



CERTIFICATION TEST REPORT

Report Number. : 11990761-E1V2

Applicant : Engineered Medical Technologies
1342 Walgra Meadows Rd
Meadow Vista, CA, 95722

Model : TC2

FCC ID : 2AOYK-TC2

EUT Description : tCHECK INFUSED OIL TESTER

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS - 247 ISSUE 2
INDUSTRY CANADA RSS-GEN ISSUE 4

Date Of Issue:
February 09, 2018

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



Revision History

Rev.	Issue Date	Revisions	Revised By
V1	1/30/2018	Initial Issue	--
V2	2/9/2018	Updated section 10.3 with reference to KDB 414788	Huda Mustapha

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION	6
4. CALIBRATION AND UNCERTAINTY	7
4.1. MEASURING INSTRUMENT CALIBRATION	7
4.2. SAMPLE CALCULATION	7
4.3. MEASUREMENT UNCERTAINTY.....	7
5. EQUIPMENT UNDER TEST	8
5.1. DESCRIPTION OF EUT	8
5.2. MAXIMUM OUTPUT POWER.....	8
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	8
5.4. SOFTWARE AND FIRMWARE.....	8
5.5. WORST-CASE CONFIGURATION AND MODE.....	9
5.6. DESCRIPTION OF TEST SETUP.....	10
6. TEST AND MEASUREMENT EQUIPMENT	13
7. SUMMARY TABLE	14
8. MEASUREMENT METHODS	15
9. ANTENNA PORT TEST RESULTS	16
9.1. ON TIME, DUTY CYCLE	16
9.2. 6 dB BANDWIDTH.....	18
9.3. 99% BANDWIDTH.....	21
9.4. AVERAGE POWER.....	24
9.5. OUTPUT POWER.....	25
9.6. POWER SPECTRAL DENSITY	27
9.7. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS.....	30
10. RADIATED TEST RESULTS.....	34
10.1. LIMITS AND PROCEDURE.....	34
10.2. TRANSMITTER ABOVE 1GHZ	35
10.2.1. RESTRICTED BANDEDGE (LOW CHANNEL)	35
10.2.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)	37
10.2.3. HARMONICS AND SPURIOUS EMISSIONS.....	39

10.3.	WORST-CASE BELOW 30MHz	45
10.4.	WORST-CASE 30 MHz TO 1 GHz	46
10.5.	WORST-CASE ABOVE 18 GHz	48
11.	SETUP PHOTOS.....	50

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: ENGINEERED MEDICAL TECHNOLOGIES
1342 WALGRA MEADOWS RD.
MEADOW VISTA, CA 95722 U.S.A

EUT DESCRIPTION: tCHECK INFUSED OIL TESTER

SERIAL NUMBER: 001 and 002

DATE TESTED: January 24-25, 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Complies
INDUSTRY CANADA RSS-247 Issue 2	Complies
INDUSTRY CANADA RSS-GEN Issue 4	Complies

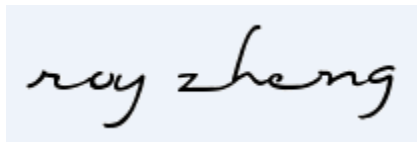
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement 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 U.S. government.

Approved & Released For
UL Verification Services Inc. By:

Prepared By:

Huda Mustapha



HUDE MUSTAPHA
LEAD PROJECT ENGINEER
UL Verification Services Inc.

ROY ZHENG
TEST 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 v04, ANSI C63.10-2013, RSS-GEN Issue 4, 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, 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. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

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
Occupied Channel Bandwidth	±0.39 %

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a cannabis oil potency tester, intended for residential use. The EUT is battery powered.

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	1.55	1.43

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PCB antenna, with the following maximum gain:

Frequency Band (GHz)	Antenna Peak Gain (dBi)
2.4	1.10

5.4. SOFTWARE AND FIRMWARE

The test utility software used during testing was Terminate (TTY program).
The firmware installed in the EUT during testing was nRF5_SDK_12.3.0_d7731ad_radio_test

5.5. 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: 2Mbps

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

AC mains line conducted emissions is not applicable, as the EUT is battery powered and has no means to connect to the AC mains.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Toshiba	Portege M789	9A088266H	N/A

I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB	JIG	0.4	
2	SMA	1	SMA	SMA	0.1	

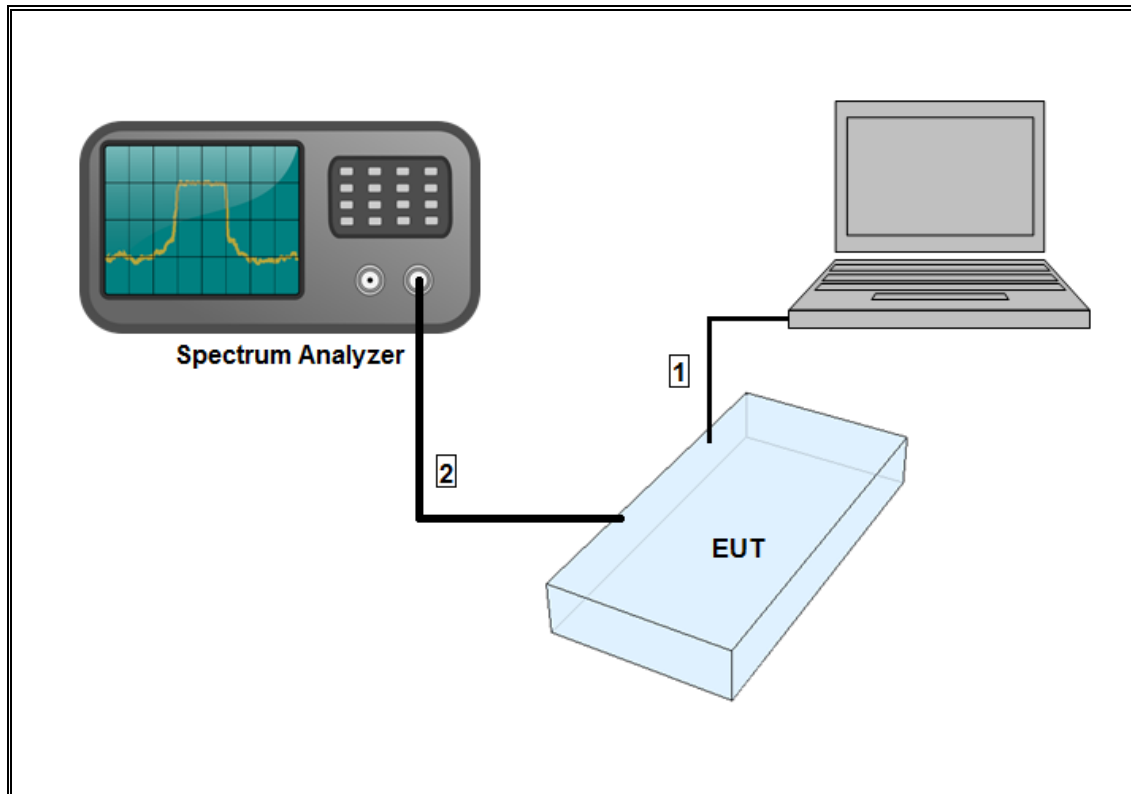
I/O CABLES (RADIATED TEST)

None.

TEST SETUP-CONDUCTED TEST

The EUT was battery operated. Test software exercised the EUT.

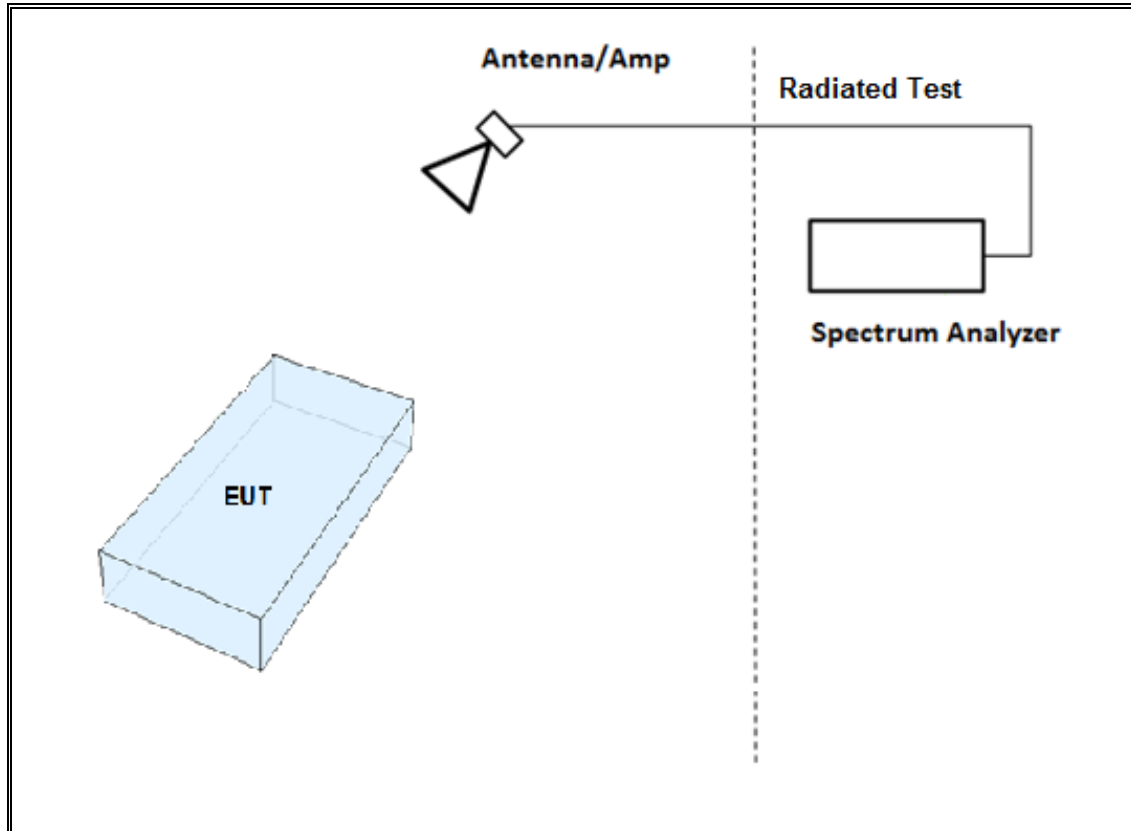
SETUP DIAGRAM



TEST SETUP- RADIATED TEST

The EUT was battery operated. Test software exercised the EUT. The laptop was removed after setting up the channel.

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	Asset	Cal Due
Antenna, Horn 1-18 GHz	ETS Lindgren	3117	T862	06/09/2018
Amplifier, 1 to 18 GHz	Miteq	AFS42-00101800-25-S-42	T1165	11/25/2018
Antenna, Active Loop 9KHz to 30 MHz	COM-POWER	AL-130R	FRE0165308	12/13/2018
Amplifier, 10 kHz to 1GHz, 32dB	SONOMA INSTRUMENT	310N	T300	12/11/2018
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T1466	04/11/2018
Antenna, Broadband Hybrid, 30 MHz to 2000 MHz	Sunol Sciences	JB1	T130	10/16/2018
Antenna Horn, 18 to 26 GHz	ARA	MWH-1826	T89	01/18/2019
Amplifier, 1 to 26.5GHz 23.5dB gain Minimum	Keysight	8449B	T404	07/23/2018
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight	N9030A-544	T1113	12/21/2018
UL AUTOMATION SOFTWARE				
Radiated Software	UL	UL EMC	Ver 9.5, Dec 01, 2016	
Conducted Software	UL	UL EMC	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. MEASUREMENT METHODS

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

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

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

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.

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME, DUTY CYCLE

LIMITS

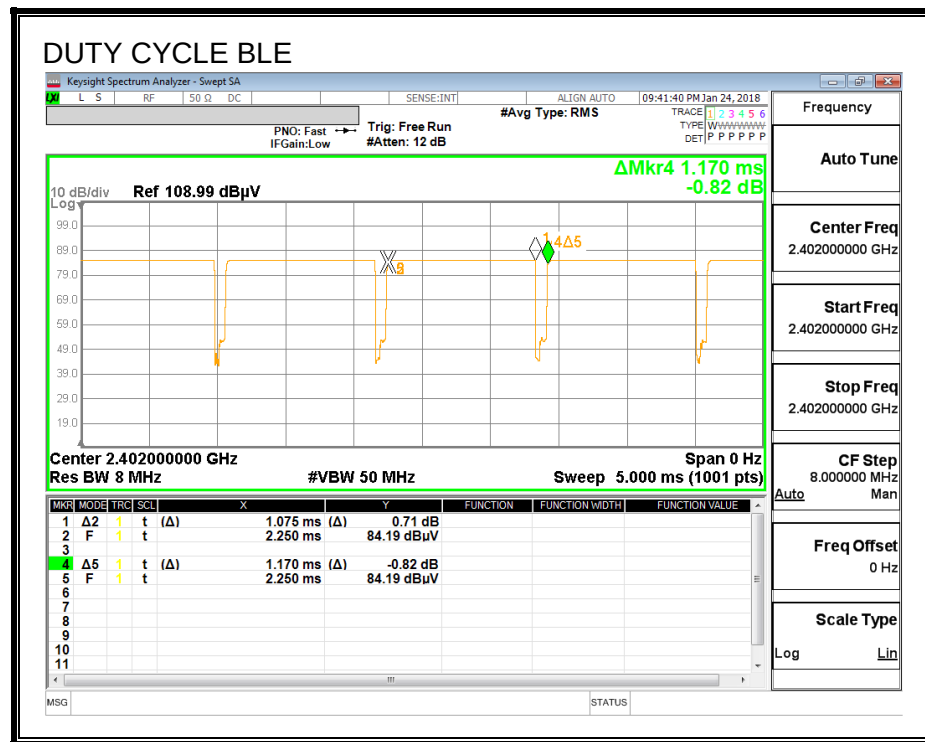
None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
BLE	1.075	1.170	0.919	91.88%	0.37	0.930



