



**FCC CFR47 PART 15 SUBPART C
ISED CANADA RSS-210 ISSUE 10**

TEST REPORT

FOR

MODEL NUMBER: SRF319-4

**FCC ID: 2AAJXQS-SRF319-4
IC: 11205A-QSSRF3194**

REPORT NUMBER: R13726049-E1

ISSUE DATE: 2021-06-09

Prepared for
Qolsys Inc.
1900 The Alameda, Suite 420
San Jose, CA 95126, U.S.A

Prepared by
UL LLC
12 LABORATORY DR.
RESEARCH TRIANGLE PARK, NC 27709 USA
TEL: (919) 549-1400



Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	2021-05-05	Initial Issue	Haley Ackun
V2	2021-05-07	Updated Model Name	Haley Ackun
V3	2021-06-09	Updated IC ID	Haley Ackun

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	5
3. FACILITIES AND ACCREDITATION	5
4. DECISION RULES AND MEASUREMENT UNCERTAINTY	5
4.1. METROLOGICAL TRACEABILITY	5
4.2. DECISION RULES.....	5
4.3. MEASUREMENT UNCERTAINTY.....	6
4.4. SAMPLE CALCULATION	6
5. EQUIPMENT UNDER TEST	7
5.1. DESCRIPTION OF EUT	7
5.2. DESCRIPTION OF AVAILABLE ANTENNAS	7
5.3. SOFTWARE AND FIRMWARE.....	7
5.4. WORST-CASE CONFIGURATION AND MODE.....	7
5.5. MODIFICATIONS	7
5.6. DESCRIPTION OF TEST SETUP.....	8
6. TEST AND MEASUREMENT EQUIPMENT	9
7. ANTENNA PORT TEST RESULTS.....	10
7.1. 20 dB AND 99% BW	10
7.2. DUTY CYCLE.....	12
7.3. TRANSMISSION TIME	15
7.4. SUPERVISION TRANSMISSIONS	16
8. RADIATED EMISSION TEST RESULTS.....	17
8.1. TX RADIATED SPURIOUS EMISSION	17

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Qolsys Inc.
1900 The Alameda, Suite 420
San Jose, CA 95126, U.S.A

EUT DESCRIPTION: 319.5MHz Radio Module

MODEL: SRF319-4

SERIAL NUMBER: Non-serialized

SAMPLE RECEIVE DATE: 2021-03-09

DATE TESTED: 2021-04-09 to 2021-04-29

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C : 2021	Complies
ISED CANADA RSS-210 Issue 10, Annex A: 2019	Complies
ISED CANADA 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:



Mike Antola
Staff Engineer
Consumer Technology Division
UL LLC

Haley Ackun
Laboratory Engineer
Consumer Technology Division
UL LLC

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15: 2021, RSS-GEN Issue 5 + A1: 2019, and RSS-210 Issue 10: 2019.

3. FACILITIES AND ACCREDITATION

UL LLC is accredited by NVLAP, Laboratory Code 200246-0, 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
<input type="checkbox"/>	Building: 12 Laboratory Dr RTP, NC 27709, U.S.A	US0067	2180C	703469
<input checked="" type="checkbox"/>	Building: 2800 Perimeter Park Dr. Suite B Morrisville, NC 27560, U.S.A	US0067	2180C	703469

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. 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.

4.2. 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.)

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Radio Frequency (Spectrum Analyzer)	141.2 Hz
Occupied Channel Bandwidth	1.22%
All emissions, radiated	6.01 dB
Temperature	0.57°C
Humidity	3.39%
DC Supply voltages	1.70%
Time	3.39%

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

4.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

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

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a 319.5MHz radio module.

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an flex pcb antenna, with a maximum gain of -0.3.

5.3. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was msm8953_64-userdebug 9
PKQ1.190723.001

The test utility software used during testing was Android Debug Bridge v29.

5.4. WORST-CASE CONFIGURATION AND MODE

The EUT operates only at a single channel. As such, all testing performed at this channel while operating at its highest intended power setting.

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.

5.5. MODIFICATIONS

No modifications were made during testing.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Power Supply	Sure-power	SW-070100AB	-	NA
Speaker	Qolsys	ABY1-TS68-2PR	STG2204900232	NA

I/O CABLES

Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	1	1	I/O	AC Mains	<3m	None
2	2	1	I/O	UART	<1m	None

TEST SETUP

Test software exercised the radio card.

6. TEST AND MEASUREMENT EQUIPMENT

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

Radiated Disturbance Emissions Test Equipment (Morrisville - South Chamber)

Equip. ID	Description	Manufacturer/Brand	Model Number	Last Cal.	Next Cal.
	0.009-30MHz				
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2020-08-20	2021-08-20
	30-1000 MHz				
AT0075	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2020-10-27	2021-10-27
	1-18 GHz				
AT0067	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2020-04-28	2021-04-28
	Gain-Loss Chains				
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
	Receiver & Software				
197955	Spectrum Analyzer	Rohde & Schwarz	ESW44	2021-03-10	2022-03-10
SOFTEMI	EMI Software	UL	Version 9.5 (2021-03-04)		
	Additional Equipment used				
s/n 200037635	Environmental Meter	Fisher Scientific	06-662-4	2020-01-22	2022-01-22
ATA176	10dB, DC-18GHz, 5W	Mini-Circuits	BW-N10W5	2020-08-29	2021-08-29
HPF012	1GHz high-pass filter, 2W, F _{high} =18GHz	Micro-Tronics	HPM18129	2021-02-15	2022-02-15

7. ANTENNA PORT TEST RESULTS

7.1. 20 dB AND 99% BW

LIMITS

FCC §15.231 (c)

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

IC A1.3

For the purpose of Section A1.1, the 99% Bandwidth shall be no wider than 0.25% of the center frequency for devices operating between 70-900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency.

