FCC CFR47 PART 15 SUBPART C
INDUSTRY CANADA RSS-210 ISSUE 8

CERTIFICATION TEST REPORT

FOR

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

MODEL NUMBER: SM-T333

FCC ID: A3LSMT333
IC: 649E-SMT333

REPORT NUMBER: 15I19760-E3- REVISION A

ISSUE DATE: JANUARY 16, 2015

Prepared for

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
-	1/16/15	Initial Issue	P. Zhang
A	2/2/15	Updated Model Number	L. Nguyen

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: **SAMSUNG ELECTRONICS CO., LTD.**

EUT DESCRIPTION: **Tablet with Bluetooth, DTS/UNII a/b/g/n, and ANT+.**

MODEL: **SM-T333**

SERIAL NUMBER: **2033413 (Conducted); 20333416 (Radiated)**

DATE TESTED: **JANUARY 12-16, 2015**

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 Issue 8 Annex 8	Pass
INDUSTRY CANADA RSS-GEN Issue 4	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, RSS-GEN Issue 4, and RSS-210 Issue 8.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☐ Chamber A(IC: 2324B-1)	☐ Chamber D(IC: 2324B-4)
☒ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☒ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☐ Chamber G(IC: 2324B-7)
	☐ Chamber H(IC: 2324B-8)

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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 26000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a 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	15.2	33.11
2412 - 2462	802.11g	13.3	21.38
2412 - 2462	802.11n HT20	10.9	12.30

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -0.6 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	ETA0U81EWE	N/A	N/A
Earphone	SAMSUNG	N/A	N/A	N/A

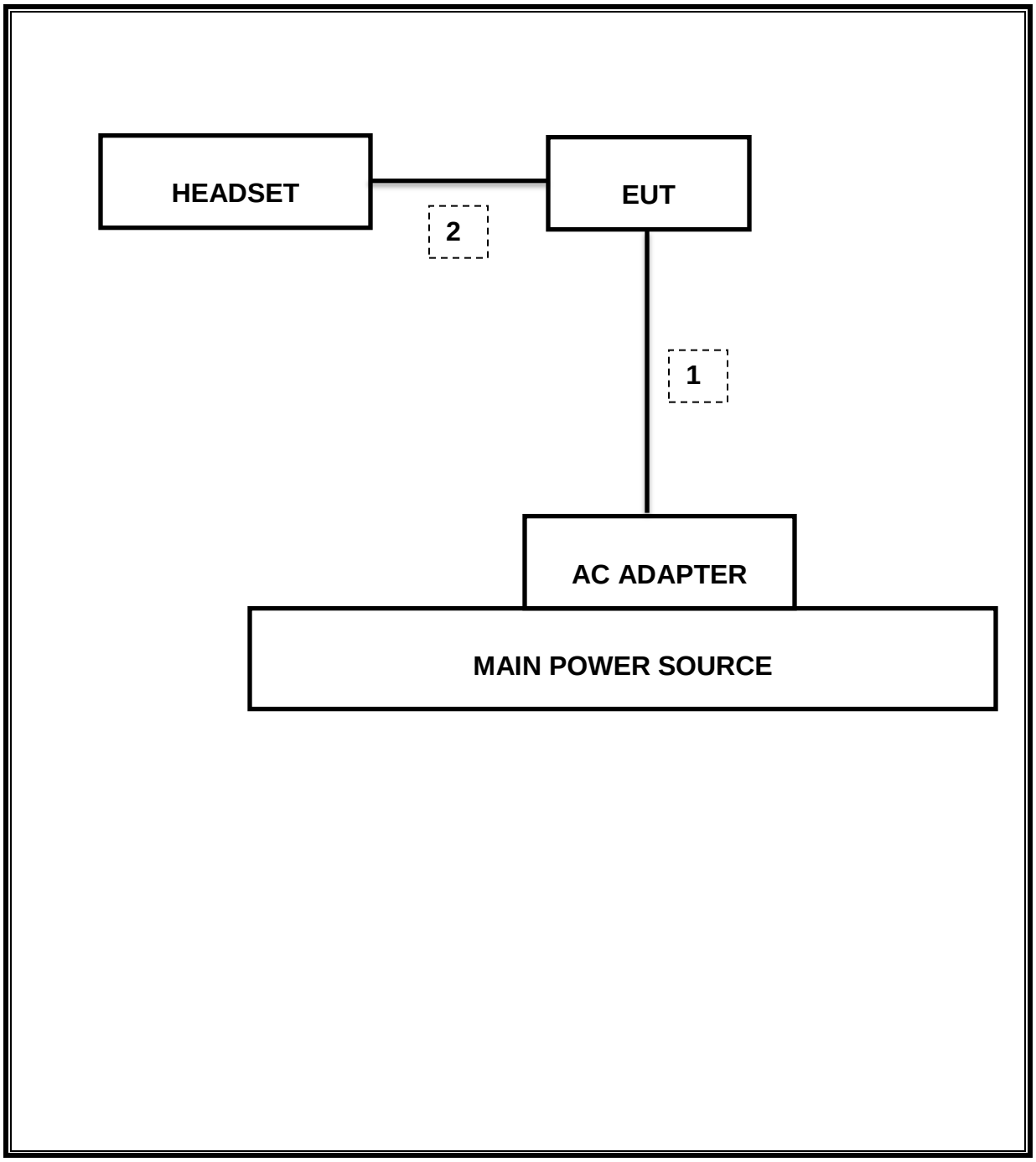
I/O CABLES

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

TEST SETUP

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

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
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

7. MEASUREMENT METHODS

KDB 558074 D01 DTS Meas Guidance v03r02:Measurement Procedure AVGPM-G is used for power and AVGPSD-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	9.02MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-31.54dBm
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	15.2dBm
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	-12.81dBm
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	46.21dBuV
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	50.97dBuV/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 v03r02: The transmitter output is connected to a spectrum analyzer with the RBW set to100KHz, the VBW >= 3 x 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	9.02	0.5
Mid	2437	9.02	0.5
High	2462	9.05	0.5
Worst		9.02	

9.1.2. 802.11g MODE IN THE 2.4 GHz BAND

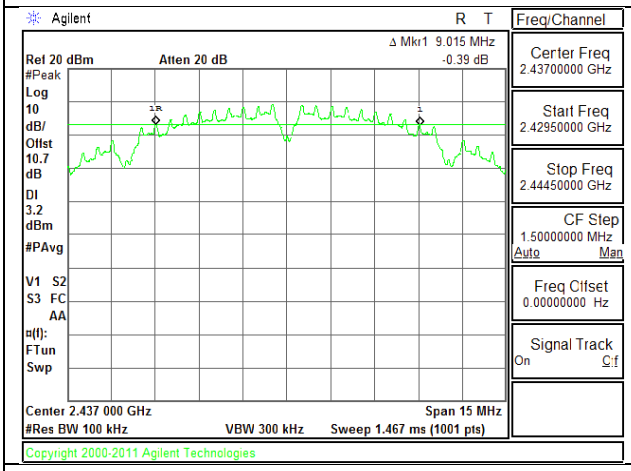
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.41	0.5
Mid	2437	16.50	0.5
High	2462	16.41	0.5
Worst		16.41	

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	17.52	0.5
Mid	2437	17.61	0.5
High	2462	17.64	0.5
Worst		17.52	

9.1.4. 6 dB BANDWIDTH MID CH PLOTS

11b HT20 2.4



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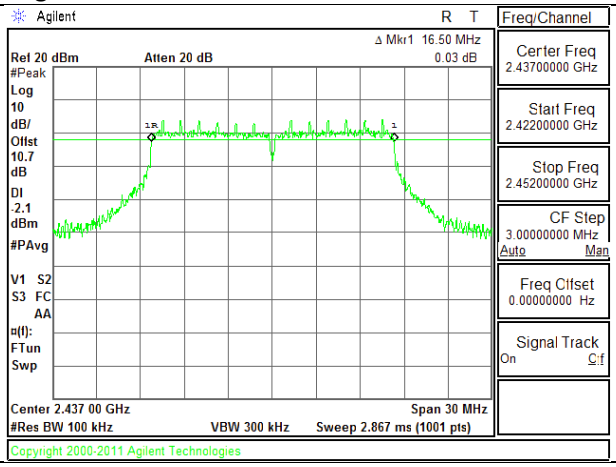
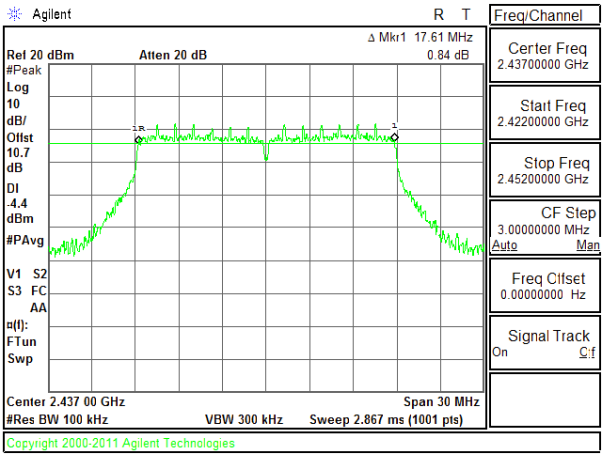


11n HT20 2.4



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	13.39
Mid	2437	13.48
High	2462	13.47
Worst		13.48

9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

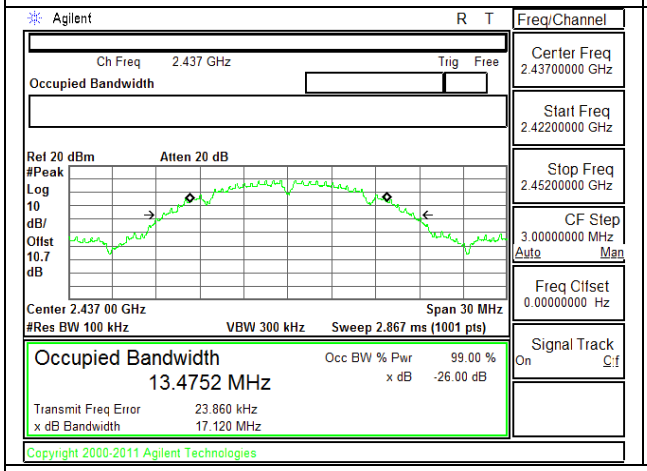
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.55
Mid	2437	16.56
High	2462	16.56
Worst		16.56

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	17.69
High	2462	17.72
Worst		17.72

9.2.4. 99% BANDWIDTH MID CH PLOTS

11b HT20 2.4



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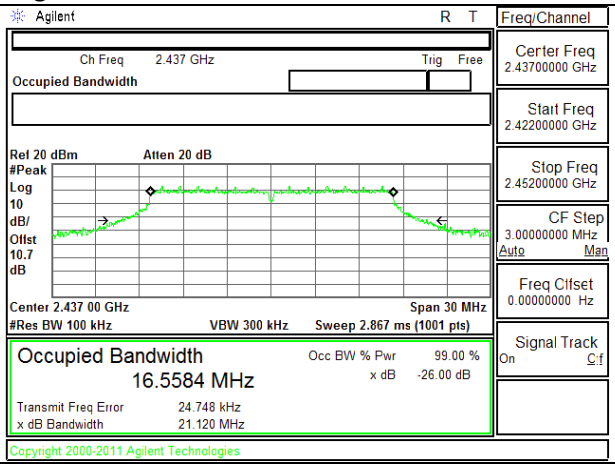

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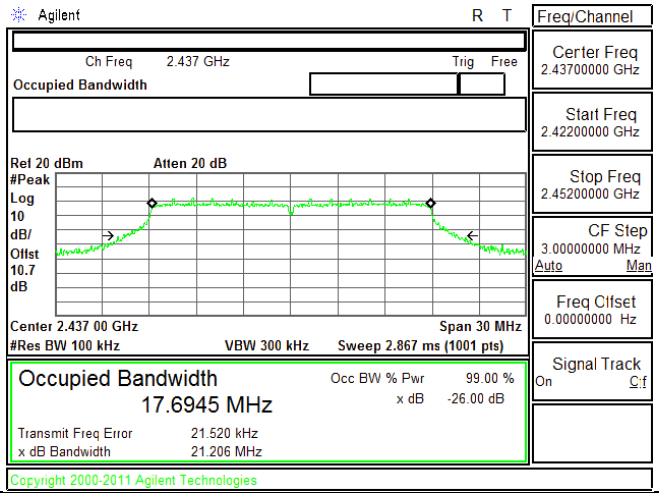


9.3. OUTPUT POWER

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.

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

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	-0.60	30.00	30	36	30.00
Mid	2437	-0.60	30.00	30	36	30.00
High	2462	-0.60	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	15.2	15.20	30.00	-14.80
Mid	2437	15.2	15.20	30.00	-14.80
High	2462	15.1	15.10	30.00	-14.90
Worst			15.20		

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	-0.60	30.00	30	36	30.00
Mid	2437	-0.60	30.00	30	36	30.00
High	2462	-0.60	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	13.04	13.04	30.00	-16.96
Mid	2437	12.81	12.81	30.00	-17.19
High	2462	13.3	13.30	30.00	-16.70
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	-0.60	30.00	30	36	30.00
Mid	2437	-0.60	30.00	30	36	30.00
High	2462	-0.60	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	10.84	10.84	30.00	-19.16
Mid	2437	10.9	10.90	30.00	-19.10
High	2462	10.65	10.65	30.00	-19.35
Worst			10.90		

9.4. 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

9.4.1. 802.11b MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-12.81	8.0	-20.8
Mid	2437	-12.93	8.0	-20.9
High	2462	-13.09	8.0	-21.1

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	-18.47	8.0	-26.5
Mid	2437	-19.24	8.0	-27.2
High	2462	-18.26	8.0	-26.3

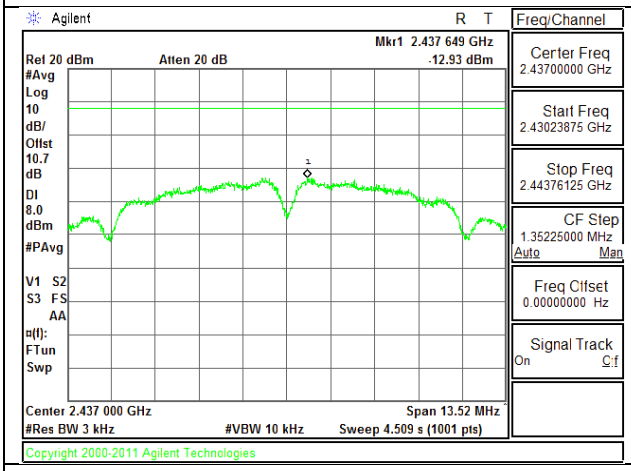
9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

PSD Results

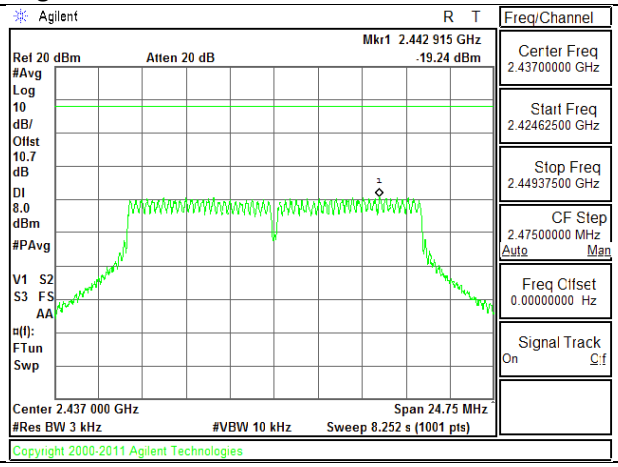
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-21.13	8.0	-29.1
Mid	2437	-21.26	8.0	-29.3
High	2462	-20.86	8.0	-28.9

9.4.4. PSD Chain 0 MID CH PLOTS

11b HT20 2.4



11g HT20 2.4



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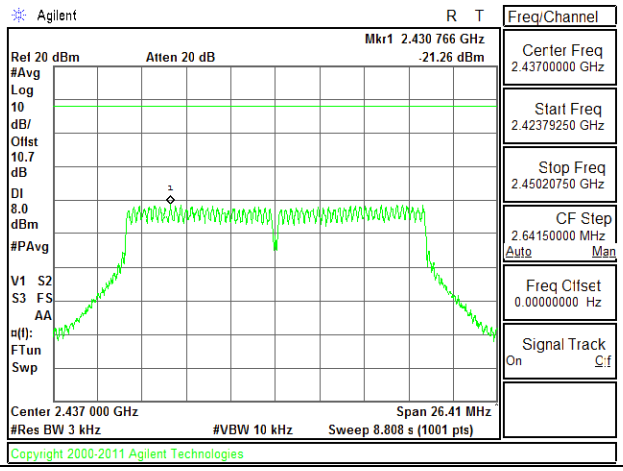


9.5. OUT-OF-BAND EMISSIONS

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

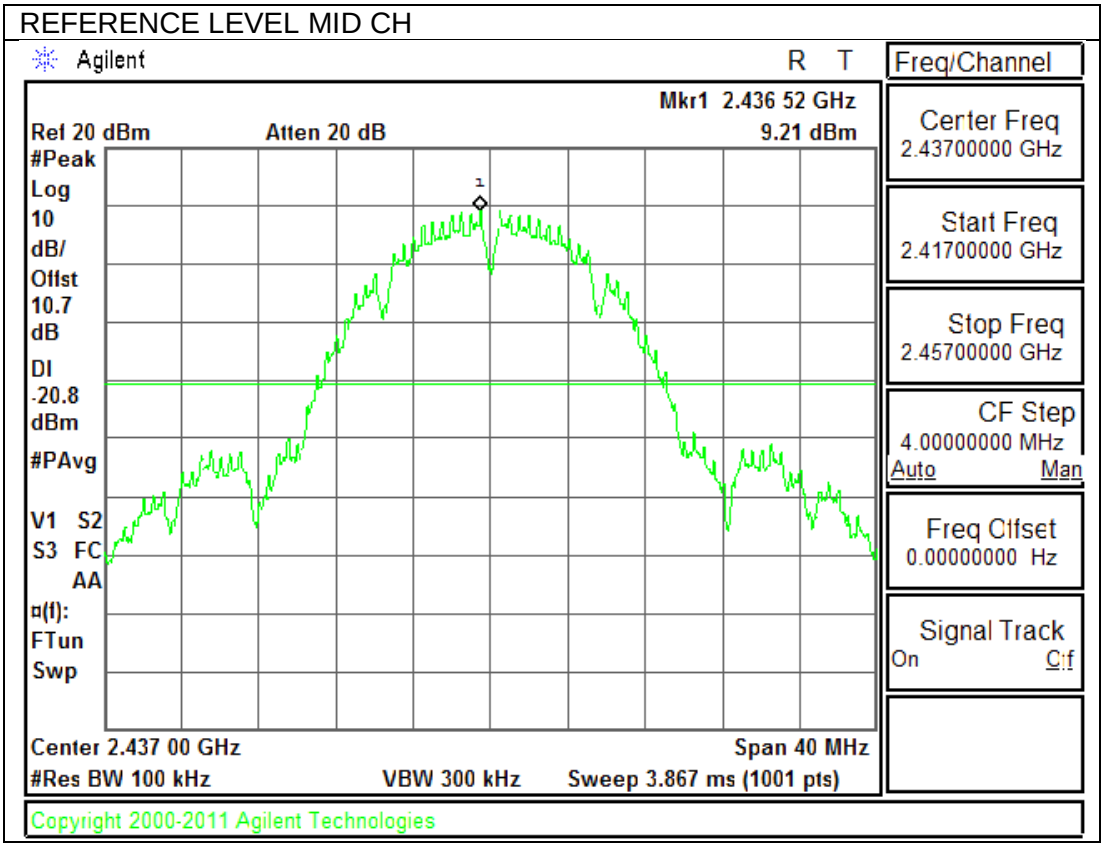
The transmitter output is connected to a spectrum analyzer with RBW = 100 kHz, VBW = 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, bandedge (where measurements to the general radiated limits will not be made) and out-of-band emissions.

