CERTIFICATION TEST REPORT

Report Number. : R12427258-E1

Applicant	:	CONTROL 4 CORPORATION 11734 S. ELECTION ROAD SALT LAKE CITY, UT 84020, USA
Model	:	C4LGWM (Module), C4-WALL7 and C4-WALL10 (Host)
FCC ID	:	R33C4WALL5G
IC	:	7848A-C4LGWM
EUT Description	:	WiFi Module
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C ISED RSS-247 ISSUE 2 ISED RSS-GEN ISSUE 5

Date Of Issue:
20 September 2018

Prepared by:
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NVLAP TESTING
NVLAP Lab code: 200246-0

REPORT REVISION HISTORY

Ver.	Issue Date	Revisions	Revised By
1	2018-09-05	Initial Issue	Brian T. Kiewra
2	2018-09-18	Included Data Reuse (Section 1), data reuse KDB reference in Section 3, and revised antenna gain in Section 6.3.	Brian T. Kiewra
3	2018-09-20	Revised statement in Section 1.3 to clarify that power was checked prior to test.	Brian T. Kiewra
4	2018-11-02	Revised model and equipment description	Lariah Ijames

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1. DATA REUSE

1.1. INTRODUCTION

The 15.247 antenna port test results for WALL10 and WALL7 are represented by report 15U19841-E2 REVISION A (FCC ID: R33C4LGWM, IC: 7848A-C4LGWM). This report for contains full Radiated Emissions measurements.

Control 4 takes full responsibility that the data as referenced in report 15U19841-E2 REVISION A (FCC ID: R33C4LGWM, IC: 7848A-C4LGWM) represents compliance for this FCC ID (R33C4WALL5G).

1.2. DIFFERENCES

Control 4 device FCC ID: R33C4WALL5G/IC: 7848A-C4LGWM and device FCC ID: R33C4LGWM/IC: 7848A-C4LGWM have identical RF circuit boards and enclosures. The antenna is different. Therefore, antenna port test results in report for FCC ID: R33C4LGWM/IC: 7848A-C4LGWM are used in this report to represent how FCC ID: R33C4WALL5G/IC: 7848A-C4LGWM operates from a conducted perspective.

1.3. TESTING PERFORMED

Radiated Emissions testing performed under this report (R12427258-E1). All other data is referenced to report 15U19841-E2 REVISION A. Power was confirmed to be within the expected manufacturing tolerances of the original granted power prior to performing any tests.

1.4. REFERENCE DETAIL SECTION

Equipment Class	Reference FCC ID	Type Grant	Grant Date	Report Number
WLAN	FCC ID: R33C4LGWM IC: 7848A-C4LGWM	New	2015-03-25	15U19841-E2 REVISION A

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2. ATTESTATION OF TEST RESULTS

COMPANY NAME: Control 4 Corporation
11734 S. Election Road
Salt Lake City, UT 84020, USA

EUT DESCRIPTION: WiFi Module

MODEL: C4LGWM (Module), C4-WALL7 and C4-WALL10 (Host).

SERIAL NUMBER: C4-WALL7 Radiated: 000FFF80ACD4
Conducted: 000FFF80AB7C

C4-WALL10 Radiated: 000FFF8193E7

DATE TESTED: 2018-08-10 to 2018-08-16

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

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

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

Approved & Released
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3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, KDB 558074 D01 v5, 484596 D01 Referencing Test Data v01, ANSI C63.10-2013, 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, North Carolina, USA and 2800 Suite Perimeter Park Dr., Morrisville, North Carolina, USA. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

12 Laboratory Dr.	2800 Suite Perimeter Park Dr.
☐ Chamber A (ISED:2180C-1)	☒ Chamber North (ISED:2180C-3)
☐ Chamber C (ISED:2180C-2)	☐ Chamber South (ISED:2180C-4)

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5. CALIBRATION AND UNCERTAINTY

5.1. 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.

5.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Radio Frequency (Spectrum Analyzer)	141.2 Hz
RF output power, conducted	1.3 dB (PK) 0.45 dB (AV)
All emissions, radiated	5.36 dB
Temperature	2.26°C
Humidity	6.79%
DC Supply voltages	1.70%
Time	3.39%

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

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6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The C4-WALL7-XX and C4-WALL10-XX (XX either BL or WH depending on color) are capacitive touchscreen displays with an 802.11a/b/g/n transceiver for use in Control4 home automation and security systems. The 802.11 a/b/g/n radio operates in the 2.4/5.2 GHz bands and only supports up to 20 MHz channel bandwidths. Both models are identical with the exception of the C4-WALL7-XX has a 7” display and the C4-WALL10-XX has a 10” display.

6.2. MAXIMUM OUTPUT POWER

Data leveraged from UL document 15U19841-E2 REVISION A.

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The both EUTs utilize an FPC Trace antenna, with a maximum gain of 0.62dBi for the WALL7 and 3.8dBi for the WALL10.

6.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 2.10.0.540110
The test utility software used during testing was Ampak RFTest Tool Ver 4.7

6.5. MANUFACTURER’S MODIFICATIONS FOR COMPLIANCE

The following changes were necessary for compliance of WALL7 to Radiated Emissions 30-1000 MHz. A Ferrishield SS2037 was attached to the ac mains on the C4-WALL7-XX. Refer to R12427258-EP1 for photo

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6.6. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, above 18GHz, were performed with the EUT set to transmit at the channel with highest output power 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 fundamentals of both models of the EUT were investigated in three orthogonal orientations X,Y,Z, it was determined that Y orientation was worst-case orientation for the WALL10 and Z orientation was worst-case for the WALL7. Therefore, all final radiated testing was performed with the WALL10 in Y orientation and the WALL7 in the Z orientation.

Per testing under 15U19841-E2 REVISION A, the Worst-case data rates were:

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

Note: Conducted data leveraged from UL document 15U19841-E2 REVISION A. Radiated testing performed due to antenna change. Duty cycle and Output Power verification checks were performed on WALL7 to cover both WALL10 and WALL7. Note: Power measurements were performed to confirm the output power was within tolerance of the power under the original report, 15U19841-E2 REV. A .

6.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop	Lenovo	T450s	PC-0A2UQS	NA

I/O CABLES

I/O Cable List						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	AC	1	AC	AC	<3m	None
2	ENET	1	RJ45	ENET	<3m	None

TEST SETUP

The EUT is installed as a standalone device.

SETUP DIAGRAM FOR TESTS

Please refer to R12427258-EP1 for diagram.

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7. MEASUREMENT METHOD

On Time and Duty Cycle: KDB 558074 D01 v05, Section 6.0

Output Power: KDB 558074 D01 v04, Section 9.2.3.2.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v05, Section 11.1 (b).

Out-of-band emissions in restricted bands: KDB 558074 D01 v05, Section 12.1.

Band-edge: KDB 558074 D01 v05, Section 12.1.

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8. 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.
0.009-30MHz (Loop Ant.)					
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2018-01-02	2019-01-02
30-1000 MHz					
AT0073	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2018-08-06	2019-08-06
1-18 GHz					
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2018-04-30	2019-04-30
18-40 GHz					
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2017-10-10	2018-10-10
Gain-Loss Chains					
N-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2017-09-15	2018-09-15
N-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2018-05-20	2019-05-20
N-SAC03	Gain-loss string: 1-18GHz	Various	Various	2018-03-23	2019-03-23
N-SAC04	Gain-loss string: 18-40GHz	Various	Various	2018-04-03	2019-04-03
Receiver & Software					
SA0027	Spectrum Analyzer	Agilent	N9030A	2018-04-04	2019-04-04
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
Additional Equipment used					
s/n 161024690	Environmental Meter	Fisher Scientific	15-077-963	2016-12-21	2018-12-21

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Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
SA0020 (PRE0100902)	Spectrum Analyzer	Agilent Technologies	E4446A	2017-11-06	2018-11-06
PWM003 (PRE0137346)	RF Power Meter	Keysight Technologies	N1911A	2018-07-30	2019-07-30
PWS004 (PRE0126443)	Peak and Avg Power Sensor, 50MHz to 6GHz	Keysight Technologies	E9323A	2018-07-30	2019-07-30
76023 (EC0225)	Temp/Humid Chamber	Cincinnati Sub-Zero	ZPH-8-3.5-SCT/AC	2018-06-07	2019-06-07
SN 161016511	Environmental Meter	Fisher Scientific	15-077-963	2016-12-21	2018-12-21
76021	DC Regulated Power Supply	CircuitSpecialists .Com	CSI3005X5	N/A	N/A

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9. ANTENNA PORT CONDUCTED TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

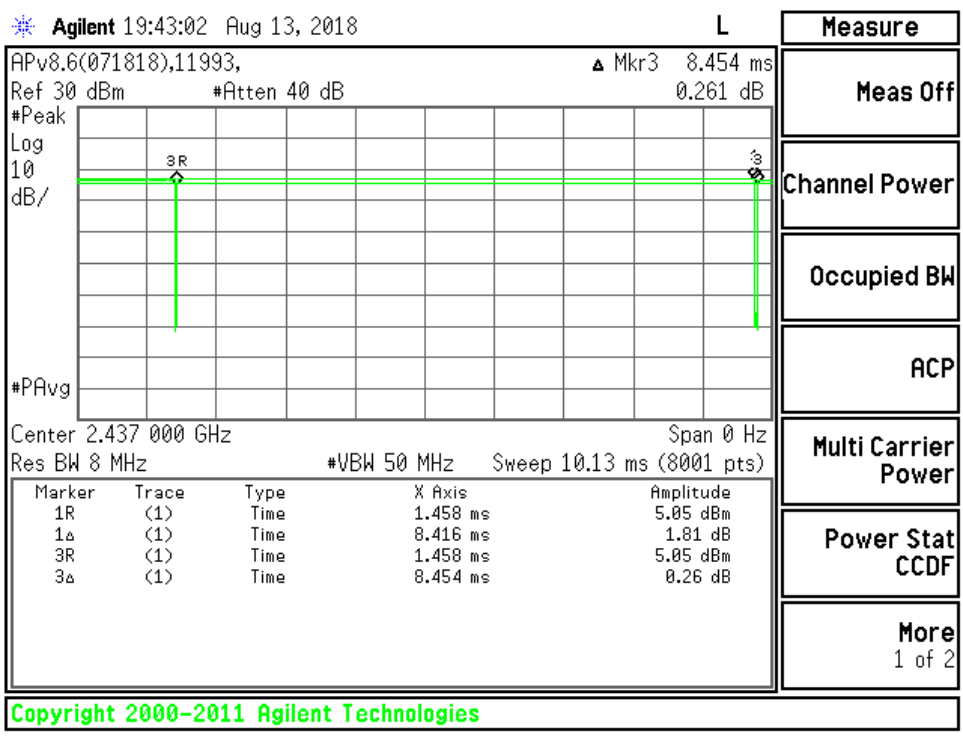
LIMITS

None; for reporting purposes only.

PROCEDURE

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
802.11b	8.416	8.454	0.996	99.55%	0.00	0.010
802.11g	1.396	1.438	0.971	97.08%	0.13	0.716
802.11n TH20	1.308	1.351	0.968	96.82%	0.14	0.765



DUTY CYCLE 802.11b

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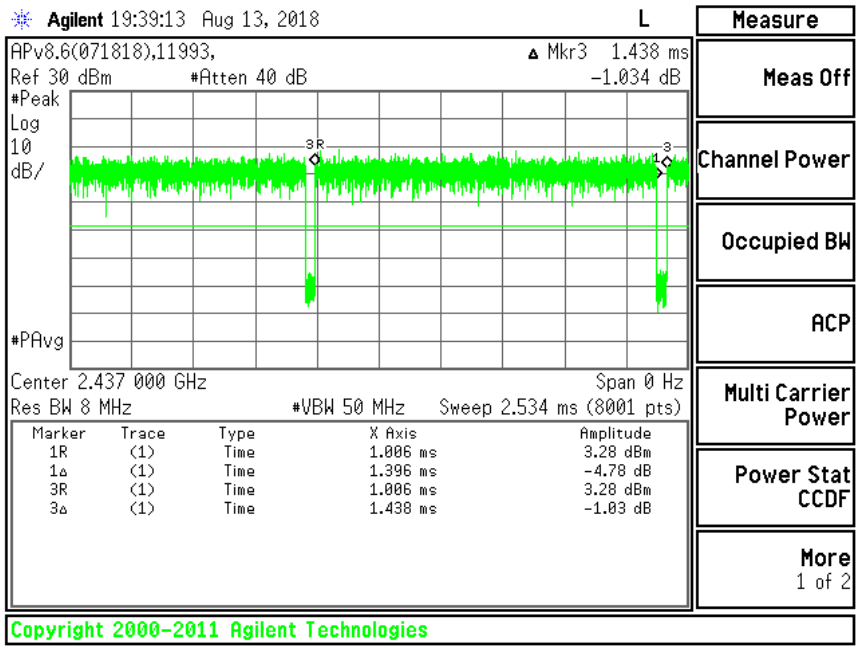
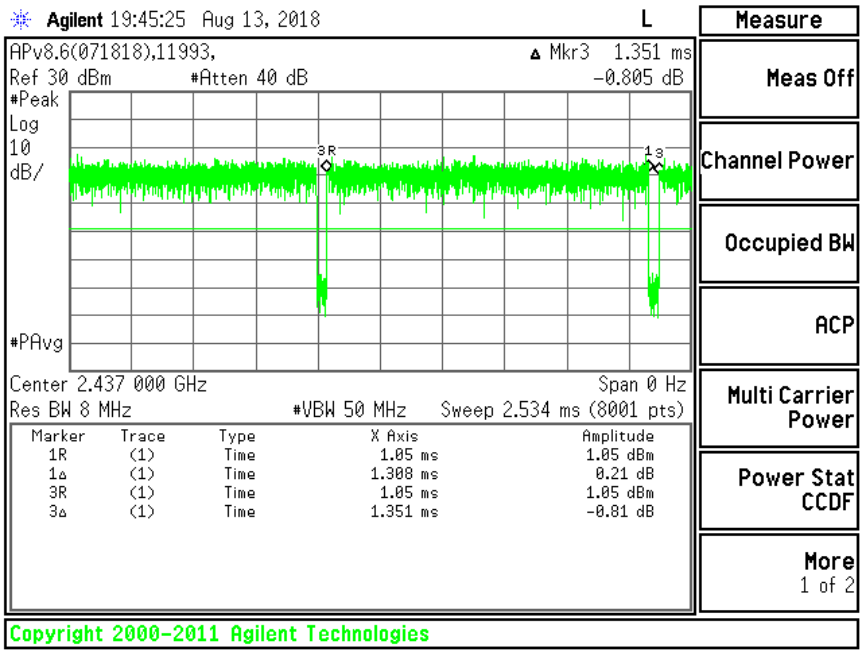


DUTY CYCLE 802.11g



DUTY CYCLE 802.11nHT20

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10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

RSS-GEN, Section 8.9 and 8.10

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements for the 30-1000 MHz range, 9 kHz for peak detection measurements or 9 kHz for quasi-peak detection measurements for the 0.15-30 MHz range and 200 Hz for peak detection measurements or 200 Hz for quasi-peak detection measurements for the 9 to 150 kHz range. Peak detection is used unless otherwise noted as quasi-peak.

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

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

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

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

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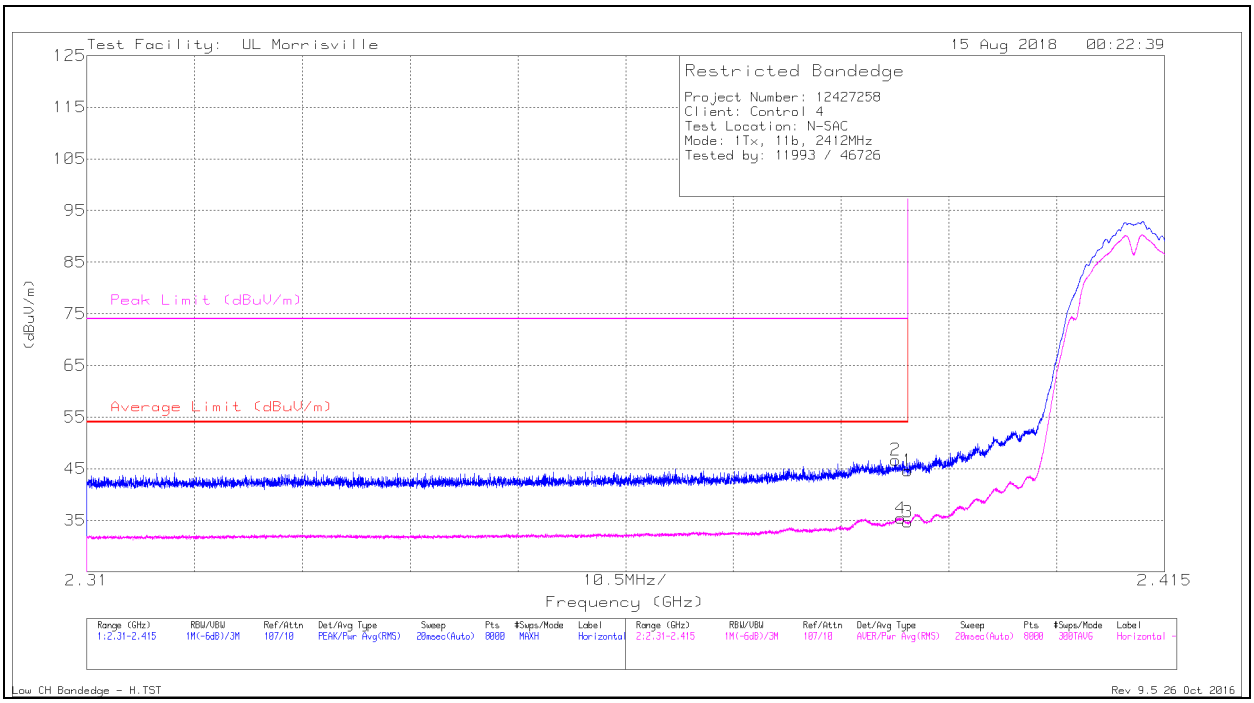
10.1. TRANSMITTER ABOVE 1 GHz

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

BANDEDGE (LOW CHANNEL, CH 1) – WALL 10

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	37.13	Pk	32	-24.5	44.63	-	-	74	-29.37	199	117	H
2	* ** 2.389	39.21	Pk	32	-24.5	46.71	-	-	74	-27.29	199	117	H
3	* ** 2.39	27.16	RMS	32	-24.5	34.66	54	-19.34	-	-	199	117	H
4	* ** 2.389	27.89	RMS	32	-24.5	35.39	54	-18.61	-	-	199	117	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

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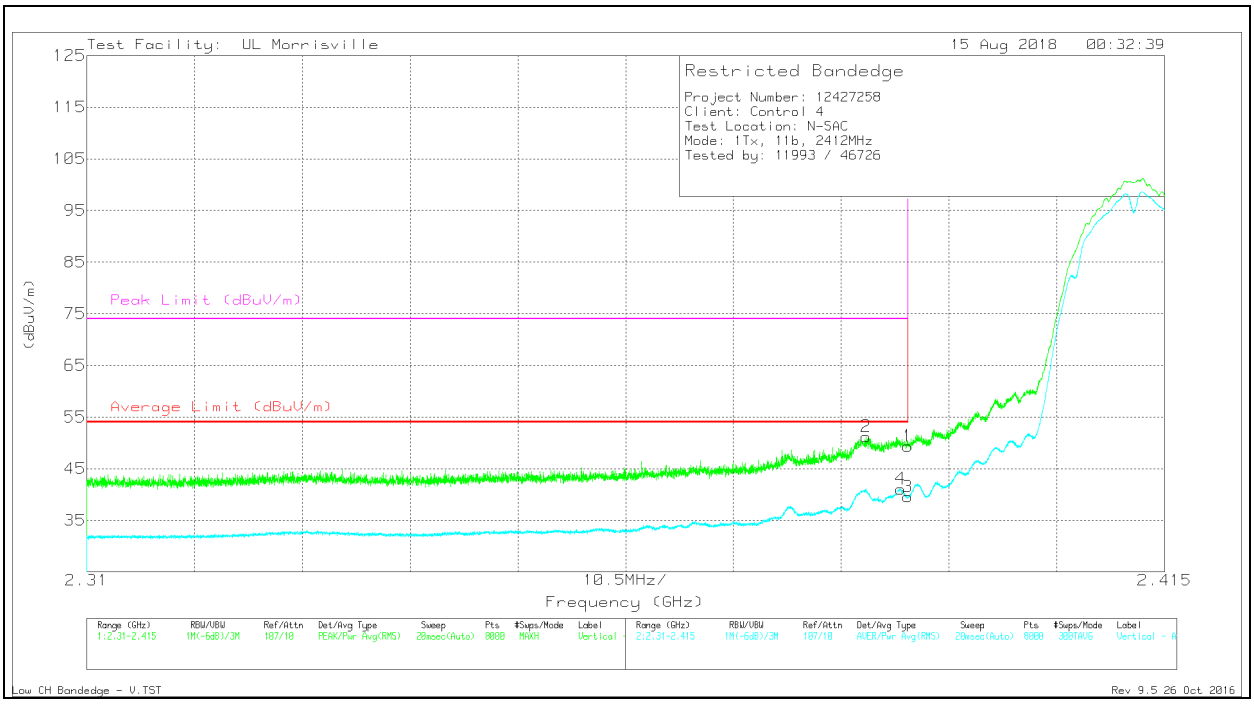
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	41.87	Pk	32	-24.5	49.37	-	-	74	-24.63	121	142	V
2	* ** 2.386	43.7	Pk	32	-24.5	51.2	-	-	74	-22.8	121	142	V
3	* ** 2.39	32.07	RMS	32	-24.5	39.57	54	-14.43	-	-	121	142	V
4	* ** 2.389	33.59	RMS	32	-24.5	41.09	54	-12.91	-	-	121	142	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

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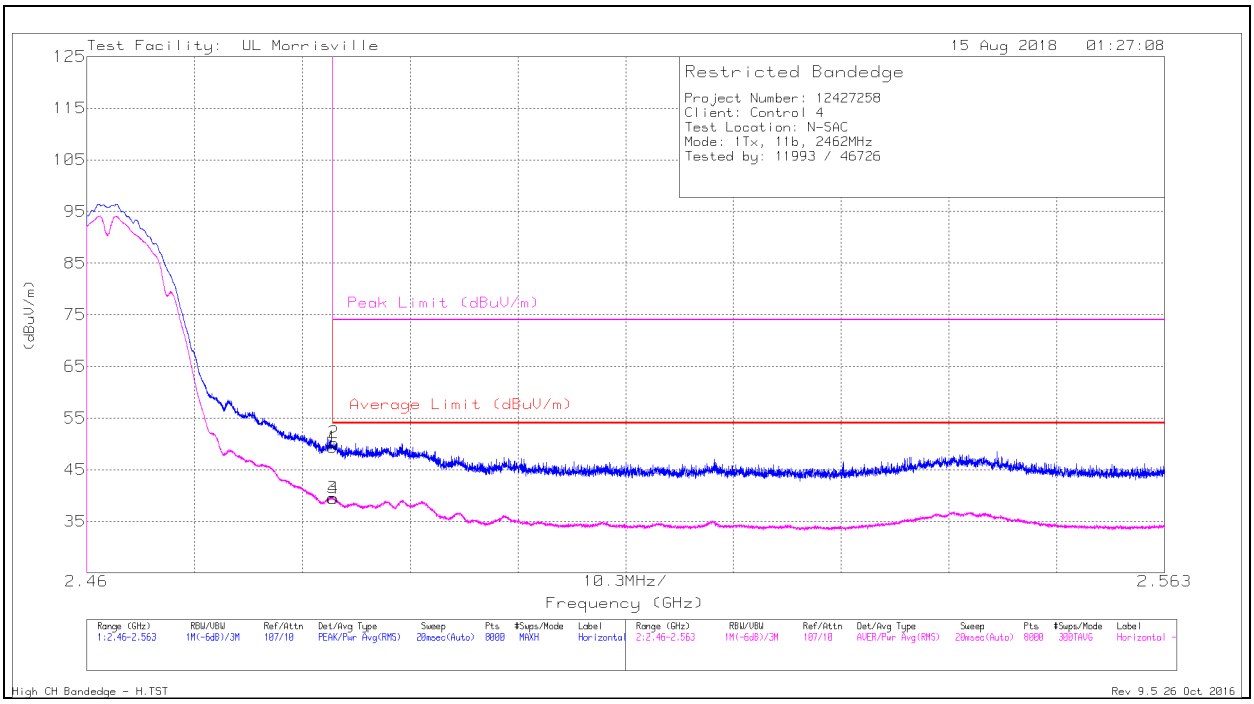
BANDEDGE (HIGH CHANNEL, CH 11) – WALL 10

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	41.35	Pk	32.4	-24.4	49.35	-	-	74	-24.65	198	109	H
2	* ** 2.484	42.23	Pk	32.4	-24.4	50.23	-	-	74	-23.77	198	109	H
3	* ** 2.484	31.53	RMS	32.4	-24.4	39.53	54	-14.47	-	-	198	109	H
4	* ** 2.484	31.42	RMS	32.4	-24.4	39.42	54	-14.58	-	-	198	109	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

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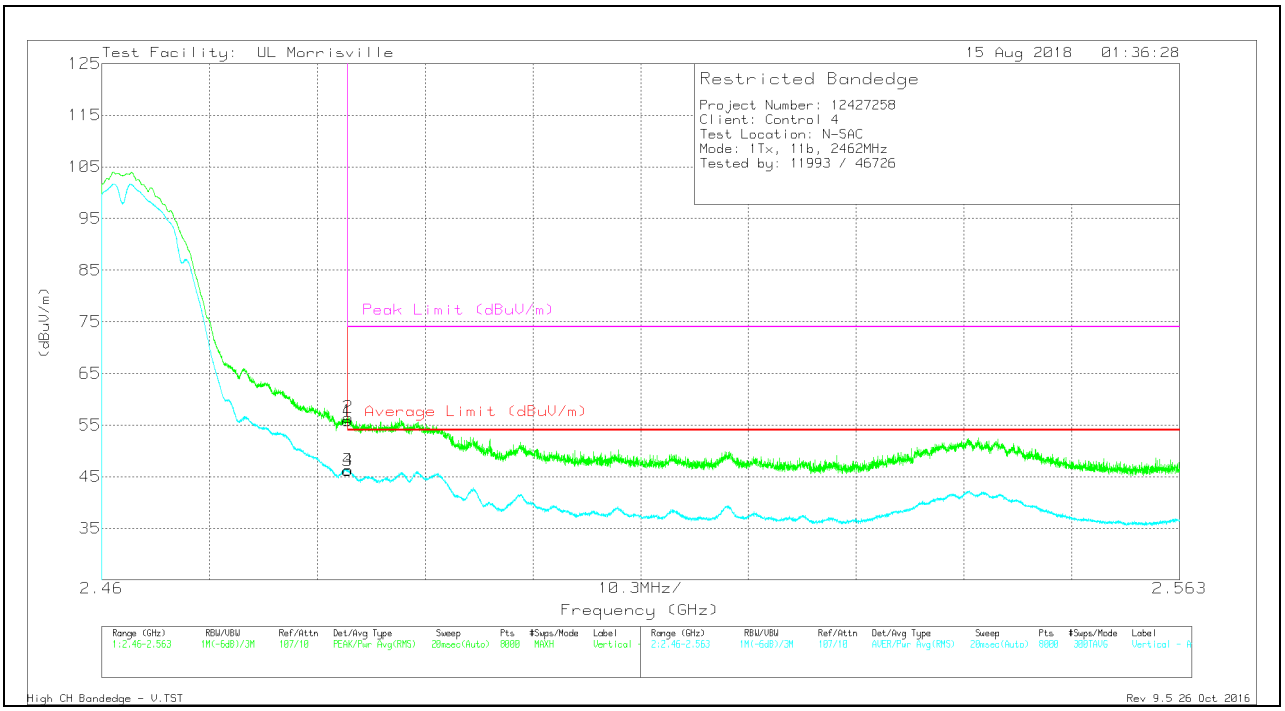
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	47.81	Pk	32.4	-24.4	55.81	-	-	74	-18.19	129	119	V
2	* ** 2.484	48.48	Pk	32.4	-24.4	56.48	-	-	74	-17.52	129	119	V
3	* ** 2.484	38.19	RMS	32.4	-24.4	46.19	54	-7.81	-	-	129	119	V
4	* ** 2.484	38.29	RMS	32.4	-24.4	46.29	54	-7.71	-	-	129	119	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

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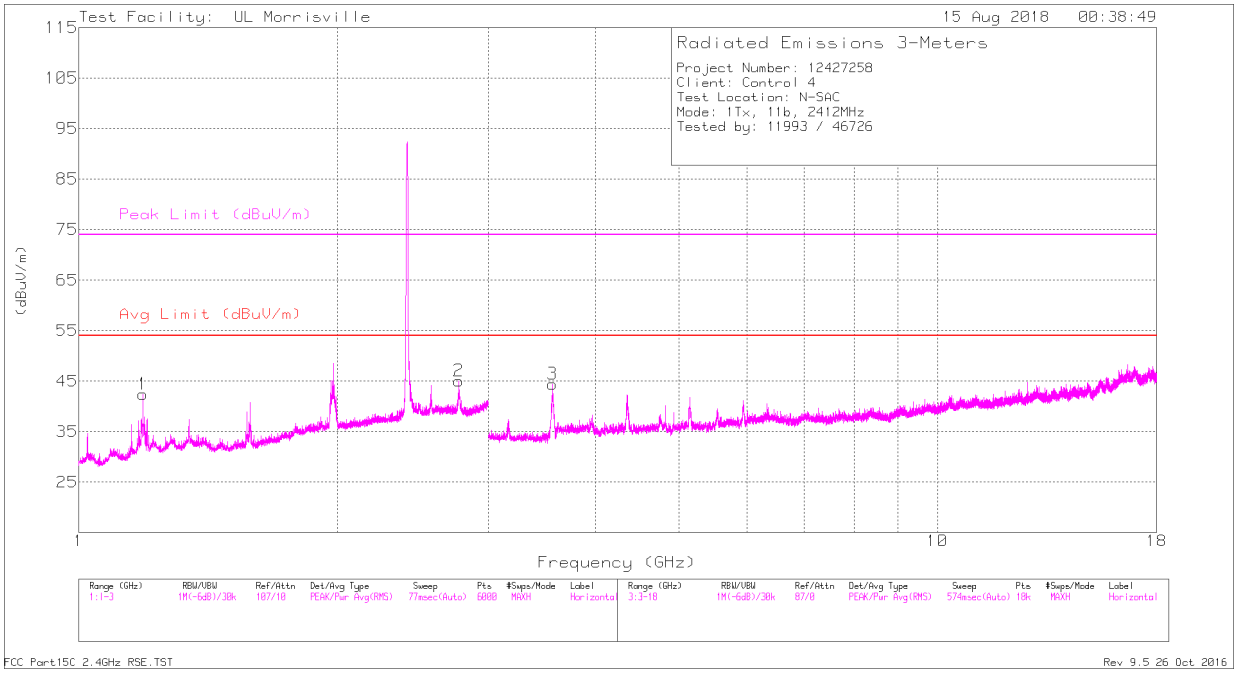
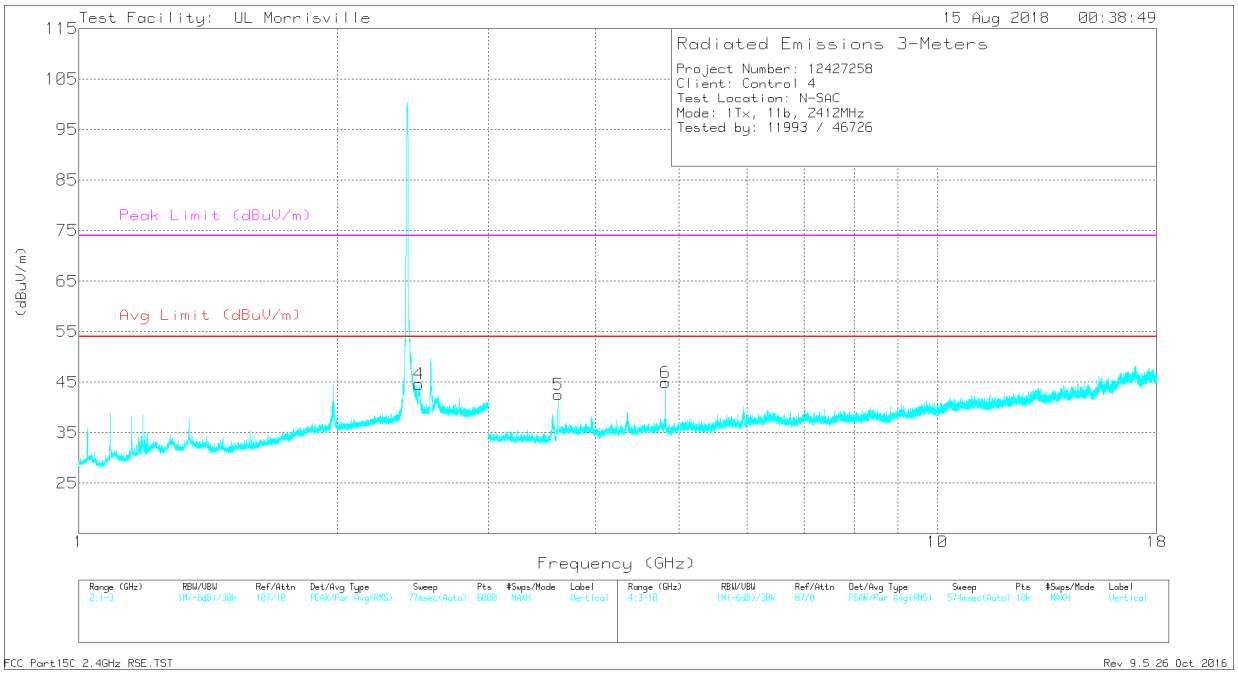
HARMONICS AND SPURIOUS EMISSIONS – WALL 10

