



CERTIFICATION TEST REPORT

Report Number. : 12696785-E2V5

Applicant : Loop Labs, Inc. DBA Notion
1530 Blake Street Suite 220
Denver, CO, 80202

Model : 0009

FCC ID : 2AE5C-5280-S3

IC ID : 20391-5280S3

EUT Description : Notion sensor

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

Date of Issue:
March 12, 2019

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888



NVLAP Lab code: 200065-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	02/13/19	Initial Issue	---
V2	02/20/19	Updated Section 1, 5.2, 6 and 9.3	Kiya Kedida
V3	03/05/19	Updated Section 5.2 – Frequency range	Kiya Kedida
V4	03/07/19	Updated Section 7, 8.3 & Added PSD plot on Section 8.5	Kiya Kedida
V5	03/12/19	Updated Cover Page, Section 1 & 2	Kiya Kedida

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Loop Labs, Inc. DBA Notion
1530 Blake Street Suite 220
Denver, CO, 80202

EUT DESCRIPTION: NOTION SENSOR.

MODEL: 0009

SERIAL NUMBER: f00010b, f00010c, f00010a

DATE TESTED: JANUARY 23 – MARCH 7, 2019

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-247 Issue 2	Pass
INDUSTRY CANADA RSS-GEN Issue 5	Pass

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

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL 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, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Verification Services Inc. By:

Reviewed By:



DAN CORONIA
CONSUMER TECHNOLOGY DIVISION
OPERATIONS LEADER
UL Verification Services Inc.



Kiya Kedida
CONSUMER TECHNOLOGY DIVISION
SENIOR PROJECT ENGINEER
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, KDB 558074 D01 v5, ANSI C63.10-2013, RSS-GEN Issue 5, and RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street	47658 Kato Rd.
☒ Chamber A (ISED:2324B-1)	☐ Chamber D (ISED:22541-1)	☐ Chamber I (ISED:2324A-5)
☐ Chamber B (ISED:2324B-2)	☐ Chamber E (ISED:22541-2)	☒ Chamber J (ISED:2324A-6)
☐ Chamber C (ISED:2324B-3)	☐ Chamber F (ISED:22541-3)	☐ Chamber K (ISED: 2324A-1)
	☐ Chamber G (ISED:22541-4)	☐ Chamber L (ISED: 2324A-3)
	☐ Chamber H (ISED:22541-5)	

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through C are covered under ISED company address code 2324B with site numbers 2324B -1 through 2324B-3, respectively. Chambers D through H are covered under ISED company address code 22541 with site numbers 22541 -1 through 22541-5, respectively. Chambers K and L are covered under ISED company address code 2324A with site numbers 2324A-1 and 2324A-3, respectively.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0

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

Where relevant, the following sample calculation is provided:

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Radiated Disturbance, 18000 to 26000 MHz	4.45 dB
Radiated Disturbance, 26000 to 40000 MHz	5.24 dB

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

5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

This device is an Notion sensor..

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency (MHz)	Output Power (dBm)	Output Power (mW)
906-924	17.92	61.94

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a monopole antenna, with a maximum gain of 2.1dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the version 3.12.5 with RAIL adapter 2.3.7.

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission below 30MHz was performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Radiated emissions between 30MHz 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 X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Sony	SVP112A1CL	N/A	PD97260NG

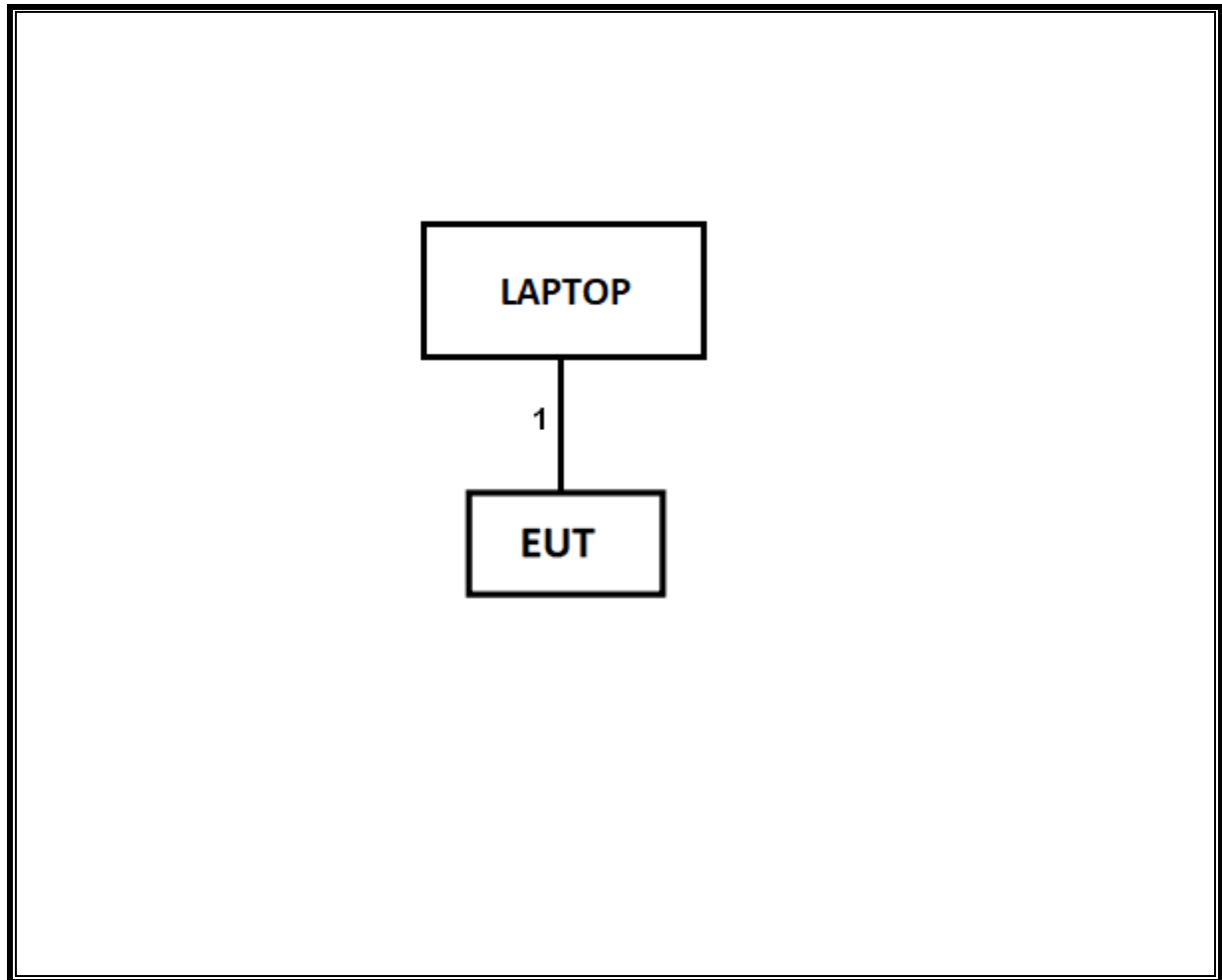
I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	3-pin serial	1	USB	Unshielded	2	

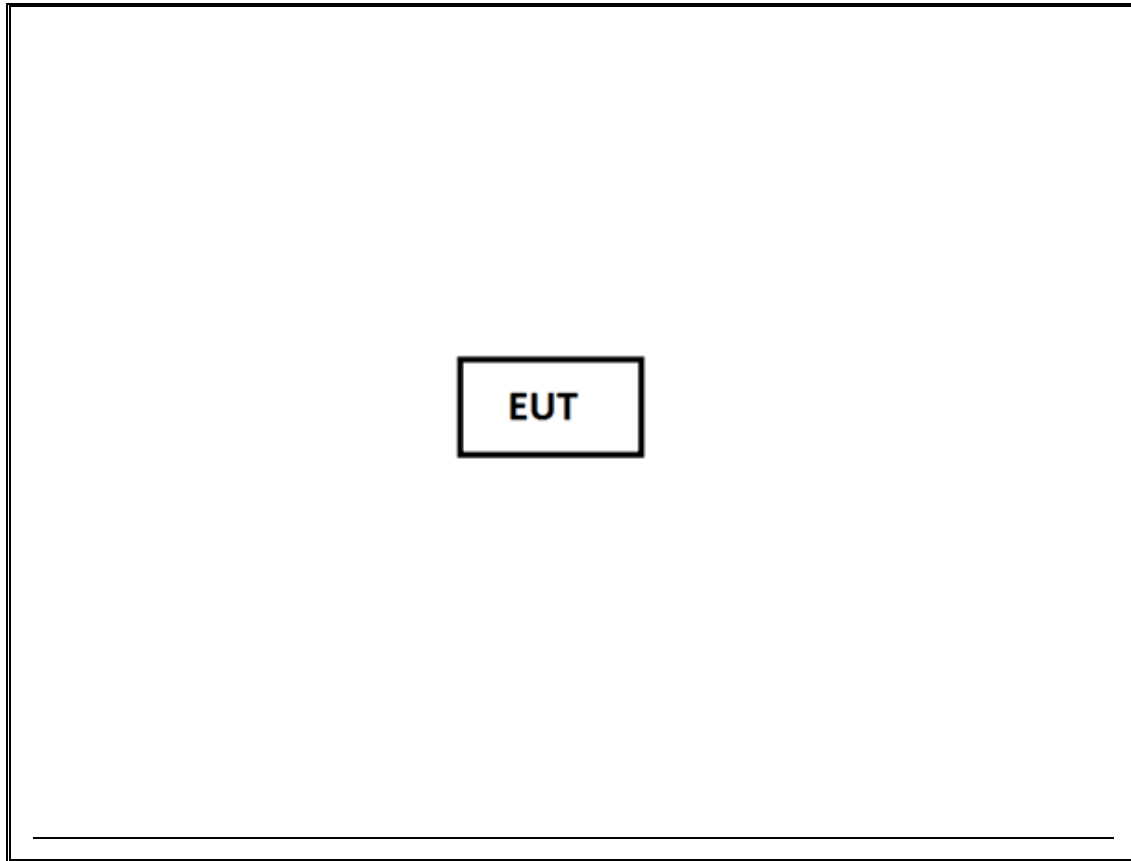
TEST SETUP

The laptop and cable were used to set transmission and removed for radiated testing. For conducted testing, the support equipment remained in place. The EUT is powered by two standard AAA 1.5V batteries.

