CERTIFICATION TEST REPORT

Report Number. : 13092227A

Applicant	:	Signify North America Corporation O'Hare International Center 10275 W. Higgins Rd. Rosemont, IL 60018
Model	:	SNS210 MC
FCC ID	:	2AF2N-SSMC
IC	:	20659-SSMC
EUT Description	:	Occupancy and Daylight Sensor Lighting Control
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C ISED RSS-247 ISSUE 2 ISED RSS-GEN ISSUE 5

Date Of Issue:
2019-12-06

Prepared by:
UL LLC
333 Pfingsten Road
Northbrook, IL 60062 U.S.A.
TEL: 842-272-8800

NVLAP TESTING

NVLAP Lab code: 100414-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
--	--	Initial Issue	

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Signify North America Corporation

EUT DESCRIPTION: Occupancy and Daylight Sensor Lighting Control

MODEL: SNS210 MC

SERIAL NUMBER: 5139650165 (Radiated Emissions Sample)
5139650168 (Antenna Port Sample)

DATE TESTED: 2019-10-31 TO 2019-12-03

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5	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 Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. 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:

Jeff Moser
Operations Leader
Consumer Technology Division

Prepared By:

Bart Mucha
Test Engineer
Consumer Technology Division

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 15, ANSI C63.10-2013, KDB 558074 D01 15.247 Meas Guidance v05R02, RSS-GEN Issue 5, and RSS-247 Issue 2, KDB 414788 D01 Radiated Test Site v01r01

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 333 Pfingsten Road, Northbrook, Illinois, USA.

333 Pfingsten Road
☒ Chamber 10m

UL NBK is accredited by NVLAP, Laboratory Code 100414-0

ISED Site #: 2180A

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4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. 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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.39 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.07 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.52 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	4.88 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.24 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.37 dB

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

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5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a Light Sensor with BTLE and ZigBee wireless transceiver. This report contains data for BTLE only. See report #13092227B for data on ZigBee transceiver. Simultaneous transmitting in BTLE mode and ZigBee mode is not possible.

5.2. MAXIMUM OUTPUT POWER

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

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402 - 2480	BLE	6.664	4.64

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -2.0dBi

5.4. SOFTWARE AND FIRMWARE

The test utility software used during testing was 0.1.8.741

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 30MHz was conducted with the EUT set to middle channel. All measurements above 30MHz were conducted with EUT set to low channel, middle channel and high channel.

The EUT is ceiling mount only and it was tested in single orientation only.

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5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Ballast	Philips	XI040C110V054VPT1	-	-

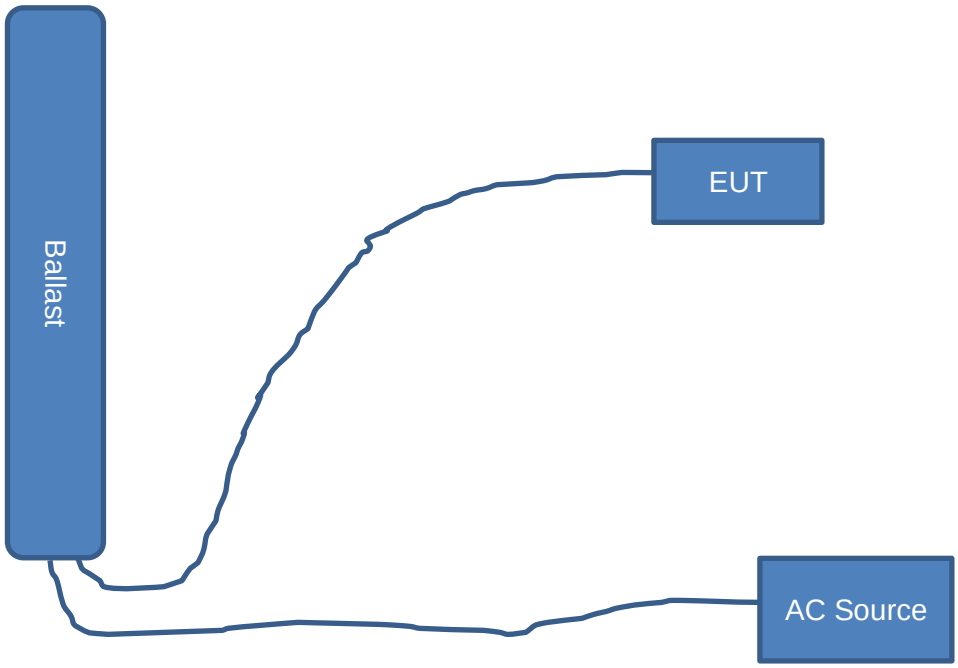
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
0	Enclosure	1	n/a	n/a	n/a	n/a
1	Data and P	1	push in	2 wire	1 m	n/a

TEST SETUP

The EUT is connected to ballast via two wires.

SETUP DIAGRAMS



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6. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10, section 11.6, b

6 dB BW: ANSI C63.10 Subclause -11.8.1 (option 2)

Occupied BW (99%): ANSI C63.10-2013 Section 6.9.3

Output Power: ANSI C63.10 Subclause -11.9.1.1 RBW ≥ DTS bandwidth

PSD: ANSI C63.10 Subclause -11.10.2 Method PKPSD (peak PSD)

Radiated emissions non-restricted frequency bands: ANSI C63.10 Subclause -11.11

Radiated emissions restricted frequency bands: ANSI C63.10 Subclause -11.12.1 & 6.10.5

Radiated Spurious Emissions Below 30MHz: ANSI C63.10-2013 Section 6.4

Band-edge: ANSI C63.10 Subclause – 11.12.1

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

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7. TEST AND MEASUREMENT EQUIPMENT

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

Test Software List			
Description	**Manufacturer**	**Model**	**Version**
Radiated Software	UL	UL EMC	Ver 9.5, June 15, 2019
AC Line Conducted Software	UL	UL EMC	Ver 9.5, May 26, 2015

Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC4328	2018-12-26	2019-12-31
Bicon Antenna	Chase	VBA6106A	EMC4078	2019-04-05	2020-04-30
Log-P Antenna	Chase	UPA6109	EMC4313	2019-04-05	2020-04-30
Antenna Array	UL	BOMS	EMC4276	2019-07-02	2020-07-31
EMI Test Receiver	Rohde & Schwarz	ESU	EMC4323	2018-12-13	2019-12-31
EMI Test Receiver	Rohde & Schwarz	ESR	EMC4377	2018-12-26	2019-12-31
Transient Limiter	Electro-Metrics	EM7600-2	EMC4224	N/A	N/A
High-Pass Filter	Solar Electronics	2803-150	EMC4327	N/A	N/A
Attenuator	HP	8494B	2831A00838	N/A	N/A
LISN - L1	Solar Electronics	8602-50-TS-50-N	EMC4066	2018-12-19	2019-12-31
LISN - L2	Solar Electronics	8602-50-TS-50-N	EMC4064	2018-12-19	2019-12-31
Signal Analyzer	Aglient	N9030A PXA	EMC4360	2018-12-11	2019-12-31

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8. ANTENNA PORT TEST RESULTS for BTLE Mode

8.1. ON TIME AND DUTY CYCLE

LIMITS

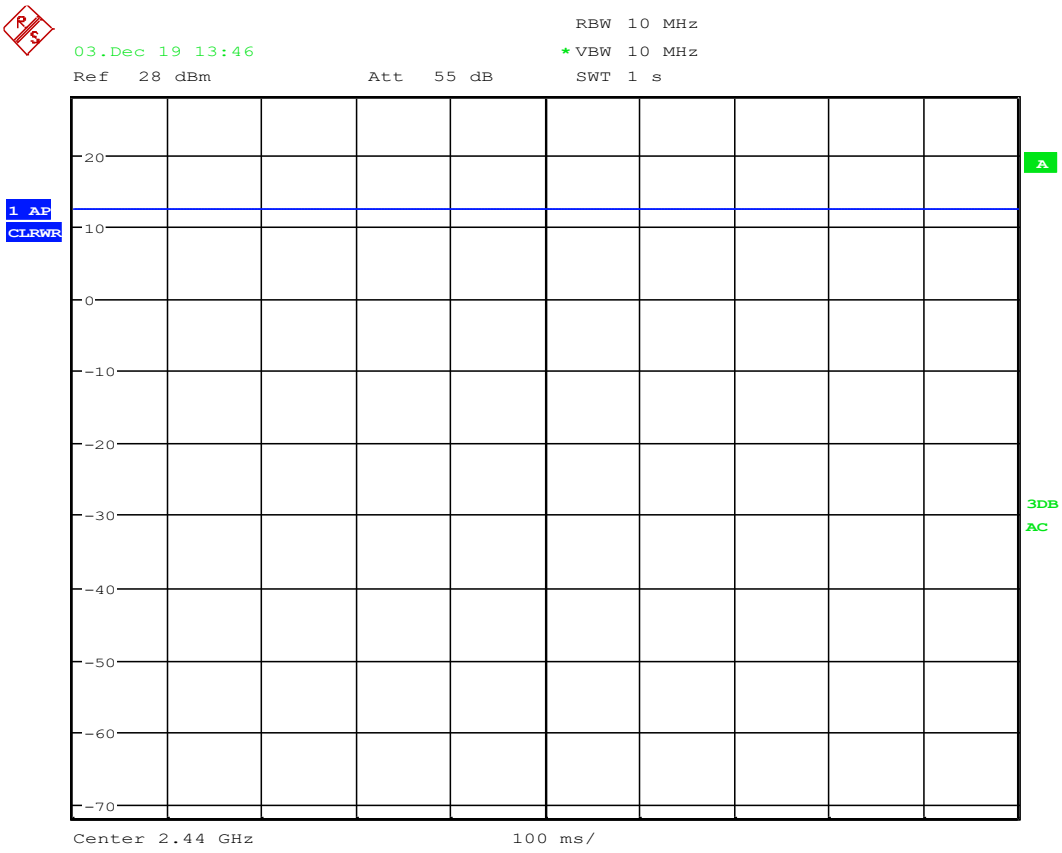
None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

For testing the EUT was set to operate at 100% Duty Cycle.



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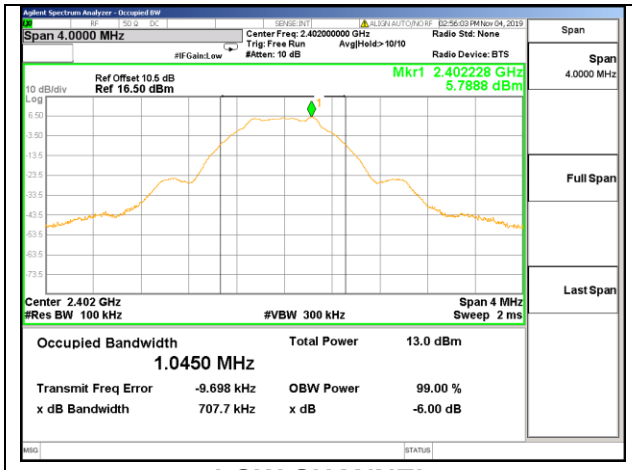
8.2. 99% BANDWIDTH

LIMITS

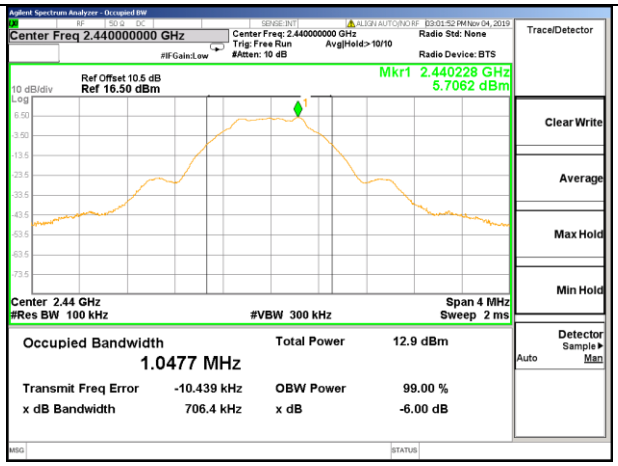
None; for reporting purposes only.

RESULTS

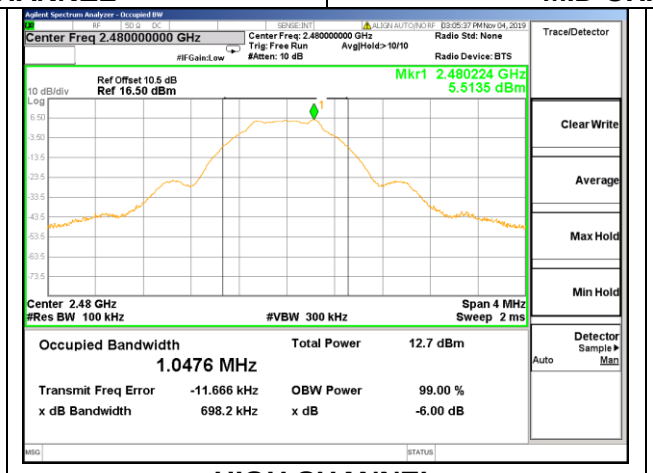
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0450
Middle	2440	1.0477
High	2480	1.0476



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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8.3. 6 dB BANDWIDTH

LIMITS

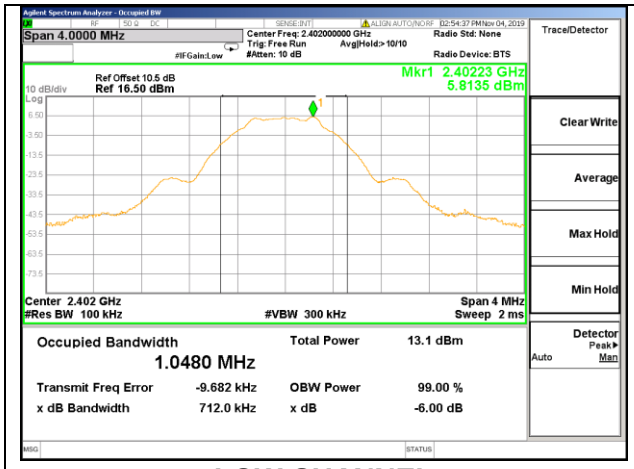
FCC §15.247 (a) (2)

RSS-247 5.2 (a)

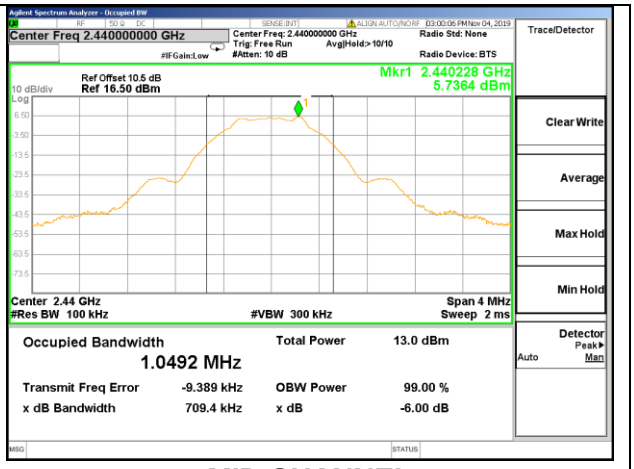
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

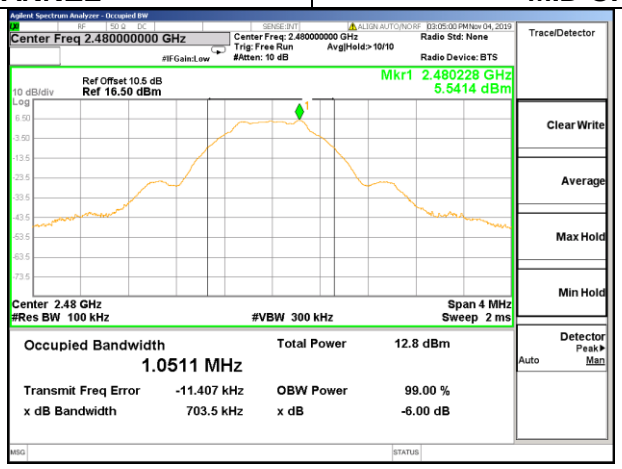
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.7120	0.5
Middle	2440	0.7090	0.5
High	2480	0.7035	0.5



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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8.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

RSS-247 5.4 (d)

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE
Transmitter output is connected to spectrum analyzer.

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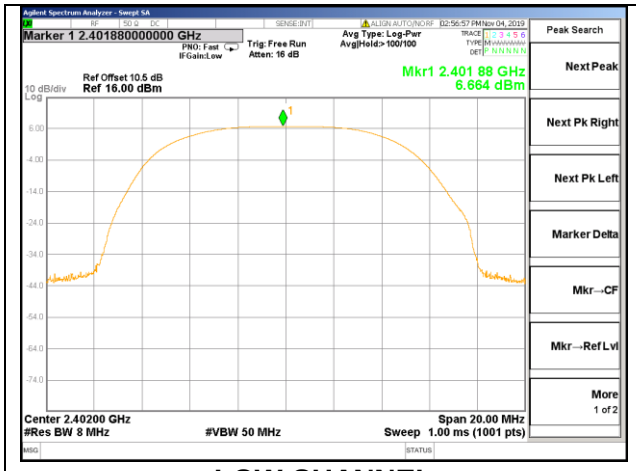
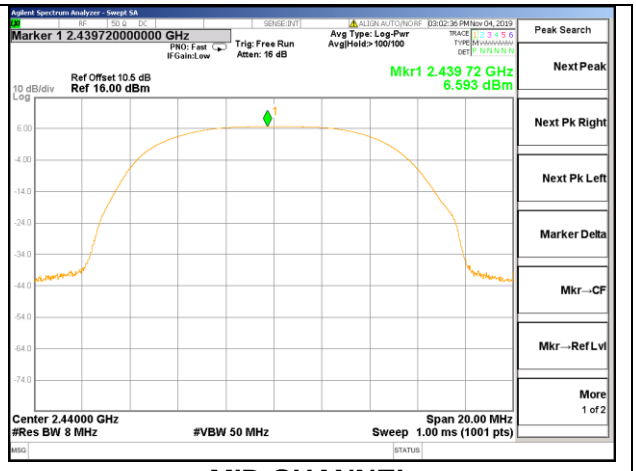
RESULTS

Tested By:	bm06740
Date:	11/4/2019

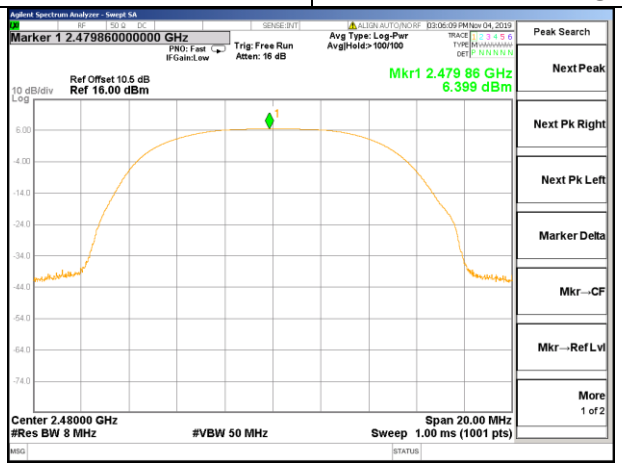
Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	6.664	30	-23.336
Middle	2440	6.593	30	-23.407
High	2480	6.399	30	-23.601



LOW CHANNEL



MID CHANNEL



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8.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

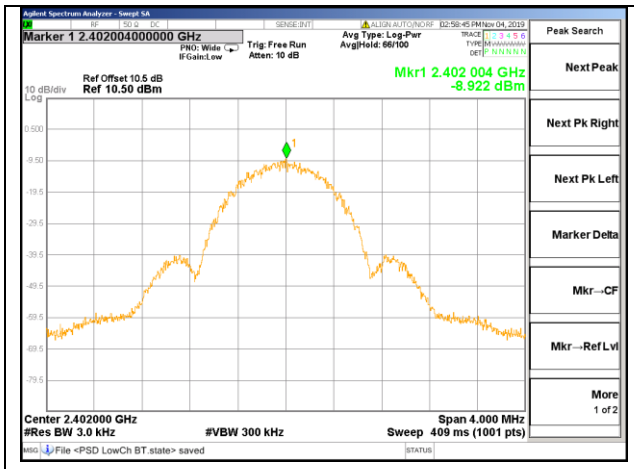
RSS-247 (5.2) (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

