CERTIFICATION TEST REPORT

Report Number. : 12021721-E3V2

Applicant	:	725-1 Corporation 195 Page Mill Rd. Suite 115 Palo Alto, CA 94306
Model	:	725-100
FCC ID	:	2AOMN-725100
EUT Description	:	Car Camera
Test Standard(s)	:	FCC 47 CFR PART 15 SUBPART C

Date Of Issue:
January 18, 2018

Prepared by:
UL Verification Services Inc.
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	1/9/2018	Initial Issue	--
V2	1/18/2018	Added below 30 MHz set-up photos to section 10	Huda Mustapha

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: 725-1 Corporation
195 Page Mill Road, Suite 115
Palo Alto, CA, 94306

EUT DESCRIPTION: Car Camera

MODEL: 725-100

SERIAL NUMBER: N746100AALM (Radiated), N746100AAMD (Conducted)

DATE TESTED: December 14th – 19th, 2018

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	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:

Huda Mustapha

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LAB TECHNICIAN
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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 v04 and ANSI C63.10-2013.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, 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
☐ Chamber A(IC: 2324B-1)	☐ Chamber D(IC: 22541-1)
☒ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 22541-2)
☒ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 22541-3)
	☐ Chamber G(IC: 22541-4)
	☐ Chamber H(IC: 22541-5)

The above test sites and facilities are covered under FCC Test Firm Registration # 208313.
UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.
Chambers A through C are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-3, respectively. Chambers D through H are covered under Industry Canada company address code 22541 with site numbers 22541 -1 through 22541-5, respectively.

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:

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

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	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.45 dB
Worst Case 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. 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 (1Mbps)	1.41	1.38

5.2. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a Laser Direct Structuring (LDS) antenna, with a maximum gain of 1.4 dBi.

5.3. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was V2.7B17

The test utility software used during testing was QRCT v3.0.264.0.

5.4. WORST-CASE CONFIGURATION AND MODE

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

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

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

BLE Mode: 1Mbps

The EUT is designed for a fixed position in the Y orientation; therefore, all final radiated testing was performed with the EUT in the Y orientation.

AC mains line conducted emissions is not applicable, as the EUT is intended for vehicular use only and has no means to connect to AC mains under normal operation.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Support Laptop	HP	HP Notebook X2	5CD736D58D	N/A
Custom debug control PCB	N/A	N/A	N/A	N/A
AC Adapter	NoiPosi	RS-AB02J00	N/A	N/A

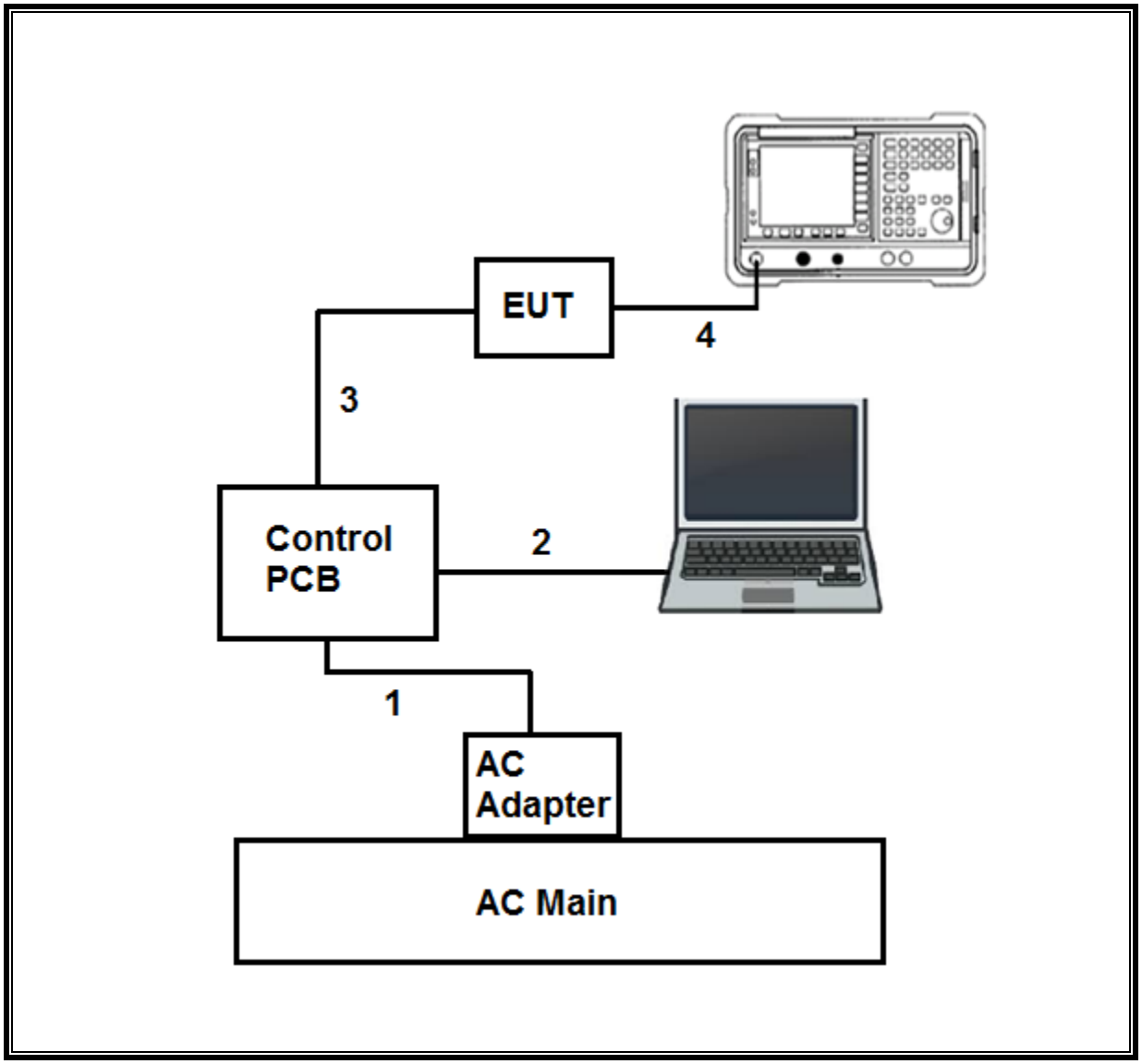
I/O CABLES

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	DC	1	DC	Shielded	1m	
2	USB	1	MicroUSB	Shielded	1.5m	
3	USB	1	5-pin	Shielded	0.2m	
4	UFL	1	SMA	Shielded	0.1m	

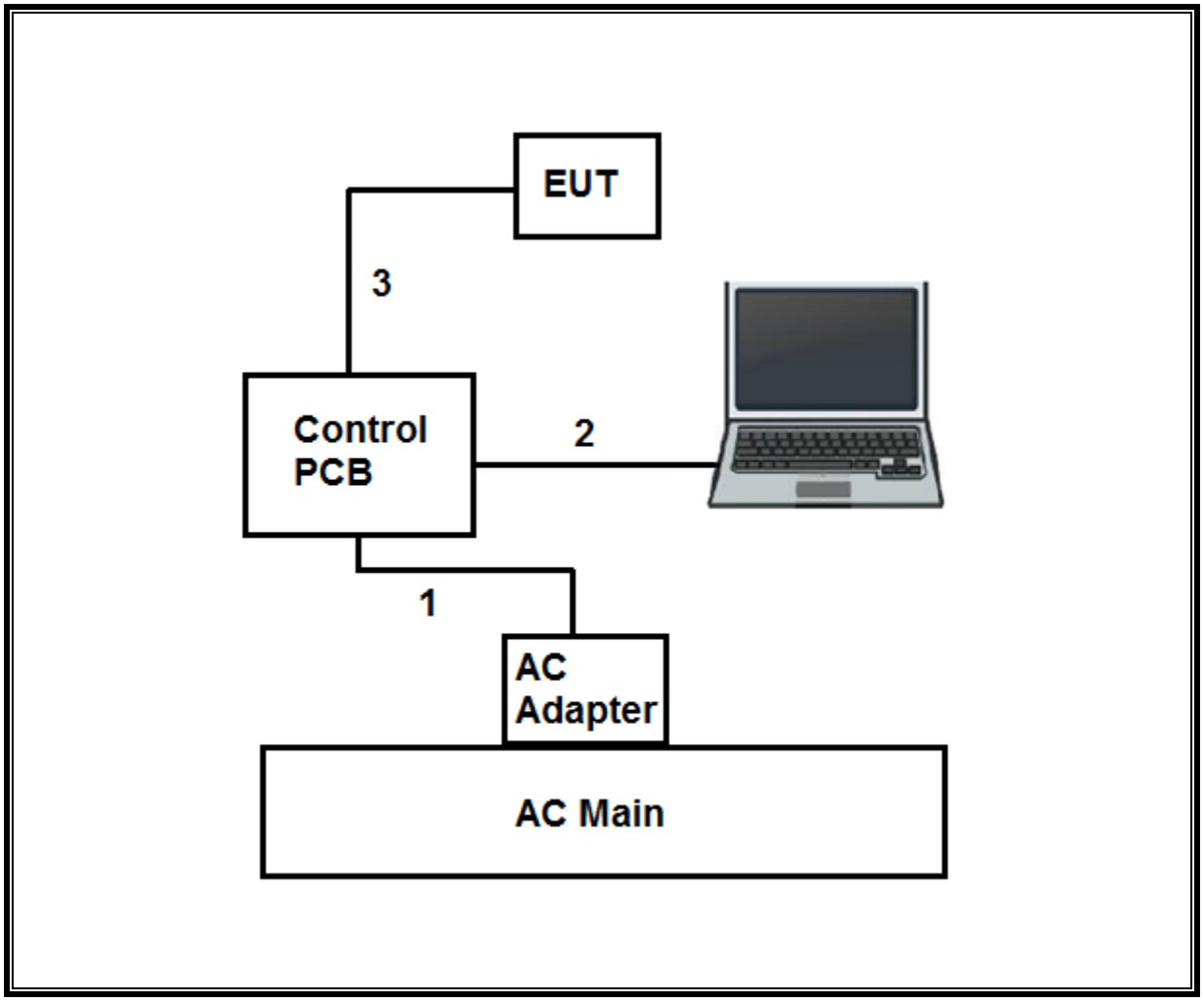
TEST SETUP

Test software on the laptop exercises the EUT transmission through the control PCB.

SETUP DIAGRAM FOR CONDUCTED TESTS



SETUP DIAGRAM FOR RADIATED TESTS



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**	**Asset**	**Cal Due**
Antenna, Broadband Hybrid, 30MHz to 2000MHz w/4dB Pad	Sunol Sciences Corp.	JB1	T130	10/16/2018
Antenna, Active Loop 9kHz-30MHz	Com-Power Corp.	AL-130R	T1866	10/10/2018
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T345	04/14/2018
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T346	03/28/2018
Antenna, Horn 18-26.5GHz	ARA	MWH-1826	T89	01/04/2018
Power Meter, P-series single channel	Agilent (Keysight) Technologies	N1911A	T1268	06/15/2018
Power Sensor, P – series, 50MHz to 18GHz, Wideband	Agilent (Keysight) Technologies	N1921A	T1223	03/29/2018
Amplifier, 1 - 18GHz	MITEQ	AFS42-00101800-25-S-42	T491	06/01/2018
Amplifier, 1 - 18GHz	MITEQ	AFS42-00101800-25-S-42	T493	06/23/2018
Amplifier, 1-8GHz	MITEQ	AMF-4D-01000800-30-29P	T1156	06/24/2018
Pre Amplifier, 1-26.5GHz	Agilent	8449B	T404	7/23/2018
Filter, HPF 3.0GHz	MICRO-TRONICS	HPM17543	T486	11/25/2018
Filter, HPF 3.0GHz	MICRO-TRONICS	HPM17543	T485	6/24/2018
Amplifier, 10kHz-1GHz	Agilent (Keysight) Technologies	8447D	T15	08/14/2018
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1210	07/17/2018
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T339	09/13/2018
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1466	04/11/2018

Test Software List			
Description	**Manufacturer**	**Model**	**Version**
Radiated Software	UL	UL EMC	Ver 9.5, Dec 01, 2016
Antenna Port Software	UL	UL RF	Ver 7.7, Dec 14, 2017

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result
15.247 (a)(2)	Occupied Band width (6dB)	>500KHz	Conducted	Pass
2.1051, 15.247 (d)	Band Edge / Conducted Spurious Emission	-20dBc		Pass
15.247	TX conducted output power	<30dBm		Pass
15.247	PSD	<8dBm		Pass
15.207 (a)	AC Power Line conducted emissions	Section 10	Radiated	Not Applicable
15.205, 15.209, 15.247(d)	Radiated Spurious Emission	< 54dBuV/m		Pass

8. ANTENNA PORT TEST RESULTS

8.1. MEASUREMENT METHODS

On Time and Duty Cycle: KDB 558074 D01 v04, Section 6.

