



**FCC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS-247 ISSUE 1**

**BLUETOOTH LOW ENERGY
CERTIFICATION TEST REPORT**

FOR

WIRELESS HEADSET

MODEL NUMBER: BA2

**FCC ID: A94BA2B
IC: 3232A-BA2**

REPORT NUMBER: 15M22294-E5V3

ISSUE DATE: March 1, 2016

Prepared for
**BOSE CORPORATION
THE MOUNTAIN
FRAMINGHAM, MA 01701 USA**

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	1/22/16	Initial Issue	F. de Anda
V2	1/26/16	Updated- Section 8. 15.209 limits table	F. de Anda
V3	3/1/16	Update to FCC ID	G.Rincand

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: BOSE CORPORATION
THE MOUNTAIN
FRAMINGHAM, MA 01701 U.S.A

EUT DESCRIPTION: WIRELESS HEADSET

MODEL: BA2

SERIAL NUMBER: 070327Z53280012AE (Conducted)
070327Z53280006AE (Radiated)

DATE TESTED: January 7, 2016 – January 12, 2016

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-247 Issue 1	Pass
INDUSTRY CANADA RSS-GEN Issue 4	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:



FRANCISCO DE ANDA
EMC SUPERVISOR
UL Verification Services Inc.

Tested By:



CLIFFORD SUSAS
EMC 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, ANSI C63.10-2013, RSS-GEN Issue 4, RSS-247 Issue 1.

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	☐ Chamber D
☐ Chamber B	☐ Chamber E
☐ Chamber C	☐ Chamber F
	☐ Chamber G
	☒ Chamber H

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through H are covered under Industry Canada company address code 2324B with site numbers 2324B -1 through 2324B-8, 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, 0.15 to 30 MHz	± 3.52 dB
Radiated Disturbance, 30 to 1000 MHz	± 4.94 dB
Radiated Disturbance, 1 to 6 GHz	± 3.86 dB
Radiated Disturbance, 6 to 18 GHz	± 4.23 dB
Radiated Disturbance, 18 to 26 GHz	± 5.30 dB
Radiated Disturbance, 26 to 40 GHz	± 5.23 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a wireless headset

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	6.64	4.61

The transmitter has a maximum Ave. conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402 - 2480	BLE	6.22	4.19

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an IFA antenna, with a maximum gain of 2.3 dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was 2.0.0-r426.

The test utility software used during testing was BlueTest3

5.5. WORST-CASE CONFIGURATION AND MODE

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

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

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

BLE: 1 Mbps.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Lenovo	T440	PC-00TFVU	N/A
AC Adapter	Lenovo	ADLX65NDC2A	36200282	N/A

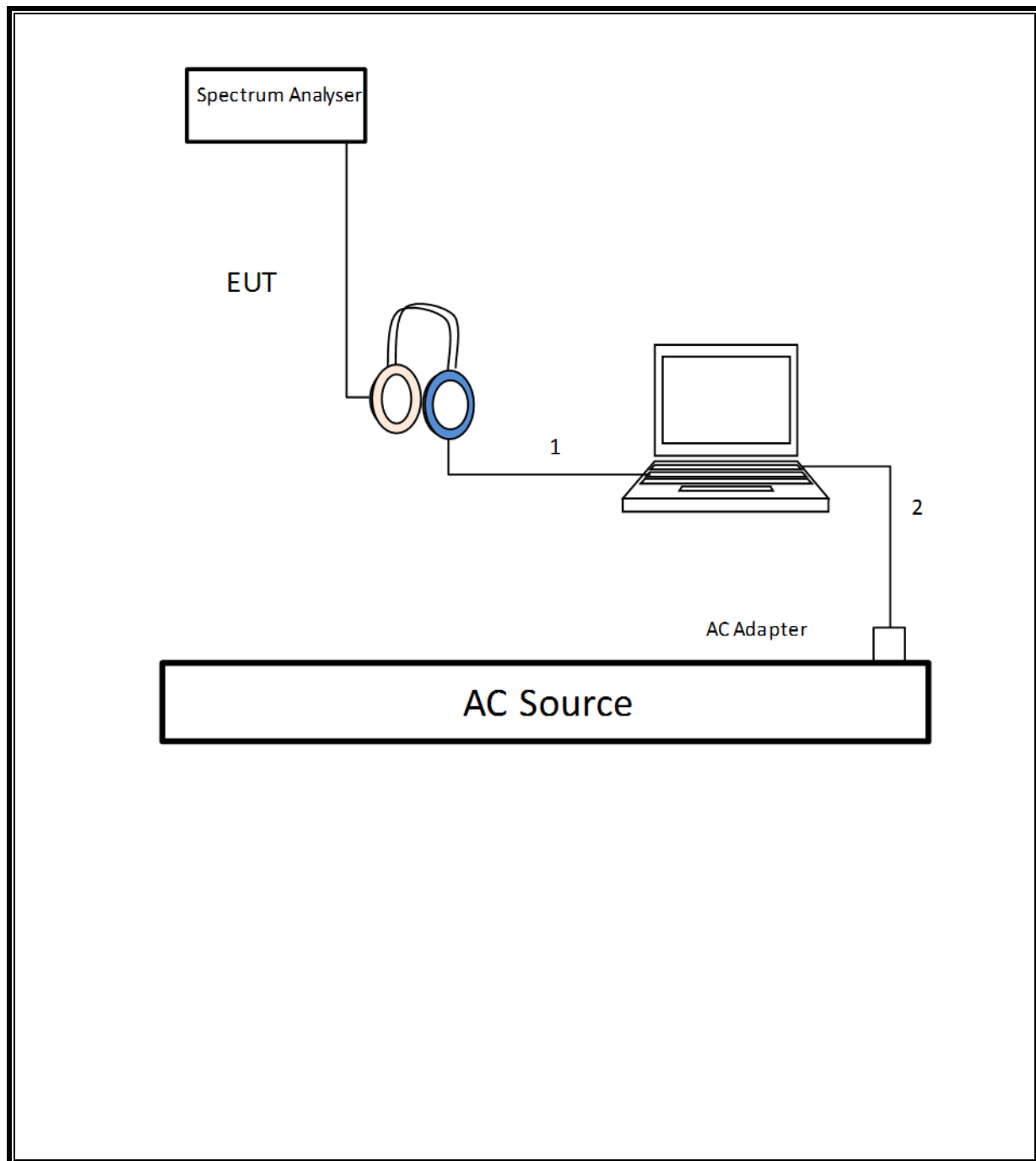
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	Micro USB	Unshielded	0.25	
2	DC	1	Barrel	Unshielded	2	

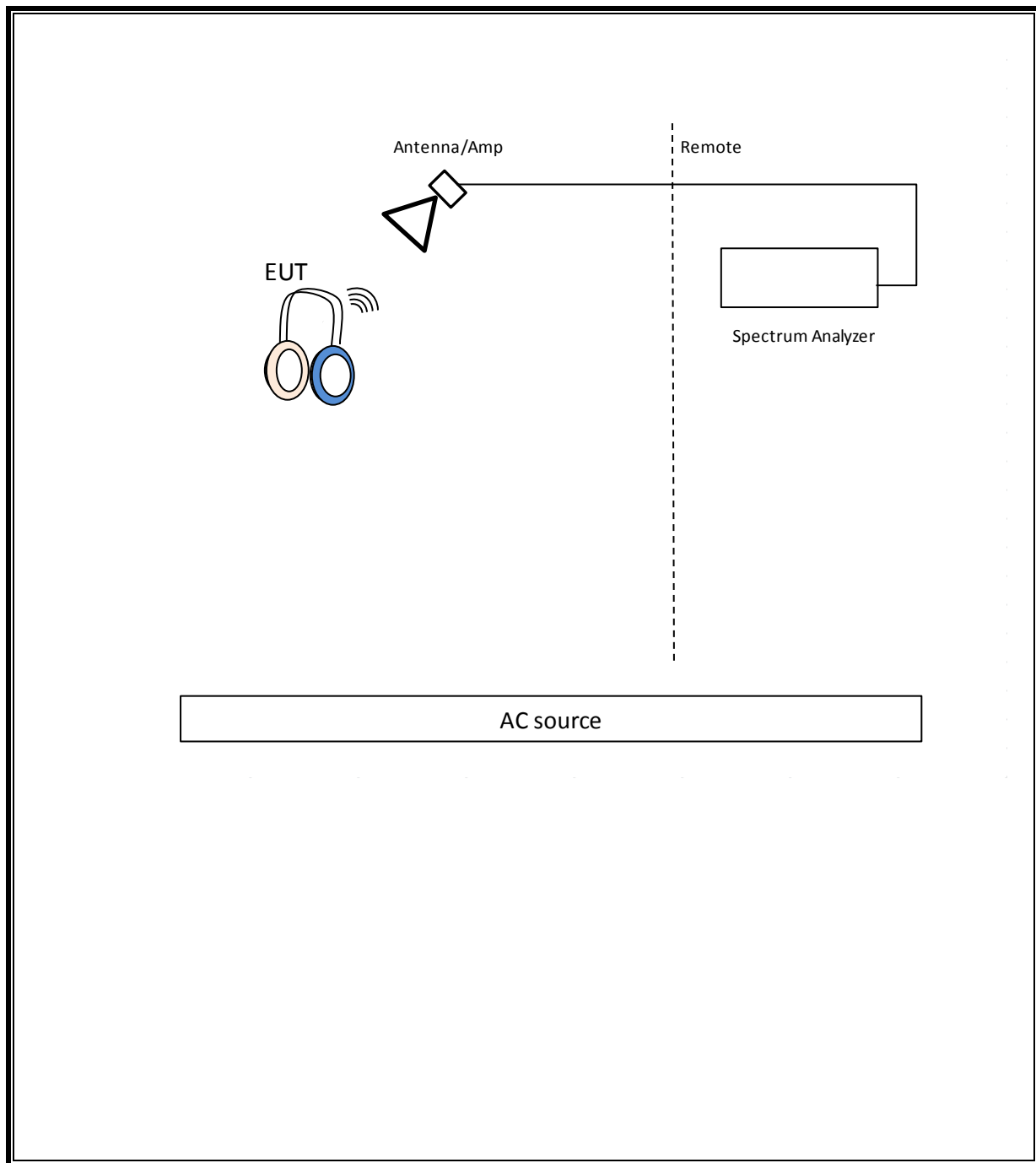
TEST SETUP

The EUT is installed in a host laptop computer during the tests. Test software exercised the radio card.

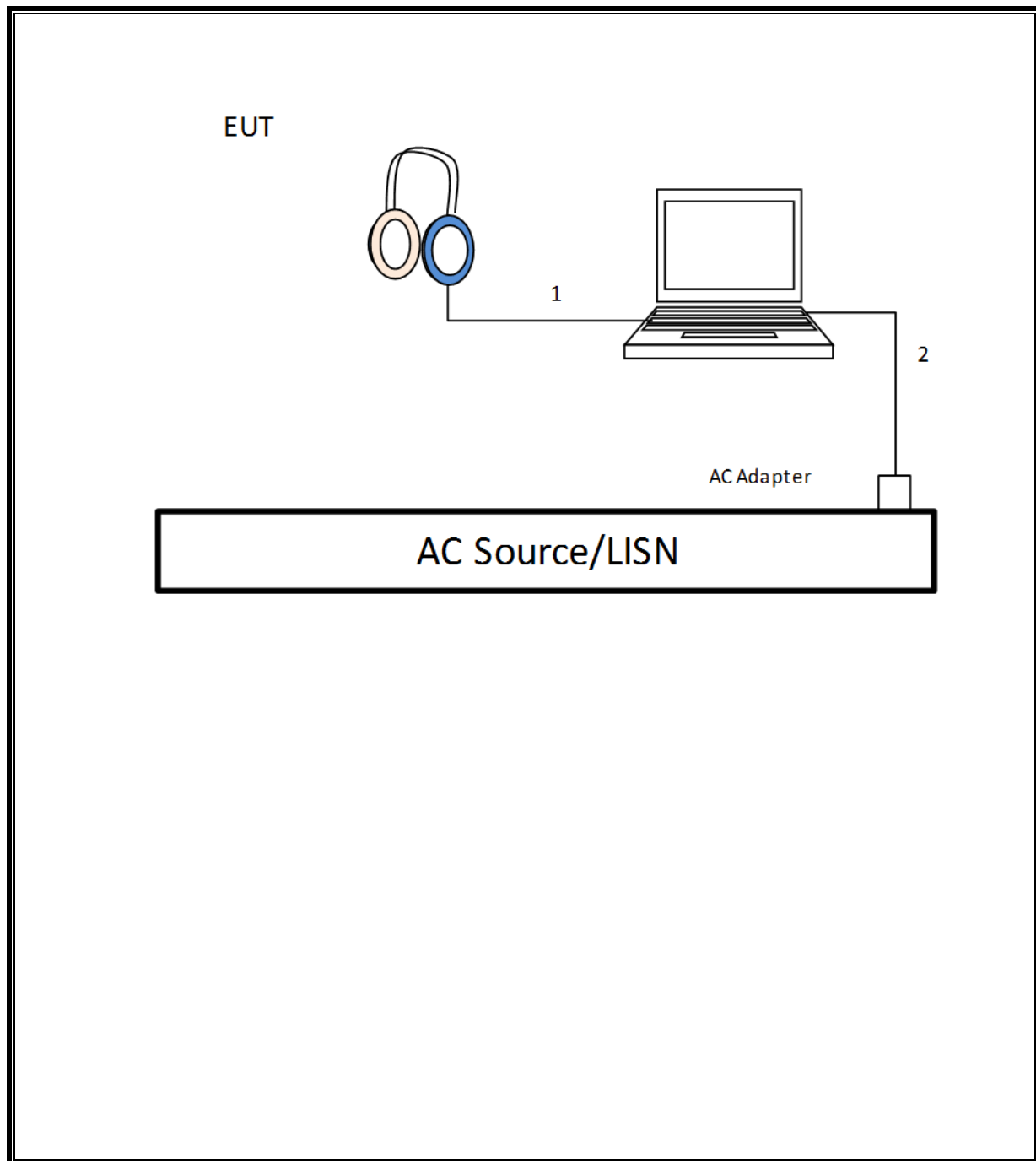
SETUP DIAGRAM FOR CONDUCTED TESTS



SETUP DIAGRAM FOR RADIATED TESTS



SETUP DIAGRAM FOR AC POWER LINE 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	T No.	Cal Date	Cal Due
Radiated Software	UL	UL EMC	Ver 9.5		
Conducted Software	UL	UL EMC	Ver 3.9.1		
Antenna, Horn 1-18GHz	ETS Lindgren	3117	863	04/10/15	04/10/16
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	900	04/10/15	04/10/16
Amplifier, 1 - 18GHz	Miteq	AMF-4D-01000800-30-29P	782	10/22/15	10/22/16
Amplifier, 10KHz to 1GHz, 32dB	Sonoma	310N	835	06/09/15	06/09/16
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent	N9030A	906	06/11/15	06/11/16
Power Meter, P-series single channel	Agilent	N1911A	1244	07/02/15	07/02/16
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Agilent	N1921A	1227	07/07/15	07/07/16
Amplifier, 1 to 26.5GHz, 23.5dB Gain minimum	Keysight	8449B	404	06/29/15	06/29/16
Spectrum Analyzer, 40 GHz	Agilent	8564E	106	08/14/15	08/14/16
Antenna, Horn 18 - 26GHz	ARA	MWH-1826	447	05/12/15	05/12/16
Filter, HPF 3.0GHz	Micro-Tronics	HPM17543	897	12/17/15	12/17/16
Spectrum Analyzer, PSA, 3Hz to 26.5GHz	Agilent	E4440A	200	09/02/15	09/02/16
Loop Antenna, 9kHz-30MHz	ETS-Lindgren	6502	757	5/21/2015	5/21/2016

7. ANTENNA PORT TEST RESULTS

7.1. MEASUREMENT METHODS

6 dB BW: KDB 558074 D01 v03r04, Section 8.1.