9.2. 6 dB BANDWIDTH

LIMITS

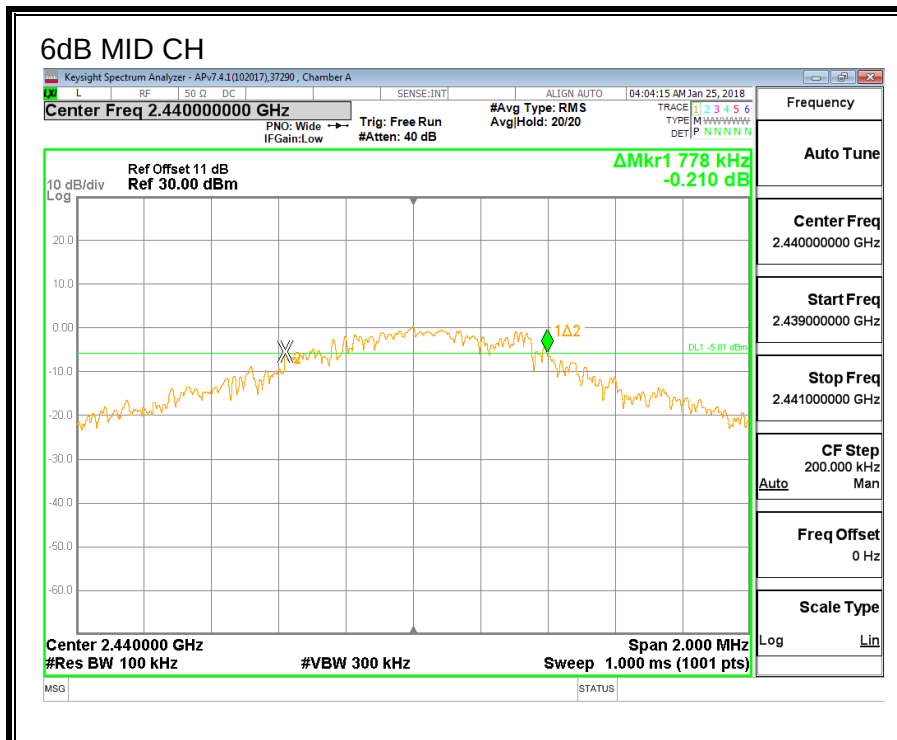
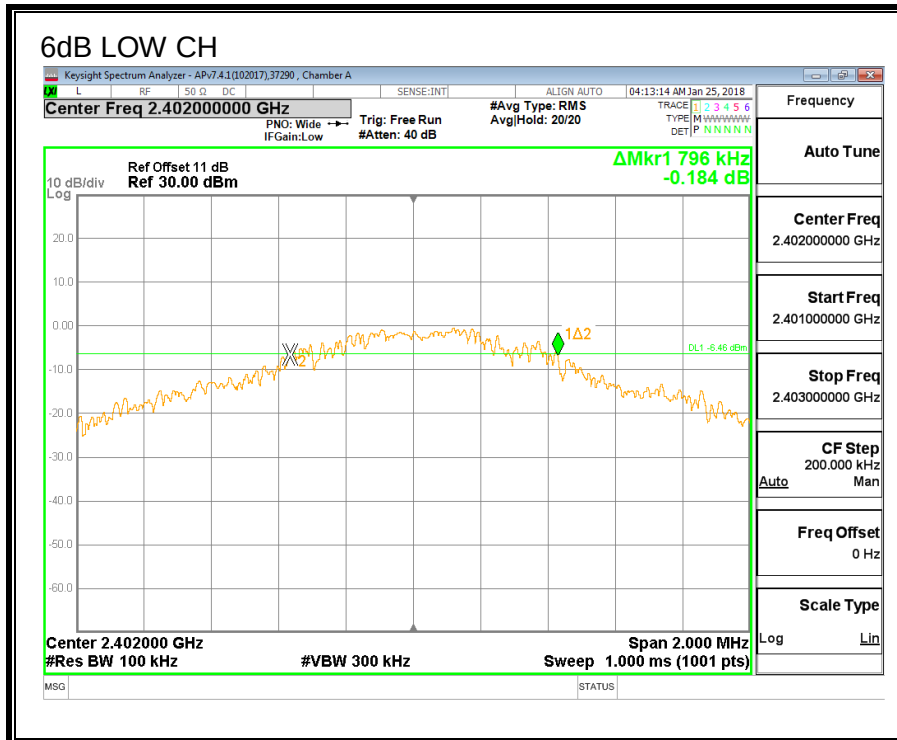
FCC §15.247 (a) (2)

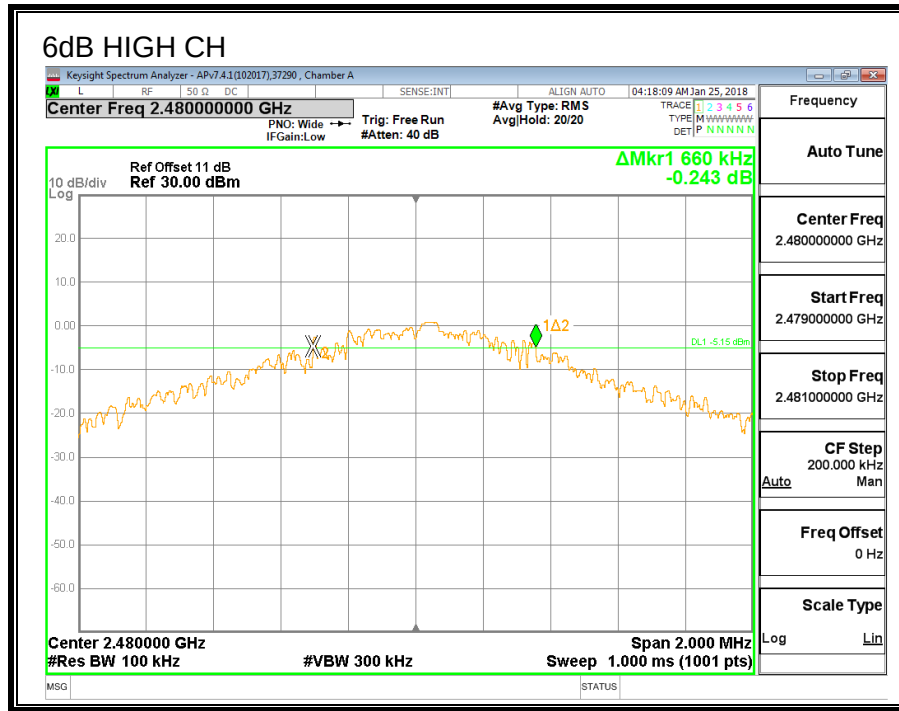
IC RSS-247 (5.2) (a)

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

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.796	0.5
Middle	2440	0.778	0.5
High	2480	0.660	0.5





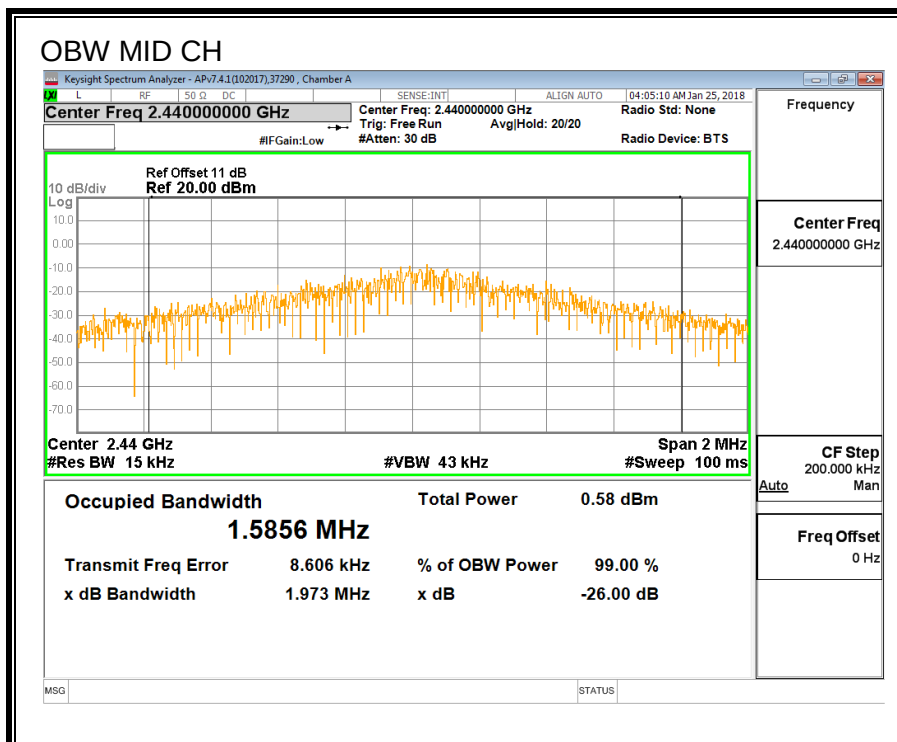
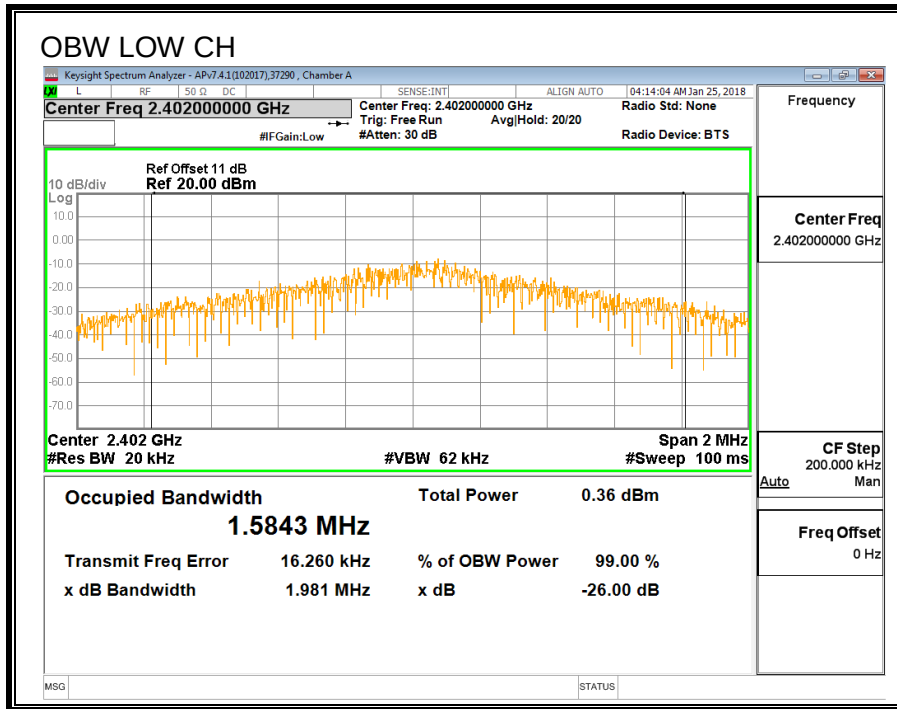
9.3. 99% BANDWIDTH

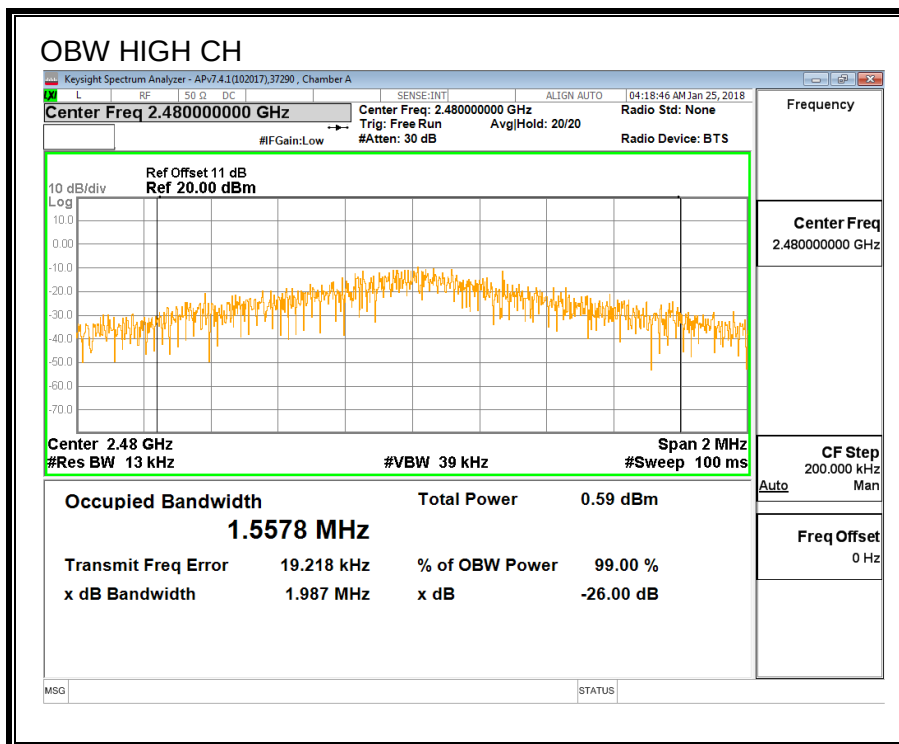
LIMITS

None; for reporting purposes only.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.5843
Middle	2440	1.5856
High	2480	1.5578





9.4. 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

ID:	37290	Date:	1/24/18
------------	-------	--------------	---------

Channel	Frequency (MHz)	AV power (dBm)
Low	2402	0.67
Middle	2440	0.83
High	2480	0.94

