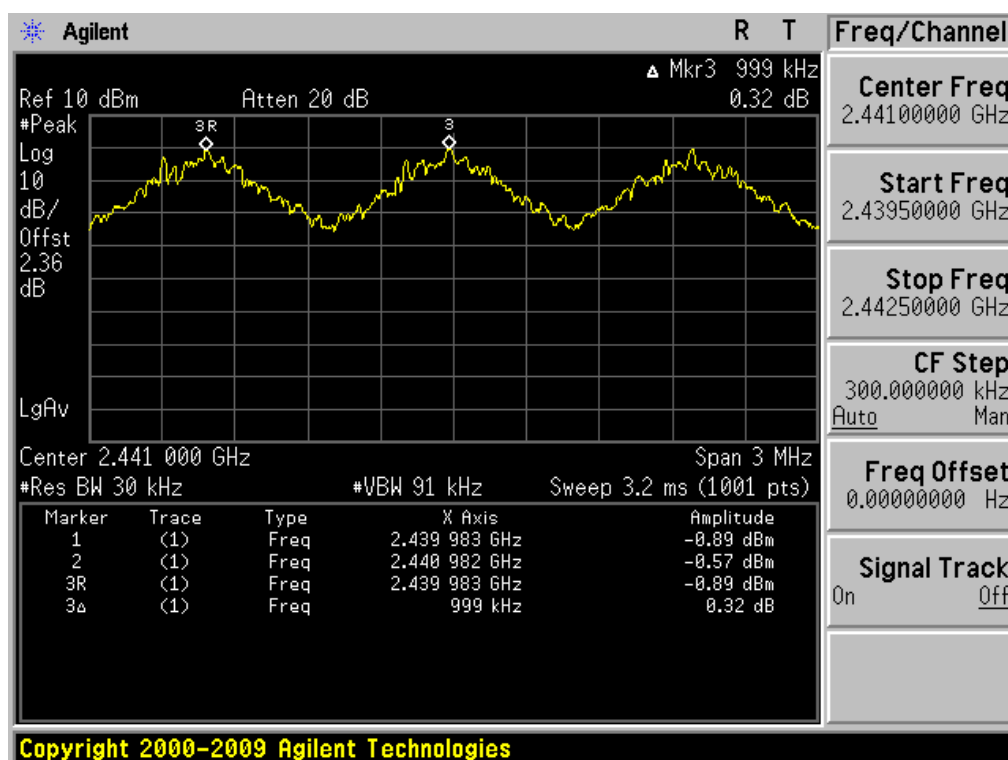
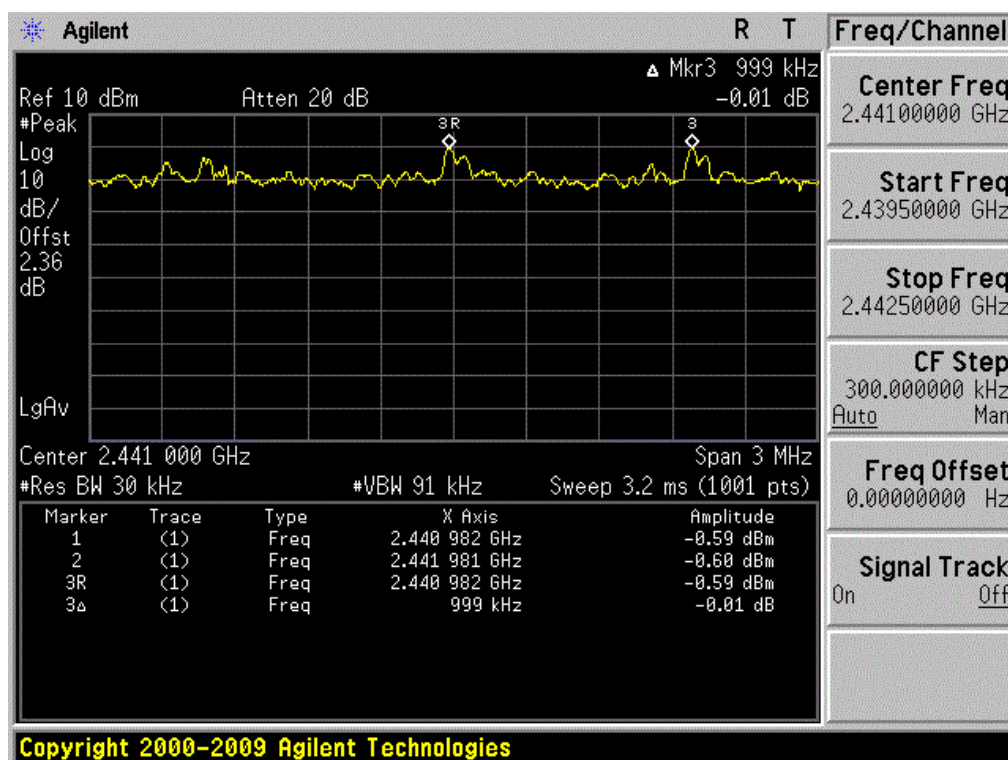
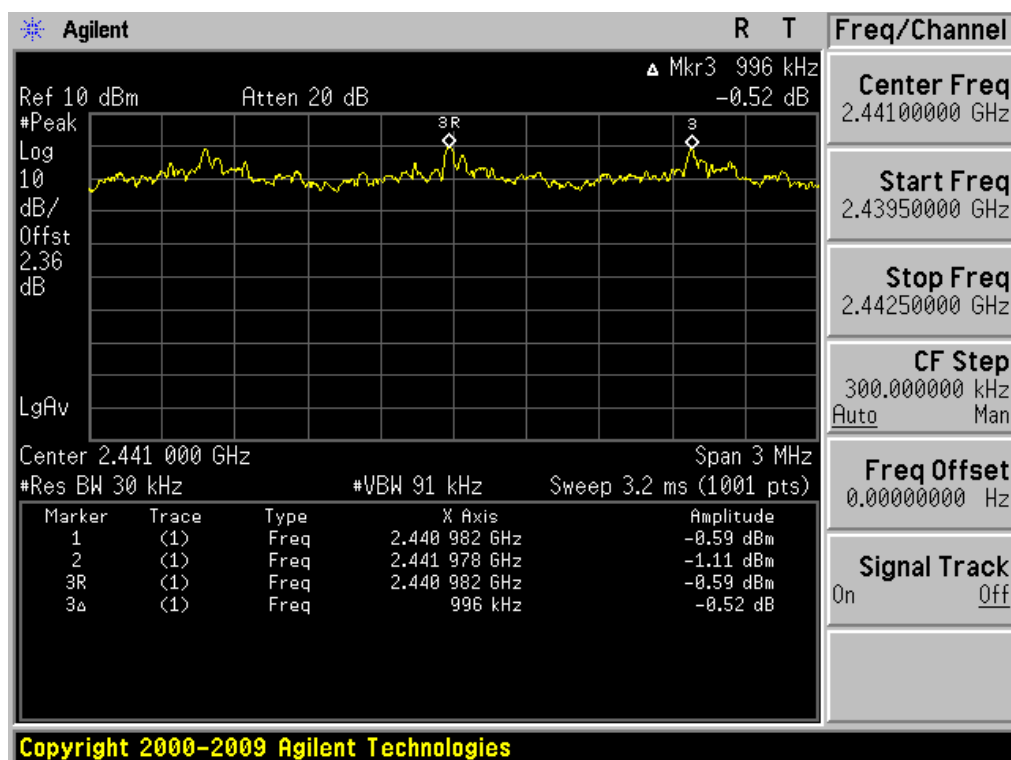


**Carrier Frequency Separation (FH)**Hopping mode: Enable & $\pi/4$ DQPSK

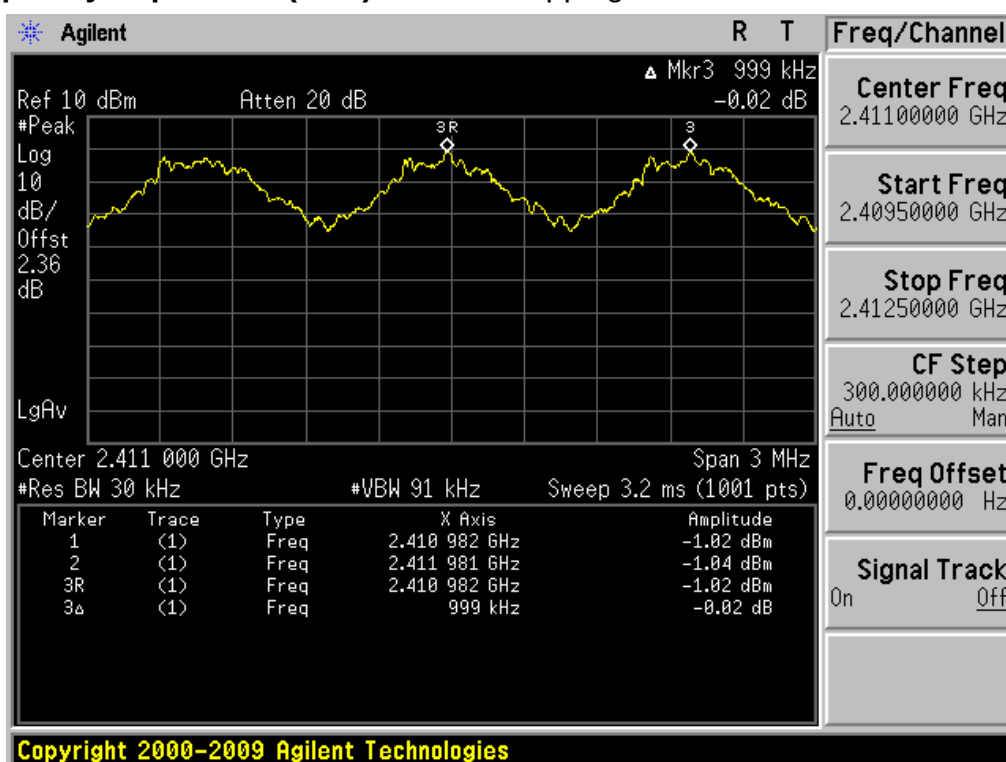
Carrier Frequency Separation (FH)

Hopping mode: Enable & 8DPSK

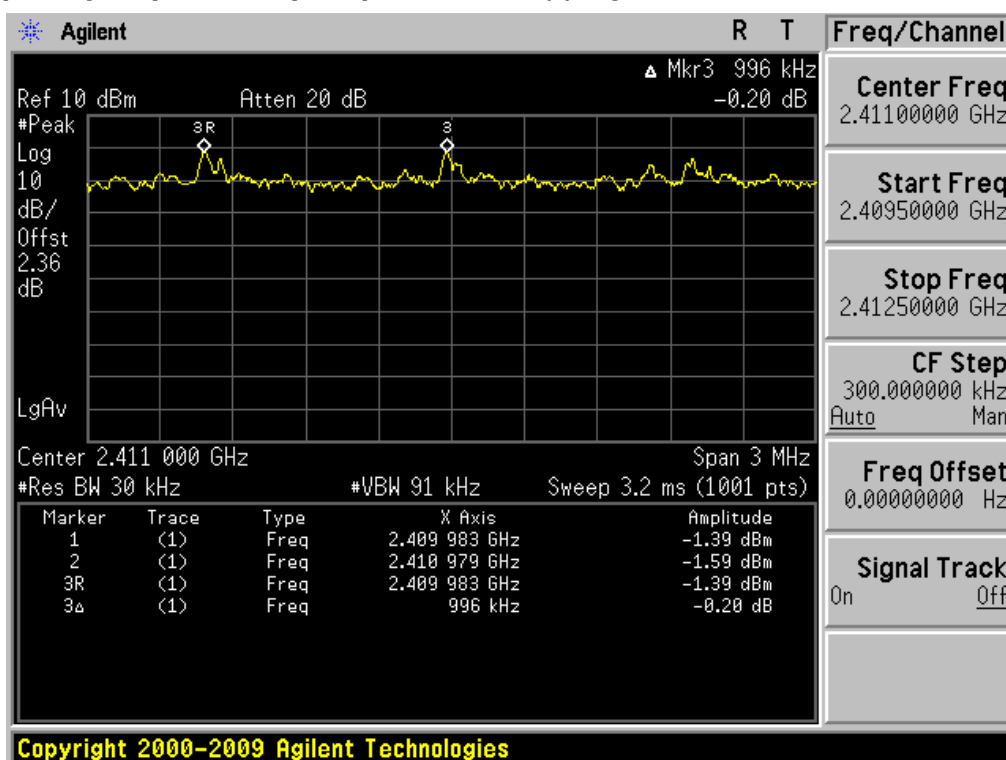


Carrier Frequency Separation (AFH)

