



FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

GSM/WCDMA/LTE Tablet with Bluetooth, DTS/UNII a/b/g/n, and ANT+

MODEL NUMBER: SM-T355

FCC ID: A3LSMT355

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Prepared for

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	2/13/14	Initial Issue	P. Zhang

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION	6
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION	6
4.3. MEASUREMENT UNCERTAINTY.....	6
5. EQUIPMENT UNDER TEST	7
5.1. DESCRIPTION OF EUT	7
5.2. MAXIMUM OUTPUT POWER.....	7
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	7
5.4. WORST-CASE CONFIGURATION AND MODE.....	8
5.5. DESCRIPTION OF TEST SETUP.....	9
6. TEST AND MEASUREMENT EQUIPMENT	11
7. MEASUREMENT METHODS	12
8. SUMMARY TABLE	13
9. ANTENNA PORT TEST RESULTS	14
9.1. 6 dB BANDWIDTH.....	14
9.1.1. 802.11b MODE IN THE 2.4 GHz BAND	15
9.1.2. 802.11g MODE IN THE 2.4 GHz BAND	15
9.1.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND	15
9.2. 99% BANDWIDTH.....	19
9.2.1. 802.11b MODE IN THE 2.4 GHz BAND	19
9.2.2. 802.11g MODE IN THE 2.4 GHz BAND	19
9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND	19
9.3. OUTPUT POWER.....	23
9.3.1. 802.11b MODE IN THE 2.4 GHz BAND	24
9.3.2. 802.11g MODE IN THE 2.4 GHz BAND	24
9.3.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND	25
9.4. PSD	26
9.4.1. 802.11b MODE IN THE 2.4 GHz BAND	26
9.4.2. 802.11g MODE IN THE 2.4 GHz BAND	26
9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND	26
9.5. OUT-OF-BAND EMISSIONS	27
9.5.1. 802.11b MODE IN THE 2.4 GHz BAND	28
9.5.2. 802.11g MODE IN THE 2.4 GHz BAND	34
9.5.3. 802.11n MODE IN THE 2.4 GHz BAND	40

10.	RADIATED TEST RESULTS	46
10.1.	LIMITS AND PROCEDURE.....	46
10.2.	TRANSMITTER ABOVE 1 GHz.....	47
10.2.1.	TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND.....	47
10.2.2.	TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND.....	57
10.2.3.	TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND	67
10.3.	WORST-CASE BELOW 1 GHz	77
11.	AC POWER LINE CONDUCTED EMISSIONS	80
12.	SETUP PHOTOS	83

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

EUT DESCRIPTION: GSM/WCDMA/LTE Tablet with Bluetooth, WLAN DTS/UNII a/b/g/n, and ANT+

MODEL: SM-T355

SERIAL NUMBER: 2044001 (Radiated), 2044002 (Conducted)

DATE TESTED: JANUARY 24 – FEBRUARY 13, 2015

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.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15, ANSI C63.4-2009.

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

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 18000 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 Tablet with Bluetooth, DTS/UNII a/b/g/n, and ANT+.

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	16.0	39.81
2412 - 2462	802.11g	13.3	21.38
2412 - 2462	802.11n HT20	12.0	15.85

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -0.5 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 X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X 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	SM-T355	N/A	N/A
Earphone	SAMSUNG	SM-T355	N/A	N/A

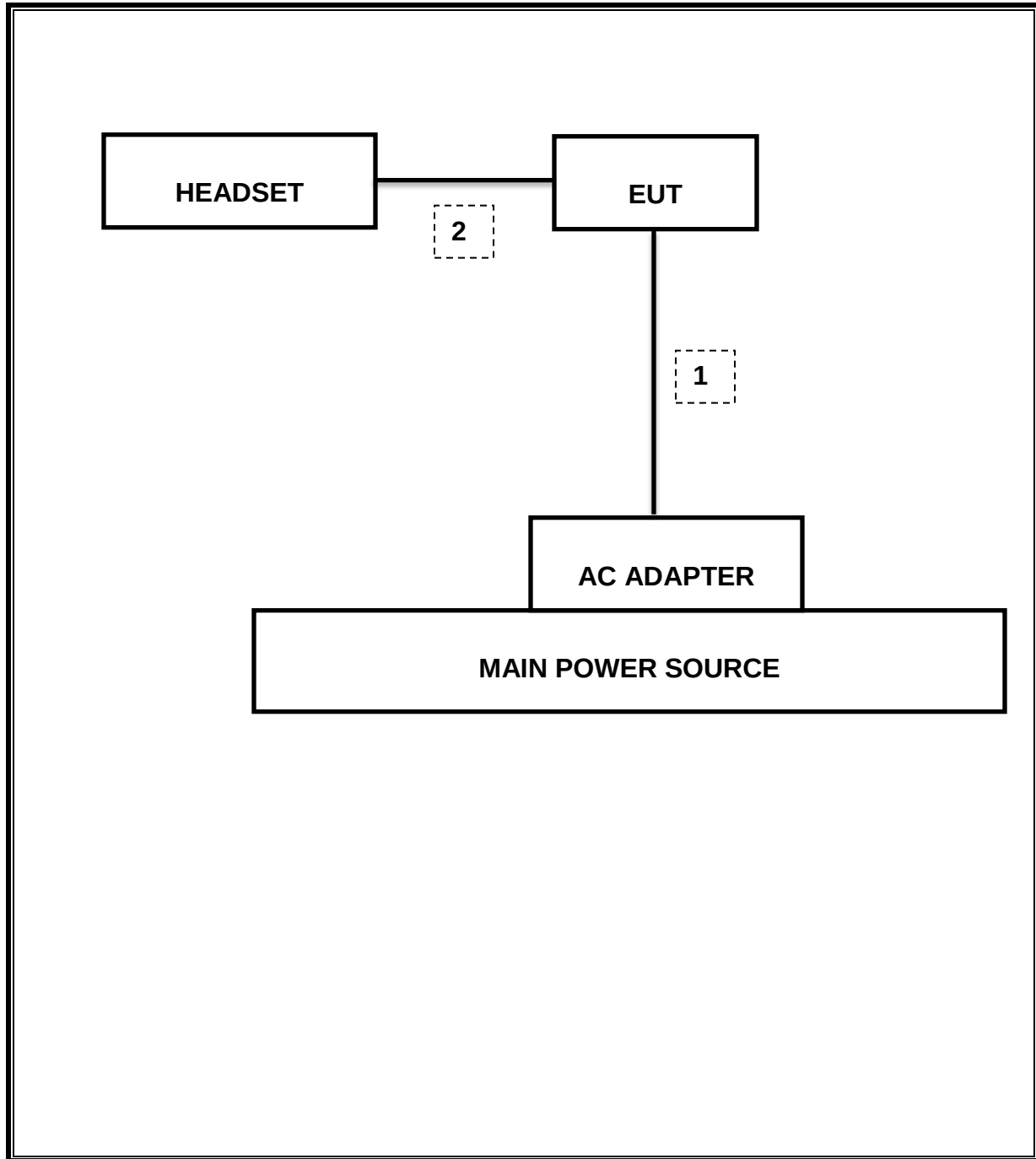
I/O CABLES

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

EUT was set in the Hidden menu mode to enable communications. 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	12/20/15
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	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
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

Test Equipment List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Version 9.5, 07/22/14
Conducted Software	UL	UL EMC	Version 9.5, 05/17/14
CLT Software	UL	UL RF	Version 1.0, 02/02/15
Antenna Port Software	UL	UL RF	Version 2.1.1.1, 1/20/15

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	9.030 MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-32.65 dBm
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	16 dBm
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	-13.81 dBm
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	49.02dBuV(PK)
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	49.39 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	9.53	0.5
Mid	2437	9.54	0.5
High	2462	9.03	0.5
Worst		9.03	

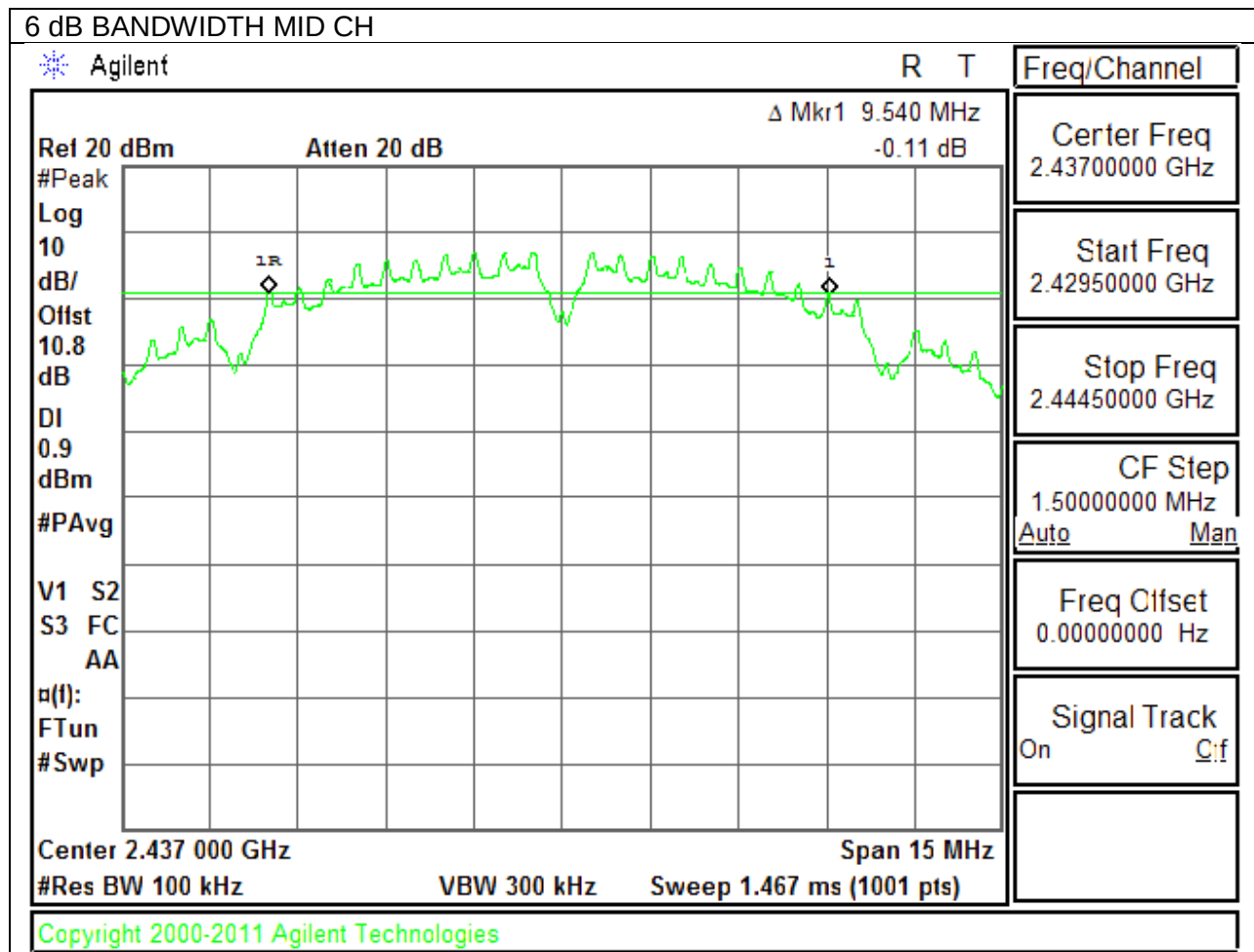
9.1.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.35	0.5
Mid	2437	16.44	0.5
High	2462	16.38	0.5
Worst		16.35	

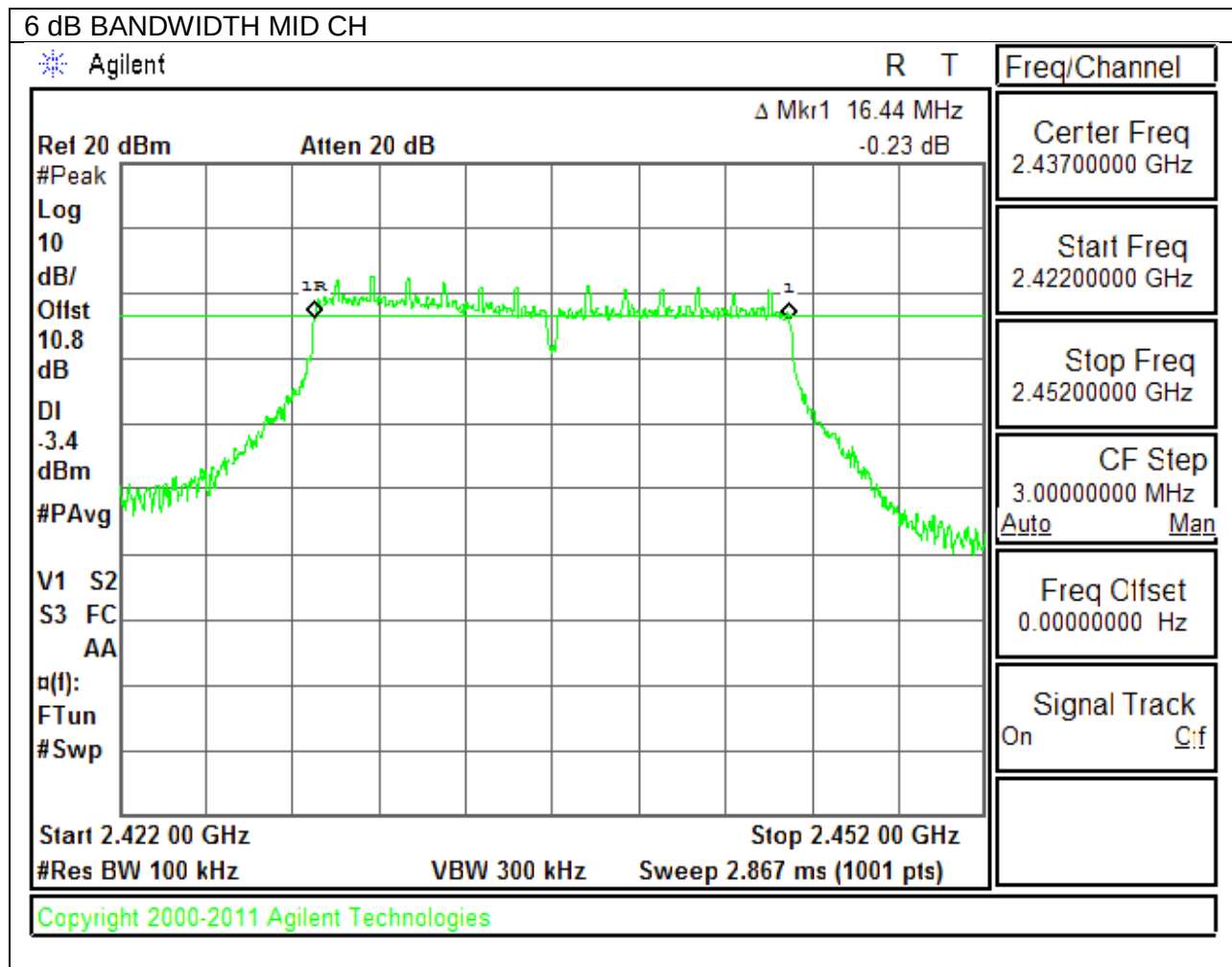
9.1.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	17.58	0.5
Mid	2437	17.40	0.5
High	2462	17.31	0.5
Worst		17.31	

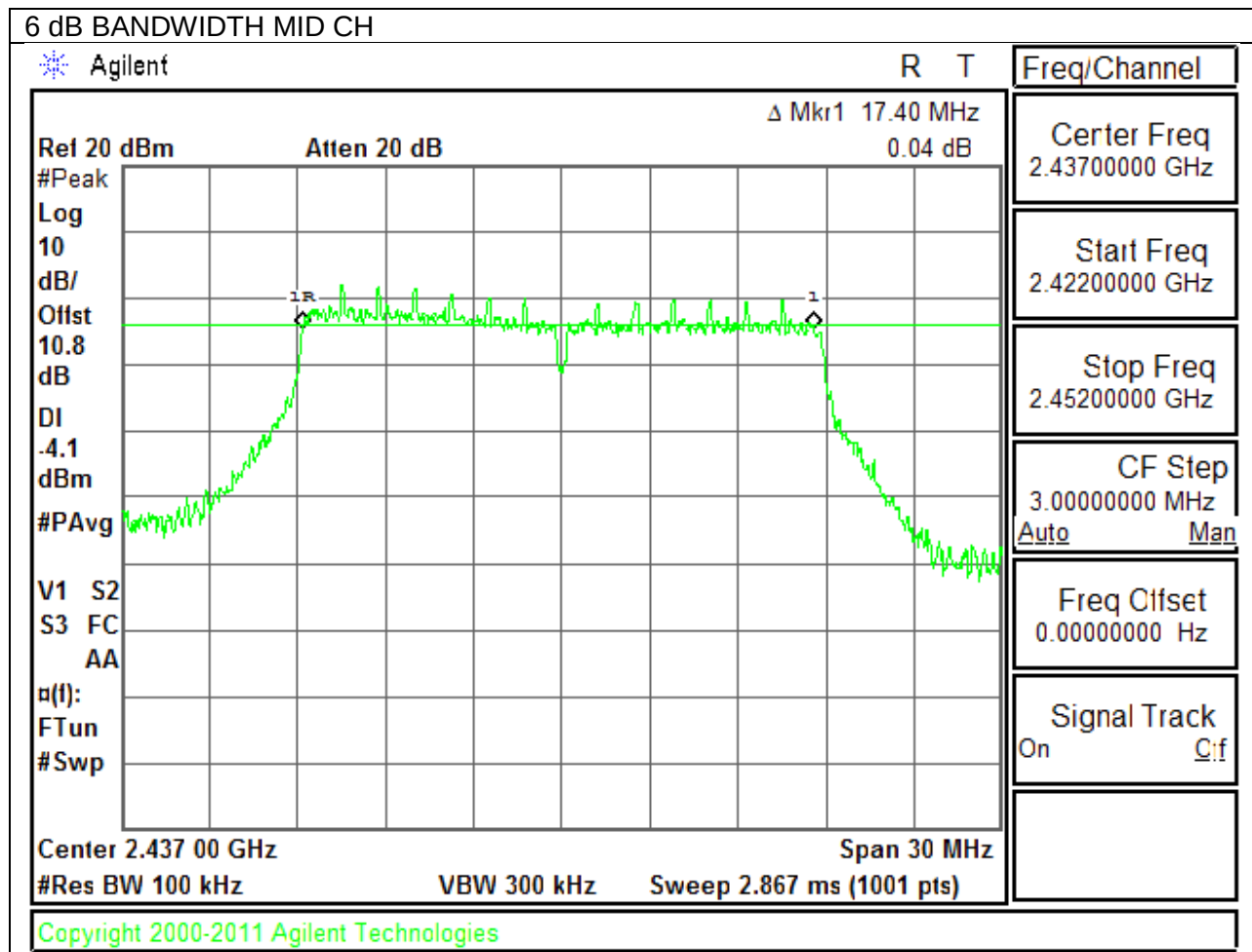
802.11b 6 dB BANDWIDTH



802.11g 6 dB BANDWIDTH



802.11n 6 dB BANDWIDTH



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	13.41
Mid	2437	13.36
High	2462	13.24
Worst		13.41

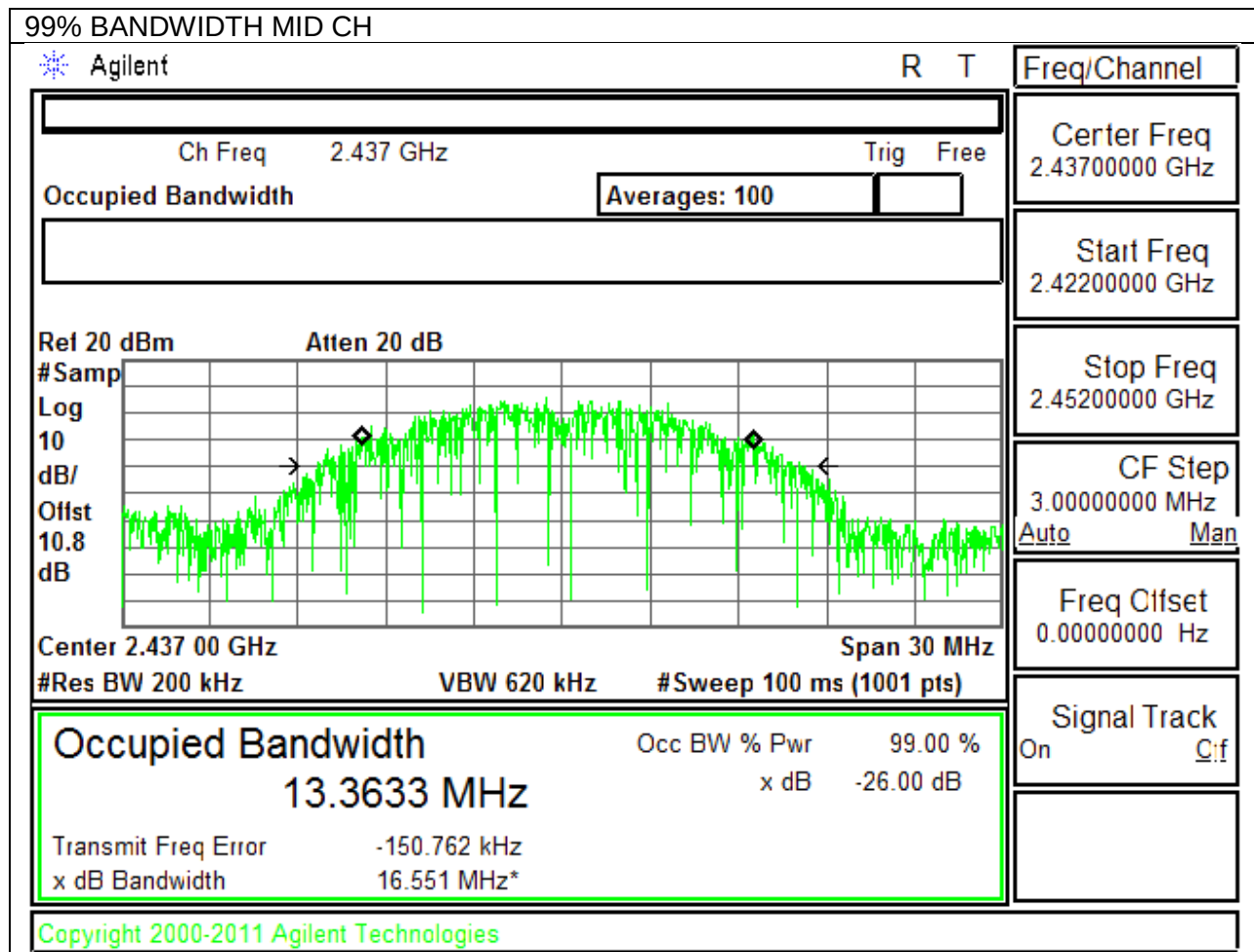
9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.49
Mid	2437	16.51
High	2462	16.88
Worst		16.88

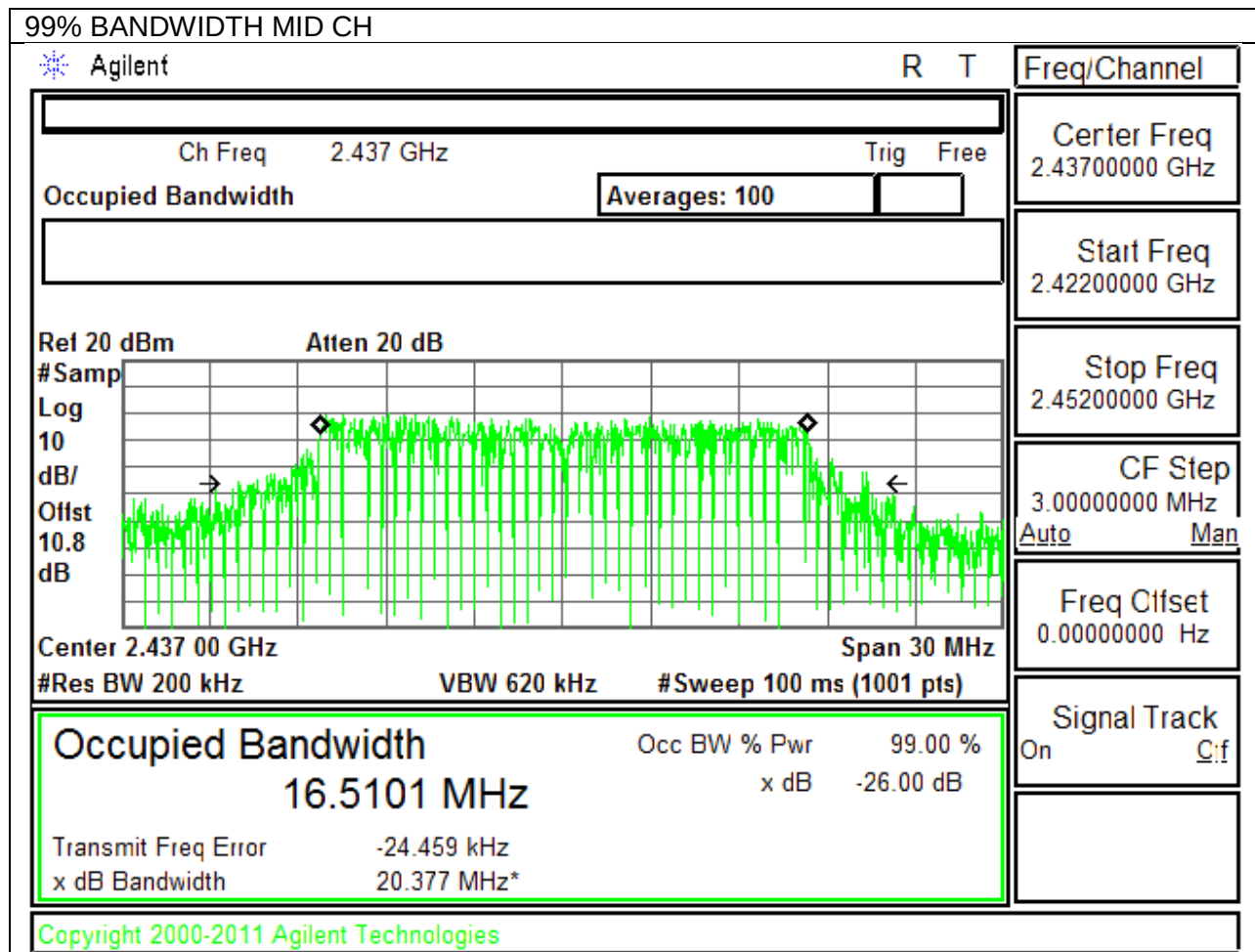
9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.68
Mid	2437	17.70
High	2462	17.63
Worst		17.70

