



FCC 47 CFR PART 15 SUBPART C

**CERTIFICATION TEST REPORT
FOR**

GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n, ANT+ & NFC

MODEL NUMBER: SM-A500K, SM-A500L, SM-A500S

FCC ID: A3LSMA500KOR

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Prepared for
SAMSUNG ELECTRONICS CO., LTD.
416, MAETAN 3-DONG, YEONGTONG-GU
SUWON-CITY, GYEONGGI-DO 443-742, SOUTH KOREA

Prepared by
UL VERIFICATION SERVICES INC.
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888



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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION: GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n, ANT+ & NFC
MODEL: SM-A500K, SM-A500L, SM-A500S
SERIAL NUMBER: 1992967 (Radiated); 1992964 (Conducted)
DATE TESTED: NOVEMBER 7-13, 2014

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released

For UL Verification Services Inc. By:

Tested By:



PENG ZHANG
CONSUMER TECHNOLOGY DIVISION
PROJECT LEAD
UL Verification Services Inc.



STEVEN TRAN
CONSUMER TECHNOLOGY DIVISION
LAB 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, and ANSI C63.4-2009.

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: 2324B-4)
☒ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☐ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☐ Chamber G(IC: 2324B-7)
	☐ Chamber H(IC: 2324B-8)

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:

$$\text{Field Strength (dBuV/m)} = \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Preamp Gain (dB)}$$

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 26000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE Phone + Bluetooth, DTS/UNII a/b/g/n, ANT+ & NFC.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	16.78	47.64
2412 - 2462	802.11g	12.72	18.71
2412 - 2462	802.11n HT20	11.82	15.21

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -4.7 dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

Radiated emission 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 Y orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Y orientation.

Based on the baseline scan, the worst-case data rates were:

802.11b mode: 1 Mbps

802.11g mode: 6 Mbps

802.11n HT20mode: MCS0

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	SAMSUNG	EP-TA50KWK	N/A	N/A
Earphone	SAMSUNG	N/A	N/A	N/A

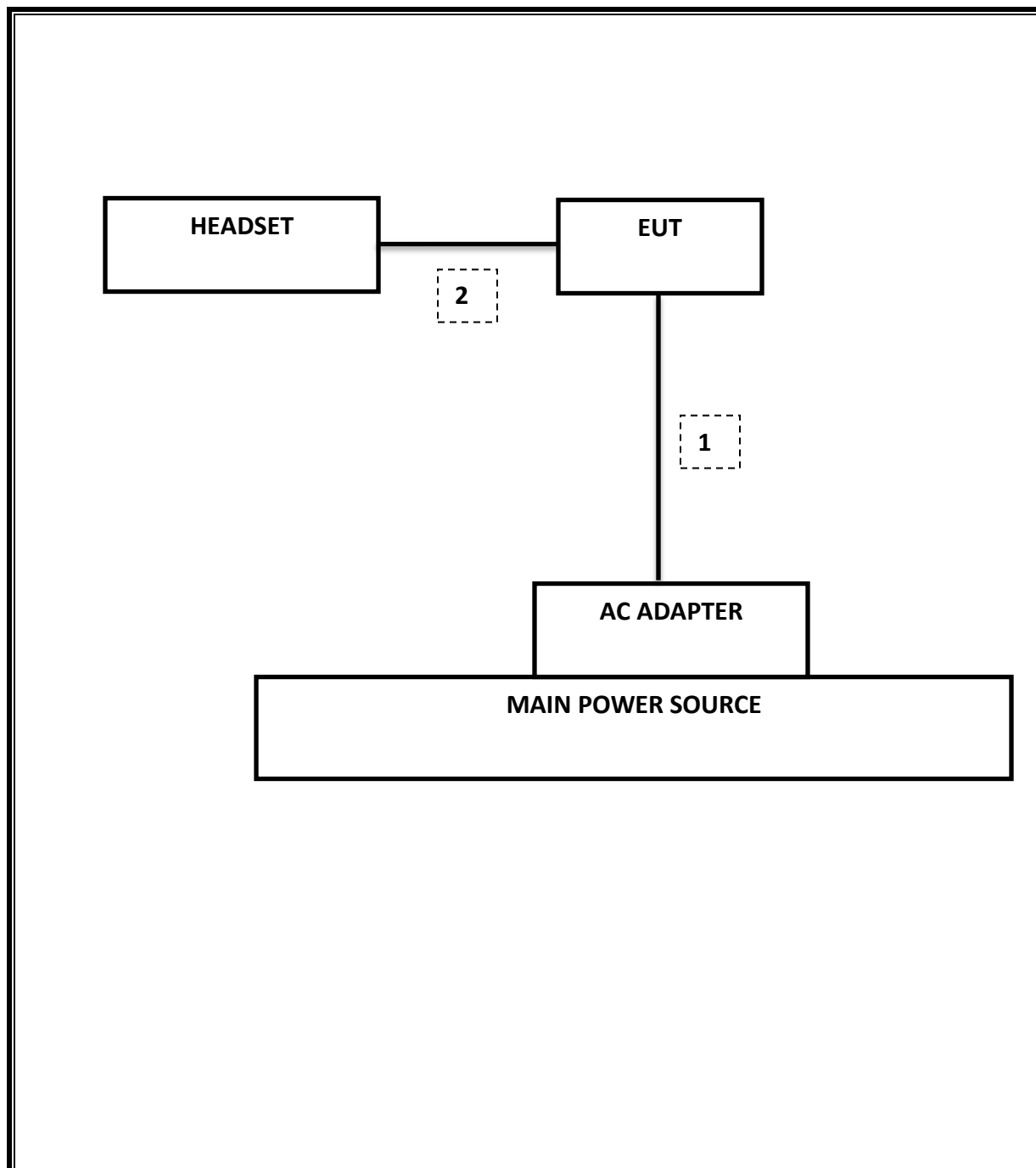
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	Mini-USB	Shielded	1.2m	N/A
2	Audio	1	Mini-Jack	Unshielded	1m	N/A

TEST SETUP

The EUT is a stand-alone unit during the tests. Test software exercised the radio card.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Test Equipment List				
Description	Manufacturer	Model	Asset	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/14
Spectrum Analyzer, 9KHz-40GHz	HP	8564E	C00986	04/01/15
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/15
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/14
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/14
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/15
Antenna, Horn, 18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/15
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/15
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/15
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/15
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/15
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/15
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	F00219	05/23/15
High Pass Filter 5GHz	Micro-Tronics	HPS17542	F00222	05/22/15
High Pass Filter 6GHz	Micro-Tronics	HPM17543	F00224	05/22/15
NOTE: The calibration interval of the above test instrument is 12 months and the calibrations are traceable to NIST USA.				

7. MEASUREMENT METHODS

KDB 558074 D01 DTS Meas Guidance v03r02: Measurement Procedure AVGPM-G is used for power and AVGPS-3 is used for power spectral density.

Unwanted emissions within Restricted Bands are measured using traditional radiated procedures.

Band edge emissions within Restricted Bands are measured using RMS with duty cycle factor offset method.

8. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)(2)	RSS-210 A8.2(a)	Occupied Band width (6dB)	>500KHz	Conducted	Pass	9.96 MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-30.28 dBm
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	16.78 dBm
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	-13.45 dBm
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	52.4 dBuV
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	44.99 dBuV/m

9. ANTENNA PORT TEST RESULTS

9.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

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

TEST PROCEDURE

Reference to KDB 558074 D01 DTS Meas Guidance v03r02: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

RESULTS

9.1.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	9.99	0.5
Mid	2437	9.96	0.5
High	2462	9.99	0.5
Worst		9.96	

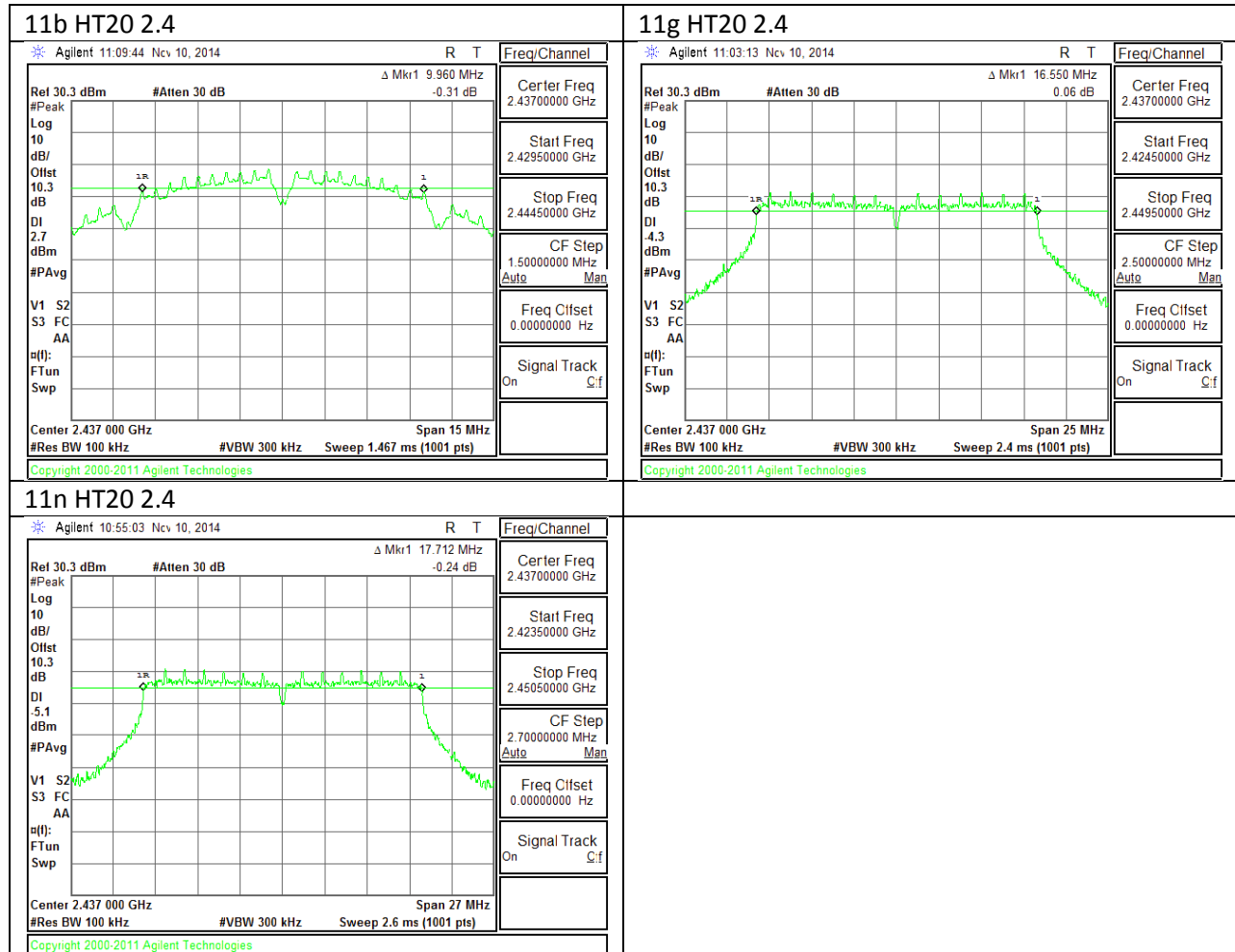
9.1.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.48	0.5
Mid	2437	16.55	0.5
High	2462	16.38	0.5
Worst		16.38	

9.1.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.63	0.5
Mid	2437	17.71	0.5
High	2462	17.63	0.5
Worst		17.63	

9.1.4. 6 dB BANDWIDTH MID CH PLOTS



9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

RESULTS

9.2.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	13.68
Mid	2437	13.52
High	2462	13.51
Worst		13.68

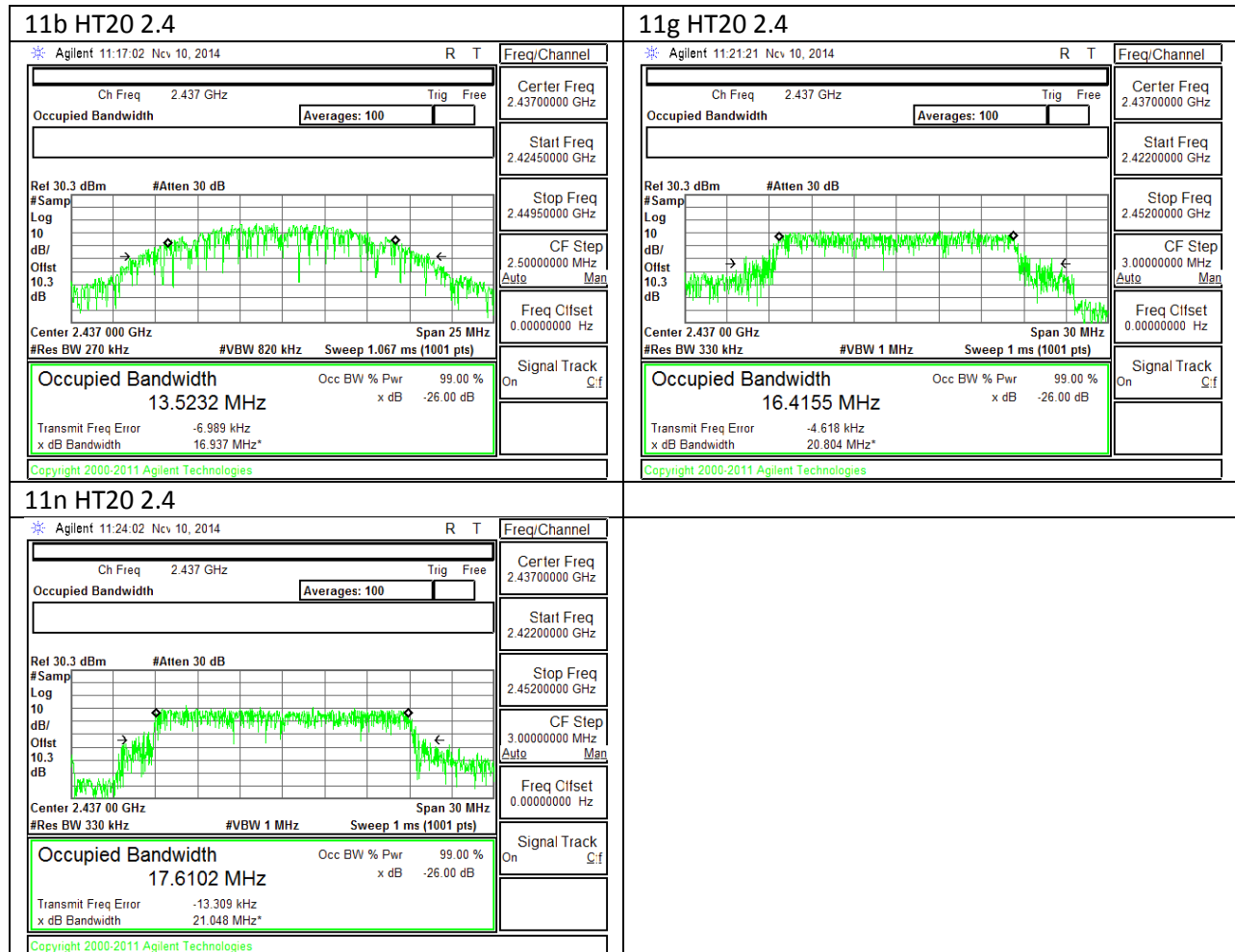
9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.31
Mid	2437	16.42
High	2462	16.46
Worst		16.46

9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.55
Mid	2437	17.61
High	2462	17.36
Worst		17.61

9.2.4. 99% BANDWIDTH MID CH PLOTS



9.3. OUTPUT POWER

LIMITS

FCC §15.247

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

DIRECTIONAL ANTENNA GAIN

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

RESULTS

9.3.1. 802.11b MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-4.70	30.00	30	36	30.00
Mid	2437	-4.70	30.00	30	36	30.00
High	2462	-4.70	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	16.58	16.58	30.00	-13.42
Mid	2437	16.60	16.60	30.00	-13.40
High	2462	16.78	16.78	30.00	-13.22
Worst			16.78		

9.3.2. 802.11g MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-4.70	30.00	30	36	30.00
Mid	2437	-4.70	30.00	30	36	30.00
High	2462	-4.70	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	12.72	12.72	30.00	-17.28
Mid	2437	12.69	12.69	30.00	-17.31
High	2462	12.68	12.68	30.00	-17.32
Worst			12.72		

9.3.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-4.70	30.00	30	36	30.00
Mid	2437	-4.70	30.00	30	36	30.00
High	2462	-4.70	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	11.82	11.82	30.00	-18.18
Mid	2437	11.80	11.80	30.00	-18.20
High	2462	11.77	11.77	30.00	-18.23
Worst			11.82		

9.4. PSD

LIMITS

FCC §15.247

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

9.4.1. 802.11b MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-13.45	8	-21.45
Mid	2437	-13.97	8	-21.97
High	2462	-13.85	8	-21.85

9.4.2. 802.11g MODE IN THE 2.4 GHz BAND

PSD Results

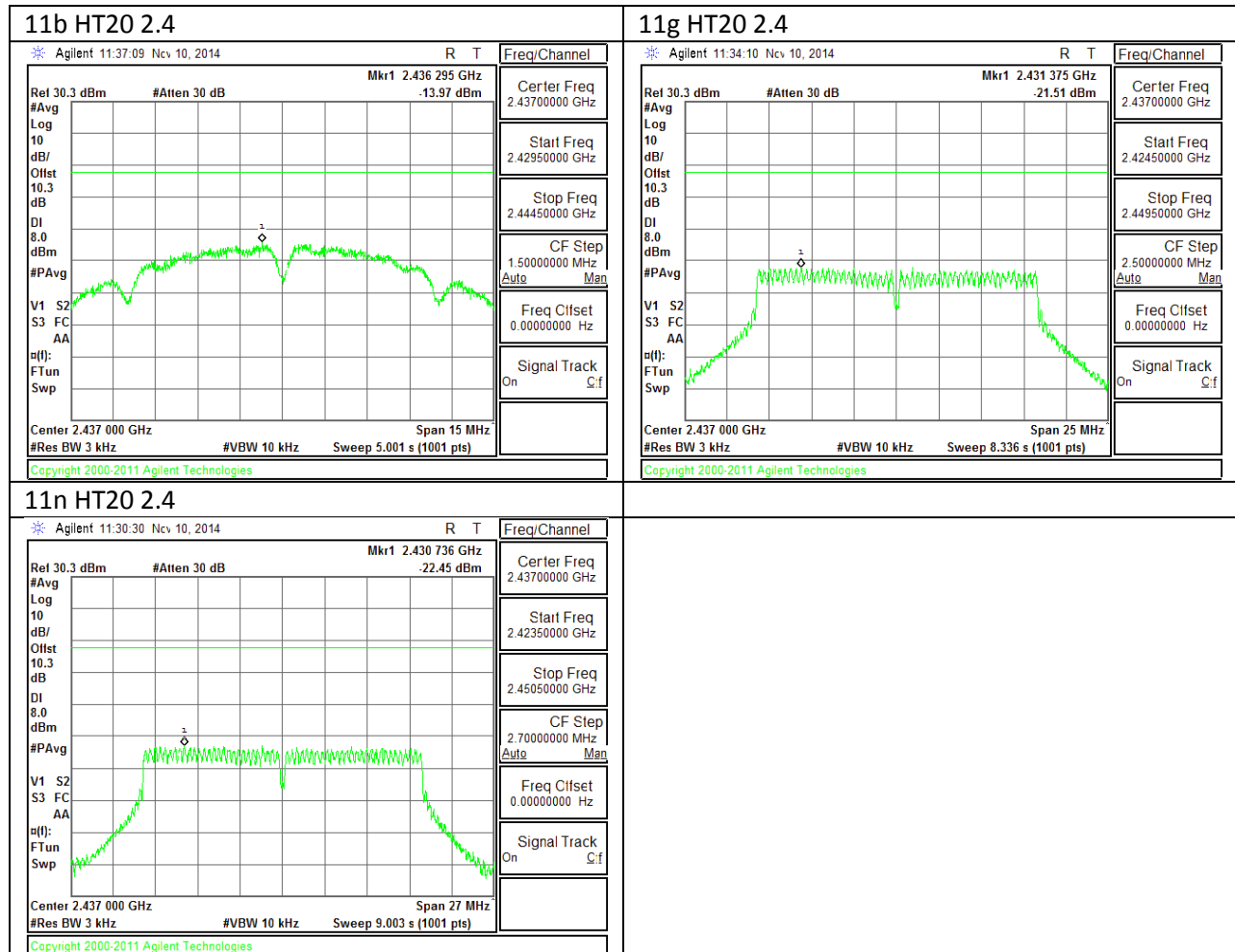
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-20.90	8.0	-28.9
Mid	2437	-21.51	8.0	-29.5
High	2462	-20.38	8.0	-28.4

9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-22.30	8.0	-30.3
Mid	2437	-22.45	8.0	-30.5
High	2462	-21.07	8.0	-29.1

9.4.4. PSD Chain 0 MID CH PLOTS



9.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required.

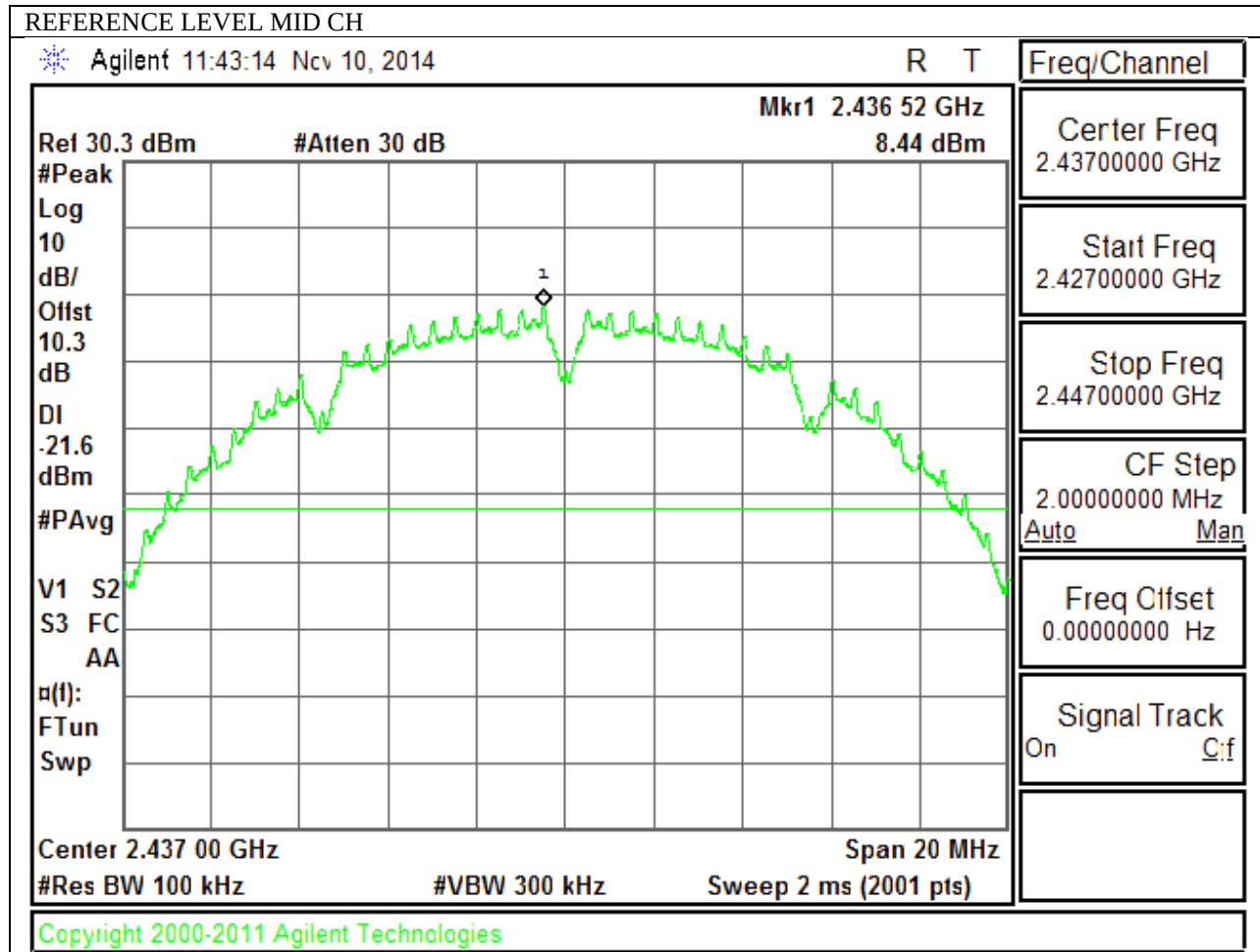
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

