



# **TEST REPORT**

**Report Number : R13359833-E3**

**Applicant :** Oxford Nanopore Technologies Ltd  
Gosling Building, Edmund Halley Road  
Oxford Science Park  
Oxford, OX4 4DQ  
United Kingdom

**Model :** ONT-07-01191-00

**FCC ID :** 2ARGS-P3310

**IC :** 26200-P3310

**EUT Description :** BT/BLE/WLAN (2.4GHz and 5GHz) Radio Module

**Test Standard(s) :** FCC 47 CFR Part 15 Subpart C  
ISED RSS-247 Issue 2  
ISED RSS-GEN Issue 5 +A1:2019

**Date of Issue:**  
2020-09-02

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

## REPORT REVISION HISTORY

Ver.	Issue Date	Revisions	Revised By
1	2020-09-02	Initial Issue	Brian T. Kiewra

## TABLE OF CONTENTS

REPORT REVISION HISTORY .....	2
TABLE OF CONTENTS .....	3
1. ATTESTATION OF TEST RESULTS .....	4
2. TEST RESULTS SUMMARY .....	5
3. TEST METHODOLOGY .....	5
4. FACILITIES AND ACCREDITATION .....	5
5. DECISION RULES AND MEASUREMENT UNCERTAINTY .....	6
5.1. METROLOGICAL TRACEABILITY .....	6
5.2. DECISION RULES .....	6
5.3. MEASUREMENT UNCERTAINTY .....	6
5.4. SAMPLE CALCULATION .....	6
6. DESCRIPTION OF C2PC .....	7
7. EQUIPMENT UNDER TEST .....	7
7.1. EUT DESCRIPTION .....	7
7.2. MAXIMUM AVERAGE OUTPUT POWER .....	7
7.3. DESCRIPTION OF AVAILABLE ANTENNAS .....	7
7.4. SOFTWARE AND FIRMWARE .....	7
7.5. WORST-CASE CONFIGURATION AND MODE .....	7
7.6. DESCRIPTION OF TEST SETUP .....	8
8. TEST AND MEASUREMENT EQUIPMENT .....	9
9. MEASUREMENT METHOD .....	12
10. ON TIME AND DUTY CYCLE .....	13
11. AVERAGE POWER .....	15
12. RADIATED TEST RESULTS .....	19
12.1. TRANSMITTER ABOVE 1 GHz .....	20
12.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND .....	20
12.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND .....	48
12.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND .....	92
12.2. WORST CASE CONFIGURATION RADIATED .....	108
13. AC POWER LINE CONDUCTED EMISSIONS .....	113
13.1.1. AC POWER LINE NORM .....	114
14. SETUP PHOTOS .....	116
END OF TEST REPORT .....	116

# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** Oxford Nanopore Technologies Ltd  
Gosling Building, Edmund Halley Road  
Oxford Science Park  
Oxford, OX4 4DQ  
United Kingdom

**EUT DESCRIPTION:** BT/BLE/WLAN (2.4GHz and 5GHz) Radio Module

**MODEL:** ONT-07-01191-00

**SERIAL NUMBER:** 0325117192382

**DATE TESTED:** 2020-07-14 to 2020-08-26

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5 + A1:2019	Complies

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

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

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

Approved & Released  
For UL LLC By:

Prepared By:



Frank Ibrahim  
Operations Leader/Manager  
Consumer Technology Division  
UL LLC



Brian T. Kiewra  
Project Engineer  
Consumer Technology Division  
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	See Comment	Refer to Section 6
15.247 (a) (2)	RSS-247 5.2 (a)	6dB BW		
15.247 (b) (3)	RSS-247 5.4 (d)	Output Power		
15.247 (b) (3)	RSS-247 5.4 (d)	Average power	Compliant	None
15.247 (e)	RSS-247 5.2 (b)	PSD	See Comment	Refer to Section 6
15.247 (d)	RSS-247 5.5	Conducted Spurious Emissions		
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions	Compliant	None
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions		

## 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 +A1:2019, 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.
<b>Site Code: 2180C</b>	
<input type="checkbox"/> Chamber A RTP	<input type="checkbox"/> North Chamber
<input type="checkbox"/> Chamber C RTP	<input checked="" type="checkbox"/> 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	$U_{Lab}$
Worst Case Conducted Disturbance, 0.15 to 30 MHz	$\pm 3.07$ dB
Worst Case Radiated Disturbance, 9kHz to 26GHz	$\pm 4.88$ dB

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

### 5.4. SAMPLE CALCULATION

#### RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

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

#### MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

$$\text{Final Voltage (dBuV)} = \text{Measured Voltage (dBuV)} + \text{Cable Loss (dB)} + \text{Limiter Factor (dB)} + \text{LISN Insertion Loss.}$$
$$36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$$

## 6. DESCRIPTION OF C2PC

The purpose of this class 2 permission change report is to demonstrate that the radio module maintains compliancy when used with an antenna different from the original submission. Therefore, full radiated, power, and AC mains testing performed.

## 7. EQUIPMENT UNDER TEST

### 7.1. EUT DESCRIPTION

The EUT is a BT/BLE/WLAN (2.4GHz and 5GHz) Radio Module.  
This report covers 2.4GHz WLAN.

### 7.2. MAXIMUM AVERAGE OUTPUT POWER

The transmitter has a maximum conducted average output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412-2472	802.11b	18.62	72.78
2412-2472	802.11g	18.59	72.28
2412-2472	802.11n HT20 MIMO	18.36	68.55

### 7.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes 2 identical PCB patch antennas, with a maximum gains of 3.73 dBi in 2.4 GHz band and 5.18 dBi in 5 GHz band.

### 7.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was fw\_bcmdhd\_mfg\_7.35.221.18.bin.  
The test utility software used during testing was wl for WiFi, hcitool for Bluetooth & Bluetooth Low-Energy.

### 7.5. WORST-CASE CONFIGURATION AND MODE

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

Modes supported and tested are as follows:

802.11b: SISO, 2Tx chains  
802.11g: SISO, 2Tx chains  
802.11n HT20 : MIMO, 2 Tx chains.

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

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

The fundamental of the EUT was investigated with chain 0 and chain 1 antennas in three orthogonal orientations X,Y,Z, it was determined fo SISO testing that Z orientation was worst-case orientation for chain 0 and Y orientation was worst-case orientation for chain 1. Therefore, all final SISO radiated testing was performed with the chain 0 antenna in Z orientation and chain 1 antenna in Y orientation. For MIMO testing, both antennas in Y orientation was worst-case.

## 7.6. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Dell	E6330	59R7PX1	NA
AC Adapter	FSP	FSP065-10AABA	H9221000252	NA

### I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Mains	1	Barrel	Mains	<3m	Connected to DC power supply
2	ENET	1	RJ45	I/O	<3m	Connected to laptop outside chamber

### SETUP DIAGRAMS

Please refer to R13359833-EP3 for setup diagram



## 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)

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
<b>1-18 GHz</b>					
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2020-04-27	2021-04-27
<b>Gain-Loss Chains</b>					
N-SAC03	Gain-loss string: 1-18GHz	Various	Various	2020-03-15	2021-03-15
<b>Receiver &amp; Software</b>					
SA0025	Spectrum Analyzer	Agilent	N9030A	2020-03-17	2021-03-17
SOFTEMI	EMI Software	UL	Version 9.5 (2019-06-12)		
<b>Additional Equipment used</b>					
s/n 200037635	Environmental Meter	Fisher Scientific	06-662-4	2020-1-22	2022-01-22

Test Equipment Used - Radiated Disturbance Emissions (E-field) – Chamber C

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
<b>1-18 GHz</b>					
AT0062	HORN Antenna	ETS-Lindgren	3117	2020-01-30	2021-01-30
<b>Gain-Loss Chains</b>					
C-SAC02	Gain-loss string: 1-18GHz	Various	Various	2020-03-03	2021-03-03
<b>Receiver &amp; Software</b>					
SA0018	Spectrum Analyzer	Agilent	PXA (N9030A)	2020-03-02	2021-03-02
SOFTEMI	EMI Software	UL	Version 9.5 (2019-06-12)		
<b>Additional Equipment used</b>					
HI0085	Temp/Humid/Pressure Meter	EXTECH	SD700	2020-04-20	2021-04-30

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

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
<b>0.009-30MHz (Loop Ant.)</b>					
AT0059	Active Loop Antenna	EMCO	6502	2020-08-06	2021-08-06
<b>30-1000 MHz</b>					
AT0081	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2019-11-20	2020-11-20
<b>1-18 GHz</b>					
AT0067	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2020-04-28	2021-04-28
<b>18-40 GHz</b>					
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2019-11-07	2020-11-07
AT0077	Horn Antenna, 26-40GHz	ARA	MWH-2640/B	2019-11-07	2020-11-07
<b>Gain-Loss Chains</b>					
S-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2020-07-10	2021-07-10
S-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2020-07-10	2021-07-10
S-SAC03	Gain-loss string: 1-18GHz	Various	Various	2020-07-06	2021-07-06
S-SAC04	Gain-loss string: 18-40GHz	Various	Various	2020-07-07	2021-07-07
<b>Receiver &amp; Software</b>					
SA0025	Spectrum Analyzer	Agilent	N9030A	2020-03-17	2021-03-17
SA0026	Spectrum Analyzer	Agilent	N9030A	2020-06-24	2021-06-24
SOFTEMI	EMI Software	UL	Version 9.5 (2019-06-12)		
<b>Additional Equipment used</b>					
s/n 200037635	Environmental Meter	Fisher Scientific	06-662-4	2020-1-22	2022-01-22
PS215	AC Power Source	Elgar	CW2501M (s/n 1523A02397)	NA	NA
BRF004	5.5GHz notch filter, 2W, F <sub>high</sub> = 18GHz	Micro-Tronics	BRM50716-01	2020-02-19	2021-02-19

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
HI0090	Environmental Meter	Fisher Scientific	15-077-963	2020-06-26	2021-06-26
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
PS215	AC Power Source	Elgar	CW2501M (s/n 1523A02397)	NA	NA
SOFTEMI	EMI Software	UL	Version 9.5 (2015-08-20)		
<b>Miscellaneous (if needed)</b>					
LISN008	LISN, 50-ohm/50-uH, 2-conductor, 25A (For support gear only.)	Solar Electronics	8012-50-R-24-BNC	2020-08-08	2021-08-08

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
72822	Spectrum Analyzer	Agilent Technologies	E4446A	2020-01-02	2021-01-02
PWM003 (PRE0137345)	RF Power Meter	Keysight Technologies	N1911A	2019-08-22	2020-08-22
PWS002 (PRE0137348)	Peak and Avg Power Sensor, 50MHz to 18GHz	Keysight Technologies	N1921A	2019-08-23	2020-08-23
PWM001 (PRE0136343)	RF Power Meter	Keysight Technologies	N1912A	2020-07-17	2021-07-17
PWS001 (PRE0137347)	Peak and Avg Power Sensor, 50MHz to 18GHz	Keysight Technologies	N1921A	2020-05-27	2021-05-27
HI0090	Environmental Meter	Fisher Scientific	15-077-963	2020-06-26	2021-06-26
SOFTEMI	EMC Software	UL	Version 2020.5.18	NA	NA

Note: All equipment within calibration at time of use.

## 9. MEASUREMENT METHOD

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

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

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

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

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

## 10. ON TIME AND DUTY CYCLE

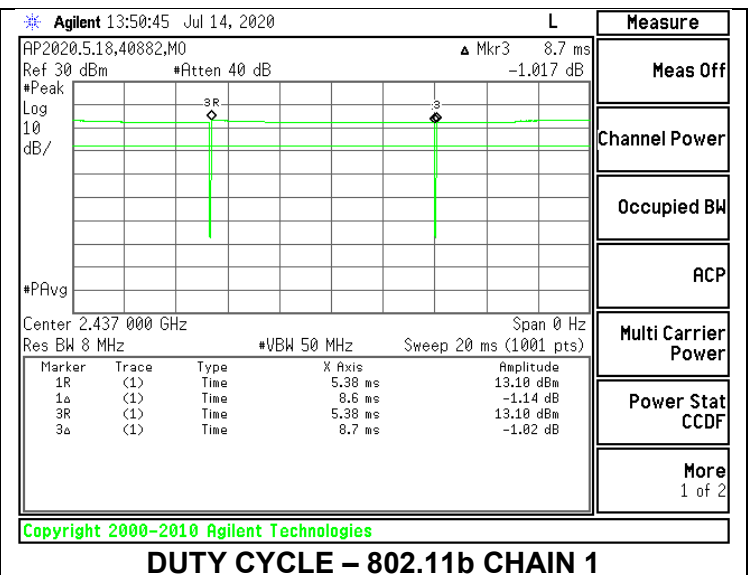
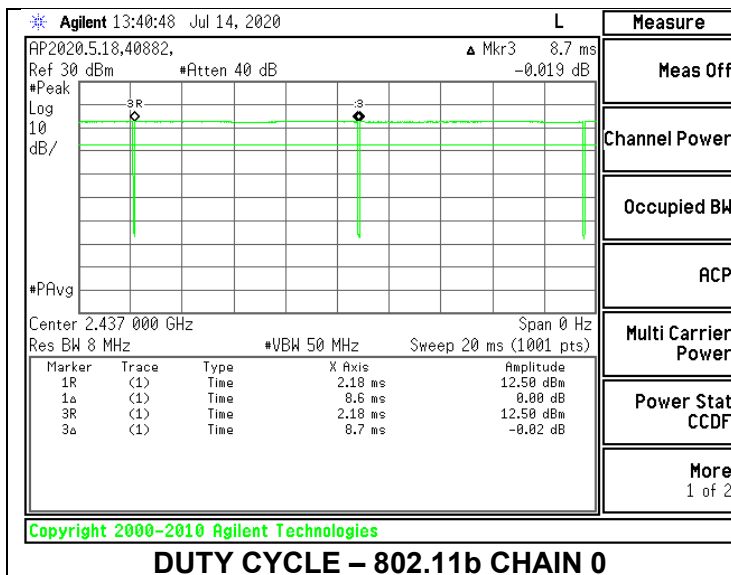
### LIMITS

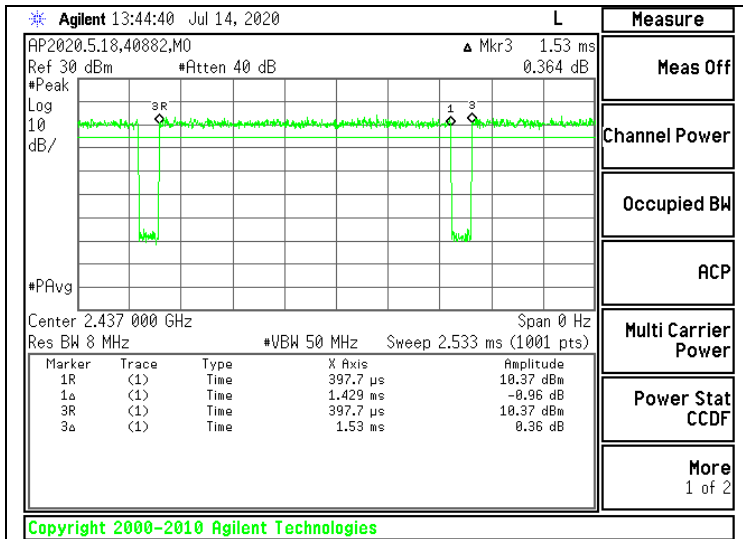
None; for reporting purposes only.

### PROCEDURE

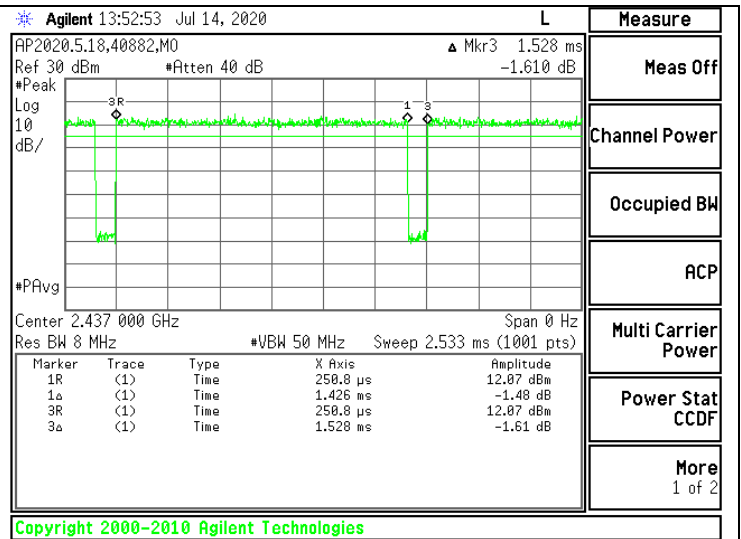
ANSI C63.10 Zero-Span Spectrum Analyzer Method.

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
<b>2.4GHz Band</b>					
802.11b chain 0	8.600	8.700	0.989	98.85%	0.00
802.11b chain 1	8.600	8.700	0.989	98.85%	0.00
802.11g chain 0	1.429	1.530	0.934	93.40%	0.59
802.11g chain 1	1.426	1.528	0.933	93.32%	0.60
802.11n HT20 MIMO	1.335	1.439	0.928	92.77%	0.65

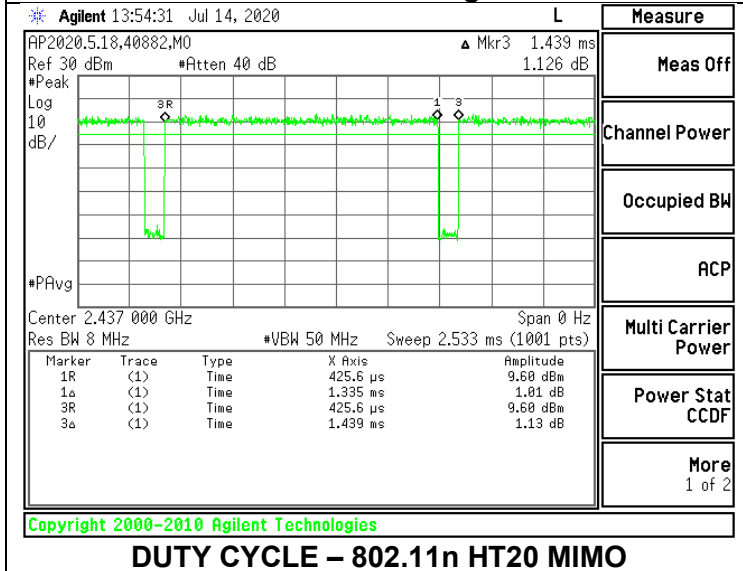




**DUTY CYCLE - 802.11g CHAIN 0**



**DUTY CYCLE - 802.11g CHAIN 1**



**DUTY CYCLE - 802.11n HT20 MIMO**

**INTENTIONALLY LEFT BLANK**

## 11. AVERAGE POWER

### LIMITS

FCC §15.247

IC RSS-247 (5.4) (4)

For systems using digital modulation in the 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### DIRECTIONAL ANTENNA GAIN

SISO:

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

MIMO:

The TX chains are uncorrelated for power and the antenna gain is equal among the chains. The directional gain is:

Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Uncorrelated Chains Directional Gain (dBi)
3.73	3.73	3.73

### TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 12.22 dB (including 10.28 dB pad and 1.94 dB cable) was entered as an offset in the power meter to allow for a gated average reading of power.

**802.11b MODE**

<b>ID:</b>	40882	<b>Date:</b>	2020-07-14 and 2020-08-26
------------	-------	--------------	---------------------------

**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low_1	2412	3.73	30.00	30	36	30.00
Mid_6	2437	3.73	30.00	30	36	30.00
High_11	2462	3.73	30.00	30	36	30.00
High_12	2467	3.73	30.00	30	36	30.00
High_13	2472	3.73	30.00	30	36	30.00

**Results**

Channel	Frequency (MHz)	SISO Ant 1 Meas Power (dBm)	SISO Ant 2 Meas Power (dBm)	Power Limit (dBm)	Worst- Case Margin (dB)
Low_1	2412	17.53	17.65	30.00	-12.35
Mid_6	2437	17.54	17.59	30.00	-12.41
High_11	2462	17.49	18.62	30.00	-11.38
High_12	2467	17.11	17.11	30.00	-12.89
High_13	2472	12.24	11.22	30.00	-17.76

Note: Average measurements taken gated.



**802.11g MODE**

<b>ID:</b>	40882	<b>Date:</b>	2020-07-14 and 2020-08-26
------------	-------	--------------	---------------------------

**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low_1	2412	3.73	30.00	30	36	30.00
Low_2	2417	3.73	30.00	30	36	30.00
Low_3	2422	3.73	30.00	30	36	30.00
Mid_6	2437	3.73	30.00	30	36	30.00
High_9	2452	3.73	30.00	30	36	30.00
High_10	2457	3.73	30.00	30	36	30.00
High_11	2462	3.73	30.00	30	36	30.00
High_12	2467	3.73	30.00	30	36	30.00
High_13	2472	3.73	30.00	30	36	30.00

**Results**

Channel	Frequency (MHz)	SISO Ant 1 Meas Power (dBm)	SISO Ant 2 Meas Power (dBm)	Power Limit (dBm)	Worst- Case Margin (dB)
Low_1	2412	15.01	15.51	30.00	-14.49
Low_2	2417	17.36	17.72	30.00	-12.28
Low_3	2422	17.87	18.36	30.00	-11.64
Mid_6	2437	18.59	15.50	30.00	-11.41
High_9	2452	17.53	18.01	30.00	-11.99
High_10	2457	15.59	16.11	30.00	-13.89
High_11	2462	13.56	14.34	30.00	-15.66
High_12	2467	10.86	11.22	30.00	-18.78
High_13	2472	8.21	8.44	30.00	-21.56

Note: Average measurements taken gated.

**802.11n HT20 MODE**

<b>ID:</b>	40882	<b>Date:</b>	2020-07-14 and 2020-08-26
------------	-------	--------------	---------------------------

**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low_1	2412	3.73	30.00	30	36	30.00
Low_2	2417	3.73	30.00	30	36	30.00
Mid_6	2437	3.73	30.00	30	36	30.00
High_10	2457	3.73	30.00	30	36	30.00
High_11	2462	3.73	30.00	30	36	30.00
High_12	2467	3.73	30.00	30	36	30.00
High_13	2472	3.73	30.00	30	36	30.00

**Results**

Channel	Frequency (MHz)	Ant 1 Meas Power (dBm)	Ant 2 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low_1	2412	15.31	15.39	18.36	30.00	-11.64
Low_2	2417	14.59	15.19	17.91	30.00	-12.09
Mid_6	2437	14.59	15.25	17.94	30.00	-12.06
High_10	2457	14.20	15.34	17.82	30.00	-12.18
High_11	2462	12.99	12.73	15.87	30.00	-14.13
High_12	2467	10.20	10.73	13.48	30.00	-16.52
High_13	2472	6.96	7.02	10.00	30.00	-20.00

Note: Average measurements taken gated.

## 12. 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 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 voltage average measurements.

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).

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.

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

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

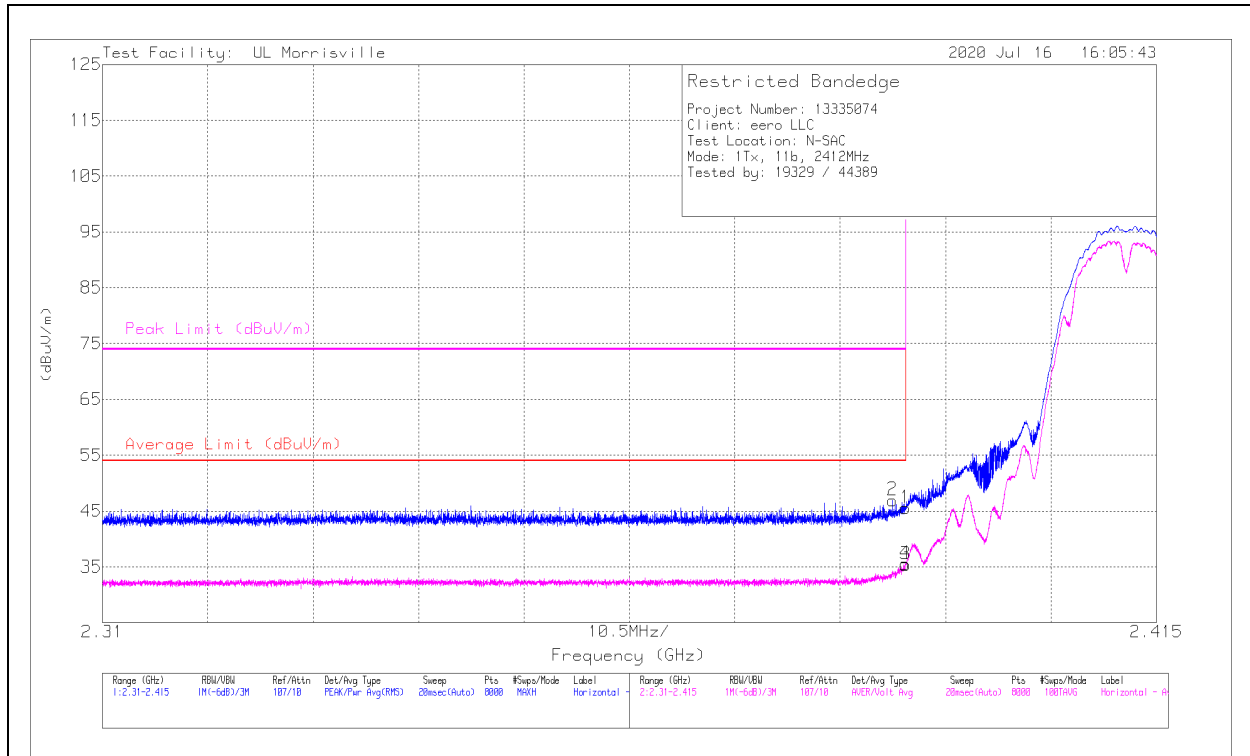
## 12.1. TRANSMITTER ABOVE 1 GHz

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

#### 1TX ANTENNA 1 MODE

#### BANDEDGE (LOW CHANNEL, CH 1)

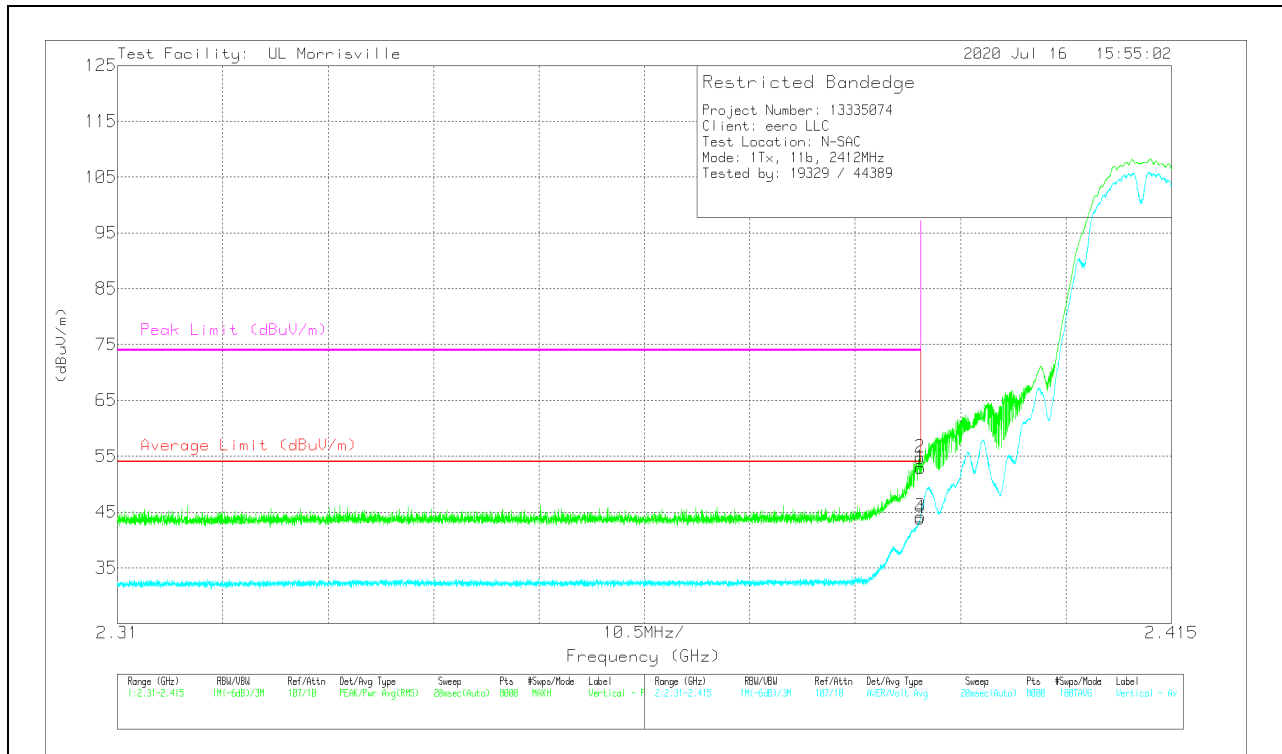
#### HORIZONTAL RESULT



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	37.35	Pk	31.8	-23.6	0	45.55	-	-	74	-28.45	86	178	H
2	2.38871	38.75	Pk	31.8	-23.6	0	46.95	-	-	74	-27.05	86	178	H
3	2.39	27.22	ADV	31.8	-23.6	0	35.42	54	-18.58	-	-	86	177	H
4	2.38994	27.34	ADV	31.8	-23.6	0	35.54	54	-18.46	-	-	86	177	H

Pk - Peak detector  
 ADV - Linear Voltage Average

### VERTICAL RESULT

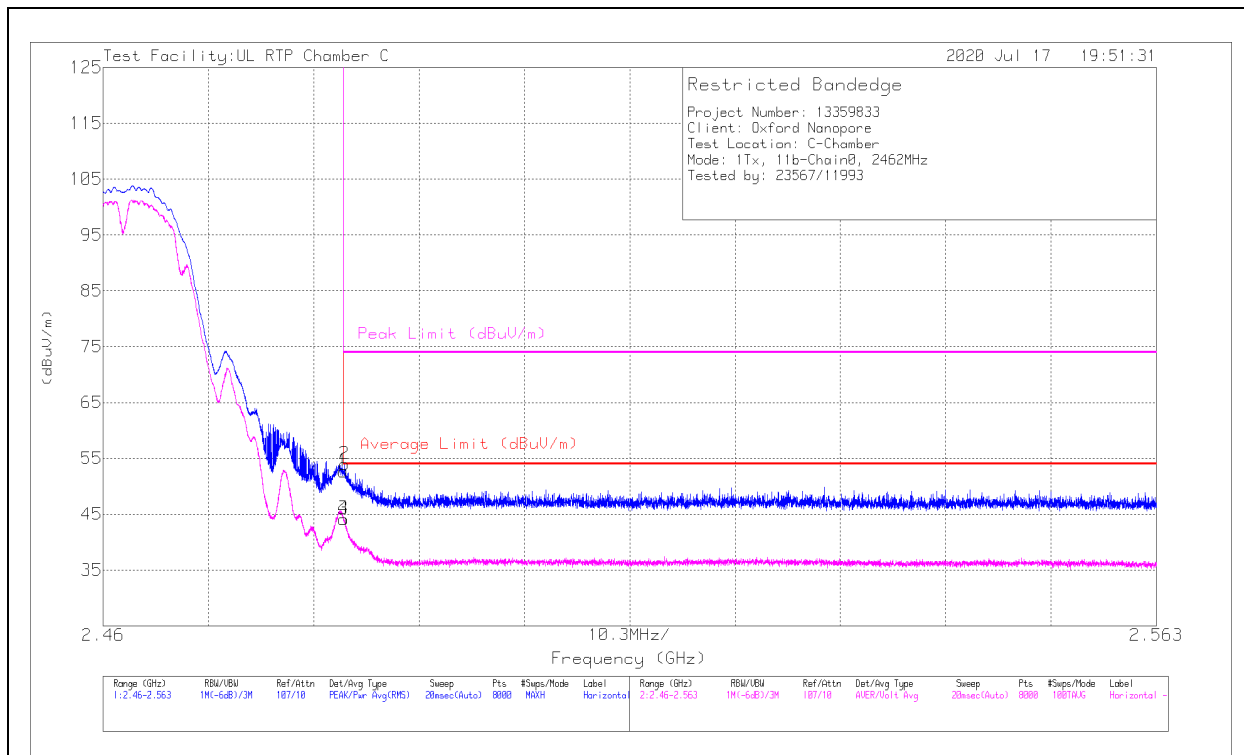


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.39	44.7	Pk	31.8	-23.6	0	52.9	-	-	74	-21.1	229	112	V
2	2.38996	46.52	Pk	31.8	-23.6	0	54.72	-	-	74	-19.28	229	112	V
3	2.39	35.99	ADV	31.8	-23.6	0	44.19	54	-9.81	-	-	229	112	V
4	2.38998	35.67	ADV	31.8	-23.6	0	43.87	54	-10.13	-	-	229	112	V

Pk - Peak detector  
 ADV - Linear Voltage Average

**BANDEDGE (HIGH CHANNEL, CH 11)**

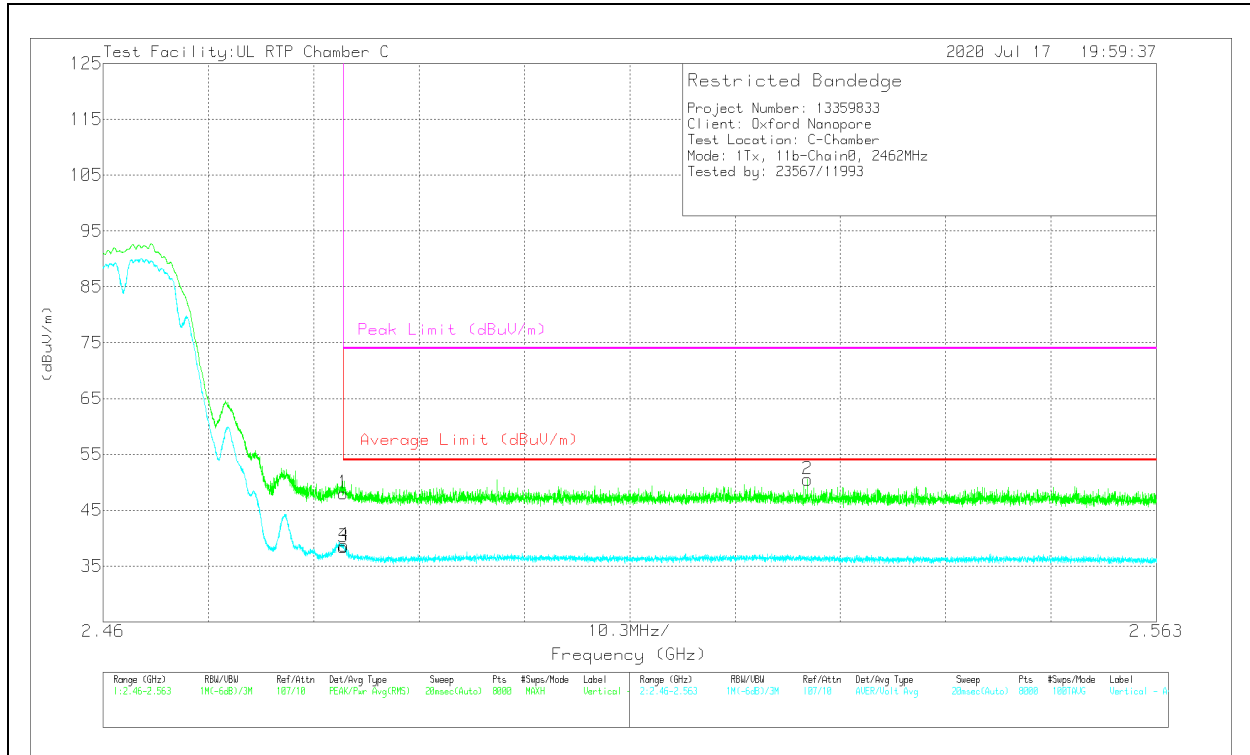
**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (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	39.3	Pk	32.6	-19.2	0	52.7	-	-	74	-21.3	144	102	H
2	* ** 2.48359	40.56	Pk	32.6	-19.2	0	53.96	-	-	74	-20.04	144	102	H
3	* ** 2.4835	30.73	ADV	32.6	-19.2	0	44.13	54	-9.87	-	-	144	102	H
4	* ** 2.48351	30.74	ADV	32.6	-19.2	0	44.14	54	-9.86	-	-	144	102	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

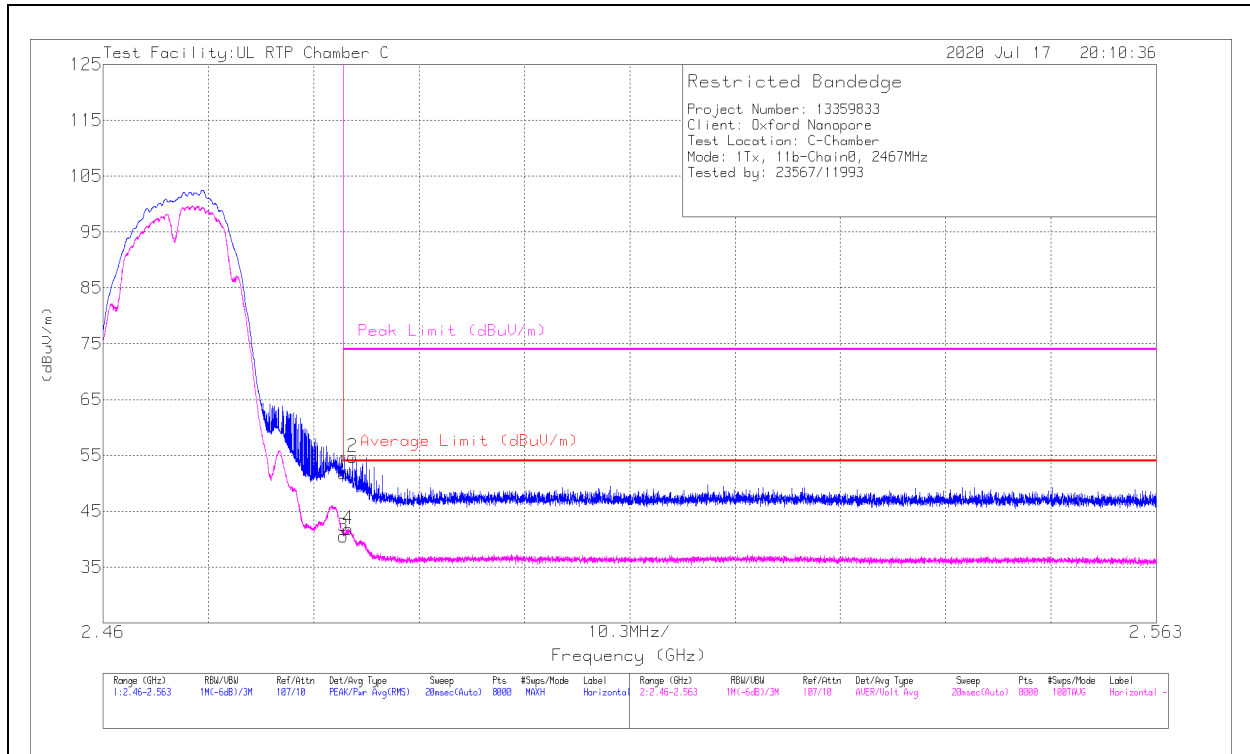


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	34.64	Pk	32.6	-19.2	0	48.04	-	-	74	-25.96	2	103	V
2	** 2.52887	36.82	Pk	32.6	-18.9	0	50.52	-	-	74	-23.48	2	103	V
3	*** 2.4835	25	ADV	32.6	-19.2	0	38.4	54	-15.6	-	-	2	103	V
4	*** 2.48354	25.31	ADV	32.6	-19.2	0	38.71	54	-15.29	-	-	2	103	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, CH 12)**

**HORIZONTAL RESULT**

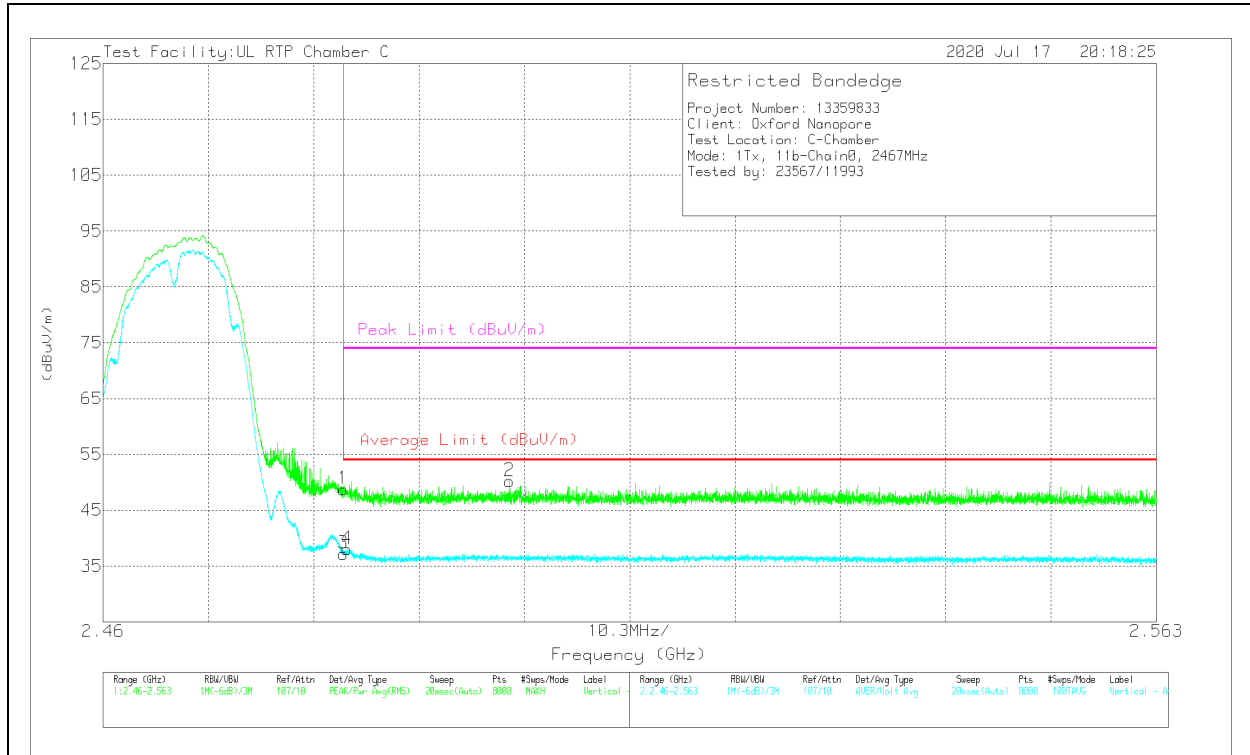


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	38.43	Pk	32.6	-19.2	0	51.83	-	-	74	-22.17	145	103	H
2	*** 2.48439	41.34	Pk	32.6	-19.2	0	54.74	-	-	74	-19.26	145	103	H
3	*** 2.4835	27.14	ADV	32.6	-19.2	0	40.54	54	-13.46	-	-	145	103	H
4	*** 2.48399	28.4	ADV	32.6	-19.2	0	41.8	54	-12.2	-	-	145	103	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

