



FCC CFR47 PART 15 SUBPART C

CERTIFICATION TEST REPORT

FOR

GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac, NFC and ANT+

MODEL NUMBER: SM-A800S

FCC ID: A3LSMA800S

REPORT NUMBER: 15I20931-E1

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Prepared for

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Issue			
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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION: GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac, NFC and ANT+
MODEL: SM-A800S
SERIAL NUMBER: 2138045 (Conducted), 2140998 (Radiated)
DATE TESTED: JUNE 8 -18, 2015

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 ANSI C63.10-2009 for FCC, FCC CFR 47 Part 2, FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

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

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

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

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

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

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

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 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 + BT/BLE, DTS/UNII a/b/g/n/ac, NFC and ANT+

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	9.21	8.34
2402 - 2480	Enhanced 8PSK	8.07	6.41

Note: GFSK, Pi/4-DQPSK, 8PSK average Power are all investigated, The GFSK & 8PSK Power are the worst case. Testing is based on this mode to showing compliance. For average power data please refer to section 8.6.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -11.99 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.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	Samsung	ETA0U83KWK	DK1FB05HS	N/A
Earphone	Samsung	N/A	N/A	N/A

I/O CABLES

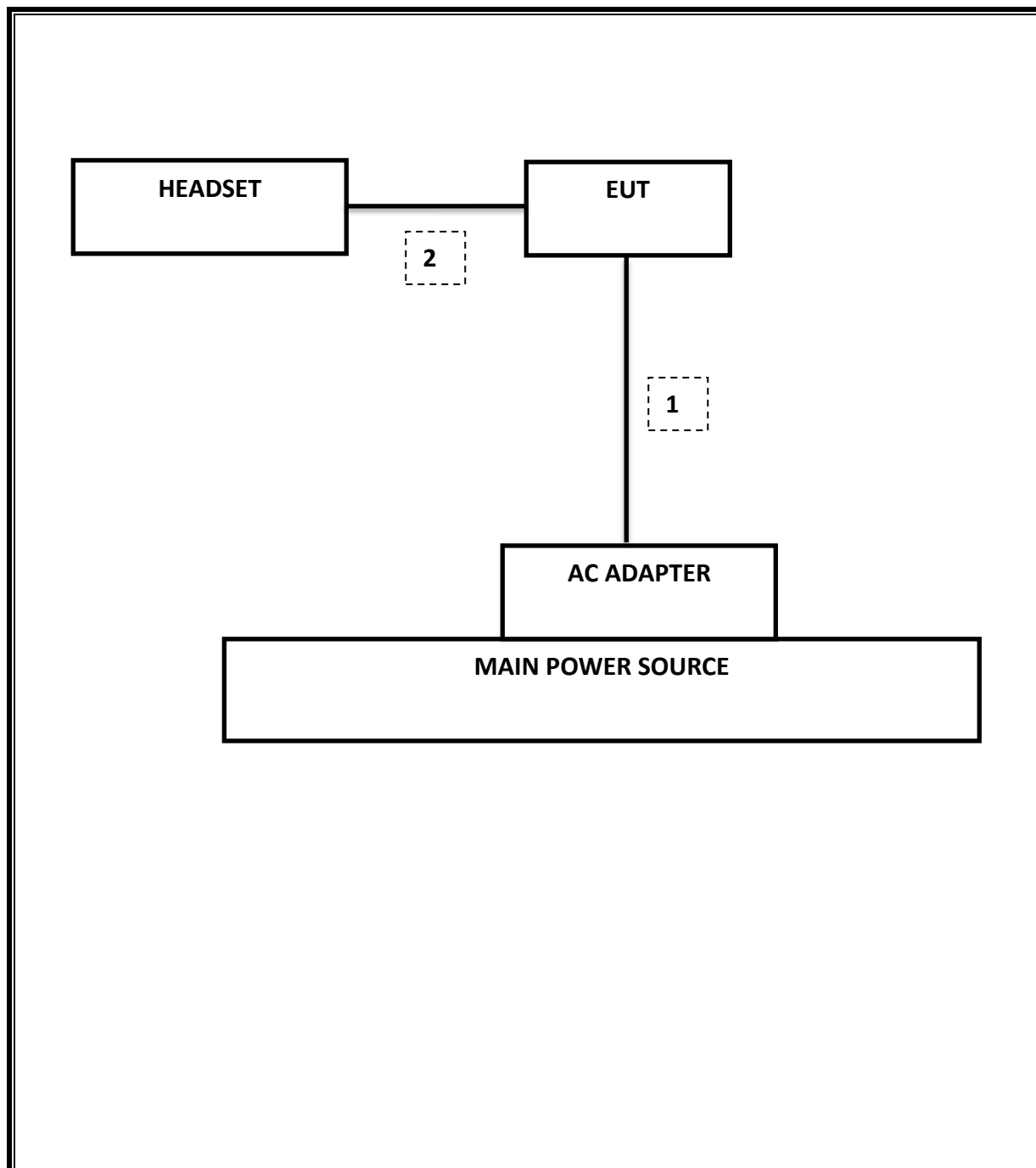
I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	Mini-USB	Shielded	1.2m	N/A
2	Audio	1	Mini-Jack	Unshielded	1m	N/A

TEST SETUP

The EUT is continuously communicating to the Bluetooth tester during the tests.

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

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
Antenna, Biconolog, 30MHz-1 GHz	Sunol Sciences	JB1	C01171	02/13/16
Antenna, Horn, 18GHz	EMCO	3115	C00783	10/25/15
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00980	11/14/15
RF Preamplifier, 100KHz -> 1300MHz	HP	TBD	C00825	06/01/16
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/16
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/15
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
Radiated Software	UL	UL EMC	Ver 9.5, July 22, 2014	
Conducted Software	UL	UL EMC	Ver 9.5, May 17 2012	
CLT Software	UL	UL RF	Ver 1.0, Feb 2 2015	
Antenna Port Software	UL	UL RF	Ver 2.1.1.1, Jan 20 2015	

7. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Worst Case
2.1049	RSS-GEN 4.6	Occupied Band width (99%)	N/A	Conducted	Pass	1.078 MHz
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-46.64 dBm
15.247 (b)(1)	RSS-247 5.4.2	TX conducted output power	<21dBm		Pass	9.21 dBm
15.247 (a)(1)	RSS-247 5.1.2	Hopping frequency separation	> 25KHz		Pass	1 MHz
15.247 (a)(1)(iii)	RSS-247 5.1.4	Number of Hopping channels	More than 15 non-overlapping channels		Pass	79 channels
15.247 (a)(1)(iii)	RSS-247 5.1.4	Avg Time of Occupancy	< 0.4sec		Pass	0.37 s
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass	38.14dBuV (AV)
15.205, 15.209	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass	49.99 dBuV/m

8. ANTENNA PORT TEST RESULTS

8.1. 20 dB AND 99% BANDWIDTH

LIMIT

None; for reporting purposes only.

TEST PROCEDURE

DA 00-705: 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

8.1.1. BASIC DATA RATE GFSK MODULATION

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.016	1.0018
Middle	2441	1.015	1.0068
High	2480	1.015	0.9155
Worst		1.016	1.0068

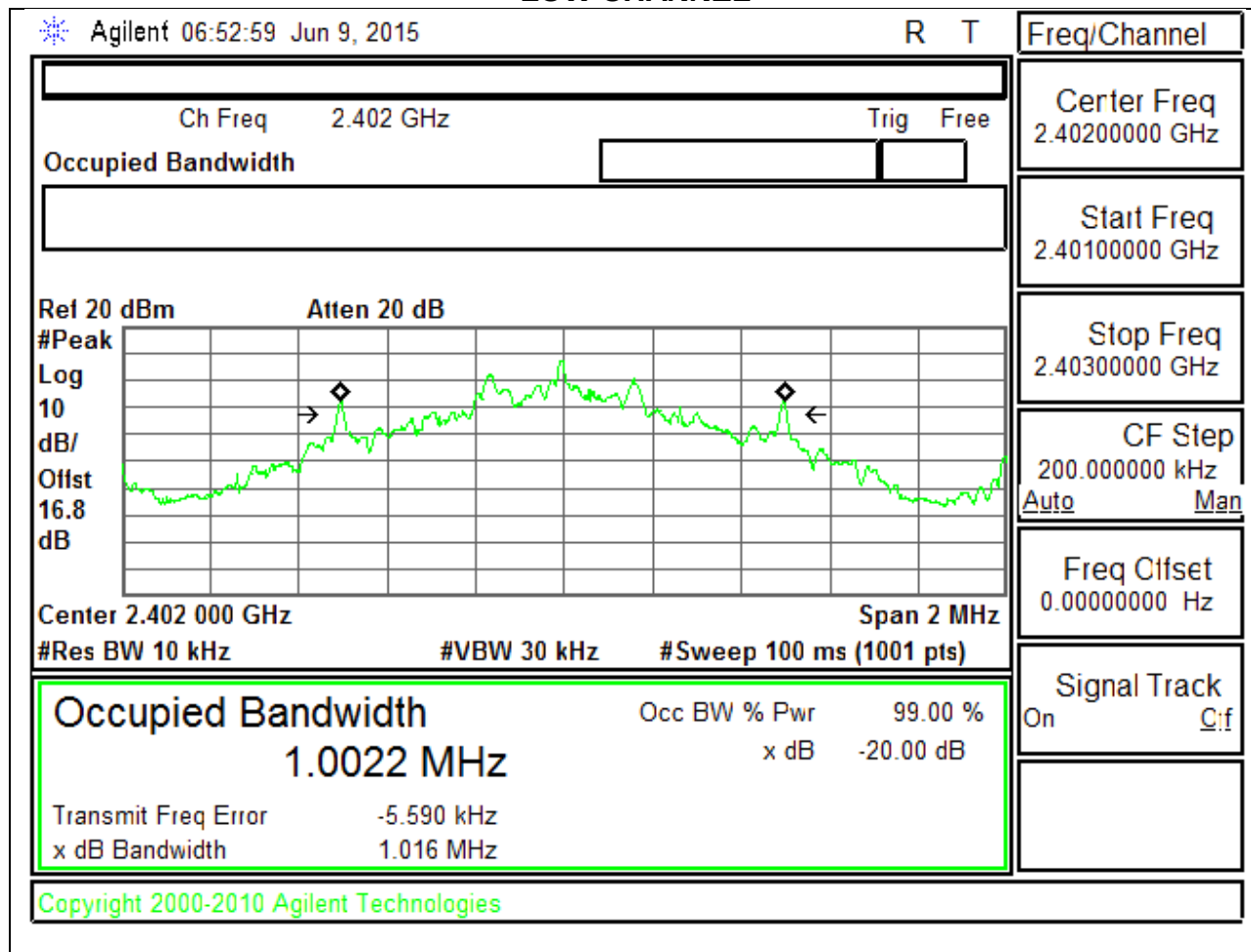
8.1.2. ENHANCED DATA RATE 8PSK MODULATION

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.093	1.0787
Middle	2441	1.107	1.0438
High	2480	1.101	1.021
Worst		1.107	1.0787

