

**8.8.4. AVERAGE TIME OF OCCUPANCY**

**LIMITS**

FCC §15.247 (a) (1) (iii)

IC RSS-247 (5.1) (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**

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
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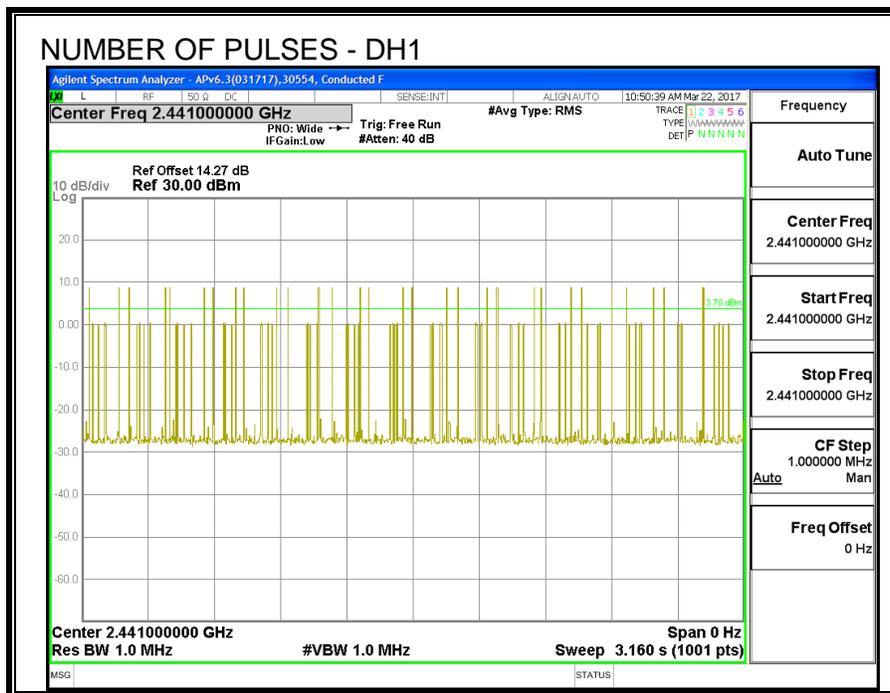
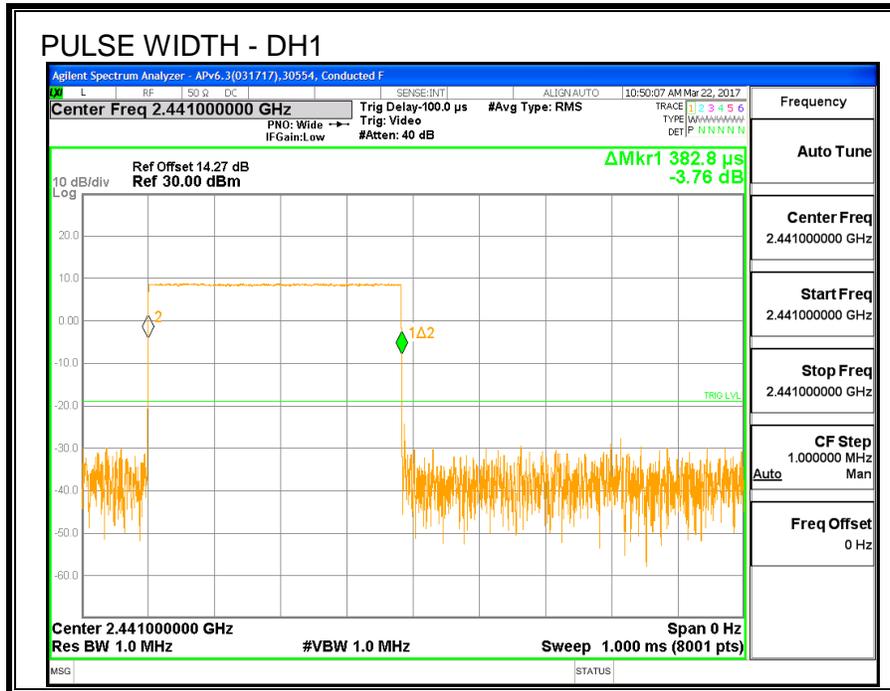
GFSK Normal Mode

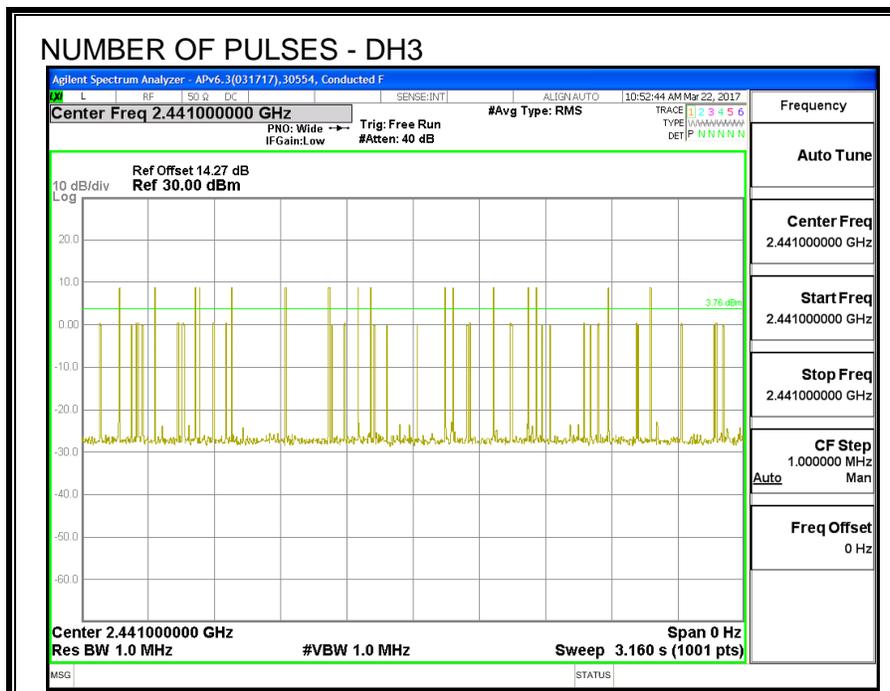
DH1	0.383	32	0.123	0.4	-0.277
DH3	1.639	16	0.262	0.4	-0.138
DH5	2.887	12	0.346	0.4	-0.054

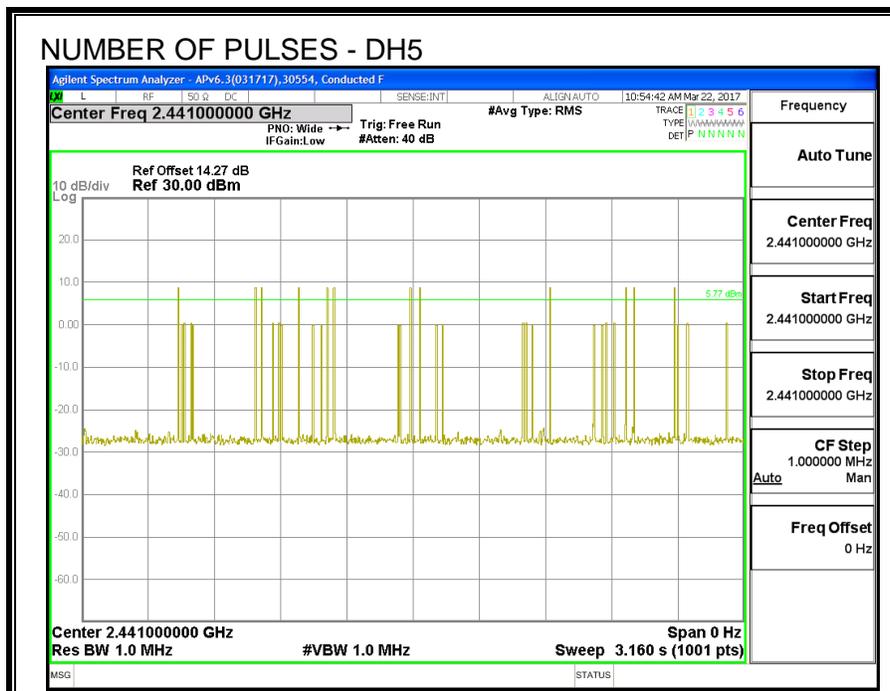
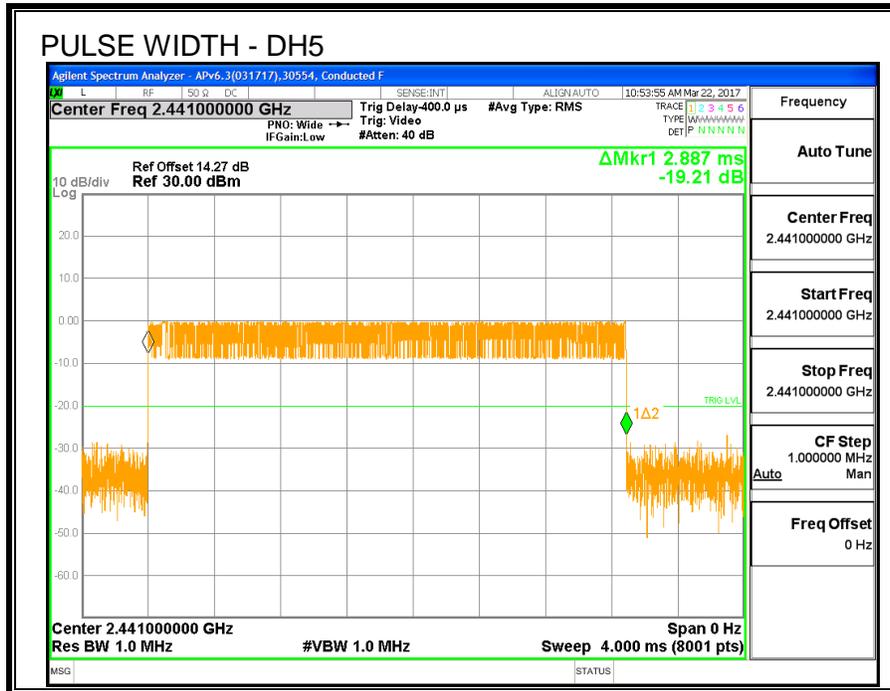
DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
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GFSK AFH Mode

DH1	0.383	8	0.031	0.4	-0.369
DH3	1.639	4	0.066	0.4	-0.334
DH5	2.887	3	0.087	0.4	-0.313







### 8.8.5. OUTPUT POWER

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#### LIMITS

§15.247 (b) (1)

RSS-247 (5.4) (b)

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

#### TEST PROCEDURE

The transmitter output is connected to a wideband peak and average power meter.

#### RESULTS

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	20.05	21	-9.95
Middle	2441	20.15	21	-9.85
High	2480	20.10	21	-9.90

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### 8.8.6. AVERAGE POWER

<b>ID:</b>	30554	<b>Date:</b>	6/13/2017
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#### 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)	Average Power (dBm)
Low	2402	19.72
Middle	2441	19.85
High	2480	19.80

## **8.8.7. CONDUCTED SPURIOUS EMISSIONS**

### **LIMITS**

FCC §15.247 (d)

IC RSS-247 (5.5)

Limit = -20 dBc

### **TEST PROCEDURE**

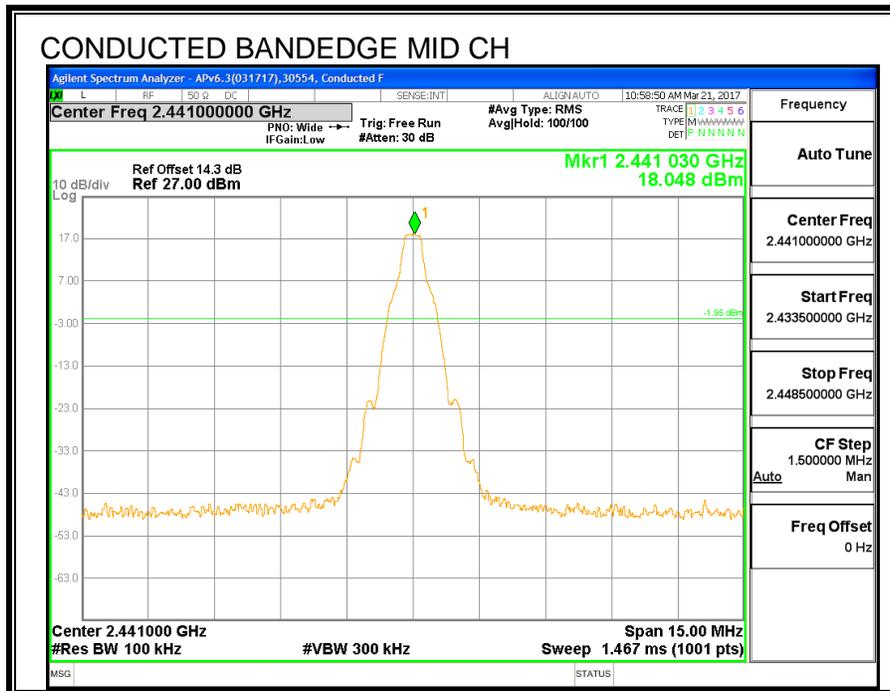
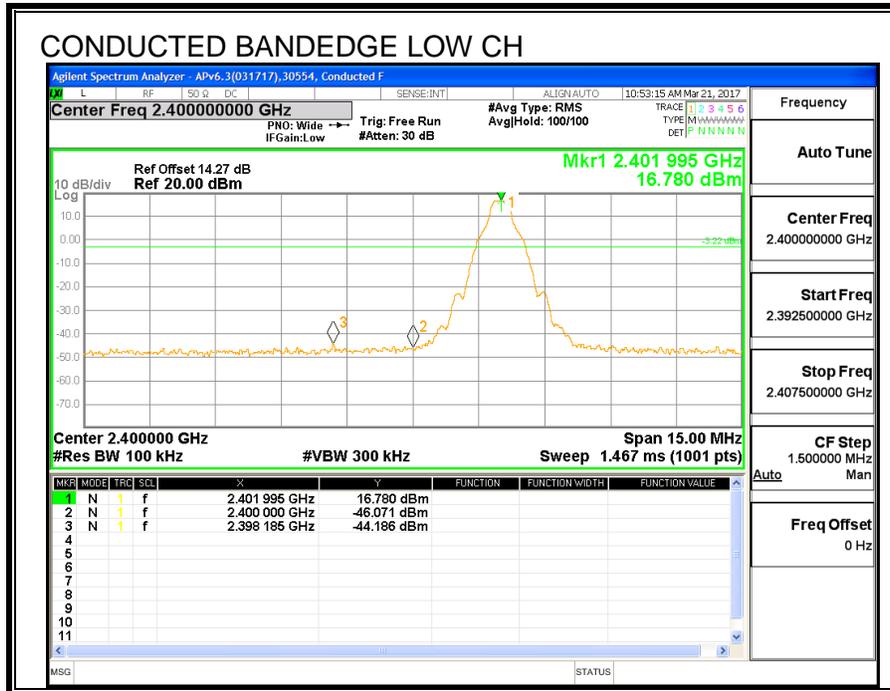
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

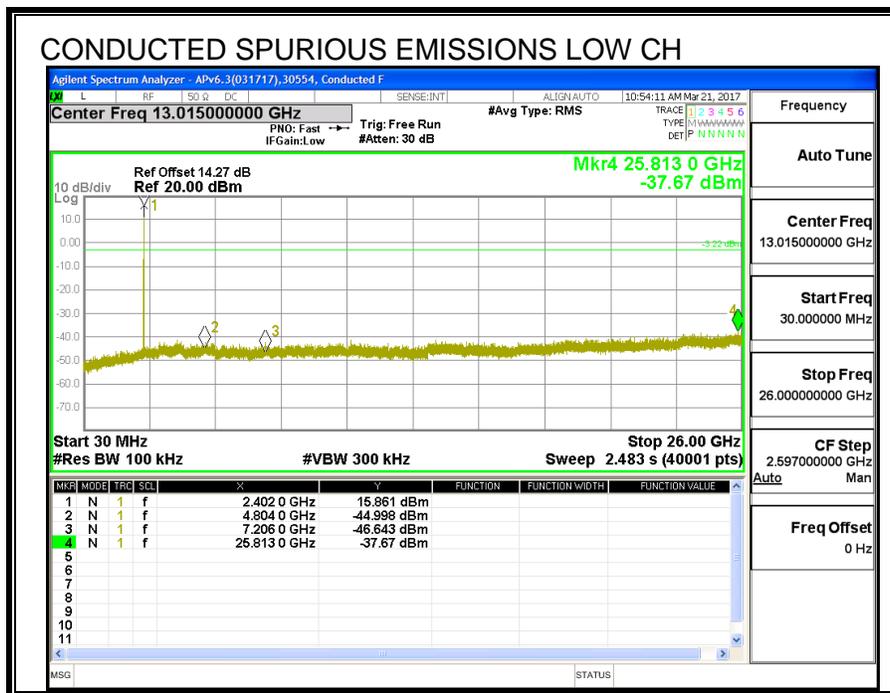
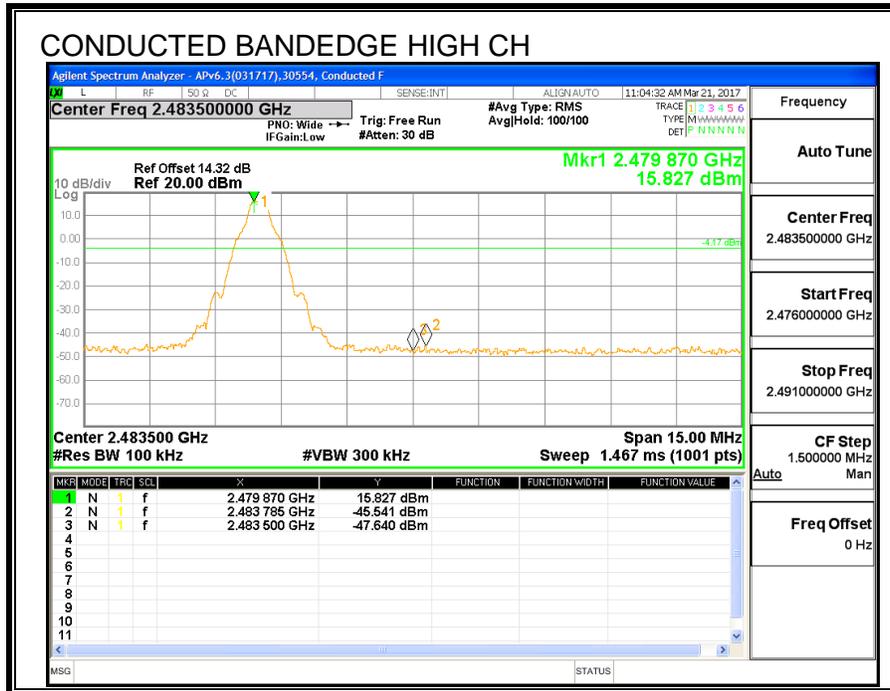
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

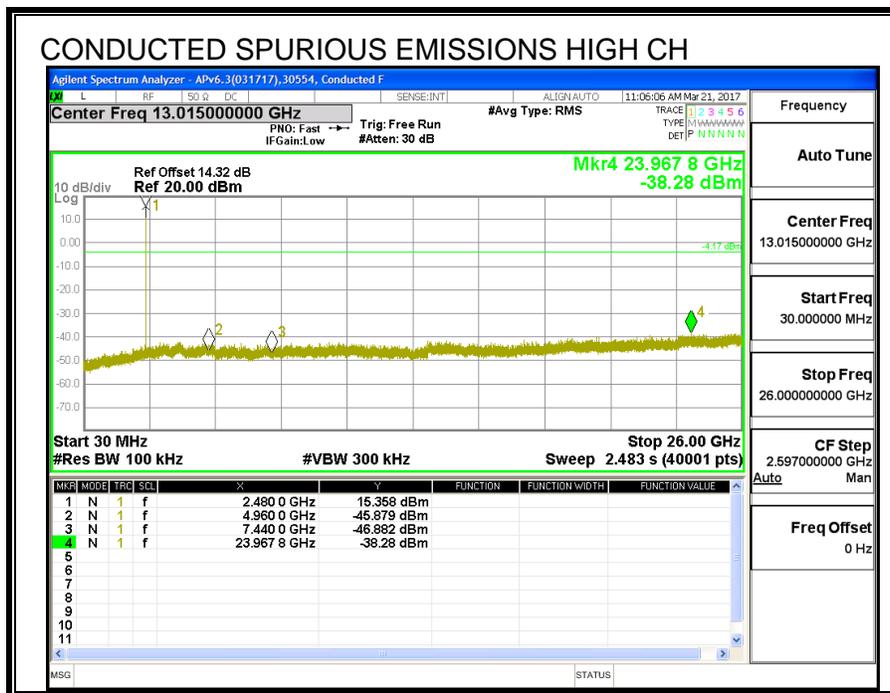
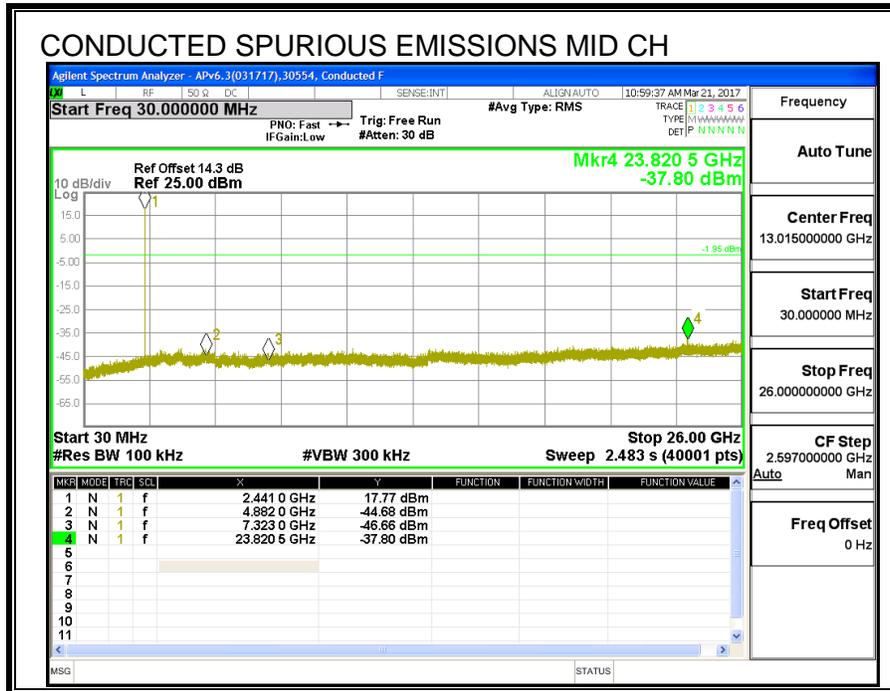
The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

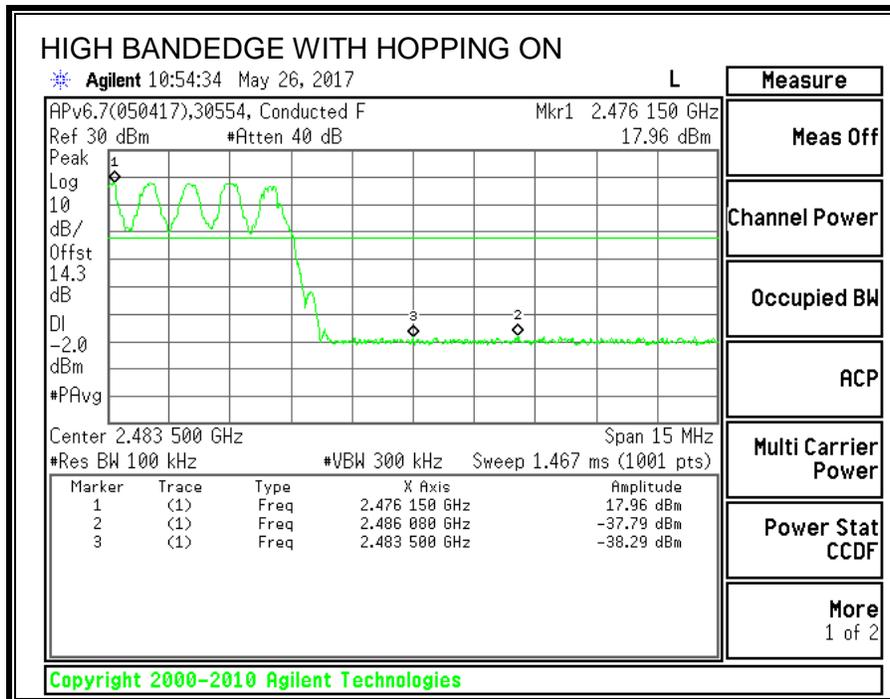
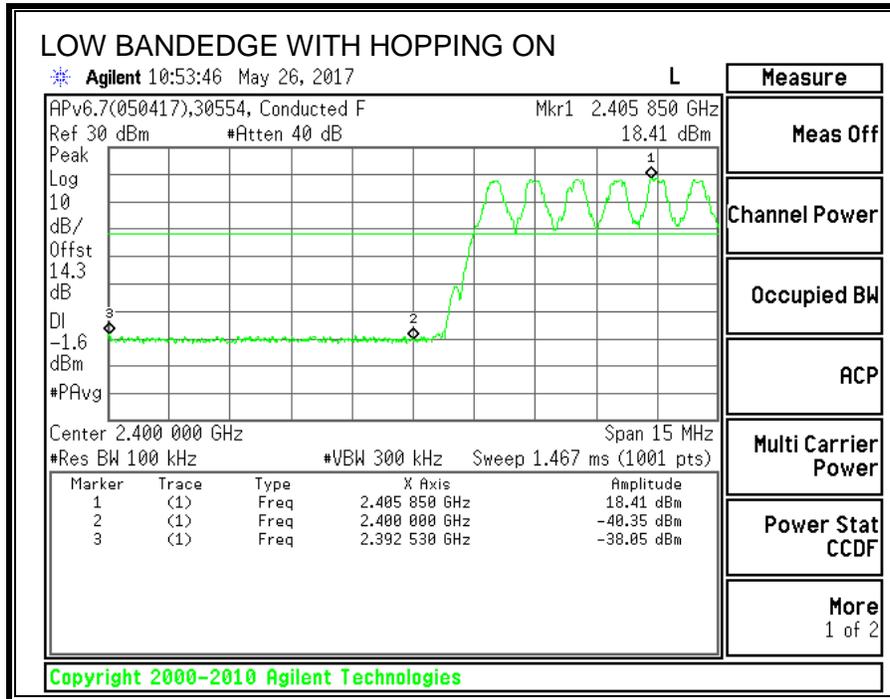
### **RESULTS**

**CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS**









## 8.9. LAT 3, Pmax ENHANCED DATA RATE DQPSK MODULATION

### 8.9.1. OUTPUT POWER

<b>ID:</b>	30554	<b>Date:</b>	6/13/2017
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#### LIMITS

§15.247 (b) (1)

RSS-247 (5.4) (b)

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

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 wideband peak and average power meter.

#### RESULTS

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	19.55	21	-1.45
Middle	2441	19.67	21	-1.33
High	2480	19.60	21	-1.40

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### 8.9.2. AVERAGE POWER

<b>ID:</b>	30554	<b>Date:</b>	6/13/2017
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#### 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)	Average Power (dBm)
Low	2402	17.25
Middle	2441	17.35
High	2480	17.30

## 8.10. LAT 3, Pmax ENHANCED DATA RATE 8PSK MODULATION

### 8.10.1. 20 dB AND 99% BANDWIDTH

#### LIMITS

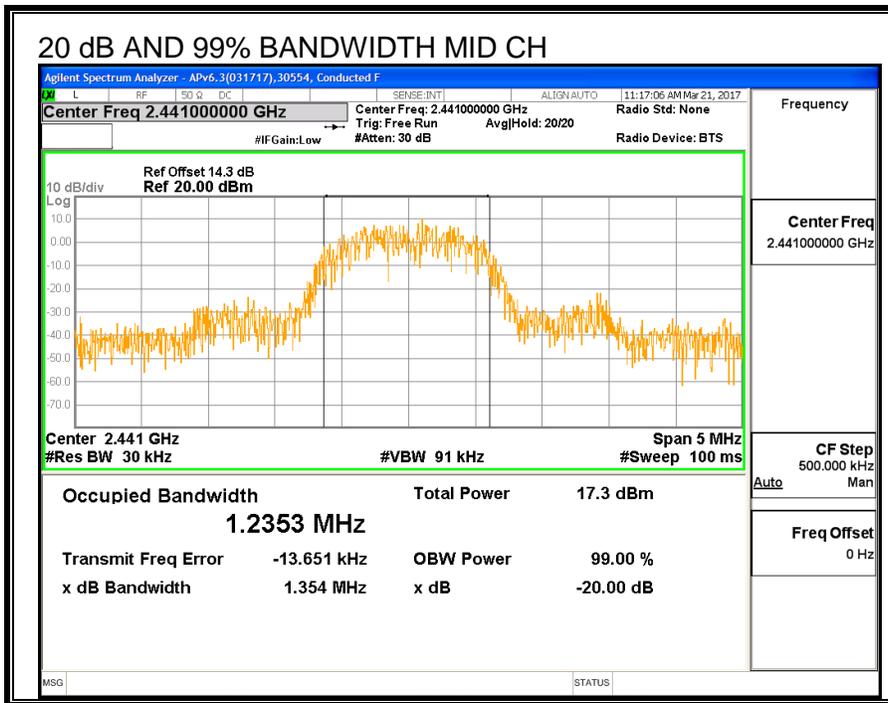
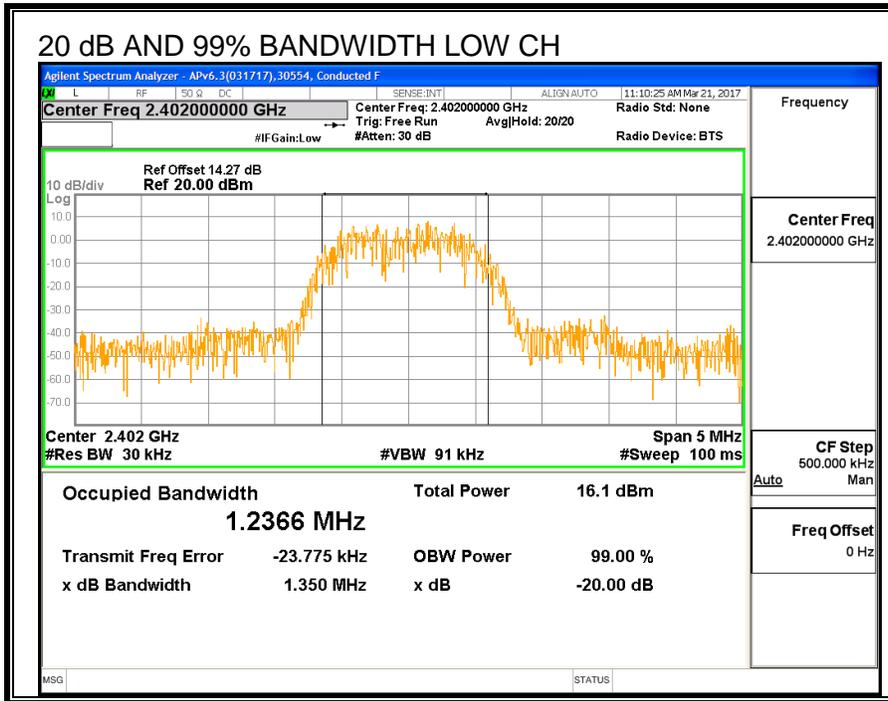
None; for reporting purposes only.