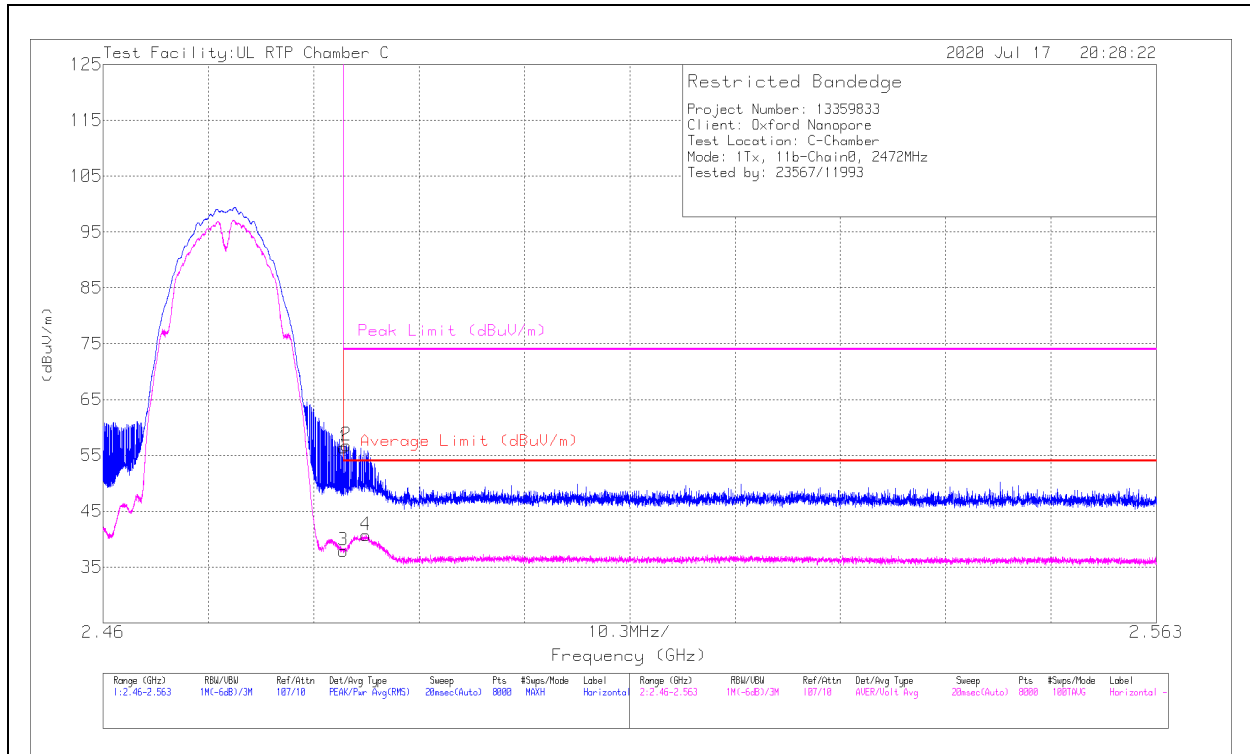


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	35.39	Pk	32.6	-19.2	0	48.79	-	-	74	-25.21	357	102	V
2	*** 2.49975	36.51	Pk	32.7	-19	0	50.21	-	-	74	-23.79	357	102	V
3	*** 2.4835	23.82	ADV	32.6	-19.2	0	37.22	54	-16.78	-	-	357	102	V
4	*** 2.48384	24.63	ADV	32.6	-19.2	0	38.03	54	-15.97	-	-	357	102	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

**BANEDGE (HIGH CHANNEL, CH 13)**

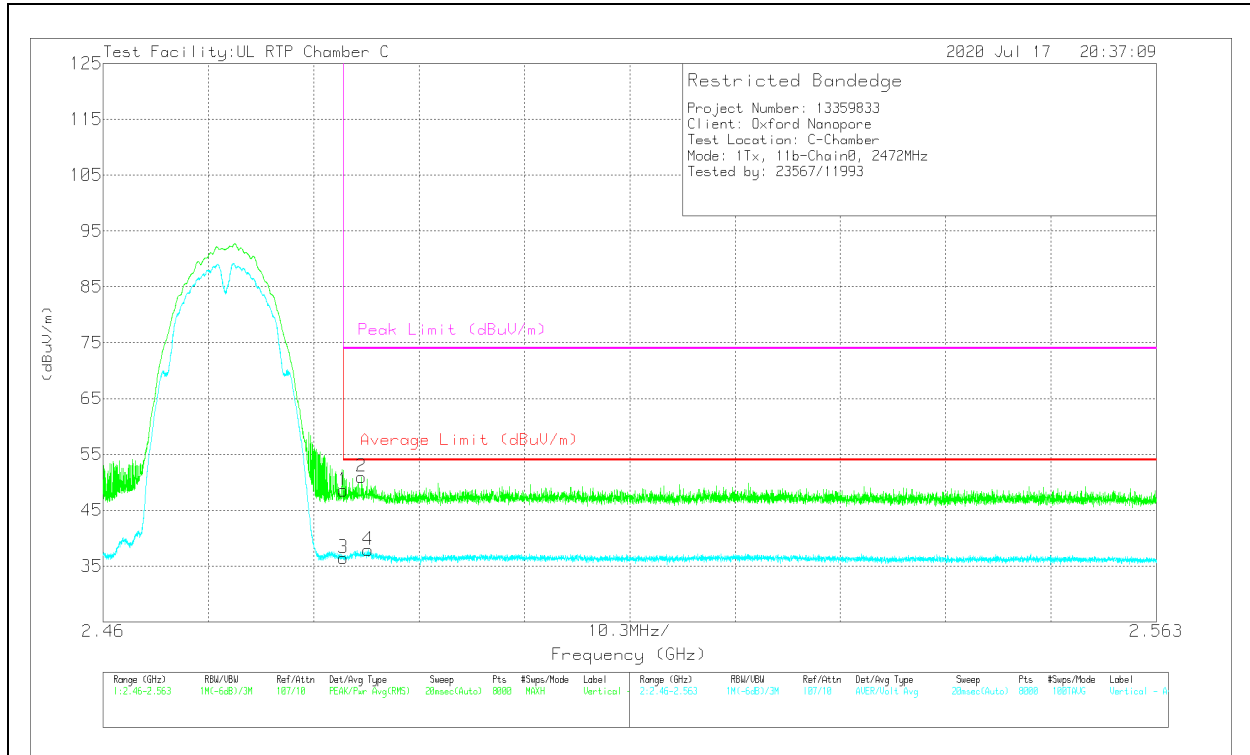
**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (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	43	Pk	32.6	-19.2	0	56.4	-	-	74	-17.6	98	102	H
2	*** 2.48377	43.42	Pk	32.6	-19.2	0	56.82	-	-	74	-17.18	98	102	H
3	*** 2.4835	24.55	ADV	32.6	-19.2	0	37.95	54	-16.05	-	-	98	102	H
4	*** 2.48568	27.33	ADV	32.6	-19.2	0	40.73	54	-13.27	-	-	98	102	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

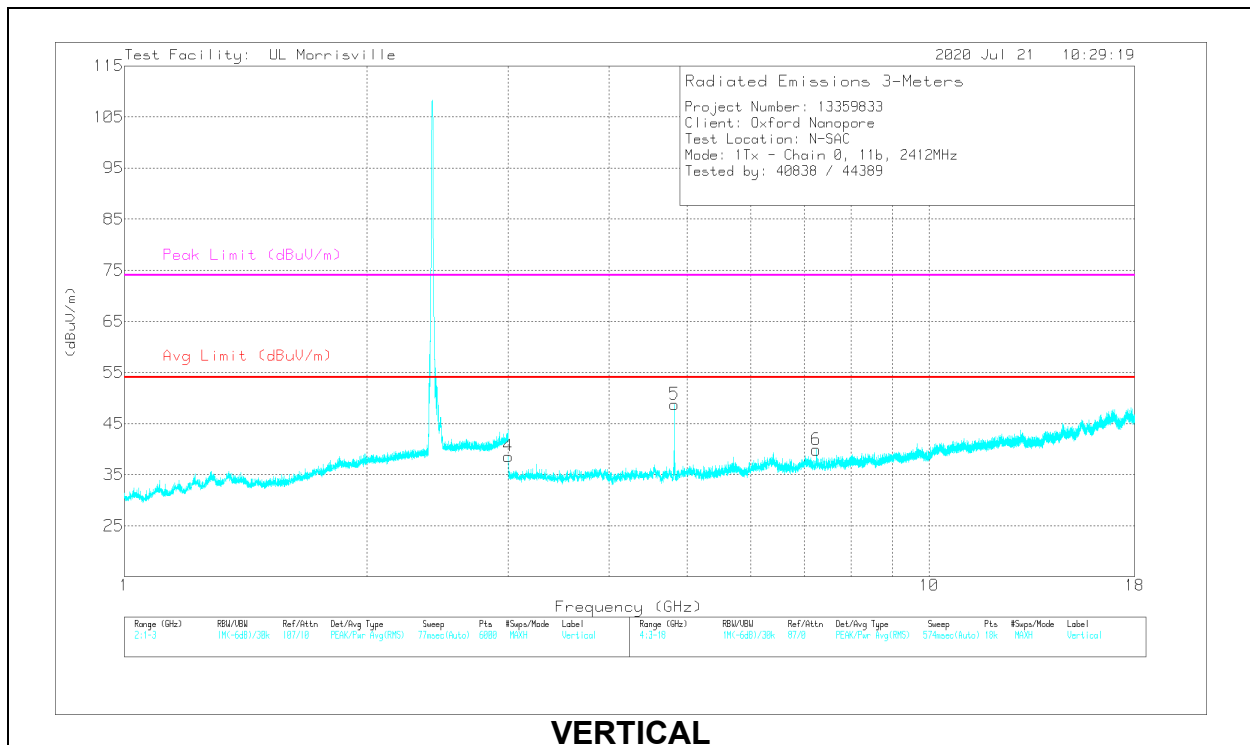
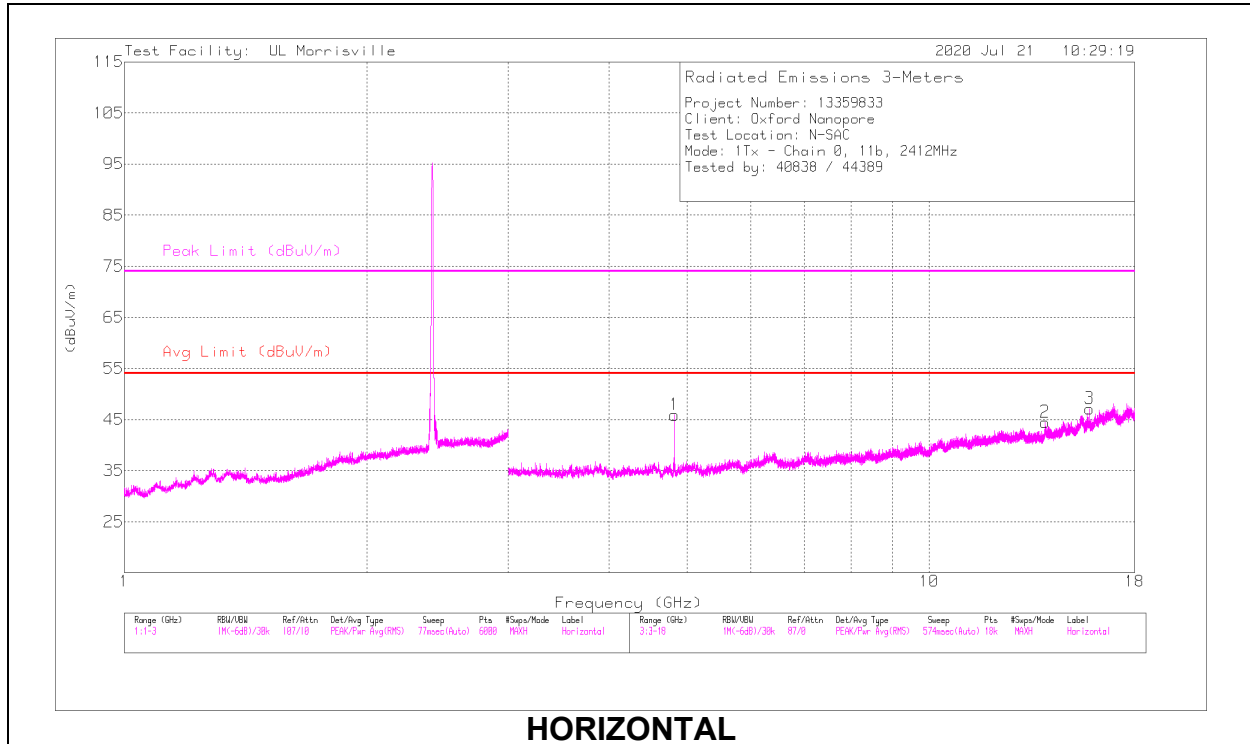


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	35.18	Pk	32.6	-19.2	0	48.58	-	-	74	-25.42	358	102	V
2	*** 2.48525	37.59	Pk	32.6	-19.2	0	50.99	-	-	74	-23.01	358	102	V
3	*** 2.4835	23.05	ADV	32.6	-19.2	0	36.45	54	-17.55	-	-	358	102	V
4	*** 2.48591	24.52	ADV	32.6	-19.2	0	37.92	54	-16.08	-	-	358	102	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, CH 1 RESULTS



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	*** 4.8239	47.24	PK2	34.2	-30.8	0	50.64	-	-	74	-23.36	312	368	H
	*** 4.82398	43.77	ADV	34.2	-30.8	0	47.17	54	-6.83	-	-	312	368	H
3	*** 15.81508	36.15	PK2	40.1	-24.1	0	52.15	-	-	74	-21.85	8	138	H
	*** 15.81477	22.96	ADV	40.1	-24.1	0	38.96	54	-15.04	-	-	8	138	H
5	*** 4.82402	46.51	PK2	34.2	-30.8	0	49.91	-	-	74	-24.09	102	155	V
	*** 4.82397	42.41	ADV	34.2	-30.8	0	45.81	54	-8.19	-	-	102	155	V
4	3	37.11	Pk	33	-31.5	0	38.61	-	-	-	-	0-360	101	V
6	7.2344	32.98	Pk	35.7	-28.8	0	39.88	-	-	-	-	0-360	101	V
2	13.92895	31.89	Pk	38.4	-25.8	0	44.49	-	-	-	-	0-360	101	H

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

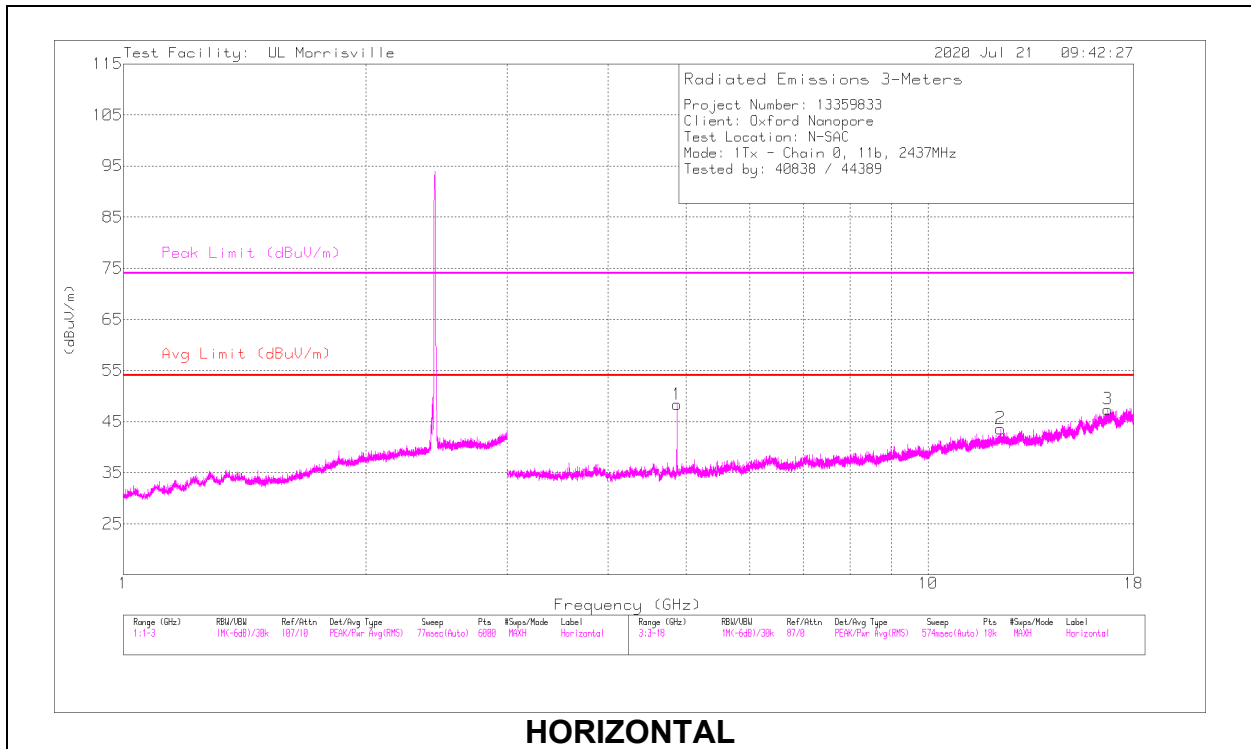
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

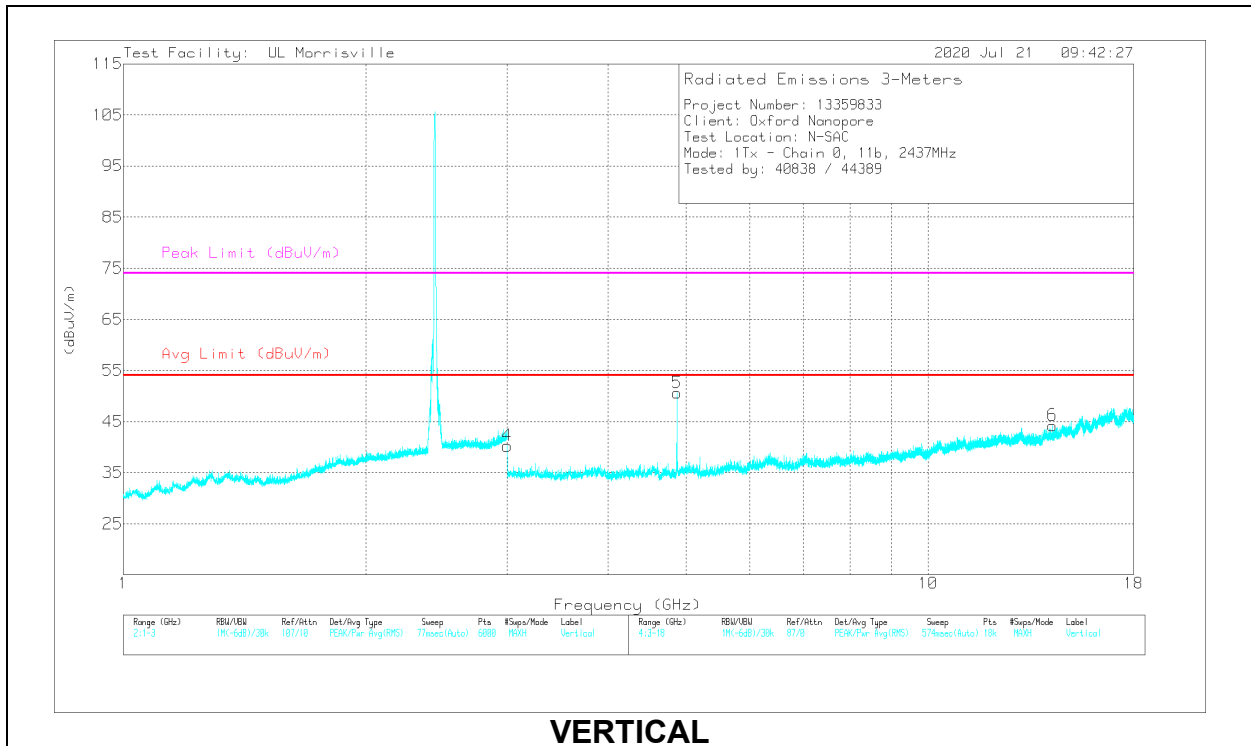
ADV - Linear Voltage Average

Pk - Peak detector

### MID CHANNEL, CH 6 RESULTS



**HORIZONTAL**



**VERTICAL**

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	*** 4.87405	50	PK2	34.1	-30.9	0	53.2	-	-	74	-20.8	51	295	H
	*** 4.87399	47.41	ADV	34.1	-30.9	0	50.61	54	-3.39	-	-	51	295	H
2	*** 12.2998	35.44	PK2	38.9	-25.1	0	49.24	-	-	74	-24.76	74	170	H
	*** 12.30017	22.41	ADV	38.9	-25.1	0	36.21	54	-17.79	-	-	74	170	H
5	*** 4.87399	51.03	PK2	34.1	-30.9	0	54.23	-	-	74	-19.77	215	265	V
	*** 4.87397	48.66	ADV	34.1	-30.9	0	51.86	54	-2.14	-	-	215	265	V
4	3	38.76	Pk	33	-31.5	0	40.26	-	-	-	-	0-360	200	V
6	14.2798	31.56	Pk	39	-26.3	0	44.26	-	-	-	-	0-360	101	V
3	16.71493	28.61	Pk	41.7	-22.9	0	47.41	-	-	-	-	0-360	101	H

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

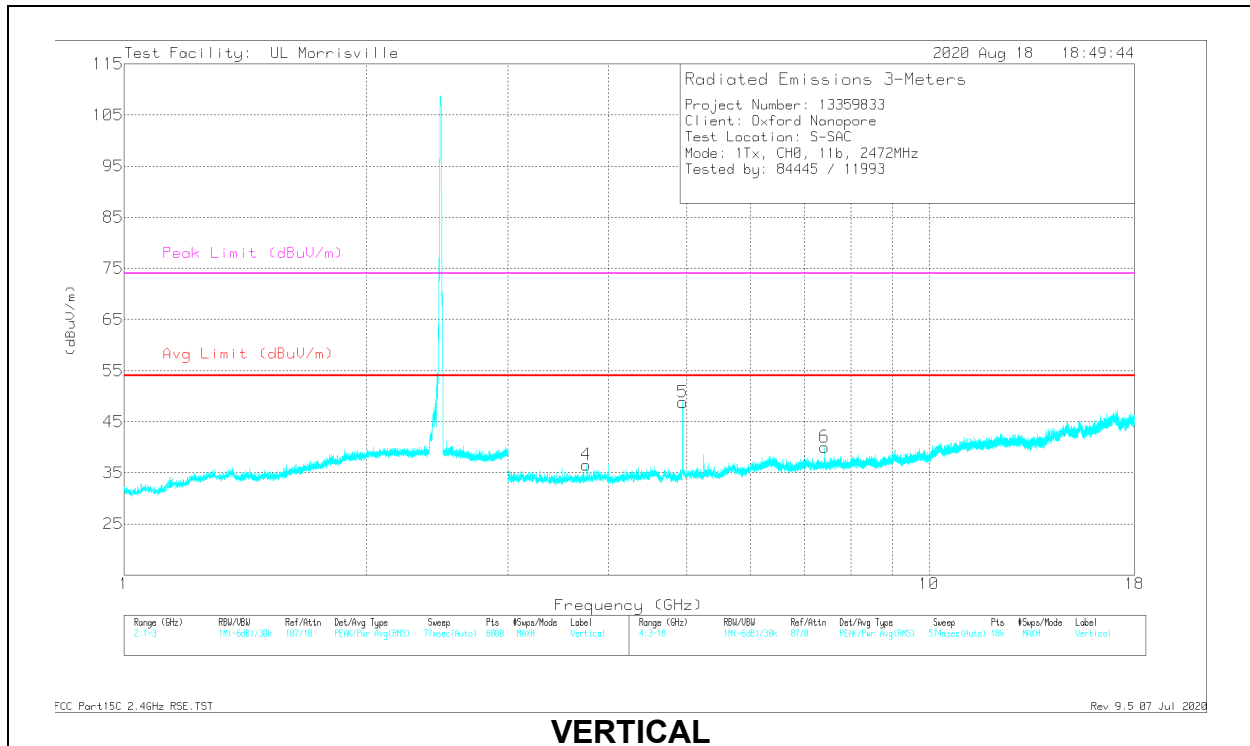
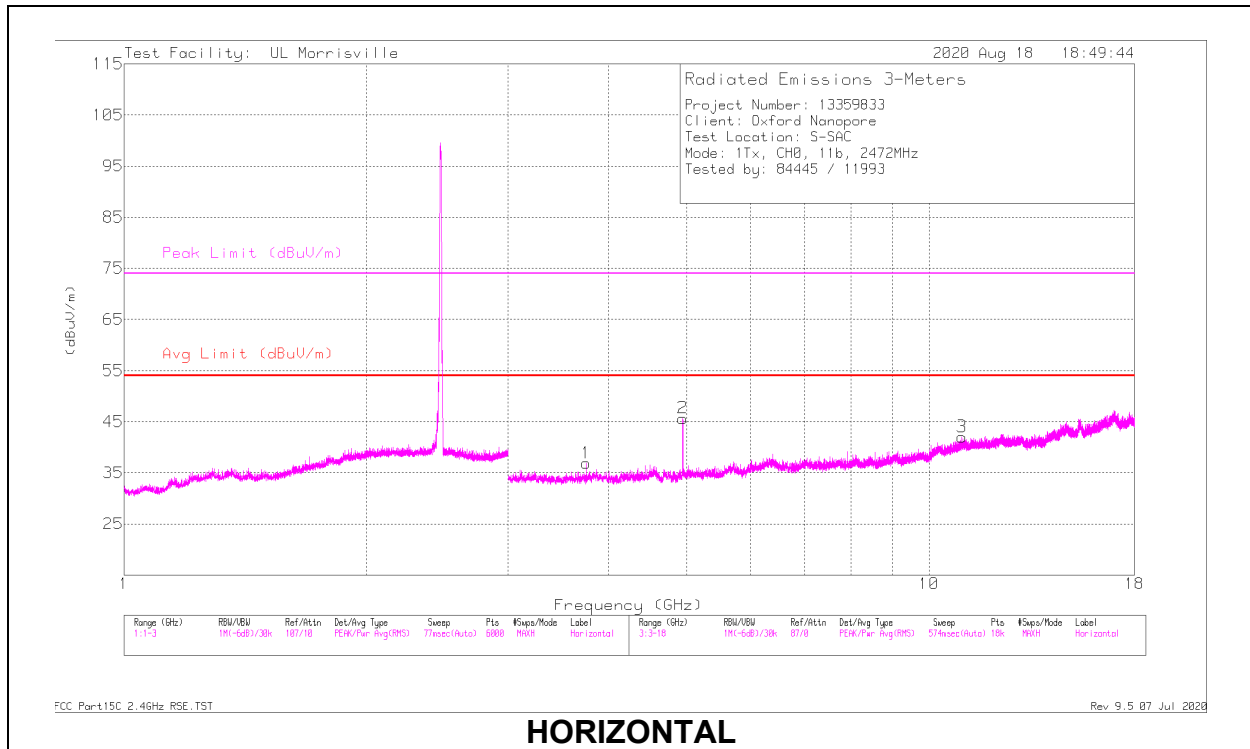
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

Pk - Peak detector

### HIGH CHANNEL, CH 13 RESULTS





Markers	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	*** 3.75025	41.25	PK2	33.2	-32.7	0	41.75	-	-	74	-32.25	72	119	H
	*** 3.75031	27.81	ADV	33.2	-32.7	0	28.31	54	-25.69	-	-	72	119	H
2	*** 4.94409	45.74	PK2	33.9	-30.9	0	48.74	-	-	74	-25.26	118	101	H
	*** 4.94401	42	ADV	33.9	-30.9	0	45	54	-9	-	-	118	101	H
3	*** 10.98656	33.47	PK2	38.1	-24.4	0	47.17	-	-	74	-26.83	313	234	H
	*** 10.98816	21.3	ADV	38.1	-24.3	0	35.1	54	-18.9	-	-	313	234	H
4	*** 3.75015	42.68	PK2	33.2	-32.7	0	43.18	-	-	74	-30.82	246	282	V
	*** 3.74997	33.53	ADV	33.2	-32.7	0	34.03	54	-19.97	-	-	246	282	V
5	*** 4.94401	46.51	PK2	33.9	-30.9	0	49.51	-	-	74	-24.49	0	108	V
	*** 4.94401	42.99	ADV	33.9	-30.9	0	45.99	54	-8.01	-	-	0	108	V
6	*** 7.41474	38.22	PK2	35.6	-27.6	0	46.22	-	-	74	-27.78	308	121	V
	*** 7.41511	28.67	ADV	35.6	-27.6	0	36.67	54	-17.33	-	-	308	121	V

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

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

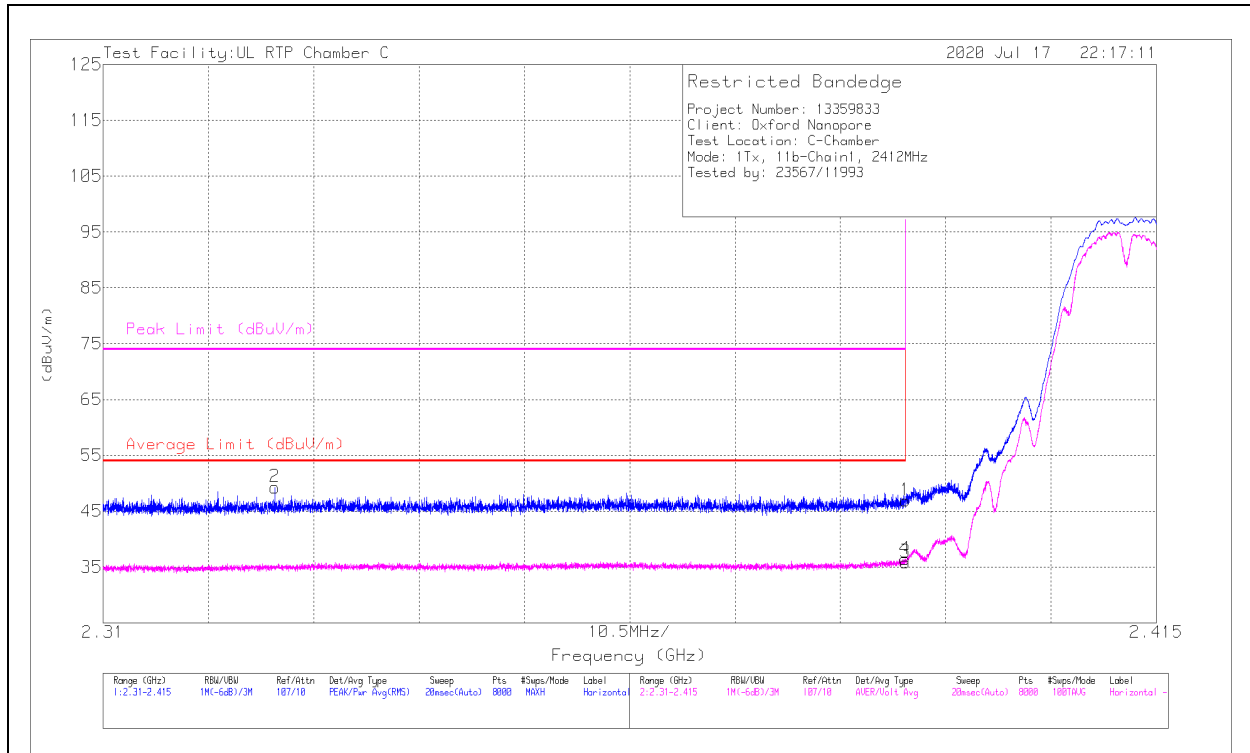
PK2 - Maximum Peak

ADV - Linear Voltage Average

**1TX ANTENNA 2 MODE**

**BANDEDGE (LOW CHANNEL, CH 1)**

**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (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	34.1	Pk	32.1	-19.3	0	46.9	-	-	74	-27.1	156	102	H
2	*** 2.32712	36.79	Pk	31.9	-19.4	0	49.29	-	-	74	-24.71	156	102	H
3	*** 2.39	23.04	ADV	32.1	-19.3	0	35.84	54	-18.16	-	-	156	102	H
4	*** 2.38994	23.62	ADV	32.1	-19.3	0	36.42	54	-17.58	-	-	156	102	H

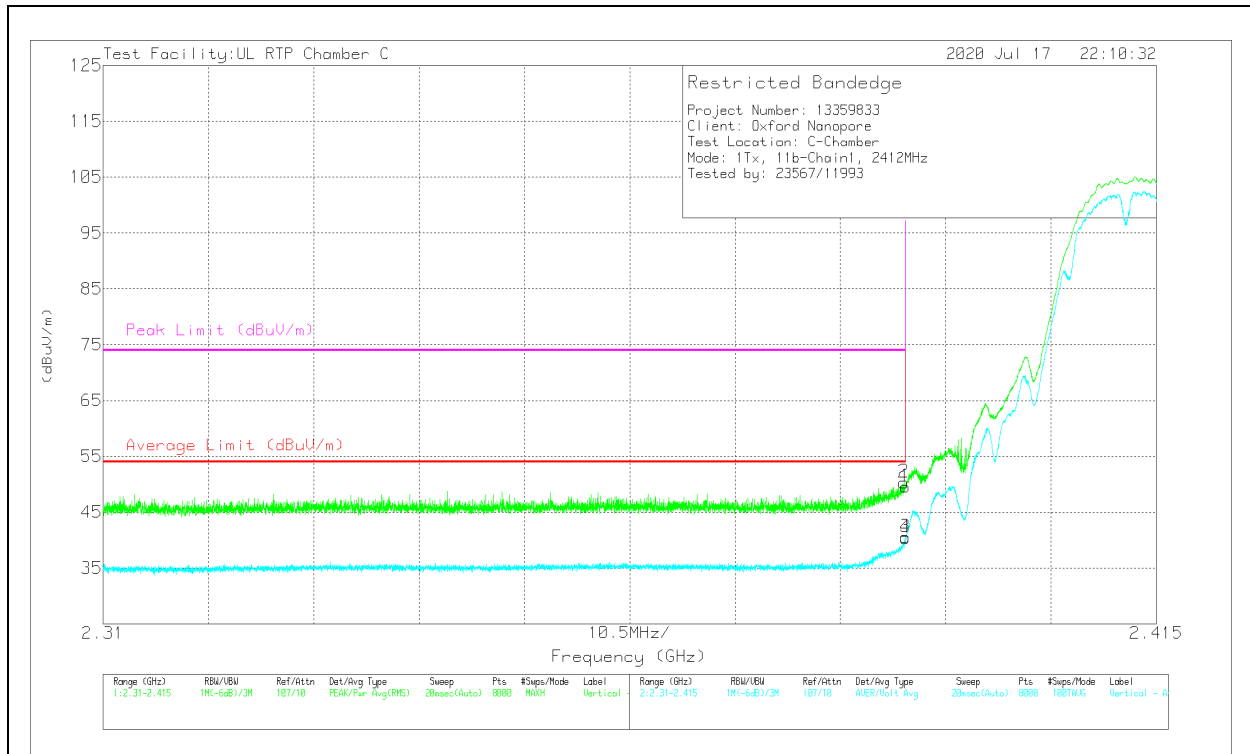
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

### VERTICAL RESULT

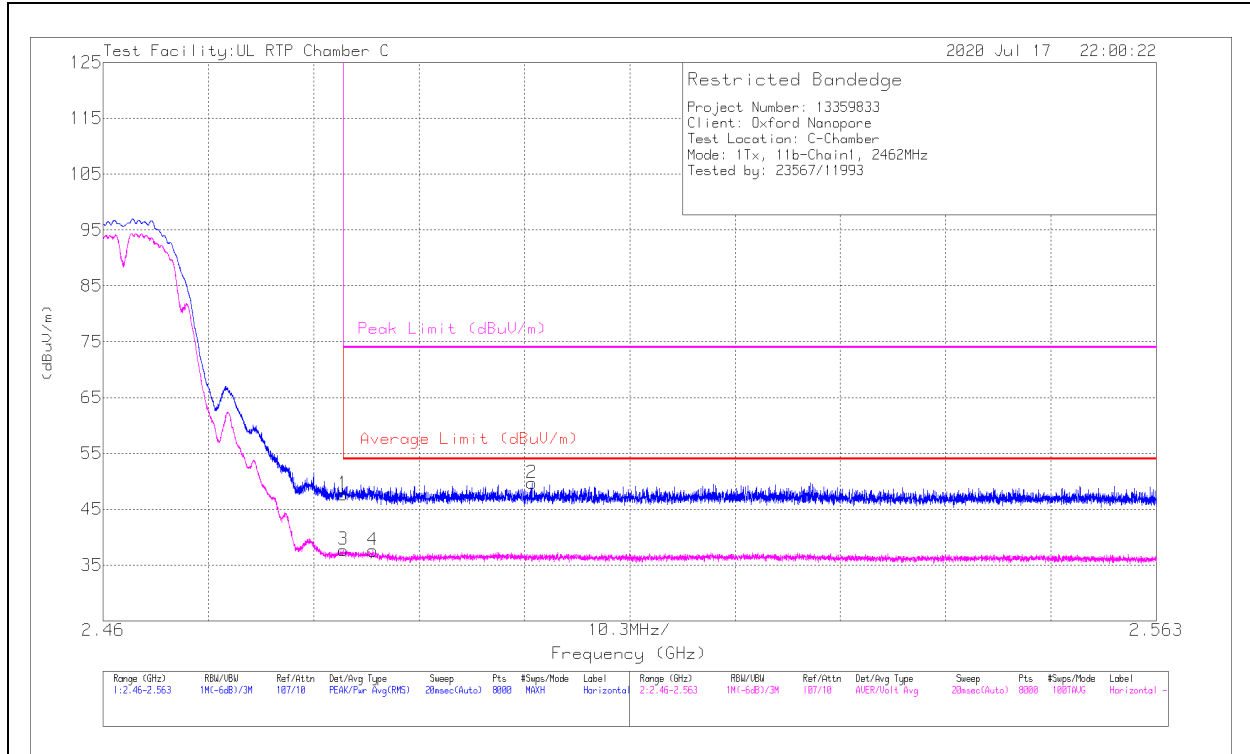


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	36.76	Pk	32.1	-19.3	0	49.56	-	-	74	-24.44	40	102	V
2	*** 2.38983	37.56	Pk	32.1	-19.3	0	50.36	-	-	74	-23.64	40	102	V
3	*** 2.39	27.77	ADV	32.1	-19.3	0	40.57	54	-13.43	-	-	40	102	V
4	*** 2.38997	27.62	ADV	32.1	-19.3	0	40.42	54	-13.58	-	-	40	102	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, CH 11)**

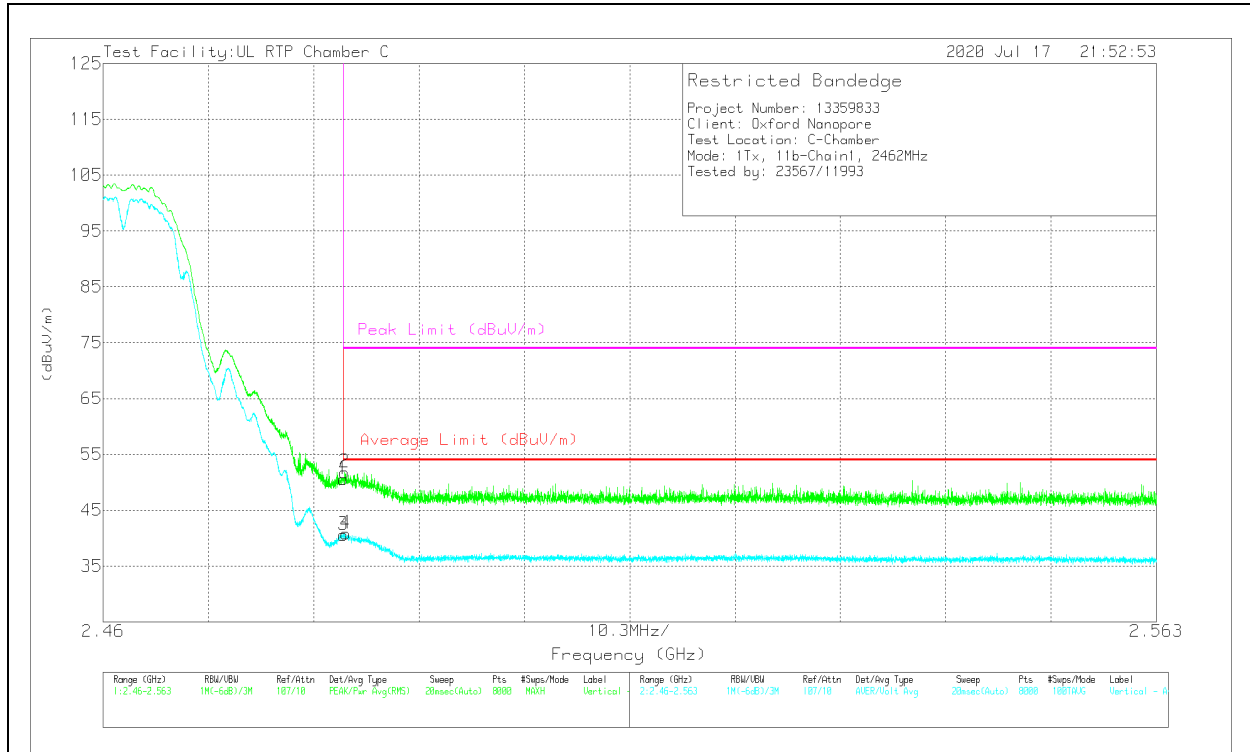
**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (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	34.3	Pk	32.6	-19.2	0	47.7	-	-	74	-26.3	150	102	H
2	** 2.50193	36.09	Pk	32.7	-19.1	0	49.69	-	-	74	-24.31	150	102	H
3	*** 2.4835	24.31	ADV	32.6	-19.2	0	37.71	54	-16.29	-	-	150	102	H
4	*** 2.48637	24.21	ADV	32.6	-19.2	0	37.61	54	-16.39	-	-	150	102	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

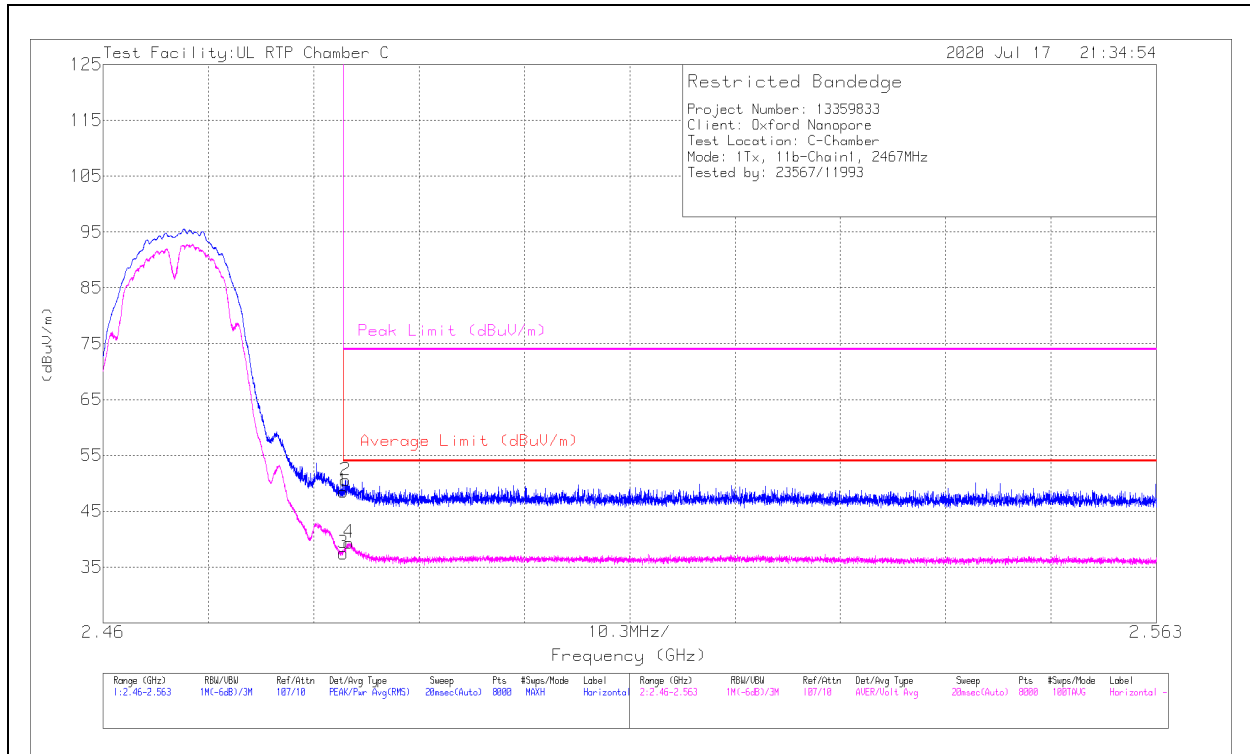


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	37.19	Pk	32.6	-19.2	0	50.59	-	-	74	-23.41	37	103	V
2	** 2.4836	38.42	Pk	32.6	-19.2	0	51.82	-	-	74	-22.18	37	103	V
3	*** 2.4835	27.22	ADV	32.6	-19.2	0	40.62	54	-13.38	-	-	37	103	V
4	*** 2.48375	27.44	ADV	32.6	-19.2	0	40.84	54	-13.16	-	-	37	103	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, CH 12)**

