



TEST REPORT

Report Number: R13663253-E1

Applicant : Stryker Instruments
1941 Stryker Way
Portage, MI 49002, USA

Model : SX-SDMAC-2832S+

Brand : Stryker

FCC ID : 2AZGA-SDMACE

IC : 27138-SDMACE

EUT Description : Embedded Wireless Module

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 2
ISED RSS-GEN ISSUE 5 + A2

Date Of Issue:
2021-07-08

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	2021-06-16	Initial Issue	Noah Bennett
V2	2021-07-08	Updates EUT Description and FCC/IC ID	Noah Bennett

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Stryker Instruments
1941 Stryker Way
Portage, MI 49002, USA

EUT DESCRIPTION: Embedded Wireless Module

MODEL: SX-SDMAC-2832S+

BRAND: Stryker

SERIAL NUMBER: JSHEW20C00028

SAMPLE RECEIPT DATE: 2021-01-07

DATE TESTED: 2021-01-14 to 2021-01-22

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



Brian T. Kiewra
Project Engineer
Consumer Technology Division
UL LLC.

Noah Bennett
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 Note	See Note
15.247 (a) (2)	RSS-247 5.2 (a)	6dB BW	Not Tested	See Note
15.247 (b) (3)	RSS-247 5.4 (d)	Output Power	Not Tested	See Note
See Comment		Average power	Not Tested	See Note
15.247 (e)	RSS-247 5.2 (b)	PSD	Not Tested	See Note
15.247 (d)	RSS-247 5.5	Conducted Spurious Emissions	Not Tested	See Note
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions	Compliant	None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	Compliant	None.

Note: Testing in this report is for a C2PC due to antenna change. Testing not in this report can be found in module report. It is the responsibility of the manufacturer to provide these upon request.

This report contains data provided by the applicant which can impact the validity of results. UL LLC is only responsible for the validity of results after the integration of the data provided by the customer.

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 v05, KDB 414788 D01 Radiated Test Site v01r01, RSS-GEN Issue 5 + A1, and RSS-247 Issue 2.

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification #0751.06, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	703469
☒	Building: 2800 Perimeter Park Dr Morrisville, NC 27560, U.S.A		27265	

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	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 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:

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

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

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

36.5 dBuV + 0 dB + 10.1 dB + 0 dB = 46.6 dBuV

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is an Embedded Wireless Module. This EUT only supports a 20MHz bandwidth for 2.4GHz WLAN. This report, R13663253-E1, is for 2.4GHz WLAN specifically. Reference R13663253-E5 for 5GHz data.

6.2. MAXIMUM OUTPUT POWER

The purpose of this C2PC report is to demonstrate compliancy after antenna change. Therefore, power measurements are not covered in this report. It is the responsibility of the manufacturer to make sure that the power settings yield the same or lower power values noted in the module report. Reference report AS-2158680001 for power levels.

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a Molex On-Metal External antenna, with a maximum gain of 1.80 dBi.

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was UL Test Package V1_0

The test utility software used during testing was qdart_conn.win.1.0_installer-00025.14

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6.5. WORST-CASE CONFIGURATION AND MODE

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

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

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

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

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n HT20mode: MCS0

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop charger	Dell	DA65NM111-00	CN-0N6M8J-48661-12J-8QO3-A01	Laptop charger
Laptop	Dell	Latitude E7450	DN2CF72	NA
USB/Serial Connector	Tripp-Lite	USA-19HS	NA	NA

I/O CABLES

I/O Cable List						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	I/O	1	4pin plug	Ethernet	<3m	Connected to laptop for configuration.
2	Mains	1	3pin plug	4 conductor to USB	<3M	Connected to laptop through USB adaptor and breaks out to DC supply for power.

TEST SETUP

The EUT is attached to a host laptop computer via USB during the tests. Test software exercised the radio card.

SETUP DIAGRAM

Please refer to R13663253-EP1 for setup diagrams

7. MEASUREMENT METHOD

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

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.

8. TEST AND MEASUREMENT EQUIPMENT

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

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

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	(Loop Ant.)			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2020-08-20	2021-08-20
	30-1000 MHz				
AT0074	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2020-07-27	2021-07-27
	1-18 GHz				
AT0072	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2020-04-27	2021-04-27
	18-40 GHz				
AT0063	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2020-10-30	2021-10-30
AT0061	Horn Antenna, 26-40GHz	ARA	MWH-2640/B	2020-10-30	2021-10-30
	Gain-Loss Chains				
N-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2020-07-29	2021-07-29
N-SAC02	Gain-loss string: 25-1000MHz	Various	Various	2020-07-29	2021-07-29
N-SAC03	Gain-loss string: 1-18GHz	Various	Various	2020-07-28	2021-07-28
N-SAC04	Gain-loss string: 18-40GHz	Various	Various	2020-07-31	2021-07-31
	Receiver & Software				
SA0026	Spectrum Analyzer	Agilent	N9030A	2020-07-16	2021-07-16
SOFTEMI	EMI Software	UL	Version 9.5 (05.12.19)	NA	NA
	Additional Equipment used				
s/n 200037610	Environmental Meter	Fisher Scientific	06-662-4	2020-01-22	2022-01-22

Test Equipment Used - Wireless Conducted Measurement Equipment

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Conducted Room 2				
SA0027 (PRE0126407)	Spectrum Analyzer	Keysight Technologies	N9030A	2020-06-10	2021-06-10
HI0090 (PRE0191271)	Environmental Meter	Fisher Scientific	15-077-963	2020-06-26	2021-06-26
SOFTEMI	Antenna Port Software	UL	Version 2020.12.3	NA	NA

Test Equipment Used - Conducted Disturbance Emissions – Voltage

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Equipment – Ground Plane E				
85496	EMI Test Receiver 9kHz-3.6GHz	Rohde & Schwarz	ESR3	2020-08-18	2021-08-18
CBL004	Coaxial cable, 20 ft., BNC - male to BNC-male	UL	RG-223	2020-07-23	2021-07-23
HI0085	Temp/Humid/Pressure Meter	Extech	SD700	2020-04-20	2021-04-30
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Transient Limiter				
ATA508	Transient Limiter, 0.009 to 100 MHz	Electro-Metrics	EM 7600	2020-07-21	2021-07-21
	LISN (FCC & CISPR testing)				
LISN002	LISN, 50-ohm/50-uH, 2-conductor, 25A	Fischer Custom Com.	FCC-LISN-50-25-2-01-550V	2020-08-17	2021-08-17

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

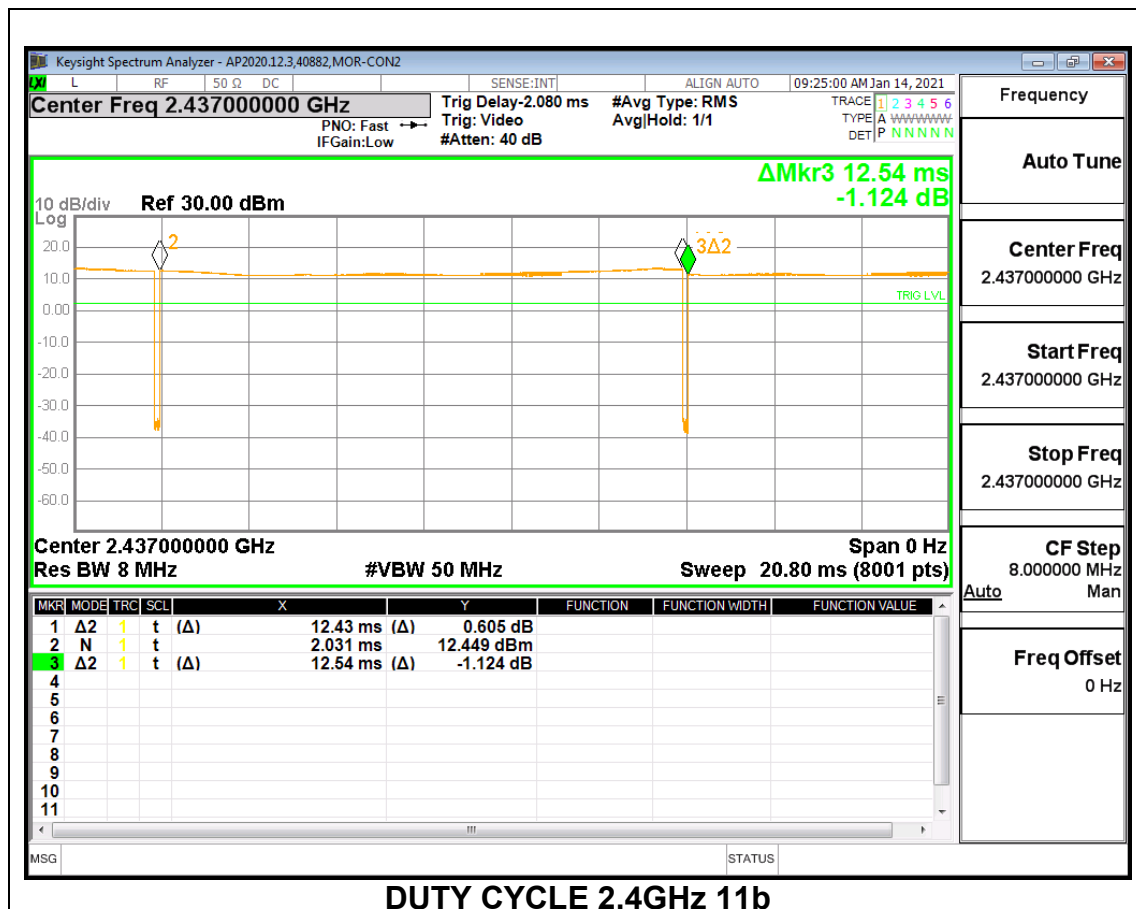
PROCEDURE

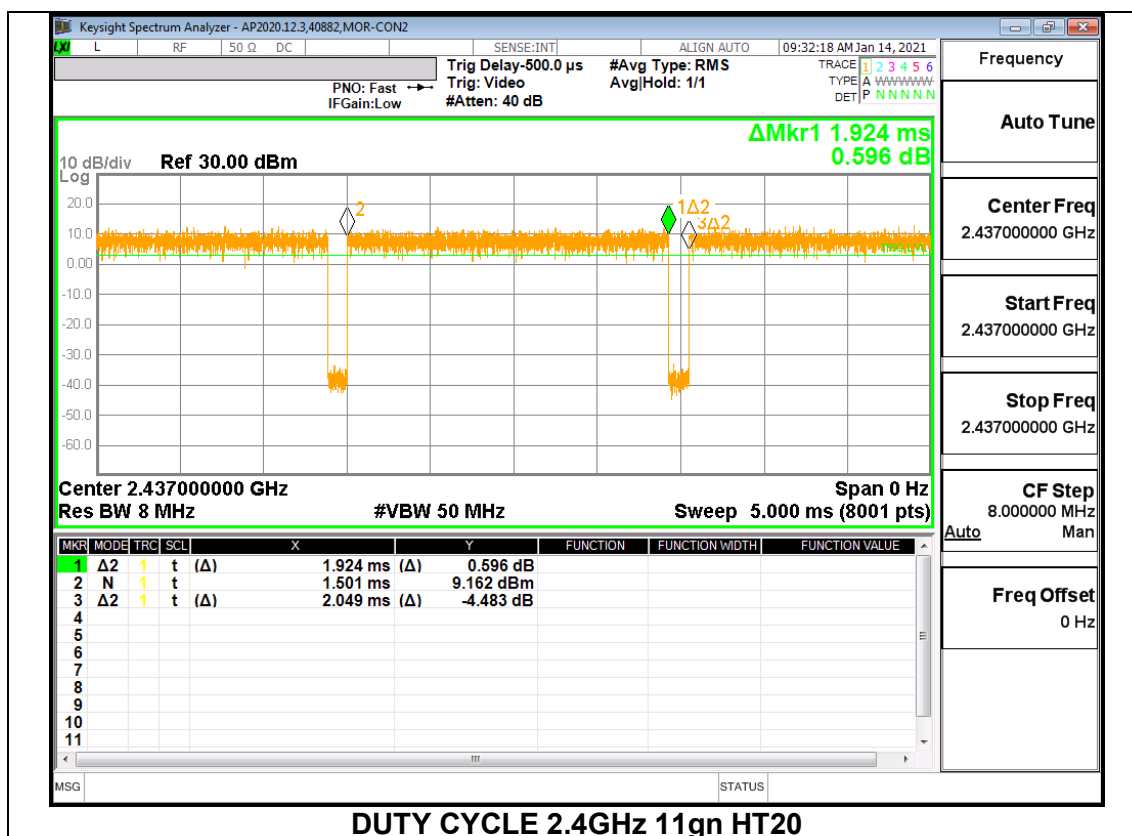
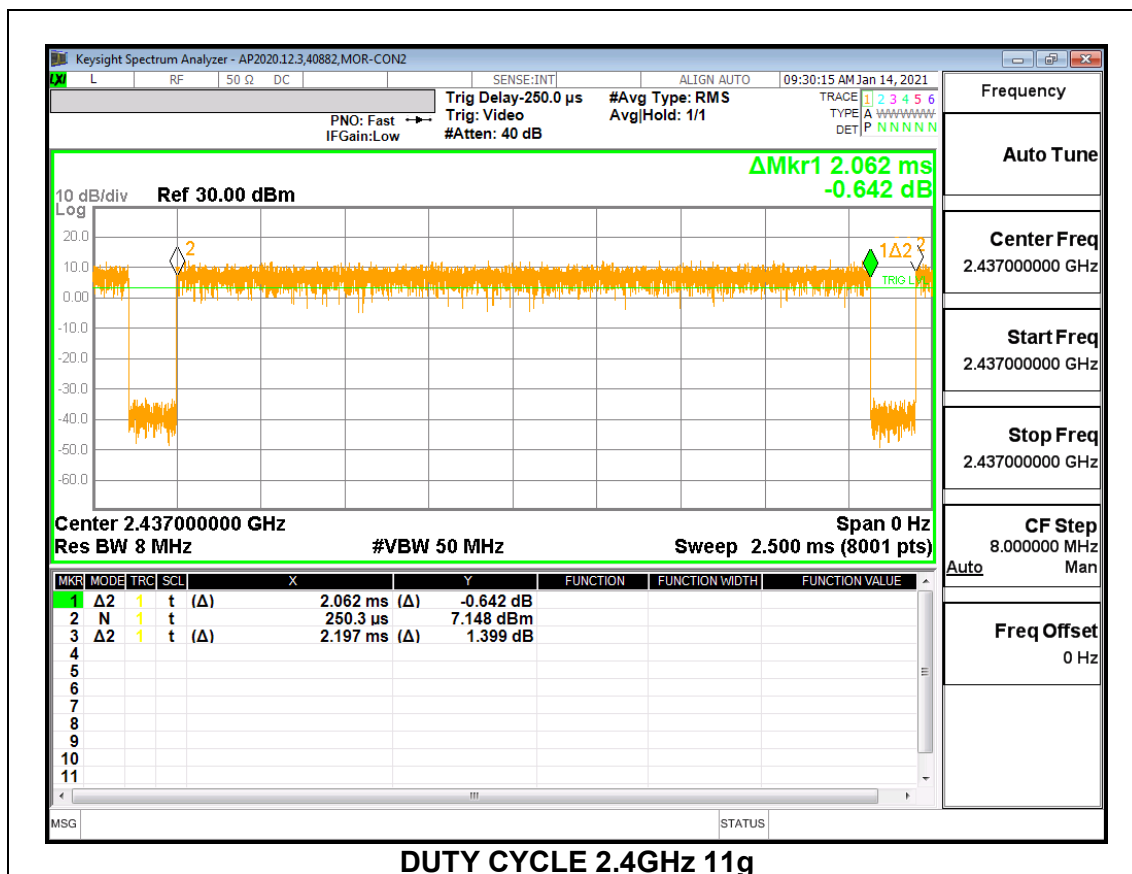
ANSI C63.10 Section 11.6

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
11b	12.430	12.540	0.991	99.12%	0.00	0.010
11g	2.062	2.197	0.939	93.86%	0.55	0.485
11n HT20	1.924	2.049	0.939	93.90%	0.55	0.520

DUTY CYCLE PLOTS





10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

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

RSS-GEN, Section 8.9 and 8.10

Frequency Range (kHz)	Field Strength Limit (uA/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	6.37/F(kHz) @ 300 m	-
0.490-1.705	63.7/F(kHz) @ 30 m	-
1.705 - 30	0.08 @ 30m	-

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 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 or average (9-90kHz and 110-490kHz).

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

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

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.

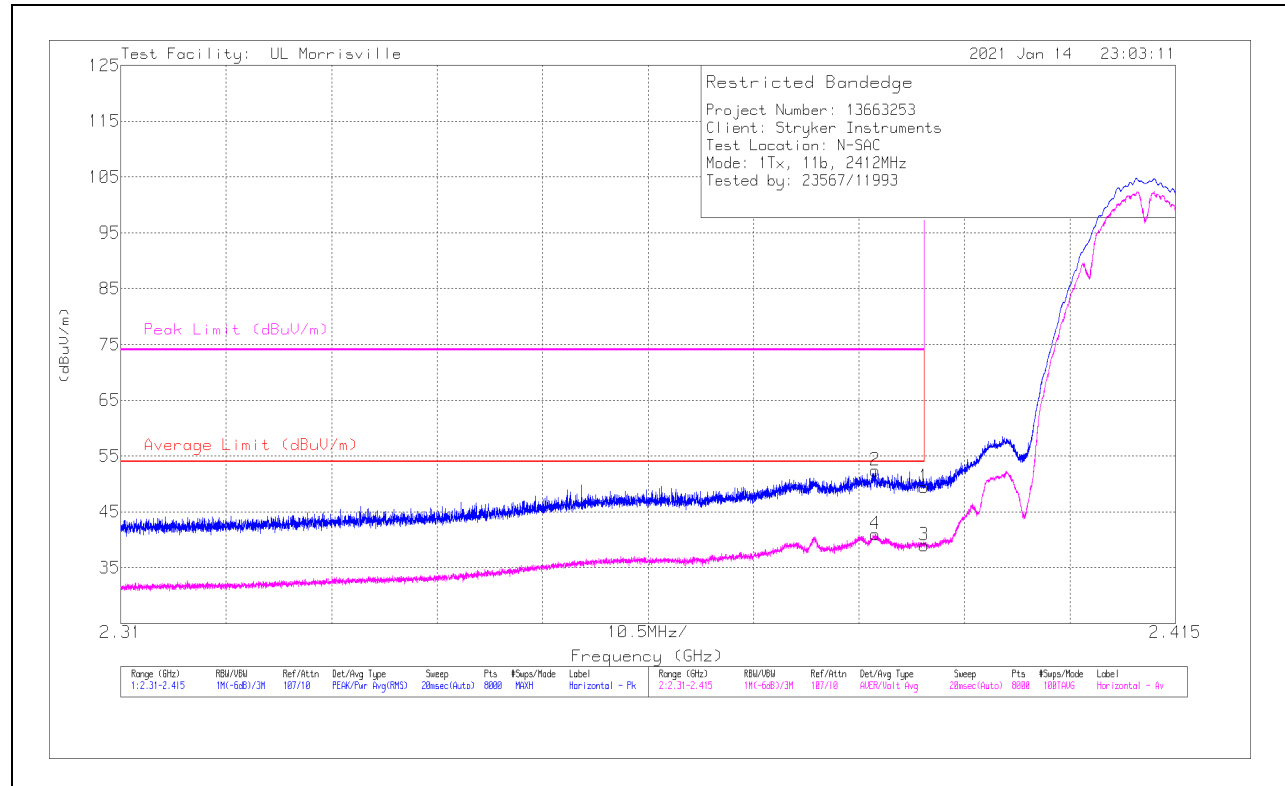
11. TRANSMITTER ABOVE 1 GHz

11.1.1. 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)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	41.98	Pk	31.8	-24.4	49.38	-	-	74	-24.62	329	143	H
2	* ** 2.38509	44.98	Pk	31.8	-24.4	52.38	-	-	74	-21.62	329	143	H
3	* ** 2.39	31.6	ADV	31.8	-24.4	39	54	-15	-	-	329	143	H
4	* ** 2.38514	33.56	ADV	31.8	-24.4	40.96	54	-13.04	-	-	329	143	H