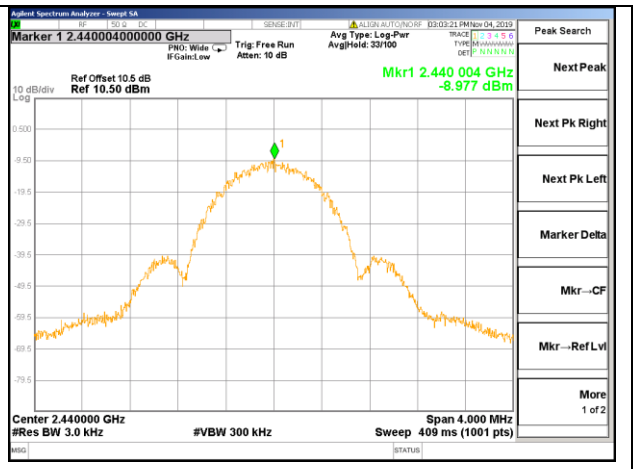
RESULTS

Tested By:	bm06740
Date:	11/4/2019

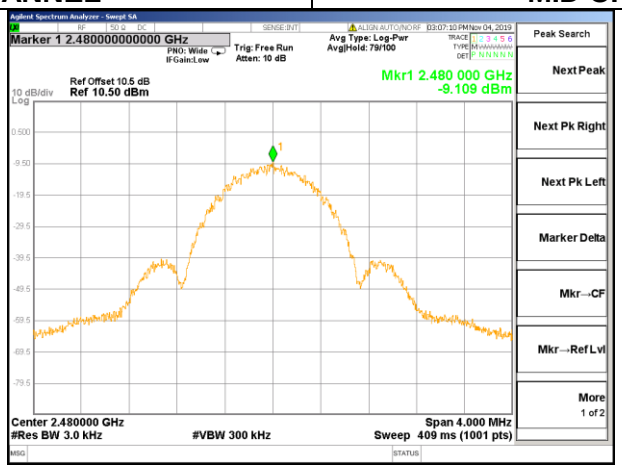
Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	2402	-8.92	8	-16.92
Middle	2440	-8.98	8	-16.98
High	2480	-9.11	8	-17.11



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

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8.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

RSS-247 5.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

Tested By:	bm06740
Date:	11/4/2019

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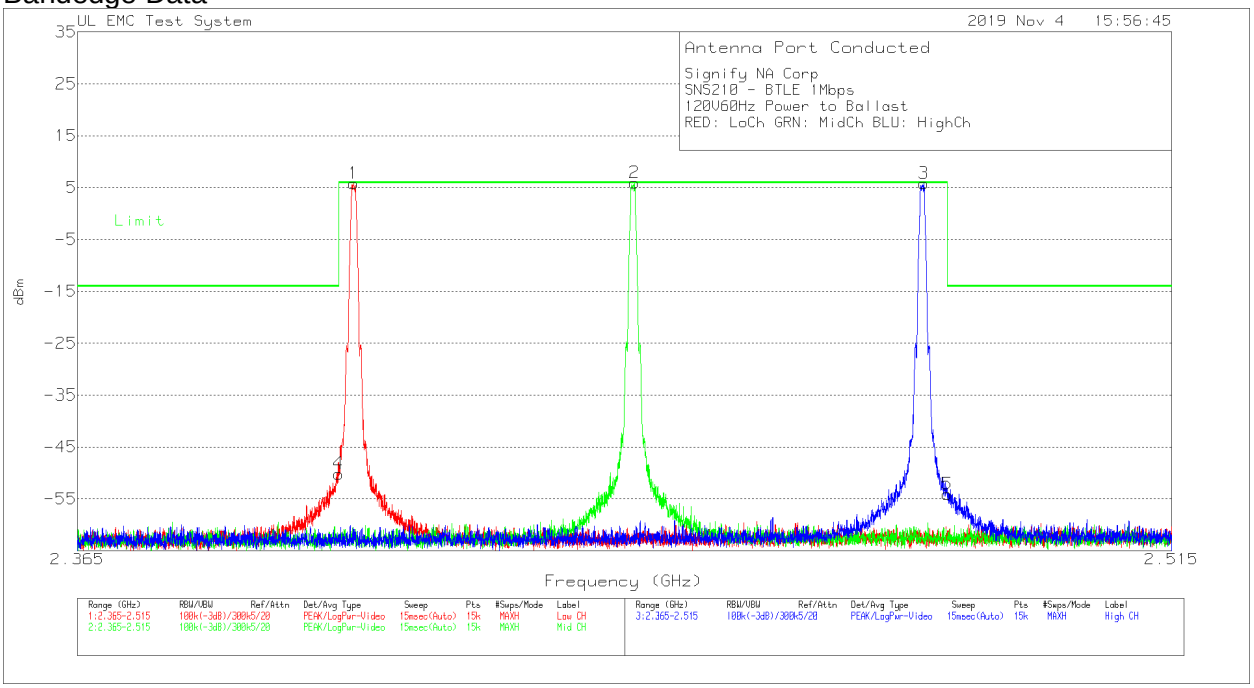
RESULTS

Bandedge Data



Signify NA Corp
SNS210 - BTLE 1Mbps
120V60Hz Power to Ballast
RED: LoCh GRN: MidCh BLU: HighCh

Trace Markers

No.	Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBm	Limit:1
Low Channel						
*1	2.402	-4.68dBm Pk	10.5	0	5.82	5.95
					Margin (dB)	-.13
4	2.4	-60.64dBm Pk	10.5	0	-50.14	-14.05
					Margin (dB)	-36.09
Middle Channel						
*2	2.44024	-4.55dBm Pk	10.5	0	5.95	5.95
					Margin (dB)	0
High Channel						
*3	2.480235	-4.75dBm Pk	10.5	0	5.75	5.95
					Margin (dB)	-.2
5	2.4835	-64.65dBm Pk	10.5	0	-54.15	-14.05
					Margin (dB)	-40.1

LIMIT 1: Limit
Pk - Peak detector
* limit and margin not applicable

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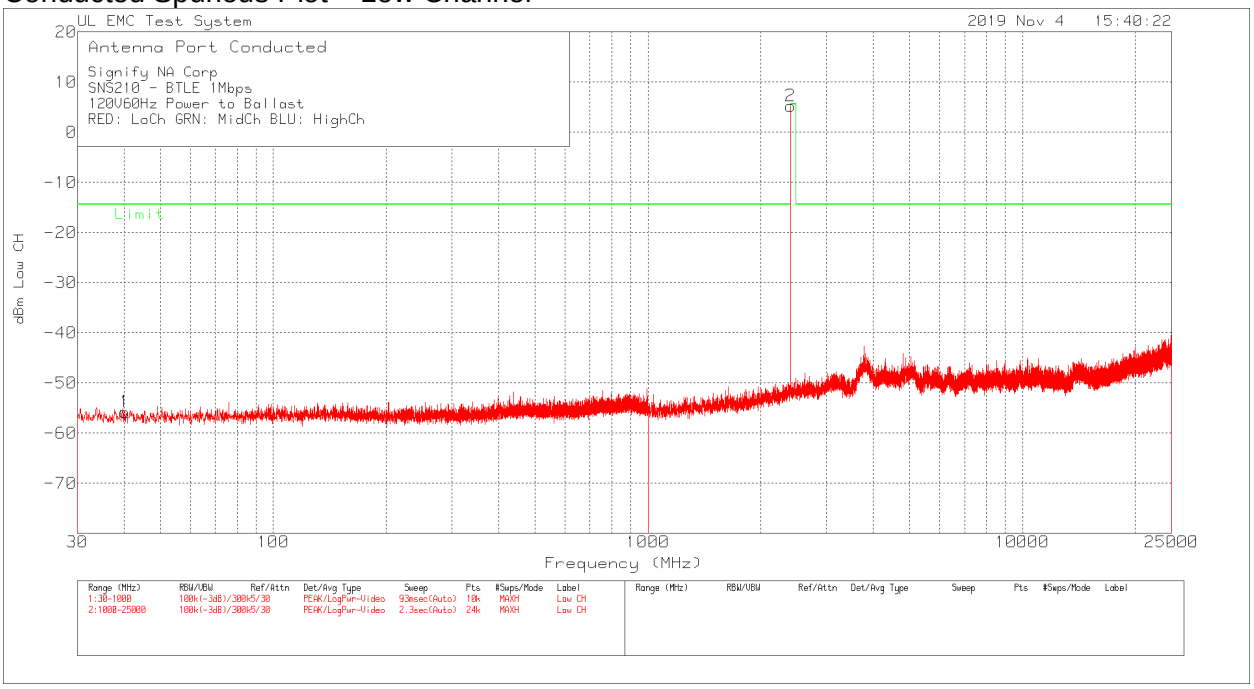
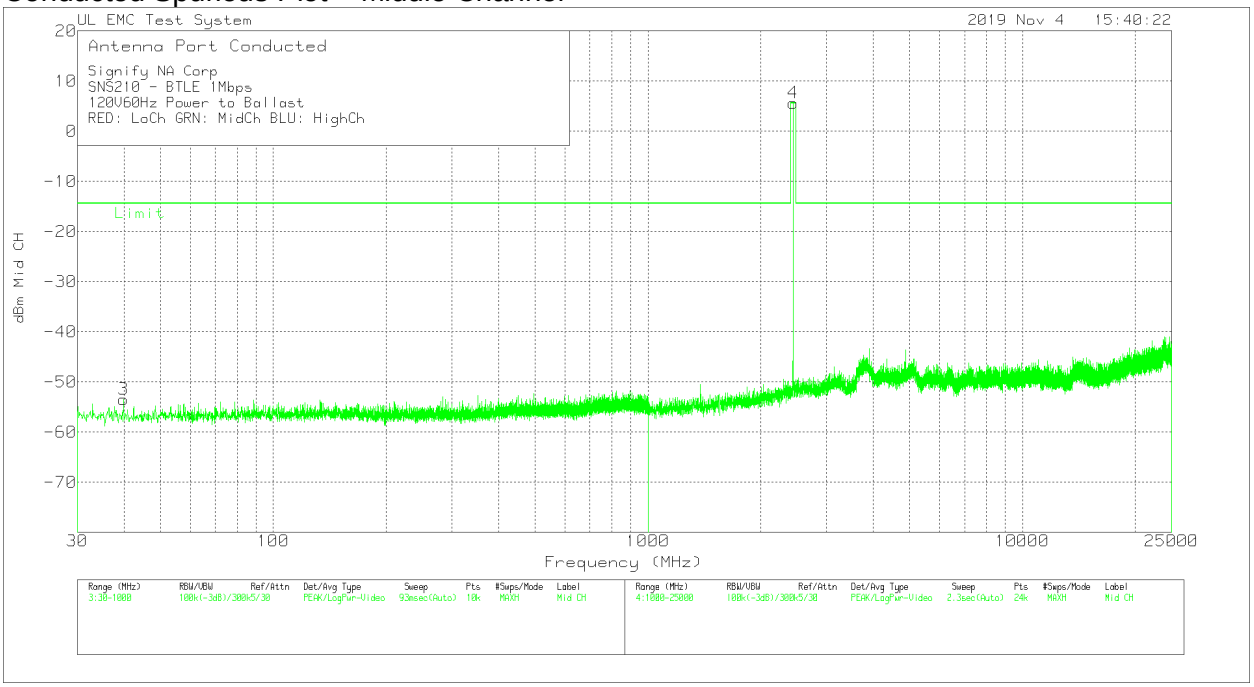
Conducted Spurious Plot – Low Channel



Conducted Spurious Plot – Middle Channel



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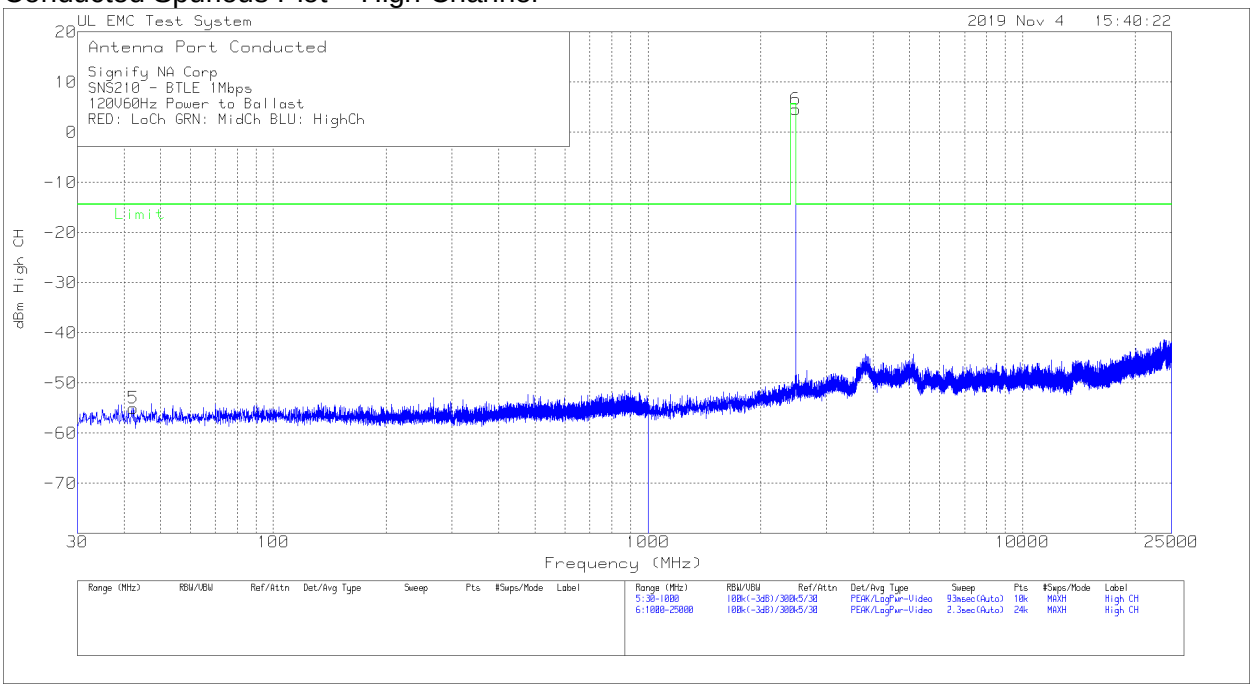
Conducted Spurious Plot – High Channel



Conducted Spurious Data – Low, Middle and High Channel

Signify NA Corp
SNS210 - BTLE 1Mbps
120V60Hz Power to Ballast
RED: LoCh GRN: MidCh BLU: HighCh

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBm	Limit:1
Low Channel						
1	40.089	-65.93dBm Pk	10.1	0	-55.83	-14.4
					Margin (dB)	-41.43
*2	2402	-5.3dBm Pk	10.5	0	5.2	5.6
					Margin (dB)	-.4
Middle Channel						
3	39.798	-63.5dBm Pk	10.1	0	-53.4	-14.4
					Margin (dB)	-39
*4	2440	-4.9dBm Pk	10.5	0	5.6	5.6
					Margin (dB)	0
High Channel						
5	42.3203	-65.08dBm Pk	10.1	0	-54.98	-14.4
					Margin (dB)	-40.58
*6	2480	-5.94dBm Pk	10.5	0	4.56	5.6
					Margin (dB)	-1.04

LIMIT 1: Limit
Pk - Peak detector
* limit and margin not applicable

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9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

RSS-GEN, Section 8.9 and 8.10.

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

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters for frequencies below 30MHz and frequencies above 1GHz. For frequencies between 30MHz and 1GHz the antenna to EUT distance is 10m. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for 30-1000 MHz peak/quasi-peak detection measurements, 200 Hz for 9-150 kHz peak/quasi-peak measurements and 9 kHz for 0.150-30 MHz peak/quasi-peak measurements. 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 3MHz 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 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. For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel).

Per FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.
OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

Measurements between 30MHz-1GHz were conducted at measurement distance of 10 meters and data was extrapolated to 3 meters using (20*log(10/3)).Measurements below 30MHz were conducted at measurement distance of 3m and data was extrapolated to measurement distance using (40*log(StandardDistance/3)).

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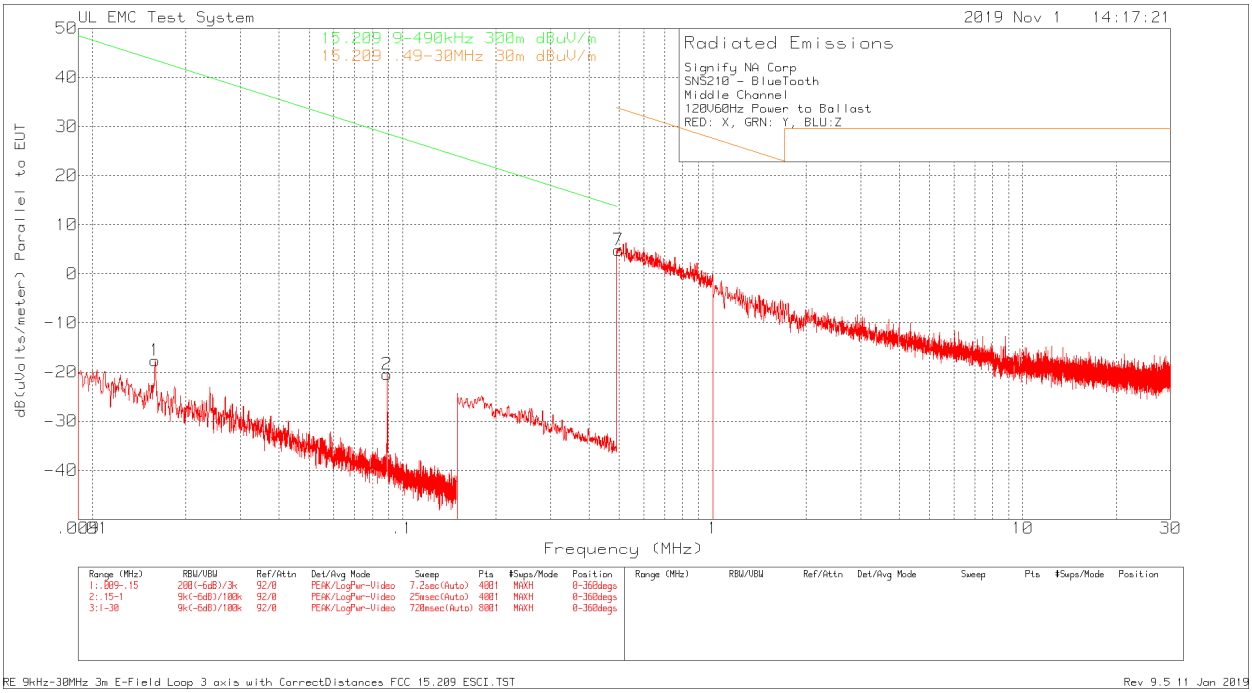
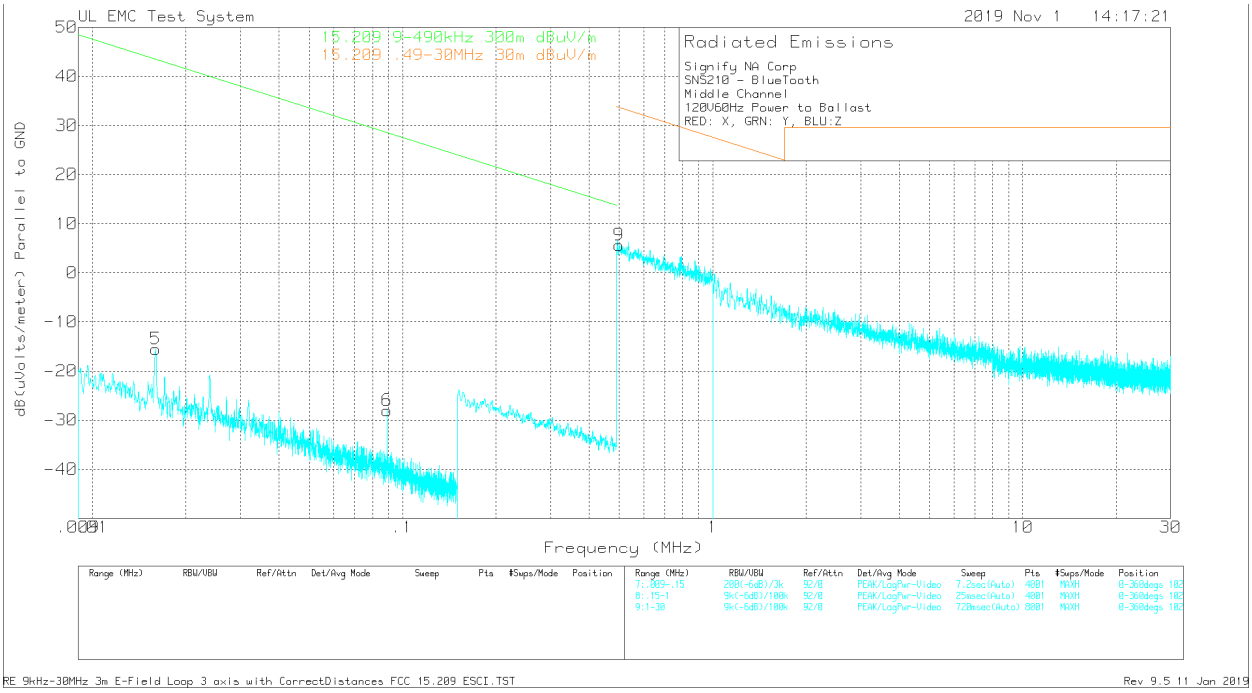
9.2. TRANSMITTER RESULTS BELOW 30MHz