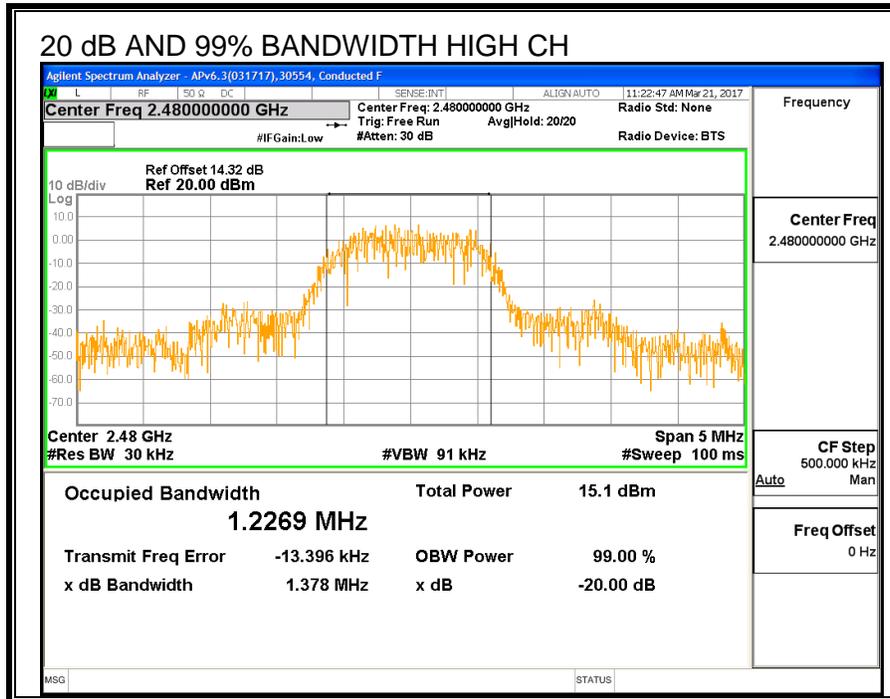
#### TEST PROCEDURE

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

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.350	1.2366
Middle	2441	1.354	1.2353
High	2480	1.378	1.2269





### 8.10.2. HOPPING FREQUENCY SEPARATION

#### LIMITS

FCC §15.247 (a) (1)

IC RSS-247 (5.1) (b)

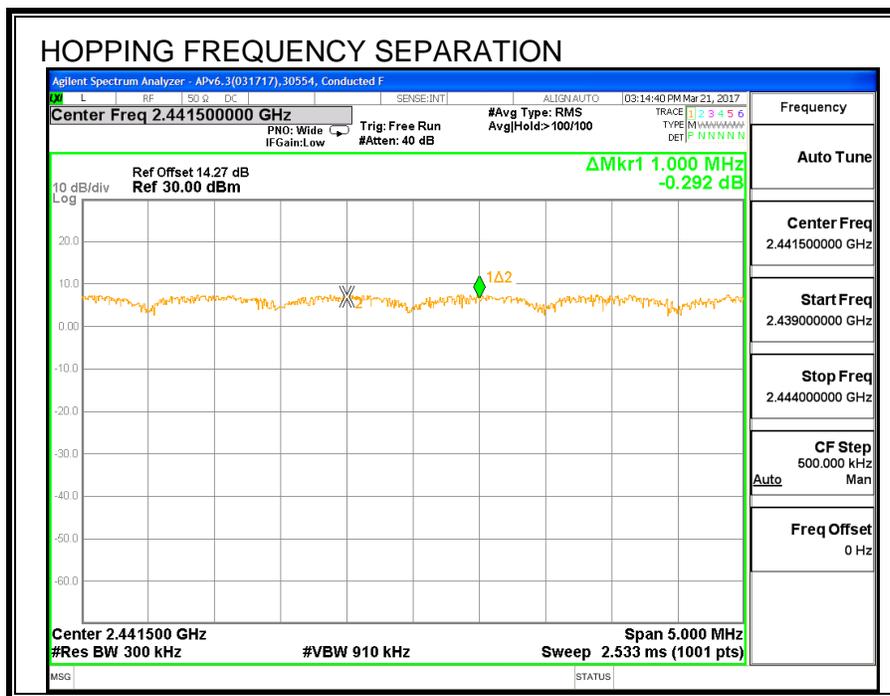
Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

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 300 kHz and the VBW is set to 910 kHz. The sweep time is coupled.

#### RESULTS



### 8.10.3. NUMBER OF HOPPING CHANNELS

#### LIMITS

FCC §15.247 (a) (1) (iii)

IC RSS-247 (5.1) (d)

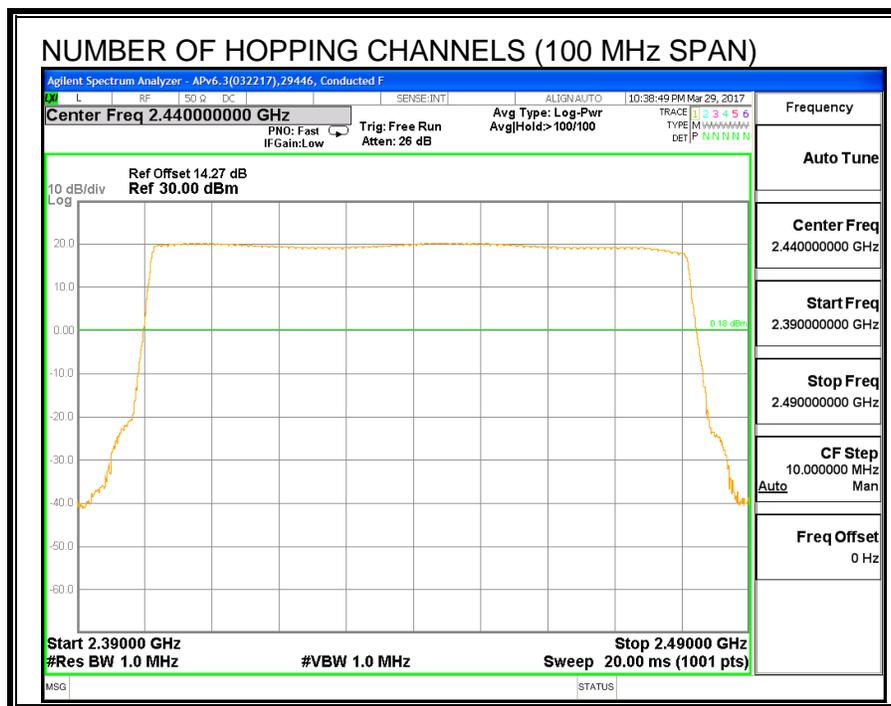
Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

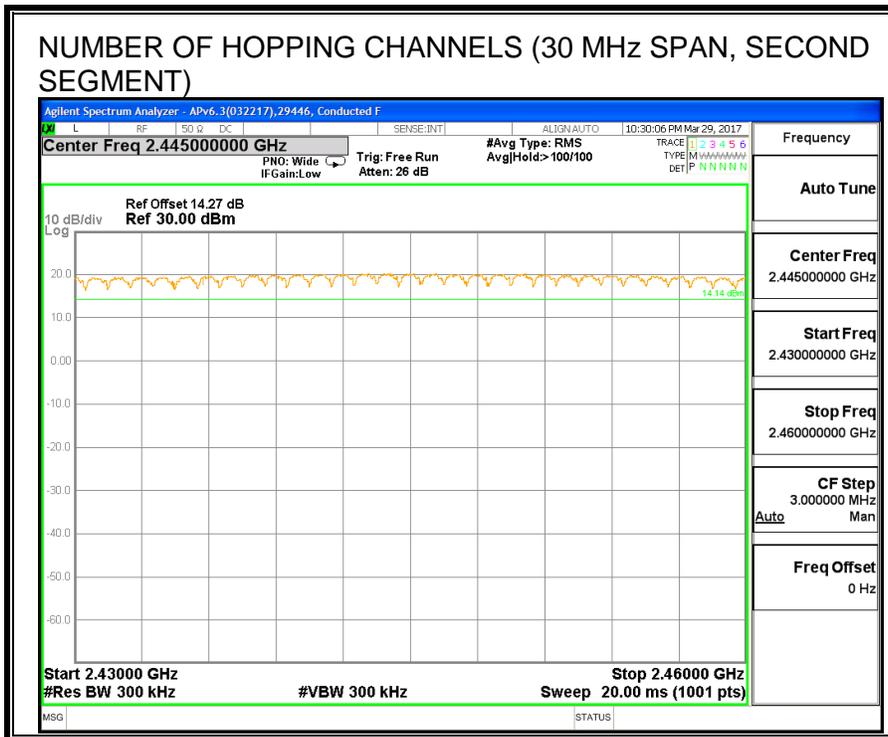
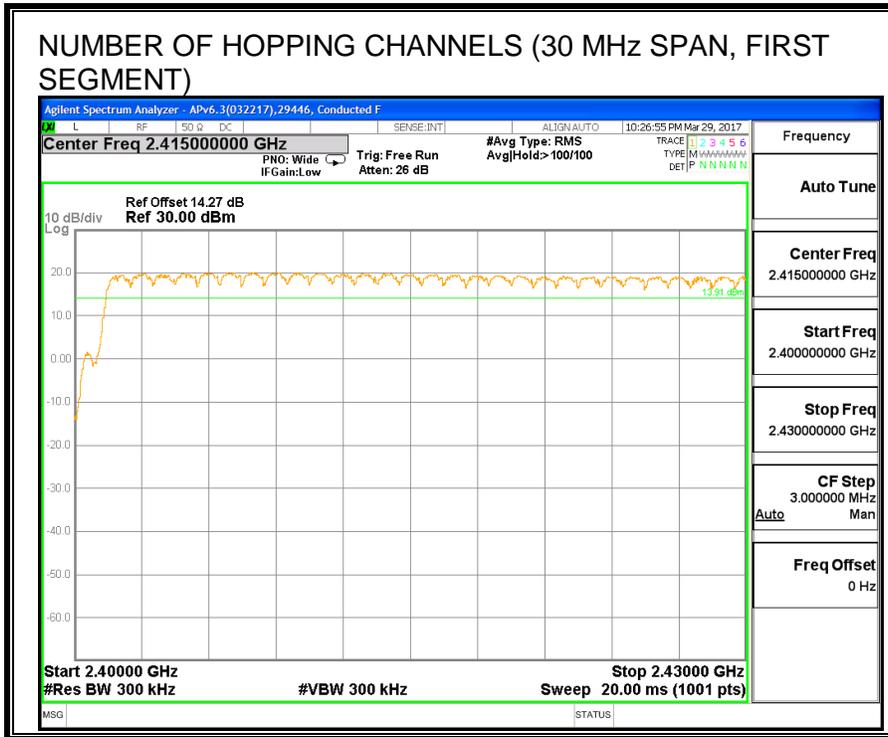
#### TEST PROCEDURE

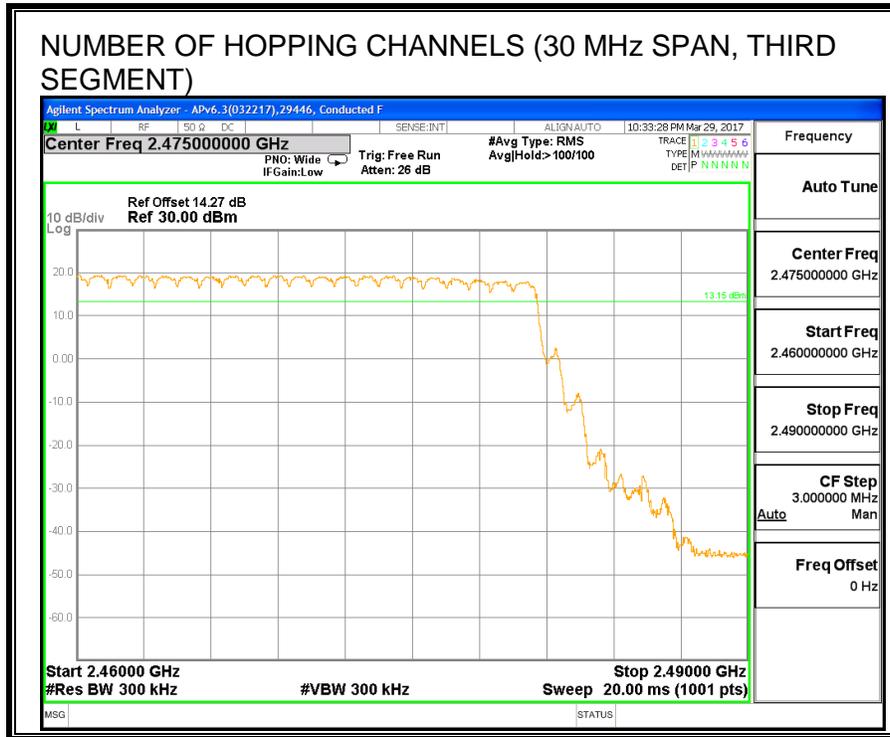
The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

#### RESULTS

Normal Mode: 79 Channels observed.







**8.10.4. AVERAGE TIME OF OCCUPANCY**

**LIMITS**

FCC §15.247 (a) (1) (iii)

IC RSS-247 (5.1) (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.

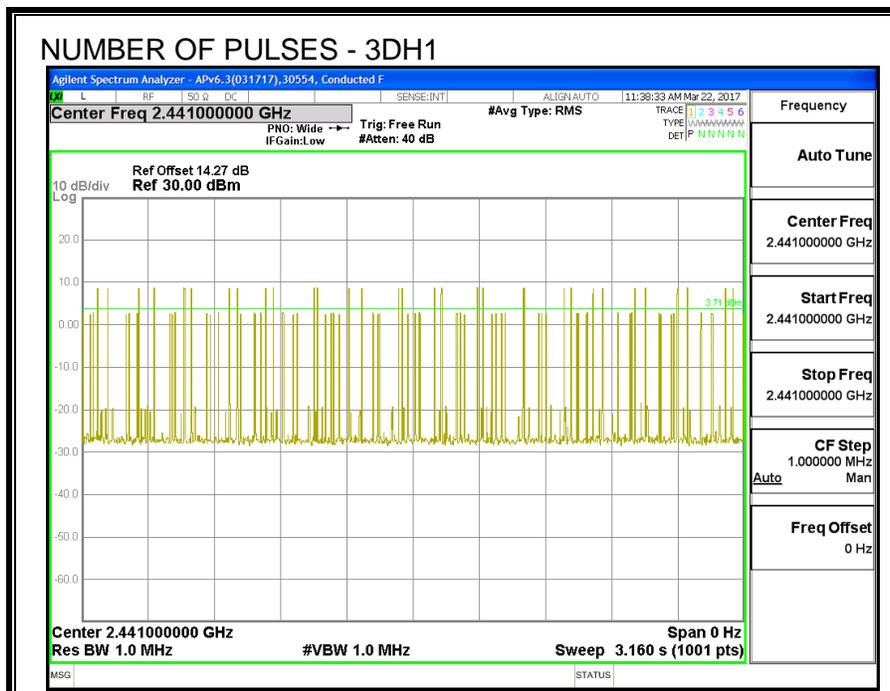
**TEST PROCEDURE**

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**

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
8PSK (EDR) Mode					
3DH1	0.389	32	0.124	0.4	-0.276
3DH3	1.640	15	0.246	0.4	-0.154
3DH5	2.891	9	0.260	0.4	-0.140







**8.10.5. OUTPUT POWER**

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**LIMITS**

§15.247 (b) (1)

RSS-247 (5.4) (b)

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

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 wideband peak and average power meter.

**RESULTS**

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	19.65	21	-1.35
Middle	2441	19.70	21	-1.30
High	2480	19.70	21	-1.30

**8.10.6. AVERAGE POWER**

<b>ID:</b>	30554	<b>Date:</b>	6/13/2017
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**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.

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Average Power (dBm)</b>
Low	2402	17.37
Middle	2441	17.42
High	2480	17.40

## **8.10.7. CONDUCTED SPURIOUS EMISSIONS**

### **LIMITS**

FCC §15.247 (d)

IC RSS-247 (5.5)

Limit = -20 dBc

### **TEST PROCEDURE**

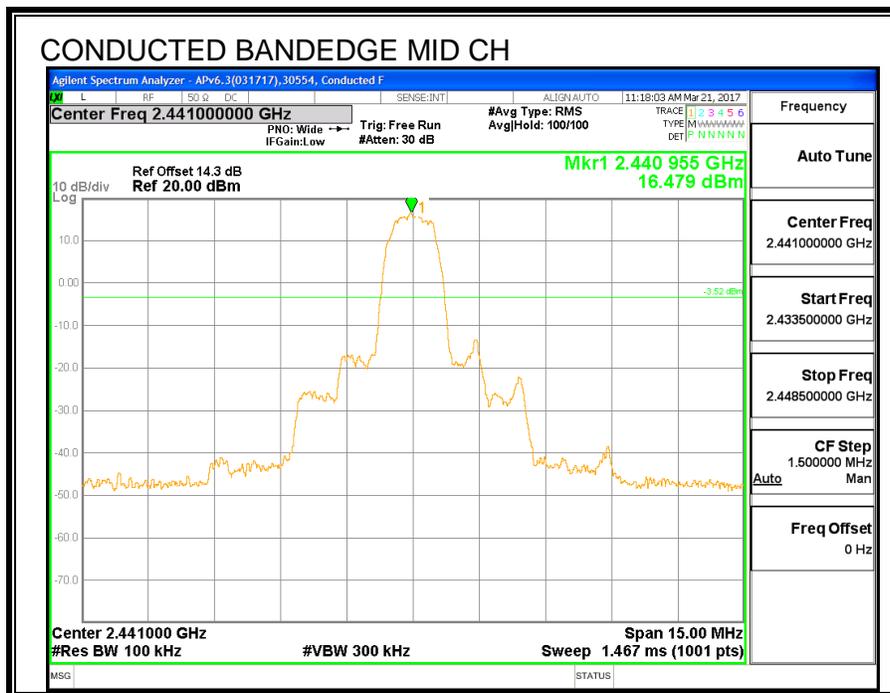
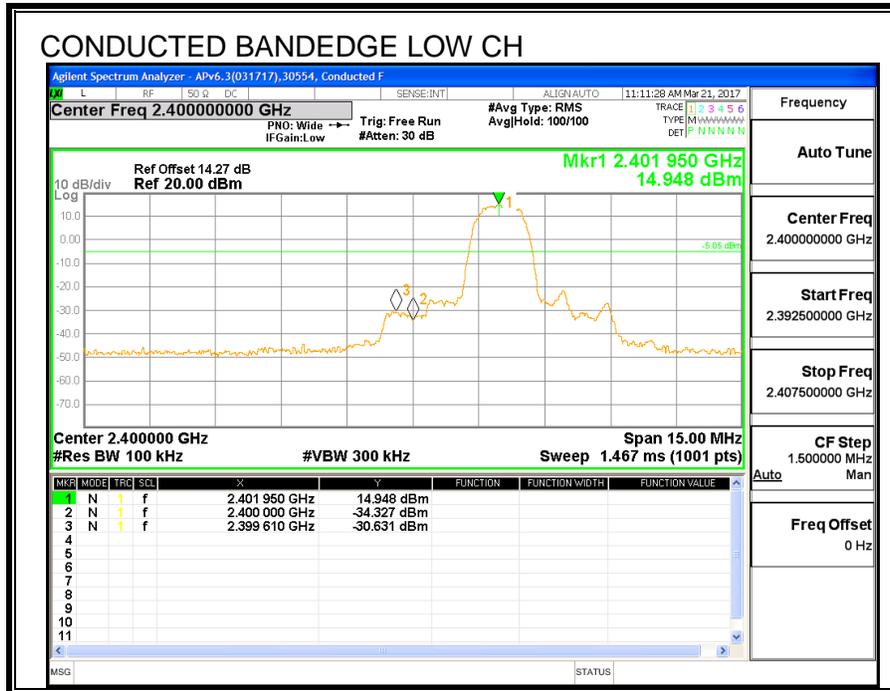
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

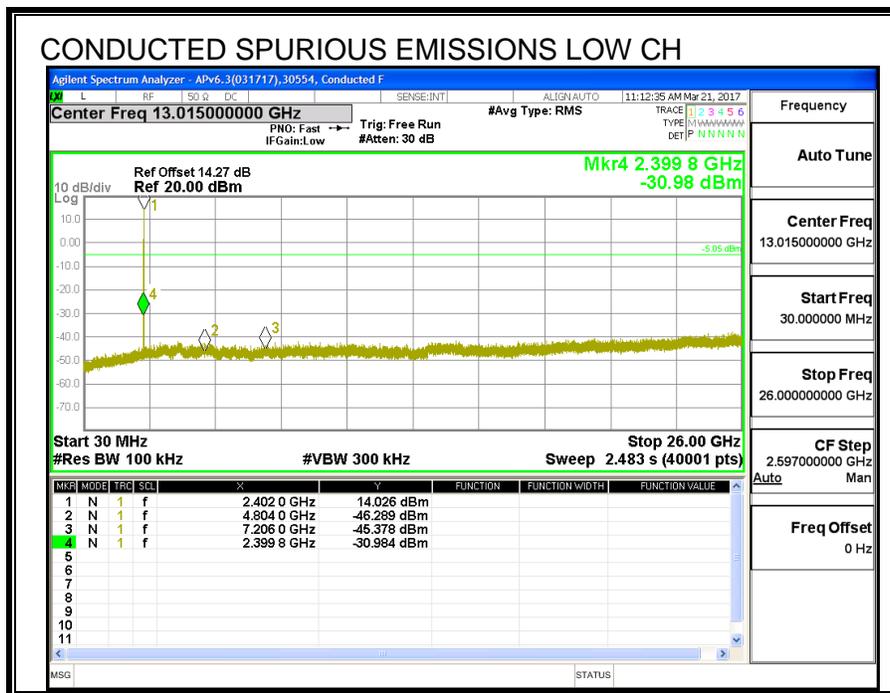
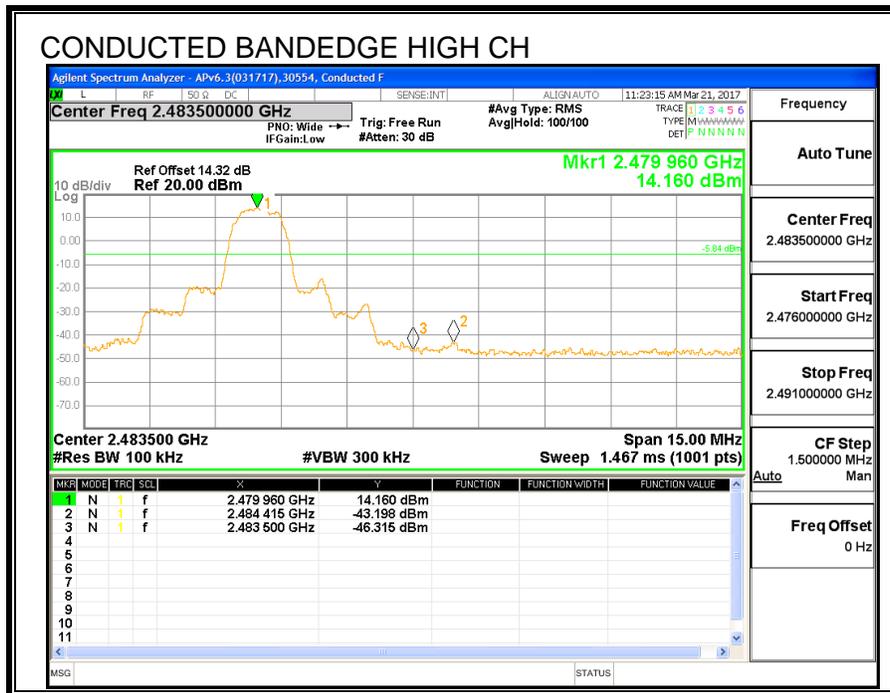
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

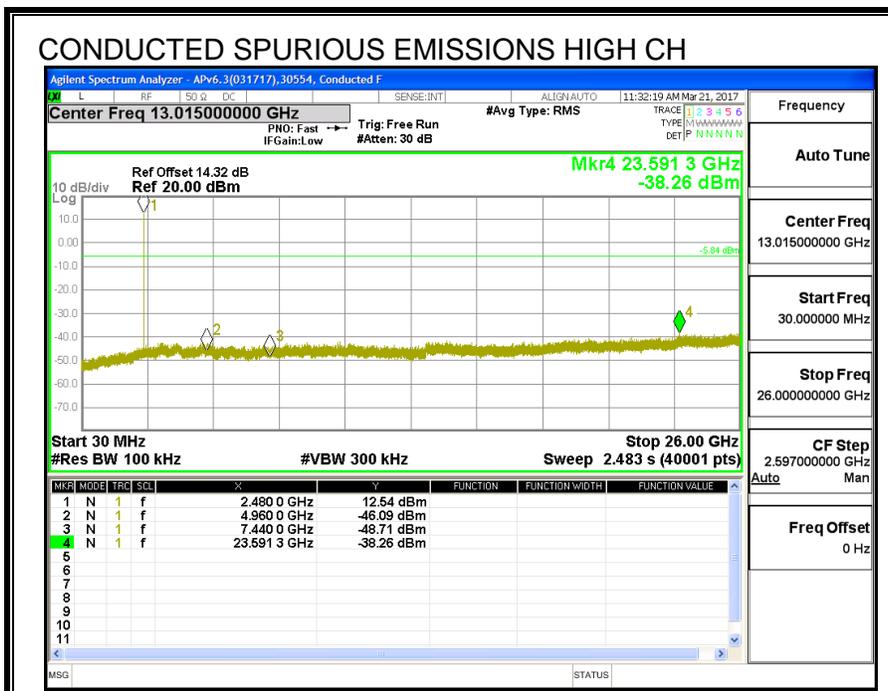
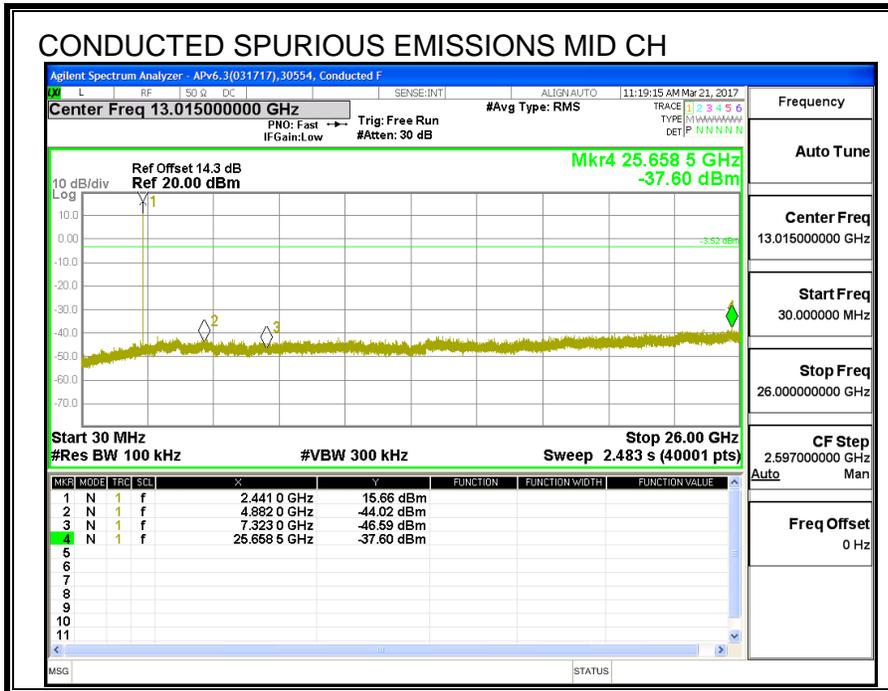
The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