6 dB BW: KDB 558074 D01 v04, Section 8.1.

Output Power: KDB 558074 D01 v04, Section 9.1.1.

Power Spectral Density: KDB 558074 D01 v04, Section 10.2.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v04, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v04, Section 12.1.

Band-edge: KDB 558074 D01 v04, Section 12.1.

8.2. ON TIME, DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
BLE (1Mbps)	0.335	0.625	0.536	53.56%	2.71	2.987

DUTY CYCLE PLOT

DUTY CYCLE BLE MODE (1Mbps)

8.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

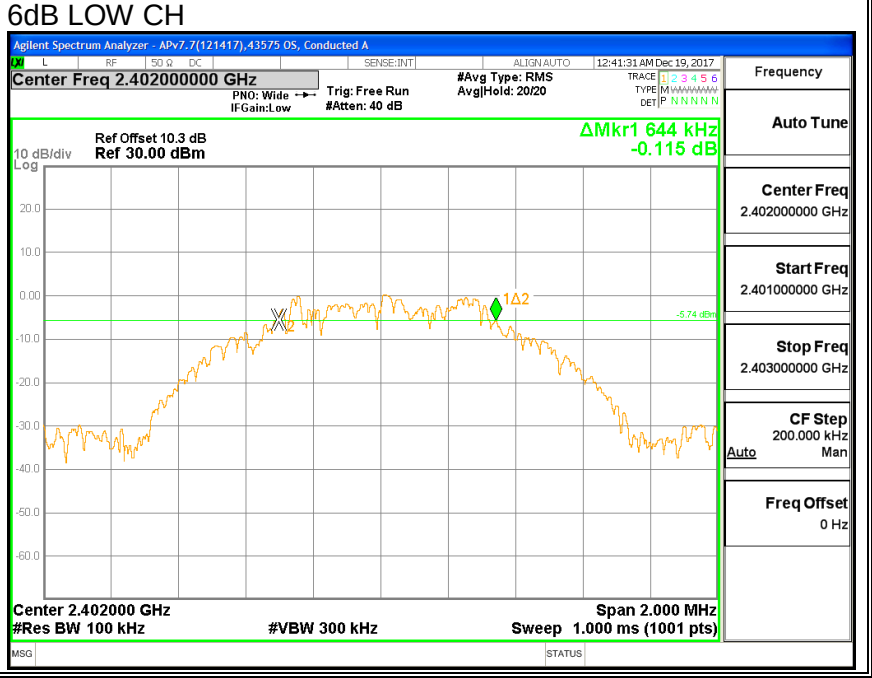
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

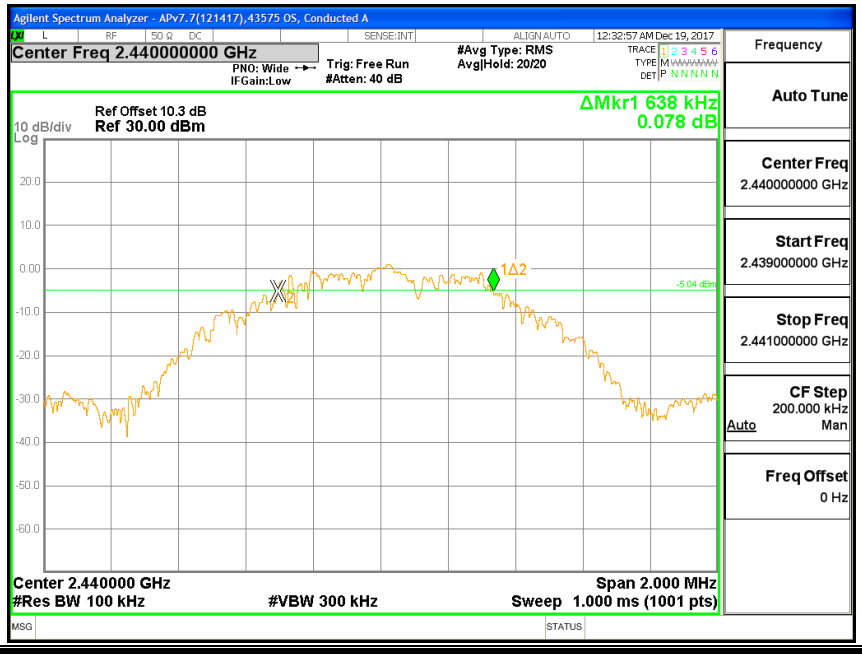
6 dB BANDWIDTH (1Mbps)

Channel	Frequency	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.644	0.5
Middle	2440	0.638	0.5
High	2480	0.684	0.5

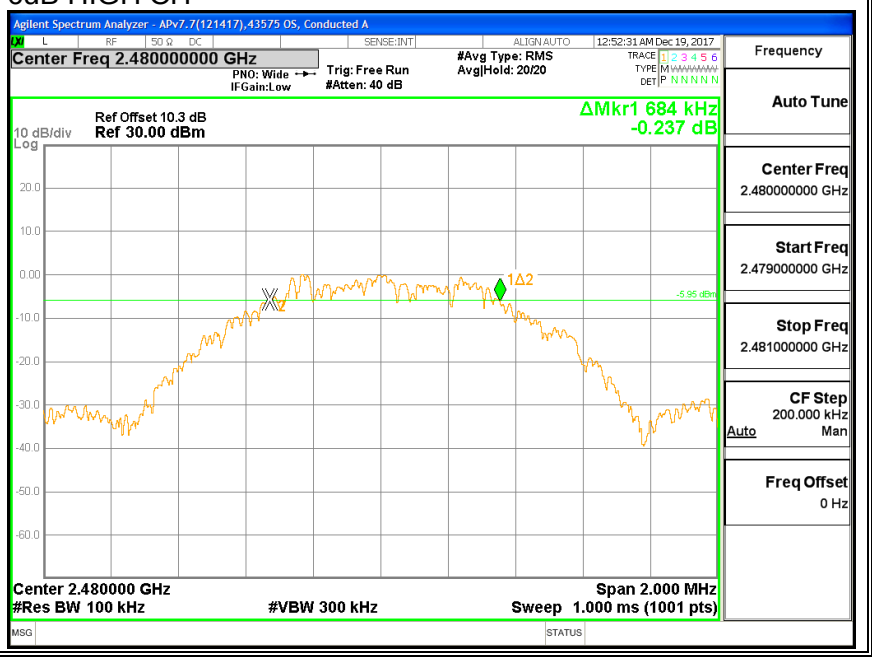
6dB LOW CH



6dB MID CH



6dB HIGH CH



8.4. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

Test Procedure

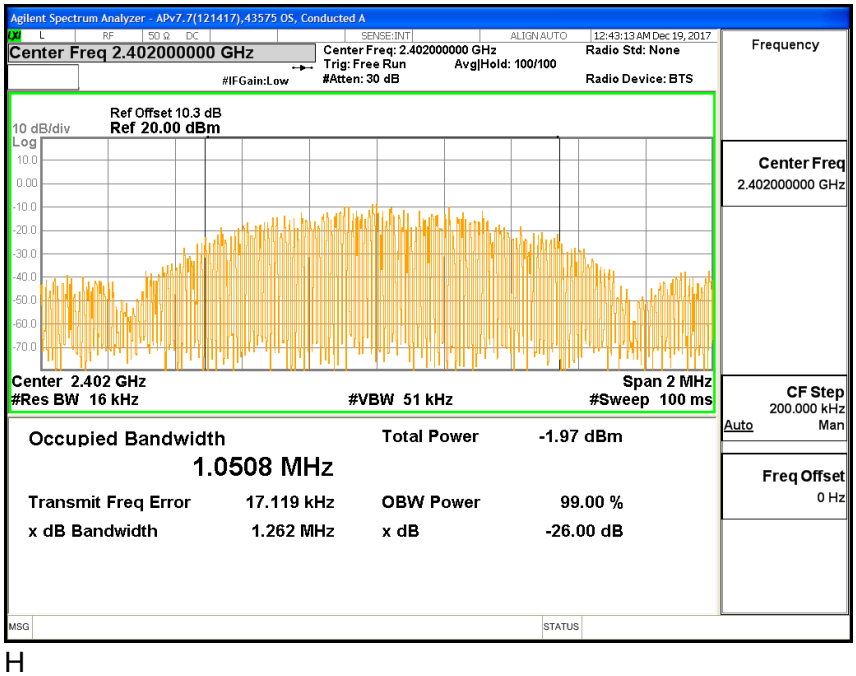
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth and to 1% of the span. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

99% BANDWIDTH (1Mbps)

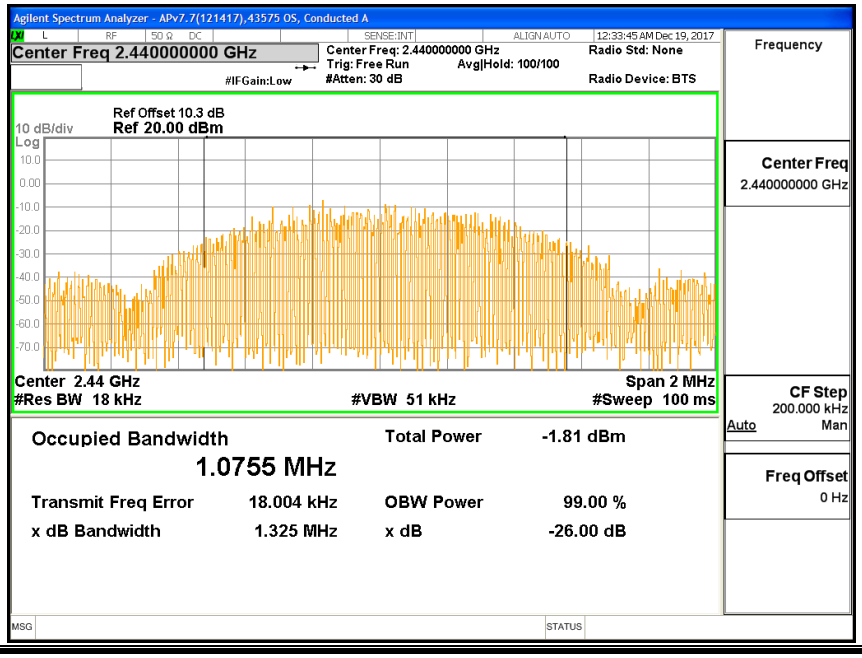
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0508
Middle	2440	1.0755
High	2480	1.0638

OBW LOW C

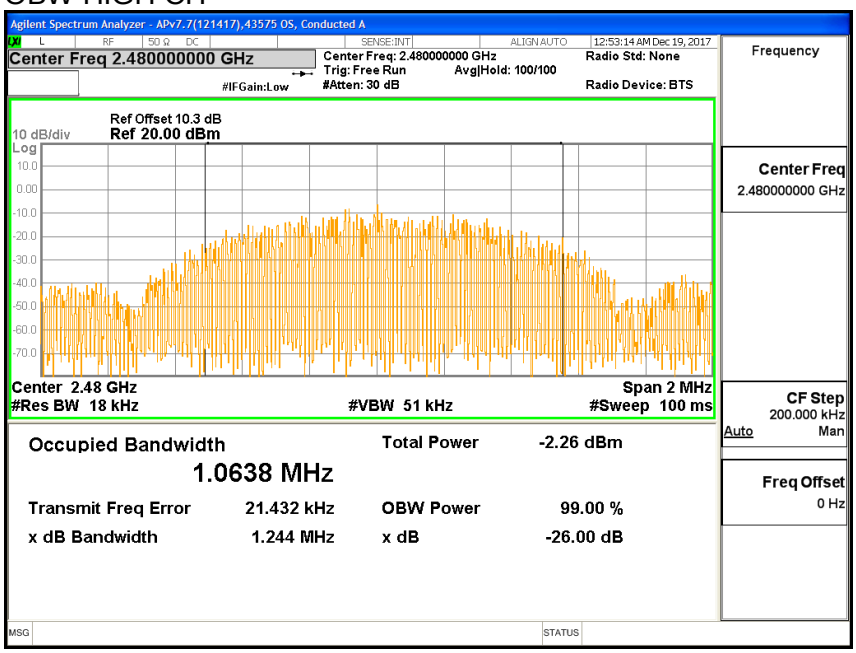


H

OBW MID CH



OBW HIGH CH



8.5. AVERAGE POWER

LIMITS

None; for reporting purposes only.