CONDUCTED TEST SETUP DIAGRAM



RADIATED SETUP DIAGRAM



6. TEST AND MEASUREMENT EQUIPMENT

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

TEST EQUIPMENT LIST					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
6 port rf switch, 1-18GHz	Pasternack	PE7159	171455	08/01/2019	08/01/2018
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	PRE0181575	08/01/2019	08/01/2018
Amplifier, 10kHz to 1GHz, 32dB	Sonoma Instrument Co.	8447D	T15	08/14/2019	08/14/2018
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	AT0067	03/26/2019	03/26/2018
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179367	04/25/2019	04/25/2018
RF Amplifier, 1-18GHz	MITEQ	AFS42-00101800-25-S-42	T1165	12/01/2019	12/01/2018
Spectrum Analyzer PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T818	06/15/2019	06/15/2018
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1466	04/16/2019	04/16/2018
Antenna, Active Loop 9kHz-30MHz	Com-Power Corp.	AL-130R	PRE0165308	1/08/2020	1/08/2019
Power Meter, P-series single channel	Agilent (Keysight) Technologies	N1911A	T1269	04/05/2019	04/05/2018

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Rev 9.5, Jun 22, 2018
Antenna Port Software	UL	UL RF	Rev 8.9.1, Oct 18, 2018

7. MEASUREMENT METHOD

On Time and Duty Cycle: ANSI C63.10-2013 Section 11.6

Occupied BW (6dB): ANSI C63.10-2013 Section 11.8.1

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

Power Spectral Density: ANSI C63.10 Section 11.10

Peak Output Power: ANSI C63.10-2013 Section 11.9.1.1

Conducted Spurious Emissions: ANSI C63.10-2013 Section 11.11

Conducted Band-Edge: ANSI C63.10-2013 Section 6.10.4

Radiated Spurious Emissions 30-1000MHz: ANSI C63.10-2013 Section 6.3 and 6.5

Radiated Spurious Emissions above 1GHz: ANSI C63.10-2013 Section 6.3 and 6.6

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME, DUTY CYCLE

LIMITS

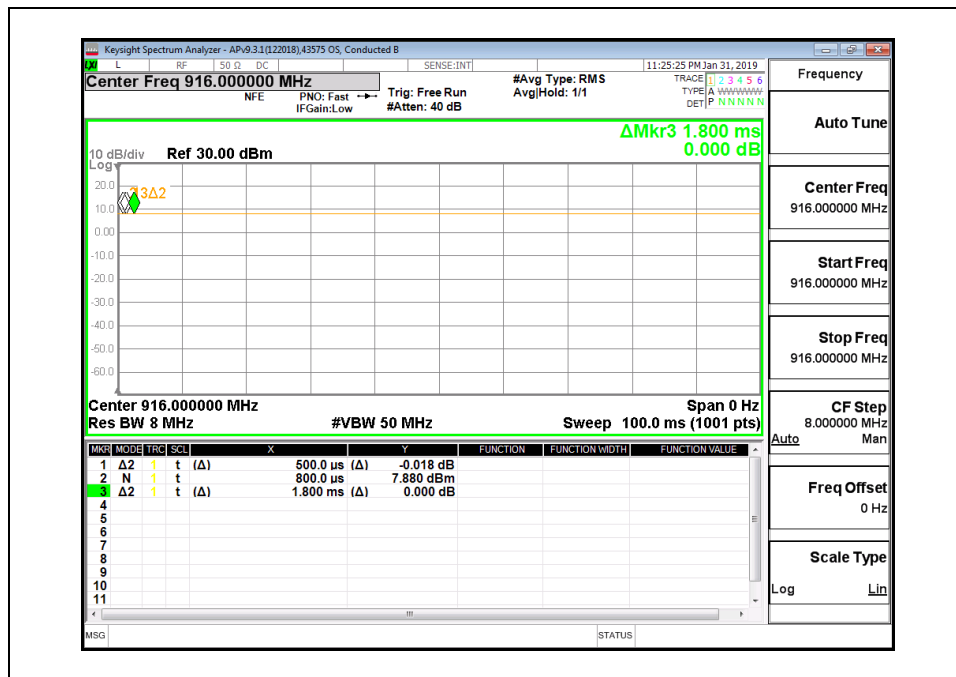
None; for reporting purposes only.

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)
916MHz	N/A	N/A	1.000	100.00%	0.00	0.010

DUTY CYCLE PLOTS

DUTY CYCLE PLOT



8.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	20 dB Bandwidth (kHz)	99% Bandwidth (kHz)
Low	906	992.1	980.55
Mid	916	1033.0	986.44
High	924	997.9	969.81



8.3. 6 dB BANDWIDTH

LIMITS

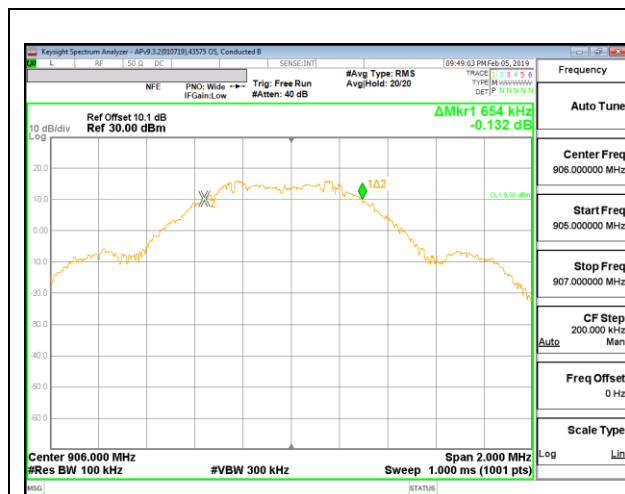
FCC §15.247(a)(2)

RSS-247 5.2 (a)

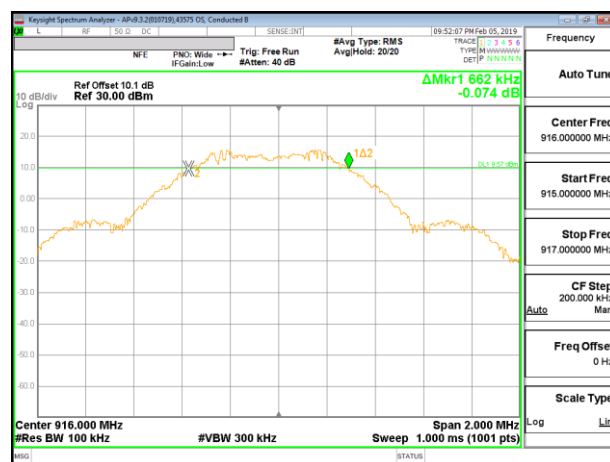
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

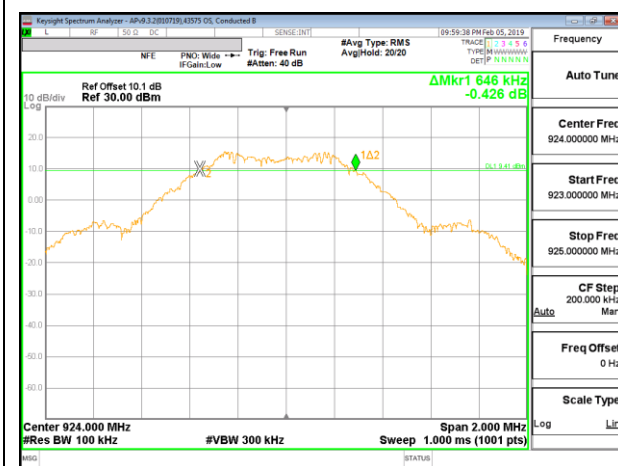
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	906	0.654	0.5
Middle	916	0.662	0.5
High	924	0.646	0.5