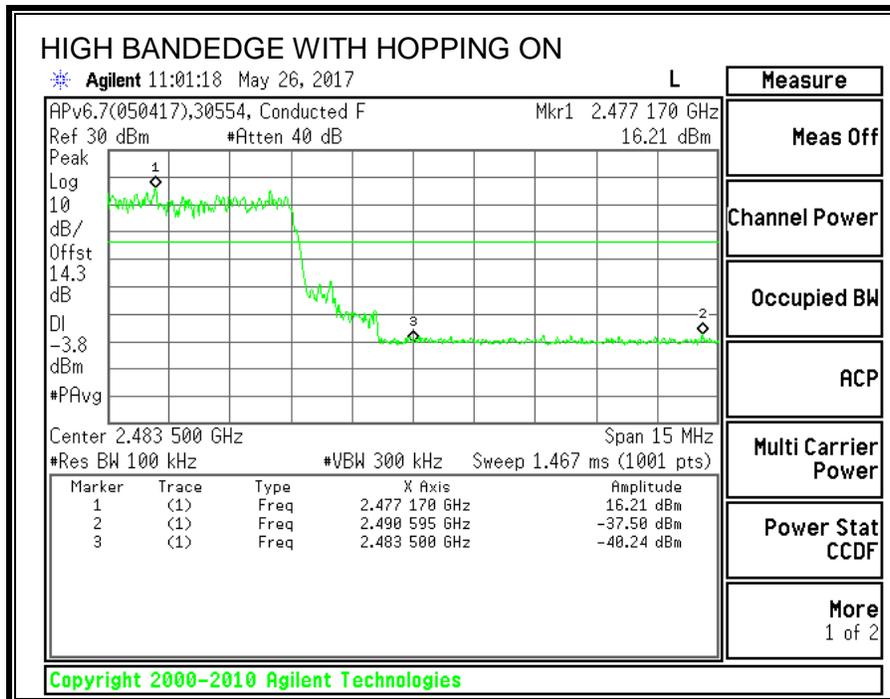
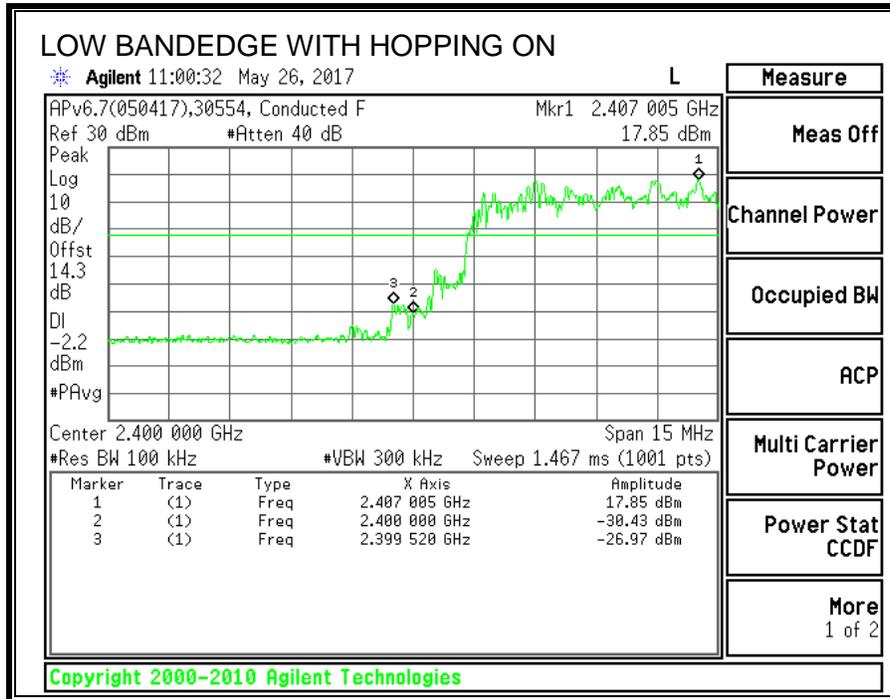
### **RESULTS**

**CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS**









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**8.11. LAT 3, P1ow BASIC DATA RATE GFSK MODULATION**

**8.11.1. 20 dB AND 99% BANDWIDTH**

**LIMITS**

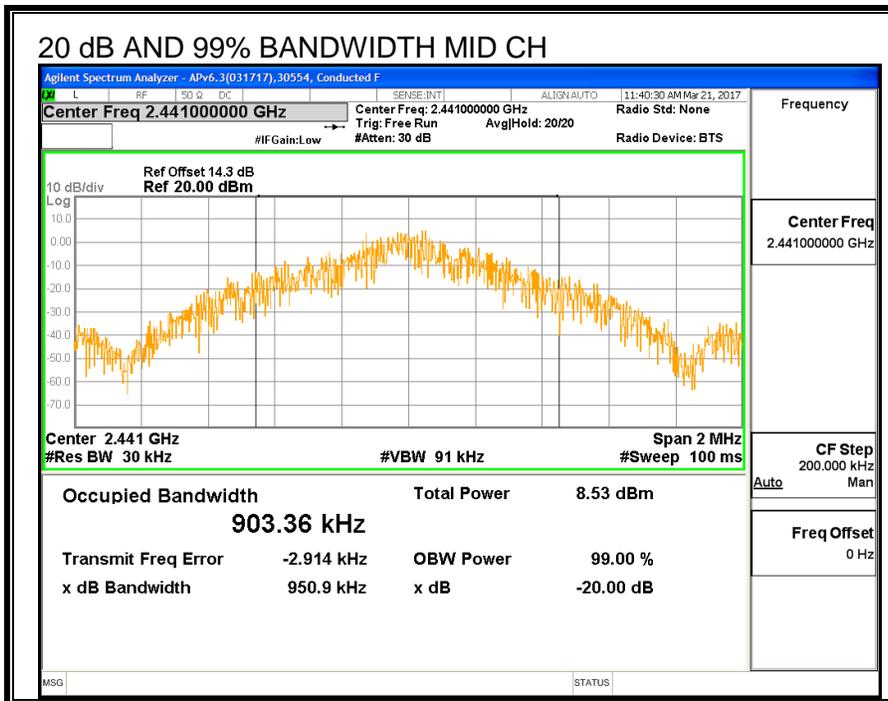
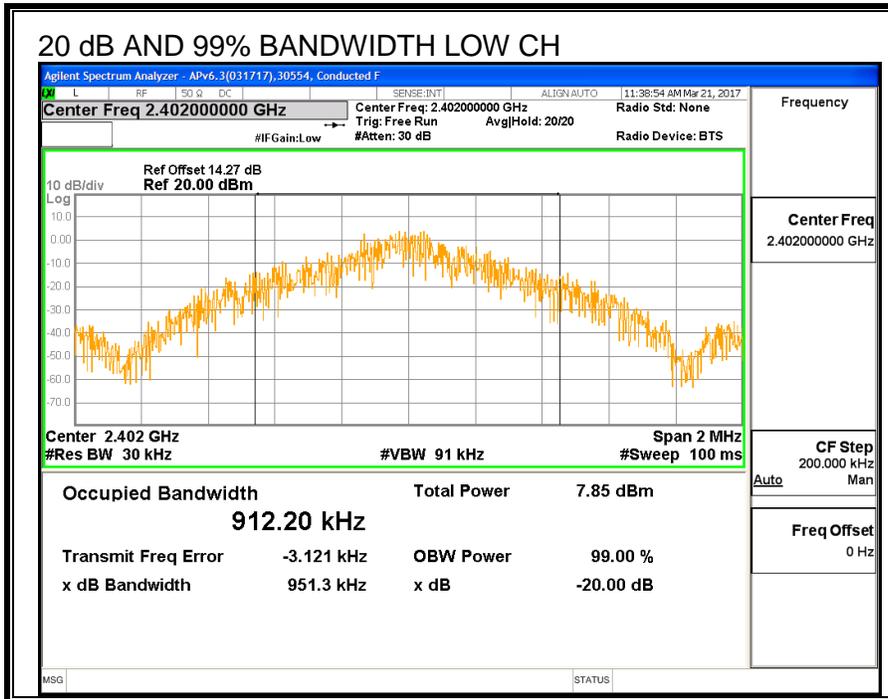
None; for reporting purposes only.

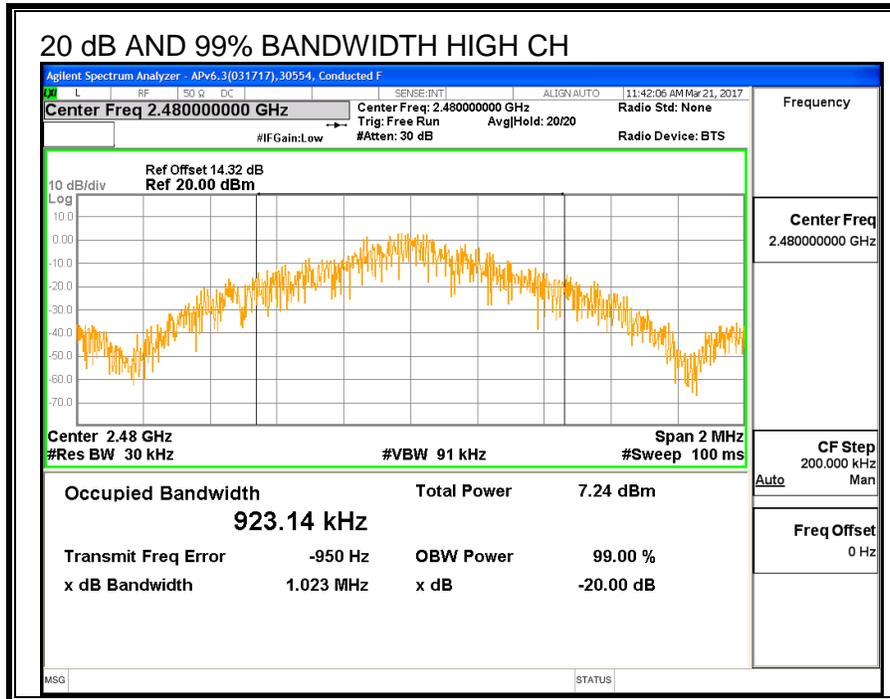
**TEST PROCEDURE**

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**

Channel	Frequency (MHz)	20 dB Bandwidth (KHz)	99% Bandwidth (KHz)
Low	2402	951.3	912.20
Middle	2441	950.9	903.36
High	2480	1023.0	923.14





### 8.11.2. HOPPING FREQUENCY SEPARATION

#### LIMITS

FCC §15.247 (a) (1)

IC RSS-247 (5.1) (b)

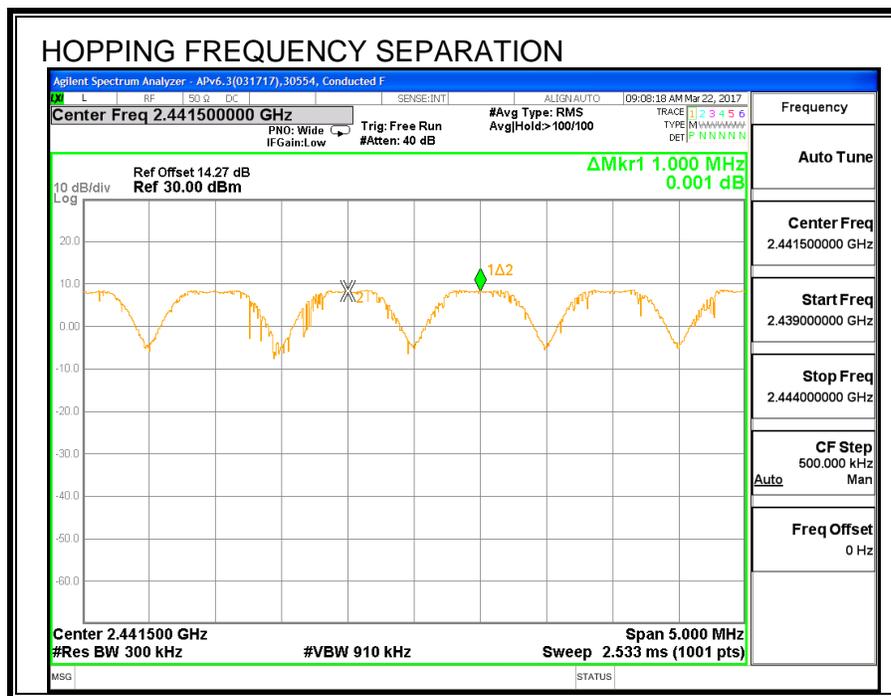
Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

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 300 kHz and the VBW is set to 910 kHz. The sweep time is coupled.

#### RESULTS



### 8.11.3. NUMBER OF HOPPING CHANNELS

#### LIMITS

FCC §15.247 (a) (1) (iii)

IC RSS-247 (5.1) (d)

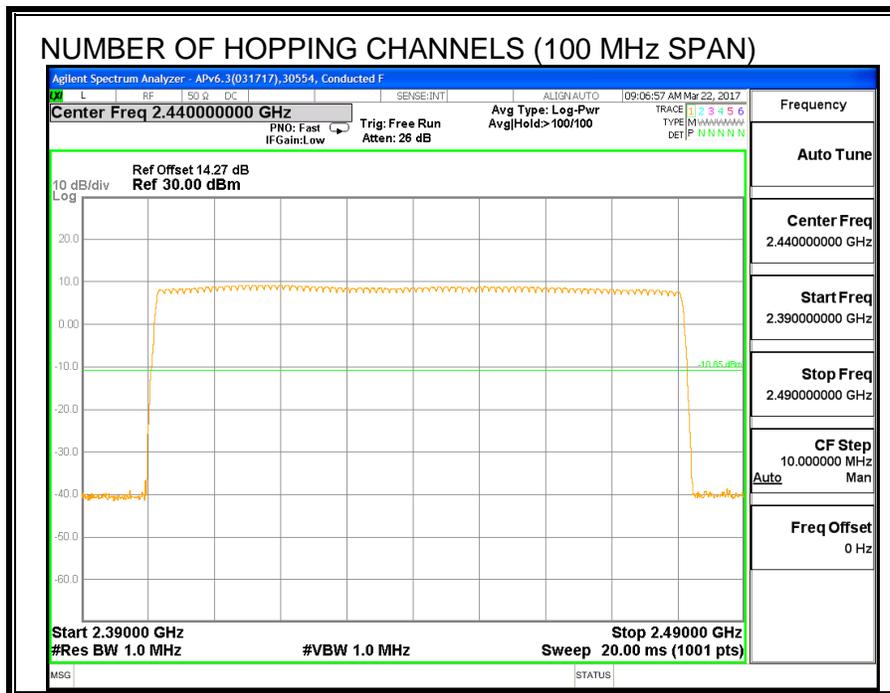
Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

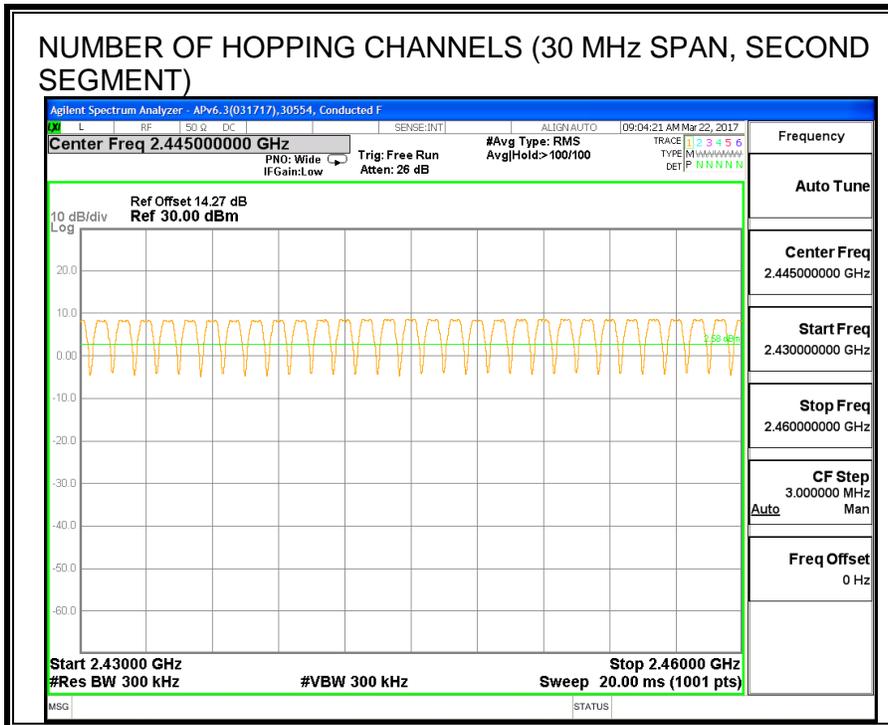
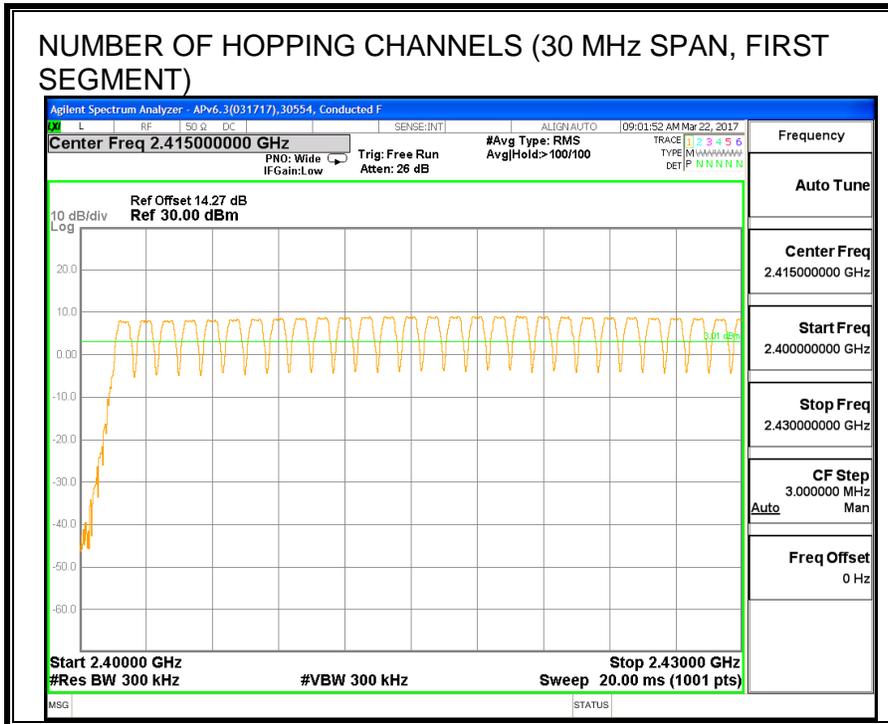
#### TEST PROCEDURE

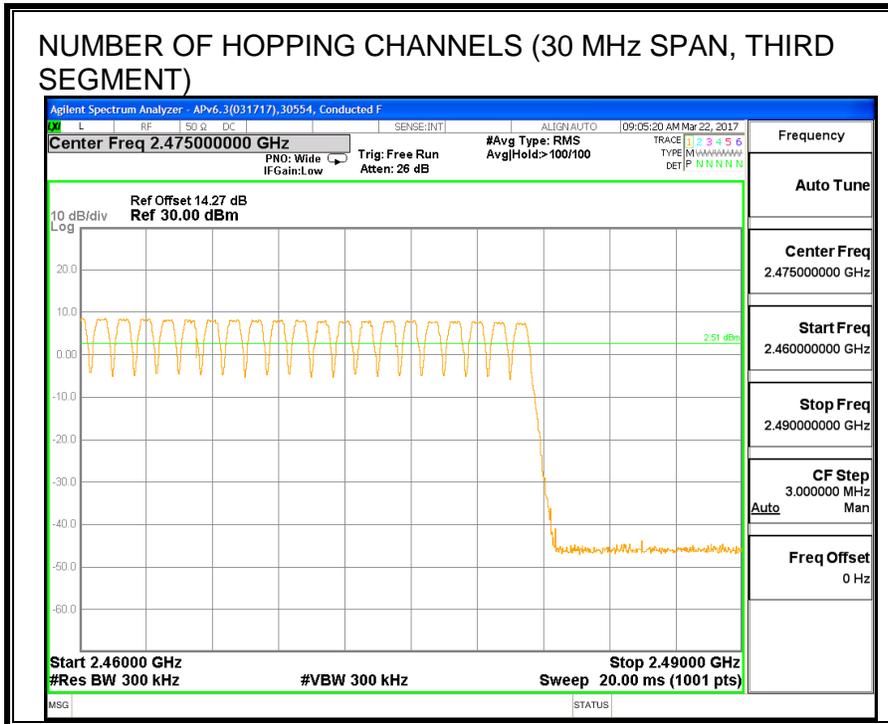
The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

#### RESULTS

Normal Mode: 79 Channels observed.







**8.11.4. AVERAGE TIME OF OCCUPANCY**

**LIMITS**

FCC §15.247 (a) (1) (iii)

IC RSS-247 (5.1) (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**

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
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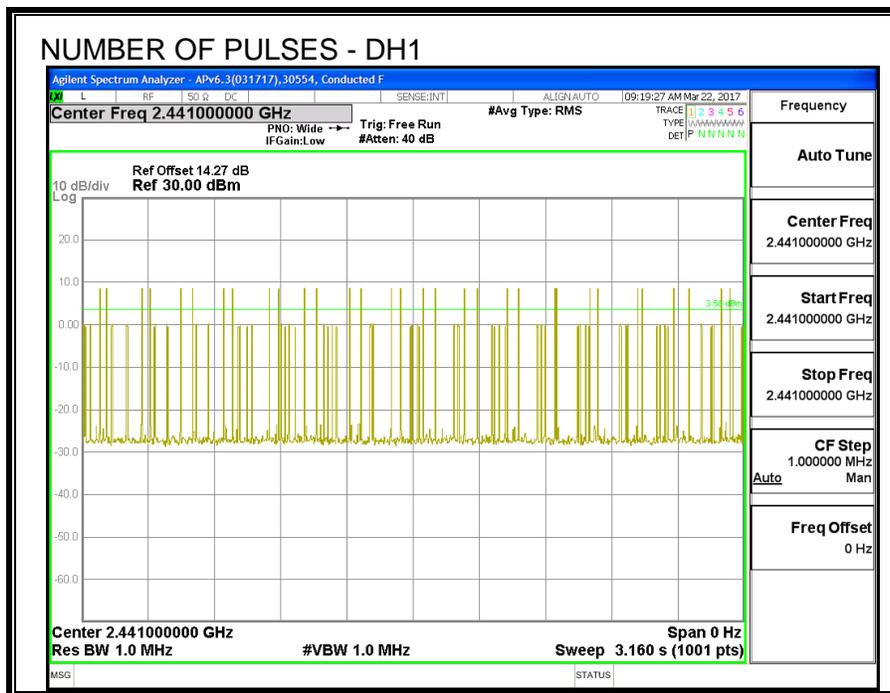
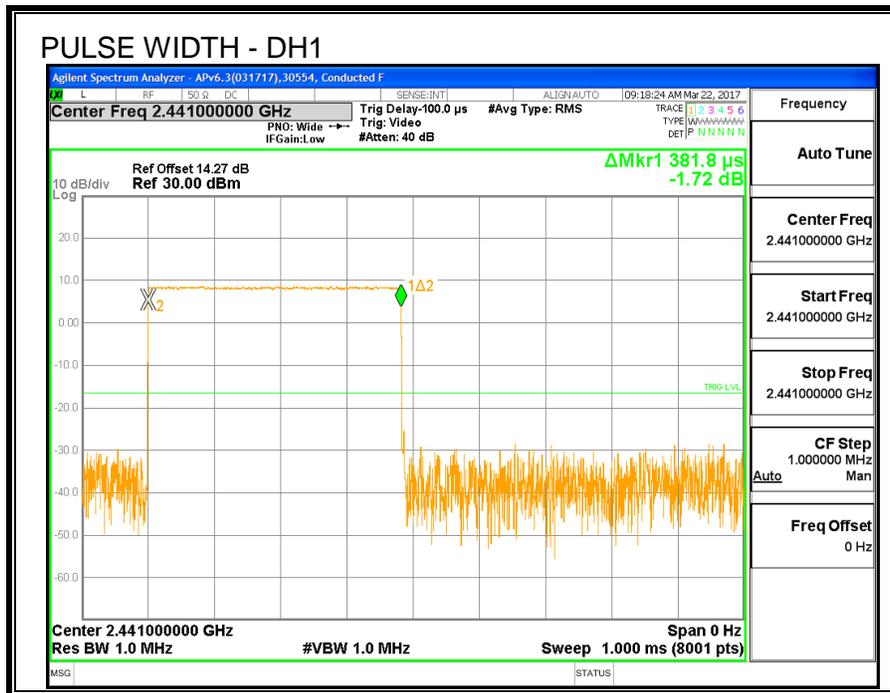
GFSK Normal Mode

DH1	0.382	32	0.122	0.4	-0.278
DH3	1.639	15	0.246	0.4	-0.154
DH5	2.887	10	0.289	0.4	-0.111

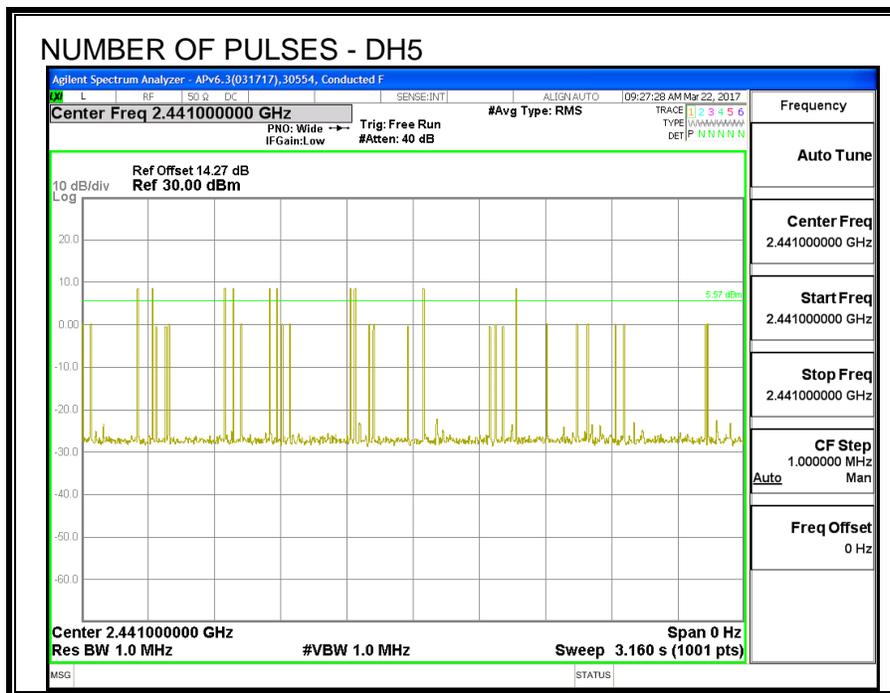
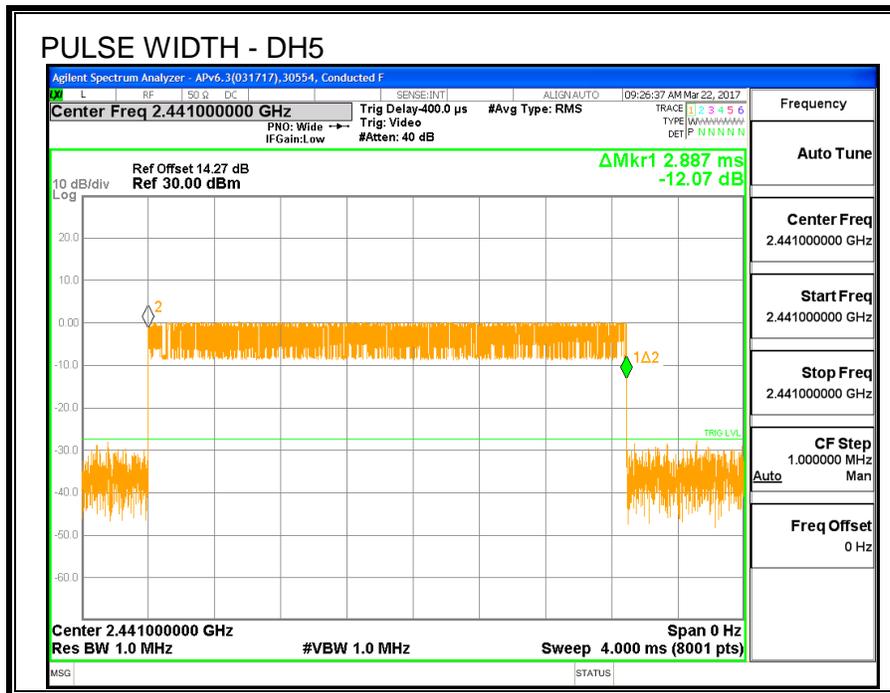
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GFSK AFH Mode

DH1	0.382	8	0.031	0.4	-0.369
DH3	1.639	4	0.066	0.4	-0.334
DH5	2.887	3	0.087	0.4	-0.313







**8.11.5. OUTPUT POWER**

<b>ID:</b>	30554	<b>Date:</b>	6/13/2017
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**LIMITS**

§15.247 (b) (1)

RSS-247 (5.4) (b)

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

**TEST PROCEDURE**

The transmitter output is connected to a wideband peak and average power meter.

**RESULTS**

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Output Power (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin (dB)</b>
Low	2402	9.90	21	-11.10
Middle	2441	10.02	21	-10.98
High	2480	9.95	21	-11.05

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**8.11.6. AVERAGE POWER**

<b>ID:</b>	30554	<b>Date:</b>	6/13/2017
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**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.