The cable assembly insertion loss of 10.3 dB (including 10 dB pad and 0.3 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

TEST ENGINEER:	43575	**Date:**	12/18/2017

Channel	Frequency (MHz)	AV Power (dBm)
Low	2402	0.43
Middle	2440	1.06
High	2480	0.44

8.6. OUTPUT POWER

LIMITS

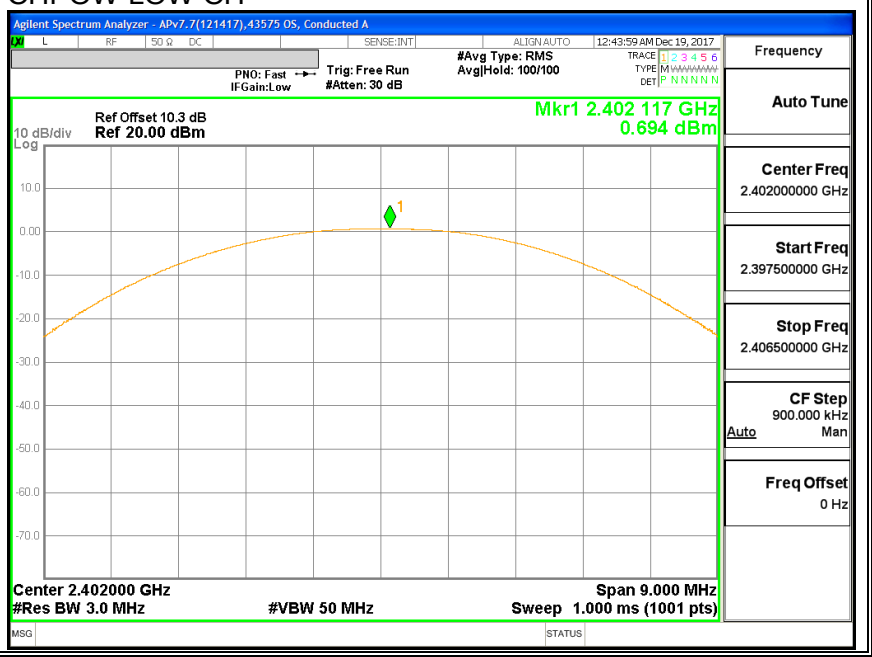
FCC §15.247 (b)

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

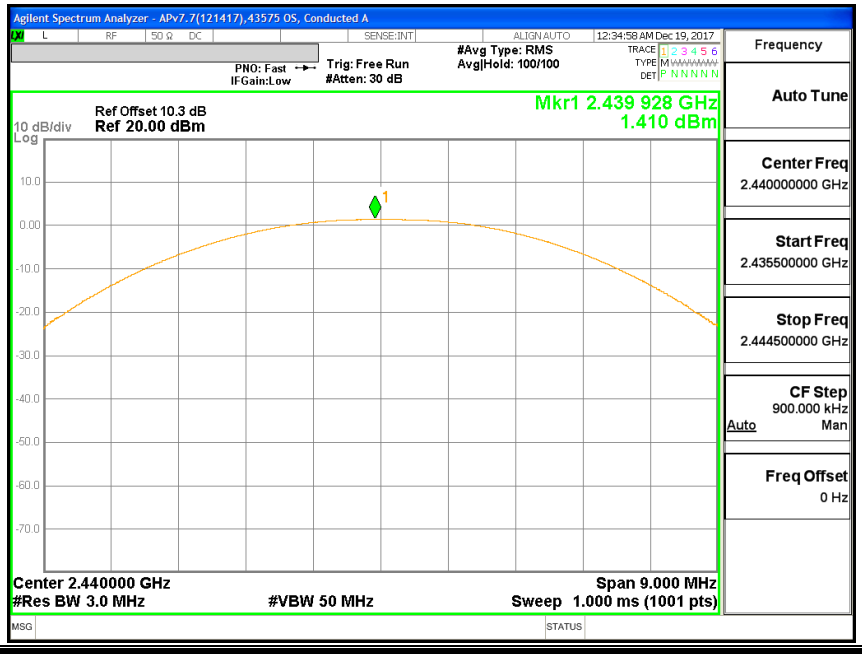
RESULTS

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	0.694	30	-29.306
Middle	2440	1.410	30	-28.590
High	2480	0.881	30	-29.119

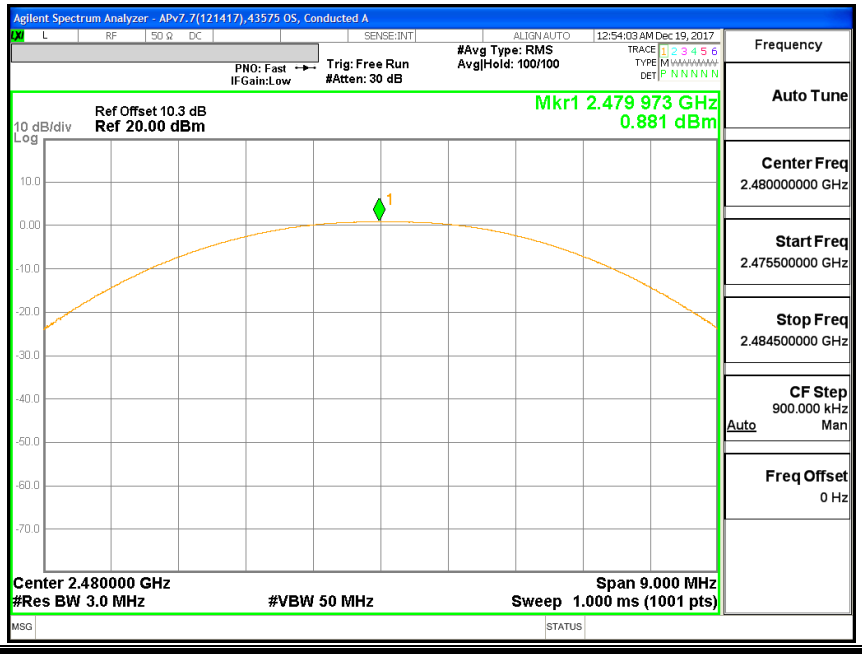
CHPOW LOW CH



CHPOW MID CH



CHPOW HIGH CH



8.7. POWER SPECTRAL DENSITY

LIMITS

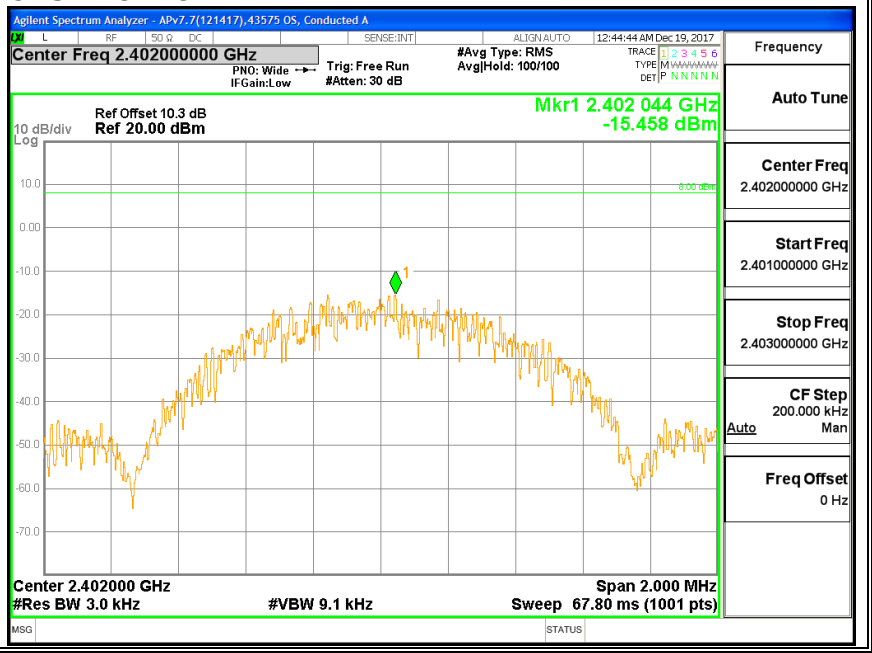
FCC §15.247 (e)

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.

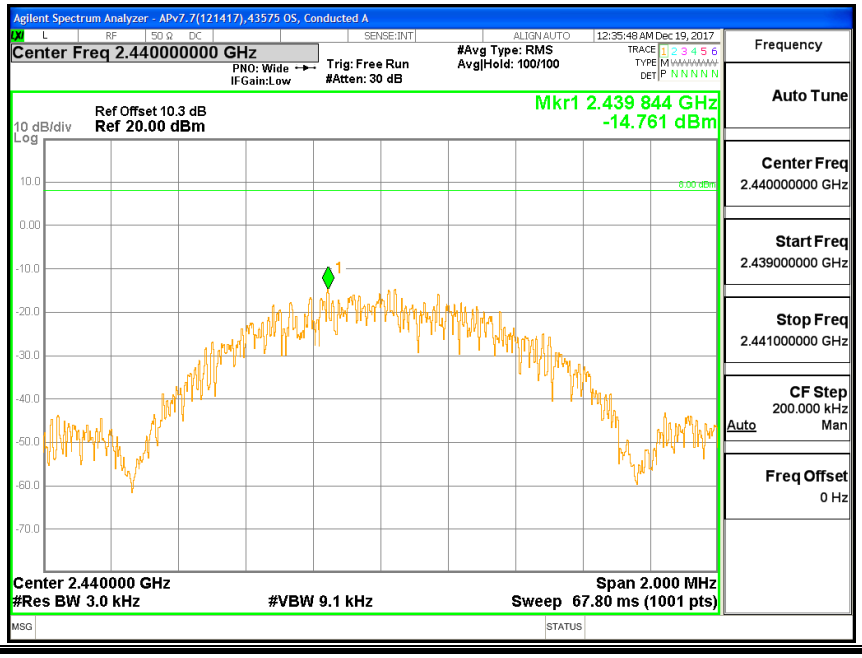
RESULTS

Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-15.458	8	-23.458
Middle	2440	-14.761	8	-22.761
High	2480	-15.313	8	-23.313