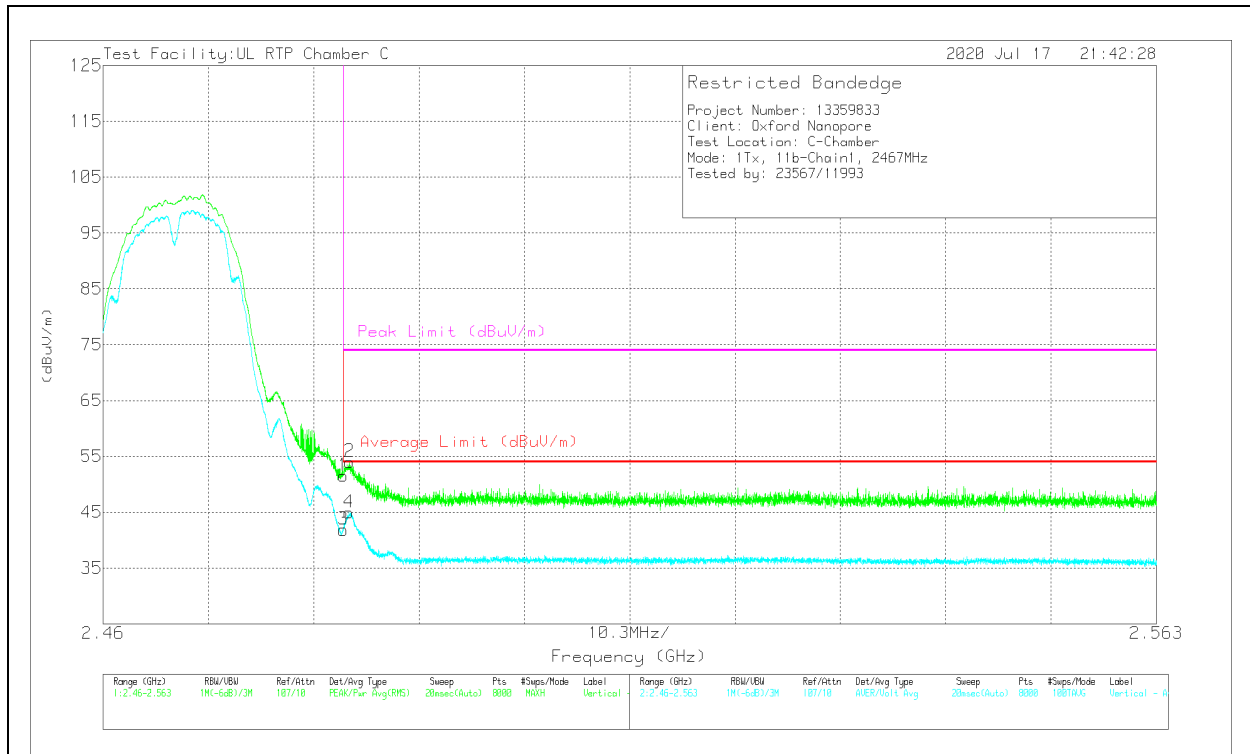
**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (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	35.14	Pk	32.6	-19.2	48.54	-	-	74	-25.46	153	102	H
2	*** 2.48371	37.16	Pk	32.6	-19.2	50.56	-	-	74	-23.44	153	102	H
3	*** 2.4835	24.08	ADV	32.6	-19.2	37.48	54	-16.52	-	-	153	102	H
4	*** 2.48405	25.97	ADV	32.6	-19.2	39.37	54	-14.63	-	-	153	102	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

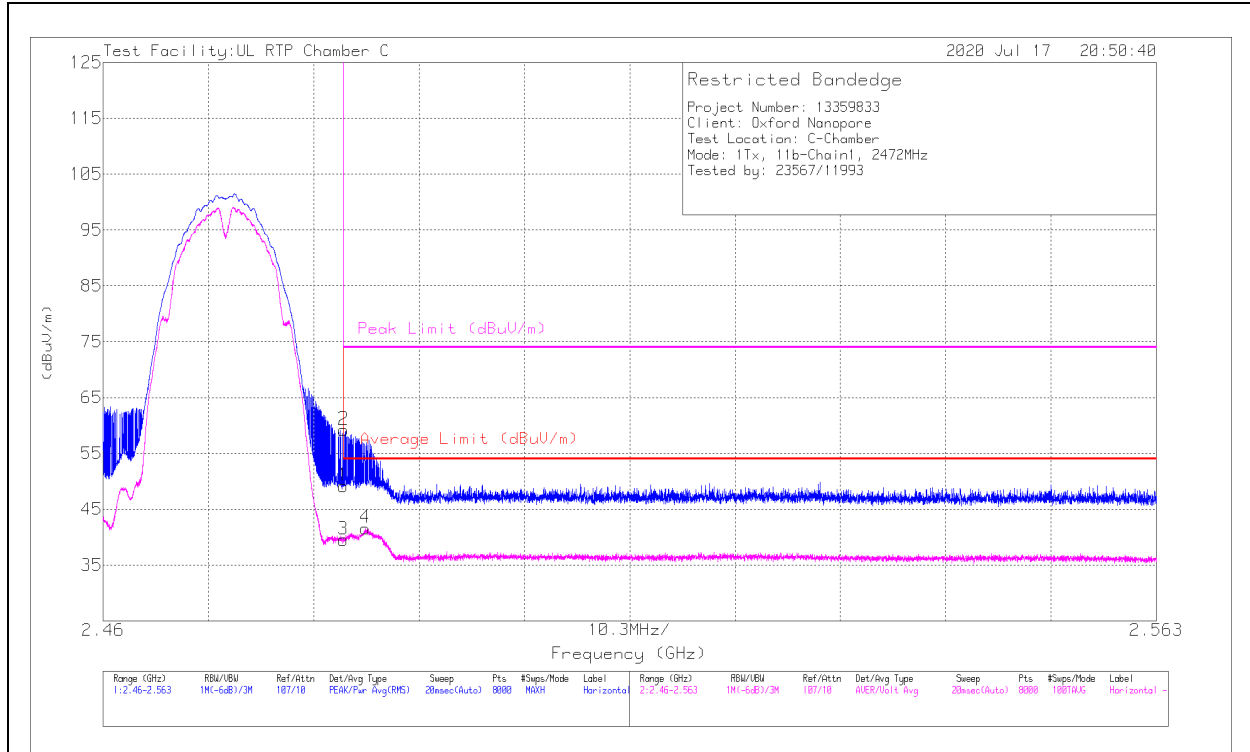


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	38.14	Pk	32.6	-19.2	51.54	-	-	74	-22.46	23	103	V
2	*** 2.48411	40.59	Pk	32.6	-19.2	53.99	-	-	74	-20.01	23	103	V
3	*** 2.4835	28.46	ADV	32.6	-19.2	41.86	54	-12.14	-	-	23	103	V
4	*** 2.48403	31.53	ADV	32.6	-19.2	44.93	54	-9.07	-	-	23	103	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, CH 13)**

**HORIZONTAL RESULT**

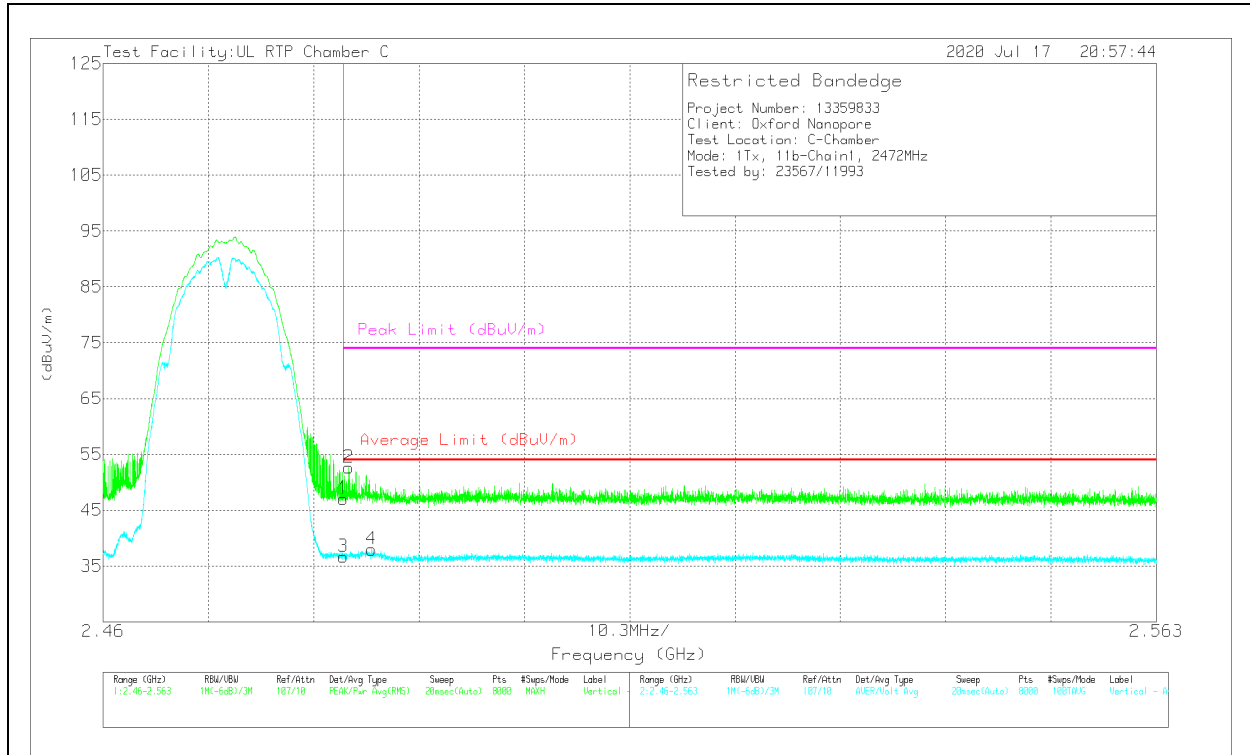


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	35.77	Pk	32.6	-19.2	0	49.17	-	-	74	-24.83	101	102	H
2	*** 2.48351	45.82	Pk	32.6	-19.2	0	59.22	-	-	74	-14.78	101	102	H
3	*** 2.4835	26.15	ADV	32.6	-19.2	0	39.55	54	-14.45	-	-	101	102	H
4	*** 2.48563	28.2	ADV	32.6	-19.2	0	41.6	54	-12.4	-	-	101	102	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

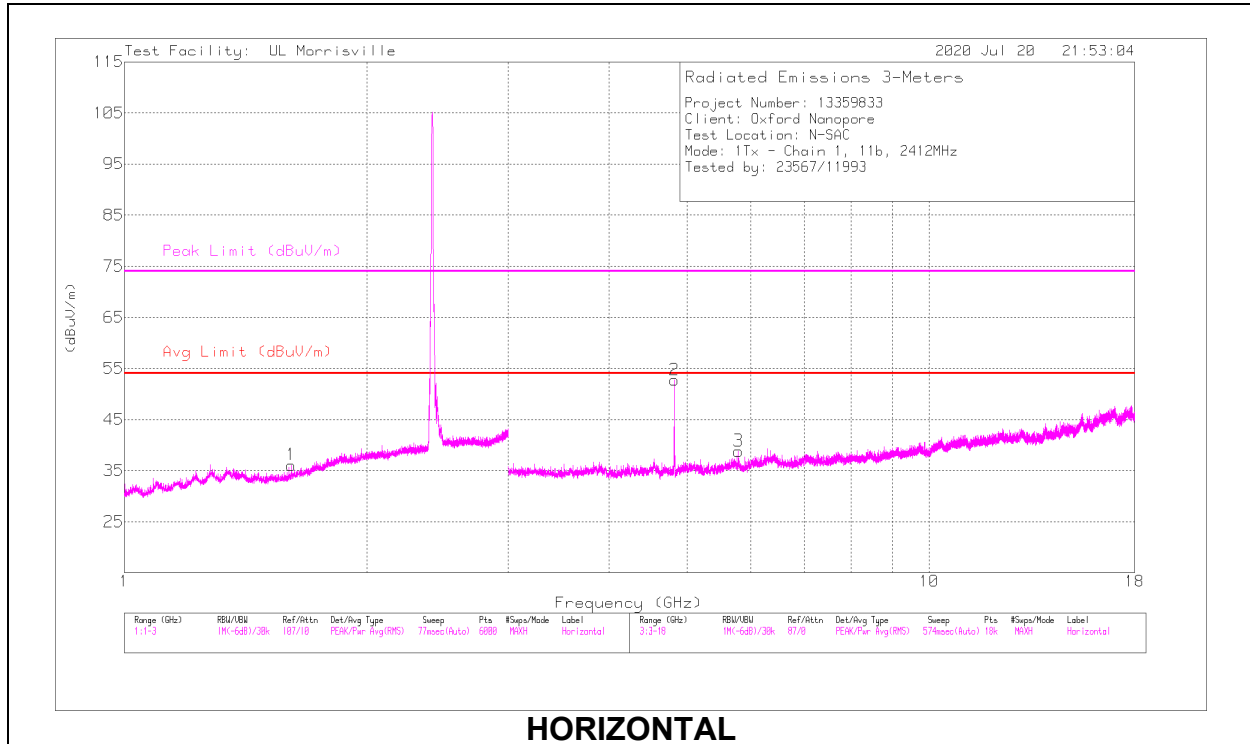


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	33.64	Pk	32.6	-19.2	0	47.04	-	-	74	-26.96	358	102	V
2	* ** 2.484	39.22	Pk	32.6	-19.2	0	52.62	-	-	74	-21.38	358	102	V
3	* ** 2.4835	23.28	ADV	32.6	-19.2	0	36.68	54	-17.32	-	-	358	102	V
4	* ** 2.48626	24.58	ADV	32.6	-19.2	0	37.98	54	-16.02	-	-	358	102	V

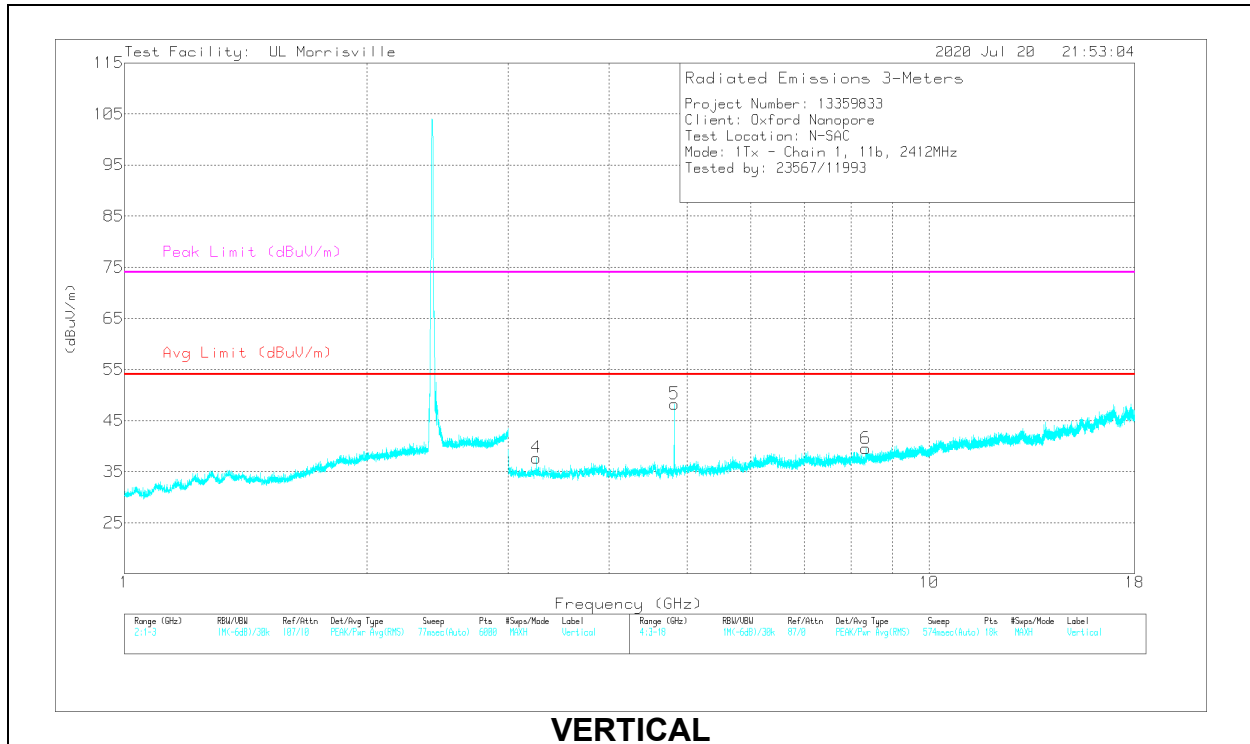
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 \*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band  
 Pk - Peak detector  
 ADV - Linear Voltage Average

# HARMONICS AND SPURIOUS EMISSIONS

## LOW CHANNEL, CH 1 RESULTS



**HORIZONTAL**



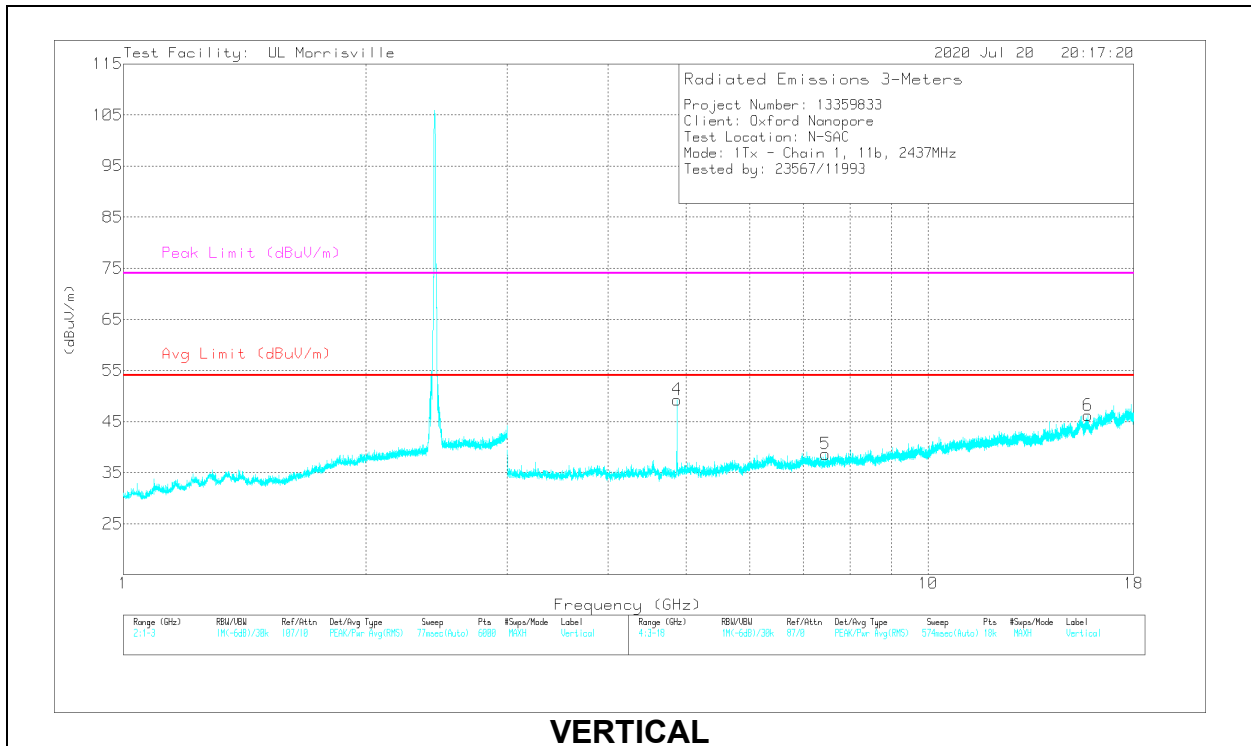
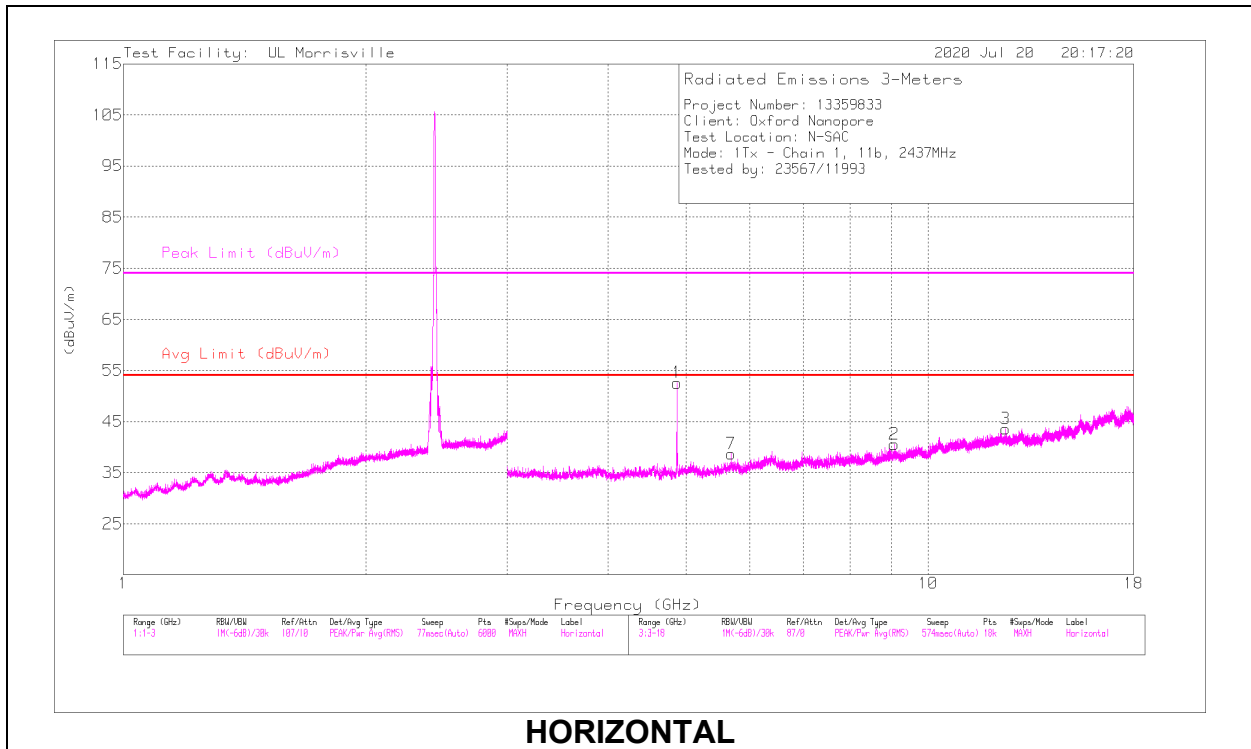
**VERTICAL**

**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	* ** 1.61363	36.69	PK2	28.1	-23.7	0	41.09	-	-	74	-32.91	147	328	H
	* ** 1.61326	23.5	ADV	28.1	-23.7	0	27.9	54	-26.1	-	-	147	328	H
2	* ** 4.82394	51.65	PK2	34.2	-30.8	0	55.05	-	-	74	-18.95	26	243	H
	* ** 4.82397	49.15	ADV	34.2	-30.8	0	52.55	54	-1.45	-	-	26	243	H
5	* ** 4.82392	48.73	PK2	34.2	-30.8	0	52.13	-	-	74	-21.87	112	205	V
	* ** 4.82397	45.41	ADV	34.2	-30.8	0	48.81	54	-5.19	-	-	112	205	V
6	* ** 8.34229	37.45	PK2	35.9	-27.8	0	45.55	-	-	74	-28.45	348	186	V
	* ** 8.34385	24.03	ADV	35.9	-27.8	0	32.13	54	-21.87	-	-	348	186	V
4	3.25001	36.73	Pk	33.3	-32.3	0	37.73	-	-	-	-	0-360	200	V
3	5.79432	34.84	Pk	34.9	-30.9	0	38.84	-	-	-	-	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, CH 6 RESULTS

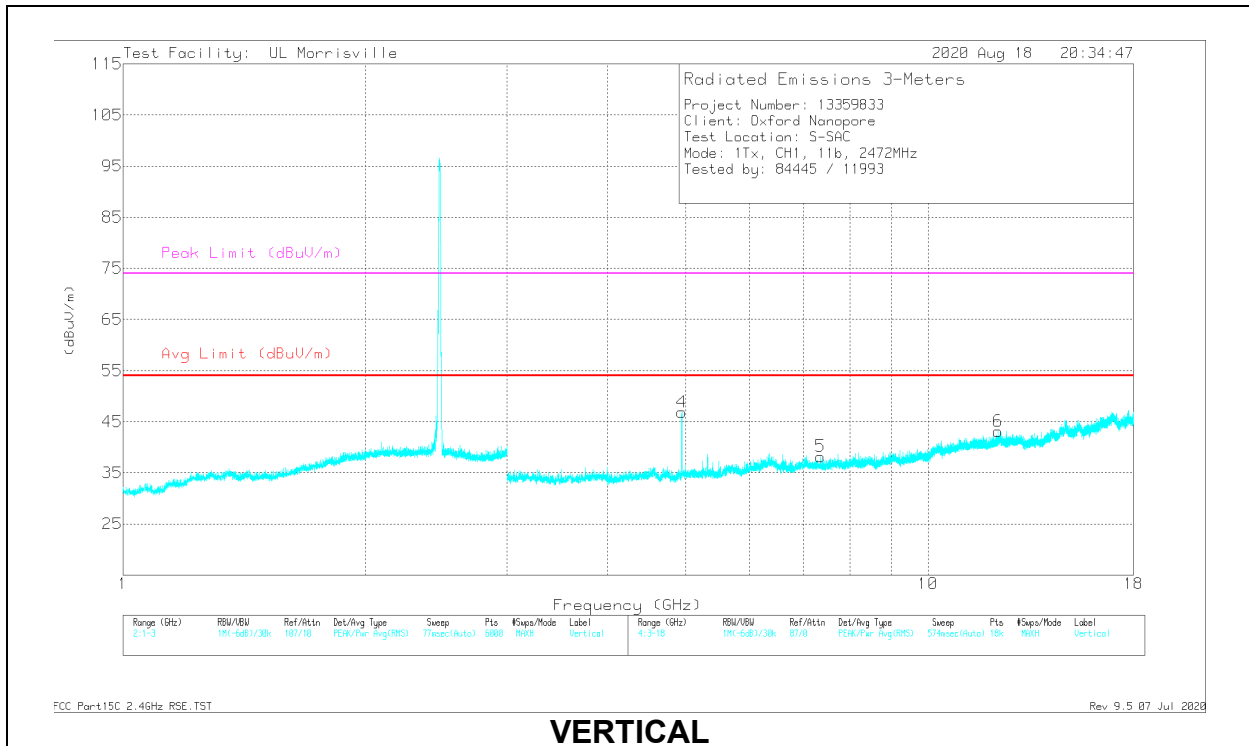
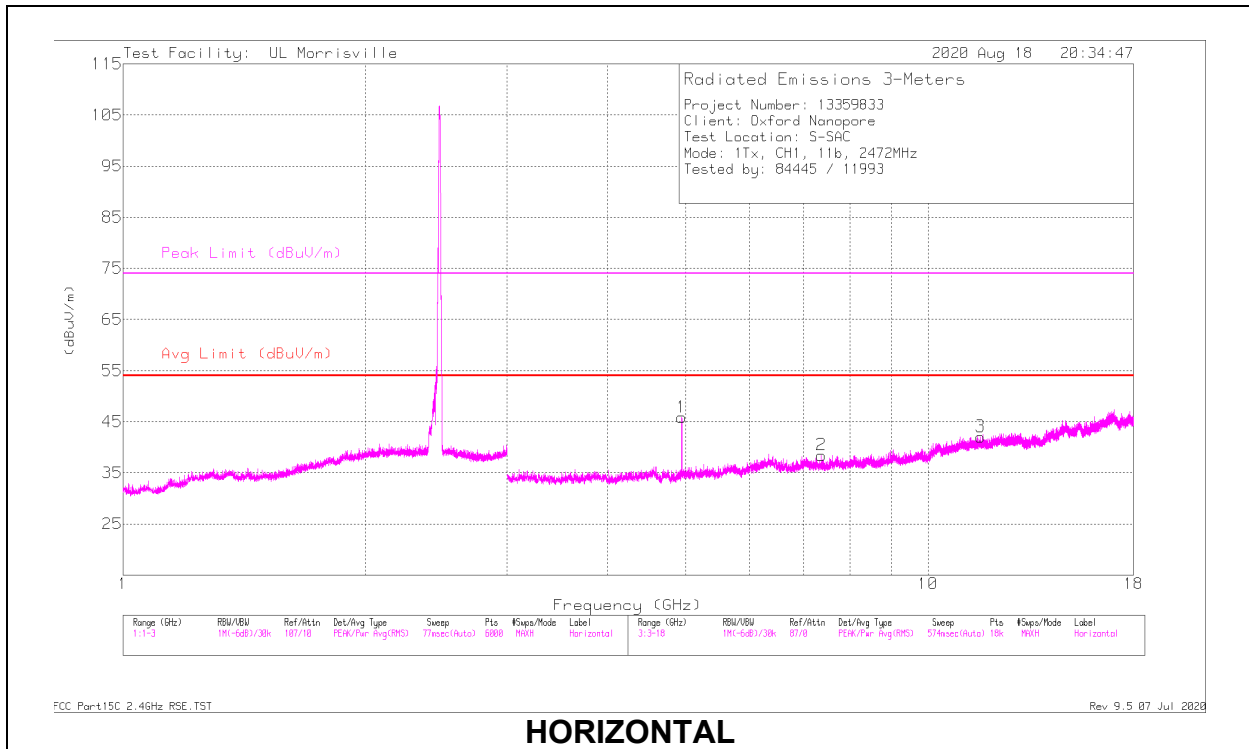


**RADIATED EMISSIONS**

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	* ** 4.87401	51.4	PK2	34.1	-30.9	0	54.6	-	-	74	-19.4	28	249	H
	* ** 4.87397	49.13	ADV	34.1	-30.9	0	52.33	54	-1.67	-	-	28	249	H
2	* ** 9.07532	37	PK2	36.5	-27.6	0	45.9	-	-	74	-28.1	351	383	H
	* ** 9.07453	24.06	ADV	36.5	-27.6	0	32.96	54	-21.04	-	-	351	383	H
3	* ** 12.47256	34.93	PK2	38.9	-25.3	0	48.53	-	-	74	-25.47	0	102	H
	* ** 12.47364	22.13	ADV	38.9	-25.3	0	35.73	54	-18.27	-	-	0	102	H
4	* ** 4.87399	48.43	PK2	34.1	-30.9	0	51.63	-	-	74	-22.37	114	199	V
	* ** 4.87393	45.3	ADV	34.1	-30.9	0	48.5	54	-5.5	-	-	114	199	V
5	* ** 7.4494	38.33	PK2	35.6	-28.4	0	45.53	-	-	74	-28.47	355	388	V
	* ** 7.4488	24.04	ADV	35.6	-28.4	0	31.24	54	-22.76	-	-	355	388	V
6	* ** 15.79703	35.56	PK2	40.1	-24	0	51.66	-	-	74	-22.34	66	386	V
	* ** 15.79698	22.69	ADV	40.1	-24	0	38.79	54	-15.21	-	-	66	386	V
7	5.69098	34.79	Pk	34.6	-30.7	0	38.69	-	-	-	-	0-360	200	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

### HIGH CHANNEL, CH 13 RESULTS



**RADIATED EMISSIONS**

Markers	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	*** 4.94401	45.72	PK2	33.9	-30.9	0	48.72	-	-	74	-25.28	16	101	H
	*** 4.94404	41.8	ADV	33.9	-30.9	0	44.8	54	-9.2	-	-	16	101	H
2	*** 7.37183	35.07	PK2	35.6	-27.4	0	43.27	-	-	74	-30.73	0	378	H
	*** 7.37105	22.59	ADV	35.6	-27.4	0	30.79	54	-23.21	-	-	0	378	H
3	*** 11.61885	34.09	PK2	38.4	-24.4	0	48.09	-	-	74	-25.91	7	140	H
	*** 11.62261	21.23	ADV	38.4	-24.5	0	35.13	54	-18.87	-	-	7	140	H
4	*** 4.944	46.51	PK2	33.9	-30.9	0	49.51	-	-	74	-24.49	98	260	V
	*** 4.94404	43.13	ADV	33.9	-30.9	0	46.13	54	-7.87	-	-	98	260	V
5	*** 7.35352	35.6	PK2	35.6	-27.5	0	43.7	-	-	74	-30.3	259	283	V
	*** 7.35451	22.75	ADV	35.6	-27.5	0	30.85	54	-23.15	-	-	259	283	V
6	*** 12.21002	33.93	PK2	38.8	-24.3	0	48.43	-	-	74	-25.57	2	268	V
	*** 12.20988	21.14	ADV	38.8	-24.3	0	35.64	54	-18.36	-	-	2	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

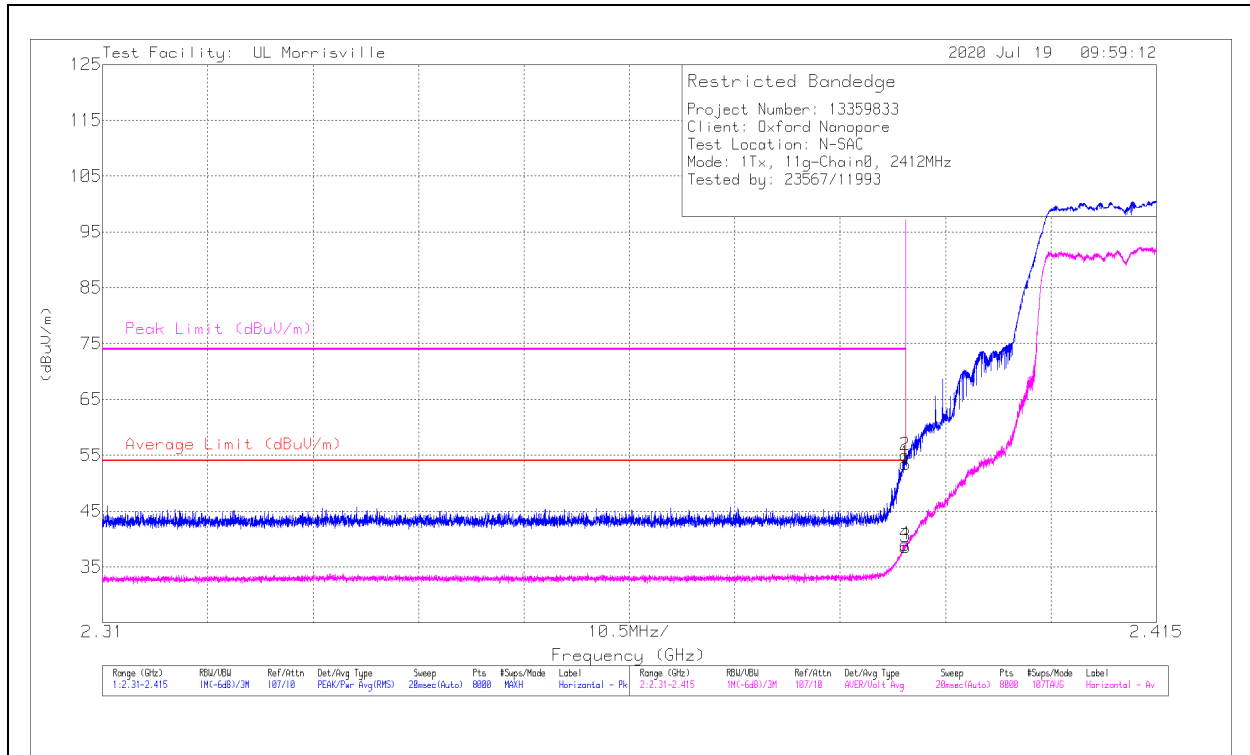
Pk - Peak detector

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

#### 1TX ANTENNA 1 MODE

#### BANDEDGE (LOW CHANNEL, CH 1)

#### HORIZONTAL RESULT

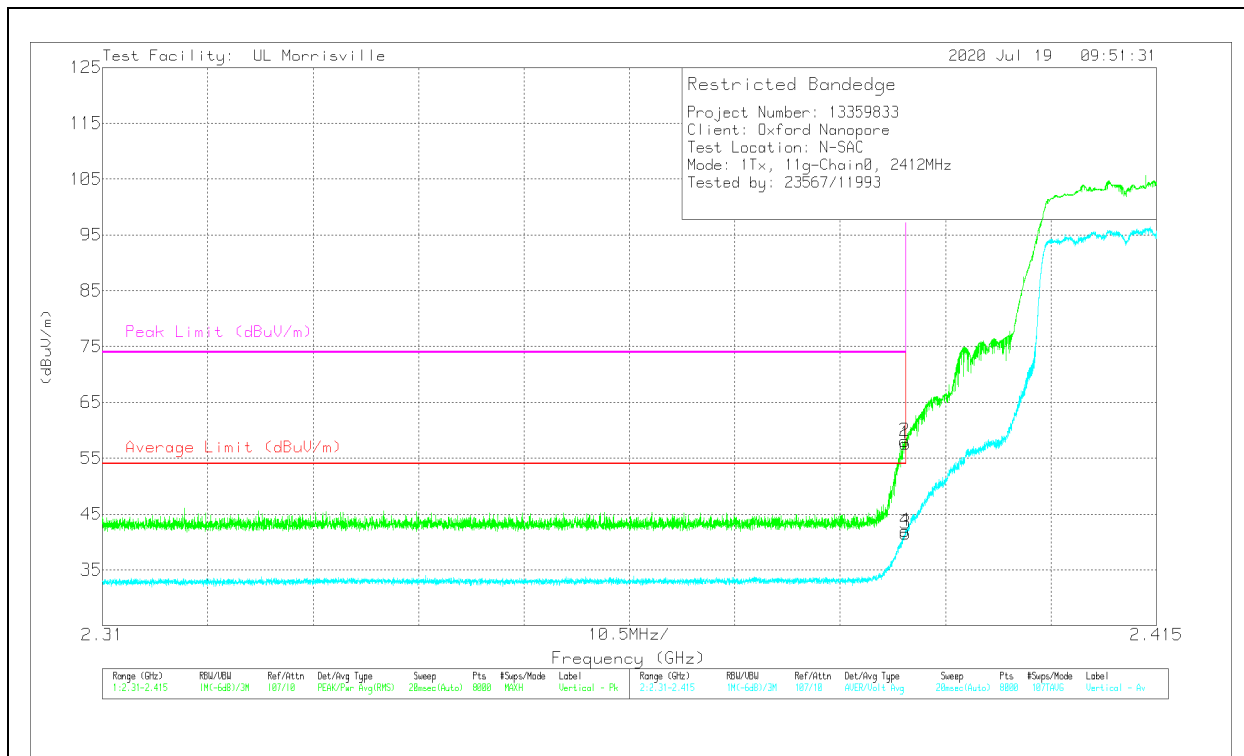


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	45.28	Pk	31.8	-23.6	0	53.48	-	-	74	-20.52	302	227	H
2	* ** 2.38996	46.8	Pk	31.8	-23.6	0	55	-	-	74	-19	302	227	H
3	* ** 2.39	29.8	ADV	31.8	-23.6	.59	38.59	54	-15.41	-	-	302	226	H
4	* ** 2.38998	30.19	ADV	31.8	-23.6	.59	38.98	54	-15.02	-	-	302	226	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

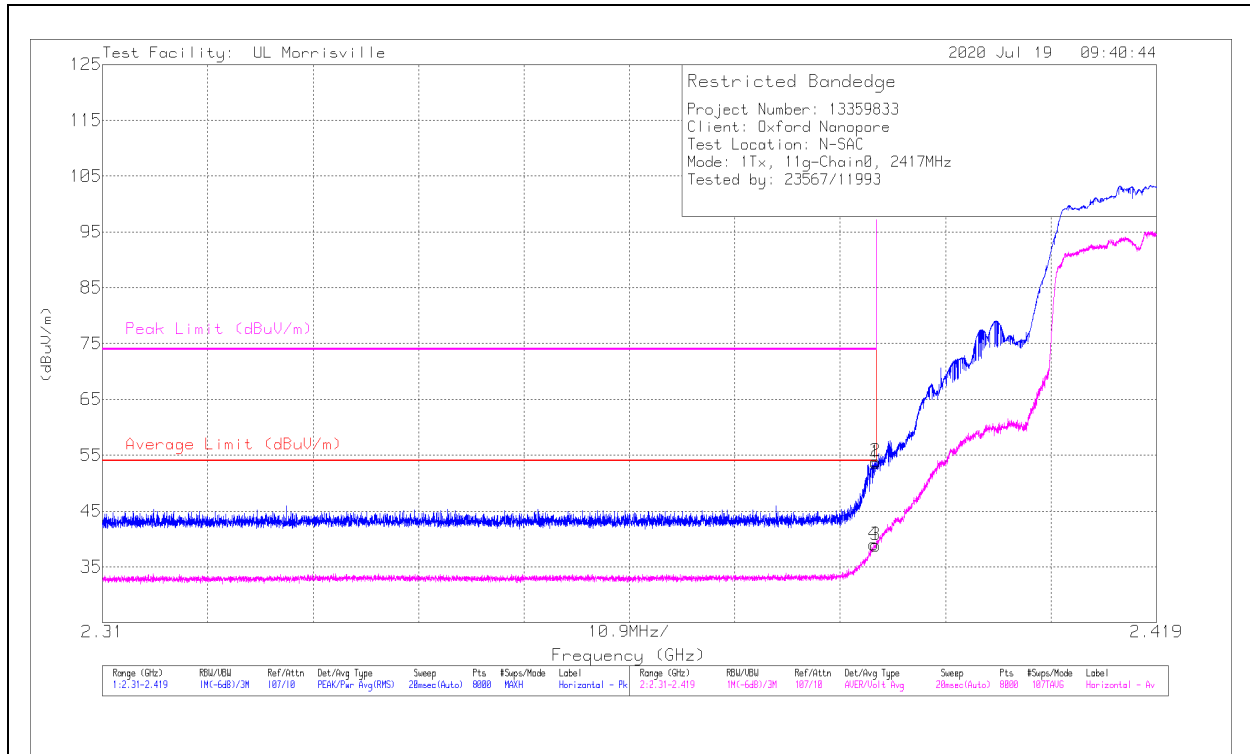


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.39	49.38	Pk	31.8	-23.6	0	57.58	-	-	74	-16.42	44	266	V
2	*** 2.38993	49.86	Pk	31.8	-23.6	0	58.06	-	-	74	-15.94	44	266	V
3	*** 2.39	32.74	ADV	31.8	-23.6	.59	41.53	54	-12.47	-	-	44	266	V
4	*** 2.38997	33.18	ADV	31.8	-23.6	.59	41.97	54	-12.03	-	-	44	266	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 (LOW CHANNEL, CH 2)**

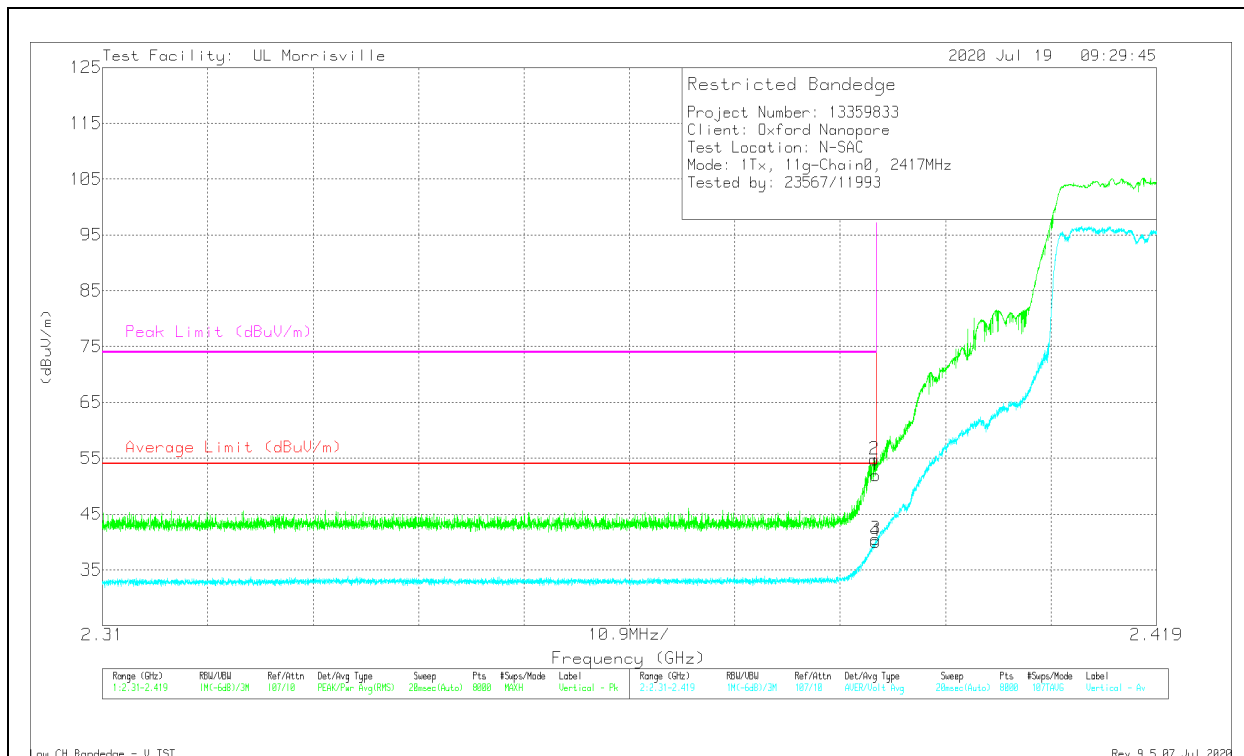
**HORIZONTAL RESULT**



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	* ** 2.38999	45.46	Pk	31.8	-23.6	0	53.66	-	-	74	-20.34	343	115	H
2	* ** 2.38995	45.68	Pk	31.8	-23.6	0	53.88	-	-	74	-20.12	343	115	H
3	* ** 2.38999	30.06	ADV	31.8	-23.6	.59	38.85	54	-15.15	-	-	343	115	H
4	* ** 2.38977	30.22	ADV	31.8	-23.6	.59	39.01	54	-14.99	-	-	343	115	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