9.2.1. Middle Channel Radiated Emissions





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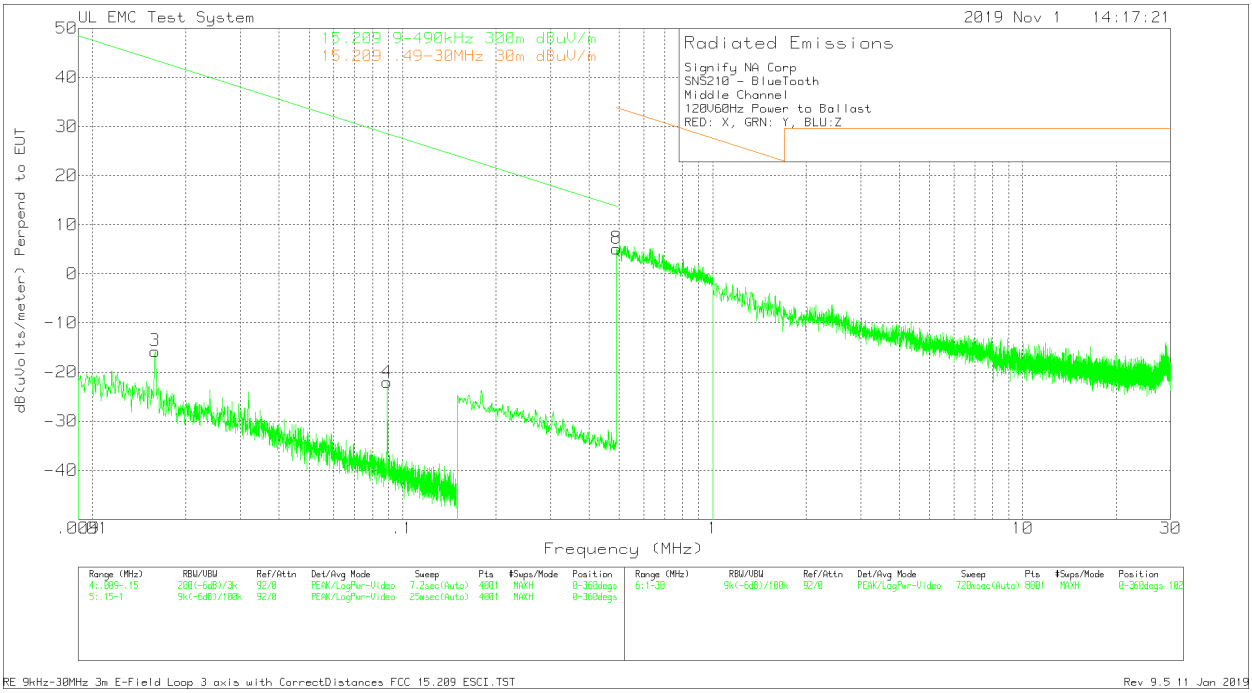

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dB(uVolts/meter)	Limit:1	2
X-Axis, Parallel to EUT							
1	.01593	41.86dBuV Pk	20.5	-80	-17.64	43.55	-
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-61.19	-
2	.08919	46.74dBuV Pk	12.8	-80	-20.46	28.59	-
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-49.05	-
7	.49719	32.71dBuV Pk	12	-39.9	4.81	-	33.67
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-	-28.86
Y-Axis, Perpendicular to EUT							
3	.01593	43.76dBuV Pk	20.5	-80	-15.74	43.55	-
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-59.29	-
4	.08919	45.12dBuV Pk	12.8	-80	-22.08	28.59	-
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-50.67	-
8	.49016	33.05dBuV Pk	12	-39.9	5.15	-	33.8
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-	-28.65
Z-Axis, Parallel to Floor							
5	.01597	43.92dBuV Pk	20.5	-80	-15.58	43.53	-
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-59.11	-
6	.08919	39.16dBuV Pk	12.8	-80	-28.04	28.59	-
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-56.63	-
9	.49953	33.5dBuV Pk	12	-39.9	5.6	-	33.63
		Azimuth:0-360	Height:102	Horz	Margin (dB)	-	-28.03

LIMIT 1: 15.209 9-490kHz 300m dBuV/m
LIMIT 2: 15.209 .49-30MHz 30m dBuV/m

Pk - Peak detector

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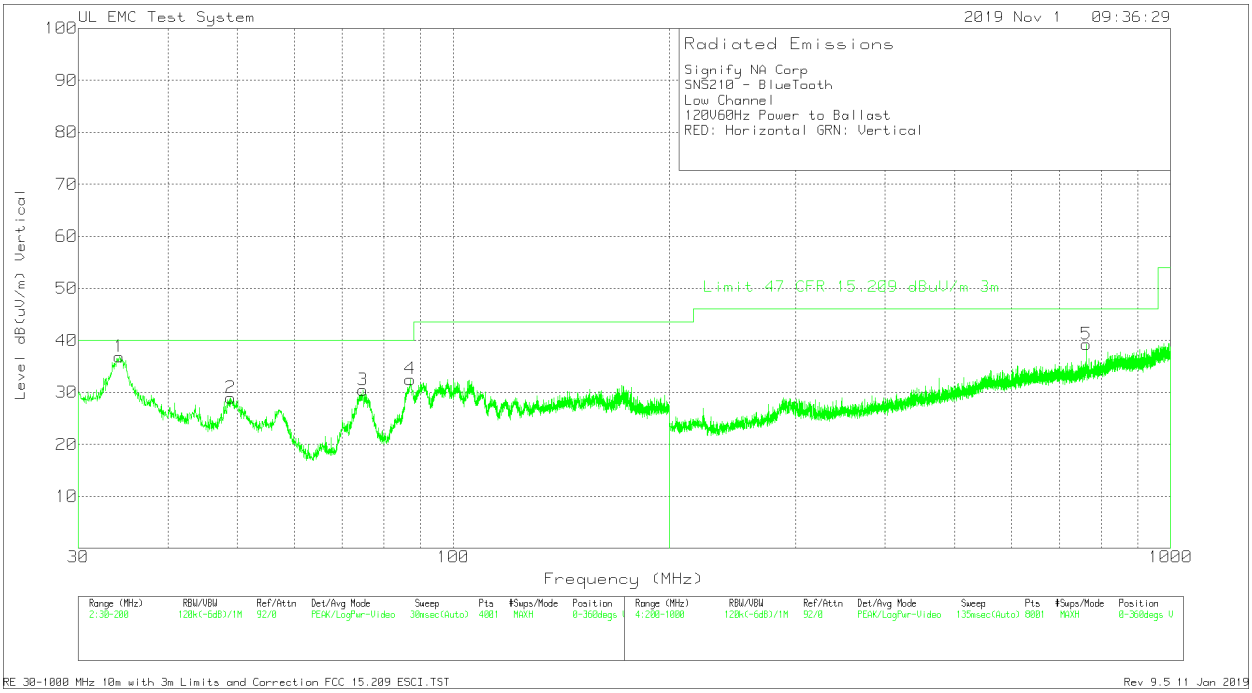
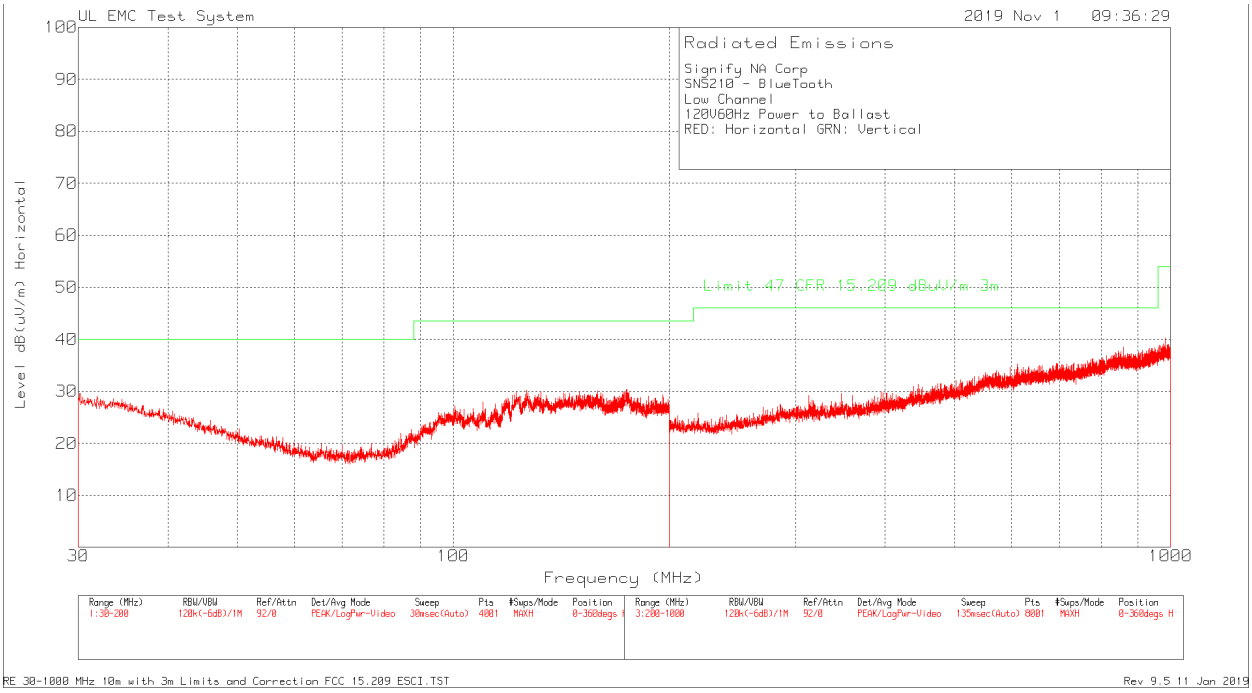
9.3. TRANSMITTER RESULTS 30MHz-1GHz

9.3.1. Low Channel Radiated Emissions





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Signify NA Corp
SNS210 - BlueTooth
Low Channel
120V60Hz Power to Ballast
RED: Horizontal GRN: Vertical

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading	Limit:1 Level dB(uV/m)
1	34.2075	40.07dBuV Pk	16.4	-19.6	36.87	40
		Azimuth:0-360	Height:102	Vert	Margin (dB)	-3.13
2	48.955	37.91dBuV Pk	10.6	-19.6	28.91	40
		Azimuth:0-360	Height:102	Vert	Margin (dB)	-11.09
3	74.795	43.54dBuV Pk	6.4	-19.5	30.44	40
		Azimuth:0-360	Height:248	Vert	Margin (dB)	-9.56
4	87.0775	43.43dBuV Pk	8.5	-19.4	32.53	40
		Azimuth:0-360	Height:248	Vert	Margin (dB)	-7.47
5	762.6	34.28dBuV Pk	21.6	-16.6	39.28	46.02
		Azimuth:0-360	Height:399	Vert	Margin (dB)	-6.74

LIMIT 1: Limit 47 CFR 15.209 dBuV/m 3m
Pk - Peak detector

Radiated Emission Data

Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading	Limit:1 Level dB(uV/m)
34.2075	36.25dBuV Qp	16.4	-19.6	33.05	40
Azimuth: 129	Height:102 Vert			Margin (dB): -6.95	

LIMIT 1: Limit 47 CFR 15.209 dBuV/m 3m
Qp - Quasi-Peak detector

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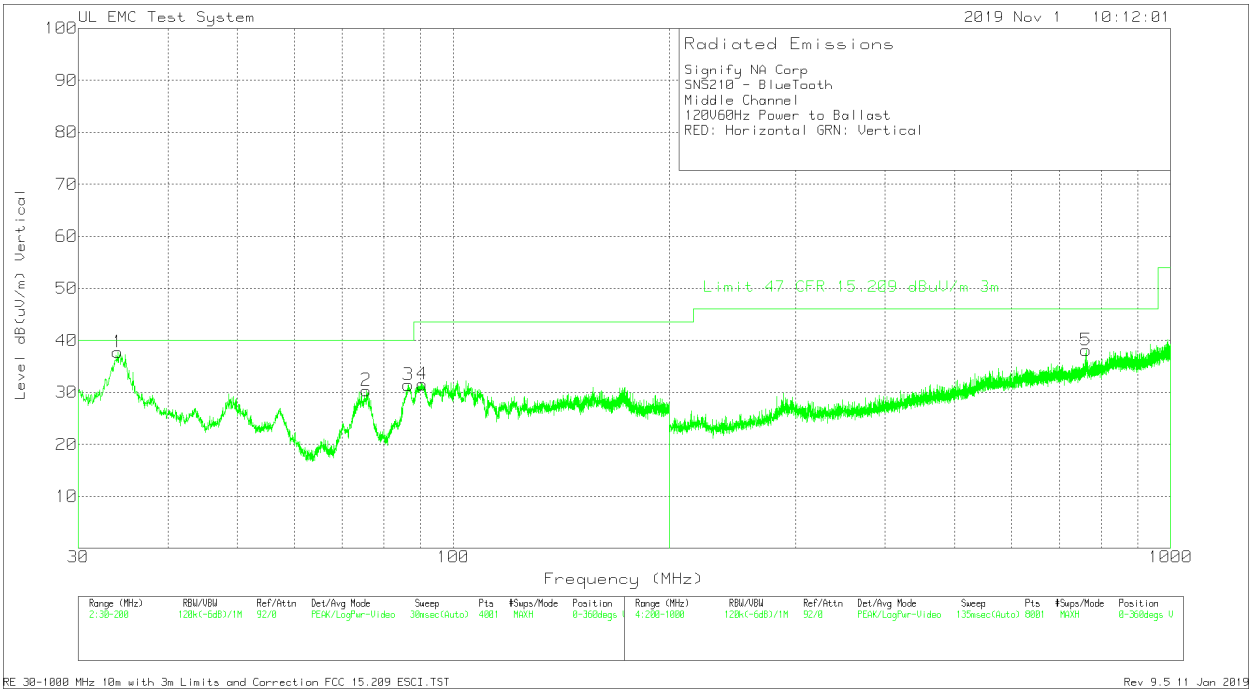
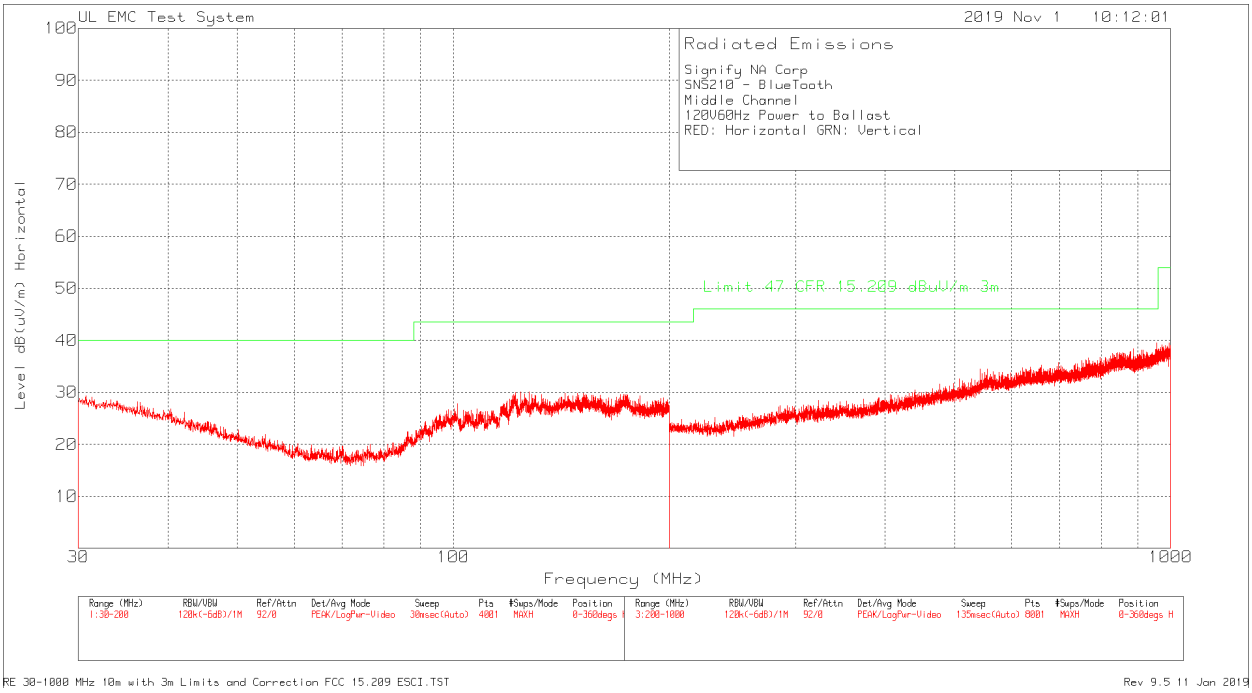
9.3.2. Middle Channel Radiated Emissions





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Signify NA Corp
SNS210 - BlueTooth
Middle Channel
120V60Hz Power to Ballast
RED: Horizontal GRN: Vertical

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading	Limit:1 Level dB(uV/m)
1	34.0375	40.87dBuV Pk	16.5	-19.6	37.77	40
		Azimuth:0-360	Height:102 Vert		Margin (dB)	-2.23
2	75.645	43.37dBuV Pk	6.5	-19.5	30.37	40
		Azimuth:0-360	Height:251 Vert		Margin (dB)	-9.63
3	86.525	42.42dBuV Pk	8.4	-19.4	31.42	40
		Azimuth:0-360	Height:102 Vert		Margin (dB)	-8.58
4	90.4775	41.84dBuV Pk	9.1	-19.4	31.54	43.52
		Azimuth:0-360	Height:102 Vert		Margin (dB)	-11.98
5	762.1	33.1dBuV Pk	21.6	-16.6	38.1	46.02
		Azimuth:0-360	Height:99 Vert		Margin (dB)	-7.92

LIMIT 1: Limit 47 CFR 15.209 dBuV/m 3m
Pk - Peak detector

Radiated Emission Data

Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading	Limit:1 Level dB(uV/m)
34.0375	35.47dBuV Qp	16.5	-19.6	32.37	40
Azimuth: 0	Height:102 Vert			Margin (dB):	-7.63