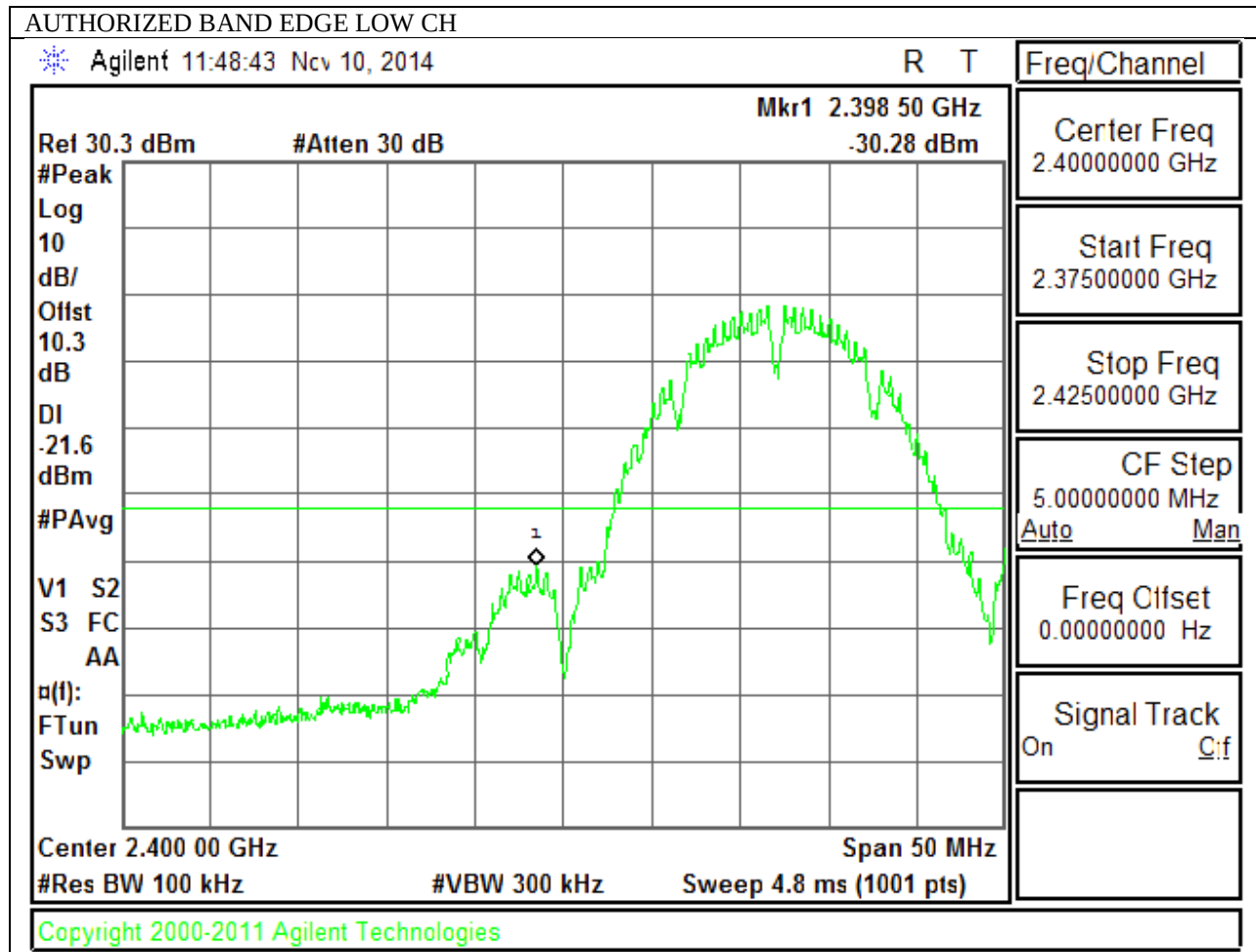
RESULTS

9.5.1. 802.11b MODE IN THE 2.4 GHz BAND

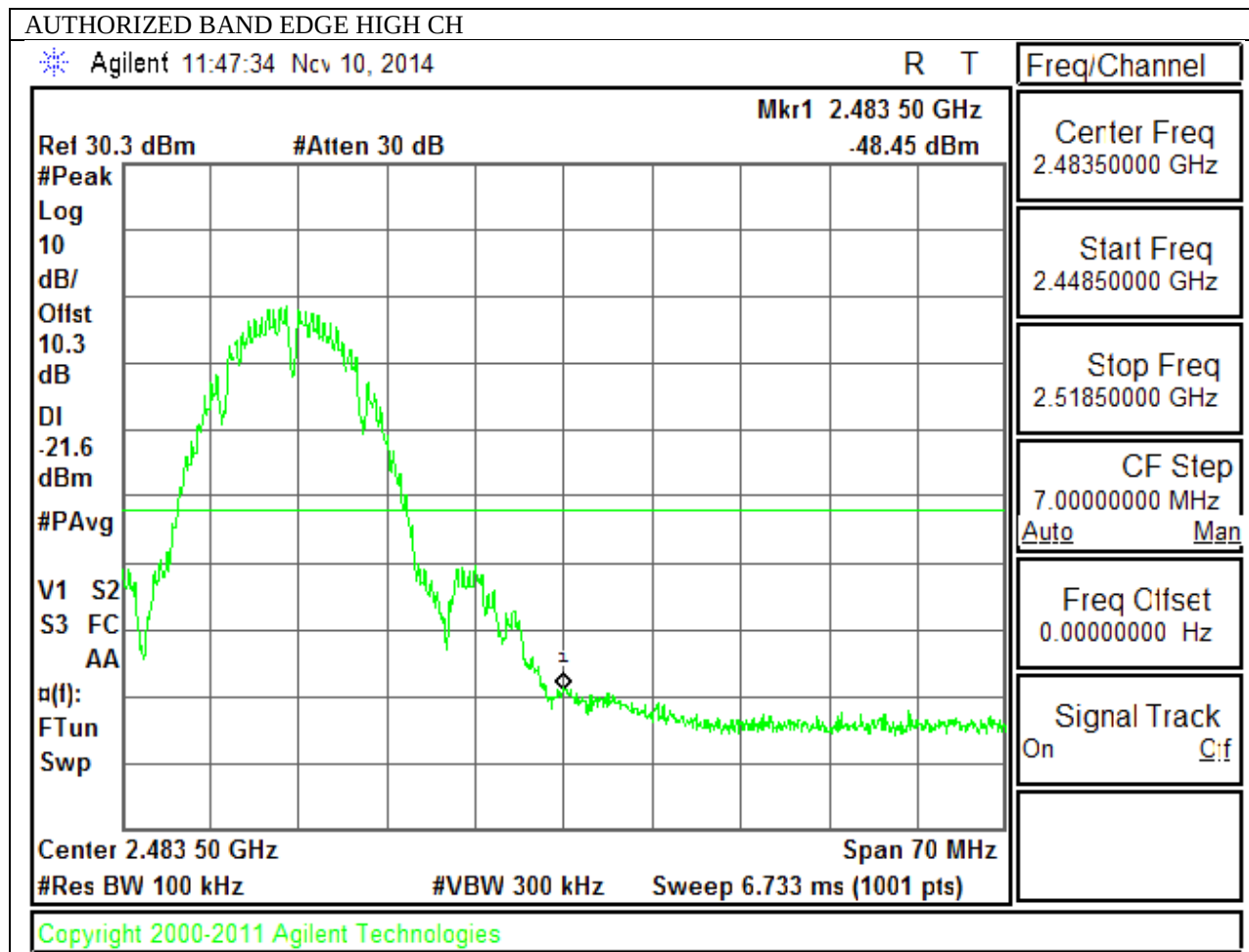
IN-BAND REFERENCE LEVEL



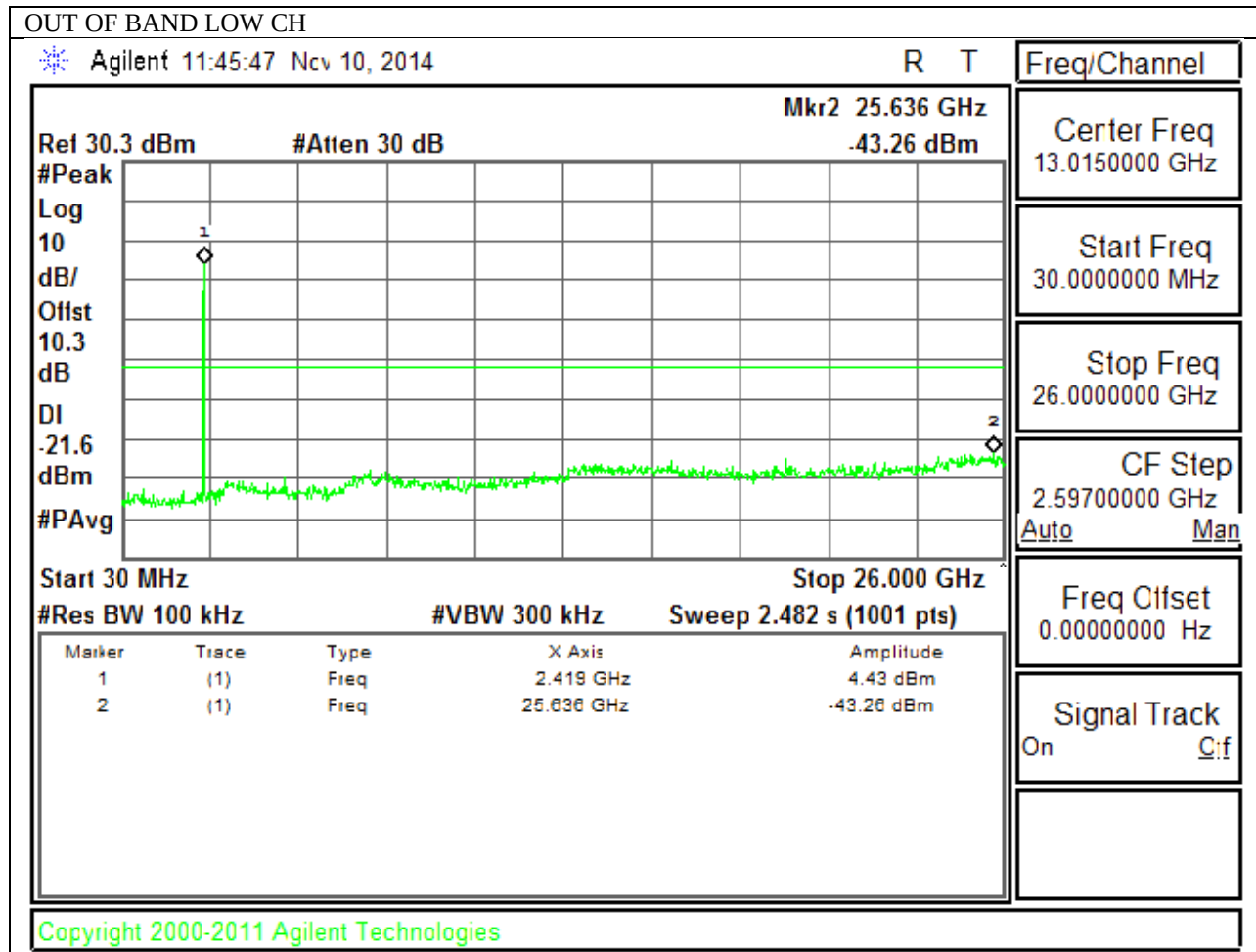
LOW CHANNEL BANDEDGE

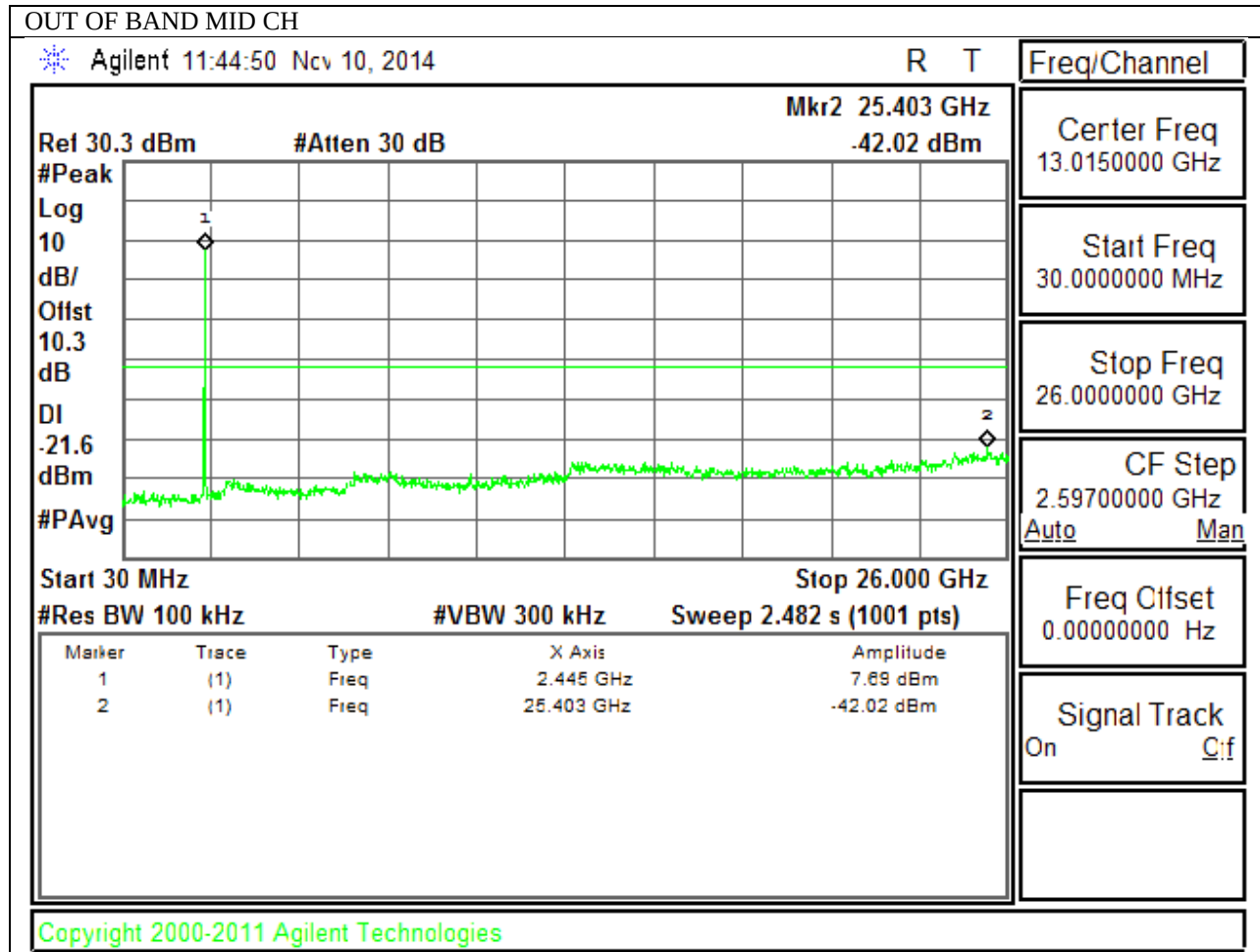


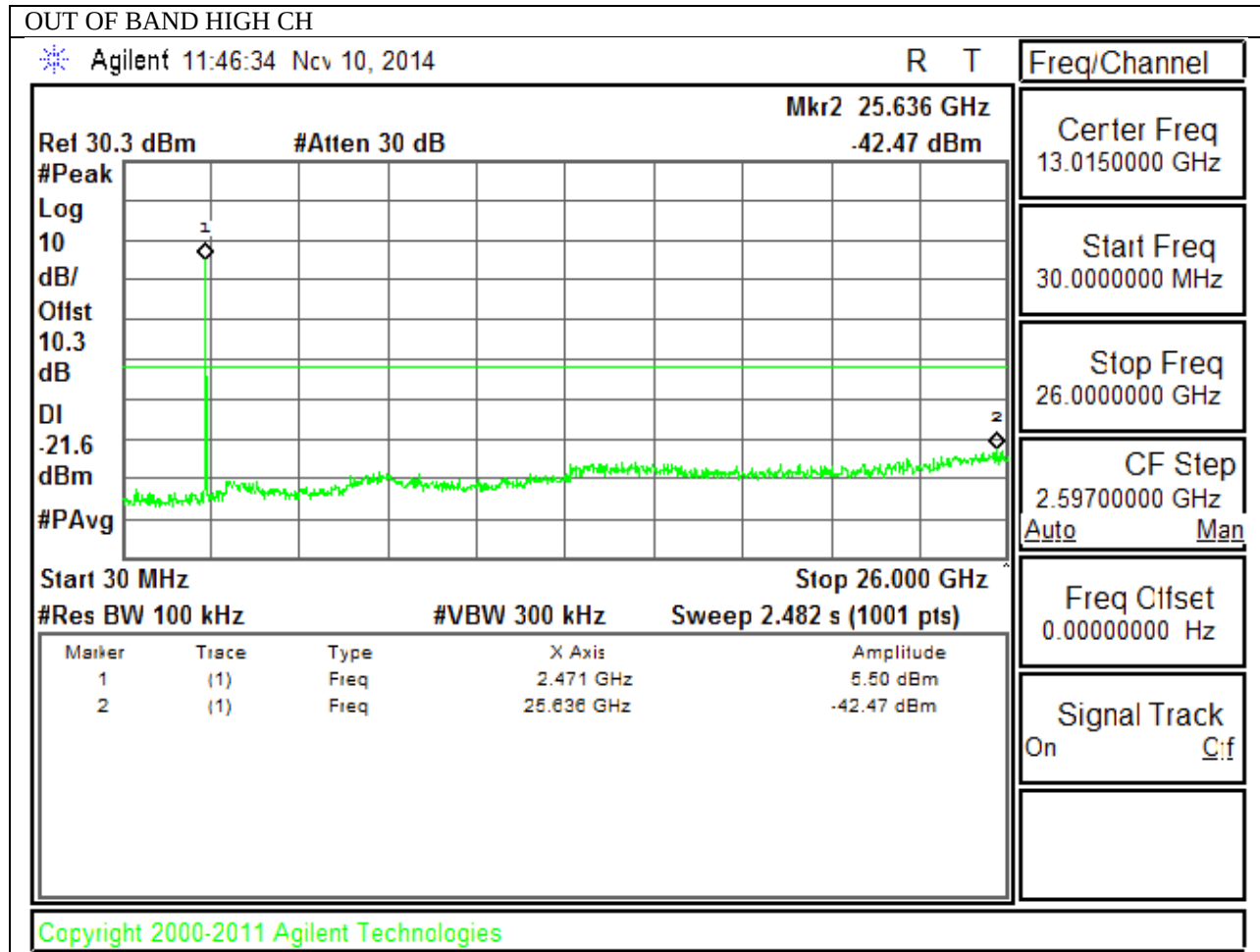
HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS

