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

BLUETOOTH LOW ENERGY

CERTIFICATION TEST REPORT

FOR

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

MODEL NUMBER: SM-T350

FCC ID: A3LSMT350
IC ID: 649E-SMT350

REPORT NUMBER: 15I19924-E2

ISSUE DATE: FEBRUARY 16, 2015

Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	2/16/2015	Initial Issue	P. Zhang

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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-T350**
SERIAL NUMBER:	**2044001 (Radiated), 2044002 (Conducted)**
DATE TESTED:	**JANUARY 24 – FEBRUARY 2, 2015**

APPLICABLE STANDARDS

STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 ISSUE 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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Tested By:

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LAB ENGINEER
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2. TEST METHODOLOGY

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

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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%.

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Tablet with Bluetooth, DTS/UNII a/b/g/n, and ANT+.

The model FCC ID: A3LSMT350 shares the same enclosure and circuit board as mode FCC ID: A3LSMT355. The WLAN/Bluetooth circuitry and layout, including antenna, are almost identical between the two units. The WLAN/Bluetooth antenna and surrounding circuitry is the same between these two units.

Only Difference is WWAN antenna and surrounding circuitry is being removed.

After confirming through preliminary radiated emissions that the performance of the A3LSMT350 WLAN/Bluetooth data remains representative of this model (FCC ID: A3LSMT355). Test data for FCC ID: A3LSMT355 is being submitted for this application.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402-2480	BLE	1.69	1.48

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -0.5 dBi.

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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 Z orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

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5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	SAMSUNG	SM-T355	N/A	N/A
Earphone	SAMSUNG	SM-T355	N/A	N/A

I/O CABLES

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

TEST SETUP

EUT was set in the Hidden menu mode to enable BLE communications.

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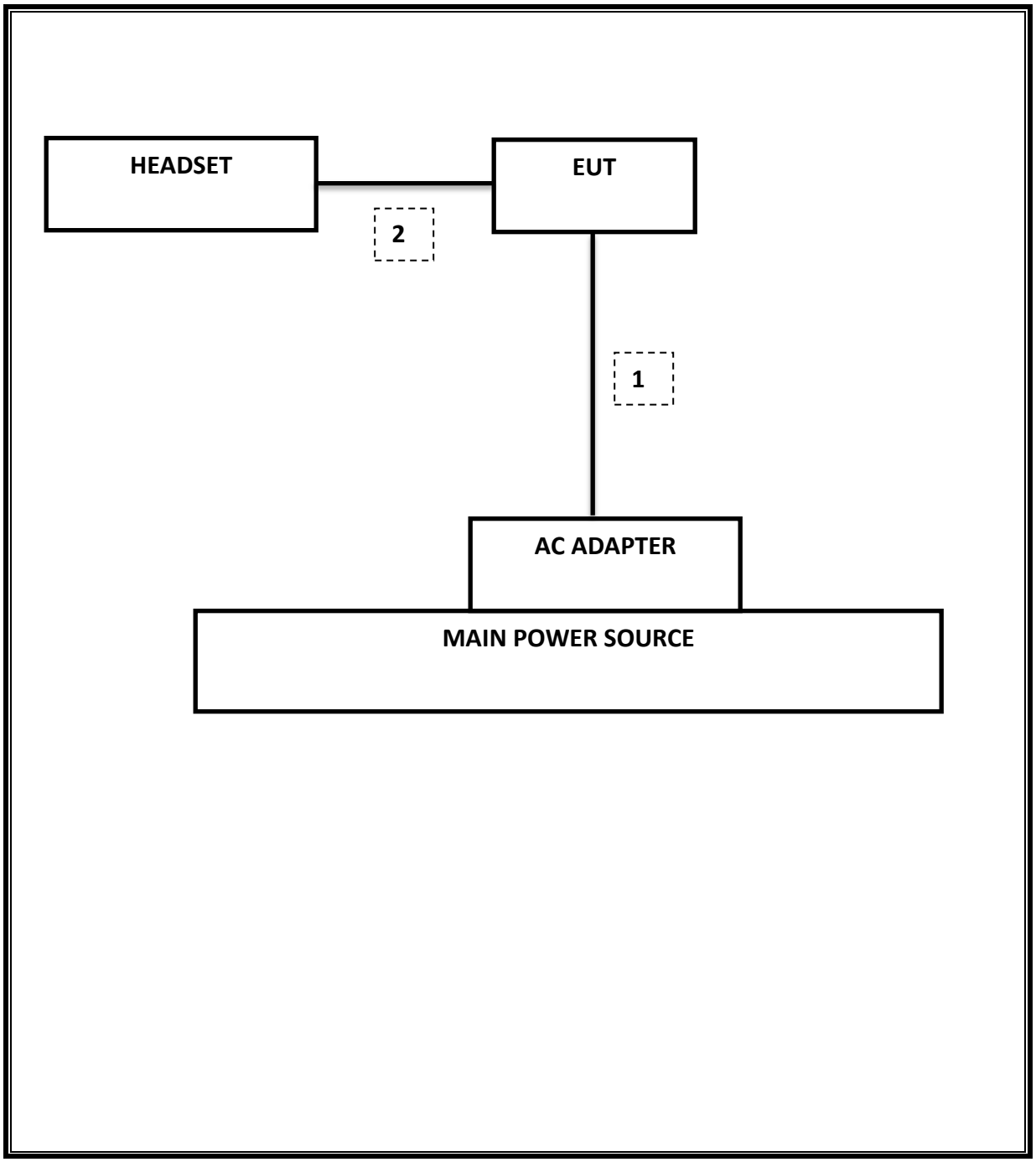
SETUP DIAGRAM FOR TESTS



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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**
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	C01171	02/13/15
Antenna, Horn, 18GHz	EMCO	3115	C00783	10/25/15
Antenna, Horn, 25.5 GHz	ARA	MWH-1826/B	C00980	11/14/15
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	01/28/16
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	10/22/15
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
CBT Bluetooth Tester	R & S	CBT	None	07/12/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/16
Reject Filter, 2.4GHz	Micro-Tronics	BRM50702	N02684	CNR

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

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7. SUMMARY

8.

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	0.6680 MHz
2.1051, 15.247 (d)	RSS-210 A8.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-57.24 dBm
15.247	RSS-210 A8.4	TX conducted output power	<30dBm		Pass	1.69 dBm
15.247	RSS-210 A8.2	PSD	<8dBm		Pass	-13.52 dBm
15.207 (a)	RSS-GEN 7.2.2	AC Power Line conducted emissions	Section 10	Radiated	Pass	44.39dBuV(PK)
15.205, 15.209	RSS-210 Clause 2.6, RSS-210 Clause 6	Radiated Spurious Emission	< 54dBuV/m		Pass	42.21 dBuV/m

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ANTENNA PORT TEST RESULTS

8.1. 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

The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.6700	0.5
Middle	2440	0.6760	0.5
High	2480	0.6680	0.5

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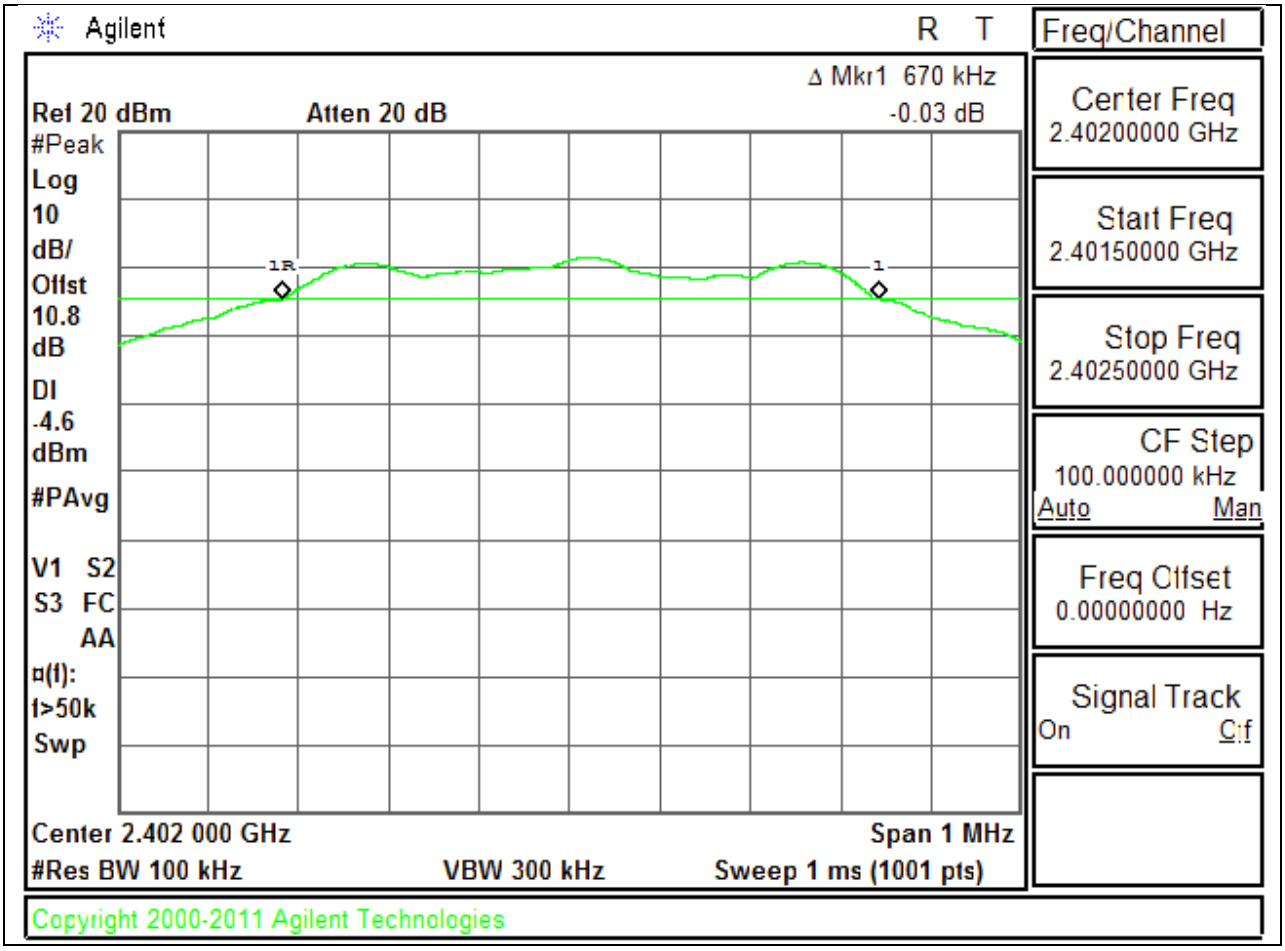
6 dB BANDWIDTH PLOTS

LOW CHANNEL



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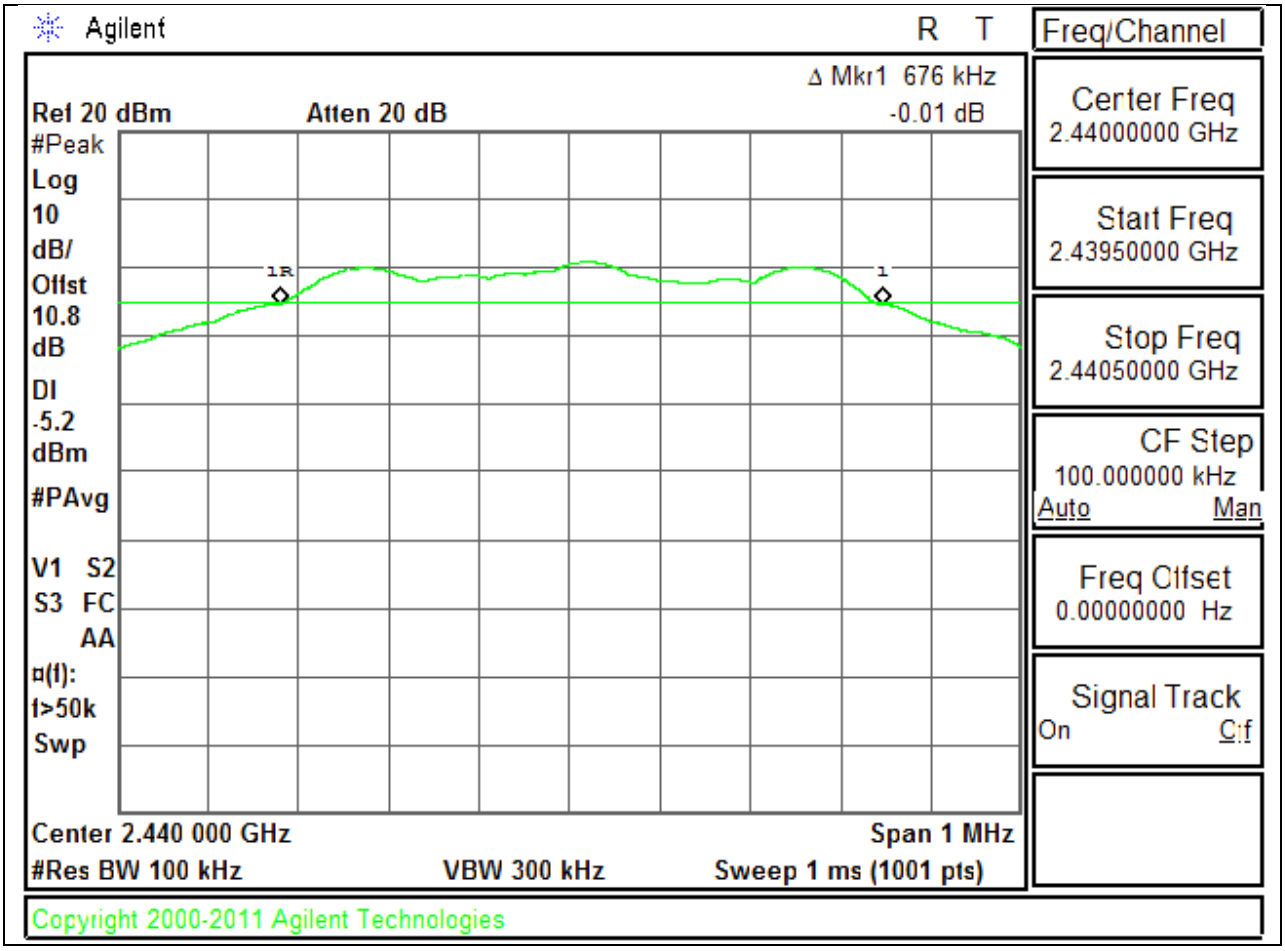
MID CHANNEL



