



FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

BAR PHONE WITH 802.11b/g/n WLAN AND BLUETOOTH

MODEL NUMBER: GT-I8262

FCC ID: A3LGTI8262

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**Prepared for
SAMSUNG ELECTRONICS CO., LTD.
416, MAETAN 3-DONG, YEONGTONG-GU
SUWON-CITY, GYEONGGI-DO 443-742, SOUTH KOREA**

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--		Initial Issue	P. Kim
A	5/1/13	Update antenna gain with correct information	P. Kim
B	5/1/13	Update antenna gain information again.	P. Kim

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.
416, MAETAN 3-DONG, YEONGTONG-GU
SUWON-CITY, GYEONGGI-DO, 443-742, SOUTH KOREA

EUT DESCRIPTION: BAR PHONE WITH 802.11b/g/n WLAN AND BLUETOOTH

MODEL: GT-I8262

SERIAL NUMBER: FK-087-D (CONDUCTED) AND FK-087-A (RADIATED)

DATE TESTED: APRIL 10 TO APRIL 22, 2013

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

UL CCS 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 CCS 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 CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS 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.

Approved & Released For UL CCS By:

Tested By:



PHILIP KIM
WISE PROGRAM MANAGER
UL CCS



CHIN PANG
WISE ENGINEER
UL CCS

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2009, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 3, and RSS-210 Issue 8.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

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 1000 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 bar-style cell phone featuring 802.11b/g/n WLAN, Bluetooth, GPS and 2.4 GHz mobile hotspot capability.

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	Basic GFSK	6.91	4.91
2402 - 2480	Enhanced 8PSK	6.14	4.11

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna with a maximum gain of -2.4 dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was Android version 4.1.2. build number JZO54K I8262XXAMC3 with baseband I862XXAM3.

5.5. 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.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	Samsung	ETA0U10EBE	RT1CB11CS/A-E	N/A
Headset	Samsung	GH59-11129H	EHS64AVFWE	N/A

I/O CABLES (CONDUCTED SETUP)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	USB	Shielded	1.0	N/A

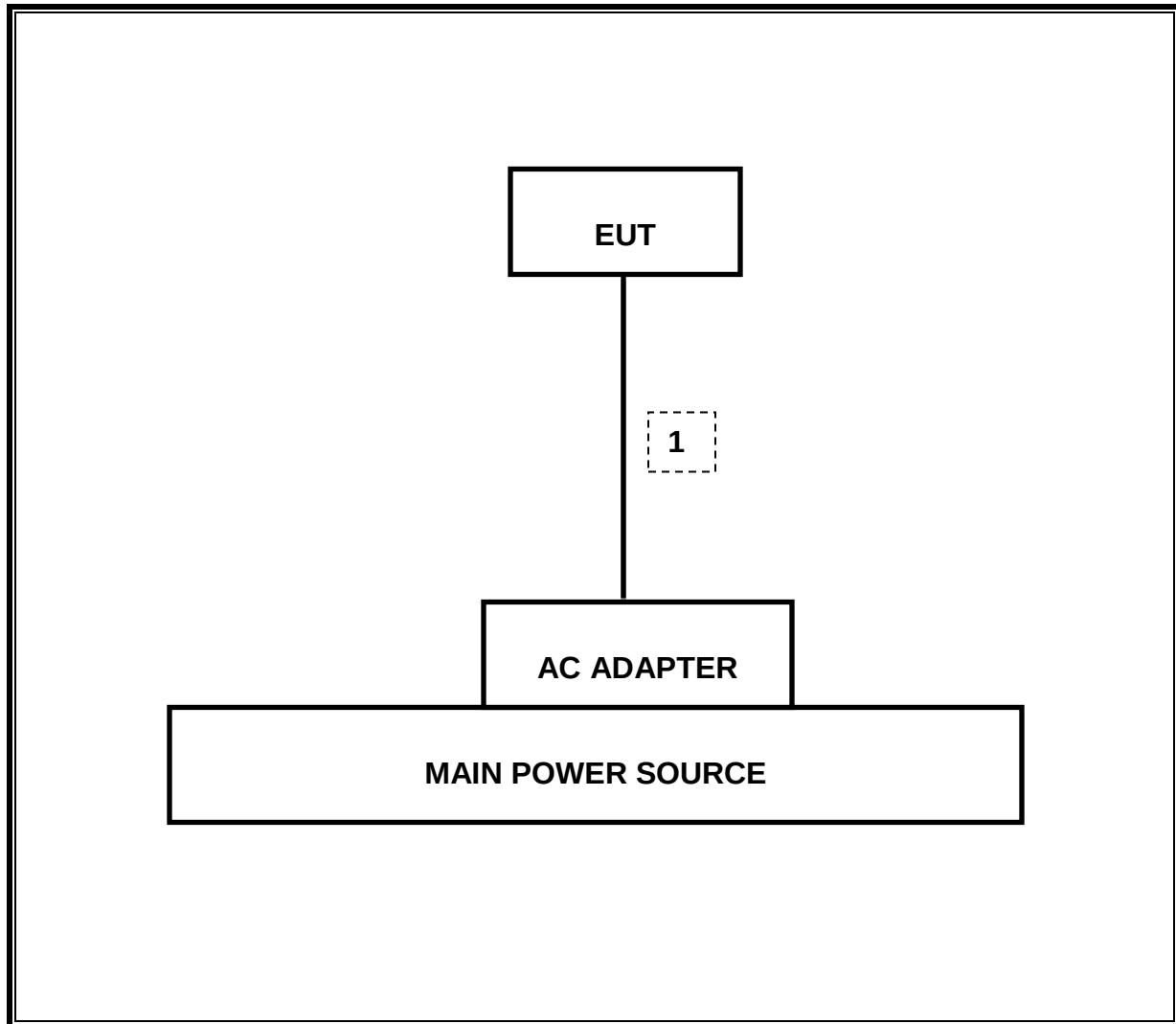
I/O CABLES (RADIATED SETUP)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC	1	USB	Shielded	1.0	N/A
2	Audio	1	Headset	Un-Shielded	1.5	N/A

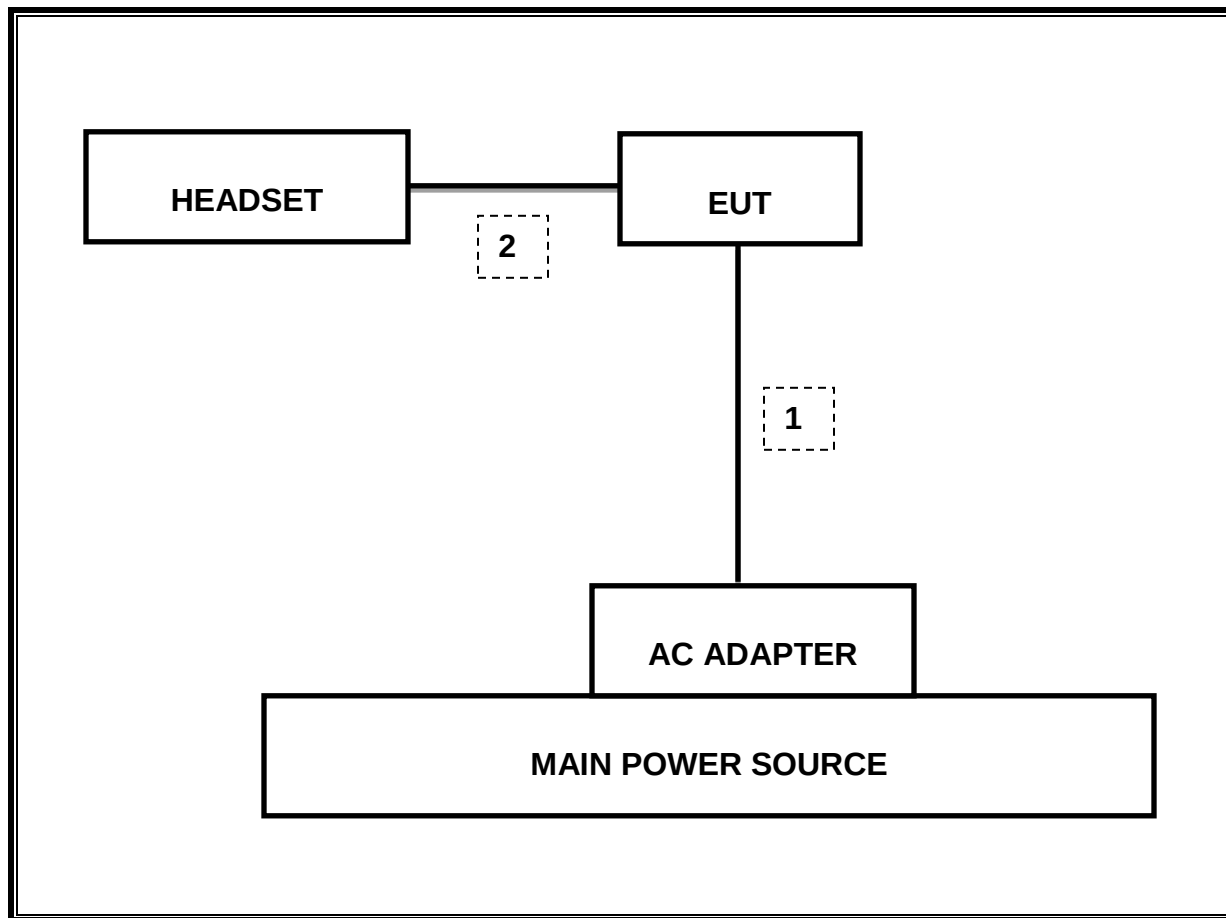
TEST SETUP

The EUT is with an AC adapter that was tested in the worst case orientation and configuration, where applicable, during the tests. Test software exercised the radio.

SETUP DIAGRAM FOR TESTS (CONDUCTED SETUP)



SETUP DIAGRAM FOR TESTS (RADIATED SETUP)



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	C01011	03/28/14
Antenna, Horn, 18 GHz	ETS	3117	C01006	12/11/13
Antenna, Horn, 25.5 GHz	ARA	MWH-1826/B	C00980	11/14/13
Preamplifier, 1300 MHz	Agilent / HP	8447D	C00580	01/28/14
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01052	10/22/13
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01012	10/21/13
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/08/13
CBT Bluetooth Tester	R & S	CBT	None	05/15/13
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/13
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/13
LISN, 30 MHz	FCC	50/250-25-2	C00626	01/14/14
Reject Filter, 2.4GHz	Micro-Tronics	BRM50702	N02684	CNR

7. ANTENNA PORT TEST RESULTS

7.1. BASIC DATA RATE GFSK MODULATION

7.1.1. 20 dB BANDWIDTH

LIMIT

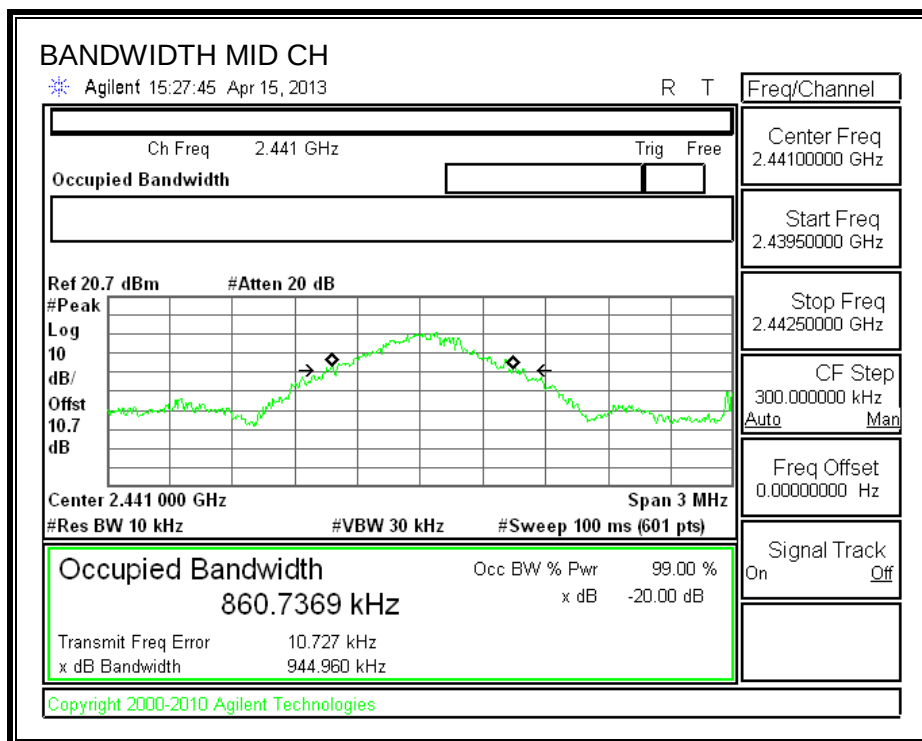
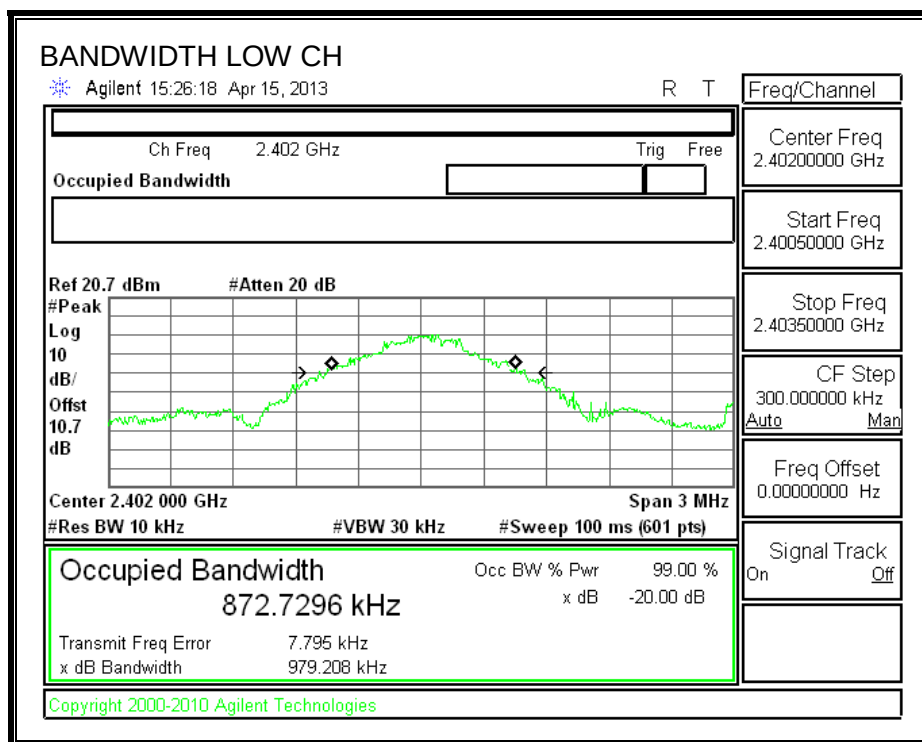
None; for reporting purposes only.

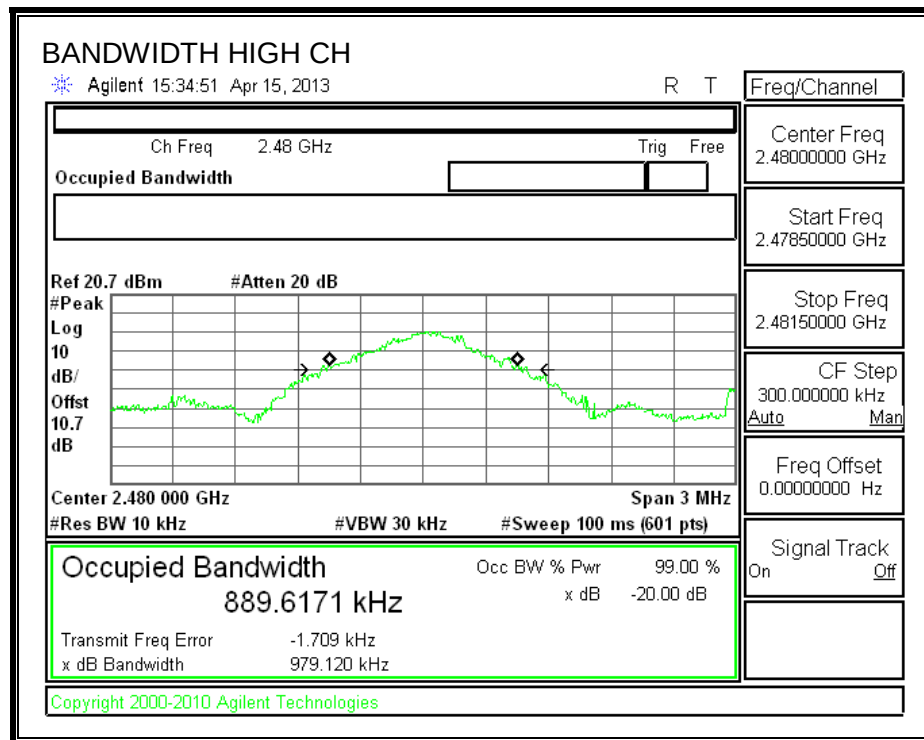
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The RBW is set to $\geq 1\%$ of the 20 dB bandwidth. The VBW is set to $\geq$ RBW. The sweep time is coupled.

RESULTS

Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
2402	872.7296	979.208
2441	860.7369	944.960
2480	889.6171	979.120





7.1.2. HOPPING FREQUENCY SEPARATION

LIMIT

FCC §15.247 (a) (1)

IC RSS-210 A8.1 (b)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

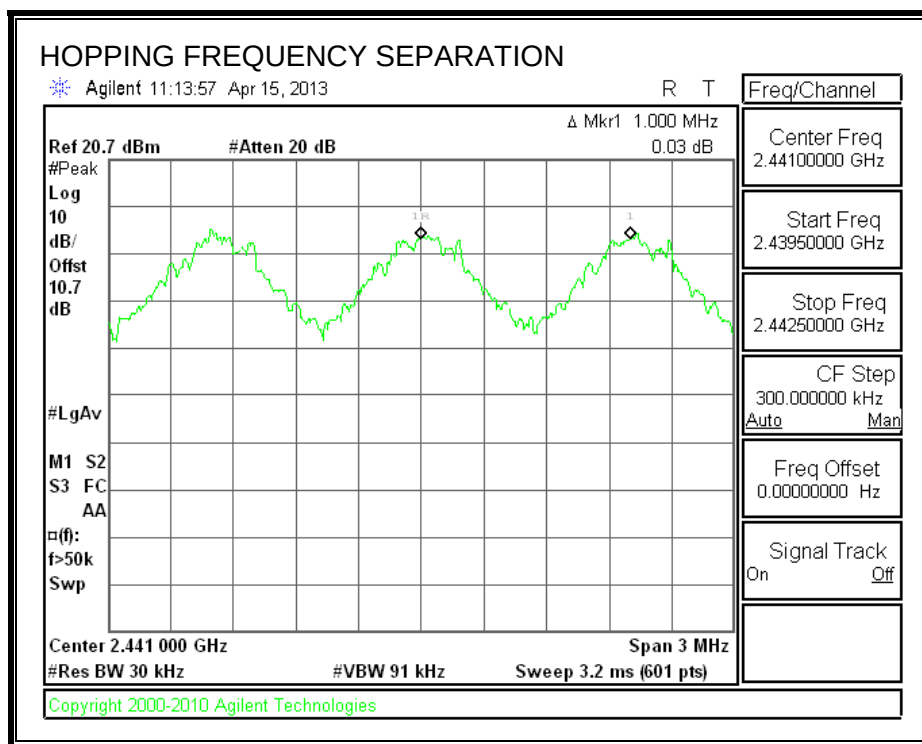
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

TEST PROCEDURE

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

RESULTS

HOPPING FREQUENCY SEPARATION



7.1.3. NUMBER OF HOPPING CHANNELS

LIMIT

FCC §15.247 (a) (1) (iii)

IC RSS-210 A8.1 (d)

Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

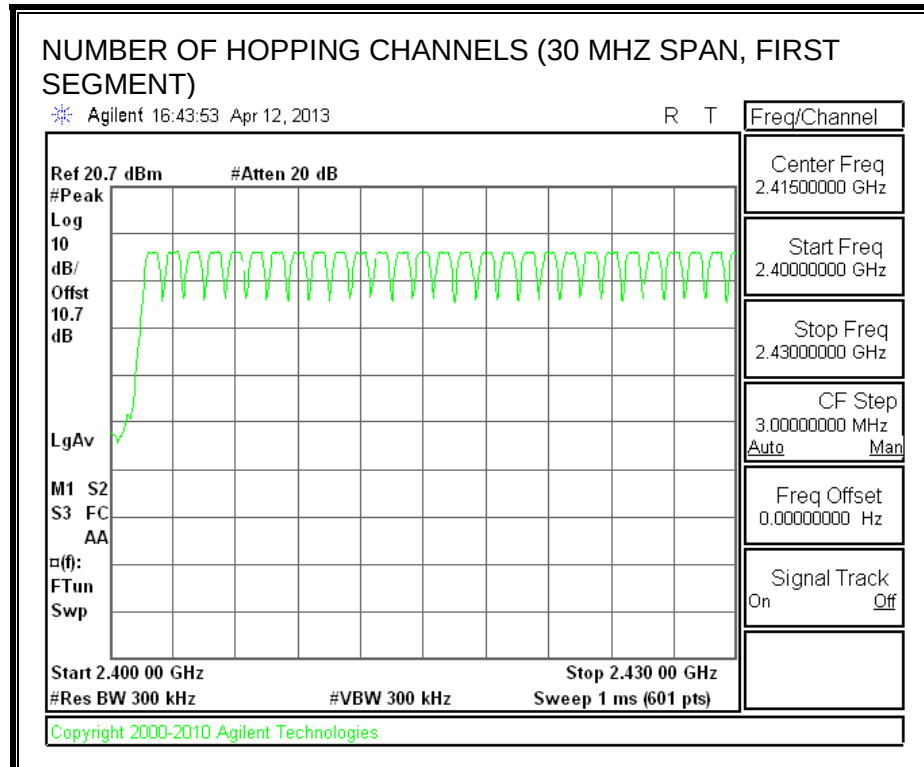
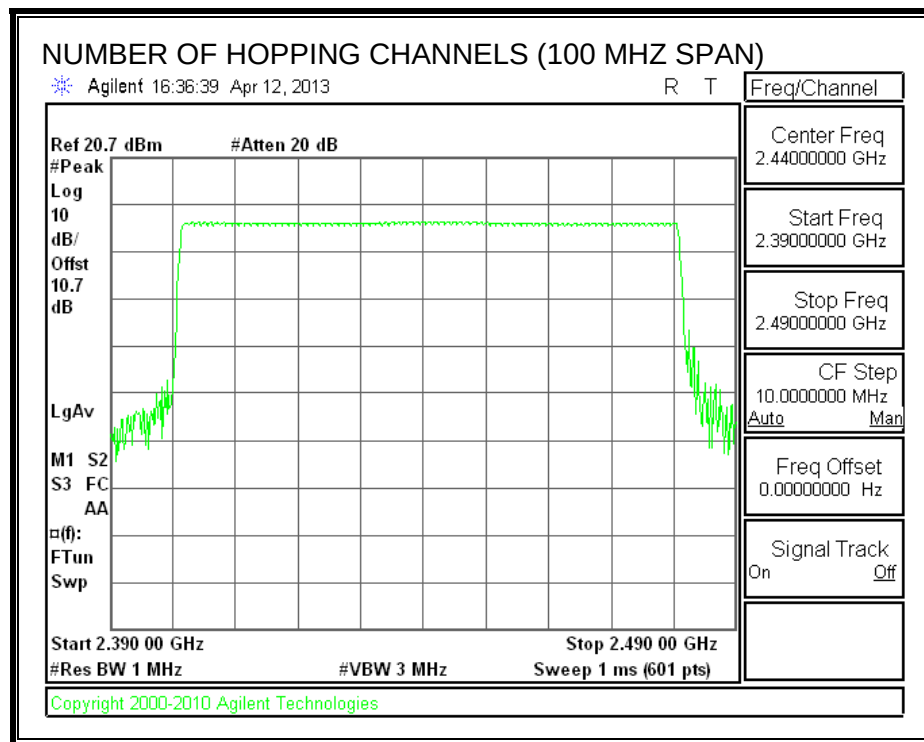
TEST PROCEDURE

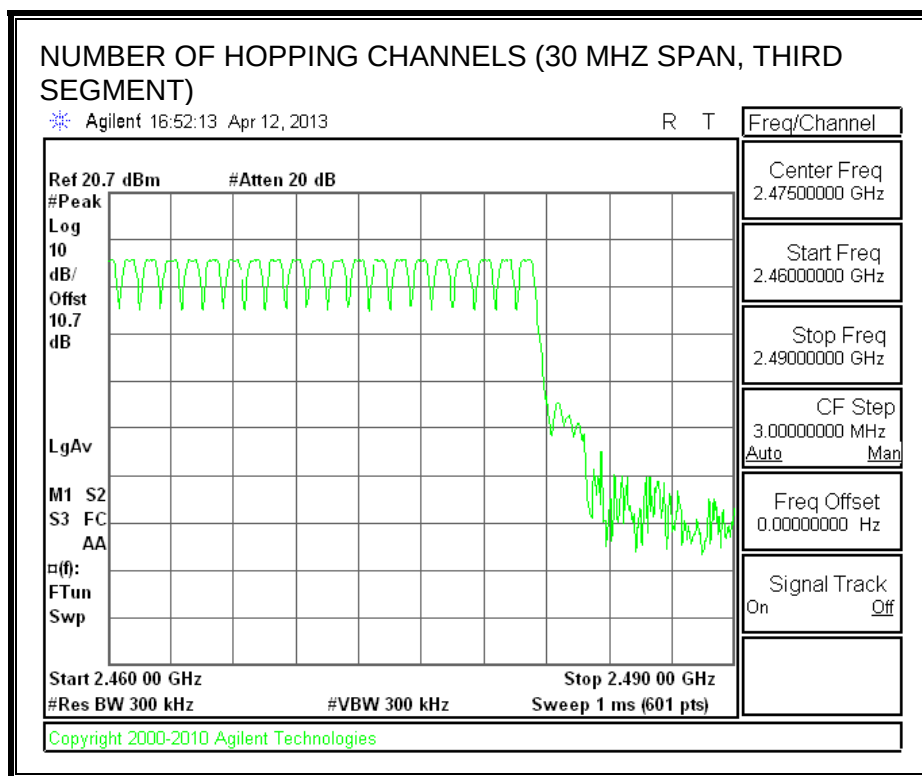
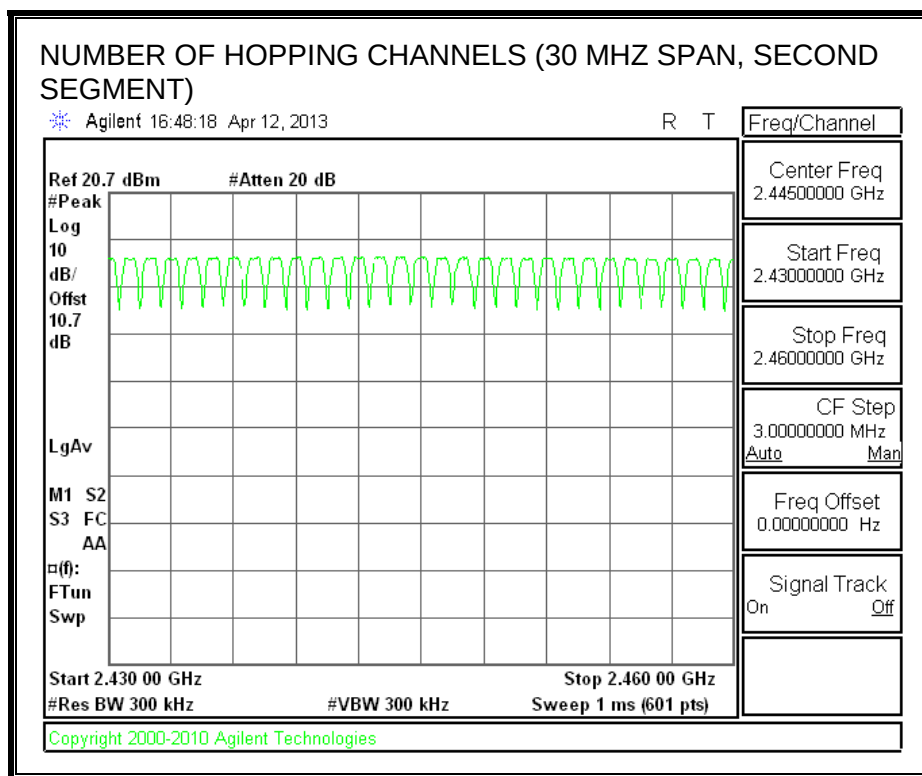
The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

RESULTS

Normal Mode: 79 Channels observed.

