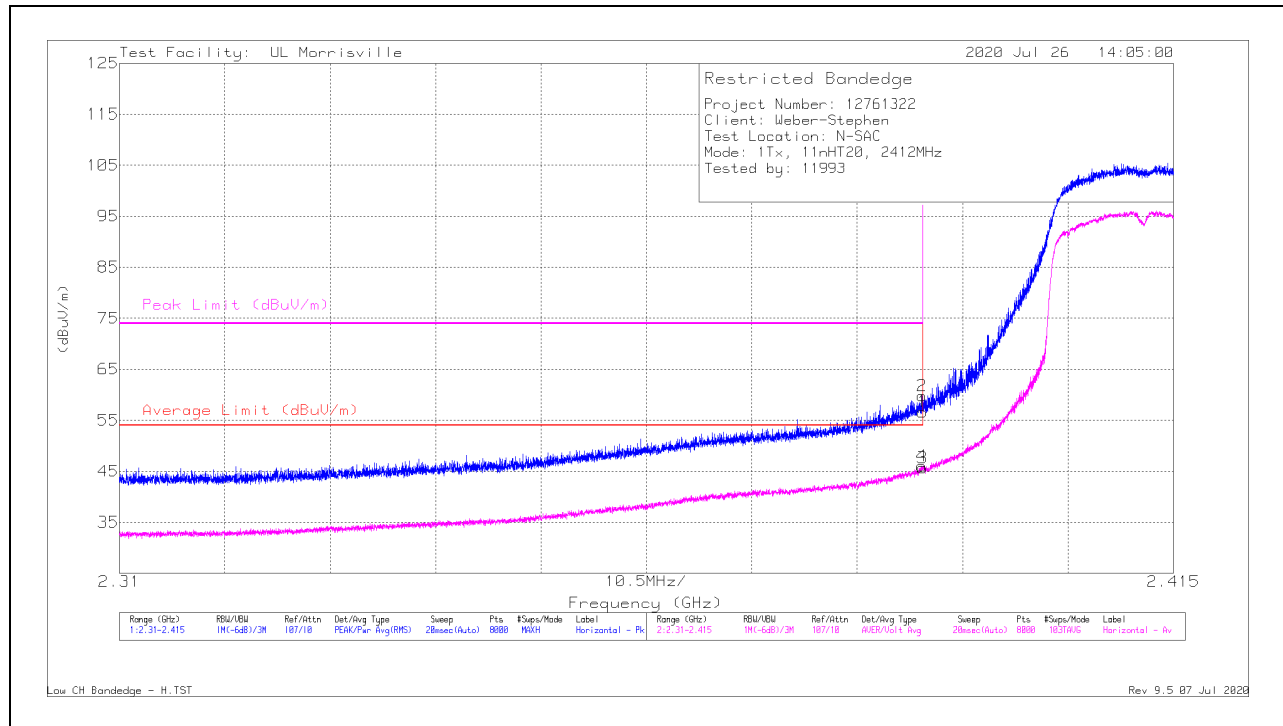
PK2 - Maximum Peak

ADV - Linear Voltage Average

10.2.4. 2.4 WLAN 802.11n HT20

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	* ** 2.39	48.47	Pk	31.8	-23.6	0	56.67	-	-	74	-17.33	85	164	H
2	* ** 2.38994	51.6	Pk	31.8	-23.6	0	59.8	-	-	74	-14.2	85	164	H
3	* ** 2.39	37.18	ADV	31.8	-23.6	.28	45.66	54	-8.34	-	-	85	164	H
4	* ** 2.38993	37.55	ADV	31.8	-23.6	.28	46.03	54	-7.97	-	-	85	164	H

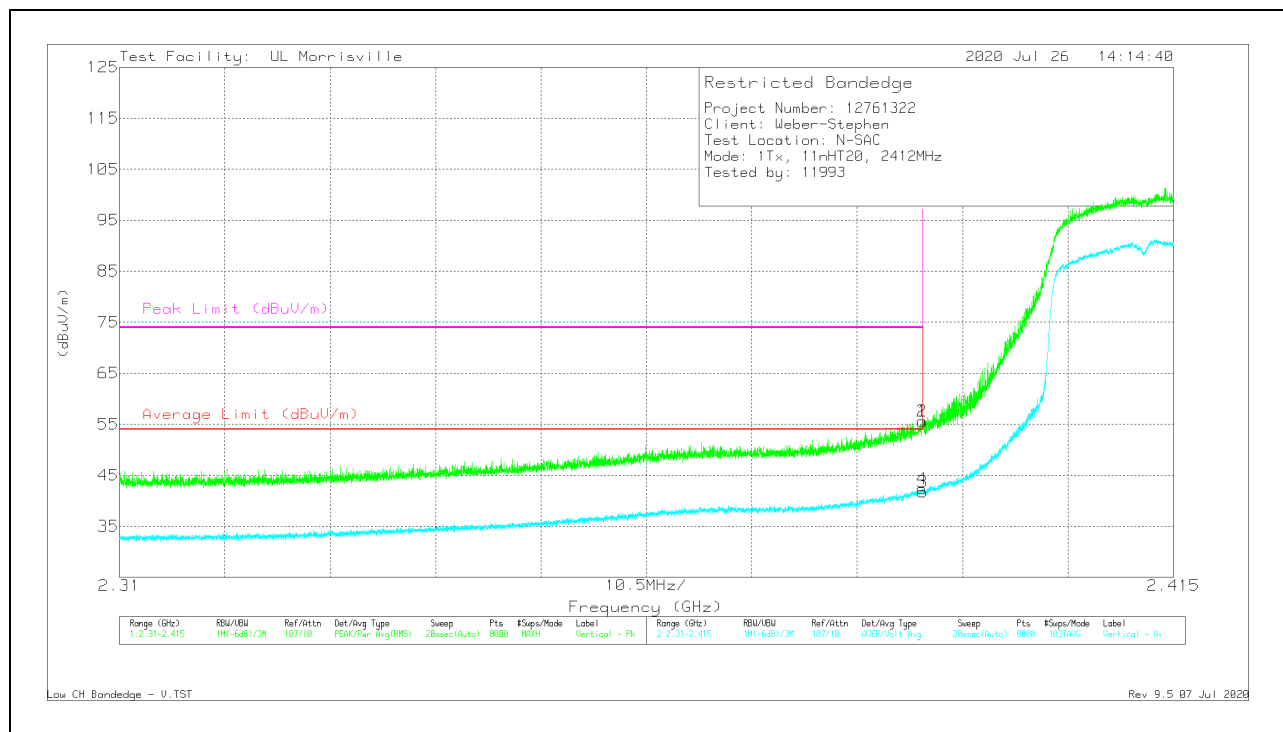
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

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	* ** 2.39	47.45	Pk	31.8	-23.6	0	55.65	-	-	74	-18.35	35	165	V
2	* ** 2.38998	47.41	Pk	31.8	-23.6	0	55.61	-	-	74	-18.39	35	165	V
3	* ** 2.39	33.27	ADV	31.8	-23.6	.28	41.75	54	-12.25	-	-	35	165	V
4	* ** 2.38997	33.85	ADV	31.8	-23.6	.28	42.33	54	-11.67	-	-	35	165	V

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

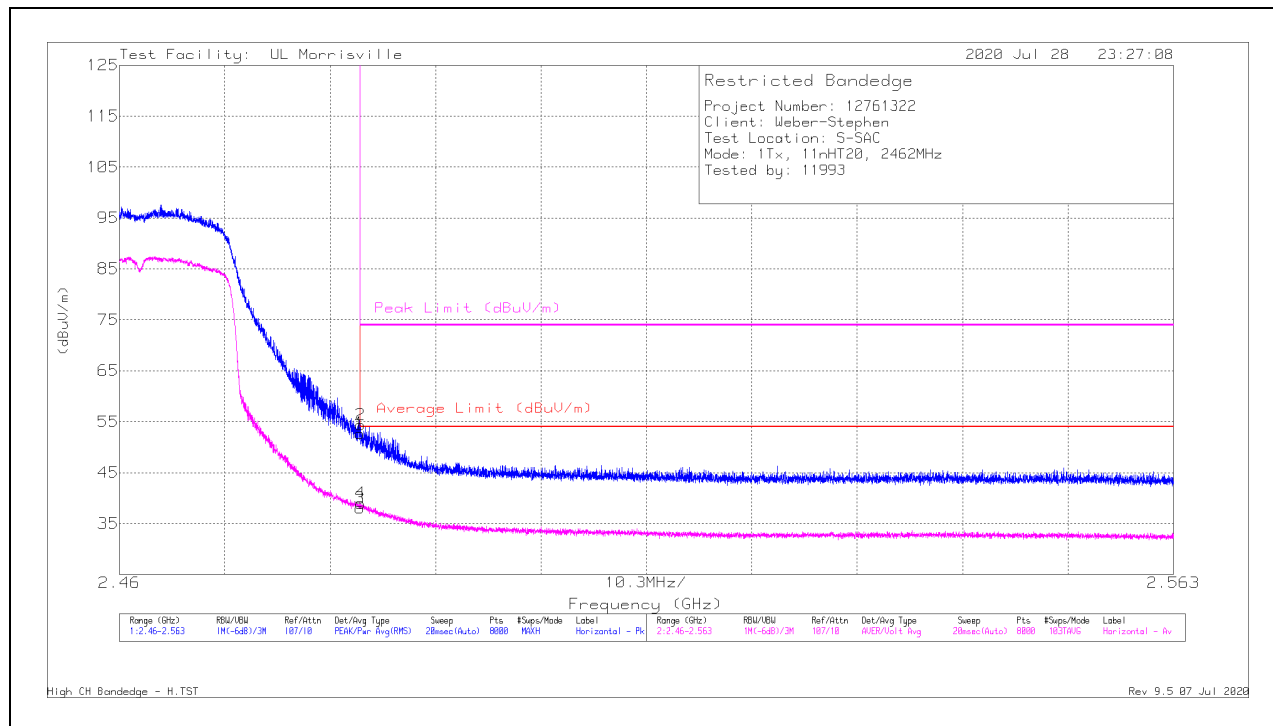
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	44.72	Pk	32.4	-24.4	0	52.72	-	-	74	-21.28	199	221	H
2	* ** 2.48355	46.36	Pk	32.4	-24.4	0	54.36	-	-	74	-19.64	199	221	H
3	* ** 2.4835	29.77	ADV	32.4	-24.4	.28	38.05	54	-15.95	-	-	199	221	H
4	* ** 2.48356	30.7	ADV	32.4	-24.4	.28	38.98	54	-15.02	-	-	199	221	H

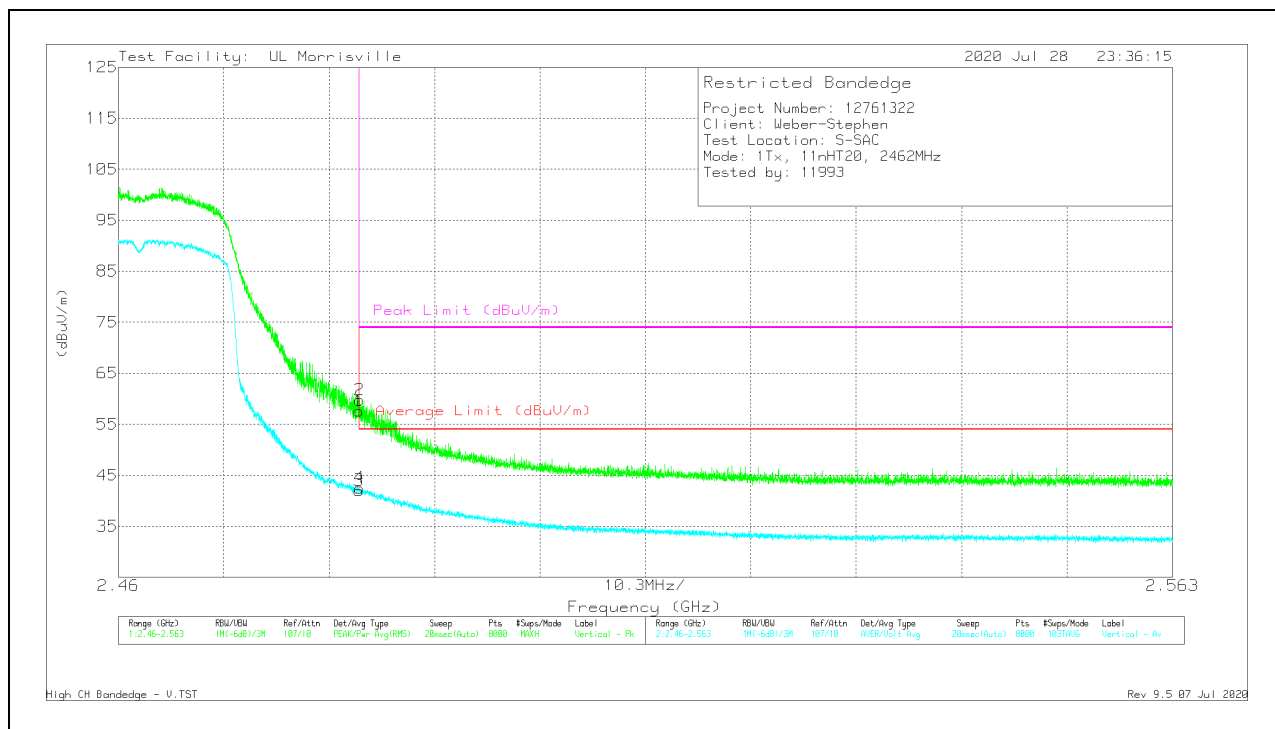
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	49.57	Pk	32.4	-24.4	0	57.57	-	-	74	-16.43	199	397	V
2	* ** 2.48356	51.76	Pk	32.4	-24.4	0	59.76	-	-	74	-14.24	199	397	V
3	* ** 2.4835	33.74	ADV	32.4	-24.4	.28	42.02	54	-11.98	-	-	199	397	V
4	* ** 2.48356	34.26	ADV	32.4	-24.4	.28	42.54	54	-11.46	-	-	199	397	V