LIMIT 1: Limit 47 CFR 15.209 dBuV/m 3m
Qp - Quasi-Peak detector

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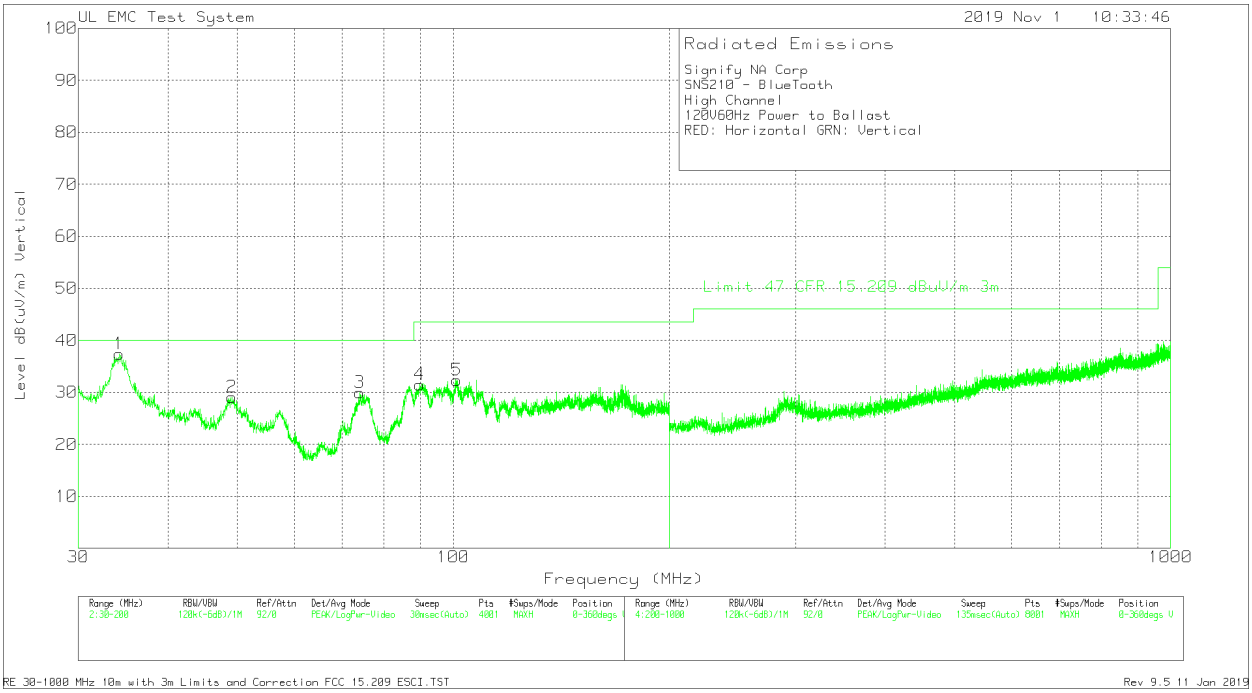
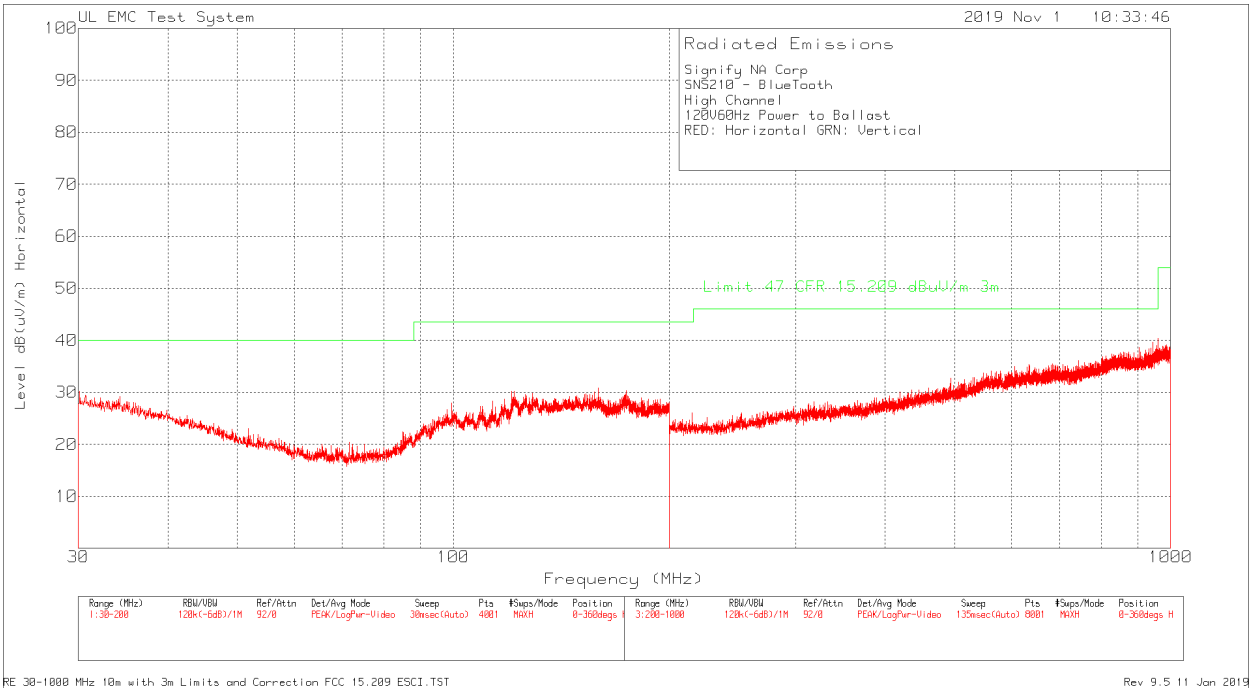
9.3.3. High Channel Radiated Emissions





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Signify NA Corp
SNS210 - BlueTooth
High Channel
120V60Hz Power to Ballast
RED: Horizontal GRN: Vertical

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading	Limit:1 Level dB(uV/m)
1	34.2075	40.56dBuV Pk	16.4	-19.6	37.36	40
		Azimuth:0-360	Height:101 Vert		Margin (dB)	-2.64
2	49.1675	38.15dBuV Pk	10.5	-19.6	29.05	40
		Azimuth:0-360	Height:101 Vert		Margin (dB)	-10.95
3	74.0725	43.18dBuV Pk	6.3	-19.5	29.98	40
		Azimuth:0-360	Height:101 Vert		Margin (dB)	-10.02
4	89.7975	41.9dBuV Pk	9	-19.4	31.5	43.52
		Azimuth:0-360	Height:101 Vert		Margin (dB)	-12.02
5	101.06	40.86dBuV Pk	10.9	-19.4	32.36	43.52
		Azimuth:0-360	Height:101 Vert		Margin (dB)	-11.16

LIMIT 1: Limit 47 CFR 15.209 dBuV/m 3m
Pk - Peak detector

Radiated Emission Data

Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading	Limit:1 Level dB(uV/m)
34.2075	36.5dBuV Qp	16.4	-19.6	33.3	40
Azimuth: 118	Height:102 Vert			Margin (dB): -6.7	

LIMIT 1: Limit 47 CFR 15.209 dBuV/m 3m
Qp - Quasi-Peak detector

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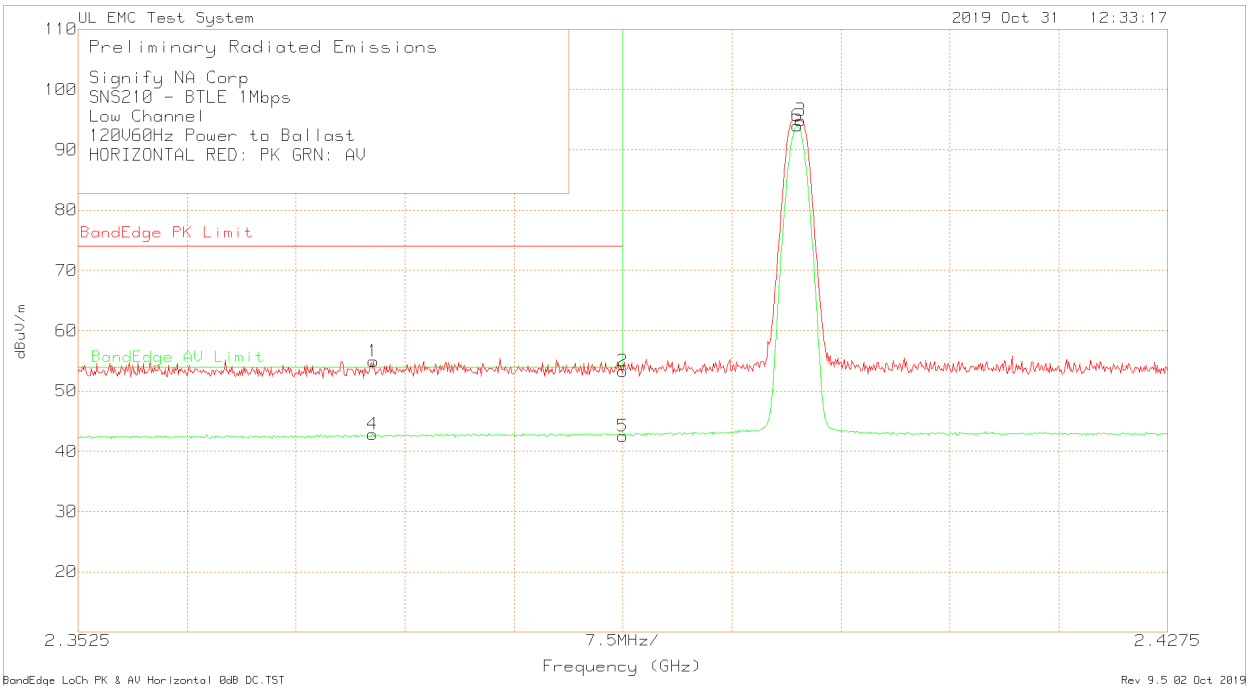
9.4. TRANSMITTER ABOVE 1 GHz

9.4.1. Low Channel Bandedge

HORIZONTAL RESULT



Trace Markers

No.	Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1	2
Peak Data							
1	2.372825	28.42dBuV Pk	21.8	4.71	54.93	74	-
		Azimuth:111	Height:100	Horz	Margin (dB)	-19.07	-
2	2.39	26.7dBuV Pk	21.8	4.8	53.3	74	-
		Azimuth:111	Height:100	Horz	Margin (dB)	-20.7	-
3	2.402225	68.34dBuV Pk	21.8	4.74	94.88	-	-
		Azimuth:111	Height:100	Horz	Margin (dB)	-	-
Average Data							
4	2.37275	16.29dBuV RMS	21.8	4.71	42.8	-	54
		Azimuth:111	Height:100	Horz	Margin (dB)	-	-11.2
5	2.39	15.92dBuV RMS	21.8	4.8	42.52	-	54
		Azimuth:111	Height:100	Horz	Margin (dB)	-	-11.48
6	2.402	67.41dBuV RMS	21.8	4.74	93.95	-	-
		Azimuth:111	Height:100	Horz	Margin (dB)	-	-

LIMIT 1: BandEdge PK Limit
LIMIT 2: BandEdge AV Limit

Pk - Peak detector
RMS - RMS detection

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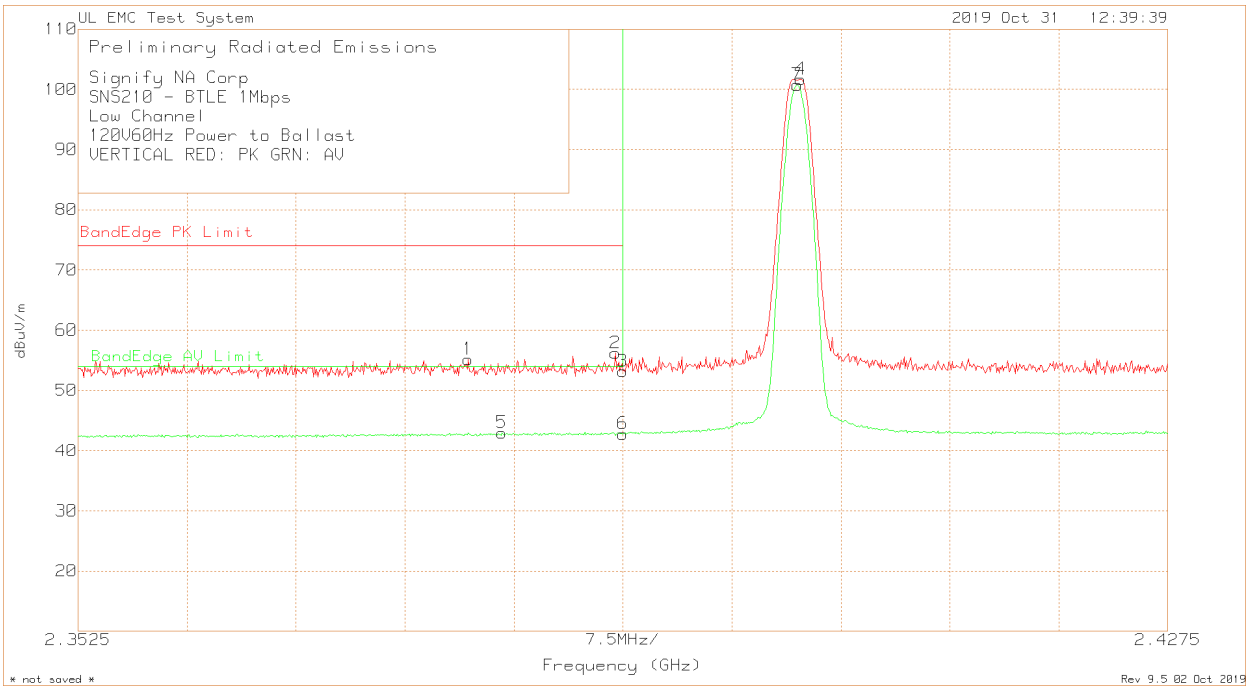
VERTICAL RESULT



Trace Markers

No.	Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1	2
Peak Data							
1	2.37935	28.62dBuV Pk	21.8	4.76	55.18	74	-
		Azimuth:224	Height:102	Vert	Margin (dB)	-18.82	-
2	2.389475	29.6dBuV Pk	21.8	4.79	56.19	74	-
		Azimuth:224	Height:102	Vert	Margin (dB)	-17.81	-
3	2.39	26.61dBuV Pk	21.8	4.8	53.21	74	-
		Azimuth:224	Height:102	Vert	Margin (dB)	-20.79	-
4	2.402225	75.14dBuV Pk	21.8	4.74	101.68	-	-
		Azimuth:224	Height:102	Vert	Margin (dB)	-	-
Average Data							
5	2.381675	16.42dBuV RMS	21.8	4.75	42.97	-	54
		Azimuth:224	Height:102	Vert	Margin (dB)	-	-11.03
6	2.39	16.17dBuV RMS	21.8	4.8	42.77	-	54
		Azimuth:224	Height:102	Vert	Margin (dB)	-	-11.23
7	2.402	74.2dBuV RMS	21.8	4.74	100.74	-	-
		Azimuth:224	Height:102	Vert	Margin (dB)	-	-

LIMIT 1: BandEdge PK Limit
LIMIT 2: BandEdge AV Limit

Pk - Peak detector
RMS - RMS detection

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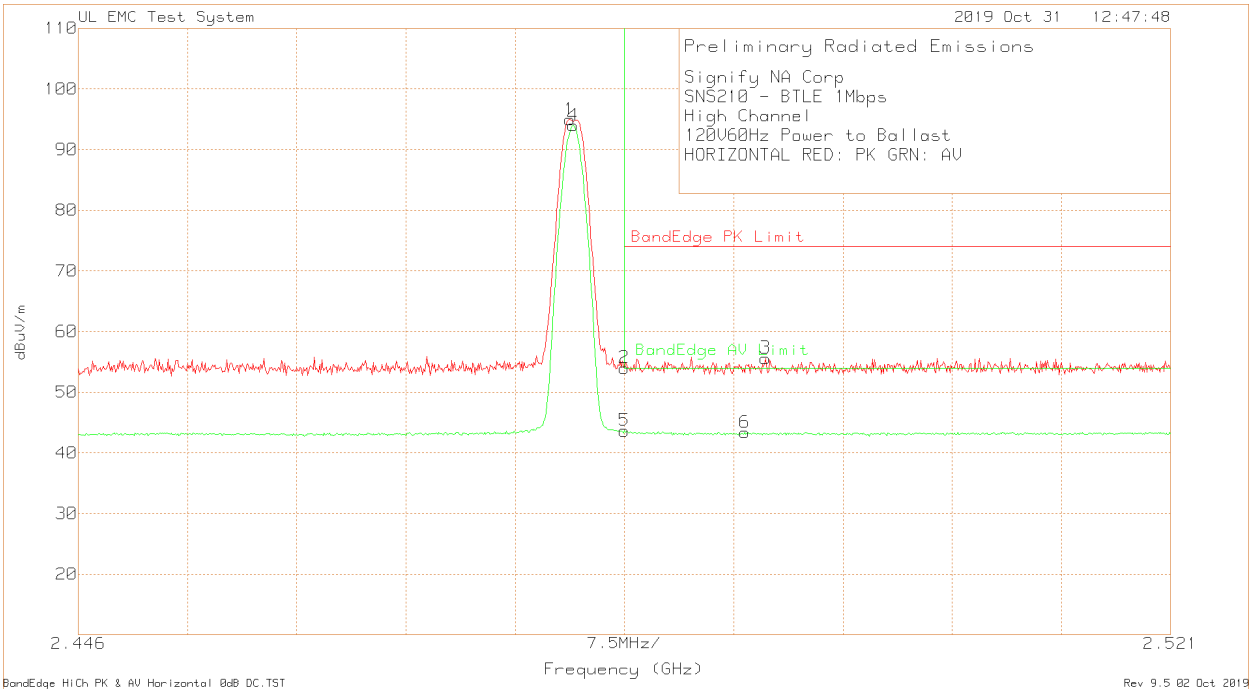
9.4.2. High Channel Bandedge

HORIZONTAL RESULT



Trace Markers

No.	Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1	2
Peak Data							
1	2.47975	68.44dBuV Pk	22	4.48	94.92	-	-
		Azimuth:91	Height:100	Horz	Margin (dB)	-	-
2	2.4835	27.43dBuV Pk	22.1	4.47	54	74	-
		Azimuth:91	Height:100	Horz	Margin (dB)	-20	-
3	2.493175	29.02dBuV Pk	22.1	4.49	55.61	74	-
		Azimuth:91	Height:100	Horz	Margin (dB)	-18.39	-
Average Data							
4	2.479975	67.48dBuV RMS	22	4.47	93.95	-	-
		Azimuth:91	Height:100	Horz	Margin (dB)	-	-
5	2.4835	17.08dBuV RMS	22.1	4.47	43.65	-	54
		Azimuth:91	Height:100	Horz	Margin (dB)	-	-10.35
6	2.49175	16.78dBuV RMS	22.1	4.5	43.38	-	54
		Azimuth:91	Height:100	Horz	Margin (dB)	-	-10.62