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.188	45.6	PK2	28.3	-26.3	47.6	-	-	74	-26.4	351	104	H
	* ** 1.188	33.69	MAv1	28.3	-26.3	35.69	54	-18.31	-	-	351	104	H
2	* ** 2.773	44.67	PK2	32.2	-23.9	52.97	-	-	74	-21.03	138	174	H
	* ** 2.772	30.16	MAv1	32.2	-23.9	38.46	54	-15.54	-	-	138	174	H
3	* ** 3.561	52.84	PK2	33	-32.7	53.14	-	-	74	-20.86	153	195	H
	* ** 3.562	36.3	MAv1	33	-32.7	36.6	54	-17.4	-	-	153	195	H
4	* ** 2.493	43.62	PK2	32.3	-24.4	51.52	-	-	74	-22.48	128	144	V
	* ** 2.491	32.68	MAv1	32.3	-24.4	40.58	54	-13.42	-	-	128	144	V
5	* ** 3.619	46.55	PK2	32.9	-31.9	47.55	-	-	74	-26.45	145	154	V
	* ** 3.617	39.42	MAv1	32.9	-31.9	40.42	54	-13.58	-	-	145	154	V
6	* ** 4.824	46.58	PK2	34.1	-31.7	48.98	-	-	74	-25.02	360	109	V
	* ** 4.824	41.04	MAv1	34.1	-31.7	43.44	54	-10.56	-	-	360	109	V

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

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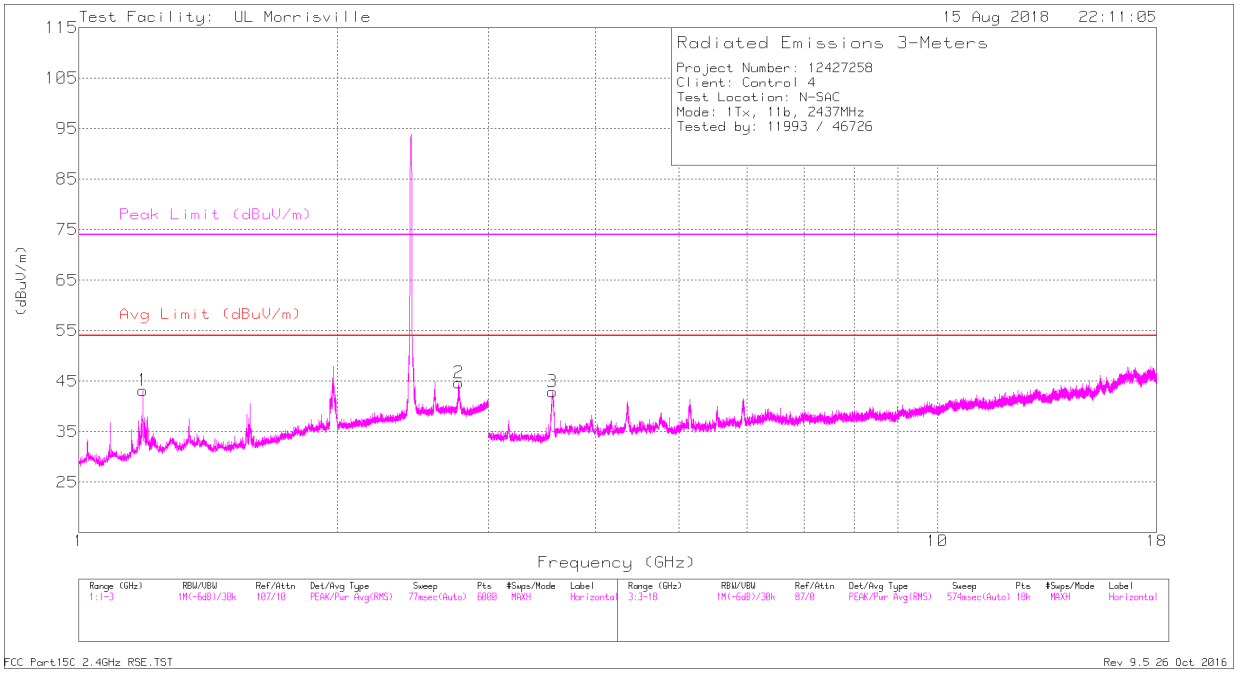
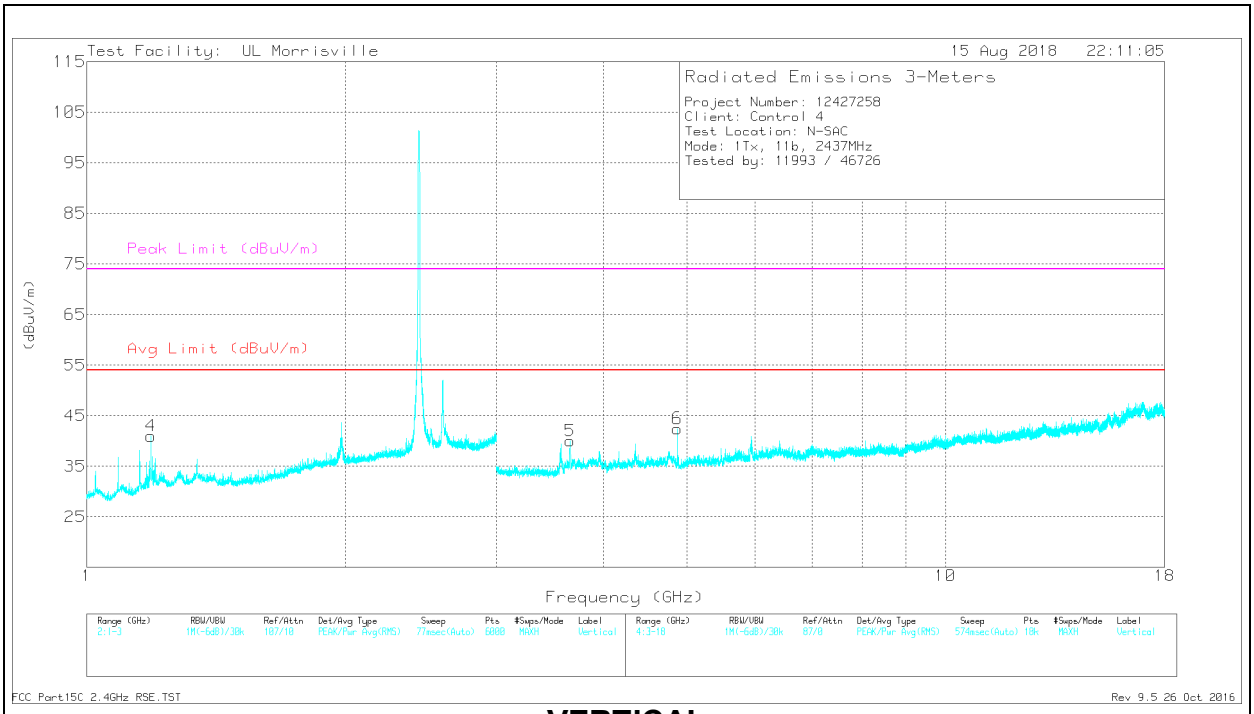
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.188	47.5	PK2	28.3	-26.3	49.5	-	-	74	-24.5	177	207	H
	* ** 1.188	35.45	MAv1	28.3	-26.3	37.45	54	-16.55	-	-	177	207	H
2	* ** 2.772	43.56	PK2	32.2	-23.9	51.86	-	-	74	-22.14	152	152	H
	* ** 2.772	29.42	MAv1	32.2	-23.9	37.72	54	-16.28	-	-	152	152	H
3	* ** 3.563	53.38	PK2	33	-32.6	53.78	-	-	74	-20.22	135	170	H
	* ** 3.564	36.43	MAv1	33	-32.6	36.83	54	-17.17	-	-	135	170	H
4	* ** 1.188	44.88	PK2	28.3	-26.3	46.88	-	-	74	-27.12	65	285	V
	* ** 1.188	32.4	MAv1	28.3	-26.3	34.4	54	-19.6	-	-	65	285	V
5	* ** 3.656	45.29	PK2	33	-31.6	46.69	-	-	74	-27.31	135	198	V
	* ** 3.655	36.52	MAv1	33	-31.6	37.92	54	-16.08	-	-	135	198	V
6	* ** 4.874	45.6	PK2	34.1	-31.6	48.1	-	-	74	-25.9	356	104	V
	* ** 4.874	39.49	MAv1	34.1	-31.6	41.99	54	-12.01	-	-	356	104	V

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

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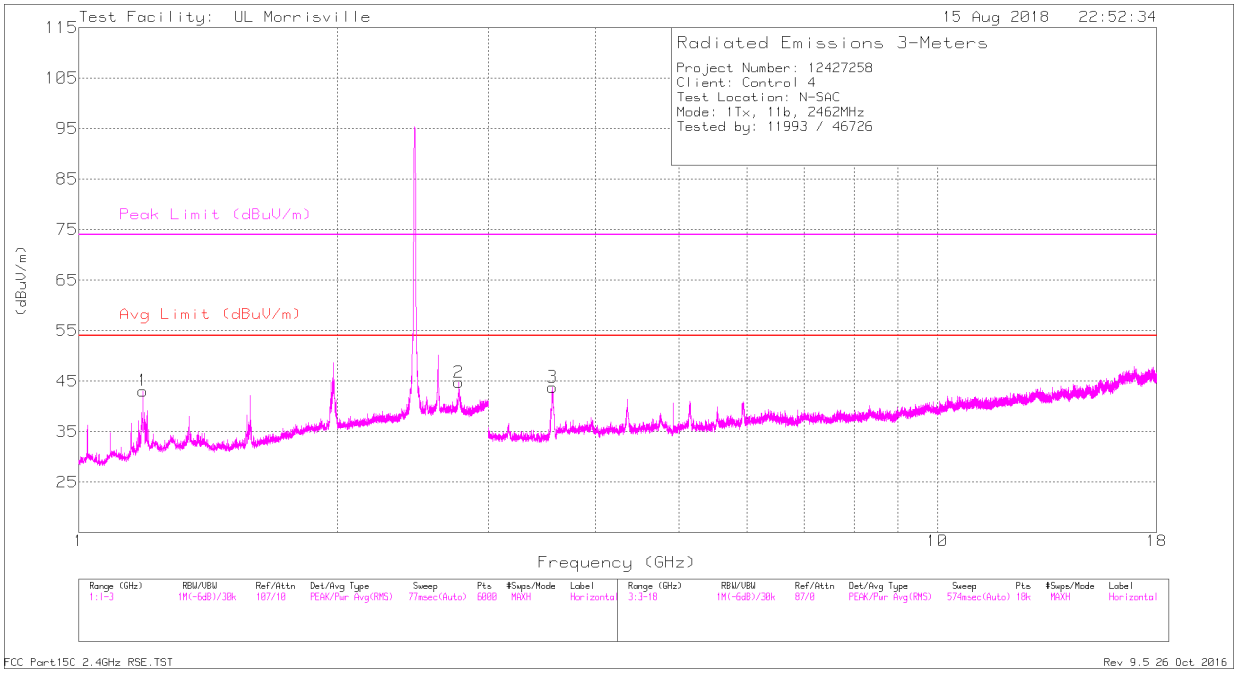
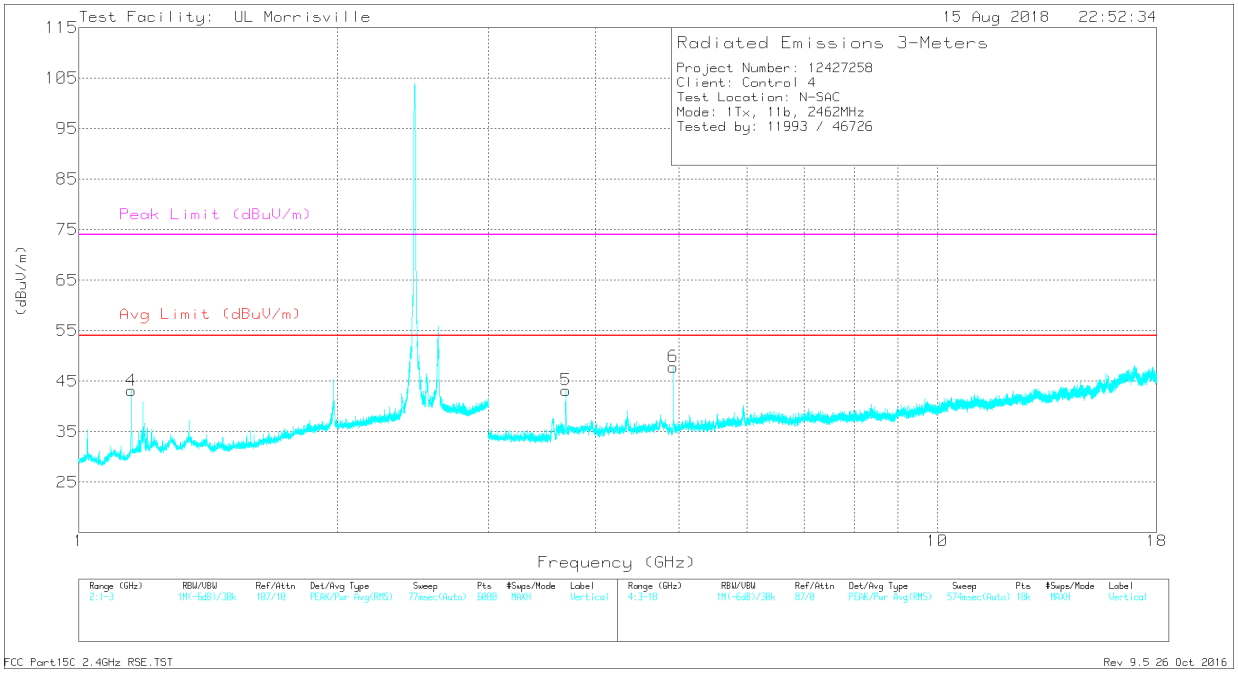
HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.188	47.74	PK2	28.3	-26.3	49.74	-	-	74	-24.26	172	185	H
	* ** 1.188	35.53	MAv1	28.3	-26.3	37.53	54	-16.47	-	-	172	185	H
2	* ** 2.771	44.76	PK2	32.2	-23.9	53.06	-	-	74	-20.94	143	187	H
	* ** 2.772	29.94	MAv1	32.2	-23.9	38.24	54	-15.76	-	-	143	187	H
3	* ** 3.564	52.63	PK2	33	-32.6	53.03	-	-	74	-20.97	73	182	H
	* ** 3.564	35.81	MAv1	33	-32.6	36.21	54	-17.79	-	-	73	182	H
4	* ** 1.152	43.06	PK2	27.9	-26.5	44.46	-	-	74	-29.54	12	145	V
	* ** 1.152	27.67	MAv1	27.9	-26.5	29.07	54	-24.93	-	-	12	145	V
5	* ** 3.693	48.16	PK2	33.2	-32.2	49.16	-	-	74	-24.84	152	131	V
	* ** 3.692	40	MAv1	33.2	-32.2	41	54	-13	-	-	152	131	V
6	* ** 4.924	49.03	PK2	34.1	-32	51.13	-	-	74	-22.87	322	319	V
	* ** 4.924	45.27	MAv1	34.1	-32	47.37	54	-6.63	-	-	322	319	V

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

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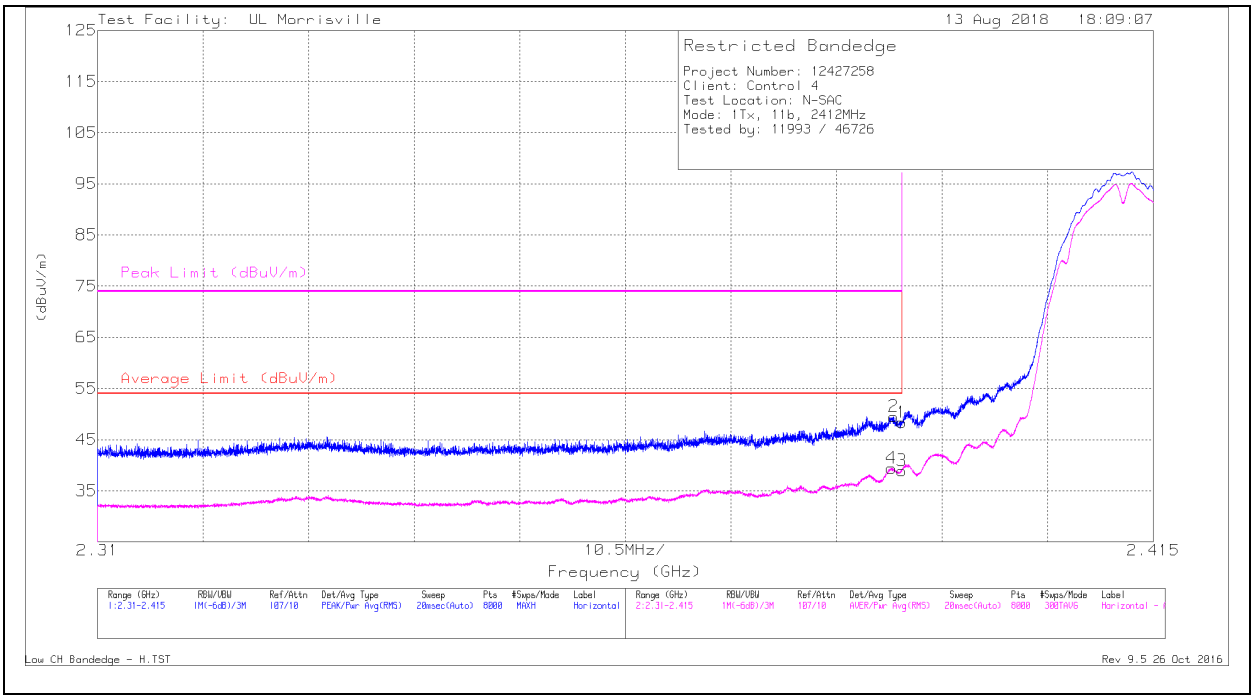
BANDEDGE (LOW CHANNEL, CH 1) – WALL 7

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	40.88	Pk	32	-24.5	48.38	-	-	74	-25.62	81	255	H
2	* ** 2.389	42.03	Pk	32	-24.5	49.53	-	-	74	-24.47	81	255	H
3	* ** 2.39	31.45	RMS	32	-24.5	38.95	54	-15.05	-	-	81	255	H
4	* ** 2.389	31.95	RMS	32	-24.5	39.45	54	-14.55	-	-	81	255	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

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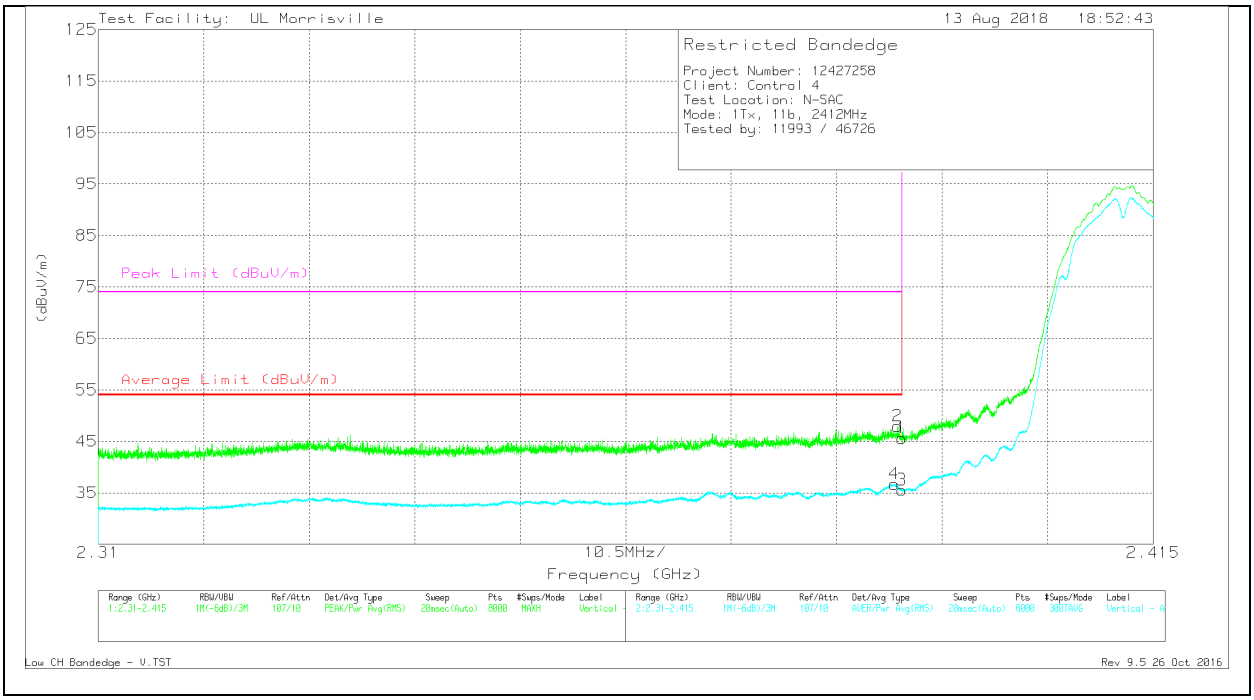
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	38.13	Pk	32	-24.5	45.63	-	-	74	-28.37	28	230	V
2	* ** 2.39	40.45	Pk	32	-24.5	47.95	-	-	74	-26.05	28	230	V
3	* ** 2.39	28.06	RMS	32	-24.5	35.56	54	-18.44	-	-	28	230	V
4	* ** 2.389	29.21	RMS	32	-24.5	36.71	54	-17.29	-	-	28	230	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

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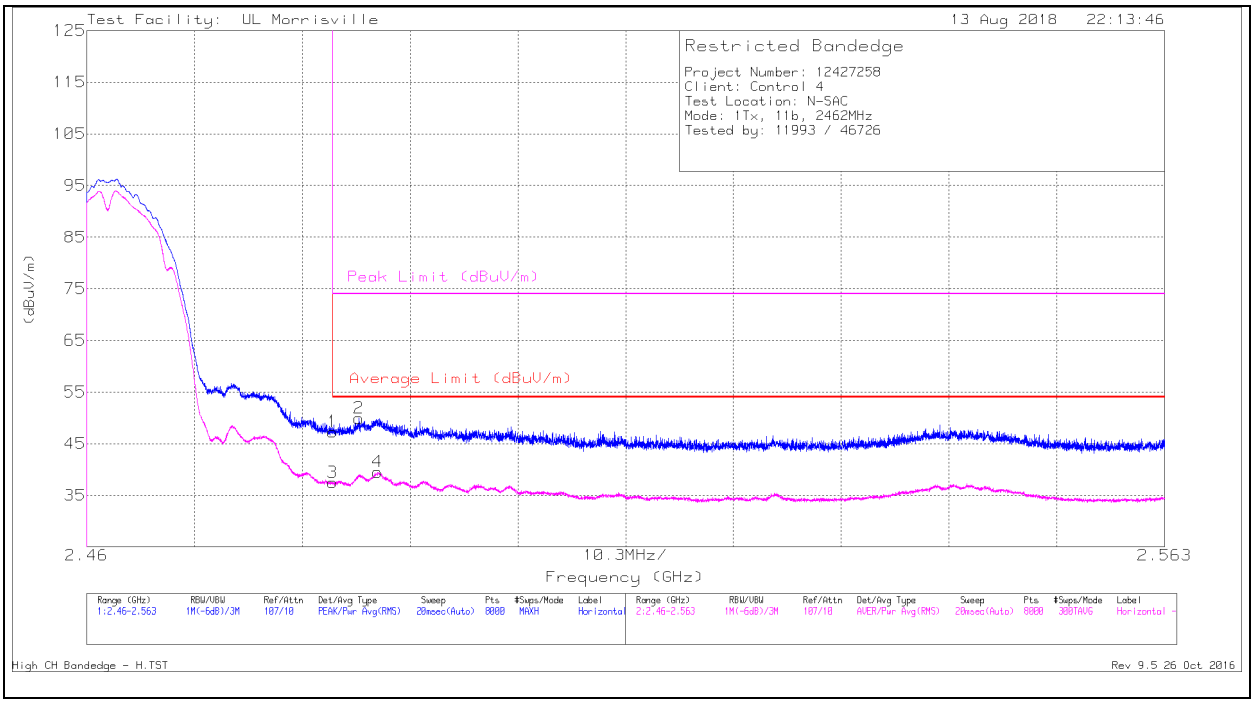
BANDEDGE (HIGH CHANNEL, CH 11) – WALL 7

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	39.29	Pk	32.4	-24.4	47.29	-	-	74	-26.71	79	215	H
2	* ** 2.486	41.91	Pk	32.4	-24.4	49.91	-	-	74	-24.09	79	215	H
3	* ** 2.484	29.48	RMS	32.4	-24.4	37.48	54	-16.52	-	-	79	215	H
4	* ** 2.488	31.52	RMS	32.4	-24.4	39.52	54	-14.48	-	-	79	215	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

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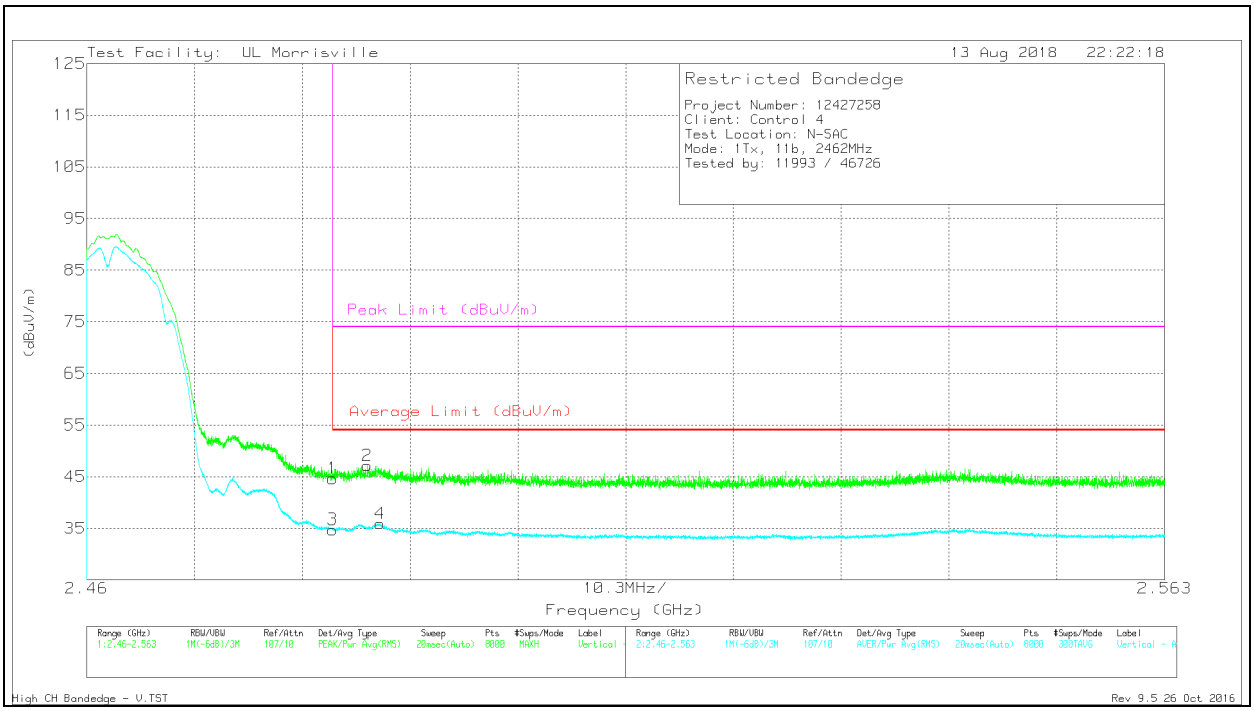
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	36.66	Pk	32.4	-24.4	44.66	-	-	74	-29.34	26	176	V
2	* ** 2.487	39.14	Pk	32.4	-24.4	47.14	-	-	74	-26.86	26	176	V
3	* ** 2.484	26.74	RMS	32.4	-24.4	34.74	54	-19.26	-	-	26	176	V
4	* ** 2.488	27.99	RMS	32.3	-24.4	35.89	54	-18.11	-	-	26	176	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