RESULTS

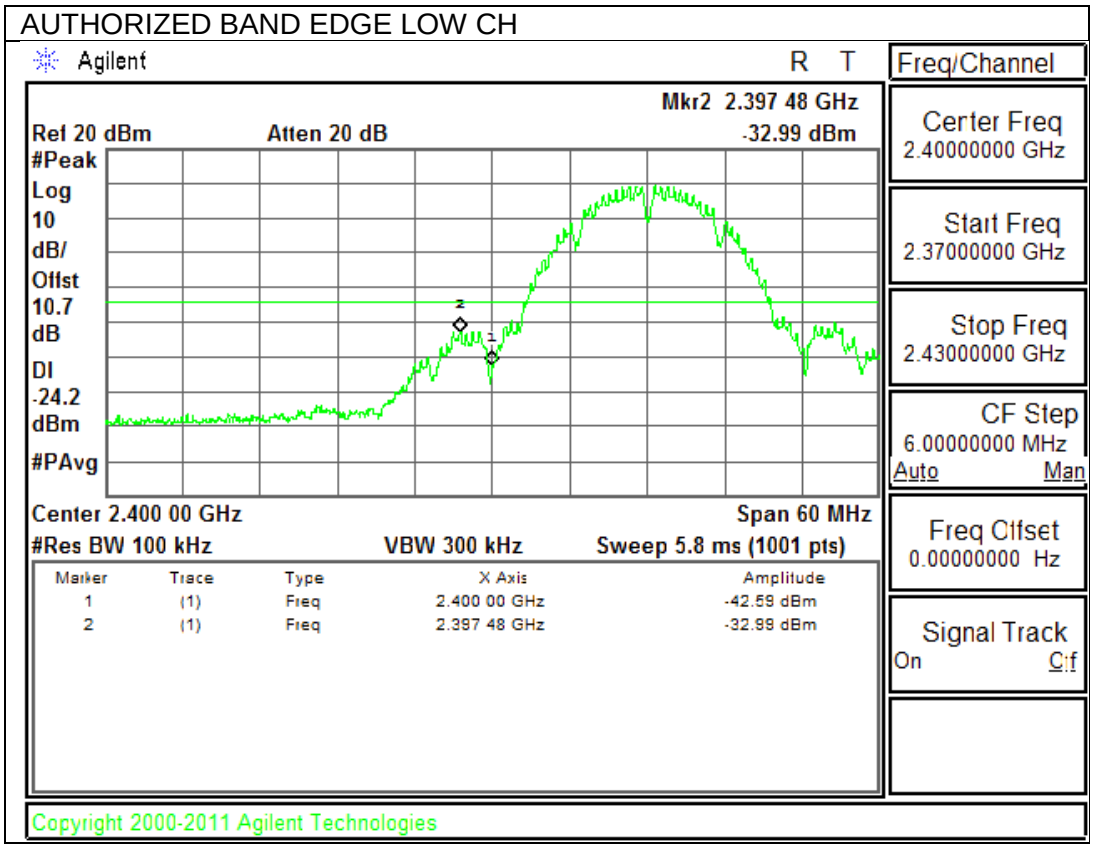
9.5.1. 802.11b MODE IN THE 2.4 GHz BAND

IN-BAND REFERENCE LEVEL

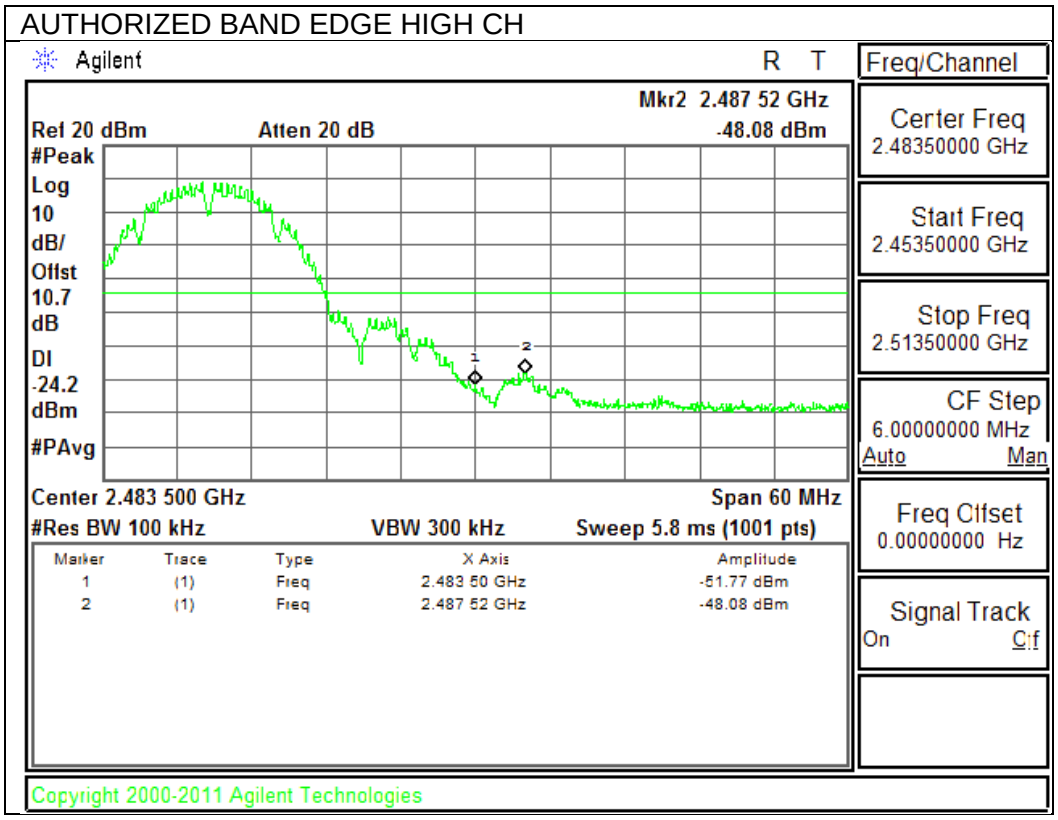
REFERENCE LEVEL MID CH



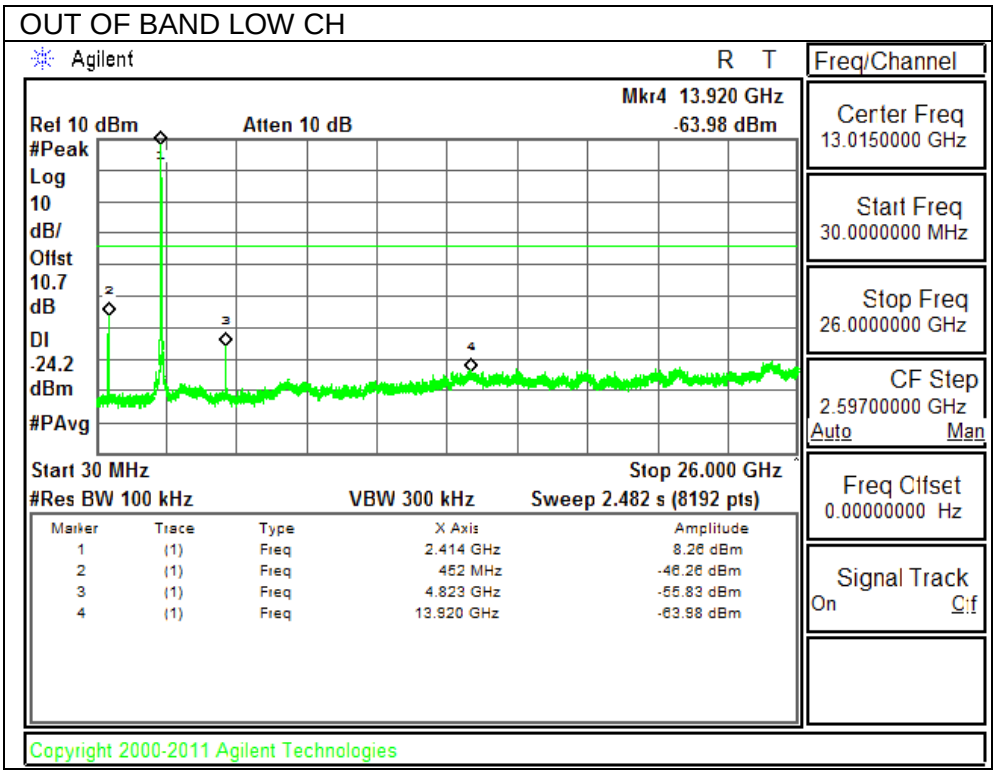
LOW CHANNEL BANDEDGE



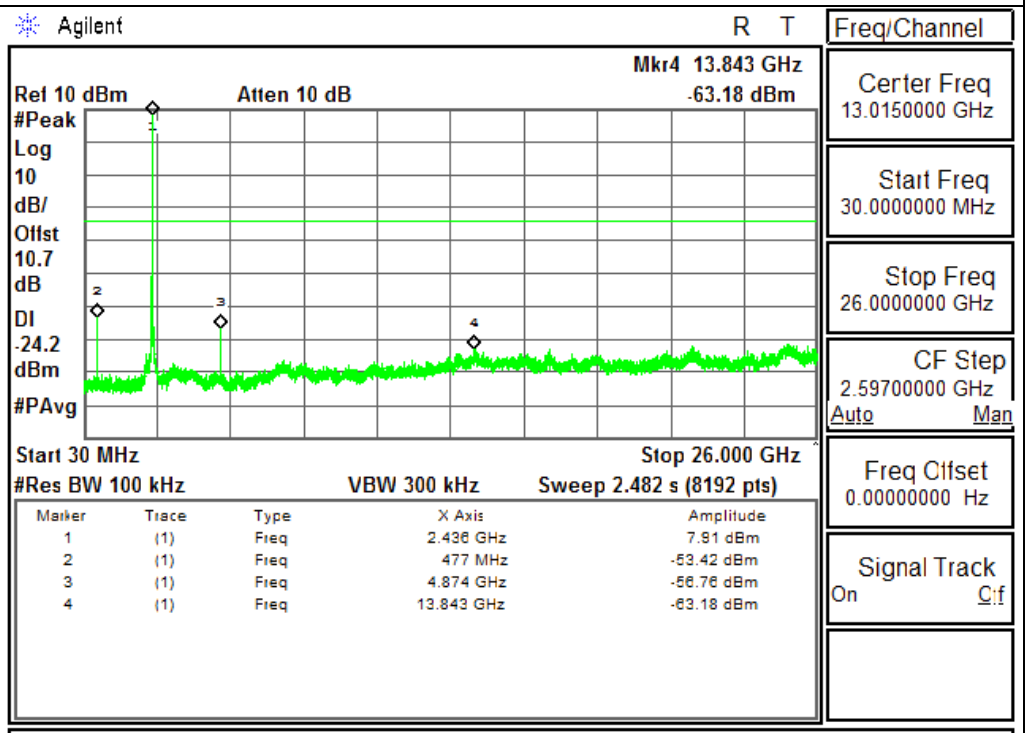
HIGH CHANNEL BANDEDGE



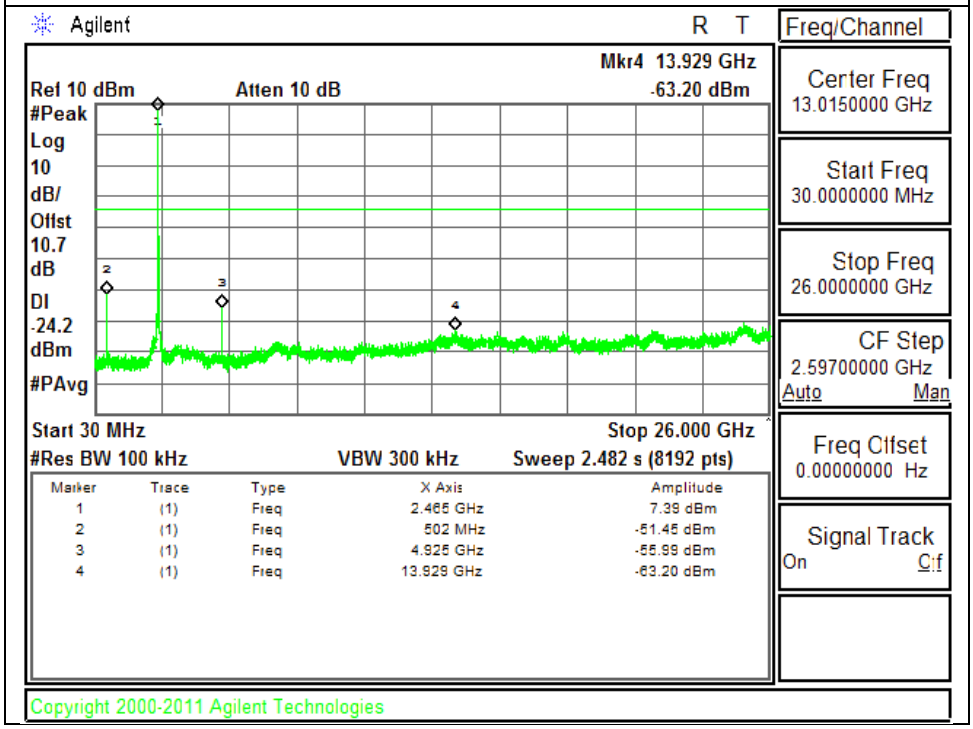
OUT-OF-BAND EMISSIONS



OUT OF BAND MID CH



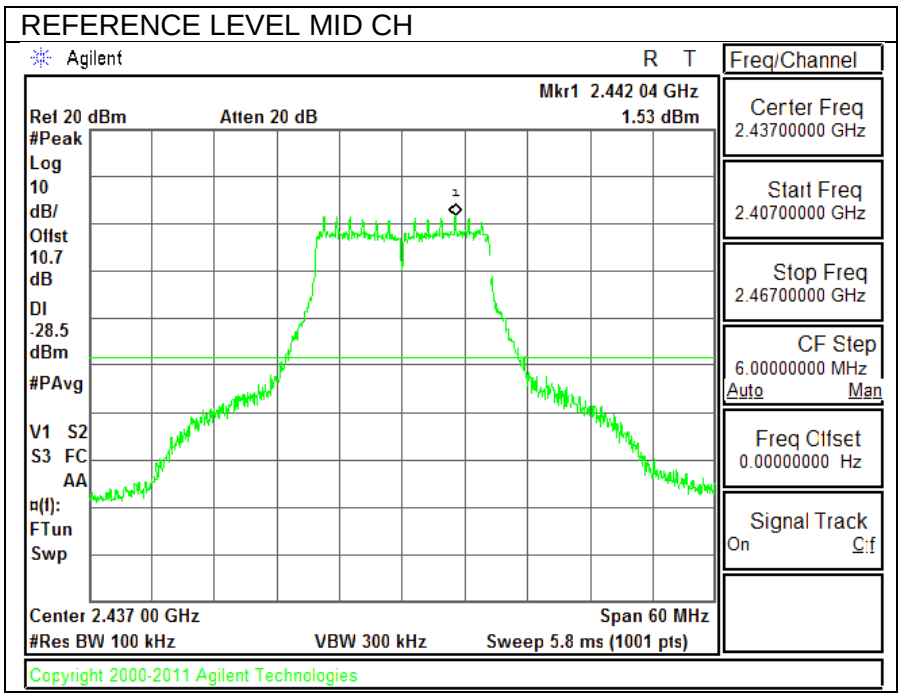
OUT OF BAND HIGH CH



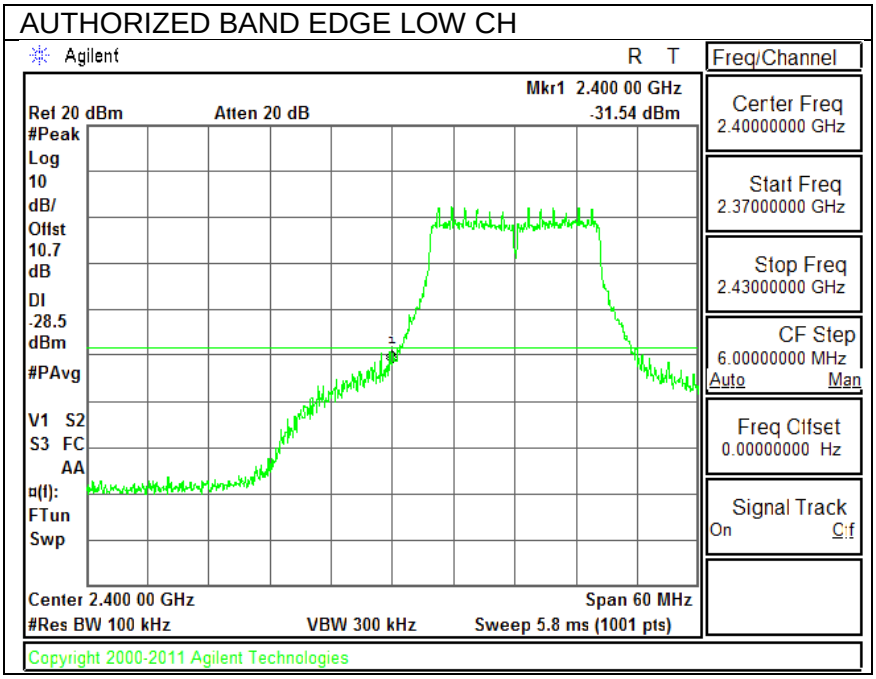
9.5.2. 802.11g MODE IN THE 2.4 GHz BAND

IN-BAND REFERENCE LEVEL

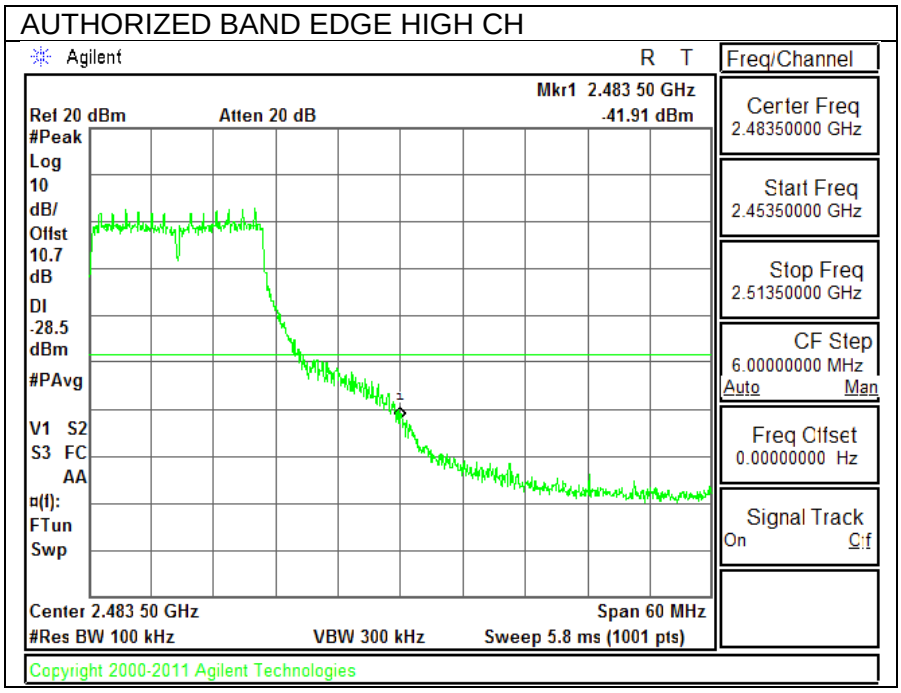
REFERENCE LEVEL MID CH



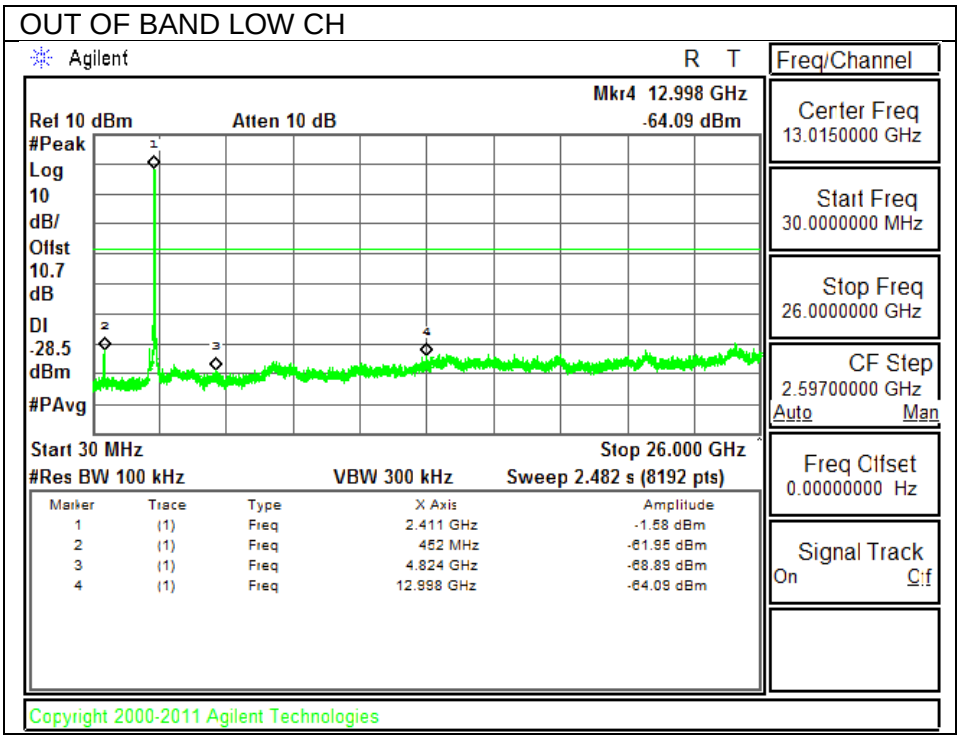
LOW CHANNEL BANDEDGE



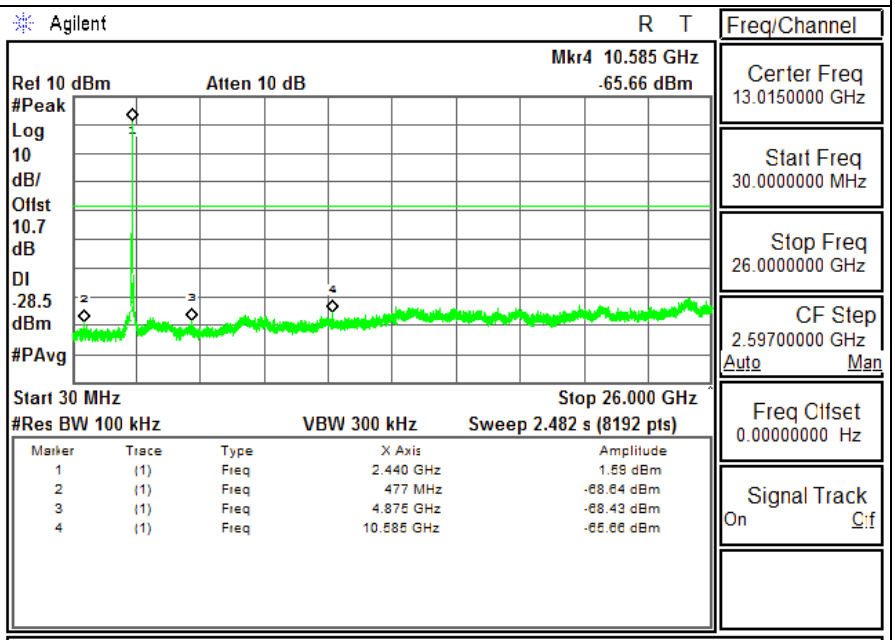
HIGH CHANNEL BANDEDGE



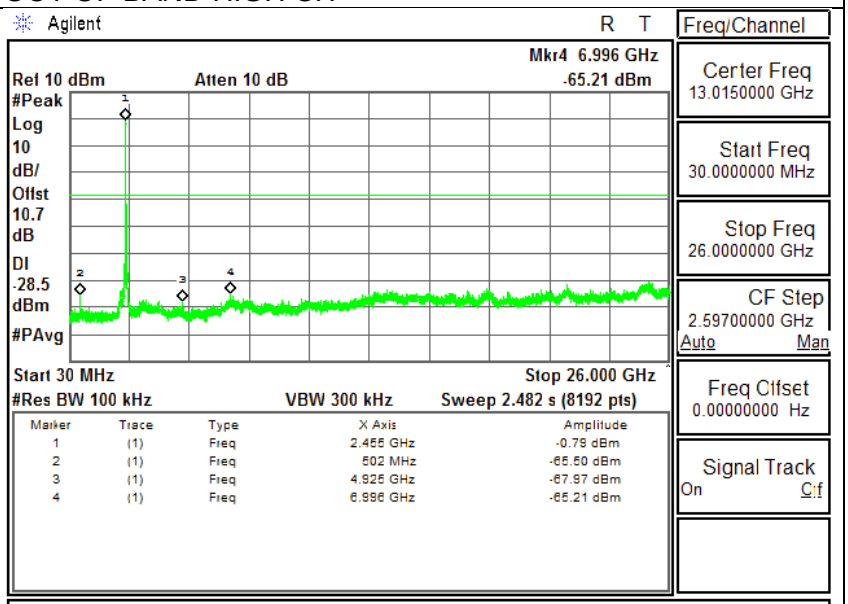
OUT-OF-BAND EMISSIONS



OUT OF BAND MID CH



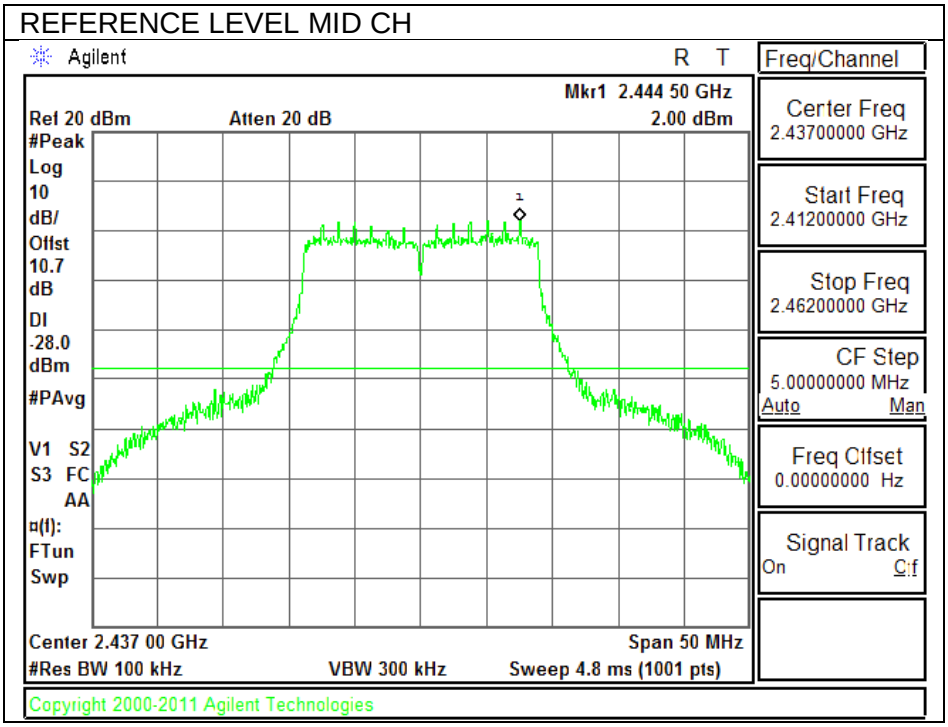
OUT OF BAND HIGH CH



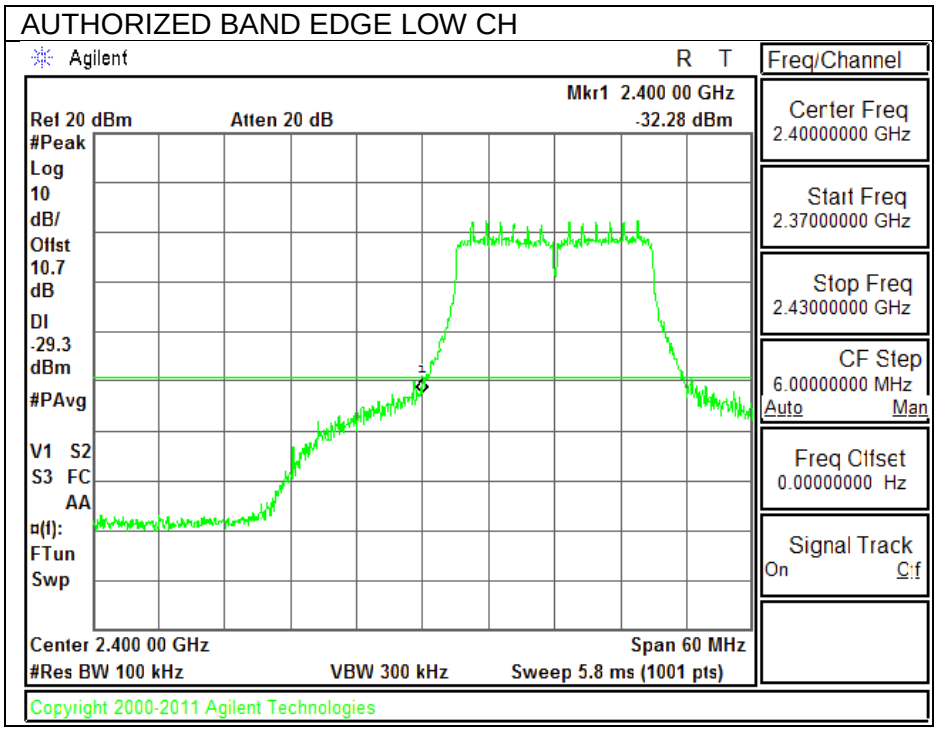
9.5.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

IN-BAND REFERENCE LEVEL

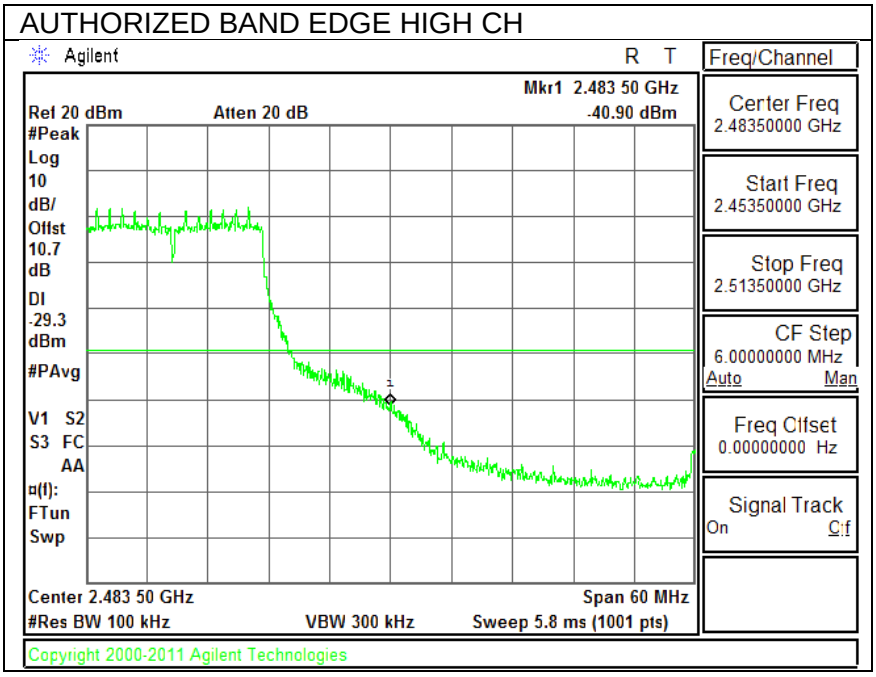