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Average Power (dBm)</b>
Low	2402	9.60
Middle	2441	9.70
High	2480	9.65

## **8.11.7. CONDUCTED SPURIOUS EMISSIONS**

### **LIMITS**

FCC §15.247 (d)

IC RSS-247 (5.5)

Limit = -20 dBc

### **TEST PROCEDURE**

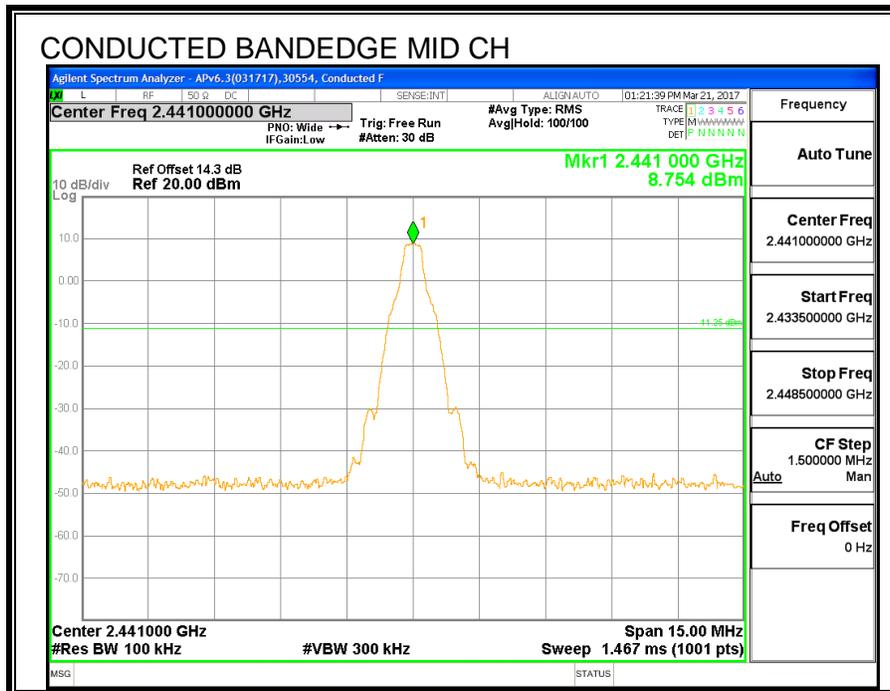
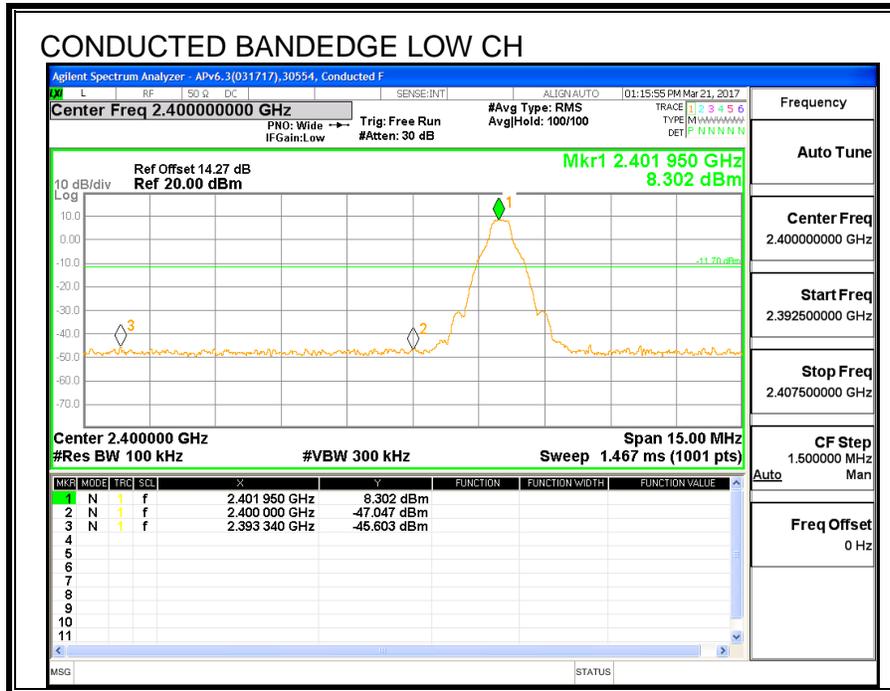
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

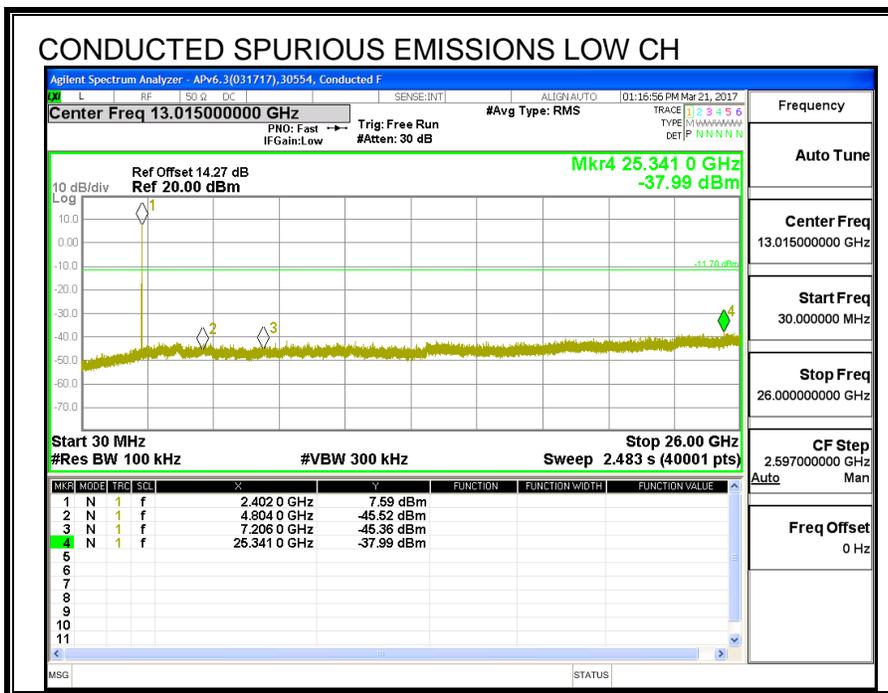
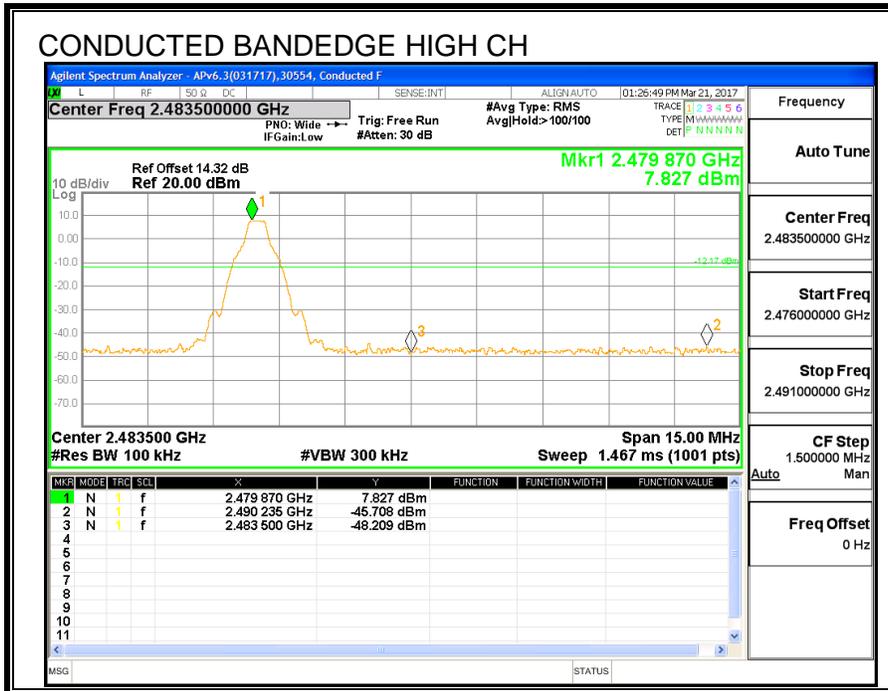
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

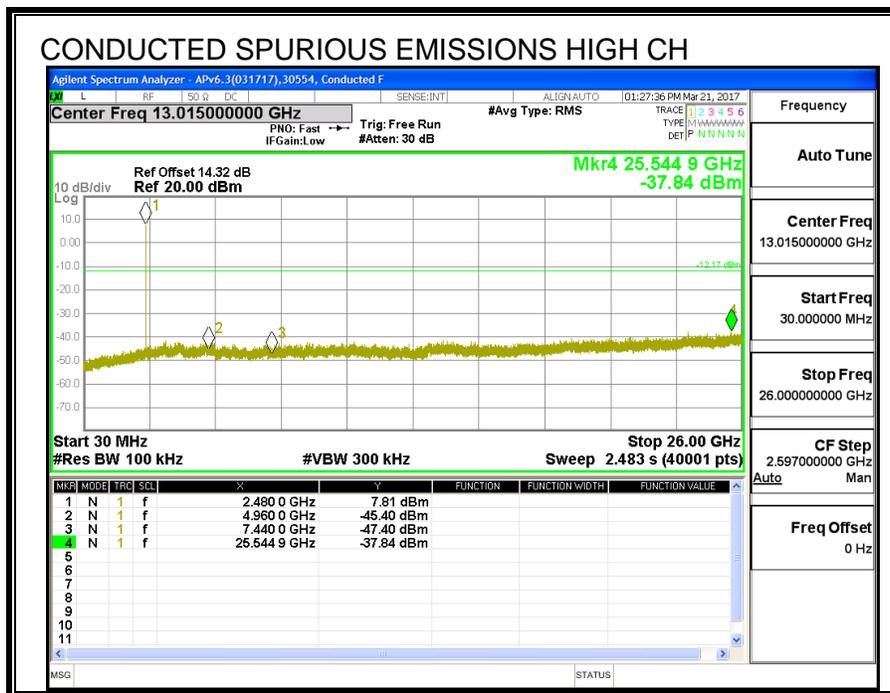
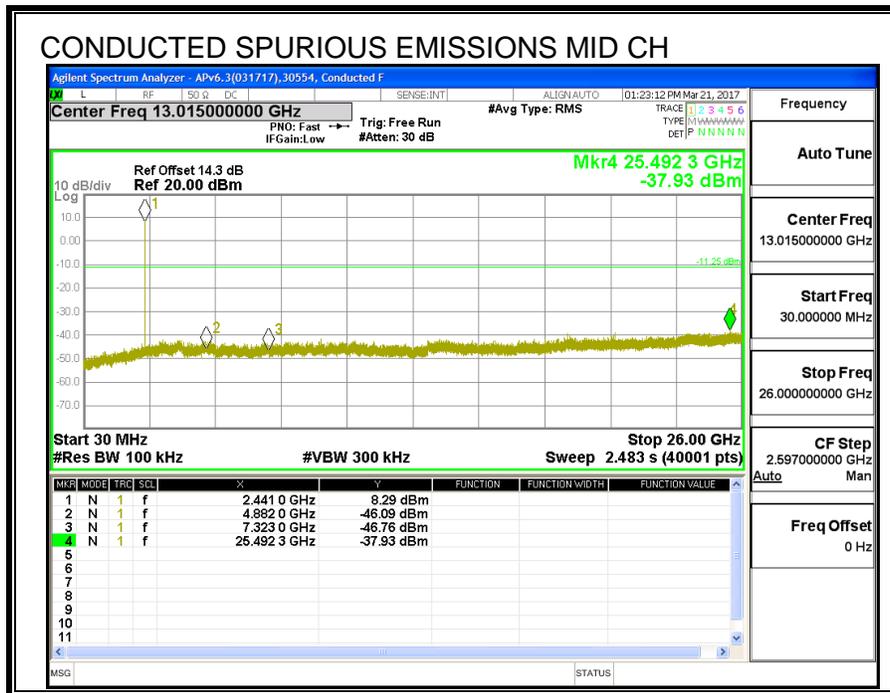
The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

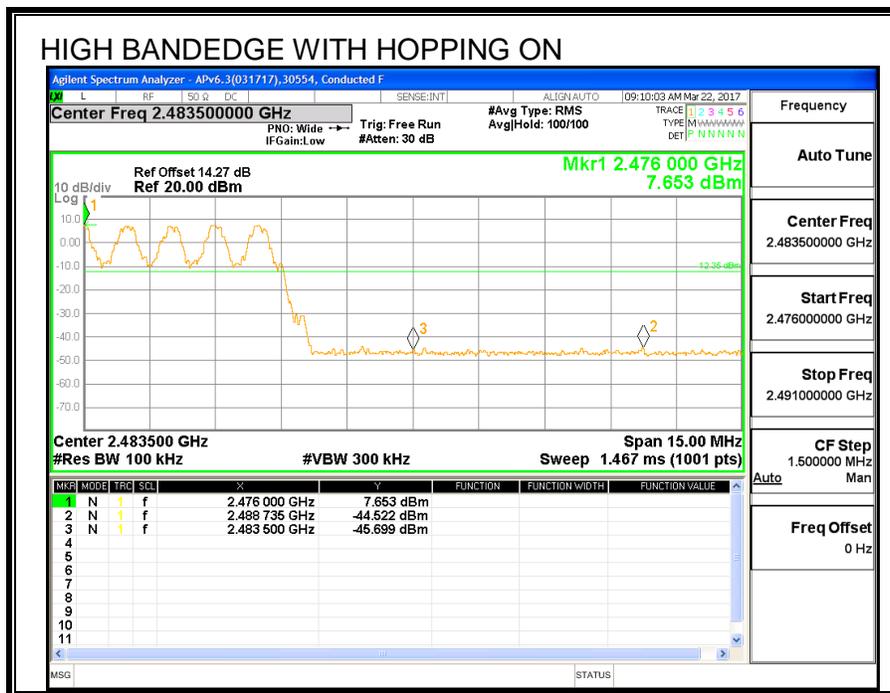
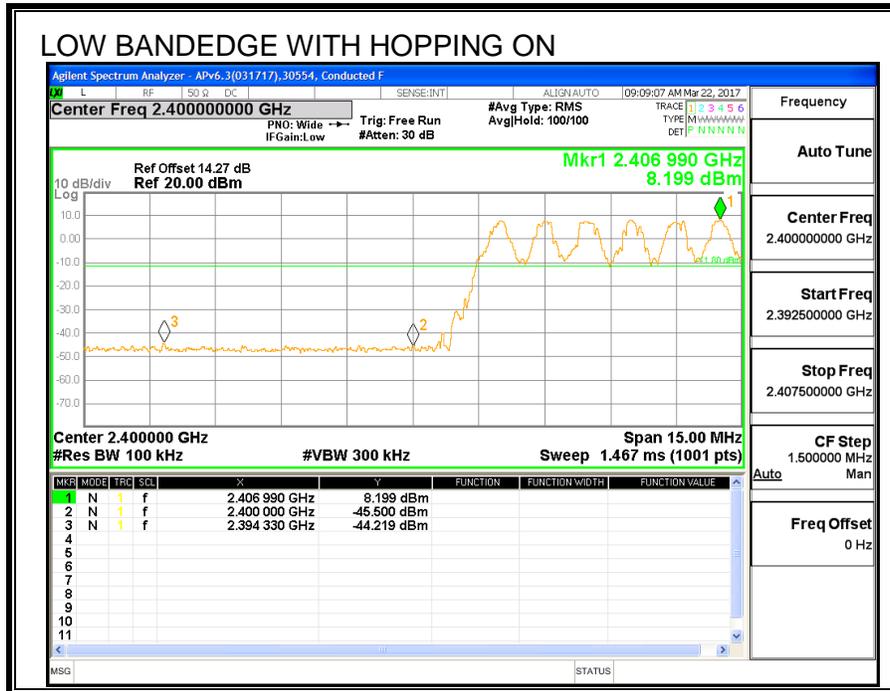
### **RESULTS**

**CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS**









**8.12. LAT 3, P1ow ENHANCED DATA RATE DQPSK MODULATION**

**8.12.1. OUTPUT POWER**

<b>ID:</b>	30554	<b>Date:</b>	6/13/2017
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**LIMITS**

§15.247 (b) (1)

RSS-247 (5.4) (b)

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

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 wideband peak and average power meter.

**RESULTS**

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Output Power (dBm)</b>	<b>Limit (dBm)</b>	<b>Margin (dB)</b>
Low	2402	9.90	21	-11.10
Middle	2441	10.00	21	-11.00
High	2480	9.95	21	-11.05

**8.12.2. AVERAGE POWER**

<b>ID:</b>	30554	<b>Date:</b>	6/13/2017
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**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.

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Average Power (dBm)</b>
Low	2402	7.60
Middle	2441	7.70
High	2480	7.65

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**8.13. LAT 3, P1ow ENHANCED DATA RATE 8PSK MODULATION**

**8.13.1. 20 dB AND 99% BANDWIDTH**

**LIMITS**

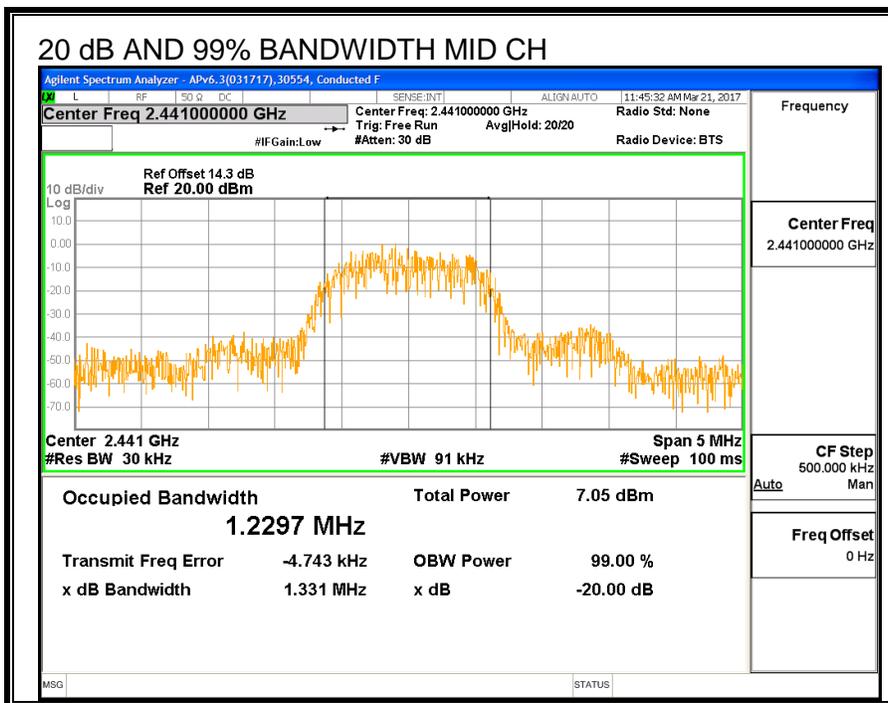
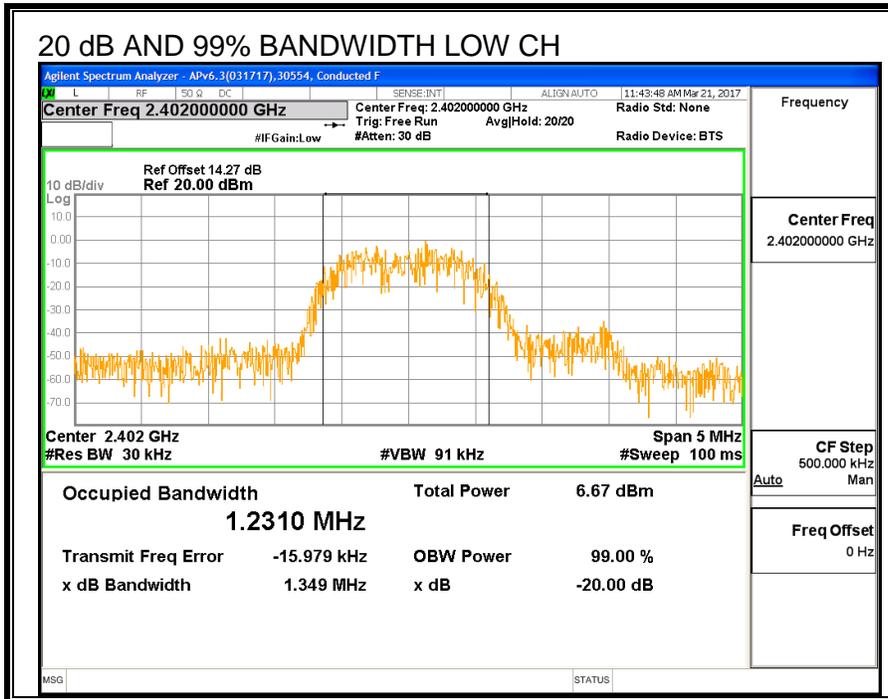
None; for reporting purposes only.

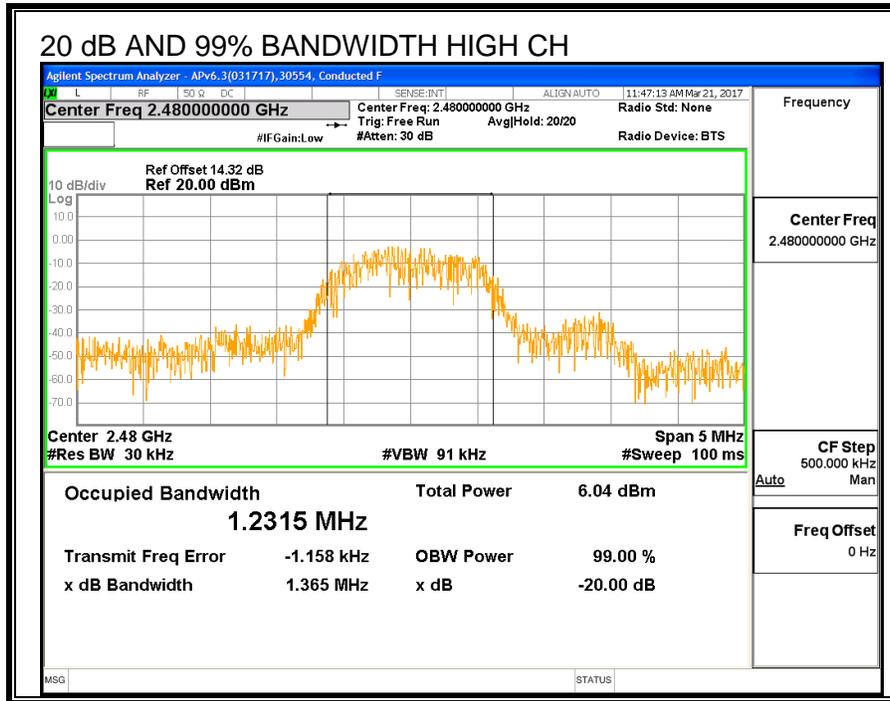
**TEST PROCEDURE**

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**

Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.349	1.2310
Middle	2441	1.331	1.2297
High	2480	1.365	1.2315







### 8.13.3. NUMBER OF HOPPING CHANNELS

#### LIMITS

FCC §15.247 (a) (1) (iii)

IC RSS-247 (5.1) (d)

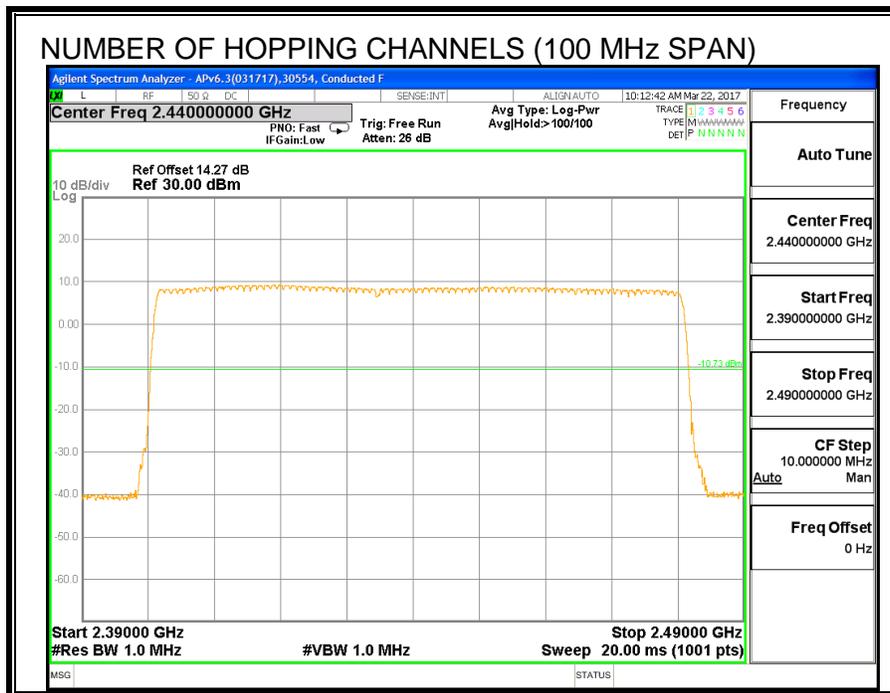
Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

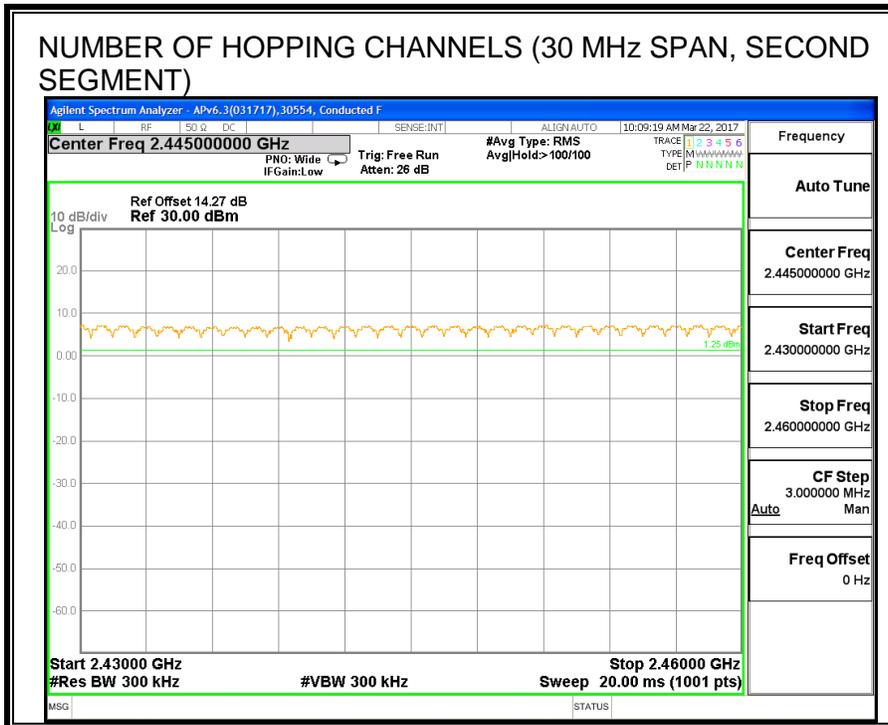
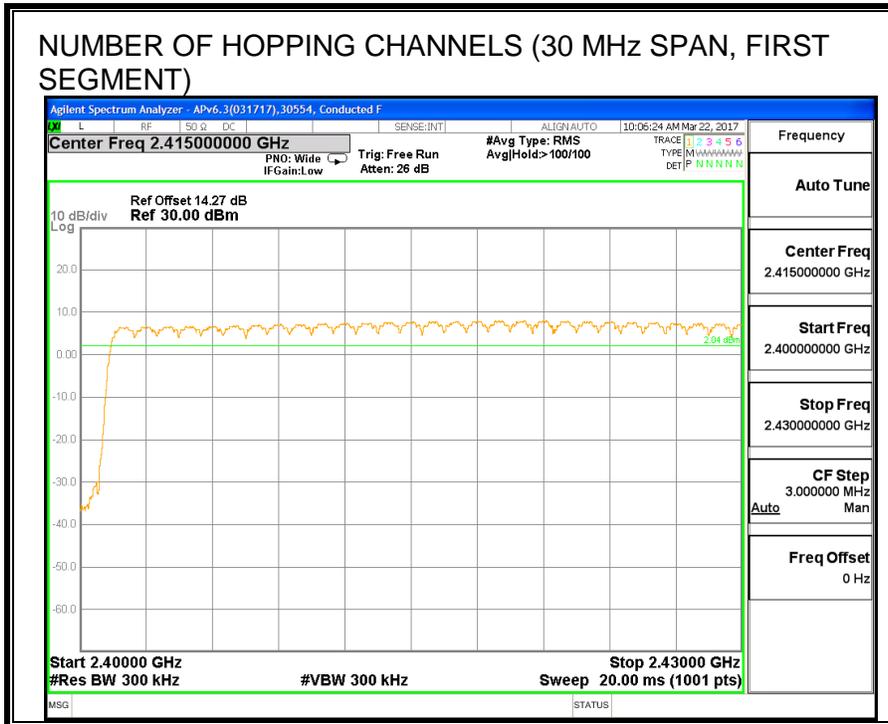
#### TEST PROCEDURE

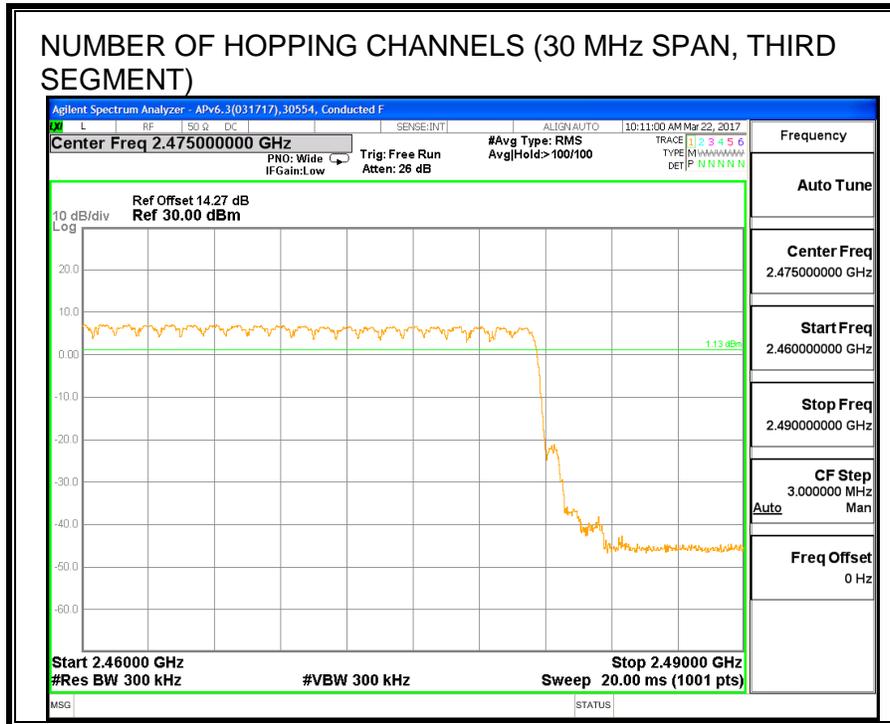
The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

#### RESULTS

Normal Mode: 79 Channels observed.







**8.13.4. AVERAGE TIME OF OCCUPANCY**

**LIMITS**

FCC §15.247 (a) (1) (iii)

IC RSS-247 (5.1) (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.