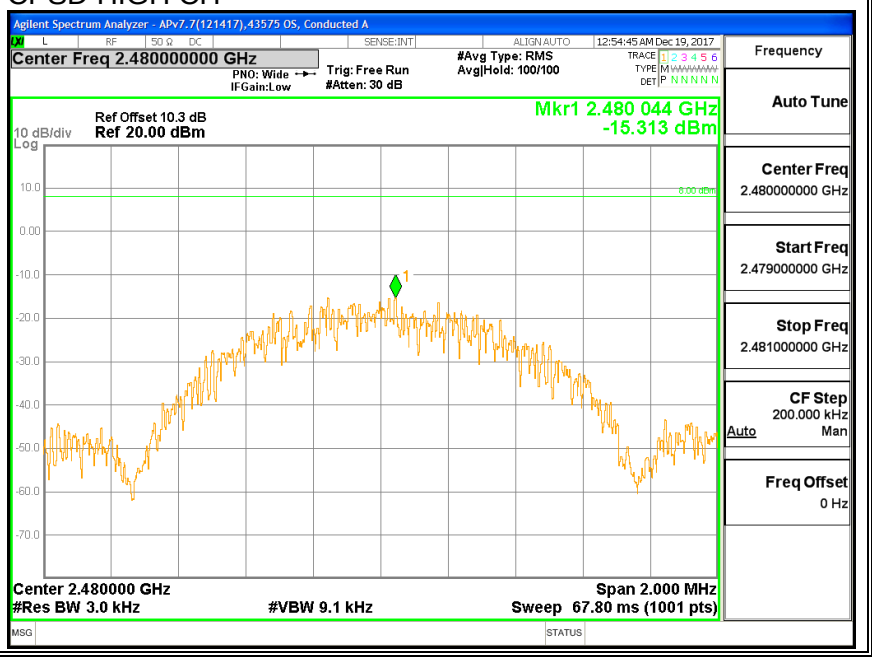
CPSD LOW CH



CPSD MID CH



CPSD HIGH CH



8.8. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

LIMITS

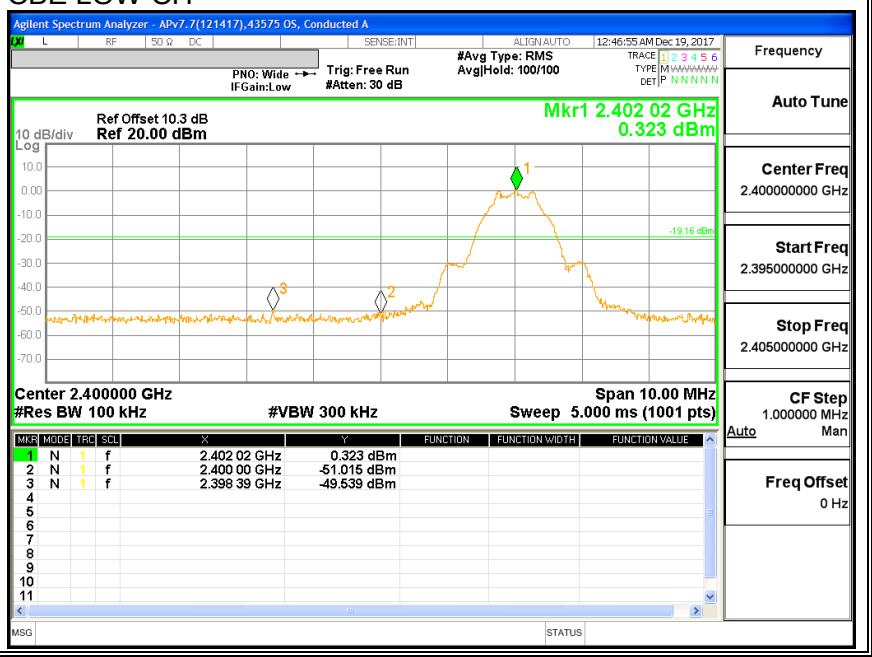
FCC §15.247 (d)

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

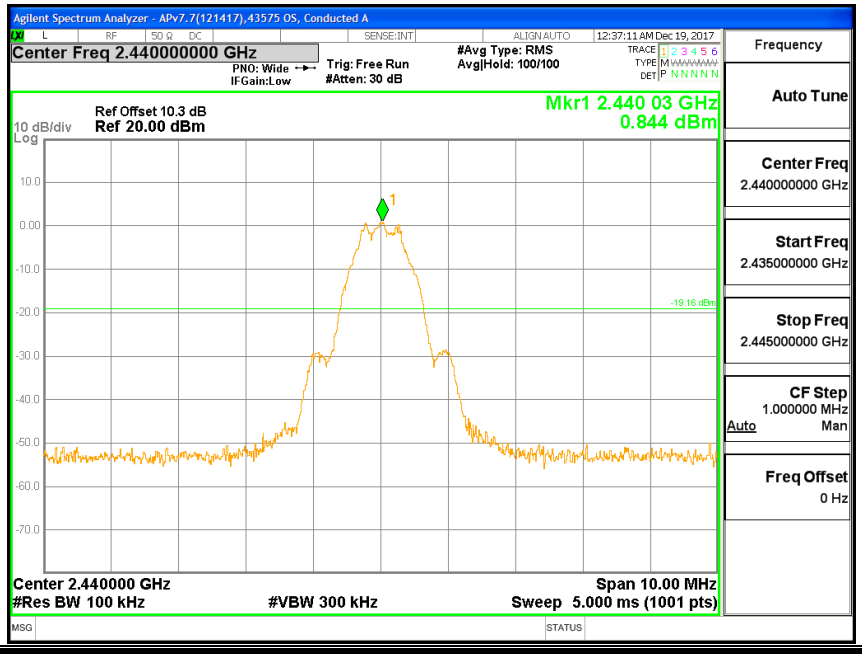
RESULTS

CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS (1Mbps)

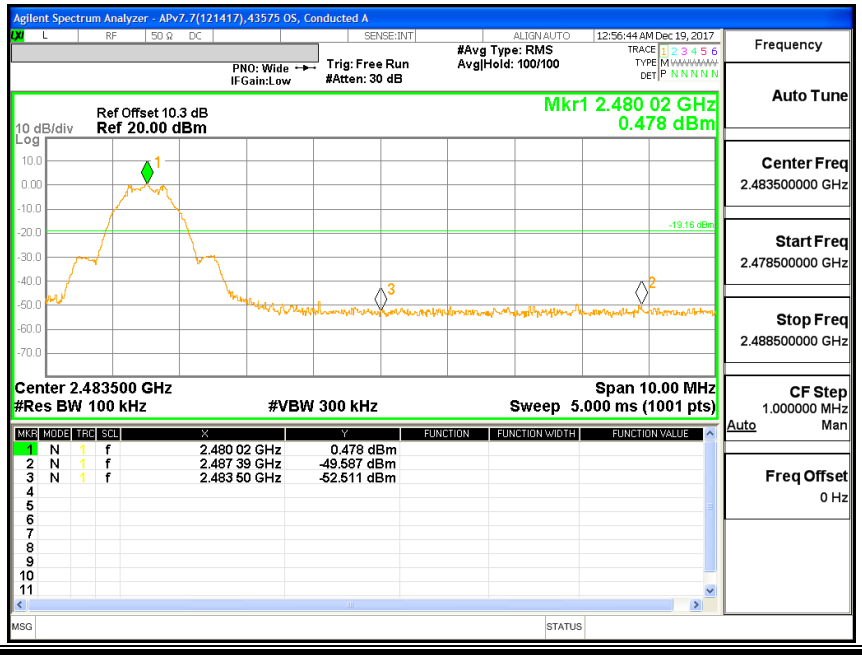
CBE LOW CH



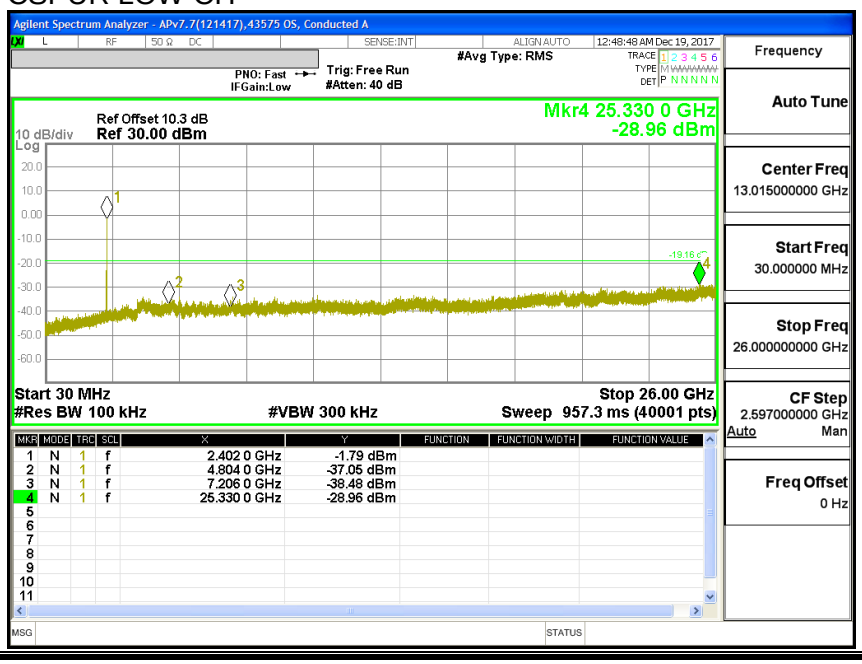
CBE MID CH



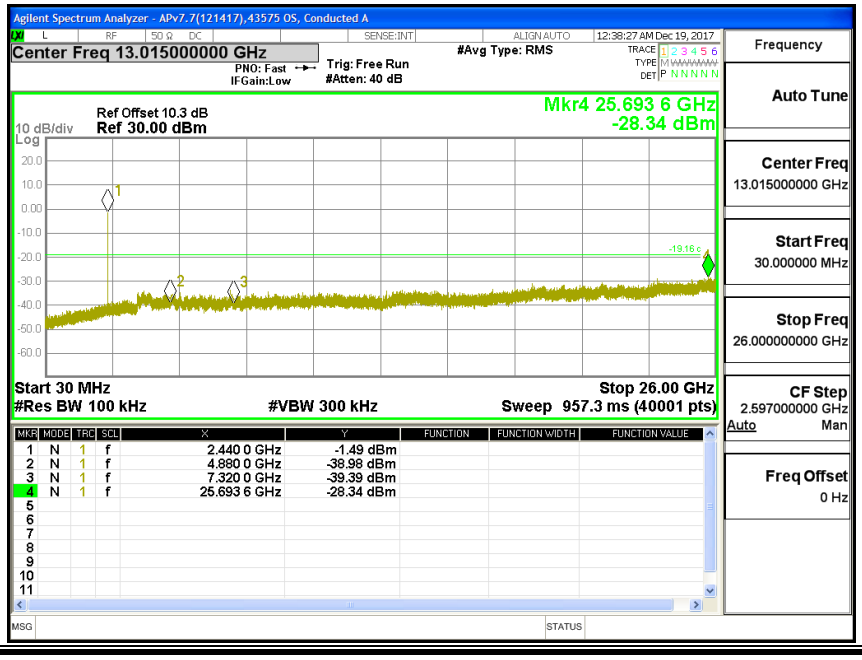
CBE HIGH CH



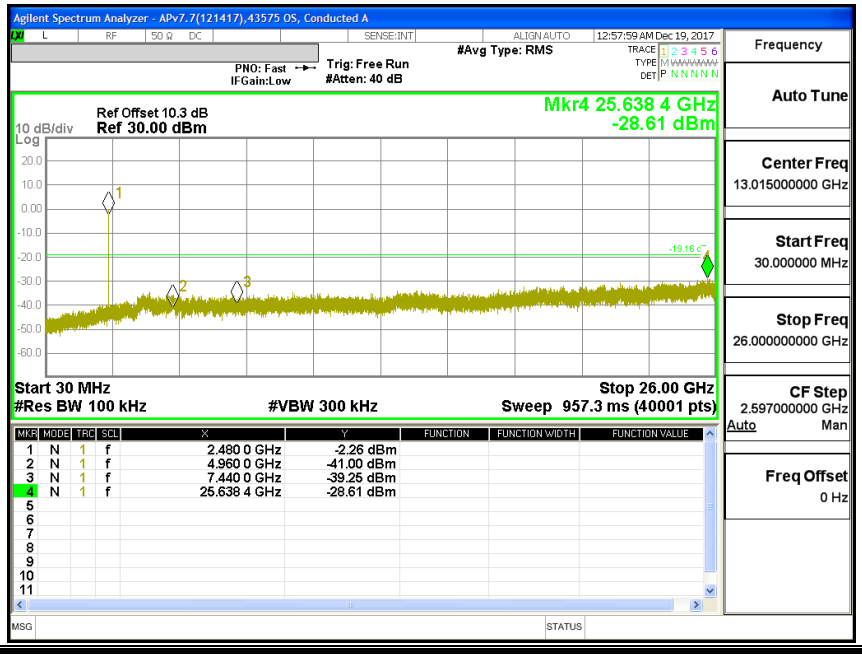
CSPUR LOW CH



CSPUR MID CH



CSPUR HIGH CH



9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

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

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.

