CERTIFICATION TEST REPORT

Report Number. : 12132753-E4V2

Applicant	**:**	SONY MOBILE COMMUNICATIONS, INC. 4-12-3 HIGASHI-SHINAGAWA, SHINAGAWA -KU, TOKYO, 140-0002, JAPAN
FCC ID	**:**	PY7-04685Z
EUT Description	**:**	GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC
Test Standard(s)	**:**	FCC 47 CFR PART 15 SUBPART C

Date Of Issue:
May 18, 2018

Prepared by:
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NVLAP TESTING
NVLAP LAB CODE 200065-0

REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	05/15/18	Initial Issue	--
V2	05/18/18	Updated Section 2, 7 & Added Section 6.3	Kiya Kedida

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	SONY MOBILE COMMUNICATIONS, INC. 4-12-3 HIGASHI-SHINAGAWA, SHINAGAWA -KU, TOKYO, 140-0002, JAPAN
EUT DESCRIPTION:	GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC
SERIAL NUMBER:	CB512FP0E0 (RADIATED)
DATE TESTED:	MAY 1-3, 2018

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	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 the U.S. government.

Approved & Released For
UL Verification Services Inc. By:

CONSUMER TECHNOLOGY DIVISION
Operations Leader
UL Verification Services Inc.

Reviewed By:

CONSUMER TECHNOLOGY DIVISION
Project Engineer
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, KDB 558074 D01 v04, KDB 662911 D01 v02r01 and ANSI C63.10-2013 and KDB 484596 D01 Referencing Test Data v01.

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 (ISED:2324B-1)	☐ Chamber D (ISED:22541-1)
☒ Chamber B (ISED:2324B-2)	☐ Chamber E (ISED:22541-2)
☐ Chamber C (ISED:2324B-3)	☐ Chamber F (ISED:22541-3)
	☐ Chamber G (ISED:22541-4)
	☐ Chamber H (ISED:22541-5)

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

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://nist.gov/standards/scopes/2000650.htm.

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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%.

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5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

The EUT is a GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC.

6. REUSE OF TEST DATA

6.1. INTRODUCTION

According to the manufacturer, the WLAN/Bluetooth conducted and NFC hardware of PY7-04685Z are HW identical to PY7-68553C. In addition PY7-04685Z digital circuit is identical to PY7-68553C. Therefore the following report/data of PY7-04685Z may represented from PY7-68553C.

-WLAN/Bluetooth conducted

-NFC

-15B

6.2. DEVICES DIFFERENCES

Difference between PY7-04685Z and PY7-68553C:

Sony Mobile Communications Inc. hereby declares that the difference between PY7-04685Z and PY7-68553C is related only to the cellular part and WLAN/Bluetooth Antenna Gain. Therefore the WLAN/Bluetooth conducted and NFC report/data of PY7-68553C may represent for PY7-04685Z.

6.3. REFERENCE DETAIL

Equipment Class	Reference FCC ID	Report Title/Section
DTS (WLAN)	PY7-68553C	12132731-E4V3 FCC Report DTS WLAN

This report covers radiated emissions portion. For antenna port data refer to report number 12132731-E4V3 FCC Report DTS WLAN. FCC ID: PY7-68553C and PY7-04685Z has same output power values. Output power was confirmed before making radiated spurious measurements.

6.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a loop antenna for chain 0 and a monopole antenna for chain 1, with the maximum gains:

Frequency Band (GHz)	Antenna Gain (dBi) Chain 0	Antenna Gain (dBi) Chain 1
2402-2480	-0.60	-8.40

6.5. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was s_atp_XXX_0_00403_A_9.
The test utility software used during testing was Tera Term Ver 4.79.

6.6. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below Below 30MHz, 1GHz, above 18GHz emission were performed with the EUT set to transmit at the channel with highest output power as a worst-case scenario.

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

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

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

802.11b mode: 1 Mbps
802.11g mode: 6 Mbps
802.11n HT20mode: MCS0

The simultaneous mode (SISO 2.4GHz Chain 0 and 5GHz chain 1) was checked and stand-alone (MIMO) 2.4 GHz / 5GHz remain the worst case.

NOTE: SISO mode is covered by MIMO mode due to same maximum tune-up limit (power).

6.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

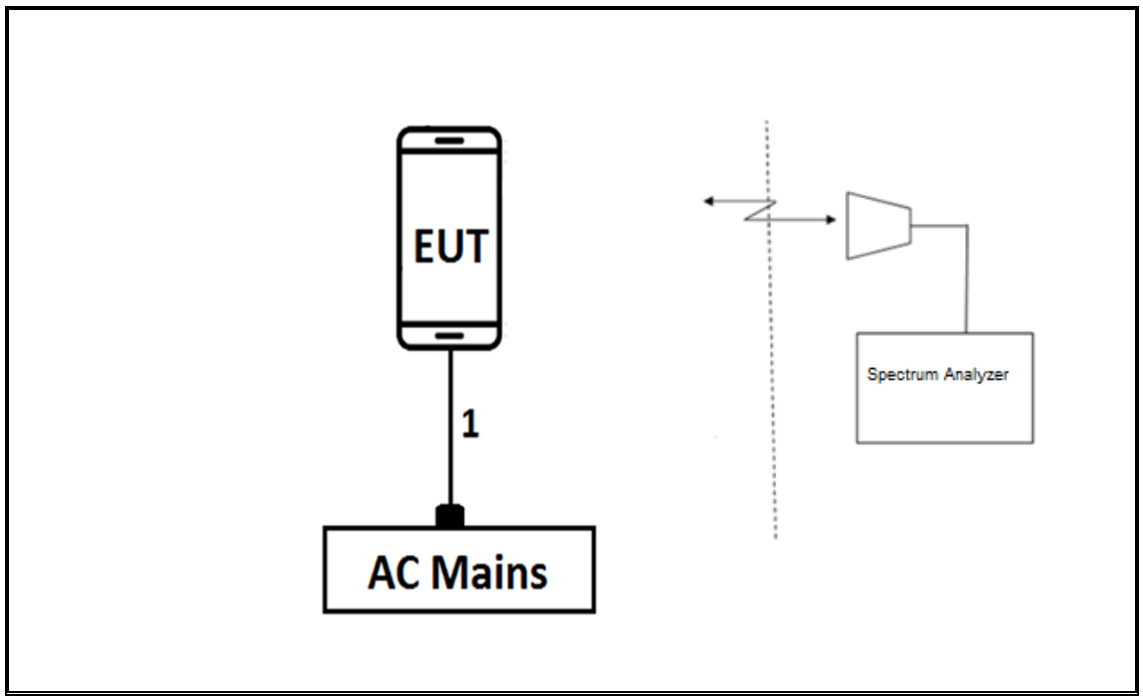
Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop	Lenovo	20B7S0A200	PC015REW	NA
AC Adapter	SONY	UCH12	4016W40310044	NA
DC Power Supply	Ametek	XT 15-4	T463	N/A

I/O CABLES (RADIATED EMISSIONS)

I/O Cable List						
Cable No	**Port**	**# of identical ports**	**Connector Type**	**Cable Type**	**Cable Length (m)**	**Remarks**
1	USB	1	USB	Shielded	3	N/A

TEST SETUP

RADIATED EMISSIONS SETUP DIAGRAM



7. 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**
Amplifier, 10KHz to 1GHz, 32dB	Agilent (Keysight) Technologies	8447D	T15	08/14/2018
Amplifier, 1 - 18GHz	MITEQ	AFS42-00101800-25-S-42	T931	09/20/2018
Amplifier, 1 to 18GHz	Miteq	AFS42-00101800-25-S-42	T493	04/03/2019
RF Preamplifier, 1 - 26GHz	Agilent	8449B	T404	07/23/2018
Antenna, Active Loop 9kHz-30MHz	Com-Power Corp.	AL-130R	T1866	10/10/2018
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB3	T130	06/15/2018
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T862	06/09/2018
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T863	06/09/2018
Antenna Horn, 18 to 26GHz	ARA	MWH-1826	T89	01/18/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1466	04/16/2019
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1454	01/08/2019
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.

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8. MEASUREMENT METHODS

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

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

Radiated Band-edge: ANSI C63.10-2013 Section 6.10.5

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9. RADIATED TEST RESULTS

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.

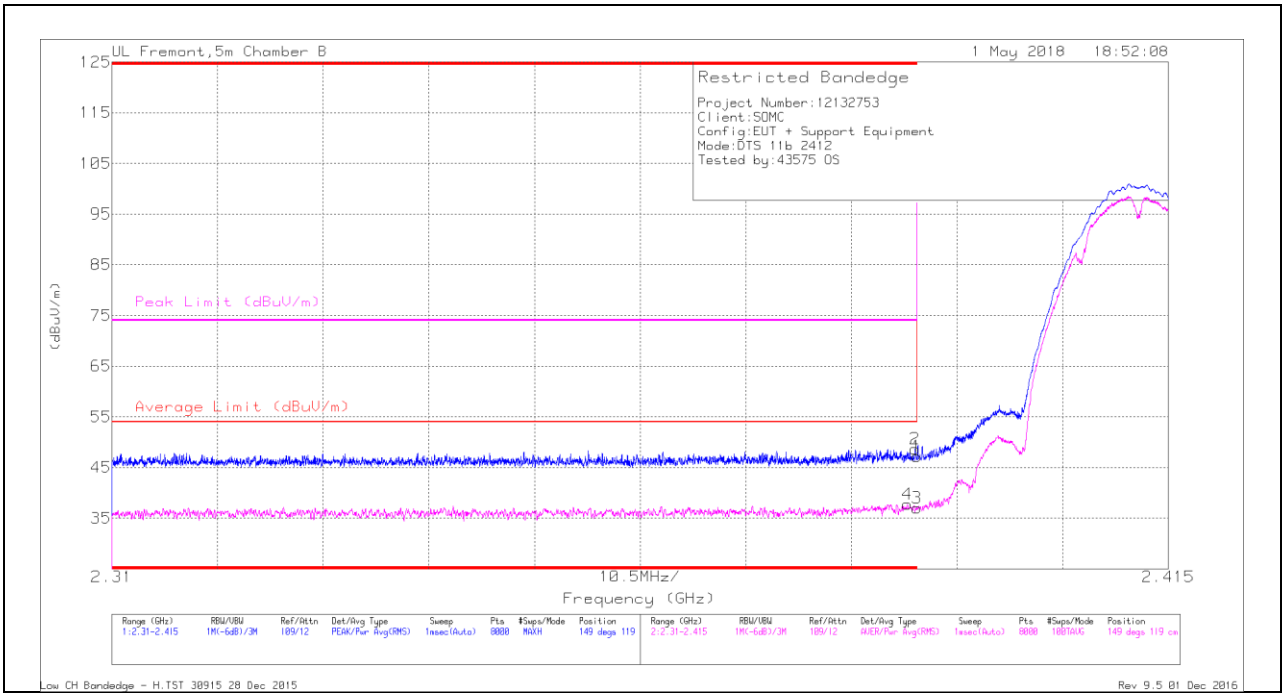
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

9.1. TRANSMITTER ABOVE 1 GHz

9.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1)

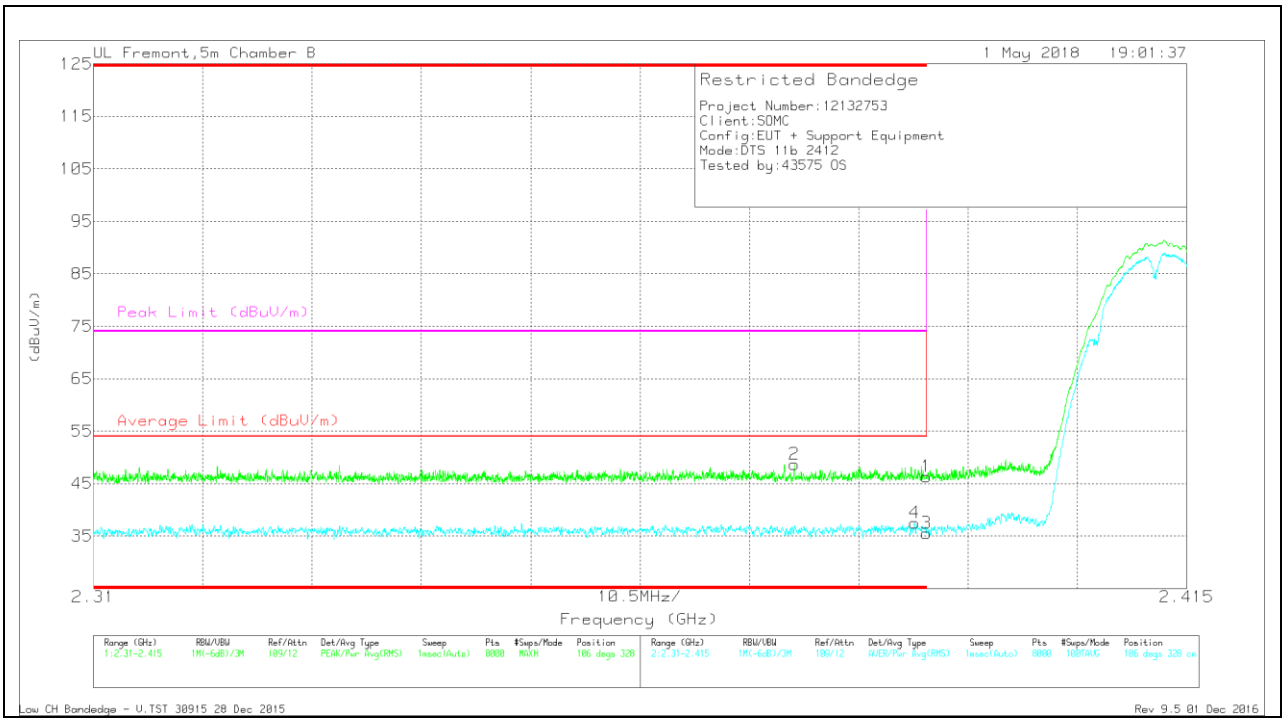
HORIZONTAL RESULT



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	36.7	Pk	32	-21.5	0	47.2	-	-	74	-26.8	149	119	H
2	* 2.39	38.22	Pk	32	-21.5	0	48.72	-	-	74	-25.28	149	119	H
3	* 2.39	26.52	RMS	32	-21.5	0	37.02	54	-16.98	-	-	149	119	H
4	* 2.389	27.22	RMS	32	-21.5	0	37.72	54	-16.28	-	-	149	119	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

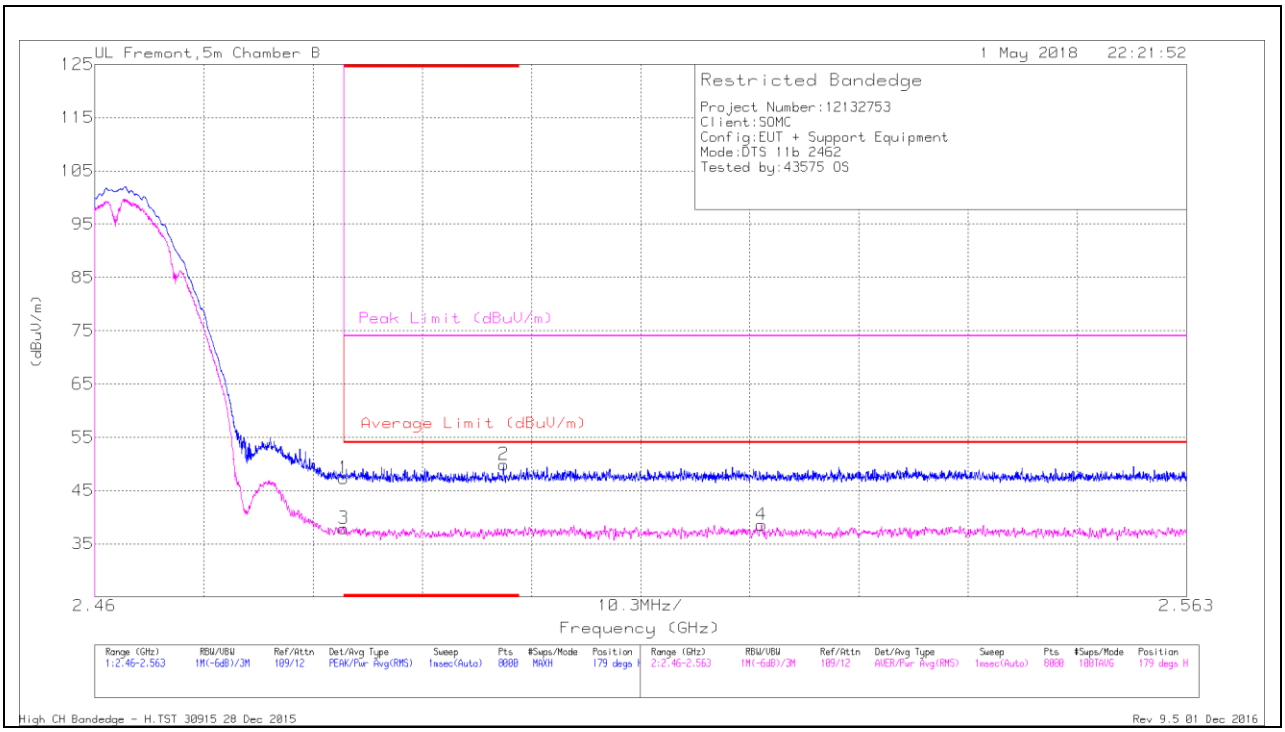


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.377	38.25	Pk	31.9	-21.5	0	48.65	-	-	74	-25.35	106	328	V
4	* 2.389	27.06	RMS	32	-21.5	0	37.56	54	-16.44	-	-	106	328	V
1	* 2.39	35.79	Pk	32	-21.5	0	46.29	-	-	74	-27.71	106	328	V
3	* 2.39	25.01	RMS	32	-21.5	0	35.51	54	-18.49	-	-	106	328	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

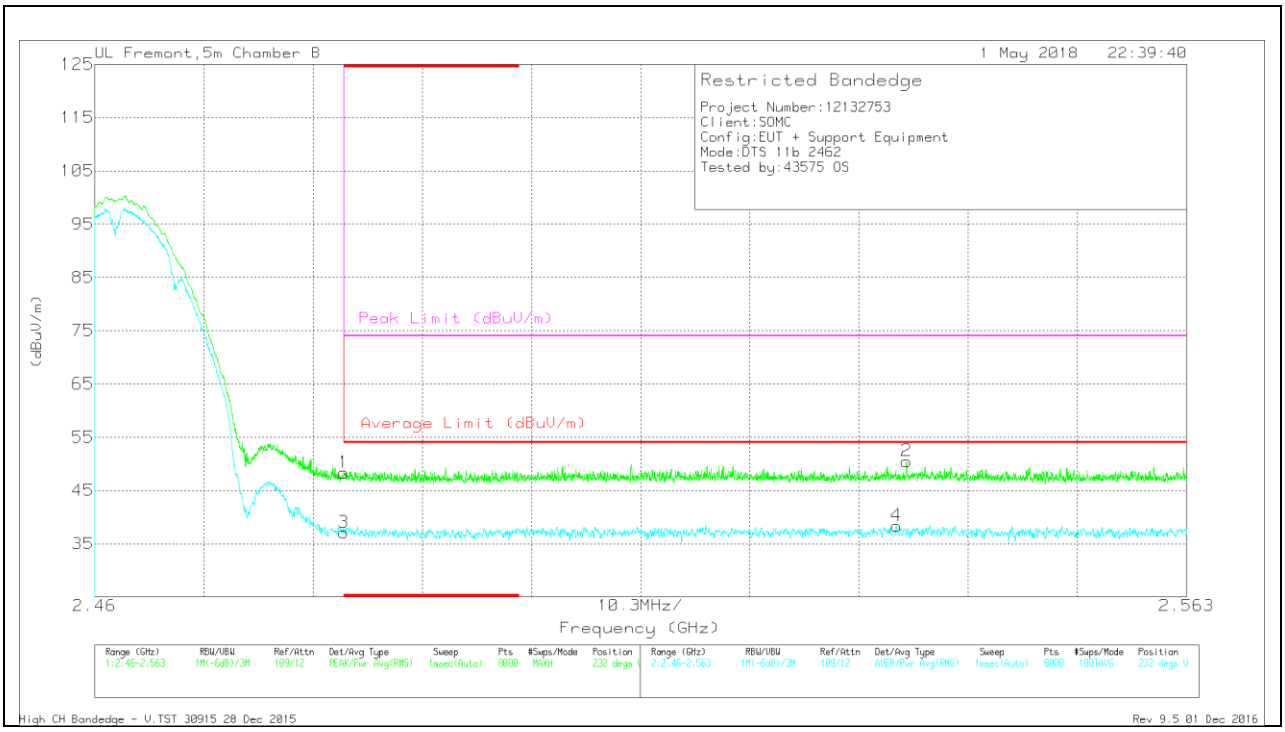
HORIZONTAL RESULT



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	36.31	Pk	32.5	-21.5	0	47.31	-	-	74	-26.69	179	350	H
2	* 2.499	38.78	Pk	32.6	-21.5	0	49.88	-	-	74	-24.12	179	350	H
3	* 2.484	26.9	RMS	32.5	-21.5	0	37.9	54	-16.1	-	-	179	350	H
4	2.523	27.36	RMS	32.6	-21.4	0	38.56	54	-15.44	-	-	179	350	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