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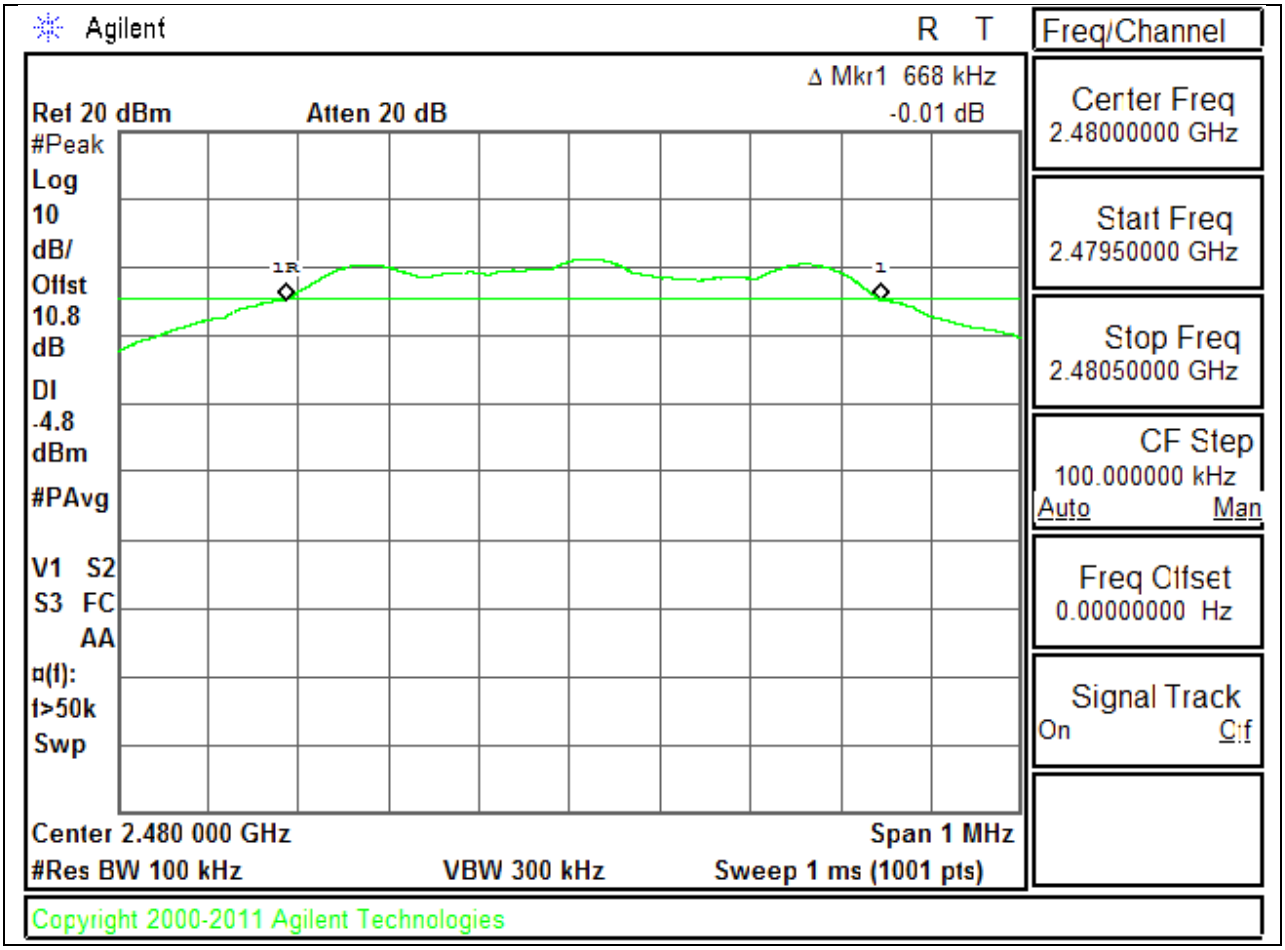
HIGH CHANNEL



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8.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Reference to KDB558074 D01 DTS Meas Guidance v03r02: The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth and to 1% of the span. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0722
Middle	2440	1.0628
High	2480	1.0603

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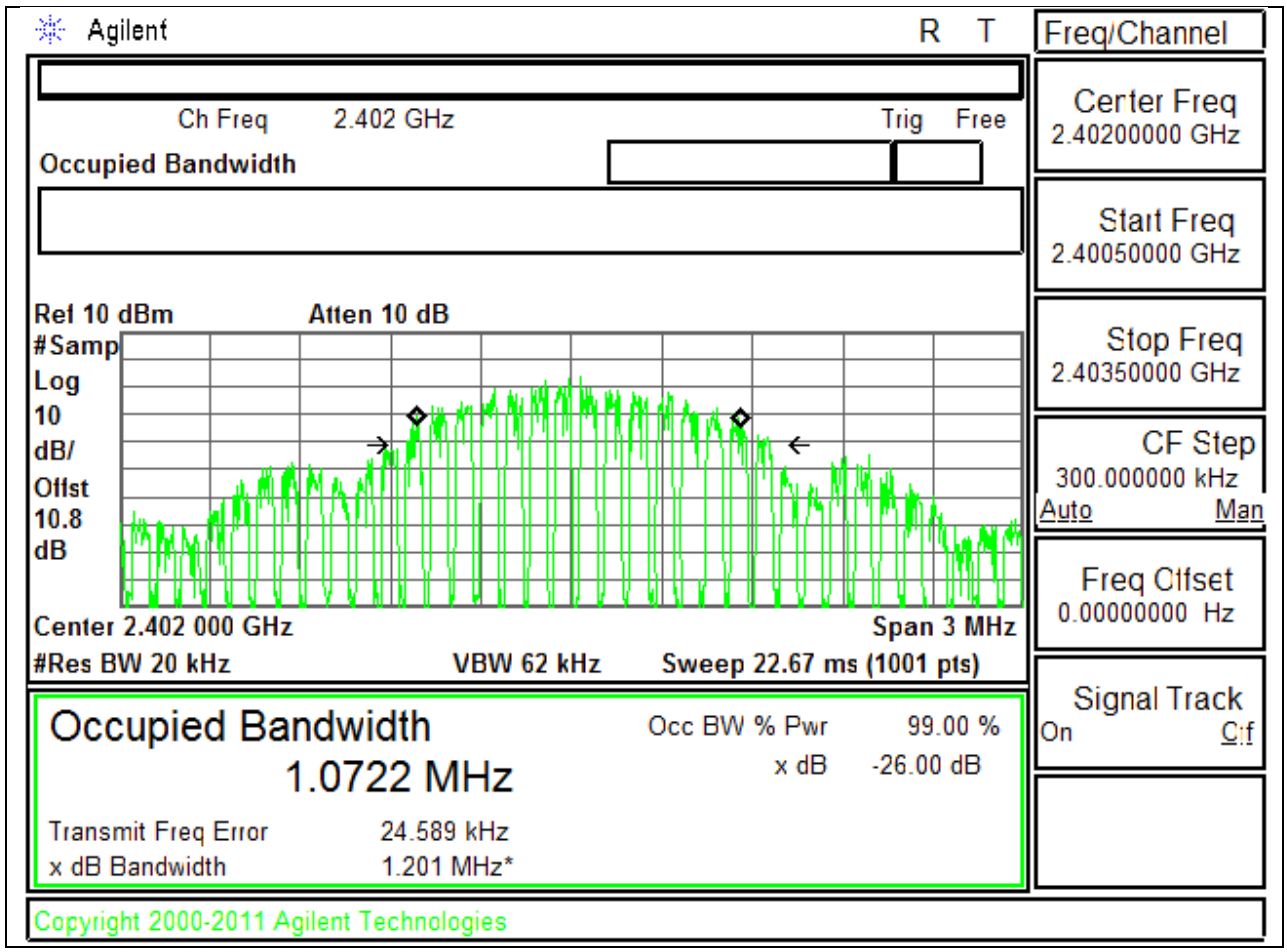
99% BANDWIDTH PLOTS

LOW CHANNEL



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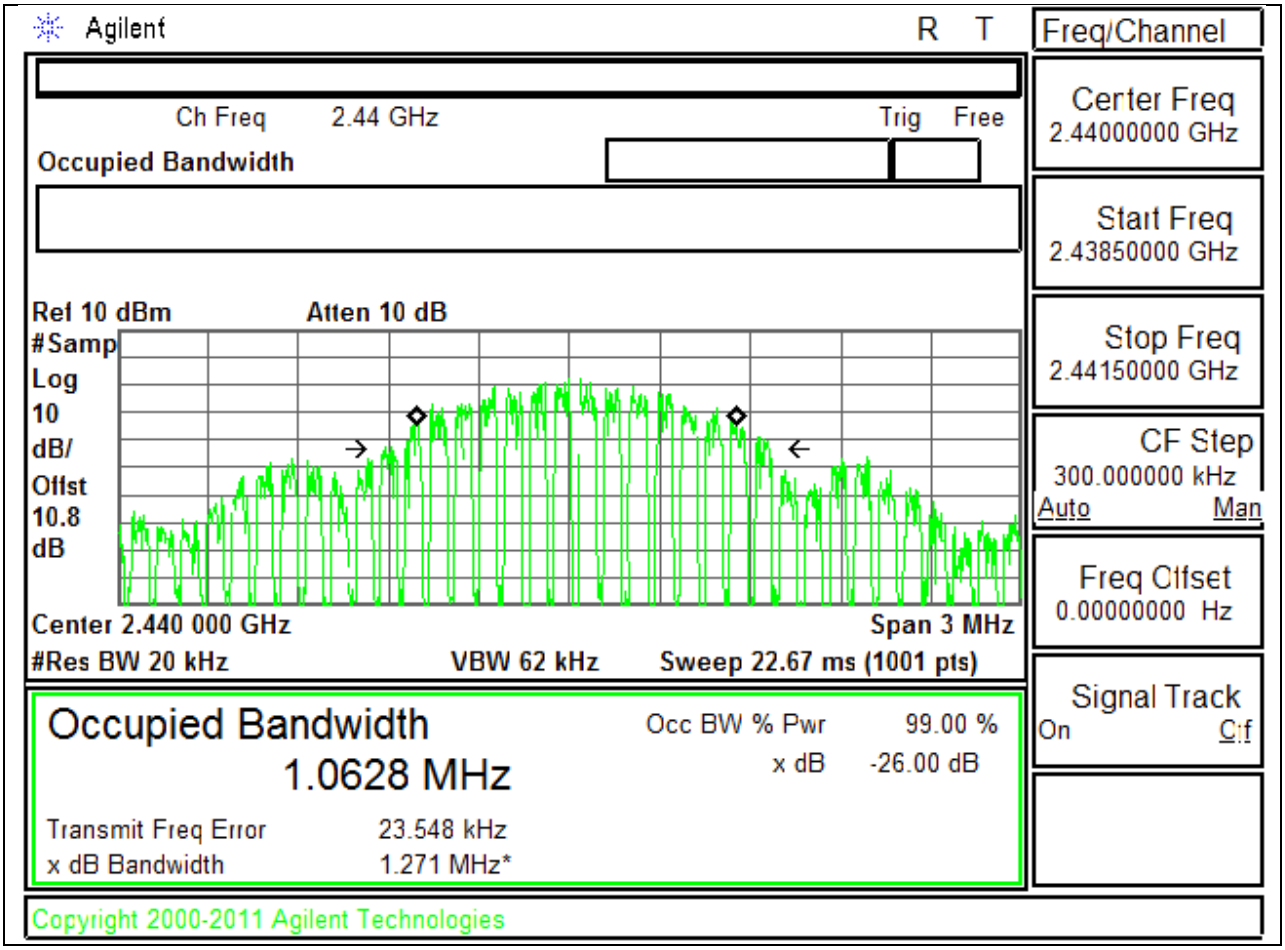
MID CHANNEL



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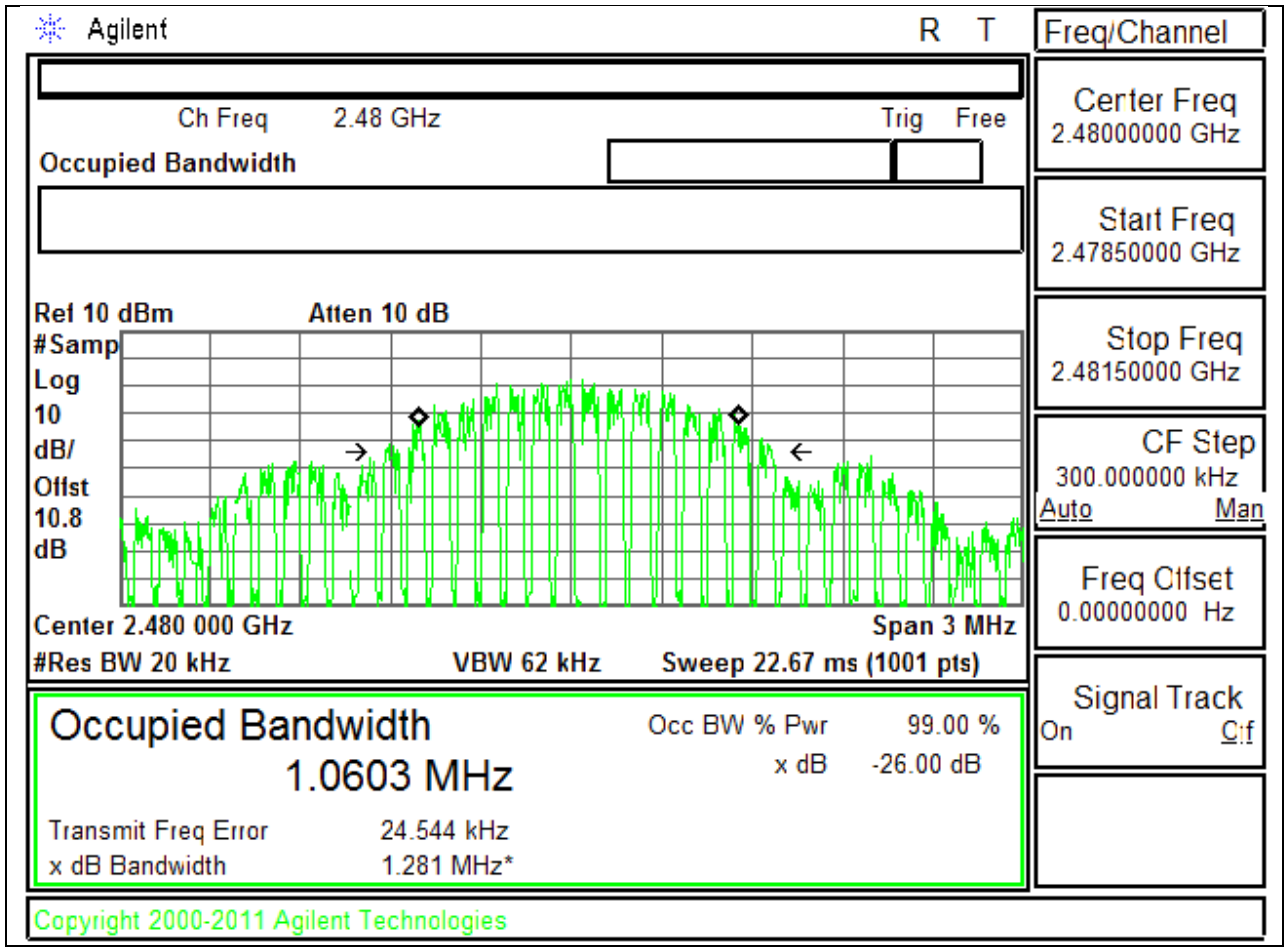
HIGH CHANNEL



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8.3. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

Peak power is measured using KDB558074 D01 DTS Meas Guidance v03r02 under section 9.1.1 utilizing spectrum analyze.