TEST PROCEDURE

ANSI C63.10

The transmitter output is connected to the spectrum analyzer.

99% & 20dB Bandwidth: The RBW is set to 1% to 5% of the 99 % / 20dB bandwidth. The VBW is set to approximately 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth and n dB down functions are utilized.

Note: Because the measured signal is CW or CW-like adjusting the RBW per C63.10 would not be practical since the measured bandwidth will always follow the RBW and the result will be approximately twice the RBW.

RESULTS

No non-compliance noted:

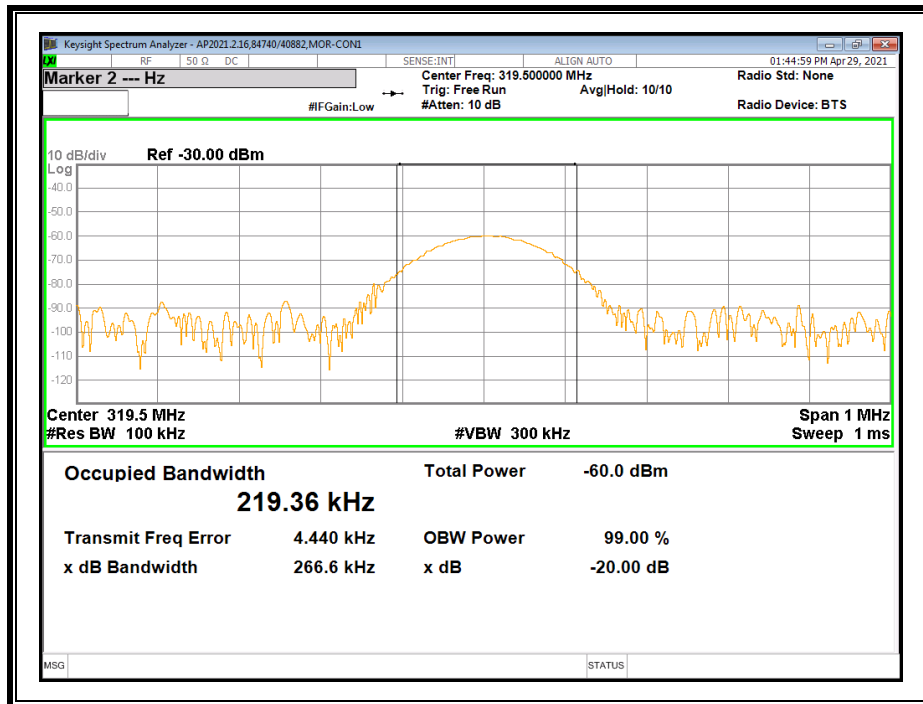
20dB Bandwidth

Frequency (MHz)	20dB Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
319.5	266.60	798.75	-532.15

99% Bandwidth

Frequency (MHz)	99% Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
319.5	219.36	798.75	-579.39

99% BANDWIDTH AND 20dB BANDWIDTH



7.2. DUTY CYCLE

LIMITS

FCC §15.35 (c)

The measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value. The exact method of calculating the average field strength shall be submitted with any application for certification or shall be retained in the measurement data file for equipment subject to notification or verification.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 100 kHz and the VBW is set to 100 kHz. The sweep time is coupled and the span is set to 0 Hz. The number of pulses is measured and calculated in a 100 ms scan.

CALCULATION

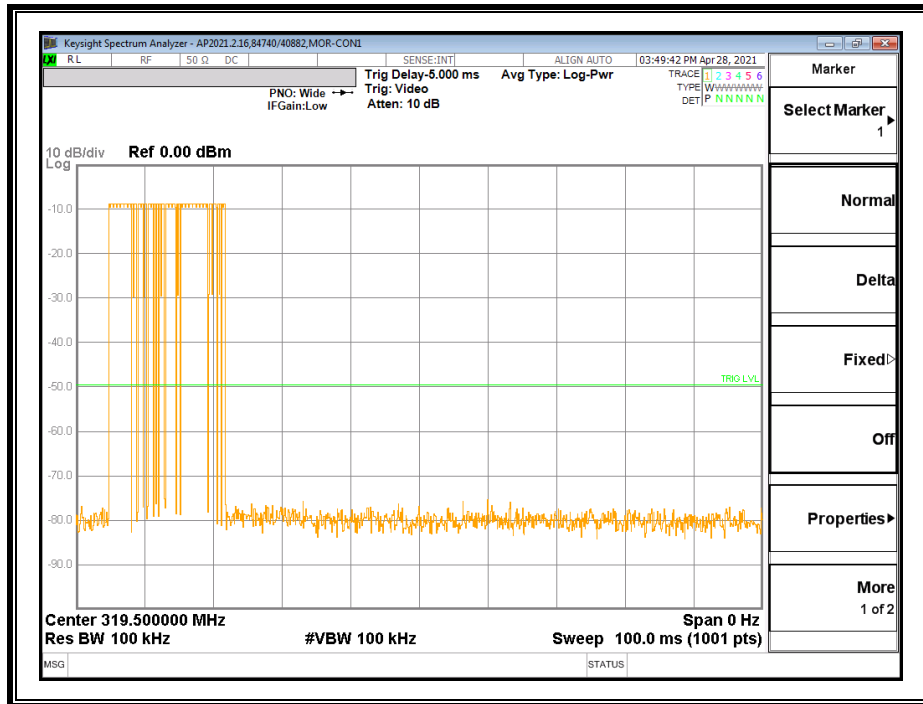
Average Reading = Peak Reading (dBuV/m) + 20log (Duty Cycle), Where Duty Cycle is (# of long pulses * long pulse width) + (# of short pulses * short pulse width) / 100 or T