LIMIT 1: BandEdge PK Limit
LIMIT 2: BandEdge AV Limit

Pk - Peak detector
RMS - RMS detection

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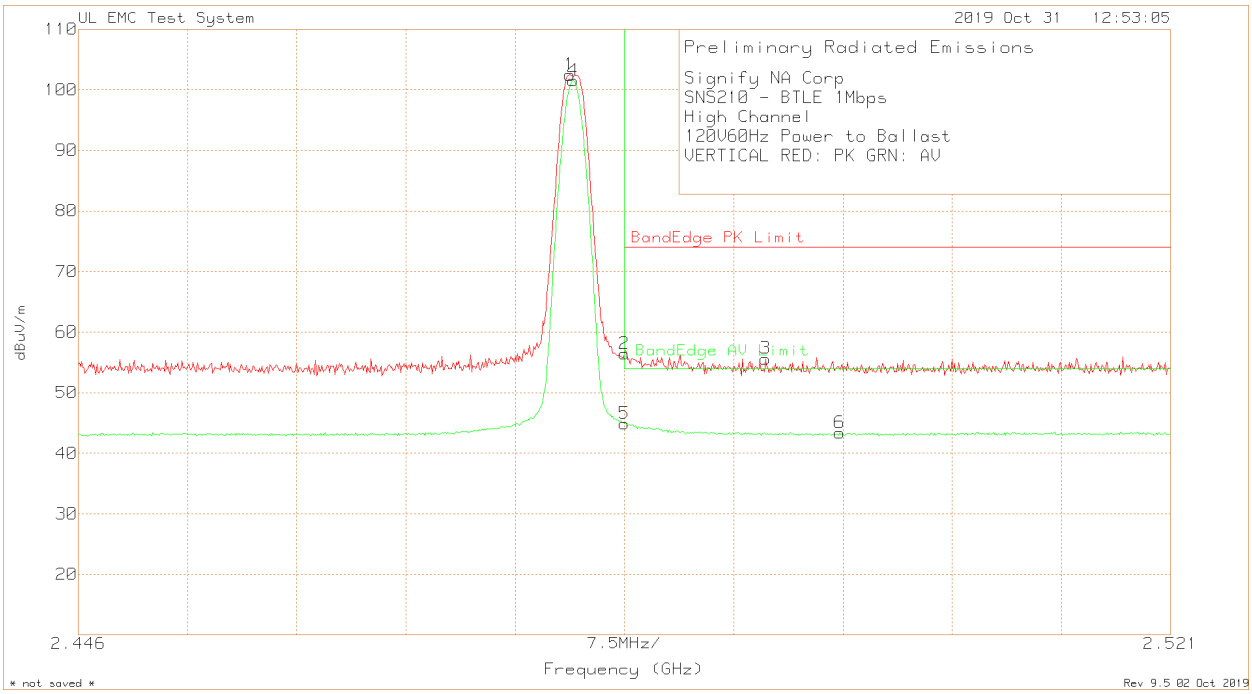
VERTICAL RESULT



Trace Markers

No.	Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1	2
Peak Data							
1	2.47975	75.99dBuV Pk	22	4.48	102.47	-	-
		Azimuth:243	Height:100	Vert	Margin (dB)	-	-
2	2.4835	29.88dBuV Pk	22.1	4.47	56.45	74	-
		Azimuth:243	Height:100	Vert	Margin (dB)	-17.55	-
3	2.493175	29.03dBuV Pk	22.1	4.49	55.62	74	-
		Azimuth:243	Height:100	Vert	Margin (dB)	-18.38	-
Average Data							
4	2.479975	75.05dBuV RMS	22	4.47	101.52	-	-
		Azimuth:243	Height:100	Vert	Margin (dB)	-	-
5	2.4835	18.33dBuV RMS	22.1	4.47	44.9	-	54
		Azimuth:243	Height:100	Vert	Margin (dB)	-	-9.1
6	2.498275	16.78dBuV RMS	22.1	4.46	43.34	-	54
		Azimuth:243	Height:100	Vert	Margin (dB)	-	-10.66

LIMIT 1: BandEdge PK Limit
LIMIT 2: BandEdge AV Limit

Pk - Peak detector
RMS - RMS detection

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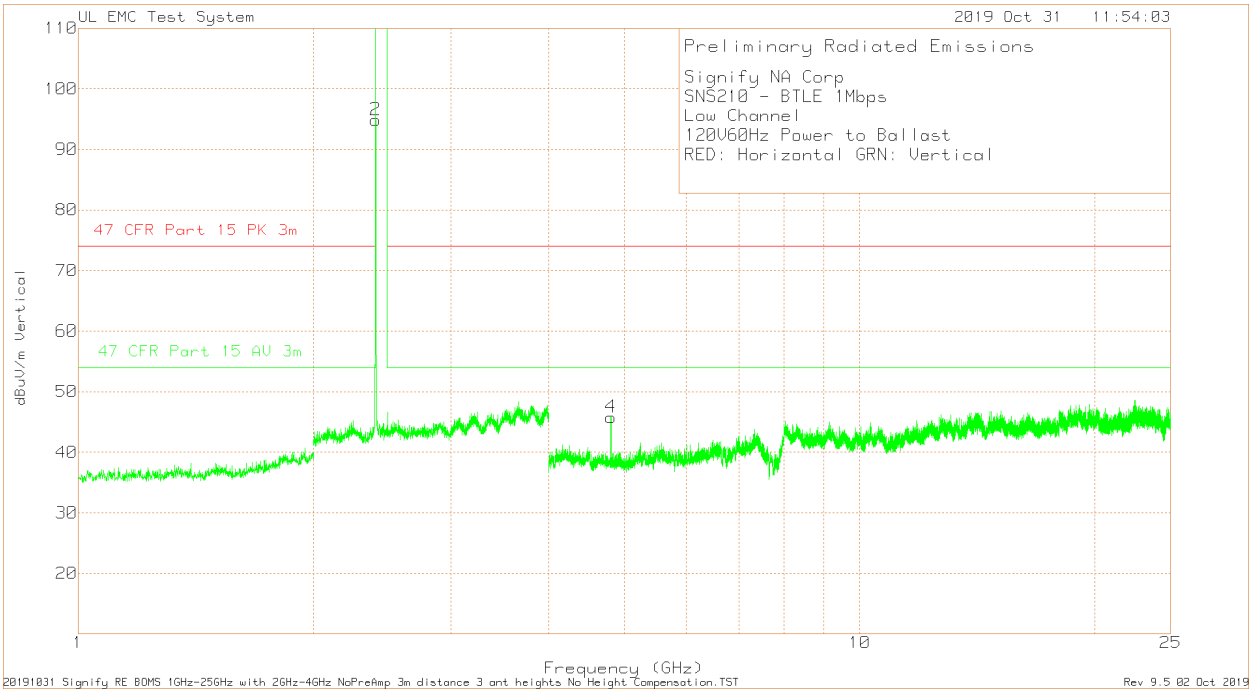
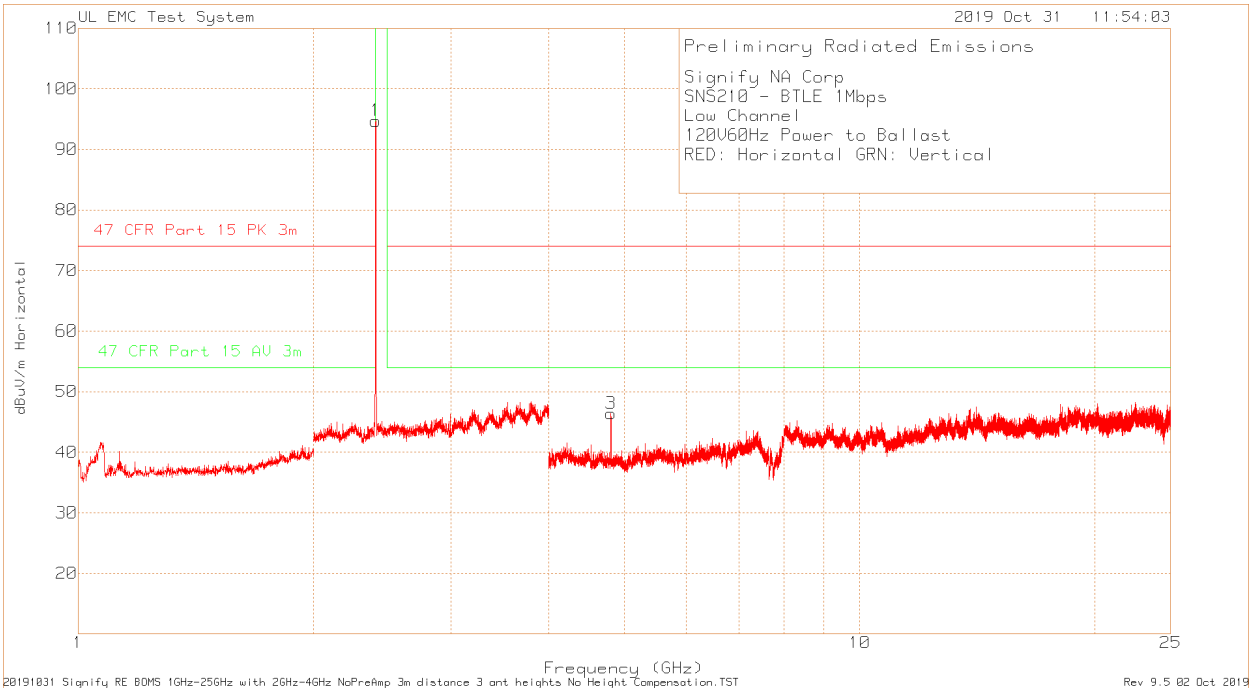
9.4.3. Harmonics and Spurious Emissions Low Channel





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Signify NA Corp
SNS210 - BTLE 1Mbps
Low Channel
120V60Hz Power to Ballast
RED: Horizontal GRN: Vertical

Trace Markers

No.	Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1	2
1	2.402	113.29dBuV Pk	21.8	-40.39	94.7	-	-
		Azimuth:0-360	Height:100	Horz	Margin (dB)	-	-
3	4.804	70.05dBuV Pk	27.7	-51.39	46.36	74	54
		Azimuth:0-360	Height:150	Horz	Margin (dB)	-27.64	-7.64
2	2.402	113.48dBuV Pk	21.8	-40.39	94.89	-	-
		Azimuth:0-360	Height:150	Vert	Margin (dB)	-	-
4	4.805	69.36dBuV Pk	27.7	-51.27	45.79	74	54
		Azimuth:0-360	Height:200	Vert	Margin (dB)	-28.21	-8.21

LIMIT 1: 47 CFR Part 15 PK 3m
LIMIT 2: 47 CFR Part 15 AV 3m

Pk - Peak detector

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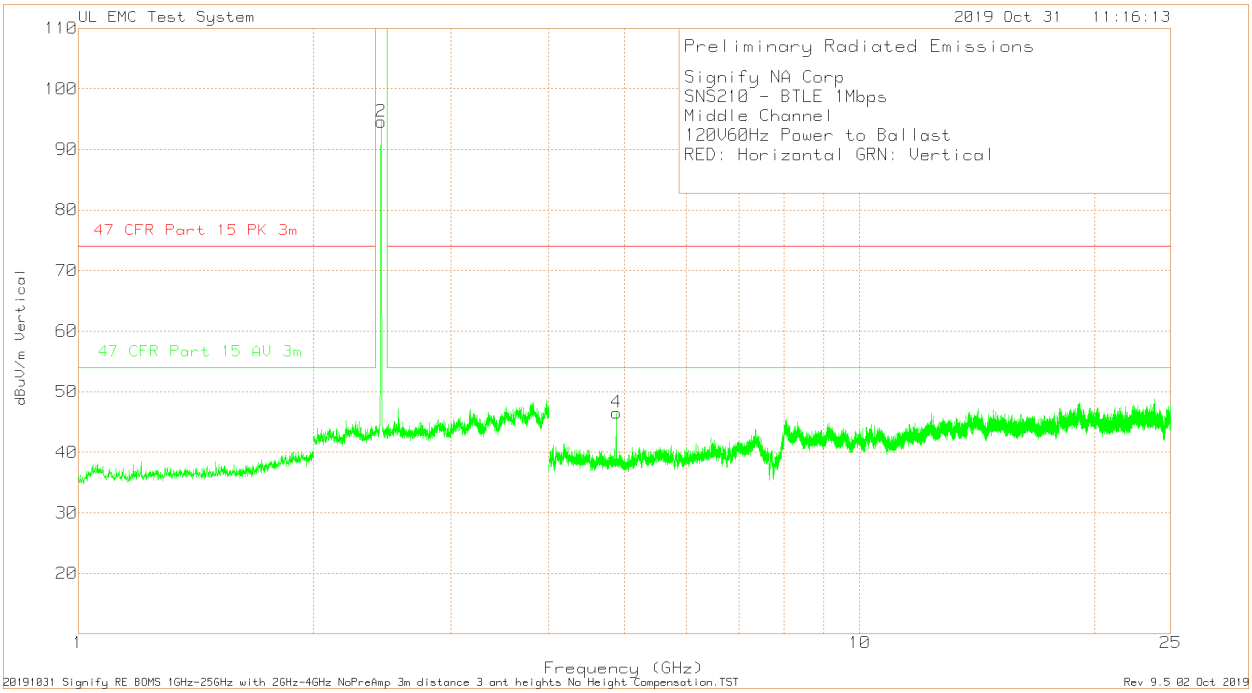
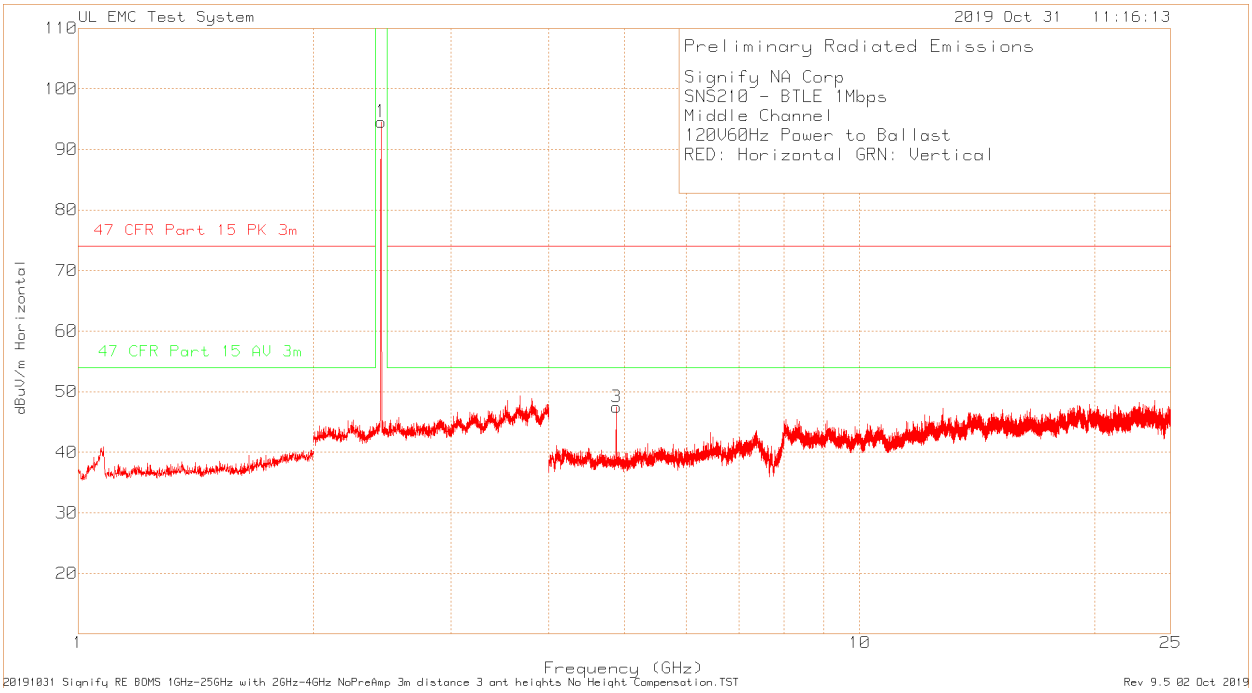
9.4.4. Harmonics and Spurious Emissions Middle Channel





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Signify NA Corp
SNS210 - BTLE 1Mbps
Middle Channel
120V60Hz Power to Ballast
RED: Horizontal GRN: Vertical

Trace Markers

No.	Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1	2
1	2.44	113.18dBuV Pk	21.9	-40.52	94.56	-	-
		Azimuth:0-360	Height:100	Horz	Margin (dB)	-	-
3	4.88	70.43dBuV Pk	27.7	-50.66	47.47	74	54
		Azimuth:0-360	Height:100	Horz	Margin (dB)	-26.53	-6.53
2	2.44	113.21dBuV Pk	21.9	-40.52	94.59	-	-
		Azimuth:0-360	Height:200	Vert	Margin (dB)	-	-
4	4.88	69.51dBuV Pk	27.7	-50.66	46.55	74	54
		Azimuth:0-360	Height:100	Vert	Margin (dB)	-27.45	-7.45

LIMIT 1: 47 CFR Part 15 PK 3m
LIMIT 2: 47 CFR Part 15 AV 3m

Pk - Peak detector

UL LLC
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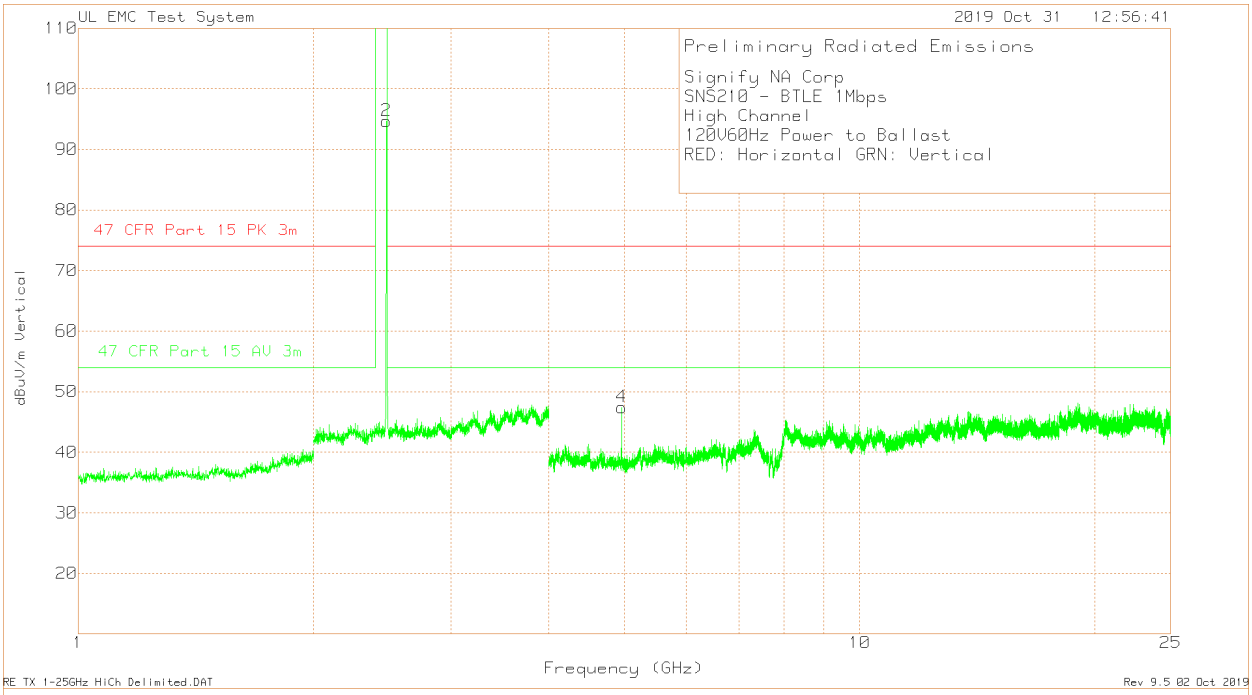
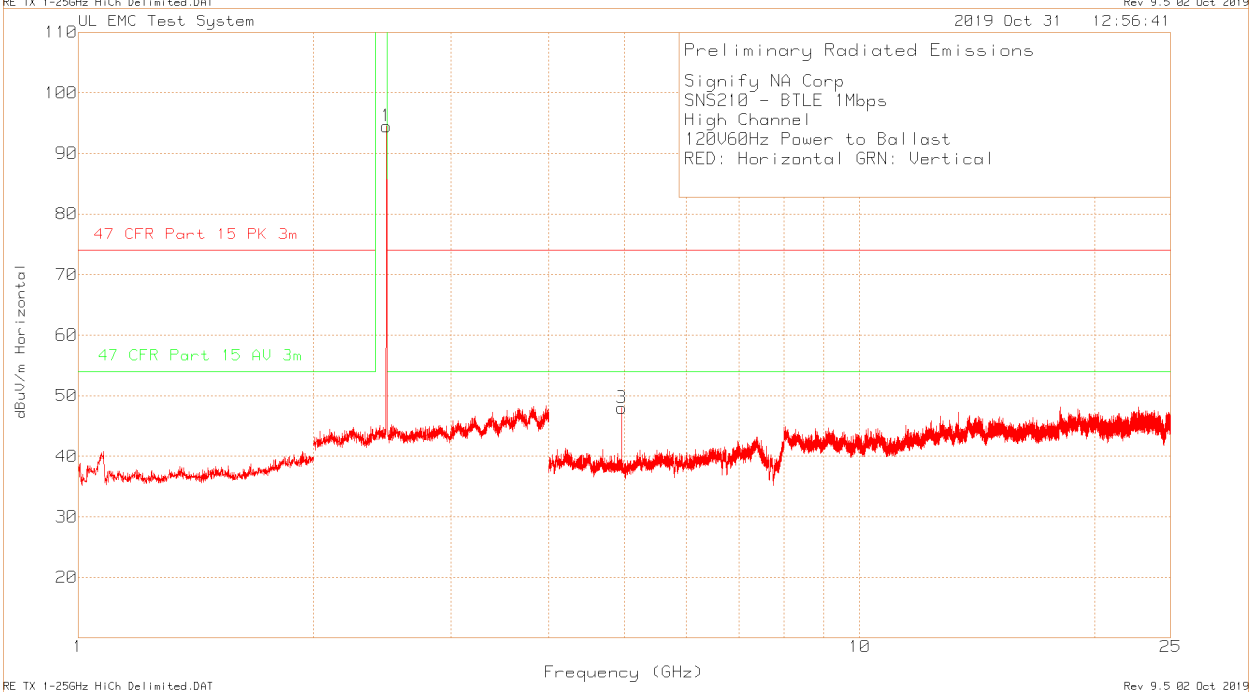
9.4.5. Harmonics and Spurious Emissions High Channel





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Signify NA Corp
SNS210 - BTLE 1Mbps
High Channel
120V60Hz Power to Ballast
RED: Horizontal GRN: Vertical

Trace Markers

No.	Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1	2
1	2.48	113.19dBuV Pk	22	-40.71	94.48	-	-
		Azimuth:0-360	Height:100	Horz	Margin (dB)	-	-
3	4.961	70.24dBuV Pk	27.8	-50.07	47.97	74	54
		Azimuth:0-360	Height:200	Horz	Margin (dB)	-26.03	-6.03
2	2.48	113.4dBuV Pk	22	-40.71	94.69	-	-
		Azimuth:0-360	Height:100	Vert	Margin (dB)	-	-
4	4.959	69.38dBuV Pk	27.8	-49.76	47.42	74	54
		Azimuth:0-360	Height:100	Vert	Margin (dB)	-26.58	-6.58

LIMIT 1: 47 CFR Part 15 PK 3m
LIMIT 2: 47 CFR Part 15 AV 3m

Pk - Peak detector

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10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

* Decreases with the logarithm of the frequency.