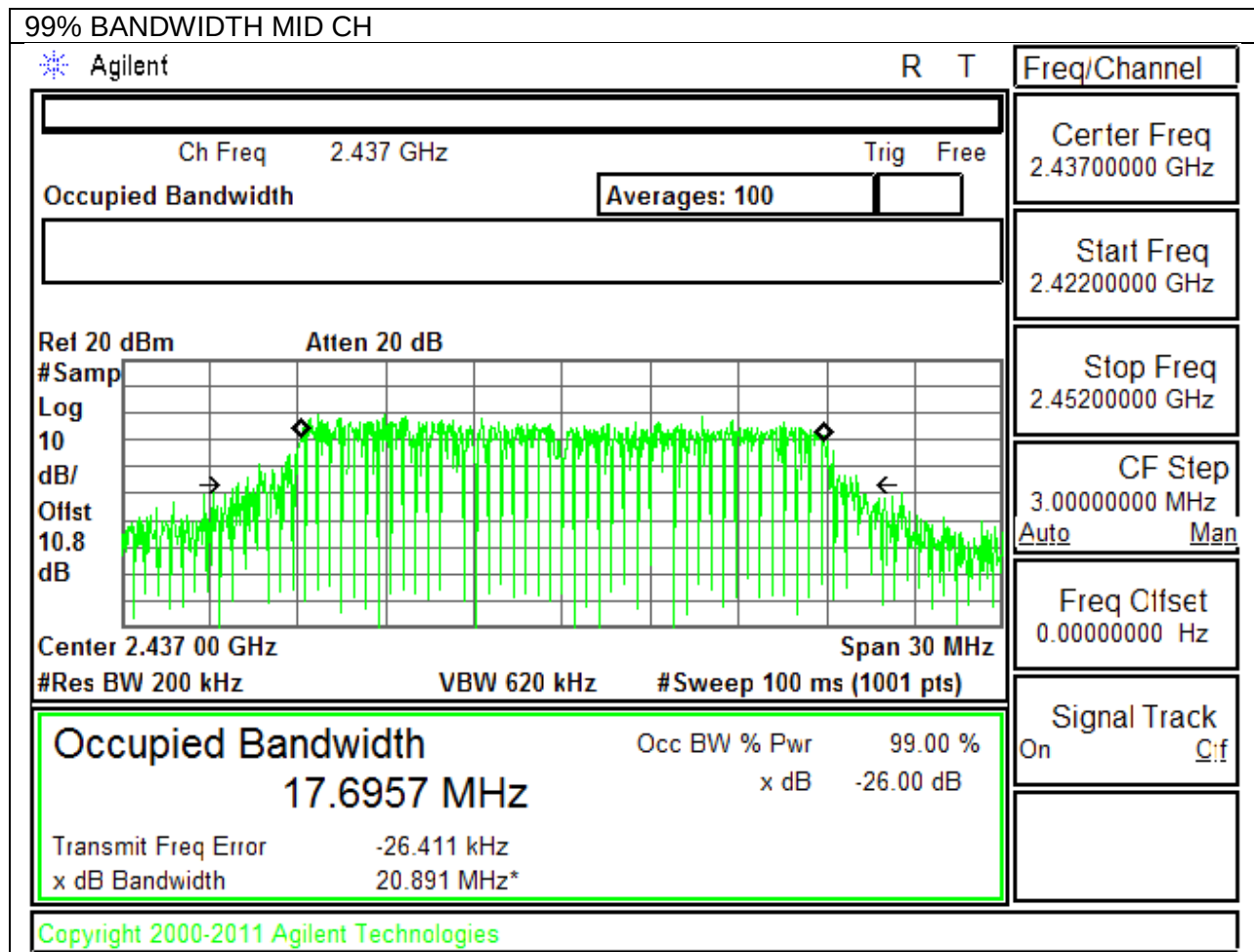
802.11b 99% BANDWIDTH



802.11g 99% BANDWIDTH



802.11n 99% BANDWIDTH



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.

TEST PROCEDURE

The transmitter output is connected to a power meter.
The cable assembly insertion loss of 10.2 dB (including 10 dB pad and 0.2 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

RESULTS

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	-0.50	30.00	30	36	30.00
Mid	2437	-0.50	30.00	30	36	30.00
High	2462	-0.50	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	16.00	16.00	30.00	-14.00
Mid	2437	15.90	15.90	30.00	-14.10
High	2462	15.80	15.80	30.00	-14.20
Worst			16.00		

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	-0.50	30.00	30	36	30.00
Mid	2437	-0.50	30.00	30	36	30.00
High	2462	-0.50	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	13.30	13.30	30.00	-16.70
Mid	2437	13.00	13.00	30.00	-17.00
High	2462	12.90	12.90	30.00	-17.10
Worst			13.30		

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	-0.50	30.00	30	36	30.00
Mid	2437	-0.50	30.00	30	36	30.00
High	2462	-0.50	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	12.00	12.00	30.00	-18.00
Mid	2437	11.90	11.90	30.00	-18.10
High	2462	11.80	11.80	30.00	-18.20
Worst			12.00		

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	-13.81	8.0	-21.8
Mid	2437	-14.68	8.0	-22.7
High	2462	-14.57	8.0	-22.6

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	-20.47	8.0	-28.5
Mid	2437	-20.28	8.0	-28.3
High	2462	-21.05	8.0	-29.1

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	-21.77	8.0	-29.8
Mid	2437	-21.84	8.0	-29.8
High	2462	-22.09	8.0	-30.1

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.

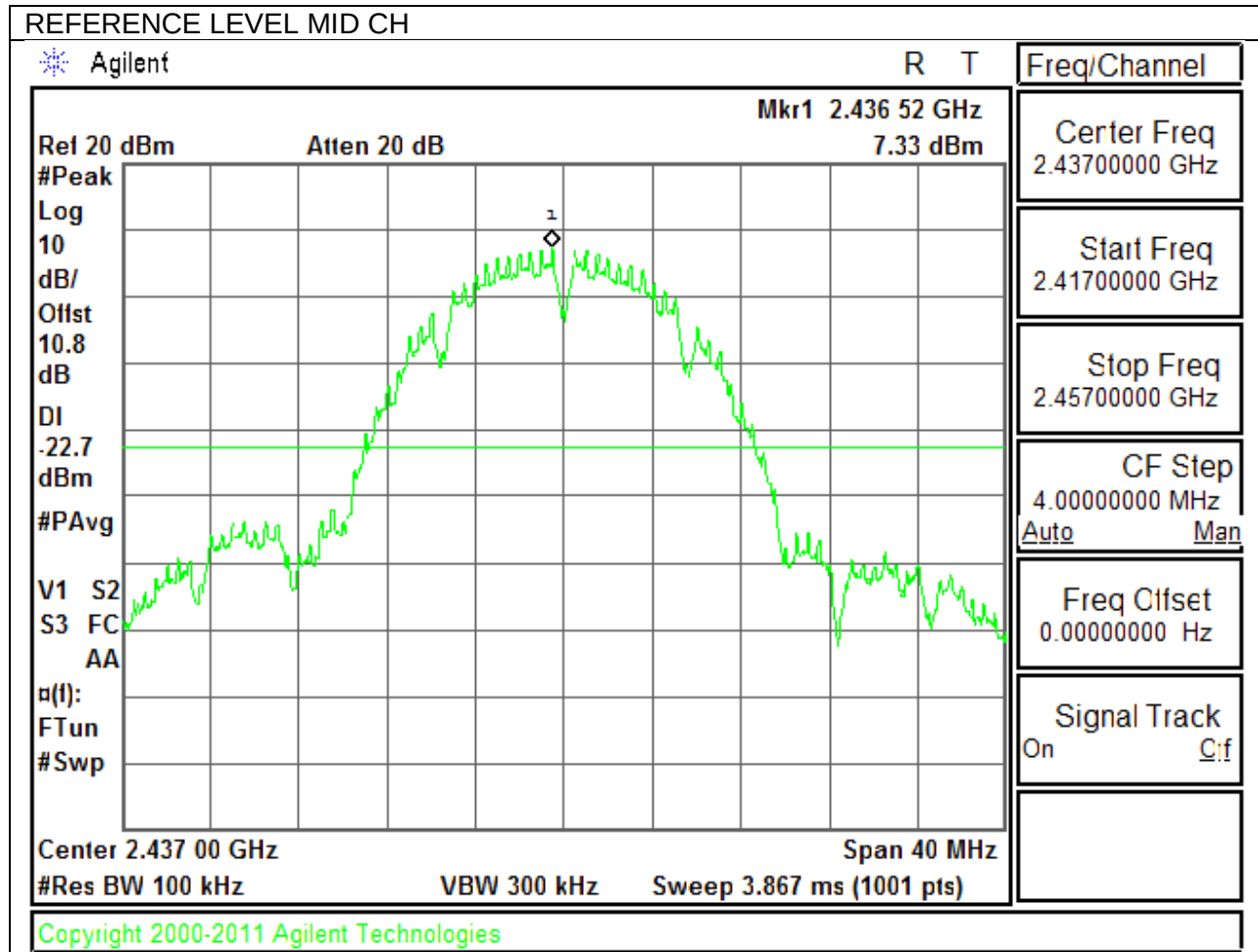
TEST PROCEDURE

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.