RESULTS

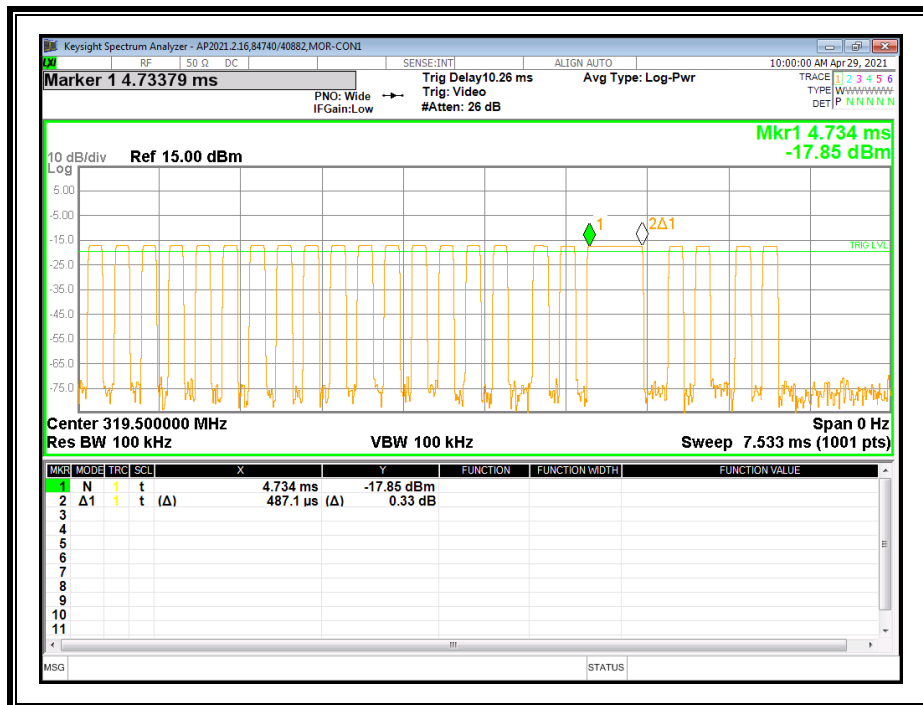
No non-compliance noted:

One Period (ms)	Long Pulse Width (ms)	# of Long Pulses	Short Width (ms)	# of Short Pulses	Duty Cycle	20*Log Duty Cycle (dB)
100	0.487	1	0.114	59	0.072	-22.84