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

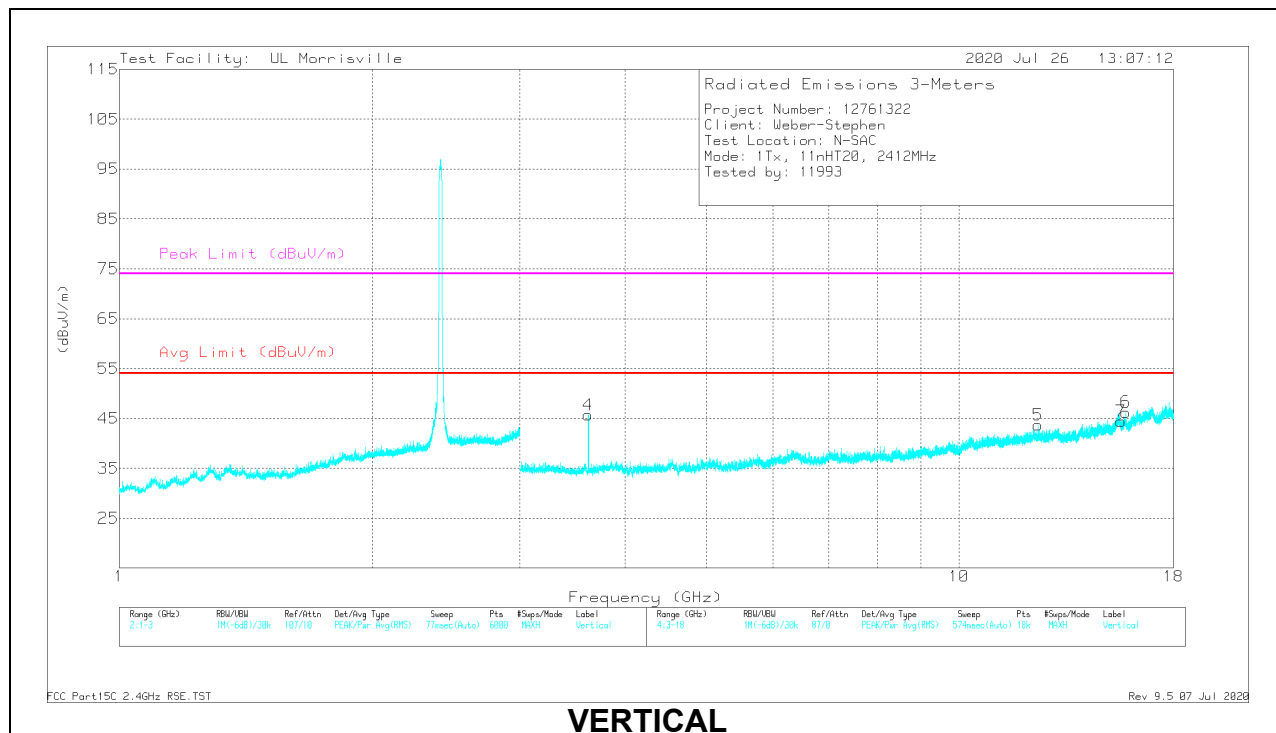
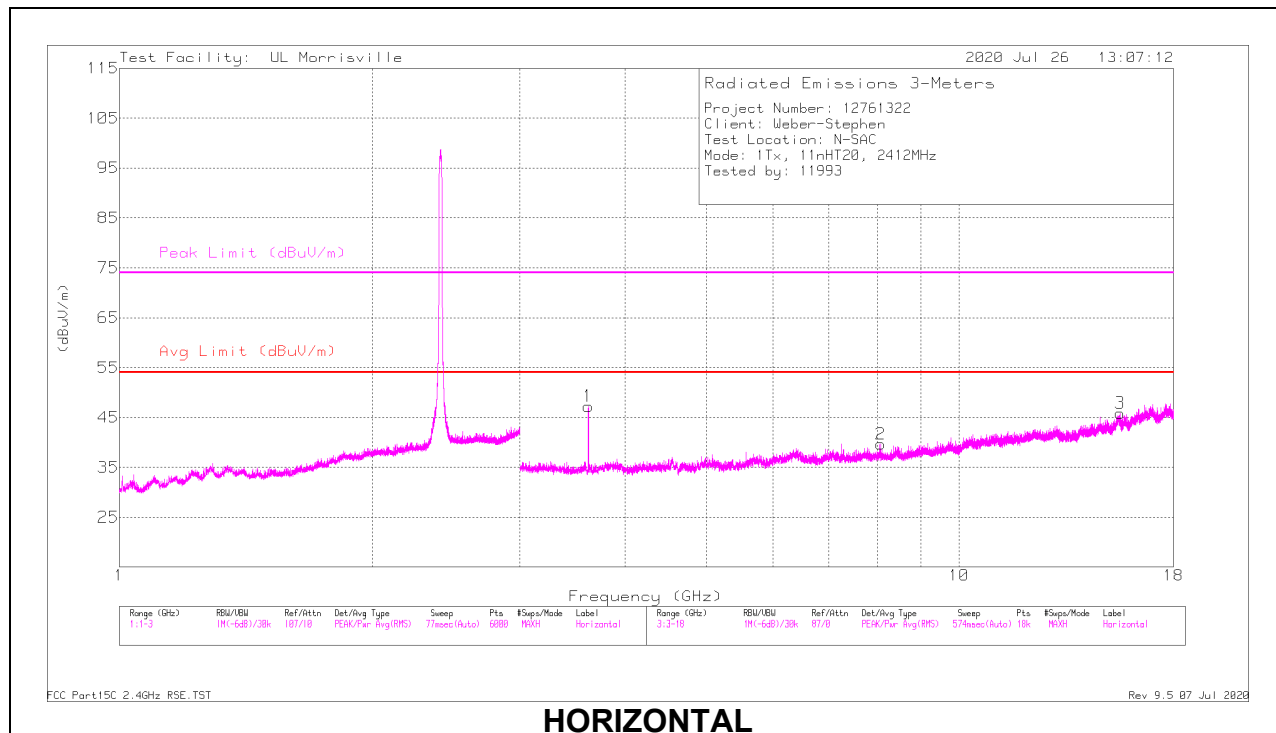
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 3.61795	48.2	PK2	33	-31.1	0	50.1	-	-	74	-23.9	152	145	H
	*** 3.61799	44.53	ADV	33	-31.1	.28	46.71	54	-7.29	-	-	152	145	H
2	*** 8.07249	36.75	PK2	35.9	-27.8	0	44.85	-	-	74	-29.15	61	163	H
	*** 8.07264	23.96	ADV	35.9	-27.8	.28	32.34	54	-21.66	-	-	61	163	H
3	*** 15.55957	35.65	PK2	40.2	-24.2	0	51.65	-	-	74	-22.35	2	249	H
	*** 15.55943	22.6	ADV	40.2	-24.2	.28	38.88	54	-15.12	-	-	2	249	H
4	*** 3.61794	46.61	PK2	33	-31.1	0	48.51	-	-	74	-25.49	163	104	V
	*** 3.618	42.38	ADV	33	-31.1	.28	44.56	54	-9.44	-	-	163	104	V
5	*** 12.42075	35.29	PK2	38.9	-25.5	0	48.69	-	-	74	-25.31	96	281	V
	*** 12.41771	22.51	ADV	38.9	-25.5	.28	36.19	54	-17.81	-	-	96	281	V
6	*** 15.79381	36	PK2	40.1	-24.1	0	52	-	-	74	-22	2	147	V
	*** 15.79376	23.37	ADV	40.1	-24.1	.28	39.65	54	-14.35	-	-	2	147	V
7	*** 15.59403	36.3	PK2	40.2	-25.8	0	50.7	-	-	74	-23.3	325	268	V
	*** 15.59405	23.84	ADV	40.2	-25.8	.28	38.52	54	-15.48	-	-	325	268	V