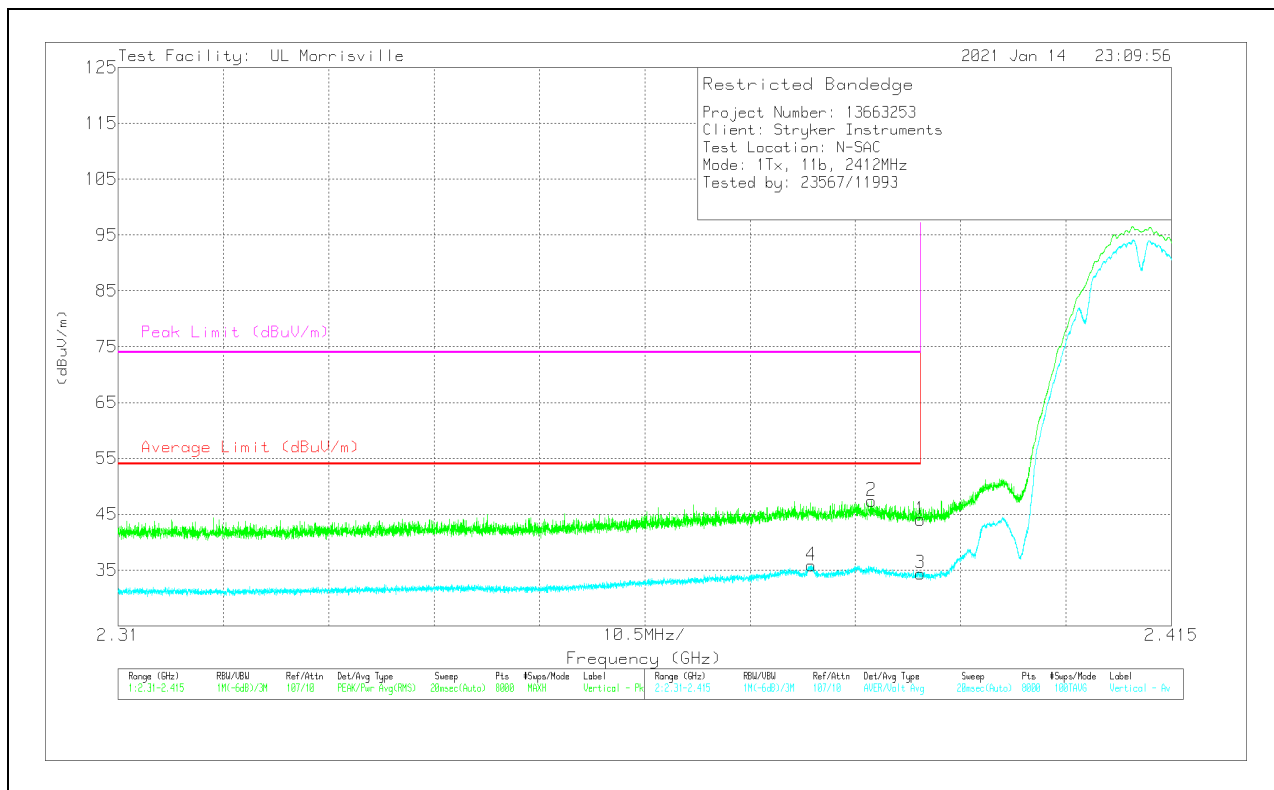
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	36.66	Pk	31.8	-24.4	44.06	-	-	74	-29.94	229	190	V
2	* ** 2.38509	40.01	Pk	31.8	-24.4	47.41	-	-	74	-26.59	229	190	V
3	* ** 2.39	27.02	ADV	31.8	-24.4	34.42	54	-19.58	-	-	229	190	V
4	* ** 2.37911	28.44	ADV	31.8	-24.4	35.84	54	-18.16	-	-	229	190	V

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

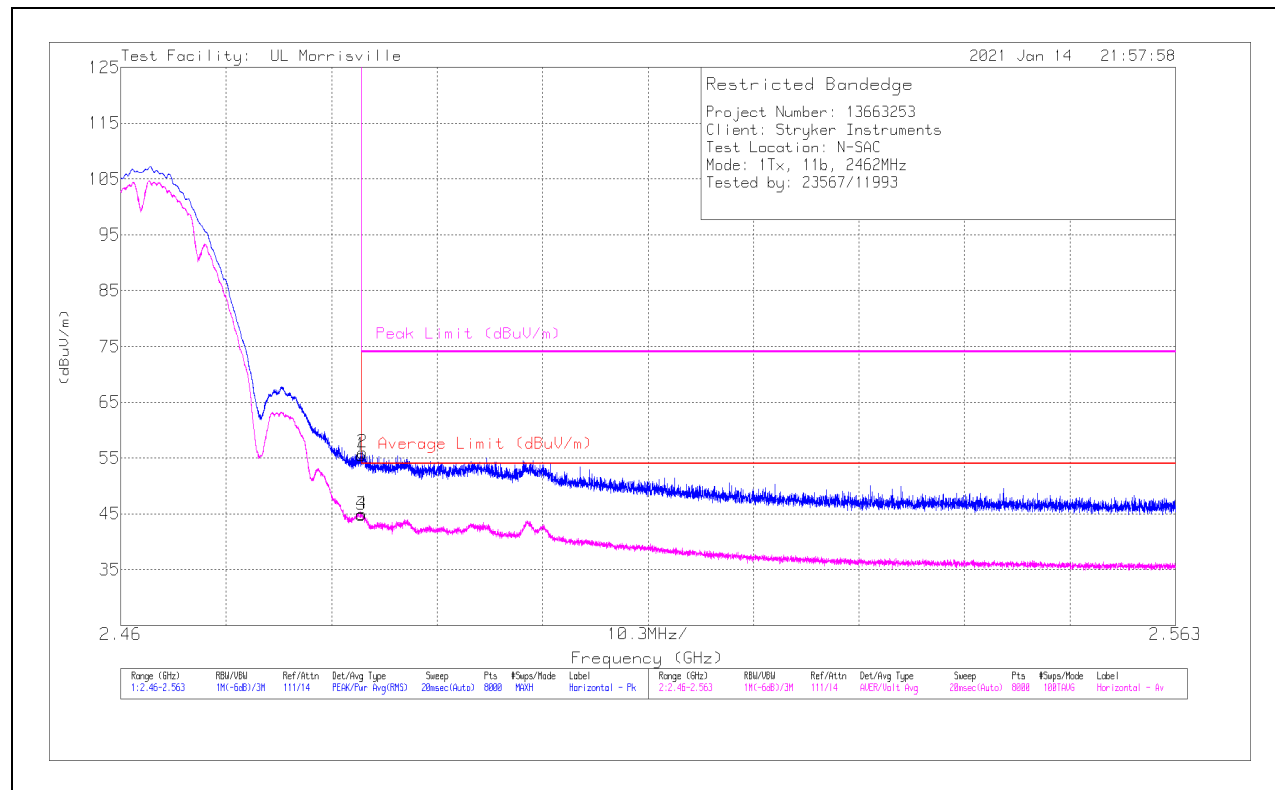
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

BANDEDGE (HIGH CHANNEL, CH 11)

HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	47.41	Pk	32.4	-24.3	55.51	-	-	74	-18.49	251	364	H
2	* ** 2.4836	47.85	Pk	32.4	-24.3	55.95	-	-	74	-18.05	251	364	H
3	* ** 2.4835	36.68	ADV	32.4	-24.3	44.78	54	-9.22	-	-	251	364	H
4	* ** 2.48353	36.8	ADV	32.4	-24.3	44.9	54	-9.1	-	-	251	364	H

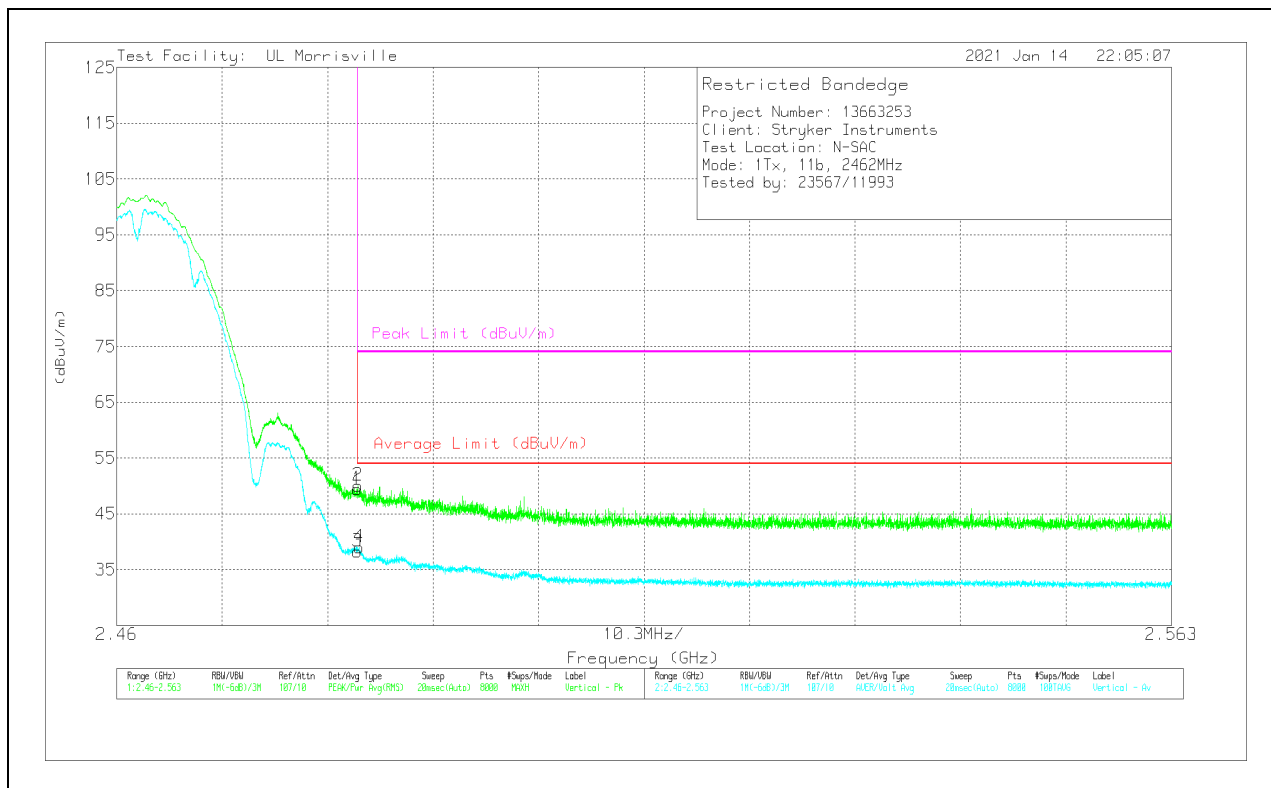
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.4835	41.27	Pk	32.4	-24.3	49.37	-	-	74	-24.63	1	376	V
2	* ** 2.48355	41.95	Pk	32.4	-24.3	50.05	-	-	74	-23.95	1	376	V
3	* ** 2.4835	30.18	ADV	32.4	-24.3	38.28	54	-15.72	-	-	1	375	V
4	* ** 2.48369	30.84	ADV	32.4	-24.3	38.94	54	-15.06	-	-	1	375	V

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

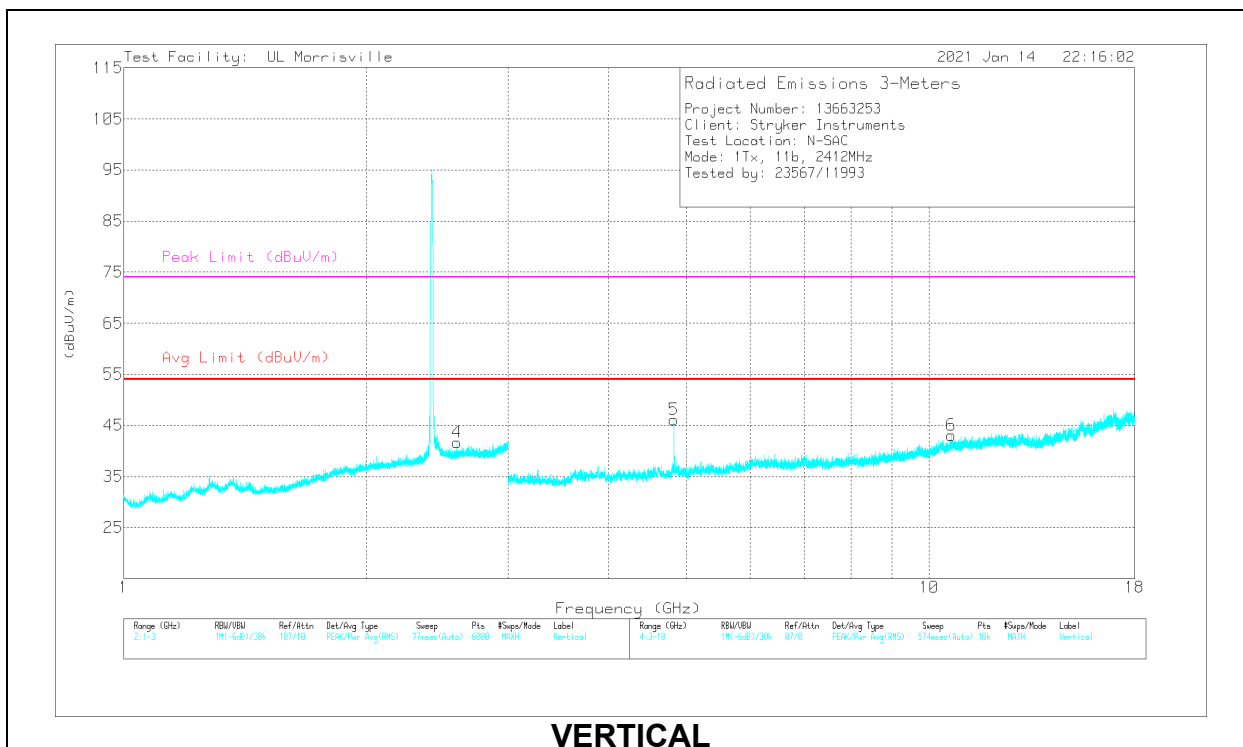
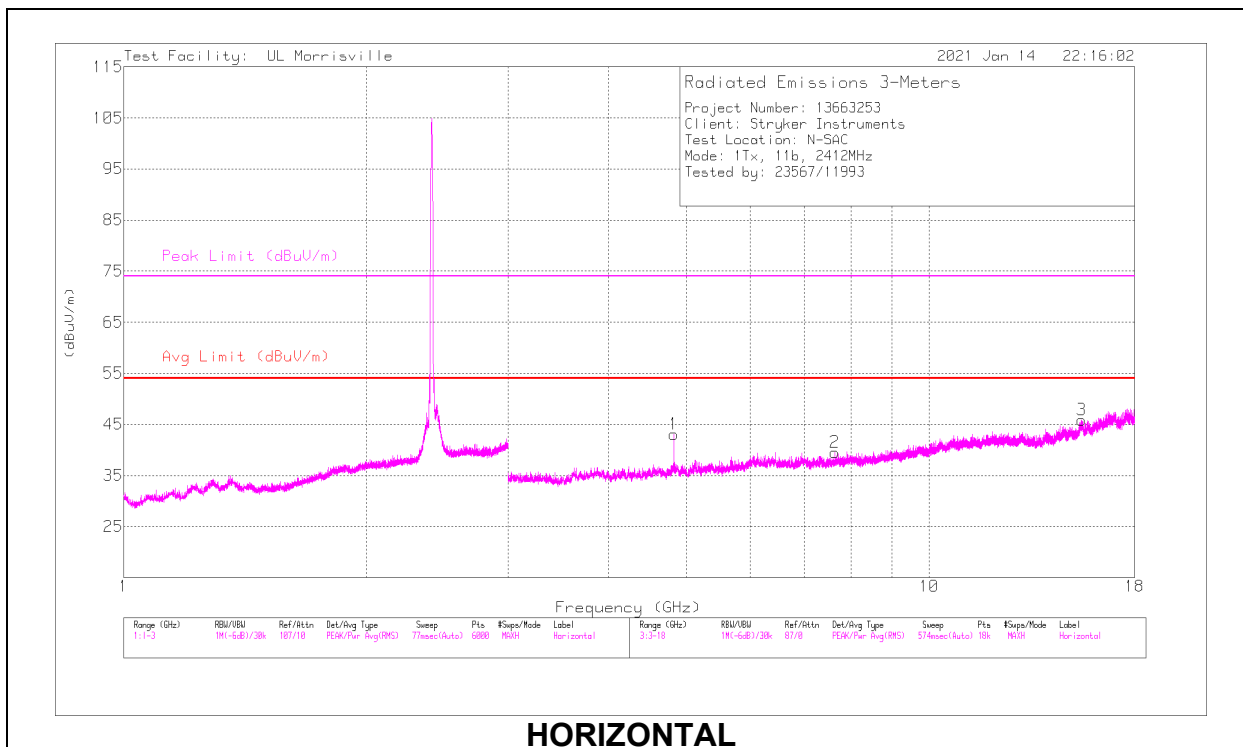
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	** 2.59459	37.94	PK2	32.3	-24.2	46.04	-	-	74	-27.96	89	304	V
	** 2.59261	24.46	ADV	32.3	-24.2	32.56	54	-21.44	-	-	89	304	V
1	*** 4.82396	45.63	PK2	34.2	-31.4	48.43	-	-	74	-25.57	178	200	H
	*** 4.82398	39.14	ADV	34.2	-31.4	41.94	54	-12.06	-	-	178	200	H
2	*** 7.63688	38.54	PK2	35.7	-29.2	45.04	-	-	74	-28.96	161	314	H
	*** 7.63592	25.42	ADV	35.7	-29.2	31.92	54	-22.08	-	-	161	314	H
3	*** 15.48299	36.33	PK2	40.2	-24	52.53	-	-	74	-21.47	161	339	H
	*** 15.4824	22.99	ADV	40.2	-24	39.19	54	-14.81	-	-	161	339	H
5	*** 4.82395	48.17	PK2	34.2	-31.4	50.97	-	-	74	-23.03	172	304	V
	*** 4.82396	44.32	ADV	34.2	-31.4	47.12	54	-6.88	-	-	172	304	V
6	*** 10.65846	37.16	PK2	37.8	-25.1	49.86	-	-	74	-24.14	239	150	V
	*** 10.65844	23.2	ADV	37.8	-25.1	35.9	54	-18.1	-	-	239	150	V