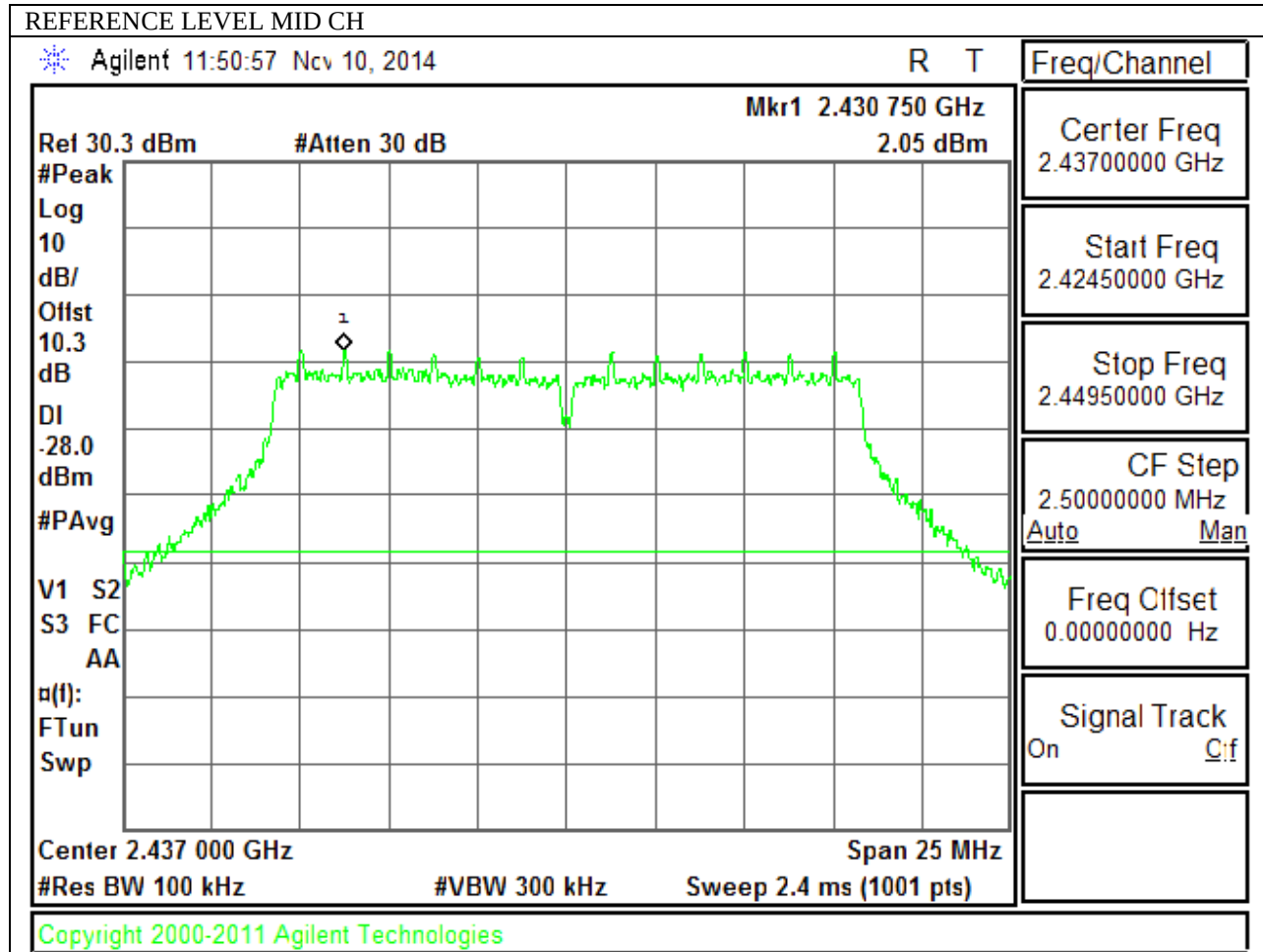




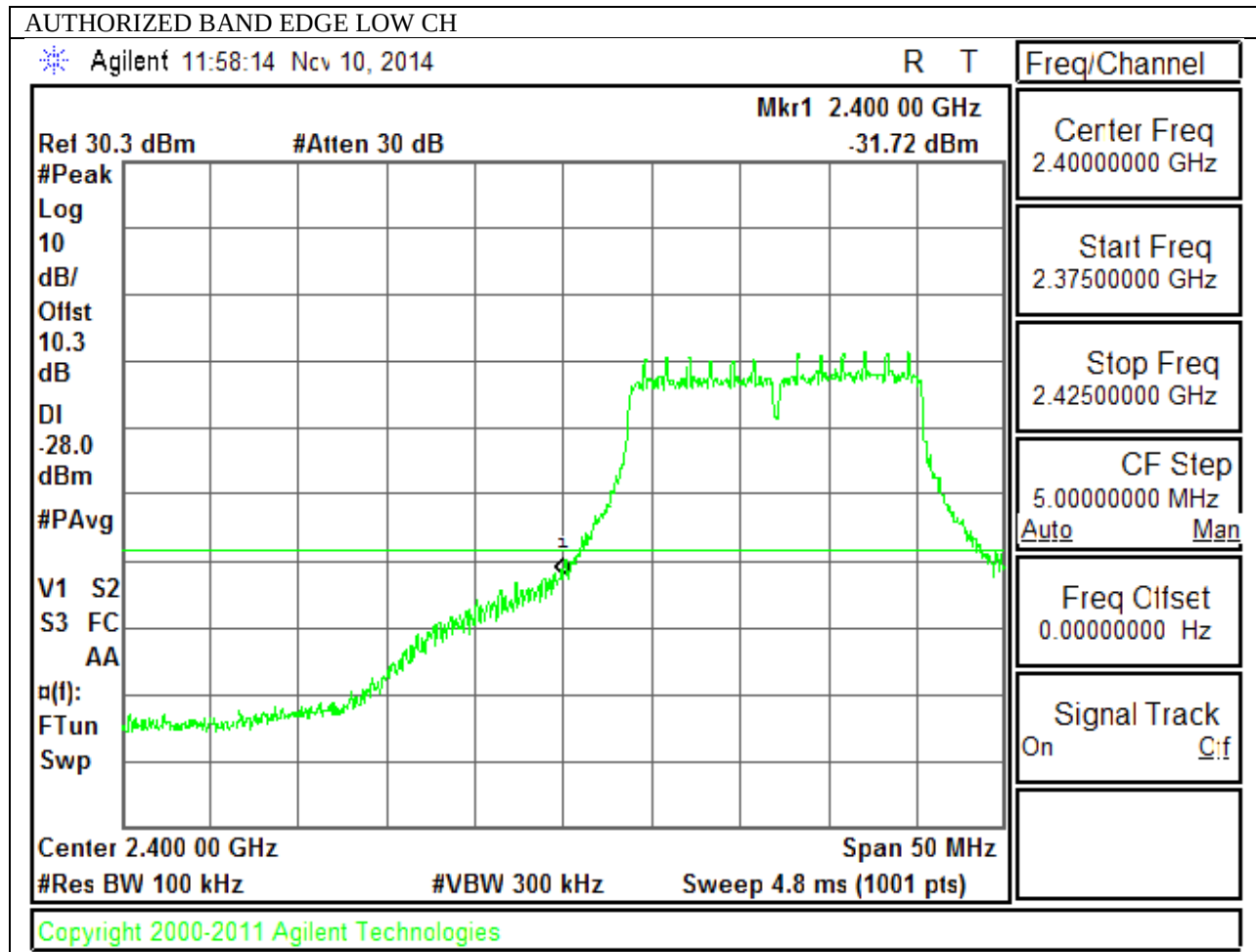


9.5.2. 802.11g MODE IN THE 2.4 GHz BAND

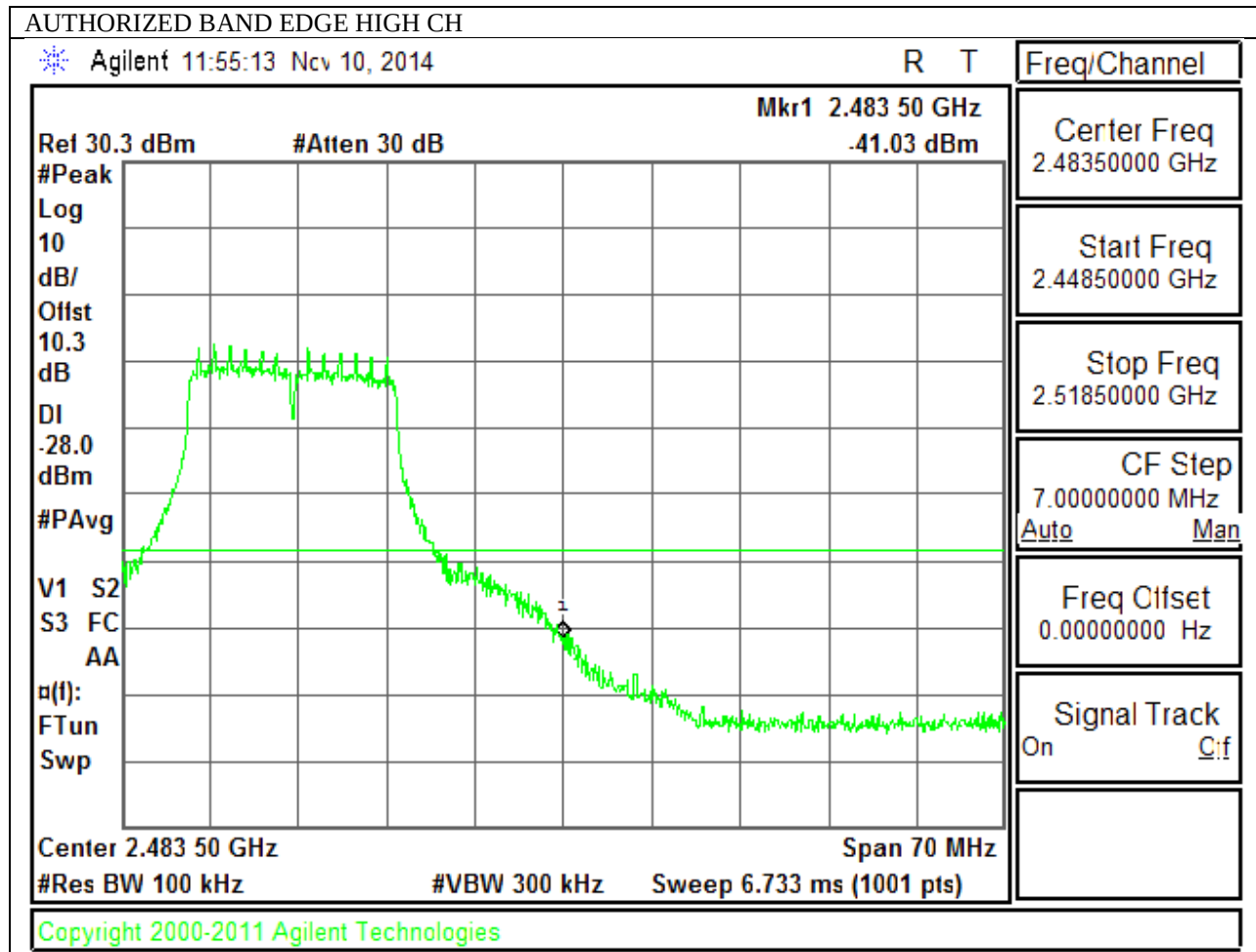
IN-BAND REFERENCE LEVEL



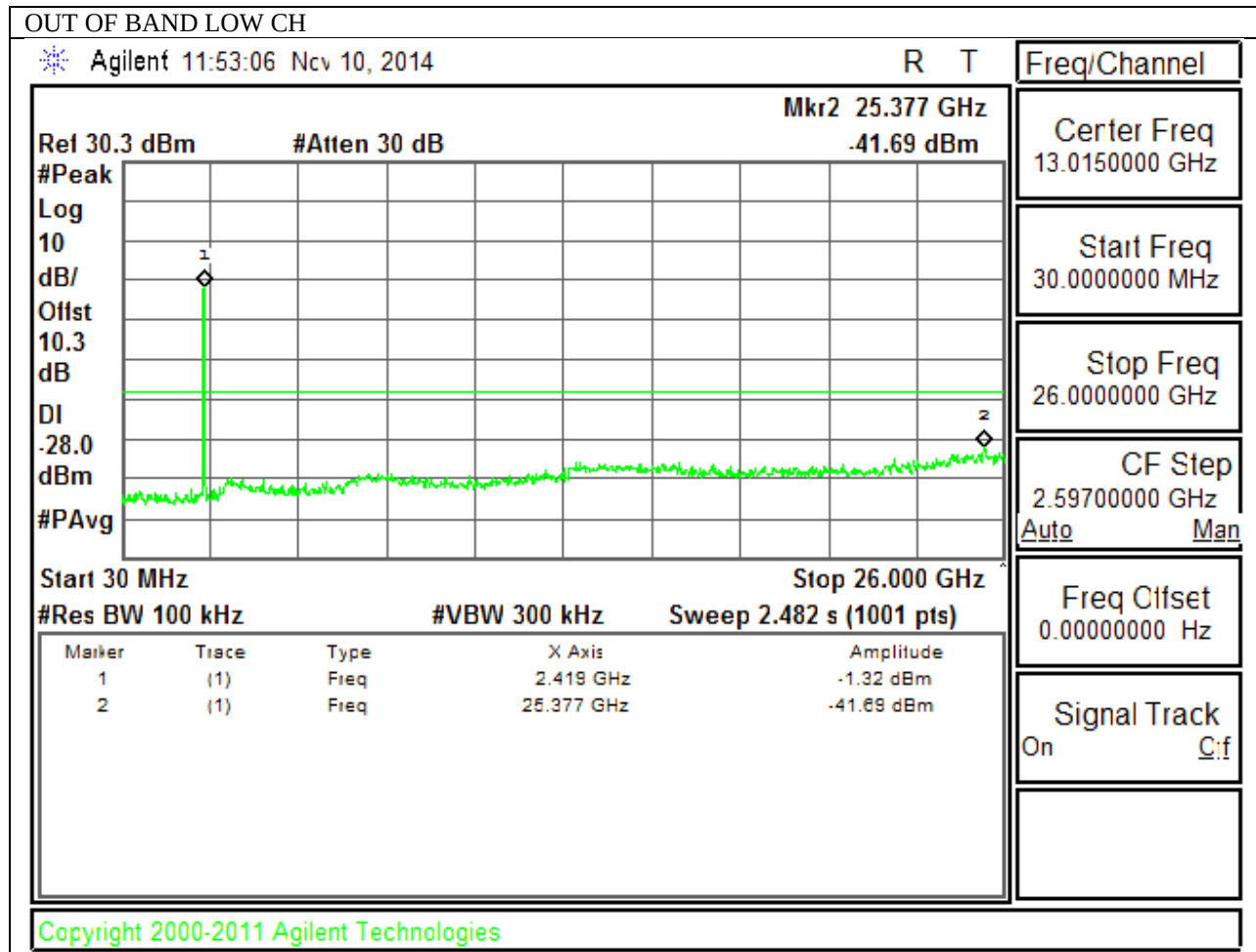
LOW CHANNEL BANDEDGE

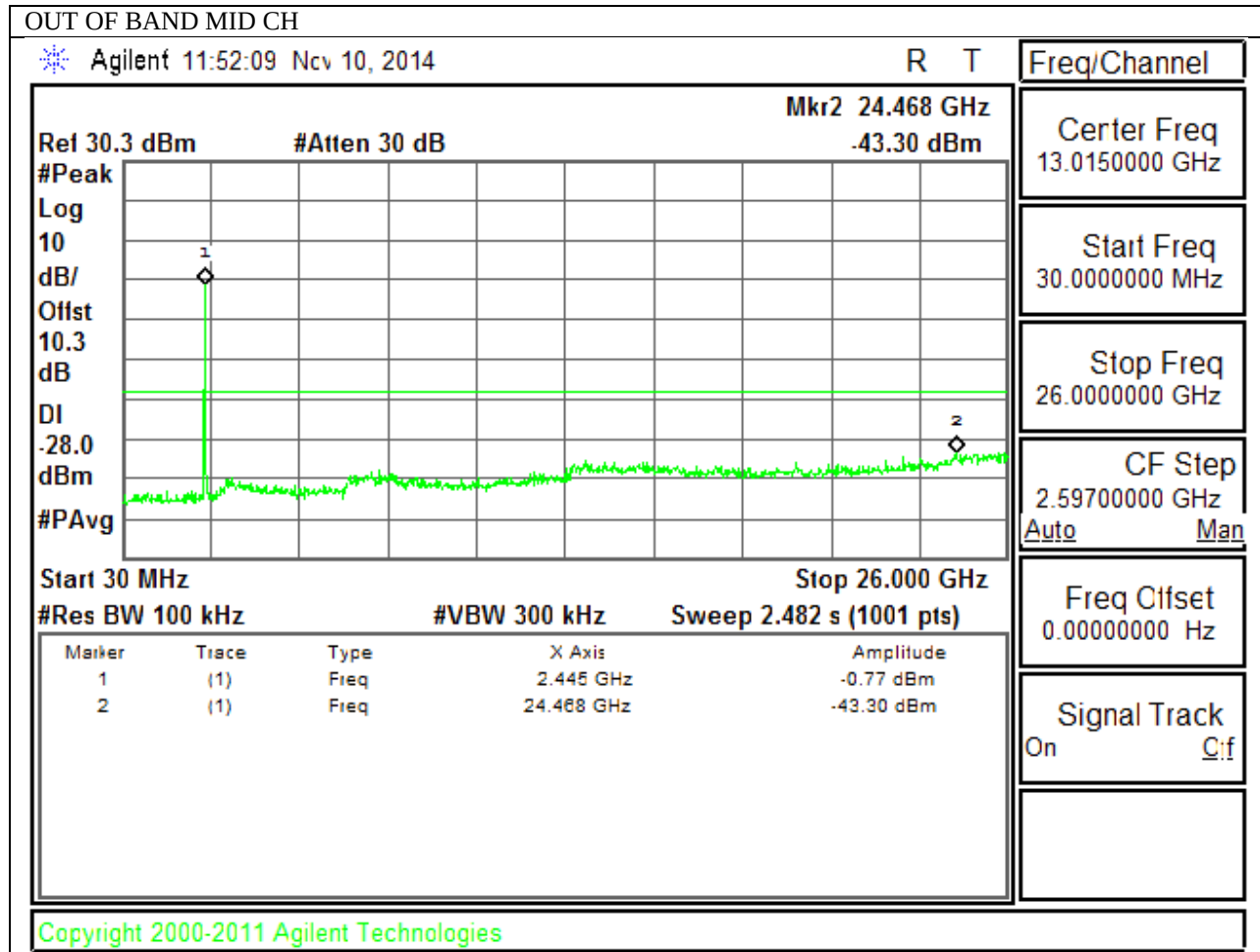


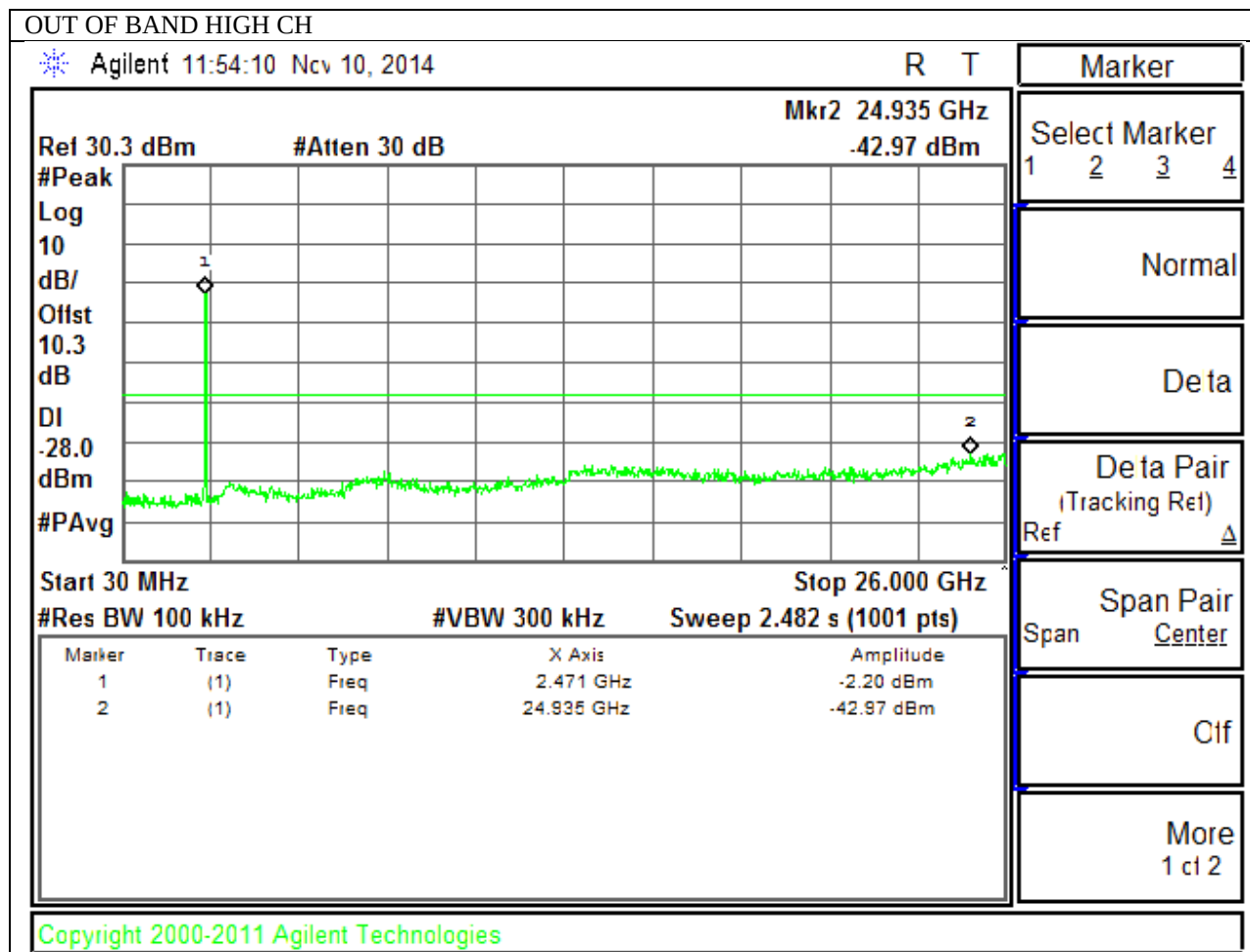
HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS