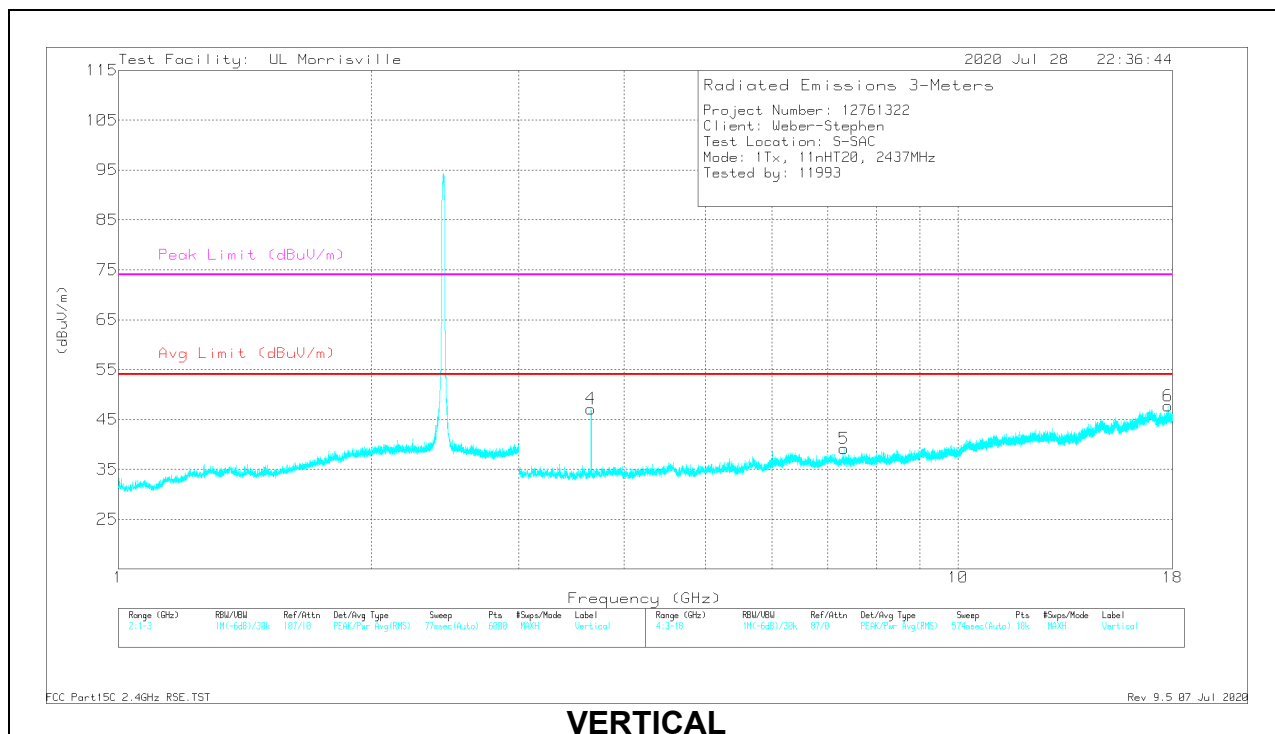
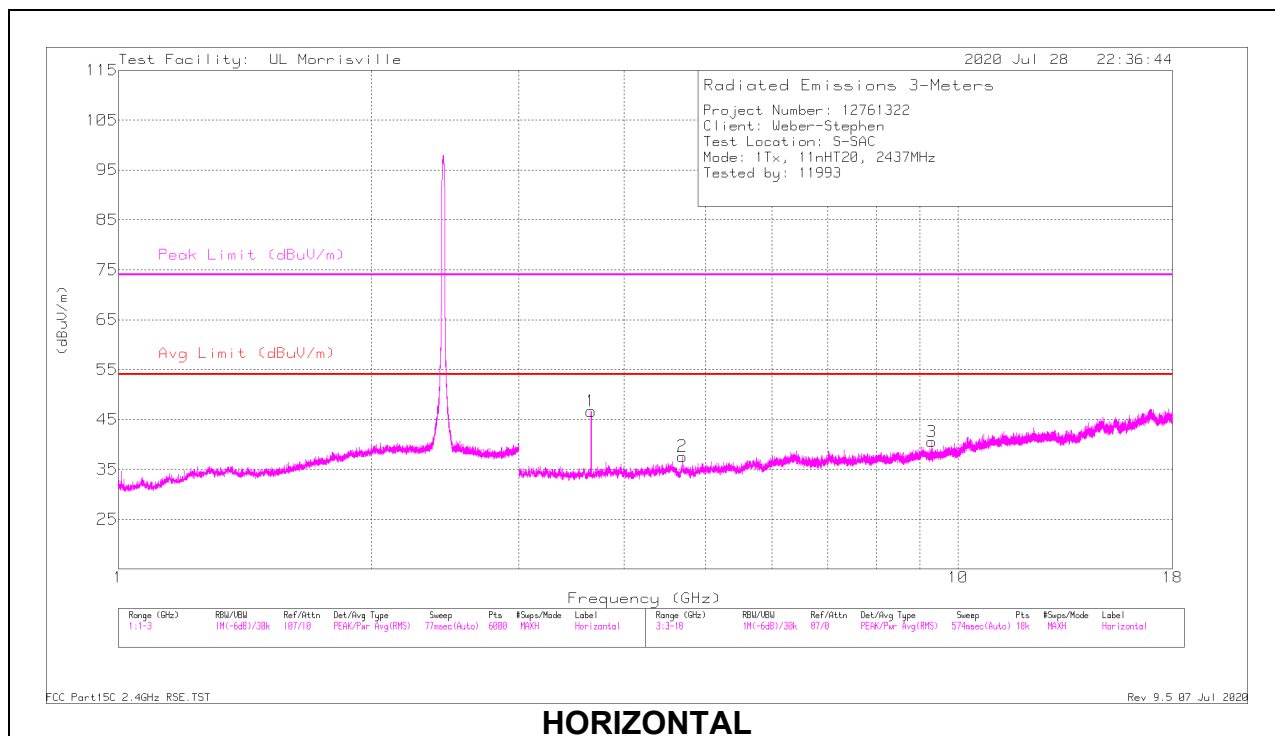
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

MID CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 3.6554	48.71	PK2	33.1	-32.2	0	49.61	-	-	74	-24.39	191	109	H
	*** 3.65548	45.11	ADV	33.1	-32.2	.28	46.29	54	-7.71	-	-	191	109	H
2	*** 4.69837	39.99	PK2	34.1	-31.7	0	42.39	-	-	74	-31.61	252	237	H
	*** 4.69823	26.81	ADV	34.1	-31.7	.28	29.49	54	-24.51	-	-	252	237	H
3	*** 9.30717	35.34	PK2	36.3	-26.6	0	45.04	-	-	74	-28.96	236	208	H
	*** 9.30717	22.41	ADV	36.3	-26.6	.28	32.39	54	-21.61	-	-	236	208	H
4	*** 3.65552	49.38	PK2	33.1	-32.2	0	50.28	-	-	74	-23.72	236	111	V
	*** 3.65549	46.07	ADV	33.1	-32.2	.28	47.25	54	-6.75	-	-	236	111	V
5	*** 7.31105	37.78	PK2	35.6	-27.5	0	45.88	-	-	74	-28.12	220	112	V
	*** 7.31103	27.8	ADV	35.6	-27.5	.28	36.18	54	-17.82	-	-	220	112	V
6	*** 17.78551	34.65	PK2	41.1	-22.1	0	53.65	-	-	74	-20.35	54	244	V
	*** 17.78532	21.24	ADV	41.1	-22.1	.28	40.52	54	-13.48	-	-	54	244	V

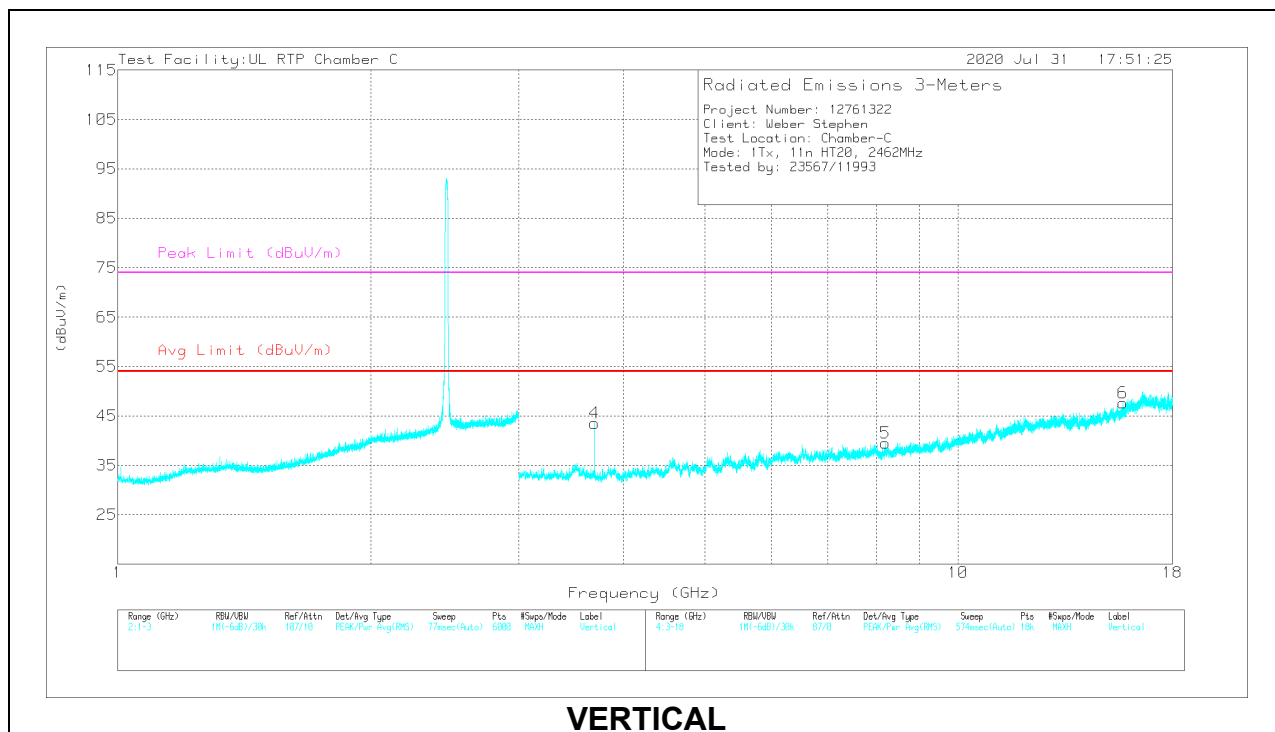
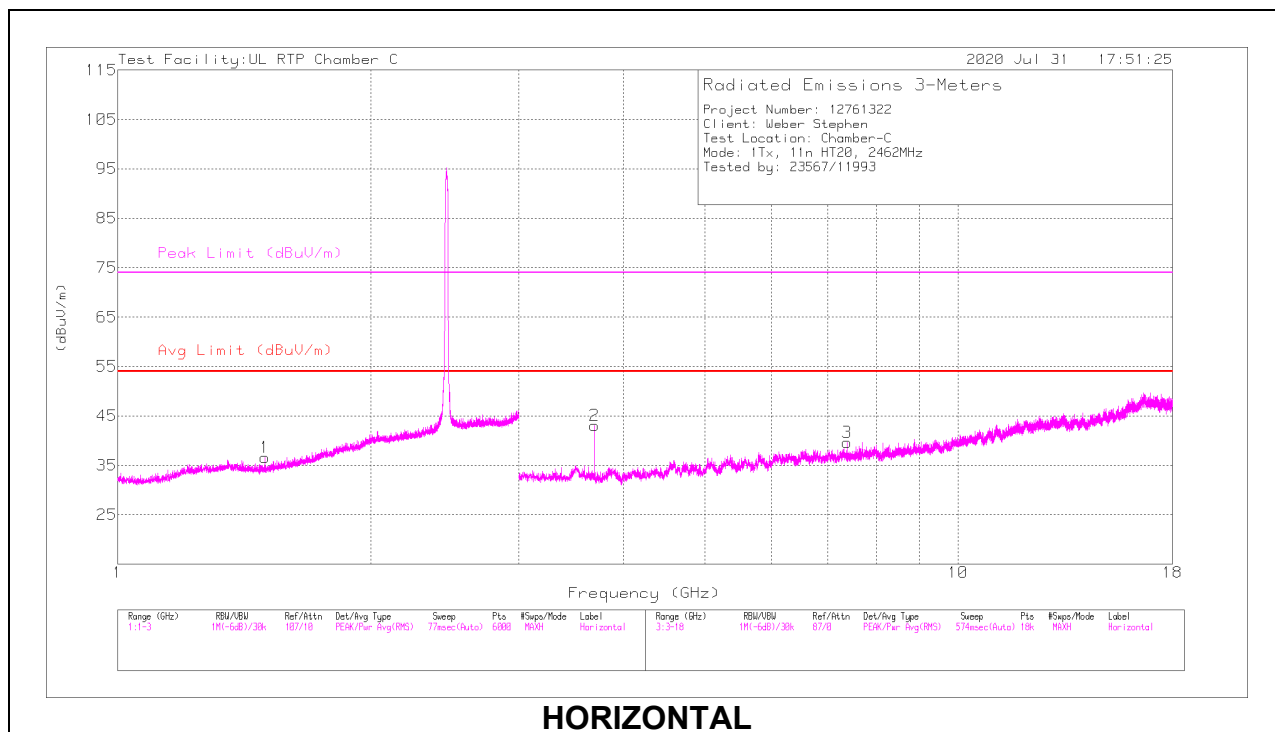
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.49669	35.05	PK2	27.8	-20.9	0	41.95	-	-	74	-32.05	126	144	H
	* ** 1.49447	21.42	ADV	27.8	-20.9	.28	28.6	54	-25.4	-	-	126	144	H
2	* ** 3.69292	63.05	PK2	33.2	-49.6	0	46.65	-	-	74	-27.35	151	102	H
	* ** 3.69298	59.14	ADV	33.2	-49.6	.28	43.02	54	-10.98	-	-	151	102	H
3	* ** 7.38613	57.96	PK2	35.8	-47	0	46.76	-	-	74	-27.24	244	102	H
	* ** 7.38607	48.63	ADV	35.8	-47	.28	37.71	54	-16.29	-	-	244	102	H
4	* ** 3.69294	62.89	PK2	33.2	-49.6	0	46.49	-	-	74	-27.51	239	102	V
	* ** 3.69301	58.51	ADV	33.2	-49.6	.28	42.39	54	-11.61	-	-	239	102	V
5	* ** 8.19821	54.39	PK2	35.9	-45.6	0	44.69	-	-	74	-29.31	202	207	V
	* ** 8.19649	41.46	ADV	35.9	-45.6	.28	32.04	54	-21.96	-	-	202	207	V
6	* ** 15.71598	50.06	PK2	40.7	-37.9	0	52.86	-	-	74	-21.14	83	217	V
	* ** 15.71647	37.26	ADV	40.7	-37.8	.28	40.44	54	-13.56	-	-	83	217	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