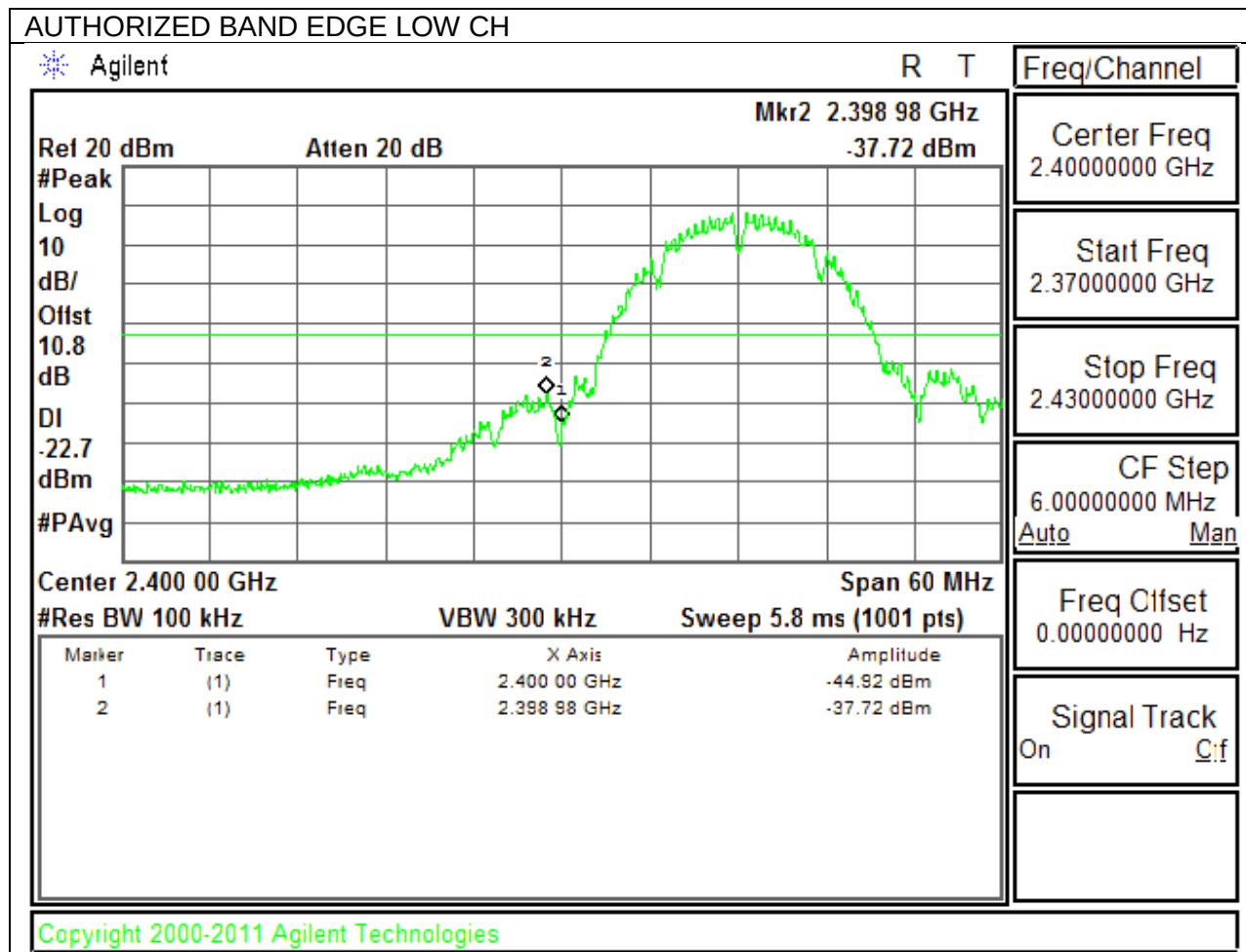
RESULTS

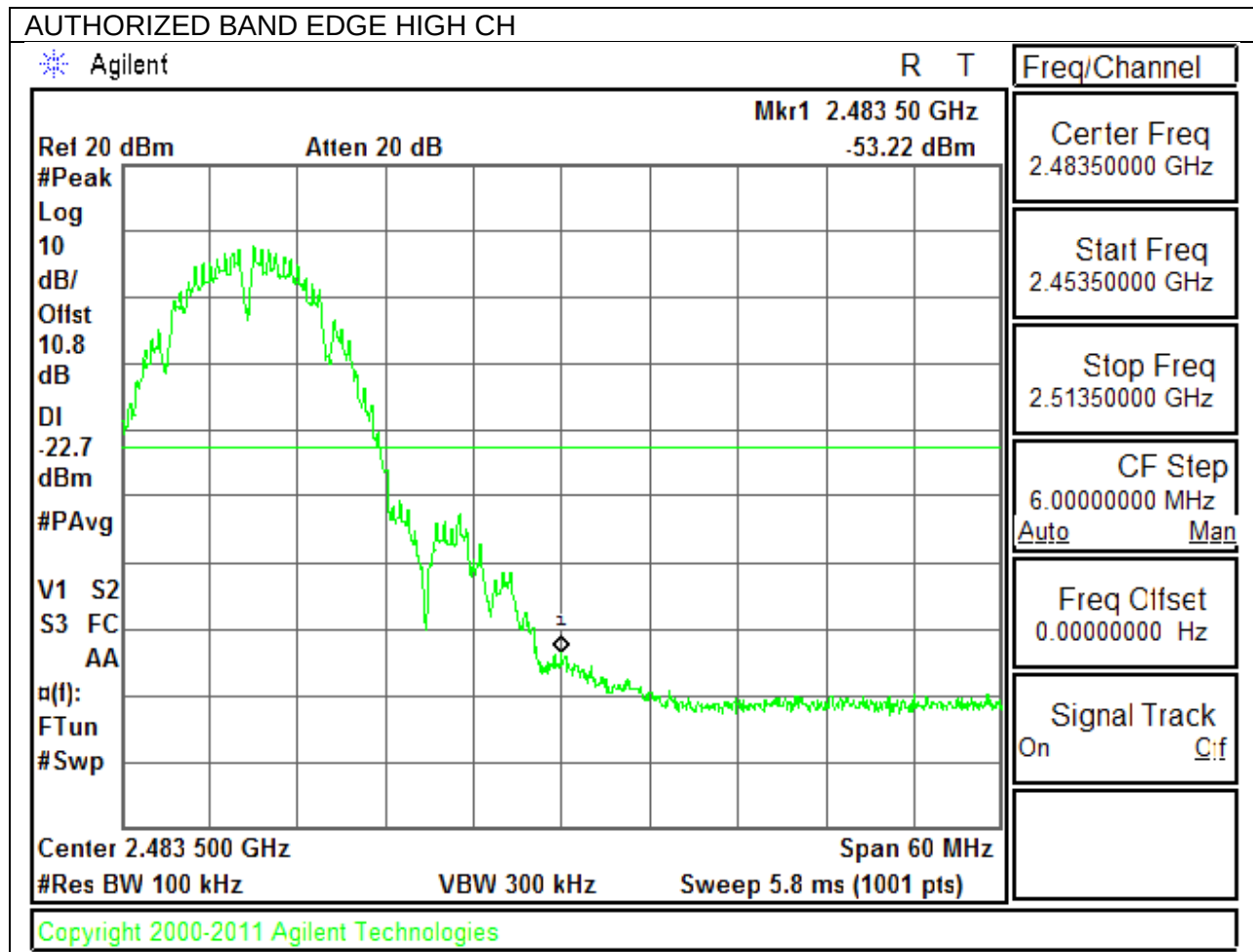
9.5.1. 802.11b MODE IN THE 2.4 GHz BAND

IN-BAND REFERENCE LEVEL

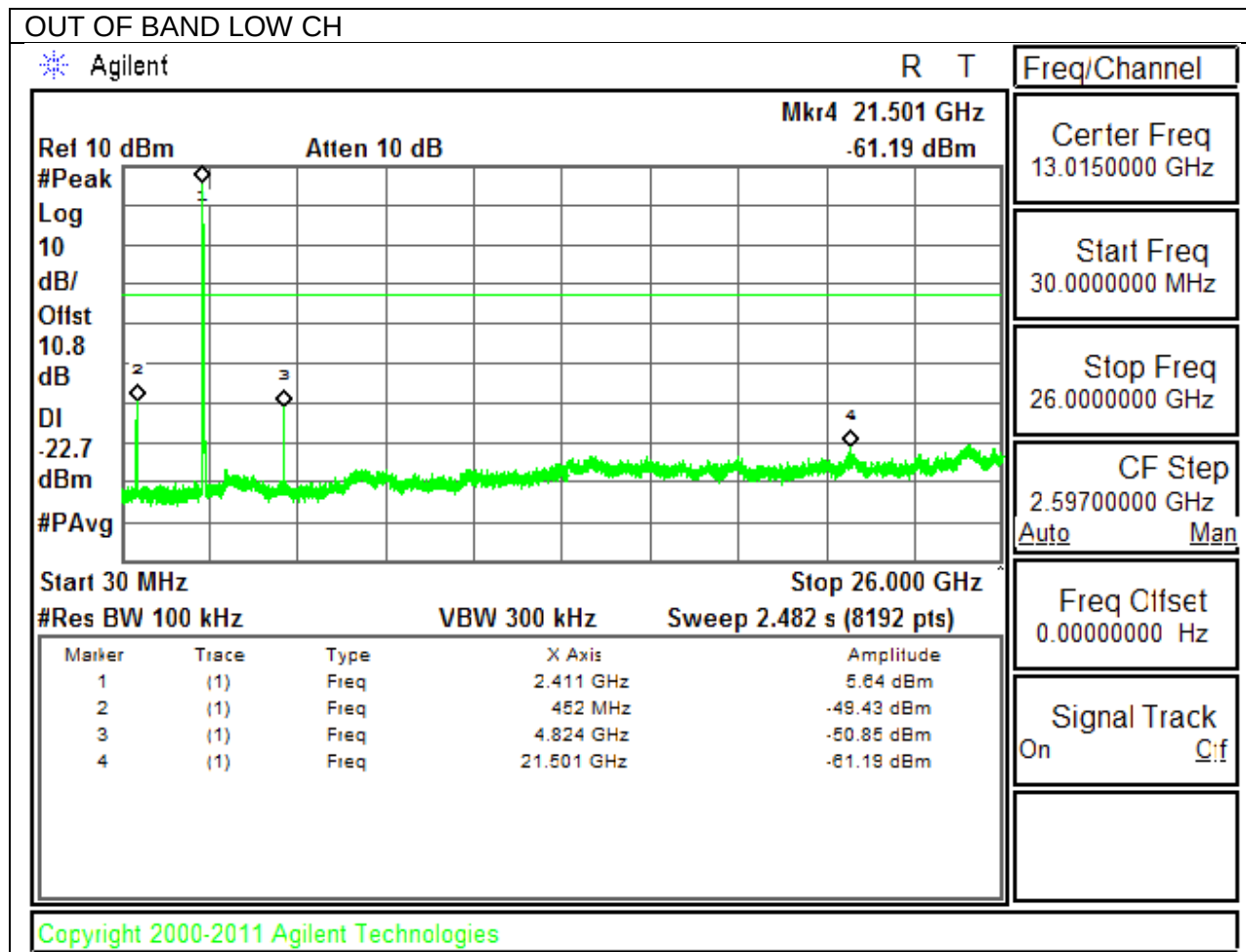


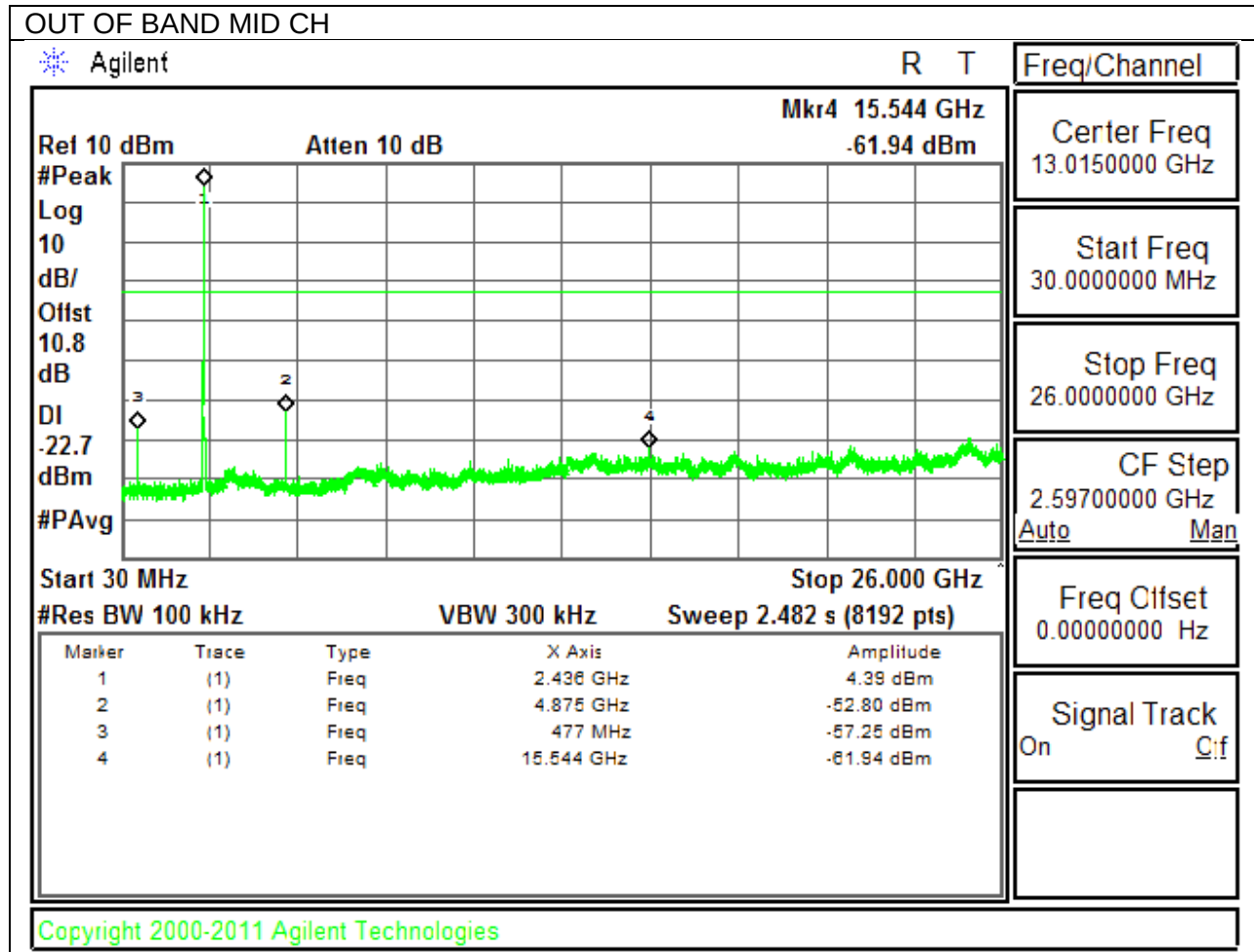
LOW CHANNEL BANDEDGE



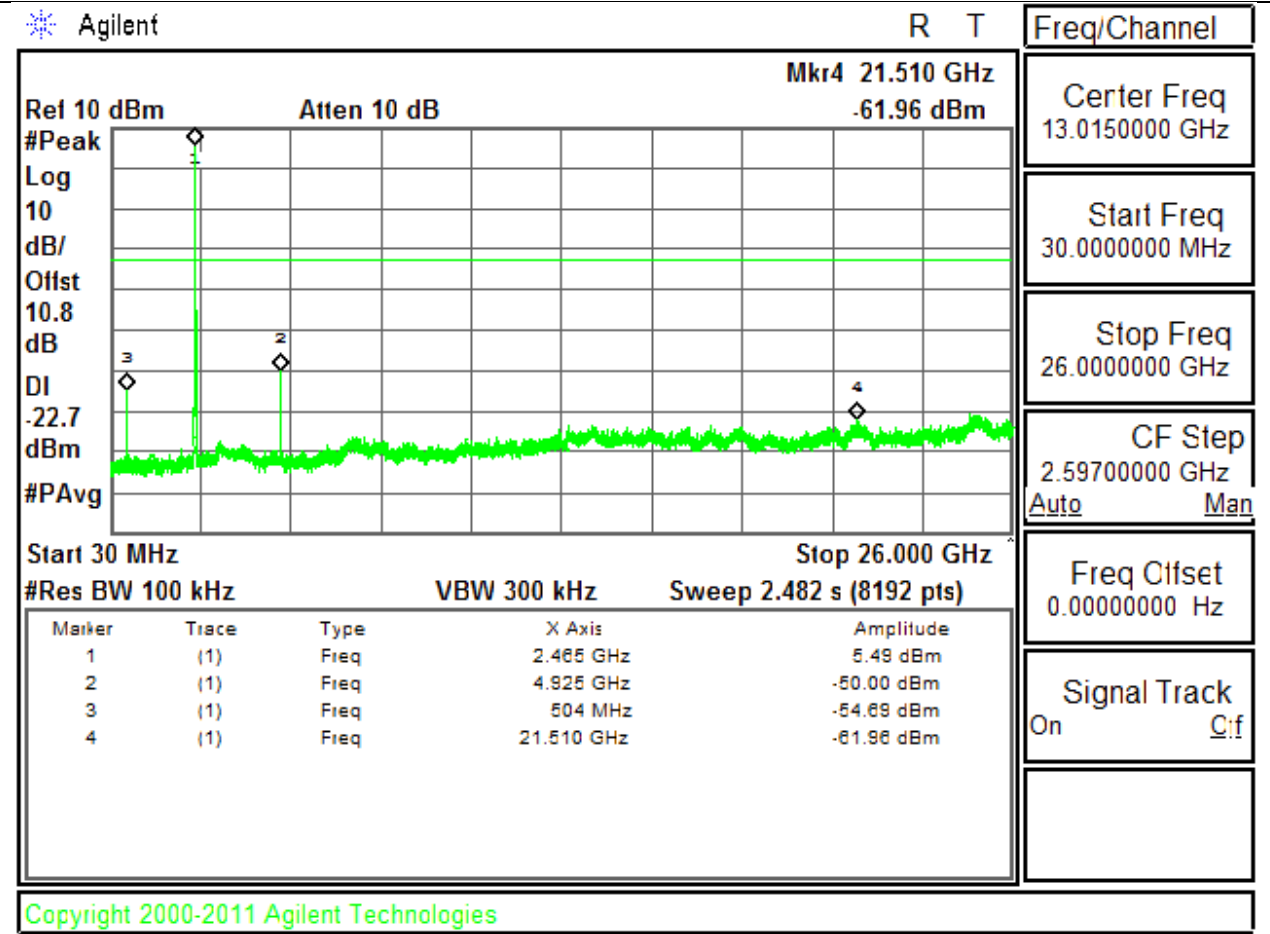


OUT-OF-BAND EMISSIONS



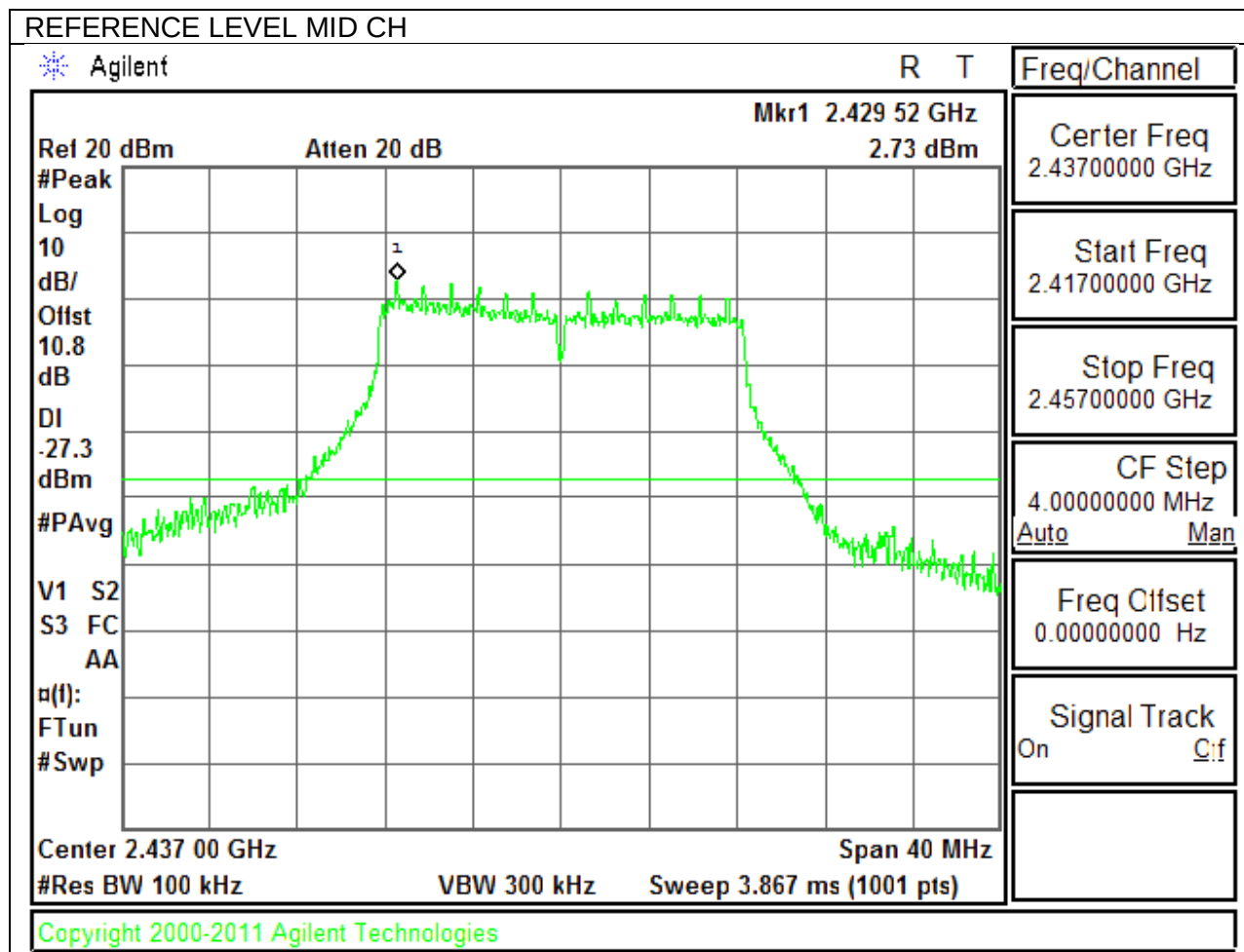


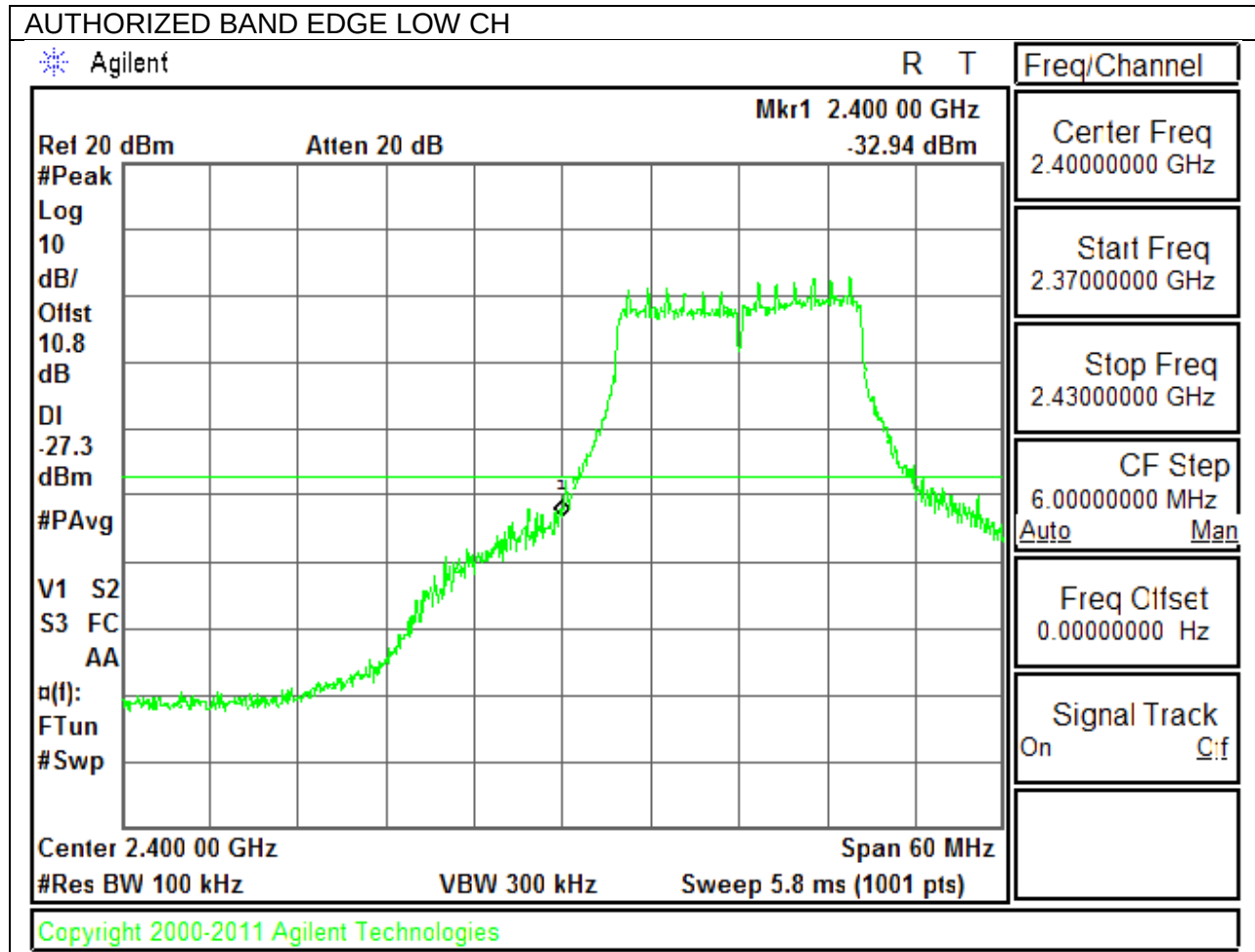
OUT OF BAND HIGH CH

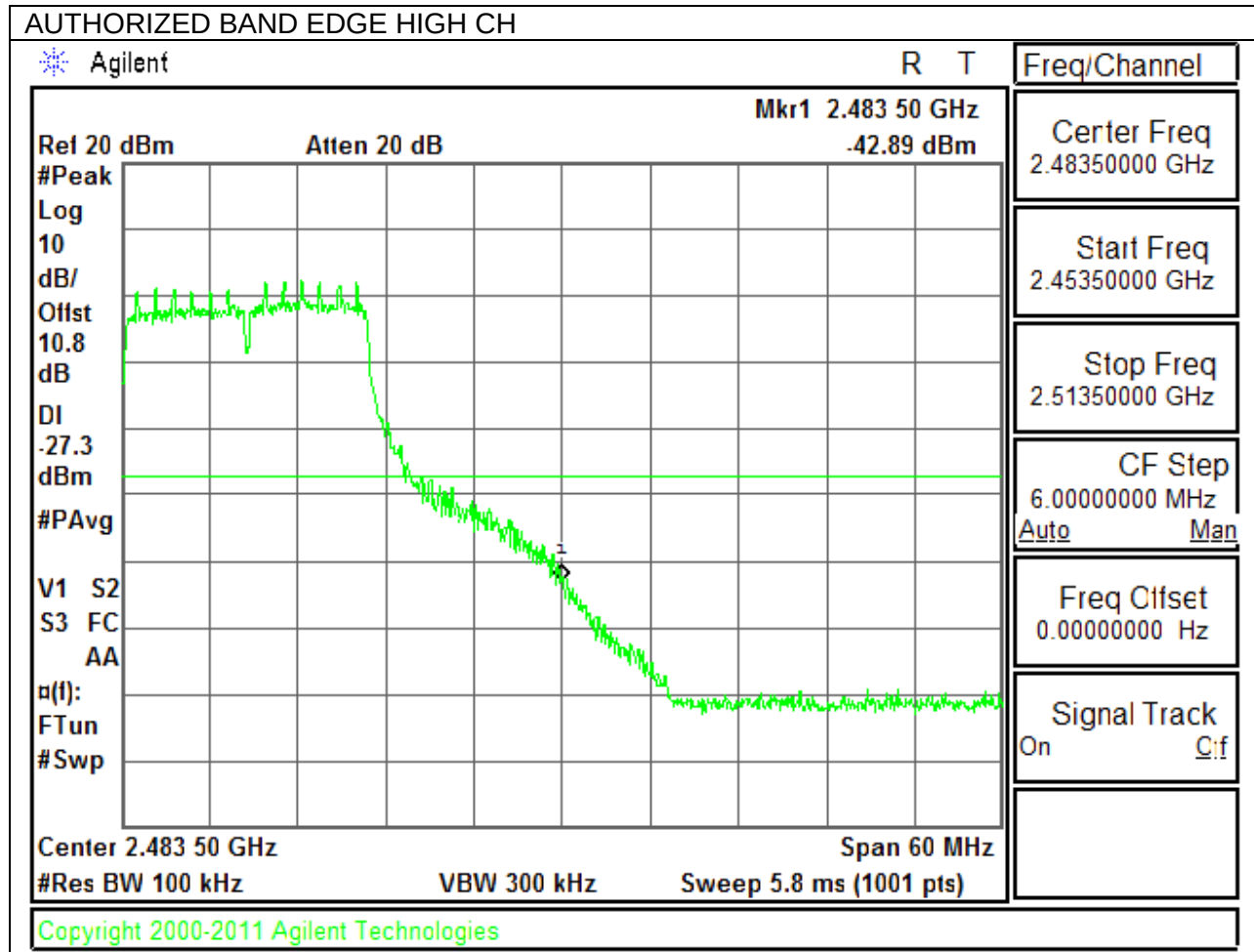


9.5.2. 802.11g MODE IN THE 2.4 GHz BAND

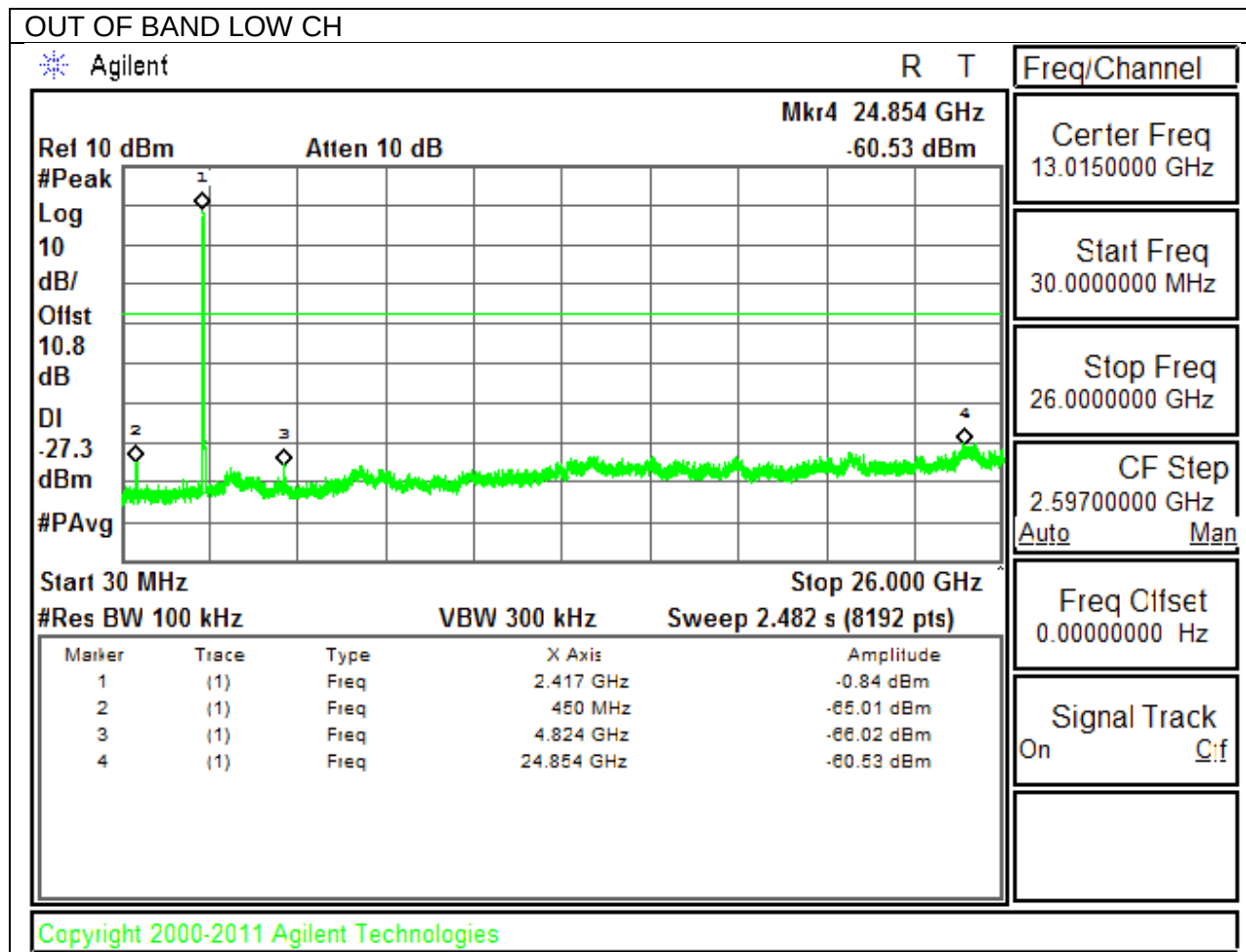
IN-BAND REFERENCE LEVEL



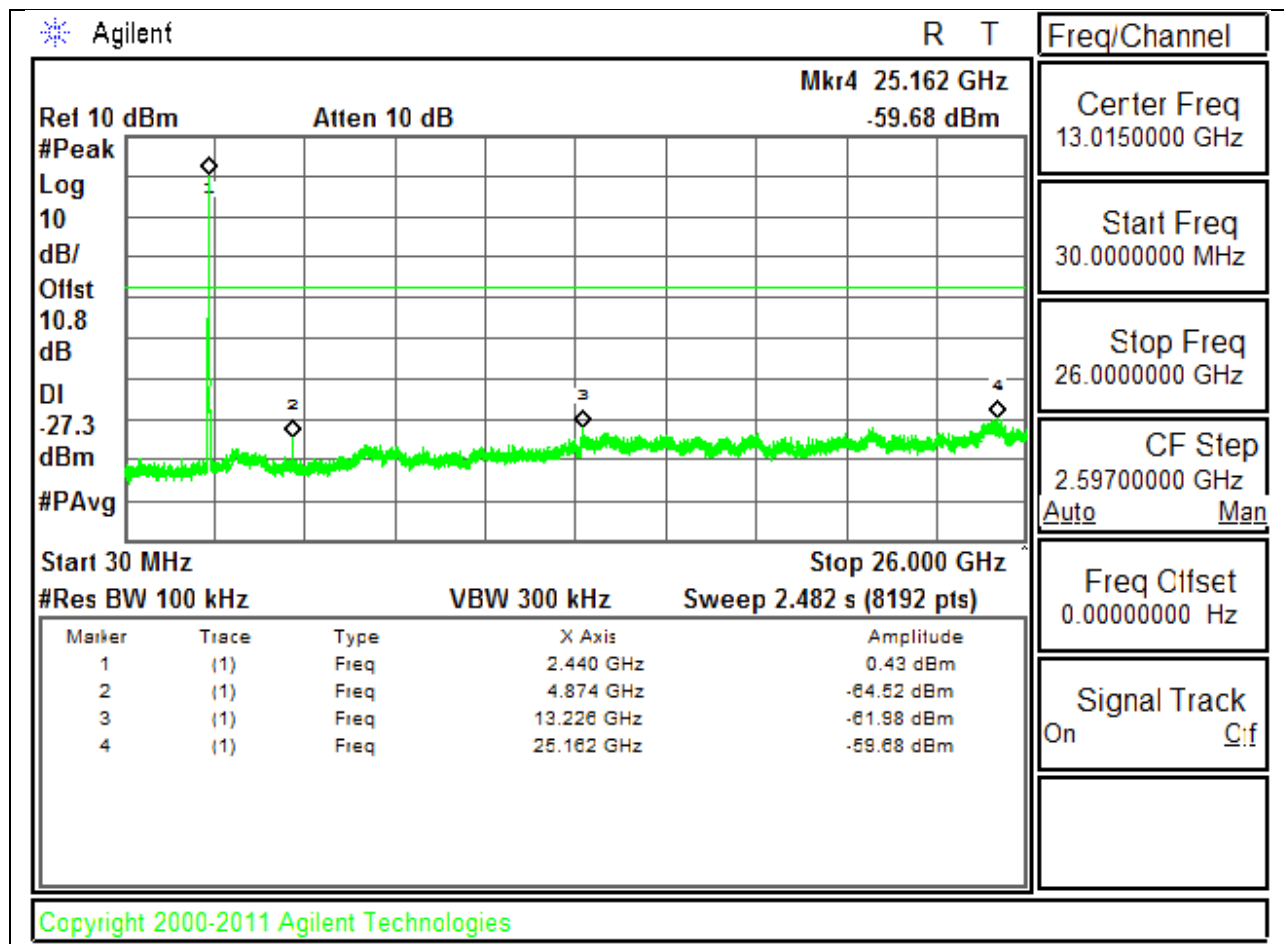




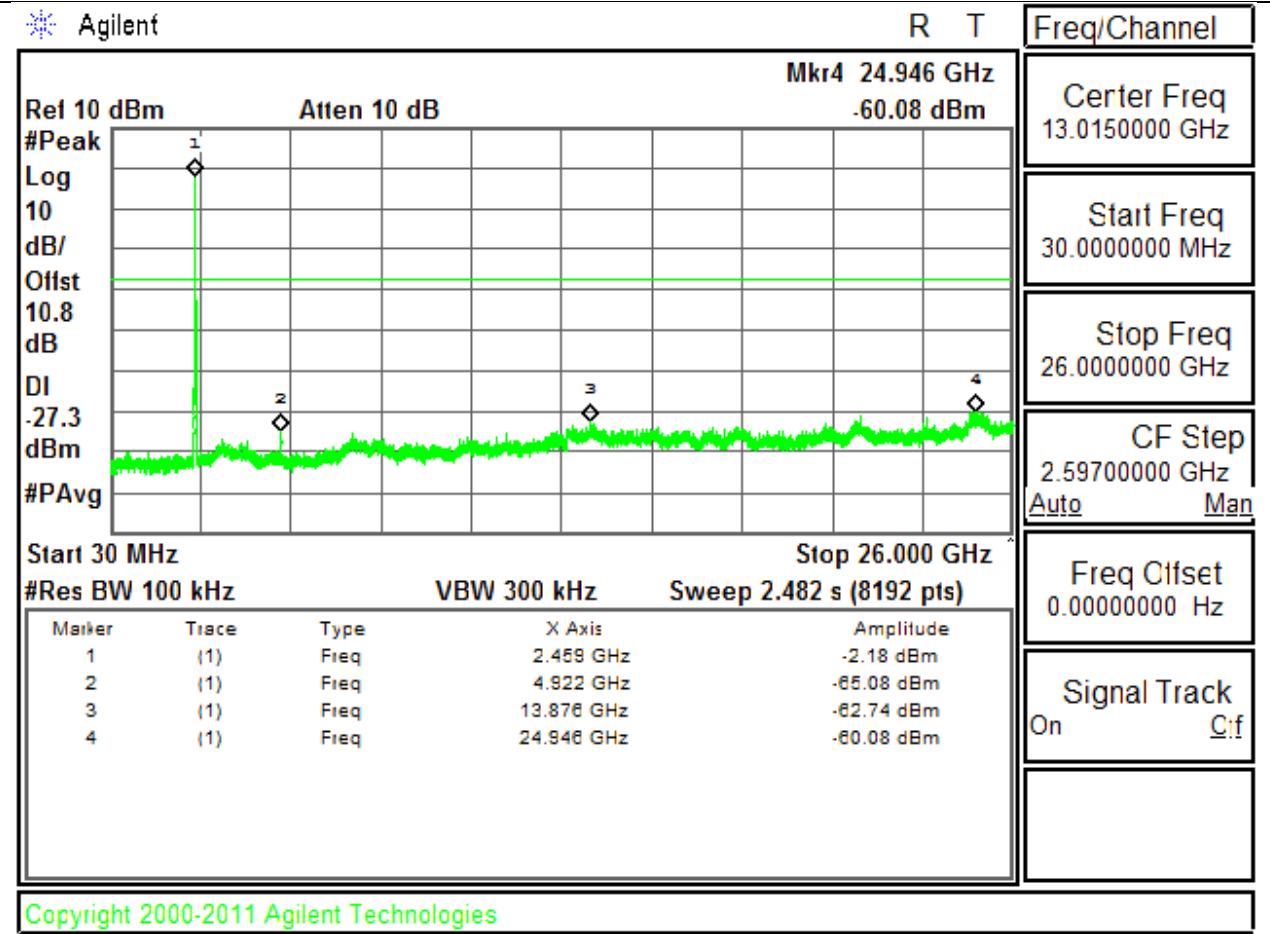
OUT-OF-BAND EMISSIONS



OUT OF BAND MID CH

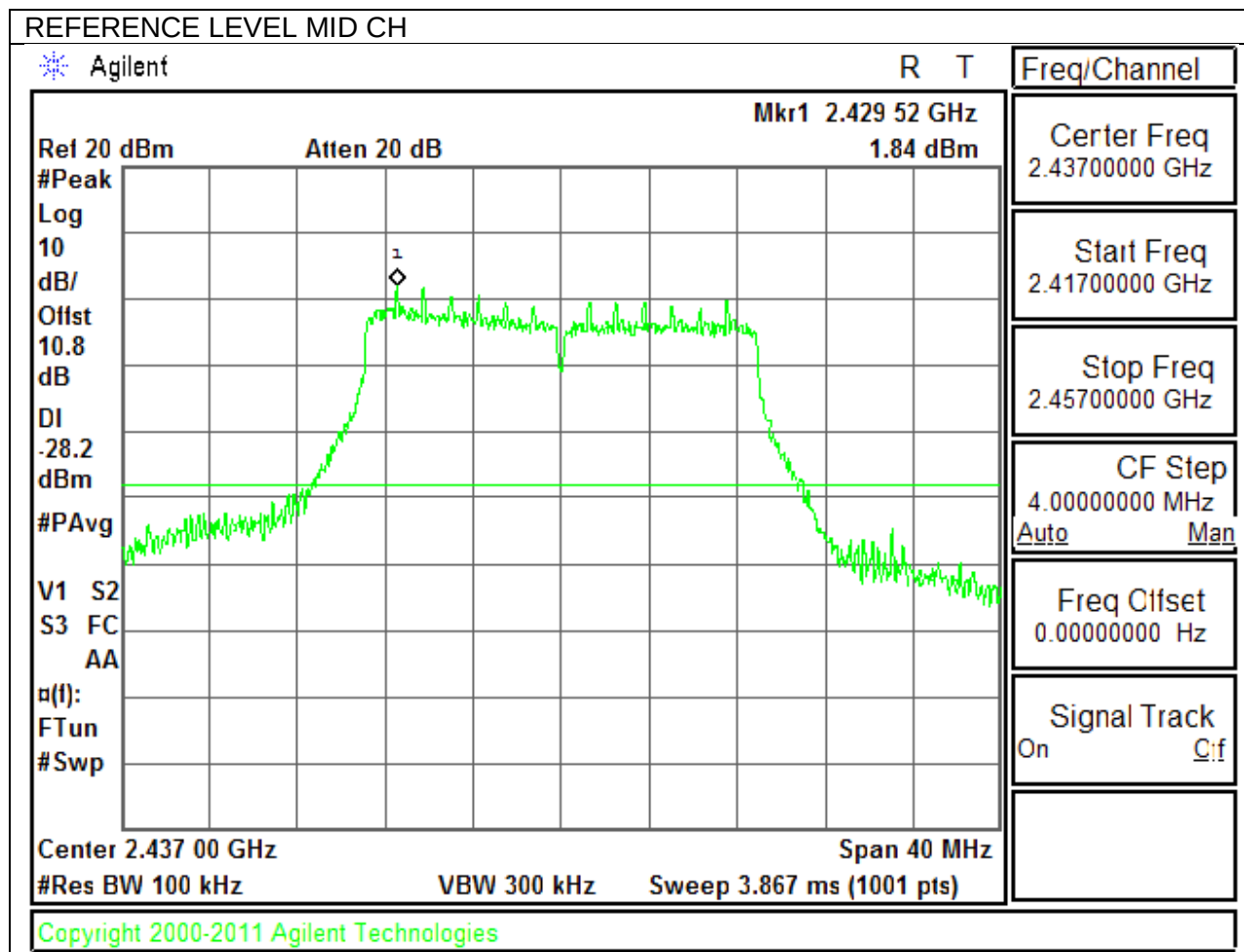


OUT OF BAND HIGH CH

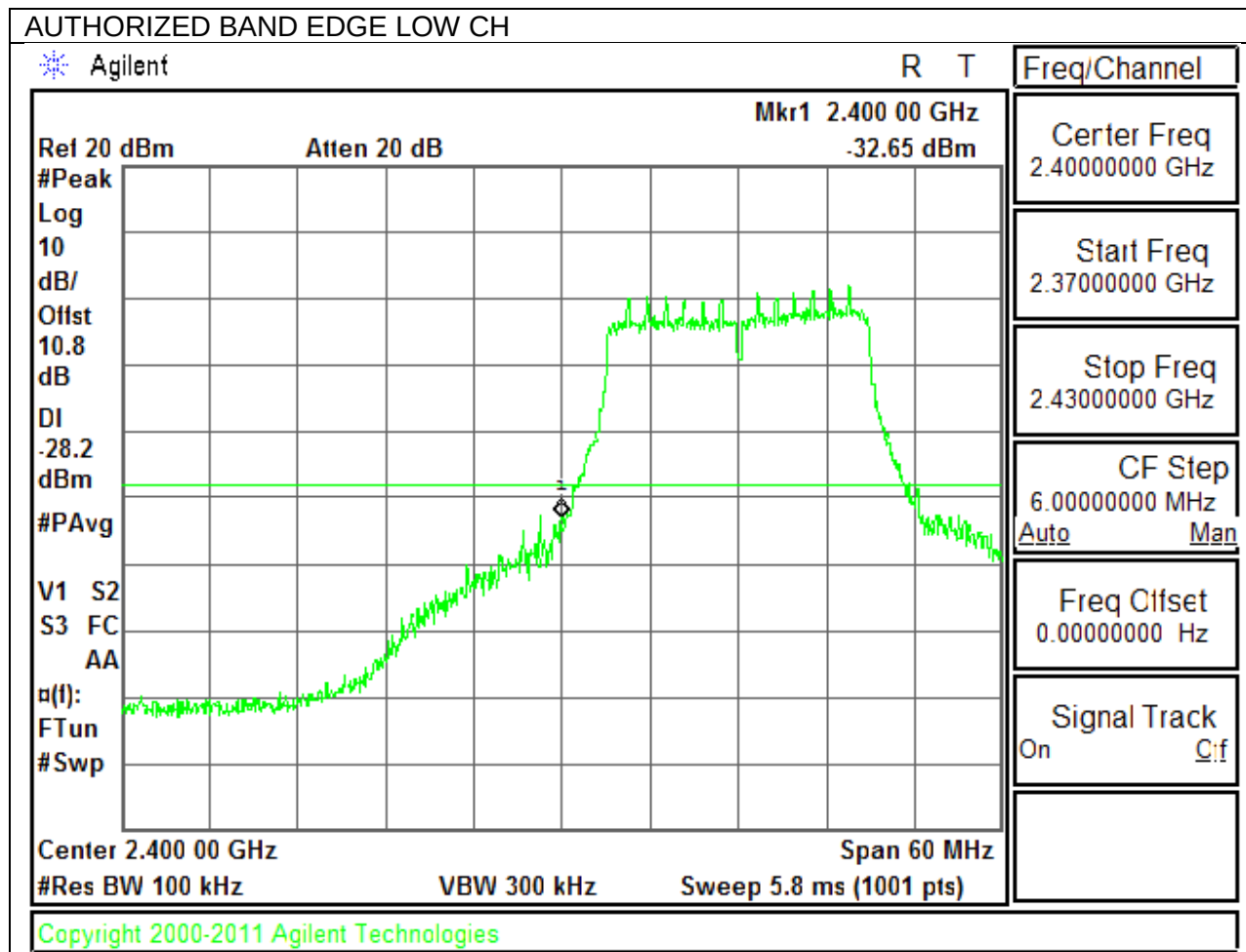


9.5.3. 802.11n MODE IN THE 2.4 GHz BAND

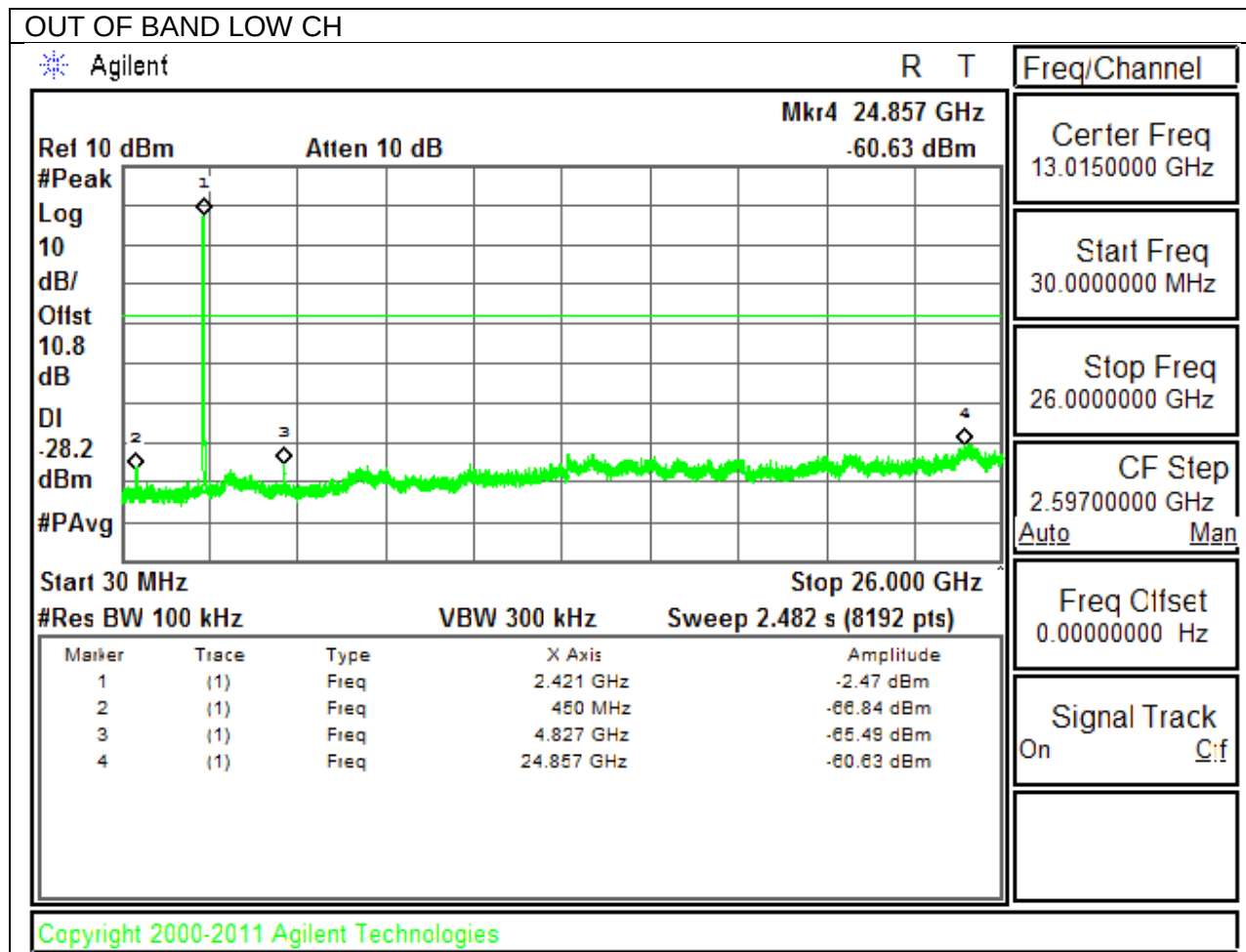
IN-BAND REFERENCE LEVEL