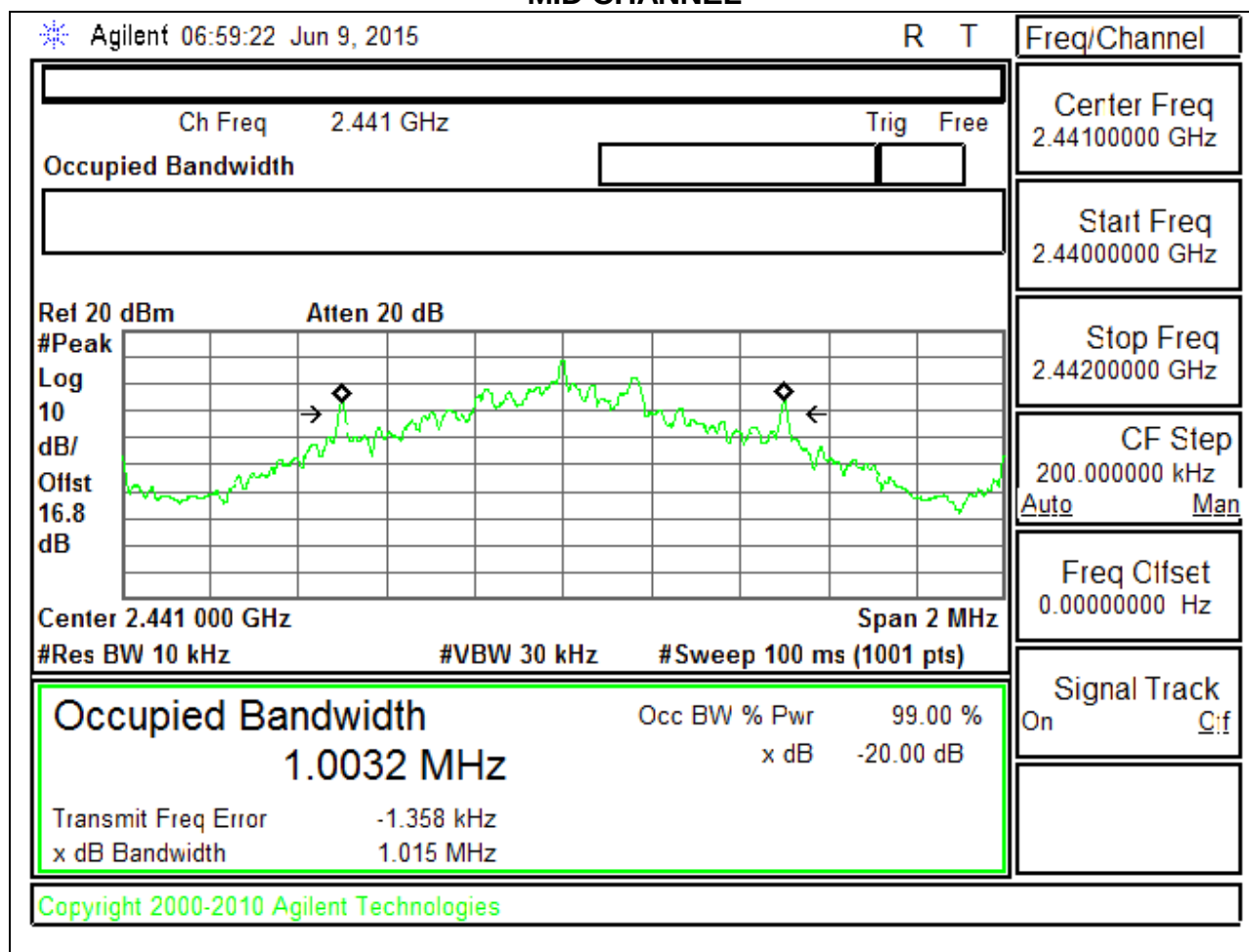
8.1.3. 20 dB AND 99% BANDWIDTH PLOTS

GFSK 20 dB BANDWIDTH

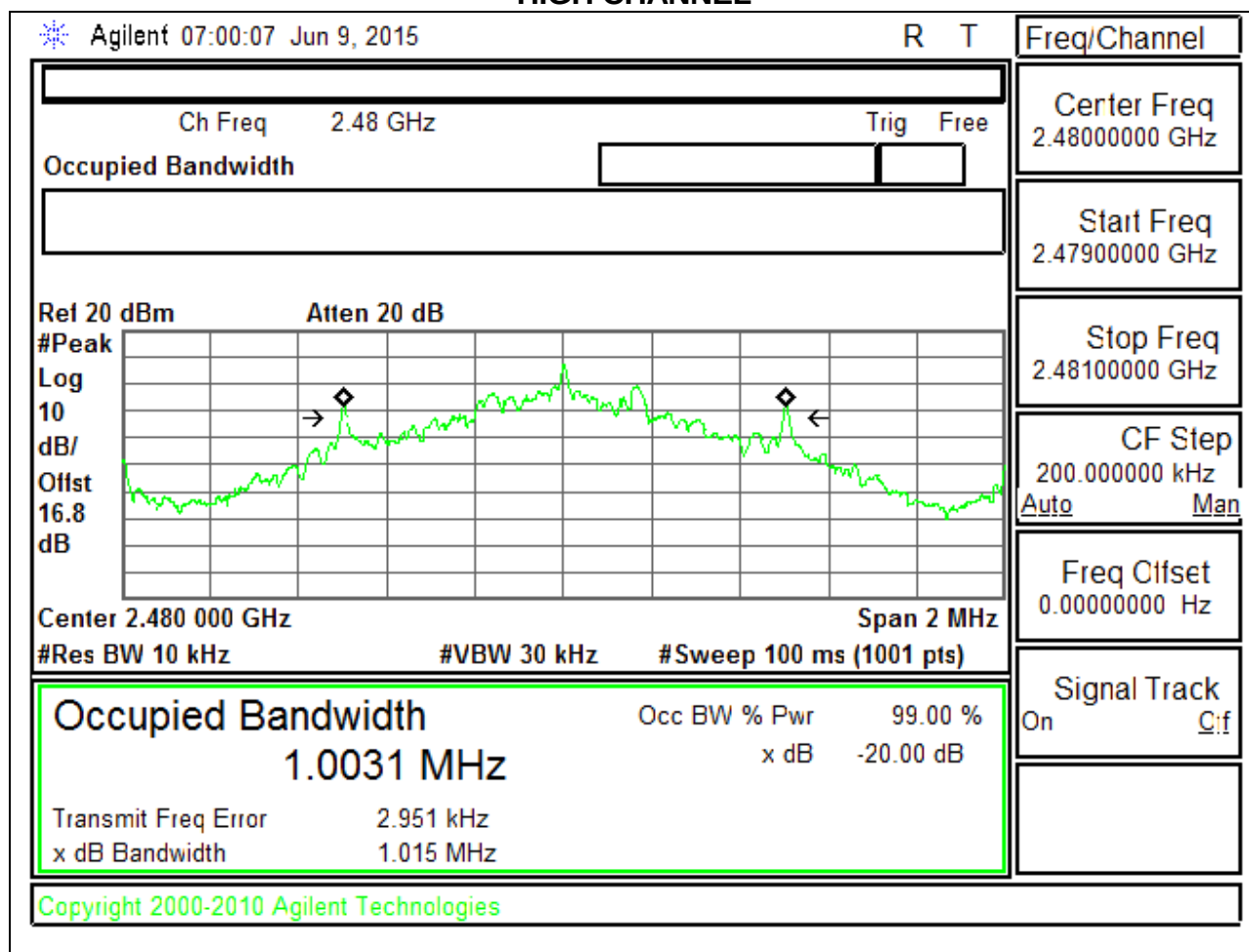
LOW CHANNEL



MID CHANNEL

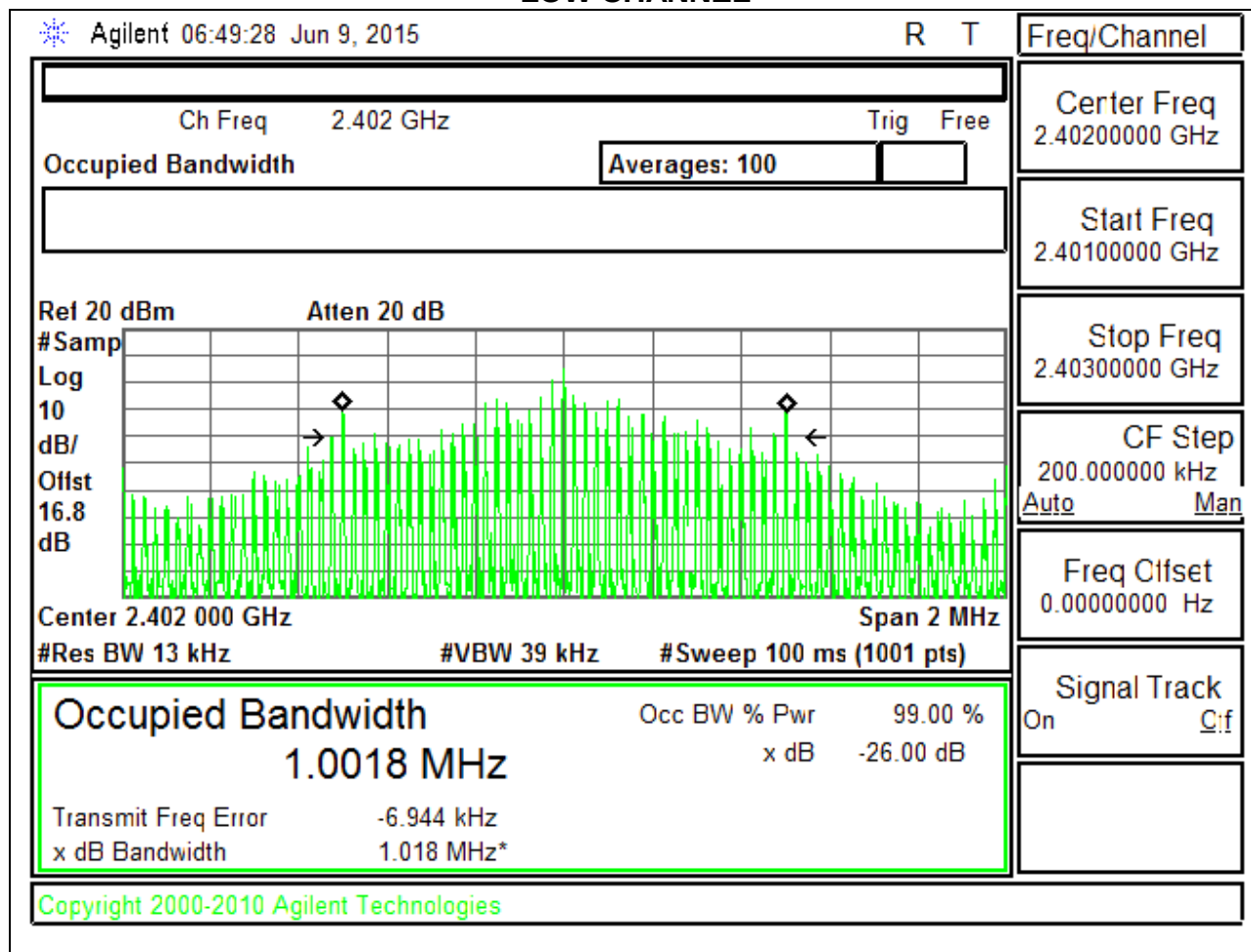


HIGH CHANNEL

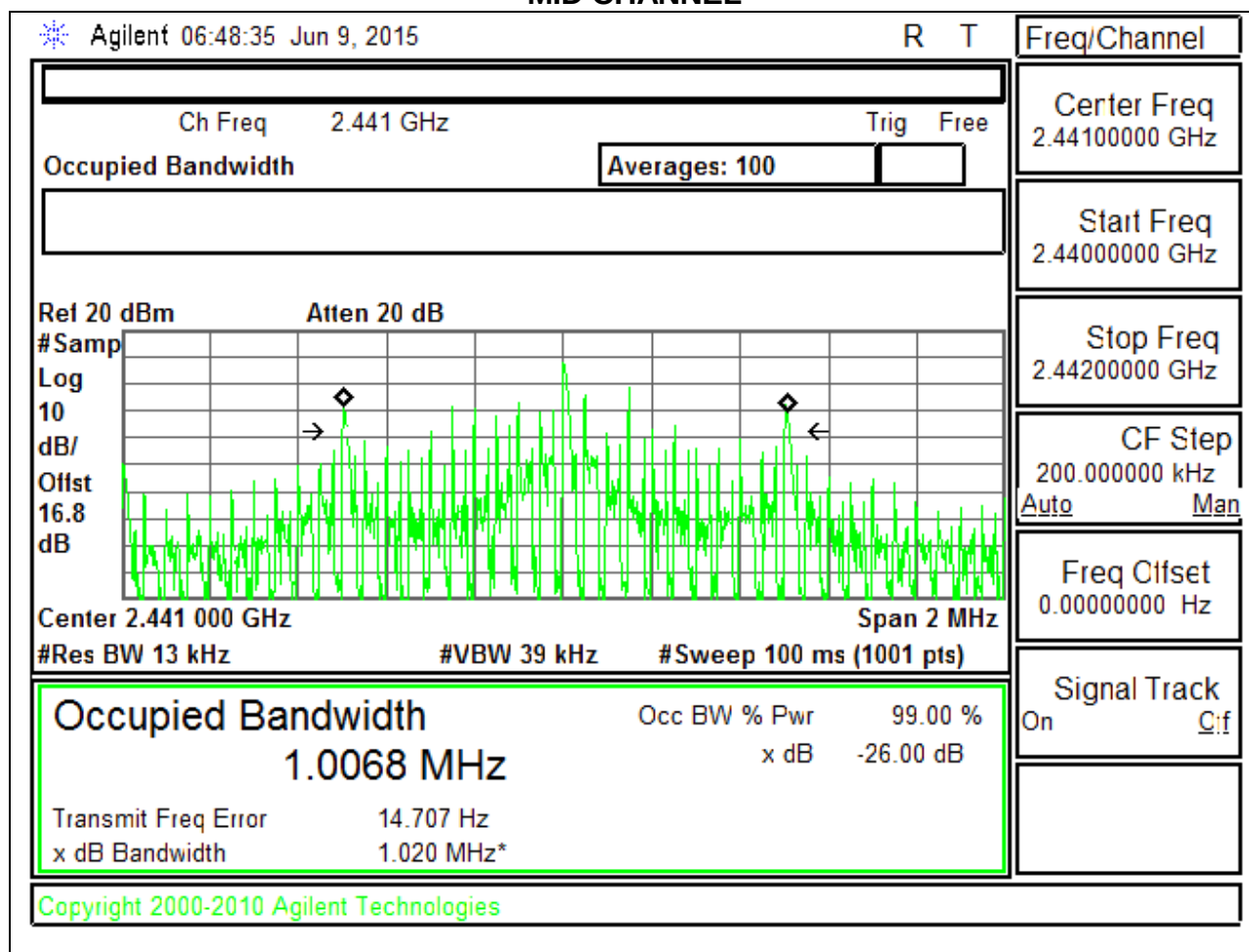


GFSK 99% BANDWIDTH

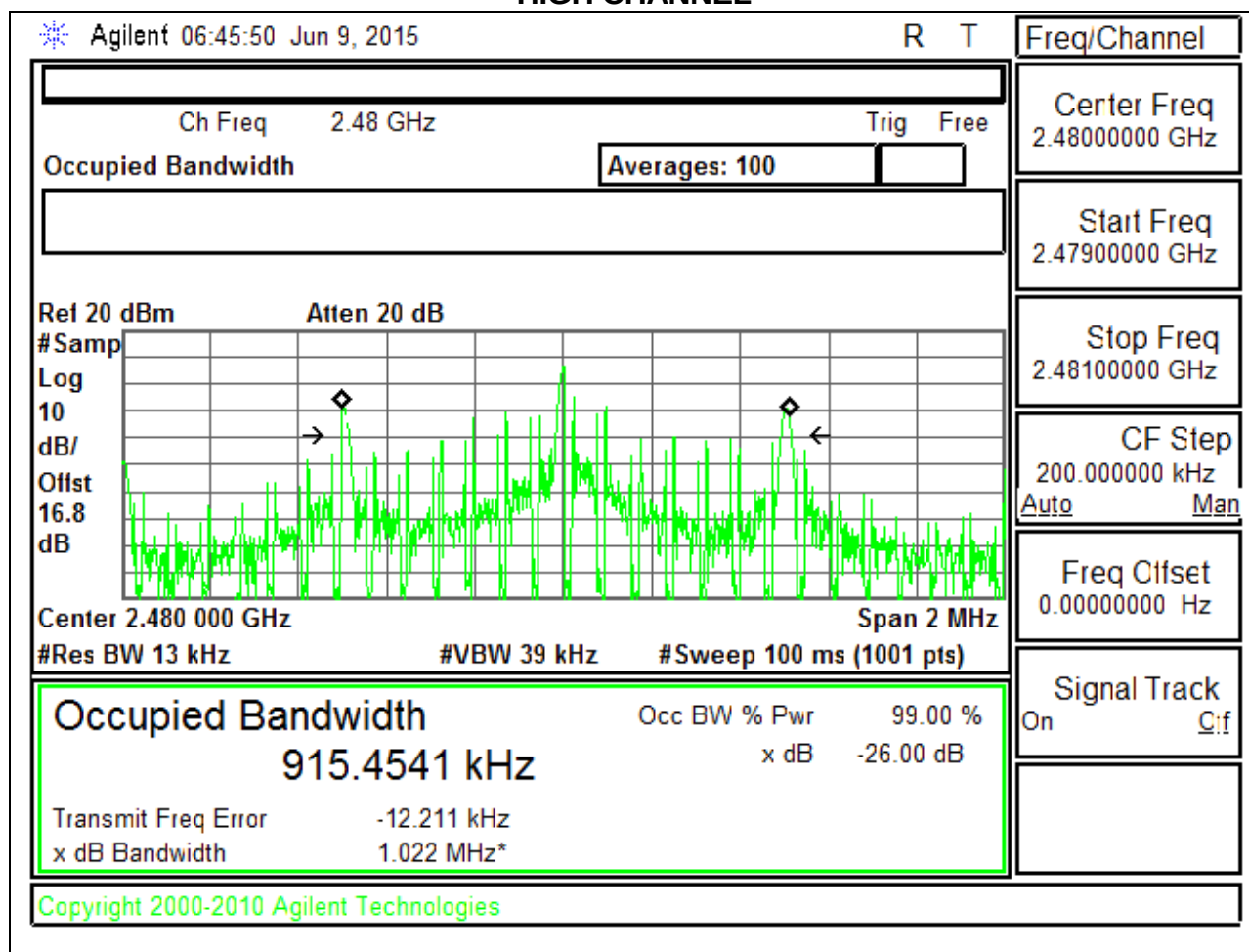
LOW CHANNEL



MID CHANNEL

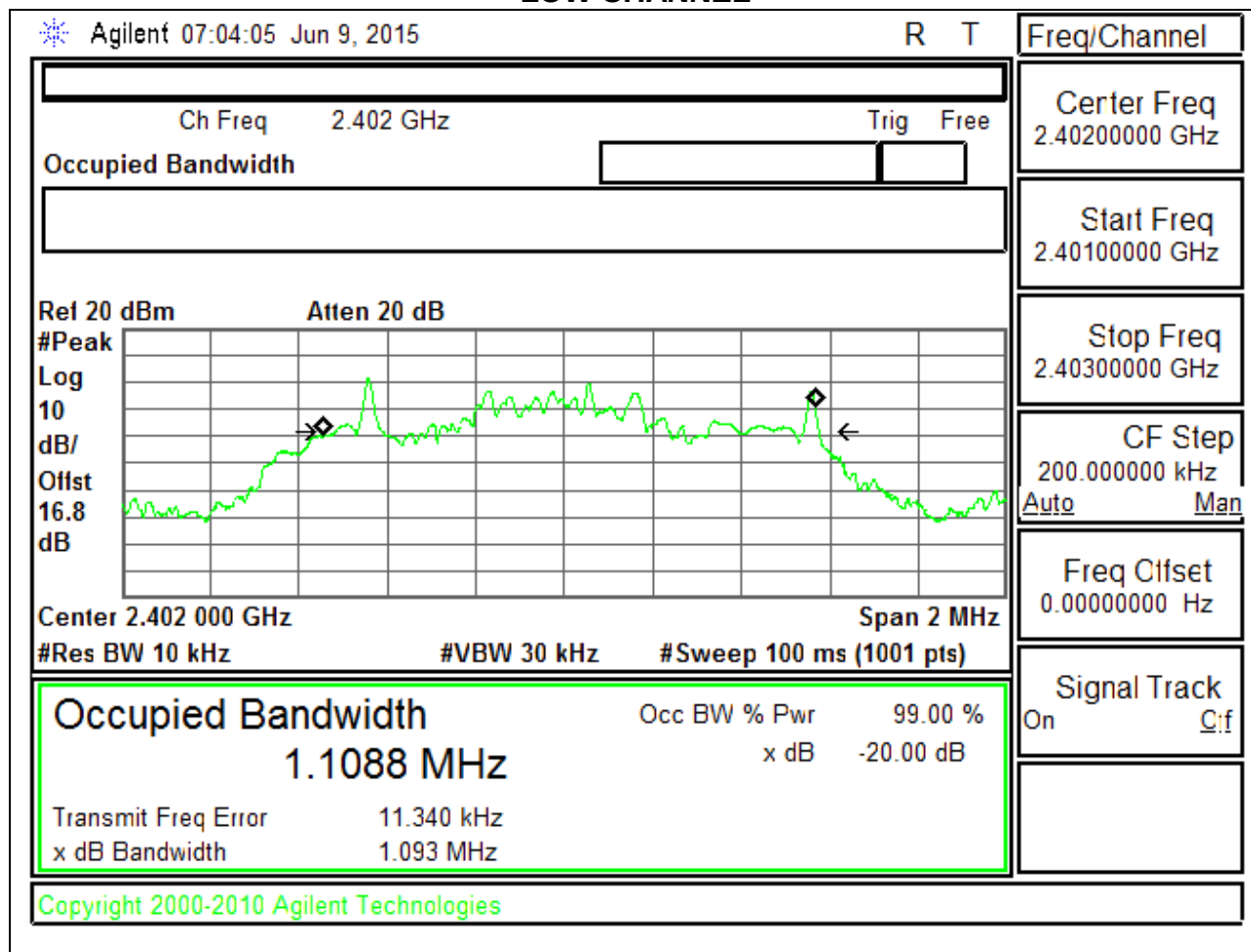


HIGH CHANNEL

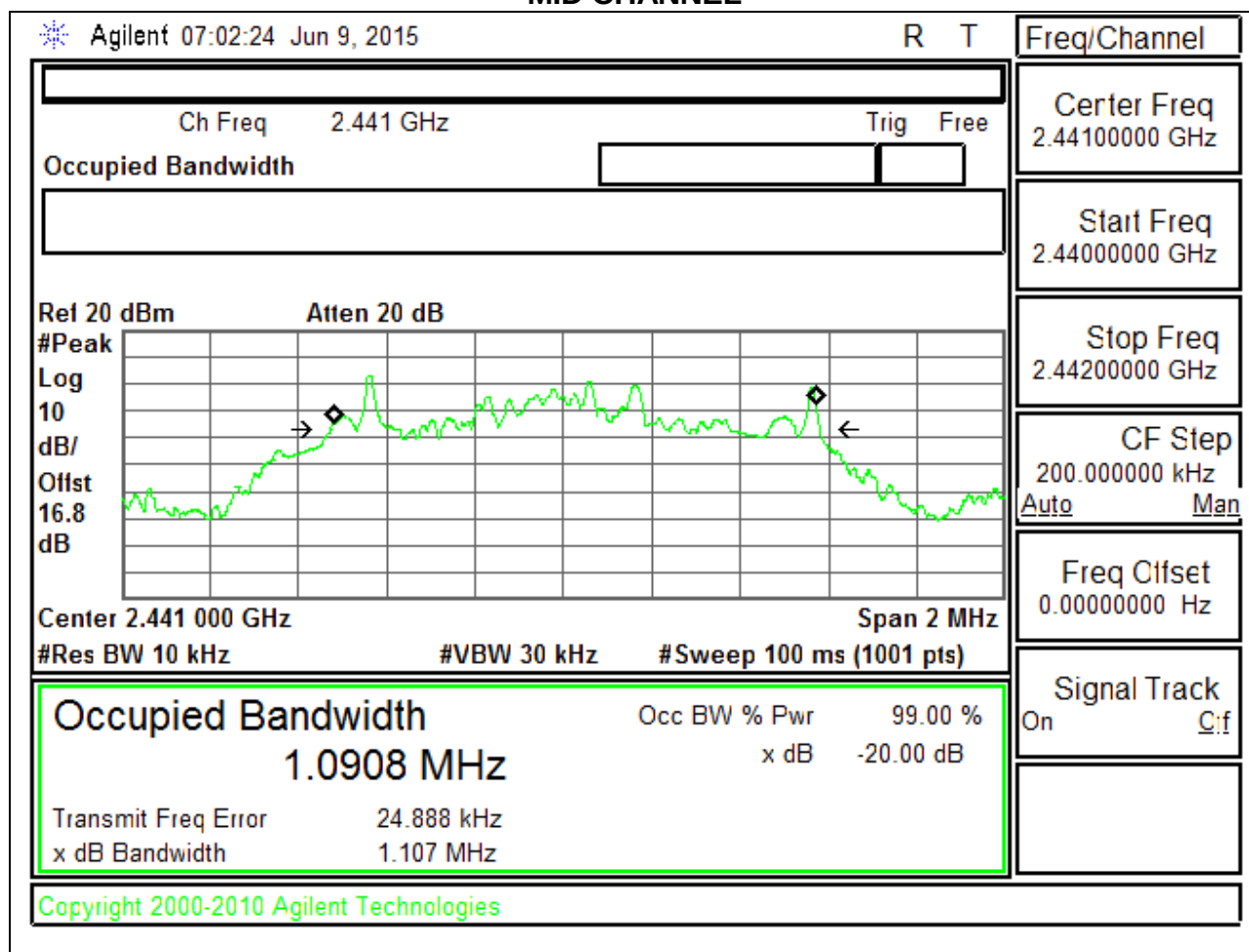


8PSK 20 dB BANDWIDTH

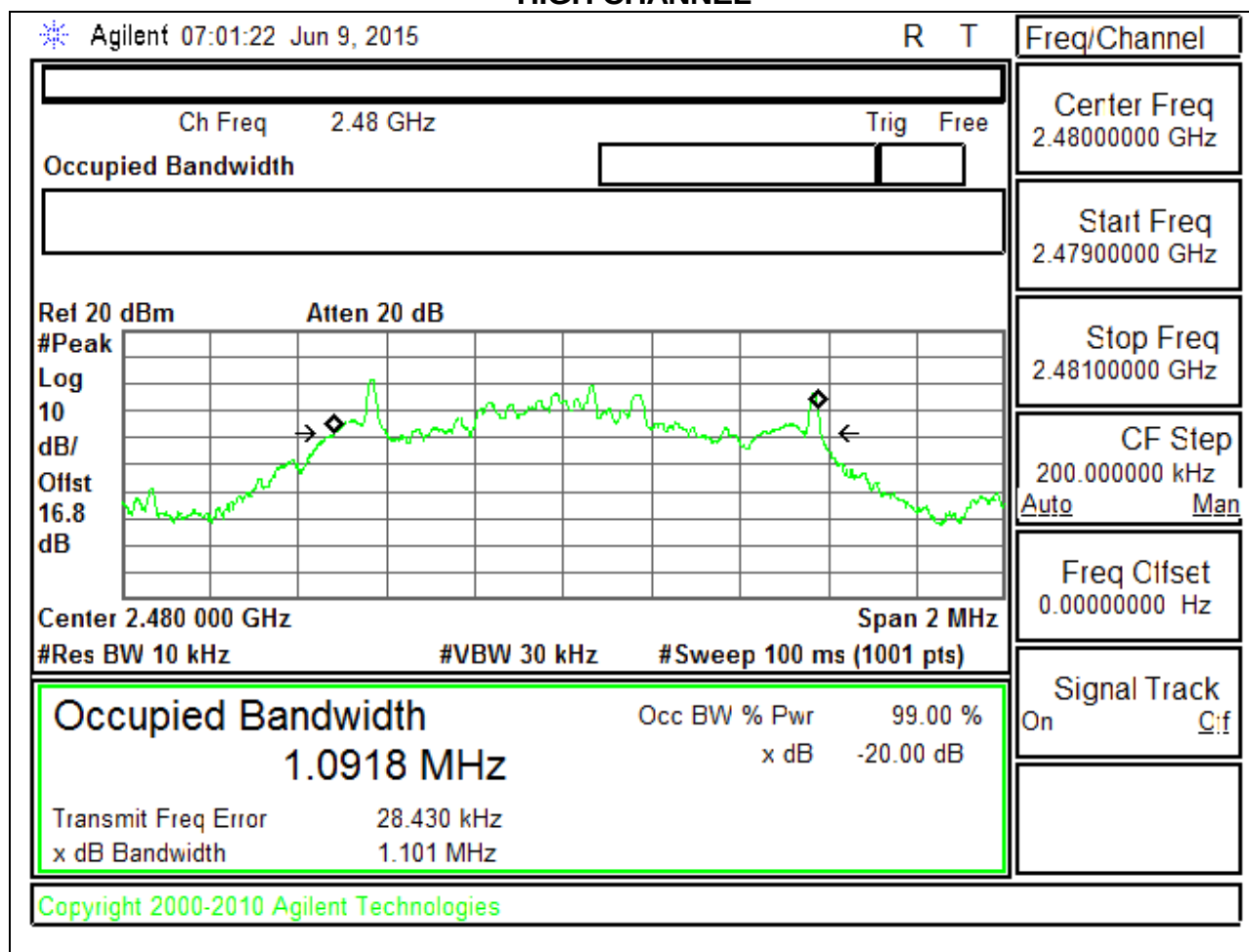
LOW CHANNEL



MID CHANNEL

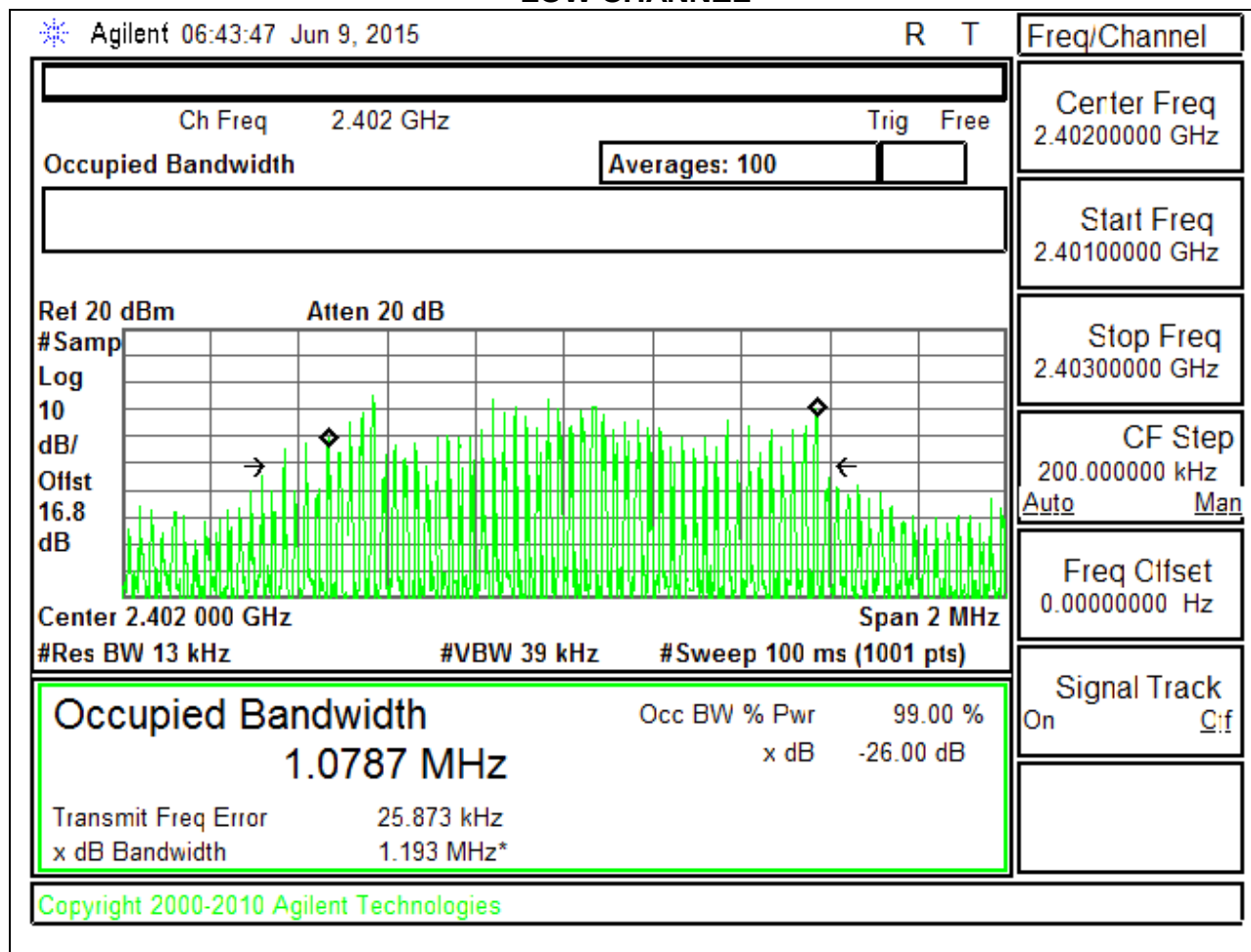


HIGH CHANNEL

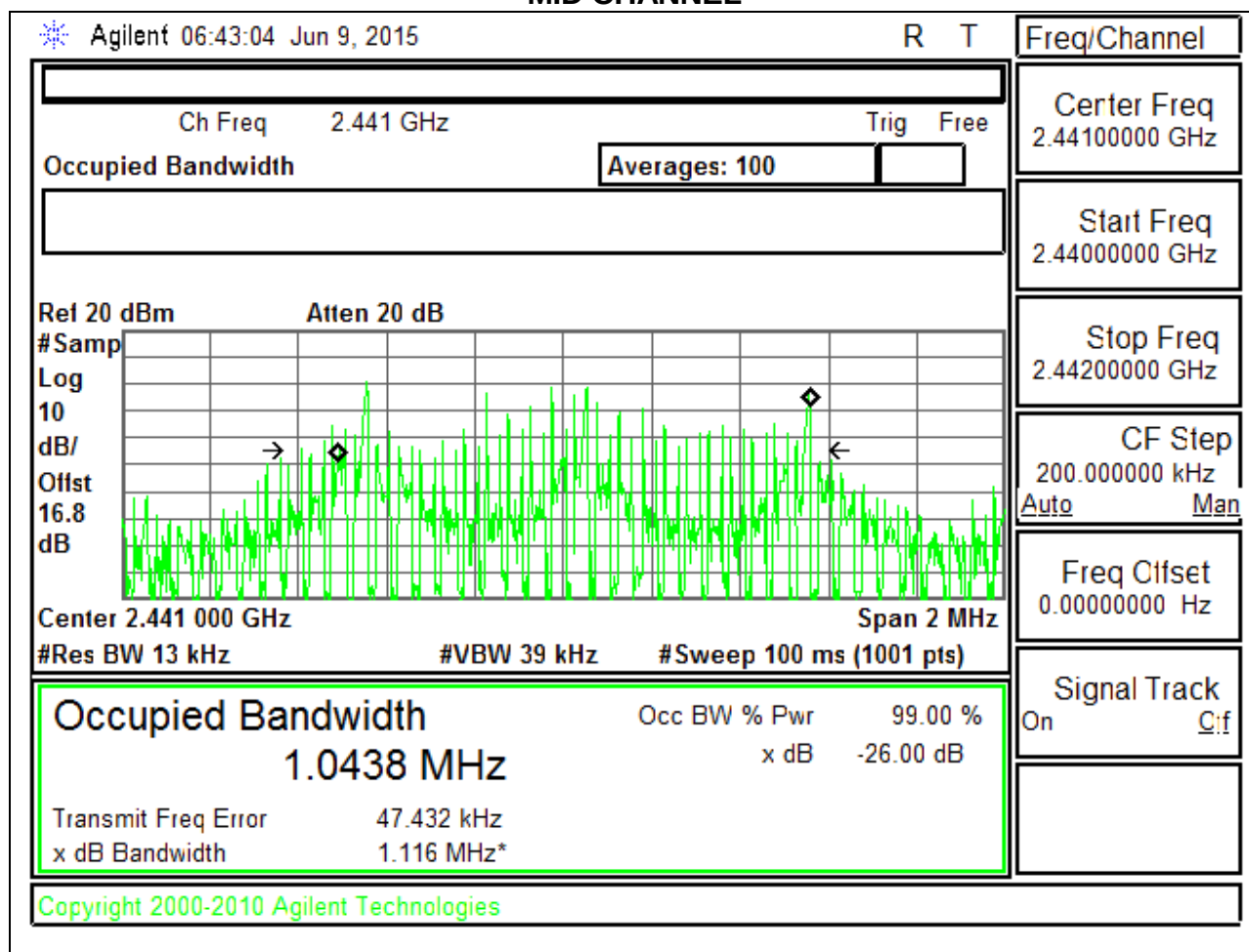


8PSK 99% BANDWIDTH

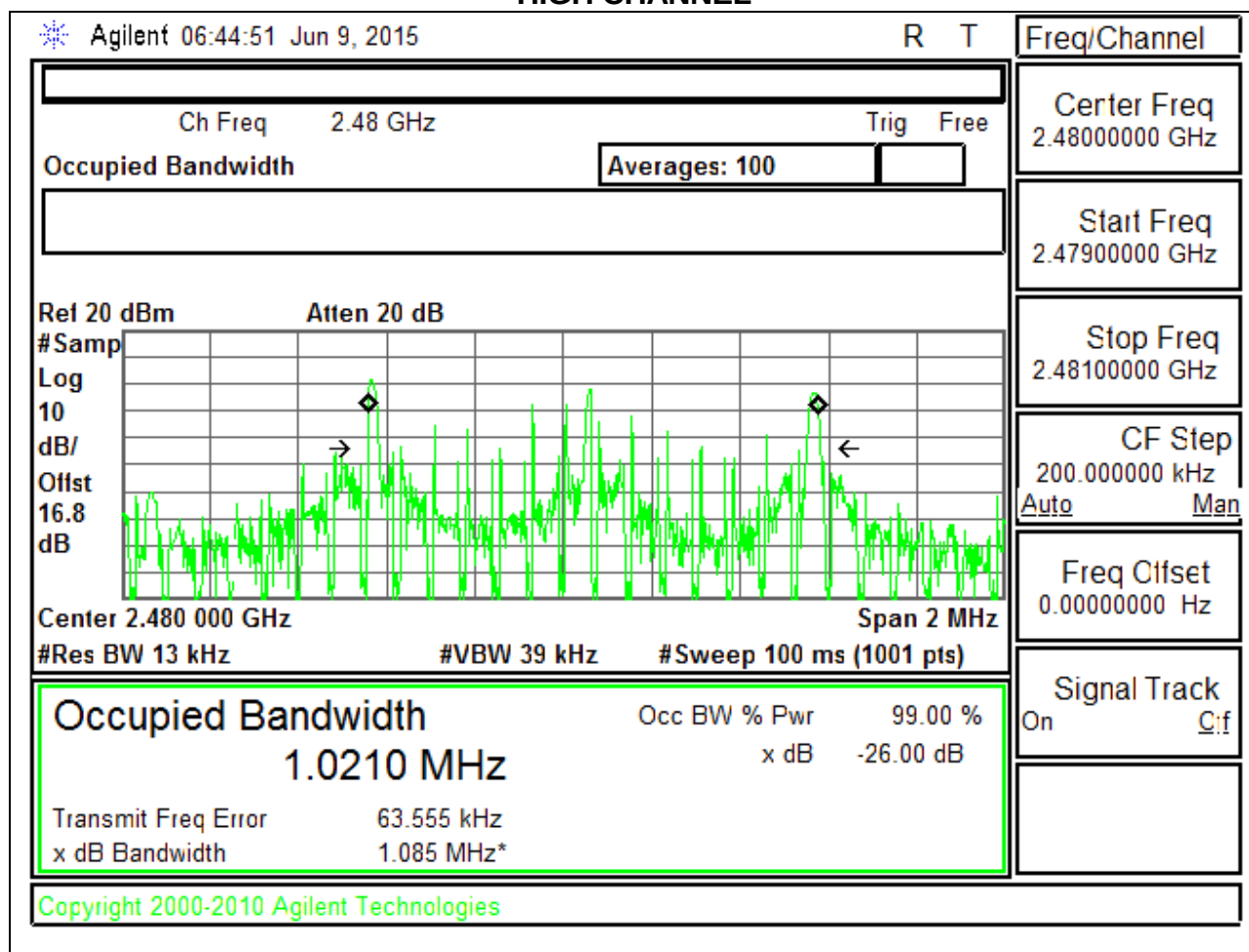
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



8.2. HOPPING FREQUENCY SEPARATION

LIMIT

FCC §15.247 (a) (1)

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.

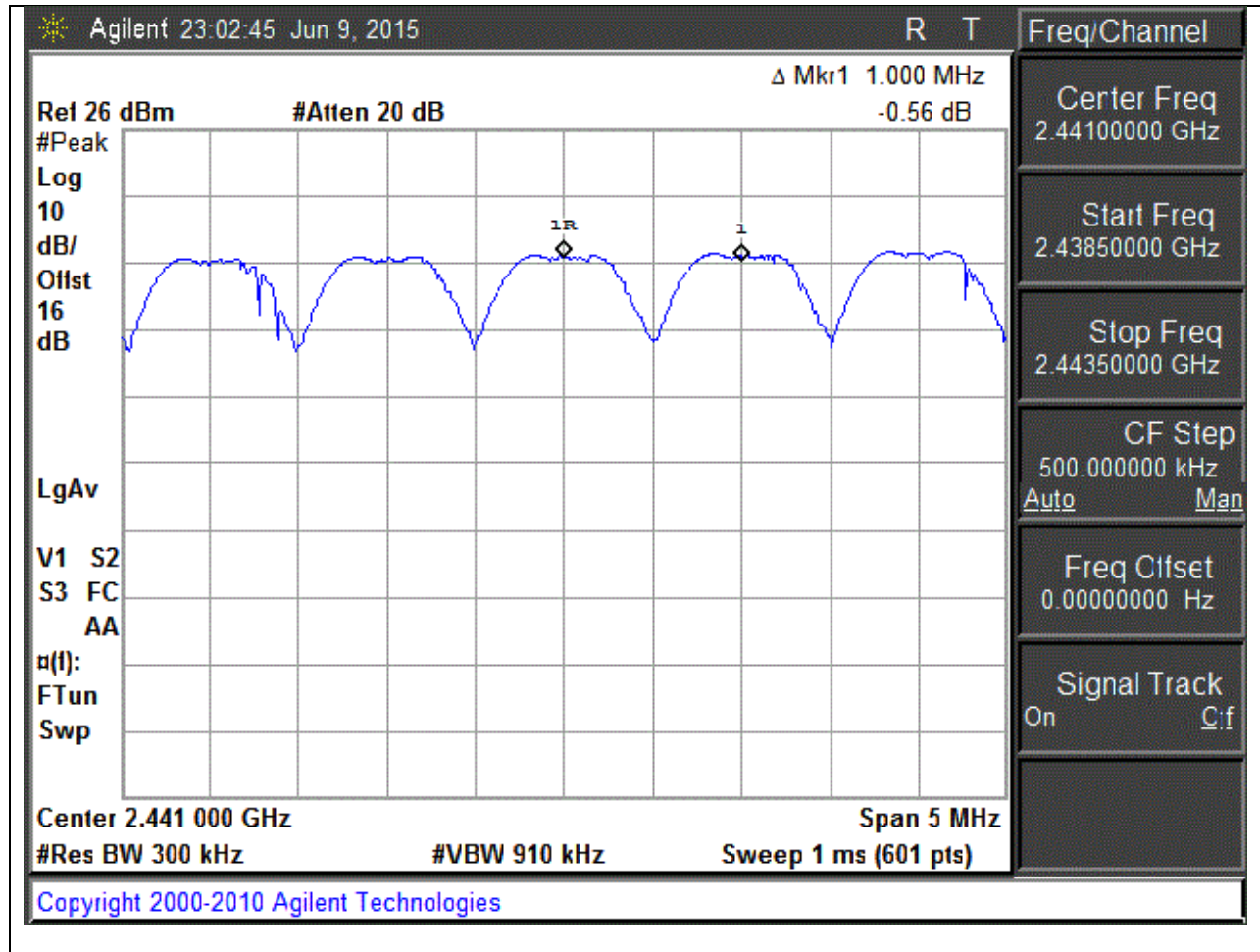
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than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

TEST PROCEDURE

DA 00-705: The transmitter output is connected to a spectrum analyzer. The RBW is set to 300 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

RESULTS

HOPPING FREQUENCY SEPARATION PLOT



8.3. NUMBER OF HOPPING CHANNELS

LIMIT

FCC §15.247 (a) (1) (iii)

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

TEST PROCEDURE

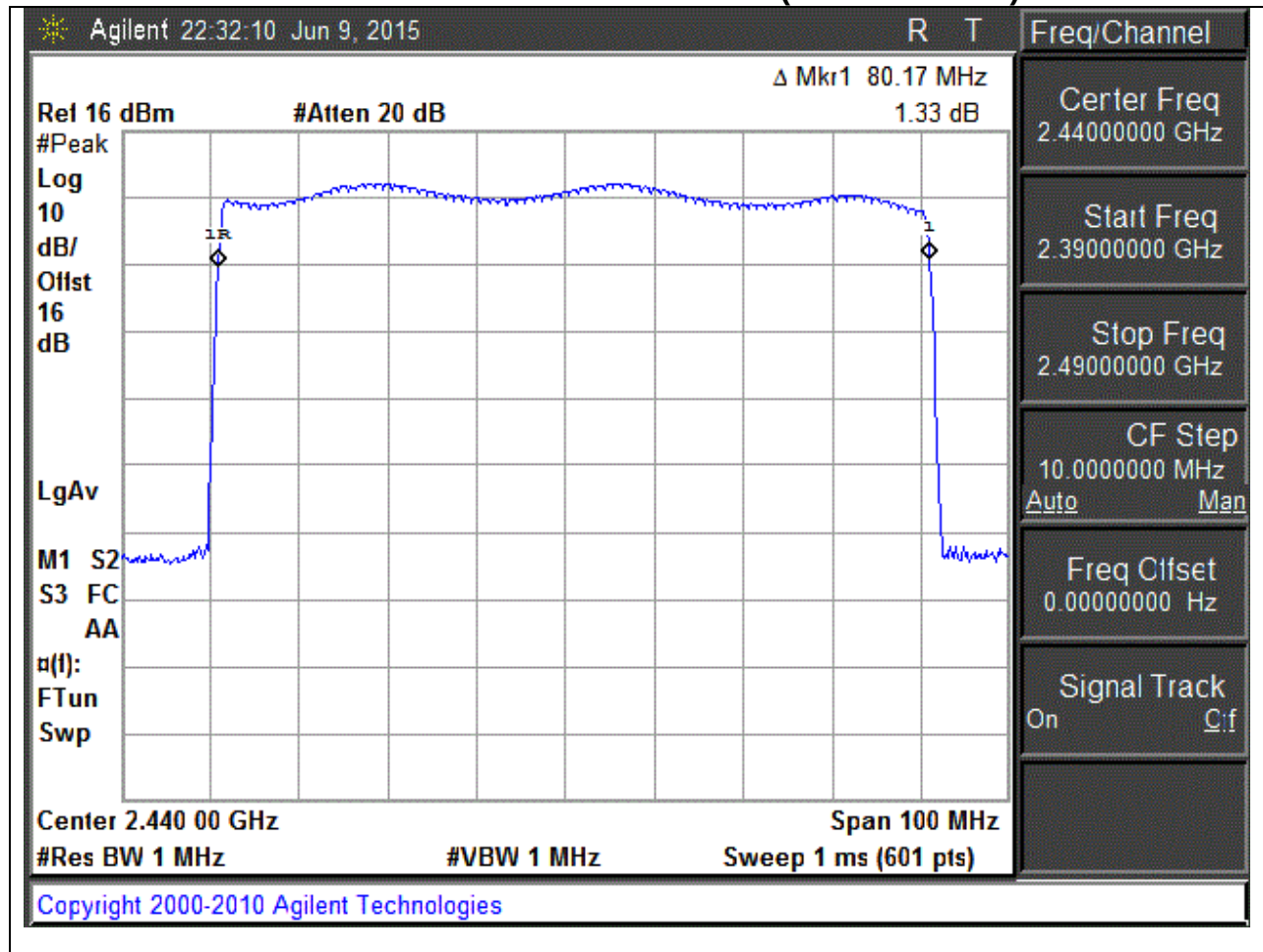
DA 00-705: The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

RESULTS

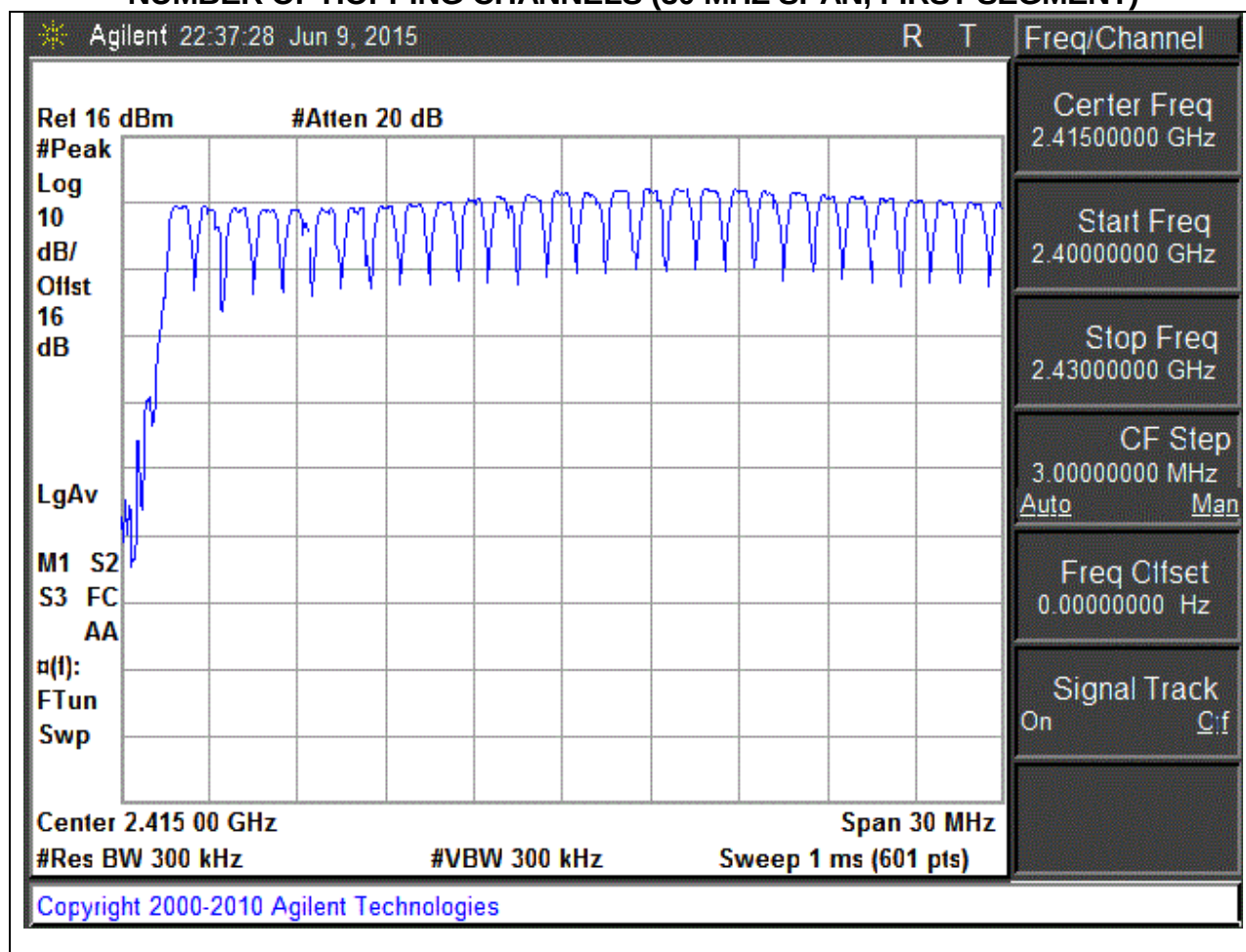
Normal Mode: 79 Channels observed.