RESULTS

Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	1.690	30	-28.310
Middle	2440	1.020	30	-28.980
High	2480	1.550	30	-28.450

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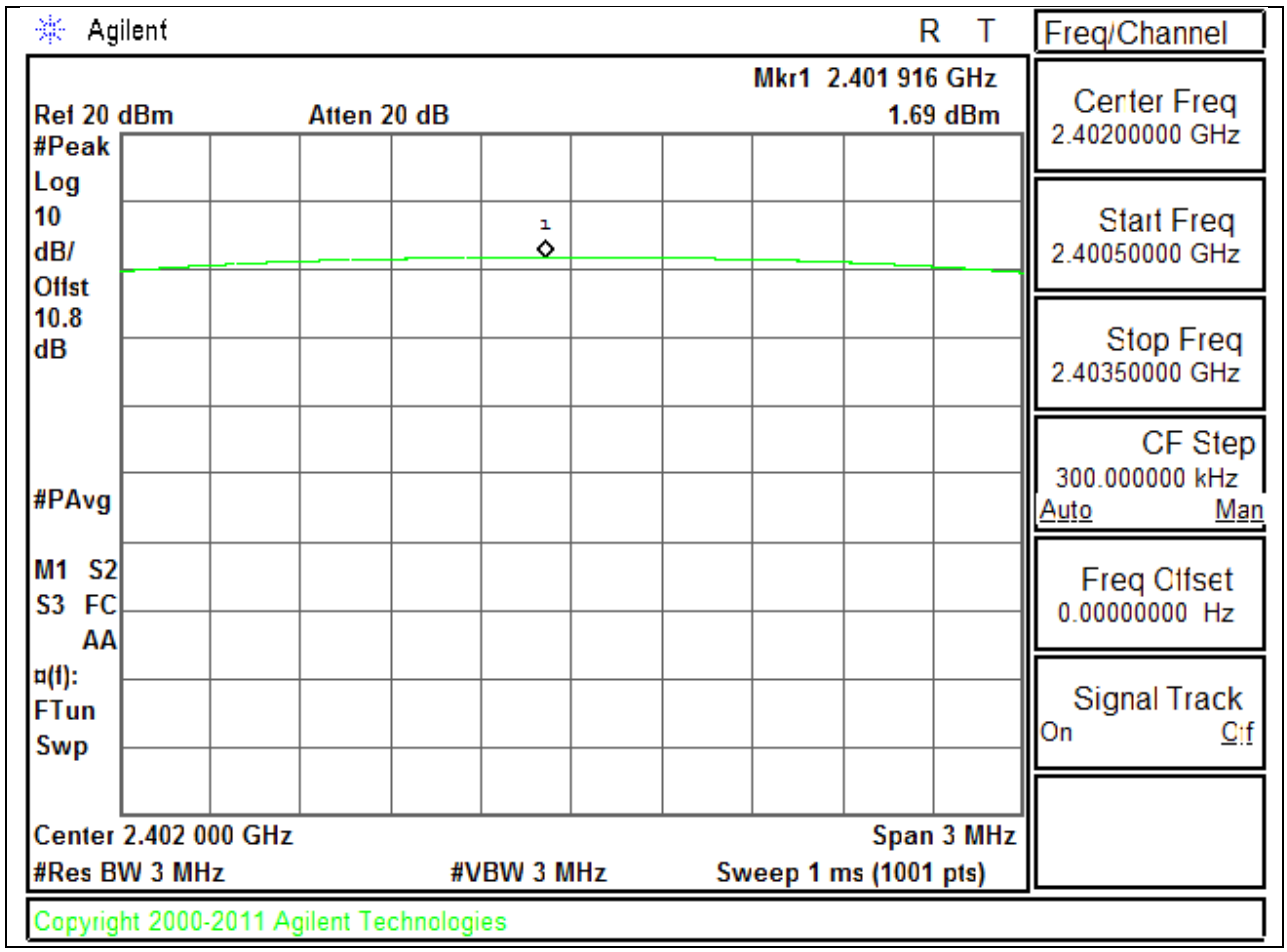
OUTPUT POWER PLOTS

LOW CHANNEL



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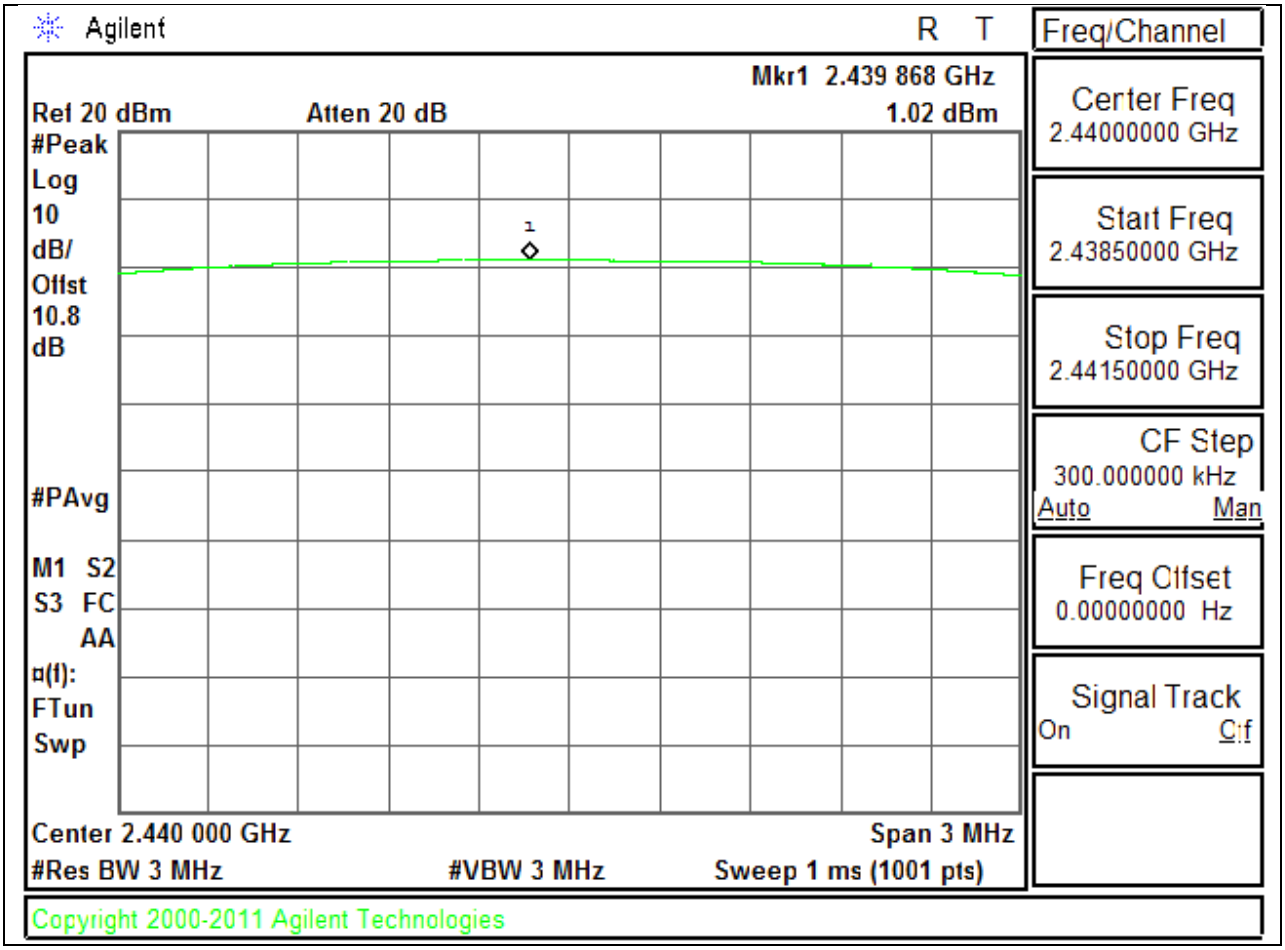
MID CHANNEL



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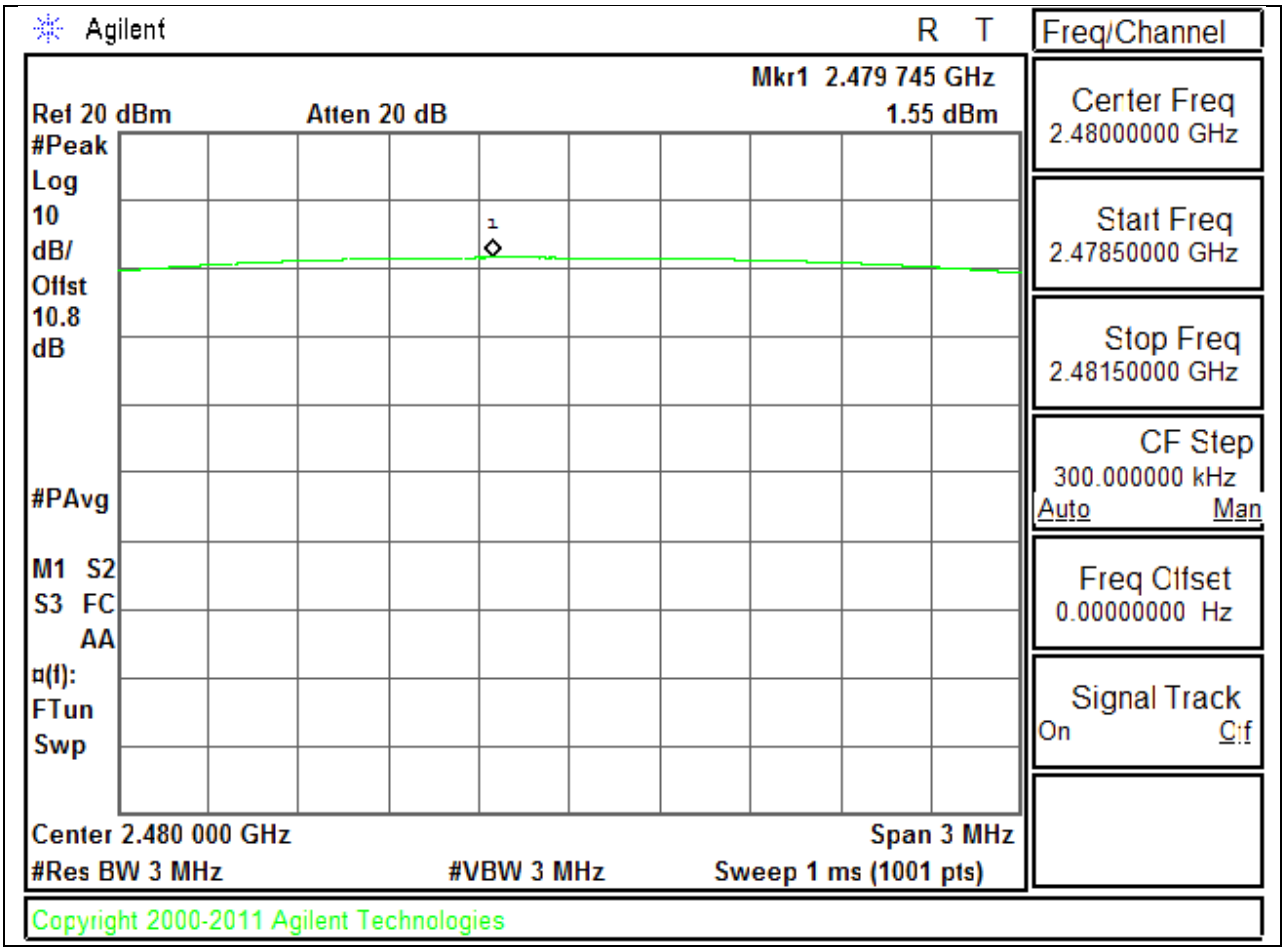
HIGH CHANNEL



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8.4. AVERAGE POWER

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 11 dB (including 10 dB pad and 1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	AV power (dBm)
Low	2402	1
Middle	2440	0.3
High	2480	0.7

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8.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

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.

TEST PROCEDURE

Power Spectral Density was performed utilizing the "Method PKPSD (Peak PSD)" under KDB558074 D01 DTS Meas Guidance v03r02.

RESULTS

Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-13.52	8	-21.52
Middle	2440	-14.13	8	-22.13
High	2480	-13.68	8	-21.68

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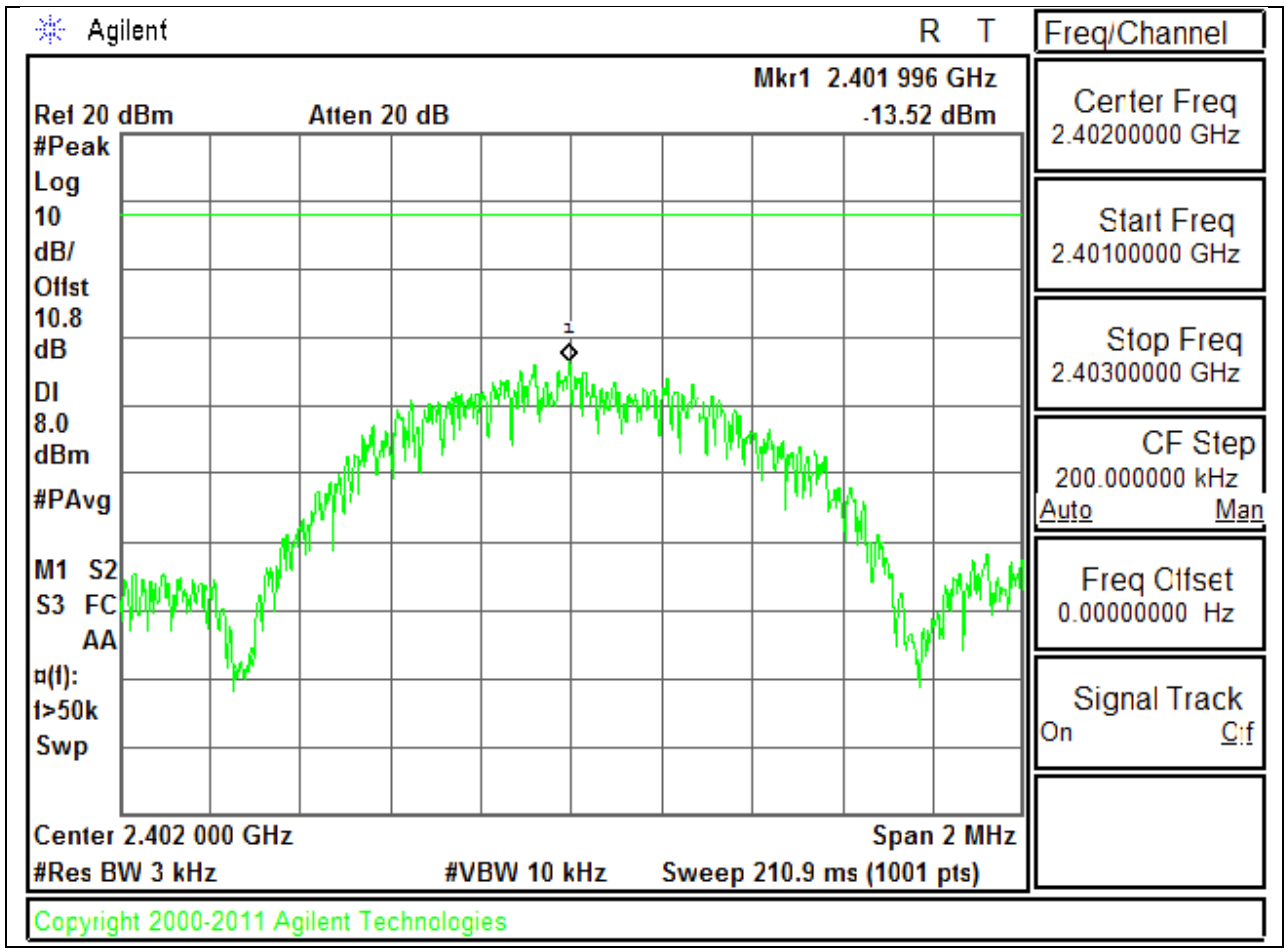
POWER SPECTRAL DENSITY PLOTS