RESULTS

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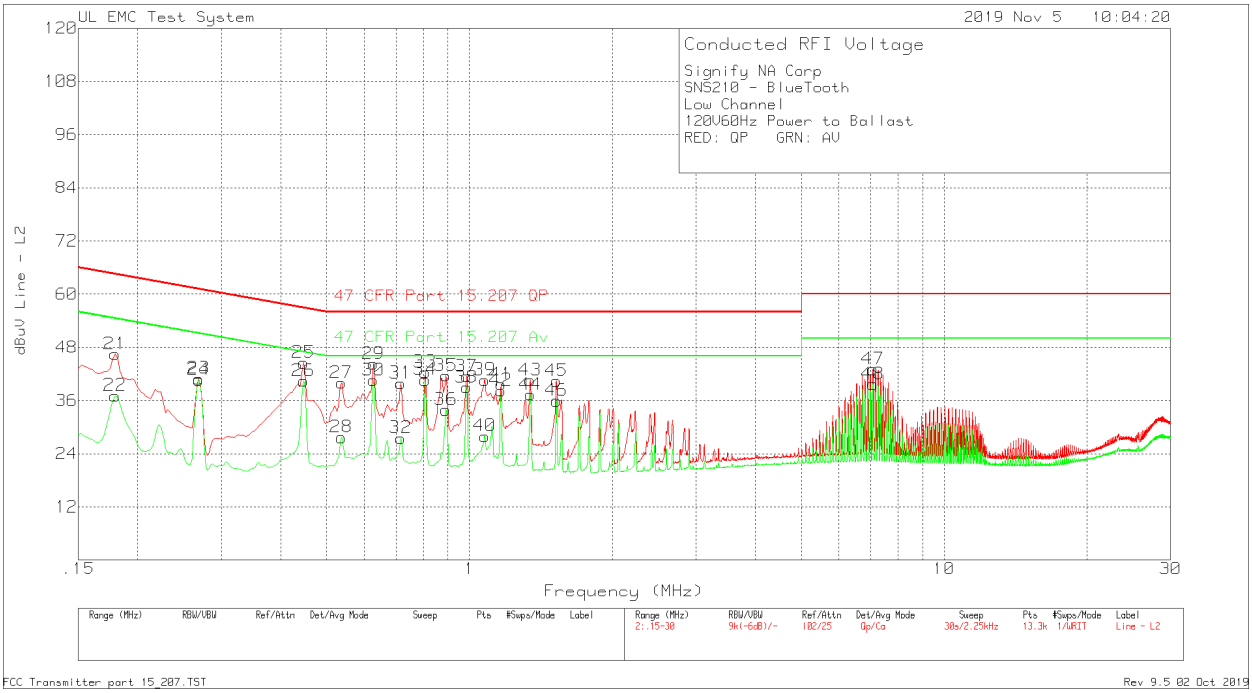
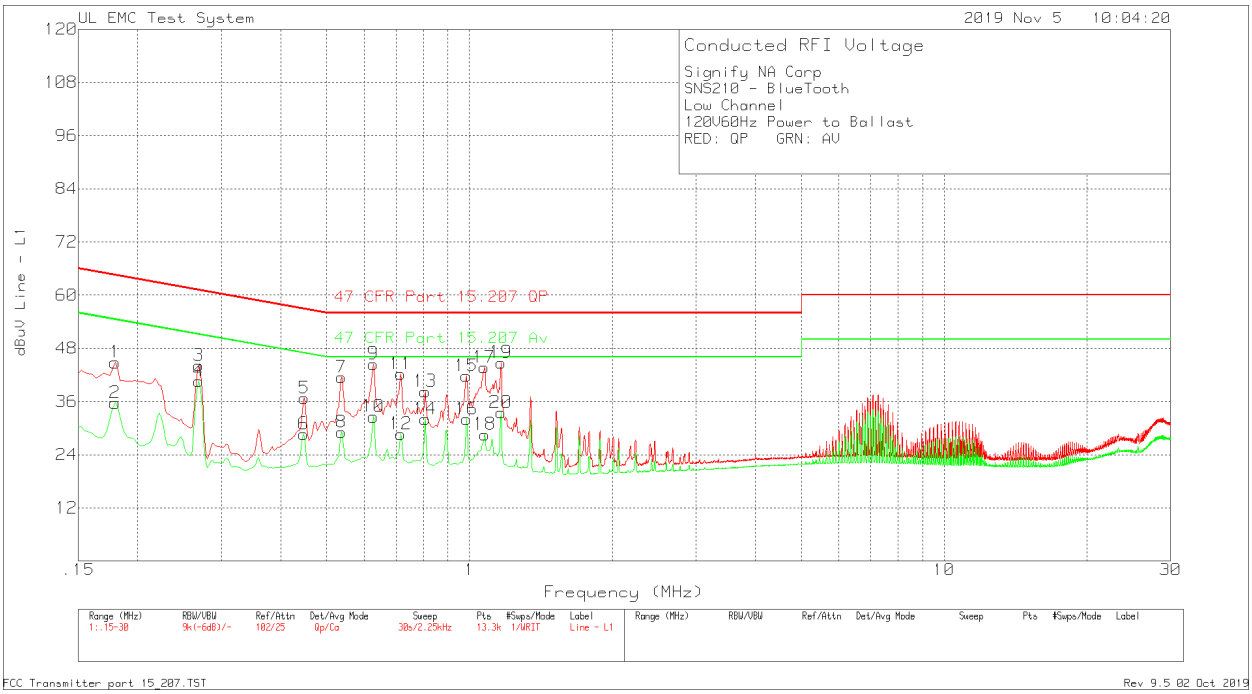
10.1. AC Power Line Low Channel





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Signify NA Corp
SNS210 - BlueTooth
Low Channel
120V60Hz Power to Ballast
RED: QP GRN: AV

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV	Limit:1	2
Line 1							
1	.17925	32.51dBuV Qp	0	12.3	44.81	64.52	54.52
					Margin (dB)	-19.71	-9.71
2	.17925	23.36dBuV Ca	0	12.3	35.66	64.52	54.52
					Margin (dB)	-28.86	-18.86
3	.26925	33.14dBuV Qp	0	11	44.14	61.14	51.14
					Margin (dB)	-17	-7
4	.26925	29.54dBuV Ca	0	11	40.54	61.14	51.14
					Margin (dB)	-20.6	-10.6
5	.44925	26.11dBuV Qp	0	10.6	36.71	56.89	46.89
					Margin (dB)	-20.18	-10.18
6	.447	18.09dBuV Ca	0	10.6	28.69	56.93	46.93
					Margin (dB)	-28.24	-18.24
7	.537	30.89dBuV Qp	0	10.6	41.49	56	46
					Margin (dB)	-14.51	-4.51
8	.537	18.52dBuV Ca	0	10.6	29.12	56	46
					Margin (dB)	-26.88	-16.88
9	.627	33.98dBuV Qp	0	10.5	44.48	56	46
					Margin (dB)	-11.52	-1.52
10	.627	22.06dBuV Ca	0	10.5	32.56	56	46
					Margin (dB)	-23.44	-13.44
11	.717	31.71dBuV Qp	0	10.5	42.21	56	46
					Margin (dB)	-13.79	-3.79
12	.717	18.18dBuV Ca	0	10.5	28.68	56	46
					Margin (dB)	-27.32	-17.32
13	.807	27.77dBuV Qp	0	10.5	38.27	56	46
					Margin (dB)	-17.73	-7.73
14	.807	21.53dBuV Ca	0	10.5	32.03	56	46
					Margin (dB)	-23.97	-13.97
15	.98475	31.28dBuV Qp	0	10.5	41.78	56	46
					Margin (dB)	-14.22	-4.22
16	.987	21.56dBuV Ca	0	10.5	32.06	56	46
					Margin (dB)	-23.94	-13.94
17	1.07475	33.15dBuV Qp	0	10.5	43.65	56	46
					Margin (dB)	-12.35	-2.35
18	1.077	18.06dBuV Ca	0	10.5	28.56	56	46
					Margin (dB)	-27.44	-17.44
19	1.16475	34.27dBuV Qp	0	10.5	44.77	56	46
					Margin (dB)	-11.23	-1.23
20	1.16475	22.99dBuV Ca	0	10.5	33.49	56	46
					Margin (dB)	-22.51	-12.51

LIMIT 1: 47 CFR Part 15.207 QP
LIMIT 2: 47 CFR Part 15.207 Av

Qp - Quasi-Peak detector
Ca - CISPR Average detection

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Signify NA Corp
SNS210 - BlueTooth
Low Channel
120V60Hz Power to Ballast
RED: QP GRN: AV

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV	Limit:1	2
Line 2							
21	.17925	34.09dBuV Qp	.1	12.3	46.49	64.52	54.52
					Margin (dB)	-18.03	-8.03
22	.17925	24.7dBuV Ca	.1	12.3	37.1	64.52	54.52
					Margin (dB)	-27.42	-17.42
23	.26925	29.96dBuV Qp	0	11	40.96	61.14	51.14
					Margin (dB)	-20.18	-10.18
24	.26925	29.68dBuV Ca	0	11	40.68	61.14	51.14
					Margin (dB)	-20.46	-10.46
25	.447	33.91dBuV Qp	0	10.6	44.51	56.93	46.93
					Margin (dB)	-12.42	-2.42
26	.447	29.82dBuV Ca	0	10.6	40.42	56.93	46.93
					Margin (dB)	-16.51	-6.51
27	.537	29.38dBuV Qp	0	10.6	39.98	56	46
					Margin (dB)	-16.02	-6.02
28	.537	17.09dBuV Ca	0	10.6	27.69	56	46
					Margin (dB)	-28.31	-18.31
29	.627	33.78dBuV Qp	0	10.5	44.28	56	46
					Margin (dB)	-11.72	-1.72
30	.627	30.06dBuV Ca	0	10.5	40.56	56	46
					Margin (dB)	-15.44	-5.44
31	.717	29.4dBuV Qp	0	10.5	39.9	56	46
					Margin (dB)	-16.1	-6.1
32	.717	17.04dBuV Ca	0	10.5	27.54	56	46
					Margin (dB)	-28.46	-18.46
33	.807	31.91dBuV Qp	0	10.5	42.41	56	46
					Margin (dB)	-13.59	-3.59
34	.807	30.18dBuV Ca	0	10.5	40.68	56	46
					Margin (dB)	-15.32	-5.32
35	.8925	31.12dBuV Qp	0	10.5	41.62	56	46
					Margin (dB)	-14.38	-4.38
36	.8925	23.4dBuV Ca	0	10.5	33.9	56	46
					Margin (dB)	-22.1	-12.1
37	.987	30.98dBuV Qp	0	10.5	41.48	56	46
					Margin (dB)	-14.52	-4.52
38	.987	28.45dBuV Ca	0	10.5	38.95	56	46
					Margin (dB)	-17.05	-7.05
39	1.077	30.13dBuV Qp	0	10.5	40.63	56	46
					Margin (dB)	-15.37	-5.37
40	1.077	17.48dBuV Ca	0	10.5	27.98	56	46
					Margin (dB)	-28.02	-18.02
41	1.16475	29.18dBuV Qp	0	10.5	39.68	56	46
					Margin (dB)	-16.32	-6.32
42	1.16475	27.77dBuV Ca	0	10.5	38.27	56	46
					Margin (dB)	-17.73	-7.73
43	1.3425	30.09dBuV Qp	0	10.5	40.59	56	46
					Margin (dB)	-15.41	-5.41
44	1.34475	26.86dBuV Ca	0	10.5	37.36	56	46
					Margin (dB)	-18.64	-8.64
45	1.52475	29.89dBuV Qp	0	10.5	40.39	56	46
					Margin (dB)	-15.61	-5.61
46	1.52475	25.45dBuV Ca	0	10.5	35.95	56	46
					Margin (dB)	-20.05	-10.05
47	7.08	32.24dBuV Qp	0	10.8	43.04	60	50
					Margin (dB)	-16.96	-6.96
48	7.07775	28.9dBuV Ca	0	10.8	39.7	60	50
					Margin (dB)	-20.3	-10.3

LIMIT 1: 47 CFR Part 15.207 QP
LIMIT 2: 47 CFR Part 15.207 Av

Qp - Quasi-Peak detector
Ca - CISPR Average detection

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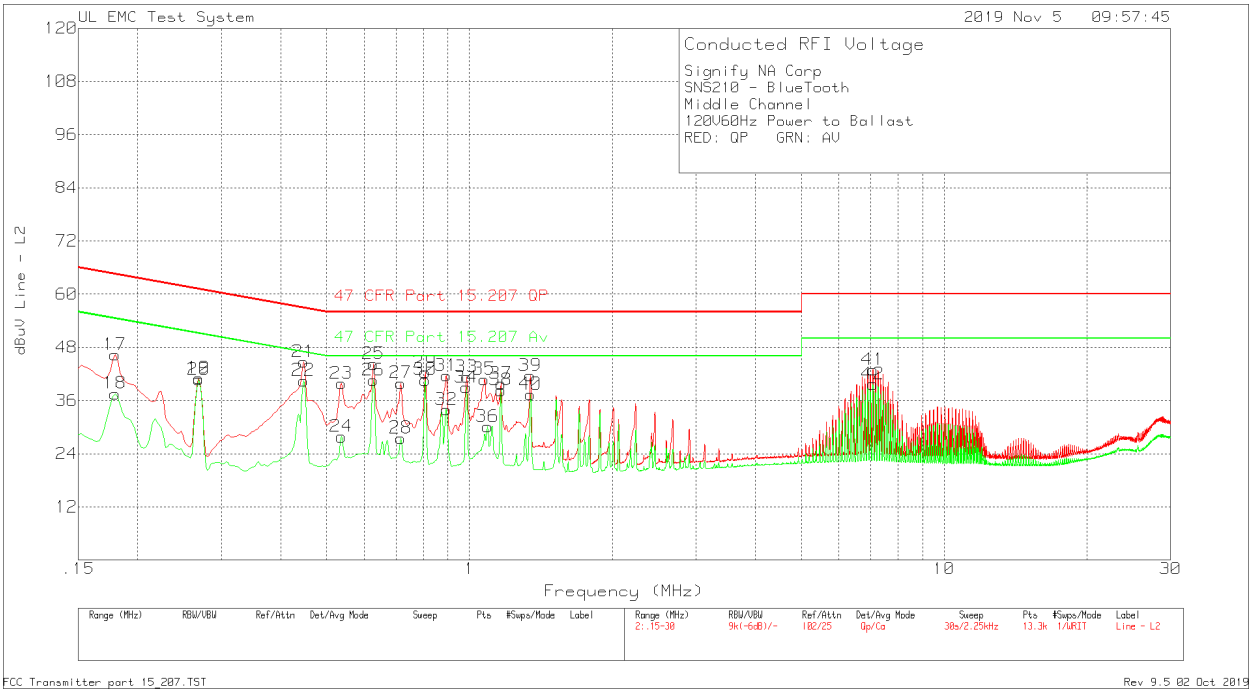
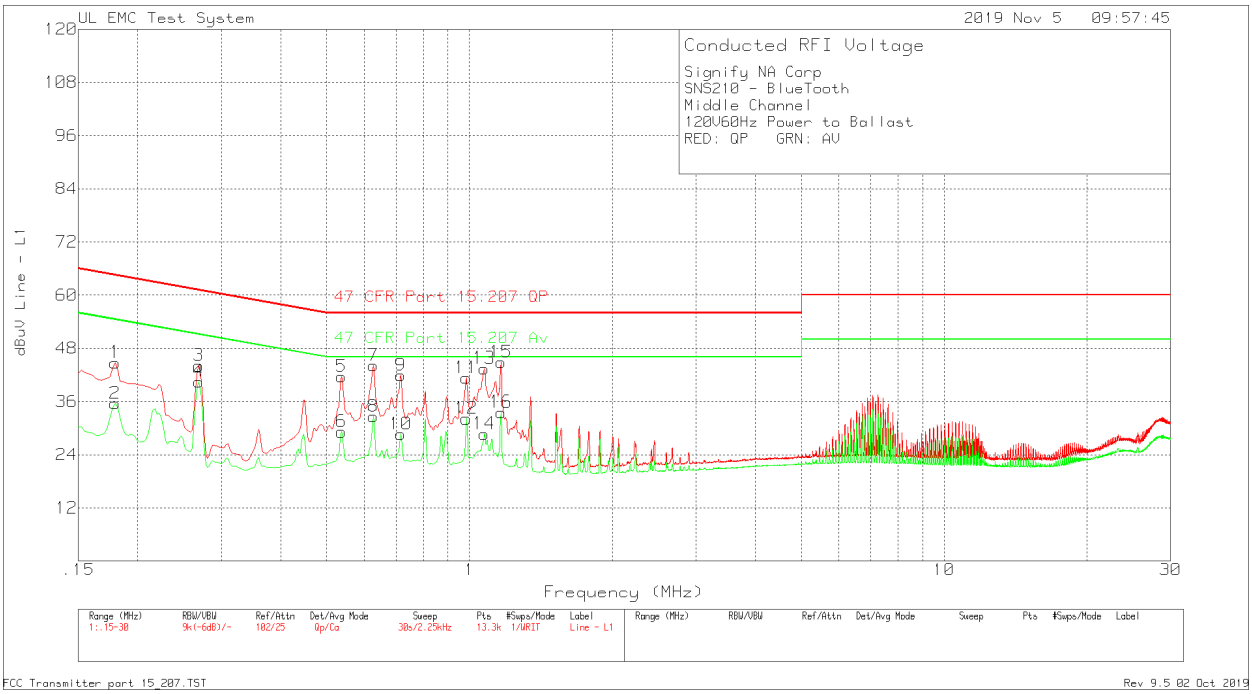
10.2. AC Power Line Middle Channel