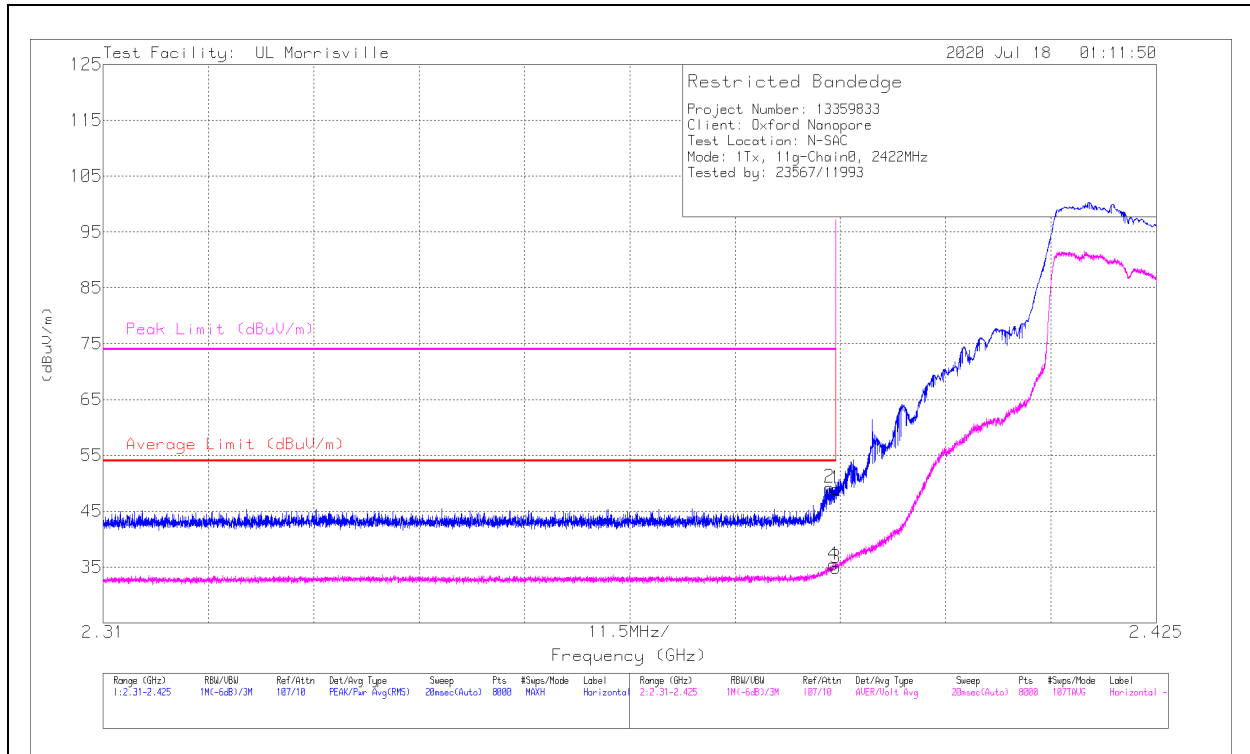


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.38999	43.76	Pk	31.8	-23.6	0	51.96	-	-	74	-22.04	351	134	V
2	*** 2.38984	46.58	Pk	31.8	-23.6	0	54.78	-	-	74	-19.22	351	134	V
3	*** 2.38999	31.74	ADV	31.8	-23.6	.59	40.53	54	-13.47	-	-	351	134	V
4	*** 2.38995	31.29	ADV	31.8	-23.6	.59	40.08	54	-13.92	-	-	351	134	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

**BANDEGE (LOW CHANNEL, CH 3)**

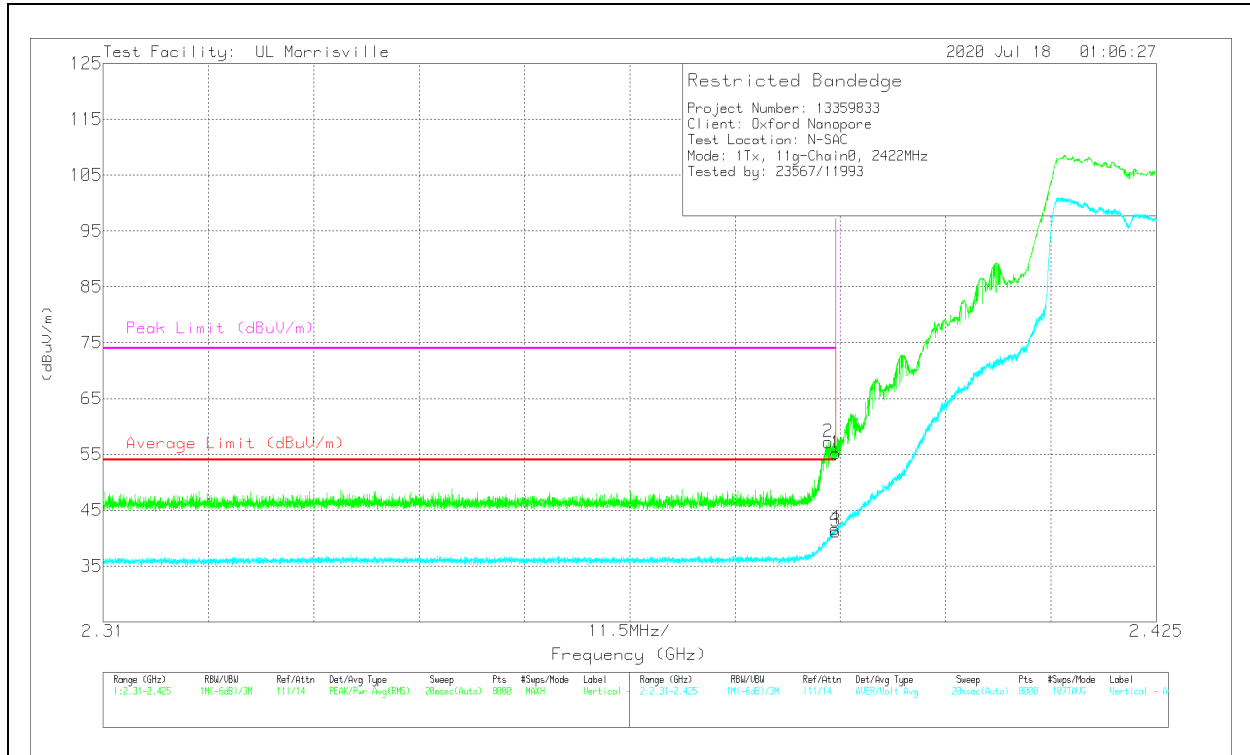
**HORIZONTAL RESULT**



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	* ** 2.38999	40.83	Pk	31.8	-23.6	0	49.03	-	-	74	-24.97	343	377	H
2	* ** 2.38974	26.63	ADV	31.8	-23.6	.59	35.42	54	-18.58	-	-	343	377	H
3	* ** 2.38999	26.06	ADV	31.8	-23.6	.59	34.85	54	-19.15	-	-	343	377	H
4	* ** 2.38993	41.07	Pk	31.8	-23.6	0	49.27	-	-	74	-24.73	343	377	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

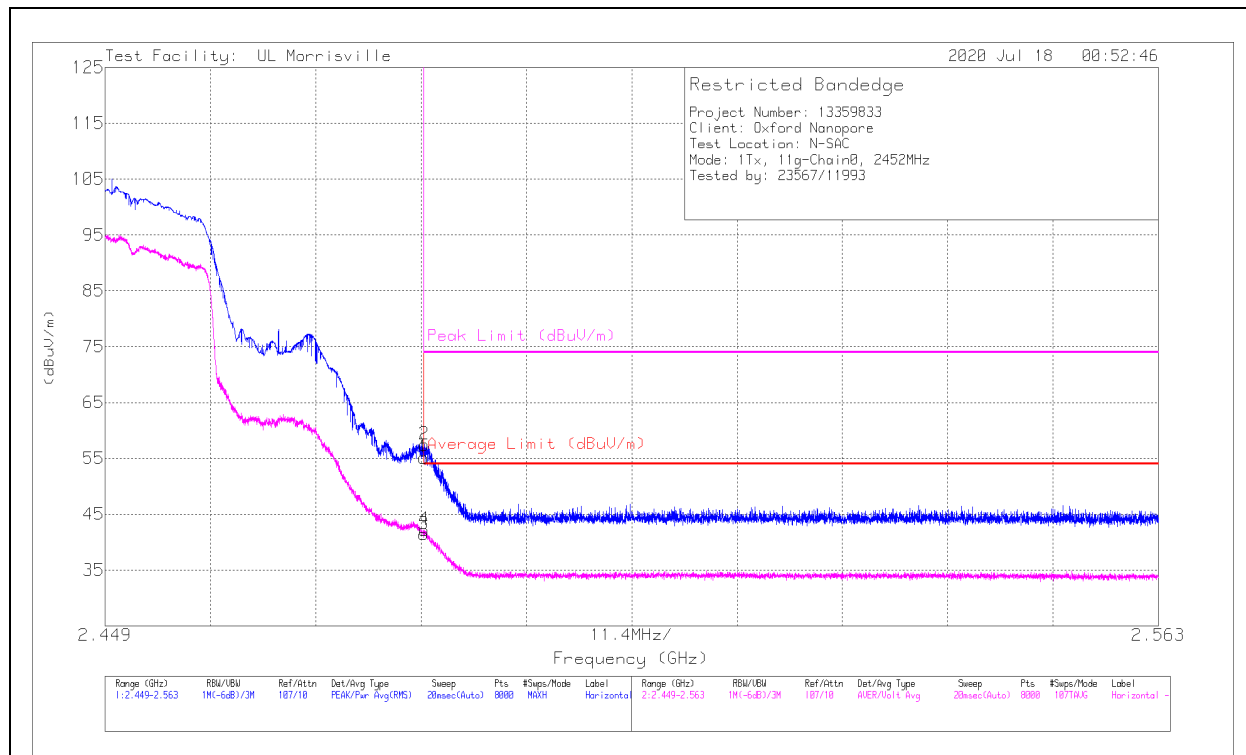


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38999	46.99	Pk	31.8	-23.6	0	55.19	-	-	74	-18.81	232	103	V
2	* ** 2.38917	49.02	Pk	31.8	-23.6	0	57.22	-	-	74	-16.78	232	103	V
3	* ** 2.38999	32.43	ADV	31.8	-23.6	.59	41.22	54	-12.78	-	-	232	103	V
4	* ** 2.38994	32.9	ADV	31.8	-23.6	.59	41.69	54	-12.31	-	-	232	103	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, CH 9)**

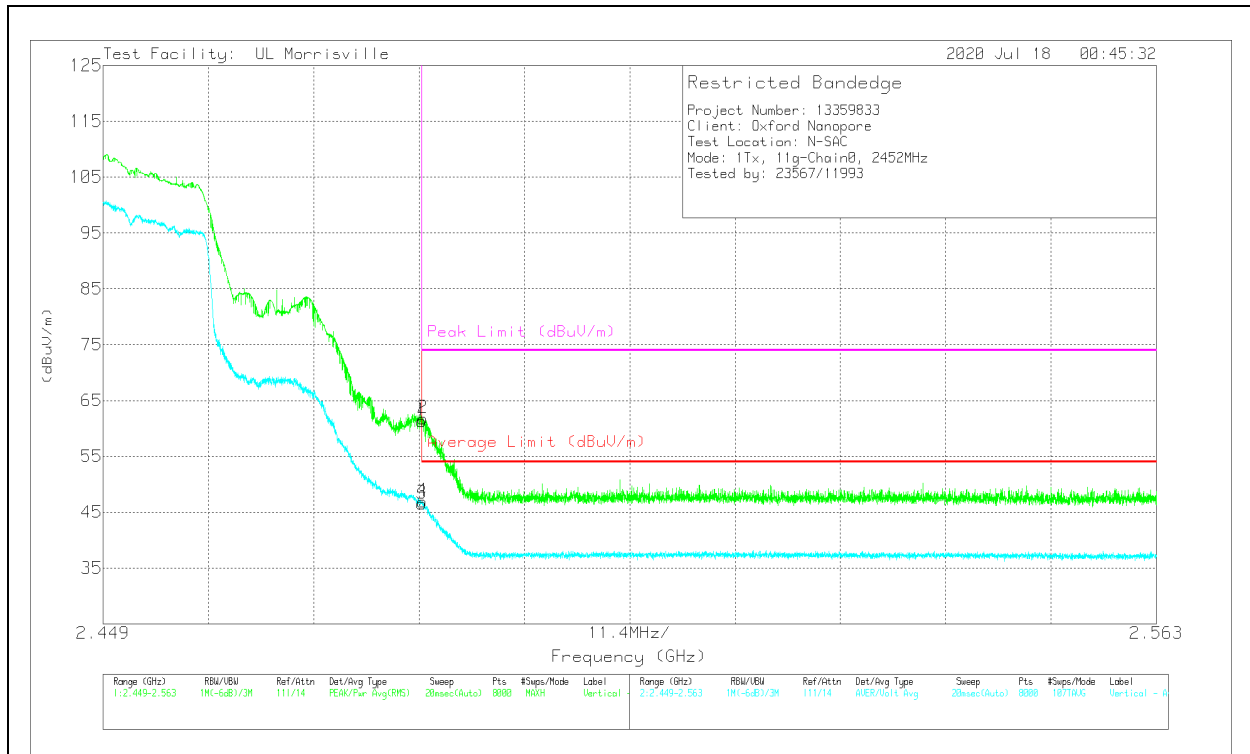
**HORIZONTAL RESULT**



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	46.14	Pk	32.4	-23.4	0	55.14	-	-	74	-18.86	12	107	H
2	* ** 2.48353	48.46	Pk	32.4	-23.4	0	57.46	-	-	74	-16.54	12	107	H
3	* ** 2.4835	31.82	ADV	32.4	-23.4	.59	41.41	54	-12.59	-	-	12	107	H
4	* ** 2.48358	32.57	ADV	32.4	-23.4	.59	42.16	54	-11.84	-	-	12	107	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

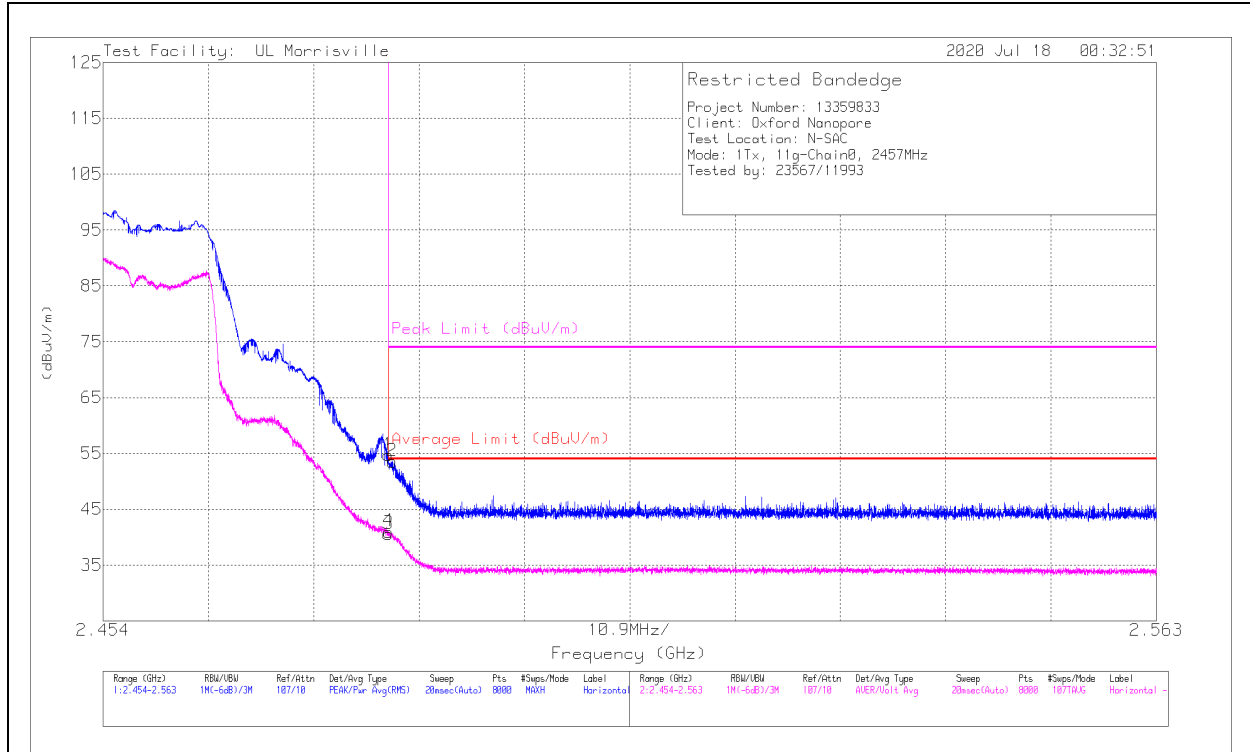


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	52.35	Pk	32.4	-23.4	0	61.35	-	-	74	-12.65	39	113	V
2	*** 2.4836	52.83	Pk	32.4	-23.4	0	61.83	-	-	74	-12.17	39	113	V
3	*** 2.4835	36.97	ADV	32.4	-23.4	.59	46.56	54	-7.44	-	-	39	113	V
4	*** 2.48356	37.34	ADV	32.4	-23.4	.59	46.93	54	-7.07	-	-	39	113	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, CH 10)**

**HORIZONTAL RESULT**

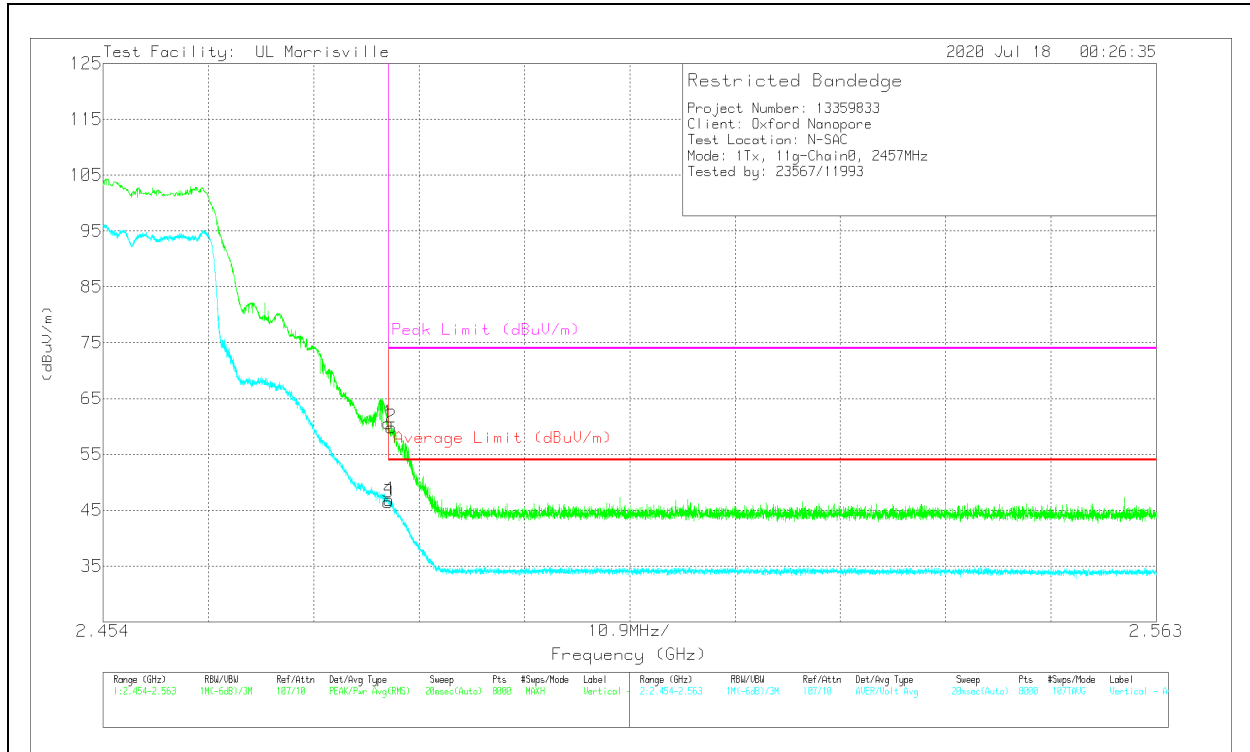


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	45.69	Pk	32.4	-23.4	0	54.69	-	-	74	-19.31	340	123	H
2	* ** 2.48391	44.57	Pk	32.4	-23.4	0	53.57	-	-	74	-20.43	340	123	H
3	* ** 2.4835	30.99	ADV	32.4	-23.4	.59	40.58	54	-13.42	-	-	340	123	H
4	* ** 2.48352	31.39	ADV	32.4	-23.4	.59	40.98	54	-13.02	-	-	340	123	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

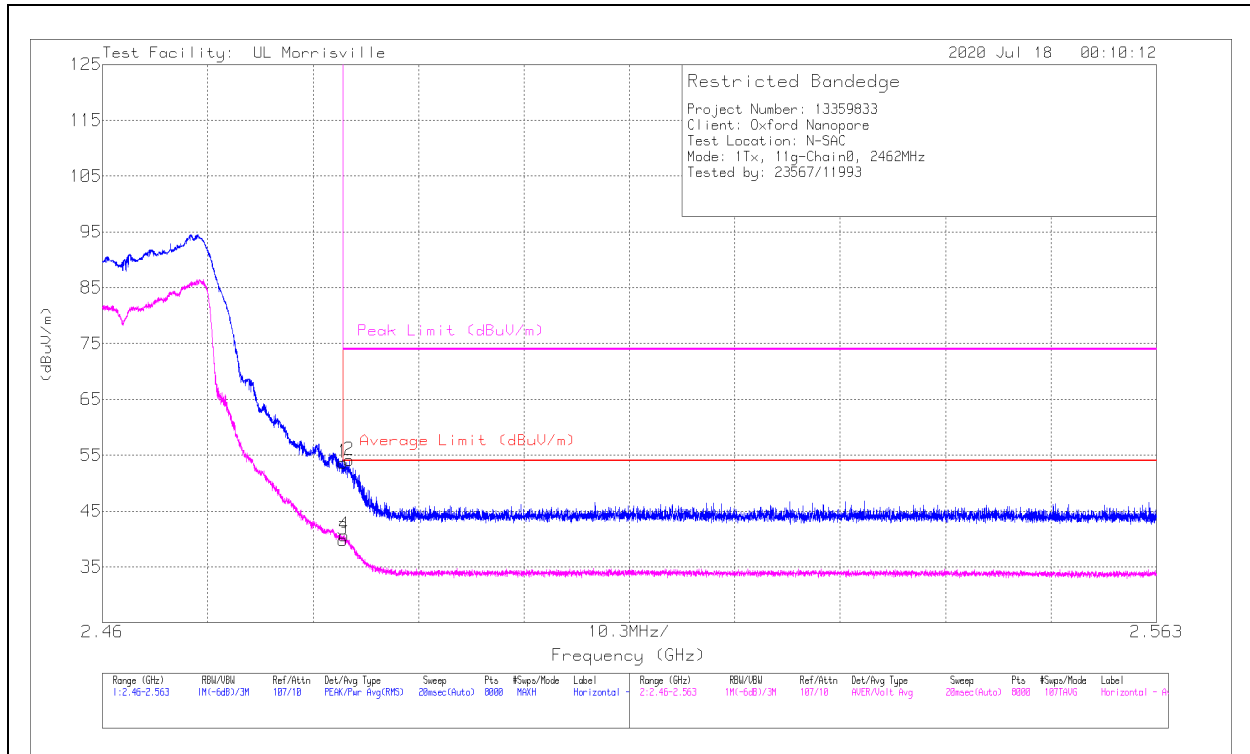


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	51.6	Pk	32.4	-23.4	0	60.6	-	-	74	-13.4	39	140	V
2	*** 2.48382	50.86	Pk	32.4	-23.4	0	59.86	-	-	74	-14.14	39	140	V
3	*** 2.4835	36.79	ADV	32.4	-23.4	.59	46.38	54	-7.62	-	-	39	140	V
4	*** 2.48361	37.27	ADV	32.4	-23.4	.59	46.86	54	-7.14	-	-	39	140	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, CH 11)**

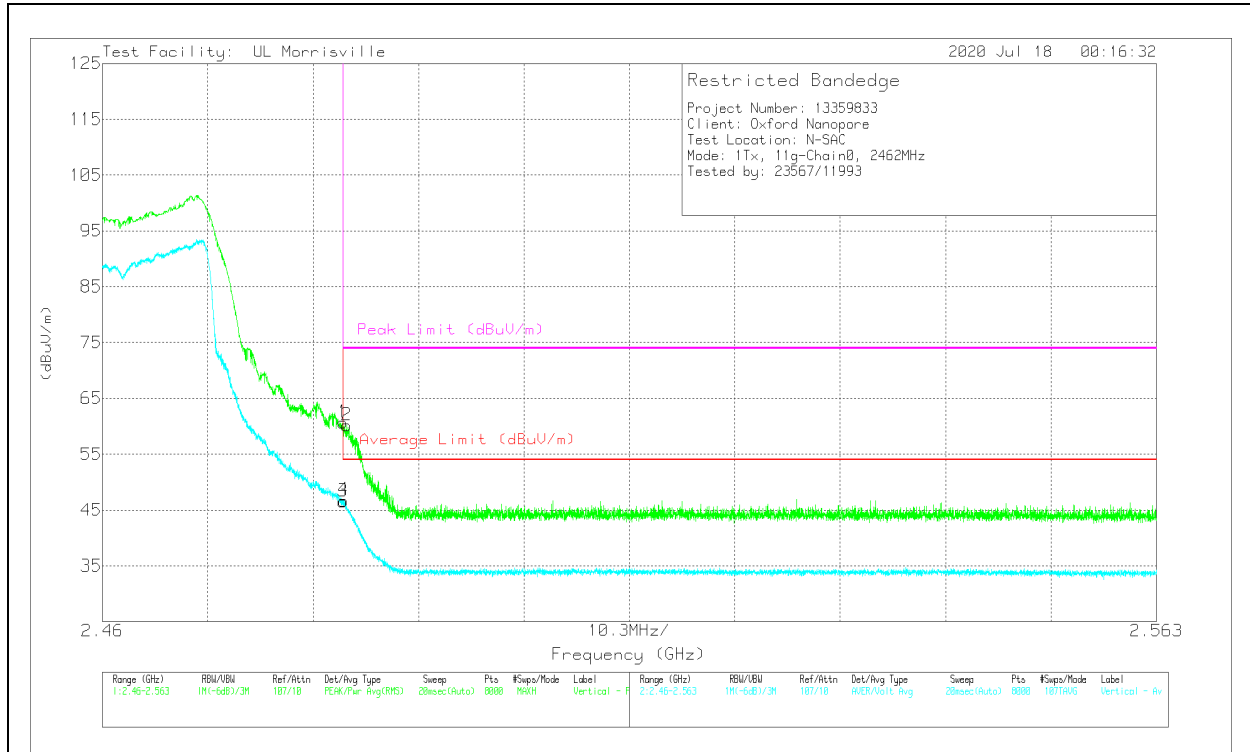
**HORIZONTAL RESULT**



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	44.7	Pk	32.4	-23.4	0	53.7	-	-	74	-20.3	115	371	H
2	*** 2.48413	45.14	Pk	32.4	-23.4	0	54.14	-	-	74	-19.86	115	371	H
3	*** 2.4835	30.24	ADV	32.4	-23.4	.59	39.83	54	-14.17	-	-	115	371	H
4	*** 2.4836	31.07	ADV	32.4	-23.4	.59	40.66	54	-13.34	-	-	115	371	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

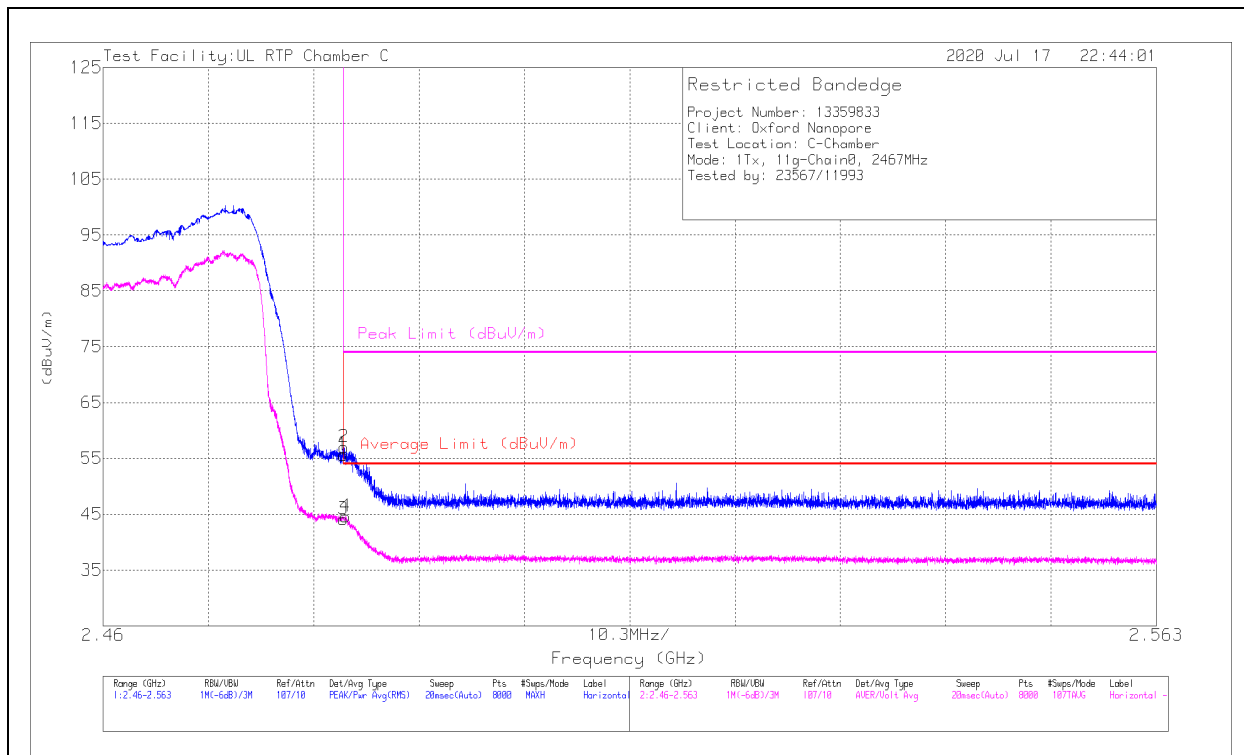


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	51.66	Pk	32.4	-23.4	0	60.66	-	-	74	-13.34	149	157	V
2	*** 2.48385	51.18	Pk	32.4	-23.4	0	60.18	-	-	74	-13.82	149	157	V
3	*** 2.4835	36.96	ADV	32.4	-23.4	.59	46.55	54	-7.45	-	-	149	157	V
4	*** 2.48357	37.12	ADV	32.4	-23.4	.59	46.71	54	-7.29	-	-	149	157	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, CH 12)

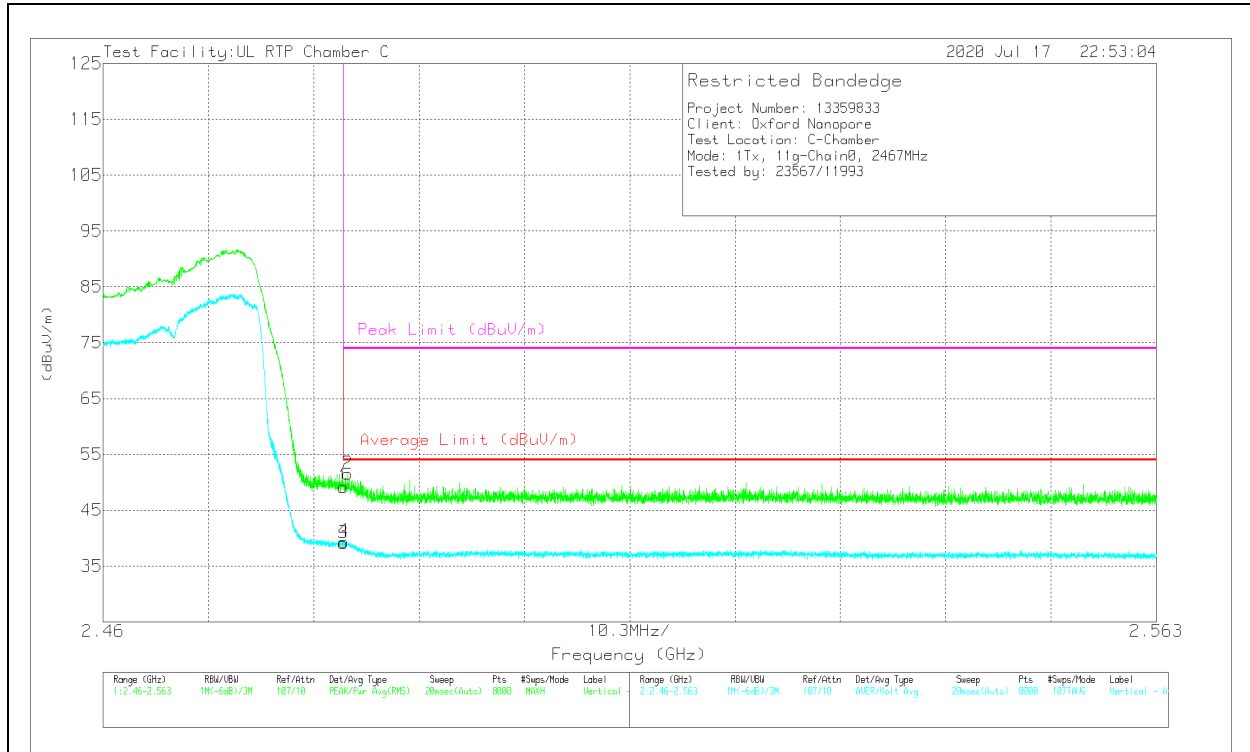
### HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (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	42.18	Pk	32.6	-19.2	0	55.58	-	-	74	-18.42	103	102	H
2	* ** 2.48357	43.6	Pk	32.6	-19.2	0	57	-	-	74	-17	103	102	H
3	* ** 2.4835	30.08	ADV	32.6	-19.2	.59	44.07	54	-9.93	-	-	103	102	H
4	* ** 2.48371	30.57	ADV	32.6	-19.2	.59	44.56	54	-9.44	-	-	103	102	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

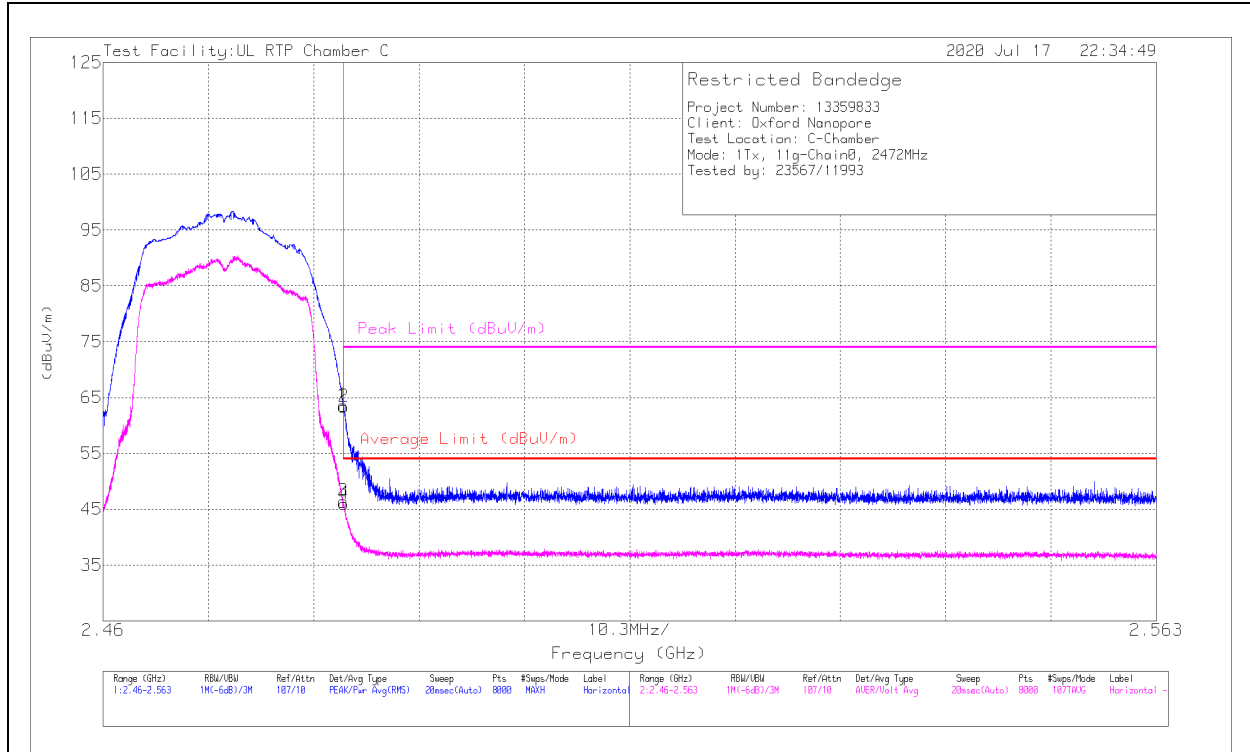


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	35.79	Pk	32.6	-19.2	0	49.19	-	-	74	-24.81	2	102	V
2	*** 2.48393	38.13	Pk	32.6	-19.2	0	51.53	-	-	74	-22.47	2	102	V
3	*** 2.4835	25.1	ADV	32.6	-19.2	.59	39.09	54	-14.91	-	-	2	102	V
4	*** 2.48357	25.39	ADV	32.6	-19.2	.59	39.38	54	-14.62	-	-	2	102	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

**BANDEGE (HIGH CHANNEL, CH 13)**

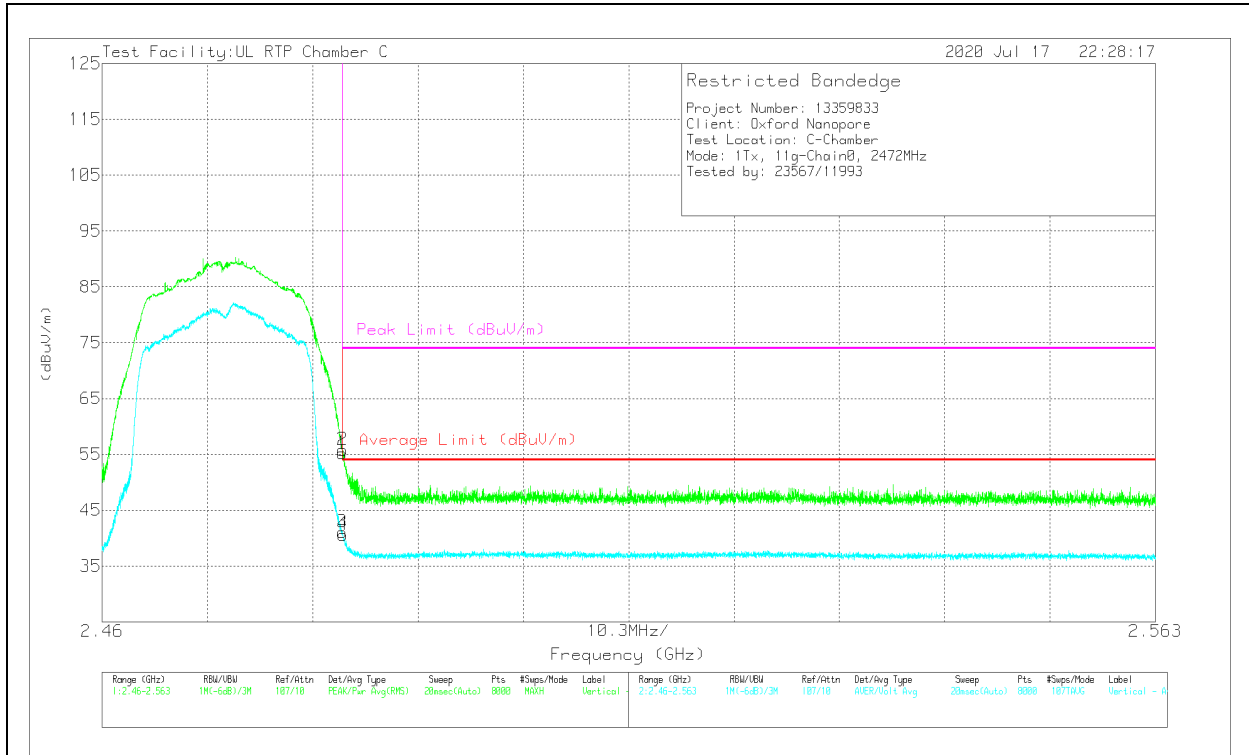
**HORIZONTAL RESULT**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (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	50.15	Pk	32.6	-19.2	0	63.55	-	-	74	-10.45	145	102	H
2	* ** 2.48354	49.93	Pk	32.6	-19.2	0	63.33	-	-	74	-10.67	145	102	H
3	* ** 2.4835	32.37	ADV	32.6	-19.2	.59	46.36	54	-7.64	-	-	145	102	H
4	* ** 2.48354	31.91	ADV	32.6	-19.2	.59	45.90	54	-8.10	-	-	145	102	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

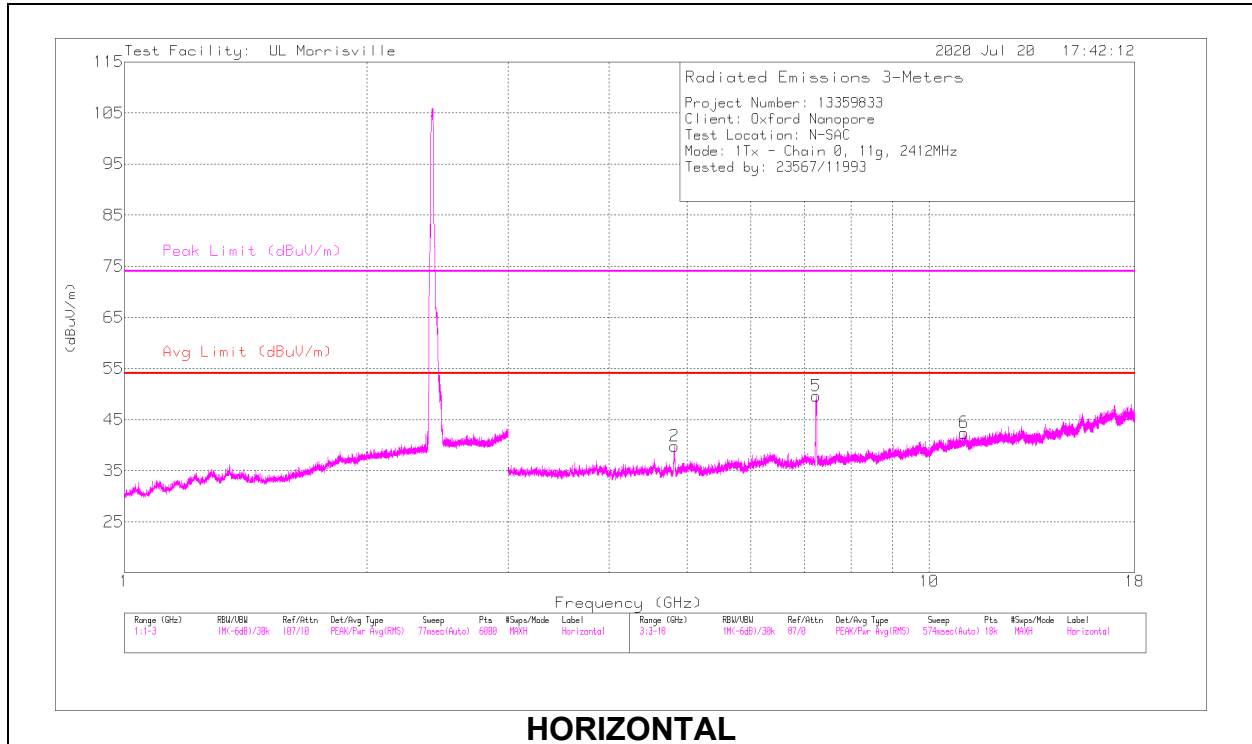


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0062 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	41.8	Pk	32.6	-19.2	0	55.2	-	-	74	-18.8	1	102	V
2	*** 2.48351	42.4	Pk	32.6	-19.2	0	55.8	-	-	74	-18.2	1	102	V
3	*** 2.4835	27.06	ADV	32.6	-19.2	.59	41.05	54	-12.95	-	-	1	102	V
4	*** 2.48354	26.62	ADV	32.6	-19.2	.59	40.61	54	-13.39	-	-	1	102	V