LOW CHANNEL



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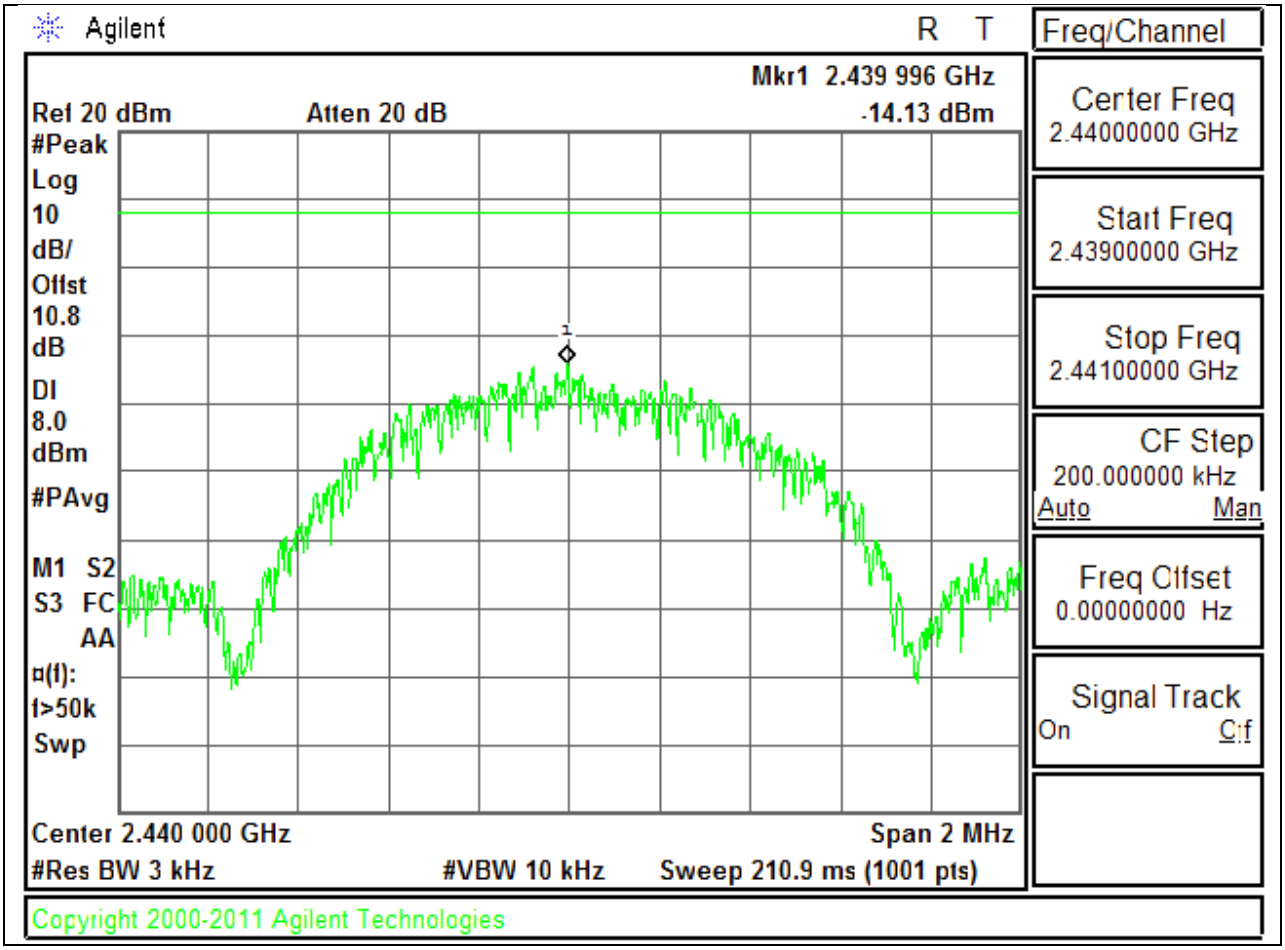
MID CHANNEL



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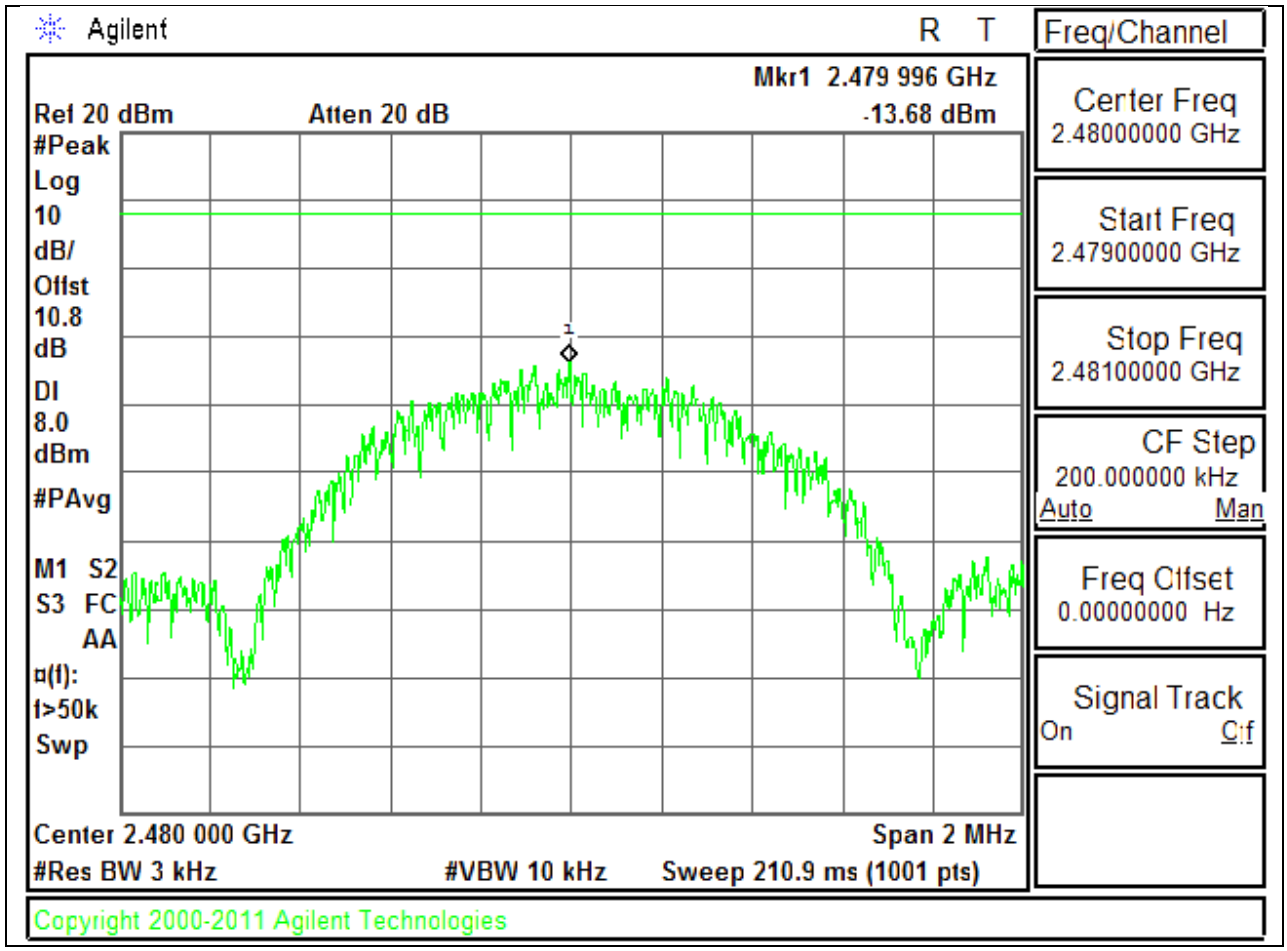
HIGH CHANNEL



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8.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

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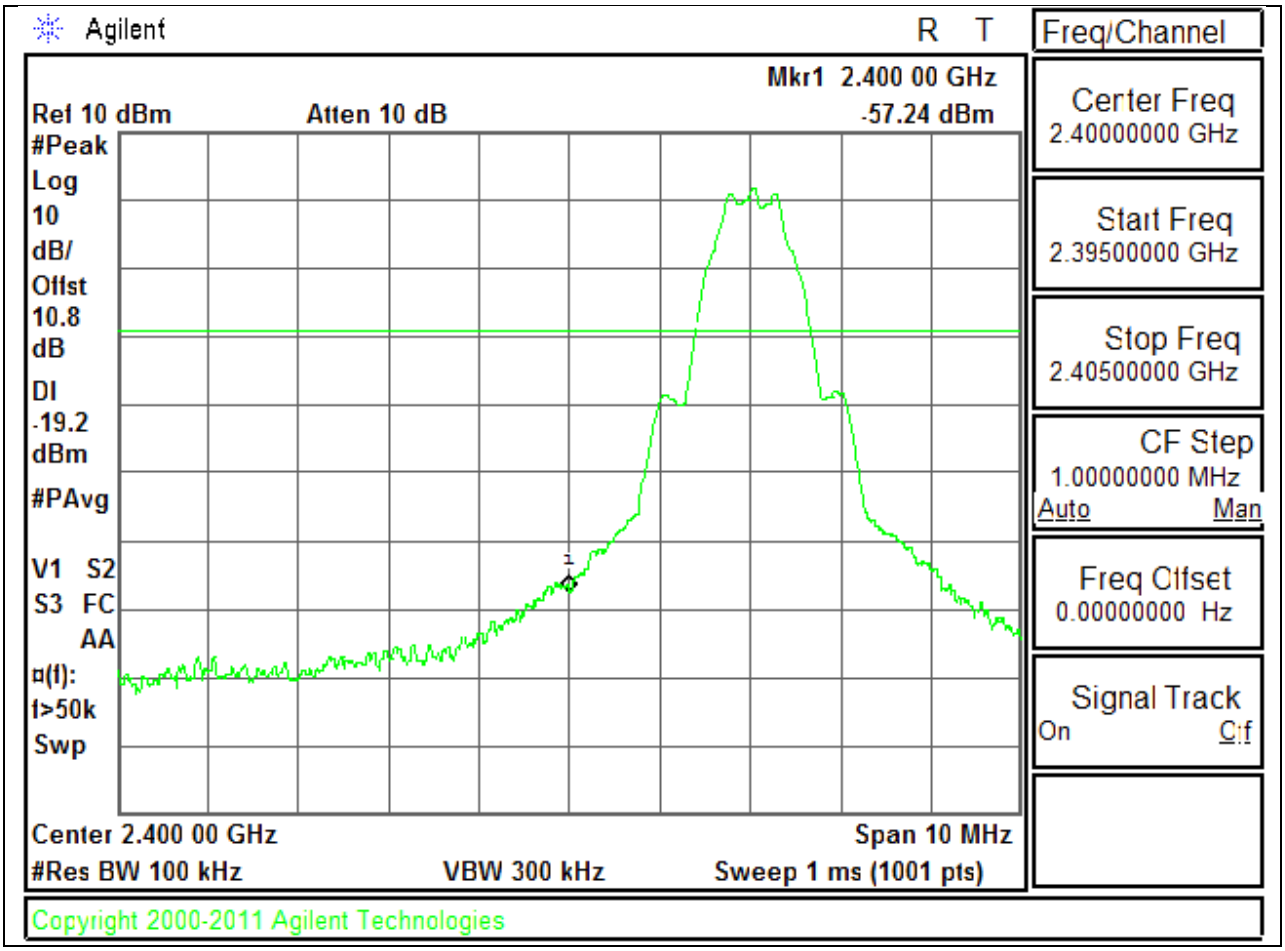
RESULTS

SPURIOUS EMISSIONS, LOW CHANNEL

LOW CHANNEL BANDEDGE



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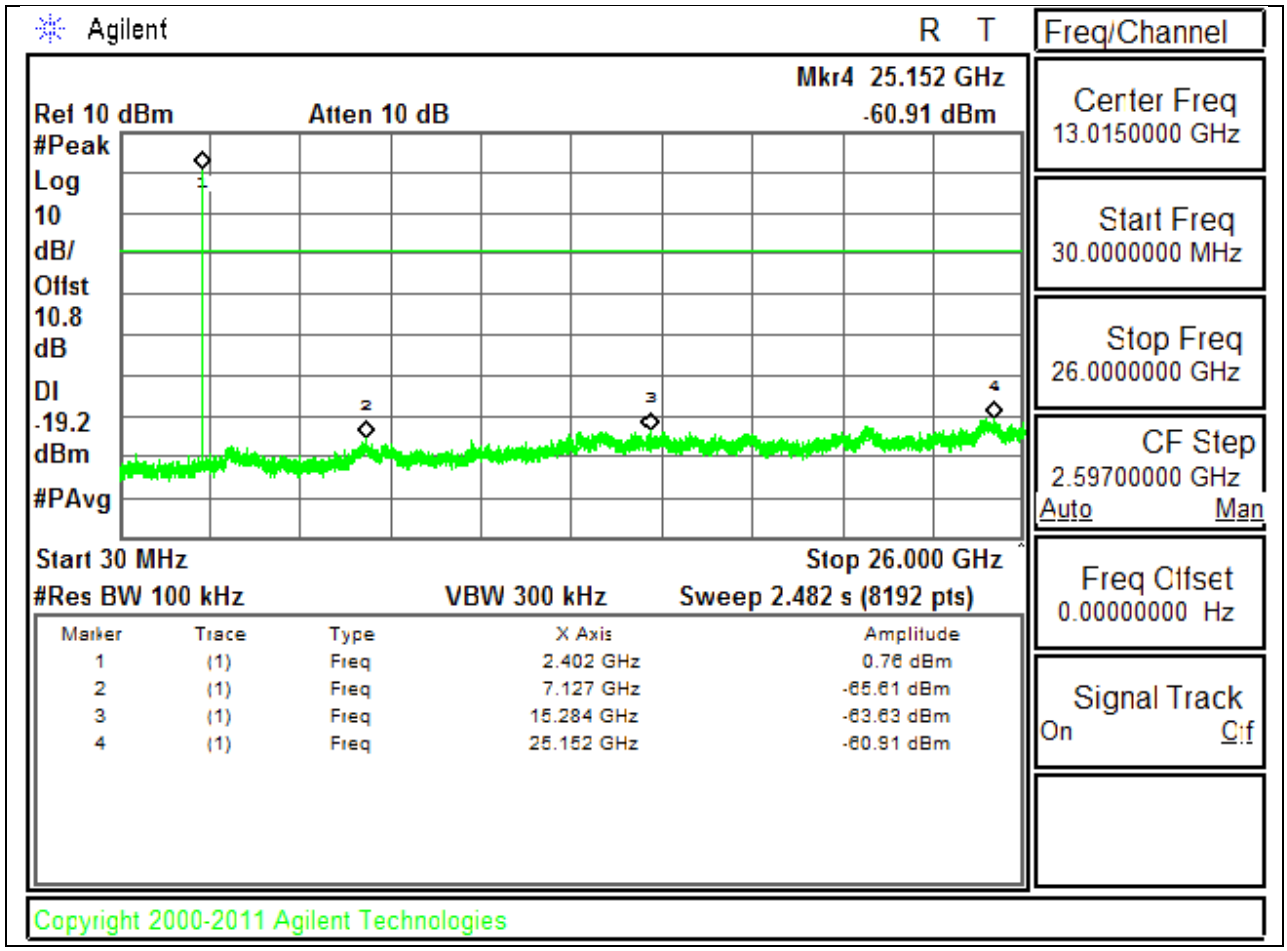
LOW CHANNEL SPURIOUS