Hopping mode: Enable & GFSK

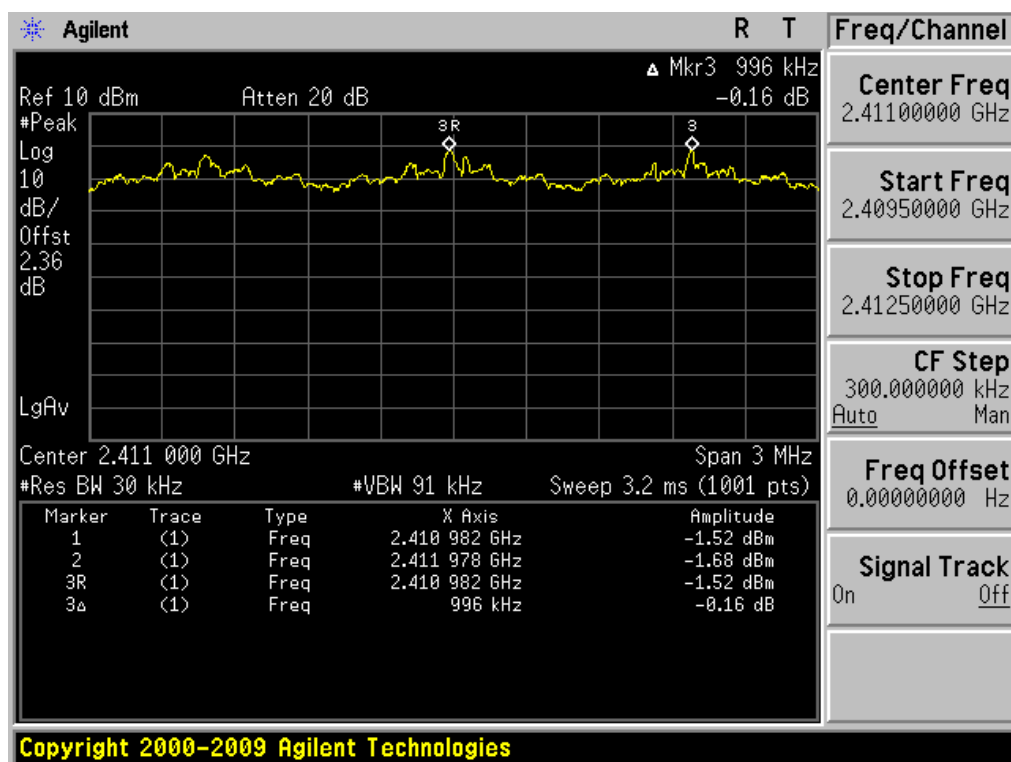


Carrier Frequency Separation (AFH)

Hopping mode: Enable & $\pi/4$ DQPSK

Carrier Frequency Separation (AFH)

Hopping mode: Enable & 8DPSK



- Measurement Data: Comply**L52SK2****- FH mode**

Hopping Mode	Test Mode	Peak of adjacent Channel (MHz)	Peak of center channel (MHz)	Test Result (MHz)
Enable	GFSK	2439.986	2440.985	0.999
	$\pi/4$ DQPSK	2409.985	2410.984	0.999
	8DPSK	2439.983	2440.982	0.999

- AFH mode

Hopping Mode	Test Mode	Peak of adjacent Channel (MHz)	Peak of center channel (MHz)	Test Result (MHz)
Enable	GFSK	2409.986	2410.982	0.996
	$\pi/4$ DQPSK	2409.983	2410.982	0.999
	8DPSK	2410.991	2411.987	0.993

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

- 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

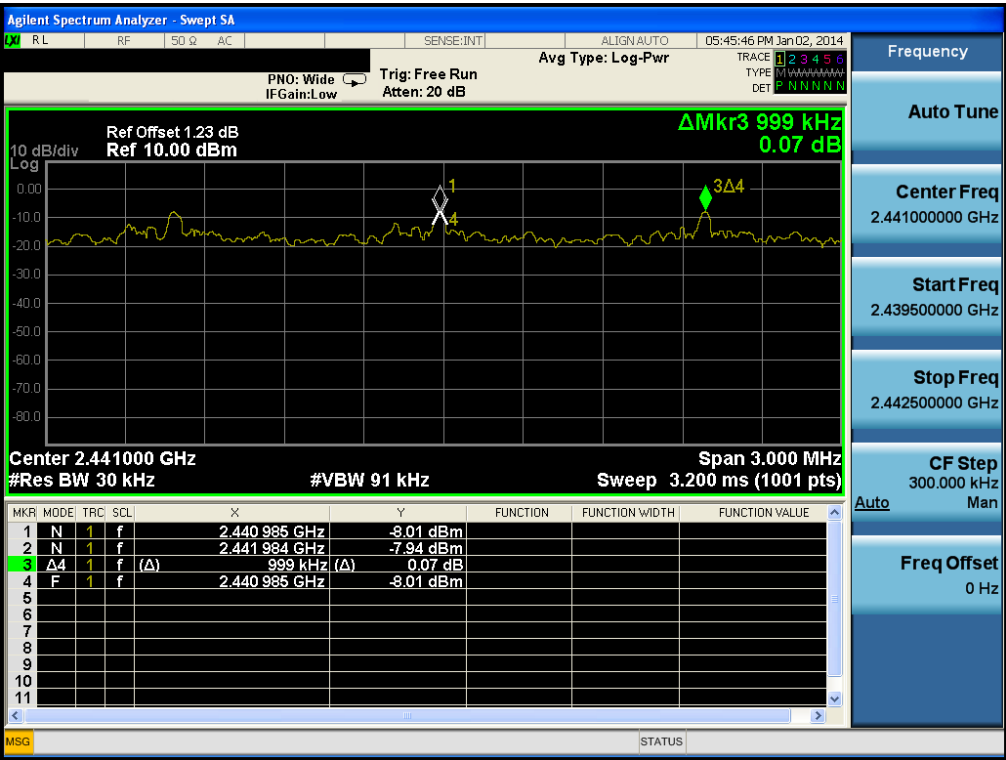
Carrier Frequency Separation (FH)

Hopping mode: Enable&GFSK



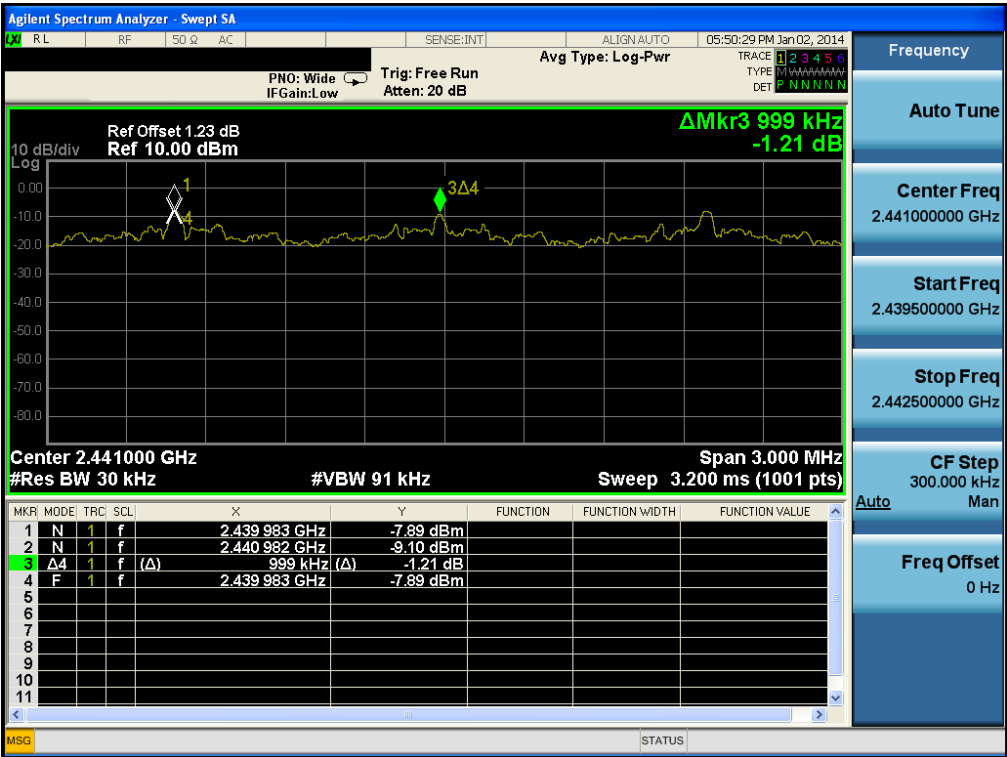
Carrier Frequency Separation (FH)

Hopping mode: Enable& $\pi/4$ DQPSK



Carrier Frequency Separation (FH)

Hopping mode: Enable&8DPSK

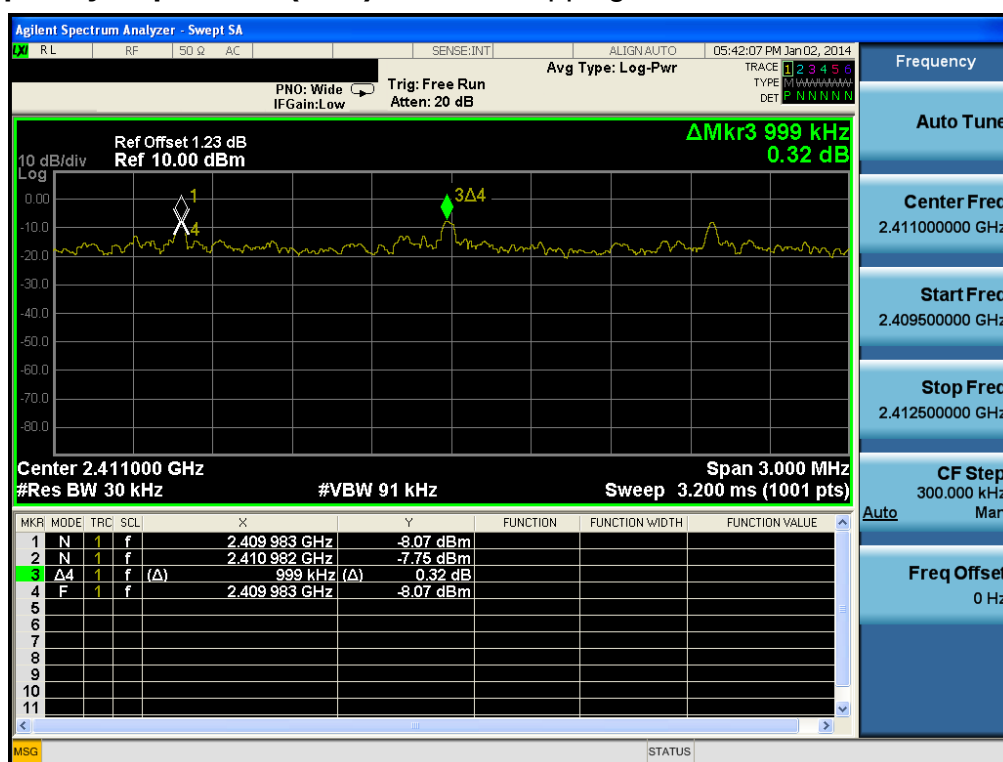


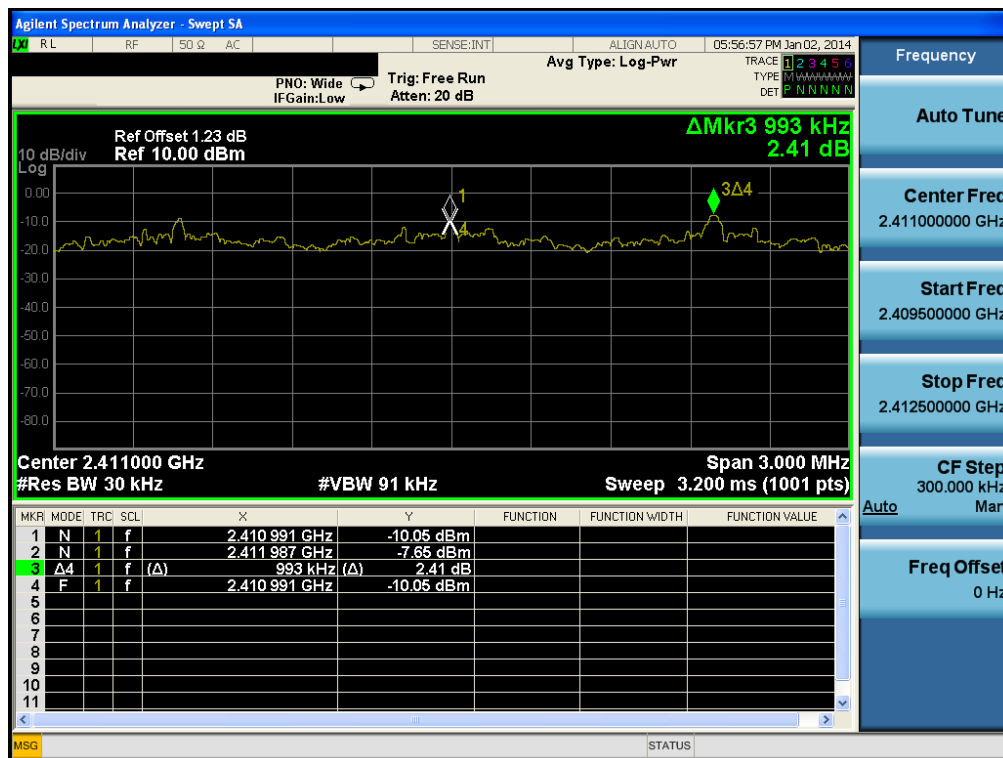
Carrier Frequency Separation (AFH)

Hopping mode: Enable&GFSK



Carrier Frequency Separation (AFH)

Hopping mode: Enable& π /4DQPSK



- Measurement Data: Comply**L53VW2****- FH mode**

Hopping Mode	Test Mode	Peak of adjacent Channel (MHz)	Peak of center channel (MHz)	Test Result (MHz)
Enable	GFSK	2439.998	2440.997	0.999
	$\pi/4$ DQPSK	2440.997	2441.996	0.999
	8DPSK	2439.998	2440.997	0.999

- AFH mode

Hopping Mode	Test Mode	Peak of adjacent Channel (MHz)	Peak of center channel (MHz)	Test Result (MHz)
Enable	GFSK	2409.995	2410.994	0.999
	$\pi/4$ DQPSK	2409.998	2410.997	0.999
	8DPSK	2409.998	2410.997	0.999

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

- 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.

