



FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

**GSM Phone + Bluetooth & WLAN 2.4GHz b/g/n
MODEL NUMBER: SM-G130E**

FCC ID: A3LSMG130E

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Prepared for
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Revision History

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION: GSM Phone + Bluetooth & WLAN 2.4GHz b/g/
MODEL: SM-G130E
SERIAL NUMBER: RV1F50PX3TT, RV1F50PX3XJ, RV1F50PX3WZ (Radiated), RV1F52W0HMX (Conducted)
DATE TESTED: May 21 - 30, 2014

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:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
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 Phone + Bluetooth & WLAN 2.4GHz b/g/n.

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	19.46	88.31
2412 - 2462	802.11g	21.33	135.83
2412 - 2462	802.11n HT20	20.08	101.86

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -1.26 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

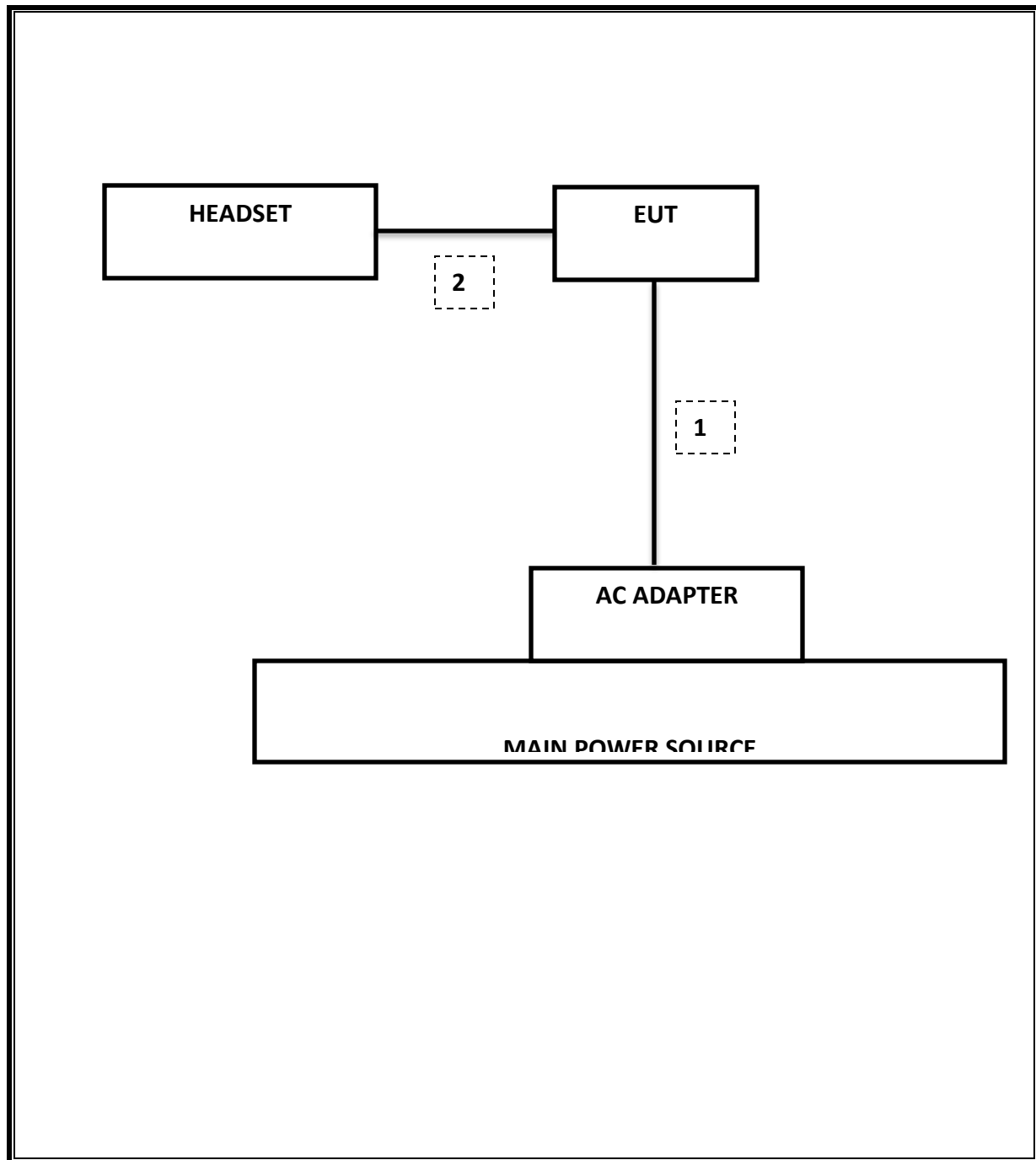
Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	Samsung	SM-G130E	N/A	N/A
Earphone	Samsung	SM-G130E	N/A	N/A

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	08/13/14
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/14
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	11/12/14
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/14
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/15
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/14
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/15
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/14
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/14
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

7. MEASUREMENT METHODS

KDB 558074 D01 DTS Meas Guidance v03r01:Measurement Procedure PK2 is used for power and PKPSD 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	9.03 MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-32.14 dBm
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	21.33 dBm
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	-5.09 dBm
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	46.47 dBuV
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	52.72dBuV/m

9. ANTENNA PORT TEST RESULTS

9.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

IC RSS-210 A8.2 (a)

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

TEST PROCEDURE

Reference to KDB 558074 D01 DTS Meas Guidance v03r01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100 kHz, 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	9.50	0.5
Mid	2437	9.55	0.5
High	2462	9.03	0.5
Worst		9.03	

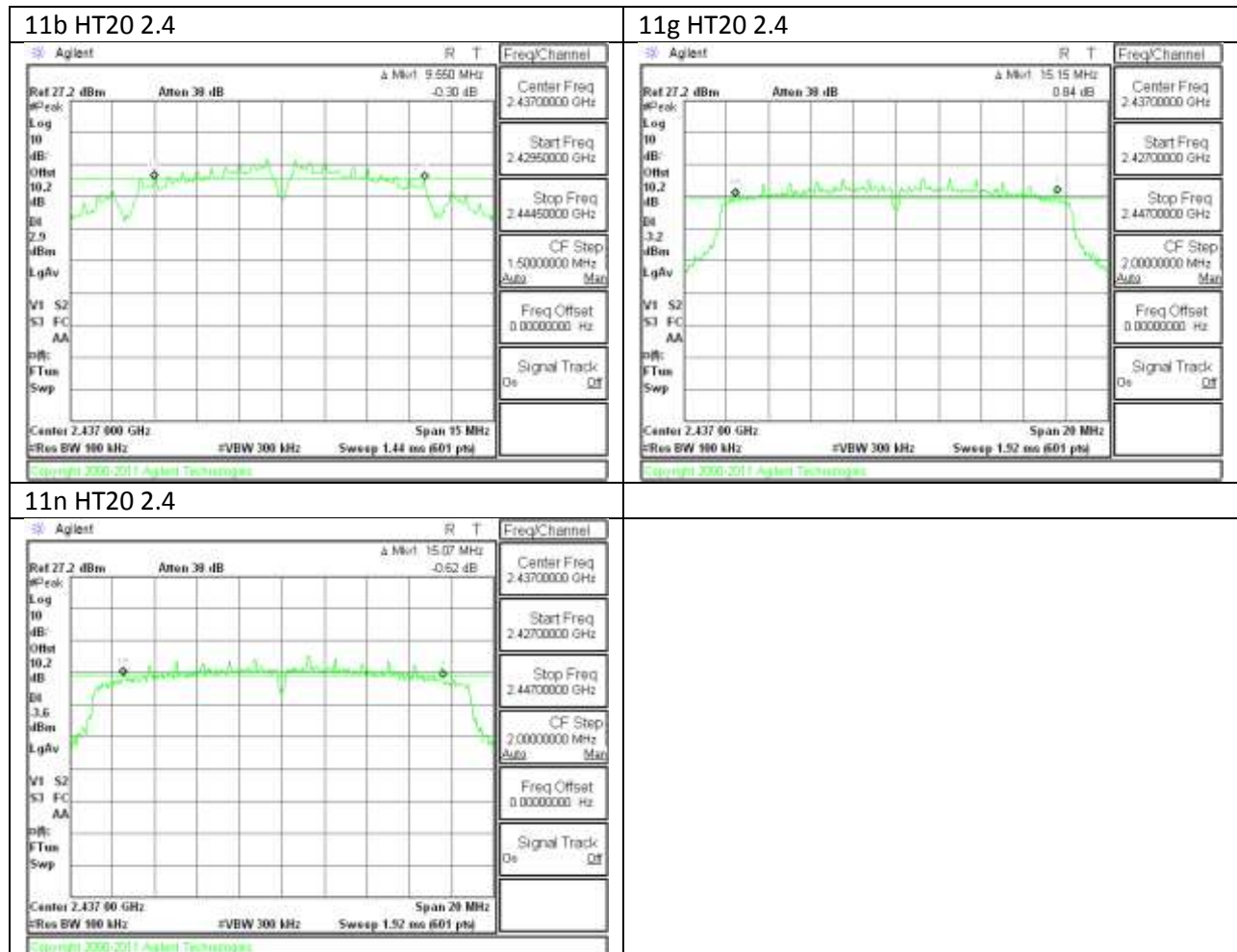
9.1.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	15.12	0.5
Mid	2437	15.15	0.5
High	2462	15.18	0.5
Worst		15.12	

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	15.33	0.5
Mid	2437	15.07	0.5
High	2462	15.10	0.5
Worst		15.07	

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	13.79
Mid	2437	14.28
High	2462	13.96
Worst		14.28

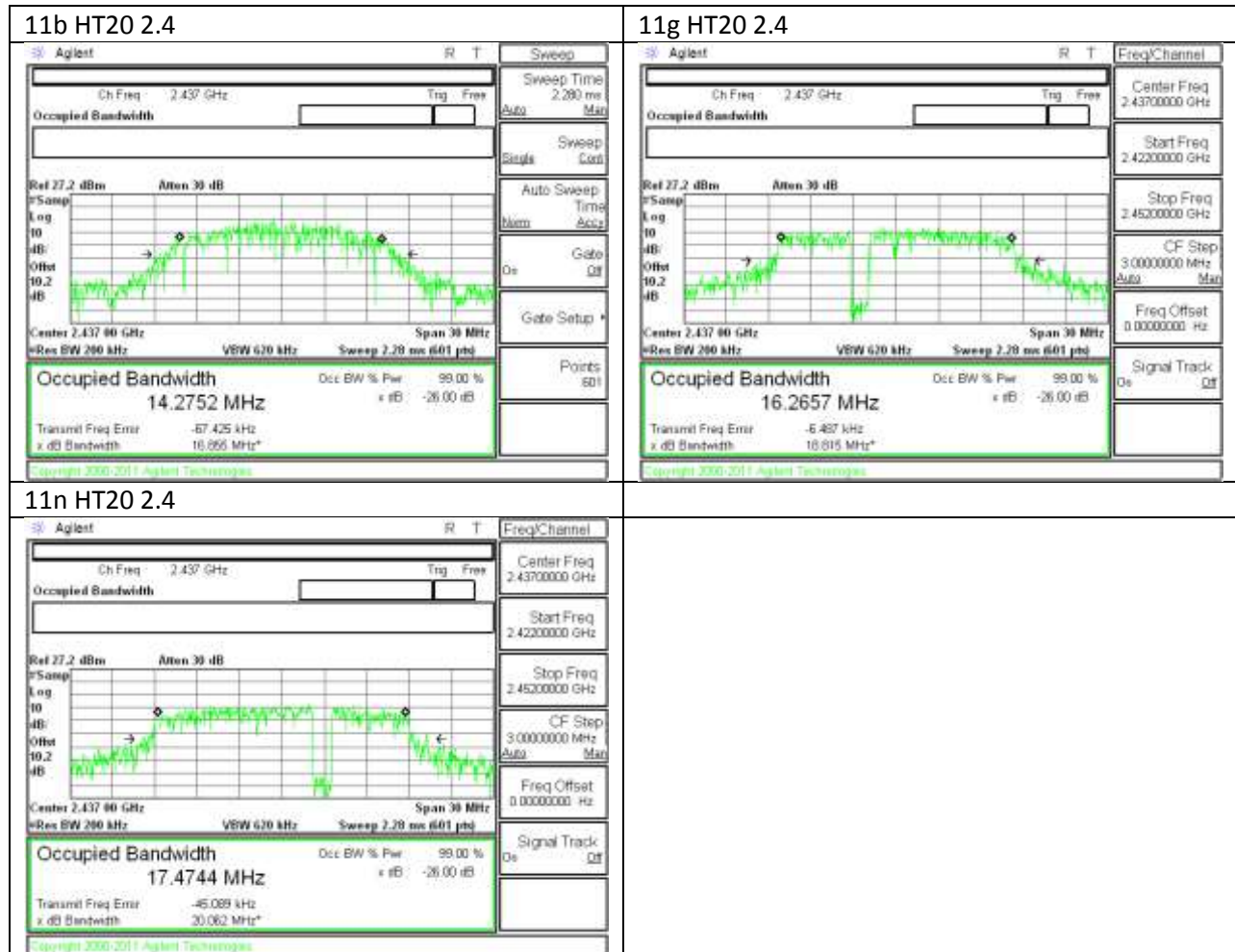
9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.26
Mid	2437	16.27
High	2462	16.30
Worst		16.30

9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.40
Mid	2437	17.47
High	2462	17.44
Worst		17.47

9.2.4. 99% BANDWIDTH MID CH PLOTS



9.3. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 0.2 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

9.3.1. 802.11b MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	2412	16.40
Mid	2437	16.40
High	2462	16.30
Worst		16.400

9.3.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	2412	13.00
Mid	2437	13.00
High	2462	13.00
Worst		13.000

9.3.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	Avg Power (dBm)
Low	2412	12.00
Mid	2437	12.10
High	2462	12.00
Worst		12.100

9.4. OUTPUT POWER

LIMITS

FCC §15.247

IC RSS-210 A8.4

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

9.4.1. 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	-1.26	30.00	30	36	30.00
Mid	2437	-1.26	30.00	30	36	30.00
High	2462	-1.26	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	19.19	19.19	30.00	-10.81
Mid	2437	19.38	19.38	30.00	-10.62
High	2462	19.46	19.46	30.00	-10.54
Worst			19.46		

9.4.2. 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	-1.26	30.00	30	36	30.00
Mid	2437	-1.26	30.00	30	36	30.00
High	2462	-1.26	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	21.01	21.01	30.00	-8.99
Mid	2437	21.33	21.33	30.00	-8.67
High	2462	21.24	21.24	30.00	-8.76
Worst			21.33		

9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

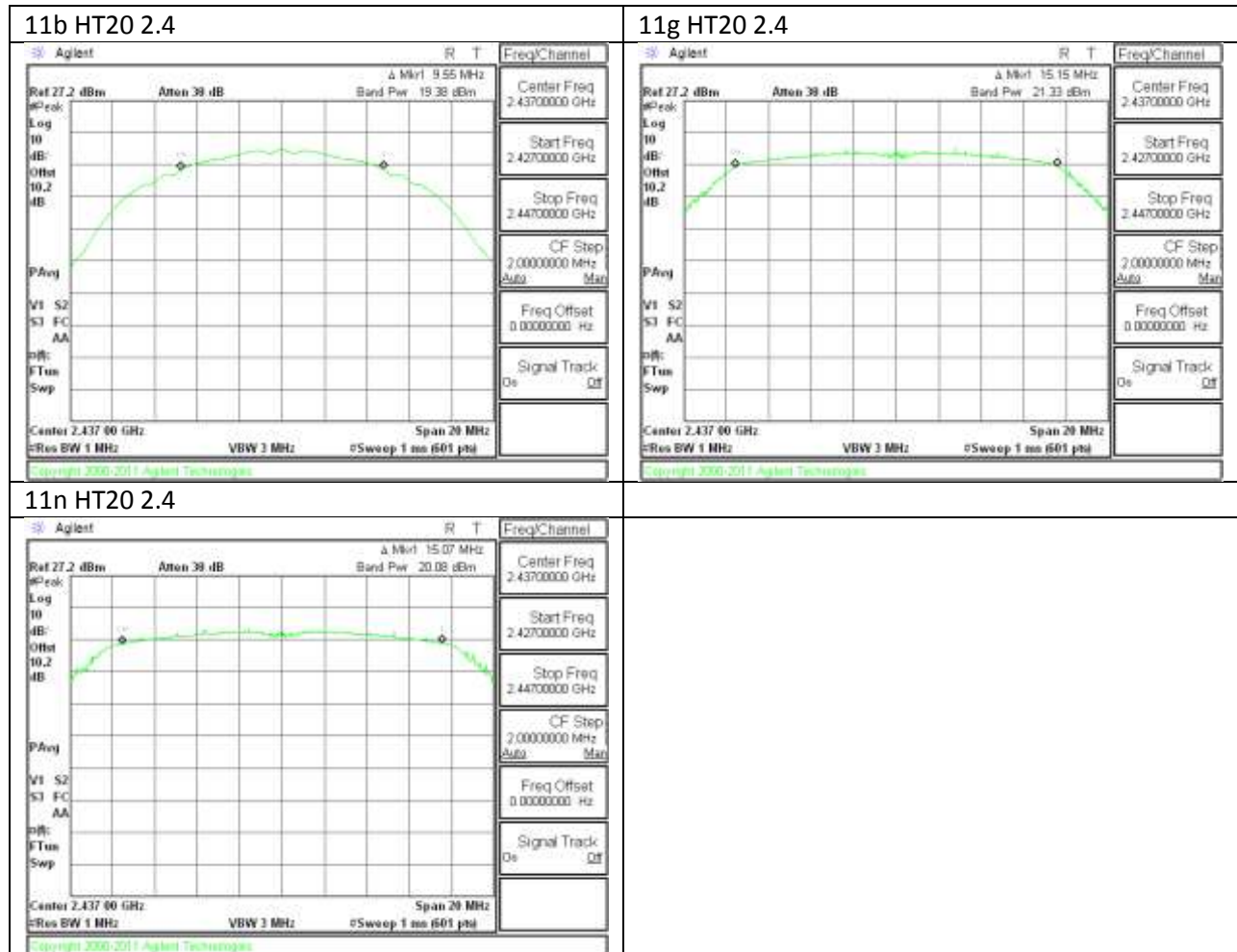
Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	IC Power Limit (dBm)	IC EIRP Limit (dBm)	Max Power (dBm)
Low	2412	-1.26	30.00	30	36	30.00
Mid	2437	-1.26	30.00	30	36	30.00
High	2462	-1.26	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	20.07	20.07	30.00	-9.93
Mid	2437	20.08	20.08	30.00	-9.92
High	2462	20.06	20.06	30.00	-9.94
Worst			20.08		

9.4.4. OUTPUT POWER CHAIN 0 MID CH PLOTS



9.5. PSD

LIMITS

FCC §15.247

IC RSS-210 A8.2

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

9.5.1. 802.11b MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-5.09	8.0	-13.1
Mid	2437	-6.32	8.0	-14.3
High	2462	-6.03	8.0	-14.0

9.5.2. 802.11g MODE IN THE 2.4 GHz BAND

PSD Results

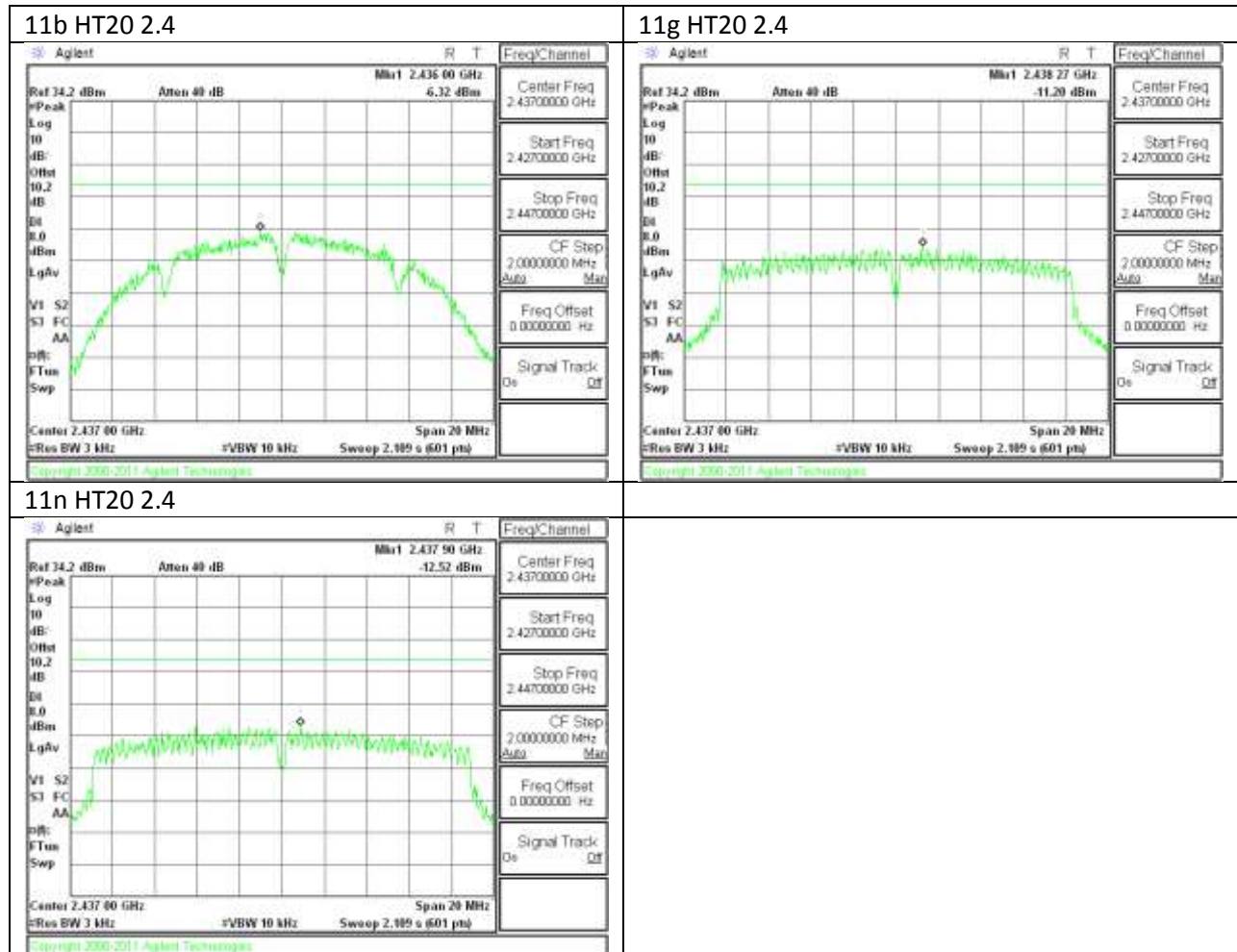
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-11.62	8.0	-19.6
Mid	2437	-11.20	8.0	-19.2
High	2462	-11.50	8.0	-19.5

9.5.3. 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	-12.92	8.0	-20.9
Mid	2437	-12.52	8.0	-20.5
High	2462	-12.55	8.0	-20.6