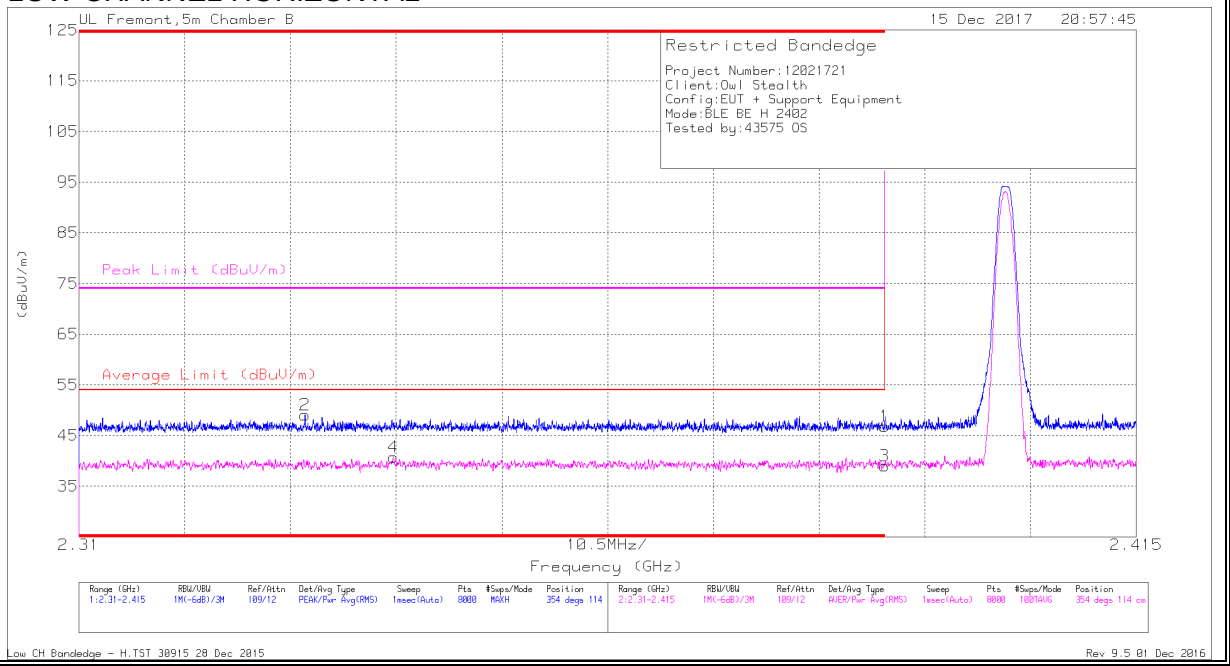
Results

Radiated Bandedge and Spurious Emissions were tested using 1Mbps as Worst-case data rate.

9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. RESTRICTED BANDEDGE (LOW CHANNEL)

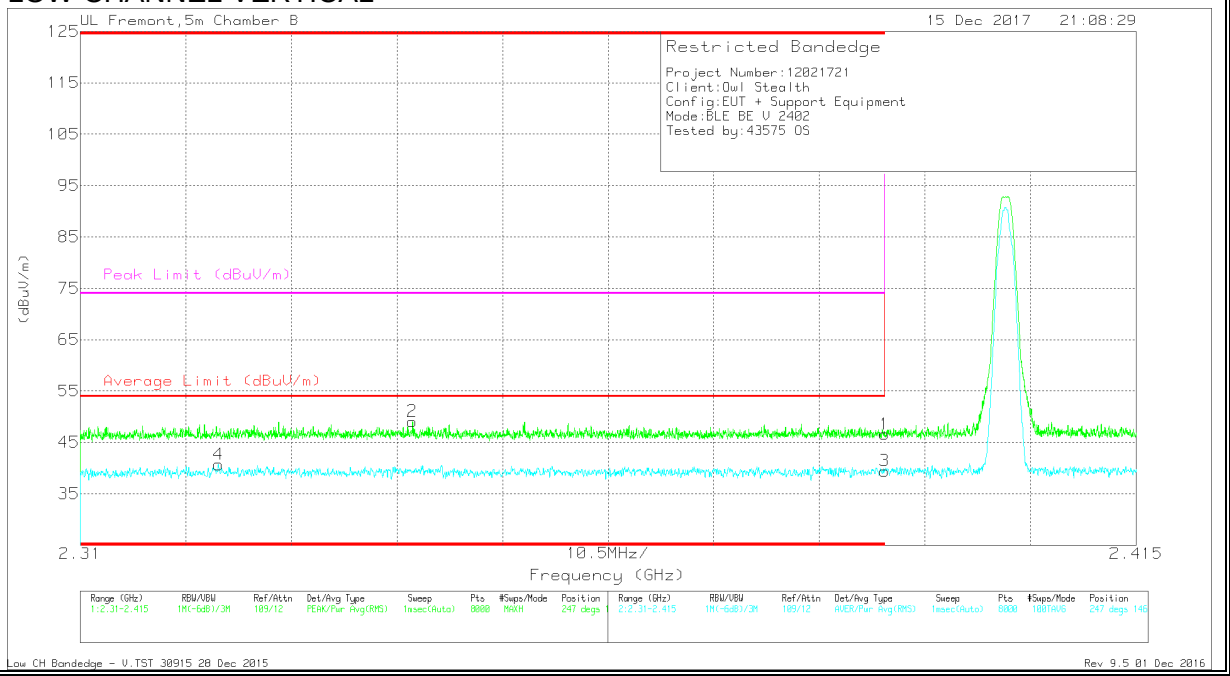
LOW CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	36	Pk	32	-21.2	0	46.8	-	-	74	-27.2	354	114	H
2	* 2.332	38.29	Pk	31.9	-21.1	0	49.09	-	-	74	-24.91	354	114	H
3	* 2.39	25.51	RMS	32	-21.2	2.72	39.03	54	-14.97	-	-	354	114	H
4	* 2.341	27.06	RMS	31.9	-21	2.72	40.68	54	-13.32	-	-	354	114	H

Pk - Peak detector
RMS - RMS detection

LOW CHANNEL VERTICAL

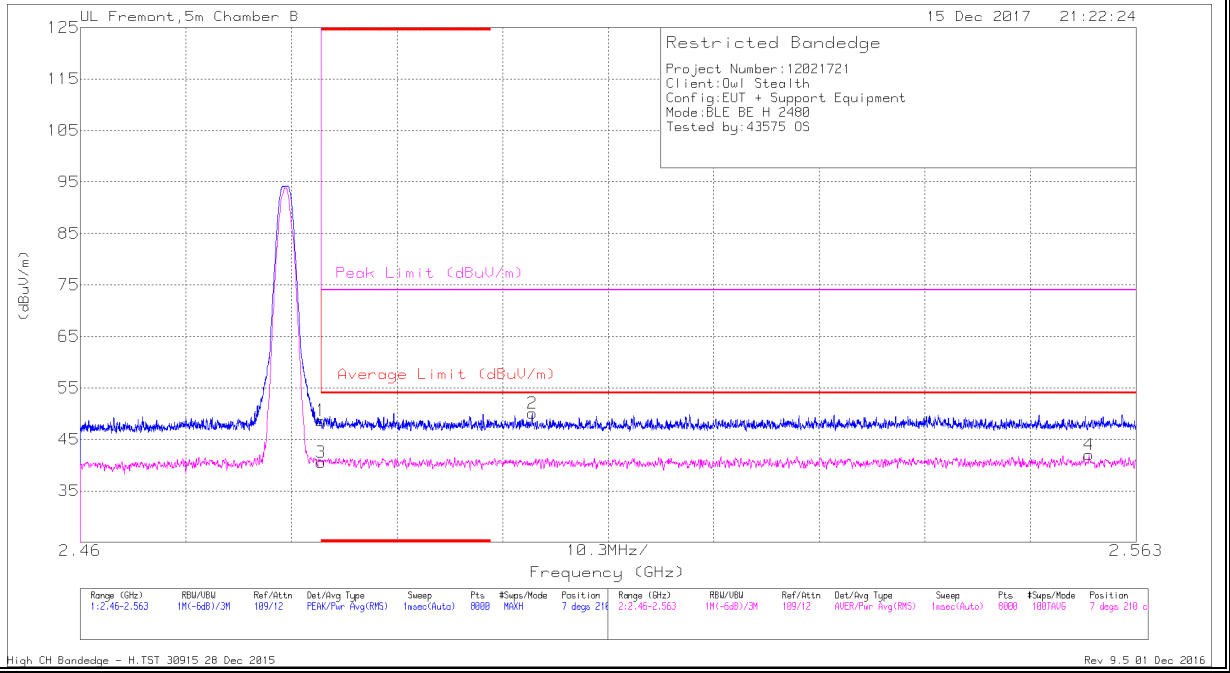


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	35.81	Pk	32	-21.2	0	46.61	-	-	74	-27.39	247	146	V
2	* 2.343	38.18	Pk	31.9	-21	0	49.08	-	-	74	-24.92	247	146	V
3	* 2.39	25.92	RMS	32	-21.2	2.72	39.44	54	-14.56	-	-	247	146	V
4	* 2.324	27.06	RMS	31.9	-21	2.72	40.68	54	-13.32	-	-	247	146	V

Pk - Peak detector
RMS - RMS detection

9.2.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)