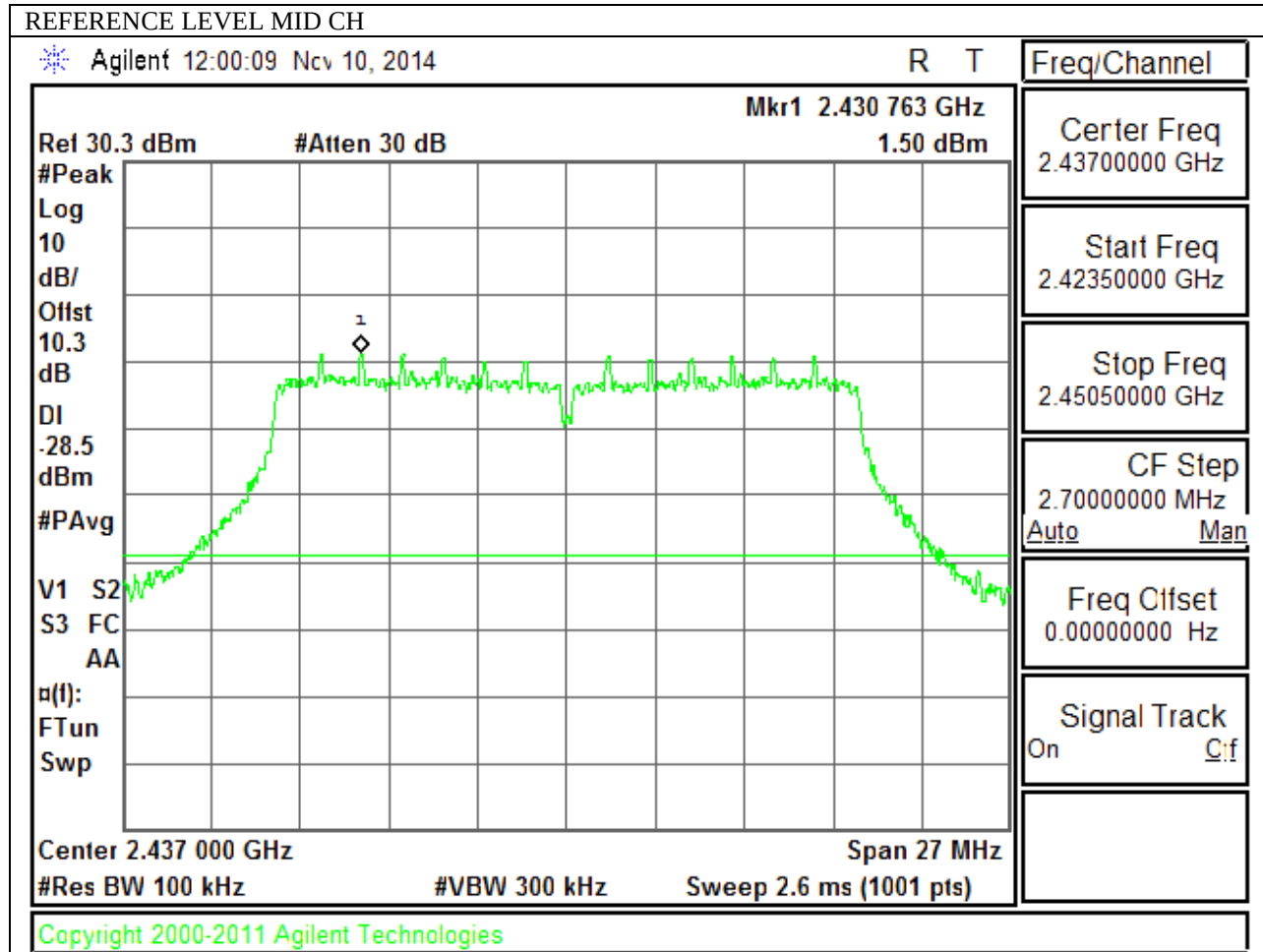




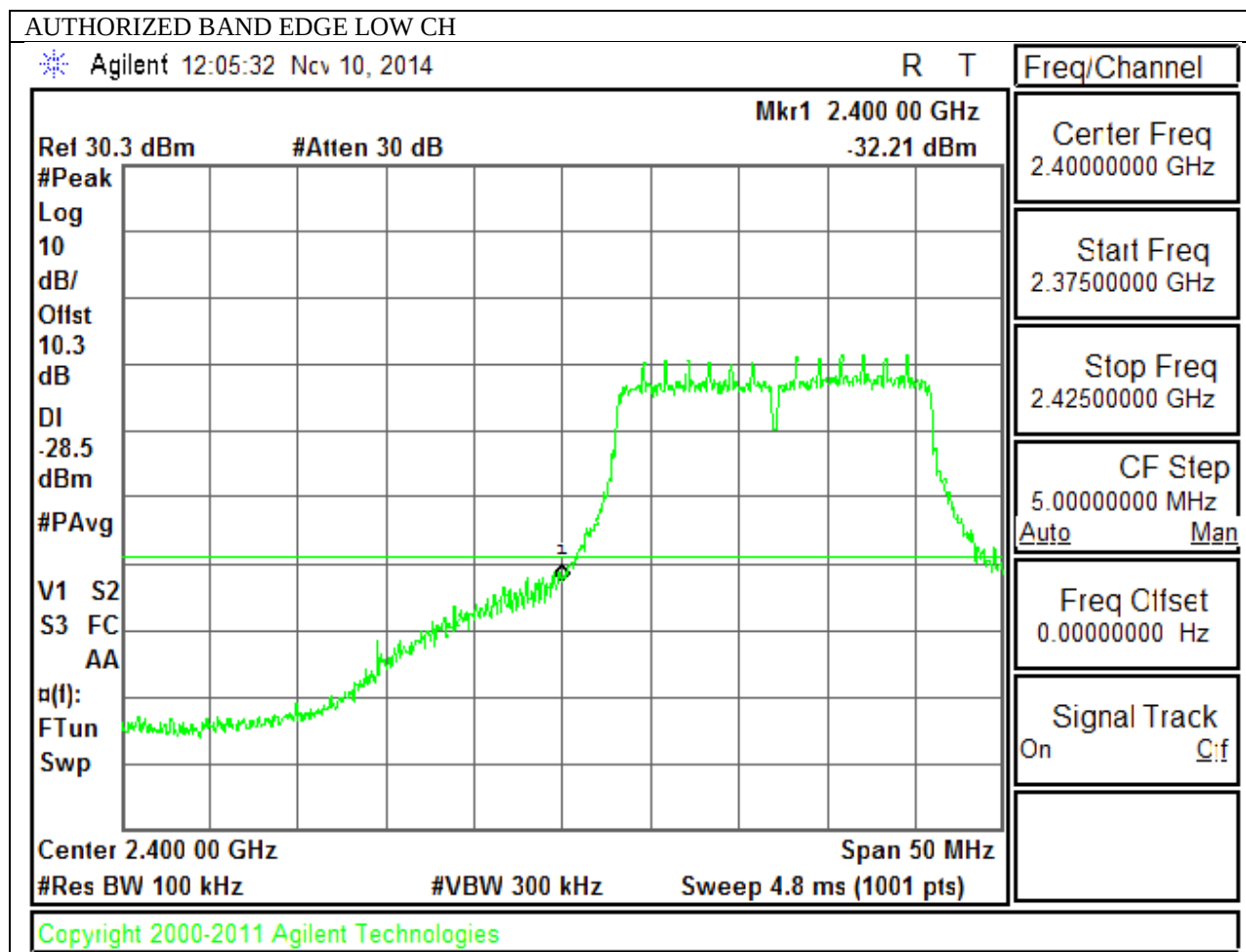


9.5.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

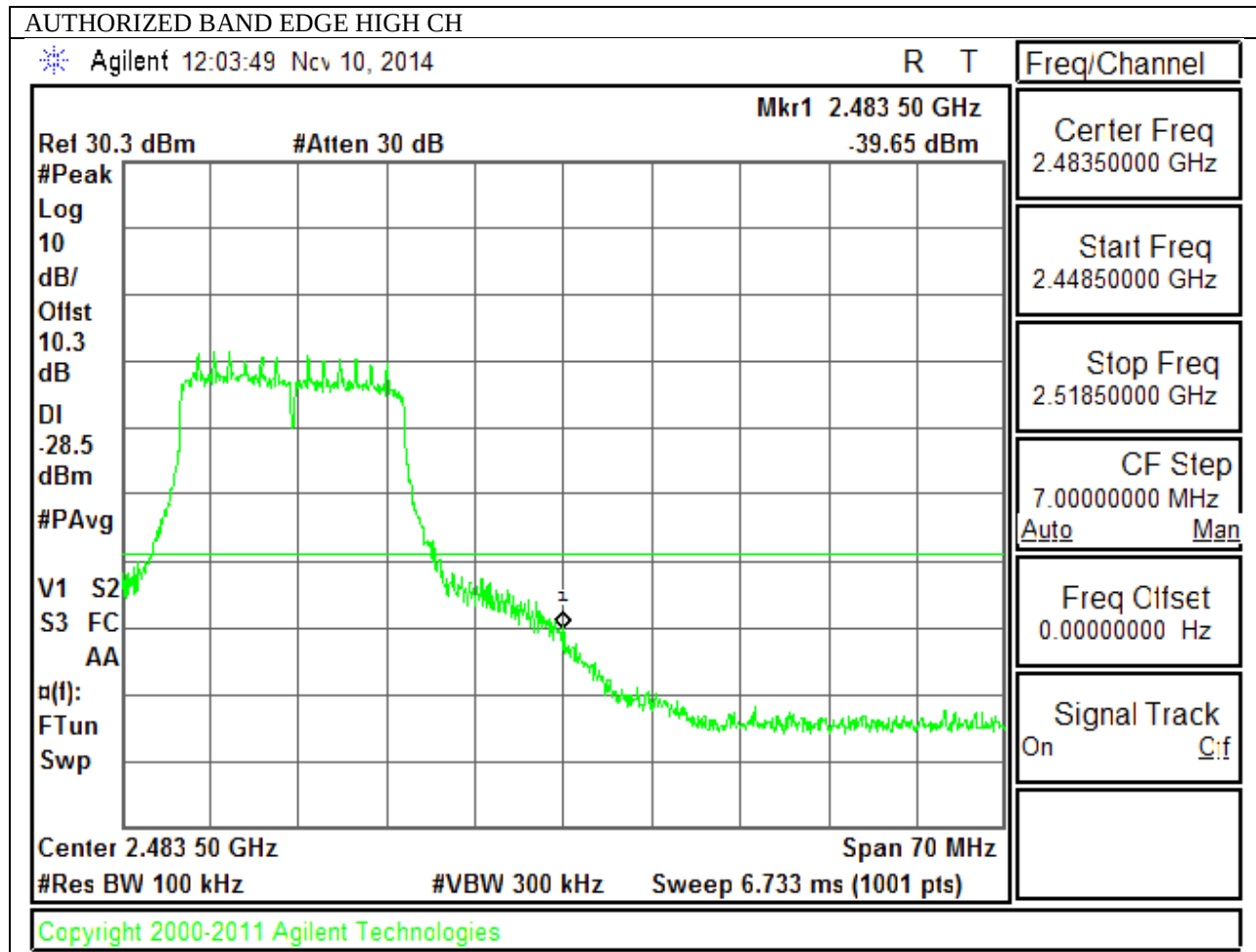
IN-BAND REFERENCE LEVEL



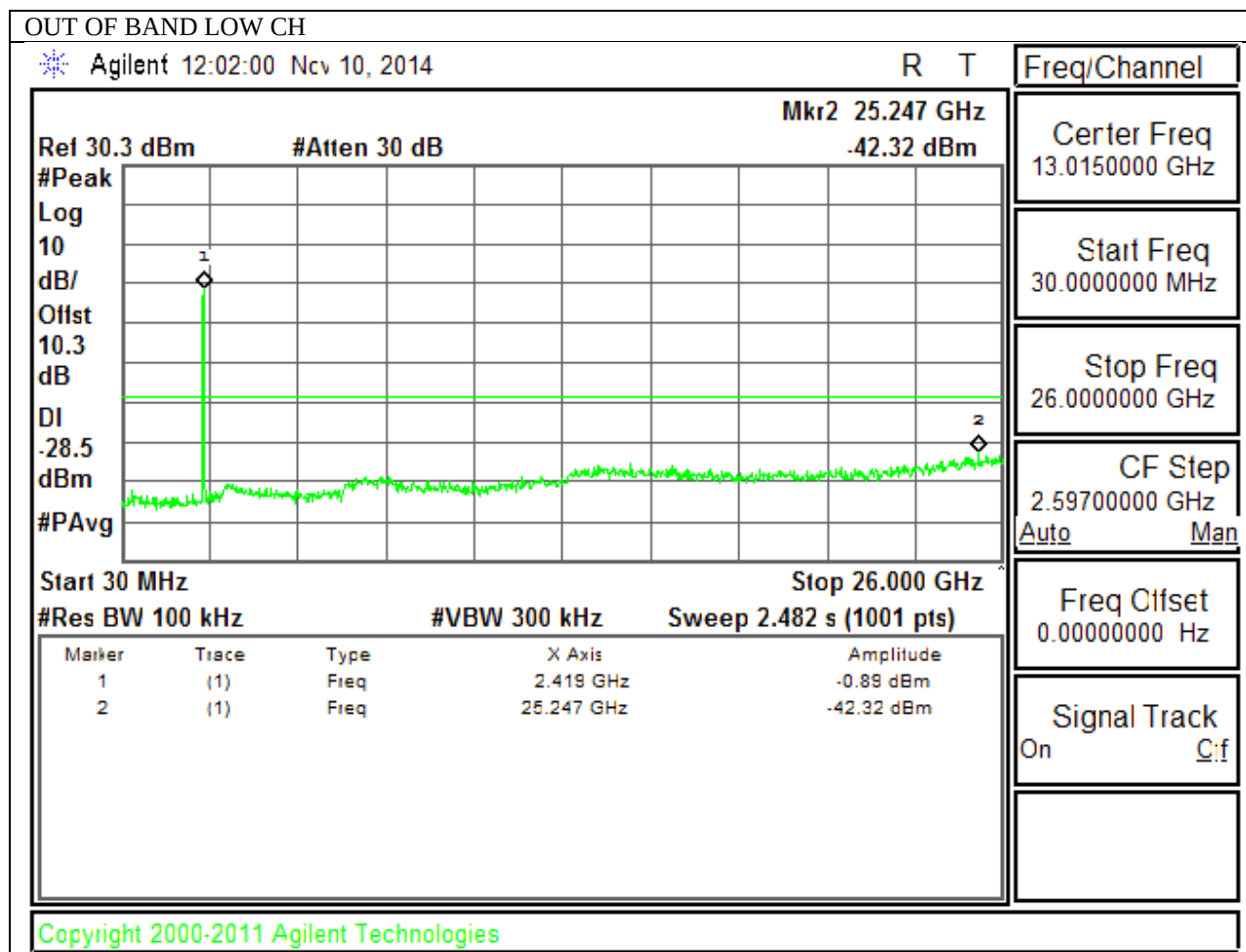
LOW CHANNEL BANDEDGE

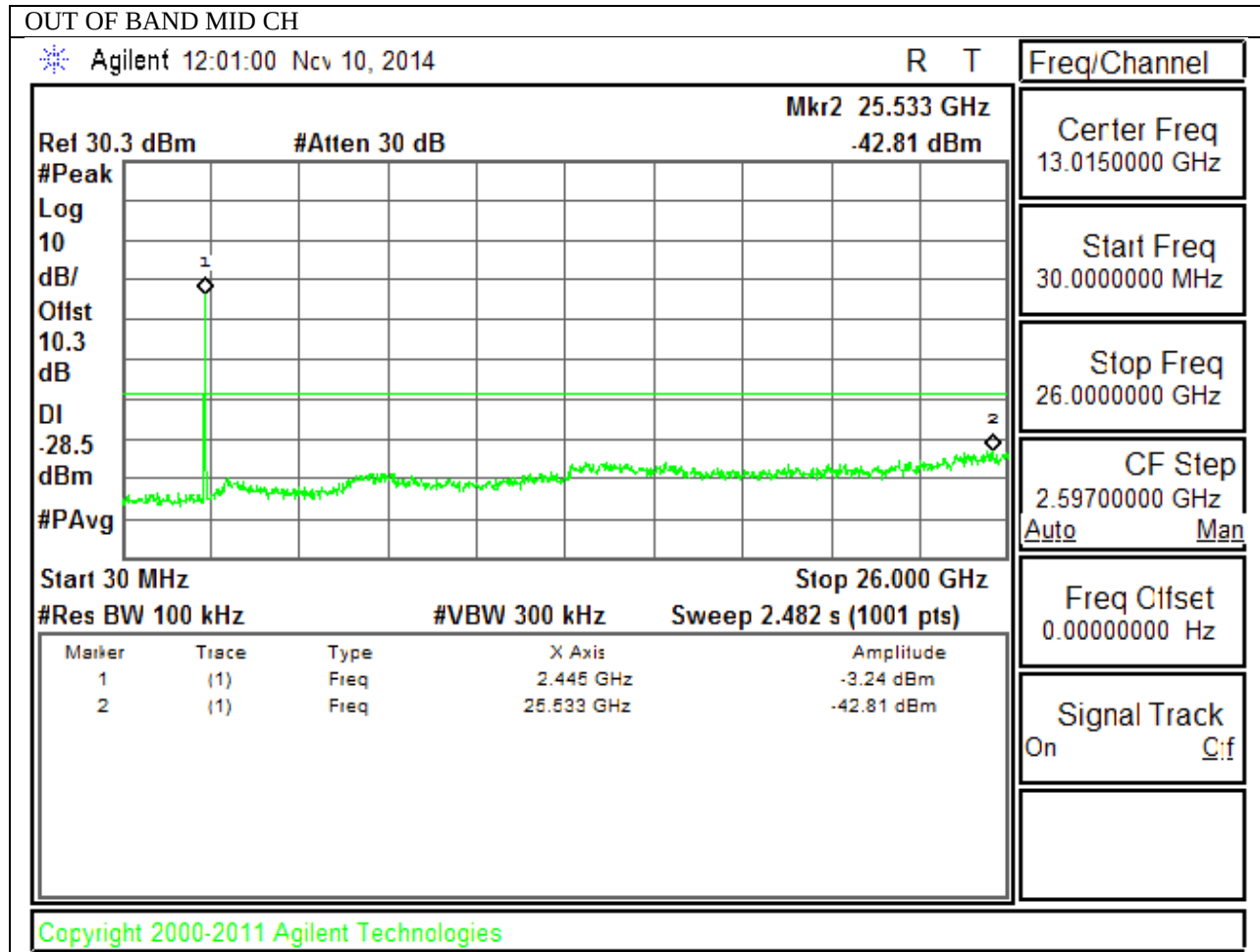


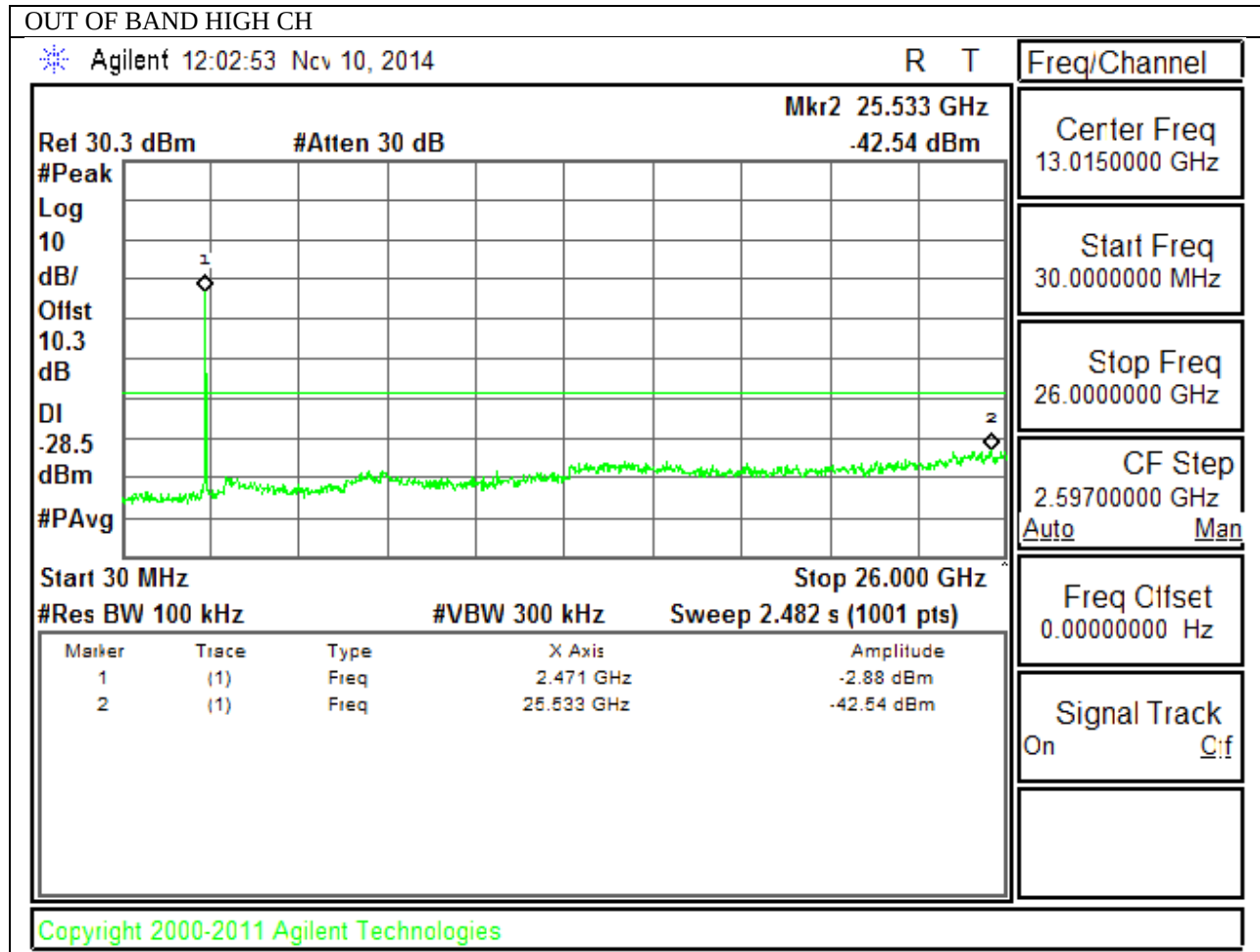
HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS







10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit ($\mu\text{V/m}$) at 3 m	Field Strength Limit (dB $\mu\text{V/m}$) 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. The antenna to EUT distance is 3 meters.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor = $10\log(1/x)$ For this sample B mode = 0dB (duty cycle >98%); G mode = 0.29dB; N mode = 0.32dB.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

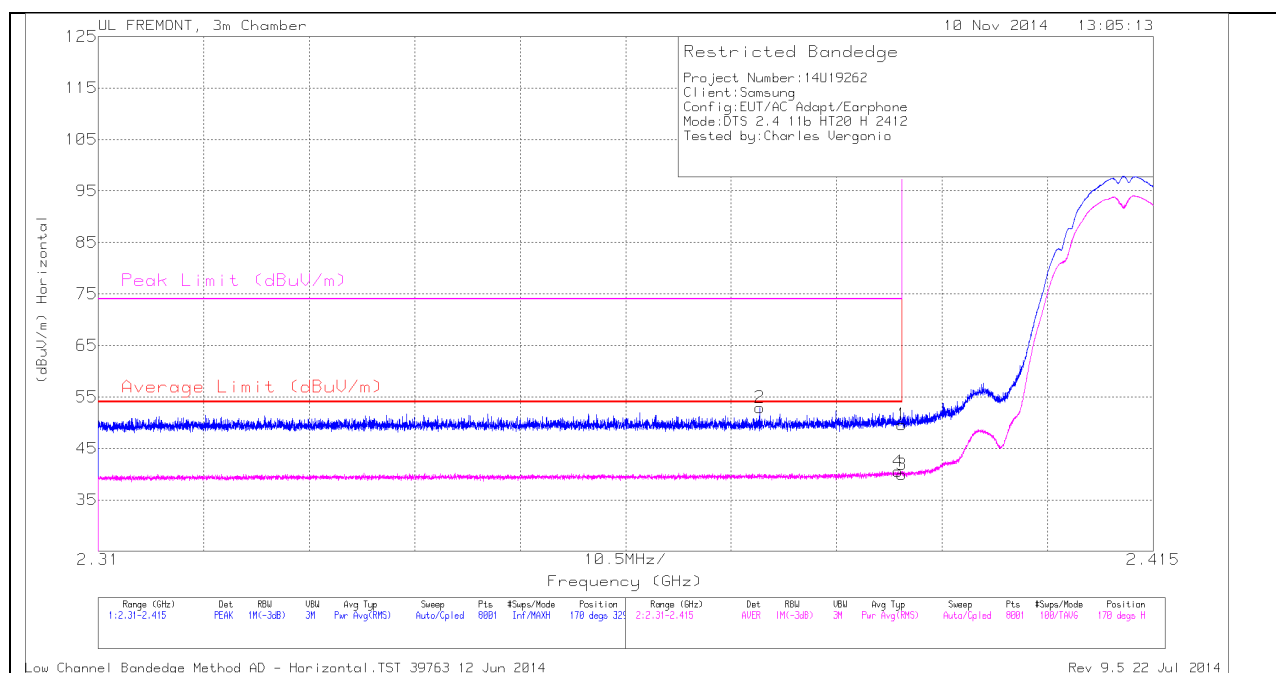
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

10.2. TRANSMITTER ABOVE 1 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

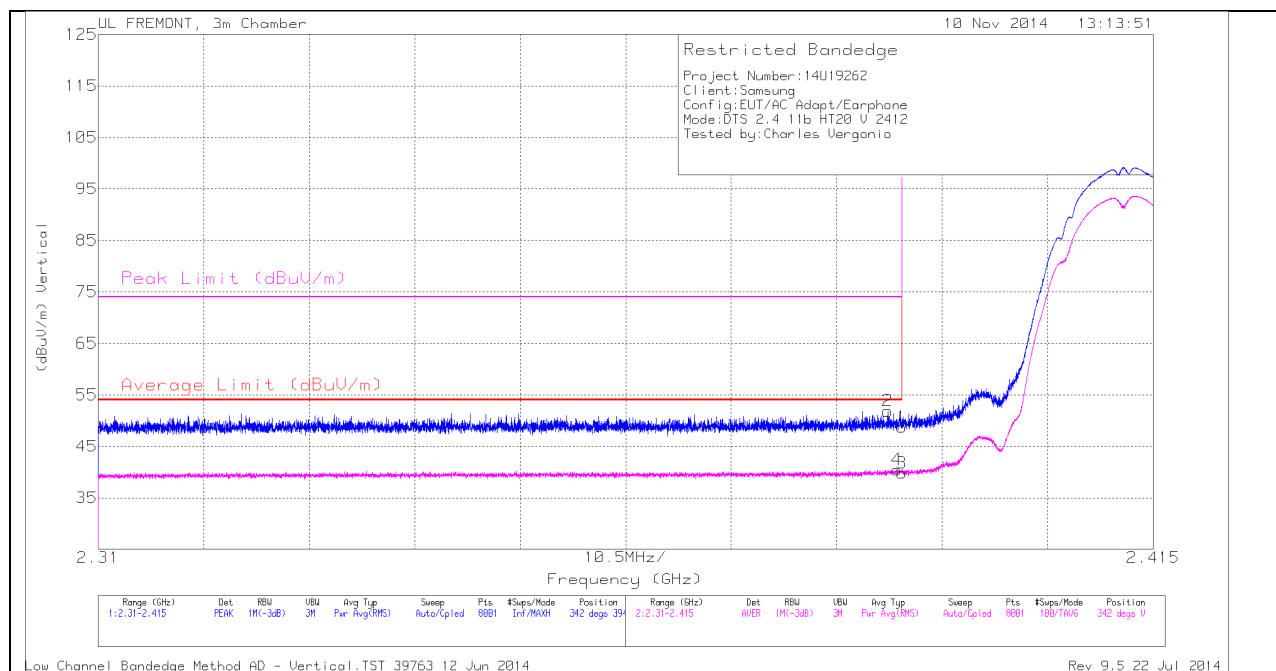
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.376	44.03	PK	32	-23.1	52.93	-	-	74	-21.07	170	329	H
1	2.39	40.62	PK	32.1	-23.1	49.62	-	-	74	-24.38	170	329	H
3	2.39	30.92	RMS	32.1	-23.1	39.92	54	-14.08	-	-	170	329	H
4	2.39	31.56	RMS	32.1	-23.1	40.56	54	-13.44	-	-	170	329	H

VERTICAL PEAK AND AVERAGE PLOT

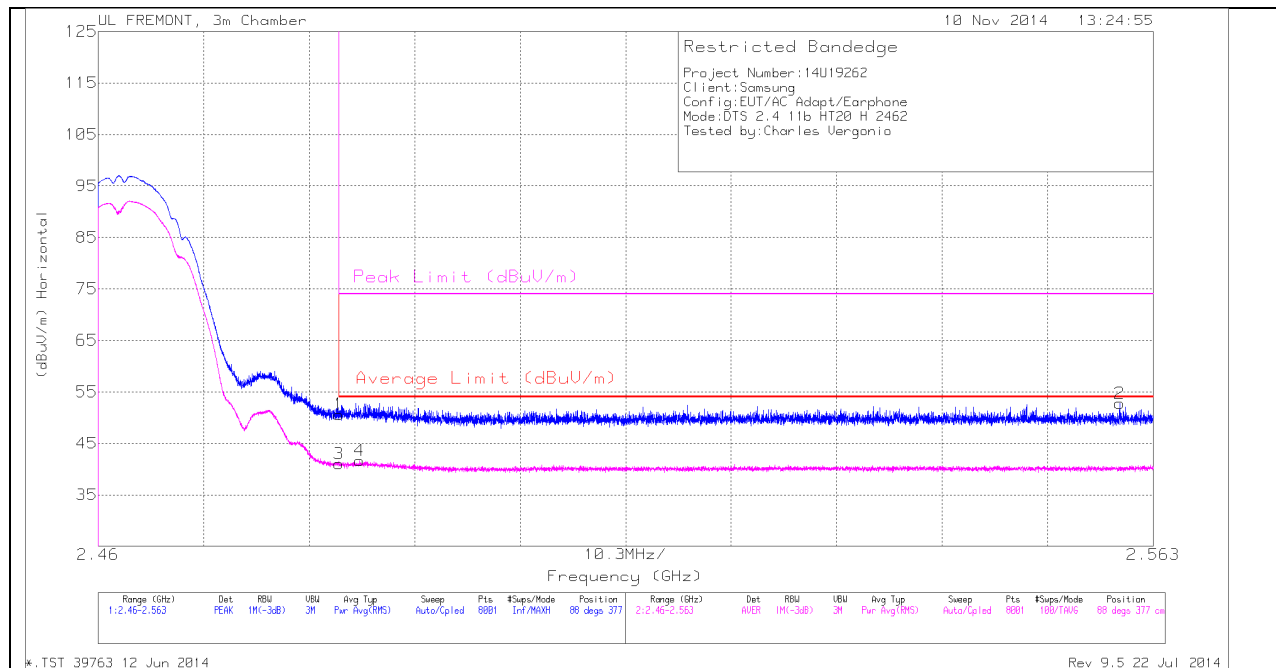


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.389	42.86	PK	32.1	-23.1	51.86	-	-	74	-22.14	342	394	V
4	2.389	31.45	RMS	32.1	-23.1	40.45	54	-13.55	-	-	342	394	V
1	2.39	39.71	PK	32.1	-23.1	48.71	-	-	74	-25.29	342	394	V
3	2.39	30.8	RMS	32.1	-23.1	39.8	54	-14.2	-	-	342	394	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

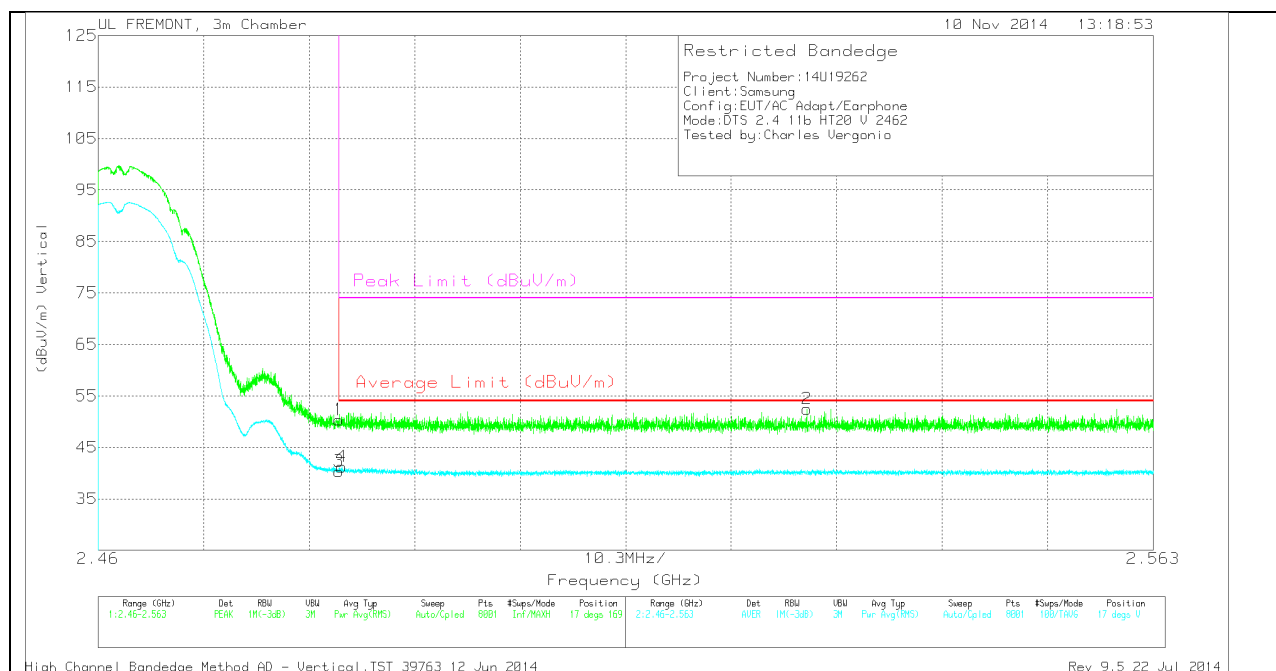
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/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	41.1	PK	32.3	-22.8	50.6	-	-	74	-23.4	88	377	H
3	2.484	31.55	RMS	32.3	-22.8	41.05	54	-12.95	-	-	88	377	H
4	2.486	32.12	RMS	32.3	-22.8	41.62	54	-12.38	-	-	88	377	H
2	2.56	43.07	PK	32.4	-22.7	52.77	-	-	74	-21.23	88	377	H

