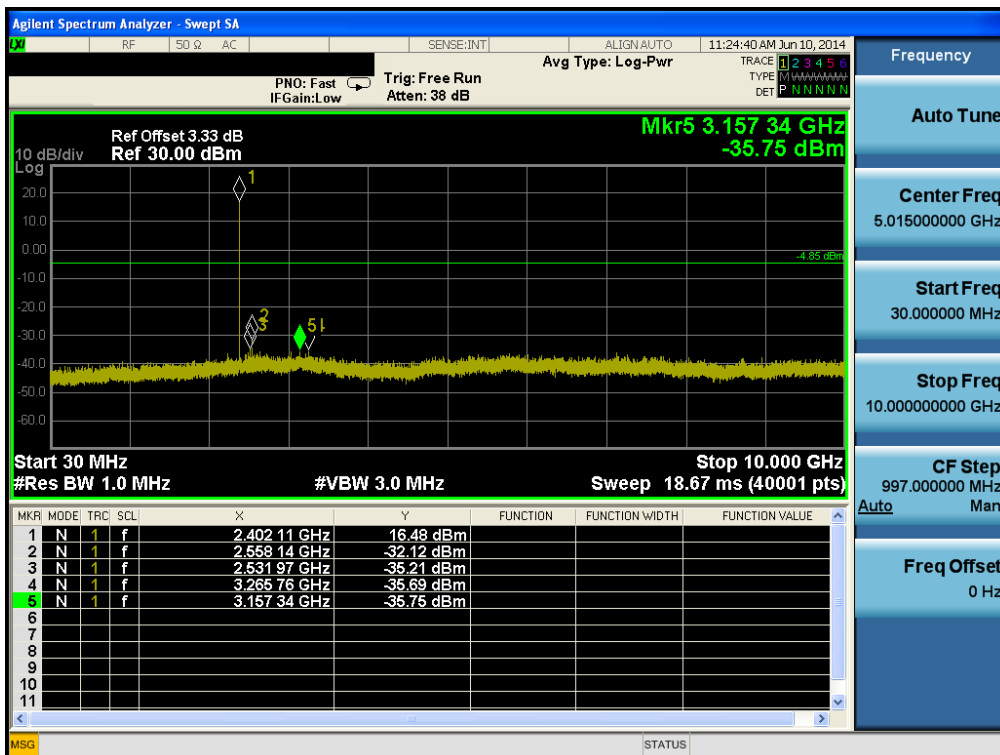
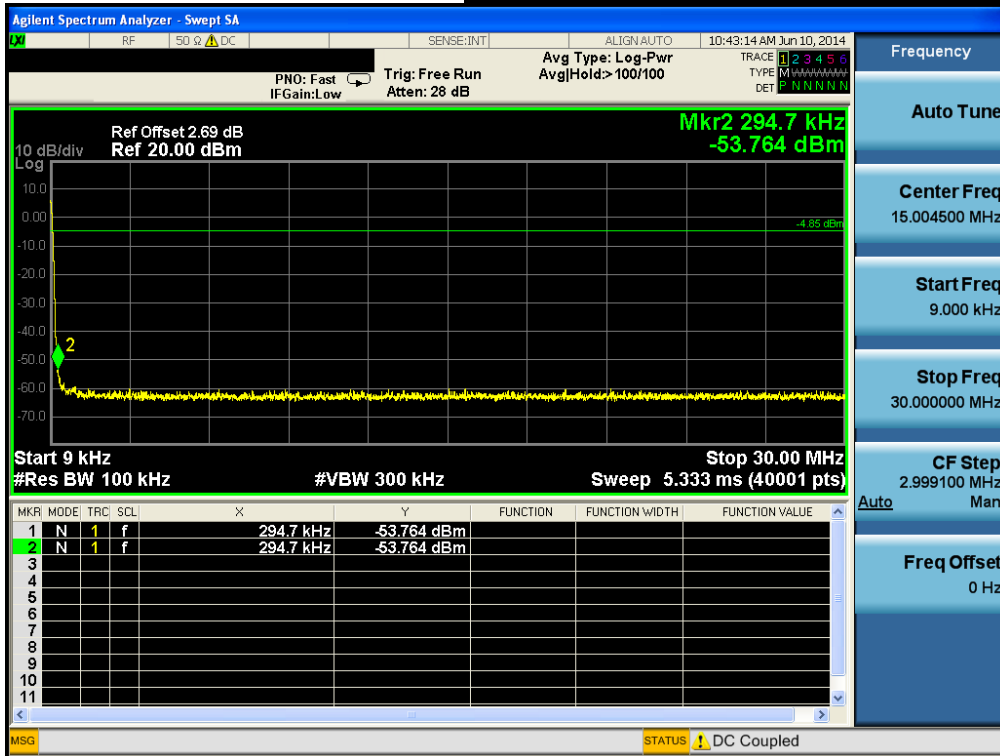


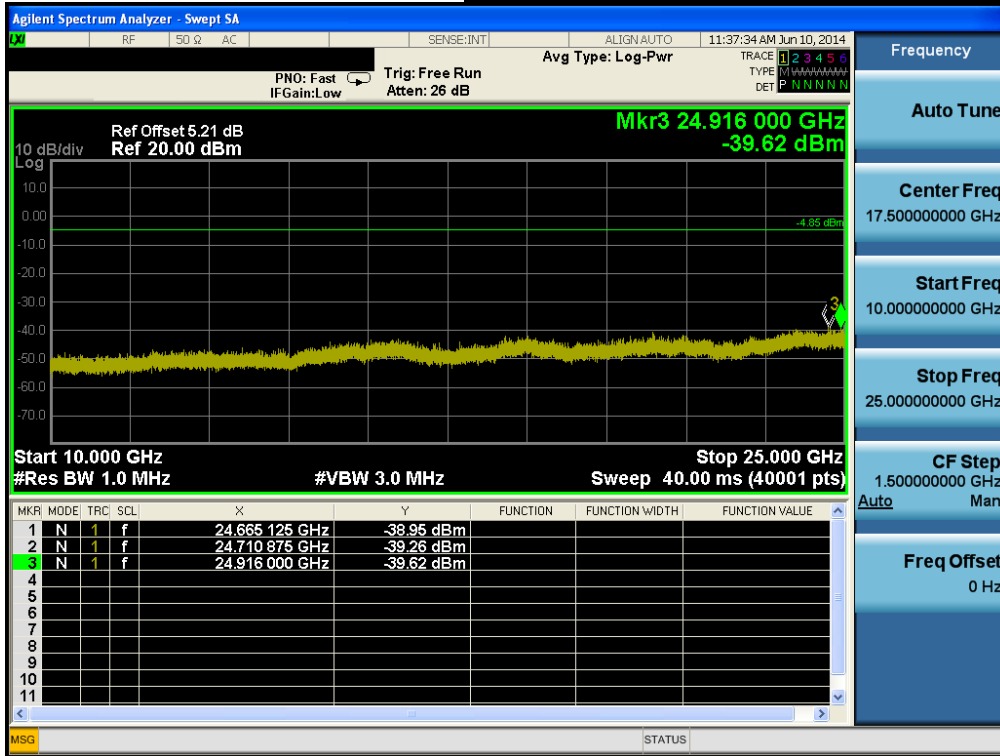
Conducted Spurious Emissions

Lowest Channel & Modulation: GFSK Module 2



Conducted Spurious Emissions

Lowest Channel & Modulation: GFSK Module 2



Frequency

Auto Tune

Center Freq
17.500000000 GHz

Start Freq
10.000000000 GHz

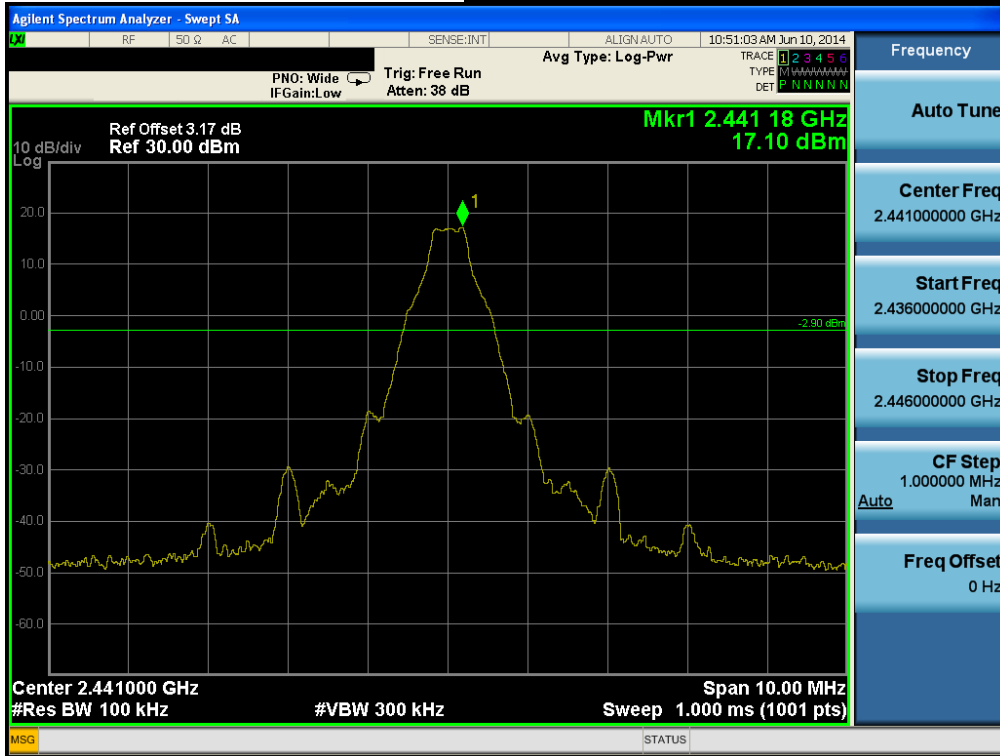
Stop Freq
25.000000000 GHz

CF Step
1.500000000 GHz
Auto Man

Freq Offset
0 Hz

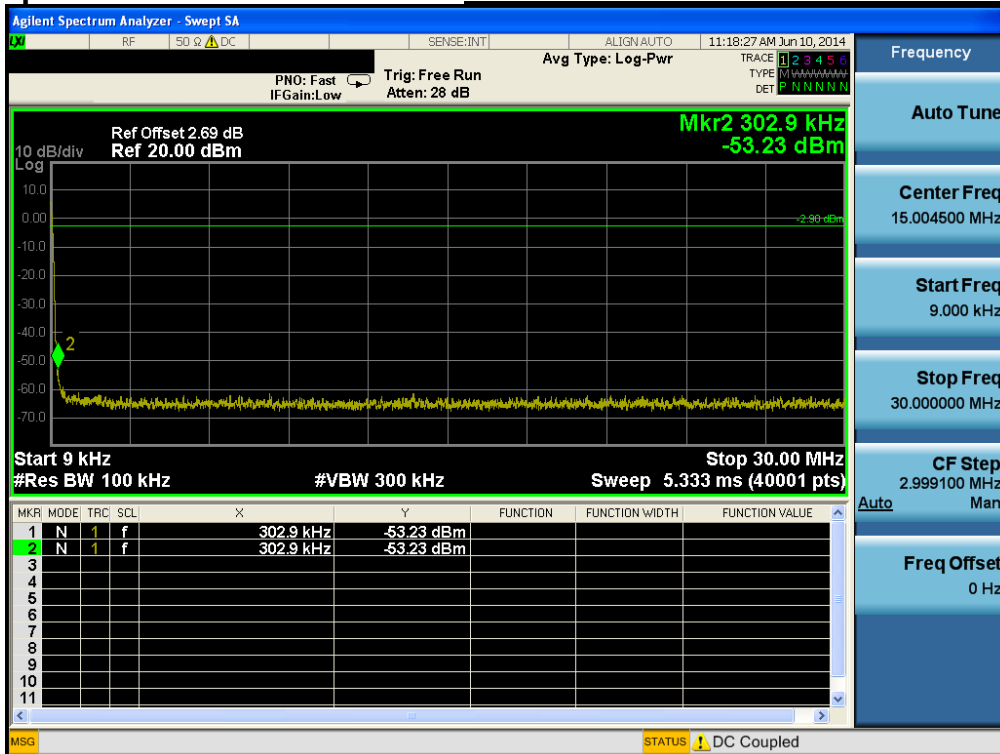
Reference for limit

Middle Channel & Modulation: GFSK Module 2



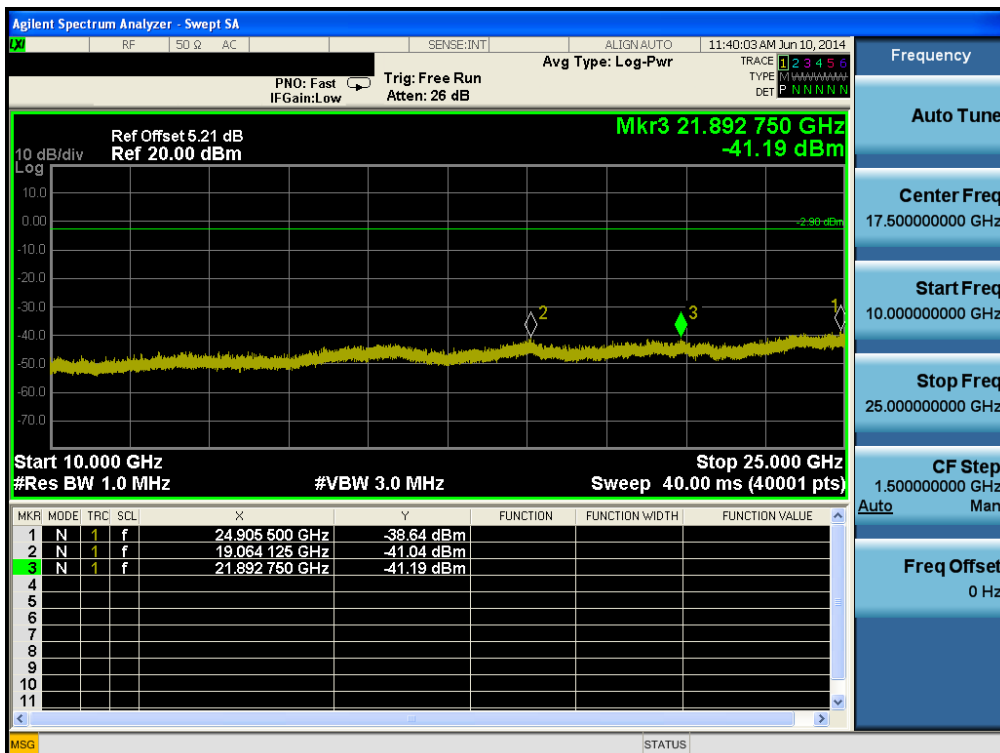
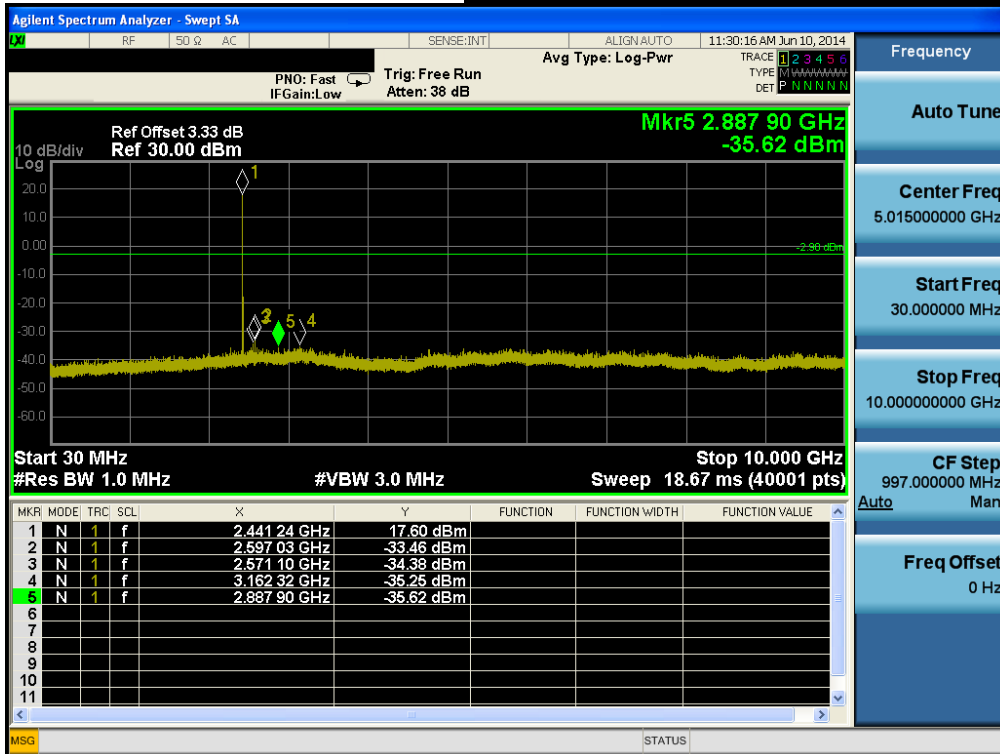
Conducted Spurious Emissions