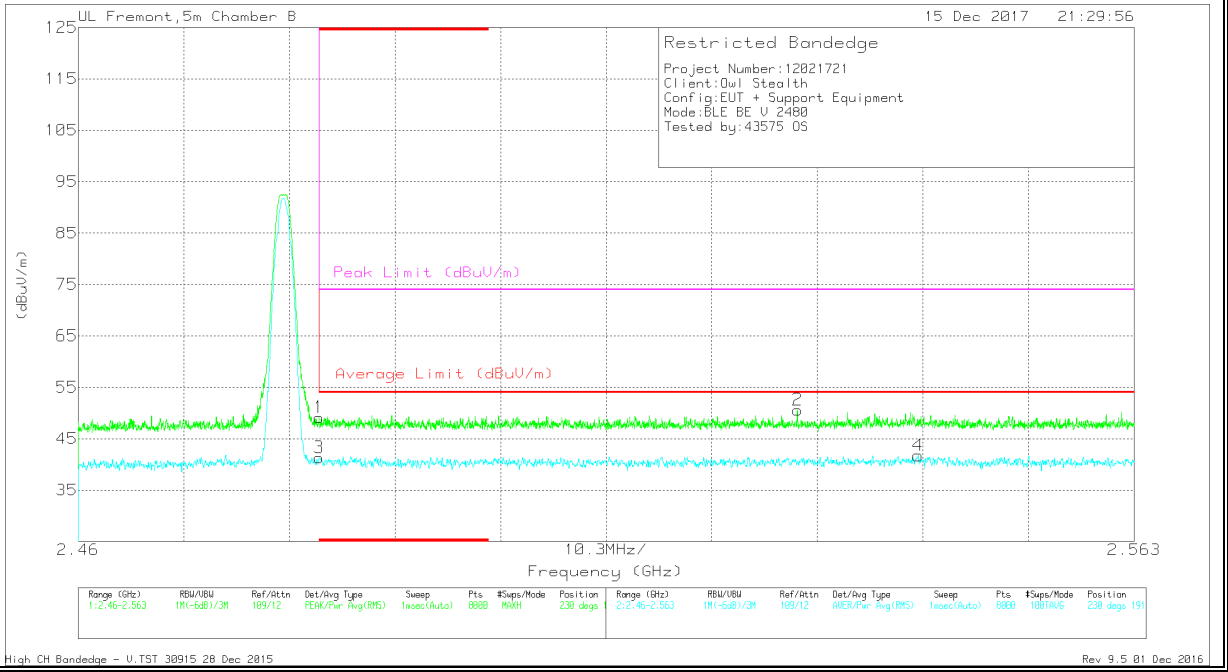
HIGH CHANNEL HORIZONTAL



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	37.04	Pk	32.5	-20.9	0	48.64	-	-	74	-25.36	7	210	H
3	* 2.484	26.21	RMS	32.5	-20.9	2.72	40.53	54	-13.47	-	-	7	210	H
2	2.504	38.49	Pk	32.6	-21	0	50.09	-	-	74	-23.91	7	210	H
4	2.558	27.71	RMS	32.5	-20.9	2.72	42.03	54	-11.97	-	-	7	210	H

Pk - Peak detector
RMS - RMS detection

HIGH CHANNEL VERTICAL

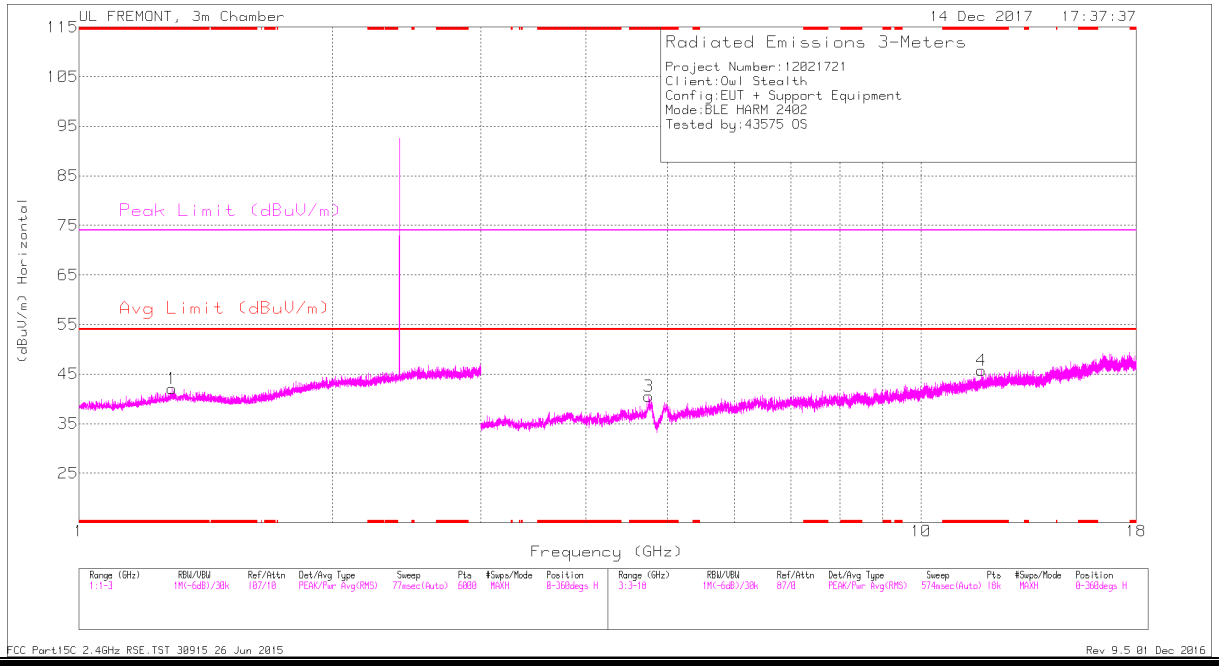


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	37.55	Pk	32.5	-20.9	0	49.15	-	-	74	-24.85	230	191	V
3	* 2.484	27.01	RMS	32.5	-20.9	2.72	41.33	54	-12.67	-	-	230	191	V
2	2.53	39.02	Pk	32.5	-20.9	0	50.62	-	-	74	-23.38	230	191	V
4	2.542	27.11	RMS	32.5	-20.6	2.72	41.73	54	-12.27	-	-	230	191	V