9.5. OUTPUT POWER

LIMITS

FCC §15.247 (b)

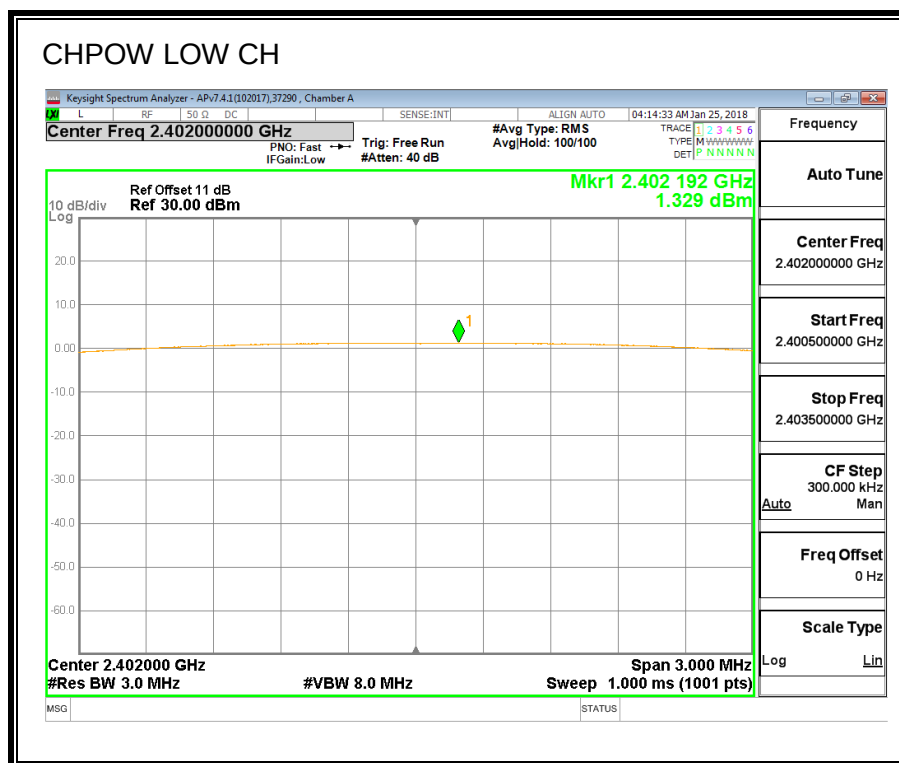
IC RSS-247 (5.4) (d)

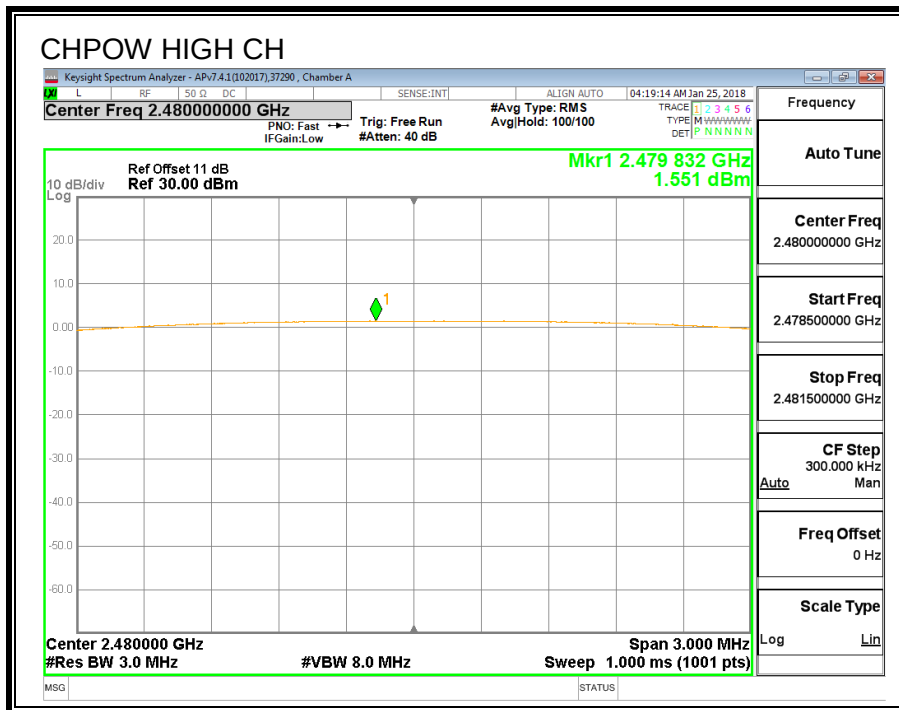
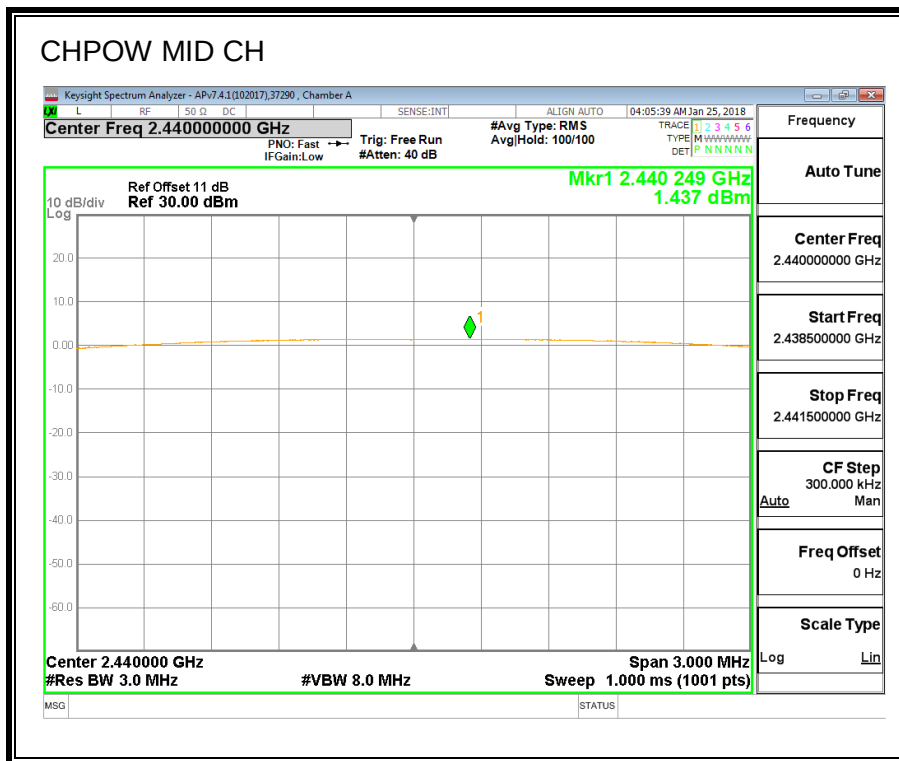
The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

RESULTS

ID:	37290	Date:	1/24/18
------------	-------	--------------	---------

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	1.33	30	-28.67
Middle	2440	1.44	30	-28.56
High	2480	1.55	30	-28.45





9.6. POWER SPECTRAL DENSITY

LIMITS

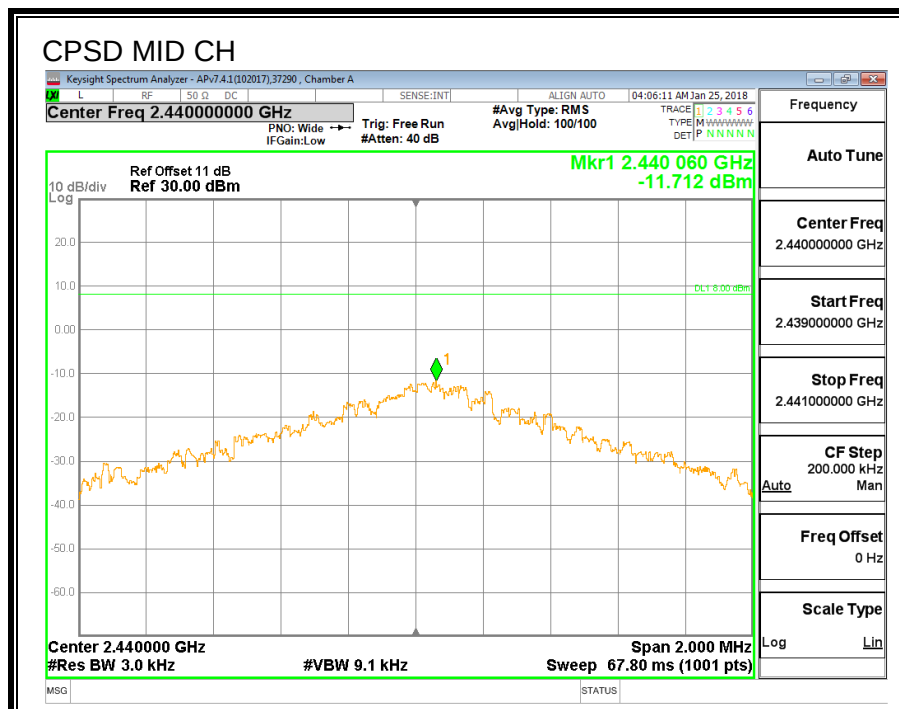
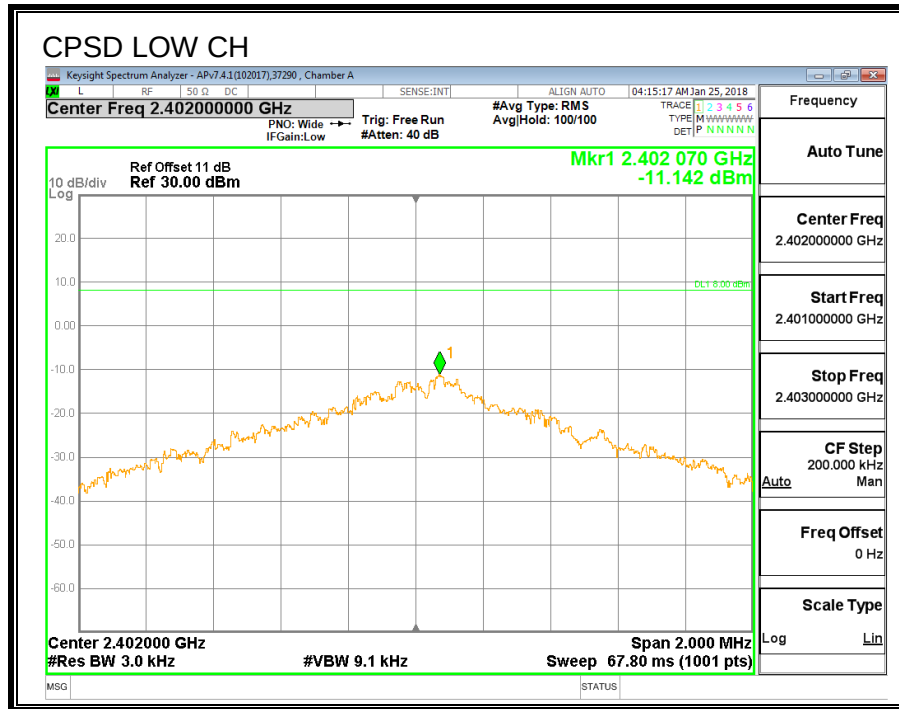
FCC §15.247 (e)

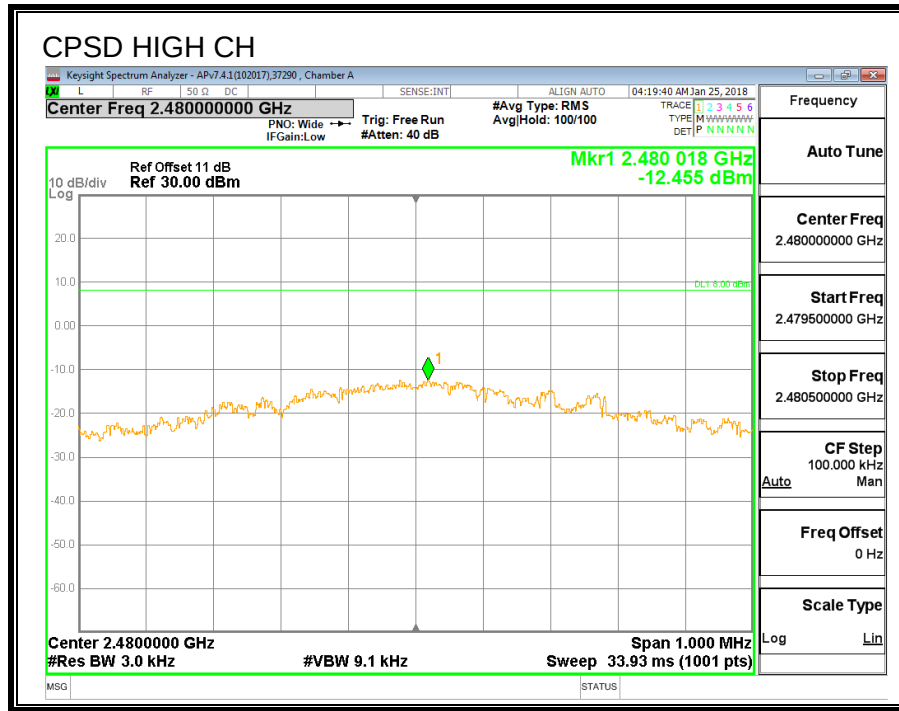
IC RSS-247 (5.2) (b)

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)	Limit (dBm)	Margin (dB)
Low	2402	-11.14	8	-19.14
Middle	2440	-11.71	8	-19.71
High	2480	-12.46	8	-20.46