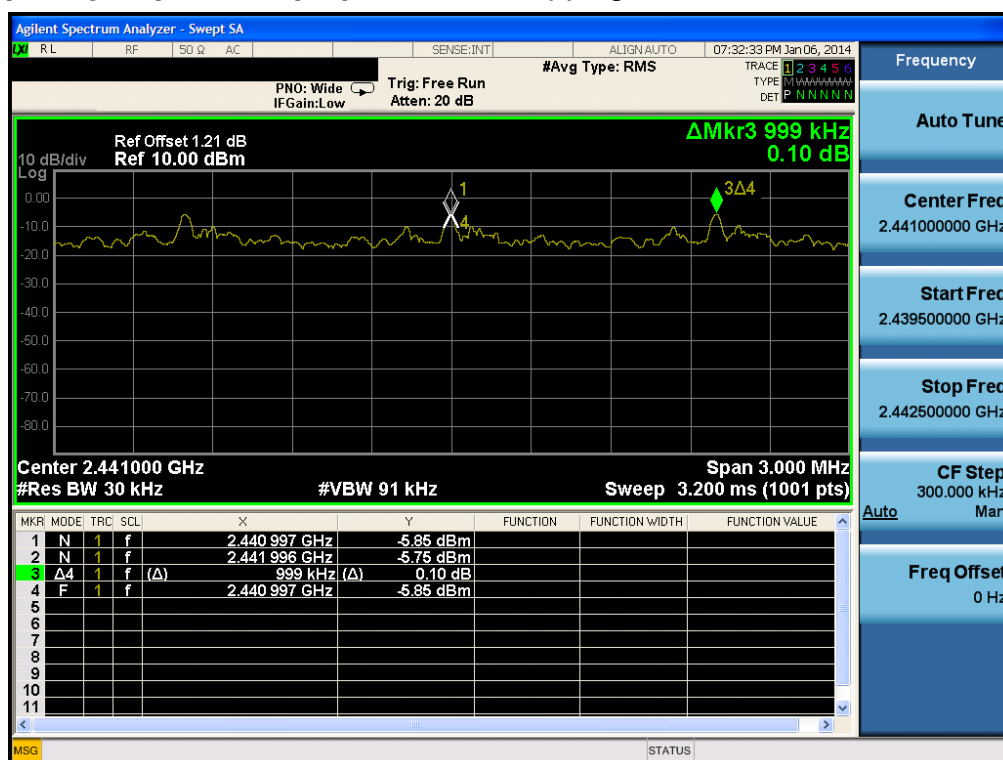
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than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

Carrier Frequency Separation (FH)

Hopping mode: Enable & GFSK

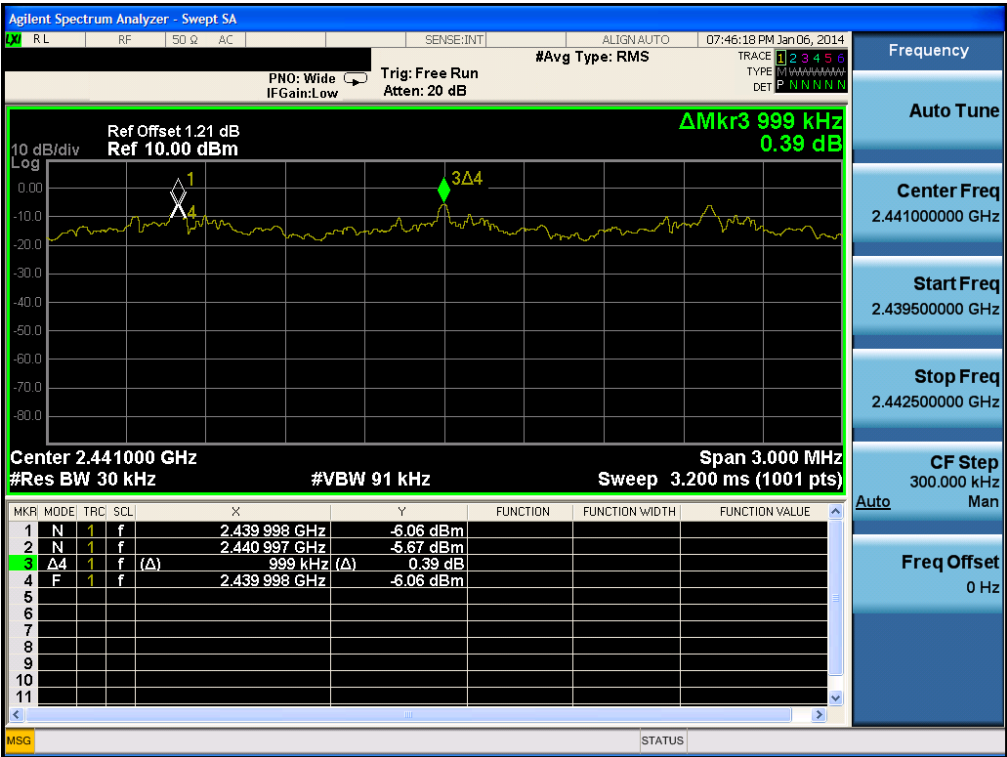


Carrier Frequency Separation (FH)

Hopping mode: Enable & $\pi/4$ DQPSK

Carrier Frequency Separation (FH)

Hopping mode: Enable & 8DPSK



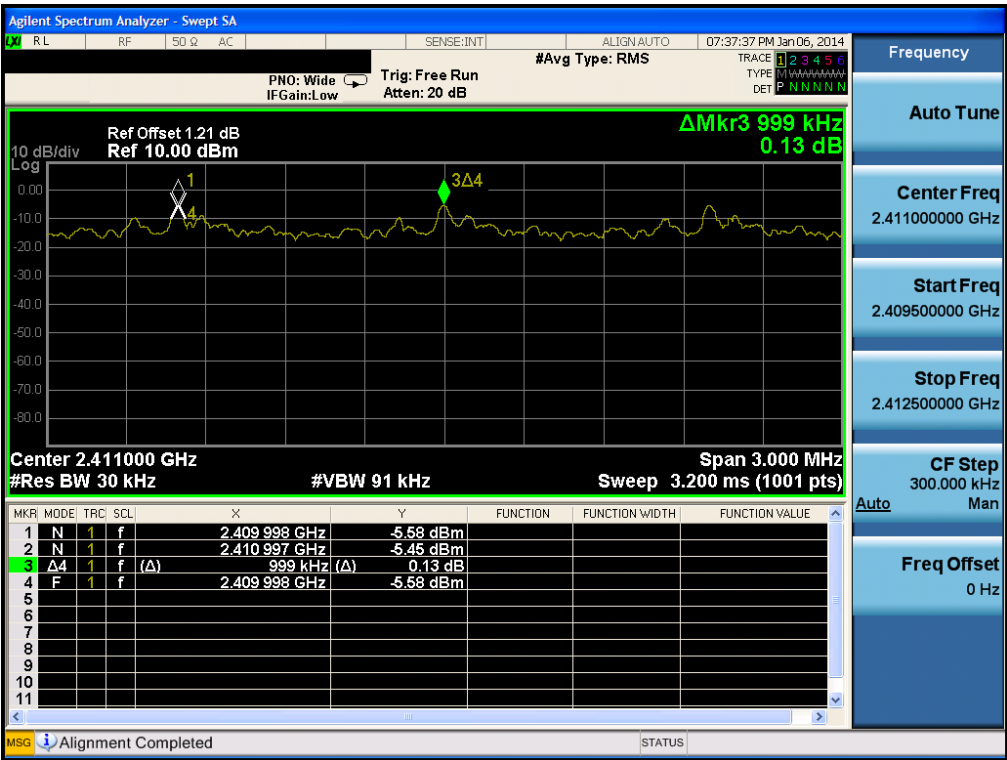
Carrier Frequency Separation (AFH)

Hopping mode: Enable & GFSK



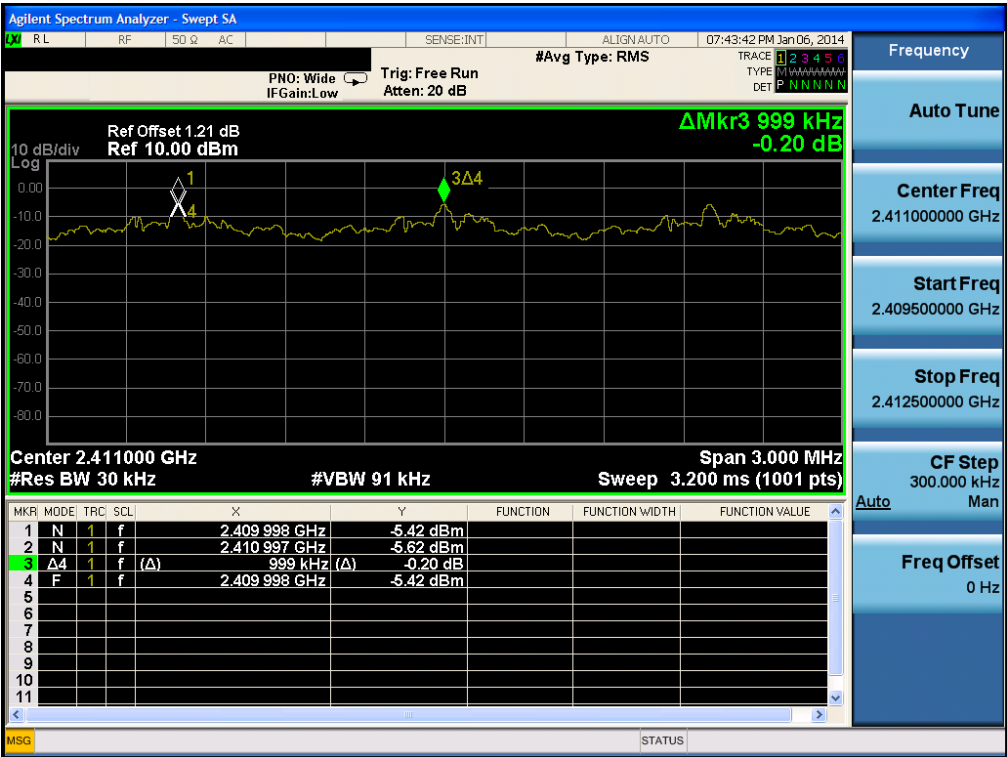
Carrier Frequency Separation (AFH)

Hopping mode: Enable & $\pi/4$ DQPSK



Carrier Frequency Separation (AFH)

Hopping mode: Enable & 8DPSK



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, four frequency ranges within the 2400 ~ 2483.5 MHz FH band were examined.

The spectrum analyzer is set to:

FH mode Plot 1: Start Frequency = 2389.5MHz, Stop Frequency = 2414.5 MHz(Span = 25MHz)
 Plot 2: Start Frequency = 2414.5MHz, Stop Frequency = 2439.5 MHz(Span = 25MHz)
 Plot 3: Start Frequency = 2439.5MHz, Stop Frequency = 2464.5 MHz(Span = 25MHz)
 Plot 4: Start Frequency = 2464.5MHz, Stop Frequency = 2489.5 MHz(Span = 25MHz)

AFH mode Plot 1: Start Frequency = 2396.0MHz, Stop Frequency = 2426.0 MHz(Span = 30MHz)

RBW = 1% of the span or more

Sweep = auto

VBW = $\geq$ RBW

Detector function = peak

Trace = max hold

- Measurement Data: **Comply**

L40SE2

- 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

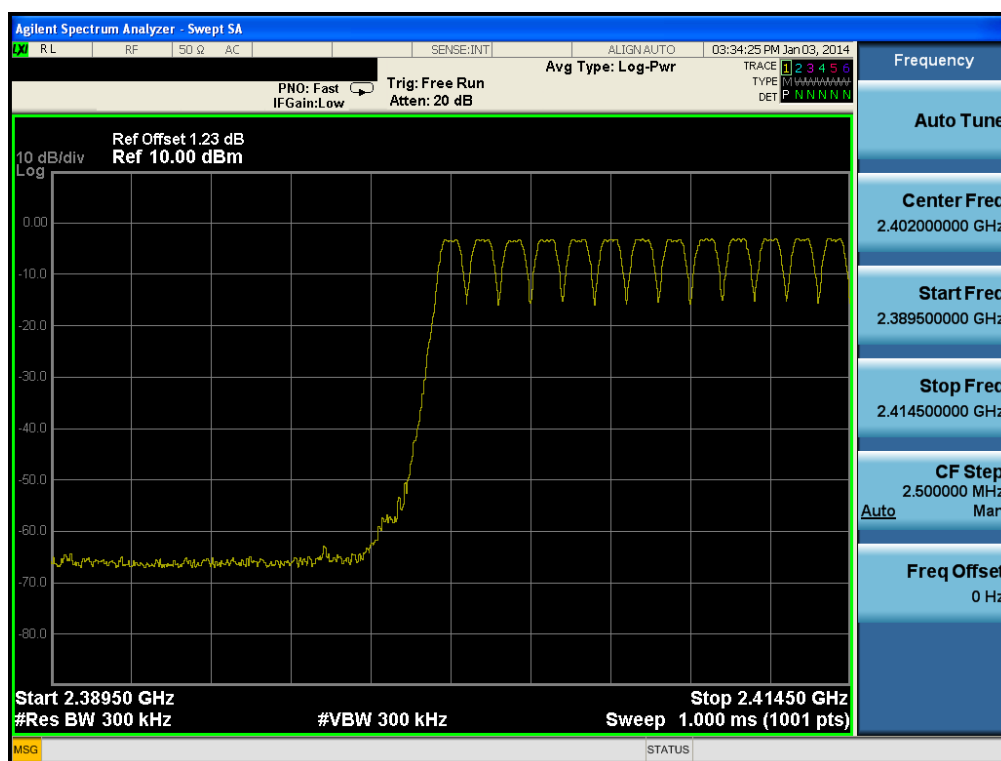
Note 1: See next pages for actual measured spectrum plots.