9.5.4. PSD Chain 0 MID CH PLOTS



9.6. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

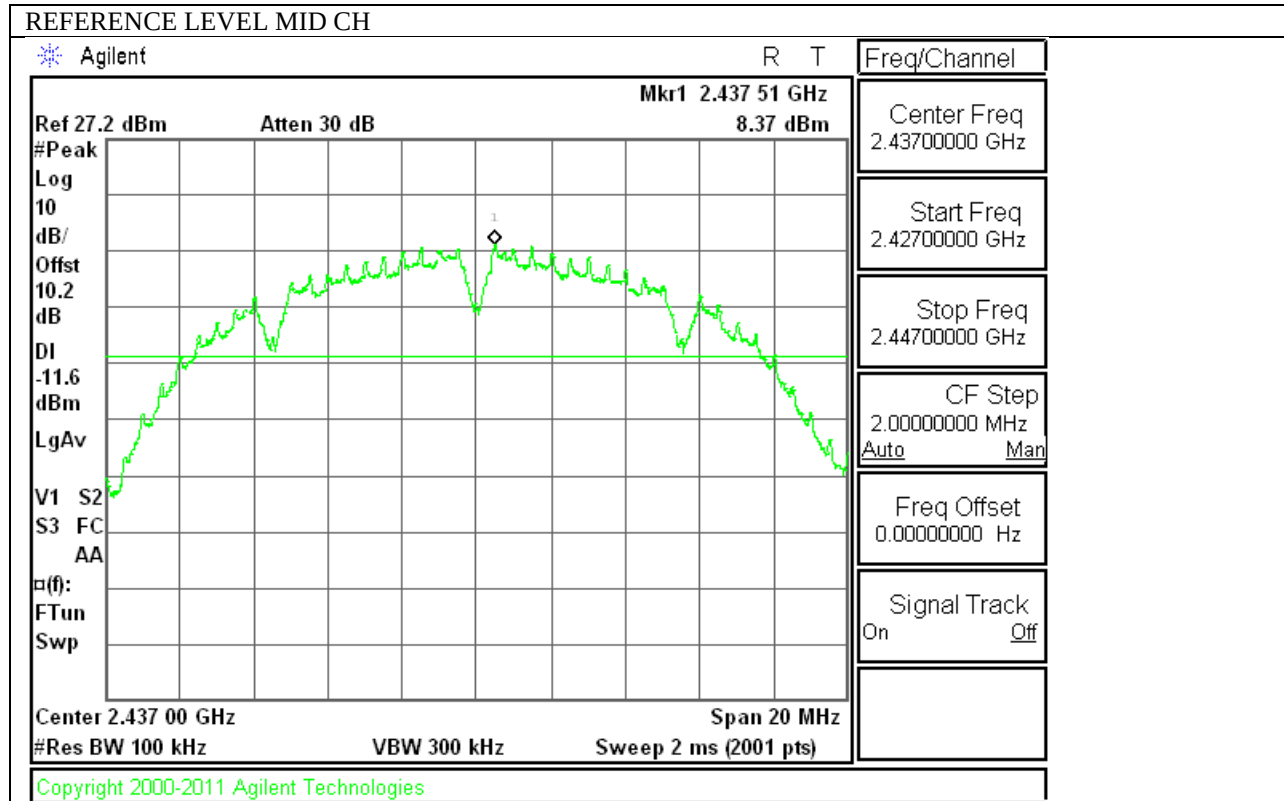
IC RSS-210 A8.5

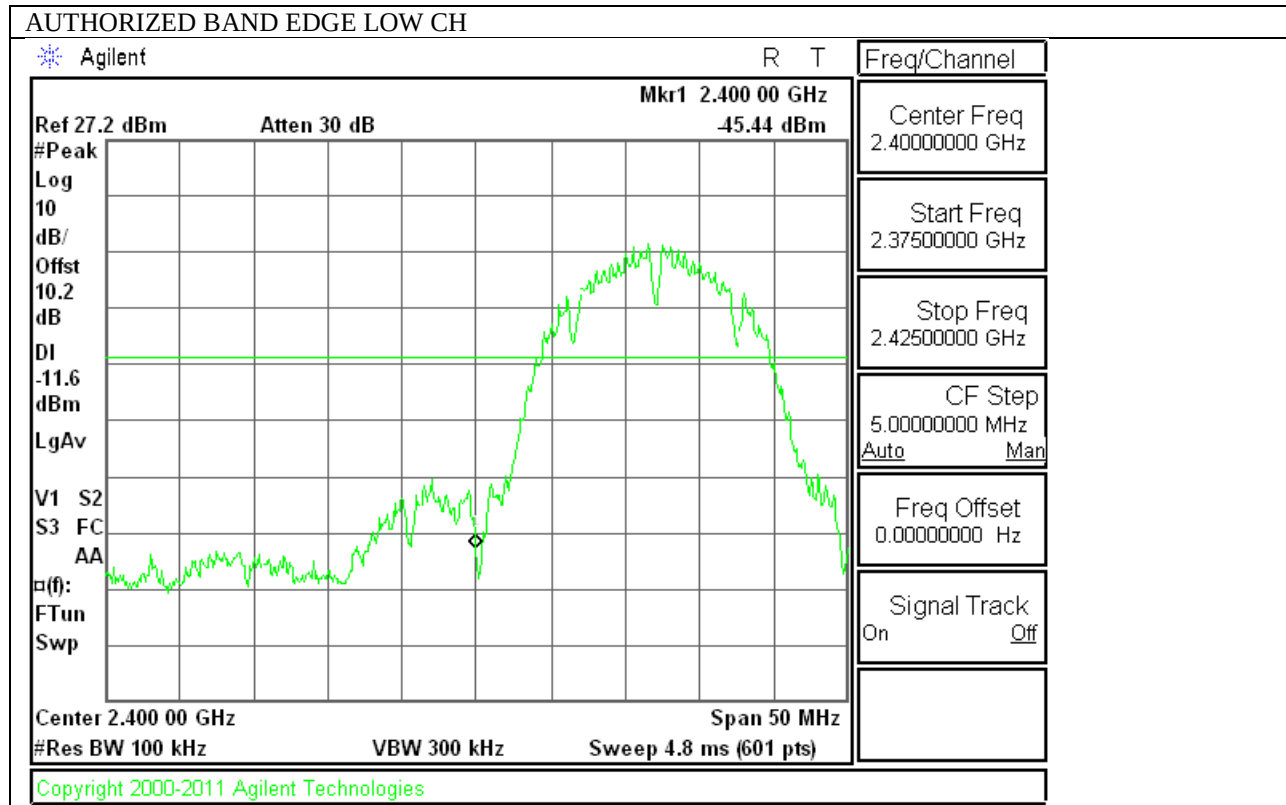
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the 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.

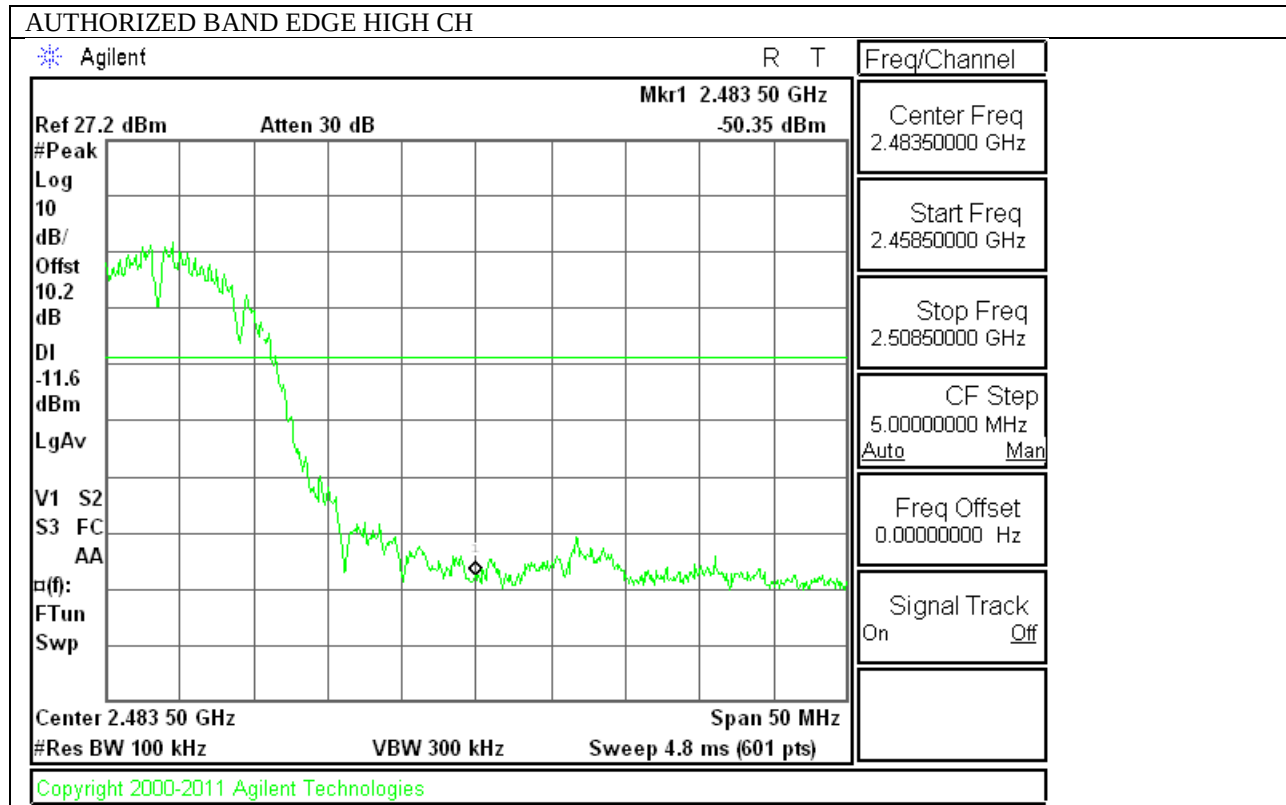
TEST PROCEDURE

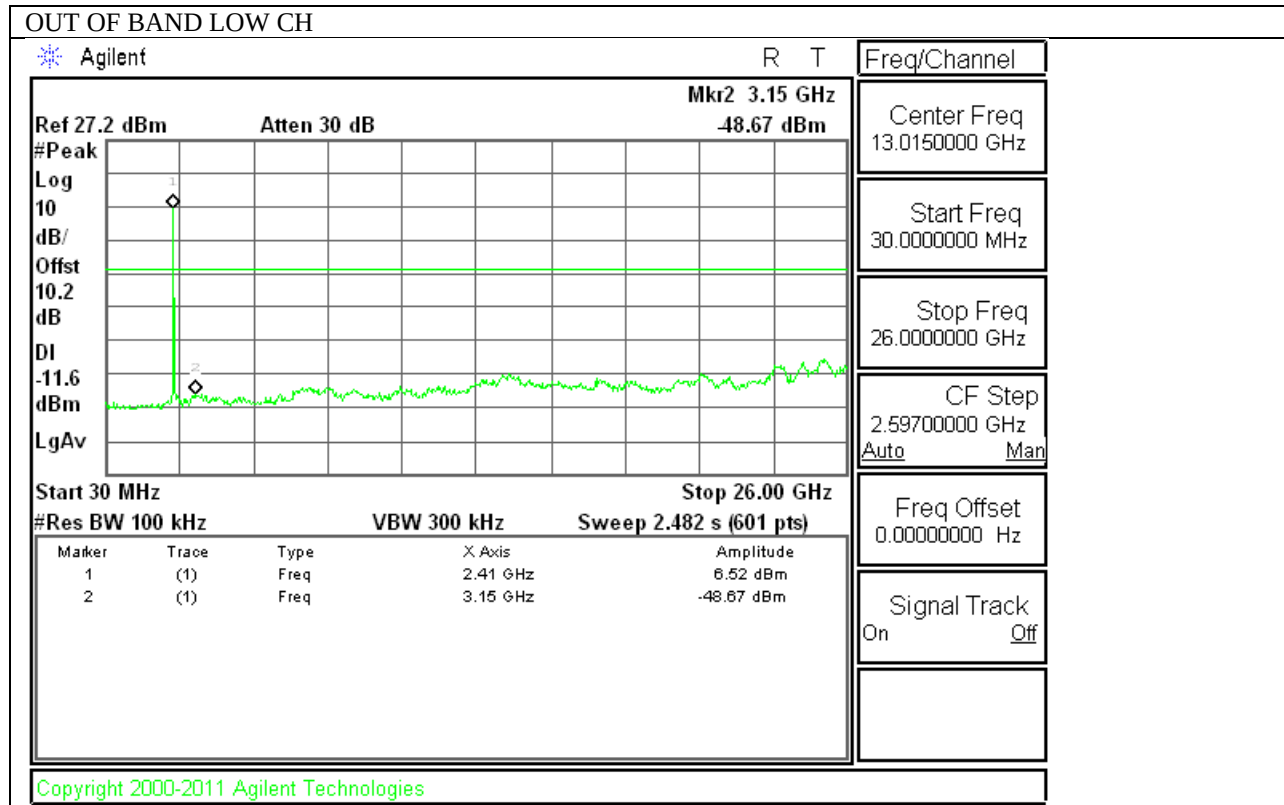
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

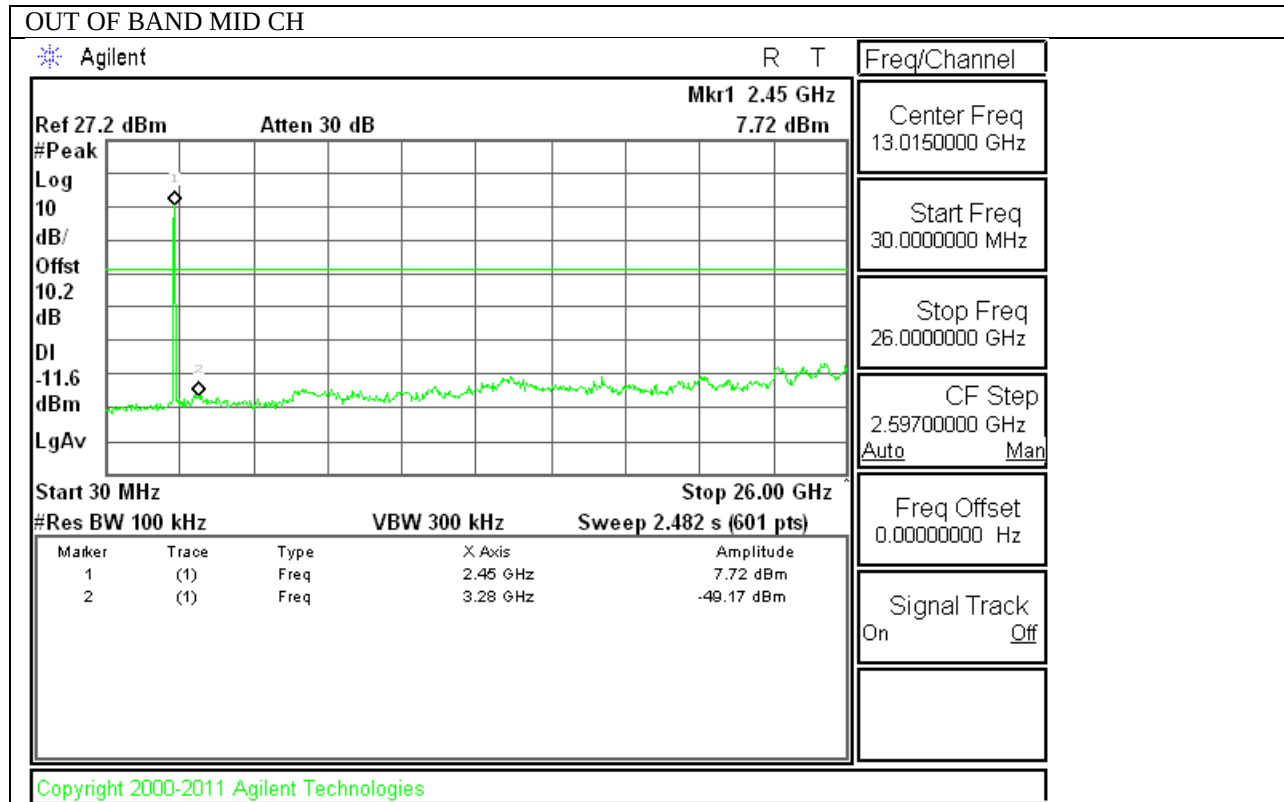
RESULTS

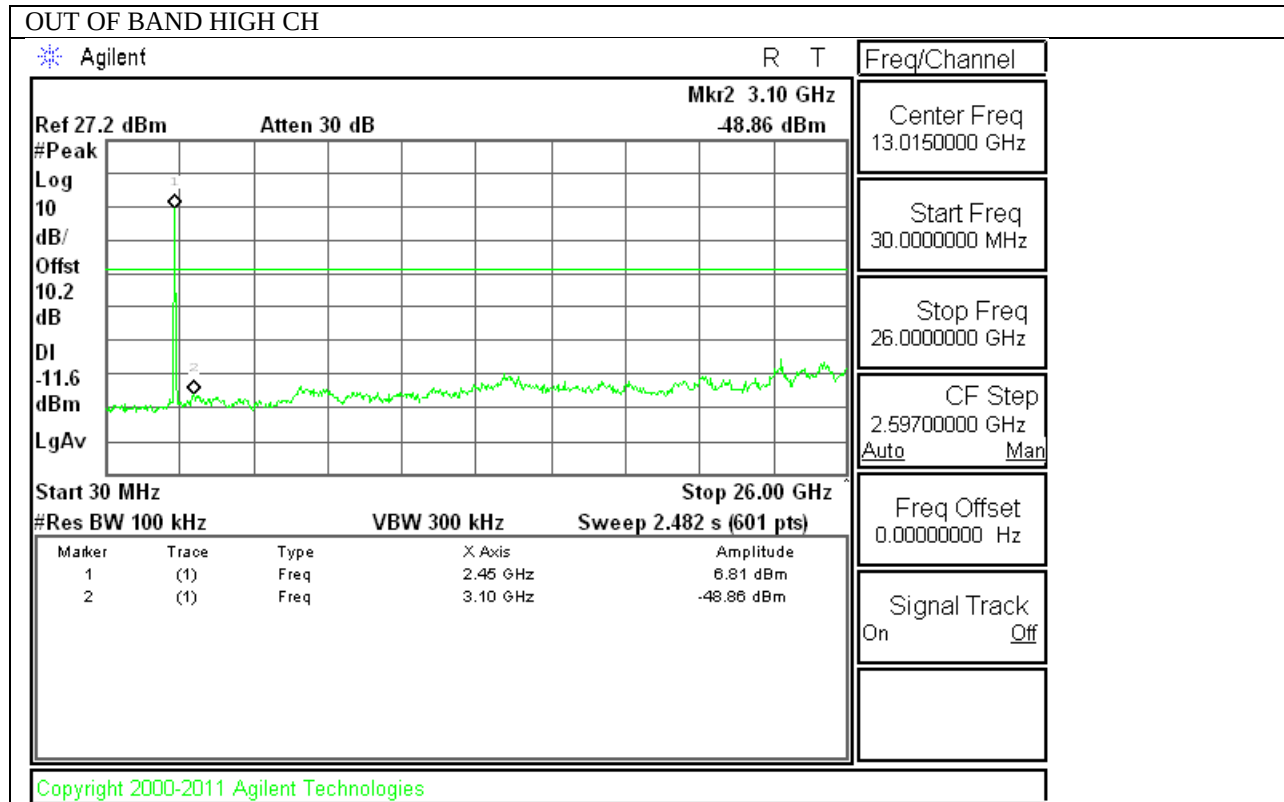
9.6.1. 802.11b MODE IN THE 2.4 GHz BAND**IN-BAND REFERENCE LEVEL**