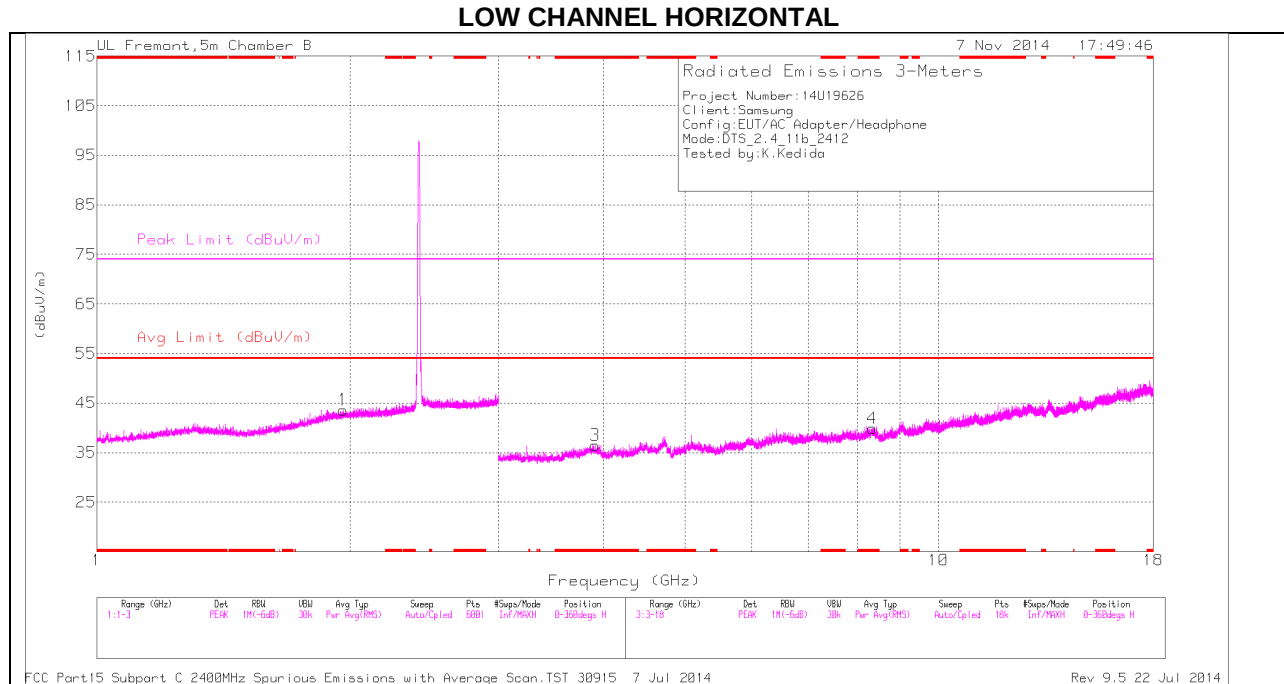
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

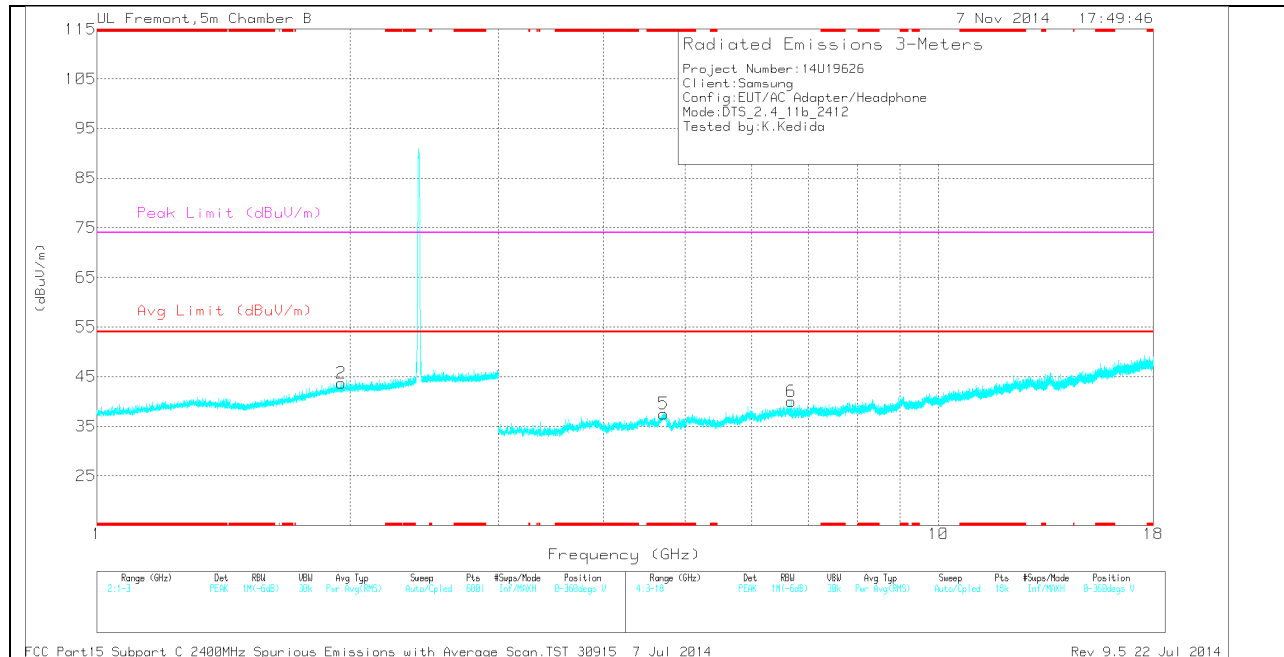
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	40.85	PK	32.3	-22.8	50.35	-	-	74	-23.65	17	169	V
3	2.484	30.86	RMS	32.3	-22.8	40.36	54	-13.64	-	-	17	169	V
4	2.484	31.74	RMS	32.3	-22.8	41.24	54	-12.76	-	-	17	169	V
2	2.529	42.67	PK	32.4	-22.6	52.47	-	-	74	-21.53	17	169	V

HARMONICS AND SPURIOUS EMISSIONS



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 3.907	33.02	PK	33.8	-30.3	36.52	-	-	74	-37.48	0-360	101	H
4	* 8.344	29.77	PK	35.7	-25.6	39.87	-	-	74	-34.13	0-360	199	H
5	* 4.714	32.84	PK	34.2	-29.5	37.54	-	-	74	-36.46	0-360	199	V
2	1.951	35.76	PK	31.2	-23.3	43.66	-	-	-	-	0-360	199	V
1	1.963	35.83	PK	31.2	-23.4	43.63	-	-	-	-	0-360	199	H
6	6.684	33.36	PK	35.7	-29.1	39.96	-	-	-	-	0-360	101	V

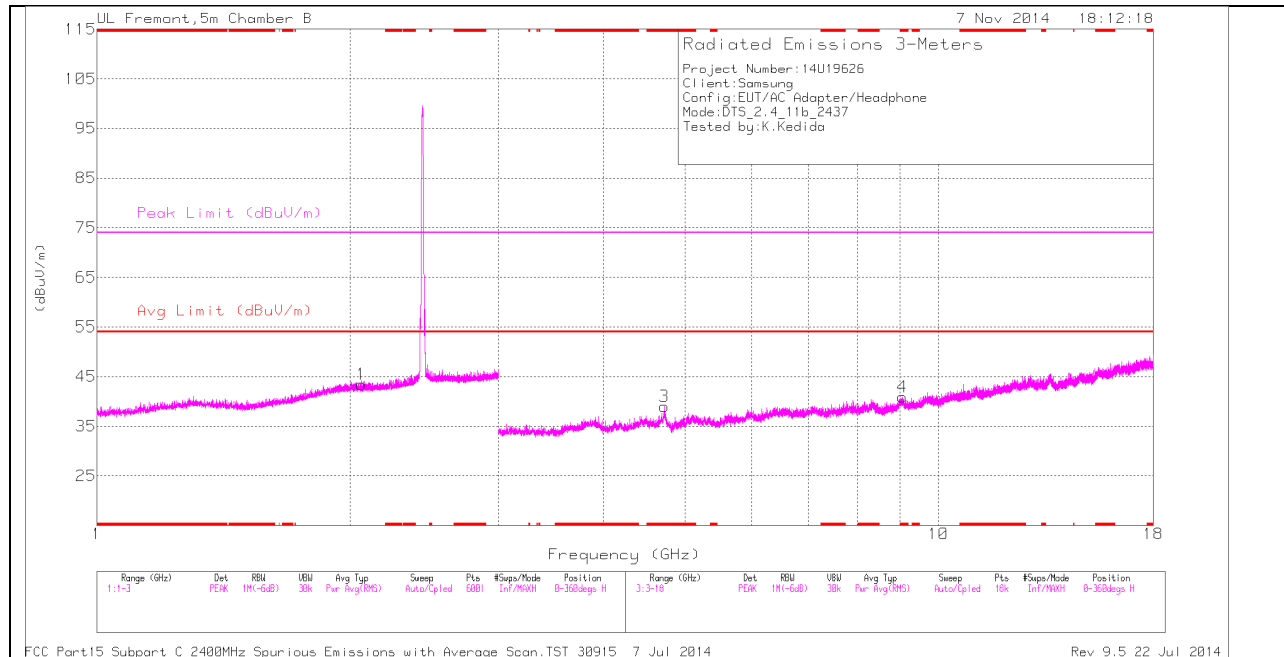
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.908	41	PK2	33.8	-30.3	44.5	-	-	74	-29.5	1	101	H
* 3.908	30.31	MAV1	33.8	-30.3	33.81	54	-20.19	-	-	1	101	H

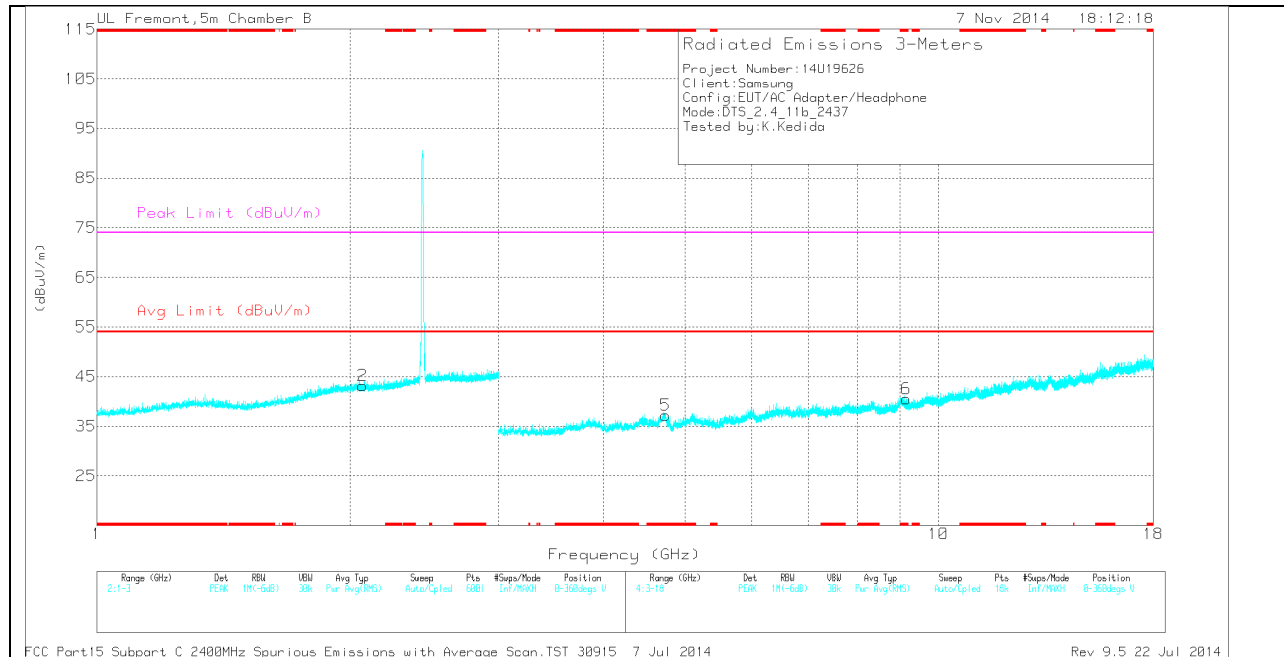
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.726	34.08	PK	34.2	-29.3	38.98	-	-	74	-35.02	0-360	200	H
4	* 9.064	29.02	PK	36.3	-24.4	40.92	-	-	74	-33.08	0-360	101	H
5	* 4.739	32.23	PK	34.2	-29.2	37.23	-	-	74	-36.77	0-360	200	V
6	* 9.154	29.69	PK	36.3	-25.5	40.49	-	-	74	-33.51	0-360	200	V
1	2.064	35.35	PK	31.3	-23.2	43.45	-	-	-	-	0-360	101	H
2	2.071	35.11	PK	31.3	-23.2	43.21	-	-	-	-	0-360	101	V

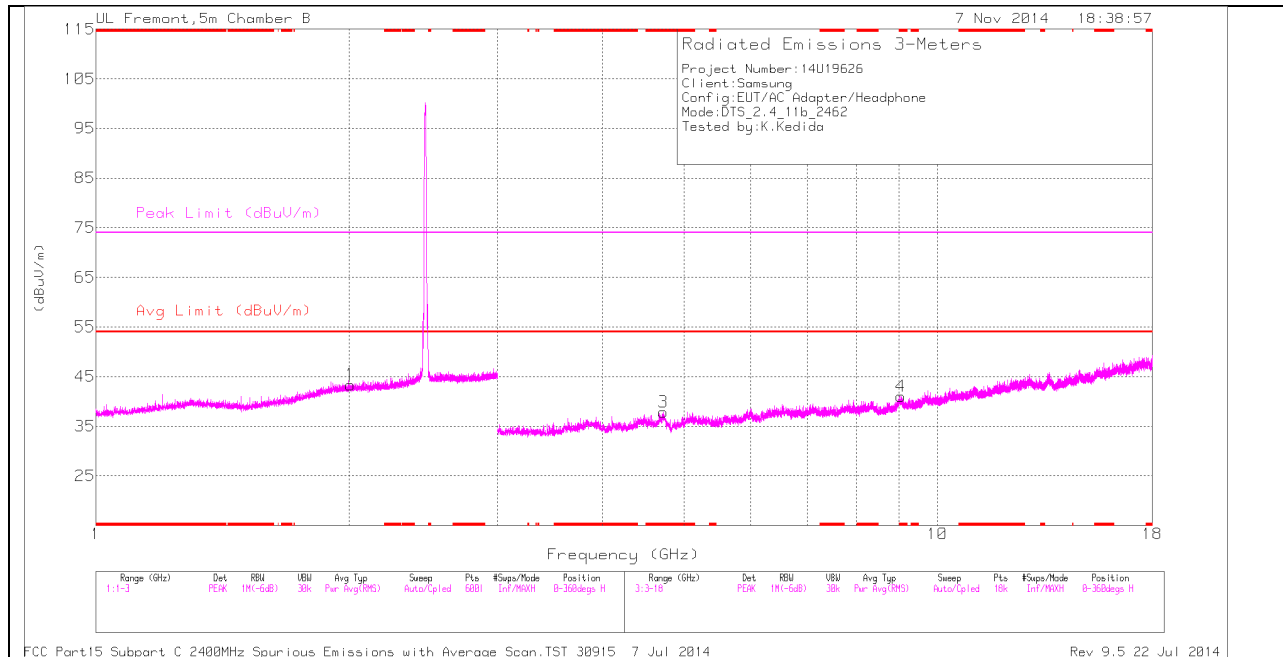
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.725	41.36	PK2	34.2	-29.3	46.26	-	-	74	-27.74	1	199	H
* 4.725	30.21	MAV1	34.2	-29.3	35.11	54	-18.89	-	-	1	199	H

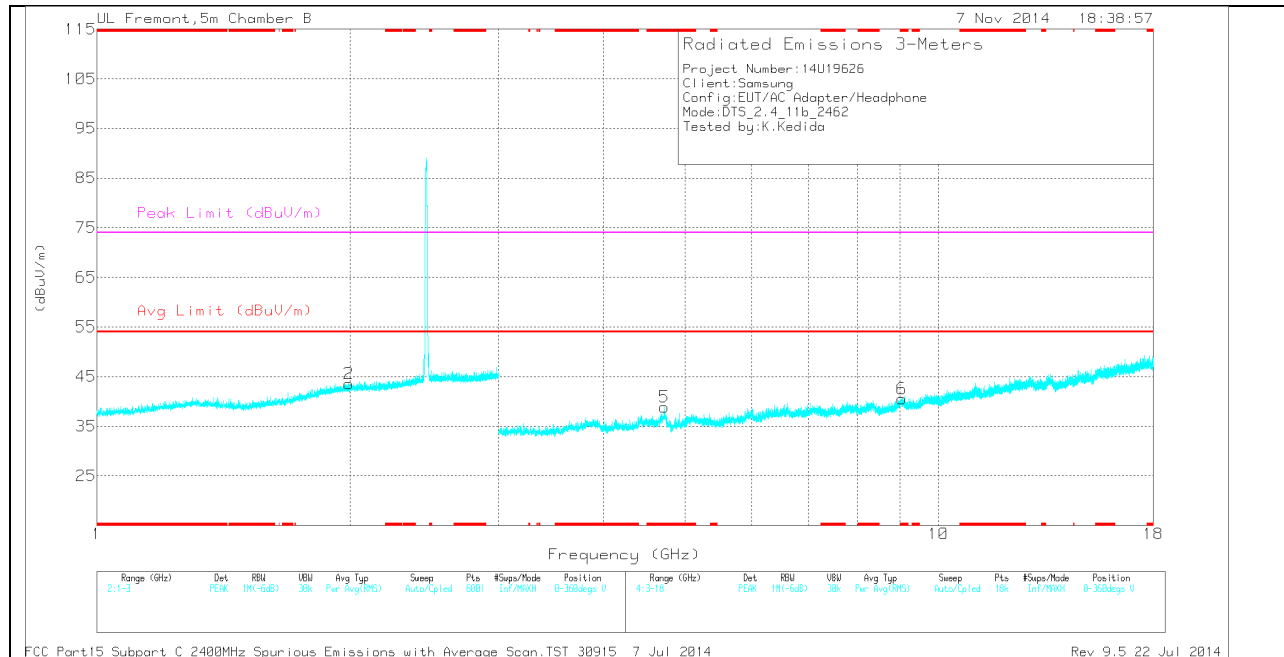
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HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.726	32.96	PK	34.2	-29.3	37.86	-	-	74	-36.14	0-360	199	H
4	* 9.05	29.21	PK	36.2	-24.4	41.01	-	-	74	-32.99	0-360	101	H
5	* 4.723	33.94	PK	34.2	-29.3	38.84	-	-	74	-35.16	0-360	199	V
6	* 9.044	28.73	PK	36.2	-24.4	40.53	-	-	74	-33.47	0-360	101	V
2	1.991	35.62	PK	31.3	-23.3	43.62	-	-	-	-	0-360	101	V
1	2.005	35.38	PK	31.3	-23.3	43.38	-	-	-	-	0-360	101	H

PK - Peak detector

RADIATED EMISSIONS

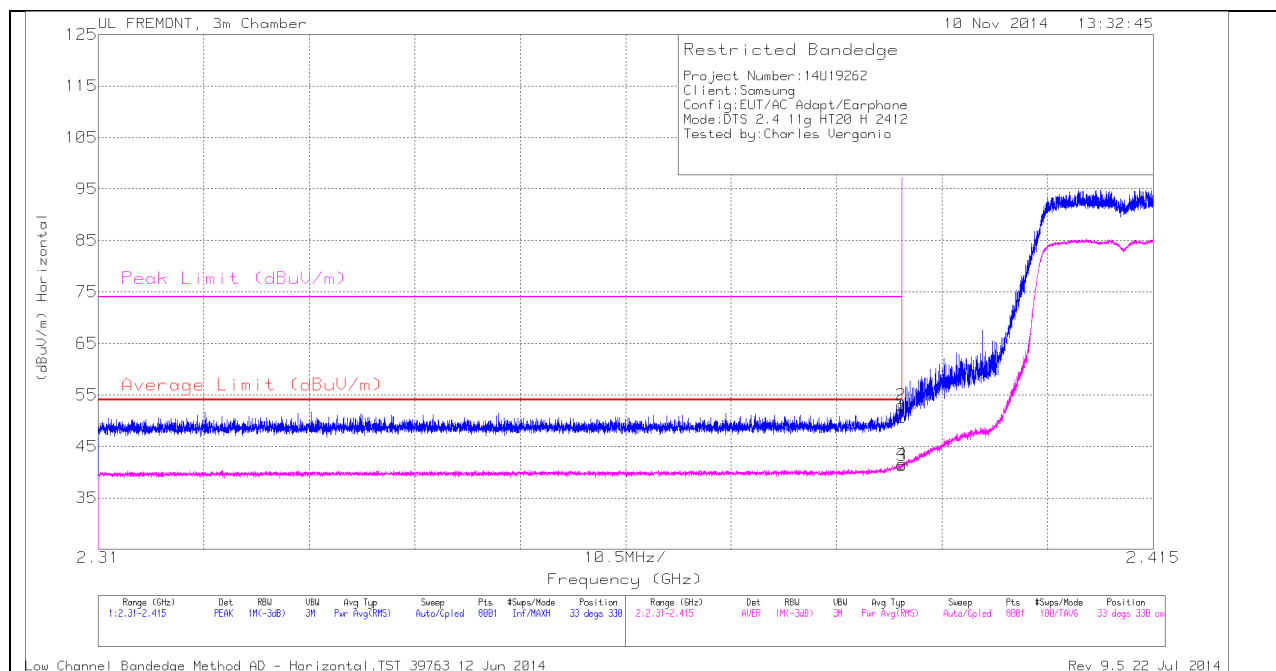
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.725	41.24	PK2	34.2	-29.3	46.14	-	-	74	-27.86	1	199	H
* 4.726	30.22	MAV1	34.2	-29.3	35.12	54	-18.88	-	-	1	199	H

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

RESTRICTED BANDEDGE (LOW CHANNEL)

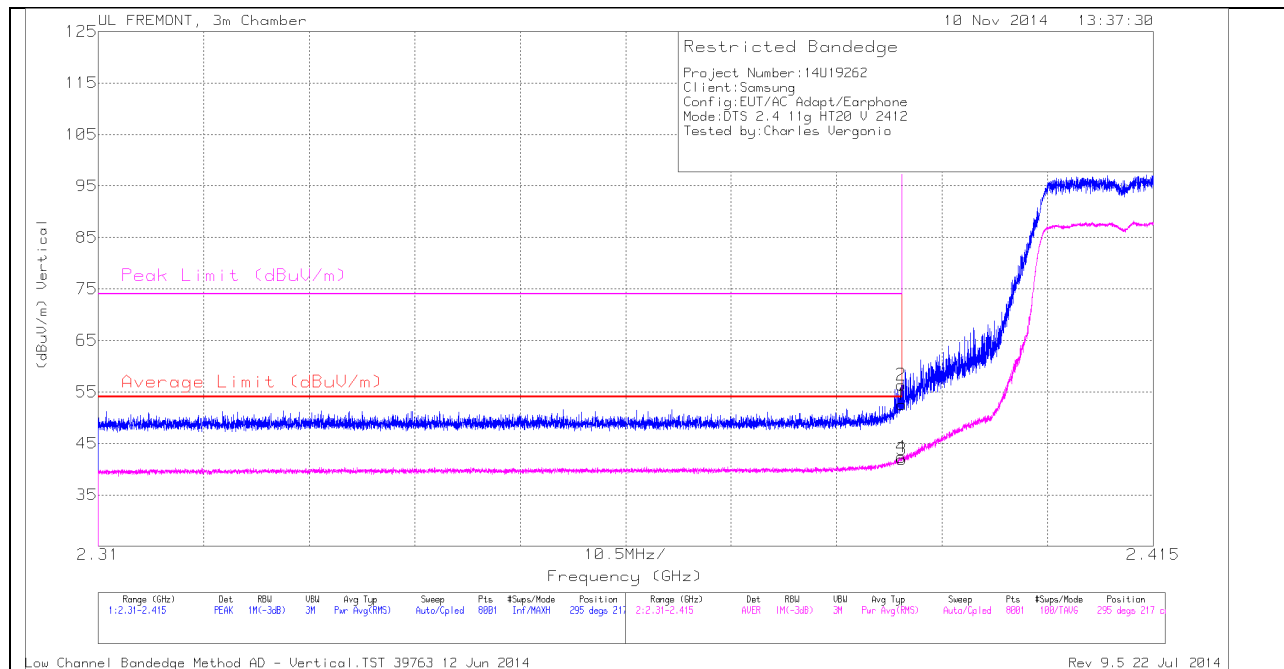
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitter/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	41.64	PK	32.1	-23.1	0	50.64	-	-	74	-23.36	33	330	H
2	2.39	44	PK	32.1	-23.1	0	53	-	-	74	-21	33	330	H
3	2.39	32.02	RMS	32.1	-23.1	.29	41.31	54	-12.69	-	-	33	330	H
4	2.39	32.31	RMS	32.1	-23.1	.29	41.6	54	-12.4	-	-	33	330	H

