



# **CERTIFICATION TEST REPORT**

**Report Number. :** 11981280-E24V1

**Applicant :** FITBIT INC.  
199 FREMONT ST, 14TH FLOOR  
SAN FRANCISCO,  
CA 94105, U.S.A

**Model :** FB504

**FCC ID :** XRAFB504

**IC :** 8542A-FB504

**EUT Description :** SMART WATCH

**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:**

January 30, 2018

**Prepared by:**

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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	1/30/2018	Initial Issue	--

## TABLE OF CONTENTS

<b>1. ATTESTATION OF TEST RESULTS</b>	<b>4</b>
<b>2. TEST METHODOLOGY</b>	<b>6</b>
<b>3. FACILITIES AND ACCREDITATION</b>	<b>6</b>
<b>4. CALIBRATION AND UNCERTAINTY</b>	<b>7</b>
4.1. MEASURING INSTRUMENT CALIBRATION	7
4.2. SAMPLE CALCULATION	7
4.3. MEASUREMENT UNCERTAINTY	7
<b>5. EQUIPMENT UNDER TEST</b>	<b>8</b>
5.1. DESCRIPTION OF EUT	8
5.2. MODELS DIFFERENCES DESCRIPTION	8
5.3. MAXIMUM OUTPUT POWER	8
5.4. DESCRIPTION OF AVAILABLE ANTENNAS	8
5.5. SOFTWARE AND FIRMWARE	8
5.6. WORST-CASE CONFIGURATION AND MODE	9
5.7. DESCRIPTION OF TEST SETUP	10
<b>6. TEST AND MEASUREMENT EQUIPMENT</b>	<b>12</b>
<b>7. MEASUREMENT METHODS</b>	<b>13</b>
<b>8. ANTENNA PORT TEST RESULTS</b>	<b>14</b>
<b>9. RADIATED TEST RESULTS</b>	<b>15</b>
9.1. LIMITS AND PROCEDURE	15
9.2. TRANSMITTER ABOVE 1GHZ	16
9.2.1. RESTRICTED BANDEDGE (LOW CHANNEL)	16
9.2.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)	18
9.2.3. HARMONICS AND SPURIOUS EMISSIONS	20
9.3. WORST-CASE BELOW 30MHz	26
9.4. WORST-CASE 30MHz TO 1GHz	28
9.5. WORST-CASE ABOVE 18 GHz	30
<b>10. SETUP PHOTOS</b>	<b>32</b>

## 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** FITBIT INC.  
199 FREMONT ST, 14<sup>TH</sup> FLOOR  
SAN FRANCISCO,  
CA 94105, U.S.A

**EUT DESCRIPTION:** SMART WATCH

**MODEL:** FB504

**SERIAL NUMBER:** B2-H3-03 (RADIATED)

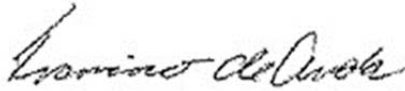
**DATE TESTED:** JANUARY 10, 2018 – JANUARY 26, 2018

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  
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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
<input checked="" type="checkbox"/> Chamber A (IC:2324B-1)	<input type="checkbox"/> Chamber D (IC:22541-1)
<input checked="" type="checkbox"/> Chamber B (IC:2324B-2)	<input type="checkbox"/> Chamber E (IC:22541-2)
<input type="checkbox"/> Chamber C (IC:2324B-3)	<input type="checkbox"/> Chamber F (IC:22541-3)
	<input type="checkbox"/> Chamber G (IC:22541-4)
	<input type="checkbox"/> 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:

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

### 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 equipment under test is a Smart Watch.

### 5.2. MODELS DIFFERENCES DESCRIPTION

FCC ID: XRAFB504 / IC: 8542A-FB504 (model: FB504) has the same board design and mechanical design as FCC ID: XRAFB505 / IC: 8542A-FB505 (model: FB505). The difference is that the Model: FB504 does not have the NFC controller and antenna is depopulated. Conducted tests are leveraged from model FB505. Radiated tests were performed on this model(FB504).

### 5.3. MAXIMUM OUTPUT POWER

Please refer to FCC ID: XRAFB505 / IC: 8542A-FB505 for the maximum output power information.

### 5.4. DESCRIPTION OF AVAILABLE ANTENNAS

Frequency Band (GHz)	Antenna Peak Gain (dBi)
2.4	-11.30

### 5.5. SOFTWARE AND FIRMWARE

The test utility software used during testing was Tera Term Ver 4.93.  
The firmware installed in the EUT during testing was Version 32.3.125.8.



## **5.6. WORST-CASE CONFIGURATION AND MODE**

EUT has 1 type of plastic wristband and 3 types of metallic bands: Mesh, Link and Tri-Link. The worst-case configuration was investigated with wristbands with and without a charger and it was determined that EUT with plastic wristband and with a charger was the worst-case; therefore, all final radiated testing was performed with this configuration.

Radiated bandedge, harmonics, and spurious emissions from 1 GHz to 18GHz were performed with EUT set to transmit at the Low/Middle/High channels.

Radiated emission below 1GHz, above 18GHz, and power line conducted 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-Portrait orientation was worst-case orientation. Therefore, all final radiated testing was performed with the EUT in Z-Portrait orientation.

Worst-case data rate as provided by the client was:

BLE: 1 Mbps.

BLE and Wifi bands do not transmit simultaneously.

## 5.7. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC/DC Adapter	Homespot	S005AYU0500100	N/A	NA

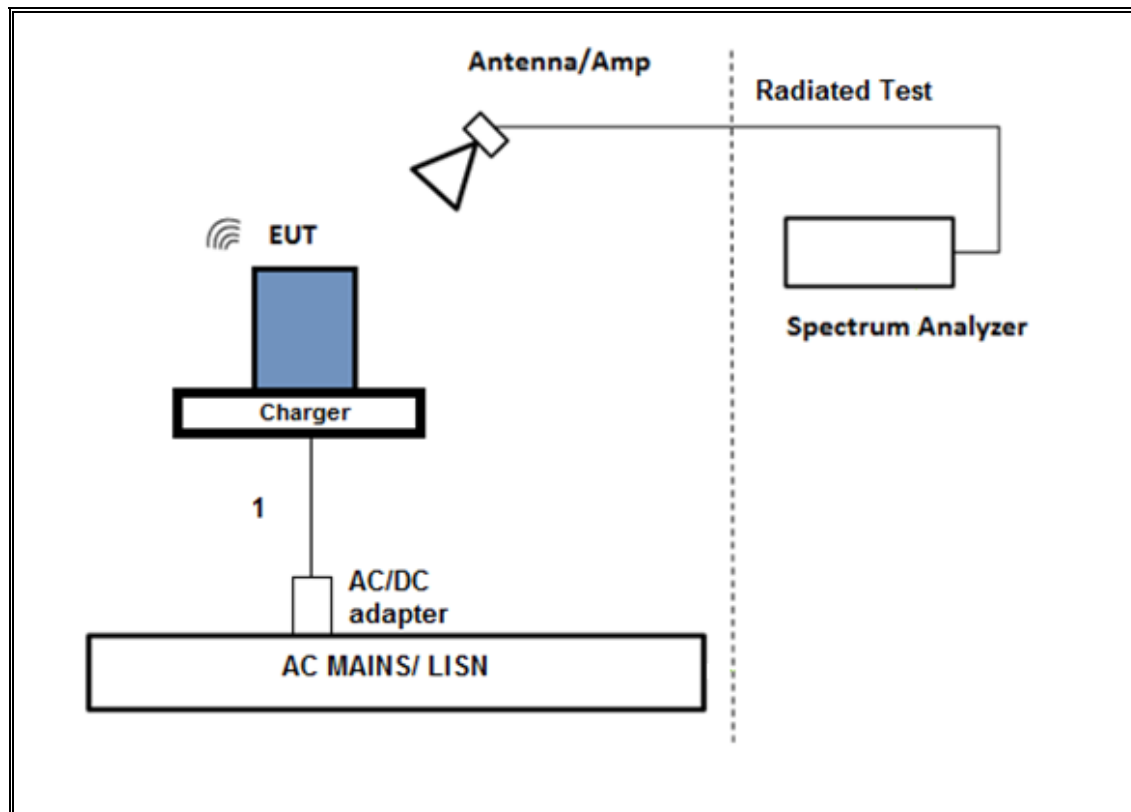
### I/O CABLES (RADIATED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB	Unshielded	1	Charger to AC/DC adapter

### **TEST SETUP- RADIATED TEST**

The EUT was placed in charger and powered by an AC/DC adapter. Test software exercised the EUT.