LOW CHANNEL BANDEDGE

HIGH CHANNEL BANDEDGE

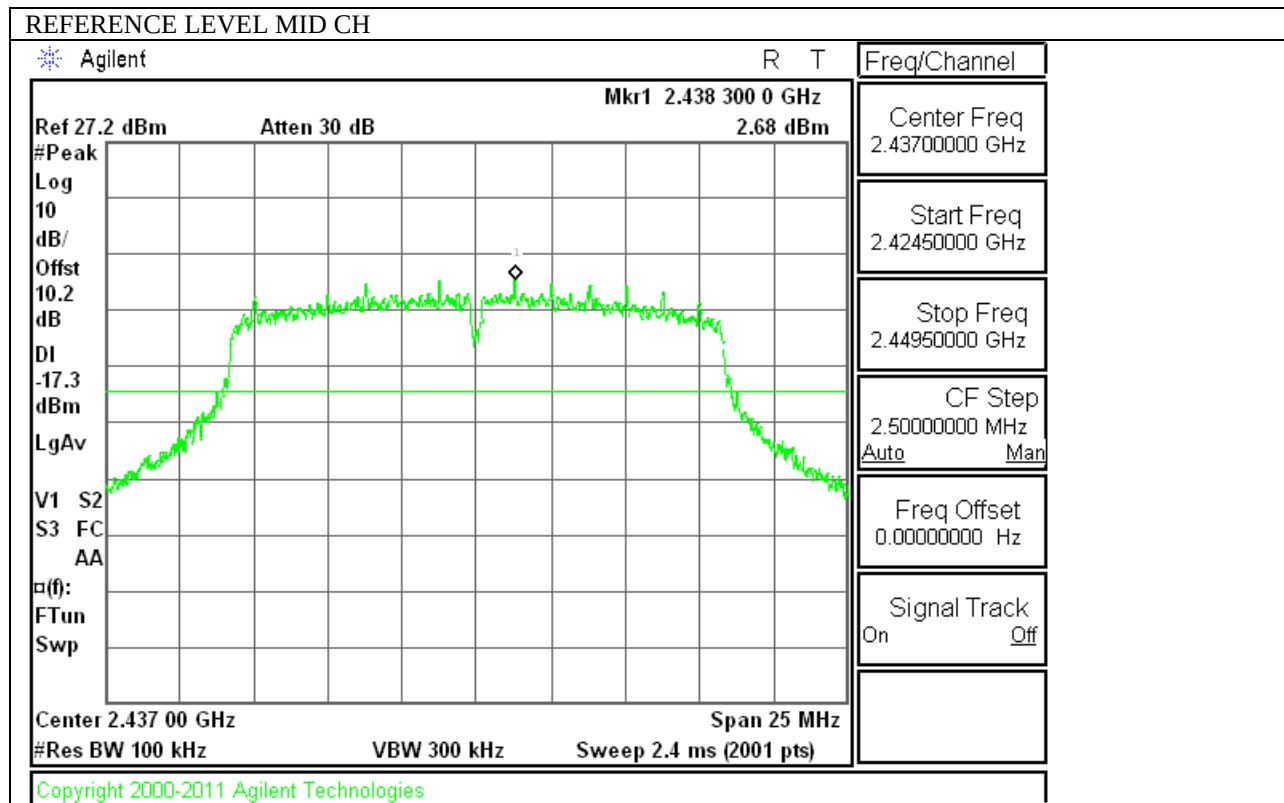
OUT-OF-BAND EMISSIONS

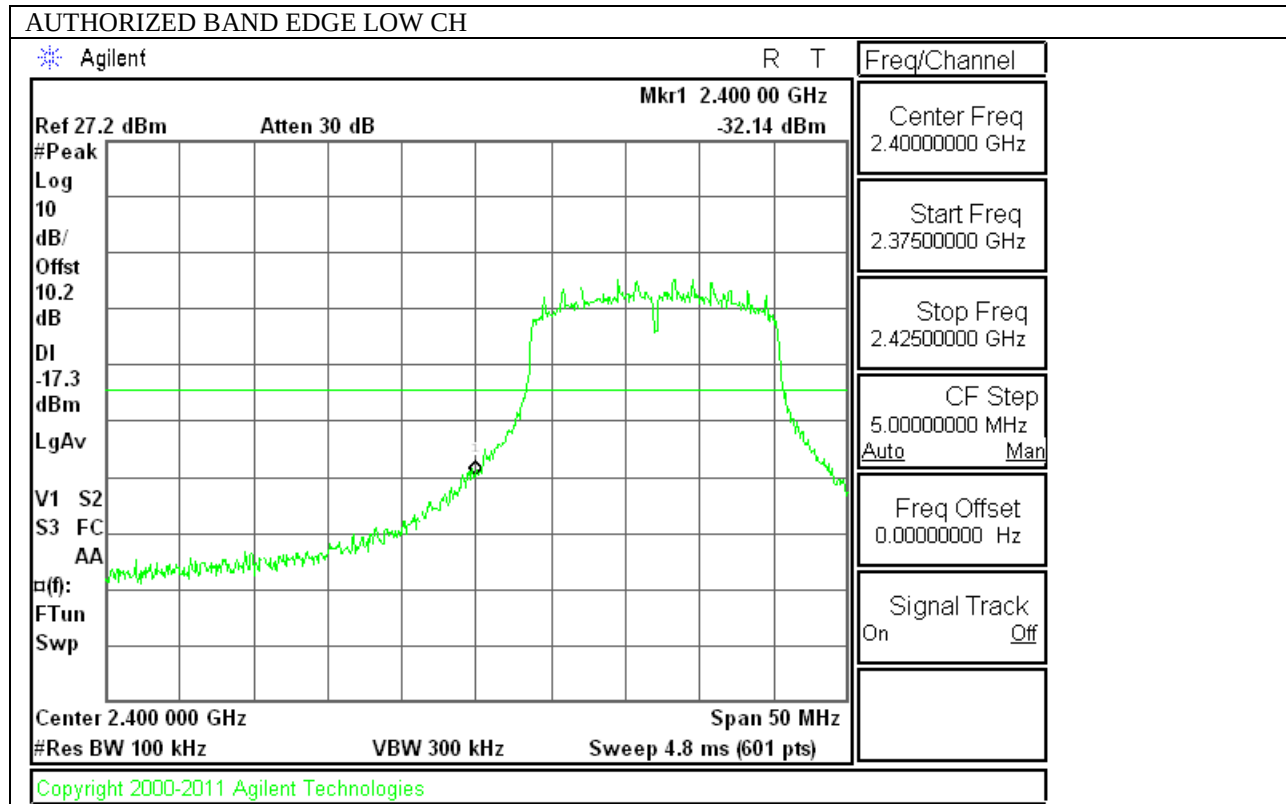


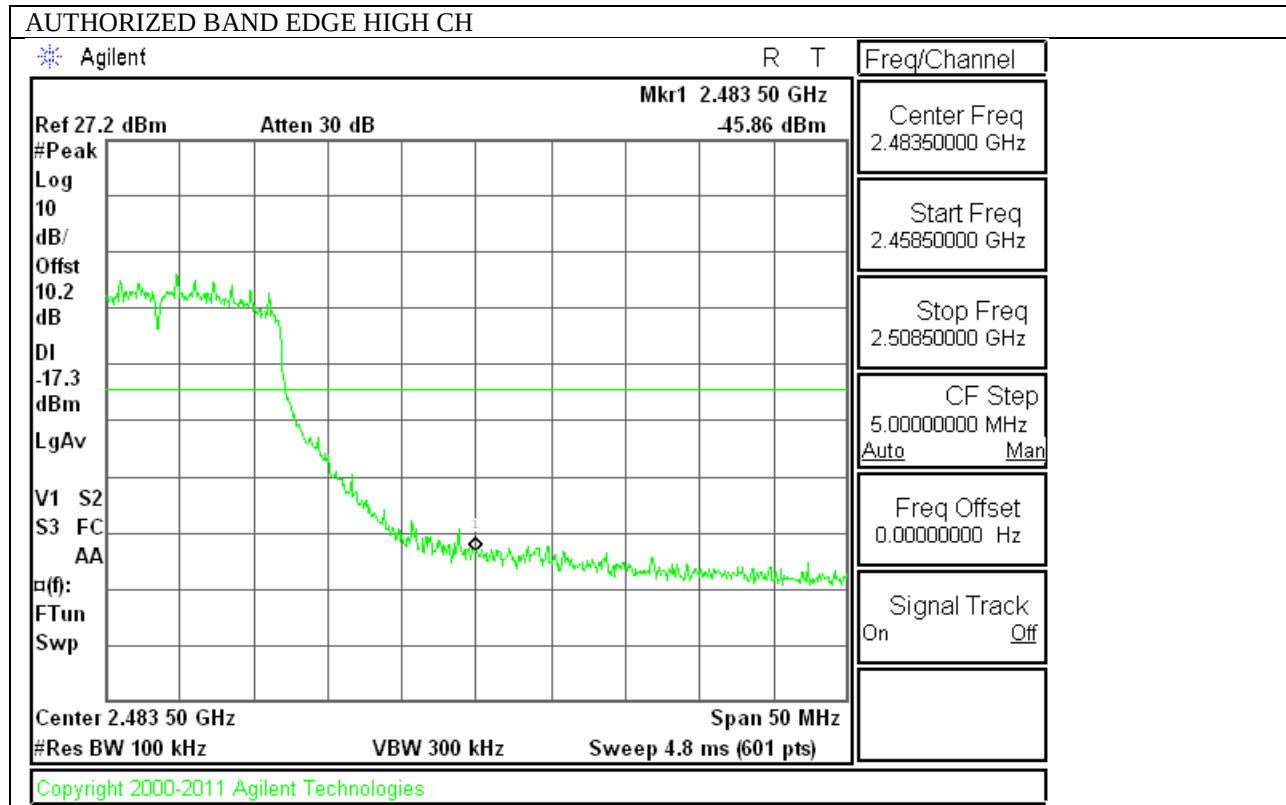


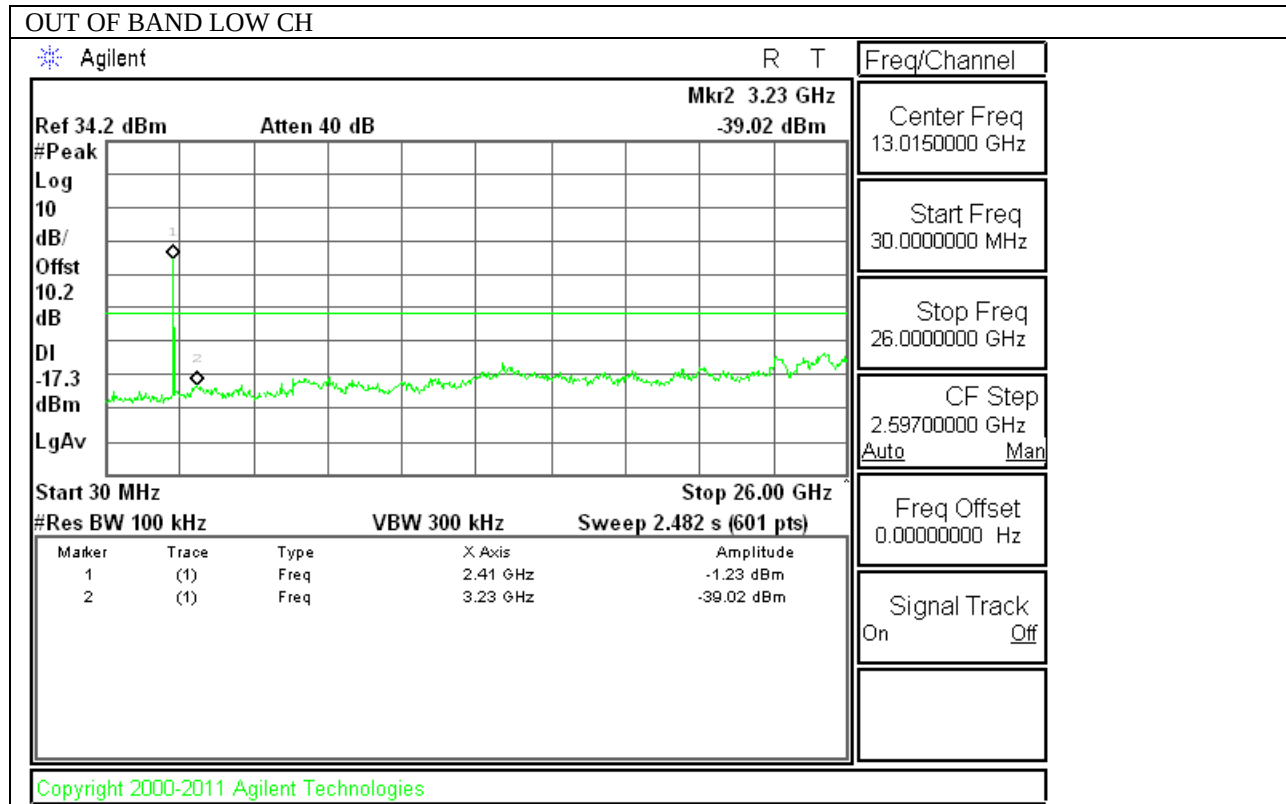
9.6.2. 802.11g MODE IN THE 2.4 GHz BAND

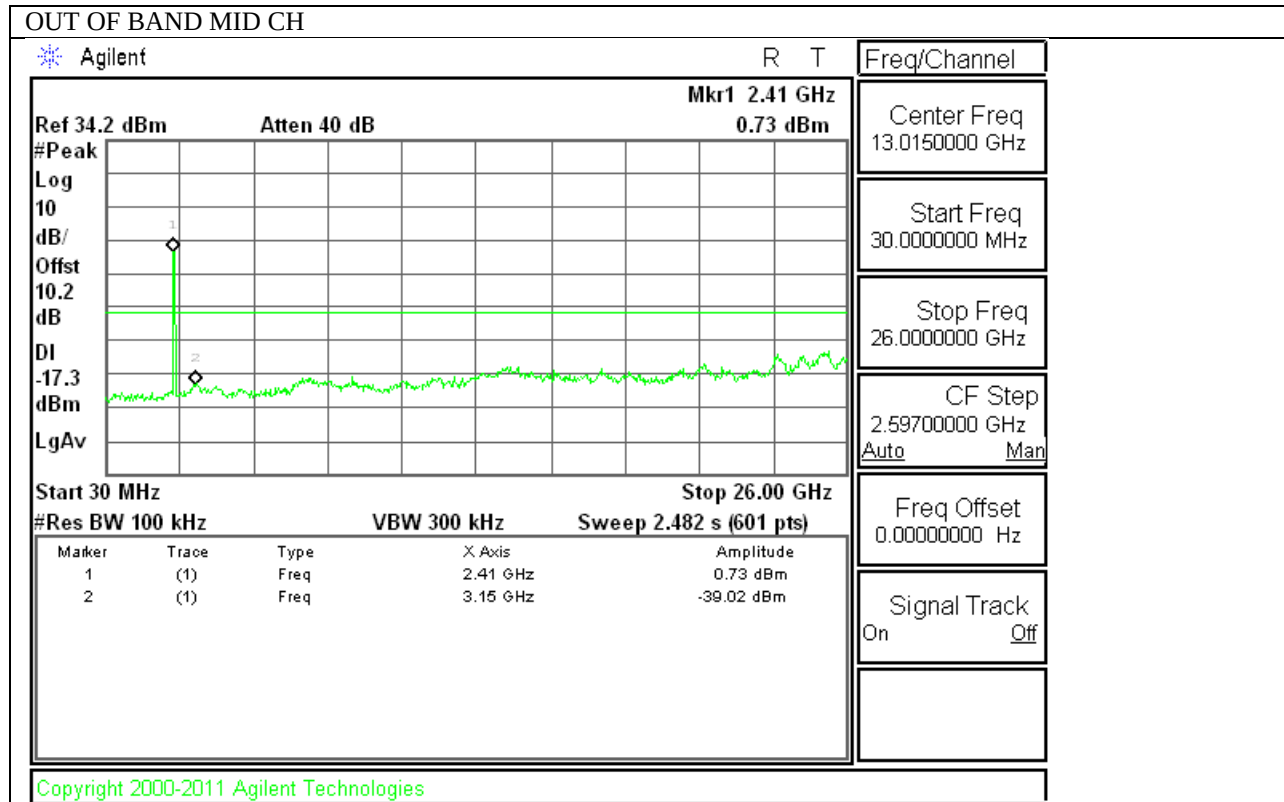
IN-BAND REFERENCE LEVEL

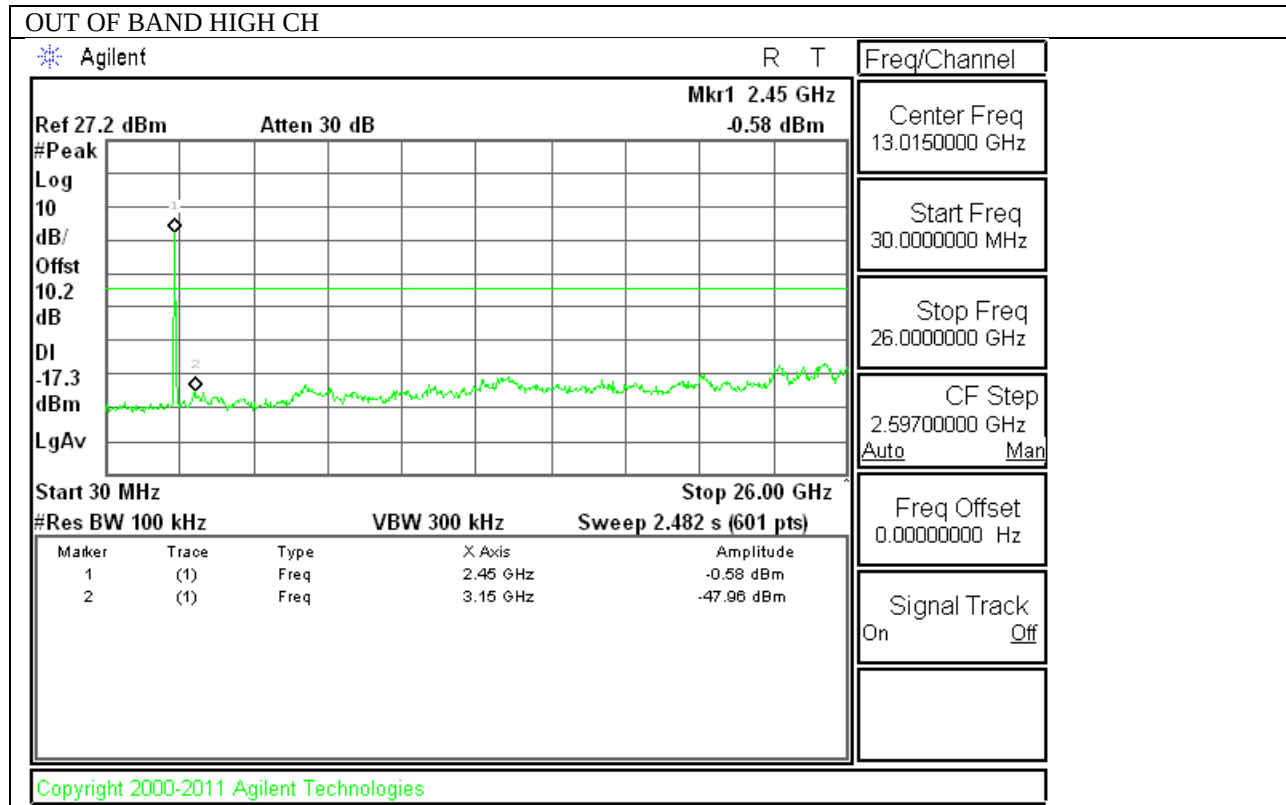


LOW CHANNEL BANDEDGE

HIGH CHANNEL BANDEDGE

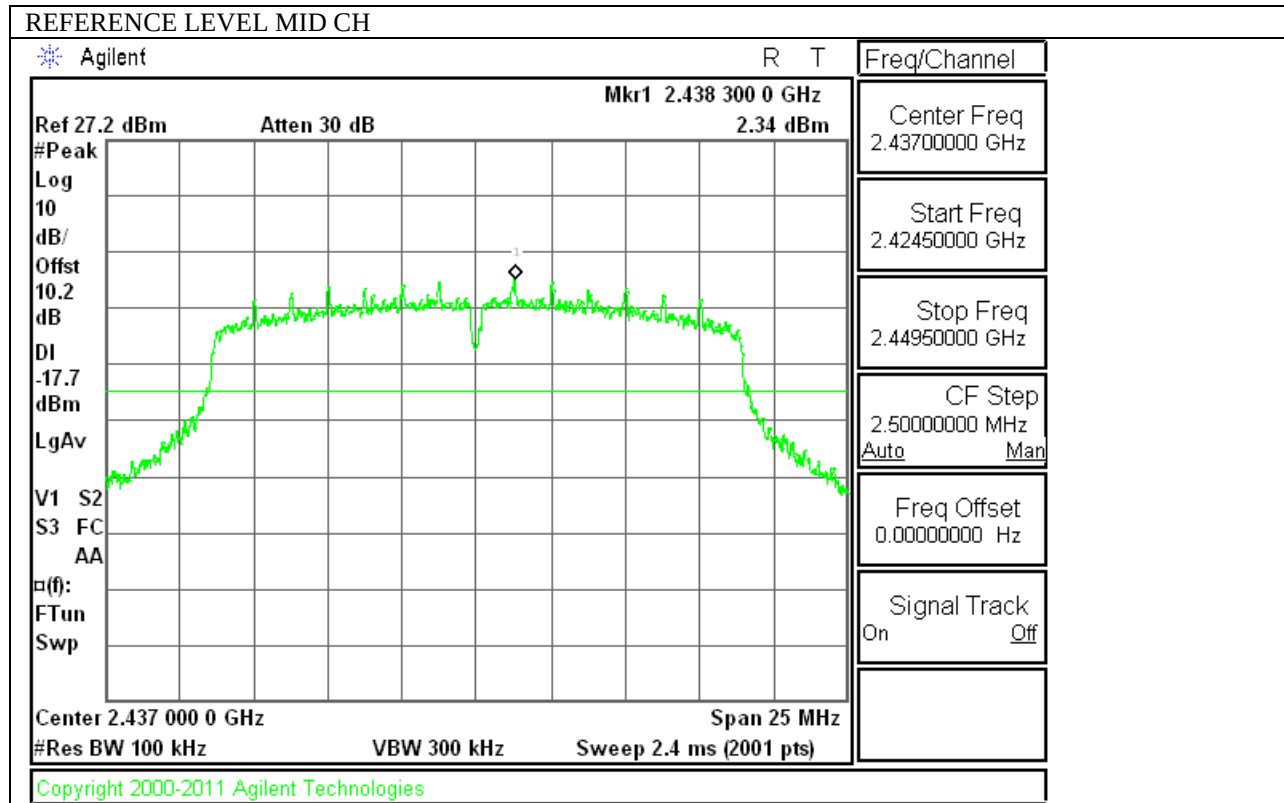
OUT-OF-BAND EMISSIONS

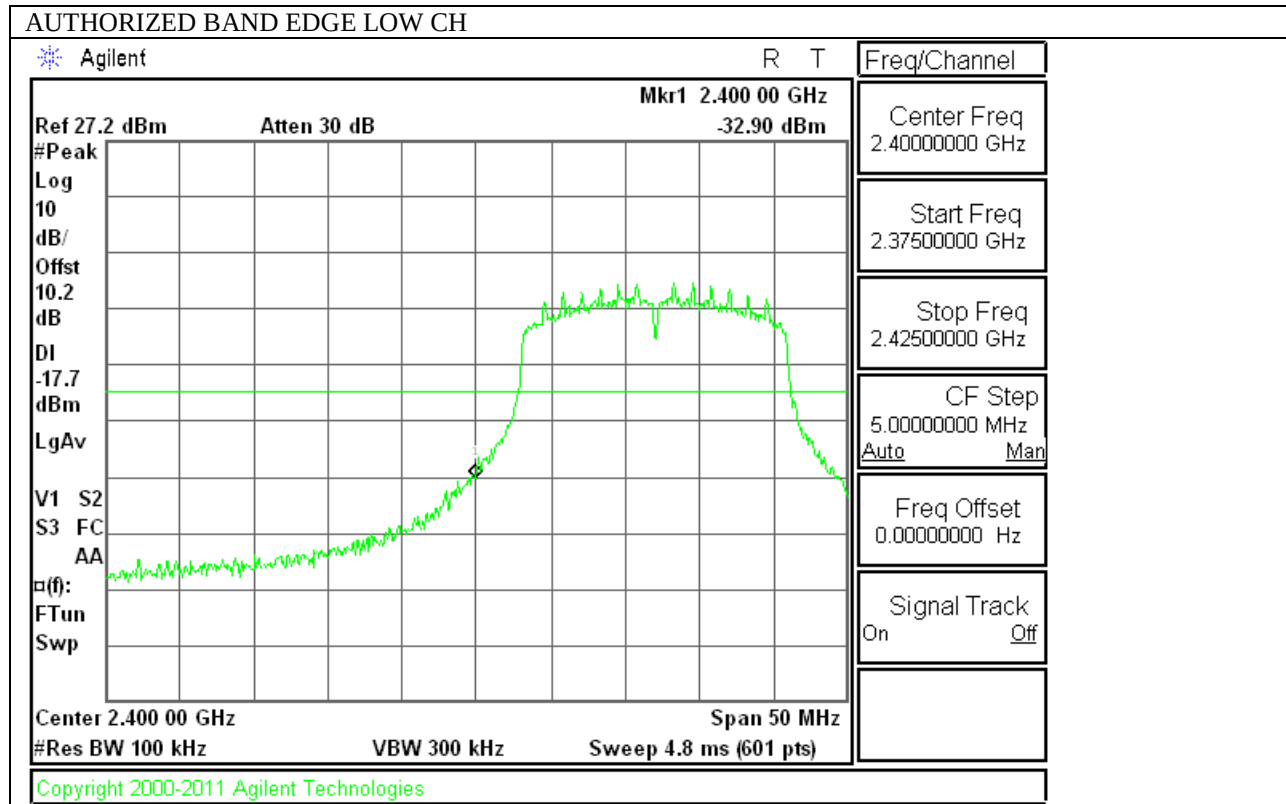


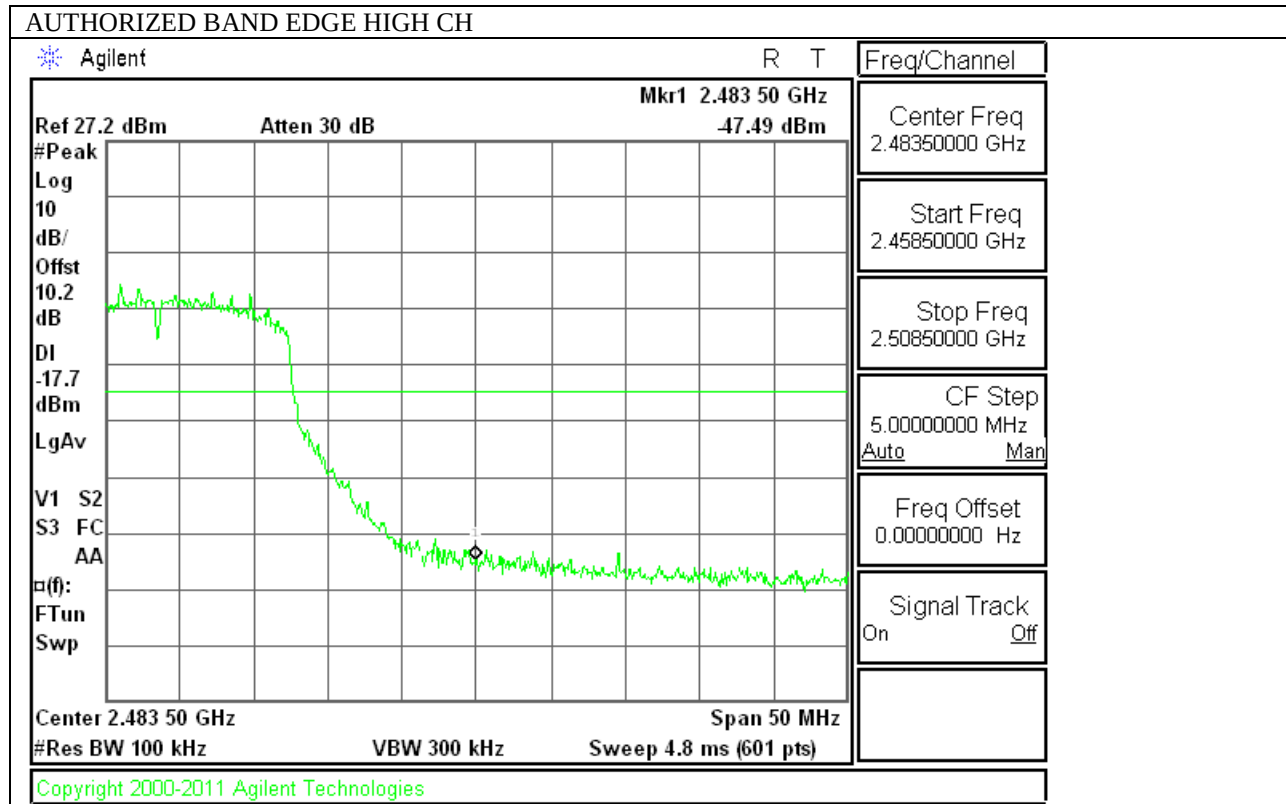


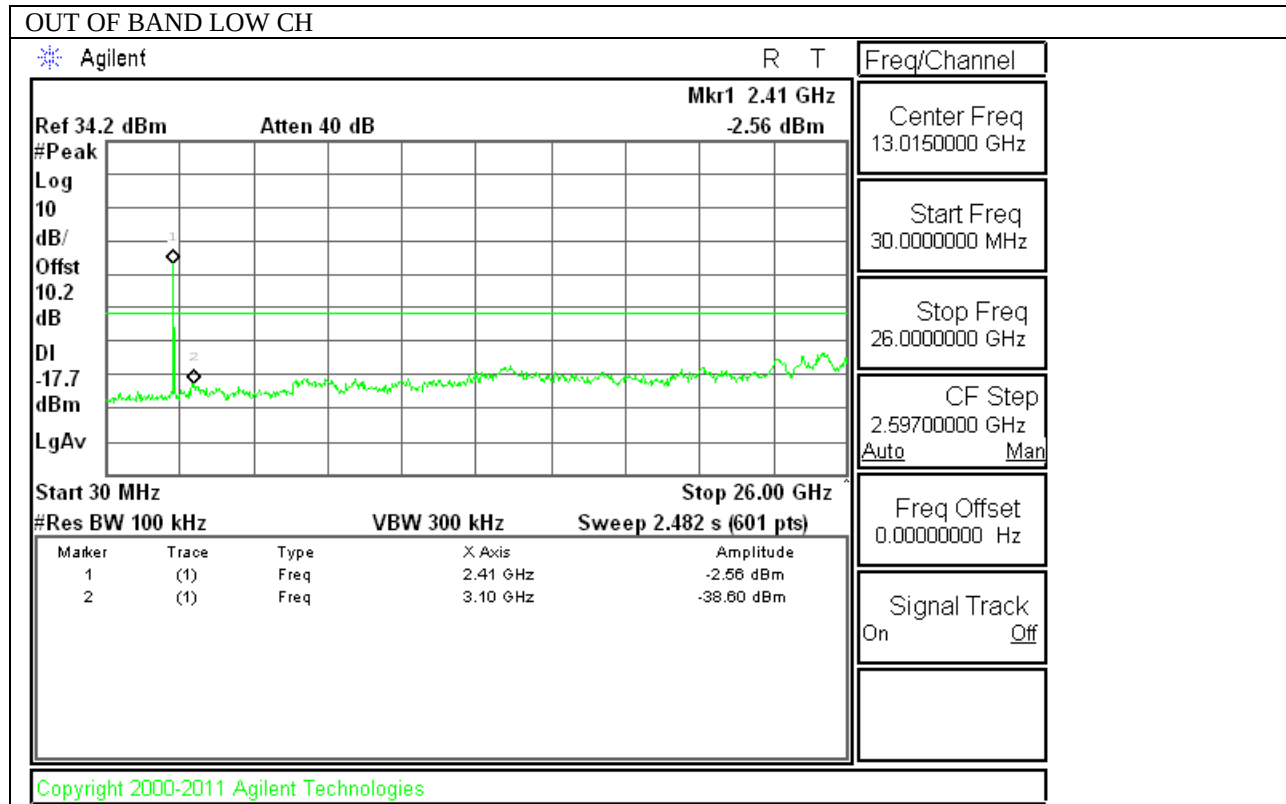
9.6.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

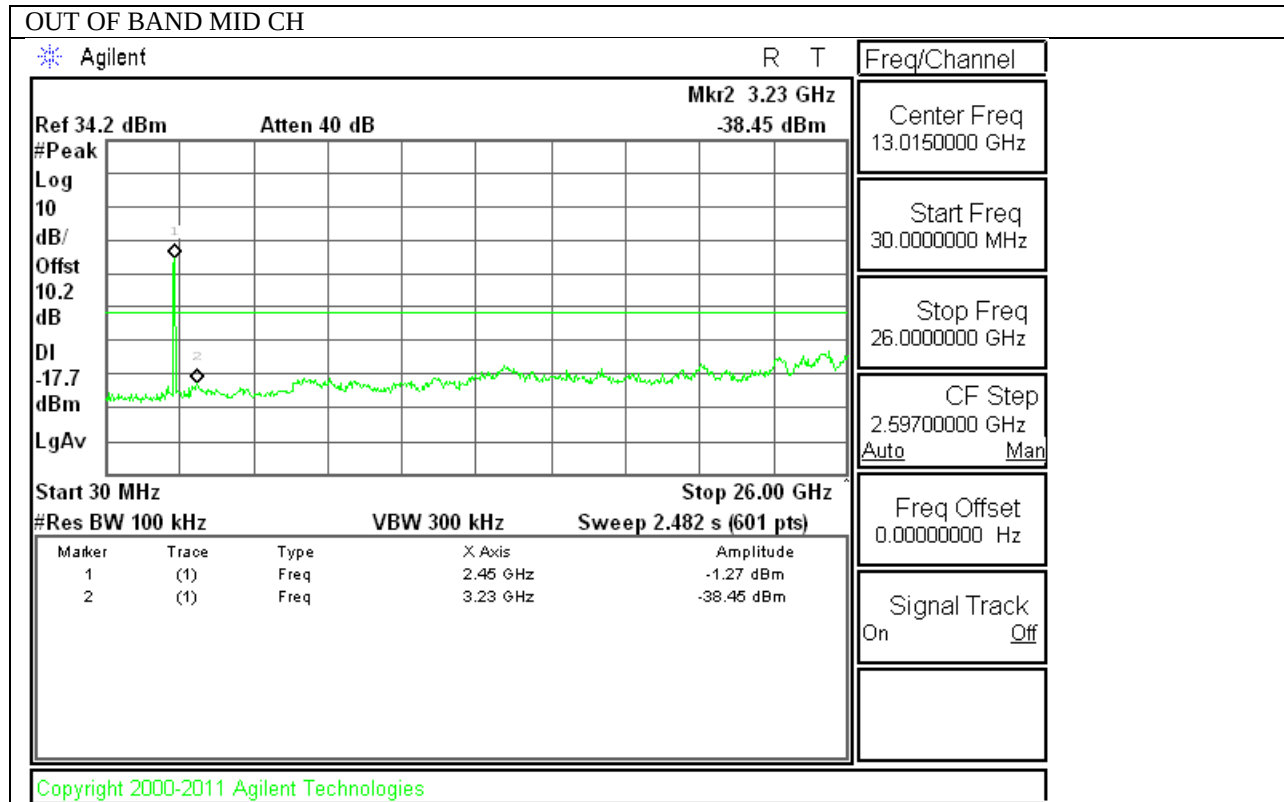
IN-BAND REFERENCE LEVEL

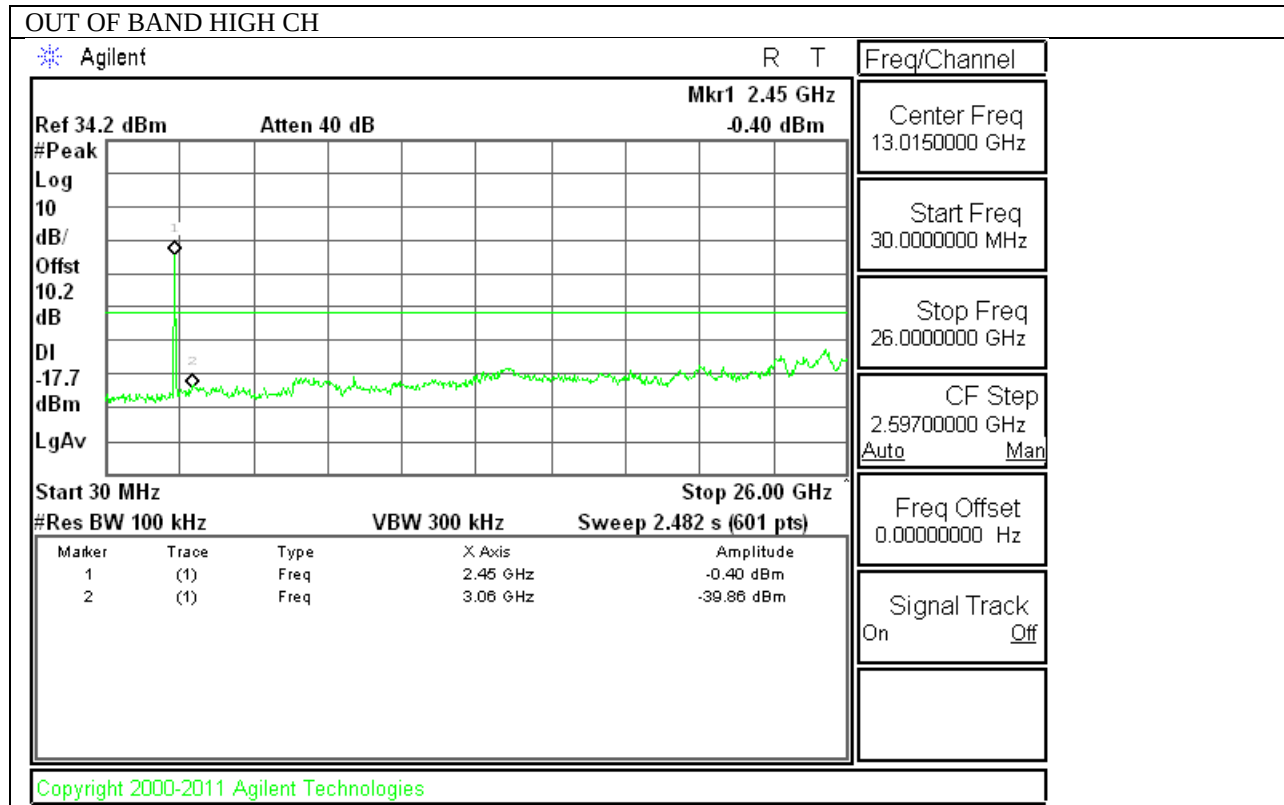


LOW CHANNEL BANDEDGE

HIGH CHANNEL BANDEDGE

OUT-OF-BAND EMISSIONS





10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

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 = 0.3dB; N mode = 0.32dB.

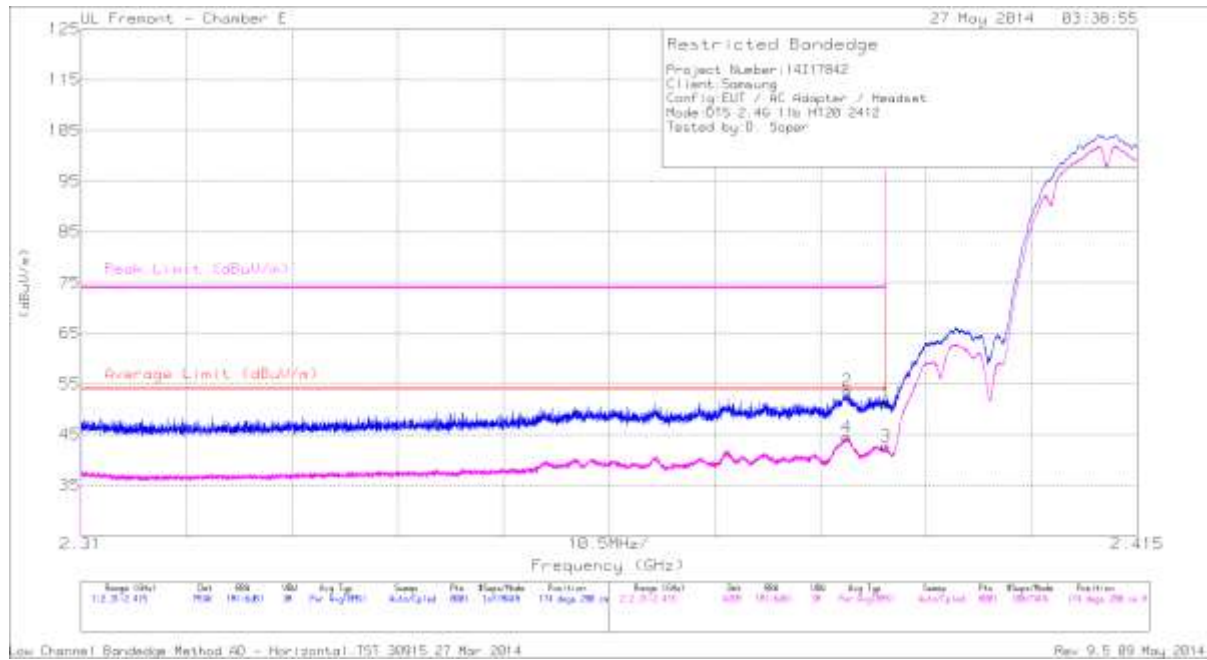
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band.

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)

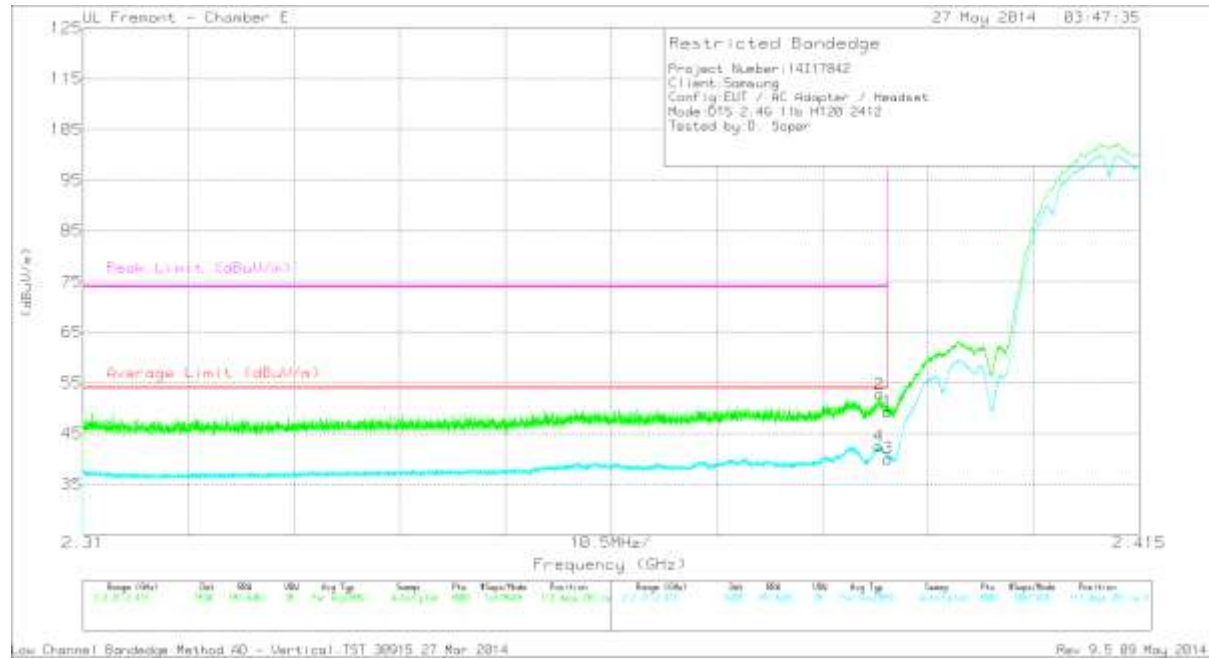


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	43.81	PK	32	-24.7	51.11	-	-	74	-22.89	174	280	H
2	* 2.386	46.28	PK	32	-24.7	53.58	-	-	74	-20.42	174	280	H
3	* 2.39	35.46	RMS	32	-24.7	42.76	54	-11.24	-	-	174	280	H
4	* 2.386	37.16	RMS	32	-24.7	44.46	54	-9.54	-	-	174	280	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 T346 (dB/m)	Amp/Cbl/ Ftr/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	* 2.39	42	PK	32	-24.7	49.3	-	-	74	-24.7	113	281	V