NUMBER OF HOPPING CHANNELS PLOTS

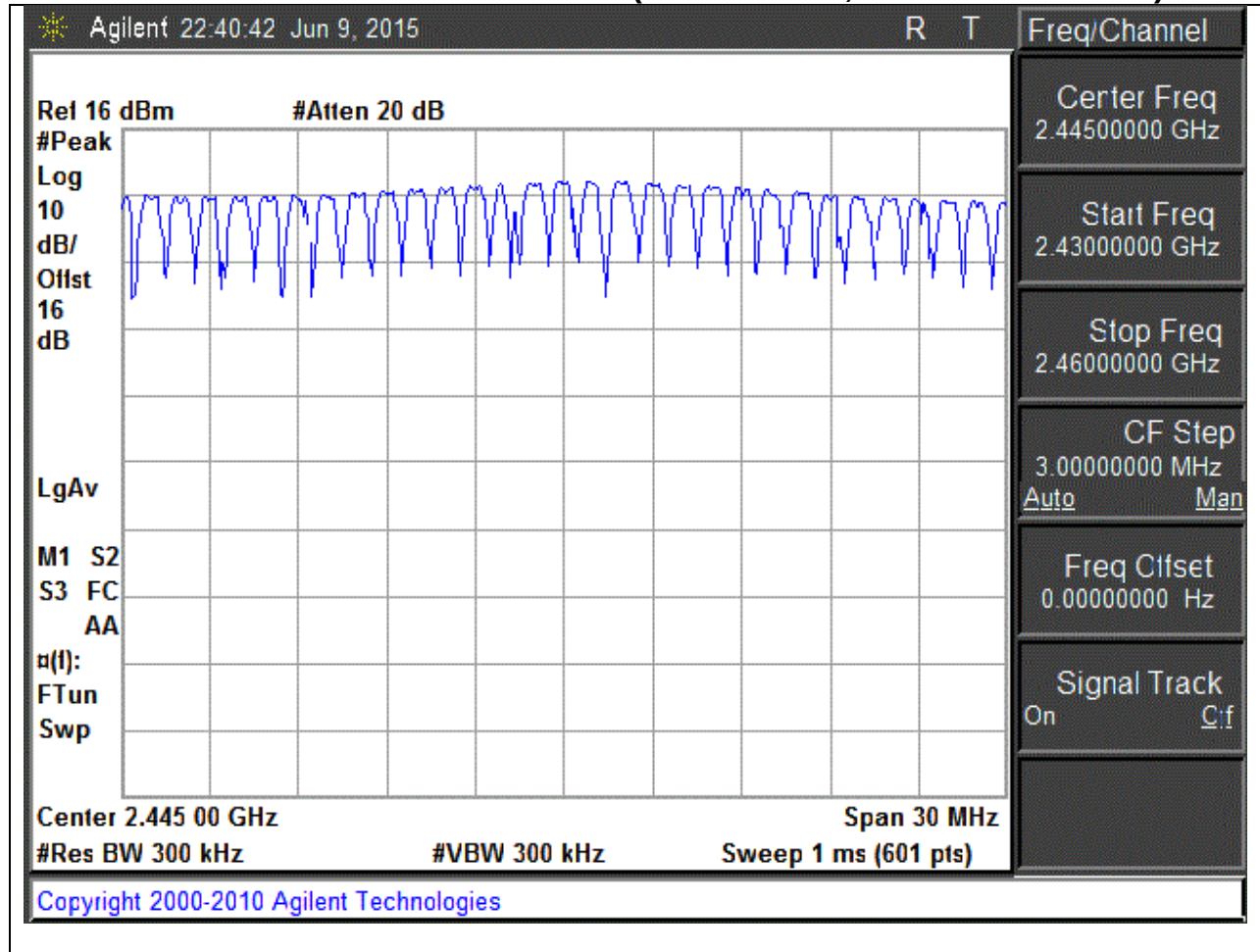
NUMBER OF HOPPING CHANNELS (100 MHz SPAN)



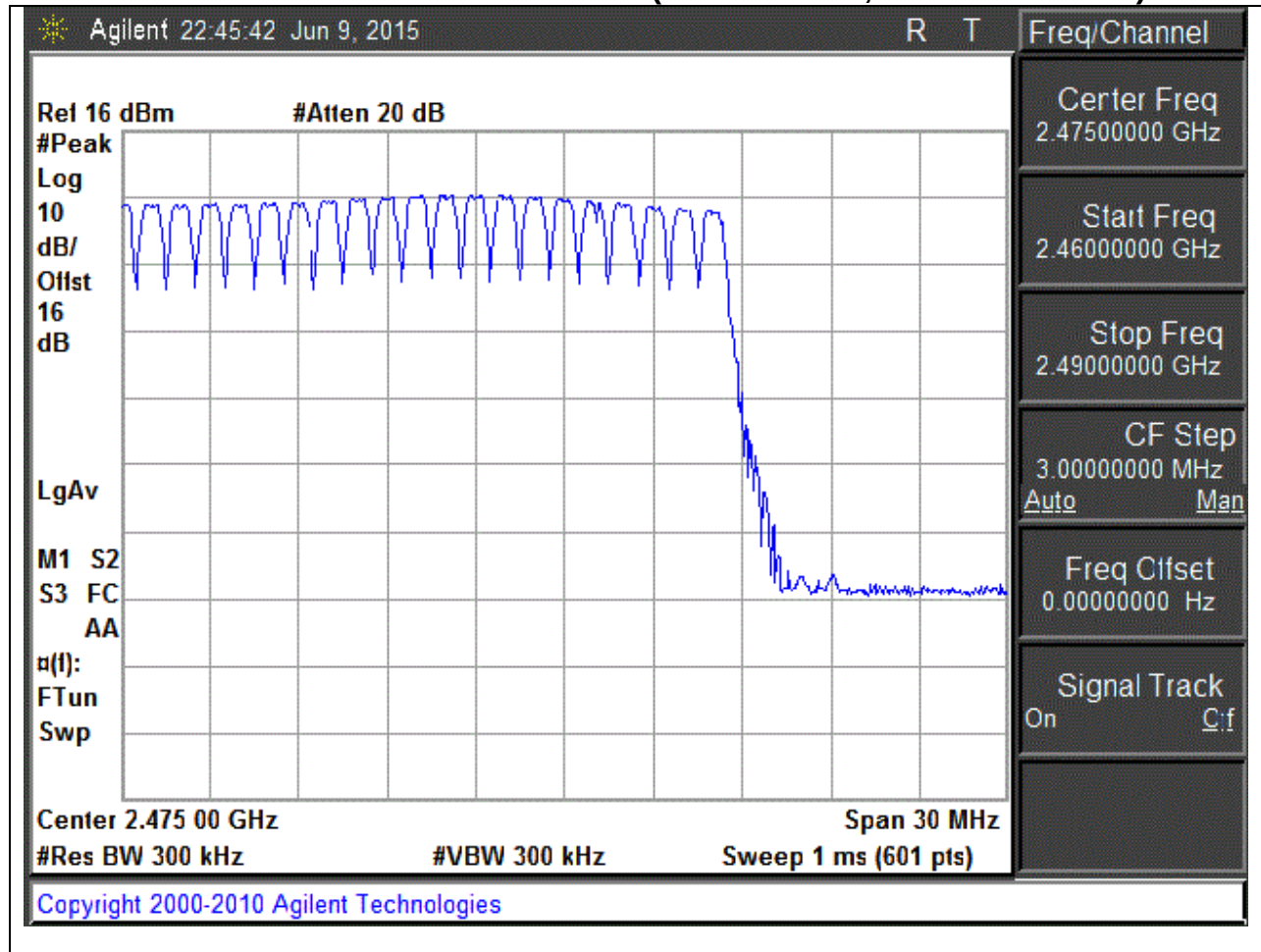
NUMBER OF HOPPING CHANNELS (30 MHz SPAN, FIRST SEGMENT)



NUMBER OF HOPPING CHANNELS (30 MHZ SPAN, SECOND SEGMENT)



NUMBER OF HOPPING CHANNELS (30 MHZ SPAN, THIRD SEGMENT)



8.4. AVERAGE TIME OF OCCUPANCY

LIMIT

FCC §15.247 (a) (1) (iii)

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.

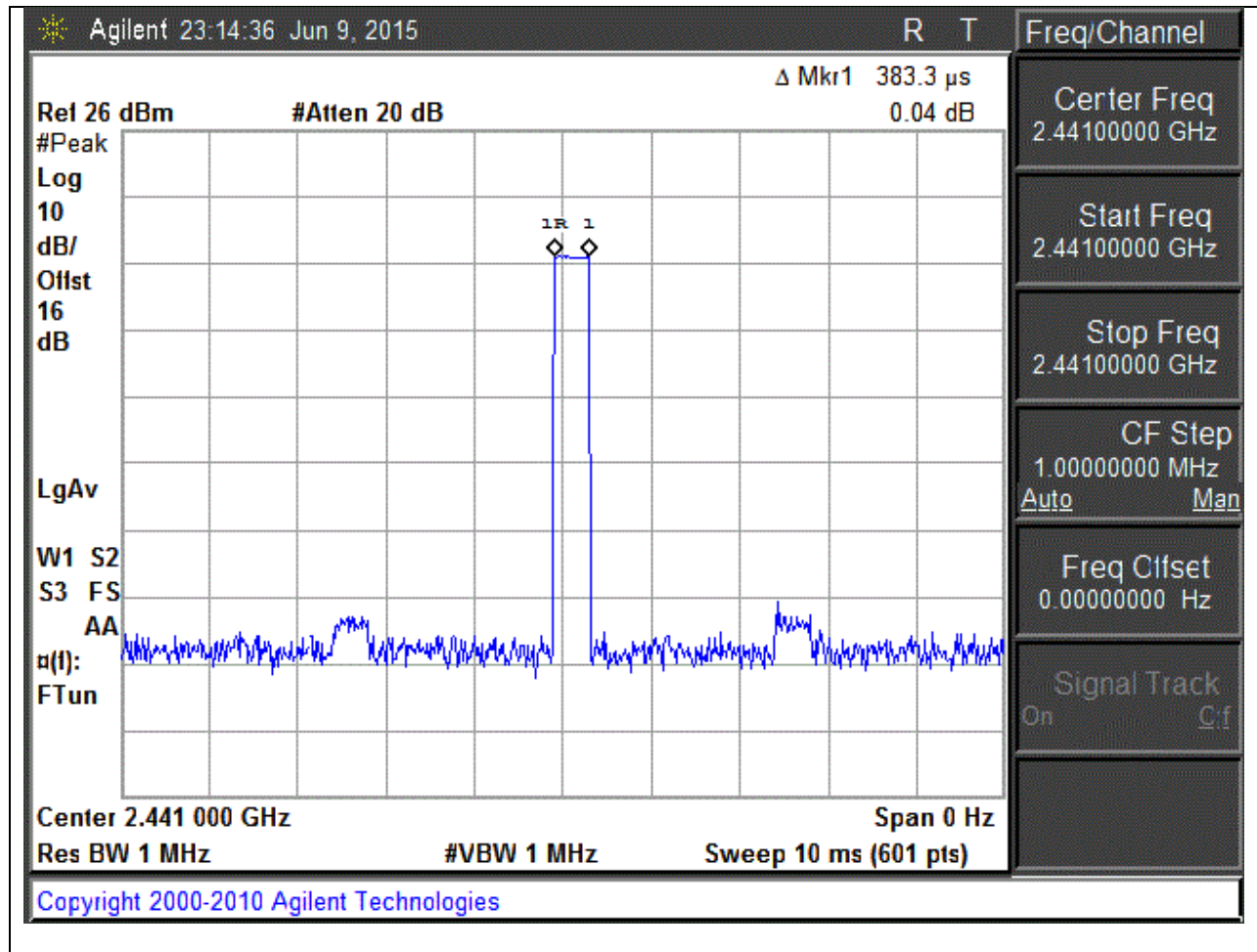
The average time of occupancy in the specified 31.6 second period (79 channels * 0.4 s) is equal to $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{pulse width}$.

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

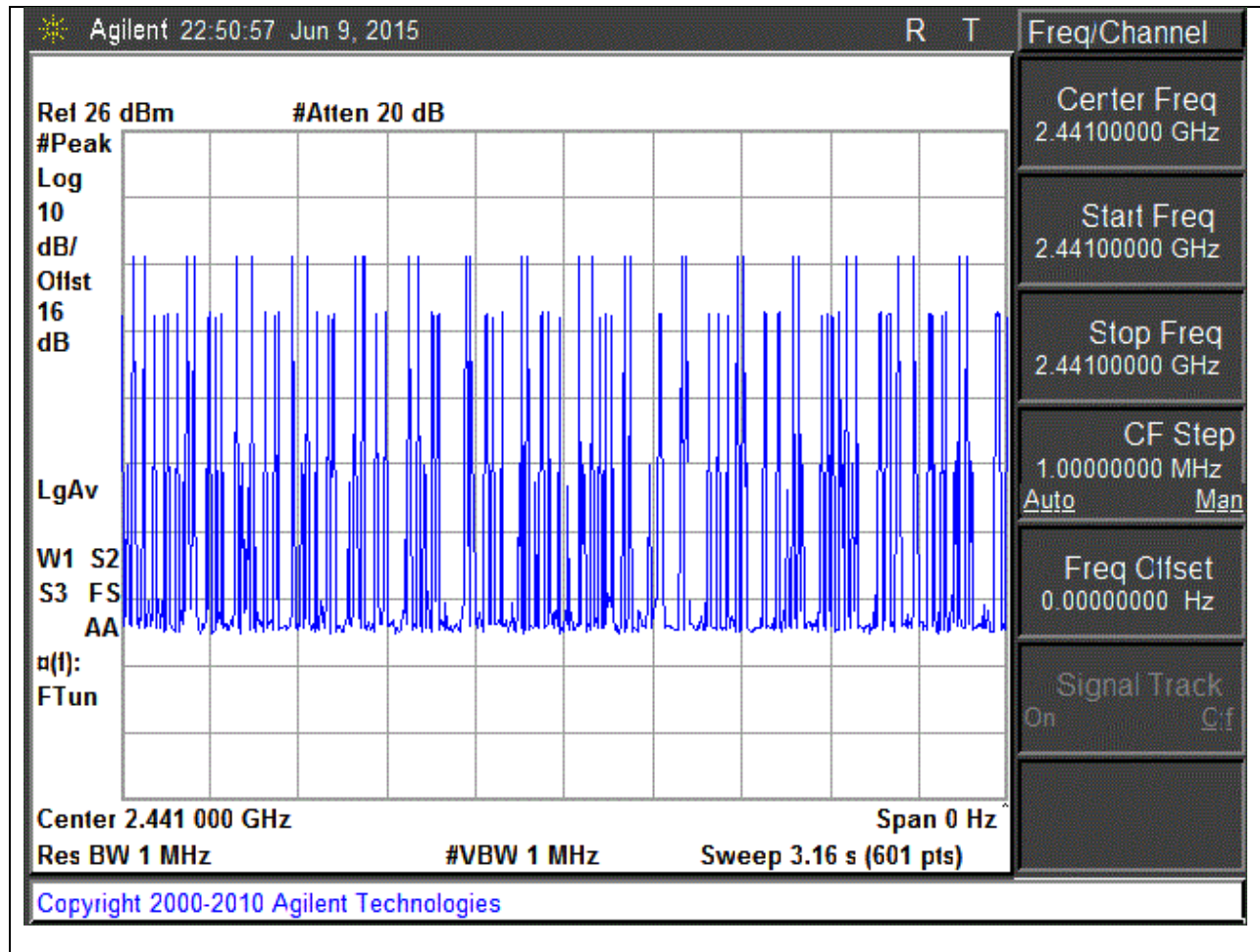
RESULTS

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK Normal Mode					
DH1	32	0.3833	0.122656	0.4	-0.27734
DH3	16	1.633	0.26128	0.4	-0.13872
DH5	13	2.867	0.37271	0.4	-0.02729
DH Packet	Pulse Width (msec)	Number of Pulses in 0.8 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK AFH Mode					
DH1	32	0.095825	0.030664	0.4	-0.36934
DH3	16	0.40825	0.06532	0.4	-0.33468
DH5	13	0.71675	0.0931775	0.4	-0.30682

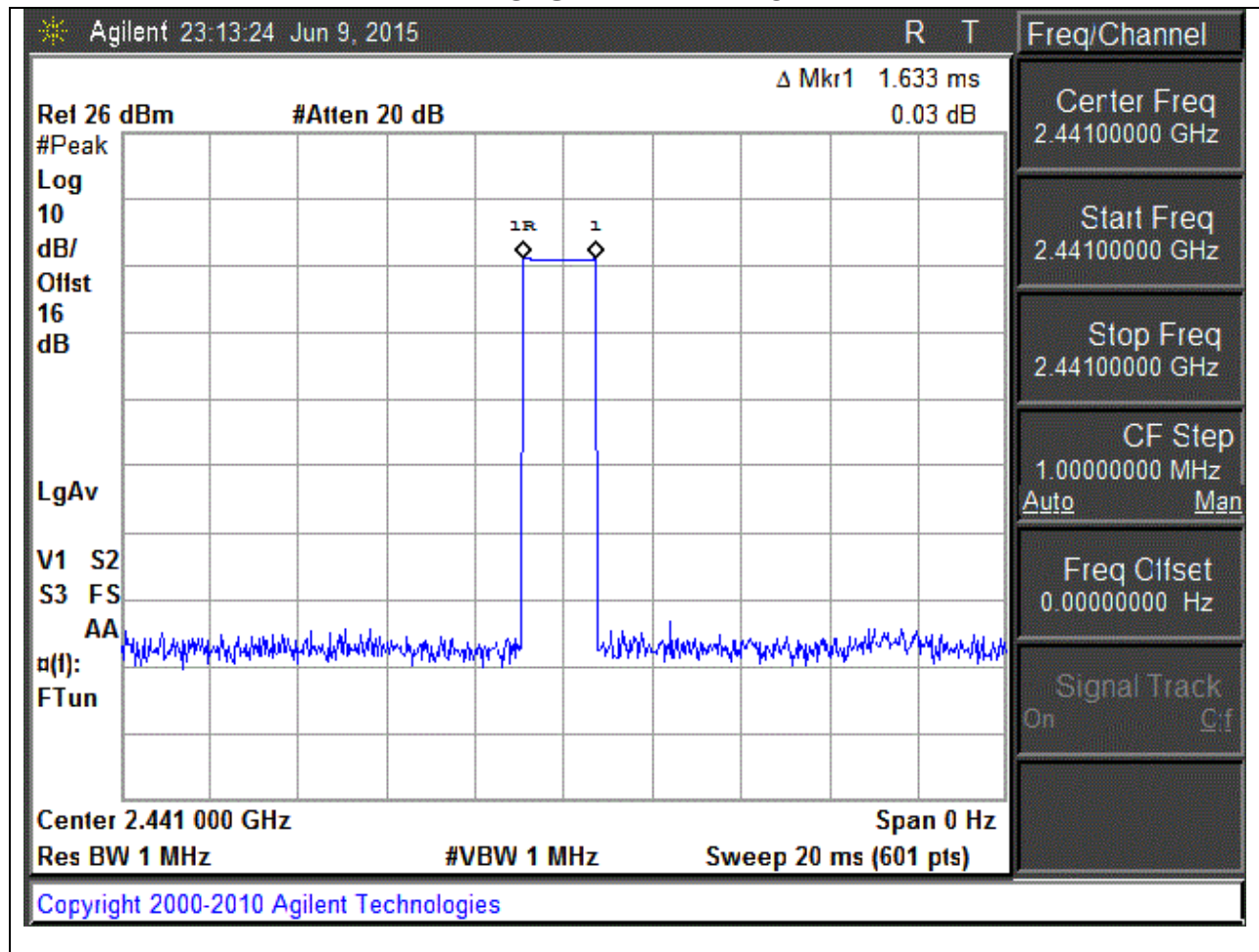
PULSE WIDTH - DH1



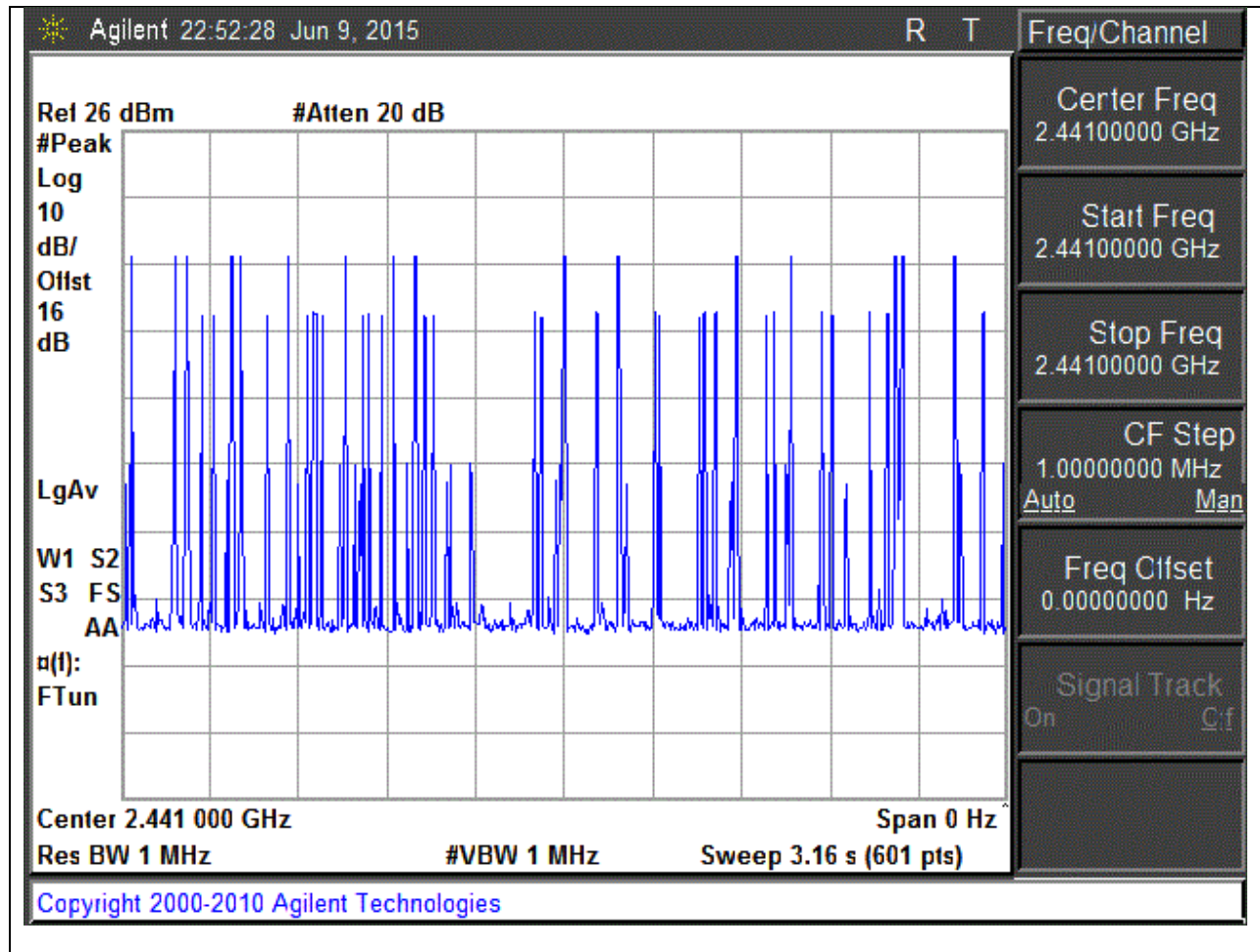
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD - DH1



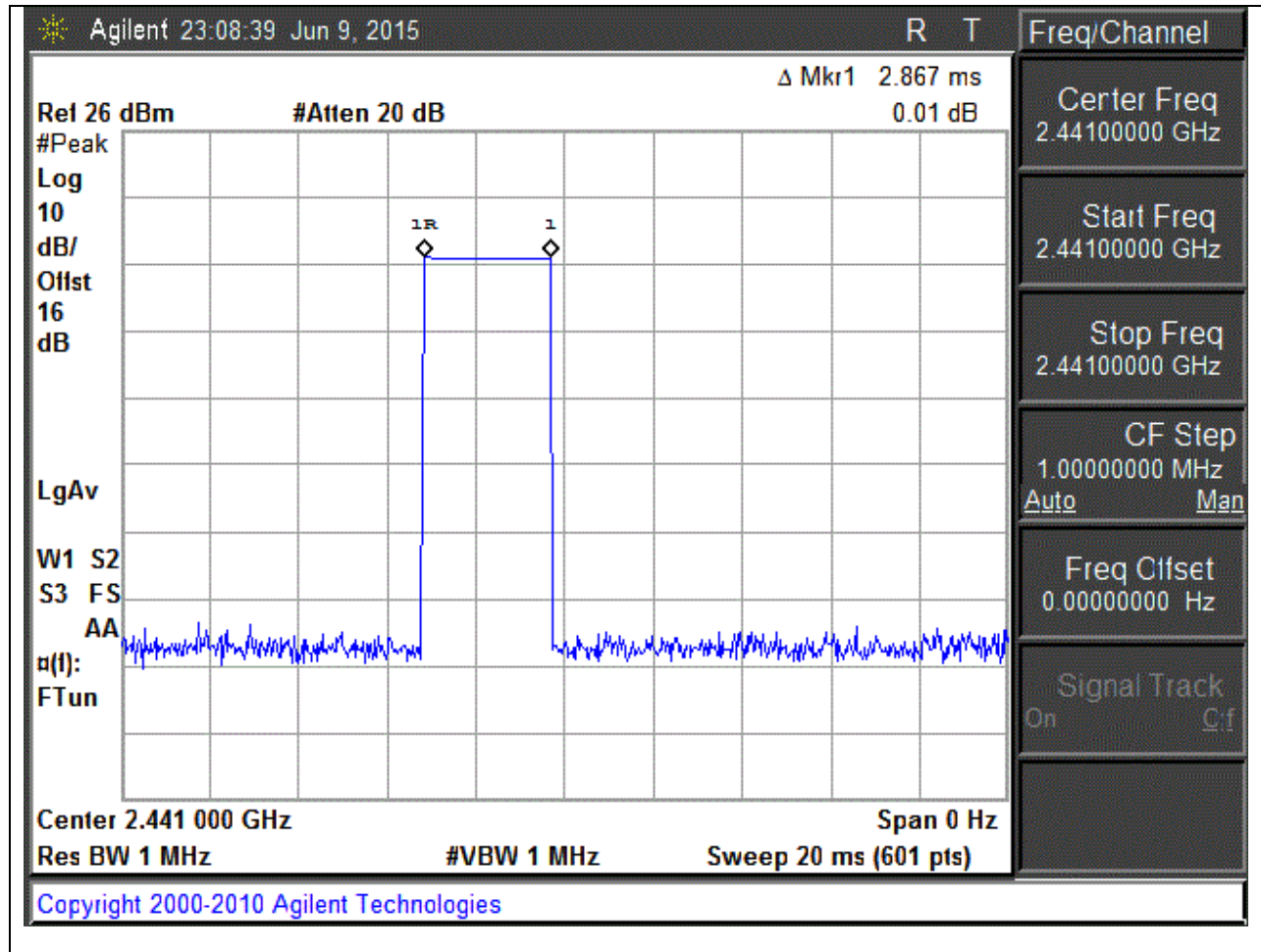
PULSE WIDTH - DH3



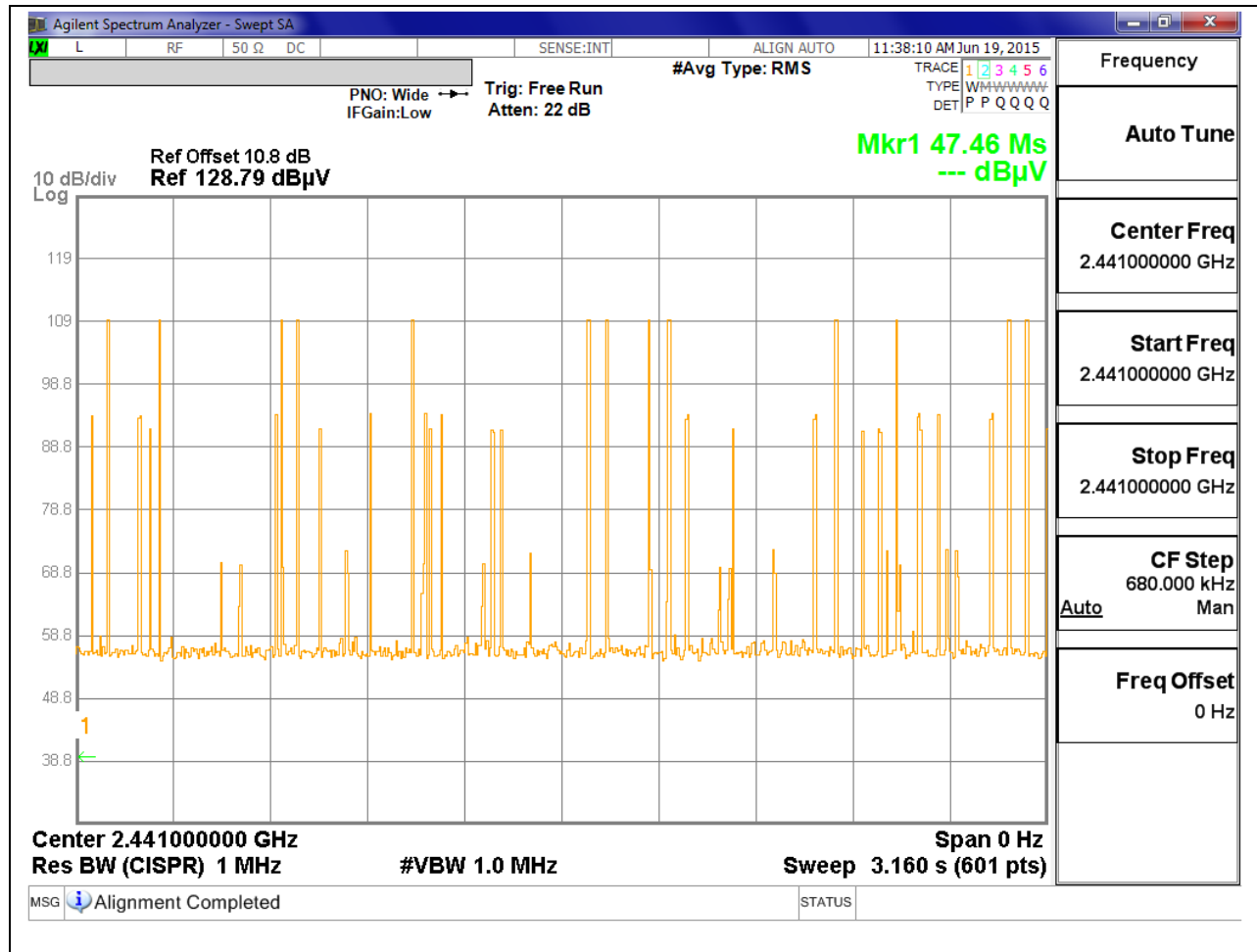
NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD - DH3



PULSE WIDTH - DH5



NUMBER OF PULSES IN 3.16 SECOND OBSERVATION PERIOD - DH5



8.5. OUTPUT POWER

LIMIT

§15.247 (b) (1)

The maximum antenna gain is less than 6 dBi, therefore the limit is 21 dBm.

TEST PROCEDURE

DA 00-705: 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

8.5.1. BASIC DATA RATE GFSK MODULATION

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	7.74	21	-13.26
Middle	2441	9.21	21	-11.79
High	2480	7.08	21	-13.92
Worst		9.21		-11.79

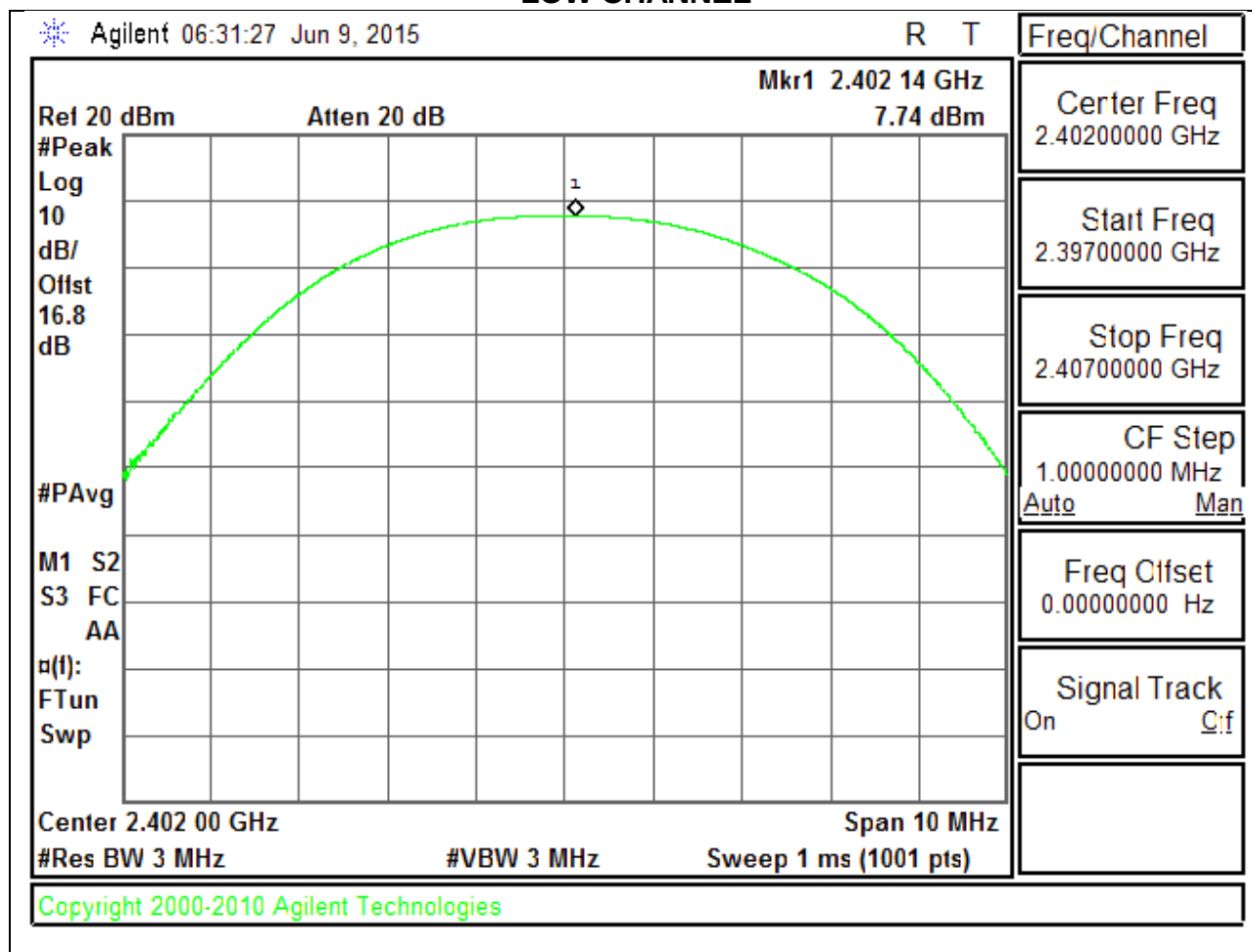
8.5.2. ENHANCED DATA RATE 8PSK MODULATION

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	6.28	21	-14.72
Middle	2441	8.07	21	-12.93
High	2480	6.26	21	-14.74
Worst		8.07		-12.93