Middle Channel & Modulation: GFSK Module 2



Conducted Spurious Emissions

Middle Channel & Modulation: GFSK Module 2



High Band-edge

Highest Channel & Modulation: GFSK Module 2



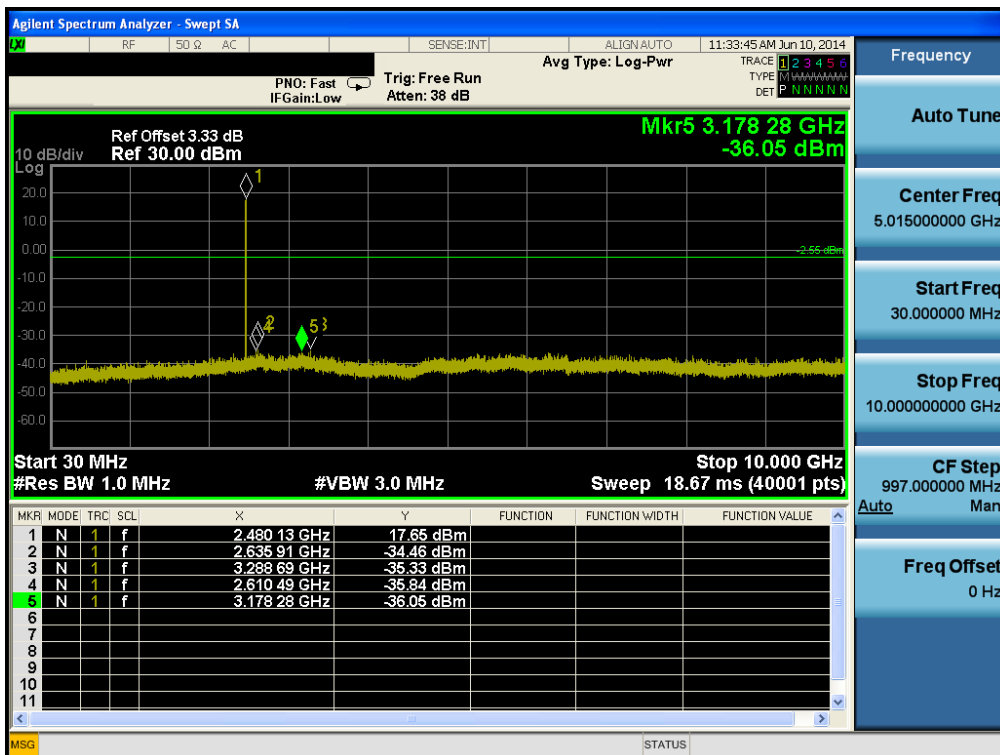
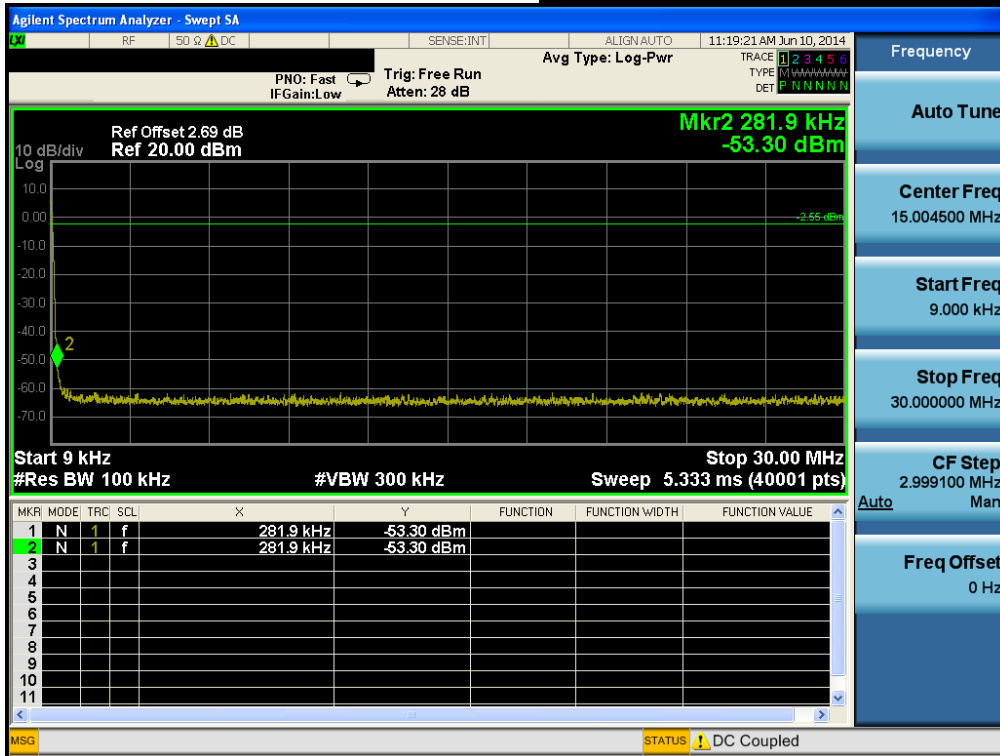
High Band-edge

Hopping mode & Modulation: GFSK Module 2



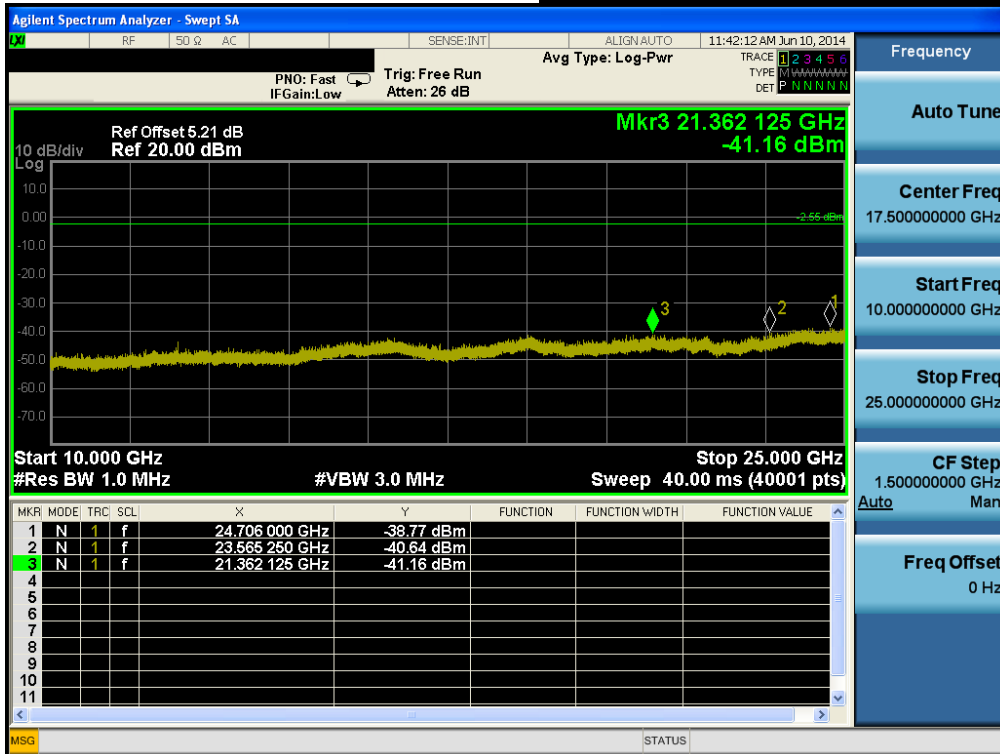
Conducted Spurious Emissions

Highest Channel & Modulation: GFSK Module 2



Conducted Spurious Emissions

Highest Channel & Modulation: GFSK Module 2



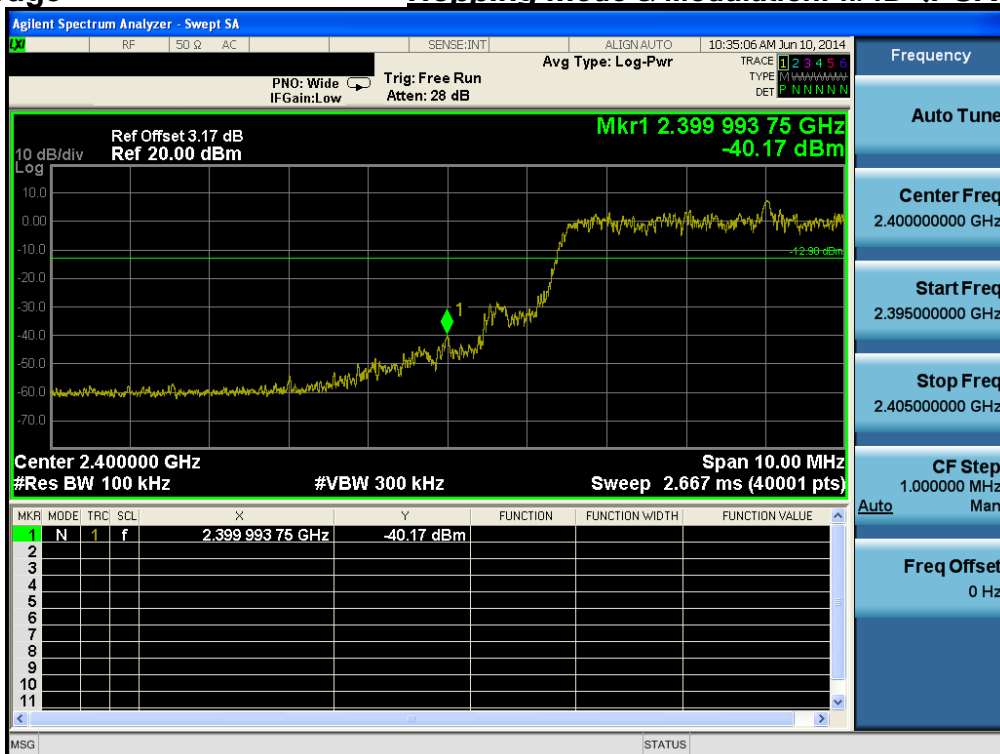
Low Band-edge

Lowest Channel & Modulation: $\pi/4$ DQPSK Module 2



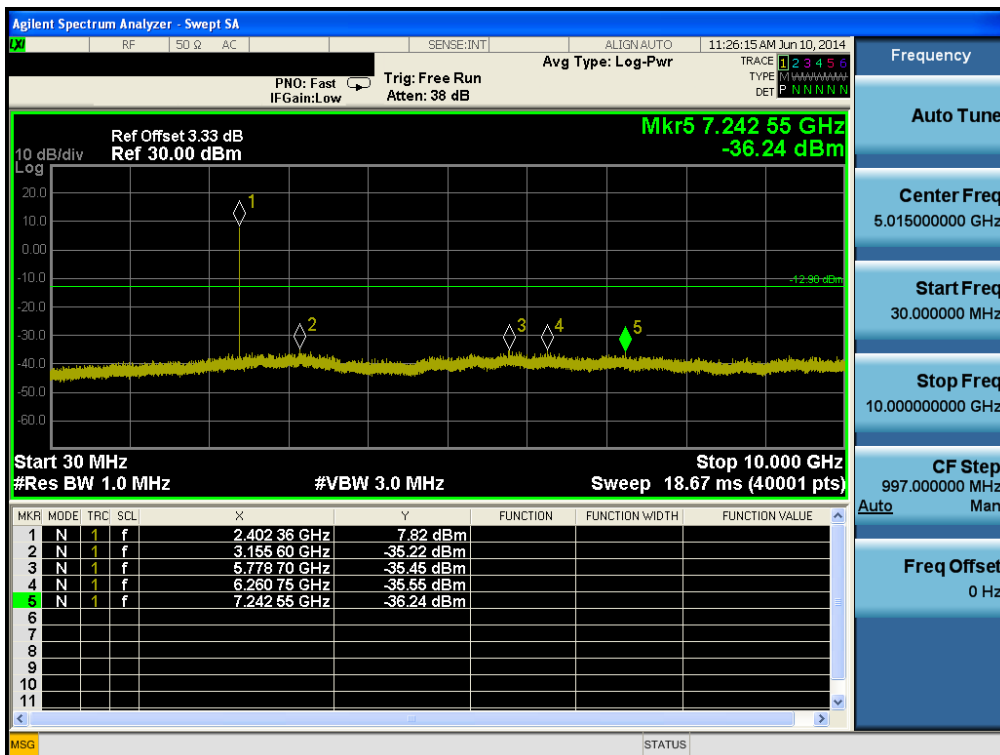
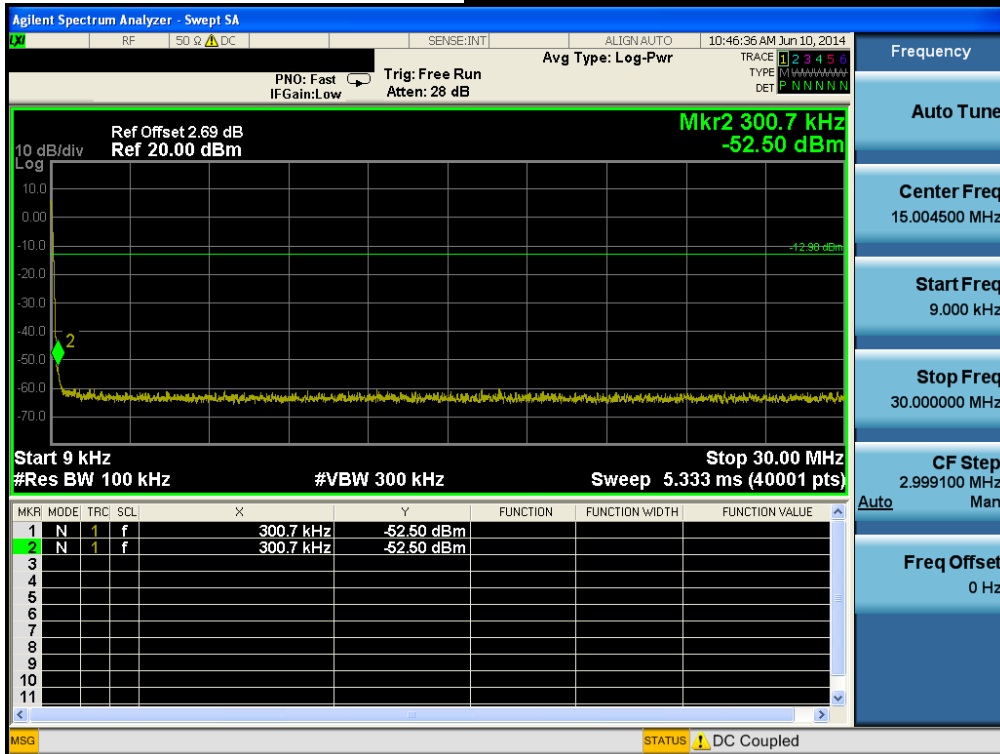
Low Band-edge