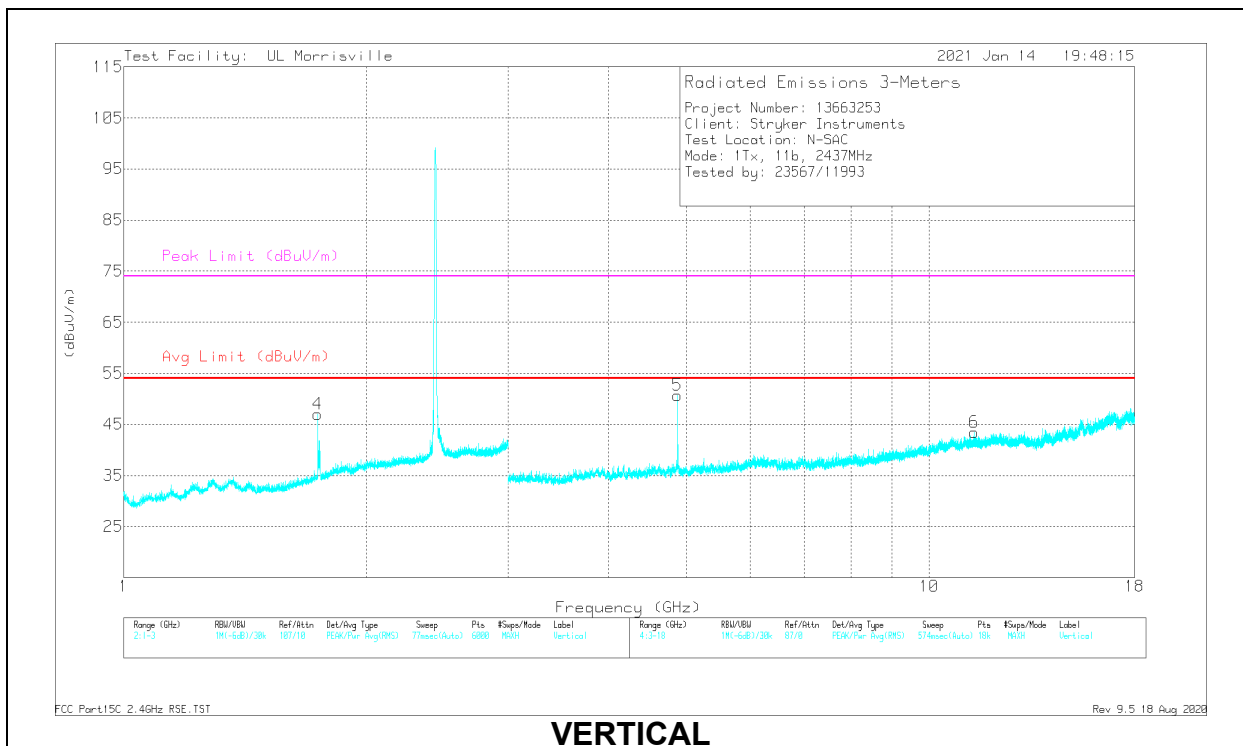
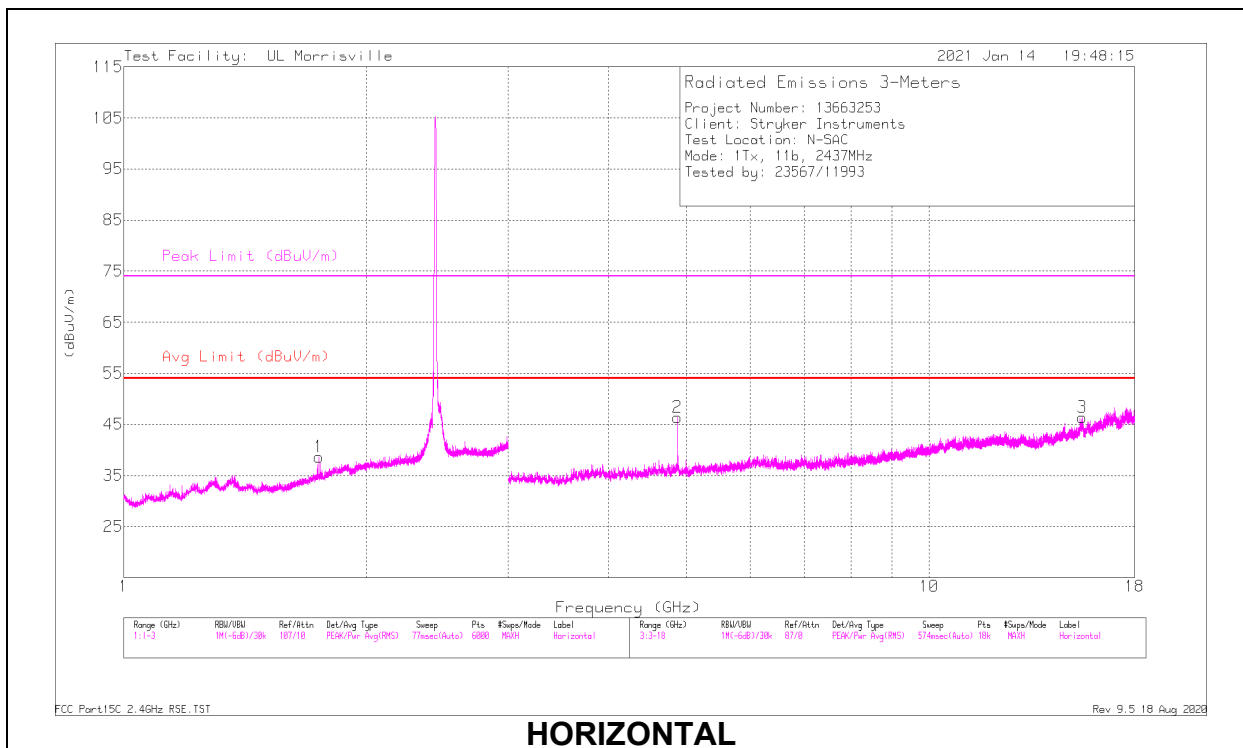
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	** 1.74985	44.35	PK2	29.6	-24.3	49.65	-	-	74	-24.35	7	299	H
	** 1.74986	23.64	ADV	29.6	-24.3	28.94	54	-25.06	-	-	7	299	H
4	** 1.74279	36.95	PK2	29.5	-24.3	42.15	-	-	74	-31.85	175	213	V
	** 1.74116	23.53	ADV	29.5	-24.3	28.73	54	-25.27	-	-	175	213	V
2	* ** 4.87403	48.02	PK2	34.1	-31.3	50.82	-	-	74	-23.18	31	102	H
	* ** 4.87397	42.85	ADV	34.1	-31.3	45.65	54	-8.35	-	-	31	102	H
3	* ** 15.50736	36.42	PK2	40.2	-23.8	52.82	-	-	74	-21.18	184	314	H
	* ** 15.5074	22.93	ADV	40.2	-23.8	39.33	54	-14.67	-	-	184	314	H
5	* ** 4.874	49.55	PK2	34.1	-31.3	52.35	-	-	74	-21.65	168	225	V
	* ** 4.87402	45.55	ADV	34.1	-31.3	48.35	54	-5.65	-	-	168	225	V
6	* ** 11.37542	36.12	PK2	38.1	-25	49.22	-	-	74	-24.78	355	215	V
	* ** 11.37499	22.89	ADV	38.1	-25	35.99	54	-18.01	-	-	355	215	V

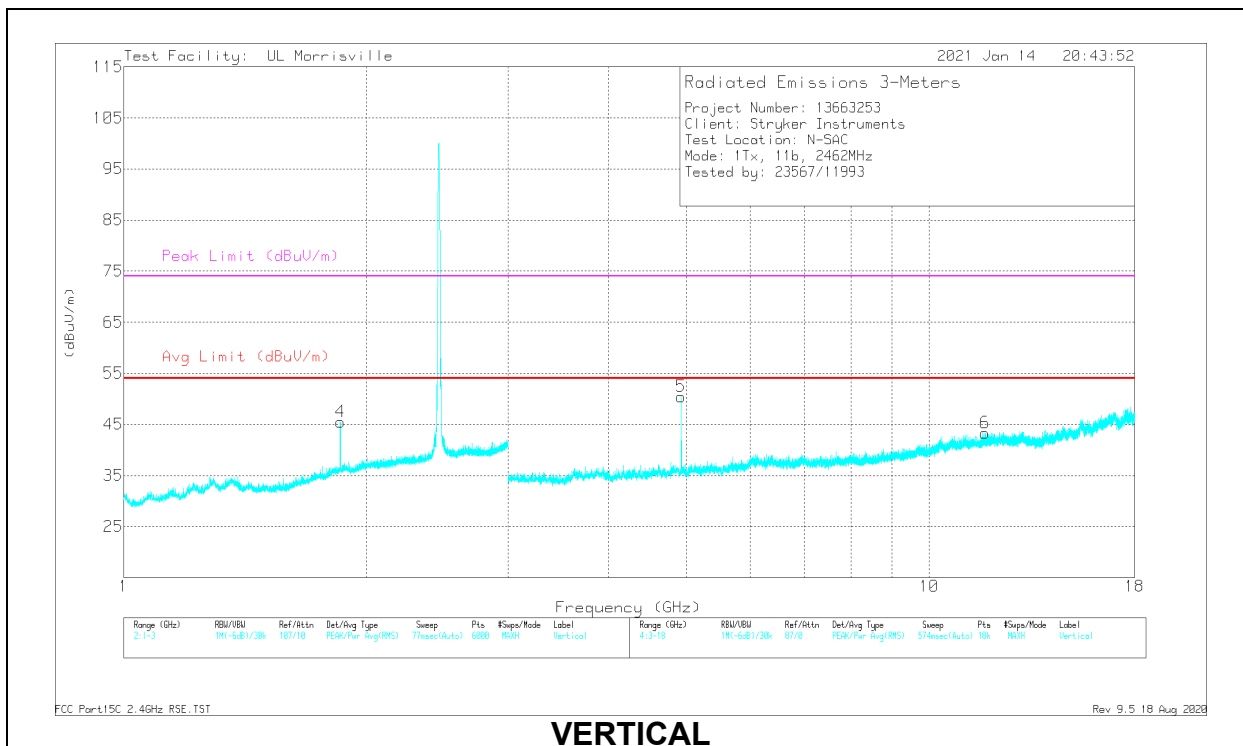
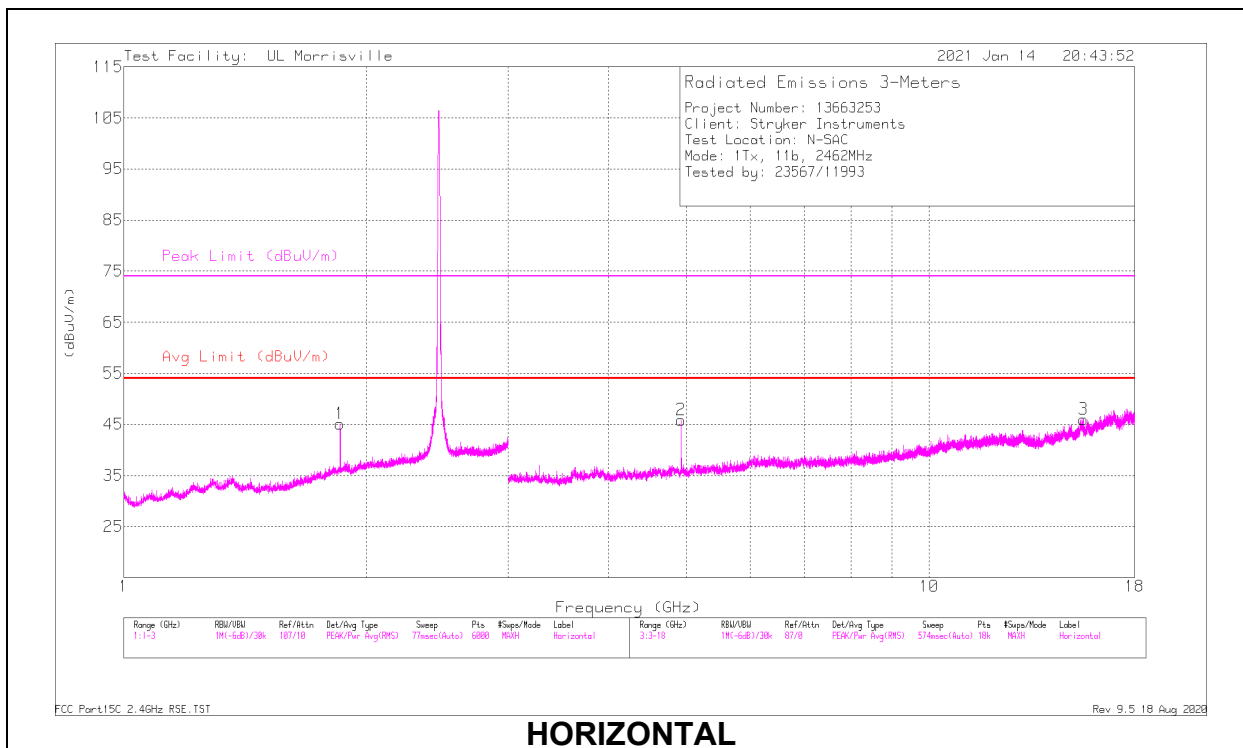
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL, CH 11 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	** 1.85553	35.86	PK2	31	-24.3	42.56	-	-	74	-31.44	289	241	H
	** 1.85782	23.08	ADV	30.9	-24.3	29.68	54	-24.32	-	-	289	241	H
4	** 1.85837	36.36	PK2	30.9	-24.3	42.96	-	-	74	-31.04	27	102	V
	** 1.85776	23.05	ADV	30.9	-24.3	29.65	54	-24.35	-	-	27	102	V
2	*** 4.92403	47.3	PK2	34	-31.9	49.4	-	-	74	-24.6	33	101	H
	*** 4.92397	42.92	ADV	34	-31.9	45.02	54	-8.98	-	-	33	101	H
3	*** 15.54154	36.39	PK2	40.1	-24.8	51.69	-	-	74	-22.31	155	291	H
	*** 15.54272	23.42	ADV	40.1	-24.9	38.62	54	-15.38	-	-	155	291	H
5	*** 4.92394	50.4	PK2	34	-31.9	52.5	-	-	74	-21.5	241	113	V
	*** 4.92402	47.16	ADV	34	-31.9	49.26	54	-4.74	-	-	241	113	V
6	*** 11.73482	36.92	PK2	38.4	-25.8	49.52	-	-	74	-24.48	187	253	V
	*** 11.73475	23.48	ADV	38.4	-25.8	36.08	54	-17.92	-	-	187	253	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

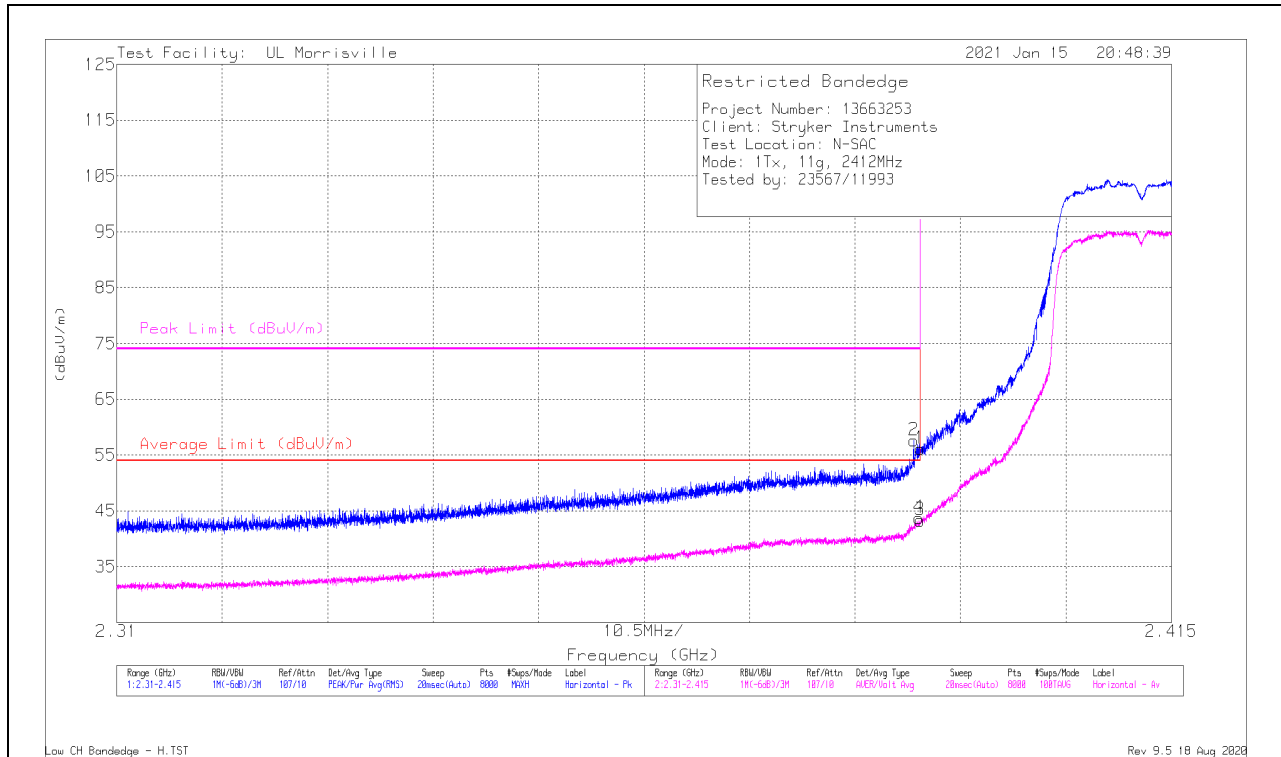
ADV - Linear Voltage Average

11.1.2. 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	48.74	Pk	31.8	-24.4	0	56.14	-	-	74	-17.86	228	285	H
2	** 2.38933	50.21	Pk	31.8	-24.4	0	57.61	-	-	74	-16.39	228	285	H
3	* ** 2.39	35.32	ADV	31.8	-24.4	.55	43.27	54	-10.73	-	-	228	285	H
4	* ** 2.38985	35.77	ADV	31.8	-24.4	.55	43.72	54	-10.28	-	-	228	285	H