### **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, Active Loop 9KHz to 30MHz	EMCO	6502	T35	03/09/2018
Amplifier, 10KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310N	T300	12/11/2018
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB1	T130	10/16/2018
Amplifier, 100KHz to 1GHz, 32dB	Keysight	8447D	T15	08/14/2018
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T1466	04/11/2018
Antenna, Horn 1-18GHz	ETS Lindgren	3117	T863	06/09//2018
Amplifier, 1 to 18GHz	Miteq	AFS42-00101800-25-S-42	T493	12/16/2018
Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T907	01/23/2018
Antenna Horn, 18 to 26GHz	ARA	MWH-1826	T449	06/12/2018
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	

### NOTES:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

## 7. MEASUREMENT METHODS

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. ANTENNA PORT TEST RESULTS

Please refer to FCC ID: XRAFB505 / IC: 8542A-FB505 for the antenna port test results.

## 9. RADIATED TEST RESULTS

### 9.1. 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
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.

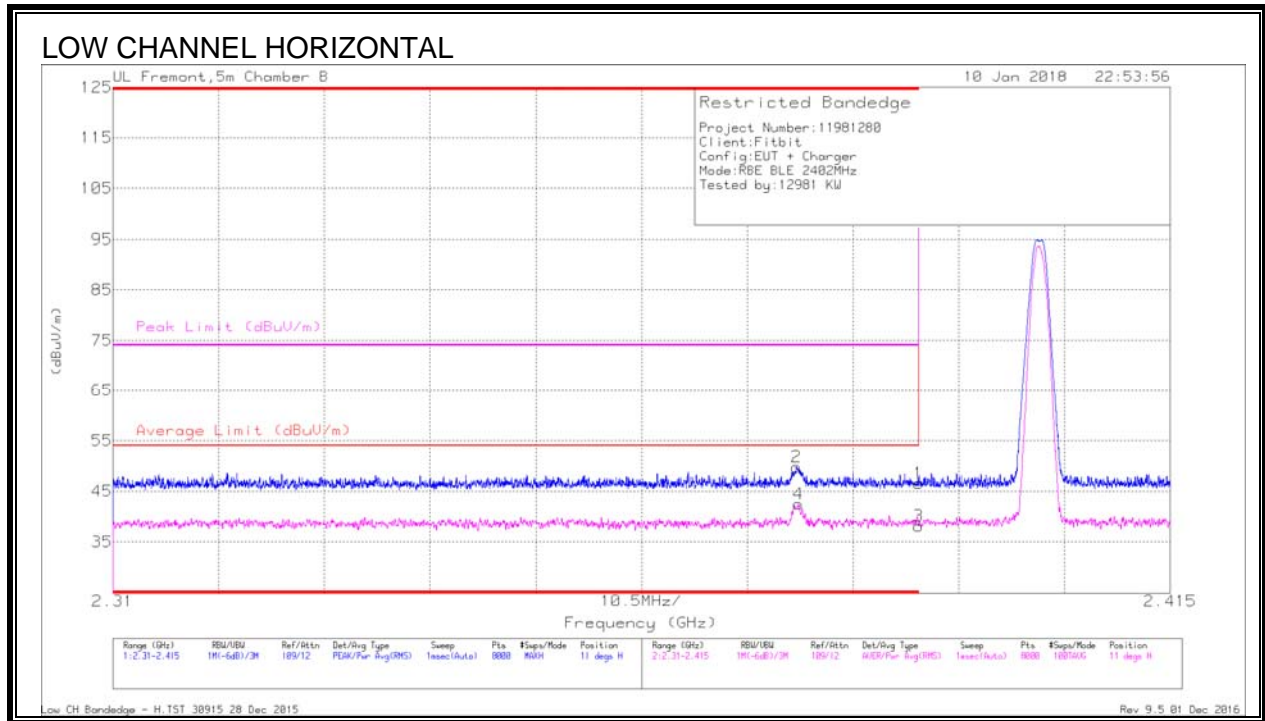
For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

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.

## 9.2. TRANSMITTER ABOVE 1GHZ

### 9.2.1. RESTRICTED BANDEDGE (LOW CHANNEL)



## DATA

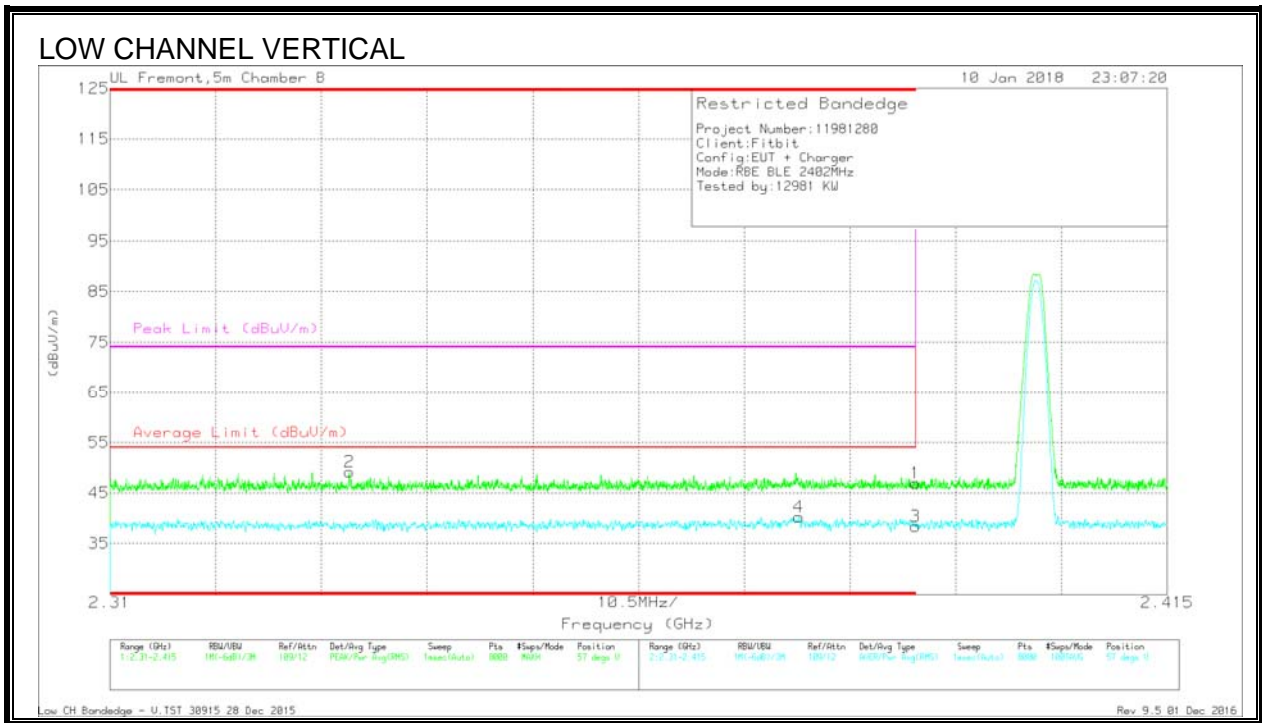
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cb/Filt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.378	39.17	Pk	31.9	-21.3	0	49.77	-	-	74	-24.23	11	192	H
4	* 2.378	29.81	RMS	31.9	-21.3	2.06	42.47	54	-11.53	-	-	11	192	H
1	* 2.39	35.86	Pk	32	-21.3	0	46.56	-	-	74	-27.44	11	192	H
3	* 2.39	25.36	RMS	32	-21.3	2.06	38.12	54	-15.88	-	-	11	192	H