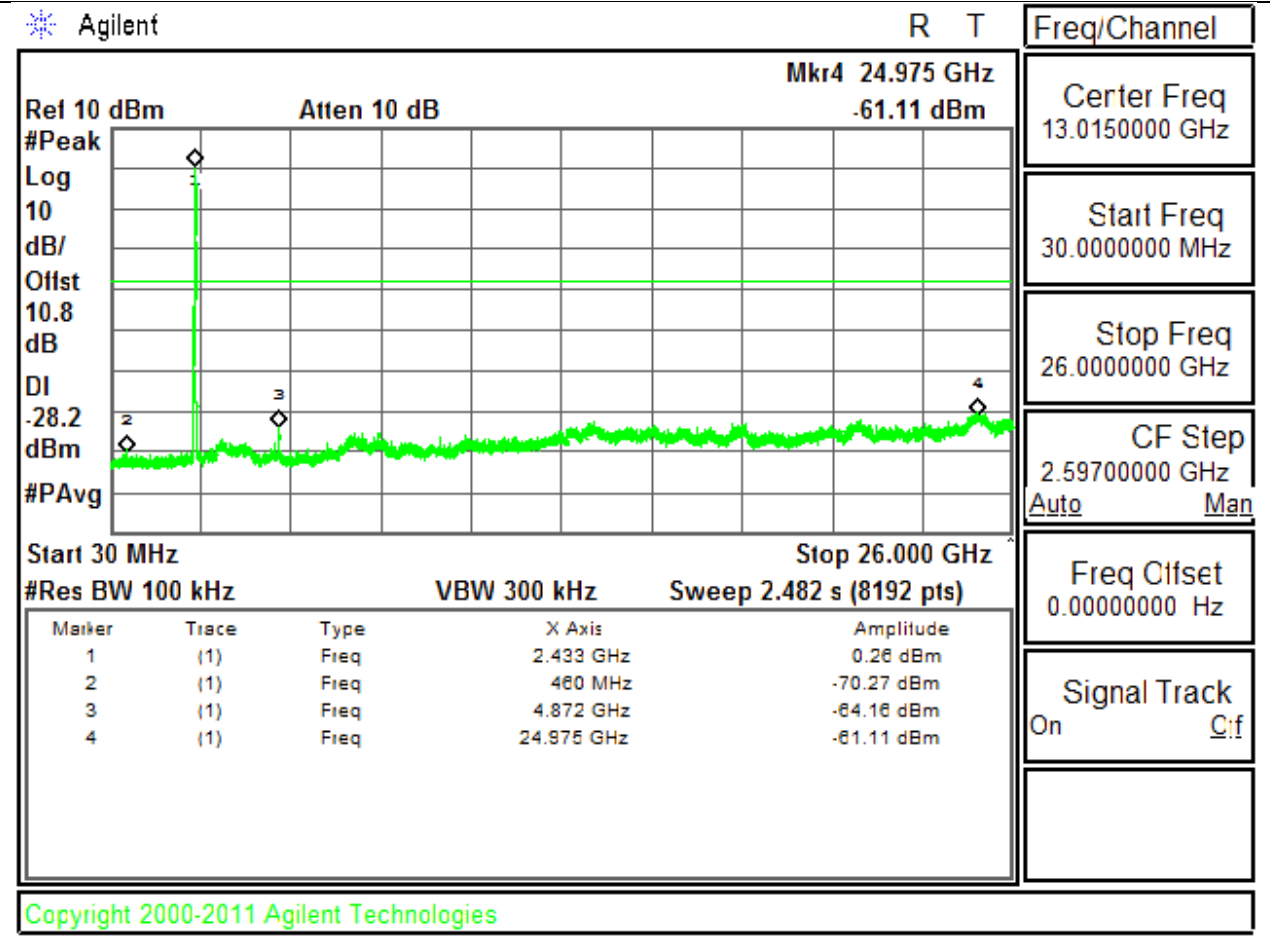
LOW CHANNEL BANDEDGE



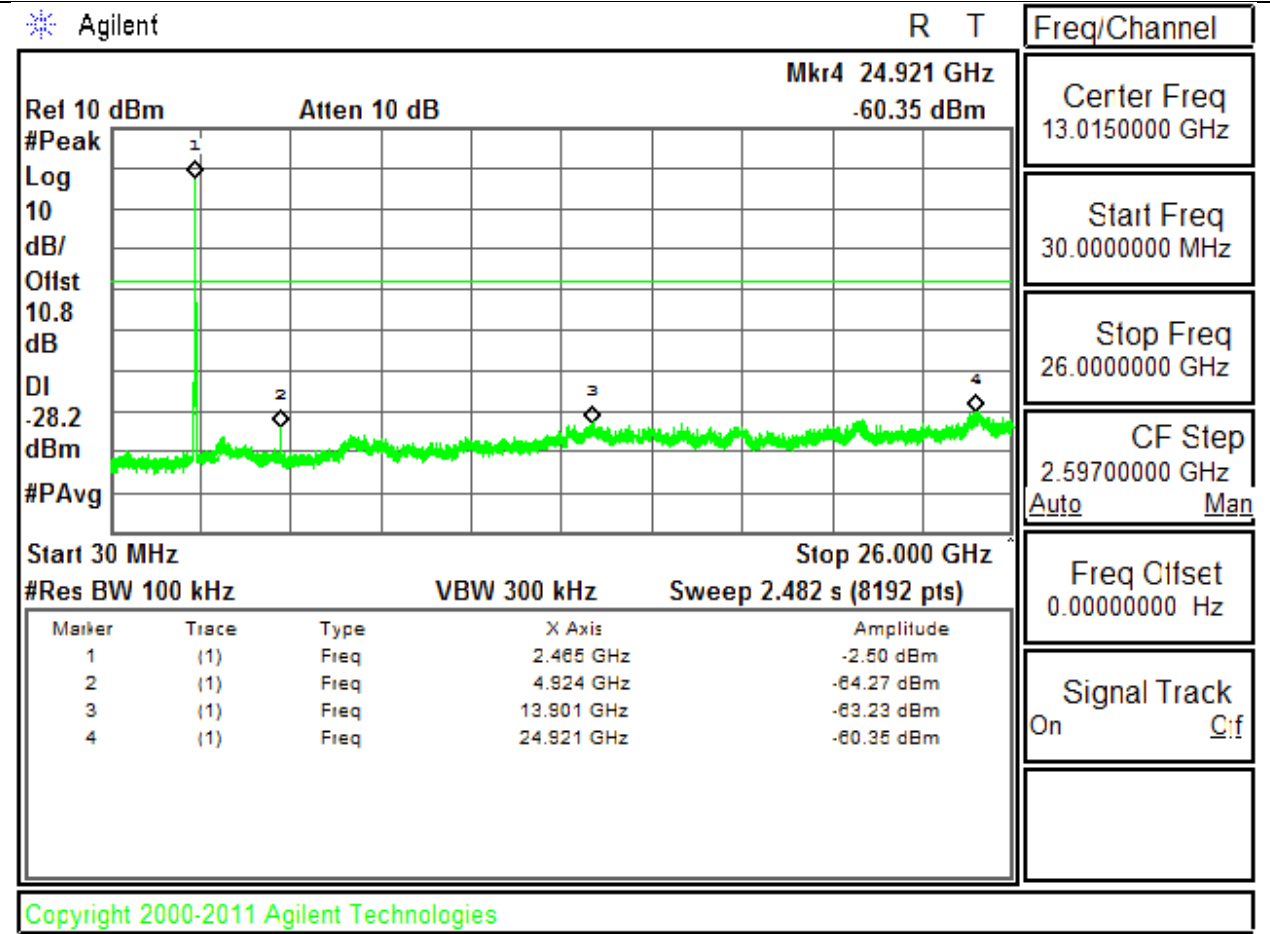
OUT-OF-BAND EMISSIONS



OUT OF BAND MID CH



OUT OF BAND HIGH CH



10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

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
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.

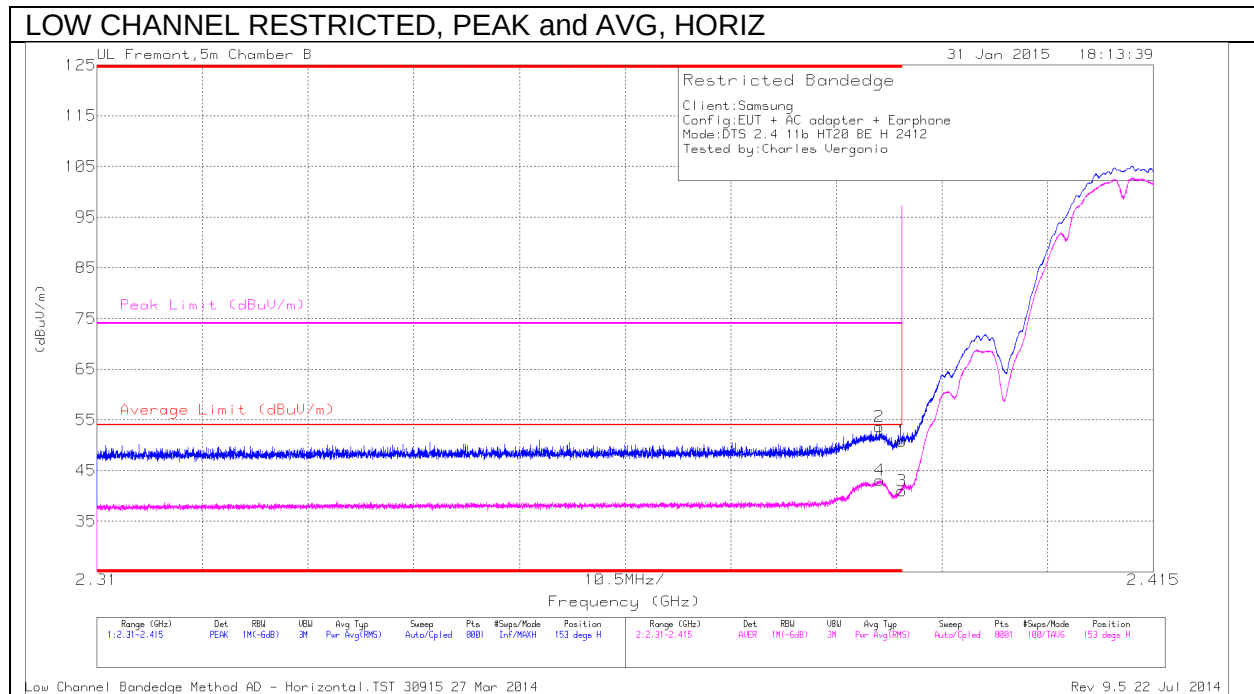
For measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor= $10\log(1/x)$ For this sample B mode = 0dB (duty cycle >98%); G mode = 0.3dB; N mode = 0.32dB.

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)

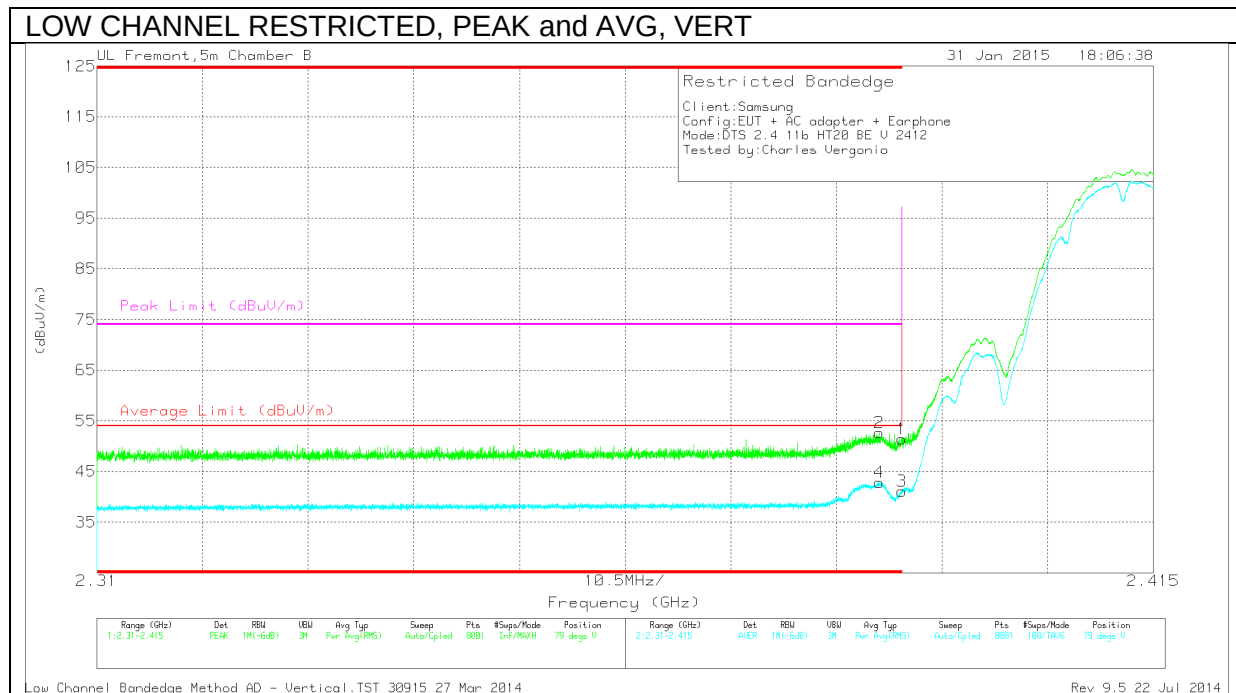


Marker	Frequen cy (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.388	44.2	PK	32.1	-22.6	53.7	-	-	74	-20.3	153	288	H
4	* 2.388	33.61	RMS	32.1	-22.6	43.11	54	-10.89	-	-	153	288	H
1	* 2.39	41.34	PK	32.1	-22.6	50.84	-	-	74	-23.16	153	288	H
3	* 2.39	31.53	RMS	32.1	-22.6	41.03	54	-12.97	-	-	153	288	H