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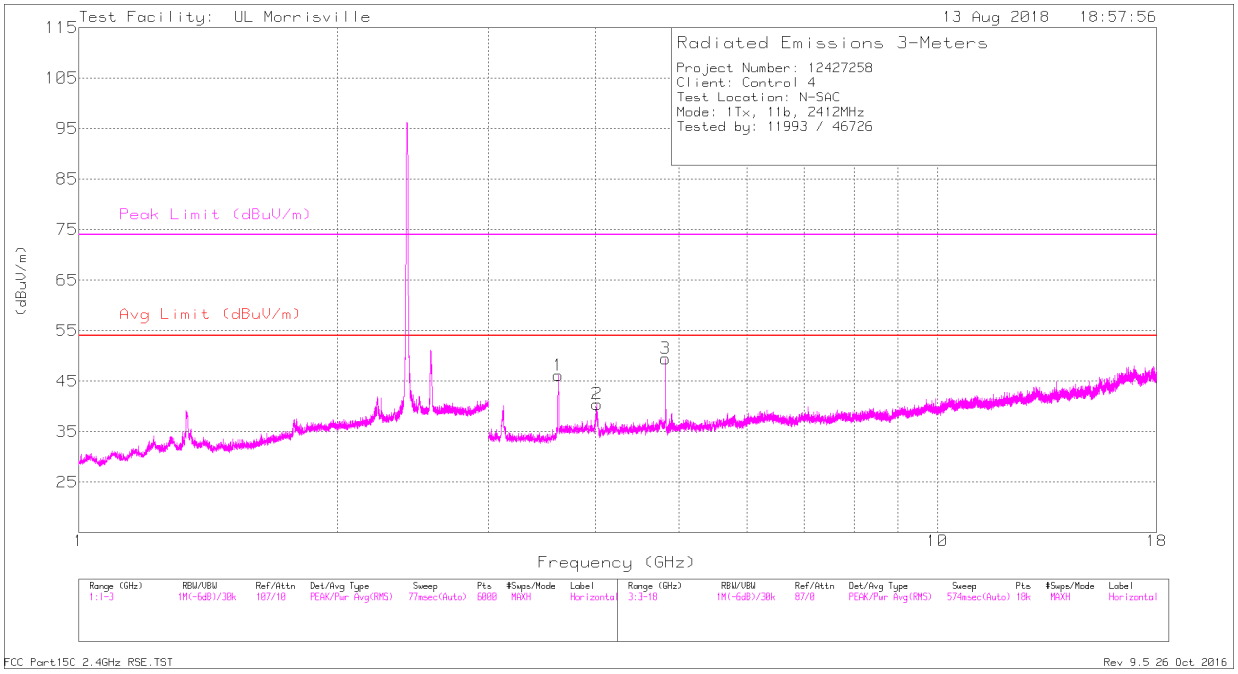
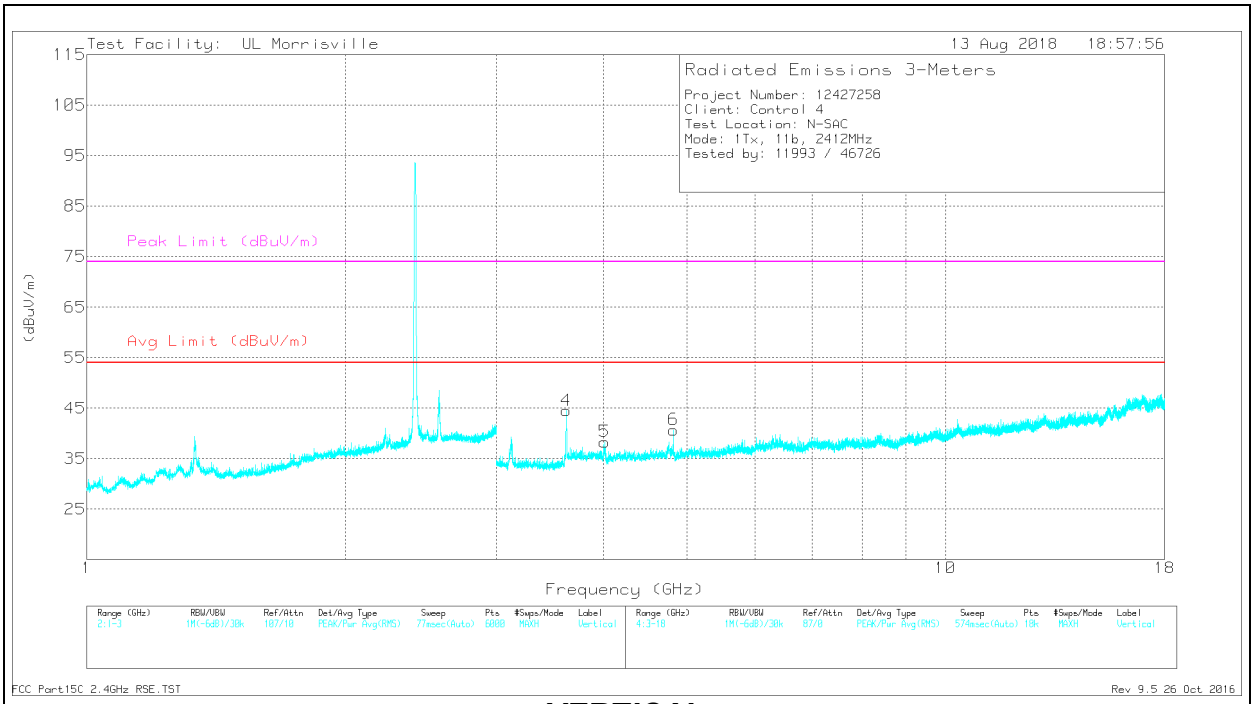
HARMONICS AND SPURIOUS EMISSIONS – WALL 7

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 3.618	48.73	PK2	32.9	-31.9	49.73	-	-	74	-24.27	328	226	H
	* ** 3.619	43.21	MAv1	32.9	-31.9	44.21	54	-9.79	-	-	328	226	H
2	* ** 4.015	47.03	PK2	33.5	-32.3	48.23	-	-	74	-25.77	4	102	H
	* ** 4.014	32.15	MAv1	33.5	-32.3	33.35	54	-20.65	-	-	4	102	H
3	* ** 4.824	50.36	PK2	34.1	-31.7	52.76	-	-	74	-21.24	335	191	H
	* ** 4.824	46.86	MAv1	34.1	-31.7	49.26	54	-4.74	-	-	335	191	H
4	* ** 3.618	48.45	PK2	32.9	-31.9	49.45	-	-	74	-24.55	62	268	V
	* ** 3.619	42.49	MAv1	32.9	-31.9	43.49	54	-10.51	-	-	62	268	V
5	* ** 4.009	45.76	PK2	33.5	-32.3	46.96	-	-	74	-27.04	182	239	V
	* ** 4.007	31.44	MAv1	33.5	-32.4	32.54	54	-21.46	-	-	182	239	V
6	* ** 4.824	44.38	PK2	34.1	-31.7	46.78	-	-	74	-27.22	102	166	V
	* ** 4.824	37.31	MAv1	34.1	-31.7	39.71	54	-14.29	-	-	102	166	V

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

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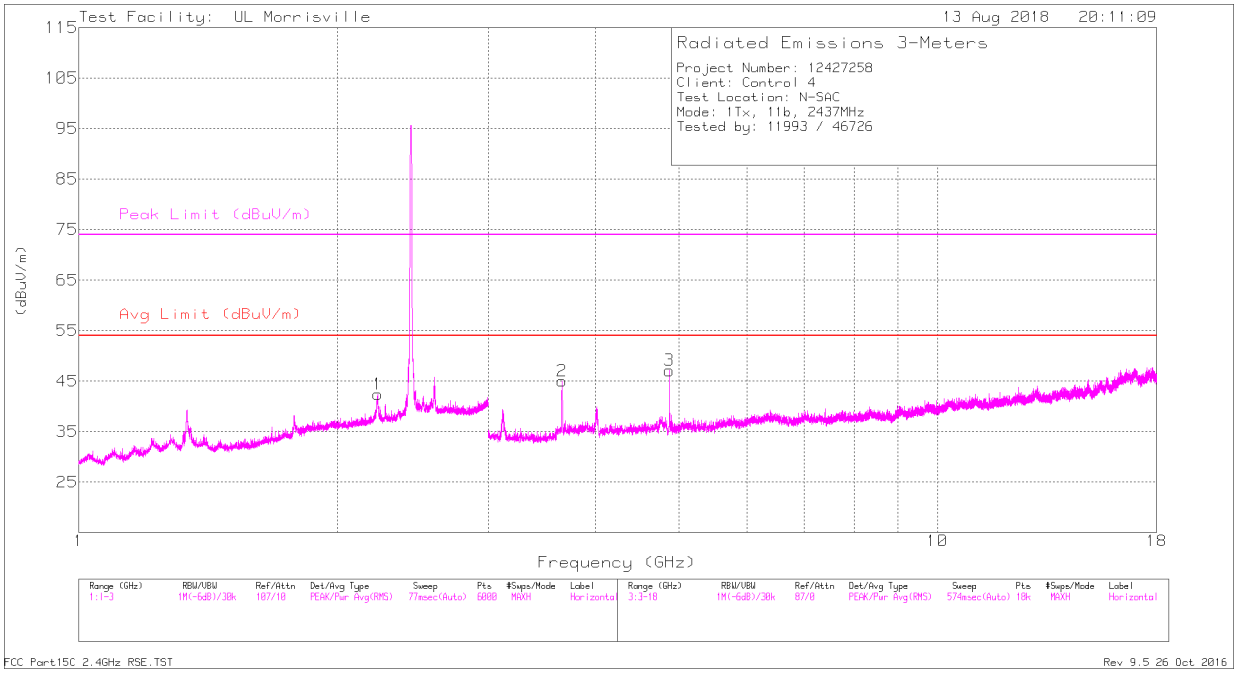
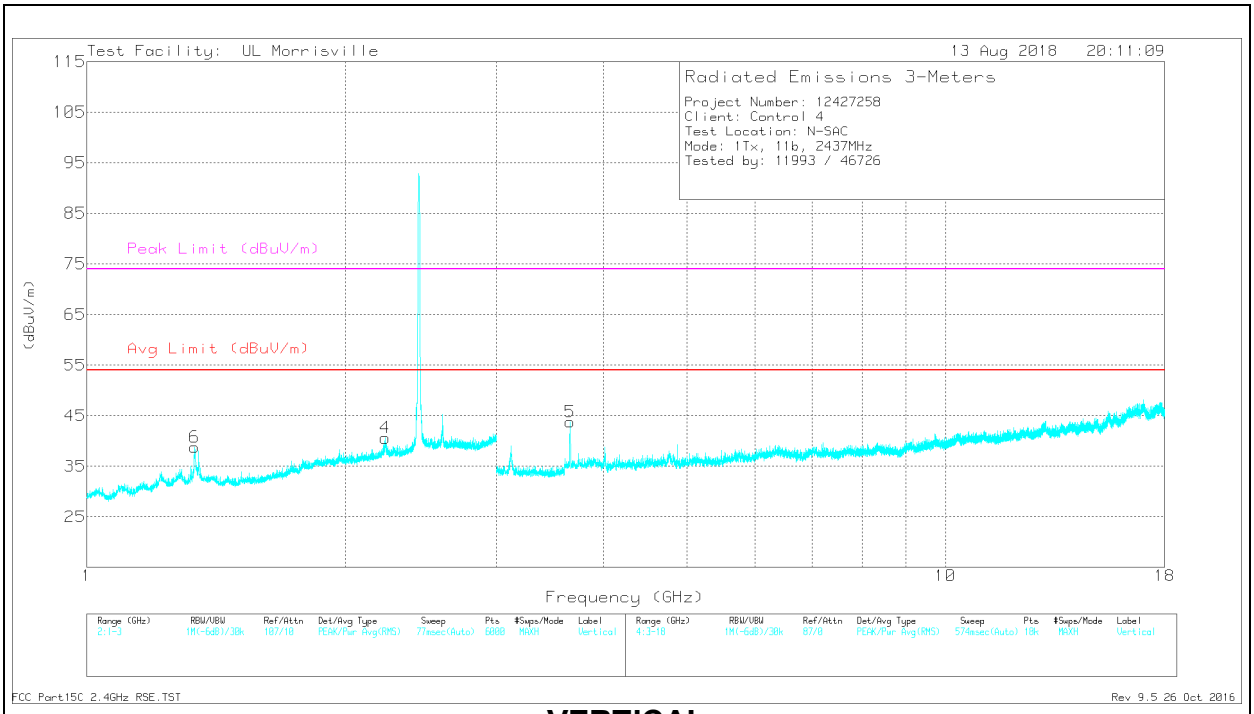
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.232	42.61	PK2	31.7	-24.5	49.81	-	-	74	-24.19	146	208	H
	* ** 2.229	27.73	MAv1	31.7	-24.5	34.93	54	-19.07	-	-	146	208	H
2	* ** 3.656	48.01	PK2	33	-31.6	49.41	-	-	74	-24.59	322	194	H
	* ** 3.656	42.53	MAv1	33	-31.6	43.93	54	-10.07	-	-	322	194	H
3	* ** 4.874	47.83	PK2	34.1	-31.6	50.33	-	-	74	-23.67	333	187	H
	* ** 4.874	44.01	MAv1	34.1	-31.6	46.51	54	-7.49	-	-	333	187	H
4	* ** 2.227	41.33	PK2	31.7	-24.5	48.53	-	-	74	-25.47	256	247	V
	* ** 2.228	27.44	MAv1	31.7	-24.5	34.64	54	-19.36	-	-	256	247	V
6	* ** 1.336	43.48	PK2	29.2	-25.6	47.08	-	-	74	-26.92	257	104	V
	* ** 1.337	28.65	MAv1	29.2	-25.6	32.25	54	-21.75	-	-	257	104	V
5	* ** 3.656	47.07	PK2	33	-31.6	48.47	-	-	74	-25.53	48	257	V
	* ** 3.656	41.23	MAv1	33	-31.6	42.63	54	-11.37	-	-	48	257	V

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

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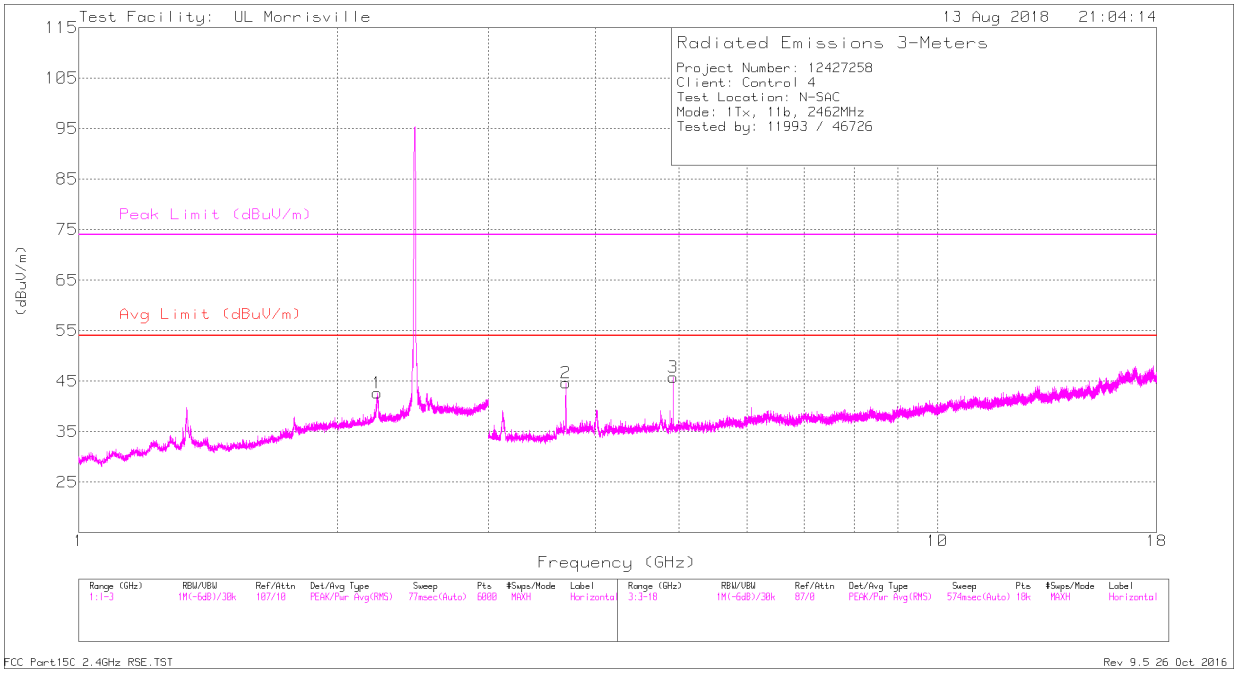
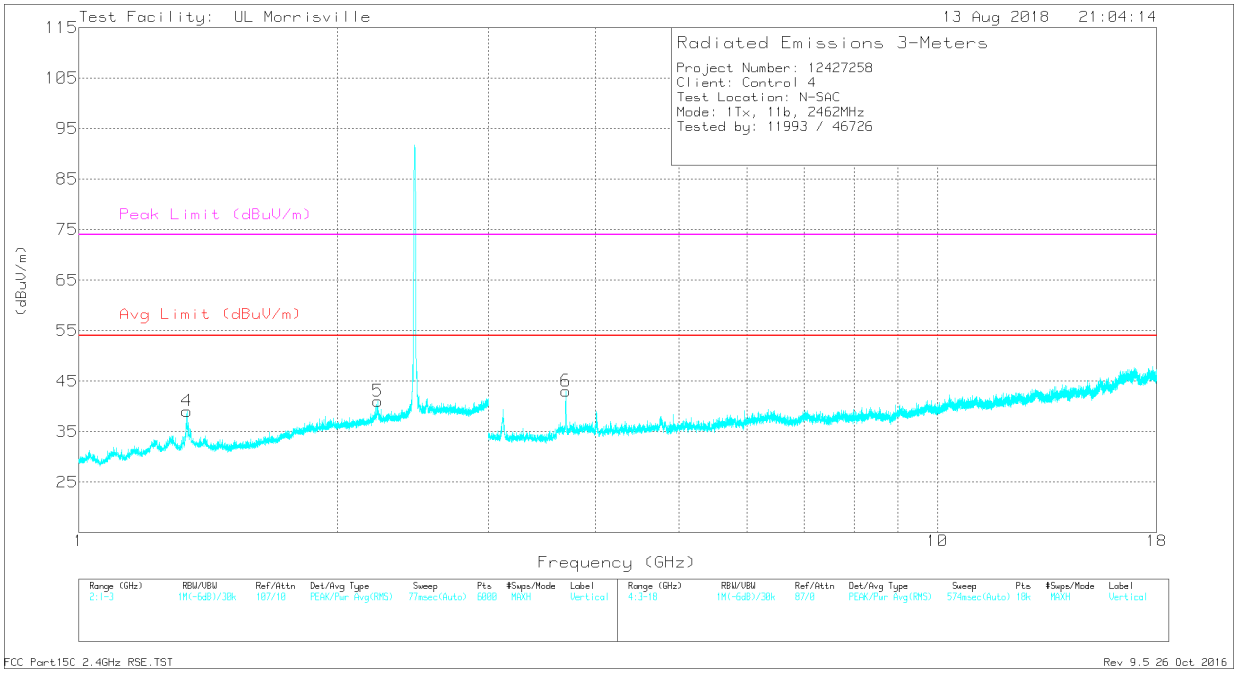
HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.226	44.39	PK2	31.7	-24.5	51.59	-	-	74	-22.41	131	175	H
	* ** 2.227	27.72	MAv1	31.7	-24.5	34.92	54	-19.08	-	-	131	175	H
2	* ** 3.692	47.95	PK2	33.2	-32.2	48.95	-	-	74	-25.05	143	154	H
	* ** 3.694	41.57	MAv1	33.2	-32.2	42.57	54	-11.43	-	-	143	154	H
3	* ** 4.924	47.04	PK2	34.1	-32	49.14	-	-	74	-24.86	343	175	H
	* ** 4.924	42.08	MAv1	34.1	-32	44.18	54	-9.82	-	-	343	175	H
4	* ** 1.338	43.27	PK2	29.2	-25.6	46.87	-	-	74	-27.13	281	108	V
	* ** 1.337	28.04	MAv1	29.2	-25.6	31.64	54	-22.36	-	-	281	108	V
5	* ** 2.229	43.05	PK2	31.7	-24.5	50.25	-	-	74	-23.75	280	239	V
	* ** 2.228	28.21	MAv1	31.7	-24.5	35.41	54	-18.59	-	-	280	239	V
6	* ** 3.693	48.18	PK2	33.2	-32.2	49.18	-	-	74	-24.82	70	270	V
	* ** 3.694	41.84	MAv1	33.2	-32.2	42.84	54	-11.16	-	-	70	270	V

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

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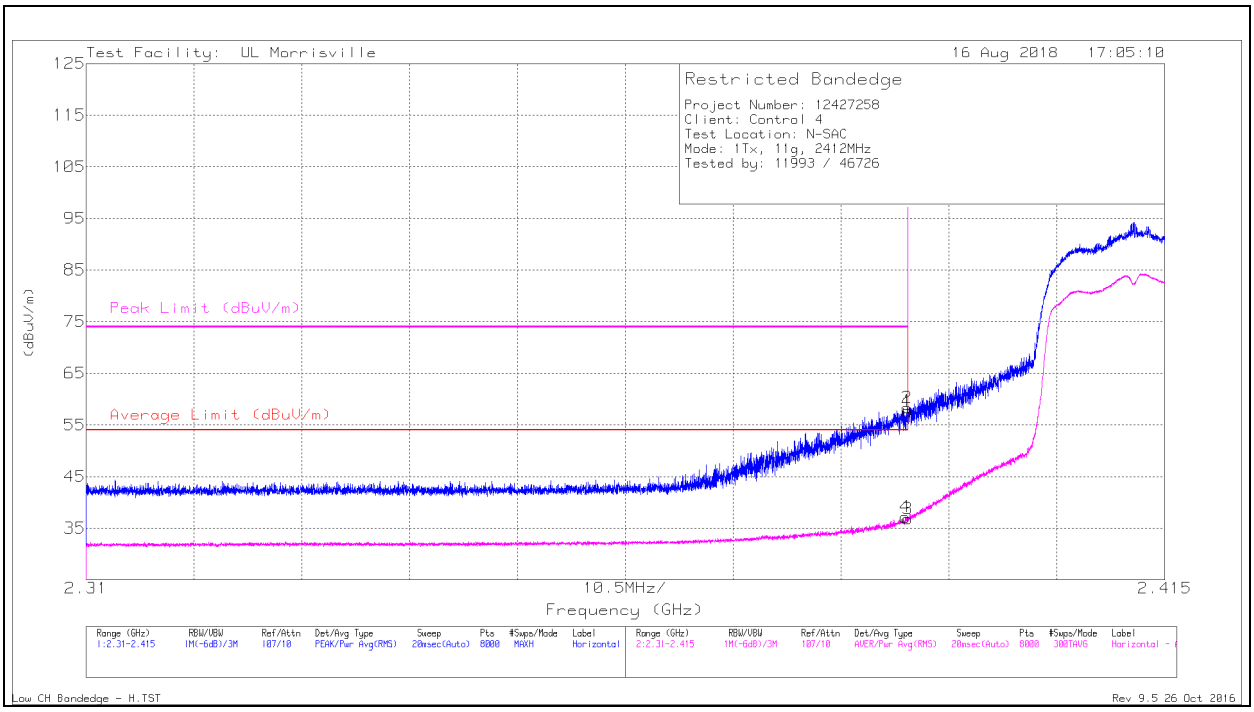
10.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1) – WALL 10

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	50.22	Pk	32	-24.5	0	57.72	-	-	74	-16.28	211	125	H
2	* ** 2.39	50.85	Pk	32	-24.5	0	58.35	-	-	74	-15.65	211	125	H
3	* ** 2.39	29.2	RMS	32	-24.5	.13	36.83	54	-17.17	-	-	211	125	H
4	* ** 2.39	29.51	RMS	32	-24.5	.13	37.14	54	-16.86	-	-	211	125	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

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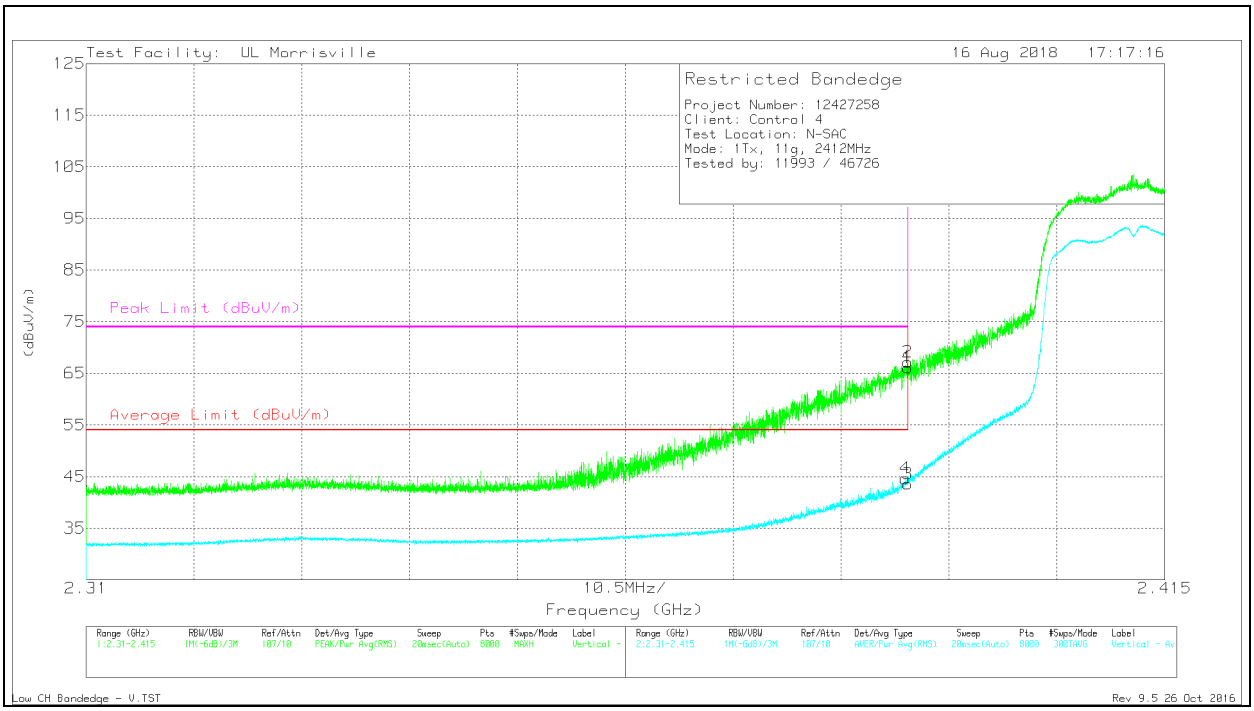
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	58.61	Pk	32	-24.5	0	66.11	-	-	74	-7.89	116	151	V
2	* ** 2.39	59.69	Pk	32	-24.5	0	67.19	-	-	74	-6.81	116	151	V
3	* ** 2.39	35.92	RMS	32	-24.5	.13	43.55	54	-10.45	-	-	116	151	V
4	* ** 2.39	37.01	RMS	32	-24.5	.13	44.64	54	-9.36	-	-	116	151	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

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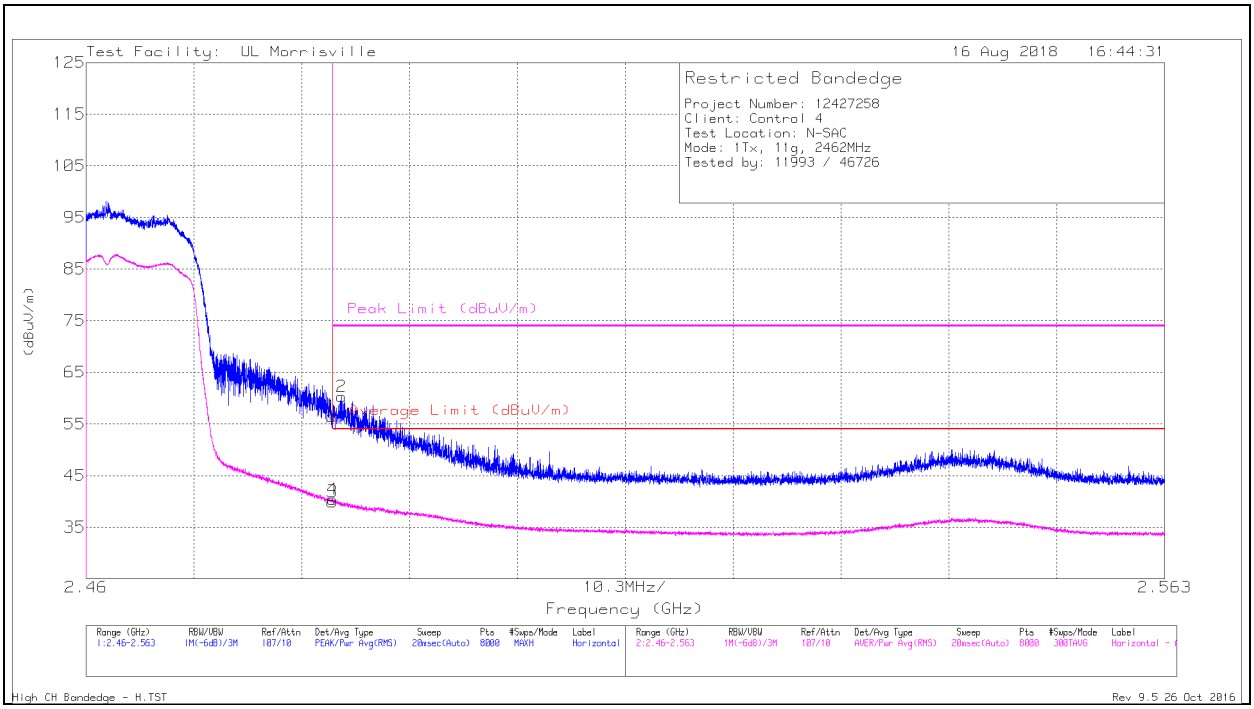
BANDEDGE (HIGH CHANNEL, CH 11) – WALL 10

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	48.47	Pk	32.4	-24.4	0	56.47	-	-	74	-17.53	116	127	H
2	* ** 2.484	52.3	Pk	32.4	-24.4	0	60.3	-	-	74	-13.7	116	127	H
3	* ** 2.484	31.8	RMS	32.4	-24.4	.13	39.93	54	-14.07	-	-	116	127	H
4	* ** 2.484	32.26	RMS	32.4	-24.4	.13	40.39	54	-13.61	-	-	116	127	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