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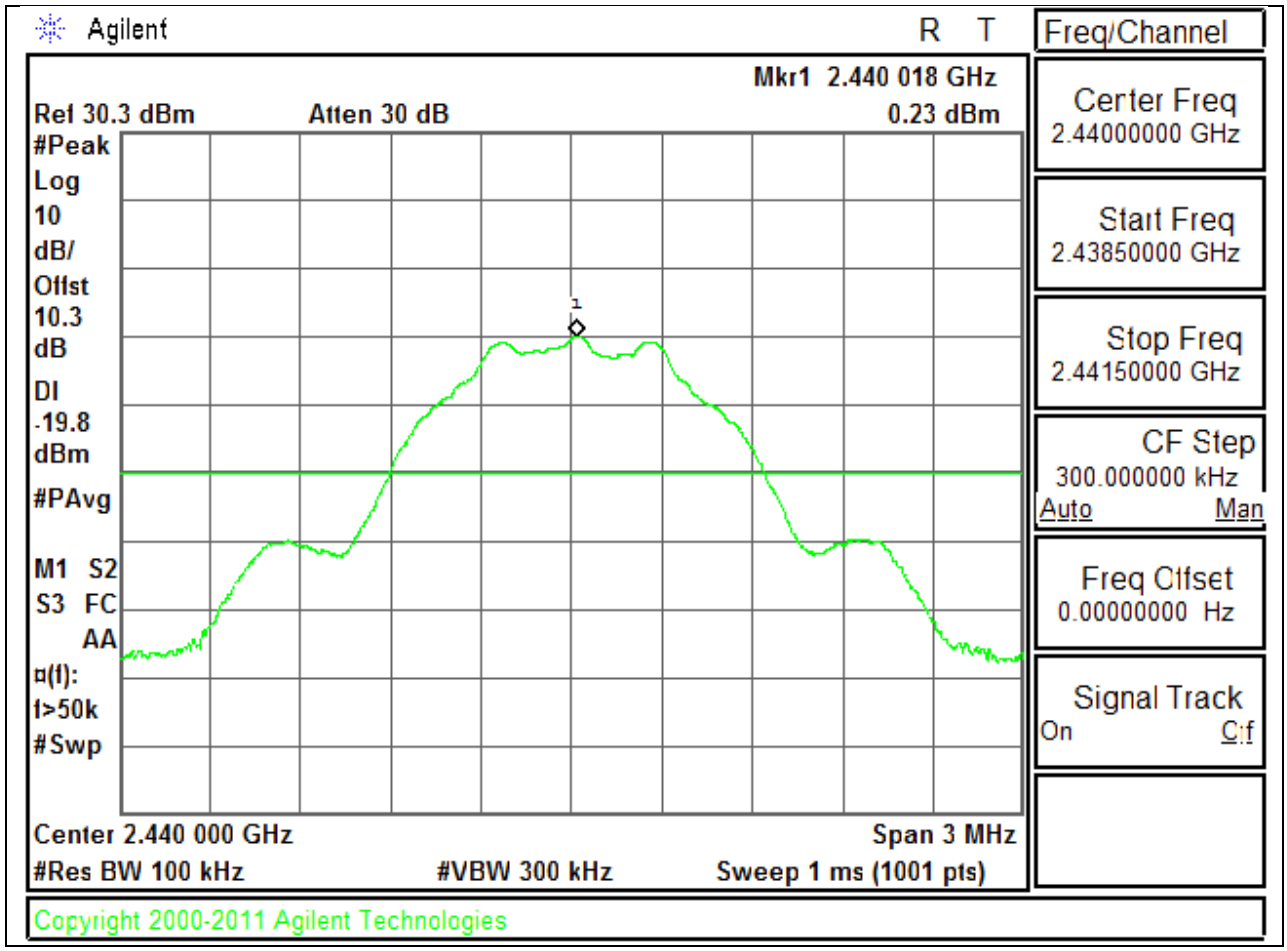
SPURIOUS EMISSIONS, MID CHANNEL

MID CHANNEL REFERENCE



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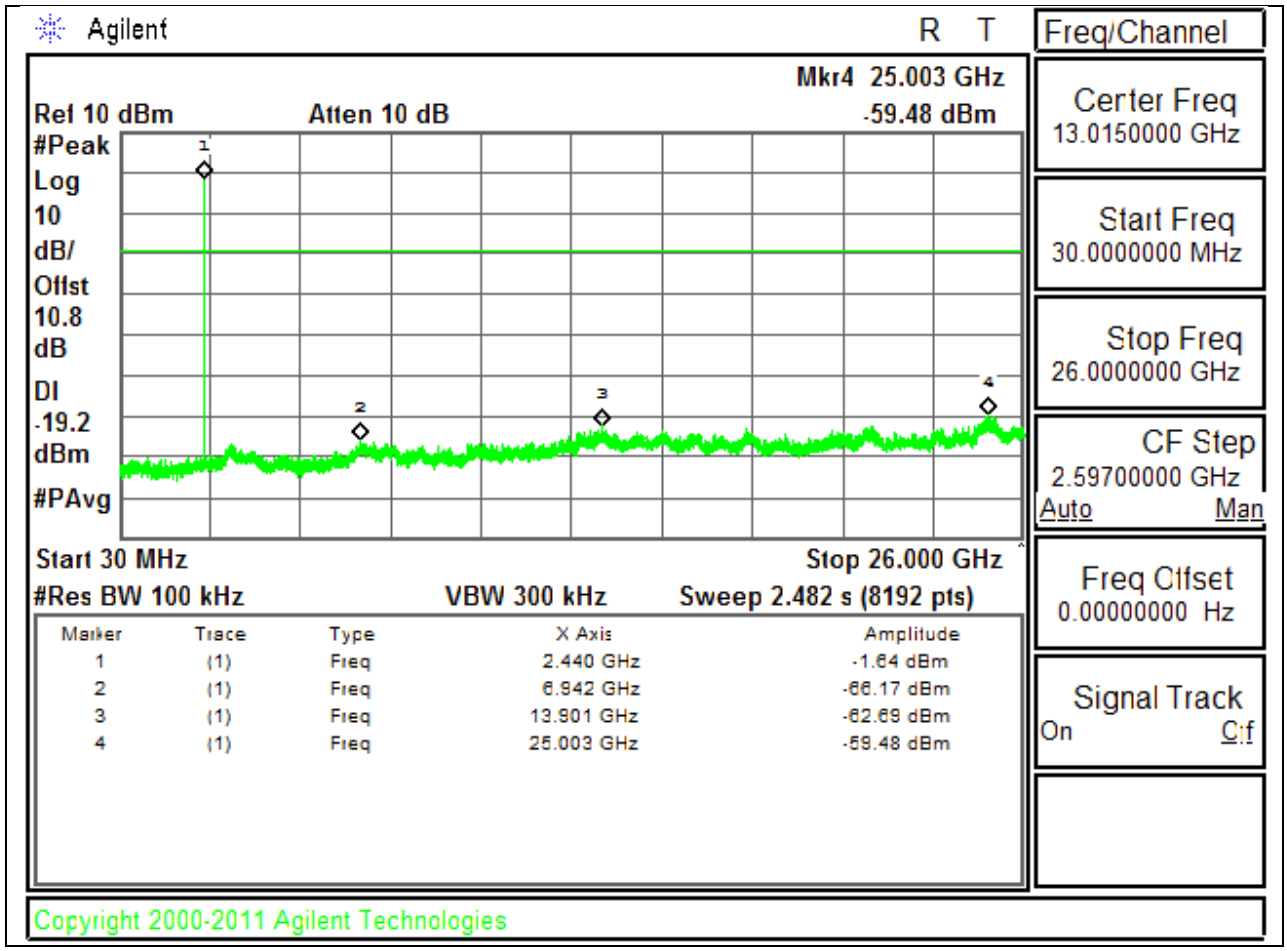
MID CHANNEL SPURIOUS



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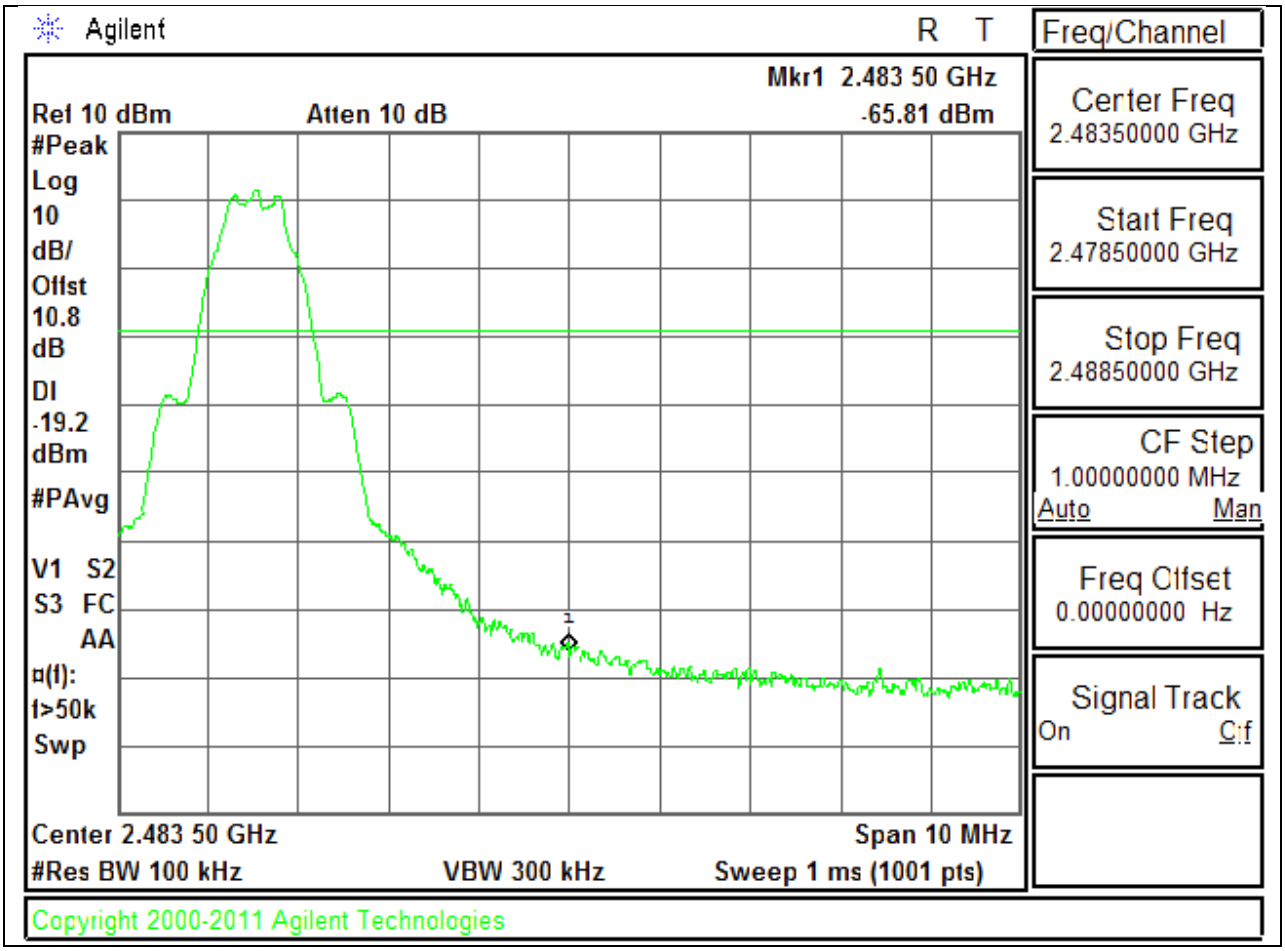
SPURIOUS EMISSIONS, HIGH CHANNEL

HIGH CHANNEL BANDEDGE



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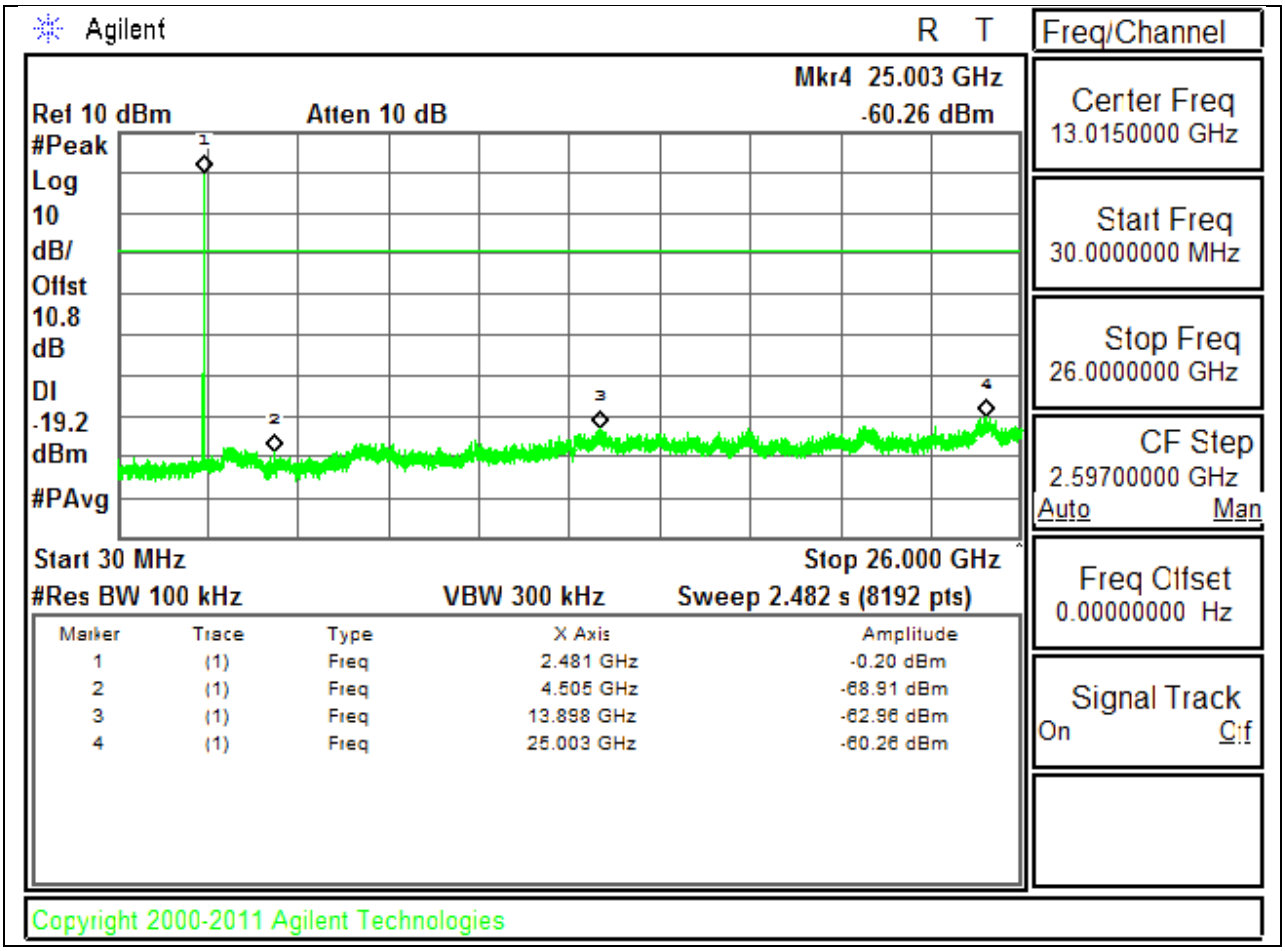
HIGH CHANNEL SPURIOUS



Marker	Trace	Type	X Axis	Amplitude
1	(1)	Freq	2.481 GHz	-0.20 dBm
2	(1)	Freq	4.505 GHz	-68.91 dBm
3	(1)	Freq	13.898 GHz	-62.96 dBm
4	(1)	Freq	25.003 GHz	-60.26 dBm

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9. RADIATED TEST RESULTS

9.1. 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. The EUT is configured in accordance with ANSI C63.4 - 2009. The EUT is set to transmit in a continuous mode.

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.

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For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and add duty cycle factor for average measurements. Duty cycle factor = 10 log (1/x). For this sample: DCF = 10log(1/0.622)= 2.062dB

(Spectrum Analyzer round it up to 2.06 dB)

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

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.

