



FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

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

MODEL NUMBER: SM-G7508W

FCC ID: A3LSMG7508W

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Prepared for

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

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

MODEL: SM-G7508W

SERIAL NUMBER: 1964696 (Radiated); 1964692 (Conducted)

DATE TESTED: SEPTEMBER 26-29, 2014

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

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

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

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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(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:

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 18000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

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

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	17.5	56.23
2412 - 2462	802.11g	14.5	28.18
2412 - 2462	802.11n HT20	12.1	16.22

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 0.14 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	EP-TA50CBC	N/A	N/A
Earphone	SAMSUNG	EHS61ASFWE	N/A	N/A

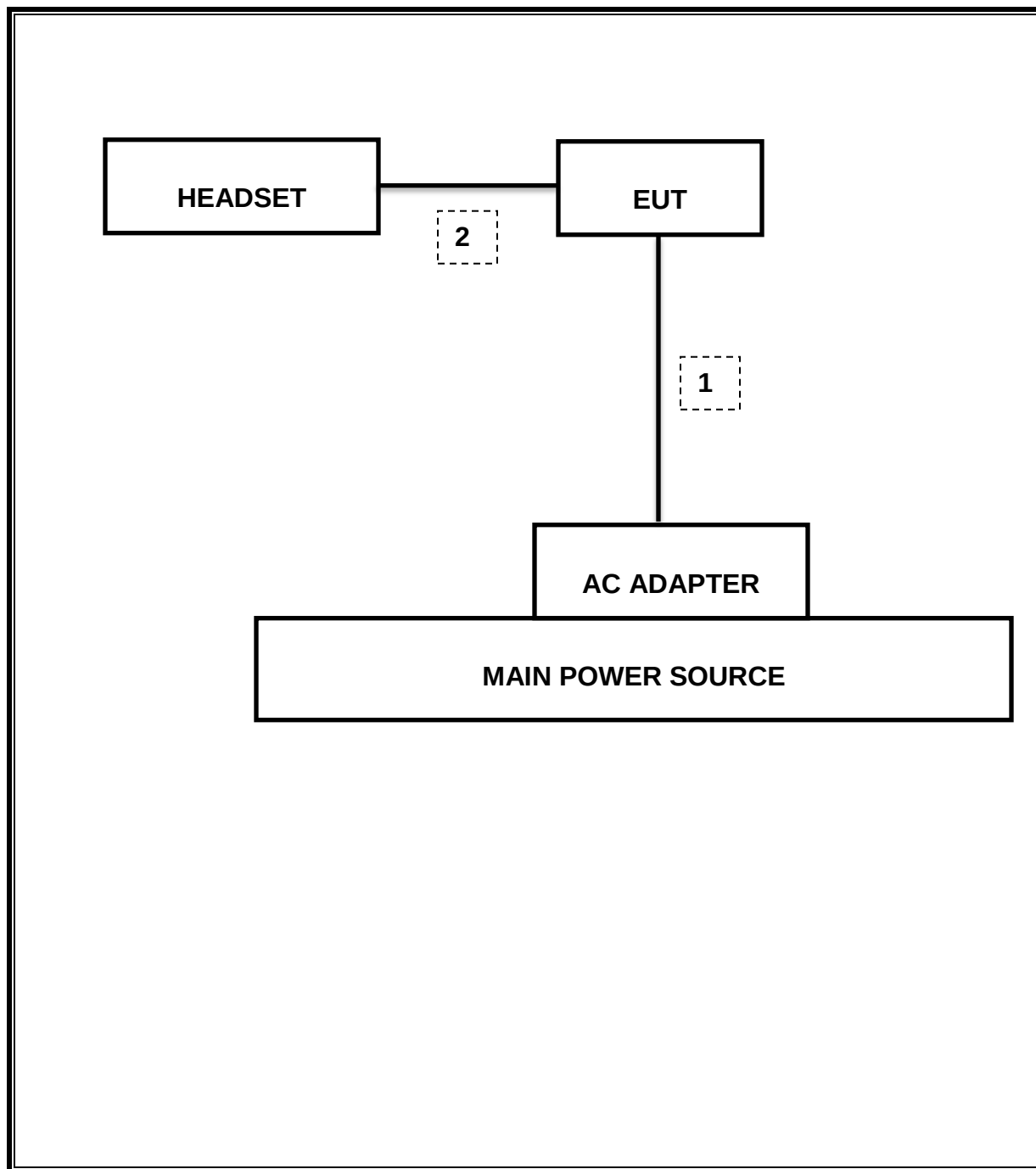
I/O CABLES

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. EUT was set in the Samsung Keystring menu mode to exercise the radio card.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

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

Test Equipment List				
Description	Manufacturer	Model	Asset	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/14
Spectrum Analyzer, 9KHz-40GHz	HP	8564E	C00986	04/01/15
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/15
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/14
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/14
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/15
Antenna, Horn, 18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/14
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 AVGPS-3 is used for power spectral density.

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

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

8. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
15.247 (a)(2)	RSS-210 A8.2(a)	Occupied Band width (6dB)	>500KHz	Conducted	Pass	8.97MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-28.38dBm
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	16.8dBm
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	-12.91dBm
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	43.18dBuV(PK)
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	50.58dBuV/m

9. ANTENNA PORT TEST RESULTS

9.1. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

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

TEST PROCEDURE

Reference to KDB 558074 D01 DTS Meas Guidance v03r02: The transmitter output is connected to a spectrum analyzer with the RBW set to 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	8.97	0.5
Mid	2437	9.04	0.5
High	2462	9.01	0.5
Worst		8.97	

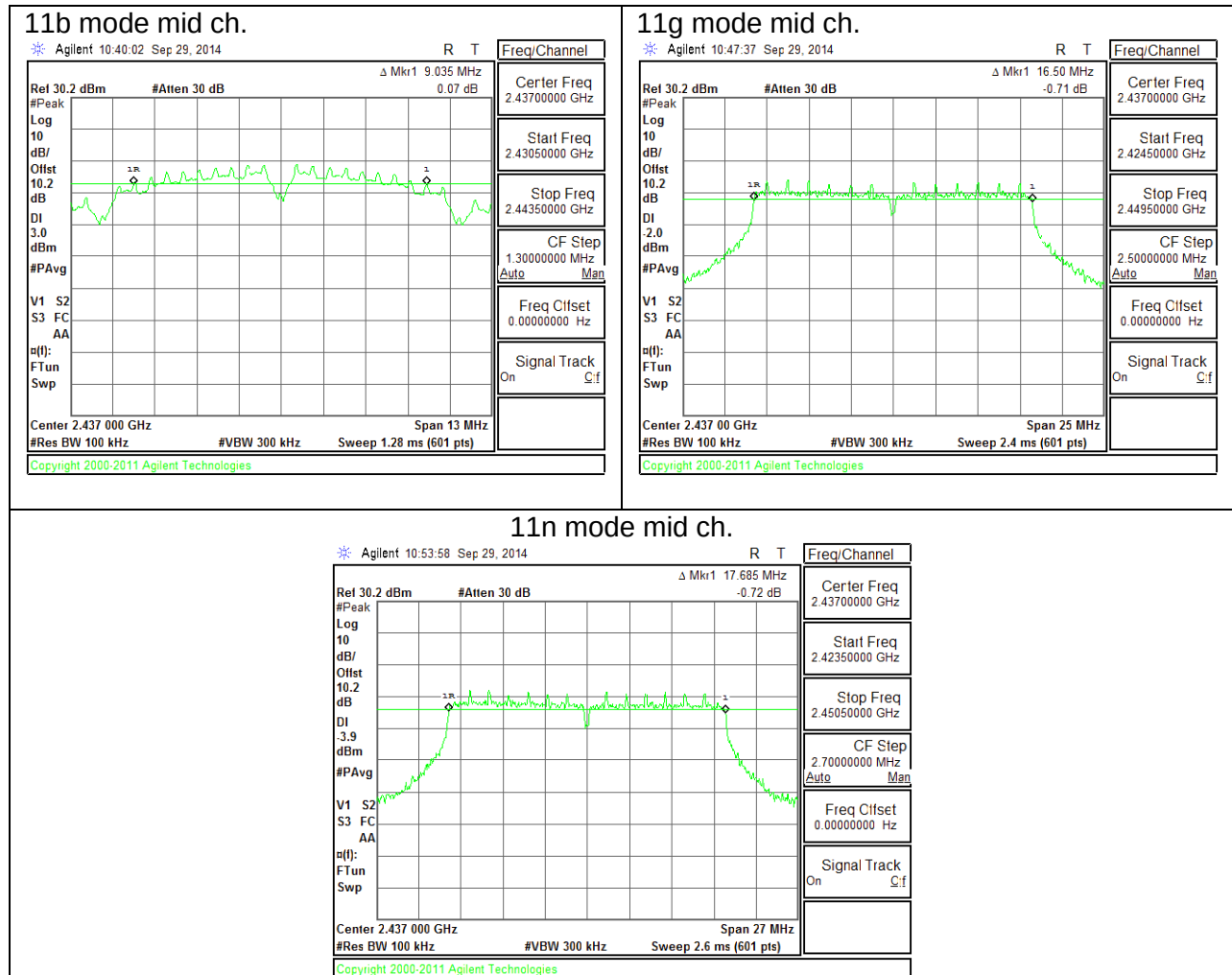
9.1.2. 802.11g MODE IN THE 2.4 GHz BAND

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2412	16.50	0.5
Mid	2437	16.50	0.5
High	2462	16.46	0.5
Worst		16.46	

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	17.64	0.5
Mid	2437	17.69	0.5
High	2462	17.68	0.5
Worst		17.64	

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	13.57
Mid	2437	13.70
High	2462	13.53
Worst		13.70

9.2.2. 802.11g MODE IN THE 2.4 GHz BAND

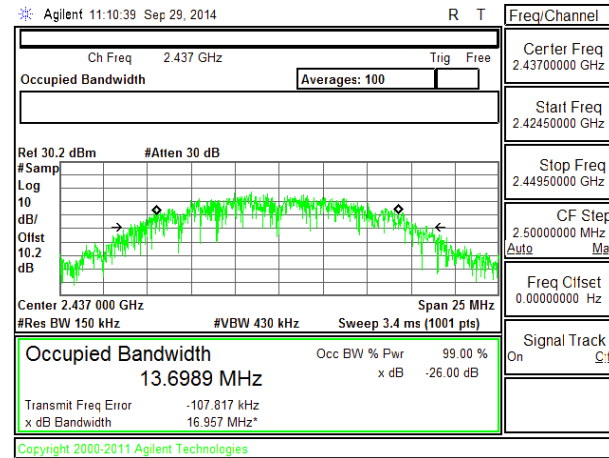
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	16.60
Mid	2437	16.52
High	2462	16.53
Worst		16.60

9.2.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

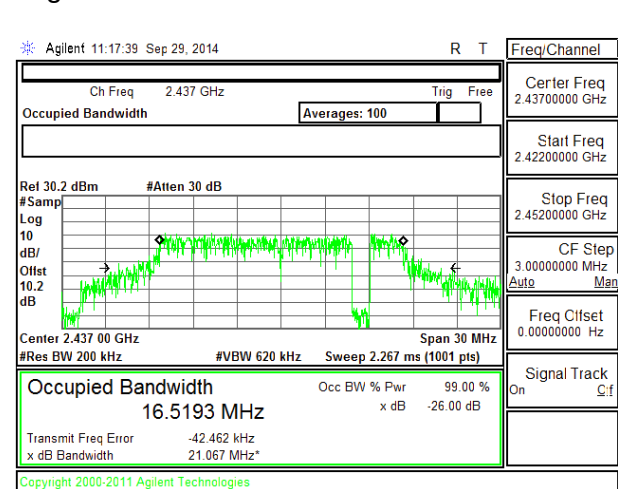
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2412	17.48
Mid	2437	17.38
High	2462	17.50
Worst		17.50

9.2.4. 99% BANDWIDTH MID CH PLOTS

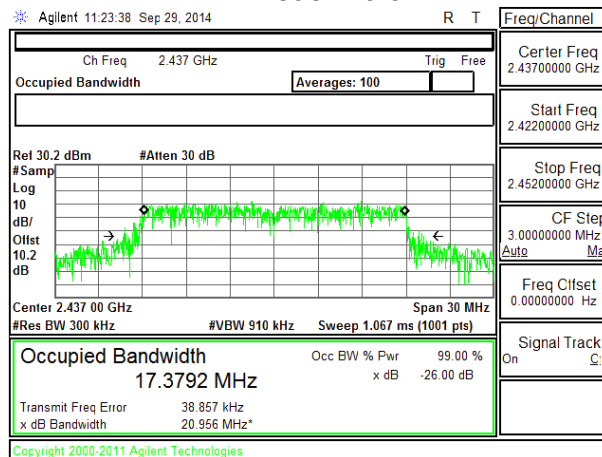
11b mode mid ch.



11g mode mid ch.



11n mode mid ch.



9.3. OUTPUT POWER

LIMITS

FCC §15.247

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

DIRECTIONAL ANTENNA GAIN

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

TEST PROCEDURE

The transmitter output is connected to a power meter.

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

RESULTS

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	0.14	30.00	30	36	30.00
Mid	2437	0.14	30.00	30	36	30.00
High	2462	0.14	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	17.50	17.50	30.00	-12.50
Mid	2437	17.50	17.50	30.00	-12.50
High	2462	17.10	17.10	30.00	-12.90
Worst			17.50		

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	0.14	30.00	30	36	30.00
Mid	2437	0.14	30.00	30	36	30.00
High	2462	0.14	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	14.50	14.50	30.00	-15.50
Mid	2437	13.80	13.80	30.00	-16.20
High	2462	14.00	14.00	30.00	-16.00
Worst			14.50		

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	0.14	30.00	30	36	30.00
Mid	2437	0.14	30.00	30	36	30.00
High	2462	0.14	30.00	30	36	30.00

Results

Channel	Frequency (MHz)	Chain 0 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low	2412	12.00	12.00	30.00	-18.00
Mid	2437	12.00	12.00	30.00	-18.00
High	2462	12.10	12.10	30.00	-17.90
Worst			12.10		

9.4. PSD

LIMITS

FCC §15.247

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

9.4.1. 802.11b MODE IN THE 2.4 GHz BAND

PSD Results

Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-12.91	8.0	-20.9
Mid	2437	-13.17	8.0	-21.2
High	2462	-13.16	8.0	-21.2

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	-19.01	8.0	-27.0
Mid	2437	-19.14	8.0	-27.1
High	2462	-19.52	8.0	-27.5

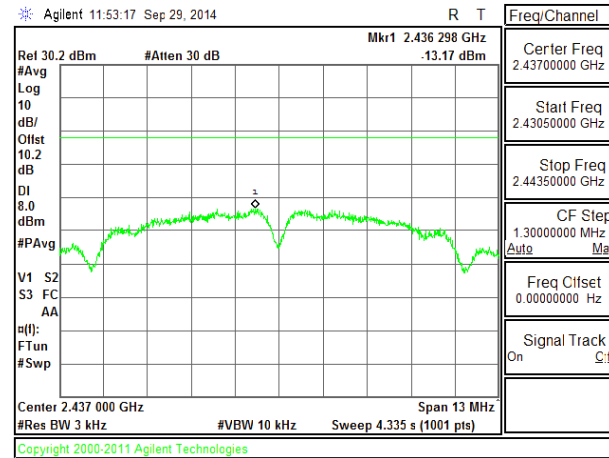
9.4.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

PSD Results

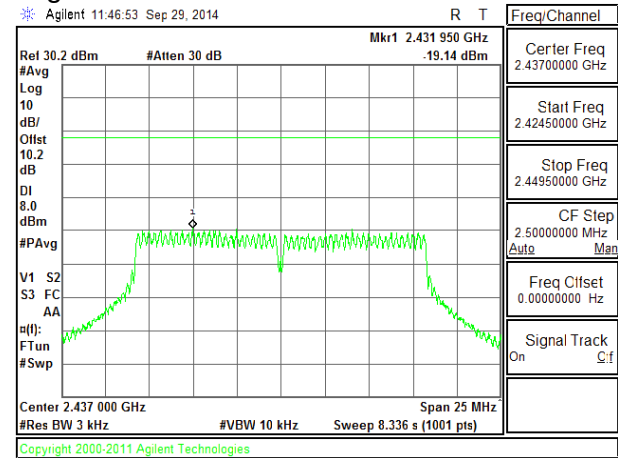
Channel	Frequency (MHz)	Chain 0 Meas (dBm)	Limit (dBm)	Margin (dB)
Low	2412	-21.31	8.0	-29.3
Mid	2437	-21.19	8.0	-29.2
High	2462	-21.96	8.0	-30.0

9.4.4. PSD Chain 0 MID CH PLOTS

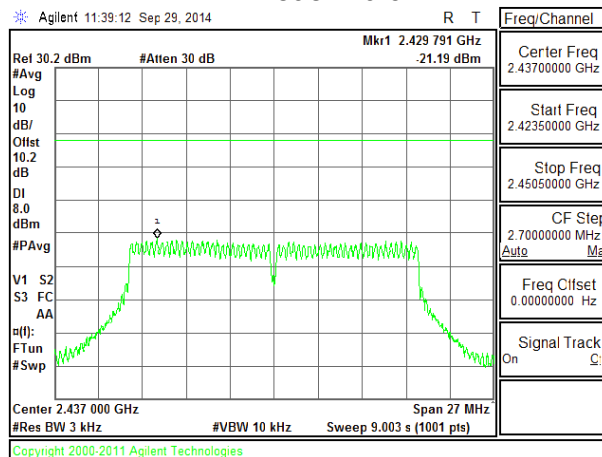
11b mode mid ch.



11g mode mid ch.



11n mode mid ch.



9.5. OUT-OF-BAND EMISSIONS

LIMITS

FCC §15.247 (d)