Hopping mode & Modulation: $\pi/4$ DQPSK Module 2



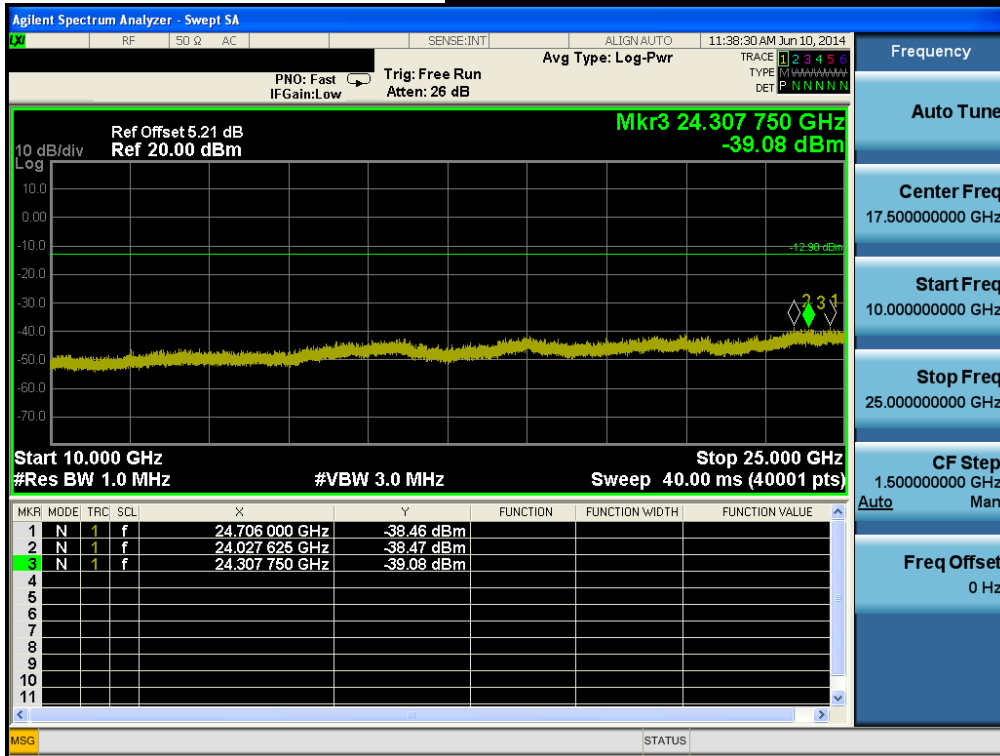
Conducted Spurious Emissions

Lowest Channel & Modulation: $\pi/4$ DQPSK Module 2



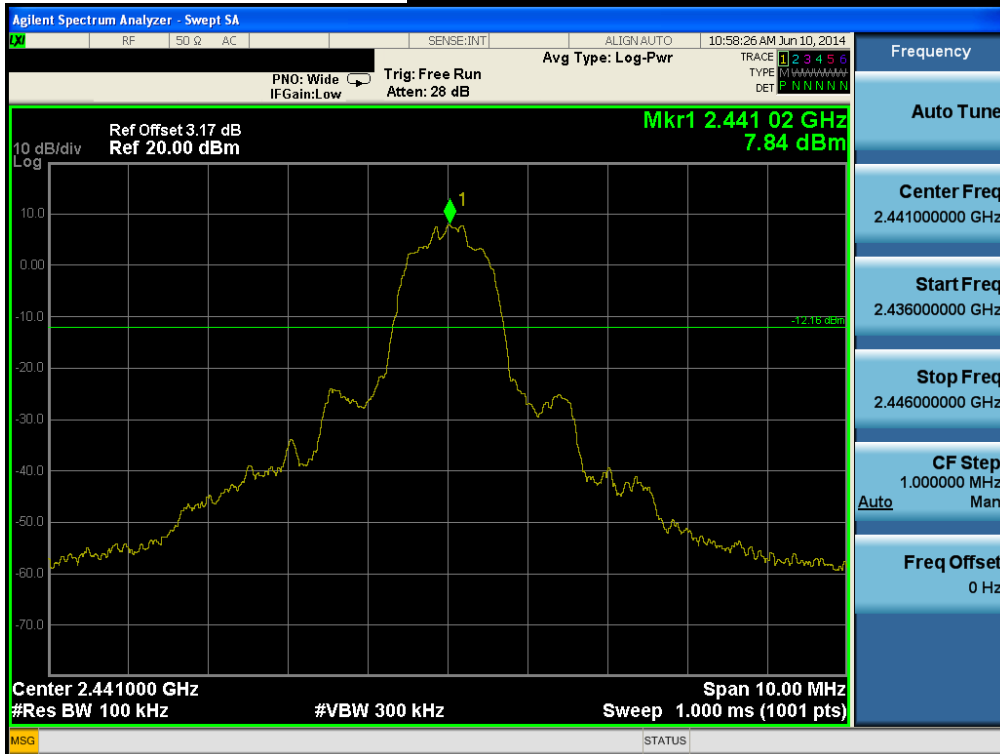
Conducted Spurious Emissions

Lowest Channel & Modulation: $\pi/4$ DQPSK Module 2



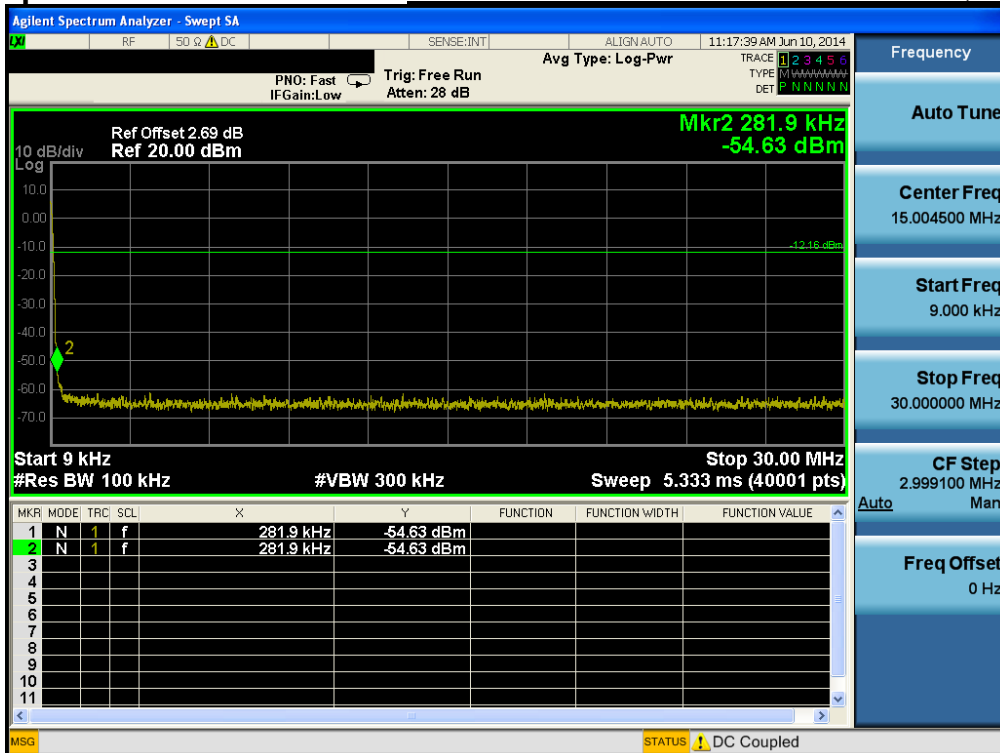
Reference for limit

Middle Channel & Modulation: $\pi/4$ DQPSK Module 2



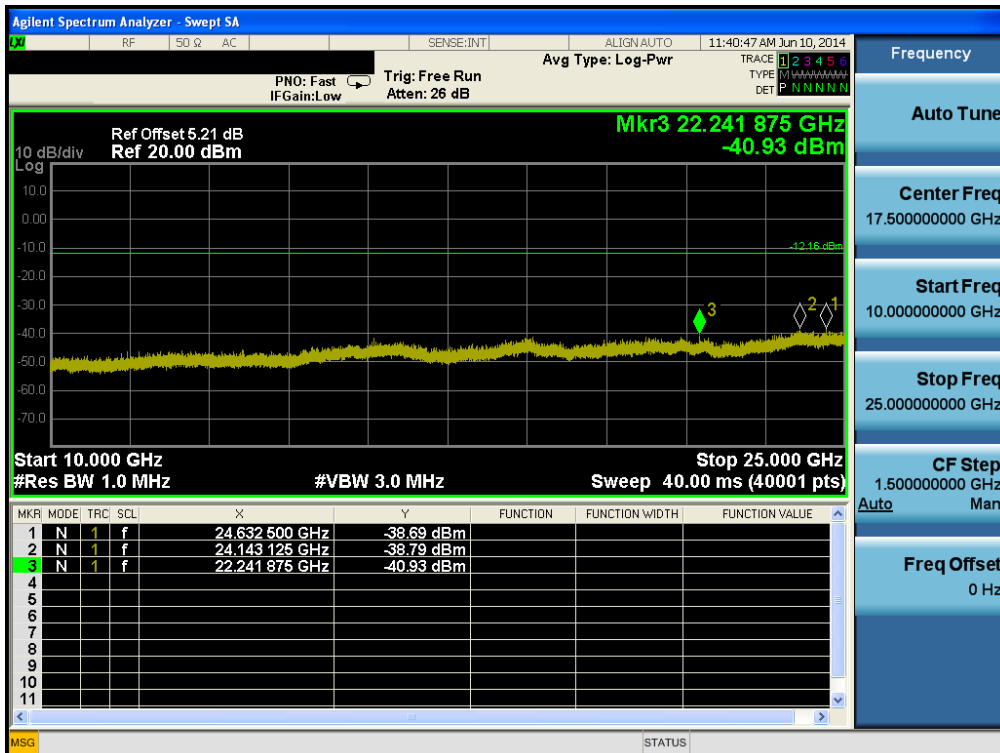
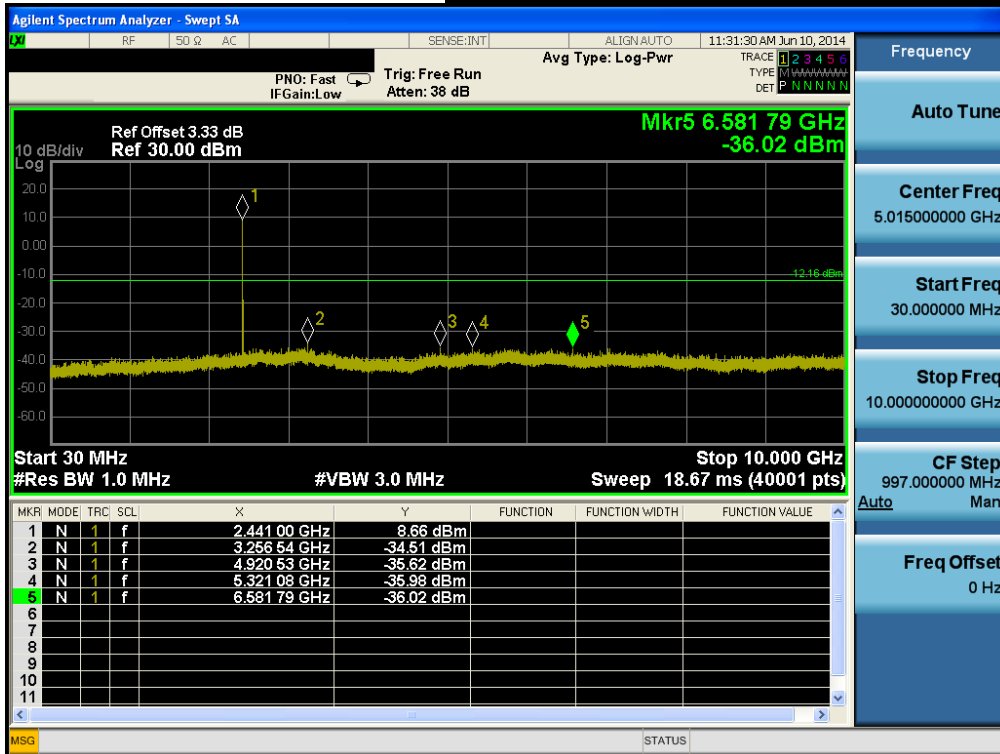
Conducted Spurious Emissions

Middle Channel & Modulation: $\pi/4$ DQPSK Module 2



Conducted Spurious Emissions

Middle Channel & Modulation: $\pi/4$ DQPSK Module 2



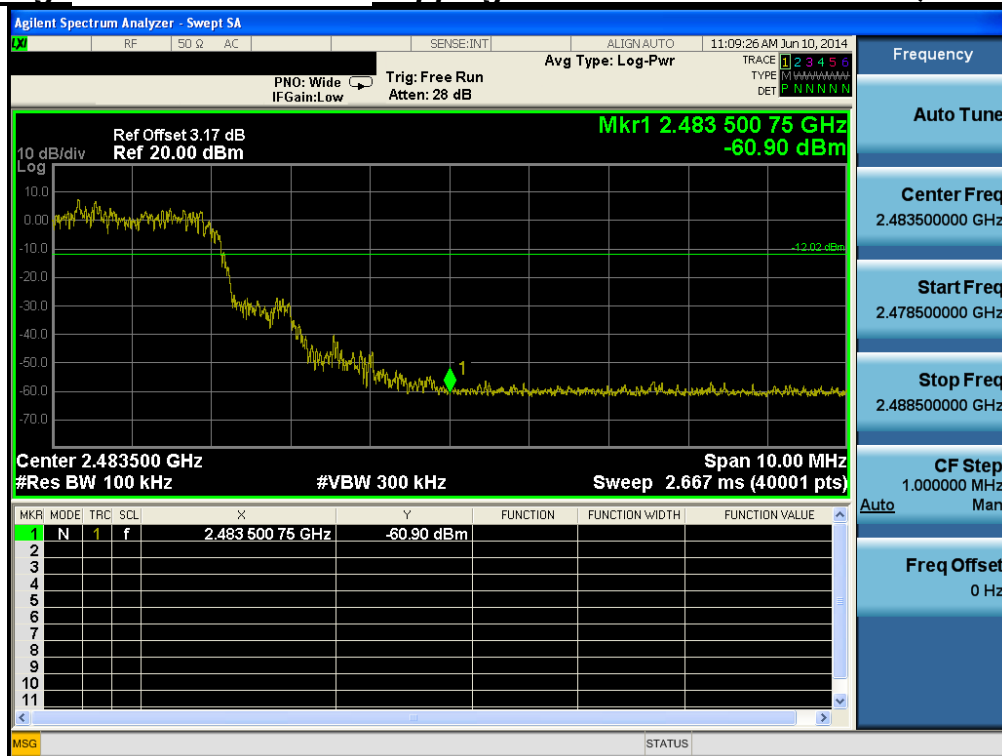
High Band-edge

Highest Channel & Modulation: $\pi/4$ DQPSK Module 2



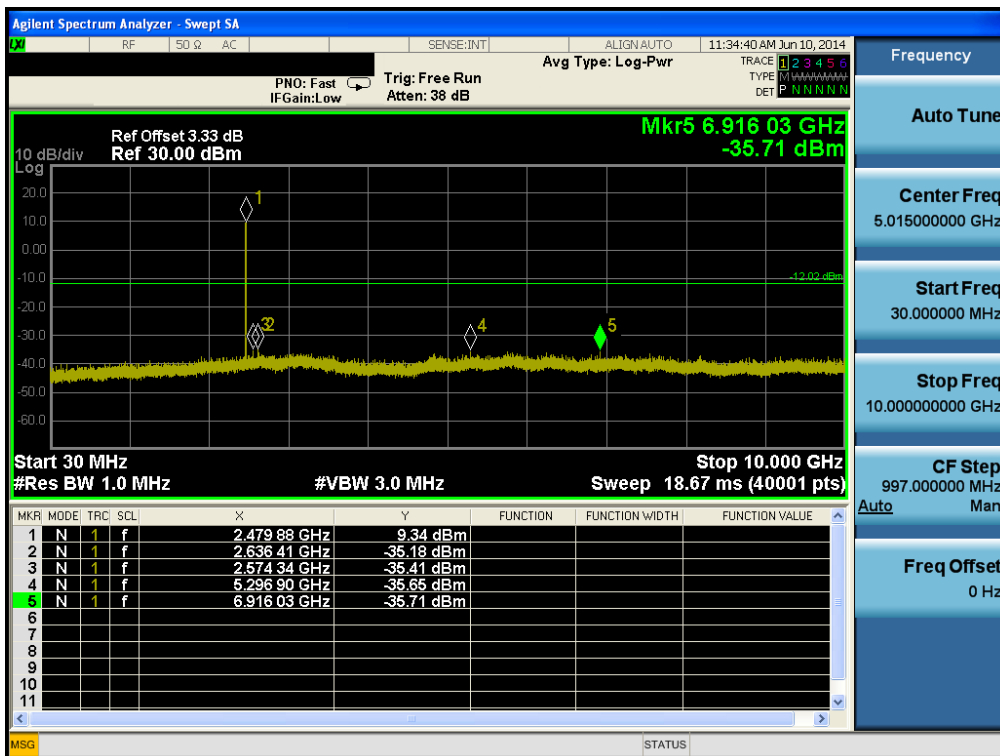
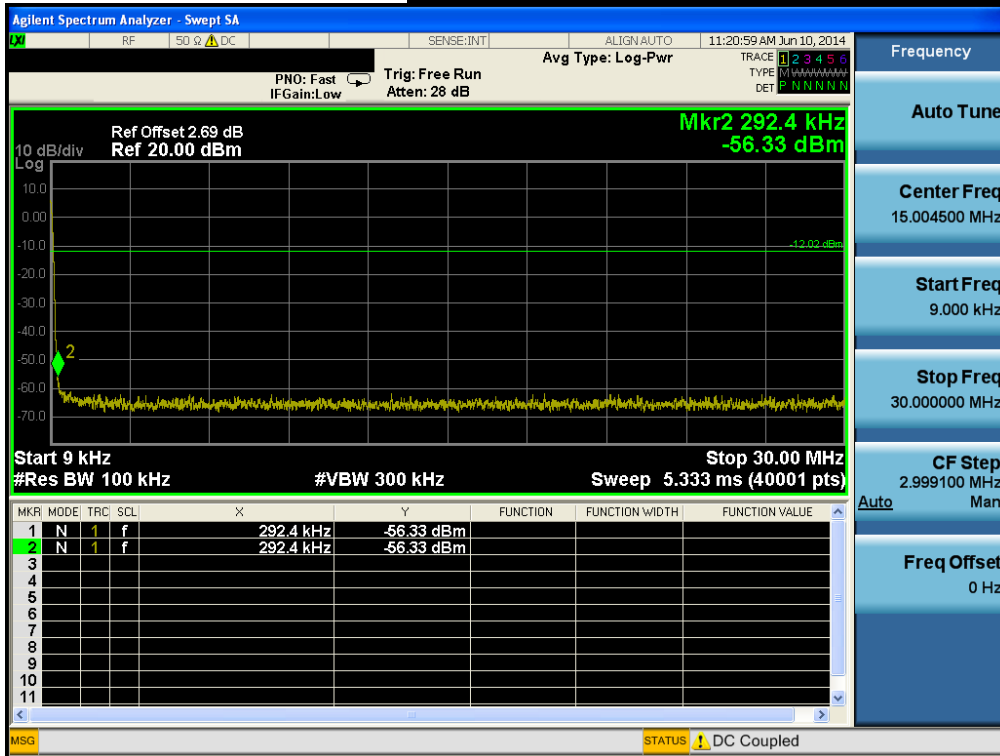
High Band-edge