LOW CHANNEL



MID CHANNEL



HIGH CHANNEL

8.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

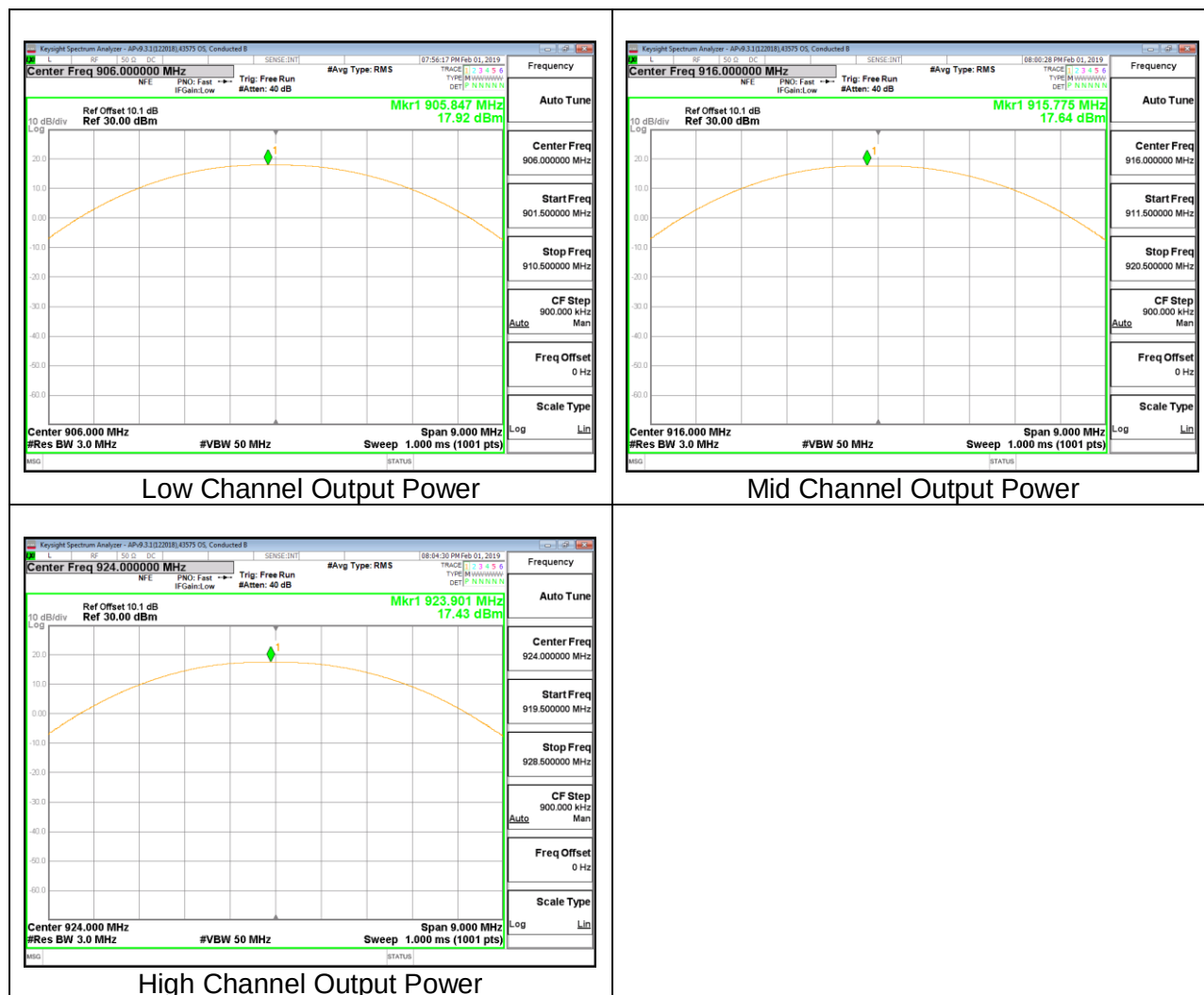
RESULTS

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low	906	2.10	30.00	30	36	30.00
Mid	916	2.10	30.00	30	36	30.00
High	924	2.10	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	906	17.92	17.92	30.00	-12.08
Mid	916	17.64	17.64	30.00	-12.36
High	924	17.43	17.43	30.00	-12.57



8.5. POWER SPECTRAL DENSITY

LIMITS

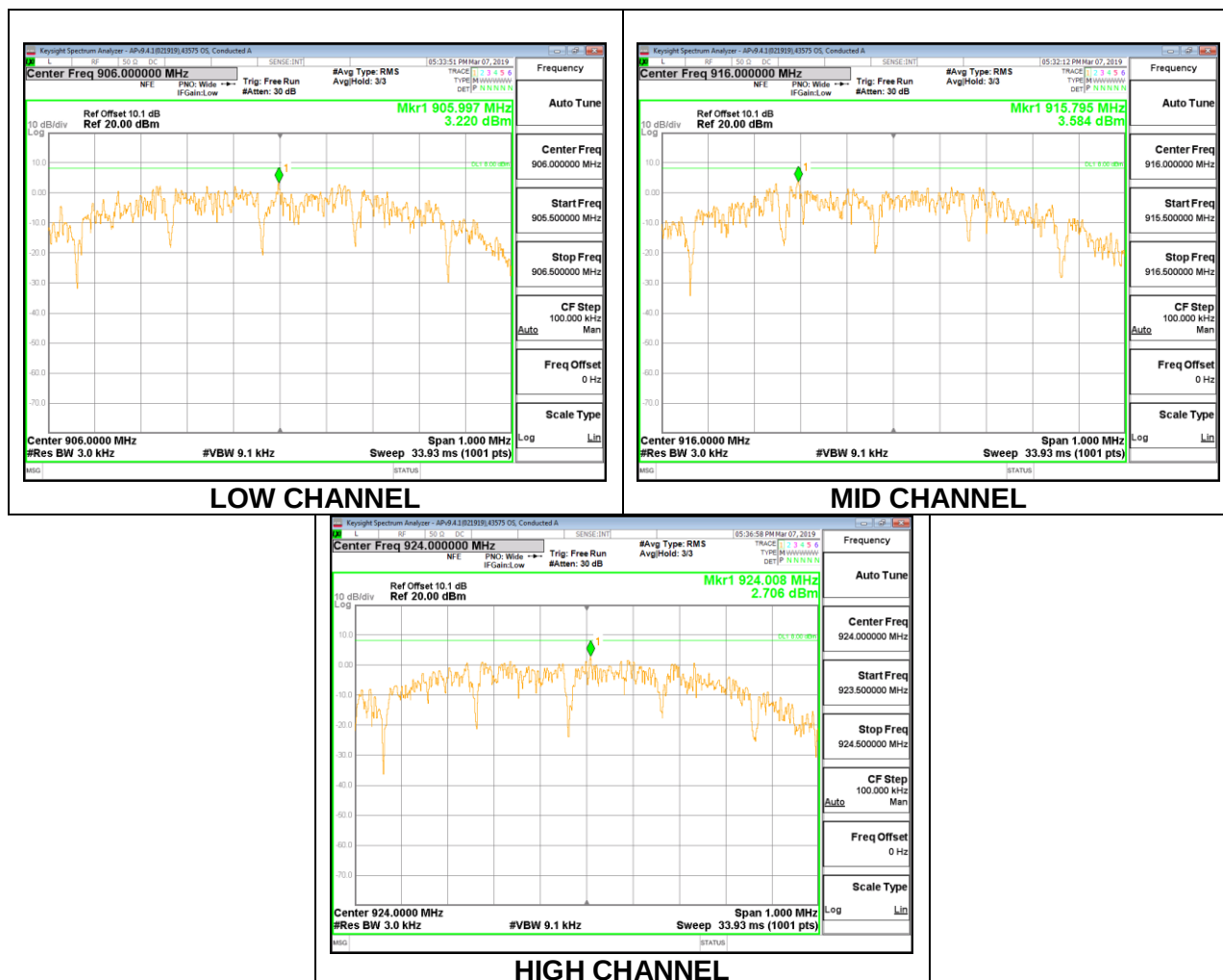
FCC §15.247 (e)

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

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
Low	906	3.22	8	-4.78
Middle	916	3.58	8	-4.42
High	924	2.71	8	-5.29



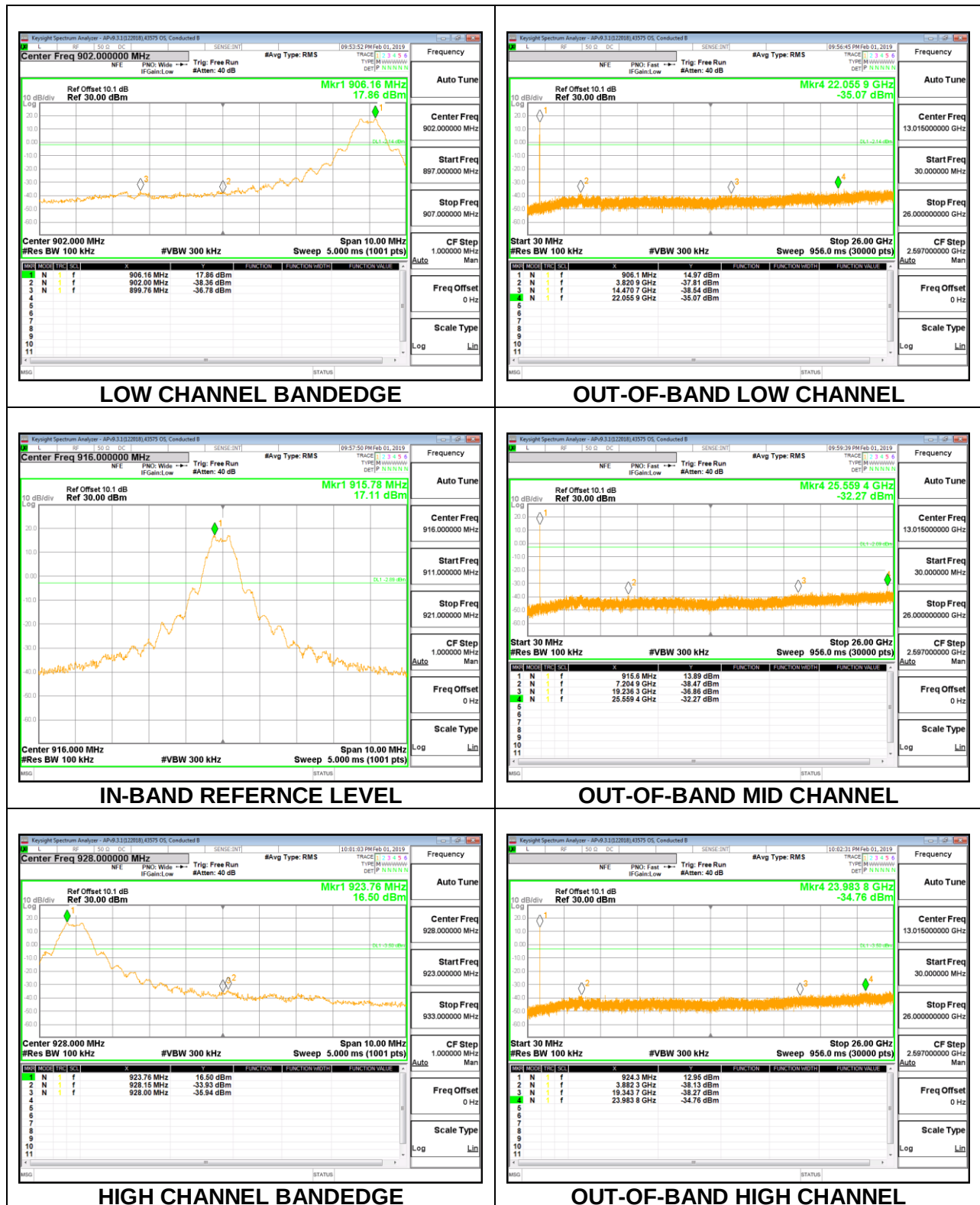
8.6. CONDUCTED SUPRIIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

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

RESULTS



9. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

RSS-GEN, Section 8.9 and 8.10.