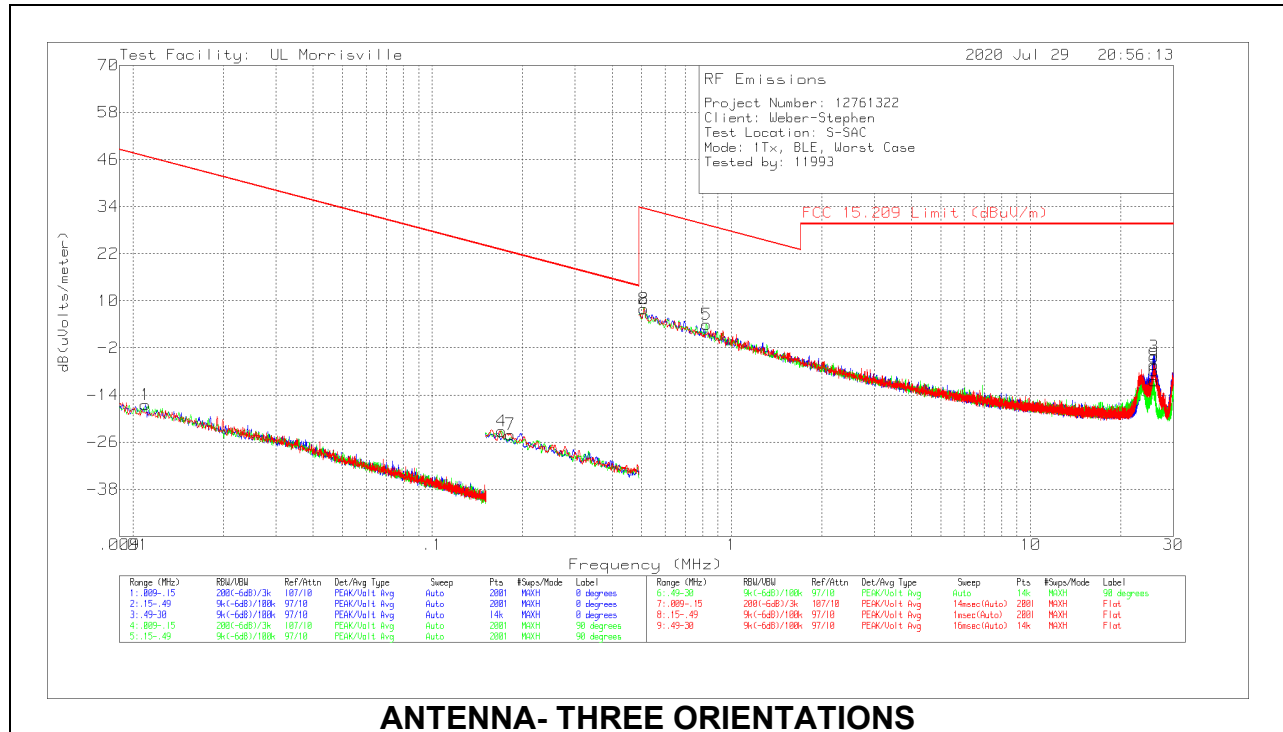
ADV - Linear Voltage Average

10.3. WORST CASE BELOW 30MHZ

Note for below 30 MHz scans: 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 $40 \cdot \log(\text{test distance} / \text{specification distance})$.

The below 30 MHz limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω . For example, the measurement frequency 10.99 KHz resulted in a level of -16.46 dBuV/m, which is equivalent to $-16.46 - 51.5 = -67.96$ dBuA/m, which has the same margin, -63.25 dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION) - BLE

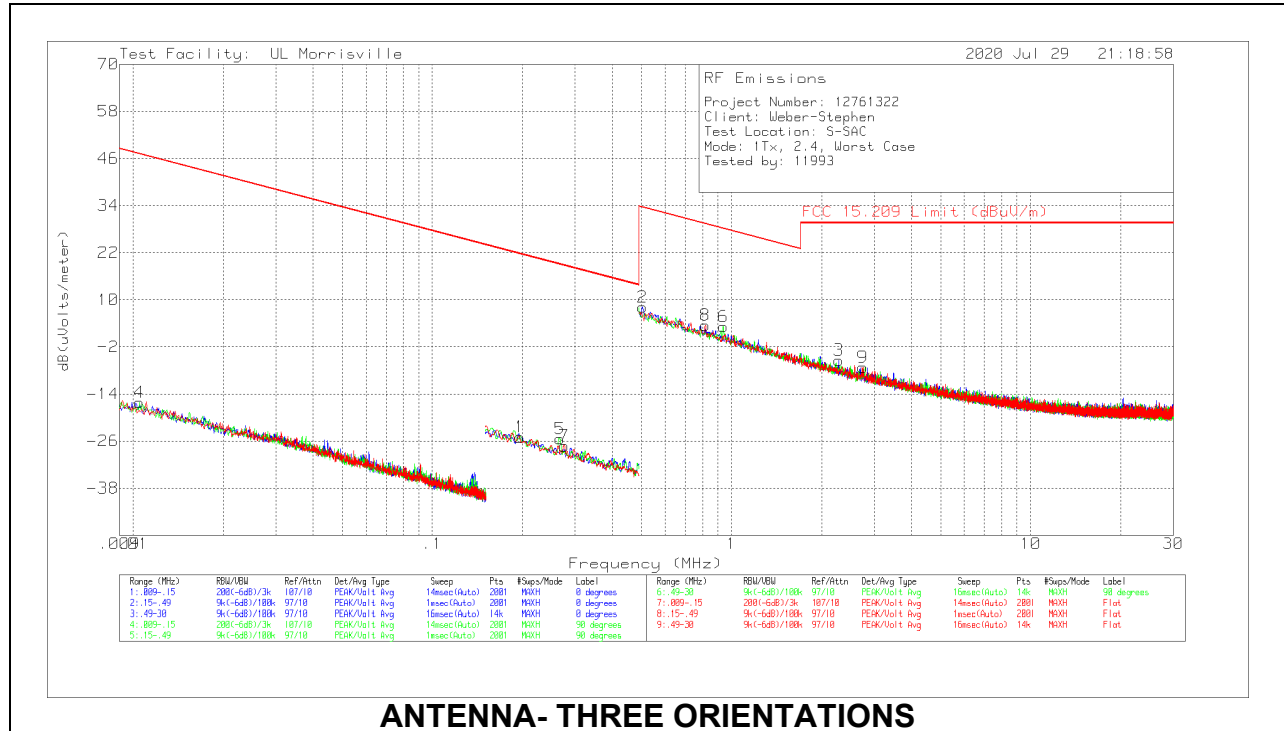


Below 30MHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 Avg/QP Limit (dBuV/m)	FCC 15.209 Pk Limit (dBuV/m)	Worst-Case Margin (dB)	Azimuth (Degs)	Antenna Face
1	.01099	45.64	Pk	17.8	.1	-80	-16.46	46.79	66.79	-63.25	0-360	On
2	.51003	36.88	Pk	11	.1	-40	7.98	33.45	-	-25.47	0-360	On
3	25.87243	26.05	Pk	8.7	1	-40	-4.25	29.54	-	-33.79	0-360	On
4	.17032	45.66	Pk	11	.1	-80	-23.24	22.98	42.98	-46.22	0-360	Off
5	.82517	32.77	Pk	11	.2	-40	3.97	29.27	-	-25.3	0-360	Off
6	25.85767	19.9	Pk	8.7	1	-40	-10.4	29.54	-	-39.94	0-360	Off
7	.18247	44.83	Pk	11	.1	-80	-24.07	22.38	42.38	-46.45	0-360	Flat
8	.50897	36.85	Pk	11	.1	-40	7.95	33.47	-	-25.52	0-360	Flat
9	25.84713	24.04	Pk	8.7	1	-40	-6.26	29.54	-	-35.8	0-360	Flat

Pk - Peak detector

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION) – 2.4 WLAN



ANTENNA- THREE ORIENTATIONS

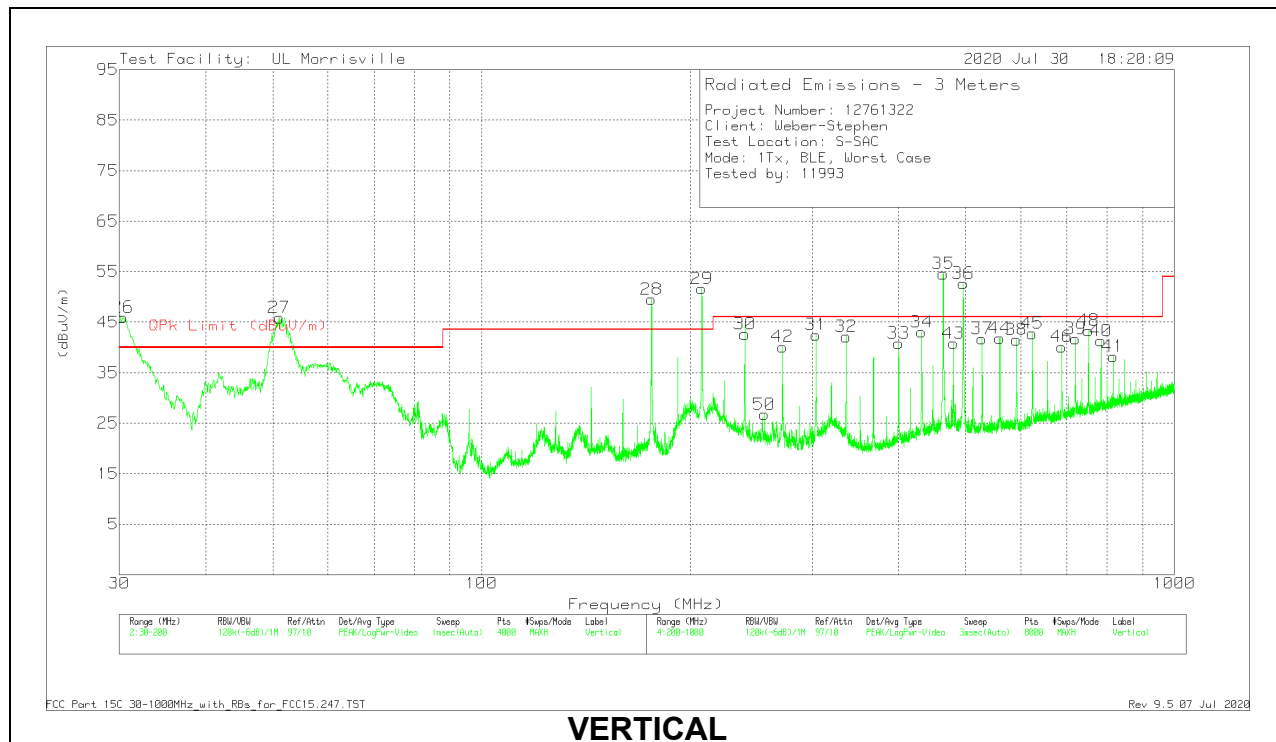
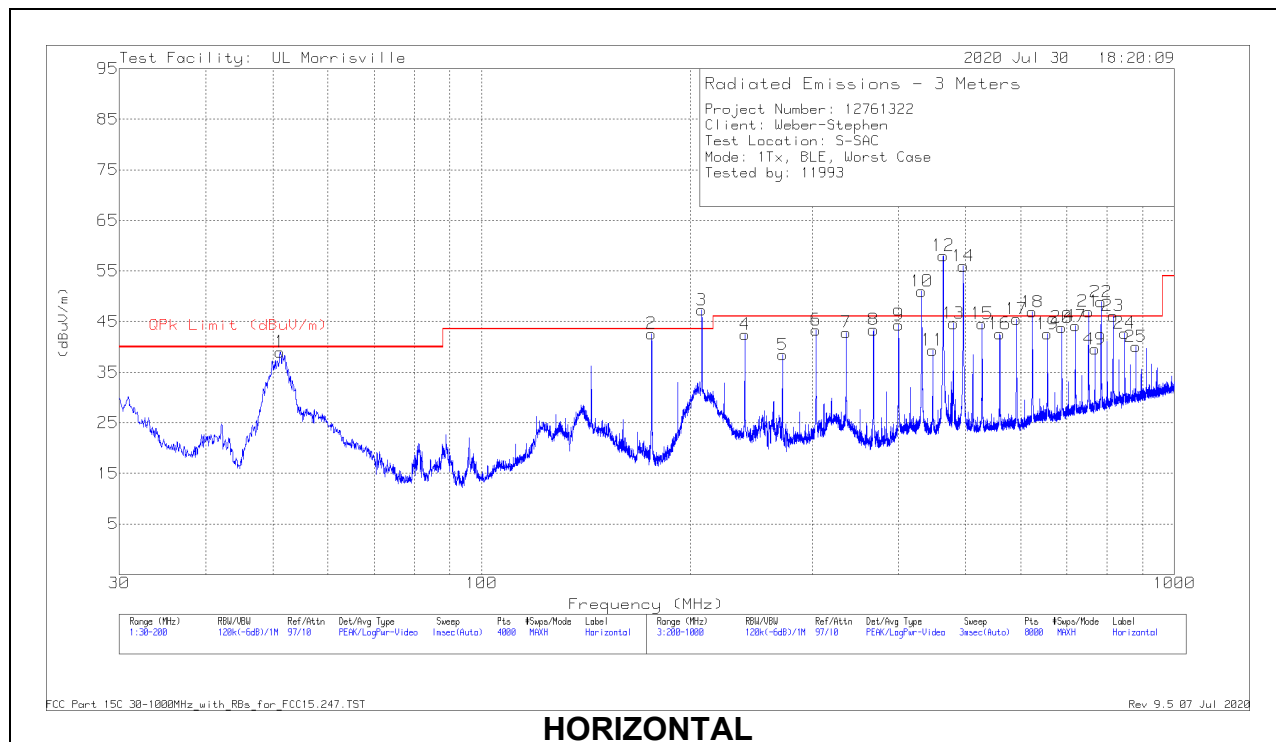
Below 30MHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 Avg/QP Limit (dBuV/m)	FCC 15.209 Pk Limit (dBuV/m)	Worst-Case Margin (dB)	Azimuth (Degs)	Antenna Face
1	.19607	43.89	Pk	11	.1	-80	-25.01	21.76	41.76	-46.77	0-360	On
2	.50476	37.04	Pk	11	.1	-40	8.14	33.54	-	-25.4	0-360	On
3	2.2818	23.09	Pk	11.2	.3	-40	-5.41	29.54	-	-34.95	0-360	On
4	.01049	45.78	Pk	18	.1	-80	-16.12	47.19	67.19	-63.31	0-360	Off
5	.2673	43.5	Pk	11	.1	-80	-25.4	19.06	39.06	-44.46	0-360	Off
6	.939	31.98	Pk	11	.2	-40	3.18	28.15	-	-24.97	0-360	Off
7	.27665	41.66	Pk	11	.1	-80	-27.24	18.77	38.77	-46.01	0-360	Flat
8	.81885	32.33	Pk	11	.2	-40	3.53	29.34	-	-25.81	0-360	Flat
9	2.74978	21.32	Pk	11.2	.3	-40	-7.18	29.54	-	-36.72	0-360	Flat