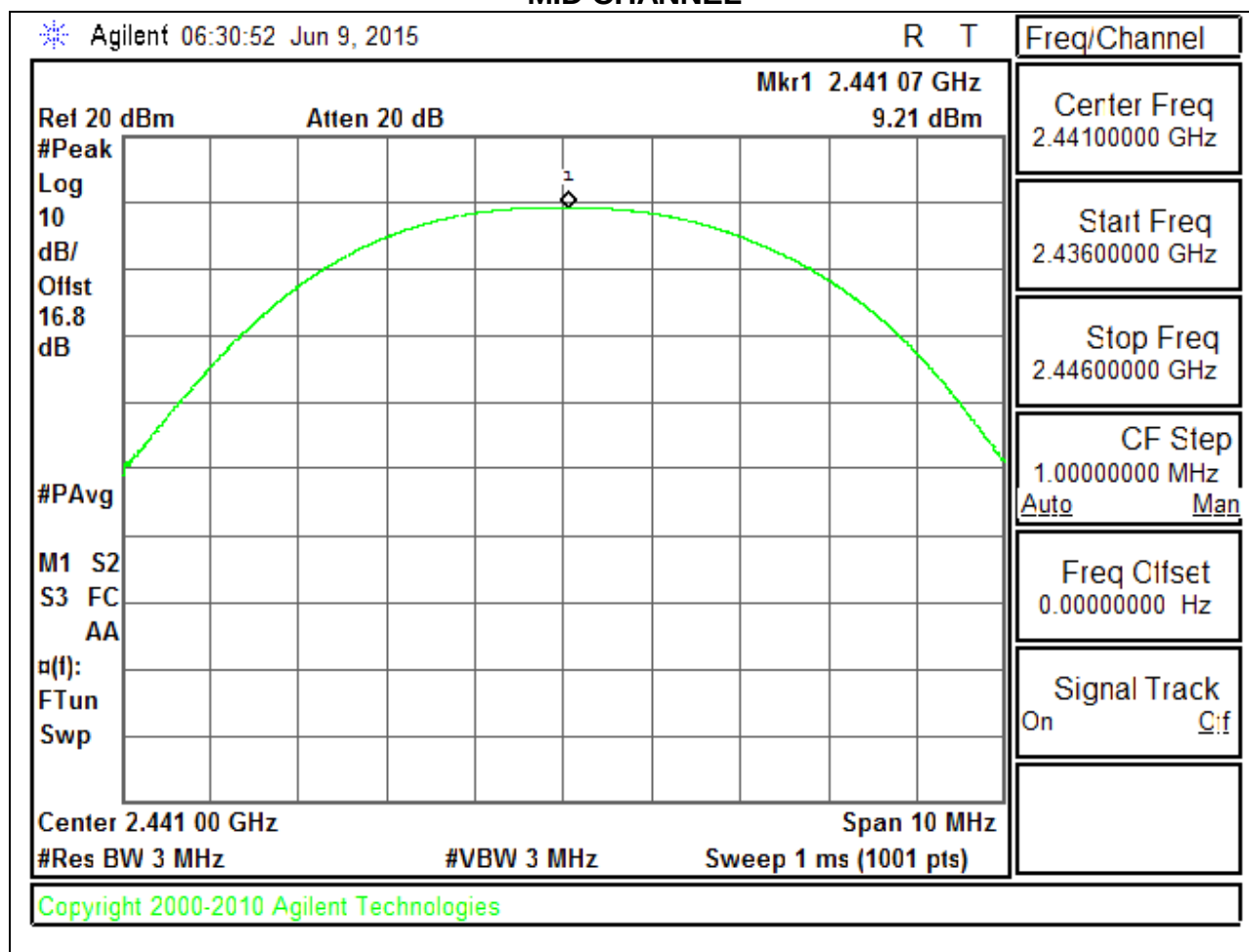
8.5.3. OUTPUT POWER PLOTS

GFSK OUTPUT POWER

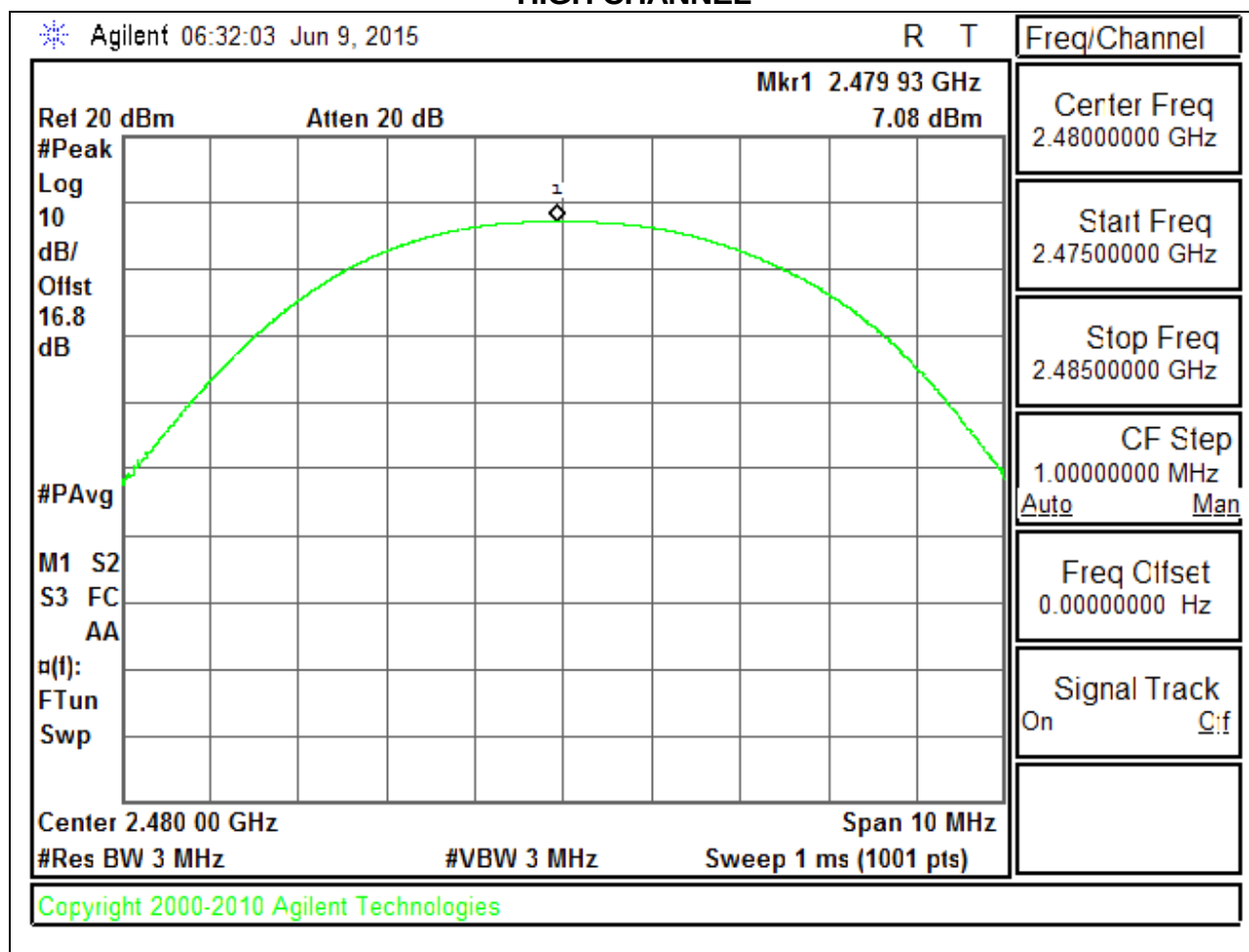
LOW CHANNEL



MID CHANNEL

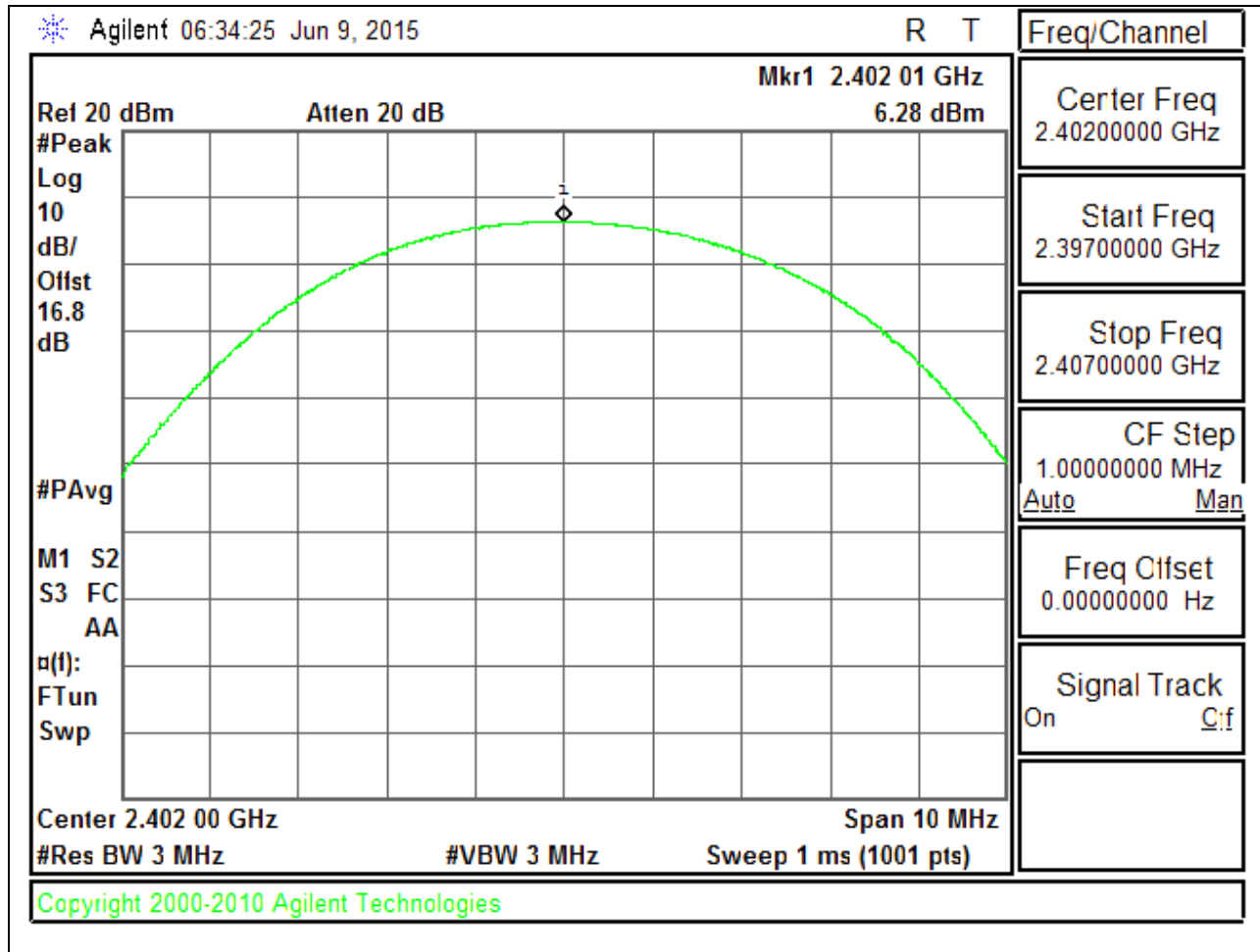


HIGH CHANNEL

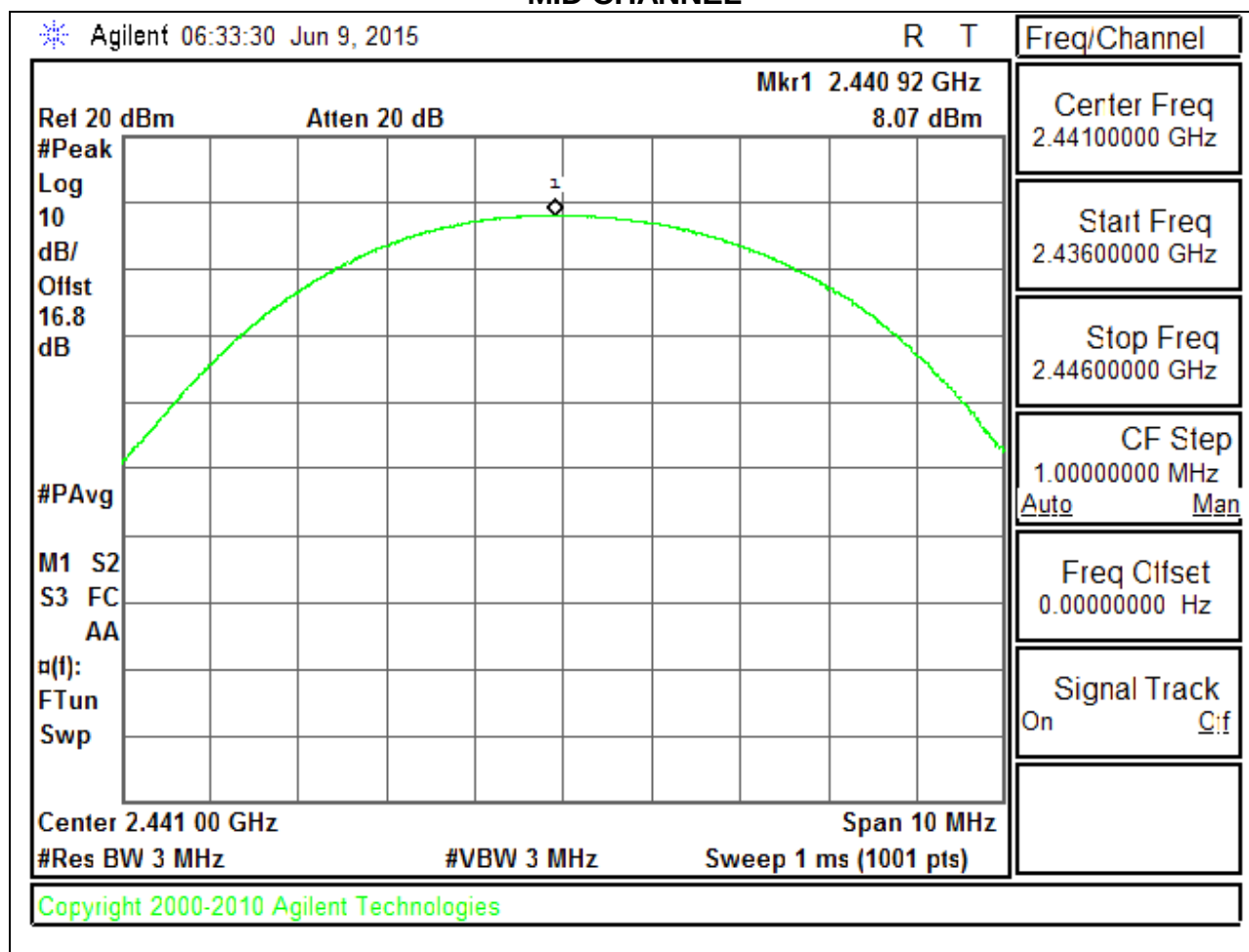


8PSK OUTPUT POWER

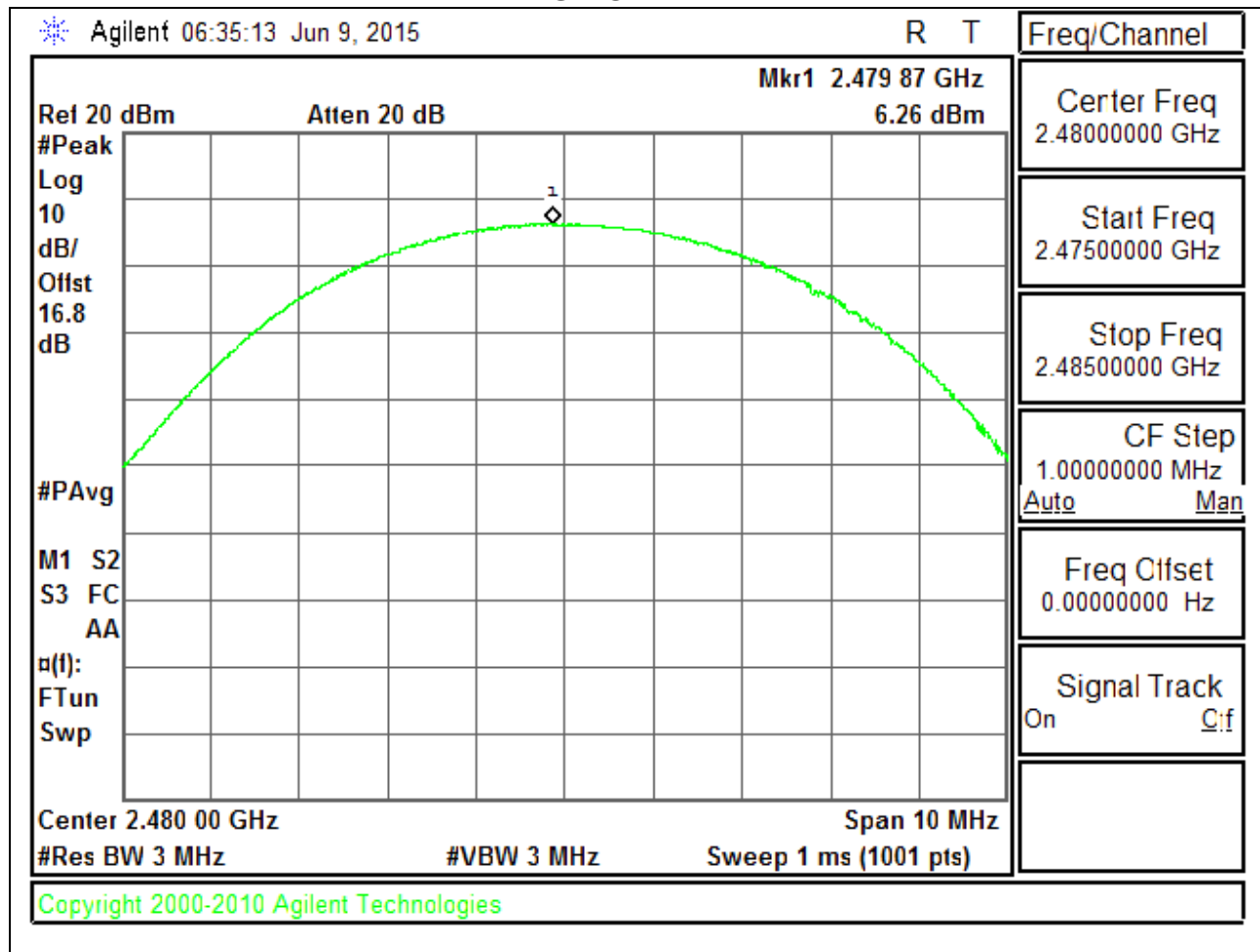
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



8.6. AVERAGE POWER

LIMIT

None; for reporting purposes only.

TEST PROCEDURE

DA 00-705: The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10.7 dB (including 10 dB pad and 0.7 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

8.6.1. BASIC DATA RATE GFSK MODULATION

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	7.3
Middle	2441	8.3
High	2480	6.7
Worst		8.3

8.6.2. DATA RATE PI/4-DQPSK MODULATION

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	3.7
Middle	2441	5.3
High	2480	3.9
Worst		5.3

8.6.3. ENHANCED DATA RATE 8PSK MODULATION

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	3.7
Middle	2441	5.3
High	2480	3.9
Worst		5.3

8.7. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

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.

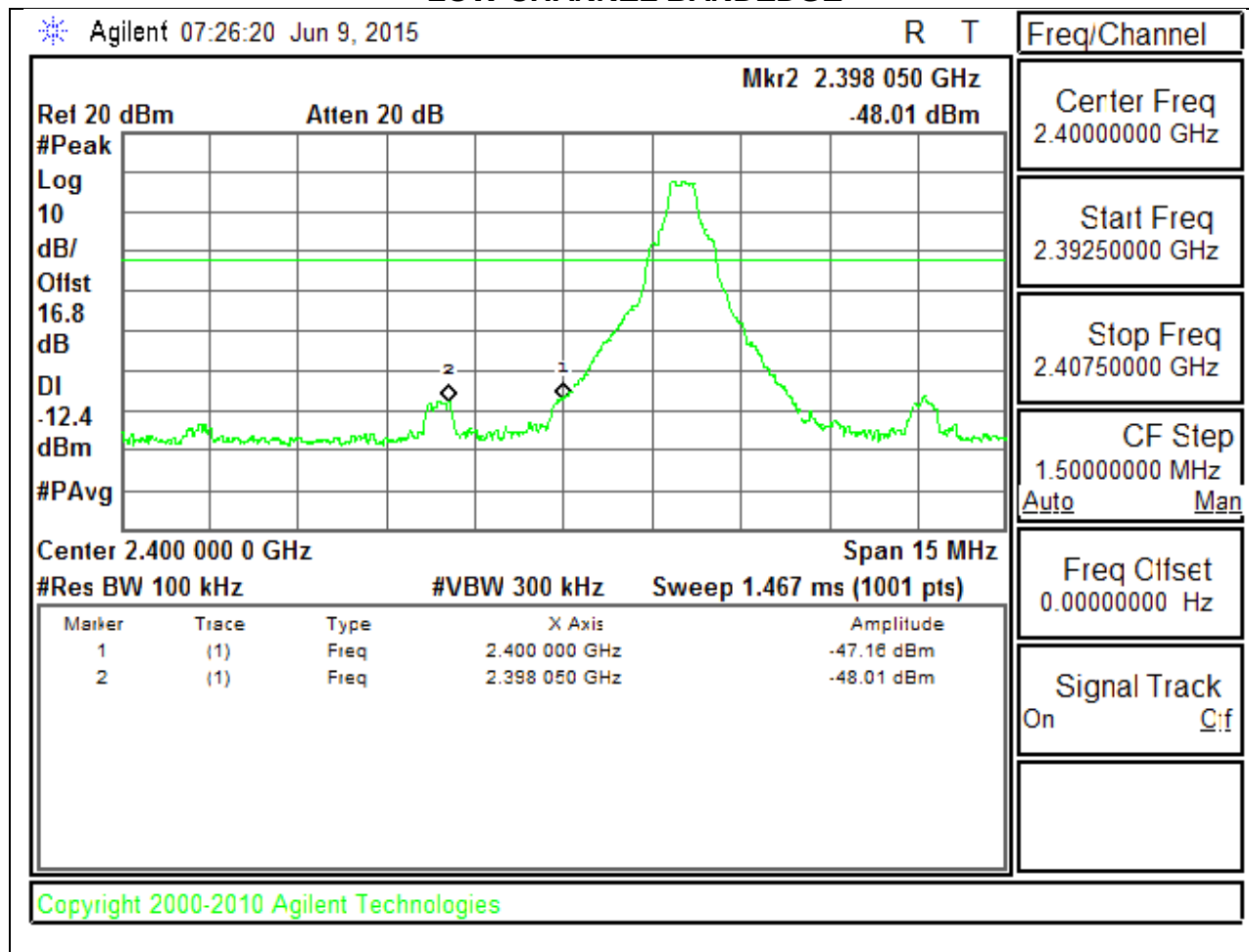
The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