REFERENCE LEVEL MID CH



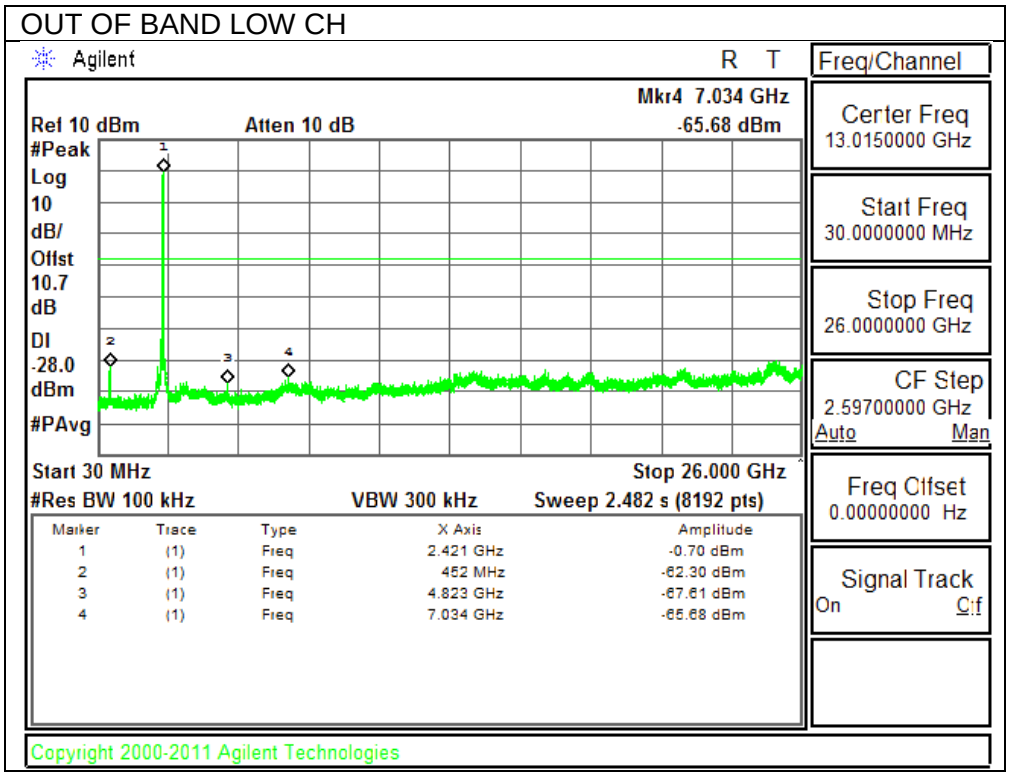
LOW CHANNEL BANDEDGE



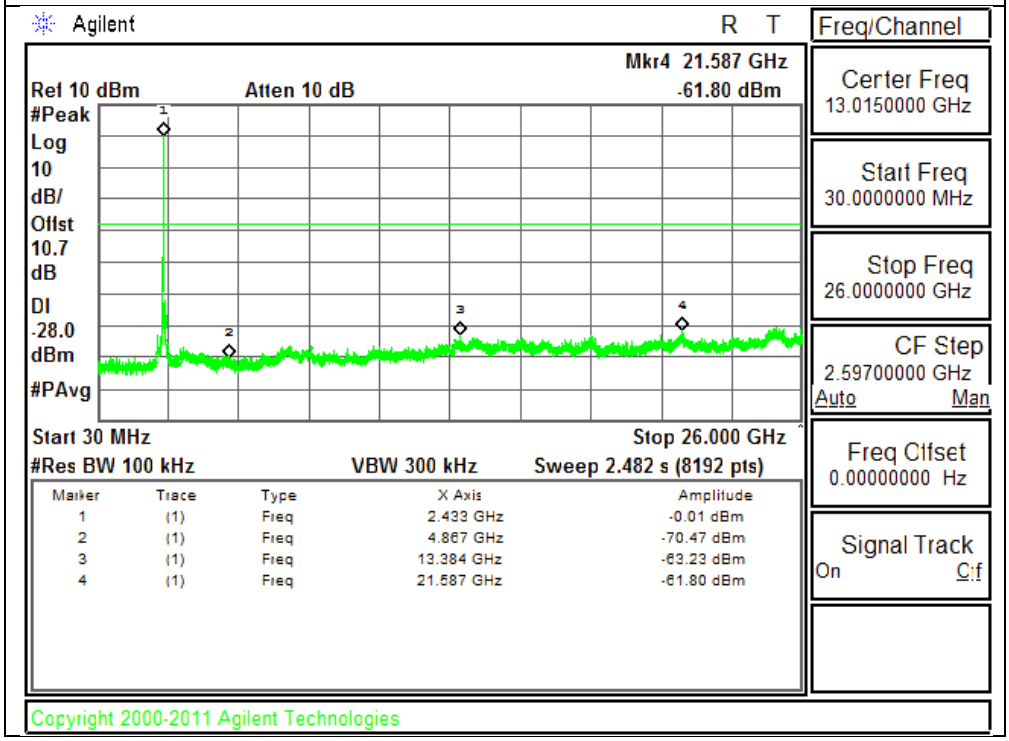
HIGH CHANNEL BANDEDGE



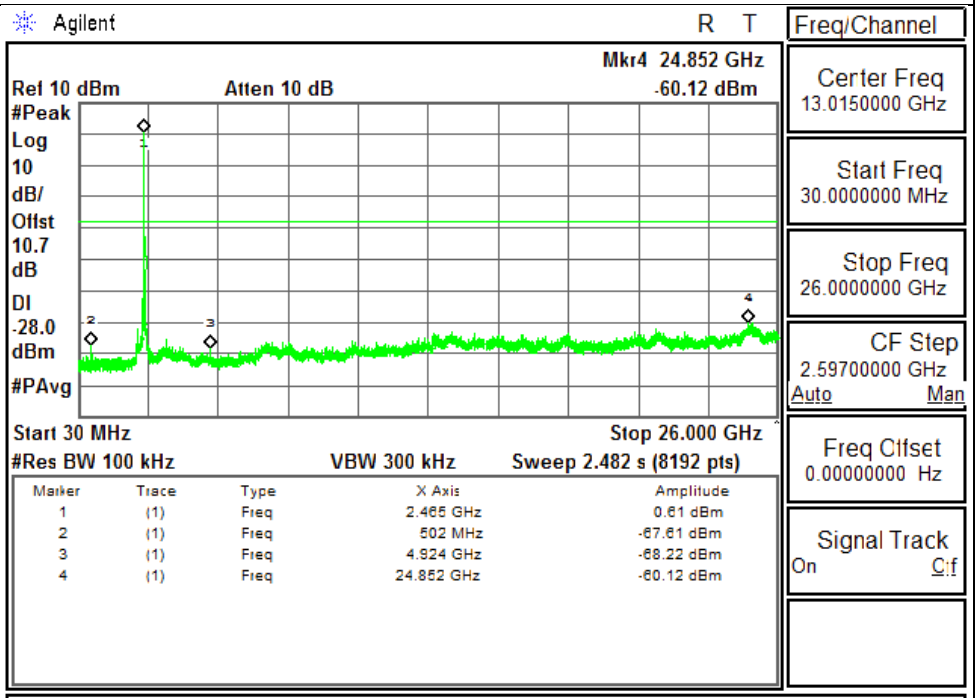
OUT-OF-BAND EMISSIONS



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

IC RSS-GEN Clause 8.9 (Transmitter)

IC RSS-GEN Clause 7(Receiver)

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= 10log (1/x) For this sample B mode = 0dB (duty cycle >98%); G mode = 0.31dB; N mode = 0.32dB.

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

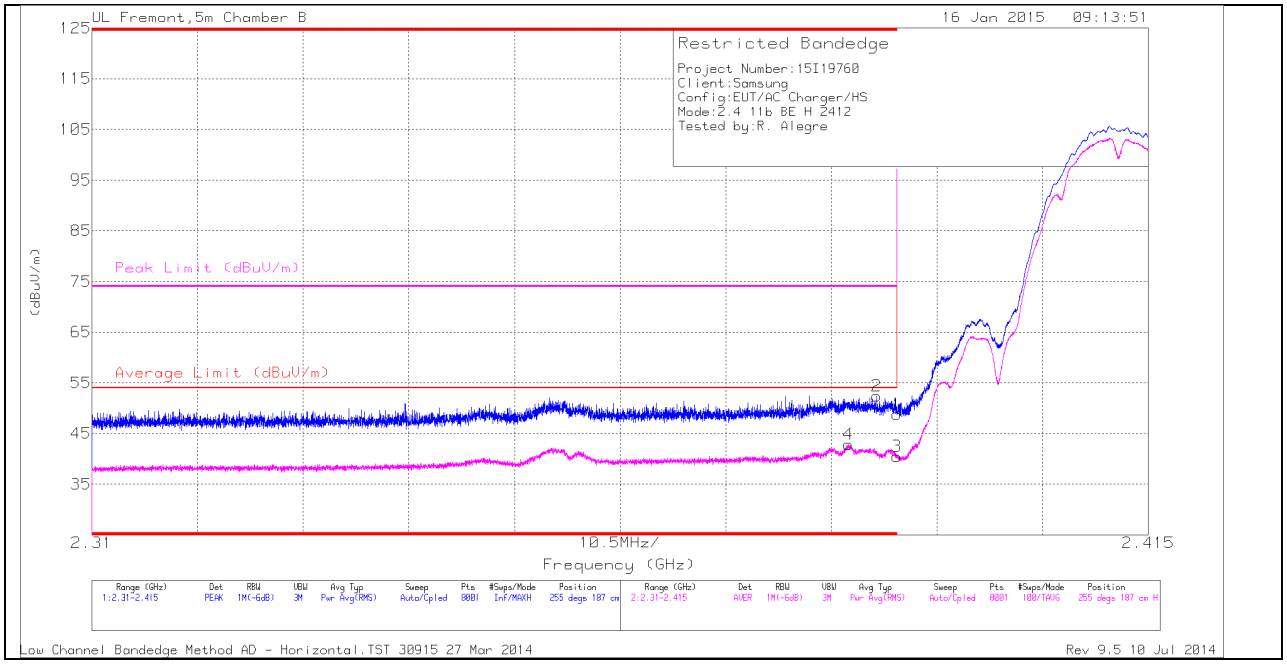
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

10.2. TRANSMITTER ABOVE 1 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

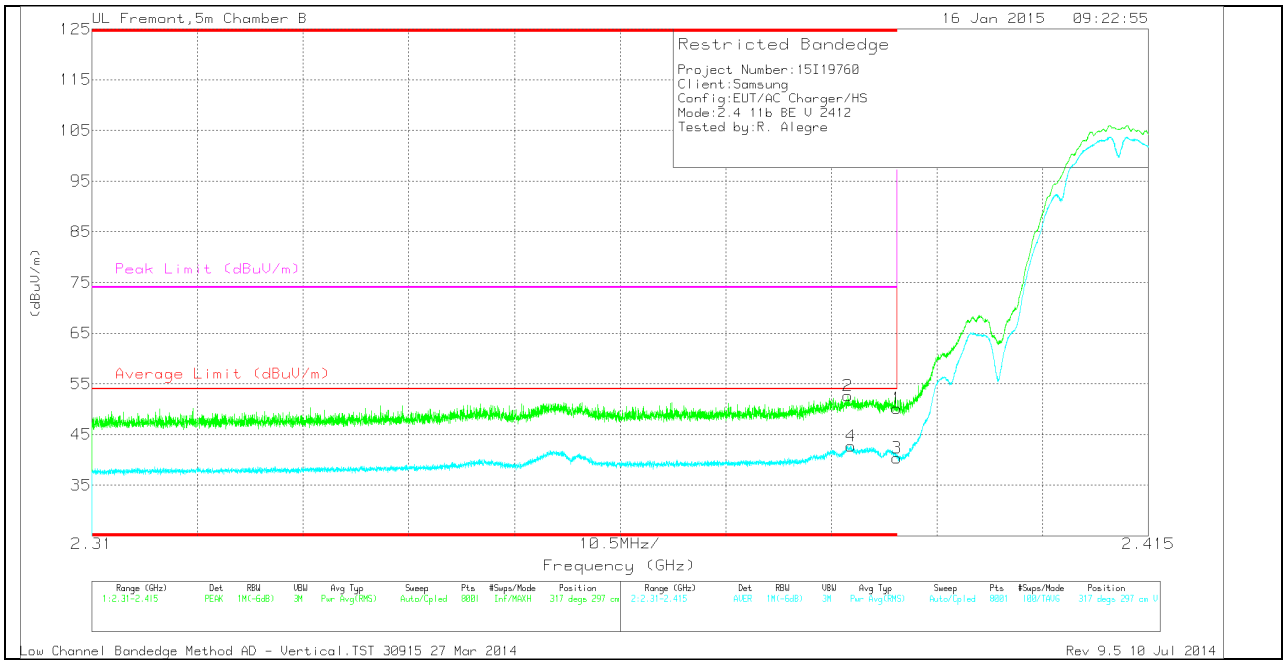
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.38	PK	32.1	-22.7	0	48.78	-	-	74	-25.22	255	187	H
2	* 2.388	43.04	PK	32.1	-22.7	0	52.44	-	-	74	-21.56	255	187	H
3	* 2.39	31.07	RMS	32.1	-22.7	0	40.47	54	-13.53	-	-	255	187	H
4	* 2.385	33.41	RMS	32.1	-22.7	0	42.81	54	-11.19	-	-	255	187	H