Hopping mode & Modulation: $\pi/4$ DQPSK Module 2



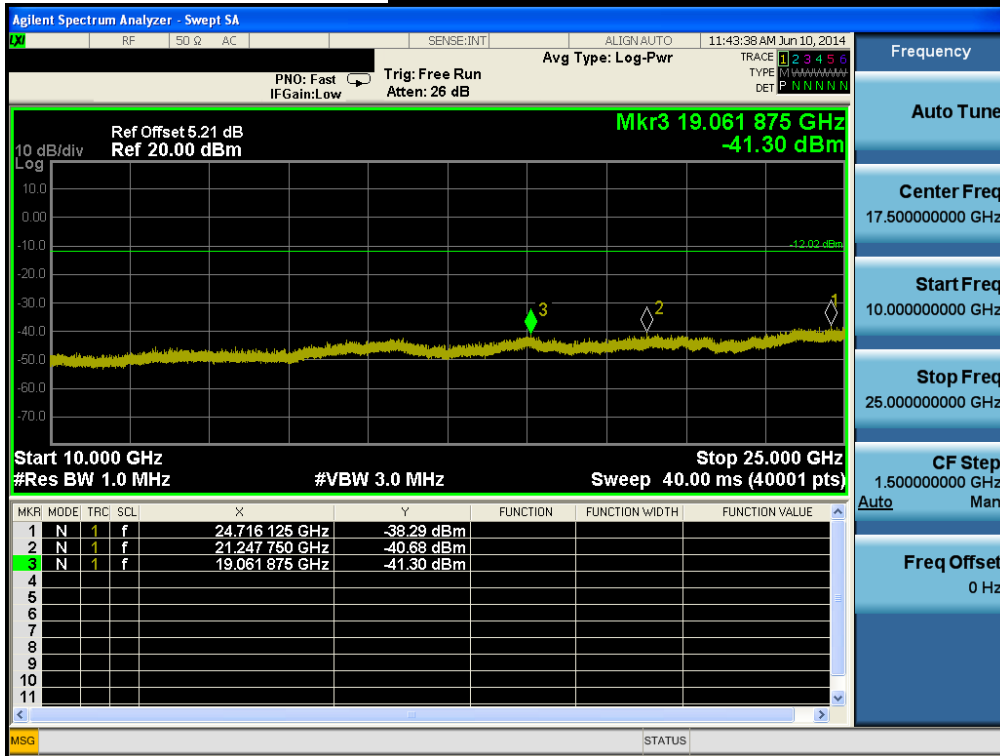
Conducted Spurious Emissions

Highest Channel & Modulation: $\pi/4$ DQPSK Module 2



Conducted Spurious Emissions

Highest Channel & Modulation: $\pi/4$ DQPSK Module 2



Low Band-edge

Lowest Channel & Modulation: 8DPSK Module 2



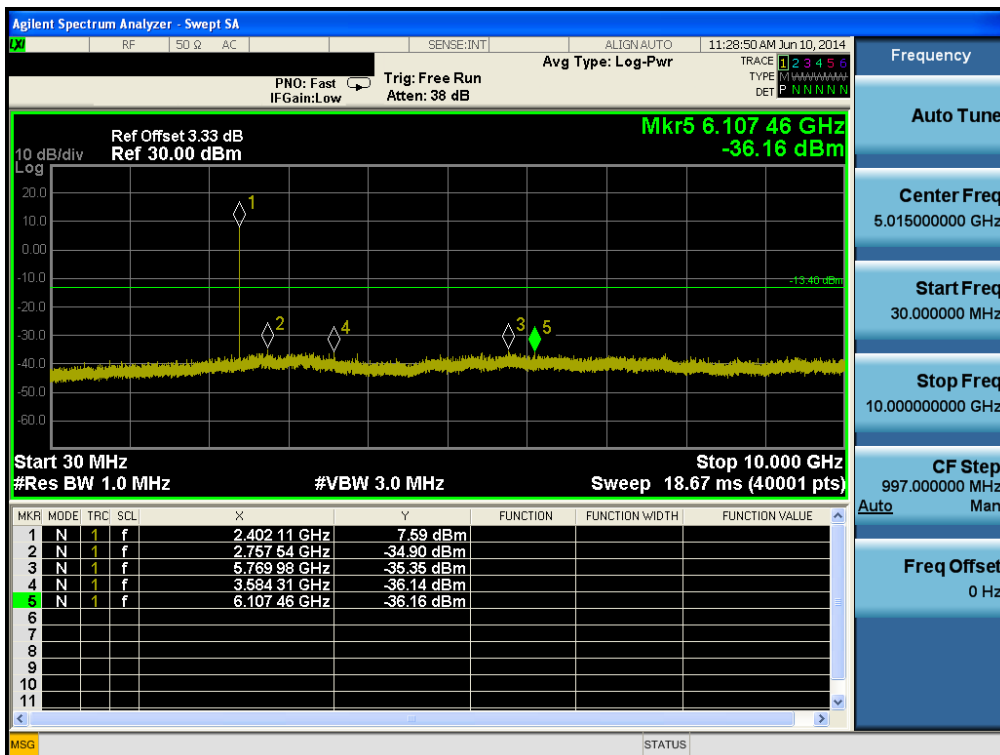
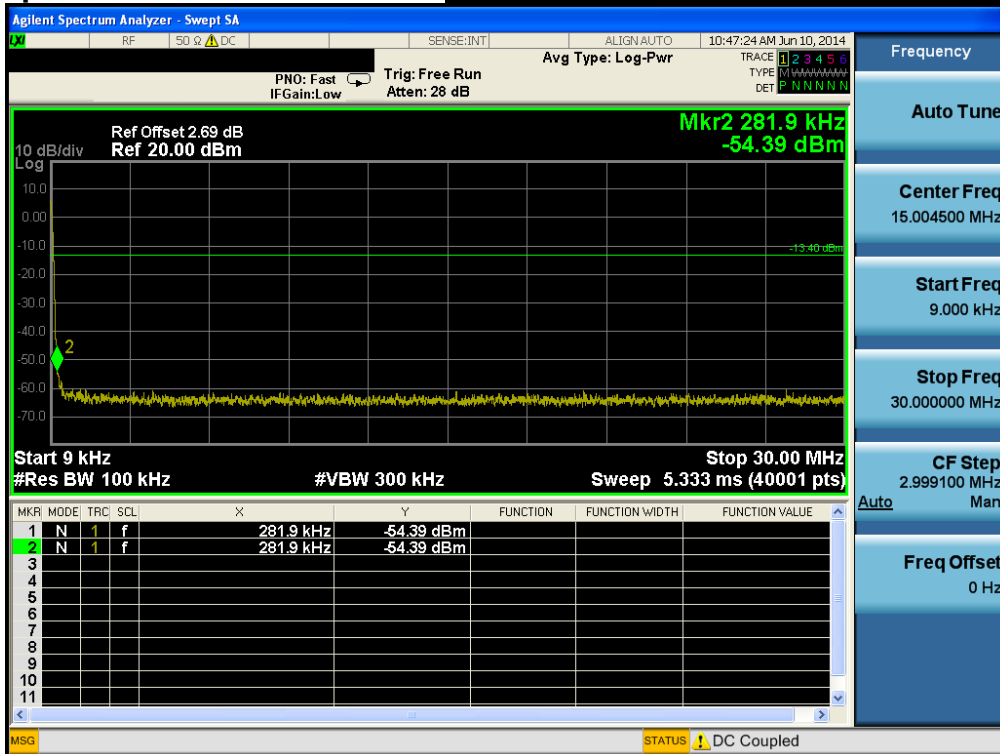
Low Band-edge

Hopping mode & Modulation: 8DPSK Module 2



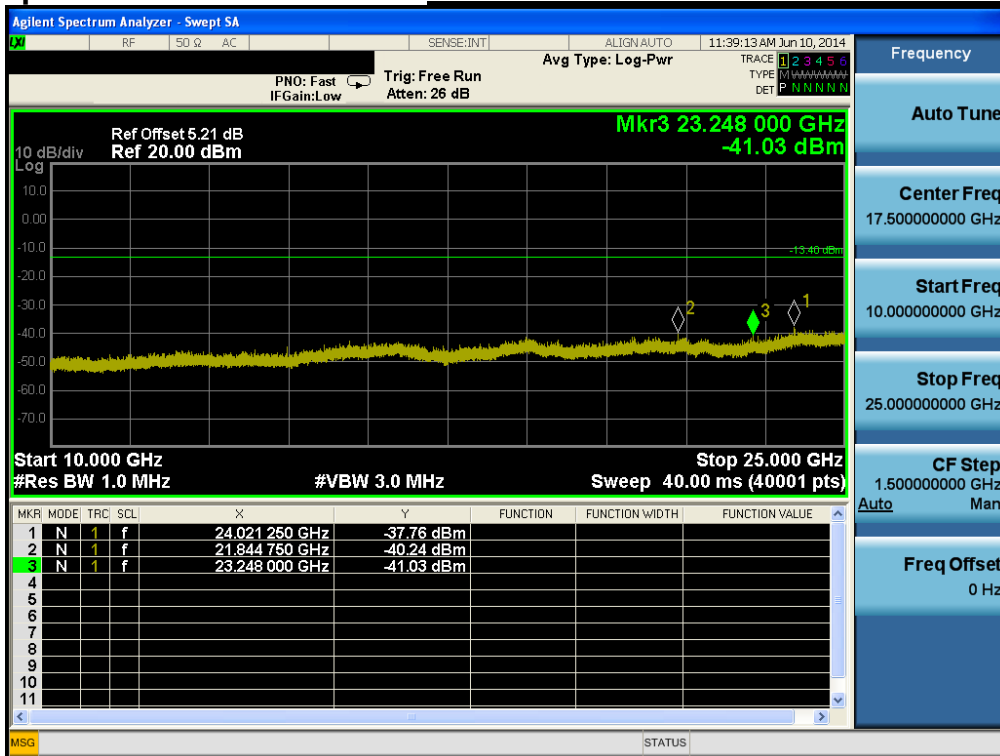
Conducted Spurious Emissions

Lowest Channel & Modulation: 8DPSK Module 2



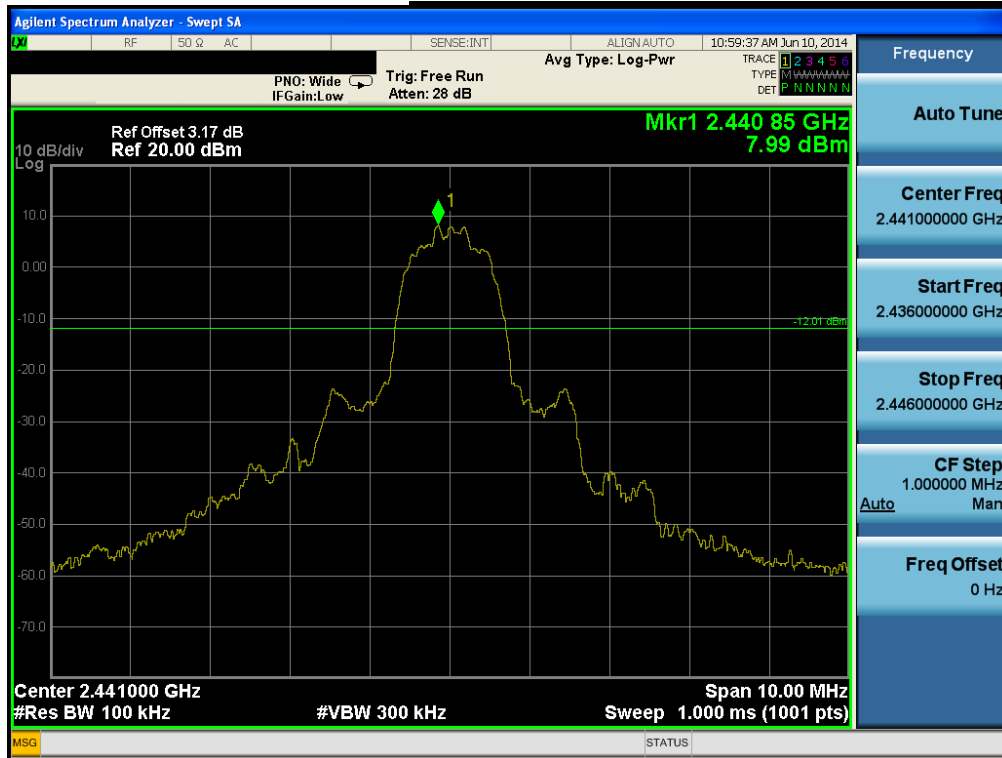
Conducted Spurious Emissions

Lowest Channel & Modulation: 8DPSK Module 2



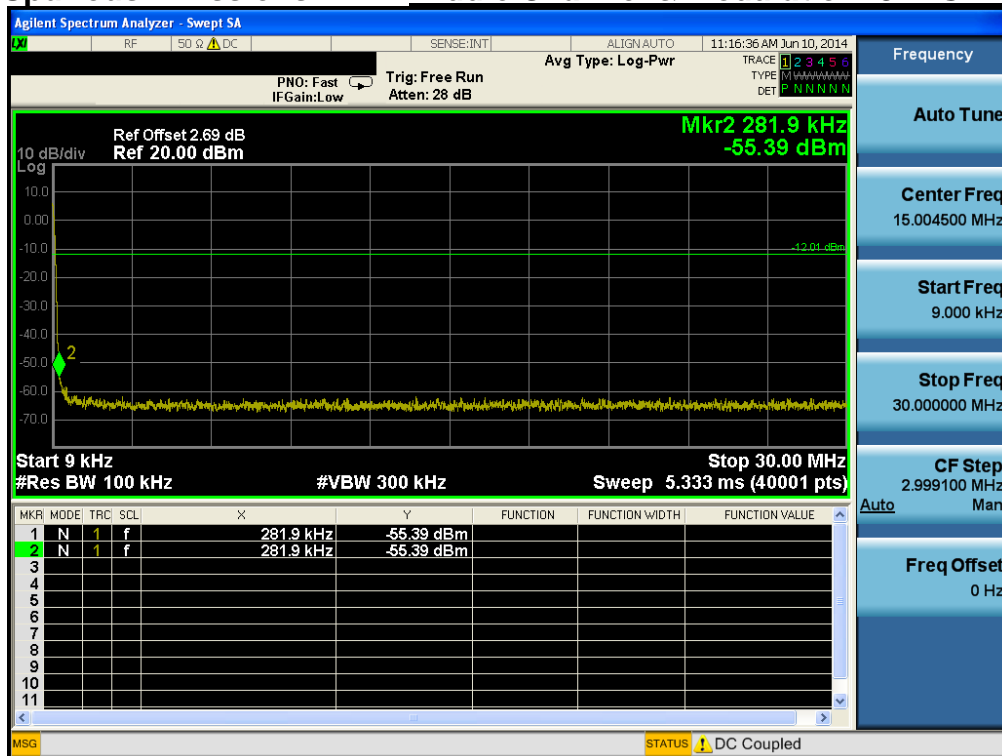
Reference for limit

Middle Channel & Modulation: 8DPSK Module 2



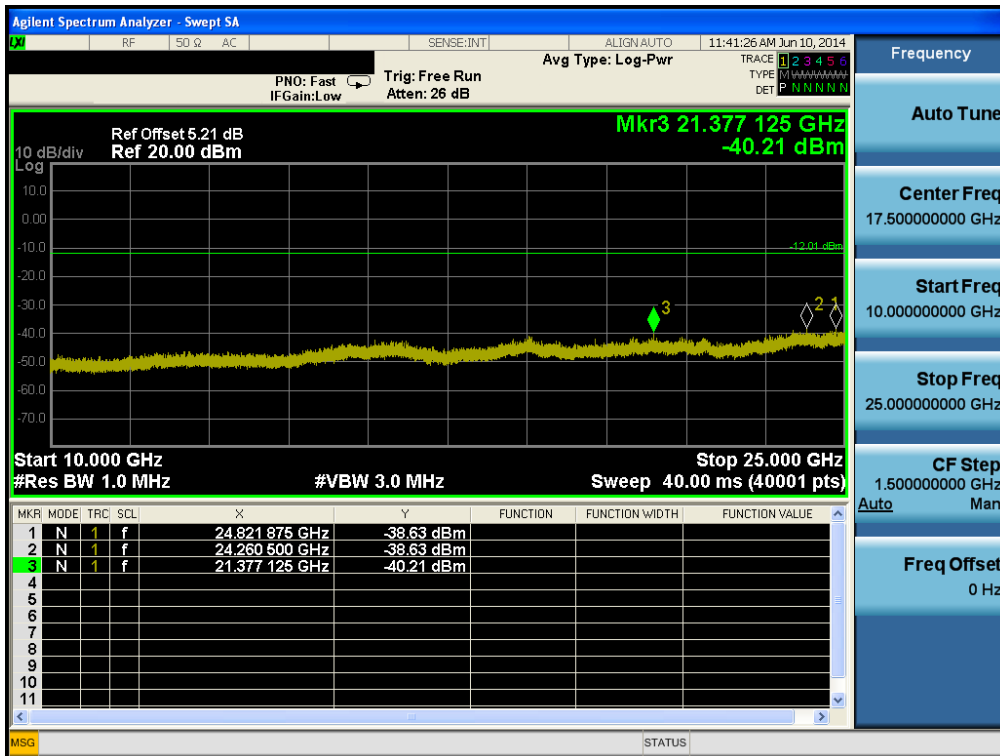
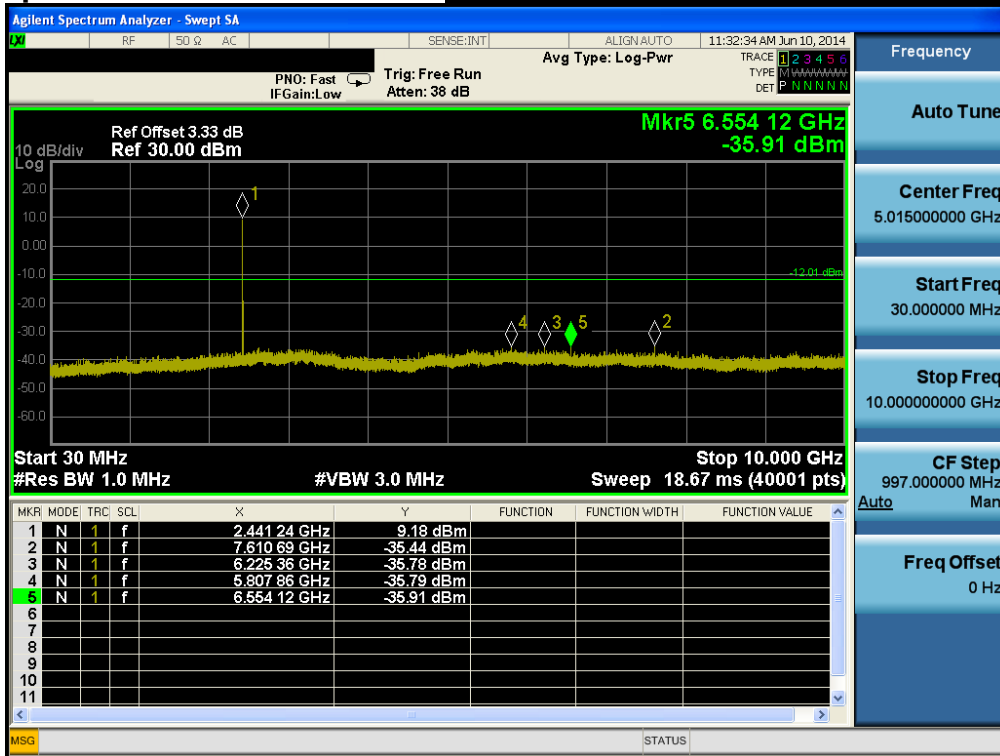
Conducted Spurious Emissions