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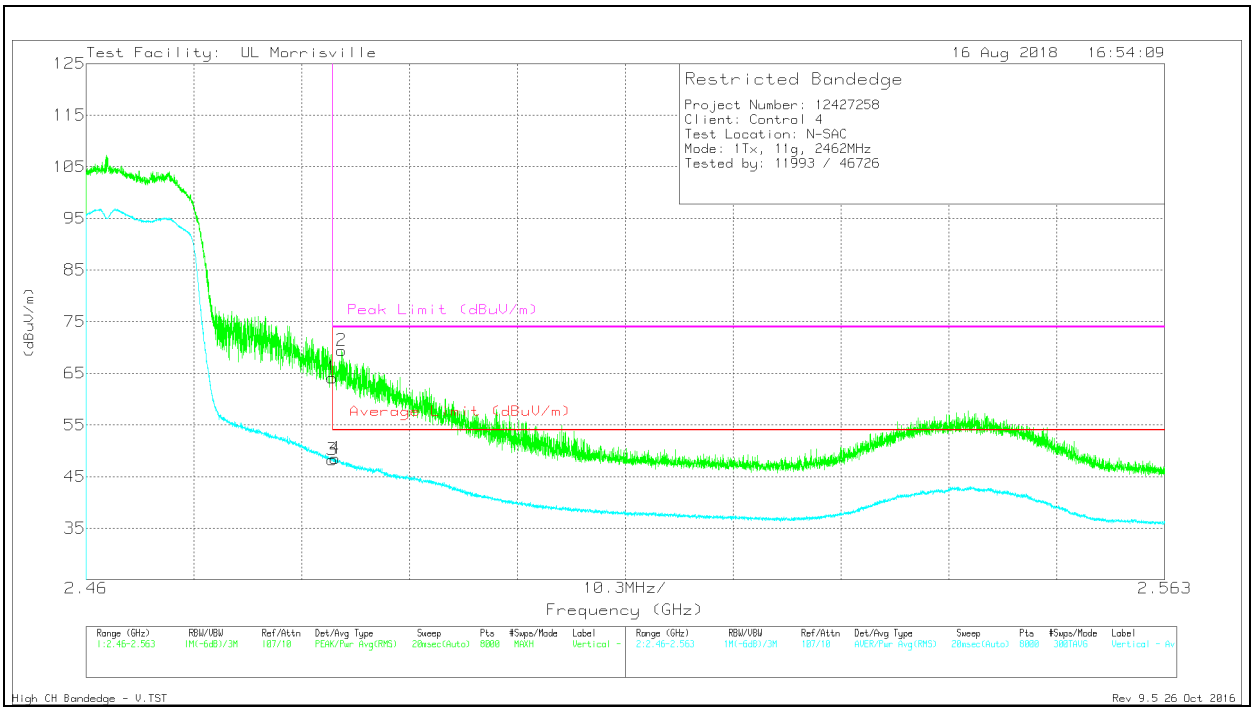
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	56.15	Pk	32.4	-24.4	0	64.15	-	-	74	-9.85	128	117	V
2	* ** 2.484	61.44	Pk	32.4	-24.4	0	69.44	-	-	74	-4.56	128	117	V
3	* ** 2.484	40.17	RMS	32.4	-24.4	.13	48.3	54	-5.7	-	-	128	117	V
4	* ** 2.484	40.42	RMS	32.4	-24.4	.13	48.55	54	-5.45	-	-	128	117	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

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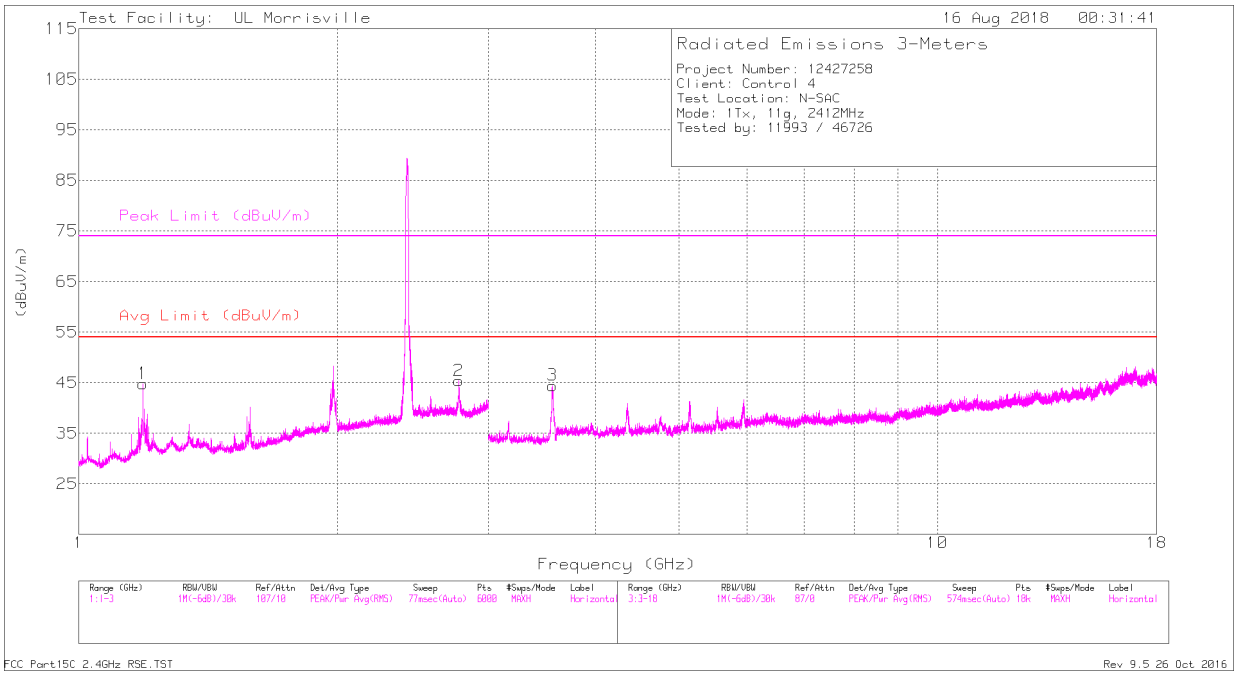
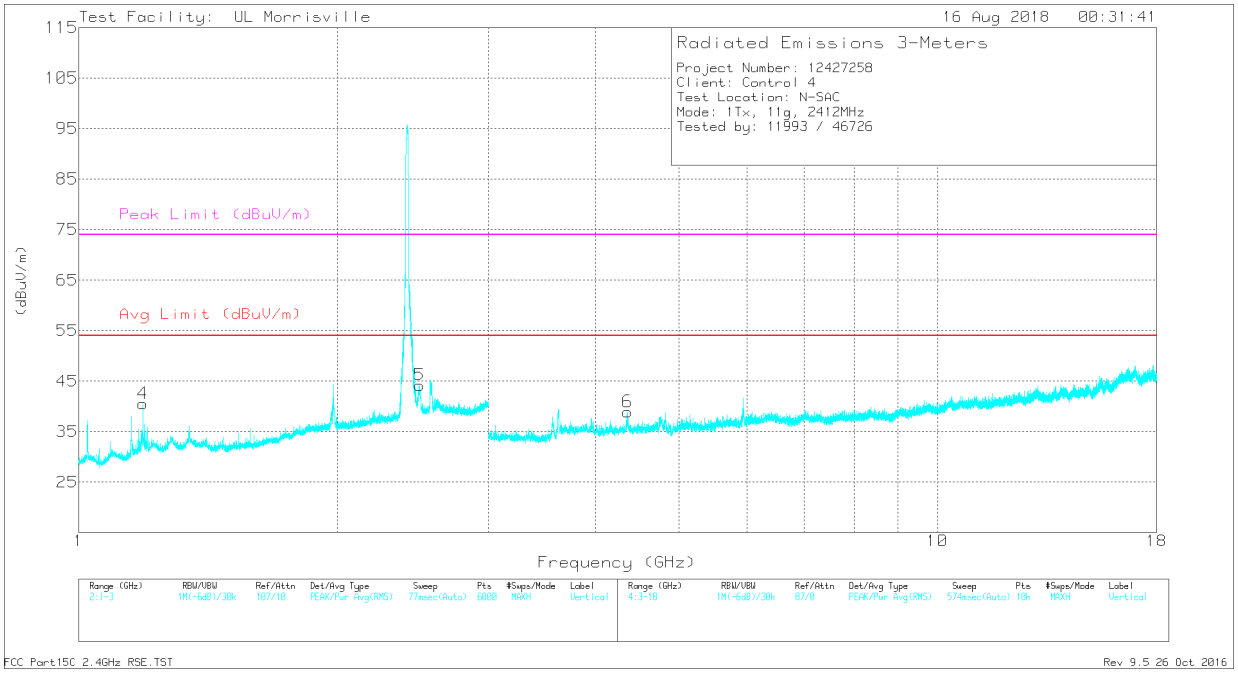
HARMONICS AND SPURIOUS EMISSIONS – WALL 10

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.188	47.55	PK2	28.3	-26.3	0	49.55	-	-	74	-24.45	173	181	H
	* ** 1.188	35.71	MAv1	28.3	-26.3	.13	37.84	54	-16.16	-	-	173	181	H
2	* ** 2.773	43.77	PK2	32.2	-23.9	0	52.07	-	-	74	-21.93	143	169	H
	* ** 2.772	29.48	MAv1	32.2	-23.9	.13	37.91	54	-16.09	-	-	143	169	H
3	* ** 3.564	54.46	PK2	33	-32.6	0	54.86	-	-	74	-19.14	131	189	H
	* ** 3.564	36.59	MAv1	33	-32.6	.13	37.12	54	-16.88	-	-	131	189	H
4	* ** 1.188	44.23	PK2	28.3	-26.3	0	46.23	-	-	74	-27.77	43	354	V
	* ** 1.188	32.38	MAv1	28.3	-26.3	.13	34.51	54	-19.49	-	-	43	354	V
5	* ** 2.494	44.48	PK2	32.3	-24.4	0	52.38	-	-	74	-21.62	123	138	V
	* ** 2.493	31.75	MAv1	32.3	-24.4	.13	39.78	54	-14.22	-	-	123	138	V
6	* ** 4.357	47.29	PK2	33.6	-32.8	0	48.09	-	-	74	-25.91	283	109	V
	* ** 4.356	32.57	MAv1	33.6	-32.8	.13	33.5	54	-20.5	-	-	283	109	V

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

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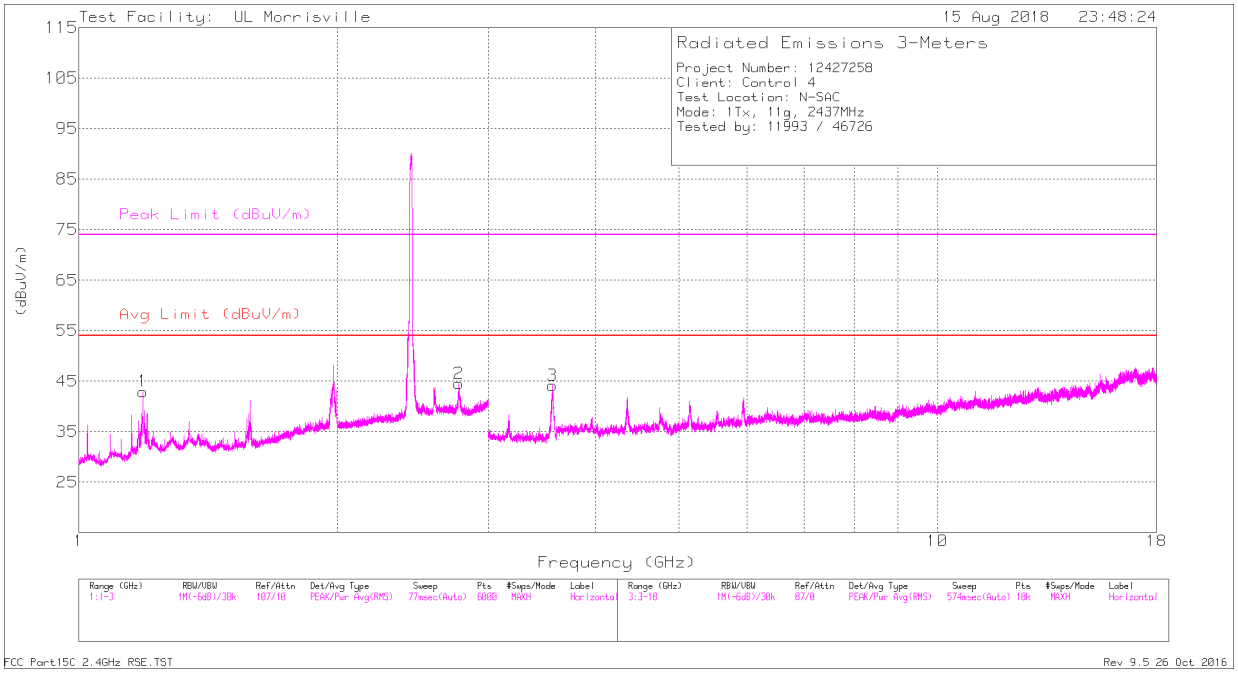
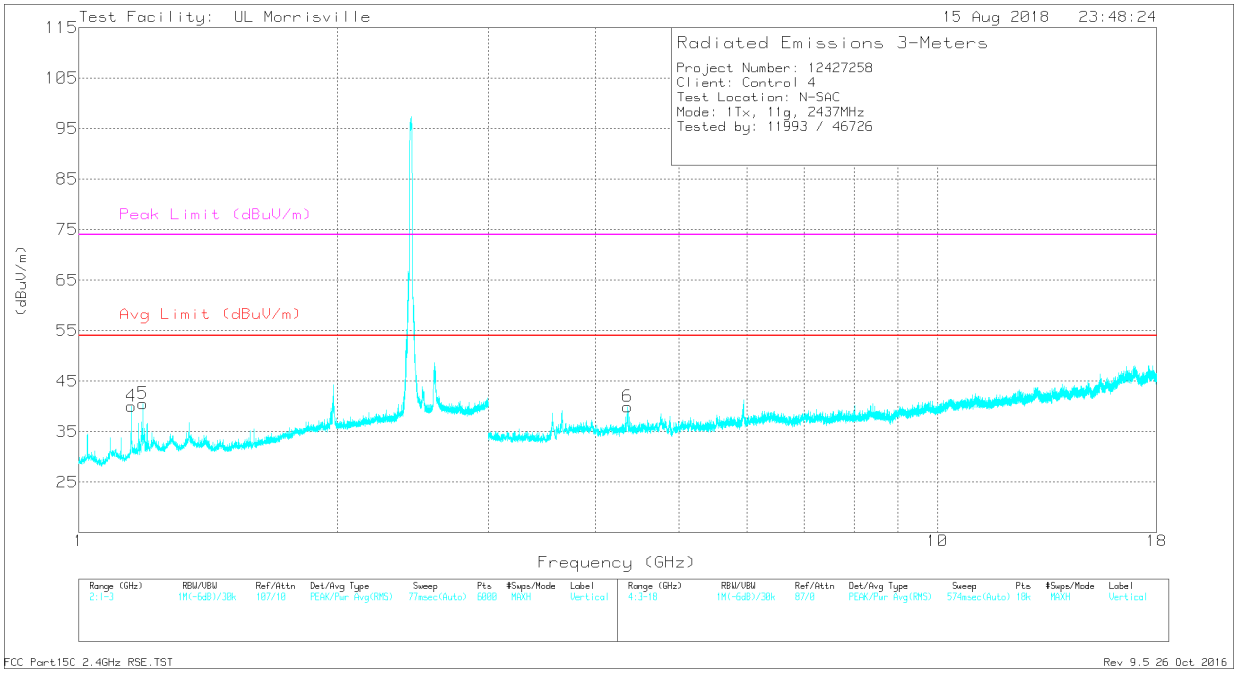
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.188	48.2	PK2	28.3	-26.3	0	50.2	-	-	74	-23.8	174	210	H
	* ** 1.188	35.96	MAv1	28.3	-26.3	.13	38.09	54	-15.91	-	-	174	210	H
2	* ** 2.772	45.31	PK2	32.2	-23.9	0	53.61	-	-	74	-20.39	152	109	H
	* ** 2.772	29.99	MAv1	32.2	-23.9	.13	38.42	54	-15.58	-	-	152	109	H
3	* ** 3.565	53.12	PK2	33	-32.6	0	53.52	-	-	74	-20.48	133	205	H
	* ** 3.564	37.07	MAv1	33	-32.6	.13	37.6	54	-16.4	-	-	133	205	H
4	* ** 1.152	42.3	PK2	27.9	-26.5	0	43.7	-	-	74	-30.3	3	177	V
	* ** 1.152	27.71	MAv1	27.9	-26.5	.13	29.24	54	-24.76	-	-	3	177	V
5	* ** 1.188	45.71	PK2	28.3	-26.3	0	47.71	-	-	74	-26.29	45	209	V
	* ** 1.188	33.14	MAv1	28.3	-26.3	.13	35.27	54	-18.73	-	-	45	209	V
6	* ** 4.36	45.15	PK2	33.6	-32.8	0	45.95	-	-	74	-28.05	286	128	V
	* ** 4.359	31.57	MAv1	33.6	-32.8	.13	32.5	54	-21.5	-	-	286	128	V

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

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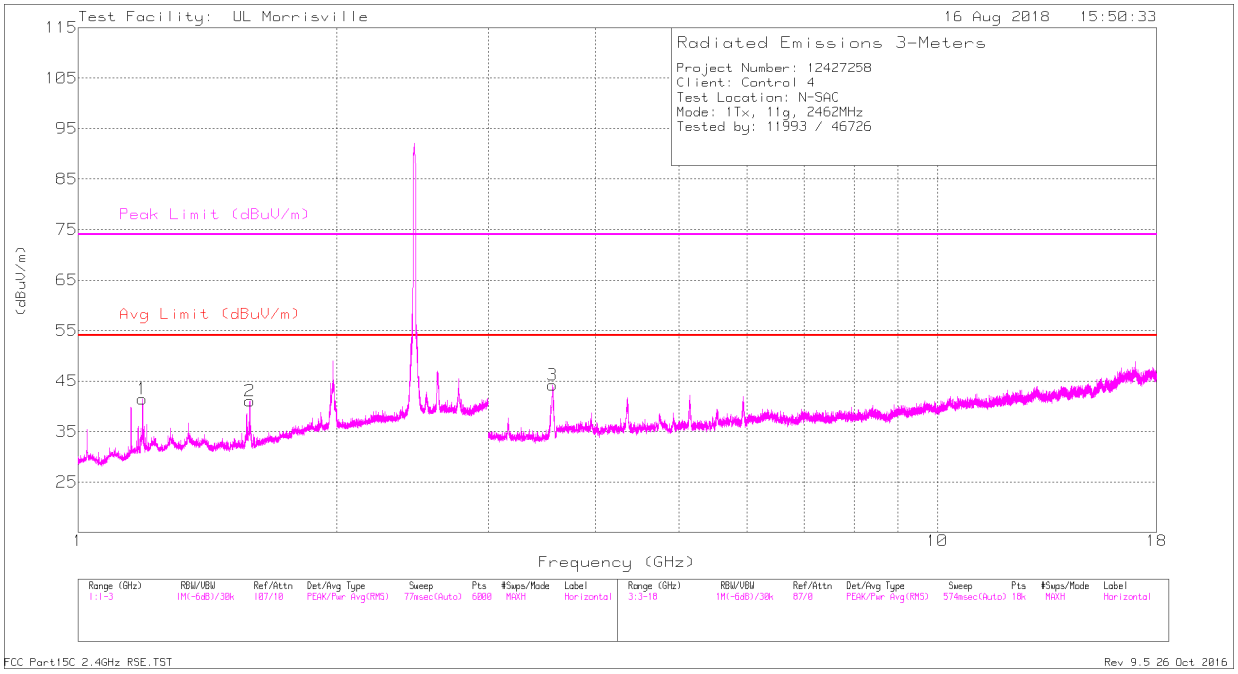
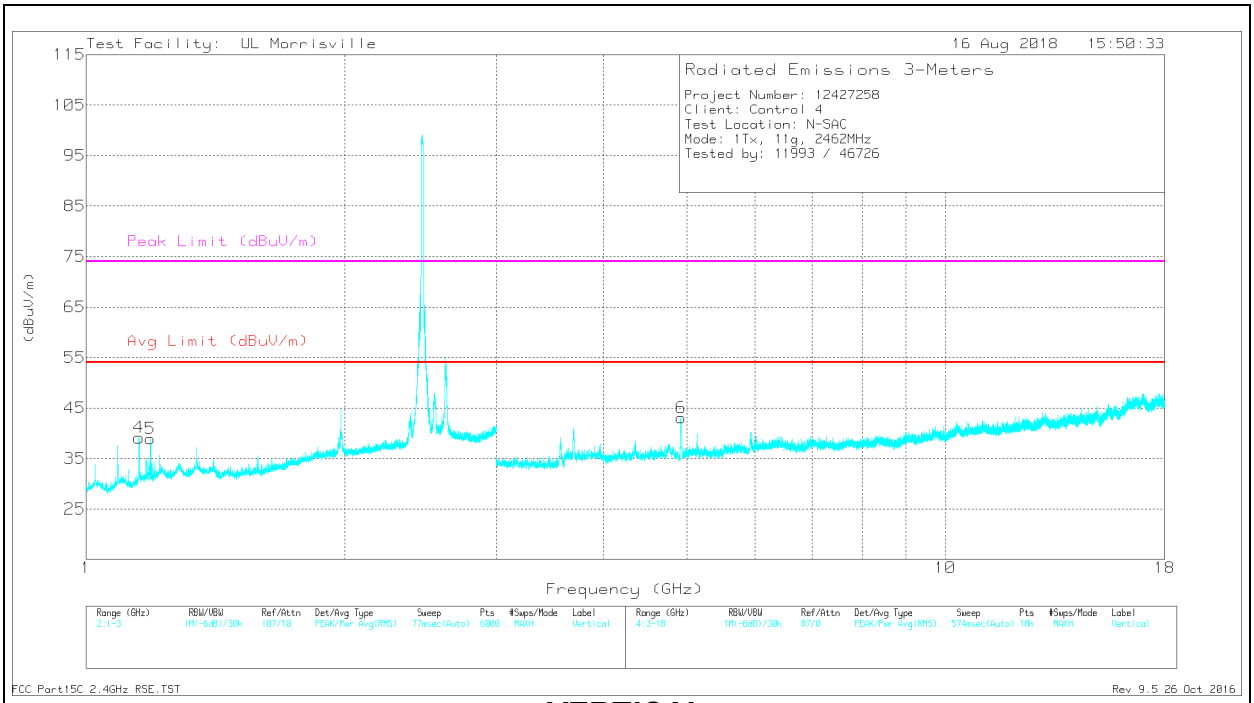
HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.188	43.37	PK2	28.3	-26.3	0	45.37	-	-	74	-28.63	140	191	H
	* ** 1.188	31.74	MAv1	28.3	-26.3	.13	33.87	54	-20.13	-	-	140	191	H
2	* ** 1.584	43.63	PK2	27.8	-24.7	0	46.73	-	-	74	-27.27	197	310	H
	* ** 1.584	31.06	MAv1	27.8	-24.7	.13	34.29	54	-19.71	-	-	197	310	H
3	* ** 3.565	54.26	PK2	33	-32.6	0	54.66	-	-	74	-19.34	130	206	H
	* ** 3.564	36.95	MAv1	33	-32.6	.13	37.48	54	-16.52	-	-	130	206	H
4	* ** 1.152	38.18	PK2	27.9	-26.5	0	39.58	-	-	74	-34.42	345	182	V
	* ** 1.152	27.18	MAv1	27.9	-26.5	.13	28.71	54	-25.29	-	-	345	182	V
5	* ** 1.189	41.06	PK2	28.3	-26.2	0	43.16	-	-	74	-30.84	70	357	V
	* ** 1.188	28.73	MAv1	28.3	-26.3	.13	30.86	54	-23.14	-	-	70	357	V
6	* ** 4.924	47.45	PK2	34.1	-32	0	49.55	-	-	74	-24.45	301	228	V
	* ** 4.924	35.38	MAv1	34.1	-32	.13	37.61	54	-16.39	-	-	301	228	V

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

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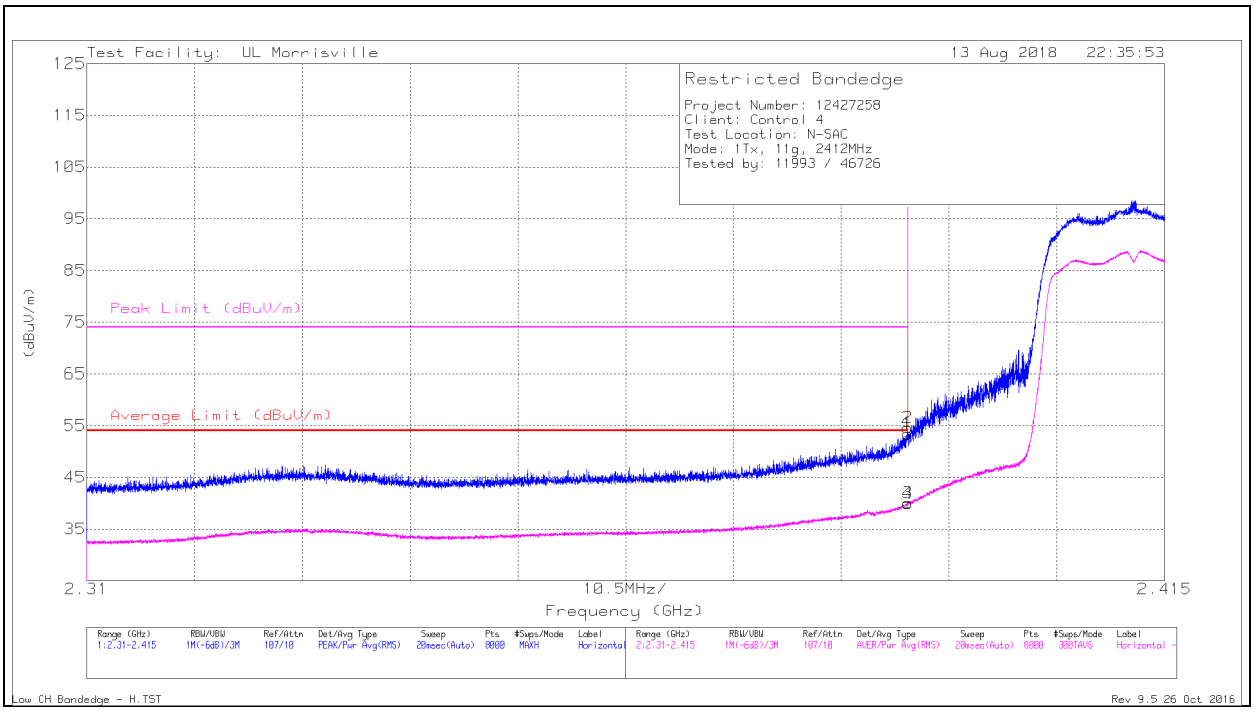
BANDEDGE (LOW CHANNEL, CH 1) – WALL 7

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	45.93	Pk	32	-24.5	0	53.43	-	-	74	-20.57	0	231	H
2	* ** 2.39	47.1	Pk	32	-24.5	0	54.6	-	-	74	-19.4	0	231	H
3	* ** 2.39	32.41	RMS	32	-24.5	.13	40.04	54	-13.96	-	-	0	231	H
4	* ** 2.39	32.31	RMS	32	-24.5	.13	39.94	54	-14.06	-	-	0	231	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

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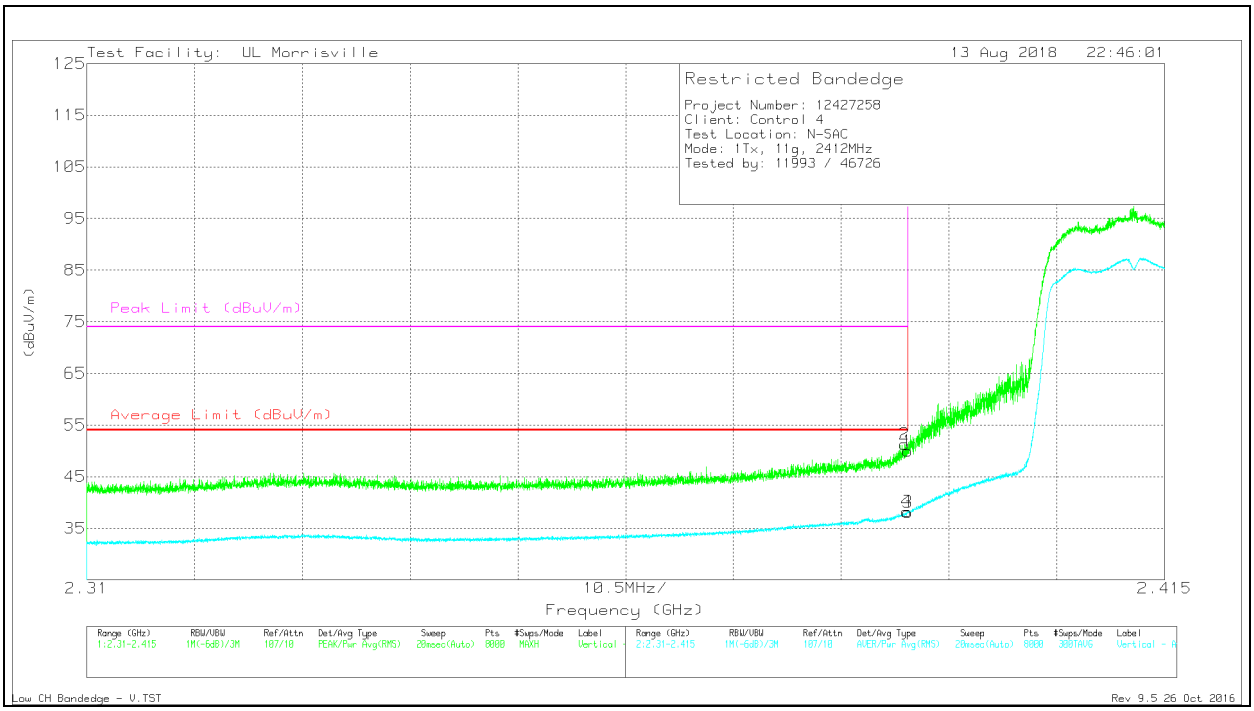
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	42.45	Pk	32	-24.5	0	49.95	-	-	74	-24.05	50	210	V
2	* ** 2.39	43.8	Pk	32	-24.5	0	51.3	-	-	74	-22.7	50	210	V
3	* ** 2.39	30.5	RMS	32	-24.5	.13	38.13	54	-15.87	-	-	50	210	V
4	* ** 2.39	30.61	RMS	32	-24.5	.13	38.24	54	-15.76	-	-	50	210	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

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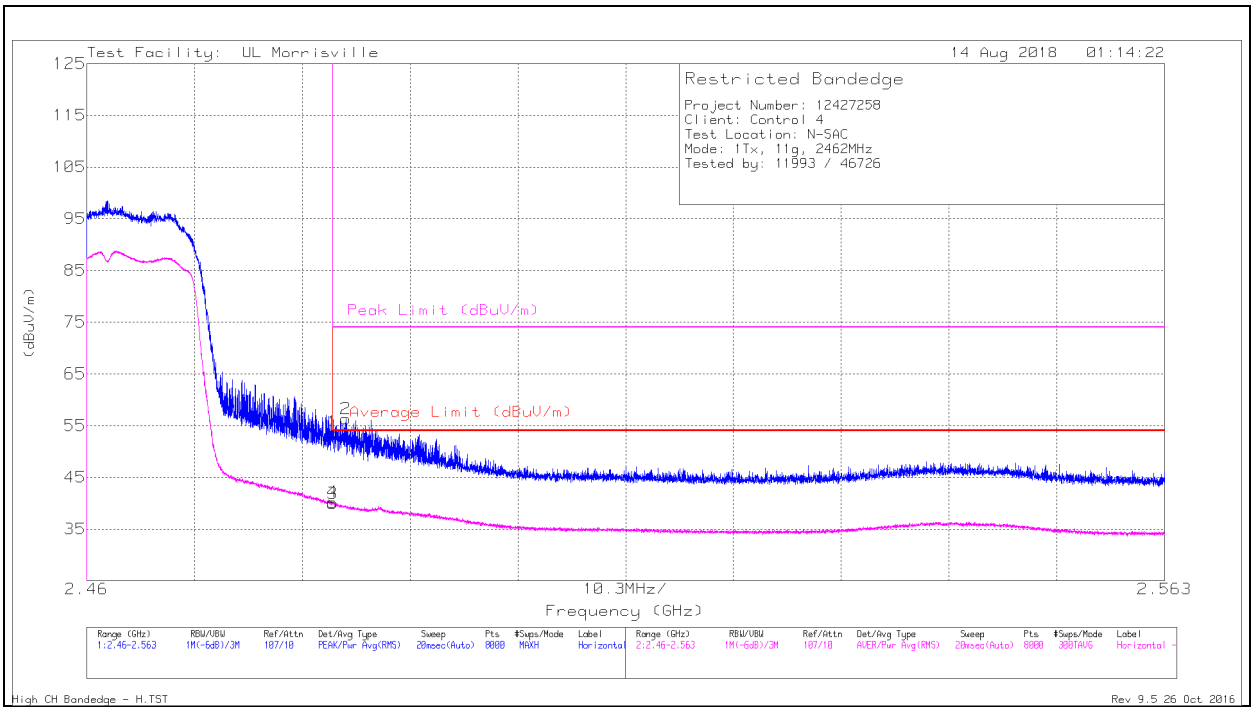
BANDEDGE (HIGH CHANNEL, CH 11) – WALL 7