- Minimum Standard:

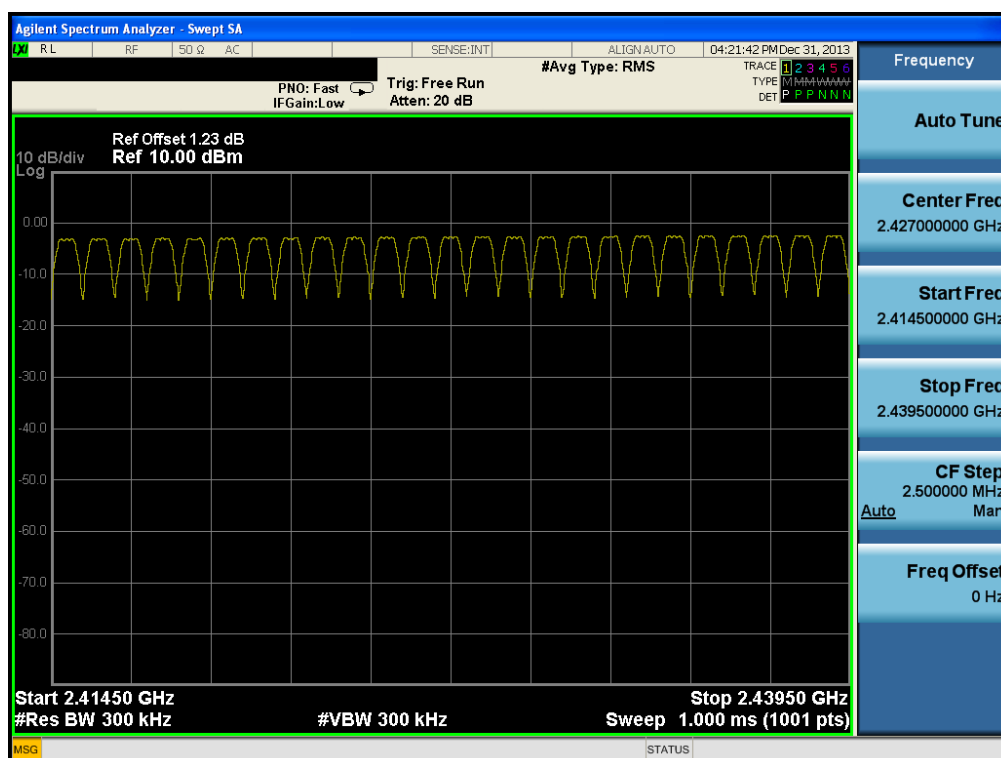
At least 15 hops

Number of Hopping Frequencies 1(FH)

Hopping mode: Enable &GFSK

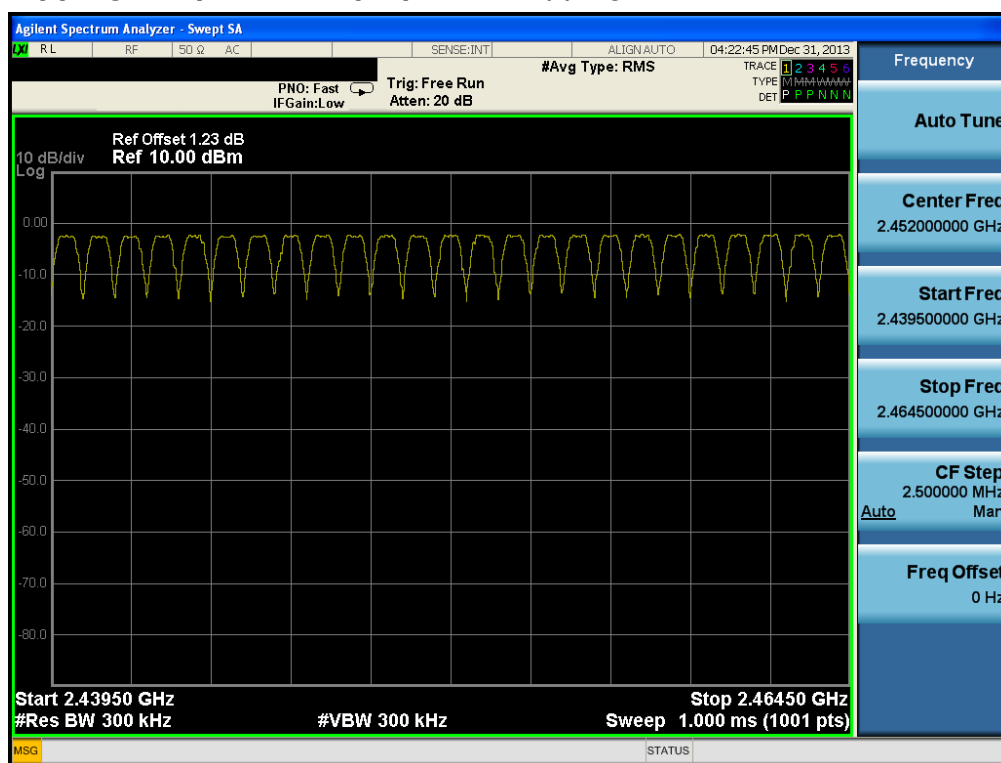
**Number of Hopping Frequencies 2(FH)**

Hopping mode: Enable &GFSK



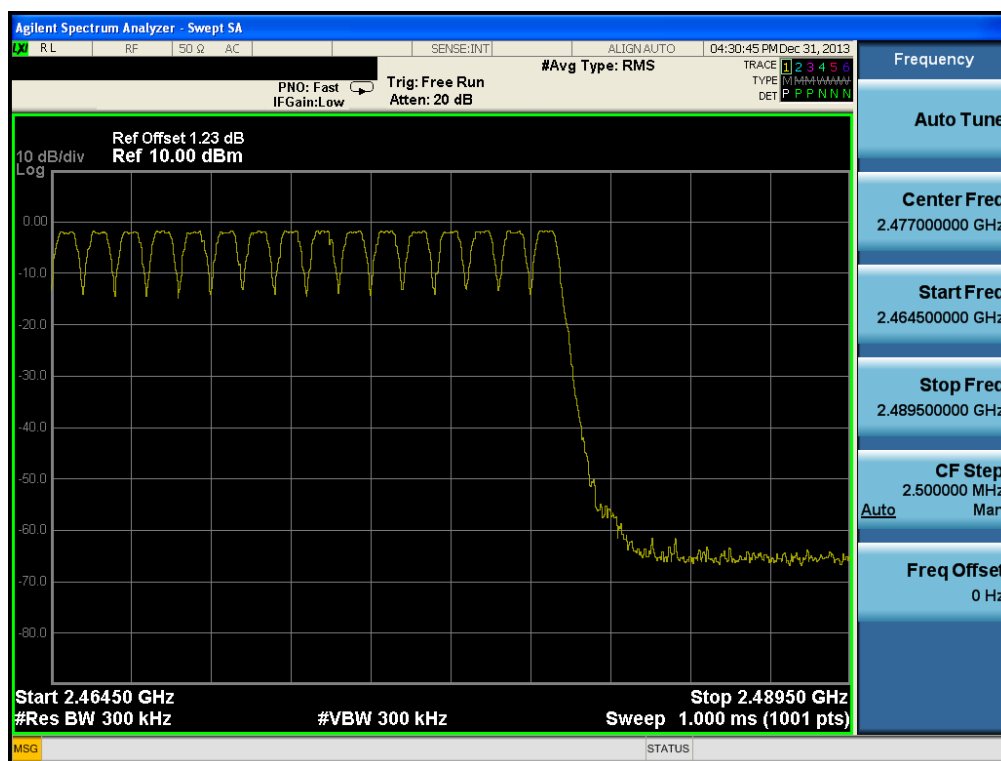
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable &GFSK

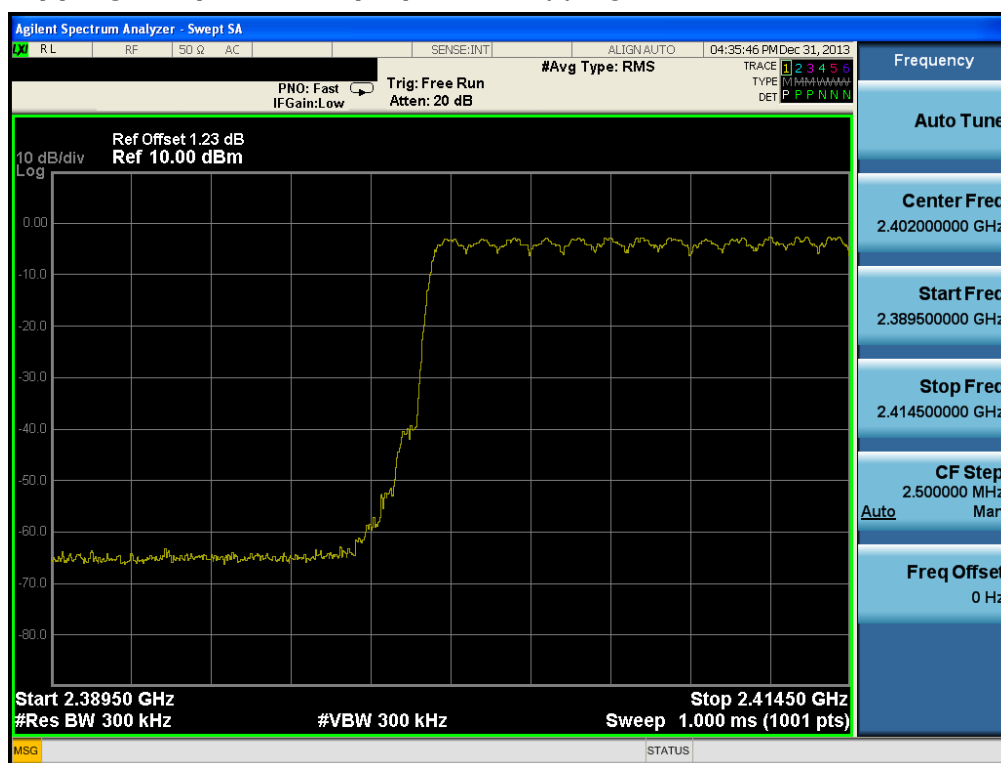


Number of Hopping Frequencies 4(FH)

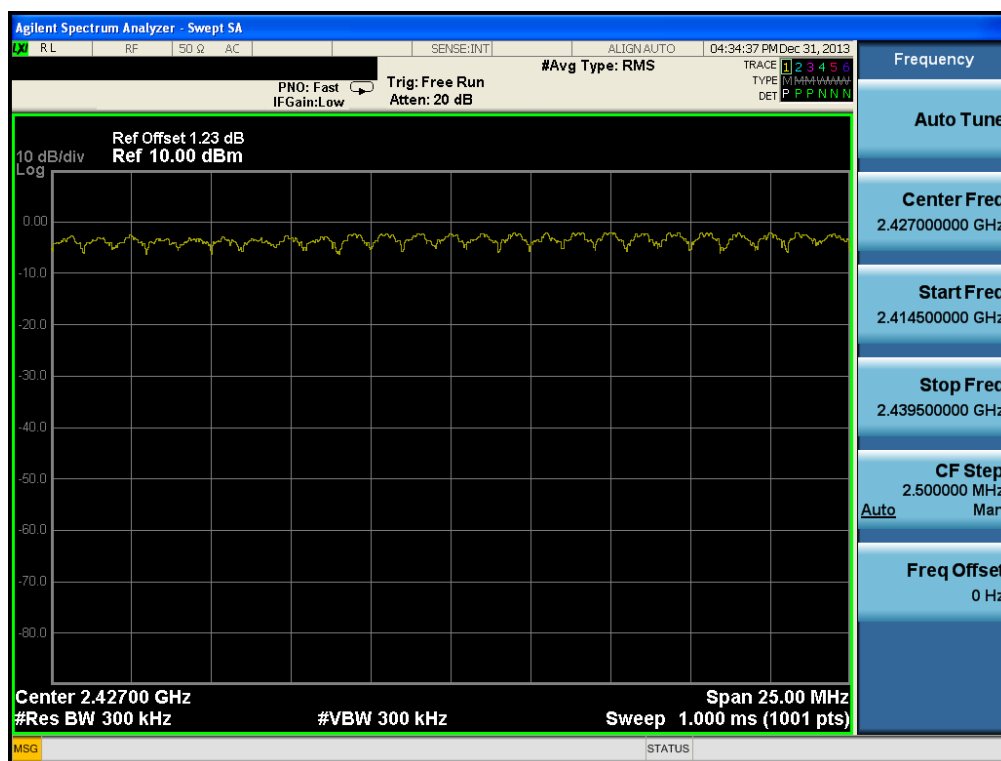
Hopping mode: Enable &GFSK



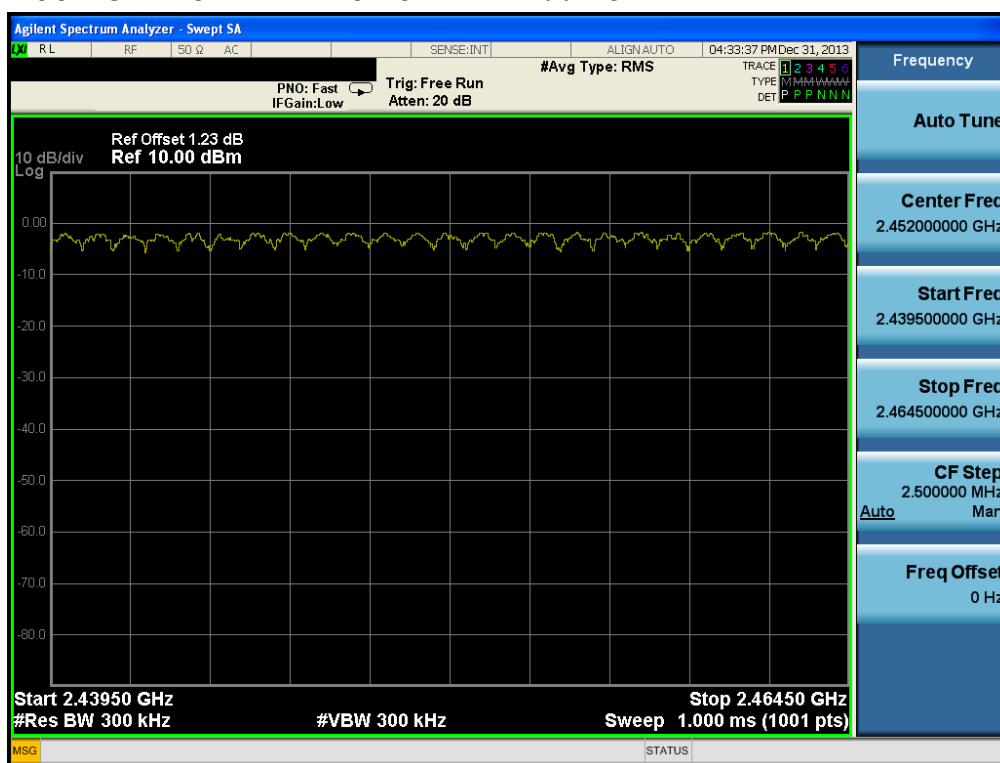
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