2	* 2.389	45.5	PK	32	-24.7	52.8	-	-	74	-21.2	113	281	V
3	* 2.39	32.75	RMS	32	-24.7	40.05	54	-13.95	-	-	113	281	V
4	* 2.389	35.2	RMS	32	-24.7	42.5	54	-11.5	-	-	113	281	V

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

PK - Peak detector

RMS - RMS detection

UL Fremont - Chamber E

27 May 2014 04:01:29

Restricted Bondedge

Project Number: 14117842

Client: Samsung

Config: EUT / AC Adapter / Headset

Mode: GPS 2.4G 11b H120 2402

Tested by: D. Soper

EIRP (dBm/Hz)

Peak Limit (dBm/Hz)

Average Limit (dBm/Hz)

Frequency (GHz)

18.3MHz

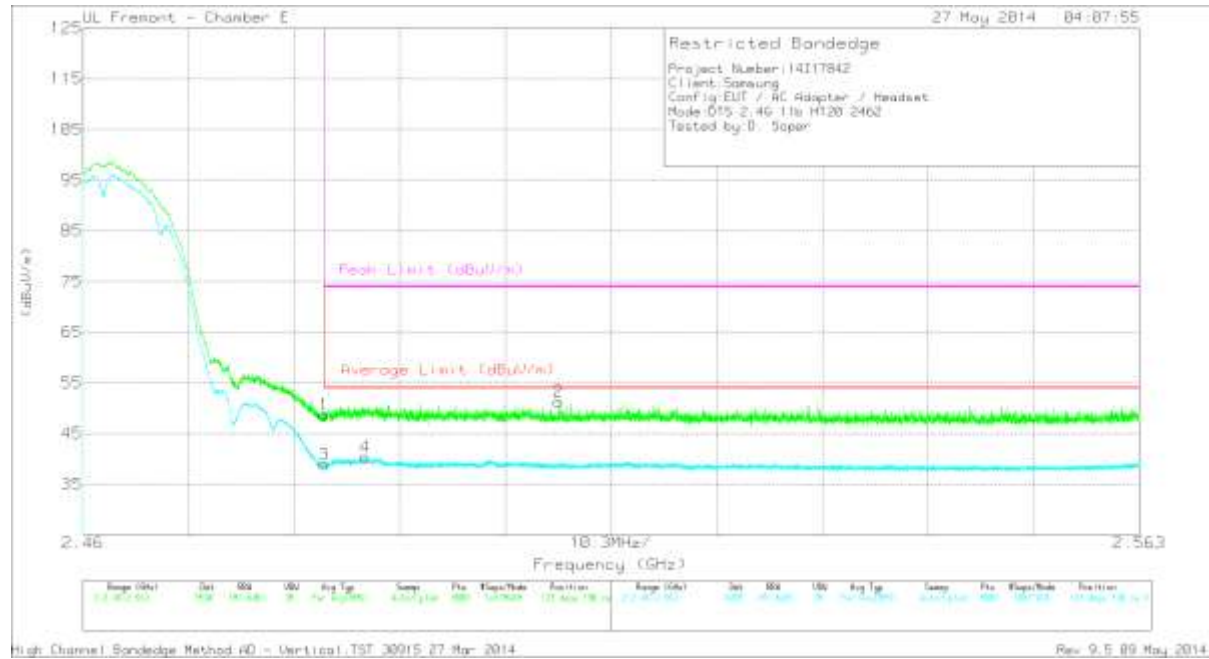
Range (GHz)	Set	Mode	Sub	Reg Type	Power	File	Shape/Rate	Position	Range (GHz)	Set	Mode	Sub	Reg Type	Power	File	Shape/Rate	Position
1.2-4.0 (5.0)	100	100	100	100	100	100	100/100	100	1.2-4.0 (5.0)	100	100	100	100	100	100	100/100	100

High Channel Bondedge Method A0 - Horizontal TST 38915 27 Mar 2014

Rev: 9.5 09 May 2014

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Fitr/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	44.15	PK	32.3	-24.3	52.15	-	-	74	-21.85	199	262	H
2	* 2.488	47.41	PK	32.3	-24.3	55.41	-	-	74	-18.59	199	262	H
3	* 2.484	33.08	RMS	32.3	-24.3	41.08	54	-12.92	-	-	199	262	H
4	* 2.488	36.88	RMS	32.3	-24.3	44.88	54	-9.12	-	-	199	262	H

RMS - RMS detection



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/ Ftr/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	40.71	PK	32.3	-24.3	48.71	-	-	74	-25.29	123	190	V
3	* 2.484	30.83	RMS	32.3	-24.3	38.83	54	-15.17	-	-	123	190	V
4	* 2.488	32.32	RMS	32.3	-24.3	40.32	54	-13.68	-	-	123	190	V
2	2.506	43.08	PK	32.4	-24.2	51.28	-	-	74	-22.72	123	190	V