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	45.65	Pk	32.4	-24.4	0	53.65	-	-	74	-20.35	93	158	H
2	* ** 2.485	48.29	Pk	32.4	-24.4	0	56.29	-	-	74	-17.71	93	158	H
3	* ** 2.484	31.8	RMS	32.4	-24.4	.13	39.93	54	-14.07	-	-	93	158	H
4	* ** 2.484	32.03	RMS	32.4	-24.4	.13	40.16	54	-13.84	-	-	93	158	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

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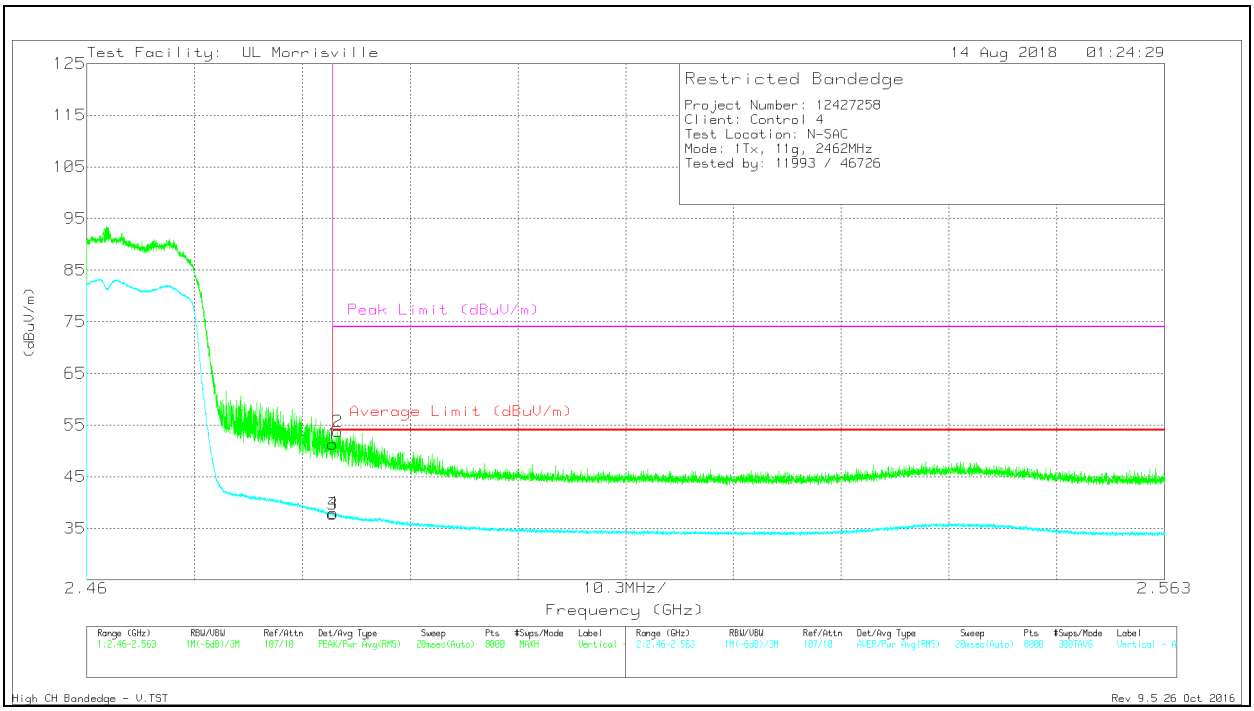
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	43.28	Pk	32.4	-24.4	0	51.28	-	-	74	-22.72	152	169	V
2	* ** 2.484	45.75	Pk	32.4	-24.4	0	53.75	-	-	74	-20.25	152	169	V
3	* ** 2.484	29.59	RMS	32.4	-24.4	.13	37.72	54	-16.28	-	-	152	169	V
4	* ** 2.484	29.82	RMS	32.4	-24.4	.13	37.95	54	-16.05	-	-	152	169	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

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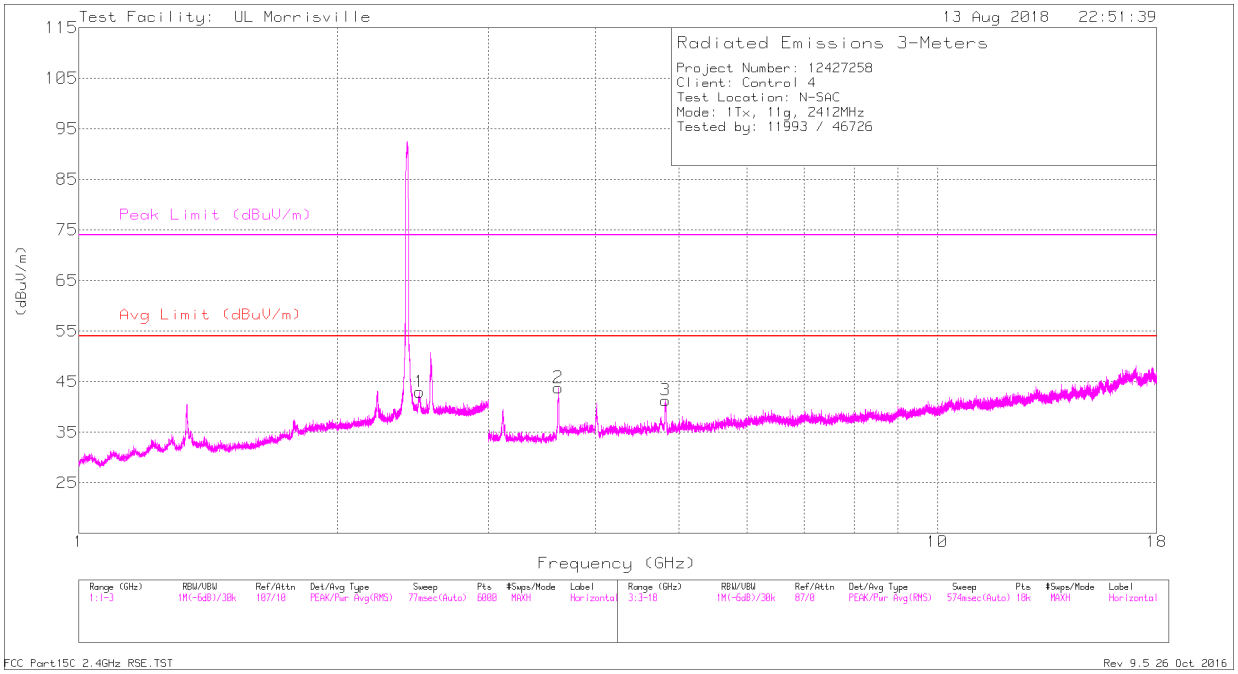
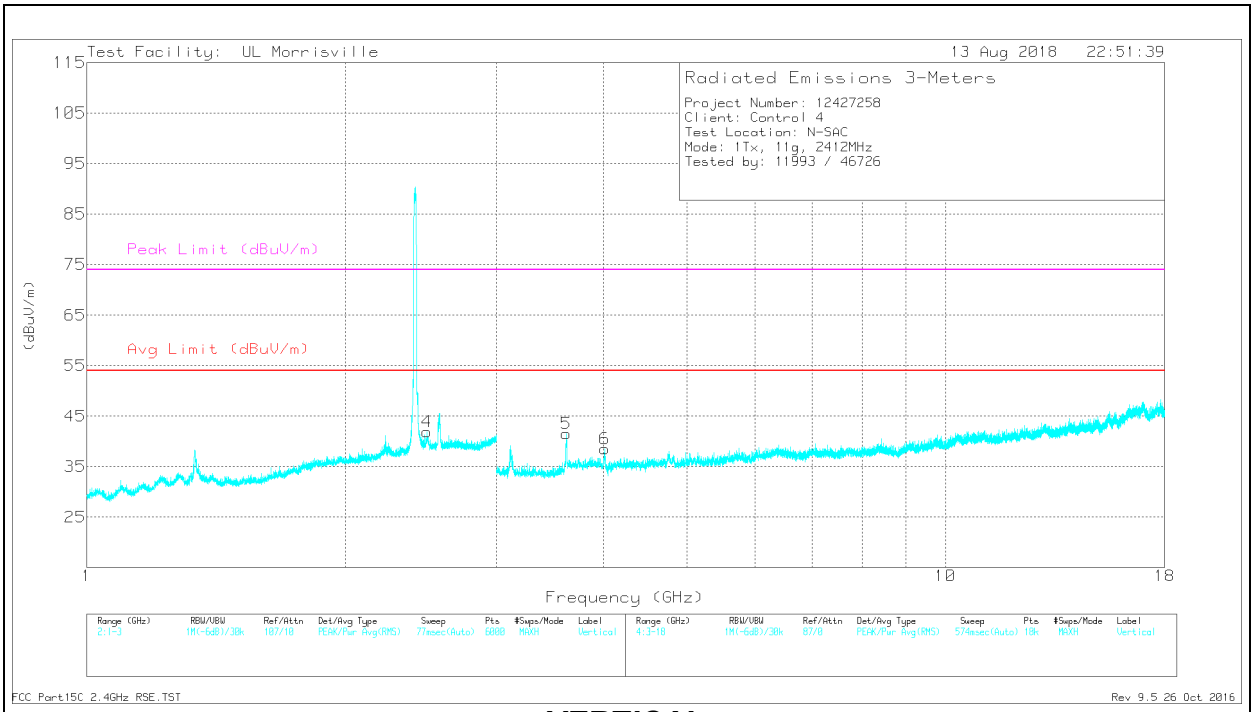
HARMONICS AND SPURIOUS EMISSIONS – WALL7

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.498	42.41	PK2	32.3	-24.4	0	50.31	-	-	74	-23.69	92	193	H
	* ** 2.495	29.82	MAv1	32.3	-24.4	.13	37.85	54	-16.15	-	-	92	193	H
2	* ** 3.618	48.4	PK2	32.9	-31.9	0	49.4	-	-	74	-24.6	151	207	H
	* ** 3.619	38.8	MAv1	32.9	-31.9	.13	39.93	54	-14.07	-	-	151	207	H
3	* ** 4.823	47.78	PK2	34.1	-31.7	0	50.18	-	-	74	-23.82	339	192	H
	* ** 4.824	35.26	MAv1	34.1	-31.7	.13	37.79	54	-16.21	-	-	339	192	H
4	* ** 2.493	40.44	PK2	32.3	-24.4	0	48.34	-	-	74	-25.66	159	206	V
	* ** 2.493	28.3	MAv1	32.3	-24.4	.13	36.33	54	-17.67	-	-	159	206	V
5	* ** 3.618	48.28	PK2	32.9	-31.9	0	49.28	-	-	74	-24.72	59	224	V
	* ** 3.619	38.07	MAv1	32.9	-31.9	.13	39.2	54	-14.8	-	-	59	224	V
6	* ** 4.009	45.78	PK2	33.5	-32.4	0	46.88	-	-	74	-27.12	167	124	V
	* ** 4.01	31.47	MAv1	33.5	-32.3	.13	32.8	54	-21.2	-	-	167	124	V

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

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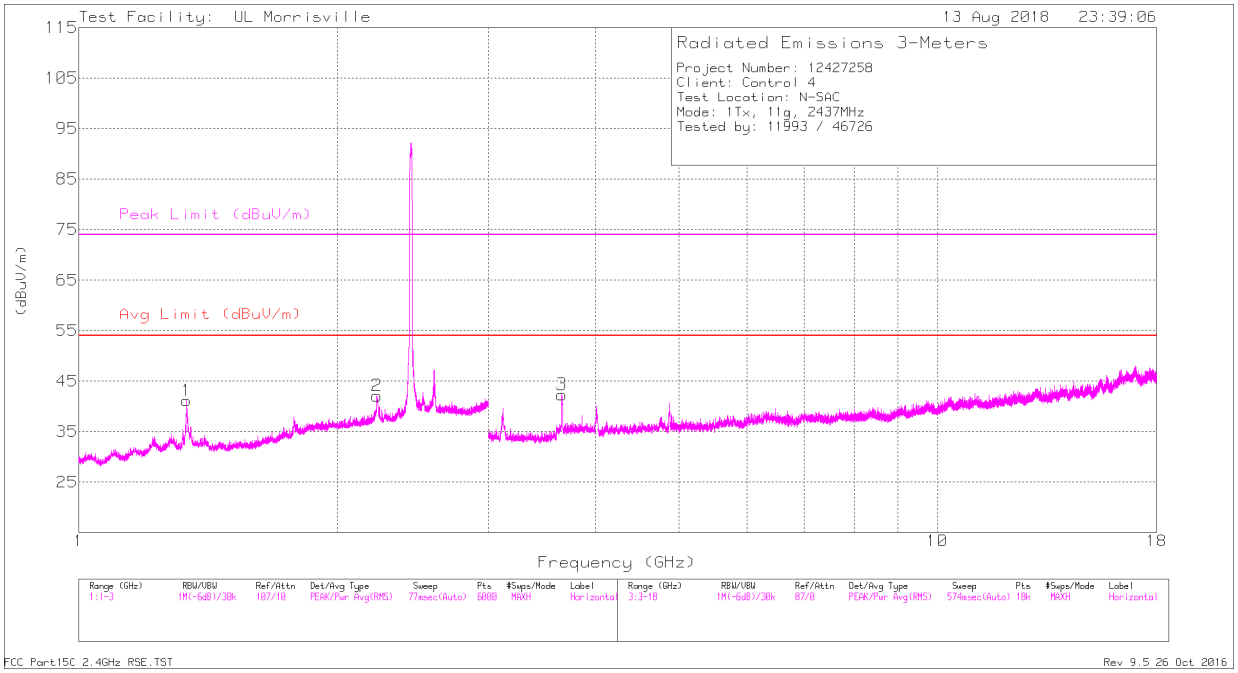
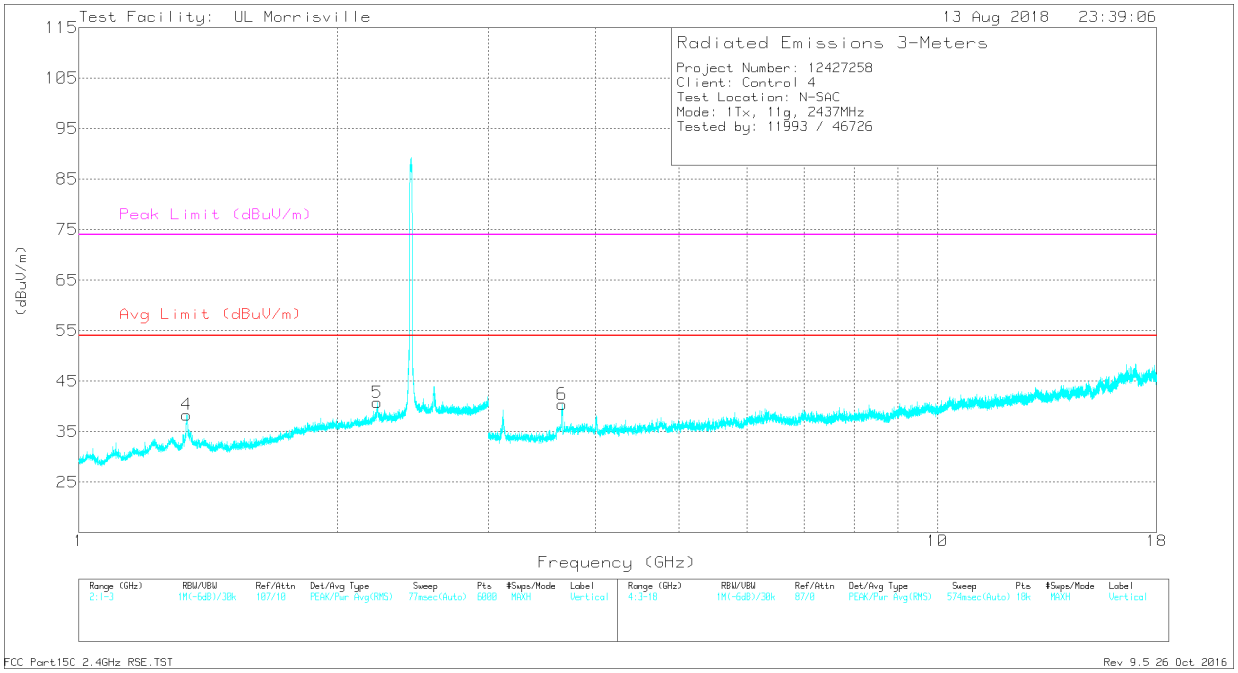
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.338	44.56	PK2	29.2	-25.6	0	48.16	-	-	74	-25.84	327	147	H
	* ** 1.337	29.16	MAv1	29.2	-25.6	.13	32.89	54	-21.11	-	-	327	147	H
2	* ** 2.229	43.64	PK2	31.7	-24.5	0	50.84	-	-	74	-23.16	313	102	H
	* ** 2.227	28.64	MAv1	31.7	-24.5	.13	35.97	54	-18.03	-	-	313	102	H
3	* ** 3.655	48.11	PK2	33	-31.6	0	49.51	-	-	74	-24.49	308	108	H
	* ** 3.656	37.36	MAv1	33	-31.6	.13	38.89	54	-15.11	-	-	308	108	H
4	* ** 1.337	44.7	PK2	29.2	-25.6	0	48.3	-	-	74	-25.7	269	152	V
	* ** 1.337	28.96	MAv1	29.2	-25.6	.13	32.69	54	-21.31	-	-	269	152	V
5	* ** 2.228	44.17	PK2	31.7	-24.5	0	51.37	-	-	74	-22.63	290	240	V
	* ** 2.228	27.98	MAv1	31.7	-24.5	.13	35.31	54	-18.69	-	-	290	240	V
6	* ** 3.656	46.64	PK2	33	-31.6	0	48.04	-	-	74	-25.96	70	248	V
	* ** 3.655	36.74	MAv1	33	-31.6	.13	38.27	54	-15.73	-	-	70	248	V

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

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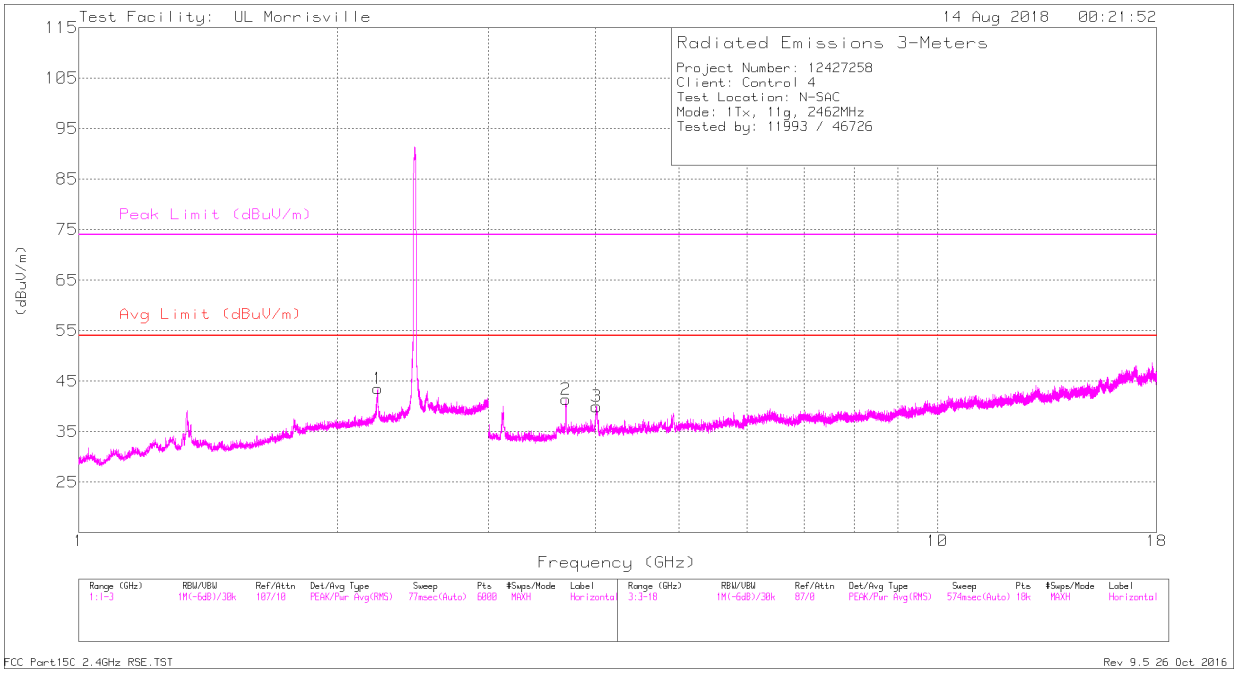
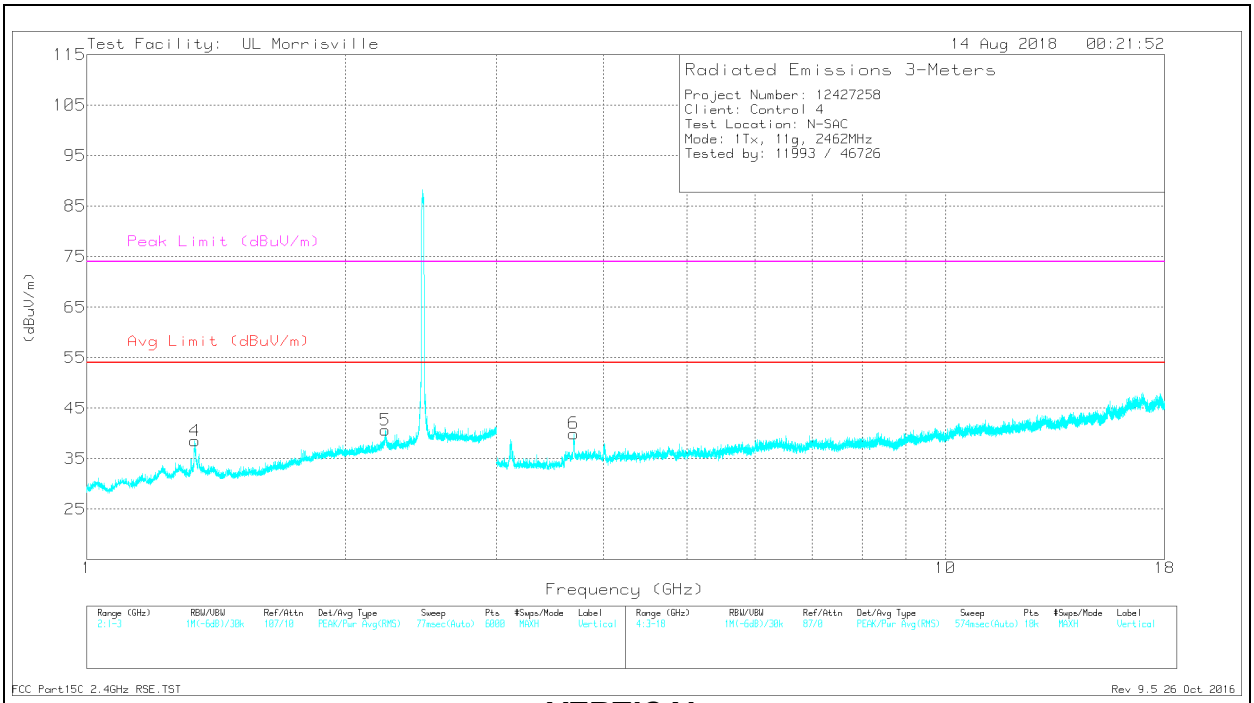
HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.227	42.8	PK2	31.7	-24.5	0	50	-	-	74	-24	318	143	H
	* ** 2.228	28.1	MAv1	31.7	-24.5	.13	35.43	54	-18.57	-	-	318	143	H
2	* ** 3.693	48.16	PK2	33.2	-32.2	0	49.16	-	-	74	-24.84	321	198	H
	* ** 3.693	37.63	MAv1	33.2	-32.2	.13	38.76	54	-15.24	-	-	321	198	H
3	* ** 4.012	49.55	PK2	33.5	-32.3	0	50.75	-	-	74	-23.25	18	214	H
	* ** 4.008	33.41	MAv1	33.5	-32.4	.13	34.64	54	-19.36	-	-	18	214	H
4	* ** 1.337	43.86	PK2	29.2	-25.6	0	47.46	-	-	74	-26.54	280	150	V
	* ** 1.337	28.92	MAv1	29.2	-25.6	.13	32.65	54	-21.35	-	-	280	150	V
5	* ** 2.225	42.81	PK2	31.7	-24.5	0	50.01	-	-	74	-23.99	281	227	V
	* ** 2.227	28.25	MAv1	31.7	-24.5	.13	35.58	54	-18.42	-	-	281	227	V
6	* ** 3.694	47.35	PK2	33.2	-32.2	0	48.35	-	-	74	-25.65	70	248	V
	* ** 3.692	37.14	MAv1	33.2	-32.2	.13	38.27	54	-15.73	-	-	70	248	V

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

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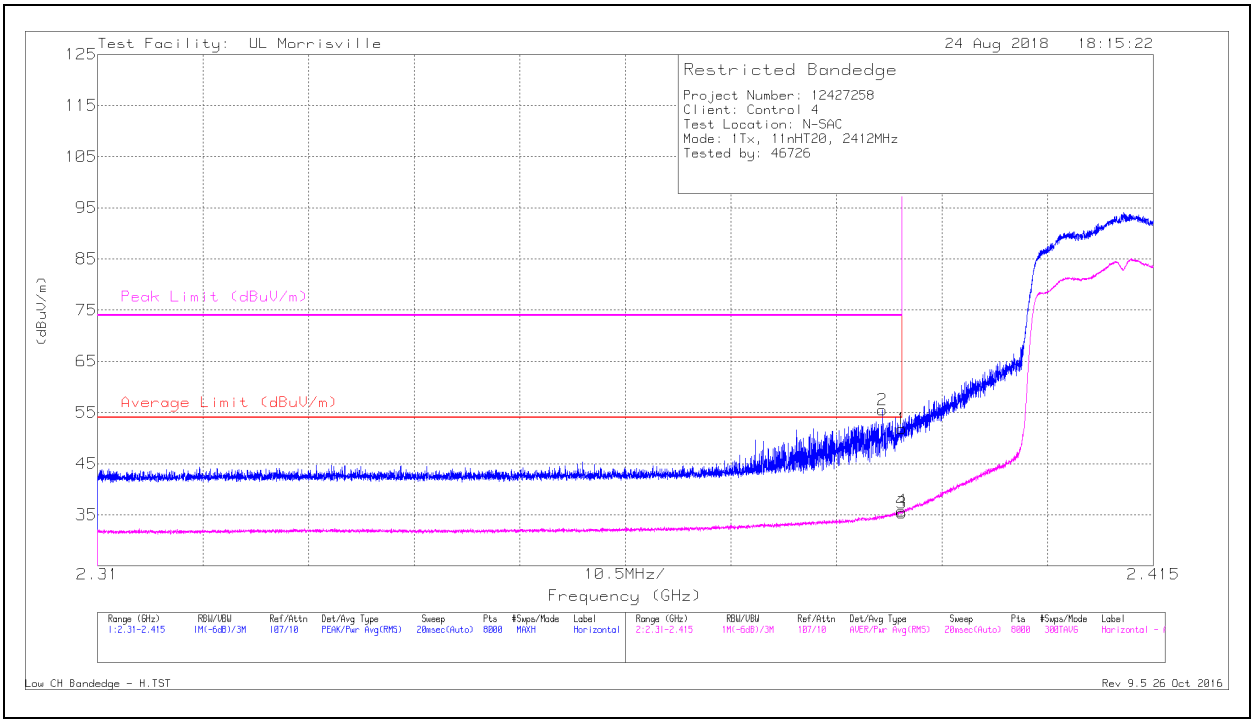
10.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1) – WALL 10

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	44.28	Pk	32	-24.5	0	51.78	-	-	74	-22.22	201	120	H
2	* ** 2.388	47.99	Pk	32	-24.5	0	55.49	-	-	74	-18.51	201	120	H
3	* ** 2.39	27.82	RMS	32	-24.5	.14	35.46	54	-18.54	-	-	201	120	H
4	* ** 2.39	28.25	RMS	32	-24.5	.14	35.89	54	-18.11	-	-	201	120	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

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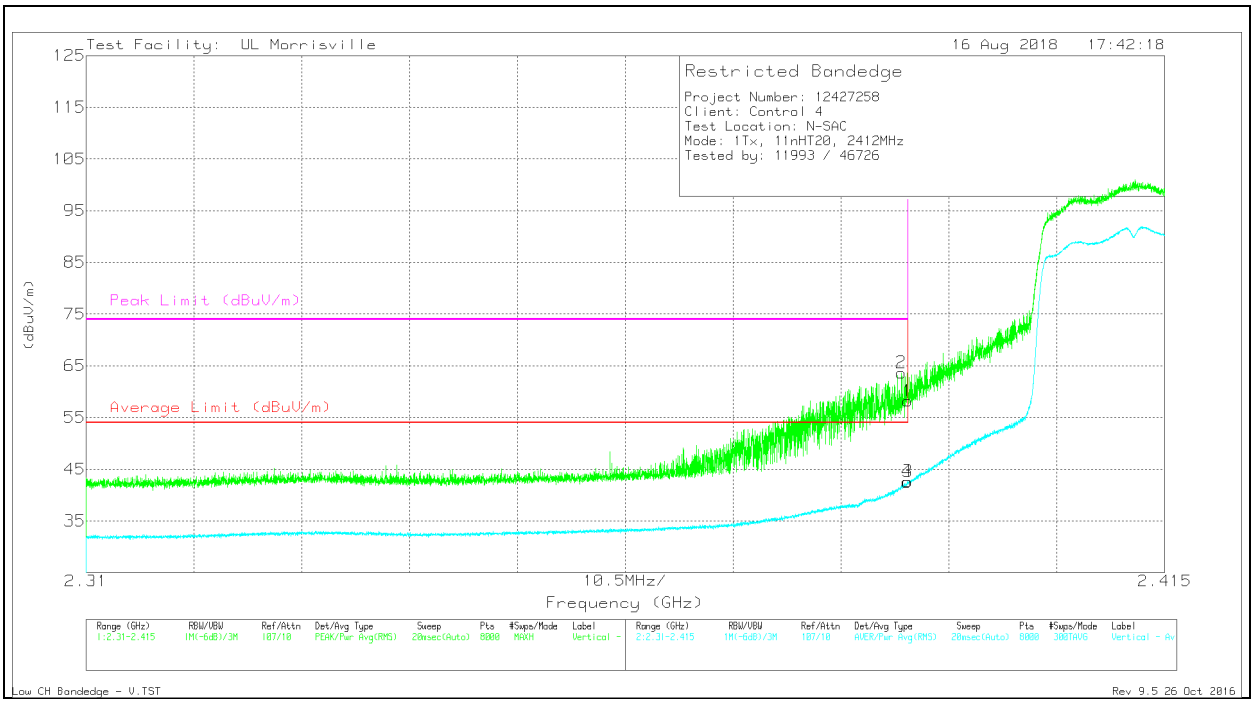
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* ** 2.389	56.17	Pk	32	-24.5	0	63.67	-	-	74	-10.33	123	128	V
1	* ** 2.39	50.72	Pk	32	-24.5	0	58.22	-	-	74	-15.78	123	128	V
3	* ** 2.39	35	RMS	32	-24.5	.14	42.64	54	-11.36	-	-	123	128	V
4	* ** 2.39	34.91	RMS	32	-24.5	.14	42.55	54	-11.45	-	-	123	128	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