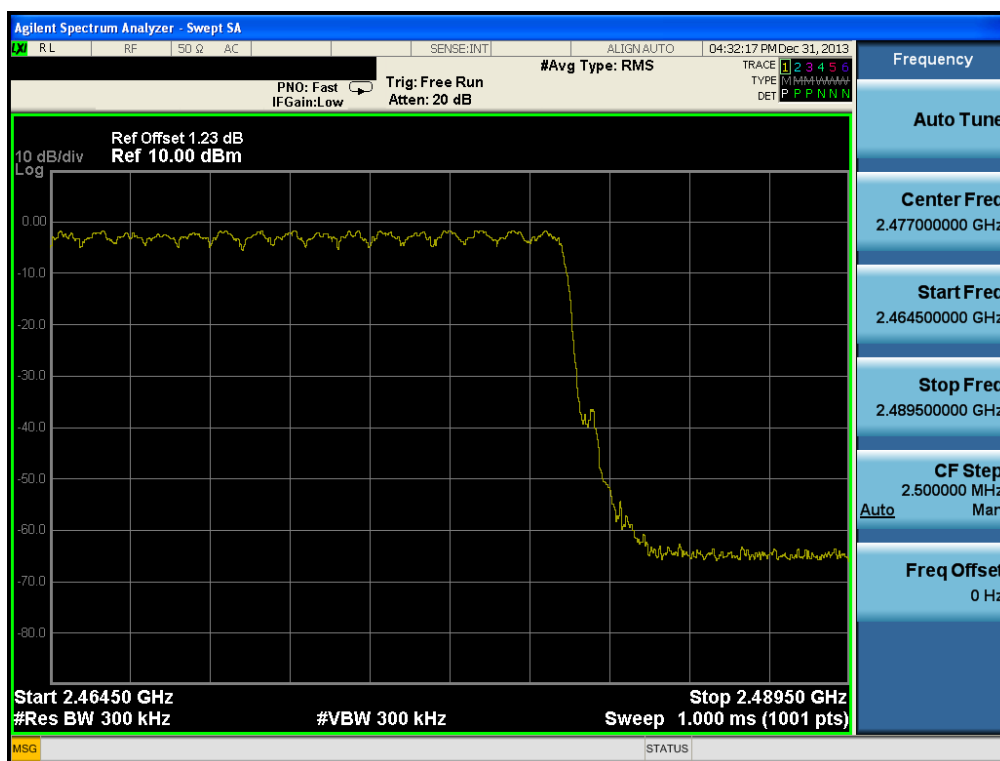
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 3(FH)

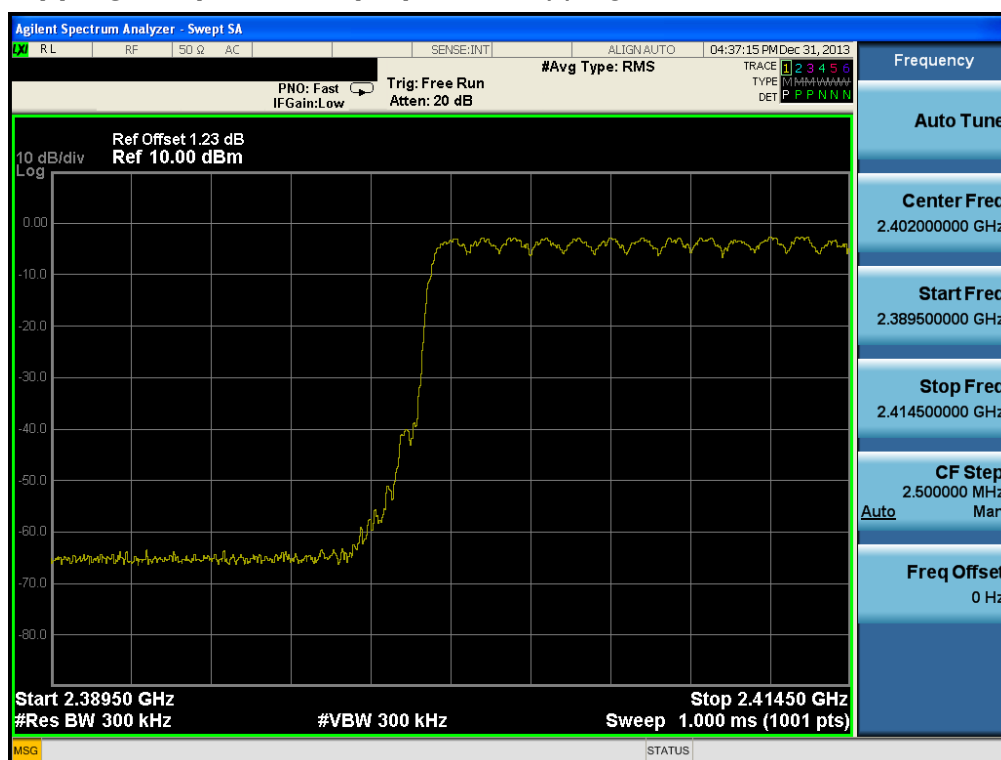
Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 4(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

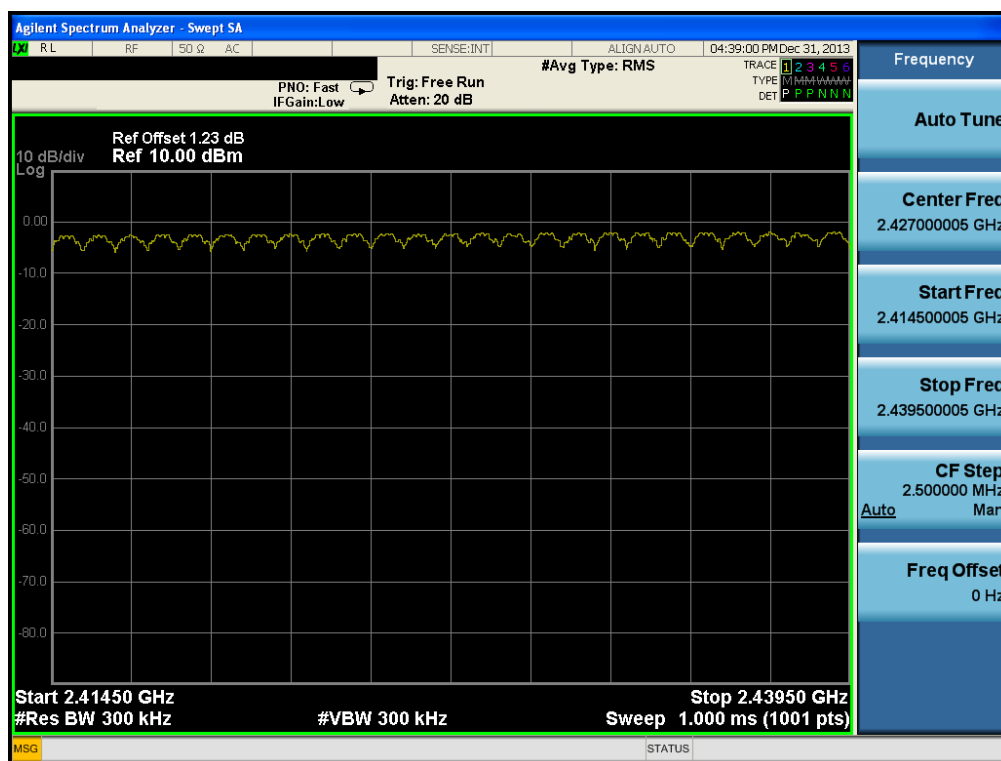
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable &8DPSK



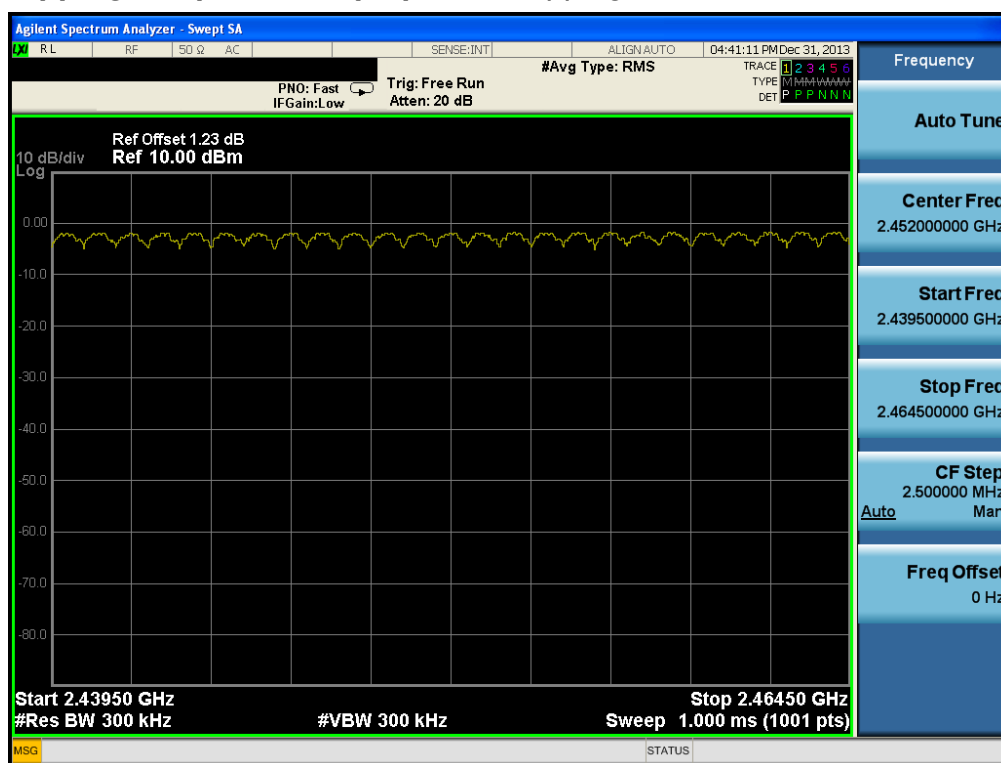
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable &8DPSK



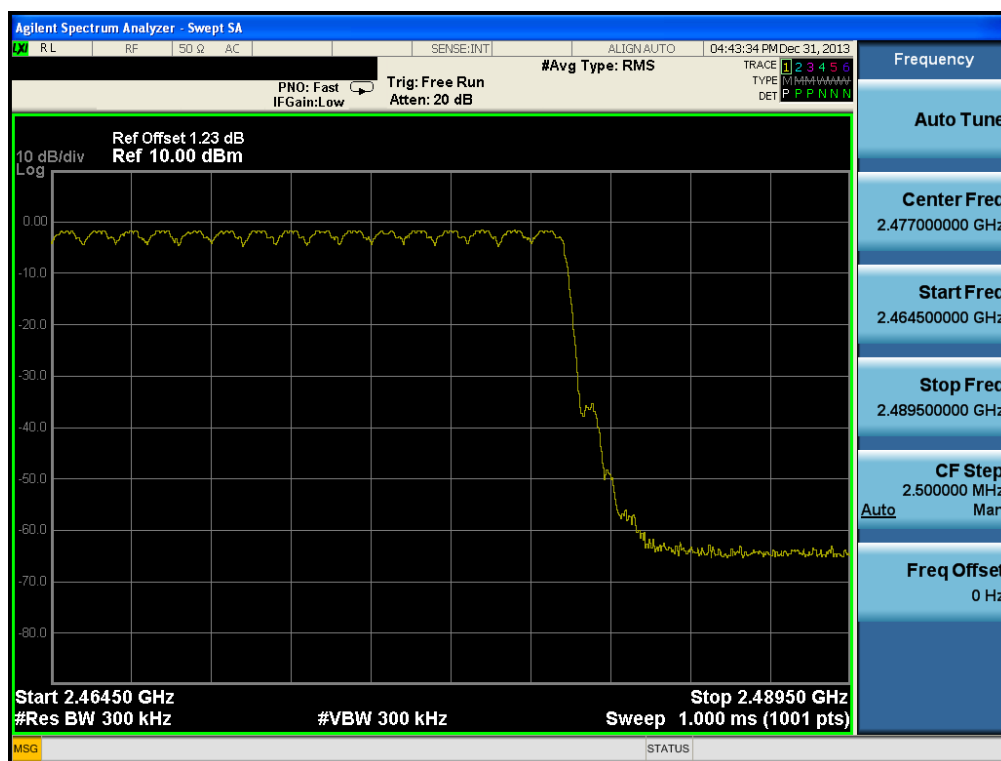
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable &8DPSK