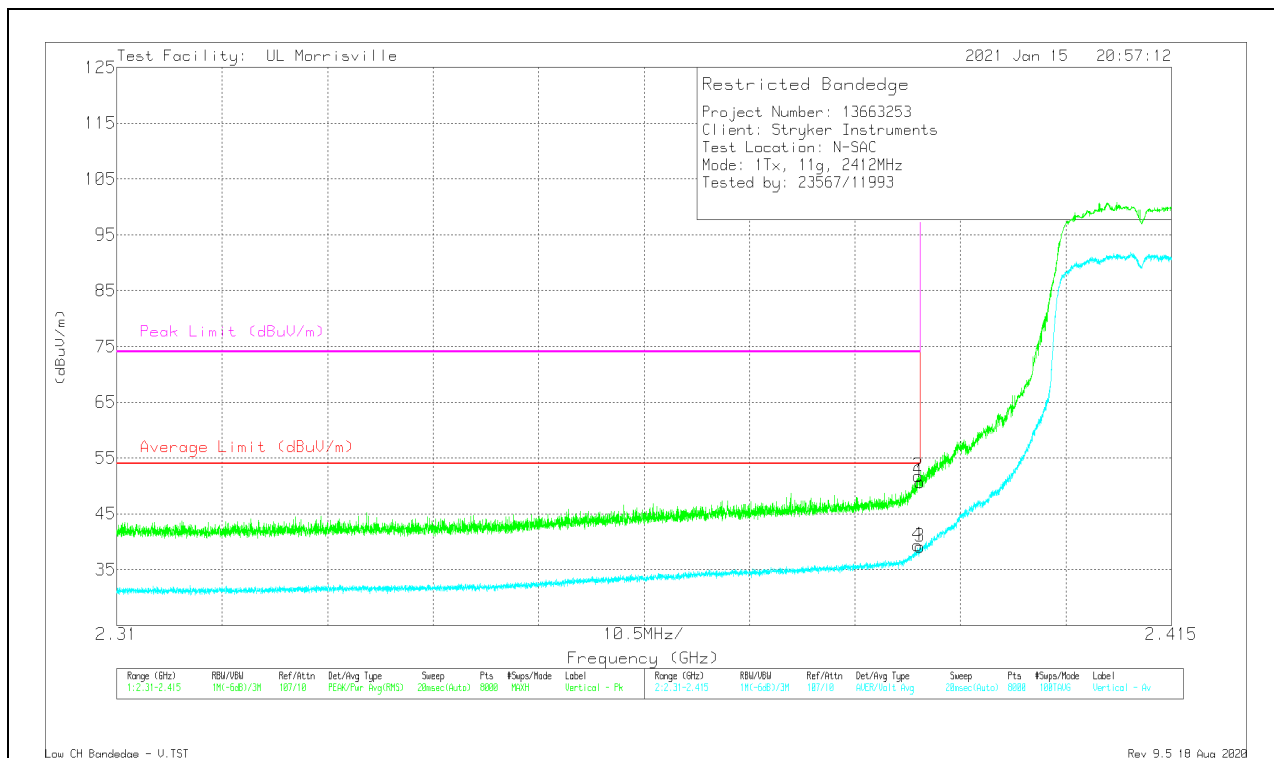
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 2.39	43.23	Pk	31.8	-24.4	0	50.63	-	-	74	-23.37	259	278	V
2	* ** 2.38977	44.41	Pk	31.8	-24.4	0	51.81	-	-	74	-22.19	259	278	V
3	* ** 2.39	31.16	ADV	31.8	-24.4	.55	39.11	54	-14.89	-	-	259	278	V
4	* ** 2.38975	31.43	ADV	31.8	-24.4	.55	39.38	54	-14.62	-	-	259	278	V

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

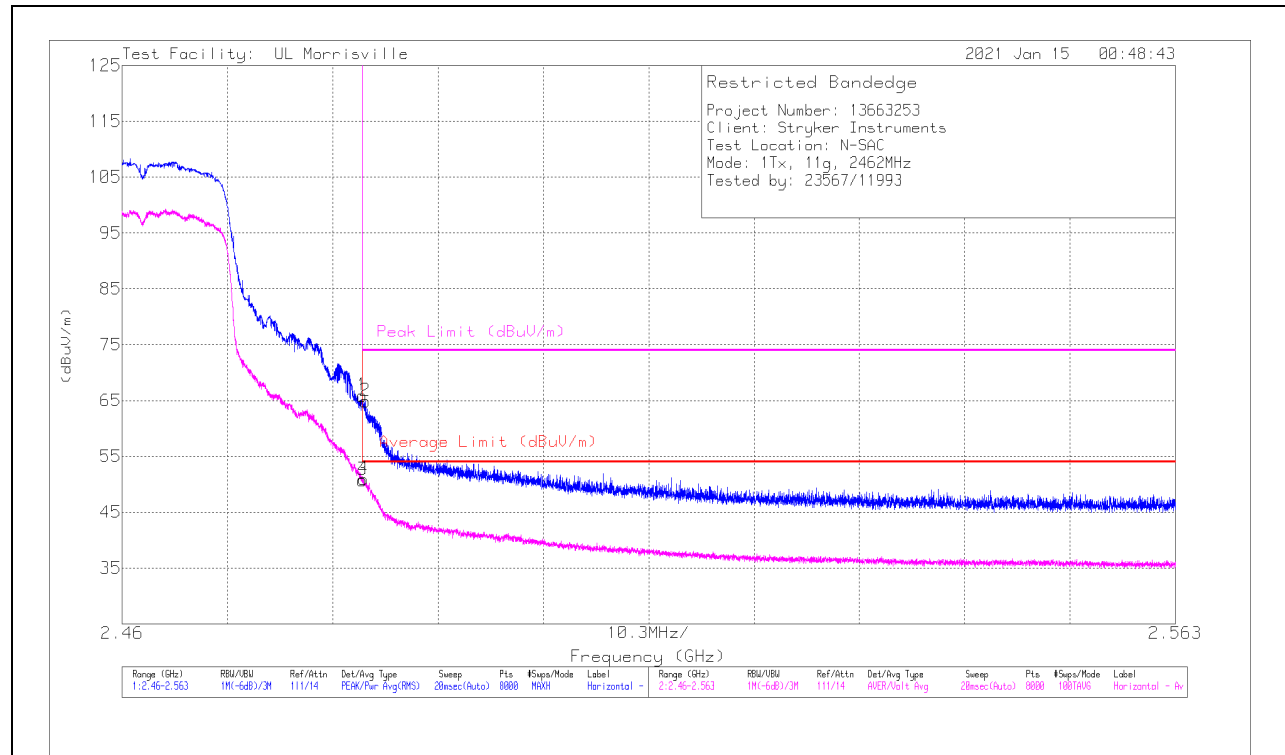
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

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	57.76	Pk	32.4	-24.3	0	65.86	-	-	74	-8.14	212	324	H
2	** 2.48377	56.79	Pk	32.4	-24.3	0	64.89	-	-	74	-9.11	212	324	H
3	*** 2.4835	42.09	ADV	32.4	-24.3	.55	50.74	54	-3.26	-	-	212	324	H
4	*** 2.4836	42.29	ADV	32.4	-24.3	.55	50.94	54	-3.06	-	-	212	324	H

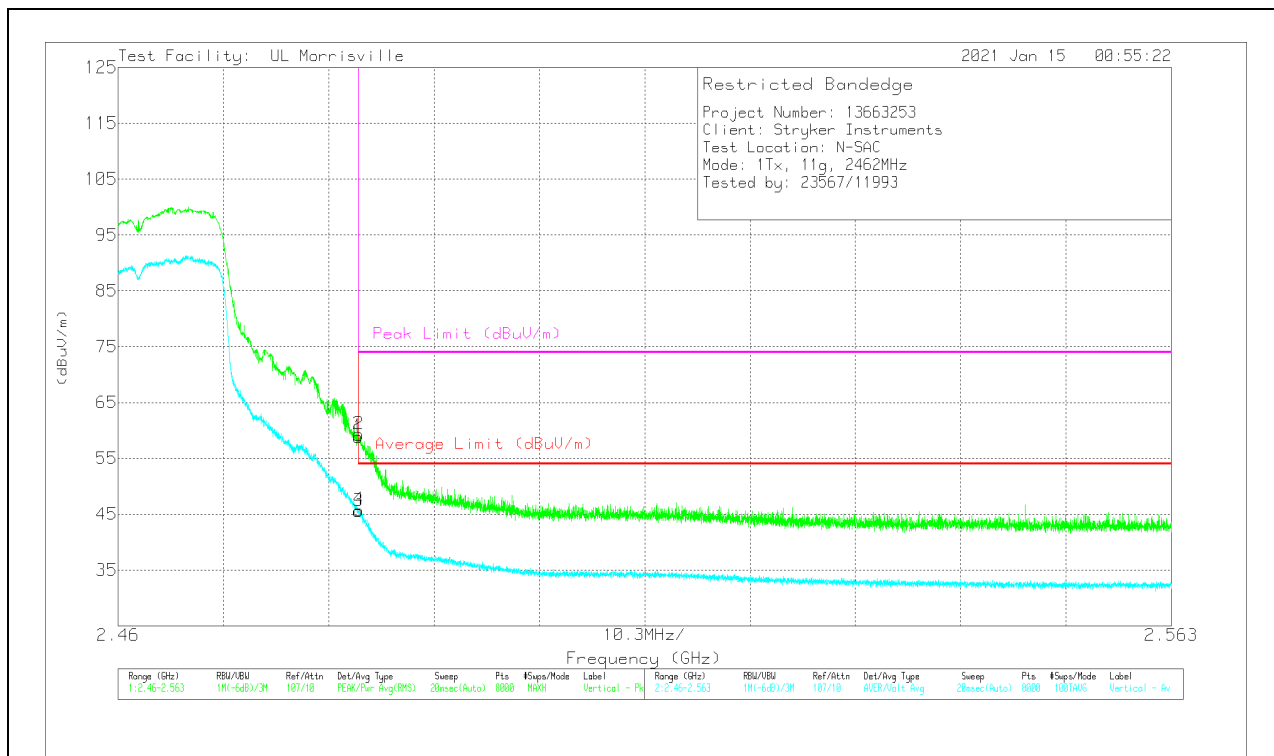
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - 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	50.75	Pk	32.4	-24.3	0	58.85	-	-	74	-15.15	251	362	V
2	*** 2.48351	51.19	Pk	32.4	-24.3	0	59.29	-	-	74	-14.71	251	362	V
3	*** 2.4835	36.91	ADV	32.4	-24.3	.55	45.56	54	-8.44	-	-	251	362	V
4	*** 2.48355	37.09	ADV	32.4	-24.3	.55	45.74	54	-8.26	-	-	251	362	V

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

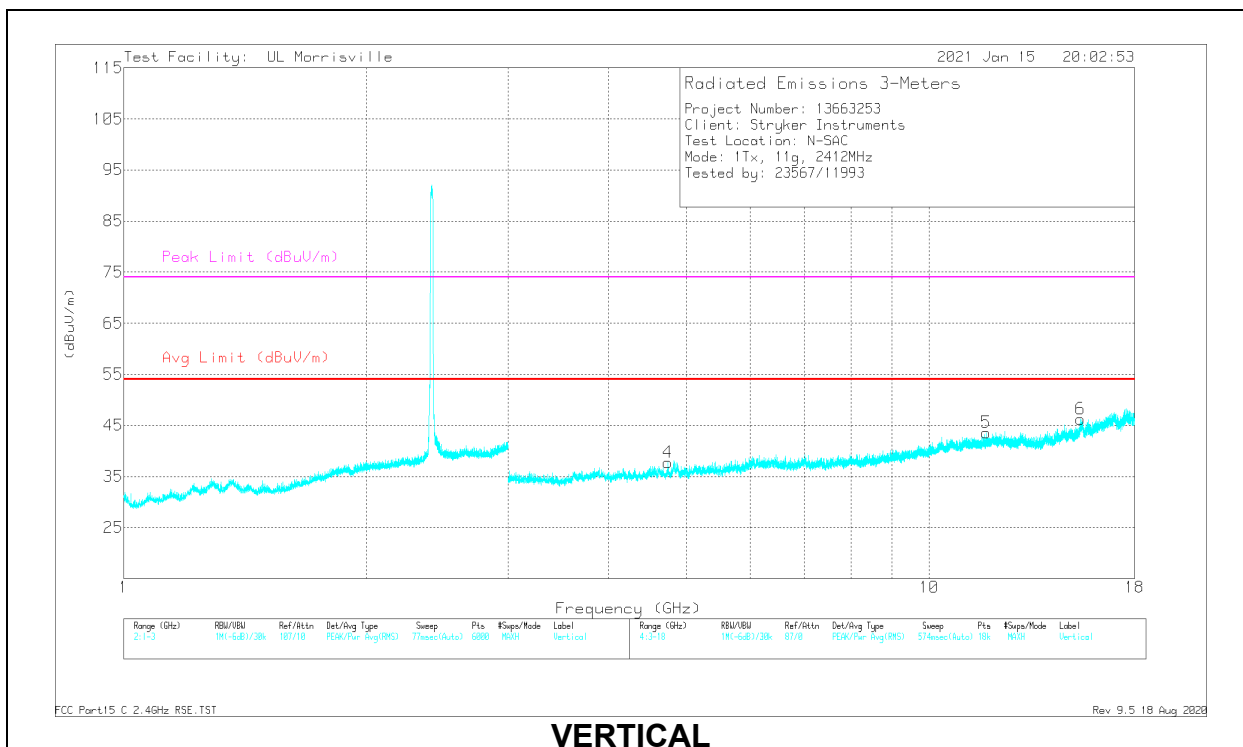
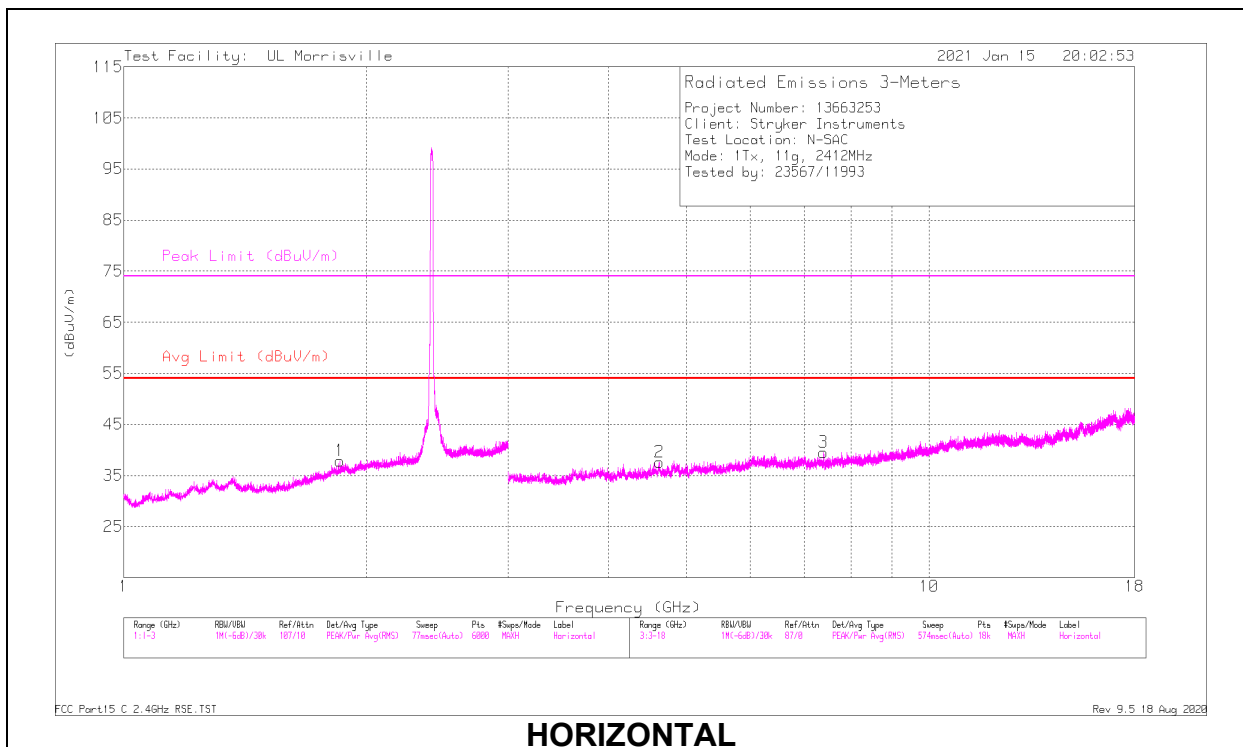
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	** 1.85234	36.22	PK2	31	-24.3	0	42.92	-	-	74	-31.08	252	185	H
	** 1.85147	22.93	ADV	31	-24.3	.55	30.18	54	-23.82	-	-	252	185	H
2	*** 4.62593	42.48	PK2	34.2	-32.6	0	44.08	-	-	74	-29.92	75	103	H
	*** 4.62528	29.04	ADV	34.2	-32.5	.55	31.29	54	-22.71	-	-	75	103	H
3	*** 7.39491	38.44	PK2	35.6	-29.3	0	44.74	-	-	74	-29.26	38	268	H
	*** 7.39481	25.01	ADV	35.6	-29.3	.55	31.86	54	-22.14	-	-	38	268	H
4	*** 4.74082	41.5	PK2	34	-32.2	0	43.3	-	-	74	-30.7	254	364	V
	*** 4.74145	28.64	ADV	34	-32.2	.55	30.99	54	-23.01	-	-	254	364	V
5	*** 11.7816	36.9	PK2	38.4	-26.1	0	49.2	-	-	74	-24.8	258	303	V
	*** 11.78101	23.56	ADV	38.4	-26.1	.55	36.41	54	-17.59	-	-	258	303	V
6	*** 15.42466	37.56	PK2	40.2	-24.9	0	52.86	-	-	74	-21.14	163	273	V
	*** 15.42338	23.94	ADV	40.2	-24.9	.55	39.79	54	-14.21	-	-	163	273	V