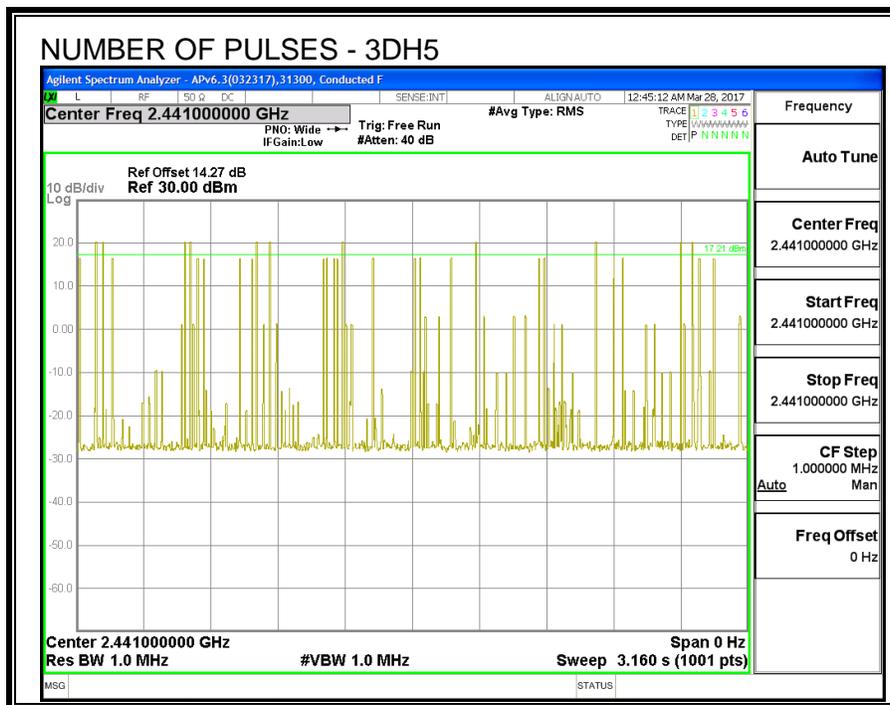
The average time of occupancy in the specified 31.6 second period (79 channels \* 0.4 s) is equal to  $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{ pulse width}$ .

**RESULTS**

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
8PSK (EDR) Mode					
3DH1	0.389	32	0.124	0.4	-0.276
3DH3	1.640	15	0.246	0.4	-0.154
3DH5	2.892	11	0.318	0.4	-0.082







**8.13.5. OUTPUT POWER**

<b>ID:</b>	30554	<b>Date:</b>	6/13/2017
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**LIMITS**

§15.247 (b) (1)

RSS-247 (5.4) (b)

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

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 wideband peak and average power meter.

**RESULTS**

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	10.10	21	-10.90
Middle	2441	10.15	21	-10.85
High	2480	10.10	21	-10.90

**8.13.6. AVERAGE POWER**

<b>ID:</b>	30554	<b>Date:</b>	6/13/2017
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**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.

<b>Channel</b>	<b>Frequency (MHz)</b>	<b>Average Power (dBm)</b>
Low	2402	7.78
Middle	2441	7.85
High	2480	7.80

## **8.13.7. CONDUCTED SPURIOUS EMISSIONS**

### **LIMITS**

FCC §15.247 (d)

IC RSS-247 (5.5)

Limit = -20 dBc

### **TEST PROCEDURE**

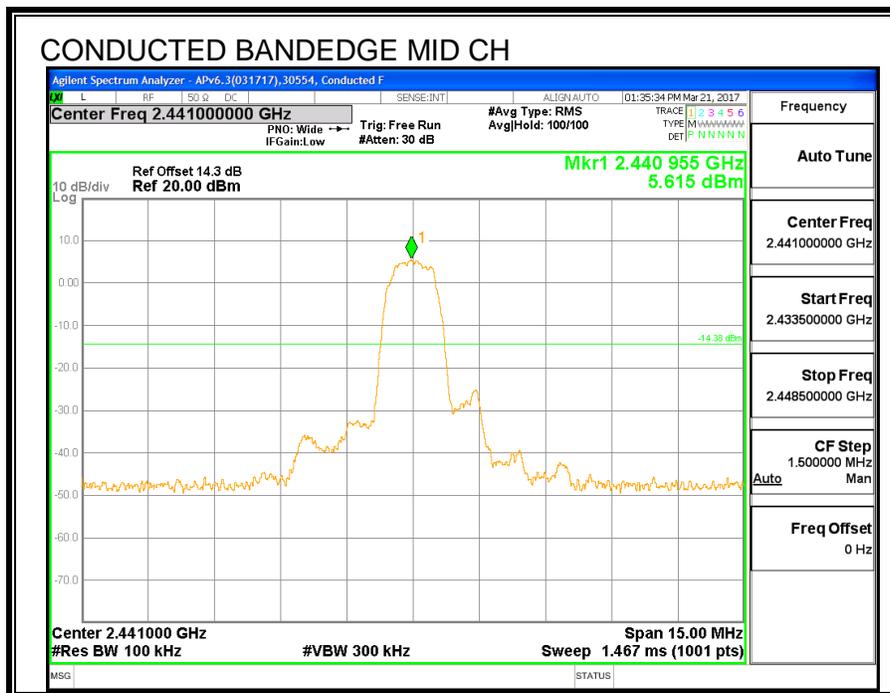
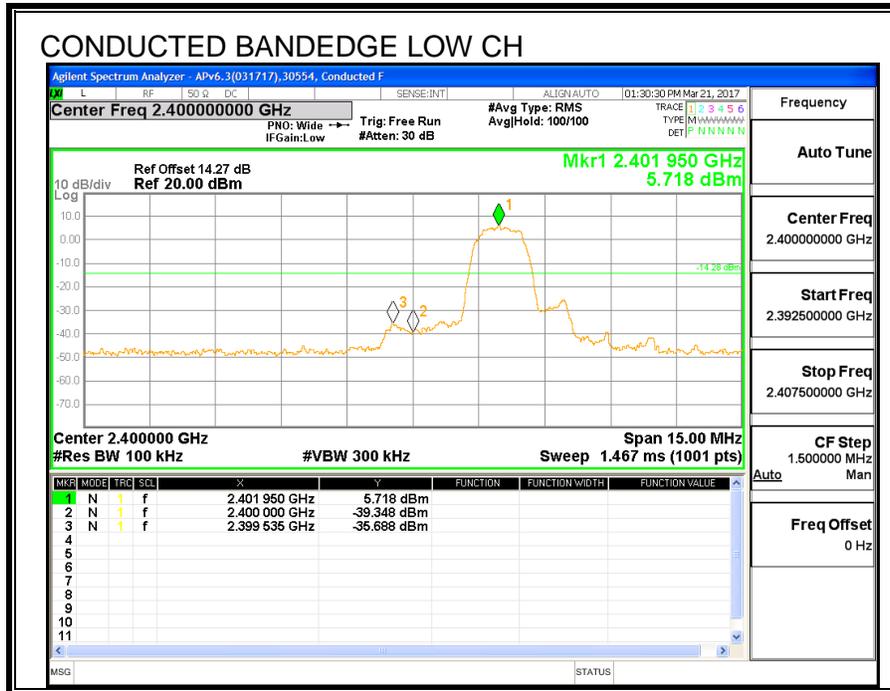
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

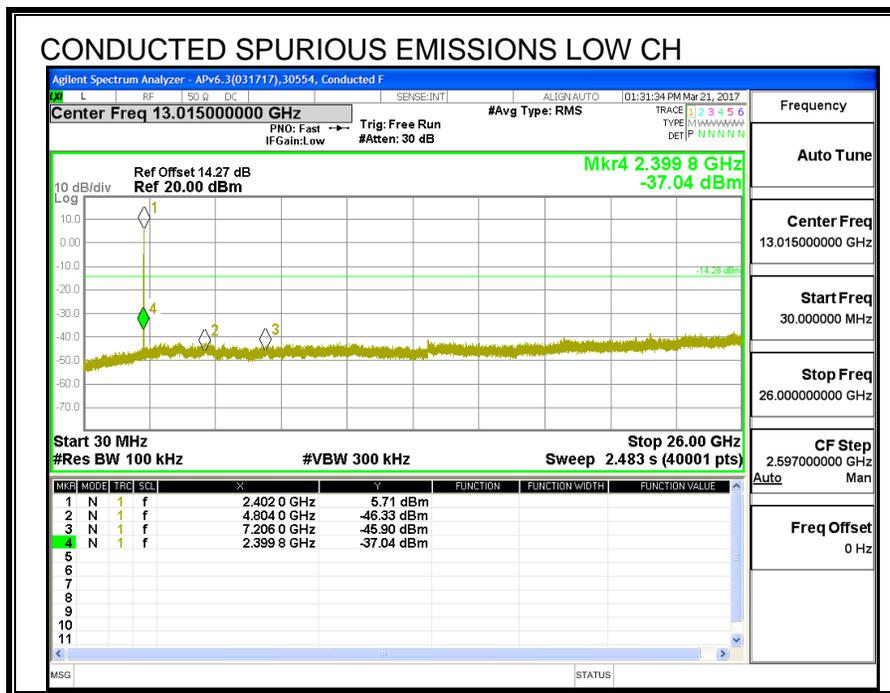
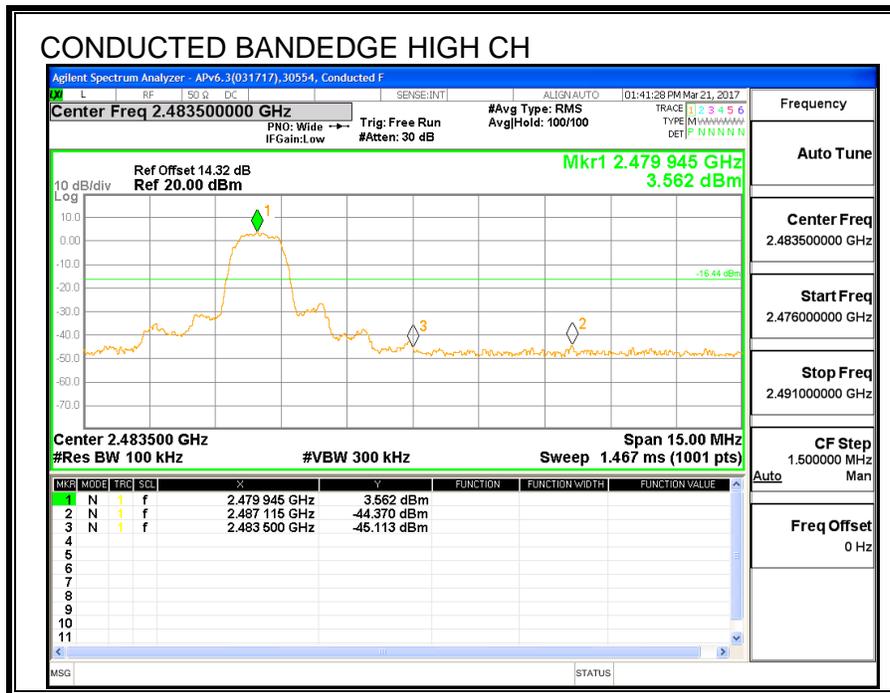
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

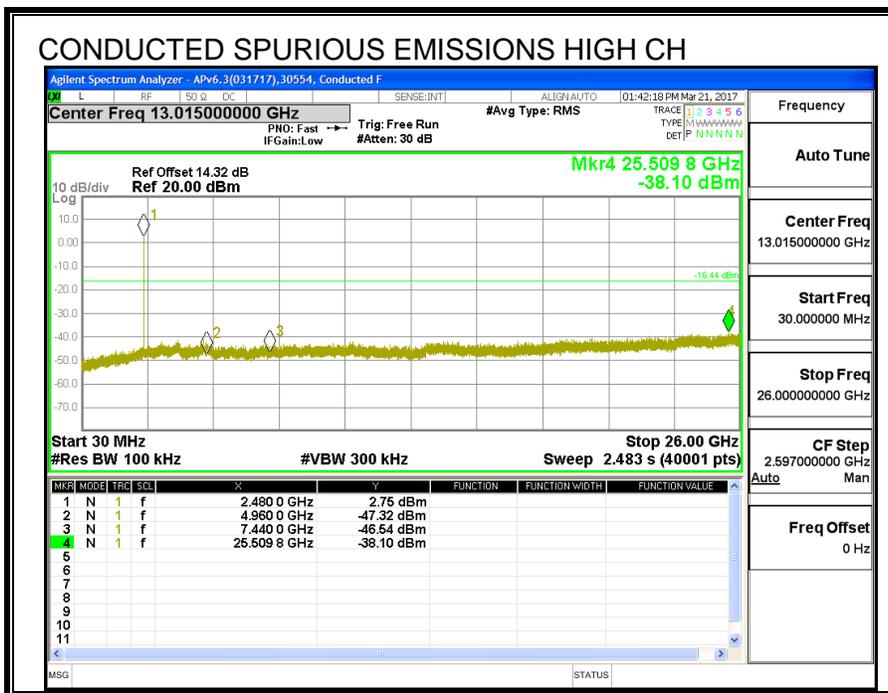
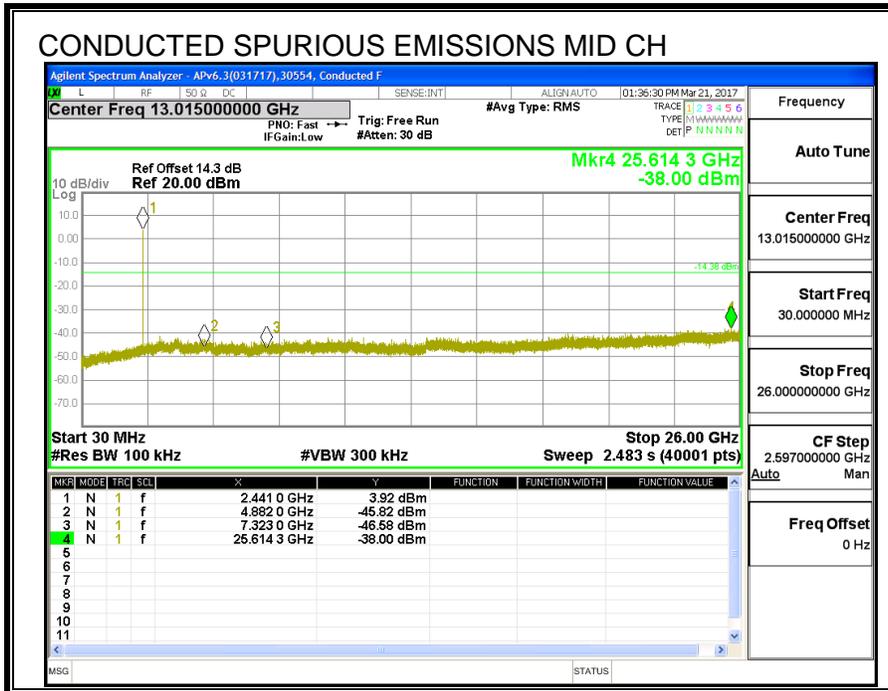
The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

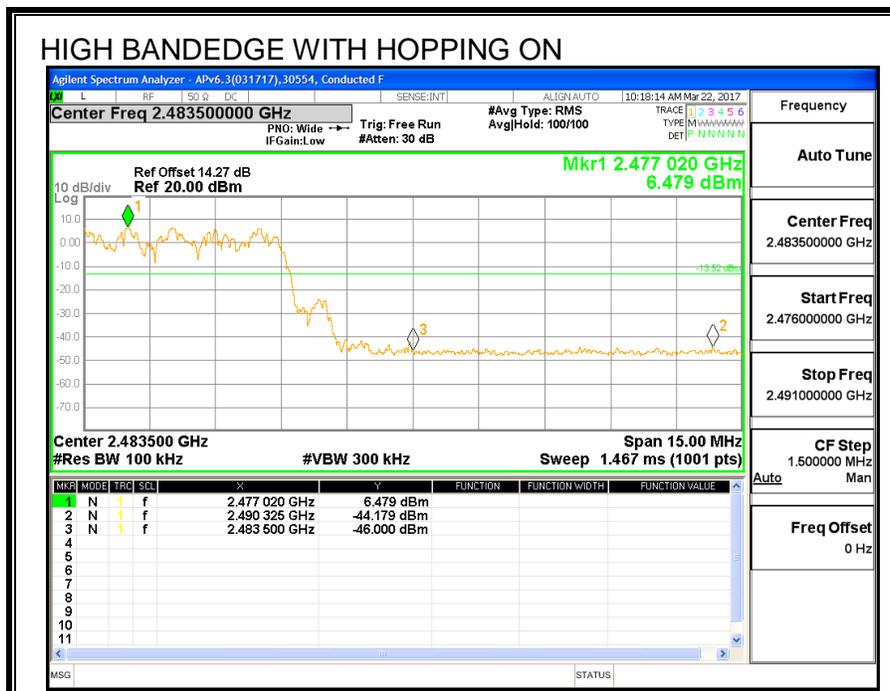
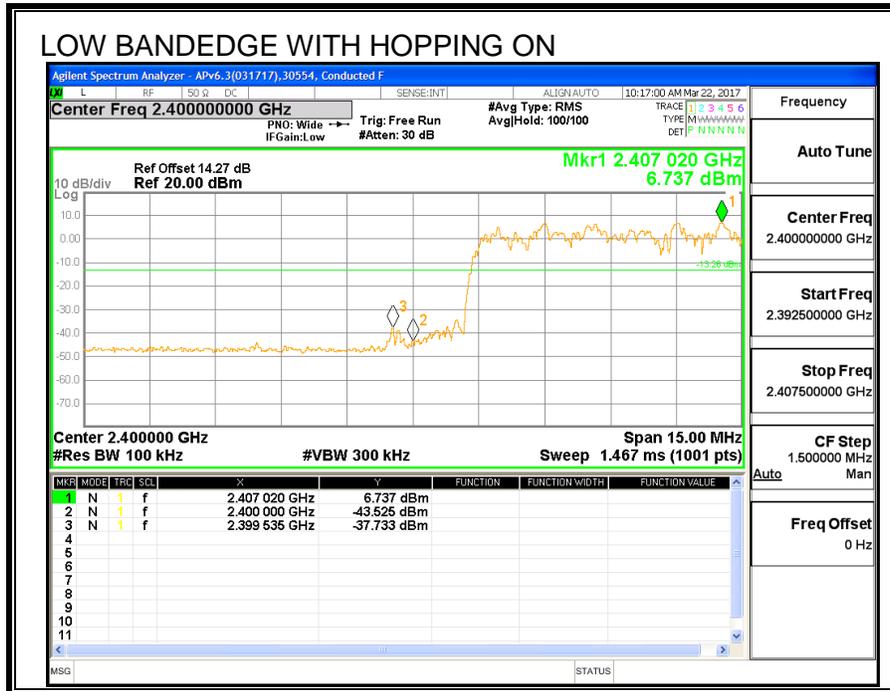
### **RESULTS**

**CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS**









## 9. RADIATED TEST RESULTS

### 9.1. LIMITS AND PROCEDURE

#### LIMITS

FCC §15.205 and §15.209

IC RSS-GEN, Section 8.9 and 8.10.

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 for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. 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 pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final scans above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T (10 Hz) video bandwidth with peak detector for average measurements.

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak→ this is a note from Radiated automation software. When the frequency is below 1G, software is using RB=100kHz; when the frequency is above 1G, software is using RB=1MHz.

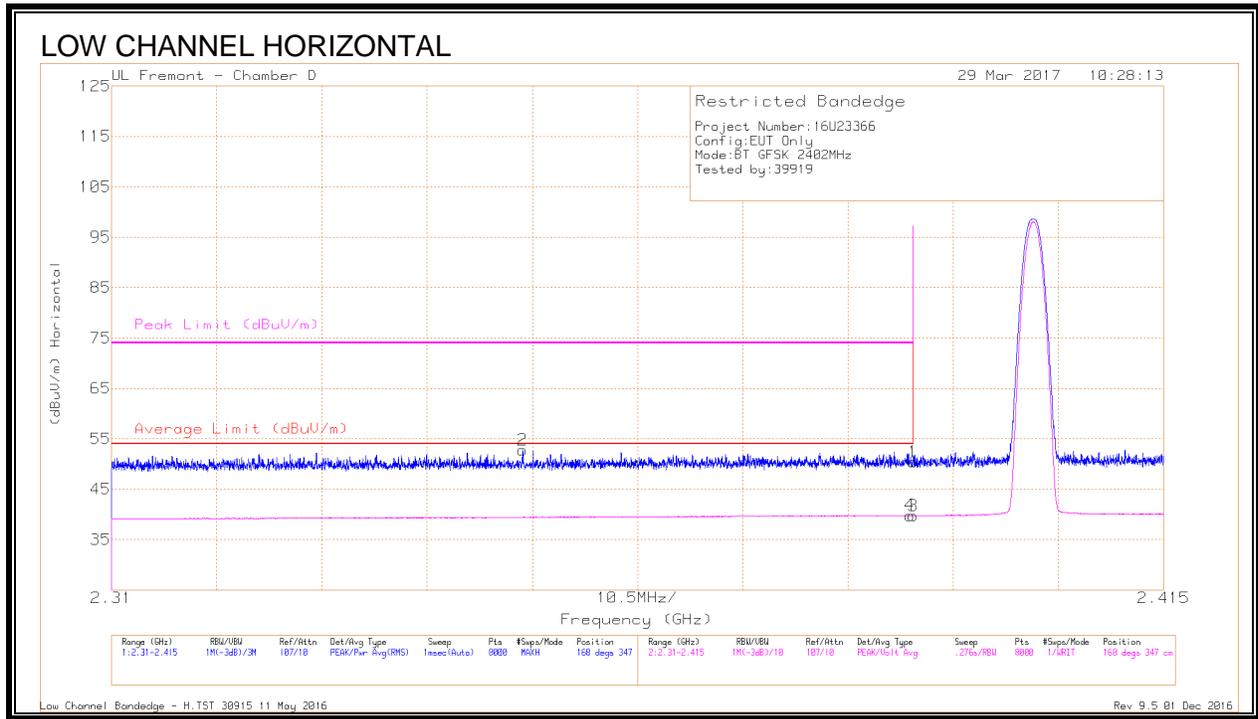
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

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.

#### RESULTS

## 9.2. UAT 1, Pmax BASIC DATA RATE GFSK MODULATION

### 9.2.1. RESTRICTED BANDEGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	39.12	Pk	32	-20.7	50.42	-	-	74	-23.58	168	347	H
2	* 2.351	41.97	Pk	31.7	-20.9	52.77	-	-	74	-21.23	168	347	H
3	* 2.39	28.44	VA1T	32	-20.7	39.74	54	-14.26	-	-	168	347	H
4	* 2.39	28.6	VA1T	32	-20.8	39.8	54	-14.2	-	-	168	347	H

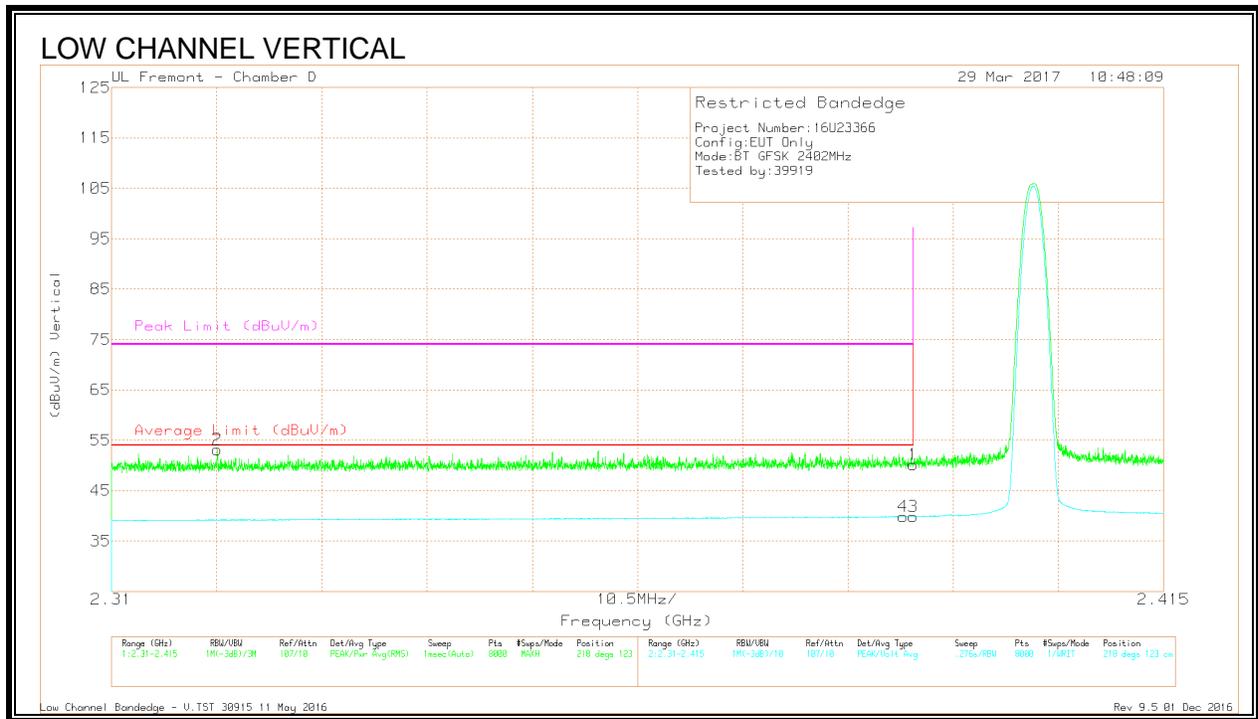
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

Low Channel Bandedge - H.TST 30915 11 May 2016

Rev 9.5 01 Dec 2016



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	38.87	Pk	32	-20.7	50.17	-	-	74	-23.83	218	123	V
2	* 2.321	42.5	Pk	31.5	-20.9	53.1	-	-	74	-20.9	218	123	V
3	* 2.39	28.59	VA1T	32	-20.7	39.89	54	-14.11	-	-	218	123	V
4	* 2.389	28.7	VA1T	32	-20.8	39.9	54	-14.1	-	-	218	123	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

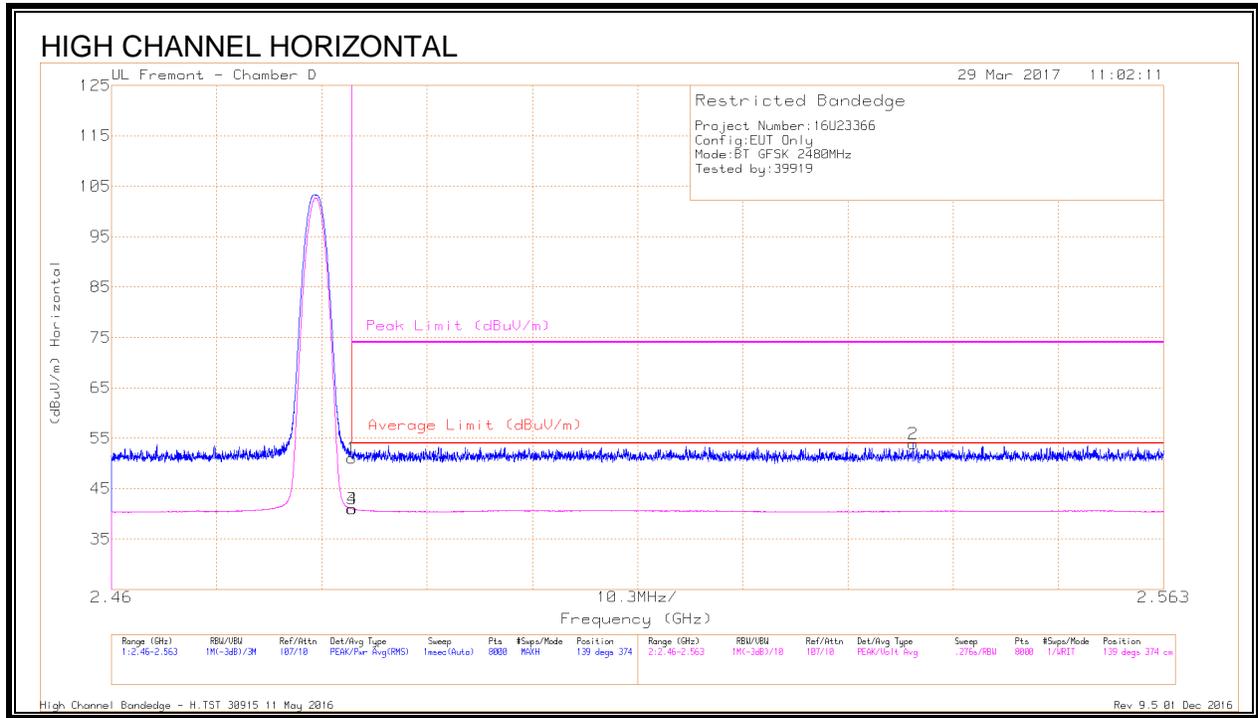
Pk - Peak detector

VA1T - FHSS: Linear Voltage Average  $V_B=1/T_{on}$  where:  $T_{on}$  is transmit duration

Low Channel Bandedge - V.TST 30915 11 May 2016

Rev 9.5 01 Dec 2016

**9.2.2. AUTHORIZED BANDEGE (HIGH CHANNEL)**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.38	Pk	32.5	-20.8	51.08	-	-	74	-22.92	139	374	H
3	* 2.484	29.29	VA1T	32.5	-20.8	40.99	54	-13.01	-	-	139	374	H
4	* 2.484	29.26	VA1T	32.5	-20.8	40.96	54	-13.04	-	-	139	374	H
2	2.538	42.02	Pk	32.5	-20.6	53.92	-	-	74	-20.08	139	374	H