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

PK - Peak detector

RMS - RMS detection



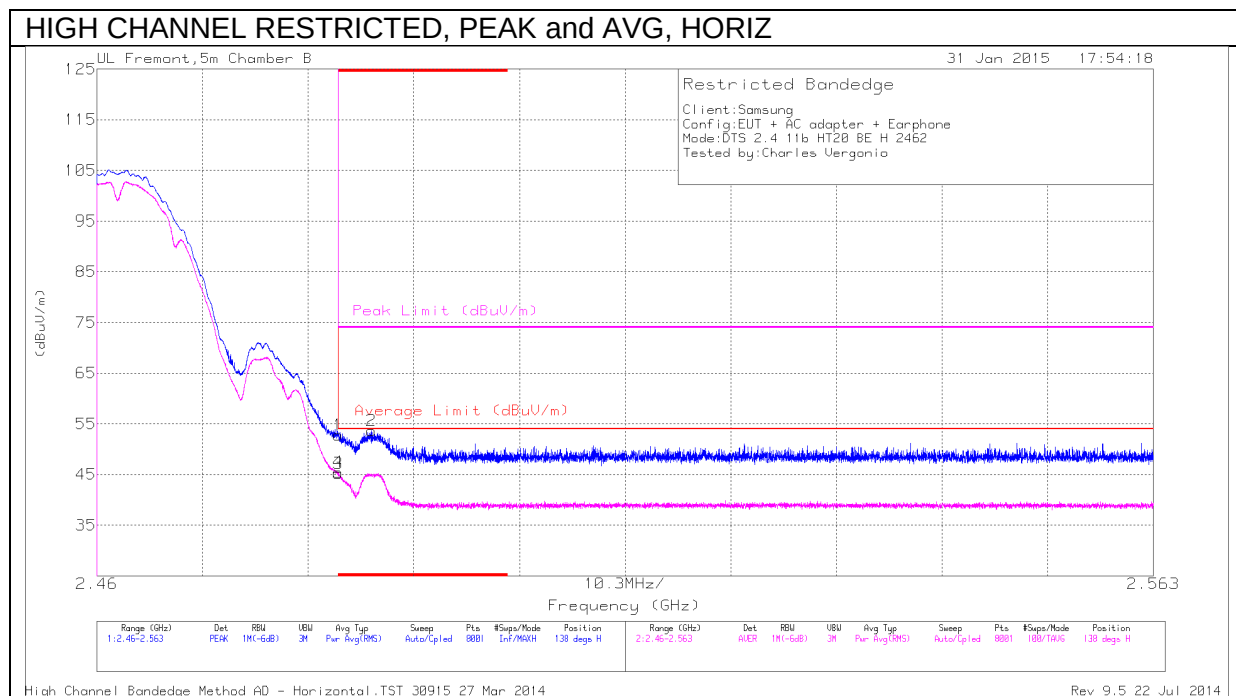
Marker	Frequen cy (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.388	43.12	PK	32.1	-22.6	52.62	-	-	74	-21.38	79	295	V
4	* 2.388	33.32	RMS	32.1	-22.6	42.82	54	-11.18	-	-	79	295	V
1	* 2.39	41.88	PK	32.1	-22.6	51.38	-	-	74	-22.62	79	295	V
3	* 2.39	31.6	RMS	32.1	-22.6	41.1	54	-12.9	-	-	79	295	V

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

PK - Peak detector

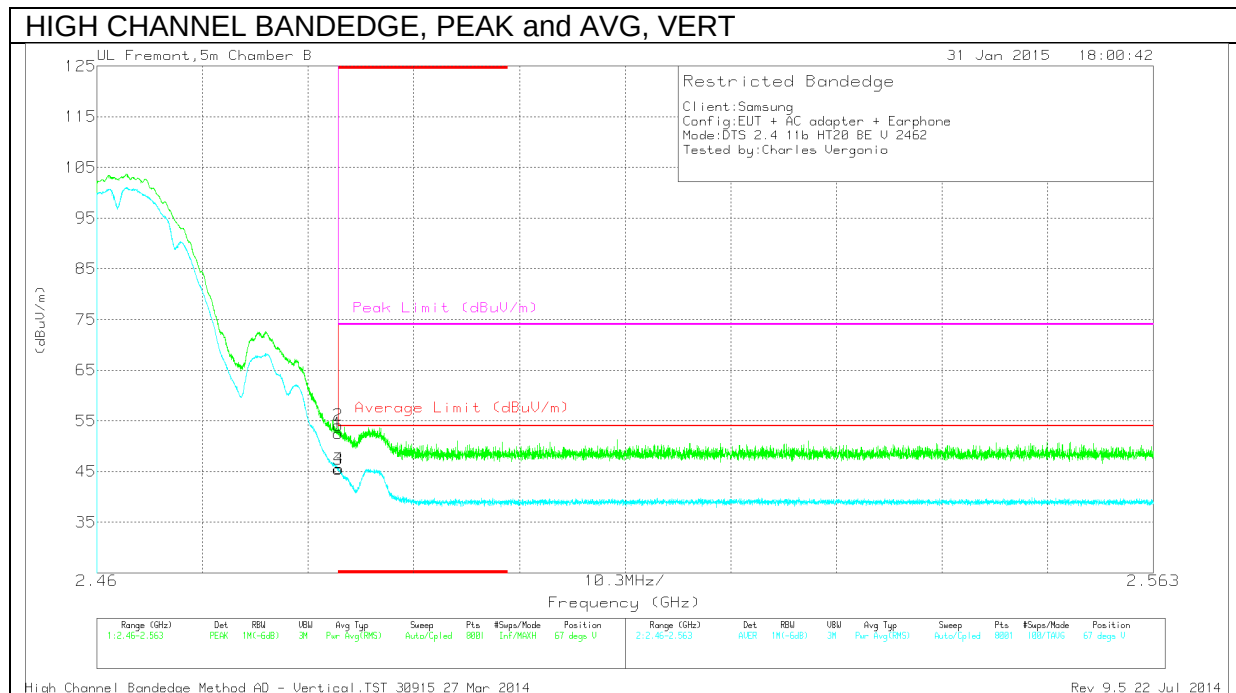
RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)



Marker	Frequen cy (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.74	PK	32.4	-22.4	52.74	-	-	74	-21.26	138	231	H
3	* 2.484	35.25	RMS	32.4	-22.4	45.25	54	-8.75	-	-	138	231	H
4	* 2.484	35.41	RMS	32.4	-22.4	45.41	54	-8.59	-	-	138	231	H
2	* 2.487	43.59	PK	32.4	-22.4	53.59	-	-	74	-20.41	138	231	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection



Marker	Frequen cy (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.49	PK	32.4	-22.4	52.49	-	-	74	-21.51	67	234	V
2	* 2.484	44.19	PK	32.4	-22.4	54.19	-	-	74	-19.81	67	234	V
3	* 2.484	35.46	RMS	32.4	-22.4	45.46	54	-8.54	-	-	67	234	V
4	* 2.484	35.61	RMS	32.4	-22.4	45.61	54	-8.39	-	-	67	234	V

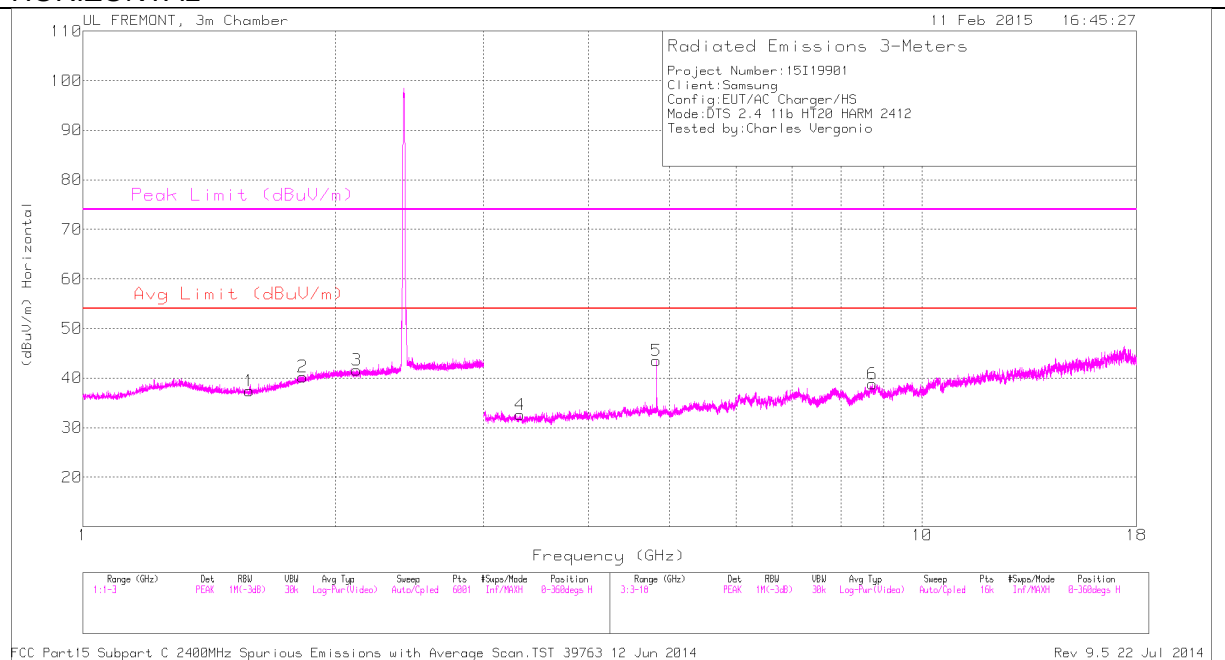
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

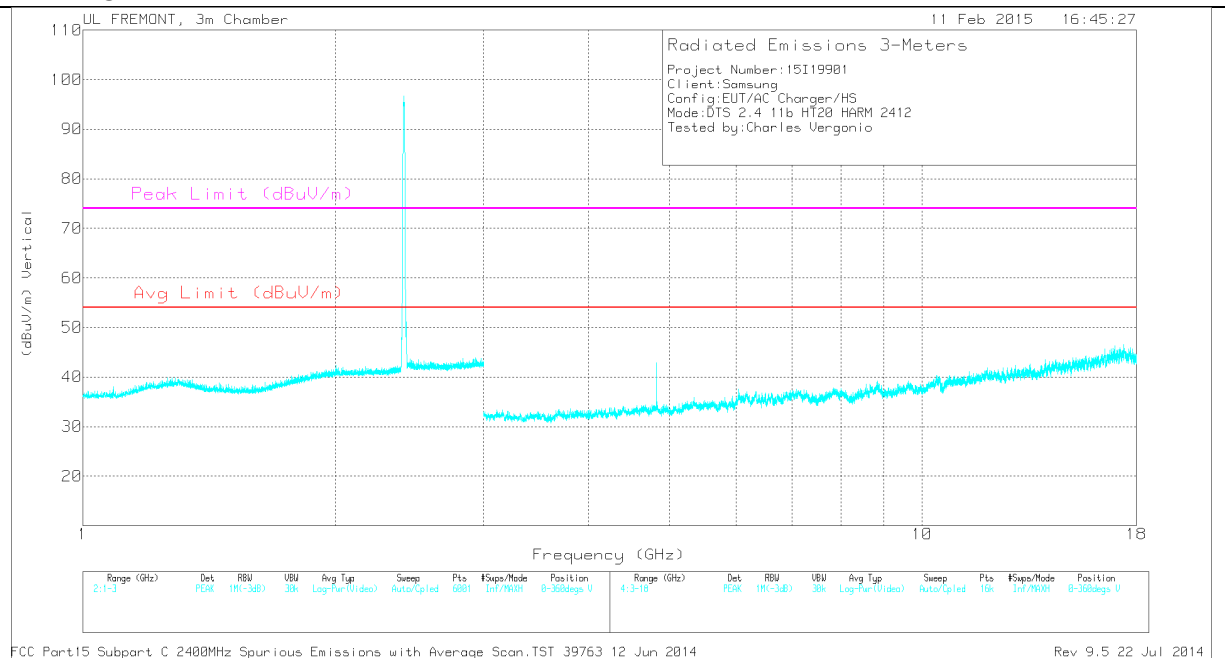
HARMONICS AND SPURIOUS EMISSIONS

LOW 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.

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

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.578	32.87	PK	28	-23.4	37.47	-	-	74	-36.53	0-360	100	H
2	1.828	33.08	PK	30.5	-23.3	40.28	-	-	-	-	0-360	200	H
3	2.119	33.12	PK	31.5	-23	41.62	-	-	-	-	0-360	200	H
4	3.319	31.36	PK	32.6	-31.4	32.56	-	-	-	-	0-360	200	H
5	4.824	39.74	PK	34	-30.2	43.54	-	-	74	-30.46	0-360	200	H
6	8.727	30.5	PK	35.9	-27.6	38.8	-	-	-	-	0-360	100	H

PK - Peak detector

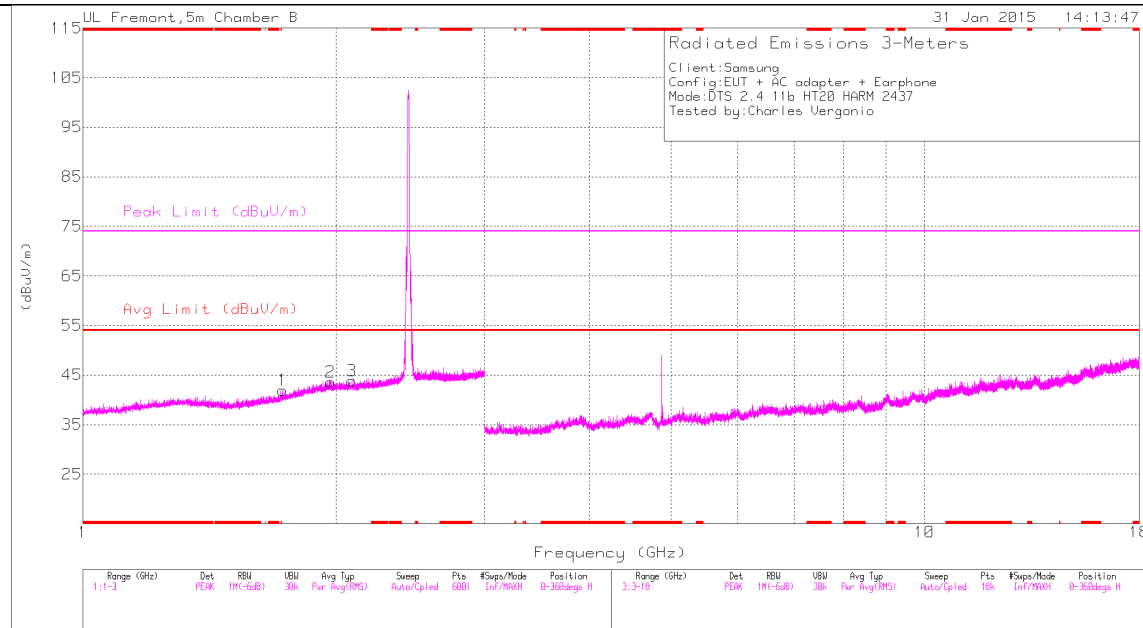
Radiated Emissions

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4.824	45.92	PK2	34	-30.3	49.62	-	-	74	-24.38	253	225	H
4.824	40.48	MAV1	34	-30.3	44.18	54	-9.82	-	-	253	225	H

PK2 - KDB558074 Method: Maximum Peak

MAV1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL HORIZONTAL

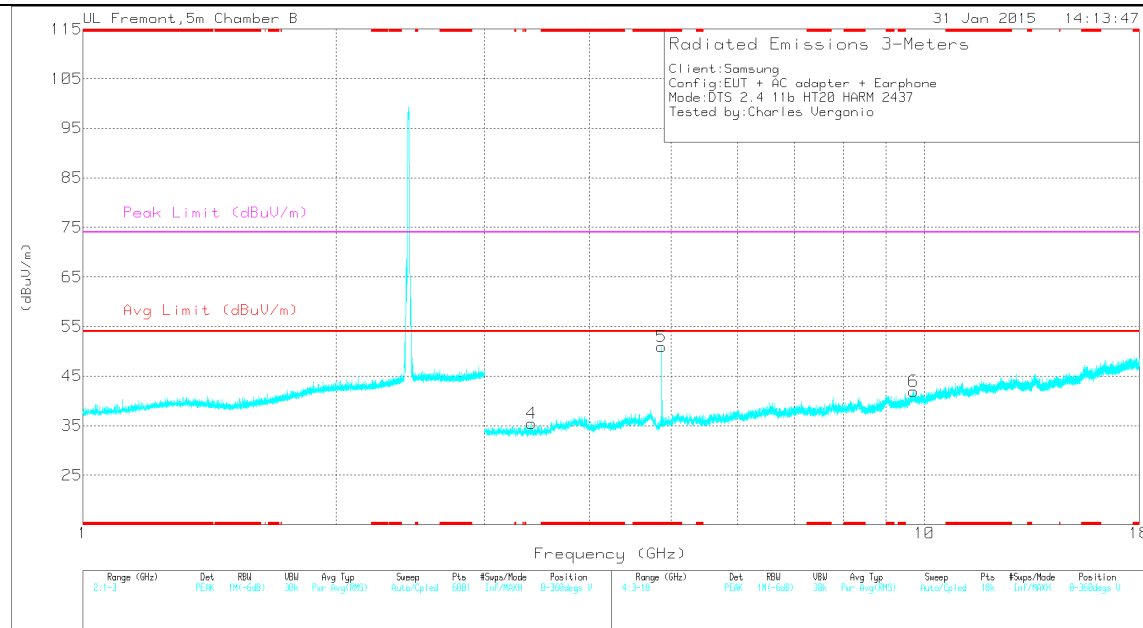


FCC Part15 Subpart C 2400MHz Spurious Emissions with Average Scan.TST 30915 7 Jul 2014

Rev 9.5 22 Jul 2014

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



FCC Part15 Subpart C 2400MHz Spurious Emissions with Average Scan.TST 30915 7 Jul 2014

Rev 9.5 22 Jul 2014

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

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.874	47.08	PK	34.2	-30.4	50.88	-	-	74	-23.12	0-360	200	V
1	1.726	36.05	PK	29.3	-23.4	41.95	-	-	-	-	0-360	101	H
2	1.968	35.48	PK	31.3	-23.2	43.58	-	-	-	-	0-360	200	H
3	2.087	35.62	PK	31.3	-23.1	43.82	-	-	-	-	0-360	200	H
4	3.41	33.49	PK	32.8	-30.9	35.39	-	-	-	-	0-360	200	V
6	9.7	28.67	PK	36.9	-23.7	41.87	-	-	-	-	0-360	200	V

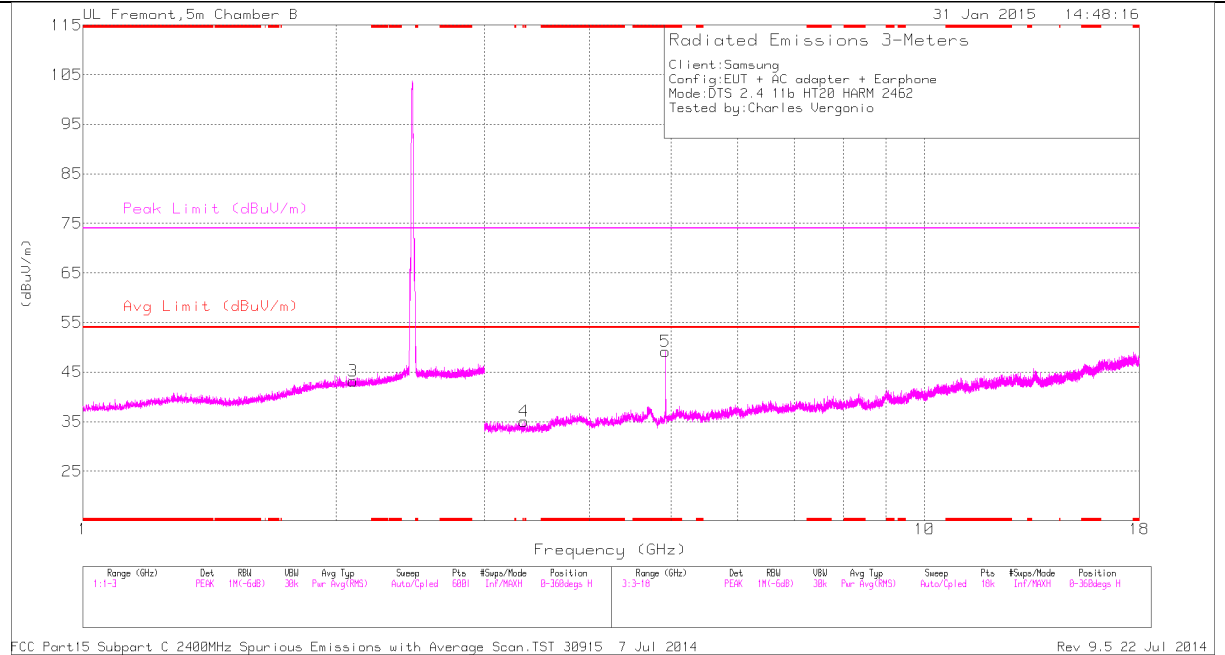
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

Radiated Emissions

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.874	43.02	PK2	34.2	-30.4	46.82	-	-	74	-27.18	31	359	V
* 4.874	36.59	MAV1	34.2	-30.4	40.39	54	-13.61	-	-	31	359	V

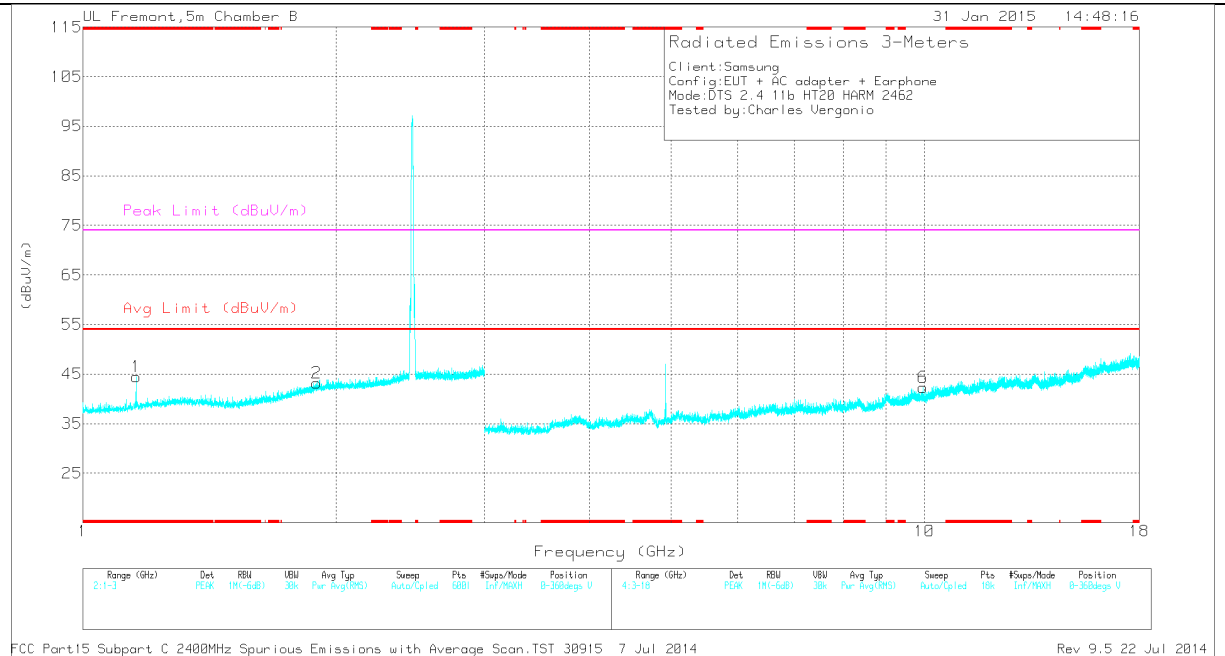
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAV1 - KDB558074 Option 1 Maximum RMS Average

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

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.156	41.01	PK	27.8	-24.3	44.51	-	-	74	-29.49	0-360	100	V
5	* 4.924	45.41	PK	34.2	-30.5	49.11	-	-	74	-24.89	0-360	199	H
2	1.897	35.46	PK	31	-23.3	43.16	-	-	-	-	0-360	199	V
3	2.093	35.04	PK	31.3	-23.1	43.24	-	-	-	-	0-360	101	H
4	3.343	33.37	PK	32.8	-31.1	35.07	-	-	-	-	0-360	101	H
6	9.959	28.9	PK	37	-23.6	42.3	-	-	-	-	0-360	199	V

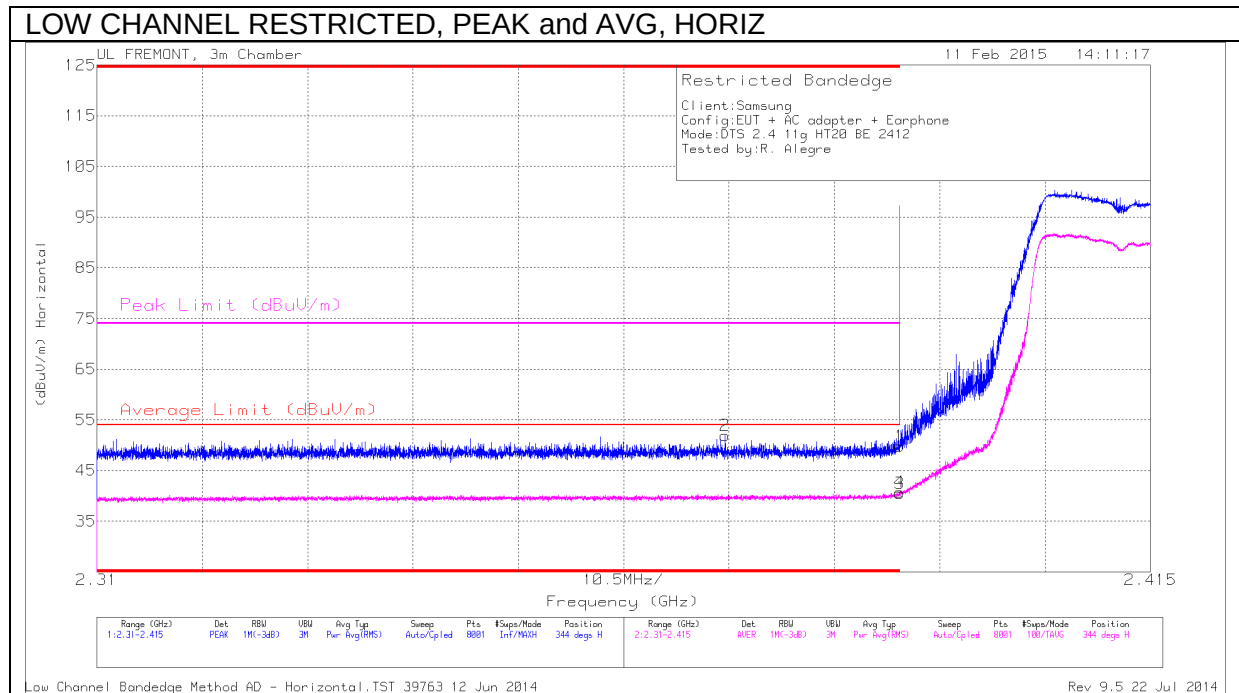
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