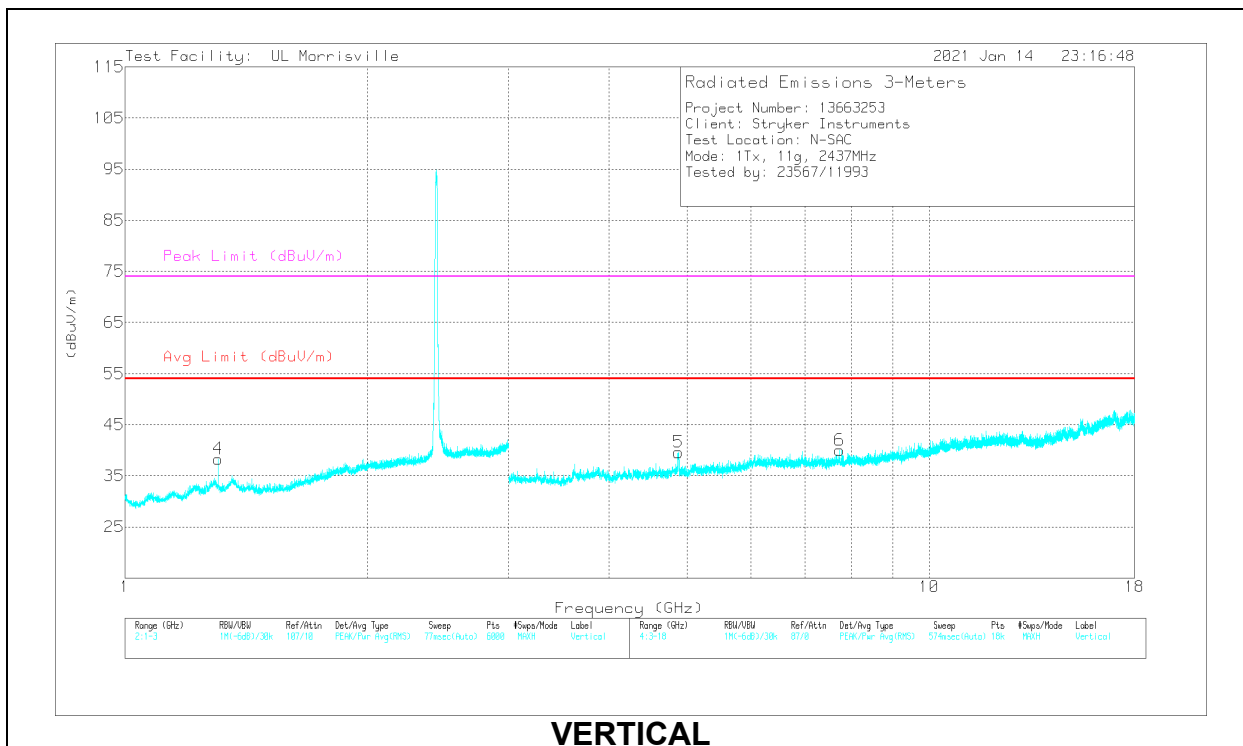
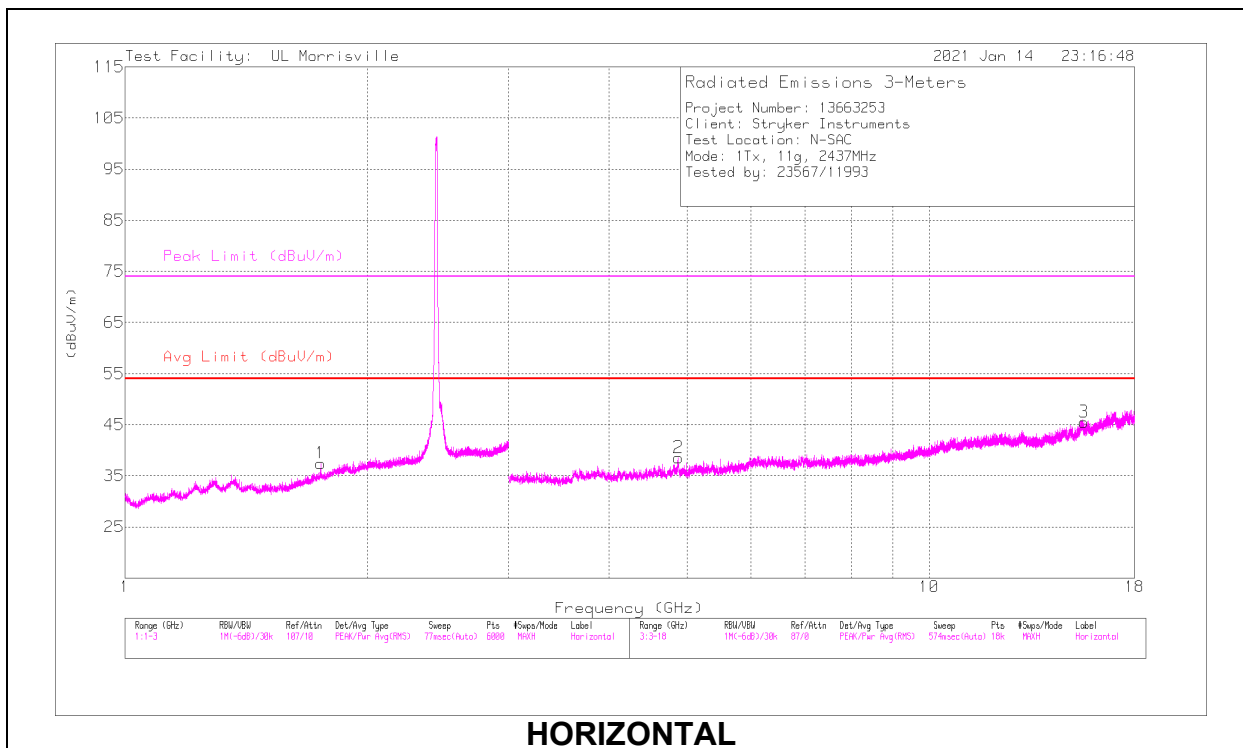
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	** 1.74973	40.62	PK2	29.6	-24.3	0	45.92	-	-	74	-28.08	337	243	H
	** 1.74929	23.74	ADV	29.6	-24.3	.55	29.59	54	-24.41	-	-	337	243	H
4	*** 1.30553	36.55	PK2	29.2	-25.6	0	40.15	-	-	74	-33.85	316	178	V
	*** 1.30331	23.46	ADV	29.1	-25.6	.55	27.51	54	-26.49	-	-	316	178	V
2	*** 4.87567	42.93	PK2	34.1	-31.3	0	45.73	-	-	74	-28.27	174	265	H
	*** 4.87419	29.82	ADV	34.1	-31.3	.55	33.17	54	-20.83	-	-	174	265	H
3	*** 15.58315	38.17	PK2	40.1	-26.5	0	51.77	-	-	74	-22.23	194	342	H
	*** 15.58269	24.34	ADV	40.1	-26.4	.55	38.59	54	-15.41	-	-	194	342	H
5	*** 4.87695	47.02	PK2	34.1	-31.3	0	49.82	-	-	74	-24.18	174	226	V
	*** 4.87605	33.49	ADV	34.1	-31.3	.55	36.84	54	-17.16	-	-	174	226	V
6	*** 7.73472	39.01	PK2	35.9	-28.9	0	46.01	-	-	74	-27.99	77	223	V
	*** 7.73467	25.08	ADV	35.9	-28.9	.55	32.63	54	-21.37	-	-	77	223	V

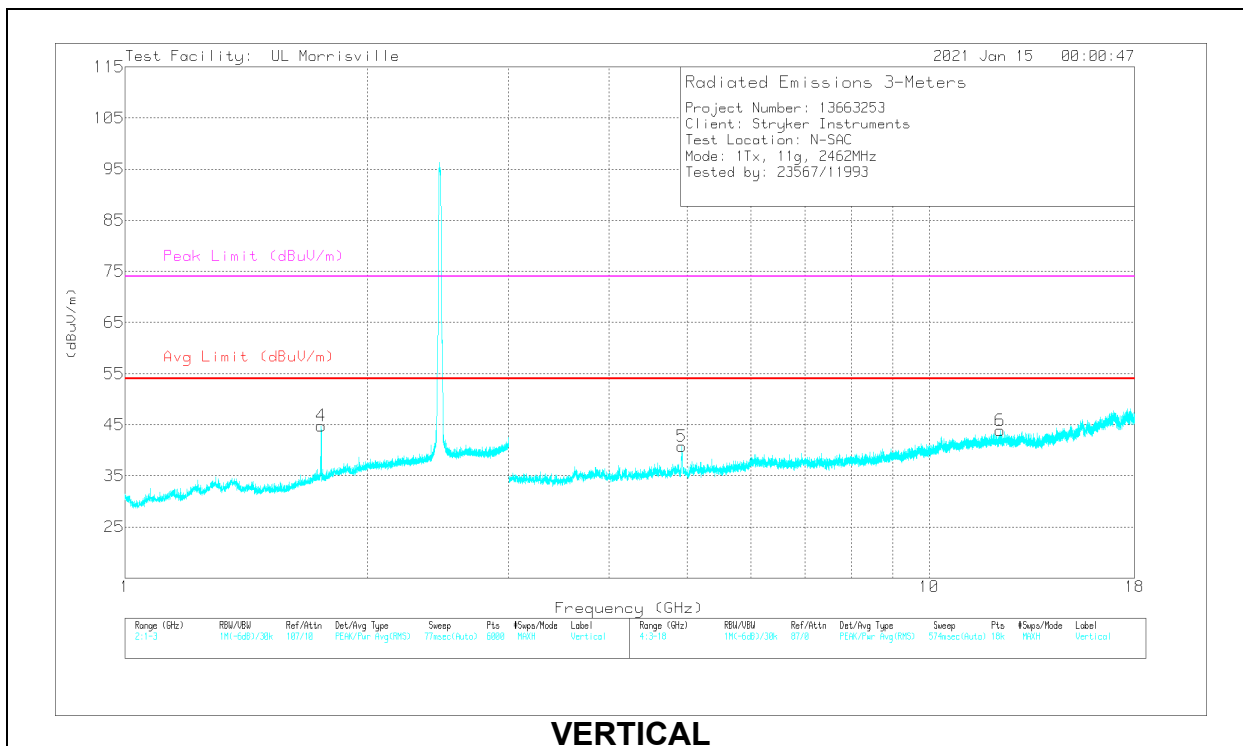
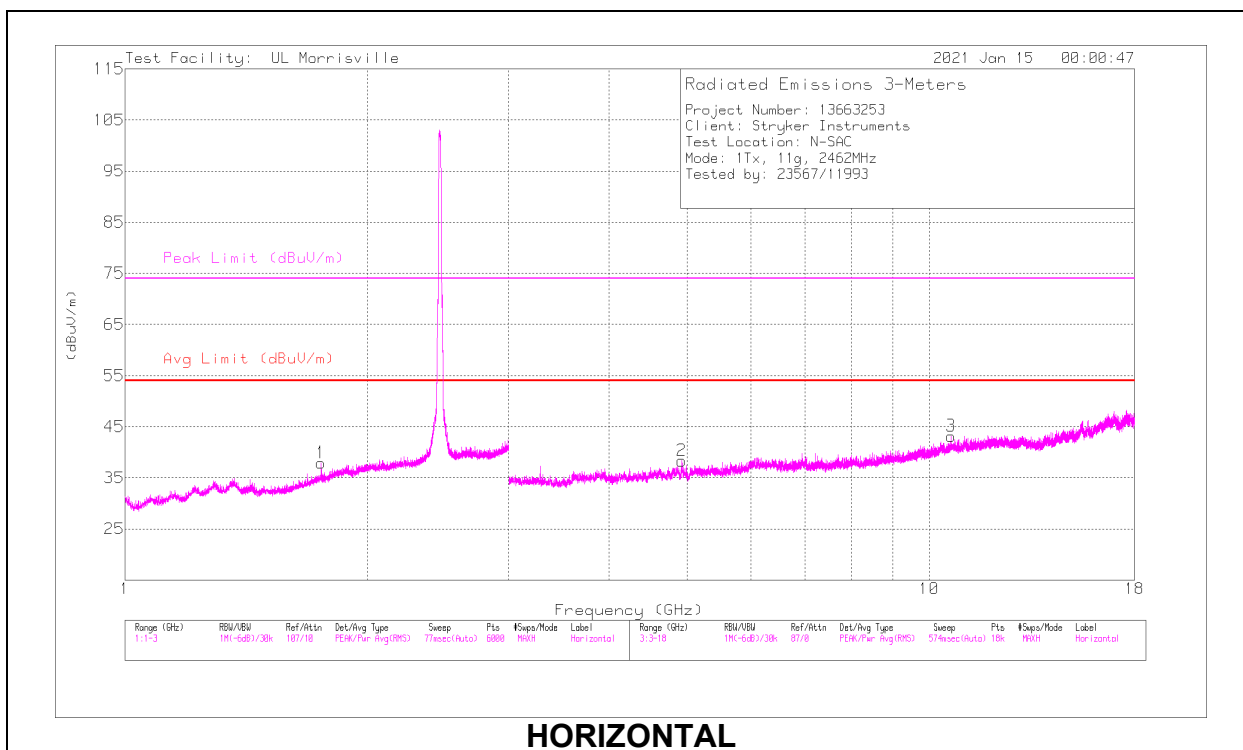
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL, CH 11 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	** 1.75289	37.09	PK2	29.6	-24.4	0	42.29	-	-	74	-31.71	299	367	H
	** 1.75404	23.61	ADV	29.6	-24.4	.55	29.36	54	-24.64	-	-	299	367	H
4	** 1.75005	36.96	PK2	29.6	-24.3	0	42.26	-	-	74	-31.74	19	267	V
	** 1.74978	23.65	ADV	29.6	-24.3	.55	29.5	54	-24.5	-	-	19	267	V
2	*** 4.92123	44.83	PK2	34	-31.8	0	47.03	-	-	74	-26.97	34	103	H
	*** 4.92105	30.62	ADV	34	-31.8	.55	33.37	54	-20.63	-	-	34	103	H
3	*** 10.64565	36.63	PK2	37.7	-25.3	0	49.03	-	-	74	-24.97	47	228	H
	*** 10.64525	23.35	ADV	37.7	-25.3	.55	36.3	54	-17.7	-	-	47	228	H
5	*** 4.92227	46.41	PK2	34	-31.8	0	48.61	-	-	74	-25.39	215	198	V
	*** 4.92372	33.05	ADV	34	-31.8	.55	35.8	54	-18.2	-	-	215	198	V
6	*** 12.24873	36.87	PK2	38.9	-26	0	49.77	-	-	74	-24.23	40	356	V
	*** 12.24791	23.46	ADV	38.9	-26	.55	36.91	54	-17.09	-	-	40	356	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

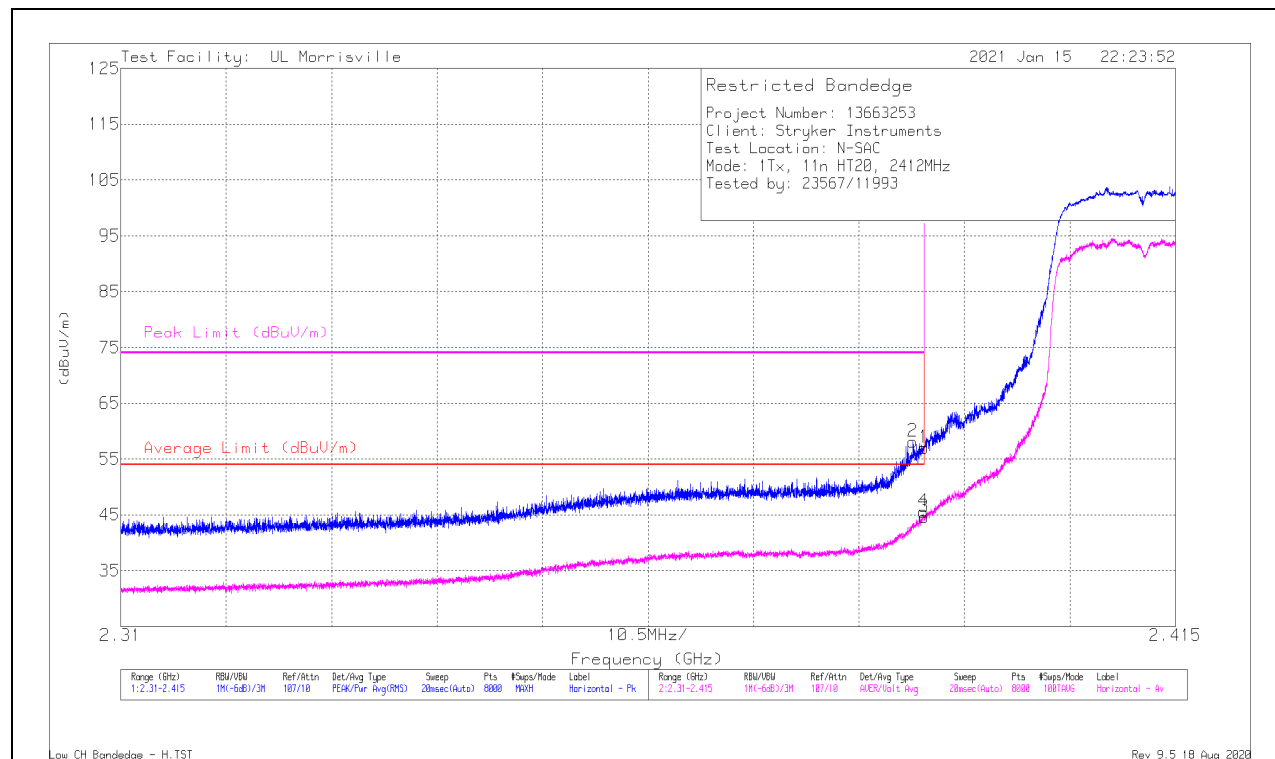
ADV - Linear Voltage Average

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

1TX Antenna 1 MODE

BANDEGE (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	49.64	Pk	31.8	-24.4	0	57.04	-	-	74	-16.96	210	320	H
2	** * 2.38888	50.68	Pk	31.8	-24.4	0	58.08	-	-	74	-15.92	210	320	H
3	* ** 2.39	36.68	ADV	31.8	-24.4	.55	44.63	54	-9.37	-	-	210	320	H
4	* ** 2.38989	37.66	ADV	31.8	-24.4	.55	45.61	54	-8.39	-	-	210	320	H

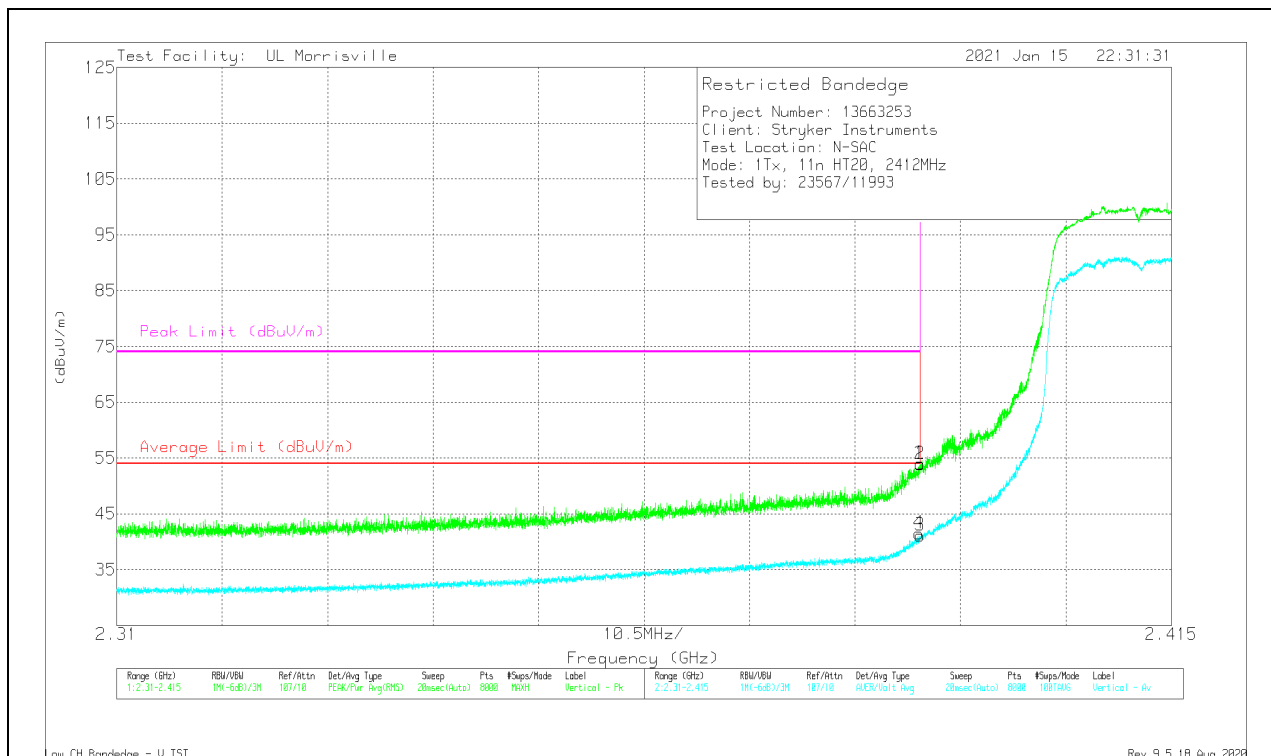
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB/(m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* * * 2.39	46.56	Pk	31.8	-24.4	0	53.96	-	-	74	-20.04	261	287	V
2	* * * 2.38997	46.49	Pk	31.8	-24.4	0	53.89	-	-	74	-20.11	261	287	V
3	* * * 2.39	33.14	ADV	31.8	-24.4	.55	41.09	54	-12.91	-	-	261	287	V
4	* * * 2.38988	33.55	ADV	31.8	-24.4	.55	41.50	54	-12.50	-	-	261	287	V