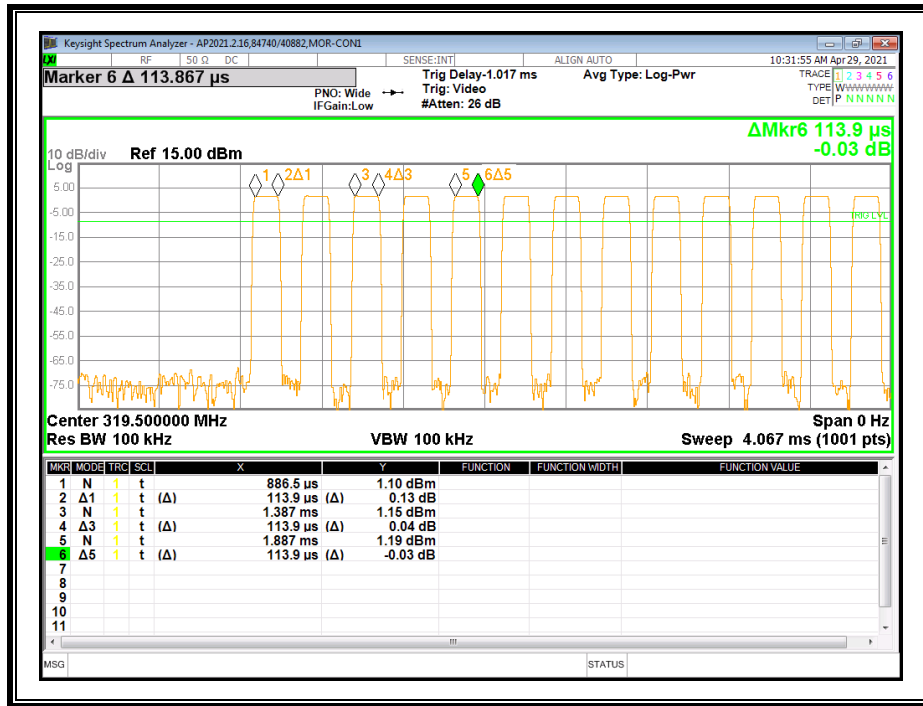
TRANSMISSION IN A 100MS WINDOW



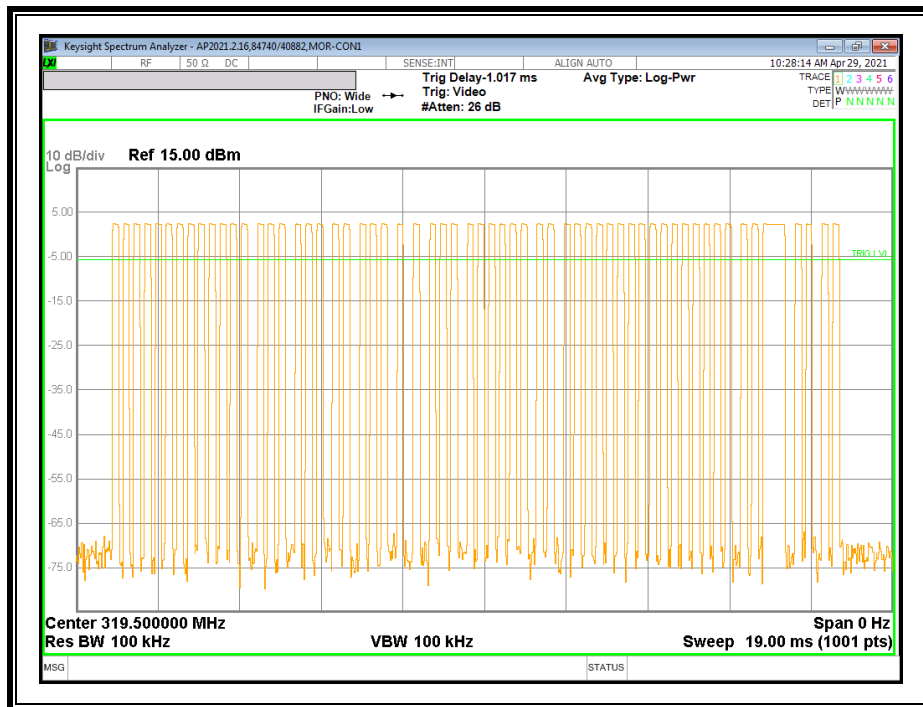
LONG PULSE WIDTH



SHORT PULSE WIDTH



NUMBER OF SHORT/LONG PULSES



7.3. TRANSMISSION TIME

LIMITS

FCC §15.231 (a) (2)

RSS-210 A1.1 (b)

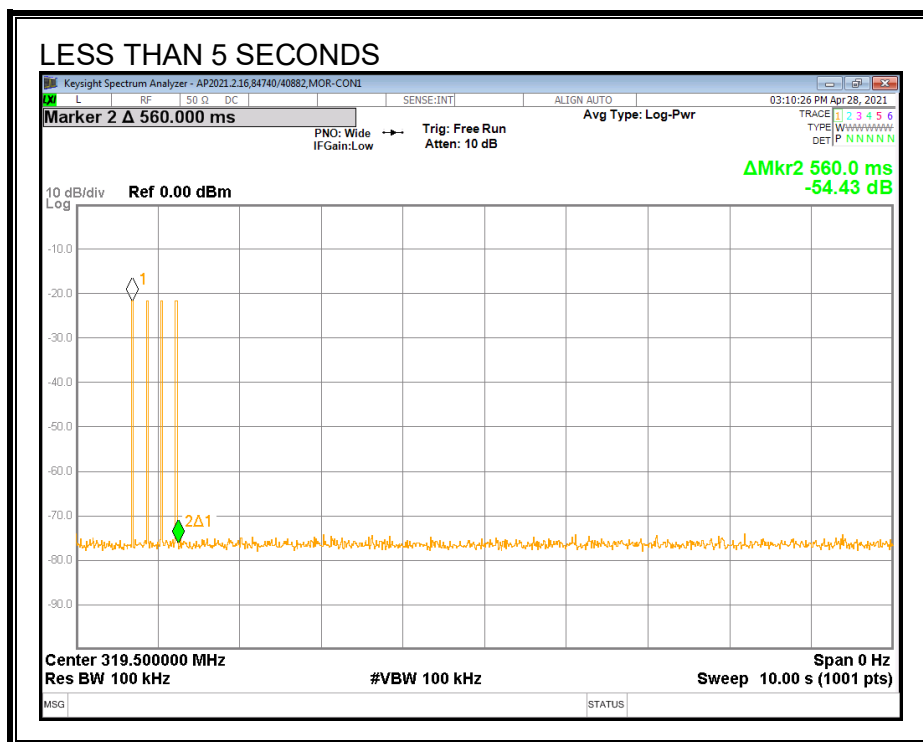
A transmitter activated automatically shall cease transmission within 5 seconds after activation.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer or radiated field strength. The RBW is set to 100 kHz and the VBW is set to 100 kHz. The sweep time is set to 10 seconds and the span is set to 0 Hz.

RESULTS

No non-compliance noted:



7.4. SUPERVISION TRANSMISSIONS

LIMITS

FCC §15.231 (a) (3)

Periodic transmissions at regular predetermined intervals are not permitted. However, polling or supervision transmissions, including data, to determine system integrity of transmitters used in security or safety applications are allowed if the total duration of transmissions does not exceed more than two seconds per hour for each transmitter. There is no limit on the number of individual transmissions, provided the total transmission time does not exceed two seconds per hour

Results

Tester:	11993
Date:	2021-04-30