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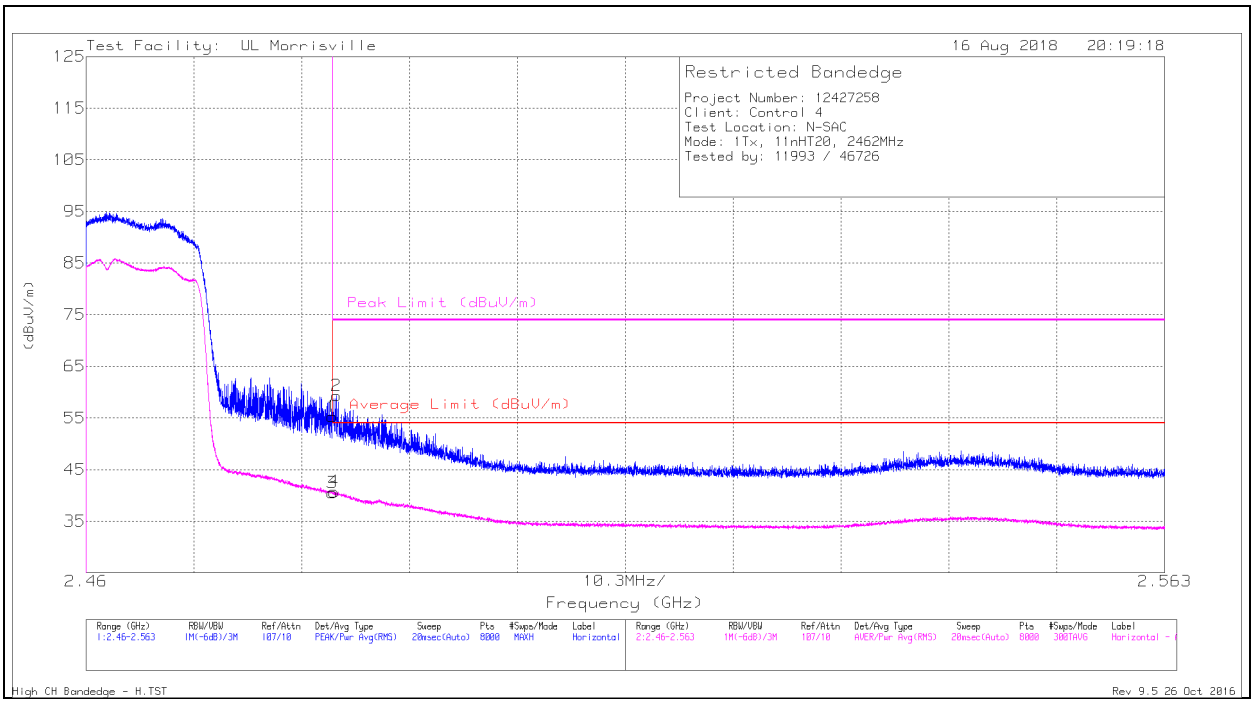
BANDEDGE (HIGH CHANNEL, CH 11) – WALL 10

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	47.26	Pk	32.4	-24.4	0	55.26	-	-	74	-18.74	135	141	H
2	* ** 2.484	51.3	Pk	32.4	-24.4	0	59.3	-	-	74	-14.7	135	141	H
3	* ** 2.484	32.4	RMS	32.4	-24.4	.14	40.54	54	-13.46	-	-	135	141	H
4	* ** 2.484	32.56	RMS	32.4	-24.4	.14	40.7	54	-13.3	-	-	135	141	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

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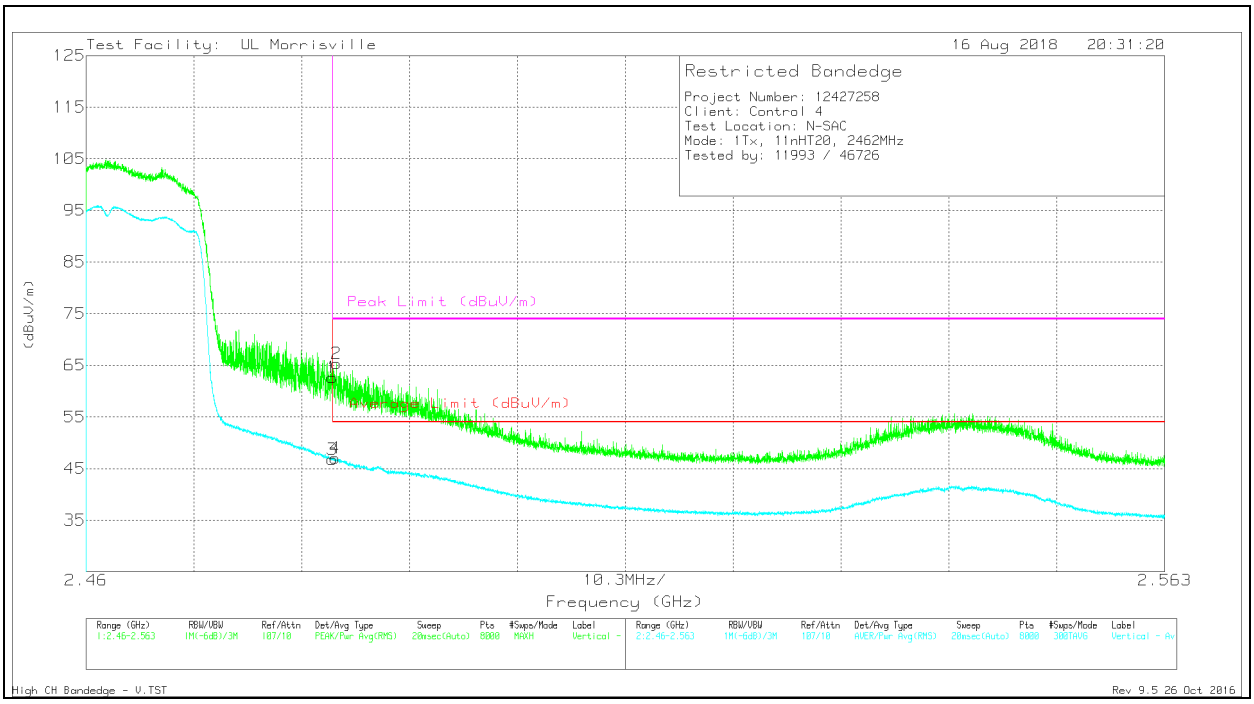
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	54.63	Pk	32.4	-24.4	0	62.63	-	-	74	-11.37	125	103	V
2	* ** 2.484	57.3	Pk	32.4	-24.4	0	65.3	-	-	74	-8.7	125	103	V
3	* ** 2.484	38.66	RMS	32.4	-24.4	.14	46.8	54	-7.2	-	-	125	103	V
4	* ** 2.484	38.86	RMS	32.4	-24.4	.14	47	54	-7	-	-	125	103	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

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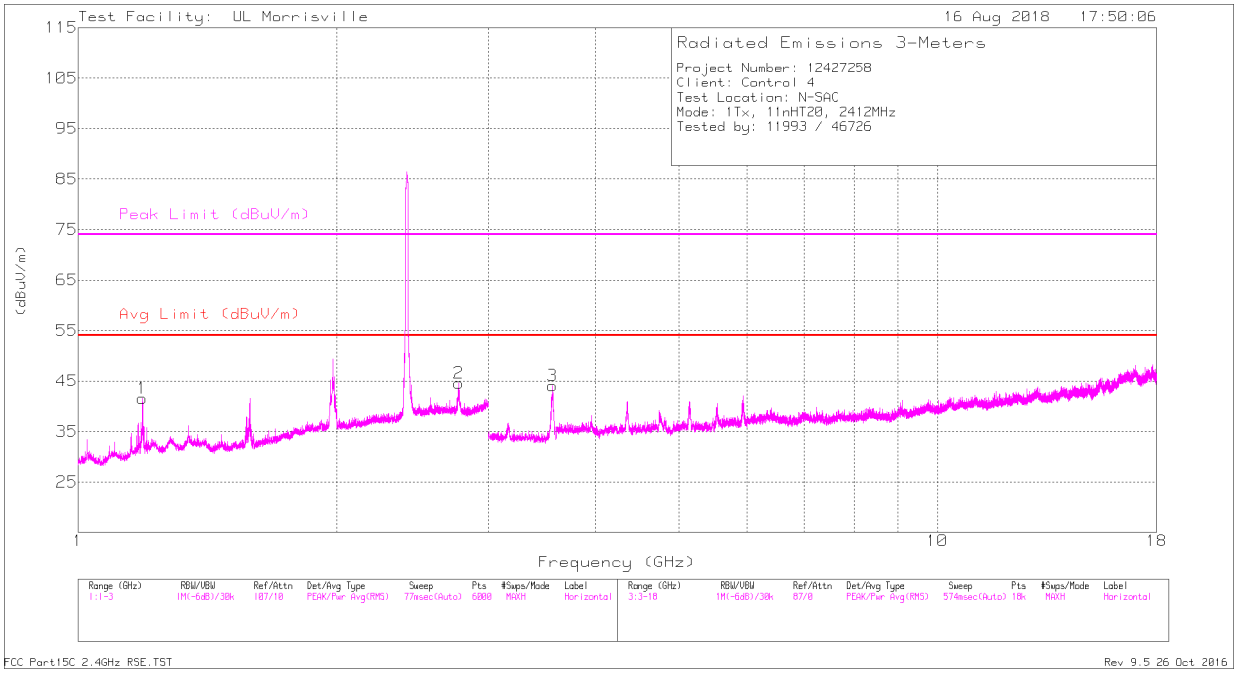
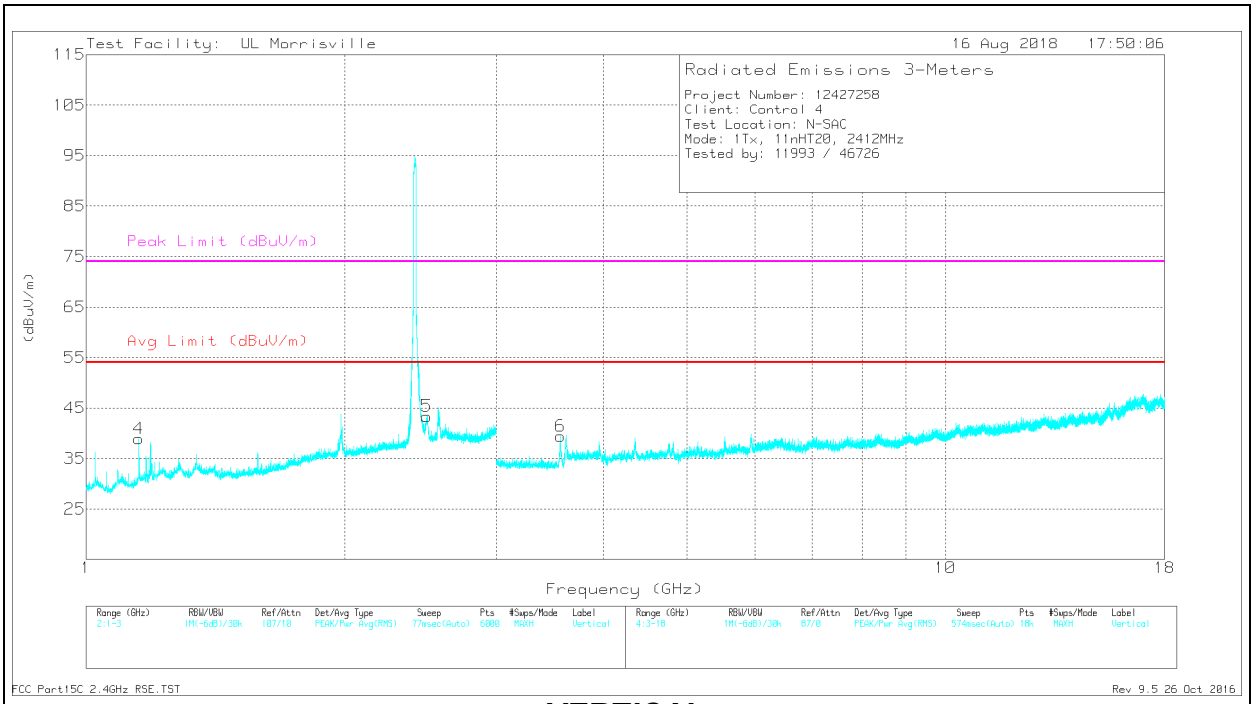
HARMONICS AND SPURIOUS EMISSIONS – WALL 10

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.188	44.91	PK2	28.3	-26.3	0	46.91	-	-	74	-27.09	160	124	H
	* ** 1.188	33.03	MAv1	28.3	-26.3	.14	35.17	54	-18.83	-	-	160	124	H
2	* ** 2.774	44.51	PK2	32.2	-23.9	0	52.81	-	-	74	-21.19	135	130	H
	* ** 2.772	30.41	MAv1	32.2	-23.9	.14	38.85	54	-15.15	-	-	135	130	H
3	* ** 3.563	53.47	PK2	33	-32.7	0	53.77	-	-	74	-20.23	131	201	H
	* ** 3.564	36.77	MAv1	33	-32.6	.14	37.31	54	-16.69	-	-	131	201	H
4	* ** 1.152	38.51	PK2	27.9	-26.5	0	39.91	-	-	74	-34.09	327	222	V
	* ** 1.152	26.96	MAv1	27.9	-26.5	.14	28.5	54	-25.5	-	-	327	222	V
5	* ** 2.49	41.56	PK2	32.3	-24.4	0	49.46	-	-	74	-24.54	94	284	V
	* ** 2.491	29.45	MAv1	32.3	-24.4	.14	37.49	54	-16.51	-	-	94	284	V
6	* ** 3.566	47	PK2	33	-32.6	0	47.4	-	-	74	-26.6	3	108	V
	* ** 3.566	31.79	MAv1	33	-32.6	.14	32.33	54	-21.67	-	-	3	108	V

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

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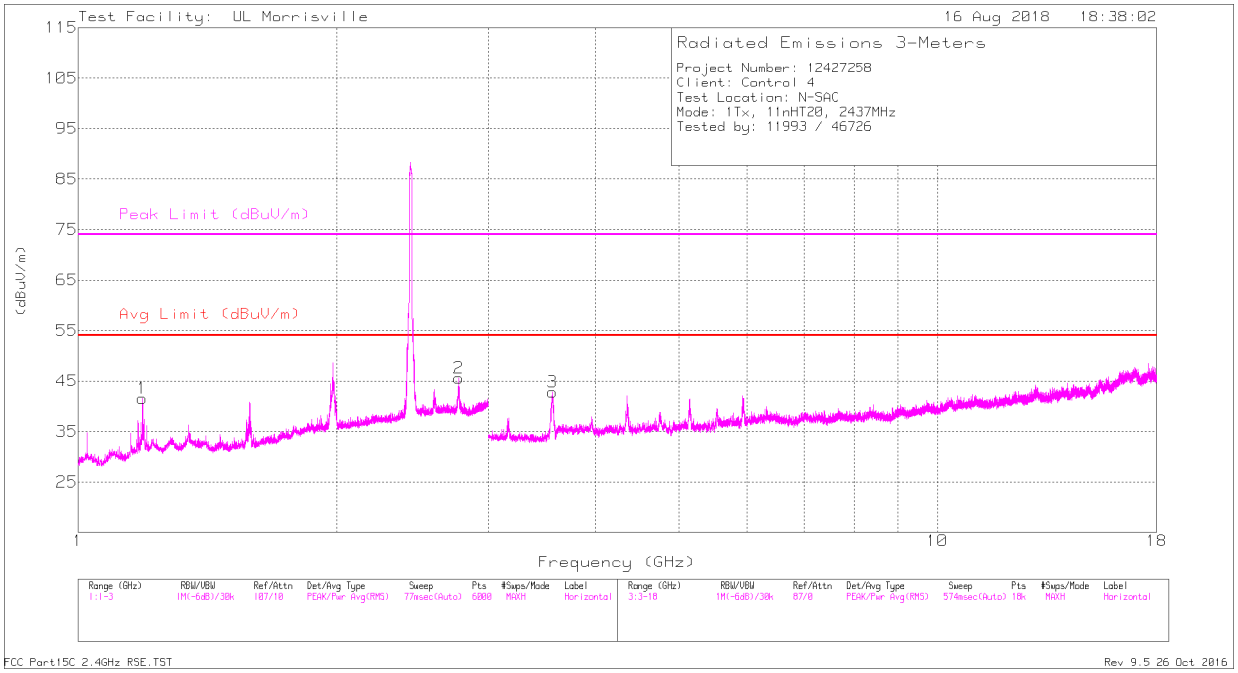
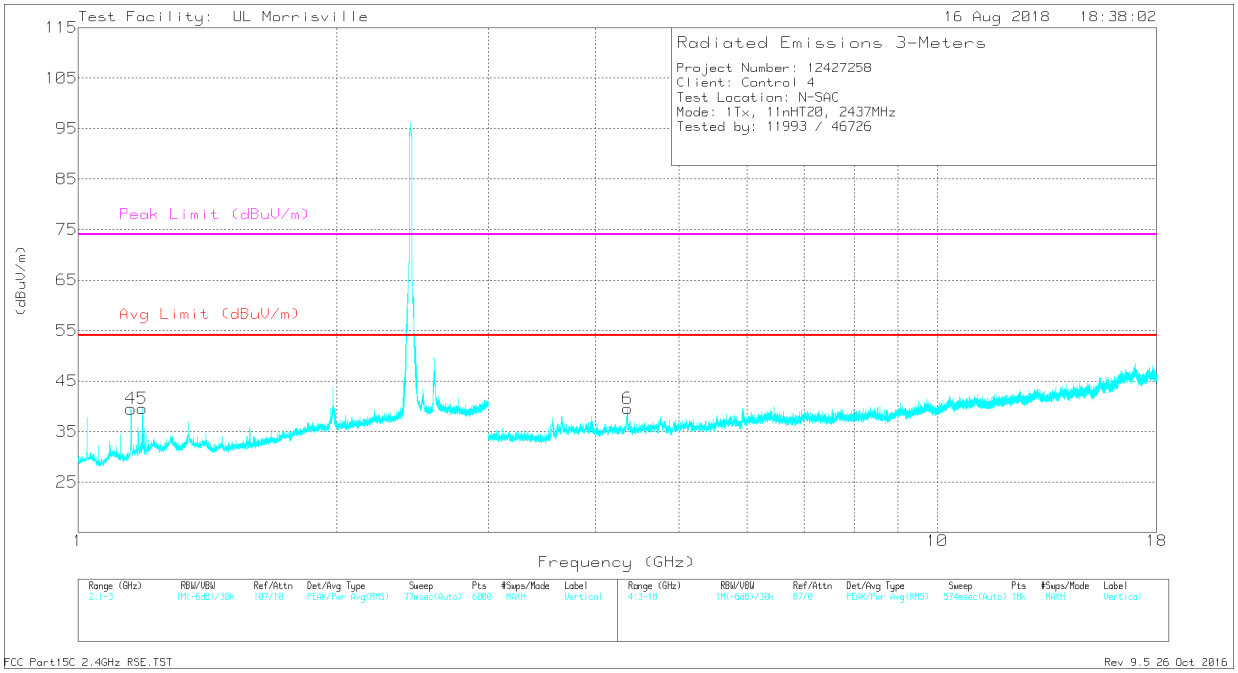
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.188	45.03	PK2	28.3	-26.3	0	47.03	-	-	74	-26.97	185	185	H
	* ** 1.188	32.72	MAv1	28.3	-26.3	.14	34.86	54	-19.14	-	-	185	185	H
2	* ** 2.774	40.58	PK2	32.2	-23.9	0	48.88	-	-	74	-25.12	185	103	H
	* ** 2.772	28.37	MAv1	32.2	-23.9	.14	36.81	54	-17.19	-	-	185	103	H
3	* ** 3.564	53.38	PK2	33	-32.6	0	53.78	-	-	74	-20.22	156	190	H
	* ** 3.564	36.47	MAv1	33	-32.6	.14	37.01	54	-16.99	-	-	156	190	H
4	* ** 1.152	43.81	PK2	27.9	-26.5	0	45.21	-	-	74	-28.79	340	178	V
	* ** 1.152	28.42	MAv1	27.9	-26.5	.14	29.96	54	-24.04	-	-	340	178	V
5	* ** 1.188	36.51	PK2	28.3	-26.2	0	38.61	-	-	74	-35.39	340	104	V
	* ** 1.188	24.83	MAv1	28.3	-26.3	.14	26.97	54	-27.03	-	-	340	104	V
6	* ** 4.358	45.94	PK2	33.6	-32.8	0	46.74	-	-	74	-27.26	321	106	V
	* ** 4.356	31.92	MAv1	33.6	-32.8	.14	32.86	54	-21.14	-	-	321	106	V

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

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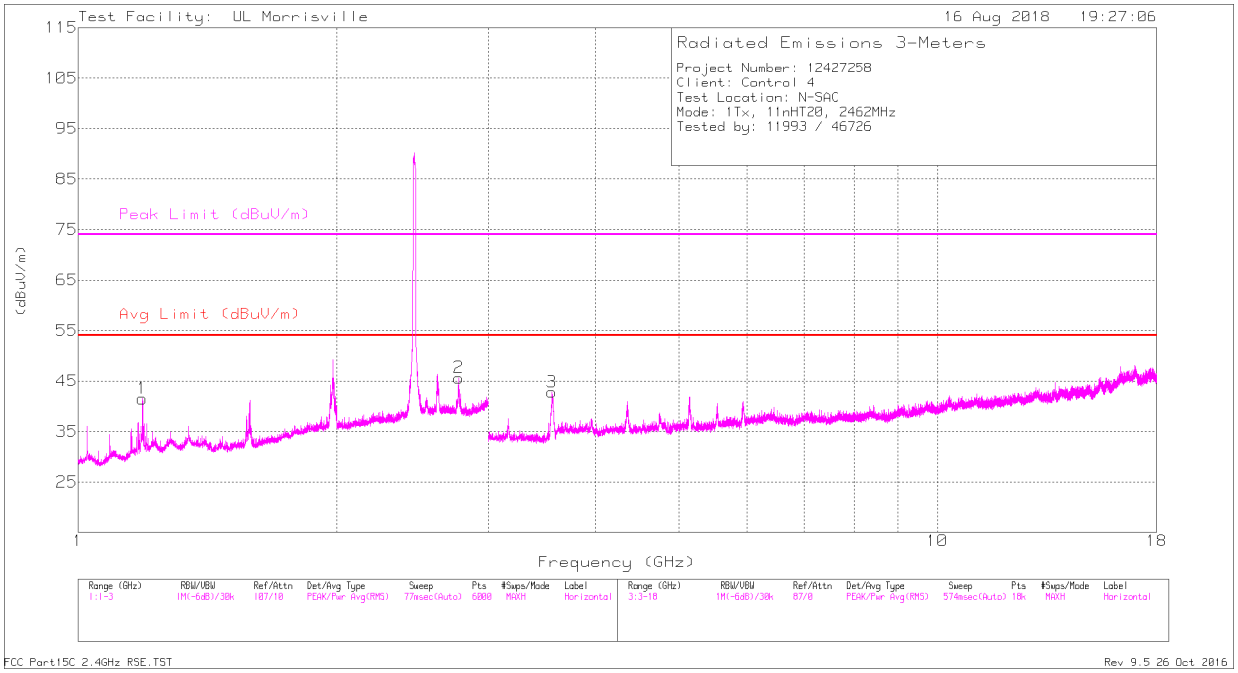
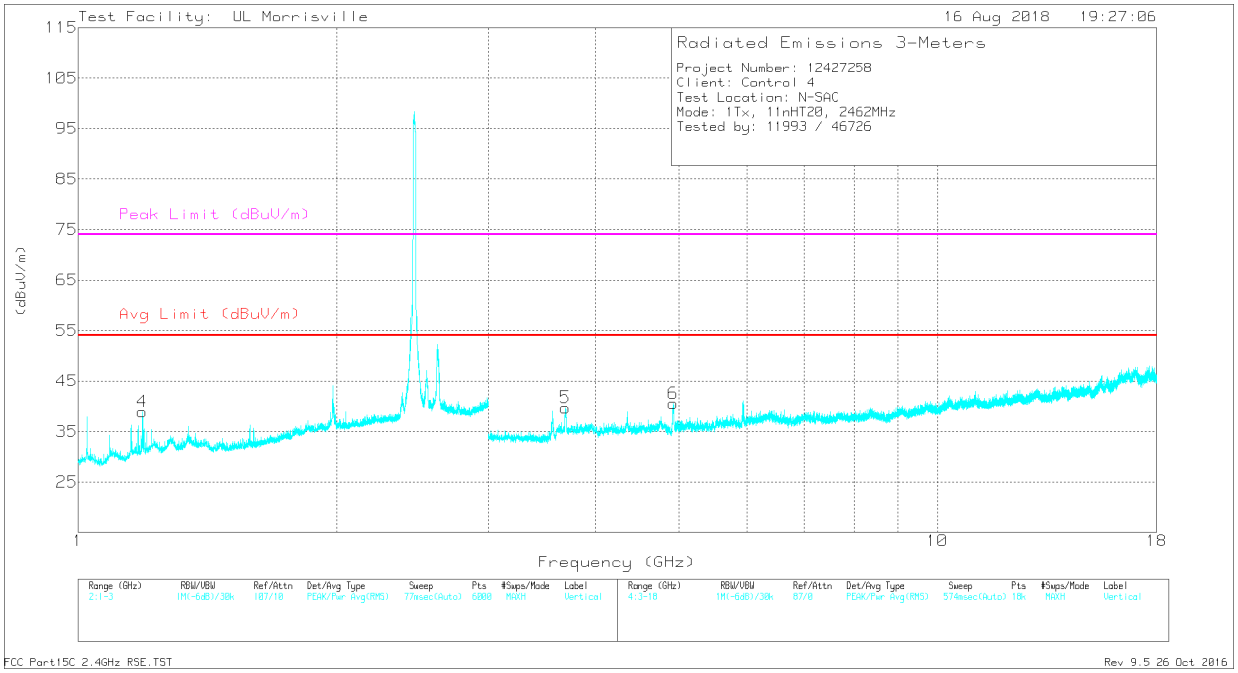
HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.188	44.99	PK2	28.3	-26.3	0	46.99	-	-	74	-27.01	173	206	H
	* ** 1.188	32.94	MAv1	28.3	-26.3	.14	35.08	54	-18.92	-	-	173	206	H
2	* ** 2.772	44.67	PK2	32.2	-23.9	0	52.97	-	-	74	-21.03	141	156	H
	* ** 2.772	30.25	MAv1	32.2	-23.9	.14	38.69	54	-15.31	-	-	141	156	H
3	* ** 3.563	52.15	PK2	33	-32.7	0	52.45	-	-	74	-21.55	135	176	H
	* ** 3.563	35.93	MAv1	33	-32.6	.14	36.47	54	-17.53	-	-	135	176	H
4	* ** 1.188	43.73	PK2	28.3	-26.3	0	45.73	-	-	74	-28.27	28	125	V
	* ** 1.188	31.8	MAv1	28.3	-26.3	.14	33.94	54	-20.06	-	-	28	125	V
5	* ** 3.692	46.25	PK2	33.2	-32.2	0	47.25	-	-	74	-26.75	132	139	V
	* ** 3.693	35.74	MAv1	33.2	-32.2	.14	36.88	54	-17.12	-	-	132	139	V
6	* ** 4.924	47.65	PK2	34.1	-32	0	49.75	-	-	74	-24.25	319	189	V
	* ** 4.924	35.4	MAv1	34.1	-32	.14	37.64	54	-16.36	-	-	319	189	V

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

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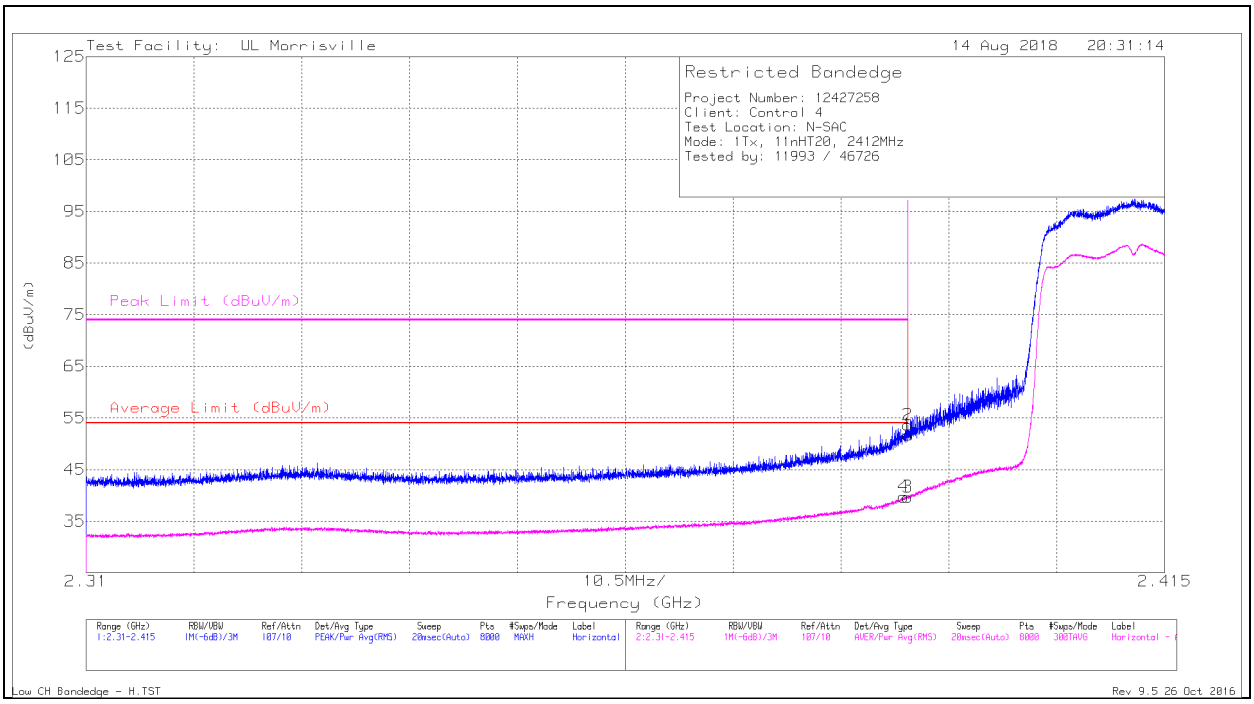
BANDEDGE (LOW CHANNEL, CH 1) – WALL 7

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	44.26	Pk	32	-24.5	0	51.76	-	-	74	-22.24	89	262	H
2	* ** 2.39	46.12	Pk	32	-24.5	0	53.62	-	-	74	-20.38	89	262	H
3	* ** 2.39	32.06	RMS	32	-24.5	.14	39.7	54	-14.3	-	-	89	262	H
4	* ** 2.39	32.09	RMS	32	-24.5	.14	39.73	54	-14.27	-	-	89	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