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

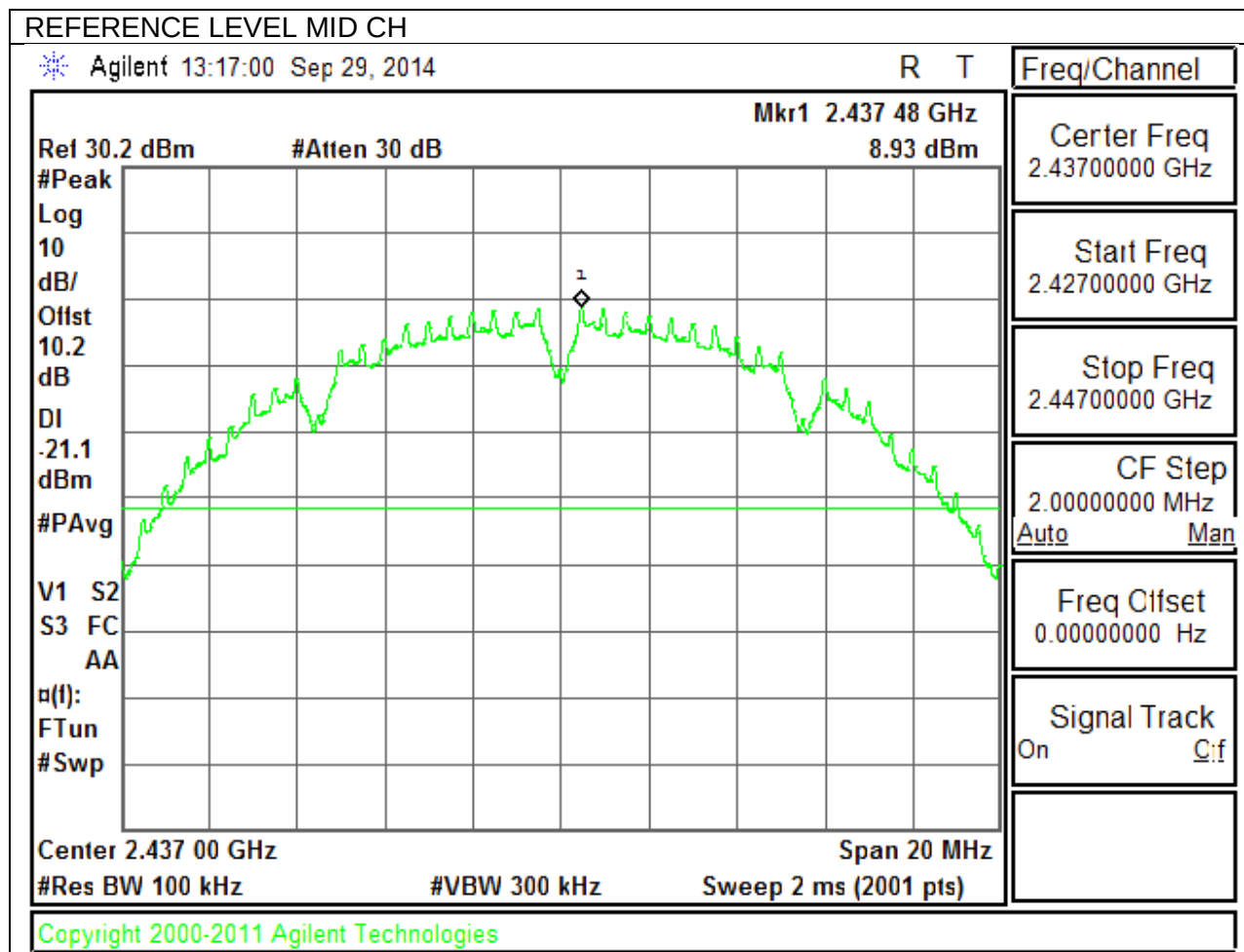
TEST PROCEDURE

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

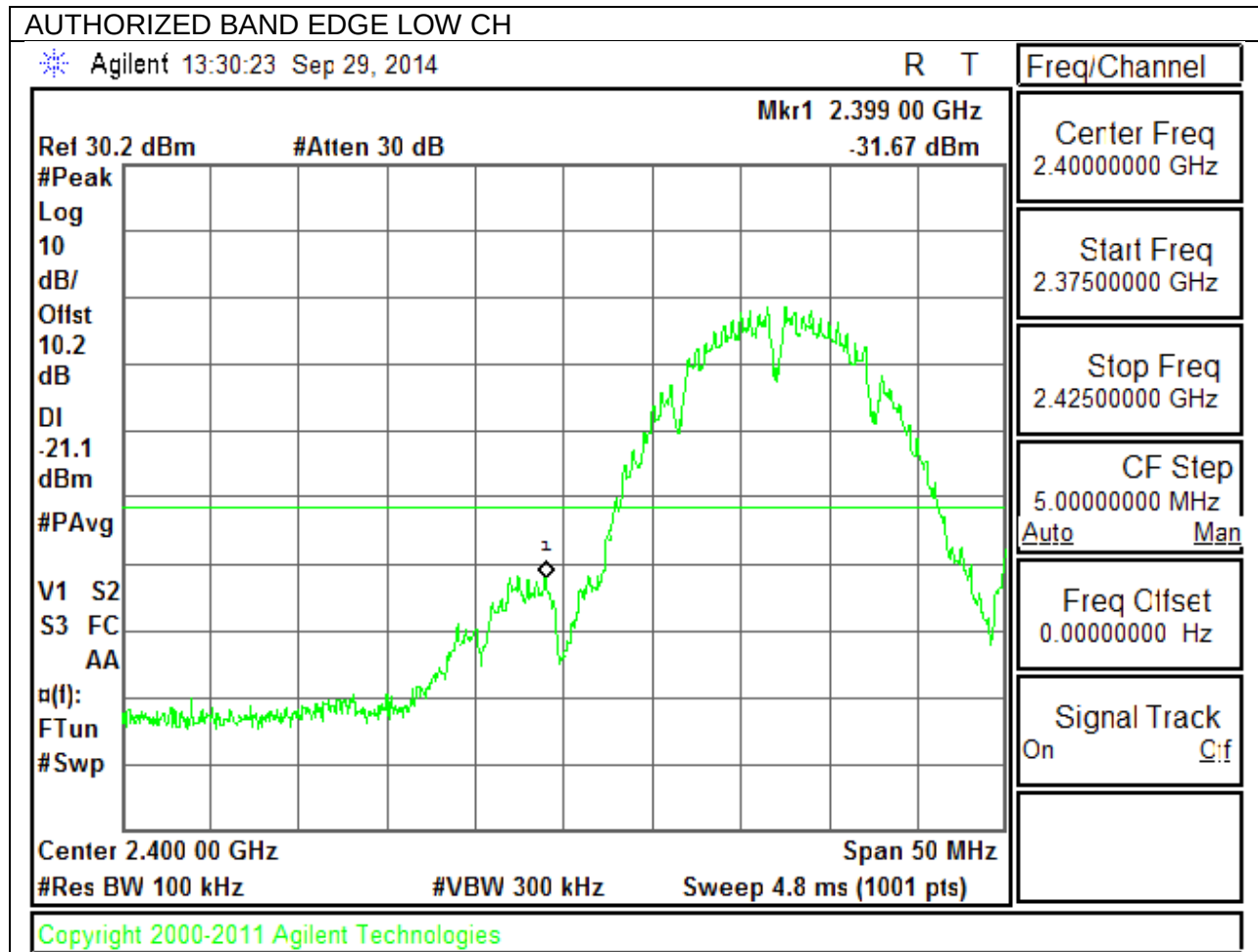
RESULTS

9.5.1. 802.11b MODE IN THE 2.4 GHz BAND

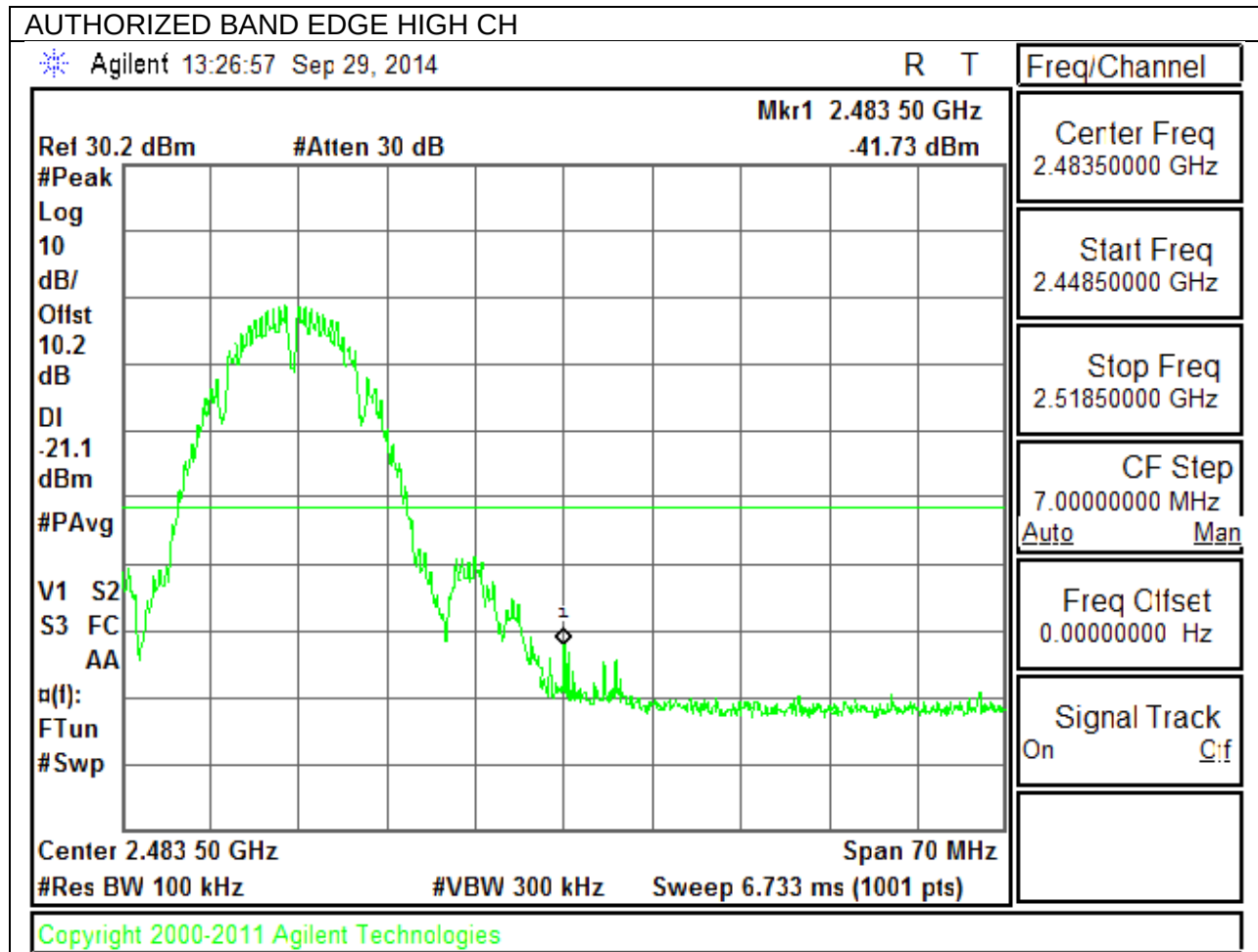
IN-BAND REFERENCE LEVEL



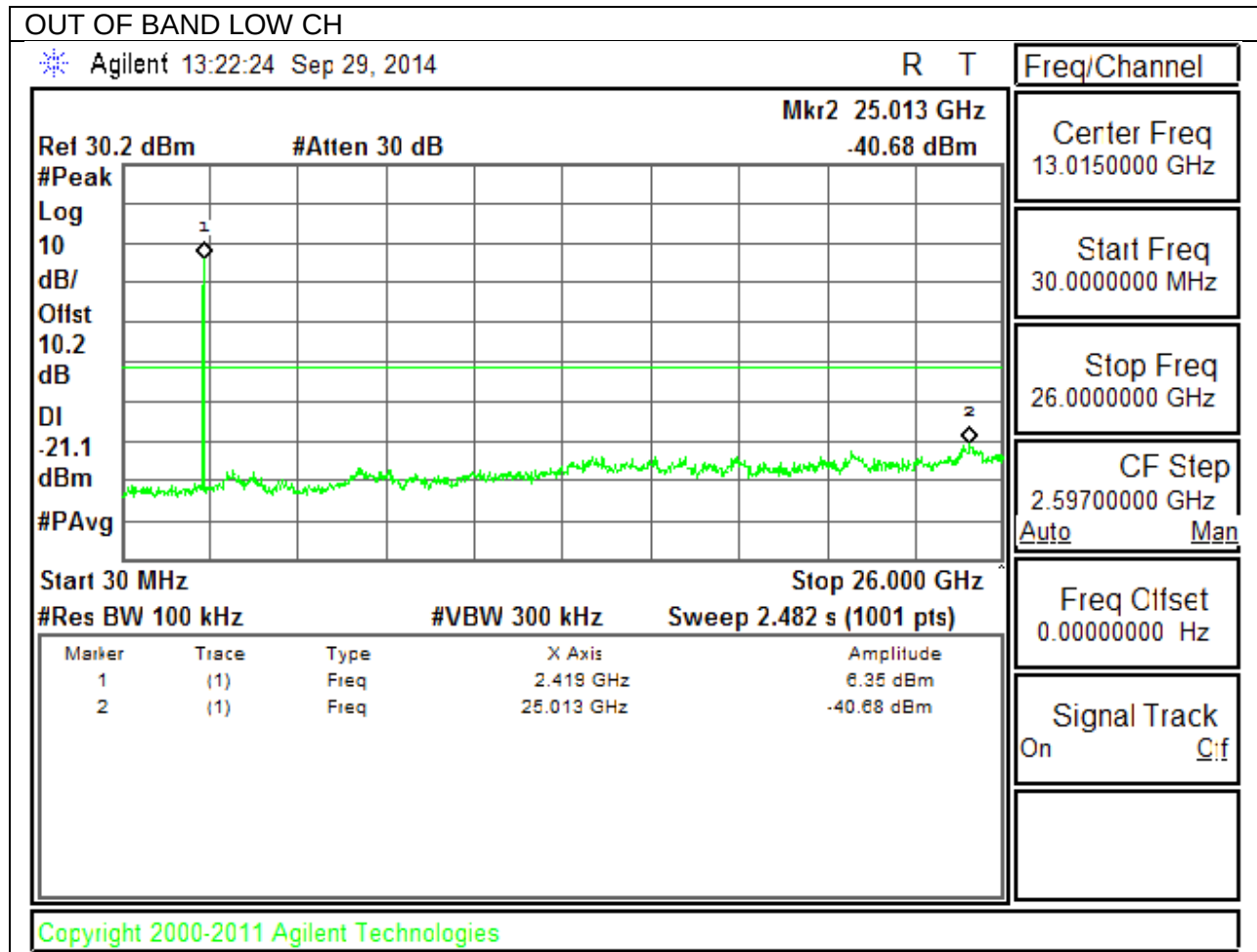
LOW CHANNEL BANDEDGE

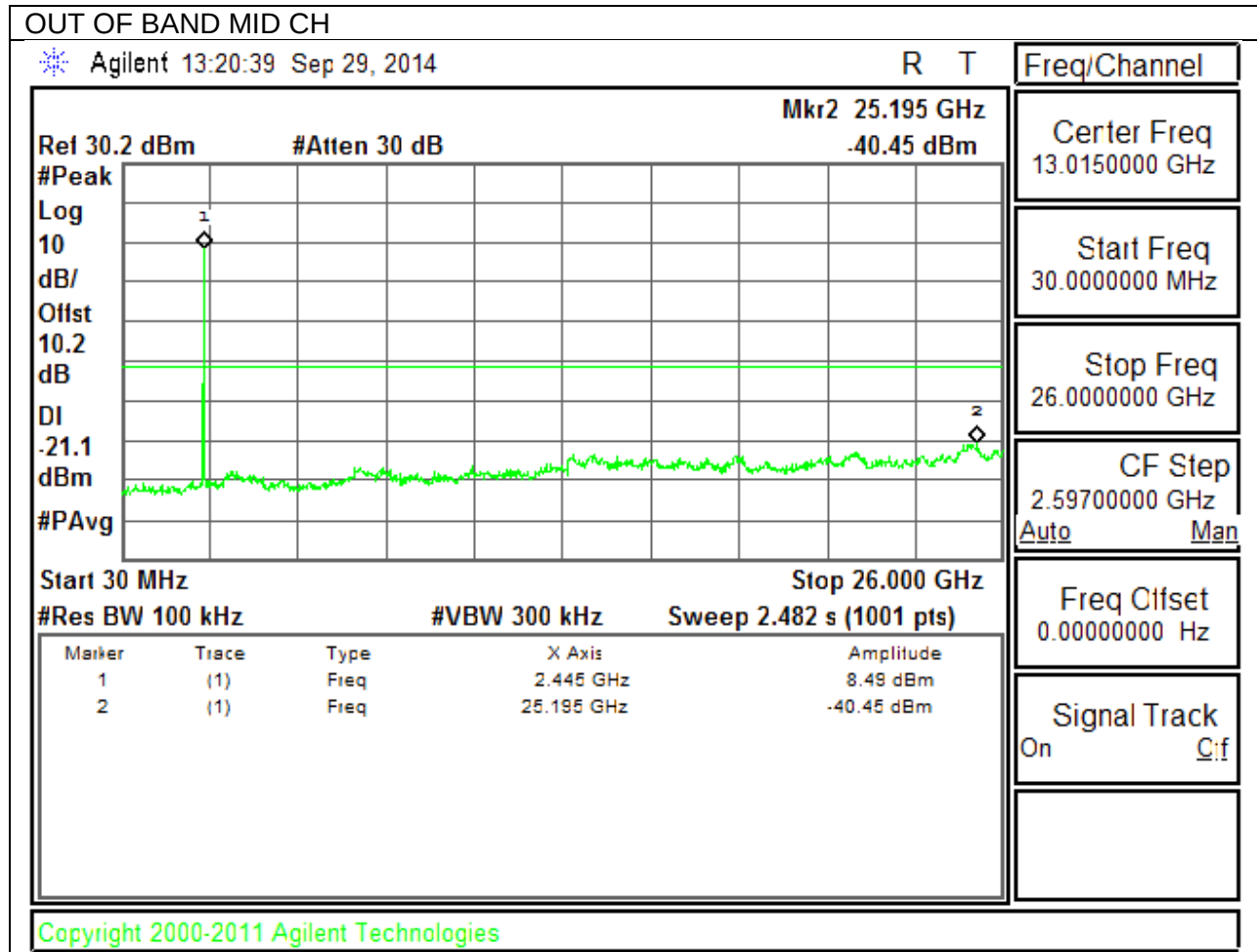


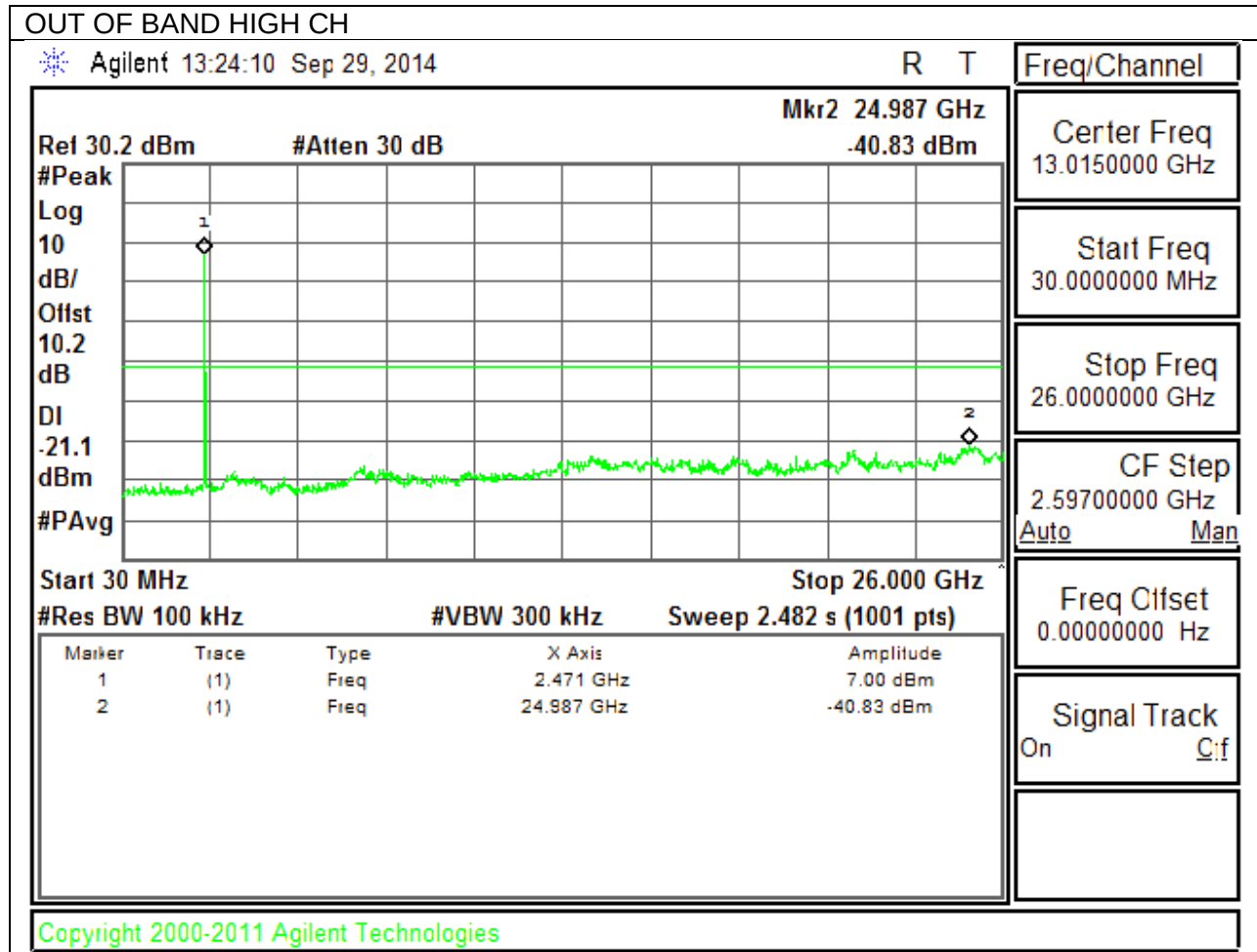
HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS