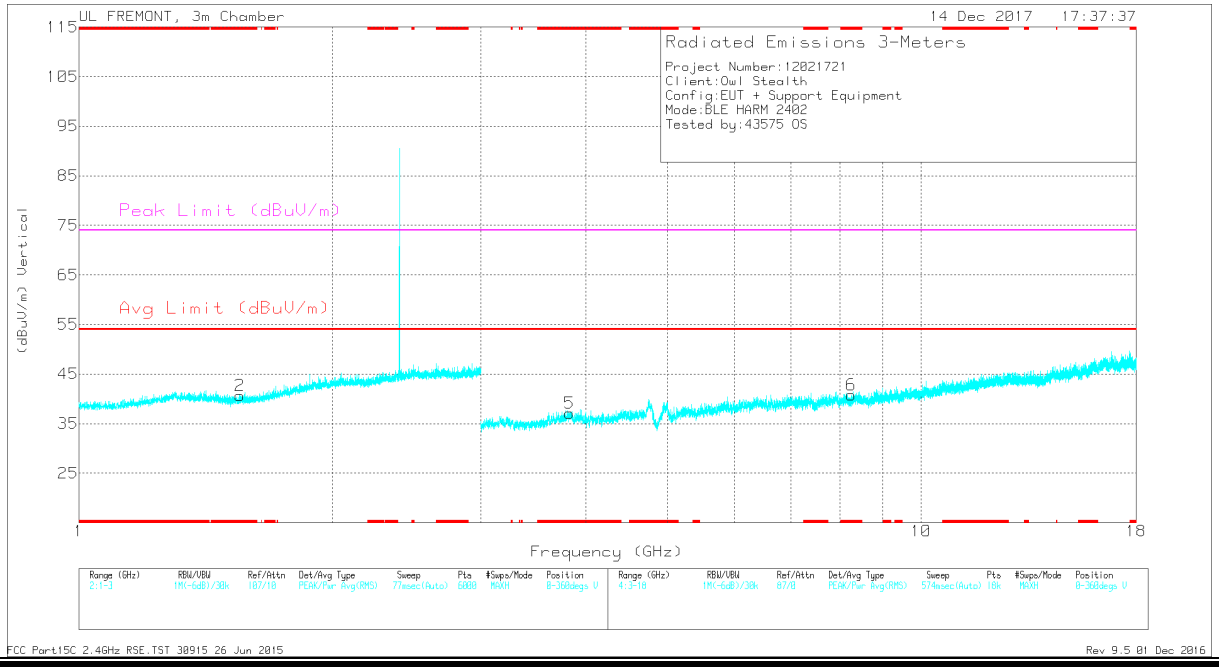
Pk - Peak detector
RMS - RMS detection

9.2.3. HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL

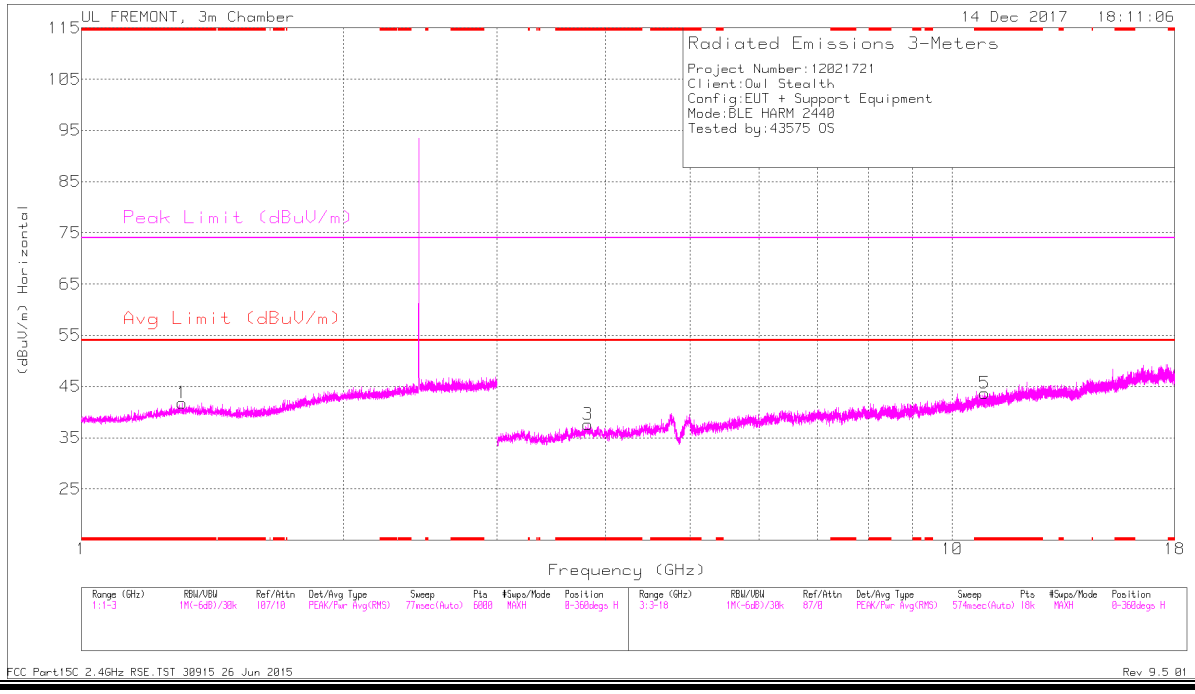


Radiated Emissions

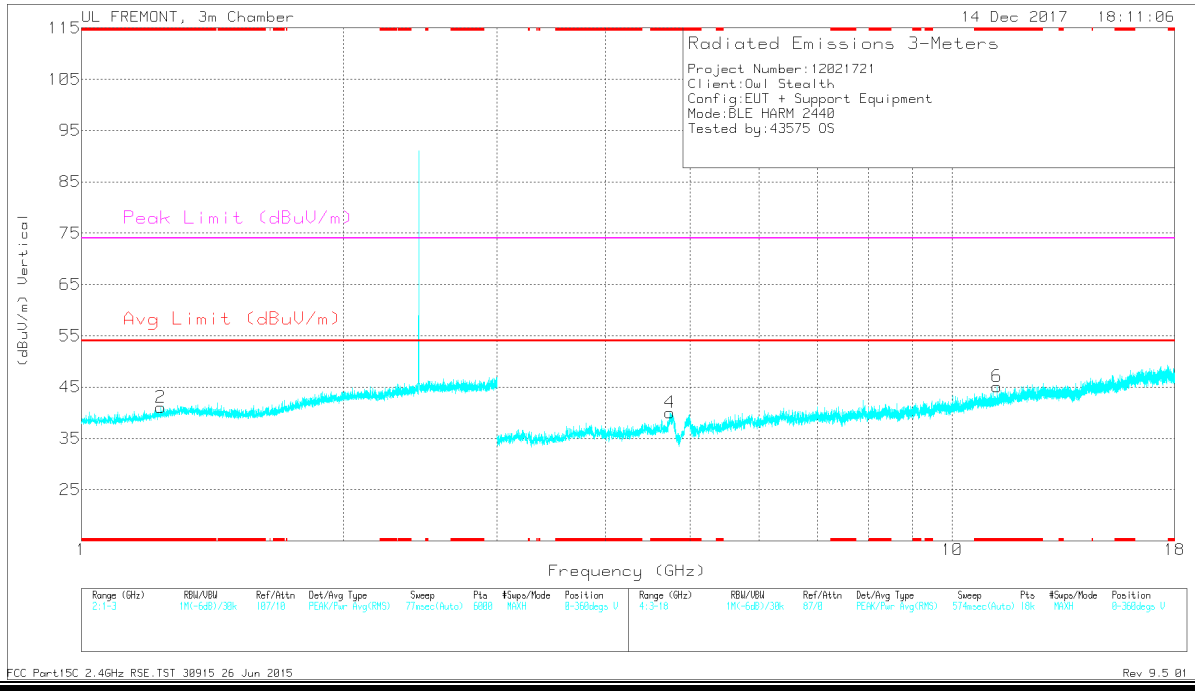
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.289	41.54	PK2	29	-22.6	0	47.94	-	-	74	-26.06	282	363	H
* 1.291	28.88	MAv1	29	-22.6	2.72	38	54	-16	-	-	282	363	H
* 1.554	41.71	PK2	28.2	-22.3	0	47.61	-	-	74	-26.39	339	187	V
* 1.552	28.46	MAv1	28.2	-22.3	2.72	37.08	54	-16.92	-	-	339	187	V
* 4.752	41.55	PK2	34	-28.7	0	46.85	-	-	74	-27.15	184	106	H
* 4.753	29.21	MAv1	34	-28.6	2.72	37.33	54	-16.67	-	-	184	106	H
* 11.778	35.51	PK2	38.4	-23	0	50.91	-	-	74	-23.09	272	356	H
* 11.779	22.74	MAv1	38.4	-22.9	2.72	40.96	54	-13.04	-	-	272	356	H
* 3.82	39.98	PK2	33.4	-29.2	0	44.18	-	-	74	-29.82	157	187	V
* 3.82	27.41	MAv1	33.4	-29.2	2.72	34.33	54	-19.67	-	-	157	187	V
* 8.263	37.3	PK2	35.8	-25.9	0	47.2	-	-	74	-26.8	153	299	V
* 8.265	24.51	MAv1	35.8	-25.8	2.72	37.23	54	-16.77	-	-	153	299	V

* - indicates frequency in CFR15.205/RSS-GEN 8.10 -Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL

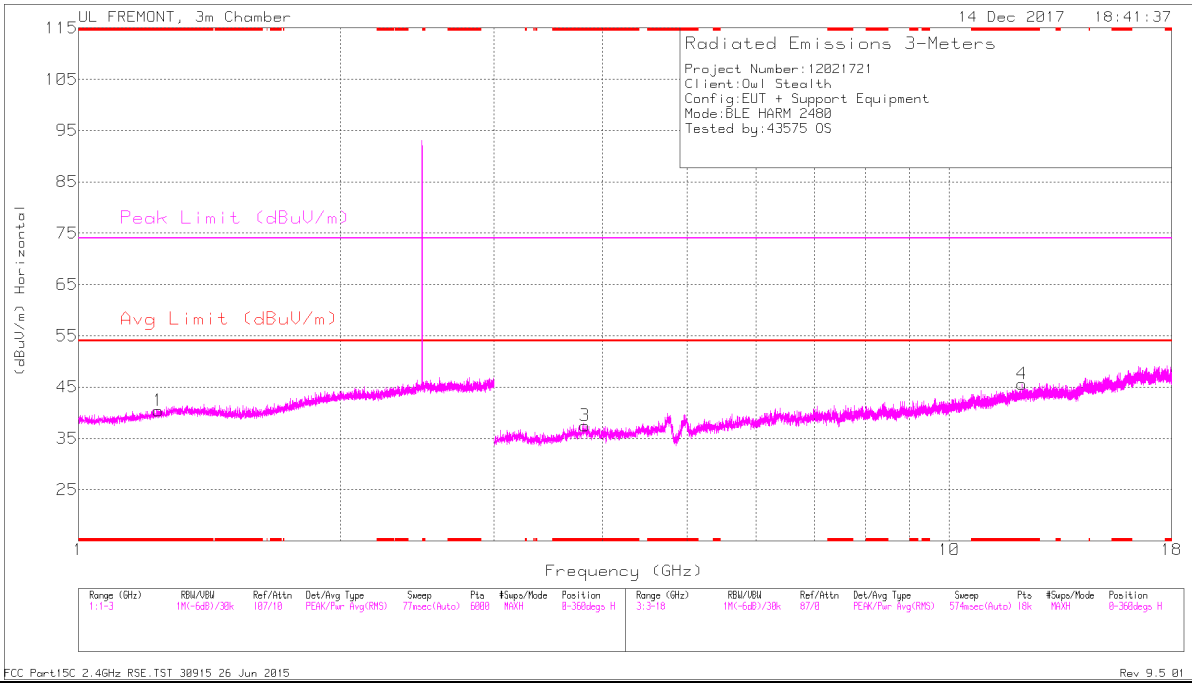


Radiated Emissions

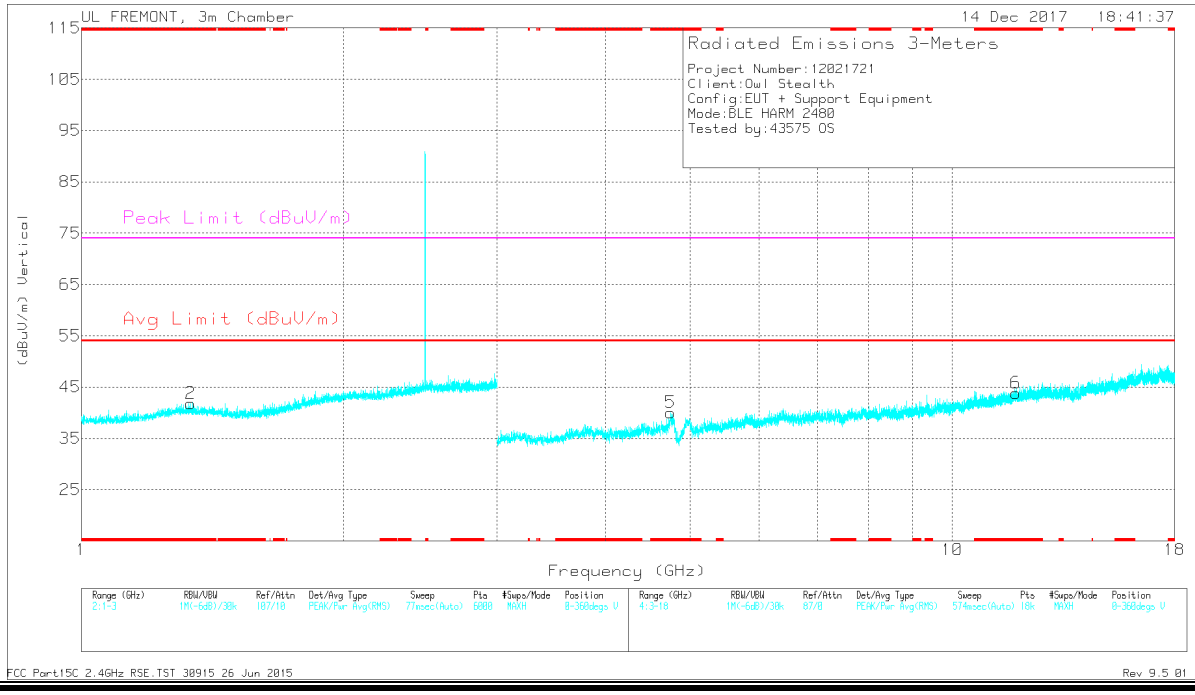
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.303	41.84	PK2	29.1	-22.6	0	48.34	-	-	74	-25.66	61	119	H
* 1.303	28.65	MAv1	29.1	-22.6	2.72	37.87	54	-16.13	-	-	61	119	H
* 1.233	41.36	PK2	28.5	-22.7	0	47.16	-	-	74	-26.84	331	200	V
* 1.235	29.02	MAv1	28.5	-22.7	2.72	37.54	54	-16.46	-	-	331	200	V
* 3.818	40.39	PK2	33.4	-29	0	44.79	-	-	74	-29.21	218	303	H
* 3.818	27.49	MAv1	33.4	-29	2.72	34.61	54	-19.39	-	-	218	303	H
* 10.887	33.75	PK2	37.8	-22.3	0	49.25	-	-	74	-24.75	142	266	H
* 10.887	21.18	MAv1	37.8	-22.3	2.72	39.4	54	-14.6	-	-	142	266	H
* 4.741	39.86	PK2	34	-28.5	0	45.36	-	-	74	-28.64	326	386	V
* 4.745	28.31	MAv1	34	-28.3	2.72	36.73	54	-17.27	-	-	326	386	V
* 11.26	34.28	PK2	37.9	-22.7	0	49.48	-	-	74	-24.52	83	165	V
* 11.262	21.95	MAv1	37.9	-22.8	2.72	39.77	54	-14.23	-	-	83	165	V

* - indicates frequency in CFR15.205/RSS-GEN 8.10 -Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



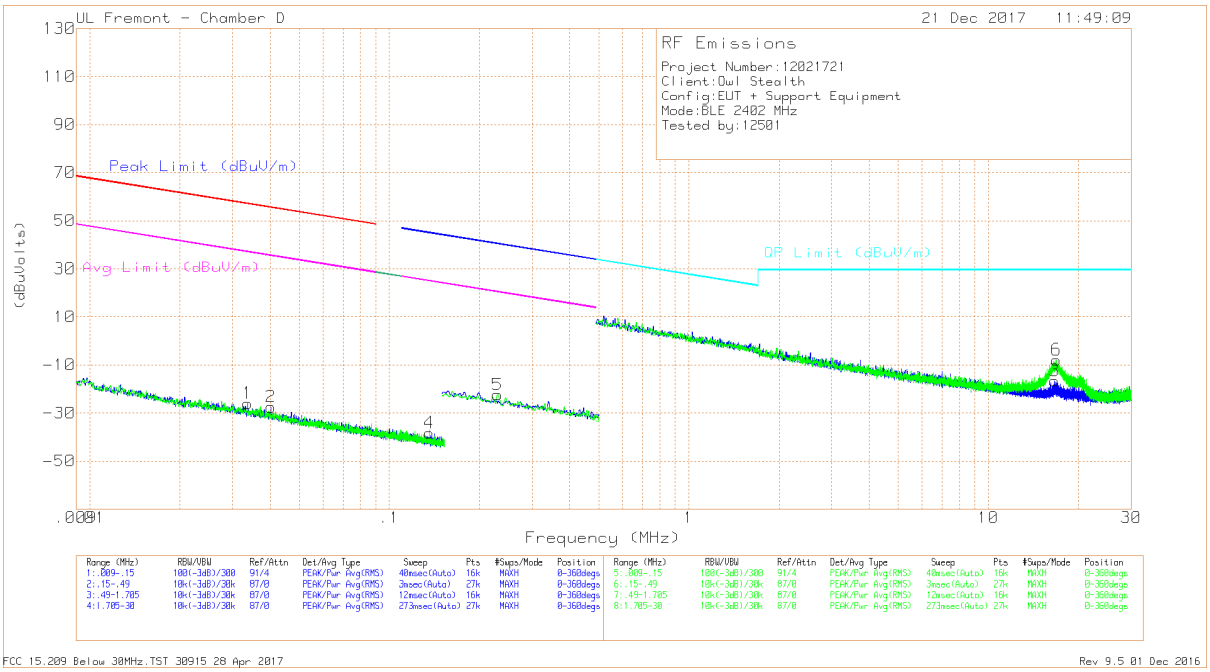
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T711 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.236	41.55	PK2	28.5	-22.8	0	47.25	-	-	74	-26.75	263	378	H
* 1.235	28.94	MAv1	28.5	-22.7	2.72	37.46	54	-16.54	-	-	263	378	H
* 1.337	41.69	PK2	29	-22.4	0	48.29	-	-	74	-25.71	230	393	V
* 1.337	28.64	MAv1	29	-22.4	2.72	37.96	54	-16.04	-	-	230	393	V
* 3.817	39.72	PK2	33.4	-28.9	0	44.22	-	-	74	-29.78	255	273	H
* 3.817	27.55	MAv1	33.4	-28.9	2.72	34.77	54	-19.23	-	-	255	273	H
* 12.117	35.51	PK2	38.8	-23.6	0	50.71	-	-	74	-23.29	0	196	H
* 12.117	23.2	MAv1	38.8	-23.6	2.72	41.12	54	-12.88	-	-	0	196	H
* 4.747	41.12	PK2	34	-28.4	0	46.72	-	-	74	-27.28	52	399	V
* 4.747	29.05	MAv1	34	-28.4	2.72	37.37	54	-16.63	-	-	52	399	V
* 11.831	36.17	PK2	38.5	-23.3	0	51.37	-	-	74	-22.63	238	355	V
* 11.833	22.86	MAv1	38.5	-23.3	2.72	40.78	54	-13.22	-	-	238	355	V