NUMBER OF HOPPING CHANNELS





7.1.4. AVERAGE TIME OF OCCUPANCY

LIMIT

FCC §15.247 (a) (1) (iii)

IC RSS-210 A8.1 (d)

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The span is set to 0 Hz, centered on a single, selected hopping channel. The width of a single pulse is measured in a fast scan. The number of pulses is measured in a 3.16 second scan, to enable resolution of each occurrence.

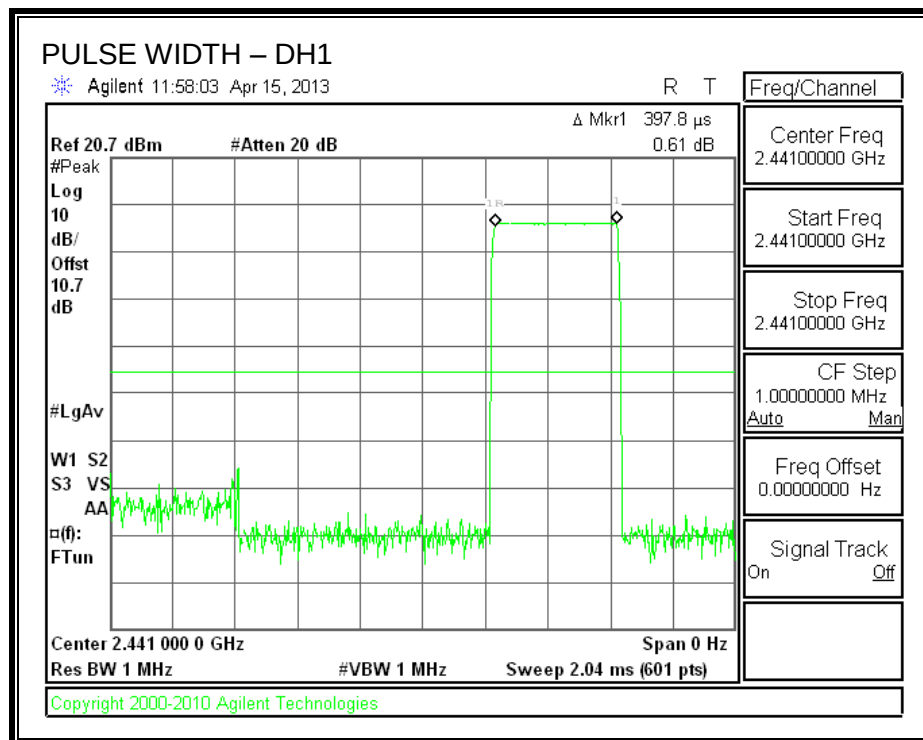
The average time of occupancy in the specified 31.6 second period (79 channels * 0.4 s) is equal to $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{pulse width}$.

For AFH mode, the average time of occupancy in the specified 8 second period (20 channels * 0.4 seconds) is equal to $10 * (\# \text{ of pulses in } 0.8 \text{ s}) * \text{pulse width}$.

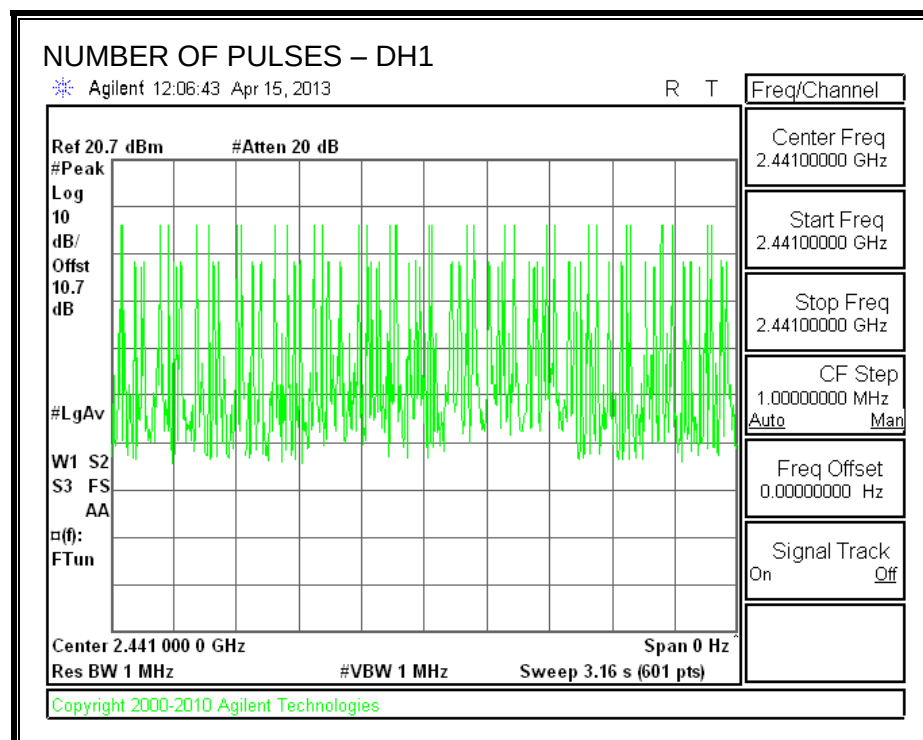
RESULTS

Frequency (MHz)	99% Bandwidth (MHz)	20dB Bandwidth (MHz)
2402	1.2053	1.299
2441	1.2284	1.282
2480	1.2066	1.288

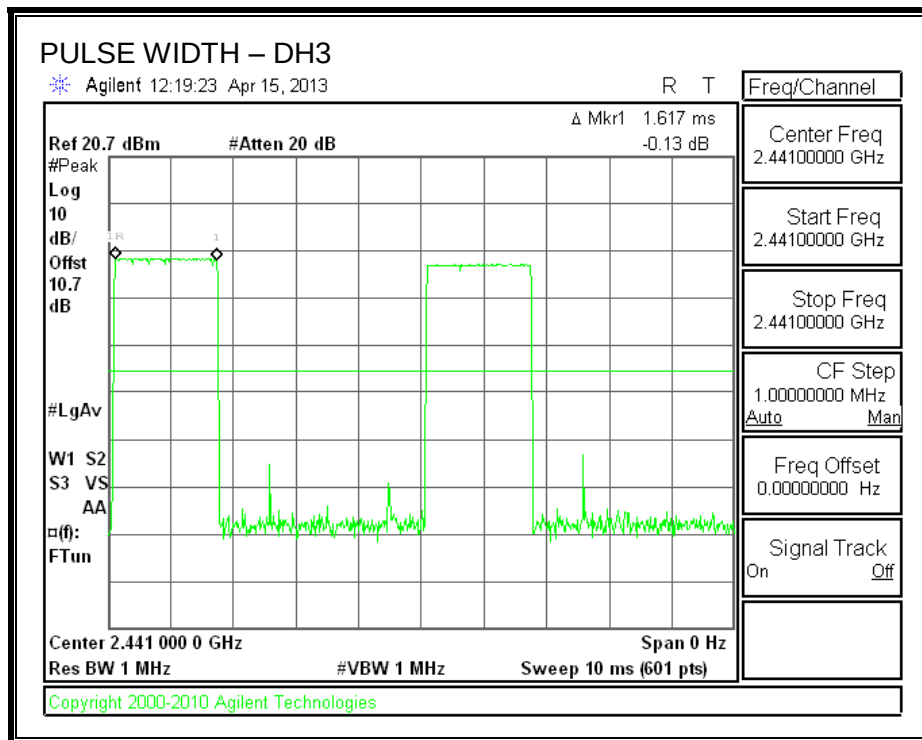
PULSE WIDTH - DH1



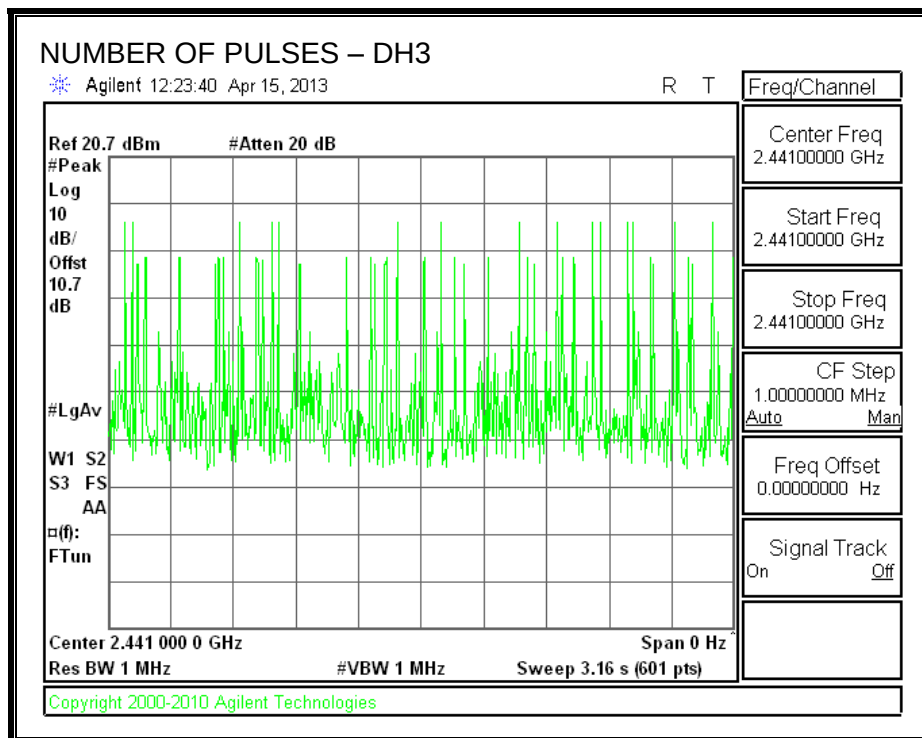
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH1



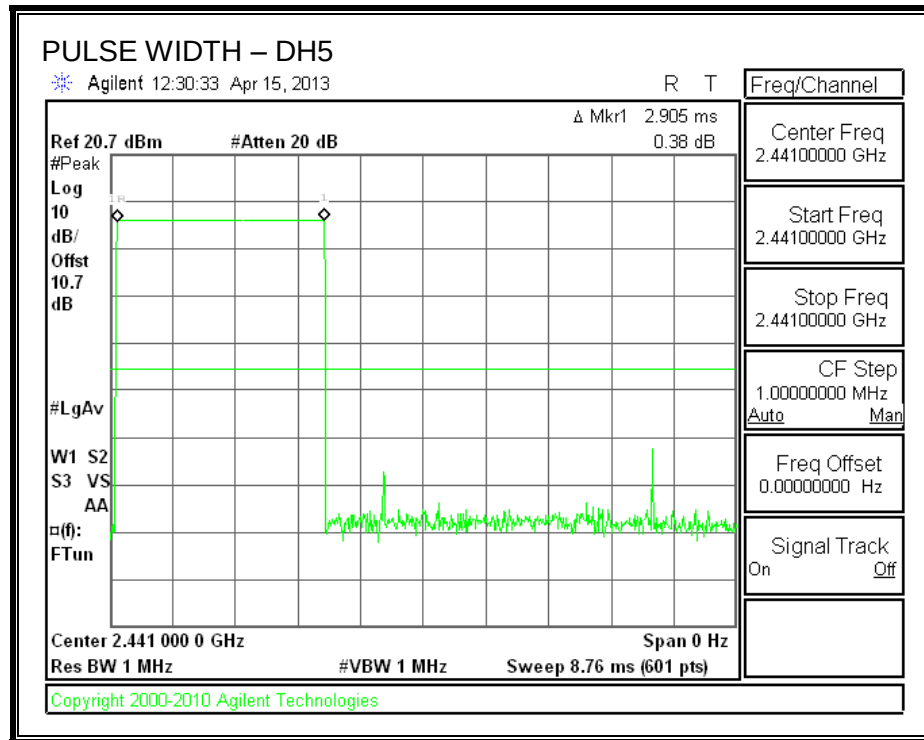
PULSE WIDTH – DH3



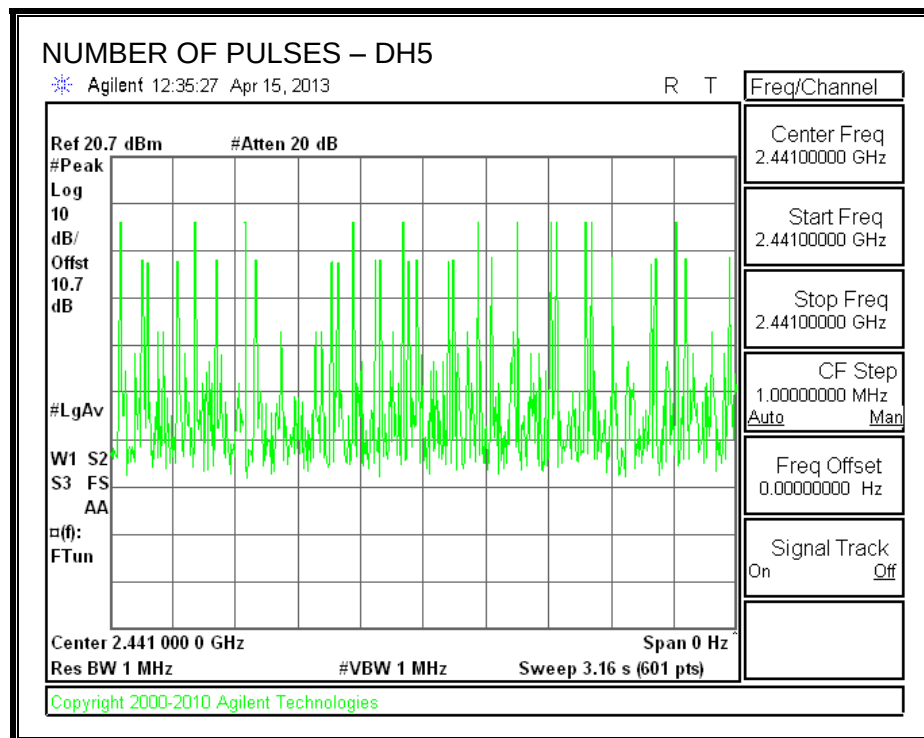
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH3



PULSE WIDTH – DH5



NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH5



7.1.5. OUTPUT POWER

LIMIT

§15.247 (b) (1)

RSS-210 Issue 7 Clause A8.4

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

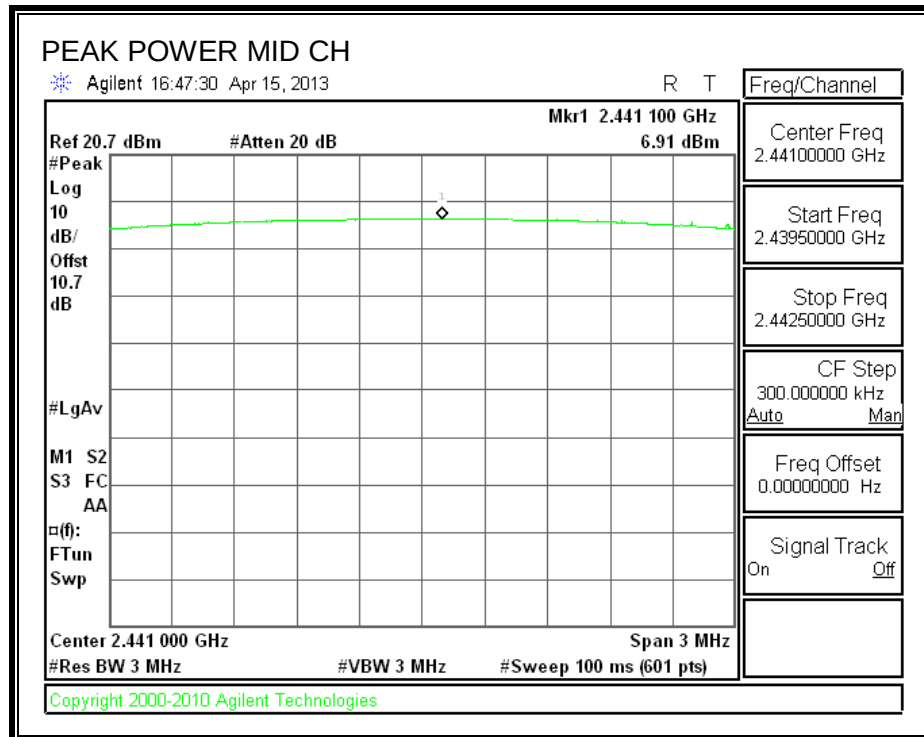
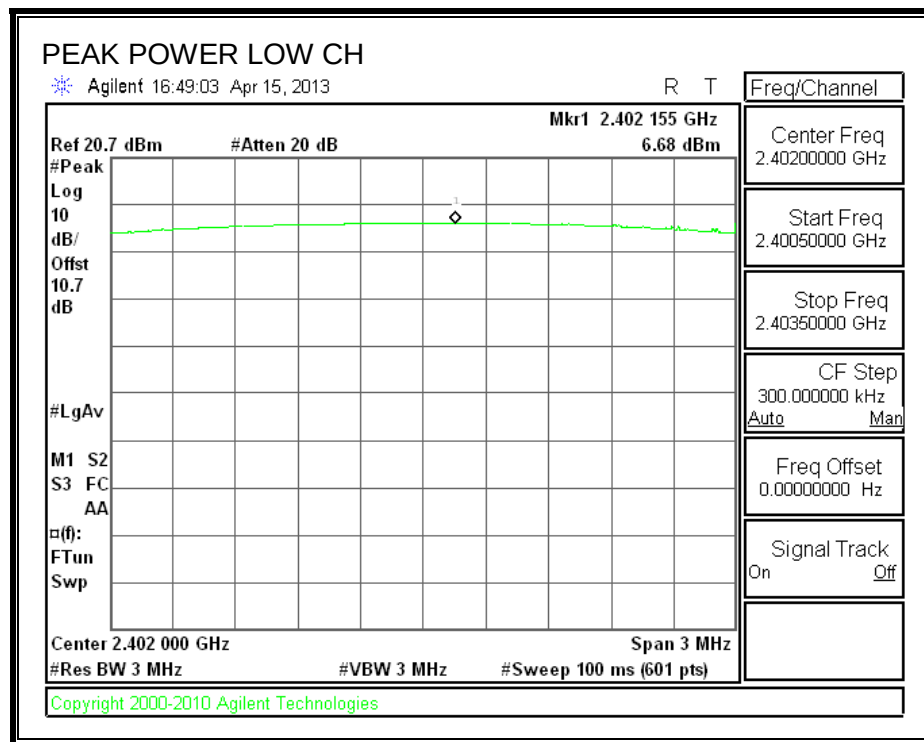
TEST PROCEDURE

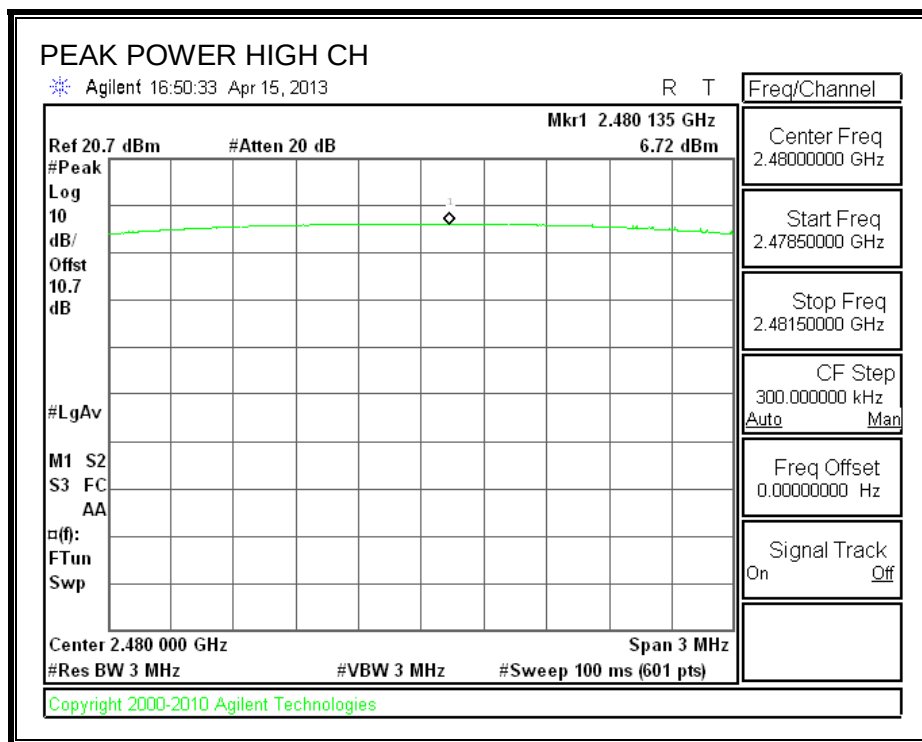
The transmitter output is connected to a spectrum analyzer the analyzer bandwidth is set to a value greater than the 20 dB bandwidth of the EUT.

RESULTS

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	6.68	30	-23.32
Middle	2441	6.91	30	-23.09
High	2480	6.72	30	-23.28

OUTPUT POWER





7.1.6. AVERAGE POWER

LIMIT

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)	Average Power (dBm)
Low	2402	3.50
Middle	2441	4.10
High	2480	4.80

7.1.7. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Limit = -20 dBc

TEST PROCEDURE

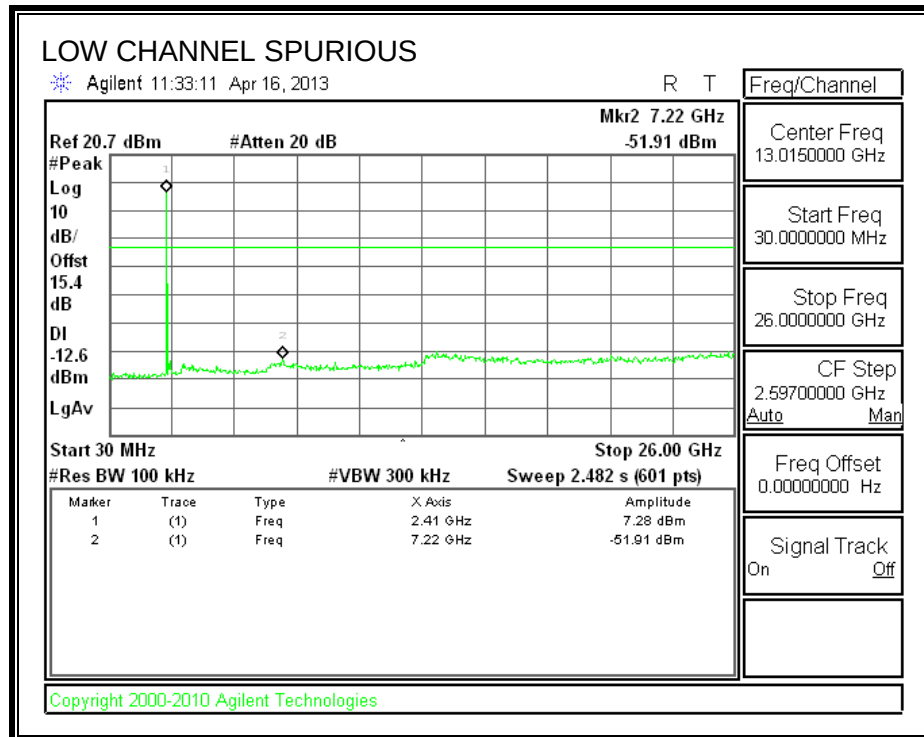
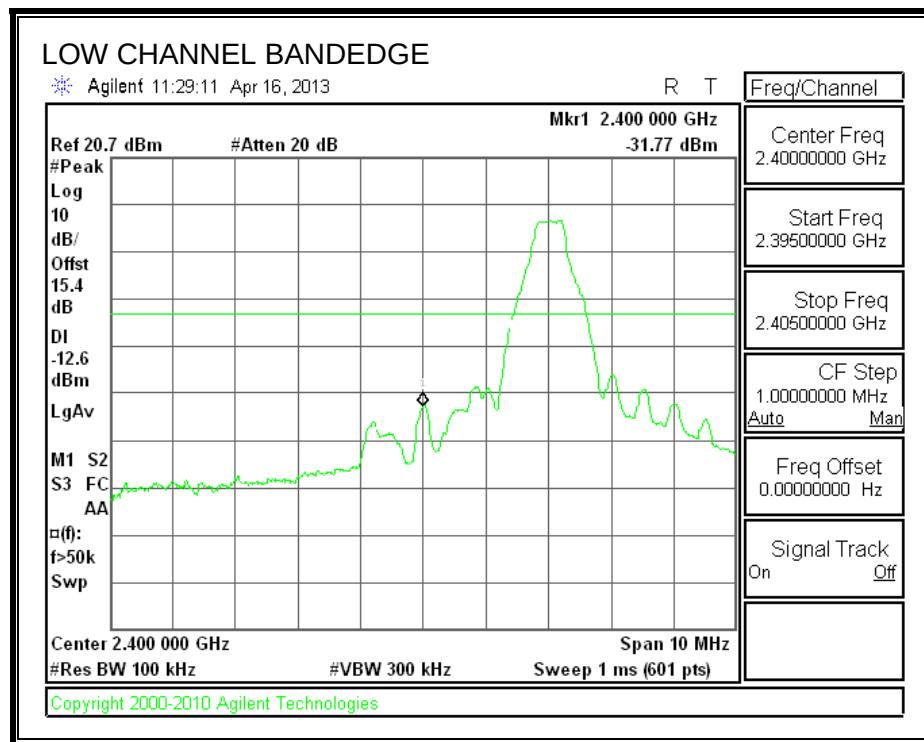
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