VERTICAL PEAK AND AVERAGE PLOT

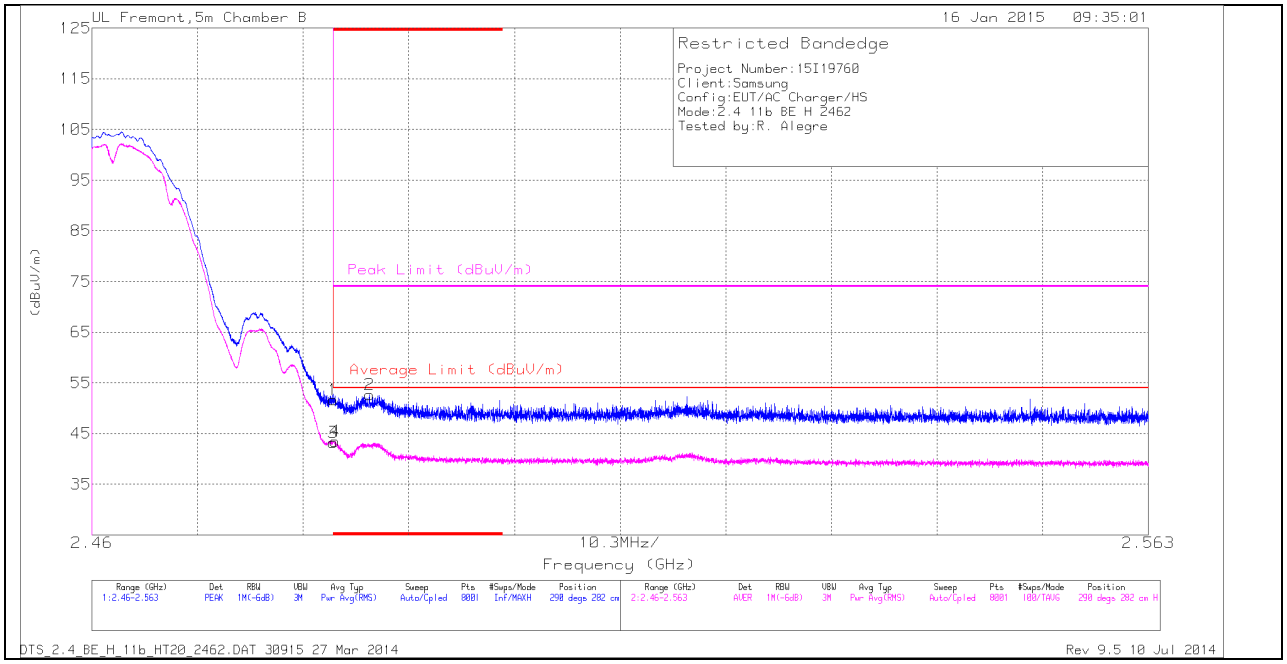


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.385	43.21	PK	32.1	-22.7	52.61	-	-	74	-21.39	317	297	V
4	* 2.385	33.32	RMS	32.1	-22.7	42.72	54	-11.28	-	-	317	297	V
1	* 2.39	40.8	PK	32.1	-22.7	50.2	-	-	74	-23.8	317	297	V
3	* 2.39	30.92	RMS	32.1	-22.7	40.32	54	-13.68	-	-	317	297	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

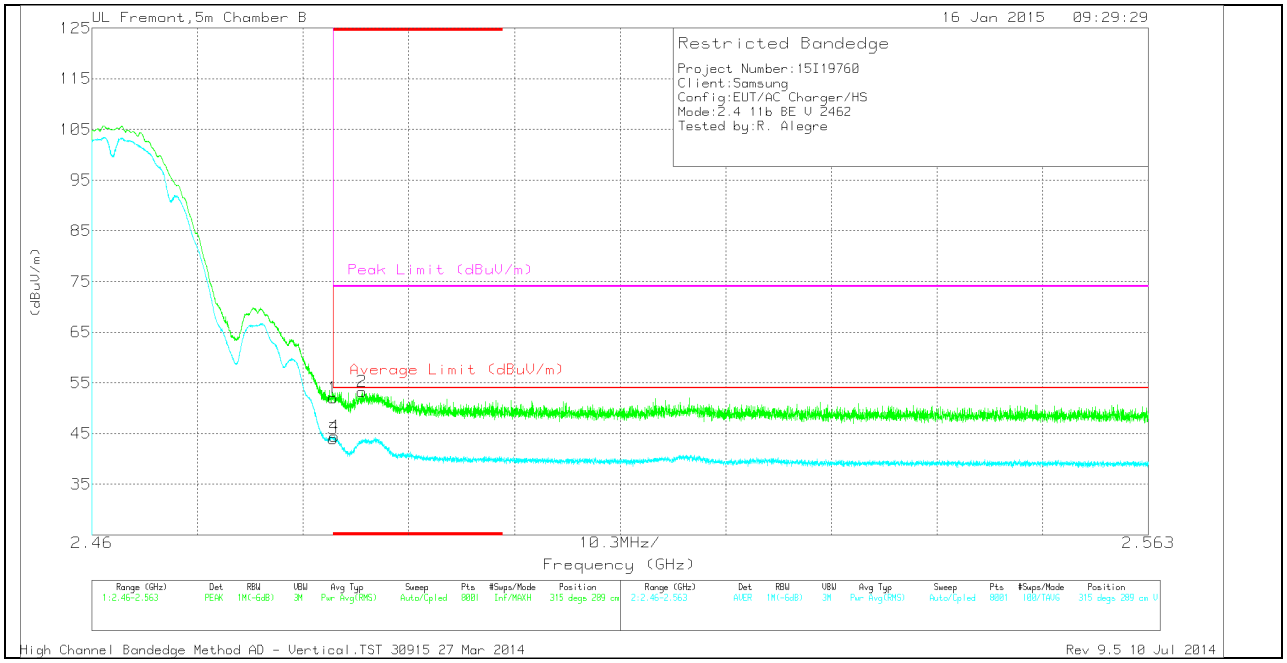
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.81	PK	32.4	-22.6	51.61	-	-	74	-22.39	290	282	H
3	* 2.484	33.4	RMS	32.4	-22.6	43.2	54	-10.8	-	-	290	282	H
4	* 2.484	33.62	RMS	32.4	-22.6	43.42	54	-10.58	-	-	290	282	H
2	* 2.487	42.85	PK	32.4	-22.6	52.65	-	-	74	-21.35	290	282	H

VERTICAL PEAK AND AVERAGE PLOT

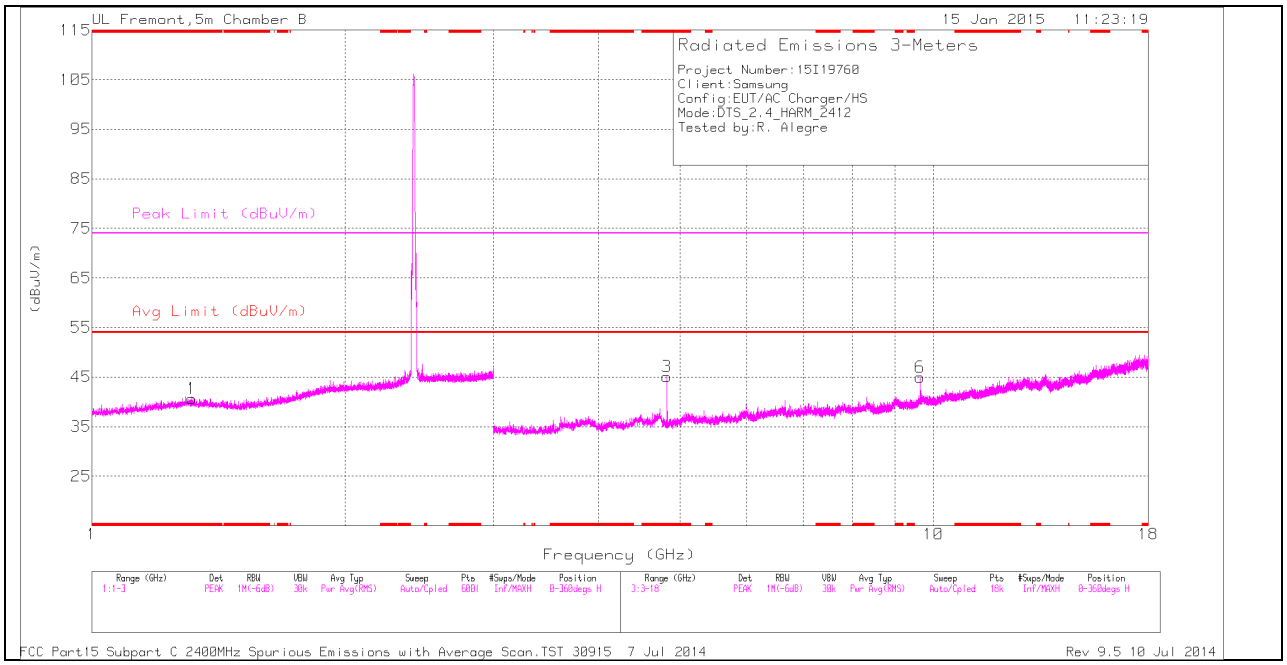


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	42.27	PK	32.4	-22.6	52.07	-	-	74	-21.93	315	289	V
3	* 2.484	34.2	RMS	32.4	-22.6	44	54	-10	-	-	315	289	V
4	* 2.484	34.61	RMS	32.4	-22.6	44.41	54	-9.59	-	-	315	289	V
2	* 2.486	43.46	PK	32.4	-22.6	53.26	-	-	74	-20.74	315	289	V

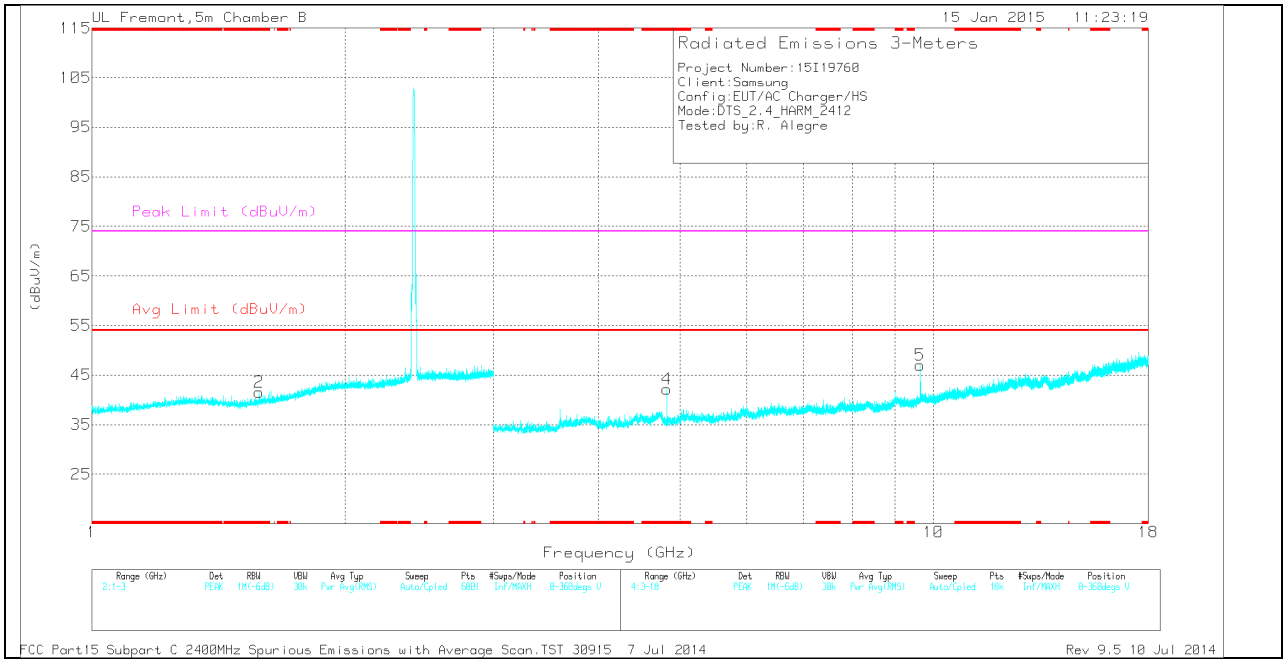
HARMONICS AND SPURIOUS EMISSIONS

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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.313	36.14	PK	28.8	-24.3	0	40.64	-	-	74	-33.36	0-360	199	H
2	* 1.581	36.94	PK	28.4	-23.8	0	41.54	-	-	74	-32.46	0-360	199	V
3	* 4.824	40.9	PK	34.2	-30	0	45.1	-	-	74	-28.9	0-360	200	H
4	* 4.824	37.93	PK	34.2	-30	0	42.13	-	-	74	-31.87	0-360	200	V
6	9.648	32.37	PK	36.8	-24.2	0	44.97	-	-	-	-	0-360	200	H
5	9.648	34.41	PK	36.8	-24.2	0	47.01	-	-	-	-	0-360	200	V

PK - Peak detector

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.824	46.02	PK2	34.2	-30	0	50.22	-	-	74	-23.78	31	271	H
* 4.824	42.07	MAv1	34.2	-30	0	46.27	54	-7.73	-	-	31	271	H
9.648	40.54	PK2	36.8	-24.2	0	53.14	-	-	-	-	184	214	V
9.648	34.99	MAv1	36.8	-24.2	0	47.59	54	-6.41	74	-26.41	184	214	V

RADIATED EMISSIONS

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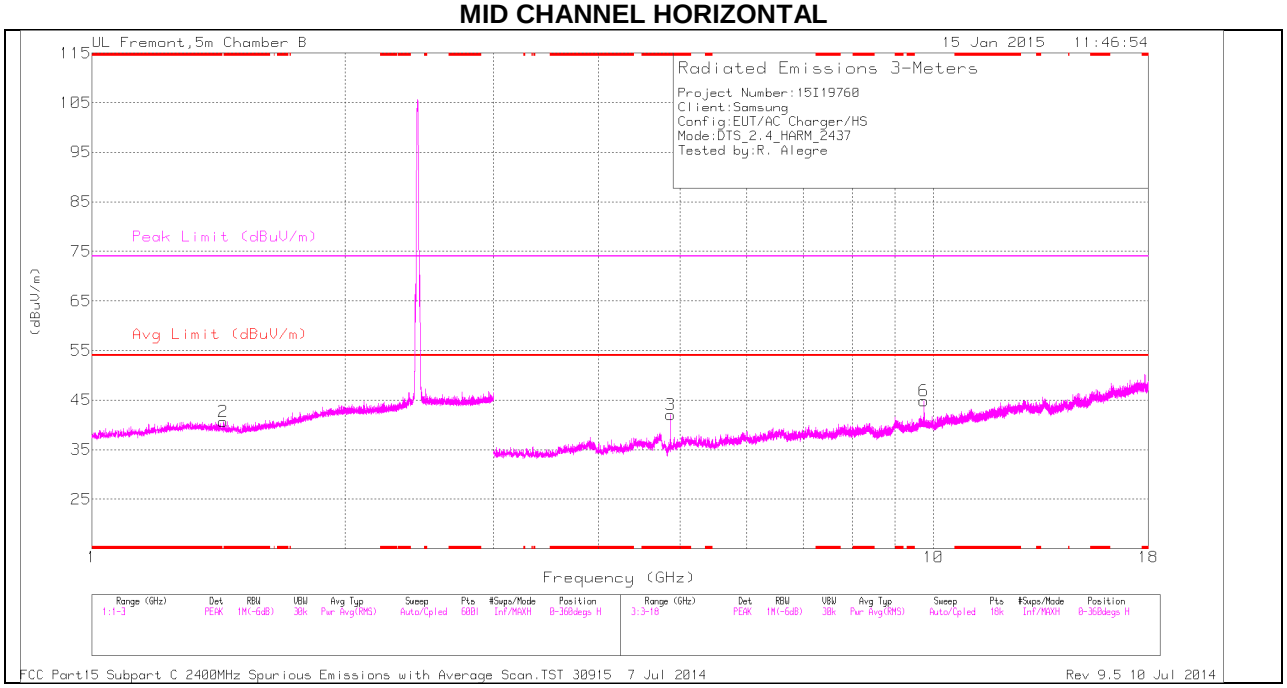
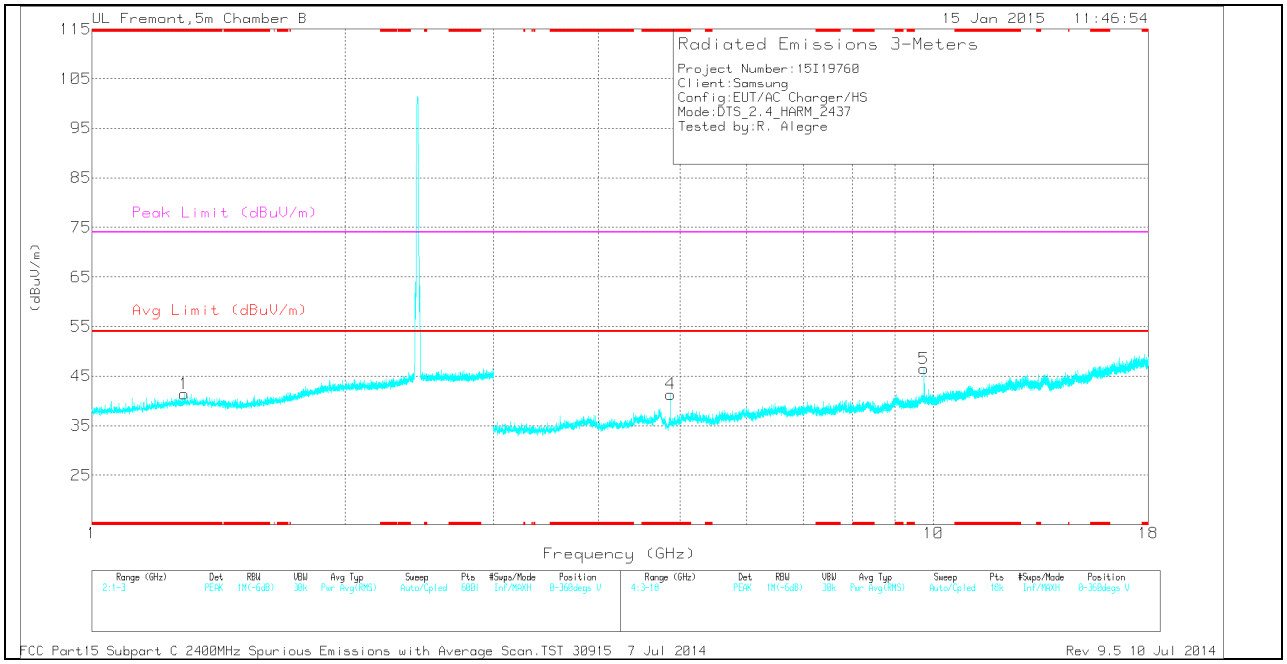
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.287	36.96	PK	28.8	-24.3	0	41.46	-	-	74	-32.54	0-360	101	V
3	* 4.874	38.39	PK	34.2	-30.6	0	41.99	-	-	74	-32.01	0-360	199	H
4	* 4.874	37.75	PK	34.2	-30.6	0	41.35	-	-	74	-32.65	0-360	199	V
2	1.432	36.54	PK	28.3	-24.2	0	40.64	-	-	-	-	0-360	101	H
6	9.748	32.14	PK	36.9	-24.2	0	44.84	-	-	-	-	0-360	199	H
5	9.748	33.84	PK	36.9	-24.2	0	46.54	-	-	-	-	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.874	46.08	PK2	34.2	-30	0	50.28	-	-	74	-23.72	31	271	H
* 4.874	42.10	MAv1	34.2	-30	0	46.3	54	-7.77	-	-	31	271	H
9.748	40.58	PK2	36.8	-24.2	0	53.18	-	-	-	-	184	214	V
9.748	34.66	MAv1	36.8	-24.2	0	47.26	54	-6.74	74	-26.74	184	214	V