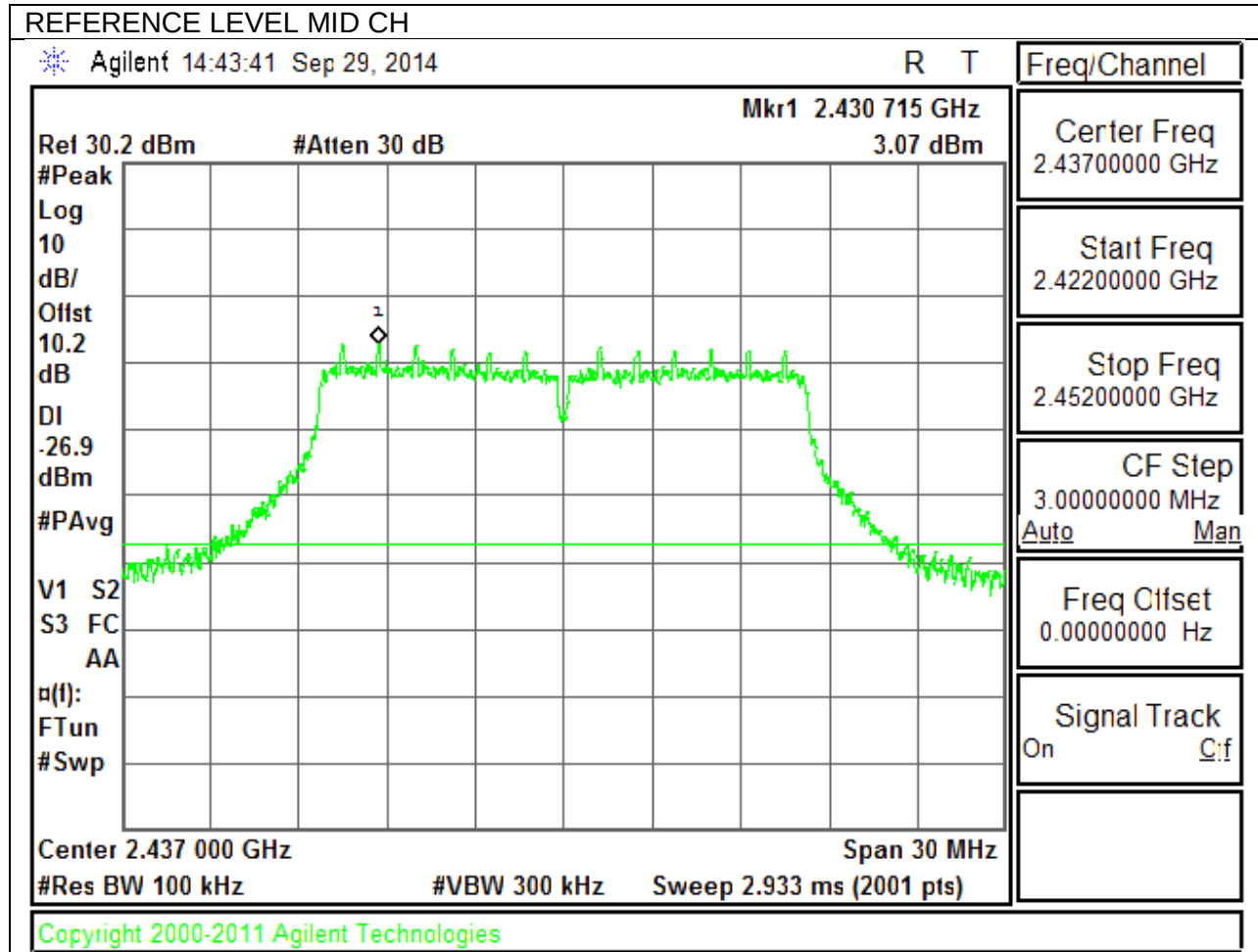




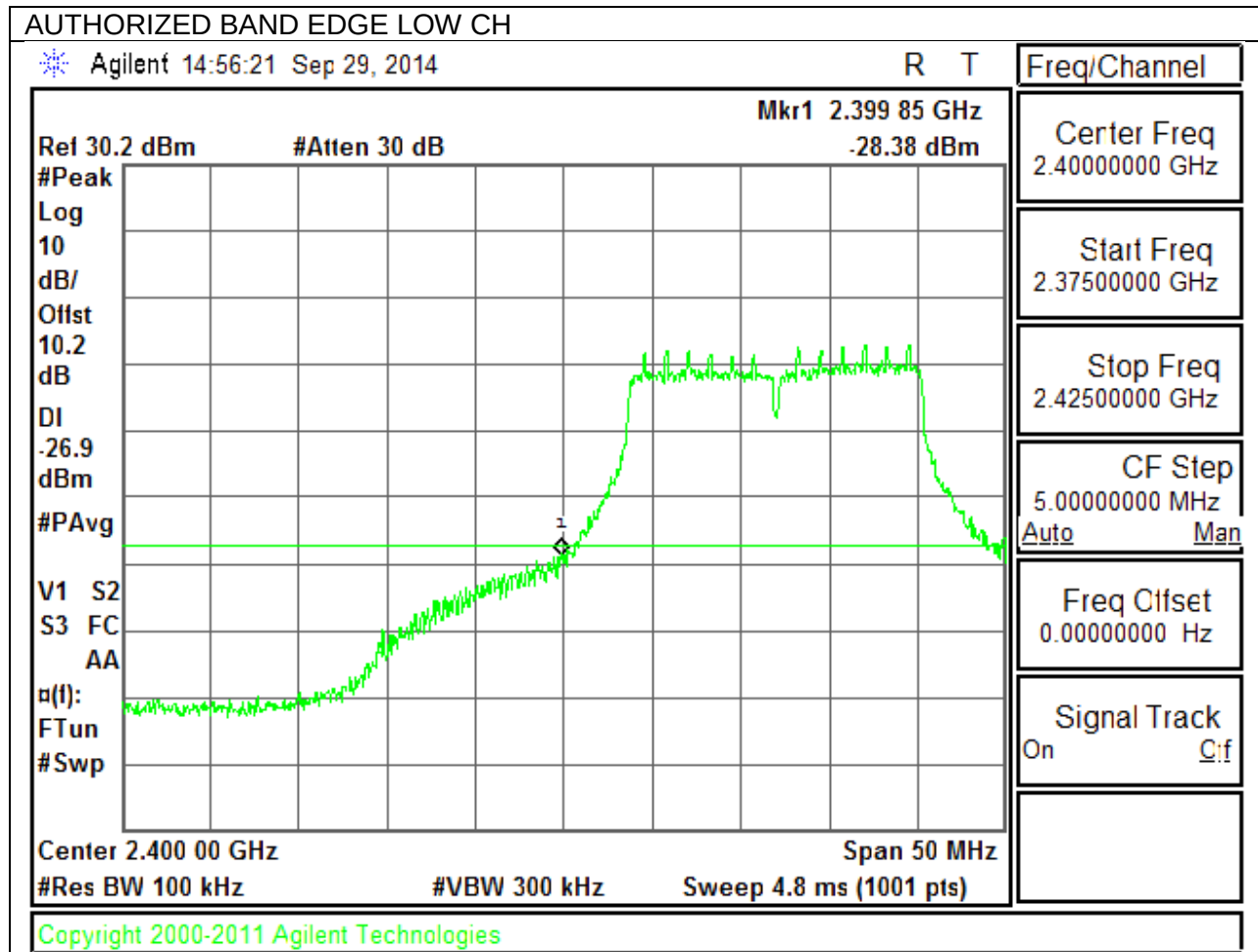


9.5.2. 802.11g MODE IN THE 2.4 GHz BAND

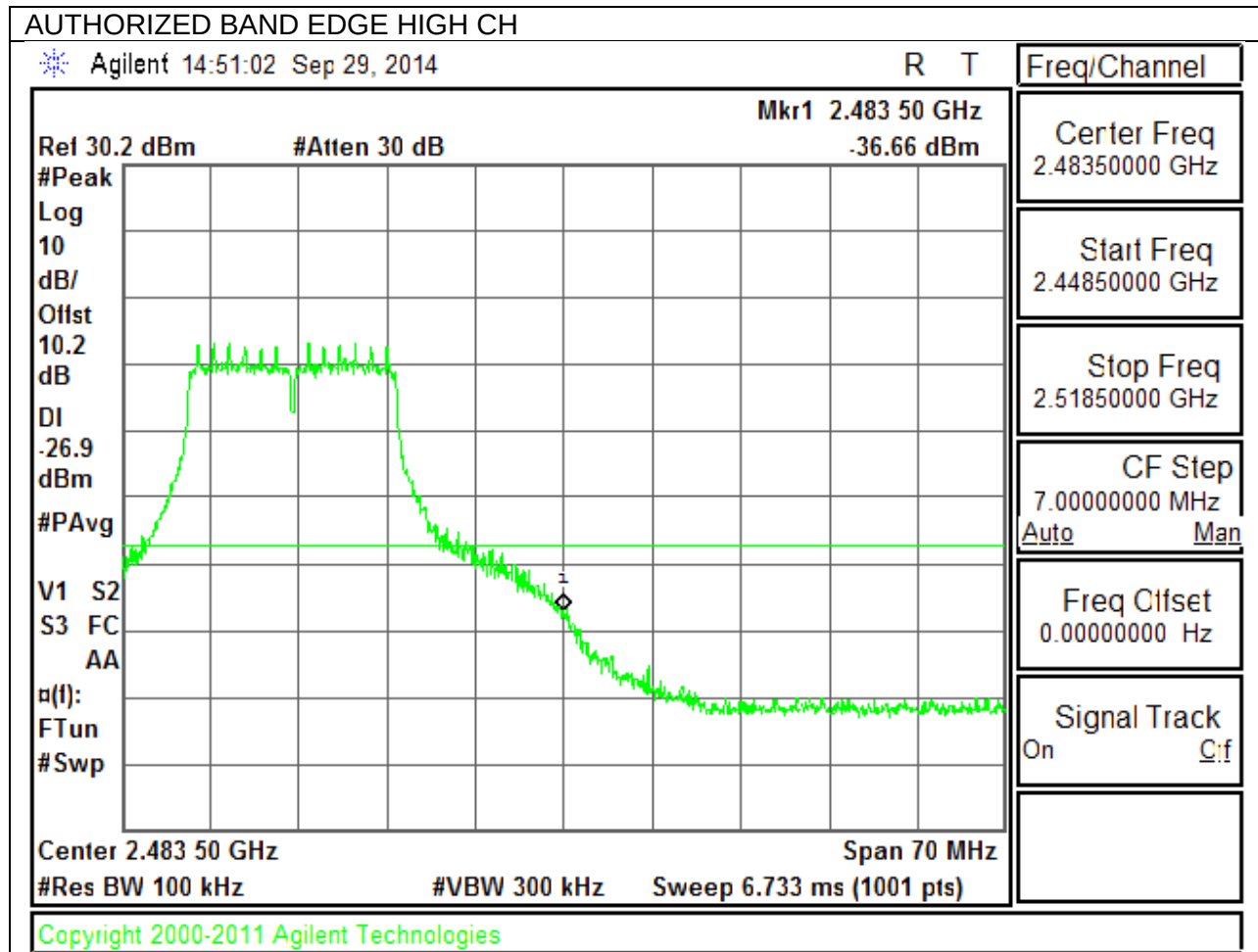
IN-BAND REFERENCE LEVEL



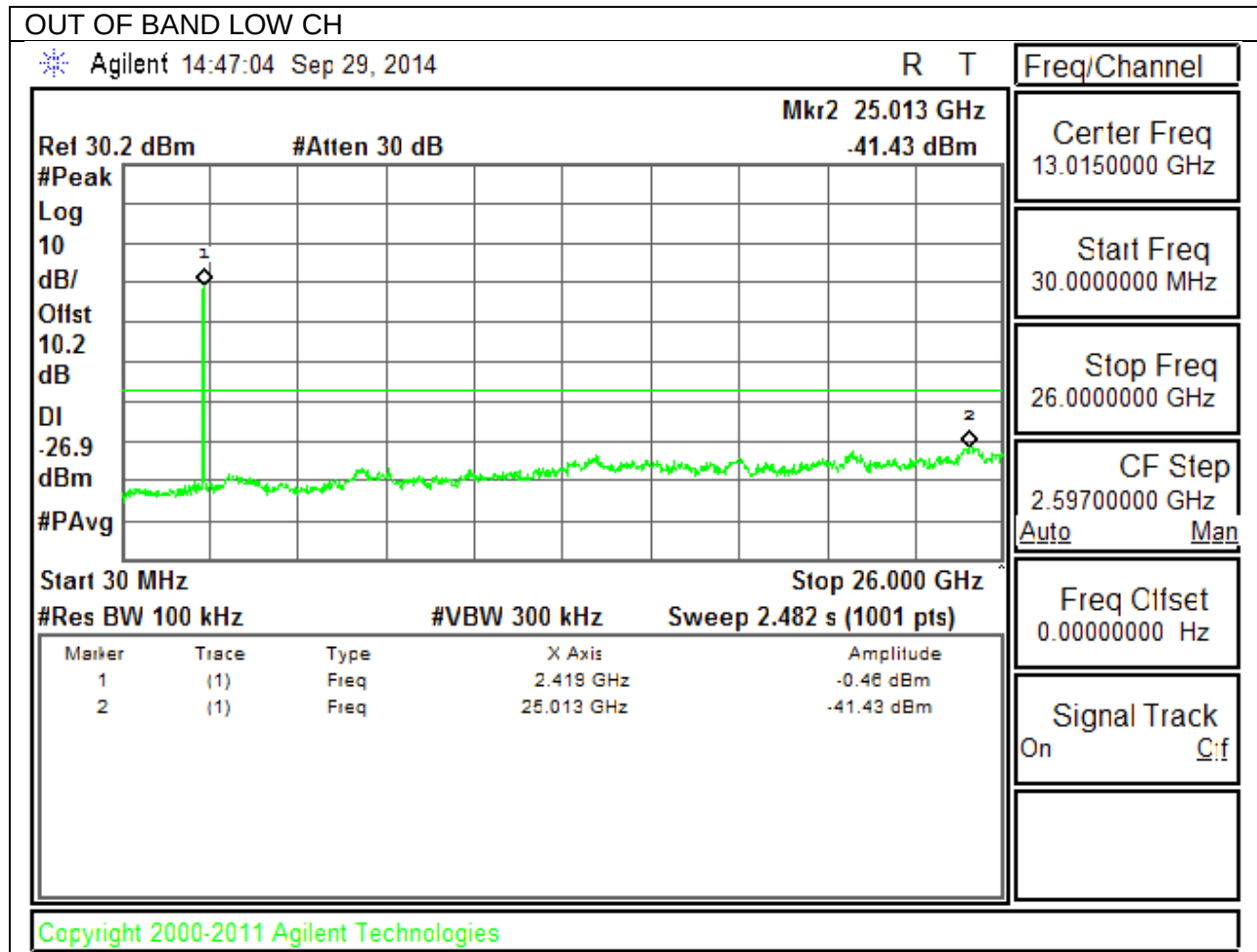
LOW CHANNEL BANDEDGE

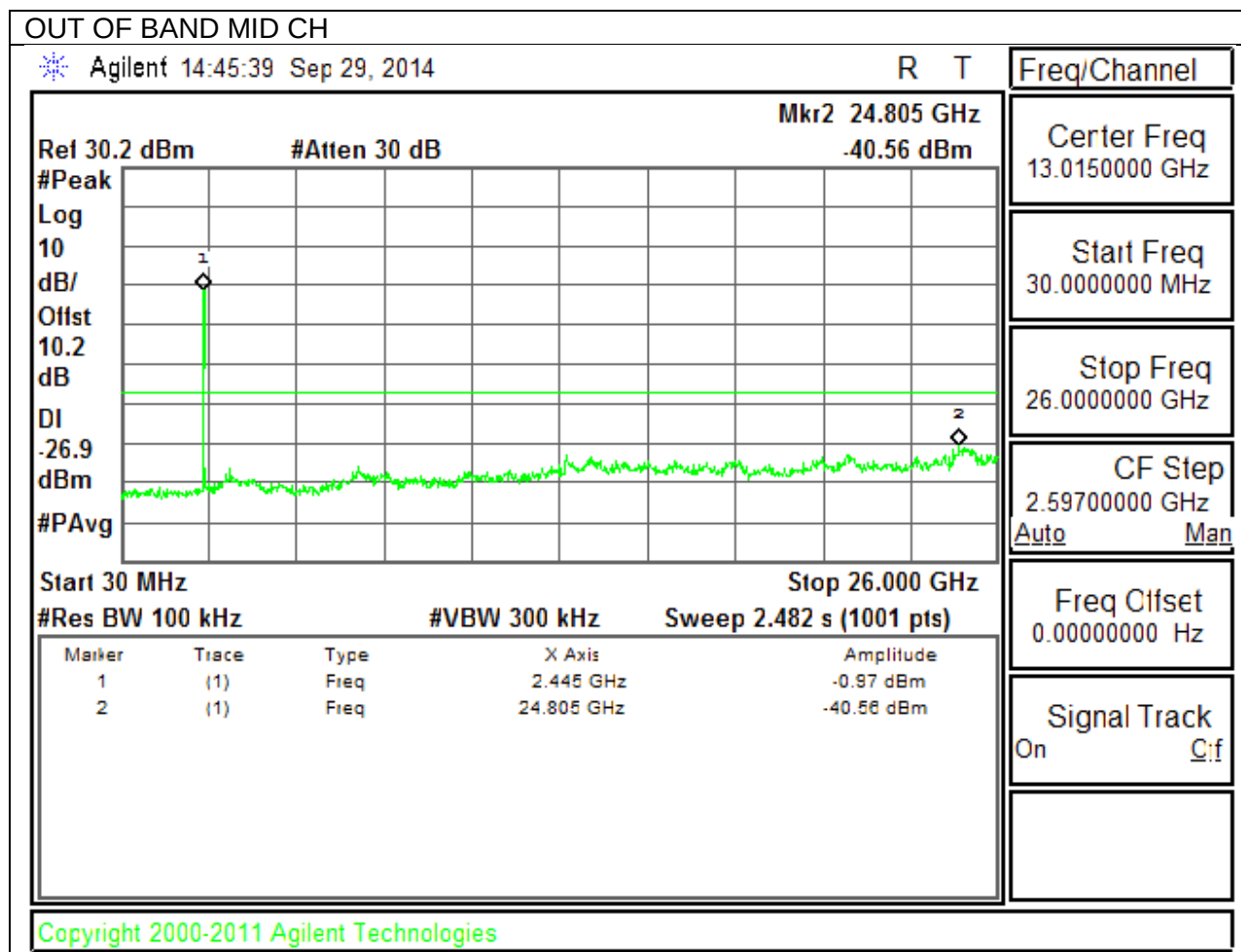


HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS



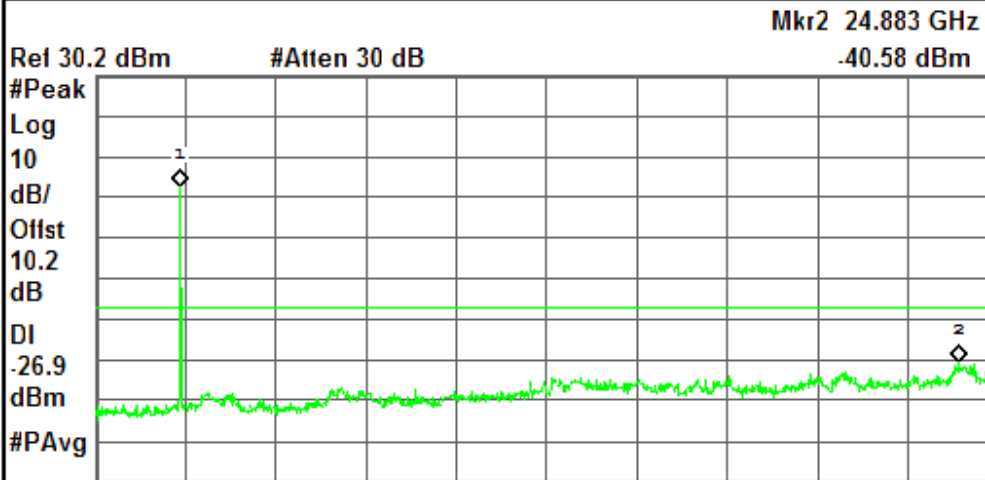


OUT OF BAND HIGH CH

Agilent 14:48:13 Sep 29, 2014

R T

Freq/Channel



Center Freq
13.0150000 GHz

Start Freq
30.0000000 MHz

Stop Freq
26.0000000 GHz

CF Step
2.59700000 GHz
Auto Man

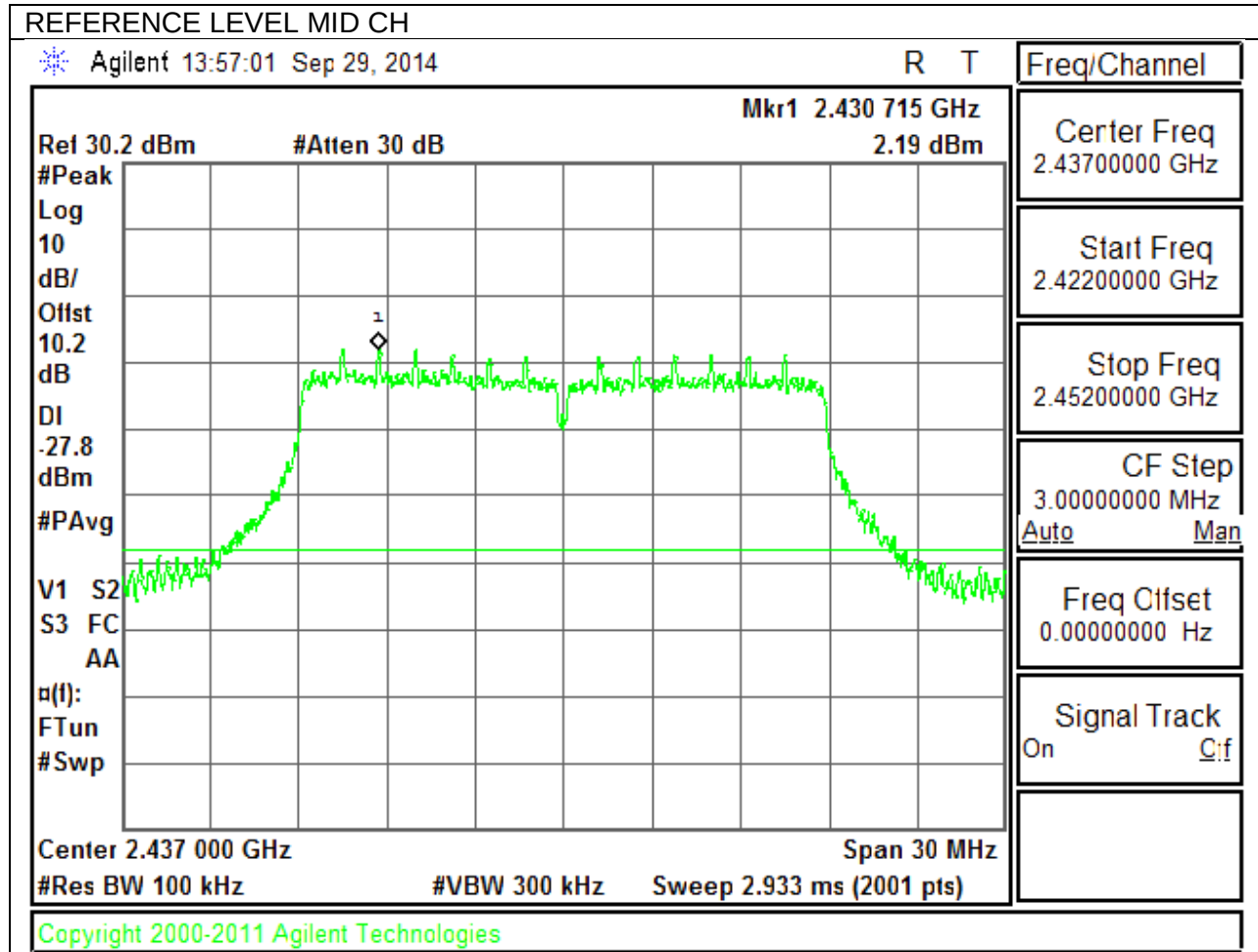
Freq Offset
0.00000000 Hz

Signal Track
On Off

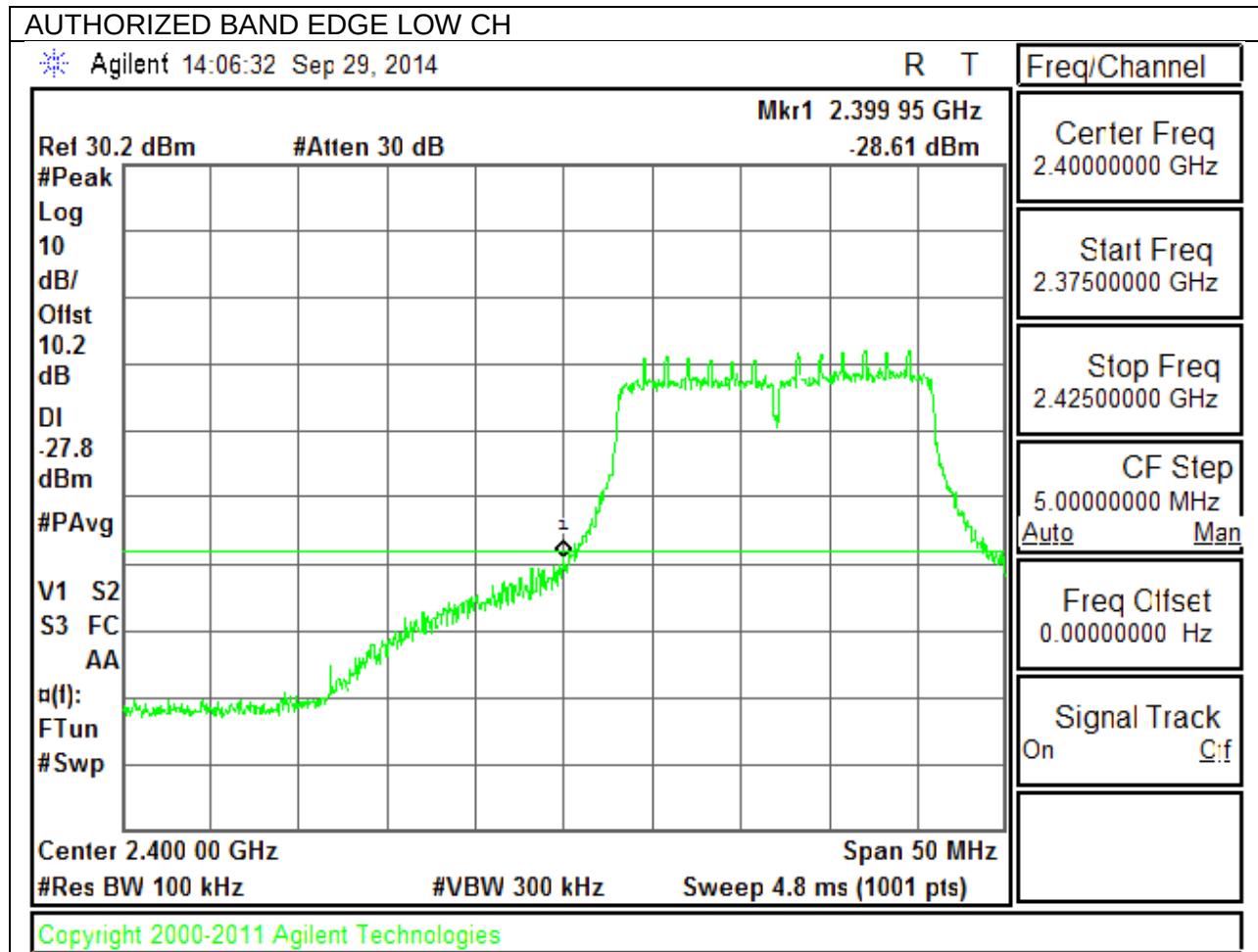
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9.5.3. 802.11n HT20 MODE IN THE 2.4 GHz BAND