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

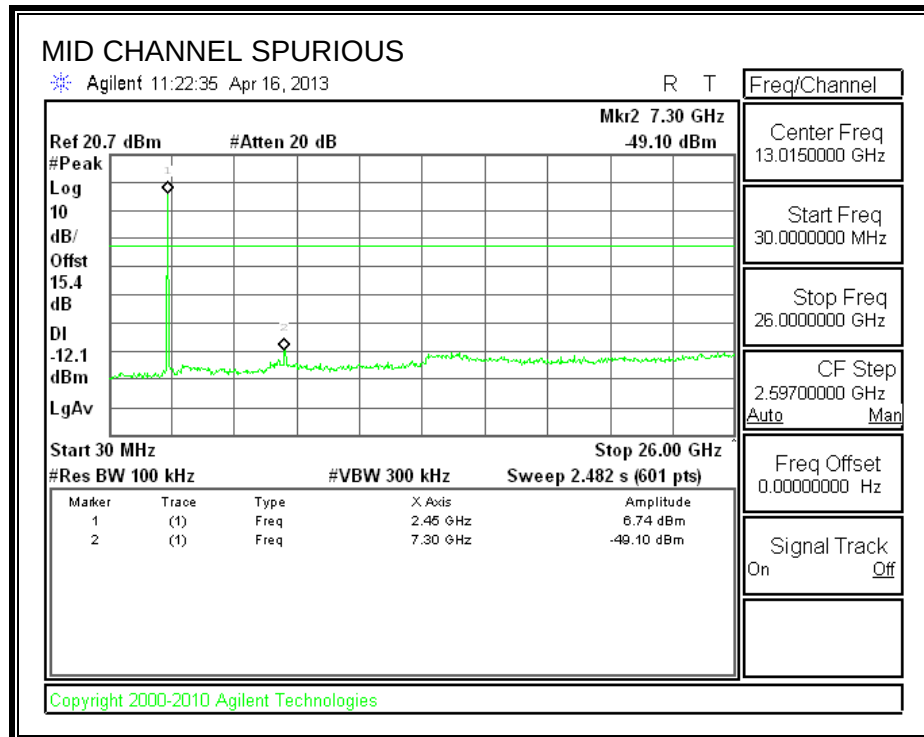
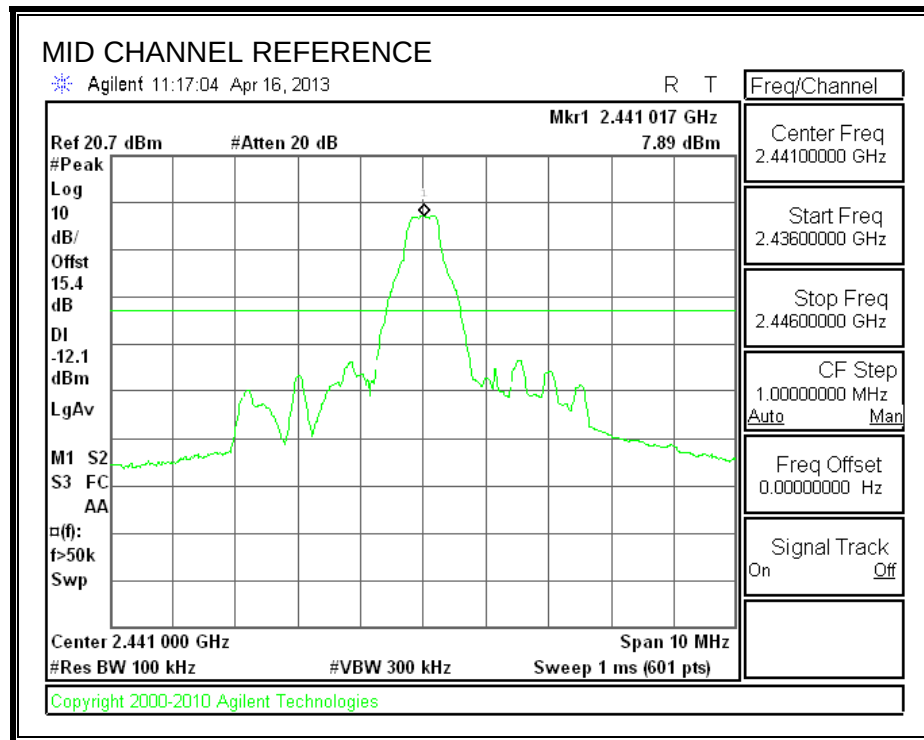
The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

RESULTS

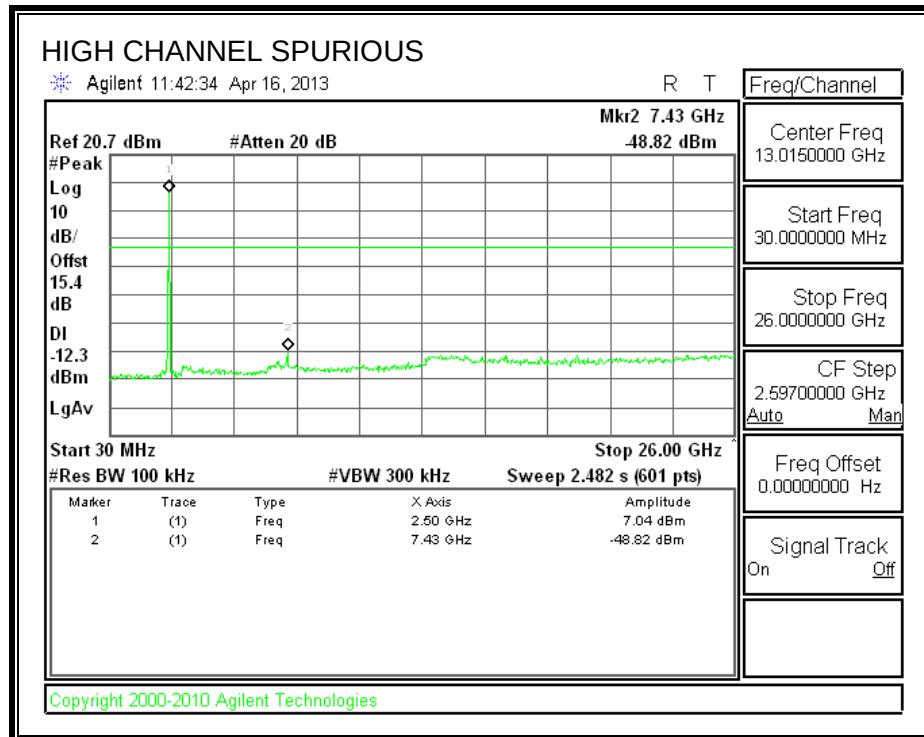
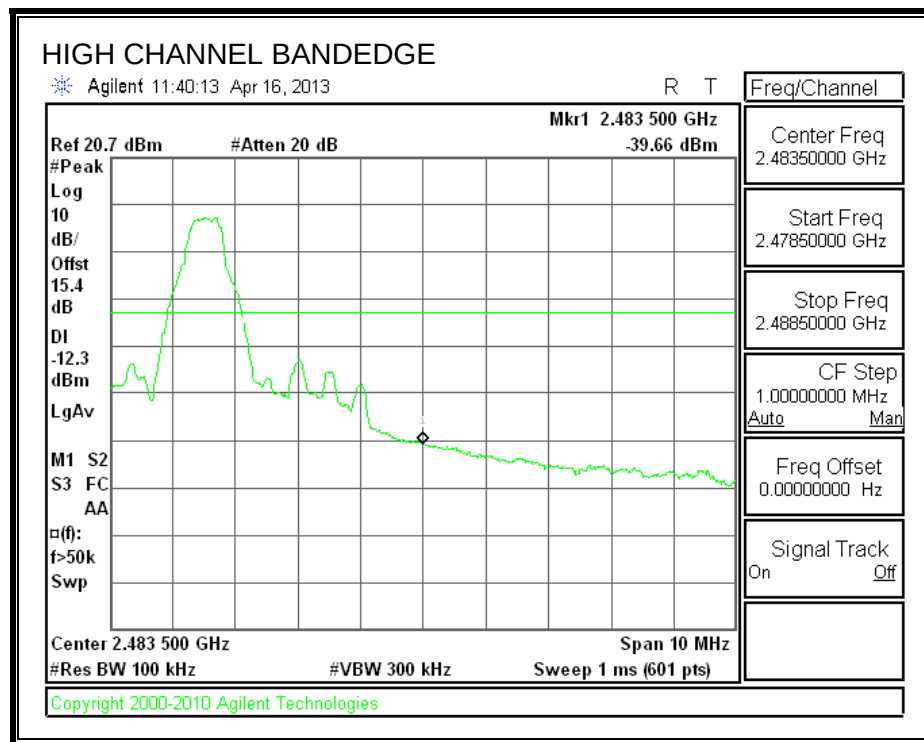
SPURIOUS EMISSIONS, LOW CHANNEL



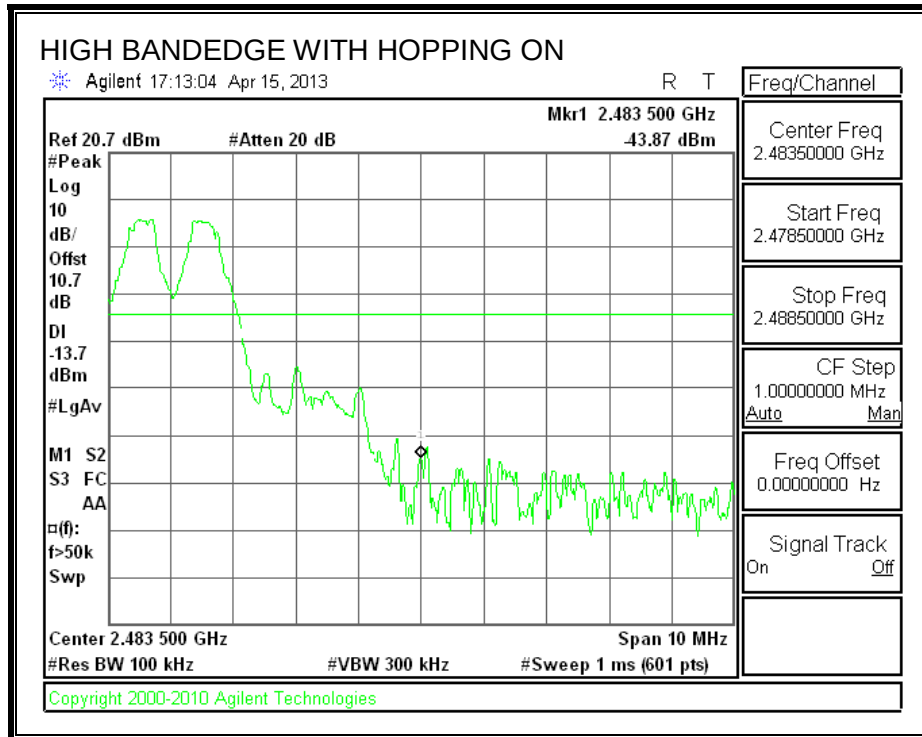
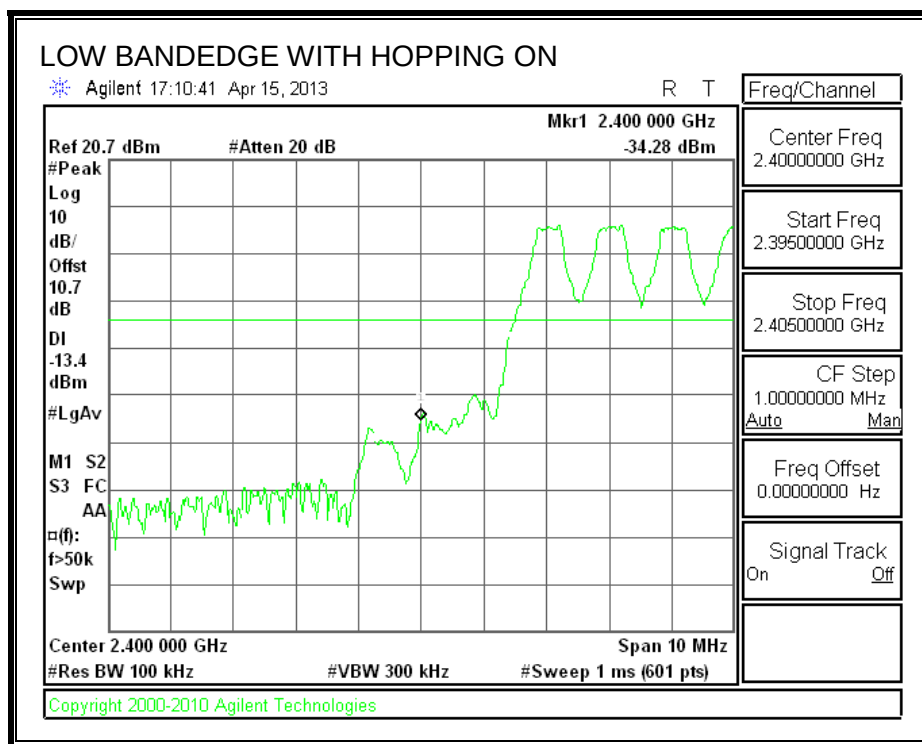
SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



7.2. ENHANCED DATA RATE 8PSK MODULATION

7.2.1. 99% AND 20 dB BANDWIDTH

LIMIT

None; for reporting purposes only.

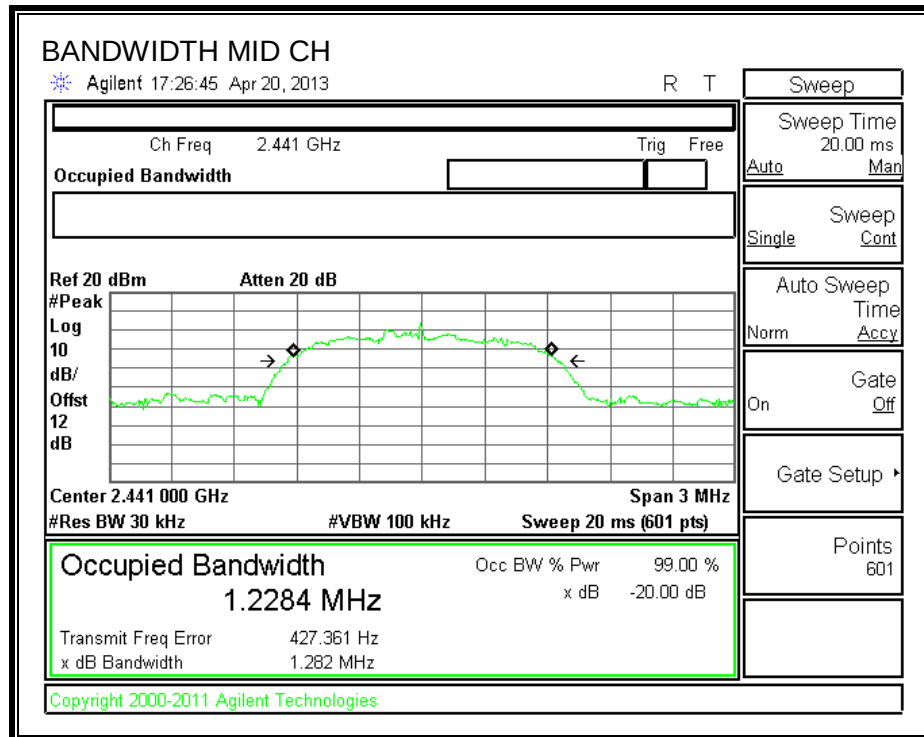
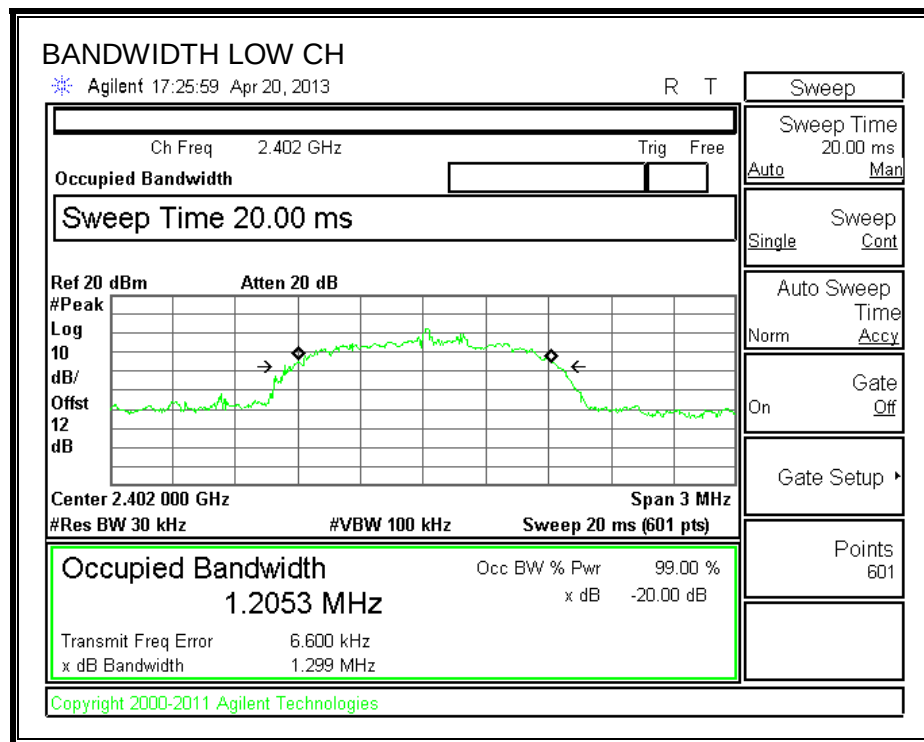
TEST PROCEDURE

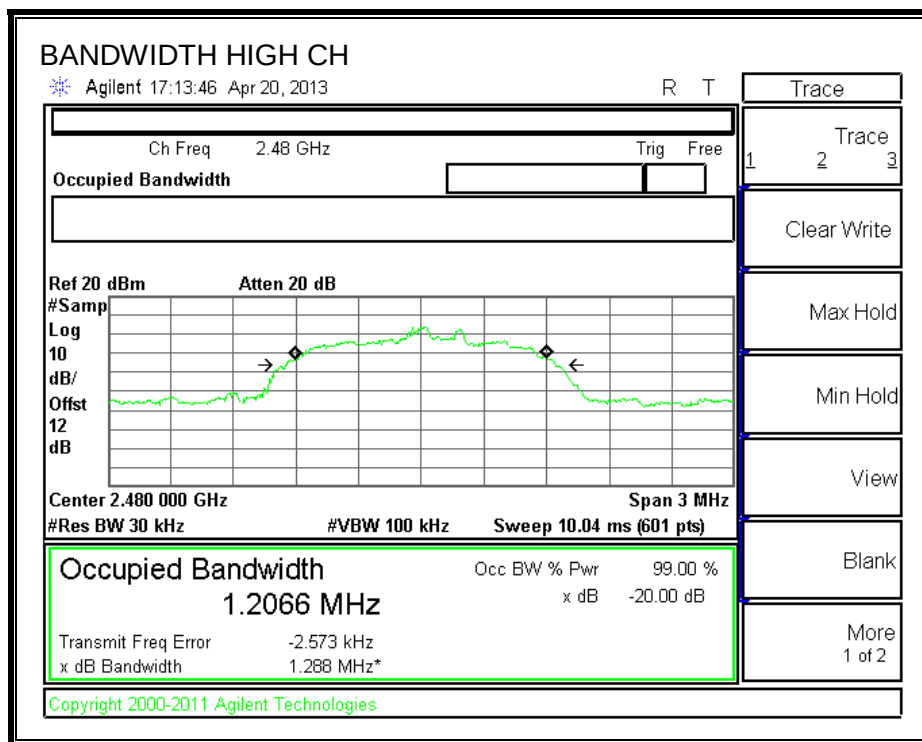
The transmitter output is connected to a spectrum analyzer. The RBW is set to $\geq 1\%$ of the 20 dB bandwidth. The VBW is set to $\geq$ RBW. The sweep time is coupled.

RESULTS

Frequency (MHz)	99% Bandwidth (MHz)	20dB Bandwidth (MHz)
2402	1.2053	1.299
2441	1.2284	1.282
2480	1.2066	1.288

99% AND 20dB BANDWIDTH





7.2.2. HOPPING FREQUENCY SEPARATION

LIMIT

FCC §15.247 (a) (1)

IC RSS-210 A8.1 (b)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

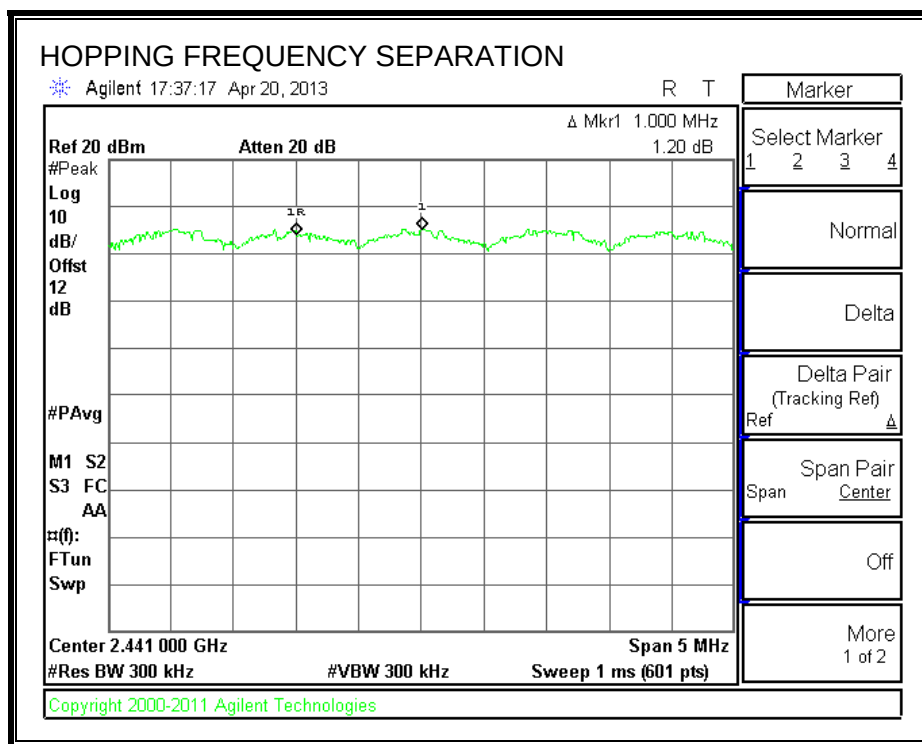
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

TEST PROCEDURE

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

RESULTS

HOPPING FREQUENCY SEPARATION



7.2.3. NUMBER OF HOPPING CHANNELS

LIMIT

FCC §15.247 (a) (1) (iii)

IC RSS-210 A8.1 (d)

Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

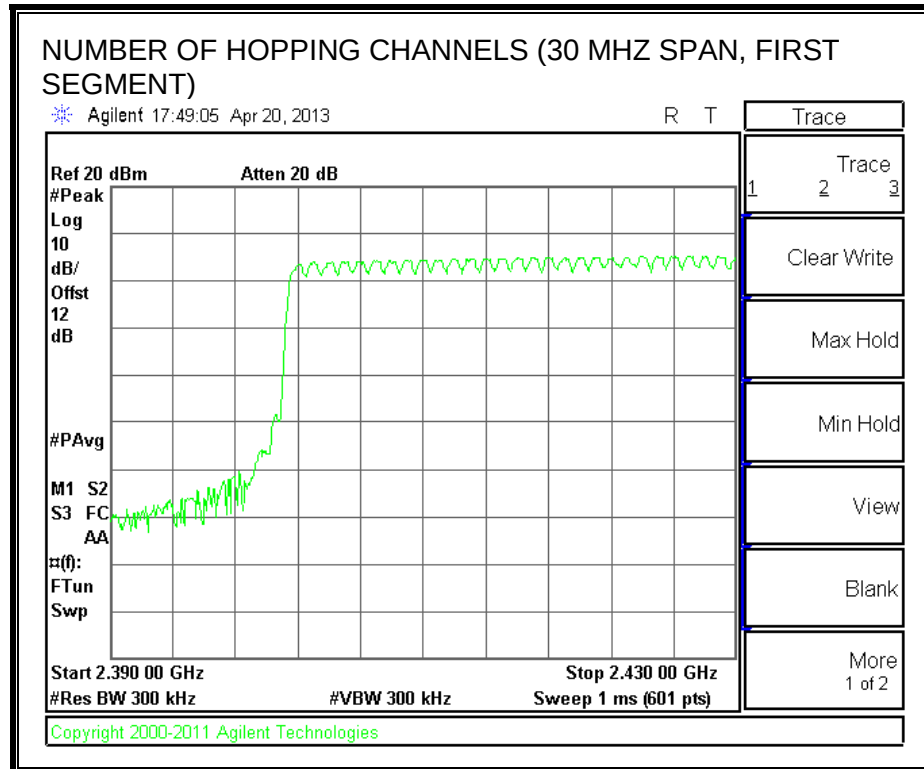
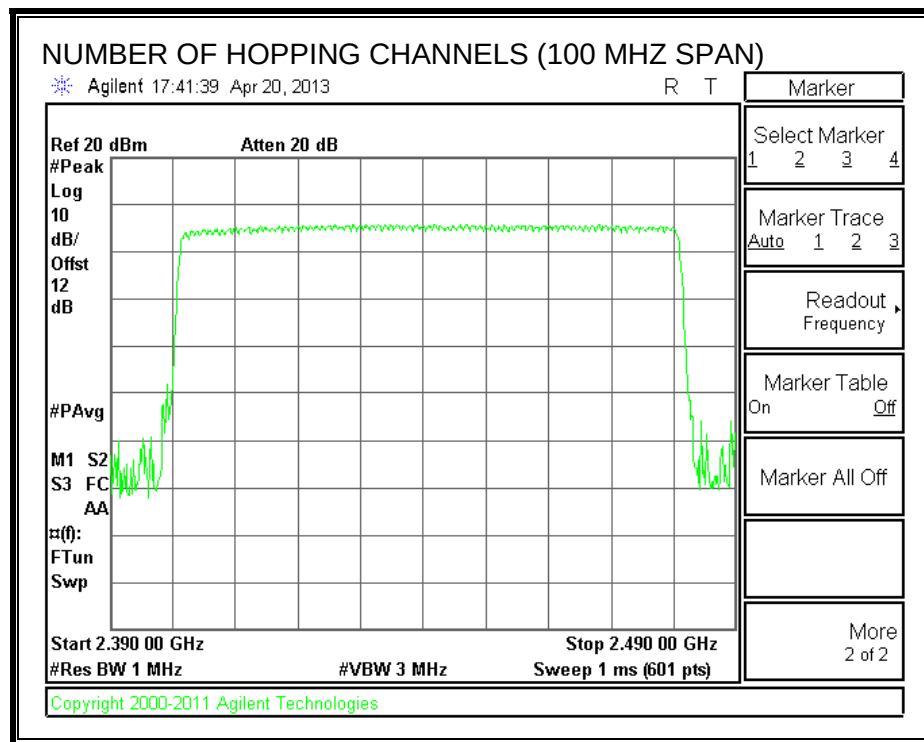
TEST PROCEDURE

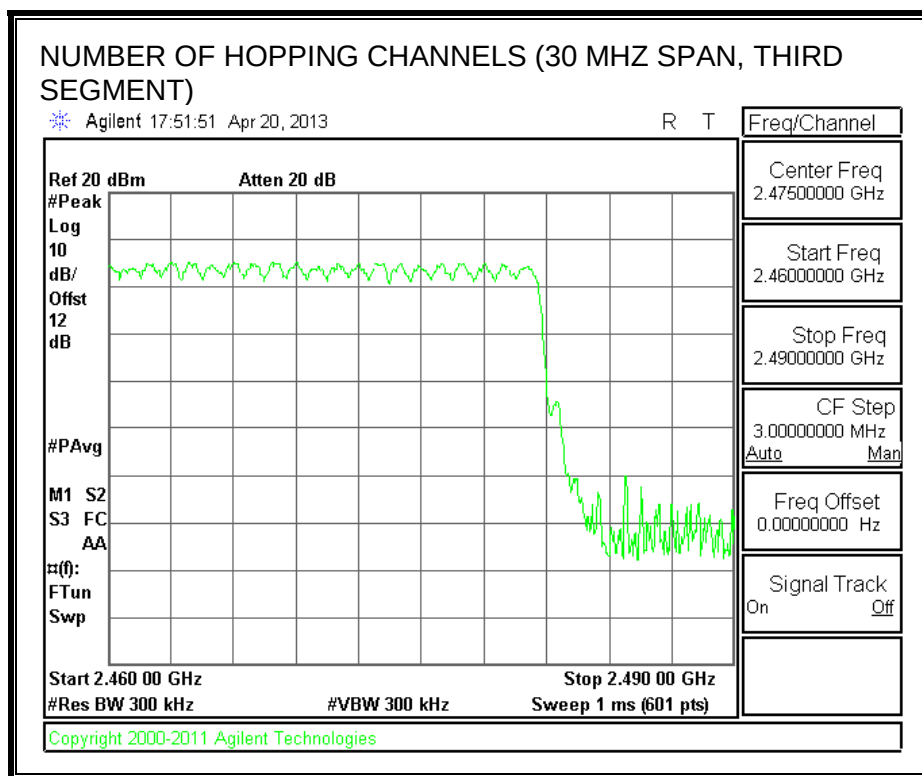
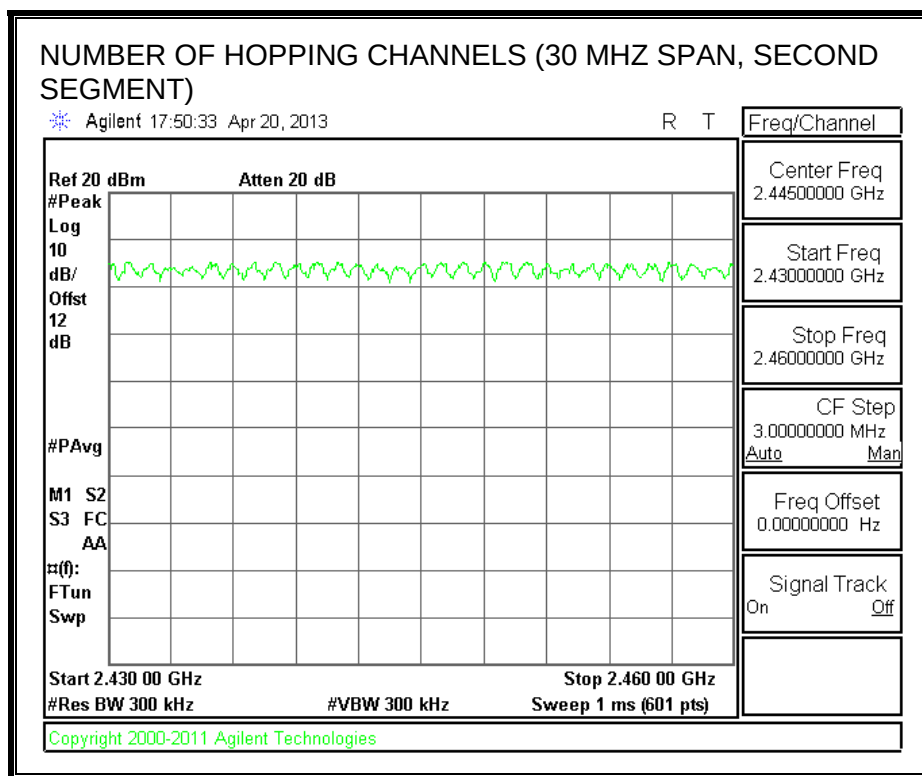
The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

RESULTS

Normal Mode: 79 Channels observed..