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

Pk - Peak detector

RMS - RMS detection





## DATA

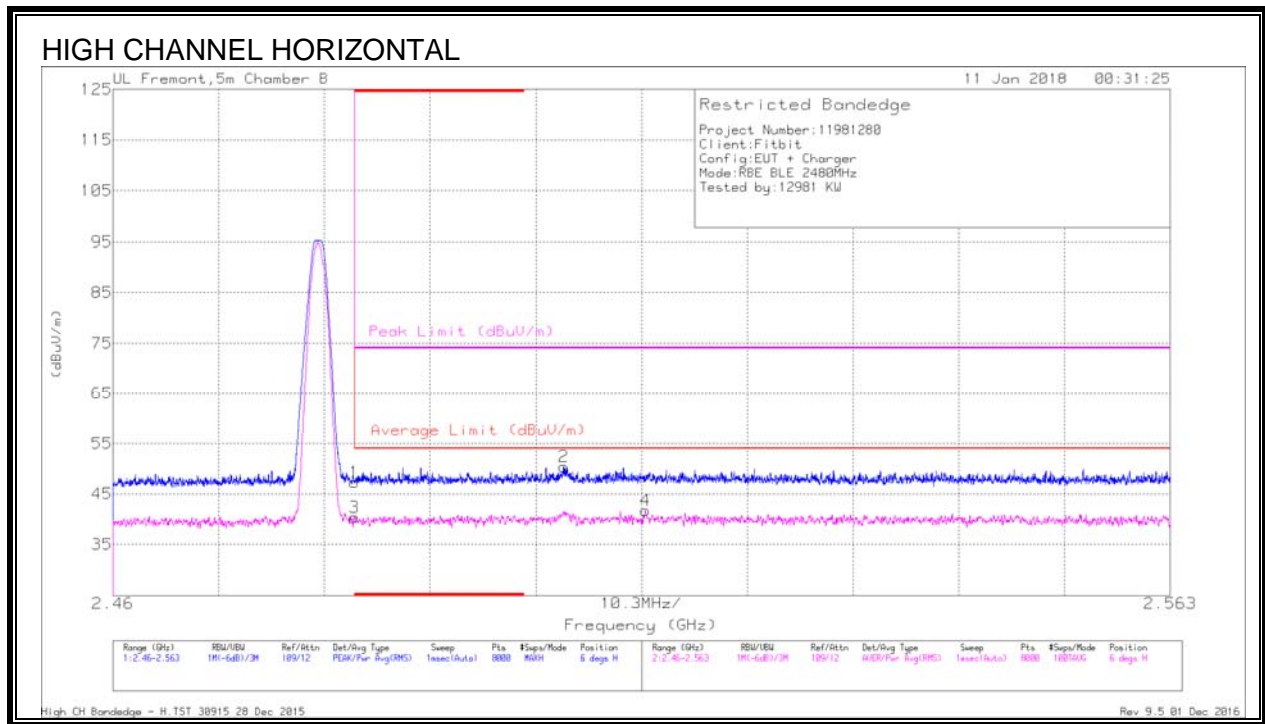
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.334	38.53	Pk	31.9	-21.3	0	49.13	-	-	74	-24.87	57	284	V
4	* 2.378	27.63	RMS	31.9	-21.3	2.06	40.29	54	-13.71	-	-	57	284	V
1	* 2.39	36.19	Pk	32	-21.3	0	46.89	-	-	74	-27.11	57	284	V
3	* 2.39	25.59	RMS	32	-21.3	2.06	38.35	54	-15.65	-	-	57	284	V

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

Pk - Peak detector

RMS - RMS detection

## 9.2.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)



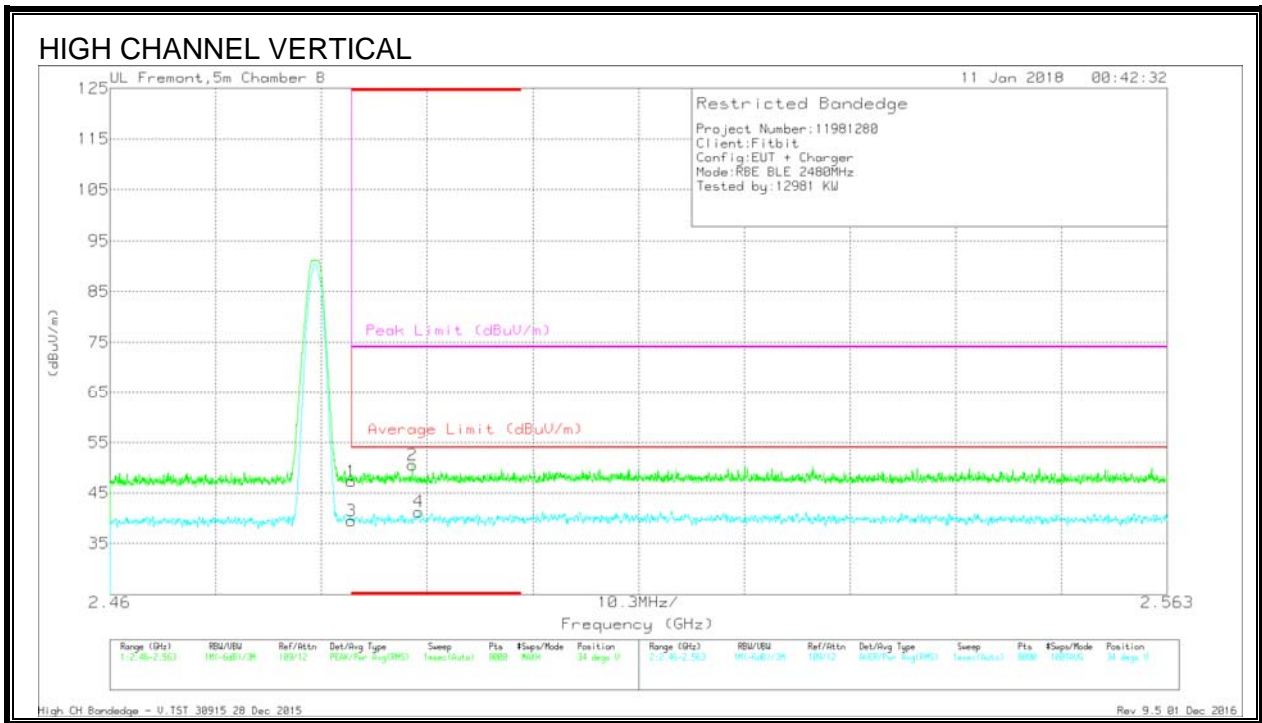
## DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	36.09	Pk	32.5	-21.3	0	47.29	-	-	74	-26.71	6	261	H
3	* 2.484	27.13	RMS	32.5	-21.3	2.06	40.39	54	-13.61	-	-	6	261	H
2	2.504	38.94	Pk	32.6	-21.1	0	50.44	-	-	74	-23.56	6	261	H
4	2.512	28.21	RMS	32.6	-21.1	2.06	41.77	54	-12.23	-	-	6	261	H