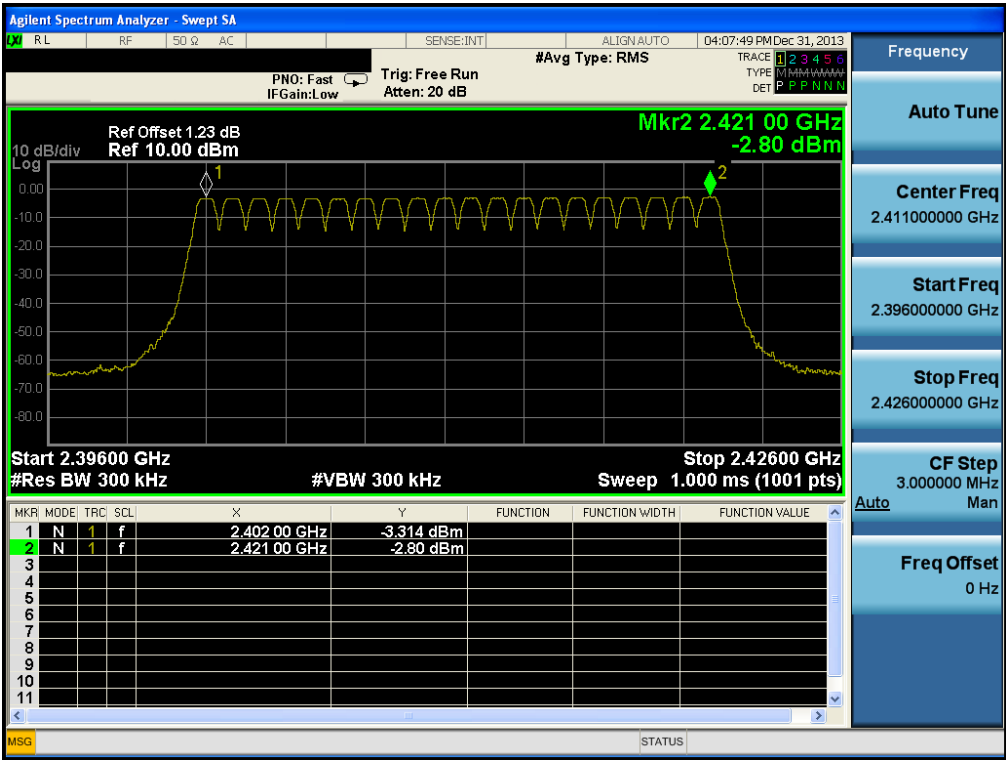


Number of Hopping Frequencies 4(FH)

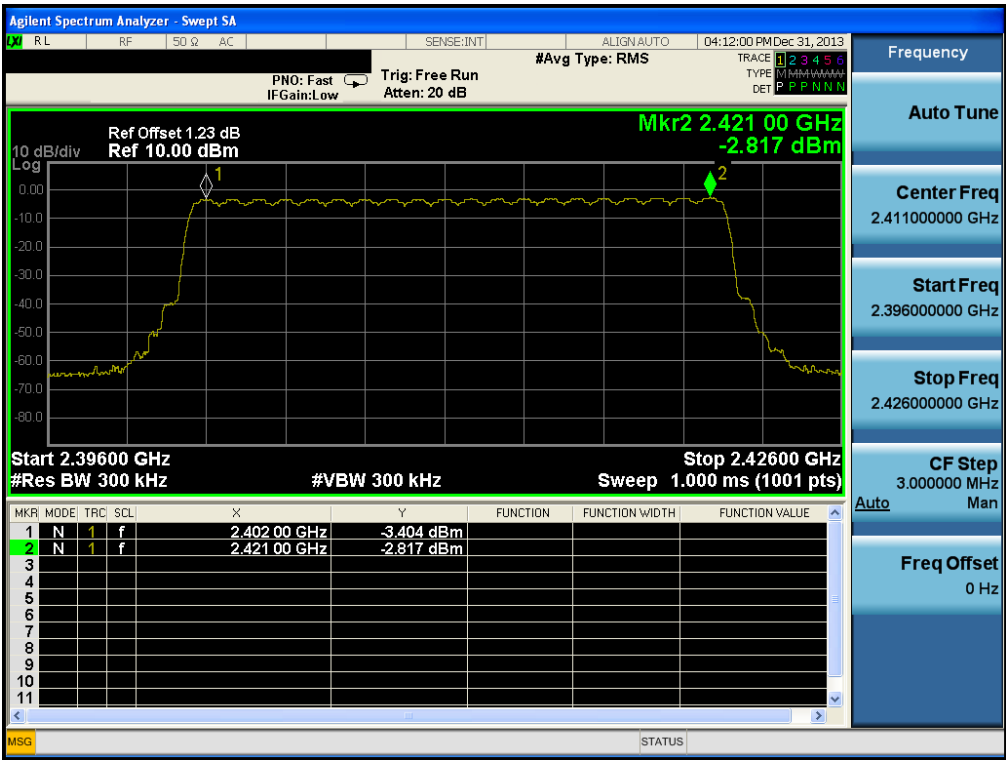
Hopping mode: Enable &8DPSK



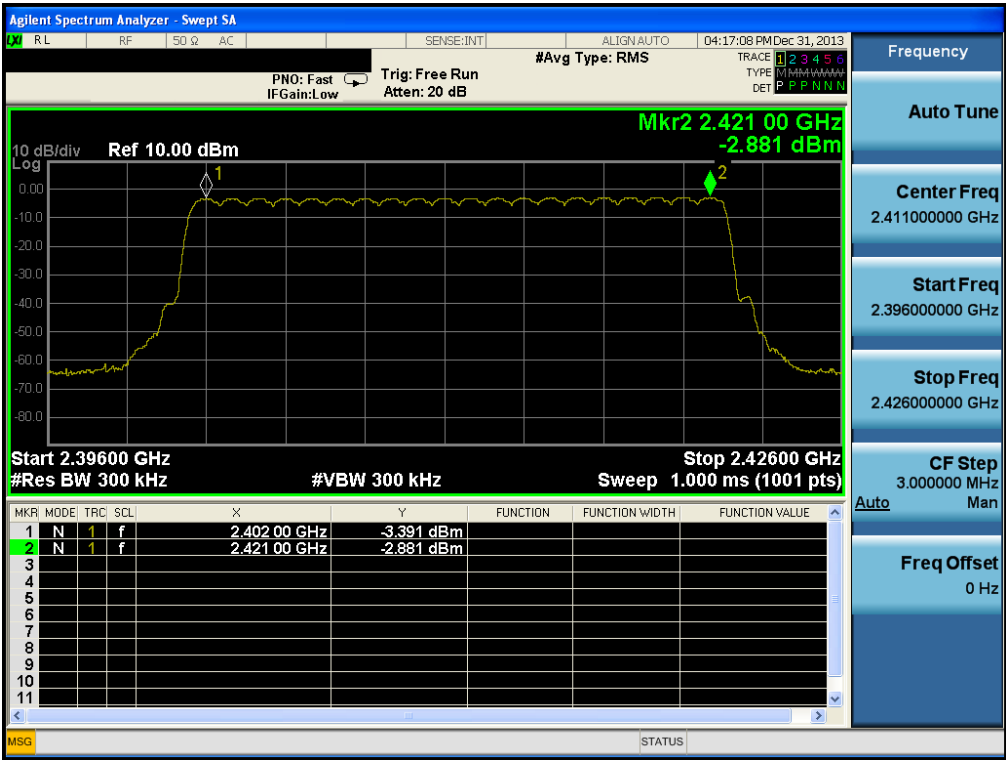
Number of Hopping Frequencies 1(AFH) Hopping mode: Enable &GFSK



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



Number of Hopping Frequencies 1(AFH) Hopping mode: Enable &8DPSK



- Measurement Data: **Comply**

L40SK2

- 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

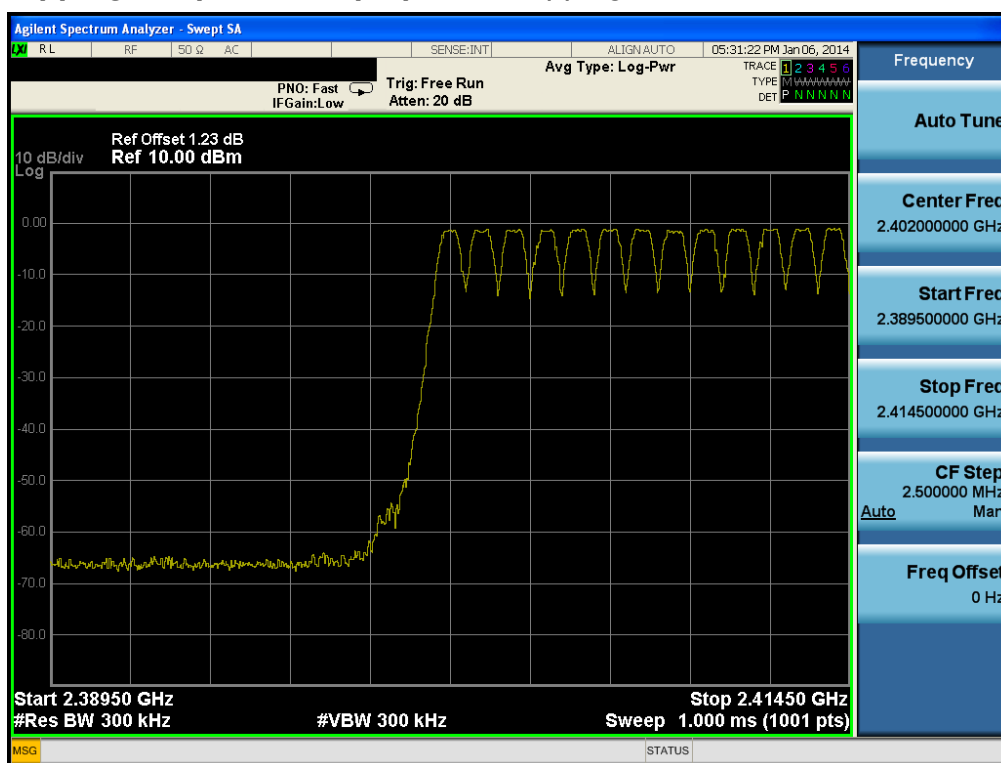
Note 1: See next pages for actual measured spectrum plots.

- Minimum Standard:

At least 15 hops

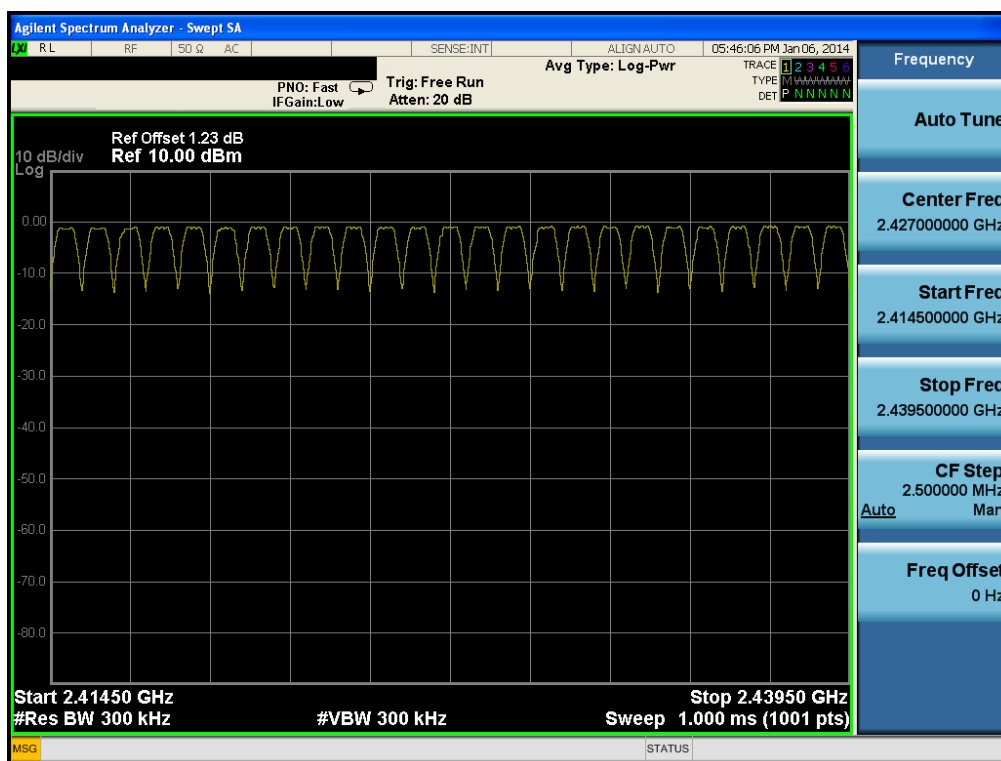
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable &GFSK