Output Power: KDB 558074 D01 v03r04, Section 9.1.1.

Power Spectral Density: KDB 558074 D01 v03r04, Section 10.2.

Out-of-band emissions in non-restricted bands: KDB 558074 D01 v03r04, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v03r04 Section 12.1.

Band-edge: KDB 558074 D01 v03r04, Section 13.3.2.

7.2. ON TIME, DUTY CYCLE

None; for reporting purposes only.

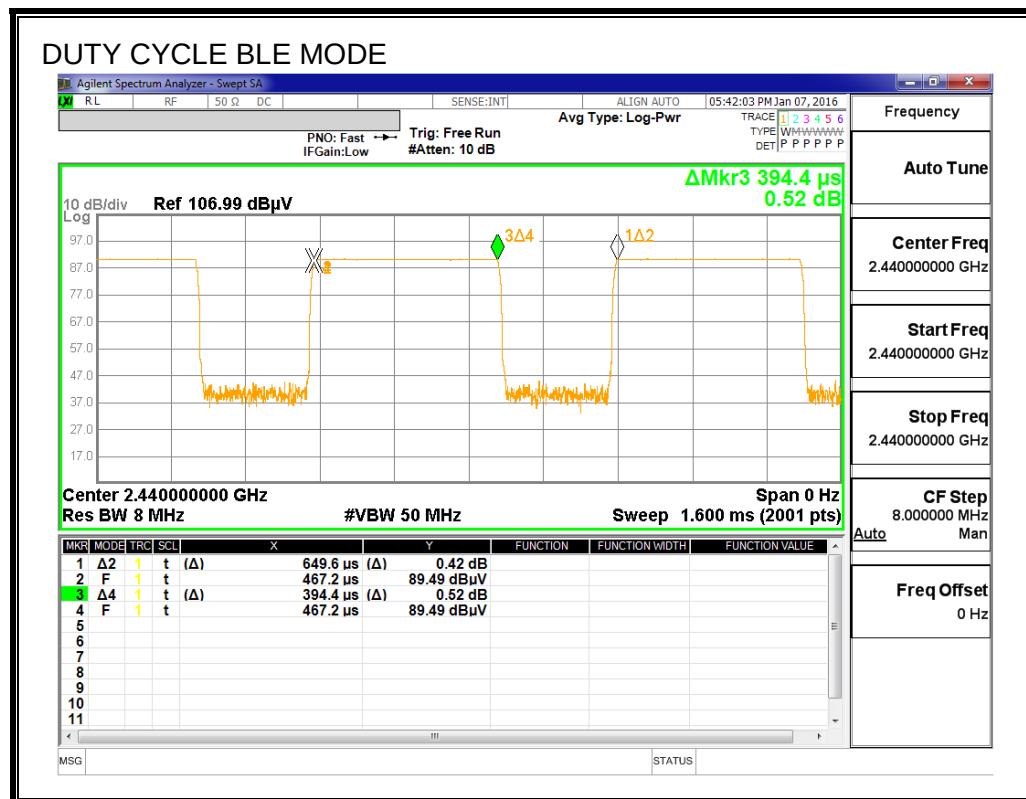
PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

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)
BLE	0.394	0.650	0.607	60.71%	2.17	2.535

DUTY CYCLE PLOTS



7.3. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

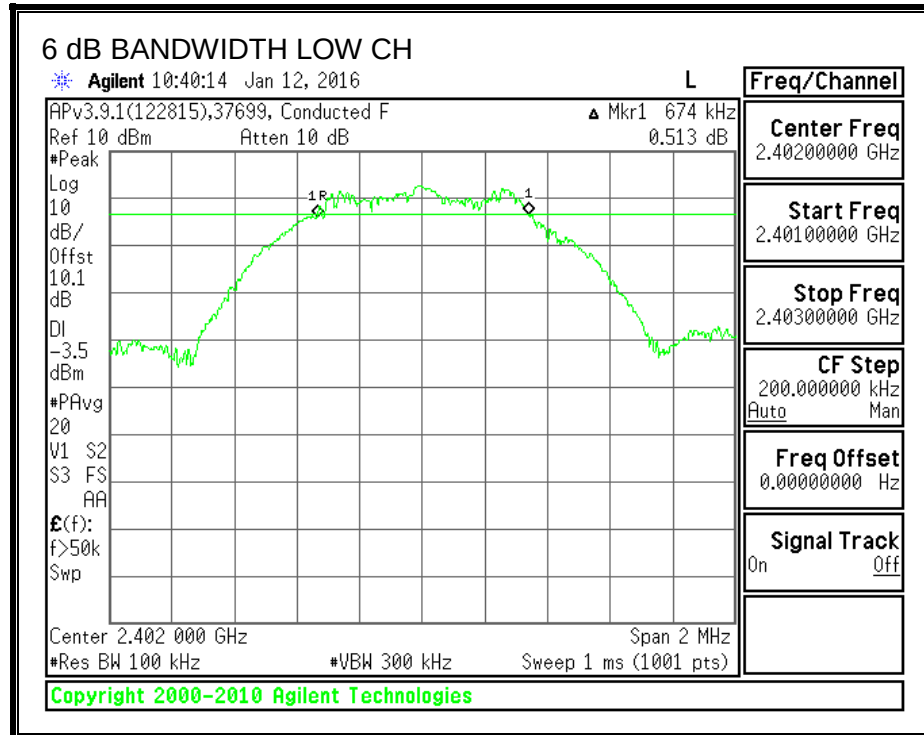
IC RSS-247 (5.2) (1)

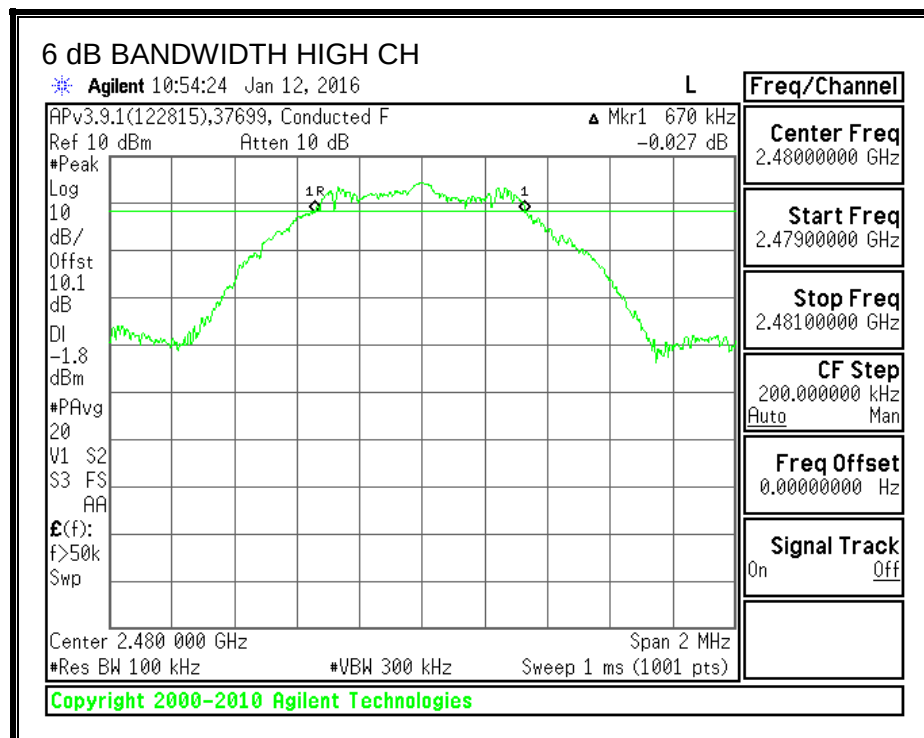
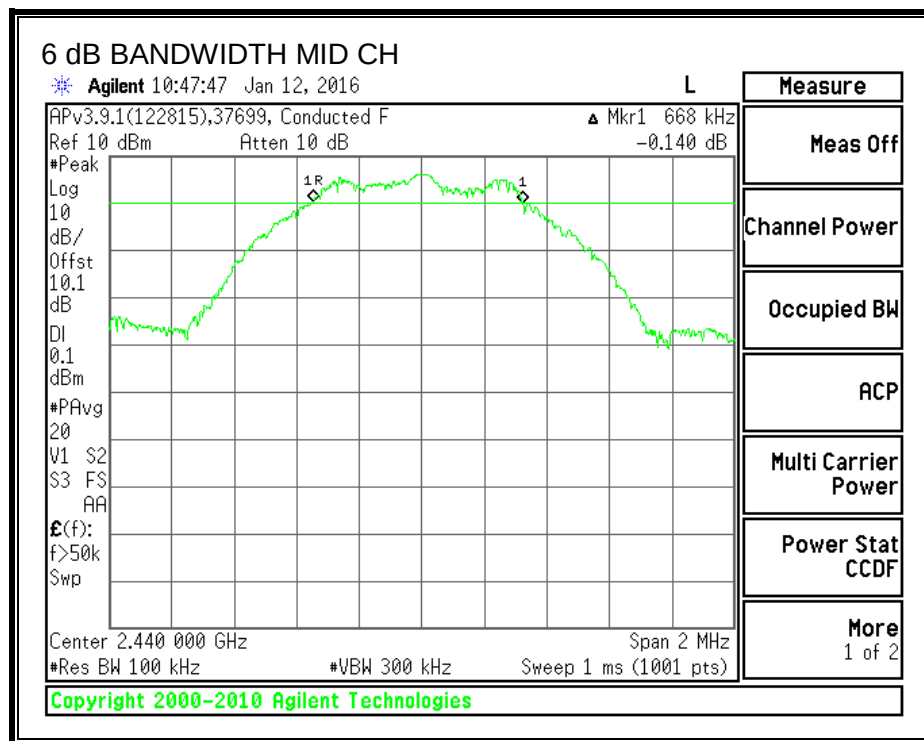
The minimum 6 dB bandwidth shall be at least 500 kHz.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.6740	0.5
Middle	2440	0.6680	0.5
High	2480	0.6700	0.5