Middle Channel & Modulation: 8DPSK Module 2



Conducted Spurious Emissions

Middle Channel & Modulation: 8DPSK Module 2



High Band-edge

Highest Channel & Modulation: 8DPSK Module 2



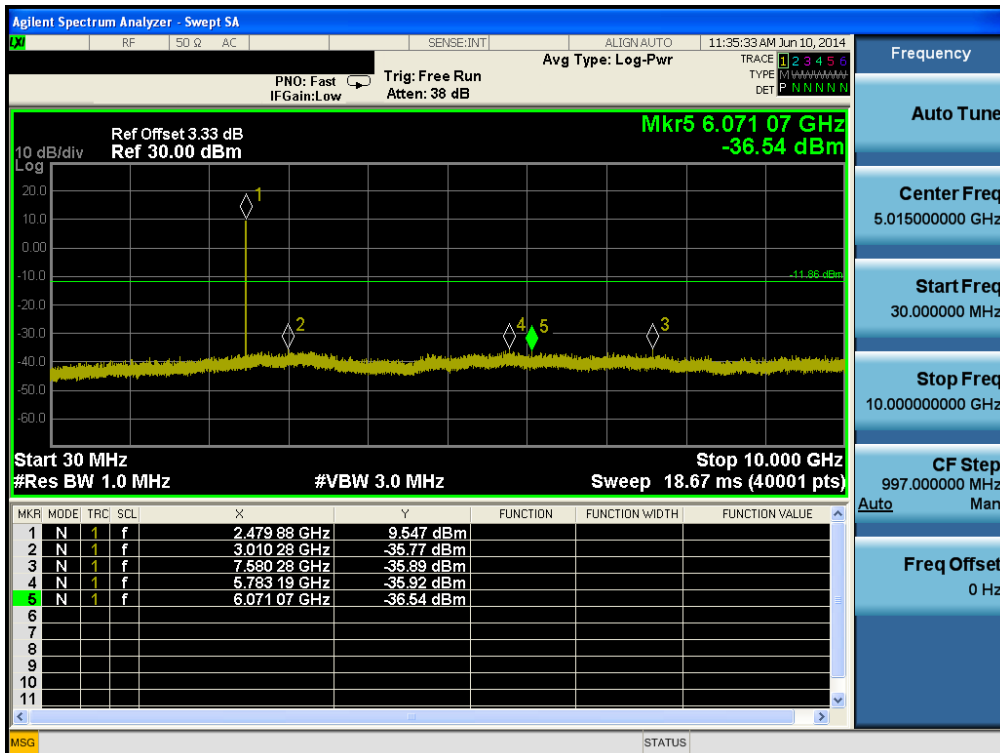
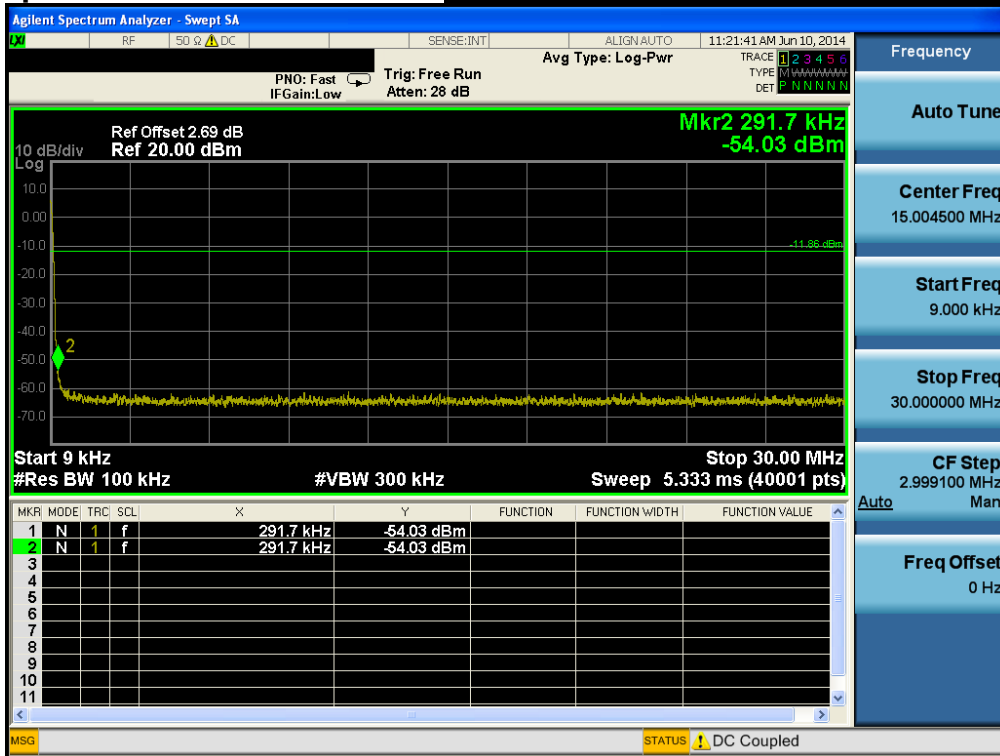
High Band-edge

Hopping mode & Modulation: 8DPSK Module 2



Conducted Spurious Emissions

Highest Channel & Modulation: 8DPSK Module 2



3. Carrier Frequency Separation

3.1. Test Setup

Refer to the APPENDIX I.

3.2. Limit

Limit: $\geq 20\text{dB BW}$ or $\geq \text{Two-Thirds of the } 20\text{dB BW}$

- Procedure:

The carrier frequency separation was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.

After the trace being stable, the reading value between the peaks of the adjacent channels using the marker-delta function was recorded as the measurement results.

The spectrum analyzer is set to:

Span = wide enough to capture the peaks of two adjacent channels

RBW = 1% of the span

Sweep = auto

VBW = \geq RBW

Detector function = peak

Trace = max hold

- Measurement Data: **Comply** (Refer to next page.)

- Minimum Standard:

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

- Measurement Data: Module 1

- FH mode

Hopping Mode	Test Mode	Peak of adjacent Channel (MHz)	Peak of center channel (MHz)	Test Result (MHz)
Enable	GFSK	2441.015	2442.013	1.002
	$\pi/4$ -DQPSK	2441.012	2442.010	1.002
	8DPSK	2441.012	2442.014	1.002

- AFH mode

Hopping Mode	Test Mode	Peak of adjacent Channel (MHz)	Peak of center channel (MHz)	Test Result (MHz)
Enable	GFSK	2411.012	2412.014	1.002
	$\pi/4$ -DQPSK	2411.012	2412.014	1.002
	8DPSK	2411.012	2412.014	1.002

- Measurement Data: Module 2

- FH mode

Hopping Mode	Test Mode	Peak of adjacent Channel (MHz)	Peak of center channel (MHz)	Test Result (MHz)
Enable	GFSK	2441.015	2442.017	1.002
	$\pi/4$ -DQPSK	2441.012	2442.014	1.002
	8DPSK	2441.013	2442.015	1.002

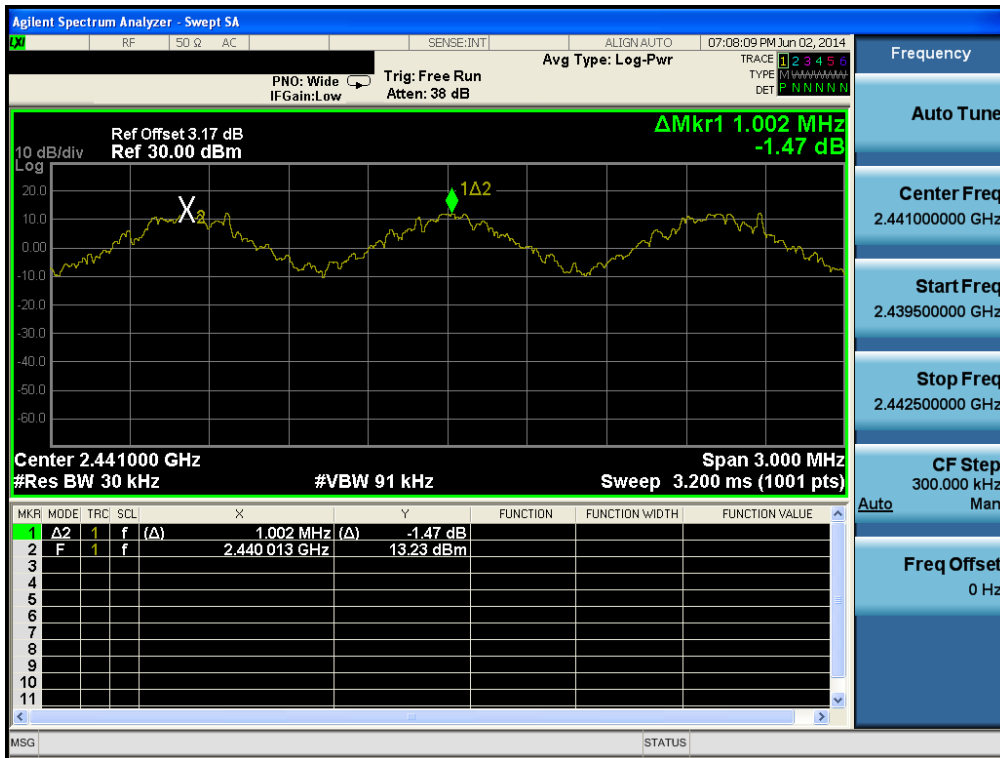
- AFH mode

Hopping Mode	Test Mode	Peak of adjacent Channel (MHz)	Peak of center channel (MHz)	Test Result (MHz)
Enable	GFSK	2411.015	2412.017	1.002
	$\pi/4$ -DQPSK	2411.018	2412.020	1.002
	8DPSK	2411.009	2412.011	1.002

Note 1: See next pages for actual measured spectrum plots.

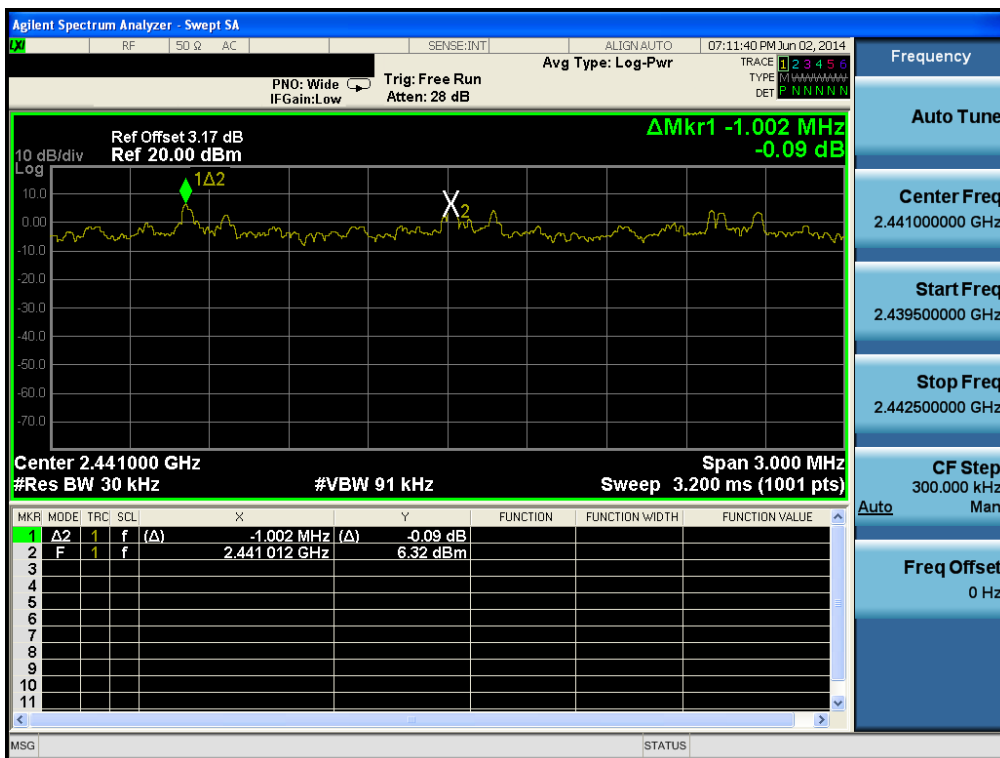
Carrier Frequency Separation (FH)

Hopping mode: Enable & GFSK Module 1



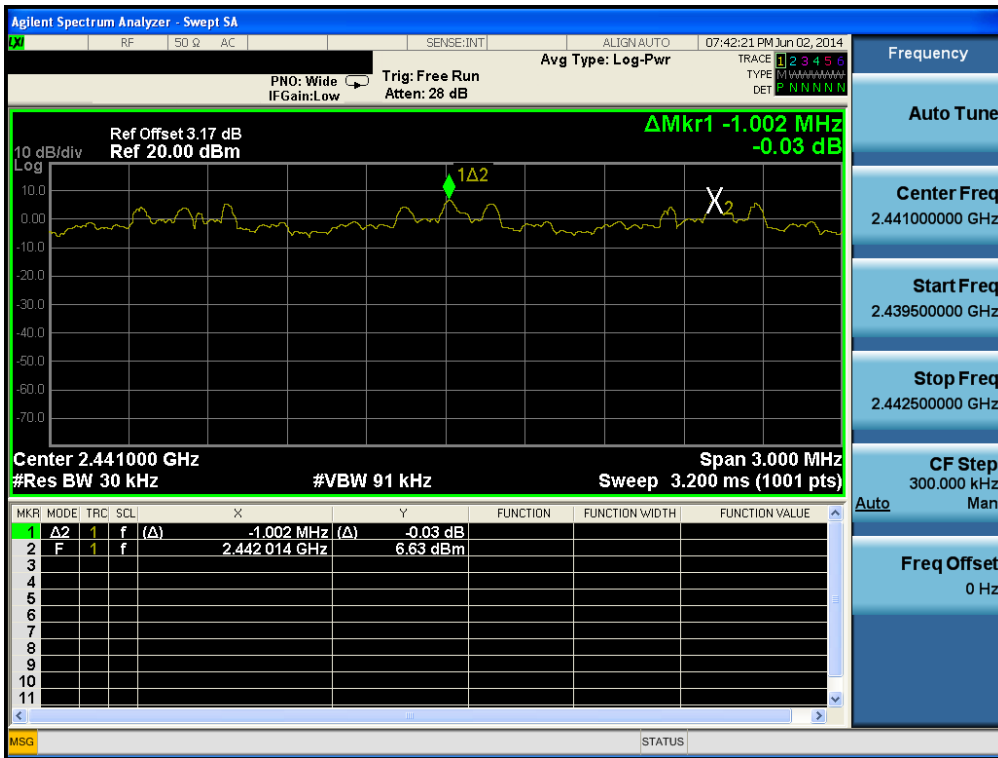
Carrier Frequency Separation (FH)

Hopping mode: Enable & $\pi/4$ -DQPSK Module 1



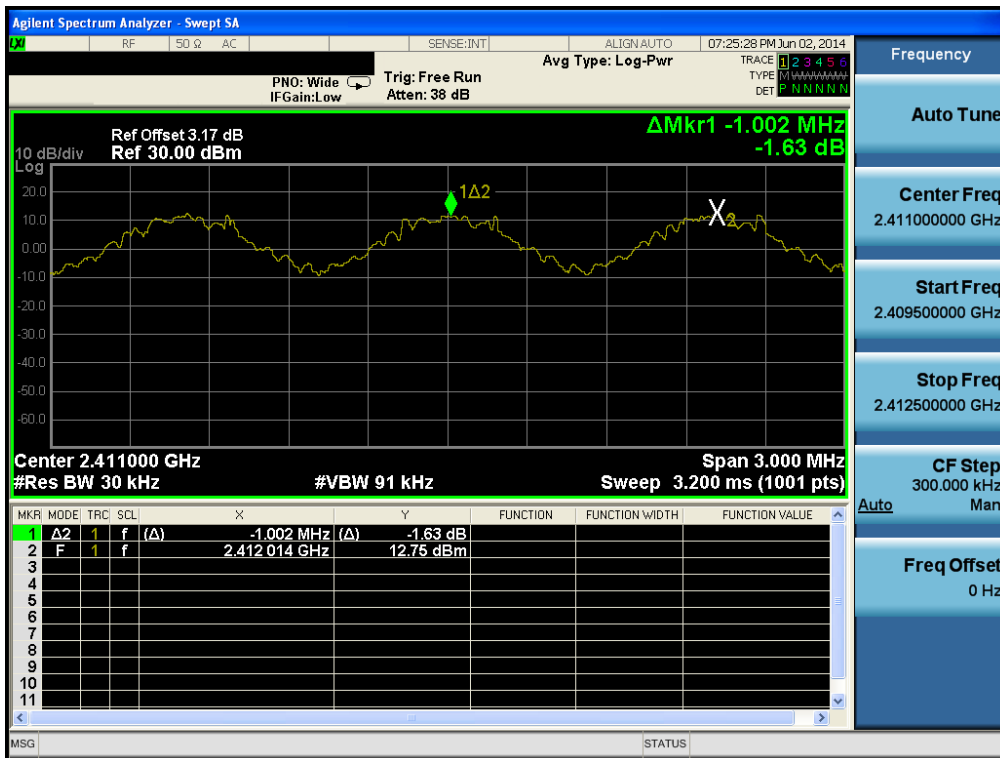
Carrier Frequency Separation (FH)