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

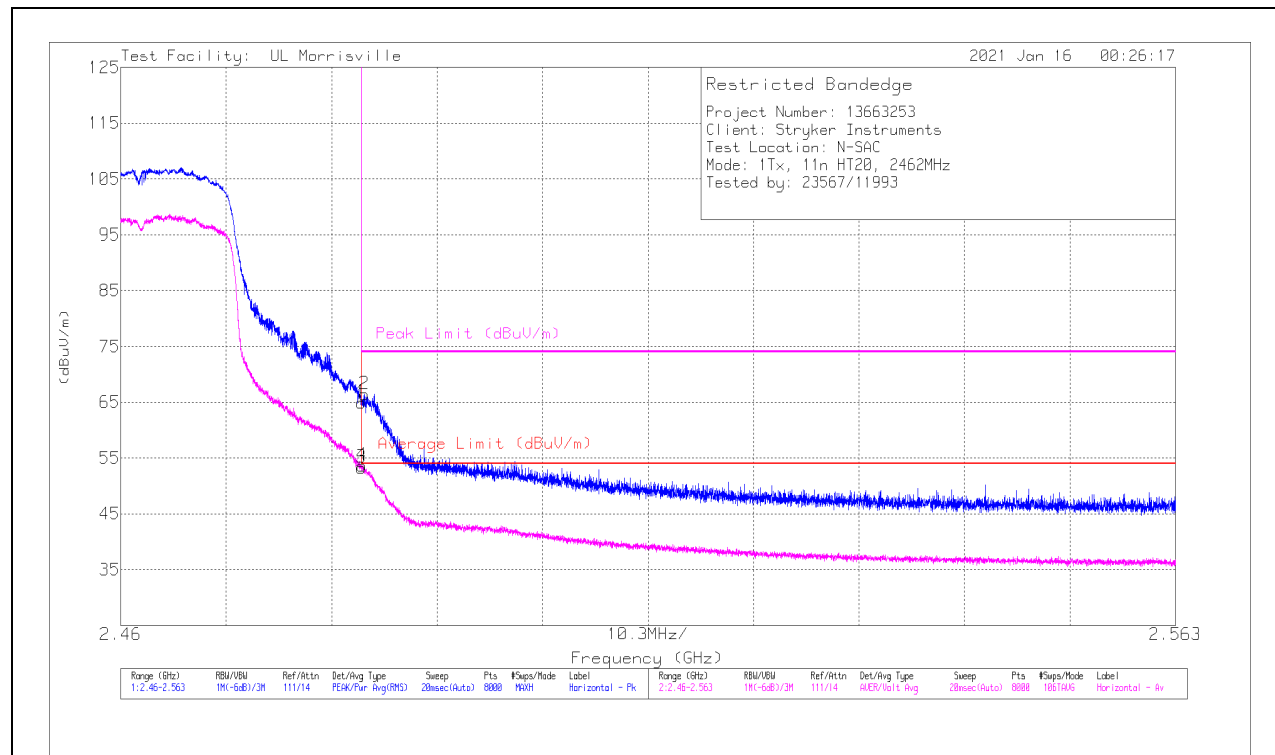
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

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	56.82	Pk	32.4	-24.3	0	64.92	-	-	74	-9.08	239	286	H
2	** 2.48378	58.34	Pk	32.4	-24.3	0	66.44	-	-	74	-7.56	239	286	H
3	*** 2.4835	44.64	ADV	32.4	-24.3	.55	53.29	54	-71	-	-	239	286	H
4	** 2.48354	45.06	ADV	32.4	-24.3	.55	53.71	54	-29	-	-	239	286	H

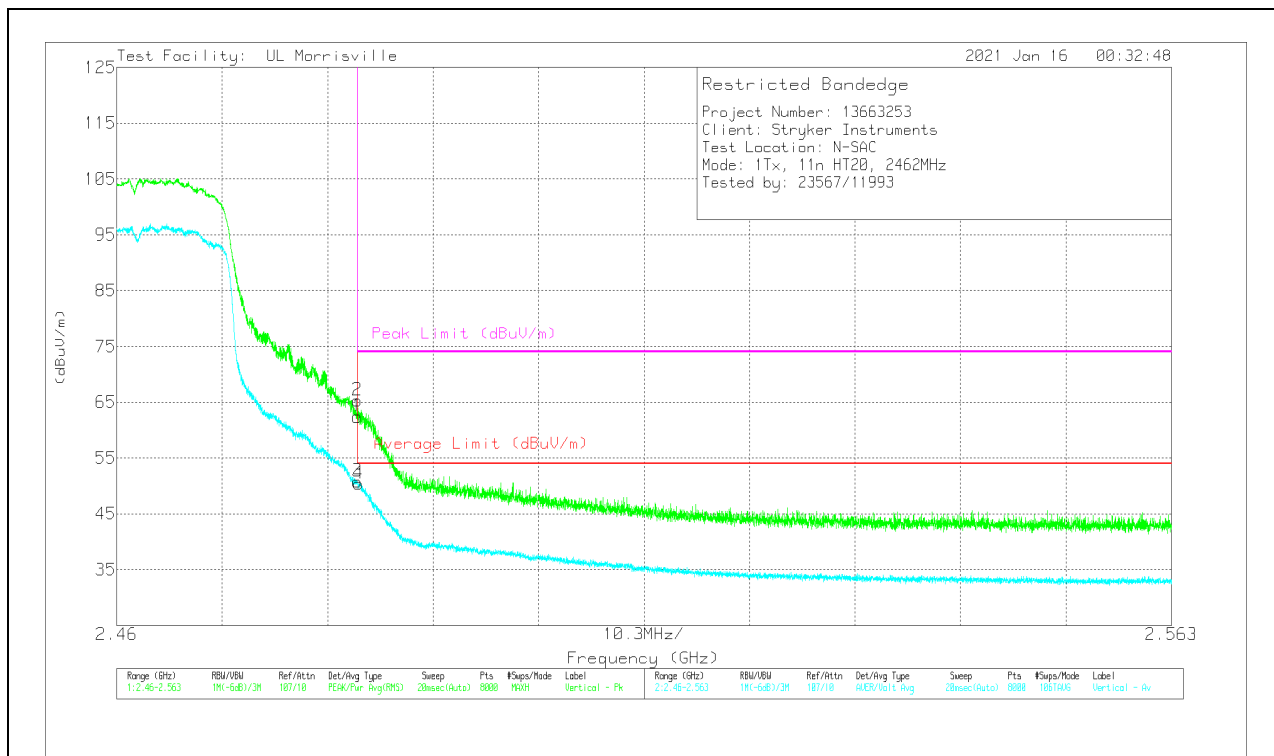
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - 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	54.3	Pk	32.4	-24.3	0	62.4	-	-	74	-11.6	334	326	V
2	*** 2.48351	57.22	Pk	32.4	-24.3	0	65.32	-	-	74	-8.68	334	326	V
3	*** 2.4835	42.14	ADV	32.4	-24.3	.55	50.79	54	-3.21	-	-	334	326	V
4	*** 2.48362	41.81	ADV	32.4	-24.3	.55	50.46	54	-3.54	-	-	334	326	V

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

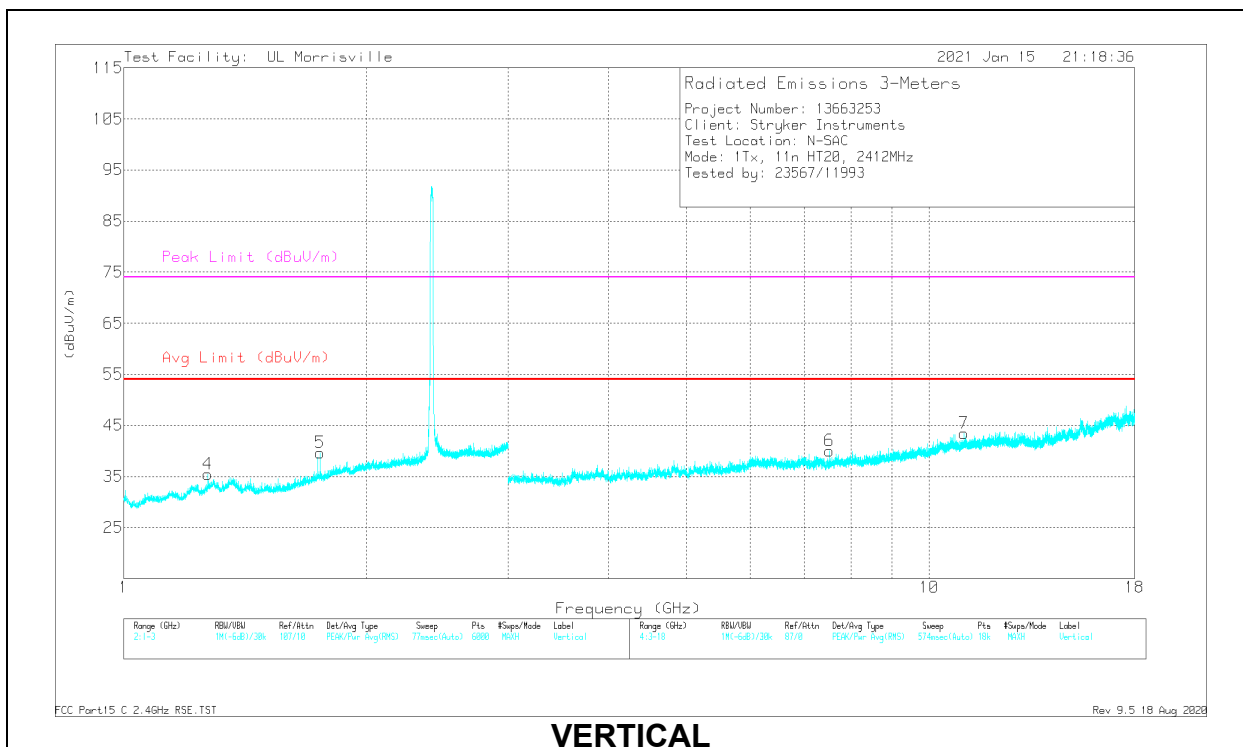
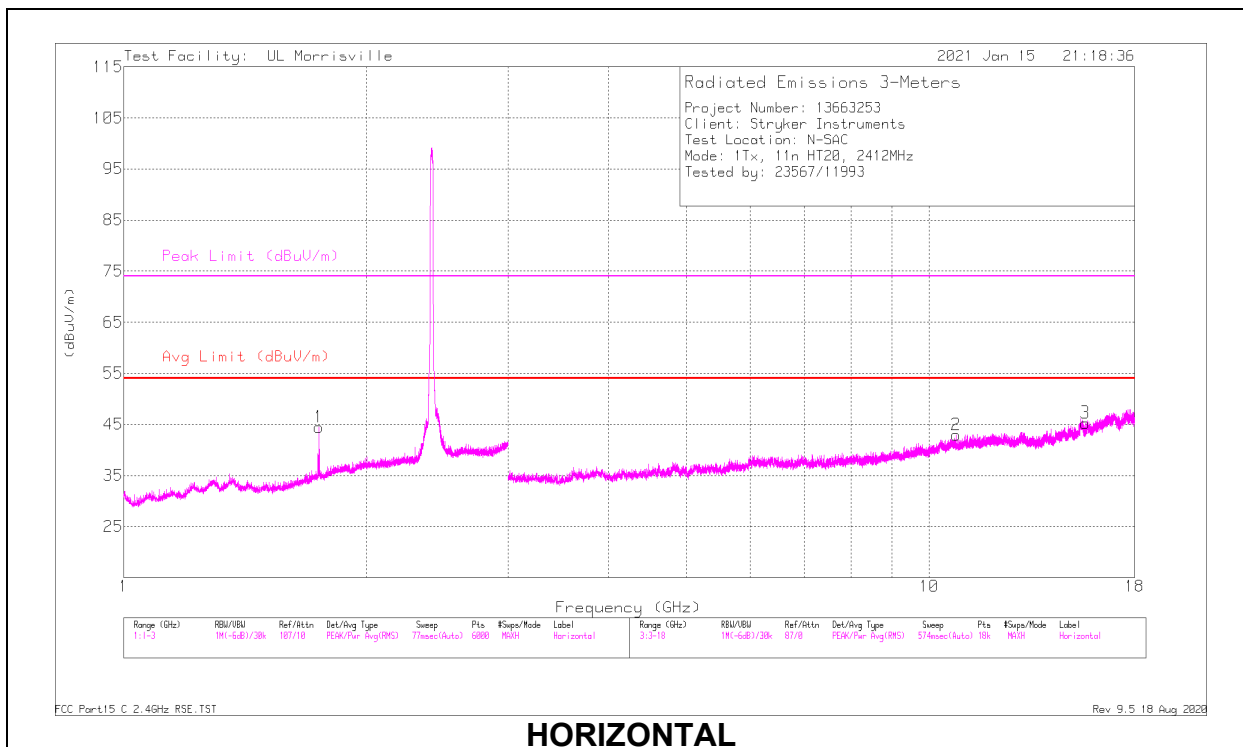
** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

ADV - Linear Voltage Average

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



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	** 1.74694	42.4	PK2	29.6	-24.3	0	47.7	-	-	74	-26.3	124	168	H
	** 1.74742	23.74	ADV	29.6	-24.3	.55	29.59	54	-24.41	-	-	124	168	H
4	* 1.27559	36.53	PK2	29.5	-25.7	0	40.33	-	-	74	-33.67	54	288	V
	* 1.27497	23.13	ADV	29.5	-25.7	.55	27.48	54	-26.52	-	-	54	288	V
5	** 1.75222	49.88	PK2	29.6	-24.4	0	55.08	-	-	74	-18.92	219	272	V
	** 1.75359	24.41	ADV	29.6	-24.4	.55	30.16	54	-23.84	-	-	219	272	V
2	* ** 10.80184	36.69	PK2	37.8	-26	0	48.49	-	-	74	-25.51	200	130	H
	* ** 10.80264	23.59	ADV	37.8	-26	.55	35.94	54	-18.06	-	-	200	130	H
3	* ** 15.63823	38.16	PK2	40.1	-27	0	51.26	-	-	74	-22.74	10	180	H
	* ** 15.63825	24.93	ADV	40.1	-27	.55	38.58	54	-15.42	-	-	10	180	H
6	* ** 7.52637	38.35	PK2	35.7	-29.6	0	44.45	-	-	74	-29.55	132	361	V
	* ** 7.52605	25.57	ADV	35.7	-29.6	.55	32.22	54	-21.78	-	-	132	361	V
7	* ** 11.0537	36.69	PK2	37.9	-25.4	0	49.19	-	-	74	-24.81	309	159	V
	* ** 11.05335	23.38	ADV	37.9	-25.4	.55	36.43	54	-17.57	-	-	309	159	V

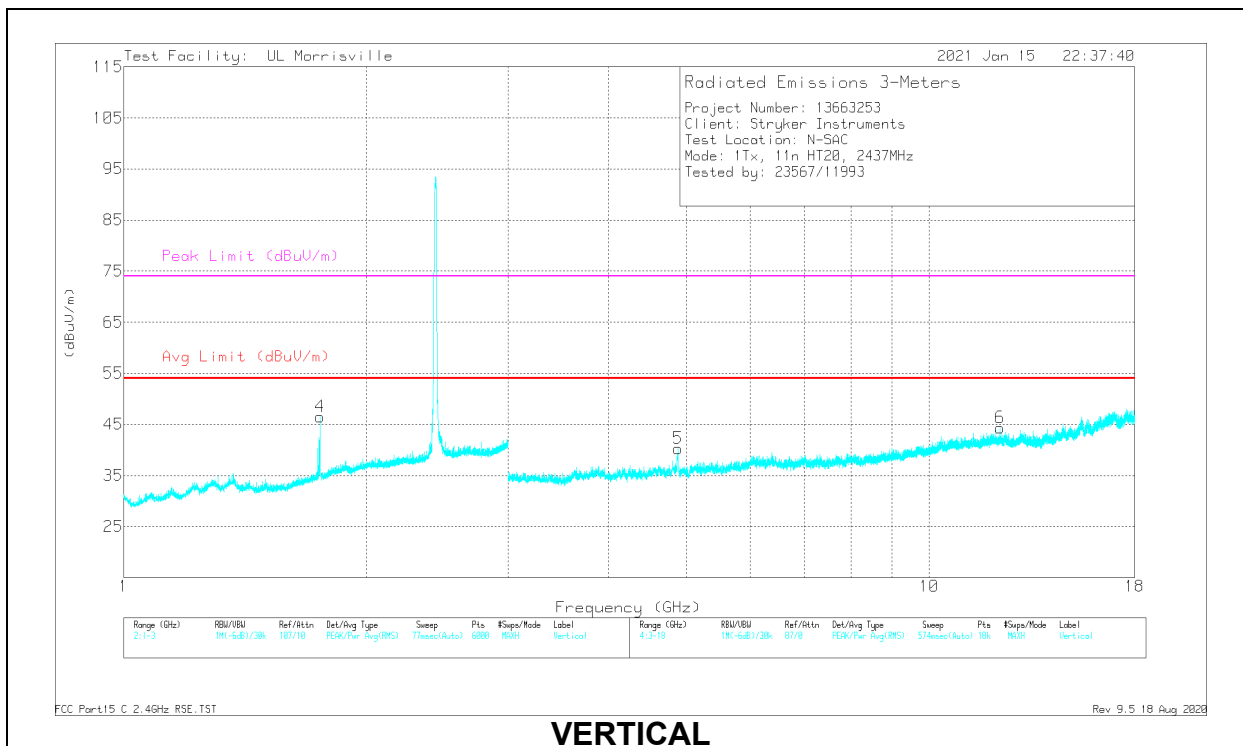
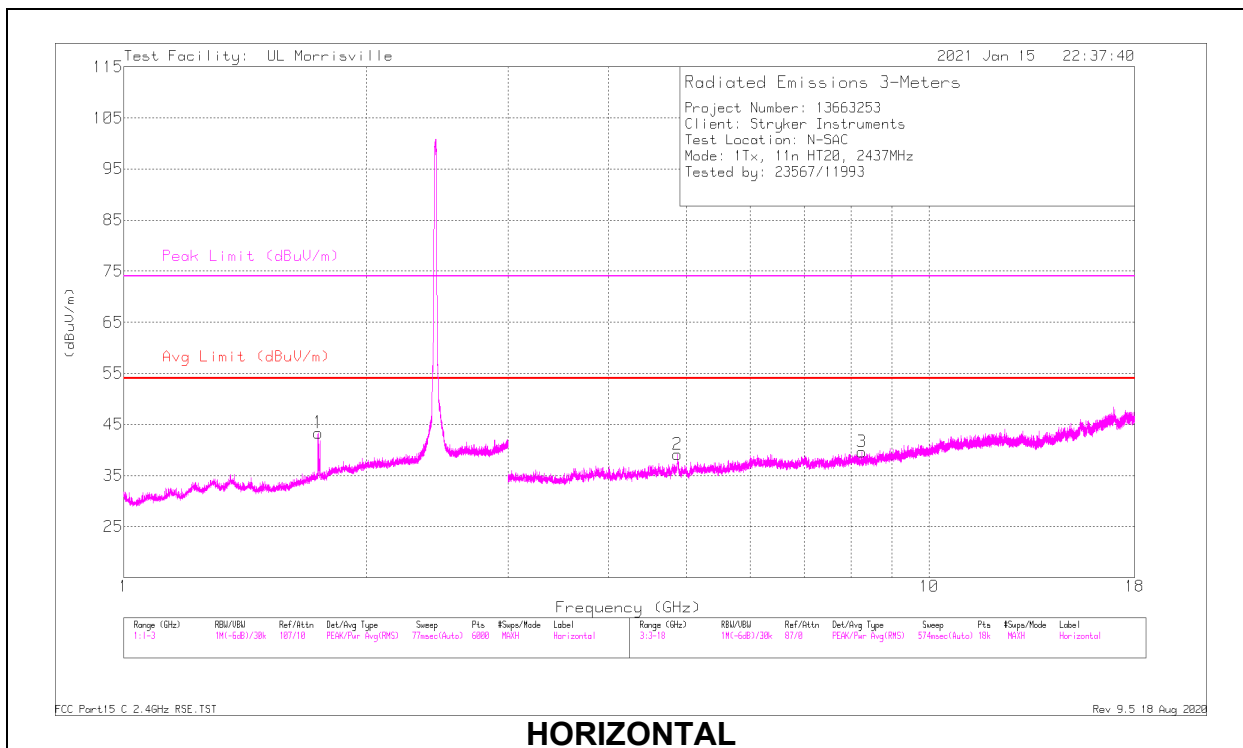
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