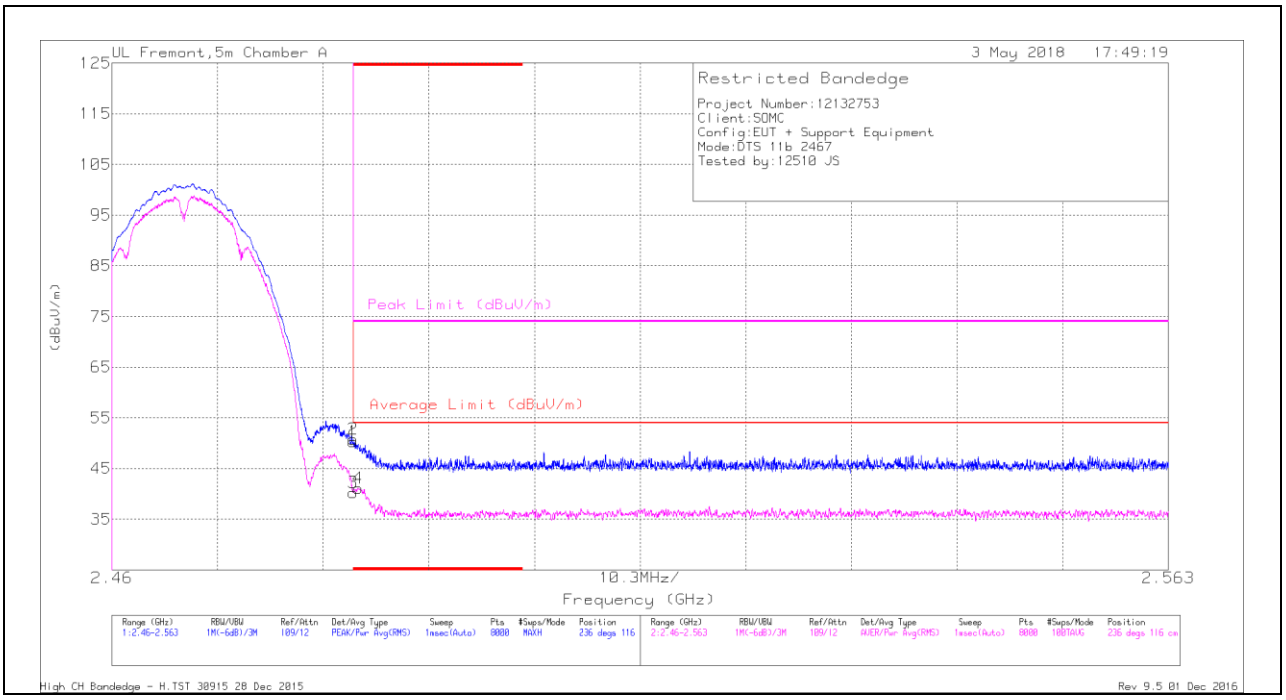


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	37.32	Pk	32.5	-21.5	0	48.32	-	-	74	-25.68	232	346	V
3	* 2.484	26.12	RMS	32.5	-21.5	0	37.12	54	-16.88	-	-	232	346	V
4	2.536	27.19	RMS	32.5	-21.3	0	38.39	54	-15.61	-	-	232	346	V
2	2.537	39.21	Pk	32.5	-21.2	0	50.51	-	-	74	-23.49	232	346	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 12)

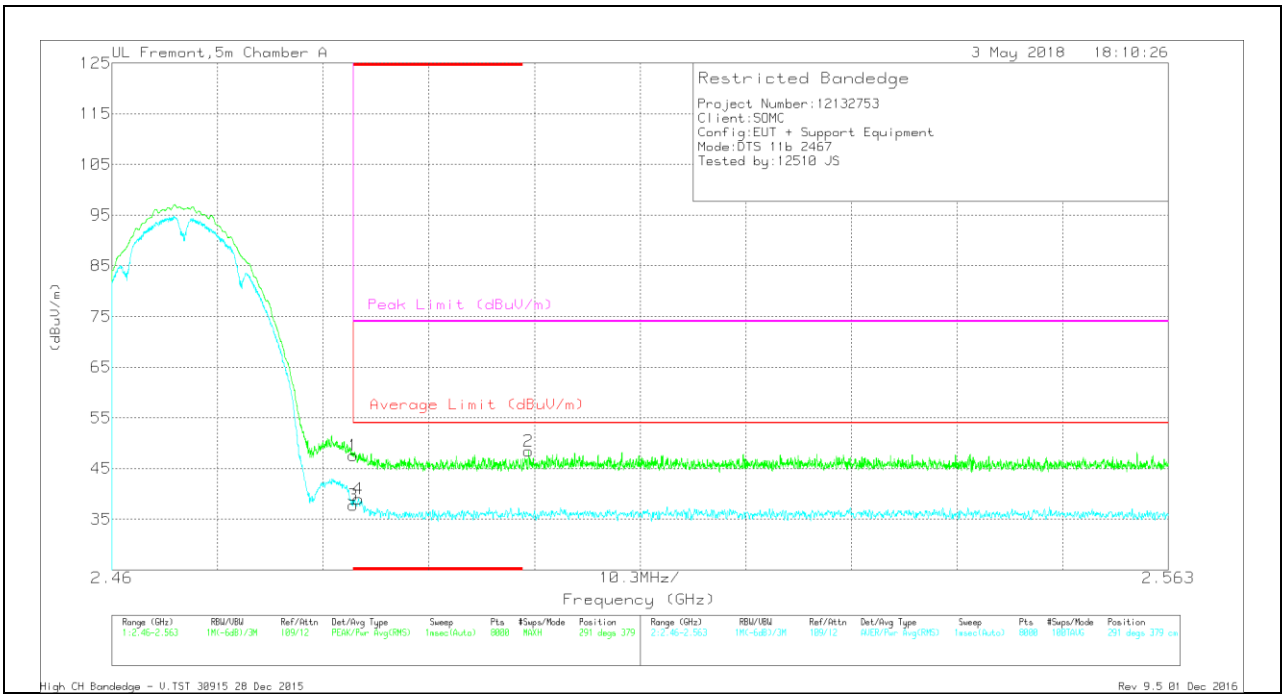
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T86Z (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	41.34	Pk	32.3	-23.3	0	50.34	-	-	74	-23.66	236	116	H
2	* 2.484	41.78	Pk	32.3	-23.3	0	50.78	-	-	74	-23.22	236	116	H
3	* 2.484	31.18	RMS	32.3	-23.3	0	40.18	54	-13.82	-	-	236	116	H
4	* 2.484	32.05	RMS	32.3	-23.2	0	41.15	54	-12.85	-	-	236	116	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

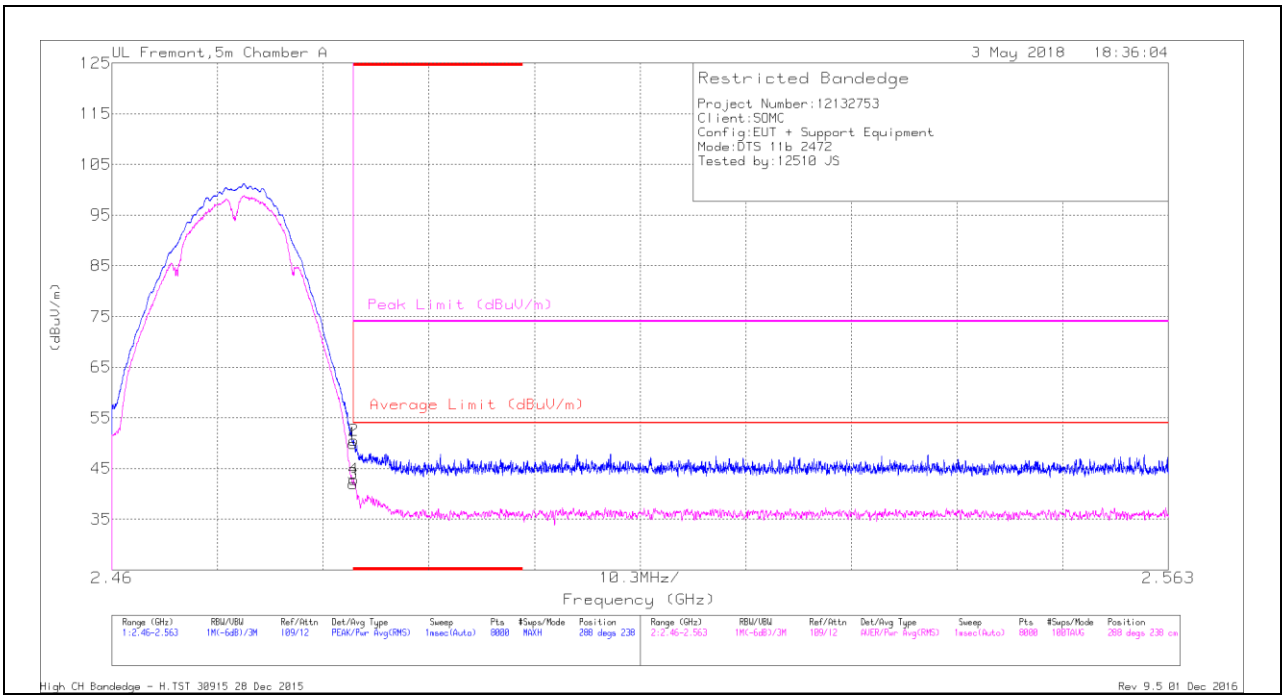


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	38.51	Pk	32.3	-23.3	0	47.51	-	-	74	-26.49	291	379	V
3	* 2.484	28.7	RMS	32.3	-23.3	0	37.7	54	-16.3	-	-	291	379	V
4	* 2.484	29.93	RMS	32.3	-23.2	0	39.03	54	-14.97	-	-	291	379	V
2	2.501	39.36	Pk	32.4	-23.3	0	48.46	-	-	74	-25.54	291	379	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 13)

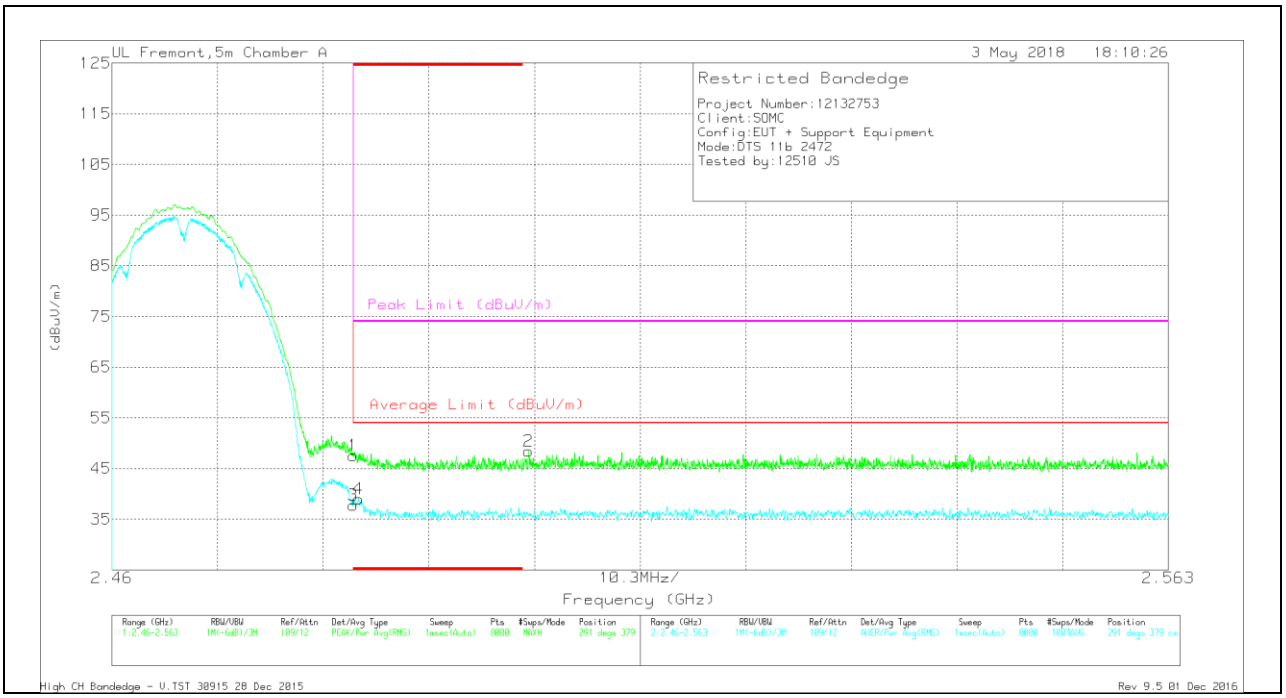
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	40.91	Pk	32.3	-23.3	0	49.91	-	-	74	-24.09	288	238	H
2	* 2.484	41.56	Pk	32.3	-23.3	0	50.56	-	-	74	-23.44	288	238	H
3	* 2.484	33.01	RMS	32.3	-23.3	0	42.01	54	-11.99	-	-	288	238	H
4	* 2.484	33.89	RMS	32.3	-23.3	0	42.89	54	-11.11	-	-	288	238	H

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

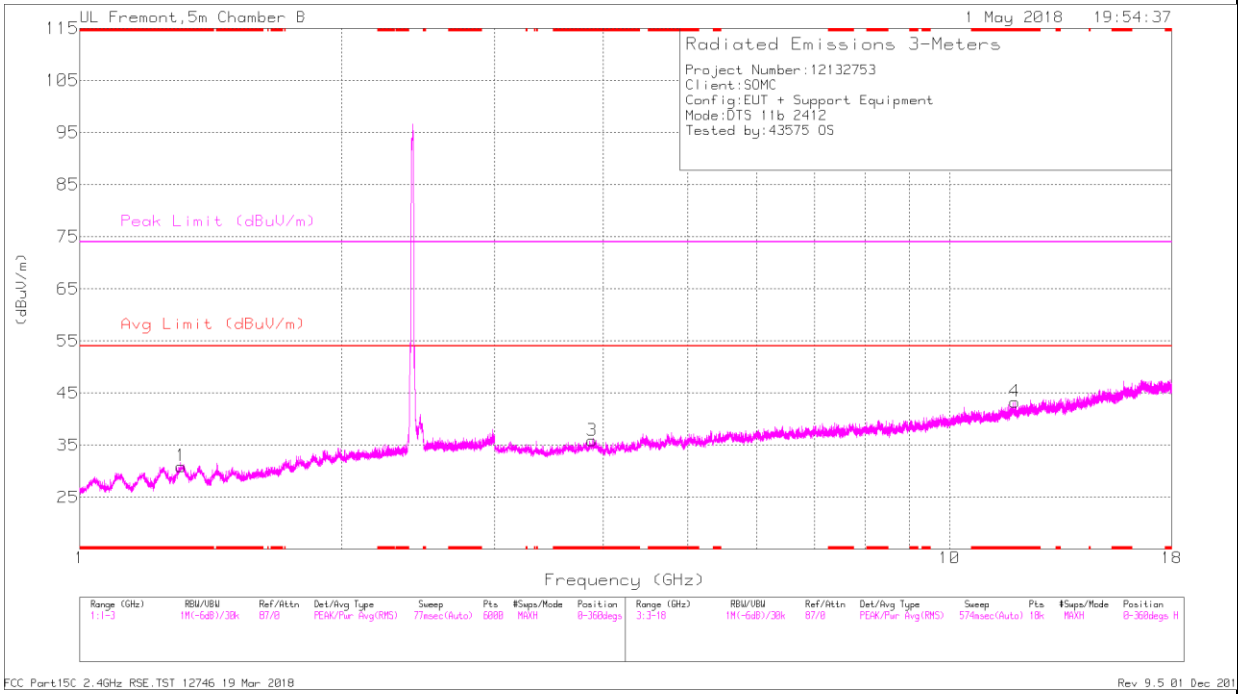


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	38.51	Pk	32.3	-23.3	0	47.51	-	-	74	-26.49	291	379	V
3	* 2.484	28.7	RMS	32.3	-23.3	0	37.7	54	-16.3	-	-	291	379	V
4	* 2.484	29.93	RMS	32.3	-23.2	0	39.03	54	-14.97	-	-	291	379	V
2	2.501	39.36	Pk	32.4	-23.3	0	48.46	-	-	74	-25.54	291	379	V

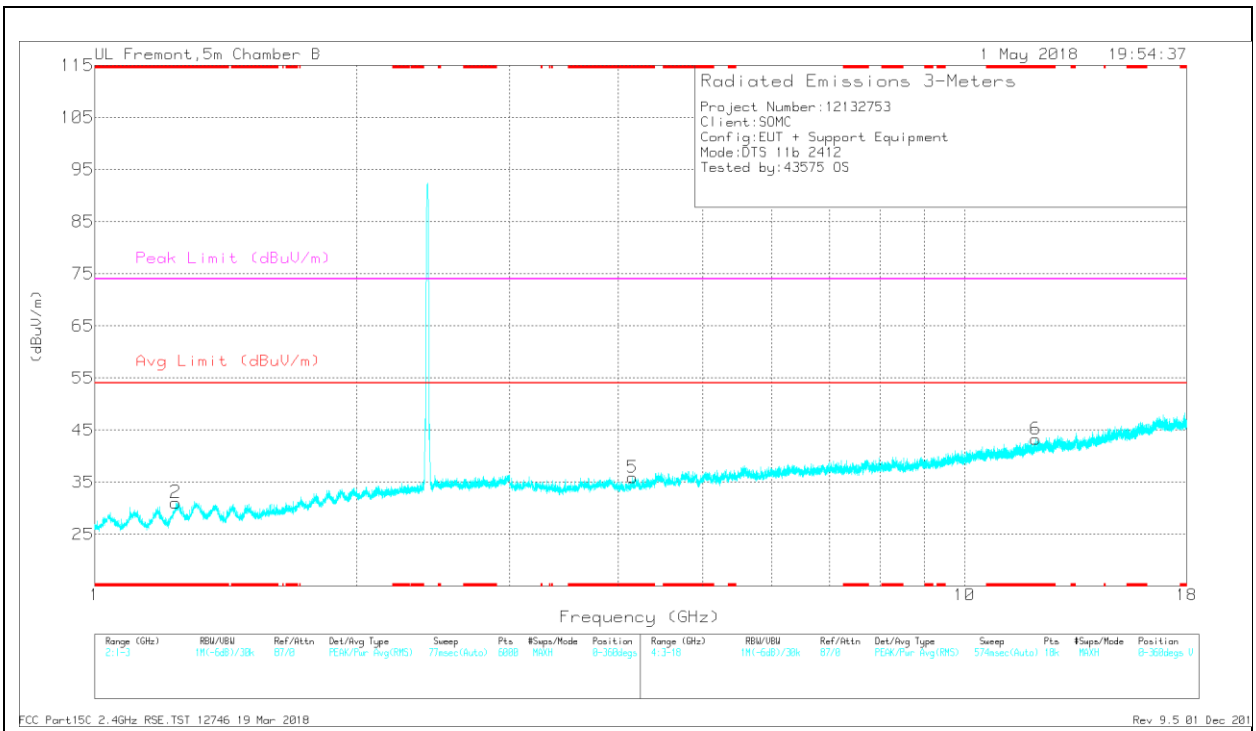
* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
* 1.31	31.35	PK2	28.9	-22.2	0	38.05	-	-	74	-35.95	202	375	H
* 1.31	19	MAv1	28.9	-22.2	0	25.7	54	-28.3	-	-	202	375	H
* 1.238	31.32	PK2	28.6	-22.6	0	37.32	-	-	74	-36.68	290	155	V
* 1.241	19.11	MAv1	28.6	-22.7	0	25.01	54	-28.99	-	-	290	155	V
* 3.885	39	PK2	33.5	-30.5	0	42	-	-	74	-32	338	354	H
* 3.887	27.54	MAv1	33.5	-30.4	0	30.64	54	-23.36	-	-	338	354	H
* 11.881	33.3	PK2	38.7	-23.7	0	48.3	-	-	74	-25.7	323	303	H
* 11.881	21.88	MAv1	38.7	-23.7	0	36.88	54	-17.12	-	-	323	303	H
* 4.152	39.26	PK2	33.4	-30.8	0	41.86	-	-	74	-32.14	78	171	V
* 4.154	27.57	MAv1	33.4	-30.8	0	30.17	54	-23.83	-	-	78	171	V
* 12.074	33.08	PK2	38.9	-23.8	0	48.18	-	-	74	-25.82	8	139	V
* 12.074	21.99	MAv1	38.9	-23.8	0	37.09	54	-16.91	-	-	8	139	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