Hopping mode: Enable & 8DPSK Module 1



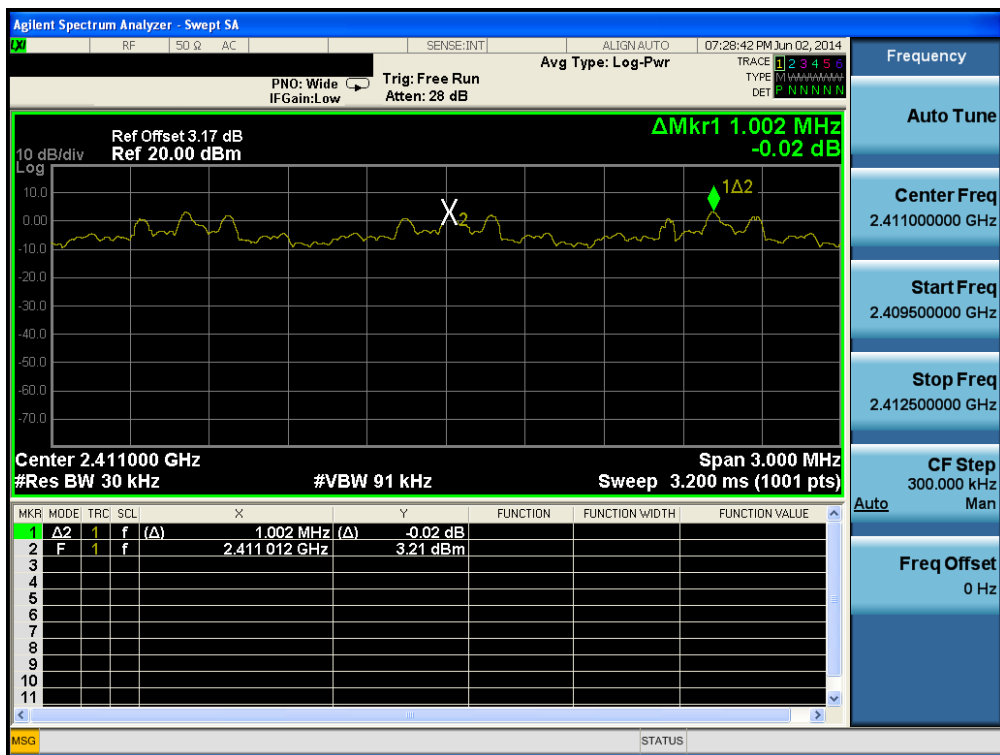
Carrier Frequency Separation (AFH)

Hopping mode: Enable & GFSK Module 1



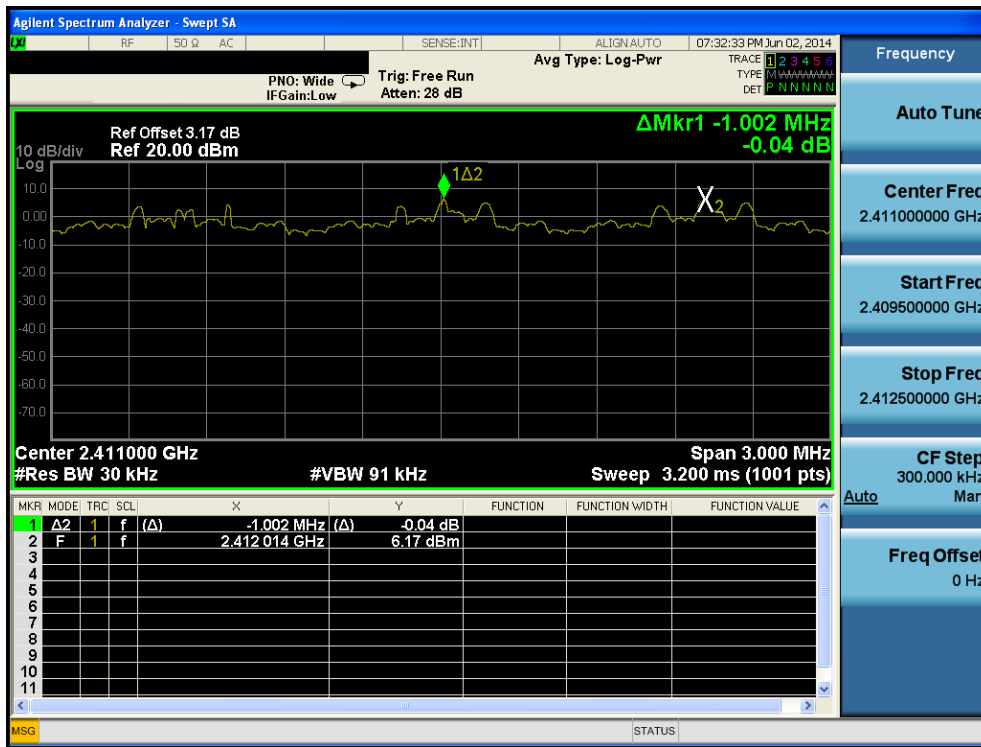
Carrier Frequency Separation (AFH)

Hopping mode: Enable & π/4-DQPSK Module 1



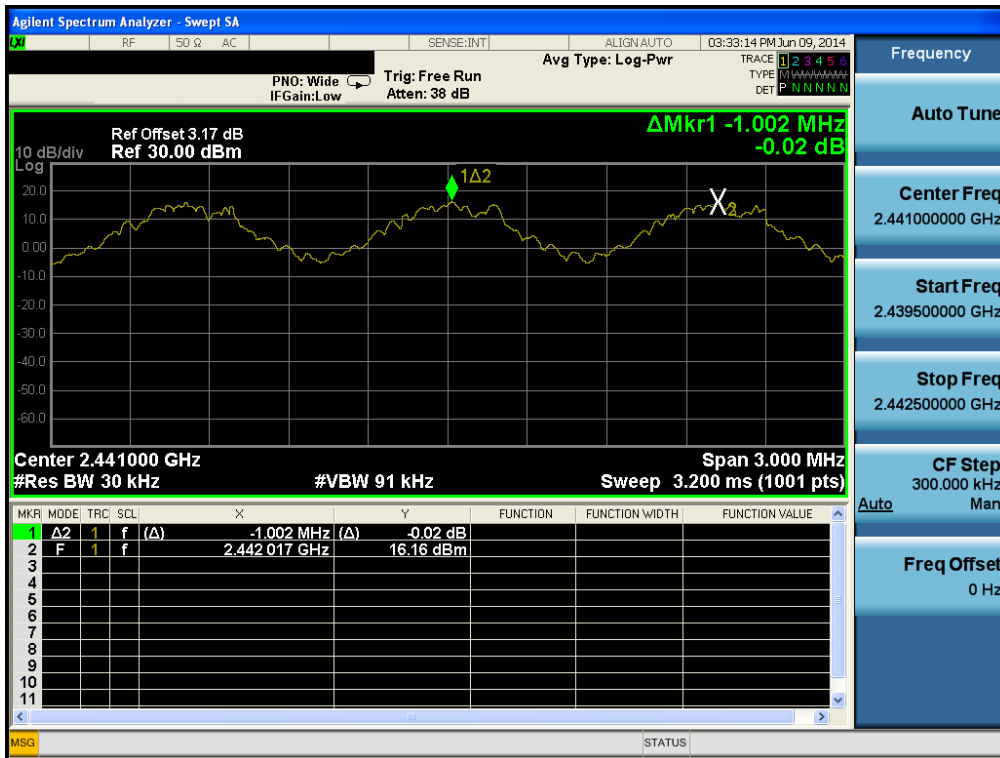
Carrier Frequency Separation (AFH)

Hopping mode: Enable & 8DPSK Module 1



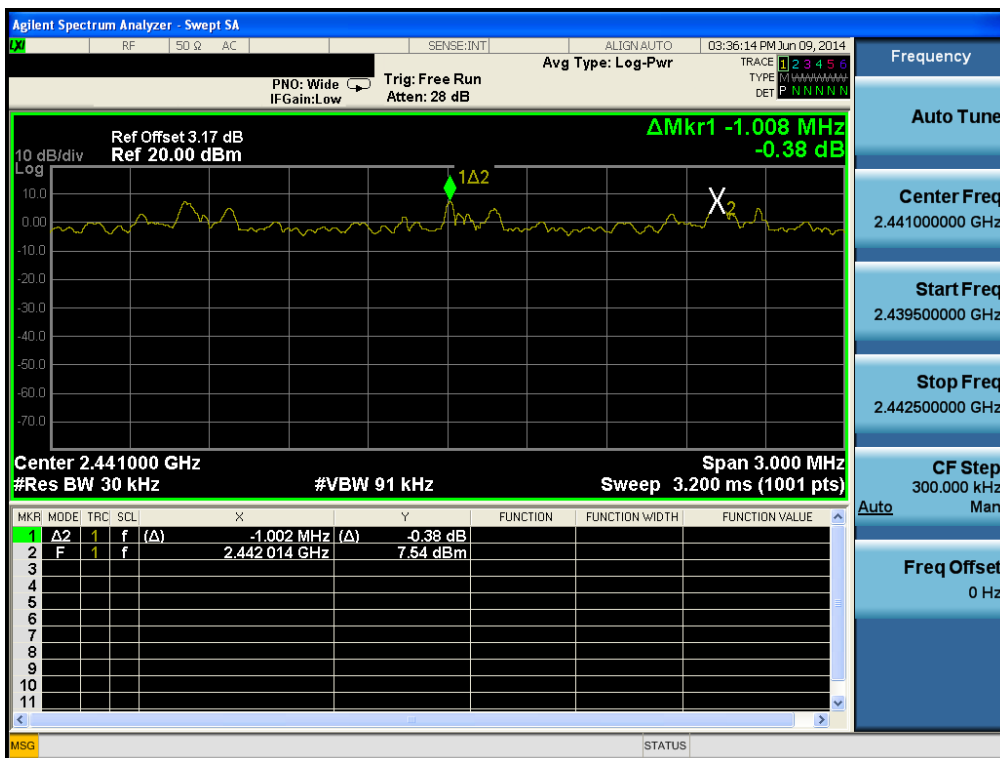
Carrier Frequency Separation (FH)

Hopping mode: Enable & GFSK Module 2



Carrier Frequency Separation (FH)

Hopping mode: Enable & $\pi/4$ -DQPSK Module 2



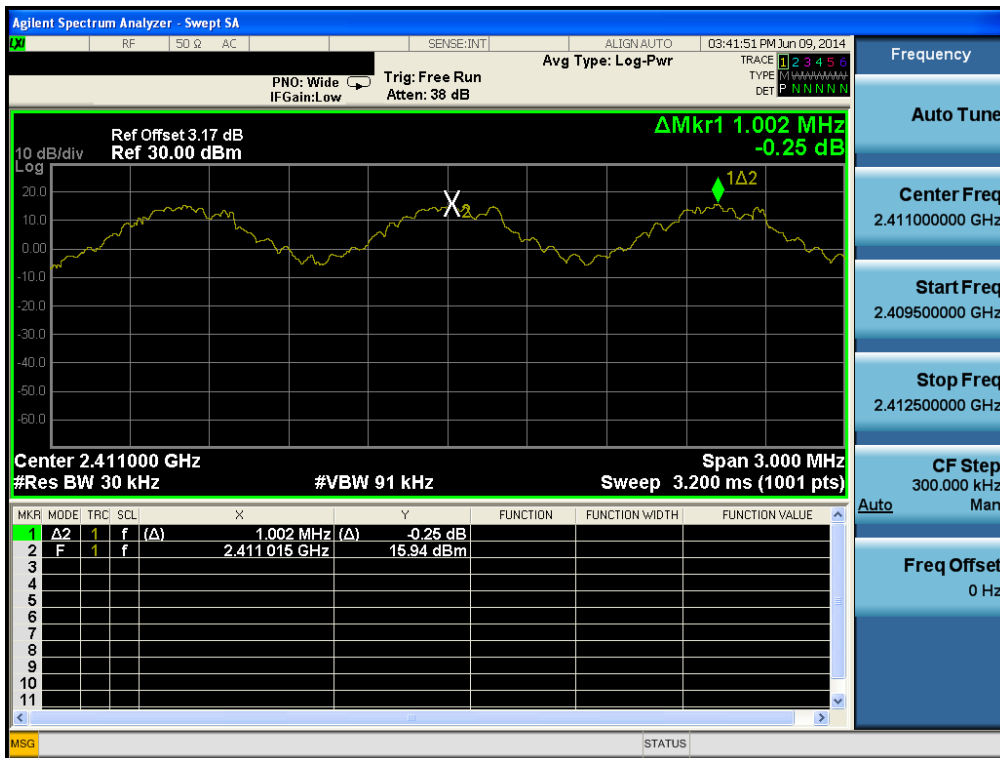
Carrier Frequency Separation (FH)

Hopping mode: Enable & 8DPSK Module 2



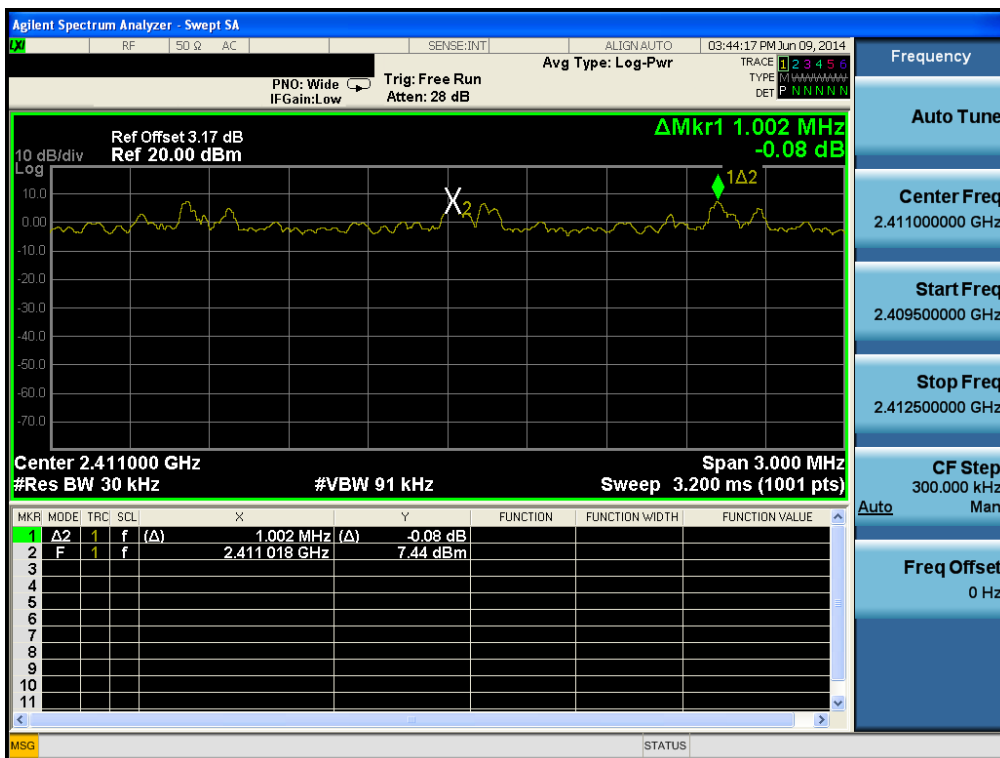
Carrier Frequency Separation (AFH)

Hopping mode: Enable & GFSK Module 2



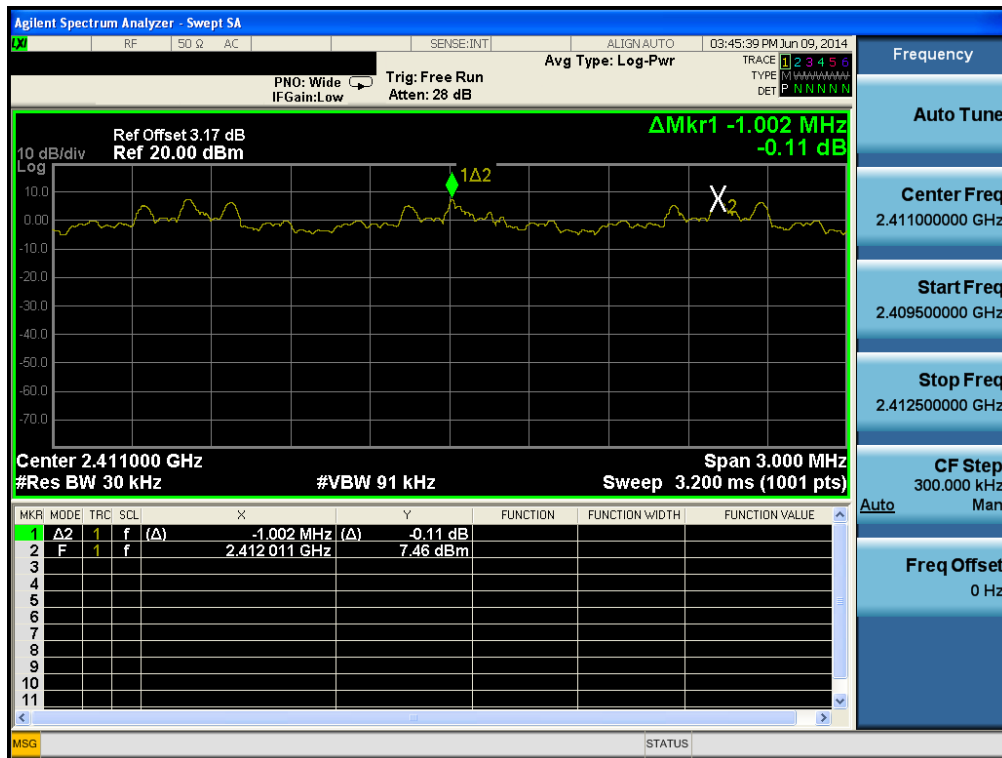
Carrier Frequency Separation (AFH)

Hopping mode: Enable & $\pi/4$ -DQPSK Module 2



Carrier Frequency Separation (AFH)

Hopping mode: Enable & 8DPSK Module 2



4. Number of Hopping Frequencies

4.1. Test Setup

Refer to the APPENDIX I.

4.2. Limit

Limit: >= 15 hops

- Procedure:

The number of hopping frequencies was measured with a spectrum analyzer connected to the antenna terminal, while EUT had its hopping function enabled.

To get higher resolution, two frequency ranges for FH mode within the 2400 ~ 2483.5 MHz were examined.