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

Pk - Peak detector

RMS - RMS detection



## DATA

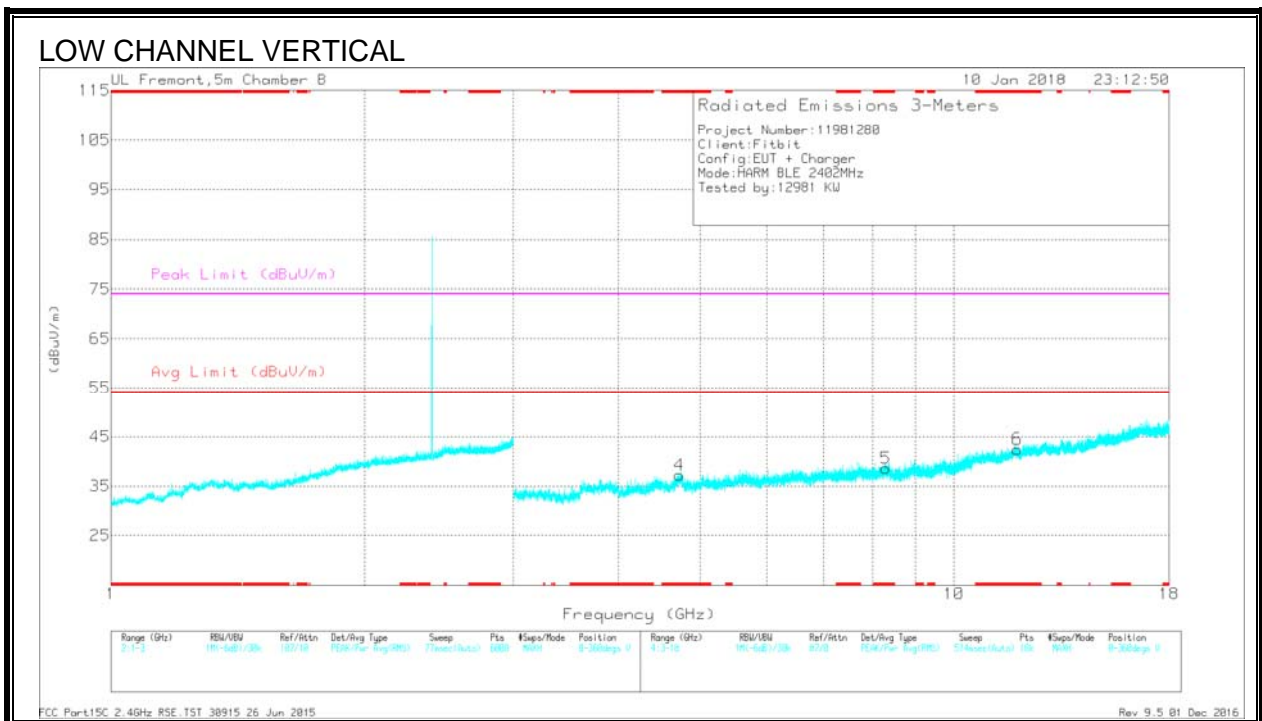
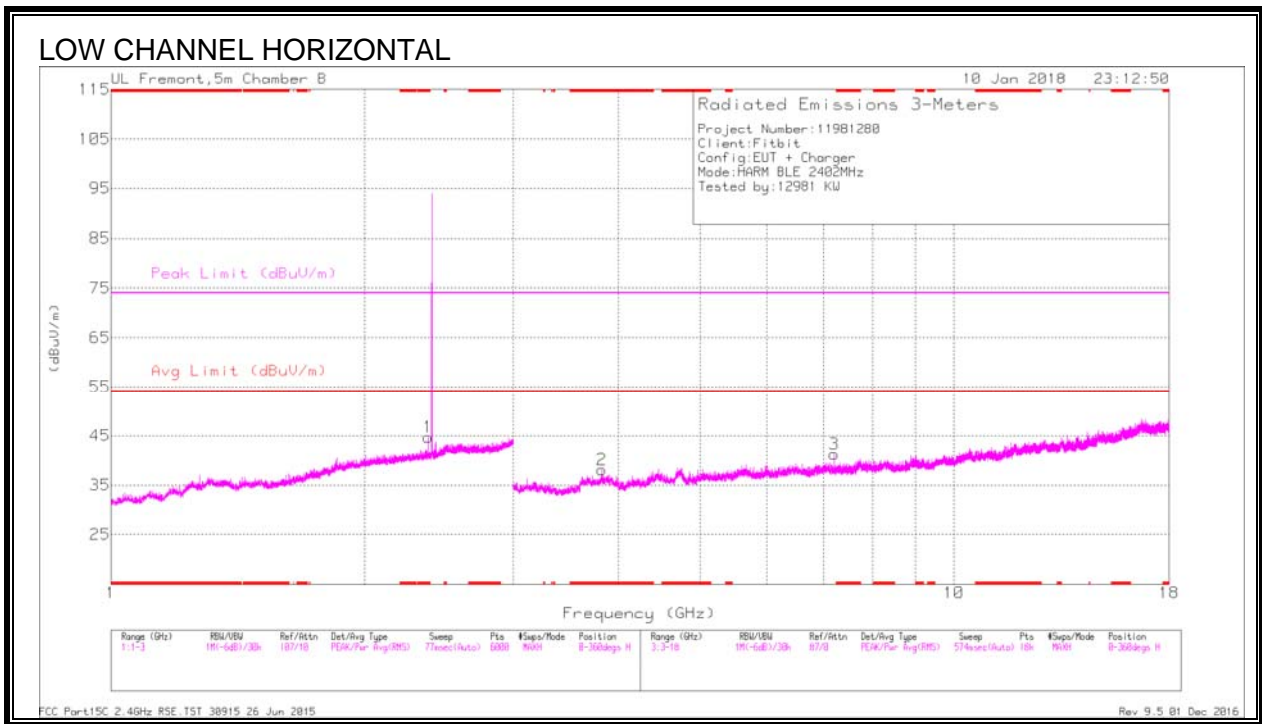
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	36.13	Pk	32.5	-21.3	0	47.33	-	-	74	-26.67	34	297	V
2	* 2.489	39.31	Pk	32.5	-21.3	0	50.51	-	-	74	-23.49	34	297	V
3	* 2.484	26.27	RMS	32.5	-21.3	2.06	39.53	54	-14.47	-	-	34	297	V
4	* 2.49	28.03	RMS	32.5	-21.3	2.06	41.29	54	-12.71	-	-	34	297	V