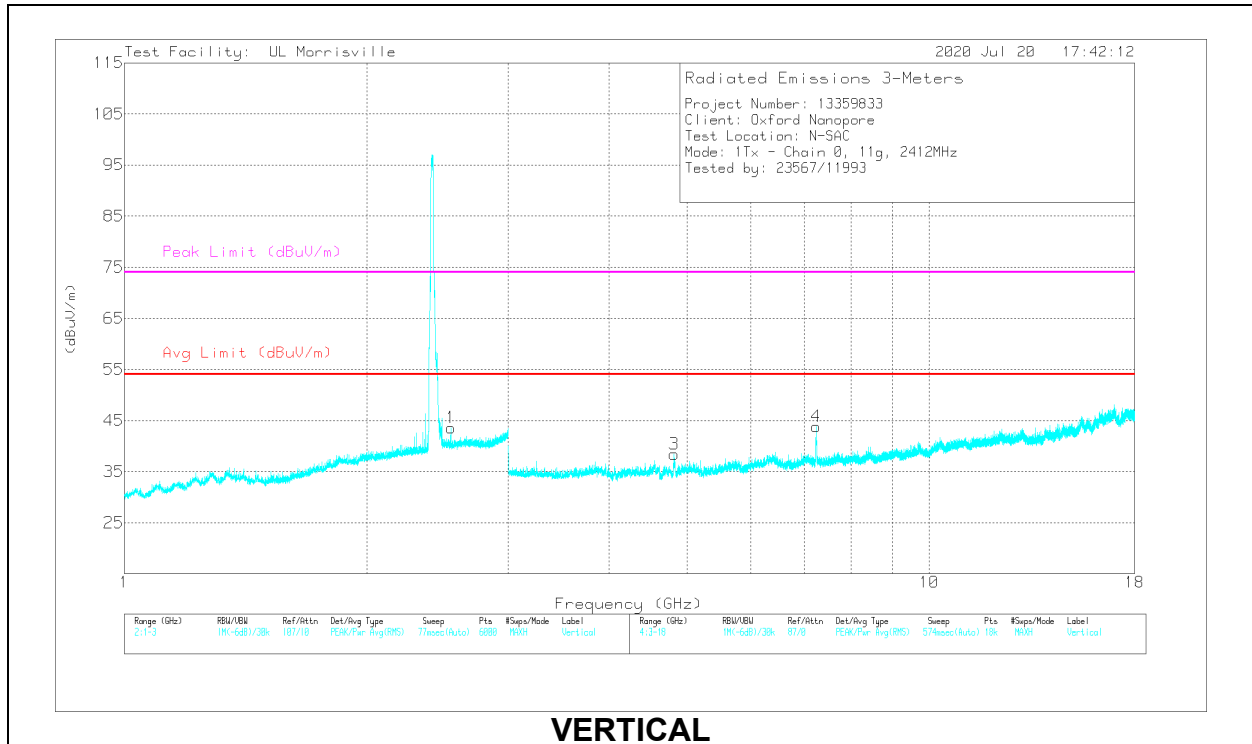
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 \*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band  
 Pk - Peak detector  
 ADV - Linear Voltage Average

# HARMONICS AND SPURIOUS EMISSIONS

## LOW CHANNEL, CH 1 RESULTS



**HORIZONTAL**



**VERTICAL**



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	** 2.54643	37.76	PK2	32.4	-23.4	0	46.76	-	-	74	-27.24	1	257	V
	** 2.54804	24.65	ADV	32.4	-23.4	.59	34.24	54	-19.76	-	-	1	257	V
2	*** 4.82472	44.3	PK2	34.2	-30.7	0	47.8	-	-	74	-26.2	346	287	H
	*** 4.82428	31.74	ADV	34.2	-30.7	.59	35.83	54	-18.17	-	-	346	287	H
6	*** 11.04884	35.41	PK2	37.9	-24.6	0	48.71	-	-	74	-25.29	213	290	H
	*** 11.04722	21.95	ADV	37.9	-24.7	.59	35.74	54	-18.26	-	-	213	290	H
3	*** 4.82052	43.44	PK2	34.2	-30.9	0	46.74	-	-	74	-27.26	303	343	V
	*** 4.82068	30.24	ADV	34.2	-30.9	.59	34.13	54	-19.87	-	-	303	343	V
4	7.23774	37.01	Pk	35.6	-28.8	0	43.81	-	-	-	-	0-360	101	V
5	7.24107	42.77	Pk	35.6	-28.8	0	49.57	-	-	-	-	0-360	101	H

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

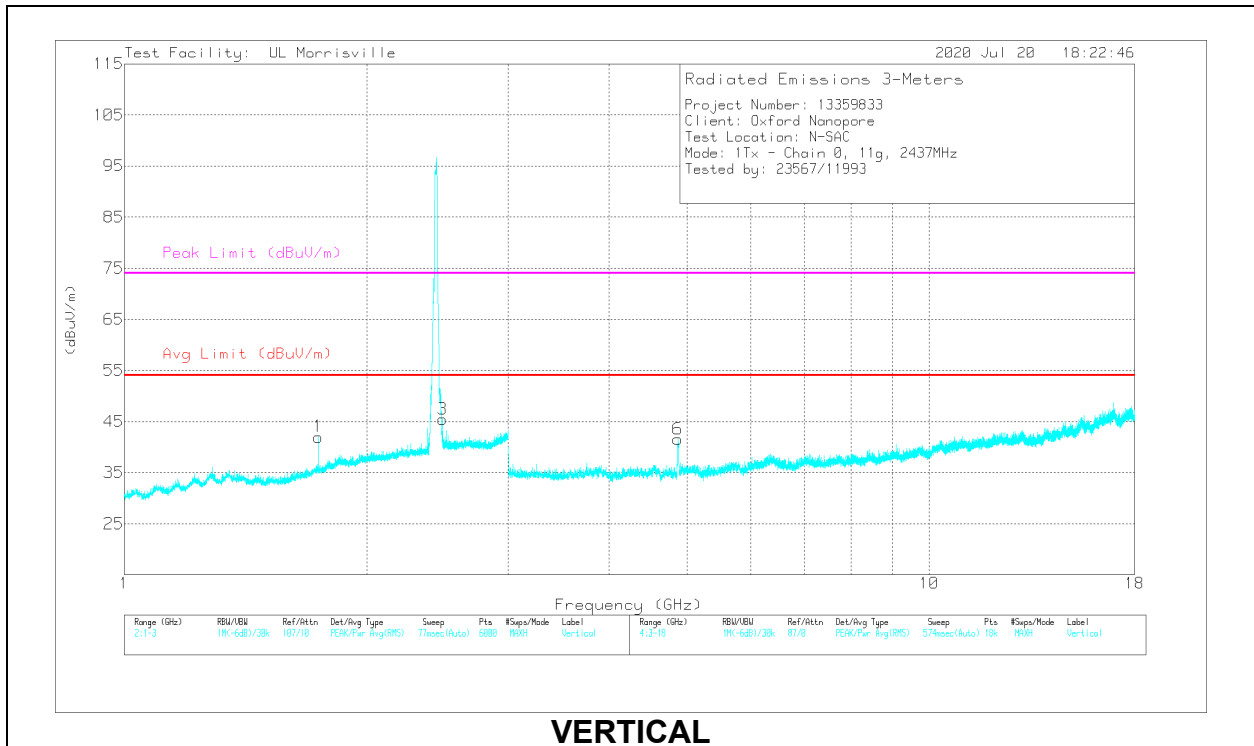
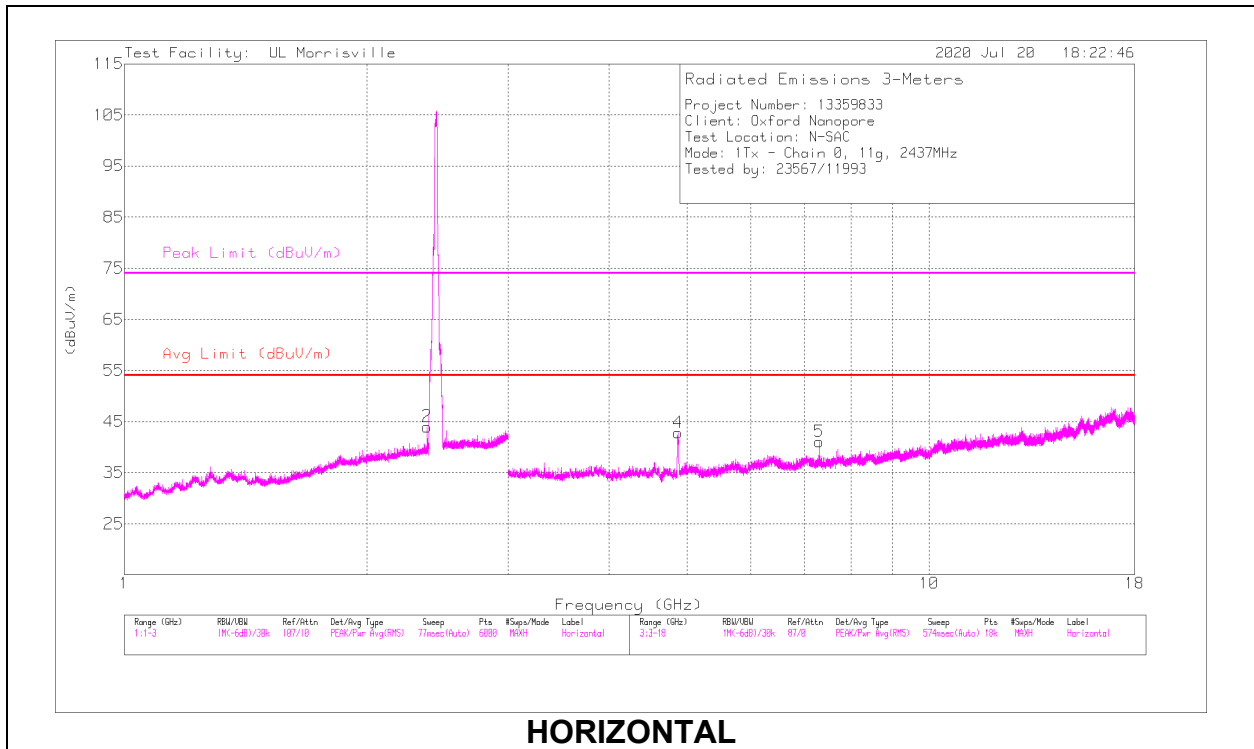
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

Pk - Peak detector

### MID CHANNEL, CH 6 RESULTS



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
2	*** 2.37748	37.56	PK2	31.7	-23.6	0	45.66	-	-	74	-28.34	17	160	H
	*** 2.37969	24.45	ADV	31.8	-23.6	.59	33.24	54	-20.76	-	-	17	160	H
1	** 1.74151	40.79	PK2	29.5	-23.5	0	46.79	-	-	74	-27.21	204	400	V
	** 1.74136	23.6	ADV	29.5	-23.5	.59	30.19	54	-23.81	-	-	204	400	V
3	*** 2.48578	38.48	PK2	32.5	-23.4	0	47.58	-	-	74	-26.42	103	121	V
	*** 2.48579	24.94	ADV	32.5	-23.4	.59	34.63	54	-19.37	-	-	103	121	V
4	** 4.87422	48.4	PK2	34.1	-30.9	0	51.6	-	-	74	-22.4	335	295	H
	*** 4.87378	35.03	ADV	34.1	-30.9	.59	38.82	54	-15.18	-	-	335	295	H
5	*** 7.30405	37.23	PK2	35.6	-28.3	0	44.53	-	-	74	-29.47	16	179	H
	*** 7.30329	23.85	ADV	35.6	-28.3	.59	31.74	54	-22.26	-	-	16	179	H
6	*** 4.87273	47.59	PK2	34.1	-30.9	0	50.79	-	-	74	-23.21	296	313	V
	*** 4.87356	34	ADV	34.1	-30.9	.59	37.79	54	-16.21	-	-	296	313	V

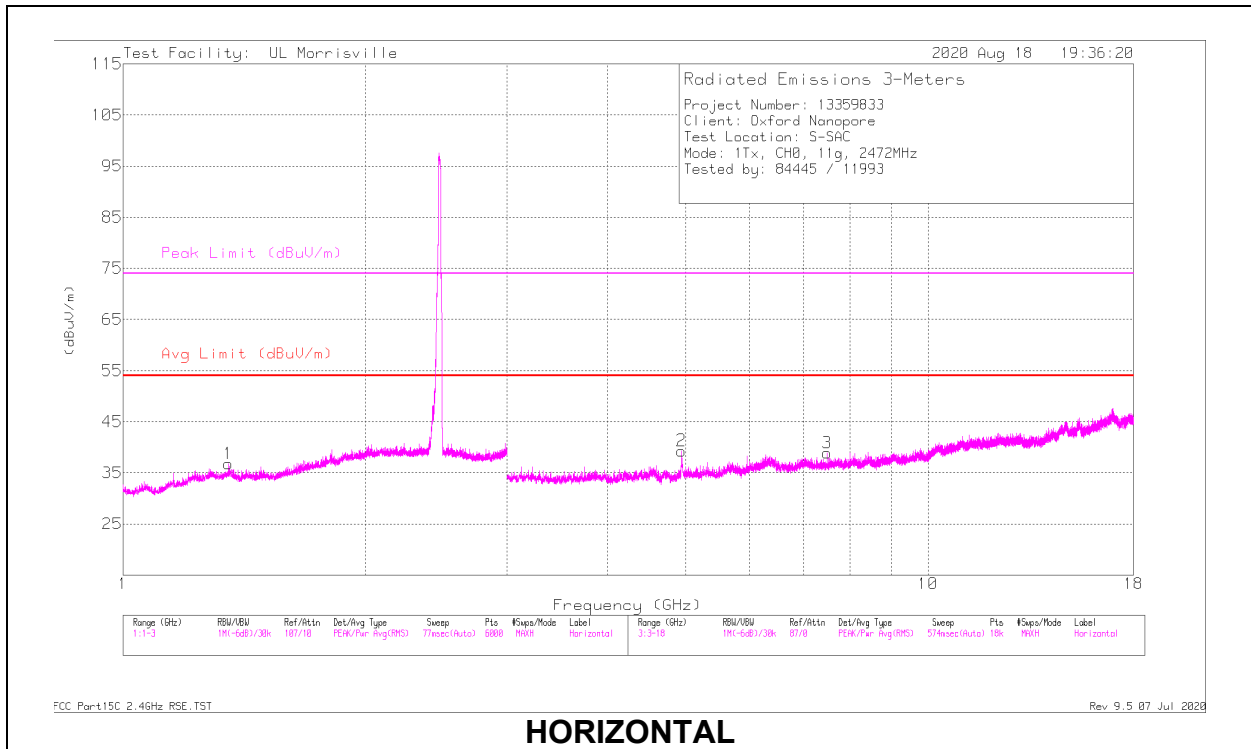
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

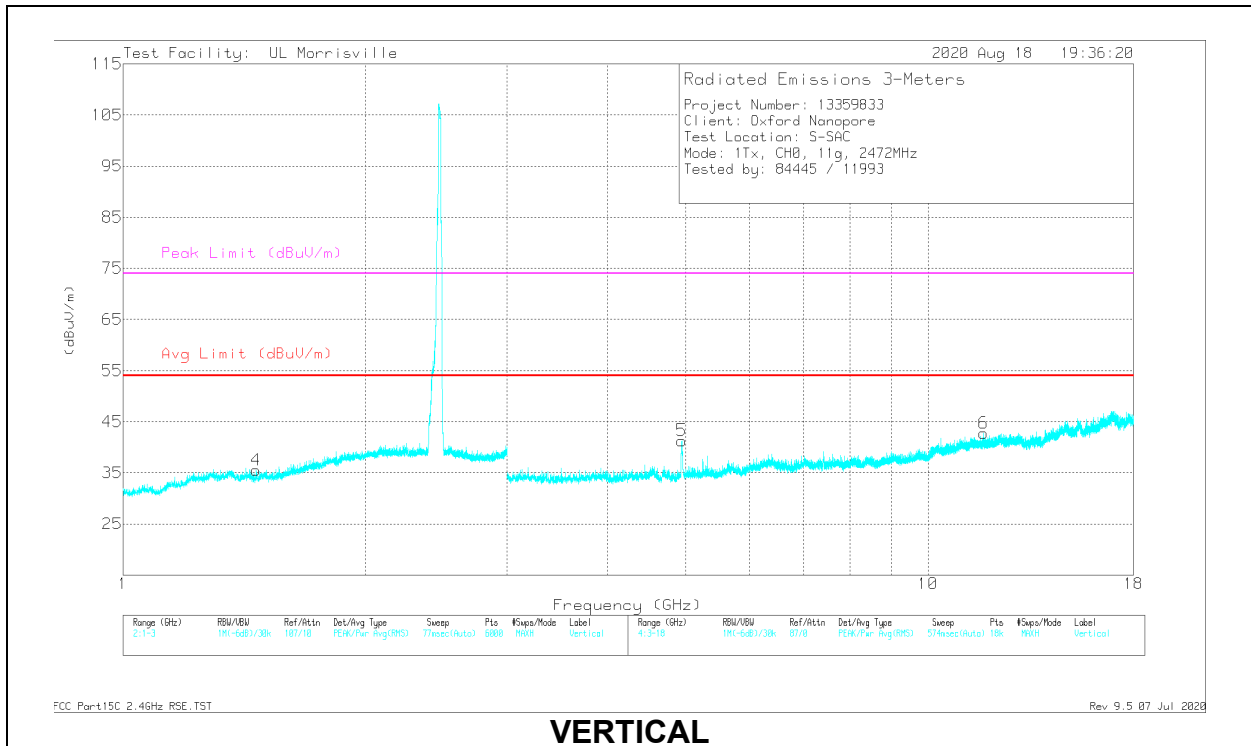
PK2 - Maximum Peak

ADV - Linear Voltage Average

### HIGH CHANNEL, CH 13 RESULTS



**HORIZONTAL**



**VERTICAL**

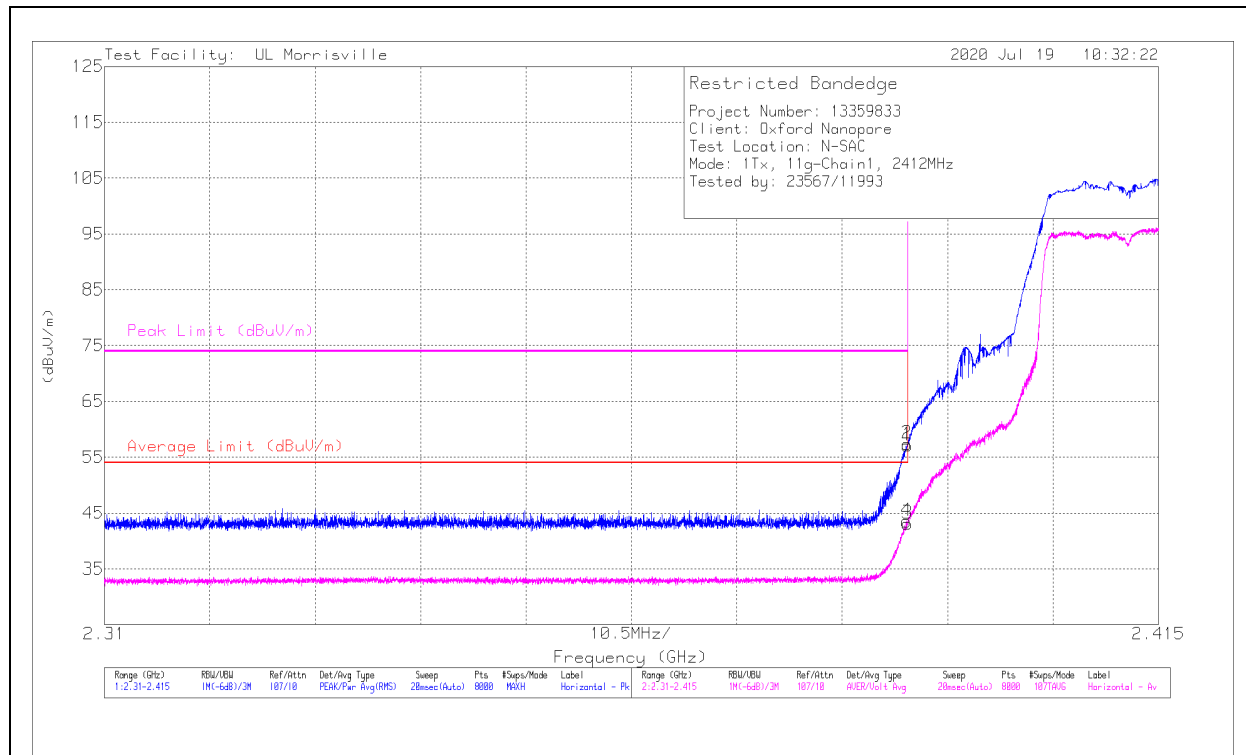
Markers	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 1.35335	36.14	PK2	29	-22.9	0	42.24	-	-	74	-31.76	249	239	H
	*** 1.3545	22.83	ADV	29	-22.9	.59	29.52	54	-24.48	-	-	249	239	H
4	*** 1.46596	35.6	PK2	28.1	-22.5	0	41.2	-	-	74	-32.8	169	104	V
	*** 1.46344	22.43	ADV	28.1	-22.5	.59	28.62	54	-25.38	-	-	169	104	V
2	*** 4.9417	42.06	PK2	33.9	-30.8	0	45.16	-	-	74	-28.84	118	101	H
	*** 4.94052	29.78	ADV	33.9	-30.8	.59	33.47	54	-20.53	-	-	118	101	H
3	*** 7.48667	35.93	PK2	35.6	-27.9	0	43.63	-	-	74	-30.37	348	178	H
	*** 7.48916	23.28	ADV	35.6	-27.9	.59	31.57	54	-22.43	-	-	348	178	H
5	*** 4.94294	45.85	PK2	33.9	-30.8	0	48.95	-	-	74	-25.05	293	263	V
	*** 4.94408	32.2	ADV	33.9	-30.9	.59	35.79	54	-18.21	-	-	293	263	V
6	*** 11.72386	34.06	PK2	38.5	-24.2	0	48.36	-	-	74	-25.64	335	212	V
	*** 11.72374	21.03	ADV	38.5	-24.2	.59	35.92	54	-18.08	-	-	335	212	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

**1TX ANTENNA 2 MODE**

**BANDEDGE (LOW CHANNEL, CH 1)**

**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	48.95	Pk	31.8	-23.6	0	57.15	-	-	74	-16.85	344	110	H
2	*** 2.38998	49.21	Pk	31.8	-23.6	0	57.41	-	-	74	-16.59	344	110	H
3	*** 2.39	34.33	ADV	31.8	-23.6	.6	43.13	54	-10.87	-	-	344	110	H
4	*** 2.38988	34.73	ADV	31.8	-23.6	.6	43.53	54	-10.47	-	-	344	110	H

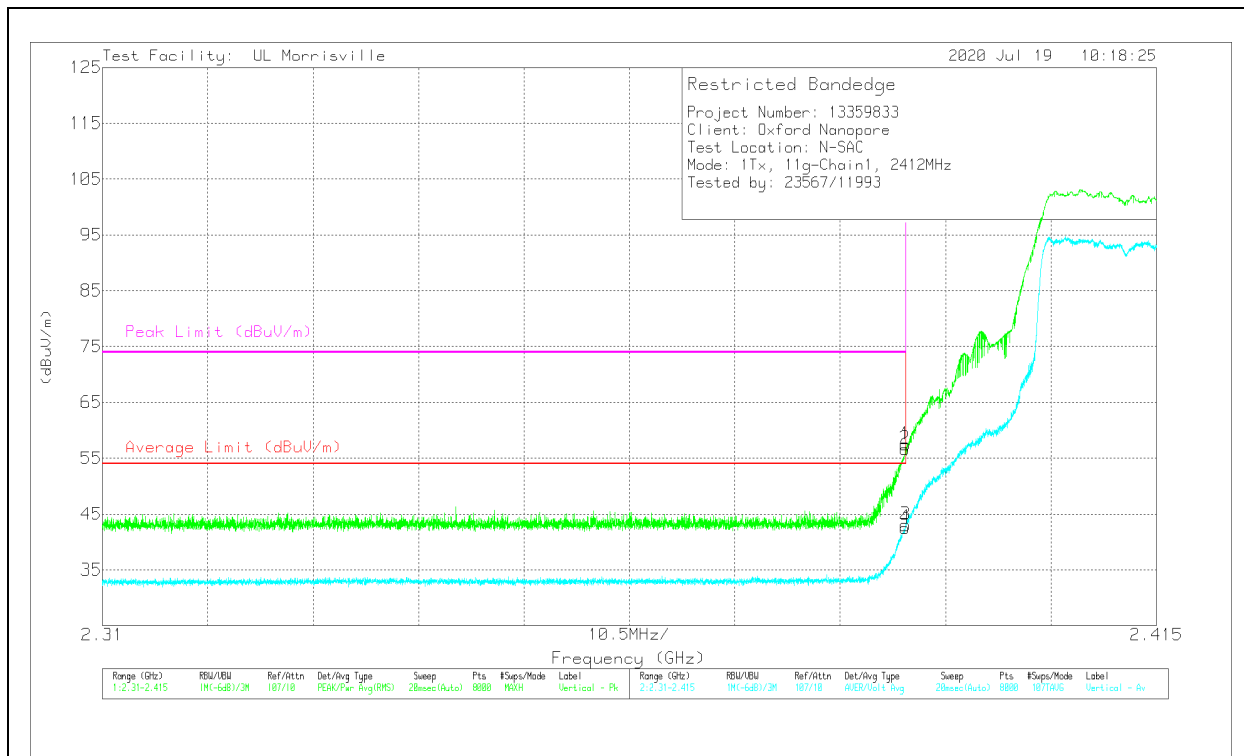
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

### VERTICAL RESULT

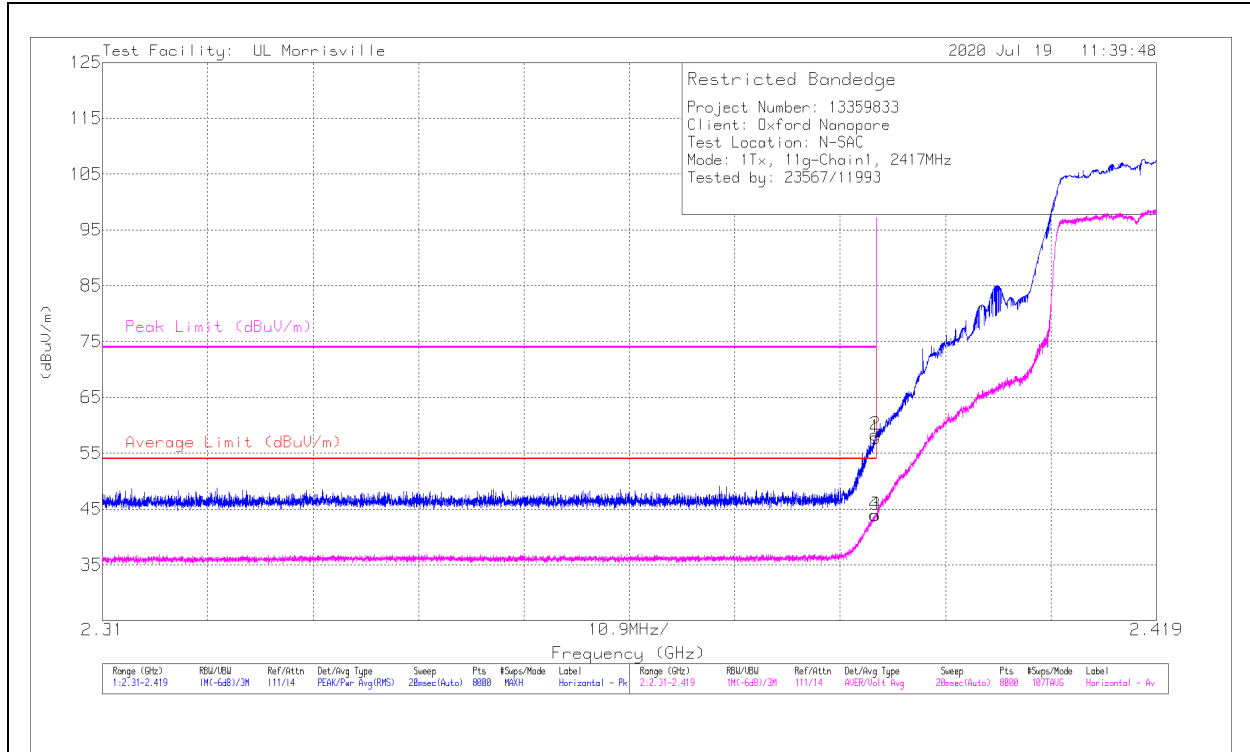


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	49.23	Pk	31.8	-23.6	0	57.43	-	-	74	-16.57	269	286	V
2	* ** 2.38998	48.45	Pk	31.8	-23.6	0	56.65	-	-	74	-17.35	269	286	V
3	* ** 2.39	34.24	ADV	31.8	-23.6	.6	43.04	54	-10.96	-	-	269	286	V
4	* ** 2.38994	33.72	ADV	31.8	-23.6	.6	42.52	54	-11.48	-	-	269	286	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

**BANEDGE (LOW CHANNEL, CH 2)**

**HORIZONTAL RESULT**

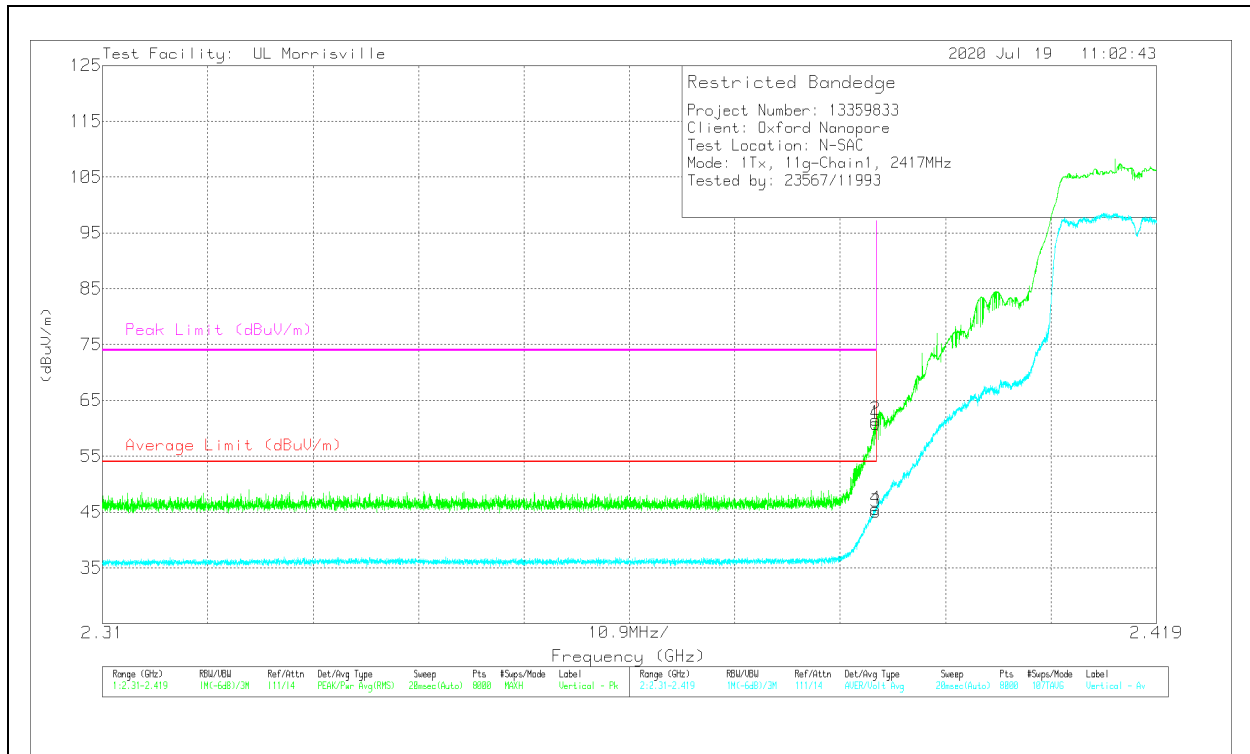


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.38999	49.59	Pk	31.8	-23.6	0	57.79	-	-	74	-16.21	352	108	H
2	* ** 2.38994	50.11	Pk	31.8	-23.6	0	58.31	-	-	74	-15.69	352	108	H
3	* ** 2.38999	35.13	ADV	31.8	-23.6	.6	43.93	54	-10.07	-	-	352	108	H
4	* ** 2.38987	35.17	ADV	31.8	-23.6	.6	43.97	54	-10.03	-	-	352	108	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

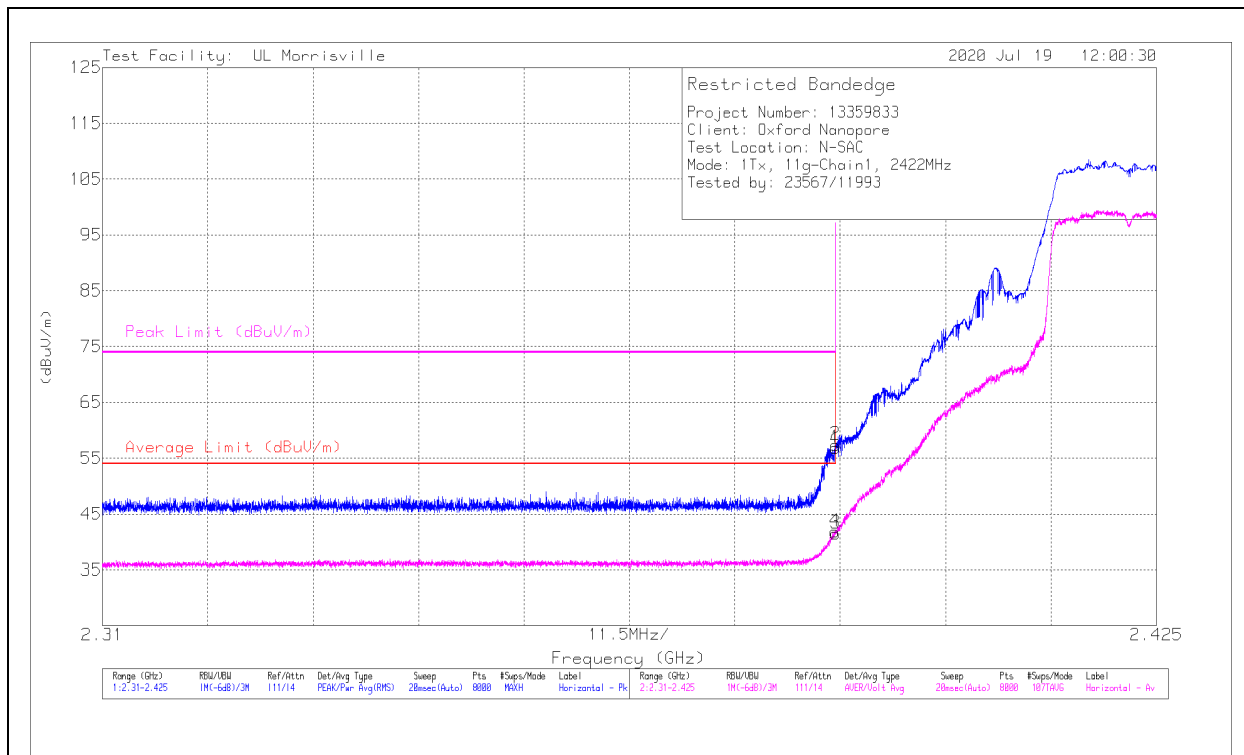


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.38999	52.67	Pk	31.8	-23.6	0	60.87	-	-	74	-13.13	236	113	V
2	*** 2.38998	53.33	Pk	31.8	-23.6	0	61.53	-	-	74	-12.47	236	113	V
3	*** 2.38999	36.26	ADV	31.8	-23.6	.6	45.06	54	-8.94	-	-	236	112	V
4	*** 2.38998	36.74	ADV	31.8	-23.6	.6	45.54	54	-8.46	-	-	236	112	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

**BANEDGE (LOW CHANNEL, CH 3)**

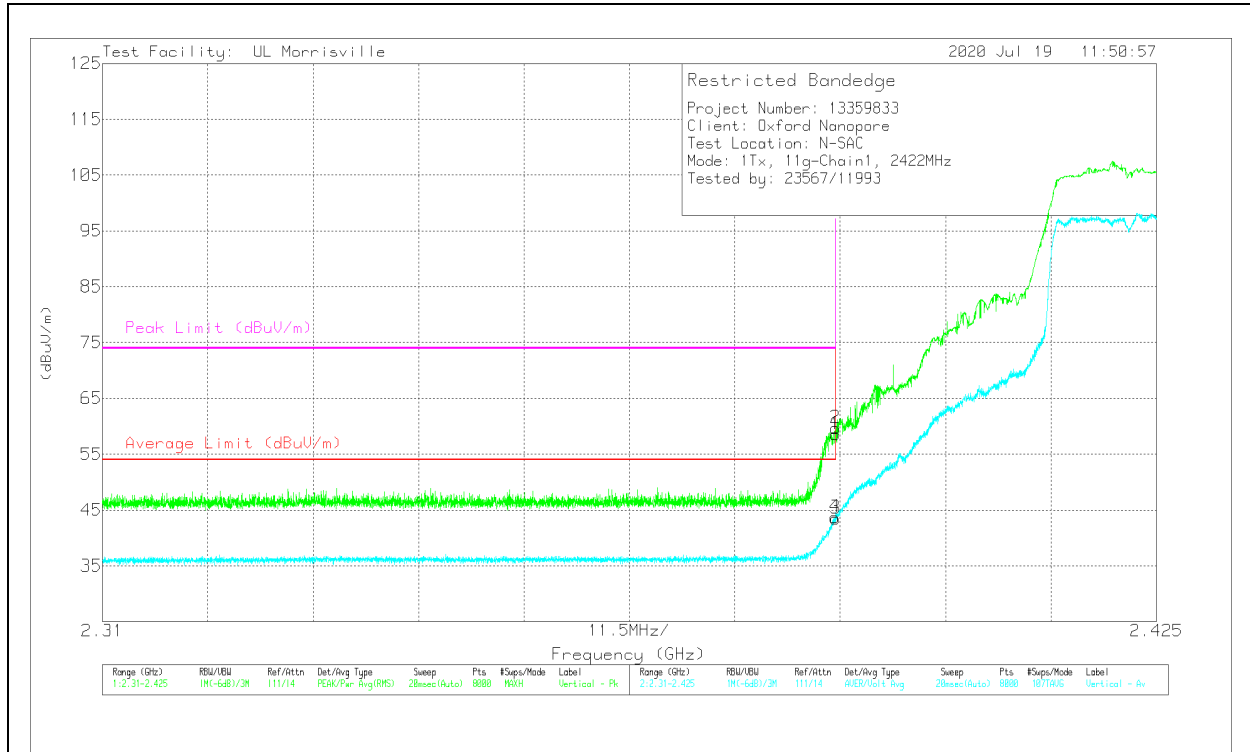
**HORIZONTAL RESULT**



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	*** 2.38999	48.67	Pk	31.8	-23.6	0	56.87	-	-	74	-17.13	352	129	H
2	*** 2.38998	49.2	Pk	31.8	-23.6	0	57.4	-	-	74	-16.6	352	129	H
3	*** 2.38999	32.75	ADV	31.8	-23.6	.6	41.55	54	-12.45	-	-	352	129	H
4	*** 2.38992	33.09	ADV	31.8	-23.6	.6	41.89	54	-12.11	-	-	352	129	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

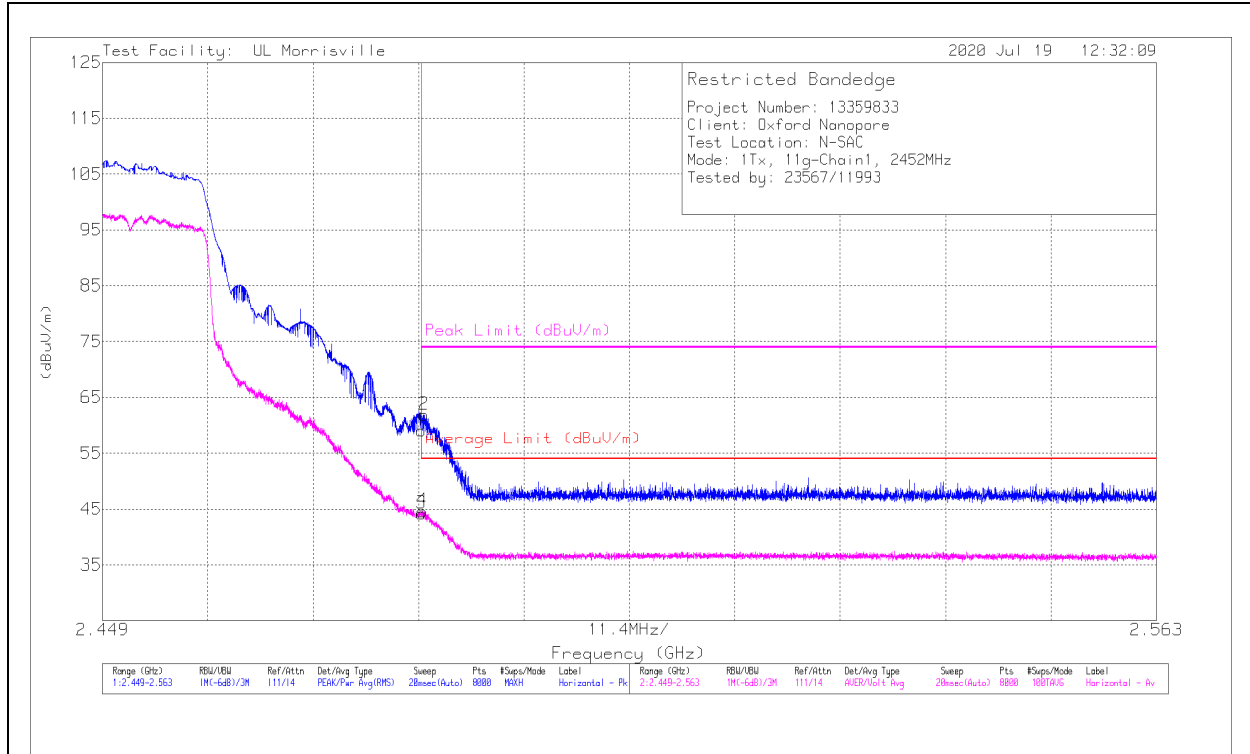


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.38999	50.38	Pk	31.8	-23.6	0	58.58	-	-	74	-15.42	232	164	V
2	*** 2.38996	51.47	Pk	31.8	-23.6	0	59.67	-	-	74	-14.33	232	164	V
3	*** 2.38999	34.71	ADV	31.8	-23.6	.6	43.51	54	-10.49	-	-	232	164	V
4	*** 2.38994	34.88	ADV	31.8	-23.6	.6	43.68	54	-10.32	-	-	232	164	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, CH 9)**

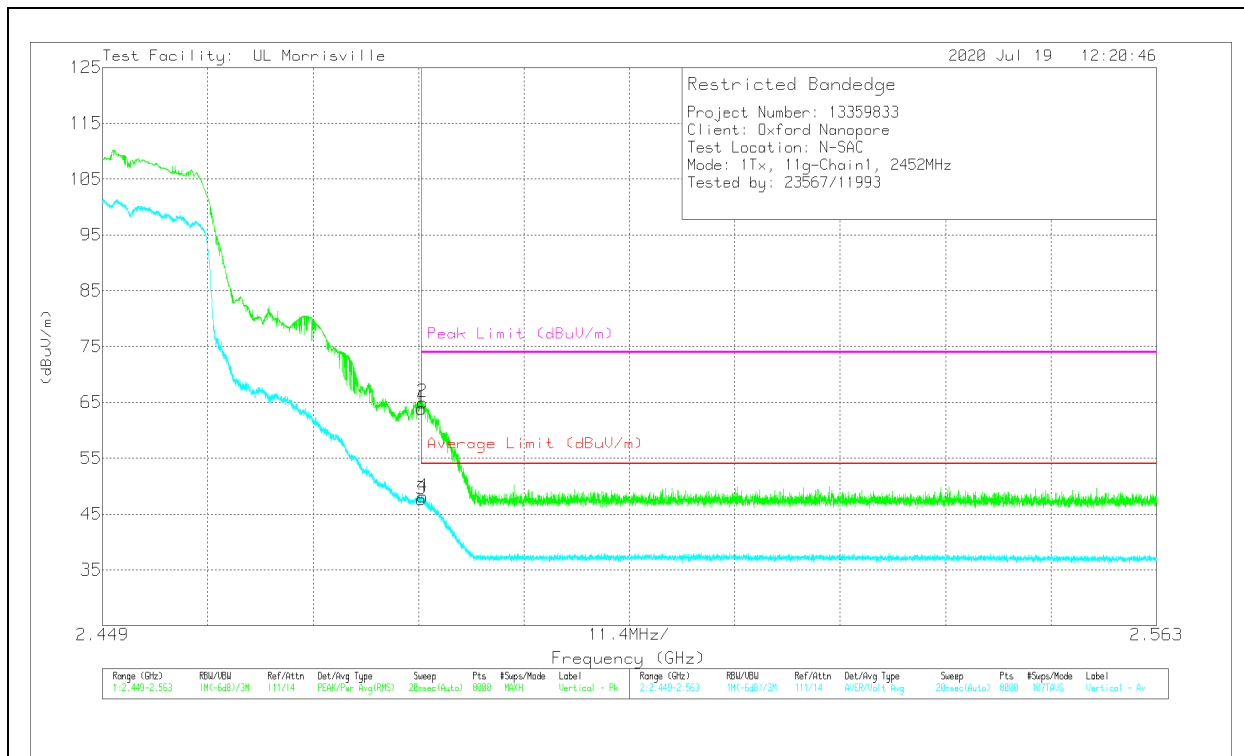
**HORIZONTAL RESULT**



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	50.04	Pk	32.4	-23.4	0	59.04	-	-	74	-14.96	337	146	H
2	*** 2.48375	52.87	Pk	32.4	-23.4	0	61.87	-	-	74	-12.13	337	146	H
3	*** 2.4835	35.18	ADV	32.4	-23.4	.6	44.78	54	-9.22	-	-	337	146	H
4	*** 2.48359	35.63	ADV	32.4	-23.4	.6	45.23	54	-8.77	-	-	337	146	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