9.7. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

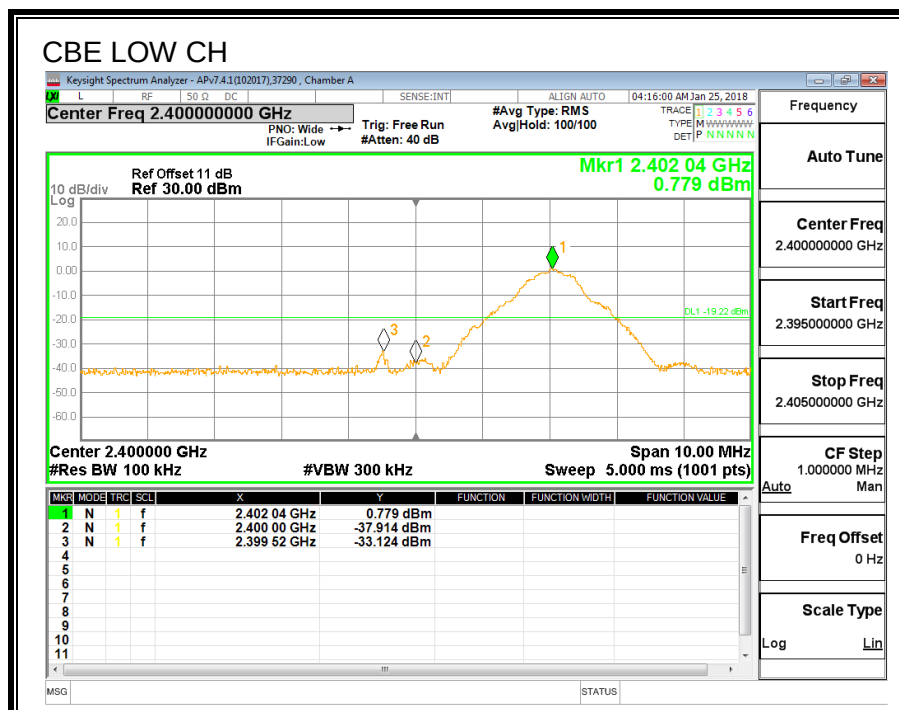
LIMITS

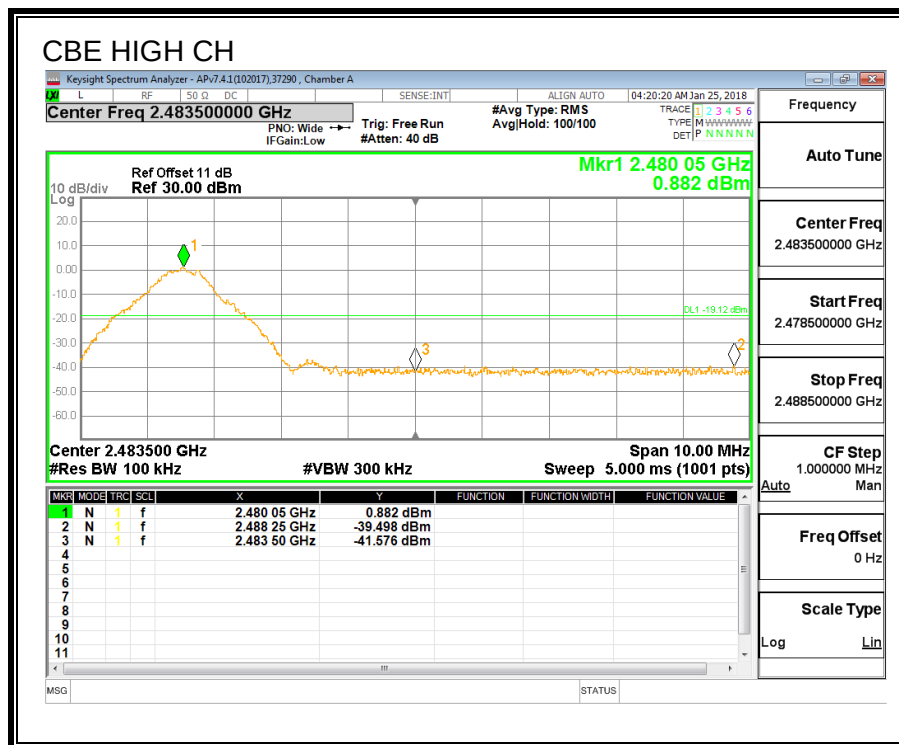
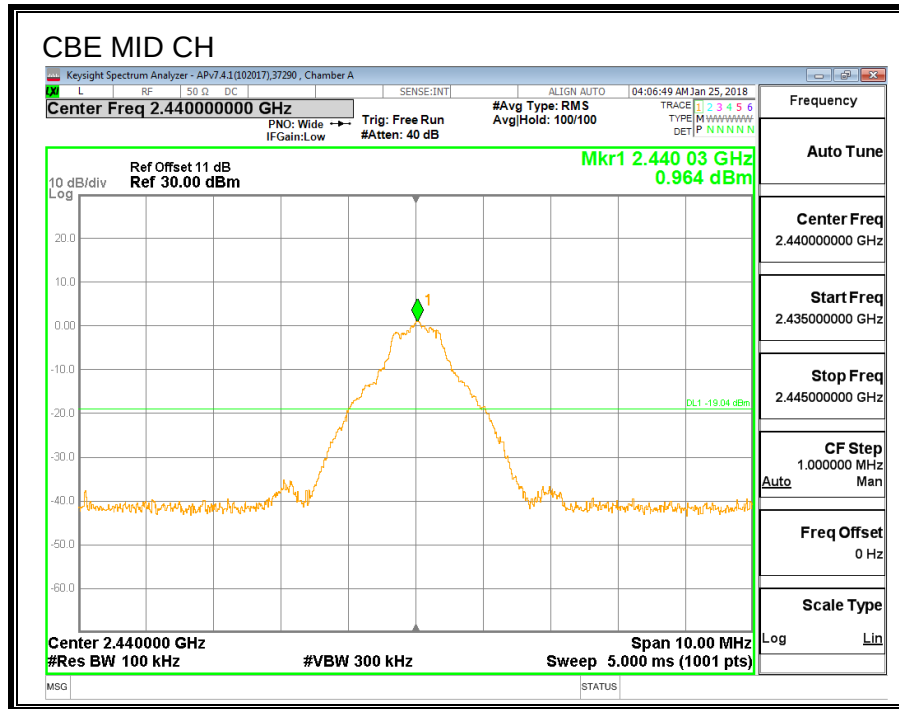
FCC §15.247 (d)

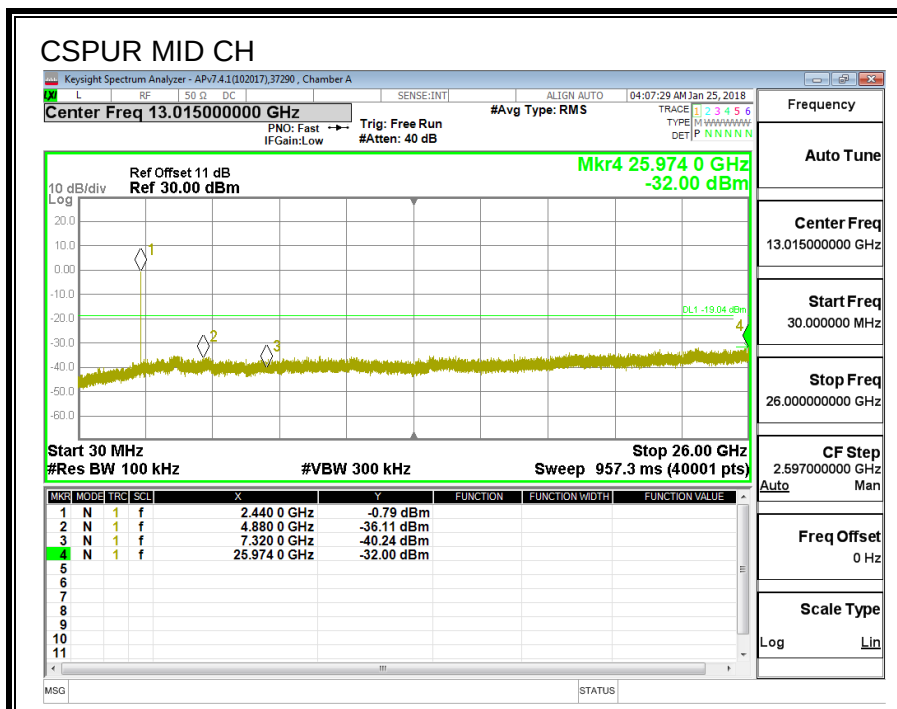
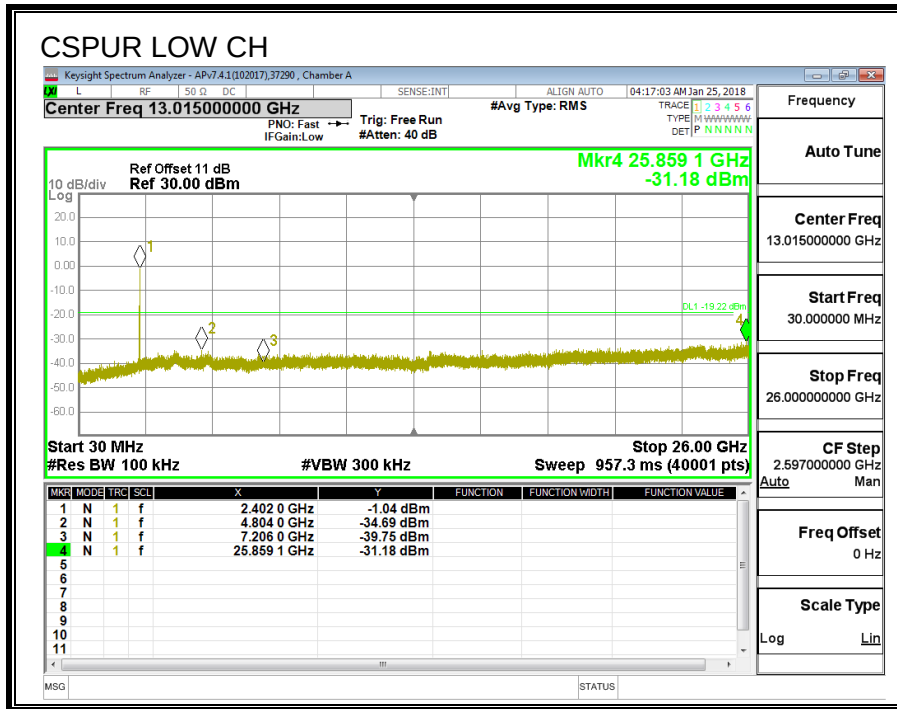
IC RSS-247 (5.5)

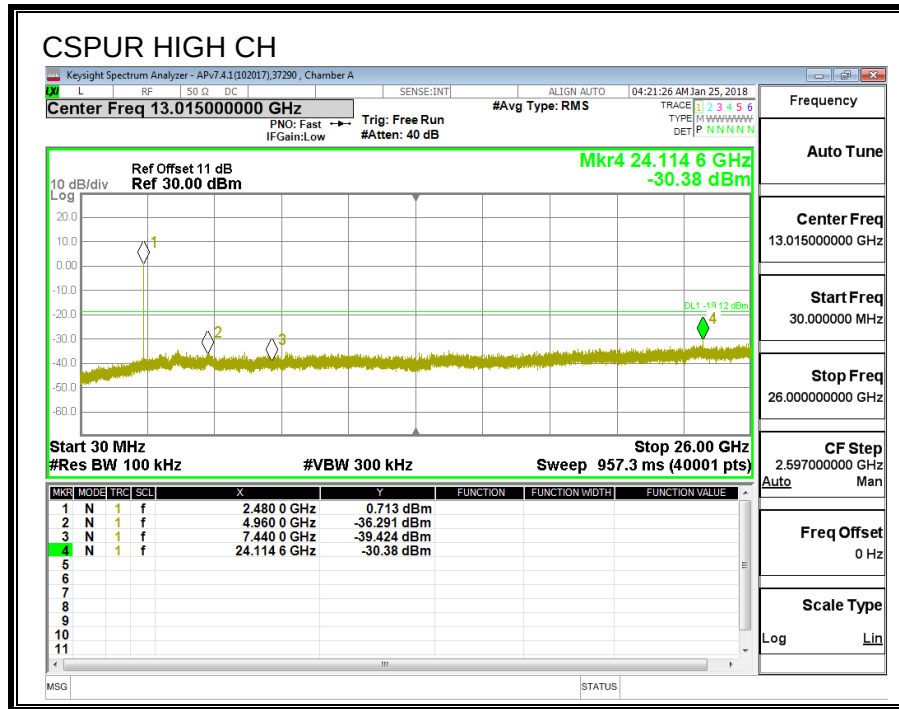
Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

RESULTS









10. RADIATED TEST RESULTS

10.1. 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) 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.