NUMBER OF HOPPING CHANNELS





7.2.4. AVERAGE TIME OF OCCUPANCY

LIMIT

FCC §15.247 (a) (1) (iii)

IC RSS-210 A8.1 (d)

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The span is set to 0 Hz, centered on a single, selected hopping channel. The width of a single pulse is measured in a fast scan. The number of pulses is measured in a 3.16 second scan, to enable resolution of each occurrence.

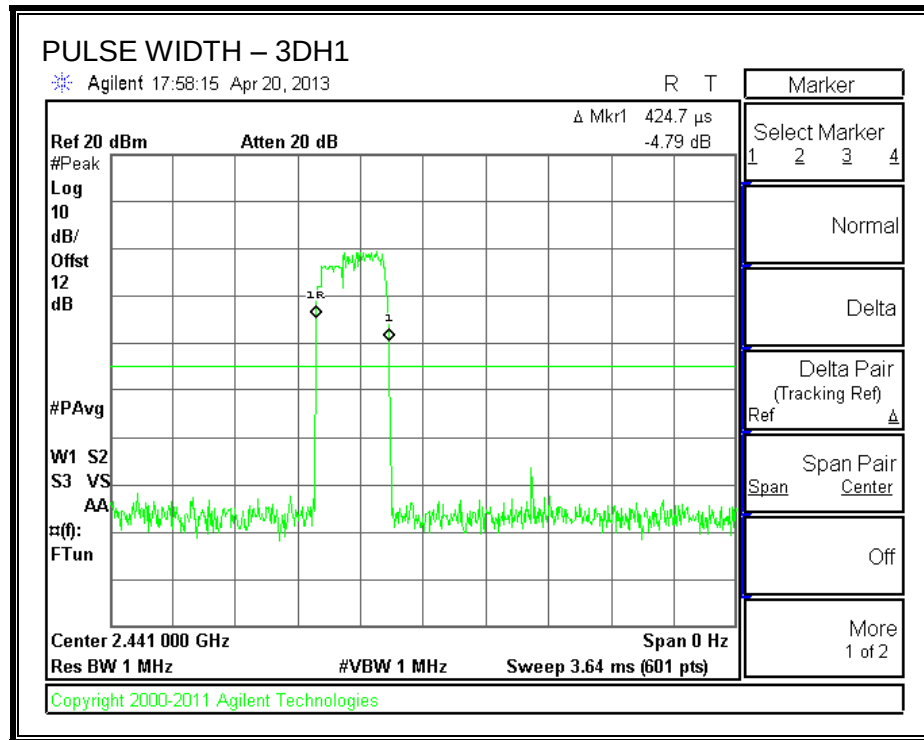
The average time of occupancy in the specified 31.6 second period (79 channels * 0.4 s) is equal to $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{pulse width}$.

RESULTS

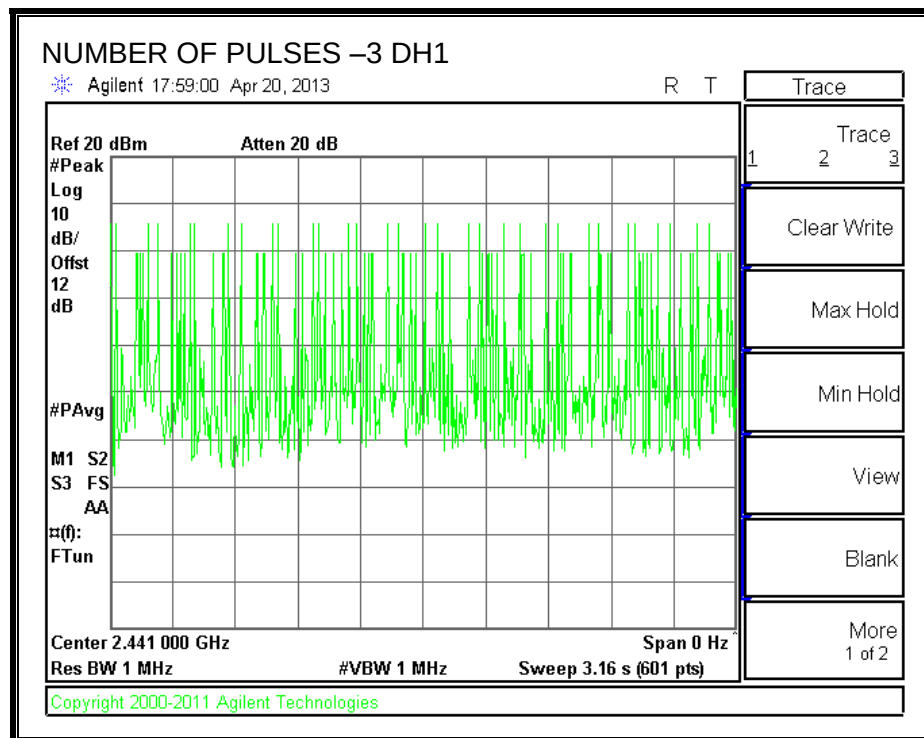
8PSK (EDR) Mode

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of (sec)	Limit (sec)	Margin (sec)
DH1	0.4247	30	0.127	0.4	-0.273
DH3	1.675	16	0.268	0.4	-0.132
DH5	2.92	11	0.321	0.4	-0.079

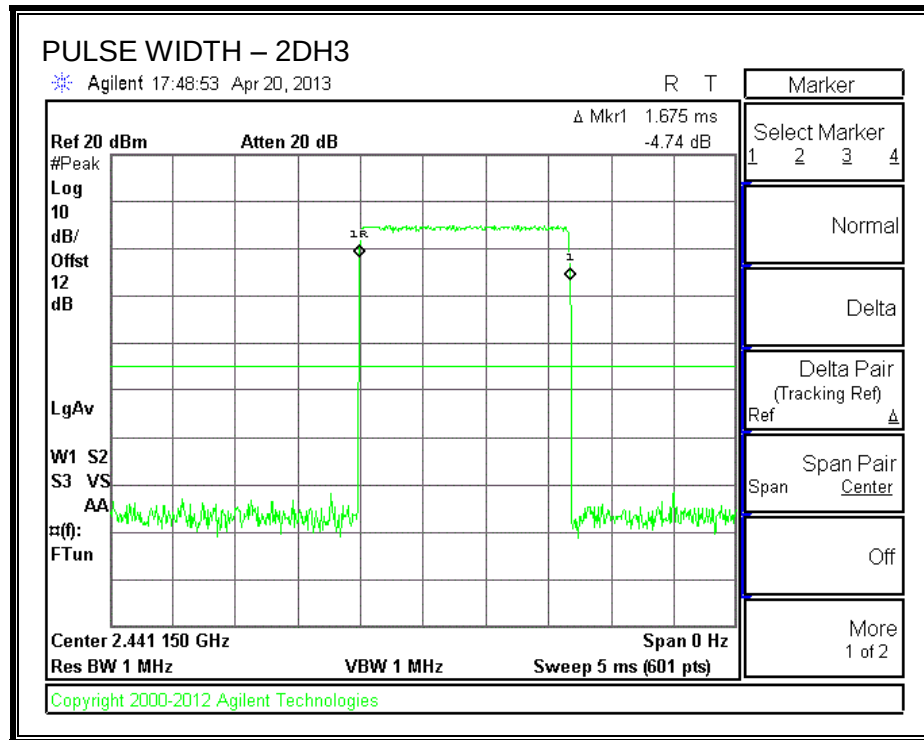
PULSE WIDTH - DH1



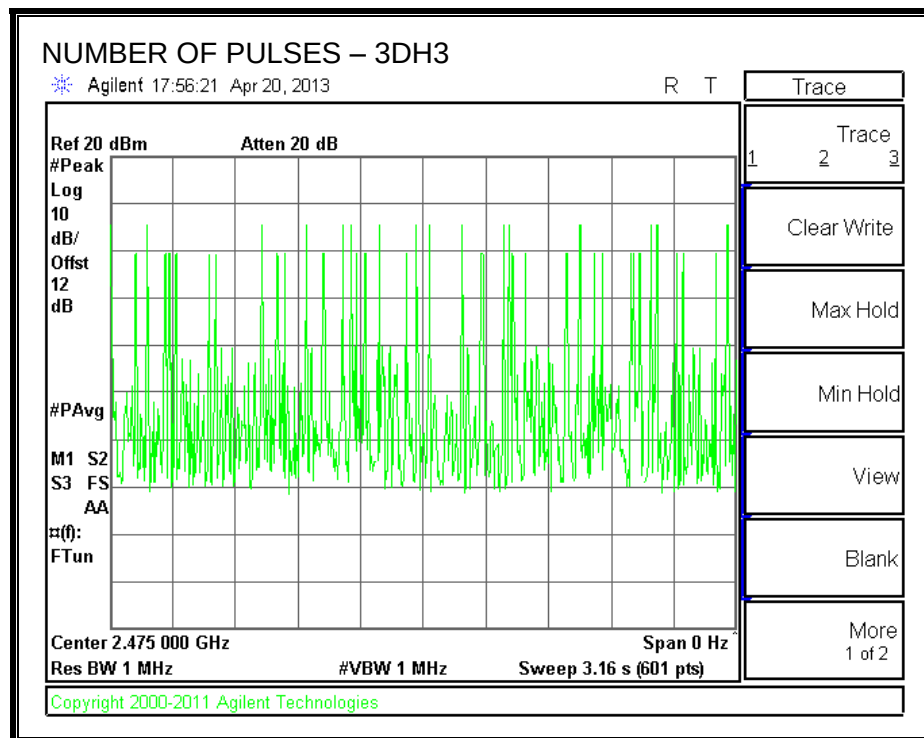
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH1



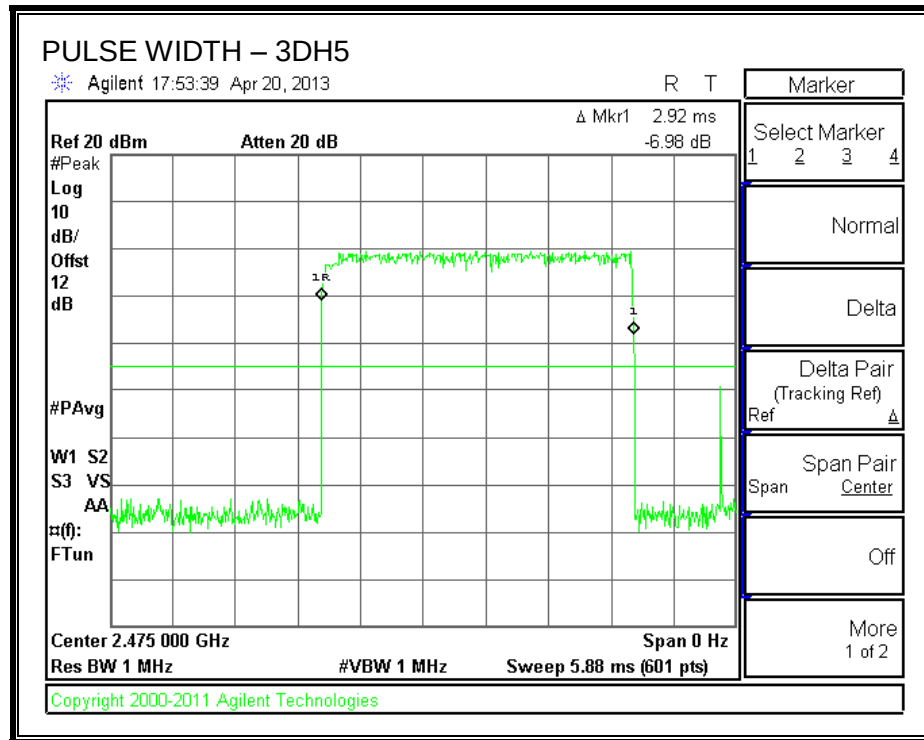
PULSE WIDTH – DH3



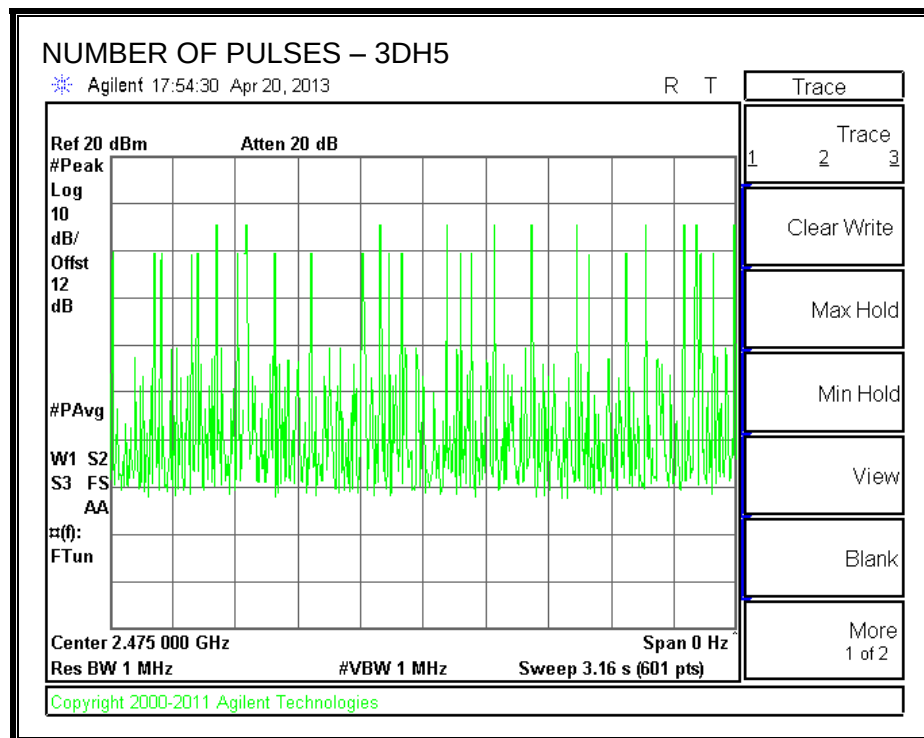
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH3



PULSE WIDTH – DH5



NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD – DH5



7.2.5. OUTPUT POWER

LIMIT

§15.247 (b) (1)

RSS-210 Issue 7 Clause A8.4

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

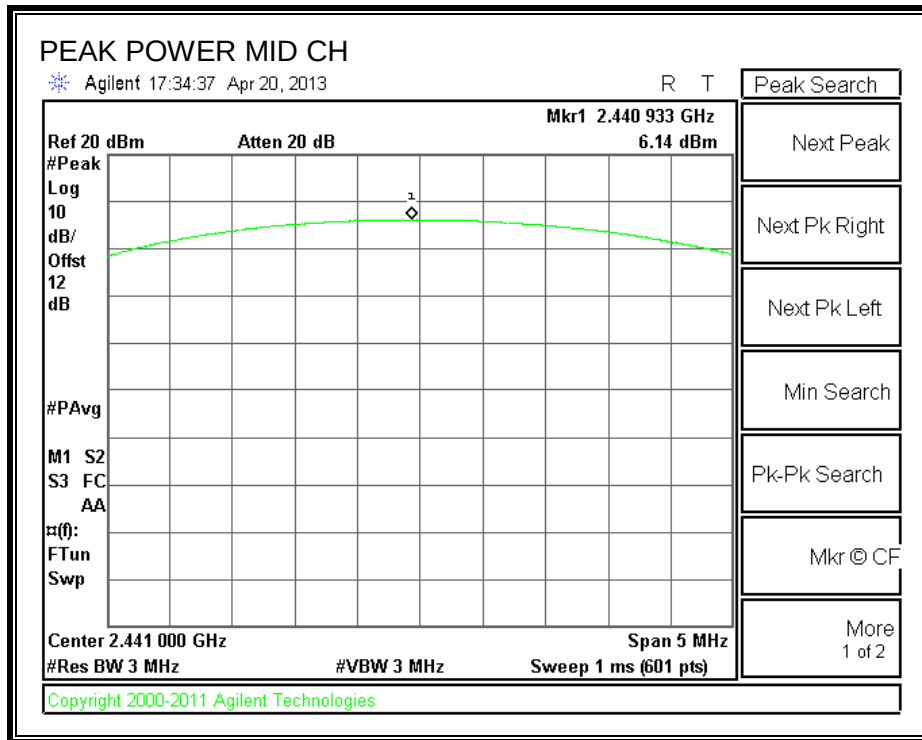
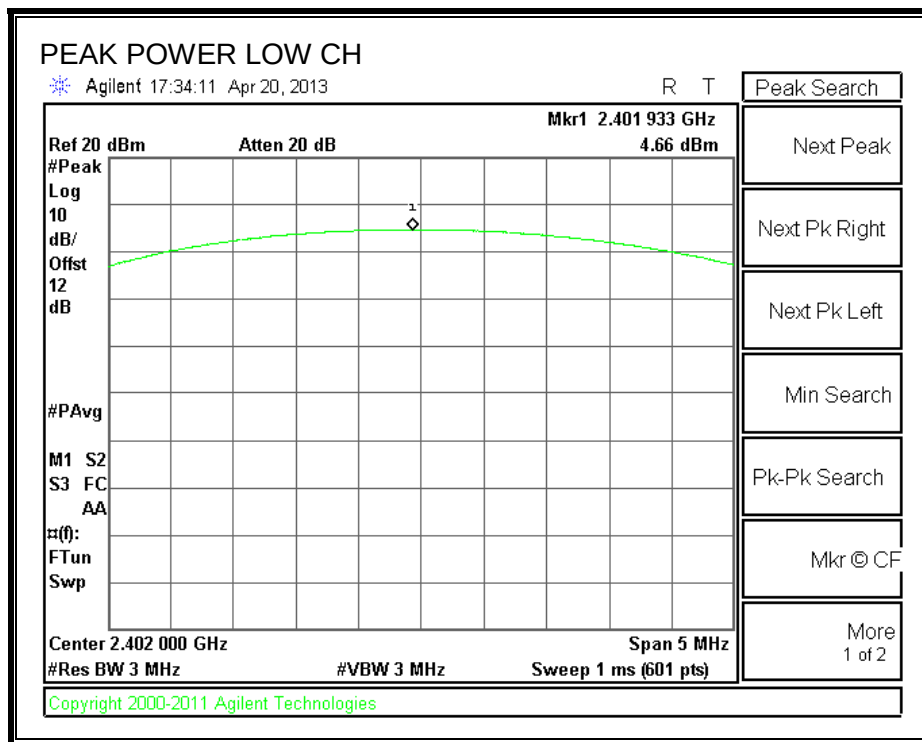
TEST PROCEDURE

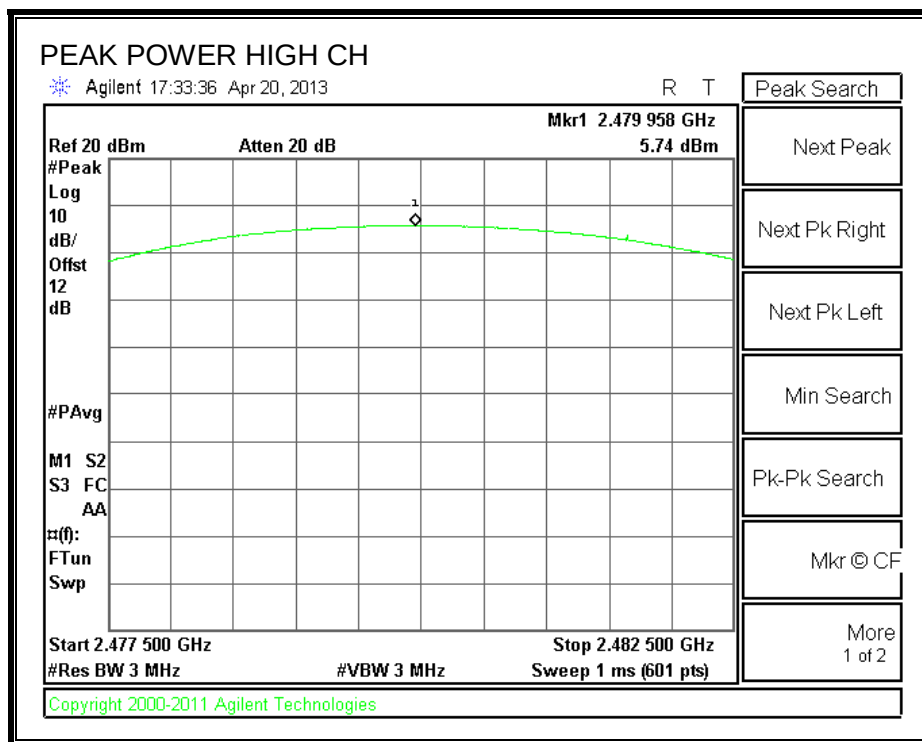
The transmitter output is connected to a spectrum analyzer the analyzer bandwidth is set to a value greater than the 20 dB bandwidth of the EUT.