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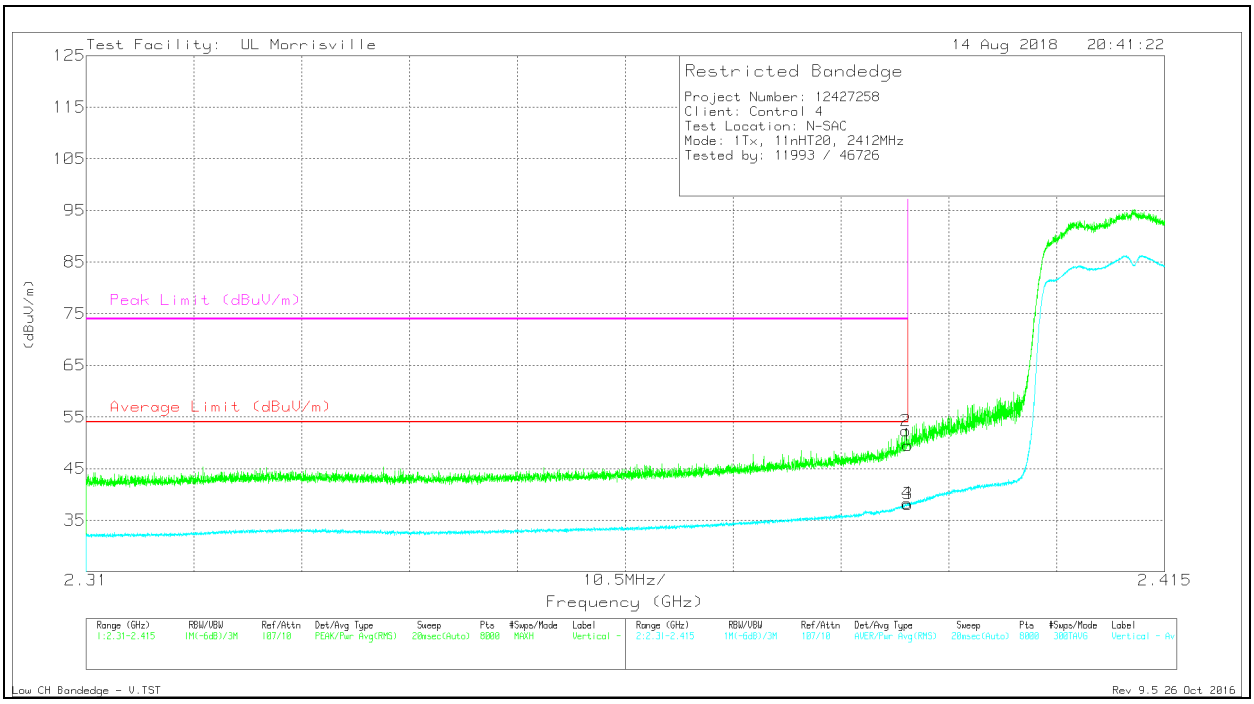
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	42.03	Pk	32	-24.5	0	49.53	-	-	74	-24.47	37	261	V
2	* ** 2.39	44.83	Pk	32	-24.5	0	52.33	-	-	74	-21.67	37	261	V
3	* ** 2.39	30.47	RMS	32	-24.5	.14	38.11	54	-15.89	-	-	37	261	V
4	* ** 2.39	30.63	RMS	32	-24.5	.14	38.27	54	-15.73	-	-	37	261	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

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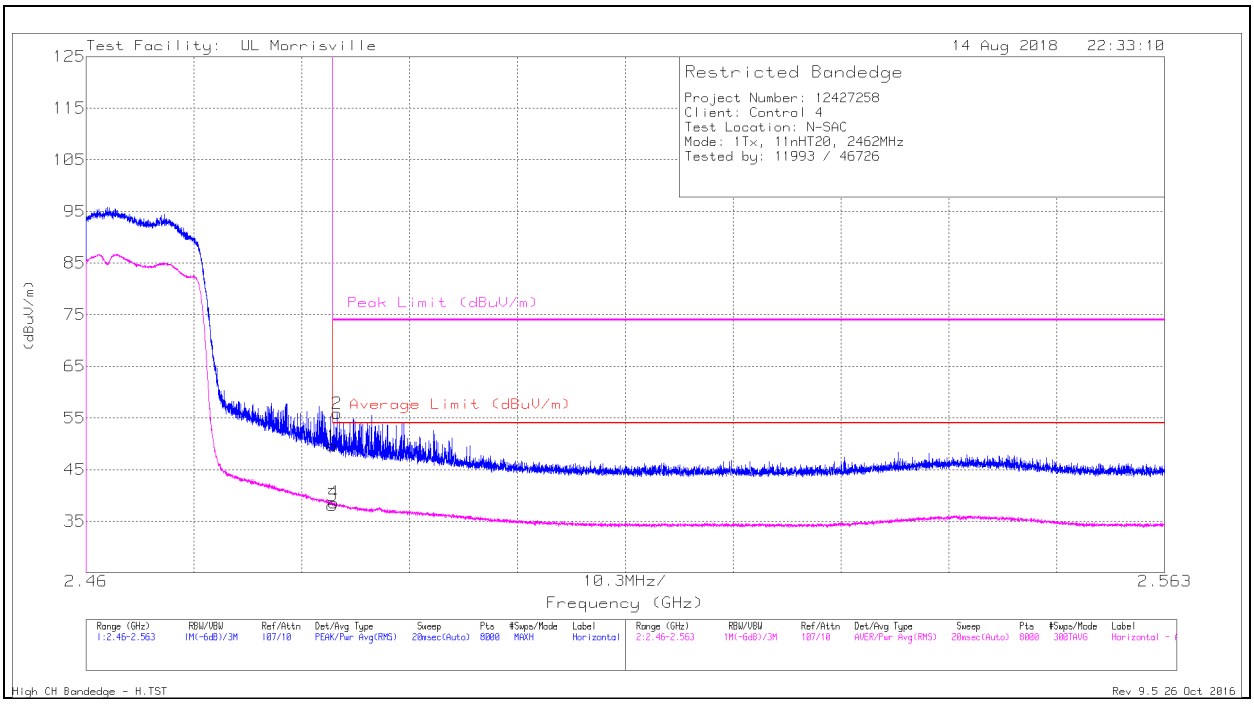
BANDEDGE (HIGH CHANNEL, CH 11) – WALL 7

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	41.57	Pk	32.4	-24.4	0	49.57	-	-	74	-24.43	77	184	H
2	* ** 2.484	47.84	Pk	32.4	-24.4	0	55.84	-	-	74	-18.16	77	184	H
3	* ** 2.484	29.95	RMS	32.4	-24.4	.14	38.09	54	-15.91	-	-	77	184	H
4	* ** 2.484	30.45	RMS	32.4	-24.4	.14	38.59	54	-15.41	-	-	77	184	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

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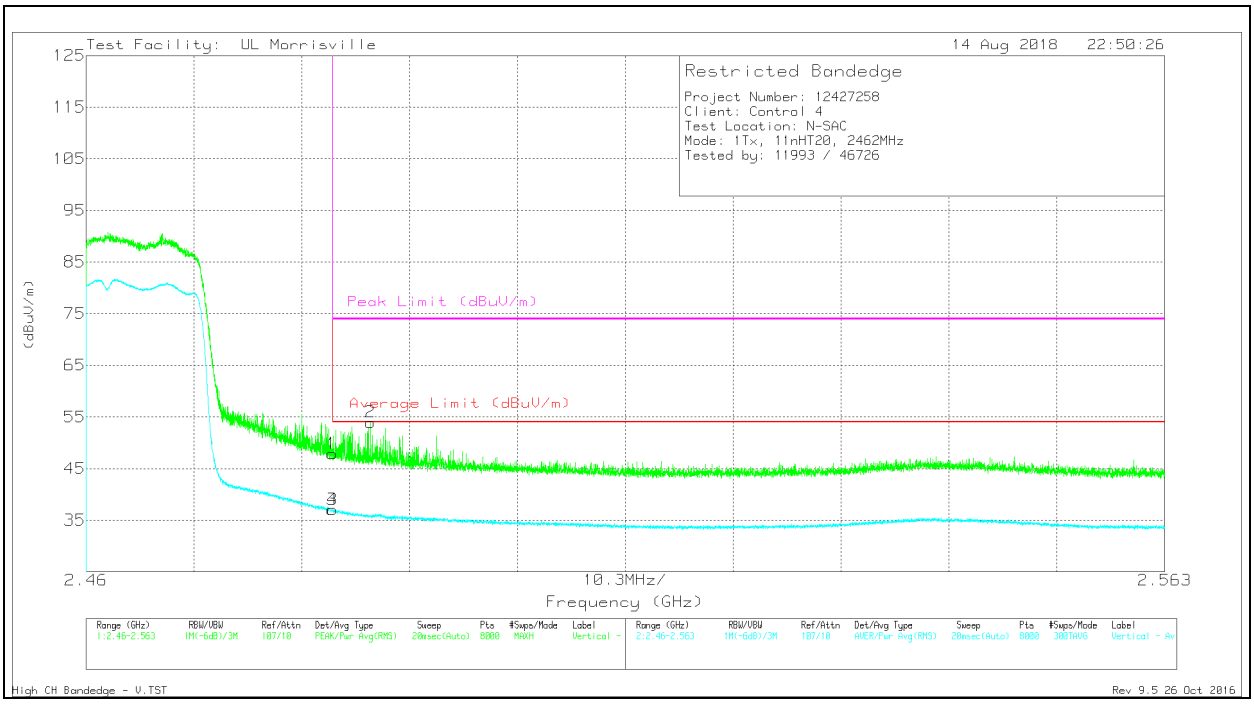
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.484	39.86	Pk	32.4	-24.4	0	47.86	-	-	74	-26.14	173	147	V
2	* ** 2.487	45.97	Pk	32.4	-24.4	0	53.97	-	-	74	-20.03	173	147	V
3	* ** 2.484	28.9	RMS	32.4	-24.4	.14	37.04	54	-16.96	-	-	173	147	V
4	* ** 2.484	28.9	RMS	32.4	-24.4	.14	37.04	54	-16.96	-	-	173	147	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

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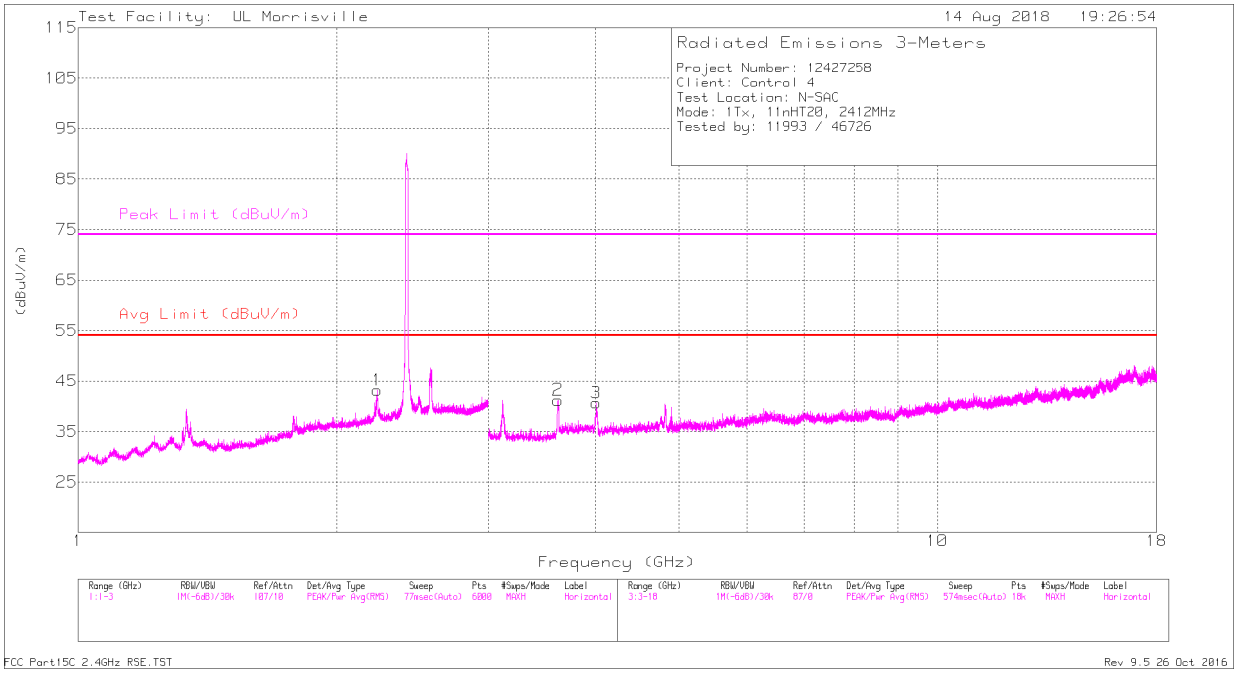
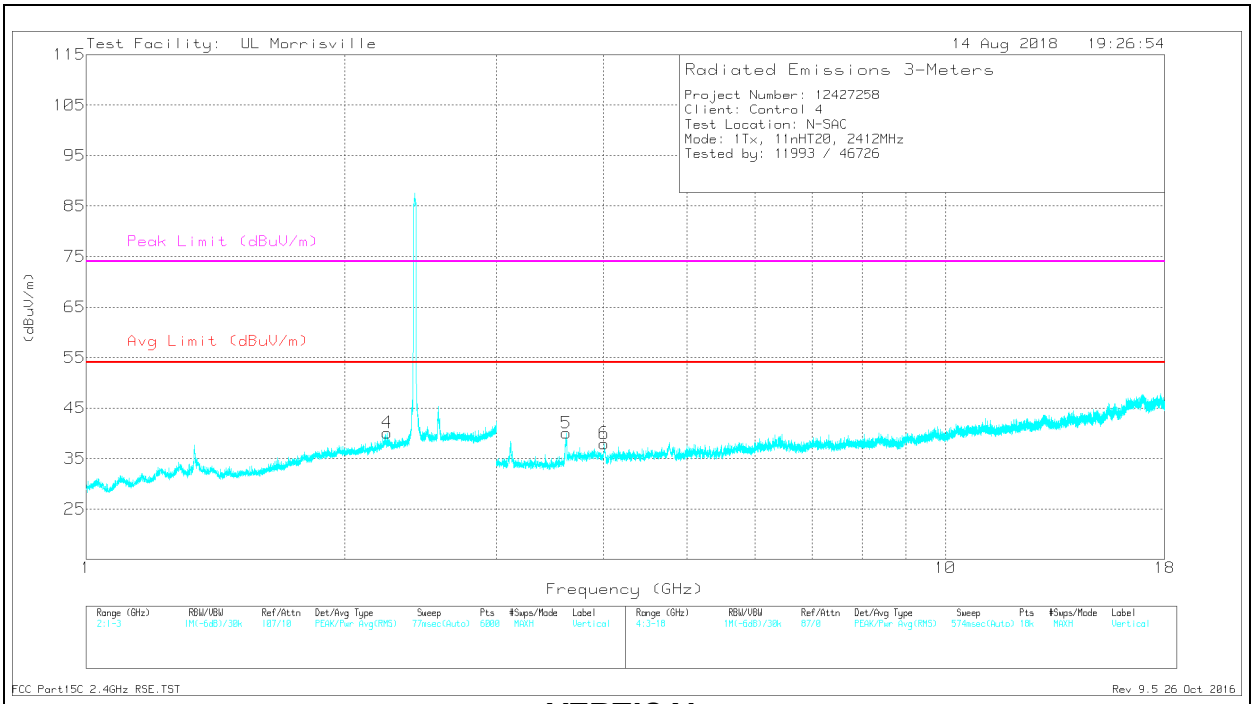
HARMONICS AND SPURIOUS EMISSIONS – WALL 7

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.225	43.76	PK2	31.7	-24.5	0	50.96	-	-	74	-23.04	322	124	H
	* ** 2.226	28.77	MAv1	31.7	-24.5	.14	36.11	54	-17.89	-	-	322	124	H
2	* ** 3.618	47.04	PK2	32.9	-31.9	0	48.04	-	-	74	-25.96	312	102	H
	* ** 3.619	37.11	MAv1	32.9	-31.9	.14	38.25	54	-15.75	-	-	312	102	H
3	* ** 4.01	46.19	PK2	33.5	-32.3	0	47.39	-	-	74	-26.61	4	112	H
	* ** 4.008	32.16	MAv1	33.5	-32.4	.14	33.4	54	-20.6	-	-	4	112	H
4	* ** 2.24	39.51	PK2	31.8	-24.5	0	46.81	-	-	74	-27.19	289	203	V
	* ** 2.24	25.59	MAv1	31.8	-24.5	.14	33.03	54	-20.97	-	-	289	203	V
5	* ** 3.618	46.94	PK2	32.9	-31.9	0	47.94	-	-	74	-26.06	66	282	V
	* ** 3.619	36.95	MAv1	32.9	-31.9	.14	38.09	54	-15.91	-	-	66	282	V
6	* ** 4.007	48.39	PK2	33.5	-32.4	0	49.49	-	-	74	-24.51	178	131	V
	* ** 4.008	32.19	MAv1	33.5	-32.4	.14	33.43	54	-20.57	-	-	178	131	V

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

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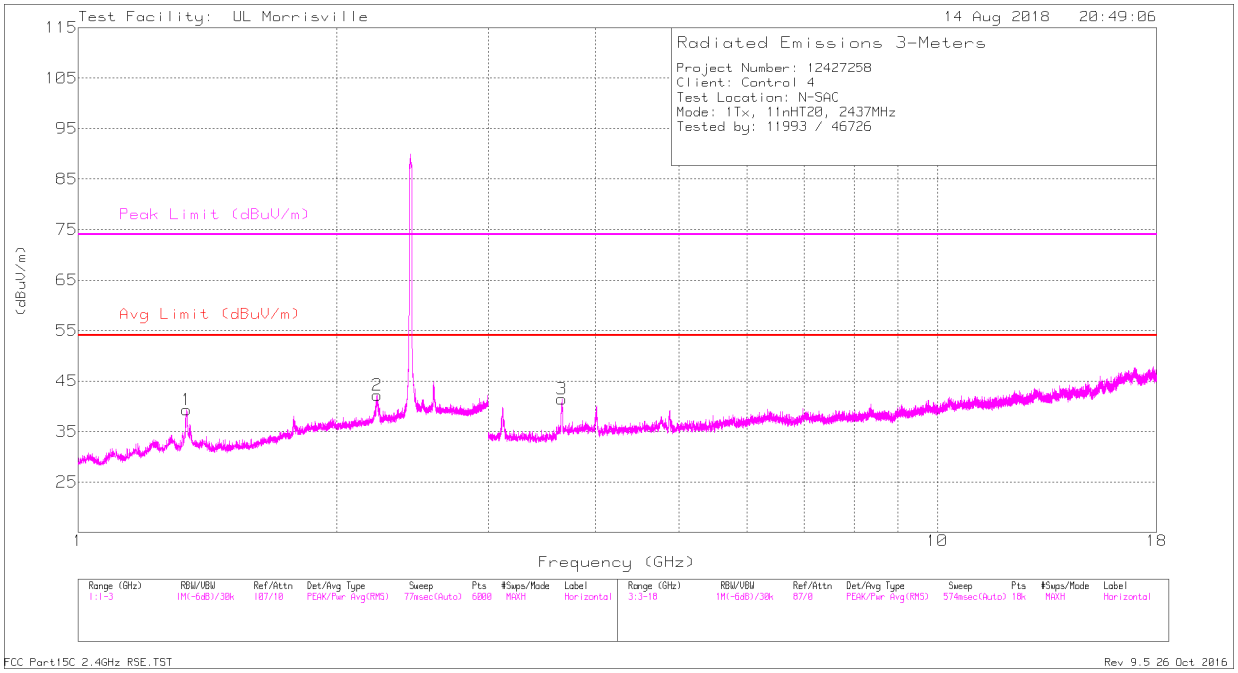
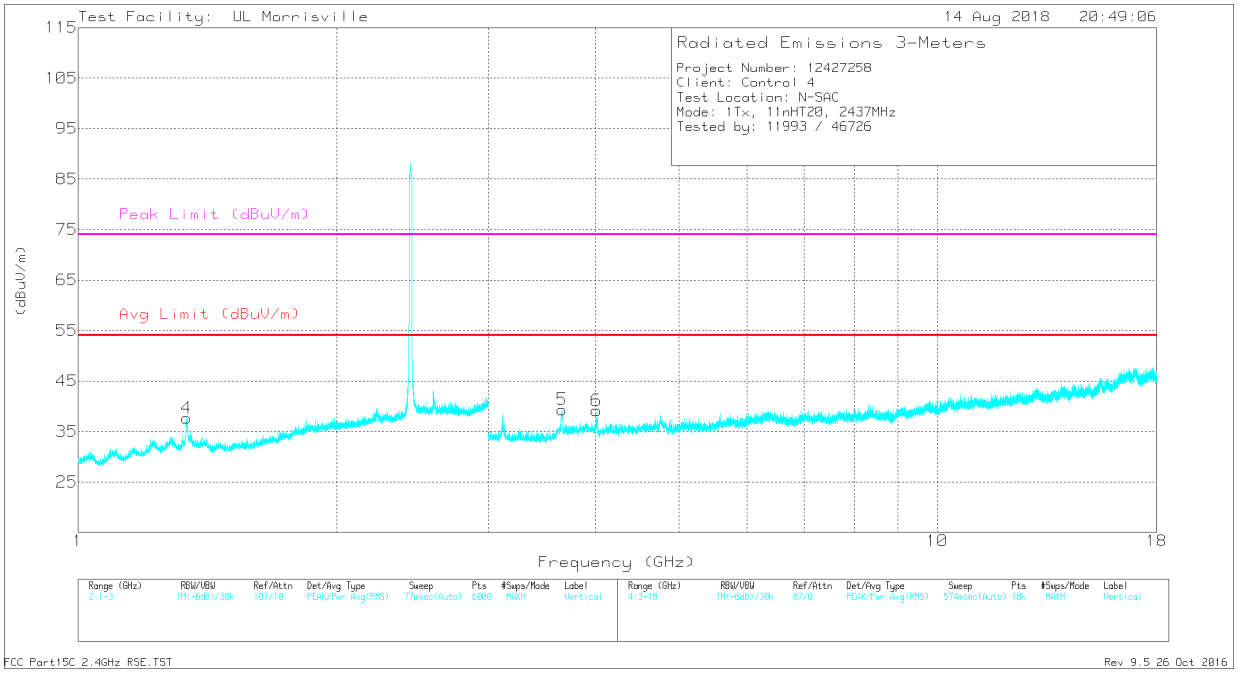
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.335	45.76	PK2	29.1	-25.6	0	49.26	-	-	74	-24.74	323	106	H
	* ** 1.337	29.96	MAv1	29.2	-25.6	.14	33.7	54	-20.3	-	-	323	106	H
2	* ** 2.227	42.87	PK2	31.7	-24.5	0	50.07	-	-	74	-23.93	89	106	H
	* ** 2.227	27.99	MAv1	31.7	-24.5	.14	35.33	54	-18.67	-	-	89	106	H
3	* ** 3.655	47	PK2	33	-31.6	0	48.4	-	-	74	-25.6	324	200	H
	* ** 3.655	36.91	MAv1	33	-31.6	.14	38.45	54	-15.55	-	-	324	200	H
4	* ** 1.338	45.99	PK2	29.2	-25.6	0	49.59	-	-	74	-24.41	276	157	V
	* ** 1.337	28.66	MAv1	29.2	-25.6	.14	32.4	54	-21.6	-	-	276	157	V
5	* ** 3.656	46.43	PK2	33	-31.6	0	47.83	-	-	74	-26.17	70	269	V
	* ** 3.655	36.42	MAv1	33	-31.6	.14	37.96	54	-16.04	-	-	70	269	V
6	* ** 4.012	45.99	PK2	33.5	-32.3	0	47.19	-	-	74	-26.81	181	263	V
	* ** 4.011	31.67	MAv1	33.5	-32.3	.14	33.01	54	-20.99	-	-	181	263	V

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

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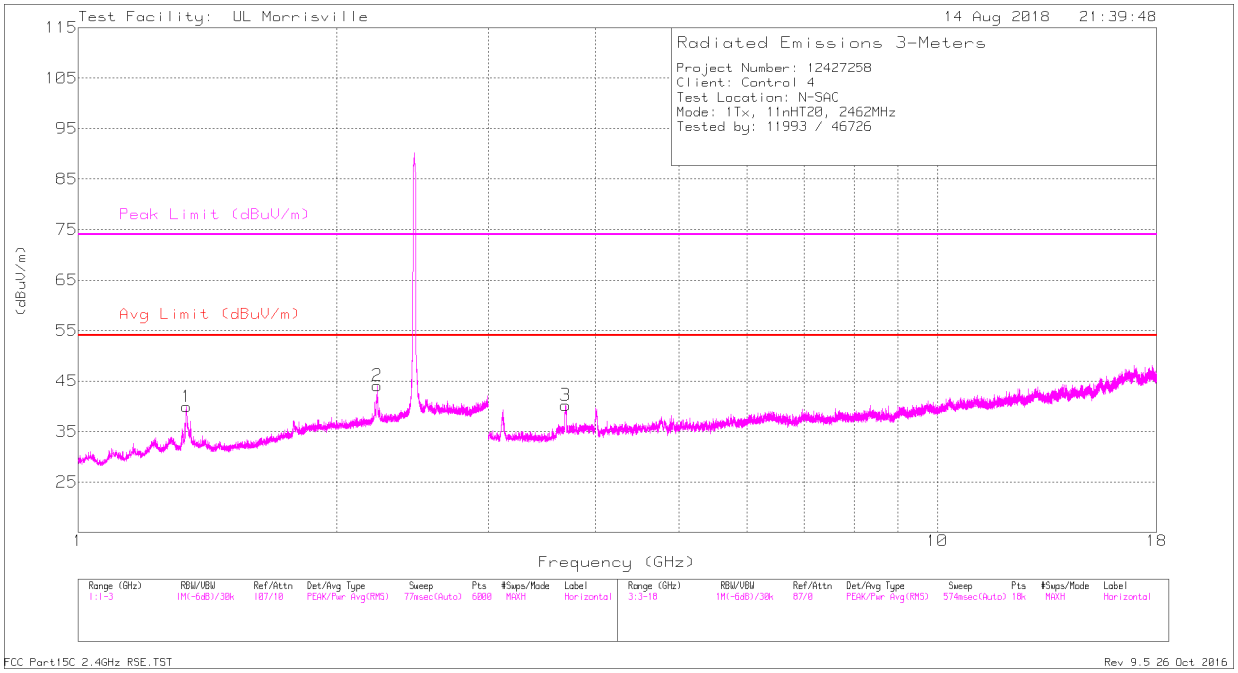
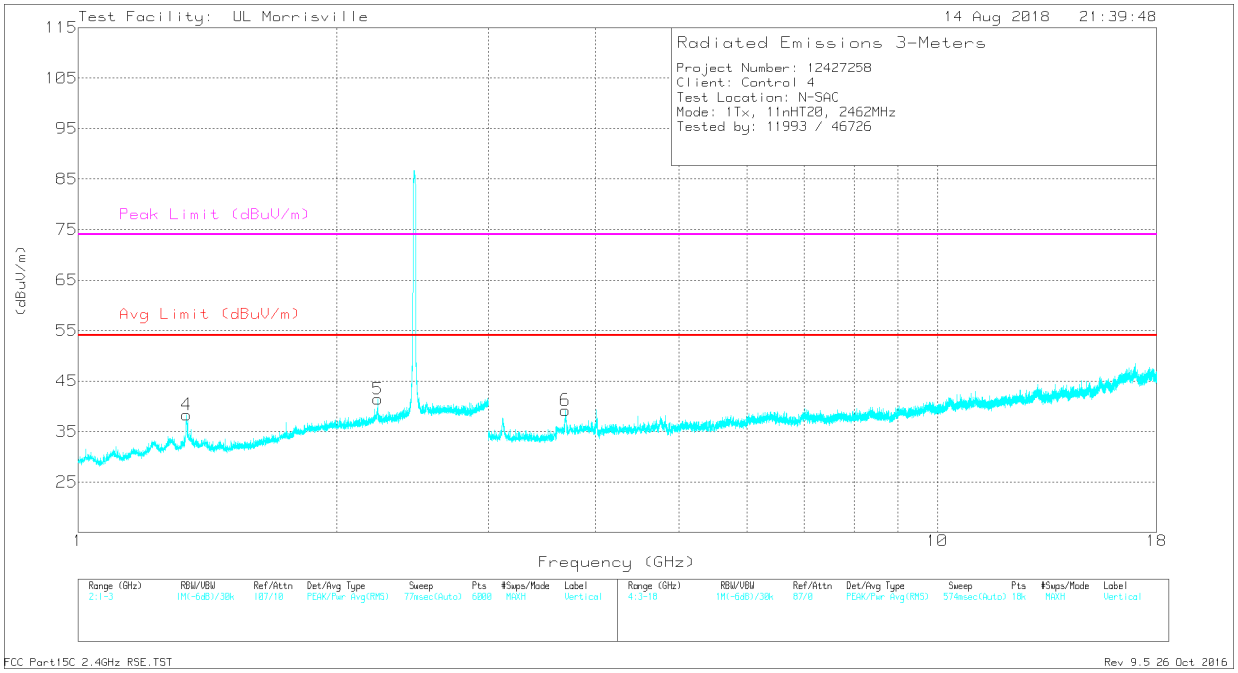
HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



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RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 AF (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.336	46.65	PK2	29.1	-25.6	0	50.15	-	-	74	-23.85	325	113	H
	* ** 1.337	30.37	MAv1	29.2	-25.6	.14	34.11	54	-19.89	-	-	325	113	H
2	* ** 2.227	45.79	PK2	31.7	-24.5	0	52.99	-	-	74	-21.01	314	102	H
	* ** 2.227	29.15	MAv1	31.7	-24.5	.14	36.49	54	-17.51	-	-	314	102	H
3	* ** 3.693	46.47	PK2	33.2	-32.2	0	47.47	-	-	74	-26.53	148	113	H
	* ** 3.693	36.45	MAv1	33.2	-32.2	.14	37.59	54	-16.41	-	-	148	113	H
4	* ** 1.338	43.8	PK2	29.2	-25.6	0	47.4	-	-	74	-26.6	271	148	V
	* ** 1.337	28.57	MAv1	29.2	-25.6	.14	32.31	54	-21.69	-	-	271	148	V
5	* ** 2.228	41.96	PK2	31.7	-24.5	0	49.16	-	-	74	-24.84	301	245	V
	* ** 2.227	27.49	MAv1	31.7	-24.5	.14	34.83	54	-19.17	-	-	301	245	V
6	* ** 3.689	45.79	PK2	33.2	-32.2	0	46.79	-	-	74	-27.21	59	265	V
	* ** 3.688	35.09	MAv1	33.2	-32.1	.14	36.33	54	-17.67	-	-	59	265	V