VERTICAL PEAK AND AVERAGE PLOT

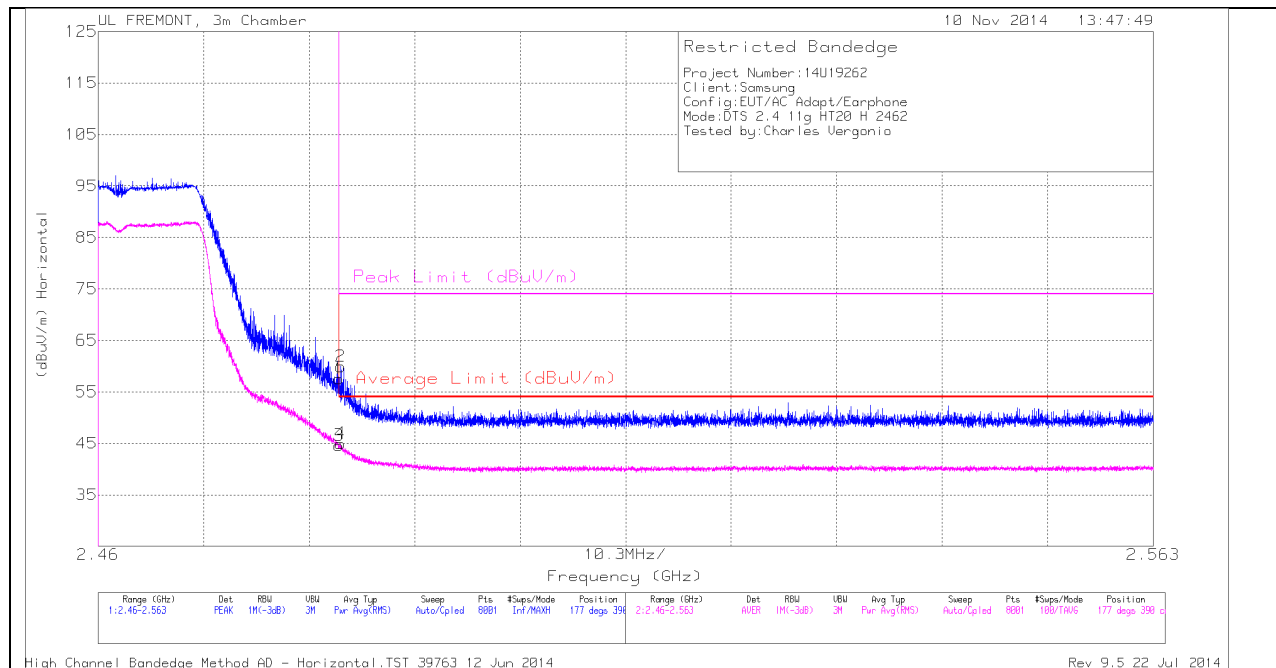


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Filter/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	43.54	PK	32.1	-23.1	0	52.54	-	-	74	-21.46	295	217	V
2	2.39	47.35	PK	32.1	-23.1	0	56.35	-	-	74	-17.65	295	217	V
3	2.39	32.62	RMS	32.1	-23.1	.29	41.91	54	-12.09	-	-	295	217	V
4	2.39	33.04	RMS	32.1	-23.1	.29	42.33	54	-11.67	-	-	295	217	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

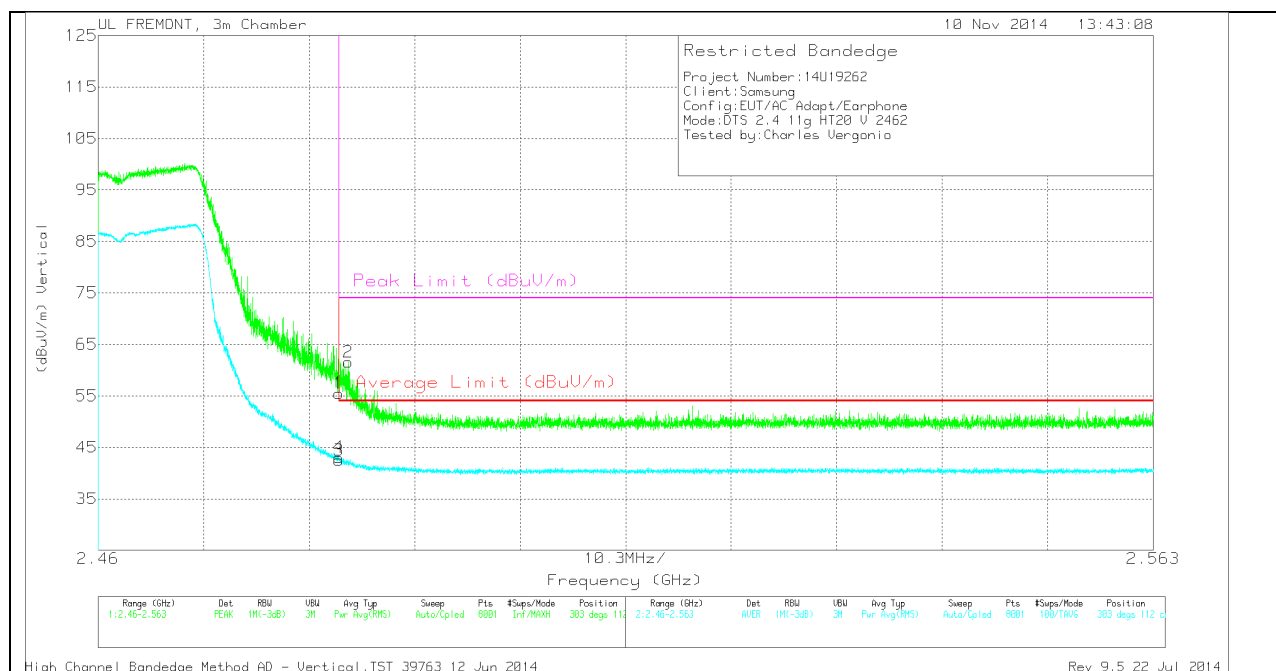
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DCCF	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	48.03	PK	32.3	-22.8		57.53	-	-	74	-16.47	177	390	H
2	2.484	50.43	PK	32.3	-22.8		59.93	-	-	74	-14.07	177	390	H
3	2.484	35.1	RMS	32.3	-22.8	0.29	44.89	54	-9.11	-	-	177	390	H
4	2.484	35.47	RMS	32.3	-22.8		44.97	54	-9.03	-	-	177	390	H

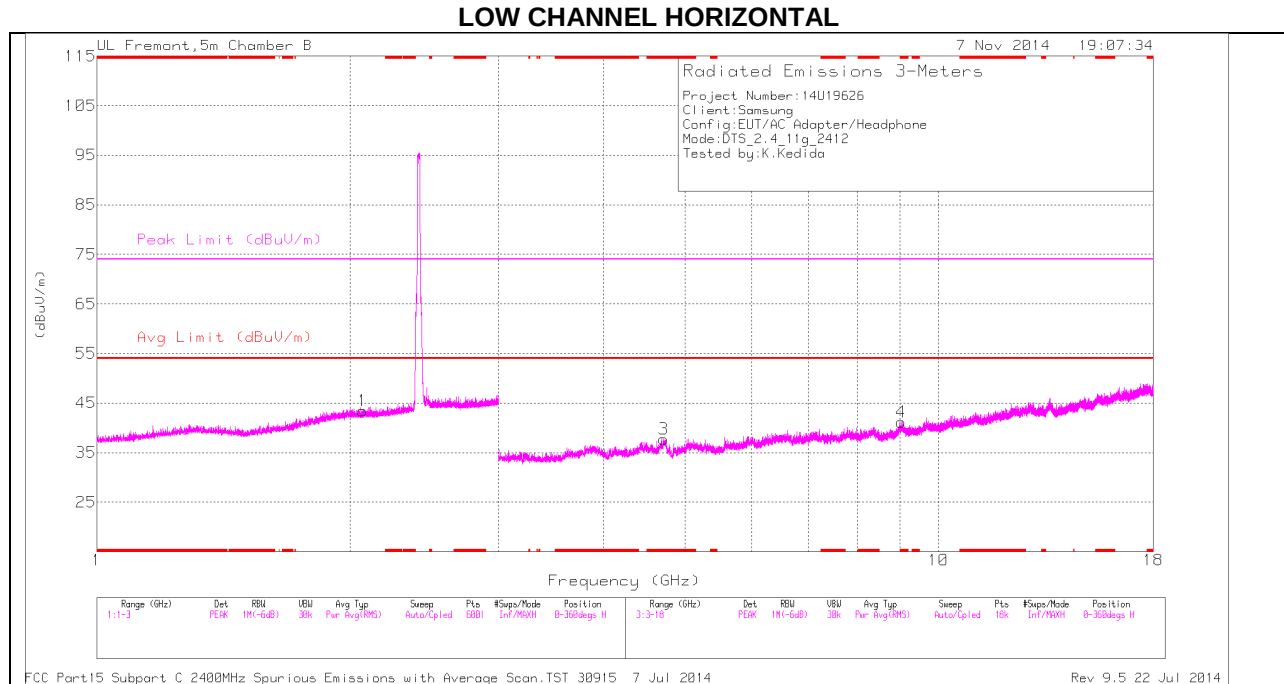
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

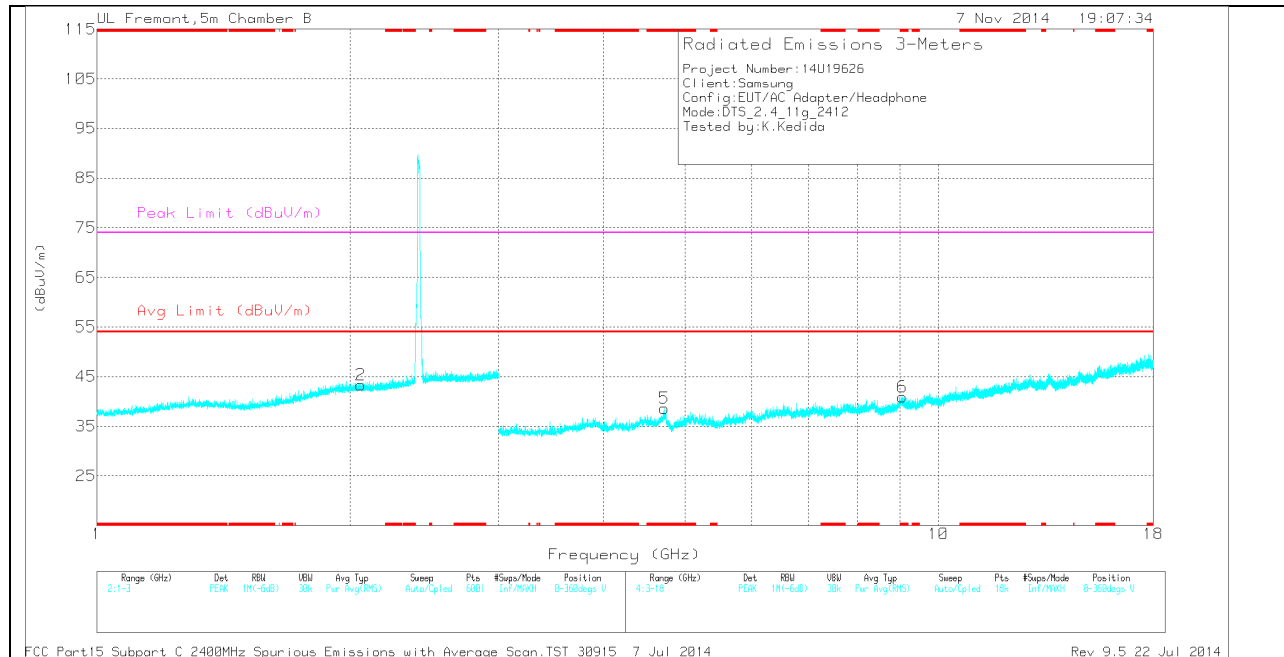
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	46.01	PK	32.3	-22.8	0	55.51	-	-	74	-18.49	303	112	V
2	2.484	52.07	PK	32.3	-22.8	0	61.57	-	-	74	-12.43	303	112	V
3	2.484	32.7	RMS	32.3	-22.8	.29	42.49	54	-11.51	-	-	303	112	V
4	2.484	33.25	RMS	32.3	-22.8	.29	43.04	54	-10.96	-	-	303	112	V

HARMONICS AND SPURIOUS EMISSIONS



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.716	33.03	PK	34.2	-29.5	37.73	-	-	74	-36.27	0-360	101	H
4	* 9.038	29.31	PK	36.2	-24.4	41.11	-	-	74	-32.89	0-360	200	H
5	* 4.724	33.68	PK	34.2	-29.3	38.58	-	-	74	-35.42	0-360	200	V
6	* 9.055	29.07	PK	36.2	-24.4	40.87	-	-	74	-33.13	0-360	101	V
2	2.06	35.19	PK	31.3	-23.2	43.29	-	-	-	-	0-360	200	V
1	2.068	35.36	PK	31.3	-23.2	43.46	-	-	-	-	0-360	200	H

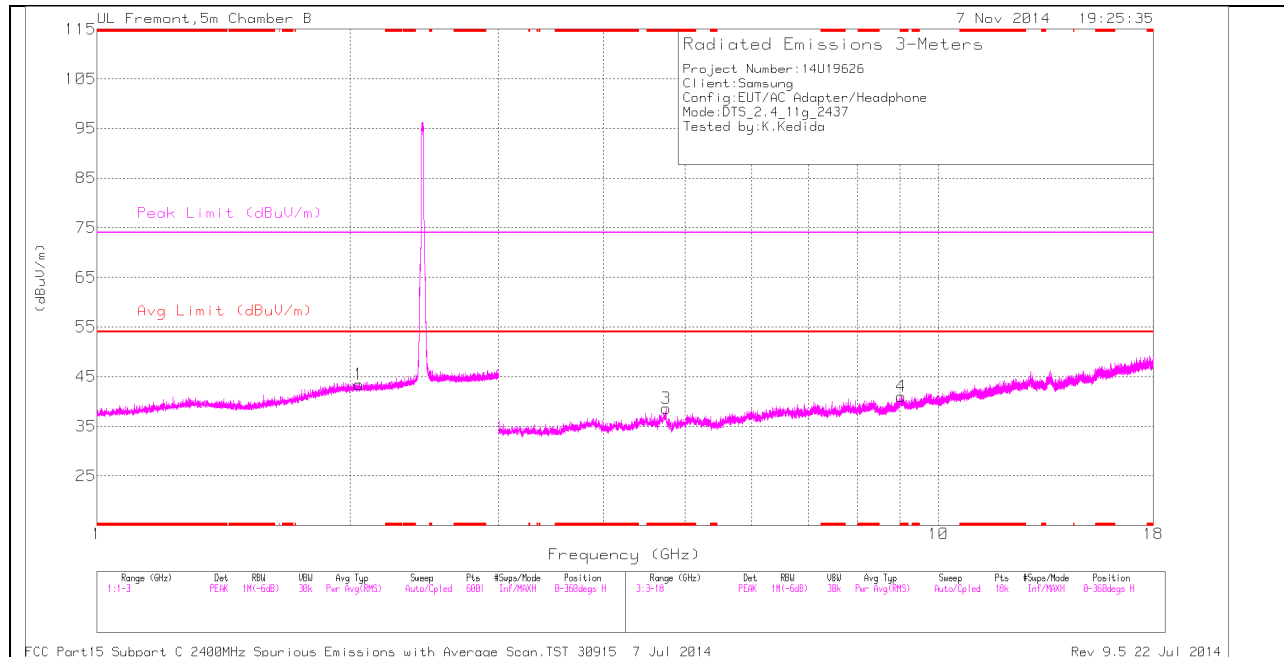
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.718	41.41	PK2	34.2	-29.4	46.21	-	-	74	-27.79	1	100	H
* 4.715	30.28	MAV1	34.2	-29.5	34.98	54	-19.02	-	-	1	100	H

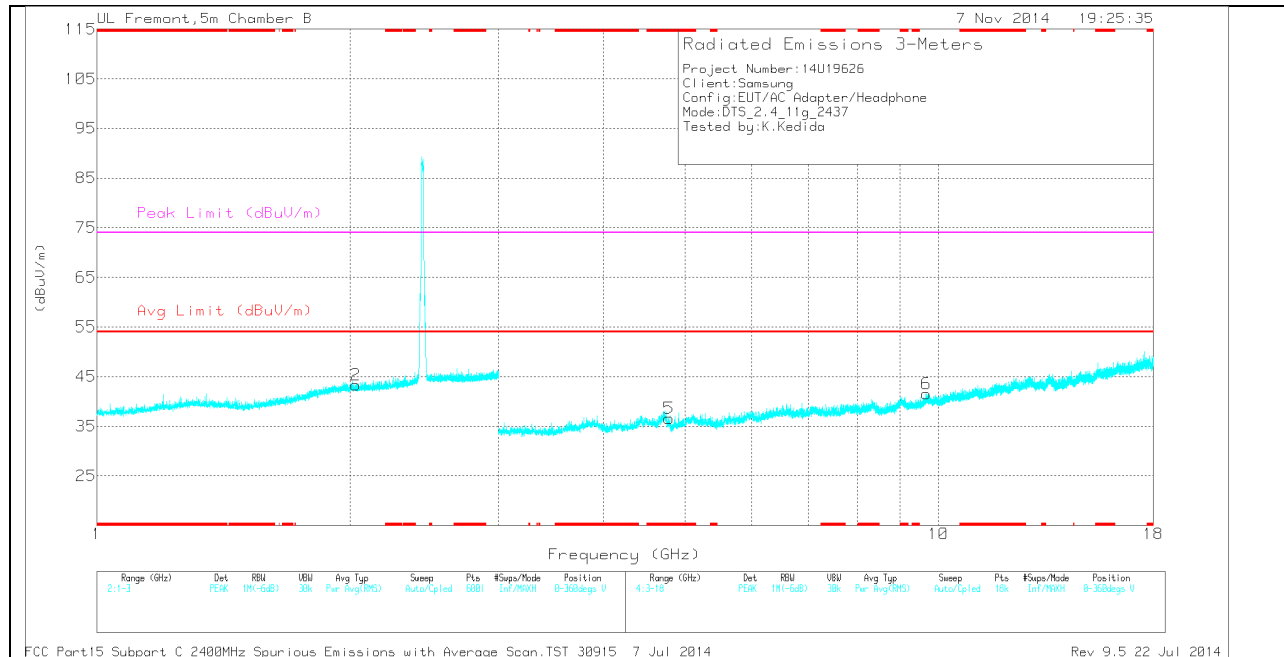
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.744	33.59	PK	34.2	-29.2	38.59	-	-	74	-35.41	0-360	199	H
4	* 9.032	29.28	PK	36.2	-24.4	41.08	-	-	74	-32.92	0-360	101	H
5	* 4.784	31.77	PK	34.2	-29.4	36.57	-	-	74	-37.43	0-360	101	V
2	2.029	35.33	PK	31.3	-23.3	43.33	-	-	-	-	0-360	101	V
1	2.047	35.44	PK	31.3	-23.3	43.44	-	-	-	-	0-360	199	H
6	9.678	28.95	PK	36.8	-24.2	41.55	-	-	-	-	0-360	101	V

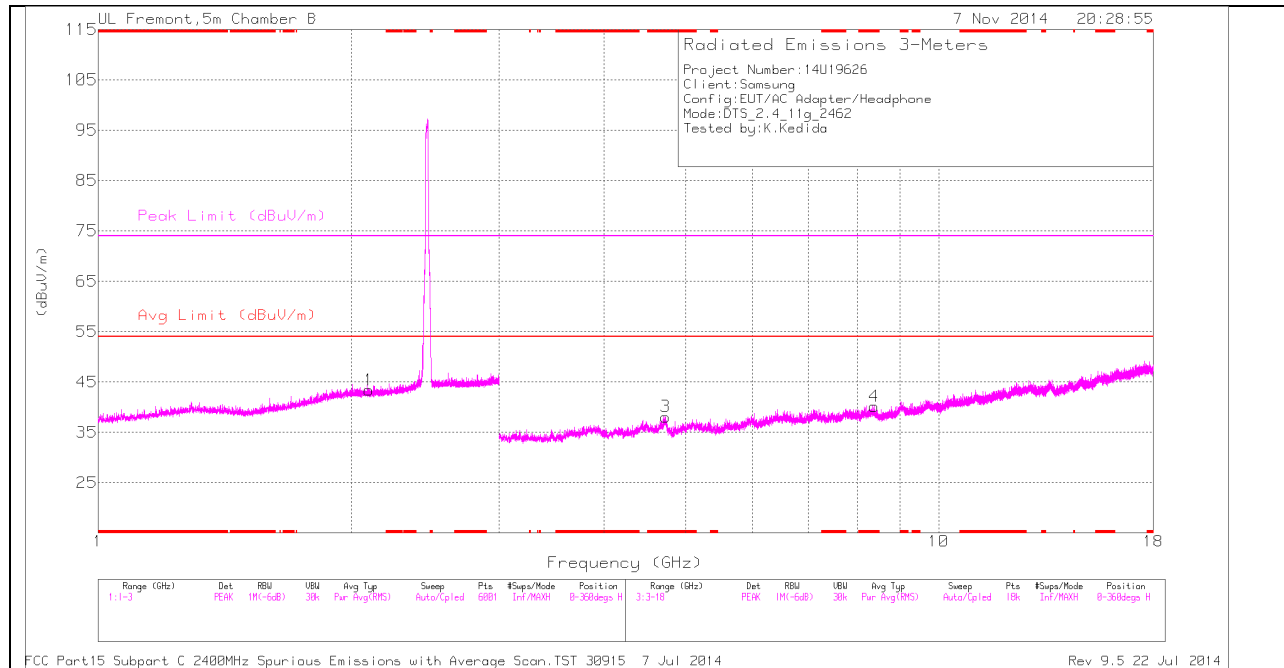
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.745	41.13	PK2	34.2	-29.2	46.13	-	-	74	-27.87	1	199	H
* 4.745	29.99	MAV1	34.2	-29.2	34.99	54	-19.01	-	-	1	199	H

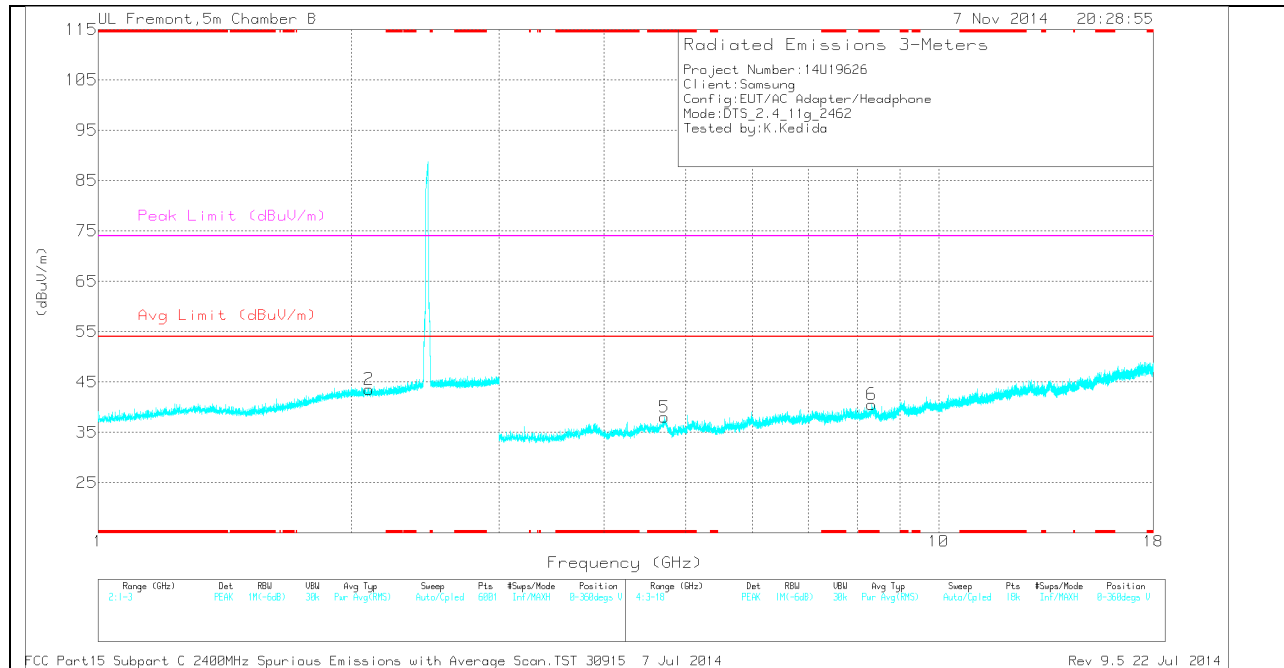
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.732	33.19	PK	34.2	-29.3	38.09	-	-	74	-35.91	0-360	101	H
4	* 8.378	29.83	PK	35.7	-25.4	40.13	-	-	74	-33.87	0-360	200	H
5	* 4.715	33.31	PK	34.2	-29.5	38.01	-	-	74	-35.99	0-360	200	V
6	* 8.322	30.76	PK	35.7	-25.9	40.56	-	-	74	-33.44	0-360	200	V
1	2.099	35.28	PK	31.2	-23.1	43.38	-	-	-	-	0-360	101	H
2	2.102	35.47	PK	31.2	-23.1	43.57	-	-	-	-	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