Radiated Emissions

Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.156	43.25	PK2	27.8	-24.3	46.75	-	-	74	-27.25	80	398	V
* 1.157	31.68	MAv1	27.8	-24.3	35.18	54	-18.82	-	-	80	398	V
* 4.924	49.13	PK2	34.2	-30.5	52.83	-	-	74	-21.17	293	204	H
* 4.924	45.69	MAv1	34.2	-30.5	49.39	54	-4.61	-	-	293	204	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

10.2.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)



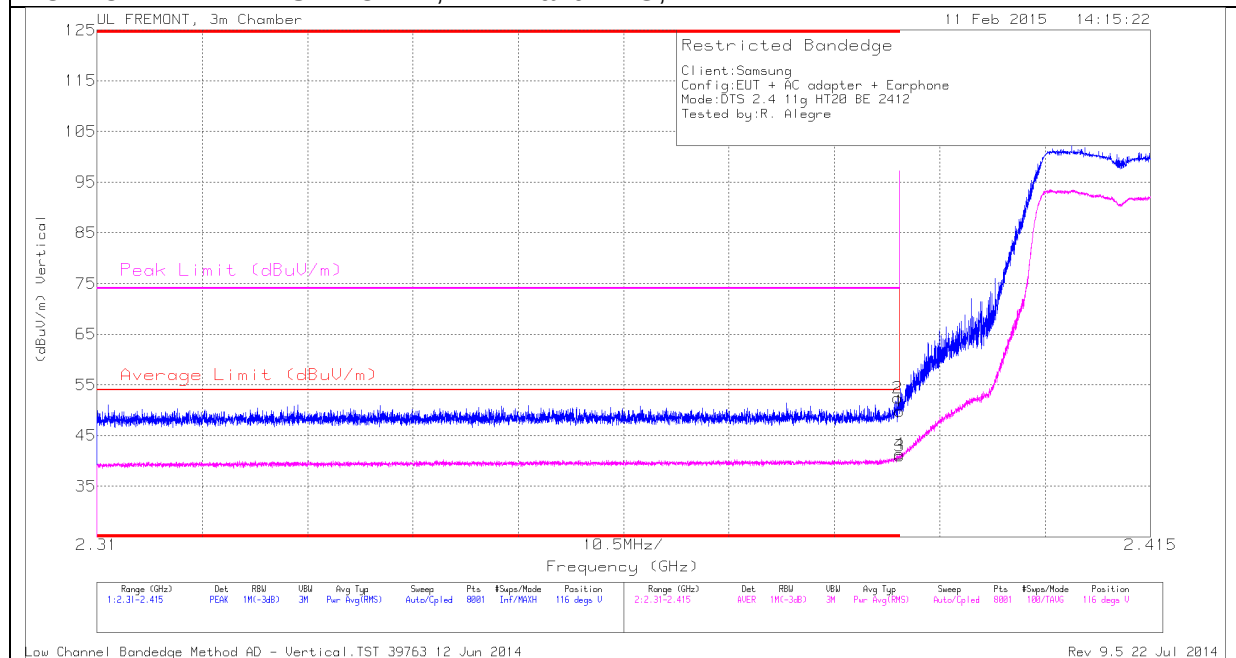
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.87	PK	32	-23.1	0	49.77	-	-	74	-24.23	344	191	H
2	* 2.373	43.11	PK	31.9	-23.1	0	51.91	-	-	74	-22.09	344	191	H
3	* 2.39	31.33	RMS	32	-23.1	.3	40.53	54	-13.47	-	-	344	191	H
4	* 2.39	31.56	RMS	32	-23.1	.3	40.76	54	-13.24	-	-	344	191	H

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

PK - Peak detector

RMS - RMS detection

LOW CHANNEL RESTRICTED, PEAK and AVG, VERT



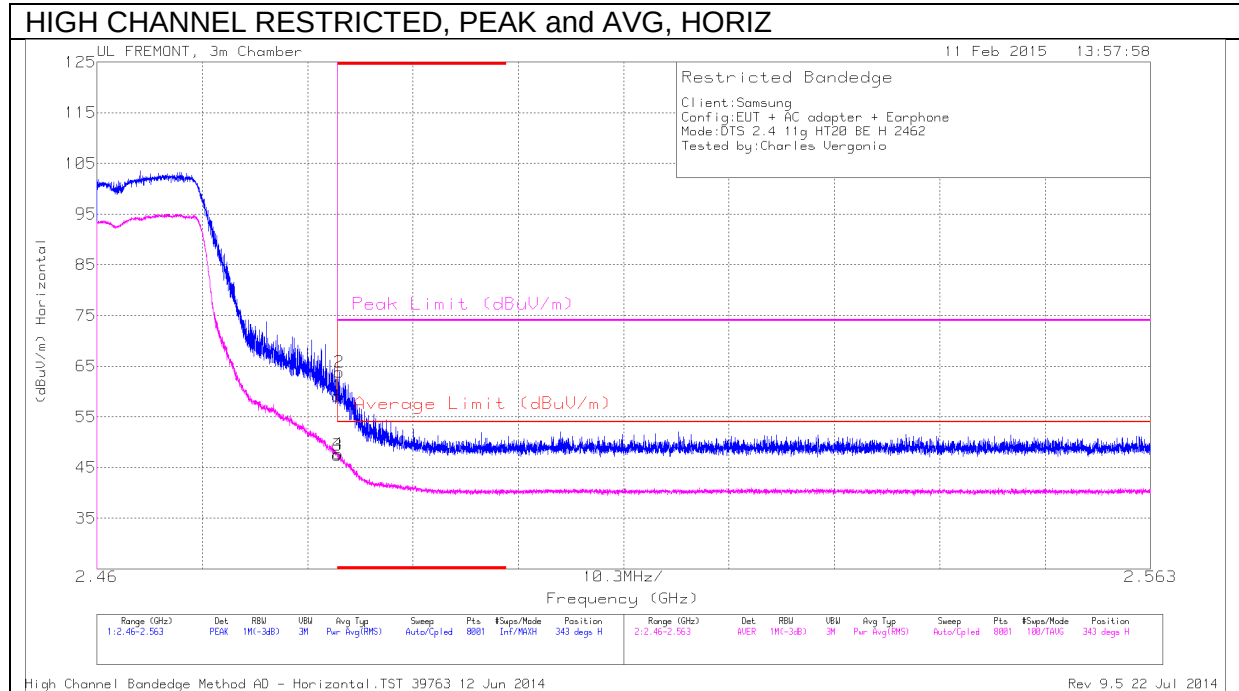
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.88	PK	32	-23.1	0	49.78	-	-	74	-24.22	116	303	V
2	* 2.39	43.46	PK	32	-23.1	0	52.36	-	-	74	-21.64	116	303	V
3	* 2.39	31.74	RMS	32	-23.1	.3	40.94	54	-13.06	-	-	116	303	V
4	* 2.39	32.13	RMS	32	-23.1	.3	41.33	54	-12.67	-	-	116	303	V

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

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

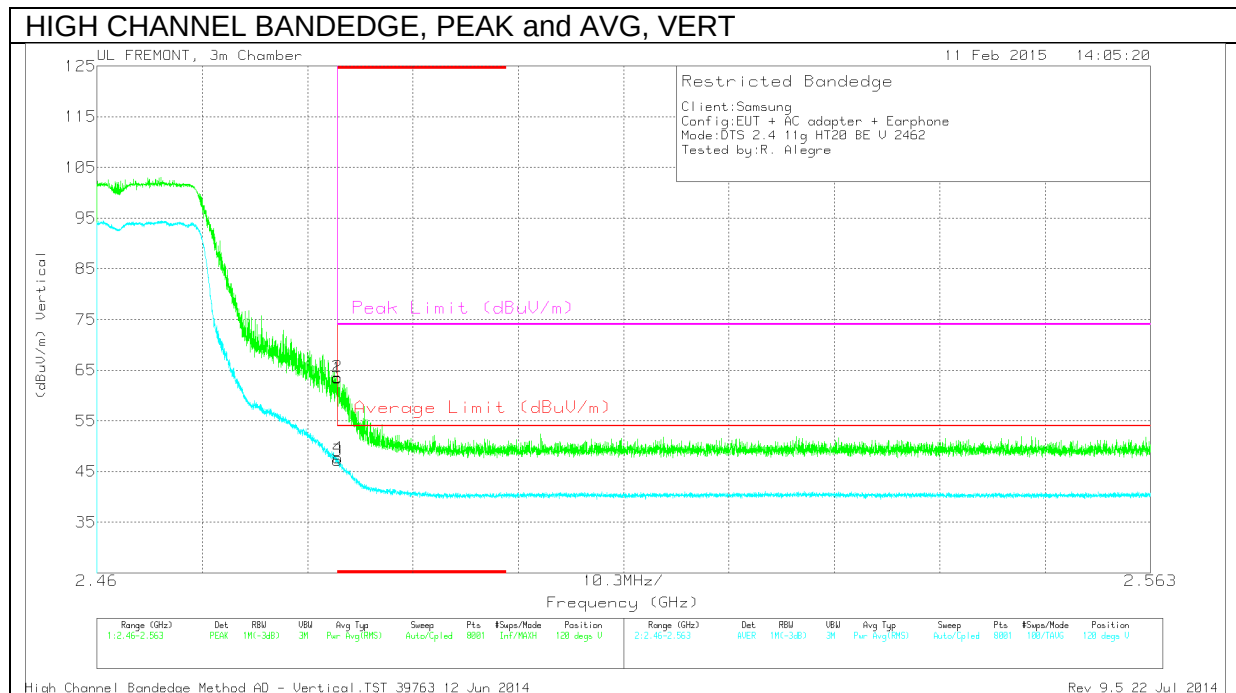


Marker	Frequency (GHz)	Meter Reading (dBUV)	Det	AF T119 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBUV/m)	Average Limit (dBUV/m)	Margin (dB)	Peak Limit (dBUV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.67	PK	32.3	-22.8	0	59.17	-	-	74	-14.83	343	284	H
2	* 2.484	54.33	PK	32.3	-22.8	0	63.83	-	-	74	-10.17	343	284	H
3	* 2.484	37.67	RMS	32.3	-22.8	.3	47.47	54	-6.53	-	-	343	284	H
4	* 2.484	37.94	RMS	32.3	-22.8	.3	47.74	54	-6.26	-	-	343	284	H

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

PK - Peak detector

RMS - RMS detection

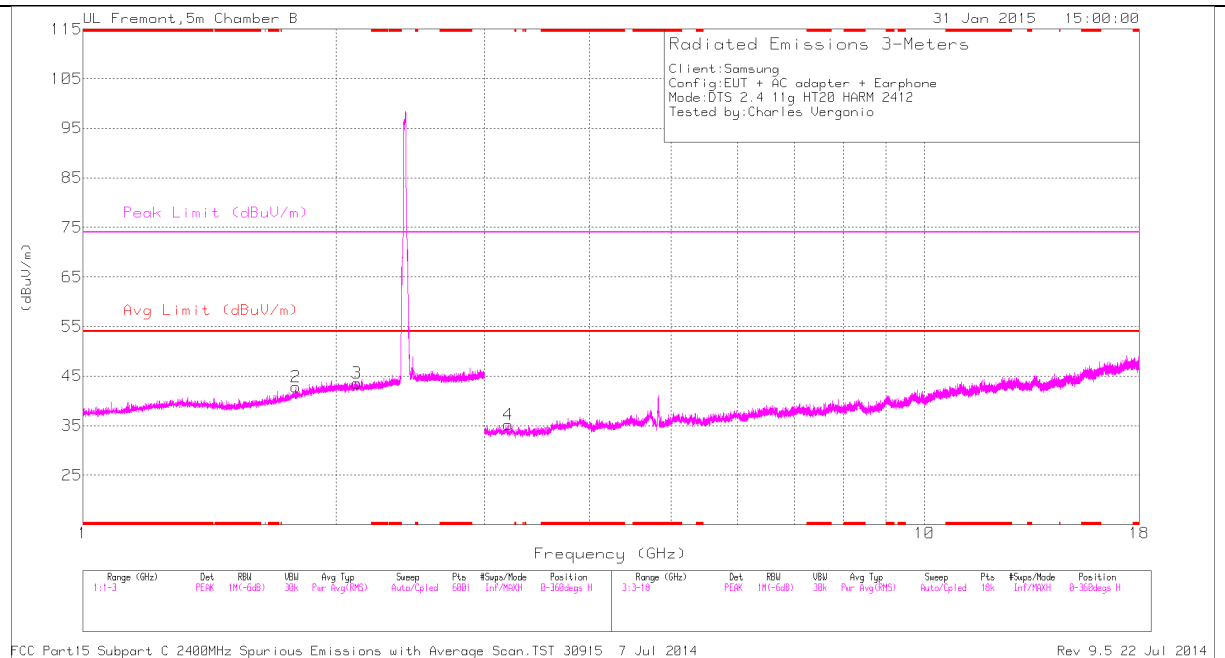


Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	53.9	PK	32.3	-22.8	0	63.4	-	-	74	-10.6	120	357	V
2	* 2.484	54.14	PK	32.3	-22.8	0	63.64	-	-	74	-10.36	120	357	V
3	* 2.484	37.42	RMS	32.3	-22.8	.3	47.22	54	-6.78	-	-	120	357	V
4	* 2.484	37.89	RMS	32.3	-22.8	.3	47.69	54	-6.31	-	-	120	357	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector
RMS - RMS detection

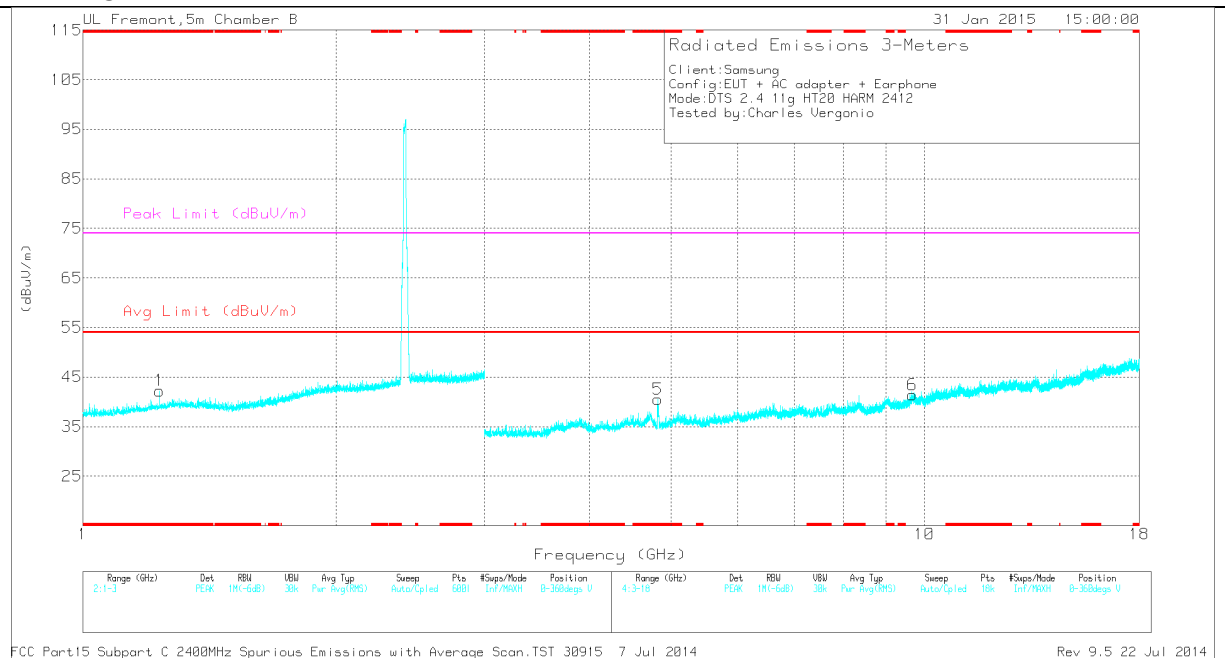
HARMONICS AND SPURIOUS EMISSIONS

LOW 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.

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

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fi tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.233	38.14	PK	28.4	-24.3	0	42.24	-	-	74	-31.76	0-360	200	V
5	* 4.823	35.97	PK	34.2	-29.7	0	40.47	-	-	74	-33.53	0-360	200	V
2	1.792	36.05	PK	30.1	-23.3	0	42.85	-	-	-	-	0-360	200	H
3	2.117	35.27	PK	31.3	-23	0	43.57	-	-	-	-	0-360	200	H
4	3.202	33.31	PK	32.8	-30.9	0	35.21	-	-	-	-	0-360	101	H
6	9.676	28.18	PK	36.8	-23.6	0	41.38	-	-	-	-	0-360	101	V

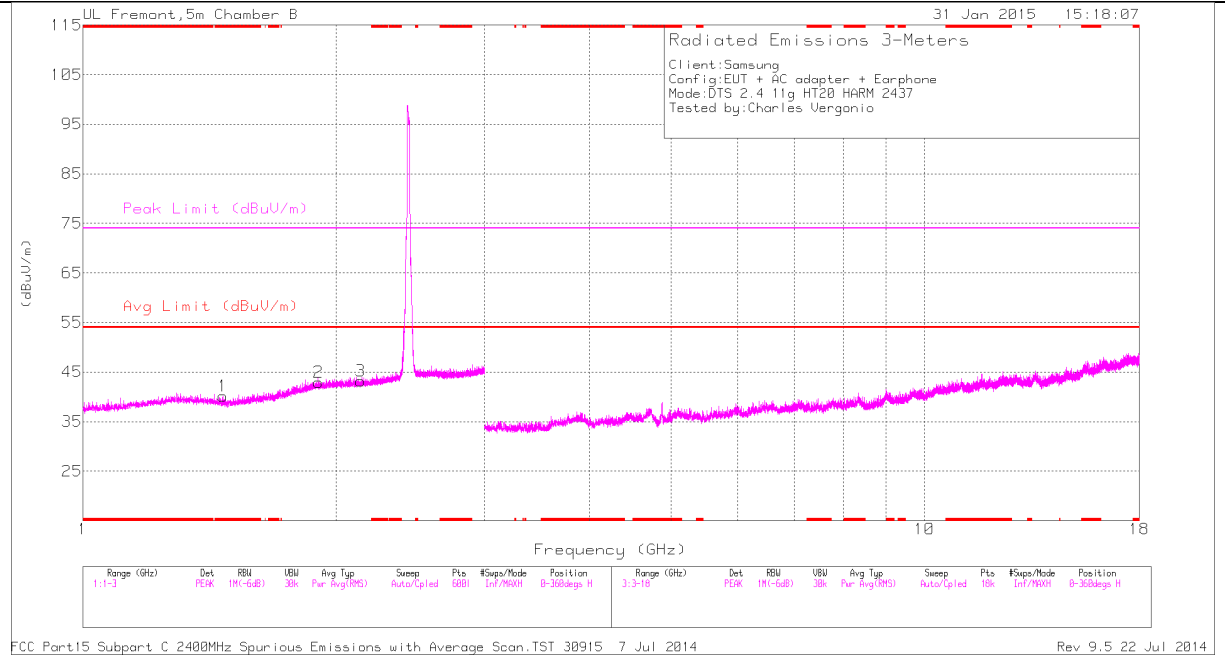
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

Radiated Emissions

Frequen cy (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.233	43.3	PK2	28.4	-24.3	0	47.4	-	-	74	-26.6	360	199	V
* 1.232	31.97	MAV1	28.4	-24.2	0.3	36.47	54	-17.53	-	-	360	199	V
* 4.822	45.08	PK2	34.2	-29.7	0	49.58	-	-	74	-24.42	26	249	V
* 4.823	33.17	MAV1	34.2	-29.7	0.3	37.97	54	-16.03	-	-	26	249	V

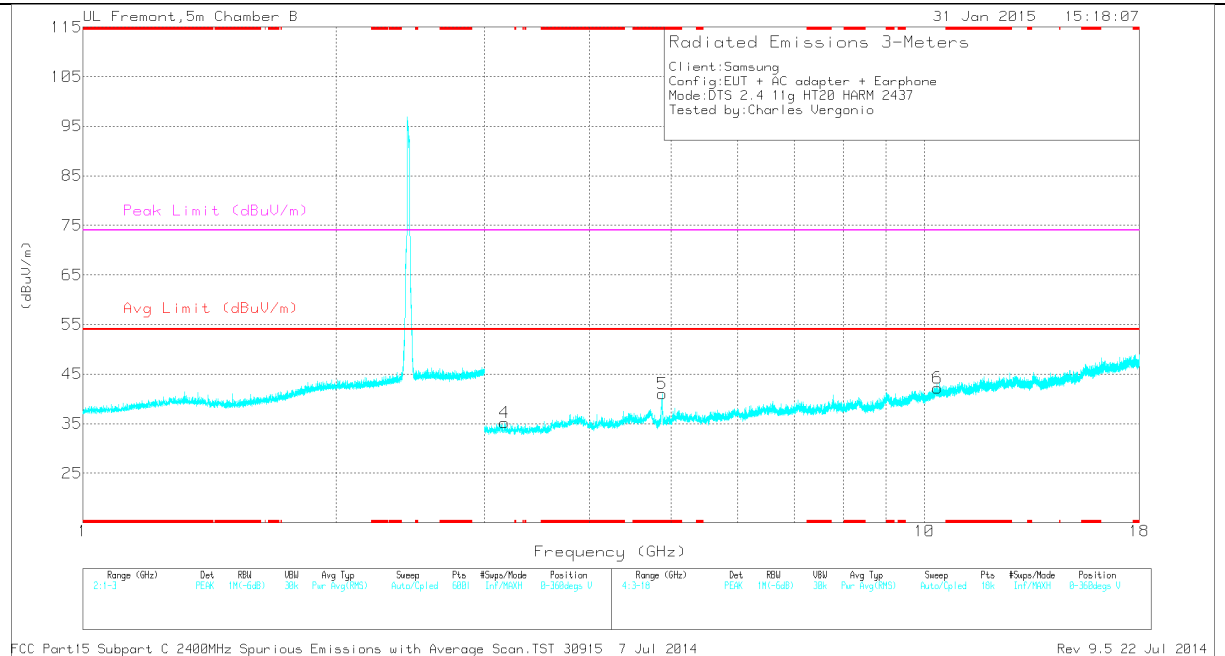
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAV1 - KDB558074 Option 1 Maximum RMS Average

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



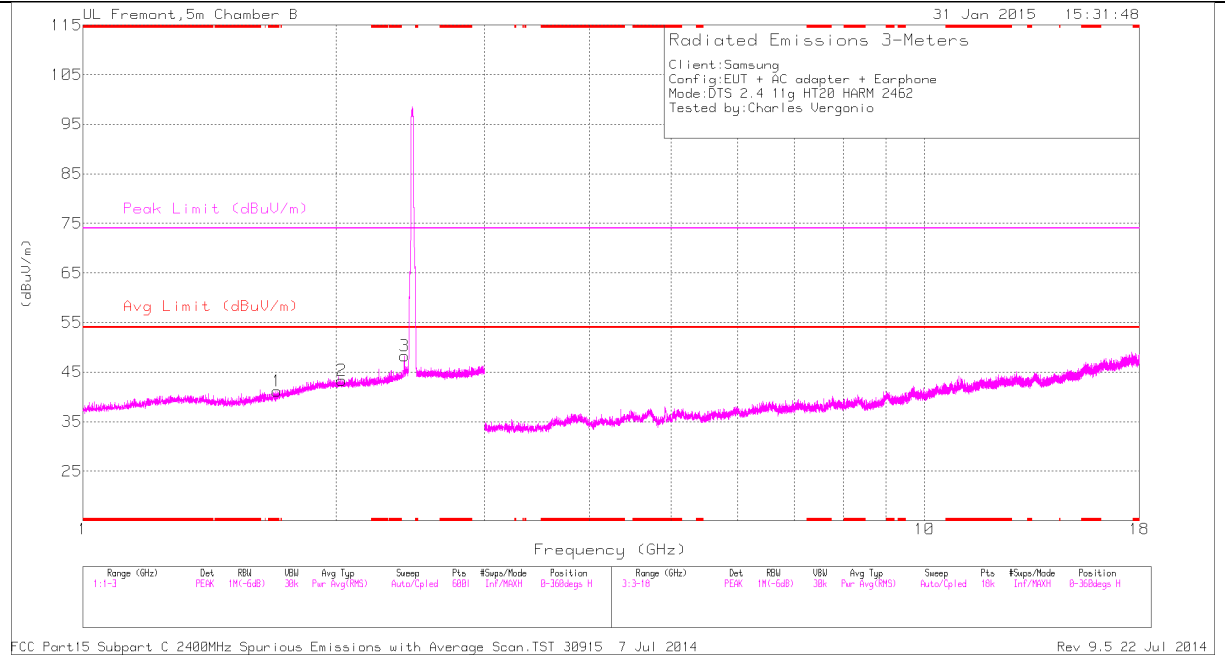
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fi tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.467	36.07	PK	28.1	-24	0	40.17	-	-	74	-33.83	0-360	101	H
5	* 4.876	37.21	PK	34.2	-30.4	0	41.01	-	-	74	-32.99	0-360	200	V
2	1.907	34.98	PK	31.1	-23.2	0	42.88	-	-	-	-	0-360	101	H
3	2.137	34.89	PK	31.3	-23	0	43.19	-	-	-	-	0-360	101	H
4	3.169	33.25	PK	32.8	-30.8	0	35.25	-	-	-	-	0-360	101	V
6	10.354	27.62	PK	37.2	-22.7	0	42.12	-	-	-	-	0-360	101	V