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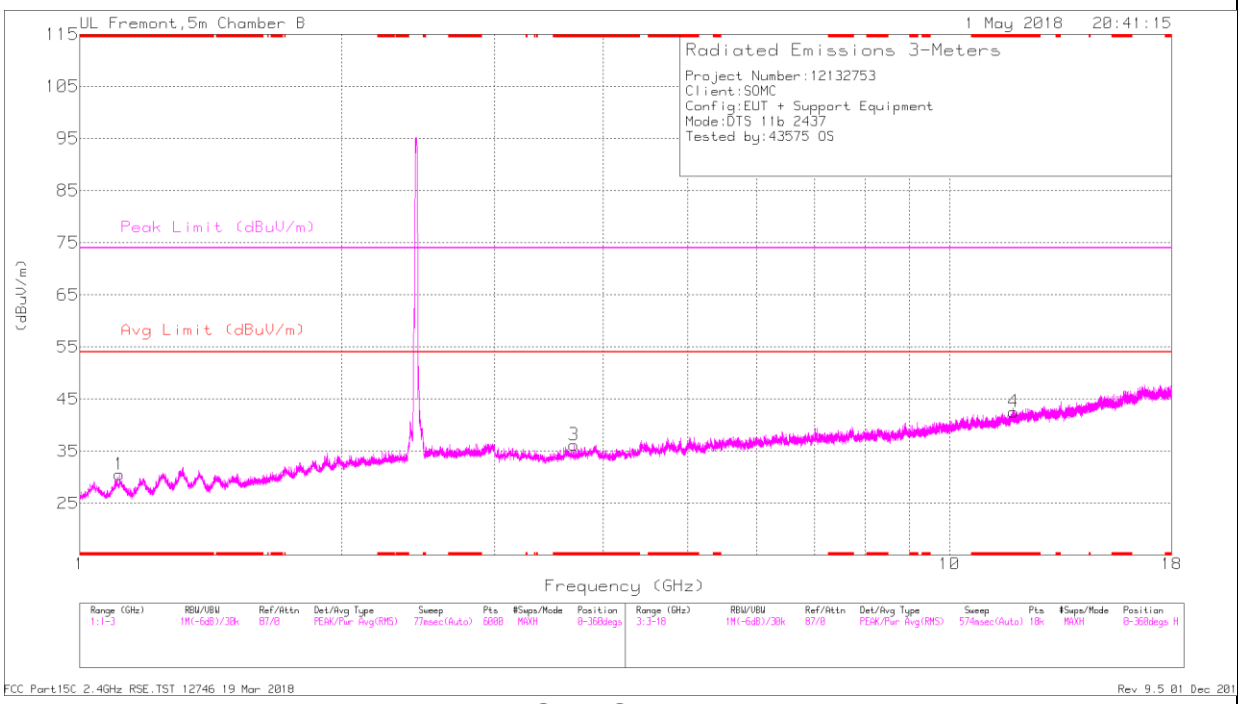
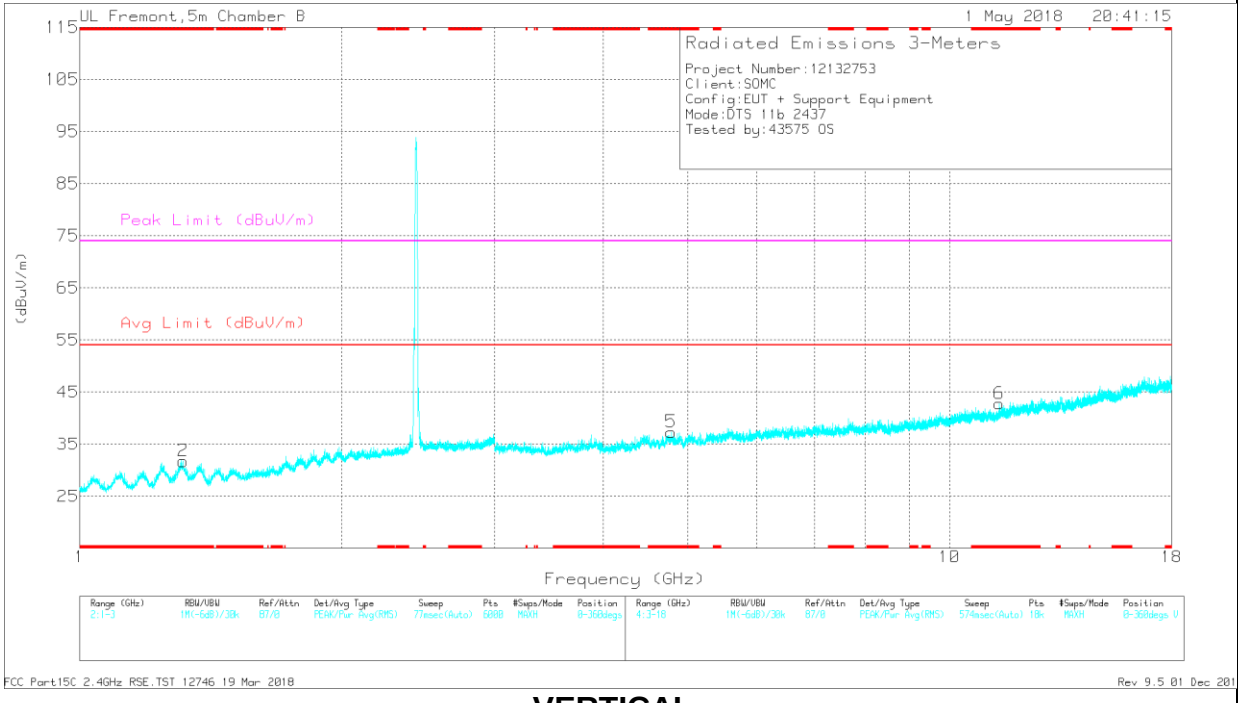
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
* 1.11	31.22	PK2	27.6	-23.2	0	35.62	-	-	74	-38.38	137	140	H
* 1.109	19.48	MAv1	27.6	-23.2	0	23.88	54	-30.12	-	-	137	140	H
* 1.313	30.76	PK2	28.9	-22	0	37.66	-	-	74	-36.34	99	128	V
* 1.313	18.93	MAv1	28.9	-22	0	25.83	54	-28.17	-	-	99	128	V
* 3.7	39.6	PK2	33.3	-31.6	0	41.3	-	-	74	-32.7	306	237	H
* 3.701	28.29	MAv1	33.3	-31.6	0	29.99	54	-24.01	-	-	306	237	H
* 11.844	33.25	PK2	38.6	-23.5	0	48.35	-	-	74	-25.65	192	252	H
* 11.844	21.8	MAv1	38.6	-23.5	0	36.9	54	-17.1	-	-	192	252	H
* 4.785	39.13	PK2	34.4	-29.6	0	43.93	-	-	74	-30.07	18	109	V
* 4.789	27.19	MAv1	34.4	-29.6	0	31.99	54	-22.01	-	-	18	109	V
* 11.406	33.81	PK2	38	-24	0	47.81	-	-	74	-26.19	356	132	V
* 11.405	22.15	MAv1	38	-24	0	36.15	54	-17.85	-	-	356	132	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

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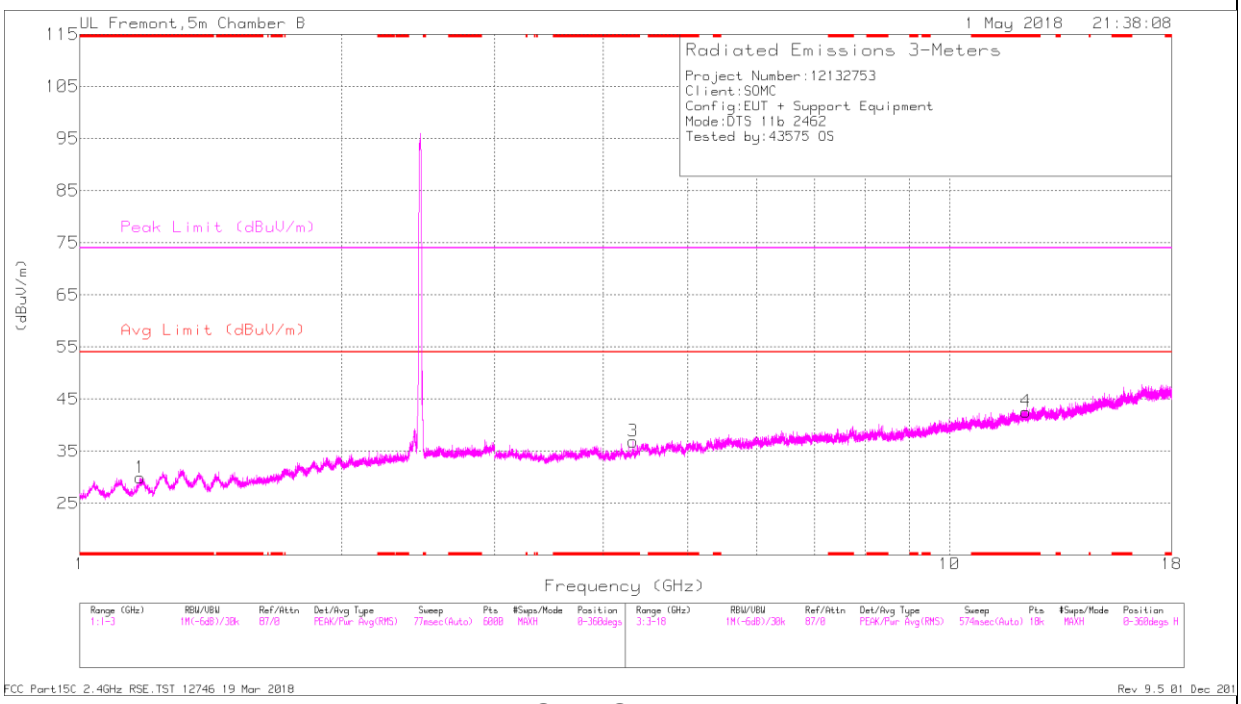
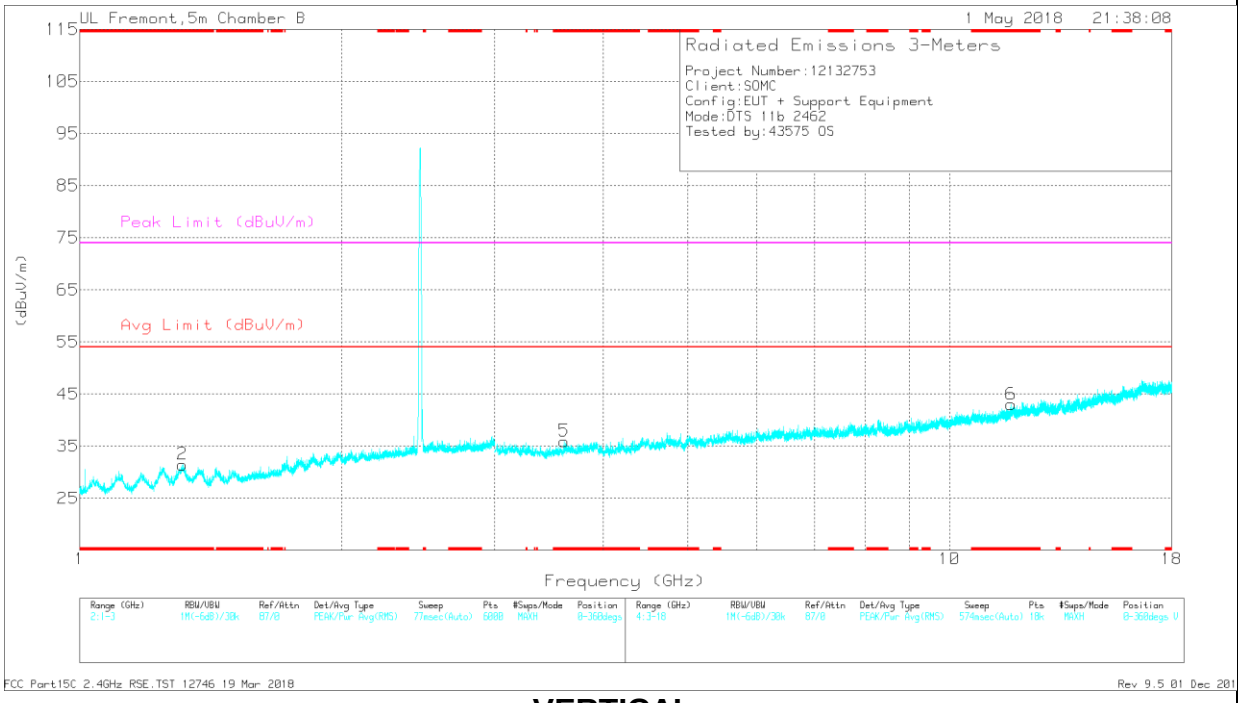
HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
* 1.172	31	PK2	27.7	-22.8	0	35.9	-	-	74	-38.1	353	330	H
* 1.175	19.3	MAv1	27.7	-23.1	0	23.9	54	-30.1	-	-	353	330	H
* 1.312	31.62	PK2	28.9	-22.1	0	38.42	-	-	74	-35.58	254	331	V
* 1.311	19.04	MAv1	28.9	-22.1	0	25.84	54	-28.16	-	-	254	331	V
* 4.324	40.42	PK2	33.6	-31.9	0	42.12	-	-	74	-31.88	49	280	H
* 4.327	28.67	MAv1	33.6	-31.8	0	30.47	54	-23.53	-	-	49	280	H
* 12.24	32.98	PK2	39.1	-23.9	0	48.18	-	-	74	-25.82	179	278	H
* 12.242	22.09	MAv1	39.1	-23.9	0	37.29	54	-16.71	-	-	179	278	H
* 3.606	40.19	PK2	33.2	-31.8	0	41.59	-	-	74	-32.41	339	116	V
* 3.607	28.37	MAv1	33.2	-31.8	0	29.77	54	-24.23	-	-	339	116	V
* 11.772	33.92	PK2	38.5	-23.6	0	48.82	-	-	74	-25.18	178	167	V
* 11.772	21.79	MAv1	38.5	-23.6	0	36.69	54	-17.31	-	-	178	167	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

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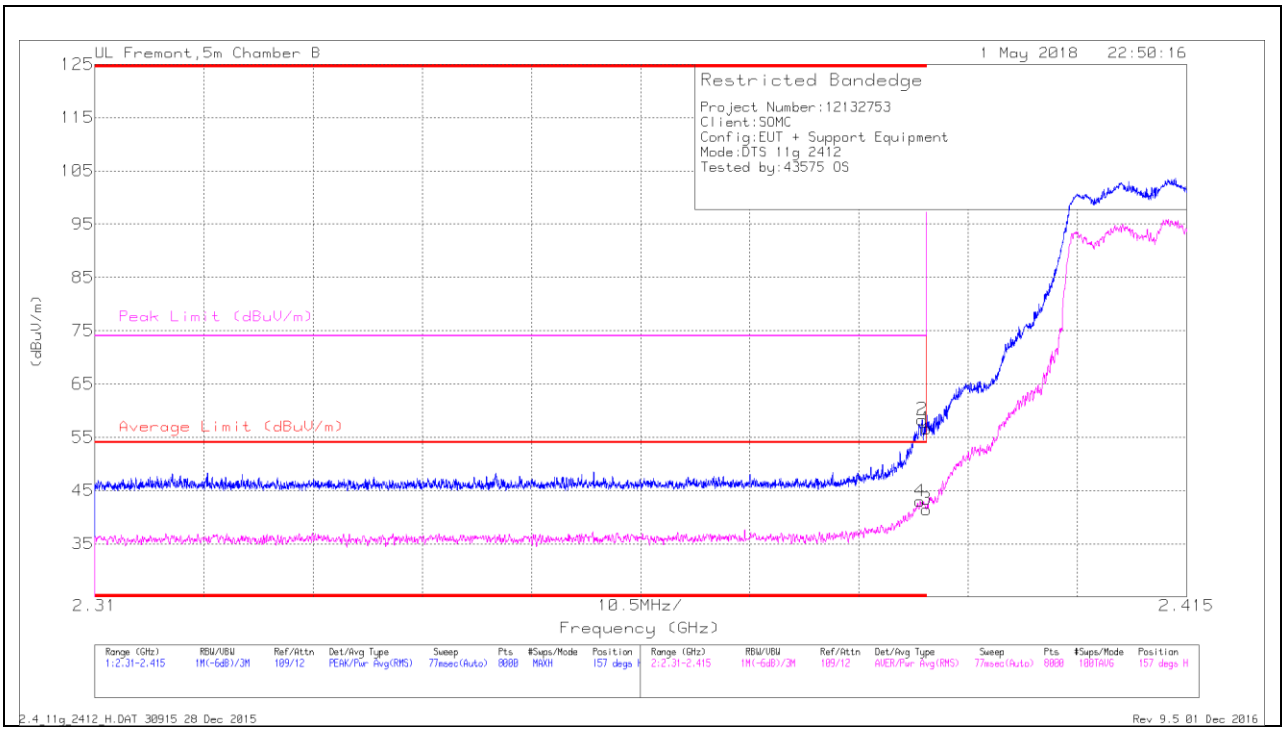
9.1.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1)

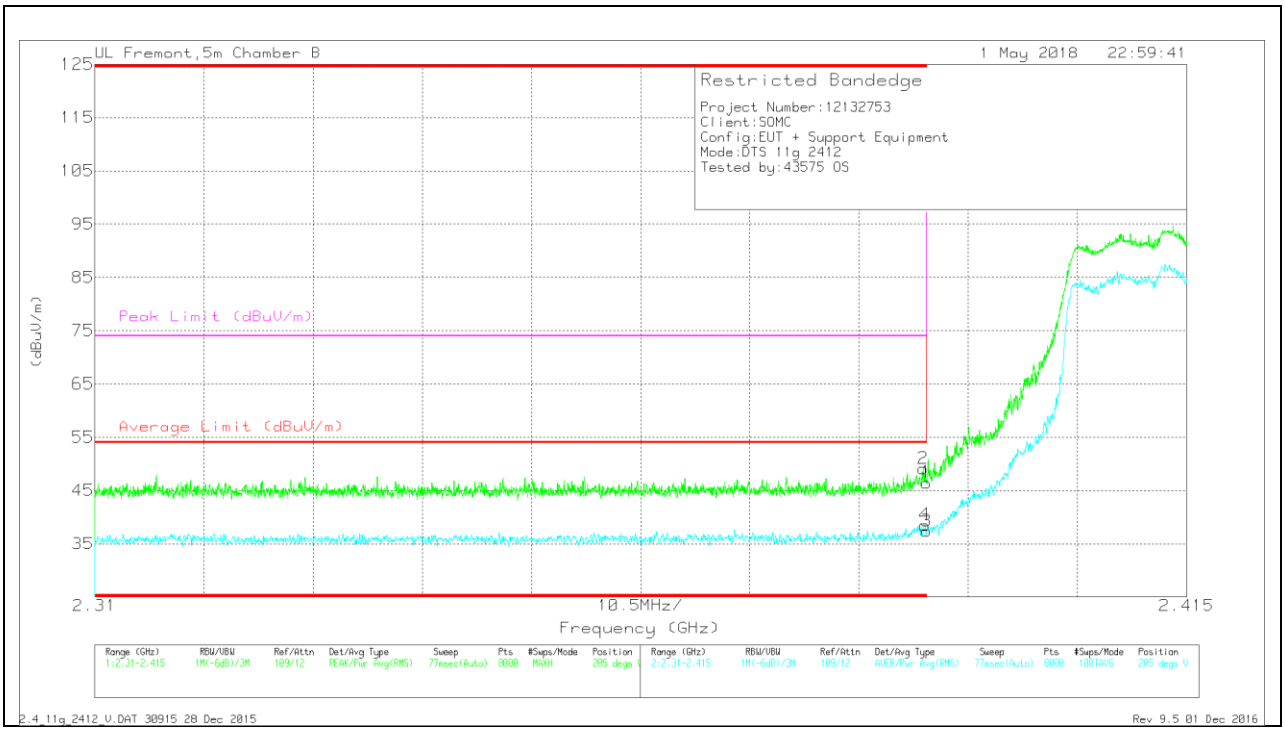
HORIZONTAL RESULT



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	46.13	Pk	32	-21.5	0	56.63	-	-	74	-17.37	157	124	H
2	* 2.39	47.81	Pk	32	-21.5	0	58.31	-	-	74	-15.69	157	124	H
3	* 2.39	30.96	RMS	32	-21.5	0	41.46	54	-12.54	-	-	157	124	H
4	* 2.389	32.47	RMS	32	-21.5	0	42.97	54	-11.03	-	-	157	124	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