6 dB BANDWIDTH





7.4. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

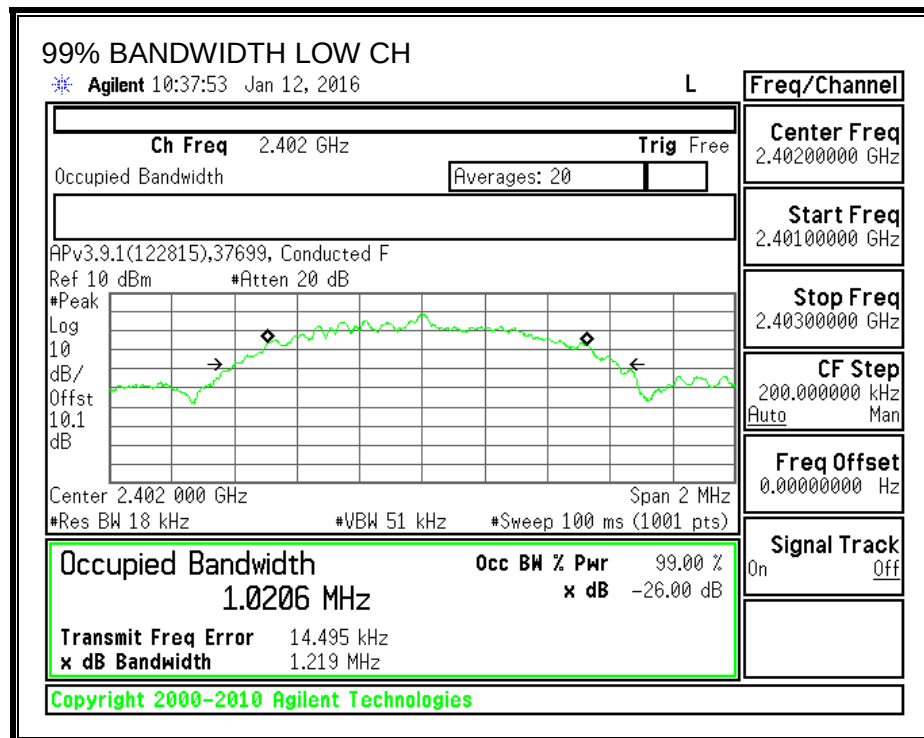
TEST PROCEDURE

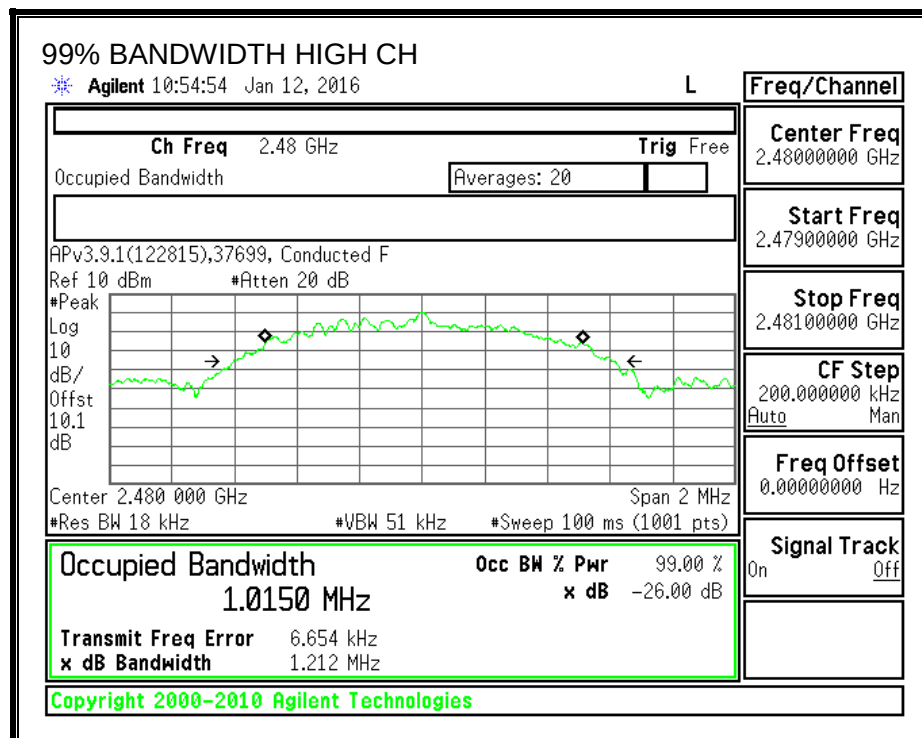
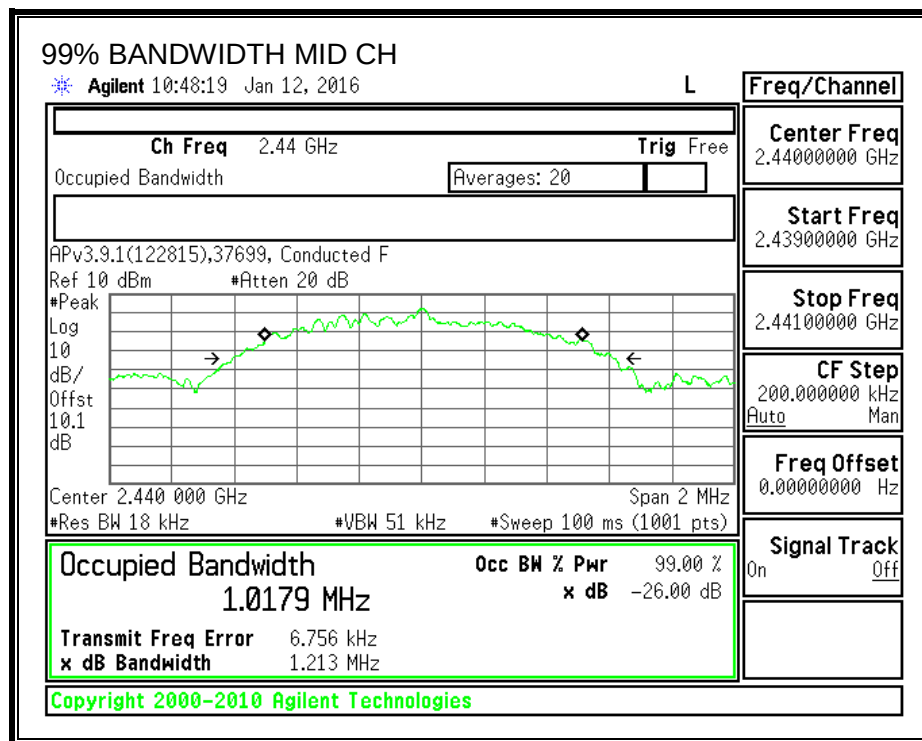
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth and to 1% of the span. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0206
Middle	2440	1.0179
High	2480	1.0150

99% BANDWIDTH





7.5. OUTPUT POWER

LIMITS

FCC §15.247 (b)

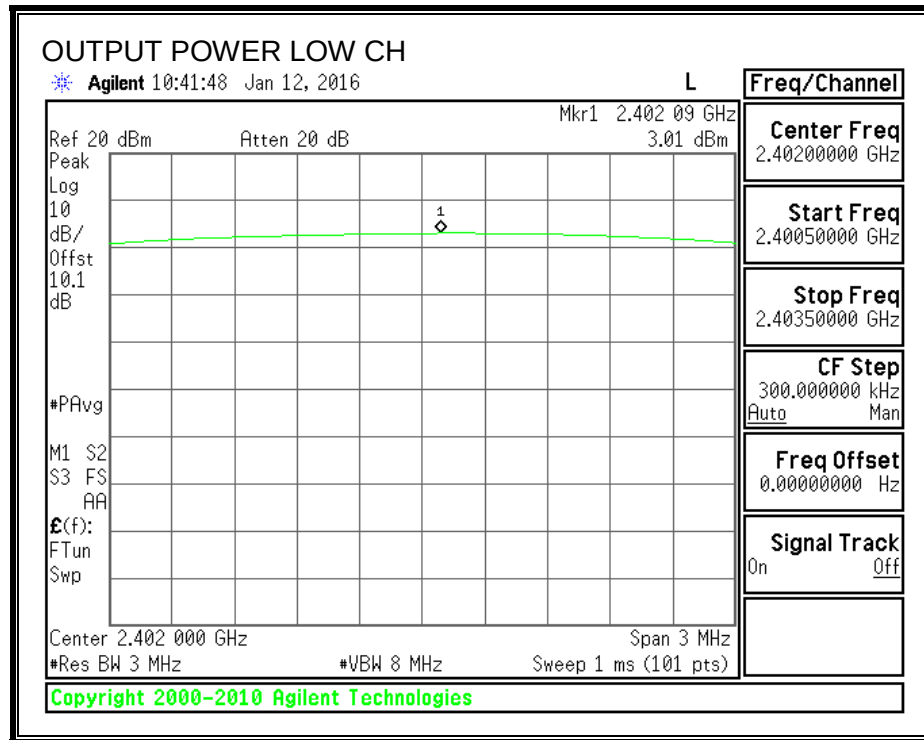
IC RSS-247 (5.4) (4)

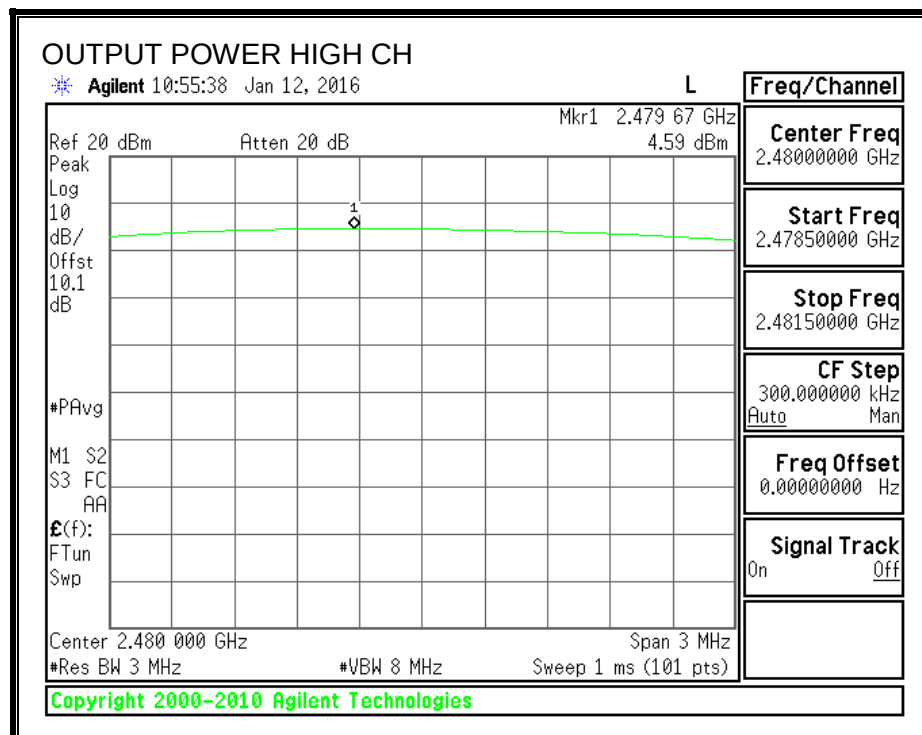
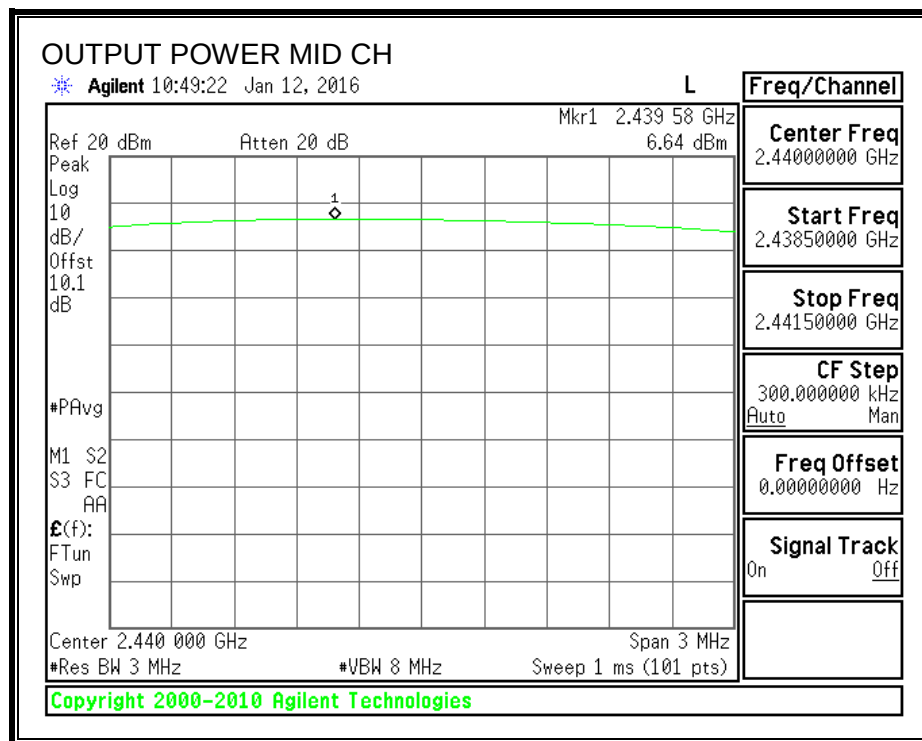
The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

RESULTS

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	3.010	30	-26.990
Middle	2440	6.640	30	-23.360
High	2480	4.590	30	-25.410

OUTPUT POWER





7.6. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

The cable assembly insertion loss of 10.12 dB (including 10 dB pad and 0.12 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	AV power (dBm)
Low	2402	2.59
Middle	2440	6.22
High	2480	4.19

7.7. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

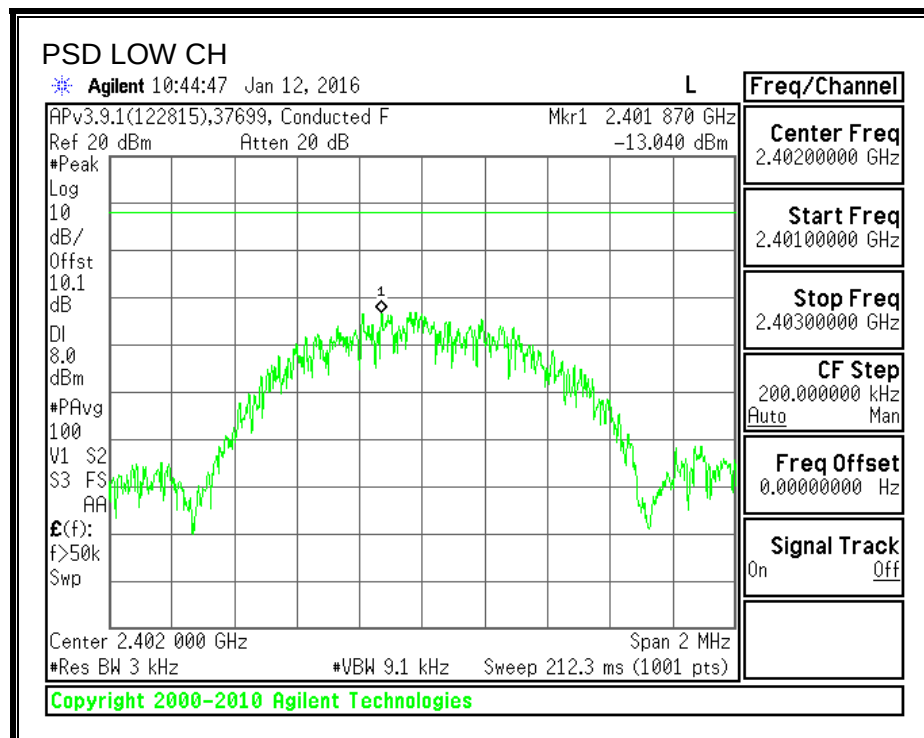
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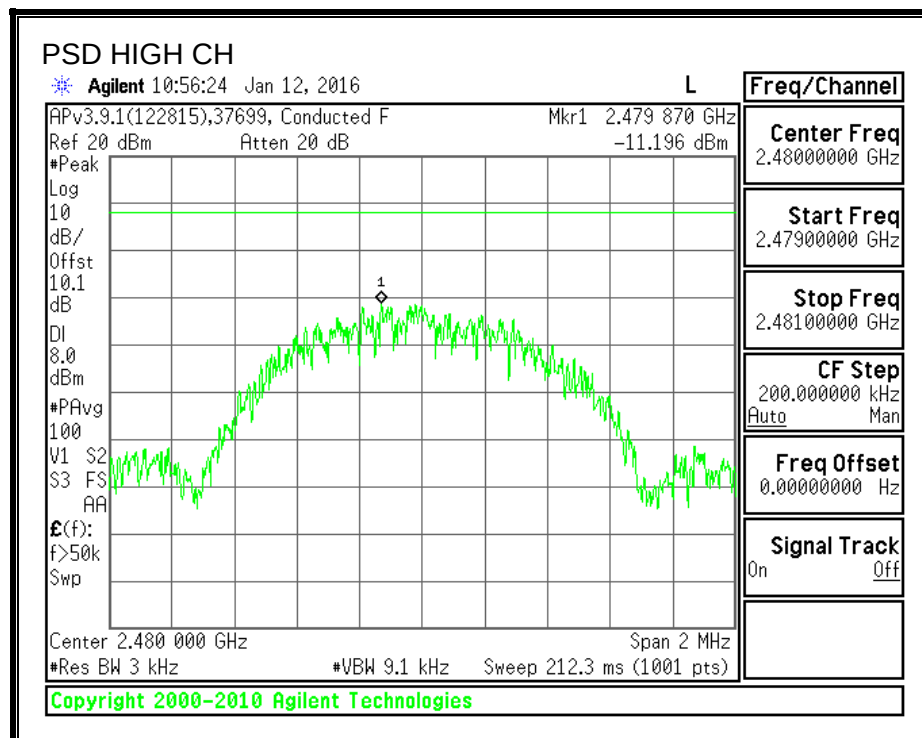
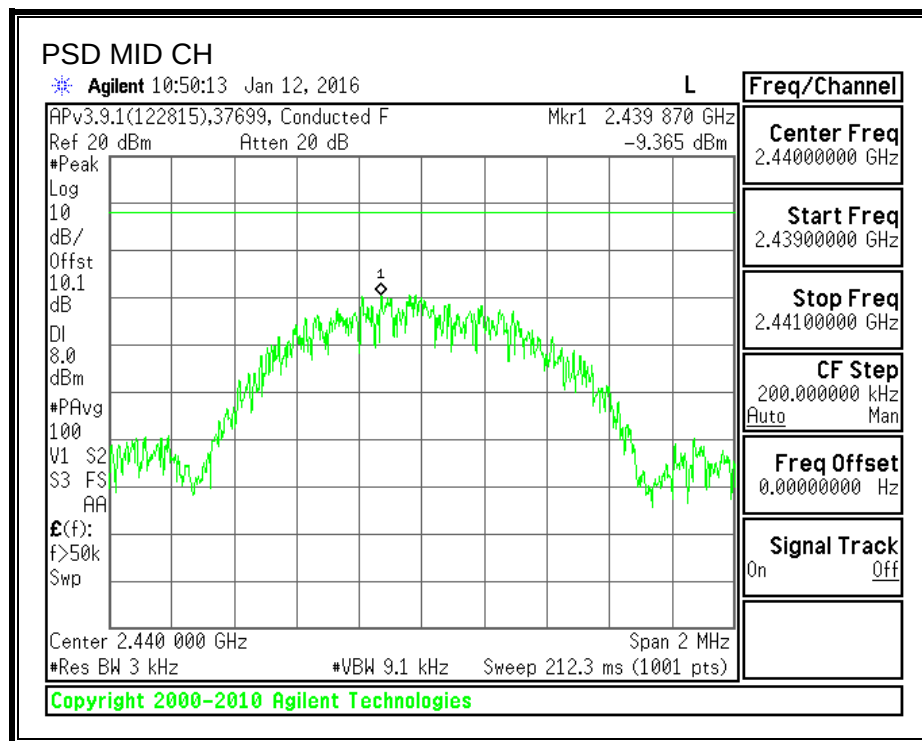
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-13.04	8	-21.04
Middle	2440	-9.37	8	-17.37
High	2480	-11.20	8	-19.20