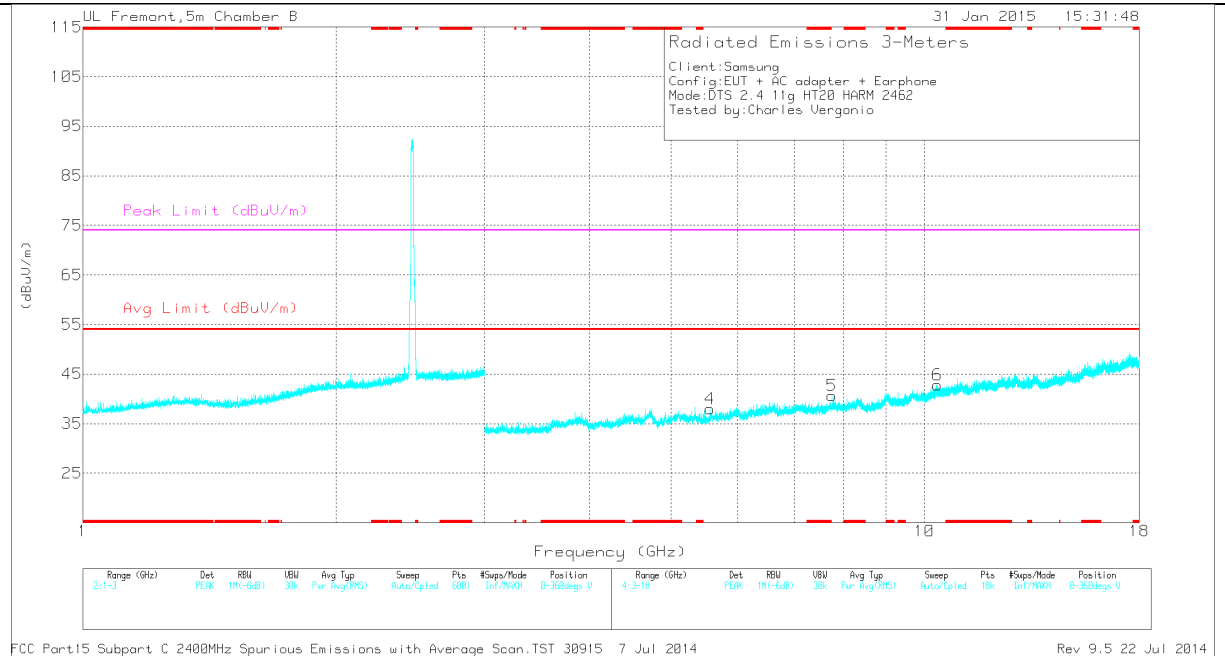
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

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



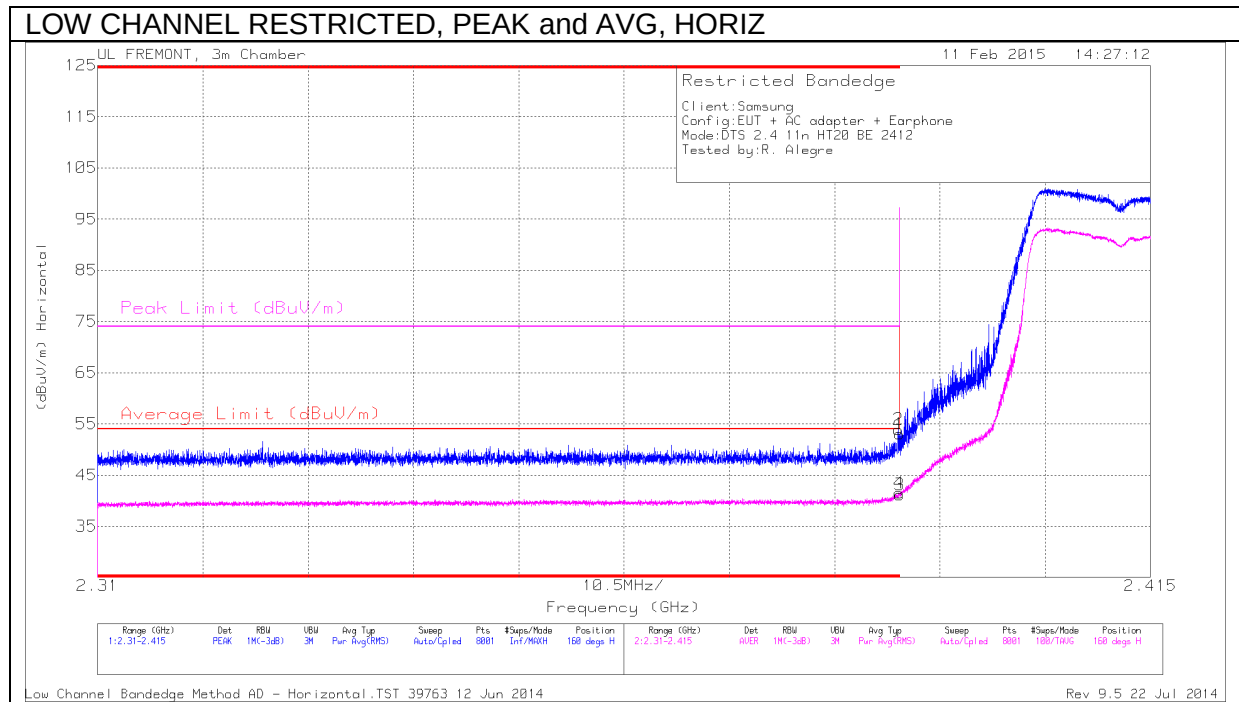
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.702	35.44	PK	29.1	-23.4	0	41.14	-	-	74	-32.86	0-360	199	H
6	10.354	28.28	PK	37.2	-22.7	0	42.78	-	-	-	-	0-360	101	V
2	2.029	35.23	PK	31.3	-23.2	0	43.33	-	-	-	-	0-360	100	H
3	2.409	38.66	PK	32.2	-22.6	0	48.26	-	-	-	-	0-360	100	H
4	5.565	33.24	PK	34.5	-29.7	0	38.04	-	-	-	-	0-360	199	V
5	7.765	31.09	PK	35.7	-26.1	0	40.69	-	-	-	-	0-360	101	V

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

10.2.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND RESTRICTED BANDEDGE (LOW CHANNEL)

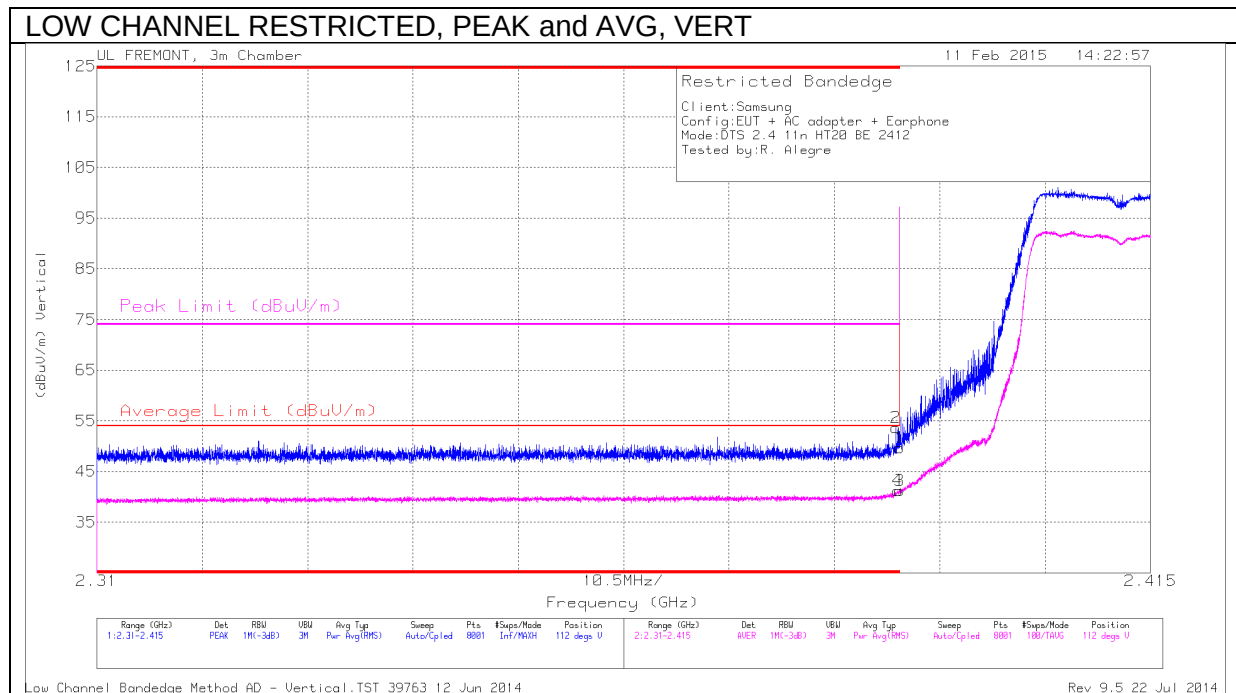


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dBm)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	44.13	PK	32	-23.1	0	53.03	-	-	74	-20.97	160	307	H
2	* 2.39	45.02	PK	32	-23.1	0	53.92	-	-	74	-20.08	160	307	H
3	* 2.39	31.94	RMS	32	-23.1	.32	41.16	54	-12.84	-	-	160	307	H
4	* 2.39	32.28	RMS	32	-23.1	.32	41.5	54	-12.5	-	-	160	307	H

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

PK - Peak detector

RMS - RMS detection



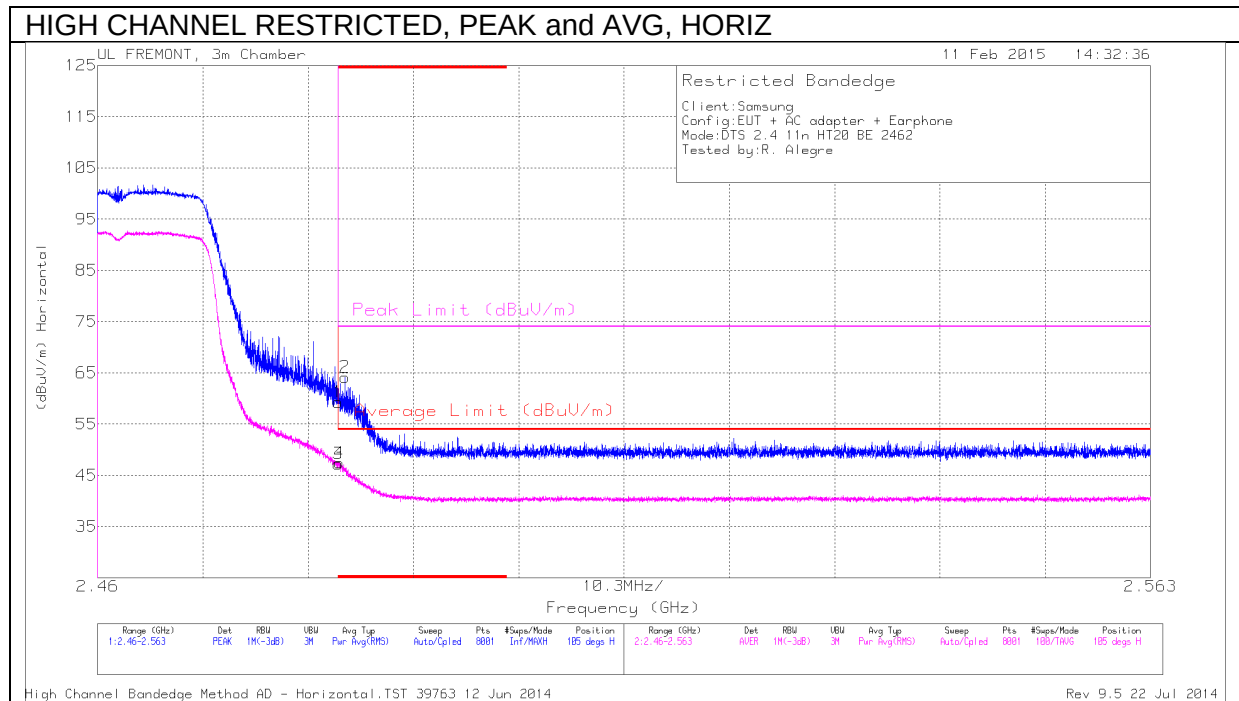
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.75	PK	32	-23.1	0	49.65	-	-	74	-24.35	112	307	V
2	* 2.39	44.73	PK	32	-23.1	0	53.63	-	-	74	-20.37	112	307	V
3	* 2.39	31.99	RMS	32	-23.1	.32	41.21	54	-12.79	-	-	112	307	V
4	* 2.39	32.02	RMS	32	-23.1	.32	41.24	54	-12.76	-	-	112	307	V

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

PK - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)



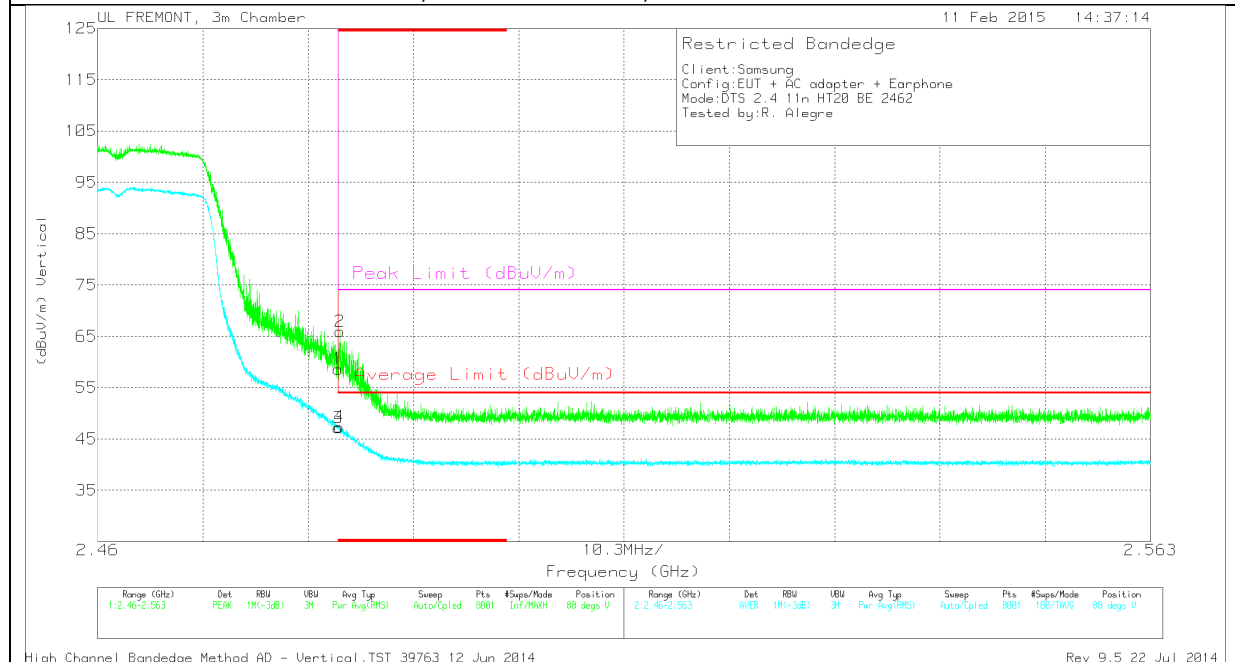
Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.78	PK	32.3	-22.8	0	59.28	-	-	74	-14.72	105	301	H
2	* 2.484	54.66	PK	32.3	-22.8	0	64.16	-	-	74	-9.84	105	301	H
3	* 2.484	37.44	RMS	32.3	-22.8	.32	47.26	54	-6.74	-	-	105	301	H
4	* 2.484	37.62	RMS	32.3	-22.8	.32	47.44	54	-6.56	-	-	105	301	H

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

PK - Peak detector

RMS - RMS detection

HIGH CHANNEL BANDEDGE, PEAK and AVG, VERT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.16	PK	32.3	-22.8	0	58.66	-	-	74	-15.34	88	291	V
2	* 2.484	56.45	PK	32.3	-22.8	0	65.95	-	-	74	-8.05	88	291	V
3	* 2.484	37.36	RMS	32.3	-22.8	.32	47.18	54	-6.82	-	-	88	291	V
4	* 2.484	37.53	RMS	32.3	-22.8	.32	47.35	54	-6.65	-	-	88	291	V

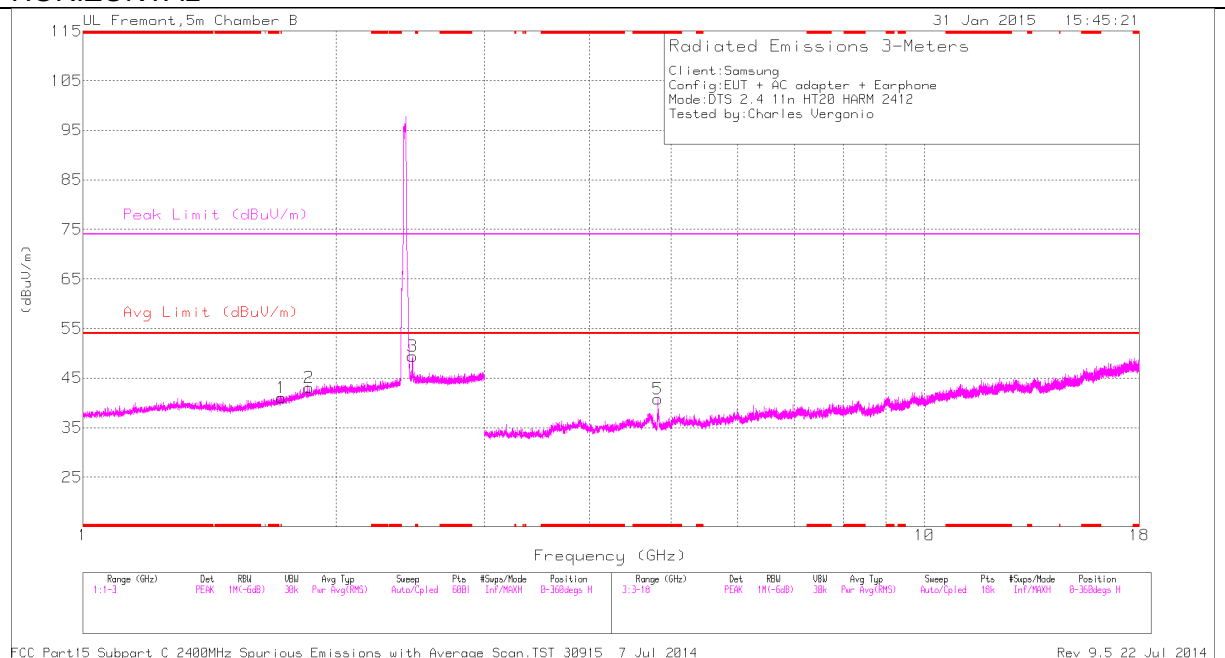
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

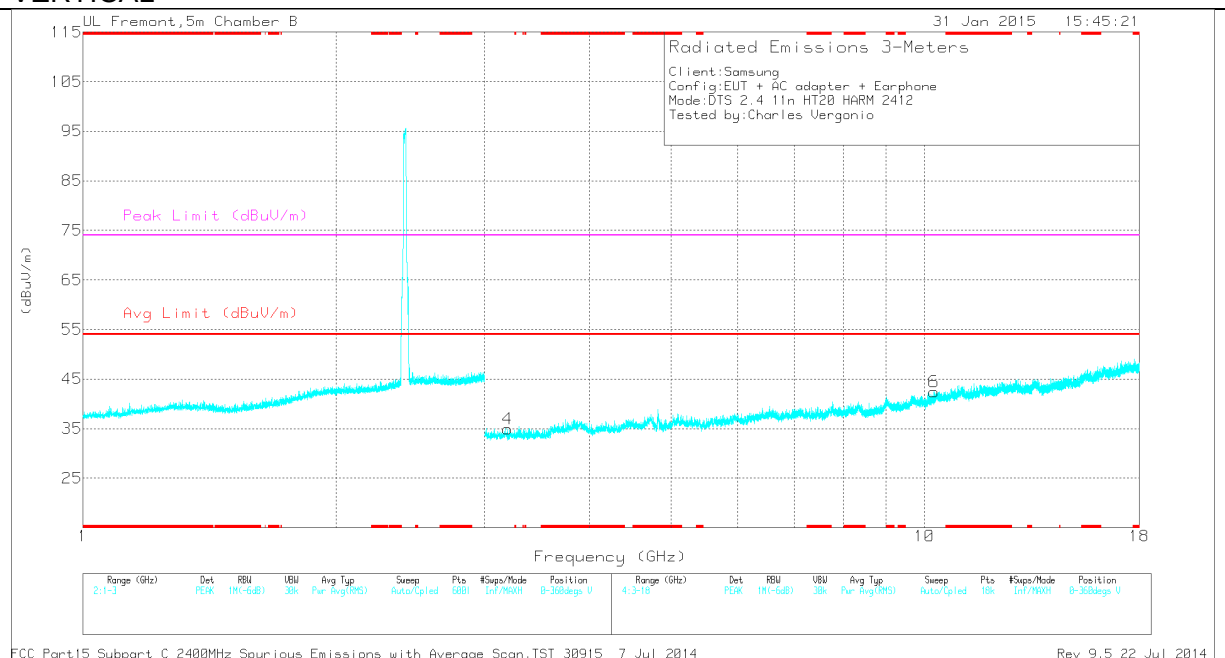
HARMONICS AND SPURIOUS EMISSIONS

LOW 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.

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

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fi tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.722	35.17	PK	29.3	-23.4	0	41.07	-	-	74	-32.93	0-360	101	H
5	* 4.824	36.25	PK	34.2	-29.7	0	40.75	-	-	74	-33.25	0-360	101	H
2	1.858	35.63	PK	30.7	-23.3	0	43.03	-	-	-	-	0-360	199	H
6	10.265	28.78	PK	37.2	-23.5	0	42.48	-	-	-	-	0-360	101	V
3	2.464	39.59	PK	32.3	-22.5	0	49.39	-	-	-	-	0-360	101	H
4	3.198	32.97	PK	32.8	-30.8	0	34.97	-	-	-	-	0-360	200	V

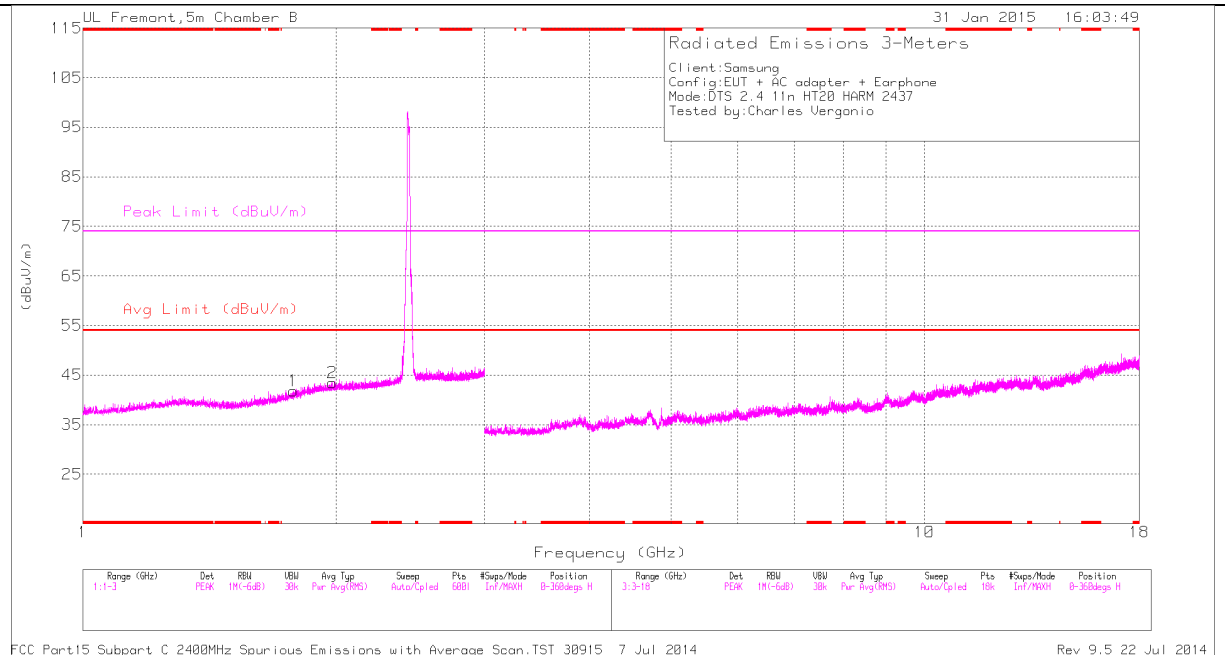
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

Radiated Emissions

Frequen cy (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl /Fitr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.823	44.21	PK2	34.2	-29.7	0	48.71	-	-	74	-25.29	145	102	H
* 4.824	32.34	MAV1	34.2	-29.7	0.32	37.16	54	-16.84	-	-	145	102	H