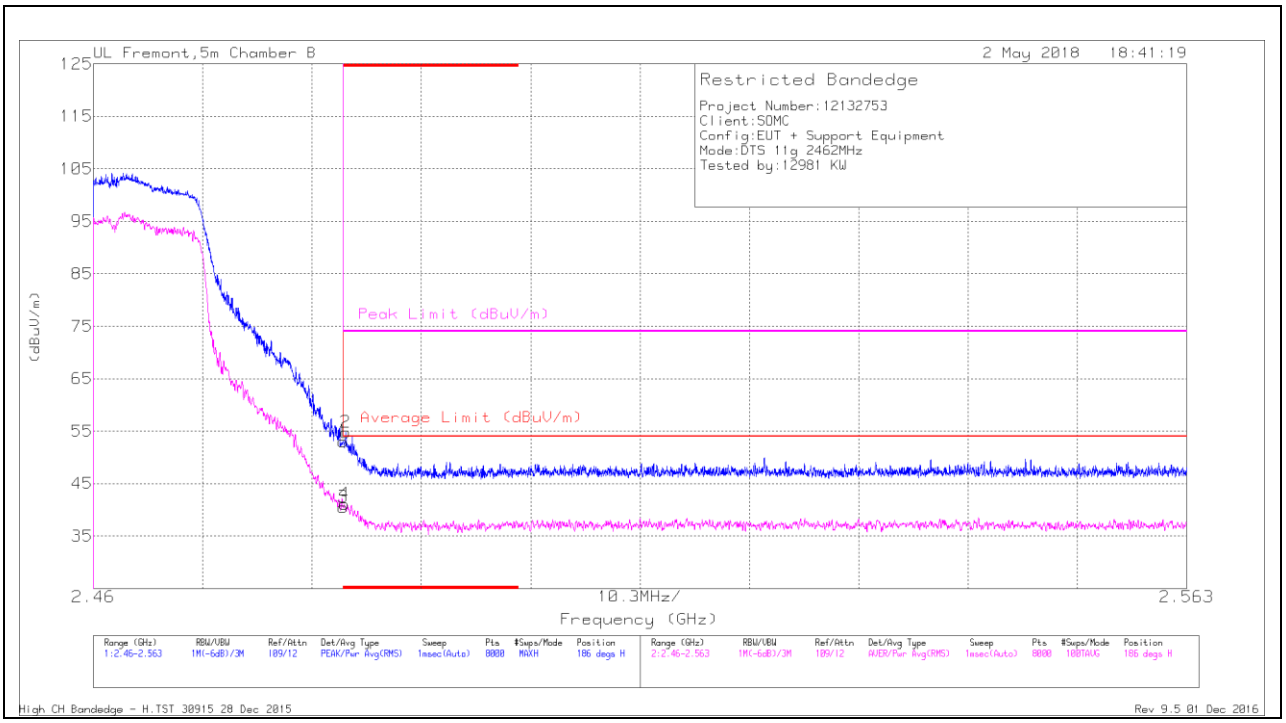


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	35.98	Pk	32	-21.5	0	46.48	-	-	74	-27.52	285	361	V
2	* 2.39	38.58	Pk	32	-21.5	0	49.08	-	-	74	-24.92	285	361	V
3	* 2.39	26.88	RMS	32	-21.5	0	37.38	54	-16.62	-	-	285	361	V
4	* 2.39	28	RMS	32	-21.5	0	38.5	54	-15.5	-	-	285	361	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

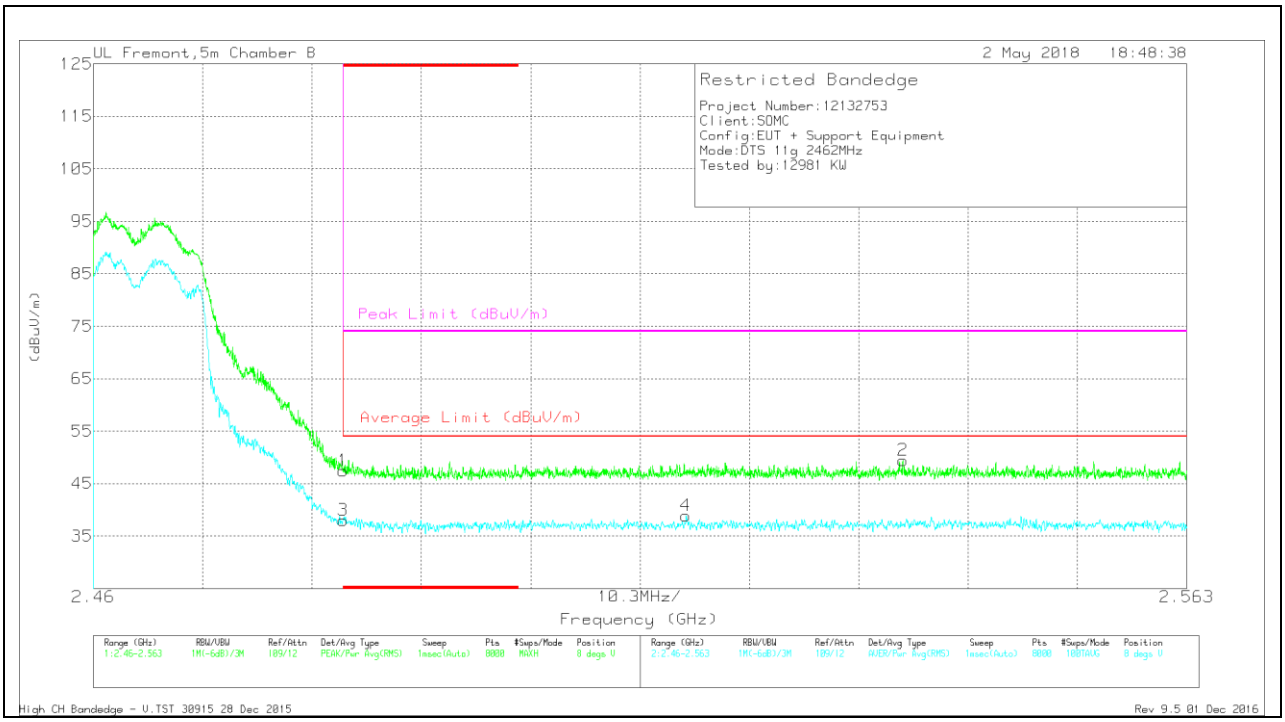
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (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	41.99	Pk	32.5	-21.5	52.99	-	-	74	-21.01	186	168	H
2	* 2.484	43.74	Pk	32.5	-21.5	54.74	-	-	74	-19.26	186	168	H
3	* 2.484	29.52	RMS	32.5	-21.5	40.52	54	-13.48	-	-	186	168	H
4	* 2.484	30.15	RMS	32.5	-21.5	41.15	54	-12.85	-	-	186	168	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

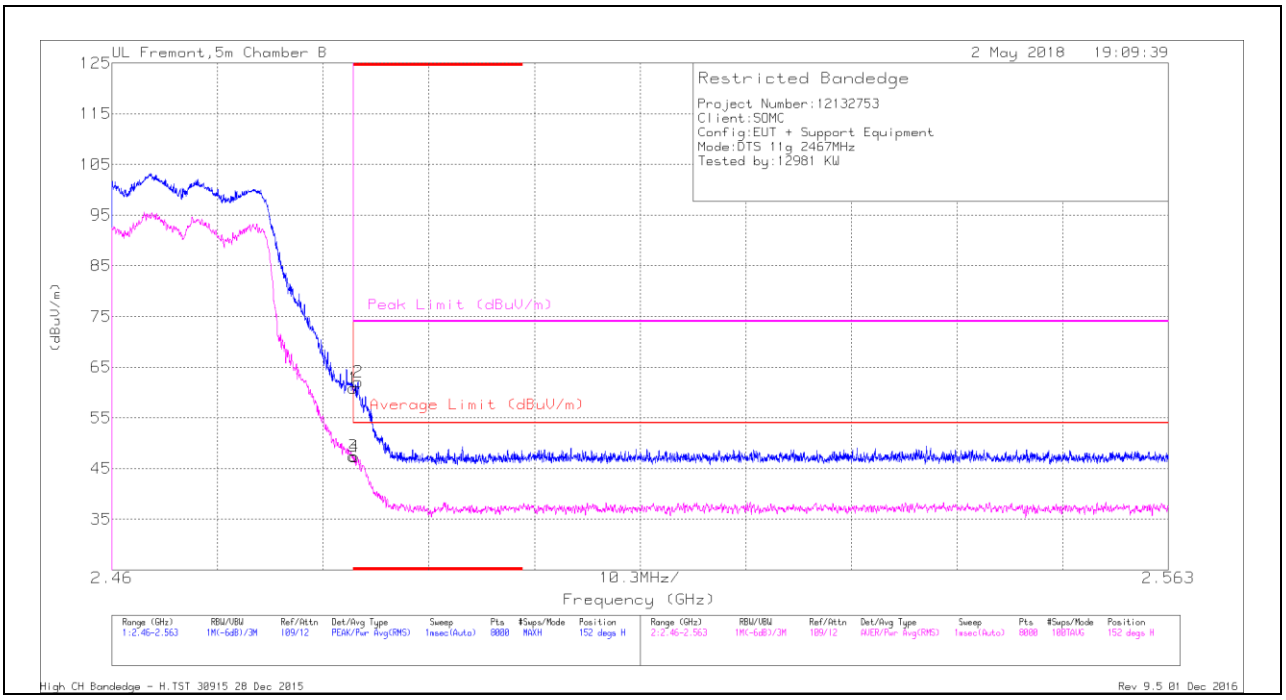


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	36.47	Pk	32.5	-21.5	47.47	-	-	74	-26.53	8	358	V
3	* 2.484	26.99	RMS	32.5	-21.5	37.99	54	-16.01	-	-	8	358	V
4	2.516	27.52	RMS	32.6	-21.3	38.82	54	-15.18	-	-	8	358	V
2	2.536	38.15	Pk	32.5	-21.2	49.45	-	-	74	-24.55	8	358	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 12)

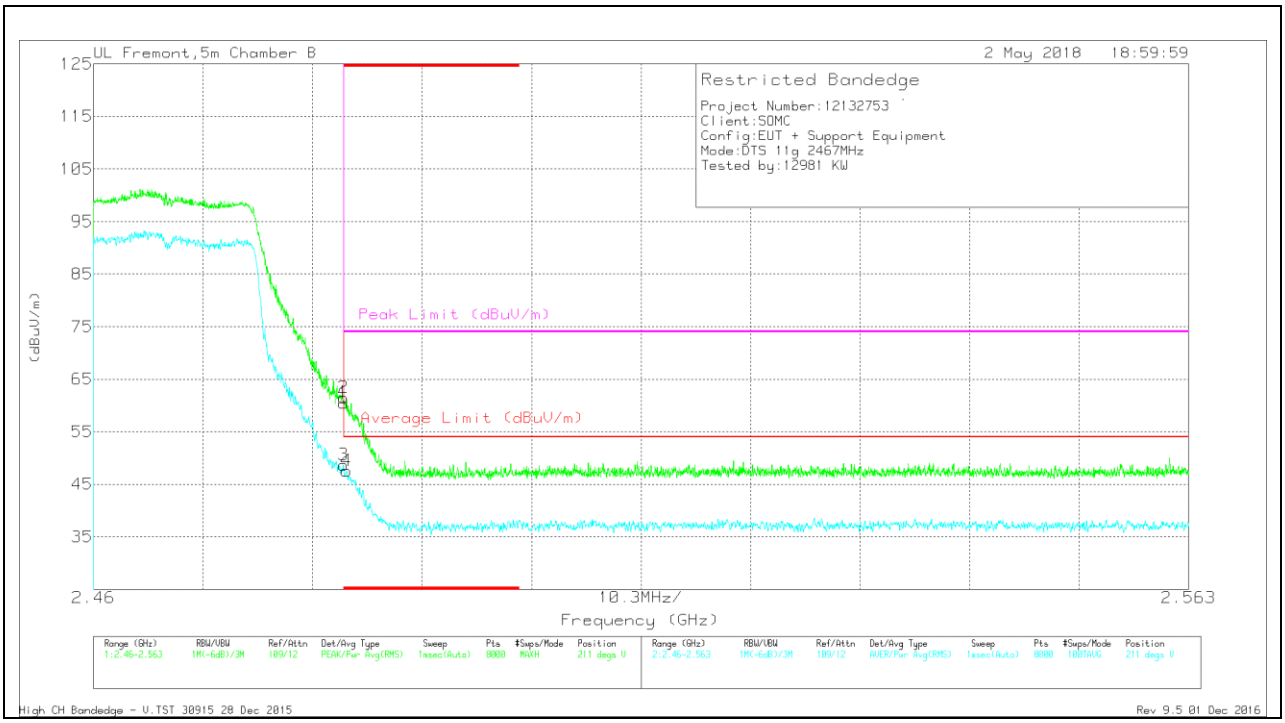
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (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	49.84	Pk	32.5	-21.5	60.84	-	-	74	-13.16	152	121	H
2	* 2.484	51.04	Pk	32.5	-21.5	62.04	-	-	74	-11.96	152	121	H
3	* 2.484	36.46	RMS	32.5	-21.5	47.46	54	-6.54	-	-	152	121	H
4	* 2.484	36.36	RMS	32.5	-21.5	47.36	54	-6.64	-	-	152	121	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

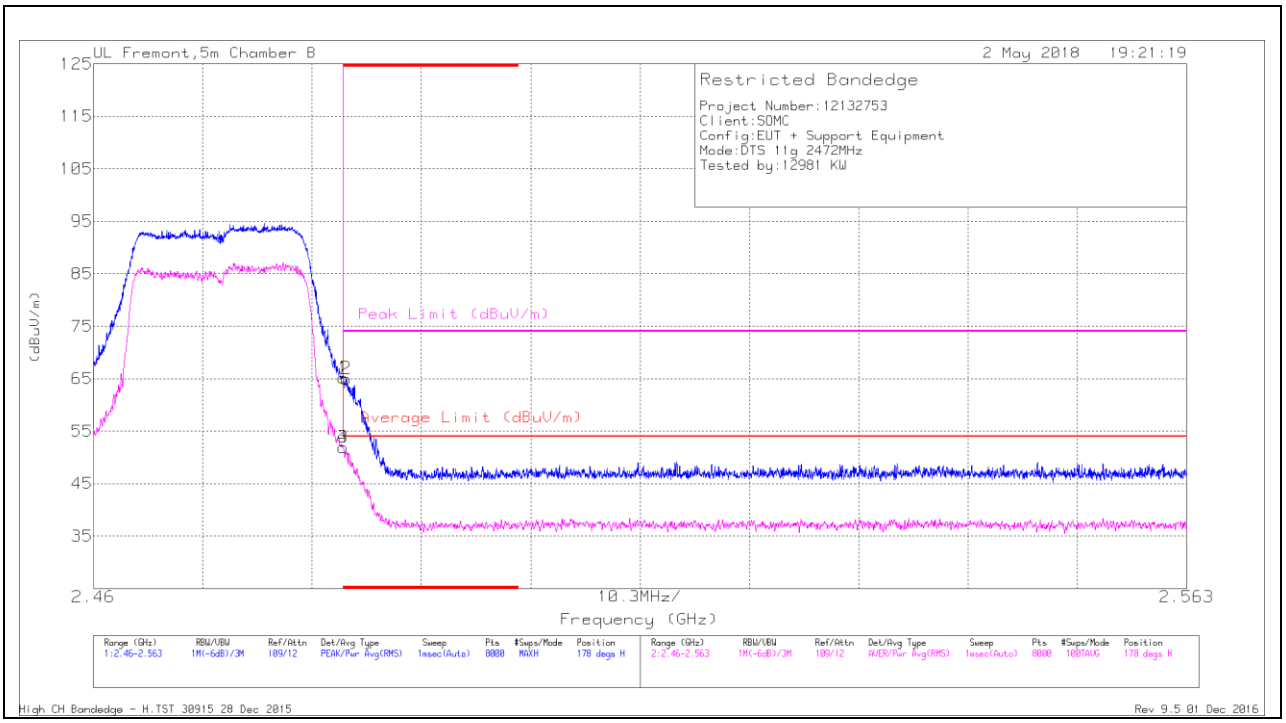


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.53	Pk	32.5	-21.5	60.53	-	-	74	-13.47	211	345	V
2	* 2.484	50.5	Pk	32.5	-21.5	61.5	-	-	74	-12.5	211	345	V
3	* 2.484	37.63	RMS	32.5	-21.5	48.63	54	-5.37	-	-	211	345	V
4	* 2.484	36.52	RMS	32.5	-21.5	47.52	54	-6.48	-	-	211	345	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 13)

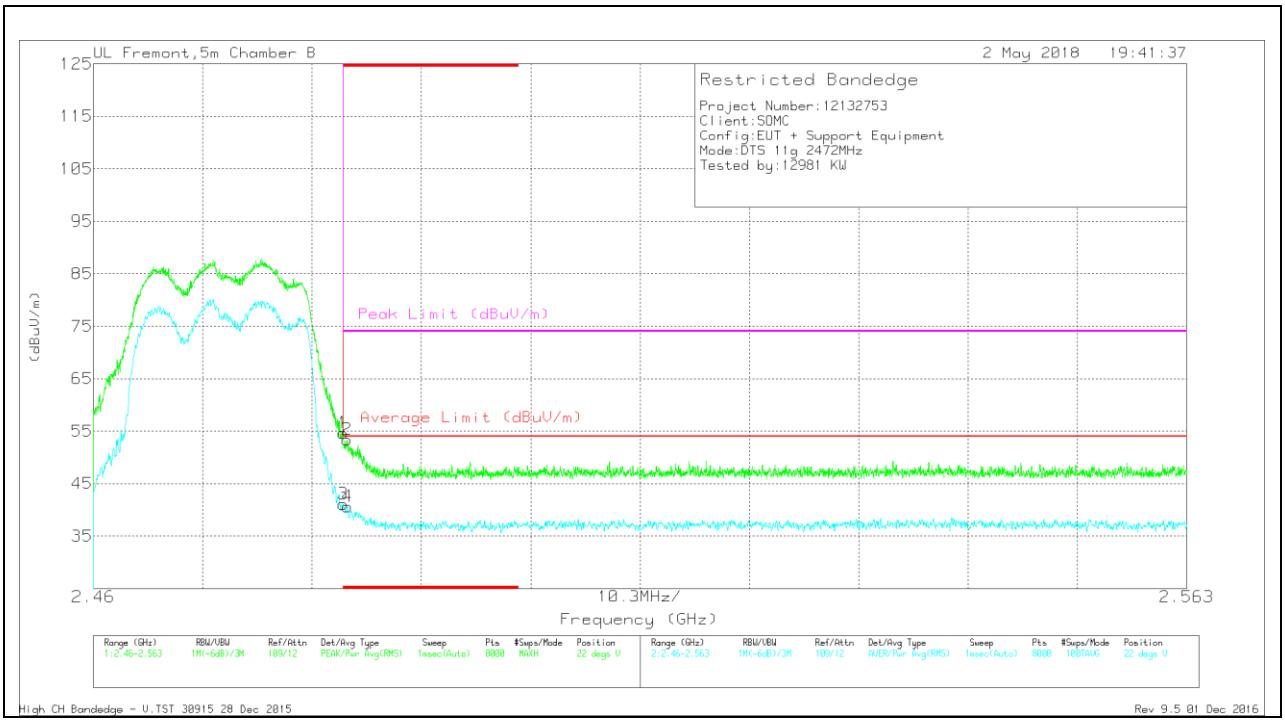
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (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	54.21	Pk	32.5	-21.5	65.21	-	-	74	-8.79	178	125	H
2	* 2.484	54	Pk	32.5	-21.5	65	-	-	74	-9	178	125	H
3	* 2.484	40.91	RMS	32.5	-21.5	51.91	54	-2.09	-	-	178	125	H
4	* 2.484	40.92	RMS	32.5	-21.5	51.92	54	-2.08	-	-	178	125	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