RESULTS

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	4.66	30	-25.34
Middle	2441	6.14	30	-23.86
High	2480	5.74	30	-24.26

OUTPUT POWER





7.2.6. AVERAGE POWER

LIMIT

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)	Average Power (dBm)
Low	2402	1.90
Middle	2441	3.20
High	2480	3.10

7.2.7. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

IC RSS-210 A8.5

Limit = -20 dBc

TEST PROCEDURE

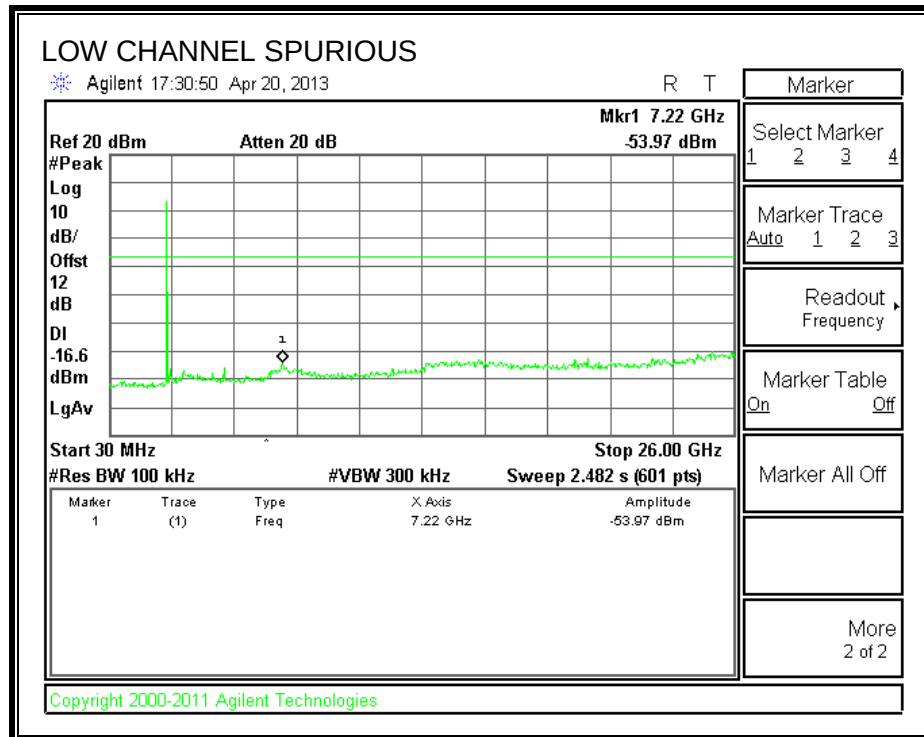
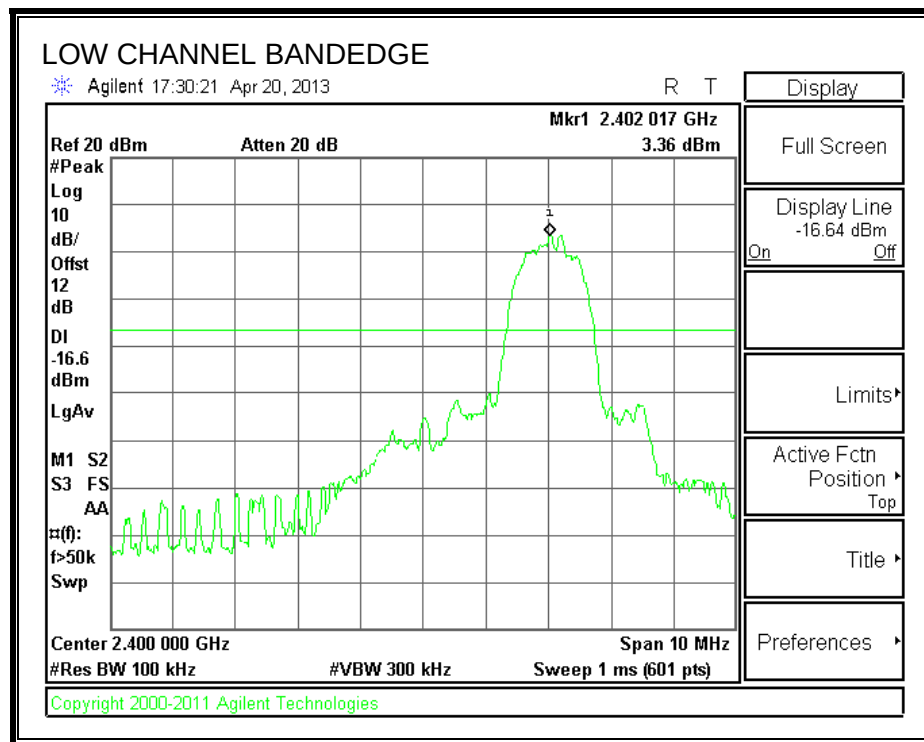
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

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

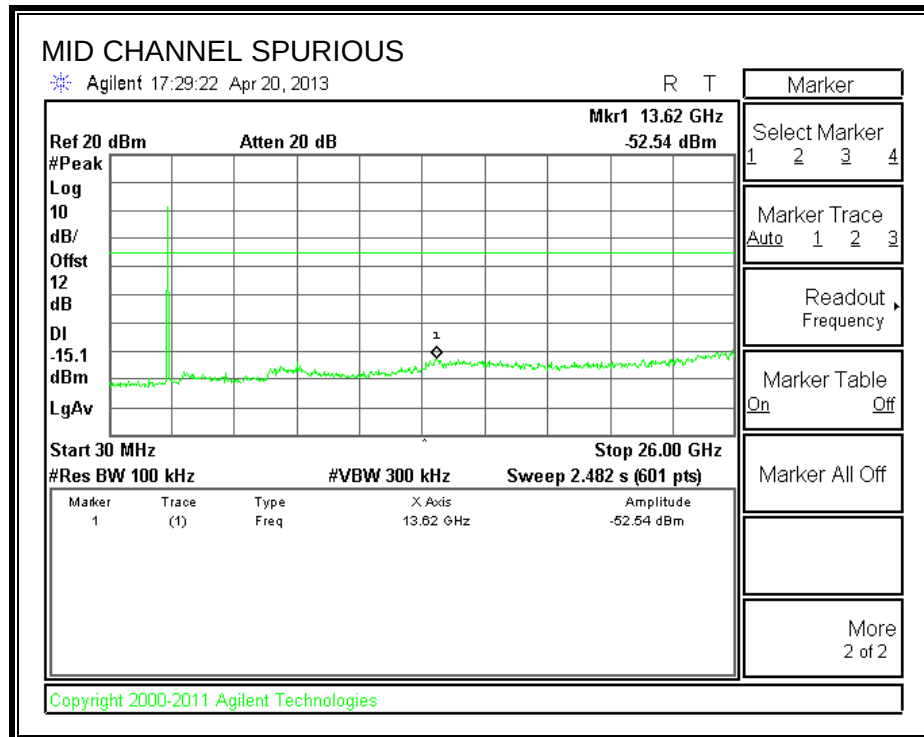
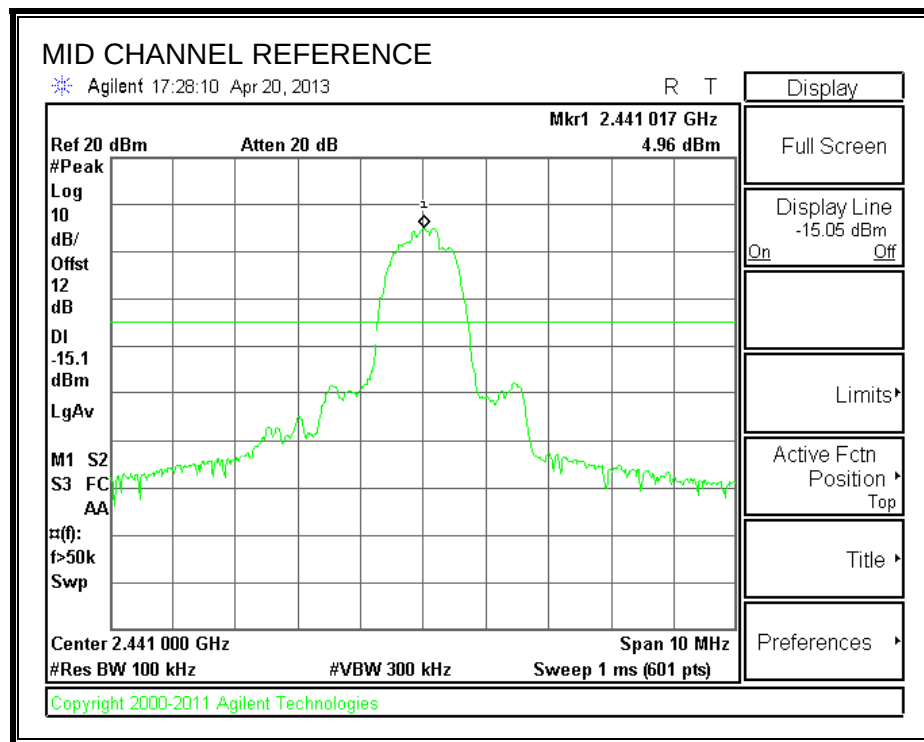
The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

RESULTS

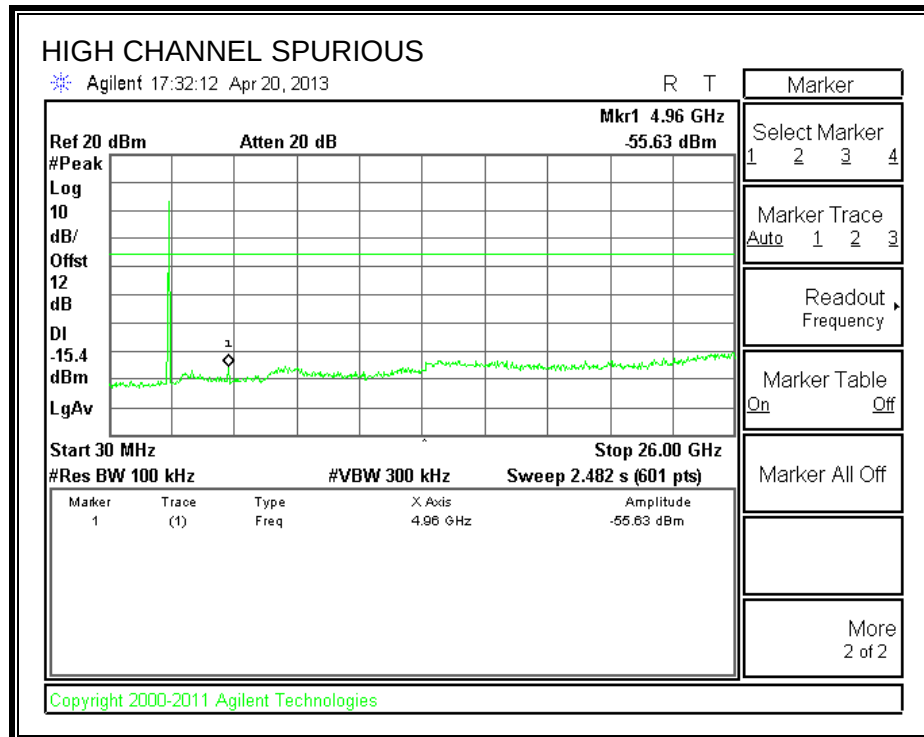
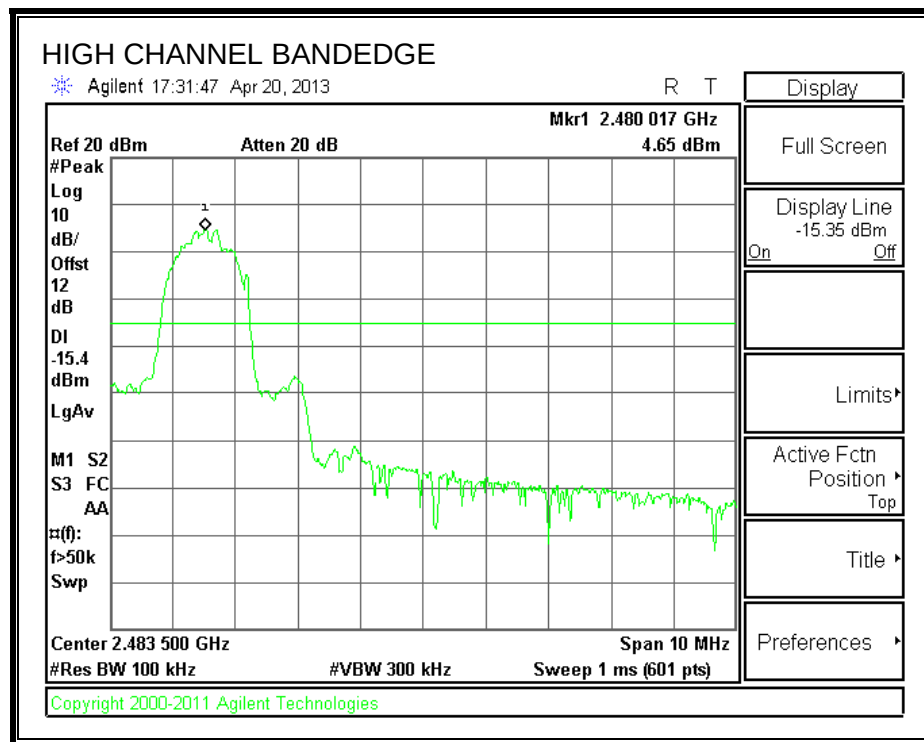
SPURIOUS EMISSIONS, LOW CHANNEL



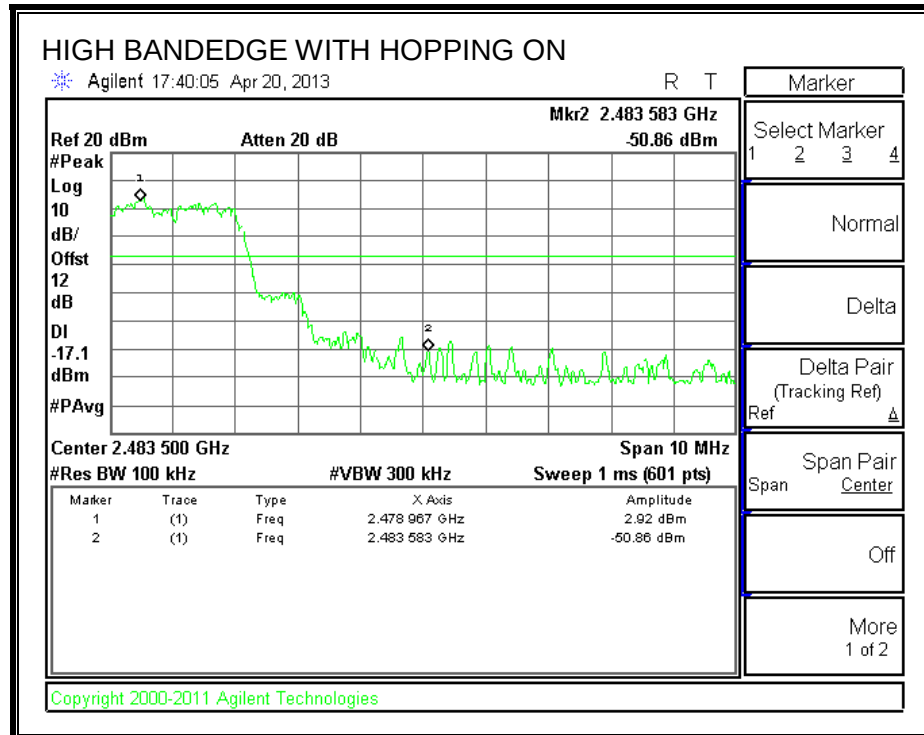
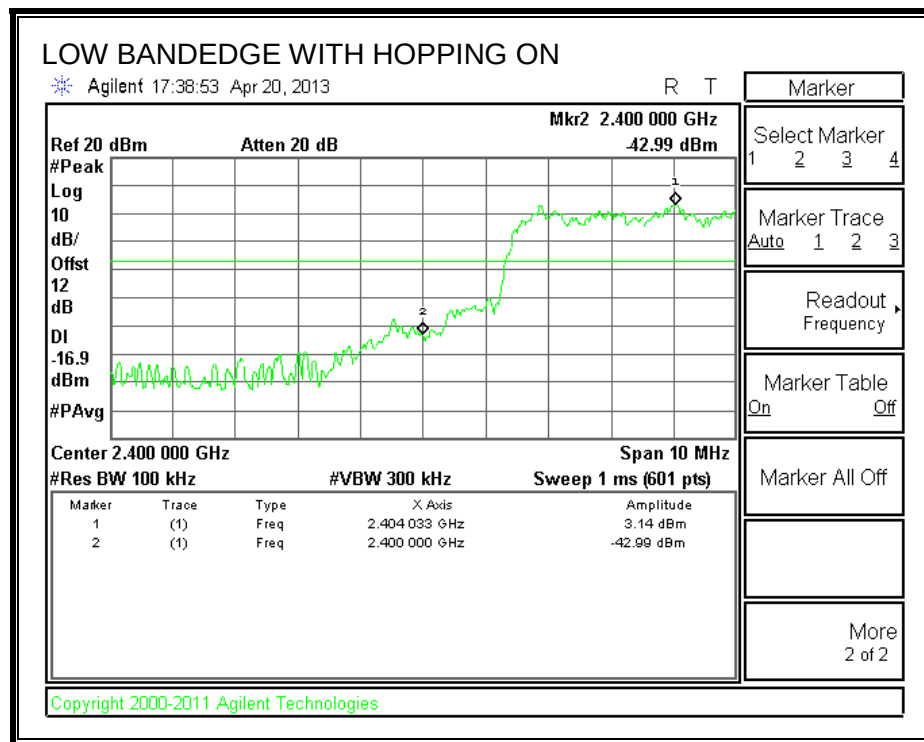
SPURIOUS EMISSIONS, MID CHANNEL



SPURIOUS EMISSIONS, HIGH CHANNEL



SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

Frequency Range (MHz)	Field Strength Limit (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. 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.

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 10 Hz for average measurements.

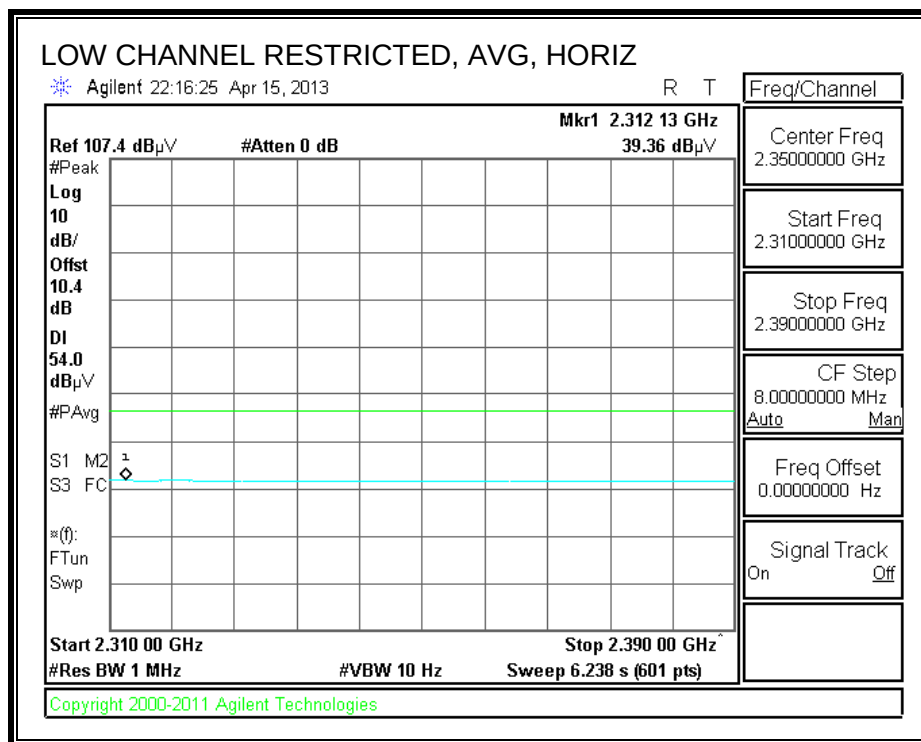
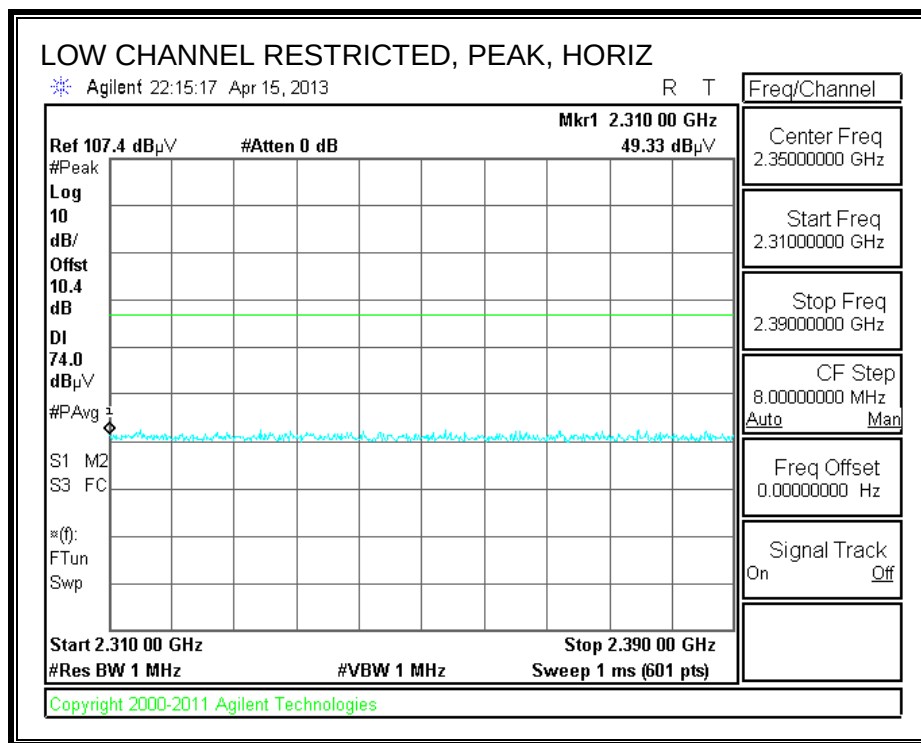
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

The 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.

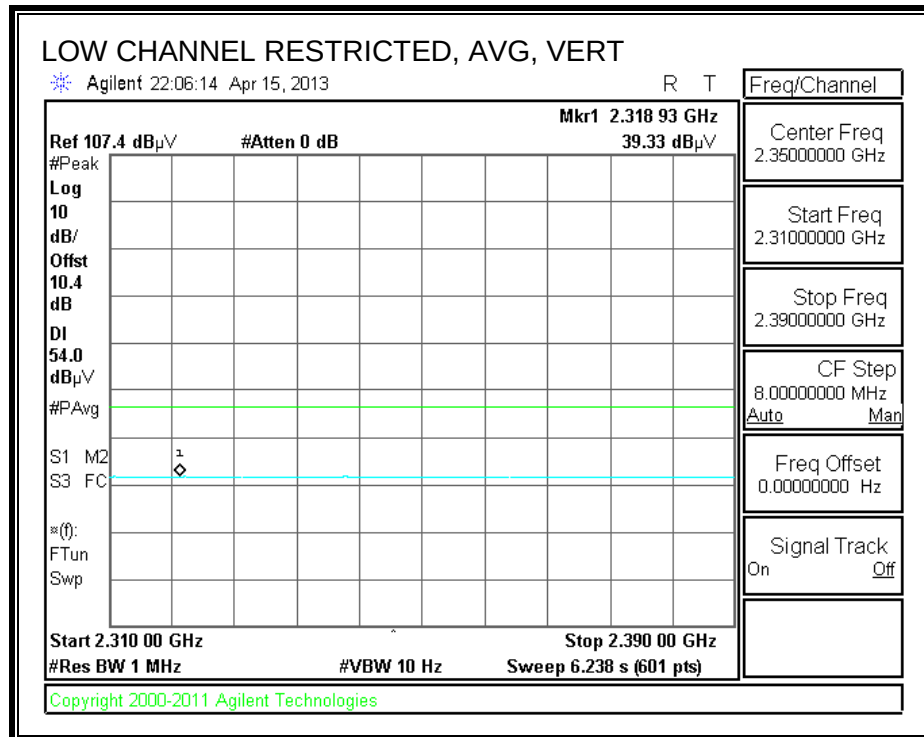
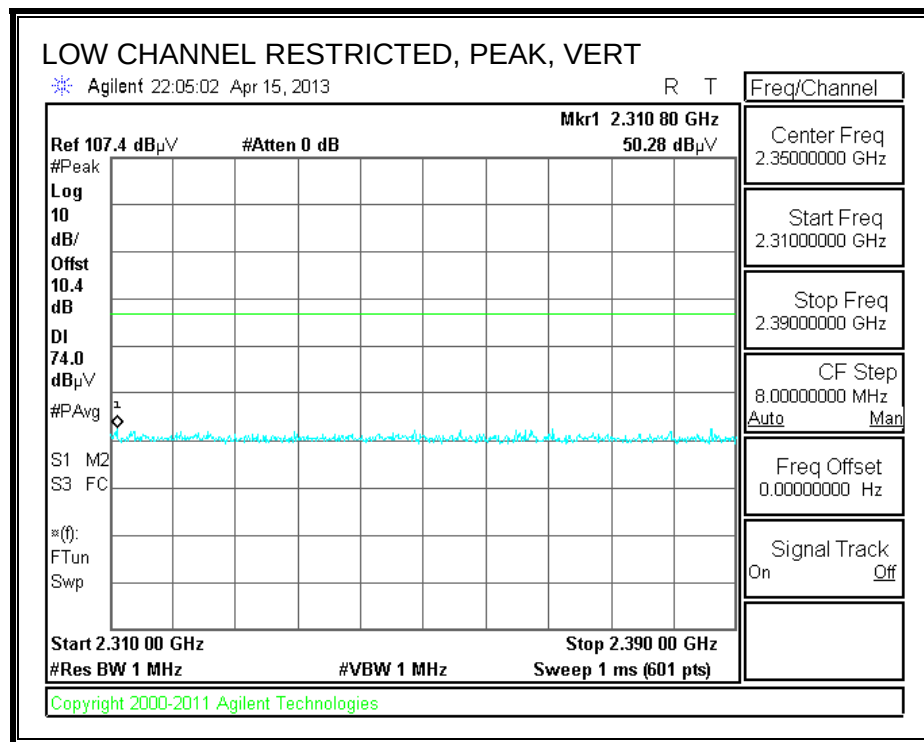
8.2. TRANSMITTER ABOVE 1 GHz

8.2.1. BASIC DATA RATE GFSK MODULATION

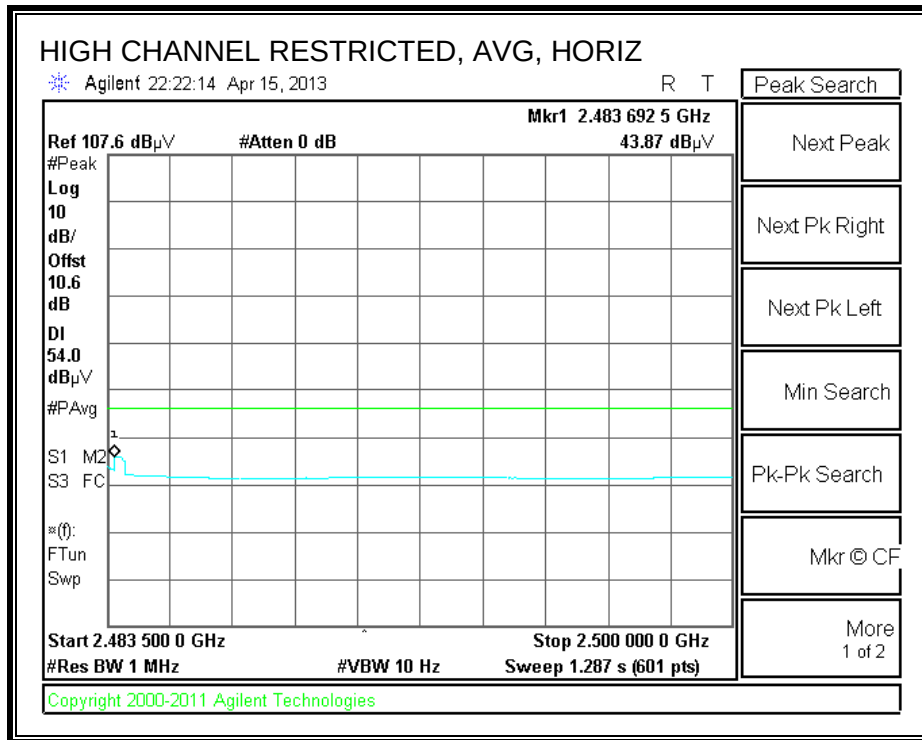
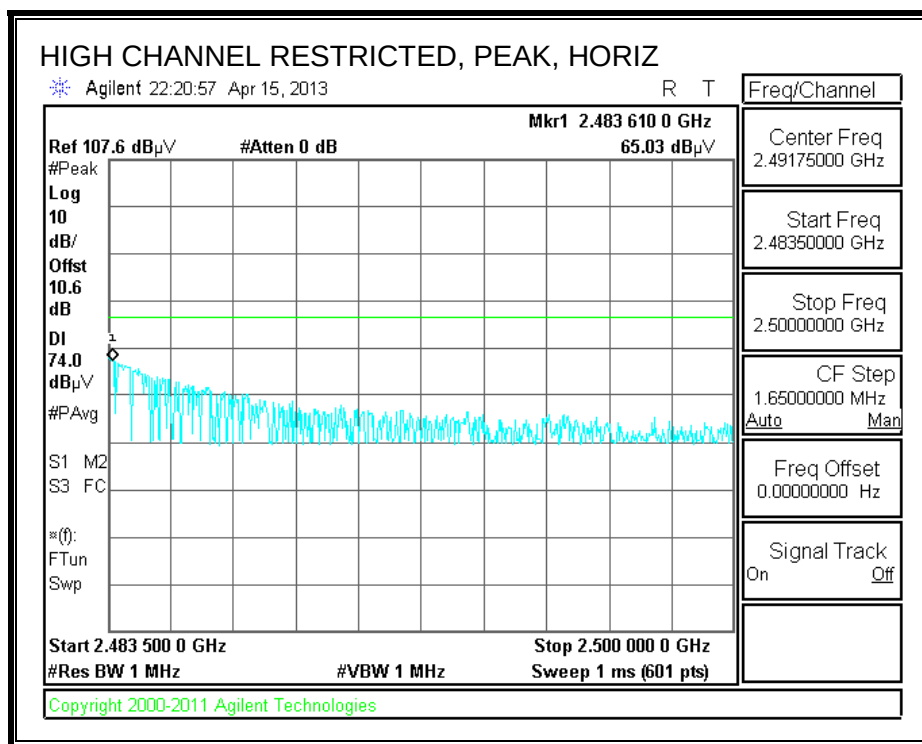
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