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

TEST PROCEDURE

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

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

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

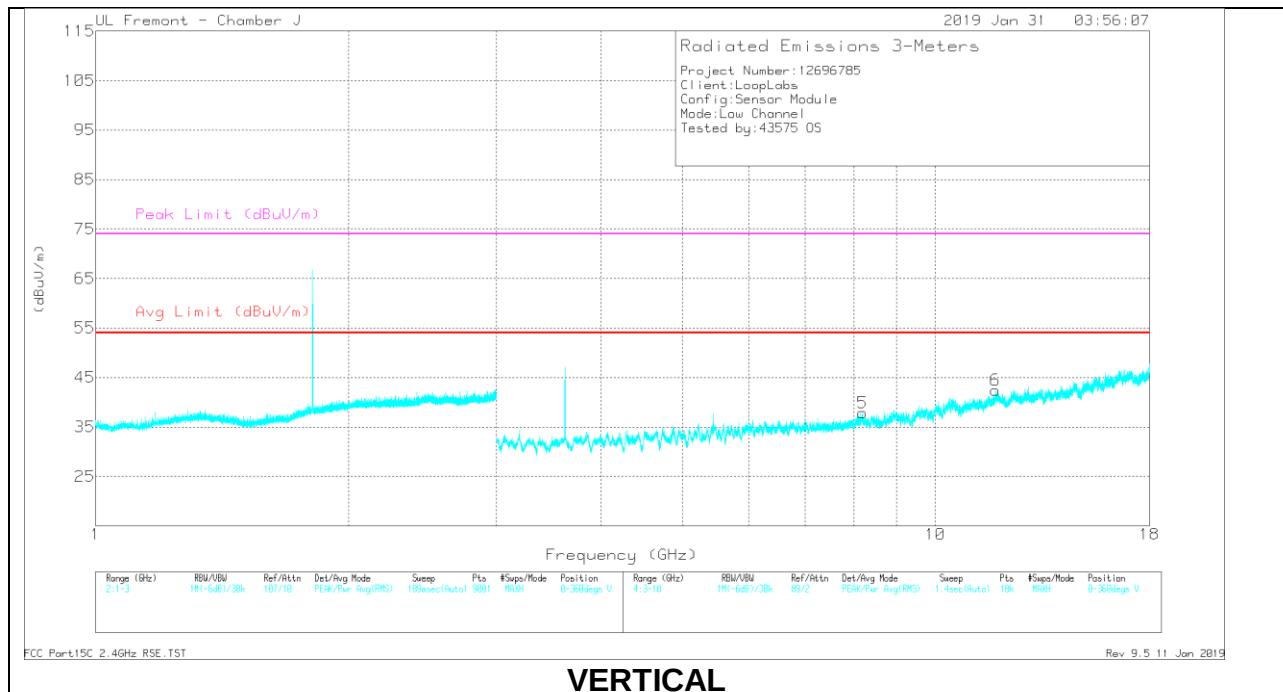
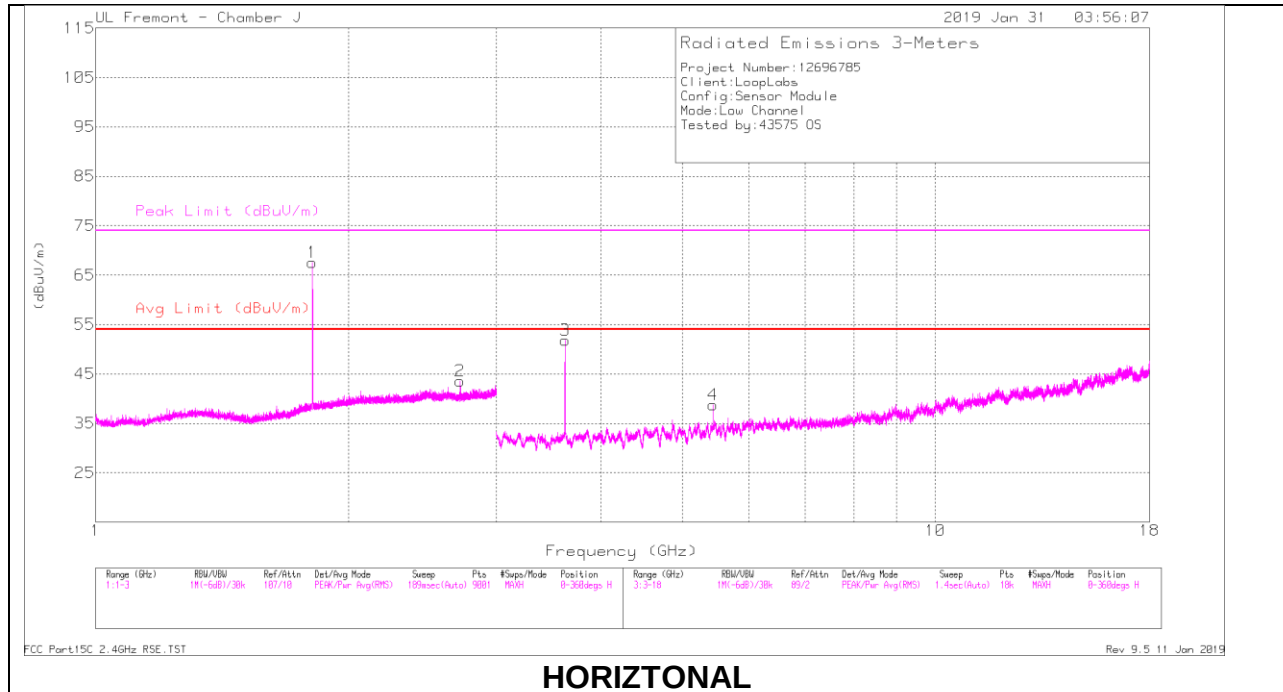
For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

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.

9.1. TRANSMITTER ABOVE 1 GHz HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0067 (dB/m)	Amp/CbI/Filt/ 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	1.812	63.14	Pk	30.5	-26.1	67.54	-	-	-	-	0-360	198	H
2	* 2.717	36.96	Pk	32.1	-25.5	43.56	-	-	74	-30.44	0-360	102	H
3	* 3.624	51.21	Pk	33.1	-32.5	51.81	-	-	74	-22.19	0-360	102	H
4	* 5.434	34.24	Pk	34.5	-30	38.74	-	-	74	-35.26	0-360	102	H
5	* 8.19	28.73	Pk	35.7	-26.6	37.83	-	-	74	-36.17	0-360	101	V
6	* 11.806	26.24	Pk	38.5	-22.3	42.44	-	-	74	-31.56	0-360	101	V