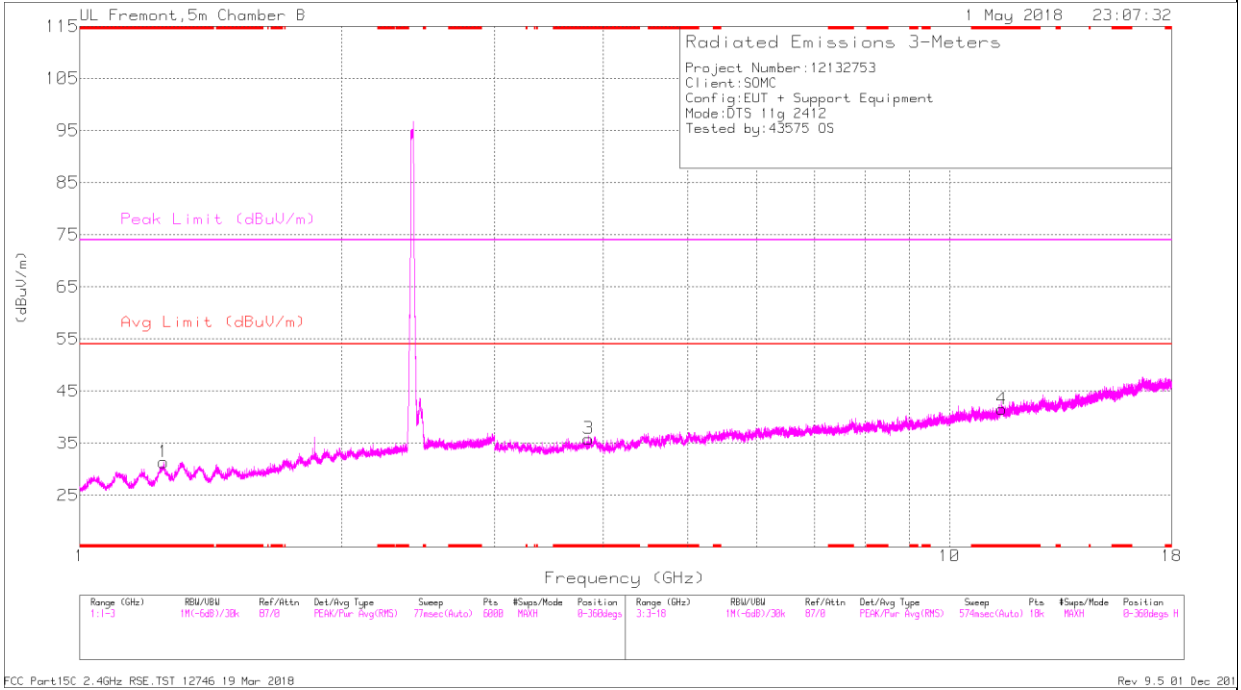


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.65	Pk	32.5	-21.5	54.65	-	-	74	-19.35	22	303	V
2	* 2.484	42.39	Pk	32.5	-21.5	53.39	-	-	74	-20.61	22	303	V
3	* 2.484	30.06	RMS	32.5	-21.5	41.06	54	-12.94	-	-	22	303	V
4	* 2.484	29.58	RMS	32.5	-21.5	40.58	54	-13.42	-	-	22	303	V

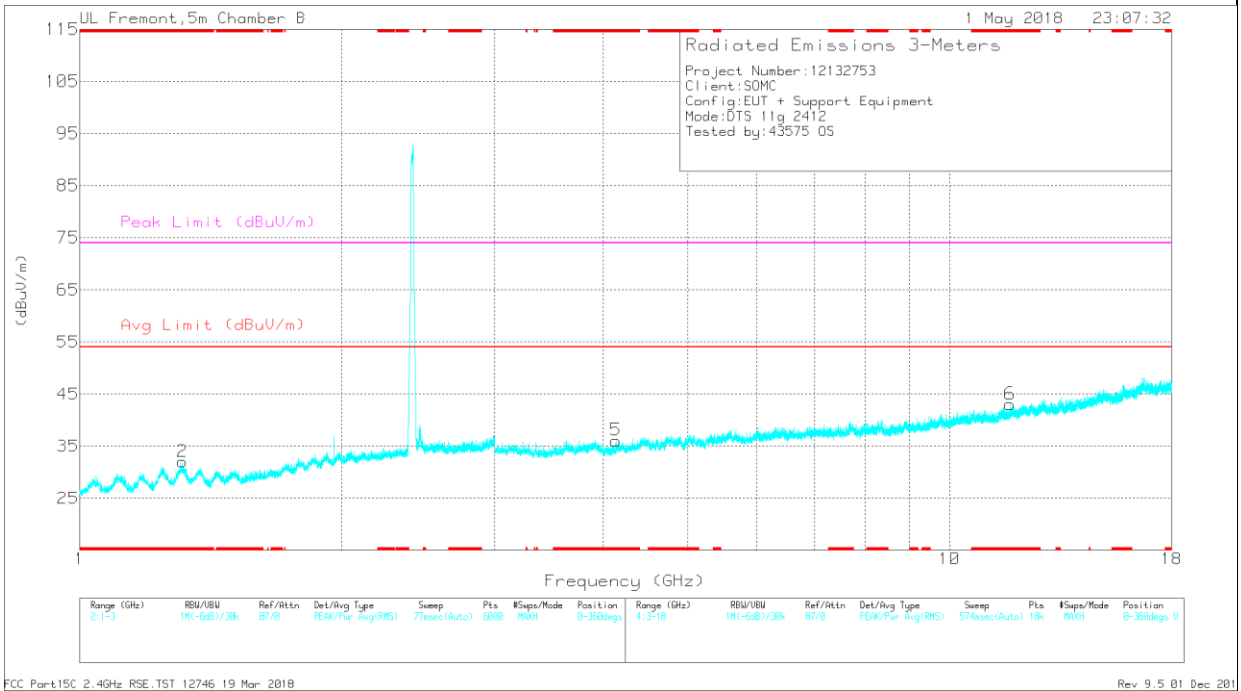
* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
* 1.249	31.24	PK2	28.8	-22.5	0	37.54	-	-	74	-36.46	353	393	H
* 1.248	19.21	MAv1	28.8	-22.5	0	25.51	54	-28.49	-	-	353	393	H
* 1.313	30.81	PK2	28.9	-22	0	37.71	-	-	74	-36.29	206	319	V
* 1.312	18.94	MAv1	28.9	-22.1	0	25.74	54	-28.26	-	-	206	319	V
* 3.848	39.8	PK2	33.5	-31	0	42.3	-	-	74	-31.7	224	121	H
* 3.848	27.93	MAv1	33.5	-31	0	30.43	54	-23.57	-	-	224	121	H
* 11.487	33.43	PK2	38.1	-23.7	0	47.83	-	-	74	-26.17	338	224	H
* 11.488	22.21	MAv1	38.1	-23.7	0	36.61	54	-17.39	-	-	338	224	H
* 4.135	39.03	PK2	33.4	-31	0	41.43	-	-	74	-32.57	107	374	V
* 4.137	27.47	MAv1	33.4	-31	0	29.87	54	-24.13	-	-	107	374	V
* 11.734	33.38	PK2	38.5	-24.1	0	47.78	-	-	74	-26.22	241	106	V
* 11.734	22	MAv1	38.5	-24.1	0	36.4	54	-17.6	-	-	241	106	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

UL VERIFICATION SERVICES INC.
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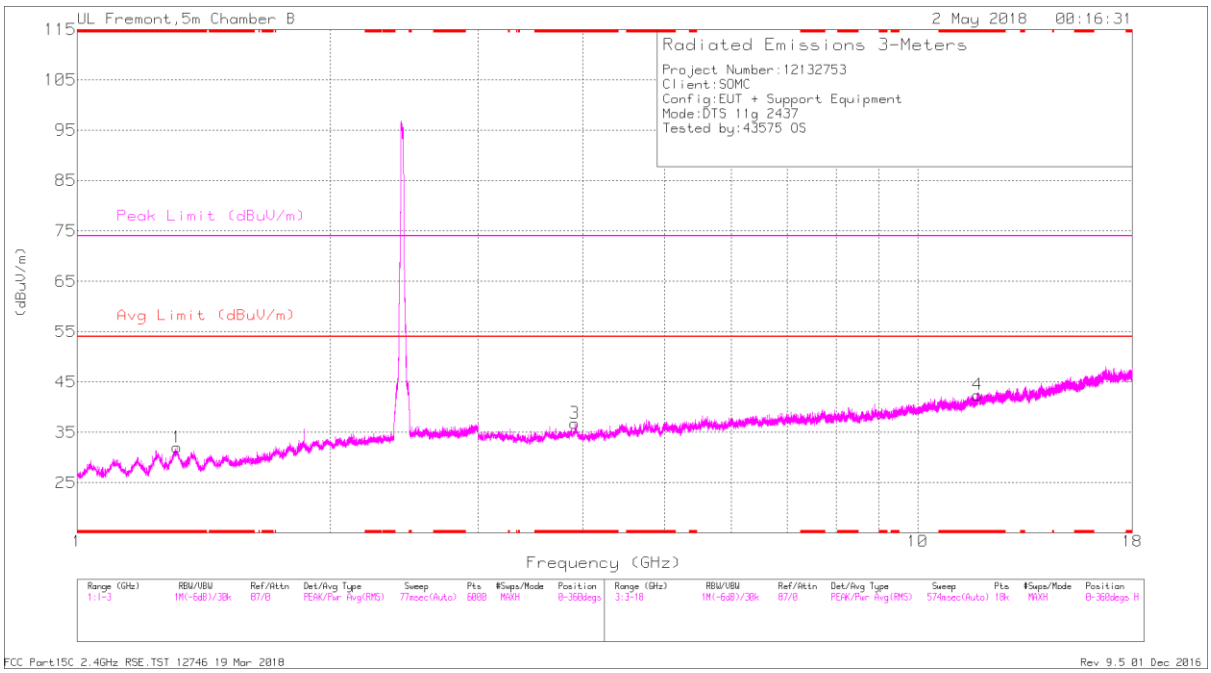
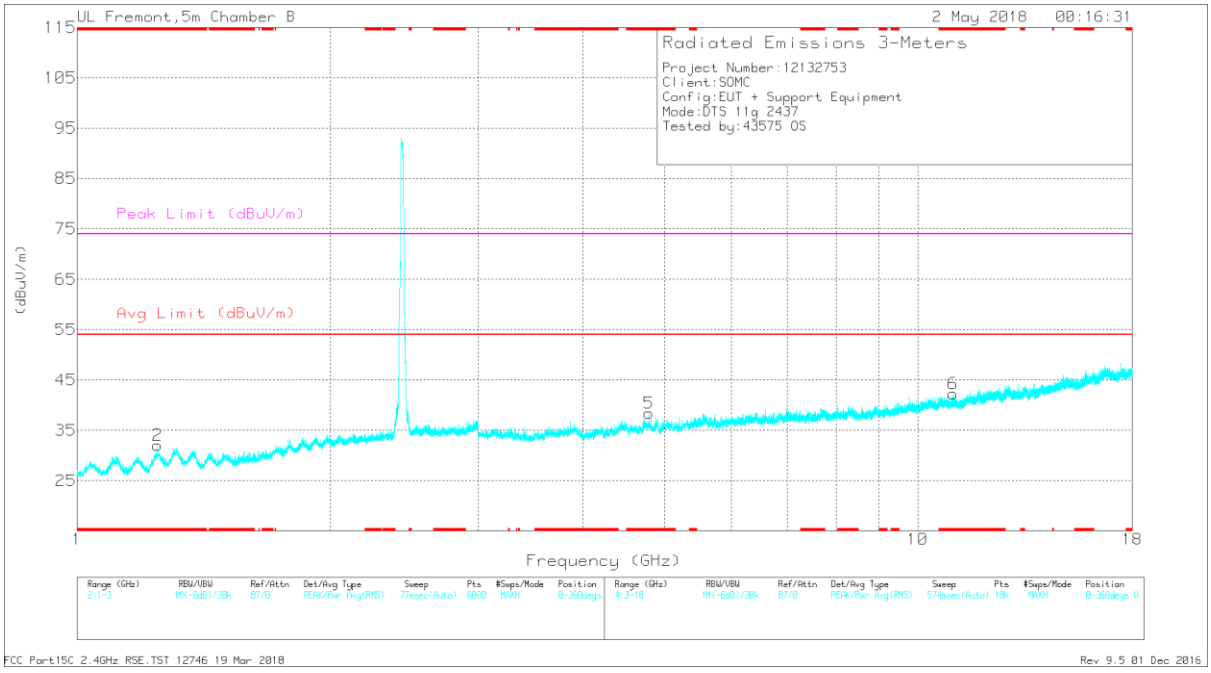
MID CHANNEL, CH 6 RESULTS



HORIZONTAL



VERTICAL

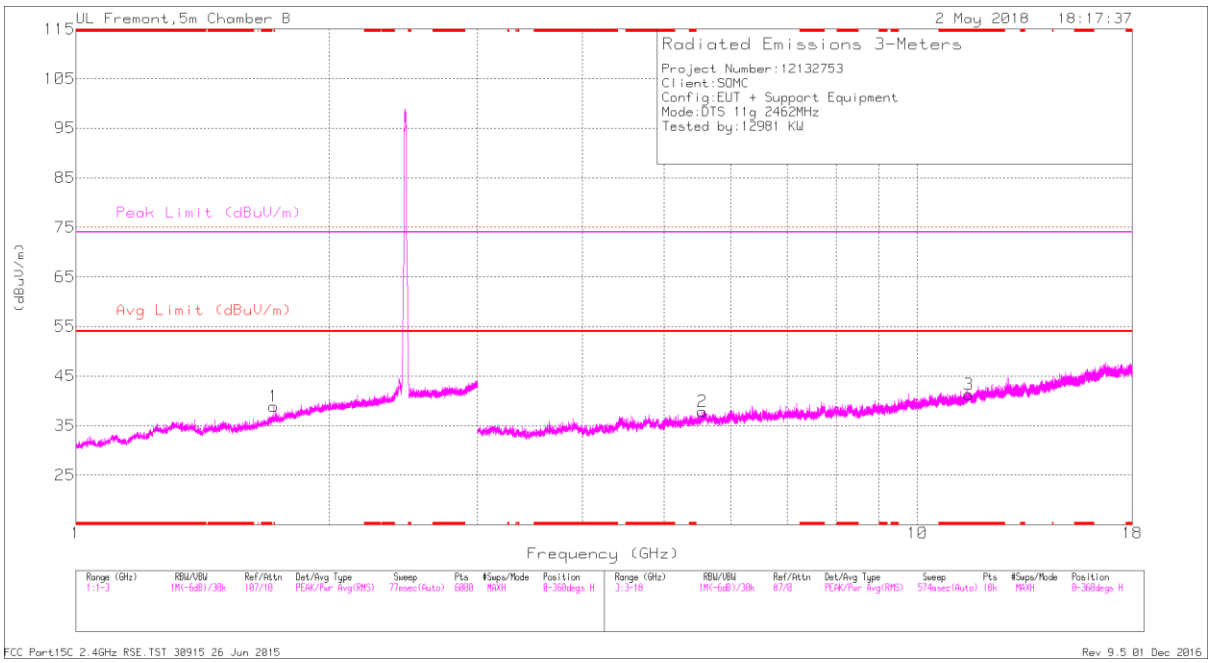
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
* 1.313	31.14	PK2	28.9	-22	0	38.04	-	-	74	-35.96	105	267	H
* 1.313	18.95	MAv1	28.9	-22	0	25.85	54	-28.15	-	-	105	267	H
* 1.247	32.06	PK2	28.7	-22.5	0	38.26	-	-	74	-35.74	52	253	V
* 1.246	19.22	MAv1	28.7	-22.6	0	25.32	54	-28.68	-	-	52	253	V
* 3.91	39.44	PK2	33.5	-30.3	0	42.64	-	-	74	-31.36	203	102	H
* 3.913	27.93	MAv1	33.5	-30.3	0	31.13	54	-22.87	-	-	203	102	H
* 11.789	33.38	PK2	38.6	-23.4	0	48.58	-	-	74	-25.42	314	208	H
* 11.789	21.95	MAv1	38.6	-23.4	0	37.15	54	-16.85	-	-	314	208	H
* 4.793	38.67	PK2	34.4	-29.8	0	43.27	-	-	74	-30.73	304	279	V
* 4.795	27.49	MAv1	34.4	-30	0	31.89	54	-22.11	-	-	304	279	V
* 11.02	33.89	PK2	37.7	-24.1	0	47.49	-	-	74	-26.51	7	316	V
* 11.022	22.08	MAv1	37.7	-24.2	0	35.58	54	-18.42	-	-	7	316	V

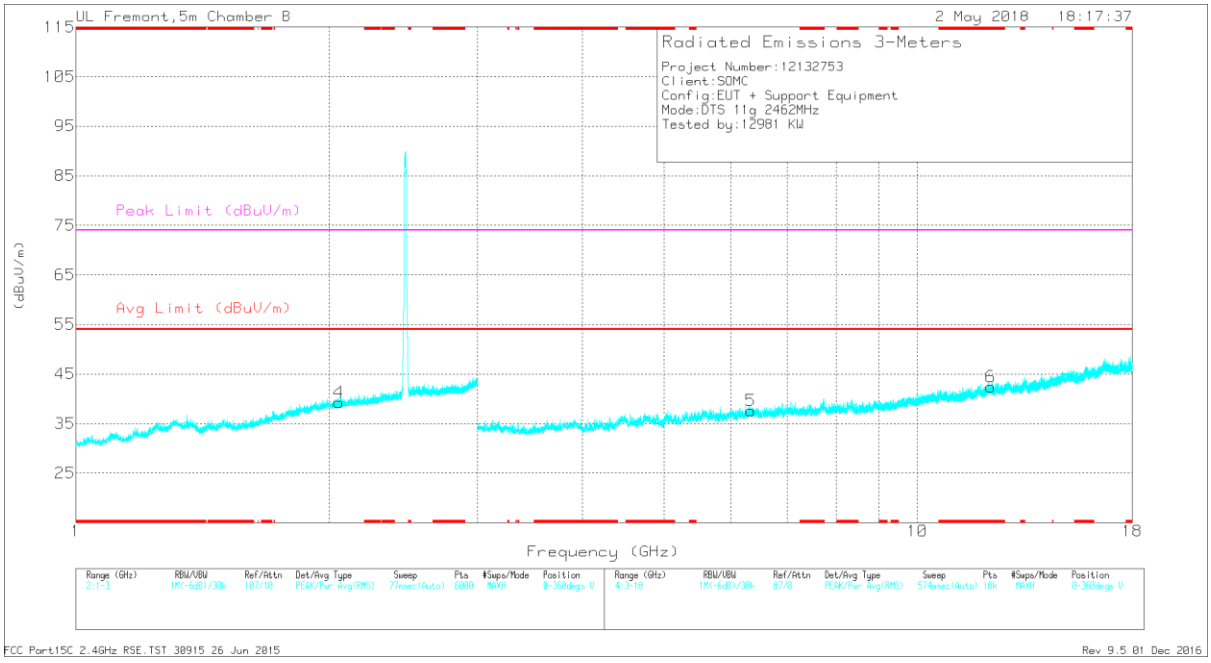
* - indicates frequency in CFR47 Pt 15 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

UL VERIFICATION SERVICES INC.
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888

HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/ Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.511	33.89	PK2	38.1	-23.8	48.19	-	-	74	-25.81	40	164	H
* 11.511	22.96	MAv1	38.1	-23.8	37.26	54	-16.74	-	-	40	164	H
* 12.223	34.13	PK2	39.1	-24.1	49.13	-	-	74	-24.87	119	104	V
* 12.222	22.75	MAv1	39.1	-24.1	37.75	54	-16.25	-	-	119	104	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