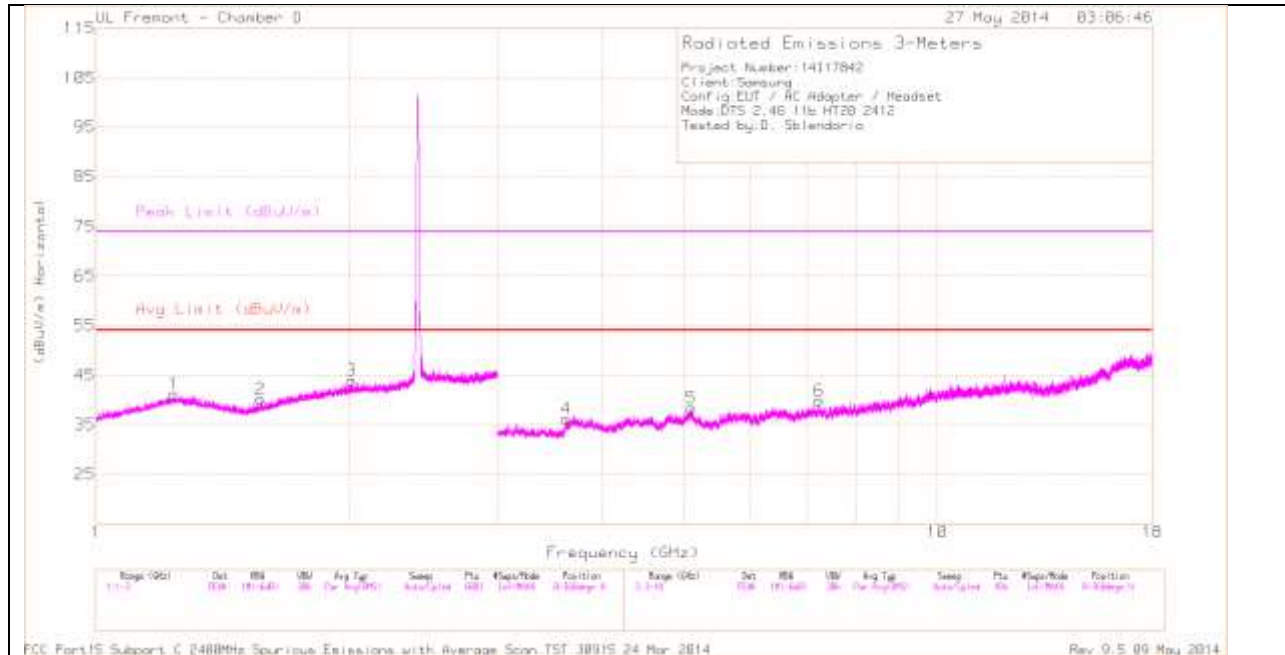
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

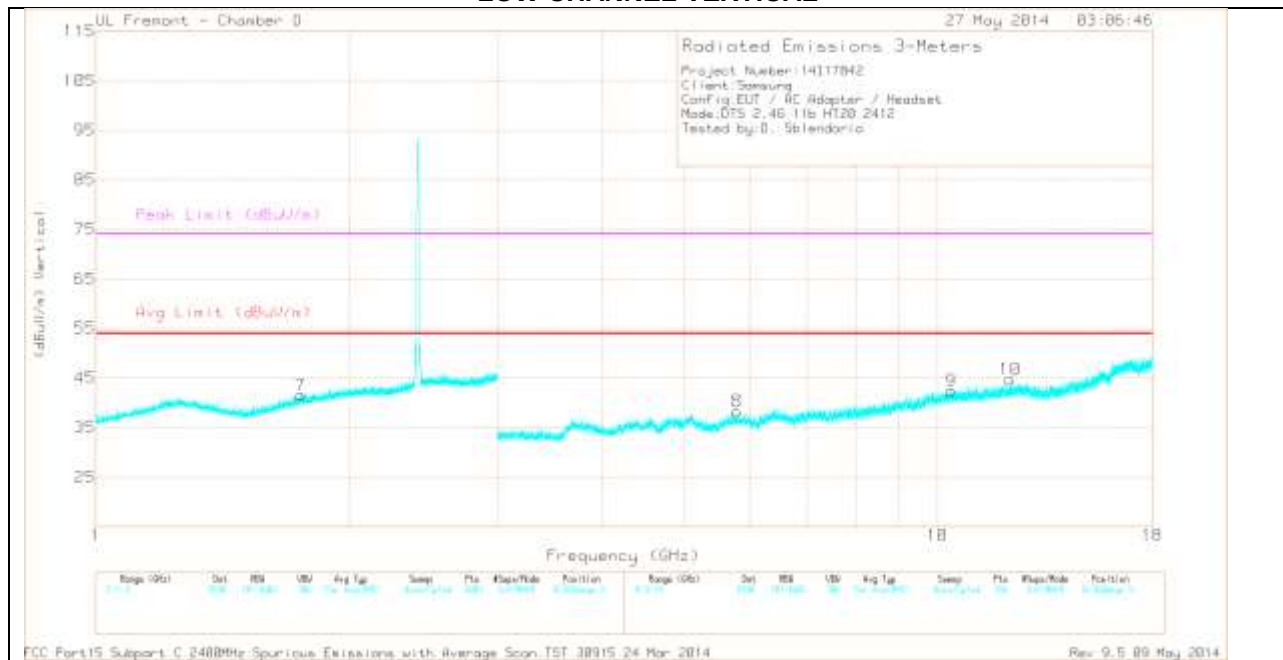
HARMONICS AND SPURIOUS EMISSIONS

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.

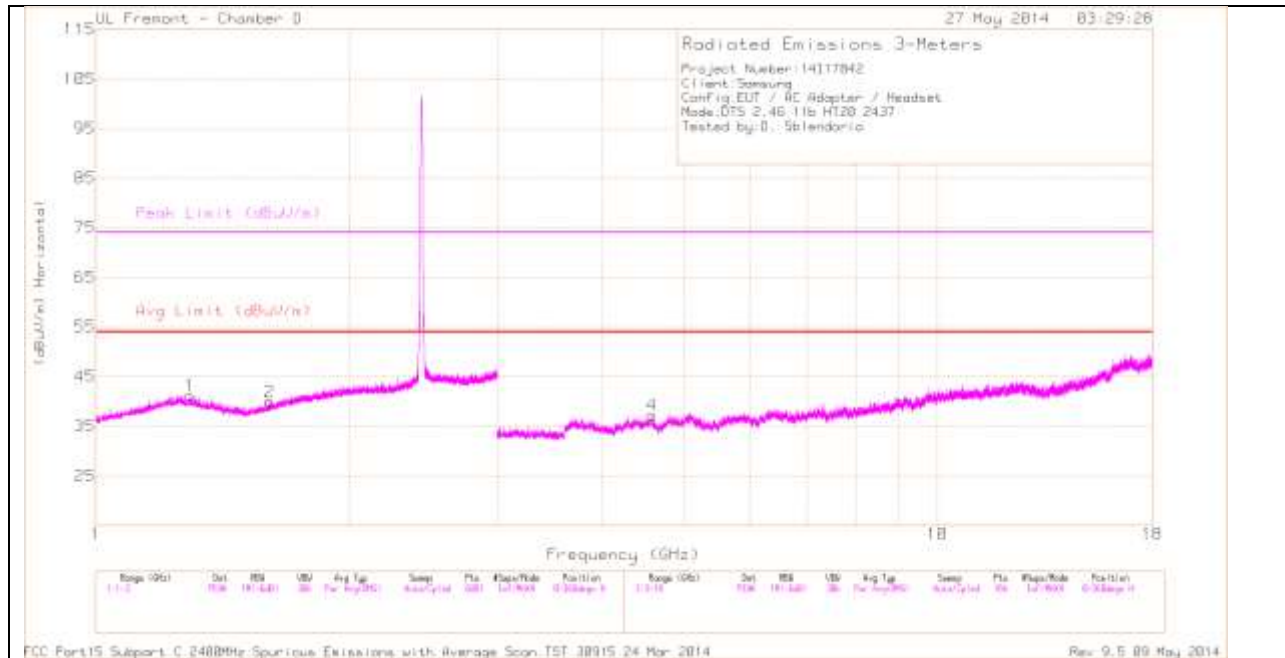
LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (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
1	* 1.238	33.84	PK	29.4	-22.1	41.14	-	-	74	-32.86	0-360	100	H
2	* 1.57	34.09	PK	27.6	-21.5	40.19	-	-	74	-33.81	0-360	100	H
4	* 3.627	31.86	PK	32.5	-28.2	36.16	-	-	74	-37.84	0-360	100	H
5	* 5.103	30.92	PK	33.6	-26.1	38.42	-	-	74	-35.58	0-360	100	H
10	* 12.203	27.7	PK	38.4	-21.4	44.7	-	-	74	-29.3	0-360	201	V
7	1.75	33.44	PK	29.4	-21.3	41.54	-	-	-	-	0-360	100	V
3	2.012	34.48	PK	30.7	-21.2	43.98	-	-	-	-	0-360	100	H
8	5.772	31.1	PK	34.2	-27	38.3	-	-	-	-	0-360	100	V
6	7.232	29.79	PK	35.1	-25	39.89	-	-	-	-	0-360	100	H
9	10.378	26.17	PK	37.1	-20.8	42.47	-	-	-	-	0-360	201	V

PK - Peak detector

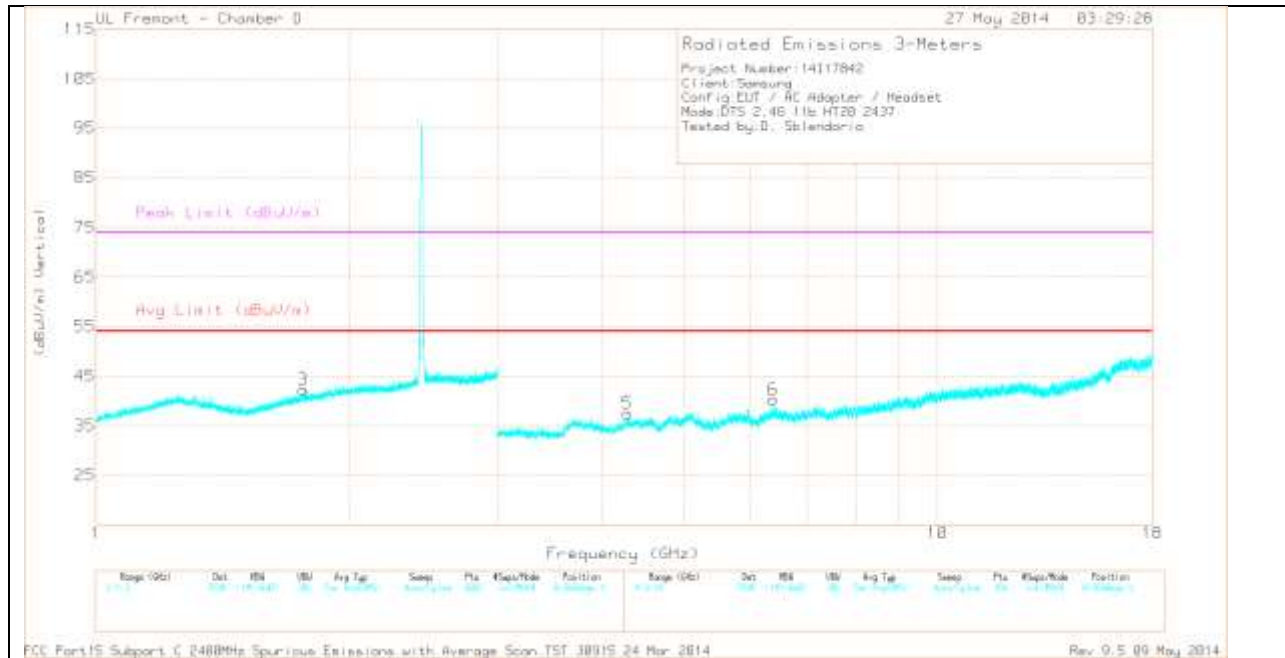
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

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.

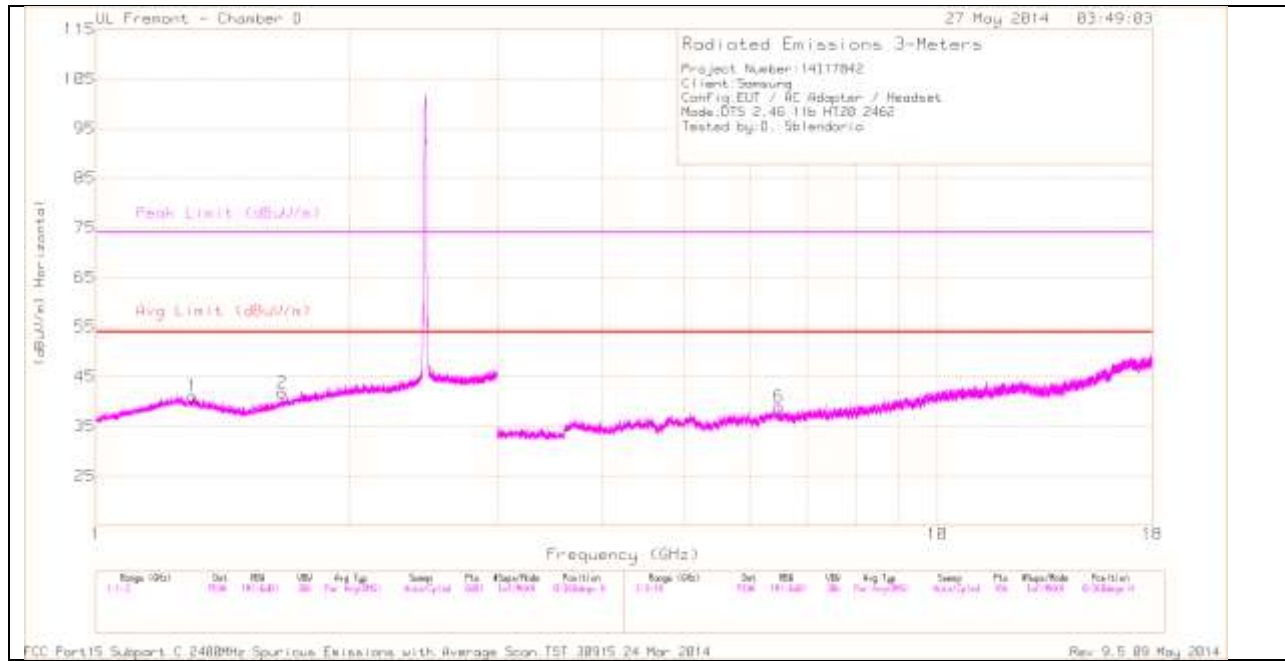
MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (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
1	* 1.294	34.05	PK	29.1	-22	41.15	-	-	74	-32.85	0-360	100	H
2	* 1.61	33.61	PK	28	-21.7	39.91	-	-	74	-34.09	0-360	201	H
4	* 4.576	30.18	PK	33.5	-26.5	37.18	-	-	74	-36.82	0-360	100	H
5	* 4.283	31.84	PK	33	-27.4	37.44	-	-	74	-36.56	0-360	100	V
3	1.765	34.21	PK	29.5	-21.4	42.31	-	-	-	-	0-360	201	V
6	6.38	31.53	PK	35	-26.2	40.33	-	-	-	-	0-360	100	V

PK - Peak detector

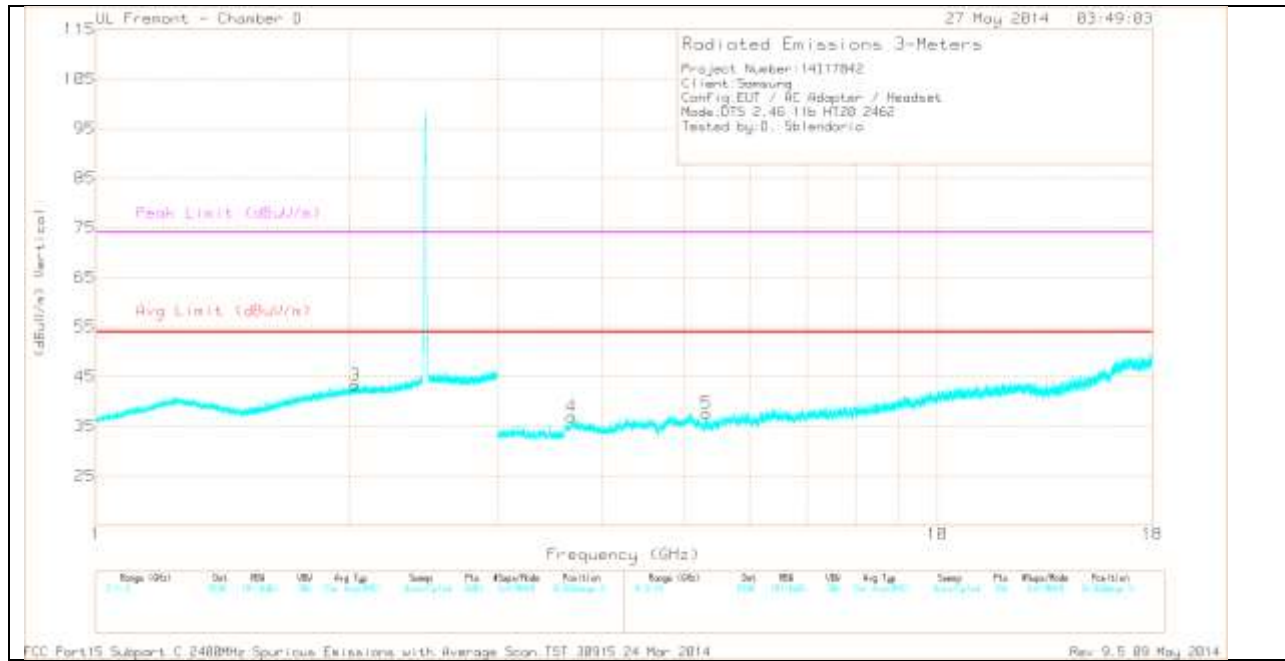
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

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



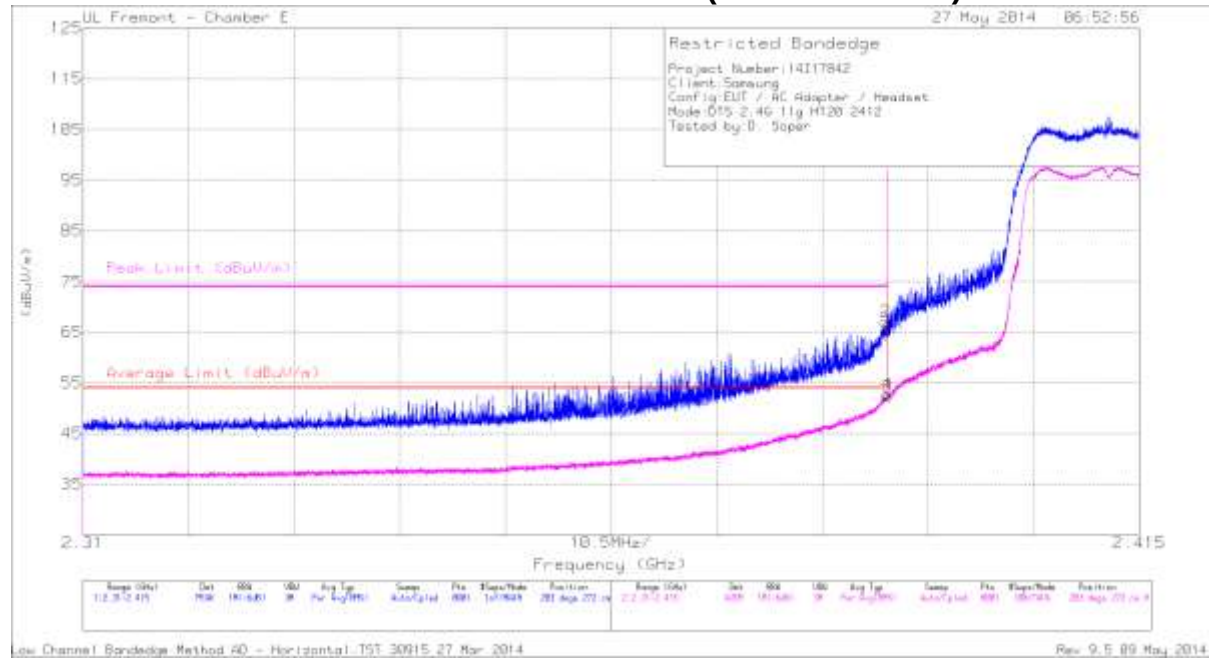
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (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
1	* 1.304	33.99	PK	29	-21.9	41.09	-	-	74	-32.91	0-360	100	H
2	* 1.666	34.55	PK	28.6	-21.4	41.75	-	-	74	-32.25	0-360	100	H
4	* 3.676	32.47	PK	32.6	-28.1	36.97	-	-	74	-37.03	0-360	100	V
3	2.034	33.68	PK	30.7	-21.1	43.28	-	-	-	-	0-360	100	V
5	5.313	31.31	PK	33.8	-27.5	37.61	-	-	-	-	0-360	201	V
6	6.483	30.65	PK	35	-26.6	39.05	-	-	-	-	0-360	100	H

PK - Peak detector

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

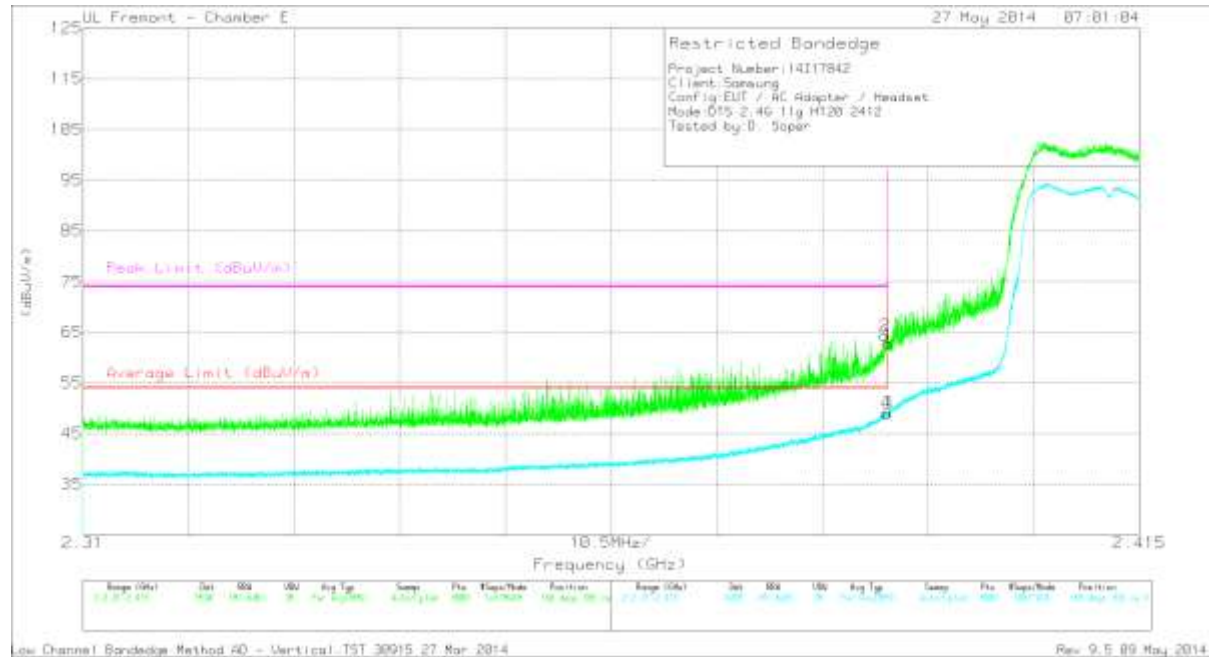


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	58.28	PK	32	-24.7	0	65.58	-	-	74	-8.42	203	272	H
2	* 2.39	59.74	PK	32	-24.7	0	67.04	-	-	74	-6.96	203	272	H
3	* 2.39	44.72	RMS	32	-24.7	.3	52.32	54	-1.68	-	-	203	272	H
4	* 2.39	45.12	RMS	32	-24.7	.3	52.72	54	-1.28	-	-	203	272	H