POWER SPECTRAL DENSITY





7.8. CONDUCTED SPURIOUS EMISSIONS

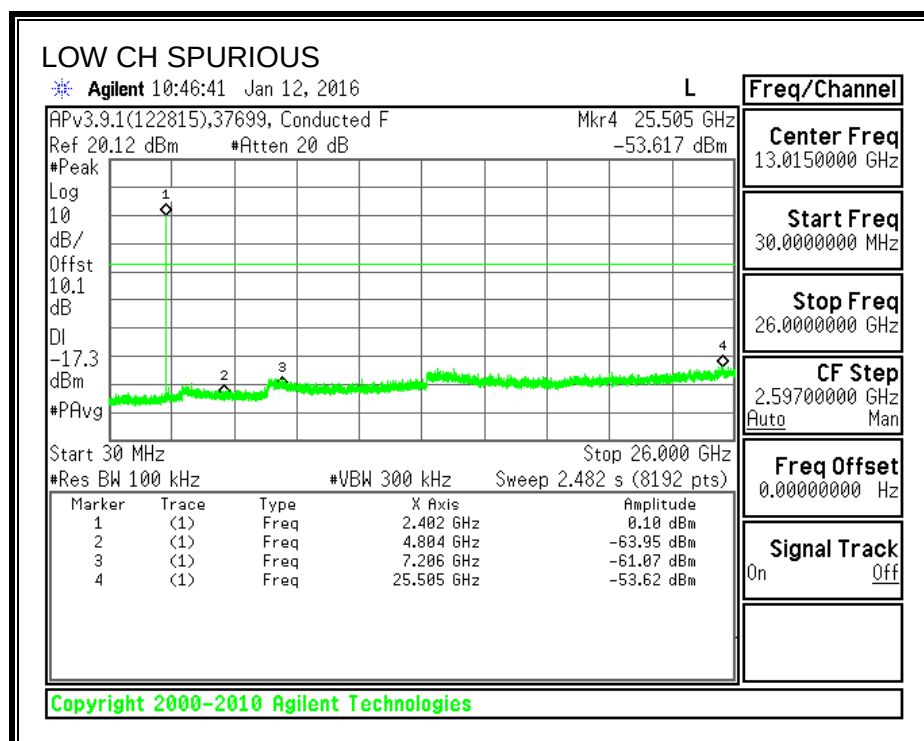
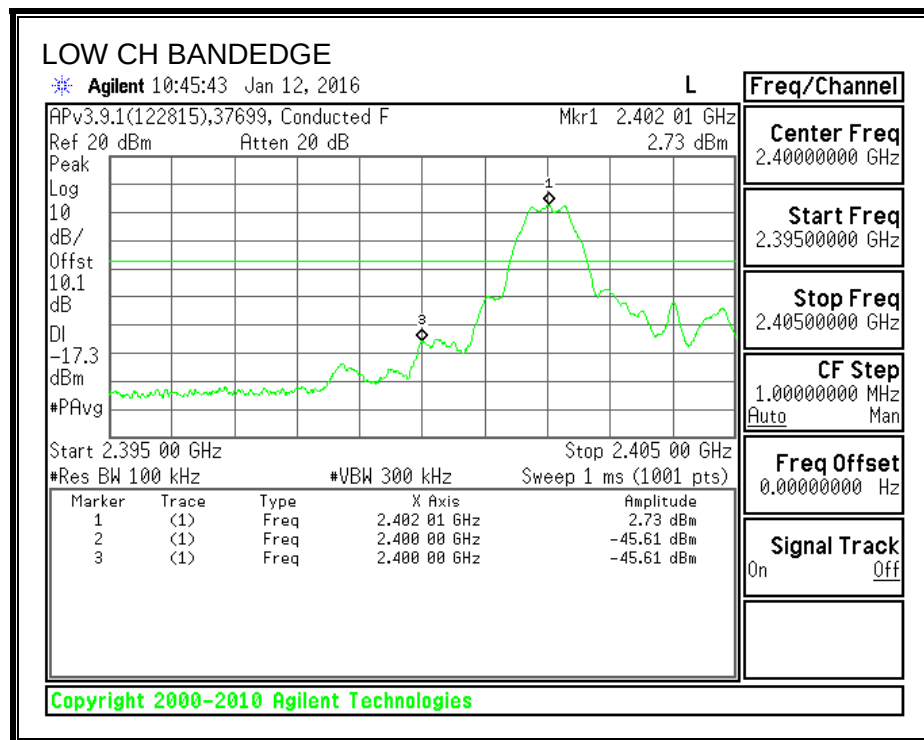
LIMITS

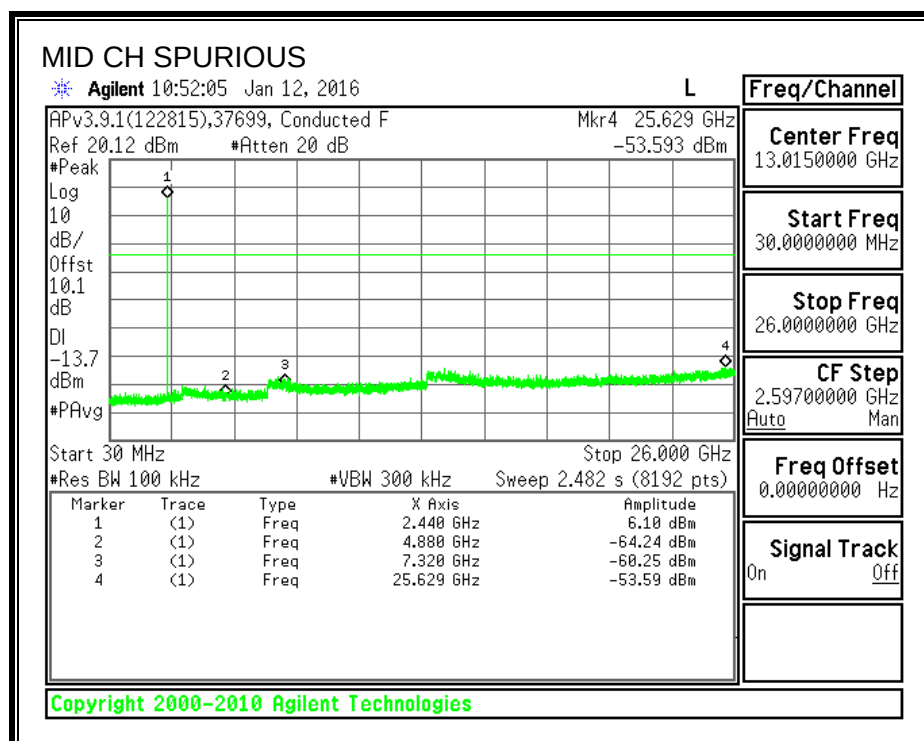
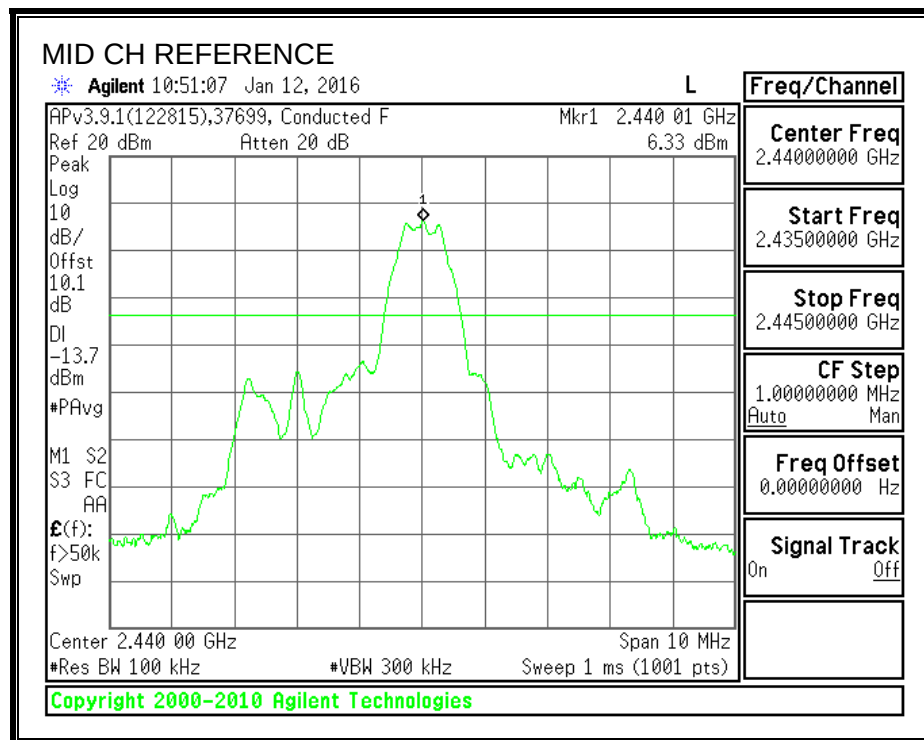
FCC §15.247 (d)

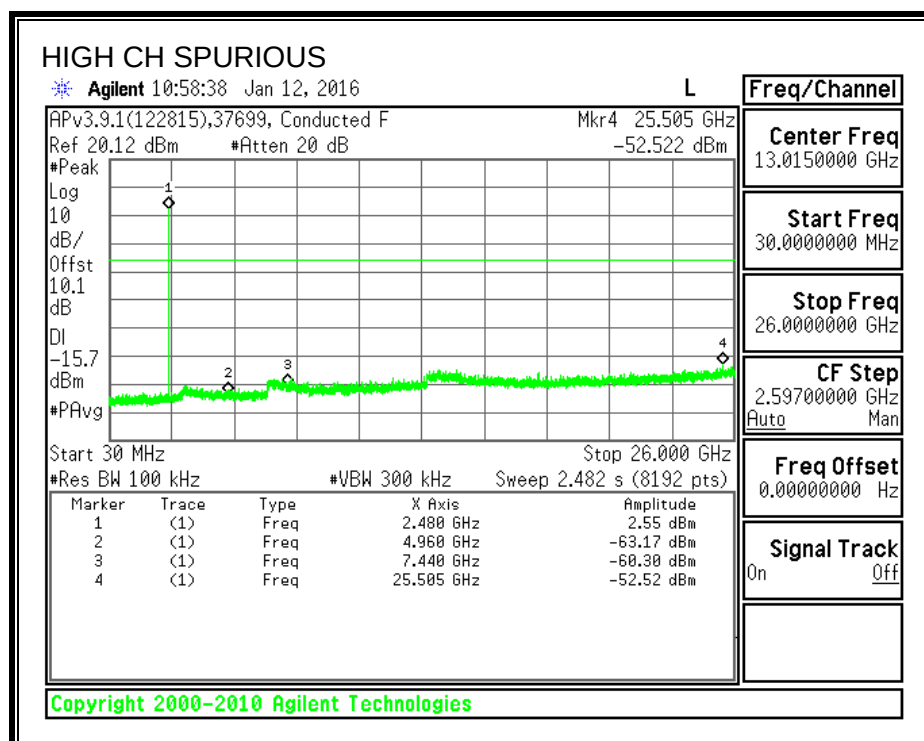
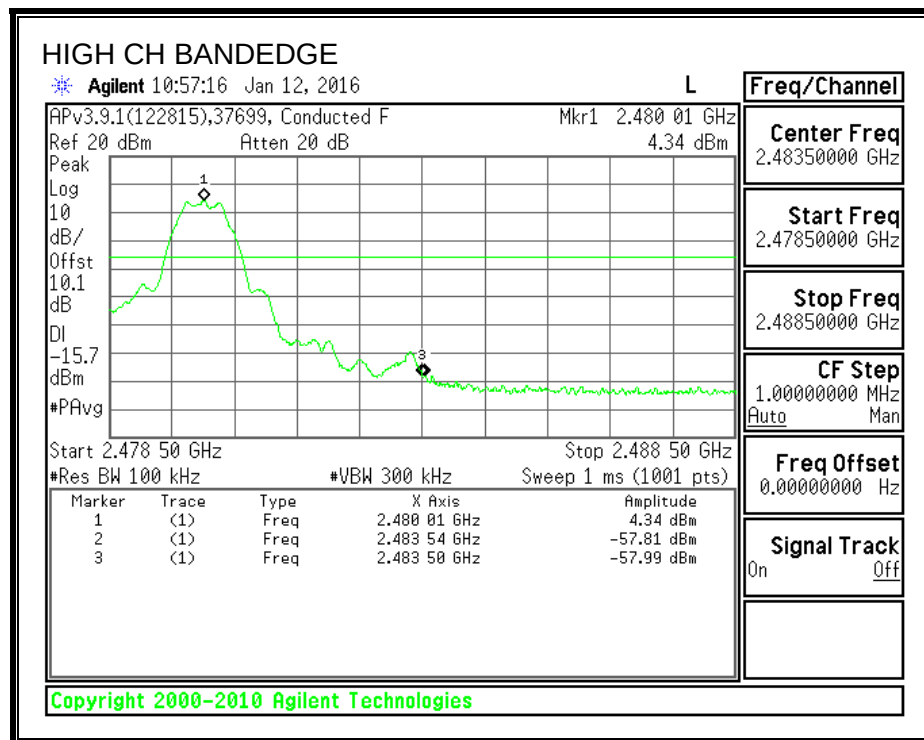
IC RSS-247 (5.5)

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

RESULTS

SPURIOUS EMISSIONS, LOW CHANNEL

SPURIOUS EMISSIONS, MID CHANNEL

SPURIOUS EMISSIONS, HIGH CHANNEL

8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-GEN, Section 8.9 and 8.10.