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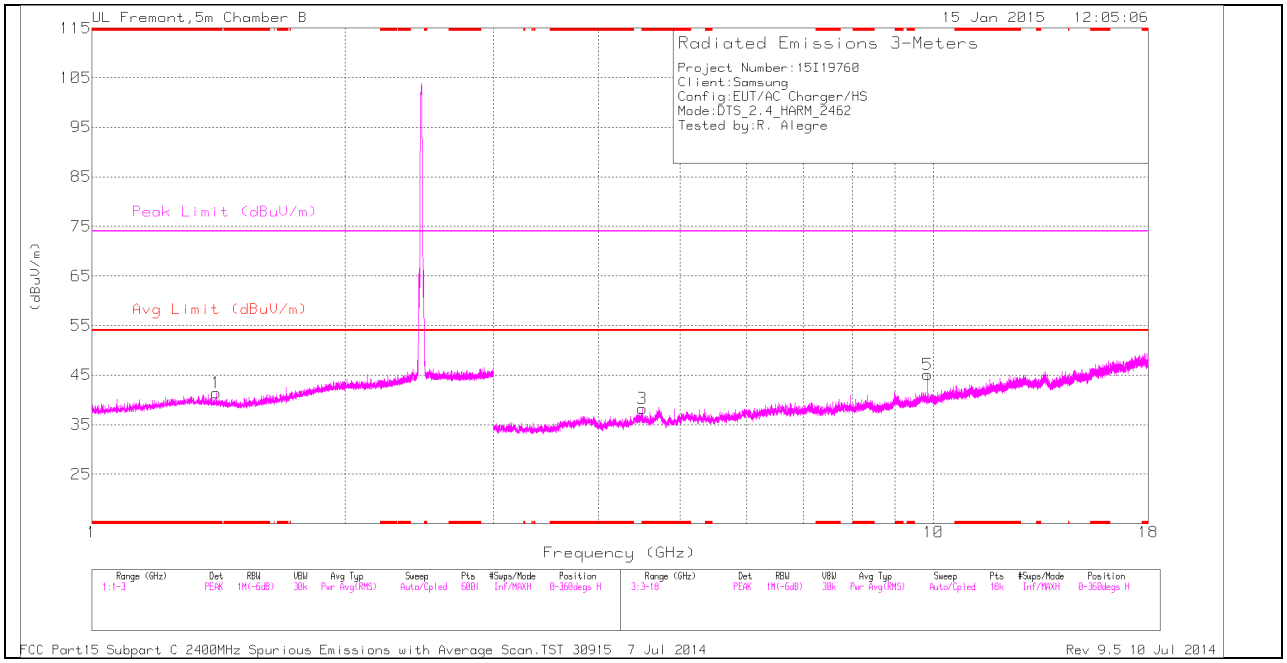
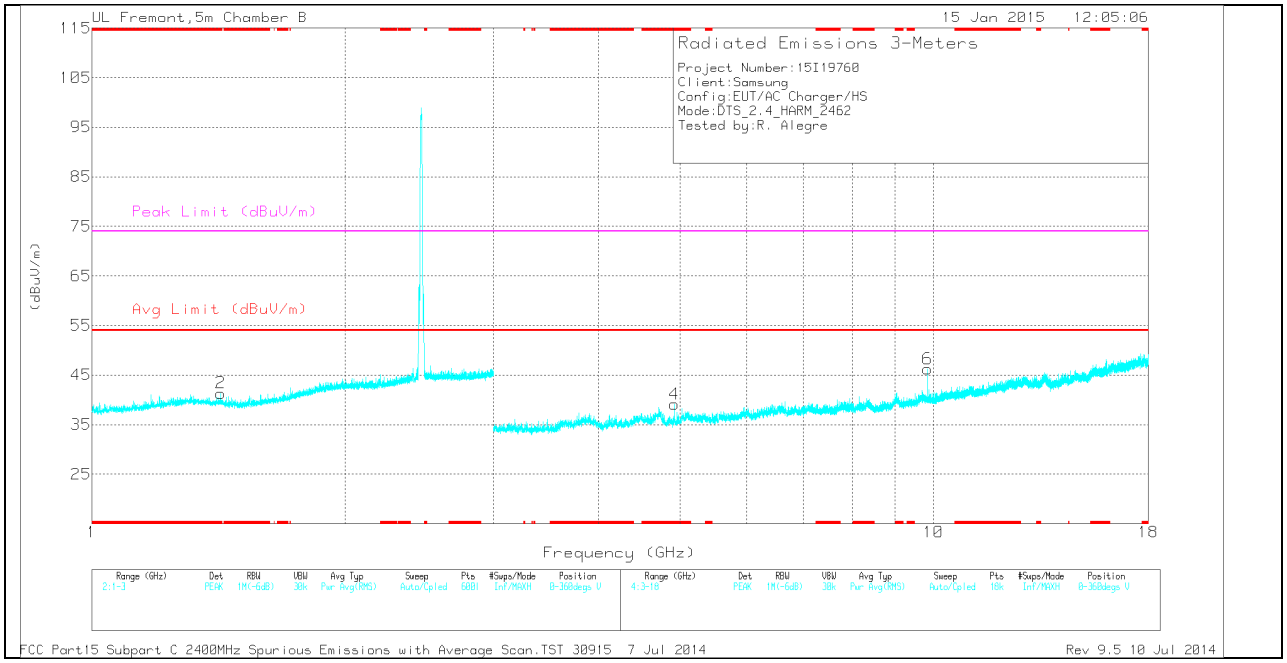
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.404	37.1	PK	28.5	-24.2	0	41.4	-	-	74	-32.6	0-360	100	H
2	* 1.421	37.15	PK	28.4	-24.2	0	41.35	-	-	74	-32.65	0-360	200	V
3	* 4.505	33.89	PK	34	-29.6	0	38.29	-	-	74	-35.71	0-360	199	H
4	* 4.924	35.88	PK	34.2	-30.9	0	39.18	-	-	74	-34.82	0-360	199	V
5	9.848	32.57	PK	37	-24.5	0	45.07	-	-	-	-	0-360	199	H
6	9.848	33.75	PK	37	-24.5	0	46.25	-	-	-	-	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.924	43.24	PK2	34.2	-30.9	0	46.54	-	-	74	-27.46	123	242	V
* 4.924	35.25	MAv1	34.2	-30.9	0	38.55	54	-15.45	-	-	123	242	H
9.848	39.47	PK2	37	-24.5	0	51.97	-	-	-	-	25	200	V
9.848	33.44	MAv1	37	-24.5	0	45.94	-	-	-	-	25	200	H

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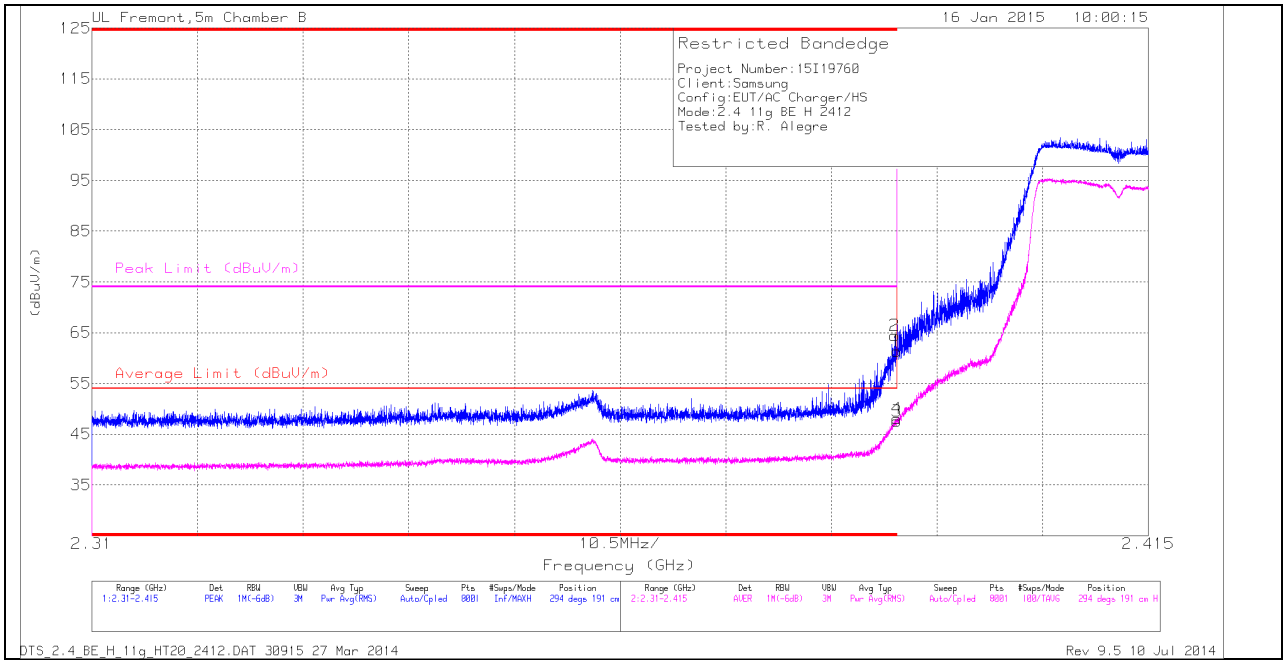
10.2.2. TX ABOVE 1 GHz 802.11g MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

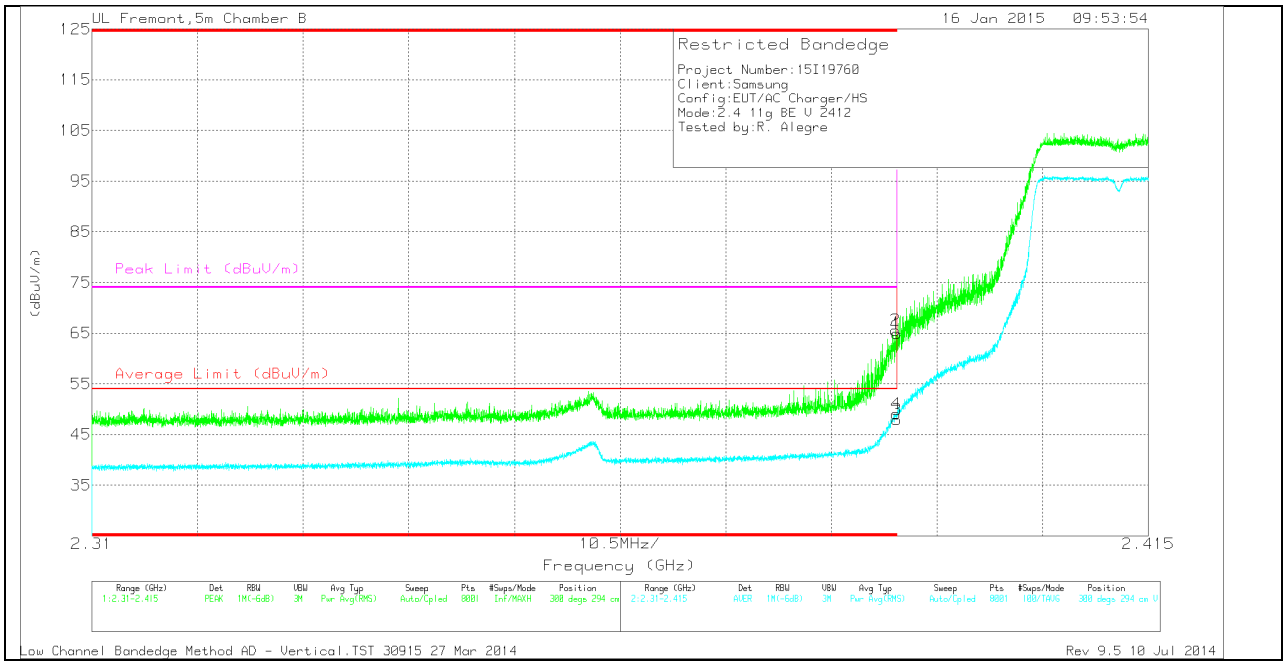
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	51.94	PK	32.1	-22.7	0	61.34	-	-	74	-12.66	294	191	H
2	* 2.39	55.1	PK	32.1	-22.7	0	64.5	-	-	74	-9.5	294	191	H
3	* 2.39	37.82	RMS	32.1	-22.7	.31	47.53	54	-6.47	-	-	294	191	H
4	* 2.39	38.32	RMS	32.1	-22.7	.31	48.03	54	-5.97	-	-	294	191	H

VERTICAL PEAK AND AVERAGE PLOT

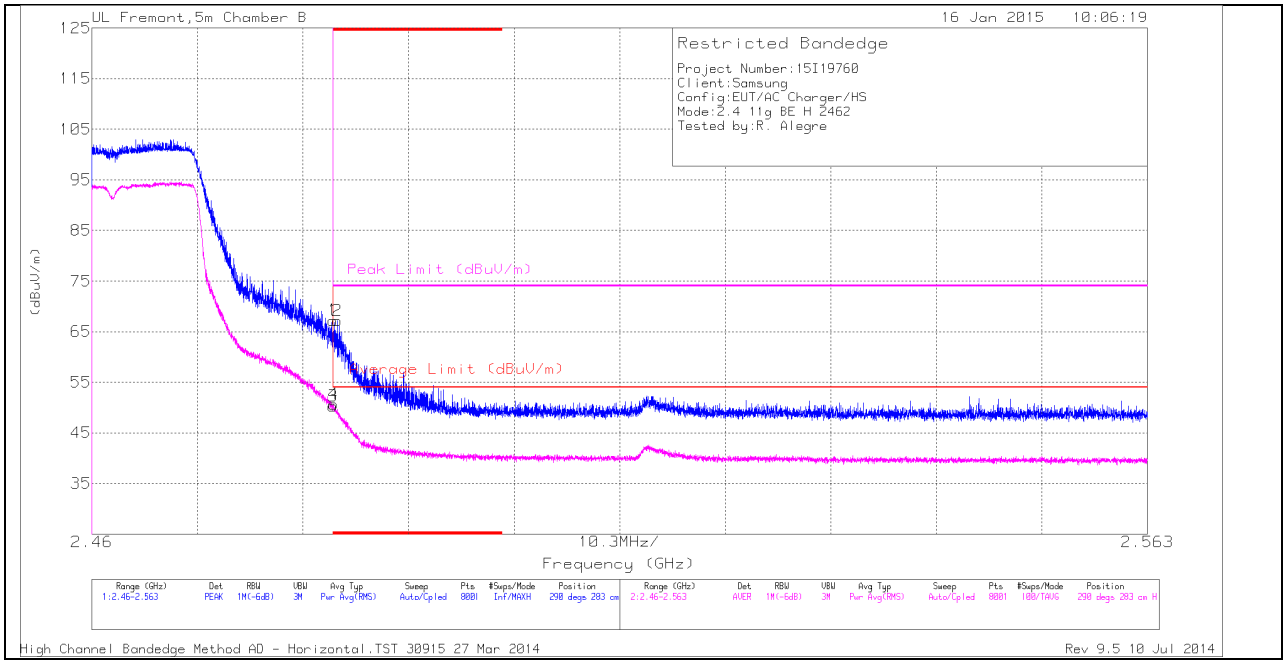


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	55.6	PK	32.1	-22.7	0	65	-	-	74	-9	300	294	V
2	* 2.39	56.18	PK	32.1	-22.7	0	65.58	-	-	74	-8.42	300	294	V
3	* 2.39	38.23	RMS	32.1	-22.7	.31	47.94	54	-6.06	-	-	300	294	V
4	* 2.39	39.39	RMS	32.1	-22.7	.31	49.1	54	-4.9	-	-	300	294	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

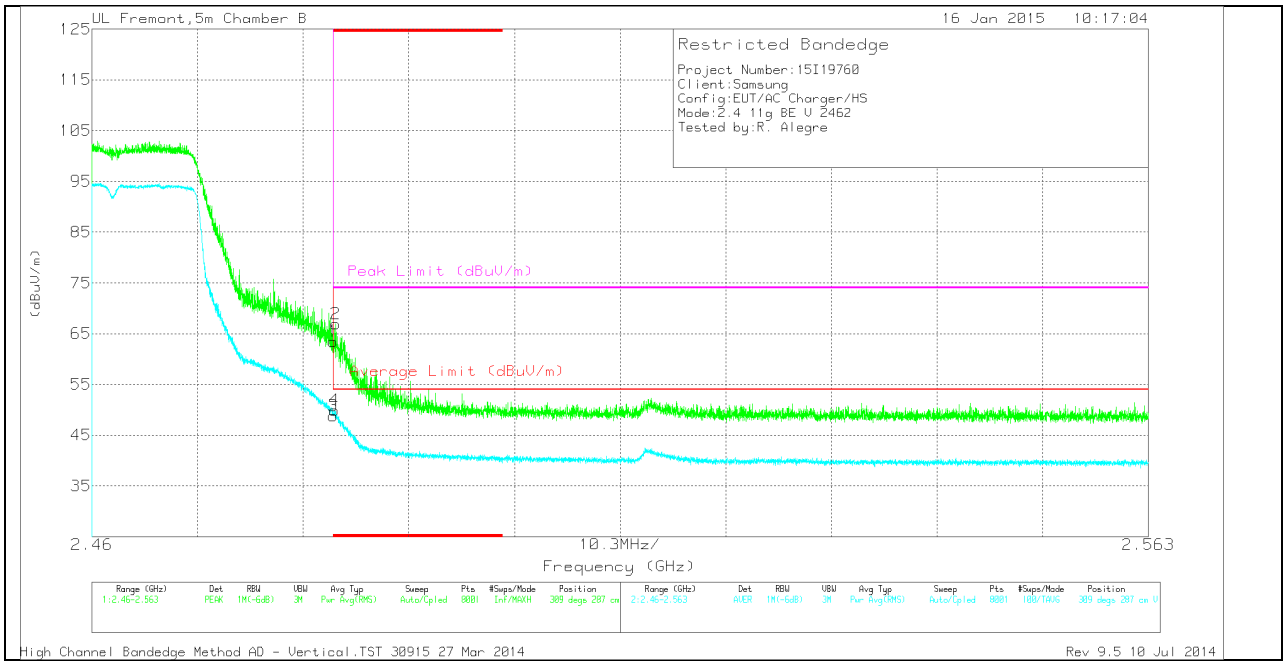
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	57.44	PK	32.4	-22.6	0	67.24	-	-	74	-6.76	290	283	H
2	* 2.484	57.35	PK	32.4	-22.6	0	67.15	-	-	74	-6.85	290	283	H
3	* 2.484	40.14	RMS	32.4	-22.6	.31	50.25	54	-3.75	-	-	290	283	H
4	* 2.484	40.57	RMS	32.4	-22.6	.31	50.68	54	-3.32	-	-	290	283	H

VERTICAL PEAK AND AVERAGE PLOT

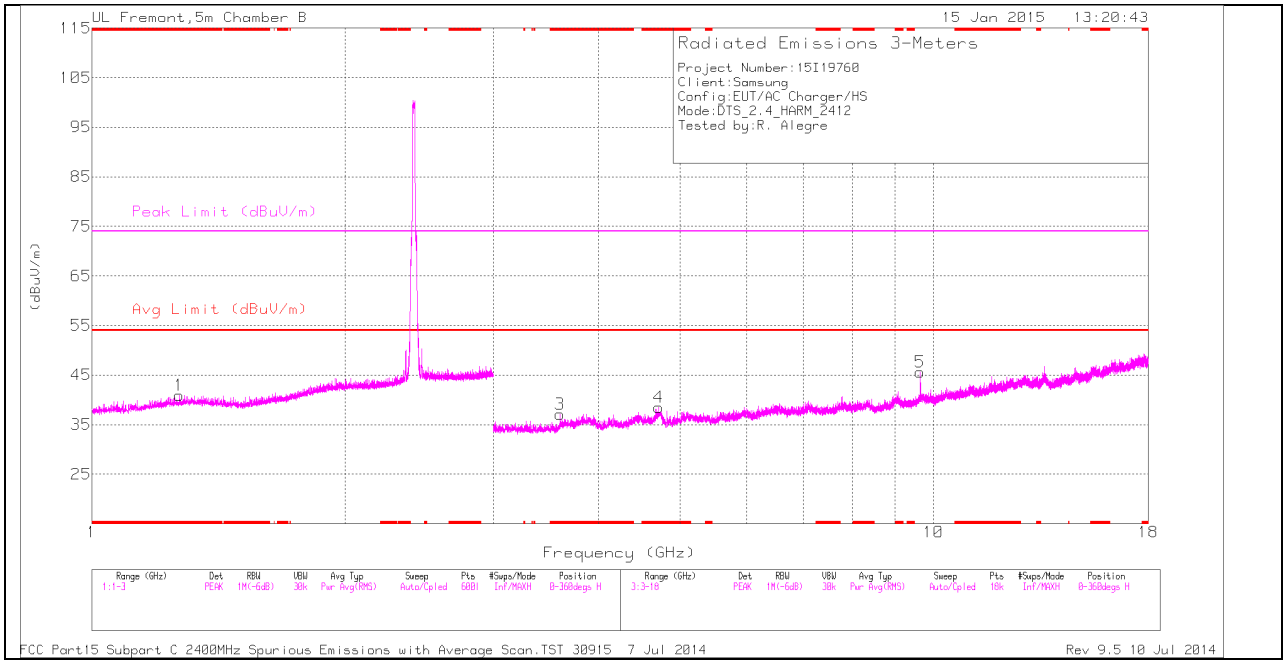


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	53.71	PK	32.4	-22.6	0	63.51	-	-	74	-10.49	309	287	V
2	* 2.484	57.16	PK	32.4	-22.6	0	66.96	-	-	74	-7.04	309	287	V
3	* 2.484	38.73	RMS	32.4	-22.6	.31	48.84	54	-5.16	-	-	309	287	V
4	* 2.484	39.79	RMS	32.4	-22.6	.31	49.9	54	-4.1	-	-	309	287	V