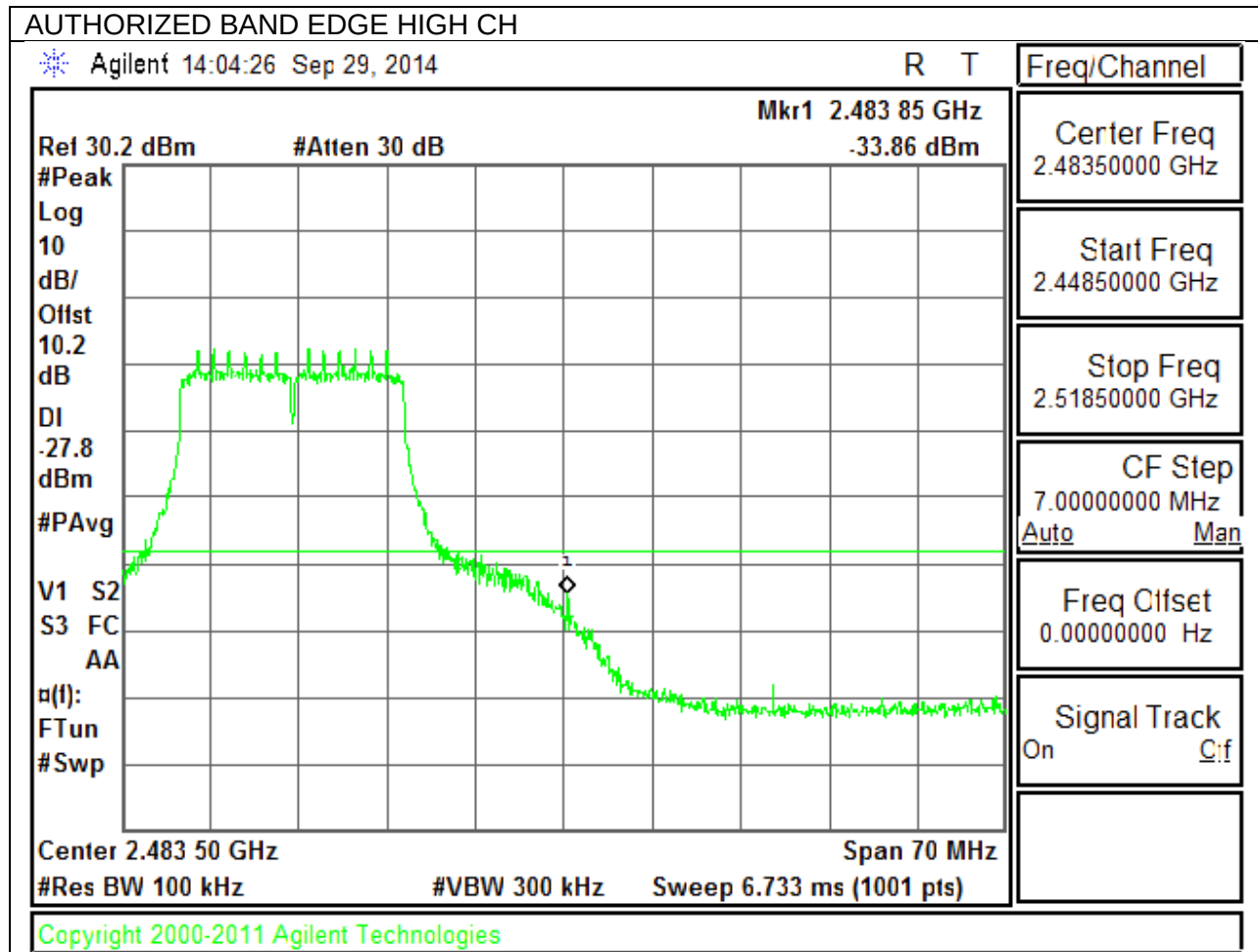
IN-BAND REFERENCE LEVEL



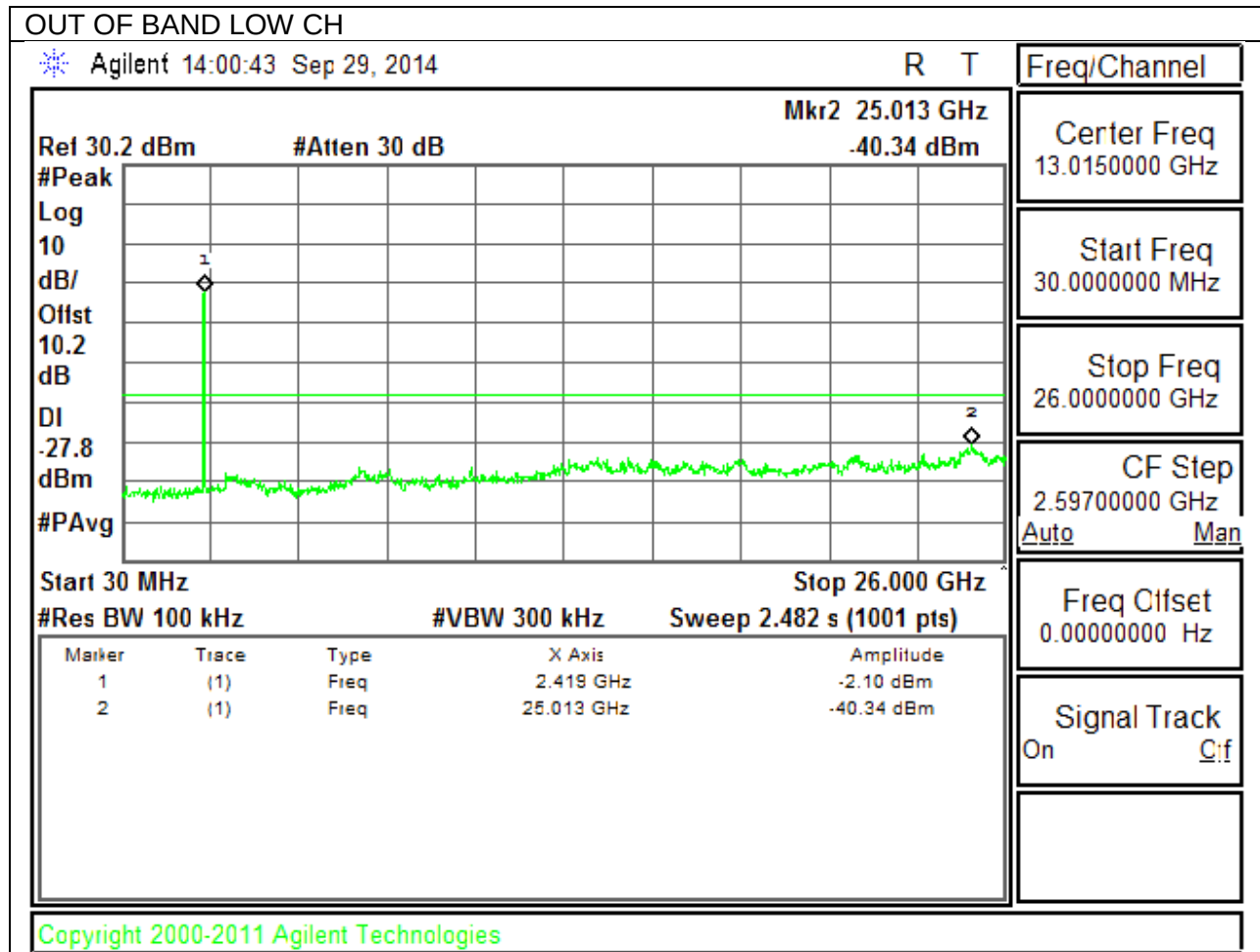
LOW CHANNEL BANDEDGE

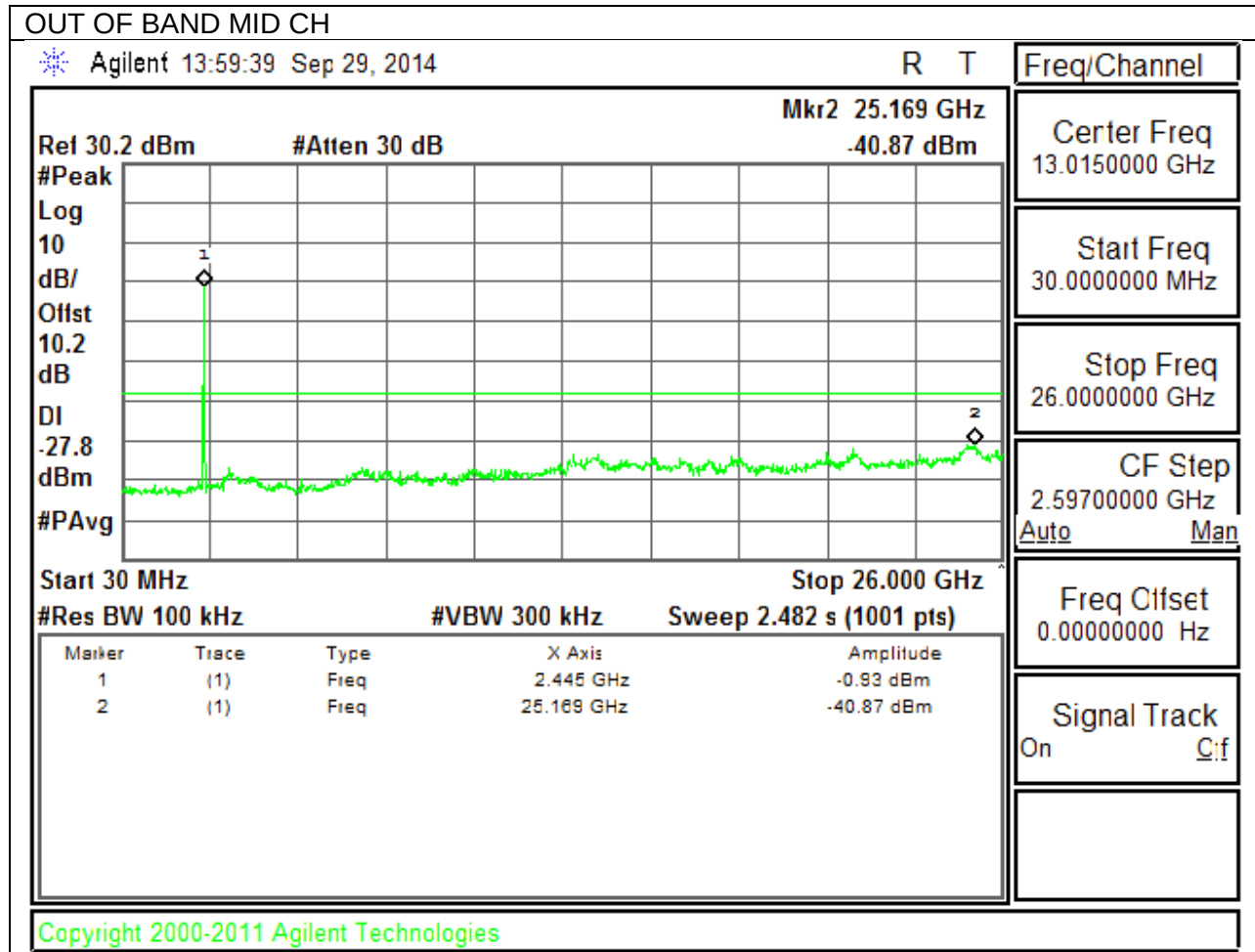


HIGH CHANNEL BANDEDGE



OUT-OF-BAND EMISSIONS





OUT OF BAND HIGH CH

Agilent 14:03:15 Sep 29, 2014

R T

Freq/Channel

Ref 30.2 dBm

#Atten 30 dB

Mkr2 25.013 GHz

-39.29 dBm

Center Freq
13.0150000 GHz

#Peak

Log

10

dB/

Offst

10.2

dB

DI

-27.8

dBm

#PAvg

Start Freq
30.0000000 MHz

Stop Freq
26.0000000 GHz

CF Step
2.59700000 GHz
Auto Man

Start 30 MHz

Stop 26.000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 2.482 s (1001 pts)

Freq Offset
0.00000000 Hz

Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.445 GHz	0.16 dBm
2	(1)	Freq	25.013 GHz	-39.29 dBm

Signal Track
On Off

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10. RADIATED TEST RESULTS

10.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters.

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

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

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

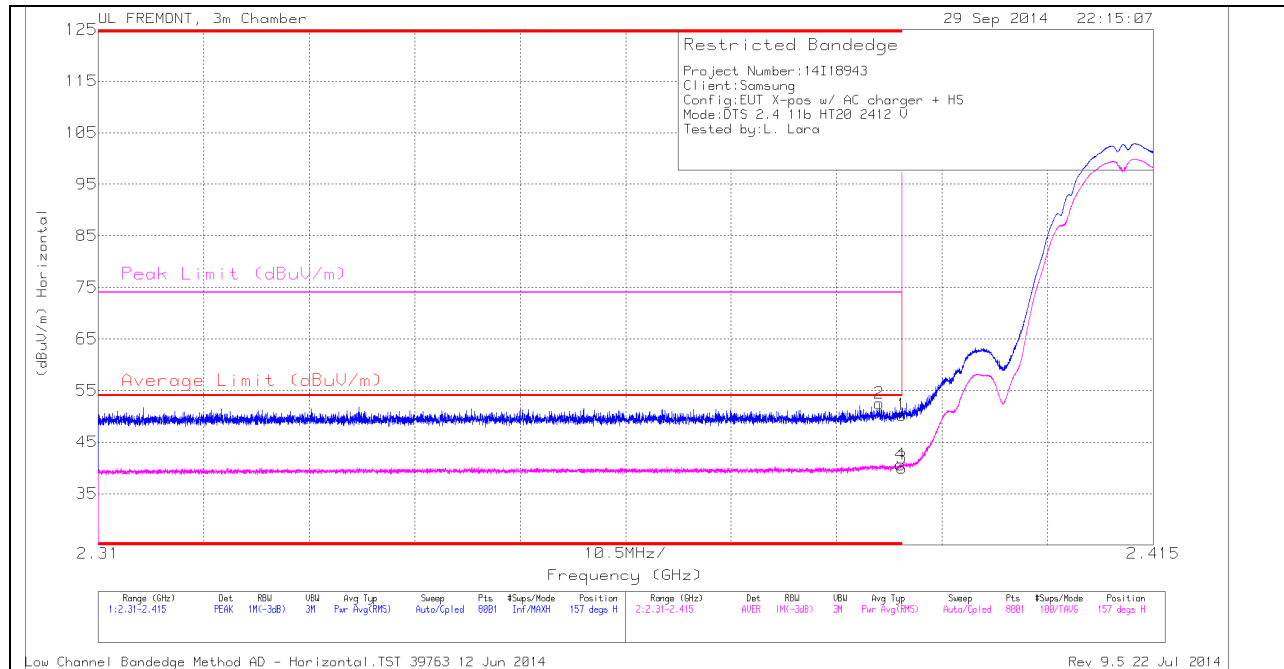
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

10.2. TRANSMITTER ABOVE 1 GHz

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

RESTRICTED BANDEDGE (LOW CHANNEL)

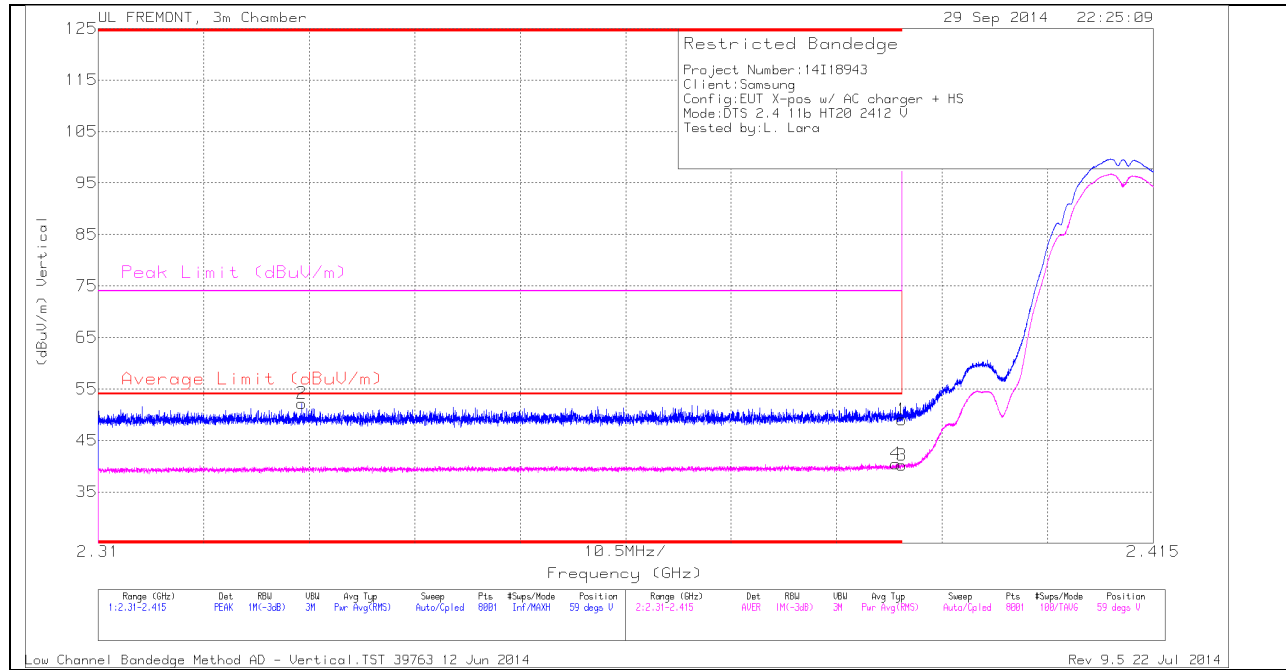
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ 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	41.28	PK	32.1	-23.1	50.28	-	-	74	-23.72	157	100	H
2	* 2.388	43.48	PK	32.1	-23.1	52.48	-	-	74	-21.52	157	100	H
3	* 2.39	30.99	RMS	32.1	-23.1	39.99	54	-14.01	-	-	157	100	H
4	* 2.39	31.63	RMS	32.1	-23.1	40.63	54	-13.37	-	-	157	100	H

VERTICAL PEAK AND AVERAGE PLOT

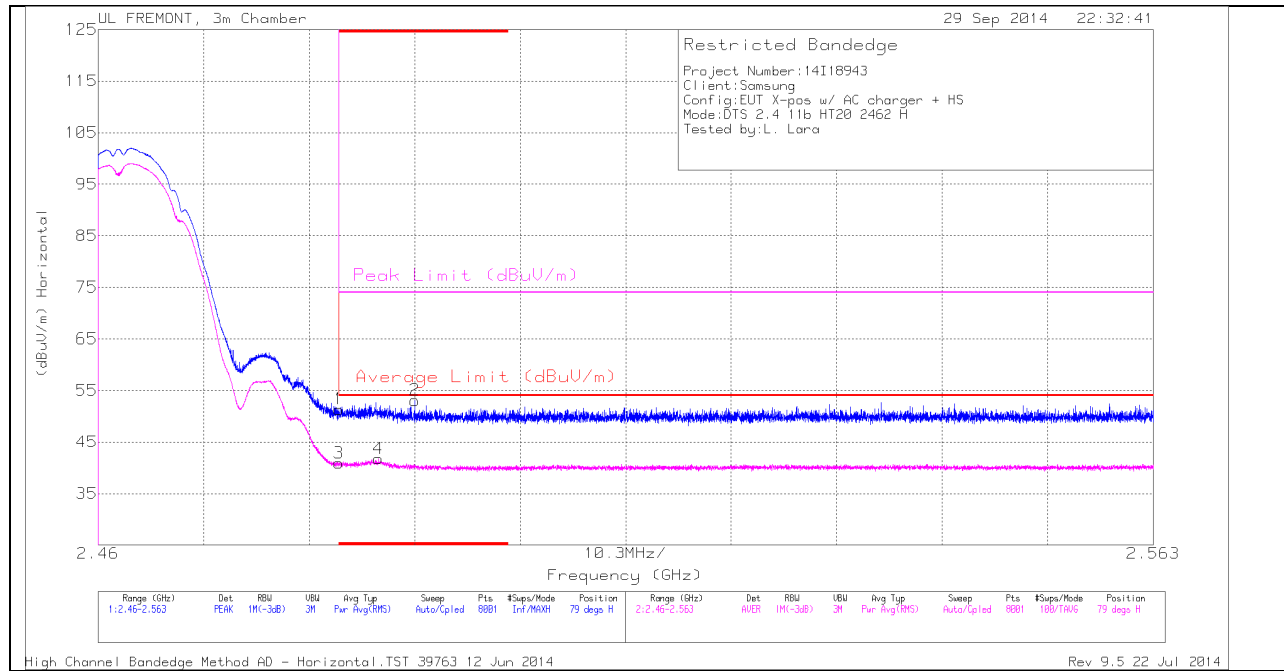


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/ Filt/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.33	43.39	PK	31.9	-23.1	52.19	-	-	74	-21.81	59	366	V
4	* 2.389	31.47	RMS	32.1	-23.1	40.47	54	-13.53	-	-	59	366	V
1	* 2.39	40.05	PK	32.1	-23.1	49.05	-	-	74	-24.95	59	366	V
3	* 2.39	31.18	RMS	32.1	-23.1	40.18	54	-13.82	-	-	59	366	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

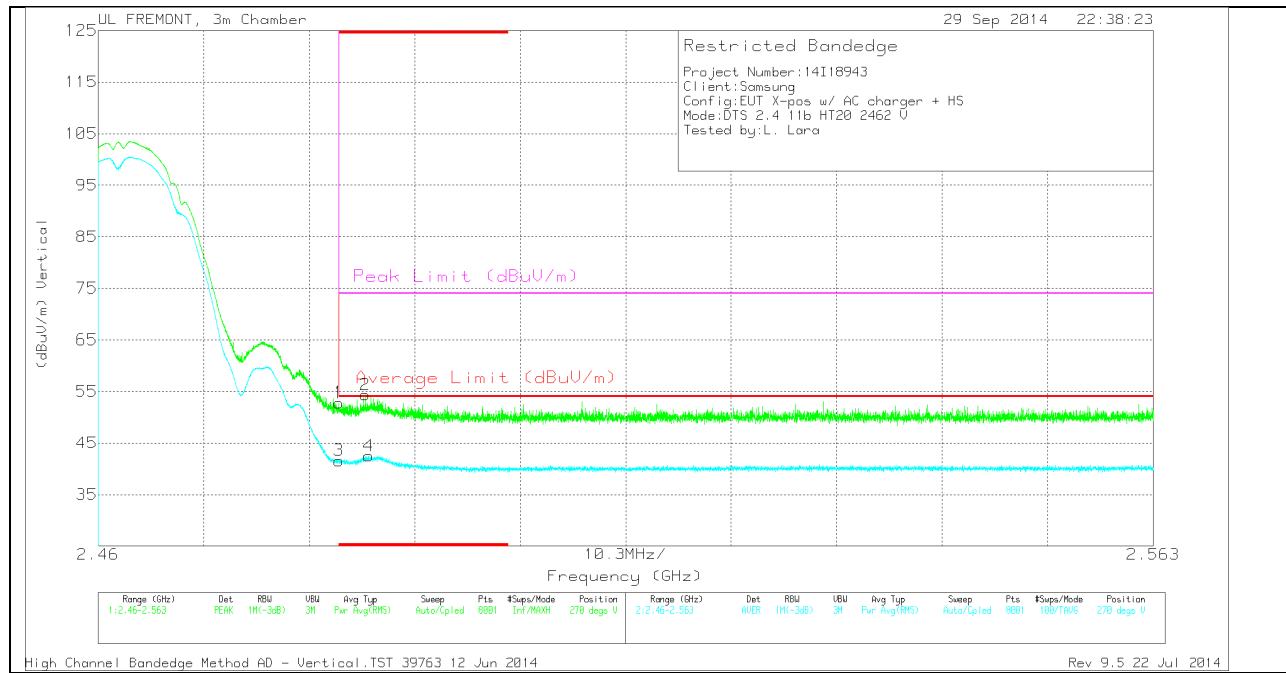
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/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	41.86	PK	32.3	-22.8	51.36	-	-	74	-22.64	79	369	H
3	* 2.484	31.42	RMS	32.3	-22.8	40.92	54	-13.08	-	-	79	369	H
4	* 2.487	32.24	RMS	32.3	-22.8	41.74	54	-12.26	-	-	79	369	H
2	* 2.491	43.58	PK	32.3	-22.8	53.08	-	-	74	-20.92	79	369	H

VERTICAL PEAK AND AVERAGE PLOT

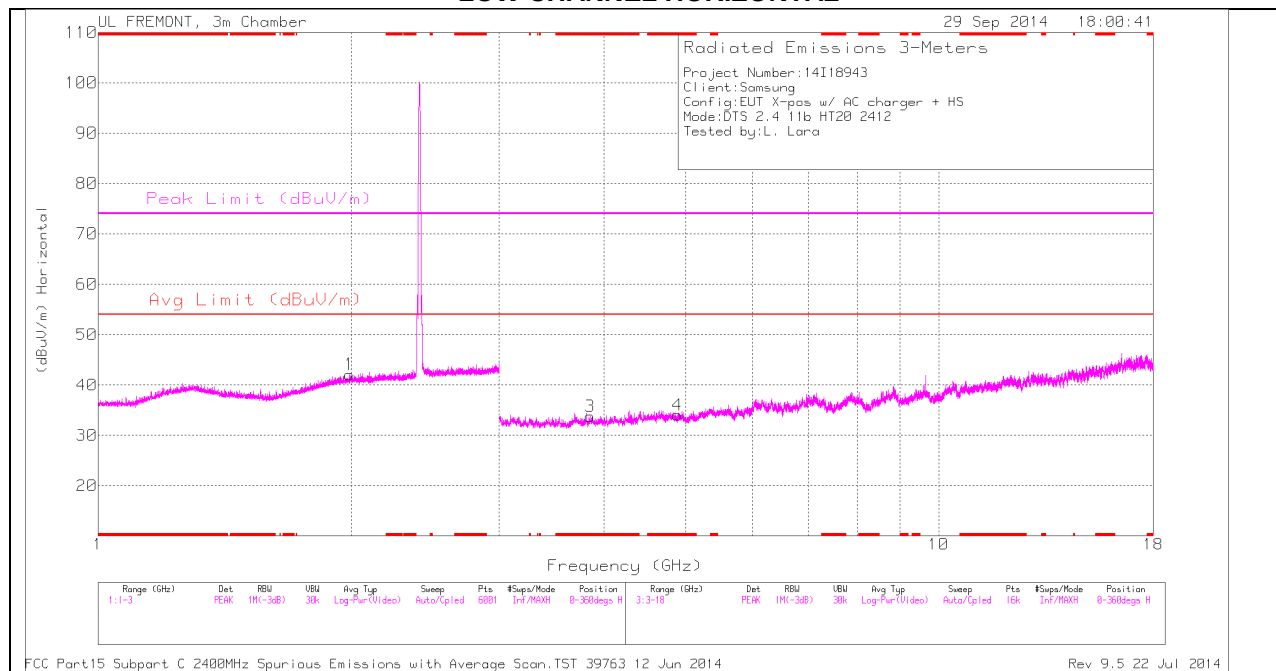


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	43.3	PK	32.3	-22.8	52.8	-	-	74	-21.2	270	371	V
3	* 2.484	32.09	RMS	32.3	-22.8	41.59	54	-12.41	-	-	270	371	V
2	* 2.486	44.87	PK	32.3	-22.8	54.37	-	-	74	-19.63	270	371	V
4	* 2.486	33.02	RMS	32.3	-22.8	42.52	54	-11.48	-	-	270	371	V