1. According to manufacturer manual, the interval of supervisory signal transmission is once every minute.
2. Total transmission time:

Short Pulse Width (ms)	Number of Short Pulse	Long Pulse Width (ms)	Number of Long Pulse	One Pulse Stream (ms)	Total Pulse Streams per hour	Total Transmission Time per hour (ms)
0.114	59	0.487	1	7.207	60.00	432.43

8. RADIATED EMISSION TEST RESULTS

8.1. TX RADIATED SPURIOUS EMISSION

LIMITS

FCC §15.231 (b)
 RSS-210 A.1.2

In addition to the provisions of § 15.205, the field strength of emissions from Intentional radiators operated under this section shall not exceed the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental Frequency (microvolts/meter)	Field Strength of Spurious Emissions (microvolts/meter)
40.66 - 40.70	2,250	225
70 - 130	1,250	125
130 - 174	1,250 to 3,750 ¹	125 to 375 ¹
174 - 260	3,750	375
260 - 470	3,750 to 12,500 ¹	375 to 1,250 ¹
Above 470	12,500	1,250

¹ Linear interpolation

§15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	(²)
13.36 - 13.41	322 - 335.4		

1 Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
2 Above 38.6

§15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

§15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 88	100 **	3
88 216	150 **	3
216 960	200 **	3
Above 960	500	3