Frequency Range (MHz)	Field Strength Limit (uV/m)	Measurement distance (meters)
0	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

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 measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 3MHz video bandwidth with average detector for average measurements.

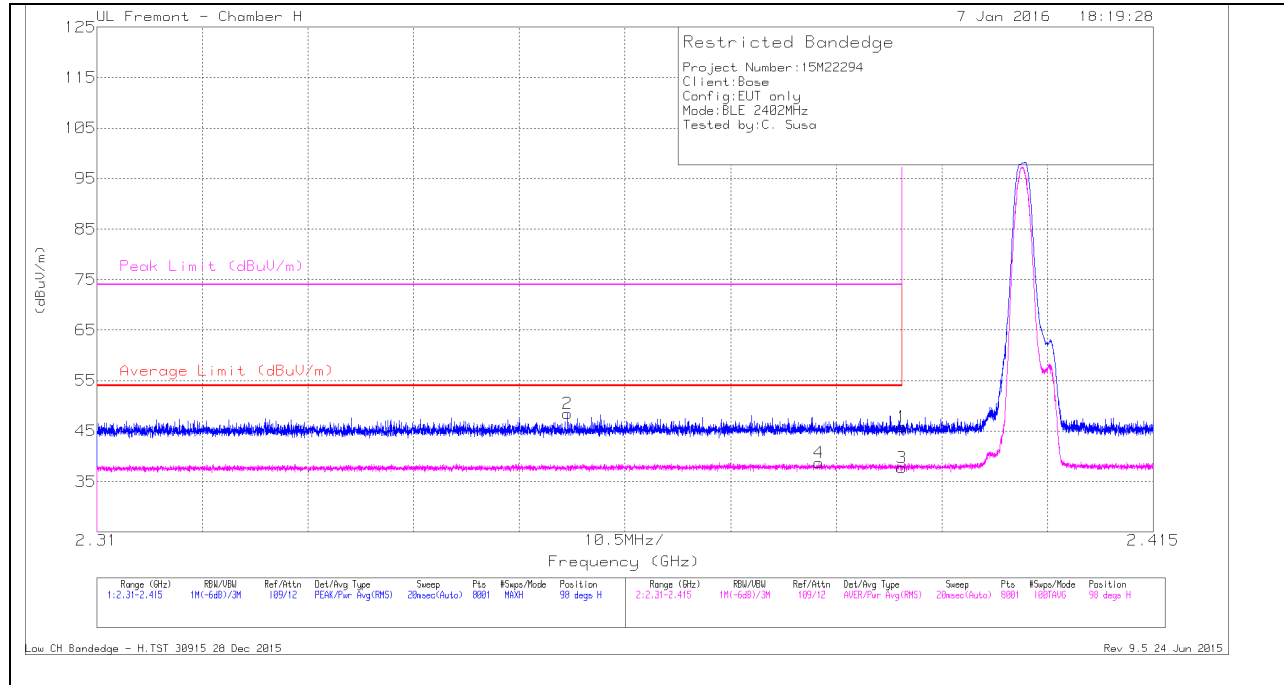
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

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.

8.2. TRANSMITTER ABOVE 1 GHz

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULTS



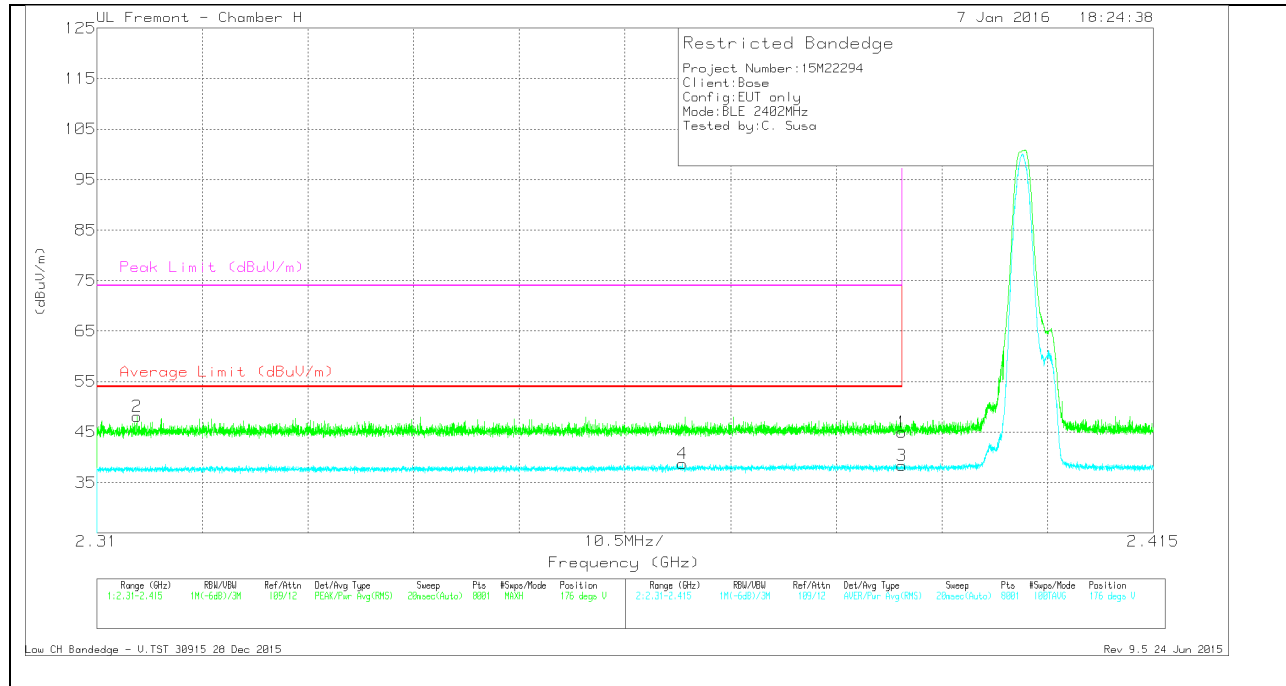
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fil tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	36.21	Pk	32	-22.4	0	45.81	-	-	74	-28.19	98	127	H
2	* 2.357	39.01	Pk	31.9	-22.4	0	48.51	-	-	74	-25.49	98	127	H
3	* 2.39	26	RMS	32	-22.4	2.17	37.77	54	-16.23	-	-	98	127	H
4	* 2.382	26.97	RMS	32	-22.4	2.17	38.74	54	-15.26	-	-	98	127	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULTS

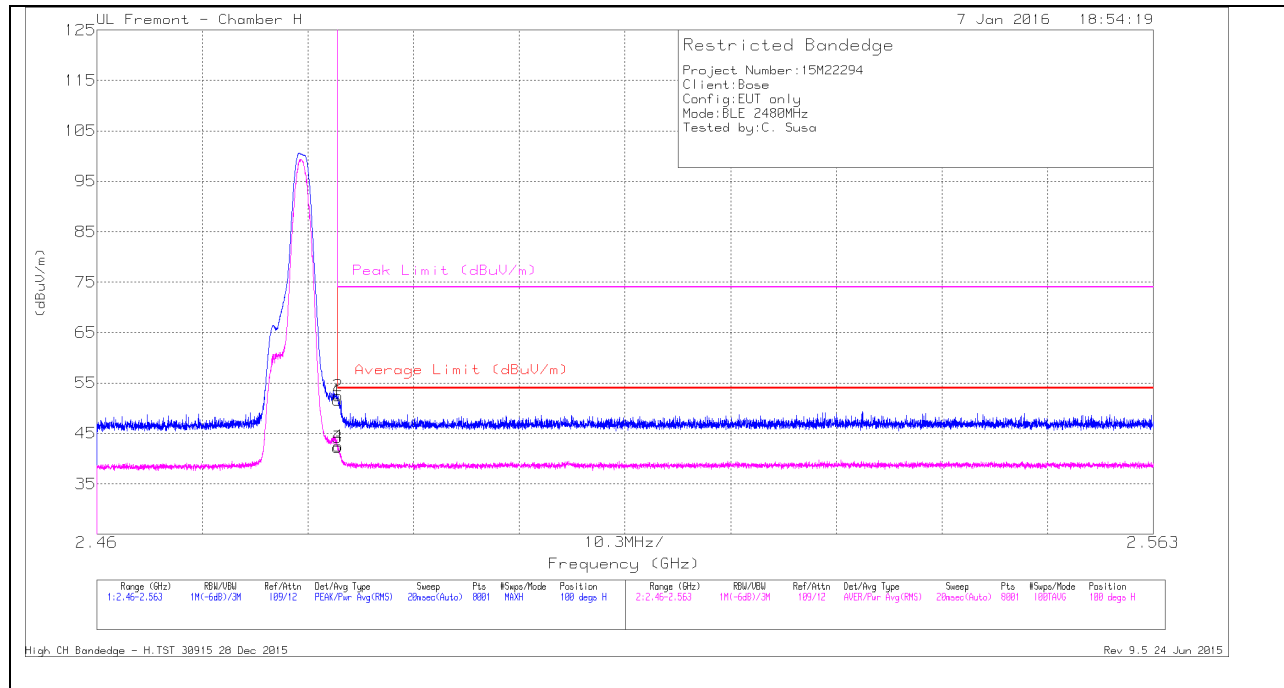


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.314	38.61	Pk	31.8	-22.3	0	48.11	-	-	74	-25.89	176	258	V
4	* 2.368	27.04	RMS	32	-22.4	2.17	38.81	54	-15.19	-	-	176	258	V
1	* 2.39	35.43	Pk	32	-22.4	0	45.03	-	-	74	-28.97	176	258	V
3	* 2.39	26.56	RMS	32	-22.4	2.17	38.33	54	-15.67	-	-	176	258	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)**HORIZONTAL RESULTS**

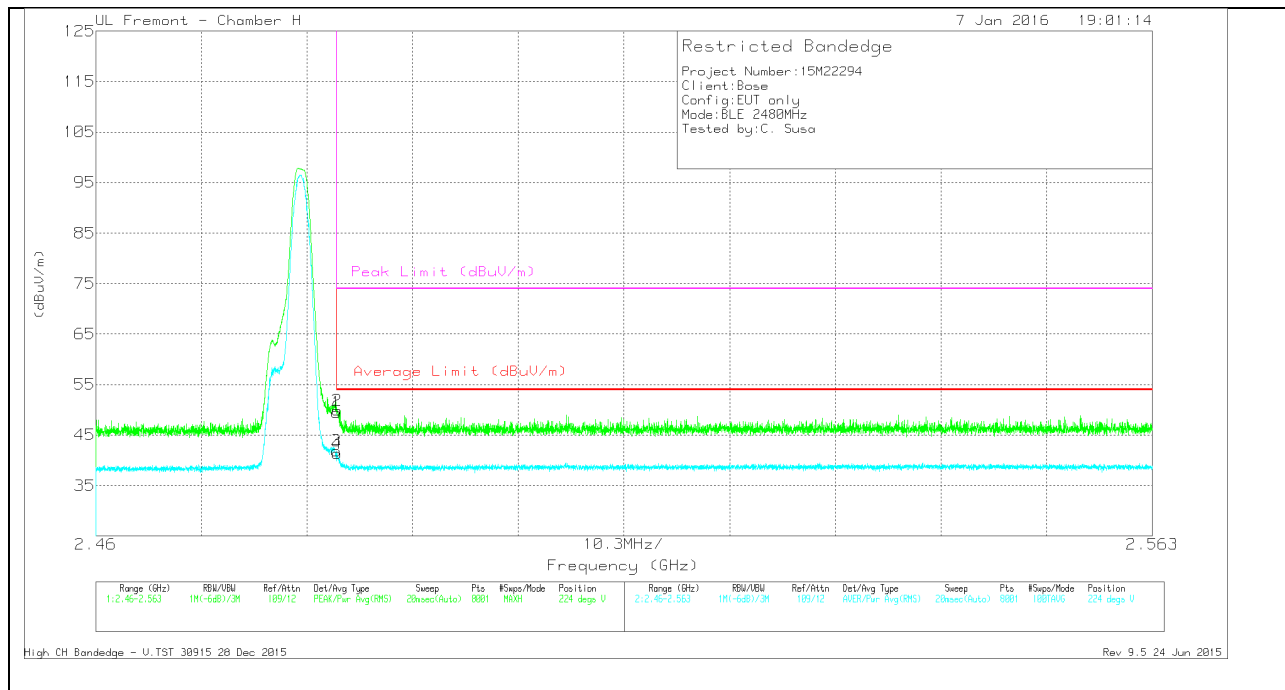
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dBm)	Amp/Cb/FI tri/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.72	Pk	32.4	-22.5	0	51.62	-	-	74	-22.38	100	106	H
2	* 2.484	42.52	Pk	32.4	-22.5	0	52.42	-	-	74	-21.58	100	106	H
3	* 2.484	30.13	RMS	32.4	-22.5	2.17	42.2	54	-11.8	-	-	100	106	H
4	* 2.484	30.45	RMS	32.4	-22.5	2.17	42.52	54	-11.48	-	-	100	106	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL RESULTS