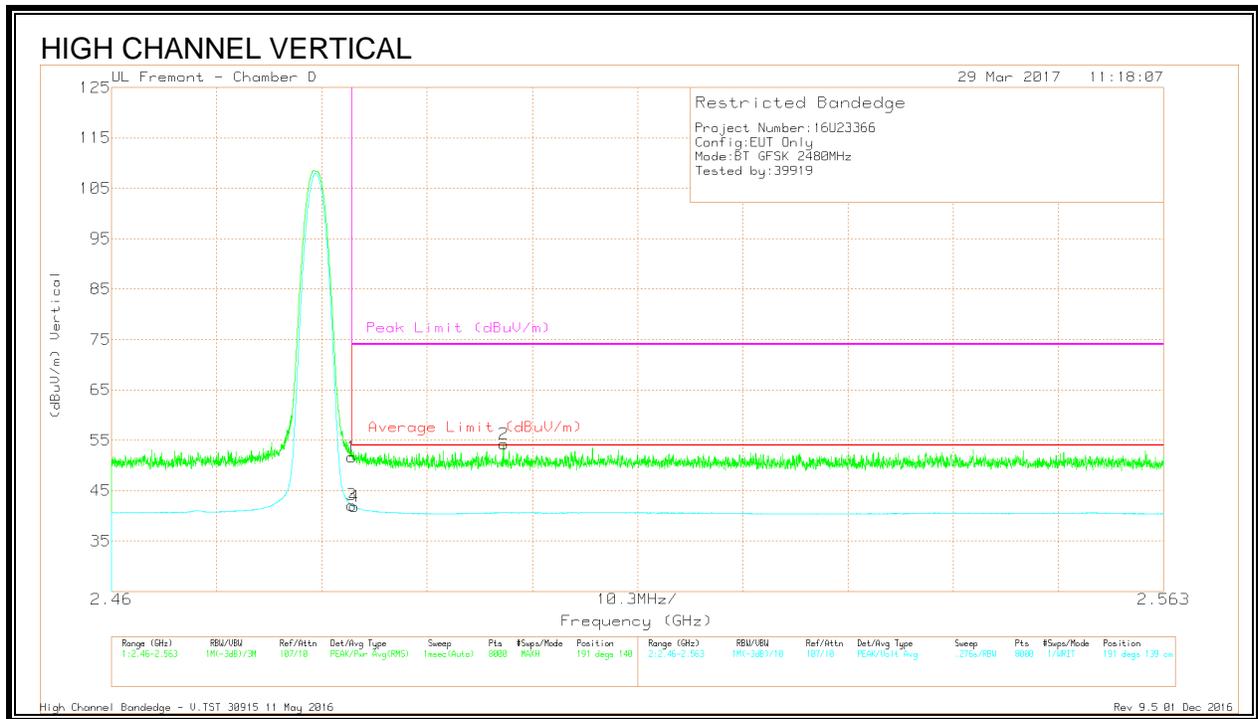
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

High Channel Bandedge - H.TST 30915 11 May 2016

Rev 9.5 01 Dec 2016



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	40.01	Pk	32.5	-20.8	51.71	-	-	74	-22.29	191	140	V
2	* 2.498	42.25	Pk	32.6	-20.6	54.25	-	-	74	-19.75	191	140	V
3	* 2.484	30.46	VA1T	32.5	-20.8	42.16	54	-11.84	-	-	191	139	V
4	* 2.484	30.1	VA1T	32.5	-20.8	41.8	54	-12.2	-	-	191	139	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

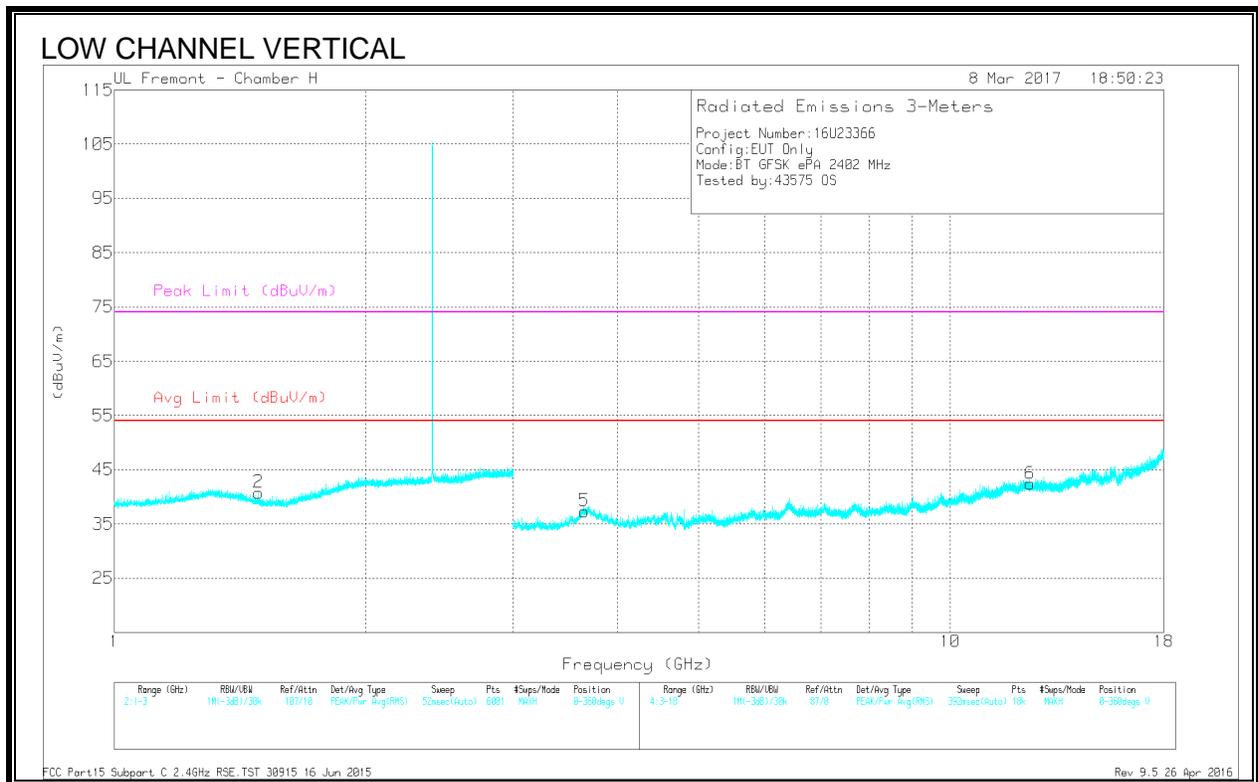
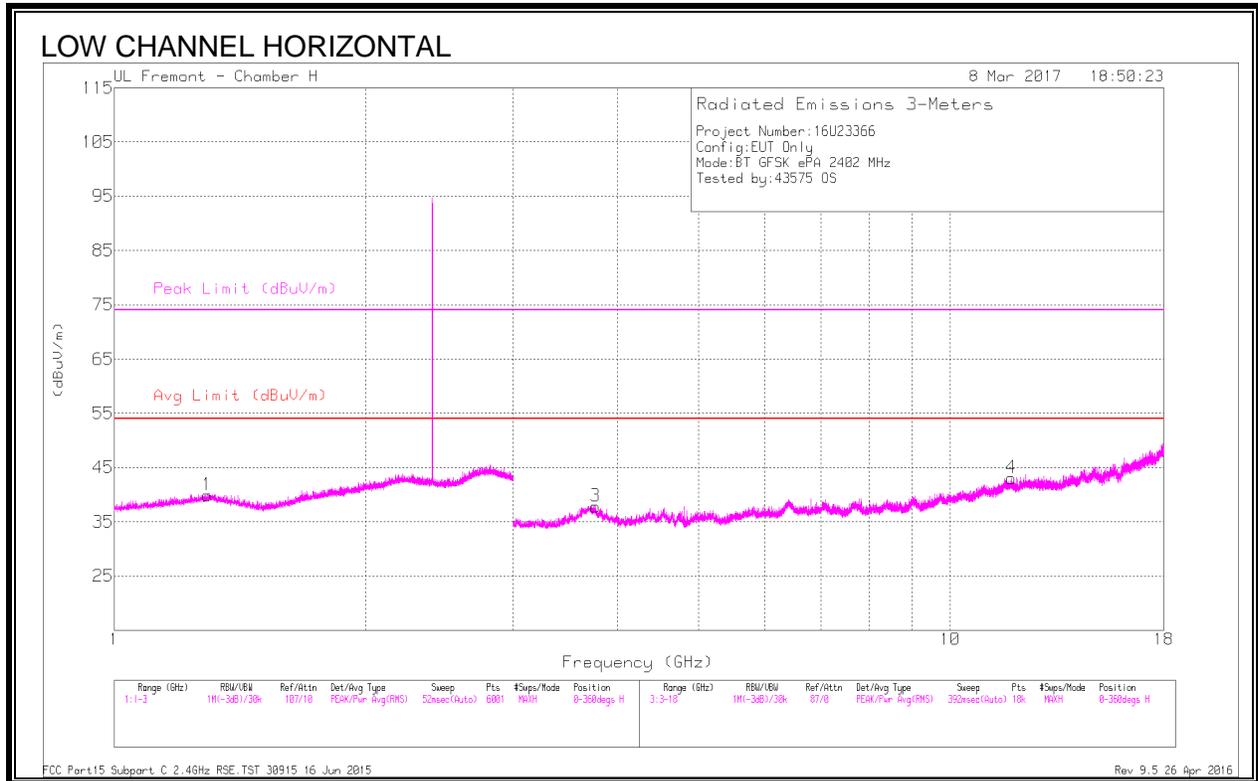
Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

High Channel Bandedge - V.TST 30915 11 May 2016

Rev 9.5 01 Dec 2016

### 9.2.3. HARMONICS AND SPURIOUS EMISSIONS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cb/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	* 1.292	43.49	PKFH	29.7	-27.8	45.39	-	-	74	-28.61	108	285	H
	* 1.292	32.37	VA1T	29.7	-27.8	34.27	54	-19.73	-	-	108	285	H
2	* 1.49	44.1	PKFH	28.1	-27.9	44.3	-	-	74	-29.7	172	268	V
	* 1.49	32.37	VA1T	28.1	-27.9	32.57	54	-21.43	-	-	172	268	V
3	* 3.764	45.17	PKFH	34.4	-35.6	43.97	-	-	74	-30.03	184	121	H
	* 3.761	33.52	VA1T	34.4	-35.5	32.42	54	-21.58	-	-	184	121	H
4	* 11.829	35.67	PKFH	39.1	-26.1	48.67	-	-	74	-25.33	331	288	H
	* 11.828	24.18	VA1T	39.1	-26.1	37.18	54	-16.82	-	-	331	288	H
5	* 3.648	44.72	PKFH	34.9	-35.7	43.92	-	-	74	-30.08	205	202	V
	* 3.65	33.15	VA1T	34.9	-35.8	32.25	54	-21.75	-	-	205	202	V
6	* 12.46	36.71	PKFH	39.4	-26.4	49.71	-	-	74	-24.29	109	391	V
	* 12.458	24.31	VA1T	39.4	-26.4	37.31	54	-16.69	-	-	109	391	V

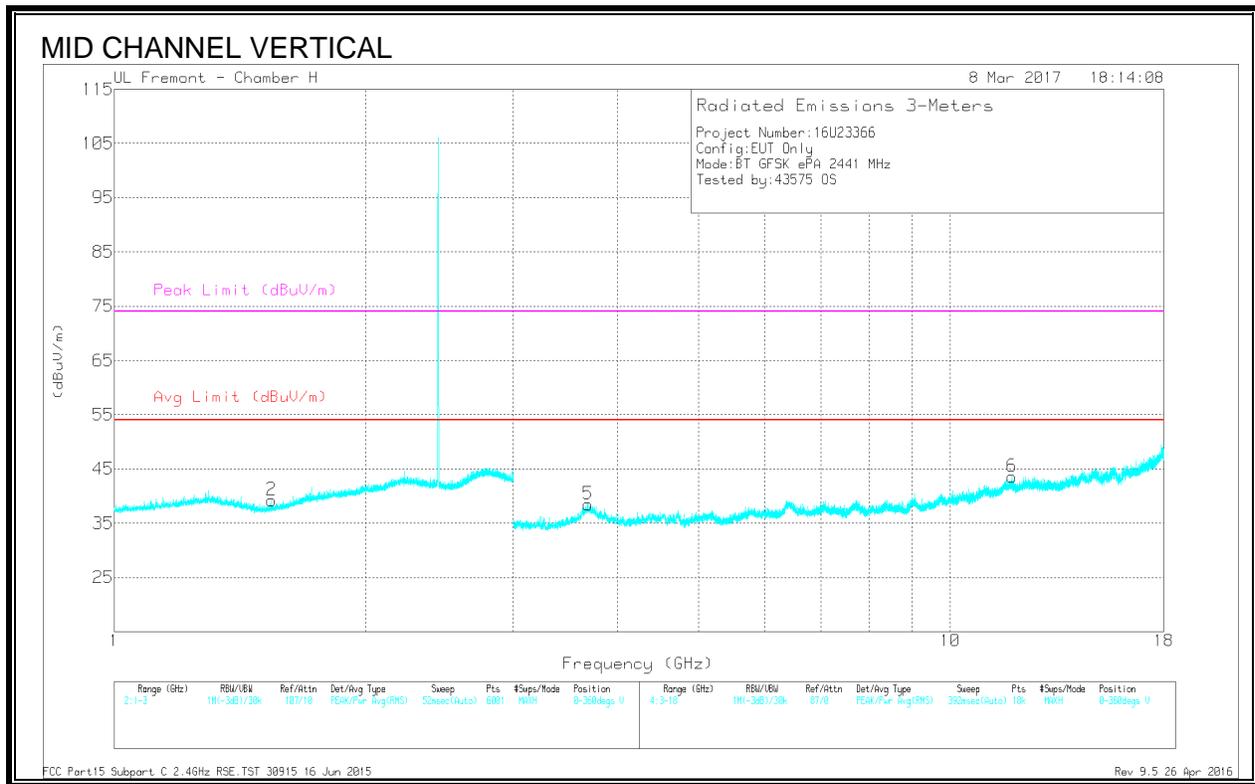
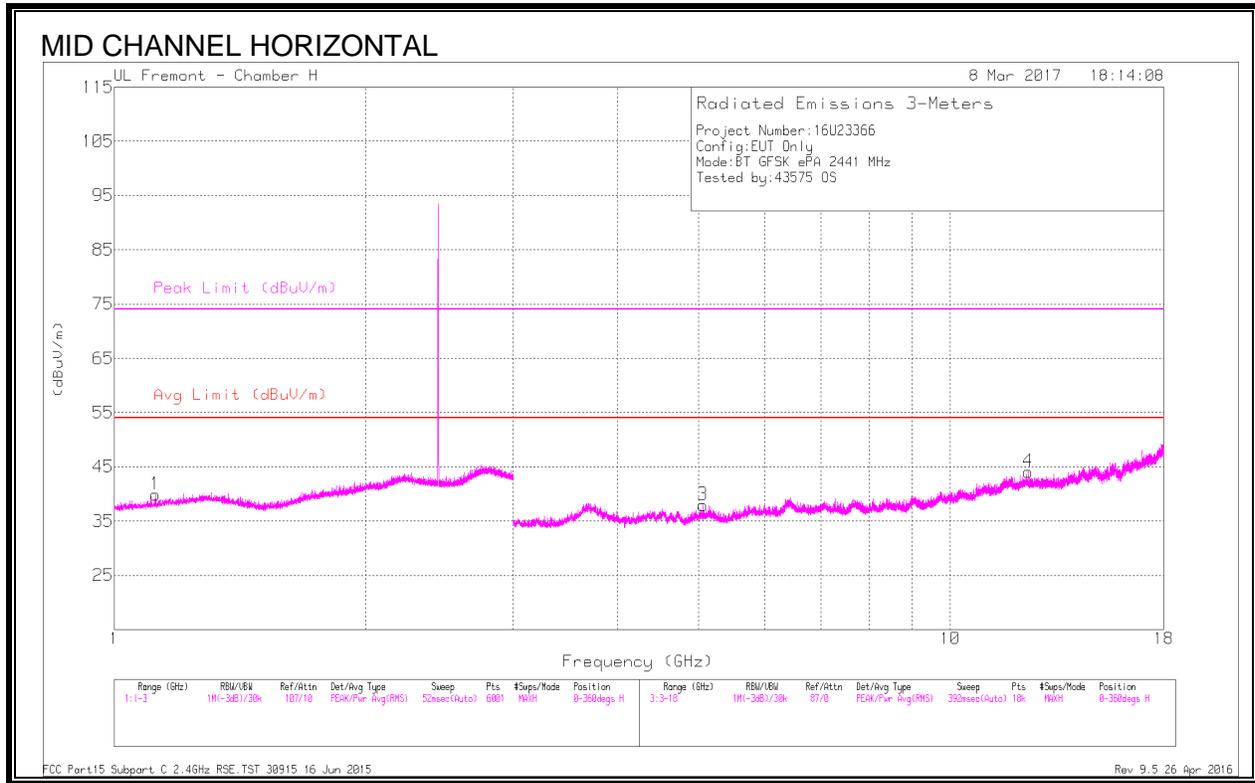
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015

Rev 9.5 26 Apr 2016



Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.122	43.7	PKFH	28.1	-27.4	44.4	-	-	74	-29.6	163	102	H
	* 1.121	32.59	VA1T	28.1	-27.4	33.29	54	-20.71	-	-	163	102	H
2	* 1.545	44.86	PKFH	27.9	-28	44.76	-	-	74	-29.24	352	188	V
	* 1.543	32.86	VA1T	27.9	-28	32.76	54	-21.24	-	-	352	188	V
3	* 5.065	43.41	PKFH	34.1	-34.4	43.11	-	-	74	-30.89	37	248	H
	* 5.063	31.3	VA1T	34.1	-34.5	30.9	54	-23.1	-	-	37	248	H
4	* 12.388	36.07	PKFH	39.3	-26.1	49.27	-	-	74	-24.73	34	145	H
	* 12.386	24.11	VA1T	39.3	-26.1	37.31	54	-16.69	-	-	34	145	H
5	* 3.689	45.26	PKFH	34.9	-36	44.16	-	-	74	-29.84	254	346	V
	* 3.69	33.8	VA1T	34.9	-36	32.7	54	-21.3	-	-	254	346	V
6	* 11.84	35.22	PKFH	39.1	-26	48.32	-	-	74	-25.68	0	125	V
	* 11.841	24.08	VA1T	39.1	-26	37.18	54	-16.82	-	-	0	125	V

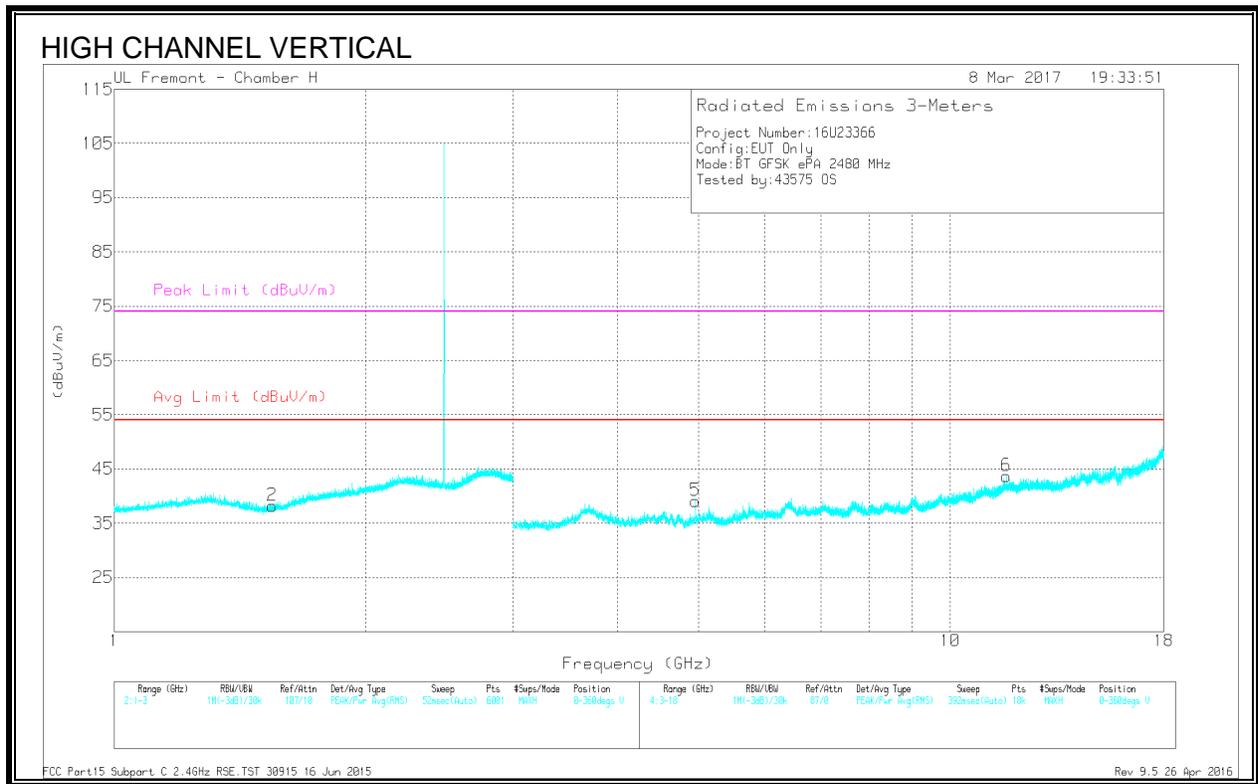
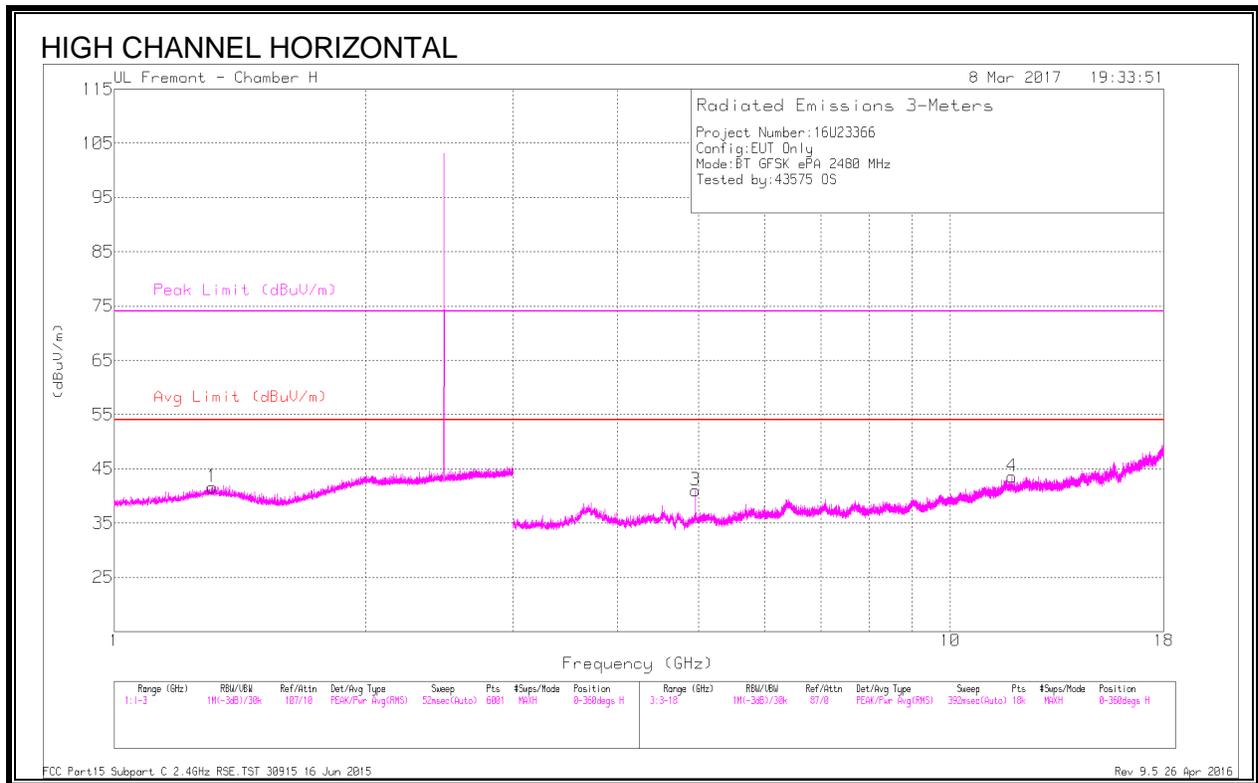
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cb/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	* 1.309	43.65	PKFH	29.7	-27.8	45.55	-	-	74	-28.45	145	139	H
	* 1.31	32.39	VA1T	29.7	-27.8	34.29	54	-19.71	-	-	145	139	H
2	* 1.546	46.06	PKFH	27.9	-28	45.96	-	-	74	-28.04	285	162	V
	* 1.549	34	VA1T	27.9	-28	33.9	54	-20.1	-	-	285	162	V
3	* 4.959	46.02	PKFH	34	-34.3	45.72	-	-	74	-28.28	330	111	H
	* 4.959	38.55	VA1T	34	-34.3	38.25	54	-15.75	-	-	330	111	H
4	* 11.846	36.27	PKFH	39.1	-26.1	49.27	-	-	74	-24.73	269	362	H
	* 11.845	24.29	VA1T	39.1	-26	37.39	54	-16.61	-	-	269	362	H
5	* 4.959	44.42	PKFH	34	-34.3	44.12	-	-	74	-29.88	275	102	V
	* 4.959	35.1	VA1T	34	-34.3	34.8	54	-19.2	-	-	275	102	V
6	* 11.676	36.02	PKFH	39	-26.2	48.82	-	-	74	-25.18	259	268	V
	* 11.675	24.33	VA1T	39	-26.2	37.13	54	-16.87	-	-	259	268	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

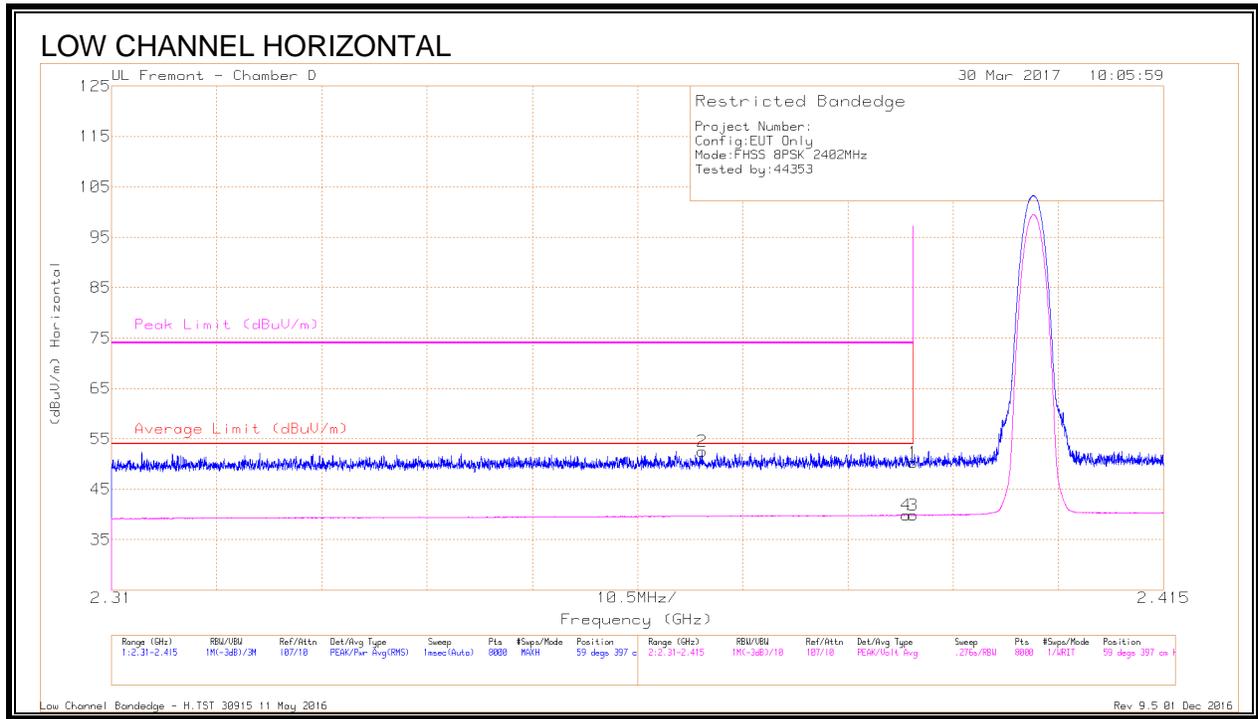
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15 Subpart C 2.4GHz RSE.TST 30915 16 Jun 2015

Rev 9.5 26 Apr 2016

### 9.3. UAT 1, Pmax ENHANCED DATA RATE 8PSK MODULATION

#### 9.3.1. RESTRICTED BANDEDGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	38.97	Pk	32	-20.7	50.27	-	-	74	-23.73	59	397	H
2	* 2.369	41.44	Pk	31.9	-20.8	52.54	-	-	74	-21.46	59	397	H
3	* 2.39	28.53	VA1T	32	-20.7	39.83	54	-14.17	-	-	59	397	H
4	* 2.389	28.66	VA1T	32	-20.8	39.86	54	-14.14	-	-	59	397	H