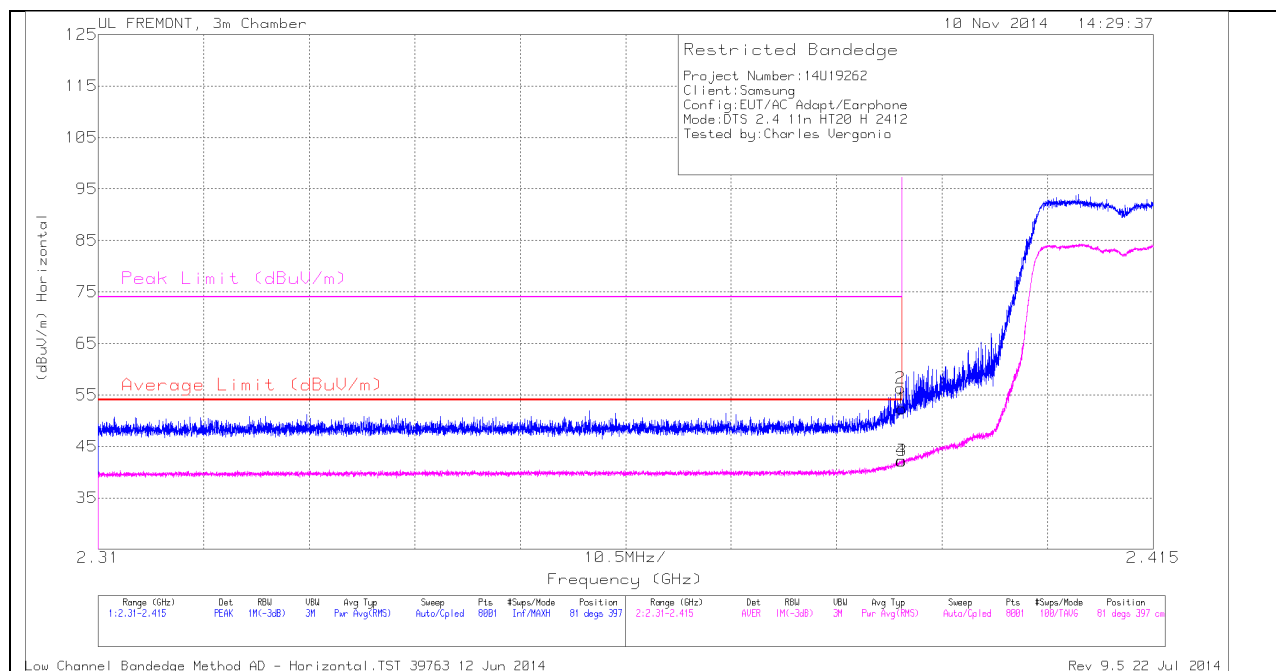
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.731	41.3	PK2	34.2	-29.3	46.2	-	-	74	-27.8	1	101	H
* 4.731	29.93	MAv1	34.2	-29.3	34.83	54	-19.17	-	-	1	101	H

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

RESTRICTED BANDEDGE (LOW CHANNEL)

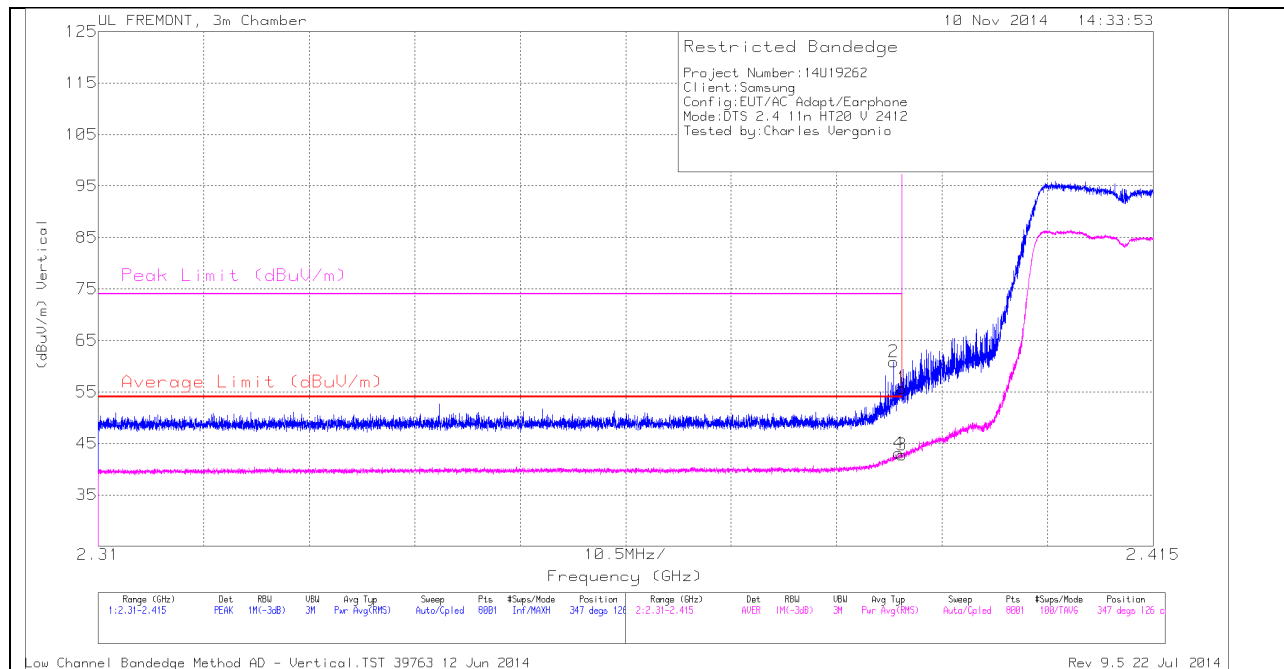
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitter/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	43.35	PK	32.1	-23.1	0	52.35	-	-	74	-21.65	81	397	H
2	2.39	47.28	PK	32.1	-23.1	0	56.28	-	-	74	-17.72	81	397	H
3	2.39	32.89	RMS	32.1	-23.1	.32	42.21	54	-11.79	-	-	81	397	H
4	2.39	32.9	RMS	32.1	-23.1	.32	42.22	54	-11.78	-	-	81	397	H

VERTICAL PEAK AND AVERAGE PLOT

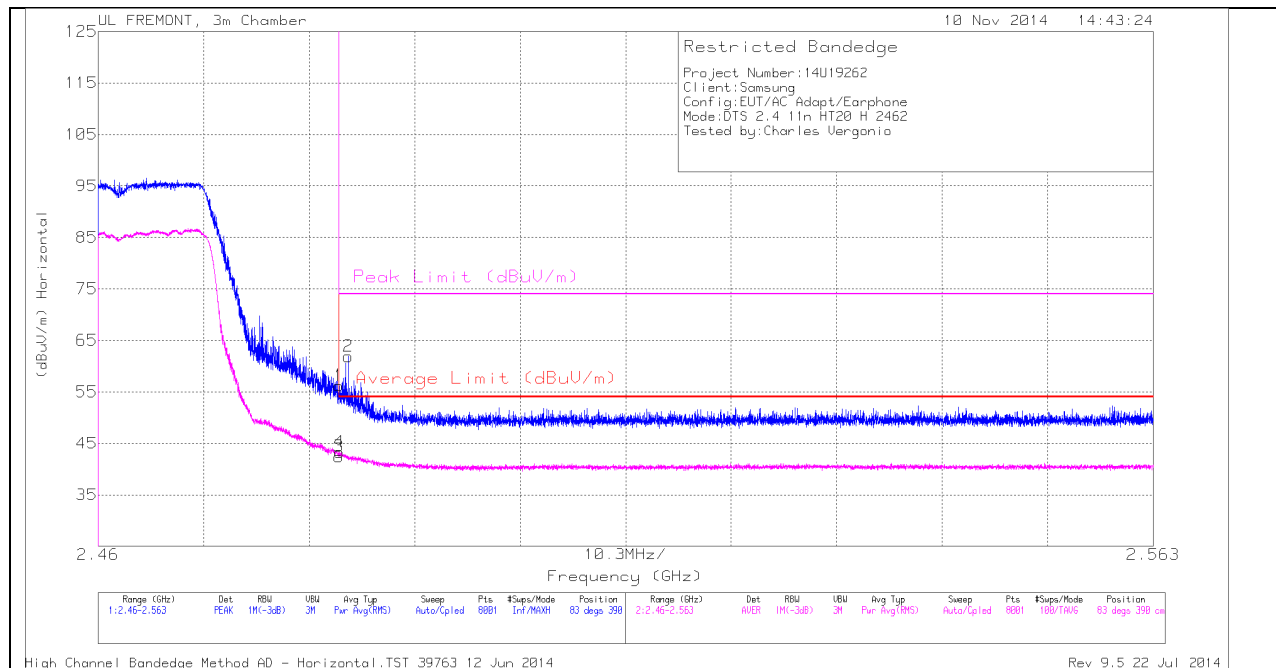


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Filter/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	2.389	51.87	PK	32.1	-23.1	0	60.87	-	-	74	-13.13	347	126	V
1	2.39	46.74	PK	32.1	-23.1	0	55.74	-	-	74	-18.26	347	126	V
3	2.39	33.47	RMS	32.1	-23.1	.32	42.79	54	-11.21	-	-	347	126	V
4	2.39	33.8	RMS	32.1	-23.1	.32	43.12	54	-10.88	-	-	347	126	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

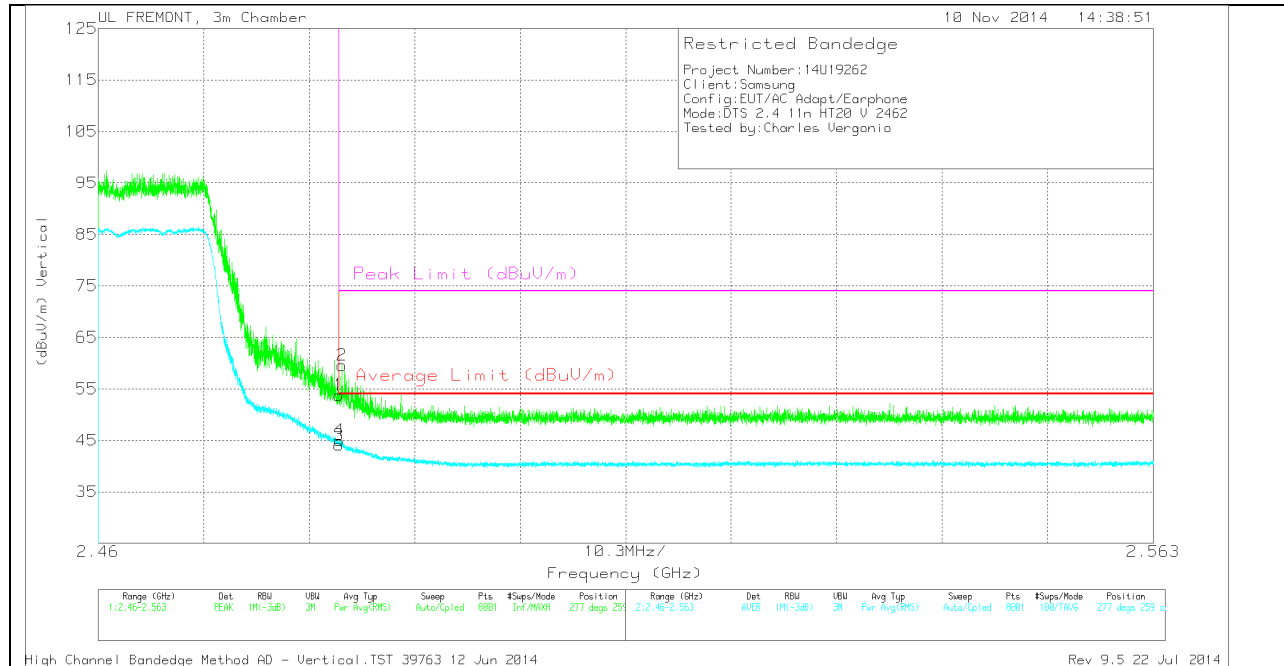
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Filter/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	46.71	PK	32.3	-22.8	0	56.21	-	-	74	-17.79	83	390	H
2	2.484	52.39	PK	32.3	-22.8	0	61.89	-	-	74	-12.11	83	390	H
3	2.484	32.63	RMS	32.3	-22.8	.32	42.45	54	-11.55	-	-	83	390	H
4	2.484	33.49	RMS	32.3	-22.8	.32	43.31	54	-10.69	-	-	83	390	H

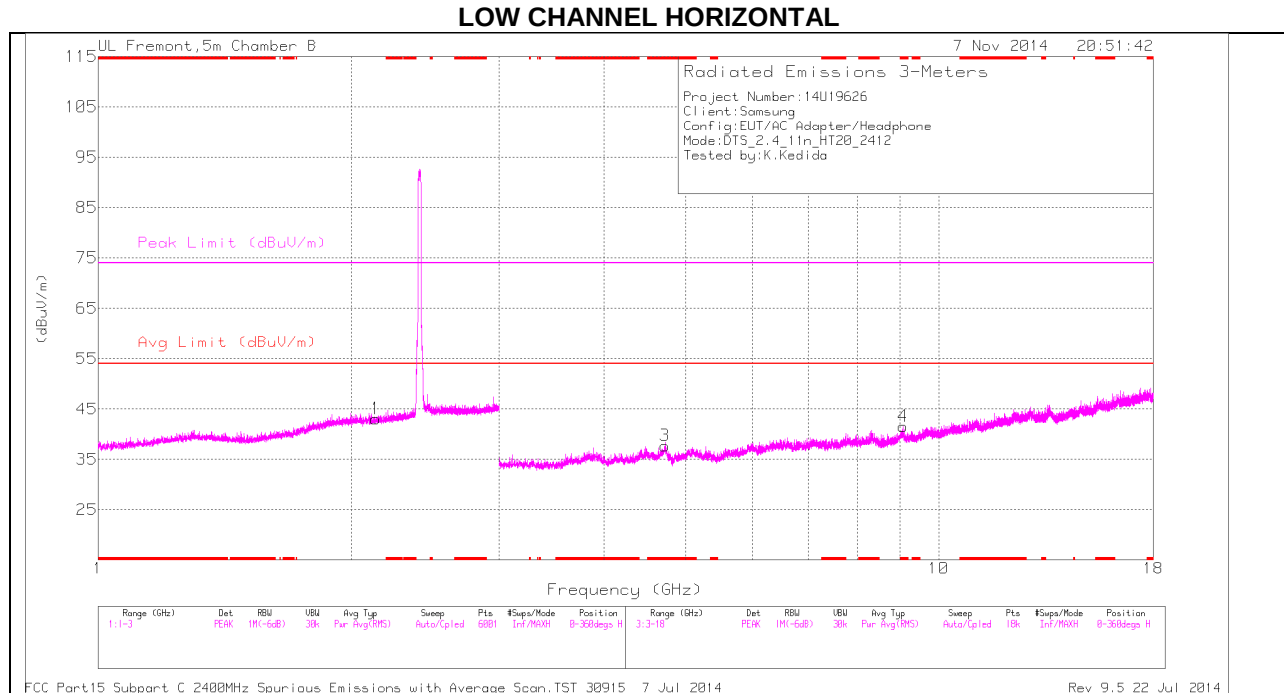
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

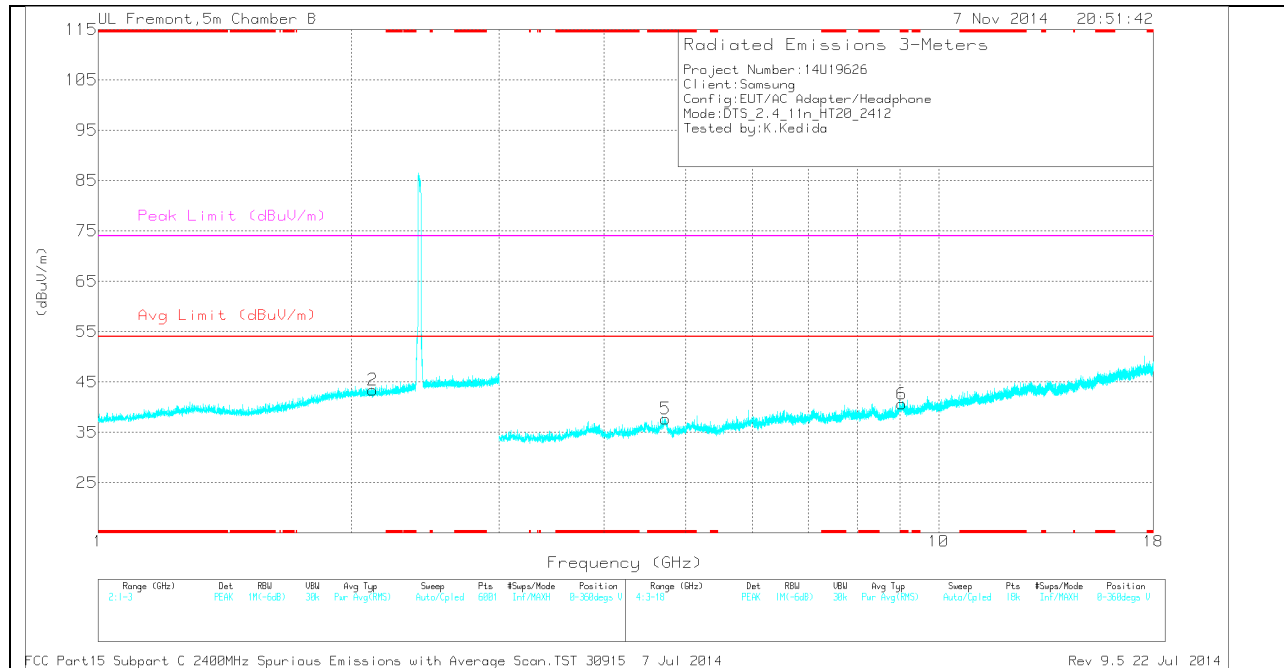
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.484	44.27	PK	32.3	-22.8	0	53.77	-	-	74	-20.23	277	259	V
2	2.484	50.06	PK	32.3	-22.8	0	59.56	-	-	74	-14.44	277	259	V
3	2.484	34.28	RMS	32.3	-22.8	.32	44.1	54	-9.9	-	-	277	259	V
4	2.484	35.17	RMS	32.3	-22.8	.32	44.99	54	-9.01	-	-	277	259	V

HARMONICS AND SPURIOUS EMISSIONS



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.727	32.82	PK	34.2	-29.3	37.72	-	-	74	-36.28	0-360	101	H
4	* 9.073	29.76	PK	36.3	-24.5	41.56	-	-	74	-32.44	0-360	199	H
5	* 4.731	32.79	PK	34.2	-29.3	37.69	-	-	74	-36.31	0-360	199	V
6	* 9.035	28.86	PK	36.2	-24.4	40.66	-	-	74	-33.34	0-360	199	V
2	2.122	35.22	PK	31.3	-23.1	43.42	-	-	-	-	0-360	199	V
1	2.139	34.88	PK	31.3	-23.1	43.08	-	-	-	-	0-360	101	H

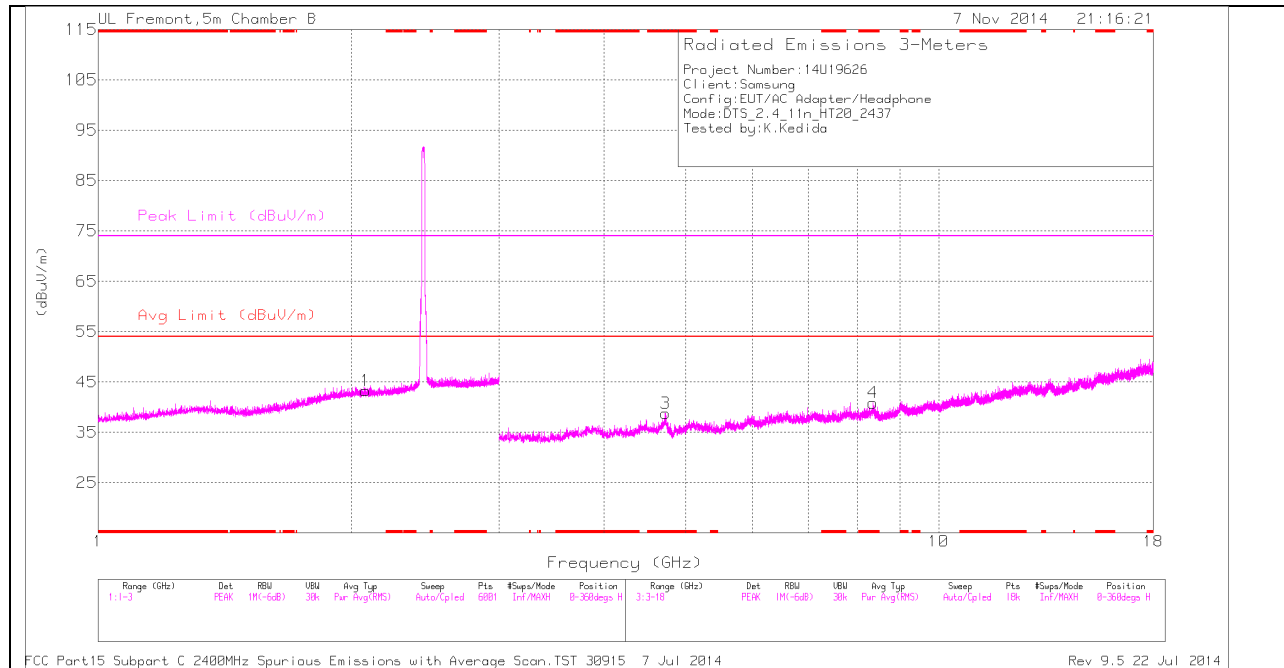
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.726	41.63	PK2	34.2	-29.3	46.53	-	-	74	-27.47	1	100	H
* 4.726	30.19	MAV1	34.2	-29.3	35.09	54	-18.91	-	-	1	100	H

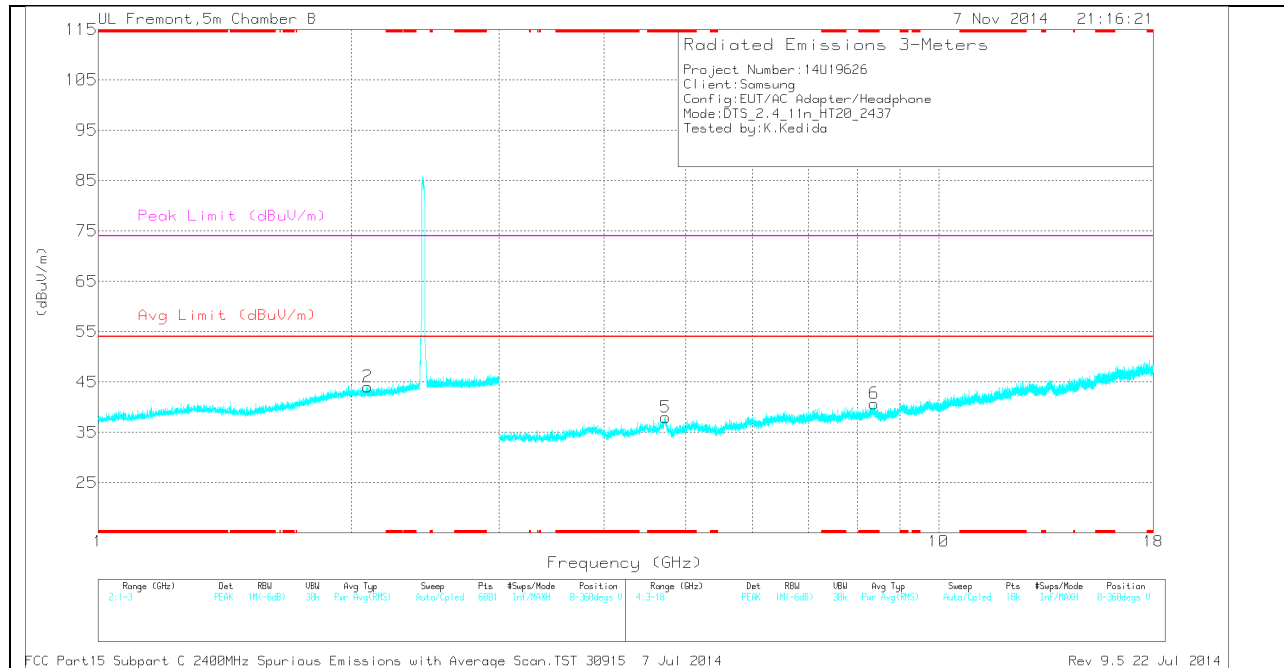
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.735	33.78	PK	34.2	-29.2	38.78	-	-	74	-35.22	0-360	101	H
4	* 8.356	30.46	PK	35.7	-25.3	40.86	-	-	74	-33.14	0-360	199	H
5	* 4.736	32.99	PK	34.2	-29.2	37.99	-	-	74	-36.01	0-360	199	V
6	* 8.377	30.42	PK	35.7	-25.4	40.72	-	-	74	-33.28	0-360	199	V
1	2.081	35.17	PK	31.3	-23.2	43.27	-	-	-	-	0-360	100	H
2	2.093	35.88	PK	31.3	-23.1	44.08	-	-	-	-	0-360	199	V