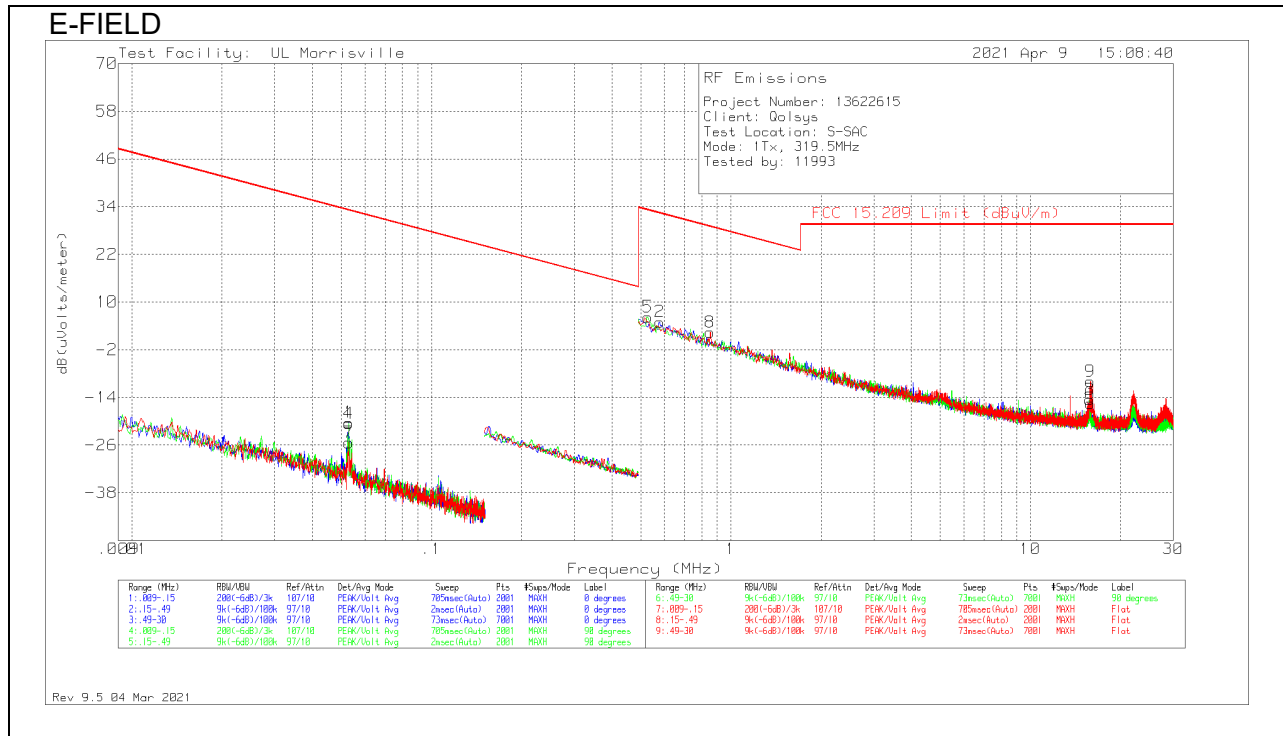
** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54 72 MHz, 76 88 MHz, 174 216 MHz or 470 806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

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

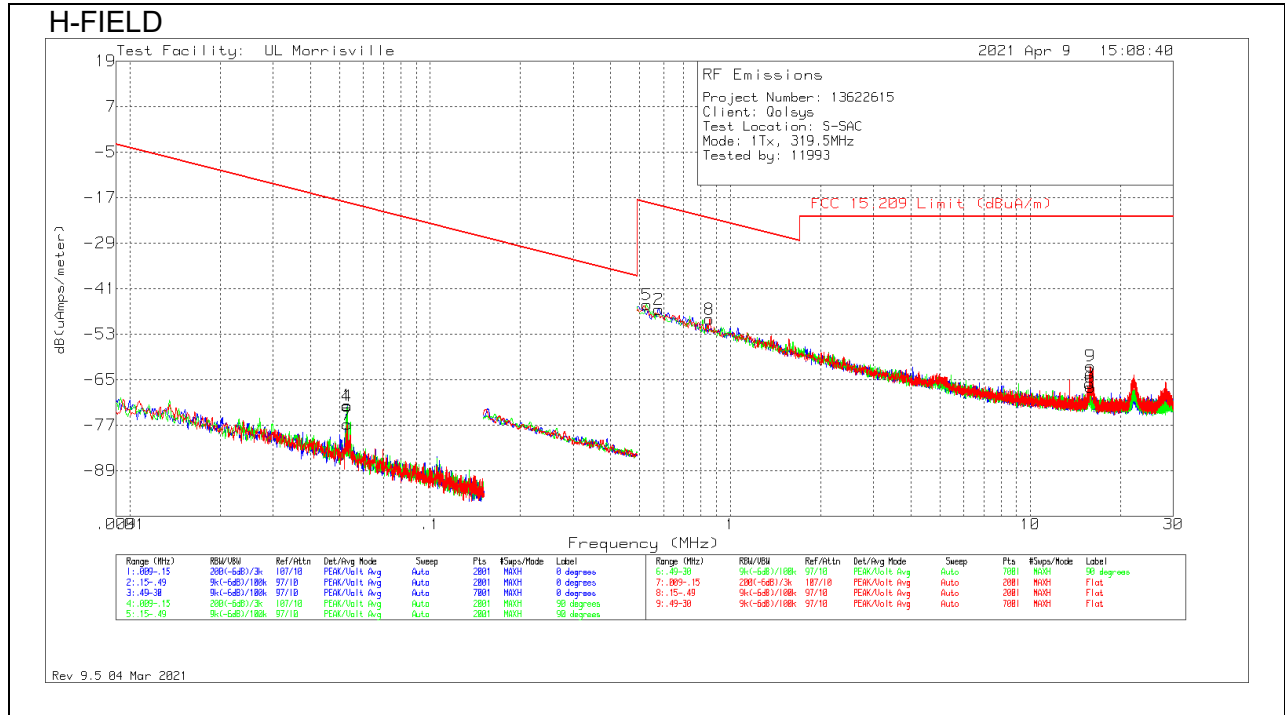
RESULTS

TX SPURIOUS EMISSION (9 kHz - 30 MHz)