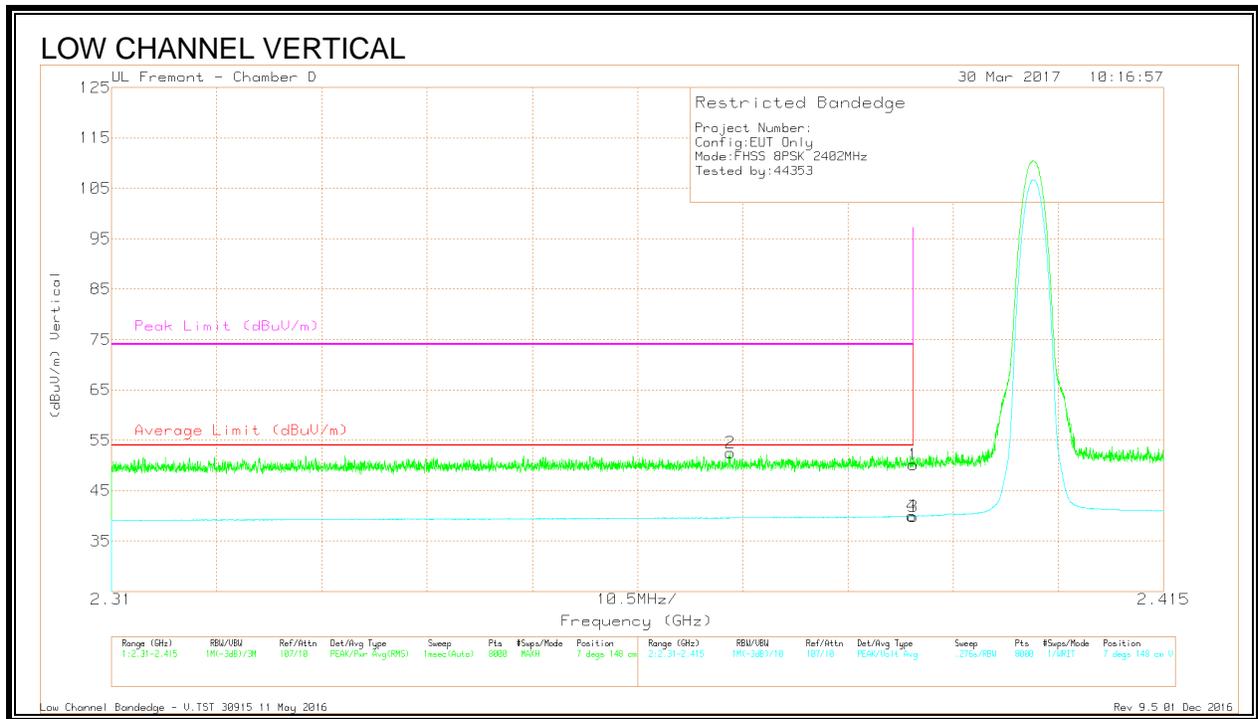
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

Low Channel Bandedge - H.TST 30915 11 May 2016

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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	38.83	Pk	32	-20.7	50.13	-	-	74	-23.87	7	148	V
2	* 2.372	41.44	Pk	31.9	-20.8	52.54	-	-	74	-21.46	7	148	V
3	* 2.39	28.61	VA1T	32	-20.7	39.91	54	-14.09	-	-	7	148	V
4	* 2.39	28.65	VA1T	32	-20.7	39.95	54	-14.05	-	-	7	148	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

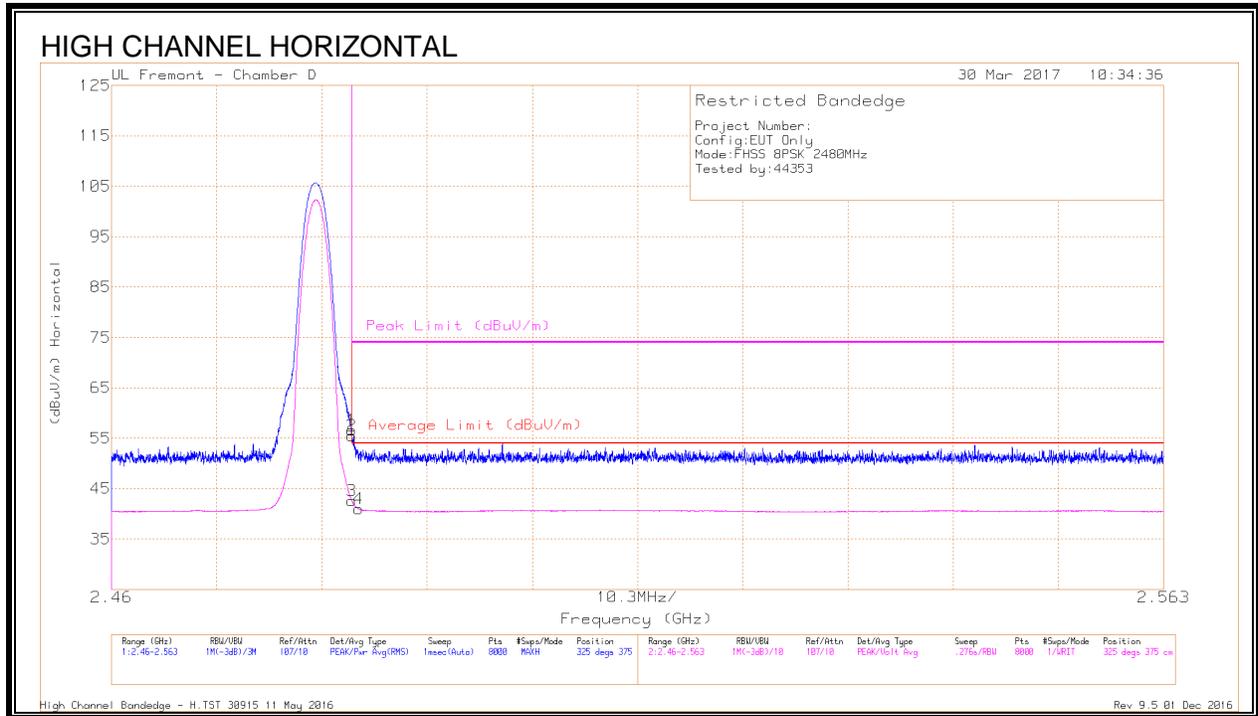
Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

Low Channel Bandedge - V.TST 30915 11 May 2016

Rev 9.5 01 Dec 2016

**9.3.2. AUTHORIZED BANDEDGE (HIGH CHANNEL)**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	44.93	Pk	32.5	-20.8	56.63	-	-	74	-17.37	325	375	H
2	* 2.484	43.81	Pk	32.5	-20.8	55.51	-	-	74	-18.49	325	375	H
3	* 2.484	30.95	VA1T	32.5	-20.8	42.65	54	-11.35	-	-	325	375	H
4	* 2.484	29.3	VA1T	32.5	-20.8	41	54	-13	-	-	325	375	H

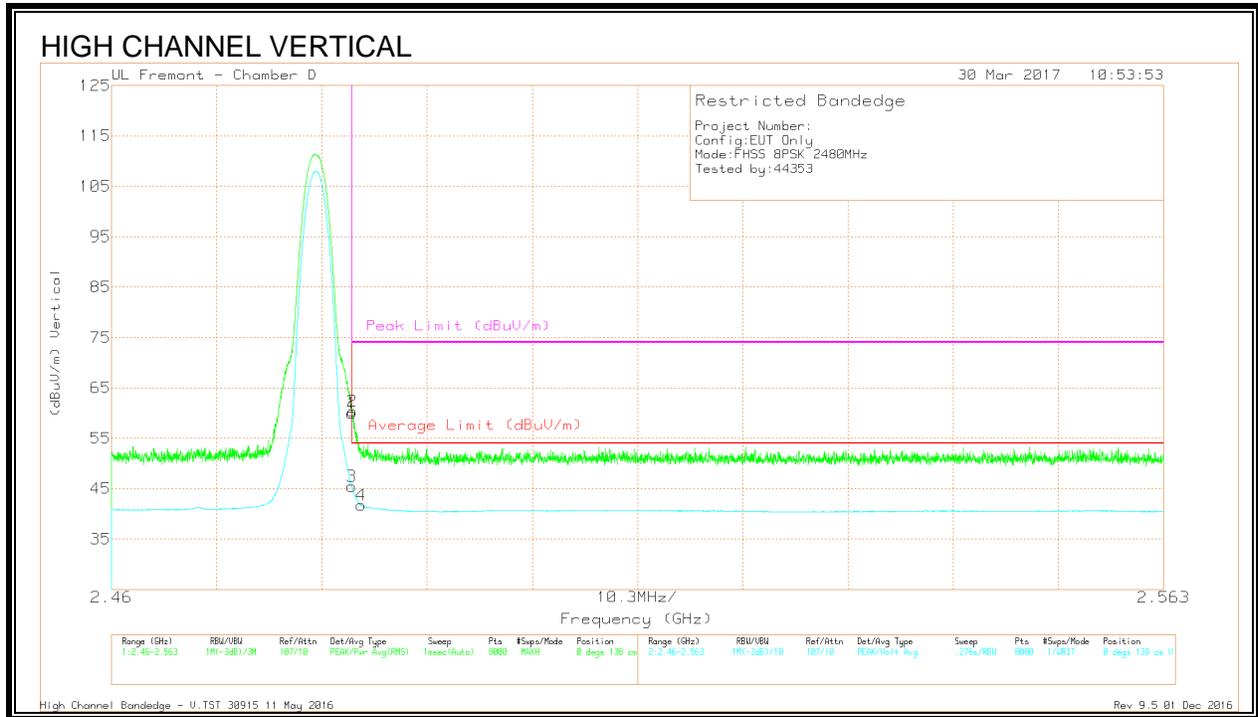
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	48.26	Pk	32.5	-20.8	59.96	-	-	74	-14.04	0	138	V
2	* 2.484	48.69	Pk	32.5	-20.8	60.39	-	-	74	-13.61	0	138	V
3	* 2.484	33.78	VA1T	32.5	-20.8	45.48	54	-8.52	-	-	0	138	V
4	* 2.484	30.02	VA1T	32.5	-20.8	41.72	54	-12.28	-	-	0	138	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

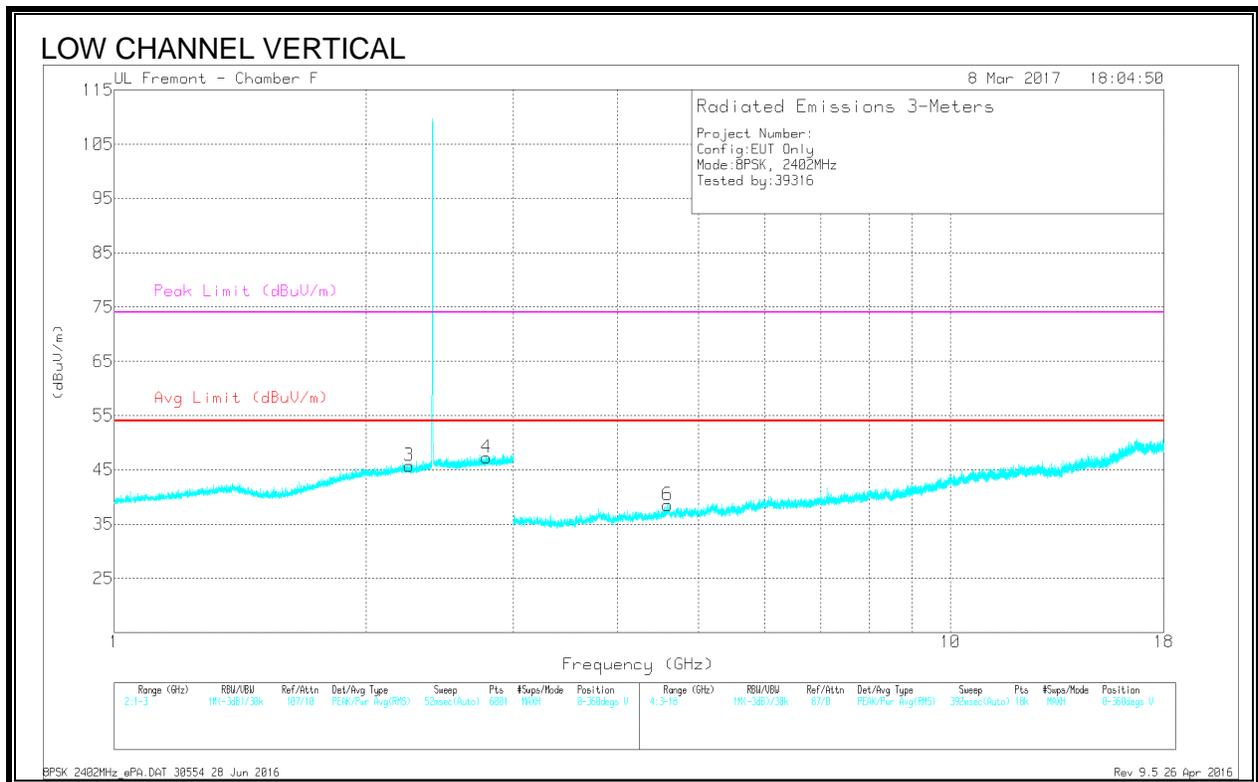
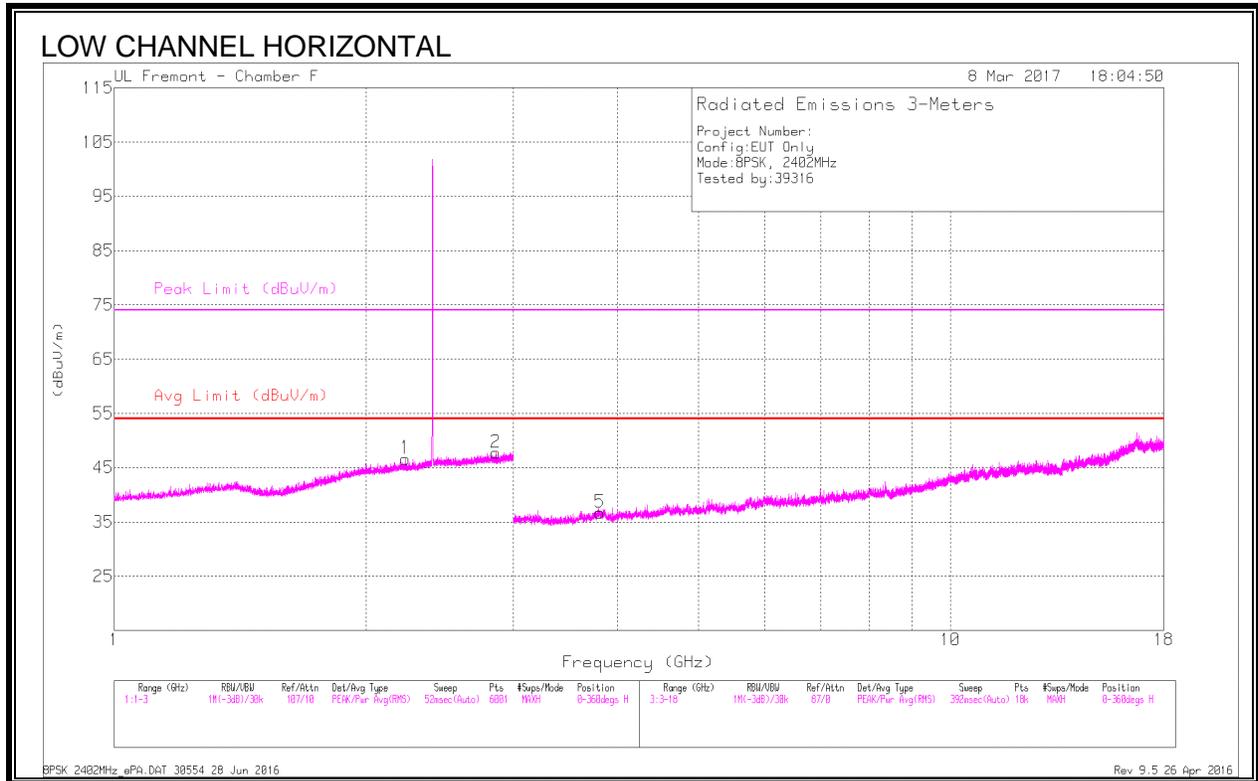
Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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### 9.3.3. HARMONICS AND SPURIOUS EMISSIONS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.229	40.27	PKFH	31.8	-21.1	50.97	-	-	74	-23.03	154	107	H
	* 2.23	29.14	VA1T	31.8	-21	39.94	54	-14.06	-	-	154	107	H
2	* 2.861	40.36	PKFH	32.6	-20.4	52.56	-	-	74	-21.44	206	181	H
	* 2.864	28.99	VA1T	32.6	-20.5	41.09	54	-12.91	-	-	206	181	H
3	* 2.254	40.6	PKFH	31.8	-21	51.4	-	-	74	-22.6	8	397	V
	* 2.254	29.14	VA1T	31.8	-21	39.94	54	-14.06	-	-	8	397	V
4	* 2.788	39.69	PKFH	32.5	-20.5	51.69	-	-	74	-22.31	283	214	V
	* 2.789	29.17	VA1T	32.5	-20.5	41.17	54	-12.83	-	-	283	214	V
5	* 3.814	38.69	PKFH	33.4	-28.3	43.79	-	-	74	-30.21	219	238	H
	* 3.814	26.72	VA1T	33.4	-28.3	31.82	54	-22.18	-	-	219	238	H
6	* 4.589	37.81	PKFH	34.1	-27.7	44.21	-	-	74	-29.79	189	177	V
	* 4.591	26.55	VA1T	34.1	-27.7	32.95	54	-21.05	-	-	189	177	V

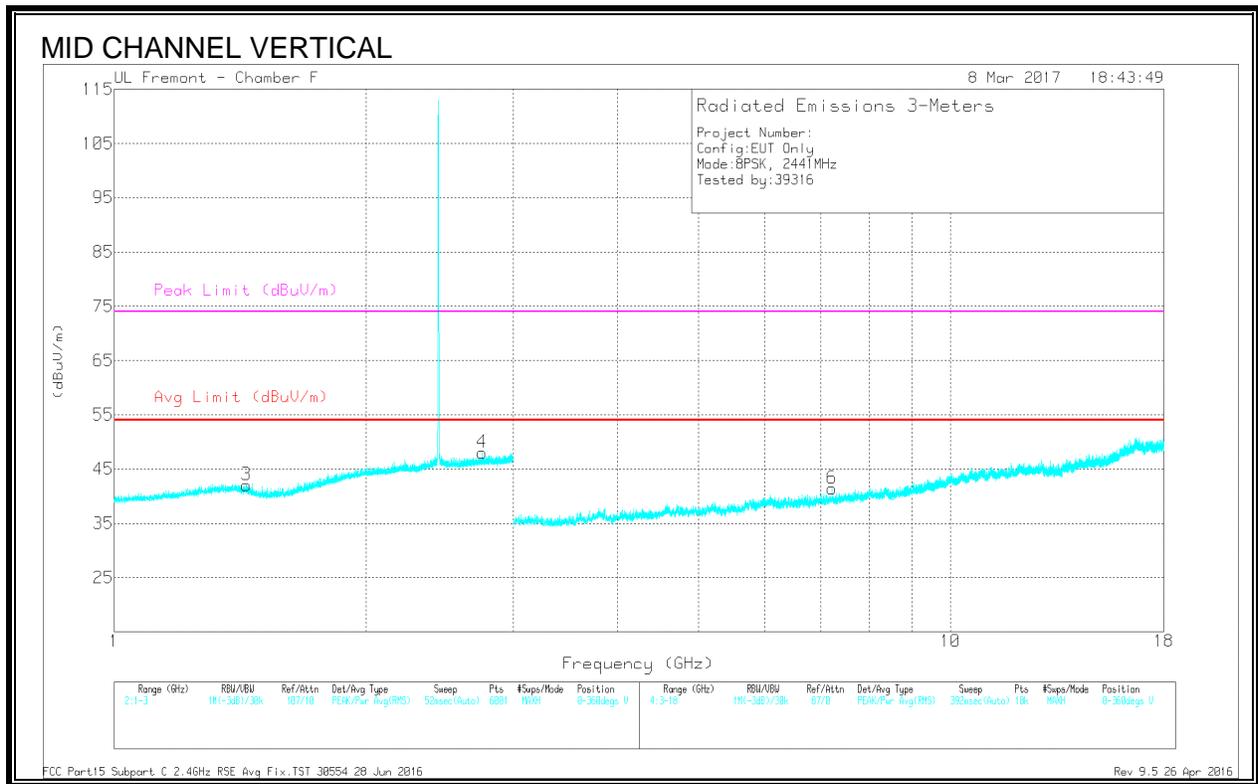
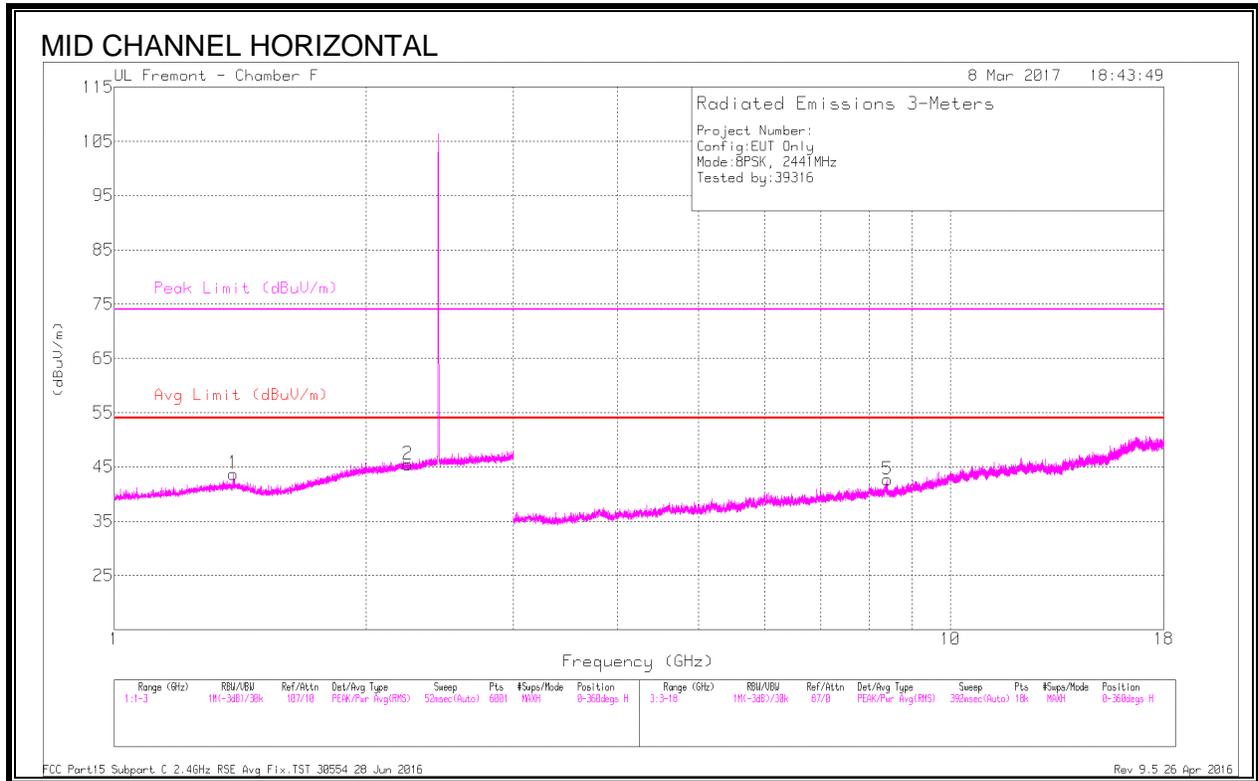
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/ Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.388	40.11	PKFH	29.3	-22.1	47.31	-	-	74	-26.69	42	101	H
	1.388	29.33	VA1T	29.3	-22.1	36.53	54	-17.47	-	-	42	101	H
2	* 2.243	40.51	PKFH	31.8	-20.9	51.41	-	-	74	-22.59	141	287	H
	2.244	29.14	VA1T	31.8	-20.9	40.04	54	-13.96	-	-	141	287	H
3	* 1.437	40.52	PKFH	28.8	-22.1	47.22	-	-	74	-26.78	181	132	V
	1.44	29.31	VA1T	28.8	-22	36.11	54	-17.89	-	-	181	132	V
4	* 2.753	41.45	PKFH	32.5	-20.6	53.35	-	-	74	-20.65	360	237	V
	2.752	29.19	VA1T	32.5	-20.6	41.09	54	-12.91	-	-	360	237	V
5	* 8.409	34.68	PKFH	35.7	-23.4	46.98	-	-	74	-27.02	317	256	H
	8.407	23.67	VA1T	35.7	-23.5	35.87	54	-18.13	-	-	317	256	H
6	7.221	36.4	PKFH	35.6	-25.9	46.1	-	-	-	-	298	211	V
	7.221	25.26	VA1T	35.6	-25.9	34.96	-	-	-	-	298	211	V

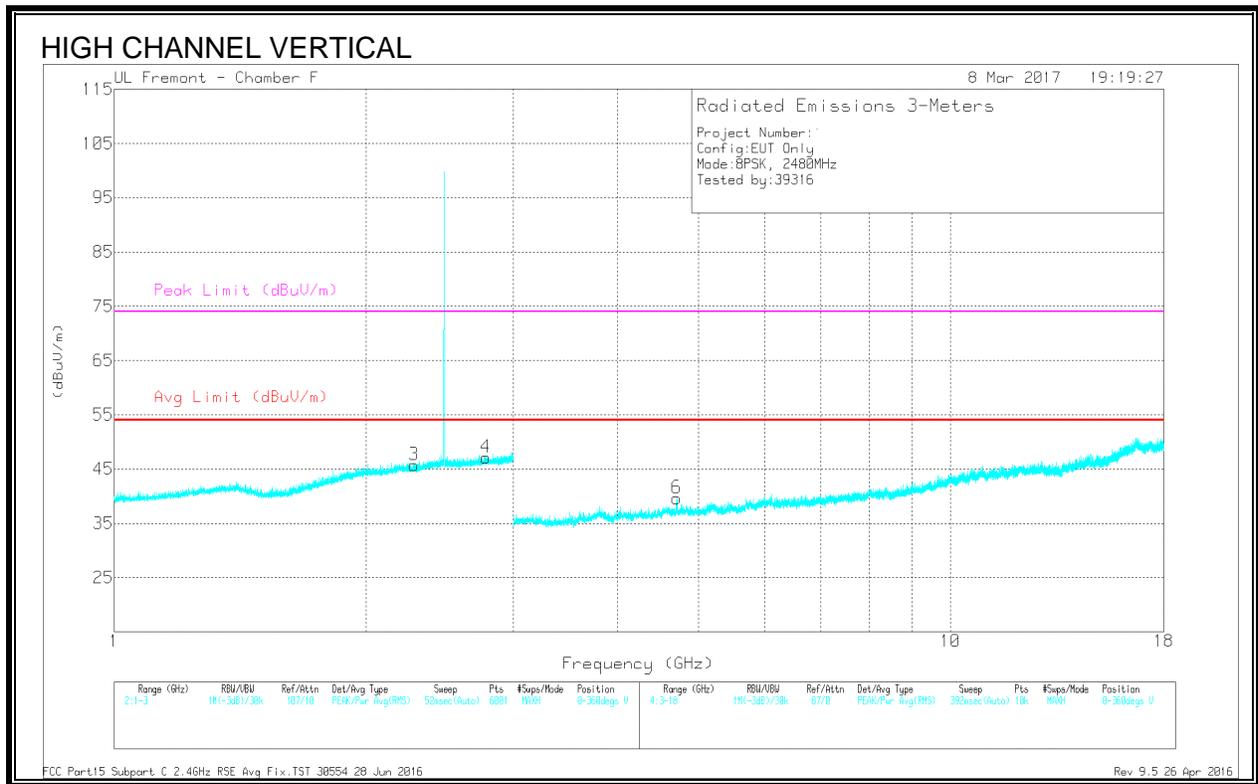
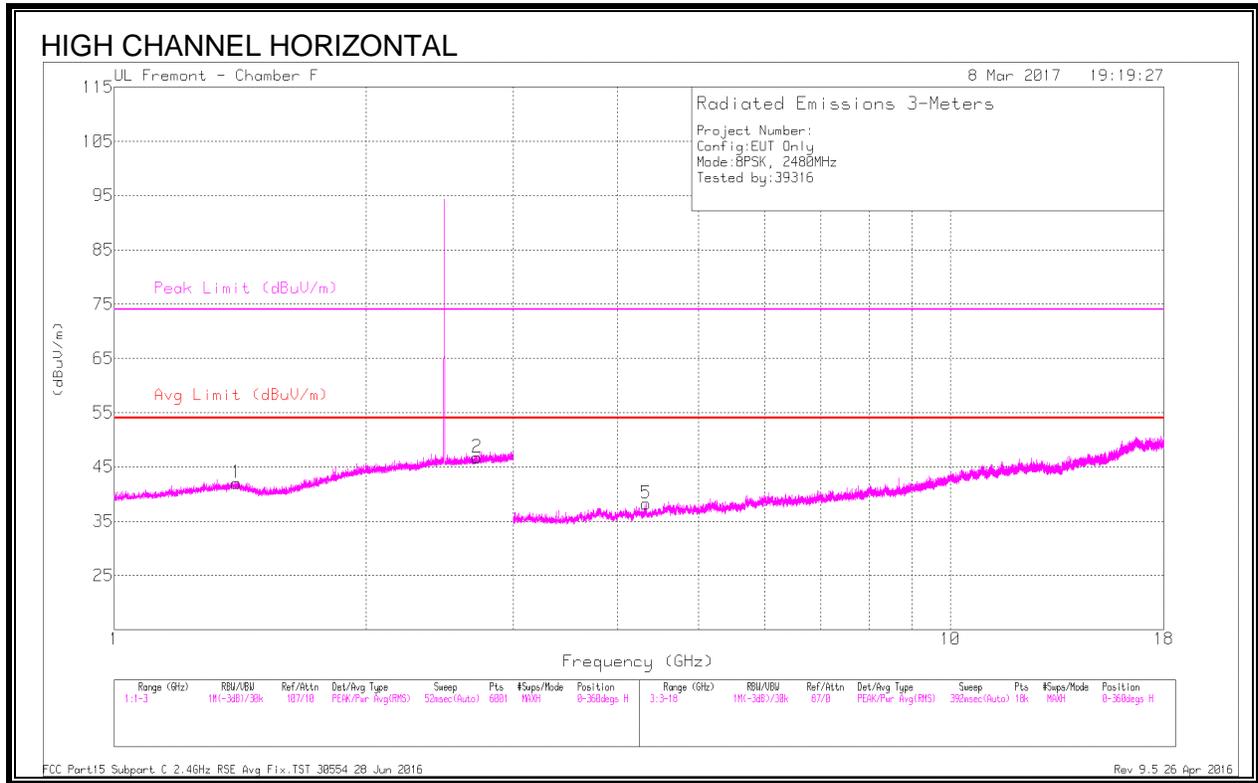
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15 Subpart C 2.4GHz RSE Avg Fix.TST 30554 28 Jun 2016