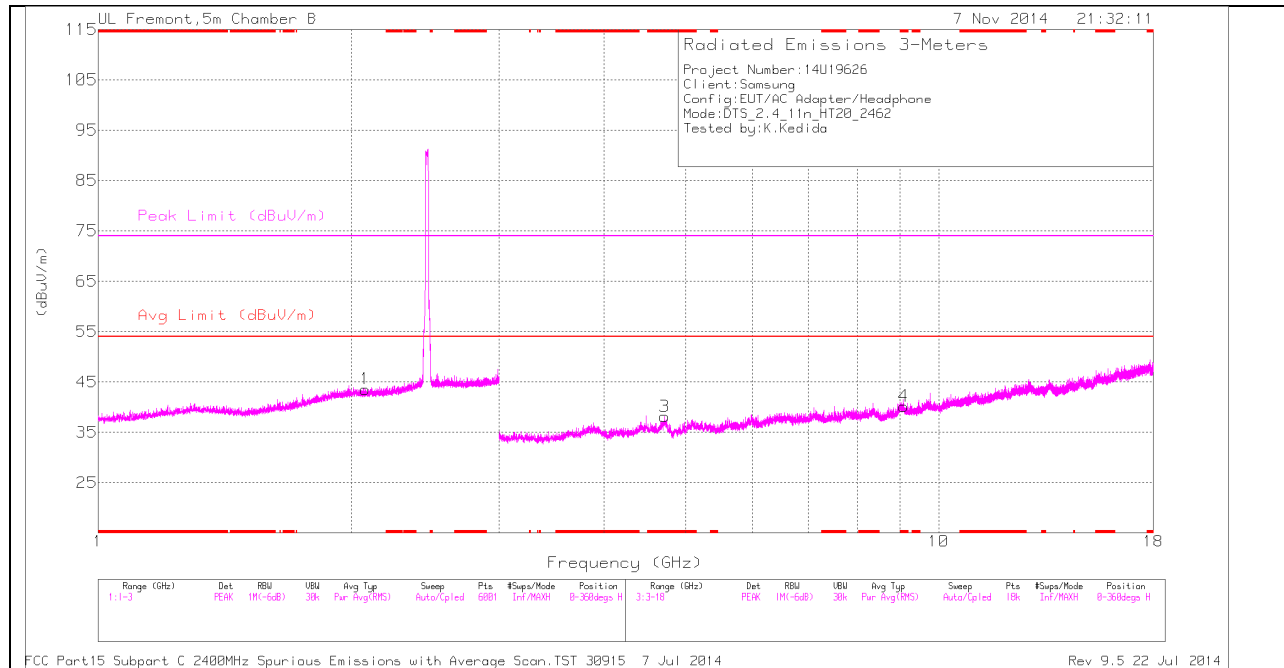
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.734	40.97	PK2	34.2	-29.2	45.97	-	-	74	-28.03	1	101	H
* 4.736	29.93	MAV1	34.2	-29.2	34.93	54	-19.07	-	-	1	101	H

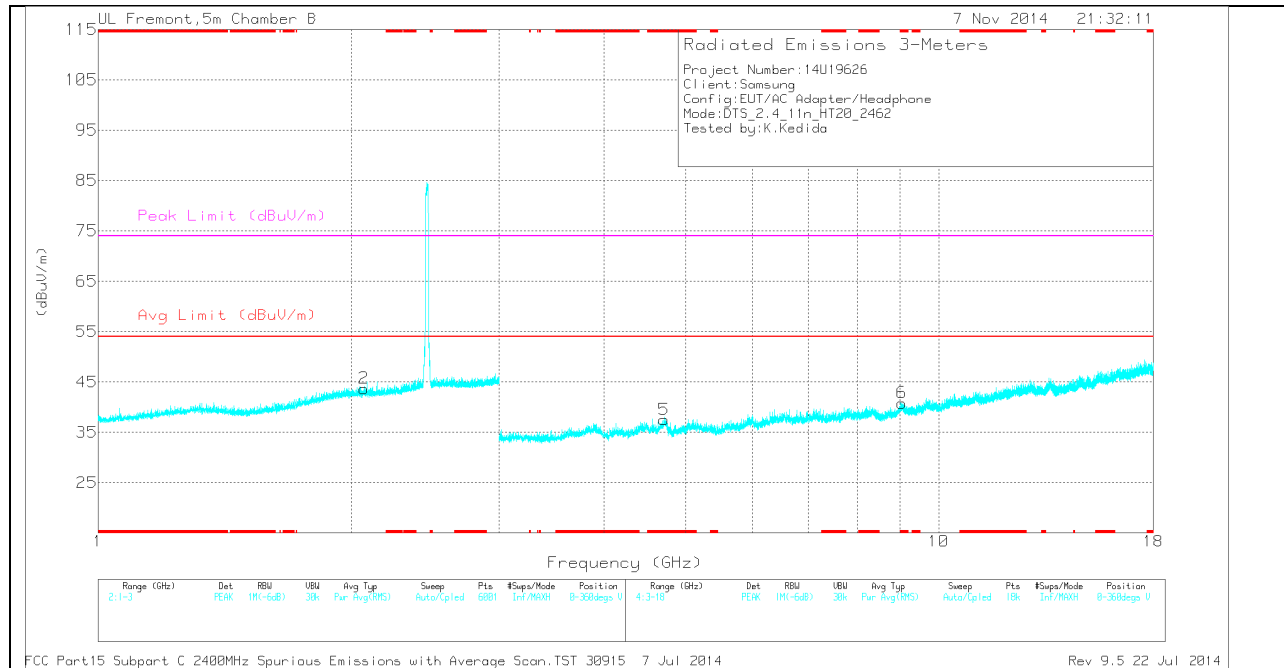
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

HIGH CHANNEL HORIZONTAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL VERTICAL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 4.72	33.35	PK	34.2	-29.4	38.15	-	-	74	-35.85	0-360	200	H
4	* 9.089	28.79	PK	36.3	-24.9	40.19	-	-	74	-33.81	0-360	101	H
5	* 4.713	32.84	PK	34.2	-29.5	37.54	-	-	74	-36.46	0-360	200	V
6	* 9.045	29.04	PK	36.2	-24.4	40.84	-	-	74	-33.16	0-360	200	V
2	2.071	35.62	PK	31.3	-23.2	43.72	-	-	-	-	0-360	101	V
1	2.079	35.49	PK	31.3	-23.2	43.59	-	-	-	-	0-360	200	H

PK - Peak detector

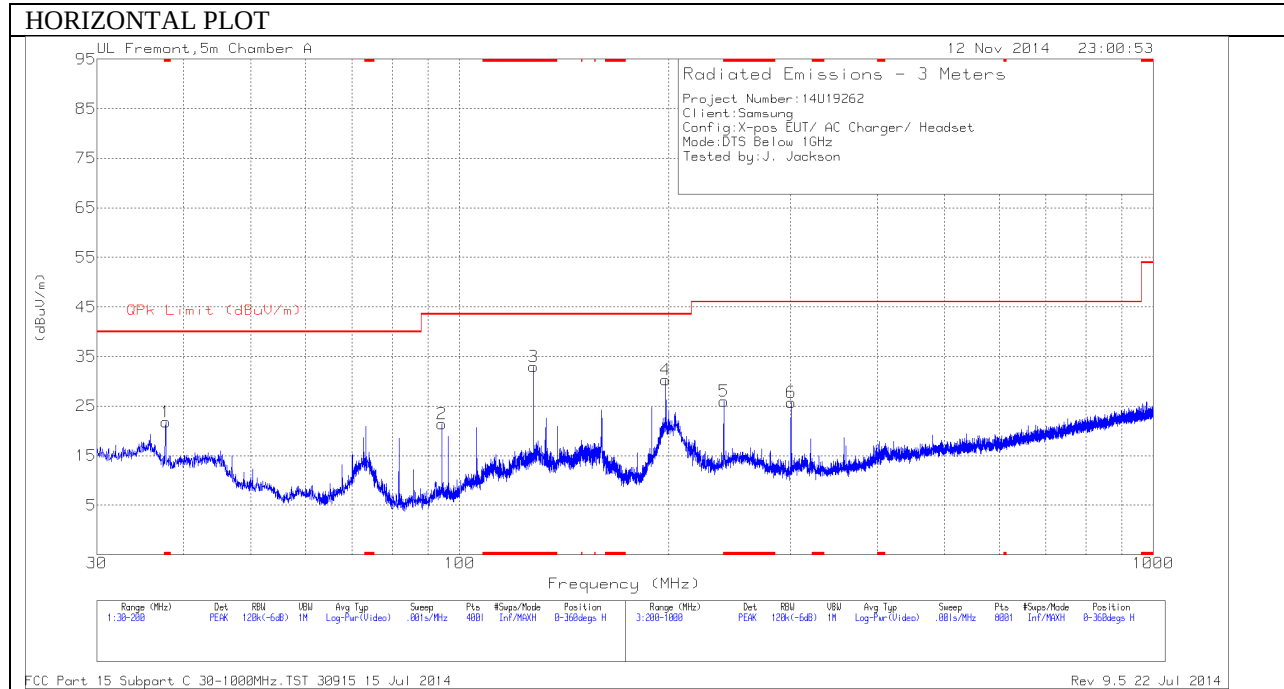
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.72	41.11	PK2	34.2	-29.4	45.91	-	-	74	-28.09	1	203	H
* 4.72	30.28	MAV1	34.2	-29.4	35.08	54	-18.92	-	-	1	203	H

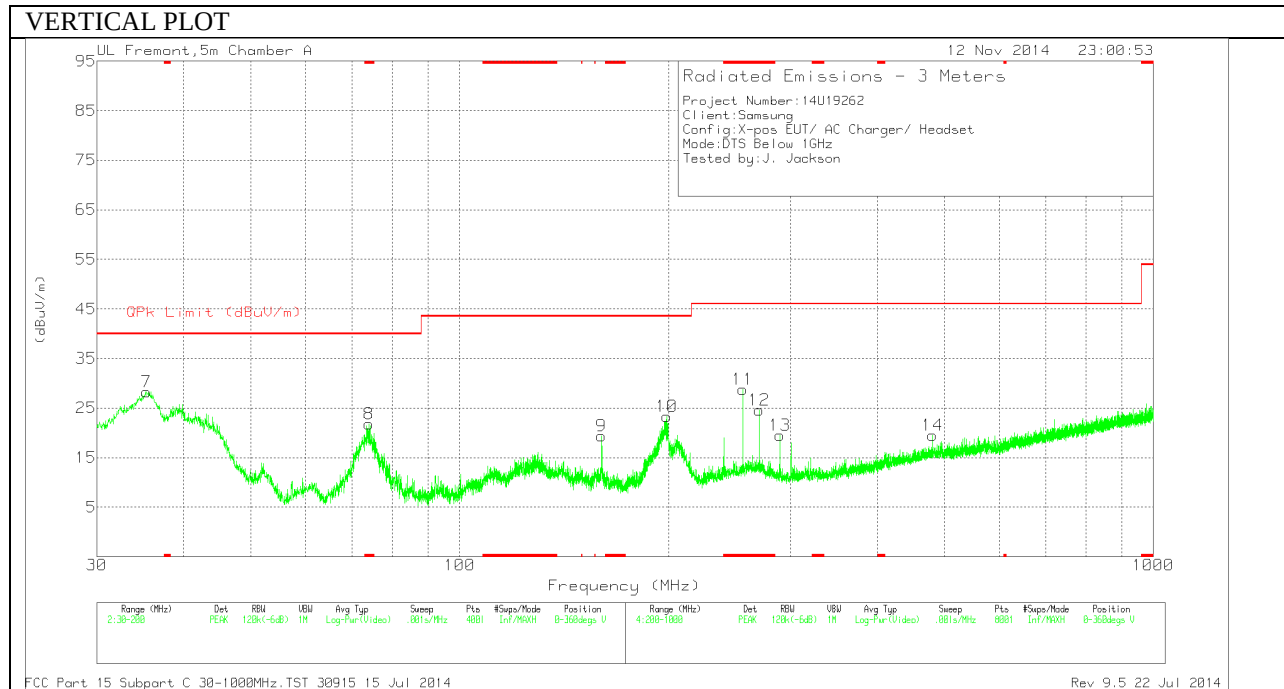
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10.3. WORST-CASE BELOW 1 GHz

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



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



Below 1G Data

Trace Markers

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	* 37.6925	37.04	PK	15.8	-31	21.84	40	-18.16	0-360	200	H
3	* 127.835	49.04	PK	14.2	-30.3	32.94	43.52	-10.58	0-360	300	H
8	* 74.03	44.95	PK	7.8	-30.9	21.85	40	-18.15	0-360	101	V
5	* 240.3	44.05	PK	11.5	-29.6	25.95	46.02	-20.07	0-360	200	H
11	* 256.1	46.49	PK	11.7	-29.4	28.79	46.02	-17.23	0-360	200	V
12	* 270.4	40.8	PK	13.1	-29.3	24.6	46.02	-21.42	0-360	200	V
7	35.355	41.81	PK	17.5	-31	28.31	40	-11.69	0-360	101	V
2	94.2175	43.37	PK	8.5	-30.5	21.37	43.52	-22.15	0-360	200	H
9	160.1775	37.47	PK	12	-30.1	19.37	43.52	-24.15	0-360	101	V
4	198.2575	47.74	PK	12.4	-29.9	30.24	43.52	-13.28	0-360	100	H
10	199.1075	40.71	PK	12.5	-29.9	23.31	43.52	-20.21	0-360	101	V
13	289.7	35.26	PK	13.3	-29.1	19.46	46.02	-26.56	0-360	200	V
6	300.4	41.48	PK	13.4	-29.2	25.68	46.02	-20.34	0-360	101	H
14	480.7	30.35	PK	17.6	-28.5	19.45	46.02	-26.57	0-360	101	V

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

PK - Peak detector

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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

^{*} Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4 2009.

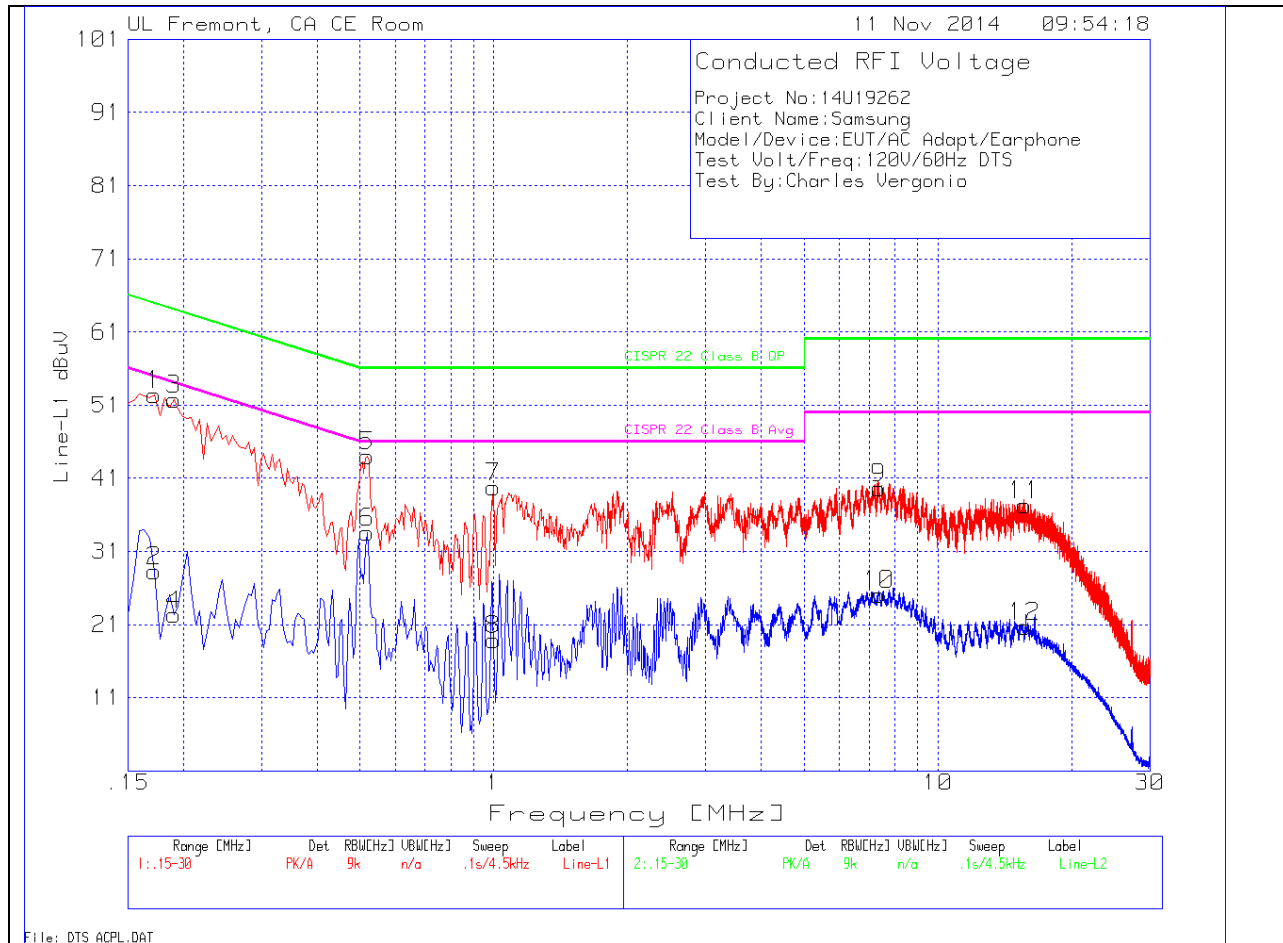
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT

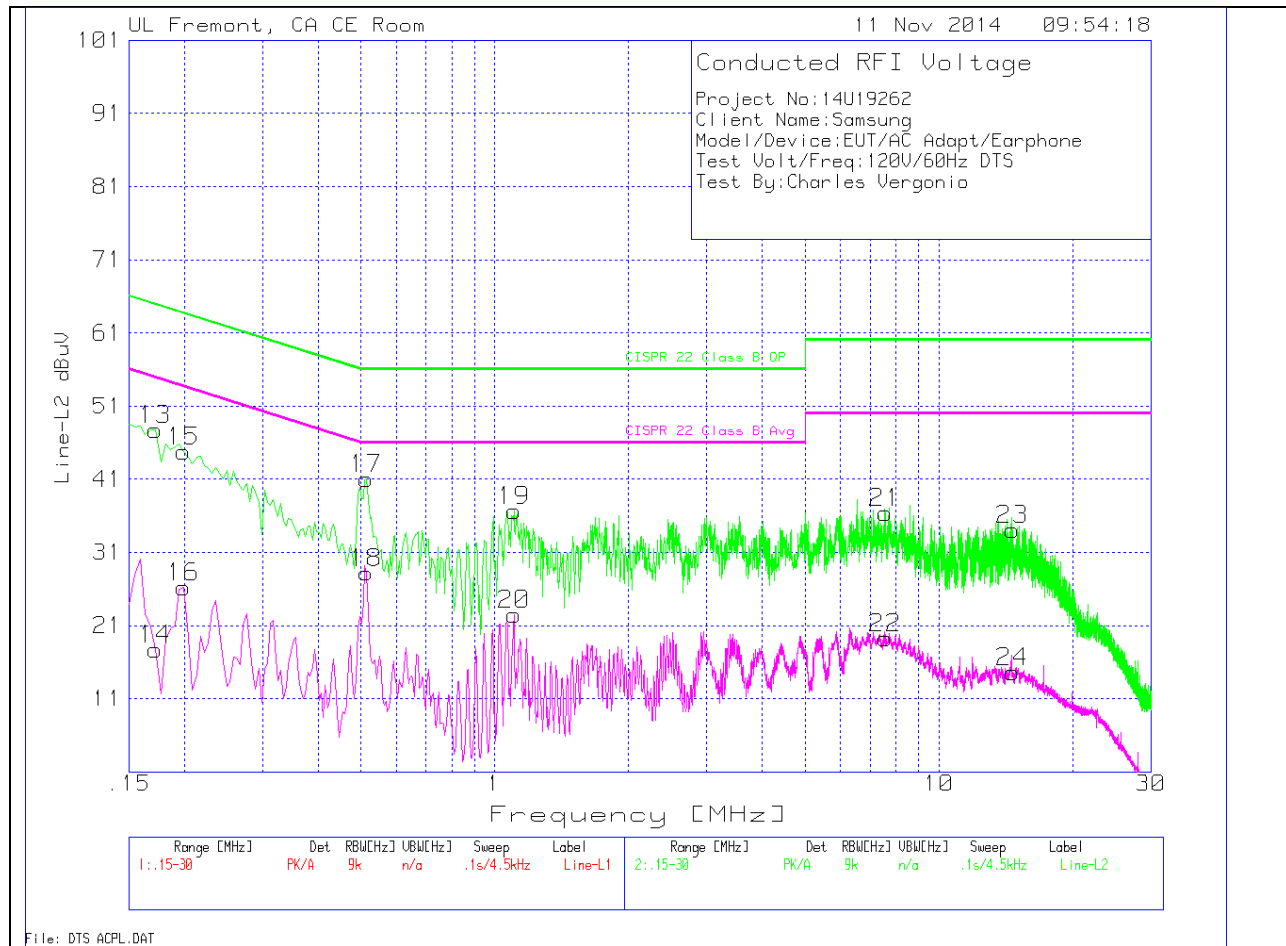


LINE 1 RESULTS

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.1725	51.2	PK	1.2	0	52.4	64.8	-12.4	-	-
2	.1725	27.1	Av	1.2	0	28.3	-	-	54.8	-26.5
3	.1905	50.79	PK	1	0	51.79	64	-12.21	-	-
4	.1905	21.3	Av	1	0	22.3	-	-	54	-31.7
5	.519	43.77	PK	.3	0	44.07	56	-11.93	-	-
6	.519	33.23	Av	.3	0	33.53	-	-	46	-12.47
7	1.0005	39.55	PK	.2	0	39.75	56	-16.25	-	-
8	1.0005	18.73	Av	.2	0	18.93	-	-	46	-27.07
9	7.3725	39.28	PK	.2	.1	39.58	60	-20.42	-	-
10	7.3725	24.81	Av	.2	.1	25.11	-	-	50	-24.89
11	15.711	36.86	PK	.3	.2	37.36	60	-22.64	-	-
12	15.711	20.16	Av	.3	.2	20.66	-	-	50	-29.34

LINE 2 PLOT



LINE 2 RESULTS

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
13	.1725	46.58	PK	1.2	0	47.78	64.8	-17.02	-	-
14	.1725	16.51	Av	1.2	0	17.71	-	-	54.8	-37.09
15	.1995	43.74	PK	1	0	44.74	63.6	-18.86	-	-
16	.1995	25.2	Av	1	0	26.2	-	-	53.6	-27.4
17	.5145	40.61	PK	.4	0	41.01	56	-14.99	-	-
18	.5145	27.82	Av	.4	0	28.22	-	-	46	-17.78
19	1.104	36.25	PK	.3	.1	36.65	56	-19.35	-	-
20	1.104	22.08	Av	.3	.1	22.48	-	-	46	-23.52
21	7.5705	36.08	PK	.2	.1	36.38	60	-23.62	-	-
22	7.5705	18.95	Av	.2	.1	19.25	-	-	50	-30.75
23	14.6625	33.63	PK	.3	.2	34.13	60	-25.87	-	-
24	14.6625	14.1	Av	.3	.2	14.6	-	-	50	-35.4