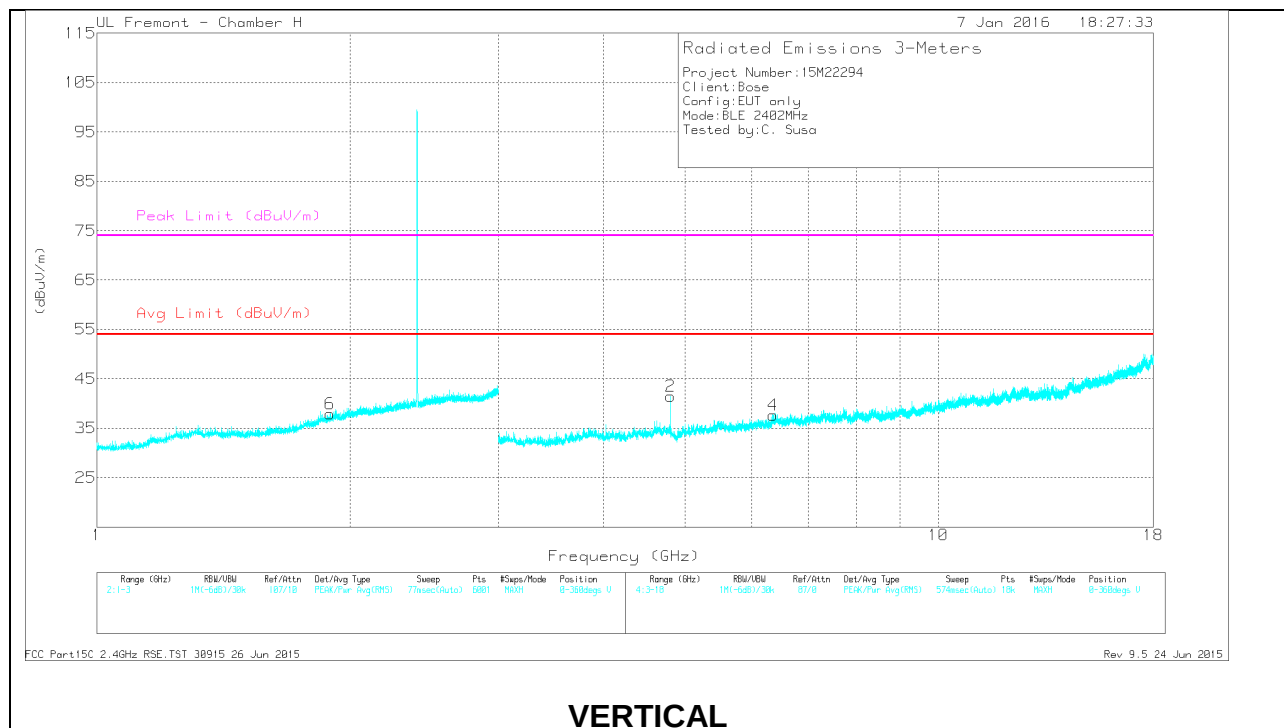
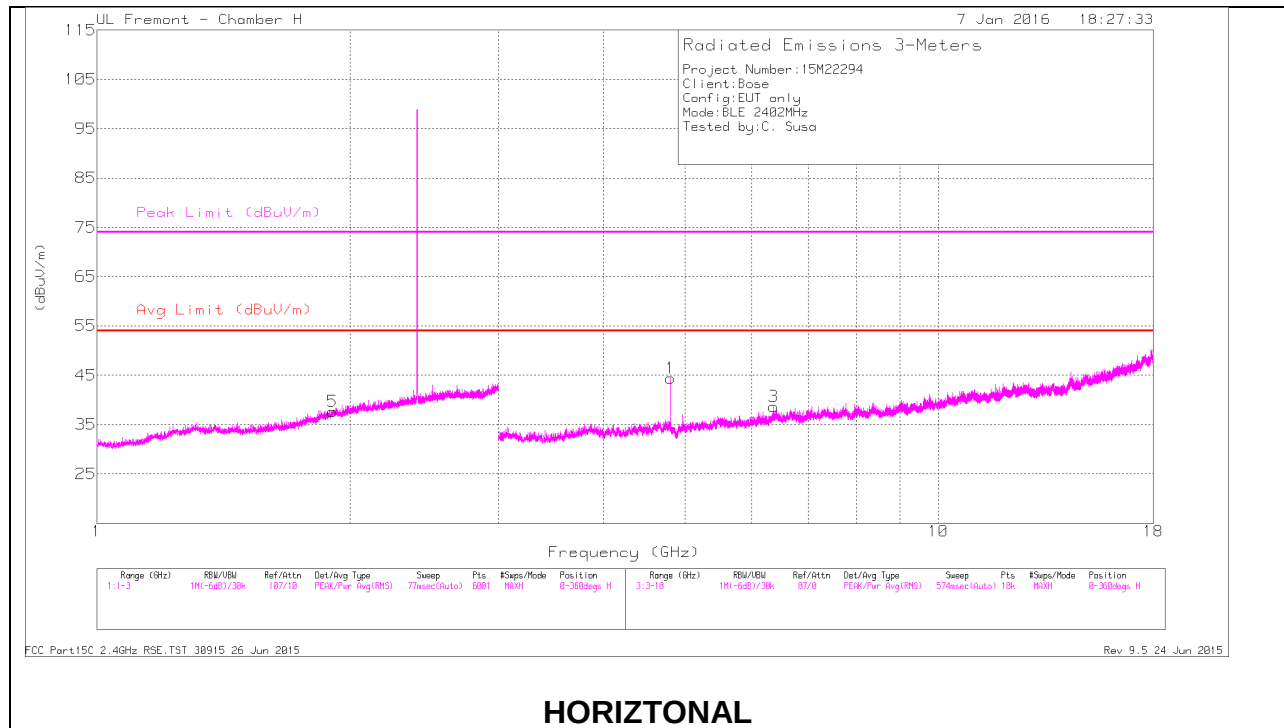


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.61	Pk	32.4	-22.5	0	49.51	-	-	74	-24.49	224	188	V
2	* 2.484	40.01	Pk	32.4	-22.5	0	49.91	-	-	74	-24.09	224	188	V
3	* 2.484	29.79	RMS	32.4	-22.5	2.17	41.86	54	-12.14	-	-	224	188	V
4	* 2.484	29.25	RMS	32.4	-22.5	2.17	41.32	54	-12.68	-	-	224	188	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS**LOW CHANNEL RESULTS**

LOW CHANNEL DATA

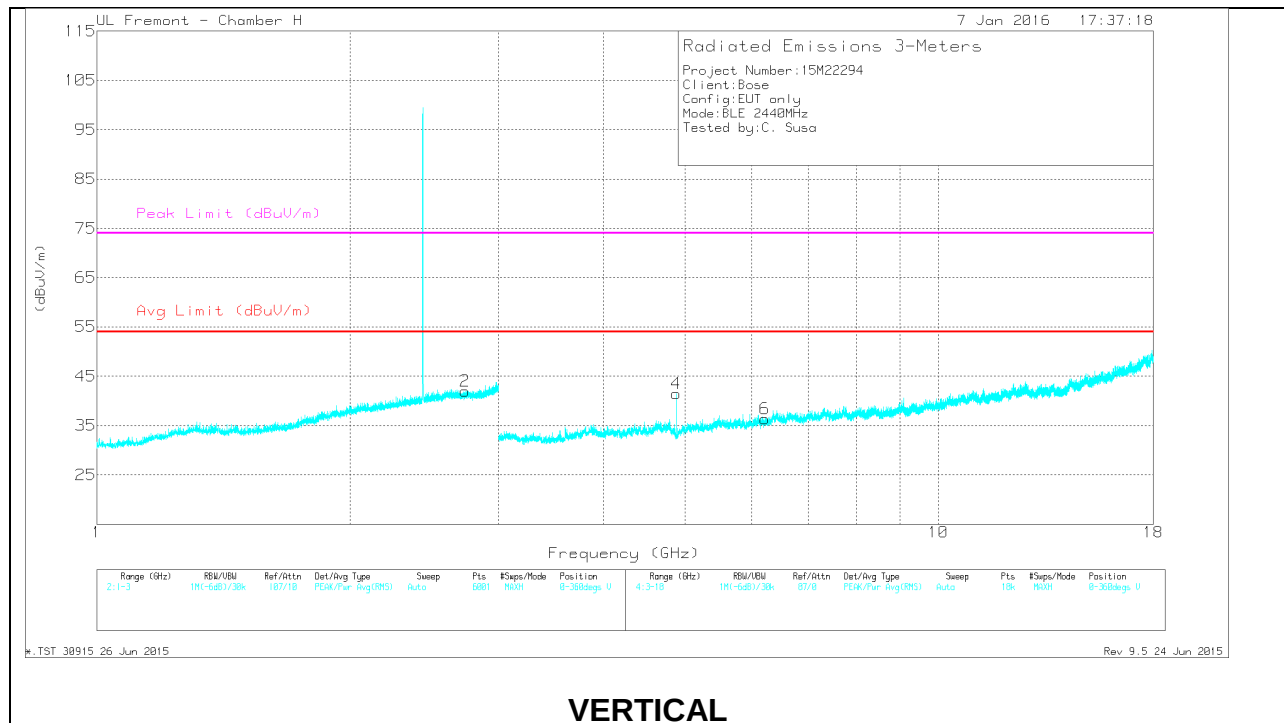
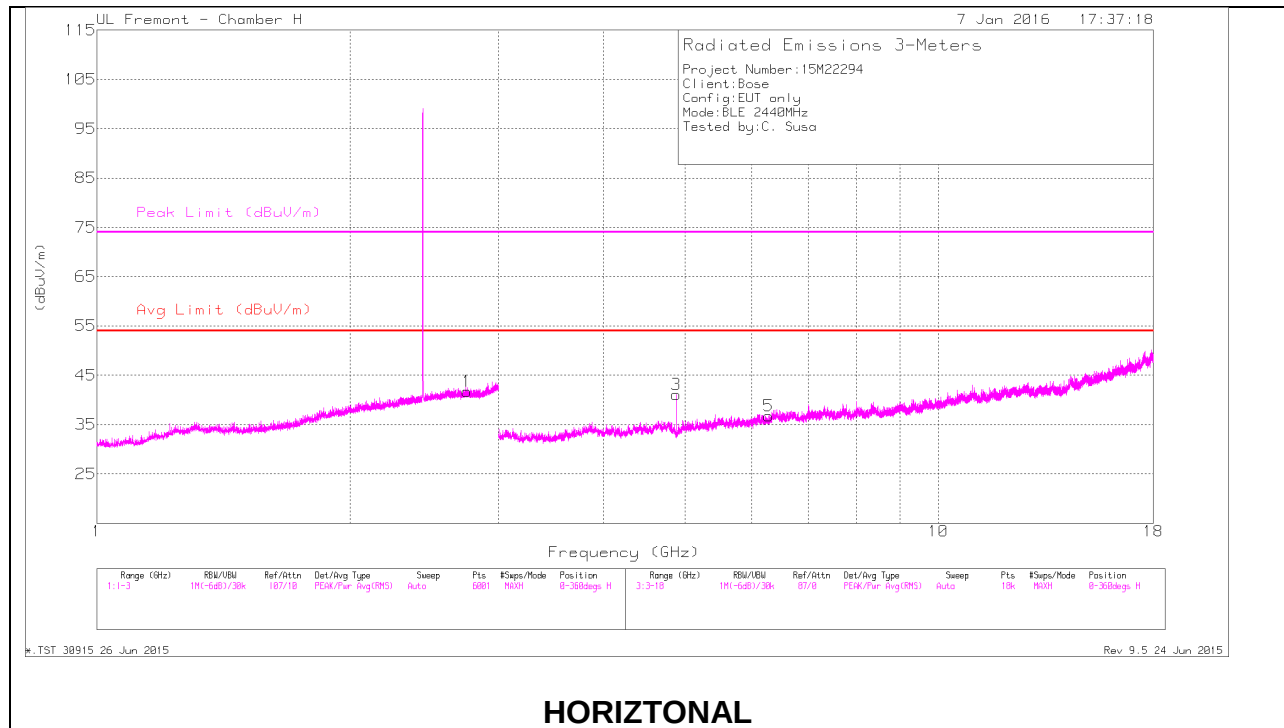
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.804	45.07	PK2	34.2	-30.3	0	48.97	-	-	74	-25.03	56	102	H
	* 4.804	37.93	MAv1	34.2	-30.3	2.17	44	54	-10	-	-	56	102	H
2	* 4.805	39.38	PK2	34.2	-30.3	0	43.28	-	-	74	-30.72	56	102	V
	* 4.806	28.24	MAv1	34.2	-30.3	2.17	34.31	54	-19.69	-	-	56	102	V
6	1.894	29.77	Pk	30.8	-22.7	0	37.87	-	-	-	-	0-360	100	V
5	1.906	29.42	Pk	30.9	-22.7	0	37.62	-	-	-	-	0-360	201	H
4	6.361	30.11	Pk	35.6	-28.1	0	37.61	-	-	-	-	0-360	100	V
3	6.371	31.1	Pk	35.6	-28	0	38.7	-	-	-	-	0-360	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL RESULTS