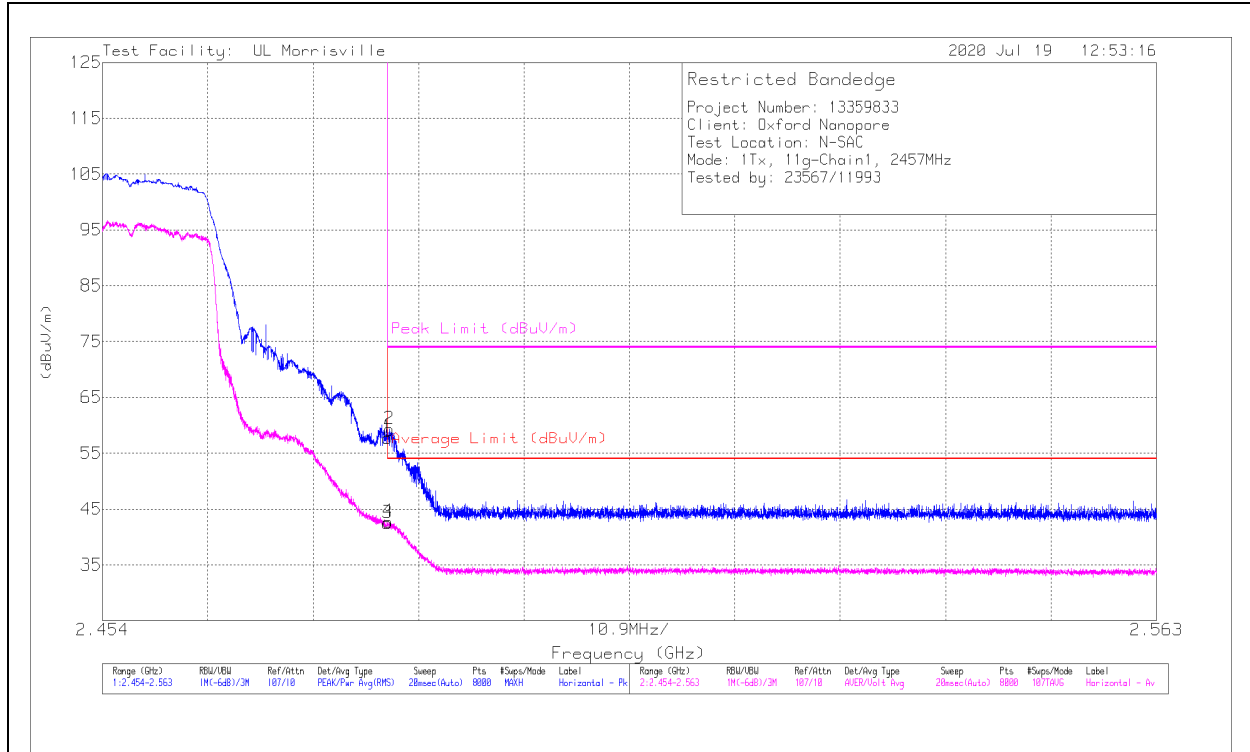


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	54.93	Pk	32.4	-23.4	0	63.93	-	-	74	-10.07	253	190	V
2	** 2.48362	56.03	Pk	32.4	-23.4	0	65.03	-	-	74	-8.97	253	190	V
3	*** 2.4835	38.06	ADV	32.4	-23.4	.6	47.66	54	-6.34	-	-	253	190	V
4	*** 2.48366	38.5	ADV	32.4	-23.4	.6	48.1	54	-5.9	-	-	253	190	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, CH 10)**

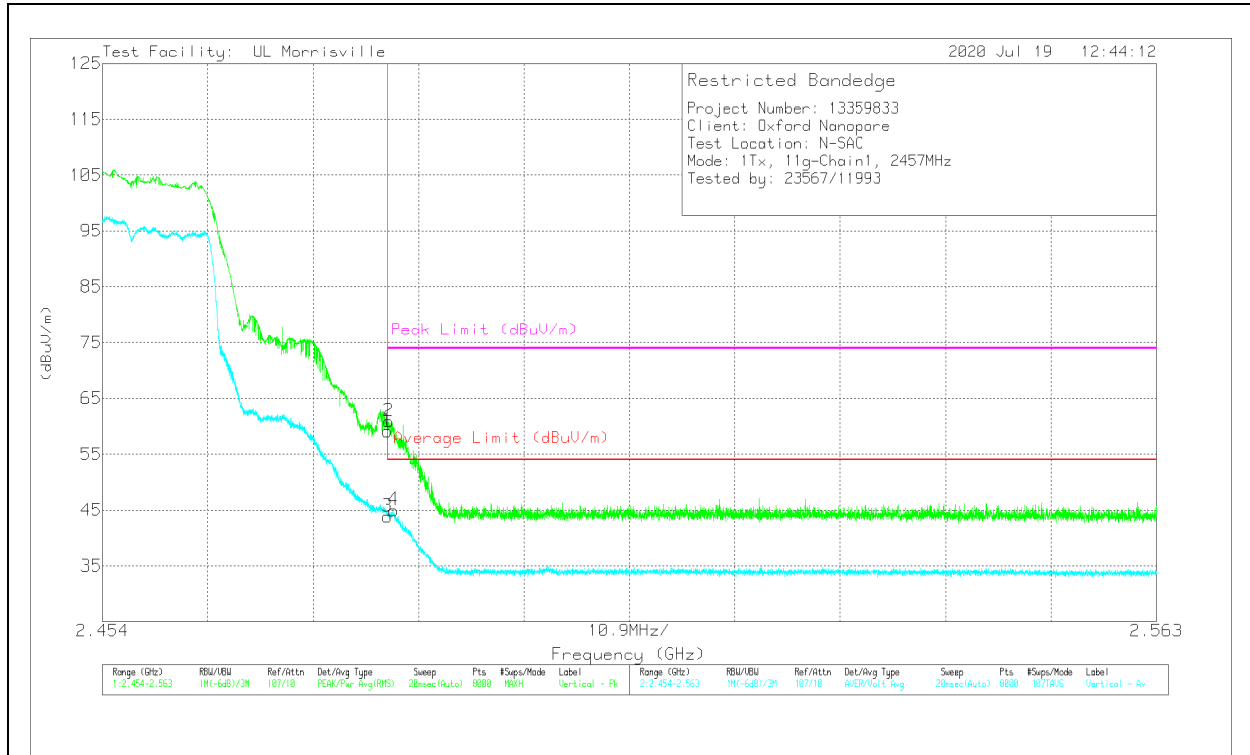
**HORIZONTAL RESULT**



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	48.77	Pk	32.4	-23.4	0	57.77	-	-	74	-16.23	339	125	H
2	*** 2.48369	50.27	Pk	32.4	-23.4	0	59.27	-	-	74	-14.73	339	125	H
3	*** 2.4835	32.86	ADV	32.4	-23.4	.6	42.46	54	-11.54	-	-	339	125	H
4	*** 2.48354	33.09	ADV	32.4	-23.4	.6	42.69	54	-11.31	-	-	339	125	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

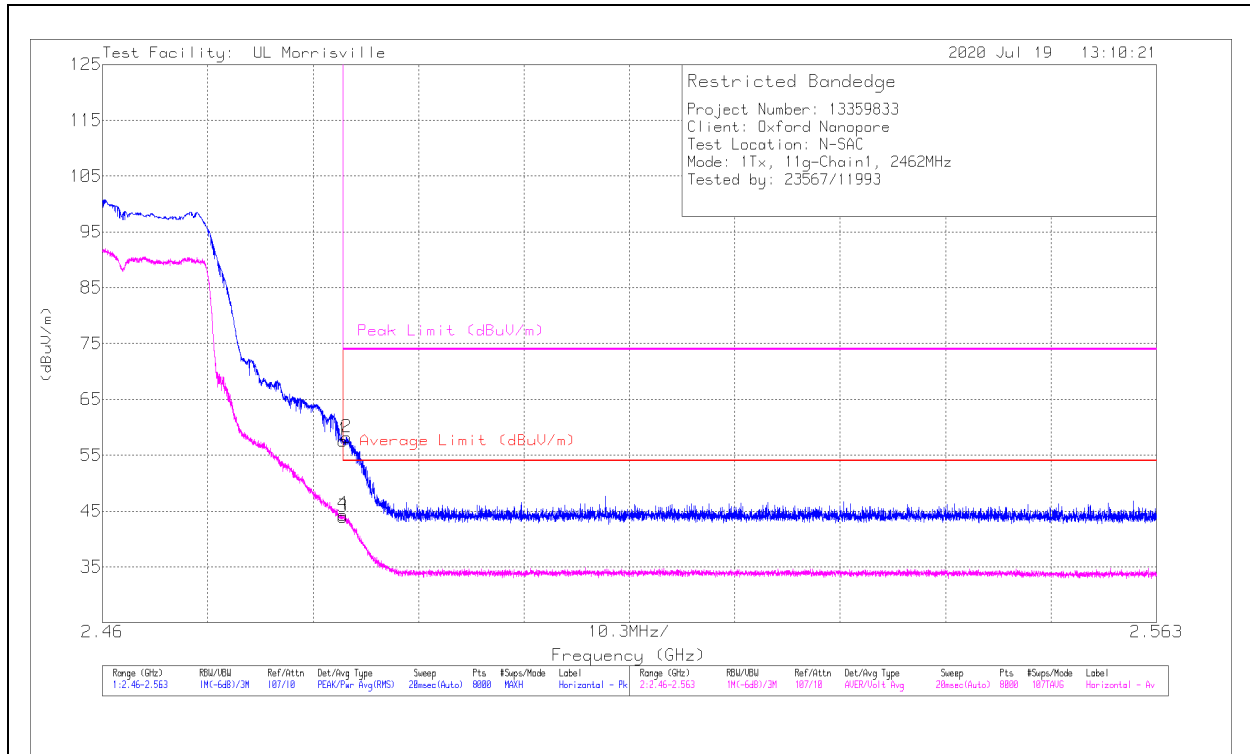


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	50.15	Pk	32.4	-23.4	0	59.15	-	-	74	-14.85	236	104	V
2	** 2.48363	51.89	Pk	32.4	-23.4	0	60.89	-	-	74	-13.11	236	104	V
3	*** 2.4835	34.22	ADV	32.4	-23.4	.6	43.82	54	-10.18	-	-	236	104	V
4	*** 2.48412	35.38	ADV	32.4	-23.4	.6	44.98	54	-9.02	-	-	236	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, CH 11)**

**HORIZONTAL RESULT**

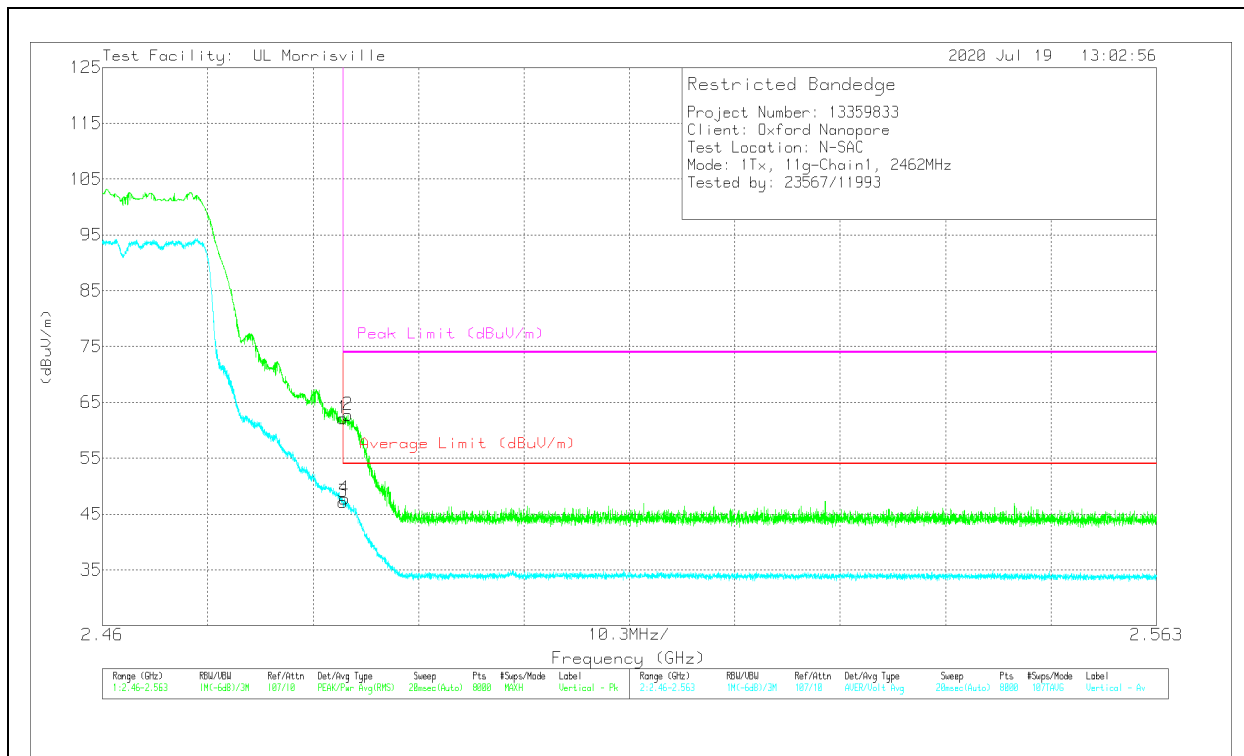


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	48.66	Pk	32.4	-23.4	0	57.66	-	-	74	-16.34	311	129	H
2	*** 2.48387	49.22	Pk	32.4	-23.4	0	58.22	-	-	74	-15.78	311	129	H
3	*** 2.4835	34.36	ADV	32.4	-23.4	.6	43.96	54	-10.04	-	-	311	129	H
4	*** 2.48351	34.77	ADV	32.4	-23.4	.6	44.37	54	-9.63	-	-	311	129	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

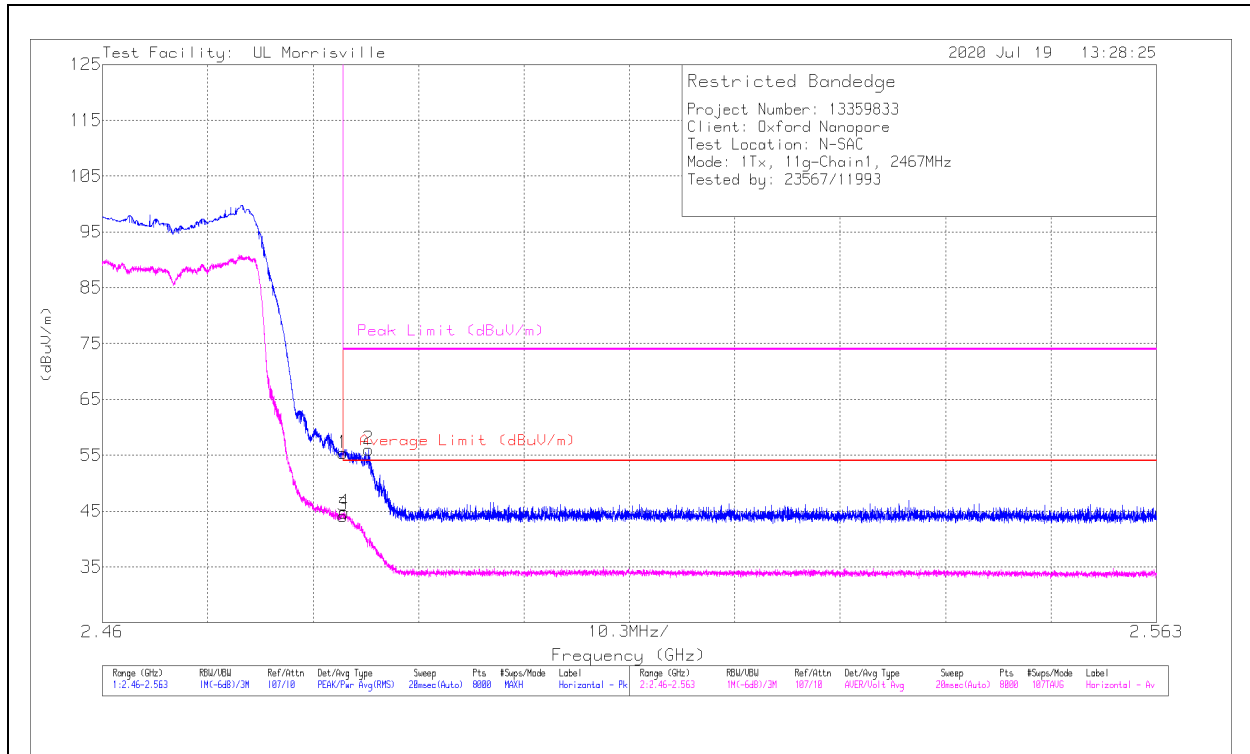


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	53.15	Pk	32.4	-23.4	0	62.15	-	-	74	-11.85	252	170	V
2	** 2.484	53.76	Pk	32.4	-23.4	0	62.76	-	-	74	-11.24	252	170	V
3	*** 2.4835	37.56	ADV	32.4	-23.4	.6	47.16	54	-6.84	-	-	252	170	V
4	*** 2.48366	38.16	ADV	32.4	-23.4	.6	47.76	54	-6.24	-	-	252	170	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, CH 12)**

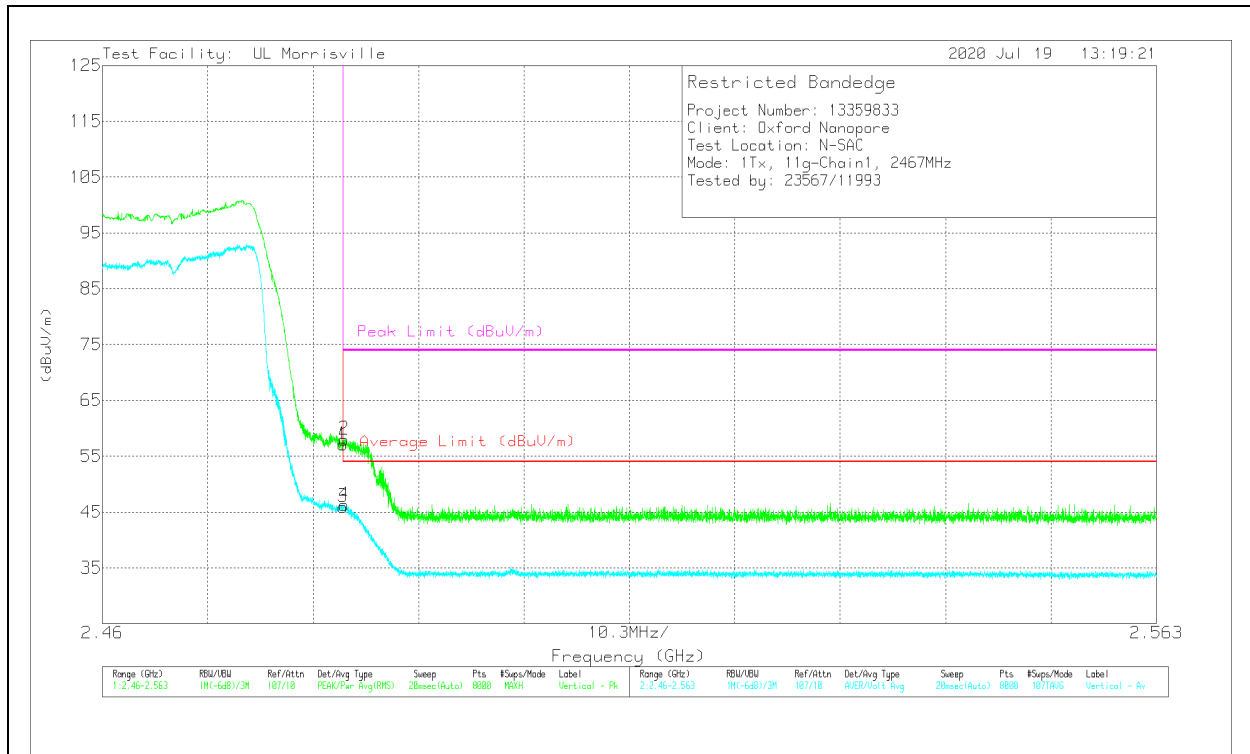
**HORIZONTAL RESULT**



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	46.4	Pk	32.4	-23.4	0	55.4	-	-	74	-18.6	349	120	H
2	*** 2.486	46.96	Pk	32.5	-23.4	0	56.06	-	-	74	-17.94	349	120	H
3	*** 2.4835	34.54	ADV	32.4	-23.4	.6	44.14	54	-9.86	-	-	349	120	H
4	*** 2.48364	35.17	ADV	32.4	-23.4	.6	44.77	54	-9.23	-	-	349	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

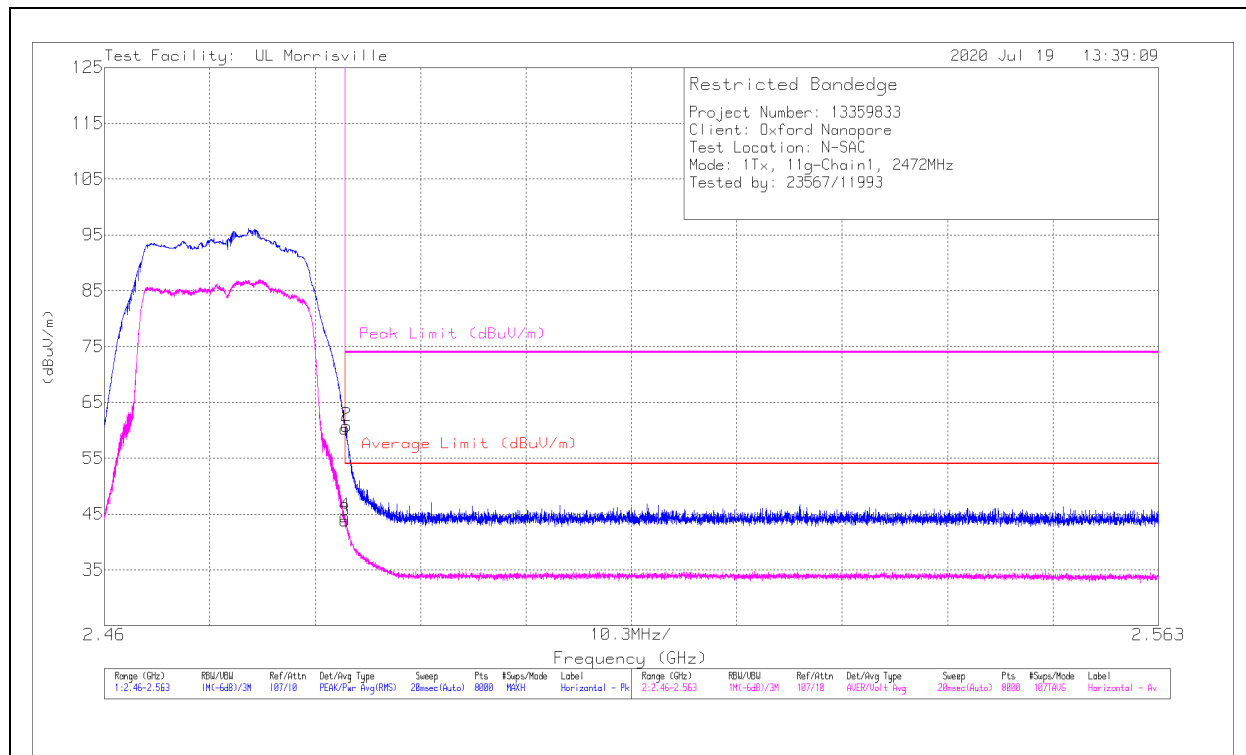


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	48.12	Pk	32.4	-23.4	0	57.12	-	-	74	-16.88	237	104	V
2	*** 2.4836	49.01	Pk	32.4	-23.4	0	58.01	-	-	74	-15.99	237	104	V
3	*** 2.4835	36.35	ADV	32.4	-23.4	.6	45.95	54	-8.05	-	-	237	104	V
4	*** 2.48363	36.7	ADV	32.4	-23.4	.6	46.3	54	-7.7	-	-	237	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

**BANEDGE (HIGH CHANNEL, CH 13)**

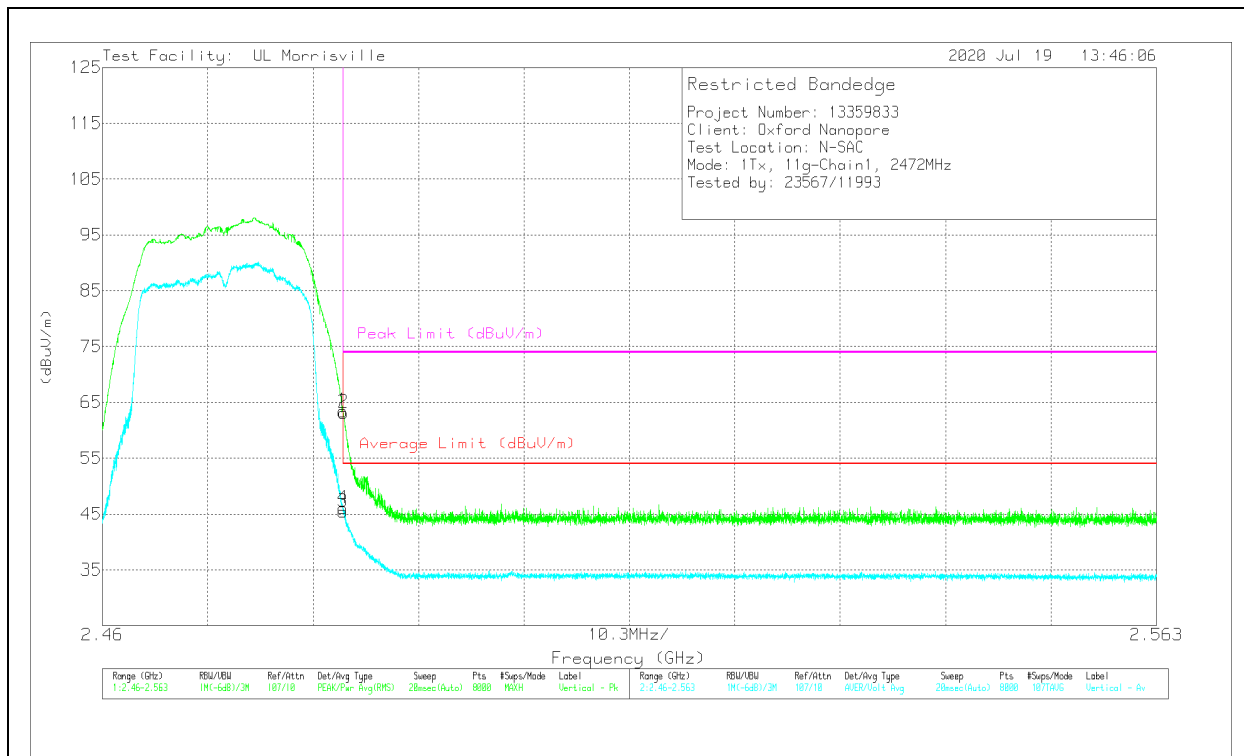
**HORIZONTAL RESULT**



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	51.35	Pk	32.4	-23.4	0	60.35	-	-	74	-13.65	3	127	H
2	*** 2.48366	51.84	Pk	32.4	-23.4	0	60.84	-	-	74	-13.16	3	127	H
3	*** 2.4835	34.22	ADV	32.4	-23.4	.6	43.82	54	-10.18	-	-	3	127	H
4	*** 2.48353	35.01	ADV	32.4	-23.4	.6	44.61	54	-9.39	-	-	3	127	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

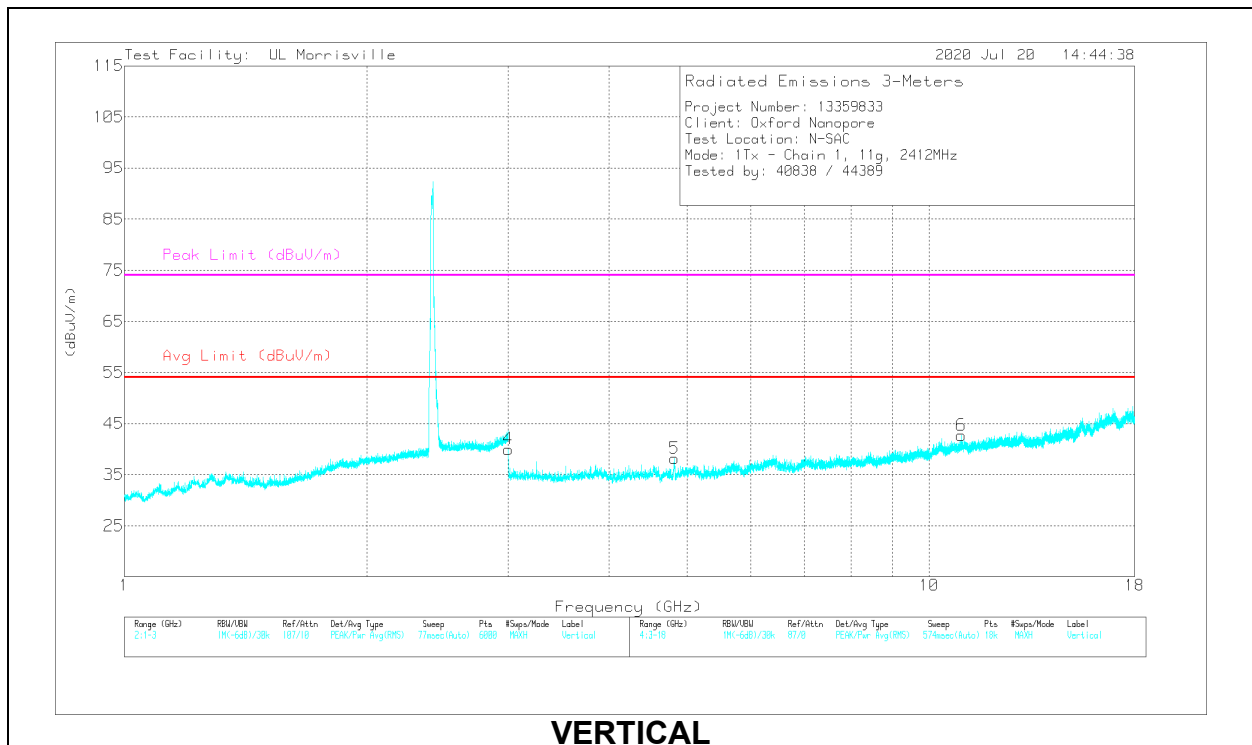
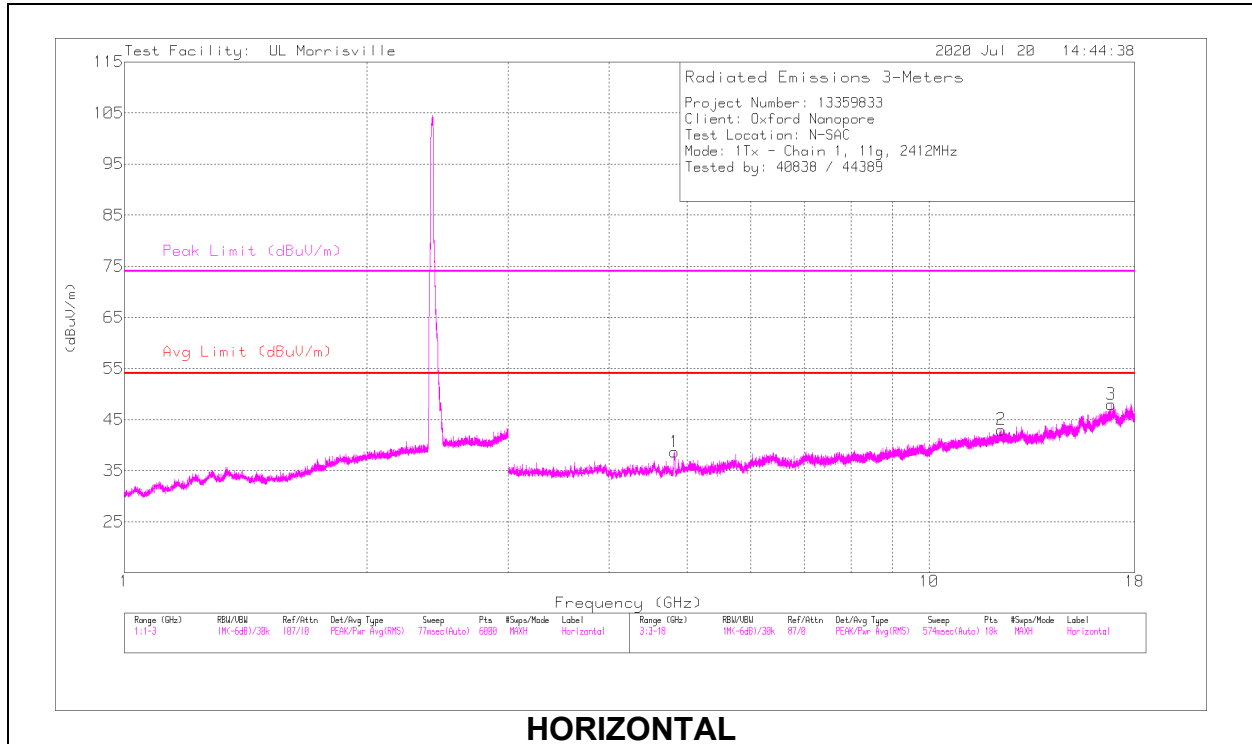


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	54.44	Pk	32.4	-23.4	0	63.44	-	-	74	-10.56	239	143	V
2	** 2.48355	54.17	Pk	32.4	-23.4	0	63.17	-	-	74	-10.83	239	143	V
3	*** 2.4835	35.82	ADV	32.4	-23.4	.6	45.42	54	-8.58	-	-	239	143	V
4	*** 2.48351	36.45	ADV	32.4	-23.4	.6	46.05	54	-7.95	-	-	239	143	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, CH 1 RESULTS



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	*** 4.82655	42	PK2	34.2	-30.7	0	45.5	-	-	74	-28.5	302	105	H
	*** 4.82608	28.55	ADV	34.2	-30.7	.6	32.65	54	-21.35	-	-	302	105	H
2	*** 12.29702	35.78	PK2	38.9	-25.1	0	49.58	-	-	74	-24.42	83	138	H
	*** 12.29705	22.28	ADV	38.9	-25.1	.6	36.68	54	-17.32	-	-	83	138	H
5	*** 4.82524	41.73	PK2	34.2	-30.7	0	45.23	-	-	74	-28.77	293	107	V
	*** 4.82545	28.34	ADV	34.2	-30.7	.6	32.44	54	-21.56	-	-	293	107	V
6	*** 10.96235	35.95	PK2	37.9	-25	0	48.85	-	-	74	-25.15	52	334	V
	*** 10.96209	22.3	ADV	37.9	-25	.6	35.8	54	-18.2	-	-	52	334	V
4	3	38.49	Pk	33	-31.5	0	39.99	-	-	-	-	0-360	200	V
3	16.83161	30.45	Pk	41.6	-24.1	0	47.95	-	-	-	-	0-360	101	H

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

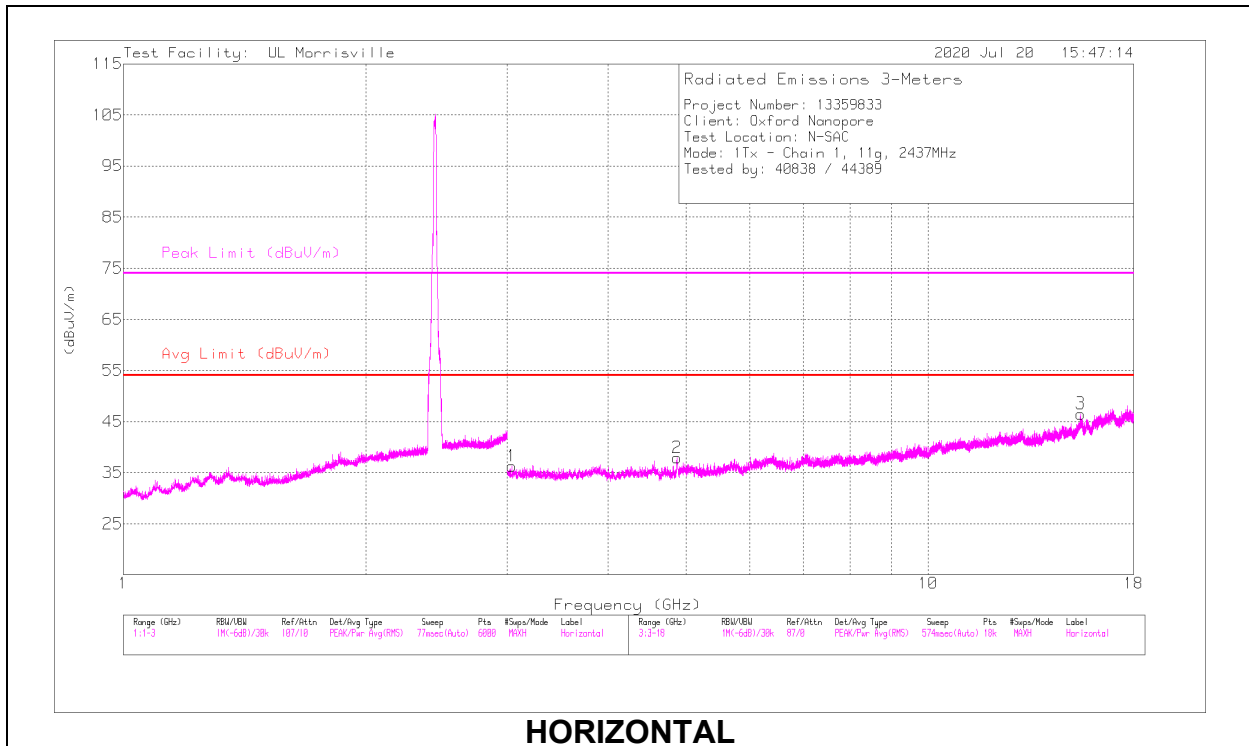
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

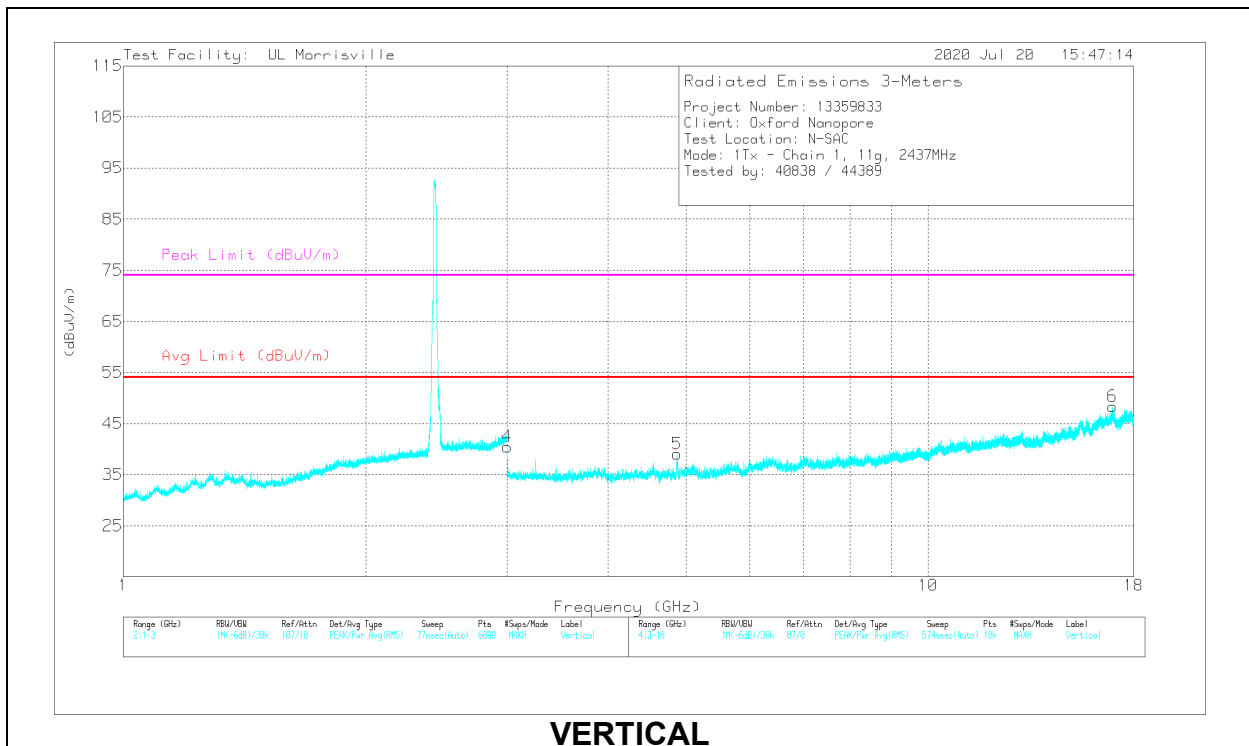
ADV - Linear Voltage Average

Pk - Peak detector

### MID CHANNEL, CH 6 RESULTS



**HORIZONTAL**



**VERTICAL**



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
2	*** 4.8766	44.13	PK2	34.1	-30.8	0	47.43	-	-	74	-26.57	306	108	H
	*** 4.87668	29.76	ADV	34.1	-30.8	.6	33.66	54	-20.34	-	-	306	108	H
3	*** 15.47005	35.3	PK2	40.2	-23.1	0	52.4	-	-	74	-21.6	221	104	H
	*** 15.47004	22.44	ADV	40.2	-23.1	.6	40.14	54	-13.86	-	-	221	104	H
5	*** 4.87463	43.11	PK2	34.1	-30.9	0	46.31	-	-	74	-27.69	284	103	V
	*** 4.87414	29.67	ADV	34.1	-30.9	.6	33.47	54	-20.53	-	-	284	103	V
4	3	38.94	Pk	33	-31.5	0	40.44	-	-	-	-	0-360	200	V
1	3.03834	35.41	Pk	33.2	-32.3	0	36.31	-	-	-	-	0-360	101	H
6	16.96078	30.24	Pk	41.5	-23.4	0	48.34	-	-	-	-	0-360	101	V