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

PK - Peak detector

RMS - RMS detection

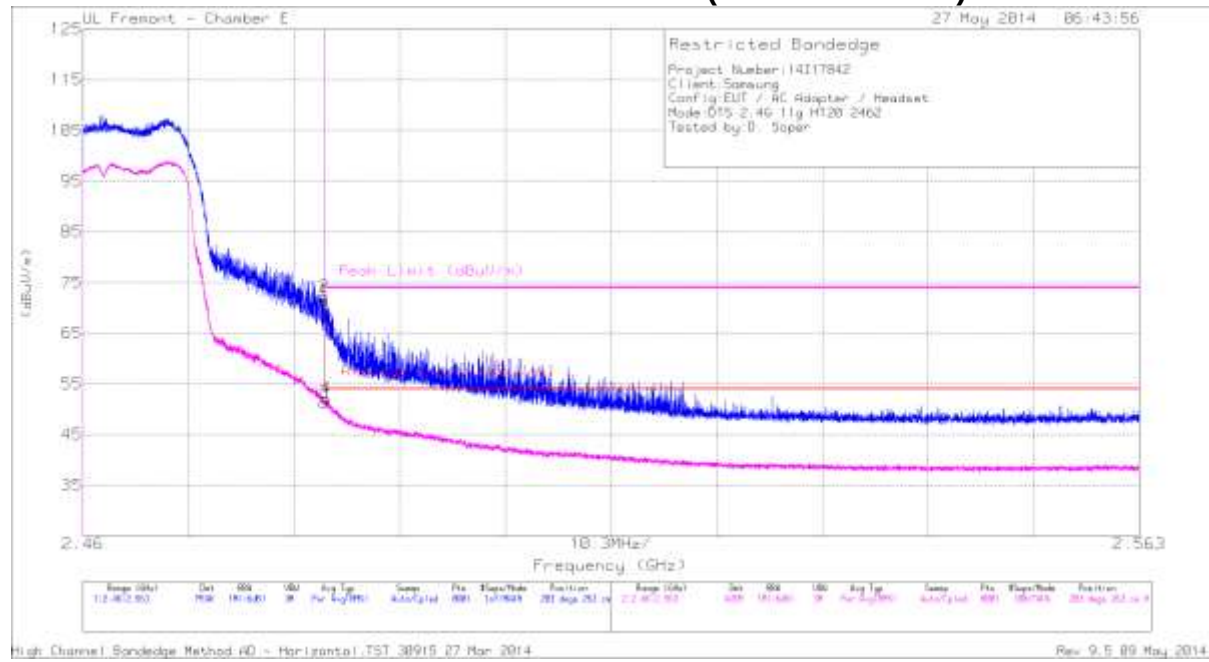


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	55.55	PK	32	-24.7	0	62.85	-	-	74	-11.15	166	365	V
2	* 2.39	57.01	PK	32	-24.7	0	64.31	-	-	74	-9.69	166	365	V
3	* 2.39	41.43	RMS	32	-24.7	.3	49.03	54	-4.97	-	-	166	365	V
4	* 2.39	41.44	RMS	32	-24.7	.3	49.04	54	-4.96	-	-	166	365	V

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

PK - Peak detector

RMS - RMS detection

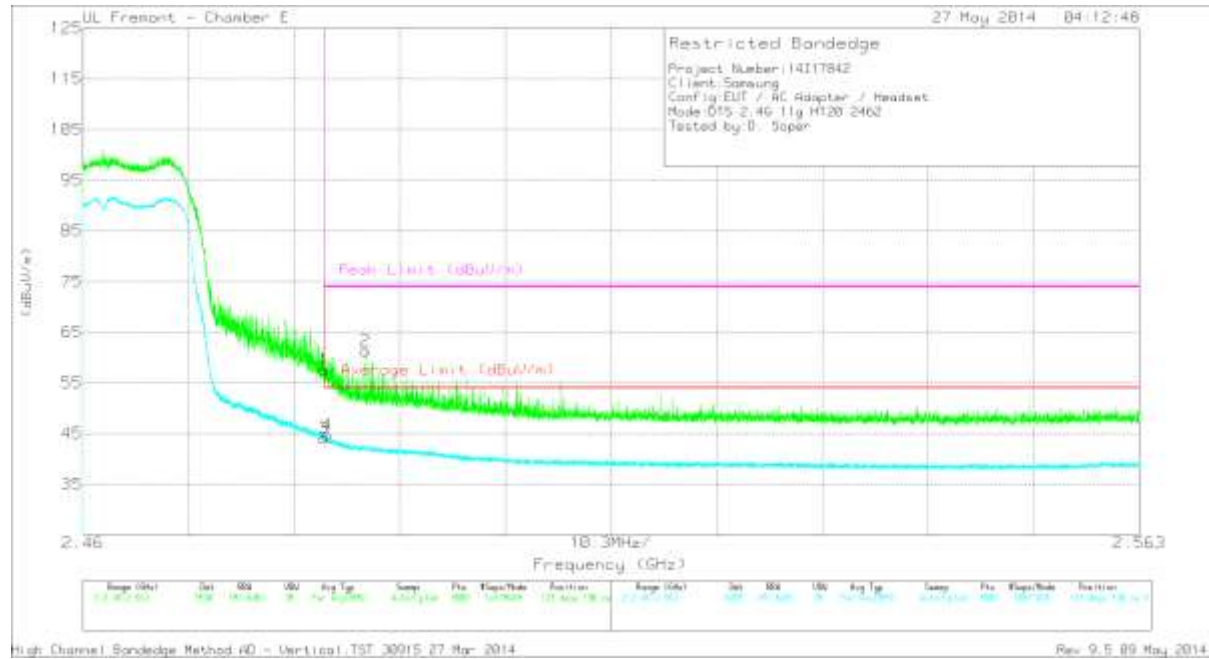
AUTHORIZED BANDEDGE (HIGH CHANNEL)

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	63.56	PK	32.3	-24.3	0	71.56	-	-	74	-2.44	203	263	H
2	* 2.484	64.23	PK	32.3	-24.3	0	72.23	-	-	74	-1.77	203	263	H
3	* 2.484	42.96	RMS	32.3	-24.3	.3	51.26	54	-2.74	-	-	203	263	H
4	* 2.484	43.81	RMS	32.3	-24.3	.3	52.11	54	-1.89	-	-	203	263	H

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

PK - Peak detector

RMS - RMS detection



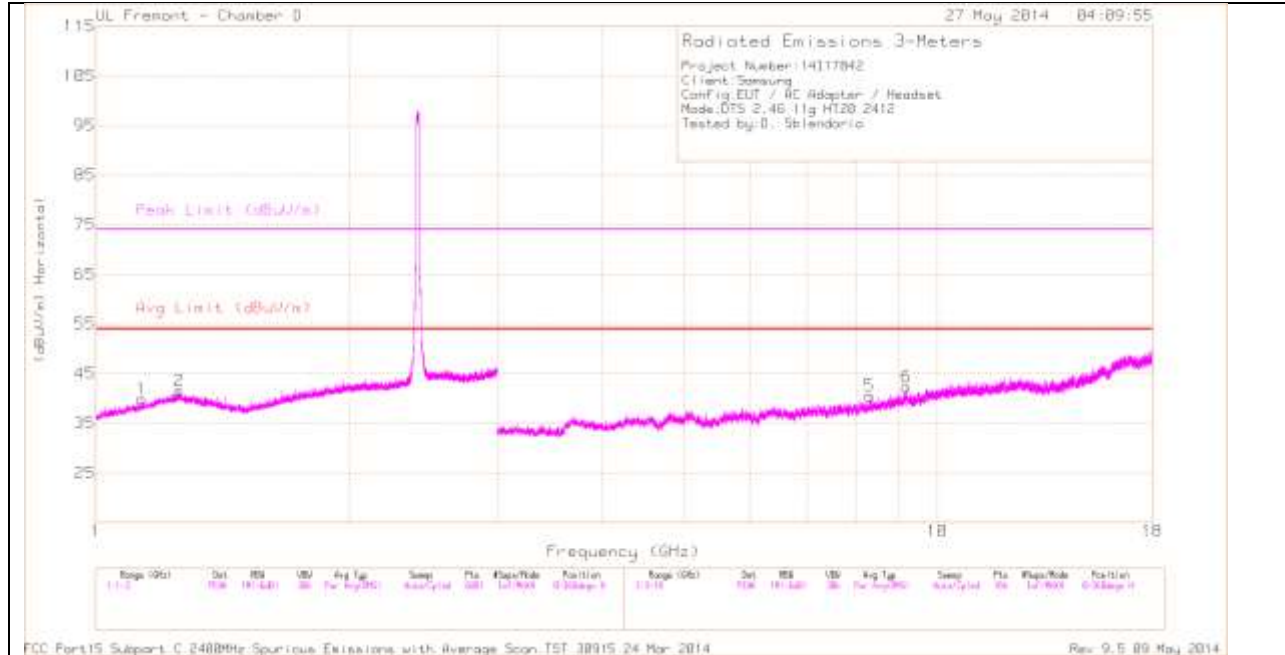
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

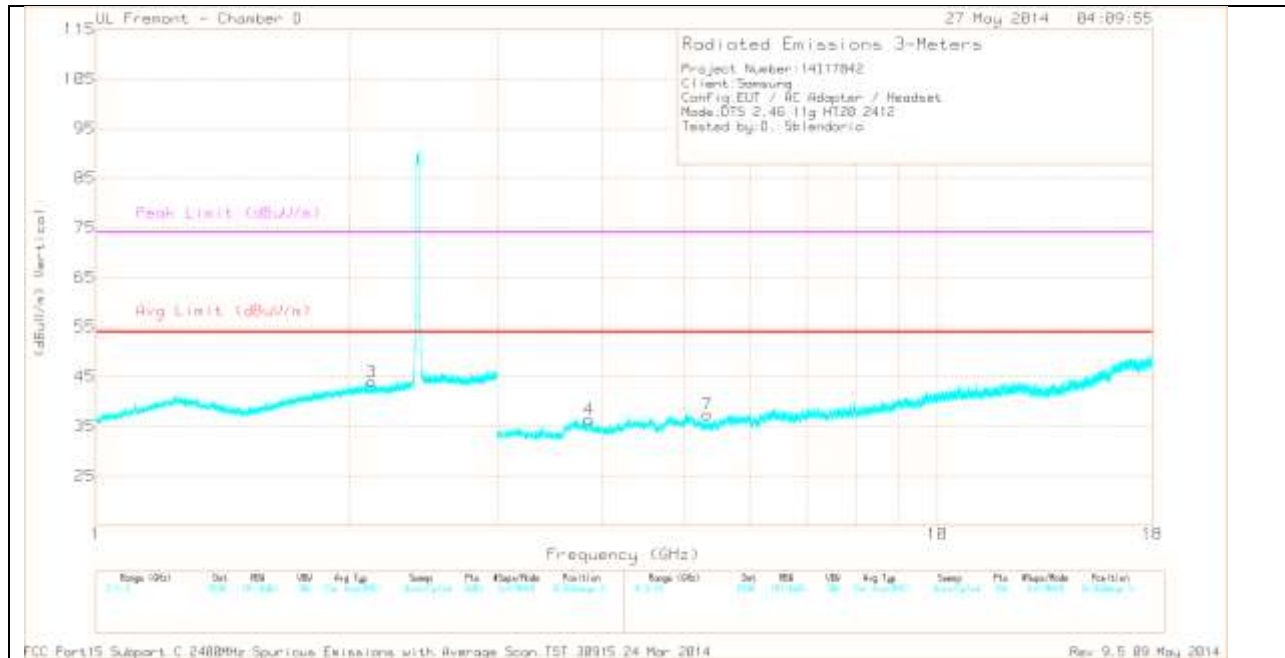
HARMONICS AND SPURIOUS EMISSIONS

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.

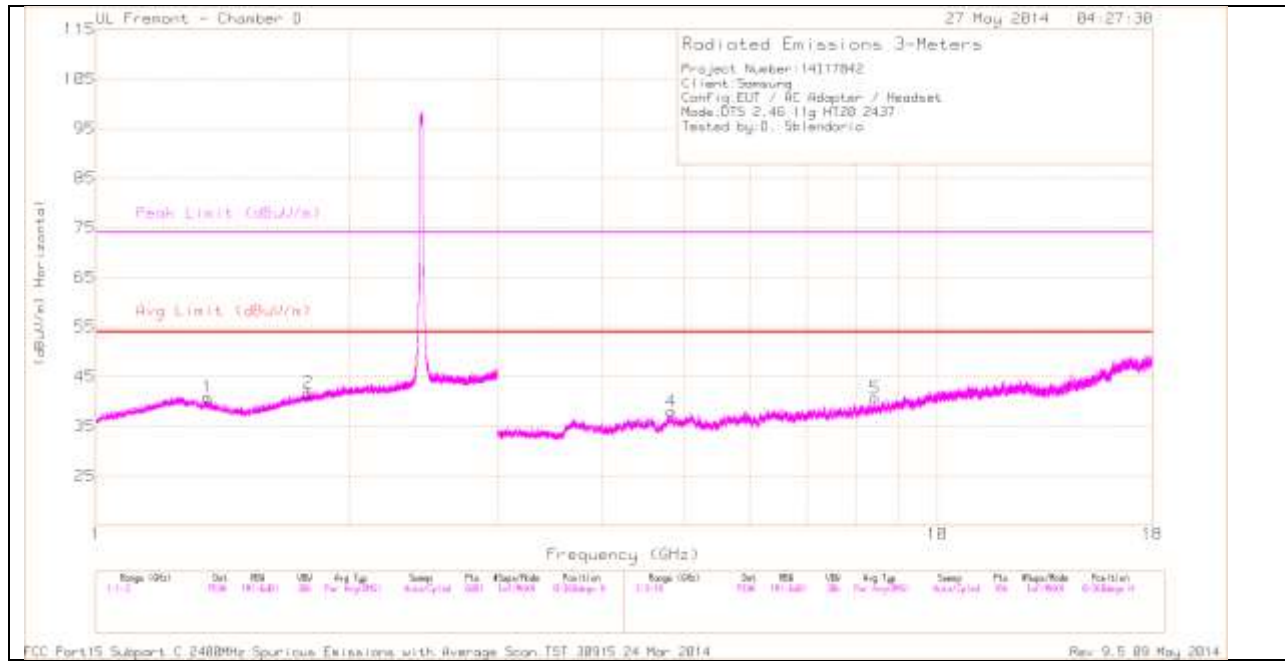
LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cb/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.133	34.17	PK	28	-22.3	0	39.87	-	-	74	-34.13	0-360	100	H
2	* 1.256	34.1	PK	29.5	-22.1	0	41.5	-	-	74	-32.5	0-360	100	H
5	* 8.307	28.81	PK	35.3	-23.6	0	40.51	-	-	74	-33.49	0-360	201	H
6	* 9.19	27.64	PK	35.9	-21.2	0	42.34	-	-	74	-31.66	0-360	201	H
4	* 3.857	32.29	PK	32.8	-28.8	0	36.29	-	-	74	-37.71	0-360	201	V
3	2.128	34.1	PK	30.6	-20.8	0	43.9	-	-	-	-	0-360	100	V
7	5.326	31.04	PK	33.8	-27.5	0	37.34	-	-	-	-	0-360	201	V

PK - Peak detector

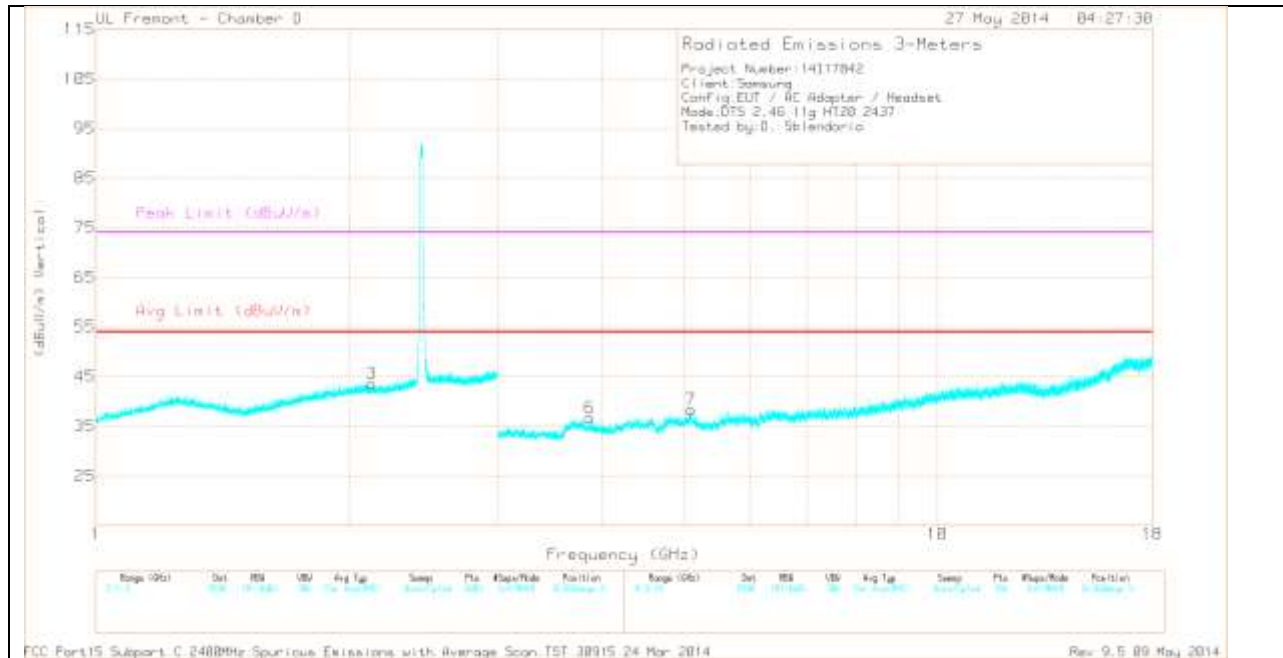
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

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.

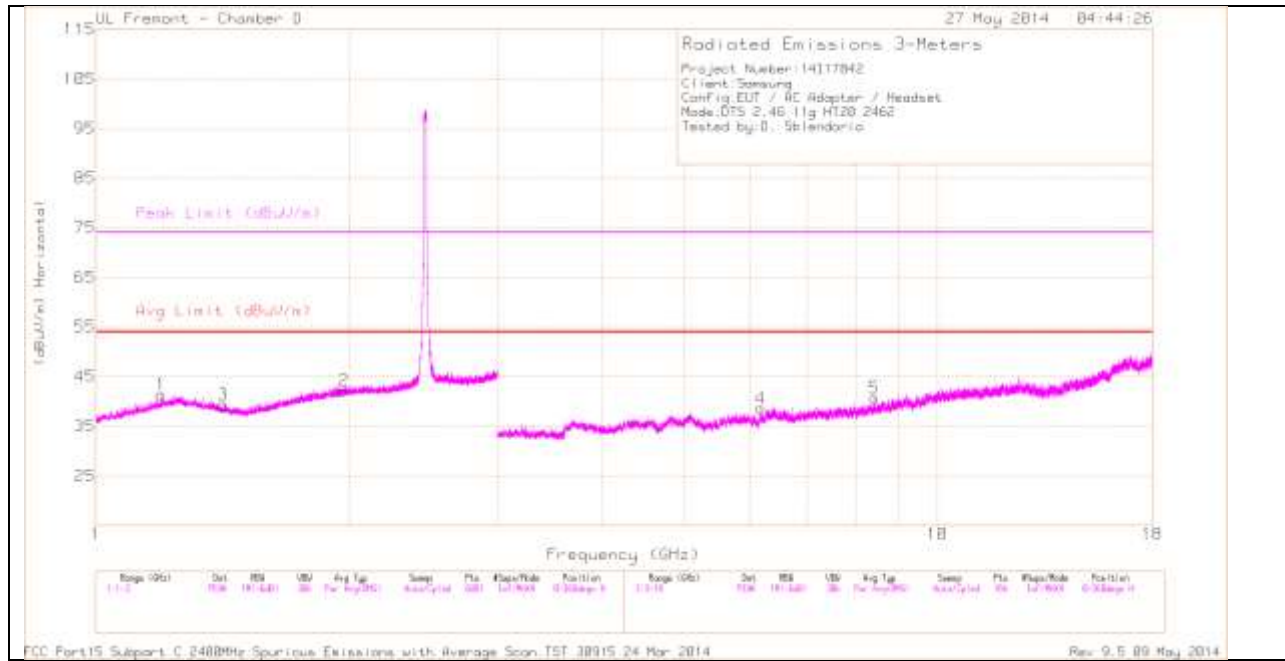
MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT712 (dB/m)	Amp/Cb/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.357	34.37	PK	28.4	-21.9	0	40.87	-	-	74	-33.13	0-360	100	H
4	* 4.827	31.14	PK	33.5	-26.7	0	37.94	-	-	74	-36.06	0-360	201	H
5	* 8.436	28.91	PK	35.4	-23.6	0	40.71	-	-	74	-33.29	0-360	100	H
6	* 3.861	32.58	PK	32.8	-28.7	0	36.68	-	-	74	-37.32	0-360	201	V
7	* 5.09	30.67	PK	33.6	-25.9	0	38.37	-	-	74	-35.63	0-360	201	V
2	1.789	33.54	PK	29.6	-21.3	0	41.84	-	-	-	-	0-360	100	H
3	2.126	33.69	PK	30.6	-20.7	0	43.59	-	-	-	-	0-360	100	V

PK - Peak detector

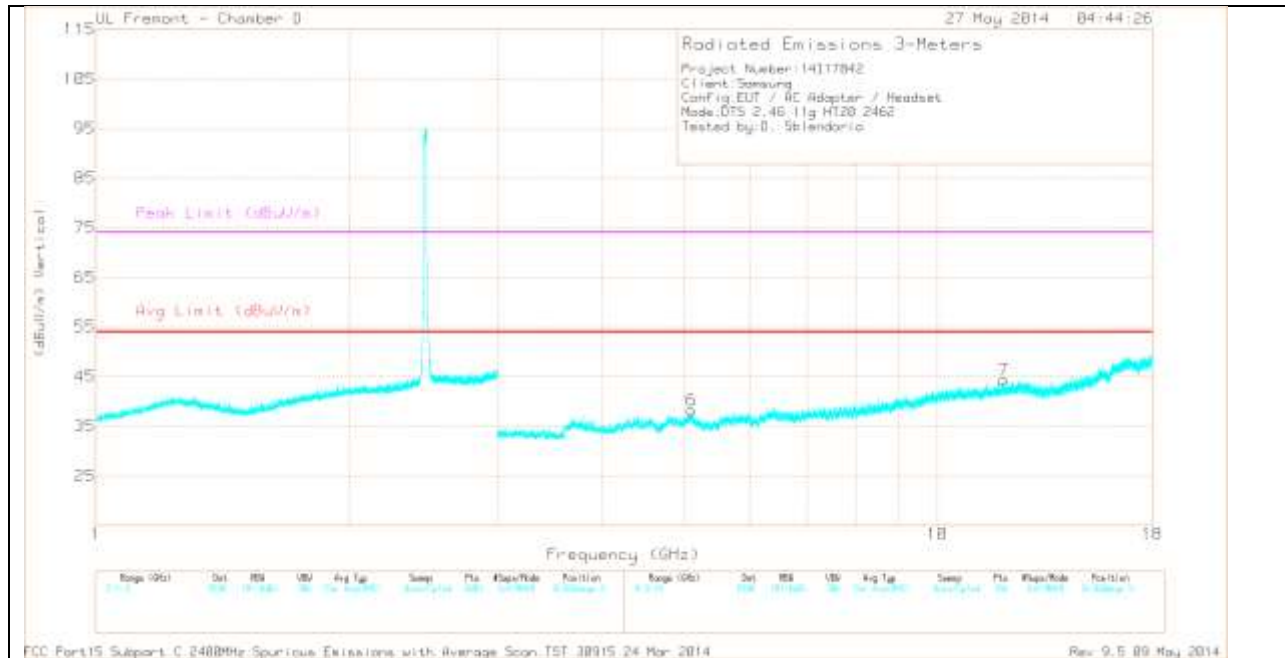
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