The spectrum analyzer is set to:

Span = 50MHz Plot 1: Start Frequency = 2391.5MHz, Stop Frequency = 2441.5 MHz
 Plot 2: Start Frequency = 2441.5MHz, Stop Frequency = 2491.5 MHz

RBW = 1% of the span or more

Sweep = auto

VBW = ≥ RBW

Detector function = peak

Trace = max hold

- Measurement Data: Comply

- Moduel 1 & Module 2

- FH mode

Hopping mode	Test mode	Test Result (Total Hops)
Enable	GFSK	79
	$\pi/4$ -DQPSK	79
	8DPSK	79

- AFH mode

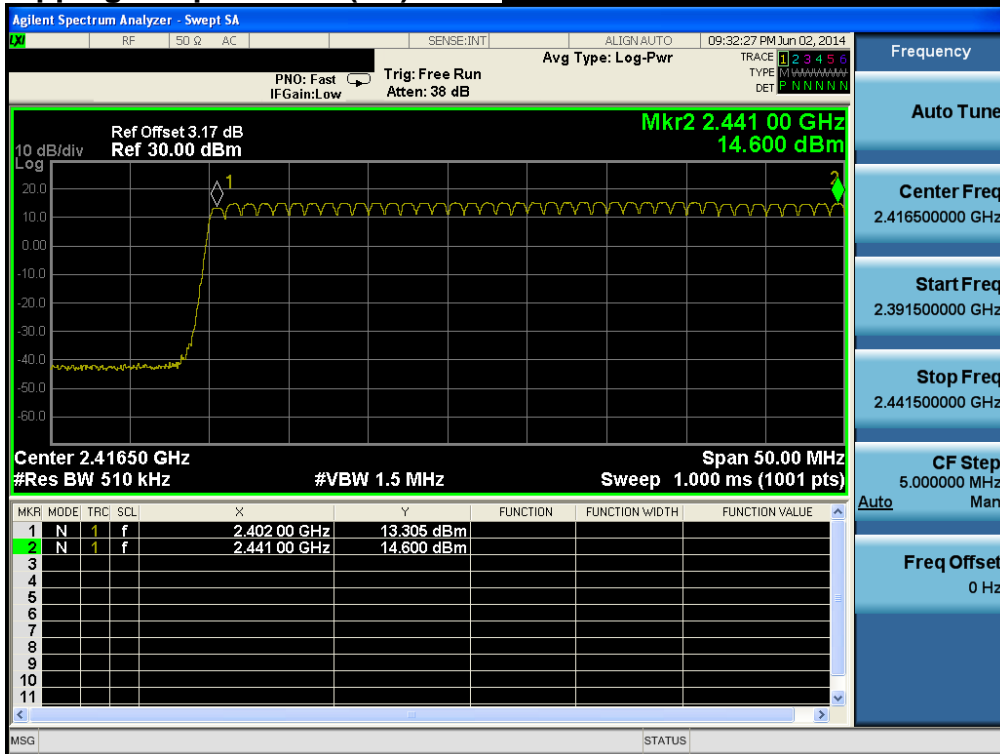
Hopping mode	Test mode	Test Result (Total Hops)
Enable	GFSK	20
	$\pi/4$ -DQPSK	20
	8DPSK	20

Note 1: See next pages for actual measured spectrum plots.

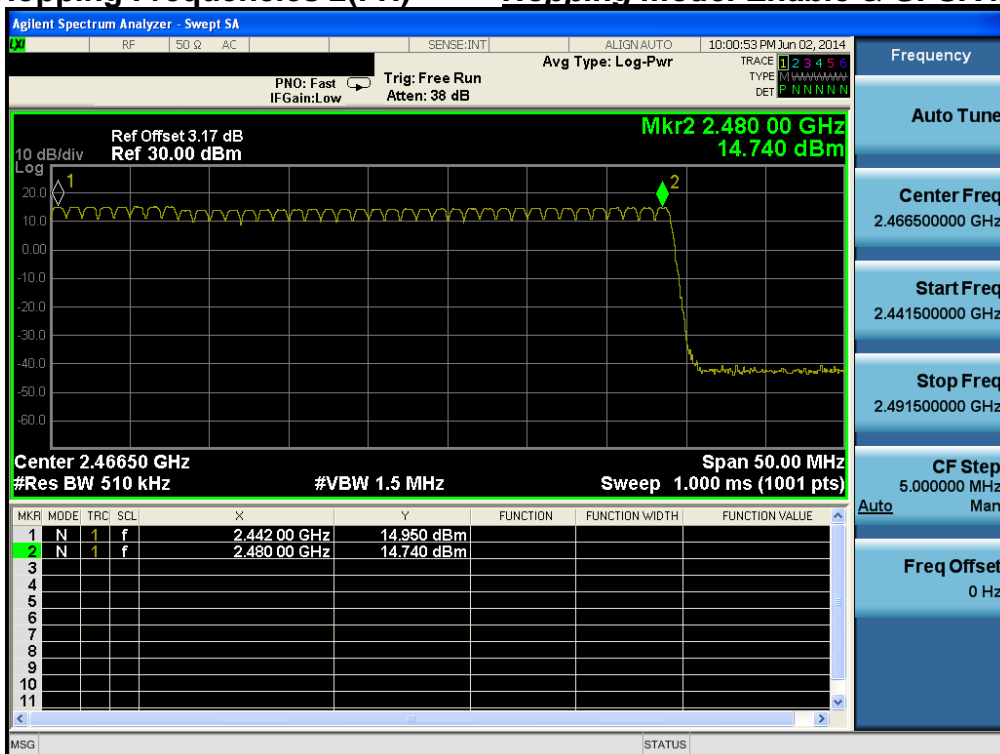
- Minimum Standard:

At least 15 hopes

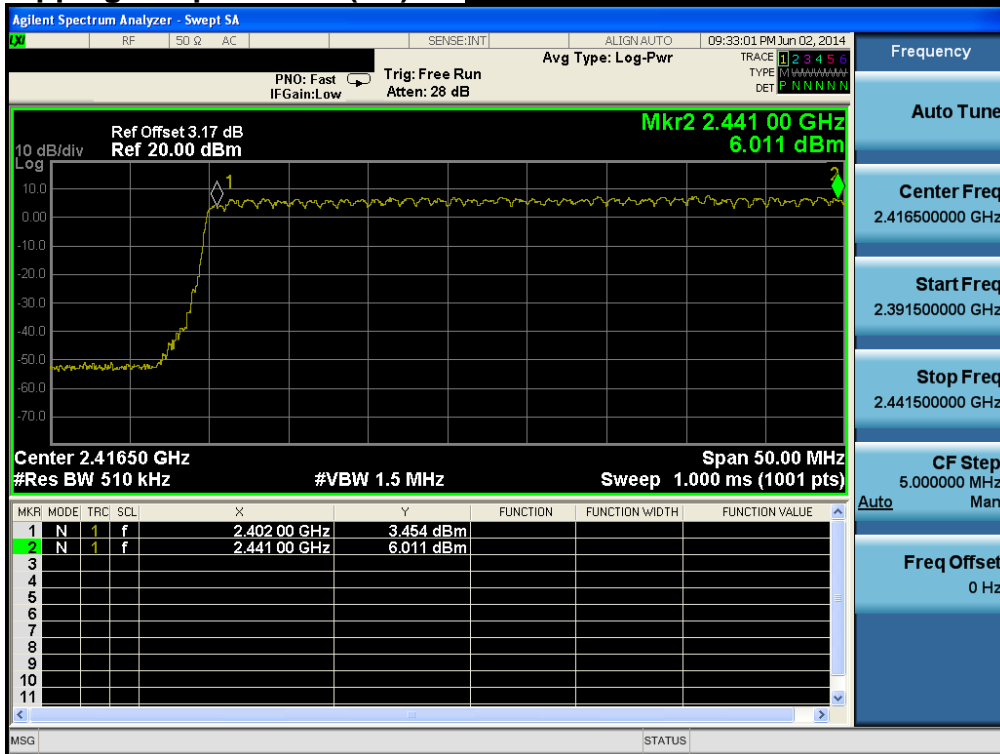
Number of Hopping Frequencies 1(FH) *Hopping mode: Enable & GFSK Module 1*



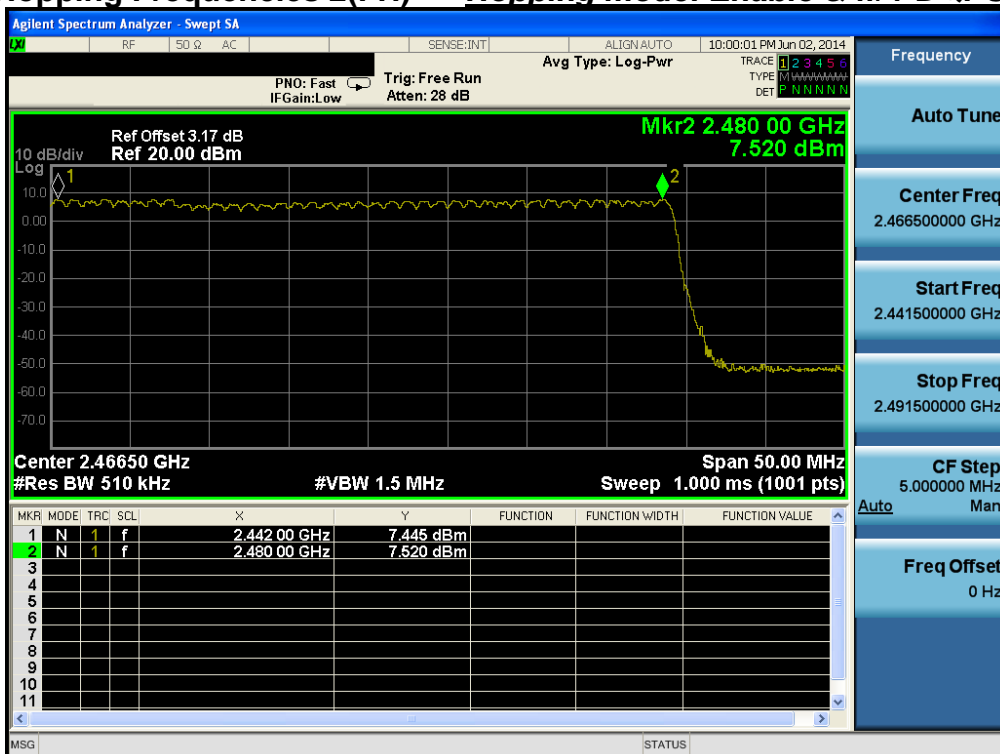
Number of Hopping Frequencies 2(FH) *Hopping mode: Enable & GFSK Module 1*



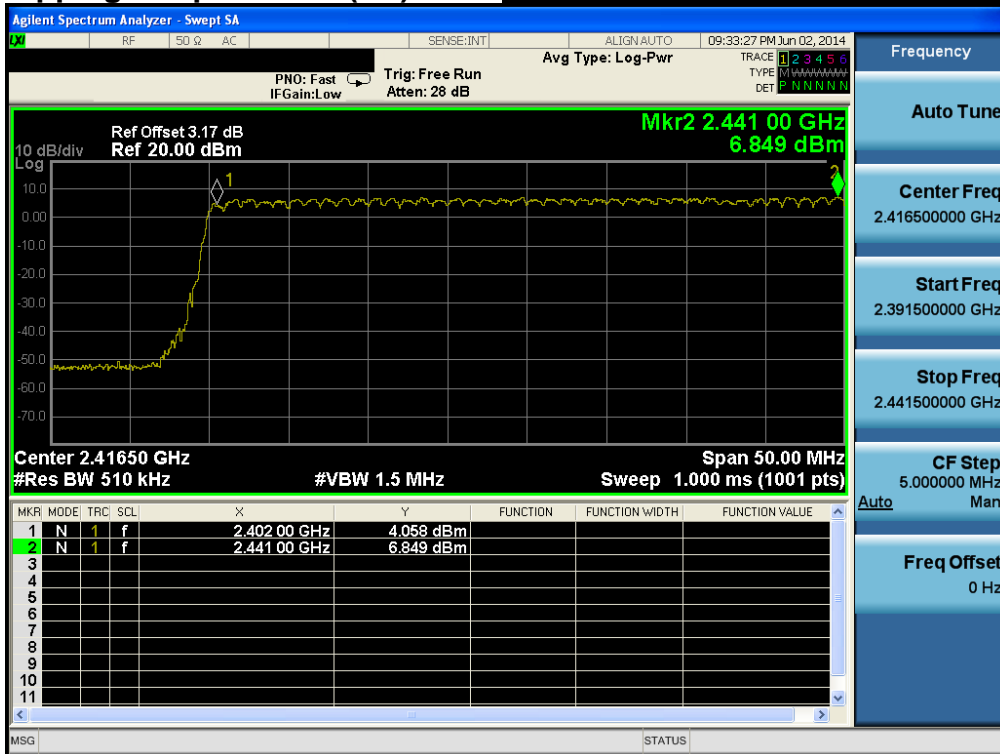
Number of Hopping Frequencies 1(FH) *Hopping mode: Enable & $\pi/4$ -DQPSK Module 1*



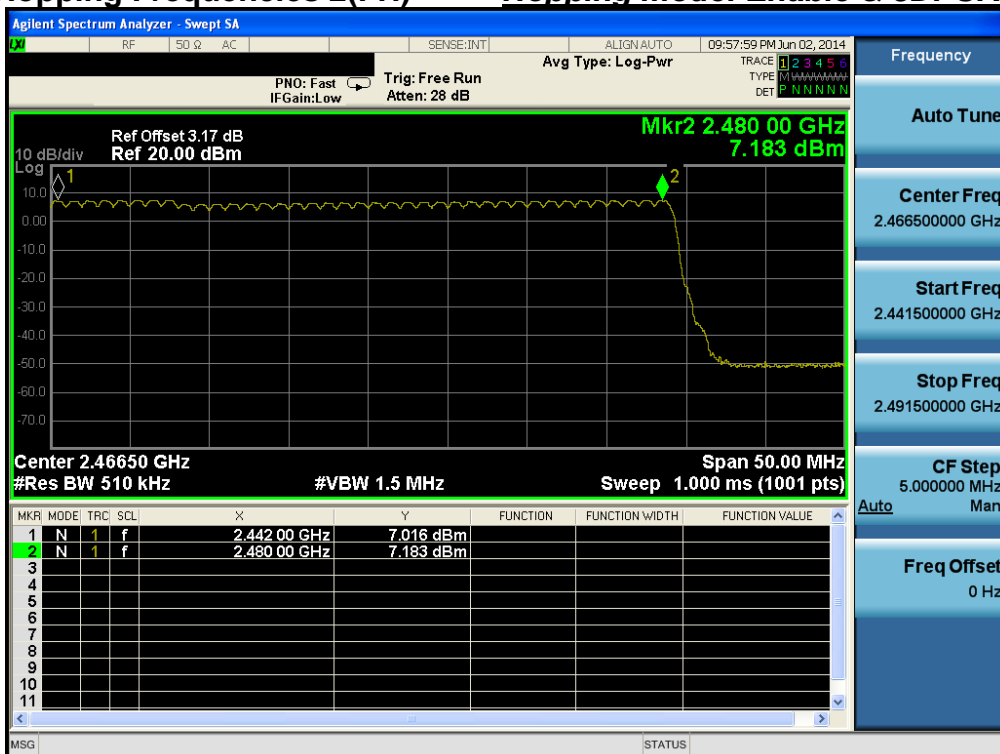
Number of Hopping Frequencies 2(FH) *Hopping mode: Enable & $\pi/4$ -DQPSK Module 1*



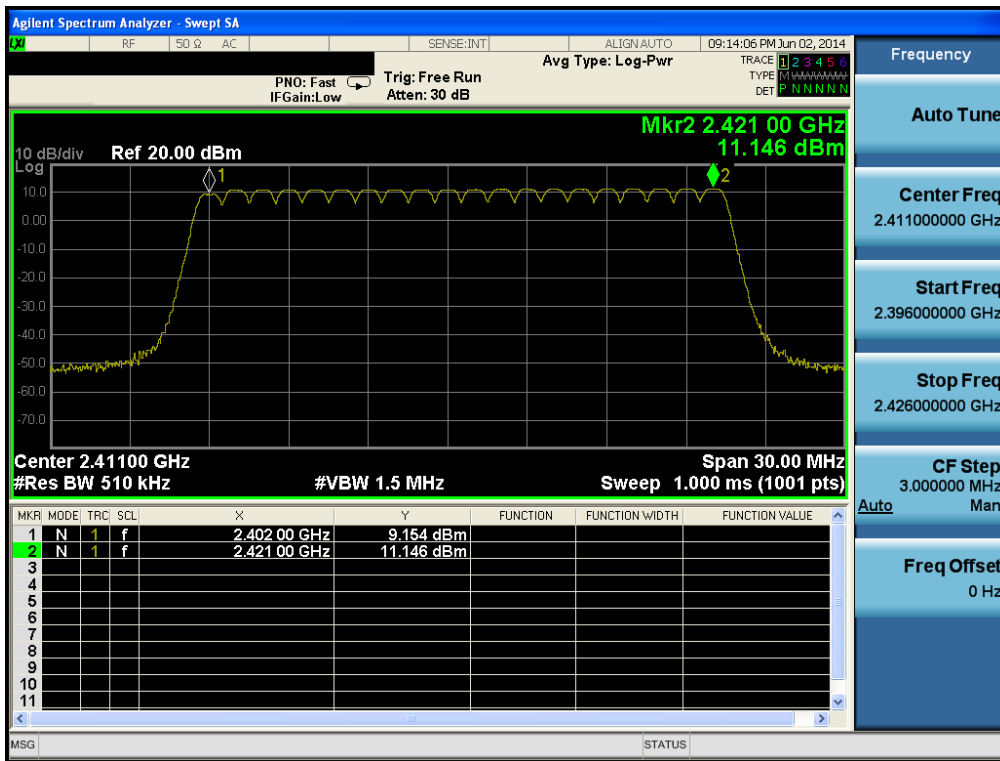
Number of Hopping Frequencies 1(FH) *Hopping mode: Enable & 8DPSK Module 1*