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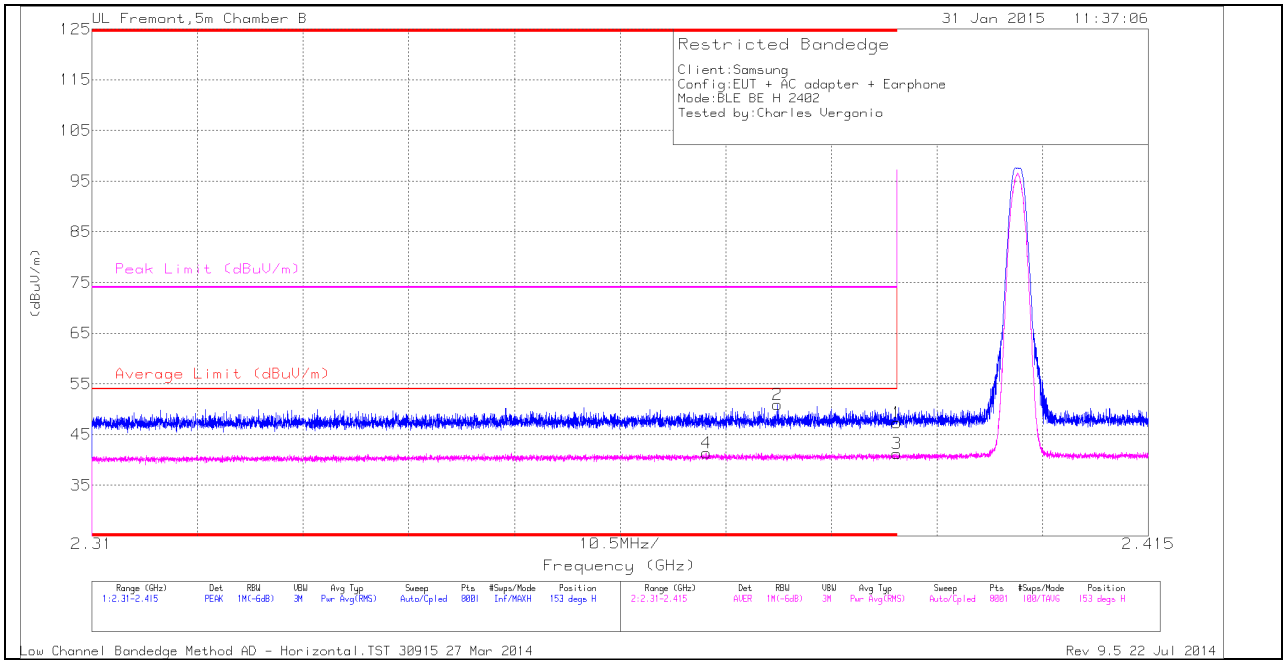
9.2. TRANSMITTER ABOVE 1 GHz

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	37.77	PK	32.1	-22.6	0	47.27	-	-	74	-26.73	153	235	H
2	* 2.378	41.54	PK	32	-22.6	0	50.94	-	-	74	-23.06	153	235	H
3	* 2.39	29.66	RMS	32.1	-22.6	2.06	41.22	54	-12.78	-	-	153	235	H
4	* 2.371	29.85	RMS	32	-22.6	2.06	41.31	54	-12.69	-	-	153	235	H

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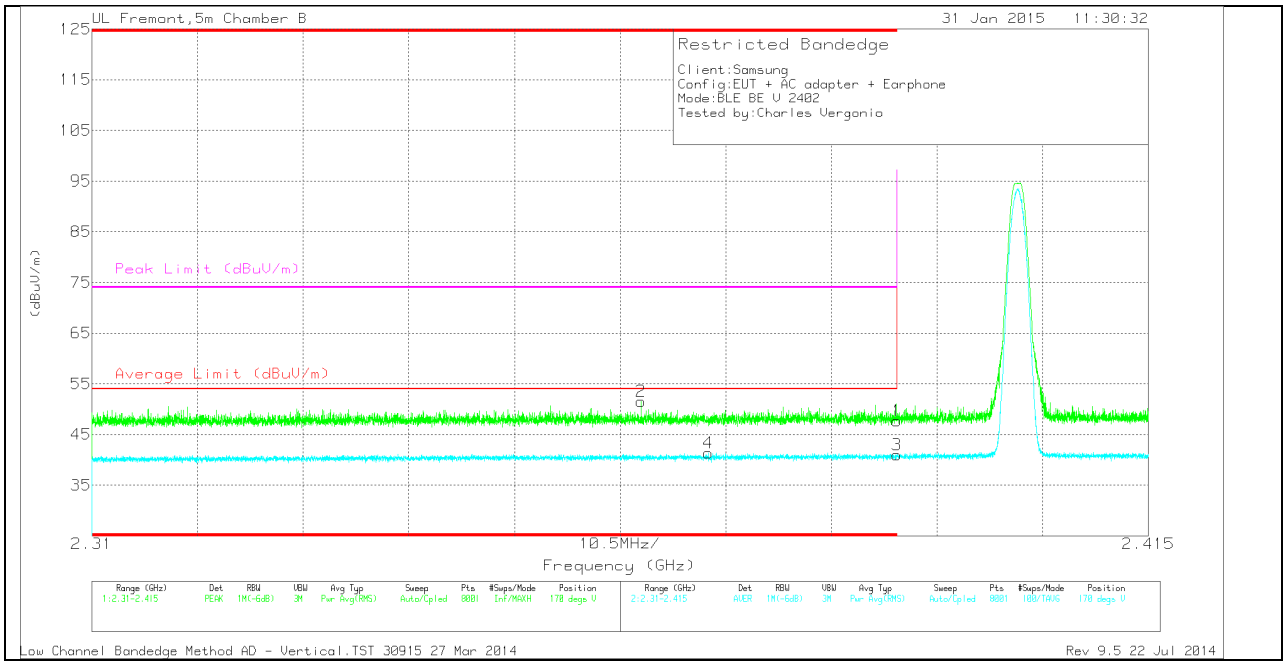
VERTICAL PEAK AND AVERAGE PLOT



VERTICAL 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	* 2.39	38.16	PK	32.1	-22.6	0	47.66	-	-	74	-26.34	170	291	V
2	* 2.365	42.14	PK	32	-22.6	0	51.54	-	-	74	-22.46	170	291	V
3	* 2.39	29.46	RMS	32.1	-22.6	2.06	41.02	54	-12.98	-	-	170	291	V
4	* 2.371	29.88	RMS	32	-22.6	2.06	41.34	54	-12.66	-	-	170	291	V

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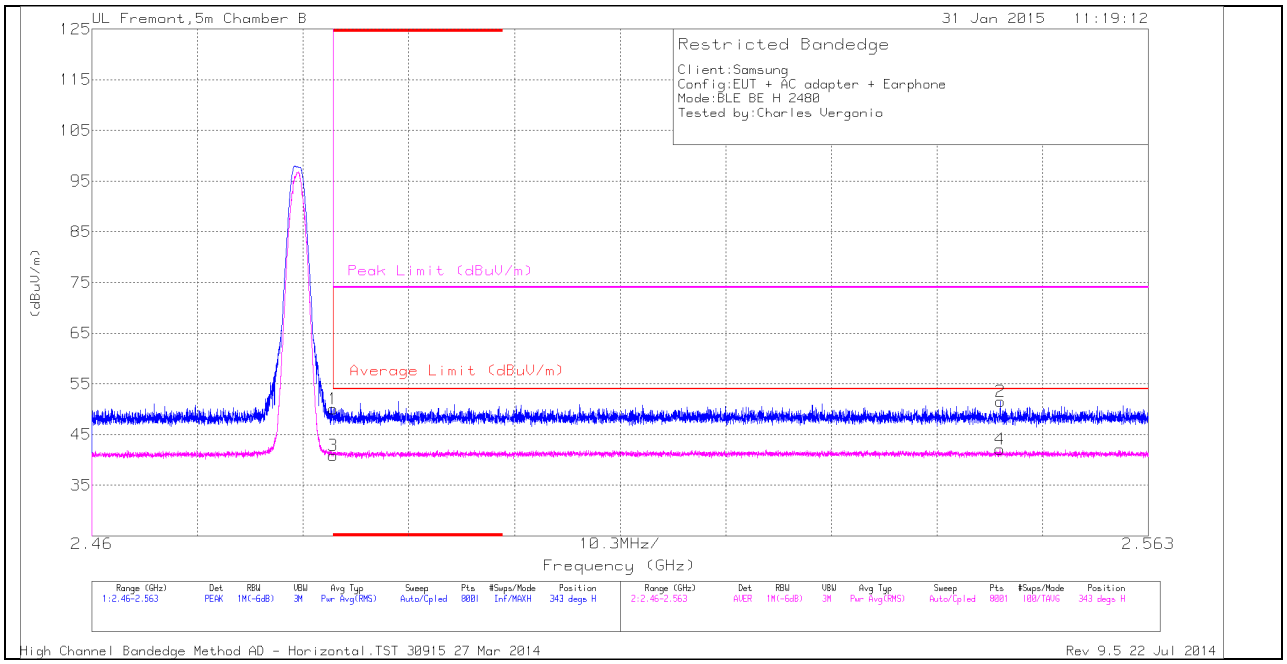
AUTHORIZED BANDEDGE (HIGH CHANNEL)

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	40.03	PK	32.4	-22.4	0	50.03	-	-	74	-23.97	343	221	H
3	* 2.484	28.79	RMS	32.4	-22.4	2.06	40.85	54	-13.15	-	-	343	221	H
2	2.549	41.34	PK	32.5	-22.3	0	51.54	-	-	74	-22.46	343	221	H
4	2.549	29.89	RMS	32.5	-22.3	2.06	42.15	54	-11.85	-	-	343	221	H

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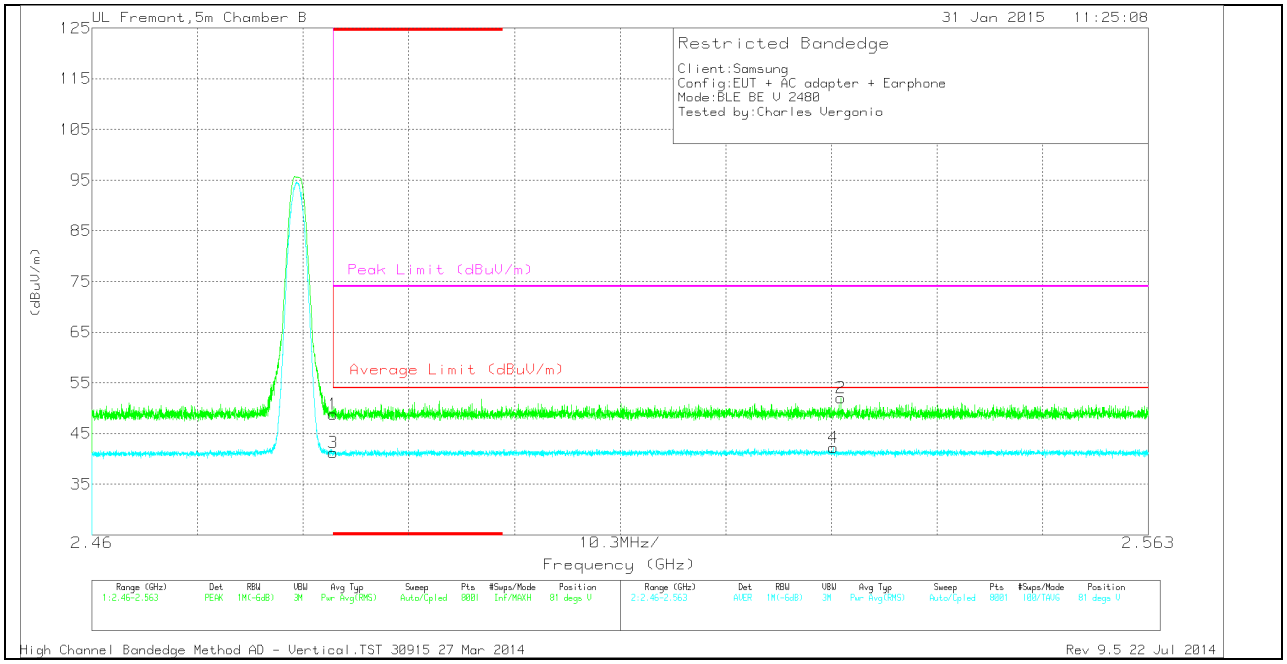
VERTICAL PEAK AND AVERAGE PLOT



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	38.77	PK	32.4	-22.4	0	48.77	-	-	74	-25.23	81	225	V
3	* 2.484	29.12	RMS	32.4	-22.4	2.06	41.18	54	-12.82	-	-	81	225	V
4	2.532	29.95	RMS	32.5	-22.3	2.06	42.21	54	-11.79	-	-	81	225	V
2	2.533	41.87	PK	32.5	-22.3	0	52.07	-	-	74	-21.93	81	225	V

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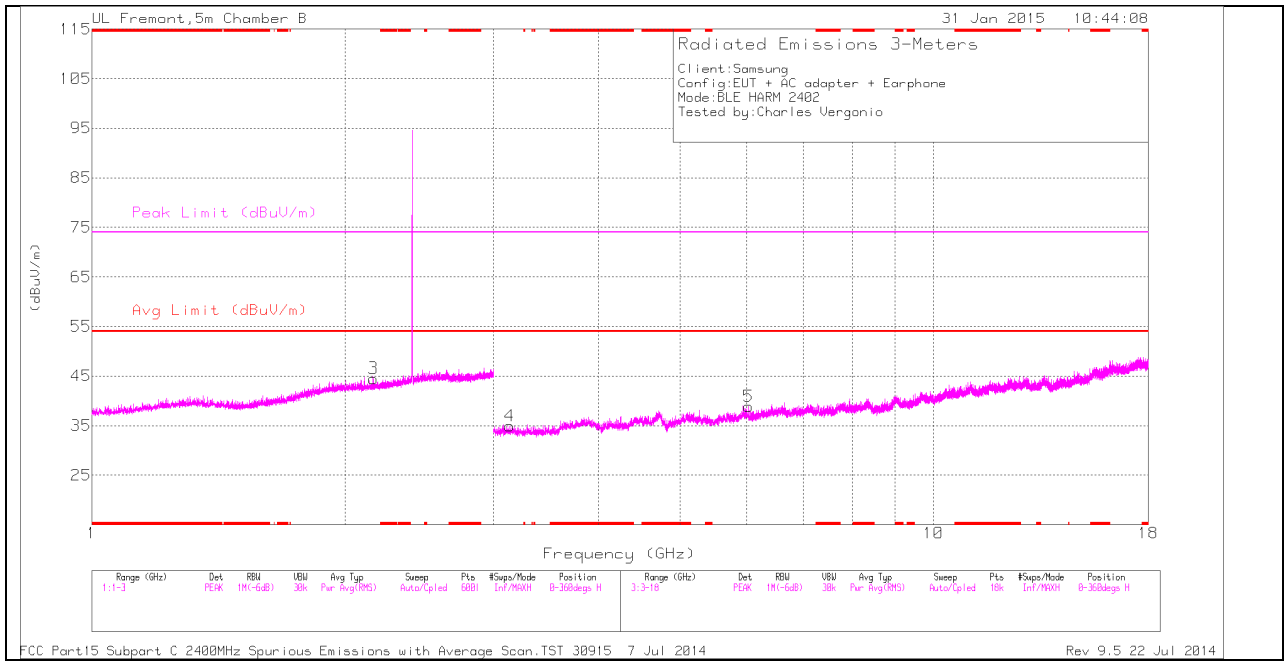
HARMONICS AND SPURIOUS EMISSIONS

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.