MID CHANNEL DATA

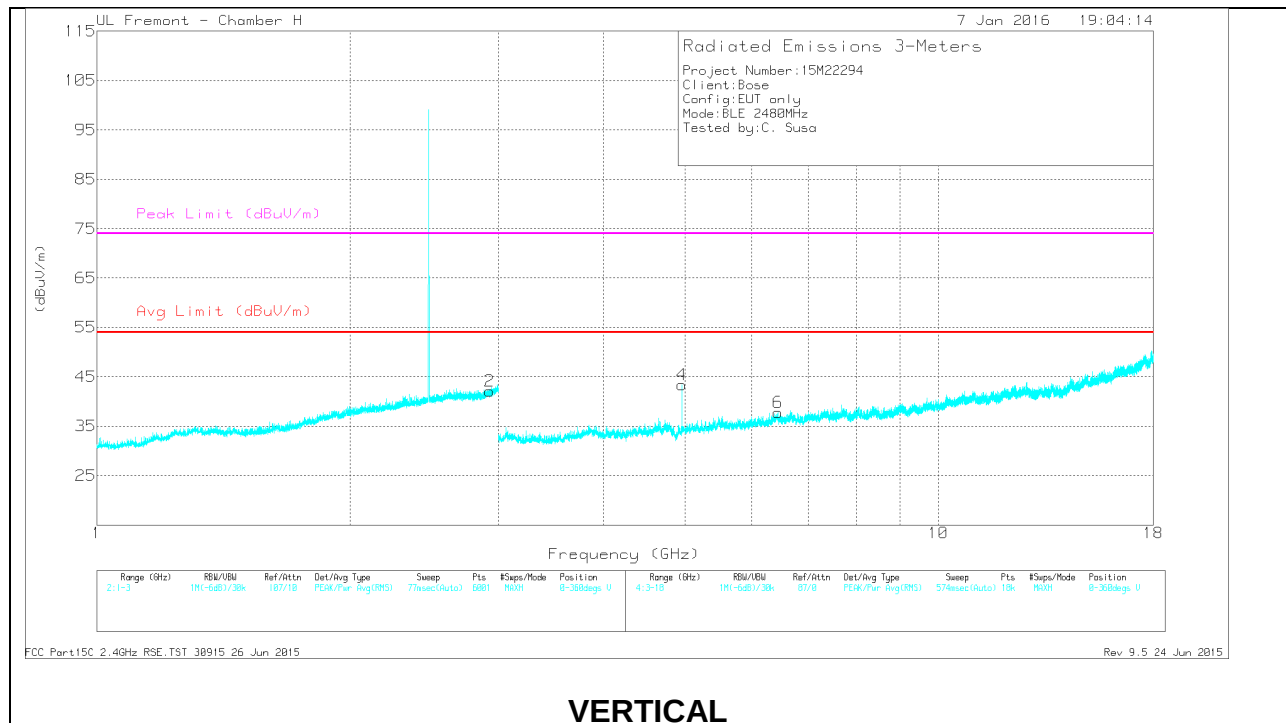
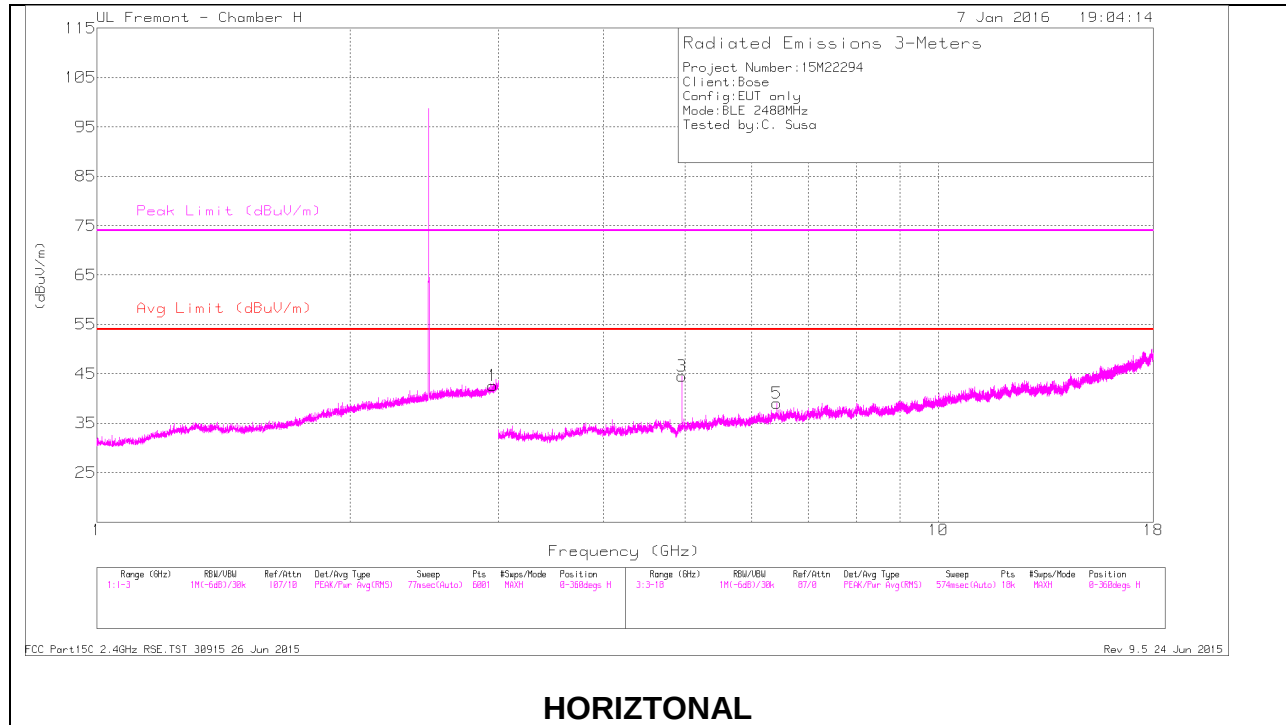
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.755	38.82	PK2	32.3	-21.7	0	49.42	-	-	74	-24.58	0	202	H
	* 2.754	26.95	MAv1	32.3	-21.7	2.17	39.72	54	-14.28	-	-	0	202	H
2	* 2.738	38.95	PK2	32.3	-21.7	0	49.55	-	-	74	-24.45	0	100	V
	* 2.741	27.03	MAv1	32.3	-21.7	2.17	39.8	54	-14.2	-	-	0	100	V
3	* 4.88	43.74	PK2	34.2	-29.9	0	48.04	-	-	74	-25.96	220	107	H
	* 4.88	35.34	MAv1	34.2	-29.9	2.17	41.81	54	-12.19	-	-	220	107	H
4	* 4.881	44	PK2	34.2	-29.9	0	48.3	-	-	74	-25.7	171	104	V
	* 4.88	35.62	MAv1	34.2	-29.9	2.17	42.09	54	-11.91	-	-	171	104	V
6	6.221	30.22	Pk	35.5	-29.3	0	36.42	-	-	-	-	0-360	200	V
5	6.284	30.54	Pk	35.5	-29.3	0	36.74	-	-	-	-	0-360	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL RESULTS



HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.96	45.15	PK2	34.2	-29.8	0	49.55	-	-	74	-24.45	332	233	H
	* 4.96	37.55	MAv1	34.2	-29.8	2.17	44.12	54	-9.88	-	-	332	233	H
4	* 4.96	44.6	PK2	34.2	-29.8	0	49	-	-	74	-25	165	102	V
	* 4.96	37.09	MAv1	34.2	-29.8	2.17	43.66	54	-10.34	-	-	165	102	V
2	2.929	30.91	Pk	32.6	-21.4	0	42.11	-	-	-	-	0-360	100	V
1	2.956	31.36	Pk	32.6	-21.3	0	42.66	-	-	-	-	0-360	100	H
5	6.423	30.89	Pk	35.7	-27.5	0	39.09	-	-	-	-	0-360	201	H
6	6.447	29.63	Pk	35.7	-27.6	0	37.73	-	-	-	-	0-360	200	V

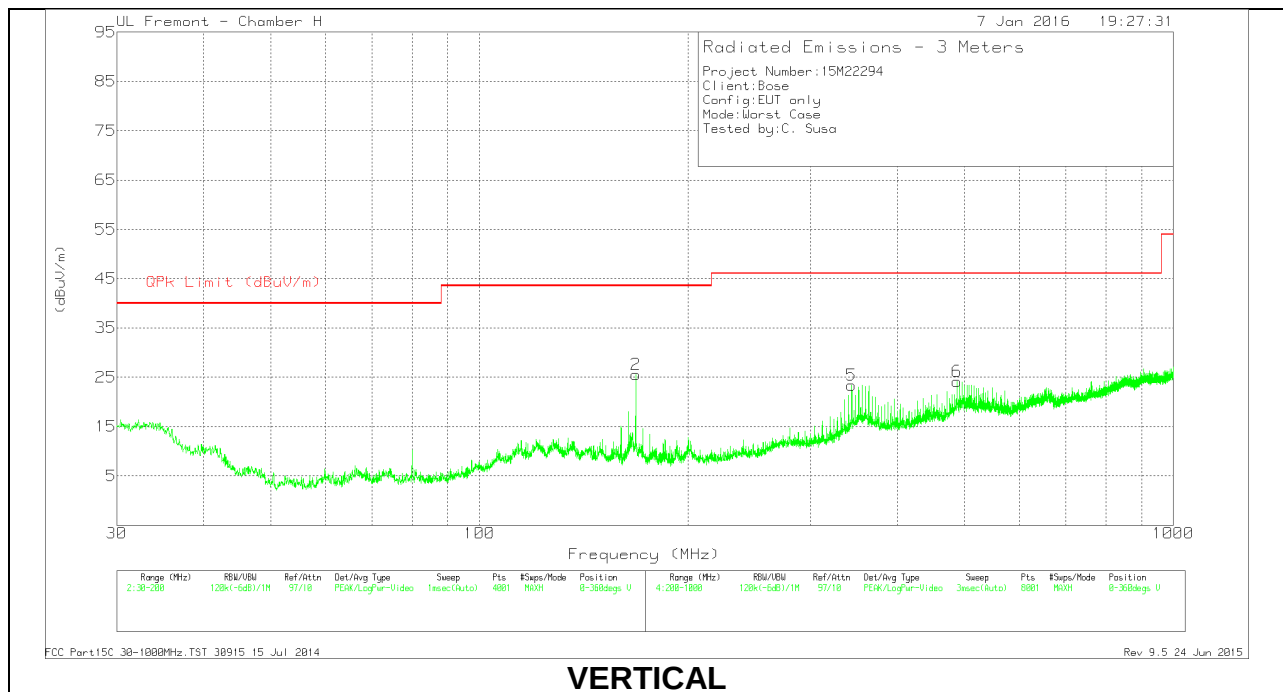
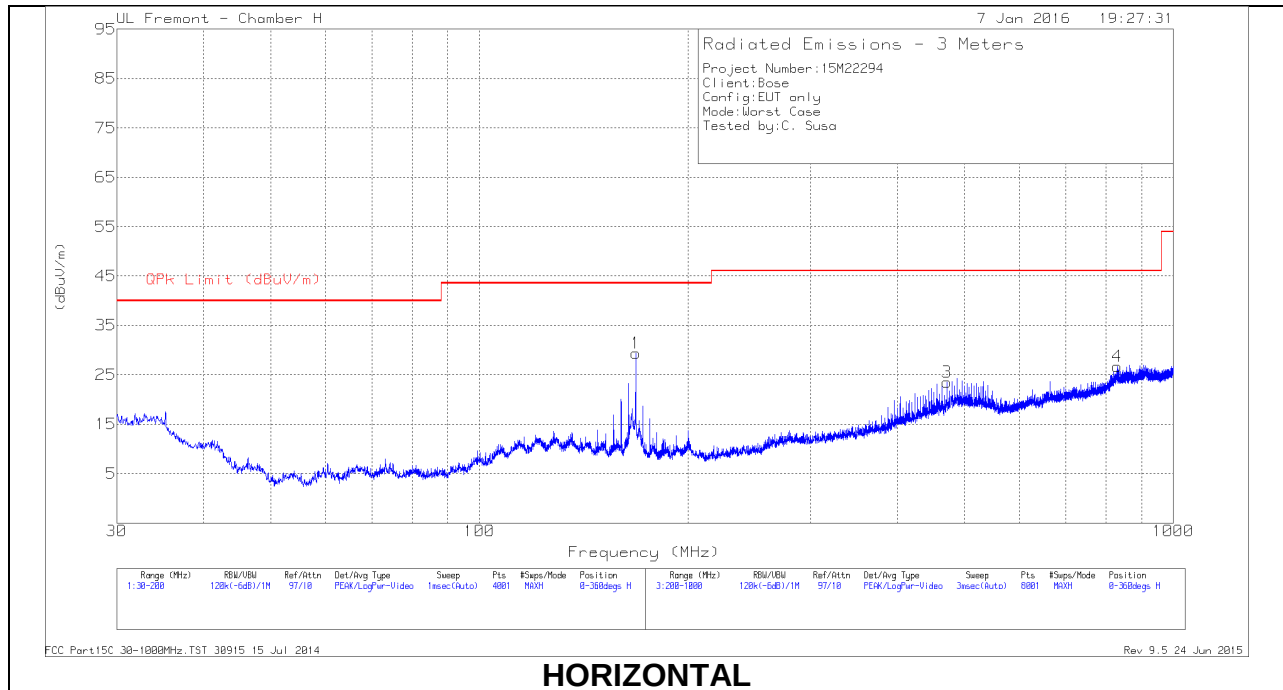
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

8.3. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 - 1000 MHz (WORST-CASE CONFIGURATION)



Data

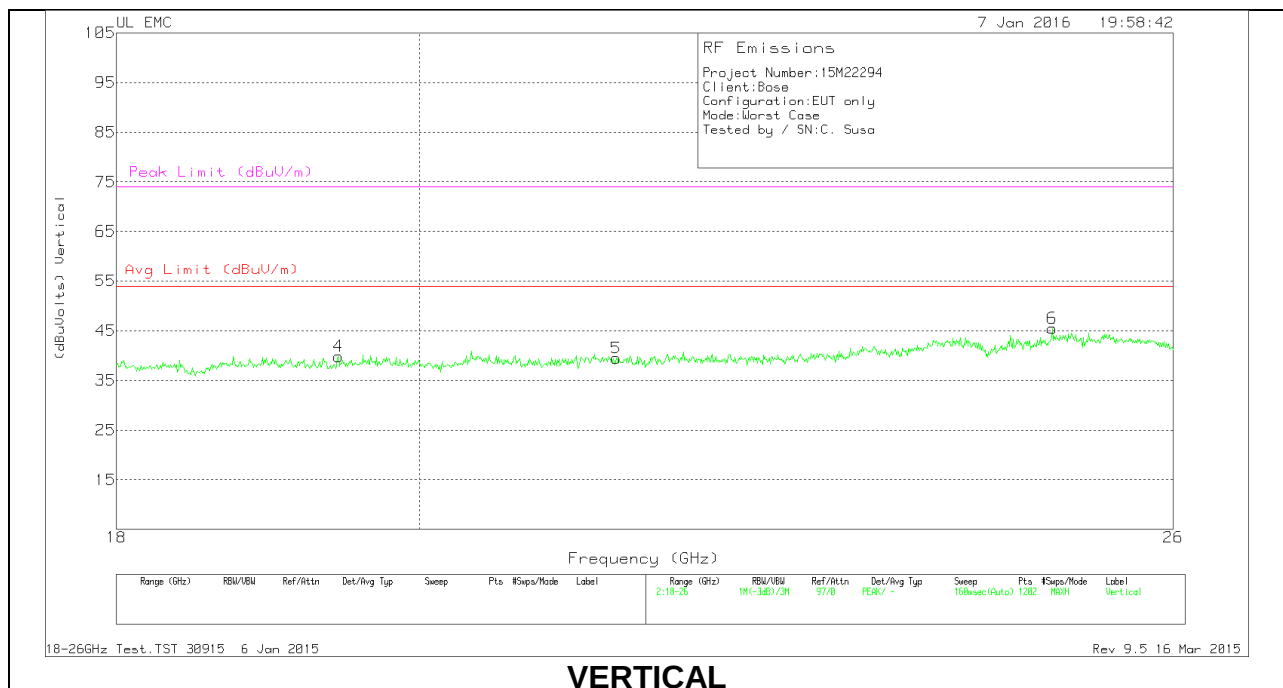
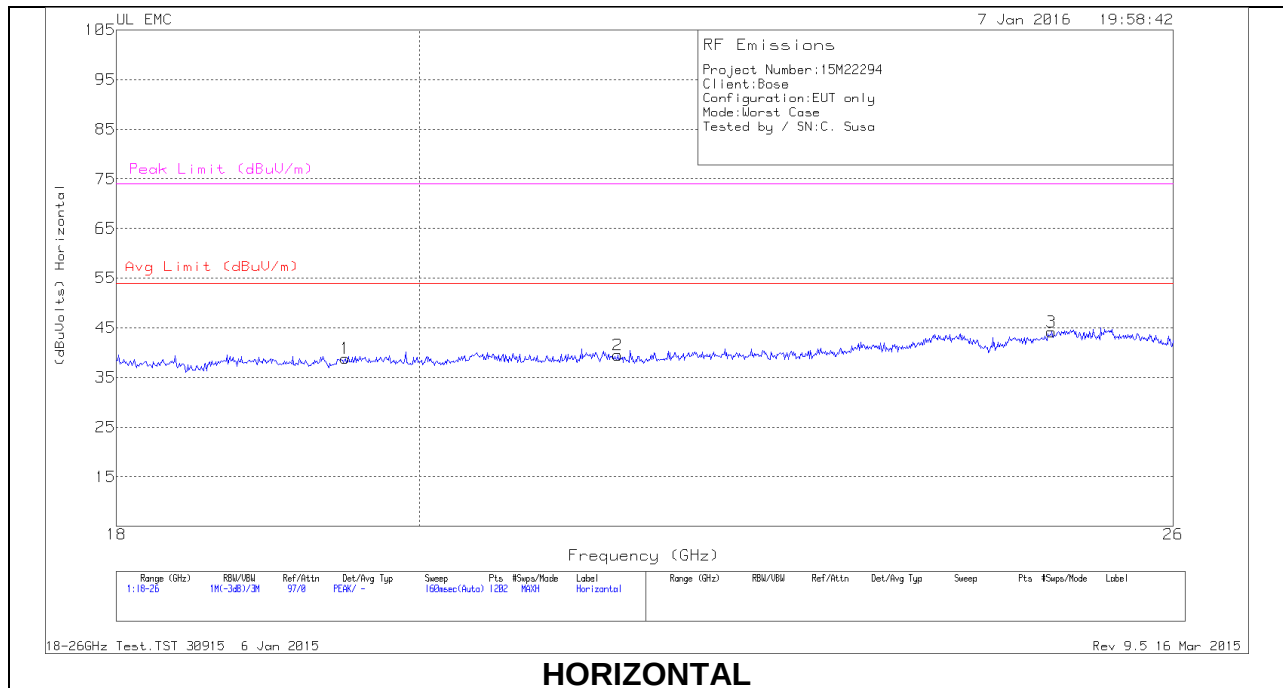
Marker	Frequency (MHz)	Meter Reading (dBUV)	Det	AF T900 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBUV/m)	QPk Limit (dBUV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 167.9975	47.49	Pk	11.8	-29.9	29.39	43.52	-14.13	0-360	201	H
2	* 167.9975	43.69	Pk	11.8	-29.9	25.59	43.52	-17.93	0-360	100	V
5	344	38.14	Pk	14.2	-28.9	23.44	46.02	-22.58	0-360	201	V
3	472	34.63	Pk	17.2	-28.3	23.53	46.02	-22.49	0-360	201	H
6	488	34.85	Pk	17.6	-28.3	24.15	46.02	-21.87	0-360	100	V
4	829.8	32.46	Pk	21.2	-27	26.66	46.02	-19.36	0-360	100	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