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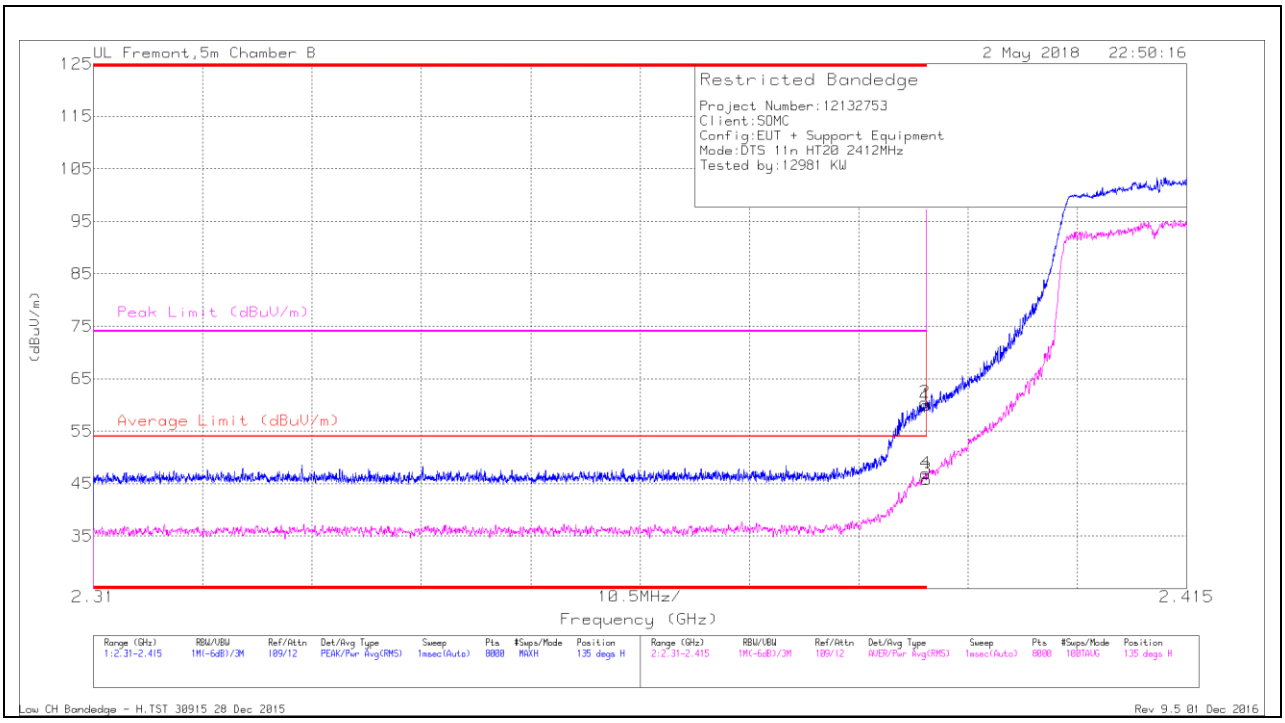
47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888

9.1.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1)

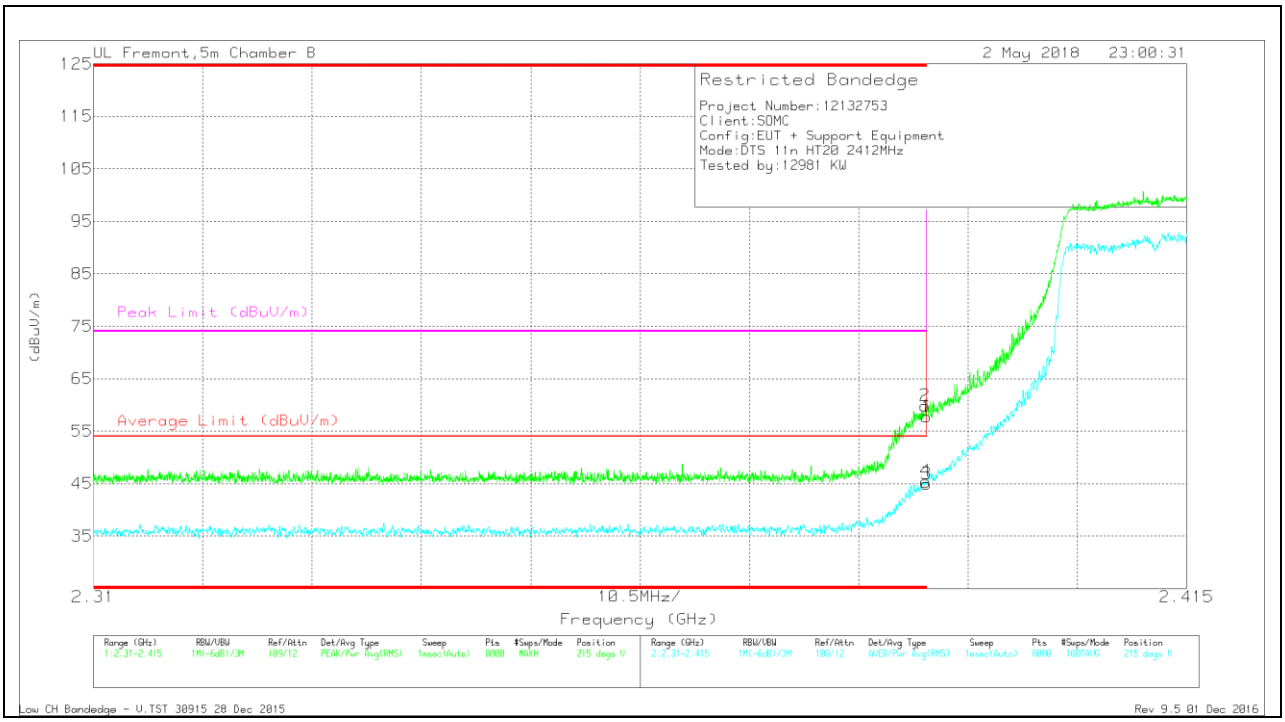
HORIZONTAL RESULT



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	49.51	Pk	32	-21.5	0	60.01	-	-	74	-13.99	135	116	H
2	* 2.39	49.98	Pk	32	-21.5	0	60.48	-	-	74	-13.52	135	116	H
3	* 2.39	35.29	RMS	32	-21.5	.11	45.9	54	-8.1	-	-	135	116	H
4	* 2.39	36.35	RMS	32	-21.5	.11	46.96	54	-7.04	-	-	135	116	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

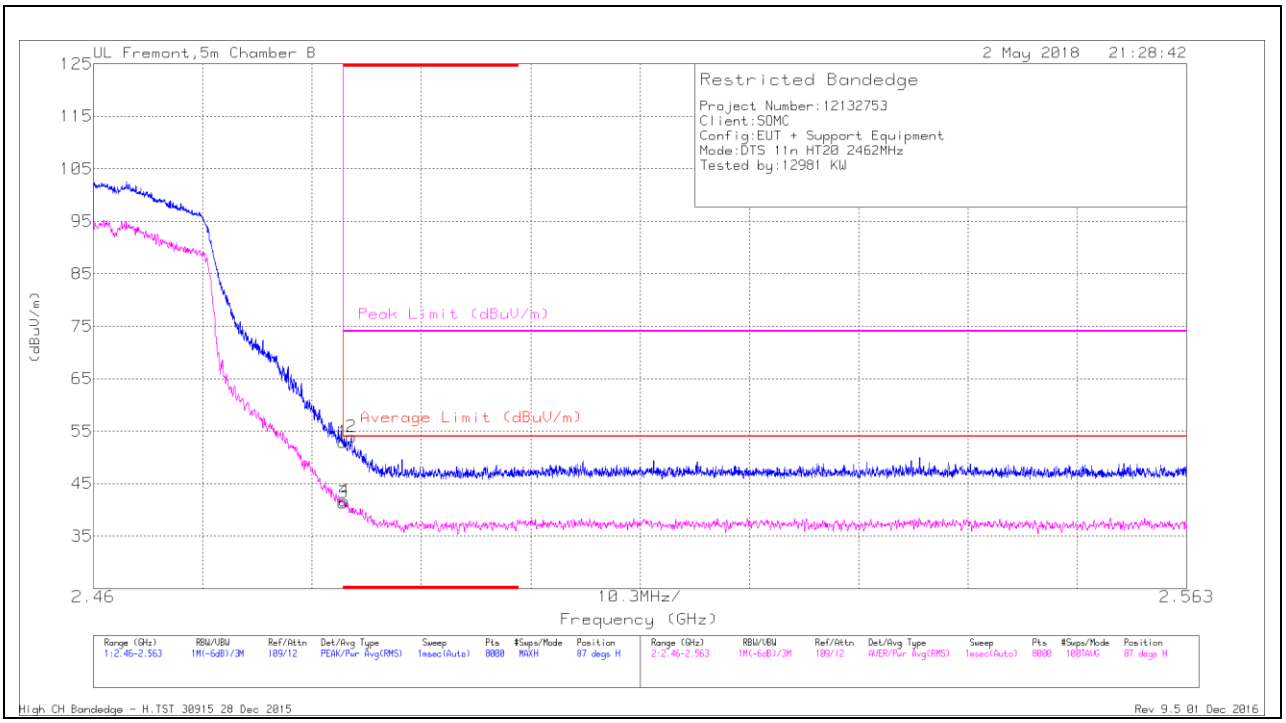


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	47.28	Pk	32	-21.5	0	57.78	-	-	74	-16.22	215	329	V
2	* 2.39	49.35	Pk	32	-21.5	0	59.85	-	-	74	-14.15	215	329	V
3	* 2.39	34.41	RMS	32	-21.5	.11	45.02	54	-8.98	-	-	215	329	V
4	* 2.39	34.8	RMS	32	-21.5	.11	45.41	54	-8.59	-	-	215	329	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 11)

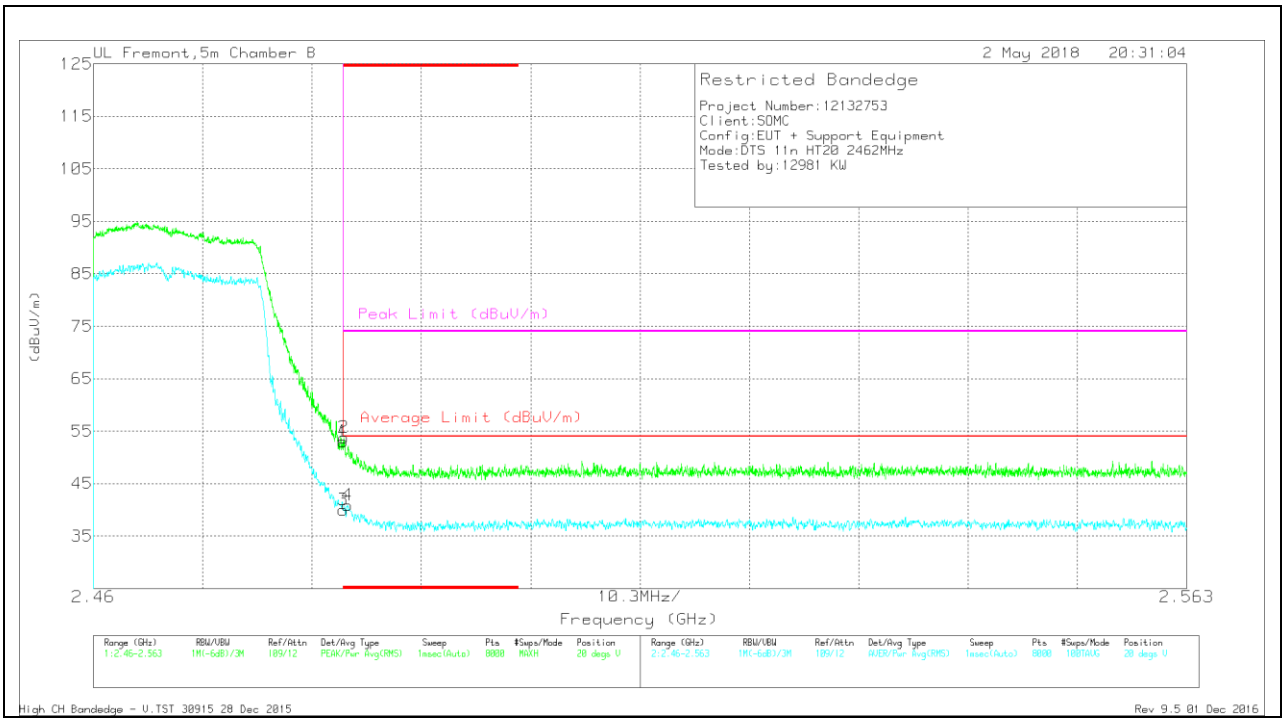
HORIZONTAL RESULT



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	41.89	Pk	32.5	-21.5	0	52.89	-	-	74	-21.11	87	271	H
2	* 2.484	42.88	Pk	32.5	-21.5	0	53.88	-	-	74	-20.12	87	271	H
3	* 2.484	30.26	RMS	32.5	-21.5	.11	41.37	54	-12.63	-	-	87	271	H
4	* 2.484	30.62	RMS	32.5	-21.5	.11	41.73	54	-12.27	-	-	87	271	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

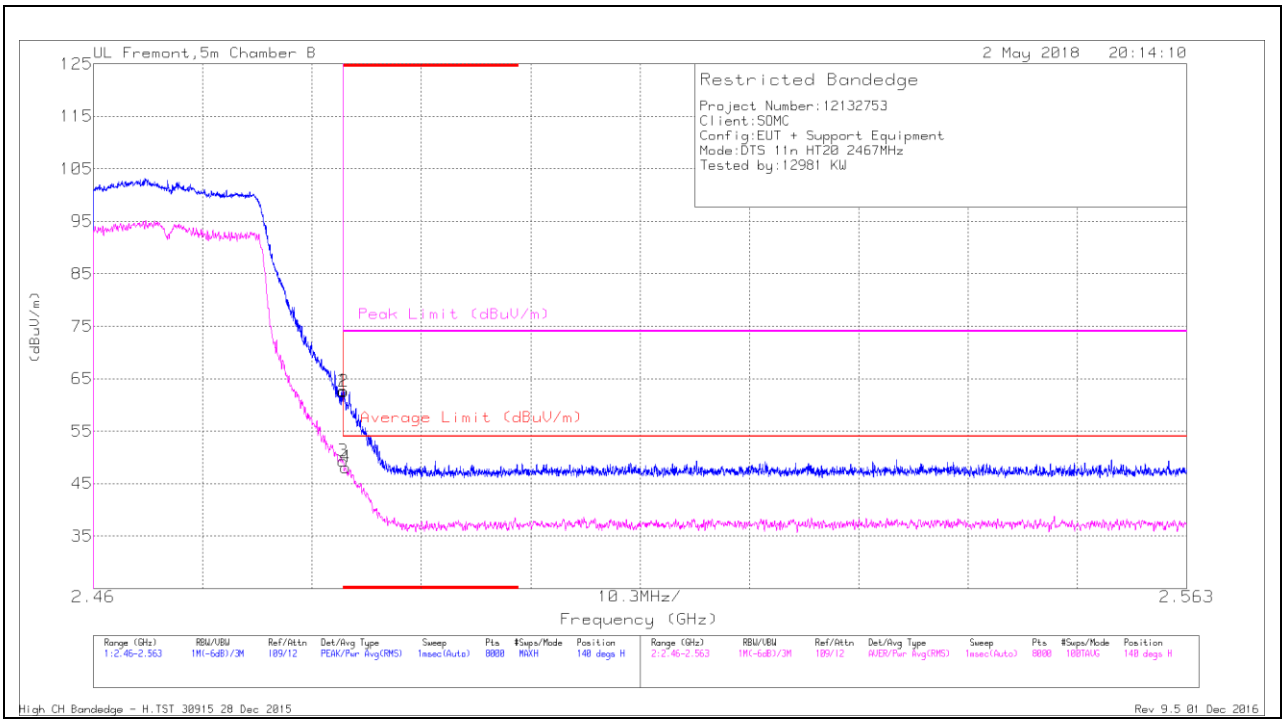


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.02	Pk	32.5	-21.5	0	53.02	-	-	74	-20.98	20	135	V
2	* 2.484	42.75	Pk	32.5	-21.5	0	53.75	-	-	74	-20.25	20	135	V
3	* 2.484	28.87	RMS	32.5	-21.5	.11	39.98	54	-14.02	-	-	20	135	V
4	* 2.484	29.72	RMS	32.5	-21.5	.11	40.83	54	-13.17	-	-	20	135	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 12)

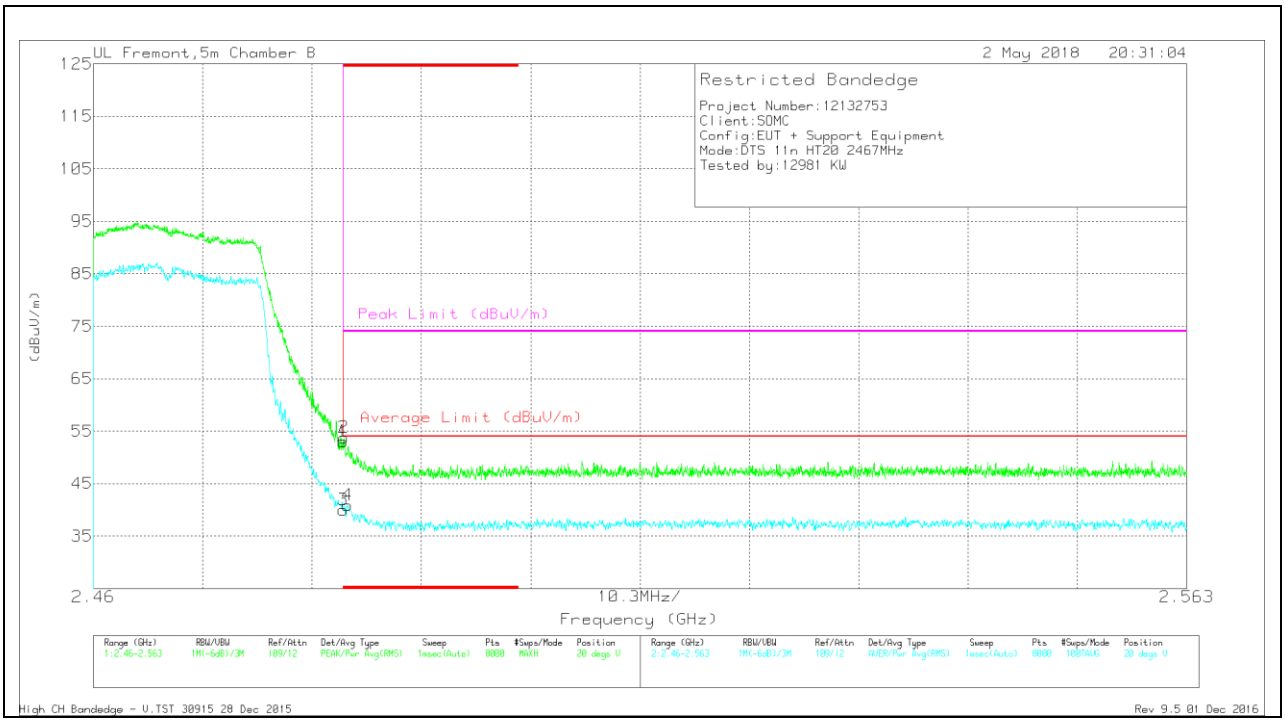
HORIZONTAL RESULT



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	51.75	Pk	32.5	-21.5	0	62.75	-	-	74	-11.25	140	144	H
2	* 2.484	51.63	Pk	32.5	-21.5	0	62.63	-	-	74	-11.37	140	144	H
3	* 2.484	38.25	RMS	32.5	-21.5	.11	49.36	54	-4.64	-	-	140	144	H
4	* 2.484	37.03	RMS	32.5	-21.5	.11	48.14	54	-5.86	-	-	140	144	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

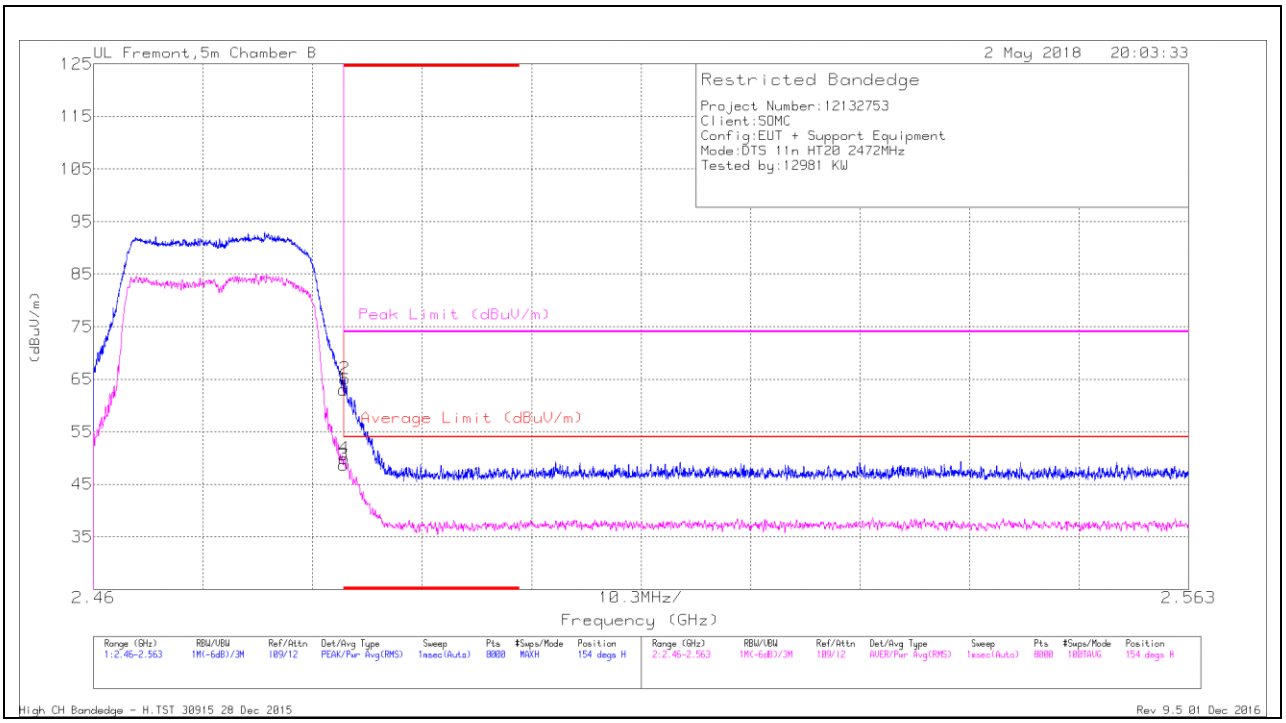


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.02	Pk	32.5	-21.5	0	53.02	-	-	74	-20.98	20	135	V
2	* 2.484	42.75	Pk	32.5	-21.5	0	53.75	-	-	74	-20.25	20	135	V
3	* 2.484	28.87	RMS	32.5	-21.5	.11	39.98	54	-14.02	-	-	20	135	V
4	* 2.484	29.72	RMS	32.5	-21.5	.11	40.83	54	-13.17	-	-	20	135	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 13)