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/AV Limit (dBuV/m)	FCC 15.209 Pk Limit (dBuV/m)	Worst-case Margin (dB)	Azimuth (Degs)	Antenna Face
1	.05295	48.08	Pk	11.5	.1	-80	-20.32	33.13	53.13	-53.45	0-360	On
2	.57854	34.1	Pk	10.8	.1	-40	5	32.36	-	-27.36	0-360	On
3	15.7983	14.34	Pk	10.3	.8	-40	-14.56	29.54	-	-44.1	0-360	On
4	.05295	47.85	Pk	11.5	.1	-80	-20.55	33.13	53.13	-53.68	0-360	Off
5	.52794	35.3	Pk	10.8	.1	-40	6.2	33.15	-	-26.95	0-360	Off
6	15.8531	13.43	Pk	10.3	.8	-40	-15.47	29.54	-	-45.01	0-360	Off
7	.05295	43.04	Pk	11.5	.1	-80	-25.36	33.13	53.13	-58.49	0-360	Flat
8	.85258	31.26	Pk	10.9	.2	-40	2.36	28.99	-	-26.63	0-360	Flat
9	15.86154	18.95	Pk	10.3	.8	-40	-9.95	29.54	-	-39.49	0-360	Flat

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/Av Limit (dBuA/m)	RSS-GEN Pk Limit (dBuA/m)	Worst-Case Margin (dB)	Azimuth (Degs)	Antenna Face
1	.05295	48.08	Pk	-40	.1	-80	-71.82	-18.37	1.63	-53.45	0-360	On
2	.57854	34.1	Pk	-40.7	.1	-40	-46.5	-19.14	-	-27.36	0-360	On
3	15.7983	14.34	Pk	-41.2	.8	-40	-66.06	-21.96	-	-44.1	0-360	On
4	.05295	47.85	Pk	-40	.1	-80	-72.05	-18.37	1.63	-53.68	0-360	Off
5	.52794	35.3	Pk	-40.7	.1	-40	-45.3	-18.35	-	-26.95	0-360	Off
6	15.8531	13.43	Pk	-41.2	.8	-40	-66.97	-21.96	-	-45.01	0-360	Off
7	.05295	43.04	Pk	-40	.1	-80	-76.86	-18.37	1.63	-58.49	0-360	Flat
8	.85258	31.26	Pk	-40.6	.2	-40	-49.14	-22.51	-	-26.63	0-360	Flat
9	15.86154	18.95	Pk	-41.2	.8	-40	-61.45	-21.96	-	-39.49	0-360	Flat

Pk - Peak detector

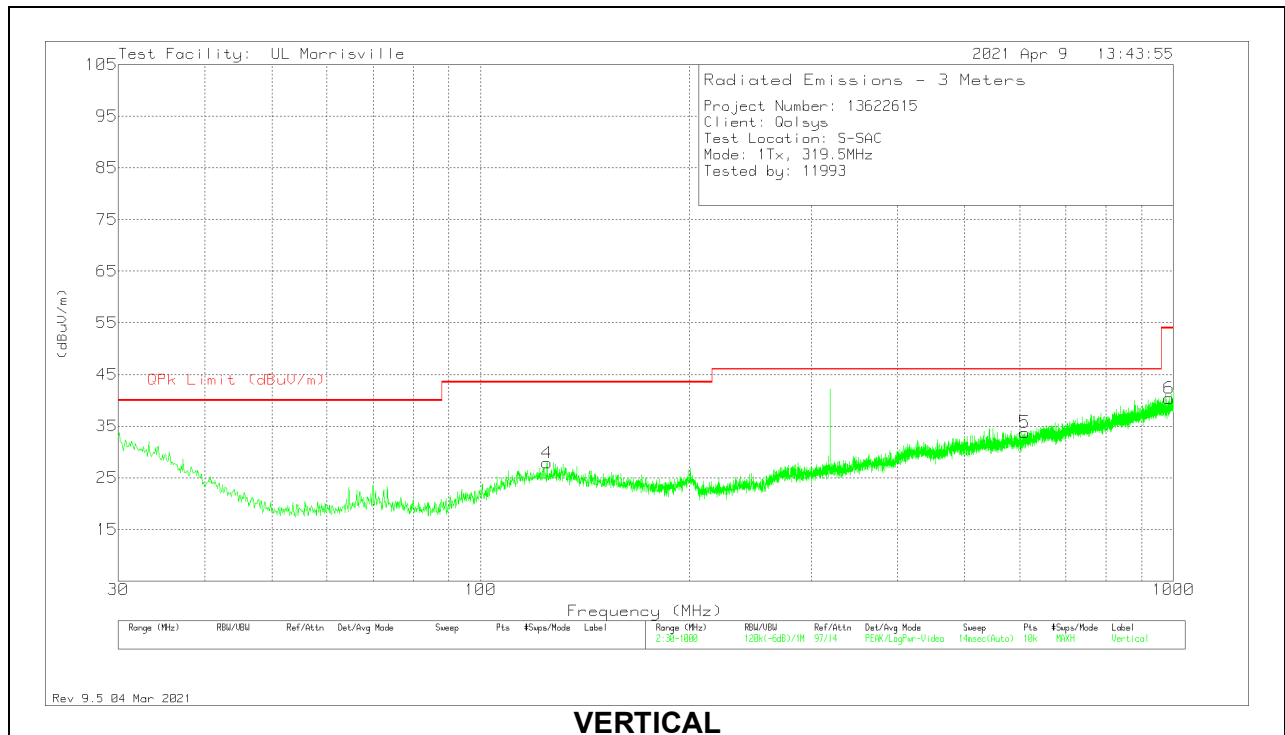
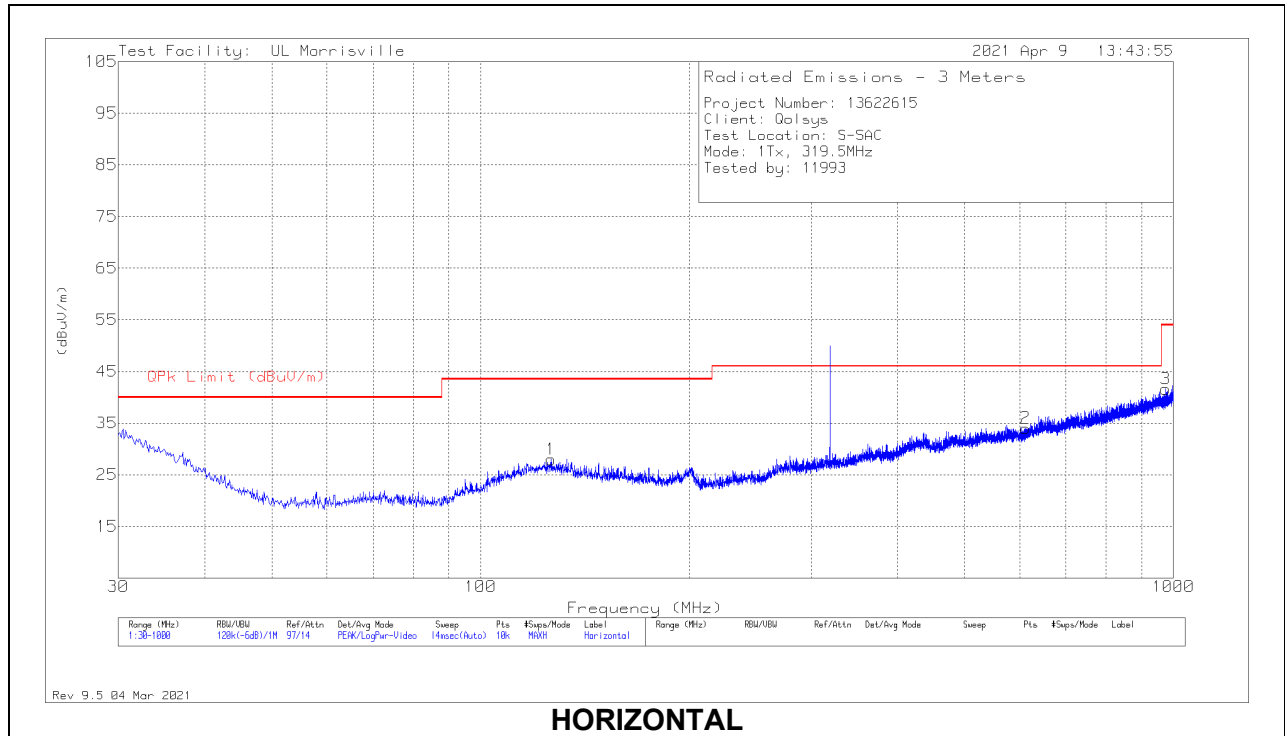
Fundamental