* - indicates frequency in CFR15.205/IC8.10 RSS-Restricted Band

Pk - Peak detector

Radiated Emissions

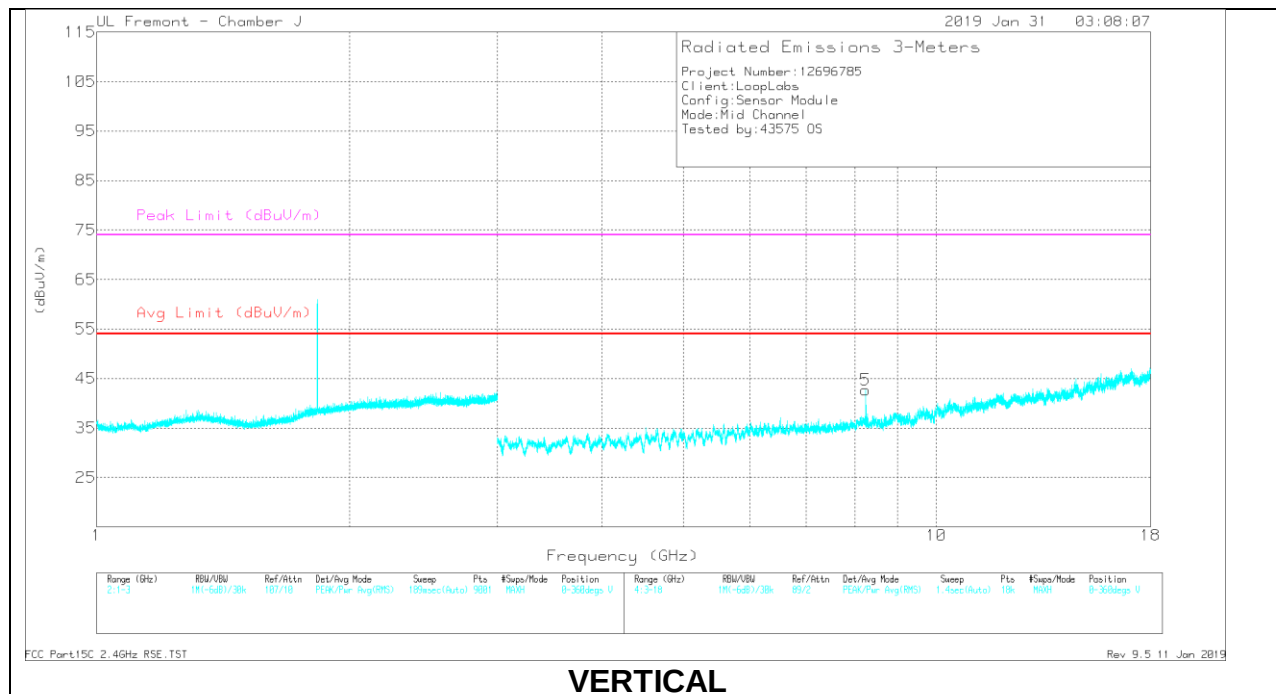
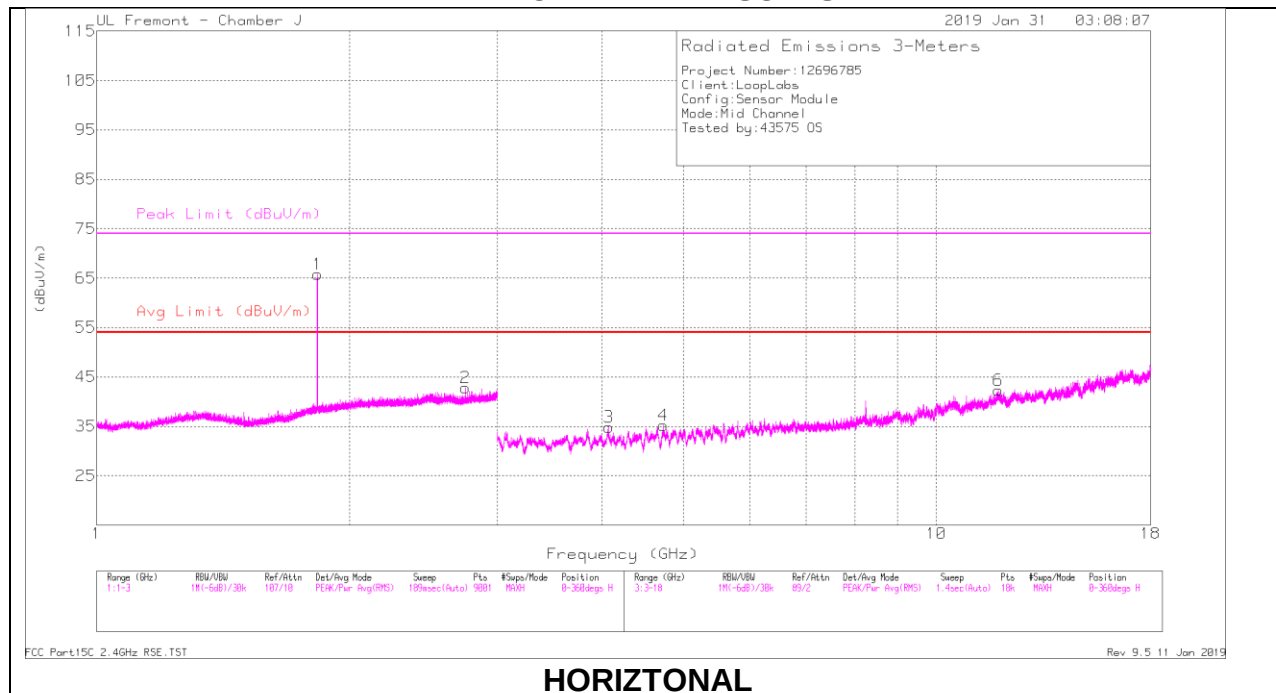
Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0067 (dB/m)	Amp/CbI/Filt/ r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.812	66.33	PK2	30.5	-26.1	70.73	-	-	-	-	171	357	H
1.812	62.12	MAV1	30.5	-26.1	66.52	-	-	-	-	171	357	H
* 2.717	42.68	PK2	32.1	-25.5	49.28	-	-	74	-24.72	197	102	H
* 2.719	34.37	MAV1	32.1	-25.5	40.97	54	-13.03	-	-	197	102	H
* 3.623	54.87	PK2	33.1	-32.5	55.47	-	-	74	-18.53	13	113	H
* 3.625	48.38	MAV1	33.1	-32.5	48.98	54	-5.02	-	-	13	113	H
* 5.434	40.1	PK2	34.5	-30	44.6	-	-	74	-29.4	308	128	H
* 5.435	32.65	MAV1	34.5	-30	37.15	54	-16.85	-	-	308	128	H
* 8.19	34.97	PK2	35.7	-26.6	44.07	-	-	74	-29.93	13	148	V
* 8.189	25.74	MAV1	35.7	-26.6	34.84	54	-19.16	-	-	13	148	V
* 11.808	32.12	PK2	38.5	-22.3	48.32	-	-	74	-25.68	88	220	V
* 11.808	22.63	MAV1	38.5	-22.3	38.83	54	-15.17	-	-	88	220	V

* - indicates frequency in CFR15.205/IC8.10 RSS-Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL RESULTS



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0067 (dB/m)	Amp/CbI/Filt/ 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	1.832	61.3	Pk	30.6	-26.1	65.8	-	-	-	-	0-360	198	H
2	* 2.748	36.06	Pk	32.2	-25.5	42.76	-	-	74	-31.24	0-360	101	H
3	* 4.075	32.97	Pk	33.6	-31.7	34.87	-	-	74	-39.13	0-360	198	H
4	* 4.729	32.35	Pk	34	-31.2	35.15	-	-	74	-38.85	0-360	101	H
6	* 11.852	26	Pk	38.6	-22.3	42.3	-	-	74	-31.7	0-360	198	H
5	* 8.242	33.53	Pk	35.8	-26.6	42.73	-	-	74	-31.27	0-360	102	V

* - indicates frequency in CFR15.205/IC8.10 RSS-Restricted Band

Pk - Peak detector

Radiated Emissions

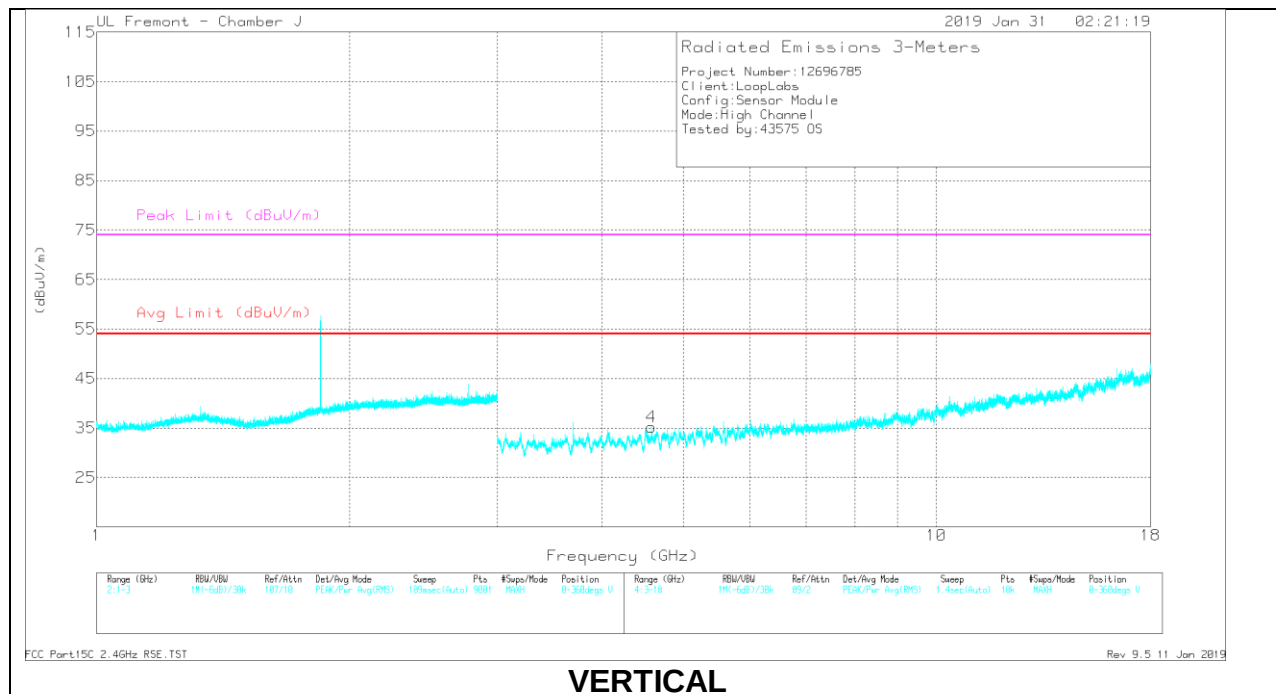
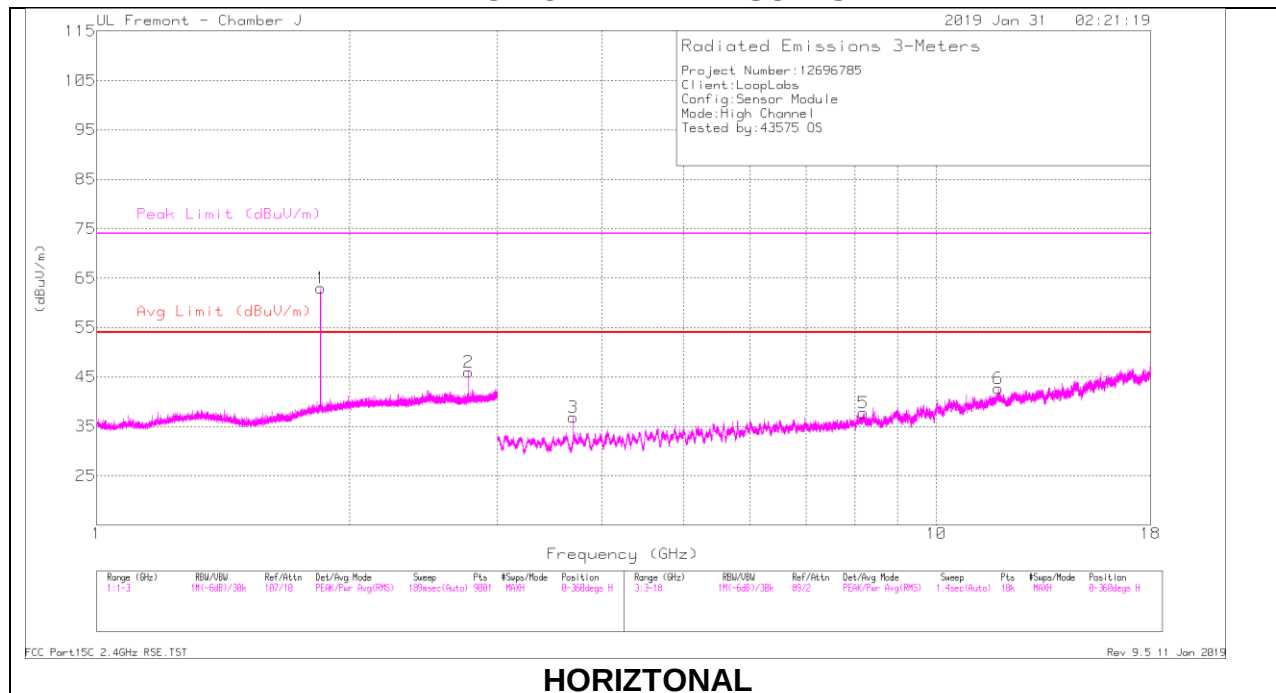
Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0067 (dB/m)	Amp/CbI/Filt/ r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.832	65.21	PK2	30.6	-26.1	69.71	-	-	-	-	192	161	H
1.832	61.01	MAV1	30.6	-26.1	65.51	-	-	-	-	192	161	H
* 2.747	42.13	PK2	32.2	-25.5	48.83	-	-	74	-25.17	3	139	H
* 2.747	33.4	MAV1	32.2	-25.5	40.1	54	-13.9	-	-	3	139	H
* 4.074	39.99	PK2	33.6	-31.7	41.89	-	-	74	-32.11	137	284	H
* 4.077	29.85	MAV1	33.6	-31.7	31.75	54	-22.25	-	-	137	284	H
* 4.73	38.4	PK2	34	-31.2	41.2	-	-	74	-32.8	24	163	H
* 4.729	29.23	MAV1	34	-31.2	32.03	54	-21.97	-	-	24	163	H
* 11.852	33.02	PK2	38.6	-22.3	49.32	-	-	74	-24.68	261	300	H
* 11.853	23.64	MAV1	38.6	-22.3	39.94	54	-14.06	-	-	261	300	H
* 8.242	38.25	PK2	35.8	-26.6	47.45	-	-	74	-26.55	165	111	V
* 8.242	30.36	MAV1	35.8	-26.6	39.56	54	-14.44	-	-	165	111	V