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

Pk - Peak detector

RMS - RMS detection

### 9.2.3. HARMONICS AND SPURIOUS EMISSIONS



## DATA

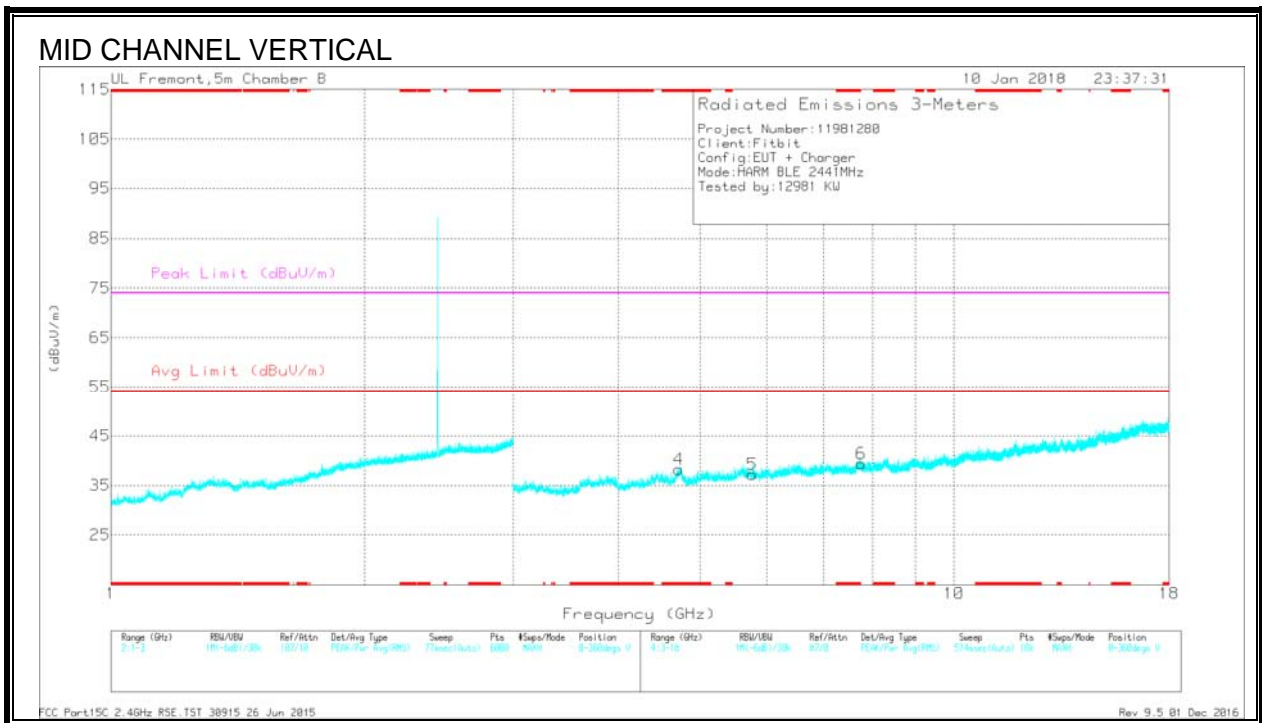
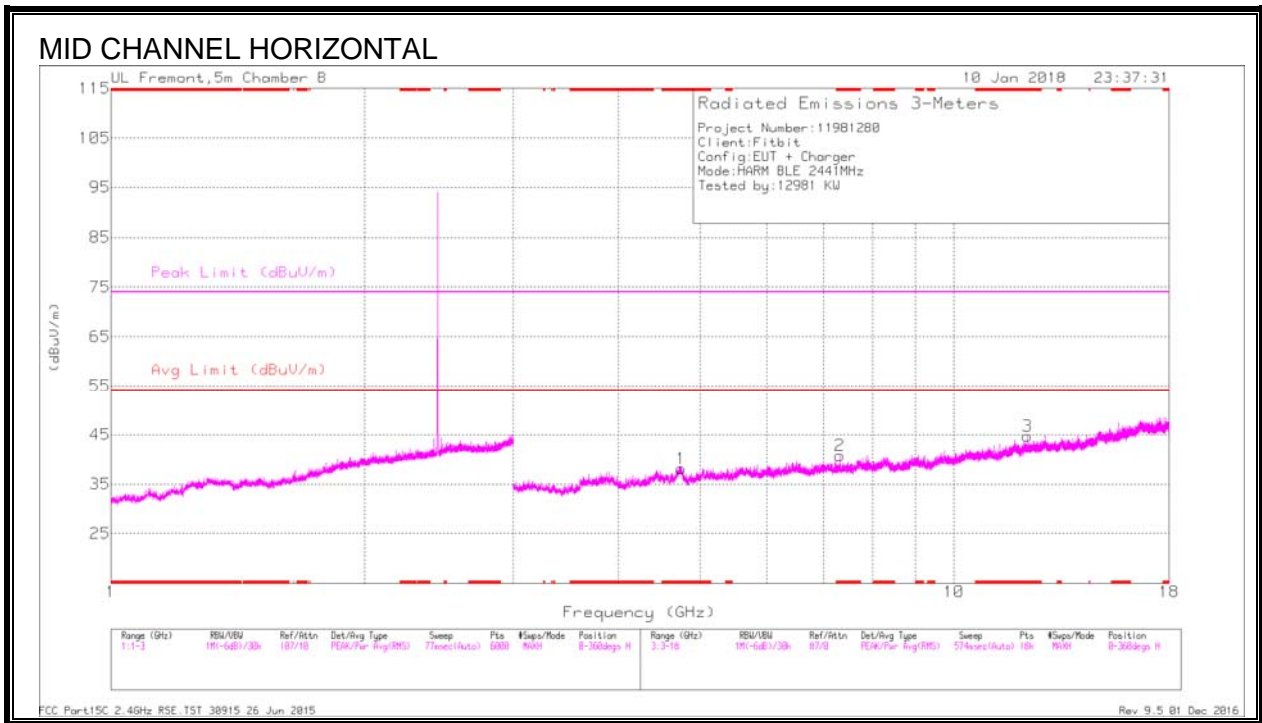
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.378	38.96	PK2	31.9	-21.3	0	49.56	-	-	74	-24.44	159	291	H
	* 2.378	28.06	MAv1	31.9	-21.3	2.06	40.72	54	-13.28	-	-	159	291	H
2	* 3.823	40.33	PK2	33.5	-30.9	0	42.93	-	-	74	-31.07	191	152	H
	* 3.825	29.29	MAv1	33.5	-30.9	2.06	33.95	54	-20.05	-	-	191	152	H
4	* 4.723	40.04	PK2	34.2	-29.7	0	44.54	-	-	74	-29.46	222	148	V
	* 4.721	29.25	MAv1	34.2	-29.8	2.06	35.71	54	-18.29	-	-	222	148	V
5	* 8.302	36.73	PK2	36.1	-26.5	0	46.33	-	-	74	-27.67	155	208	V
	* 8.305	25.7	MAv1	36.1	-26.6	2.06	37.26	54	-16.74	-	-	155	208	V
6	* 11.888	34.43	PK2	38.7	-24.2	0	48.93	-	-	74	-25.07	66	135	V
	* 11.888	23.48	MAv1	38.7	-24.2	2.06	40.04	54	-13.96	-	-	66	135	V
3	7.206	34	Pk	35.8	-28.5	0	41.3	-	-	-	-	0-360	102	H

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

Pk - Peak detector

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average



## 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	* 4.746	40.51	PK2	34.2	-29.3	0	45.41	-	-	74	-28.59	95	171	H
	* 4.742	29.43	MAv1	34.2	-29.4	2.06	36.29	54	-17.71	-	-	95	171	H
2	* 7.32	40.62	PK2	35.9	-28.9	0	47.62	-	-	74	-26.38	165	163	H
	* 7.319	30.2	MAv1	35.9	-28.9	2.06	39.26	54	-14.74	-	-	165	163	H
3	* 12.225	33.97	PK2	39.1	-24.2	0	48.87	-	-	74	-25.13	251	127	H
	* 12.225	23.62	MAv1	39.1	-24.2	2.06	40.58	54	-13.42	-	-	251	127	H
4	* 4.72	39.92	PK2	34.2	-29.8	0	44.32	-	-	74	-29.68	168	158	V
	* 4.718	29.24	MAv1	34.2	-29.9	2.06	35.6	54	-18.4	-	-	168	158	V
5	5.766	32.86	Pk	35	-30.6	0	37.26	-	-	-	-	0-360	200	V
6	7.761	30.66	Pk	36	-27.3	0	39.36	-	-	-	-	0-360	102	V