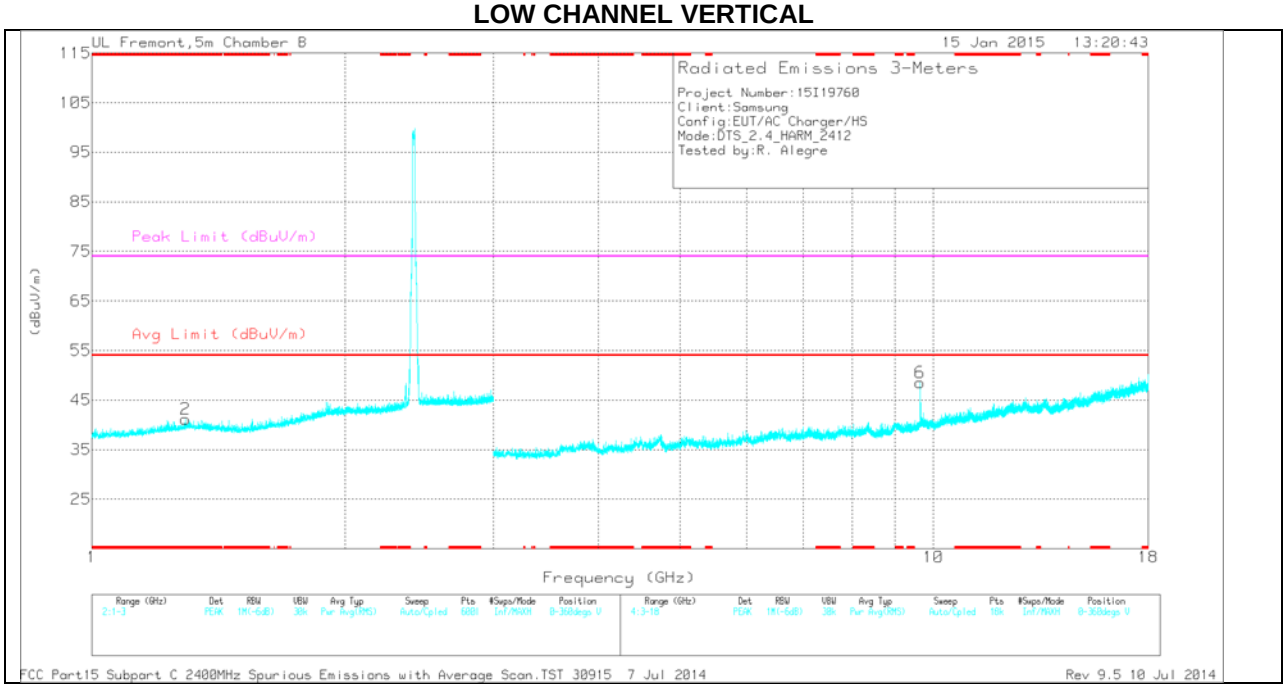
HARMONICS AND SPURIOUS EMISSIONS

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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.269	36.61	PK	28.7	-24.4	0	40.91	-	-	74	-33.09	0-360	101	H
2	* 1.291	36.67	PK	28.8	-24.3	0	41.17	-	-	74	-32.83	0-360	101	V
3	* 3.6	34.94	PK	33.1	-31	0	37.04	-	-	74	-36.96	0-360	101	H
4	* 4.713	33.75	PK	34.2	-29.5	0	38.45	-	-	74	-35.55	0-360	101	H
5	9.648	33.01	PK	36.8	-24.2	0	45.61	-	-	-	-	0-360	199	H
6	9.648	35.87	PK	36.8	-24.2	0	48.47	-	-	-	-	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.648	40.57	PK2	36.8	-24.2	0	53.17	-	-	-	-	184	214	V
9.648	34.89	MAv1	36.8	-24.2	.31	47.8	54	-6.2	74	-26.2	184	214	V

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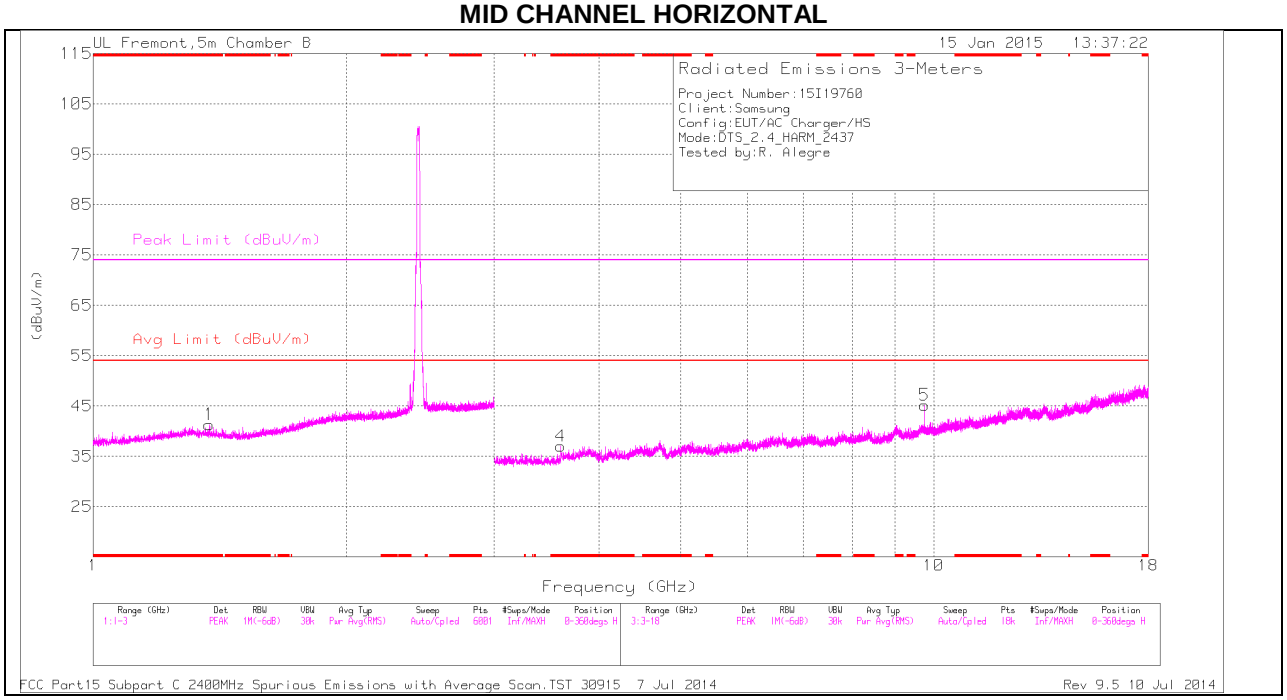
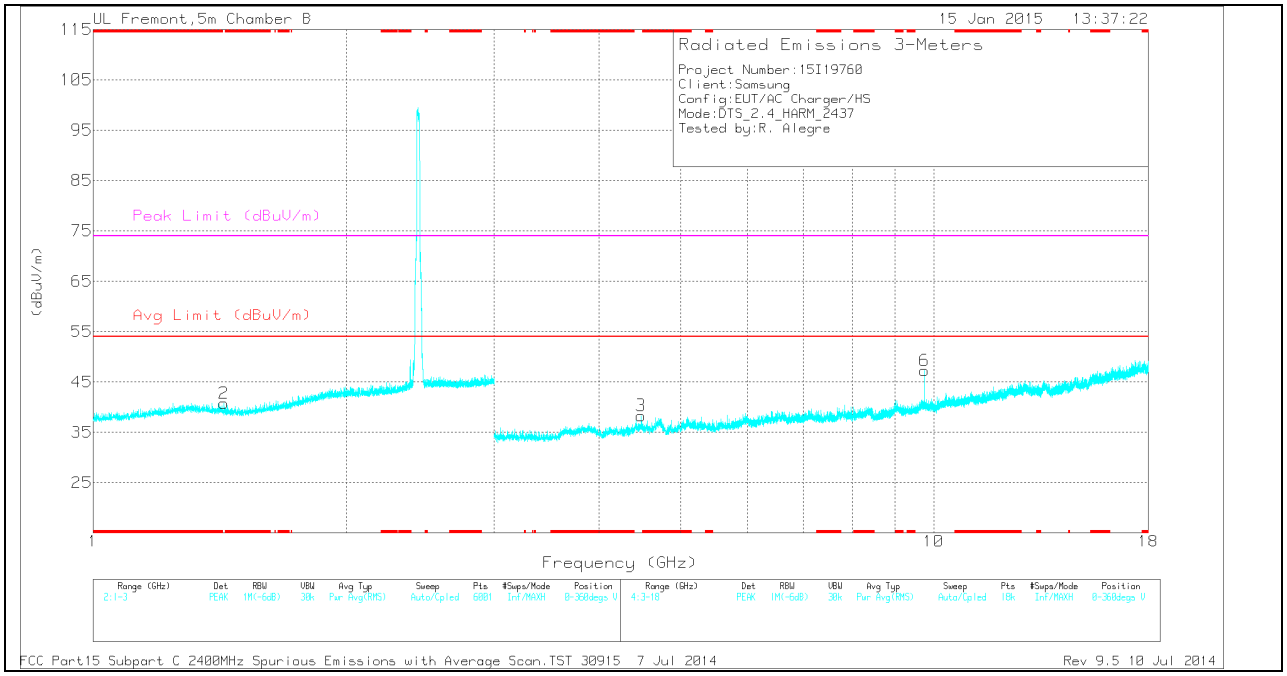
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.374	37.02	PK	28.6	-24.3	0	41.32	-	-	74	-32.68	0-360	199	H
4	* 3.6	34.9	PK	33.1	-31	0	37	-	-	74	-37	0-360	101	H
2	1.431	36.67	PK	28.3	-24.2	0	40.77	-	-	-	-	0-360	101	V
3	4.49	33.61	PK	34	-29.3	0	38.31	-	-	-	-	0-360	101	V
5	9.748	32.47	PK	36.9	-24.2	0	45.17	-	-	-	-	0-360	200	H
6	9.748	34.55	PK	36.9	-24.2	0	47.25	-	-	-	-	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.748	39.9	PK2	36.9	-24.2	0	52.6	-	-	-	-	34	170	V
9.748	33.6	MAv1	36.9	-24.2	.31	46.61	54	-7.39	-	-	34	170	V

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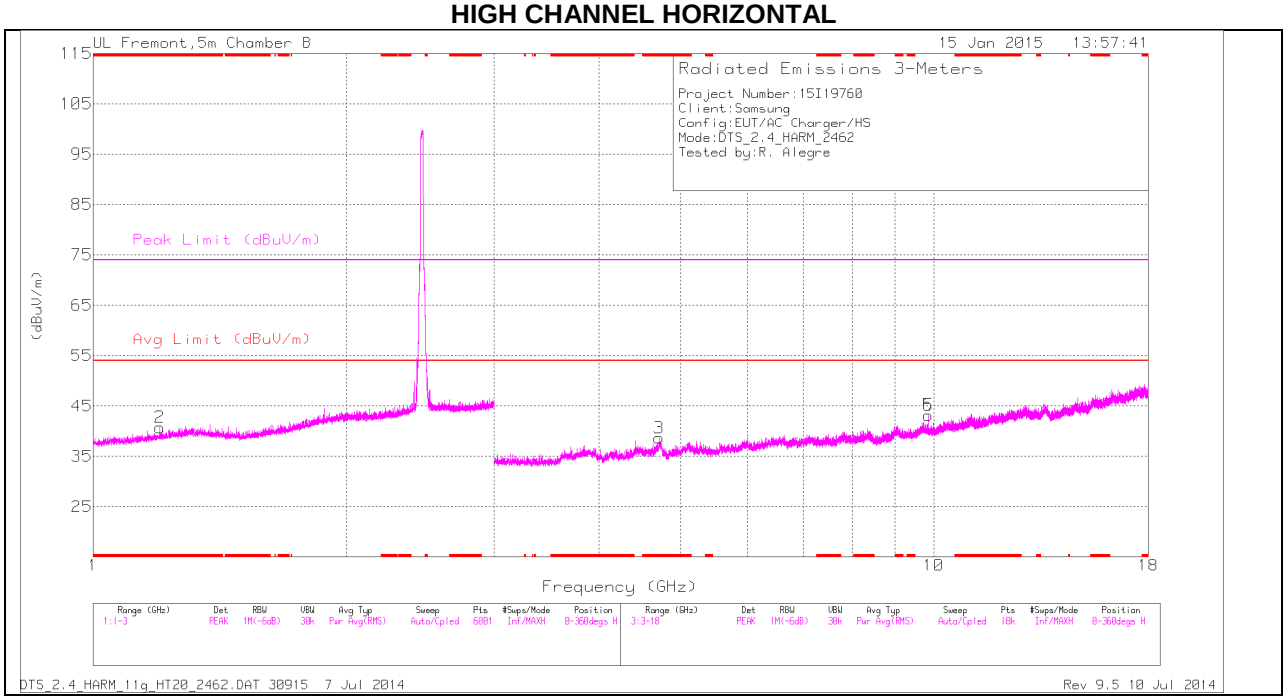
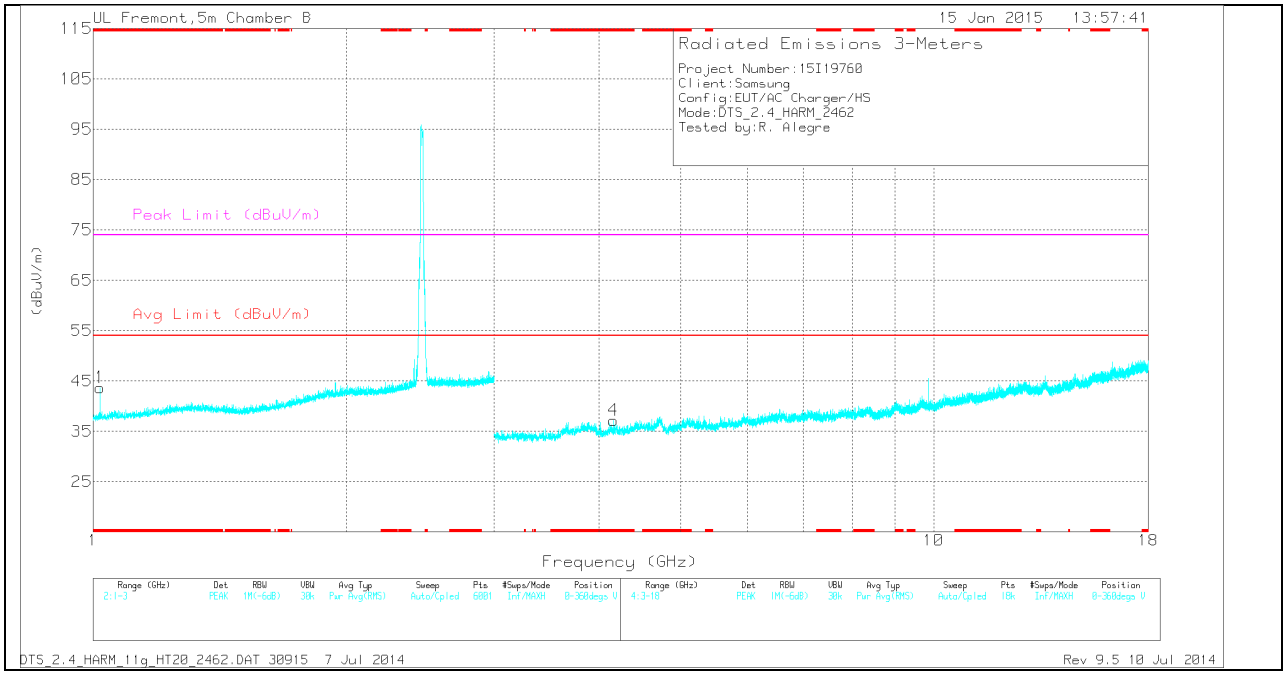
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.201	36.93	PK	28.2	-24.4	0	40.73	-	-	74	-33.27	0-360	101	H
1	* 1.019	41.19	PK	27.1	-24.6	0	43.69	-	-	74	-30.31	0-360	101	V
3	* 4.712	33.97	PK	34.2	-29.5	0	38.67	-	-	74	-35.33	0-360	199	H
4	* 4.162	33.71	PK	33.6	-30.1	0	37.21	-	-	74	-36.79	0-360	199	V
5	9.848	30.7	PK	37	-24.5	0	43.2	-	-	-	-	0-360	199	H
6	9.848	30.7	PK	37	-24.5	0	43.2	-	-	-	-	0-360	199	H

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.018	36.48	PK2	27.1	-24.6	0	38.98	-	-	74	-35.02	1	101	V
* 1.019	32.65	MAv1	27.1	-24.6	0.31	35.46	54	-18.54	-	-	1	101	V
* 1.017	36.18	PK2	27.1	-24.6	0	38.68	-	-	74	-35.32	11	102	V
* 1.019	32.53	MAv1	27.1	-24.6	0.31	35.34	54	-18.66	-	-	11	102	V
9.848	29.34	PK2	37	-24.5	0	41.84	-	-	-	-	25	199	H
9.848	25.85	MAv1	37	-24.5	0.31	38.66	-	-	-	-	25	199	H
9.848	30.35	PK2	37	-24.5	0	42.85	-	-	-	-	39	199	H
9.848	26.75	MAv1	37	-24.5	0.31	39.56	-	-	-	-	39	199	H

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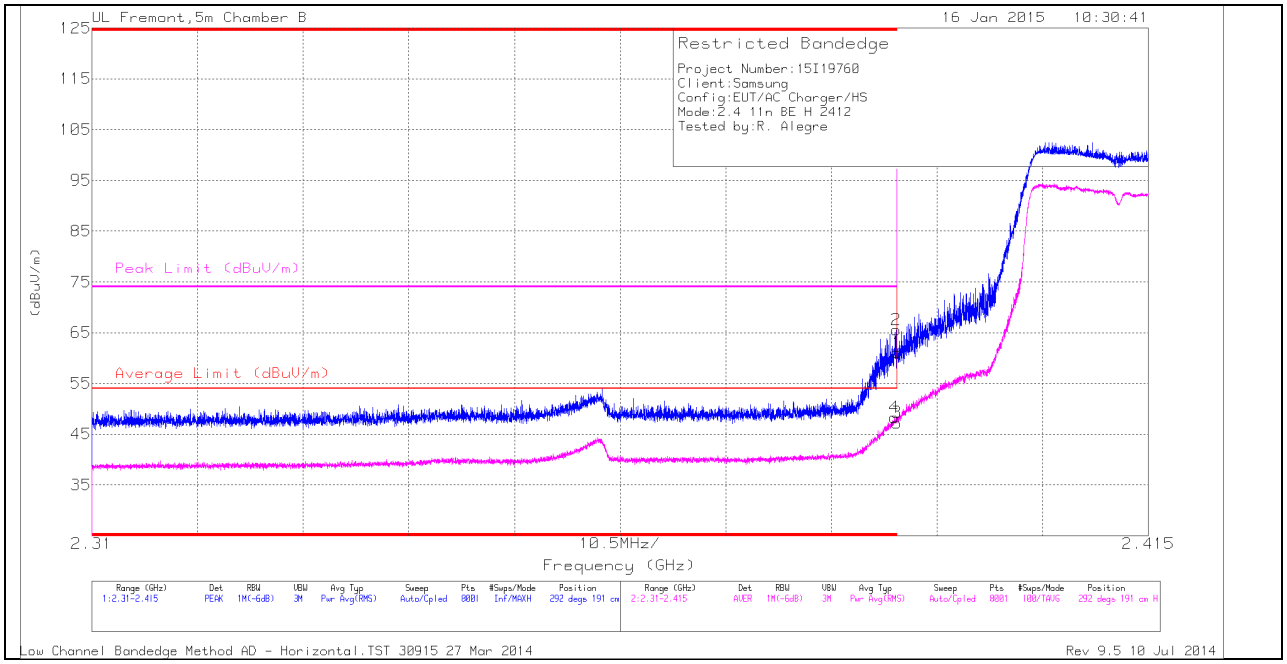
10.2.3. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

RESTRICTED BANDEDGE (LOW CHANNEL)

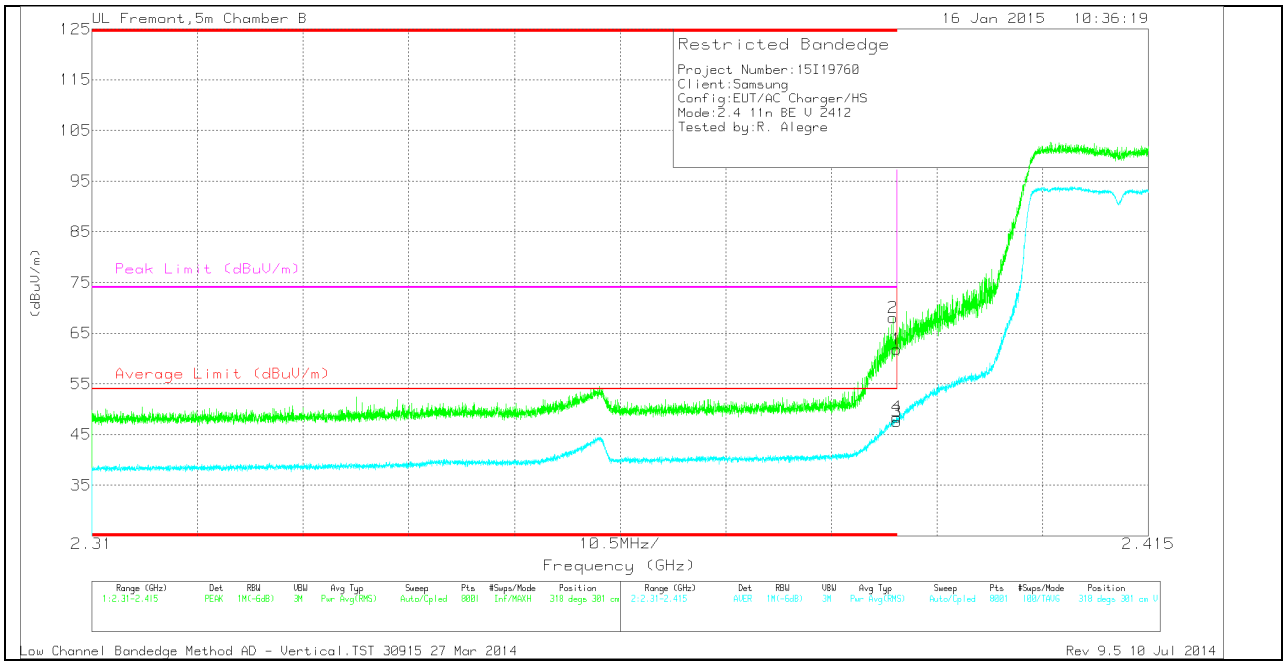
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	51.69	PK	32.1	-22.7	0	61.09	-	-	74	-12.91	292	191	H
2	* 2.39	56.2	PK	32.1	-22.7	0	65.6	-	-	74	-8.4	292	191	H
3	* 2.39	37.53	RMS	32.1	-22.7	.32	47.25	54	-6.75	-	-	292	191	H
4	* 2.39	38.64	RMS	32.1	-22.7	.32	48.36	54	-5.64	-	-	292	191	H