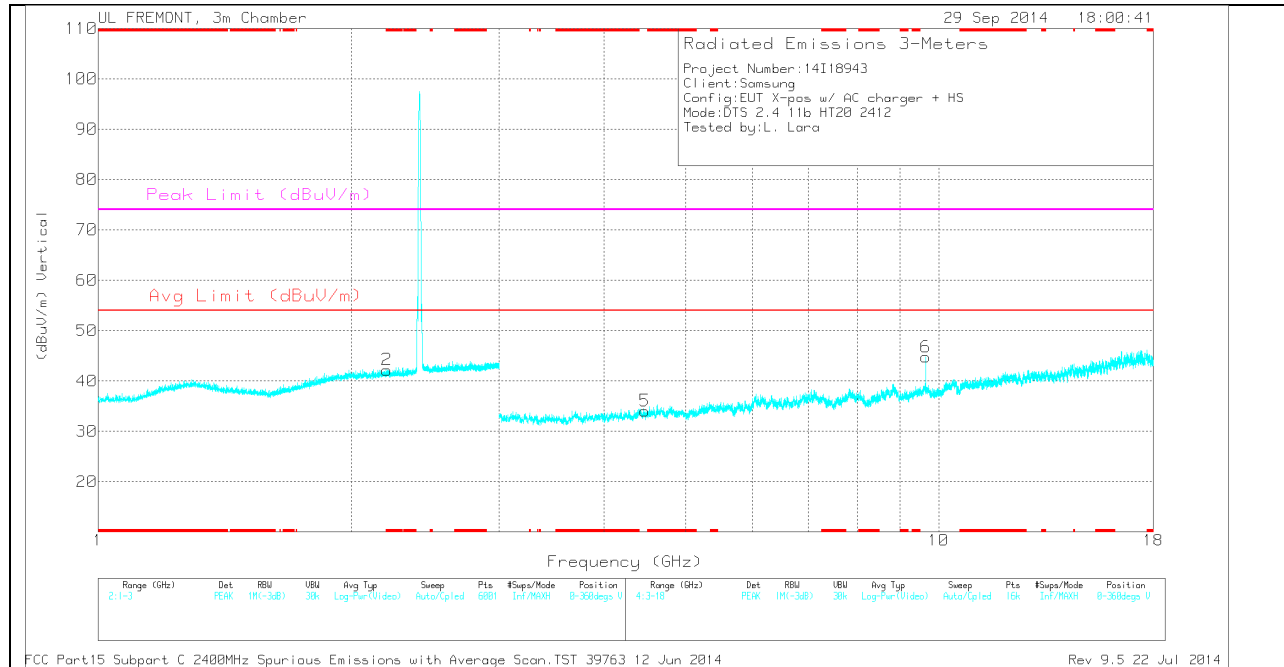
HARMONICS AND SPURIOUS EMISSIONS

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 T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.206	33.41	PK	31.7	-22.9	42.21	-	-	74	-31.79	0-360	100	V
3	* 3.85	31.59	PK	33.2	-31	33.79	-	-	74	-40.21	0-360	200	H
4	* 4.89	30.11	PK	34	-30.1	34.01	-	-	74	-39.99	0-360	100	H
1	1.991	33.77	PK	31.6	-23.3	42.07	-	-	-	-	0-360	100	H
5	4.472	31.35	PK	33.9	-31.2	34.05	-	-	-	-	0-360	100	V
6	9.647	33.57	PK	36.8	-25.6	44.77	-	-	-	-	0-360	100	V

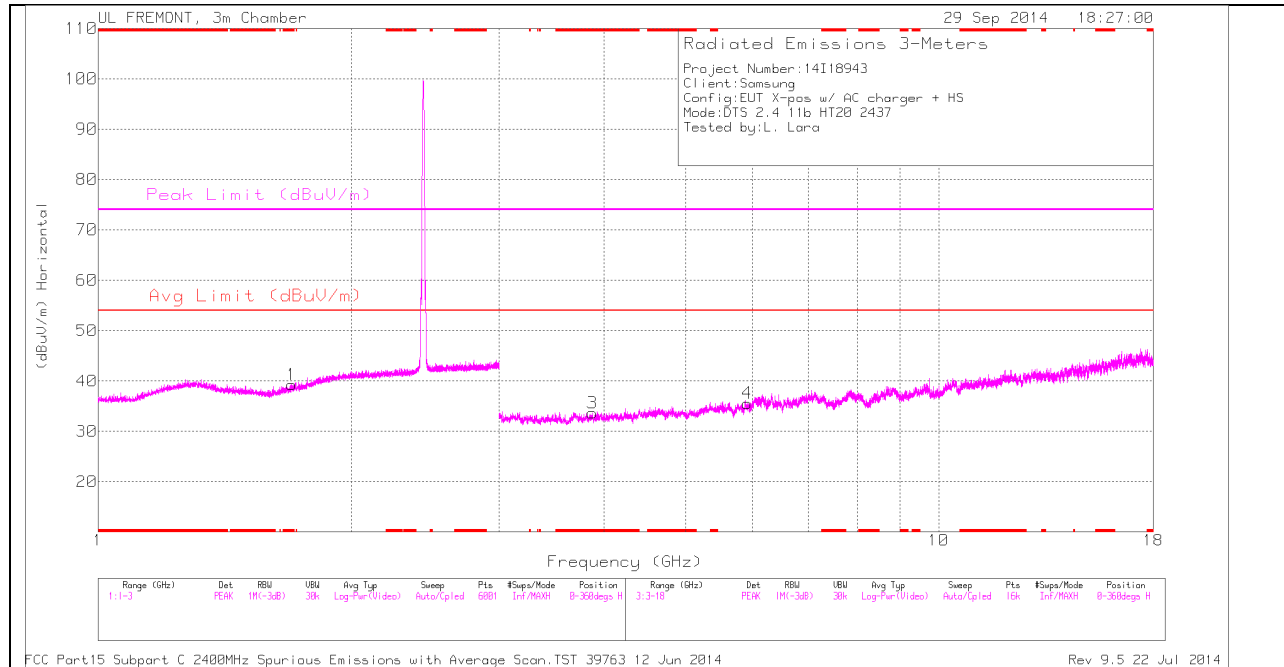
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

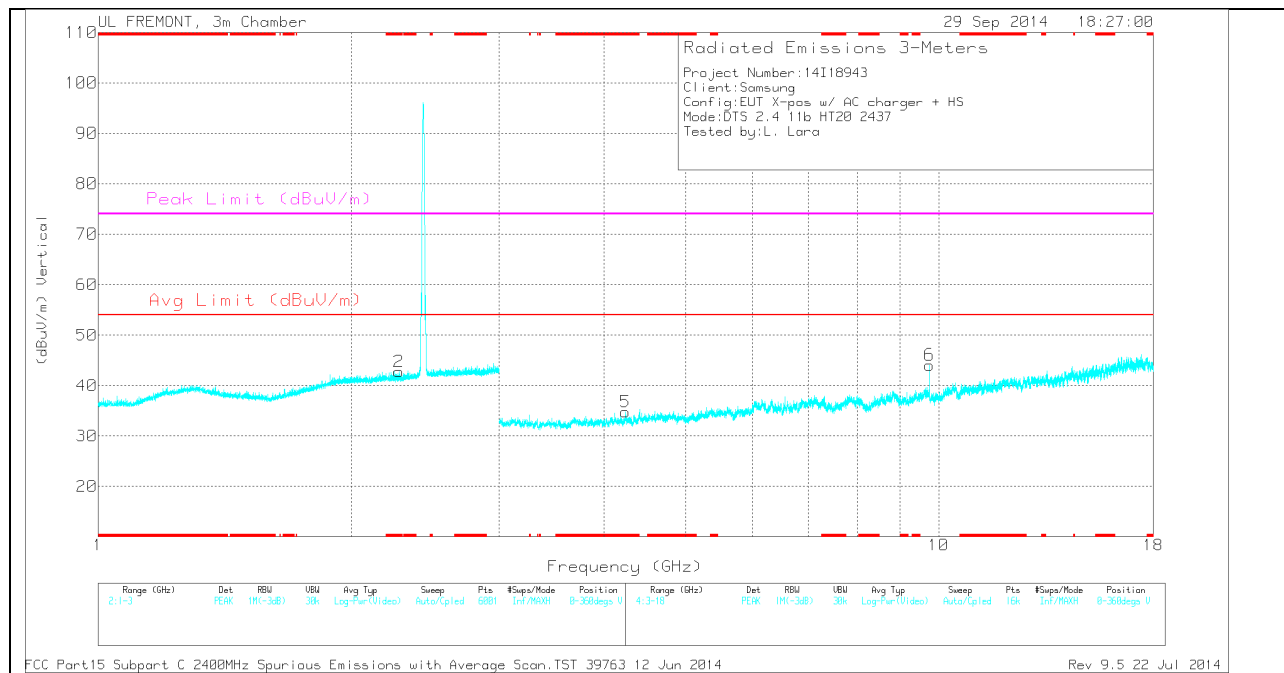
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.648	39.07	PK2	36.8	-25.6	50.27	-	-	-	-	235	108	V
9.648	31.63	MAV1	36.8	-25.6	42.83	-	-	-	-	235	108	V

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 T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.699	33.68	PK	29	-23.4	39.28	-	-	74	-34.72	0-360	100	H
2	* 2.28	34.07	PK	31.8	-23.1	42.77	-	-	74	-31.23	0-360	100	V
3	* 3.873	31.87	PK	33.2	-31.4	33.67	-	-	74	-40.33	0-360	200	H
5	* 4.236	32.18	PK	33.5	-30.9	34.78	-	-	74	-39.22	0-360	100	V
4	5.922	31.08	PK	35.1	-30.6	35.58	-	-	-	-	0-360	200	H
6	9.748	32.87	PK	36.9	-25.7	44.07	-	-	-	-	0-360	100	V

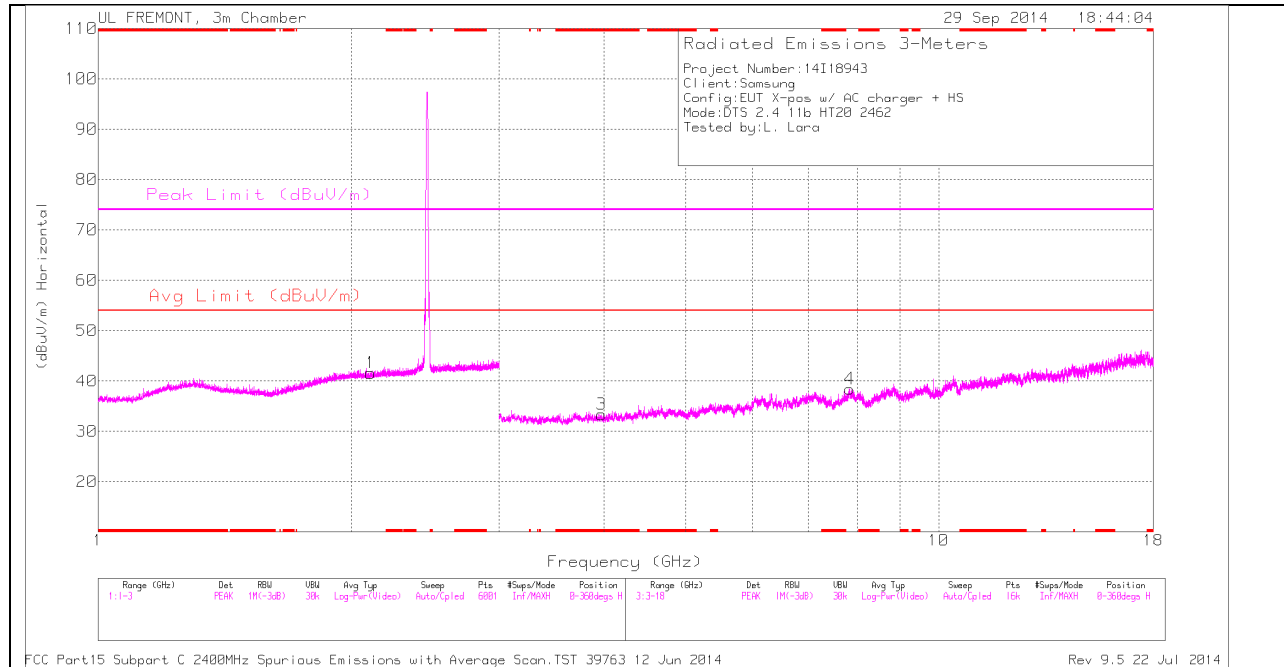
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

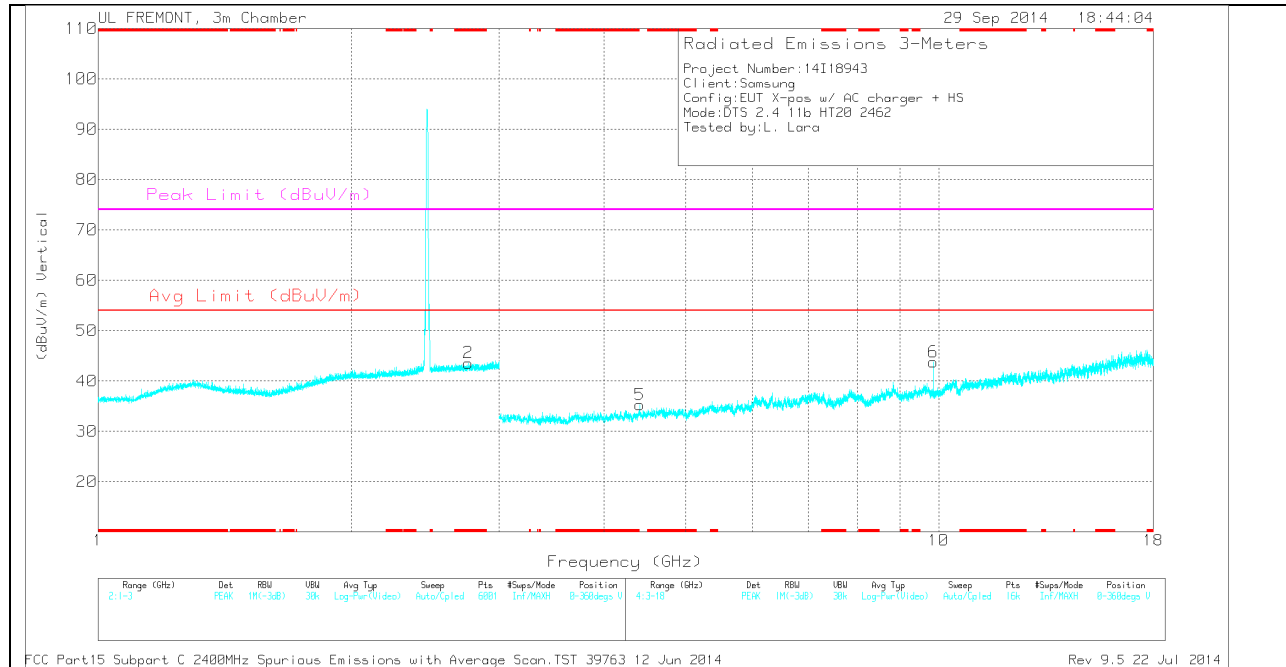
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.748	37.01	PK2	36.9	-25.7	48.21	-	-	-	-	360	100	V
9.748	26.59	MAV1	36.9	-25.7	37.79	-	-	-	-	360	100	V

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 T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.757	33.69	PK	32.7	-22.8	43.59	-	-	74	-30.41	0-360	100	V
3	* 3.969	31.25	PK	33.3	-31.2	33.35	-	-	74	-40.65	0-360	100	H
1	2.11	33.1	PK	31.5	-23	41.6	-	-	-	-	0-360	100	H
5	4.409	31.75	PK	33.7	-30.2	35.25	-	-	-	-	0-360	200	V
4	7.836	30.12	PK	35.8	-27.5	38.42	-	-	-	-	0-360	100	H
6	9.848	32.76	PK	36.9	-25.9	43.76	-	-	-	-	0-360	100	V

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

PK - Peak detector

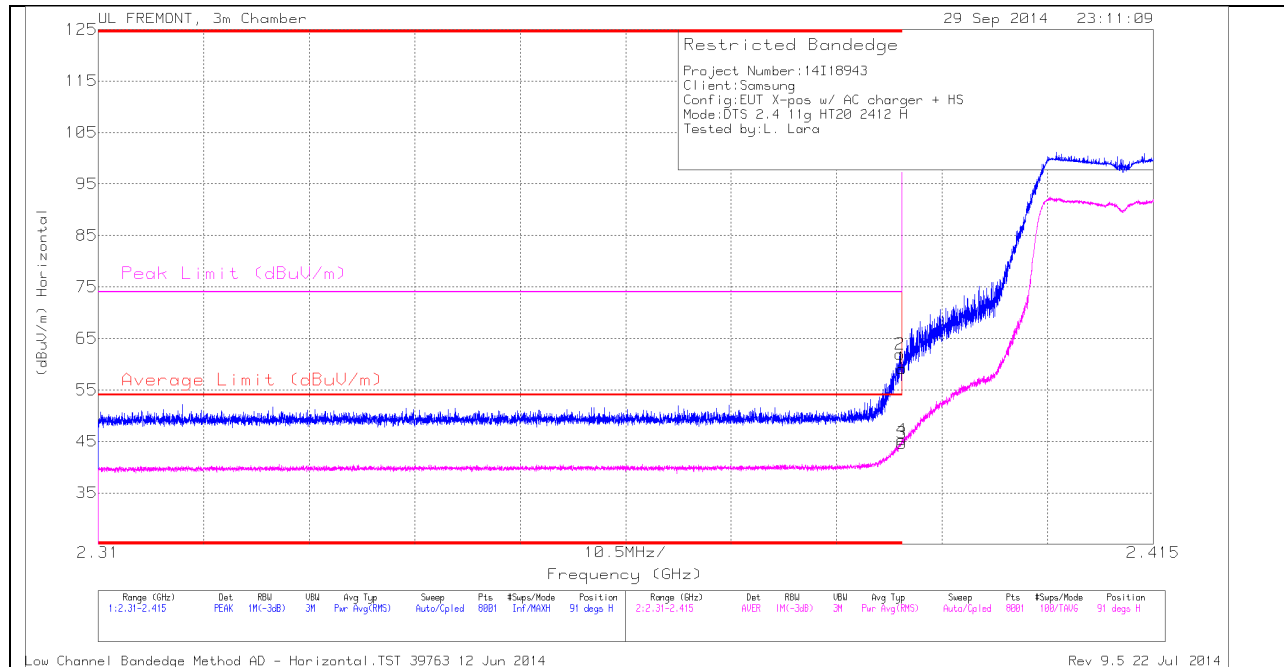
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.848	26.18	MAV1	36.9	-25.9	37.18	-	-	-	-	360	100	V
9.849	37.08	PK2	36.9	-25.9	48.08	-	-	-	-	360	100	V

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

RESTRICTED BANDEDGE (LOW CHANNEL)

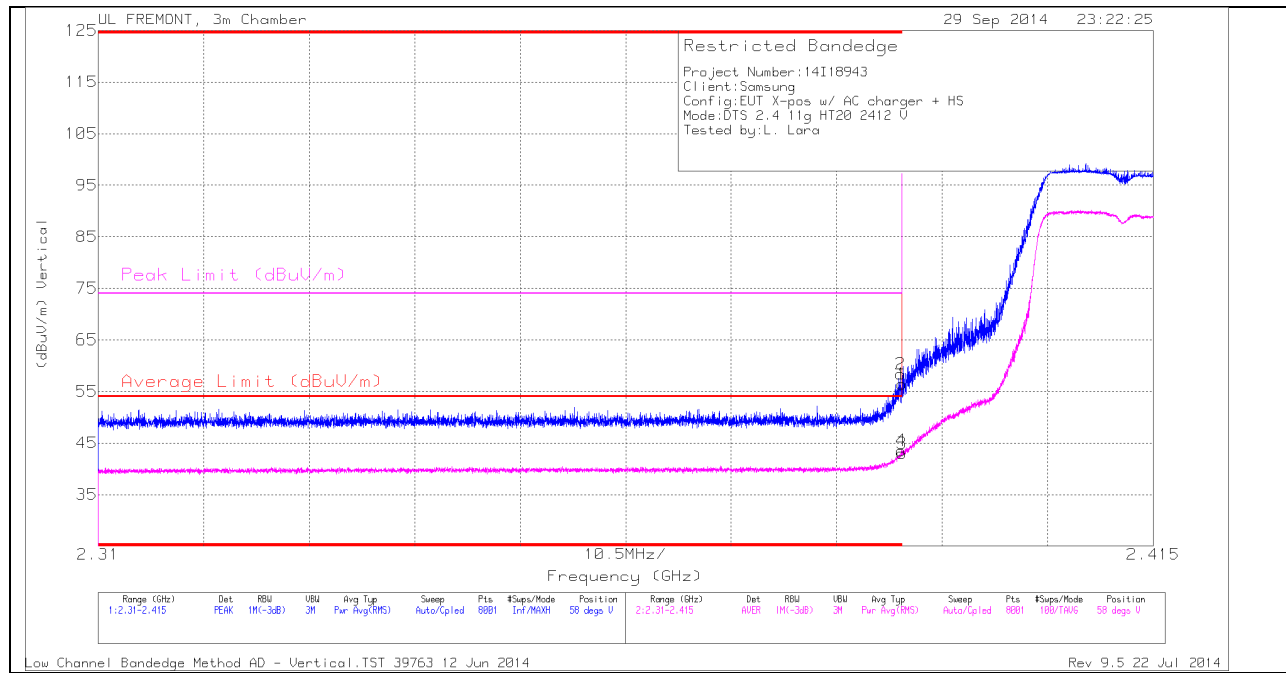
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	50.17	PK	32.1	-23.1	0	59.17	-	-	74	-14.83	91	100	H
2	* 2.39	52.91	PK	32.1	-23.1	0	61.91	-	-	74	-12.09	91	100	H
3	* 2.39	35.34	RMS	32.1	-23.1	.32	44.66	54	-9.34	-	-	91	100	H
4	* 2.39	35.98	RMS	32.1	-23.1	.32	45.3	54	-8.7	-	-	91	100	H

VERTICAL PEAK AND AVERAGE PLOT

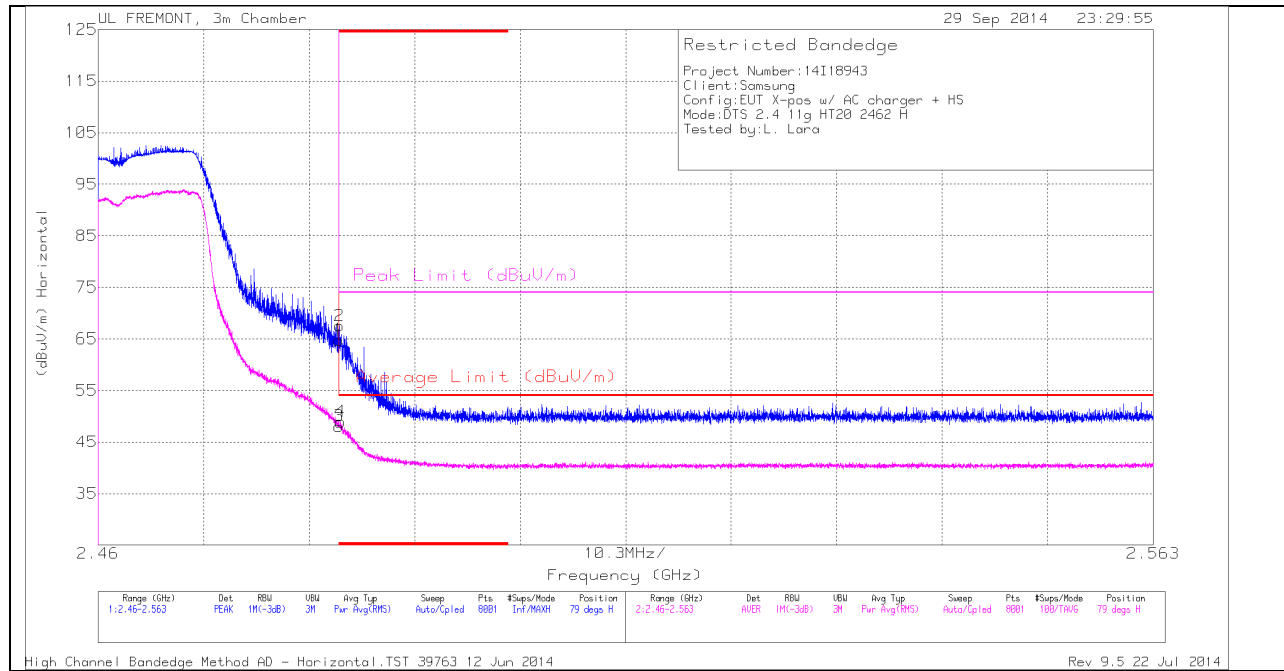


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cb/Filter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	47.43	PK	32.1	-23.1	0	56.43	-	-	74	-17.57	58	366	V
2	* 2.39	49.39	PK	32.1	-23.1	0	58.39	-	-	74	-15.61	58	366	V
3	* 2.39	33.68	RMS	32.1	-23.1	.32	43	54	-11	-	-	58	366	V
4	* 2.39	34.19	RMS	32.1	-23.1	.32	43.51	54	-10.49	-	-	58	366	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