8.4. WORST-CASE 18 – 26 GHz

SPURIOUS EMISSIONS 18 -26GHz (WORST-CASE CONFIGURATION)



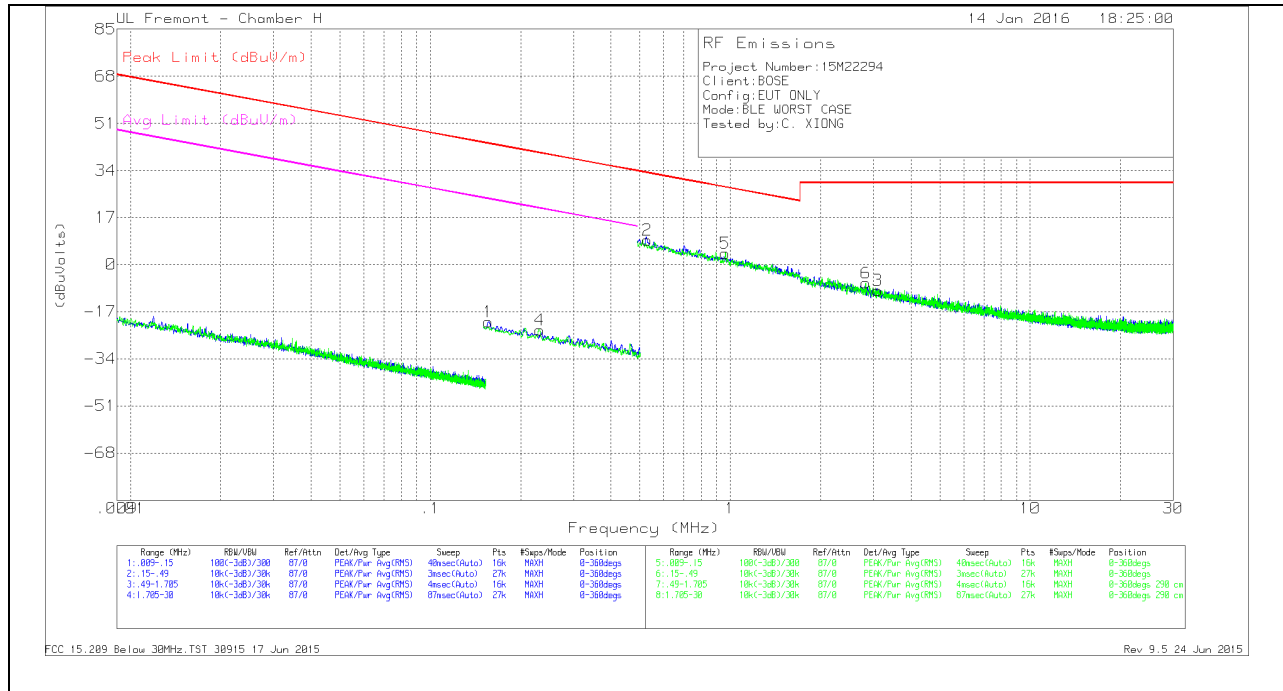
Data

Marker	Frequency (GHz)	Meter Reading (dBUV)	Det	T477 AF (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	19.492	40.83	Pk	32.6	-25.1	-9.5	38.833	54	-15.167	74	-35.167
2	21.43	41.5	Pk	33.1	-25.6	-9.5	39.5	54	-14.5	74	-34.5
3	24.921	43.87	Pk	34	-24.2	-9.5	44.167	54	-9.833	74	-29.833
4	19.445	41.43	Pk	32.6	-24.7	-9.5	39.833	54	-14.167	74	-34.167
5	21.417	41.5	Pk	33.1	-25.6	-9.5	39.5	54	-14.5	74	-34.5
6	24.928	45.3	Pk	34	-24.3	-9.5	45.5	54	-8.5	74	-28.5

Pk - Peak detector

8.5. WORST-CASE BELOW 30MHz

SPURIOUS EMISSIONS BELOW 30MHz (WORST-CASE CONFIGURATION)



Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.15608	48.37	Pk	10.8	.1	-80	-20.73	43.74	-64.47	23.74	-44.47	0-360
4	.23165	45.59	Pk	10.8	.1	-80	-23.51	40.31	-63.82	20.31	-43.82	0-360
2	.5283	38.1	Pk	10.6	.1	-40	8.8	33.15	-24.35	-	-	0-360
5	.96196	33.33	Pk	10.7	.1	-40	4.13	27.94	-23.81	-	-	0-360
6	2.82846	22.19	Pk	10.8	.3	-40	-6.71	29.54	-36.25	-	-	0-360
3	3.10198	19.61	Pk	10.8	.3	-40	-9.29	29.54	-38.83	-	-	0-360

Pk - Peak detector

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

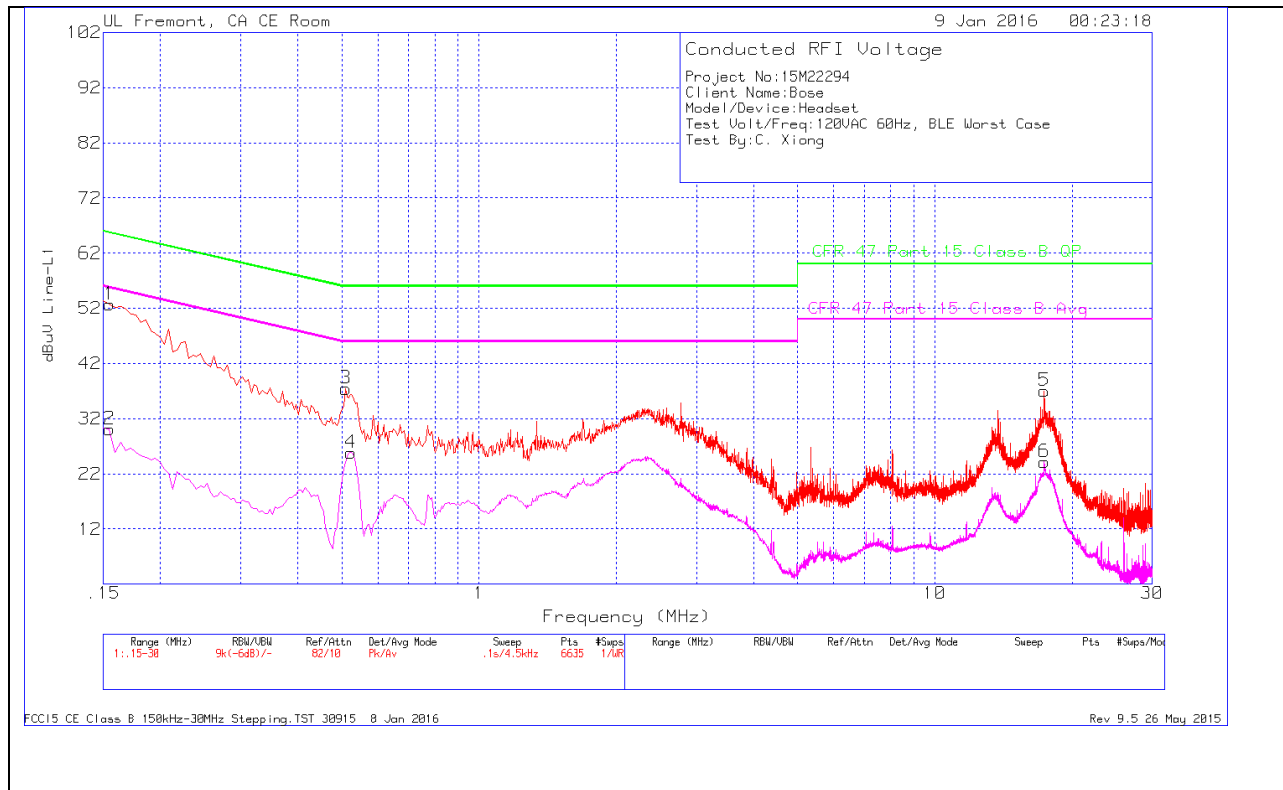
*Decreases with the logarithm of the frequency.

TEST PROCEDURE

C63.10.

RESULTS

LINE 1 RESULTS



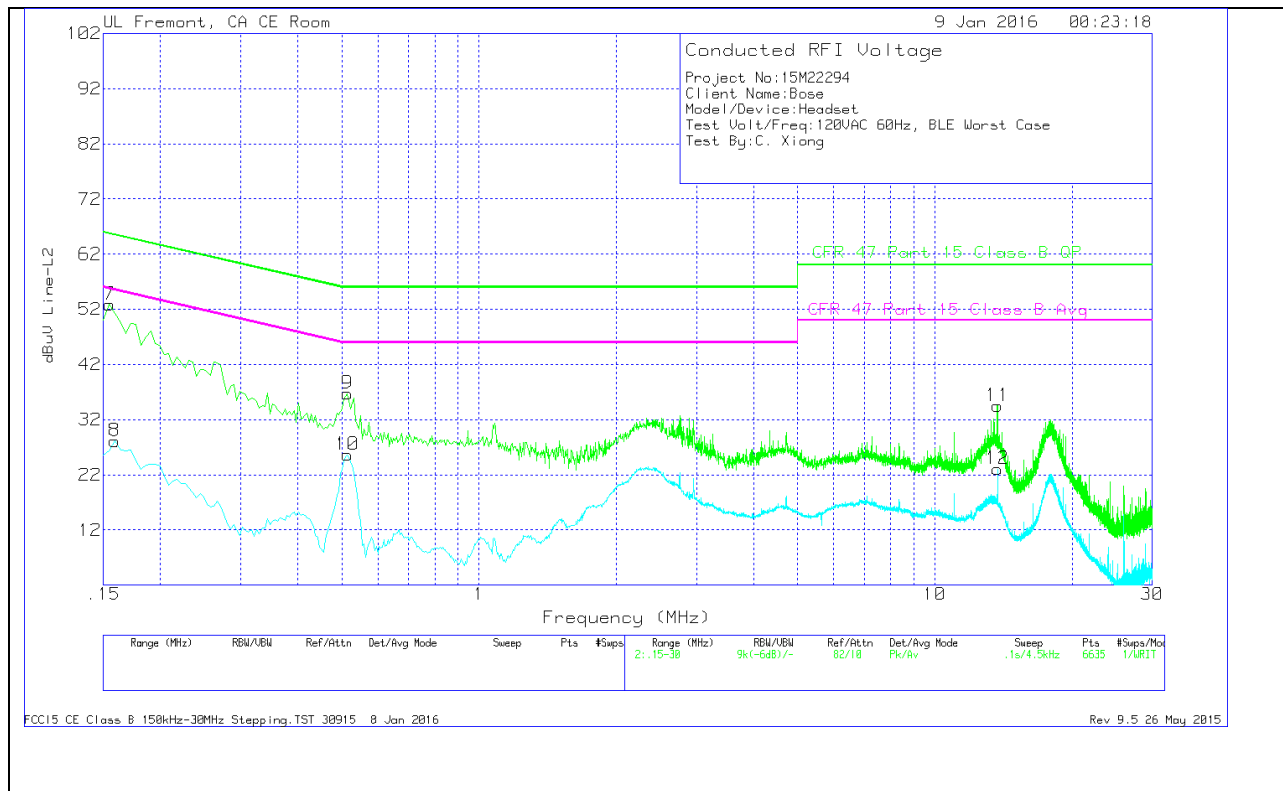
Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T1310 IL L1	LC Cables 1&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
1	.1545	52.74	Pk	0	0	52.74	65.75	-13.01	-	-
2	.1545	30.08	Av	0	0	30.08	-	-	55.75	-25.67
3	.51	37.44	Pk	0	0	37.44	56	-18.56	-	-
4	.5235	25.83	Av	0	0	25.83	-	-	46	-20.17
5	17.376	36.84	Pk	0	.2	37.04	60	-22.96	-	-
6	17.3715	23.98	Av	0	.2	24.18	-	-	50	-25.82

Pk - Peak detector

Av - Average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T1310 IL L2	LC Cables 2&3	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	Margin (dB)	CFR 47 Part 15 Class B Avg	Margin (dB)
7	.1545	52.88	Pk	0	0	52.88	65.75	-12.87	-	-
8	.159	28.13	Av	0	0	28.13	-	-	55.52	-27.39
9	.5145	36.69	Pk	0	0	36.69	56	-19.31	-	-
10	.5145	25.6	Av	0	0	25.6	-	-	46	-20.4
11	13.731	34.18	Pk	.1	.2	34.48	60	-25.52	-	-
12	13.731	22.73	Av	.1	.2	23.03	-	-	50	-26.97

Pk - Peak detector

Av - Average detection