VERTICAL PEAK AND AVERAGE PLOT

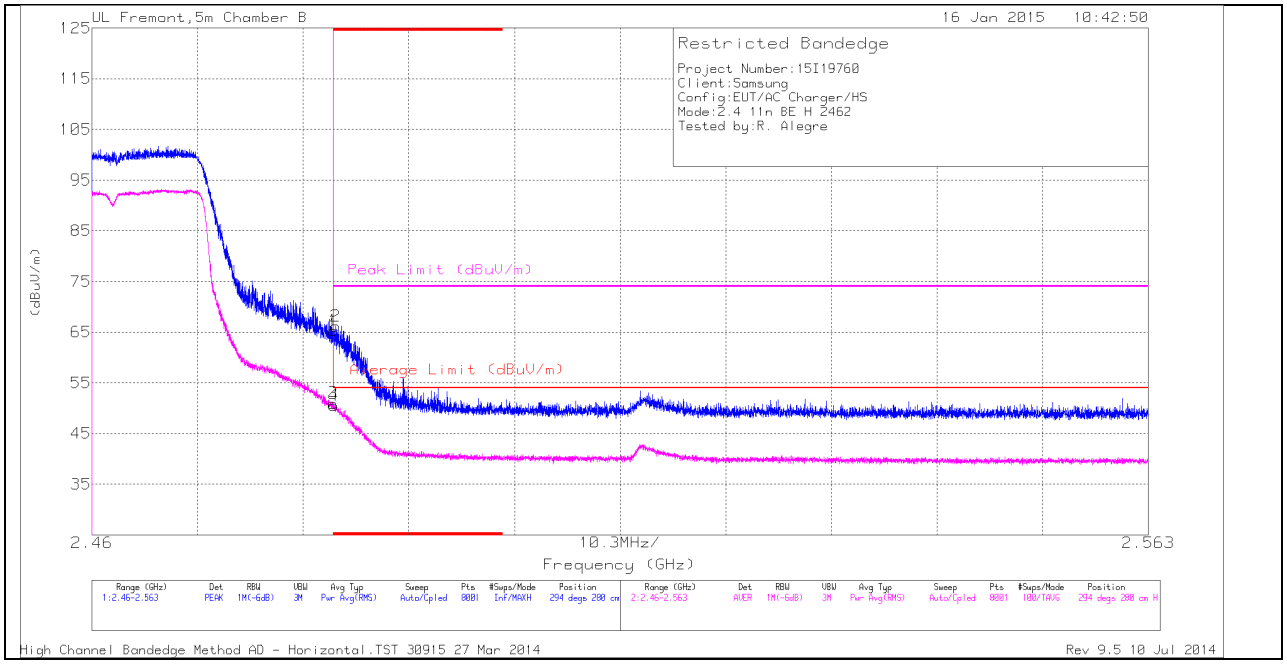


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	52.47	PK	32.1	-22.7	0	61.87	-	-	74	-12.13	318	301	V
2	* 2.39	58.64	PK	32.1	-22.7	0	68.04	-	-	74	-5.96	318	301	V
3	* 2.39	38.21	RMS	32.1	-22.7	.32	47.93	54	-6.07	-	-	318	301	V
4	* 2.39	38.98	RMS	32.1	-22.7	.32	48.60	54	-5.30	-	-	318	301	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

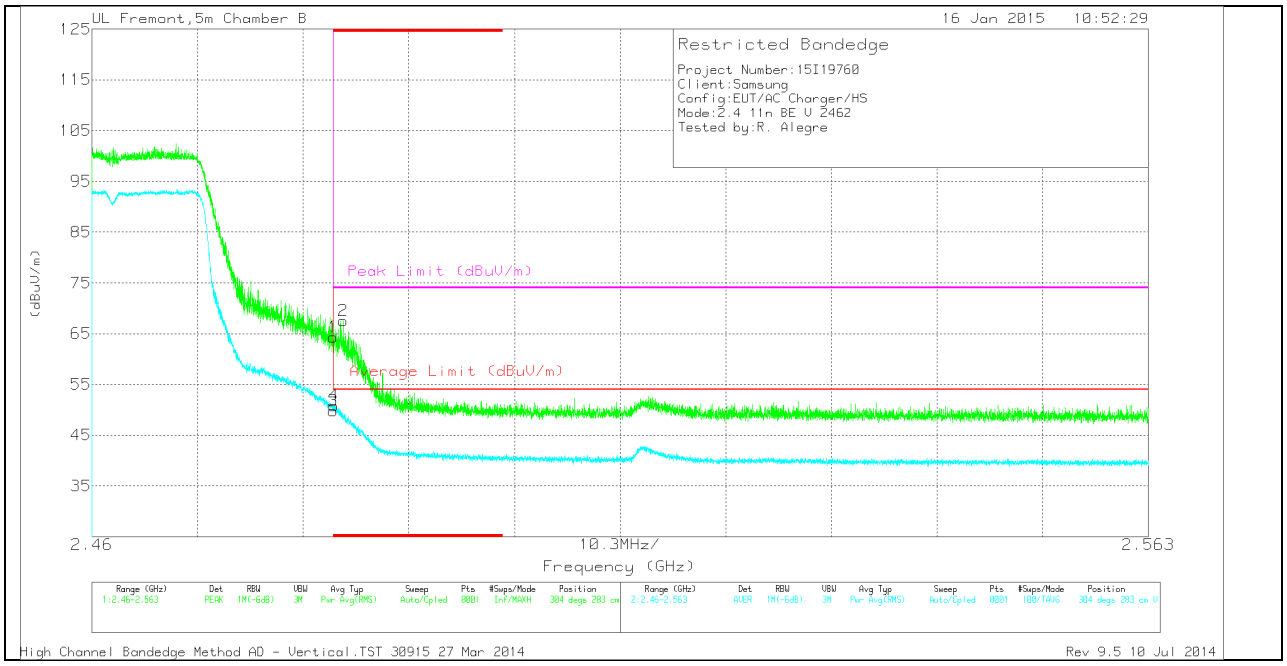
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Flt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	55.56	PK	32.4	-22.6	0	65.36	-	-	74	-8.64	294	280	H
2	* 2.484	56.43	PK	32.4	-22.6	0	66.23	-	-	74	-7.77	294	280	H
3	* 2.484	40.85	RMS	32.4	-22.6	.32	50.97	54	-3.03	-	-	294	280	H
4	* 2.484	40.42	RMS	32.4	-22.6	.32	50.54	54	-3.46	-	-	294	280	H

VERTICAL PEAK AND AVERAGE PLOT

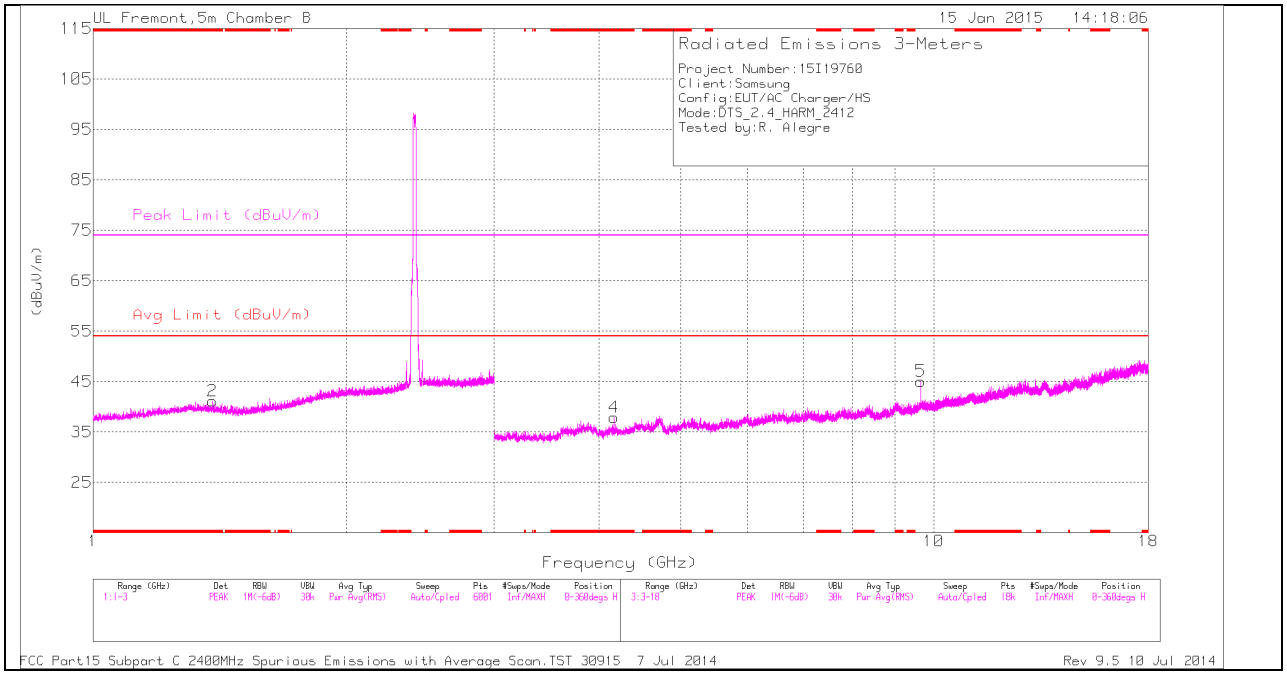


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	54.49	PK	32.4	-22.6	0	64.29	-	-	74	-9.71	304	283	V
2	* 2.484	57.78	PK	32.4	-22.6	0	67.58	-	-	74	-6.42	304	283	V
3	* 2.484	39.7	RMS	32.4	-22.6	.32	49.82	54	-4.18	-	-	304	283	V
4	* 2.484	40.68	RMS	32.4	-22.6	.32	50.8	54	-3.2	-	-	304	283	V

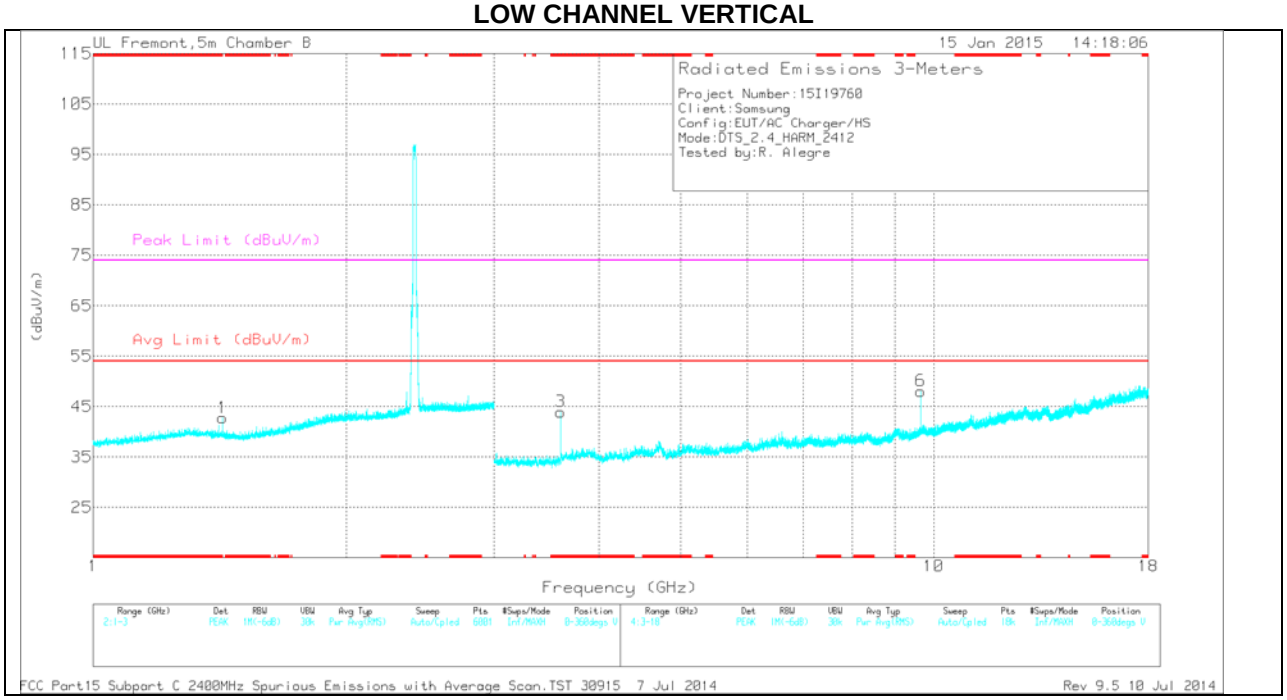
HARMONICS AND SPURIOUS EMISSIONS

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

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.387	36.75	PK	28.6	-24.2	0	41.15	-	-	74	-32.85	0-360	101	H
1	* 1.426	38.58	PK	28.4	-24.2	0	42.78	-	-	74	-31.22	0-360	101	V
4	* 4.168	34.4	PK	33.6	-30.1	0	37.9	-	-	74	-36.1	0-360	200	H
3	* 3.6	41.86	PK	33.1	-31	0	43.96	-	-	74	-30.04	0-360	200	V
5	9.648	32.47	PK	36.8	-24.2	0	45.07	-	-	-	-	0-360	200	H
6	9.648	35.49	PK	36.8	-24.2	0	48.09	-	-	-	-	0-360	200	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 3.6	33.37	PK2	33.1	-31	0	35.47	-	-	74	-38.53	2	200	V
* 3.6	30.21	MAv1	33.1	-31	.32	32.63	54	-21.37	-	-	2	200	V
9.648	33.68	PK2	36.8	-24.2	0	46.28	-	-	-	-	26	200	V
9.648	31.08	MAv1	36.8	-24.2	.32	44	54	-10	-	-	26	200	V

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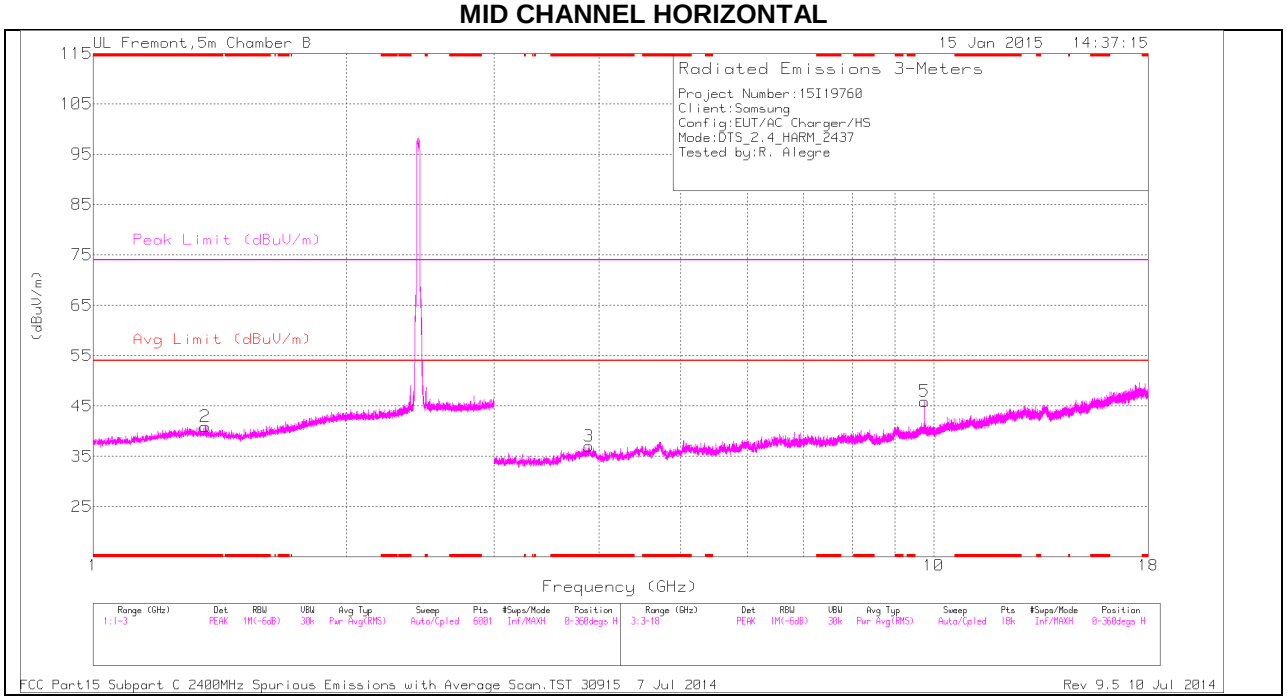
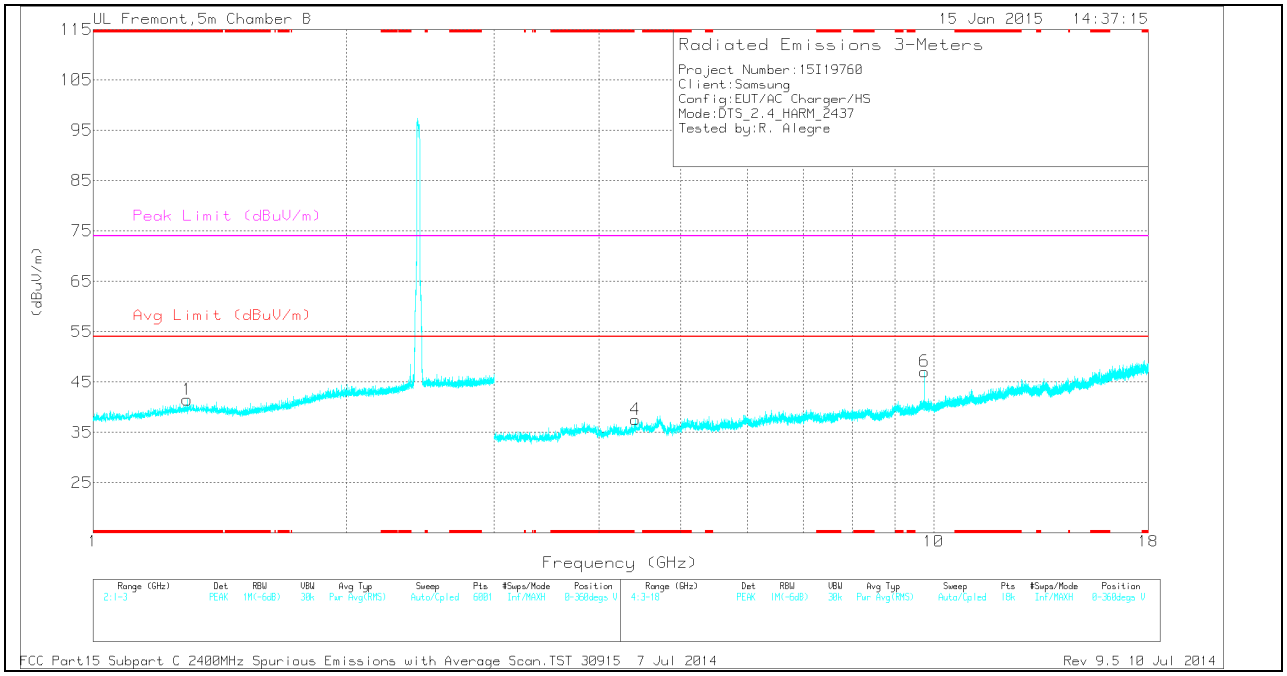
MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.36	36.52	PK	28.7	-24.3	0	40.92	-	-	74	-33.08	0-360	101	H
1	* 1.294	36.99	PK	28.8	-24.3	0	41.49	-	-	74	-32.51	0-360	101	V
3	* 3.892	33.51	PK	33.8	-30.3	0	37.01	-	-	74	-36.99	0-360	199	H
4	4.417	33.15	PK	33.8	-29.4	0	37.55	-	-	-	-	0-360	101	V
5	9.748	33.25	PK	36.9	-24.2	0	45.95	-	-	-	-	0-360	199	H
6	9.748	34.38	PK	36.9	-24.2	0	47.08	-	-	-	-	0-360	199	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.748	39.64	PK2	36.9	-24.2	0	52.34	-	-	-	-	236	210	V
9.748	26.02	MAv1	36.9	-24.2	.32	39.04	54	-14.96	-	-	236	210	V