Pk - Peak detector

10.4. WORST CASE BELOW 1 GHz

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



Below 1GHz Data

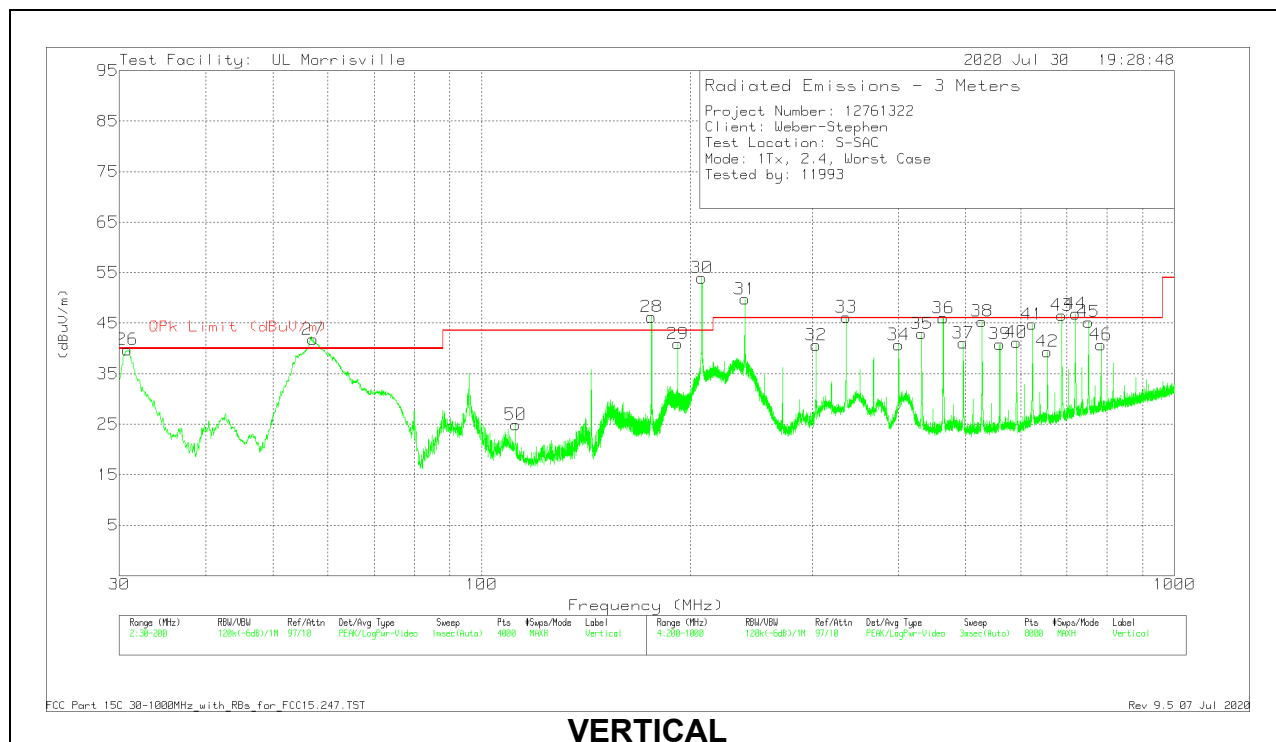
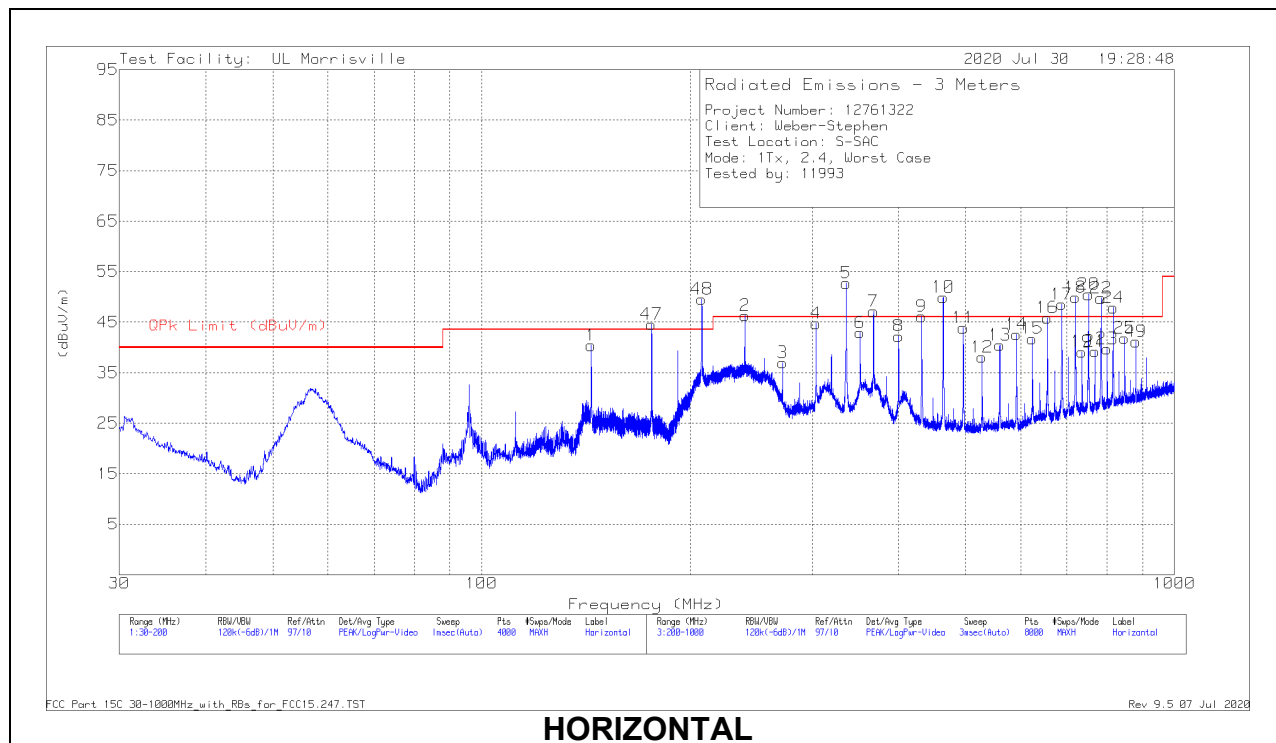
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0081 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	* 240.0052	53.9	Qp	17.7	-29.3	42.3	46.02	-3.72	179	115	H
5	* 272.0094	48.13	Pk	19.3	-29	38.43	46.02	-7.59	0-360	101	H
9	* 400.0015	50.62	Qp	21.7	-28.3	44.02	46.02	-2	134	101	H
33	* 399.9943	47.1	Qp	21.7	-28.3	40.5	46.02	-5.52	158	194	V
42	* 272.0003	49.36	Qp	19.3	-29	39.66	46.02	-6.36	137	227	V
50	* 256.0073	38.13	Pk	17.7	-29.1	26.73	46.02	-19.29	0-360	199	V
26	30.3401	50.75	Pk	26.7	-31.5	45.95	-	-	0-360	101	V
27	51.0429	63.18	Pk	13.9	-31.2	45.88	-	-	0-360	101	V
1	51.213	56.27	Pk	13.9	-31.2	38.97	-	-	0-360	400	H
28	175.9828	61.81	Pk	17.5	-29.8	49.51	-	-	0-360	101	V
2	176.0253	54.91	Pk	17.5	-29.8	42.61	-	-	0-360	200	H
3	208.001	60.06	Pk	16.6	-29.4	47.26	-	-	0-360	101	H
29	208.001	64.42	Pk	16.6	-29.4	51.62	-	-	0-360	101	V
30	239.9052	54.24	Pk	17.7	-29.3	42.64	-	-	0-360	101	V
6	304.0135	52.44	Pk	19.6	-28.7	43.34	-	-	0-360	101	H
31	304.0135	51.59	Pk	19.6	-28.7	42.49	-	-	0-360	101	V
7	336.0177	51.36	Pk	20.1	-28.6	42.86	-	-	0-360	101	H
32	336.0177	50.64	Pk	20.1	-28.6	42.14	-	-	0-360	199	V
8	368.0218	50.89	Pk	20.9	-28.4	43.39	-	-	0-360	101	H
10	432.0302	56.58	Pk	22.6	-28.2	50.98	-	-	0-360	101	H
34	432.0302	48.63	Pk	22.6	-28.2	43.03	-	-	0-360	101	V
11	447.9322	44.57	Pk	22.8	-28	39.37	-	-	0-360	101	H
12	464.0343	62.72	Pk	23.3	-28	58.02	-	-	0-360	101	H
35	464.0343	59.29	Pk	23.3	-28	54.59	-	-	0-360	199	V
13	480.0364	48.63	Pk	23.8	-27.8	44.63	-	-	0-360	101	H
43	480.0364	44.79	Pk	23.8	-27.8	40.79	-	-	0-360	199	V
14	496.0385	59.97	Pk	23.7	-27.7	55.97	-	-	0-360	101	H
36	496.0385	56.66	Pk	23.7	-27.7	52.66	-	-	0-360	199	V
15	528.0426	48.27	Pk	24	-27.7	44.57	-	-	0-360	101	H
37	528.0426	45.43	Pk	24	-27.7	41.73	-	-	0-360	101	V
16	559.9468	45.59	Pk	24.5	-27.5	42.59	-	-	0-360	101	H
44	559.9468	44.82	Pk	24.5	-27.5	41.82	-	-	0-360	101	V
17	591.9509	48.49	Pk	24.4	-27.4	45.49	-	-	0-360	199	H
38	591.9509	44.52	Pk	24.4	-27.4	41.52	-	-	0-360	101	V
18	623.9551	48.72	Pk	25.4	-27.2	46.92	-	-	0-360	199	H
45	624.0551	44.57	Pk	25.4	-27.2	42.77	-	-	0-360	101	V
19	655.9593	43.97	Pk	25.8	-27.2	42.57	-	-	0-360	199	H
20	687.9634	44.93	Pk	26.1	-27.2	43.83	-	-	0-360	101	H
46	688.0134	41.22	Pk	26.1	-27.2	40.12	-	-	0-360	101	V
47	719.9676	44.66	Pk	26.5	-27	44.16	-	-	0-360	101	H
39	719.9676	42.23	Pk	26.5	-27	41.73	-	-	0-360	101	V
21	751.9717	47.07	Pk	26.8	-26.9	46.97	-	-	0-360	101	H
48	751.9717	43.42	Pk	26.8	-26.9	43.32	-	-	0-360	101	V
49	767.9738	39.27	Pk	26.9	-26.6	39.57	-	-	0-360	101	H
22	783.9759	48.29	Pk	27.3	-26.7	48.89	-	-	0-360	101	H
40	783.9759	40.69	Pk	27.3	-26.7	41.29	-	-	0-360	101	V
23	815.9801	44.73	Pk	27.7	-26.3	46.13	-	-	0-360	101	H
41	815.9801	36.81	Pk	27.7	-26.3	38.21	-	-	0-360	101	V
24	847.9842	40.91	Pk	27.9	-26.1	42.71	-	-	0-360	101	H
25	879.9884	37.86	Pk	28	-25.8	40.06	-	-	0-360	101	H