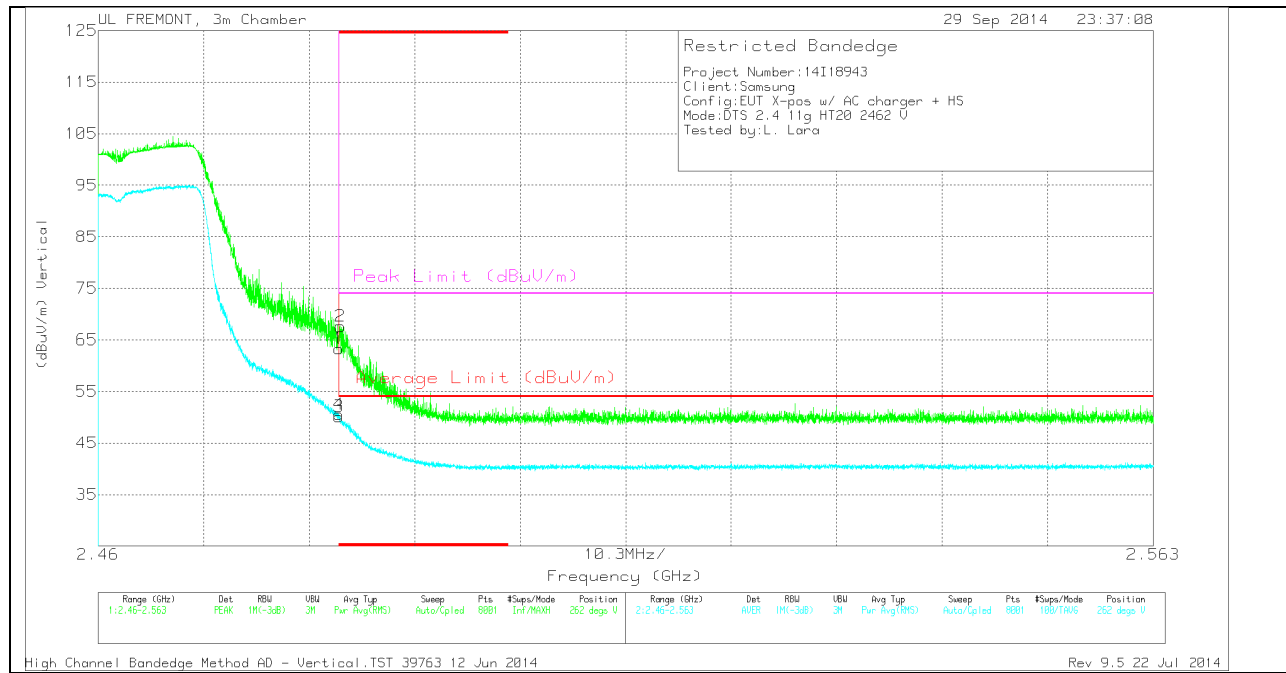
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	55.28	PK	32.3	-22.8	0	64.78	-	-	74	-9.22	79	370	H
2	* 2.484	58.03	PK	32.3	-22.8	0	67.53	-	-	74	-6.47	79	370	H
3	* 2.484	38.24	RMS	32.3	-22.8	.32	48.06	54	-5.94	-	-	79	370	H
4	* 2.484	39.12	RMS	32.3	-22.8	.32	48.94	54	-5.06	-	-	79	370	H

VERTICAL PEAK AND AVERAGE PLOT

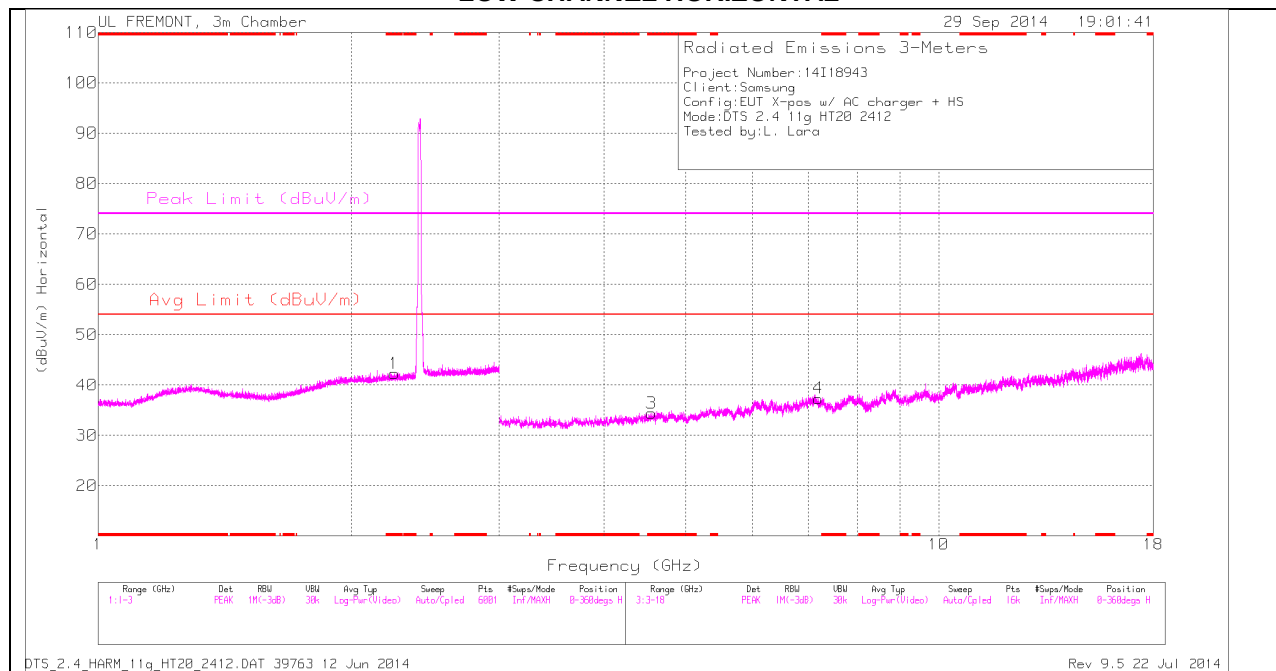


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	53.84	PK	32.3	-22.8	0	63.34	-	-	74	-10.66	262	371	V
2	* 2.484	58.13	PK	32.3	-22.8	0	67.63	-	-	74	-6.37	262	371	V
3	* 2.484	40.3	RMS	32.3	-22.8	.32	50.12	54	-3.88	-	-	262	371	V
4	* 2.484	40.76	RMS	32.3	-22.8	.32	50.58	54	-3.42	-	-	262	371	V

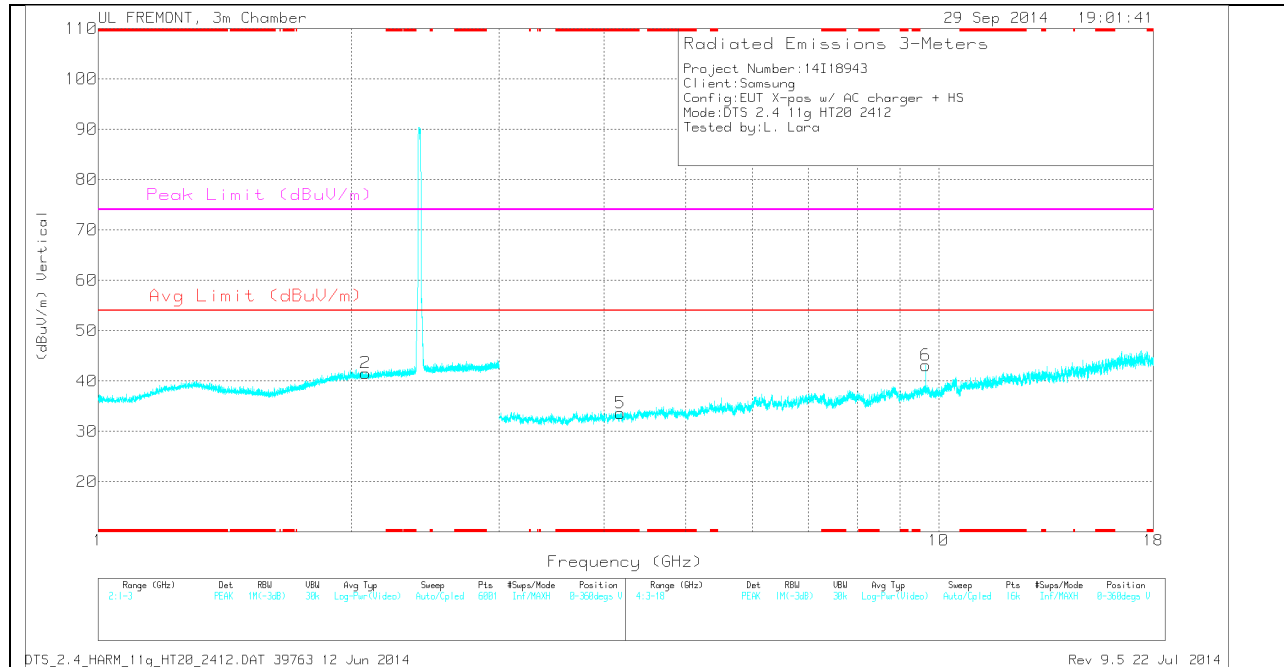
HARMONICS AND SPURIOUS EMISSIONS

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 T119 (dB/m)	Amp/Cbl/Fitr /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	* 2.252	33.34	PK	31.8	-22.9	0	42.24	-	-	74	-31.76	0-360	200	H
3	* 4.553	31.38	PK	34	-31	0	34.38	-	-	74	-39.62	0-360	200	H
5	* 4.183	30.41	PK	33.5	-30.3	0	33.61	-	-	74	-40.39	0-360	100	V
2	2.08	33.09	PK	31.5	-23	0	41.59	-	-	-	-	0-360	200	V
4	7.187	30.74	PK	35.6	-29	0	37.34	-	-	-	-	0-360	200	H
6	9.647	31.91	PK	36.8	-25.6	0	43.11	-	-	-	-	0-360	100	V

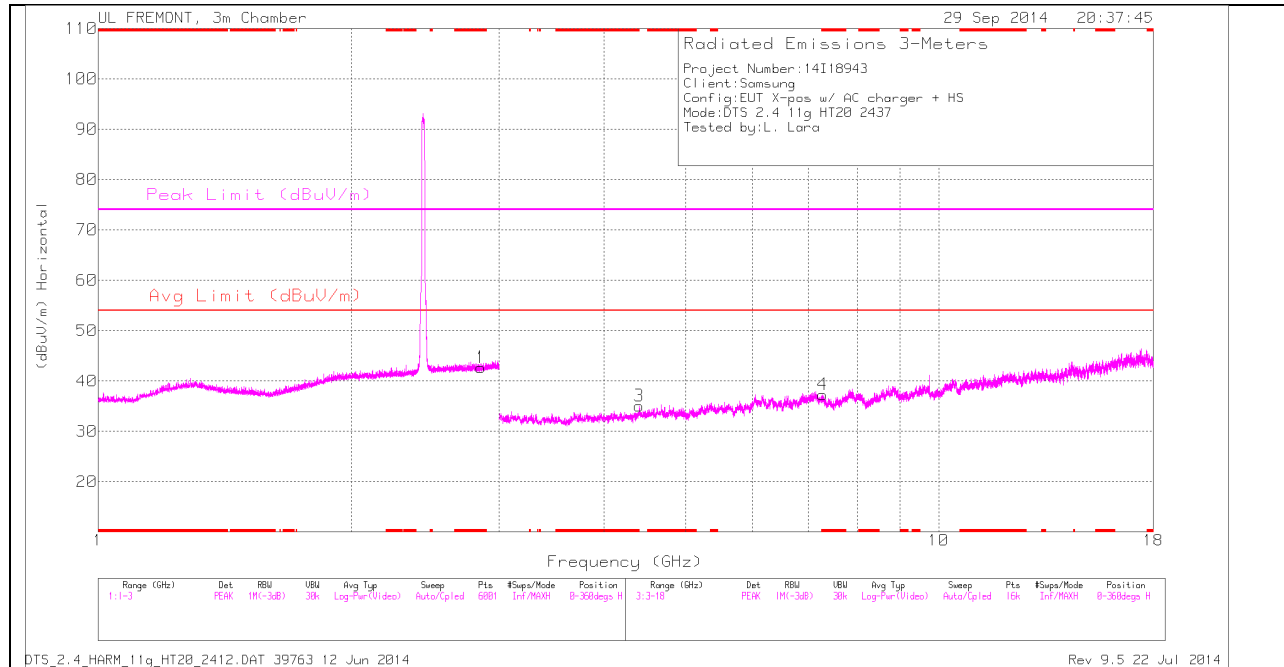
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

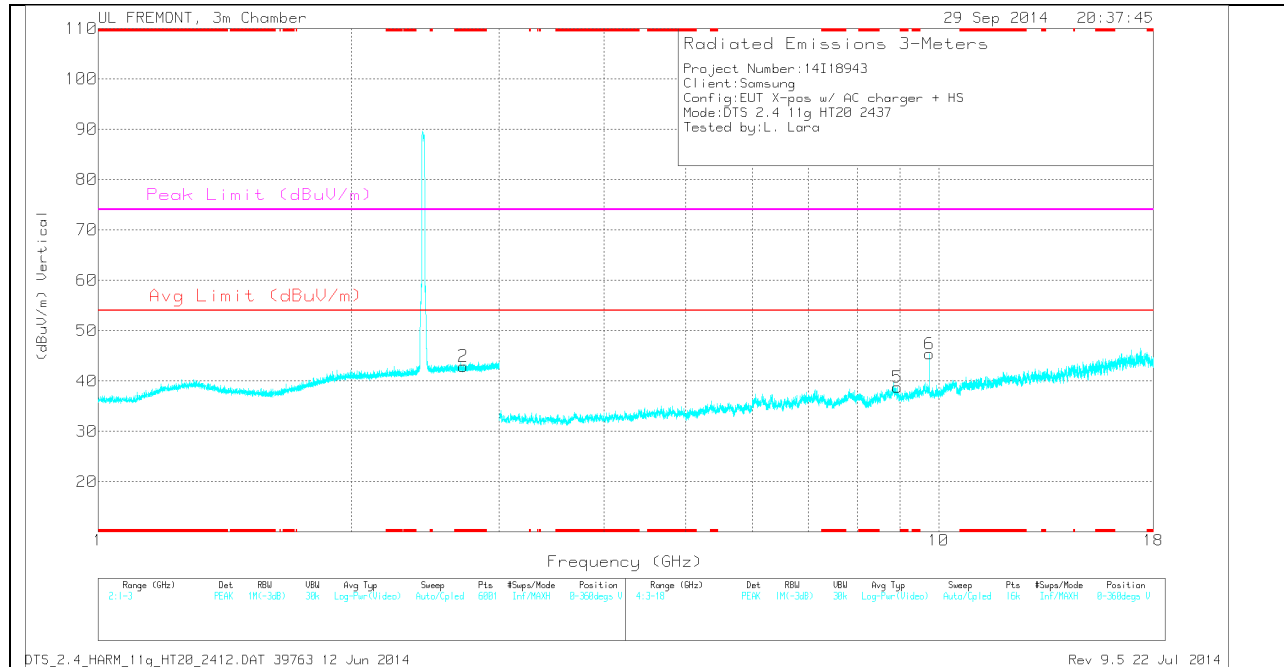
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.648	37.63	PK2	36.8	-25.6	0	48.83	-	-	-	-	360	100	V
9.648	27.73	MAV1	36.8	-25.6	.32	39.25	-	-	-	-	360	100	V

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 T119 (dB/m)	Amp/Cbl/Fitr /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	* 2.854	32.77	PK	32.7	-22.8	0	42.67	-	-	74	-31.33	0-360	200	H
2	* 2.72	33.13	PK	32.6	-22.8	0	42.93	-	-	74	-31.07	0-360	100	V
4	* 7.277	31.02	PK	35.6	-29.3	0	37.32	-	-	74	-36.68	0-360	200	H
3	4.403	31.46	PK	33.7	-30.1	0	35.06	-	-	-	-	0-360	200	H
5	8.938	29.46	PK	36.1	-26.8	0	38.76	-	-	-	-	0-360	100	V
6	9.748	34.18	PK	36.9	-25.7	0	45.38	-	-	-	-	0-360	100	V

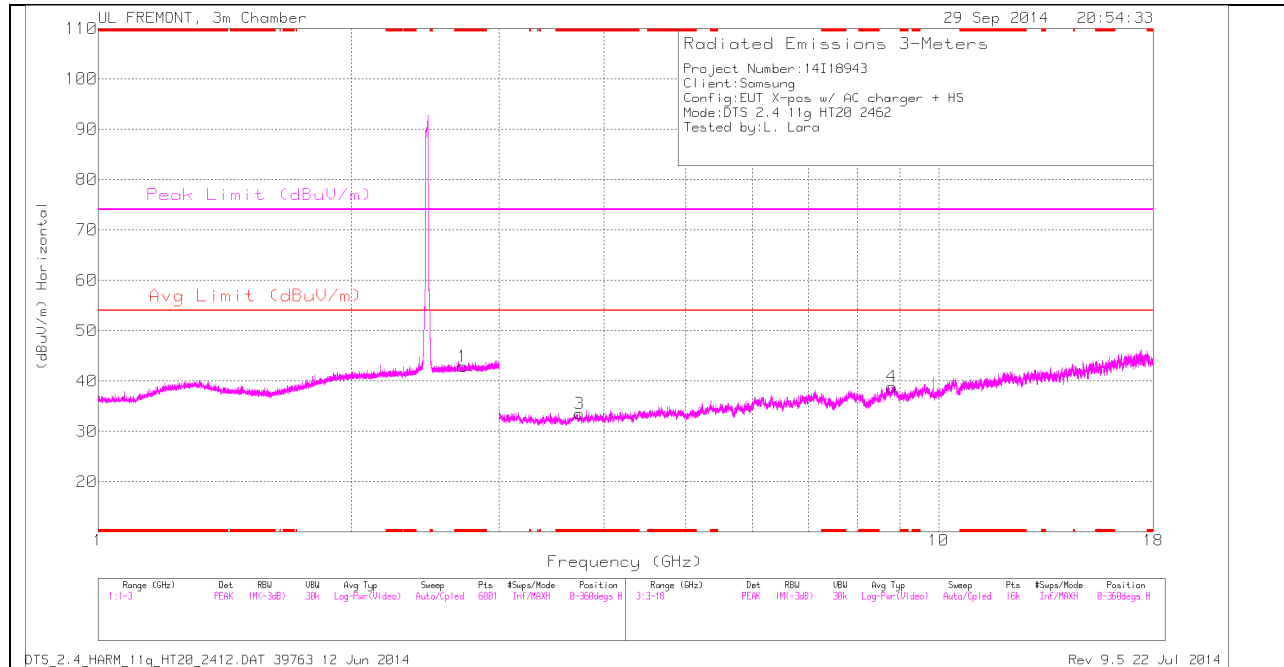
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

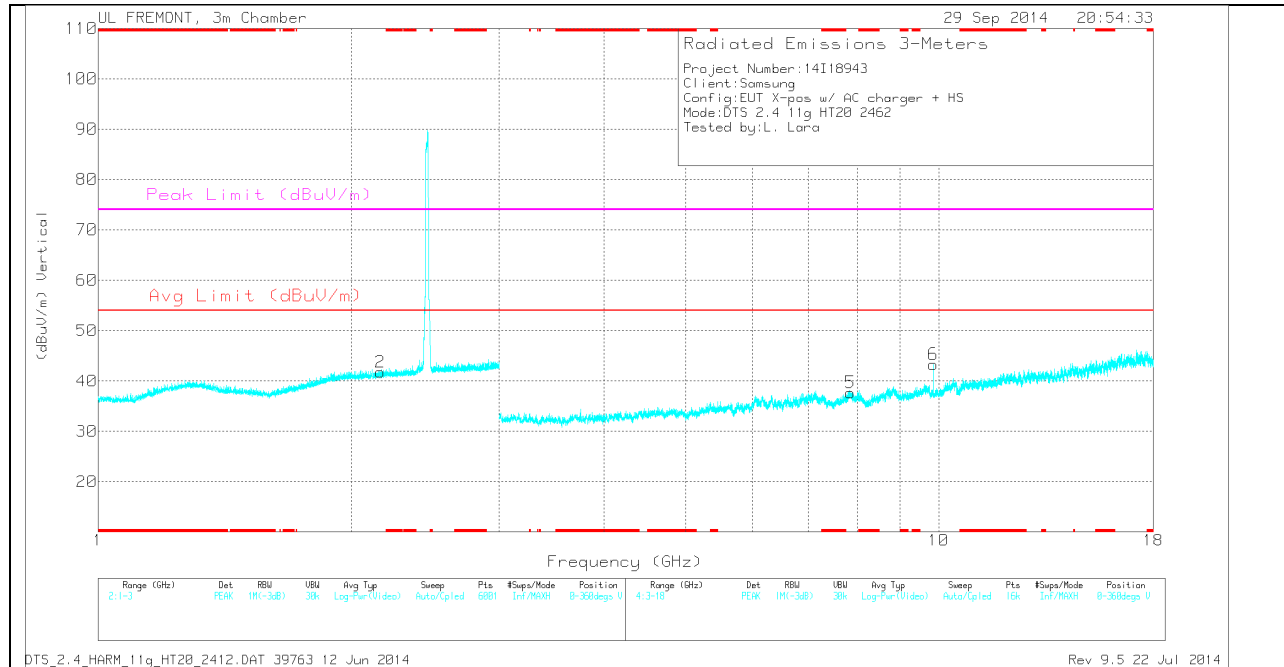
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.748	36.94	PK2	36.9	-25.7	0	48.14	-	-	-	-	360	100	V
9.748	25.94	MAV1	36.9	-25.7	.32	37.46	-	-	-	-	360	100	V

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 T119 (dB/m)	Amp/Cbl/Filtr /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	* 2.716	33.1	PK	32.6	-22.8	0	42.9	-	-	74	-31.1	0-360	100	H
3	* 3.738	31.21	PK	33.2	-30.9	0	33.51	-	-	74	-40.49	0-360	100	H
2	2.167	33.07	PK	31.6	-22.9	0	41.77	-	-	-	-	0-360	100	V
5	7.855	29.27	PK	35.8	-27.4	0	37.67	-	-	-	-	0-360	200	V
4	8.796	30.05	PK	35.9	-27.1	0	38.85	-	-	-	-	0-360	100	H
6	9.847	32.3	PK	36.9	-25.9	0	43.3	-	-	-	-	0-360	100	V