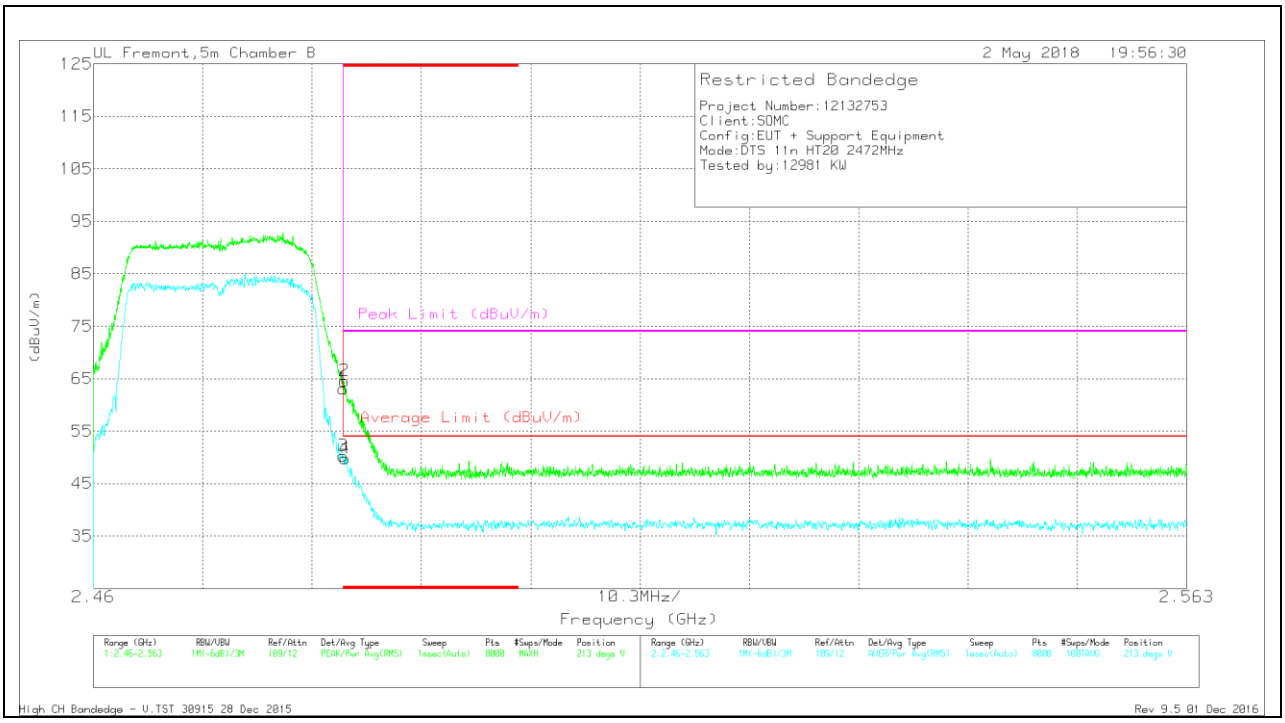
HORIZONTAL RESULT



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	52.02	Pk	32.5	-21.5	0	63.02	-	-	74	-10.98	154	121	H
2	* 2.484	54.01	Pk	32.5	-21.5	0	65.01	-	-	74	-8.99	154	121	H
3	* 2.484	37.63	RMS	32.5	-21.5	.11	48.74	54	-5.26	-	-	154	121	H
4	* 2.484	38.97	RMS	32.5	-21.5	.11	50.08	54	-3.92	-	-	154	121	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

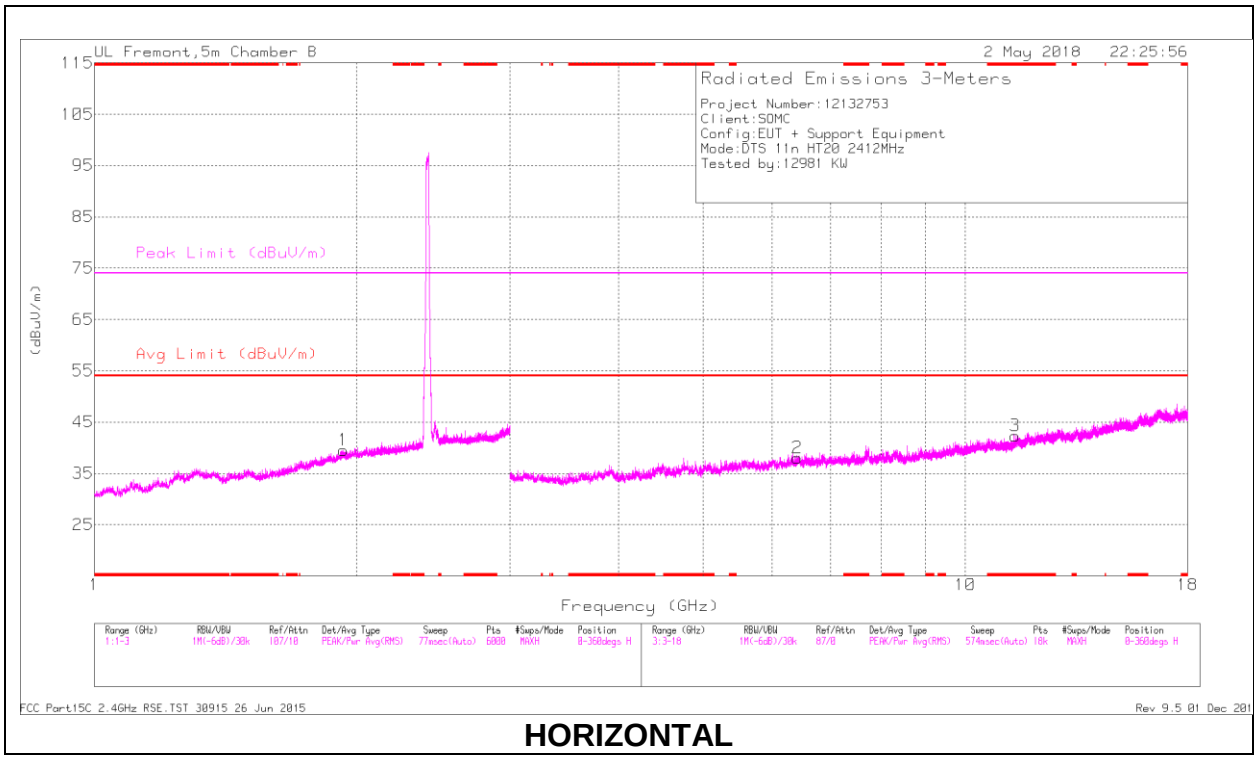


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	52.13	Pk	32.5	-21.5	0	63.13	-	-	74	-10.87	213	389	V
2	* 2.484	53.62	Pk	32.5	-21.5	0	64.62	-	-	74	-9.38	213	389	V
3	* 2.484	39.23	RMS	32.5	-21.5	.11	50.34	54	-3.66	-	-	213	389	V
4	* 2.484	38.71	RMS	32.5	-21.5	.11	50	54	-4	-	-	213	389	V

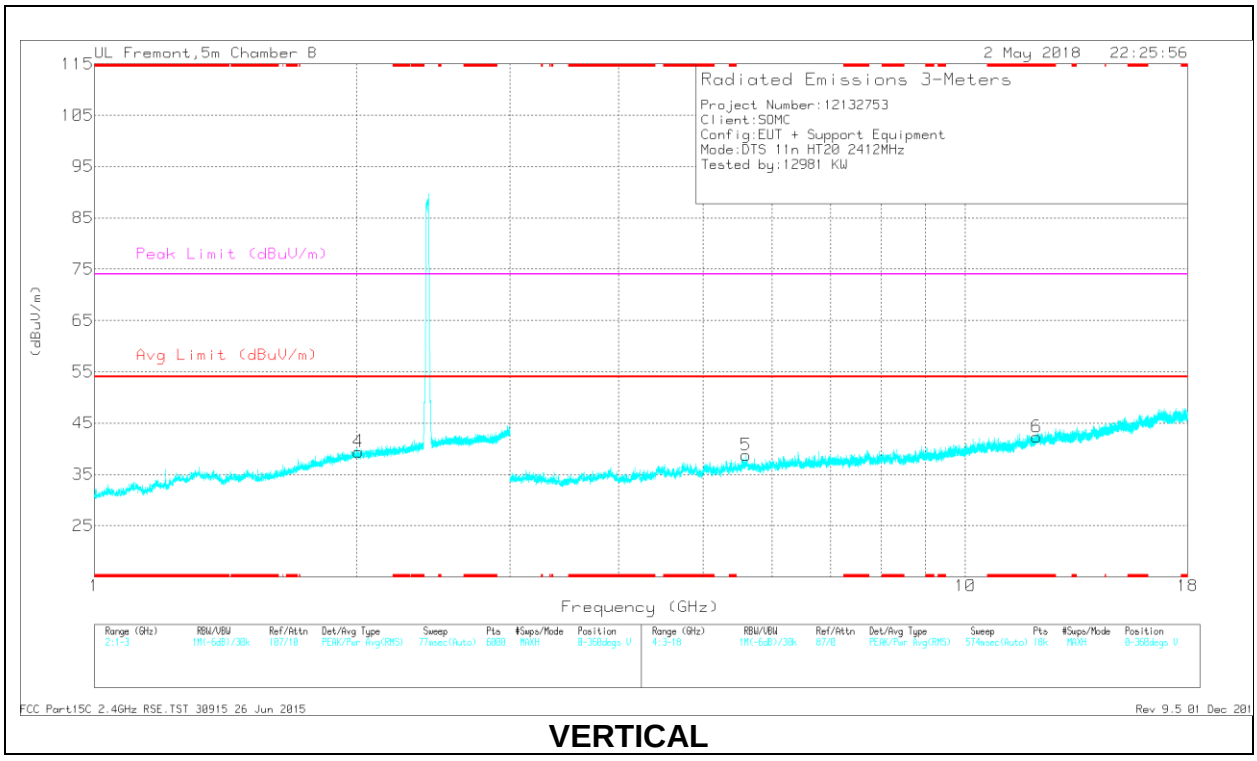
* - indicates frequency in CFR47 Pt 15 Restricted Band
Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS



HORIZONTAL



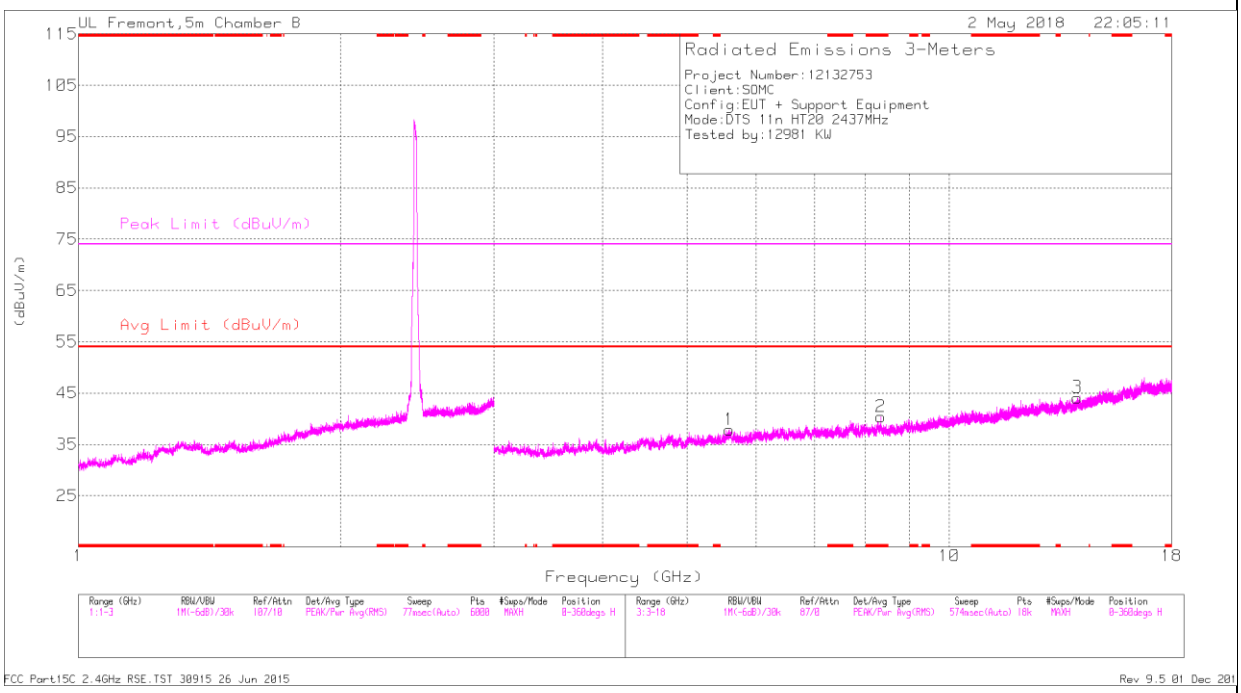
VERTICAL

RADIATED EMISSIONS

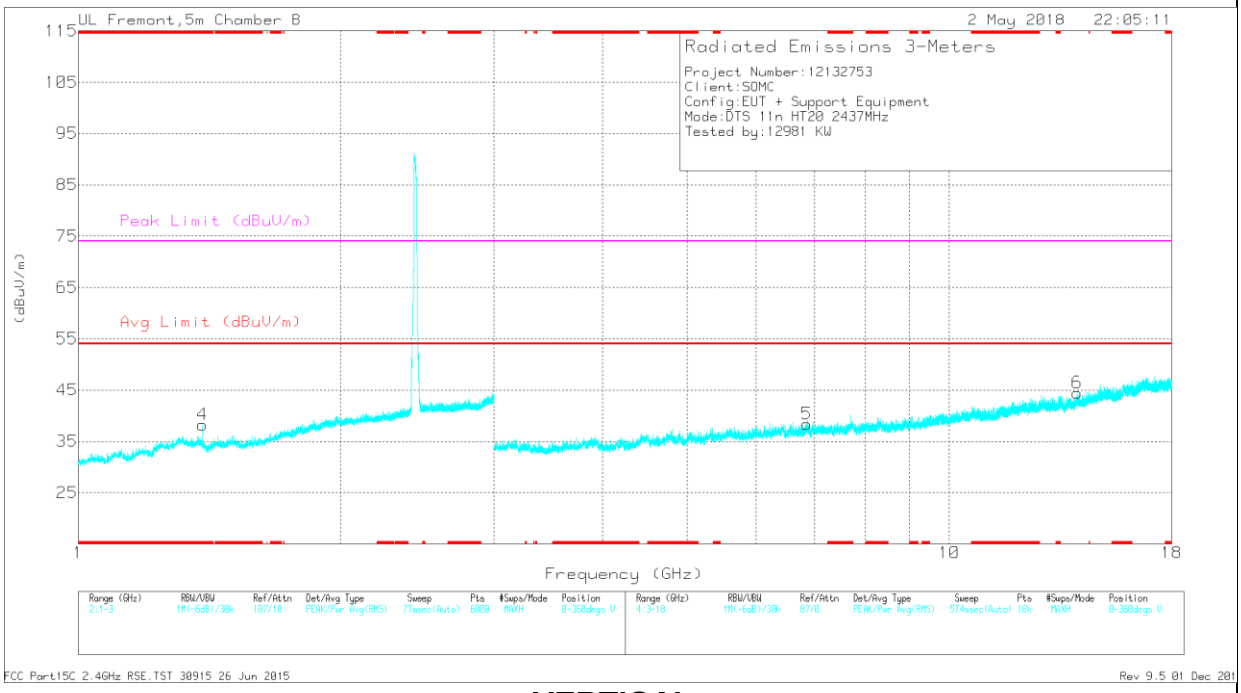
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 11.414	33.29	PK2	38	-23.8	0	47.49	-	-	74	-26.51	110	198	H
* 11.415	22.75	MAv1	38	-23.9	.11	36.96	54	-17.04	-	-	110	198	H
* 12.075	33.9	PK2	38.9	-23.9	0	48.9	-	-	74	-25.1	92	164	V
* 12.075	22.71	MAv1	38.9	-23.9	.11	38	54	-16	-	-	92	164	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS



HORIZONTAL



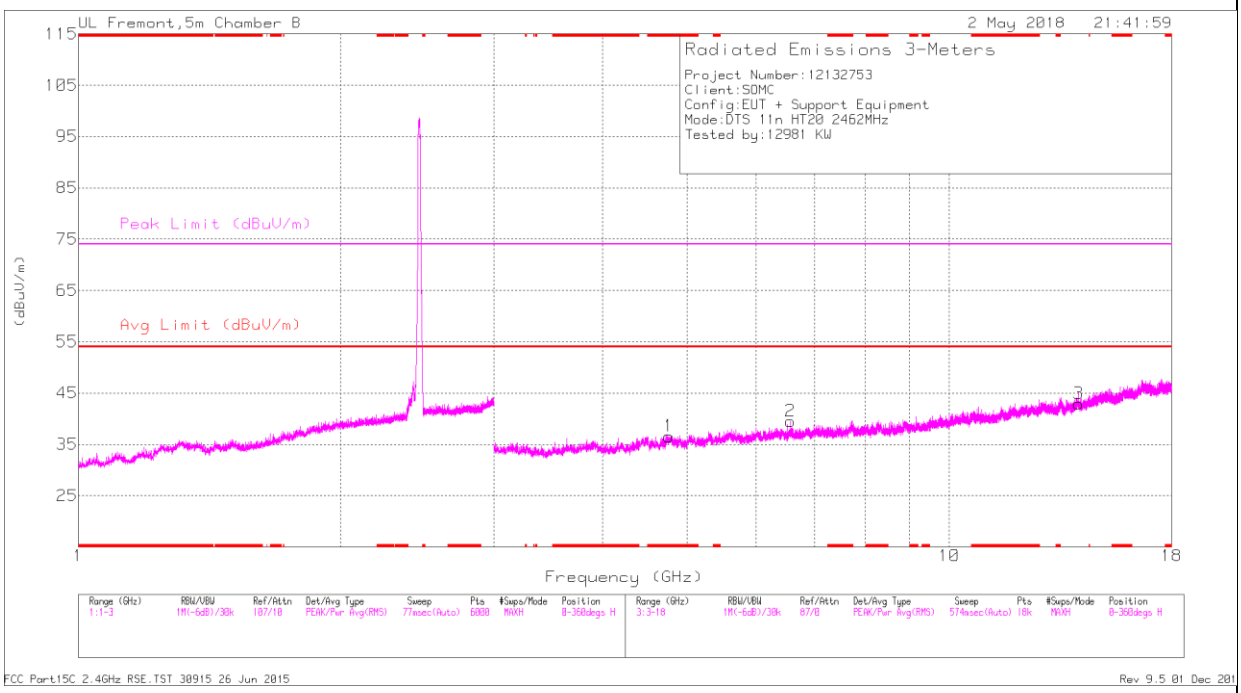
VERTICAL

RADIATED EMISSIONS

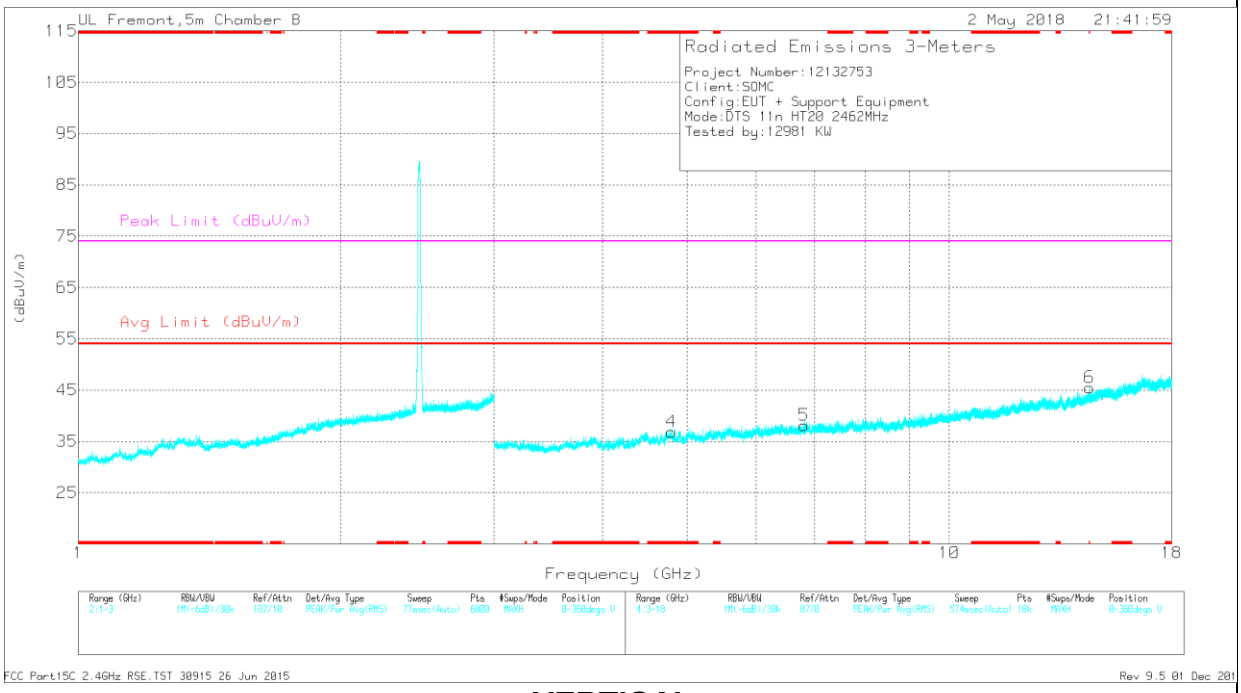
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.386	35.01	PK2	28.4	-22.1	0	41.31	-	-	74	-32.69	88	172	V
* 1.389	23.79	MAv1	28.3	-22.2	.11	30	54	-24	-	-	88	172	V
* 8.341	35.51	PK2	36.1	-26	0	45.61	-	-	74	-28.39	226	211	H
* 8.339	24.51	MAv1	36.1	-26	.11	34.9	54	-19.1	-	-	226	211	H