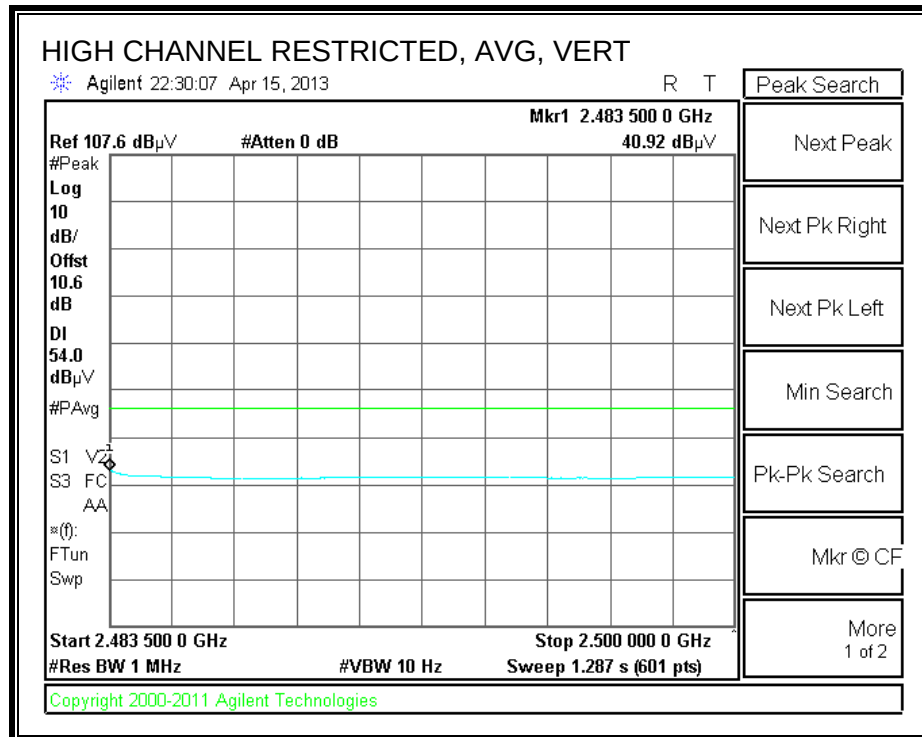
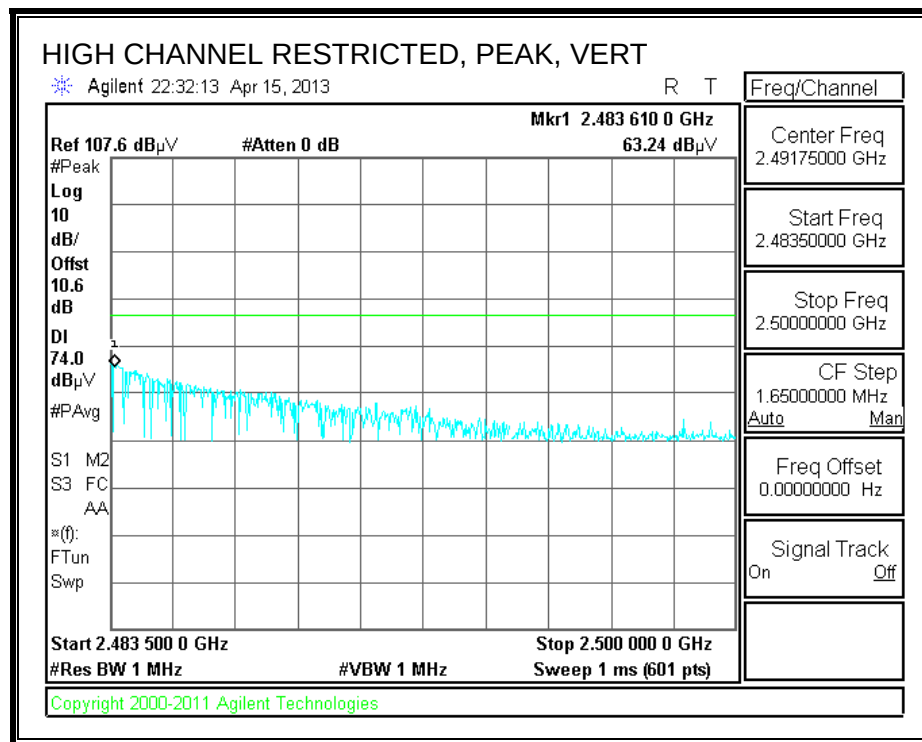
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



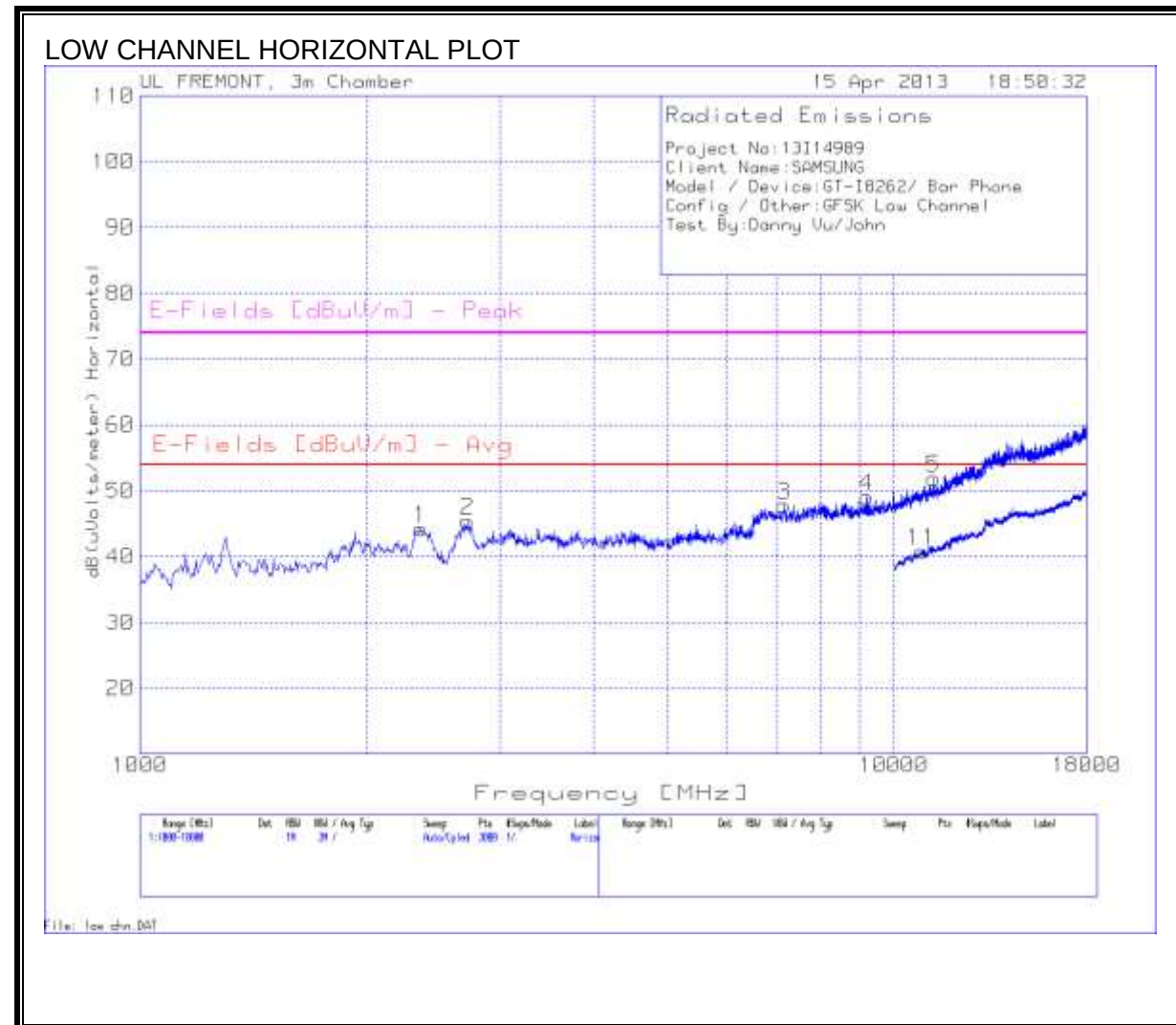
RESTRICTED BANEDGE (HIGH CHANNEL, HORIZONTAL)

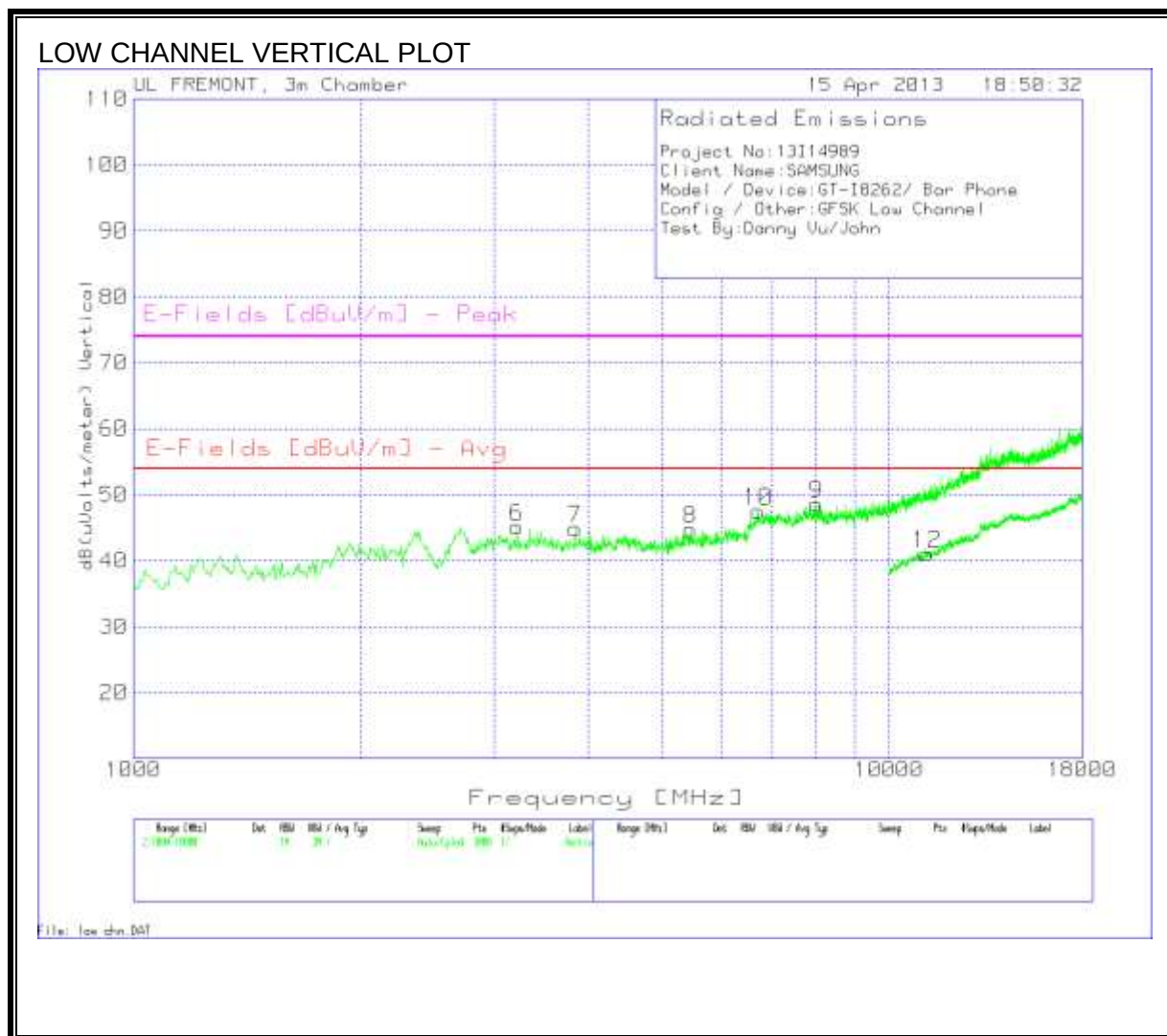


RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS





Project No:	13I14989
Client Name:	SAMSUNG
Model / Device:	GT-I8262/ Bar Phone
Config / Other:	GFSK Low Channel
Test By:	Danny Vu/John

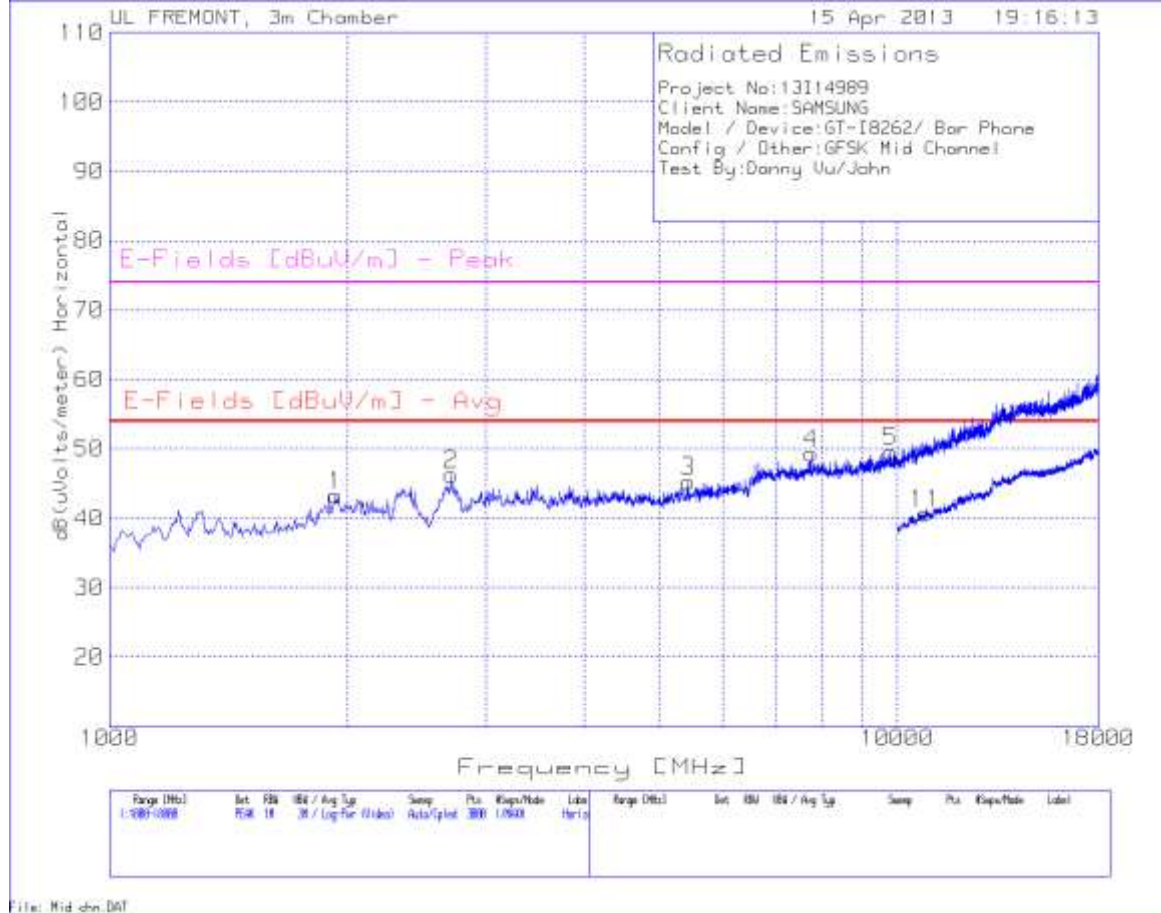
Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	1300.133	45.22	PK	30.2	-32.9	0.4	42.92	54	-11.08	74	-31.08		
2	1928.714	42.34	PK	31.3	-30.8	0.9	43.74	54	-10.26	74	-30.26		
3	2687.542	40.66	PK	32.6	-29	0.9	45.16	54	-8.84	74	-28.84		
4	9199.867	34.28	PK	36.3	-21.9	0.4	49.08	54	-4.92	74	-24.92		
5	2463.857	37.64	PK	32.2	-29.6	0.9	41.14	54	-12.86	74	-32.86		

[illegible]

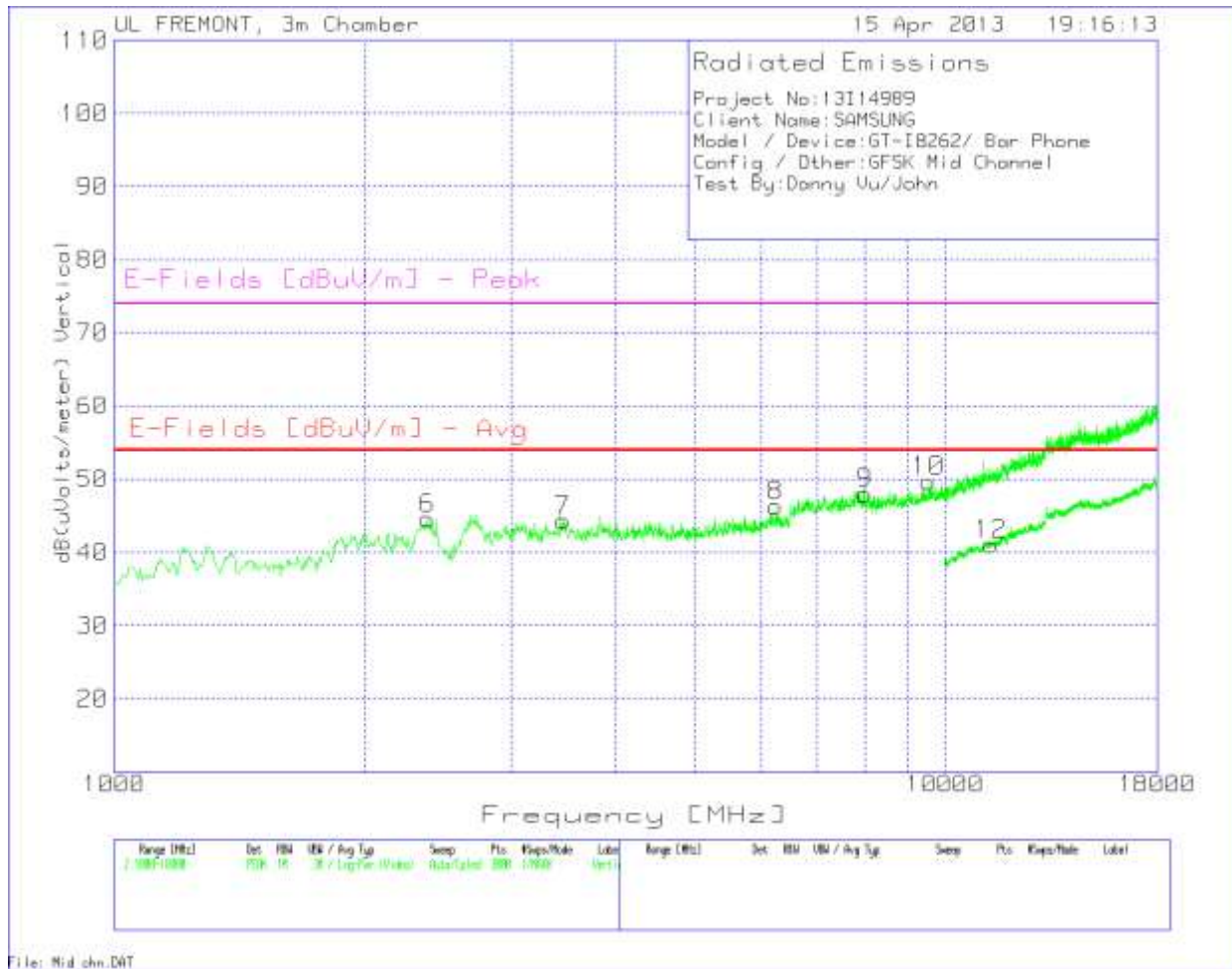
Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
10	11299.35	22.06	PK	38	-19.5	0.5	41.06	54	-12.94	74	-32.94		

Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
11	11255.372	22.14	PK	37.9	-19.5	0.7	41.24	54	-12.76	74	-32.76		

MID CHANNEL HORIZONTAL PLOT



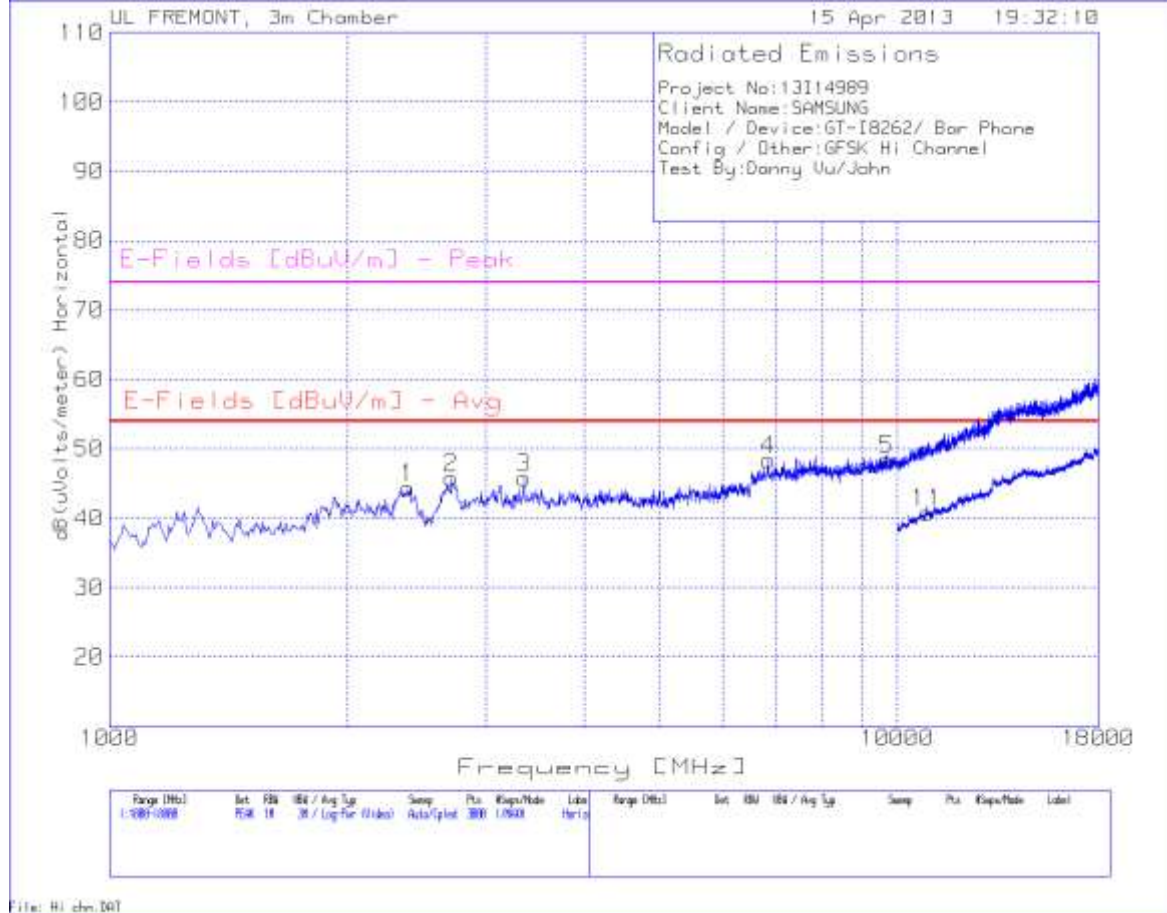
MID CHANNEL VERTICAL PLOT

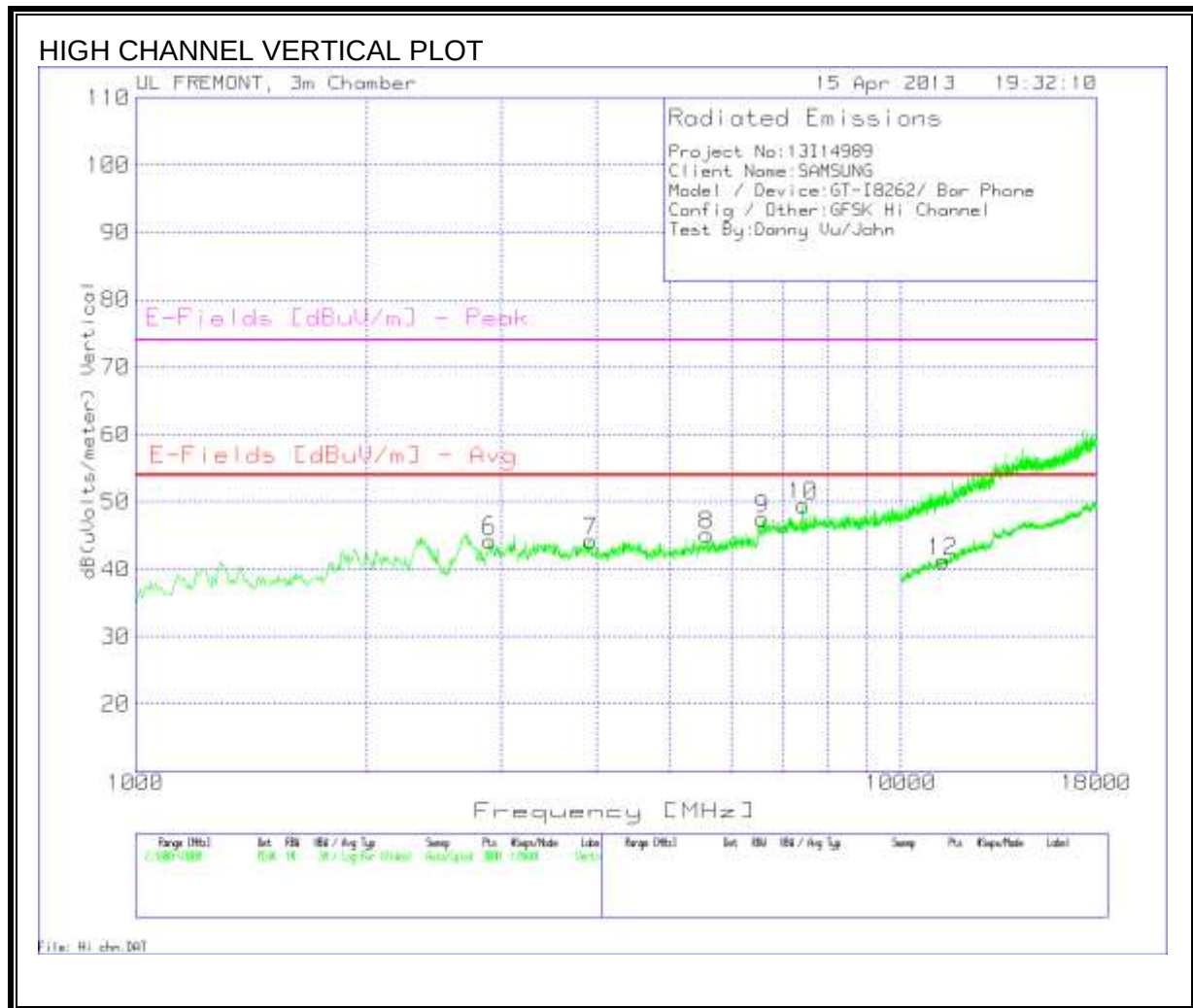


Project No:	13I14989
Client Name:	SAMSUNG
Model / Device:	GT-I8262/ Bar Phone
Config / Other:	GFSK Low Channel
Test By:	Danny Vu/John

Vertical 10000 - 18000MHz													
Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
12	11347.326	21.84	PK	38	-19.5	0.7	41.04	54	-12.96	74	-32.96		

HIGH CHANNEL HORIZONTAL PLOT





HIGH CHANNEL HORIZONTAL AND VERTICAL DATA

Project No:1314989														
Client Name:SAMSUNG														
Model / Device:GT-I8262/ Bar Phone														
Config / Other:GFSK Hi Channel														
Test By:Danny Vu/John														

Horizontal 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	2387.408	41.1	PK	32.1	-29.7	0.9	44.4	54	-9.6	74	-29.6		
2	2715.856	41.34	PK	32.6	-29	0.9	45.84	54	-8.16	74	-28.16		
3	3355.763	40	PK	32.9	-27.6	0.5	45.8	54	-8.2	74	-28.2		
4	6855.43	35.66	PK	35.6	-23.2	0.3	48.36	54	-5.64	74	-25.64		
5	9709.527	32.8	PK	36.9	-21.7	0.4	48.4	54	-5.6	74	-25.6		