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



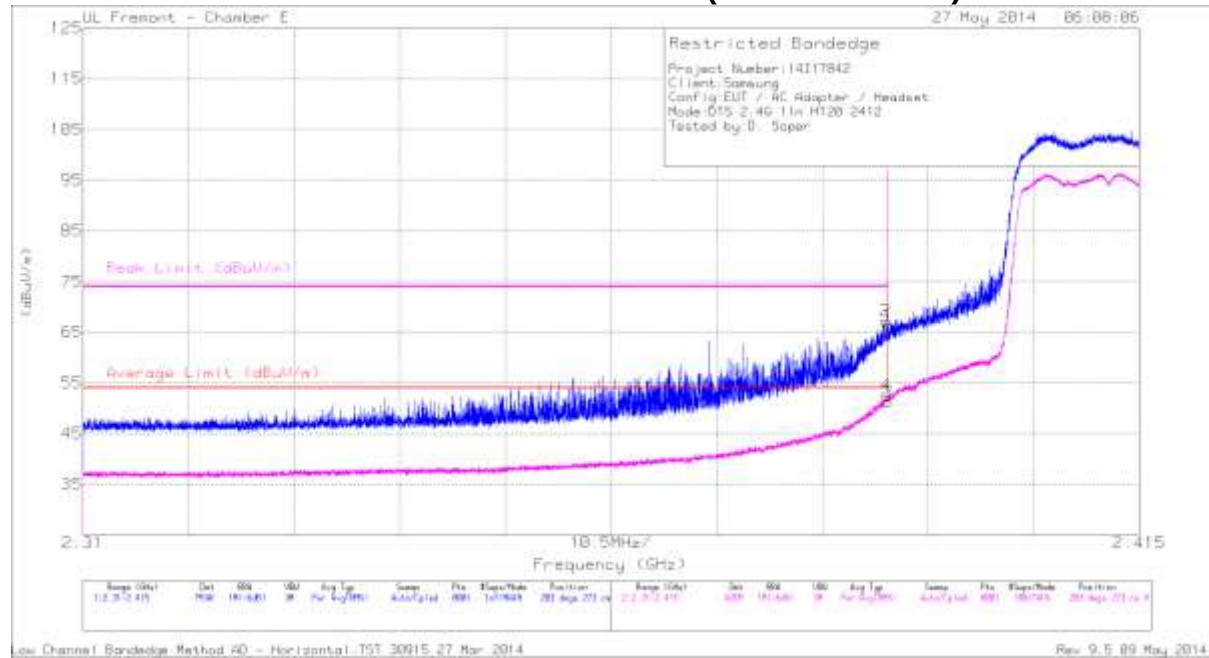
Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cb/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.196	34.65	PK	28.8	-22	0	41.45	-	-	74	-32.55	0-360	201	H
3	* 1.417	33.61	PK	27.8	-22	0	39.41	-	-	74	-34.59	0-360	100	H
5	* 8.413	28.91	PK	35.4	-23.6	0	40.71	-	-	74	-33.29	0-360	201	H
6	* 5.104	30.76	PK	33.6	-26.1	0	38.26	-	-	74	-35.74	0-360	201	V
7	* 11.99	26.78	PK	38.2	-20.7	0	44.28	-	-	74	-29.72	0-360	201	V
2	1.973	32.66	PK	30.6	-21.1	0	42.16	-	-	-	-	0-360	100	H
4	6.164	30.68	PK	34.8	-26.9	0	38.58	-	-	-	-	0-360	100	H

PK - Peak detector

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

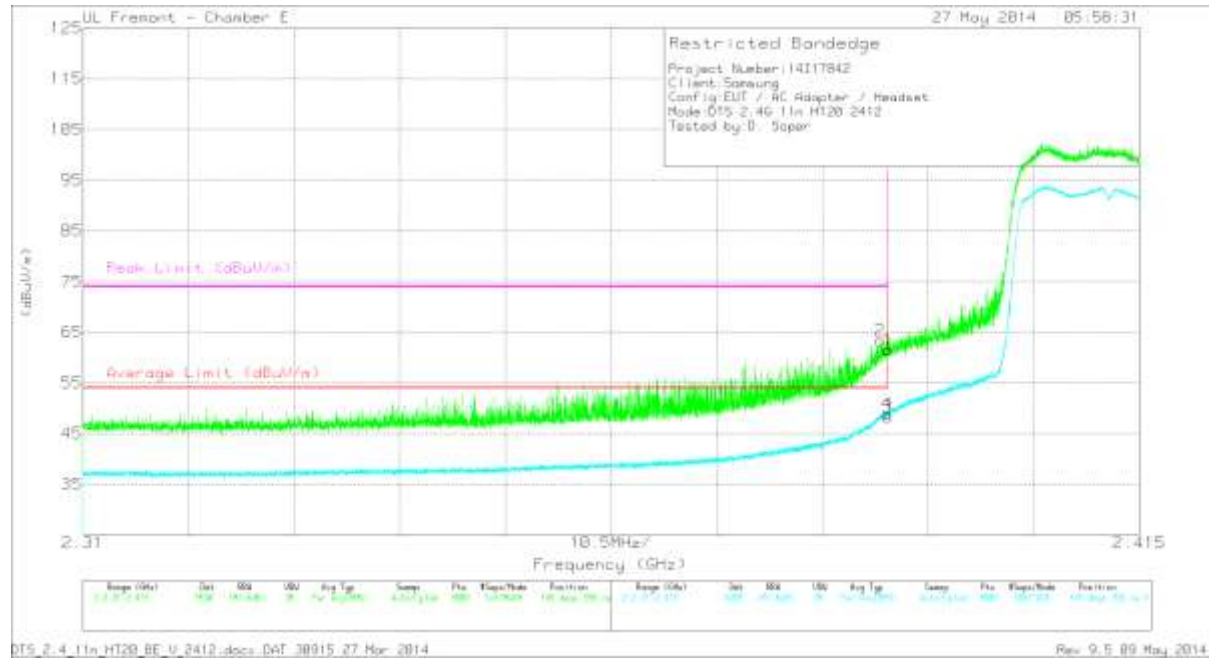


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	59.01	PK	32	-24.7	0	66.31	-	-	74	-7.69	203	273	H
2	* 2.39	59.94	PK	32	-24.7	0	67.24	-	-	74	-6.76	203	273	H
3	* 2.39	43.7	RMS	32	-24.7	.3	51.3	54	-2.7	-	-	203	273	H
4	* 2.39	45.09	RMS	32	-24.7	.3	52.69	54	-1.31	-	-	203	273	H

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

PK - Peak detector

RMS - RMS detection

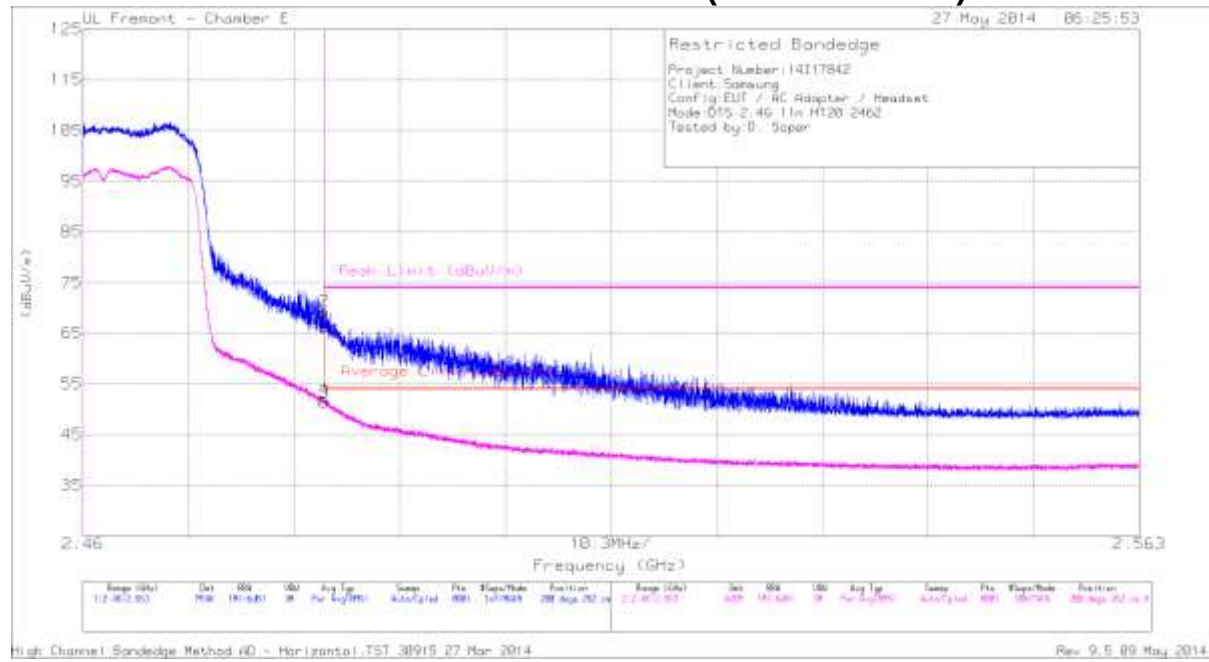


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Plt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	54.14	PK	32	-24.7	0	61.44	-	-	74	-12.56	145	358	V
2	* 2.389	55.99	PK	32	-24.7	0	63.29	-	-	74	-10.71	145	358	V
3	* 2.39	41.06	RMS	32	-24.7	.3	48.66	54	-5.34	-	-	145	358	V
4	* 2.39	41.63	RMS	32	-24.7	.3	49.23	54	-4.77	-	-	145	358	V

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

PK - Peak detector

RMS - RMS detection

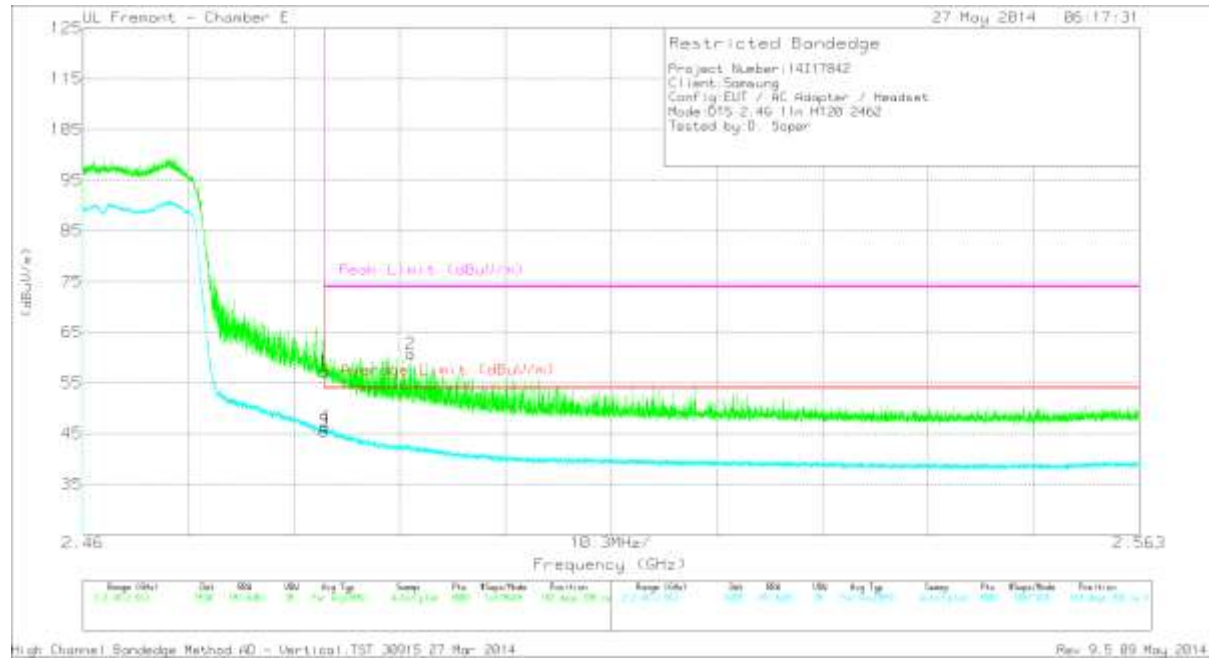
AUTHORIZED BANDEDGE (HIGH CHANNEL)

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T346 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	58.42	PK	32.3	-24.3	0	66.42	-	-	74	-7.58	200	262	H
2	* 2.484	61.27	PK	32.3	-24.3	0	69.27	-	-	74	-4.73	200	262	H
3	* 2.484	43.15	RMS	32.3	-24.3	.3	51.45	54	-2.55	-	-	200	262	H
4	* 2.484	43.64	RMS	32.3	-24.3	.3	51.94	54	-2.06	-	-	200	262	H

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

PK - Peak detector

RMS - RMS detection



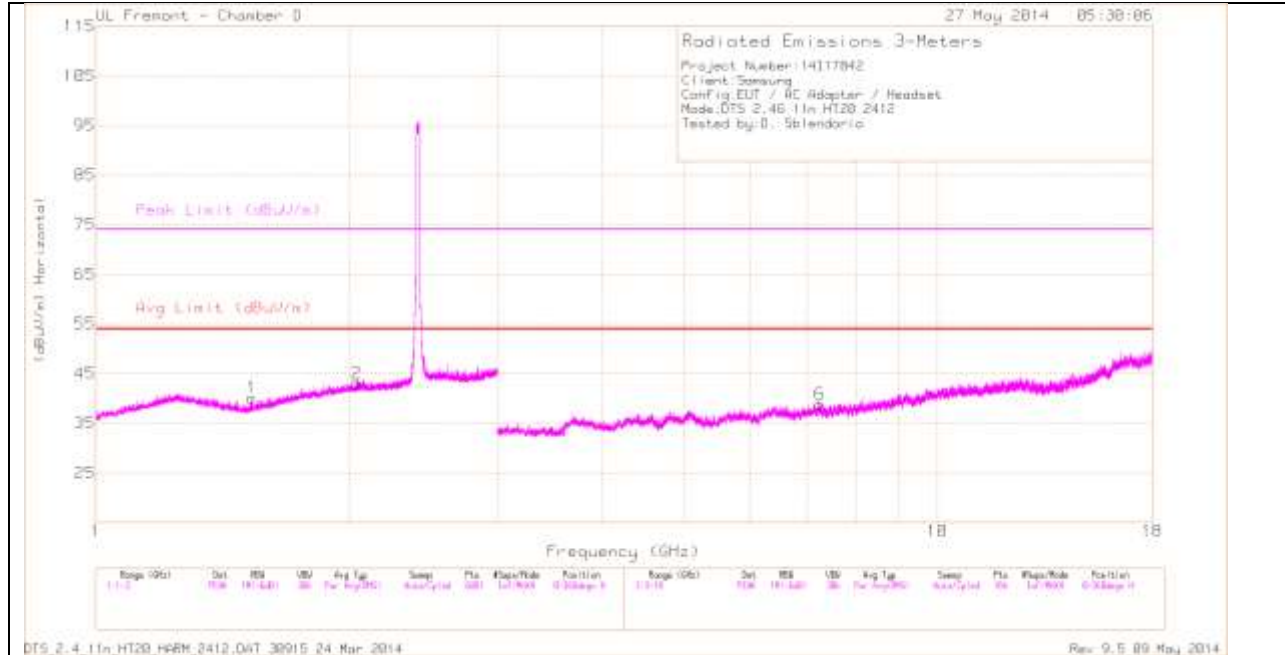
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

RMS - RMS detection

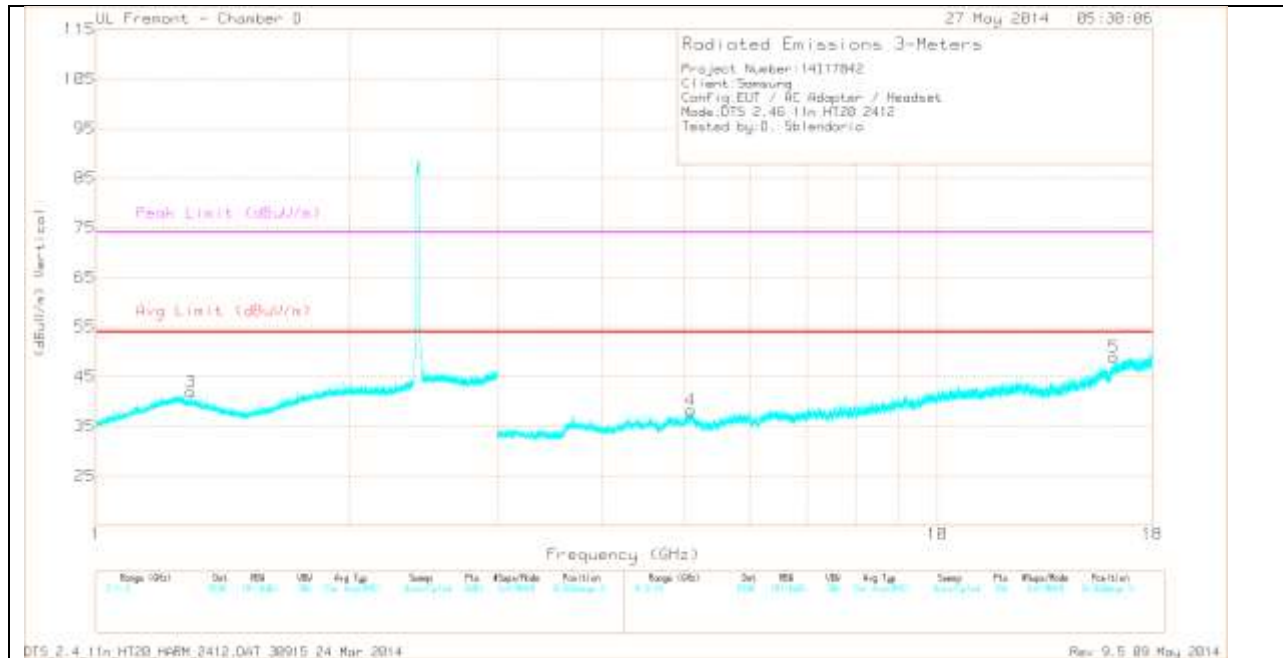
HARMONICS AND SPURIOUS EMISSIONS

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.

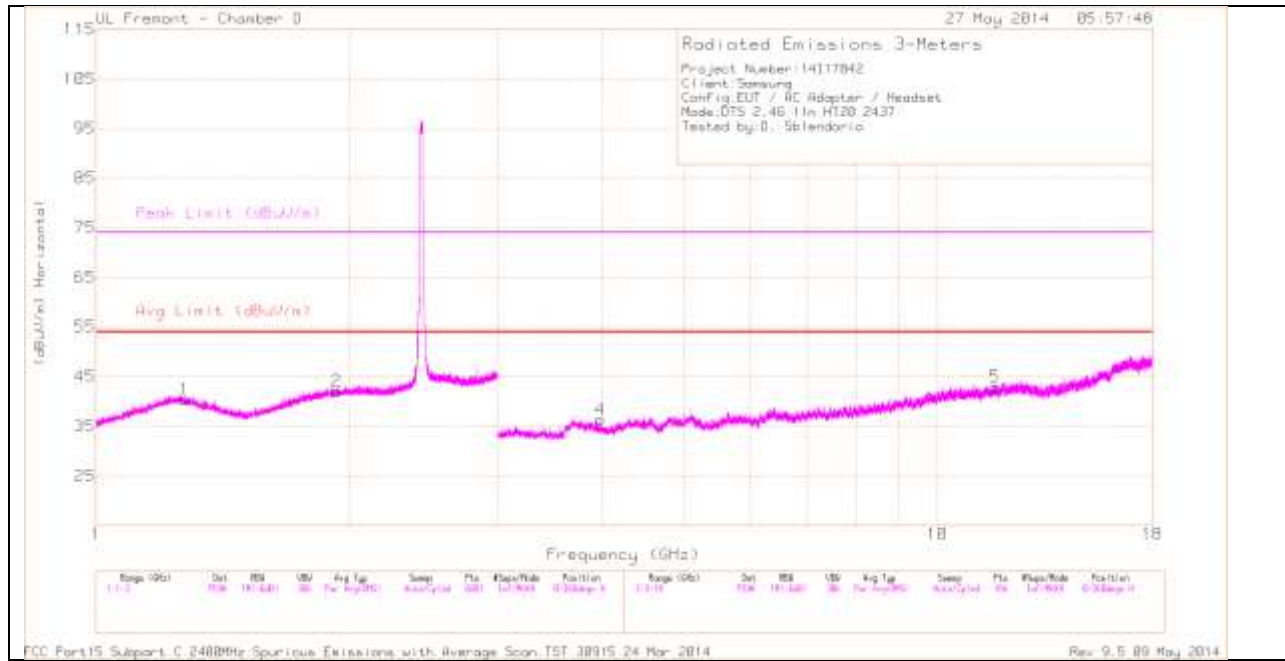
LOW CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AFT712 (dB/m)	Amp/Cb/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.53	34.6	PK	27.2	-21.6	0	40.2	-	-	74	-33.8	0-360	202	H
3	* 1.296	34.86	PK	29.1	-22	0	41.96	-	-	74	-32.04	0-360	100	V
4	* 5.092	30.55	PK	33.6	-25.9	0	38.25	-	-	74	-35.75	0-360	100	V
2	2.041	33.33	PK	30.7	-21	0	43.03	-	-	-	-	0-360	202	H
6	7.246	28.86	PK	35.1	-25.1	0	38.86	-	-	-	-	0-360	201	H
5	16.215	27.06	PK	40.7	-18.9	0	48.86	-	-	-	-	0-360	100	V

PK - Peak detector

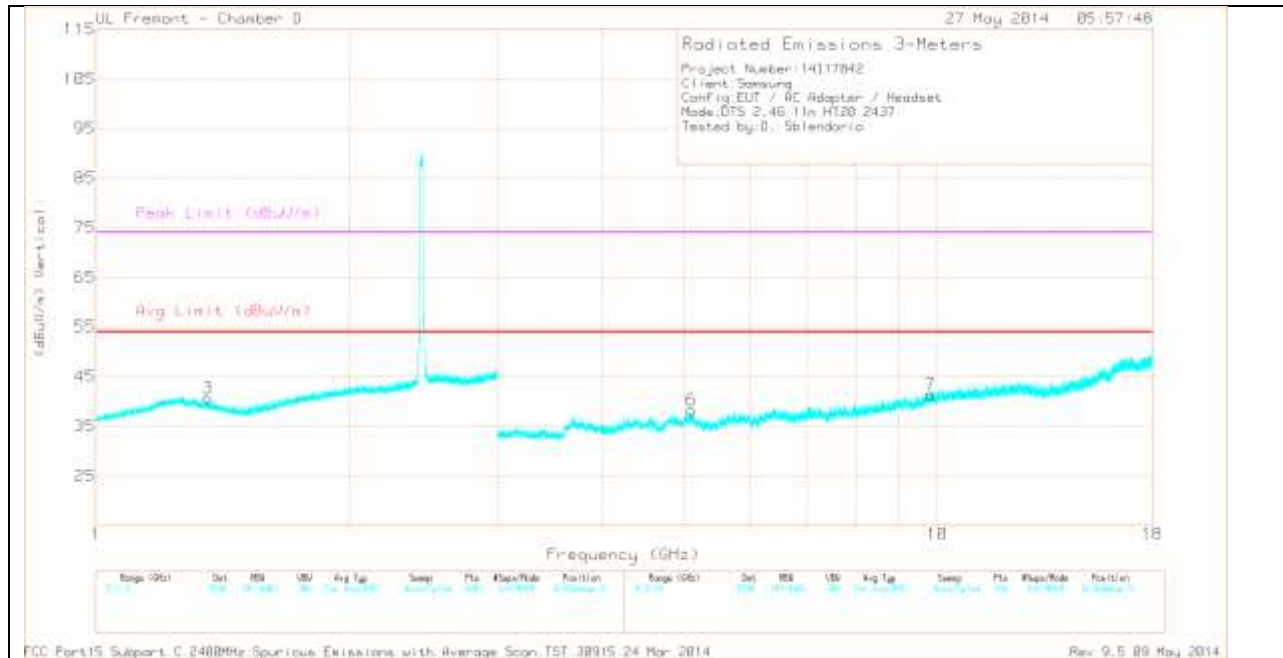
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

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.