RESULTS

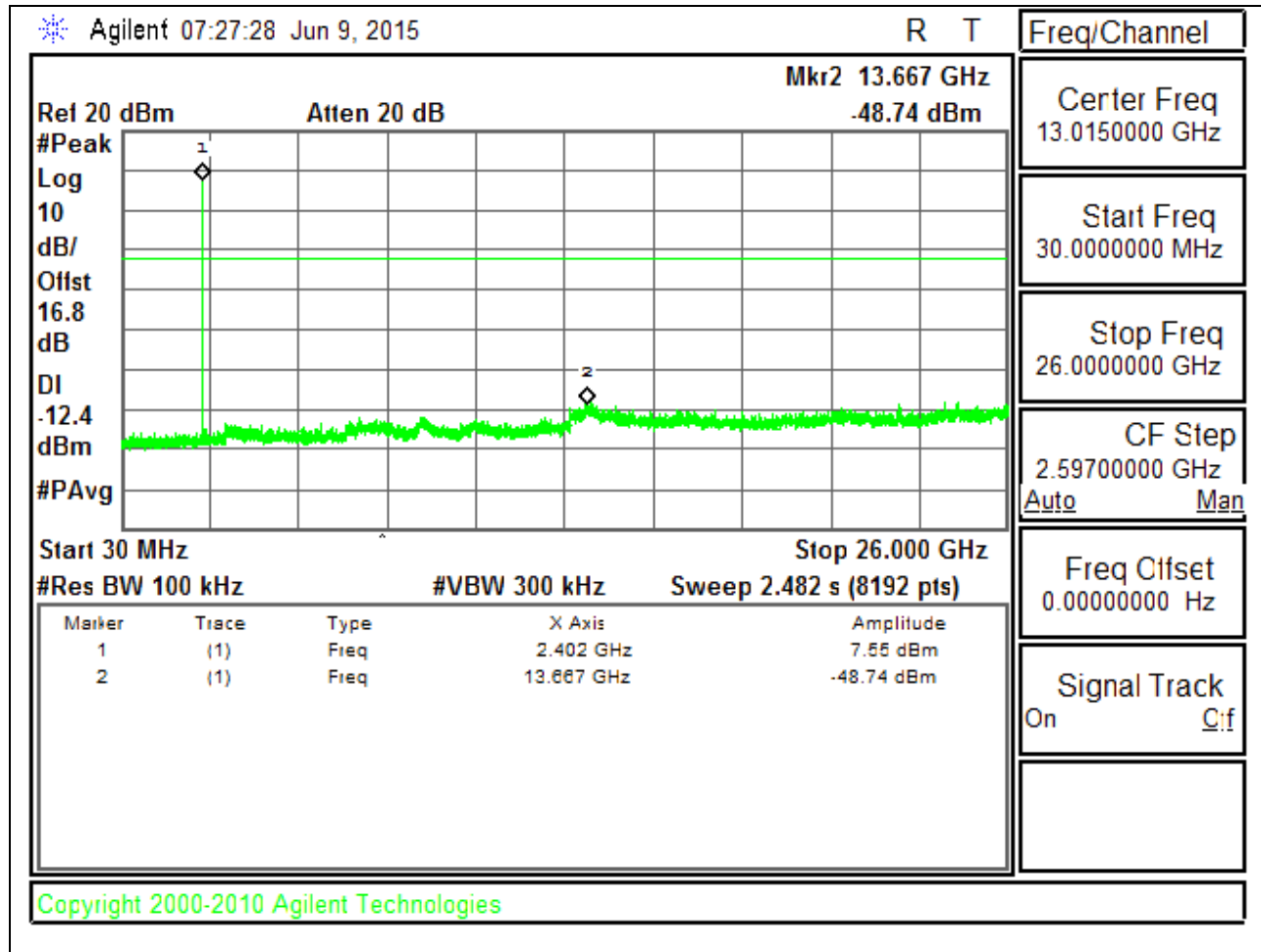
8.7.1. BASIC DATA RATE GFSK MODULATION

SPURIOUS EMISSIONS, LOW CHANNEL

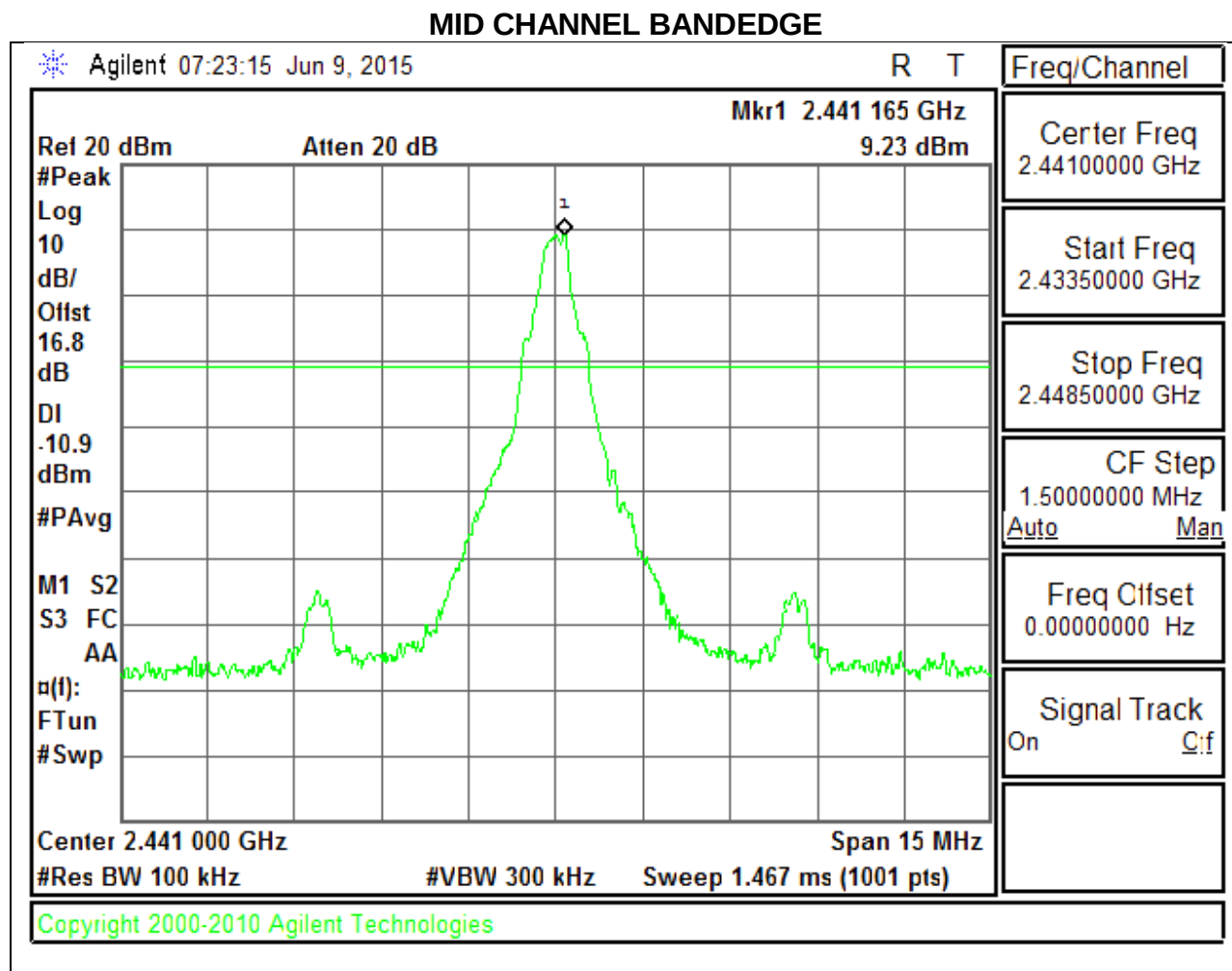
LOW CHANNEL BANDEDGE



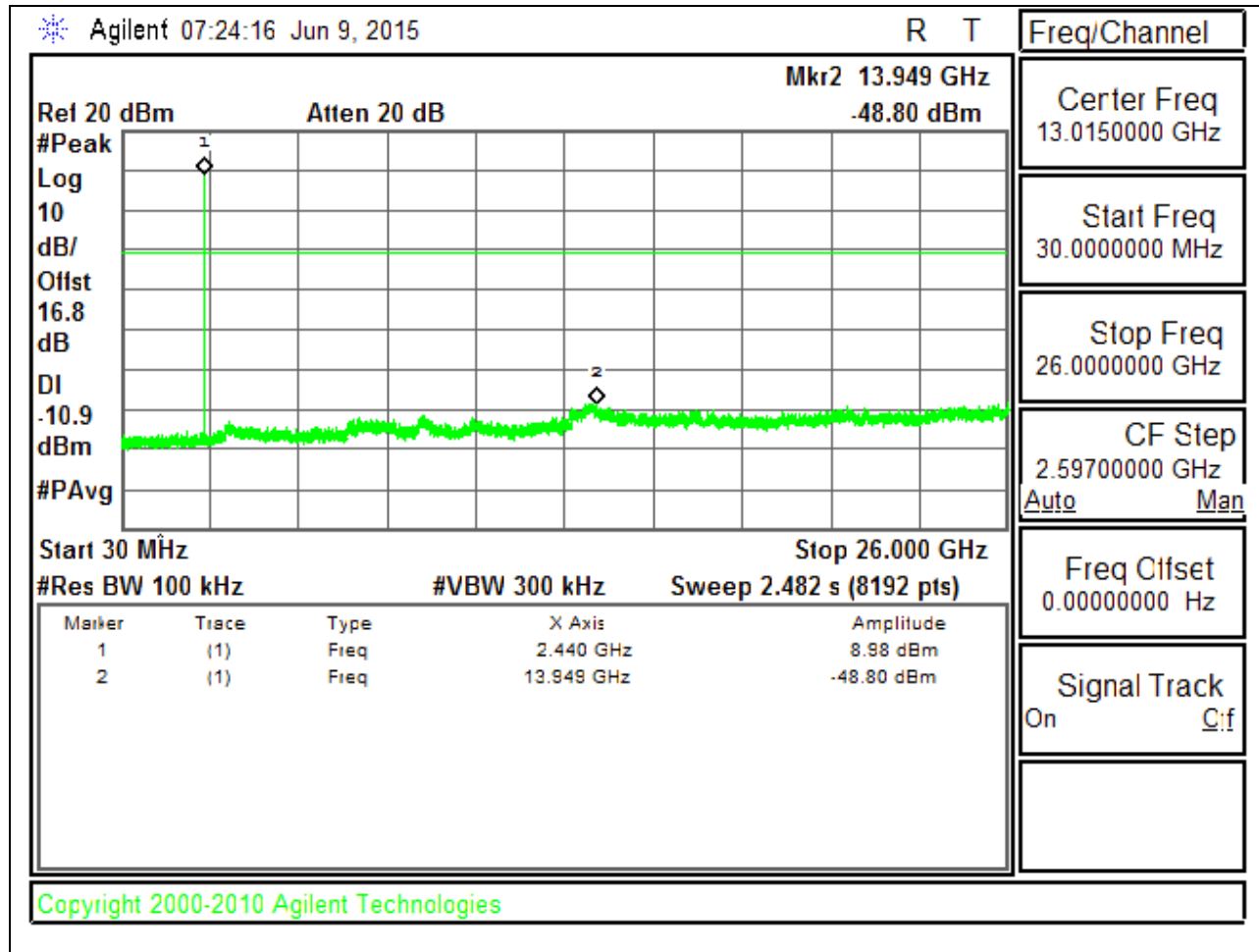
LOW CHANNEL SPURIOUS



SPURIOUS EMISSIONS, MID CHANNEL

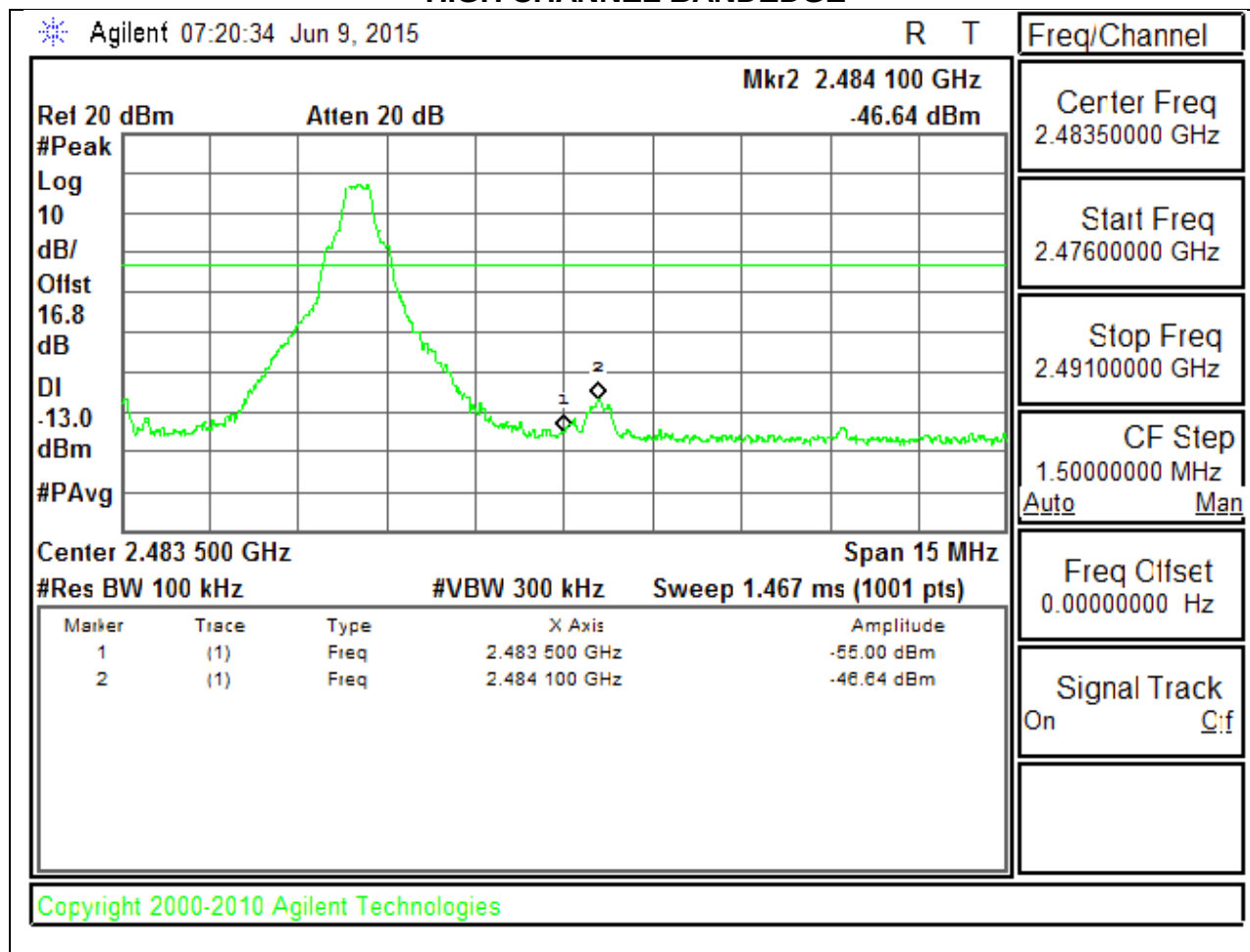


MID CHANNEL SPURIOUS

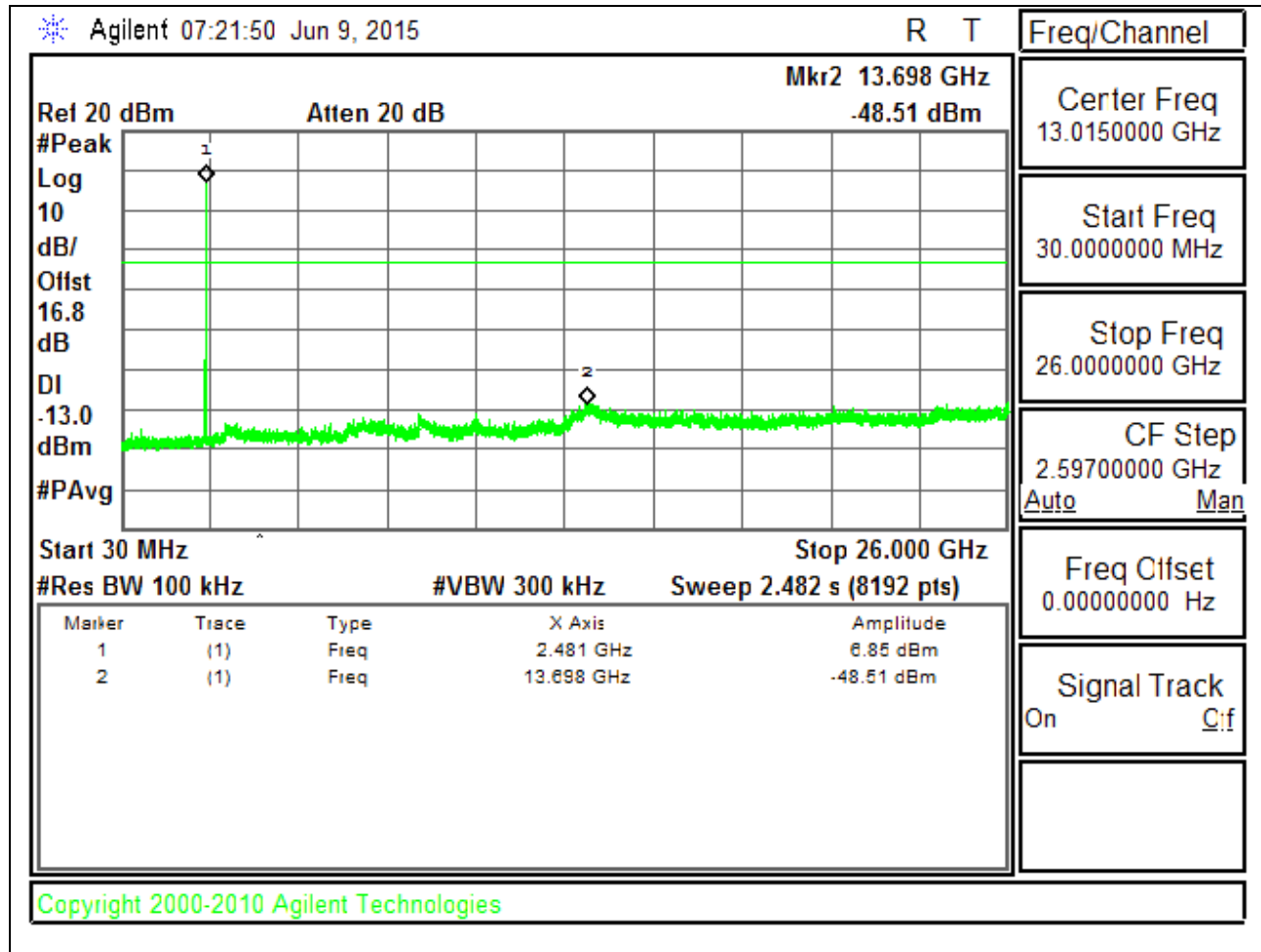


SPURIOUS EMISSIONS, HIGH CHANNEL

HIGH CHANNEL BANDEDGE

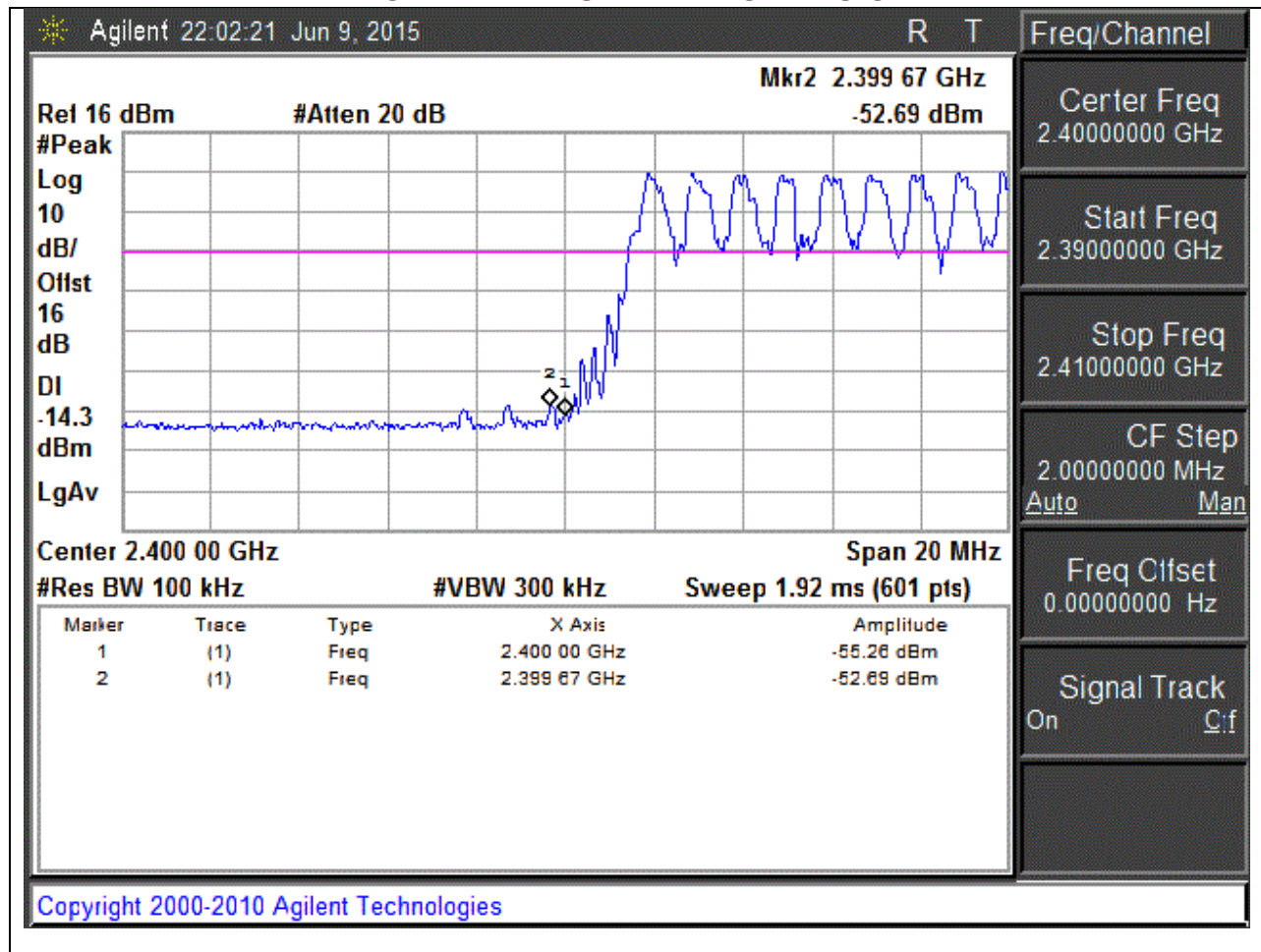


HIGH CHANNEL SPURIOUS

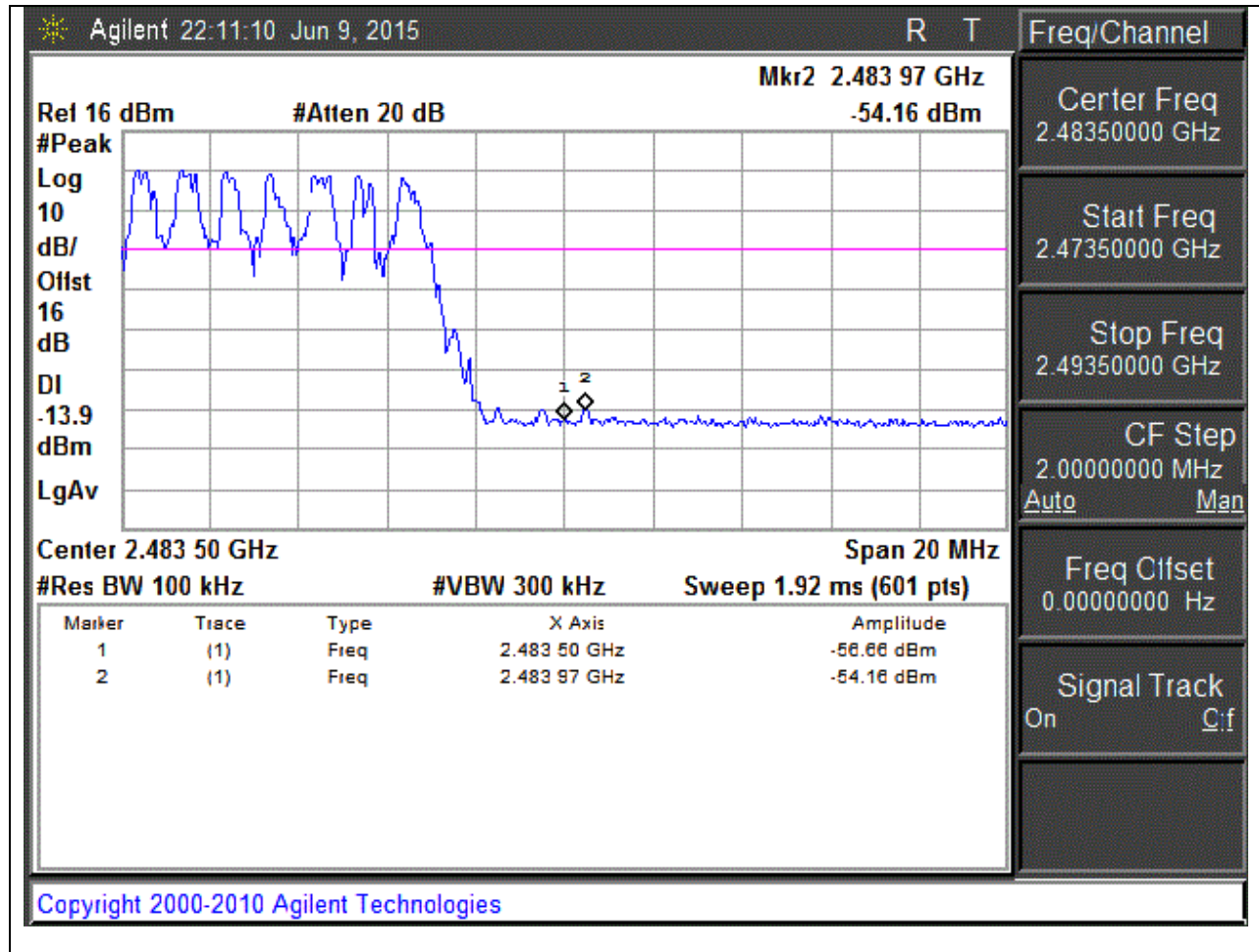


SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON

LOW BANDEDGE WITH HOPPING ON



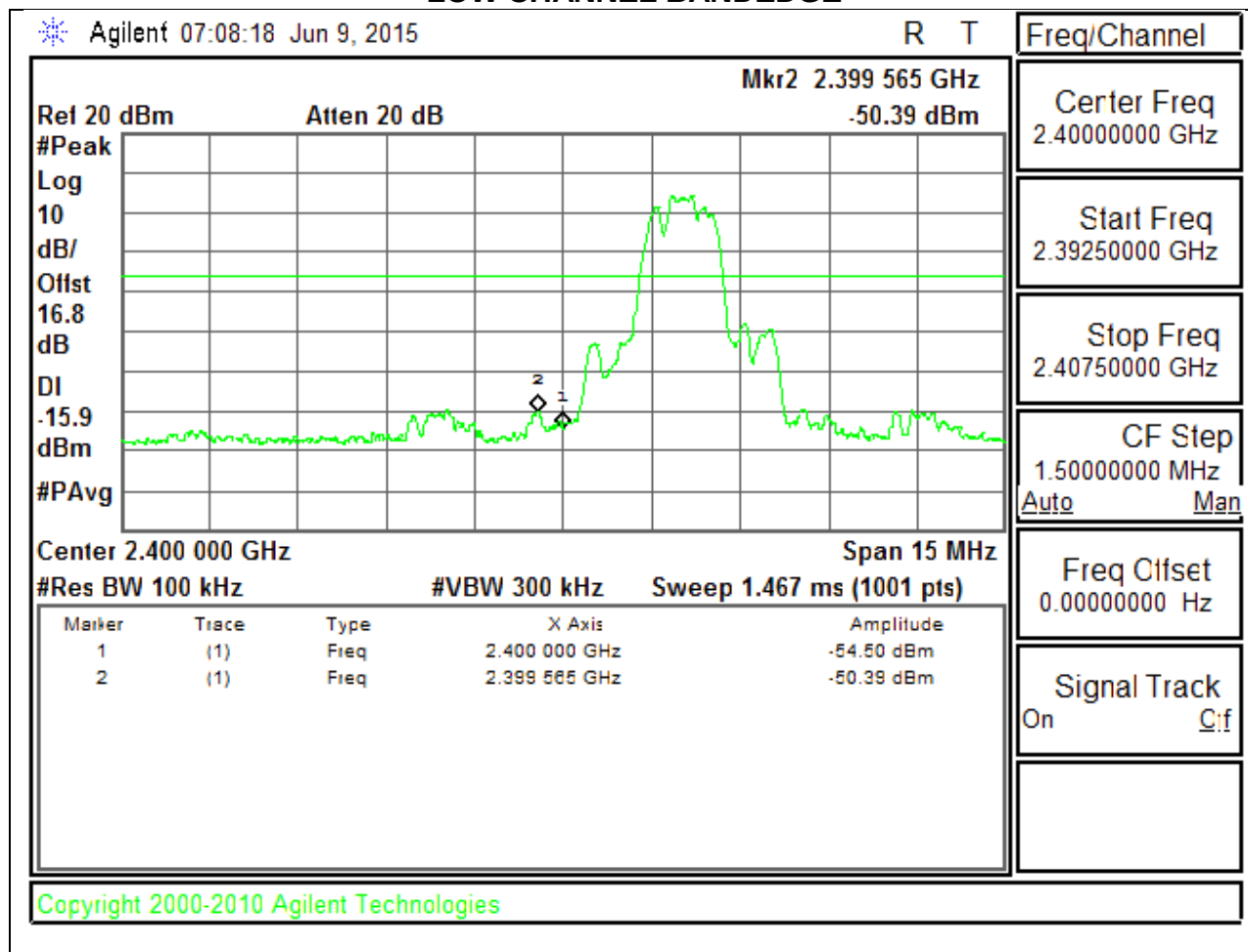
HIGH BANDEDGE WITH HOPPING ON



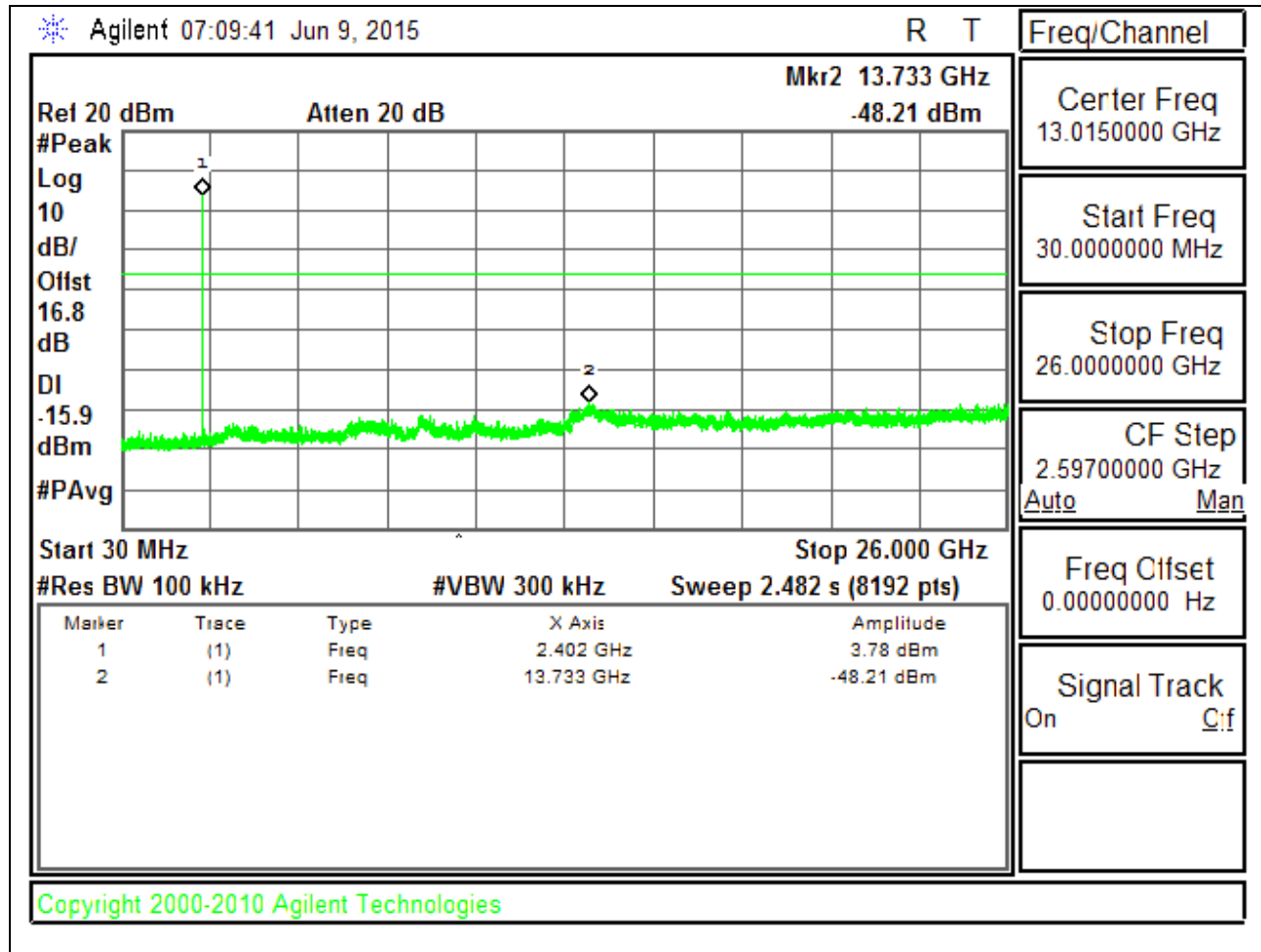
8.7.2. ENHANCED DATA RATE 8PSK MODULATION