* - indicates frequency in CFR15.205/RSS-GEN 8.10 -Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

9.3. SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL AND VERTICAL PLOTS



NOTE: KDB 414788 OATS and Chamber Correlation Justification

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

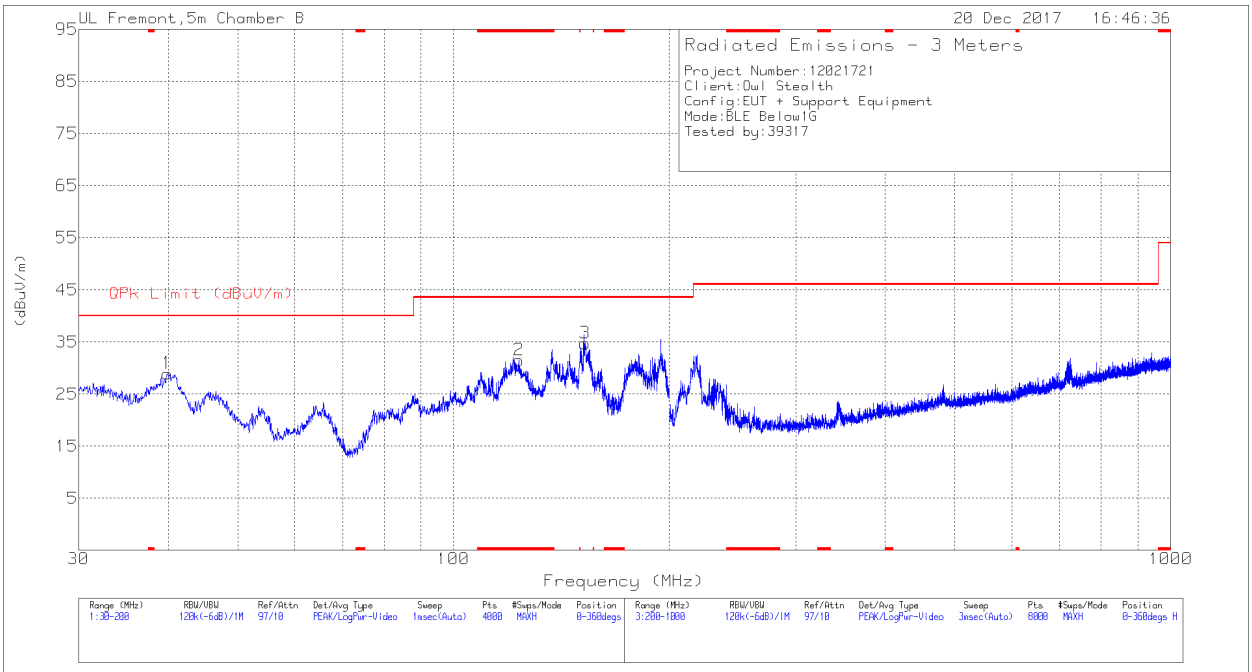
Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.03368	40.03	Pk	14	0	-80	-25.97	57.04	-83.01	37.04	-63.01	-	-	-	-	-	-	0-360
2	.04028	39.13	Pk	13.4	0	-80	-27.47	55.48	-82.95	35.48	-62.95	-	-	-	-	-	-	0-360
4	.13586	30.03	Pk	11.6	.1	-80	-38.27	-	-	-	-	-	-	44.96	-83.23	24.96	-63.23	0-360
5	.22971	46.02	Pk	11.5	.1	-80	-22.38	-	-	-	-	-	-	40.39	-62.77	20.39	-42.77	0-360
3	16.60704	13.15	Pk	9.9	.4	-40	-16.55	-	-	-	-	29.5	-46.05	-	-	-	-	0-360
6	16.85751	21.82	Pk	9.9	.4	-40	-7.88	-	-	-	-	29.5	-37.38	-	-	-	-	0-360

Pk - Peak detector

9.4. SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL PLOT



VERTICAL PLOT

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T477 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 123.311	41.47	Pk	17.7	-27.7	31.47	43.52	-12.05	0-360	200	H
6	* 109.708	47.27	Pk	16.6	-27.8	36.07	43.52	-7.45	0-360	100	V
1	39.9051	39.35	Pk	18.3	-28.7	28.95	40	-11.05	0-360	400	H
4	40.1917	48.82	Qp	18	-28.7	38.12	40	-1.88	290	103	V
5	46.9364	32.21	Qp	13.3	-30.9	14.61	40	-25.39	220	103	V
3	152.5167	45.82	Pk	16.2	-27.3	34.72	43.52	-8.8	0-360	300	H

Pk - Peak detector

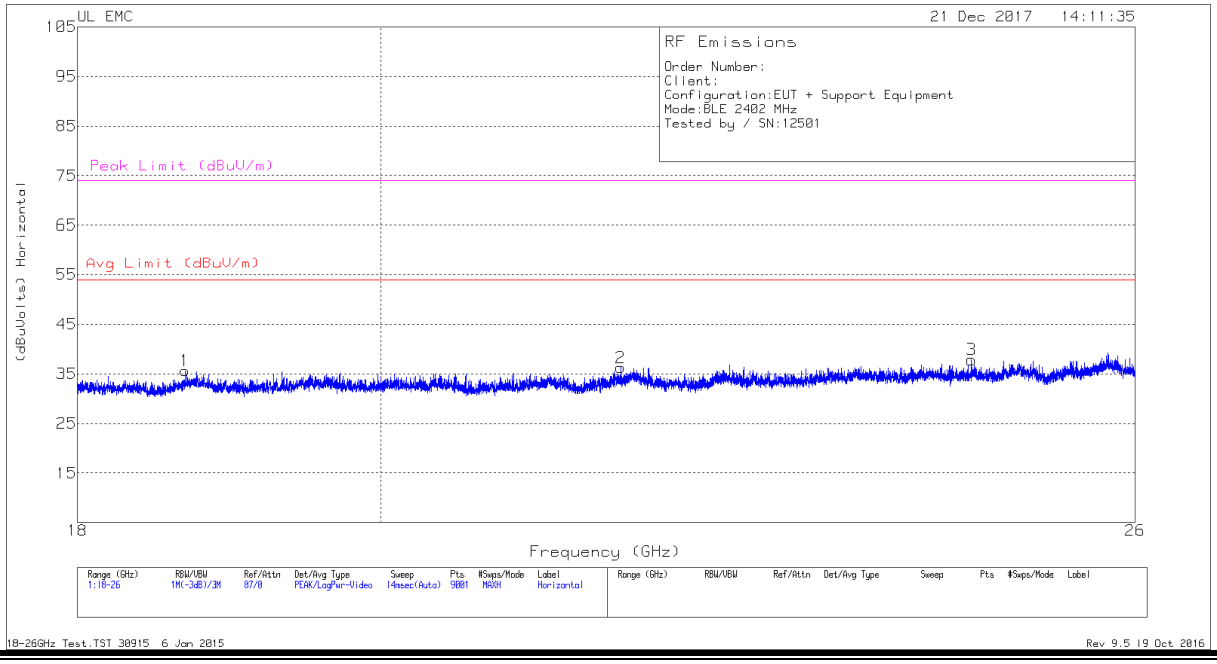
Qp - Quasi-Peak detector

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

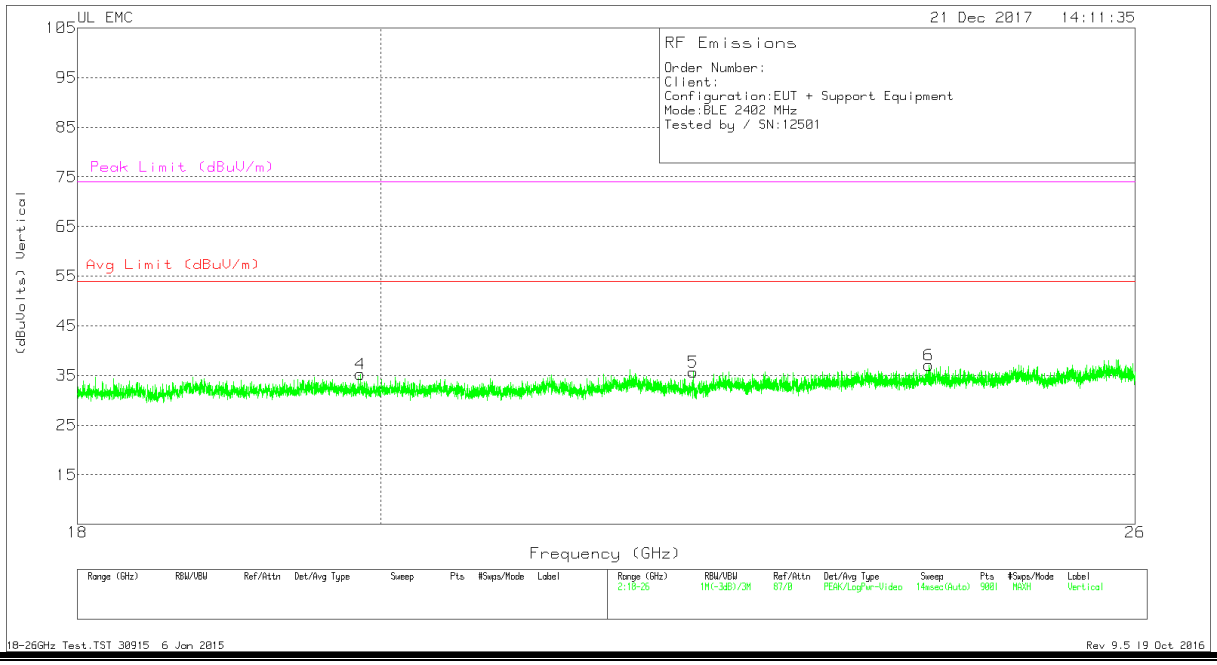
9.5. WORST-CASE 18 to 26 GHz

SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION, HORIZONTAL & VERTICAL)

HORIZONTAL PLOT



VERTICAL PLOT



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T449 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	18.685	37.04	Pk	32.5	-24.4	-9.5	35.64	54	-18.36	74	-38.36
2	21.741	37.26	Pk	33.3	-24.8	-9.5	36.26	54	-17.74	74	-37.74
3	24.561	37.35	Pk	33.9	-23.9	-9.5	37.85	54	-16.15	74	-36.15
4	19.86	36.95	Pk	32.8	-25	-9.5	35.25	54	-18.75	74	-38.75
5	22.298	37.26	Pk	32.8	-24.9	-9.5	35.66	54	-18.34	74	-38.34
6	24.199	37.18	Pk	33.5	-24.1	-9.5	37.08	54	-16.92	74	-36.92

Pk - Peak detector