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

Pk - Peak detector

Qp - Quasi-Peak detector

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION) – 2.4 WLAN



Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0081 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
50	* 112.0037	36.3	Pk	19.1	-30.5	24.9	43.52	-18.62	0-360	101	V
2	* 240.0086	57.36	Qp	17.7	-29.3	45.76	46.02	-1.26	166	105	H
3	* 272.0094	46.66	Pk	19.3	-29	36.96	46.02	-9.06	0-360	101	H
8	* 399.9911	47.62	Qp	21.7	-28.3	41.02	46.02	-5	138	101	H
31	* 240.0086	56.2	Qp	17.7	-29.3	44.6	46.02	-1.42	314	103	V
34	* 400.003	45.88	Qp	21.7	-28.3	39.28	46.02	-6.74	260	130	V
26	30.8077	44.75	Pk	26.5	-31.5	39.75	-	-	0-360	101	V
27	57.122	59.5	Pk	13.4	-31.1	41.8	-	-	0-360	101	V
1	144.0145	51.59	Pk	18.9	-30.1	40.39	-	-	0-360	199	H
47	175.9828	56.86	Pk	17.5	-29.8	44.56	-	-	0-360	199	H
28	176.0253	58.54	Pk	17.5	-29.8	46.24	-	-	0-360	101	V
29	192.0094	53.12	Pk	17.4	-29.6	40.92	-	-	0-360	101	V
48	208.001	62.35	Pk	16.6	-29.4	49.55	-	-	0-360	101	H
30	208.001	66.77	Pk	16.6	-29.4	53.97	-	-	0-360	101	V
4	304.0135	53.85	Pk	19.6	-28.7	44.75	-	-	0-360	101	H
32	304.0135	49.75	Pk	19.6	-28.7	40.65	-	-	0-360	101	V
5	336.0177	61.23	Pk	20.1	-28.6	52.73	-	-	0-360	101	H
33	336.0177	54.71	Pk	20.1	-28.6	46.21	-	-	0-360	101	V
6	352.0198	50.83	Pk	20.6	-28.5	42.93	-	-	0-360	101	H
7	368.0218	54.62	Pk	20.9	-28.4	47.12	-	-	0-360	101	H
9	432.0302	51.72	Pk	22.6	-28.2	46.12	-	-	0-360	200	H
35	432.0302	48.52	Pk	22.6	-28.2	42.92	-	-	0-360	199	V
10	464.0343	54.65	Pk	23.3	-28	49.95	-	-	0-360	200	H
36	464.0343	50.74	Pk	23.3	-28	46.04	-	-	0-360	101	V
37	495.9385	45.06	Pk	23.7	-27.7	41.06	-	-	0-360	101	V
11	496.0385	47.89	Pk	23.7	-27.7	43.89	-	-	0-360	200	H
12	528.0426	41.76	Pk	24	-27.7	38.06	-	-	0-360	200	H
38	528.0426	49.05	Pk	24	-27.7	45.35	-	-	0-360	101	V
13	560.0468	43.45	Pk	24.5	-27.5	40.45	-	-	0-360	299	H
39	560.0468	43.88	Pk	24.5	-27.5	40.88	-	-	0-360	101	V
14	591.9509	45.57	Pk	24.4	-27.4	42.57	-	-	0-360	101	H
40	591.9509	44.21	Pk	24.4	-27.4	41.21	-	-	0-360	101	V
15	623.9551	43.55	Pk	25.4	-27.2	41.75	-	-	0-360	101	H
41	623.9551	46.58	Pk	25.4	-27.2	44.78	-	-	0-360	101	V
16	655.9593	47.26	Pk	25.8	-27.2	45.86	-	-	0-360	101	H
42	655.9593	40.78	Pk	25.8	-27.2	39.38	-	-	0-360	101	V
17	687.9634	49.61	Pk	26.1	-27.2	48.51	-	-	0-360	101	H
43	687.9634	47.66	Pk	26.1	-27.2	46.56	-	-	0-360	101	V
18	719.9676	50.38	Pk	26.5	-27	49.88	-	-	0-360	101	H
44	719.9676	47.36	Pk	26.5	-27	46.86	-	-	0-360	101	V
19	735.9697	39.32	Pk	26.6	-26.8	39.12	-	-	0-360	101	H
20	751.9717	50.58	Pk	26.8	-26.9	50.48	-	-	0-360	101	H
45	751.9717	45.34	Pk	26.8	-26.9	45.24	-	-	0-360	101	V
21	767.9738	38.92	Pk	26.9	-26.6	39.22	-	-	0-360	101	H
22	783.9759	49.13	Pk	27.3	-26.7	49.73	-	-	0-360	101	H
46	783.9759	40.14	Pk	27.3	-26.7	40.74	-	-	0-360	101	V
23	799.978	38.71	Pk	27.4	-26.4	39.71	-	-	0-360	101	H
24	815.9801	46.47	Pk	27.7	-26.3	47.87	-	-	0-360	101	H
25	847.9842	40.06	Pk	27.9	-26.1	41.86	-	-	0-360	101	H
49	879.9884	38.95	Pk	28	-25.8	41.15	-	-	0-360	101	H

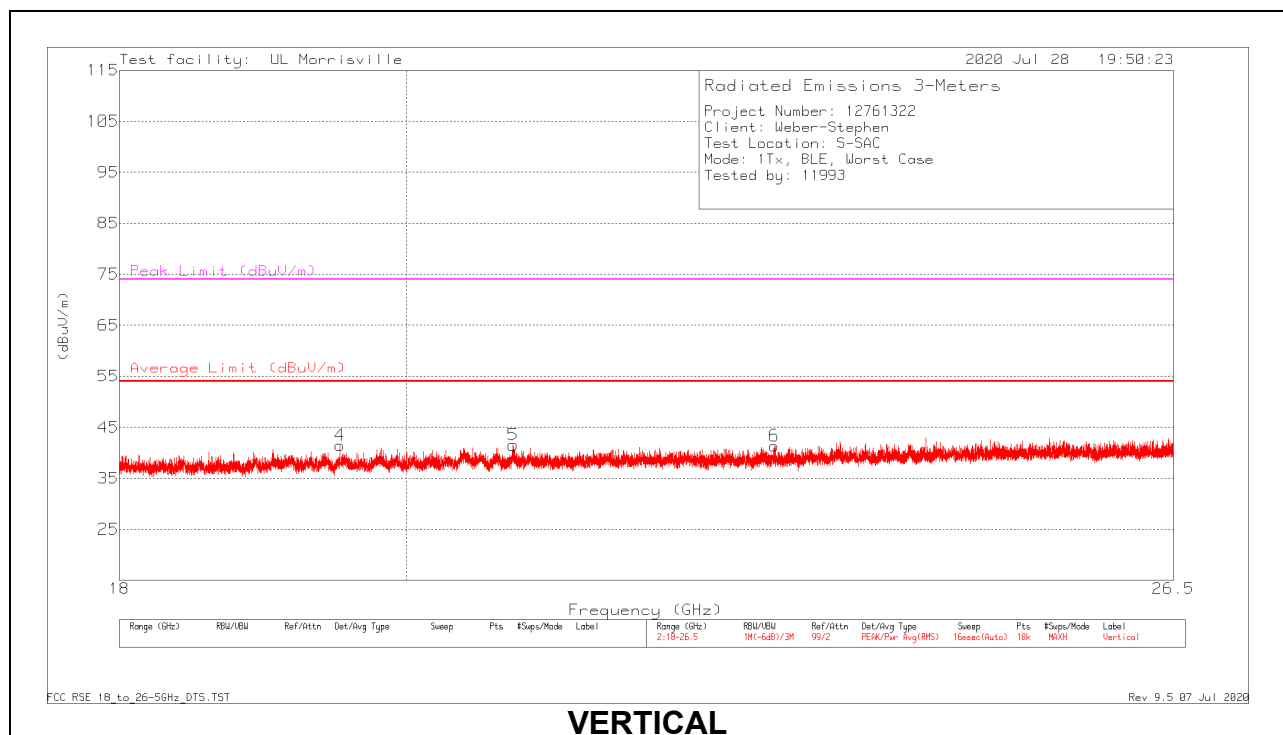
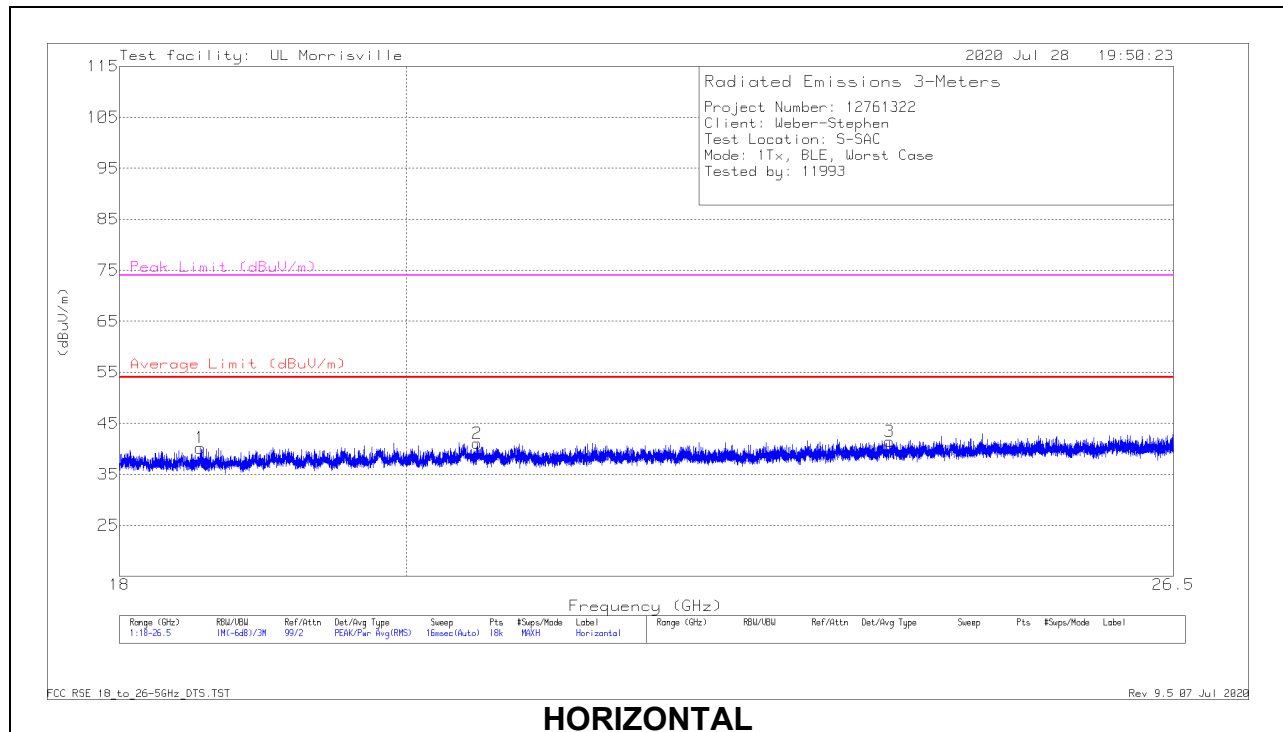
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