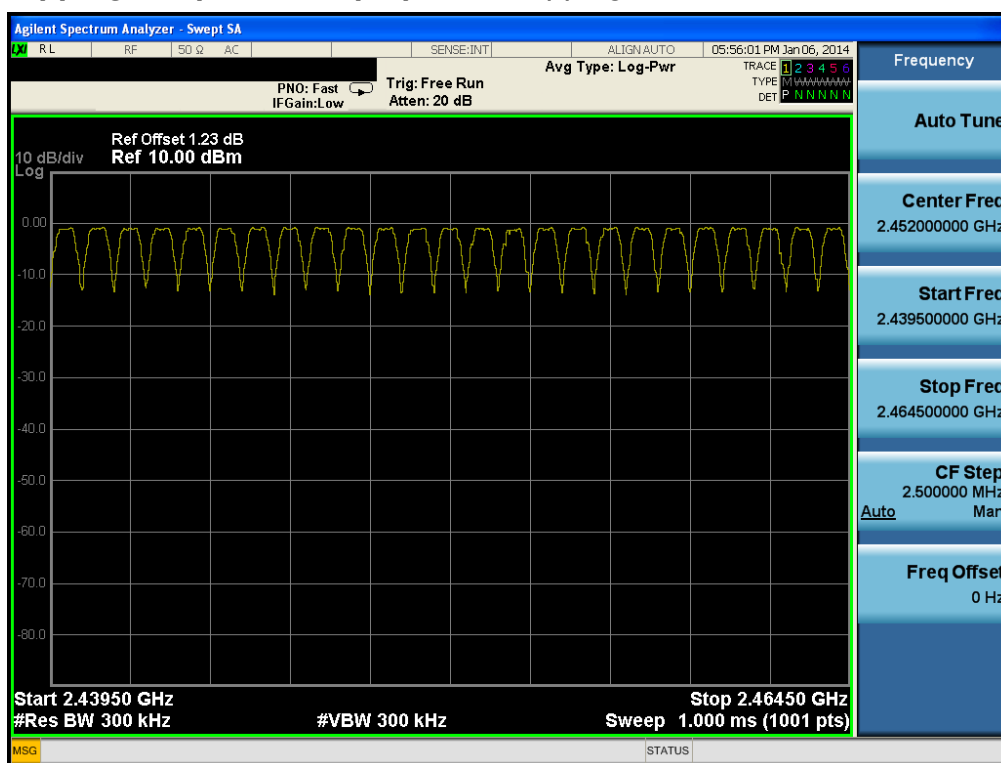
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable &GFSK



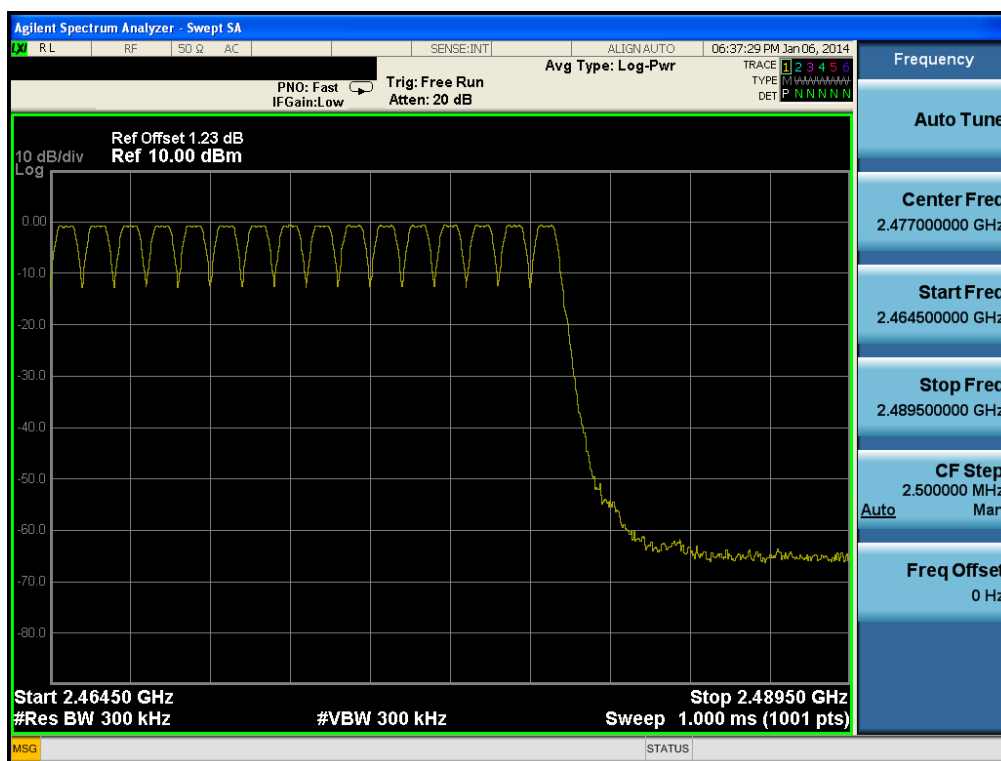
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable &GFSK

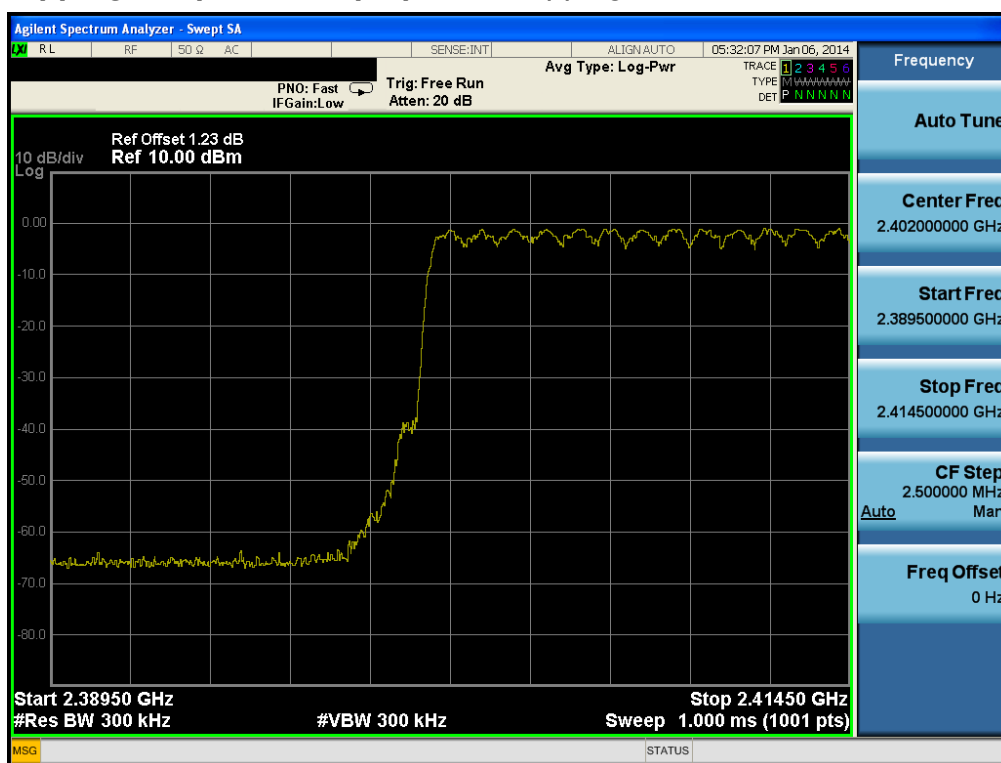


Number of Hopping Frequencies 4(FH)

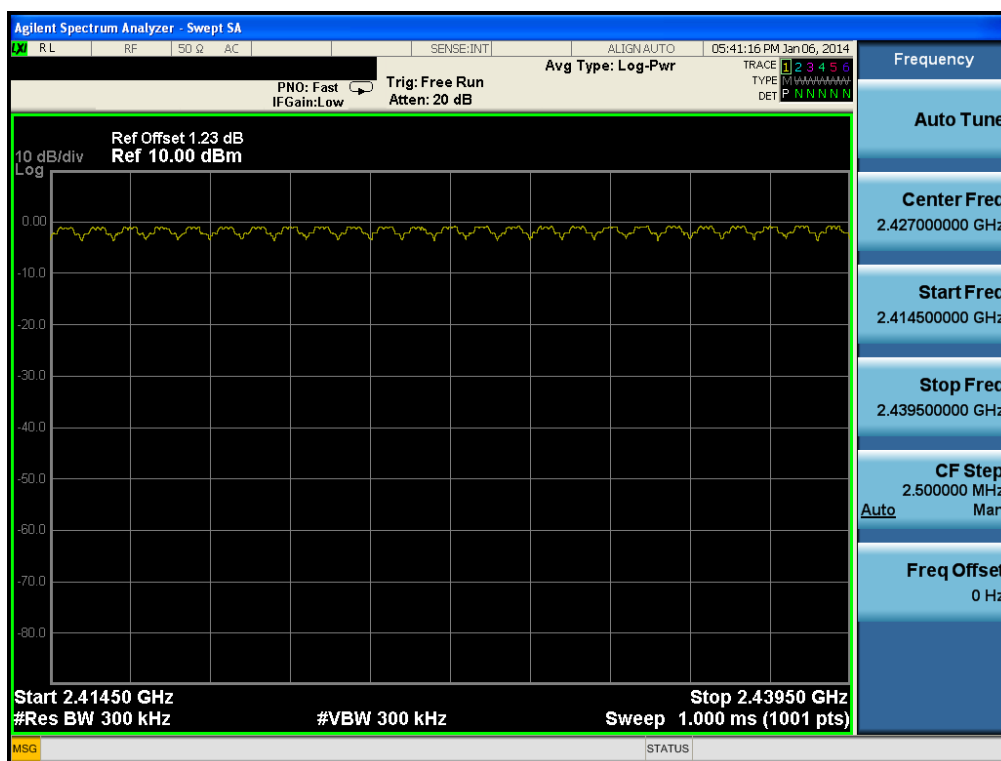
Hopping mode: Enable &GFSK



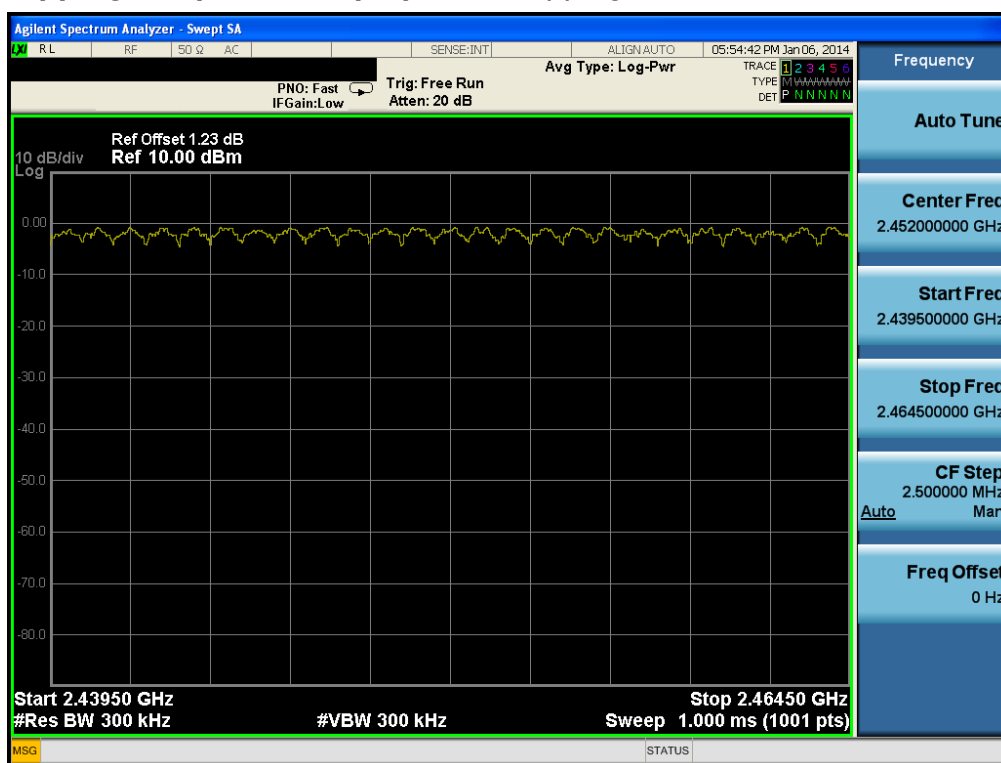
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

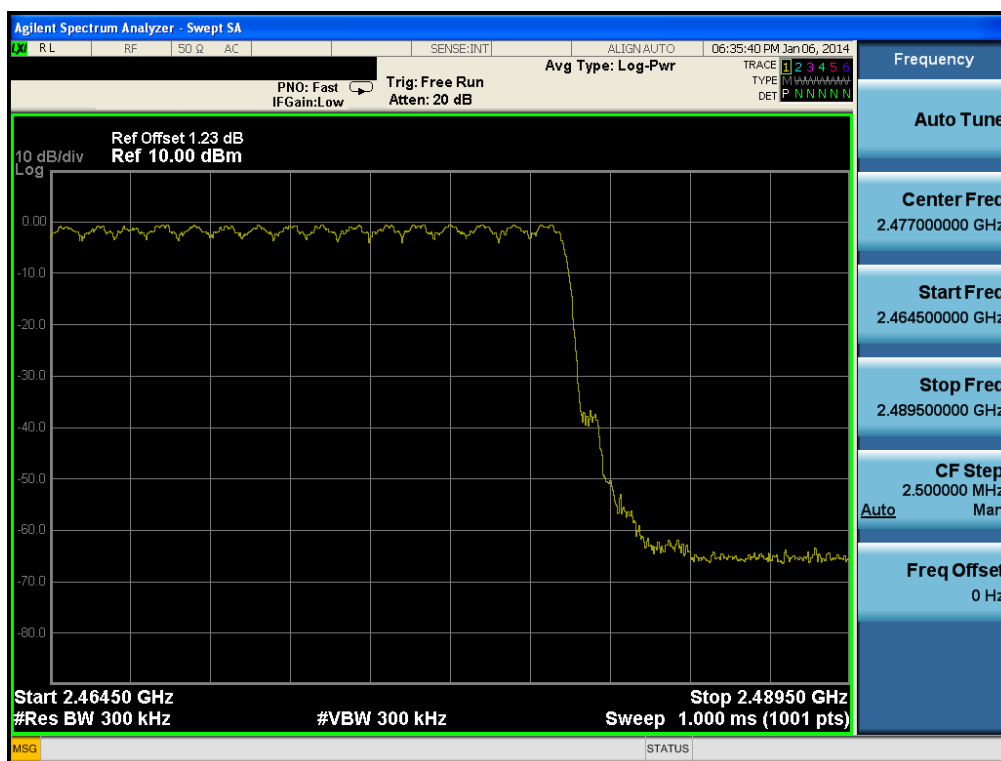
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 3(FH)