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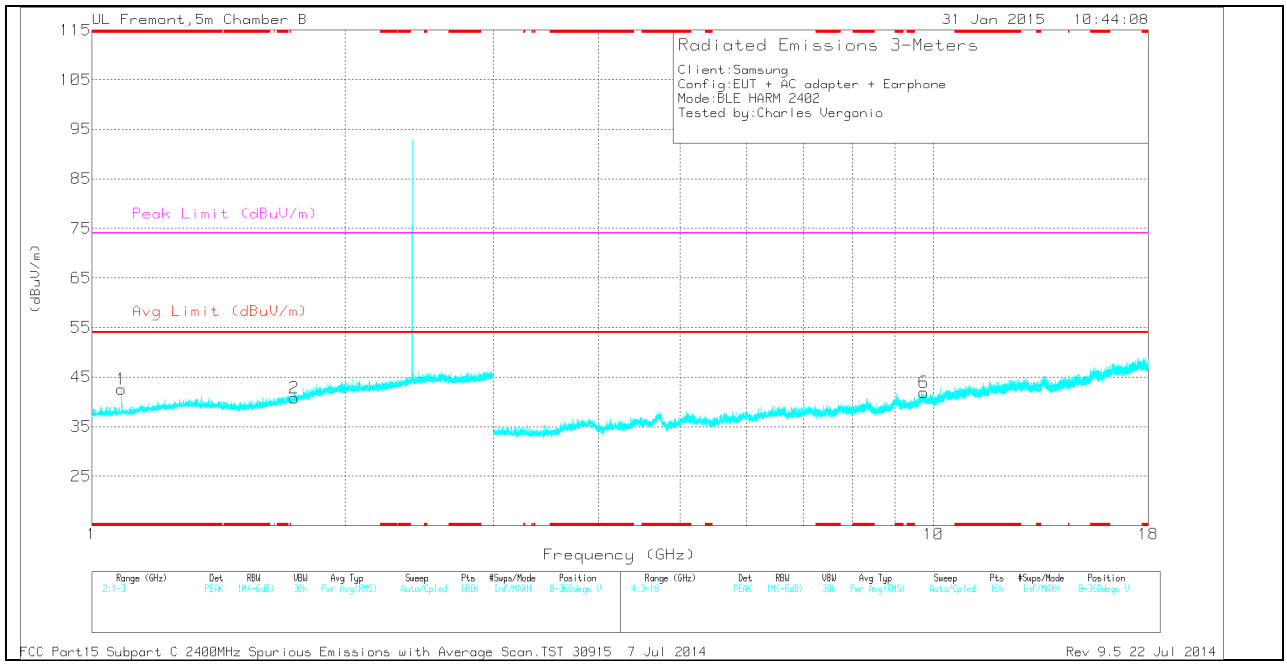
LOW CHANNEL VERTICAL



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

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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	* 1.084	39.64	PK	27.3	-24.4	0	42.54	-	-	74	-31.46	0-360	199	V
2	1.738	34.73	PK	29.5	-23.4	0	40.83	-	-	-	-	0-360	101	V
3	2.161	36.22	PK	31.3	-23	0	44.52	-	-	-	-	0-360	101	H
4	3.137	33.14	PK	32.8	-31	0	34.94	-	-	-	-	0-360	101	H
5	6.027	32.93	PK	35.3	-29.3	0	38.93	-	-	-	-	0-360	101	H
6	9.733	28.77	PK	36.9	-23.8	0	41.87	-	-	-	-	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
* 1.086	44.23	PK2	27.3	-24.4	0	47.13	-	-	74	-26.87	359	198	V
* 1.086	32.22	MAv1	27.3	-24.4	2.06	37.18	54	-16.82	-	-	359	198	V

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

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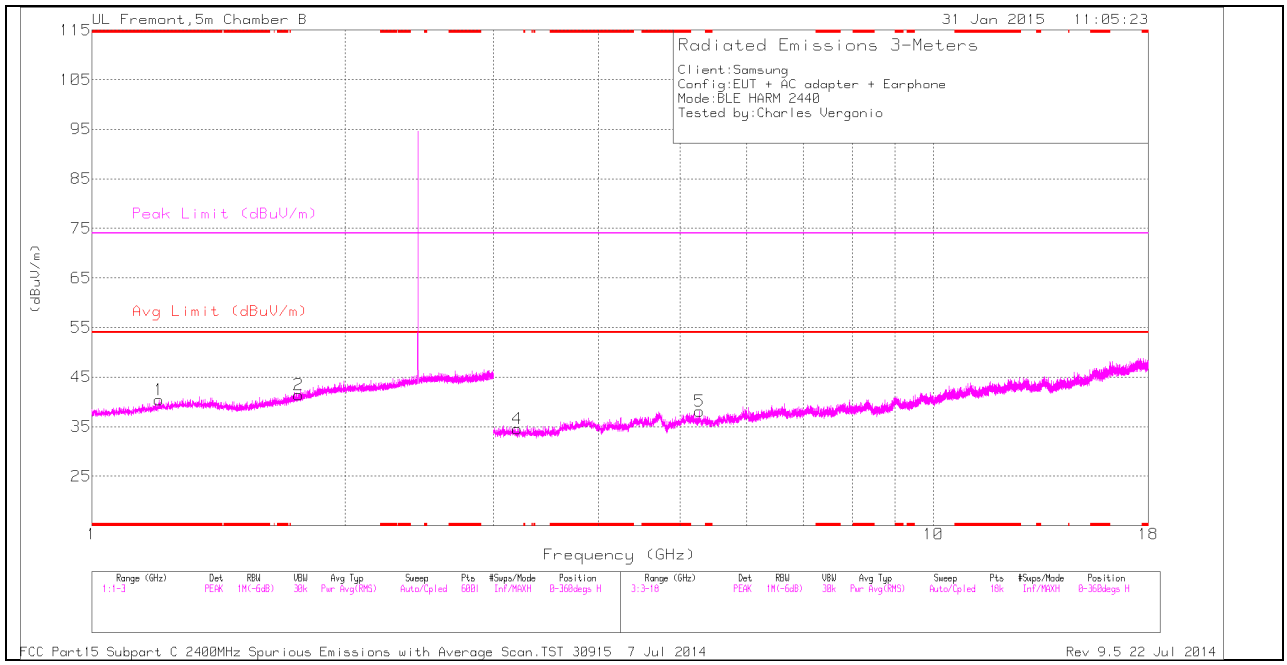
MID CHANNEL HORIZONTAL



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

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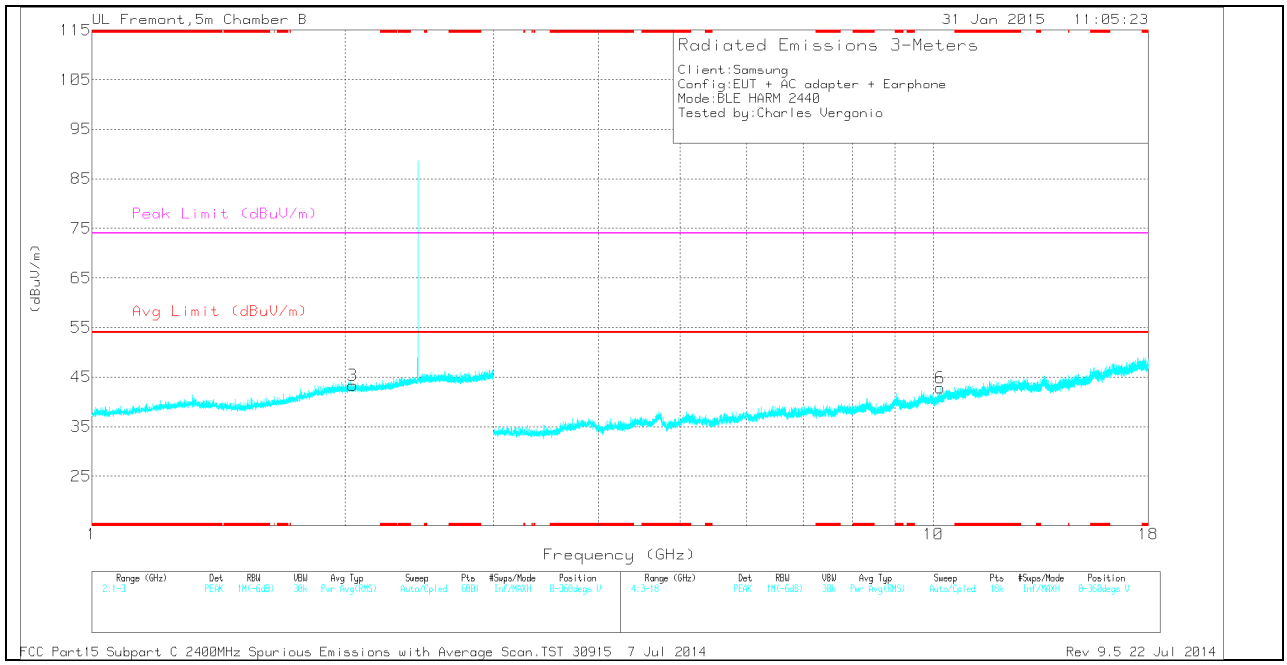
MID CHANNEL VERTICAL



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

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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	* 1.201	36.48	PK	28.2	-24.3	0	40.38	-	-	74	-33.62	0-360	199	H
2	1.759	35.04	PK	29.7	-23.3	0	41.44	-	-	-	-	0-360	199	H
3	2.04	35.21	PK	31.3	-23.2	0	43.31	-	-	-	-	0-360	101	V
4	3.203	32.65	PK	32.8	-30.9	0	34.55	-	-	-	-	0-360	200	H
5	5.272	33.34	PK	34.4	-29.6	0	38.14	-	-	-	-	0-360	101	H
6	10.192	29.18	PK	37.1	-23.5	0	42.78	-	-	-	-	0-360	101	V

PK - Peak detector

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

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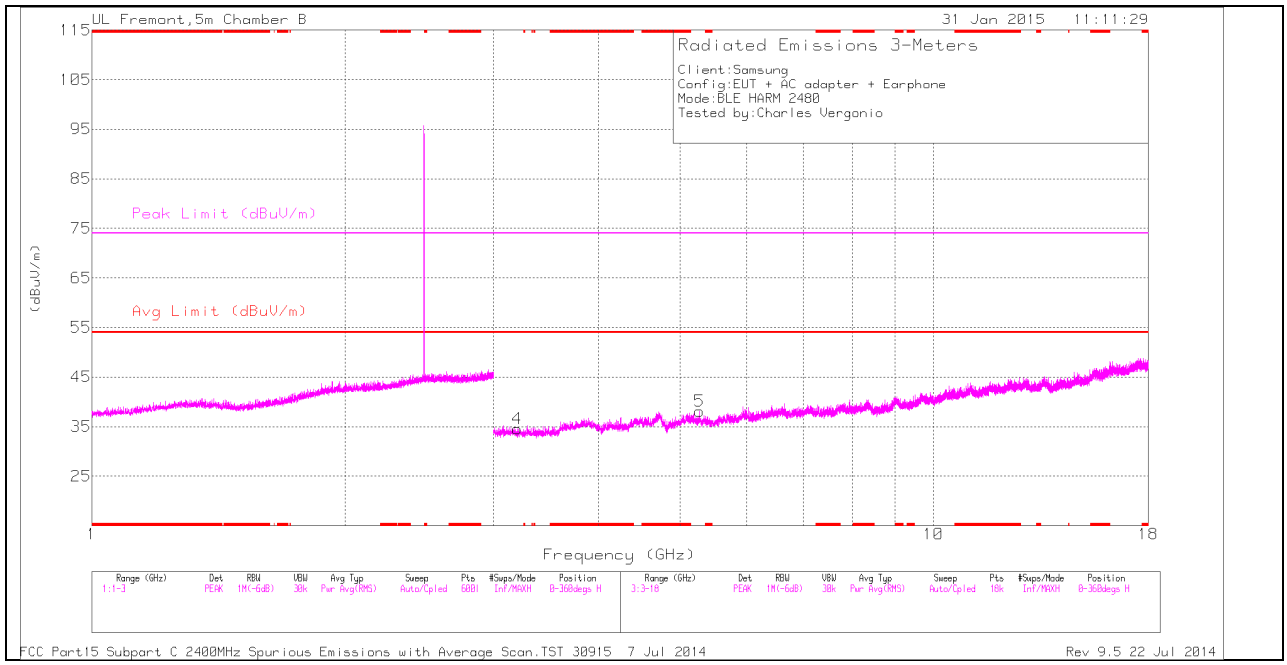
HIGH CHANNEL HORIZONTAL



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

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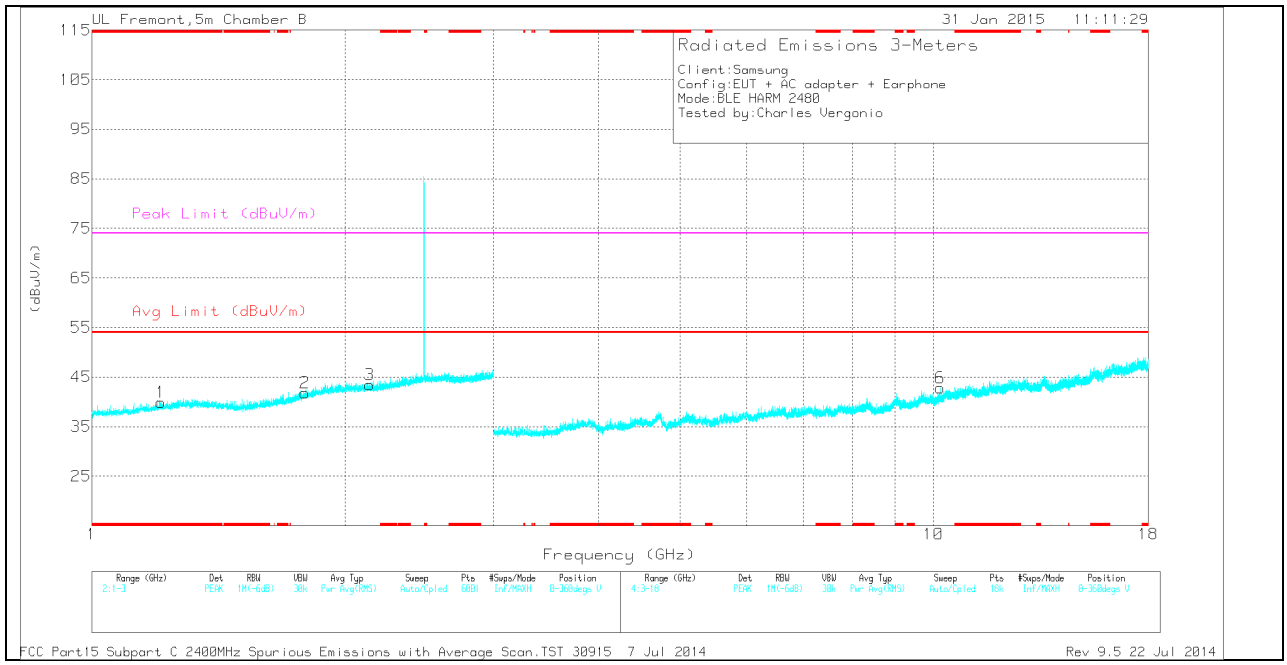
HIGH CHANNEL VERTICAL



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

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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	* 1.208	35.88	PK	28.3	-24.3	0	39.88	-	-	74	-34.12	0-360	101	V
2	1.79	35.03	PK	30.1	-23.3	0	41.83	-	-	-	-	0-360	200	V
3	2.137	35.1	PK	31.3	-23	0	43.4	-	-	-	-	0-360	200	V
4	3.203	32.65	PK	32.8	-30.9	0	34.55	-	-	-	-	0-360	200	H
5	5.272	33.34	PK	34.4	-29.6	0	38.14	-	-	-	-	0-360	101	H
6	10.192	29.18	PK	37.1	-23.5	0	42.78	-	-	-	-	0-360	101	V

PK - Peak detector

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

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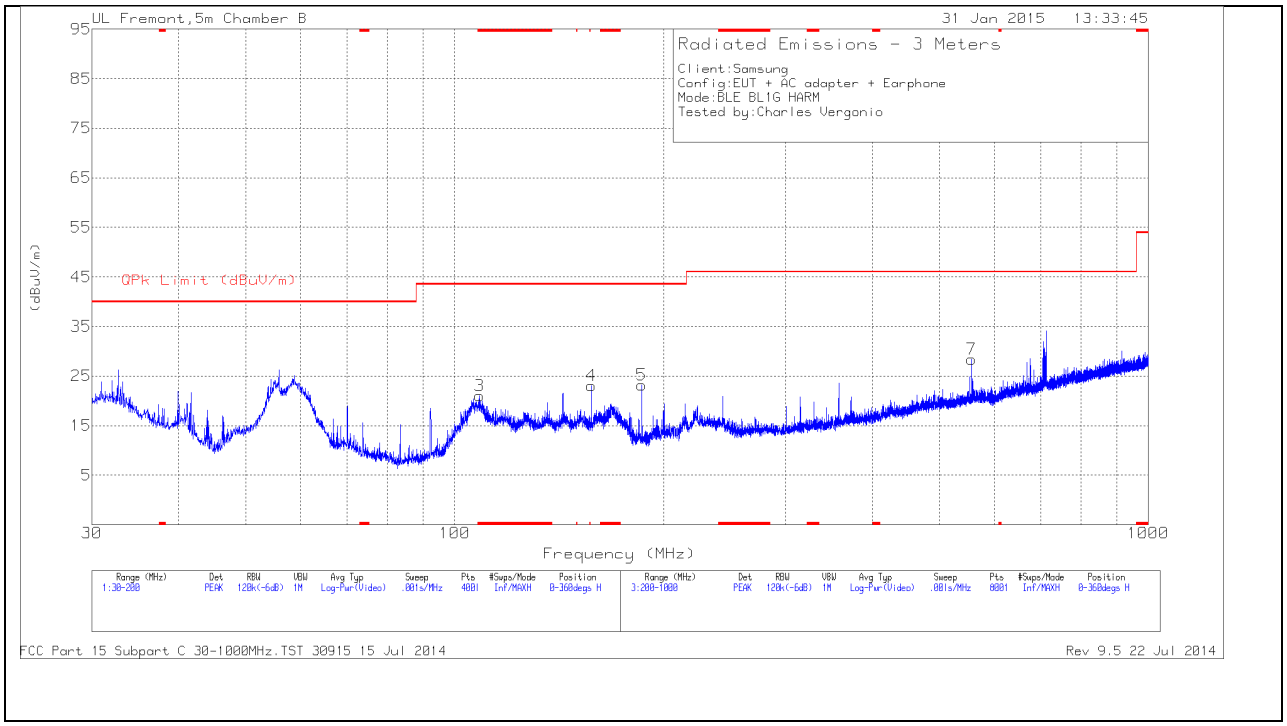
9.3. WORST-CASE BELOW 1 GHz