Frequency (MHz)	Meter Reading (dBuV)	Det	AT0075 AF (dB/m)	Amp/Cbl (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Pk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
319.5053	58.53	Pk	20.1	-28.8	0	49.83	-	-	95.89	-46.06	153	101	H
319.5053	58.53	Pk	20.1	-28.8	-22.84	26.99	75.89	-48.9	-	-	153	101	H
319.5083	51.26	Pk	20.1	-28.8	0	42.56	-	-	95.89	-53.33	220	132	V
319.5083	51.26	Pk	20.1	-28.8	-22.84	19.72	75.89	-56.17	-	-	220	132	V

Pk - Peak detector

Client:	Qolsys Inc.
Project #:	13622615
Date:	2021-04-30
Tested by:	11993
Mode:	1Tx, 319.5 MHz
Test Location:	S-SAC

HARMONICS AND TX SPURIOUS EMISSION (30 – 1000 MHz)



Radiated Emissions

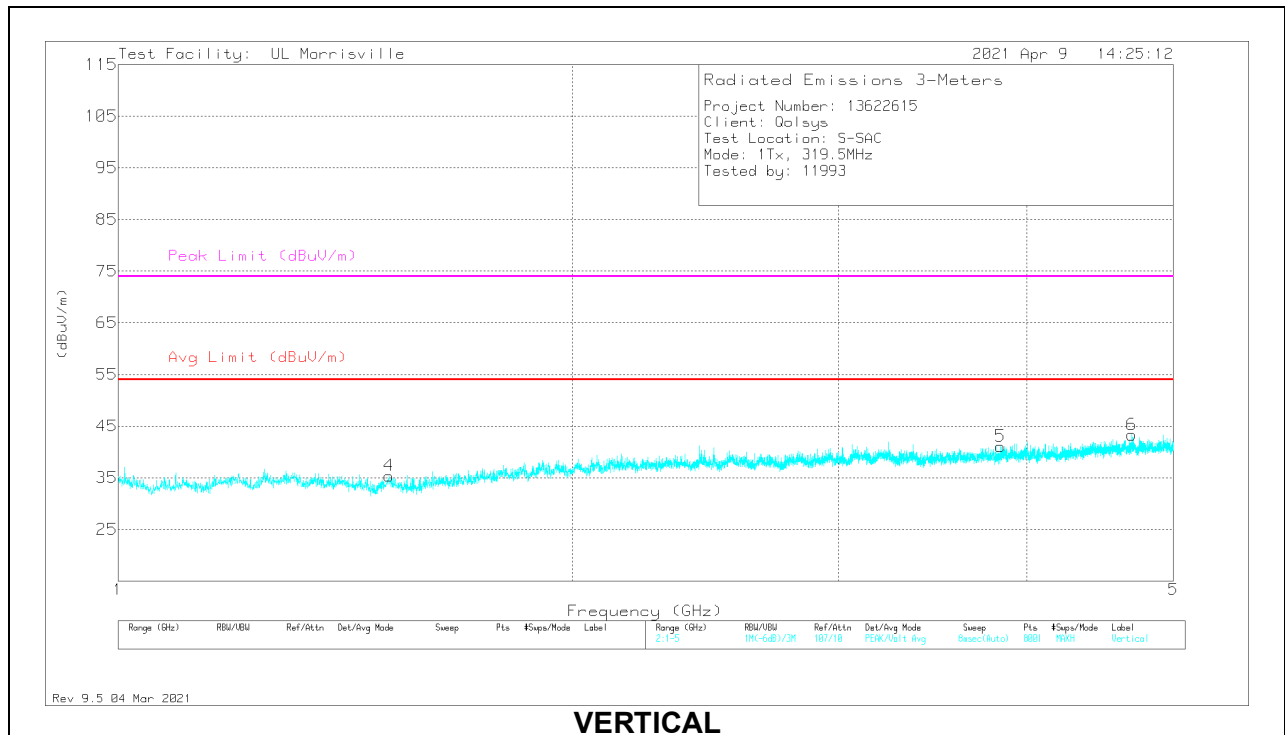
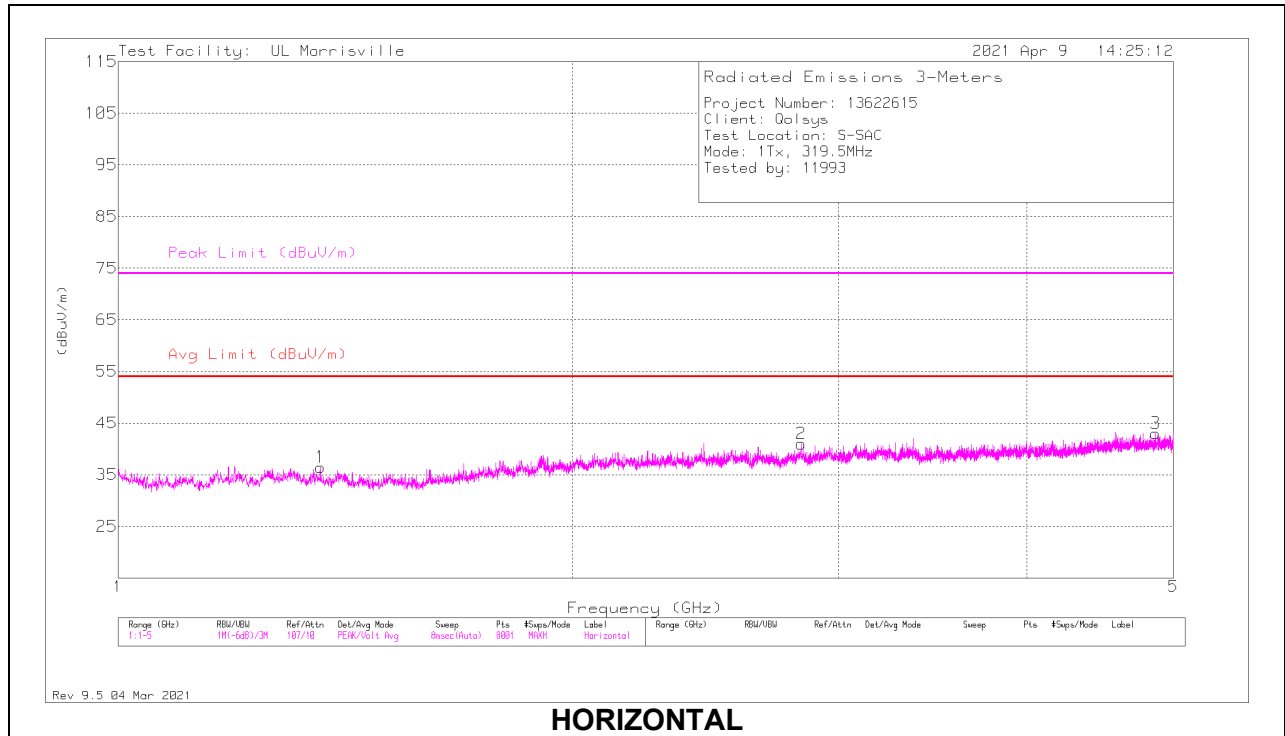
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0075 AF (dB/m)	Amp/Cbl (dB)	Pad (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 126.515	27.96	Pk	20.1	-30.1	10	27.96	43.52	-15.56	0-360	101	H
2	* ** 612	25.91	Pk	24.9	-27	10.2	34.01	46.02	-12.01	0-360	101	H
3	* ** 974.78	26.3	Pk	29.2	-24.2	10.3	41.6	53.97	-12.37	0-360	299	H
4	* ** 124.769	27.86	Pk	20.1	-30.1	10	27.86	43.52	-15.66	0-360	101	V
5	* ** 610.254	25.75	Pk	24.8	-27	10.2	33.75	46.02	-12.27	0-360	101	V
6	* ** 986.42	24.69	Pk	29.3	-23.9	10.3	40.39	53.97	-13.58	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

HARMONICS AND TX SPURIOUS EMISSIONS ABOVE 1GHz



Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AT0067 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Filter (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* ** 1.361	41.84	Pk	28.9	-35.2	.9	36.44	54	-17.56	74	-37.56	0-360	200	H
2	* ** 2.8335	41.9	Pk	32.5	-34	.6	41	54	-13	74	-33	0-360	400	H
3	* ** 4.8685	40.22	Pk	34	-31.5	.3	43.02	54	-10.98	74	-30.98	0-360	400	H
4	* ** 1.511	41.28	Pk	28	-35	1.1	35.38	54	-18.62	74	-38.62	0-360	201	V
5	* ** 3.842	40.28	Pk	33.3	-32.9	.4	41.08	54	-12.92	74	-32.92	0-360	101	V
6	* ** 4.6925	40.33	Pk	34.1	-31.5	.4	43.33	54	-10.67	74	-30.67	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

END OF TEST REPORT