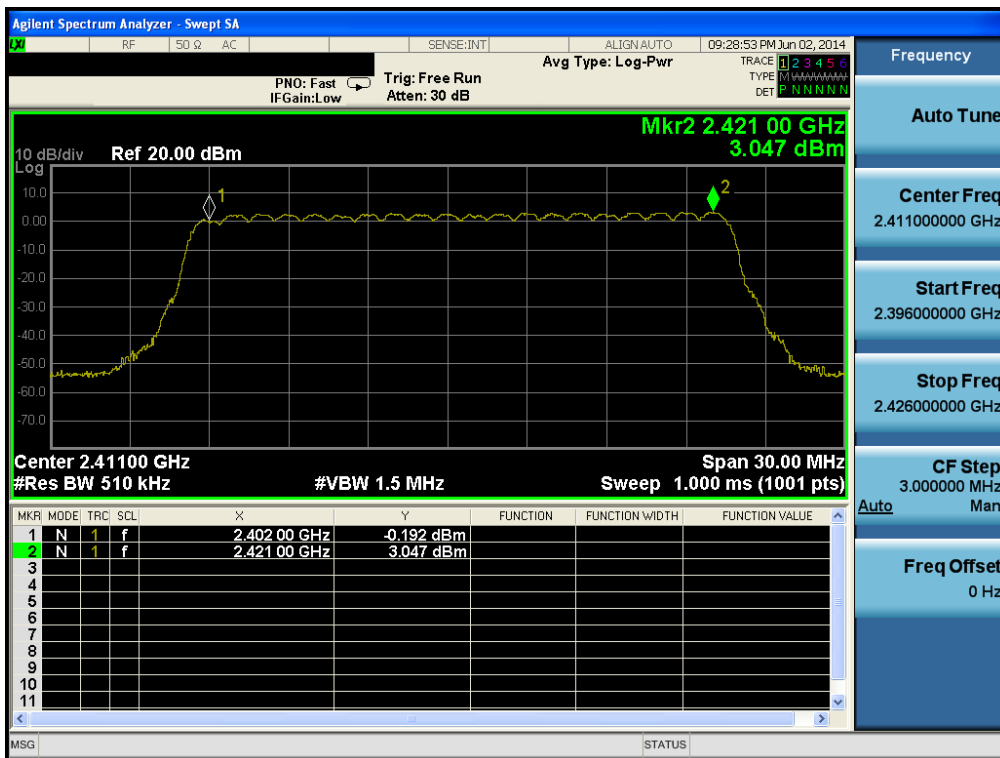
Number of Hopping Frequencies 2(FH) *Hopping mode: Enable & 8DPSK Module 1*



Number of Hopping Frequencies 1(AFH) *Hopping mode: Enable & GFSK Module 1*

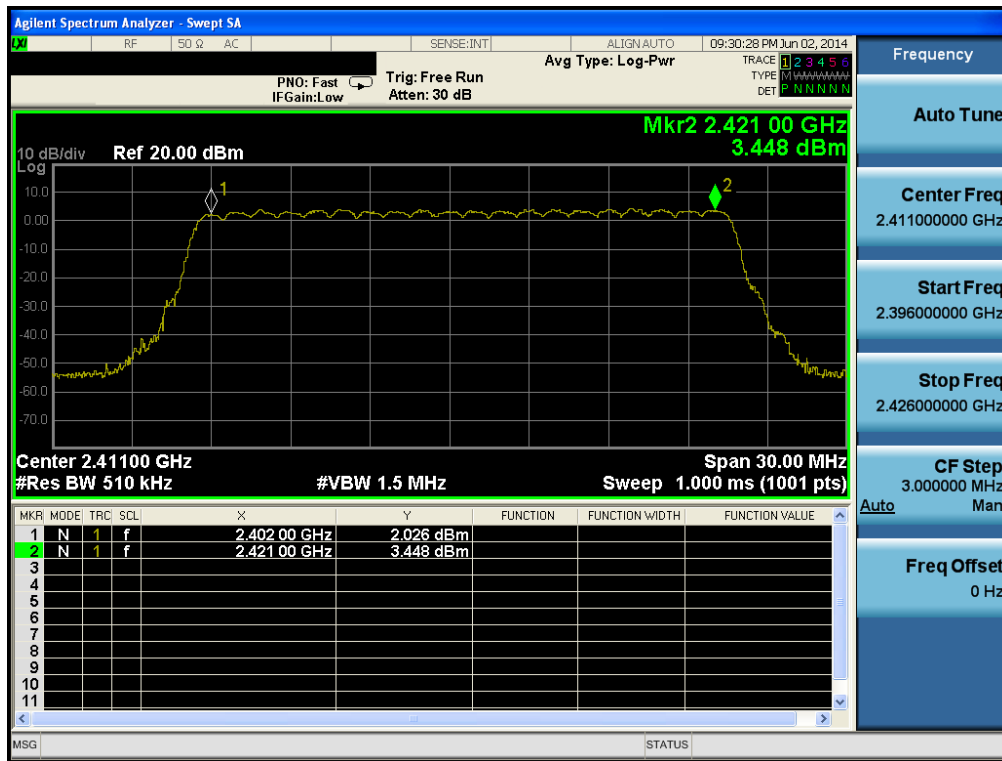


Number of Hopping Frequencies 1(AFH) *Hopping mode: Enable & π/4-DQPSK Module 1*

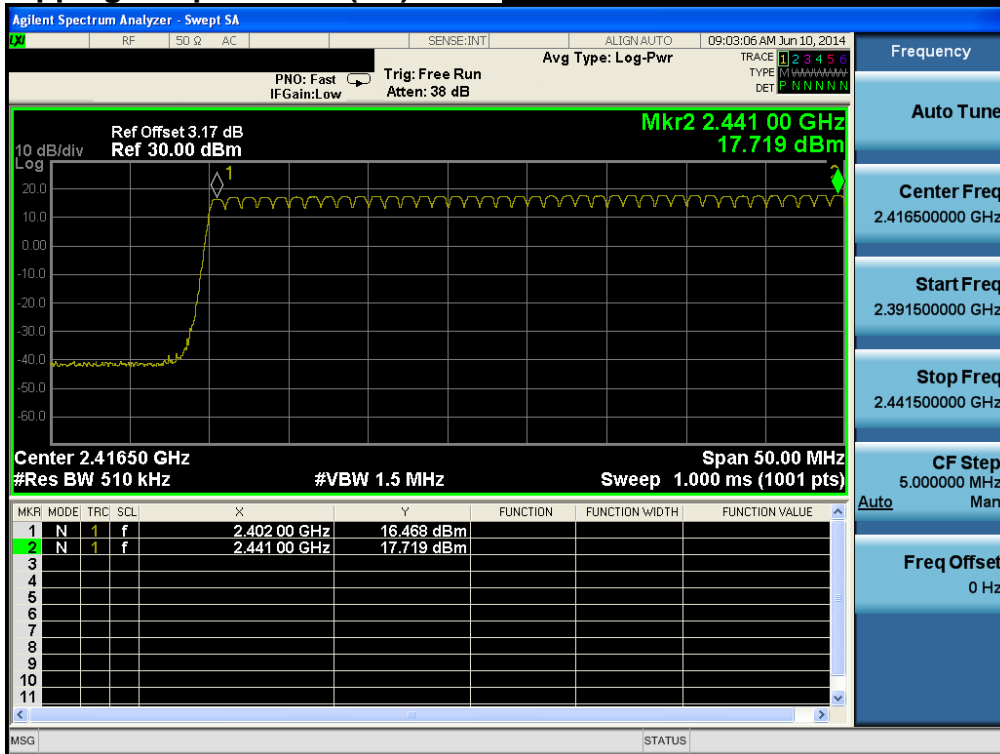


Number of Hopping Frequencies 1(AFH)

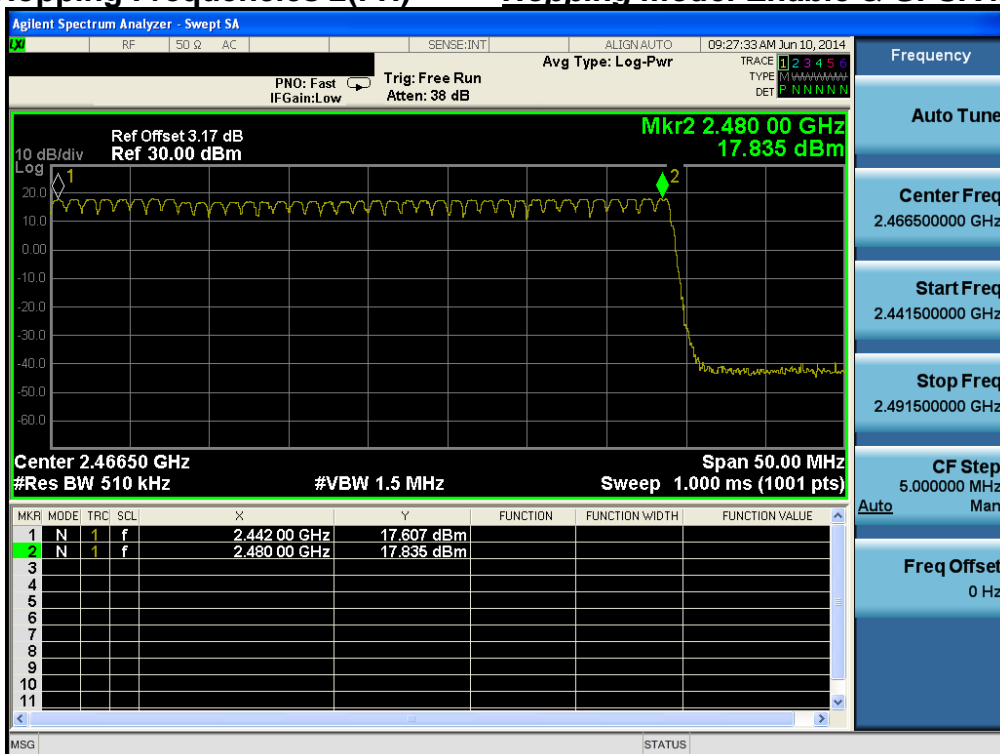
Hopping mode: Enable & 8DPSK Module 1



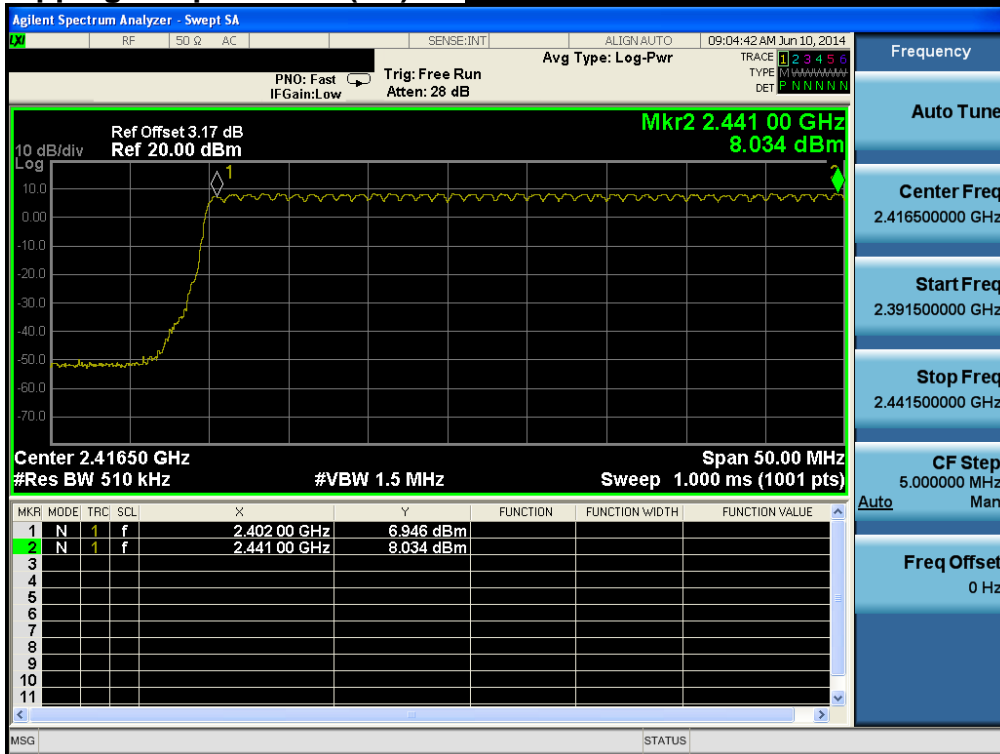
Number of Hopping Frequencies 1(FH) *Hopping mode: Enable & GFSK Module 2*



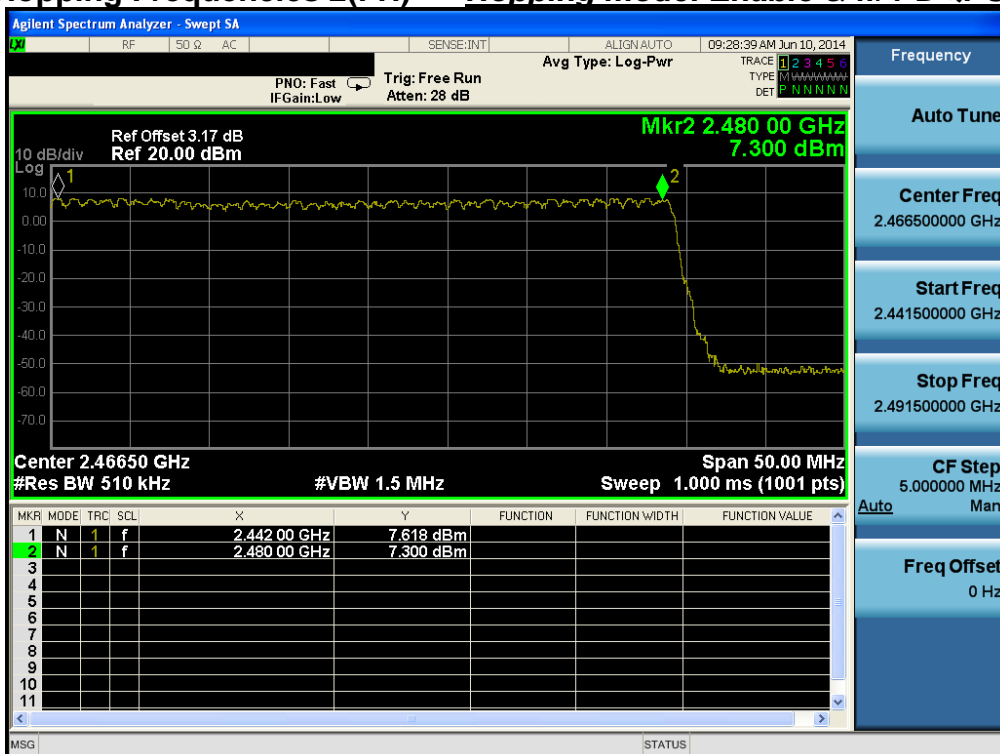
Number of Hopping Frequencies 2(FH) *Hopping mode: Enable & GFSK Module 2*



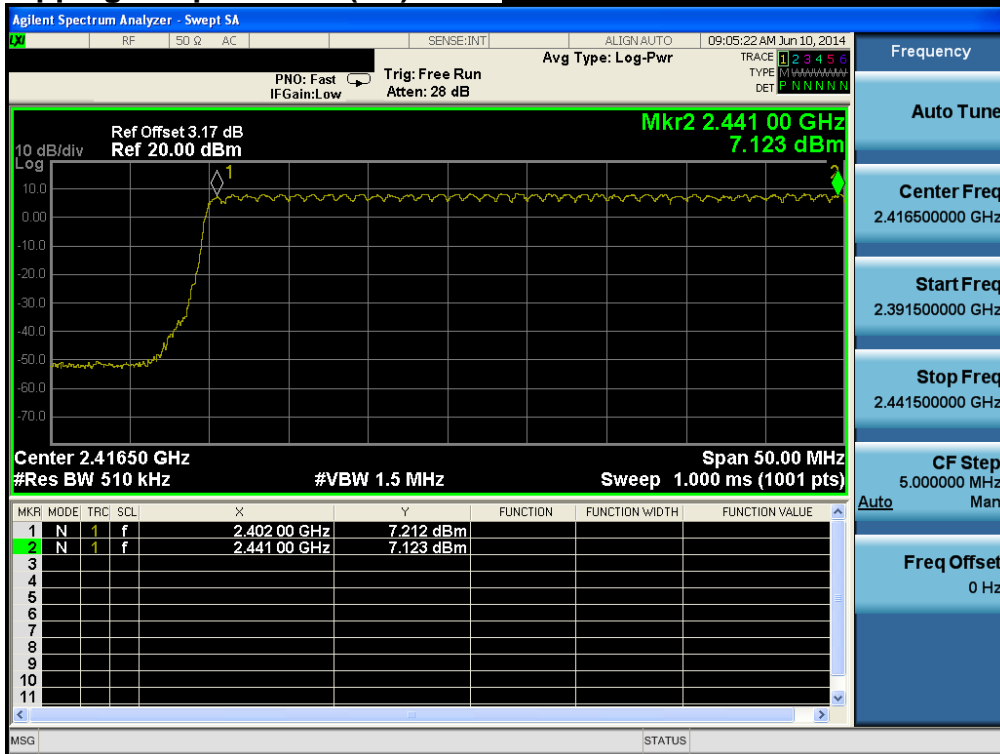
Number of Hopping Frequencies 1(FH) *Hopping mode: Enable & $\pi/4$ -DQPSK Module 1*



Number of Hopping Frequencies 2(FH) *Hopping mode: Enable & $\pi/4$ -DQPSK Module 1*



Number of Hopping Frequencies 1(FH) *Hopping mode: Enable & 8DPSK Module 1*



Number of Hopping Frequencies 2(FH) *Hopping mode: Enable & 8DPSK Module 1*