Qp - Quasi-Peak detector

10.5. WORST CASE 18-26 GHZ

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



18 – 26GHz DATA

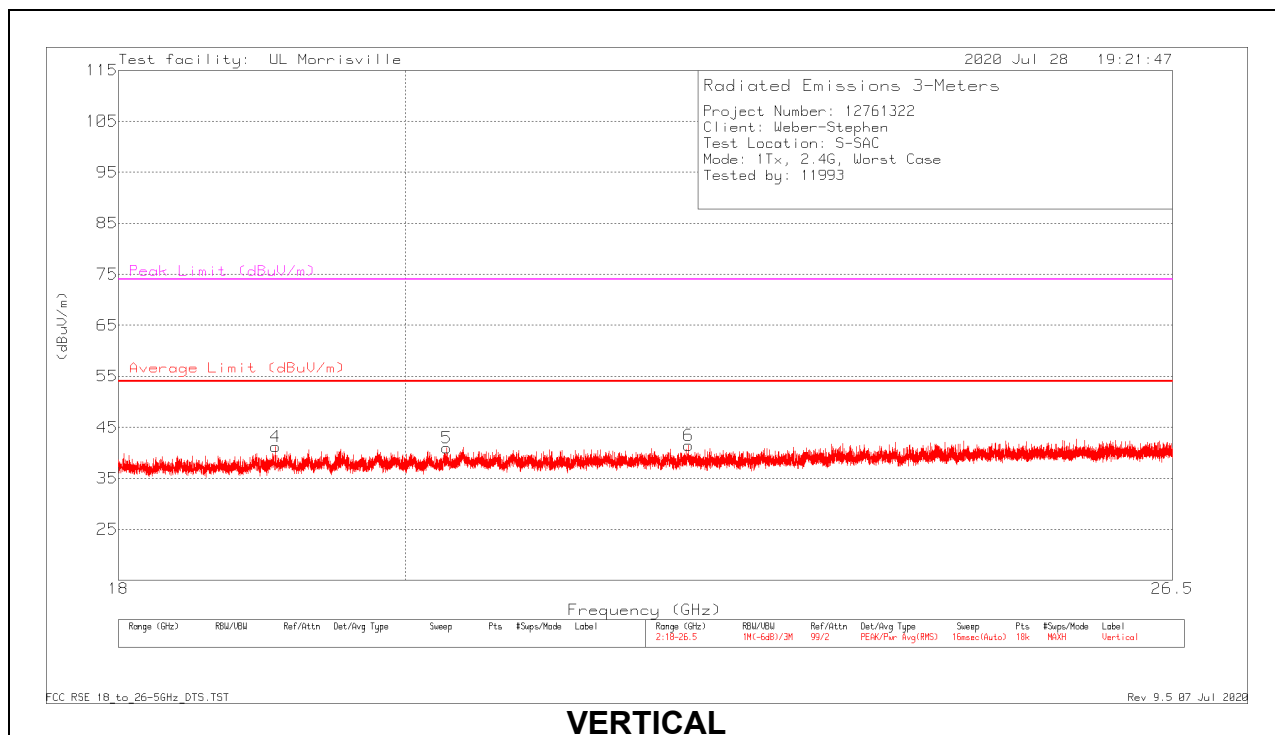
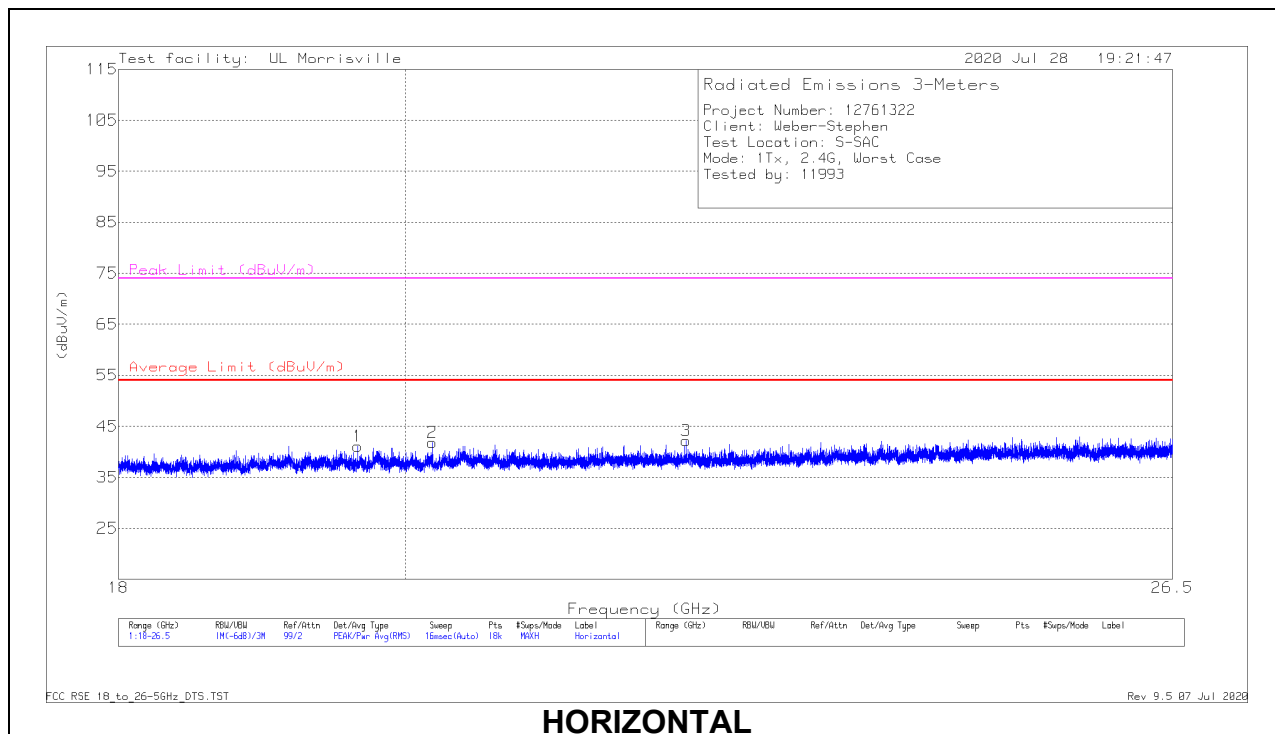
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0076 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 18.54309	47.17	Pk	32.6	-39.6	40.17	54	-13.83	74	-33.83	0-360	250	H
2	* ** 20.52511	46.89	Pk	33.2	-39	41.09	54	-12.91	74	-32.91	0-360	101	H
3	* ** 23.88043	45.97	Pk	34.1	-38.6	41.47	54	-12.53	74	-32.53	0-360	199	H
4	* ** 19.51828	47.69	Pk	32.7	-38.9	41.49	54	-12.51	74	-32.51	0-360	299	V
5	* ** 20.79807	47.23	Pk	33.2	-38.9	41.53	54	-12.47	74	-32.47	0-360	250	V
6	* ** 22.89013	46.47	Pk	33.8	-38.9	41.37	54	-12.63	74	-32.63	0-360	150	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION) – 2.4 WLAN



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	* ** 19.6524	47.35	Pk	32.7	-39	41.05	54	-12.95	74	-32.95	0-360	200	H
2	* ** 20.19595	48.02	Pk	32.8	-39	41.82	54	-12.18	74	-32.18	0-360	300	H
3	* ** 22.16664	47.97	Pk	33.6	-39.4	42.17	54	-11.83	74	-31.83	0-360	300	H
4	* ** 19.06728	47.8	Pk	32.8	-39.4	41.2	54	-12.8	74	-32.8	0-360	101	V
5	* ** 20.30268	46.45	Pk	33.2	-38.7	40.95	54	-13.05	74	-33.05	0-360	200	V
6	* ** 22.1879	47.31	Pk	33.6	-39.5	41.41	54	-12.59	74	-32.59	0-360	300	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)
RSS-Gen 8.8

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

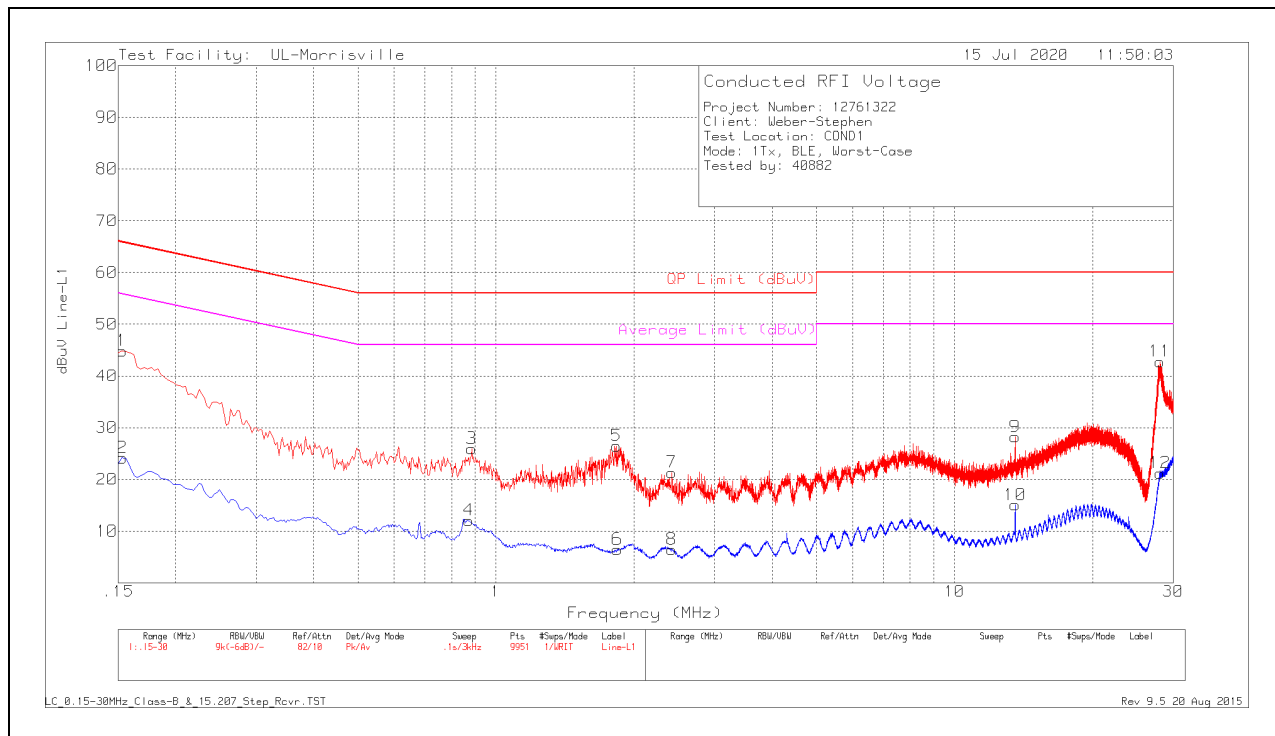
* Decreases with the logarithm of the frequency.