SPURIOUS EMISSIONS, LOW CHANNEL

LOW CHANNEL BANDEDGE

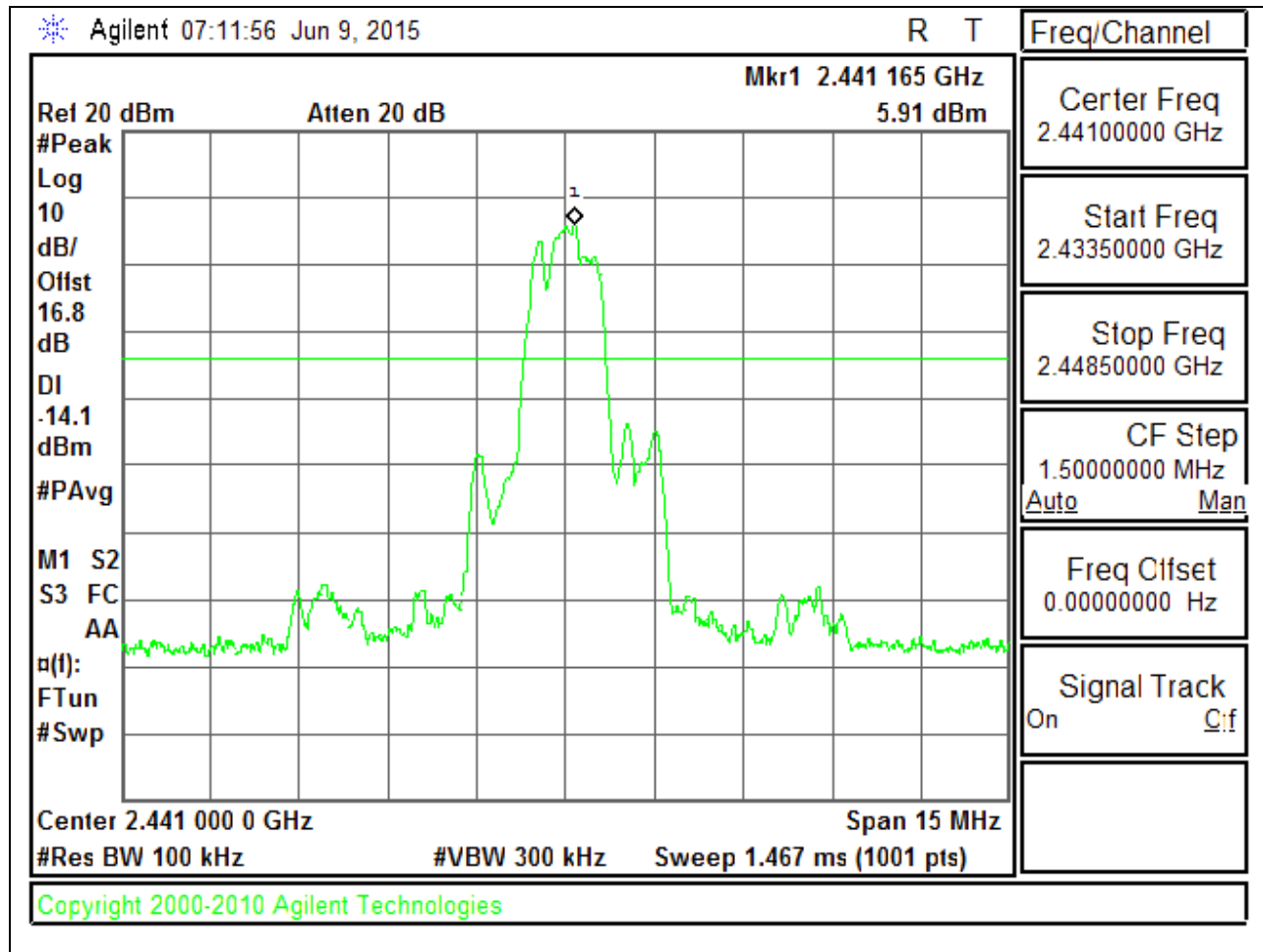


LOW CHANNEL SPURIOUS

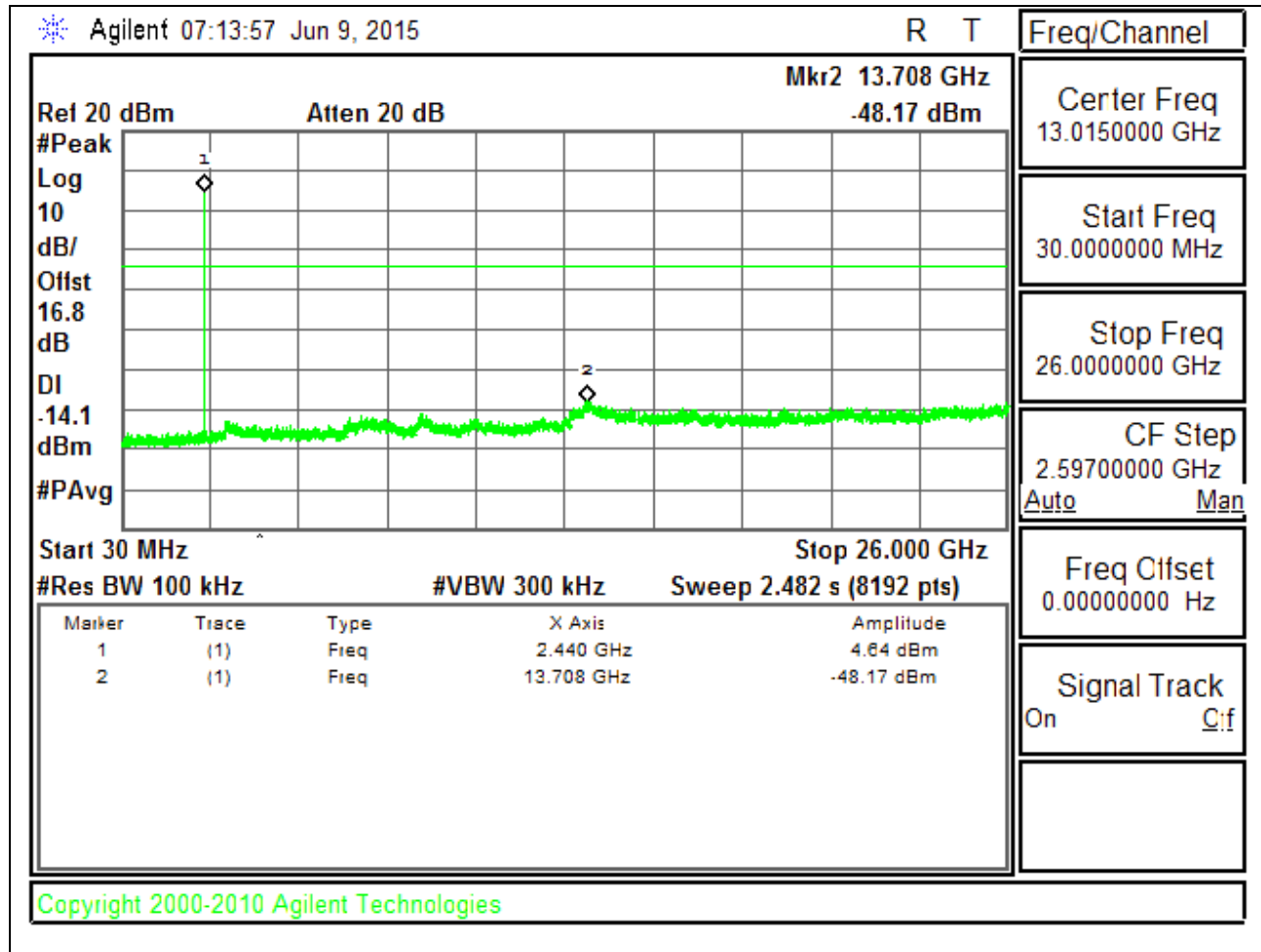


SPURIOUS EMISSIONS, MID CHANNEL

MID CHANNEL BANDEDGE

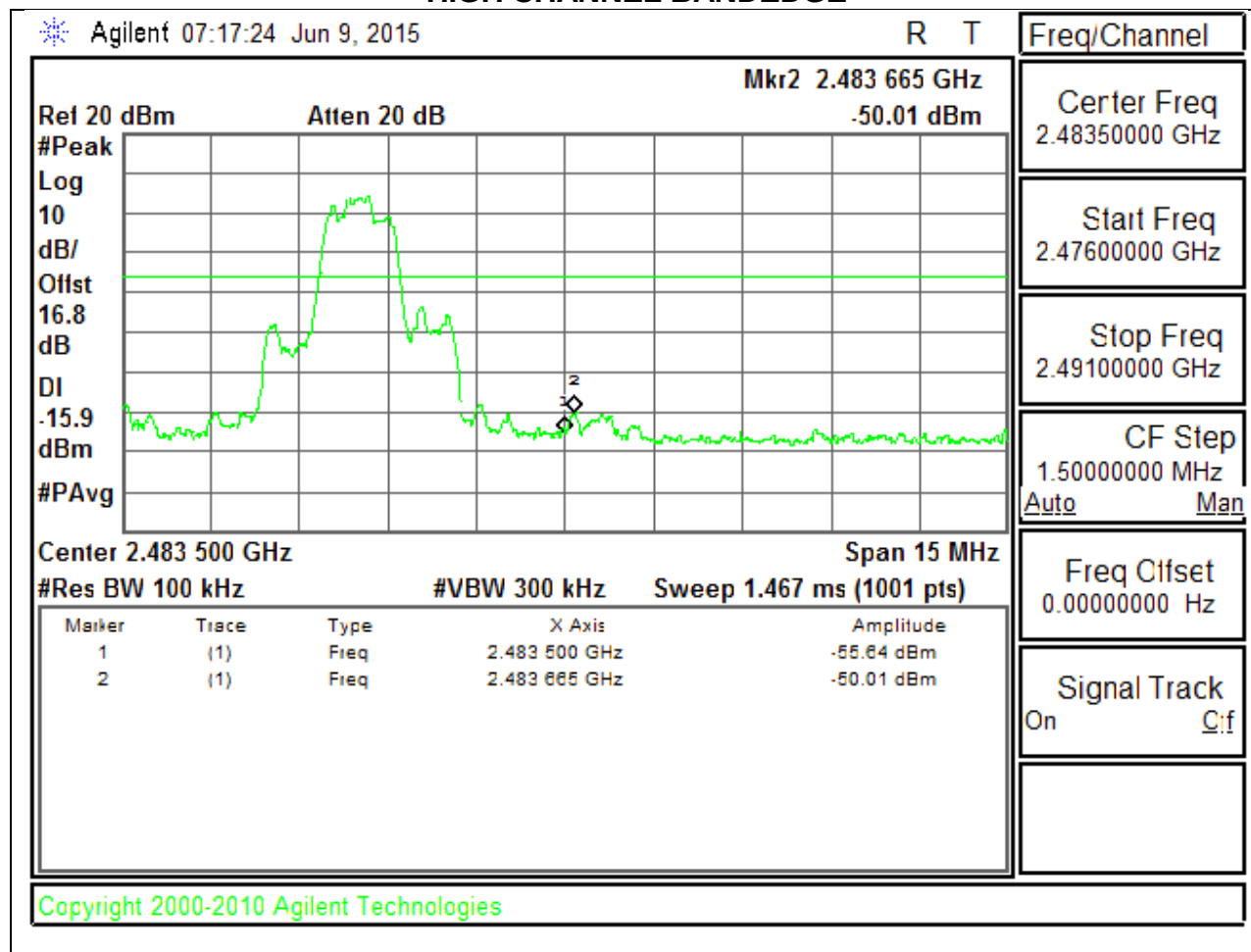


MID CHANNEL SPURIOUS

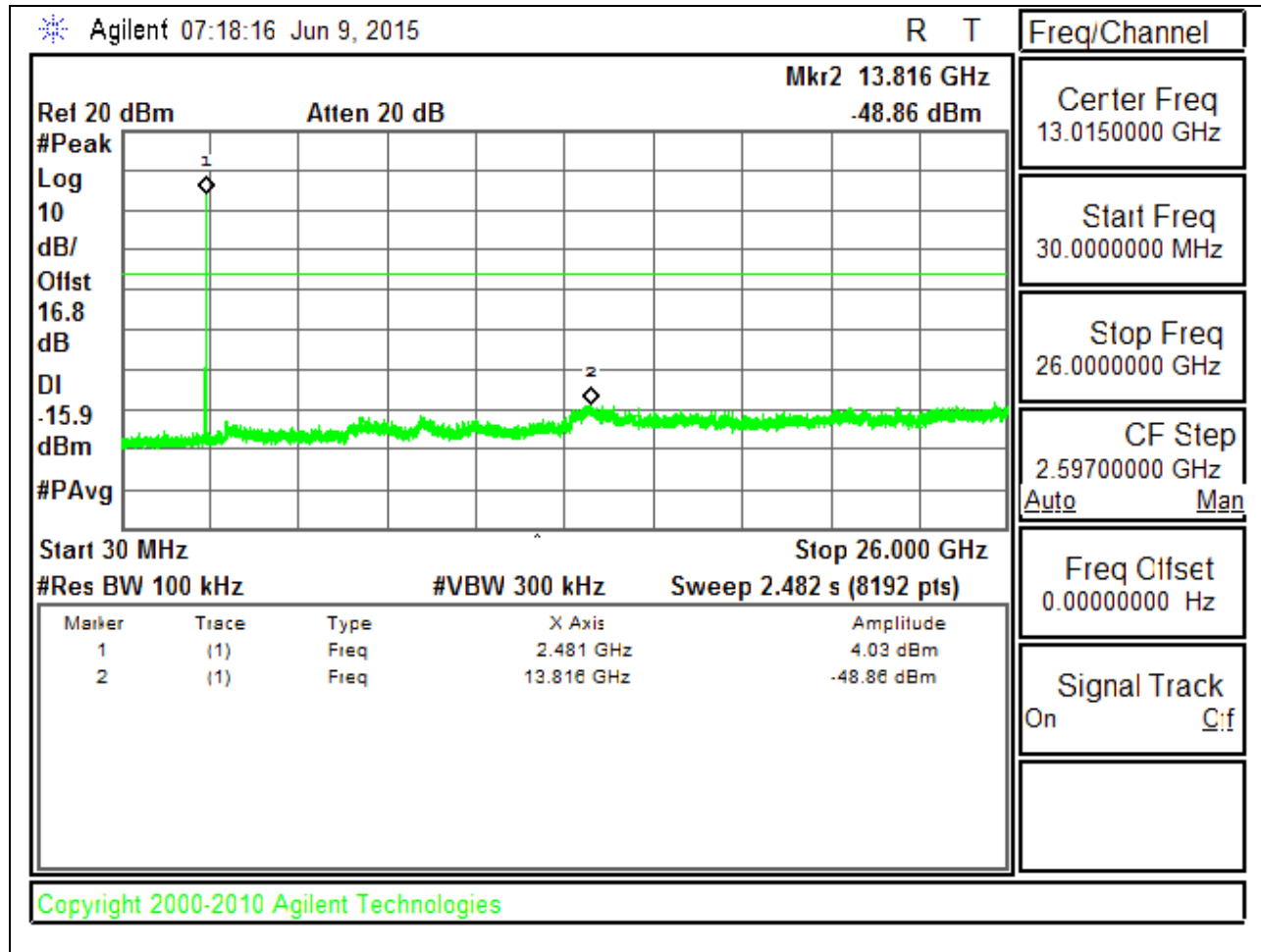


SPURIOUS EMISSIONS, HIGH CHANNEL

HIGH CHANNEL BANDEDGE

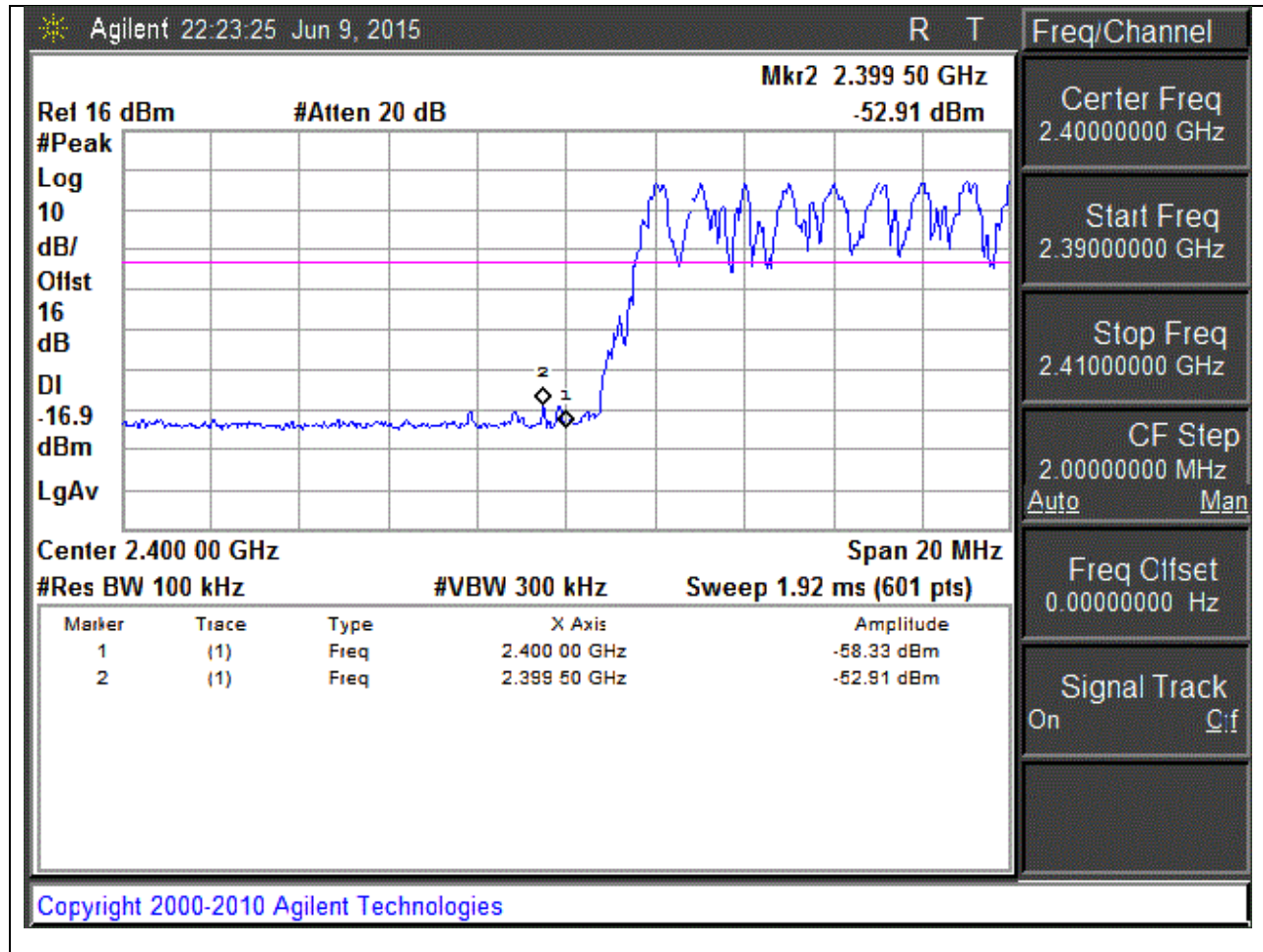


HIGH CHANNEL SPURIOUS

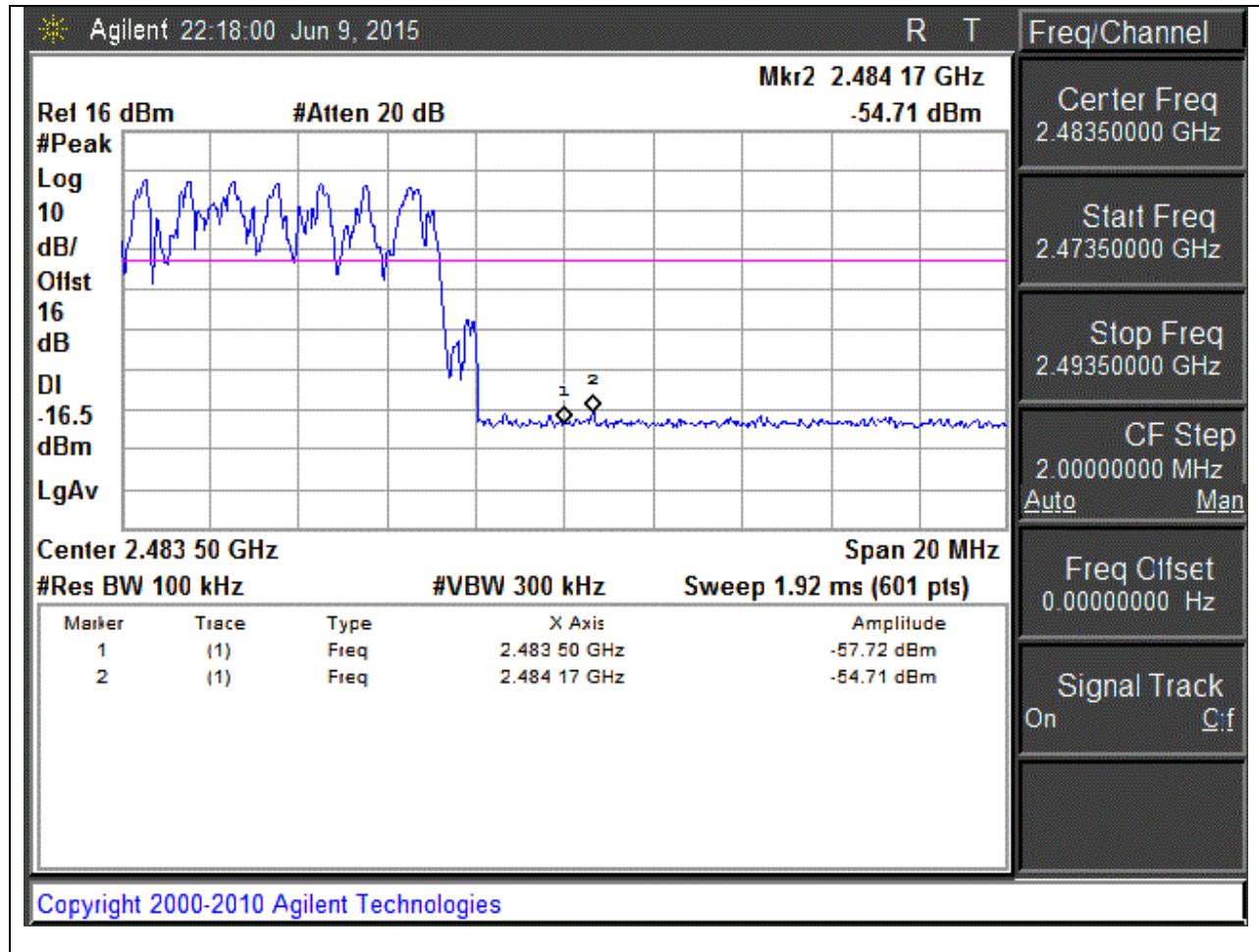


SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON

LOW BANDEDGE WITH HOPPING ON



HIGH BANDEDGE WITH HOPPING ON



9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit ($\mu\text{V}/\text{m}$) at 3 m	Field Strength Limit (dB $\mu\text{V}/\text{m}$) 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 band edge 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 1/T (on time) for average measurement.
 $\text{GFSK} = 1/T = 1 / 0.001632\text{S} = 620\text{Hz}$.

The spectrum from 1GHzHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

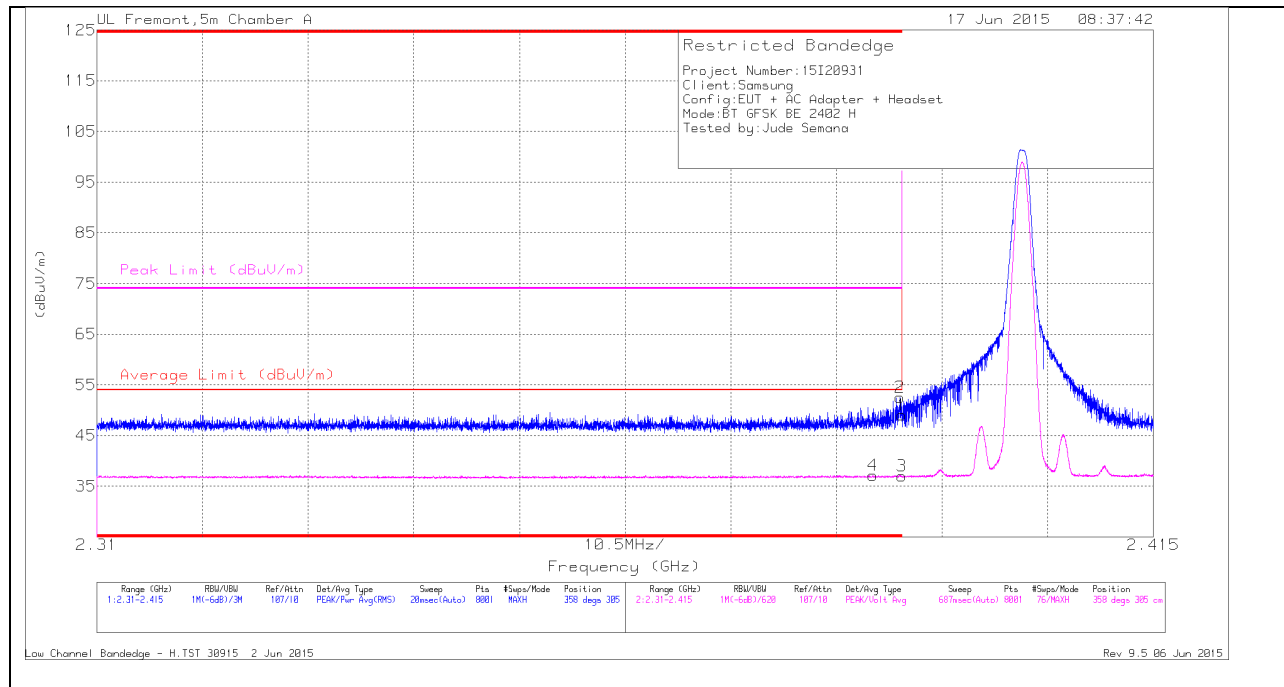
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. BASIC DATA RATE GFSK MODULATION

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



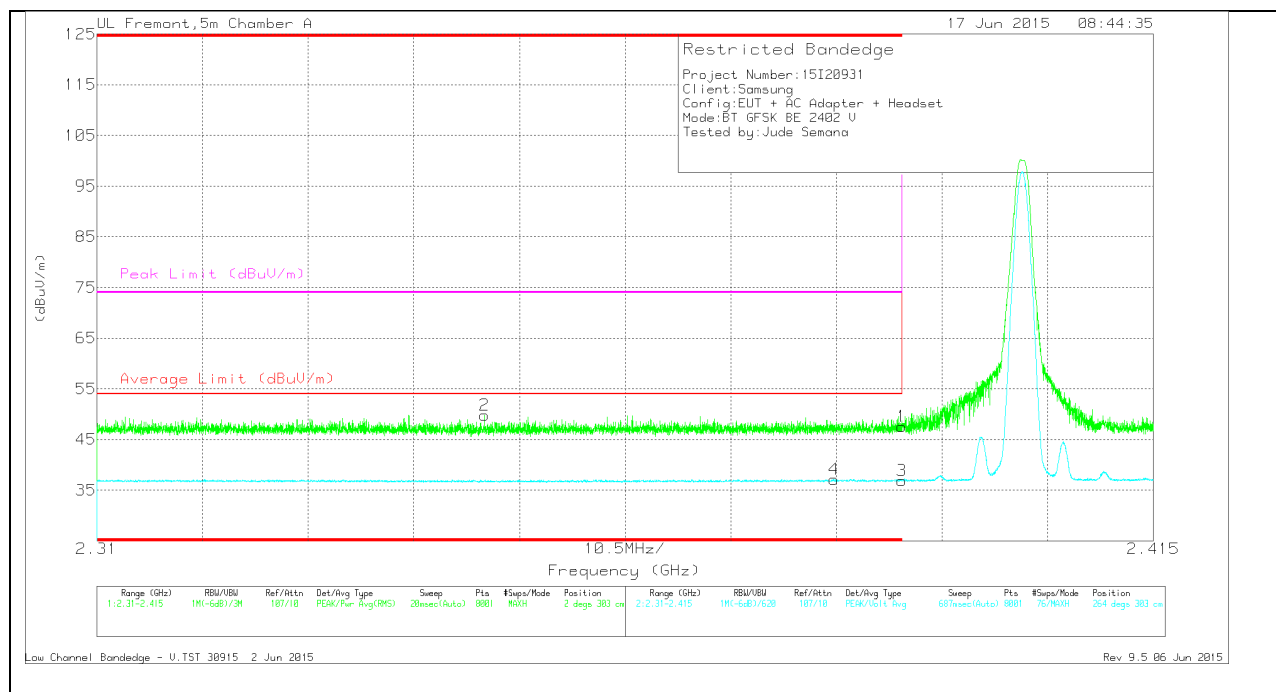
HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	42	Pk	32	-24.9	49.1	-	-	74	-24.9	358	305	H
2	* 2.39	45.42	Pk	32	-24.9	52.52	-	-	74	-21.48	358	305	H
3	* 2.39	29.85	V1TV	32	-24.9	36.95	54	-17.05	-	-	358	305	H
4	* 2.387	30.08	V1TV	32	-24.9	37.18	54	-16.82	-	-	358	305	H

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

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

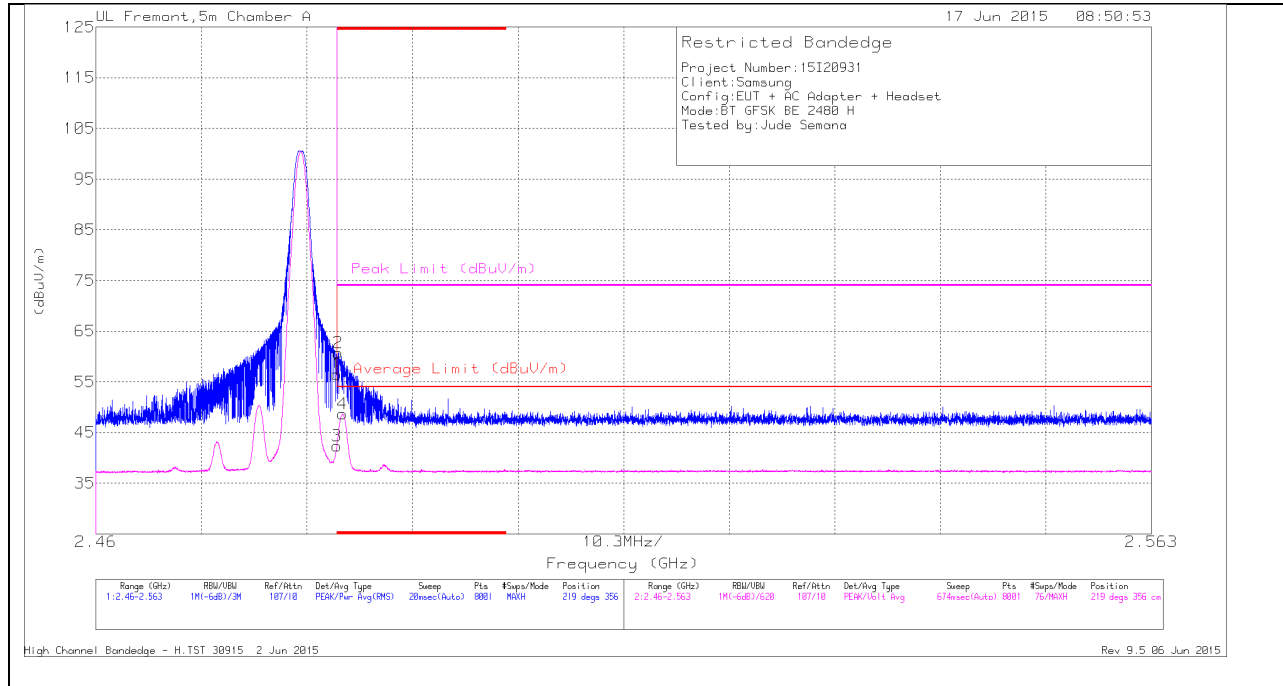
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Ftr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.43	Pk	32	-24.9	47.53	-	-	74	-26.47	2	303	V
2	* 2.349	42.8	Pk	31.9	-24.9	49.8	-	-	74	-24.2	2	303	V
3	* 2.39	29.76	V1TV	32	-24.9	36.86	54	-17.14	-	-	264	303	V
4	* 2.383	30.15	V1TV	31.9	-24.9	37.15	54	-16.85	-	-	264	303	V

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

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

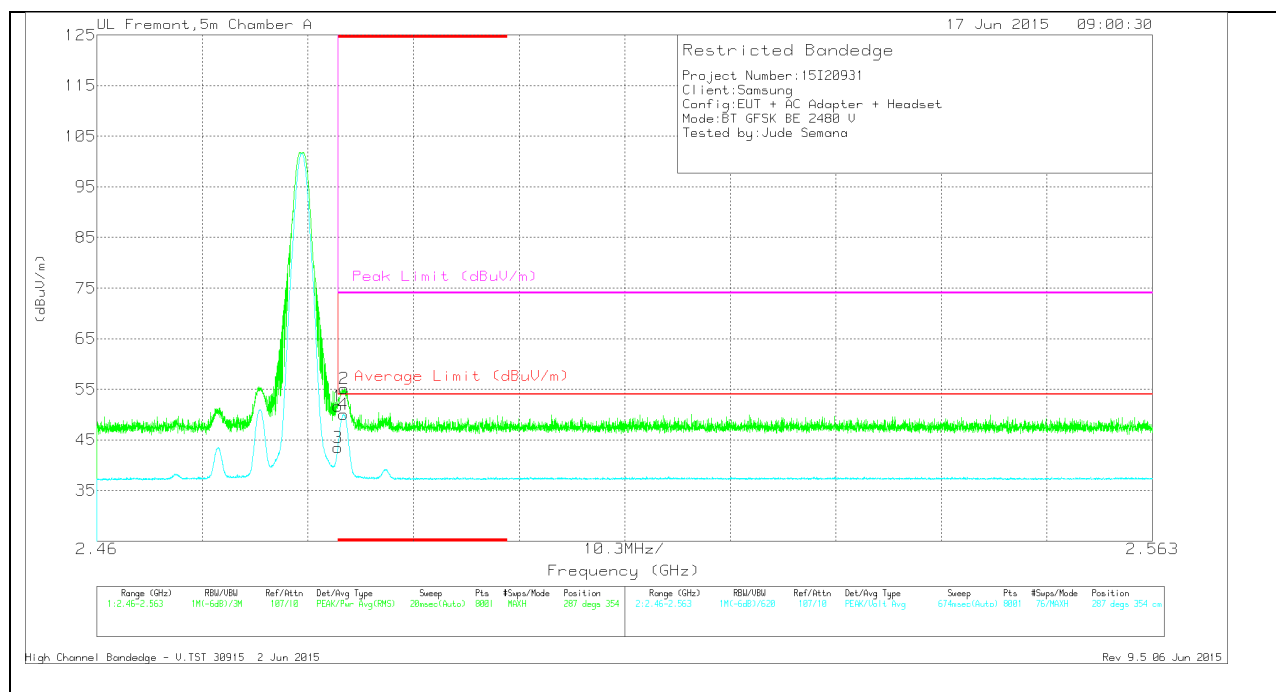


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	49.22	Pk	32.1	-24.8	56.52	-	-	74	-17.48	219	356	H
2	* 2.484	53.44	Pk	32.1	-24.8	60.74	-	-	74	-13.26	219	356	H
3	* 2.484	34.99	V1TV	32.1	-24.8	42.29	54	-11.71	-	-	219	356	H
4	* 2.484	41.33	V1TV	32.1	-24.8	48.63	54	-5.37	-	-	219	356	H

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

VERTICAL PEAK AND AVERAGE PLOT



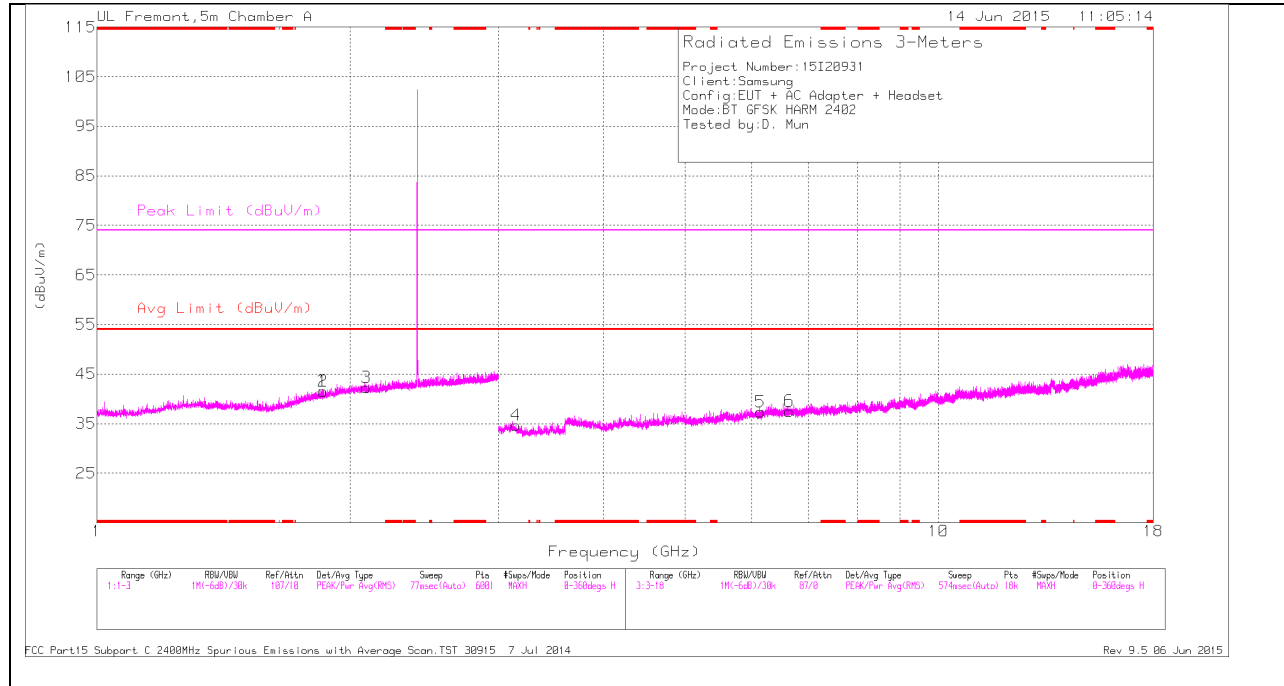
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	44.36	Pk	32.1	-24.8	51.66	-	-	74	-22.34	287	354	V
2	* 2.484	47.81	Pk	32.1	-24.8	55.11	-	-	74	-18.89	287	354	V
3	* 2.484	36.11	V1TV	32.1	-24.8	43.41	54	-10.59	-	-	287	354	V
4	* 2.484	42.69	V1TV	32.1	-24.8	49.99	54	-4.01	-	-	287	354	V

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

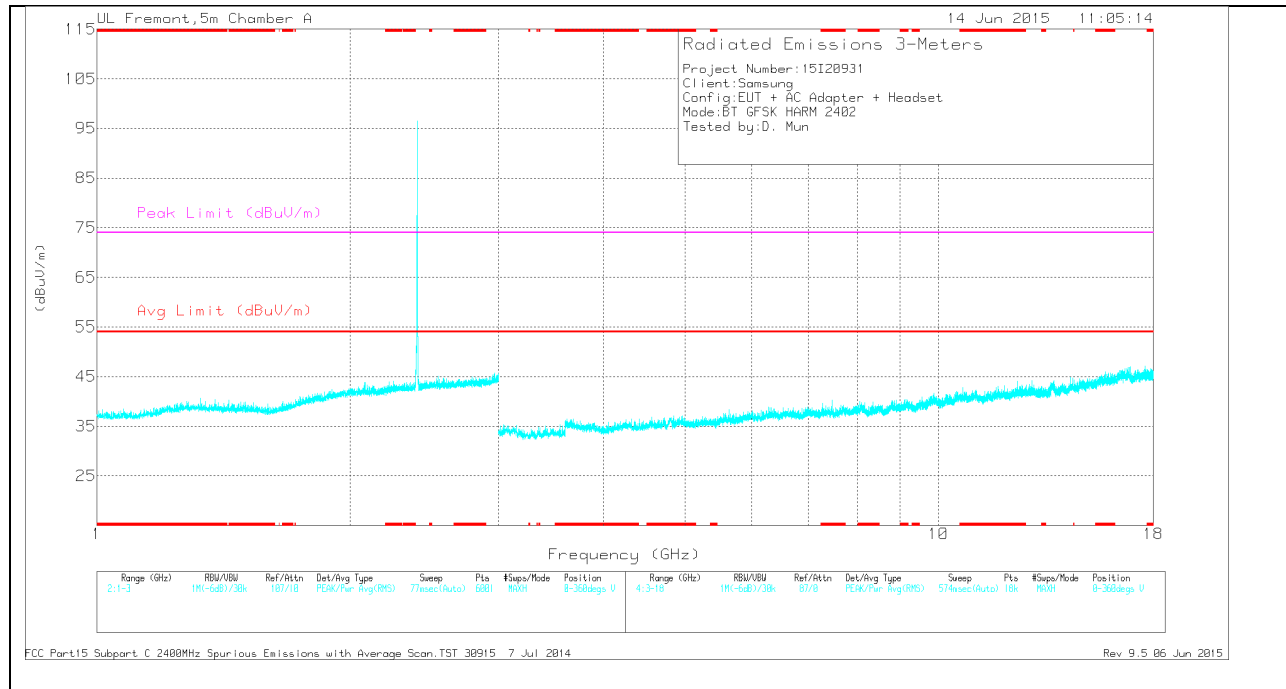
HARMONICS AND SPURIOUS EMISSIONS

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 T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.858	36.55	Pk	30.5	-25.5	41.55	-	-	74	-32.45	0-360	100	H
2	1.858	36.55	Pk	30.5	-25.5	41.55	-	-	74	-32.45	0-360	100	H
3	2.089	36.25	Pk	31.4	-25.3	42.35	-	-	74	-31.65	0-360	201	H
4	3.147	34.03	Pk	32.8	-32.2	34.63	-	-	74	-39.37	0-360	100	H
5	6.14	31.2	Pk	35.4	-29.3	37.3	-	-	74	-36.7	0-360	100	H
6	6.648	29.34	Pk	35.6	-27.4	37.54	-	-	74	-36.46	0-360	201	H