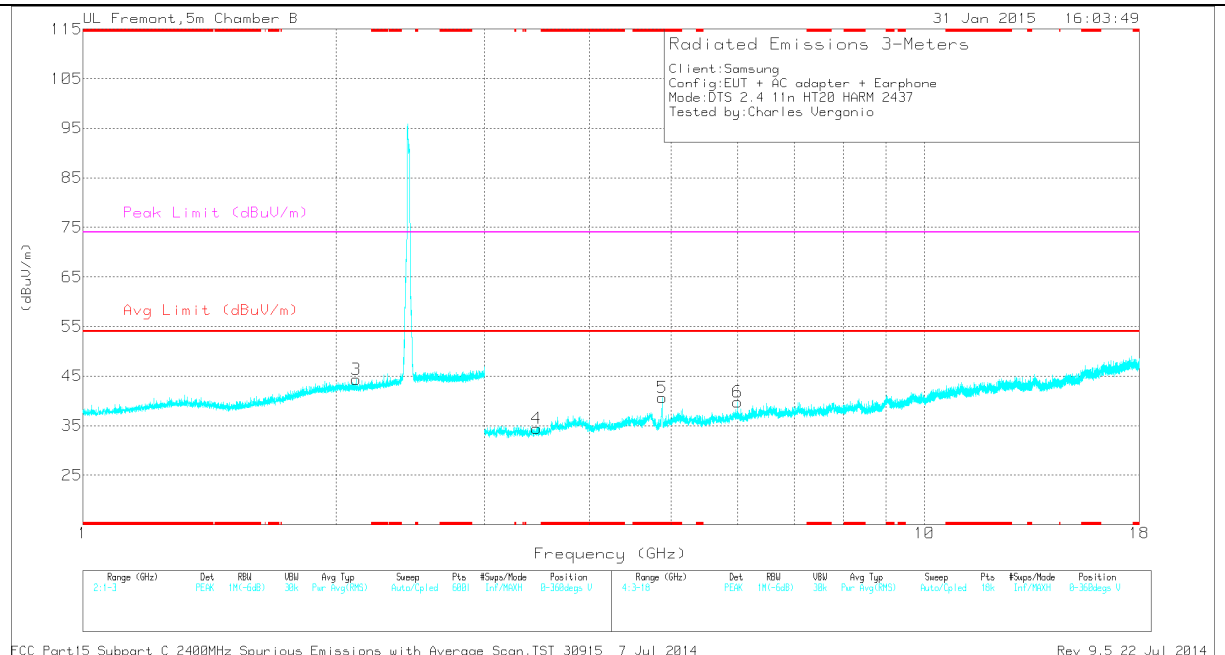
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAV1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL 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

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fi tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	* 4.877	36.87	PK	34.2	-30.4	0	40.67	-	-	74	-33.33	0-360	199	V
1	1.78	35.17	PK	29.9	-23.3	0	41.77	-	-	-	-	0-360	102	H
2	1.98	35.35	PK	31.3	-23.2	0	43.45	-	-	-	-	0-360	200	H
3	2.113	36.08	PK	31.3	-23	0	44.38	-	-	-	-	0-360	200	V
4	3.461	32.47	PK	32.8	-30.8	0	34.47	-	-	-	-	0-360	199	V
6	5.997	33.23	PK	35.2	-28.7	0	39.73	-	-	-	-	0-360	199	V

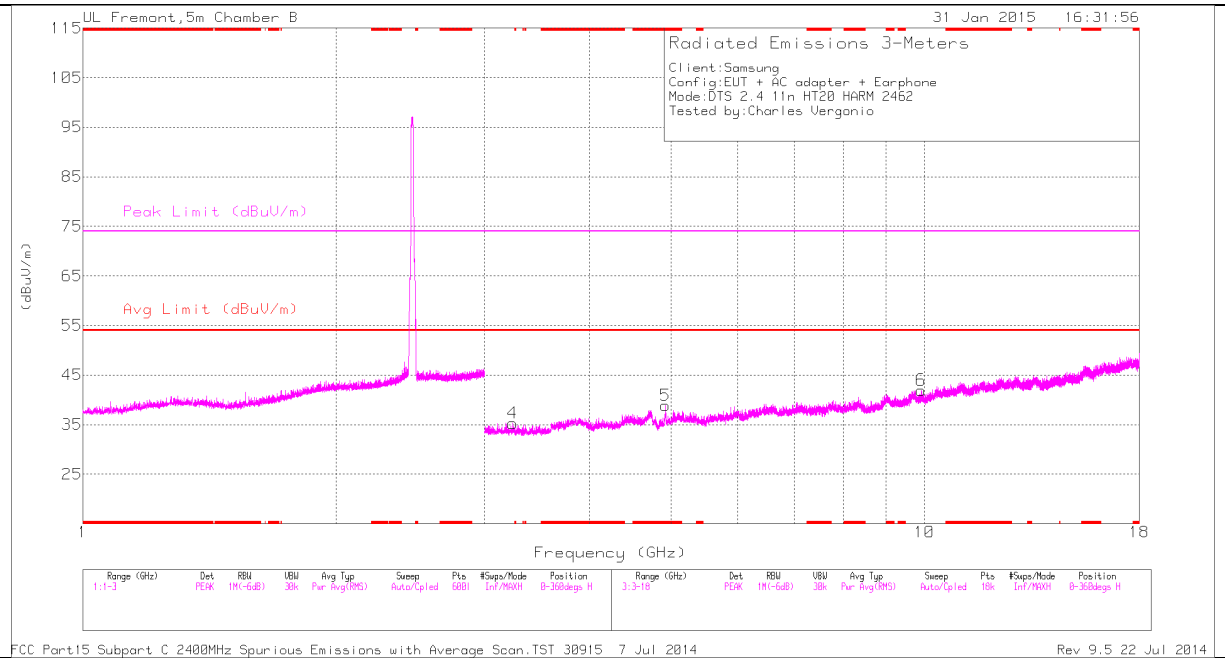
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK - Peak detector

Radiated Emissions

Frequen cy (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.876	39.46	PK2	34.2	-30.4	0	43.26	-	-	74	-30.74	1	198	V
* 4.875	28.88	MAV1	34.2	-30.4	0.32	33.0	54	-21.0	-	-	1	198	V

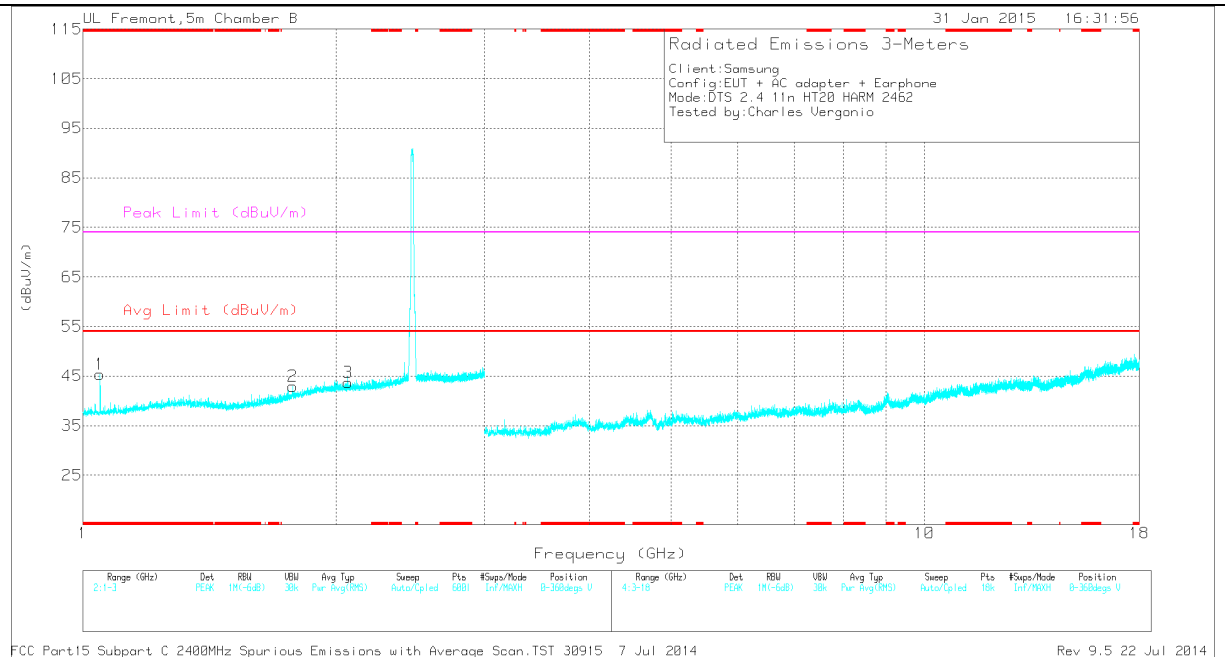
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAV1 - KDB558074 Option 1 Maximum RMS Average

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

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/FI tr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.048	42.7	PK	27.2	-24.5	0	45.4	-	-	74	-28.6	0-360	101	V
5	* 4.92	35.14	PK	34.2	-30.5	0	38.84	-	-	74	-35.16	0-360	199	H
2	1.775	36.43	PK	29.9	-23.4	0	42.93	-	-	-	-	0-360	199	V
3	2.067	35.65	PK	31.3	-23.2	0	43.75	-	-	-	-	0-360	199	V
4	3.242	33.36	PK	32.8	-30.9	0	35.26	-	-	-	-	0-360	101	H
6	9.915	28.58	PK	37	-23.6	0	41.98	-	-	-	-	0-360	199	H

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

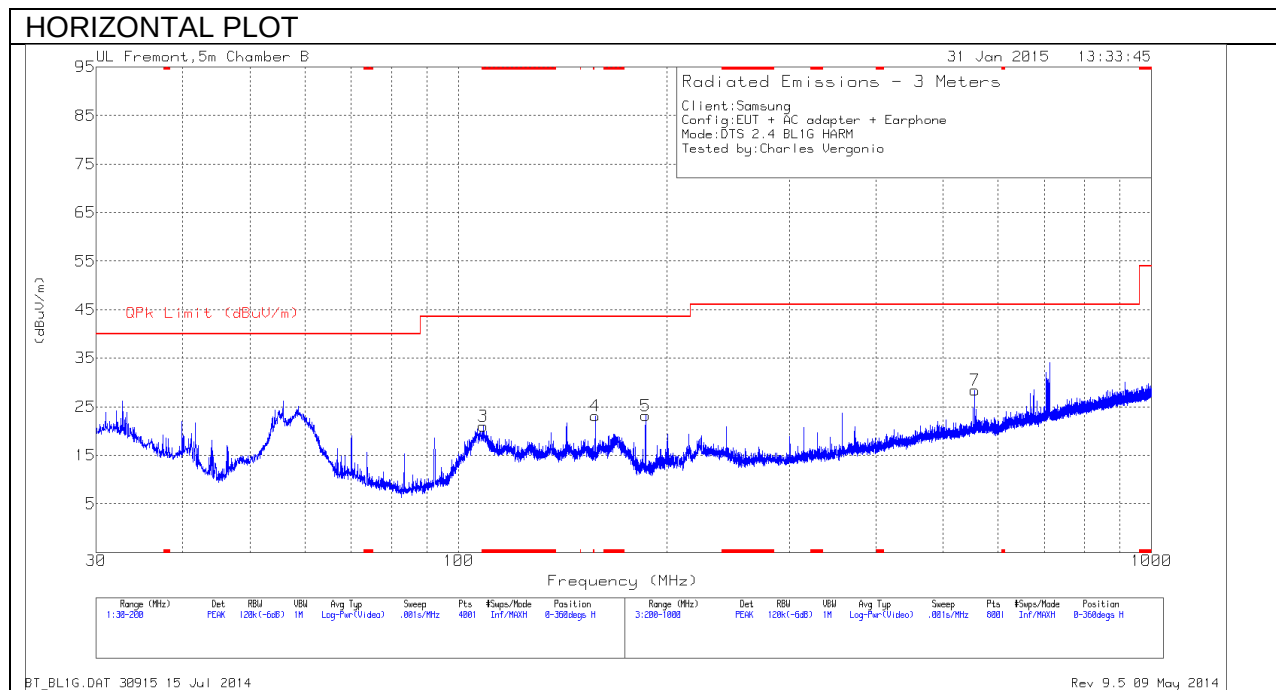
Radiated Emissions

Frequen cy (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl /Filtr/Pad (dB)	DC Corr (dB)	Correcte d Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.049	43.21	PK2	27.2	-24.5	0	45.91	-	-	74	-28.09	355	123	V
* 1.047	31.69	MAV1	27.2	-24.5	0.32	34.71	54	-19.29	-	-	355	123	V

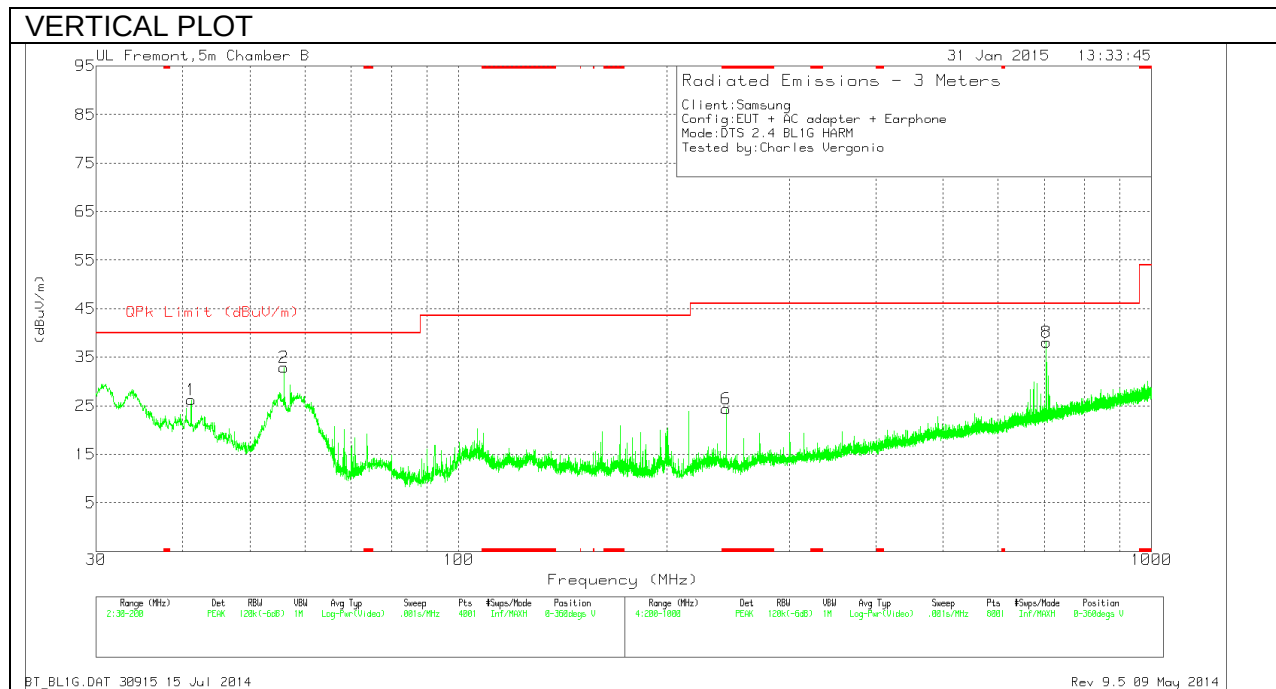
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band
PK2 - KDB558074 Method: Maximum Peak
MAV1 - KDB558074 Option 1 Maximum RMS Average

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

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Correcte d Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 108.54	36.71	PK	12.3	-28	21.01	43.52	-22.51	0-360	300	H
6	* 243.4	39.27	PK	11.6	-26.5	24.37	46.02	-21.65	0-360	200	V
1	41.135	41.81	PK	13.2	-28.8	26.21	40	-13.79	0-360	101	V
2	56.01	54.22	PK	7.3	-28.6	32.92	40	-7.08	0-360	101	V
4	157.5	38.19	PK	12.3	-27.4	23.09	43.52	-20.43	0-360	100	H
5	186.145	38.95	PK	11.3	-27.1	23.15	43.52	-20.37	0-360	400	H
7	556	35.3	PK	18.6	-25.5	28.4	46.02	-17.62	0-360	200	H
8	705.2	42.4	PK	20.2	-24.5	38.1	46.02	-7.92	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)

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.

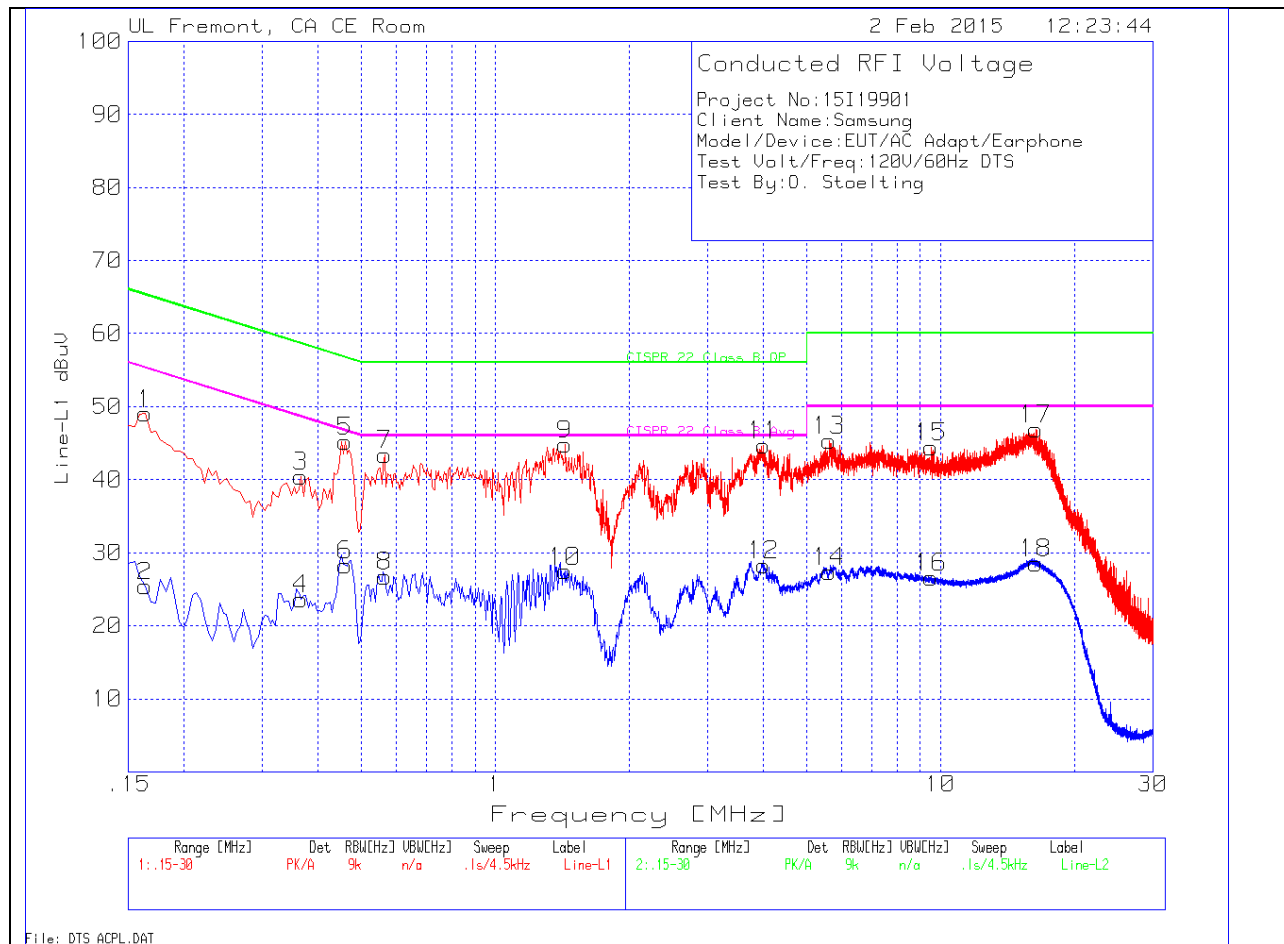
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 RESULTS

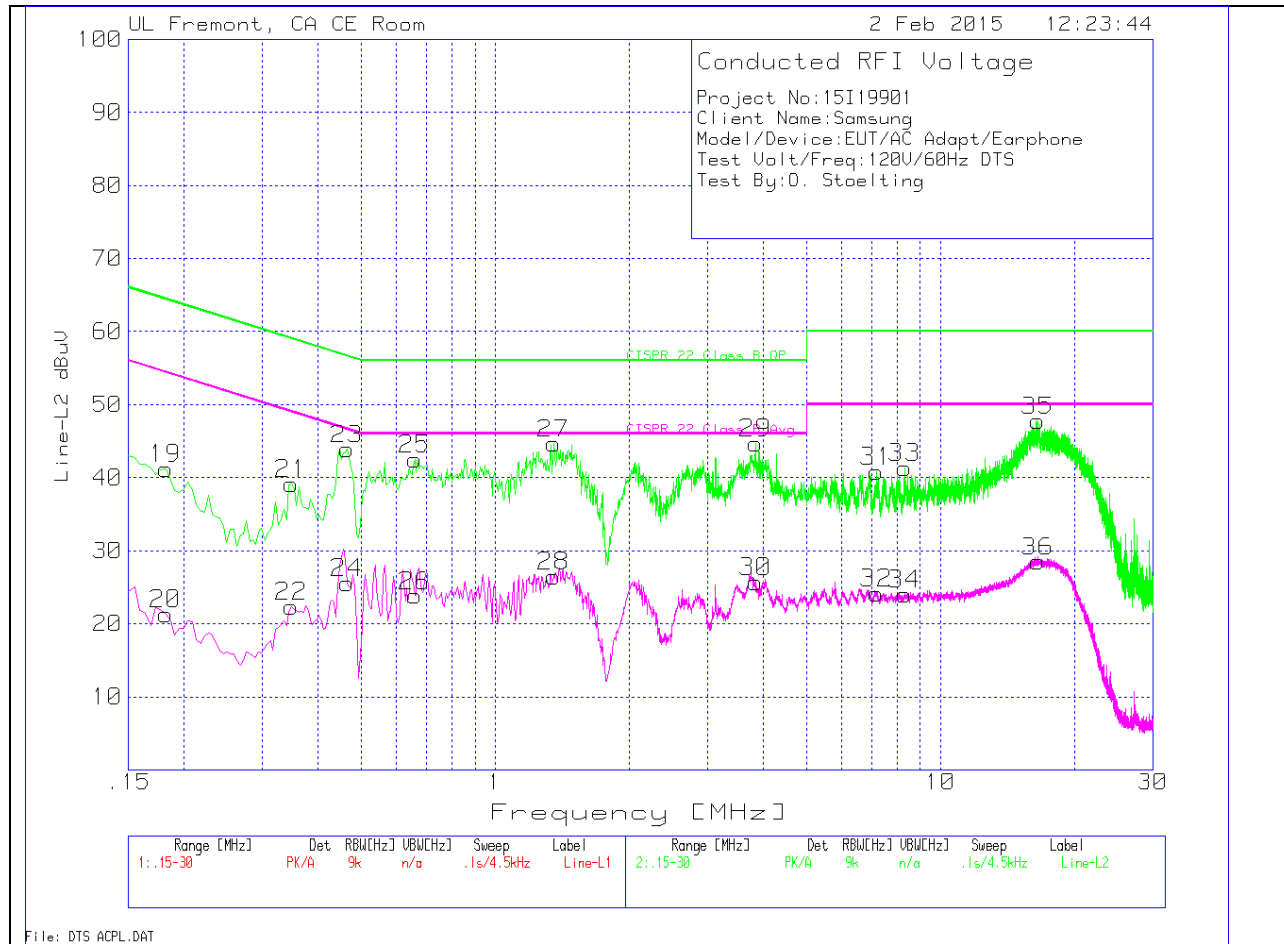


Line-L1 .15 - 30MHz

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	.1635	47.82	PK	1.2	0	49.02	65.3	-16.28	-	-
2	.1635	24.19	Av	1.2	0	25.39	-	-	55.3	-29.91
3	.366	39.96	PK	.5	0	40.46	58.6	-18.14	-	-
4	.366	23.12	Av	.5	0	23.62	-	-	48.6	-24.98
5	.4605	44.83	PK	.4	0	45.23	56.7	-11.47	-	-
6	.4605	27.84	Av	.4	0	28.24	-	-	46.7	-18.46
7	.564	43.06	PK	.3	0	43.36	56	-12.64	-	-
8	.564	26.42	Av	.3	0	26.72	-	-	46	-19.28
9	1.437	44.47	PK	.2	.1	44.77	56	-11.23	-	-
10	1.437	27.15	Av	.2	.1	27.45	-	-	46	-18.55
11	4.0065	44.43	PK	.2	.1	44.73	56	-11.27	-	-
12	4.0065	28.04	Av	.2	.1	28.34	-	-	46	-17.66
13	5.631	45.01	PK	.2	.1	45.31	60	-14.69	-	-
14	5.631	27.05	Av	.2	.1	27.35	-	-	50	-22.65
15	9.5145	44.04	PK	.2	.2	44.44	60	-15.56	-	-
16	9.5145	26.19	Av	.2	.2	26.59	-	-	50	-23.41
17	16.359	46.4	PK	.3	.2	46.9	60	-13.1	-	-
18	16.359	28.05	Av	.3	.2	28.55	-	-	50	-21.45

LINE 2 RESULTS



Line-L2 .15 - 30MHz

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)
19	.1815	39.97	PK	1.2	0	41.17	64.4	-23.23	-	-
20	.1815	20.12	Av	1.2	0	21.32	-	-	54.4	-33.08
21	.348	38.64	PK	.5	0	39.14	59	-19.86	-	-
22	.348	21.82	Av	.5	0	22.32	-	-	49	-26.68
23	.465	43.46	PK	.4	0	43.86	56.6	-12.74	-	-
24	.465	25.2	Av	.4	0	25.6	-	-	46.6	-21
25	.6585	42.25	PK	.3	0	42.55	56	-13.45	-	-
26	.6585	23.53	Av	.3	0	23.83	-	-	46	-22.17
27	1.3515	44.34	PK	.2	.1	44.64	56	-11.36	-	-
28	1.3515	26.18	Av	.2	.1	26.48	-	-	46	-19.52
29	3.84	44.39	PK	.2	.1	44.69	56	-11.31	-	-
30	3.84	25.38	Av	.2	.1	25.68	-	-	46	-20.32
31	7.1925	40.5	PK	.2	.1	40.8	60	-19.2	-	-
32	7.1925	23.85	Av	.2	.1	24.15	-	-	50	-25.85
33	8.322	41.02	PK	.2	.1	41.32	60	-18.68	-	-
34	8.322	23.74	Av	.2	.1	24.04	-	-	50	-25.96
35	16.5705	47.24	PK	.3	.2	47.74	60	-12.26	-	-
36	16.5705	27.99	Av	.3	.2	28.49	-	-	50	-21.51