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

HORIZONTAL PLOT



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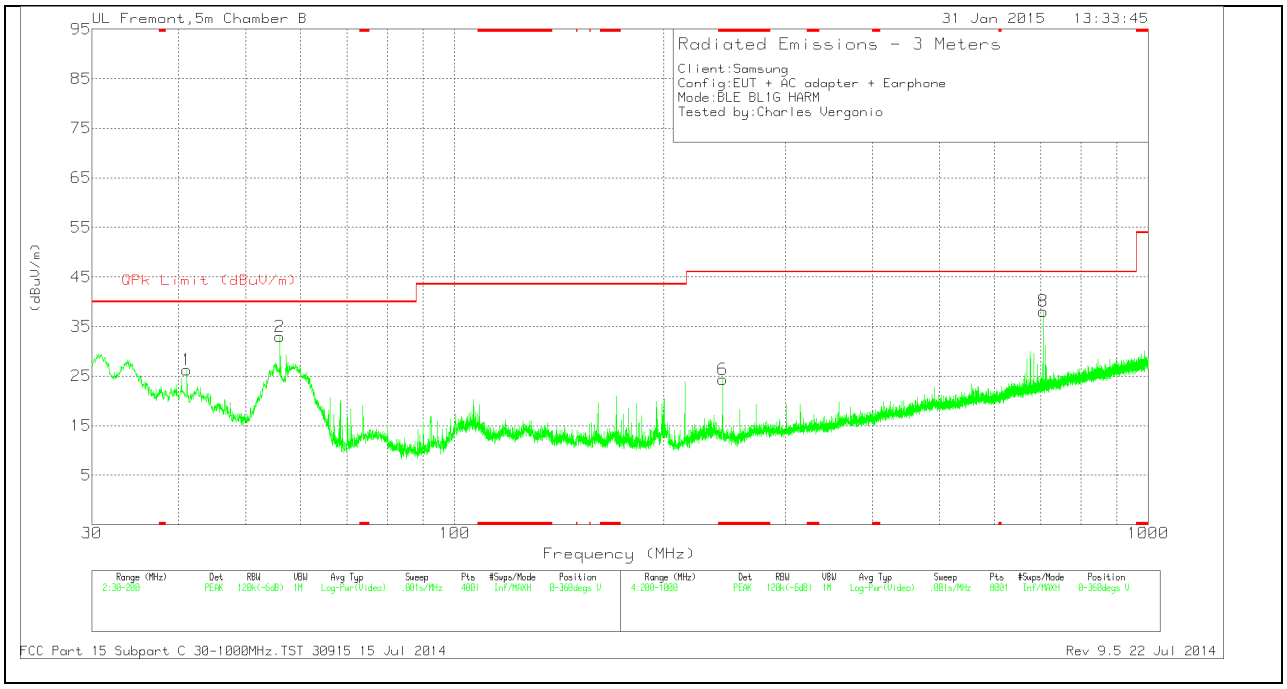
VERTICAL PLOT



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BELOW 1 GHz TABLE

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
3	* 108.54	36.71	PK	12.3	-28	21.01	43.52	-22.51	0-360	300	H
6	* 243.4	39.27	PK	11.6	-26.5	24.37	46.02	-21.65	0-360	200	V
4	157.5	38.19	PK	12.3	-27.4	23.09	43.52	-20.43	0-360	100	H
5	186.145	38.95	PK	11.3	-27.1	23.15	43.52	-20.37	0-360	400	H
1	41.135	41.81	PK	13.2	-28.8	26.21	40	-13.79	0-360	101	V
7	556	35.3	PK	18.6	-25.5	28.4	46.02	-17.62	0-360	200	H
2	56.01	54.22	PK	7.3	-28.6	32.92	40	-7.08	0-360	101	V
8	705.2	42.4	PK	20.2	-24.5	38.1	46.02	-7.92	0-360	101	V

PK - Peak detector

FCC Part 15 Subpart C 30-1000MHz.TST 30915 9 Jul 2013 Rev 9.5 12 Jun 2013

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10. 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

ANSI C63.4 - 2009

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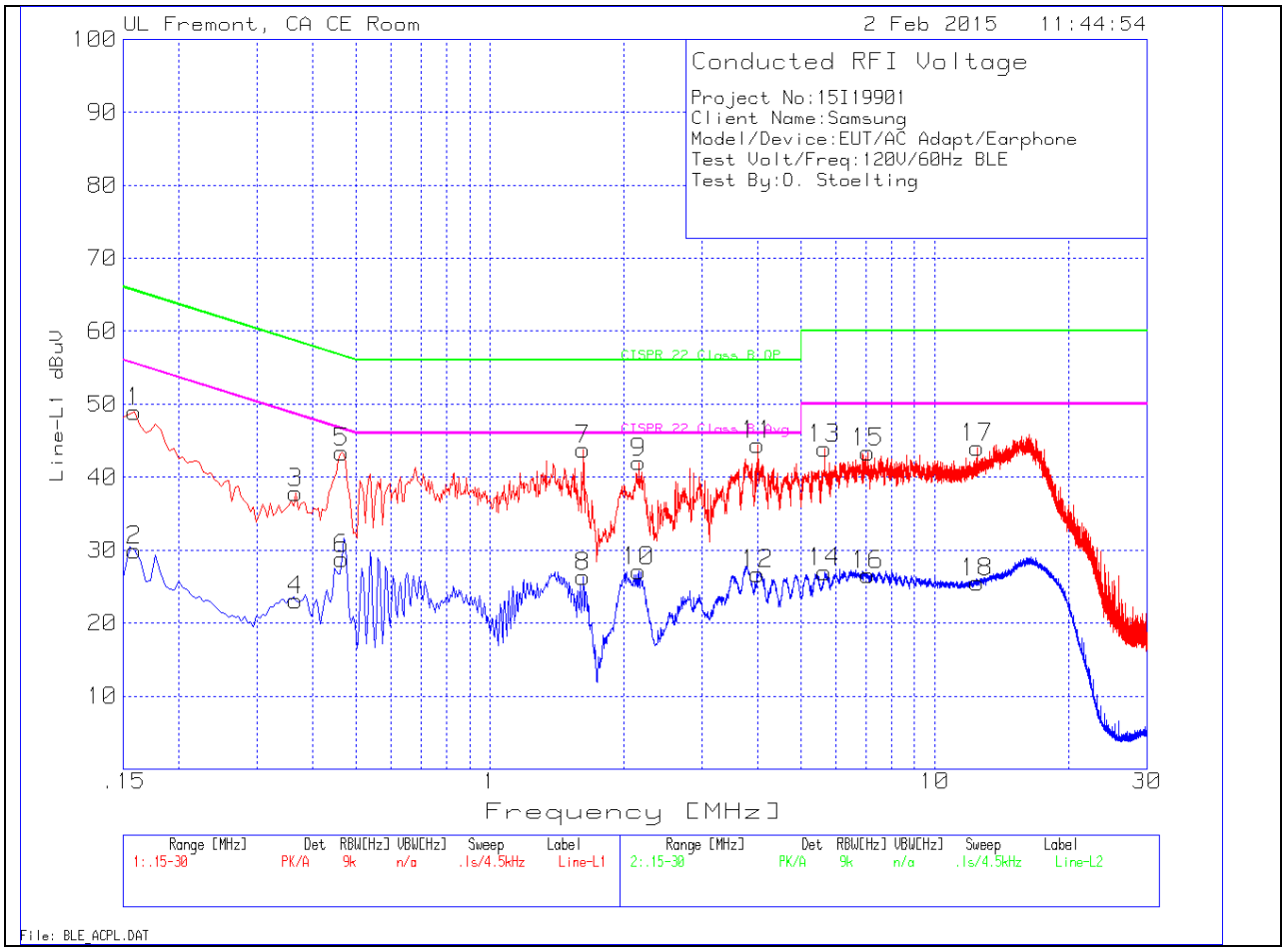
RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



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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	.159	47.69	PK	1.3	0	48.99	65.5	-16.51	-	-
2	.159	28.63	Av	1.3	0	29.93	-	-	55.5	-25.57
3	.366	37.39	PK	.5	0	37.89	58.6	-20.71	-	-
4	.366	22.59	Av	.5	0	23.09	-	-	48.6	-25.51
5	.465	42.97	PK	.4	0	43.37	56.6	-13.23	-	-
6	.465	28.4	Av	.4	0	28.8	-	-	46.6	-17.8
7	1.6215	43.5	PK	.2	.1	43.8	56	-12.2	-	-
8	1.6215	26.06	Av	.2	.1	26.36	-	-	46	-19.64
9	2.1615	41.74	PK	.2	.1	42.04	56	-13.96	-	-
10	2.1615	26.84	Av	.2	.1	27.14	-	-	46	-18.86
11	3.993	44.09	PK	.2	.1	44.39	56	-11.61	-	-
12	3.993	26.48	Av	.2	.1	26.78	-	-	46	-19.22
13	5.6535	43.6	PK	.2	.1	43.9	60	-16.1	-	-
14	5.6535	26.68	Av	.2	.1	26.98	-	-	50	-23.02
15	7.0755	43.09	PK	.2	.1	43.39	60	-16.61	-	-
16	7.0755	26.33	Av	.2	.1	26.63	-	-	50	-23.37
17	12.4485	43.66	PK	.2	.2	44.06	60	-15.94	-	-
18	12.4485	25.18	Av	.2	.2	25.58	-	-	50	-24.42

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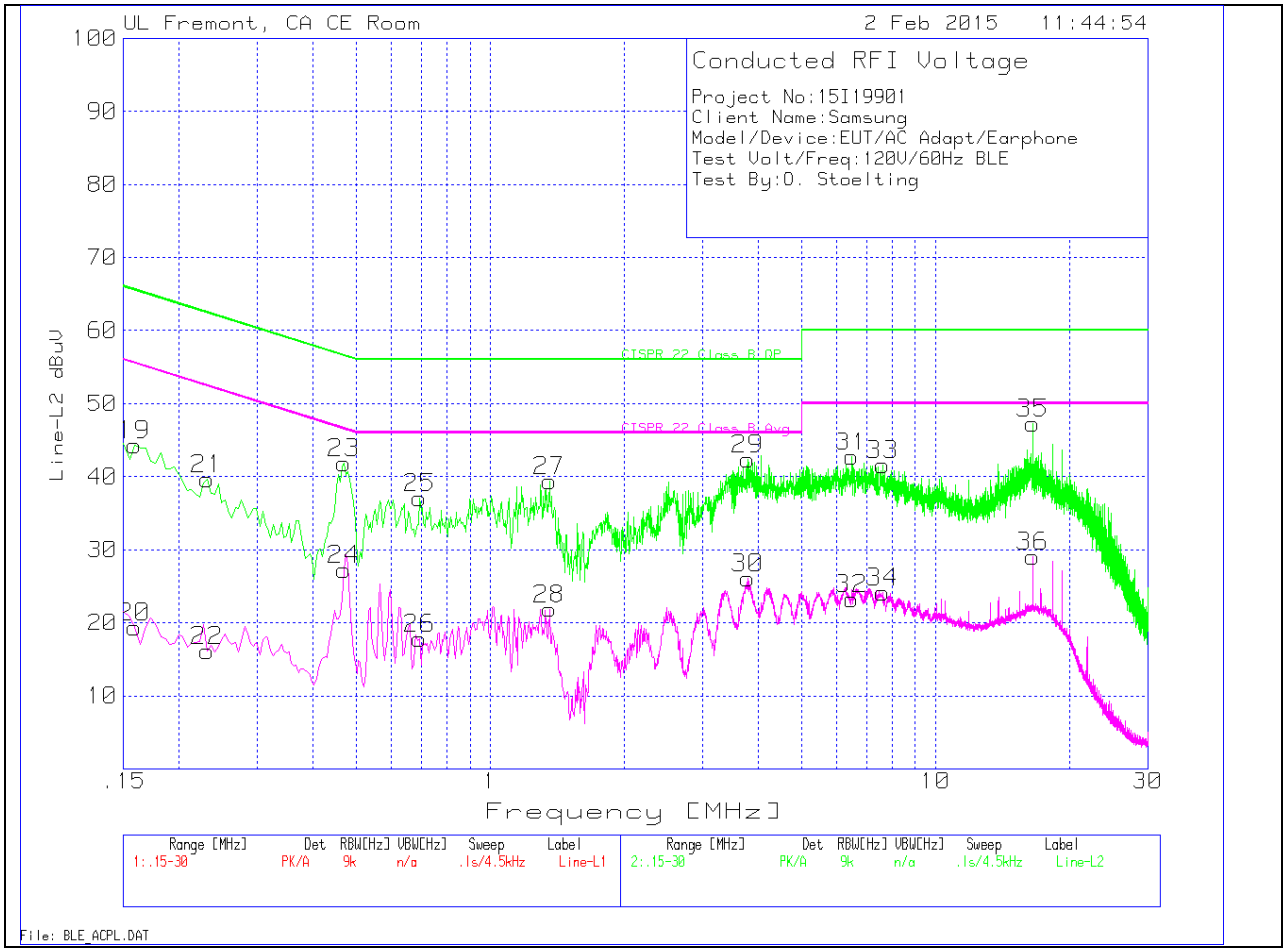
LINE 2 PLOT



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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)
19	.159	42.9	PK	1.4	0	44.3	65.5	-21.2	-	-
20	.159	18	Av	1.4	0	19.4	-	-	55.5	-36.1
21	.231	38.86	PK	.8	0	39.66	62.4	-22.74	-	-
22	.231	15.36	Av	.8	0	16.16	-	-	52.4	-36.24
23	.4695	41.41	PK	.4	0	41.81	56.5	-14.69	-	-
24	.4695	26.81	Av	.4	0	27.21	-	-	46.5	-19.29
25	.6945	36.75	PK	.3	0	37.05	56	-18.95	-	-
26	.6945	17.5	Av	.3	0	17.8	-	-	46	-28.2
27	1.356	39.1	PK	.2	.1	39.4	56	-16.6	-	-
28	1.356	21.59	Av	.2	.1	21.89	-	-	46	-24.11
29	3.795	42.02	PK	.2	.1	42.32	56	-13.68	-	-
30	3.795	25.8	Av	.2	.1	26.1	-	-	46	-19.9
31	6.495	42.4	PK	.2	.1	42.7	60	-17.3	-	-
32	6.495	23	Av	.2	.1	23.3	-	-	50	-26.7
33	7.602	41.3	PK	.2	.1	41.6	60	-18.4	-	-
34	7.602	23.9	Av	.2	.1	24.2	-	-	50	-25.8
35	16.5345	46.82	PK	.3	.2	47.32	60	-12.68	-	-
36	16.5345	28.54	Av	.3	.2	29.04	-	-	50	-20.96

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