* - indicates frequency in CFR47 Pt 15 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL, CH 11 RESULTS



HORIZONTAL



VERTICAL

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (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
* 4.764	37.73	PK2	34.3	-29.3	0	42.73	-	-	74	-31.27	225	181	H
* 4.763	27.05	MAv1	34.3	-29.2	.11	32.24	54	-21.74	-	-	225	181	H
* 4.798	39.17	PK2	34.4	-30.2	0	43.37	-	-	74	-30.63	79	155	V
* 4.8	28.1	MAv1	34.4	-30.2	.11	32.39	54	-21.59	-	-	79	155	V
* 14.492	33.4	PK2	39.9	-23	0	50.3	-	-	74	-23.7	162	212	V
* 14.492	22.76	MAv1	39.9	-23	.11	39.75	54	-14.23	-	-	162	212	V

* - indicates frequency in CFR47 Pt 15 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

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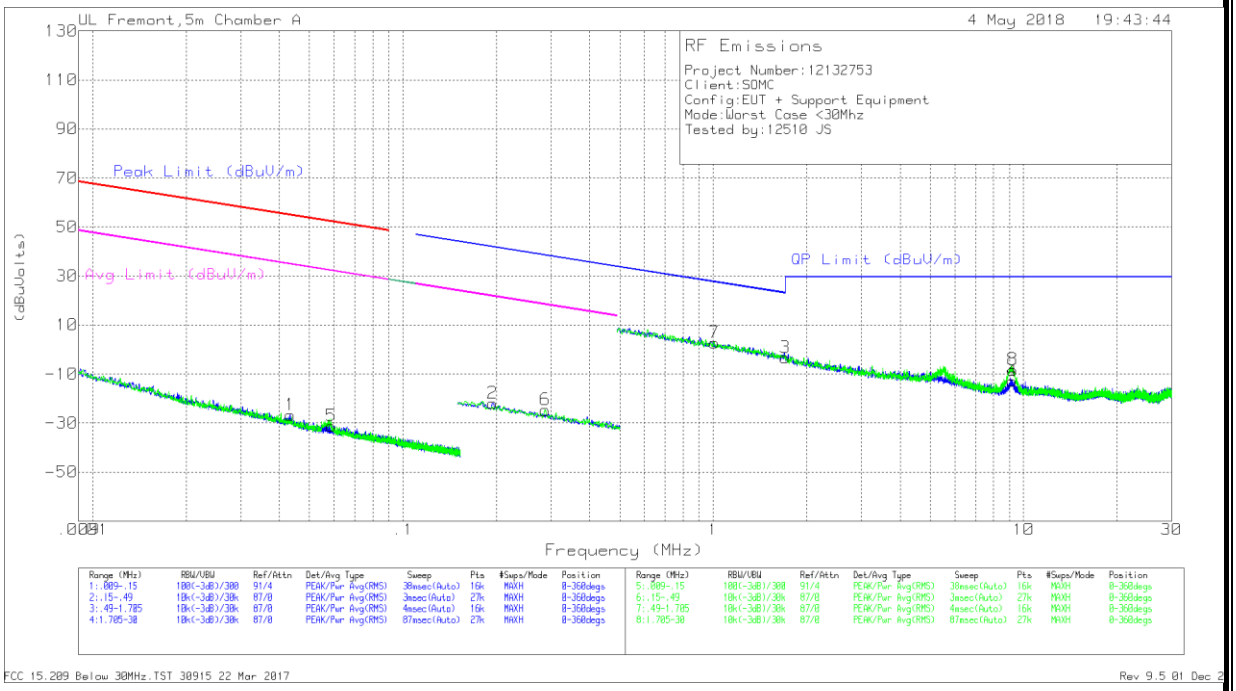
9.1. WORST-CASE BELOW 30 MHz

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)

FACE ON AND FACE OFF 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

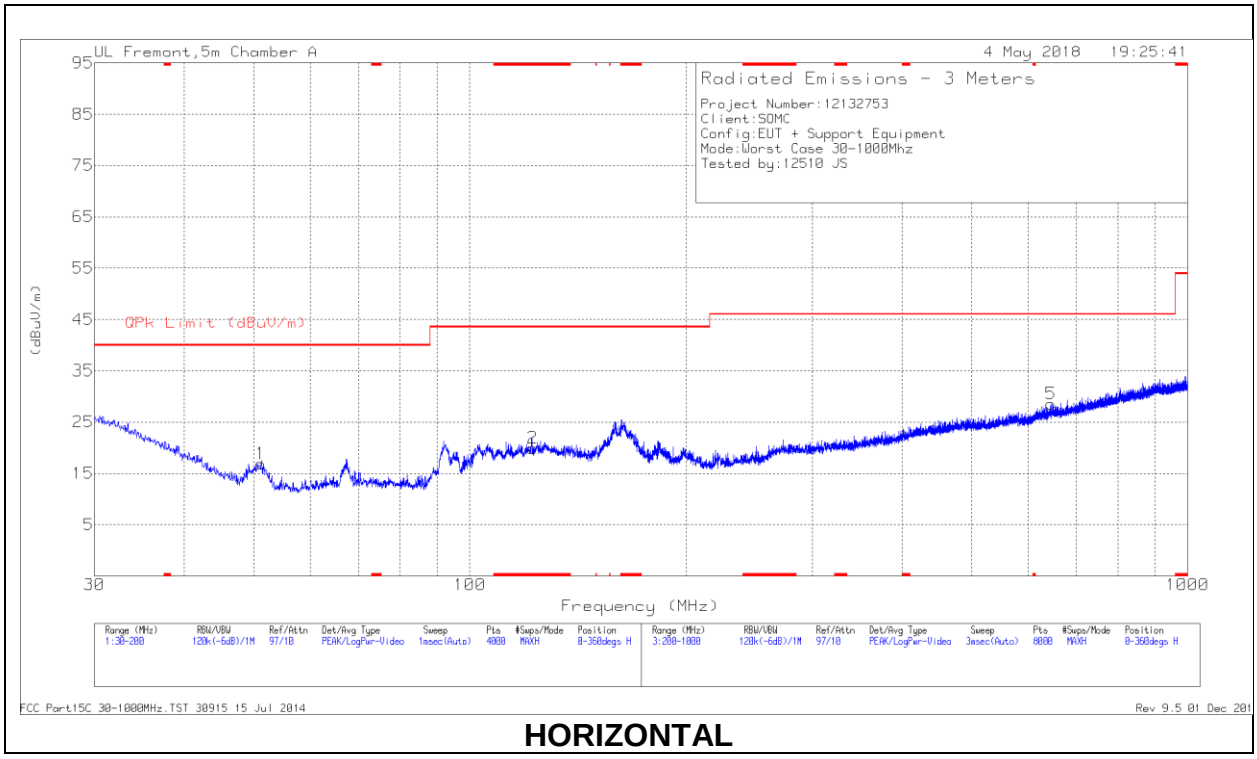
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.04336	40.8	Pk	12.4	.1	-80	-26.7	54.84	-81.54	34.84	-61.54	-	-	-	-	0-360
5	.05875	36.77	Pk	11.8	.1	-80	-31.33	52.2	-83.53	32.2	-63.53	-	-	-	-	0-360
2	.19465	47.02	Pk	11	.1	-80	-21.88	-	-	-	-	41.83	-63.71	21.83	-43.71	0-360
6	.28749	44.27	Pk	10.9	.1	-80	-24.73	-	-	-	-	38.44	-63.17	18.44	-43.17	0-360

Pk - Peak detector

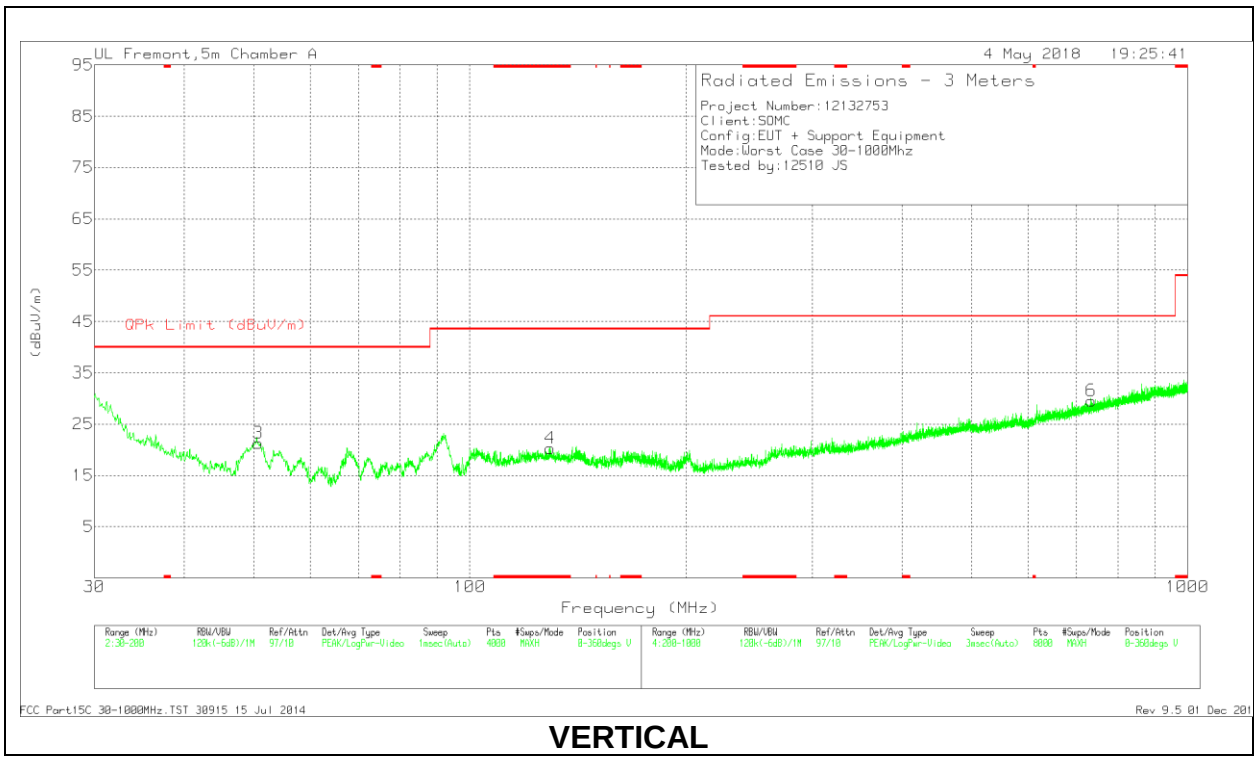
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cbl (dB)	Dist Corr 30m	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
7	1.00786	31.16	Pk	11.3	.2	-40	2.66	27.55	-24.89	0-360
3	1.705	25.1	Pk	11.4	.2	-40	-3.3	23	-26.3	0-360
4	9.18562	15.61	Pk	10.9	.5	-40	-12.99	29.5	-42.49	0-360
8	9.23645	20.34	Pk	10.9	.5	-40	-8.26	29.5	-37.76	0-360

Pk - Peak detector

9.2. Worst Case Below 1 GHz



HORIZONTAL



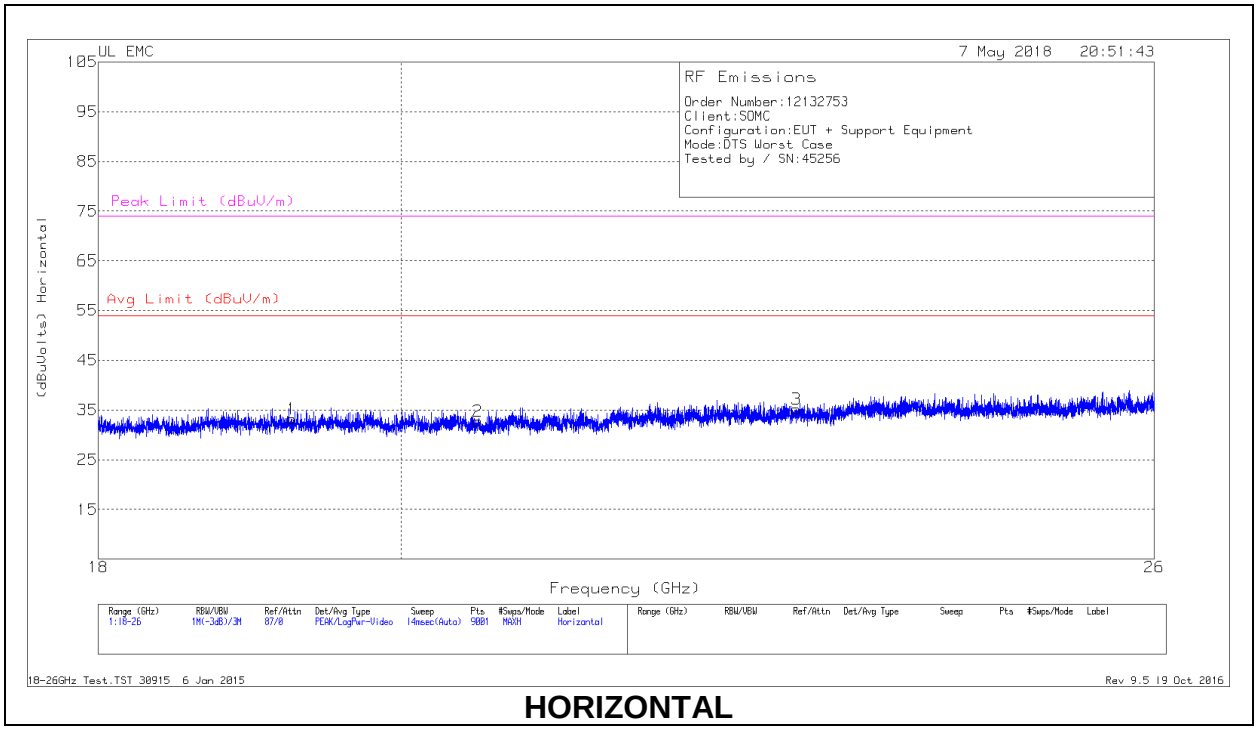
VERTICAL

Below 1GHz DATA

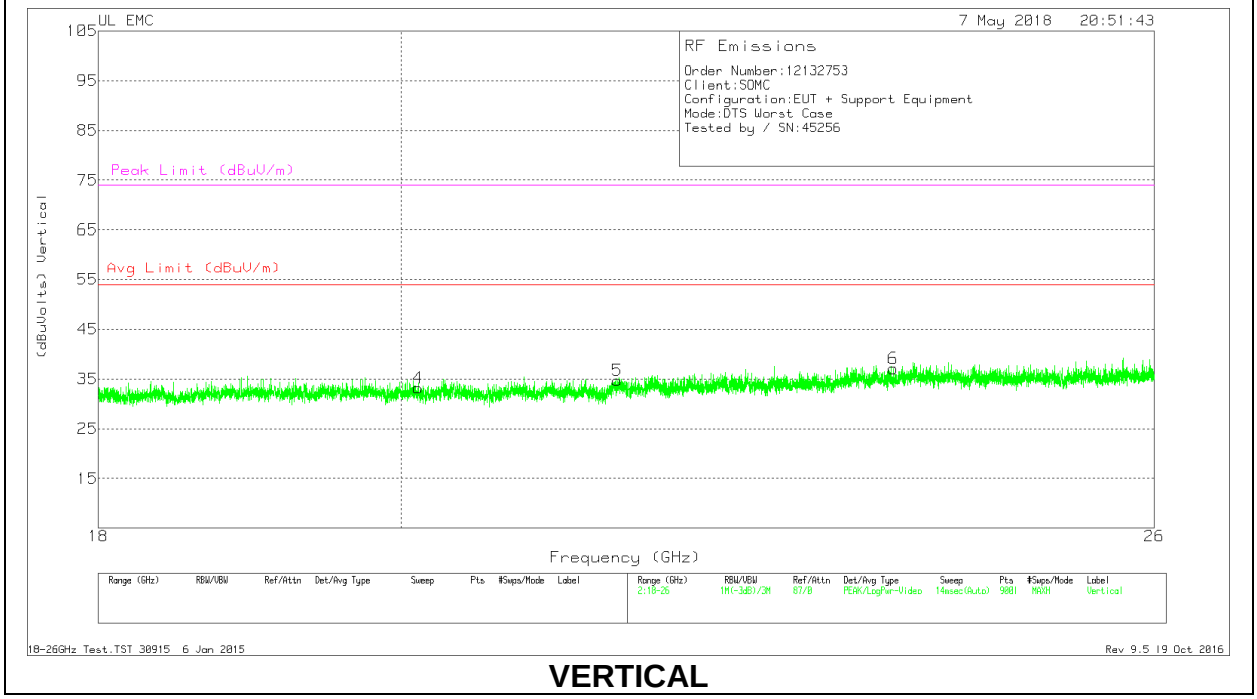
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 122.2276	28.21	Pk	17.9	-26.2	19.91	43.52	-23.61	0-360	400	H
4	* 129.5183	28.29	Pk	18.1	-26.1	20.29	43.52	-23.23	0-360	100	V
3	50.7454	36.76	Pk	11.5	-27	21.26	40	-18.74	0-360	100	V
1	51.1705	32.42	Pk	11.4	-27	16.82	40	-23.18	0-360	400	H
5	644.6578	29.49	Pk	23.8	-24.8	28.49	46.02	-17.53	0-360	300	H
6	734.3695	29.19	Pk	24.5	-24.2	29.49	46.02	-16.53	0-360	101	V

Pk - Peak detector

9.3. Worst Case 18-26 GHz



HORIZONTAL



VERTICAL

18 – 26GHz 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	19.254	35.21	Pk	32.6	-25.1	-9.5	33.21	54	-20.79	74	-40.79
2	20.542	34.56	Pk	33.1	-25.4	-9.5	32.76	54	-21.24	74	-41.24
3	22.952	36.27	Pk	33.5	-25.1	-9.5	35.17	54	-18.83	74	-38.83
4	20.118	35.07	Pk	32.8	-25.2	-9.5	33.17	54	-20.83	74	-40.83
5	21.564	36.32	Pk	33.2	-25.3	-9.5	34.72	54	-19.28	74	-39.28
6	23.741	37.09	Pk	33.8	-24.3	-9.5	37.09	54	-16.91	74	-36.91

Pk - Peak detector