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

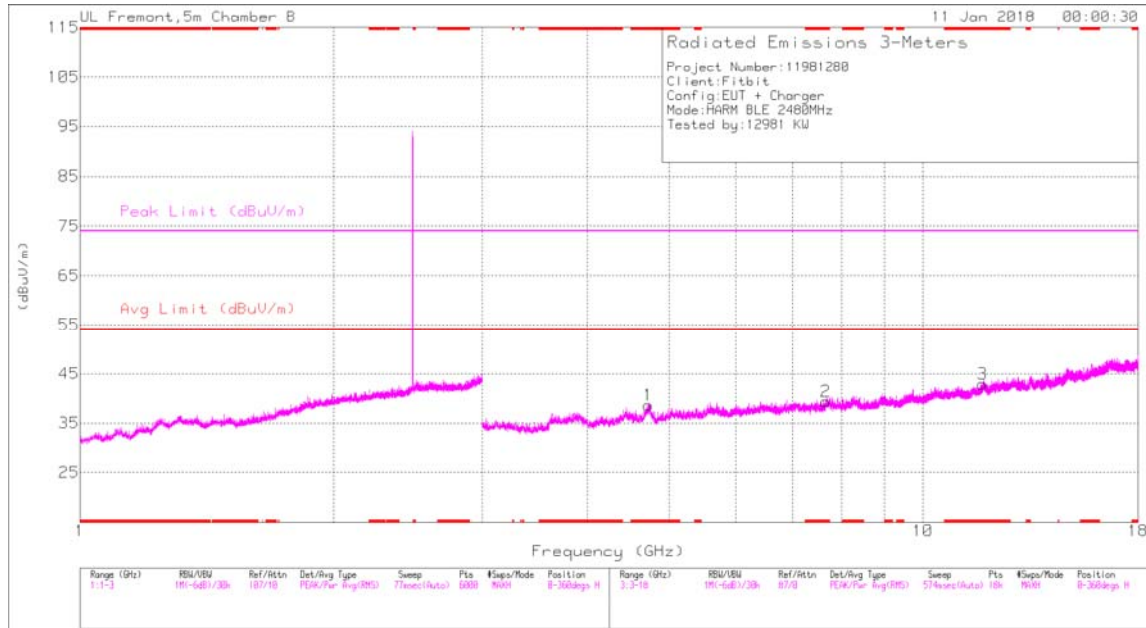
Pk - Peak detector

PK2 - KDB558074 Method: Maximum Peak

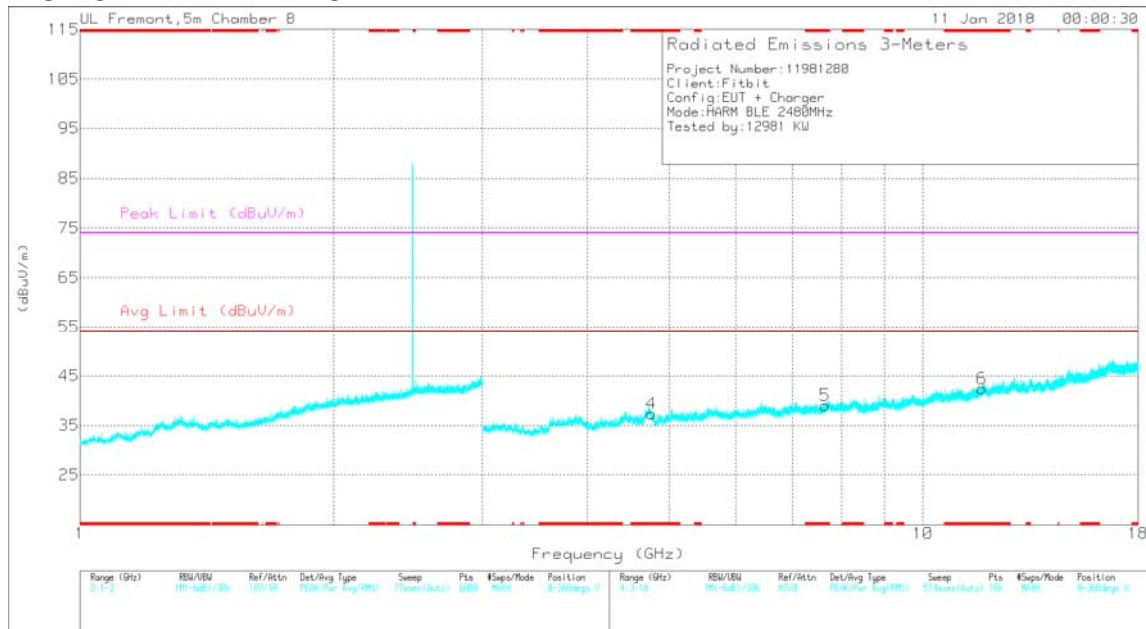
MAv1 - KDB558074 Option 1 Maximum RMS Average



## HIGH CHANNEL HORIZONTAL



## HIGH CHANNEL VERTICAL





## 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	* 4.719	39.91	PK2	34.2	-29.8	0	44.31	-	-	74	-29.69	168	115	H
	* 4.719	29.2	MAv1	34.2	-29.8	2.06	35.66	54	-18.34	-	-	168	115	H
2	* 7.668	36.95	PK2	36	-27.6	0	45.35	-	-	74	-28.65	55	193	H
	* 7.665	26.34	MAv1	36	-27.7	2.06	36.7	54	-17.3	-	-	55	193	H
3	* 11.766	34.36	PK2	38.5	-23.9	0	48.96	-	-	74	-25.04	167	198	H
	* 11.765	23.36	MAv1	38.5	-23.9	2.06	40.02	54	-13.98	-	-	167	198	H
4	* 4.766	39.52	PK2	34.3	-29.4	0	44.42	-	-	74	-29.58	206	153	V
	* 4.764	28.31	MAv1	34.3	-29.3	2.06	35.37	54	-18.63	-	-	206	153	V
5	* 7.659	36.97	PK2	36.1	-27.8	0	45.27	-	-	74	-28.73	312	191	V
	* 7.66	26.39	MAv1	36.1	-27.8	2.06	36.75	54	-17.25	-	-	312	191	V
6	* 11.752	33.75	PK2	38.5	-23.9	0	48.35	-	-	74	-25.65	119	172	V
	* 11.75	23.37	MAv1	38.5	-24	2.06	39.93	54	-14.07	-	-	119	172	V

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

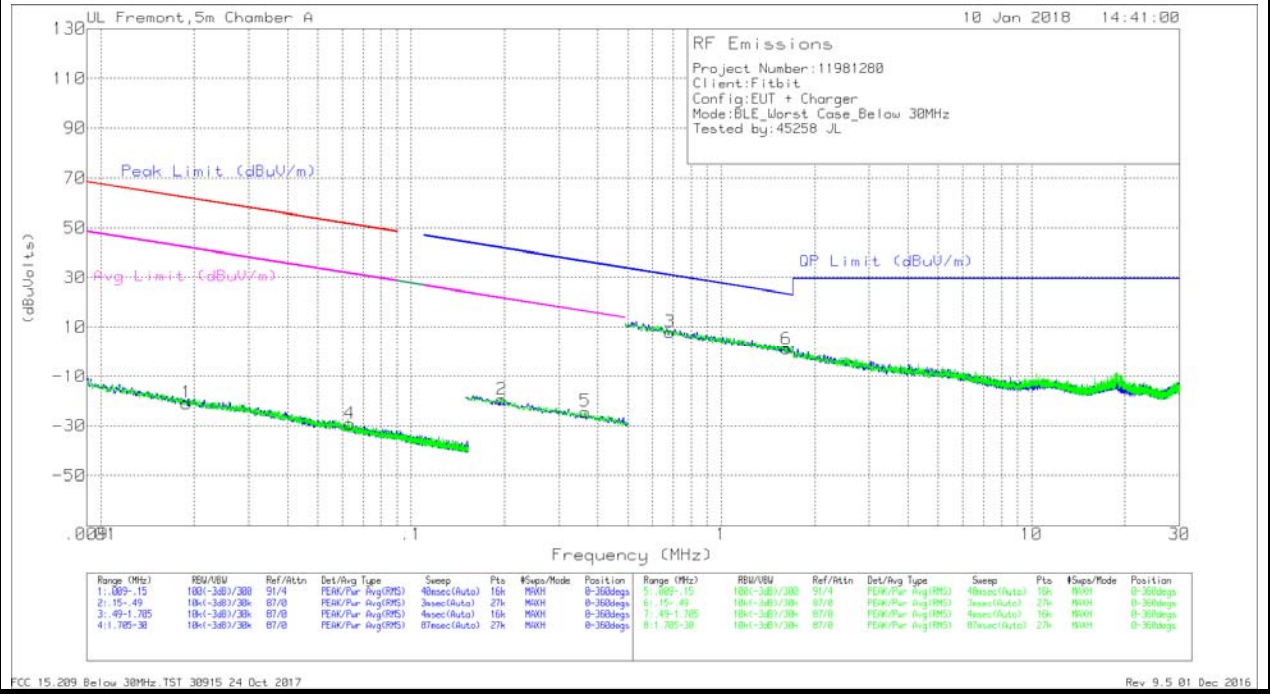
PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