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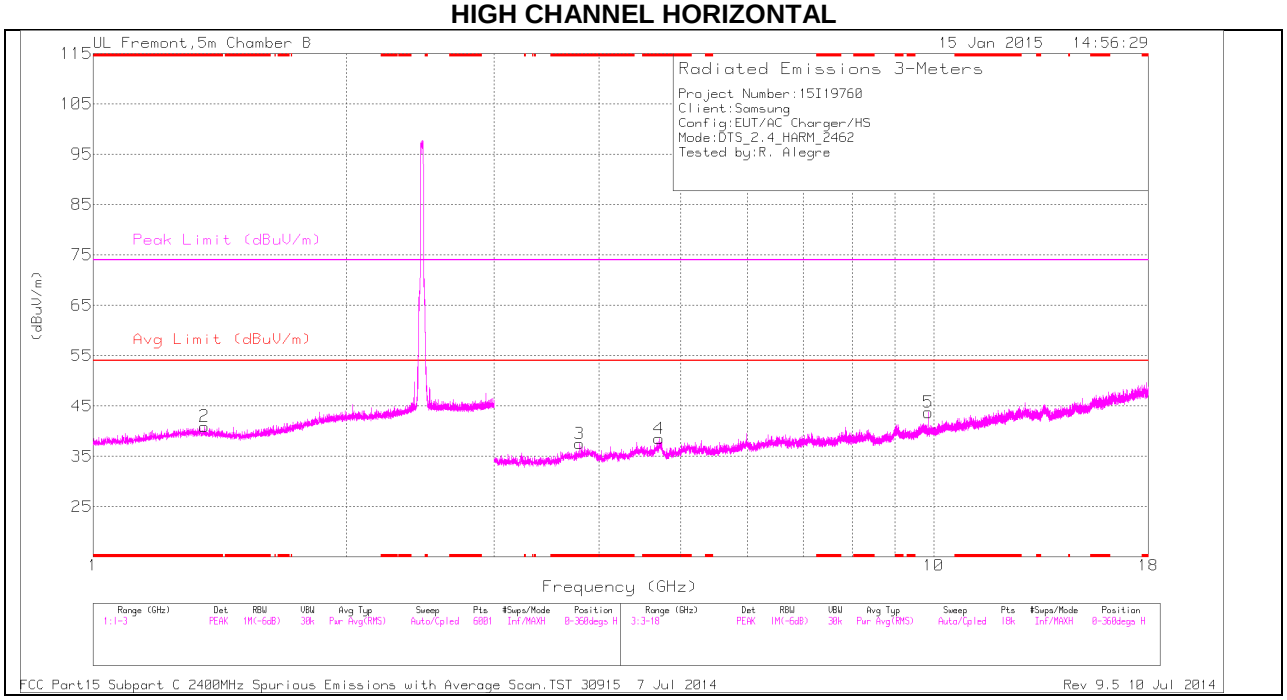
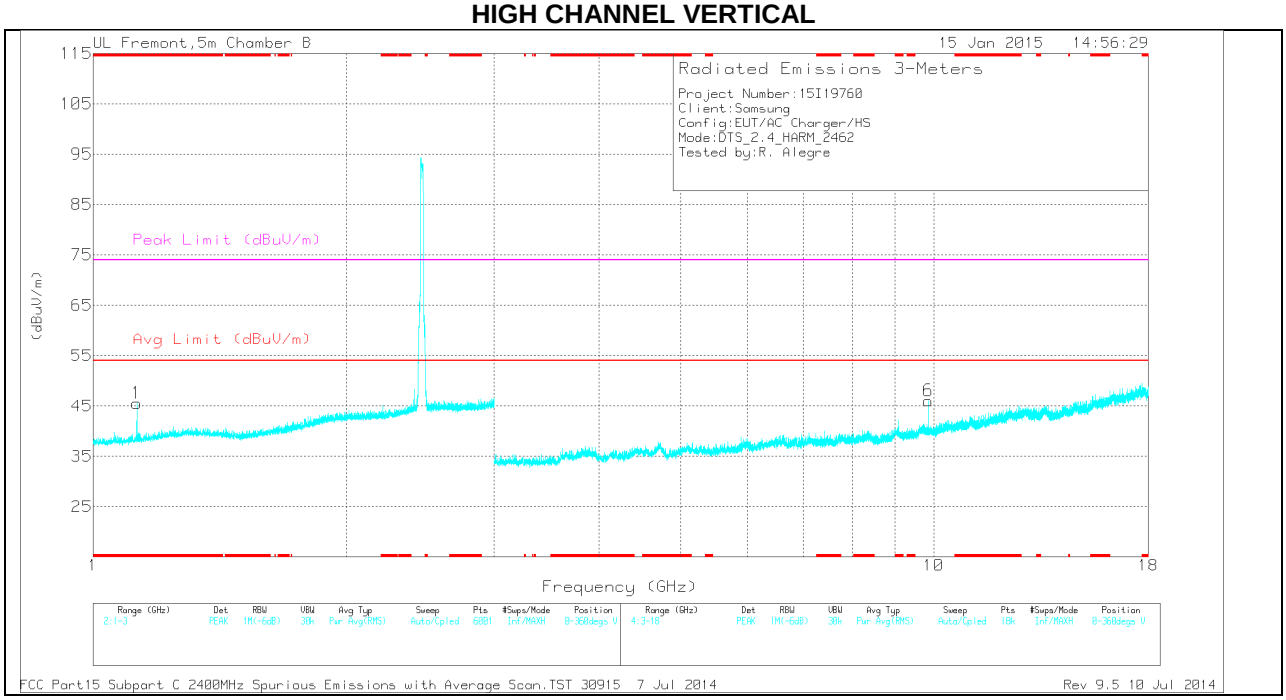
HIGH CHANNEL HORIZONTAL



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

HIGH CHANNEL VERTICAL



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

HIGH CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/Fltr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.357	36.55	PK	28.7	-24.3	0	40.95	-	-	74	-33.05	0-360	199	H
1	* 1.127	42.47	PK	27.6	-24.5	0	45.57	-	-	74	-28.43	0-360	199	V
3	* 3.792	34.73	PK	33.6	-30.8	0	37.53	-	-	74	-36.47	0-360	200	H
4	* 4.712	33.81	PK	34.2	-29.5	0	38.51	-	-	74	-35.49	0-360	200	H
5	9.848	31.24	PK	37	-24.5	0	43.74	-	-	-	-	0-360	200	H
6	9.848	33.56	PK	37	-24.5	0	46.06	-	-	-	-	0-360	101	V

PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T345 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.126	45.5	PK2	27.6	-24.5	0	48.6	-	-	74	-25.4	123	352	V
* 1.128	32.2	MAv1	27.6	-24.5	.32	35.62	54	-18.38	-	-	123	352	V
9.848	39.54	PK2	37	-24.5	0	52.04	-	-	-	-	39	103	V
9.848	32.3	MAv1	37	-24.5	.32	44.8	-	-	-	-	39	103	V

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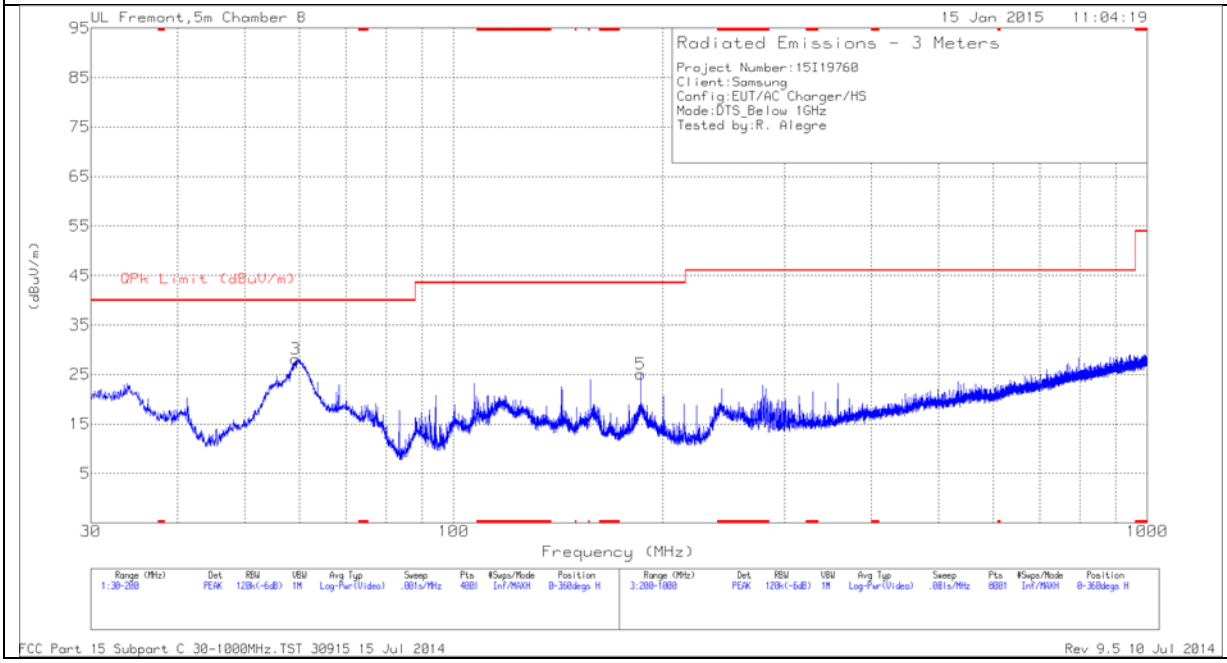
10.3. WORST-CASE BELOW 1 GHz

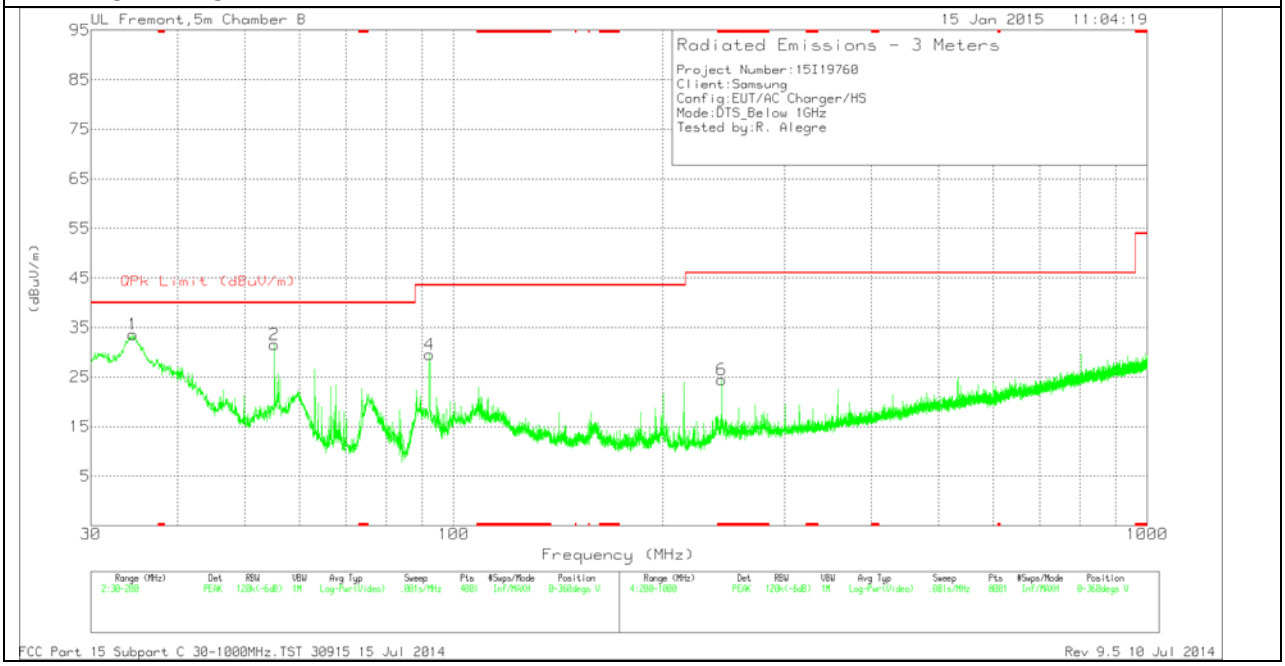
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



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

VERTICAL PLOT



Below 1G Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T243 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 243.4	39.27	PK	11.6	-26.4	24.47	46.02	-21.55	0-360	101	V
1	34.505	44.49	PK	17.8	-28.7	33.59	40	-6.41	0-360	101	V
2	55.2025	52.79	PK	7.3	-28.5	31.59	40	-8.41	0-360	101	V
3	59.24	48.99	PK	7.5	-28.4	28.09	40	-11.91	0-360	400	H
4	92.305	49.4	PK	8.2	-28.1	29.5	43.52	-14.02	0-360	101	V
5	186.145	40.8	PK	11.3	-27	25.1	43.52	-18.42	0-360	100	H

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

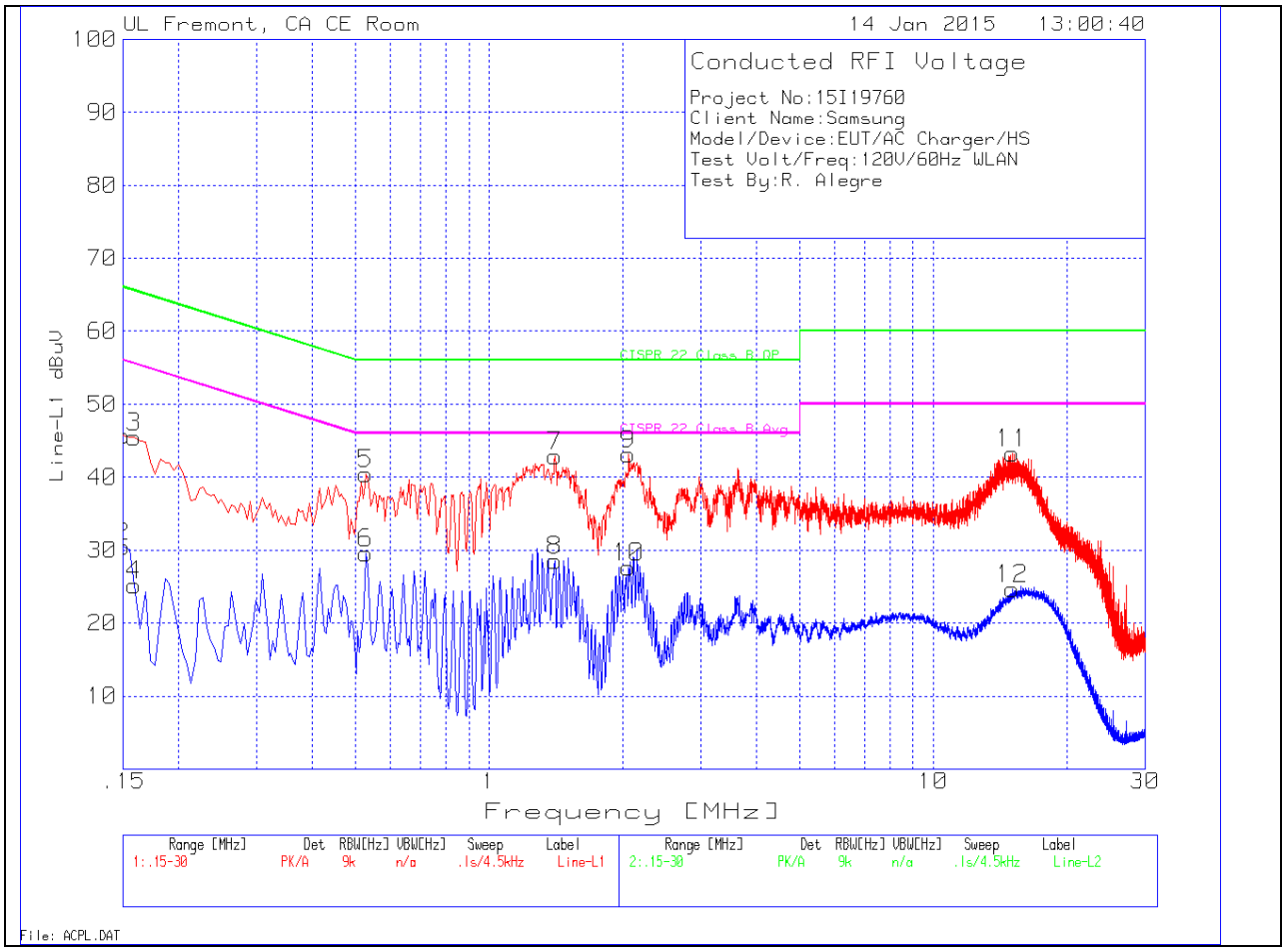
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT

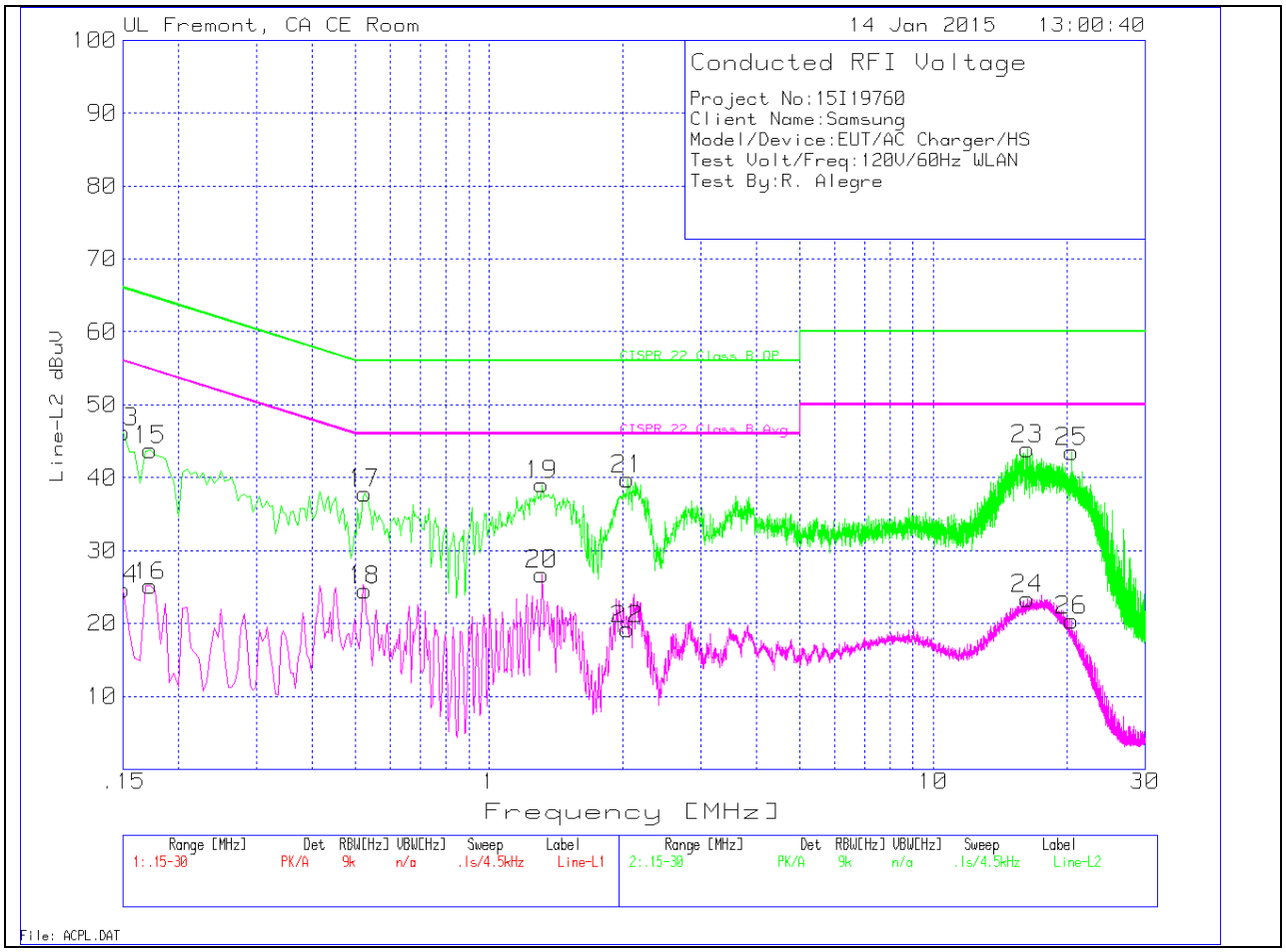


LINE 1 RESULTS

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1 (dB)	LC Cables 1&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
1	.15	44.28	PK	1.4	0	45.68	66	-20.32	-	-
2	.15	29.03	Av	1.4	0	30.43	-	-	56	-25.57
3	.159	44.22	PK	1.3	0	45.52	65.5	-19.98	-	-
4	.159	23.88	Av	1.3	0	25.18	-	-	55.5	-30.32
5	.528	40.11	PK	.3	0	40.41	56	-15.59	-	-
6	.528	29.23	Av	.3	0	29.53	-	-	46	-16.47
7	1.4055	42.72	PK	.2	0	42.92	56	-13.08	-	-
8	1.4055	28.39	Av	.2	0	28.59	-	-	46	-17.41
9	2.0625	42.79	PK	.2	.1	43.09	56	-12.91	-	-
10	2.0625	27.31	Av	.2	.1	27.61	-	-	46	-18.39
11	15.0675	42.77	PK	.3	.2	43.27	60	-16.73	-	-
12	15.0675	24.15	Av	.3	.2	24.65	-	-	50	-25.35

LINE 2 PLOT



LINE 2 RESULTS

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2 (dB)	LC Cables 2&3 (dB)	Corrected Reading dBuV	CISPR 22 Class B QP	Margin to Limit (dB)	CISPR 22 Class B Avg	Margin to Limit (dB)
13	.15	44.71	PK	1.5	0	46.21	66	-19.79	-	-
14	.15	23.18	Av	1.5	0	24.68	-	-	56	-31.32
15	.1725	42.6	PK	1.2	0	43.8	64.8	-21	-	-
16	.1725	23.93	Av	1.2	0	25.13	-	-	54.8	-29.67
17	.5235	37.4	PK	.4	0	37.8	56	-18.2	-	-
18	.5235	24.18	Av	.4	0	24.58	-	-	46	-21.42
19	1.3155	38.77	PK	.2	.1	39.07	56	-16.93	-	-
20	1.3155	26.43	Av	.2	.1	26.73	-	-	46	-19.27
21	2.049	39.51	PK	.2	.1	39.81	56	-16.19	-	-
22	2.049	18.89	Av	.2	.1	19.19	-	-	46	-26.81
23	16.305	43.39	PK	.3	.2	43.89	60	-16.11	-	-
24	16.305	22.89	Av	.3	.2	23.39	-	-	50	-26.61
25	20.535	43.08	PK	.3	.2	43.58	60	-16.42	-	-
26	20.535	19.9	Av	.3	.2	20.4	-	-	50	-29.6