Vertical 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
6	2897.069	39.37	PK	32.7	-28.7	0.9	44.27	54	-9.73	74	-29.73		
7	3933.378	37.05	PK	33.3	-26.4	0.3	44.25	54	-9.75	74	-29.75		
8	5575.616	34.52	PK	34.8	-24.4	0.2	45.12	54	-8.88	74	-28.88		
9	6594.937	35.21	PK	35.6	-23.5	0.2	47.51	54	-6.49	74	-26.49		
10	7444.37	36.43	PK	35.7	-23	0.3	49.43	54	-4.57	74	-24.57		

Horizontal 10000 - 18000MHz

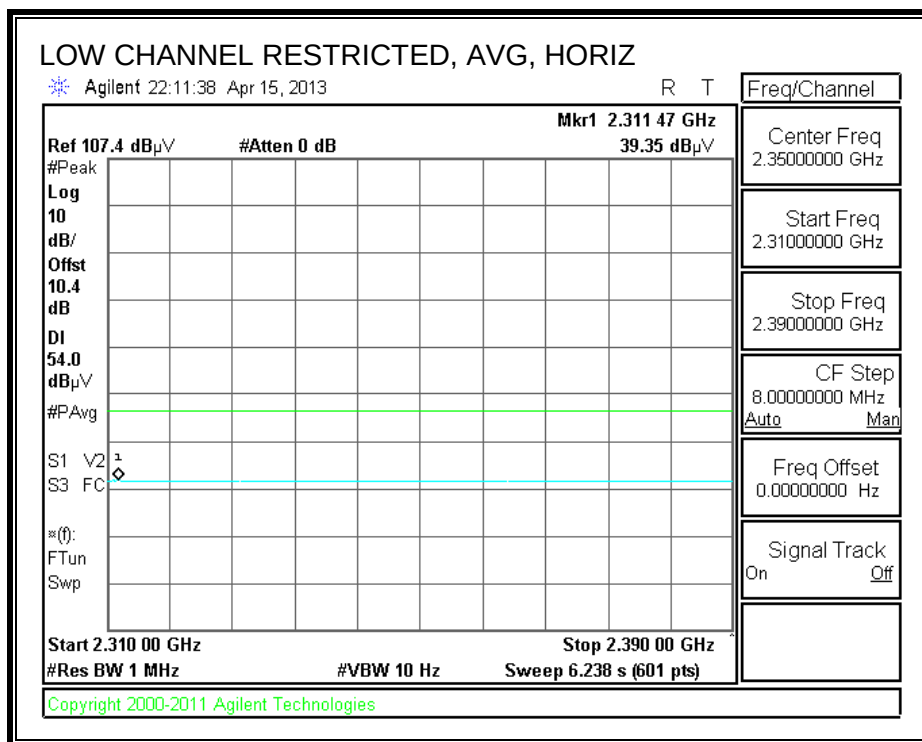
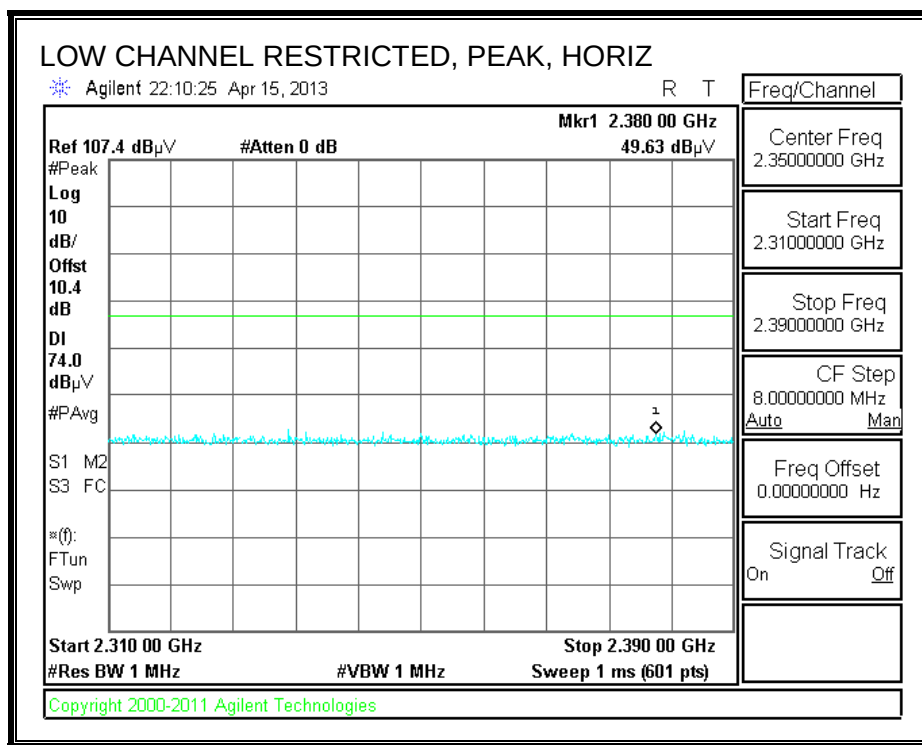
Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
11	10907.546	22.16	PK	37.9	-20	0.7	40.76	54	-13.24	74	-33.24		

Vertical 10000 - 18000MHz

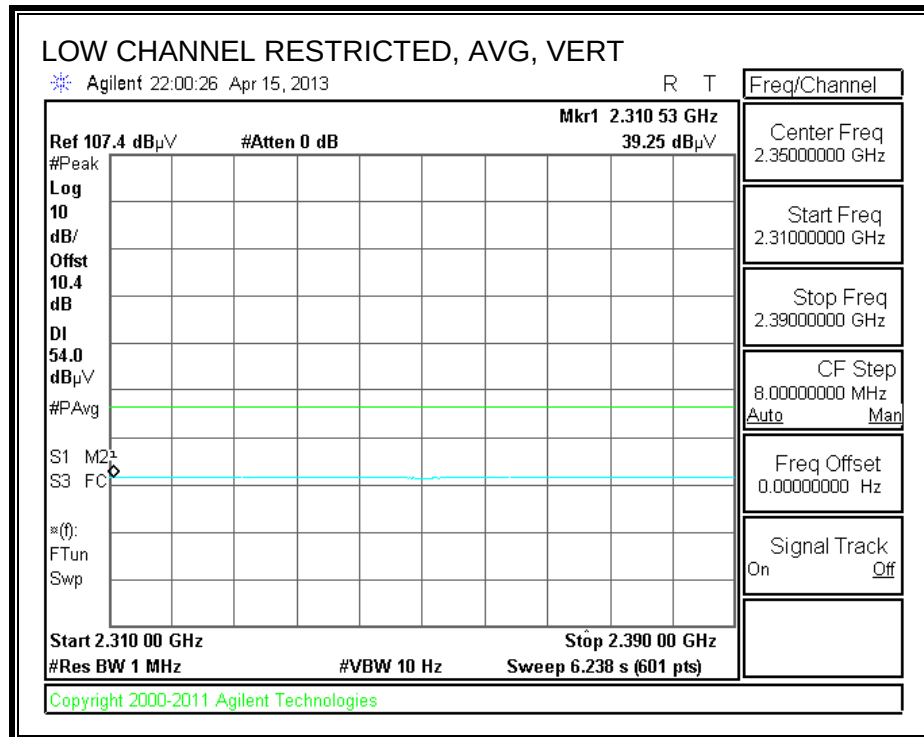
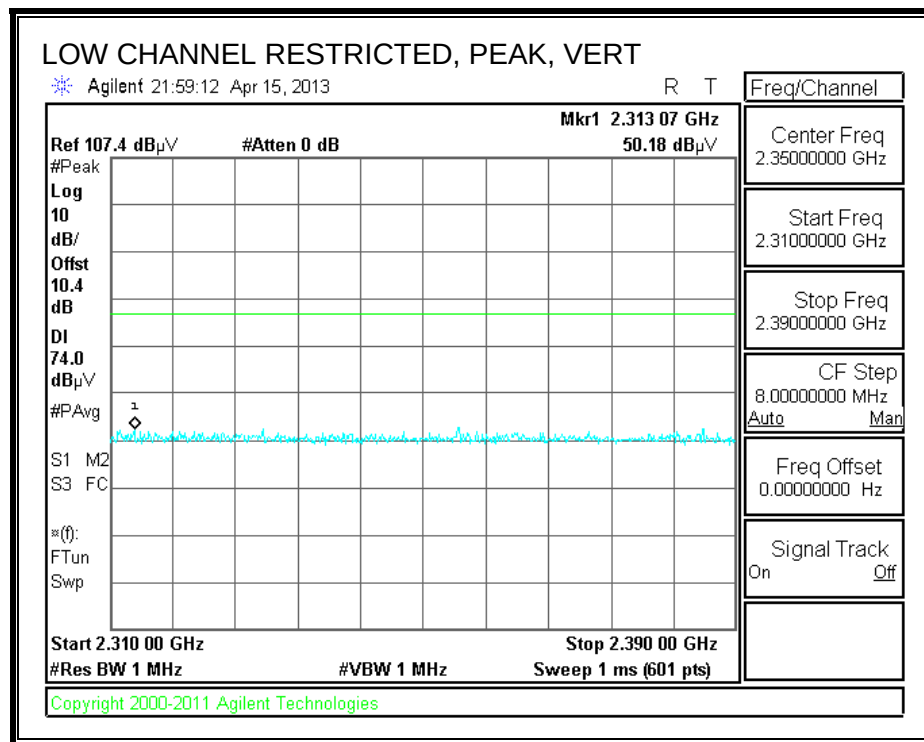
Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
12	11355.322	22.02	PK	38.1	-19.5	0.6	41.22	54	-12.78	74	-32.78		

8.2.2. ENHANCED DATA RATE 8PSK MODULATION

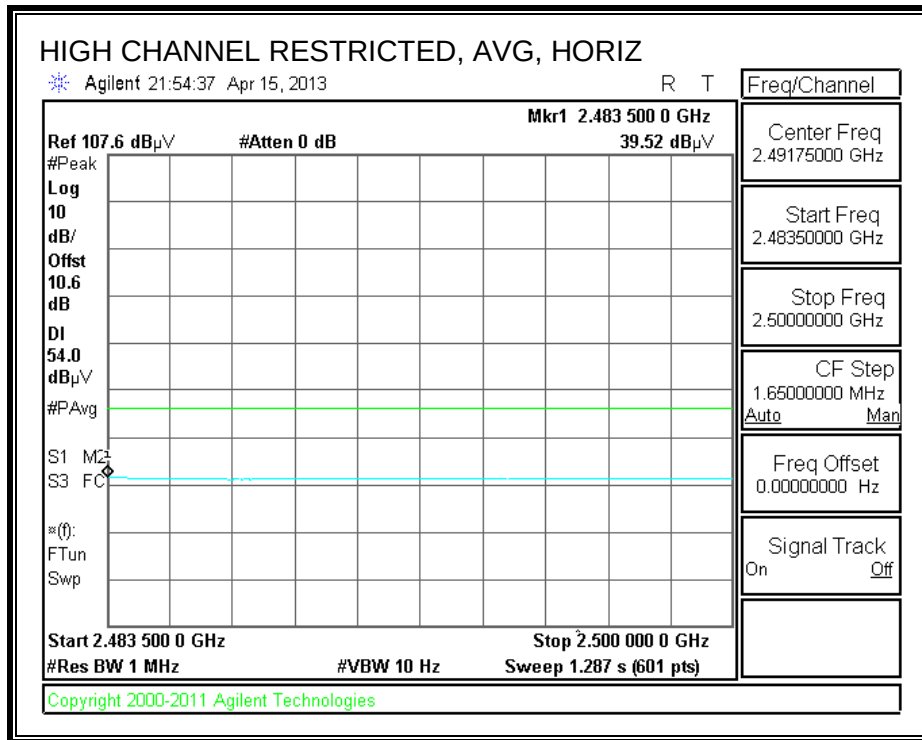
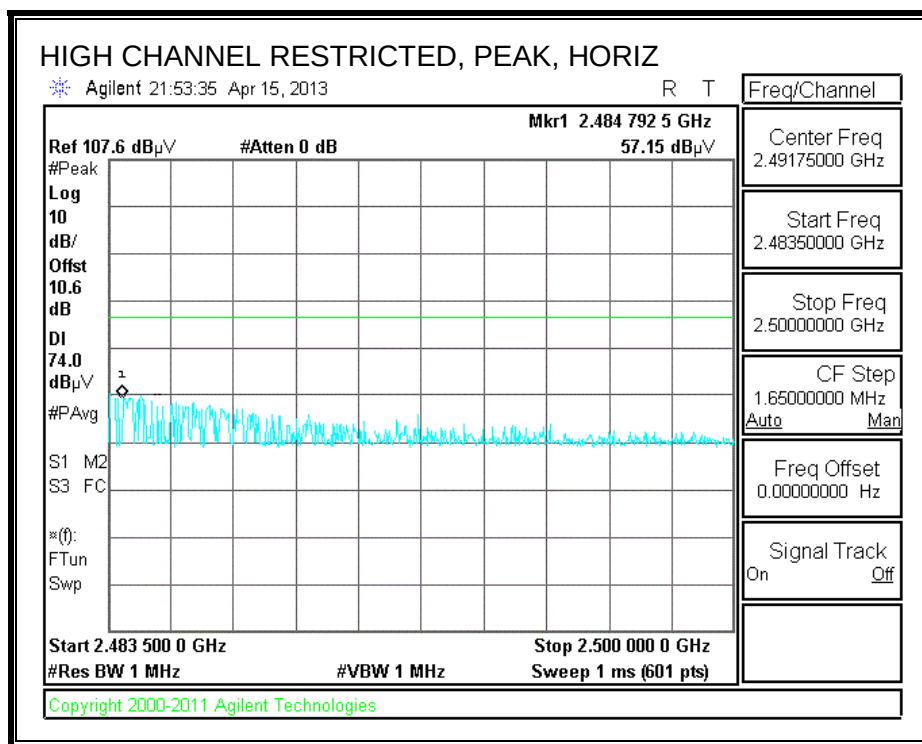
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



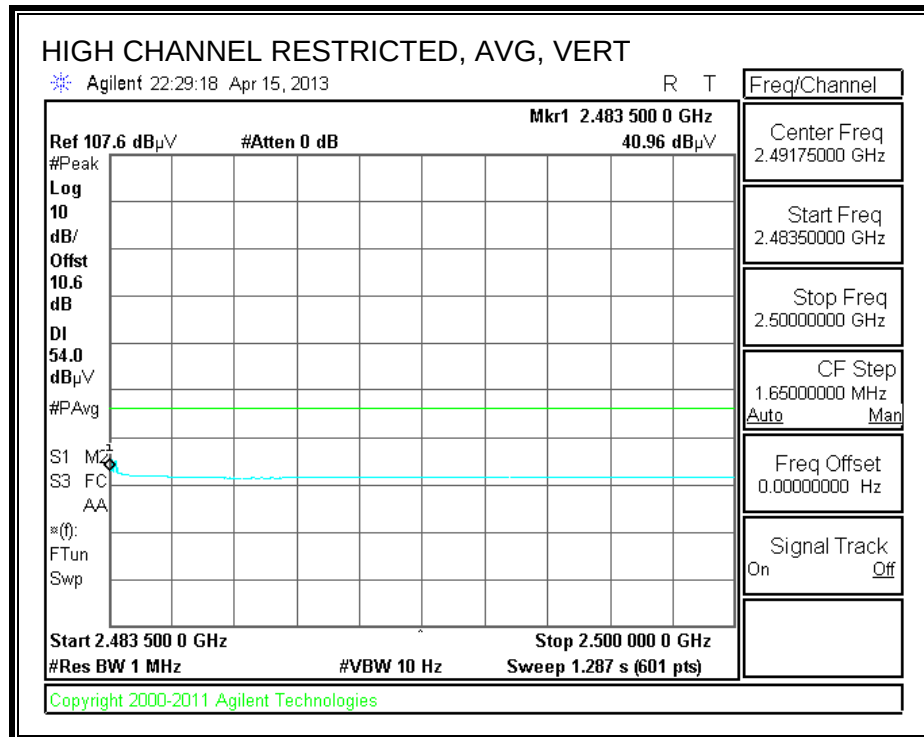
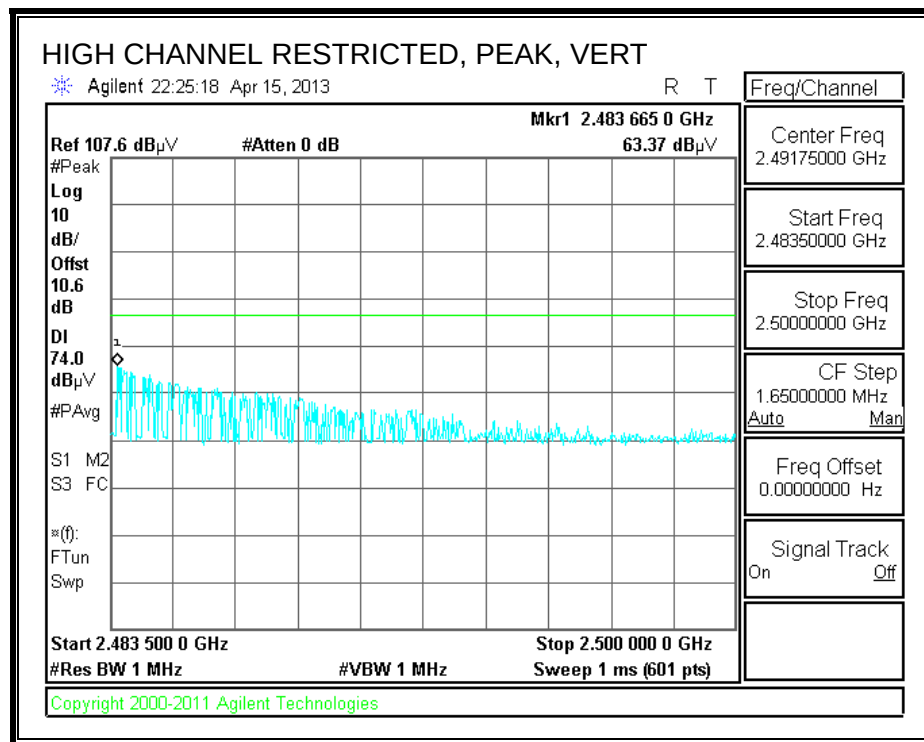
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



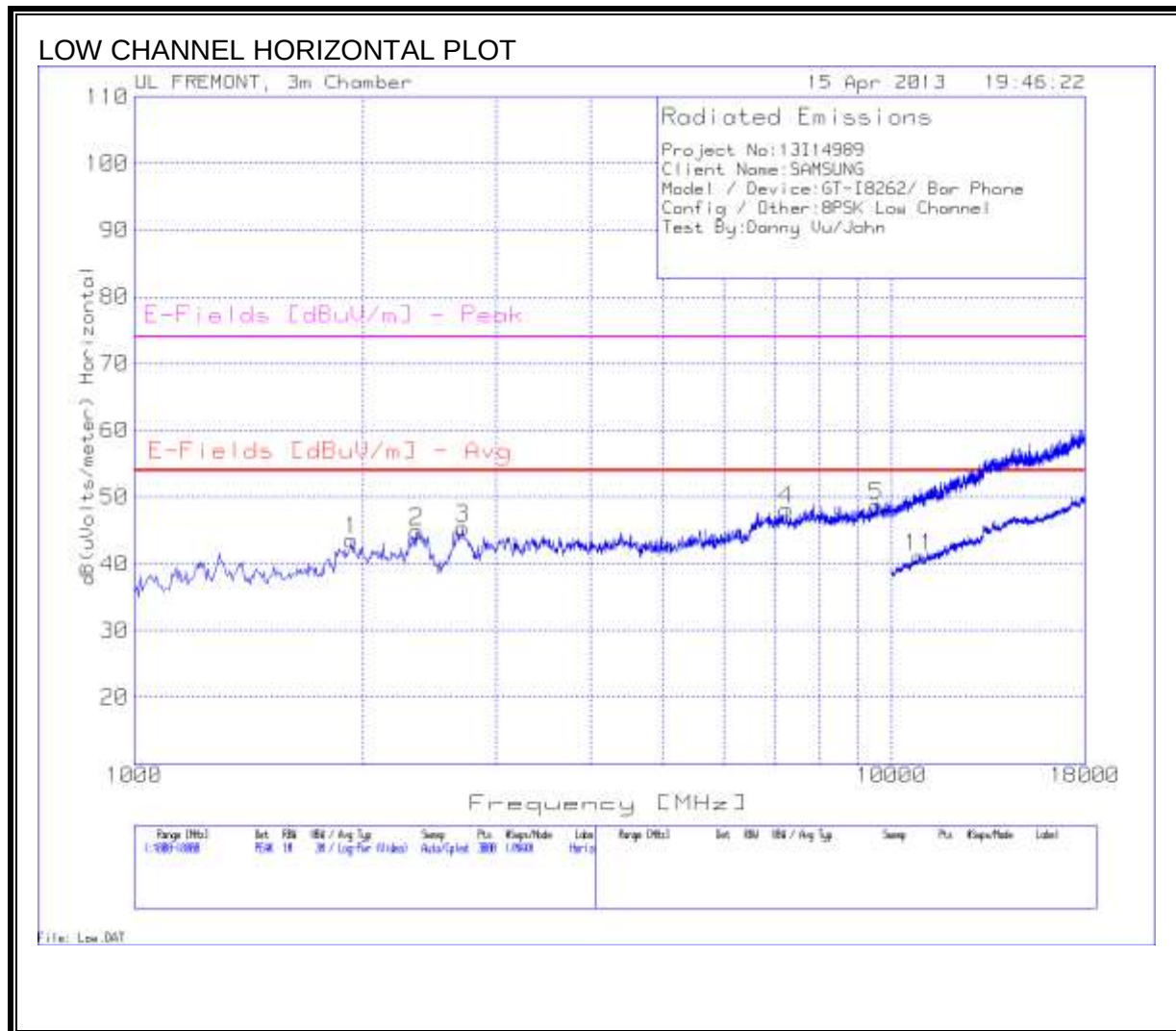
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