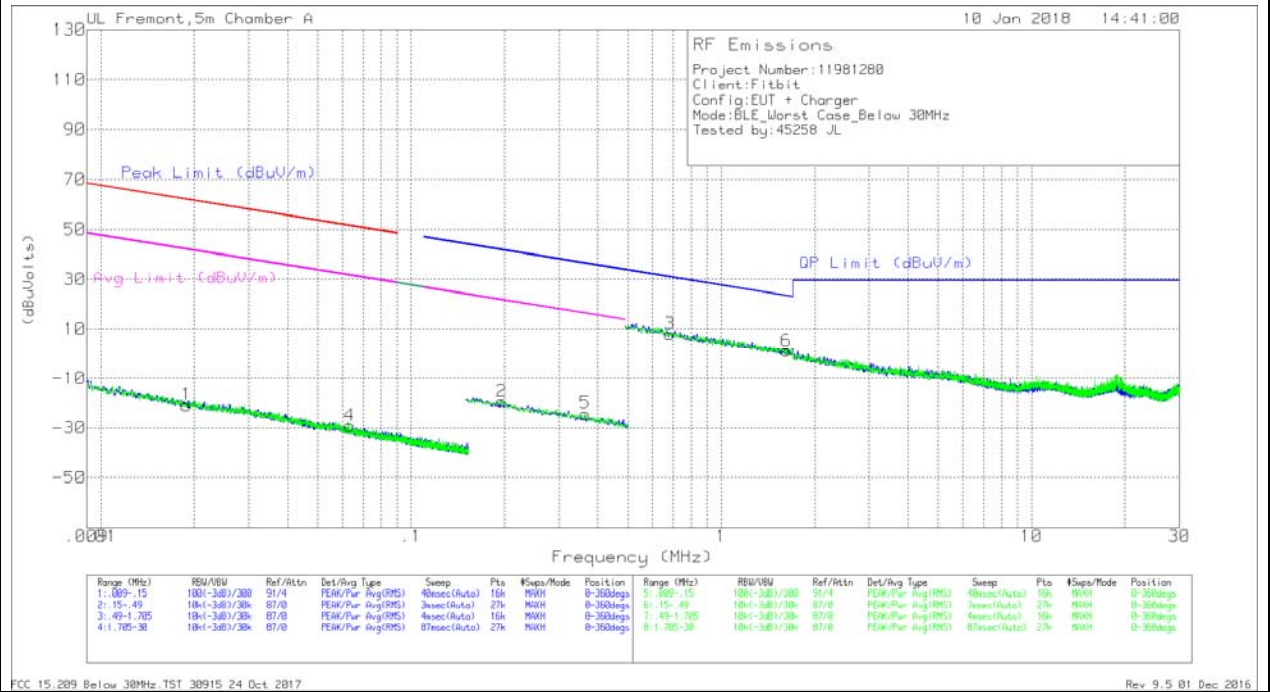
### 9.3. WORST-CASE BELOW 30MHz

#### SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)

##### HORIZONTAL PLOT



##### VERTICAL PLOT



## 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)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.01891	44.28	Pk	14.8	.1	-80	-20.82	62.05	-82.87	42.05	-62.87	-	-	-	-	0-360
4	.0634	36.35	Pk	14.4	.1	-80	-29.15	51.54	-80.69	31.54	-60.69	-	-	-	-	0-360
2	.19629	46.6	Pk	13.9	.1	-80	-19.4	-	-	-	-	41.76	-61.16	21.76	-41.16	0-360
5	.36442	41.89	Pk	13.8	.1	-80	-24.21	-	-	-	-	36.38	-60.59	16.38	-40.59	0-360

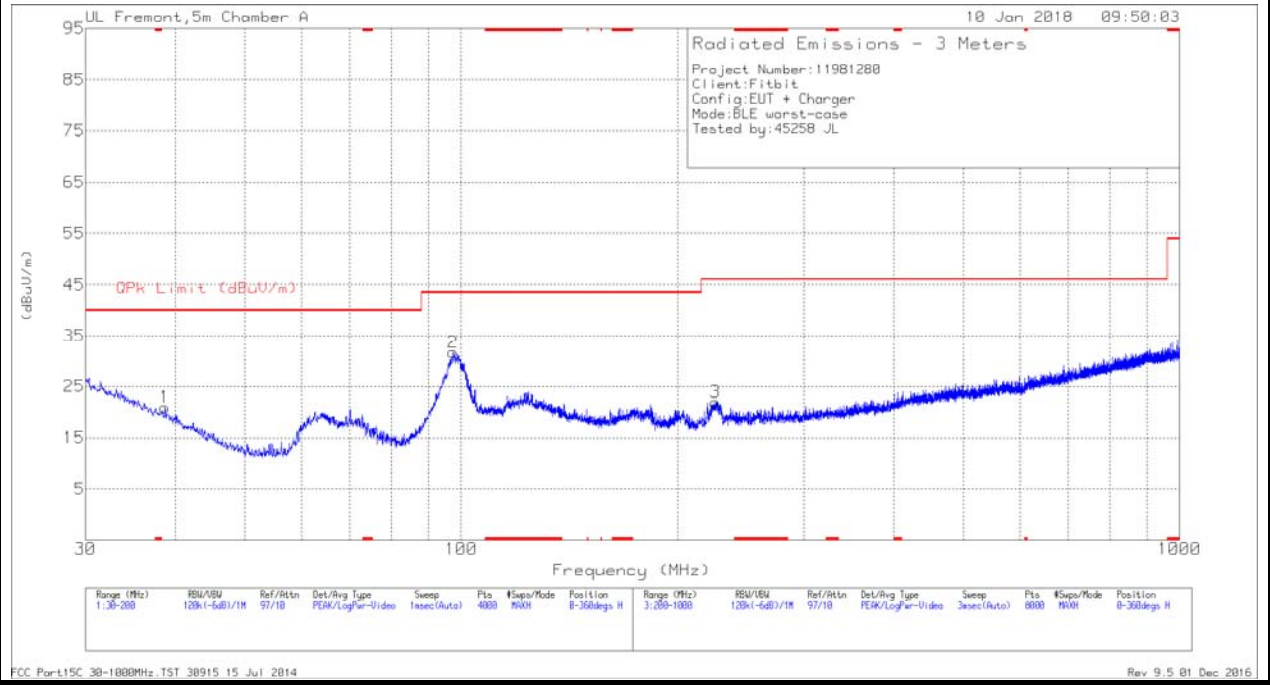
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	.68312	33.99	Pk	14	.1	-40	8.09	30.92	-22.83	0-360
6	1.62126	26.58	Pk	14.4	.2	-40	1.18	23.44	-22.26	0-360