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

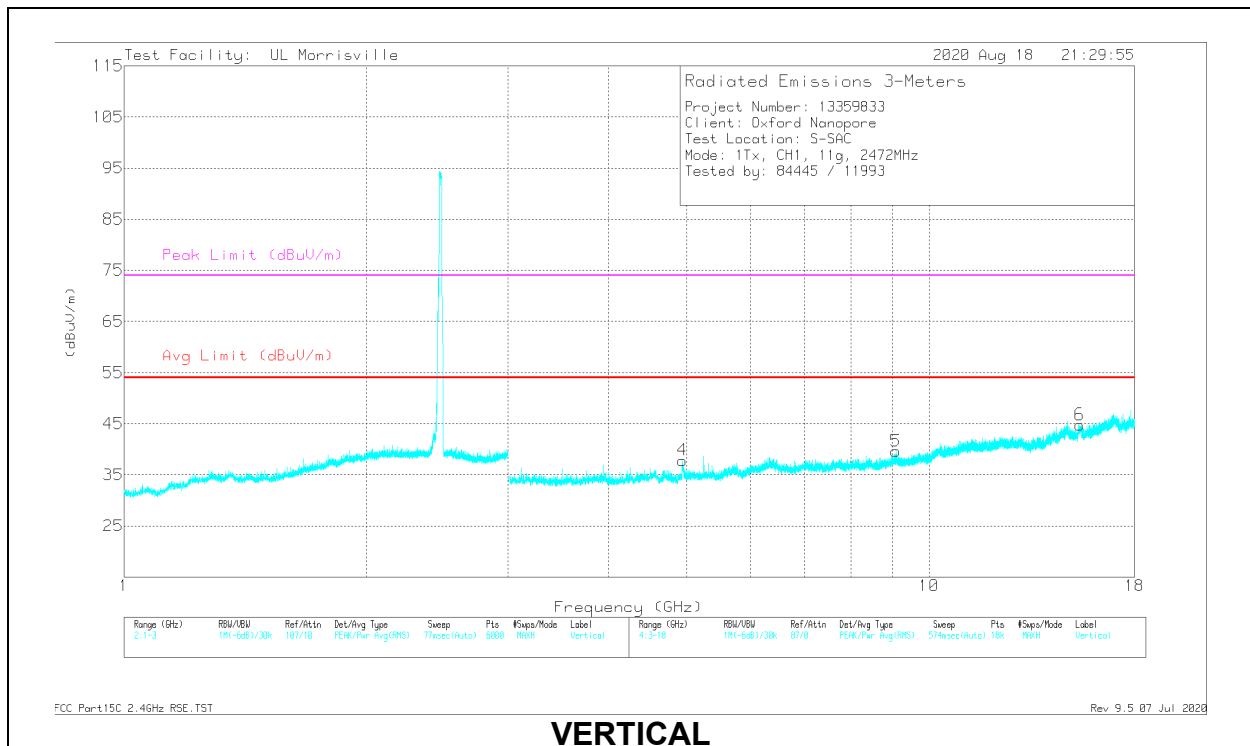
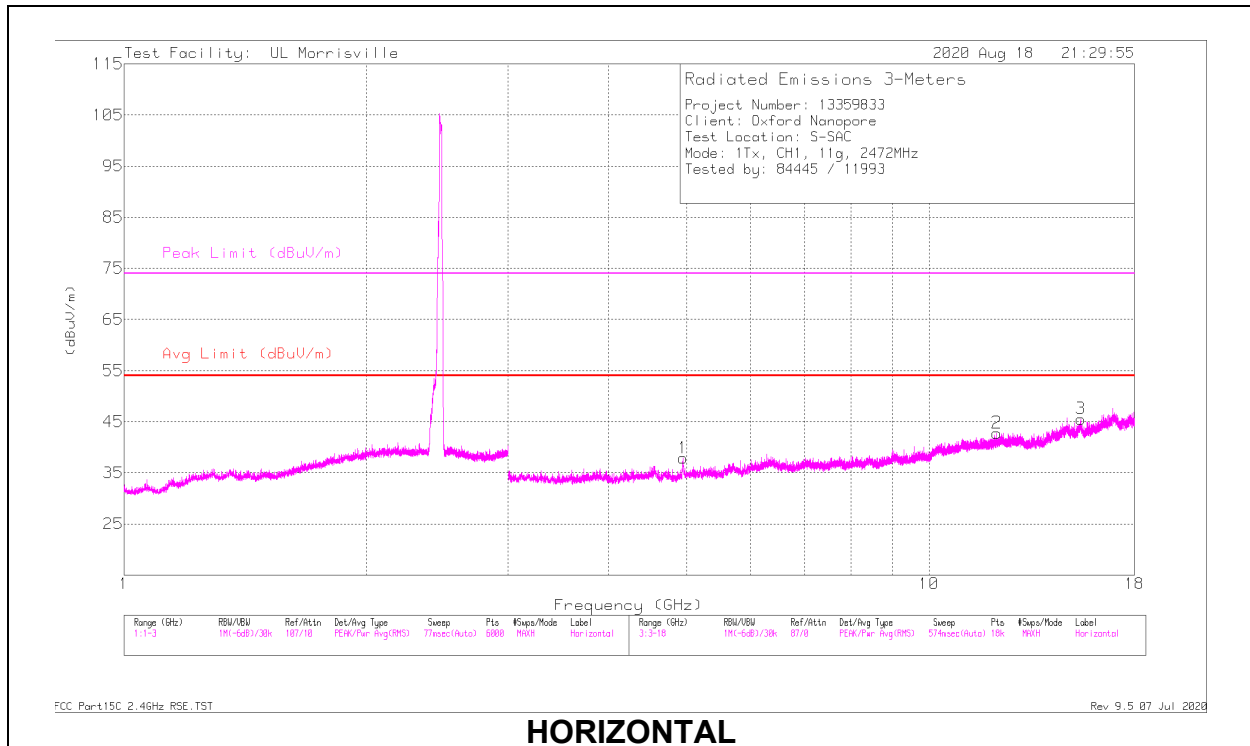
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

Pk - Peak detector

### HIGH CHANNEL, CH 13 RESULTS



Markers	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	*** 4.94671	42.59	PK2	33.9	-30.9	0	45.59	-	-	74	-28.41	18	111	H
	*** 4.9464	29.35	ADV	33.9	-30.9	.6	32.95	54	-21.05	-	-	18	111	H
2	*** 12.14094	34.25	PK2	38.8	-24.2	0	48.85	-	-	74	-25.15	215	296	H
	*** 12.14159	20.86	ADV	38.8	-24.2	.6	36.06	54	-17.94	-	-	215	296	H
3	*** 15.43392	33.5	PK2	40.3	-22	0	51.8	-	-	74	-22.2	240	179	H
	*** 15.43404	20.28	ADV	40.3	-22	.6	39.18	54	-14.82	-	-	240	179	H
4	*** 4.94245	44.16	PK2	33.9	-30.8	0	47.26	-	-	74	-26.74	92	268	V
	*** 4.94352	30.24	ADV	33.9	-30.9	.6	33.84	54	-20.16	-	-	92	268	V
5	*** 9.09428	35	PK2	36.3	-26.1	0	45.2	-	-	74	-28.8	308	343	V
	*** 9.09305	22.27	ADV	36.3	-26.1	.6	33.07	54	-20.93	-	-	308	343	V
6	*** 15.38535	33.72	PK2	40.3	-22.4	0	51.62	-	-	74	-22.38	259	374	V
	*** 15.38568	20.53	ADV	40.3	-22.4	.6	39.03	54	-14.97	-	-	259	374	V

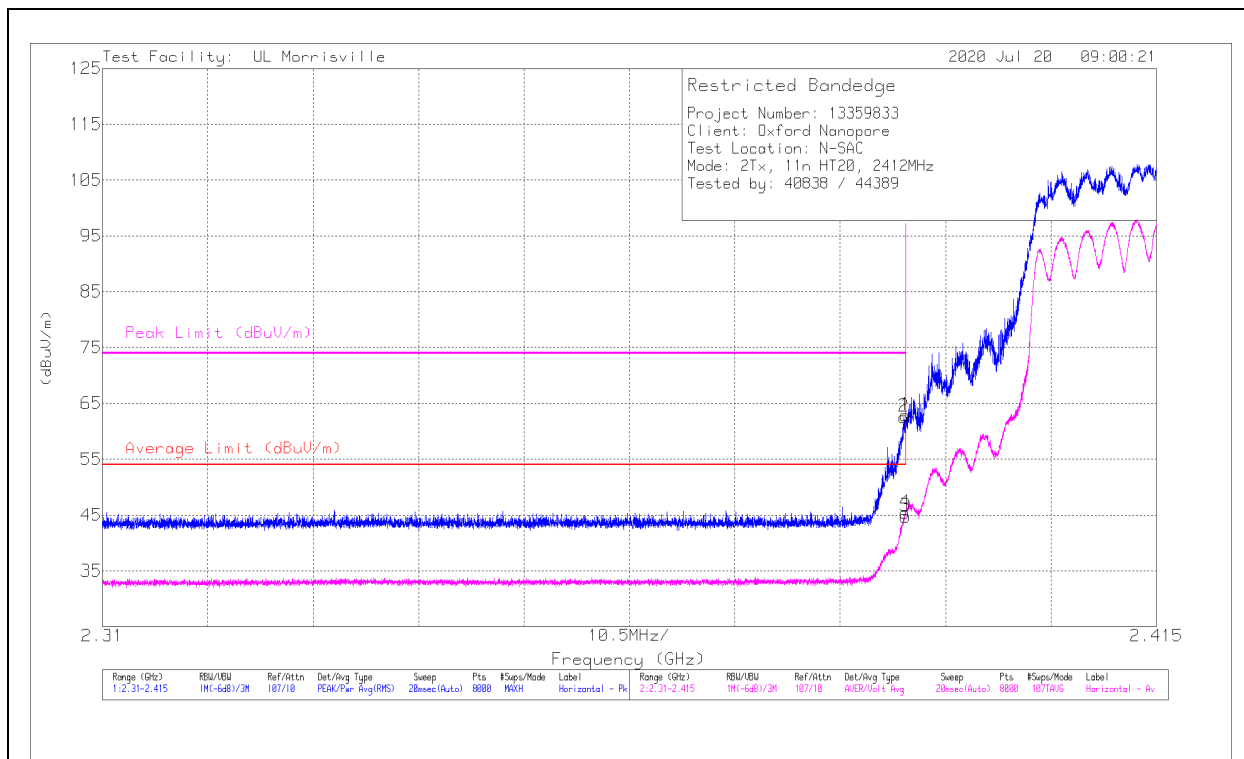
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 \*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band  
 PK2 - Maximum Peak  
 ADV - Linear Voltage Average

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

#### 2TX ANTENNA 1 + ANTENNA2 CDD MODE

#### BANDEDGE (LOW CHANNEL, CH 1)

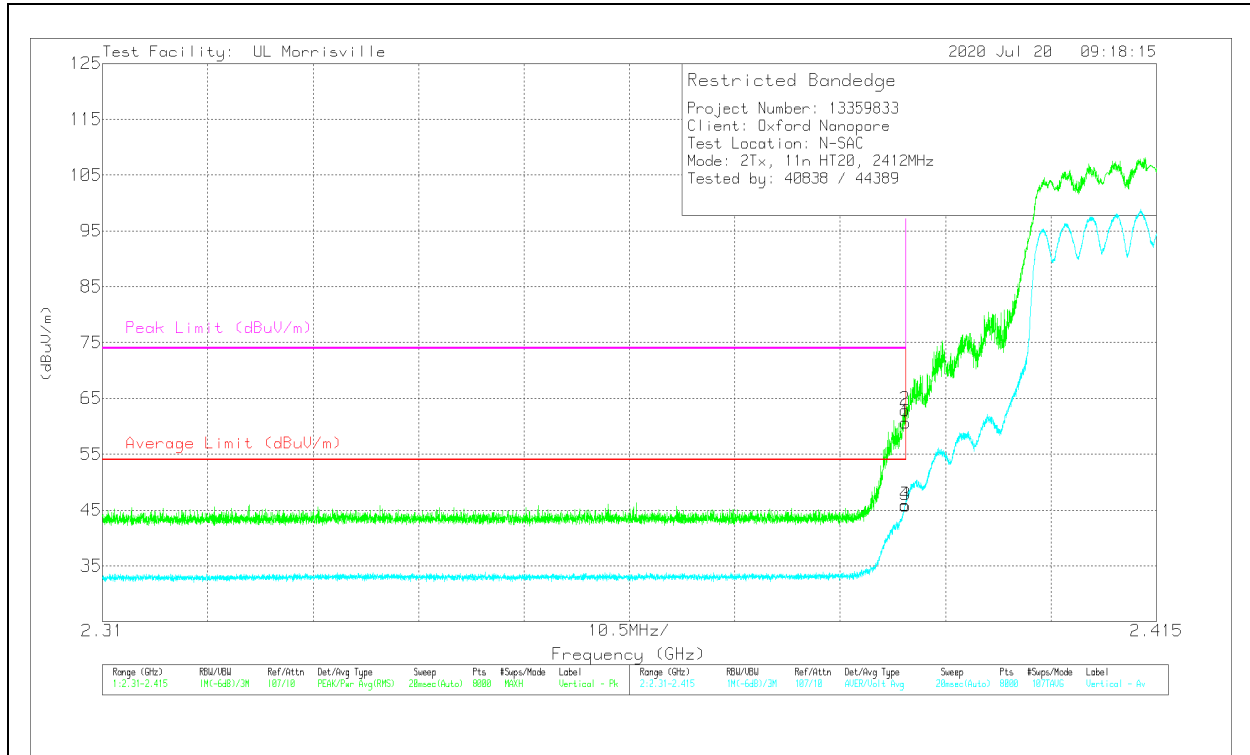
#### HORIZONTAL RESULT



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	54.67	Pk	31.8	-23.6	0	62.87	-	-	74	-11.13	262	299	H
2	* ** 2.38985	54.37	Pk	31.8	-23.6	0	62.57	-	-	74	-11.43	262	299	H
3	* ** 2.39	35.91	ADV	31.8	-23.6	.65	44.76	54	-9.24	-	-	262	299	H
4	* ** 2.38997	36.59	ADV	31.8	-23.6	.65	45.44	54	-8.56	-	-	262	299	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

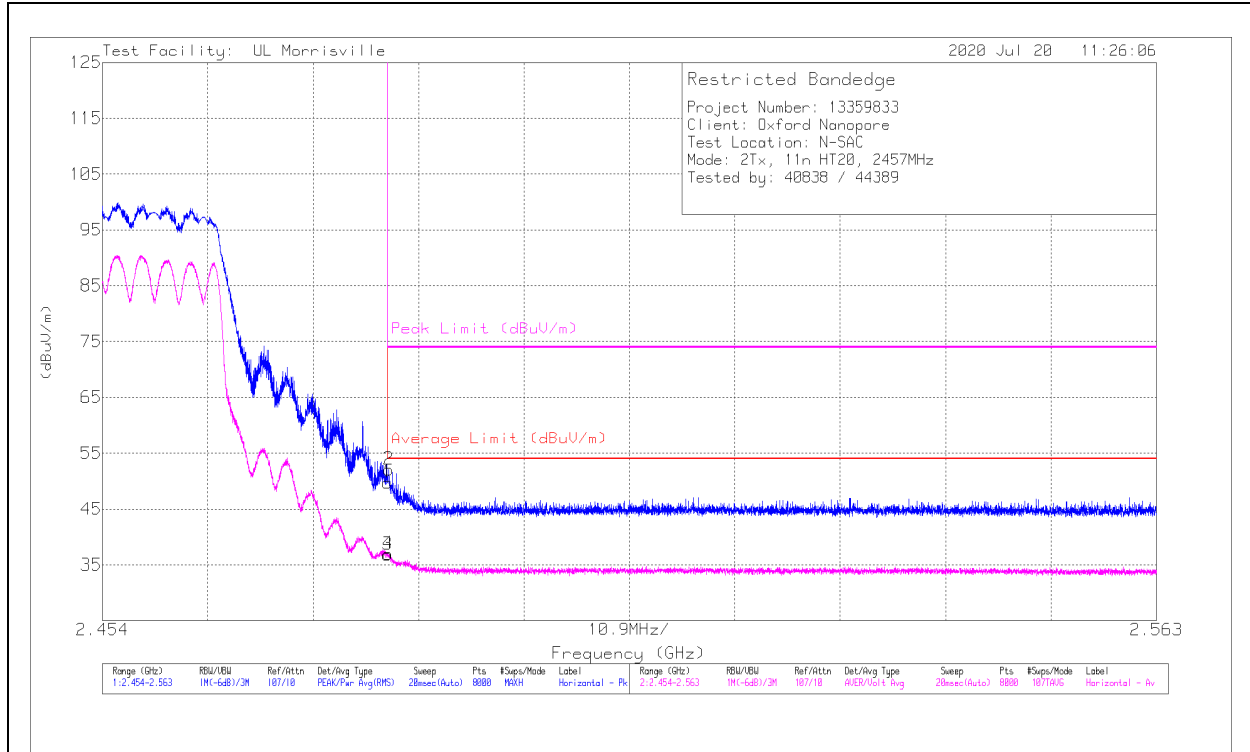


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fitr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	52.51	Pk	31.8	-23.6	0	60.71	-	-	74	-13.29	28	385	V
2	* ** 2.38998	54.72	Pk	31.8	-23.6	0	62.92	-	-	74	-11.08	28	385	V
3	* ** 2.39	37.01	ADV	31.8	-23.6	.65	45.86	54	-8.14	-	-	28	385	V
4	* ** 2.38997	37.05	ADV	31.8	-23.6	.65	45.9	54	-8.1	-	-	28	385	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, CH 10)**

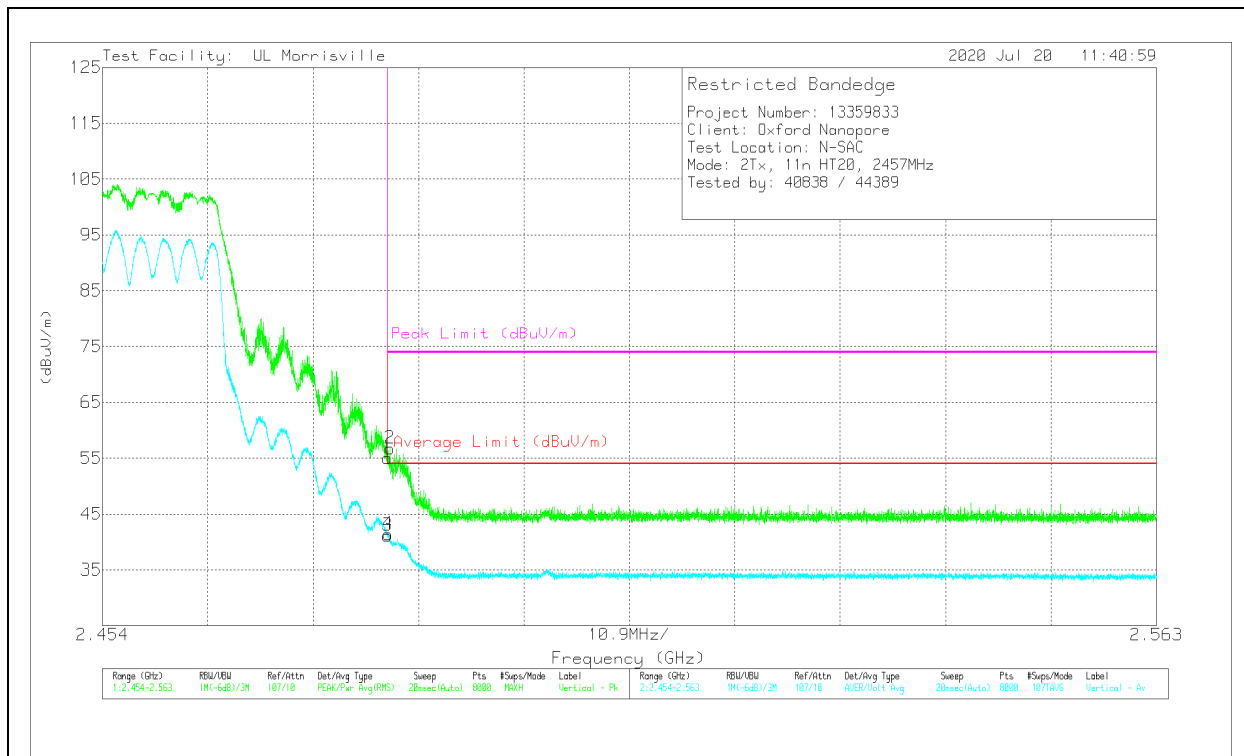
**HORIZONTAL RESULT**



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	40.72	Pk	32.4	-23.4	0	49.72	-	-	74	-24.28	42	357	H
2	*** 2.48361	43.05	Pk	32.4	-23.4	0	52.05	-	-	74	-21.95	42	357	H
3	*** 2.4835	27.16	ADV	32.4	-23.4	.65	36.81	54	-17.19	-	-	42	357	H
4	*** 2.48352	27.31	ADV	32.4	-23.4	.65	36.96	54	-17.04	-	-	42	357	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

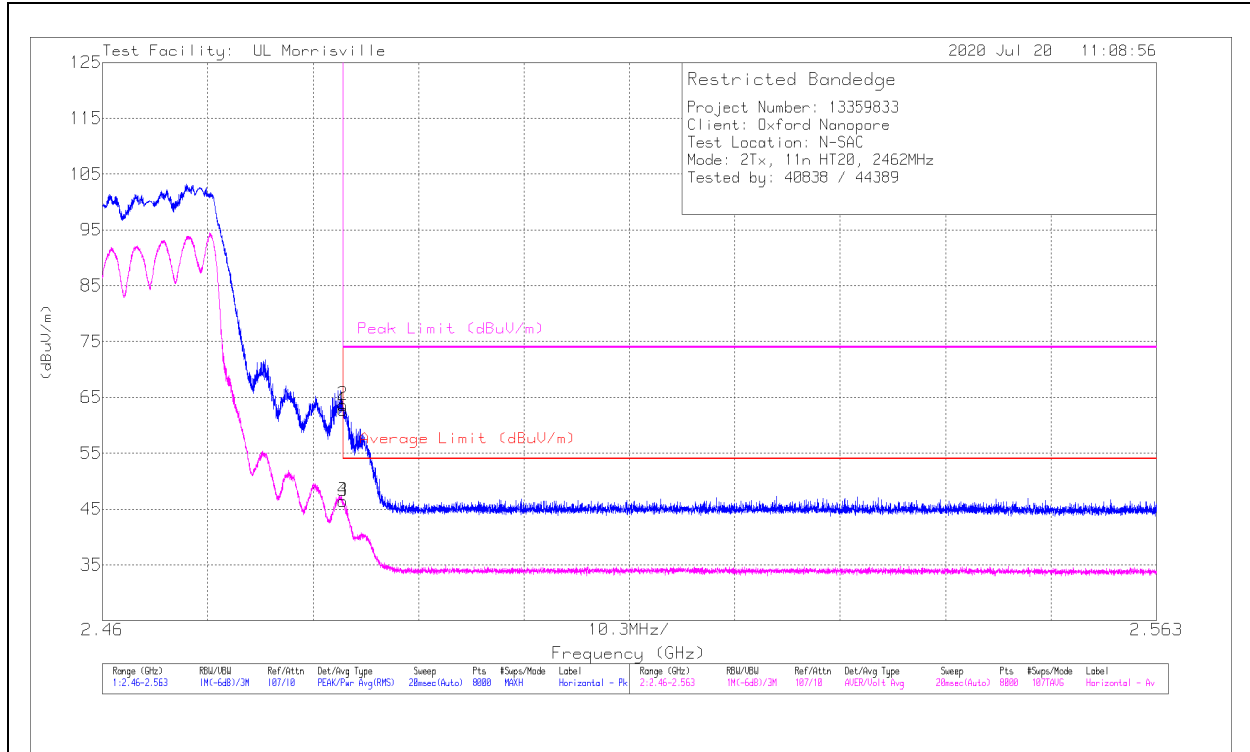


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	45.98	Pk	32.4	-23.4	0	54.98	-	-	74	-19.02	242	353	V
2	** 2.48375	47.74	Pk	32.4	-23.4	0	56.74	-	-	74	-17.26	242	353	V
3	*** 2.4835	31.48	ADV	32.4	-23.4	.65	41.13	54	-12.87	-	-	242	353	V
4	*** 2.48356	31.7	ADV	32.4	-23.4	.65	41.35	54	-12.65	-	-	242	353	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, CH 11)**

**HORIZONTAL RESULT**

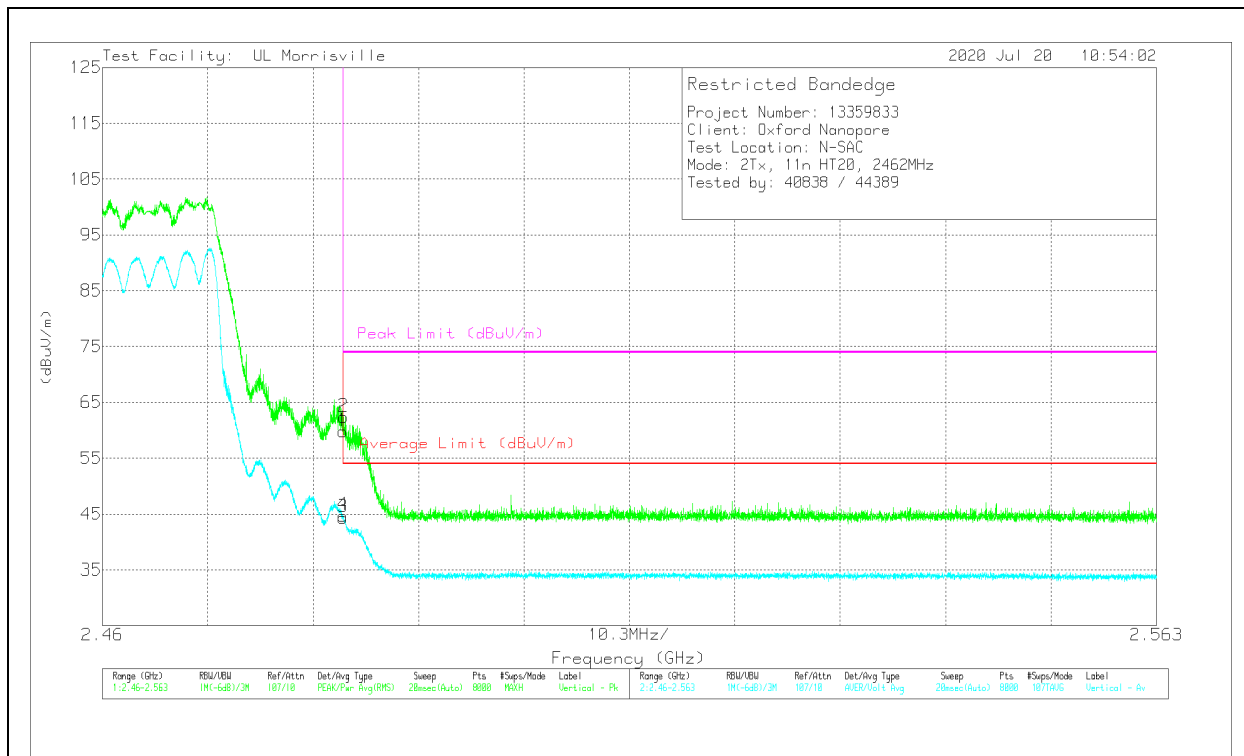


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	53.77	Pk	32.4	-23.4	0	62.77	-	-	74	-11.23	23	362	H
2	*** 2.48353	54.67	Pk	32.4	-23.4	0	63.67	-	-	74	-10.33	23	362	H
3	*** 2.4835	36.81	ADV	32.4	-23.4	.65	46.46	54	-7.54	-	-	23	362	H
4	*** 2.48351	36.81	ADV	32.4	-23.4	.65	46.46	54	-7.54	-	-	23	362	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

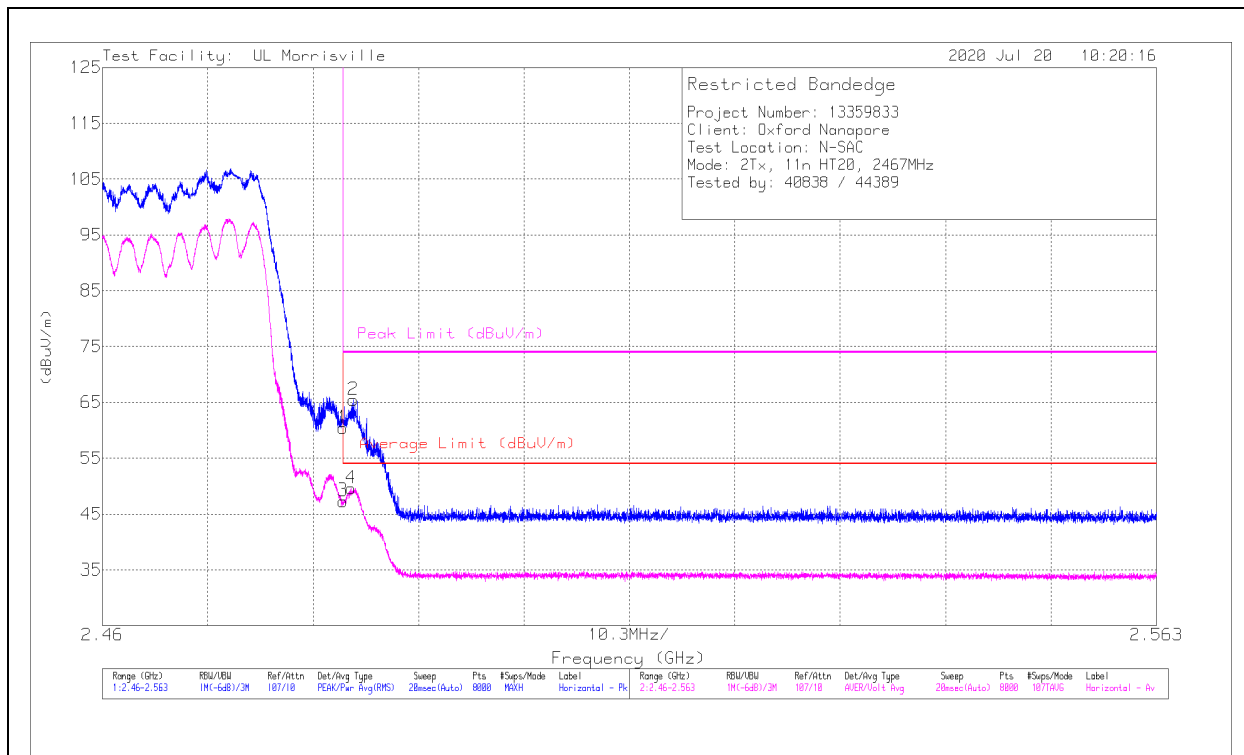


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	50.86	Pk	32.4	-23.4	0	59.86	-	-	74	-14.14	77	362	V
2	** 2.48358	53.44	Pk	32.4	-23.4	0	62.44	-	-	74	-11.56	77	362	V
3	*** 2.4835	34.73	ADV	32.4	-23.4	.65	44.38	54	-9.62	-	-	77	362	V
4	*** 2.48353	35.1	ADV	32.4	-23.4	.65	44.75	54	-9.25	-	-	77	362	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, CH 12)

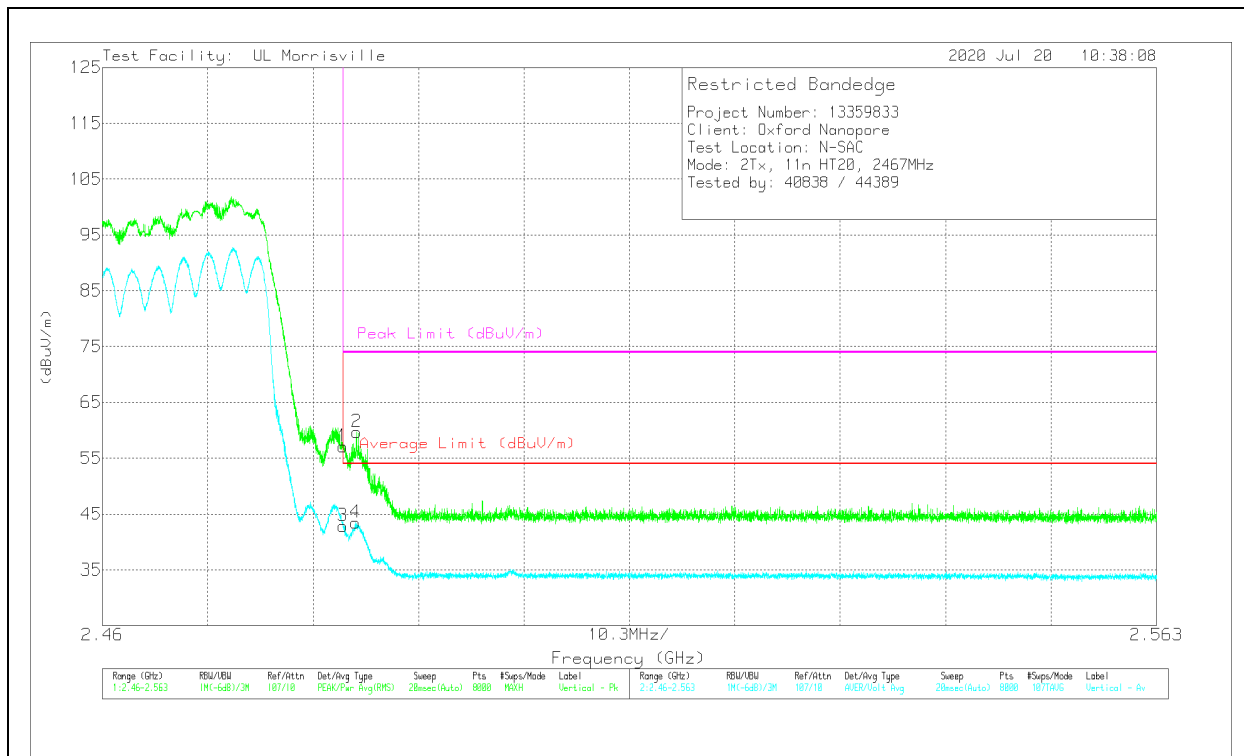
### HORIZONTAL RESULT



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	51.45	Pk	32.4	-23.4	0	60.45	-	-	74	-13.55	306	289	H
2	*** 2.48452	56.47	Pk	32.4	-23.4	0	65.47	-	-	74	-8.53	306	289	H
3	*** 2.4835	37.67	ADV	32.4	-23.4	.65	47.32	54	-6.68	-	-	306	288	H
4	*** 2.48431	39.96	ADV	32.4	-23.4	.65	49.61	54	-4.39	-	-	306	288	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

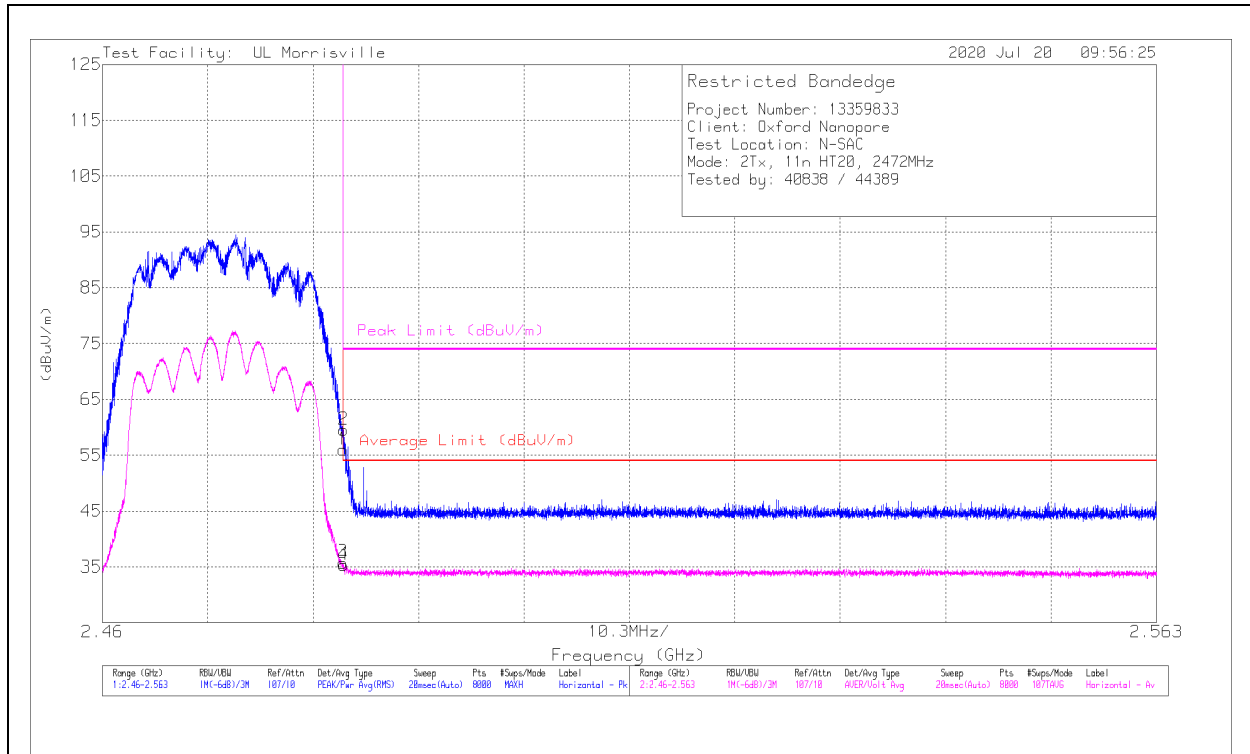


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	48.07	Pk	32.4	-23.4	0	57.07	-	-	74	-16.93	259	354	V
2	** 2.48487	50.55	Pk	32.5	-23.4	0	59.65	-	-	74	-14.35	259	354	V
3	*** 2.4835	33.16	ADV	32.4	-23.4	.65	42.81	54	-11.19	-	-	259	354	V
4	*** 2.48471	33.83	ADV	32.4	-23.4	.65	43.48	54	-10.52	-	-	259	354	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, CH 13)**

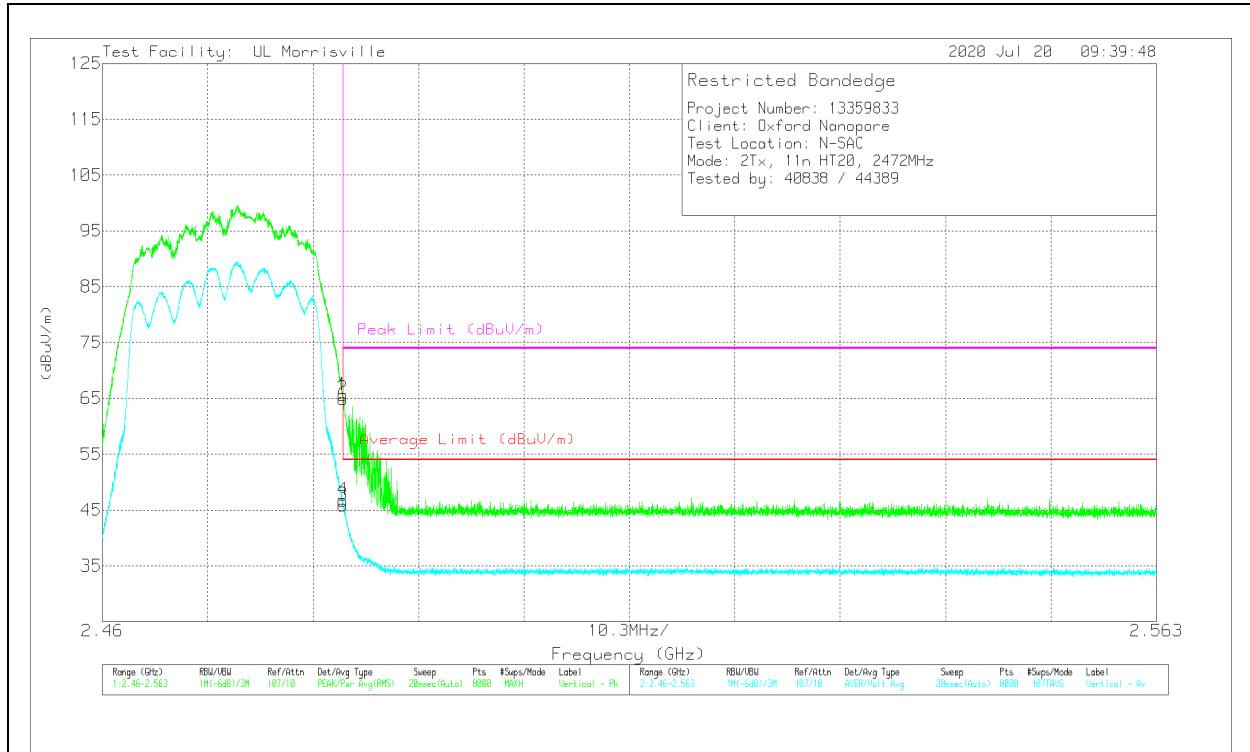
**HORIZONTAL RESULT**



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	46.98	Pk	32.4	-23.4	0	55.98	-	-	74	-18.02	236	352	H
2	*** 2.48359	50.52	Pk	32.4	-23.4	0	59.52	-	-	74	-14.48	236	352	H
3	*** 2.4835	26.11	ADV	32.4	-23.4	.65	35.76	54	-18.24	-	-	236	352	H
4	*** 2.48358	25.68	ADV	32.4	-23.4	.65	35.33	54	-18.67	-	-	236	352	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

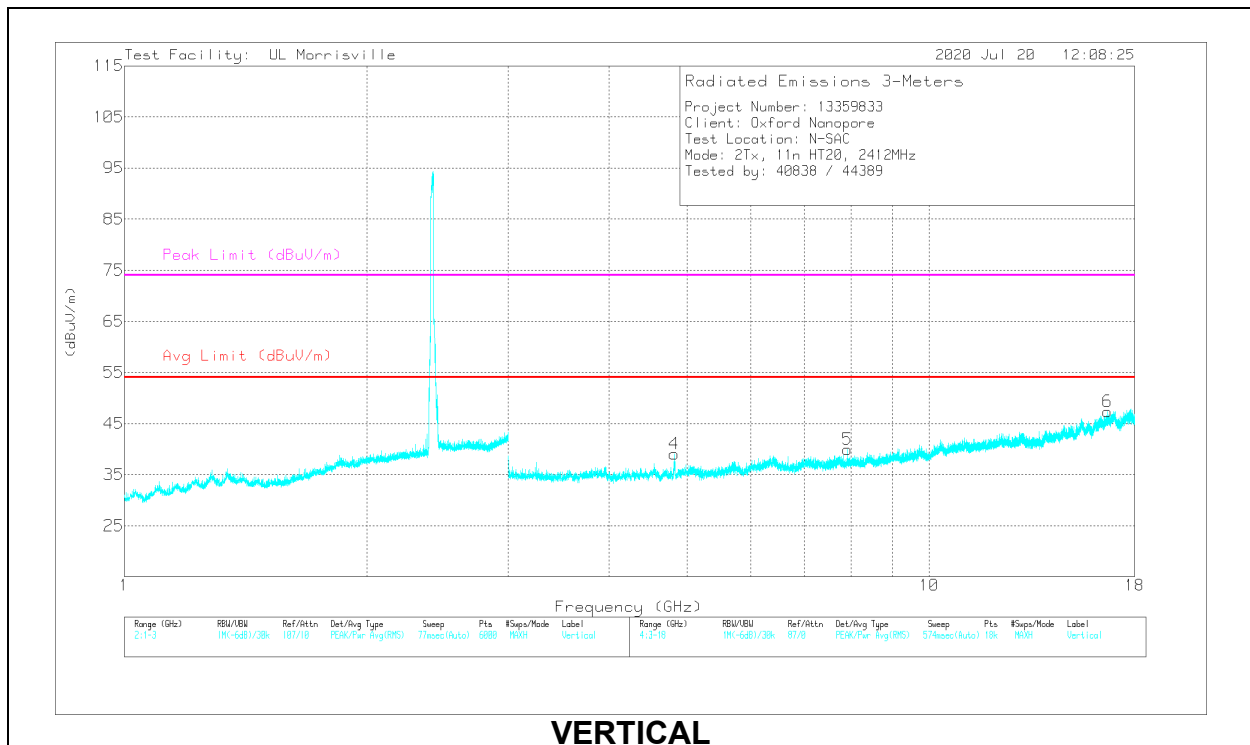
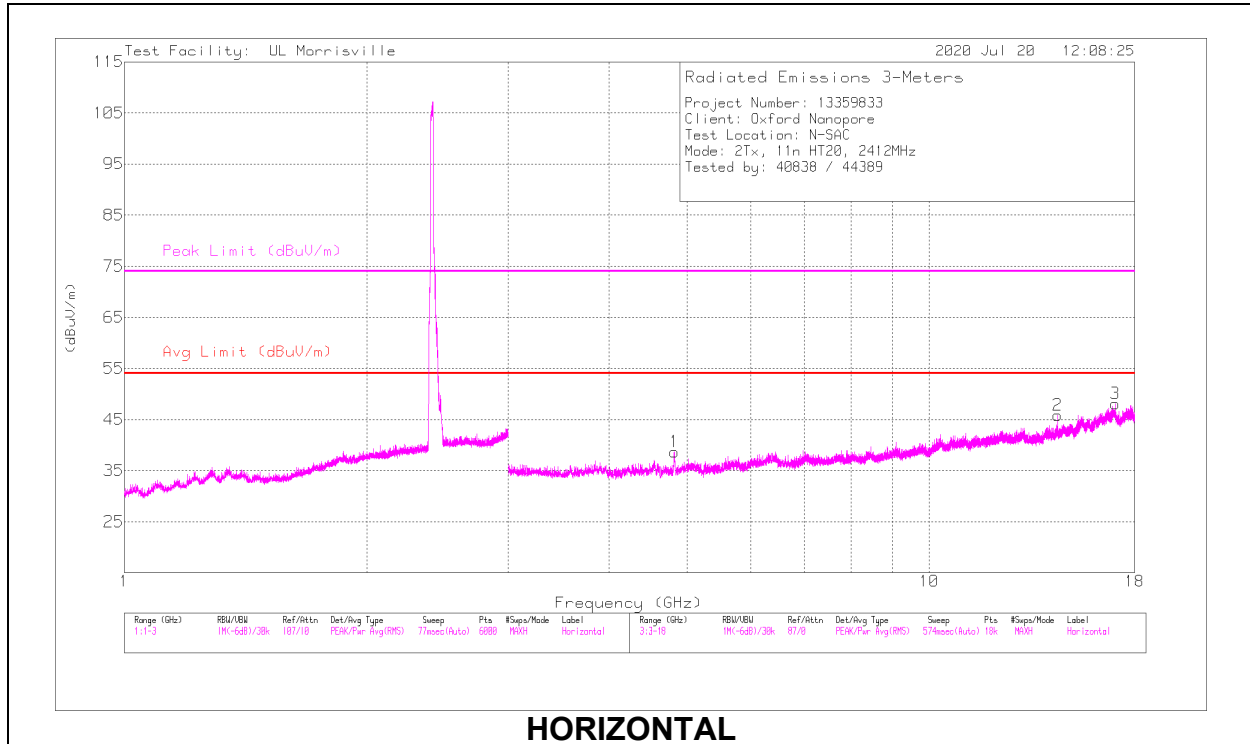