RESULTS

11.1.1. AC Power Line Host

BLE

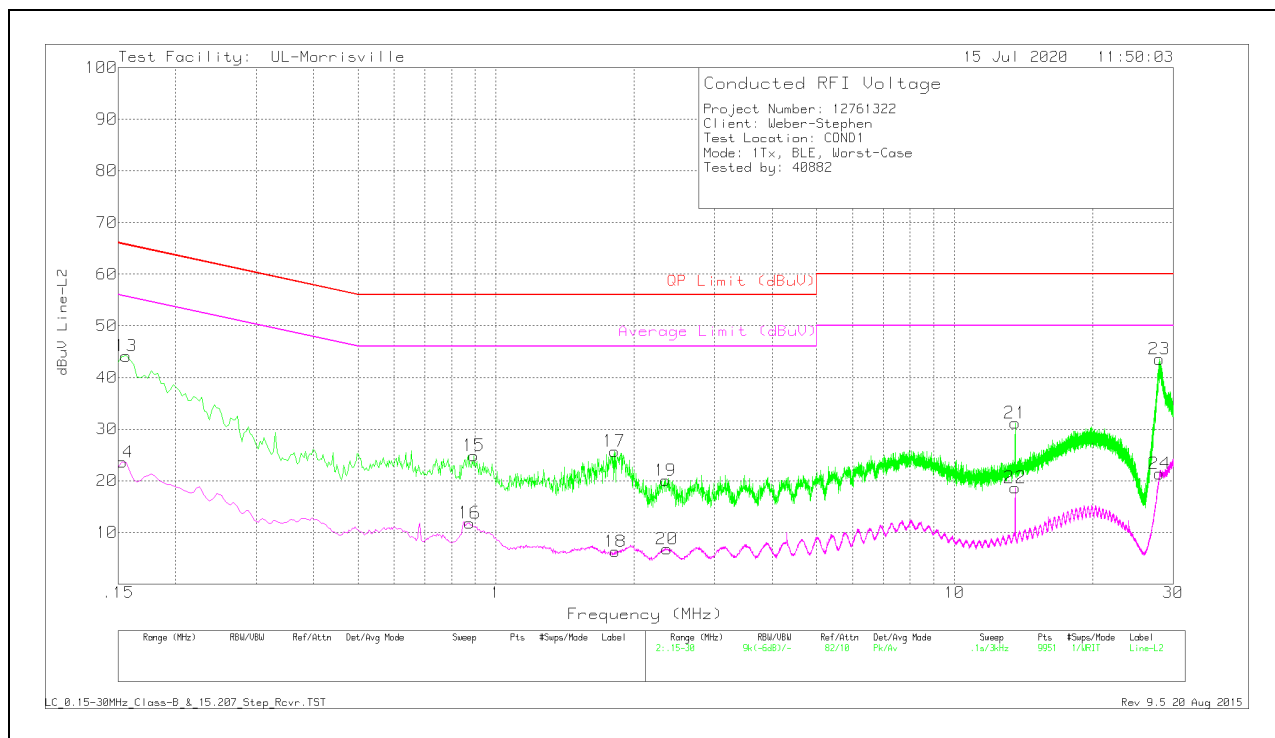
LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.153	34.97	Pk	.2	9.7	44.87	65.84	-20.97	-	-
2	.153	14.28	Av	.2	9.7	24.18	-	-	55.84	-31.66
3	.885	16.15	Pk	0	9.8	25.95	56	-30.05	-	-
4	.873	2.3	Av	0	9.8	12.1	-	-	46	-33.9
5	1.83	16.68	Pk	0	9.8	26.48	56	-29.52	-	-
6	1.839	-3.33	Av	0	9.8	6.47	-	-	46	-39.53
7	2.418	11.55	Pk	0	9.8	21.35	56	-34.65	-	-
8	2.418	-3.34	Av	0	9.8	6.46	-	-	46	-39.54
9	13.56	18.14	Pk	.1	10	28.24	60	-31.76	-	-
10	13.56	4.97	Av	.1	10	15.07	-	-	50	-34.93
11	28.044	32.29	Pk	.3	10.2	42.79	60	-17.21	-	-
12	28.047	10.73	Av	.3	10.2	21.23	-	-	50	-28.77

Pk - Peak detector
Av - Average detection

LINE 2 RESULTS

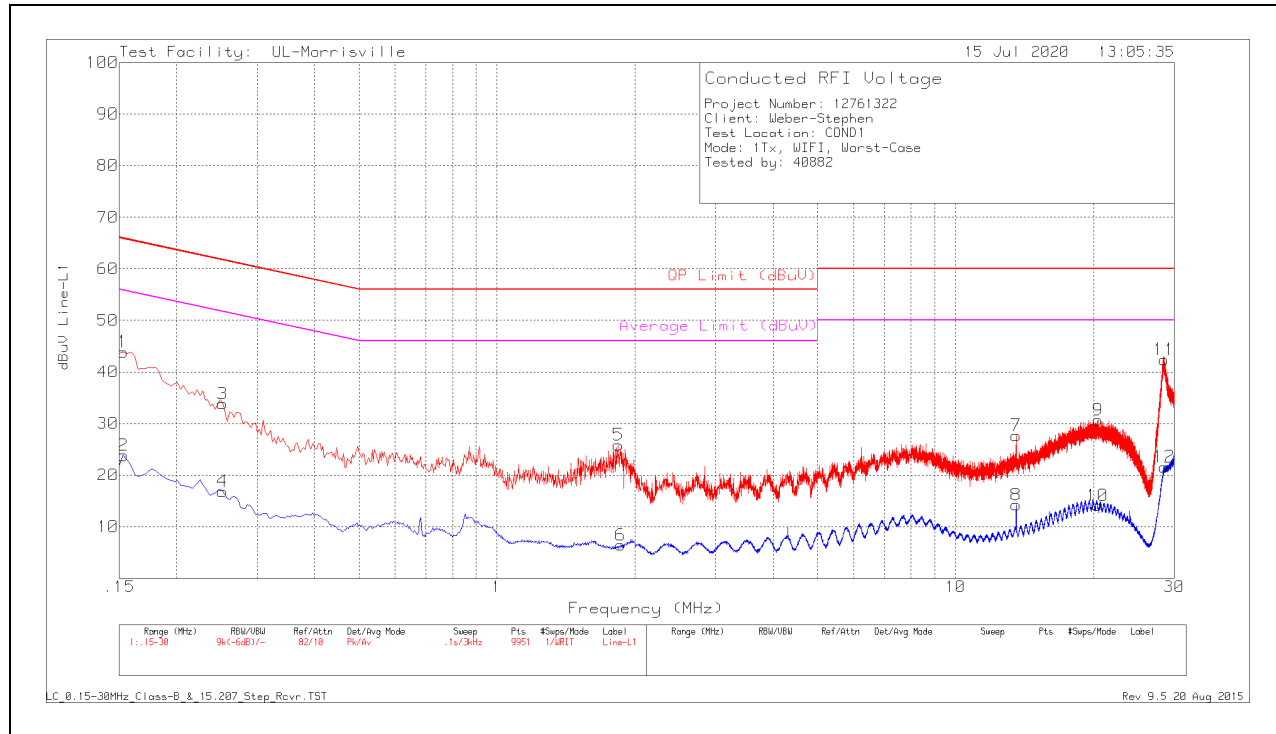


Range 2: Line-L2 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
13	.156	34.25	Pk	.2	9.7	44.15	65.67	-21.52	-	-
14	.153	13.69	Av	.2	9.7	23.59	-	-	55.84	-32.25
15	.894	15.07	Pk	0	9.8	24.87	56	-31.13	-	-
16	.876	2.02	Av	0	9.8	11.82	-	-	46	-34.18
17	1.812	15.93	Pk	0	9.8	25.73	56	-30.27	-	-
18	1.821	-3.5	Av	0	9.8	6.3	-	-	46	-39.7
19	2.343	10.28	Pk	0	9.8	20.08	56	-35.92	-	-
20	2.361	-3	Av	0	9.8	6.8	-	-	46	-39.2
21	13.56	21.07	Pk	.1	10	31.17	60	-28.83	-	-
22	13.56	8.55	Av	.1	10	18.65	-	-	50	-31.35
23	27.984	33.15	Pk	.2	10.2	43.55	60	-16.45	-	-
24	28.002	10.88	Av	.3	10.2	21.38	-	-	50	-28.62

Pk - Peak detector
Av - Average detection

2.4 WLAN

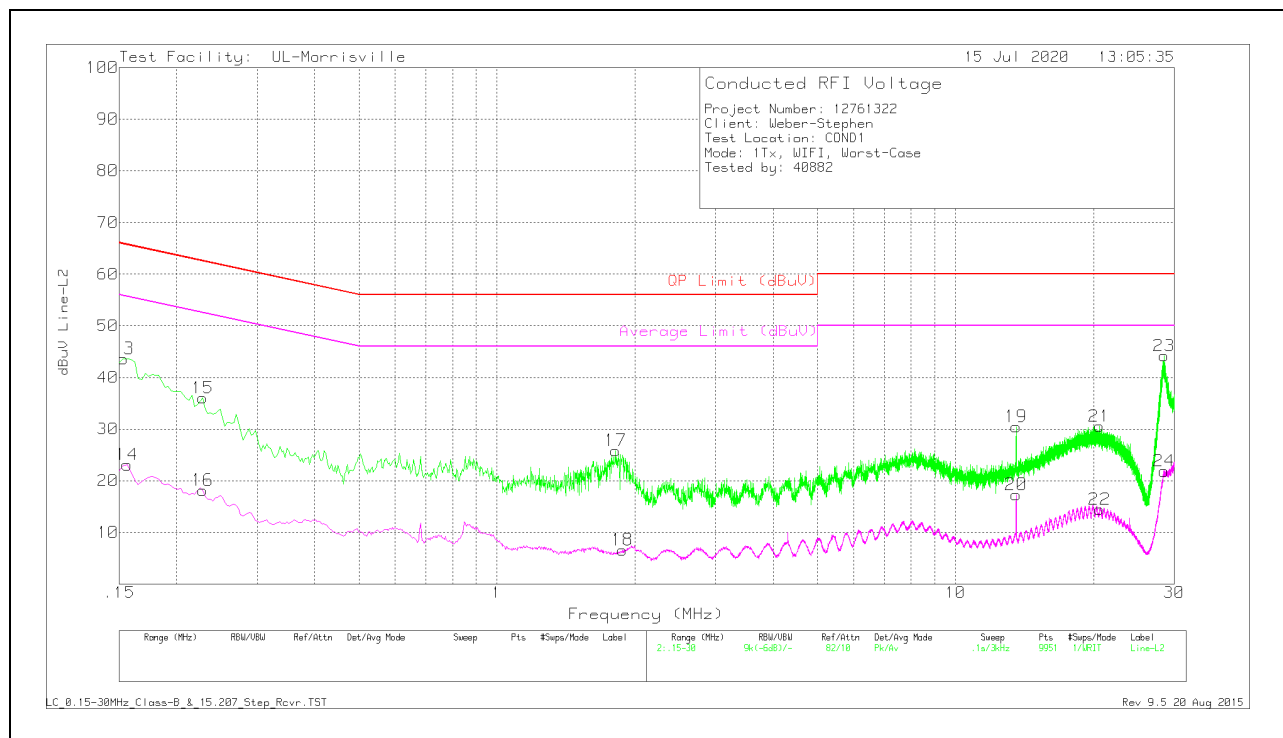
LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz										
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF (dB)	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
1	.153	33.96	Pk	.2	9.7	43.86	65.84	-21.98	-	-
2	.153	13.91	Av	.2	9.7	23.81	-	-	55.84	-32.03
3	.252	24.04	Pk	.1	9.7	33.84	61.69	-27.85	-	-
4	.252	7.03	Av	.1	9.7	16.83	-	-	51.69	-34.86
5	1.839	16.04	Pk	0	9.8	25.84	56	-30.16	-	-
6	1.86	-3.36	Av	0	9.8	6.44	-	-	46	-39.56
7	13.56	17.54	Pk	.1	10	27.64	60	-32.36	-	-
8	13.56	4.11	Av	.1	10	14.21	-	-	50	-35.79
9	20.478	20.38	Pk	.2	10.1	30.68	60	-29.32	-	-
10	20.406	3.79	Av	.2	10.1	14.09	-	-	50	-35.91
11	28.53	31.88	Pk	.3	10.2	42.38	60	-17.62	-	-
12	28.518	11.08	Av	.3	10.2	21.58	-	-	50	-28.42

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 (dBuV)	Margin (dB)	Average Limit (dBuV)	Margin (dB)
13	.153	33.72	Pk	.2	9.7	43.62	65.84	-22.22	-	-
14	.156	13.19	Av	.2	9.7	23.09	-	-	55.67	-32.58
15	.228	26.21	Pk	.1	9.7	36.01	62.52	-26.51	-	-
16	.228	8.35	Av	.1	9.7	18.15	-	-	52.52	-34.37
17	1.815	16.03	Pk	0	9.8	25.83	56	-30.17	-	-
18	1.878	-3.2	Av	0	9.8	6.6	-	-	46	-39.4
19	13.56	20.35	Pk	.1	10	30.45	60	-29.55	-	-
20	13.56	7.19	Av	.1	10	17.29	-	-	50	-32.71
21	20.595	20.24	Pk	.2	10.1	30.54	60	-29.46	-	-
22	20.625	4.18	Av	.2	10.1	14.48	-	-	50	-35.52
23	28.521	33.68	Pk	.3	10.2	44.18	60	-15.82	-	-
24	28.53	11.36	Av	.3	10.2	21.86	-	-	50	-28.14

Pk - Peak detector
Av - Average detection

12. SETUP PHOTOS

Please refer to R12761322-EP3 for setup photos.

END OF TEST REPORT