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Signify NA Corp
SNS210 - BlueTooth
Middle Channel
120V60Hz Power to Ballast
RED: QP GRN: AV

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV	Limit:1	2
Line 1							
1	.17925	32.48dBuV Qp	0	12.3	44.78	64.52	54.52
					Margin (dB)	-19.74	-9.74
2	.17925	23.31dBuV Ca	0	12.3	35.61	64.52	54.52
					Margin (dB)	-28.91	-18.91
3	.26925	33.07dBuV Qp	0	11	44.07	61.14	51.14
					Margin (dB)	-17.07	-7.07
4	.26925	29.52dBuV Ca	0	11	40.52	61.14	51.14
					Margin (dB)	-20.62	-10.62
5	.537	30.98dBuV Qp	0	10.6	41.58	56	46
					Margin (dB)	-14.42	-4.42
6	.537	18.57dBuV Ca	0	10.6	29.17	56	46
					Margin (dB)	-26.83	-16.83
7	.627	33.66dBuV Qp	0	10.5	44.16	56	46
					Margin (dB)	-11.84	-1.84
8	.627	22.15dBuV Ca	0	10.5	32.65	56	46
					Margin (dB)	-23.35	-13.35
9	.717	31.43dBuV Qp	0	10.5	41.93	56	46
					Margin (dB)	-14.07	-4.07
10	.717	18.17dBuV Ca	0	10.5	28.67	56	46
					Margin (dB)	-27.33	-17.33
11	.98475	30.81dBuV Qp	0	10.5	41.31	56	46
					Margin (dB)	-14.69	-4.69
12	.98475	21.63dBuV Ca	0	10.5	32.13	56	46
					Margin (dB)	-23.87	-13.87
13	1.07475	32.94dBuV Qp	0	10.5	43.44	56	46
					Margin (dB)	-12.56	-2.56
14	1.07475	18.19dBuV Ca	0	10.5	28.69	56	46
					Margin (dB)	-27.31	-17.31
15	1.16475	34.38dBuV Qp	0	10.5	44.88	56	46
					Margin (dB)	-11.12	-1.12
16	1.16475	23.05dBuV Ca	0	10.5	33.55	56	46
					Margin (dB)	-22.45	-12.45

LIMIT 1: 47 CFR Part 15.207 QP
LIMIT 2: 47 CFR Part 15.207 Av

Qp - Quasi-Peak detector
Ca - CISPR Average detection

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Signify NA Corp
SNS210 - BlueTooth
Middle Channel
120V60Hz Power to Ballast
RED: QP GRN: AV

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV	Limit:1	2
Line 2							
17	.17925	33.94dBuV Qp	.1	12.3	46.34	64.52	54.52
					Margin (dB)	-18.18	-8.18
18	.17925	25.17dBuV Ca	.1	12.3	37.57	64.52	54.52
					Margin (dB)	-26.95	-16.95
19	.26925	29.99dBuV Qp	0	11	40.99	61.14	51.14
					Margin (dB)	-20.15	-10.15
20	.26925	29.73dBuV Ca	0	11	40.73	61.14	51.14
					Margin (dB)	-20.41	-10.41
21	.447	34.07dBuV Qp	0	10.6	44.67	56.93	46.93
					Margin (dB)	-12.26	-2.26
22	.447	29.9dBuV Ca	0	10.6	40.5	56.93	46.93
					Margin (dB)	-16.43	-6.43
23	.537	29.25dBuV Qp	0	10.6	39.85	56	46
					Margin (dB)	-16.15	-6.15
24	.537	17.24dBuV Ca	0	10.6	27.84	56	46
					Margin (dB)	-28.16	-18.16
25	.627	33.72dBuV Qp	0	10.5	44.22	56	46
					Margin (dB)	-11.78	-1.78
26	.627	30.09dBuV Ca	0	10.5	40.59	56	46
					Margin (dB)	-15.41	-5.41
27	.717	29.42dBuV Qp	0	10.5	39.92	56	46
					Margin (dB)	-16.08	-6.08
28	.717	17.01dBuV Ca	0	10.5	27.51	56	46
					Margin (dB)	-28.49	-18.49
29	.807	31.85dBuV Qp	0	10.5	42.35	56	46
					Margin (dB)	-13.65	-3.65
30	.807	30.17dBuV Ca	0	10.5	40.67	56	46
					Margin (dB)	-15.33	-5.33
31	.89475	31.12dBuV Qp	0	10.5	41.62	56	46
					Margin (dB)	-14.38	-4.38
32	.89363	23.42dBuV Ca	0	10.5	33.92	56	46
					Margin (dB)	-22.08	-12.08
33	.987	30.83dBuV Qp	0	10.5	41.33	56	46
					Margin (dB)	-14.67	-4.67
34	.98475	28.42dBuV Ca	0	10.5	38.92	56	46
					Margin (dB)	-17.08	-7.08
35	1.07475	30.3dBuV Qp	0	10.5	40.8	56	46
					Margin (dB)	-15.2	-5.2
36	1.09275	19.58dBuV Ca	0	10.5	30.08	56	46
					Margin (dB)	-25.92	-15.92
37	1.16475	29.29dBuV Qp	0	10.5	39.79	56	46
					Margin (dB)	-16.21	-6.21
38	1.16475	27.82dBuV Ca	0	10.5	38.32	56	46
					Margin (dB)	-17.68	-7.68
39	1.3425	31.14dBuV Qp	0	10.5	41.64	56	46
					Margin (dB)	-14.36	-4.36
40	1.34475	26.91dBuV Ca	0	10.5	37.41	56	46
					Margin (dB)	-18.59	-8.59
41	7.08	32.16dBuV Qp	0	10.8	42.96	60	50
					Margin (dB)	-17.04	-7.04
42	7.07775	28.9dBuV Ca	0	10.8	39.7	60	50
					Margin (dB)	-20.3	-10.3

LIMIT 1: 47 CFR Part 15.207 QP
LIMIT 2: 47 CFR Part 15.207 Av

Qp - Quasi-Peak detector
Ca - CISPR Average detection

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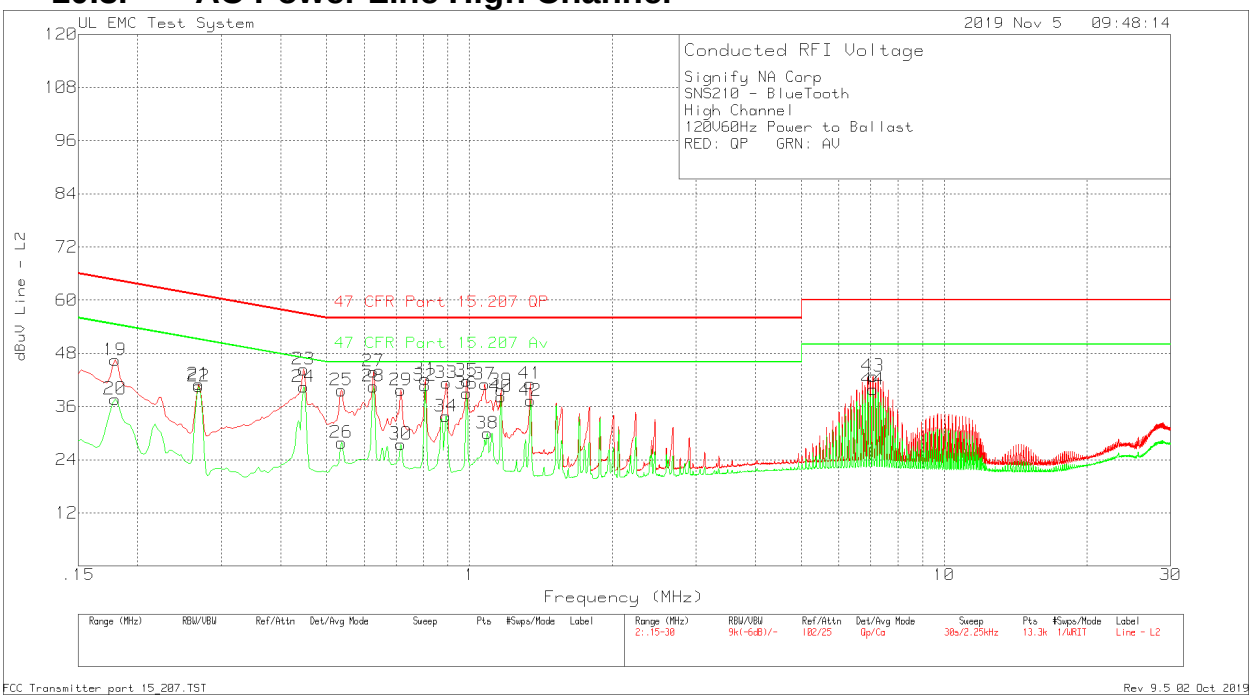
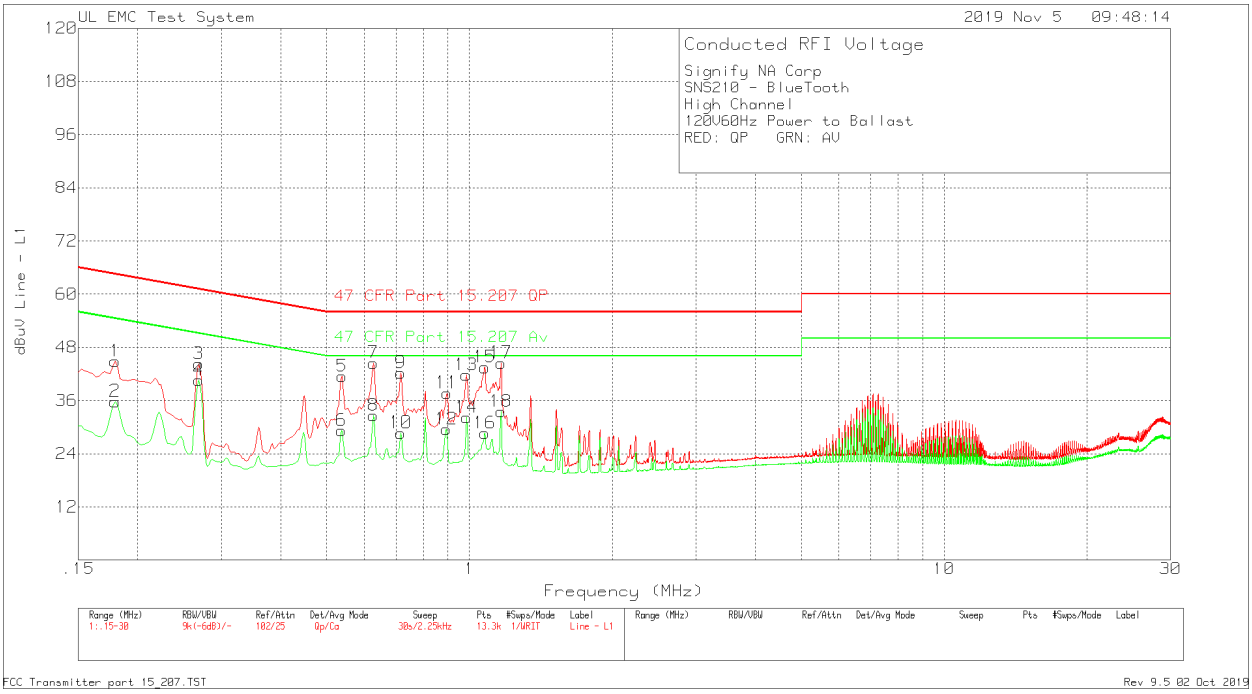
10.3. AC Power Line High Channel





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Signify NA Corp
SNS210 - BlueTooth
High Channel
120V60Hz Power to Ballast
RED: QP GRN: AV

Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV	Limit:1	2
Line 1							
1	.17925	32.58dBuV Qp	0	12.3	44.88	64.52	54.52
					Margin (dB)	-19.64	-9.64
2	.17925	23.48dBuV Ca	0	12.3	35.78	64.52	54.52
					Margin (dB)	-28.74	-18.74
3	.26925	33.29dBuV Qp	0	11	44.29	61.14	51.14
					Margin (dB)	-16.85	-6.85
4	.26925	29.56dBuV Ca	0	11	40.56	61.14	51.14
					Margin (dB)	-20.58	-10.58
5	.53925	30.88dBuV Qp	0	10.6	41.48	56	46
					Margin (dB)	-14.52	-4.52
6	.537	18.59dBuV Ca	0	10.6	29.19	56	46
					Margin (dB)	-26.81	-16.81
7	.627	34dBuV Qp	0	10.5	44.5	56	46
					Margin (dB)	-11.5	-1.5
8	.627	22.11dBuV Ca	0	10.5	32.61	56	46
					Margin (dB)	-23.39	-13.39
9	.717	31.75dBuV Qp	0	10.5	42.25	56	46
					Margin (dB)	-13.75	-3.75
10	.717	18.19dBuV Ca	0	10.5	28.69	56	46
					Margin (dB)	-27.31	-17.31
11	.897	27.19dBuV Qp	0	10.5	37.69	56	46
					Margin (dB)	-18.31	-8.31
12	.89475	19.05dBuV Ca	0	10.5	29.55	56	46
					Margin (dB)	-26.45	-16.45
13	.98475	31.29dBuV Qp	0	10.5	41.79	56	46
					Margin (dB)	-14.21	-4.21
14	.987	21.68dBuV Ca	0	10.5	32.18	56	46
					Margin (dB)	-23.82	-13.82
15	1.077	32.98dBuV Qp	0	10.5	43.48	56	46
					Margin (dB)	-12.52	-2.52
16	1.077	18.1dBuV Ca	0	10.5	28.6	56	46
					Margin (dB)	-27.4	-17.4
17	1.16475	33.97dBuV Qp	0	10.5	44.47	56	46
					Margin (dB)	-11.53	-1.53
18	1.16475	22.96dBuV Ca	0	10.5	33.46	56	46
					Margin (dB)	-22.54	-12.54

LIMIT 1: 47 CFR Part 15.207 QP
LIMIT 2: 47 CFR Part 15.207 Av

Qp - Quasi-Peak detector
Ca - CISPR Average detection

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Signify NA Corp
SNS210 - BlueTooth
High Channel
120V60Hz Power to Ballast
RED: QP GRN: AV

Trace Markers

Line 2

19	.17925	34.06dBuV Qp	.1	12.3	46.46	64.52	54.52
					Margin (dB)	-18.06	-8.06
20	.17925	25.3dBuV Ca	.1	12.3	37.7	64.52	54.52
					Margin (dB)	-26.82	-16.82
21	.26925	30.02dBuV Qp	0	11	41.02	61.14	51.14
					Margin (dB)	-20.12	-10.12
22	.26925	29.62dBuV Ca	0	11	40.62	61.14	51.14
					Margin (dB)	-20.52	-10.52
23	.447	33.77dBuV Qp	0	10.6	44.37	56.93	46.93
					Margin (dB)	-12.56	-2.56
24	.447	29.82dBuV Ca	0	10.6	40.42	56.93	46.93
					Margin (dB)	-16.51	-6.51
25	.537	29.05dBuV Qp	0	10.6	39.65	56	46
					Margin (dB)	-16.35	-6.35
26	.537	17.25dBuV Ca	0	10.6	27.85	56	46
					Margin (dB)	-28.15	-18.15
27	.627	33.41dBuV Qp	0	10.5	43.91	56	46
					Margin (dB)	-12.09	-2.09
28	.627	30.03dBuV Ca	0	10.5	40.53	56	46
					Margin (dB)	-15.47	-5.47
29	.717	29.21dBuV Qp	0	10.5	39.71	56	46
					Margin (dB)	-16.29	-6.29
30	.717	17.01dBuV Ca	0	10.5	27.51	56	46
					Margin (dB)	-28.49	-18.49
31	.807	31.72dBuV Qp	0	10.5	42.22	56	46
					Margin (dB)	-13.78	-3.78
32	.807	30.21dBuV Ca	0	10.5	40.71	56	46
					Margin (dB)	-15.29	-5.29
33	.89475	30.82dBuV Qp	0	10.5	41.32	56	46
					Margin (dB)	-14.68	-4.68
34	.8925	23.34dBuV Ca	0	10.5	33.84	56	46
					Margin (dB)	-22.16	-12.16
35	.987	31.31dBuV Qp	0	10.5	41.81	56	46
					Margin (dB)	-14.19	-4.19
36	.987	28.5dBuV Ca	0	10.5	39	56	46
					Margin (dB)	-17	-7
37	1.077	30.51dBuV Qp	0	10.5	41.01	56	46
					Margin (dB)	-14.99	-4.99
38	1.0905	19.43dBuV Ca	0	10.5	29.93	56	46
					Margin (dB)	-26.07	-16.07
39	1.16475	29.24dBuV Qp	0	10.5	39.74	56	46
					Margin (dB)	-16.26	-6.26
40	1.16475	27.74dBuV Ca	0	10.5	38.24	56	46
					Margin (dB)	-17.76	-7.76
41	1.3425	30.67dBuV Qp	0	10.5	41.17	56	46
					Margin (dB)	-14.83	-4.83
42	1.34475	26.88dBuV Ca	0	10.5	37.38	56	46
					Margin (dB)	-18.62	-8.62
43	7.08225	32.04dBuV Qp	0	10.8	42.84	60	50
					Margin (dB)	-17.16	-7.16
44	7.08	29.01dBuV Ca	0	10.8	39.81	60	50
					Margin (dB)	-20.19	-10.19

LIMIT 1: 47 CFR Part 15.207 QP
LIMIT 2: 47 CFR Part 15.207 Av

Qp - Quasi-Peak detector
Ca - CISPR Average detection

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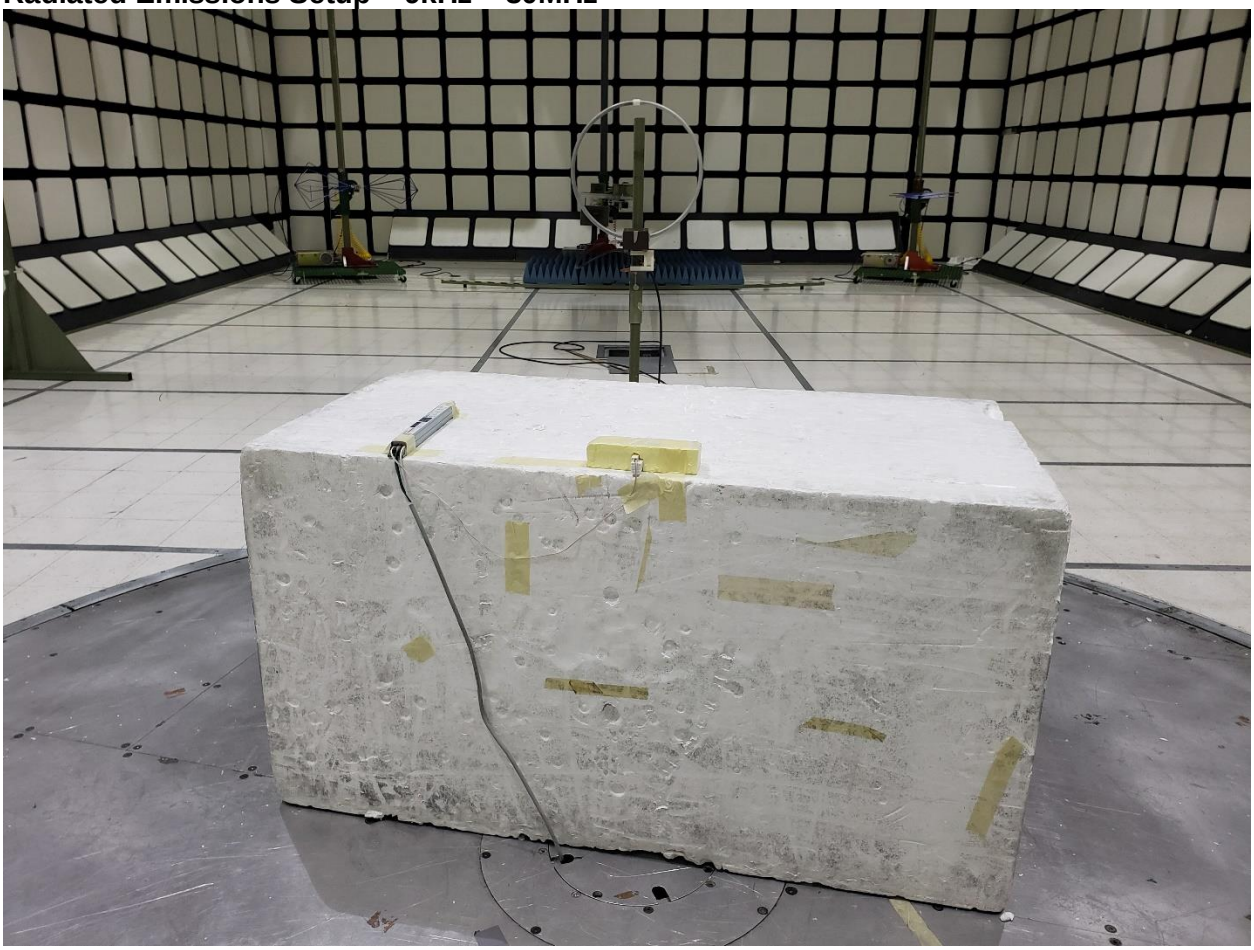
11. SETUP PHOTOS