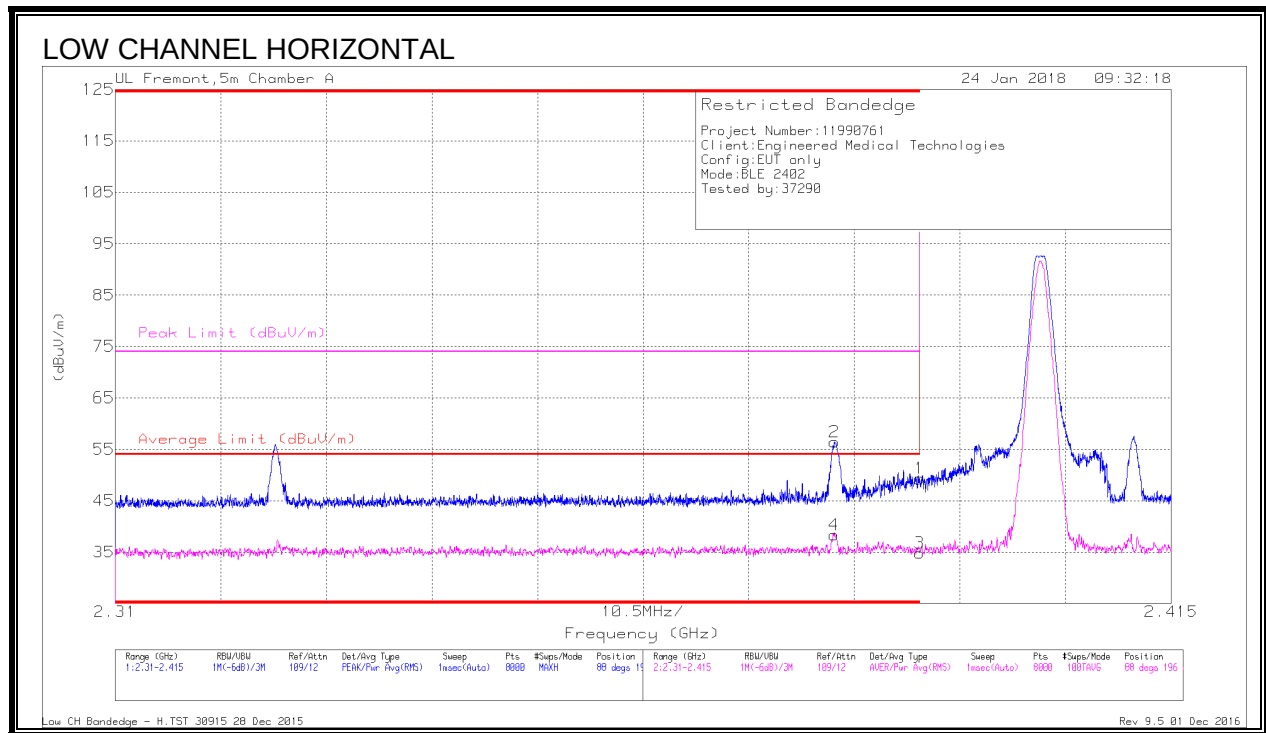
For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

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 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.

10.2. TRANSMITTER ABOVE 1GHZ

10.2.1. RESTRICTED BANDEDGE (LOW CHANNEL)



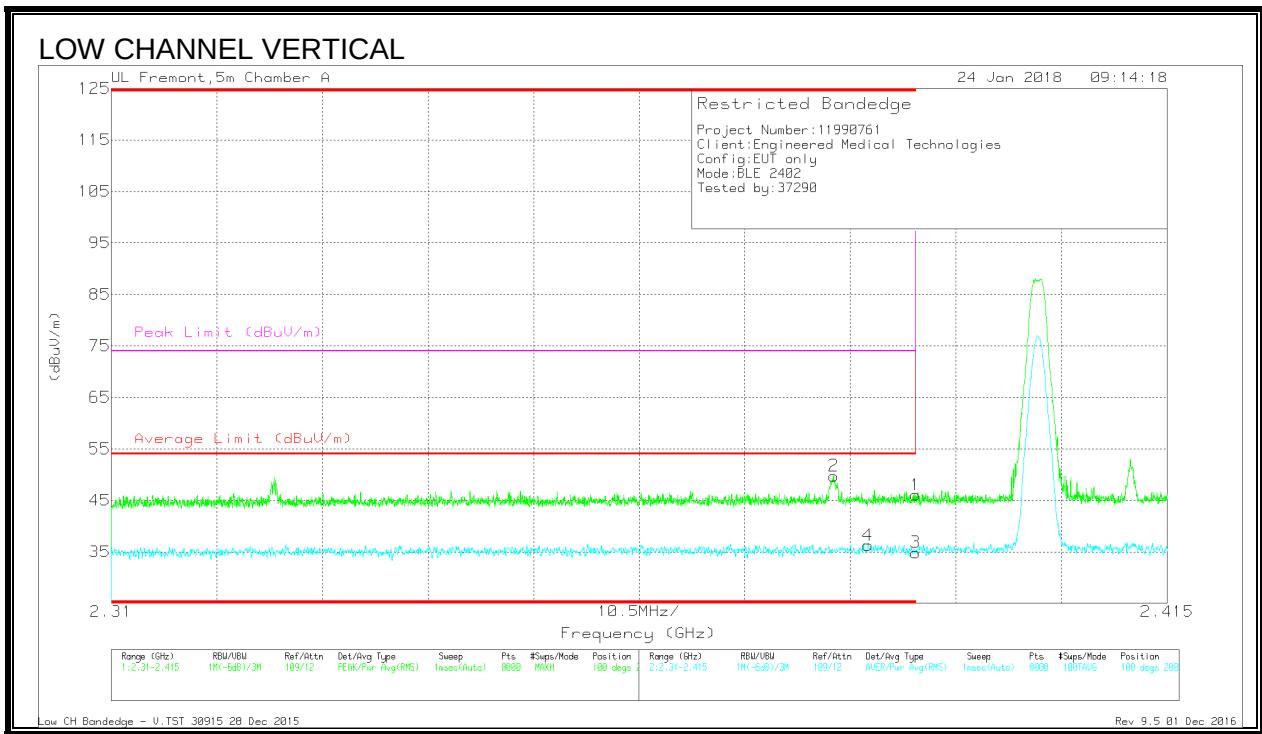
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Filt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.39	40.8	Pk	31.8	-23.3	0	49.3	-	-	74	-24.7	88	196	H
2	* 2.382	48.12	Pk	31.7	-23.4	0	56.42	-	-	74	-17.58	88	196	H
3	* 2.39	26.28	RMS	31.8	-23.3	-37	35.15	54	-18.85	-	-	88	196	H
4	* 2.382	30.02	RMS	31.7	-23.4	-37	38.69	54	-15.31	-	-	88	196	H

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

Pk - Peak detector

RMS - RMS detection



DATA

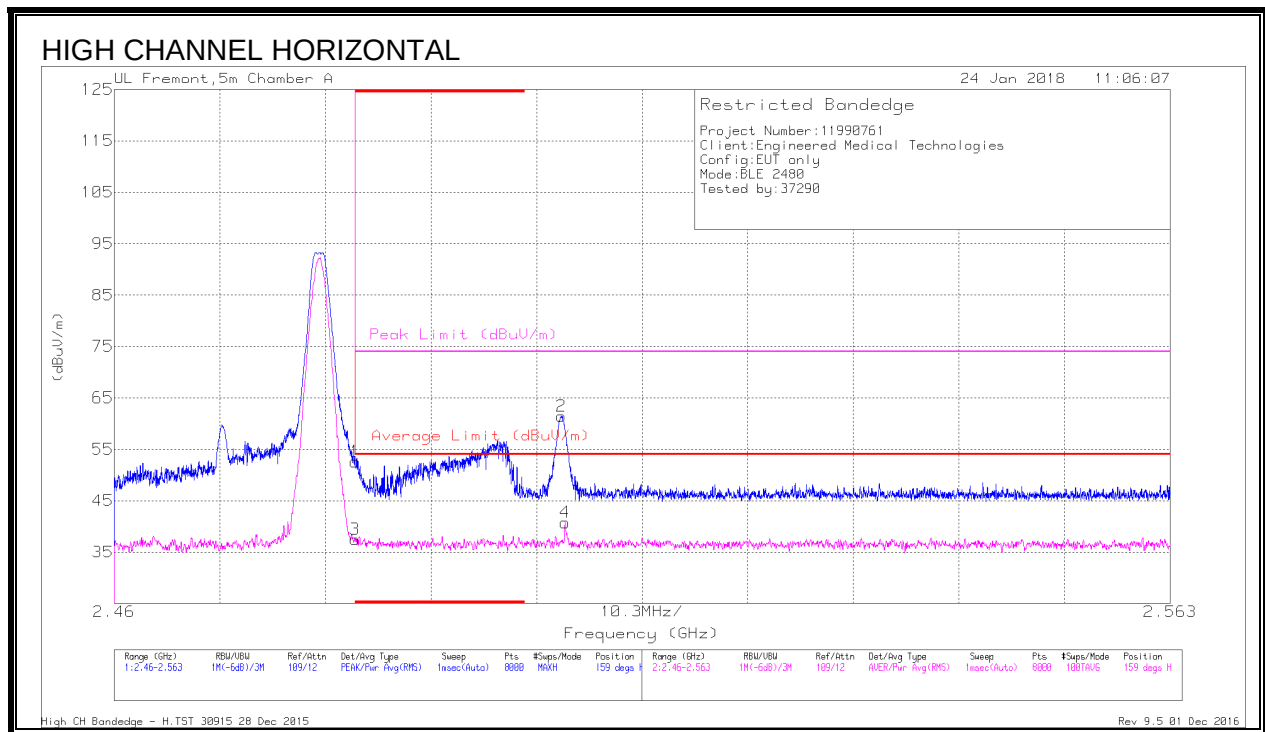
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Pir/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Altitude (Degs)	Height (cm)	Polarity
1	* 2.39	37.52	Pk	31.8	-23.3	0	46.02	-	-	74	-27.98	100	200	V
2	* 2.382	41.45	Pk	31.7	-23.4	0	49.75	-	-	74	-24.25	100	200	V
3	* 2.39	26.37	RMS	31.8	-23.3	.37	35.24	54	-18.76	-	-	100	200	V
4	* 2.385	27.85	RMS	31.8	-23.4	.37	36.62	54	-17.38	-	-	100	200	V

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

Pk - Peak detector

RMS - RMS detection

10.2.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)



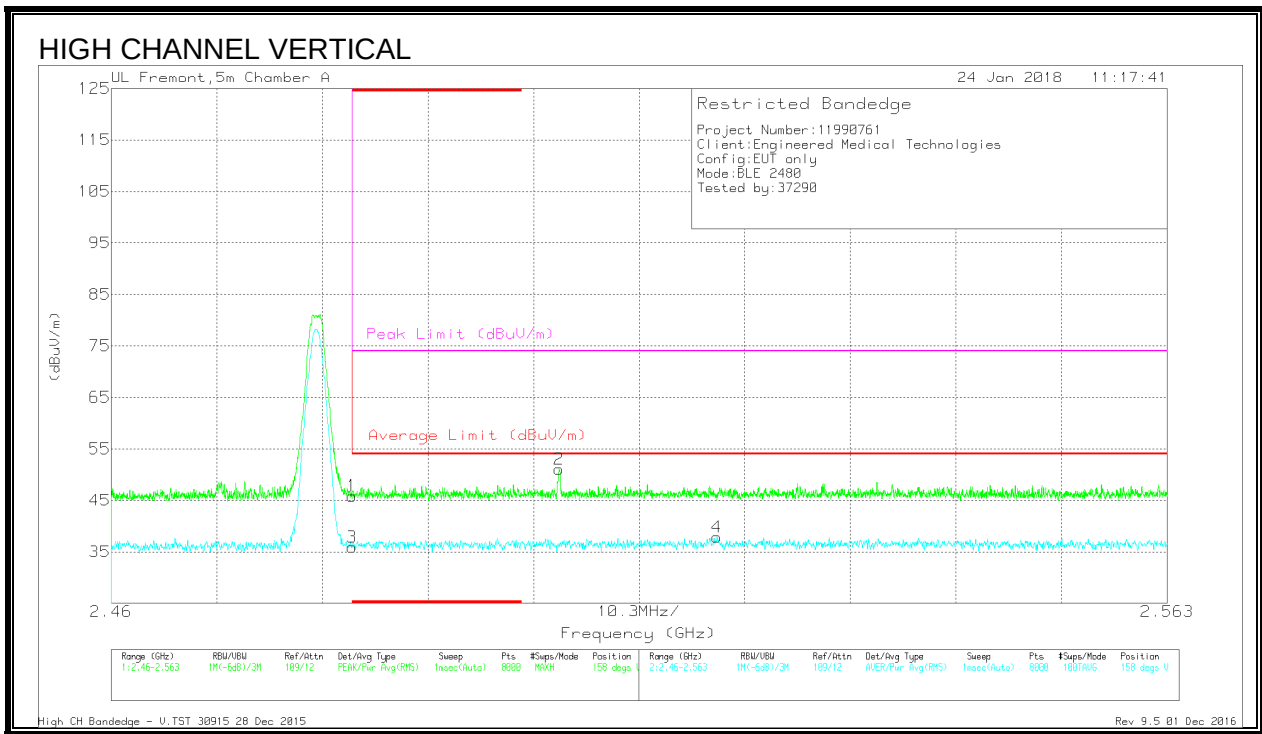
DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cb/Ftr/Psd (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	43.5	Pk	32.3	-23.2	0	52.6	-	-	74	-21.4	159	227	H
3	* 2.484	28.02	RMS	32.3	-23.2	-37	37.49	54	-16.51	-	-	159	227	H
2	2.504	52.25	Pk	32.4	-23.2	0	61.45	-	-	74	-12.55	159	227	H
4	2.504	31.18	RMS	32.4	-23.2	-37	40.75	54	-13.25	-	-	159	227	H