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	*** 2.4835	56.55	Pk	32.4	-23.4	0	65.55	-	-	74	-8.45	38	396	V
2	** 2.48353	55.9	Pk	32.4	-23.4	0	64.9	-	-	74	-9.1	38	396	V
3	*** 2.4835	36.2	ADV	32.4	-23.4	.65	45.85	54	-8.15	-	-	38	396	V
4	*** 2.48351	37.08	ADV	32.4	-23.4	.65	46.73	54	-7.27	-	-	38	396	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, CH 1 RESULTS



	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	** 4.82311	44.33	PK2	34.2	-30.8	0	47.73	-	-	74	-26.27	309	107	H
	** 4.82307	30.18	ADV	34.2	-30.8	.65	34.23	54	-19.77	-	-	309	107	H
4	** 4.82313	42.27	PK2	34.2	-30.8	0	45.67	-	-	74	-28.33	235	109	V
	** 4.82313	28.44	ADV	34.2	-30.8	.65	32.49	54	-21.51	-	-	235	109	V
5	7.91111	32.36	Pk	35.9	-28.3	0	39.96	-	-	-	-	0-360	200	V
2	14.45564	33.12	Pk	39.4	-26.7	0	45.82	-	-	-	-	0-360	101	H
6	16.64826	28.44	Pk	41.6	-22.7	0	47.34	-	-	-	-	0-360	101	V
3	17.02662	30.6	Pk	41.4	-23.9	0	48.1	-	-	-	-	0-360	200	H

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

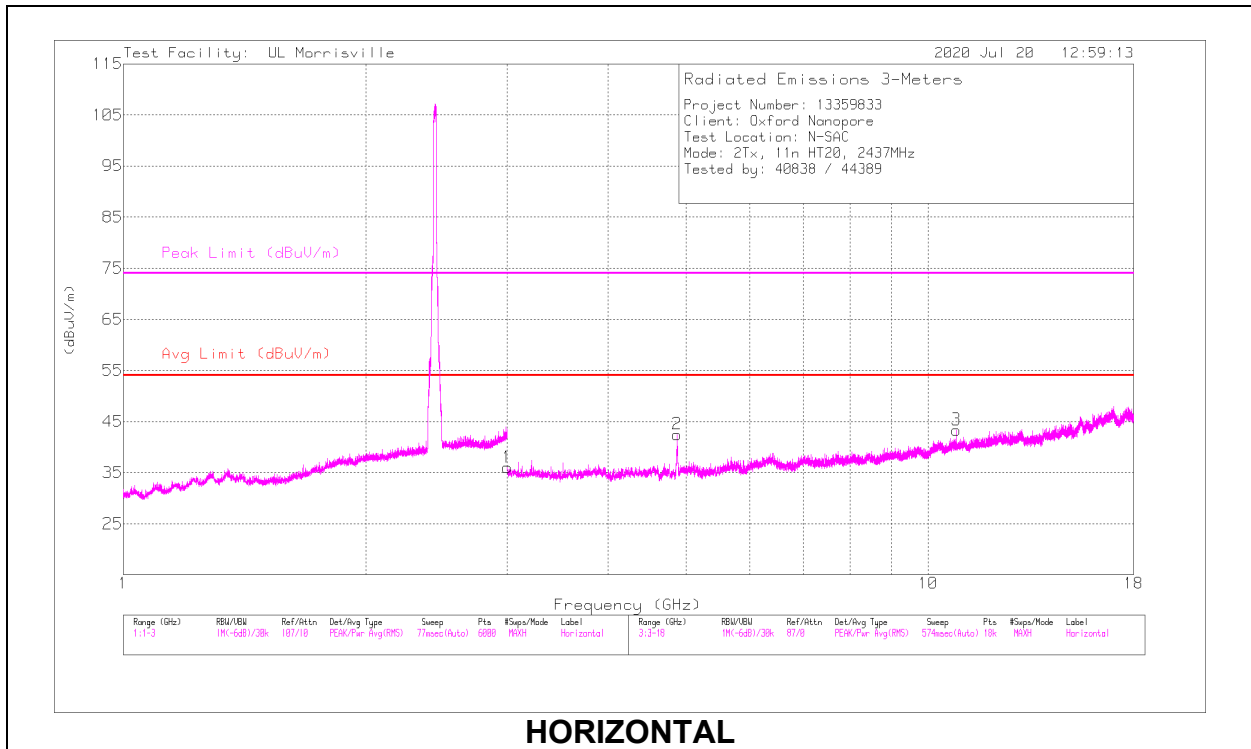
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

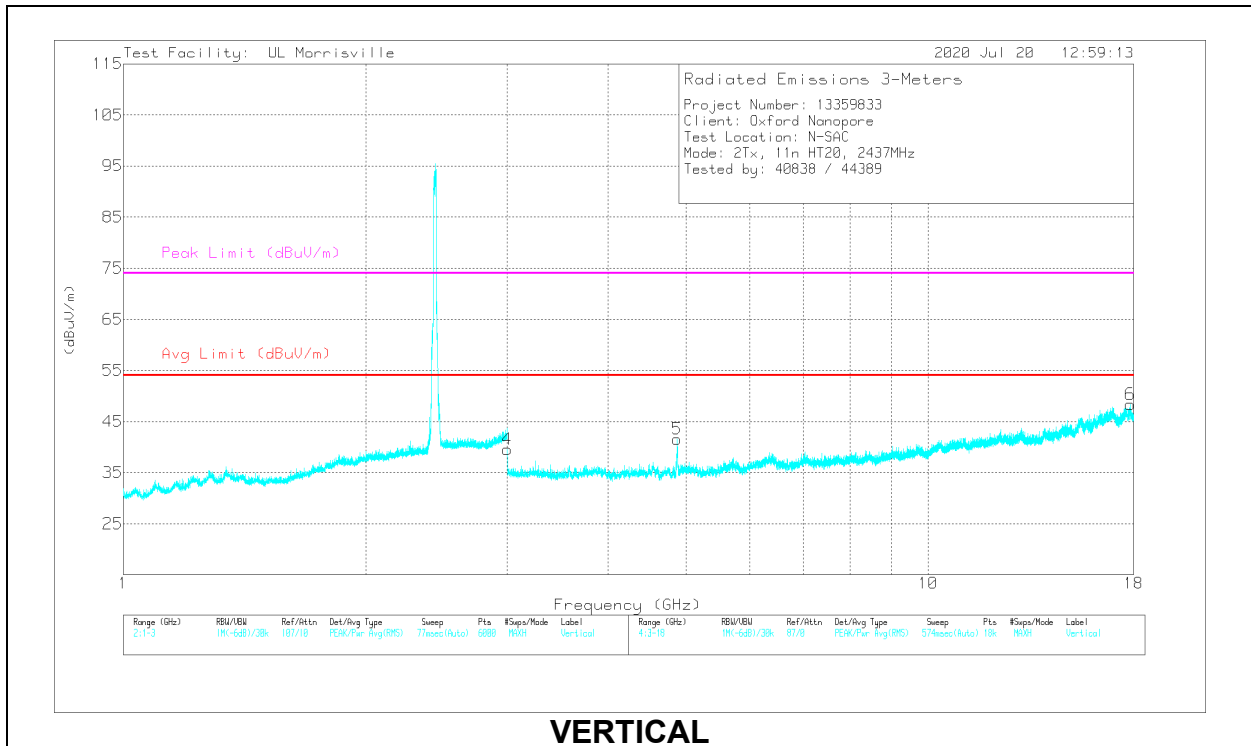
ADV - Linear Voltage Average

Pk - Peak detector

### MID CHANNEL, CH 6 RESULTS



**HORIZONTAL**



**VERTICAL**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	*** 4.87824	46.1	PK2	34.1	-30.8	0	49.4	-	-	74	-24.6	308	106	H
	*** 4.87807	32.37	ADV	34.1	-30.8	.65	36.32	54	-17.68	-	-	308	106	H
3	*** 10.83396	35.81	PK2	37.9	-25.6	0	48.11	-	-	74	-25.89	188	267	H
	*** 10.83386	22.71	ADV	37.9	-25.6	.65	35.66	54	-18.34	-	-	188	267	H
5	*** 4.87266	45.02	PK2	34.1	-30.9	0	48.22	-	-	74	-25.78	299	367	V
	*** 4.87284	31.19	ADV	34.1	-30.9	.65	35.04	54	-18.96	-	-	299	367	V
6	*** 17.8326	34.42	PK2	41.5	-21.5	0	54.42	-	-	74	-19.58	88	396	V
	*** 17.8328	21.34	ADV	41.5	-21.5	.65	41.99	54	-12.01	-	-	88	396	V
1	3	34.55	Pk	33	-31.5	0	36.05	-	-	-	-	0-360	101	H
4	3	38.08	Pk	33	-31.5	0	39.58	-	-	-	-	0-360	101	V

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

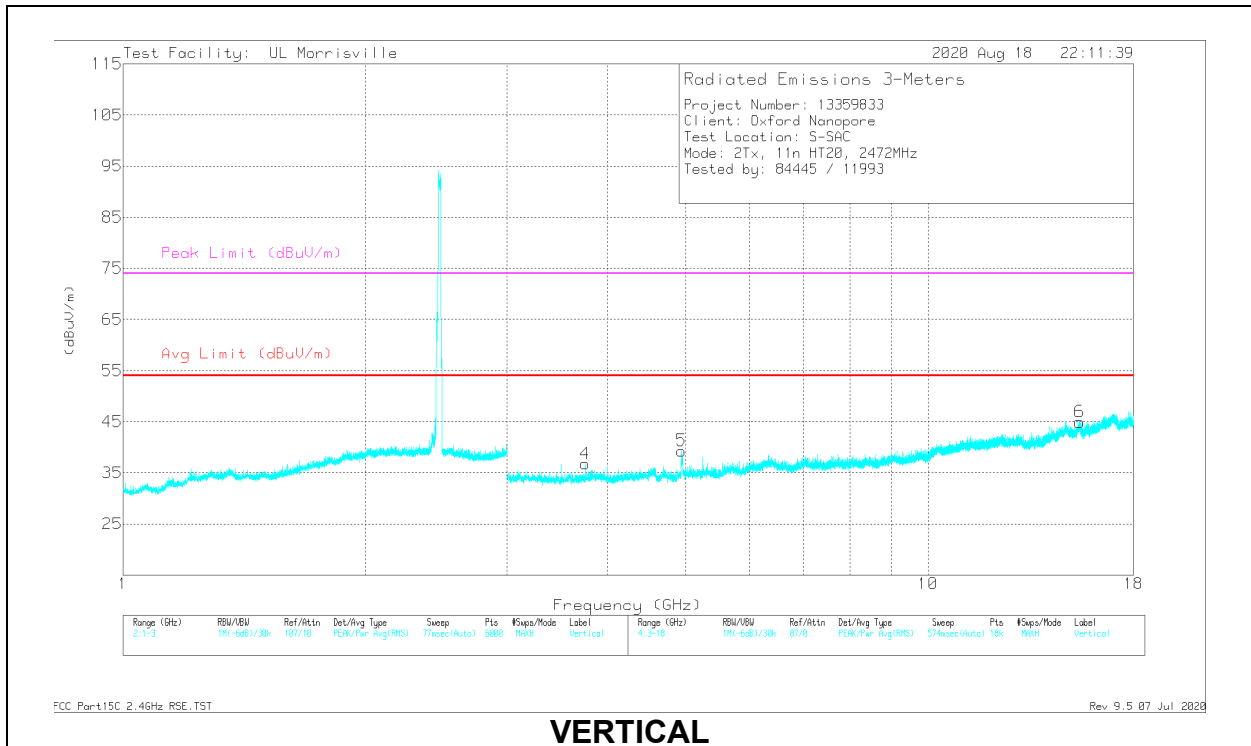
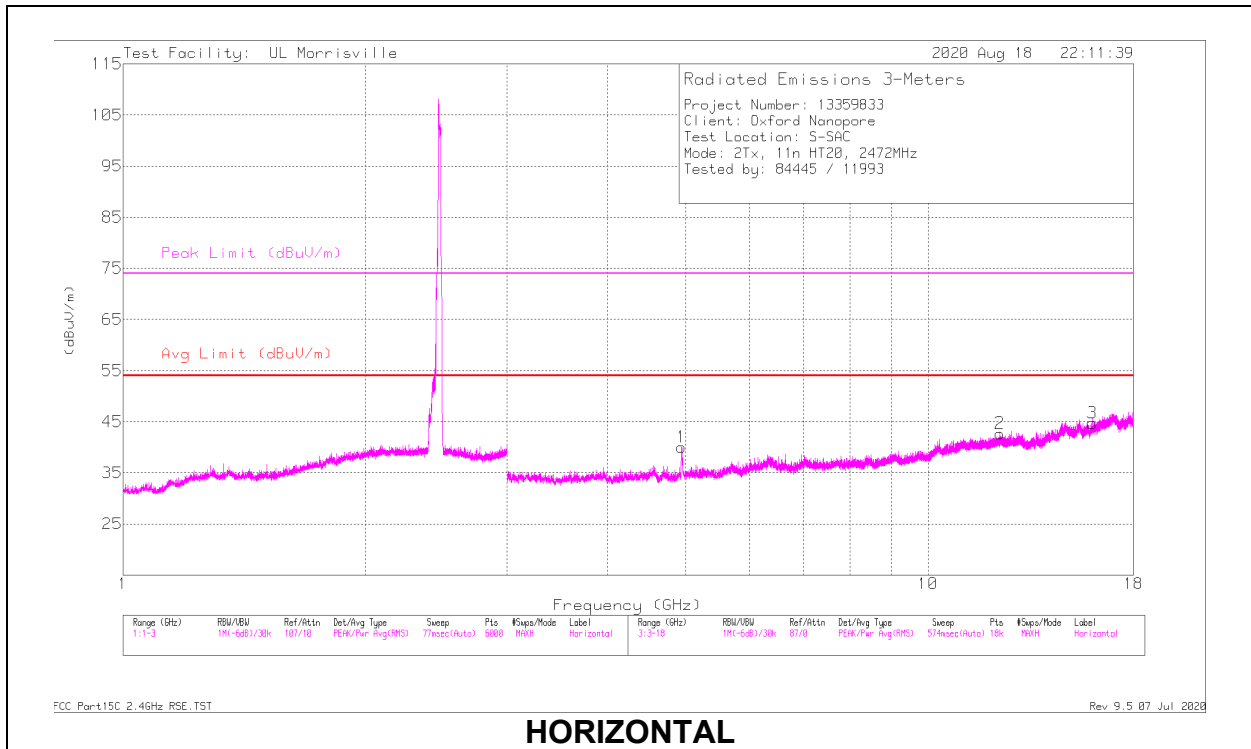
\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

Pk - Peak detector

### HIGH CHANNEL, CH 13 RESULTS



Markers	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	*** 4.94282	45.85	PK2	33.9	-30.8	0	48.95	-	-	74	-25.05	65	255	H
	*** 4.9432	31.7	ADV	33.9	-30.8	.65	35.45	54	-18.55	-	-	65	255	H
2	*** 12.27838	34.53	PK2	38.8	-24.1	0	49.23	-	-	74	-24.77	181	314	H
	*** 12.27919	21.19	ADV	38.8	-24.1	.65	36.54	54	-17.46	-	-	181	314	H
3	*** 16.0003	35.22	PK2	40.4	-23.9	0	51.72	-	-	74	-22.28	11	280	H
	*** 16.00055	22.03	ADV	40.4	-23.9	.65	39.18	54	-14.82	-	-	11	280	H
4	*** 3.74981	43.13	PK2	33.2	-32.7	0	43.63	-	-	74	-30.37	236	247	V
	*** 3.74996	32.87	ADV	33.2	-32.7	.65	34.02	54	-19.98	-	-	236	247	V
5	*** 4.94317	44.27	PK2	33.9	-30.8	0	47.37	-	-	74	-26.63	351	116	V
	*** 4.94316	30.37	ADV	33.9	-30.8	.65	34.12	54	-19.88	-	-	351	116	V
6	*** 15.42579	33.16	PK2	40.3	-21.9	0	51.56	-	-	74	-22.44	311	163	V
	*** 15.42624	20.5	ADV	40.3	-21.9	.65	39.55	54	-14.45	-	-	311	163	V

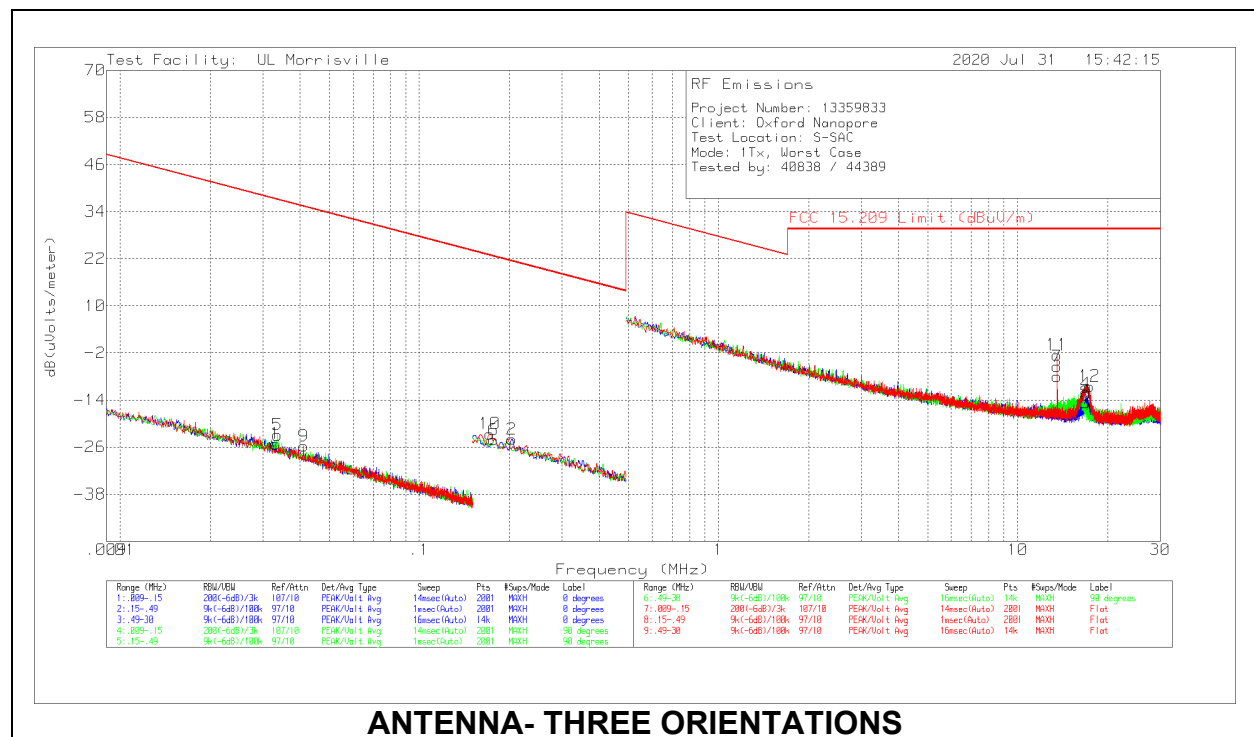
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band  
 \*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band  
 PK2 - Maximum Peak  
 ADV - Linear Voltage Average

## 12.2. WORST CASE CONFIGURATION RADIATED

### SPURIOUS EMISSIONS BELOW 30 MHz

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  $377 \Omega$ . For example, the measurement frequency 33.07 kHz resulted in a level of -25.16 dBuV/m, which is equivalent to  $-25.16 - 51.5 = -76.66$  dBuA/m, which has the same margin, -62.38 dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

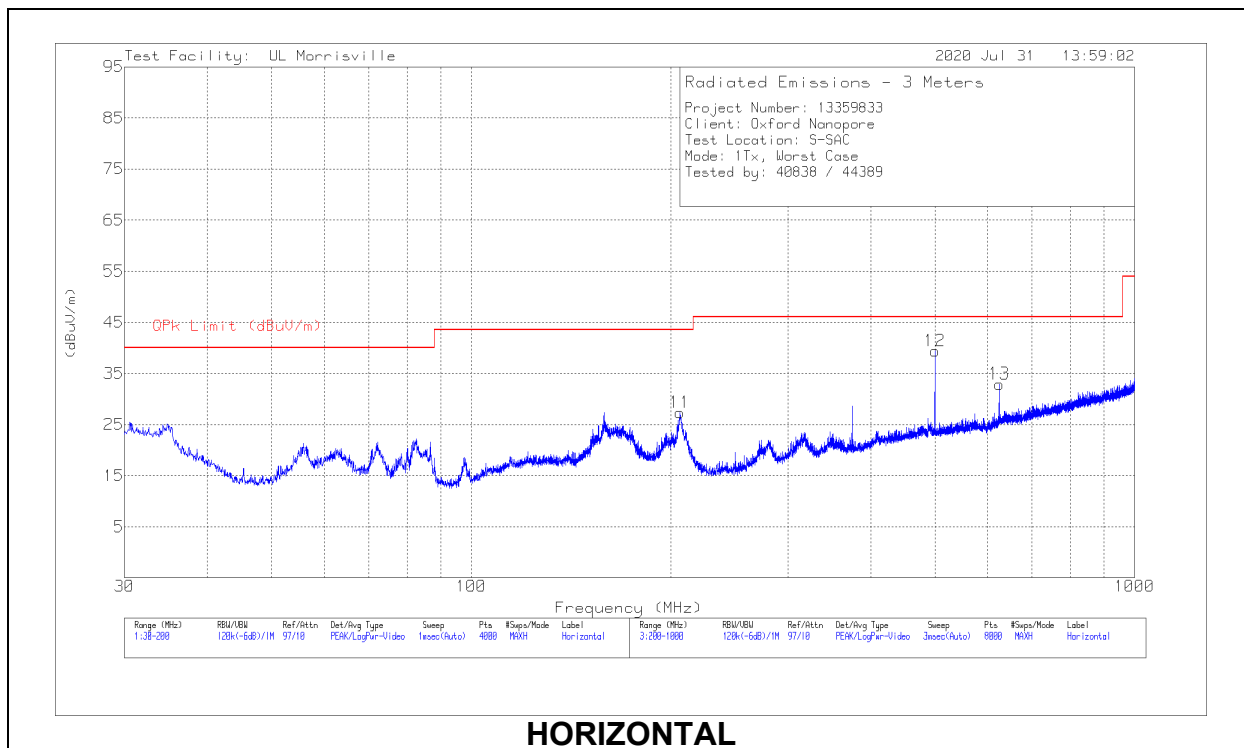


ANTENNA- THREE ORIENTATIONS

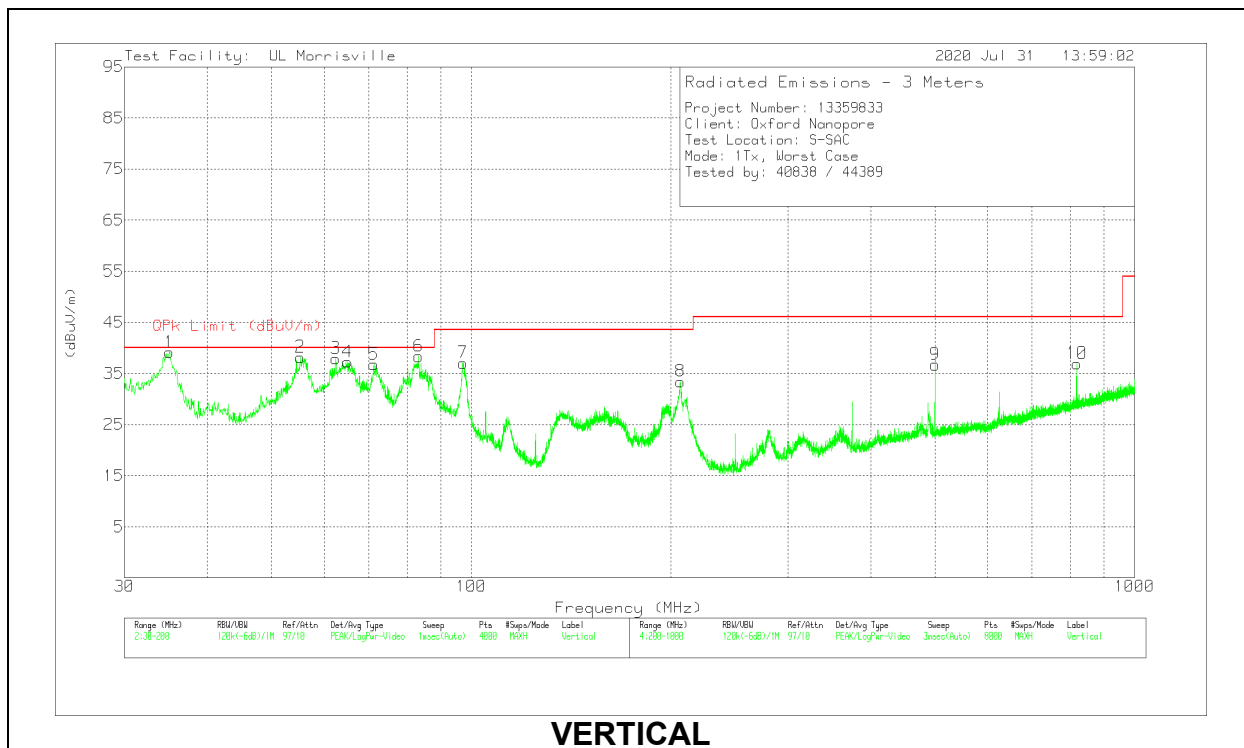
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 AF (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 QP/AV Limit (dBuV/m)	FCC 15.209 PK Limit (dBuV/m)	Worst-Case Margin (dB)	Azimuth (Degs)
1	.03307	41.84	Pk	12.9	.1	-80	-25.16	37.22	57.22	-62.38	0-360
5	.03357	44.08	Pk	12.9	.1	-80	-22.92	37.09	57.09	-60.01	0-360
9	.04109	41.86	Pk	12.3	.1	-80	-25.74	35.33	55.33	-61.07	0-360
10	.17219	46.28	Pk	11	.1	-80	-22.62	22.88	42.88	-45.5	0-360
6	.1772	44.75	Pk	11	.1	-80	-24.15	22.63	42.63	-46.78	0-360
2	.20389	44.87	Pk	11	.1	-80	-24.03	21.42	41.42	-45.45	0-360
3	13.5596	21.3	Pk	10	.7	-40	-8	29.54	-	-37.54	0-360
11	13.5596	26.77	Pk	10	.7	-40	-2.53	29.54	-	-32.07	0-360
7	13.56171	23.86	Pk	10	.7	-40	-5.44	29.54	-	-34.98	0-360
8	16.88392	14.97	Pk	9.6	.8	-40	-14.63	29.54	-	-44.17	0-360
4	16.88602	17.2	Pk	9.6	.8	-40	-12.4	29.54	-	-41.94	0-360
12	17.36665	19.1	Pk	9.6	.8	-40	-10.5	29.54	-	-40.04	0-360

Pk - Peak detector

**SPURIOUS EMISSIONS 30-1000 MHz**



**HORIZONTAL**



**VERTICAL**

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
1	34.8288	42.06	Qp	23.9	-31.5	34.46	40	-5.54	97	103	V
2	55.0615	50.04	Qp	13.3	-31.2	32.14	40	-7.86	162	117	V
3	62.5234	47.77	Qp	14	-31	30.77	40	-9.23	172	198	V
4	65.1466	49.13	Qp	14.2	-31	32.33	40	-7.67	230	108	V
5	71.7407	48.32	Qp	14.5	-30.9	31.92	40	-8.08	270	110	V
6	82.2463	50.3	Qp	13.7	-30.8	33.2	40	-6.8	133	115	V
7	97.1674	51.98	Pk	15.7	-30.6	37.08	43.52	-6.44	0-360	101	V
11	206.2008	39.84	Pk	16.9	-29.4	27.34	43.52	-16.18	0-360	101	H
8	206.6009	46.04	Pk	16.8	-29.4	33.44	43.52	-10.08	0-360	101	V
12	500.039	43.4	Pk	23.7	-27.7	39.4	46.02	-6.62	0-360	200	H
9	500.039	40.72	Pk	23.7	-27.7	36.72	46.02	-9.3	0-360	101	V
13	625.0553	34.73	Pk	25.4	-27.2	32.93	46.02	-13.09	0-360	101	H
10	818.3804	35.65	Pk	27.7	-26.4	36.95	46.02	-9.07	0-360	101	V

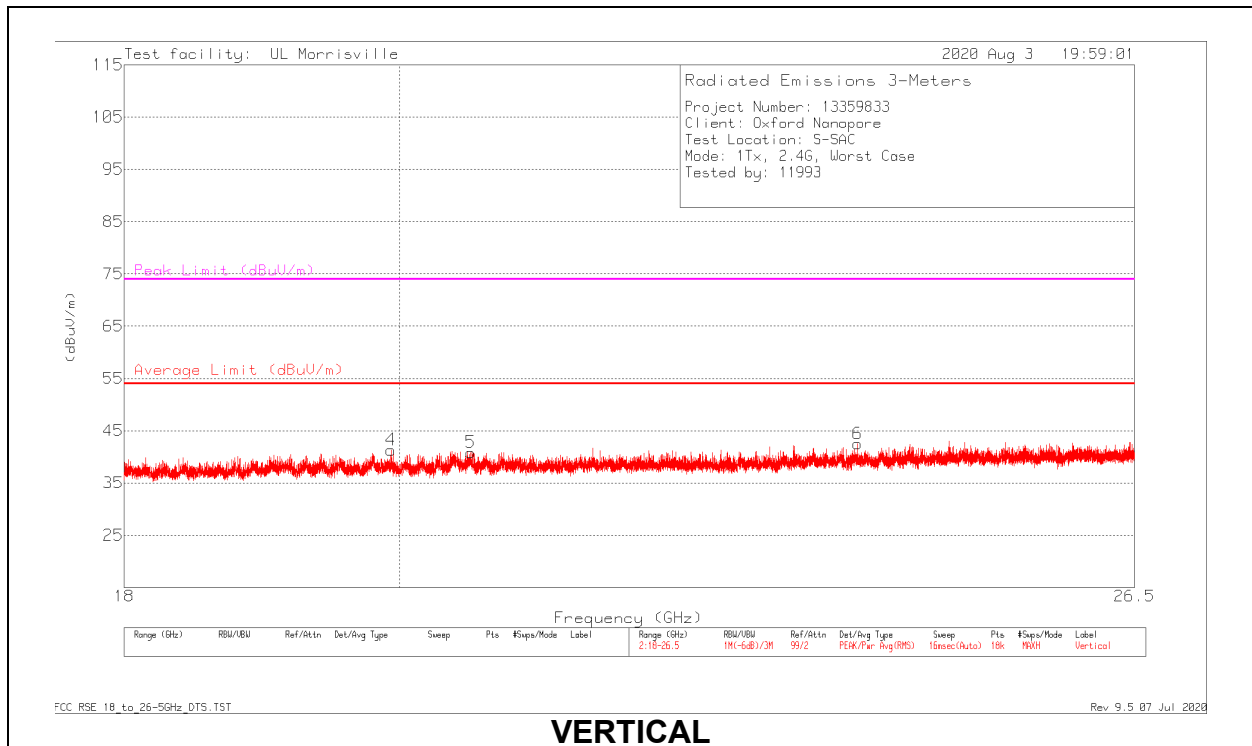
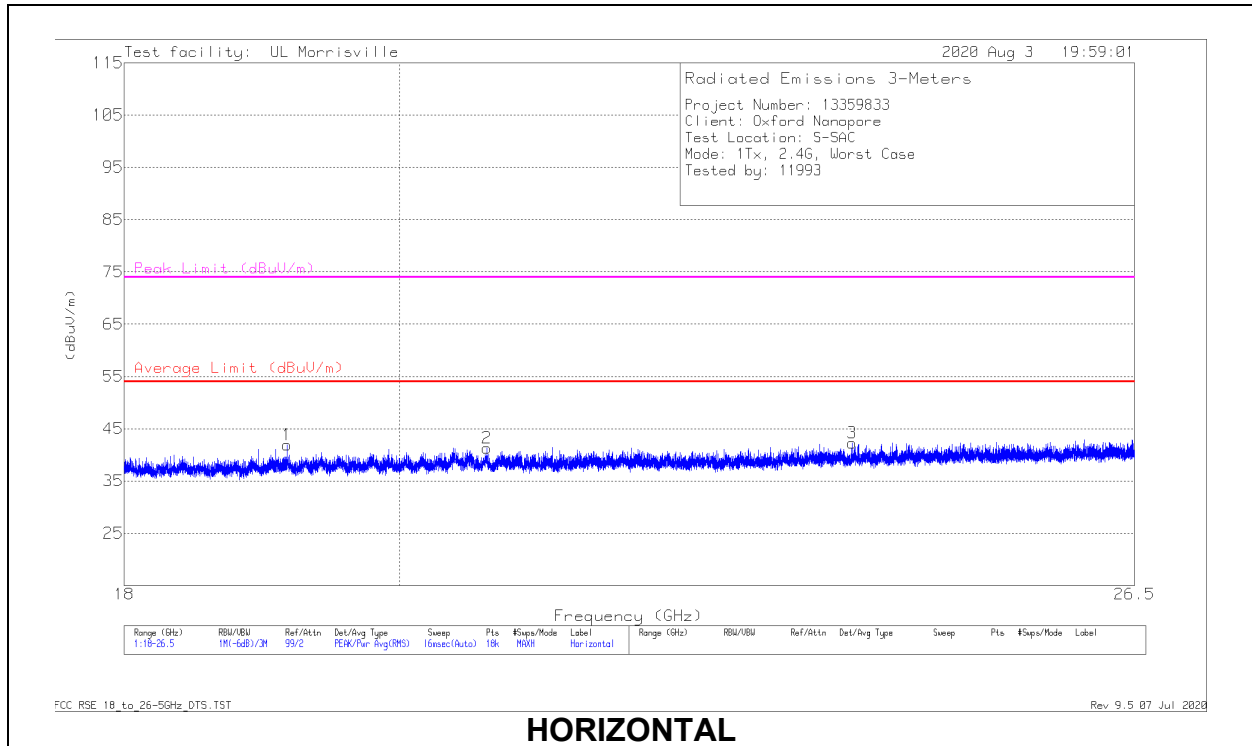
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

Qp - Quasi-Peak detector

**SPURIOUS EMISSIONS 18 – 26GHz**



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	*** 19.15748	48.08	Pk	32.8	-39	41.88	54	-12.12	74	-32.12	0-360	199	H
2	*** 20.68142	47.07	Pk	33	-38.8	41.27	54	-12.73	74	-32.73	0-360	101	H
3	*** 23.78645	46.76	Pk	34	-38.5	42.26	54	-11.74	74	-31.74	0-360	101	H
4	*** 19.93574	47.41	Pk	32.8	-38.9	41.31	54	-12.69	74	-32.69	0-360	200	V
5	*** 20.55344	46.54	Pk	33.1	-38.8	40.84	54	-13.16	74	-33.16	0-360	150	V
6	*** 23.83368	47.2	Pk	34.1	-38.8	42.5	54	-11.5	74	-31.5	0-360	101	V

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

\*\* - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector



### 13. AC POWER LINE CONDUCTED EMISSIONS

#### LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

\*Decreases with the logarithm of the frequency.

#### TEST PROCEDURE

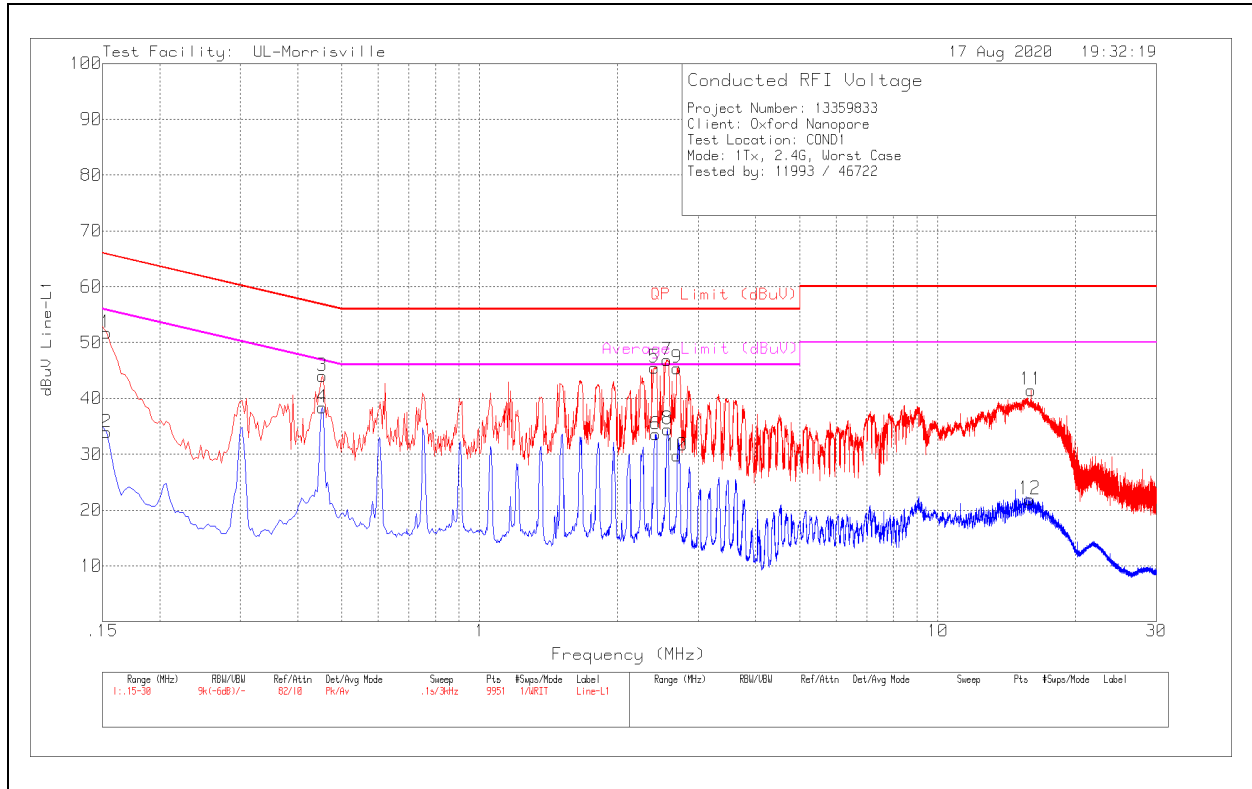
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

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

Line conducted data is recorded for both lines.

**13.1.1. AC POWER LINE NORM**

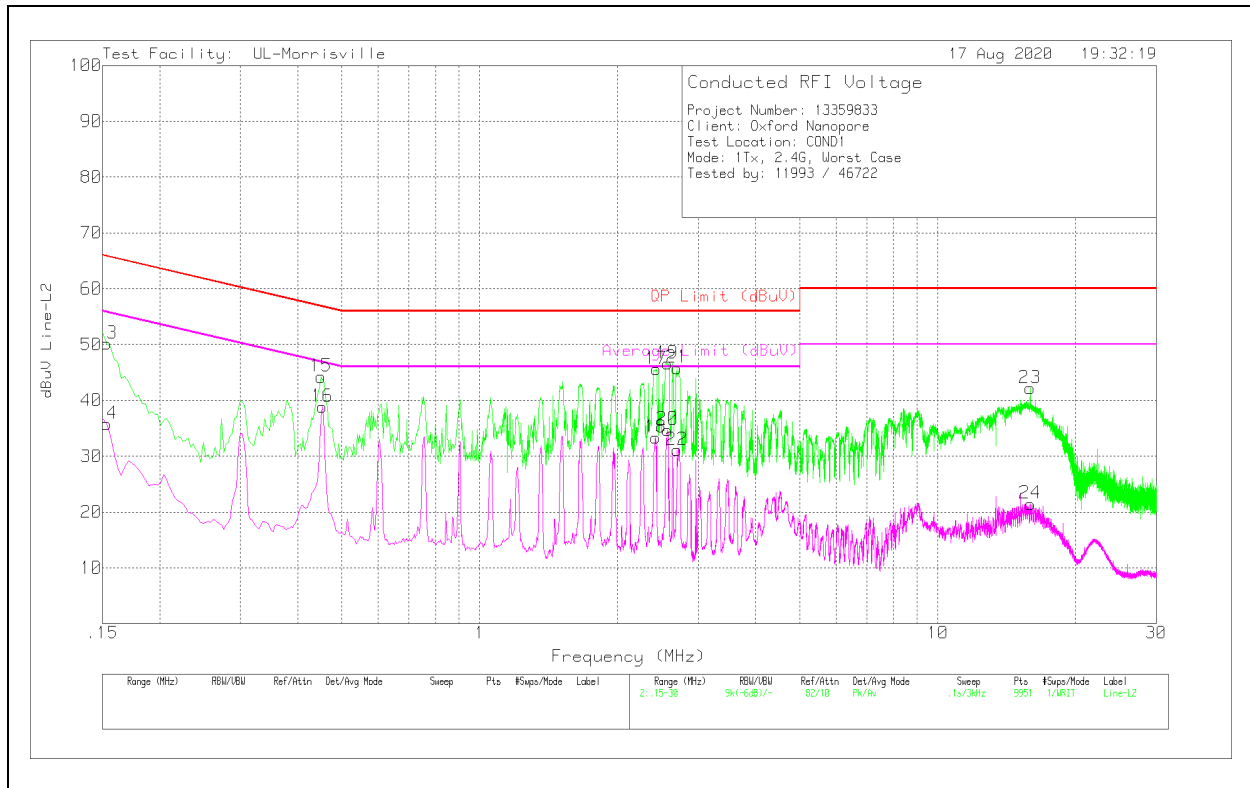
**LINE 1 RESULTS**



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	41.87	Pk	.2	9.7	51.77	65.84	-14.07	-	-
2	.153	24.04	Av	.2	9.7	33.94	-	-	55.84	-21.9
3	.453	34.11	Pk	.1	9.8	44.01	56.82	-12.81	-	-
4	.453	28.45	Av	.1	9.8	38.35	-	-	46.82	-8.47
5	2.403	35.74	Pk	0	9.8	45.54	56	-10.46	-	-
6	2.421	23.79	Av	0	9.8	33.59	-	-	46	-12.41
7	2.562	37.03	Pk	0	9.8	46.83	56	-9.17	-	-
8	2.571	24.69	Av	0	9.8	34.49	-	-	46	-11.51
9	2.694	35.64	Pk	0	9.8	45.44	56	-10.56	-	-
10	2.697	19.93	Av	0	9.8	29.73	-	-	46	-16.27
11	15.99	31.31	Pk	.1	10.1	41.51	60	-18.49	-	-
12	15.888	11.74	Av	.1	10.1	21.94	-	-	50	-28.06

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	40.24	Pk	.2	9.7	50.14	65.84	-15.7	-	-
14	.153	25.85	Av	.2	9.7	35.75	-	-	55.84	-20.09
15	.45	34.32	Pk	.1	9.8	44.22	56.88	-12.66	-	-
16	.453	28.94	Av	.1	9.8	38.84	-	-	46.82	-7.98
17	2.427	35.85	Pk	0	9.8	45.65	56	-10.35	-	-
18	2.421	23.53	Av	0	9.8	33.33	-	-	46	-12.67
19	2.568	36.83	Pk	0	9.8	46.63	56	-9.37	-	-
20	2.571	24.94	Av	0	9.8	34.74	-	-	46	-11.26
21	2.694	36.01	Pk	0	9.8	45.81	56	-10.19	-	-
22	2.694	21.3	Av	0	9.8	31.1	-	-	46	-14.9
23	15.9	31.98	Pk	.1	10.1	42.18	60	-17.82	-	-
24	15.909	11.27	Av	.1	10.1	21.47	-	-	50	-28.53

Pk - Peak detector  
 Av - Average detection

## **14. SETUP PHOTOS**

Please refer to R13359833-EP3 for setup photos

**END OF TEST REPORT**