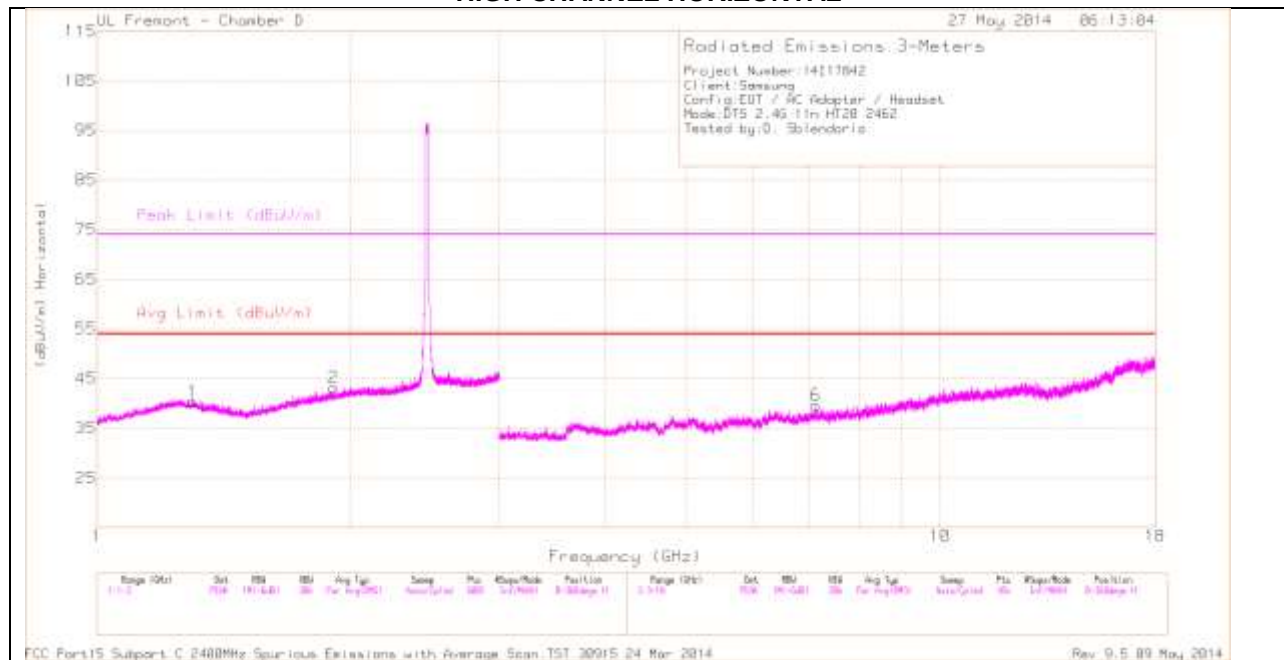
MID CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cb/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.273	33.34	PK	29.3	-22.2	0	40.44	-	-	74	-33.56	0-360	100	H
3	* 1.358	34.13	PK	28.4	-21.9	0	40.63	-	-	74	-33.37	0-360	201	V
4	* 3.979	31.69	PK	32.9	-28.3	0	36.29	-	-	74	-37.71	0-360	100	H
5	* 11.701	25.89	PK	37.9	-20.8	0	42.99	-	-	74	-31.01	0-360	100	H
6	* 5.1	30.7	PK	33.6	-26	0	38.3	-	-	74	-35.7	0-360	201	V
2	1.933	32.82	PK	30.4	-21.2	0	42.02	-	-	-	-	0-360	100	H
7	9.801	26.45	PK	36.5	-21.5	0	41.45	-	-	-	-	0-360	201	V

PK - Peak detector

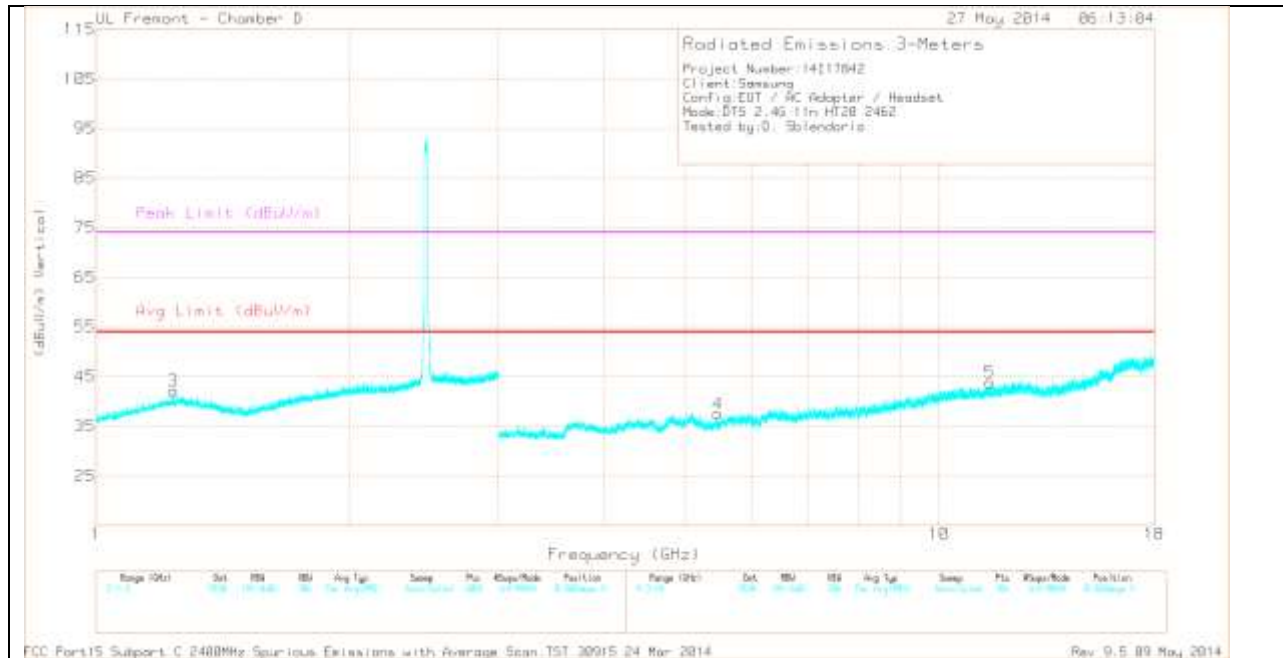
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

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.

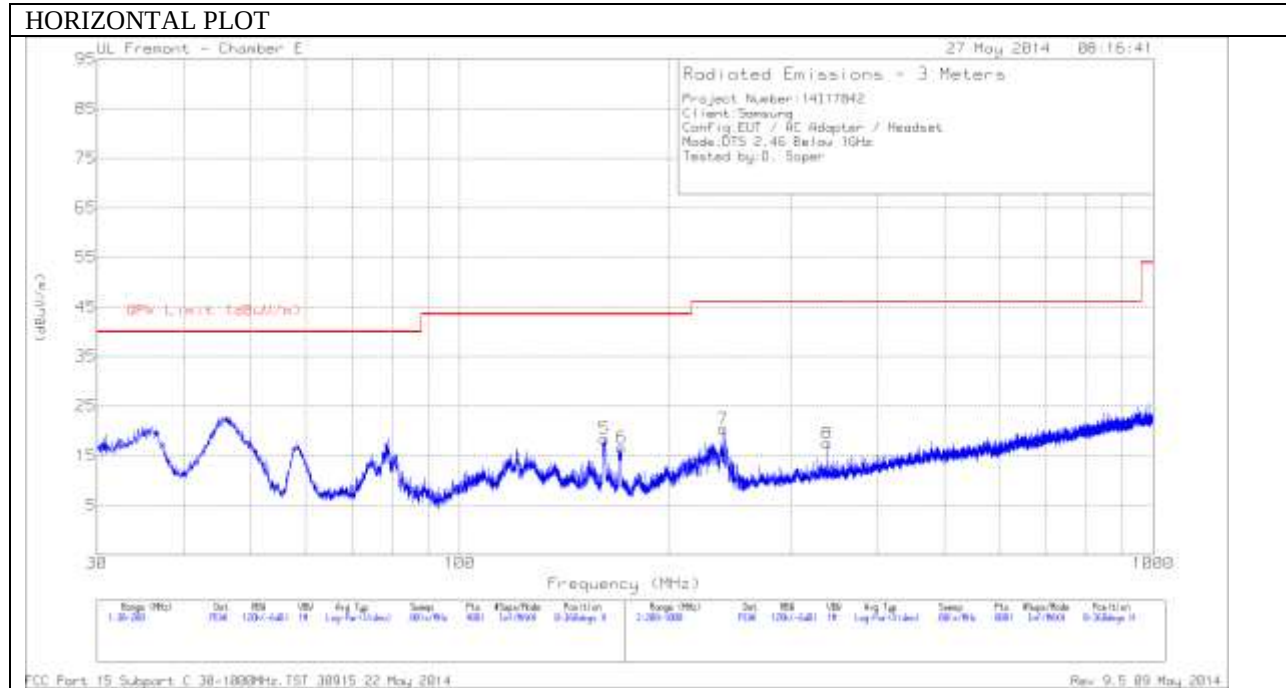
HIGH CHANNEL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T712 (dB/m)	Amp/Cb/Ftr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.299	33.34	PK	29.1	-22	0	40.44	-	-	74	-33.56	0-360	100	H
3	* 1.236	34.76	PK	29.4	-22	0	42.16	-	-	74	-31.84	0-360	100	V
5	* 11.486	27.53	PK	37.7	-21.4	0	43.83	-	-	74	-30.17	0-360	100	V
2	1.908	34.17	PK	30.2	-21.2	0	43.17	-	-	-	-	0-360	201	H
4	5.47	30.86	PK	33.9	-27.3	0	37.46	-	-	-	-	0-360	100	V
6	7.126	29.6	PK	35.1	-25.1	0	39.6	-	-	-	-	0-360	201	H

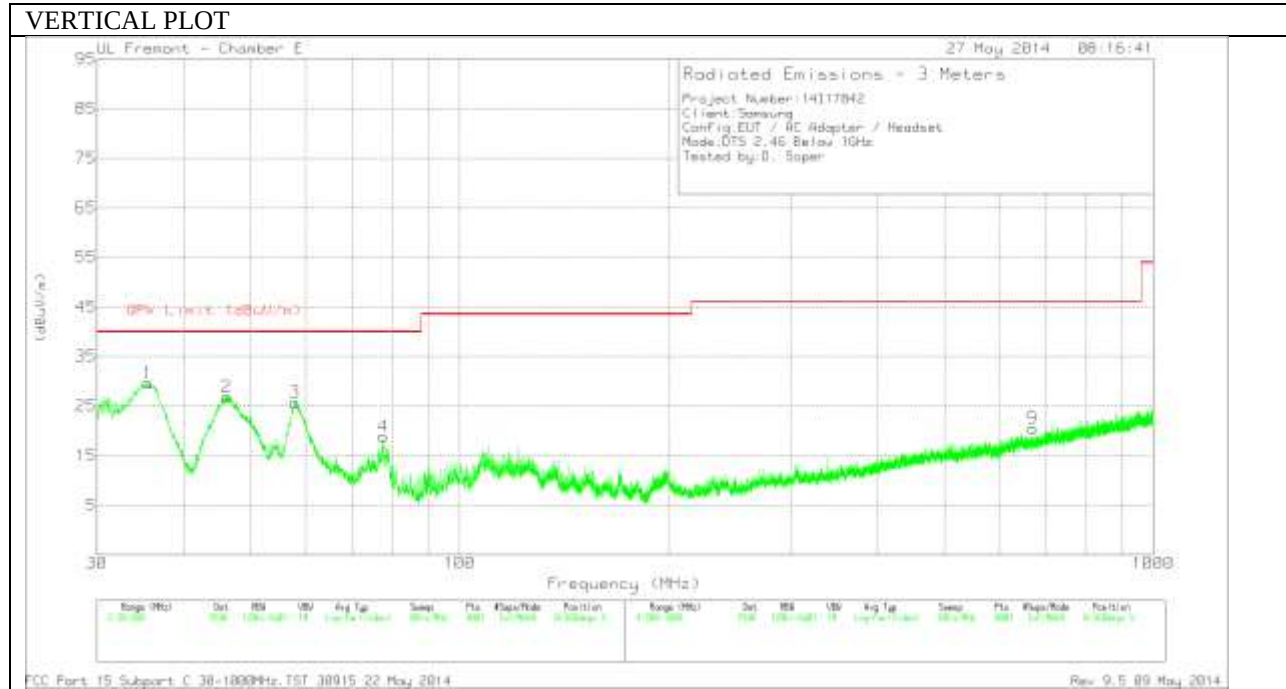
PK - Peak detector

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	Frequency (MHz)	Meter Reading (dBuV)	Det	Hybrid	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 171.0575	35.85	PK	11.7	-30.9	16.65	43.52	-26.87	0-360	100	H
7	* 240	39.42	PK	11.6	-30.6	20.42	46.02	-25.6	0-360	201	H
1	35.4825	43.93	PK	17.5	-31.8	29.63	40	-10.37	0-360	100	V
2	46.1925	48.71	PK	9.8	-31.7	26.81	40	-13.19	0-360	100	V
3	57.88	50.09	PK	7.3	-31.6	25.79	40	-14.21	0-360	100	V
4	77.685	42.53	PK	7.8	-31.5	18.83	40	-21.17	0-360	100	V
5	161.665	37.33	PK	12.1	-31	18.43	43.52	-25.09	0-360	201	H
8	338.8	33.69	PK	14	-30.2	17.49	46.02	-28.53	0-360	100	H
9	669.2	30.07	PK	19.7	-29.2	20.57	46.02	-25.45	0-360	100	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.

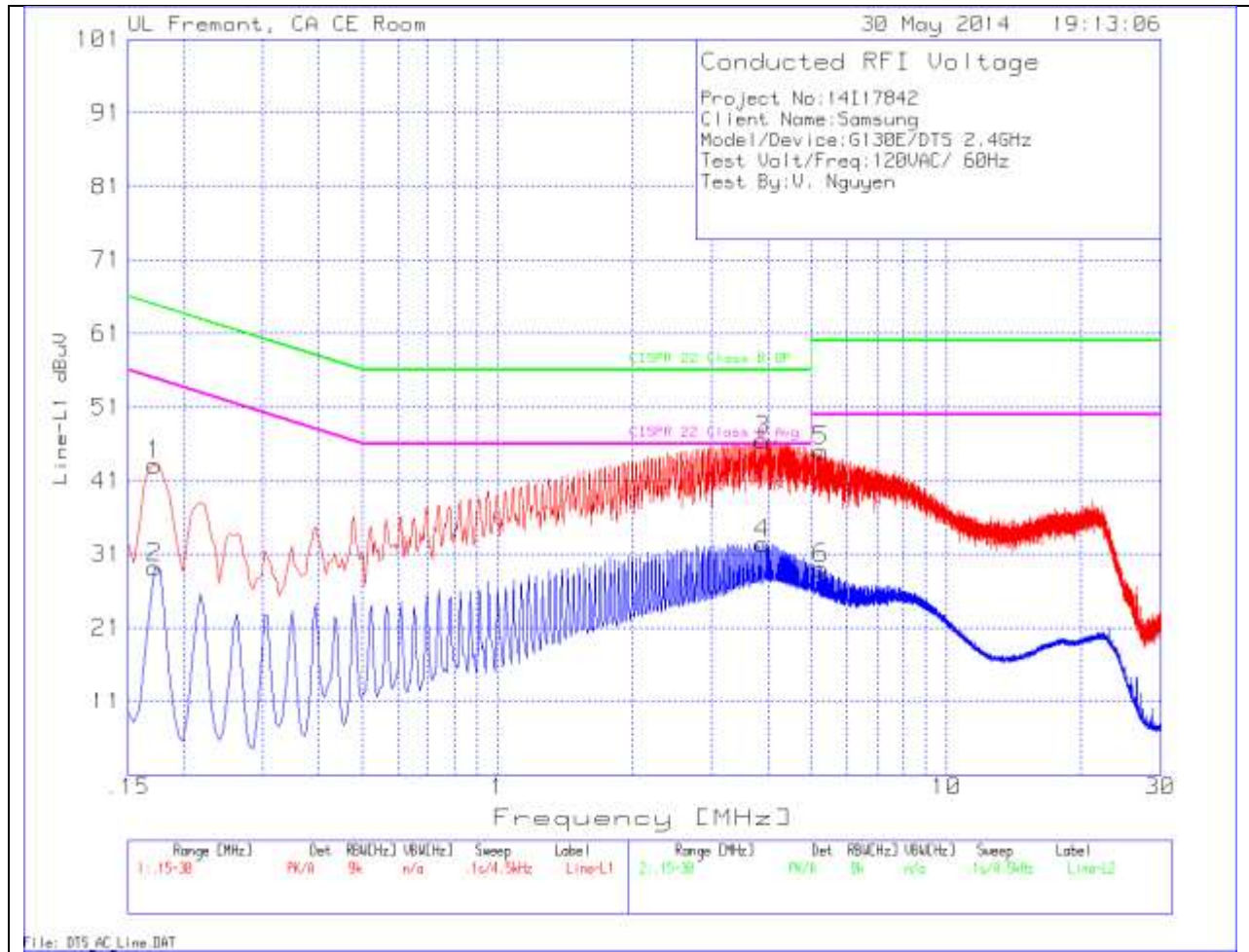
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



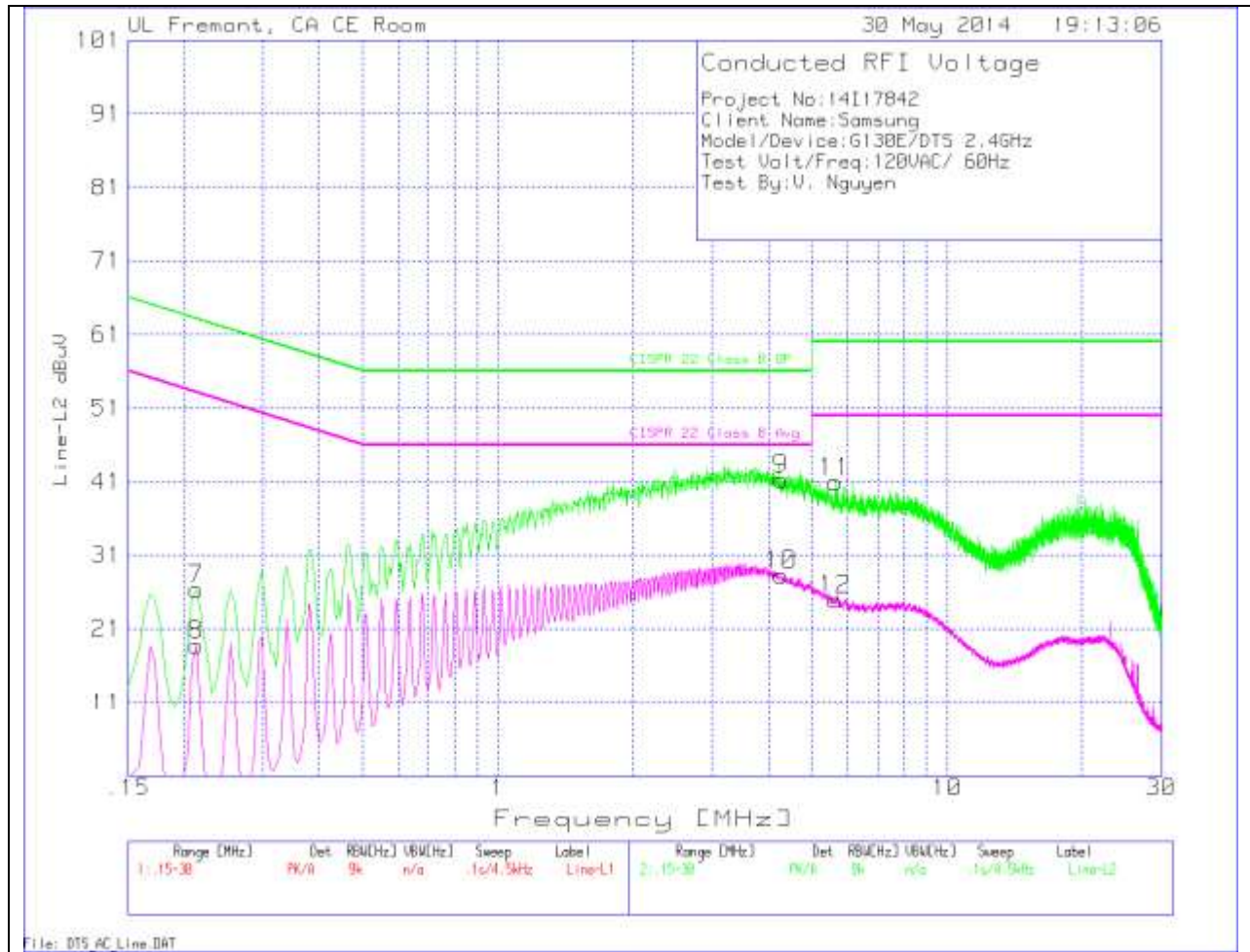
LINE 1 RESULTS

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	.1725	41.88	PK	1.2	0	43.08	64.8	-21.72	-	-
2	.1725	27.96	Av	1.2	0	29.16	-	-	54.8	-25.64
3	3.8895	46.17	PK	.2	.1	46.47	56	-9.53	-	-
4	3.8895	32.08	Av	.2	.1	32.38	-	-	46	-13.62
5	5.2665	44.7	PK	.2	.1	45	60	-15	-	-
6	5.2665	28.78	Av	.2	.1	29.08	-	-	50	-20.92

LINE 2 PLOT



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)
7	.213	25.44	PK	.9	0	26.34	63.1	-36.76	-	-
8	.213	17.85	Av	.9	0	18.75	-	-	53.1	-34.35
9	4.2675	41.03	PK	.2	.1	41.33	56	-14.67	-	-
10	4.2675	28.02	Av	.2	.1	28.32	-	-	46	-17.68
11	5.6445	40.57	PK	.2	.1	40.87	60	-19.13	-	-
12	5.6445	24.67	Av	.2	.1	24.97	-	-	50	-25.03

PK - Peak detector

Av - average detection