PK2 - Maximum Peak

ADV - Linear Voltage Average

MID CHANNEL, CH 6 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0072 dB(/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	** 1.74439	44.61	PK2	29.5	-24.3	0	49.81	-	-	74	-24.19	45	238	H
	** 1.74177	23.81	ADV	29.5	-24.3	.55	29.56	54	-24.44	-	-	45	238	H
4	** 1.75349	54.27	PK2	29.6	-24.4	0	59.47	-	-	74	-14.53	276	193	V
	** 1.75362	26.32	ADV	29.6	-24.4	.55	32.07	54	-21.93	-	-	276	193	V
2	* ** 4.87118	44.28	PK2	34.1	-31.2	0	47.18	-	-	74	-26.82	22	113	H
	* ** 4.87065	30.17	ADV	34	-31.2	.55	33.52	54	-20.48	-	-	22	113	H
3	* ** 8.2577	38.67	PK2	35.9	-29.2	0	45.37	-	-	74	-28.63	260	347	H
	* ** 8.25832	25.04	ADV	35.9	-29.2	.55	32.29	54	-21.71	-	-	260	347	H
5	* ** 4.87945	45.56	PK2	34.1	-31.4	0	48.26	-	-	74	-25.74	175	180	V
	* ** 4.87922	31.36	ADV	34.1	-31.4	.55	34.61	54	-19.39	-	-	175	180	V
6	* ** 12.24759	36.76	PK2	38.9	-26	0	49.66	-	-	74	-24.34	82	329	V
	* ** 12.24691	23.48	ADV	38.9	-26	.55	36.93	54	-17.07	-	-	82	329	V

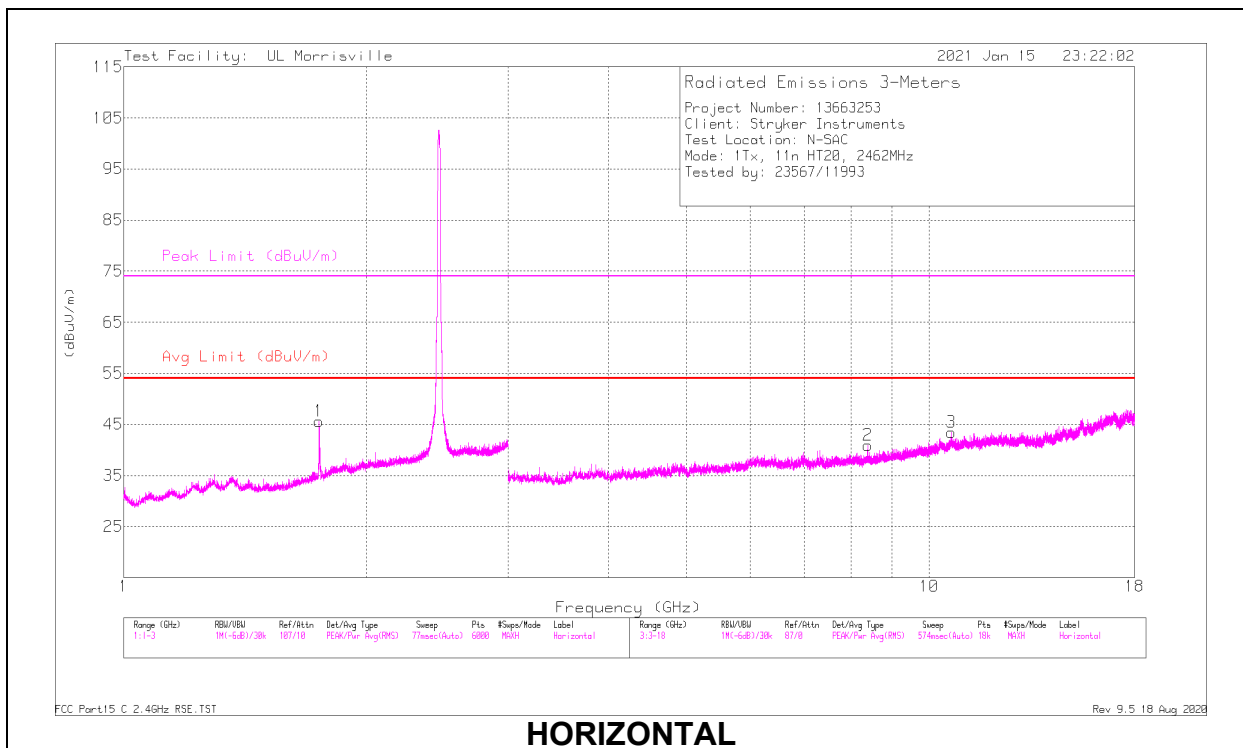
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

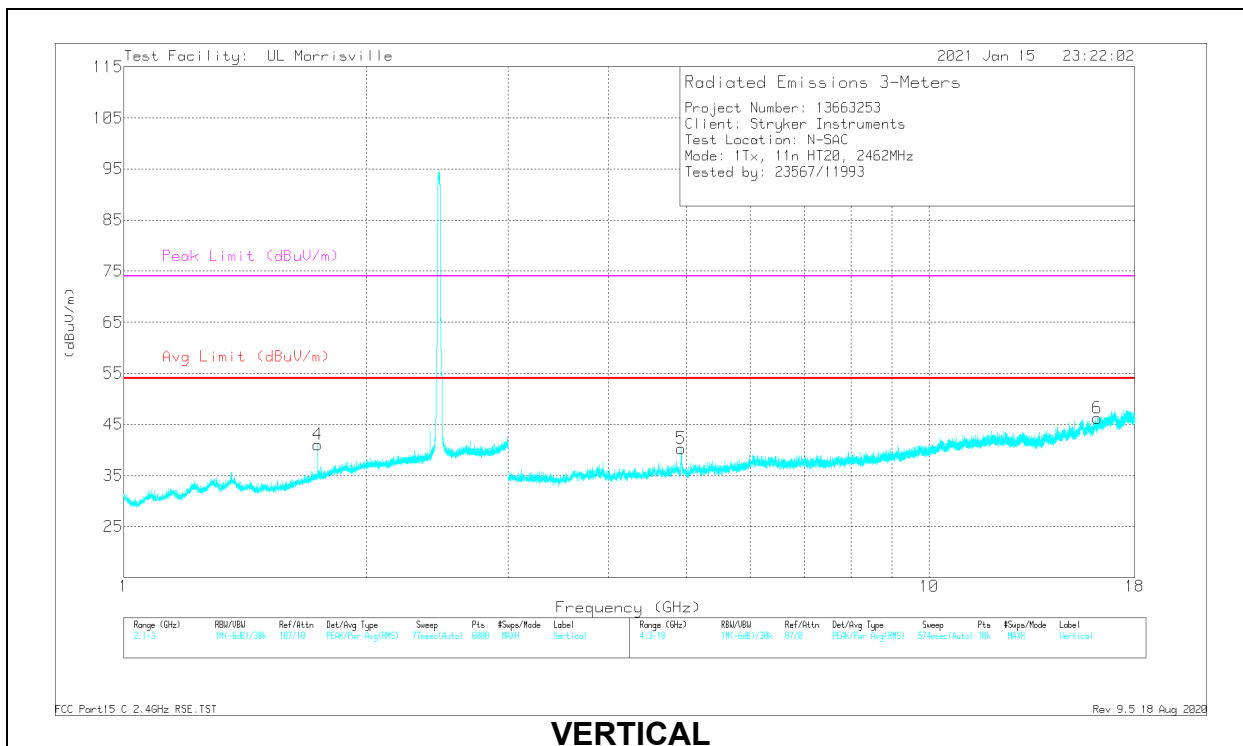
PK2 - Maximum Peak

ADV - Linear Voltage Average

HIGH CHANNEL, CH 11 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	** 1.74686	43.1	PK2	29.6	-24.3	0	48.4	-	-	74	-25.6	113	333	H
	** 1.74637	23.66	ADV	29.6	-24.3	.55	29.51	54	-24.49	-	-	113	333	H
4	** 1.74101	42.65	PK2	29.5	-24.3	0	47.85	-	-	74	-26.15	190	115	V
	** 1.74123	23.79	ADV	29.5	-24.3	.55	29.54	54	-24.46	-	-	190	115	V
2	*** 8.39033	38.17	PK2	36	-28.5	0	45.67	-	-	74	-28.33	293	236	H
	*** 8.3902	24.97	ADV	36	-28.5	.55	33.02	54	-20.98	-	-	293	236	H
3	*** 10.65464	36.55	PK2	37.7	-25.1	0	49.15	-	-	74	-24.85	238	278	H
	*** 10.65376	23.23	ADV	37.7	-25.1	.55	36.38	54	-17.62	-	-	238	278	H
5	*** 4.92205	46.36	PK2	34	-31.8	0	48.56	-	-	74	-25.44	286	120	V
	*** 4.92395	31.67	ADV	34	-31.9	.55	34.32	54	-19.68	-	-	286	120	V
6	*** 16.18072	37.82	PK2	40.7	-26.6	0	51.92	-	-	74	-22.08	53	326	V
	*** 16.18135	24.87	ADV	40.7	-26.6	.55	39.52	54	-14.48	-	-	53	326	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

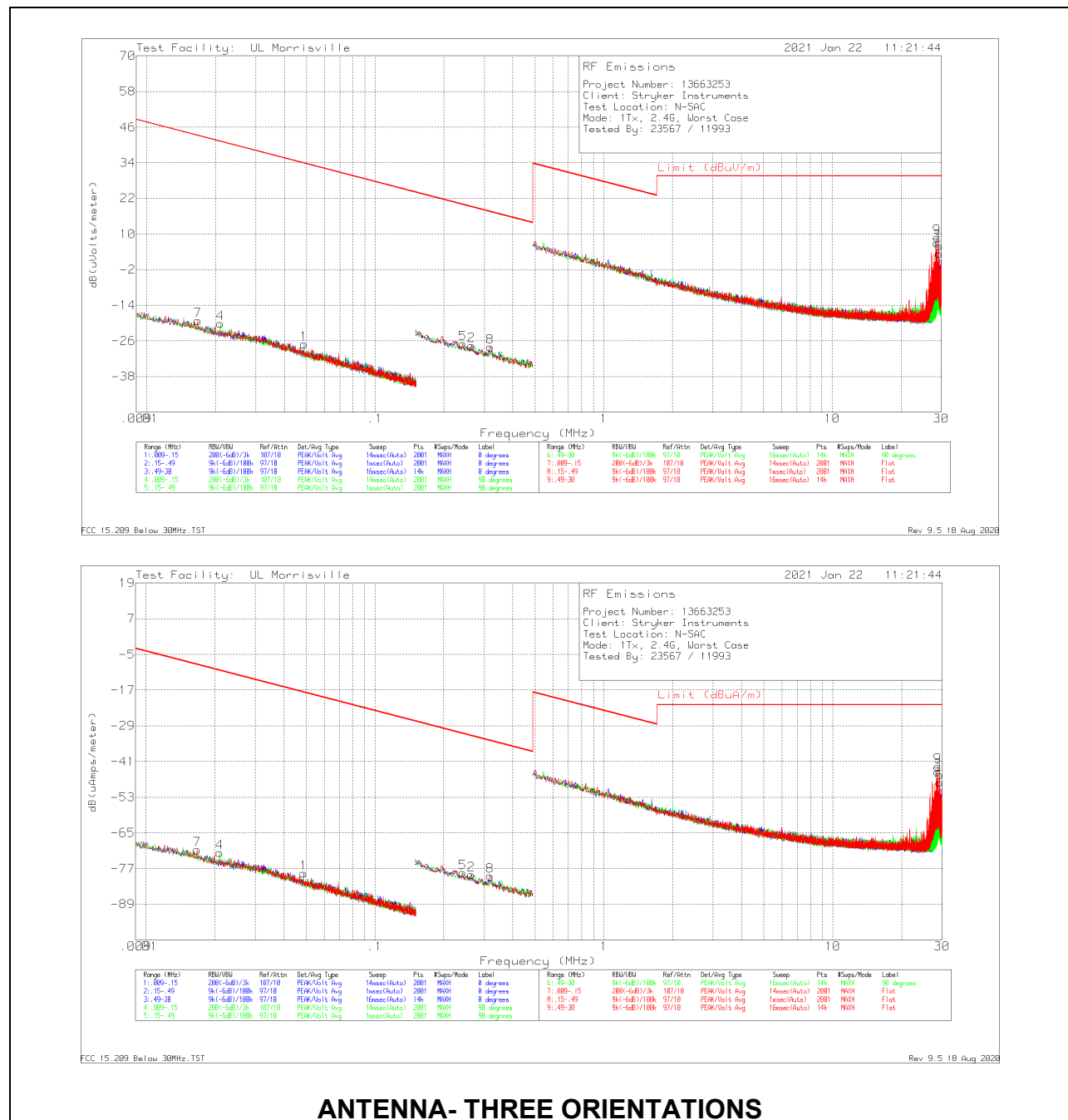
PK2 - Maximum Peak

ADV - Linear Voltage Average

11.2. WORST CASE BELOW 30MHZ

Note for below 30 MHz scans: All measurements were made at a test distance of 3 m. The measured data was extrapolated from the test distance (3m) to the specification distance (300 m from 9-490 kHz and 30 m from 490 kHz – 30 MHz) to clearly show the relative levels of fundamental and spurious emissions and demonstrate compliance with the requirement that the level of any spurious emissions be below the level of the intentionally transmitted signal. The extrapolation factor for the limits were $40 \cdot \log(\text{test distance} / \text{specification distance})$.

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



Below 30MHz Data

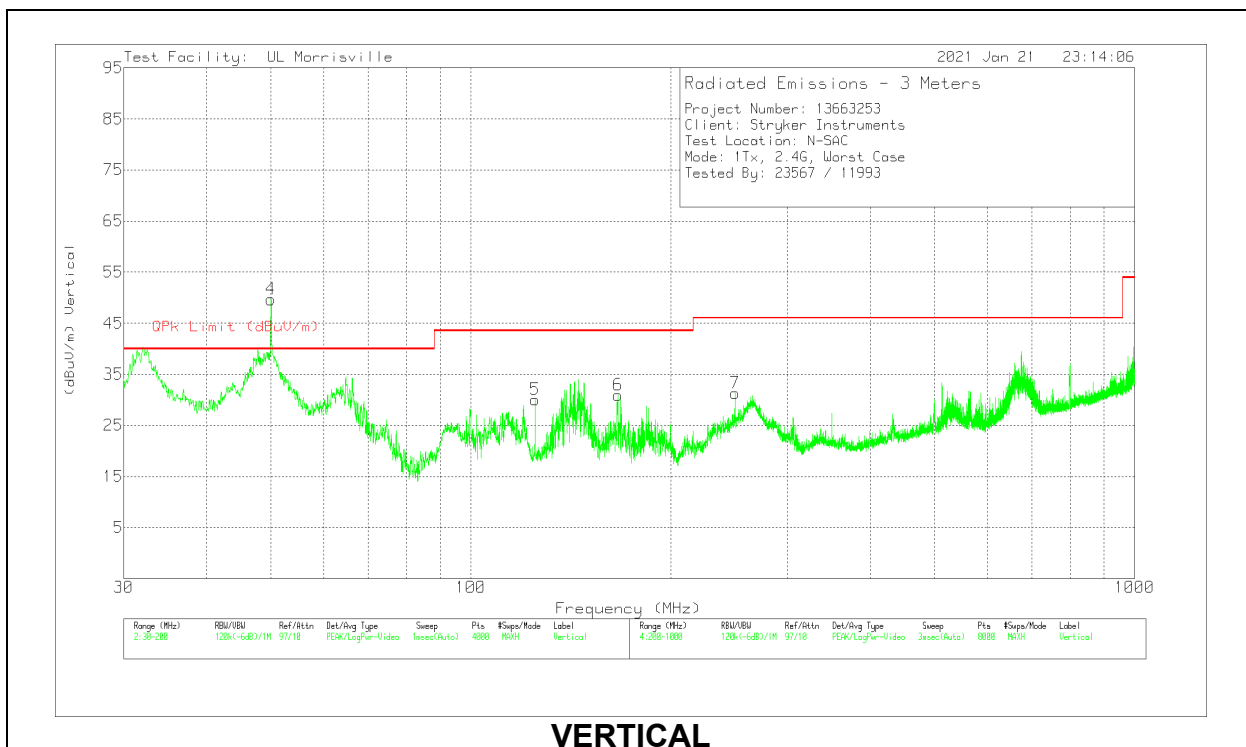
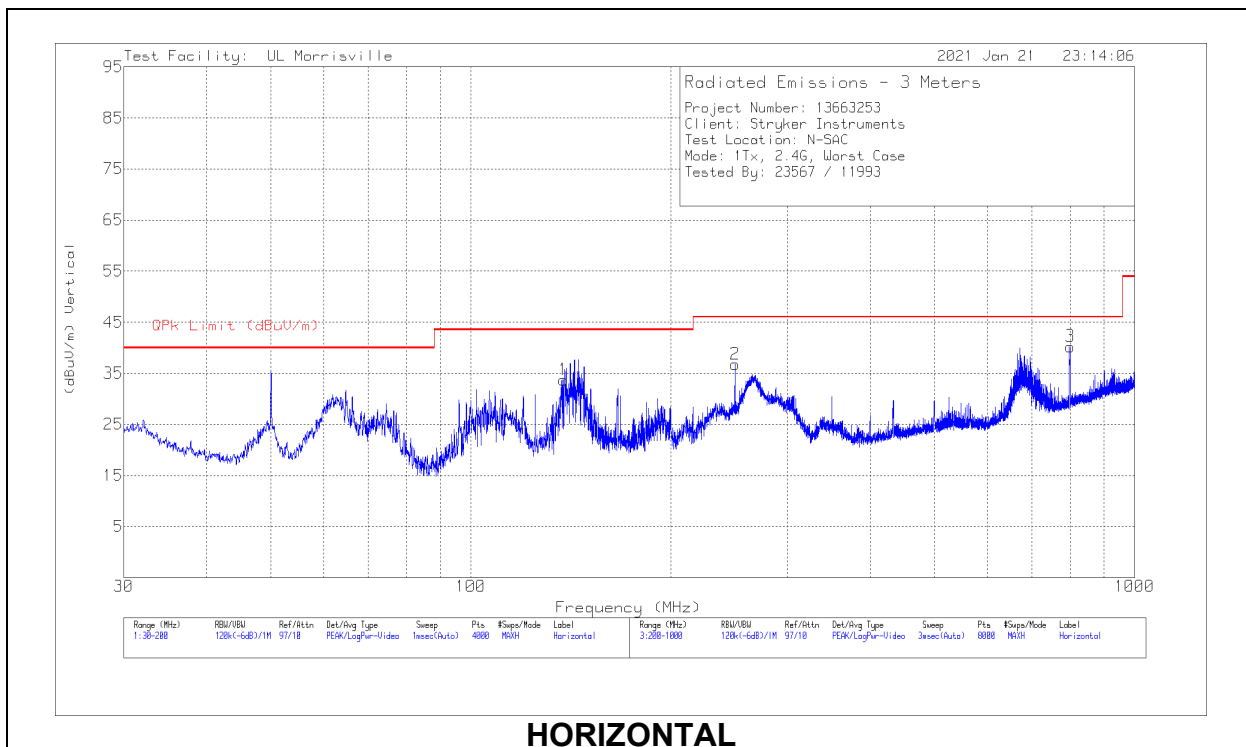
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uVolts/meter)	FCC 15.209 QP/Avg Limit (dBuV/m)	FCC 15.209 Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
7	.01674	45.56	Pk	15.1	.1	-80	-19.24	43.13	63.13	-62.37	0-360
4	.021	46.09	Pk	13.7	.1	-80	-20.11	41.16	61.16	-61.27	0-360
1	.04883	41.16	Pk	11.6	.1	-80	-27.14	33.83	53.83	-60.97	0-360
5	.24172	42.15	Pk	10.8	.1	-80	-26.95	19.94	39.94	-46.89	0-360
2	.26407	41.64	Pk	10.7	.1	-80	-27.56	19.17	39.17	-46.73	0-360
8	.3183	41.15	Pk	10.7	.1	-80	-28.05	17.55	37.55	-45.6	0-360
3	28.68872	37.7	Pk	8.2	1.1	-40	7	29.54	-	-22.54	0-360
9	28.68872	39.53	Pk	8.2	1.1	-40	8.83	29.54	-	-20.71	0-360
6	29.23785	34.27	Pk	8.1	1.1	-40	3.47	29.54	-	-26.07	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0079 (dB/m)	Cbl (dB)	Dist. Corr. Factor (dB)	Corrected Reading dB(uAmps/meter)	RSS-GEN QP/Avg Limit (dBuA/m)	RSS-GEN Pk Limit (dBuA/m)	Margin (dB)	Azimuth (Degs)
7	.01674	45.56	Pk	-36.4	.1	-80	-70.74	-8.37	11.63	-62.37	0-360
4	.021	46.09	Pk	-37.8	.1	-80	-71.61	-10.34	9.66	-61.27	0-360
1	.04883	41.16	Pk	-39.9	.1	-80	-78.64	-17.67	2.33	-60.97	0-360
5	.24172	42.15	Pk	-40.7	.1	-80	-78.45	-31.56	-11.56	-46.89	0-360
2	.26407	41.64	Pk	-40.8	.1	-80	-79.06	-32.33	-12.33	-46.73	0-360
8	.3183	41.15	Pk	-40.8	.1	-80	-79.55	-33.95	-13.95	-45.6	0-360
3	28.68872	37.7	Pk	-43.3	1.1	-40	-44.5	-21.96	-	-22.54	0-360
9	28.68872	39.53	Pk	-43.3	1.1	-40	-42.67	-21.96	-	-20.71	0-360
6	29.23785	34.27	Pk	-43.4	1.1	-40	-48.03	-21.96	-	-26.07	0-360