* - indicates frequency in CFR15.205/IC8.10 RSS-Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL RESULTS



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0067 (dB/m)	Amp/CbI/Filt/ 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	1.848	58.34	Pk	30.7	-26	63.04	-	-	-	-	0-360	101	H
2	* 2.772	39.2	Pk	32.3	-25.5	46	-	-	74	-28	0-360	101	H
3	* 3.696	36.65	Pk	33.3	-33.1	36.85	-	-	74	-37.15	0-360	102	H
5	* 8.189	28.65	Pk	35.7	-26.6	37.75	-	-	74	-36.25	0-360	102	H
6	* 11.848	26.33	Pk	38.6	-22.3	42.63	-	-	74	-31.37	0-360	102	H
4	* 4.582	32.35	Pk	34.2	-31.4	35.15	-	-	74	-38.85	0-360	198	V

* - indicates frequency in CFR15.205/IC8.10 RSS-Restricted Band

Pk - Peak detector

Radiated Emissions

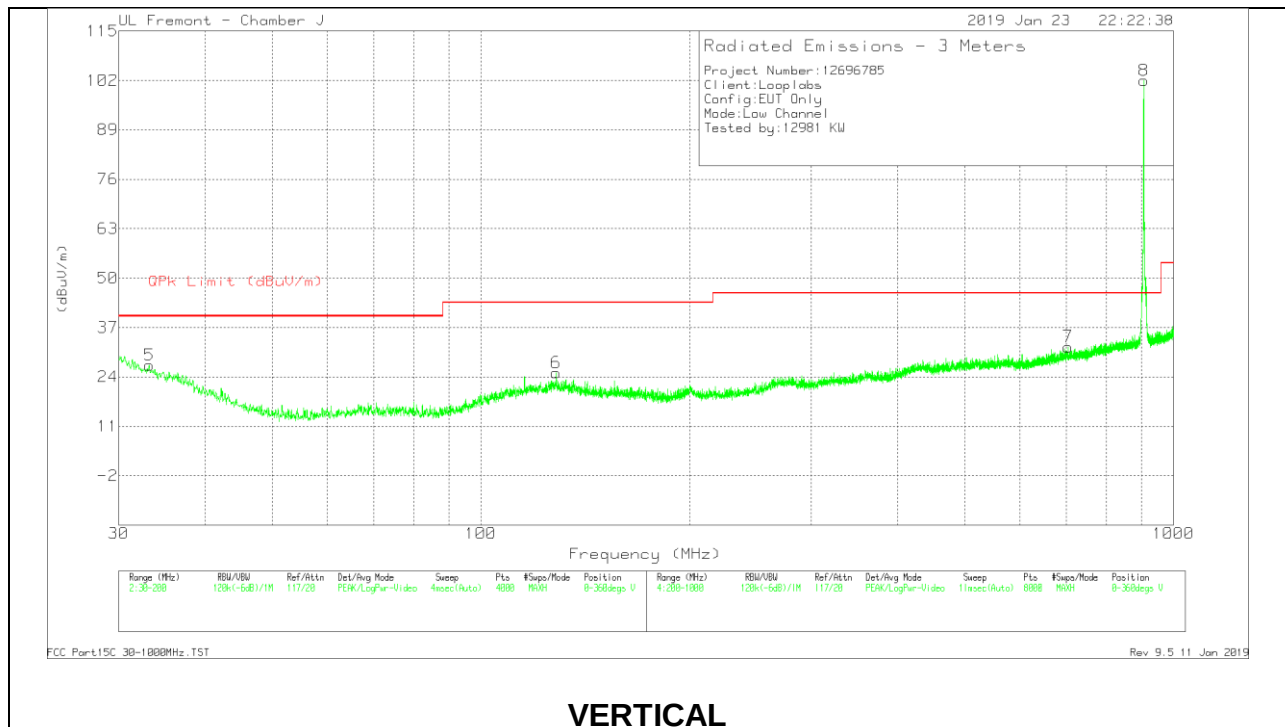
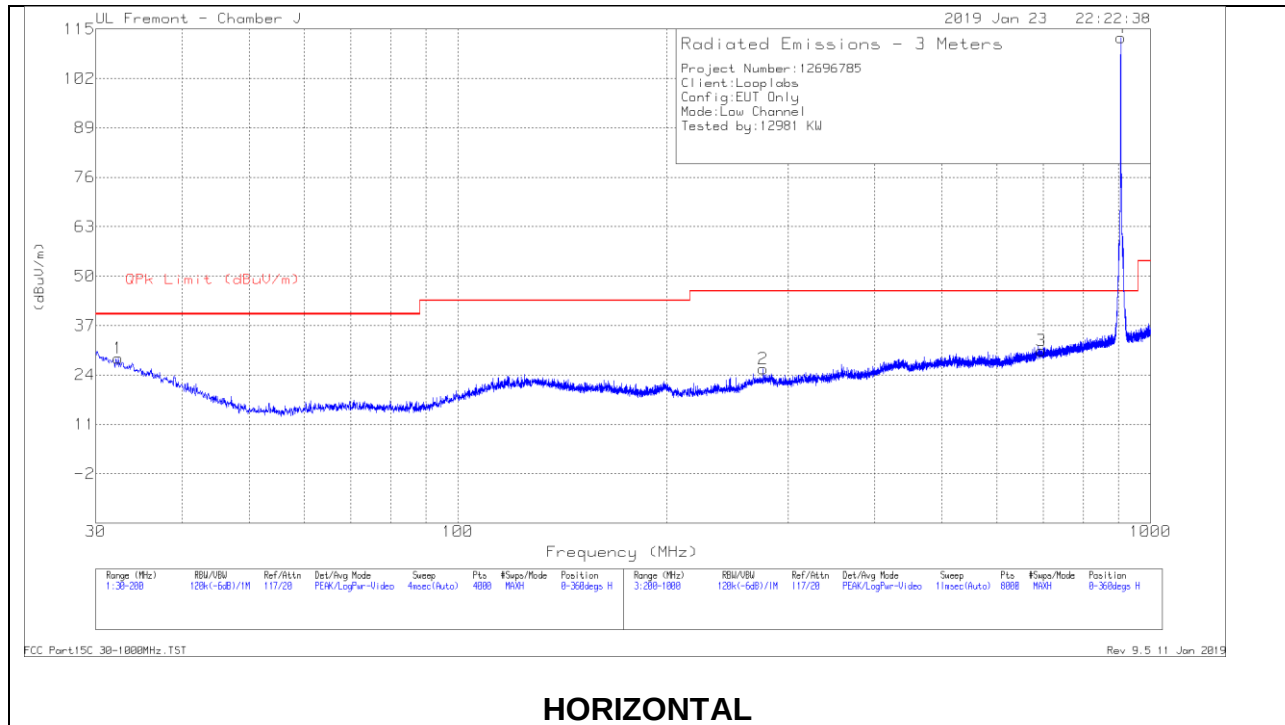
Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0067 (dB/m)	Amp/CbI/Filt/ r/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.848	61.87	PK2	30.7	-26	66.57	-	-	-	-	131	340	H
1.848	57.65	MAV1	30.7	-26	62.35	-	-	-	-	131	340	H
* 2.771	45.15	PK2	32.3	-25.5	51.95	-	-	74	-22.05	78	171	H
* 2.771	38.04	MAV1	32.3	-25.5	44.84	54	-9.16	-	-	78	171	H
* 3.697	43.85	PK2	33.3	-33.1	44.05	-	-	74	-29.95	122	128	H
* 3.697	35.92	MAV1	33.3	-33.1	36.12	54	-17.88	-	-	122	128	H
* 8.188	35.4	PK2	35.7	-26.6	44.5	-	-	74	-29.5	67	125	H
* 8.188	26.23	MAV1	35.7	-26.6	35.33	54	-18.67	-	-	67	125	H
* 11.848	32.61	PK2	38.6	-22.3	48.91	-	-	74	-25.09	92	282	H
* 11.849	22.79	MAV1	38.6	-22.3	39.09	54	-14.91	-	-	92	282	H
* 4.584	38.21	PK2	34.2	-31.4	41.01	-	-	74	-32.99	235	168	V
* 4.58	28.65	MAV1	34.2	-31.5	31.35	54	-22.65	-	-	235	168	V