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

Pk - Peak detector

RMS - RMS detection



DATA

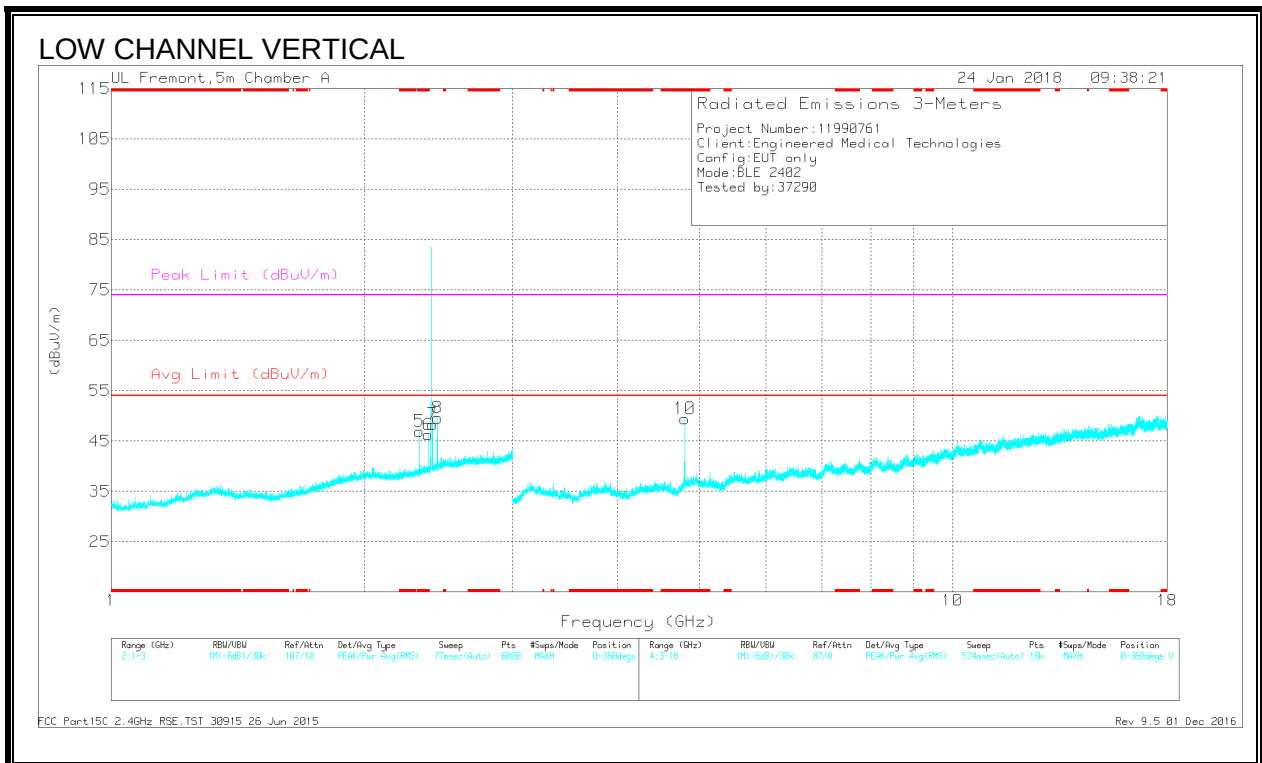
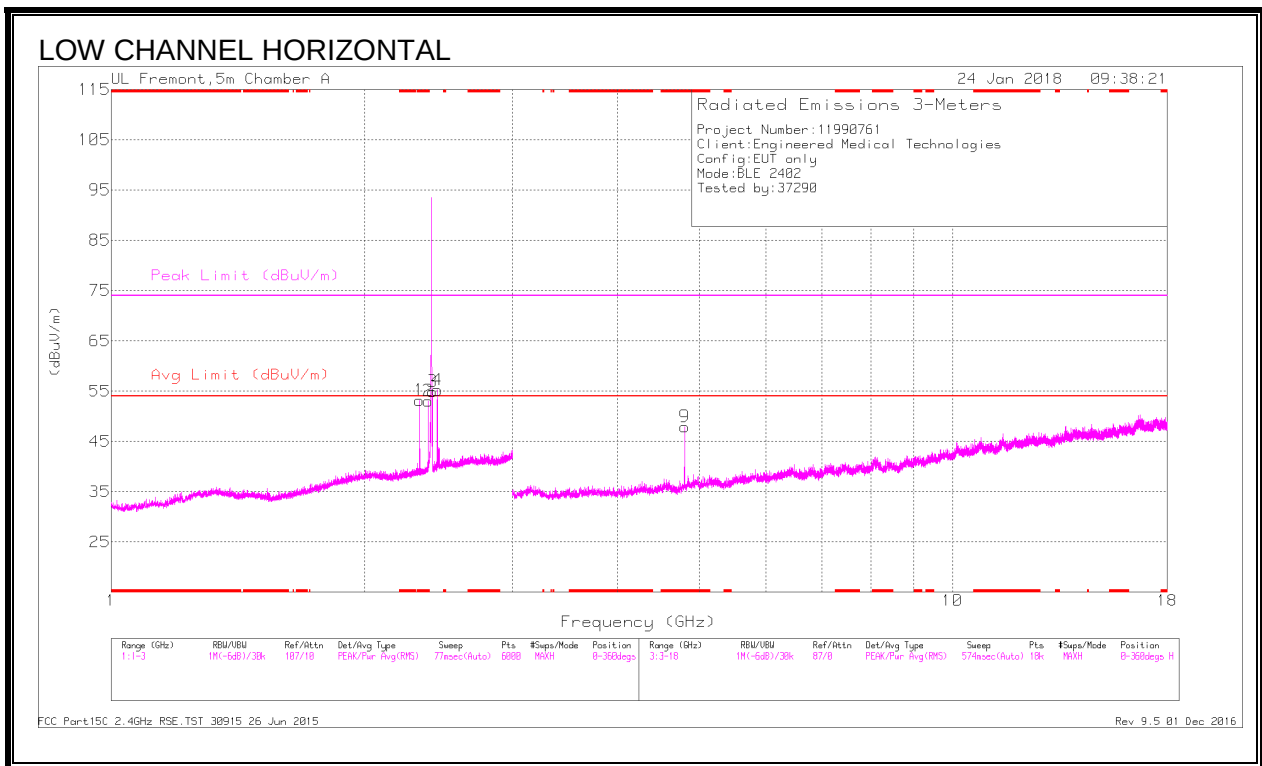
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Ch/Filt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	36.74	Pk	32.3	-23.2	0	45.84	-	-	74	-28.16	158	282	V
3	* 2.484	26.41	RMS	32.3	-23.2	.37	35.88	54	-18.12	-	-	158	282	V
2	2.504	41.84	Pk	32.4	-23.2	0	51.04	-	-	74	-22.96	158	282	V
4	2.519	28.29	RMS	32.4	-23.2	.37	37.86	54	-16.14	-	-	158	282	V

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

Pk - Peak detector

RMS - RMS detection

10.2.3. HARMONICS AND SPURIOUS EMISSIONS



DATA

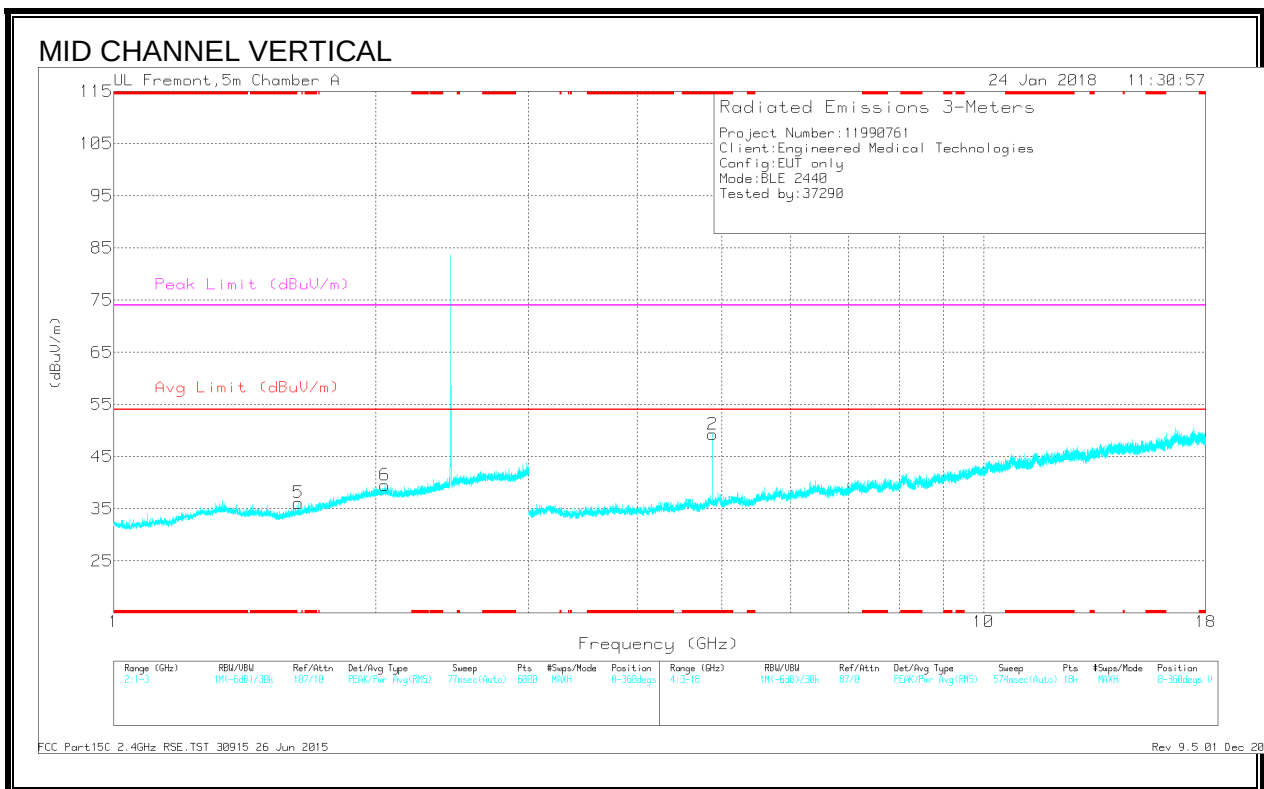
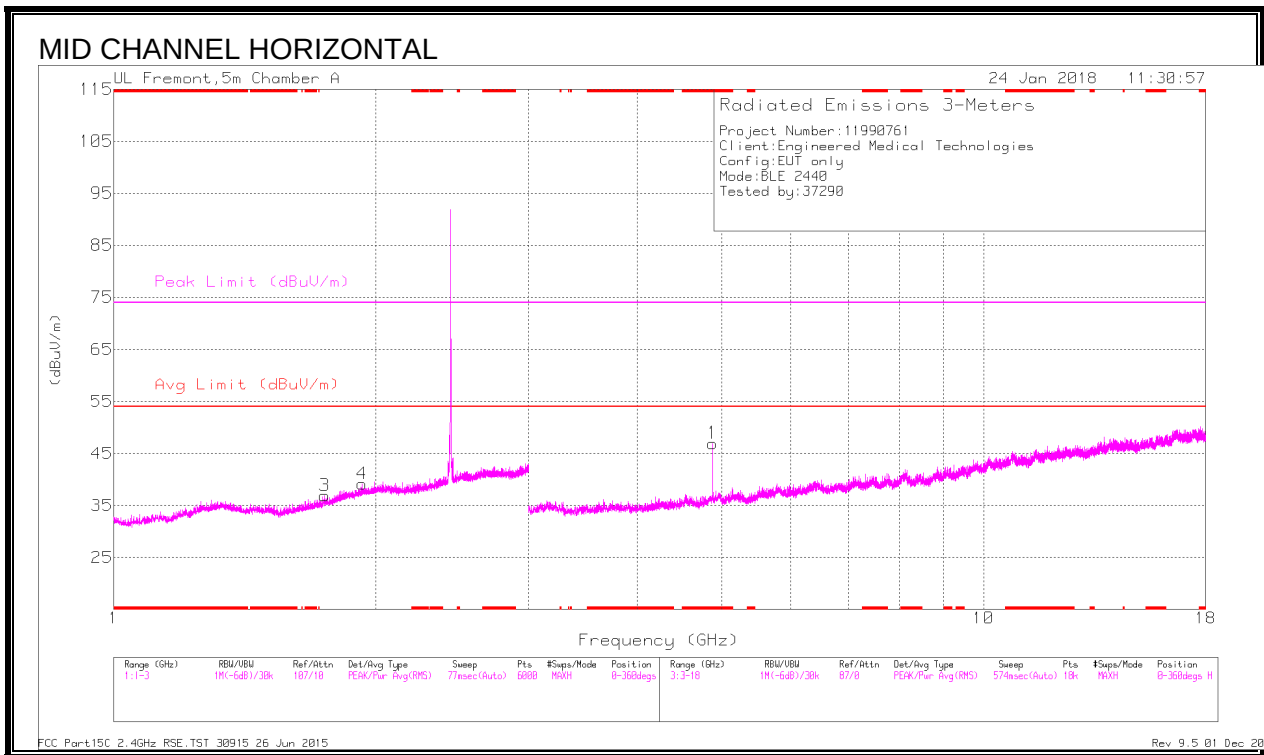
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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
* 2.326	50.55	PK2	31.6	-23.4	0	58.75	-	-	74	-15.25	329	150	H
* 2.326	30.36	MAv1	31.6	-23.4	.37	38.93	54	-15.07	-	-	329	150	H
* 2.382	50.23	PK2	31.7	-23.4	0	58.53	-	-	74	-15.47	319	123	H
* 2.381	29.65	MAv1	31.7	-23.4	.37	38.32	54	-15.68	-	-	319	123	H
* 2.326	47.5	PK2	31.6	-23.4	0	55.7	-	-	74	-18.3	294	342	V
* 2.326	28.34	MAv1	31.6	-23.4	.37	36.91	54	-17.09	-	-	294	342	V
* 2.381	46.5	PK2	31.7	-23.4	0	54.8	-	-	74	-19.2	314	370	V
* 2.381	27.34	MAv1	31.7	-23.4	.37	36.01	54	-17.99	-	-	314	370	V
* 4.803	44.75	PK2	34.2	-26.9	0	52.05	-	-	74	-21.95	22	118	H
* 4.804	38.3	MAv1	34.2	-26.9	.37	45.97	54	-8.03	-	-	22	118	H
* 4.805	45.2	PK2	34.2	-26.9	0	52.5	-	-	74	-21.5	42	123	V
* 4.804	39.24	MAv1	34.2	-26.9	.37	46.91	54	-7.09	-	-	42	123	V
2.411	48.97	PK2	31.9	-23.3	0	57.57	-	-	-	-	319	102	H
2.411	34.32	MAv1	31.9	-23.3	.37	43.29	-	-	-	-	319	102	H
2.411	42.62	PK2	31.9	-23.3	0	51.22	-	-	-	-	314	201	V
2.411	27.9	MAv1	31.9	-23.3	.37	36.87	-	-	-	-	314	201	V
2.442	48.48	PK2	32.1	-23.3	0	57.28	-	-	-	-	319	199	H
2.442	33.47	MAv1	32.1	-23.3	.37	42.64	-	-	-	-	319	199	H
2.442	44.33	PK2	32.1	-23.3	0	53.13	-	-	-	-	314	201	V
2.442	28.63	MAv1	32.1	-23.3	.37	37.8	-	-	-	-	314	201	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average