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

PK - Peak detector

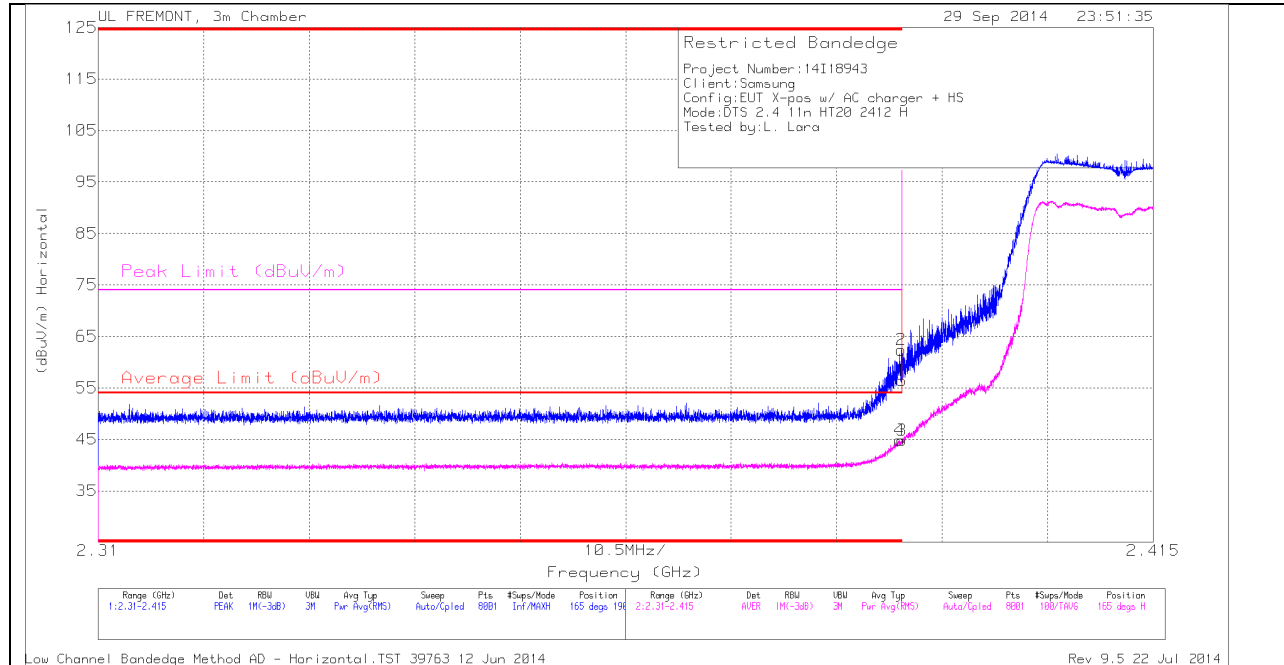
Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filtr /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
9.846	36.98	PK2	36.9	-25.9	0	47.98	-	-	-	-	360	100	V
9.848	26.01	MAV1	36.9	-25.9	.32	37.33	-	-	-	-	360	100	V

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

RESTRICTED BANDEDGE (LOW CHANNEL)

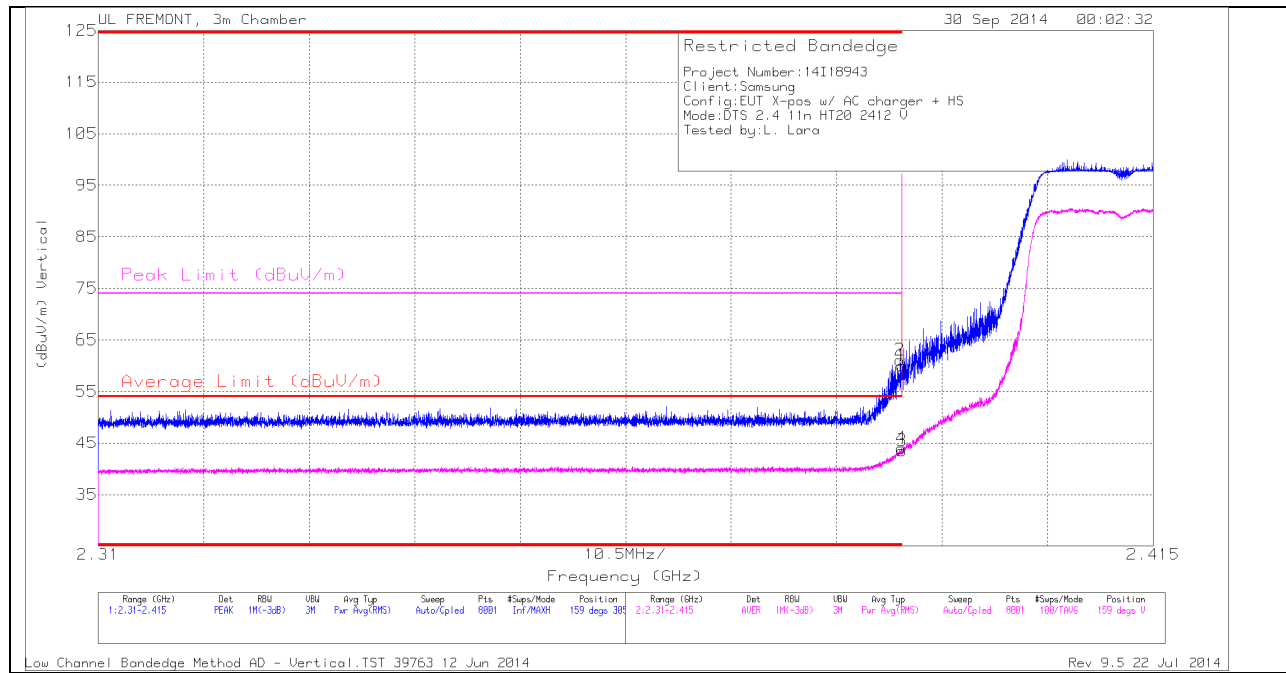
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Filt r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	47.43	PK	32.1	-23.1	0	56.43	-	-	74	-17.57	165	190	H
2	* 2.39	53.38	PK	32.1	-23.1	0	62.38	-	-	74	-11.62	165	190	H
3	* 2.39	35.49	RMS	32.1	-23.1	.32	44.81	54	-9.19	-	-	165	190	H
4	* 2.39	35.5	RMS	32.1	-23.1	.32	44.82	54	-9.18	-	-	165	190	H

VERTICAL PEAK AND AVERAGE PLOT

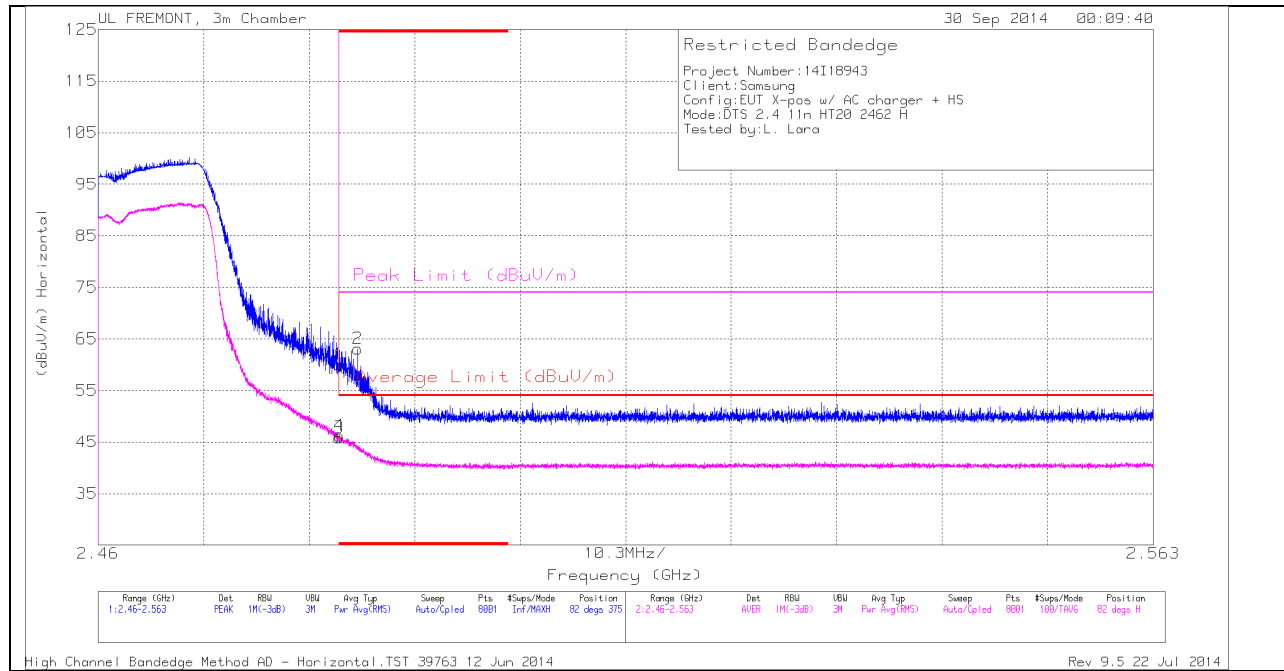


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitter/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	51.03	PK	32.1	-23.1	0	60.03	-	-	74	-13.97	159	305	V
2	* 2.39	52.11	PK	32.1	-23.1	0	61.11	-	-	74	-12.89	159	305	V
3	* 2.39	34.21	RMS	32.1	-23.1	.32	43.53	54	-10.47	-	-	159	305	V
4	* 2.39	34.67	RMS	32.1	-23.1	.32	43.99	54	-10.01	-	-	159	305	V

AUTHORIZED BANDEDGE (HIGH CHANNEL)

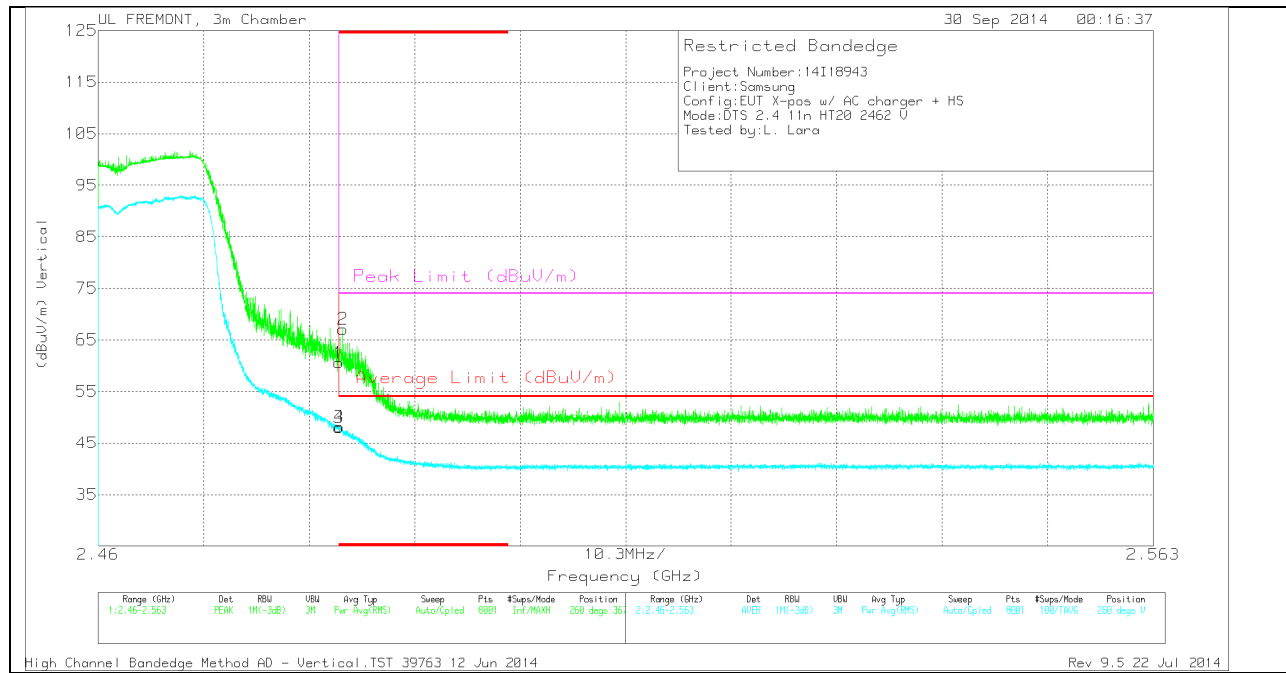
HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	50.54	PK	32.3	-22.8	0	60.04	-	-	74	-13.96	82	375	H
3	* 2.484	36.01	RMS	32.3	-22.8	.32	45.83	54	-8.17	-	-	82	375	H
4	* 2.484	36.44	RMS	32.3	-22.8	.32	46.26	54	-7.74	-	-	82	375	H
2	* 2.485	53.6	PK	32.3	-22.8	0	63.1	-	-	74	-10.9	82	375	H

VERTICAL PEAK AND AVERAGE PLOT

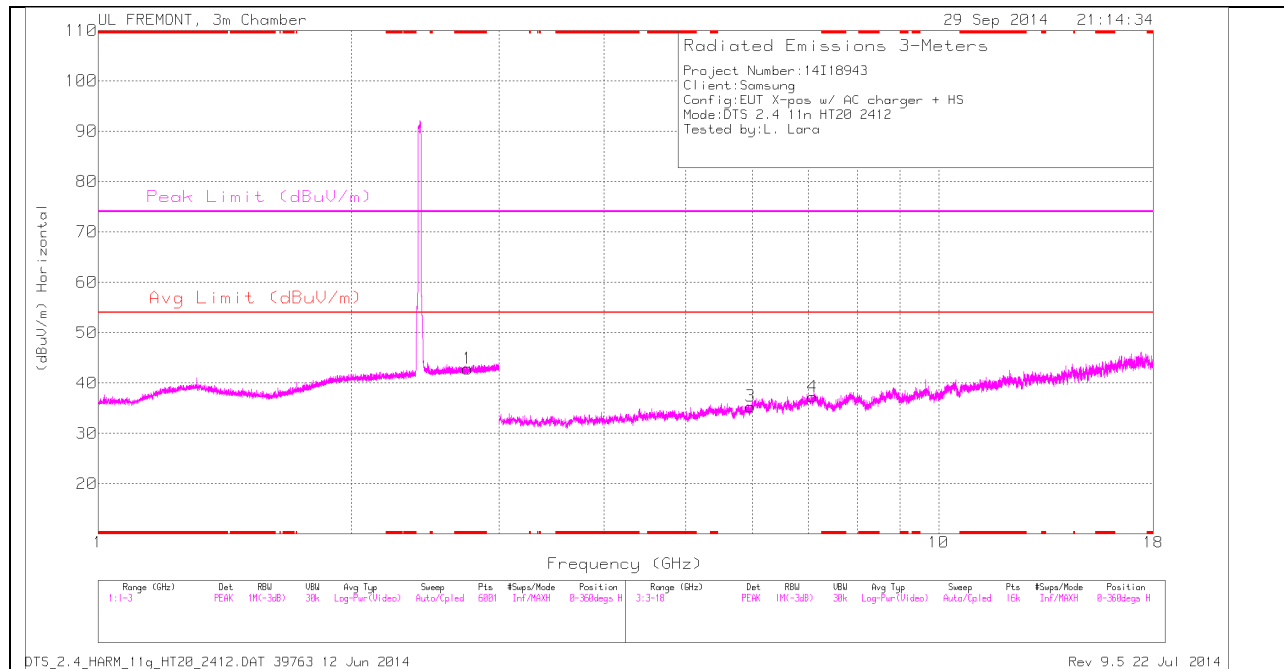


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fit r/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	51.08	PK	32.3	-22.8	0	60.58	-	-	74	-13.42	260	367	V
2	* 2.484	57.58	PK	32.3	-22.8	0	67.08	-	-	74	-6.92	260	367	V
3	* 2.484	38.21	RMS	32.3	-22.8	.32	48.03	54	-5.97	-	-	260	367	V
4	* 2.484	38.29	RMS	32.3	-22.8	.32	48.11	54	-5.89	-	-	260	367	V

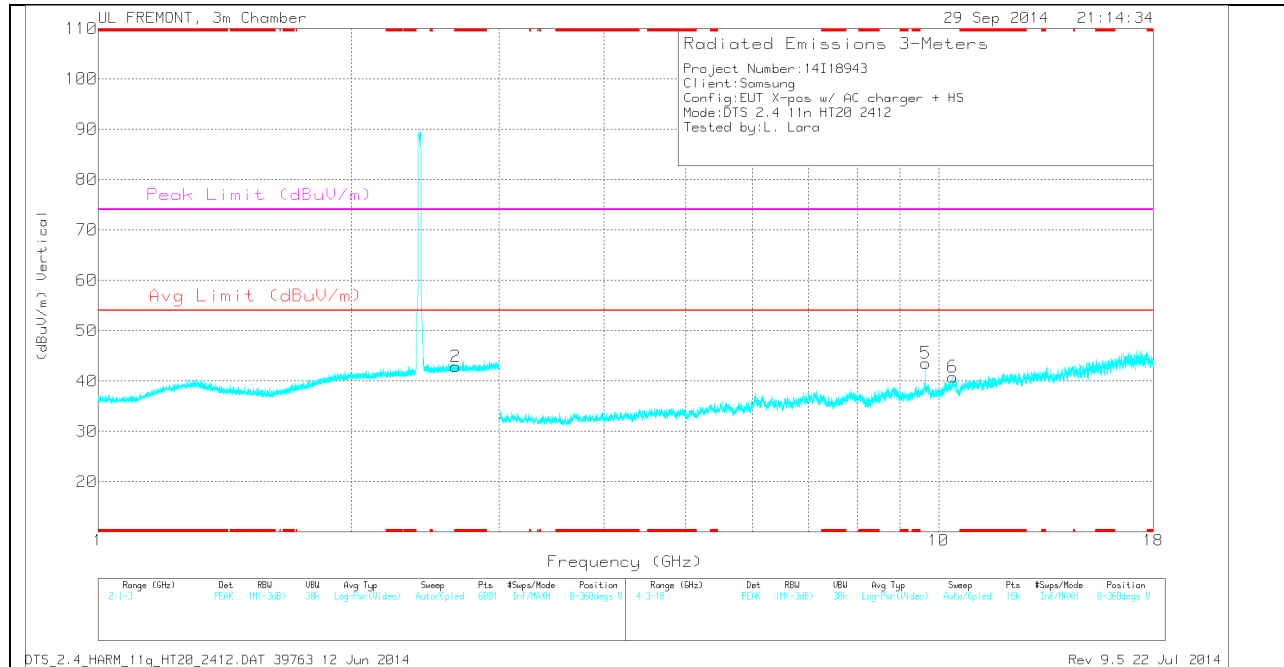
HARMONICS AND SPURIOUS EMISSIONS

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 T119 (dB/m)	Amp/Cbl/Fitr /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	* 2.752	33.05	PK	32.7	-22.9	0	42.85	-	-	74	-31.15	0-360	100	H
2	* 2.664	32.99	PK	32.6	-22.7	0	42.89	-	-	74	-31.11	0-360	100	V
3	5.97	30.74	PK	35.2	-30.6	0	35.34	-	-	-	-	0-360	100	H
4	7.081	29.65	PK	35.6	-28	0	37.25	-	-	-	-	0-360	100	H
5	9.647	32.34	PK	36.8	-25.6	0	43.54	-	-	-	-	0-360	100	V
6	10.398	28.8	PK	37.3	-25.3	0	40.8	-	-	-	-	0-360	100	V

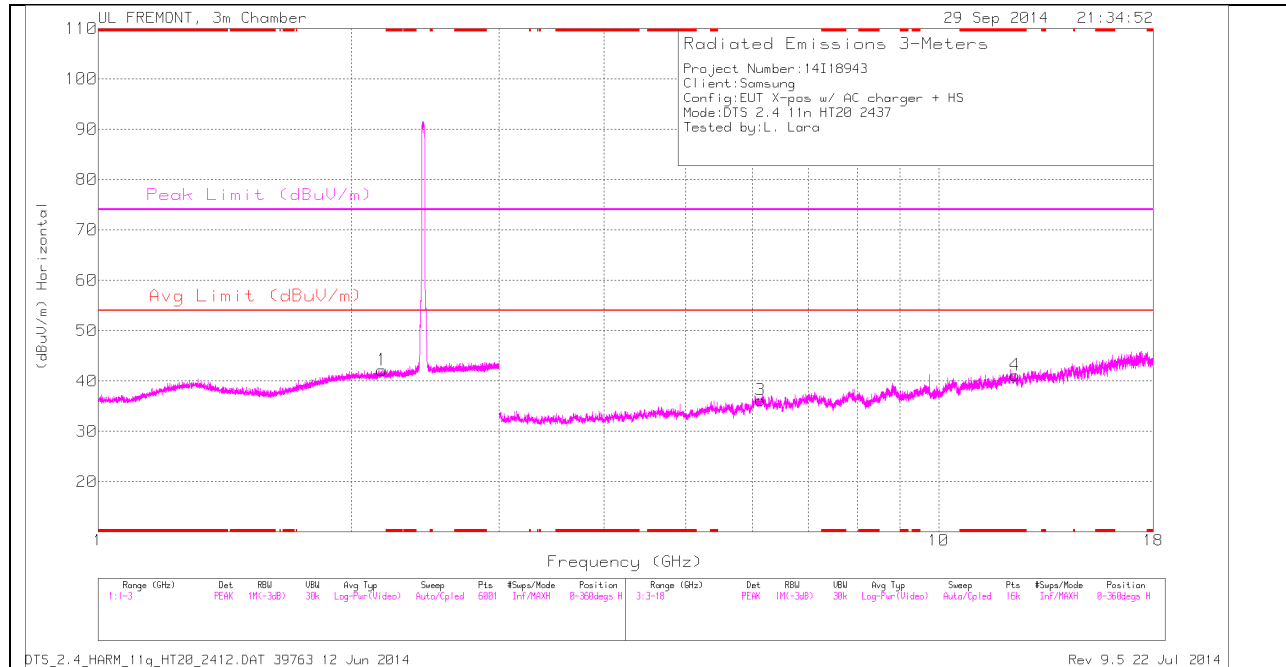
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

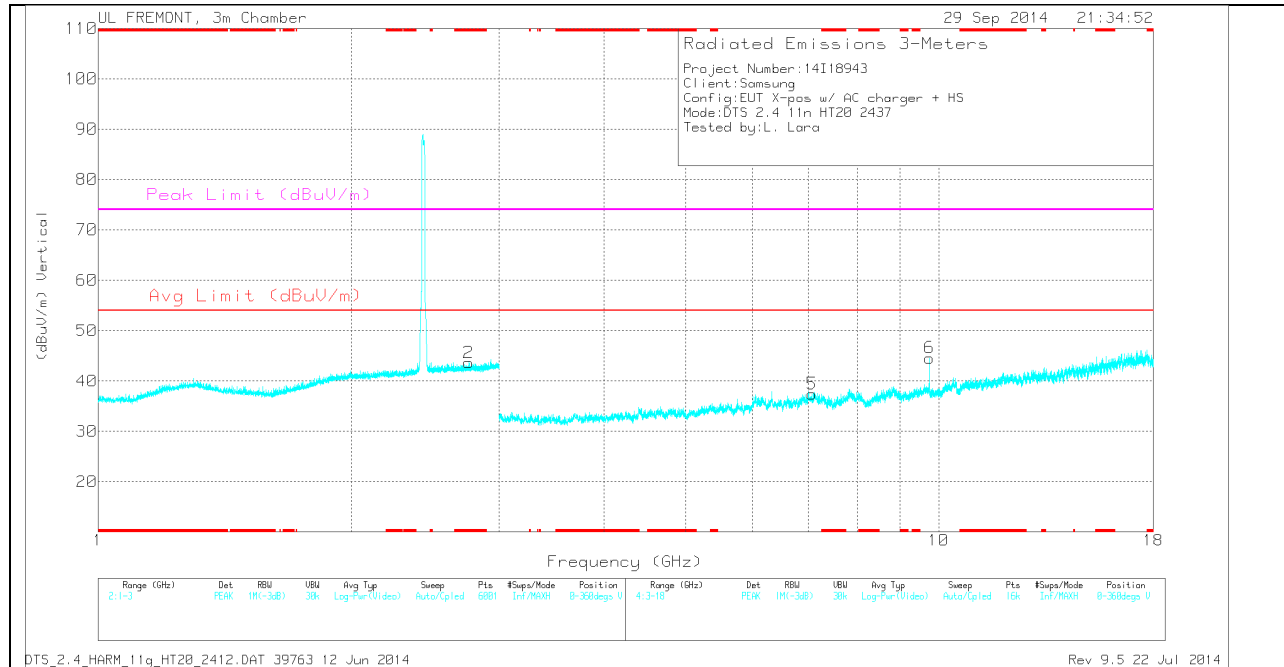
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.648	38.44	PK2	36.8	-25.6	0	49.64	-	-	-	-	360	100	V
9.648	27.64	MAV1	36.8	-25.6	.32	39.16	-	-	-	-	360	100	V