* - indicates frequency in CFR15.205/IC8.10 RSS-Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

9.2. TRANSMITTER BELOW 1 GHz LOW CHANNEL RESULTS



Trace Markers

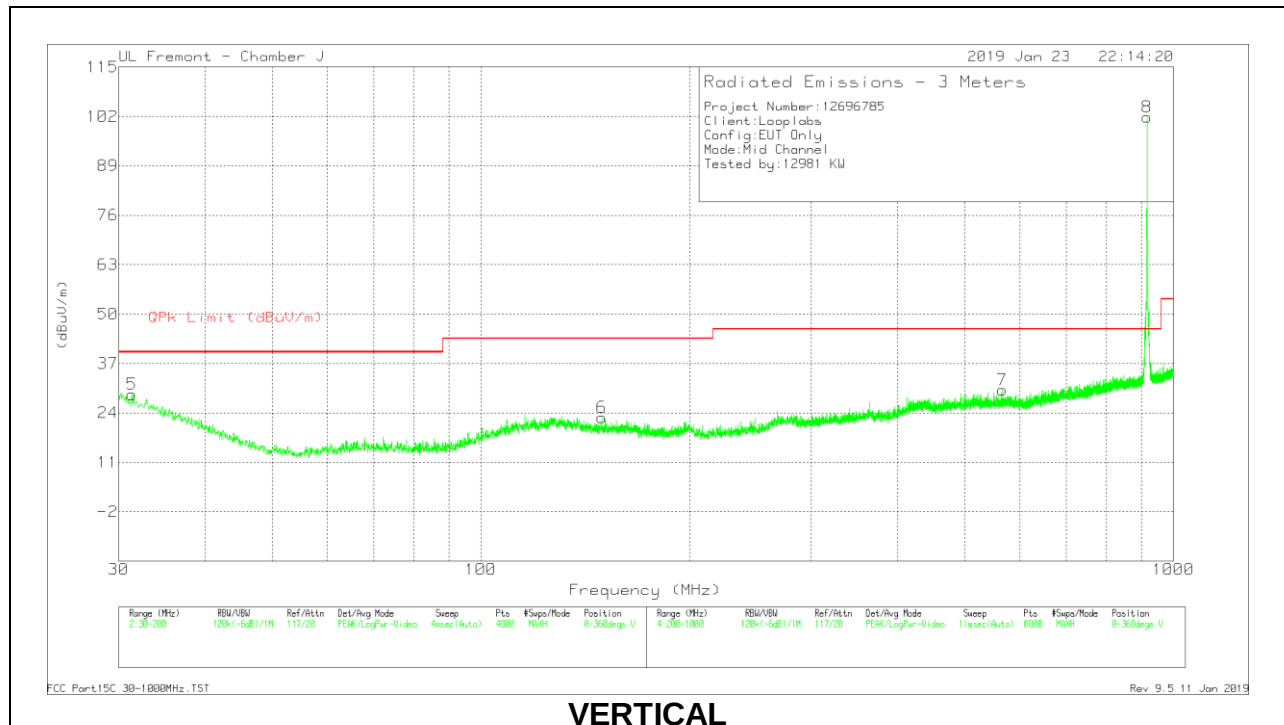
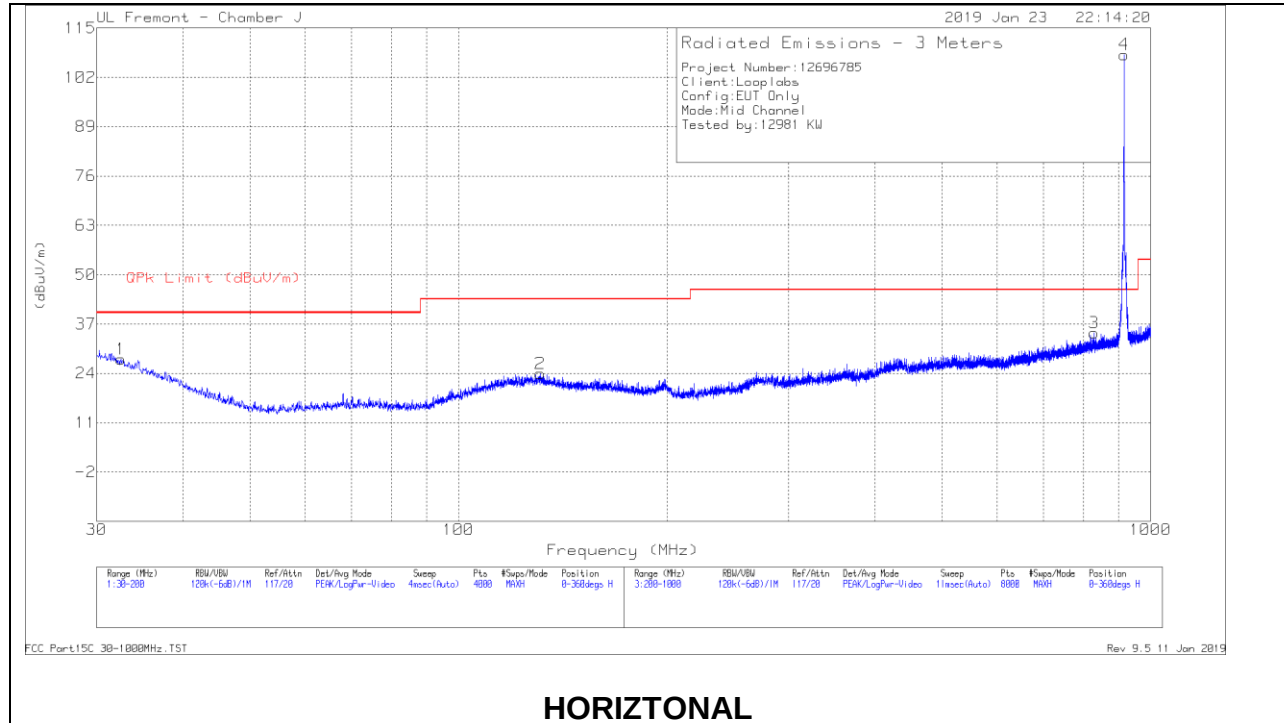
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF PRE0181575 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.3381	34.66	Pk	25.3	-31.5	28.46	40	-11.54	196	298	H
5	33.1883	34.14	Pk	24.5	-31.5	27.14	40	-12.86	289	161	V
6	* 128.498	36.11	Pk	19.7	-30.7	25.11	43.52	-18.41	155	177	V
2	* 276.1099	36.48	Pk	19.2	-30.1	25.58	46.02	-20.44	130	192	H
3	695.6644	33.36	Pk	26	-28.9	30.46	46.02	-15.56	296	255	H
4	** 906.1918	111.86	Pk	28.3	-27.4	112.76	46.02	66.74	0-360	101	H
7	705.1657	34.56	Pk	26.2	-28.8	31.96	46.02	-14.06	65	325	V
8	** 906.1918	101.04	Pk	28.3	-27.4	101.94	46.02	55.92	0-360	298	V