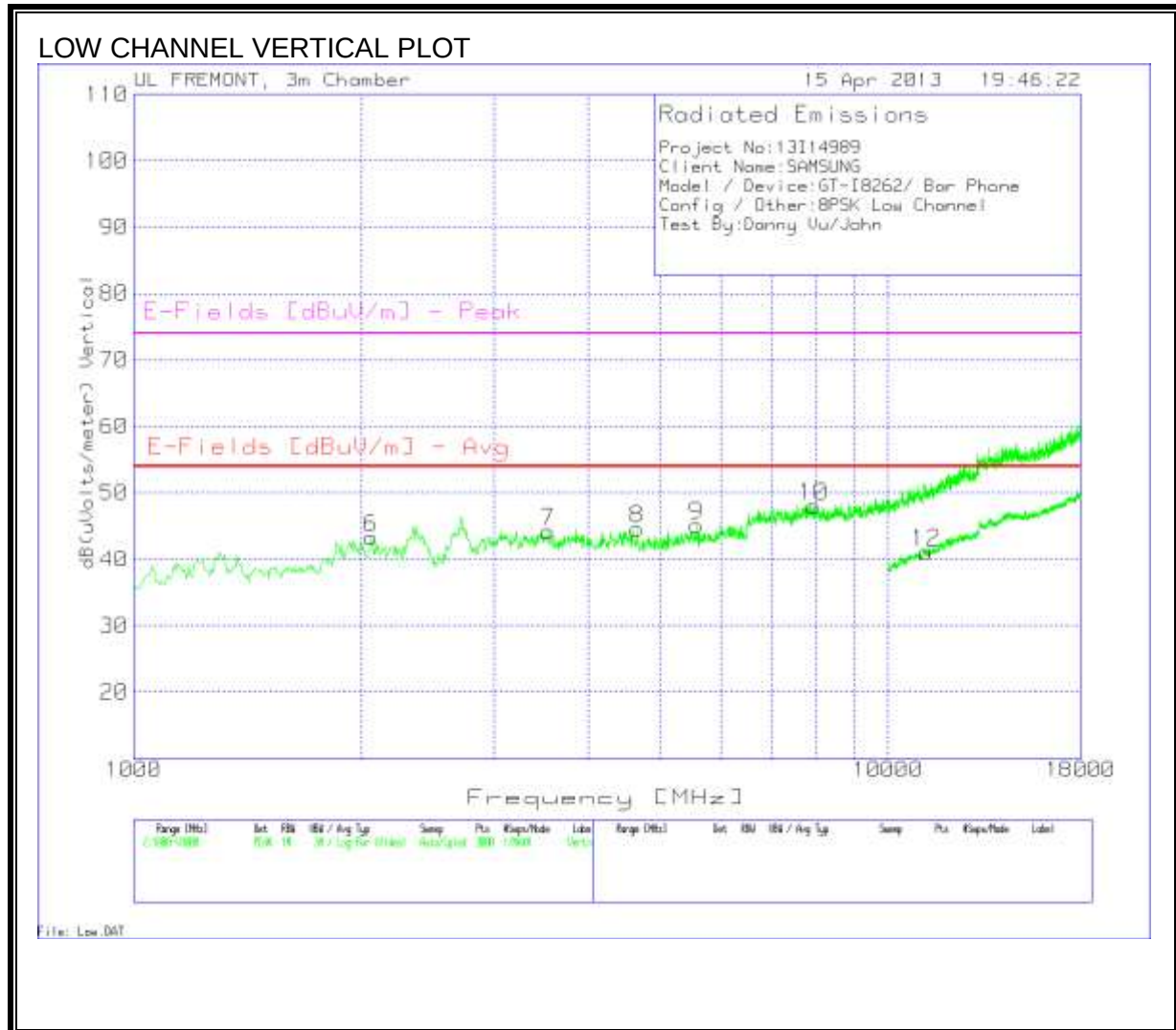


RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



HARMONICS AND SPURIOUS EMISSIONS

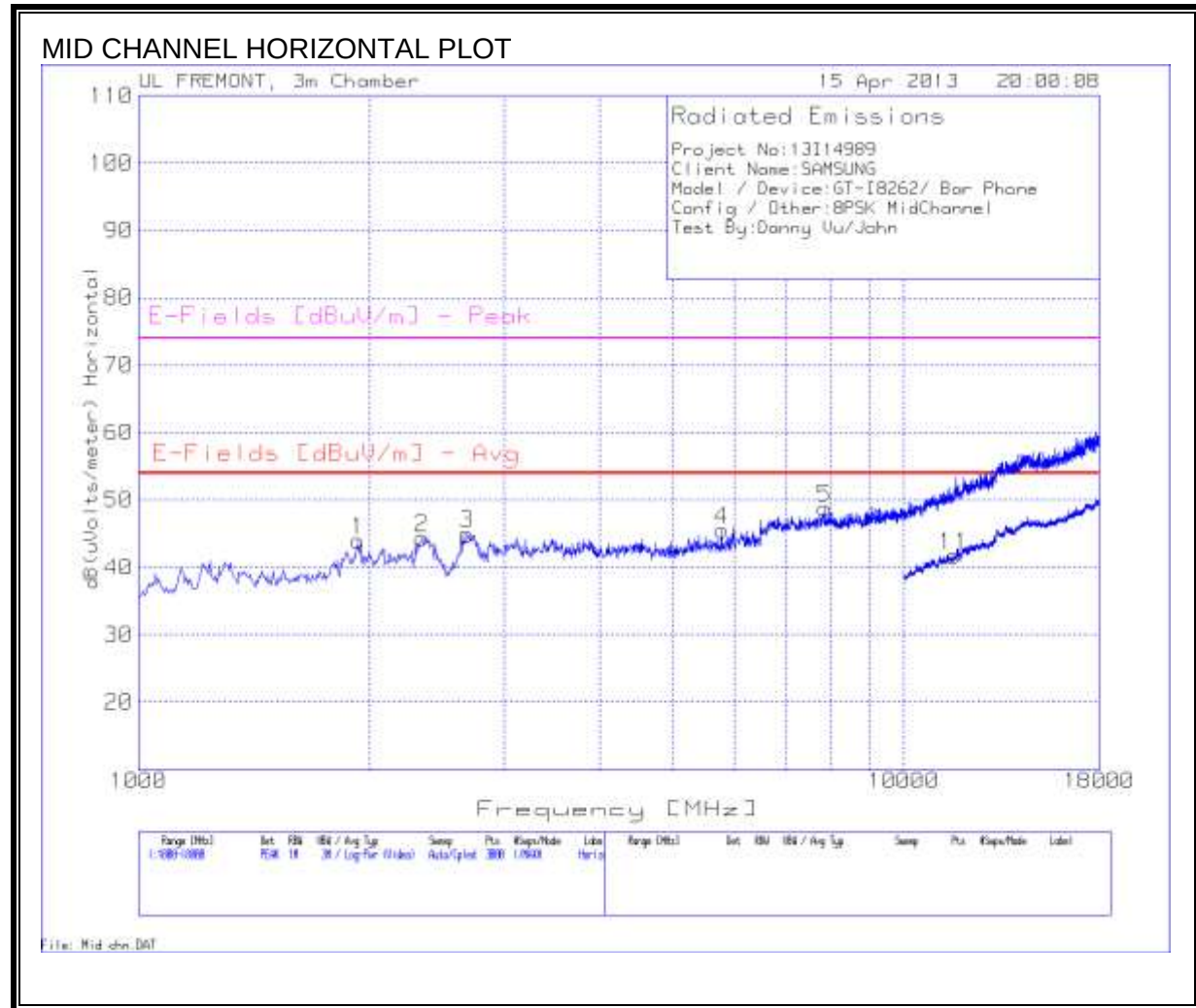


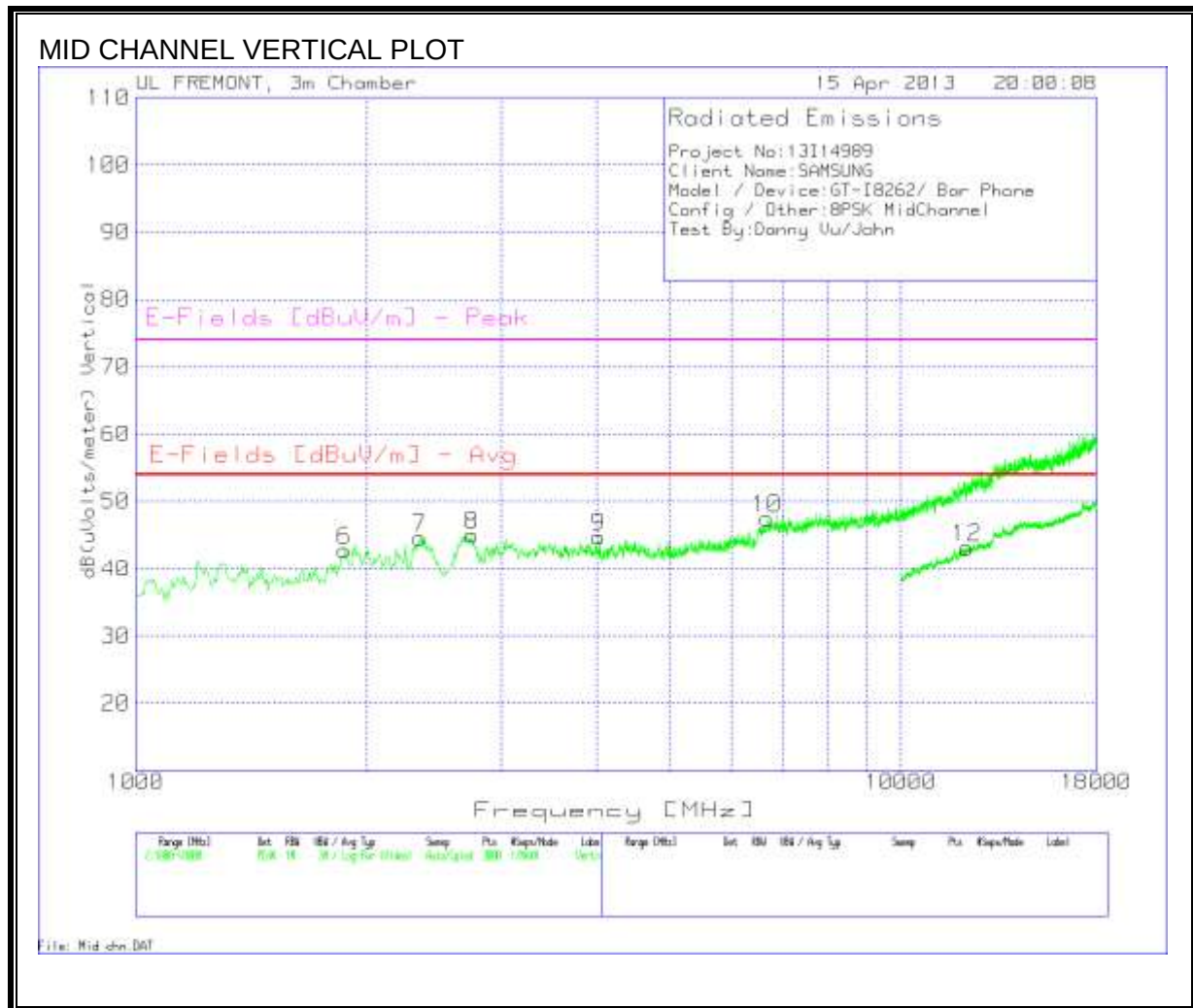


Project No:	13I14989
Client Name:	SAMSUNG
Model / Device:	GT-I8262/ Bar Phone
Config / Other:	8PSK Low Channel
Test By:	Danny Vu/John

Vertical 1000 - 18000MHz													
Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
6	2064.624	41.33	PK	31.6	-30.5	0.9	43.33	54	-10.67	74	-30.67		
7	3542.638	37.9	PK	33	-27.1	0.4	44.2	54	-9.8	74	-29.8		
8	4646.902	35.57	PK	34.1	-25.4	0.3	44.57	54	-9.43	74	-29.43		
9	5575.616	34.57	PK	34.8	-24.4	0.2	45.17	54	-8.83	74	-28.83		
10	7971.019	34.57	PK	35.7	-22.5	0.3	48.07	54	-5.93	74	-25.93		

Vertical 10000 - 18000MHz													
Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
12	11223.388	22.08	PK	37.9	-19.6	0.7	41.08	54	-12.92	74	-32.92		





MID CHANNEL HORIZONTAL AND VERTICAL DATA

Project No:13U14989														
Client Name:SAMSUNG														
Model / Device:GT-I8262/ Bar Phone														
Config / Other:8PSK MidChannel														
Test By:Danny Vu/John														

Horizontal 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
1	1934.377	42.44	PK	31.4	-30.8	0.9	43.94	54	-10.06	74	-30.06		
2	2342.105	41.09	PK	32	-29.7	0.9	44.29	54	-9.71	74	-29.71		
3	2687.542	40.44	PK	32.6	-29	0.9	44.94	54	-9.06	74	-29.06		
4	5779.48	34.67	PK	34.9	-24.3	0.2	45.47	54	-8.53	74	-28.53		
5	7880.413	35.31	PK	35.8	-22.6	0.3	48.81	54	-5.19	74	-25.19		

Vertical 1000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
6	1872.085	42.09	PK	30.9	-31	0.8	42.79	54	-11.21	74	-31.21		
7	2347.768	41.46	PK	32	-29.7	0.9	44.66	54	-9.34	74	-29.34		
8	2749.833	40.26	PK	32.7	-28.9	0.9	44.96	54	-9.04	74	-29.04		
9	4029.647	37.36	PK	33.4	-26.3	0.3	44.76	54	-9.24	74	-29.24		
10	6679.88	35.05	PK	35.6	-23.4	0.3	47.55	54	-6.45	74	-26.45		

Horizontal 10000 - 18000MHz

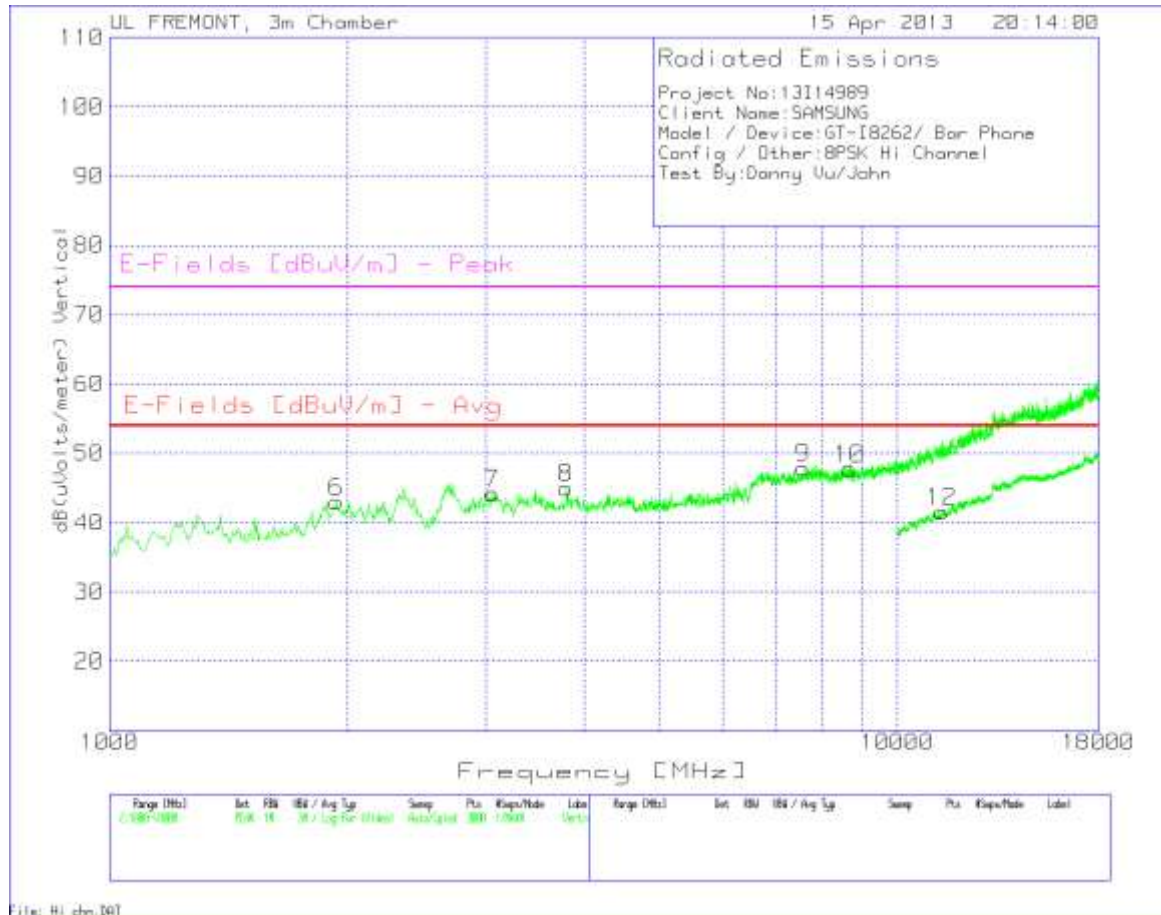
Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
11	11631.184	21.83	PK	38.5	-19.3	0.7	41.73	54	-12.27	74	-32.27		

Vertical 10000 - 18000MHz

Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
12	12202.899	22.22	PK	39.1	-18.8	0.6	43.12	54	-10.88	74	-30.88		

File: H1_chm.DAT

HIGH CHANNEL VERTICAL PLOT



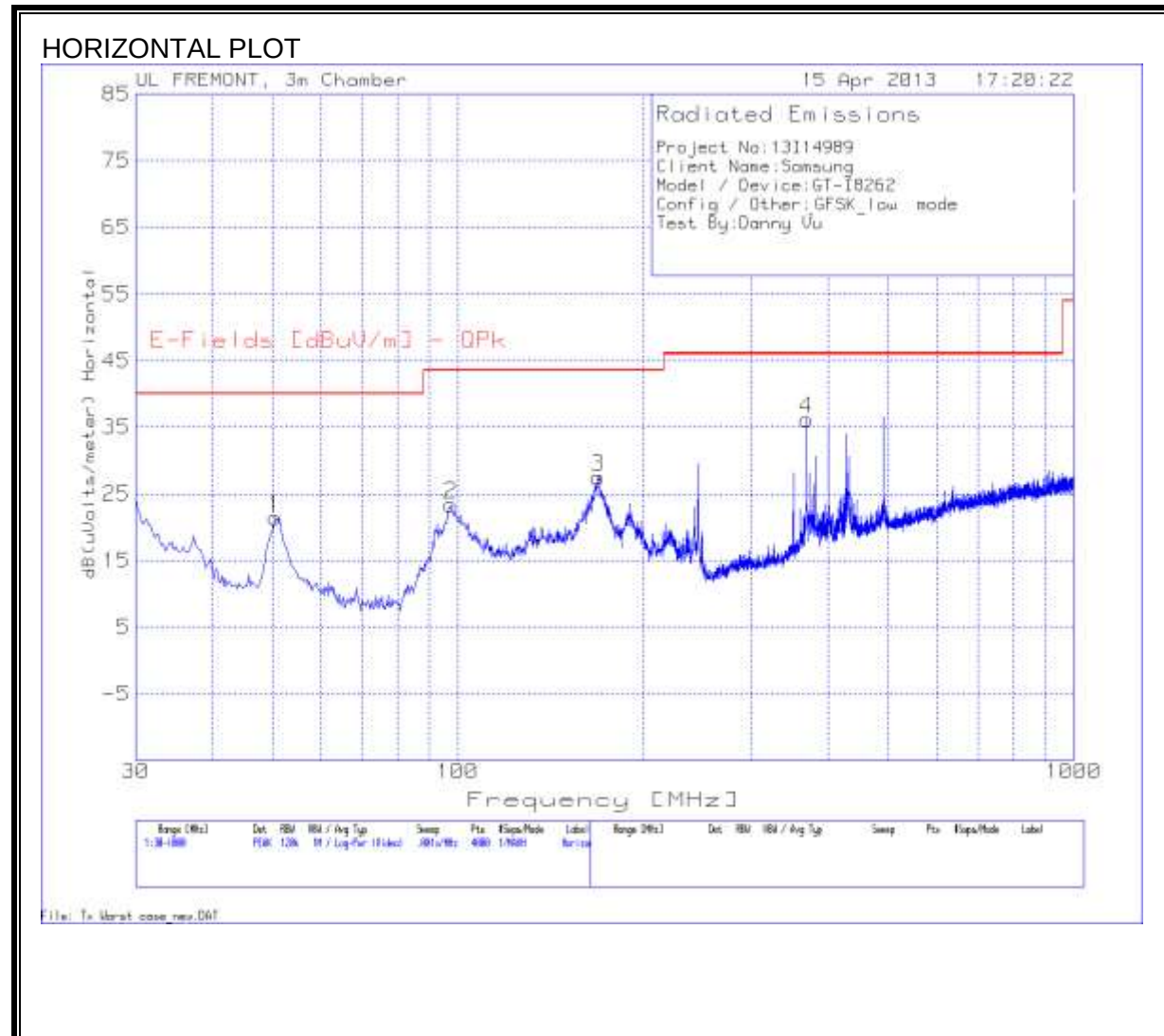
Project No:	13I14989
Client Name:	SAMSUNG
Model / Device:	GT-I826Z/ Bar Phone
Config / Other:	8PSK Hi Channel
Test By:	Danny Vu/John

[illegible]

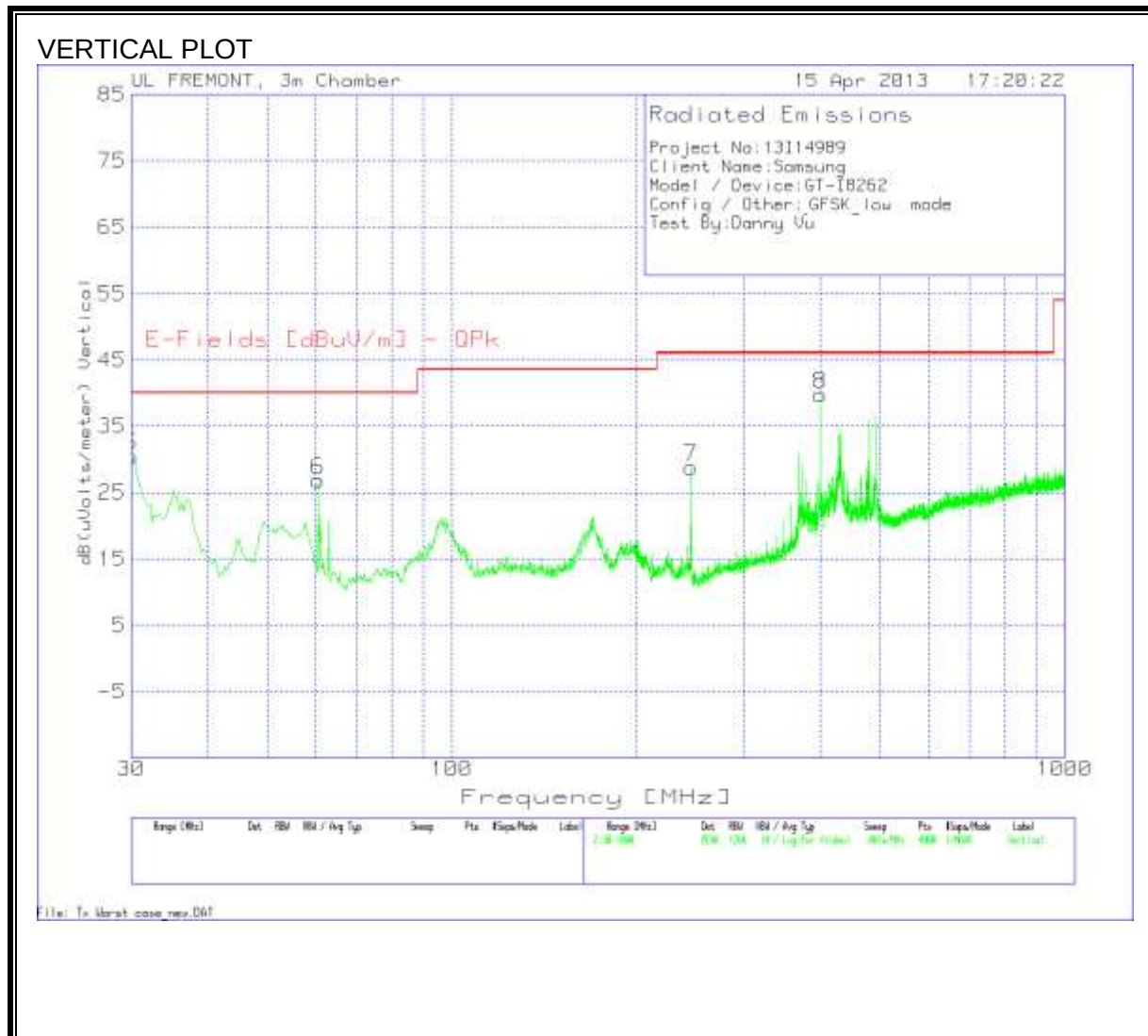
Vertical 10000 - 18000MHz													
Marker No.	Test Frequency	Meter Reading	Detector	T119 Ant Factor [dB/m]	T34 Preamp/ Cable Loss [dB]	T160 BRF [dB]	dB(uVolt s/meter)	E-Fields [dBuV/m] - Avg	Margin (dB)	E-Fields [dBuV/m] - Peak	Margin (dB)	Height [cm]	Polarity
12	11379.31	22.32	PK	38.1	-19.5	0.7	41.62	54	-12.38	74	-32.38		

8.3. 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)



HORIZONTAL AND VERTICAL DATA

Project No:13I14989									
Client Name:Samsung									
Model / Device:GT-I8262									
Config / Other:GFSK low mode									
Test By:Danny Vu									

Horizontal 30 - 1000MHz										
Marker No.	Test Frequency	Meter Reading	Detector	T130 Ant Factor [dB/m]	T64 preamp/ cable loss [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - QPk	Margin (dB)	Height [cm]	Polarity
1	50.5971	41.6	PK	7.3	-27.5	21.4	40	-18.6	100	Horz
2	97.6068	40.94	PK	9.5	-27.1	23.34	43.52	-20.18	100	Horz
3	169.0907	42.3	PK	11.8	-26.6	27.5	43.52	-16.02	100	Horz
4	368.5186	46.6	PK	15	-25.4	36.2	46.02	-9.82	100	Horz

Vertical 30 - 1000MHz										
Marker No.	Test Frequency	Meter Reading	Detector	T130 Ant Factor [dB/m]	T64 preamp/ cable loss [dB]	dB(uV/s/meter)	E-Fields [dBuV/m] - QPk	Margin (dB)	Height [cm]	Polarity
5	30	37.32	PK	20.9	-27.7	30.52	40	-9.48	100	Vert
6	60.5321	46.73	PK	7.5	-27.3	26.93	40	-13.07	100	Vert
7	245.6633	43.24	PK	11.5	-25.9	28.84	46.02	-17.18	100	Vert
8	400.02	49.55	PK	15.6	-25.3	39.85	46.02	-6.17	100	Vert

9. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 7.2.2

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

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

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

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

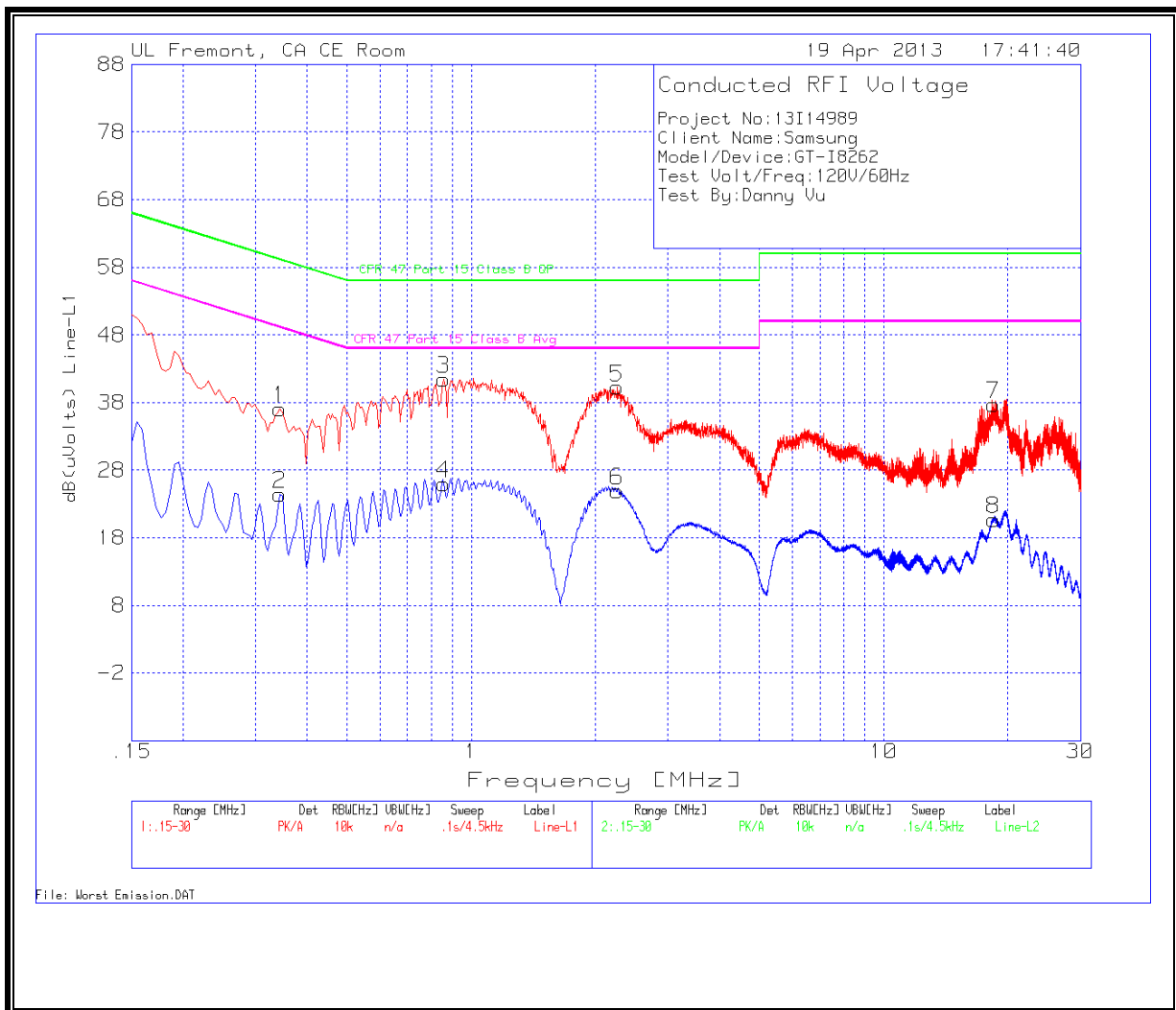
Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

6 WORST EMISSIONS

Project No:13I14989									
Client Name:Samsung									
Model/Device:GT-I8262									
Test Volt/Freq:120V/60Hz									
Test By:Danny Vu									
Line-L1 .15 - 30MHz									
Test Frequency	Meter Reading	Detector	T24 IL L1.TXT (dB)	LC Cables 1&3.TXT (dB)	dB(uVols)	CFR 47 Part 15 Class B QP	Margin	CFR 47 Part 15 Class B Avg	Margin
0.3435	37.02	PK	0.1	0	37.12	59.1	-21.98	-	-
0.3435	24.39	Av	0.1	0	24.49	-	-	49.1	-24.61
0.8565	41.36	PK	0.1	0	41.46	56	-14.54	-	-
0.8565	25.91	Av	0.1	0	26.01	-	-	46	-19.99
2.2605	40.03	PK	0.1	0.1	40.23	56	-15.77	-	-
2.2605	24.78	Av	0.1	0.1	24.98	-	-	46	-21.02
18.492	37.35	PK	0.2	0.2	37.75	60	-22.25	-	-
18.492	20.28	Av	0.2	0.2	20.68	-	-	50	-29.32
Line-L2 .15 - 30MHz									
Test Frequency	Meter Reading	Detector	T24 IL L2.TXT (dB)	LC Cables 2&3.TXT (dB)	dB(uVols)	CFR 47 Part 15 Class B QP	Margin	CFR 47 Part 15 Class B Avg	Margin
0.3435	33.66	PK	0.1	0	33.76	59.1	-25.34	-	-
0.3435	24.53	Av	0.1	0	24.63	-	-	49.1	-24.47
0.807	37.48	PK	0.1	0	37.58	56	-18.42	-	-
0.807	21.15	Av	0.1	0	21.25	-	-	46	-24.75
2.0355	37.24	PK	0.1	0.1	37.44	56	-18.56	-	-
2.0355	20.16	Av	0.1	0.1	20.36	-	-	46	-25.64
19.284	31.32	PK	0.3	0.2	31.82	60	-28.18	-	-
19.284	16.76	Av	0.3	0.2	17.26	-	-	50	-32.74
PK - Peak detector									

LINE 1 RESULTS



LINE 2 RESULTS