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 T119 (dB/m)	Amp/Cbl/Fitr /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	* 2.759	33.72	PK	32.7	-22.8	0	43.62	-	-	74	-30.38	0-360	100	V
4	* 12.328	28.89	PK	39	-26.7	0	41.19	-	-	74	-32.81	0-360	200	H
1	2.176	33.6	PK	31.6	-23	0	42.2	-	-	-	-	0-360	200	H
3	6.138	30.31	PK	35.3	-29.4	0	36.21	-	-	-	-	0-360	200	H
5	7.068	30.03	PK	35.6	-28.2	0	37.43	-	-	-	-	0-360	100	V
6	9.748	33.39	PK	36.9	-25.7	0	44.59	-	-	-	-	0-360	100	V

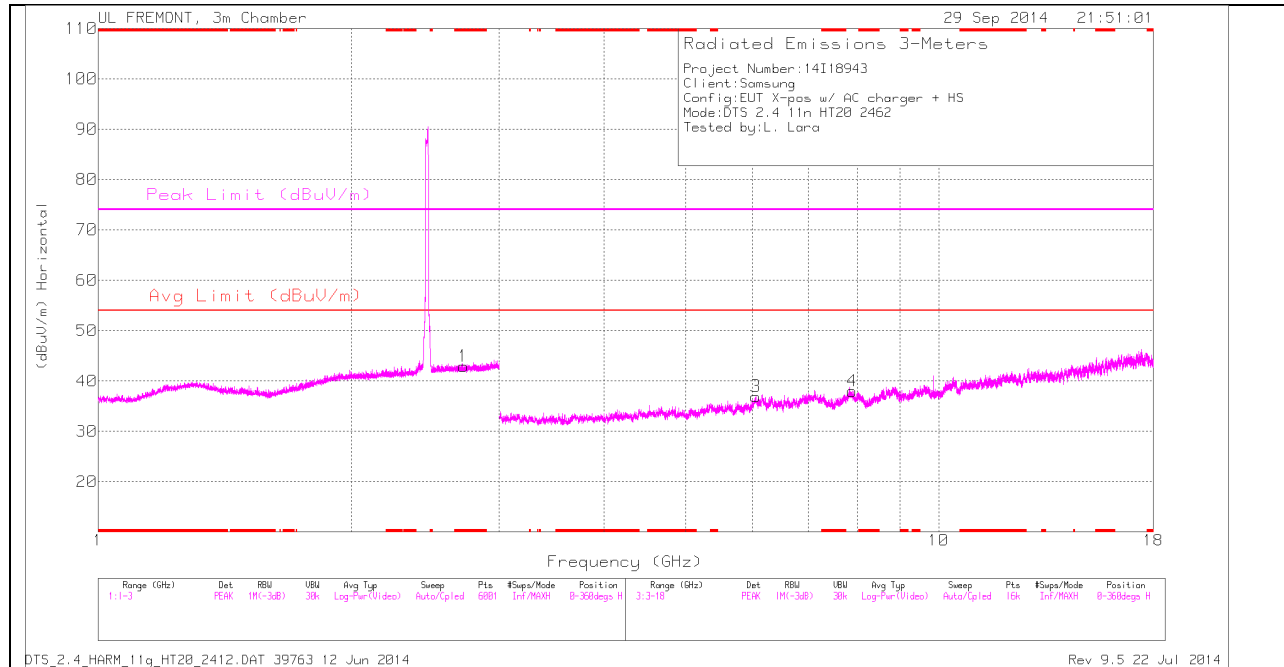
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

Radiated Emissions

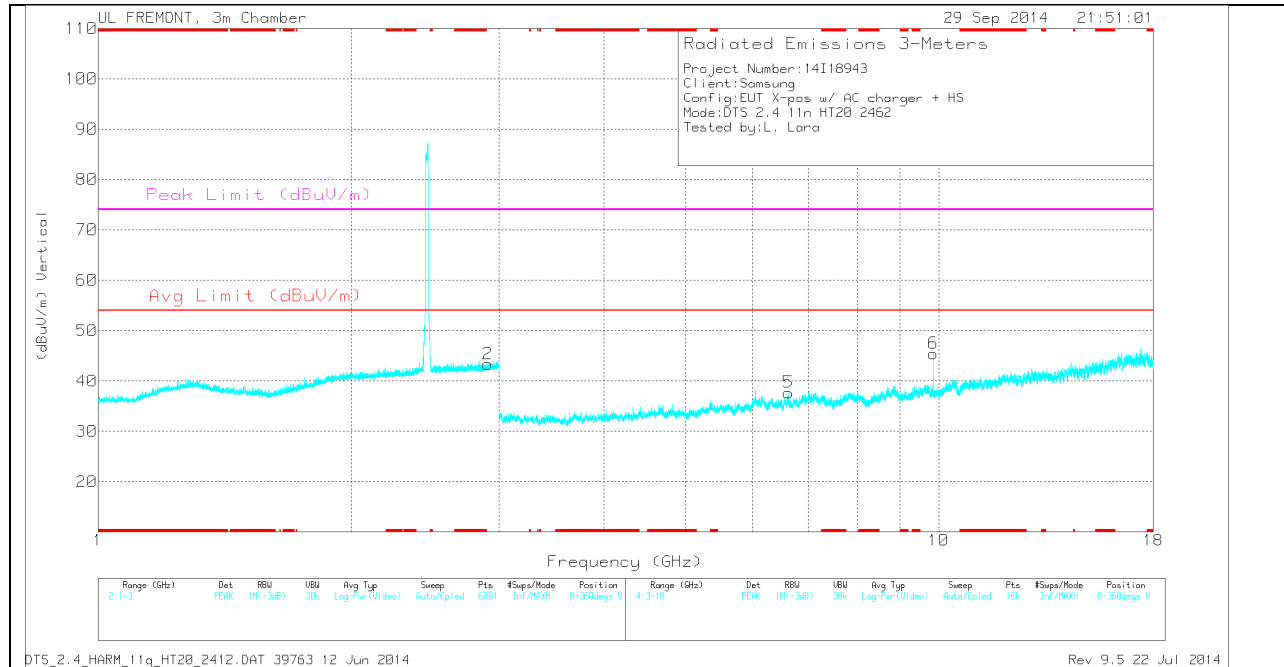
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.748	37.52	PK2	36.9	-25.7	0	48.72	-	-	-	-	360	100	V
9.748	25.88	MAv1	36.9	-25.7	.32	37.4	-	-	-	-	360	100	V

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 T119 (dB/m)	Amp/Cbl/Fitr /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	* 2.721	33.22	PK	32.6	-22.9	0	42.92	-	-	74	-31.08	0-360	200	H
2	2.909	33.26	PK	32.8	-22.7	0	43.36	-	-	-	-	0-360	100	V
3	6.06	30.72	PK	35.3	-29.1	0	36.92	-	-	-	-	0-360	200	H
5	6.625	30.72	PK	35.6	-28.6	0	37.72	-	-	-	-	0-360	100	V
4	7.893	29.58	PK	35.8	-27.4	0	37.98	-	-	-	-	0-360	200	H
6	9.848	34.46	PK	36.9	-25.9	0	45.46	-	-	-	-	0-360	100	V

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

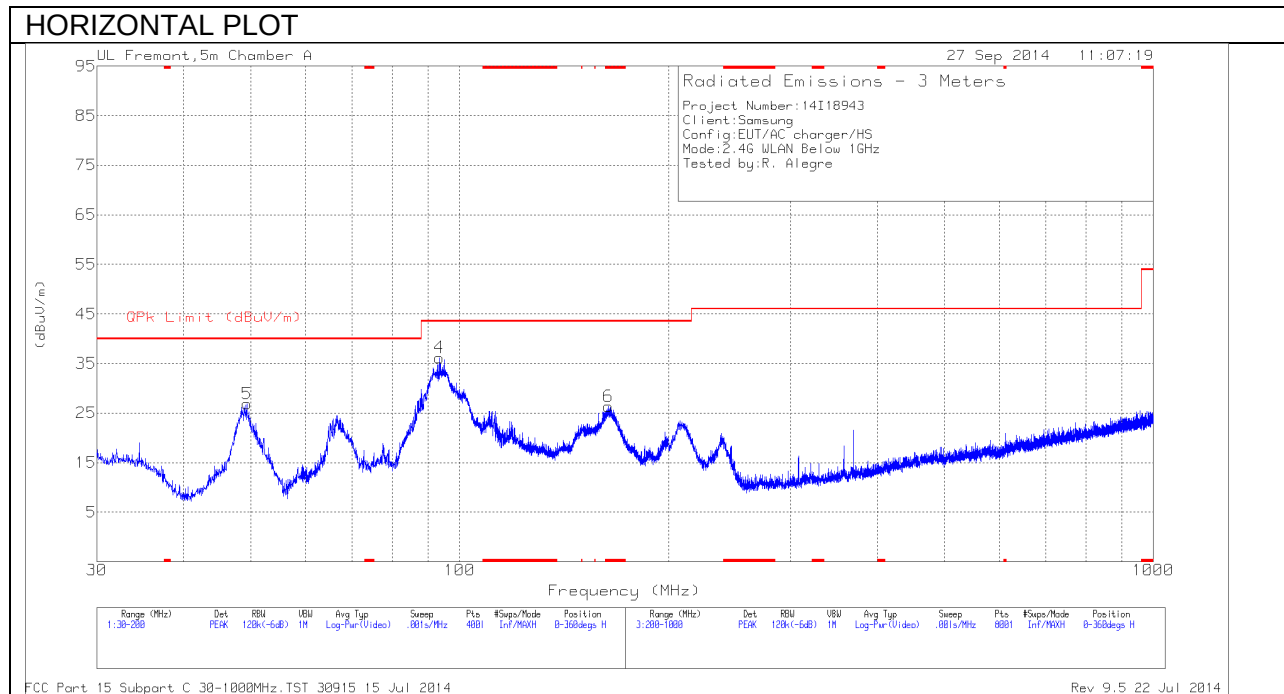
PK - Peak detector

Radiated Emissions

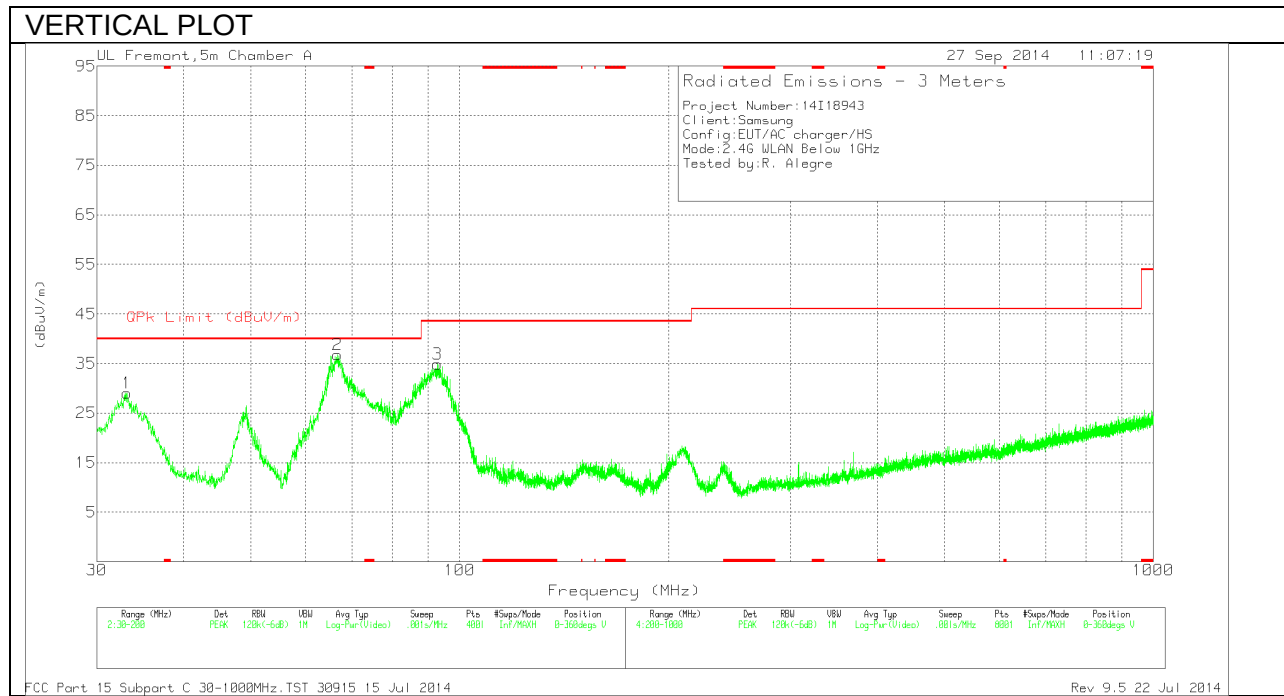
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T119 (dB/m)	Amp/Cbl/Fitr /Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
9.848	25.93	MAV1	36.9	-25.9	.32	37.25	-	-	-	-	360	100	V
9.85	37.45	PK2	36.9	-25.9	0	48.45	-	-	-	-	360	100	V

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	AF T477 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	* 163.705	44.31	PK	12.1	-30	26.41	43.52	-17.11	0-360	101	H
1	33.145	41.17	PK	19	-31.1	29.07	40	-10.93	0-360	101	V
5	49.3375	49.98	PK	8.1	-31.2	26.88	40	-13.12	0-360	400	H
2	66.6775	59.12	PK	8.1	-30.5	36.72	40	-3.28	0-360	101	V
3	92.8575	56.86	PK	8.4	-30.4	34.86	43.52	-8.66	0-360	101	V
4	93.5375	58.1	PK	8.5	-30.4	36.2	43.52	-7.32	0-360	200	H

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

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

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

TEST PROCEDURE

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

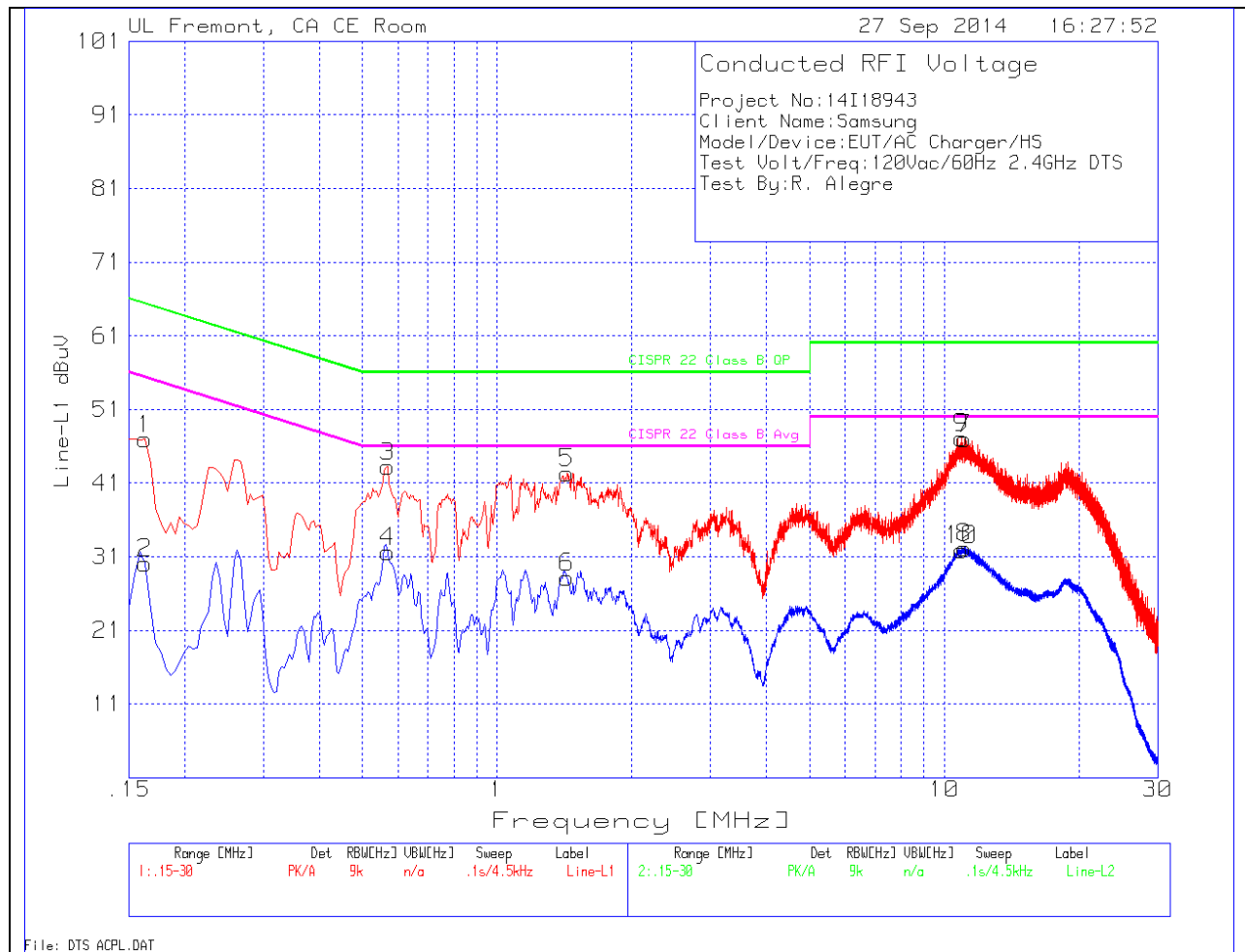
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

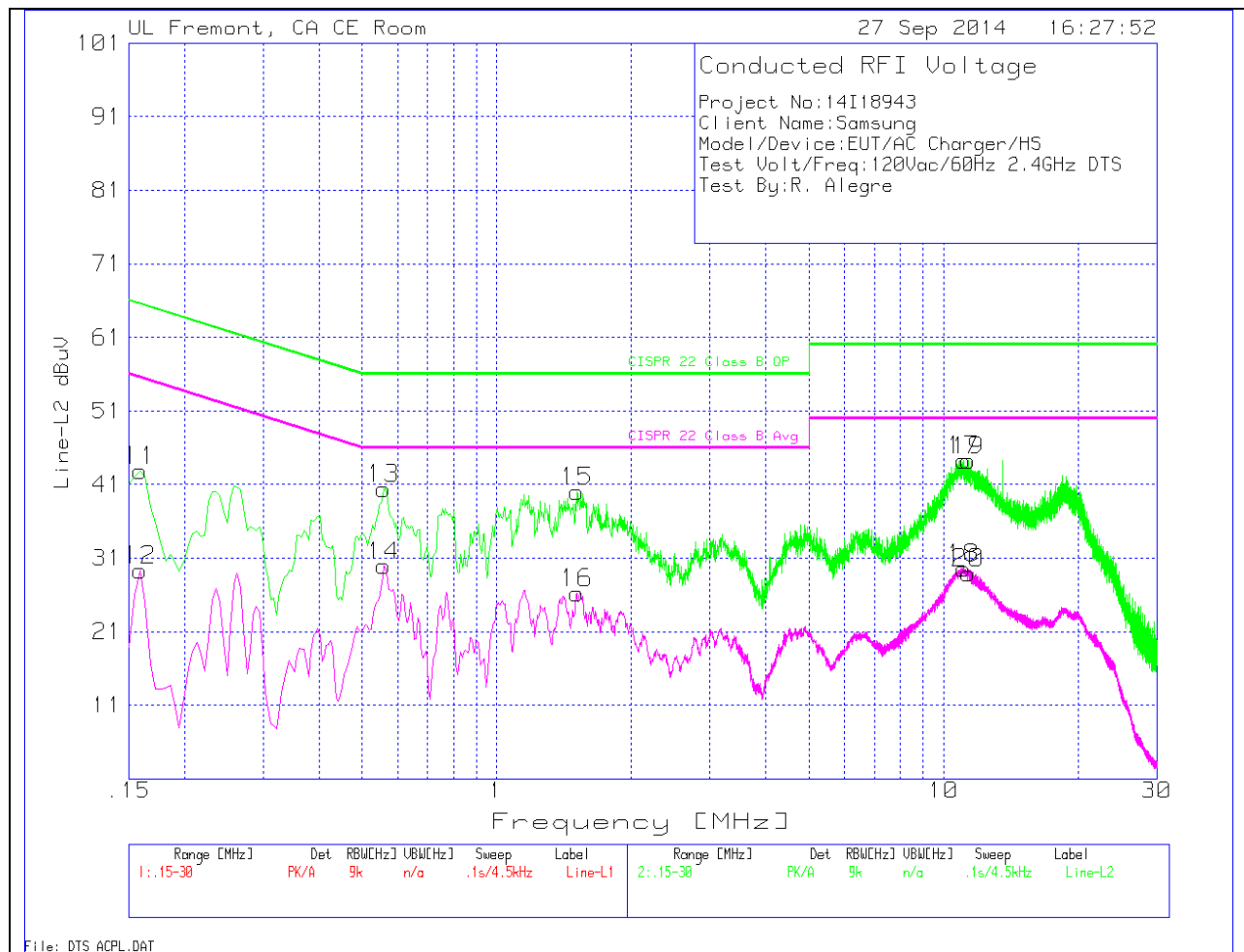
LINE 1 PLOT



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	.1635	45.72	PK	1.2	0	46.92	65.3	-18.38	-	-
2	.1635	28.85	Av	1.2	0	30.05	-	-	55.3	-25.25
3	.5685	42.88	PK	.3	0	43.18	56	-12.82	-	-
4	.5685	31.33	Av	.3	0	31.63	-	-	46	-14.37
5	1.4325	42.08	PK	.2	.1	42.38	56	-13.62	-	-
6	1.4325	27.83	Av	.2	.1	28.13	-	-	46	-17.87
9	10.932	46.71	PK	.2	.2	47.11	60	-12.89	-	-
10	10.932	31.51	Av	.2	.2	31.91	-	-	50	-18.09
7	11.103	46.63	PK	.2	.2	47.03	60	-12.97	-	-
8	11.103	31.73	Av	.2	.2	32.13	-	-	50	-17.87

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)
11	.159	41.41	PK	1.4	0	42.81	65.5	-22.69	-	-
12	.159	27.9	Av	1.4	0	29.3	-	-	55.5	-26.2
13	.5595	40.11	PK	.3	0	40.41	56	-15.59	-	-
14	.5595	29.6	Av	.3	0	29.9	-	-	46	-16.1
15	1.509	39.71	PK	.2	.1	40.01	56	-15.99	-	-
16	1.509	25.91	Av	.2	.1	26.21	-	-	46	-19.79
17	11.0805	43.82	PK	.2	.2	44.22	60	-15.78	-	-
18	11.0805	29.15	Av	.2	.2	29.55	-	-	50	-20.45
19	11.337	43.81	PK	.2	.2	44.21	60	-15.79	-	-
20	11.337	28.59	Av	.2	.2	28.99	-	-	50	-21.01