Rev 9.5 26 Apr 2016



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T344 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.4	40.46	PKFH	29.3	-22	47.76	-	-	74	-26.24	92	113	H
	* 1.398	29.34	VA1T	29.3	-22	36.64	54	-17.36	-	-	92	113	H
2	* 2.717	40.87	PKFH	32.4	-20.7	52.57	-	-	74	-21.43	349	186	H
	* 2.716	29.21	VA1T	32.4	-20.7	40.91	54	-13.09	-	-	349	186	H
3	* 2.284	40.79	PKFH	31.7	-21	51.49	-	-	74	-22.51	340	376	V
	* 2.284	29.22	VA1T	31.7	-21	39.92	54	-14.08	-	-	340	376	V
4	* 2.781	40.96	PKFH	32.5	-20.5	52.96	-	-	74	-21.04	87	397	V
	* 2.782	29.16	VA1T	32.5	-20.5	41.16	54	-12.84	-	-	87	397	V
5	* 4.323	37.84	PKFH	33.8	-28.7	42.94	-	-	74	-31.06	119	361	H
	* 4.326	26.69	VA1T	33.8	-28.6	31.89	54	-22.11	-	-	119	361	H
6	* 4.709	38.71	PKFH	34.2	-28.6	44.31	-	-	74	-29.69	211	310	V
	* 4.71	27.66	VA1T	34.2	-28.6	33.26	54	-20.74	-	-	211	310	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

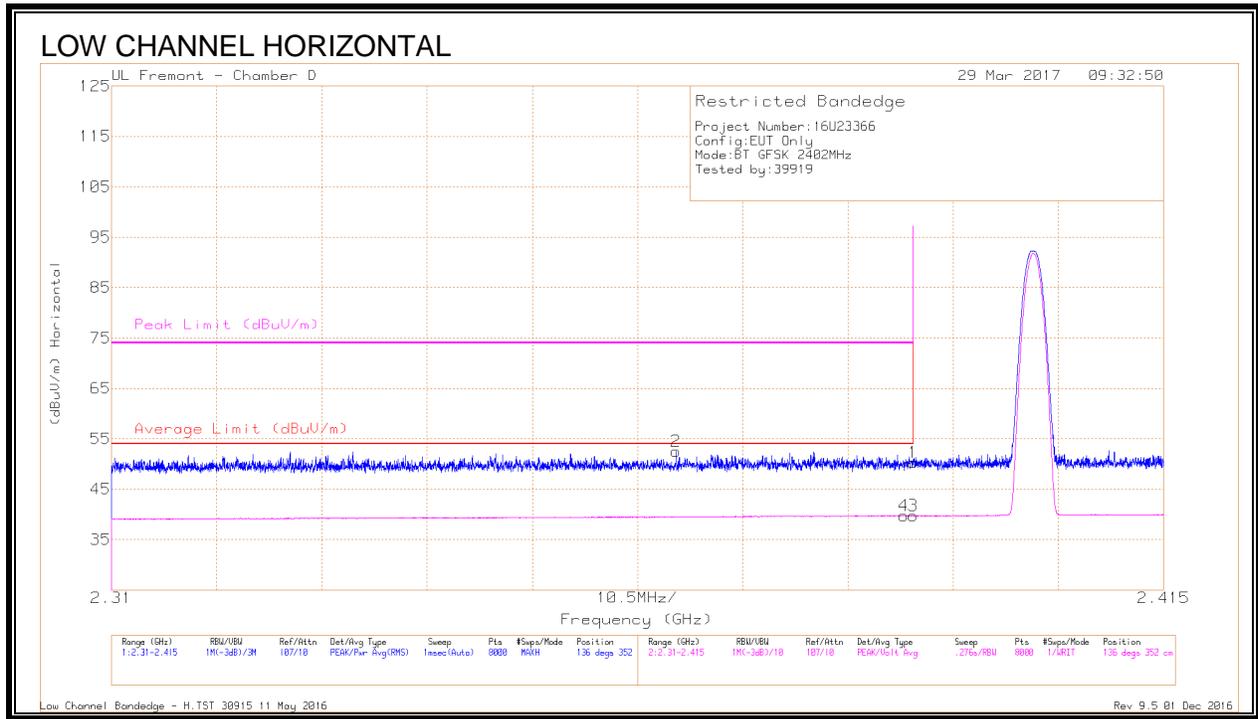
VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

FCC Part15 Subpart C 2.4GHz RSE Avg Fix.TST 30554 28 Jun 2016

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### 9.4. UAT 1, Plow BASIC DATA RATE GFSK MODULATION

#### 9.4.1. RESTRICTED BANDEGE (LOW CHANNEL)



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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	38.99	Pk	32	-20.7	50.29	-	-	74	-23.71	136	352	H
2	* 2.366	41.58	Pk	31.8	-20.8	52.58	-	-	74	-21.42	136	352	H
3	* 2.39	28.43	VA1T	32	-20.7	39.73	54	-14.27	-	-	136	352	H
4	* 2.389	28.57	VA1T	32	-20.8	39.77	54	-14.23	-	-	136	352	H

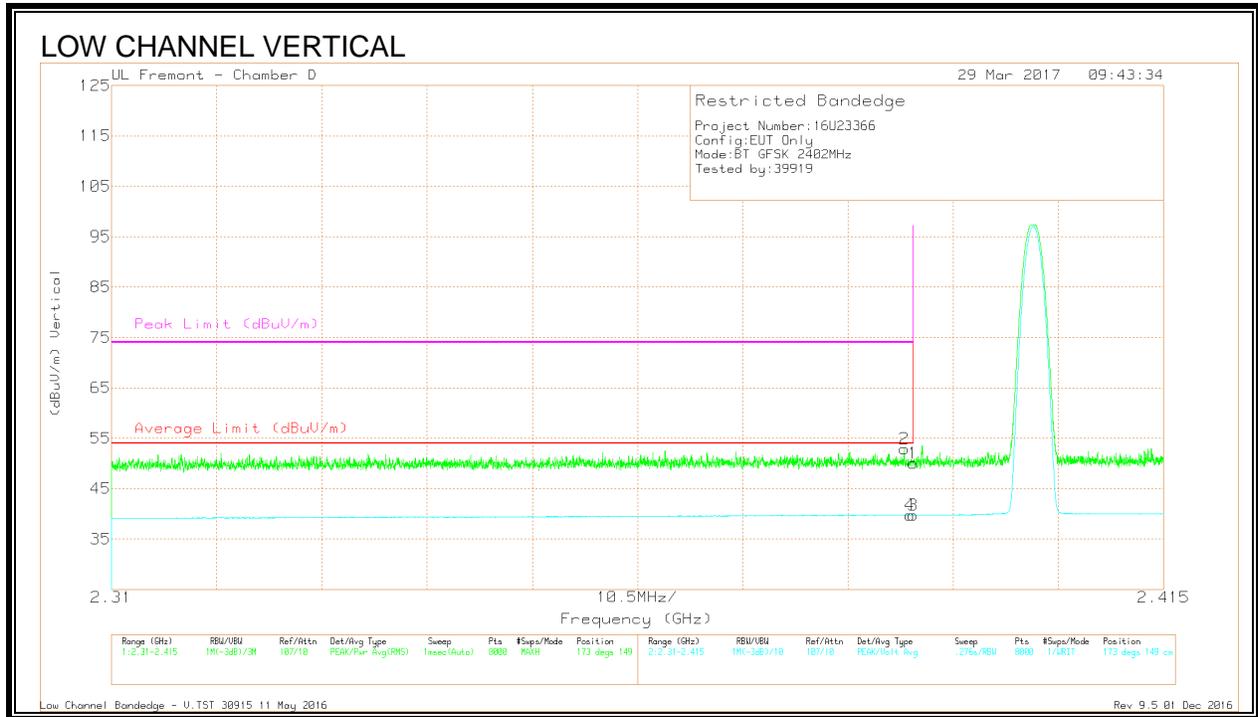
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

Low Channel Bandedge - H.TST 30915 11 May 2016

Rev 9.5 01 Dec 2016



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	38.73	Pk	32	-20.7	50.03	-	-	74	-23.97	173	149	V
2	* 2.389	41.67	Pk	32	-20.8	52.87	-	-	74	-21.13	173	149	V
3	* 2.39	28.45	VA1T	32	-20.7	39.75	54	-14.25	-	-	173	149	V
4	* 2.39	28.58	VA1T	32	-20.8	39.78	54	-14.22	-	-	173	149	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

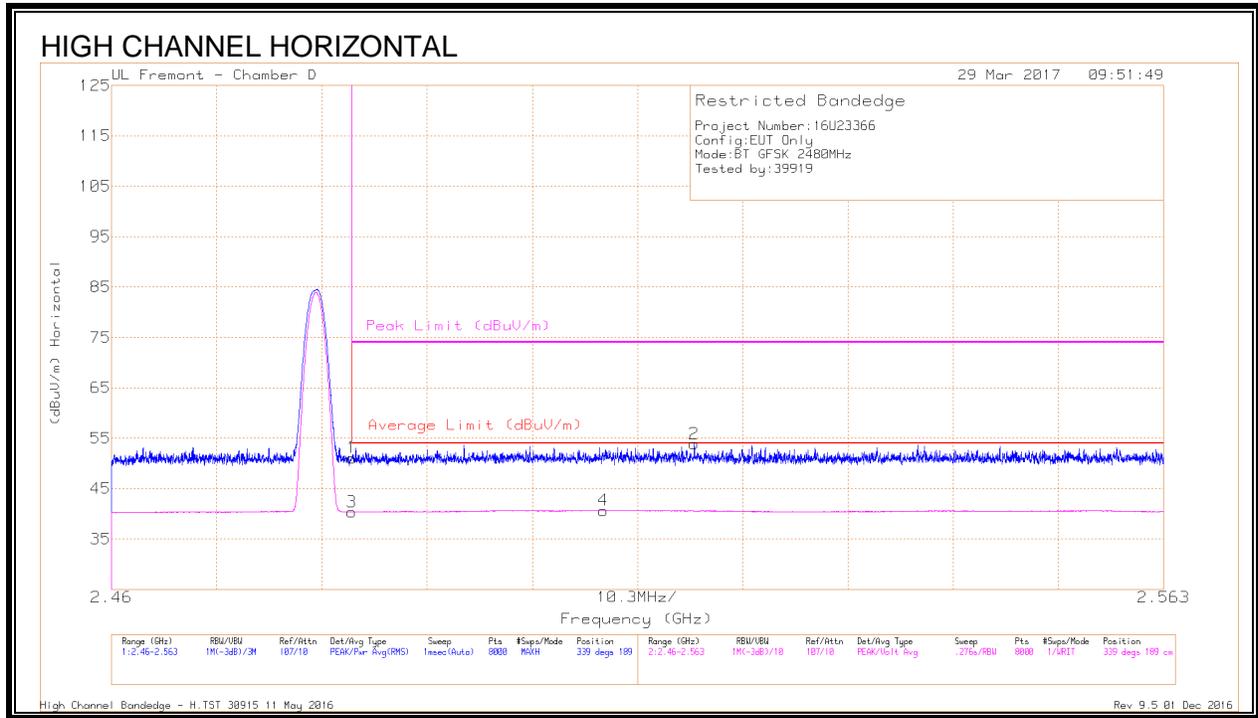
Pk - Peak detector

VA1T - FHSS: Linear Voltage Average  $VB=1/T_{on}$  where:  $T_{on}$  is transmit duration

Low Channel Bandedge - V.TST 30915 11 May 2016

Rev 9.5 01 Dec 2016

**9.4.2. AUTHORIZED BANDEGE (HIGH CHANNEL)**



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/C bl/Filtr/ Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.4	Pk	32.5	-20.8	51.1	-	-	74	-22.9	339	189	H
3	* 2.484	28.66	VA1T	32.5	-20.8	40.36	54	-13.64	-	-	339	189	H
4	2.508	28.67	VA1T	32.6	-20.6	40.67	54	-13.33	-	-	339	189	H
2	2.517	41.89	Pk	32.6	-20.6	53.89	-	-	74	-20.11	339	189	H

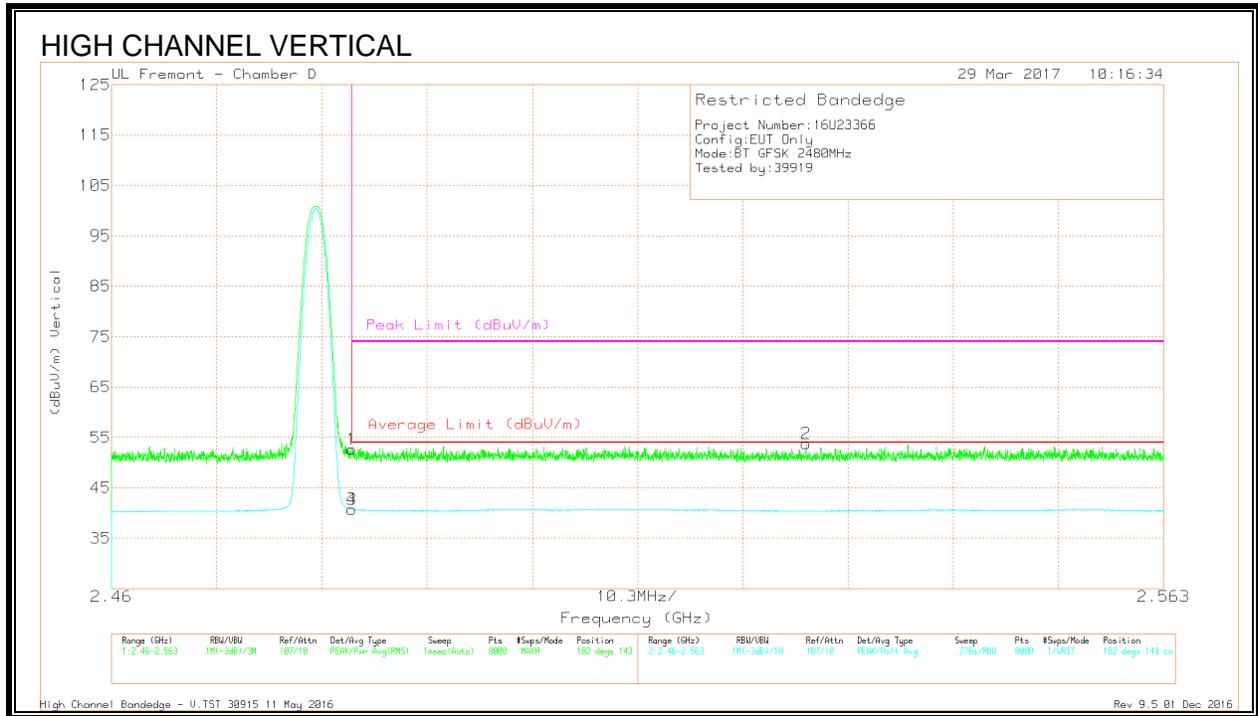
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

High Channel Bandedge - H.TST 30915 11 May 2016

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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (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)	Polarization
1	* 2.484	40.93	Pk	32.5	-20.8	52.63	-	-	74	-21.37	182	143	V
3	* 2.484	29.07	VA1T	32.5	-20.8	40.77	54	-13.23	-	-	182	143	V
4	* 2.484	29.07	VA1T	32.5	-20.8	40.77	54	-13.23	-	-	182	143	V
2	2.528	41.83	Pk	32.6	-20.7	53.73	-	-	74	-20.27	182	143	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

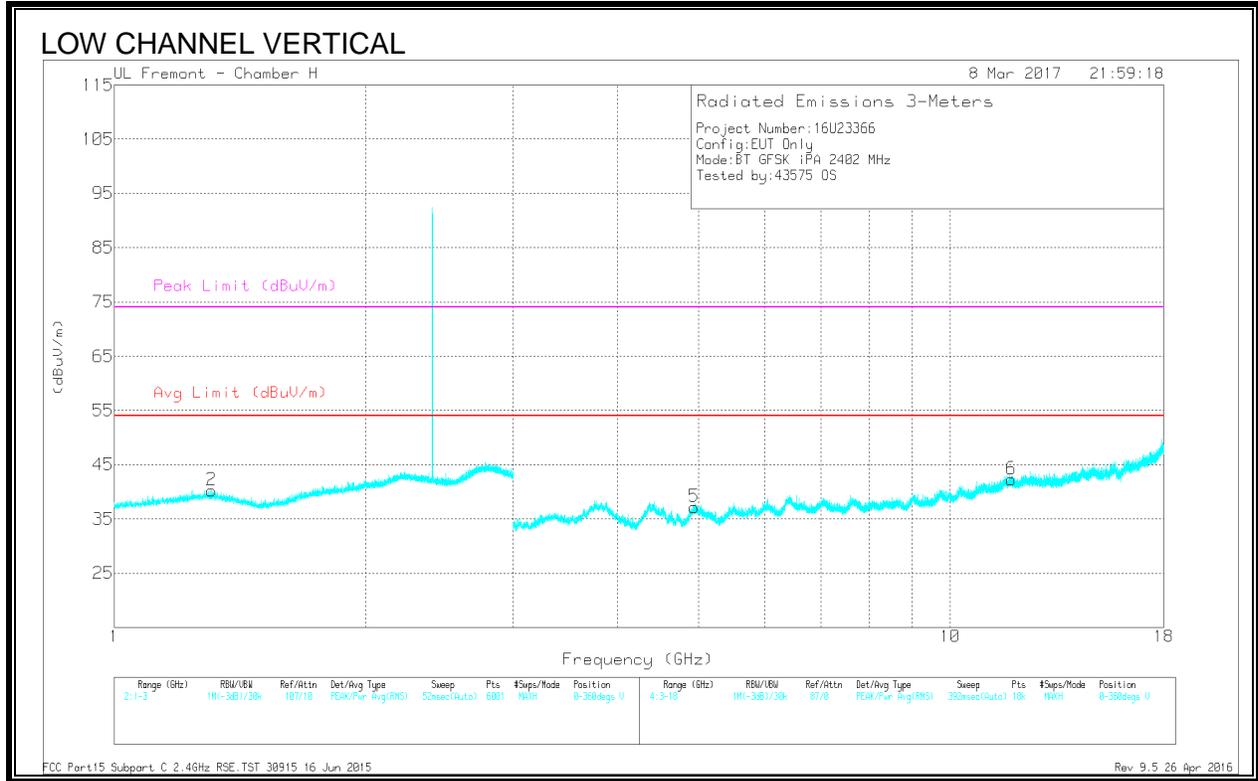
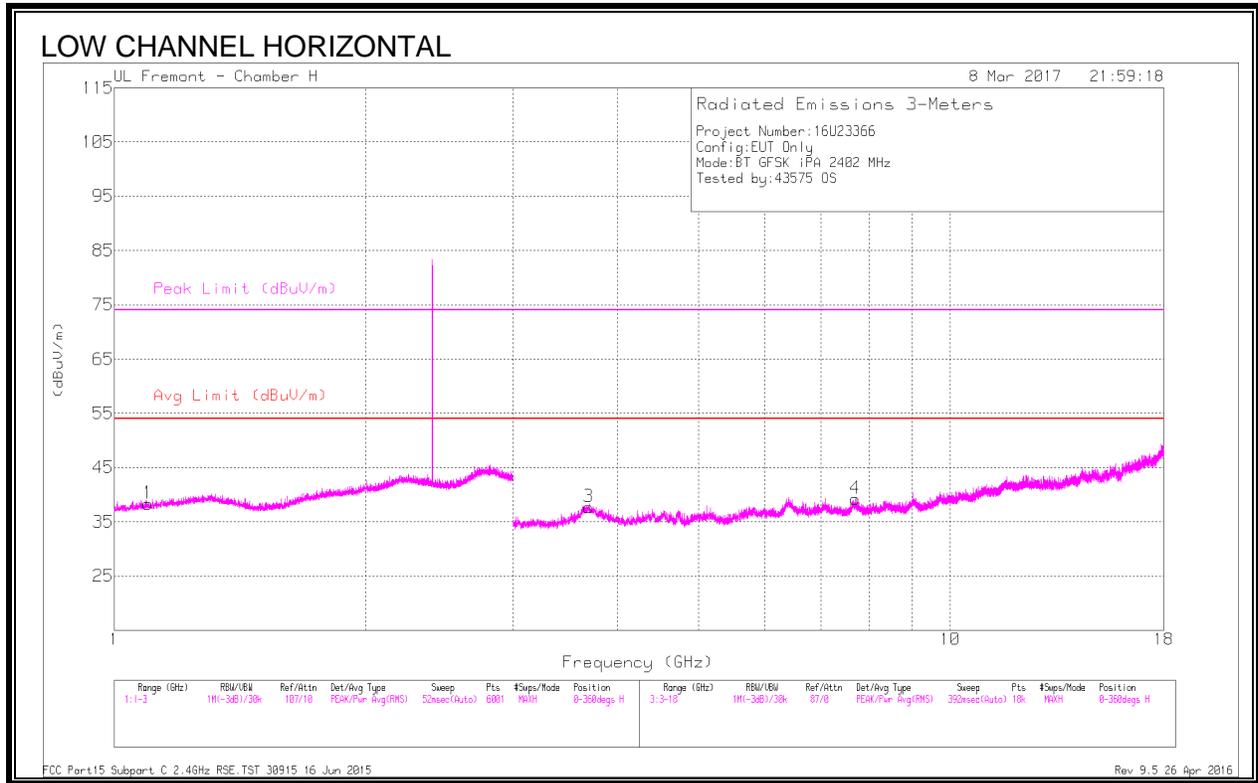
Pk - Peak detector

VA1T - FHSS: Linear Voltage Average  $V_B=1/T_{on}$  where:  $T_{on}$  is transmit duration

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### 9.4.3. HARMONICS AND SPURIOUS EMISSIONS



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cb/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	* 1.097	43.77	PKFH	27.9	-27.3	44.37	-	-	74	-29.63	67	241	H
	* 1.099	32.49	VA1T	27.9	-27.3	33.09	54	-20.91	-	-	67	241	H
2	* 1.309	43.43	PKFH	29.7	-27.8	45.33	-	-	74	-28.67	106	382	V
	* 1.308	32.35	VA1T	29.7	-27.8	34.25	54	-19.75	-	-	106	382	V
3	* 3.693	45.25	PKFH	34.9	-35.9	44.25	-	-	74	-29.75	126	143	H
	* 3.694	33.79	VA1T	34.9	-35.9	32.79	54	-21.21	-	-	126	143	H
4	* 7.7	39.17	PKFH	35.8	-30.3	44.67	-	-	74	-29.33	229	204	H
	* 7.698	27.92	VA1T	35.8	-30.3	33.42	54	-20.58	-	-	229	204	H
5	* 4.945	42.38	PKFH	34	-34.4	41.98	-	-	74	-32.02	198	127	V
	* 4.941	31.18	VA1T	34	-34.3	30.88	54	-23.12	-	-	198	127	V
6	* 11.831	35.92	PKFH	39.1	-26.1	48.92	-	-	74	-25.08	238	176	V
	* 11.83	24.27	VA1T	39.1	-26.1	37.27	54	-16.73	-	-	238	176	V

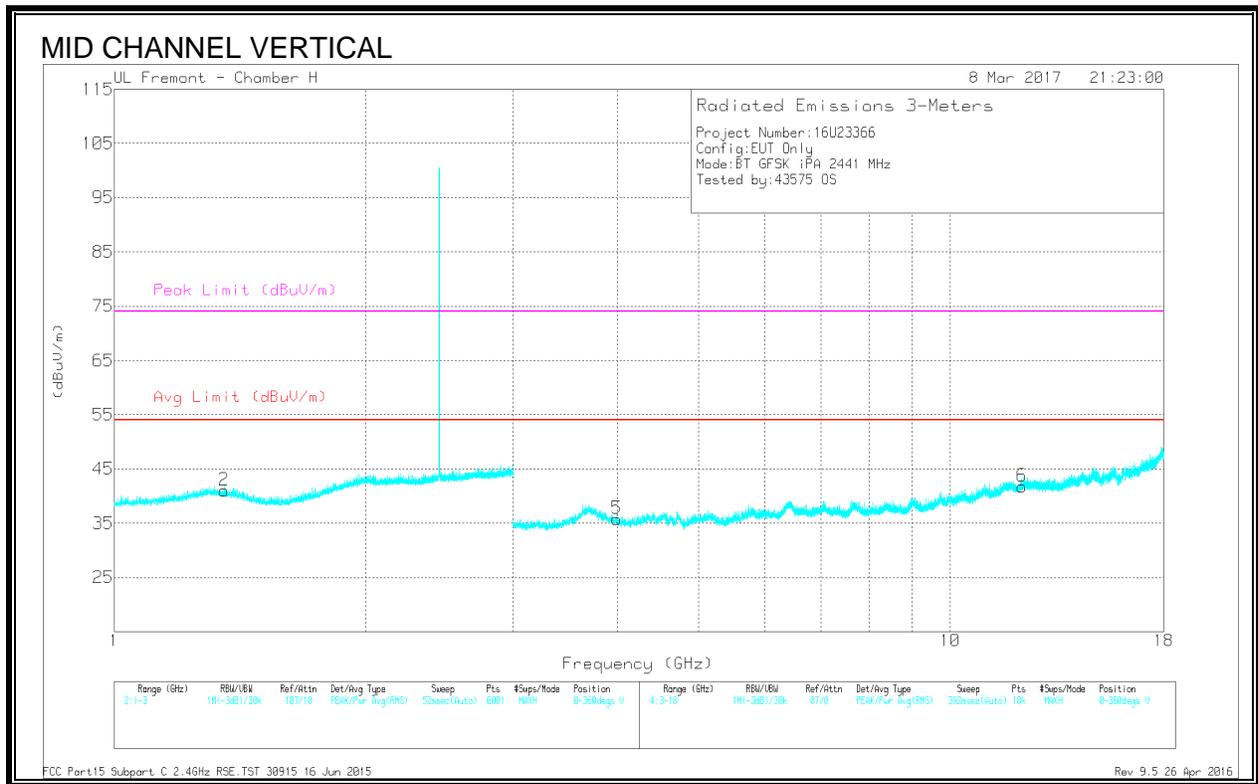
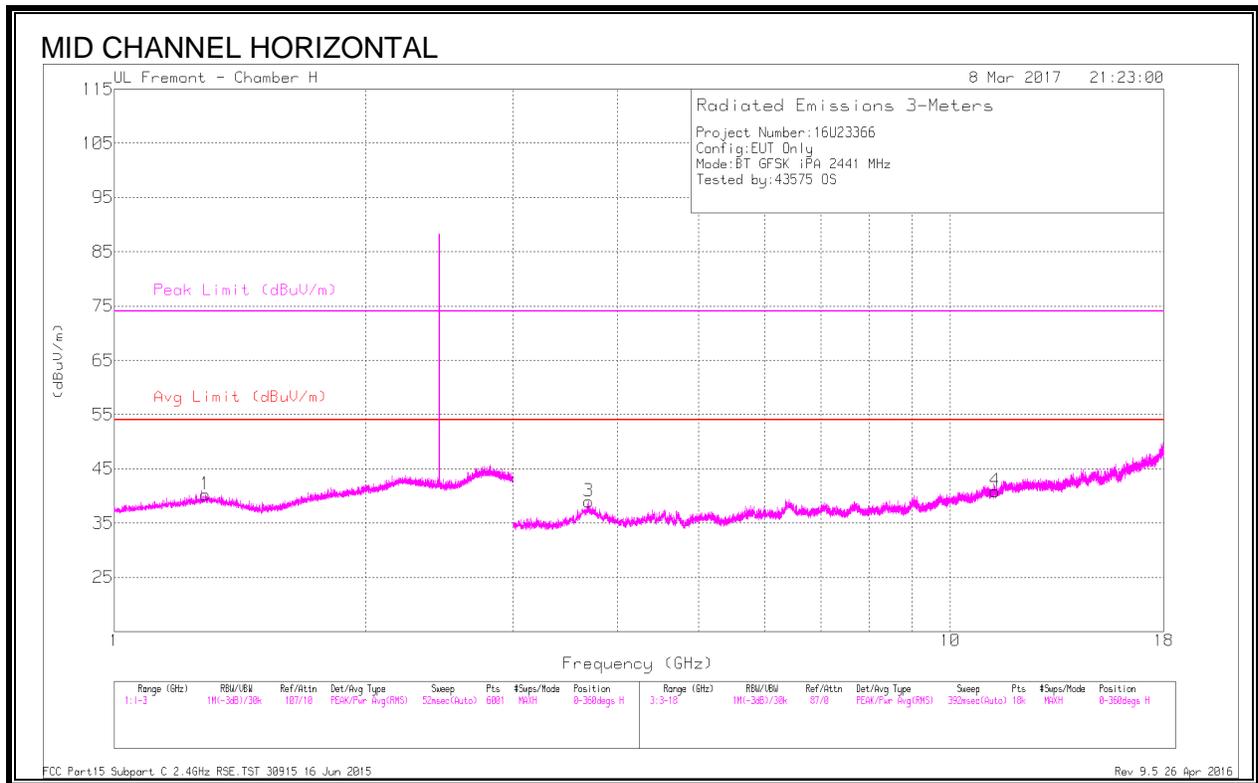
\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T120 (dB/m)	Amp/Cb/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	* 1.285	43.87	PKFH	29.6	-27.8	45.67	-	-	74	-28.33	207	117	H
	* 1.286	32.49	VA1T	29.6	-27.8	34.29	54	-19.71	-	-	207	117	H
2	* 1.352	43.13	PKFH	29.5	-27.7	44.93	-	-	74	-29.07	14	163	V
	* 1.352	32.06	VA1T	29.5	-27.7	33.86	54	-20.14	-	-	14	163	V
3	* 3.693	44.85	PKFH	34.9	-35.9	43.85	-	-	74	-30.15	304	231	H
	* 3.691	33.8	VA1T	34.9	-35.9	32.8	54	-21.2	-	-	304	231	H
4	* 11.31	35.67	PKFH	38.6	-26.8	47.47	-	-	74	-26.53	46	352	H
	* 11.31	24.44	VA1T	38.6	-26.8	36.24	54	-17.76	-	-	46	352	H
5	* 3.993	43.95	PKFH	33.5	-35.5	41.95	-	-	74	-32.05	0	122	V
	* 3.995	32.81	VA1T	33.5	-35.5	30.81	54	-23.19	-	-	0	122	V
6	* 12.181	35.12	PKFH	39.3	-26.3	48.12	-	-	74	-25.88	356	207	V
	* 12.18	24.03	VA1T	39.3	-26.3	37.03	54	-16.97	-	-	356	207	V

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

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