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

** - Fundamental Frequencies

Pk - Peak detector

MID CHANNEL RESULTS



Trace Markers

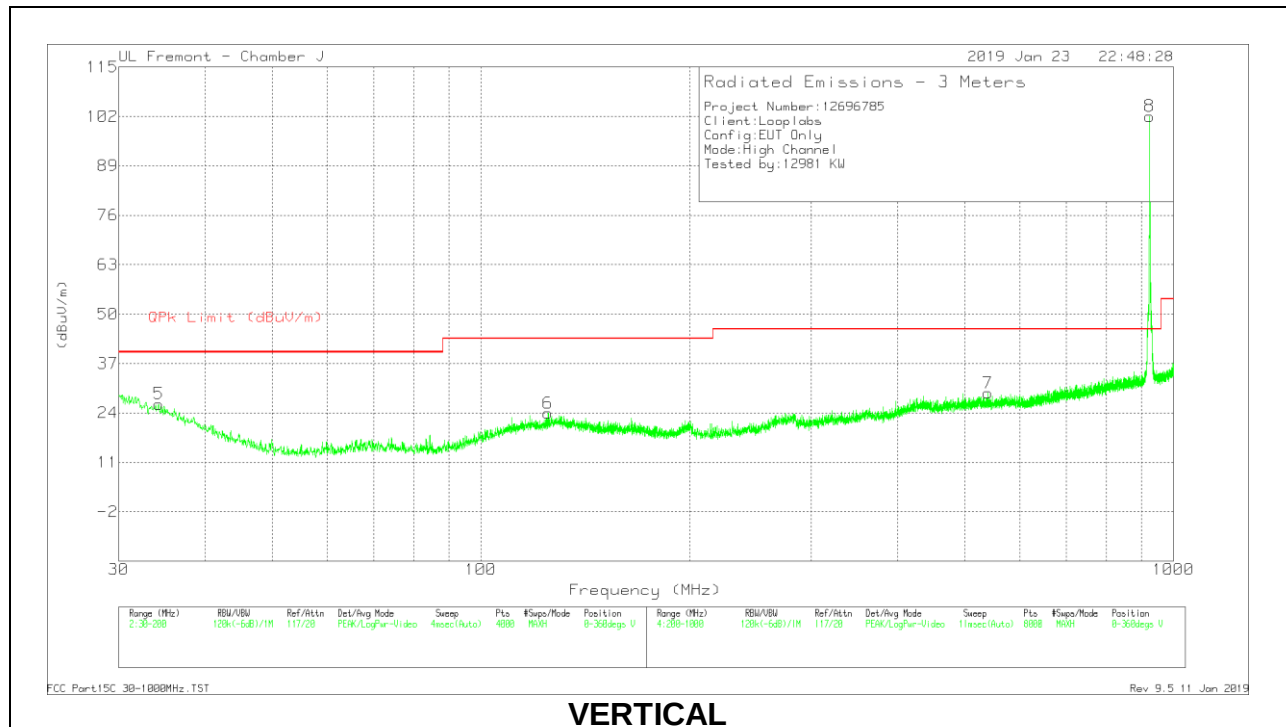
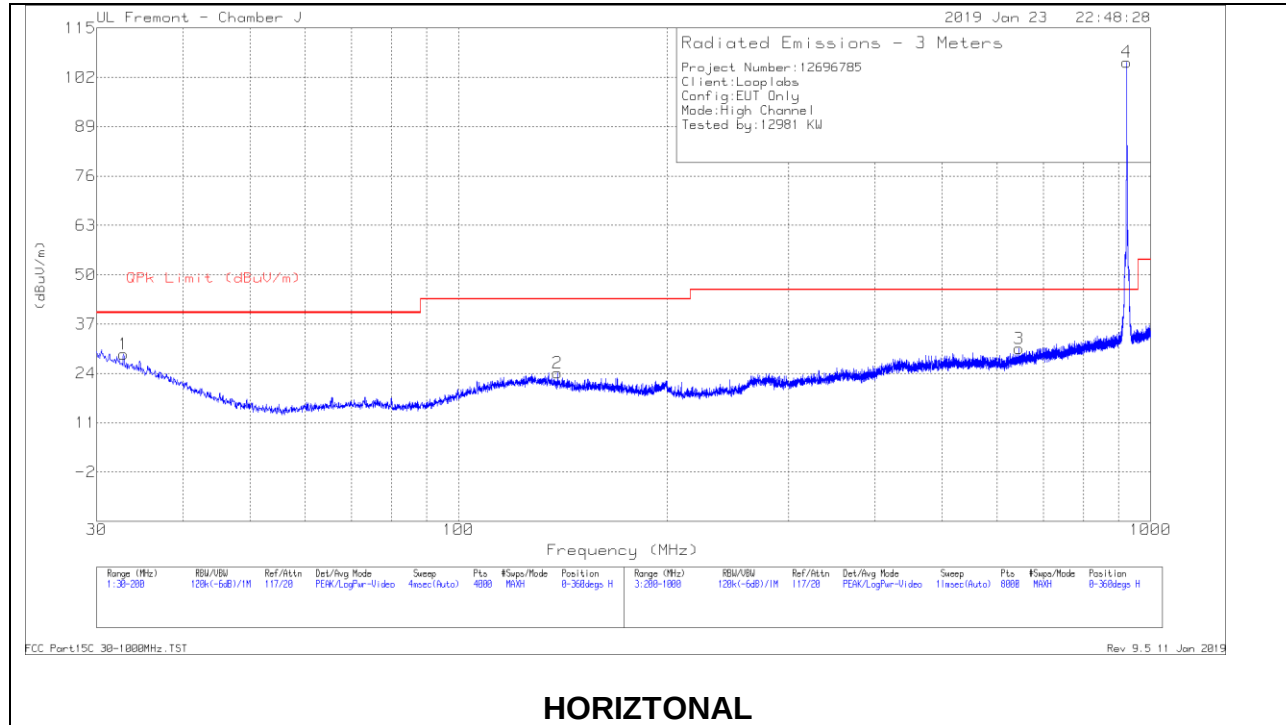
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF PRE0181575 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.5081	34.2	Pk	25.1	-31.5	27.8	40	-12.2	77	311	H
2	* 131.2612	35.14	Pk	19.6	-30.8	23.94	43.52	-19.58	196	221	H
5	31.3178	34.43	Pk	25.9	-31.5	28.83	40	-11.17	228	151	V
6	149.626	35.26	Pk	18.3	-30.7	22.86	43.52	-20.66	163	135	V
3	829.4818	34.95	Pk	27.8	-28.1	34.65	46.02	-11.37	50	221	H
4	** 916.1931	107.03	Pk	28.3	-27.3	108.03	46.02	62.01	0-360	98	H
7	566.0476	34.89	Pk	24.4	-29.2	30.09	46.02	-15.93	181	265	V
8	** 916.1931	100.88	Pk	28.3	-27.3	101.88	46.02	55.86	0-360	101	V

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

** - Fundamental Frequencies

Pk - Peak detector

HIGH CHANNEL RESULTS



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF PRE0181575 (dB/m)	Amp Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	32.8057	35.77	Pk	24.8	-31.5	29.07	40	-10.93	96	258	H
2	138.9982	35.78	Pk	19	-30.7	24.08	43.52	-19.44	195	192	H
5	34.2511	34.05	Pk	23.7	-31.4	26.35	40	-13.65	182	191	V
6	* 125.0971	35.03	Pk	19.8	-30.8	24.03	43.52	-19.49	299	155	V
3	645.858	34.03	Pk	25.6	-29.1	30.53	46.02	-15.49	262	175	H
4	** 924.1941	104.85	Pk	28.4	-27.2	106.05	46.02	60.03	0-360	101	H
7	539.7442	34.6	Pk	24.1	-29.4	29.3	46.02	-16.72	195	144	V
8	** 924.1941	100.89	Pk	28.4	-27.2	102.09	46.02	56.07	0-360	99	V

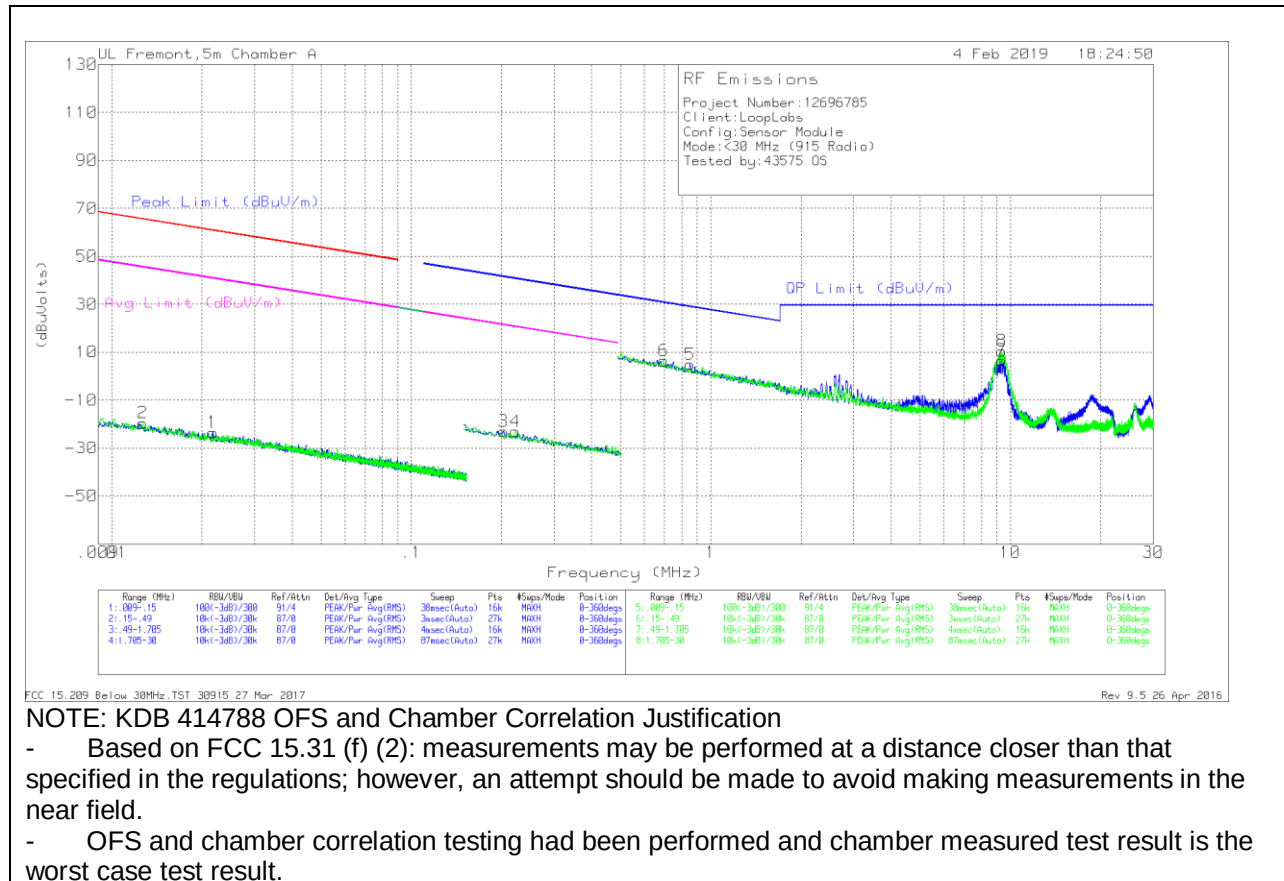
* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

** - Fundamental Frequencies

Pk - Peak detector

Qp - Quasi-Peak detector

9.3. WORST CASE BELOW 30 MHz



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
2	.01267	42.7	Pk	17.8	0	-80	-19.5	65.53	-85.03	45.53	-65.03	-	-	-	-	0-360
1	.02174	41.72	Pk	14.8	0	-80	-23.48	60.84	-84.32	40.84	-64.32	-	-	-	-	0-360
3	.20303	45.7	Pk	11.2	.1	-80	-23	-	-	-	-	41.47	-64.47	21.47	-44.47	0-360
4	.22266	45.78	Pk	11.1	.1	-80	-23.02	-	-	-	-	40.66	-63.68	20.66	-43.68	0-360

Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Dist Corr 30m	Corrected Reading (dBuV/m)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
6	.69566	35.62	Pk	10.7	.1	-40	6.42	30.76	-24.34	0-360
5	.85256	34.11	Pk	10.7	.1	-40	4.91	29	-24.09	0-360
7	9.34859	35.64	Pk	10.6	.4	-40	6.64	29.5	-22.86	0-360
8	9.35121	39.54	Pk	10.6	.4	-40	10.54	29.5	-18.96	0-360

Pk - Peak detector