DATA

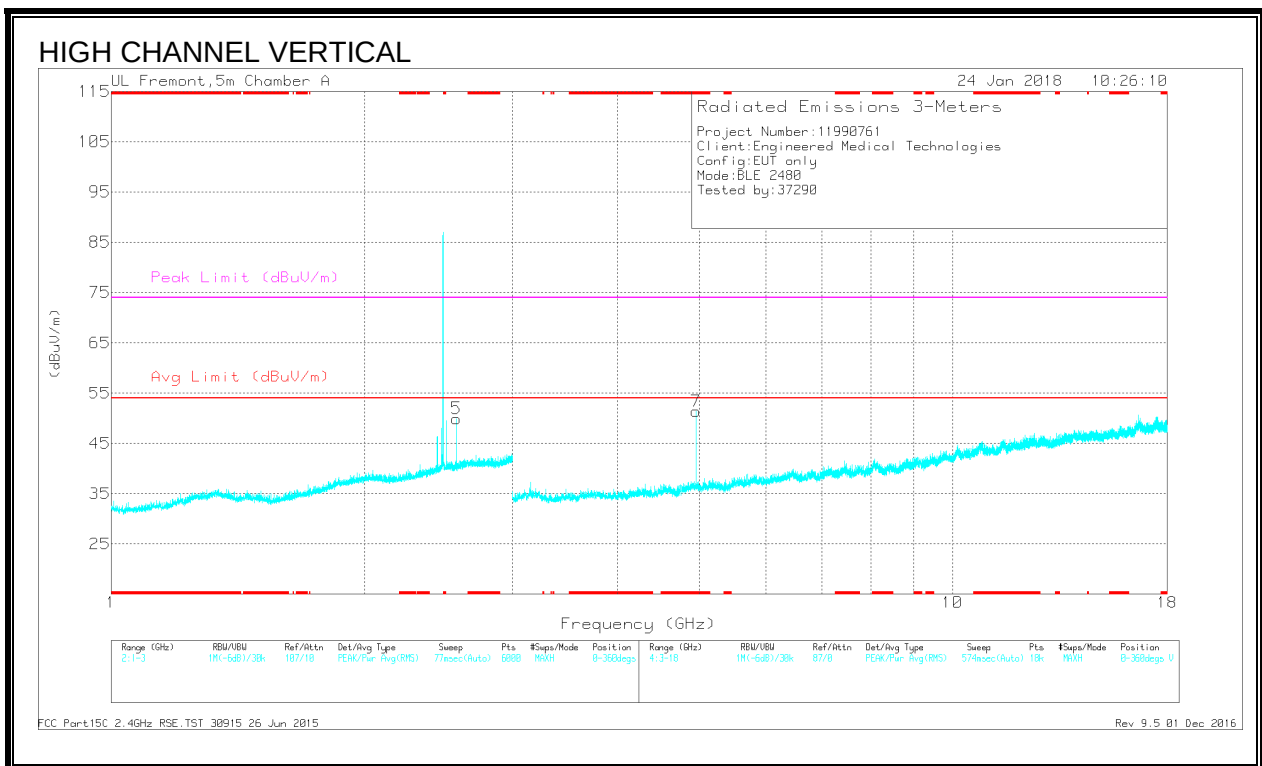
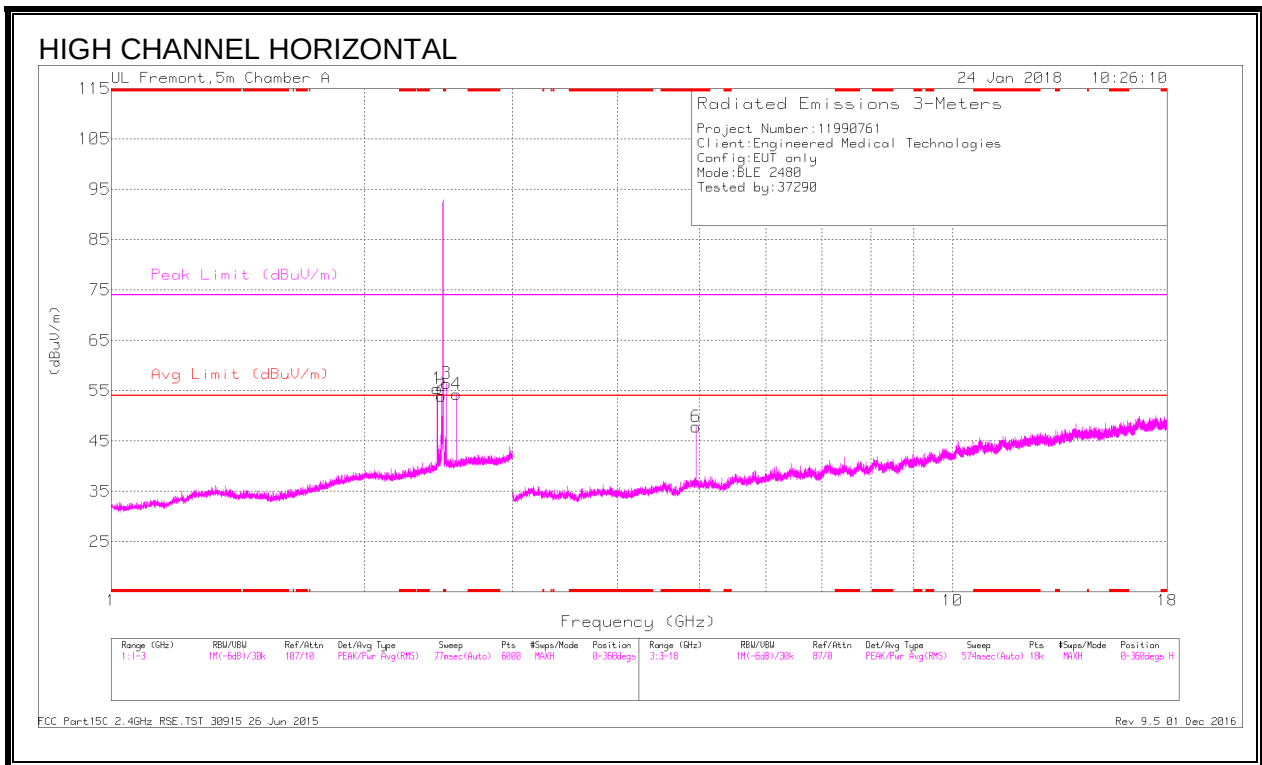
Radiated Emissions

	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pa d (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	* 4.881	42.72	PK2	34.1	-26.3	0	50.52	-	-	74	-23.48	114	109	H
	* 4.88	36.28	MAv1	34.1	-26.3	.37	44.45	54	-9.55	-	-	114	109	H
2	* 4.881	46.05	PK2	34.1	-26.3	0	53.85	-	-	74	-20.15	224	107	V
	* 4.88	40.56	MAv1	34.1	-26.3	.37	48.73	54	-5.27	-	-	224	107	V
5	1.631	31.11	Pk	28.4	-23.4	0	36.11	-	-	-	-	0-360	200	V
3	1.748	30.59	Pk	29.7	-23.4	0	36.89	-	-	-	-	0-360	101	H
4	1.93	31.25	Pk	31.2	-23.3	0	39.15	-	-	-	-	0-360	199	H
6	2.049	31.44	Pk	31.4	-23.3	0	39.54	-	-	-	-	0-360	101	V

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

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average



DATA

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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
* 4.961	45.03	PK2	34.2	-27.1	0	52.13	-	-	74	-21.87	296	101	H
* 4.96	39.12	MAv1	34.2	-27.1	.37	46.59	54	-7.41	-	-	296	101	H
* 4.961	46.91	PK2	34.2	-27.1	0	54.01	-	-	74	-19.99	37	102	V
* 4.96	41.48	MAv1	34.2	-27.1	.37	48.95	54	-5.05	-	-	37	102	V
2.442	43.85	PK2	32.1	-23.3	0	52.65	-	-	-	-	0	199	H
2.442	28.71	MAv1	32.1	-23.3	.37	37.88	-	-	-	-	0	199	H
2.47	41.82	PK2	32.2	-23.3	0	50.72	-	-	-	-	0	199	H
2.47	26.85	MAv1	32.2	-23.3	.37	36.12	-	-	-	-	0	199	H
2.504	43.8	PK2	32.4	-23.2	0	53	-	-	-	-	0	199	H
2.504	27.59	MAv1	32.4	-23.2	.37	37.16	-	-	-	-	0	199	H
2.573	46.31	PK2	32.4	-23.2	0	55.51	-	-	-	-	0	102	H
2.573	29.96	MAv1	32.4	-23.2	.37	39.53	-	-	-	-	0	102	H
2.573	42.67	PK2	32.4	-23.2	0	51.87	-	-	-	-	0	200	V
2.573	27.68	MAv1	32.4	-23.2	.37	37.25	-	-	-	-	0	200	V

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

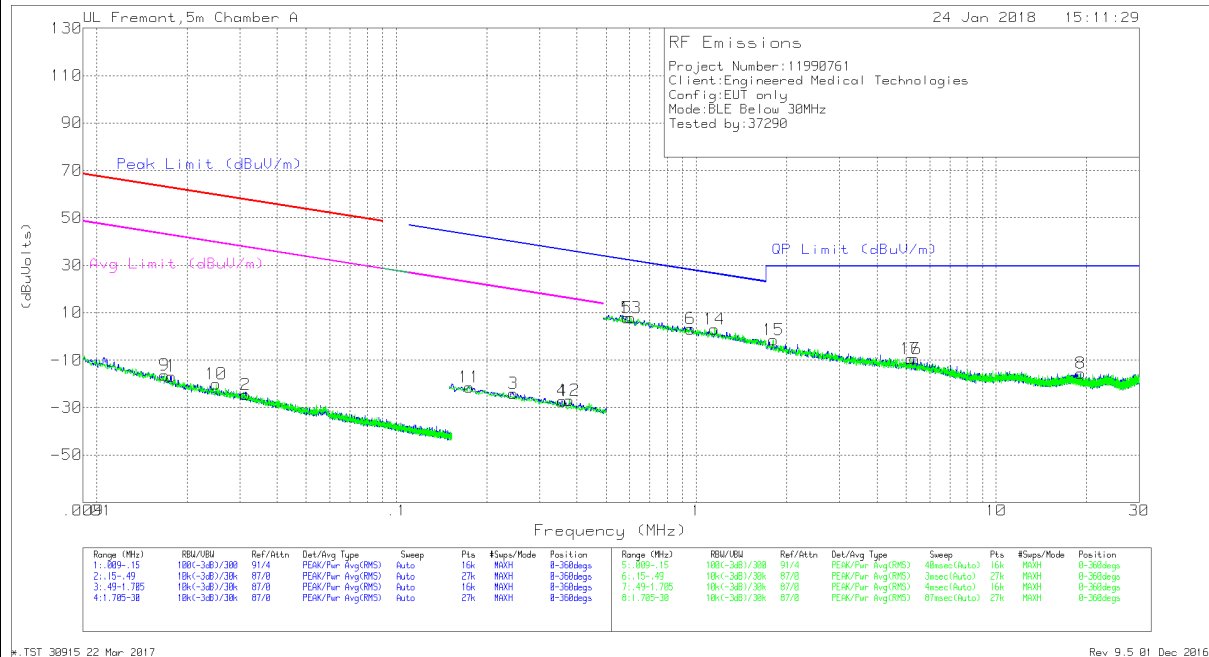
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

10.3. WORST-CASE BELOW 30MHz

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL AND VERTICAL PLOT



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.