Pk - Peak detector

11.3. WORST CASE BELOW 1 GHZ



Below 1GHz DATA

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0074 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 137.7654	44.43	Pk	19.3	-30	33.73	43.52	-9.79	0-360	199	H
5	* ** 125.0121	40.12	Pk	20	-30.1	30.02	43.52	-13.5	0-360	100	V
6	* ** 166.5878	42.5	Pk	18.1	-29.7	30.9	43.52	-12.62	0-360	100	V
2	* ** 250.0065	48.16	Pk	17.6	-29	36.76	46.02	-9.26	0-360	99	H
3	** 799.8454	36.88	Qp	27.4	-25.7	38.58	46.02	-7.44	330	211	H
7	* ** 250.0065	42.74	Pk	17.6	-29	31.34	46.02	-14.68	0-360	99	V
4	49.9802	66.76	Pk	14	-31.1	49.66	-	-	0-360	100	V

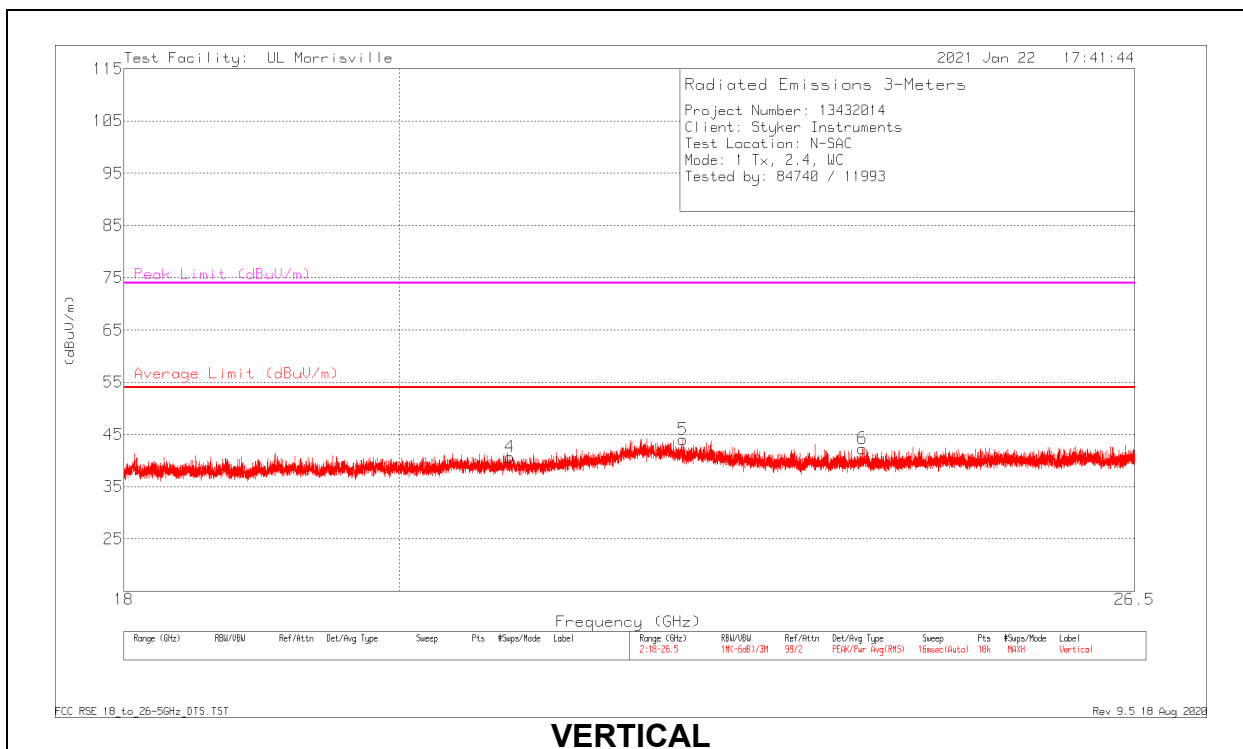
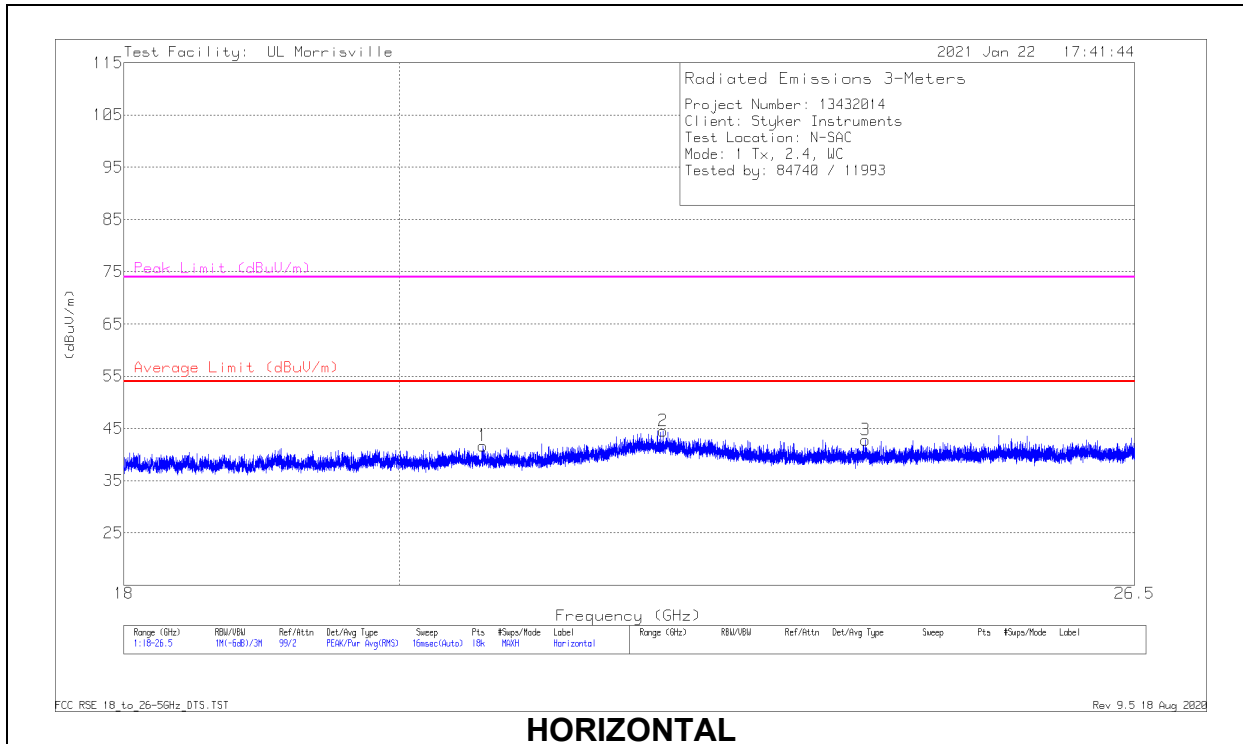
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

Qp - Quasi-Peak detector

11.4. WORST CASE 18-26 GHZ



18 – 26GHz DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0063 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	* ** 20.65356	48.22	Pk	34	-40.6	41.62	54	-12.38	74	-32.38	0-360	101	H
2	* ** 22.12509	49	Pk	36.7	-41.2	44.5	54	-9.5	74	-29.5	0-360	200	H
3	* ** 23.90593	48.13	Pk	34.9	-40.3	42.73	54	-11.27	74	-31.27	0-360	101	H
4	* ** 20.86418	47.45	Pk	34.1	-40.9	40.65	54	-13.35	74	-33.35	0-360	299	V
5	* ** 22.29273	48.53	Pk	36.5	-41	44.03	54	-9.97	74	-29.97	0-360	250	V
6	* ** 23.88185	47.86	Pk	34.9	-40.5	42.26	54	-11.74	74	-31.74	0-360	200	V

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

** - indicates frequency in Taiwan NCC LP0002 Restricted Band

Pk - Peak detector

12. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

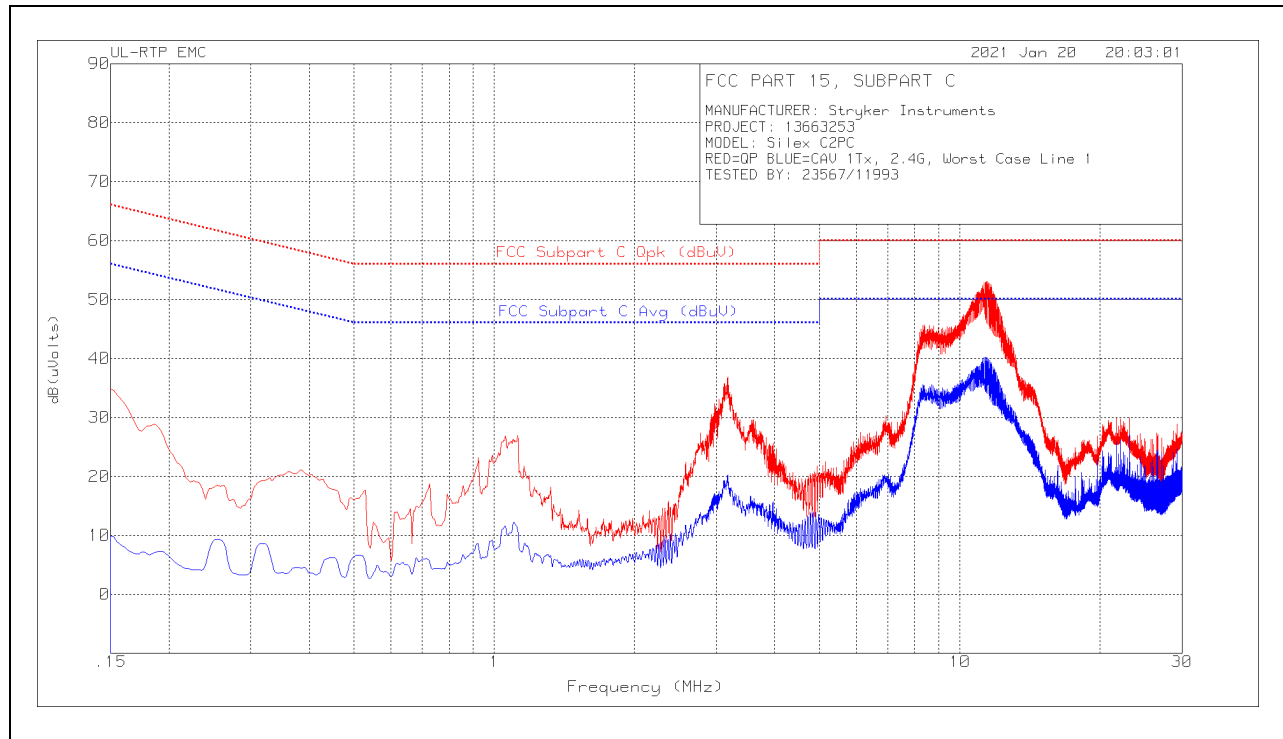
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

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

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

RESULTS

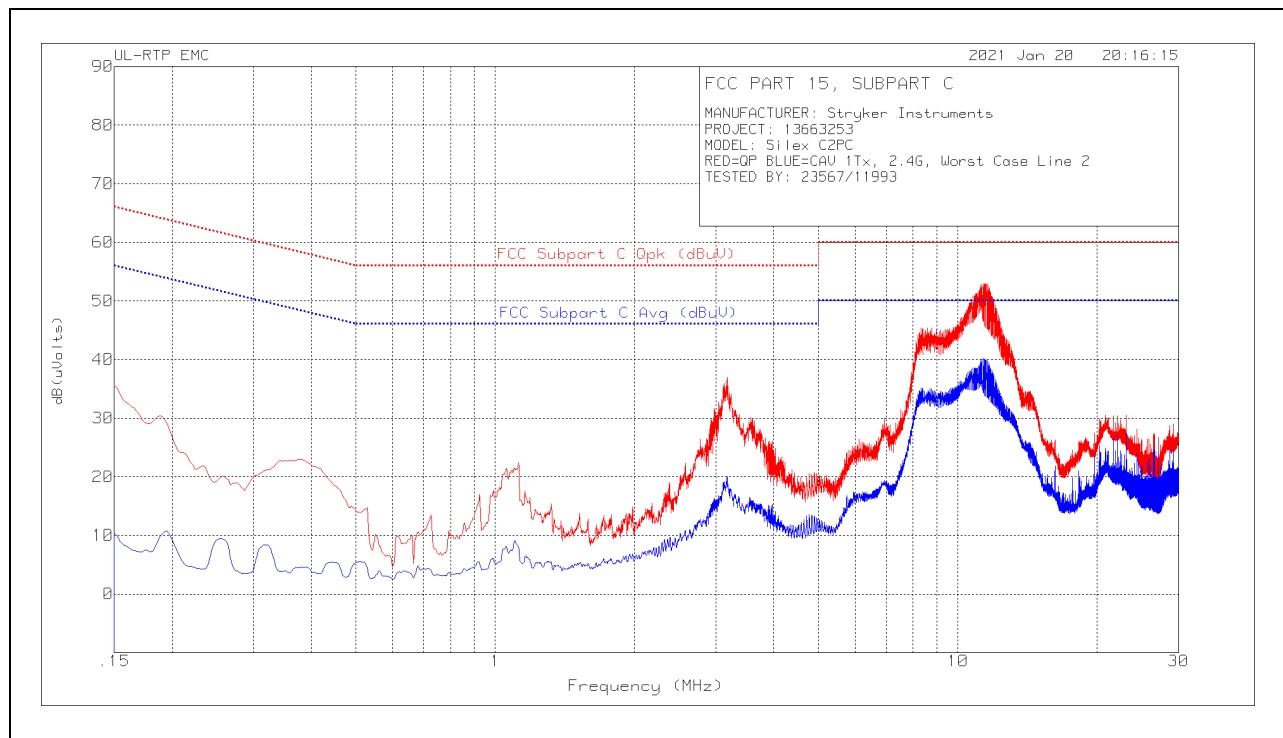
LINE 1 RESULTS



Frequency (MHz)	Meter Reading (dBuV)	Det	LISN001 (dB)	CBL004_ATA508 (dB)	Corrected Reading dB(uVolts)	FCC Subpart C Qpk (dBuV)	Margin (dB)	FCC Subpart C Avg (dBuV)	Margin (dB)
.19163	-2.03	Ca	0	9.3	7.27	-	-	53.97	-46.7
.39075	-4.7	Ca	0	9.3	4.6	-	-	48.05	-43.45
1.0545	2.23	Ca	0	9.4	11.63	-	-	46	-34.37
3.17175	10.44	Ca	0	9.4	19.84	-	-	46	-26.16
8.5425	24.91	Ca	0	9.5	34.41	-	-	50	-15.59
11.391	30.56	Ca	0	9.6	40.16	-	-	50	-9.84
.186	19.53	Qp	0	9.3	28.83	64.21	-35.38	-	-
.384	11.76	Qp	0	9.3	21.06	58.19	-37.13	-	-
1.05675	17.47	Qp	0	9.4	26.87	56	-29.13	-	-
3.17175	26.97	Qp	0	9.4	36.37	56	-19.63	-	-
8.54475	35.48	Qp	0	9.5	44.98	60	-15.02	-	-
11.3865	43.45	Qp	0	9.6	53.05	60	-6.95	-	-

Qp - Quasi-Peak detector
Ca - CISPR average detection

LINE 2 RESULTS



Frequency (MHz)	Meter Reading (dBuV)	Det	LISN001 (dB)	CBL004_ATA508 (dB)	Corrected Reading dB(uVolts)	FCC Subpart C Qpk (dBuV)	Margin (dB)	FCC Subpart C Avg (dBuV)	Margin (dB)
.195	1.43	Ca	0	9.3	10.73	-	-	53.82	-43.09
.33	-2.5	Ca	0	9.3	6.8	-	-	49.45	-42.65
1.11075	-.77	Ca	0	9.4	8.63	-	-	46	-37.37
3.1695	10.66	Ca	0	9.4	20.06	-	-	46	-25.94
8.5875	24.66	Ca	0	9.5	34.16	-	-	50	-15.84
11.39325	30.52	Ca	0	9.6	40.12	-	-	50	-9.88
.18825	21.09	Qp	0	9.3	30.39	64.11	-33.72	-	-
.35025	13.49	Qp	0	9.3	22.79	58.96	-36.17	-	-
1.122	12.95	Qp	0	9.4	22.35	56	-33.65	-	-
3.1695	27.57	Qp	0	9.4	36.97	56	-19.03	-	-
8.5875	35.87	Qp	0	9.5	45.37	60	-14.63	-	-
11.38988	43.37	Qp	0	9.6	52.97	60	-7.03	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

13. SETUP PHOTOS

Please refer to R13663253-EP1 for setup photos.

END OF TEST REPORT