Radiated Emissions Setup – 9kHz – 30MHz



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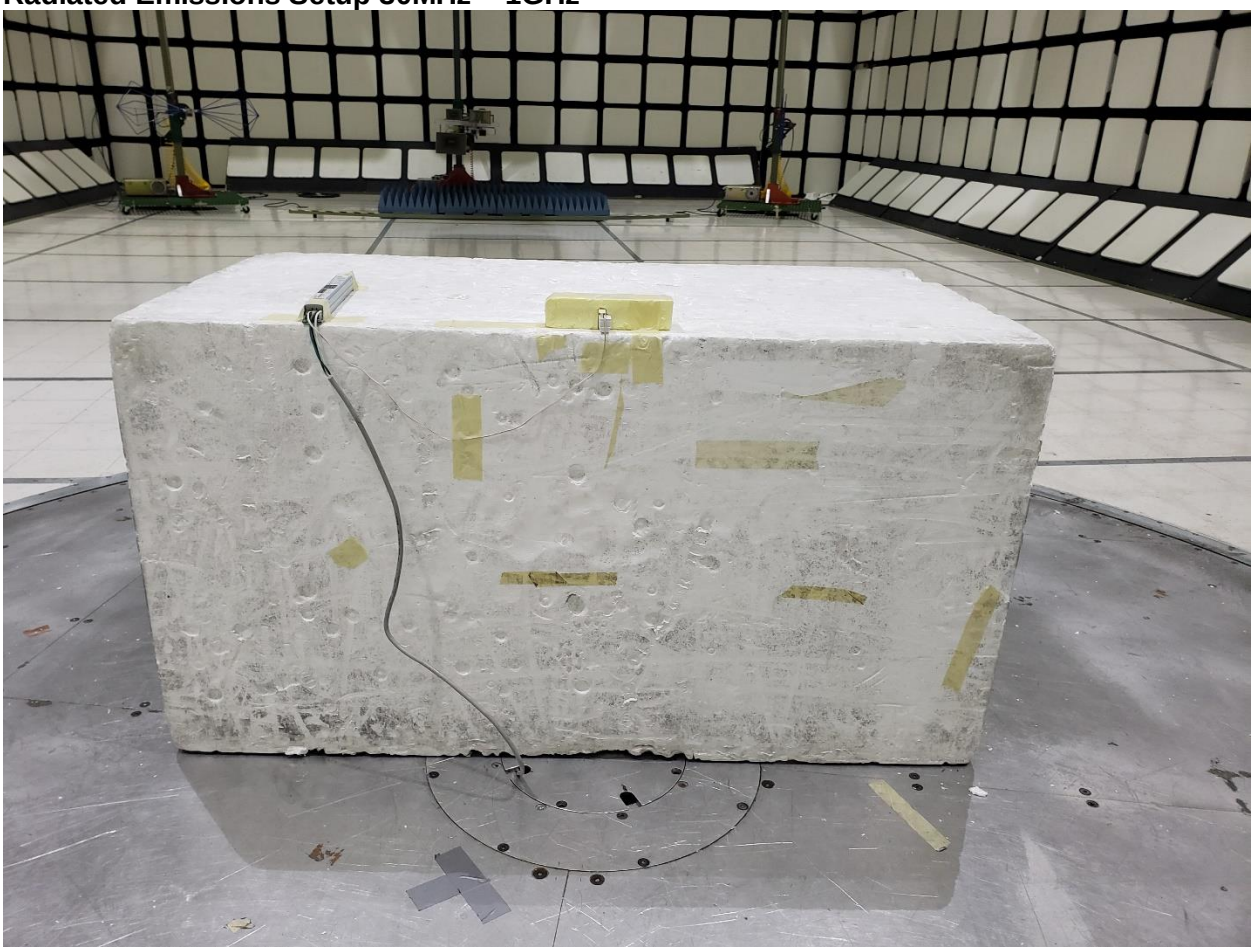
Radiated Emissions Setup 30MHz – 1GHz



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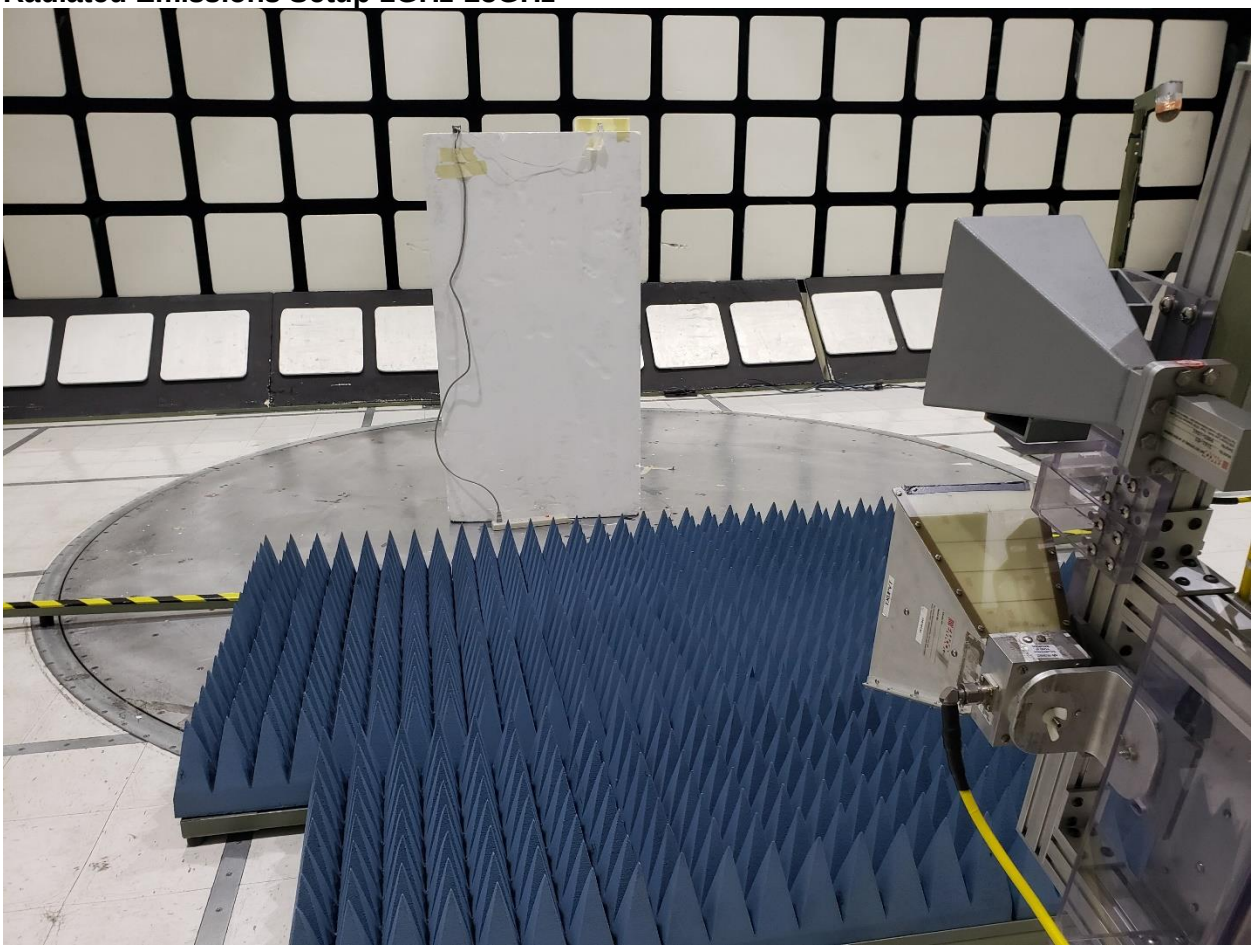
Radiated Emissions Setup 1GHz-25GHz



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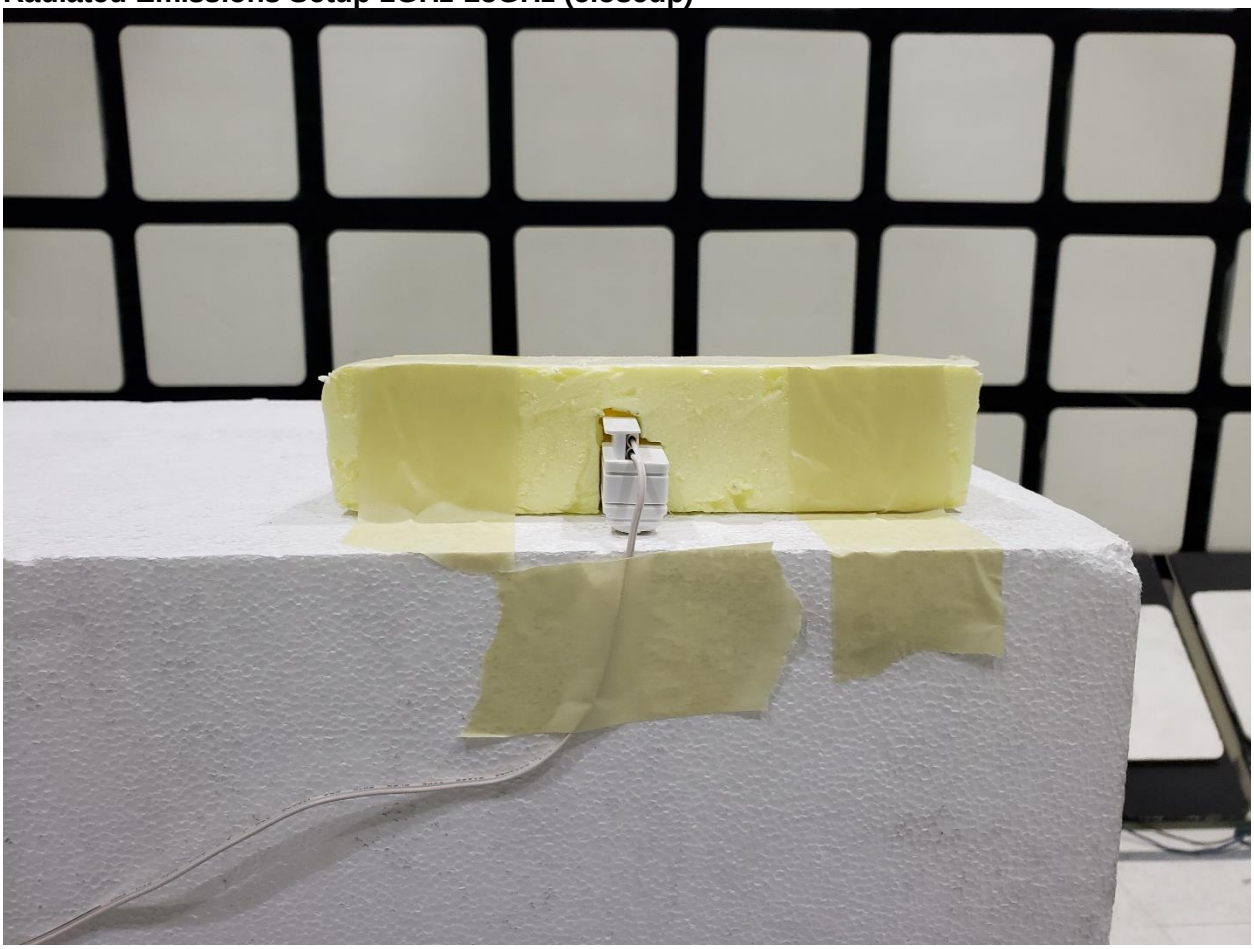
Radiated Emissions Setup 1GHz-25GHz (closeup)



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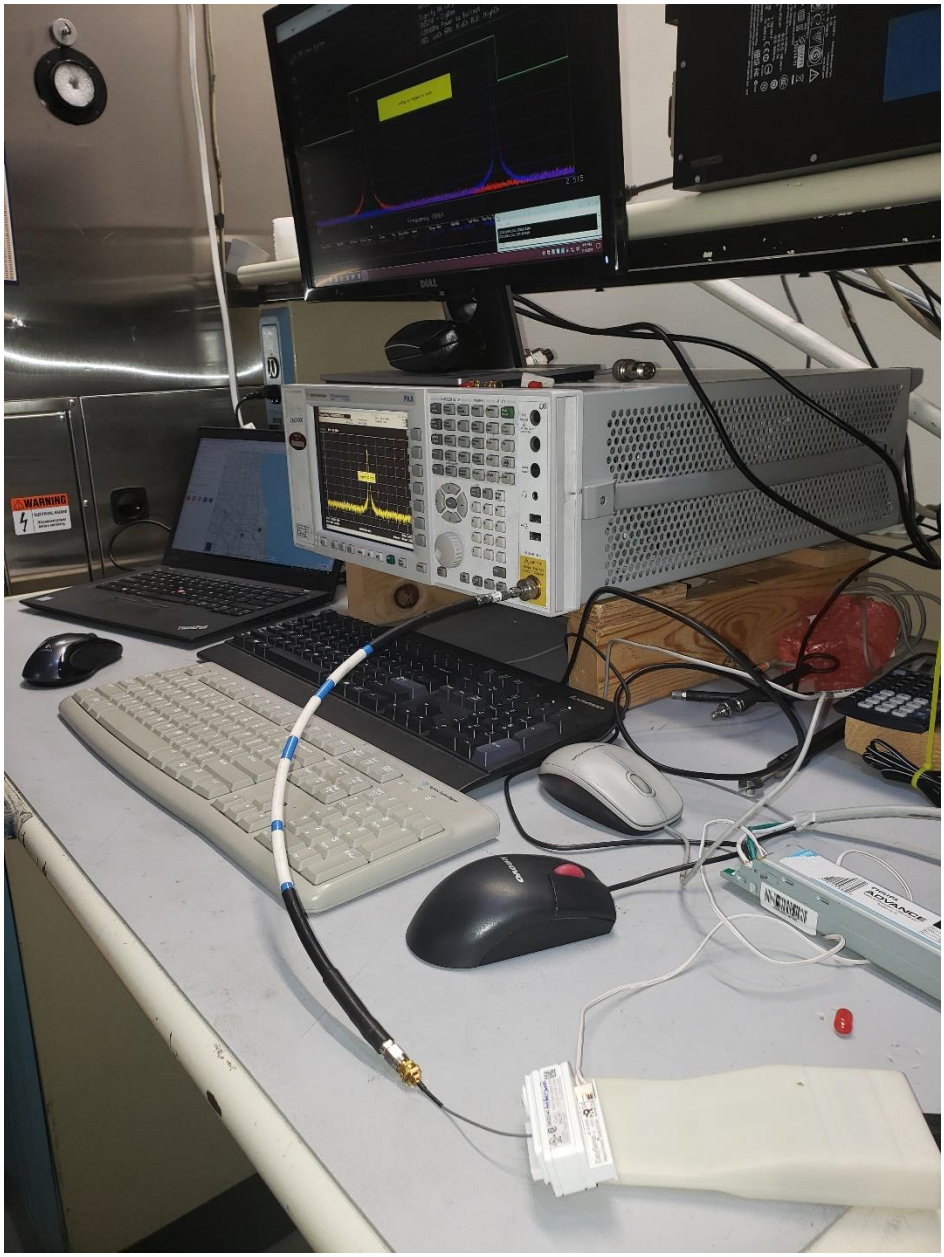
Antenna Port Conducted Emissions



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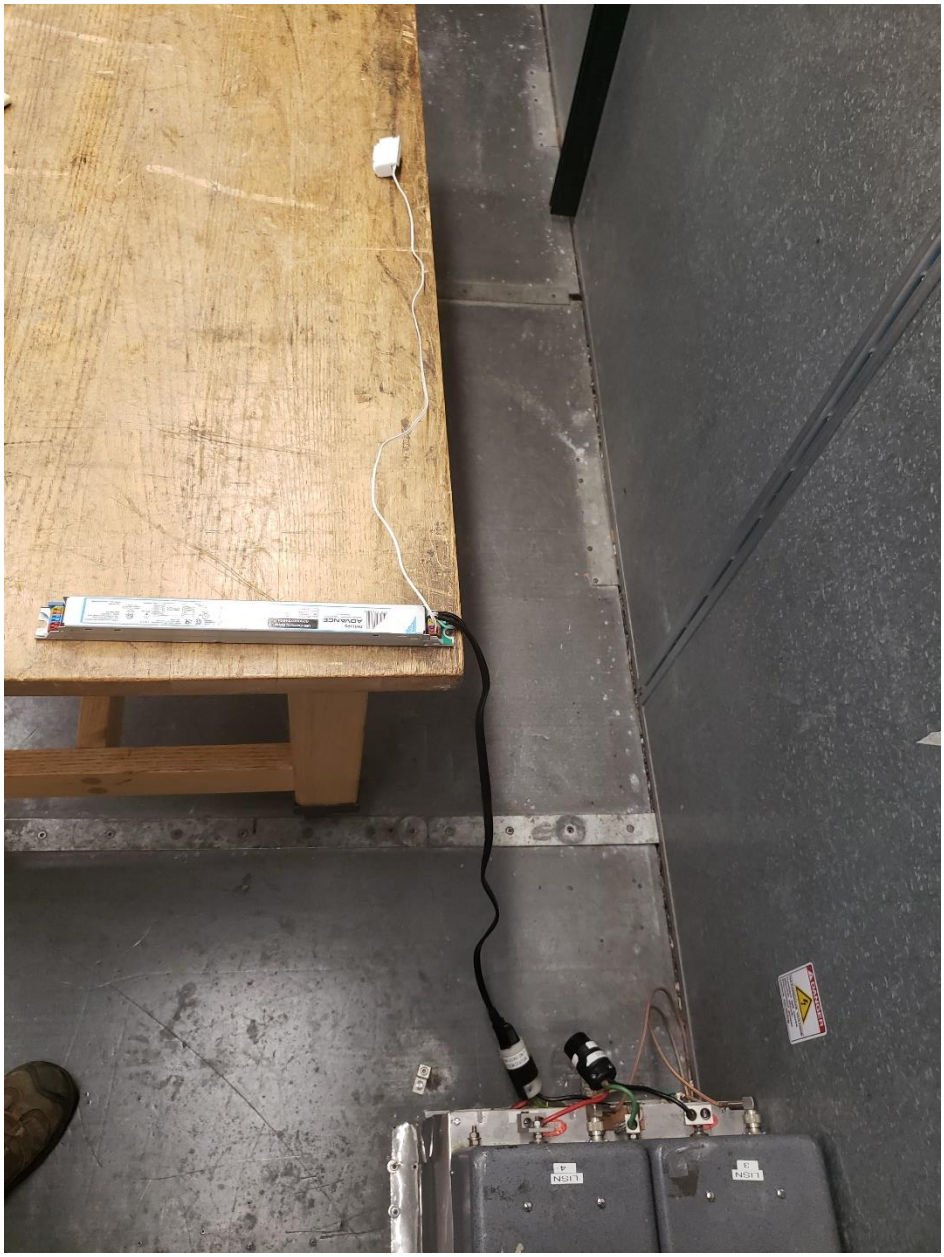
Line Conducted Emissions



END OF TEST REPORT

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