Pk - Peak detector

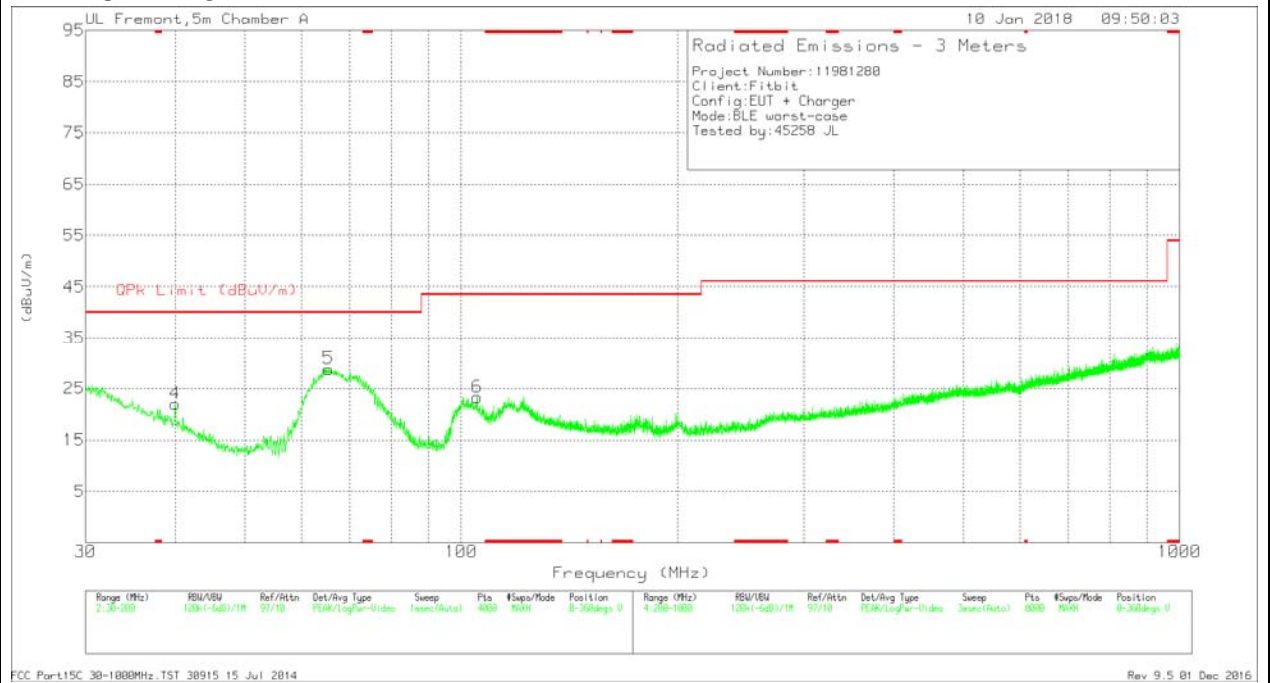
## 9.4. WORST-CASE 30MHz TO 1GHz

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

#### HORIZONTAL PLOT



#### VERTICAL PLOT



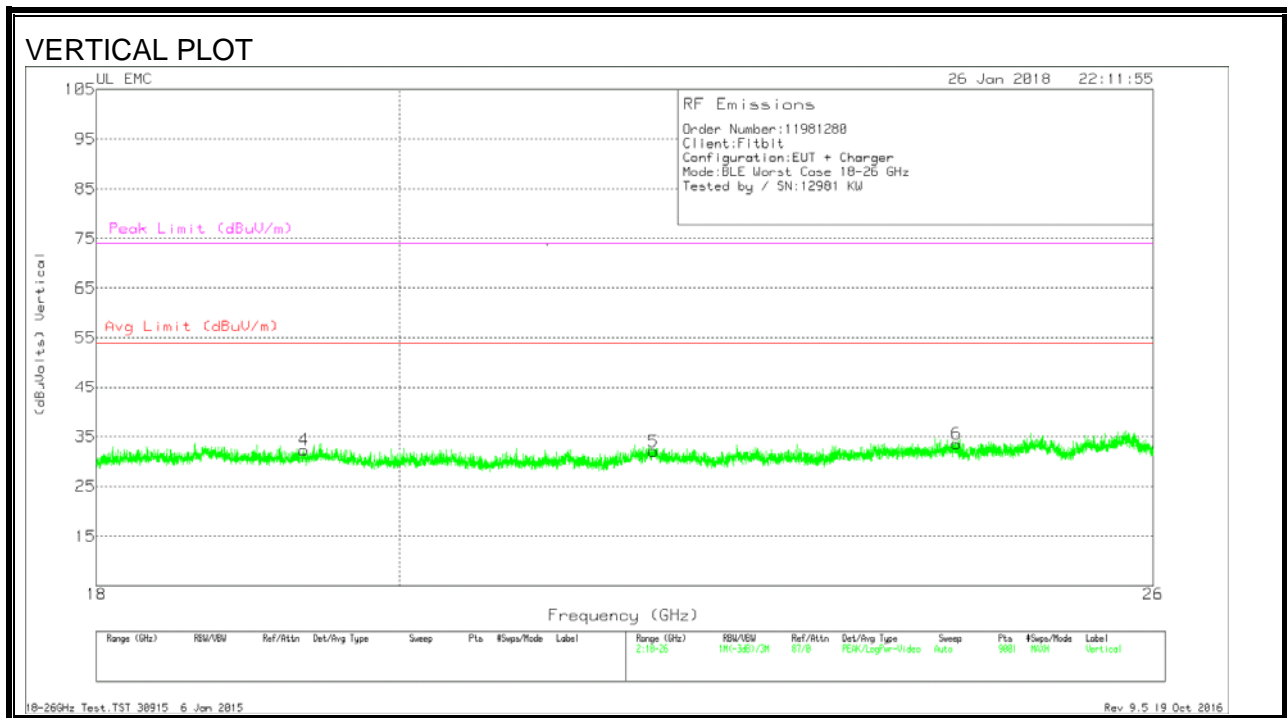
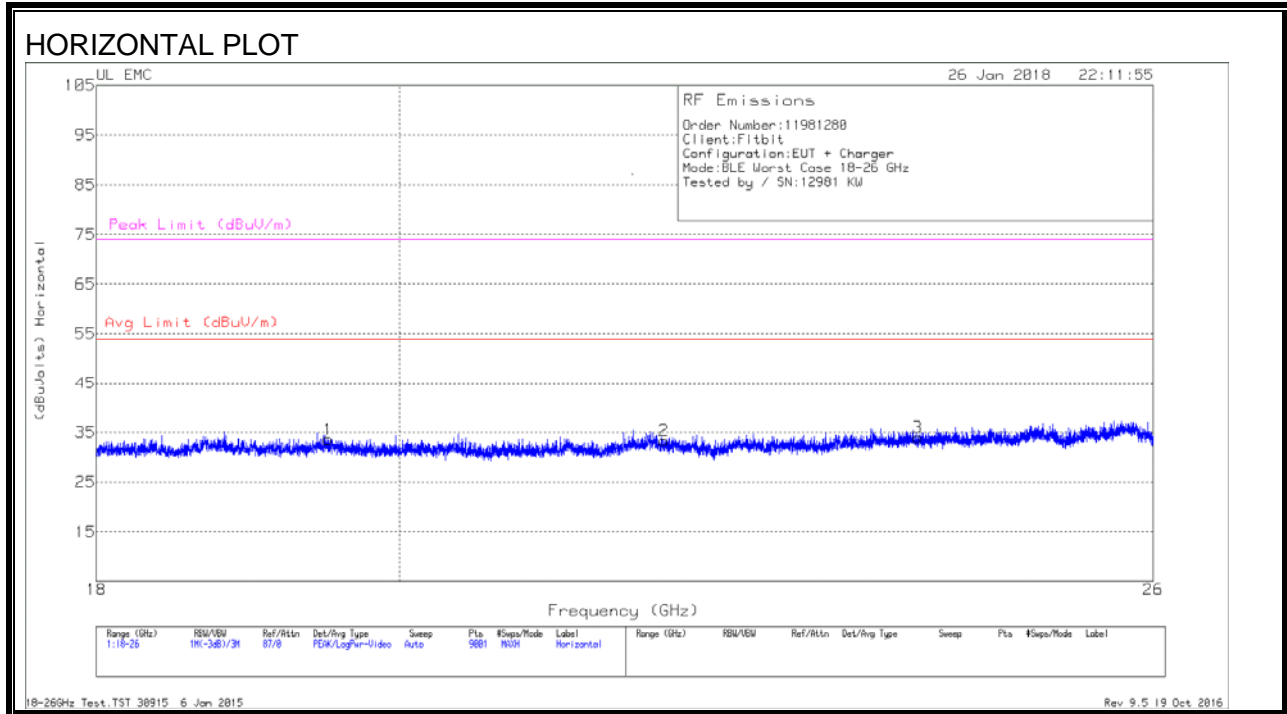
## DATA

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
1	38.7148	29.16	Pk	18.9	-27.2	20.86	40	-19.14	0-360	100	H
4	39.9901	31.11	Pk	18	-27.1	22.01	40	-17.99	0-360	100	V
5	65.3692	43.54	Pk	12.1	-26.8	28.84	40	-11.16	0-360	100	V
2	97.55	44.53	Pk	13.6	-26.4	31.73	43.52	-11.79	0-360	300	H
6	105.202	33.99	Pk	15.6	-26.3	23.29	43.52	-20.23	0-360	100	V
3	226.1034	32.25	Pk	14.8	-25.1	21.95	46.02	-24.07	0-360	200	H

Pk - Peak detector

## 9.5. WORST-CASE ABOVE 18 GHz

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



**DATA**

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T449 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	19.51	35.58	Pk	32.5	-25	-9.5	33.58	54	-20.42	74	-40.42
2	21.93	34.92	Pk	33.3	-25.4	-9.5	33.32	54	-20.68	74	-40.68
3	23.955	34.46	Pk	33.3	-24.3	-9.5	33.96	54	-20.04	74	-40.04
4	19.348	34.1	Pk	32.4	-24.7	-9.5	32.3	54	-21.7	74	-41.7
5	21.85	32.95	Pk	33.3	-24.7	-9.5	32.05	54	-21.95	74	-41.95
6	24.28	33.65	Pk	33.6	-24.2	-9.5	33.55	54	-20.45	74	-40.45

Pk - Peak detector