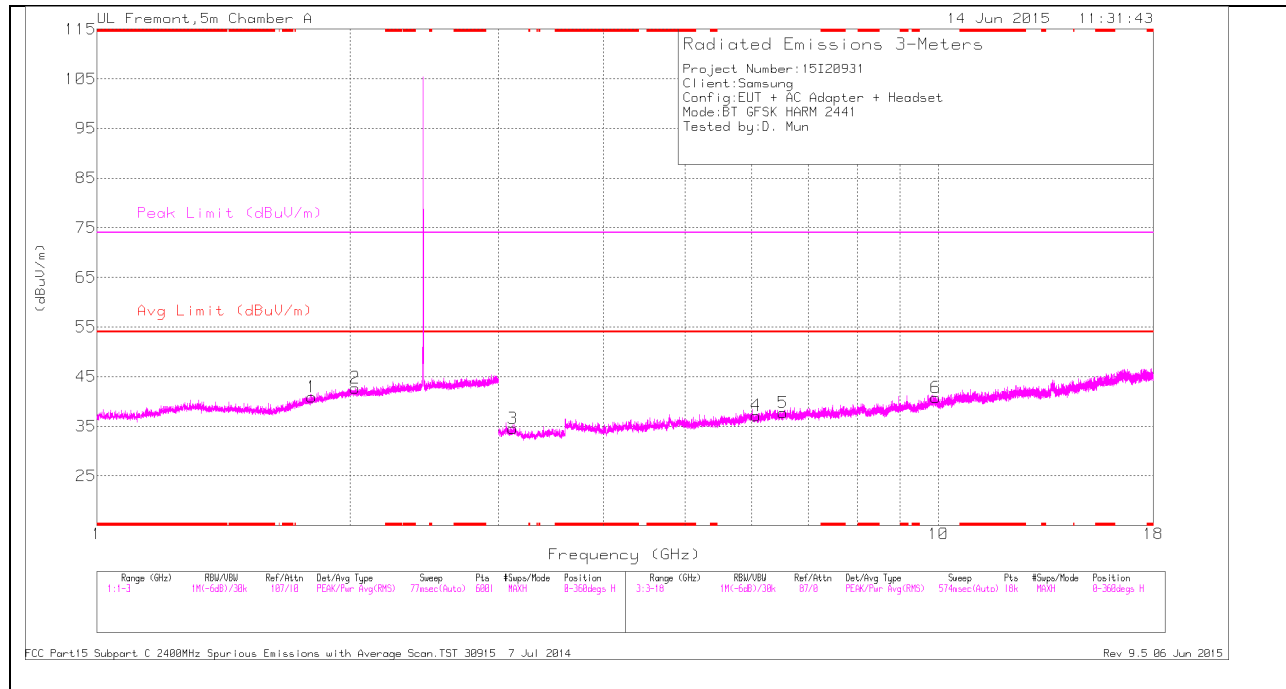
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.857	44.26	PK2	30.5	-25.5	49.26	-	-	74	-24.74	1	100	H
1.857	44.75	PK2	30.5	-25.5	49.75	-	-	74	-24.25	1	100	H
1.859	32.76	V1TV	30.5	-25.5	37.76	54	-16.24	-	-	1	100	H
1.859	32.79	V1TV	30.5	-25.5	37.79	54	-16.21	-	-	1	100	H
2.087	32.73	V1TV	31.4	-25.3	38.83	54	-15.17	-	-	1	202	H
2.09	44.51	PK2	31.4	-25.3	50.61	-	-	74	-23.39	1	202	H
3.148	42.21	PK2	32.8	-32.3	42.71	-	-	74	-31.29	1	100	H
3.148	30.89	V1TV	32.8	-32.2	31.49	54	-22.51	-	-	1	100	H
6.138	28.02	V1TV	35.4	-29.3	34.12	54	-19.88	-	-	1	100	H
6.139	39.21	PK2	35.4	-29.3	45.31	-	-	74	-28.69	1	100	H
6.649	37.74	PK2	35.6	-27.4	45.94	-	-	74	-28.06	1	202	H
6.65	26.55	V1TV	35.6	-27.4	34.75	54	-19.25	-	-	1	202	H

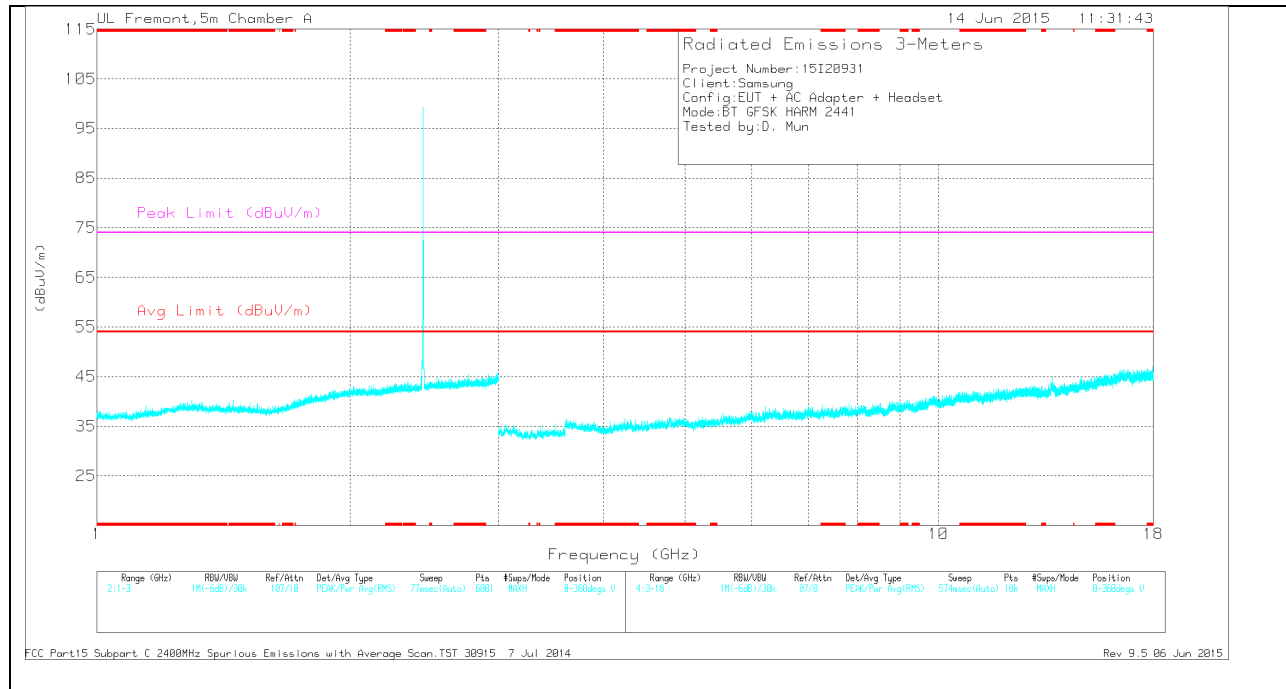
FCC Part15 Subpart C T186 2400MHz Spurious Emissions.TST 12746Rev 9.5 12 Jun 2013

MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.801	36.41	Pk	30	-25.5	40.91	-	-	74	-33.09	0-360	100	H
2	2.028	36.84	Pk	31.2	-25.3	42.74	-	-	74	-31.26	0-360	100	H
3	3.119	33.51	Pk	32.9	-31.9	34.51	-	-	74	-39.49	0-360	201	H
4	6.067	30.96	Pk	35.4	-29.2	37.16	-	-	74	-36.84	0-360	100	H
5	6.541	30.37	Pk	35.6	-28.2	37.77	-	-	74	-36.23	0-360	100	H
6	9.923	27.23	Pk	37	-23.4	40.83	-	-	74	-33.17	0-360	201	H

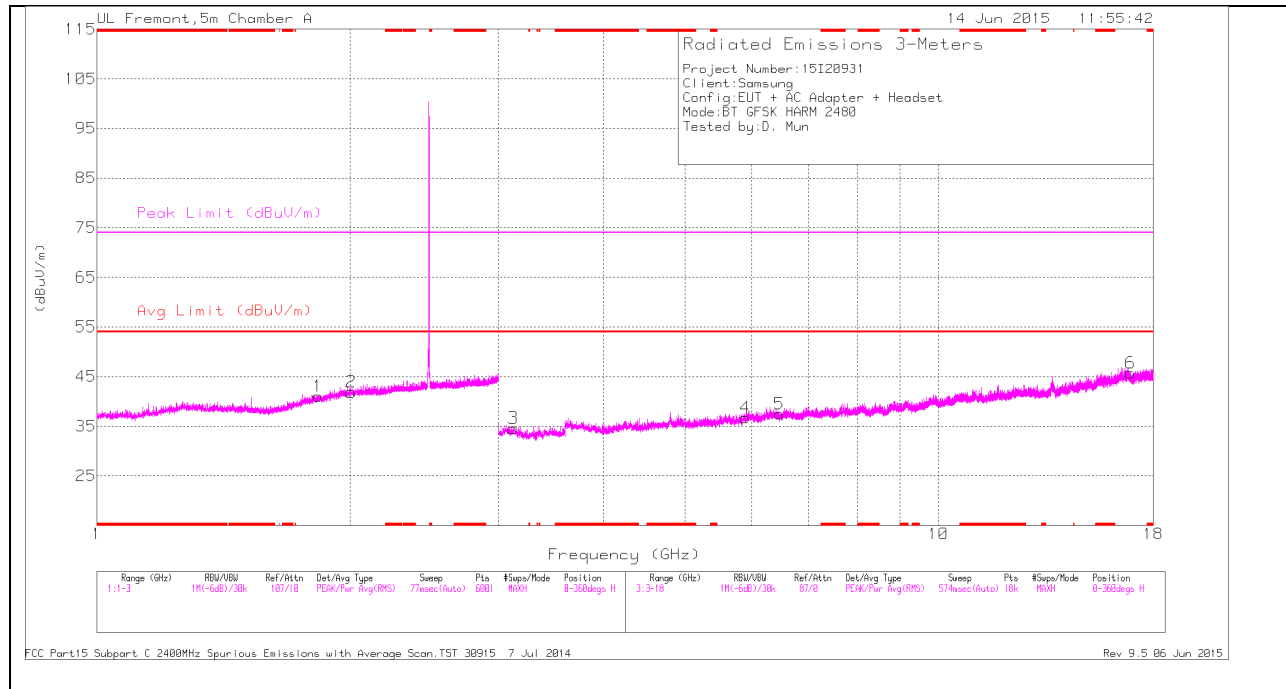
PK - Peak detector

RADIATED EMISSIONS

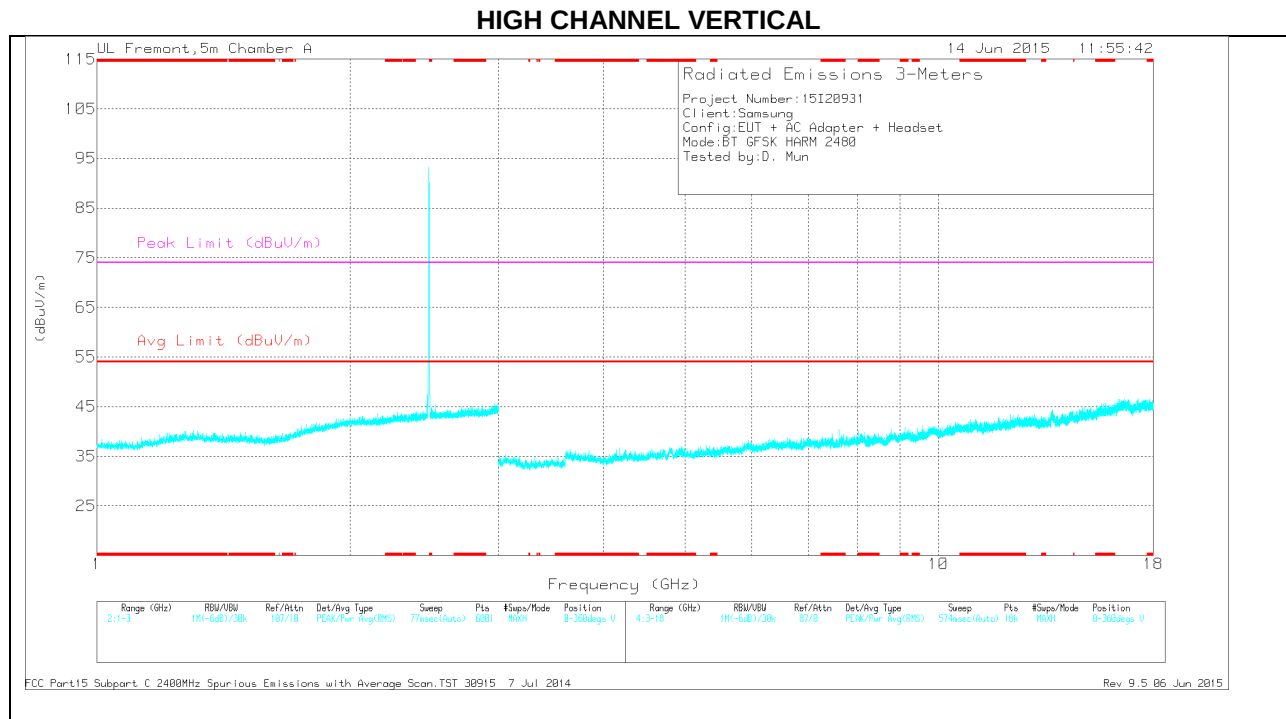
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.8	32.98	V1TV	30	-25.5	37.48	54	-16.52	-	-	1	100	H
1.802	45.04	PK2	30	-25.5	49.54	-	-	74	-24.46	1	100	H
2.027	32.97	V1TV	31.2	-25.3	38.87	54	-15.13	-	-	1	100	H
2.028	44.56	PK2	31.2	-25.3	50.46	-	-	74	-23.54	1	100	H
3.118	42.24	PK2	32.9	-31.9	43.24	-	-	74	-30.76	1	202	H
3.121	30.79	V1TV	32.9	-31.9	31.79	54	-22.21	-	-	1	202	H
6.067	39.07	PK2	35.4	-29.2	45.27	-	-	74	-28.73	1	100	H
6.068	28.17	V1TV	35.4	-29.2	34.37	54	-19.63	-	-	1	100	H
6.539	27.82	V1TV	35.6	-28.3	35.12	54	-18.88	-	-	1	100	H
6.541	39.21	PK2	35.6	-28.2	46.61	-	-	74	-27.39	1	100	H
9.923	35.39	PK2	37	-23.4	48.99	-	-	74	-25.01	1	202	H
9.925	23.91	V1TV	37	-23.4	37.51	54	-16.49	-	-	1	202	H

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

HIGH CHANNEL HORIZONTAL



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



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 T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.83	36.31	Pk	30.2	-25.5	41.01	-	-	74	-32.99	0-360	100	H
2	2.004	36.06	Pk	31.1	-25.3	41.86	-	-	74	-32.14	0-360	100	H
3	3.123	33.62	Pk	32.9	-31.9	34.62	-	-	74	-39.38	0-360	100	H
4	5.899	30.43	Pk	35.2	-28.9	36.73	-	-	74	-37.27	0-360	201	H
5	6.473	30.72	Pk	35.5	-28.8	37.42	-	-	74	-36.58	0-360	100	H
6	16.915	27.3	Pk	41.4	-23	45.7	-	-	74	-28.3	0-360	100	H

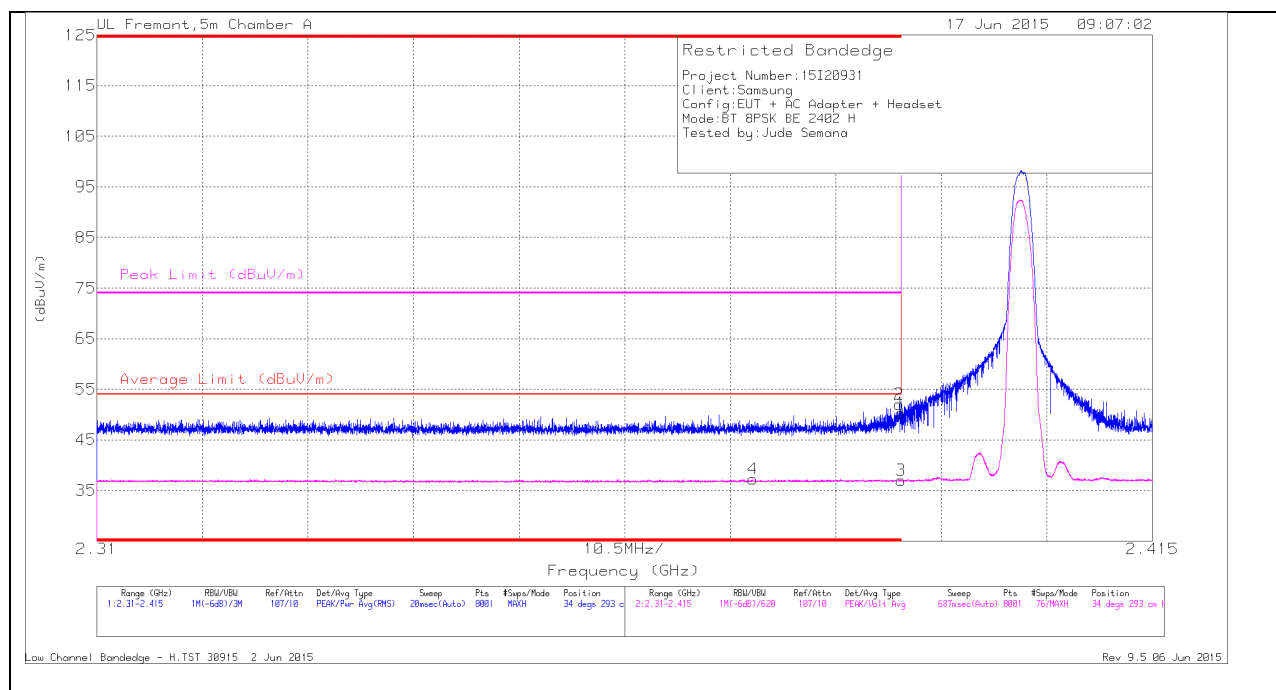
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.828	44.33	PK2	30.2	-25.5	49.03	-	-	74	-24.97	1	100	H
1.828	32.96	V1TV	30.2	-25.5	37.66	54	-16.34	-	-	1	100	H
2.005	44.87	PK2	31.2	-25.3	50.77	-	-	74	-23.23	1	100	H
2.005	33.06	V1TV	31.1	-25.3	38.86	54	-15.14	-	-	1	100	H
3.124	30.99	V1TV	32.9	-31.9	31.99	54	-22.01	-	-	1	100	H
3.125	42.45	PK2	32.9	-31.9	43.45	-	-	74	-30.55	1	100	H
5.898	39.35	PK2	35.2	-28.9	45.65	-	-	74	-28.35	1	202	H
5.899	28.02	V1TV	35.2	-28.9	34.32	54	-19.68	-	-	1	202	H
6.471	27.96	V1TV	35.5	-28.8	34.66	54	-19.34	-	-	1	100	H
6.475	39.83	PK2	35.5	-28.8	46.53	-	-	74	-27.47	1	100	H
16.913	24.31	V1TV	41.4	-23	42.71	54	-11.29	-	-	1	100	H
16.914	35.48	PK2	41.4	-23	53.88	-	-	74	-20.12	1	100	H

9.2.2. ENHANCED DATA RATE 8PSK MODULATION RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

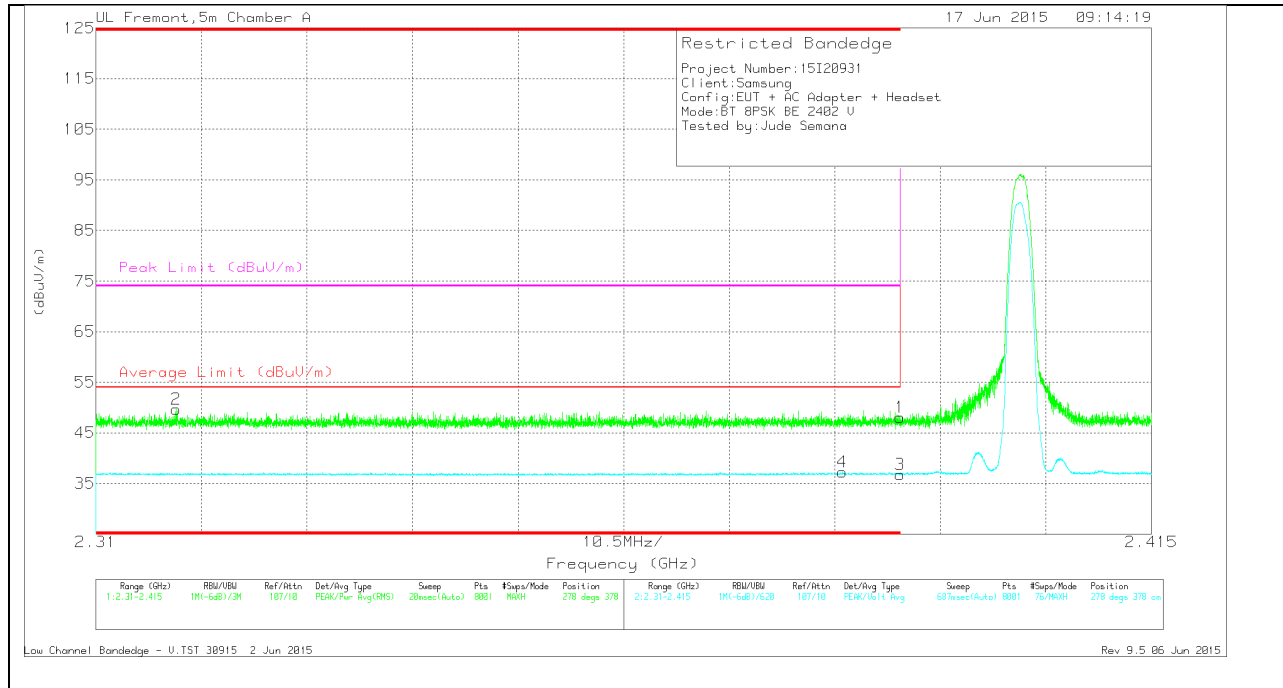


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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
4	* 2.375	30.3	V1TV	31.9	-24.9	37.3	54	-16.7	-	-	34	293	H
1	* 2.39	43.22	Pk	32	-24.9	50.32	-	-	74	-23.68	34	293	H
2	* 2.39	44.92	Pk	32	-24.9	52.02	-	-	74	-21.98	34	293	H
3	* 2.39	29.86	V1TV	32	-24.9	36.96	54	-17.04	-	-	34	293	H

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

VERTICAL PEAK AND AVERAGE PLOT



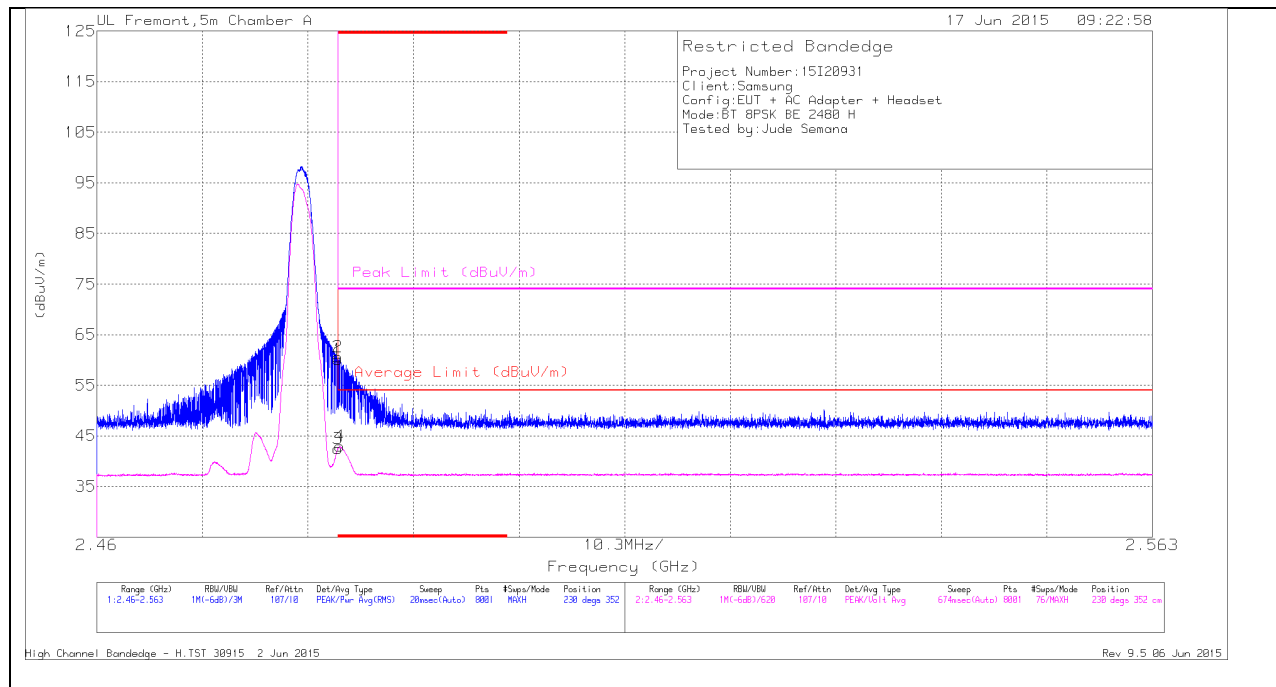
VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fitr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 2.318	42.62	Pk	31.9	-24.9	49.62	-	-	74	-24.38	278	378	V
4	* 2.384	30.21	V1TV	31.9	-24.9	37.21	54	-16.79	-	-	278	378	V
1	* 2.39	40.94	Pk	32	-24.9	48.04	-	-	74	-25.96	278	378	V
3	* 2.39	29.67	V1TV	32	-24.9	36.77	54	-17.23	-	-	278	378	V

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT

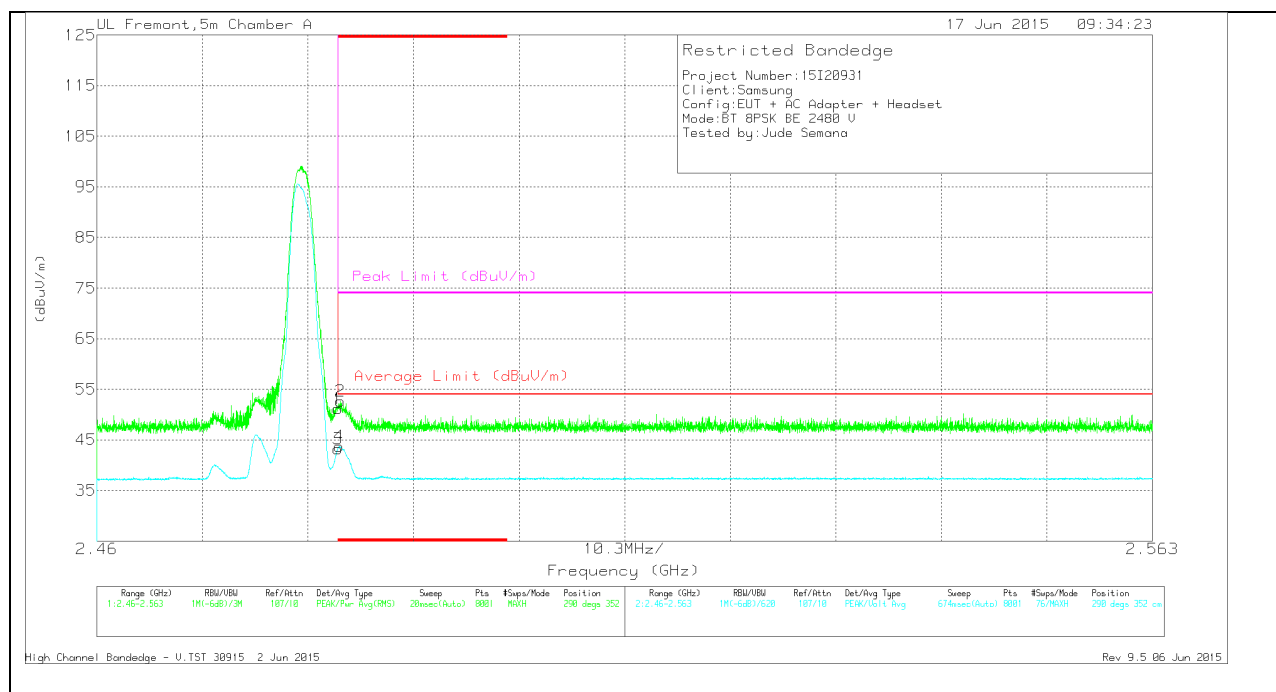


HORIZONTAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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
1	* 2.484	52.79	Pk	32.1	-24.8	60.09	-	-	74	-13.91	230	352	H
2	* 2.484	53.24	Pk	32.1	-24.8	60.54	-	-	74	-13.46	230	352	H
3	* 2.484	35.16	V1TV	32.1	-24.8	42.46	54	-11.54	-	-	230	352	H
4	* 2.484	35.64	V1TV	32.1	-24.8	42.94	54	-11.06	-	-	230	352	H

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

VERTICAL PEAK AND AVERAGE PLOT

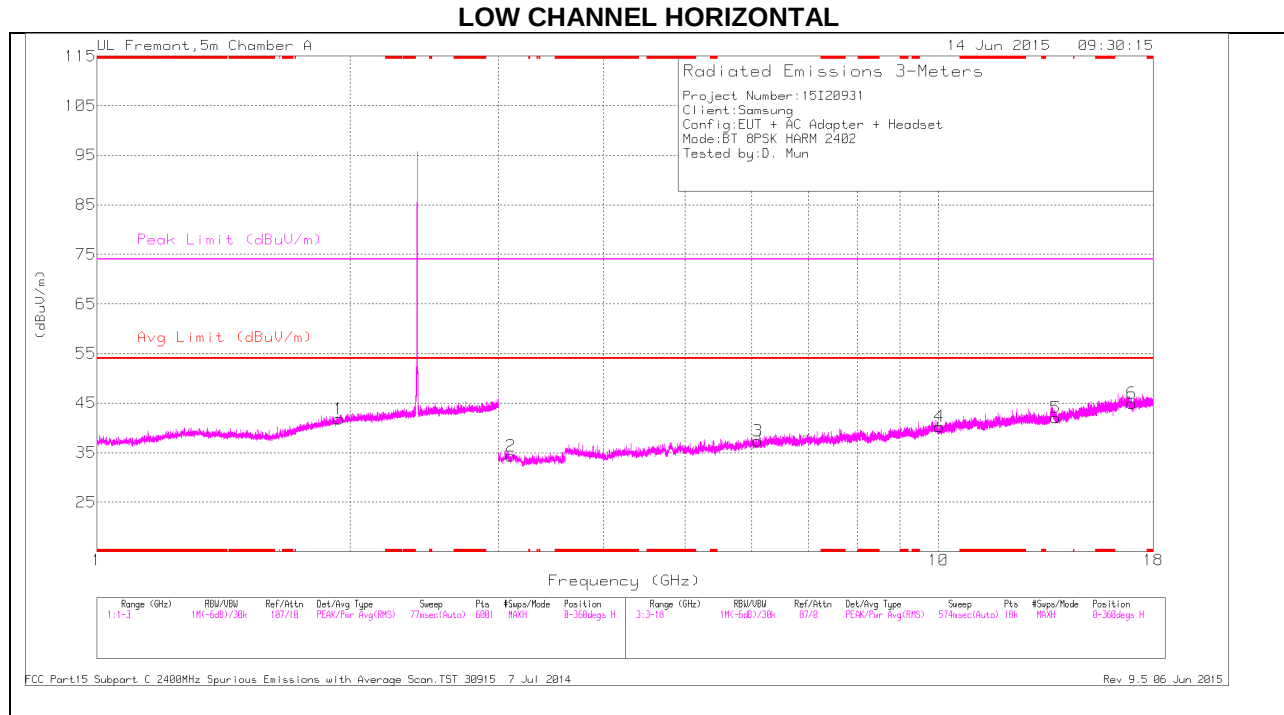


VERTICAL DATA

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (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	43.82	Pk	32.1	-24.8	51.12	-	-	74	-22.88	290	352	V
2	* 2.484	45.35	Pk	32.1	-24.8	52.65	-	-	74	-21.35	290	352	V
3	* 2.484	35.94	V1TV	32.1	-24.8	43.24	54	-10.74	-	-	290	352	V
4	* 2.484	36.42	V1TV	32.1	-24.8	43.72	54	-10.28	-	-	290	352	V

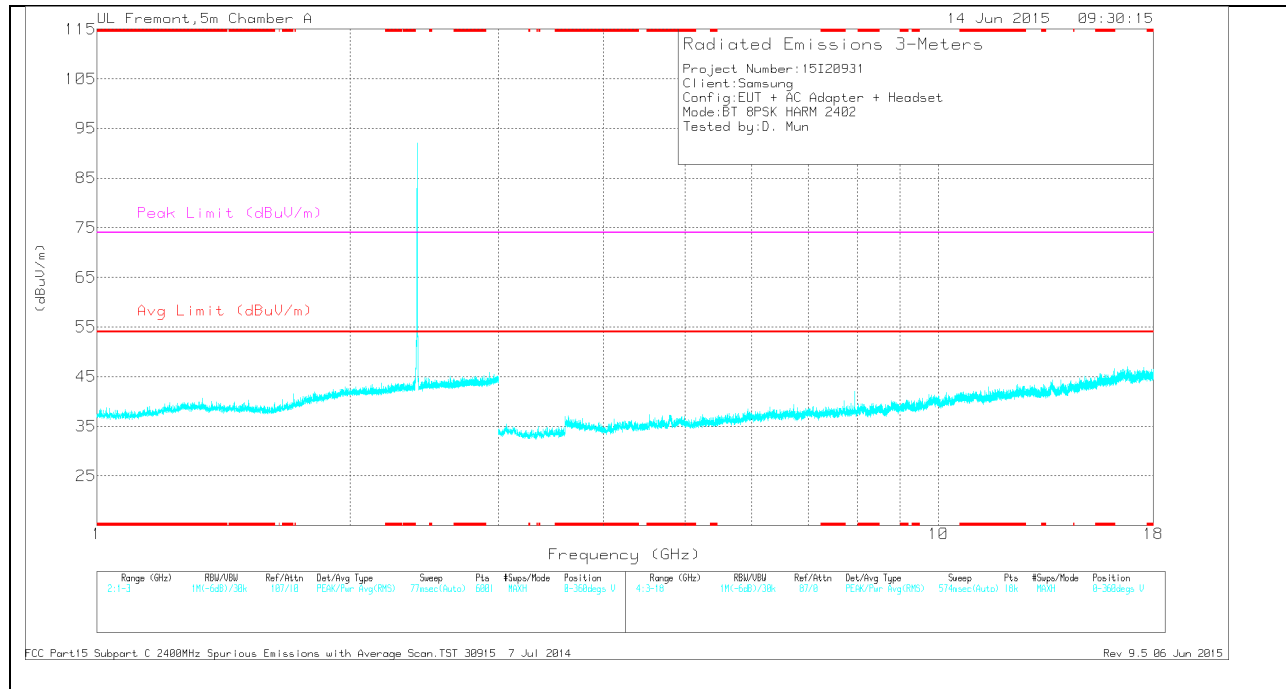
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