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

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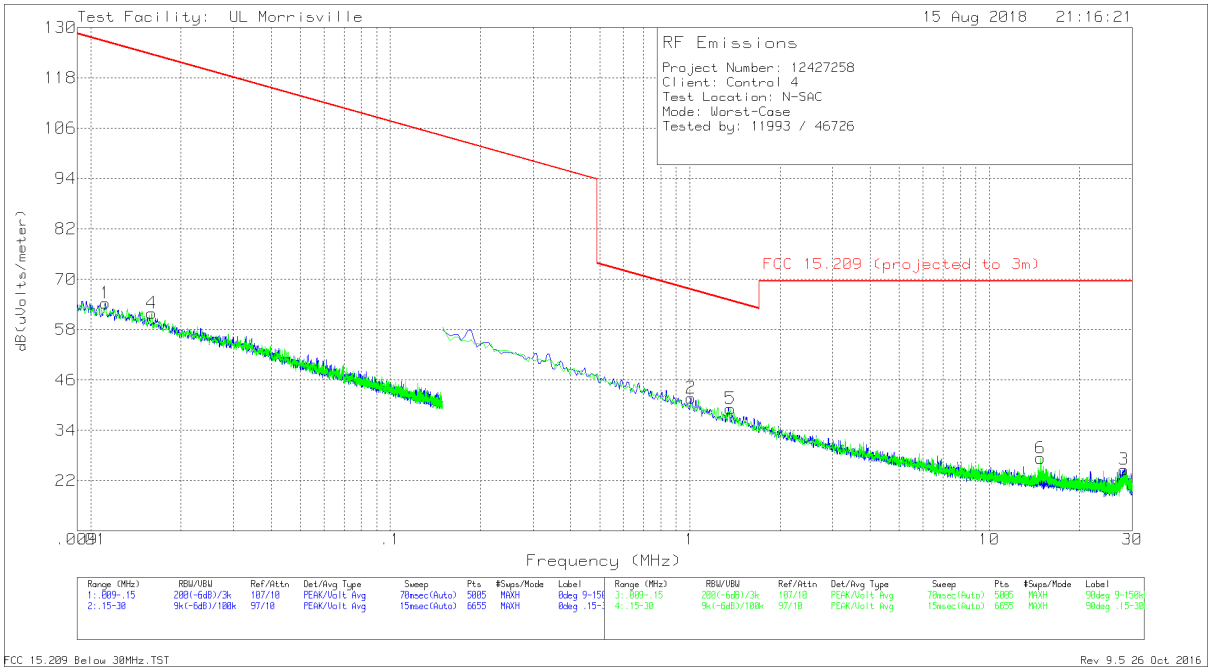
10.2. WORST-CASE RADIATED

10.2.1. 9kHz – 30MHz WORST-CASE MODE – WALL 10

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

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



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 QP (projected to 3m)	FCC 15.209 AV (projected to 3m)	FCC 15.209 PK (projected to 3m)	Worst - Case Margin (dB)	Azimuth (Degs)
1	.01118	46.04	Pk	18.2	.1	64.34	-	126.63	146.63	-62.29	0-360
4	.01597	45.64	Pk	16.2	.1	61.94	-	123.54	143.54	-61.6	0-360
2	1.01131	30.04	Pk	11.5	.2	41.74	67.51	-	-	-25.77	0-360
5	1.36571	27.5	Pk	11.5	.2	39.2	64.9	-	-	-25.7	0-360
6	14.83716	16.5	Pk	10.3	.6	27.4	69.54	-	-	-42.14	0-360
3	28.17404	15.47	Pk	8.3	.9	24.67	69.54	-	-	-44.87	0-360

Pk - Peak detector

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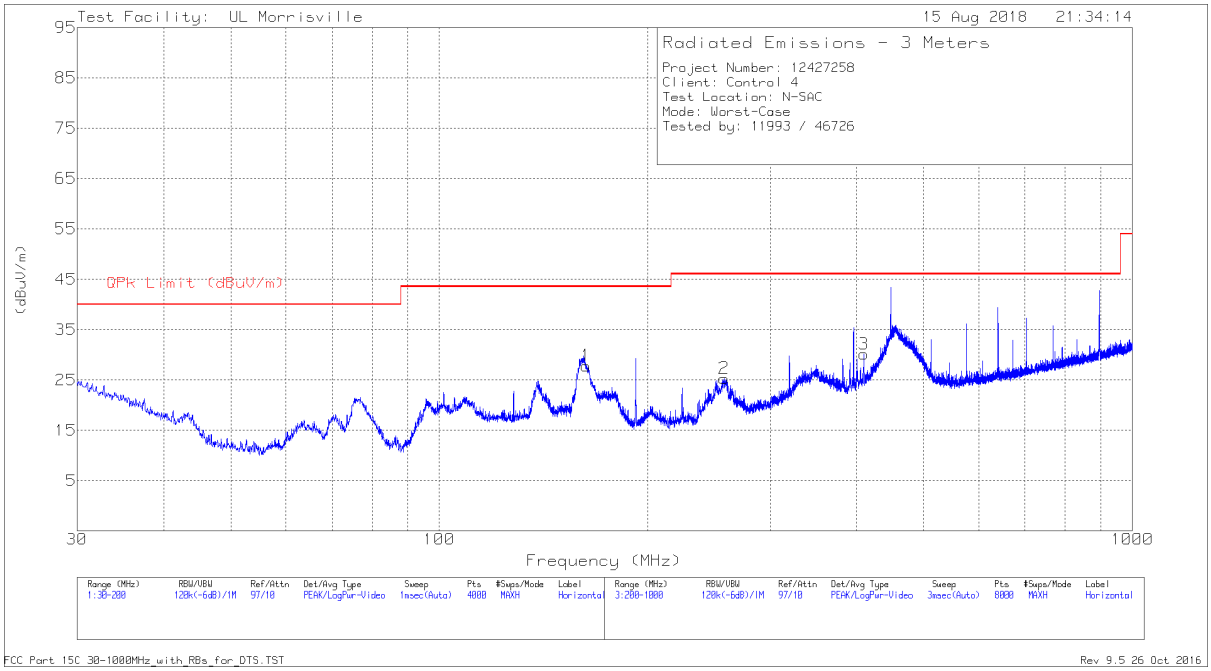
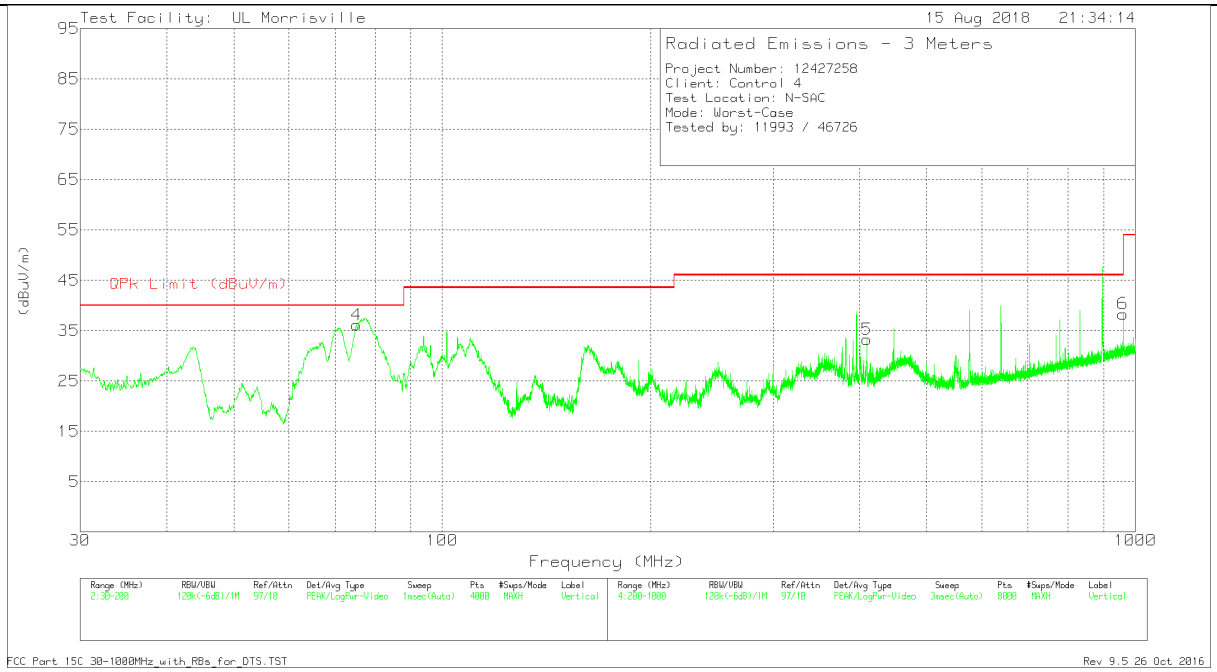
10.2.2. 30-1000MHz WORST-CASE MODE – WALL 10



HORIZONTAL



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Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 ACF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 162.8044	39.54	Pk	18.7	-30.4	27.84	43.52	-15.68	0-360	199	H
2	* ** 257.6075	36.52	Pk	18.5	-29.7	25.32	46.02	-20.7	0-360	103	H
3	* ** 409.9273	36.34	Pk	22.6	-28.8	30.14	46.02	-15.88	0-360	199	H
5	* ** 409.9273	39.44	Pk	22.6	-28.8	33.24	46.02	-12.78	0-360	102	V
4	** 75.3802	42.28	Qp	14.3	-31.2	25.38	40	-14.62	360	129	V
6	* ** 960.0988	34.43	Pk	29.5	-25.6	38.33	53.97	-15.64	0-360	102	V

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

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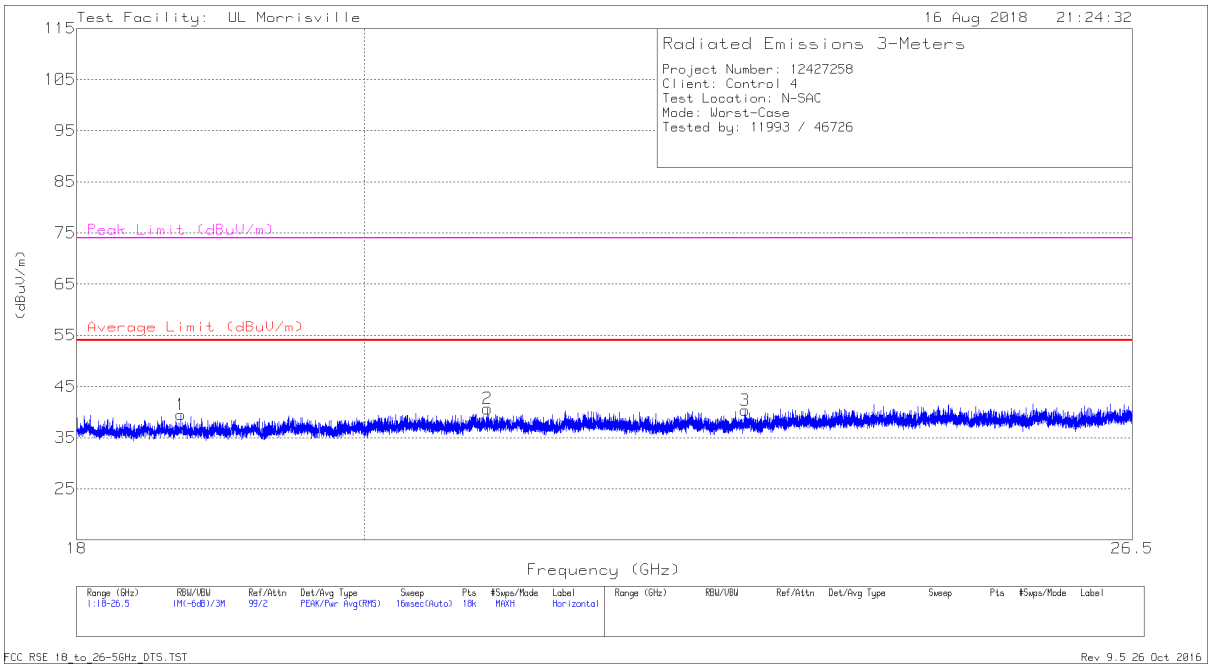
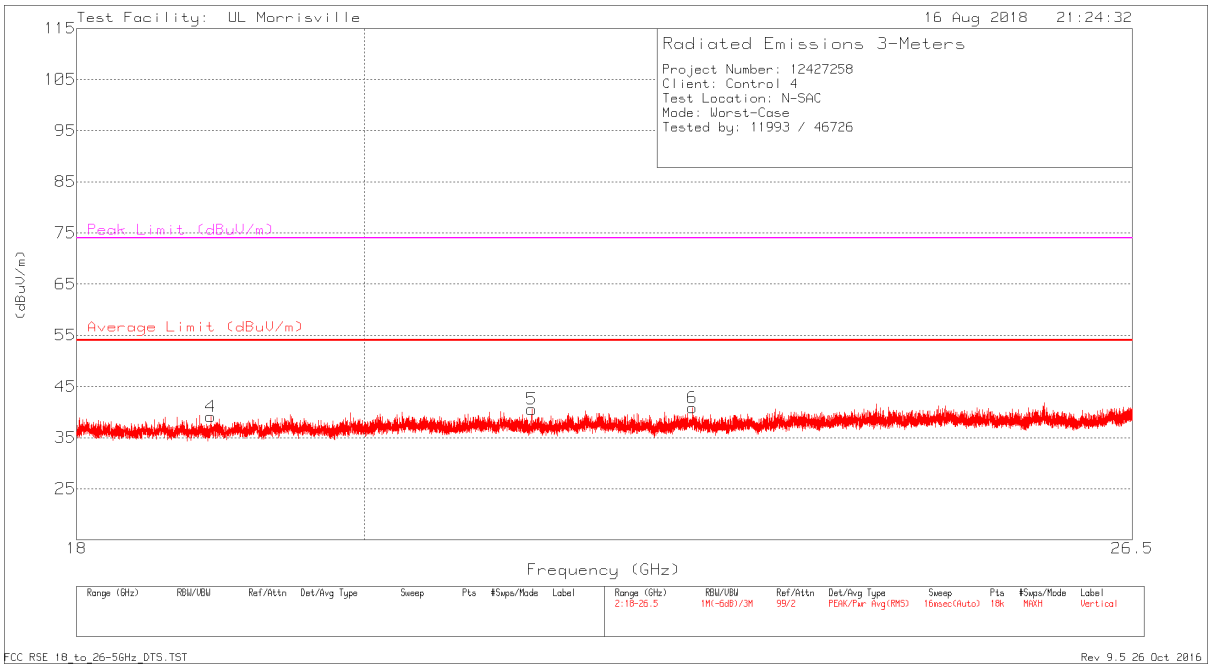
10.2.3. 18-26GHz WORST-CASE MODE – WALL 10



HORIZONTAL



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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	* ** 18.7	47.59	Pk	32.5	-40.6	39.49	54	-14.51	74	-34.51	0-360	249	H
2	* ** 20.924	48.66	Pk	33.2	-41.2	40.66	54	-13.34	74	-33.34	0-360	299	H
3	* ** 22.994	47.13	Pk	33.8	-40.6	40.33	54	-13.67	74	-33.67	0-360	198	H
4	* ** 18.906	47.31	Pk	32.7	-40.9	39.11	54	-14.89	74	-34.89	0-360	251	V
5	* ** 21.267	48.54	Pk	33.1	-41.1	40.54	54	-13.46	74	-33.46	0-360	152	V
6	* ** 22.554	47.9	Pk	33.7	-40.8	40.8	54	-13.2	74	-33.2	0-360	152	V

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

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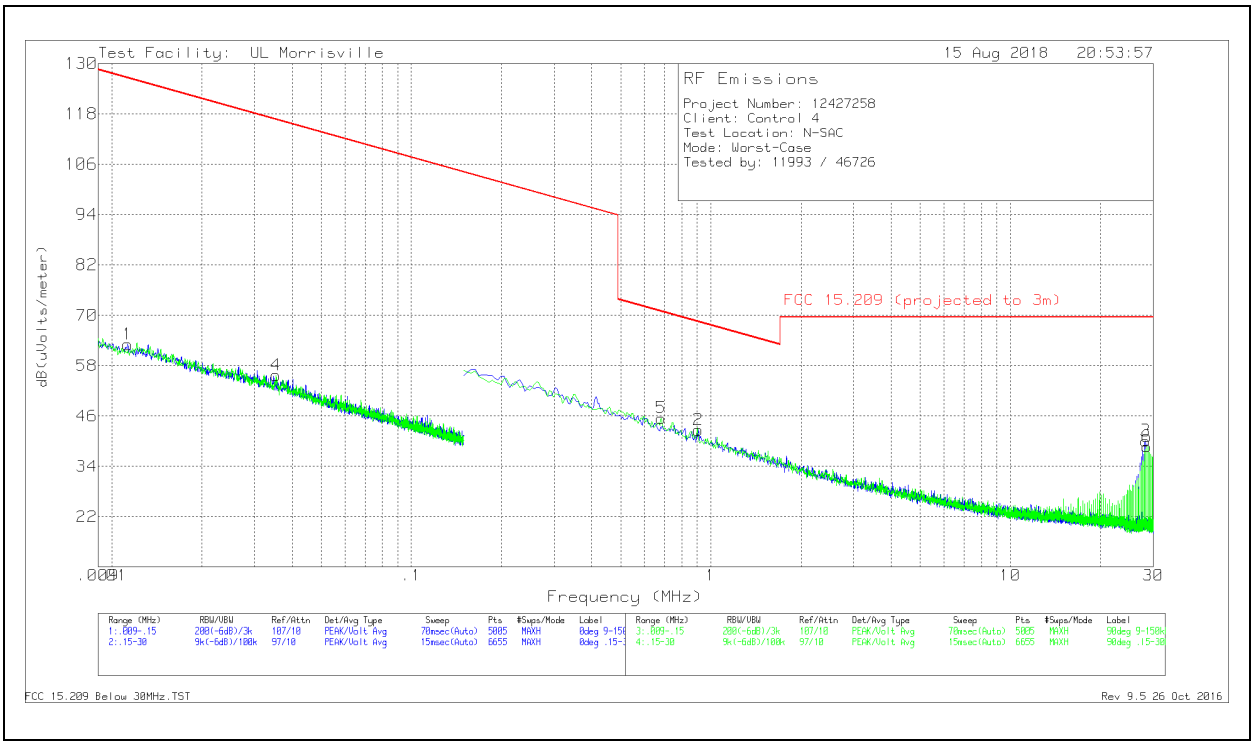
10.2.4. 9kHz – 30MHz WORST-CASE MODE – WALL 7

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

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



Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 QP (projected to 3m)	FCC 15.209 AV (projected to 3m)	FCC 15.209 PK (projected to 3m)	Worst-Case Margin (dB)	Azimuth (Degs)
1	.01131	44.77	Pk	18.2	.1	63.07	-	126.54	146.54	-63.47	0-360
4	.03538	42.41	Pk	13.2	.1	55.71	-	116.63	136.63	-60.92	0-360
5	.68383	33.91	Pk	11.5	.1	45.51	70.91	-	-	-25.4	0-360
2	.90813	31.08	Pk	11.5	.1	42.68	68.44	-	-	-25.76	0-360
3	28.25928	30.97	Pk	8.2	.9	40.07	69.54	-	-	-29.47	0-360
6	28.56432	29.63	Pk	8.2	.9	38.73	69.54	-	-	-30.81	0-360

Pk - Peak detector

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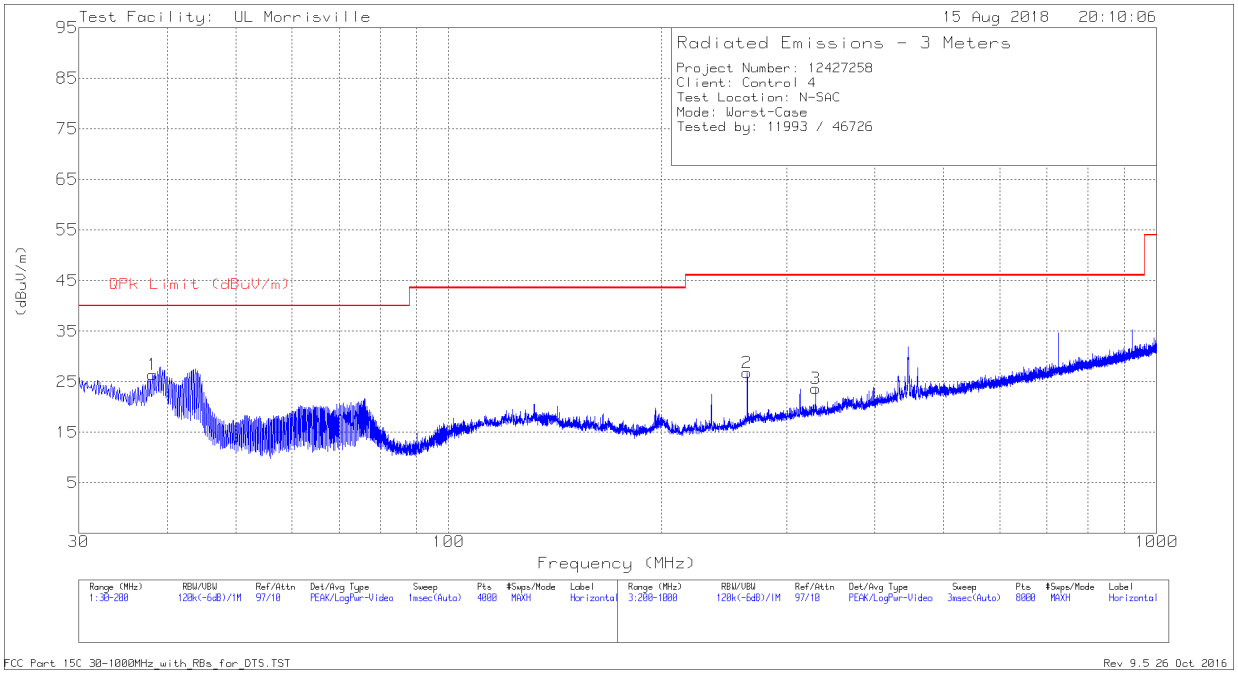
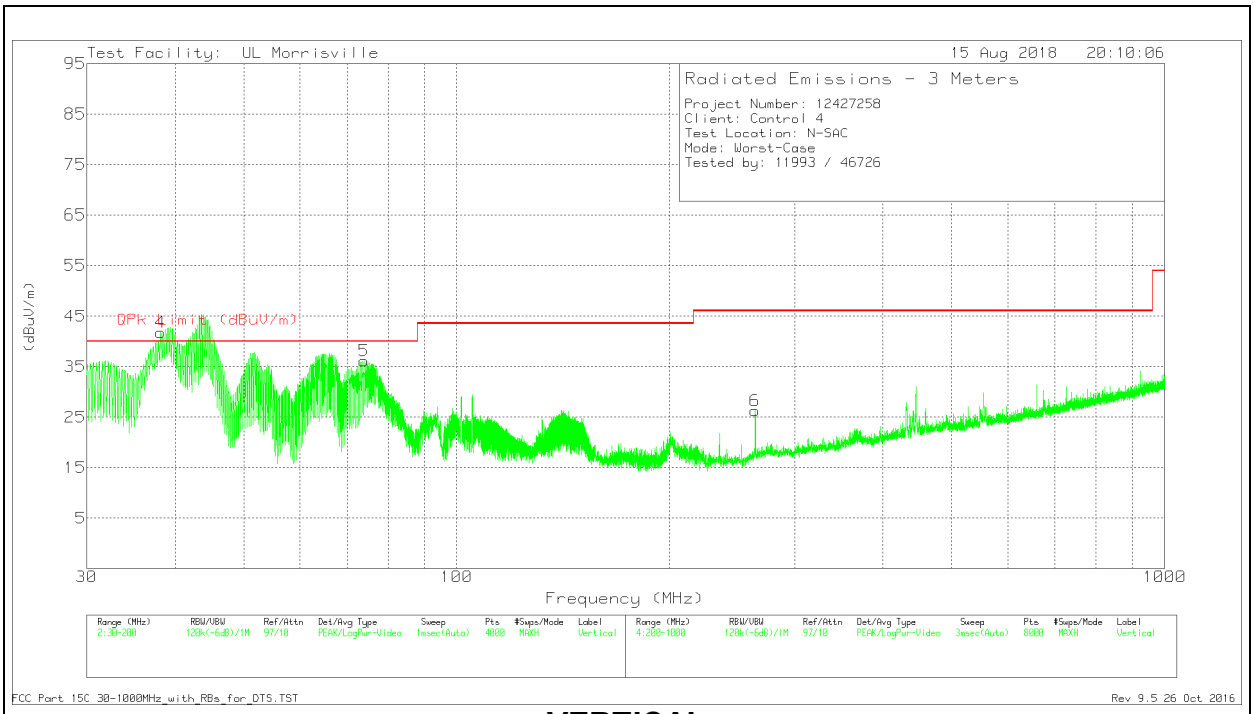
10.2.5. 30-1000MHz WORST-CASE MODE – WALL 7



HORIZONTAL



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Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 ACF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 38.1621	36.11	Pk	21.9	-31.6	26.41	40	-13.59	0-360	199	H
2	* ** 264.0083	37.15	Pk	19.3	-29.7	26.75	46.02	-19.27	0-360	102	H
3	* ** 330.0169	32.14	Pk	20.7	-29.2	23.64	46.02	-22.38	0-360	102	H
4	* ** 38.1736	48.7	Qp	21.9	-31.6	39	40	-1	284	109	V
5	* ** 73.9742	51.51	Qp	14.3	-31.2	34.61	40	-5.39	360	106	V
6	* ** 264.0083	36.68	Pk	19.3	-29.7	26.28	46.02	-19.74	0-360	199	V

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

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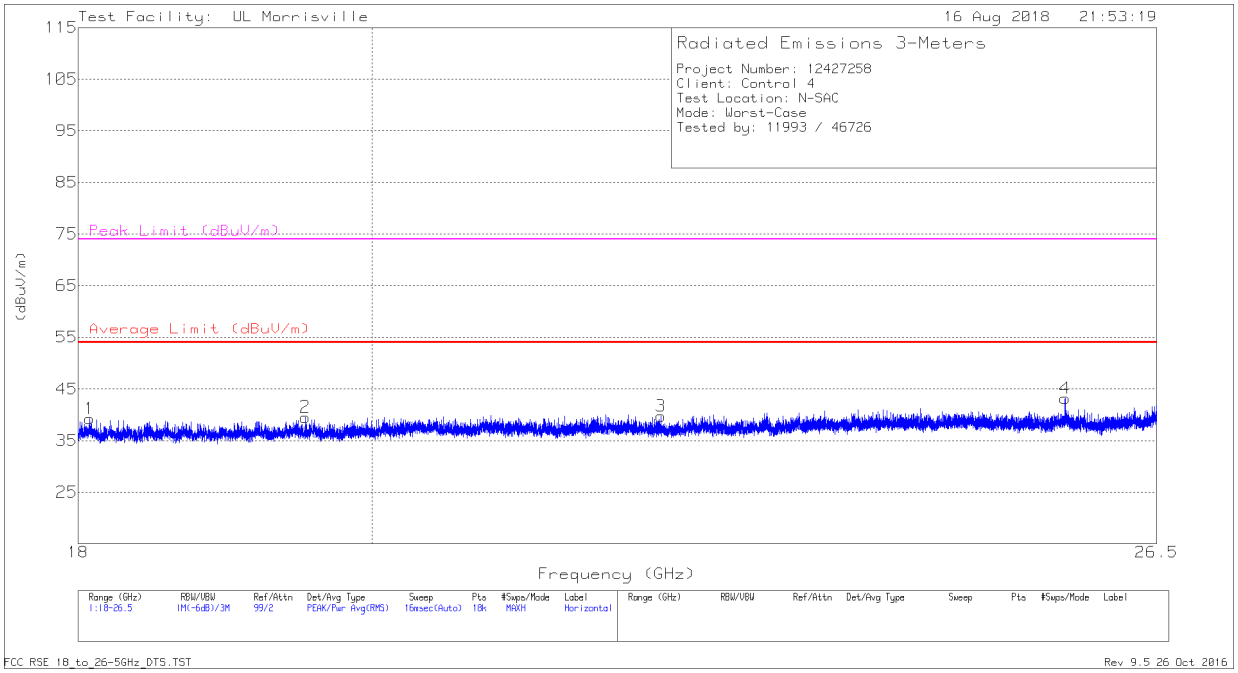
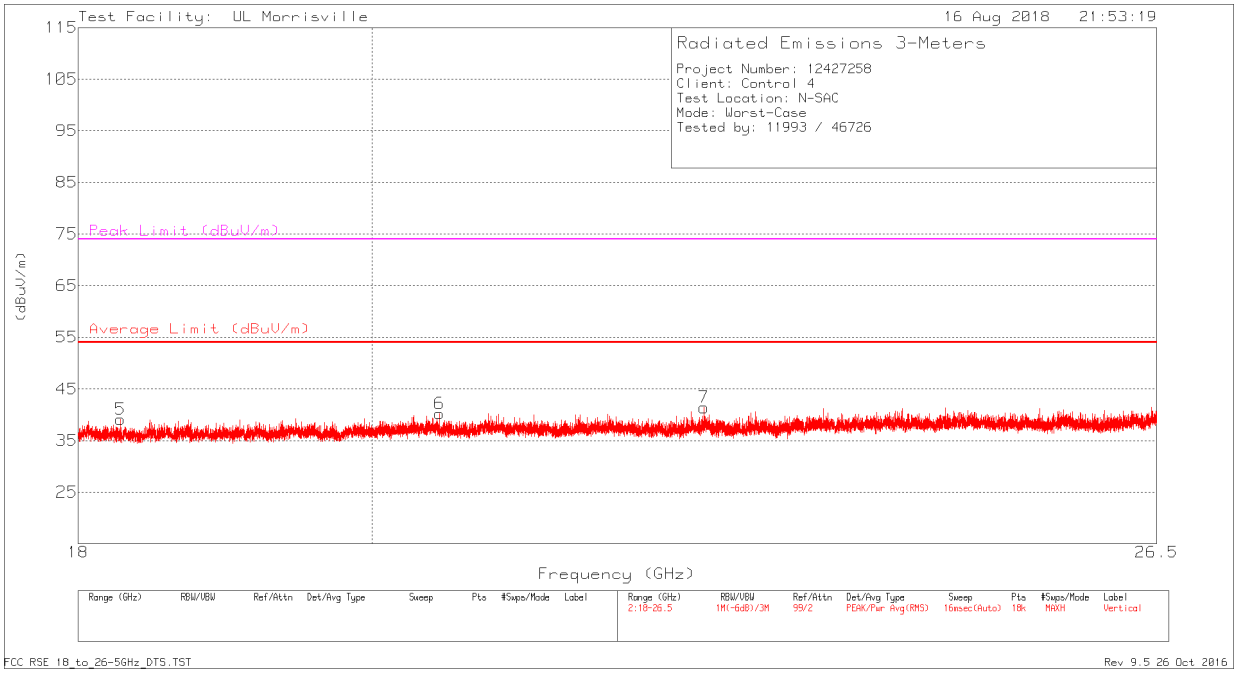
10.2.6. 18-26GHz WORST-CASE MODE – WALL 7



HORIZONTAL



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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	* ** 18.074	47.22	Pk	32.4	-40.4	39.22	54	-14.78	74	-34.78	0-360	149	H
2	* ** 19.529	48.03	Pk	32.7	-41.2	39.53	54	-14.47	74	-34.47	0-360	249	H
3	* ** 22.186	46.9	Pk	33.6	-40.8	39.7	54	-14.3	74	-34.3	0-360	149	H
5	* ** 18.276	47.39	Pk	32.3	-40.6	39.09	54	-14.91	74	-34.91	0-360	102	V
6	* ** 20.489	48.29	Pk	33.1	-41.2	40.19	54	-13.81	74	-33.81	0-360	202	V
7	* ** 22.527	48.4	Pk	33.7	-40.7	41.4	54	-12.6	74	-32.6	0-360	252	V
4	25.644	48.09	Pk	34.3	-39.2	43.19	54	-10.81	74	-30.81	0-360	199	H

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

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11. SETUP PHOTOS

Please refer to R12427258-EP1 for setup photos

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