DATA

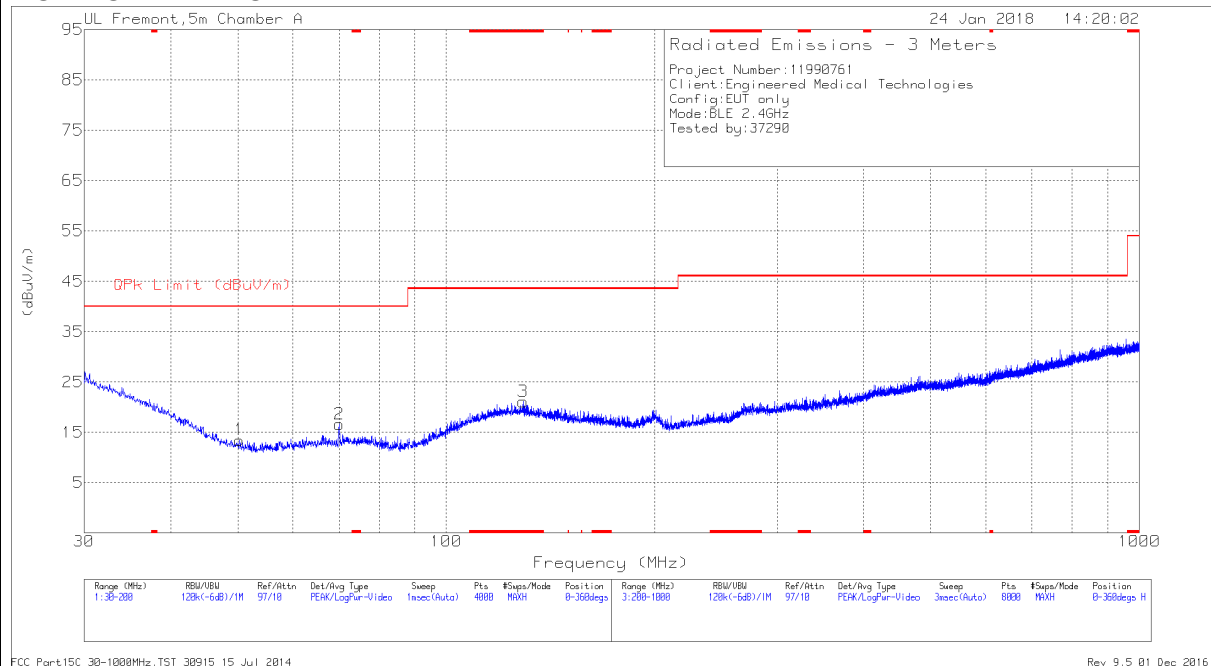
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	OP Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
9	.01681	47.94	Pk	15.6	.1	-80	-16.36	63.07	-79.43	43.07	-59.43	-	-	-	-	-	-	0-360
1	.01772	47.93	Pk	15.2	.1	-80	-16.77	62.62	-79.39	42.62	-59.39	-	-	-	-	-	-	0-360
10	.02503	45.86	Pk	14	.1	-80	-20.04	59.62	-79.66	39.62	-59.66	-	-	-	-	-	-	0-360
2	.03135	41.67	Pk	13.7	.1	-80	-24.53	57.66	-82.19	37.66	-62.19	-	-	-	-	-	-	0-360
11	.17487	47.53	Pk	11	.1	-80	-21.37	-	-	-	-	-	-	42.77	-64.14	22.77	-44.14	0-360
3	.24515	44.72	Pk	11	.1	-80	-24.18	-	-	-	-	-	-	39.83	-64.01	19.83	-44.01	0-360
4	.35724	41.74	Pk	10.9	.1	-80	-27.26	-	-	-	-	-	-	36.55	-63.81	16.55	-43.81	0-360
12	.37684	41.94	Pk	10.9	.1	-80	-27.06	-	-	-	-	-	-	36.08	-63.14	16.08	-43.14	0-360
5	.5869	36.67	Pk	11.1	.1	-40	7.87	-	-	-	-	32.24	-24.37	-	-	-	-	0-360
13	.60457	36.7	Pk	11.1	.1	-40	7.9	-	-	-	-	31.98	-24.08	-	-	-	-	0-360
6	.95573	31.88	Pk	11.2	.1	-40	3.18	-	-	-	-	28.01	-24.83	-	-	-	-	0-360
14	1.14892	31.51	Pk	11.3	.2	-40	3.01	-	-	-	-	26.42	-23.41	-	-	-	-	0-360
15	1.80404	26.88	Pk	11.4	.2	-40	-1.52	-	-	-	-	29.5	-31.02	-	-	-	-	0-360
16	5.20951	19.11	Pk	11.2	.3	-40	-9.39	-	-	-	-	29.5	-38.89	-	-	-	-	0-360
7	5.35938	18.99	Pk	11.2	.4	-40	-9.41	-	-	-	-	29.5	-38.91	-	-	-	-	0-360
8	19.139	12.95	Pk	10.9	.6	-40	-15.55	-	-	-	-	29.5	-45.05	-	-	-	-	0-360

Pk - Peak detector

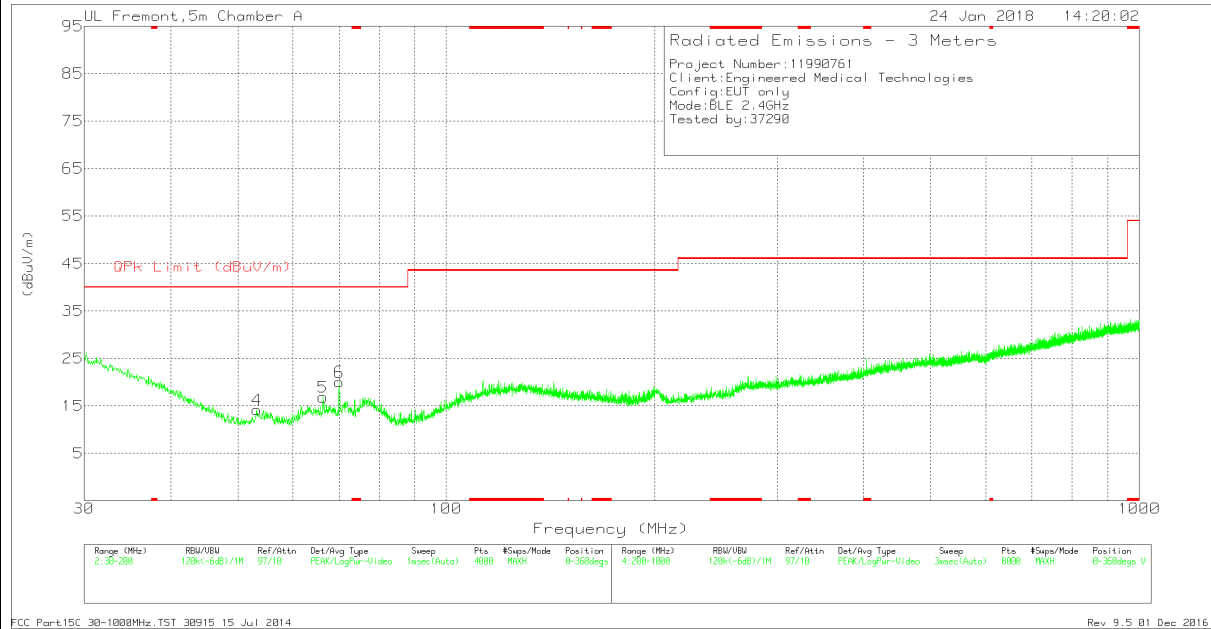
10.4. WORST-CASE 30 MHz TO 1 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



DATA

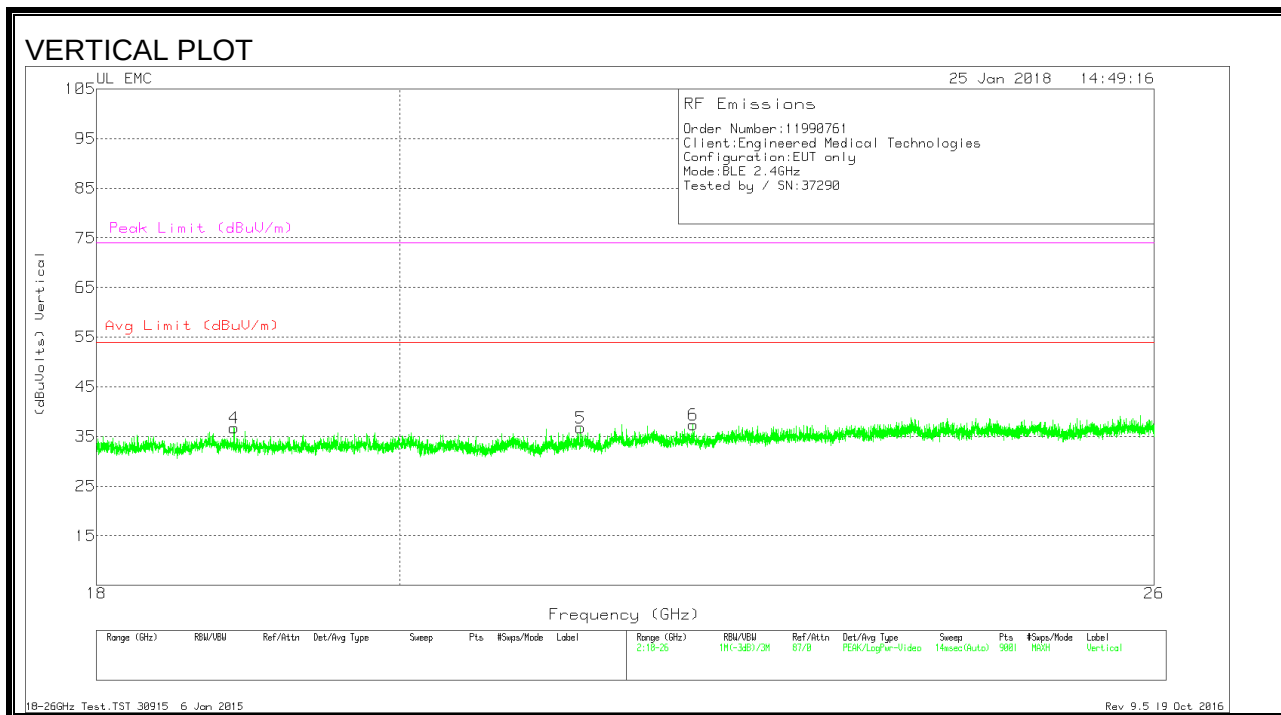
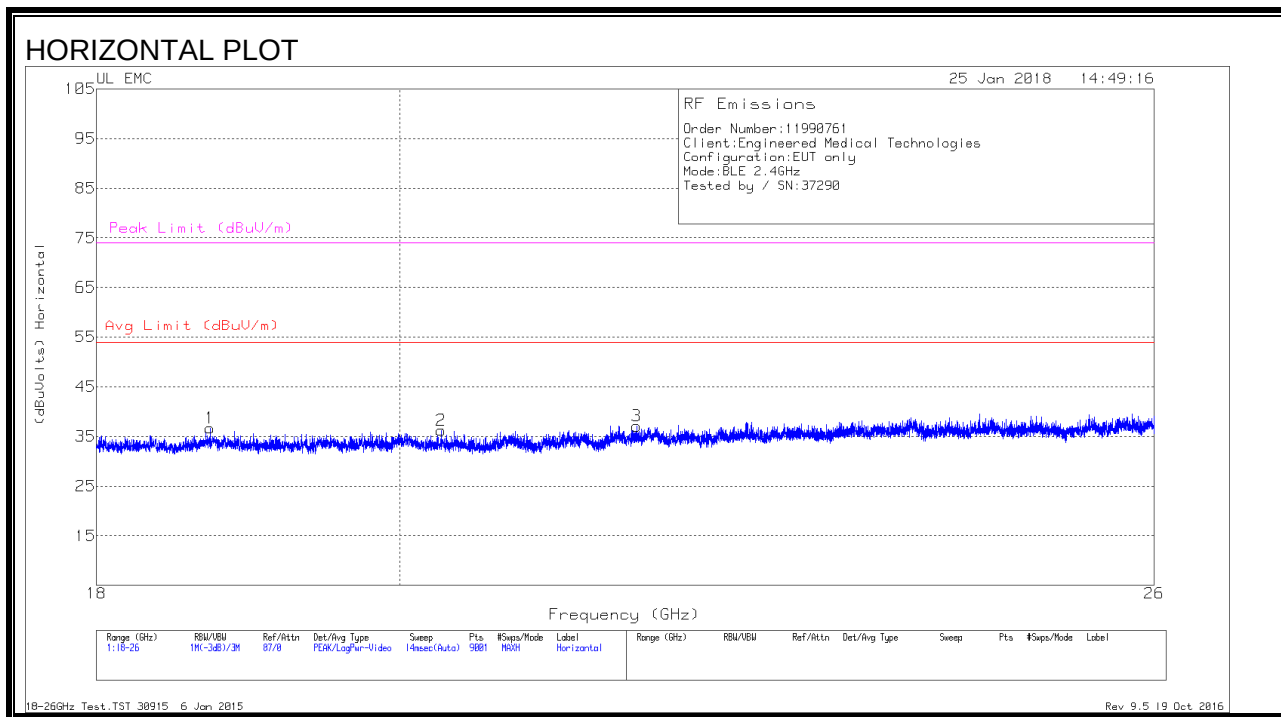
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 129.0506	29.01	Pk	18.2	-26.1	21.11	43.52	-22.41	0-360	300	H
1	50.2777	28.97	Pk	11.5	-27	13.47	40	-26.53	0-360	400	H
4	53.296	30.09	Pk	11.1	-27	14.19	40	-25.81	0-360	100	V
5	66.3894	31.56	Pk	12.1	-26.8	16.86	40	-23.14	0-360	100	V
2	70.0241	31.21	Pk	12.1	-26.7	16.61	40	-23.39	0-360	100	H
6	70.0454	34.66	Pk	12.1	-26.7	20.06	40	-19.94	0-360	100	V

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

Pk - Peak detector

10.5. WORST-CASE ABOVE 18 GHz

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



DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T89 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	18.724	38.38	Pk	32.5	-24.7	-9.5	36.68	54	-17.32	74	-37.32
2	20.292	38.4	Pk	32.5	-25.2	-9.5	36.2	54	-17.8	74	-37.8
3	21.717	38.09	Pk	33.3	-24.8	-9.5	37.09	54	-16.91	74	-36.91
4	18.881	39.35	Pk	32.3	-25.4	-9.5	36.75	54	-17.25	74	-37.25
5	21.298	38.56	Pk	33.2	-25.5	-9.5	36.76	54	-17.24	74	-37.24
6	22.148	38.76	Pk	32.9	-24.8	-9.5	37.36	54	-16.64	74	-36.64

Pk - Peak detector