HARMONICS AND SPURIOUS EMISSIONS



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 T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.94	36.3	Pk	30.9	-25.4	41.8	-	-	74	-32.2	0-360	201	H
2	3.102	33.46	Pk	32.9	-32	34.36	-	-	74	-39.64	0-360	201	H
3	6.098	31.21	Pk	35.4	-29.3	37.31	-	-	74	-36.69	0-360	100	H
4	10.031	27.32	Pk	37.1	-24.1	40.32	-	-	74	-33.68	0-360	100	H
5	13.786	27.02	Pk	38.7	-23.7	42.02	-	-	74	-31.98	0-360	201	H
6	16.971	27.21	Pk	41.4	-23.7	44.91	-	-	74	-29.09	0-360	100	H

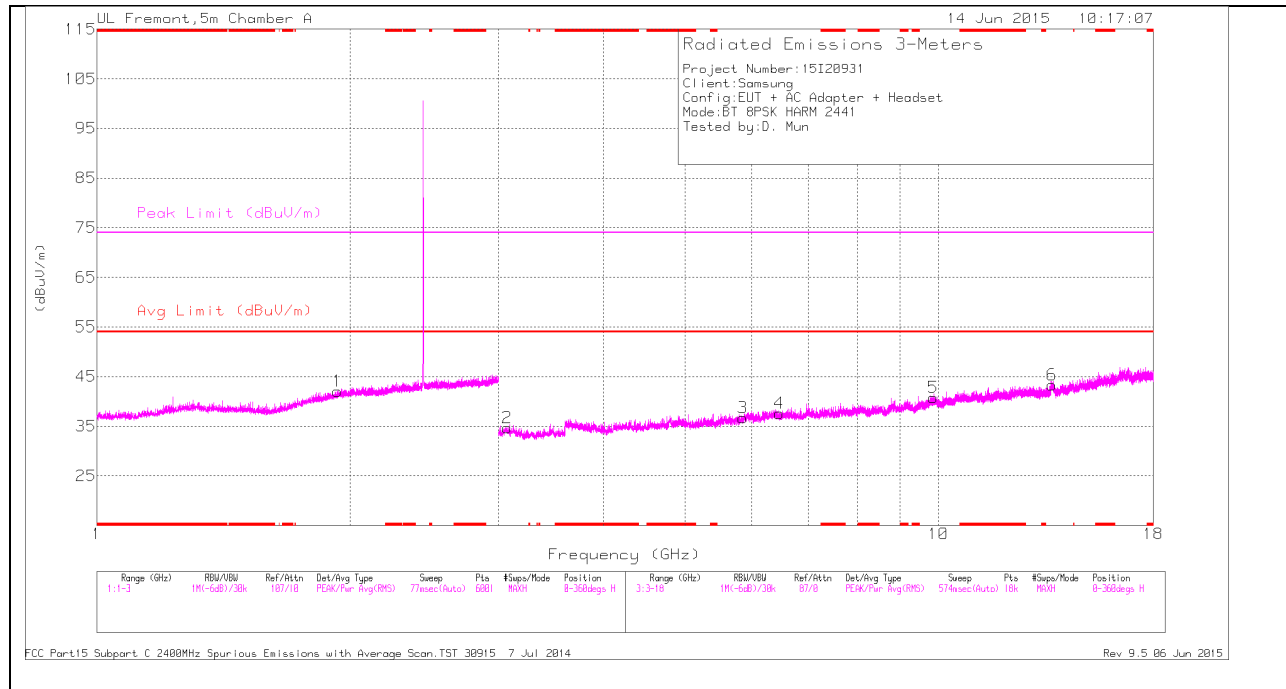
PK - Peak detector

RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.939	32.97	V1TV	30.9	-25.4	38.47	54	-15.53	-	-	0	202	H
1.941	44.88	PK2	30.9	-25.4	50.38	-	-	74	-23.62	0	202	H
3.102	41.99	PK2	32.9	-32	42.89	-	-	74	-31.11	0	202	H
3.102	30.47	V1TV	32.9	-32	31.37	54	-22.63	-	-	0	202	H
6.096	40.11	PK2	35.4	-29.3	46.21	-	-	74	-27.79	0	100	H
6.1	28.12	V1TV	35.4	-29.3	34.22	54	-19.78	-	-	0	100	H
10.03	35.13	PK2	37.1	-24.1	48.13	-	-	74	-25.87	0	100	H
10.03	23.94	V1TV	37.1	-24.1	36.94	54	-17.06	-	-	0	100	H
13.785	35.08	PK2	38.7	-23.7	50.08	-	-	74	-23.92	0	202	H
13.785	24.06	V1TV	38.7	-23.7	39.06	54	-14.94	-	-	0	202	H
16.969	36.48	PK2	41.4	-23.7	54.18	-	-	74	-19.82	0	100	H
16.971	24.63	V1TV	41.4	-23.7	42.33	54	-11.67	-	-	0	100	H

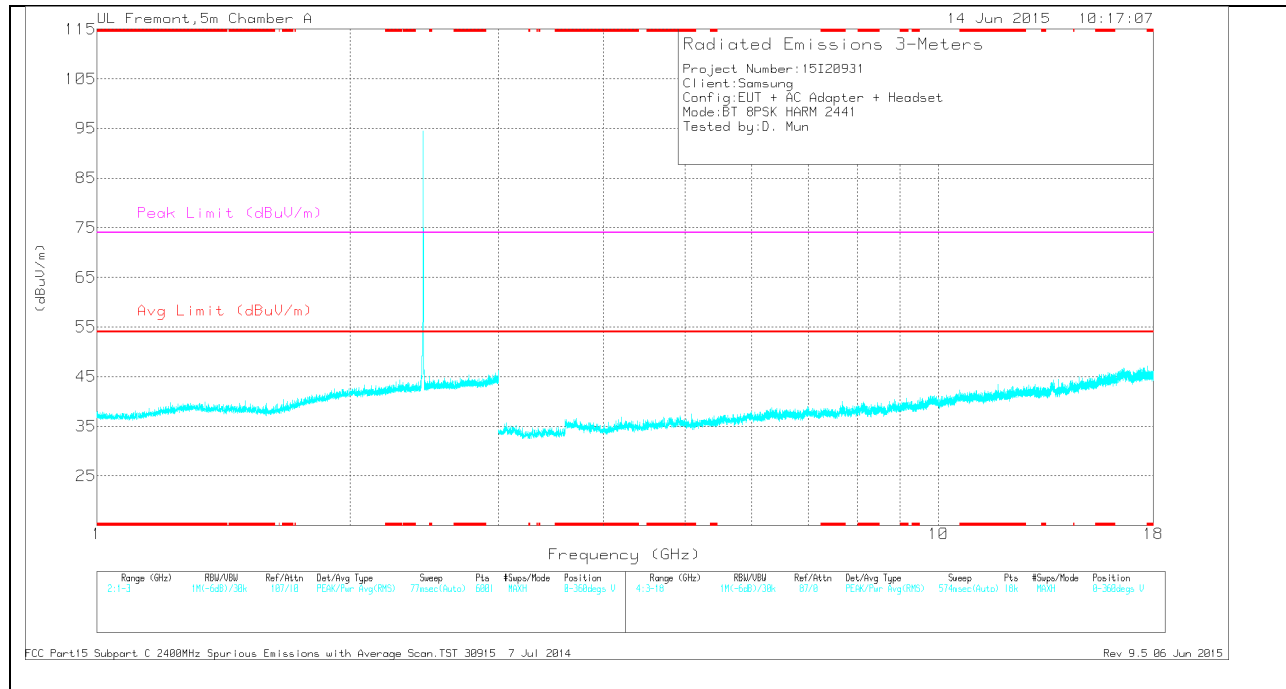
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MID CHANNEL HORIZONTAL



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

MID CHANNEL VERTICAL



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

MID CHANNEL DATA

TRACE MARKERS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.932	36.54	Pk	30.9	-25.4	42.04	-	-	74	-31.96	0-360	100	H
2	3.071	33.76	Pk	32.9	-32	34.66	-	-	74	-39.34	0-360	201	H
3	5.856	31.07	Pk	35.1	-29.5	36.67	-	-	74	-37.33	0-360	201	H
4	6.468	30.88	Pk	35.5	-28.8	37.58	-	-	74	-36.42	0-360	201	H
5	9.862	27.18	Pk	37	-23.4	40.78	-	-	74	-33.22	0-360	201	H
6	13.64	27.24	Pk	38.8	-22.7	43.34	-	-	74	-30.66	0-360	201	H

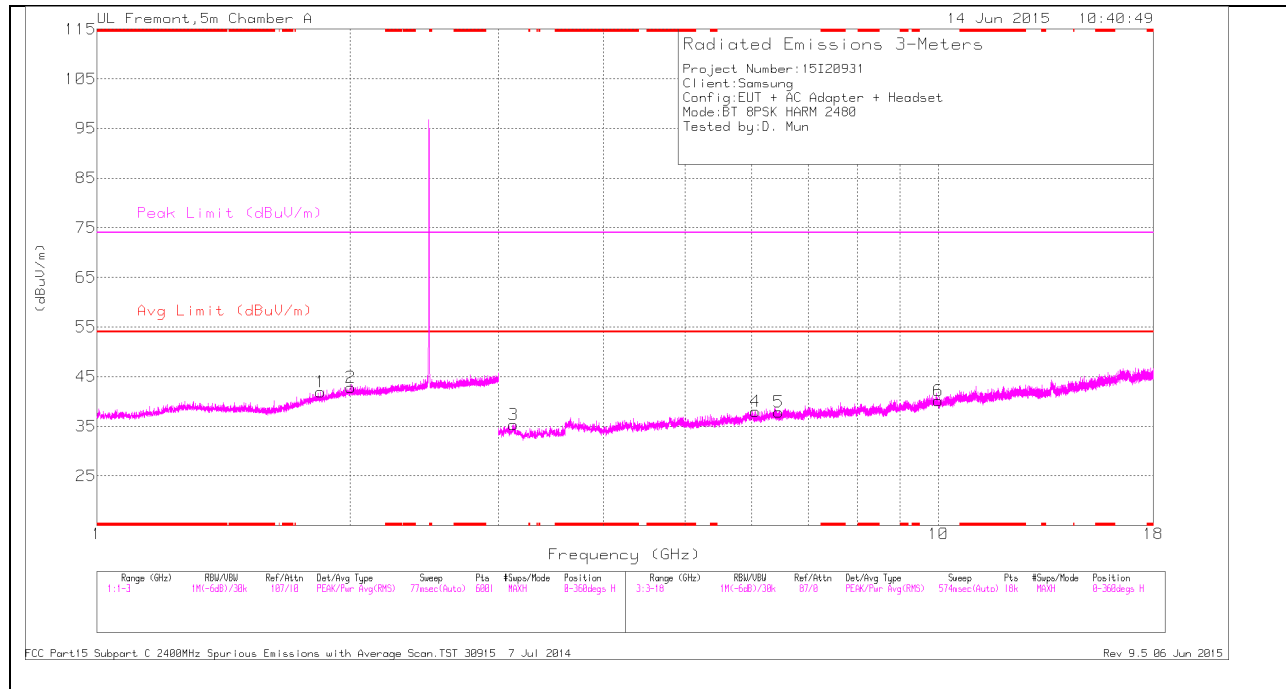
PK - Peak detector

RADIATED EMISSIONS

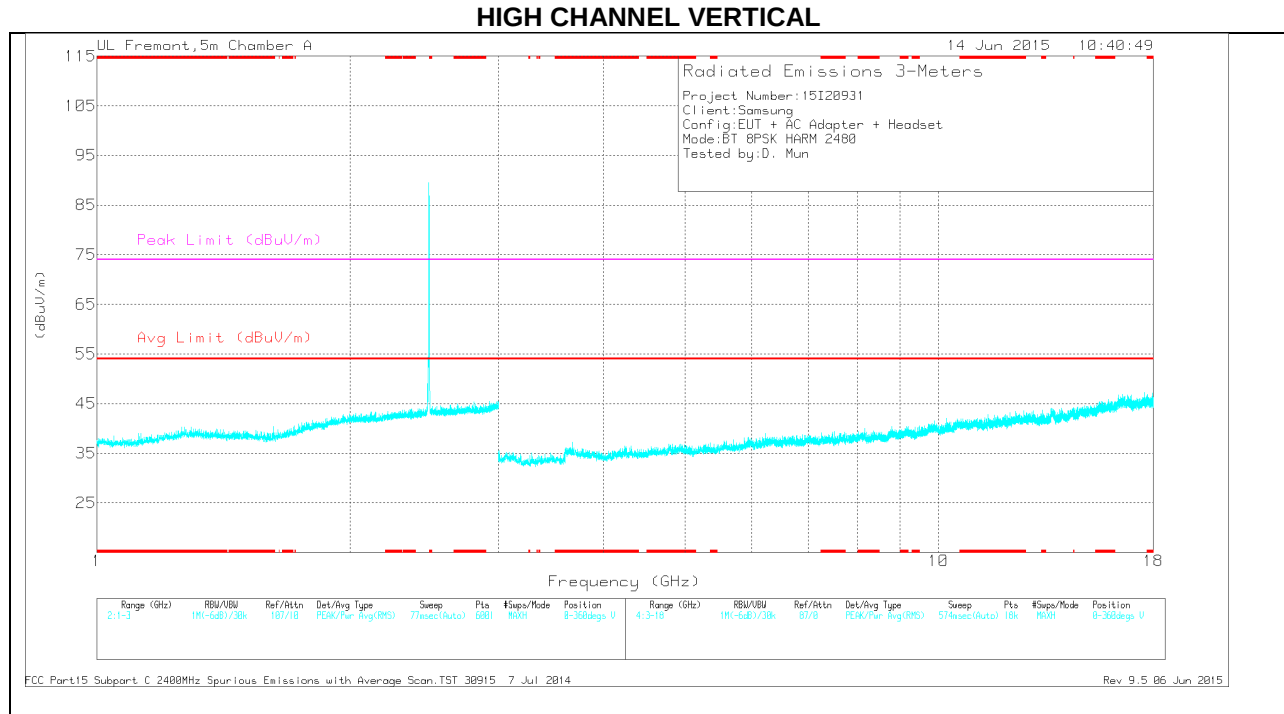
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.931	45.87	PK2	30.9	-25.4	51.37	-	-	74	-22.63	1	100	H
1.933	32.97	V1TV	30.9	-25.4	38.47	54	-15.53	-	-	1	100	H
3.07	30.96	V1TV	32.9	-32	31.86	54	-22.14	-	-	1	202	H
3.071	42.18	PK2	32.9	-32	43.08	-	-	74	-30.92	1	202	H
5.855	28.62	V1TV	35.1	-29.5	34.22	54	-19.78	-	-	1	202	H
5.857	39.66	PK2	35.1	-29.5	45.26	-	-	74	-28.74	1	202	H
6.468	27.97	V1TV	35.5	-28.8	34.67	54	-19.33	-	-	1	202	H
6.469	39.6	PK2	35.5	-28.8	46.3	-	-	74	-27.7	1	202	H
9.861	35.21	PK2	37	-23.4	48.81	-	-	74	-25.19	1	202	H
9.861	24.1	V1TV	37	-23.4	37.7	54	-16.3	-	-	1	202	H
13.641	35.18	PK2	38.8	-22.7	51.28	-	-	74	-22.72	1	202	H
13.641	24.35	V1TV	38.8	-22.7	40.45	54	-13.55	-	-	1	202	H

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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.



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 T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.843	37.14	Pk	30.3	-25.5	41.94	-	-	74	-32.06	0-360	201	H
2	2.001	36.96	Pk	31.1	-25.3	42.76	-	-	74	-31.24	0-360	100	H
3	3.125	34.34	Pk	32.9	-31.9	35.34	-	-	74	-38.66	0-360	201	H
4	6.062	31.75	Pk	35.4	-29.2	37.95	-	-	74	-36.05	0-360	100	H
5	6.461	31.15	Pk	35.5	-28.8	37.85	-	-	74	-36.15	0-360	100	H
6	9.992	26.9	Pk	37	-23.8	40.1	-	-	74	-33.9	0-360	201	H

PK - Peak detector

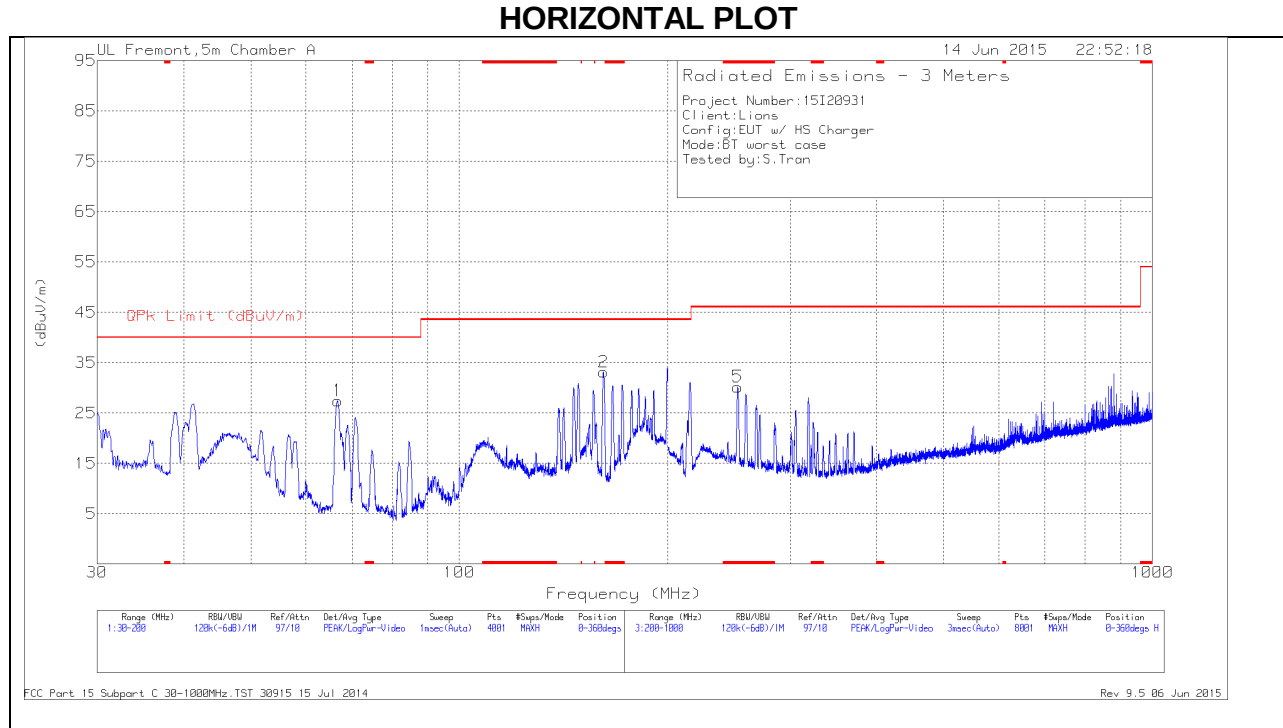
RADIATED EMISSIONS

Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/F ltr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1.842	44.42	PK2	30.3	-25.5	49.22	-	-	74	-24.78	1	202	H
1.843	32.81	V1TV	30.3	-25.5	37.61	54	-16.39	-	-	1	202	H
1.999	45.53	PK2	31.1	-25.3	51.33	-	-	74	-22.67	1	100	H
2.001	33.18	V1TV	31.1	-25.3	38.98	54	-15.02	-	-	1	100	H
3.126	30.85	V1TV	32.9	-31.9	31.85	54	-22.15	-	-	1	202	H
3.127	42.18	PK2	32.9	-31.9	43.18	-	-	74	-30.82	1	202	H
6.061	28.16	V1TV	35.4	-29.2	34.36	54	-19.64	-	-	1	100	H
6.061	28.18	V1TV	35.4	-29.2	34.38	54	-19.62	-	-	1	100	H
6.062	39.33	PK2	35.4	-29.2	45.53	-	-	74	-28.47	1	100	H
6.064	38.95	PK2	35.4	-29.2	45.15	-	-	74	-28.85	1	100	H
9.991	34.87	PK2	37	-23.8	48.07	-	-	74	-25.93	1	202	H
9.991	23.81	V1TV	37	-23.8	37.01	54	-16.99	-	-	1	202	H

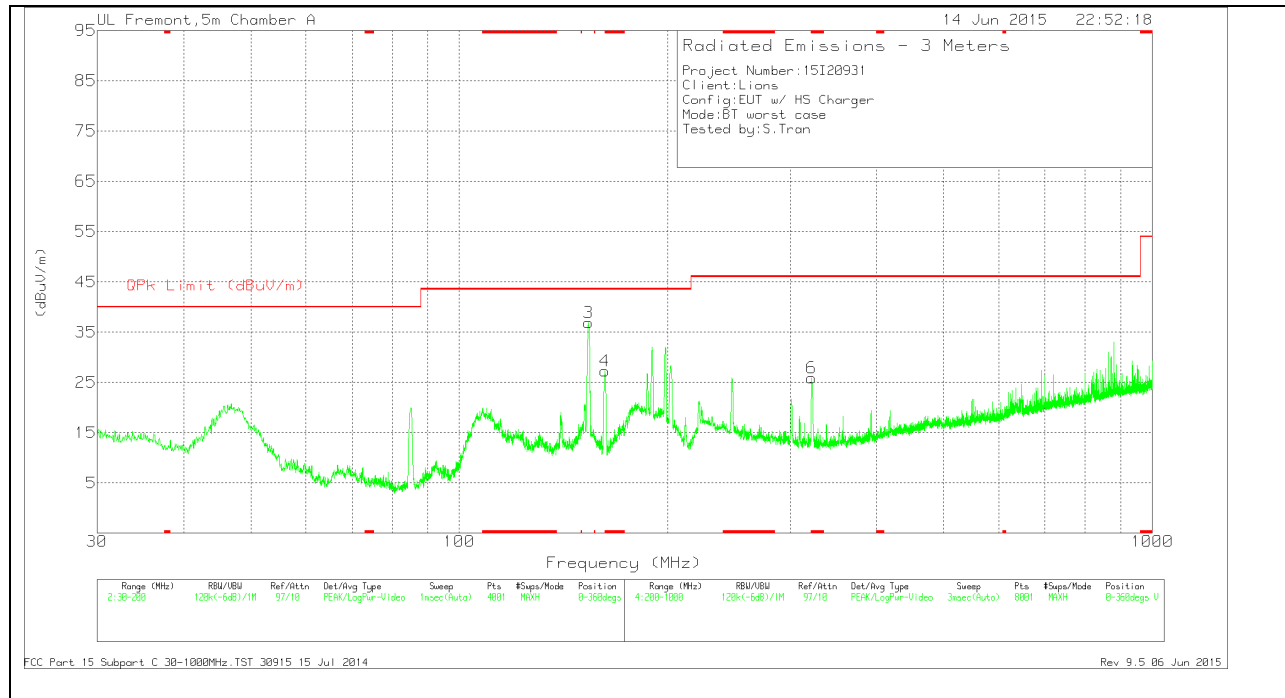
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9.3. WORST-CASE BELOW 1 GHz

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



VERTICAL PLOT



BELOW 1 GHz TABLE

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	* 162.2175	45.58	Pk	11.9	-30.2	27.28	43.52	-16.24	0-360
5	* 252.2	48.3	Pk	11.5	-29.6	30.2	46.02	-15.82	0-360
6	* 322.6	41.08	Pk	14	-29.2	25.88	46.02	-20.14	0-360
1	66.72	50.23	Pk	8.1	-30.9	27.43	40	-12.57	0-360
3	153.59	54.66	Pk	12.4	-30.2	36.86	43.52	-6.66	0-360
2	161.41	51.33	Pk	11.9	-30.1	33.13	43.52	-10.39	0-360

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

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
153.607	23.71	Qp	12.4	-30.2	5.91	43.52	-37.61	1

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

Qp - Quasi-Peak detector

10. 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 C63.10.

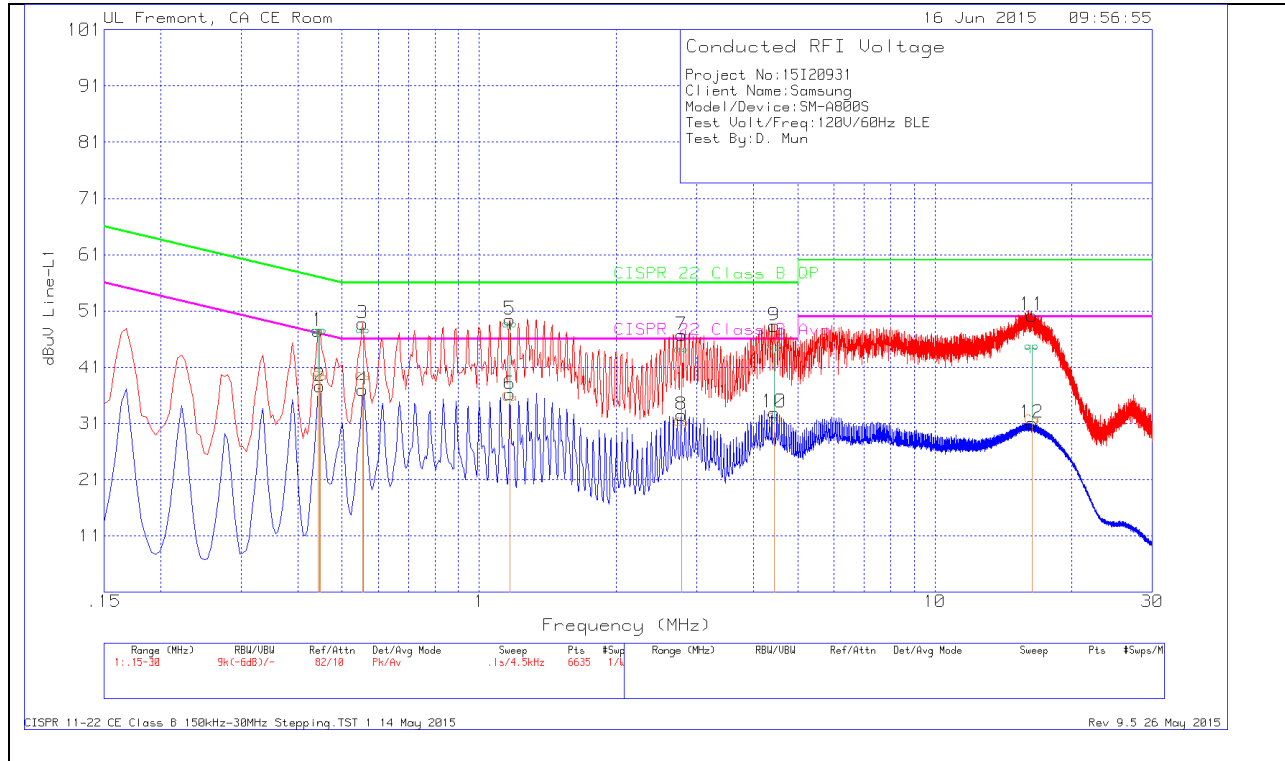
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



LINE 1 RESULTS

Range 1: Line-L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.44363	38.48	Ca	.4	0	38.88	-	-	46.99	-8.11
.44588	37.84	Ca	.4	0	38.24	-	-	46.95	-8.71
.55568	37.84	Ca	.3	0	38.14	-	-	46	-7.86
1.16768	34.24	Ca	.2	.1	34.54	-	-	46	-11.46
2.77913	29.7	Ca	.2	.1	30	-	-	46	-16
4.44413	30.5	Ca	.2	.1	30.8	-	-	46	-15.2
16.3444	30.02	Ca	.3	.2	30.52	-	-	50	-19.48
16.3408	30.03	Ca	.3	.2	30.53	-	-	50	-19.47

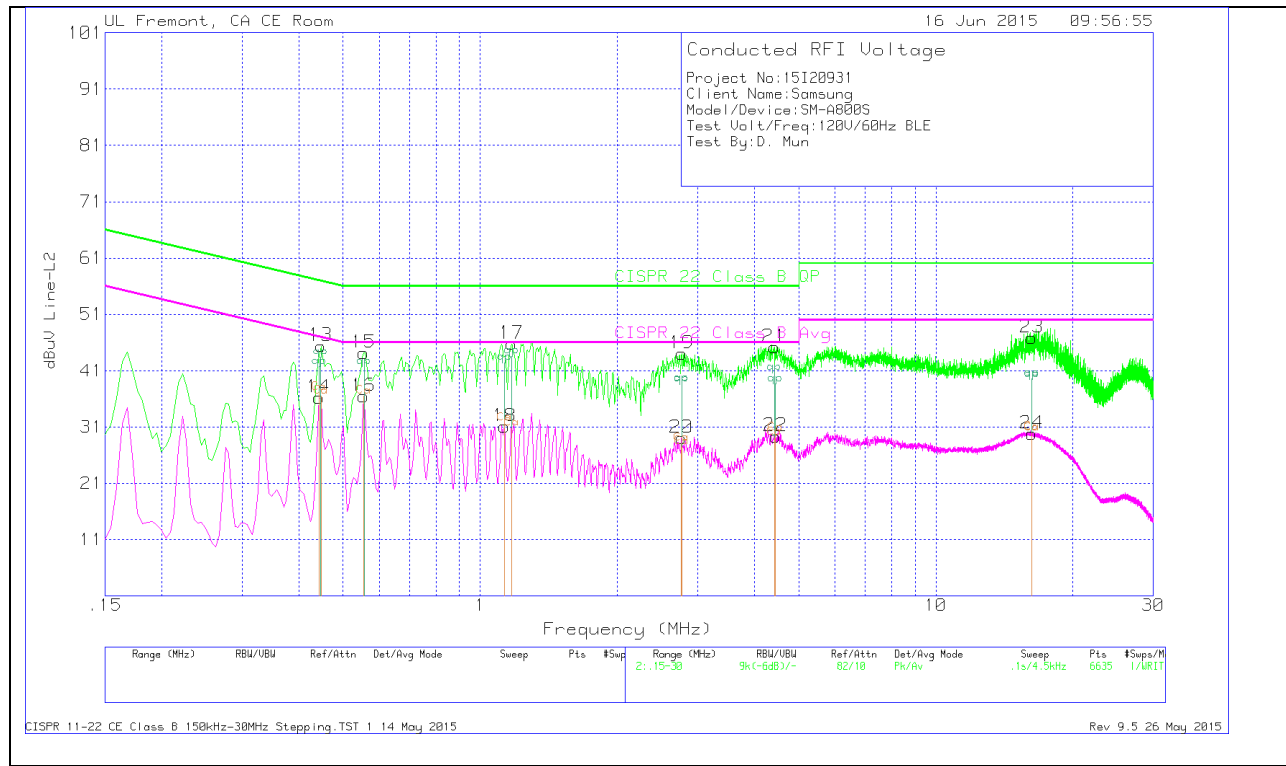
Ca - CISPR average detection

Range 1: Line-L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.44363	46.03	Qp	.4	0	46.43	56.99	-10.56	-	-
.44588	45.99	Qp	.4	0	46.39	56.95	-10.56	-	-
.55568	46.16	Qp	.3	0	46.46	56	-9.54	-	-
1.16768	47.27	Qp	.2	.1	47.57	56	-8.43	-	-
2.77913	42.73	Qp	.2	.1	43.03	56	-12.97	-	-
4.44413	43.17	Qp	.2	.1	43.47	56	-12.53	-	-
16.3444	43.09	Qp	.3	.2	43.59	60	-16.41	-	-
16.3408	43.15	Qp	.3	.2	43.65	60	-16.35	-	-

Qp - Quasi-Peak detector

LINE 2 PLOT



LINE 2 RESULTS

Range 2: Line-L2 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.44678	36.05	Ca	.4	0	36.45	-	-	46.93	-10.48
.44363	36.65	Ca	.4	0	37.05	-	-	46.99	-9.94
.55613	36.15	Ca	.3	0	36.45	-	-	46	-9.55
1.17263	30.32	Ca	.3	.1	30.72	-	-	46	-15.28
1.13168	31.24	Ca	.3	.1	31.64	-	-	46	-14.36
2.76788	27.15	Ca	.2	.1	27.45	-	-	46	-18.55
2.76563	27.73	Ca	.2	.1	28.03	-	-	46	-17.97
4.41938	28.77	Ca	.2	.1	29.07	-	-	46	-16.93
4.44638	29.57	Ca	.2	.1	29.87	-	-	46	-16.13
16.2409	29.49	Ca	.3	.2	29.99	-	-	50	-20.01
16.2553	29.34	Ca	.3	.2	29.84	-	-	50	-20.16

Ca - CISPR average detection

Range 2: Line-L2 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.44678	42.98	Qp	.4	0	43.38	56.93	-13.55	-	-
.44363	41.28	Qp	.4	0	41.68	56.99	-15.31	-	-
.55613	41.41	Qp	.3	0	41.71	56	-14.29	-	-
1.17263	43.18	Qp	.3	.1	43.58	56	-12.42	-	-
1.13168	42	Qp	.3	.1	42.4	56	-13.6	-	-
2.76788	38.29	Qp	.2	.1	38.59	56	-17.41	-	-
2.76563	38.42	Qp	.2	.1	38.72	56	-17.28	-	-
4.41938	40.31	Qp	.2	.1	40.61	56	-15.39	-	-
4.44638	38.31	Qp	.2	.1	38.61	56	-17.39	-	-
16.2409	39.08	Qp	.3	.2	39.58	60	-20.42	-	-
16.2553	38.89	Qp	.3	.2	39.39	60	-20.61	-	-

Qp - Quasi-Peak detector