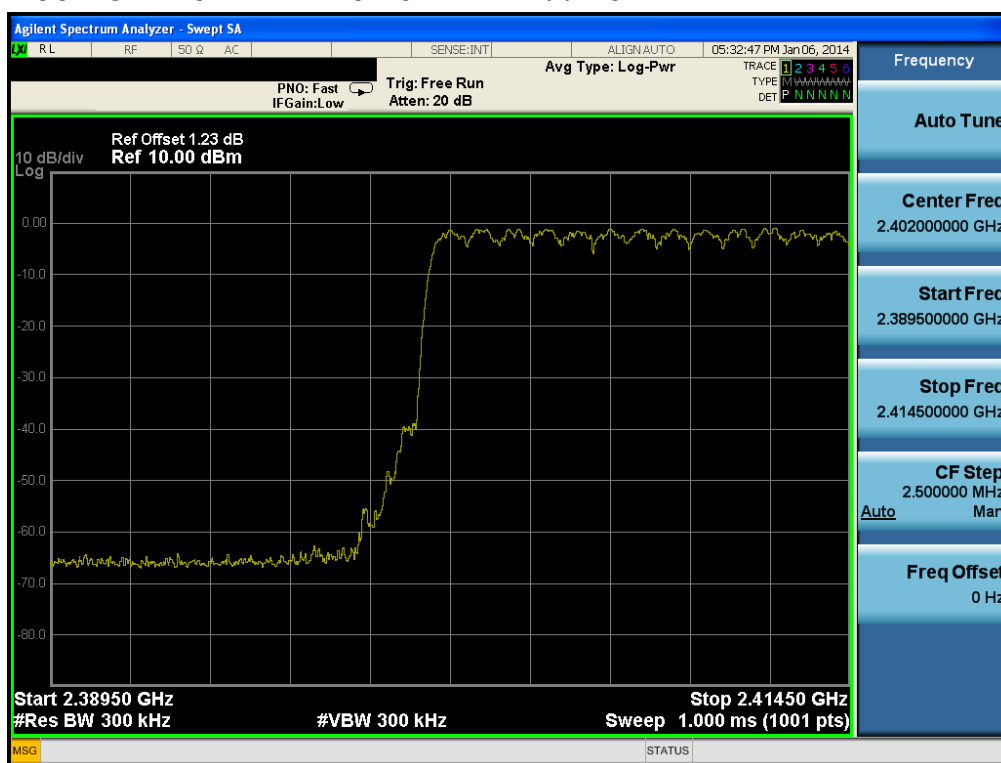
Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 4(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

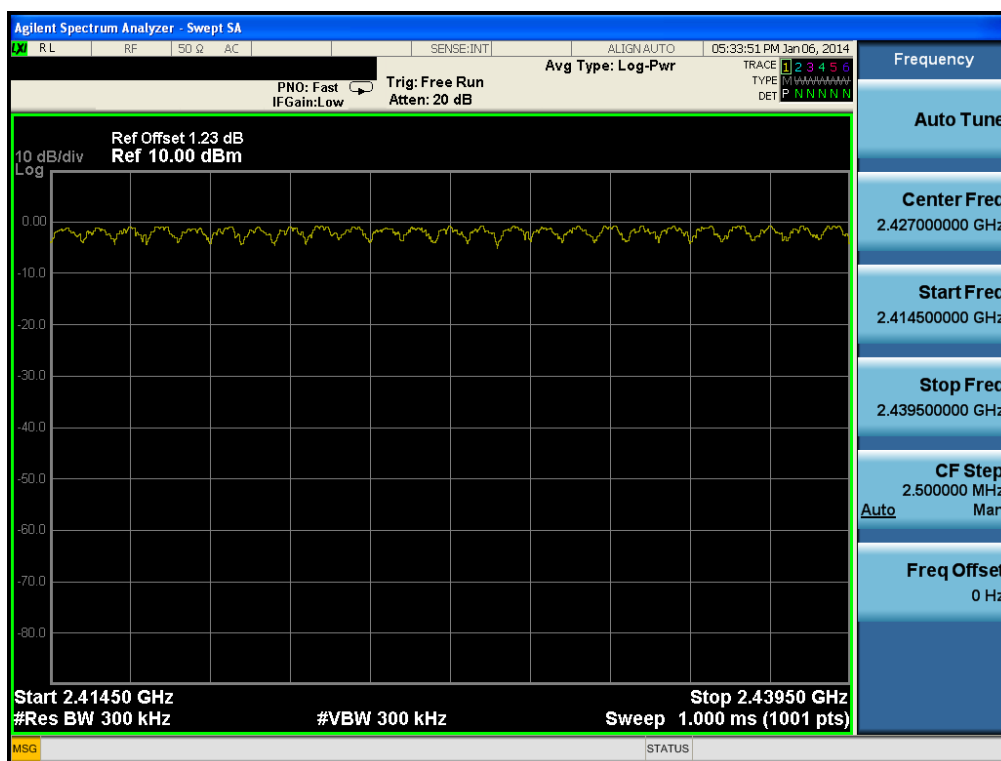
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable &8DPSK



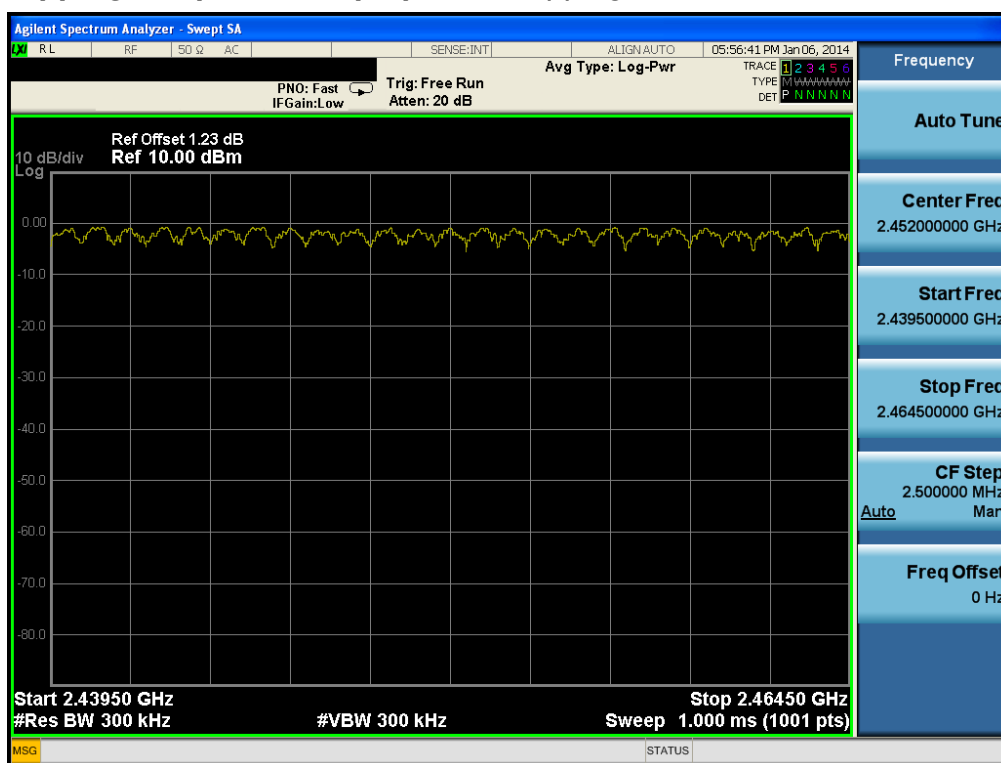
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable &8DPSK



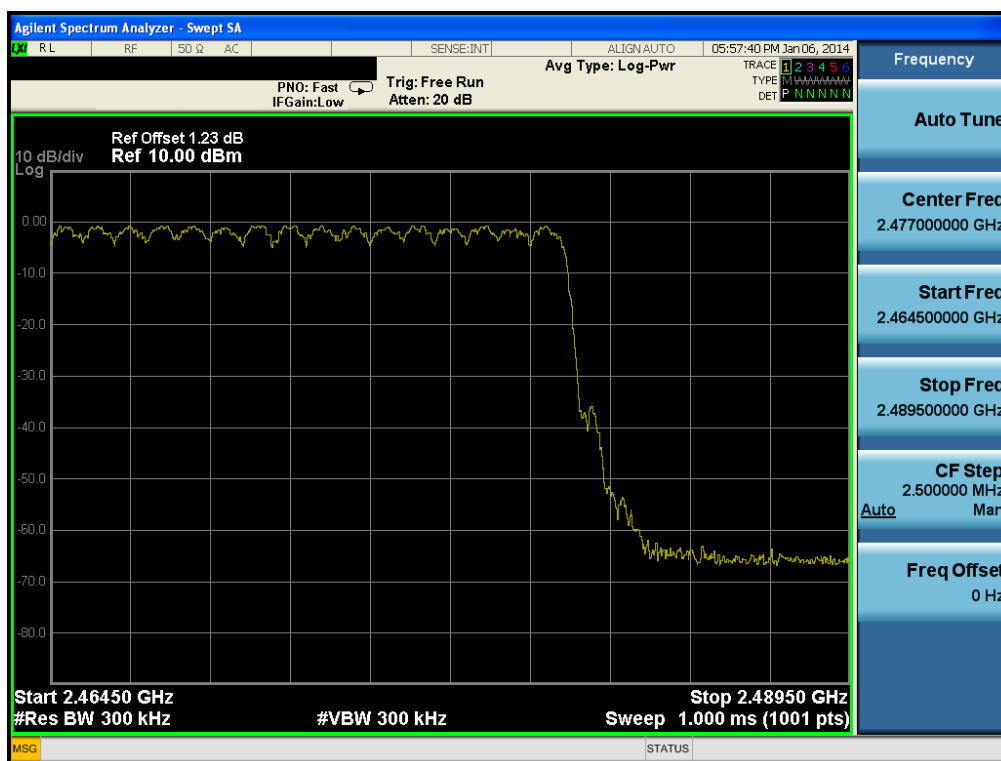
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable &8DPSK



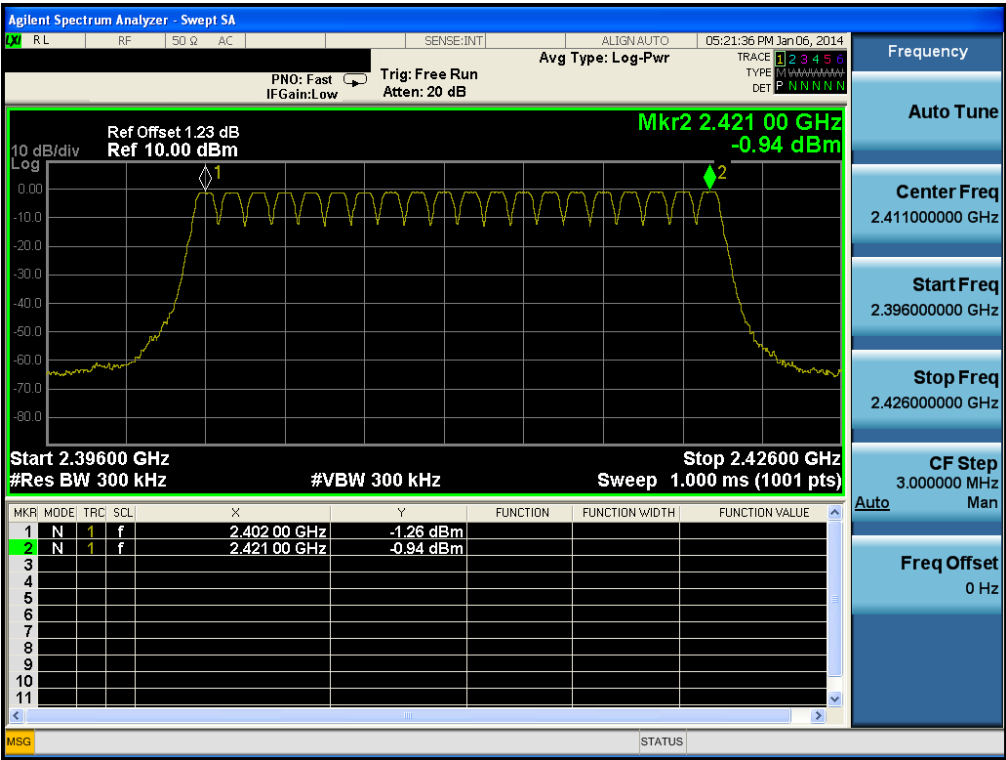
Number of Hopping Frequencies 4(FH)

Hopping mode: Enable &8DPSK



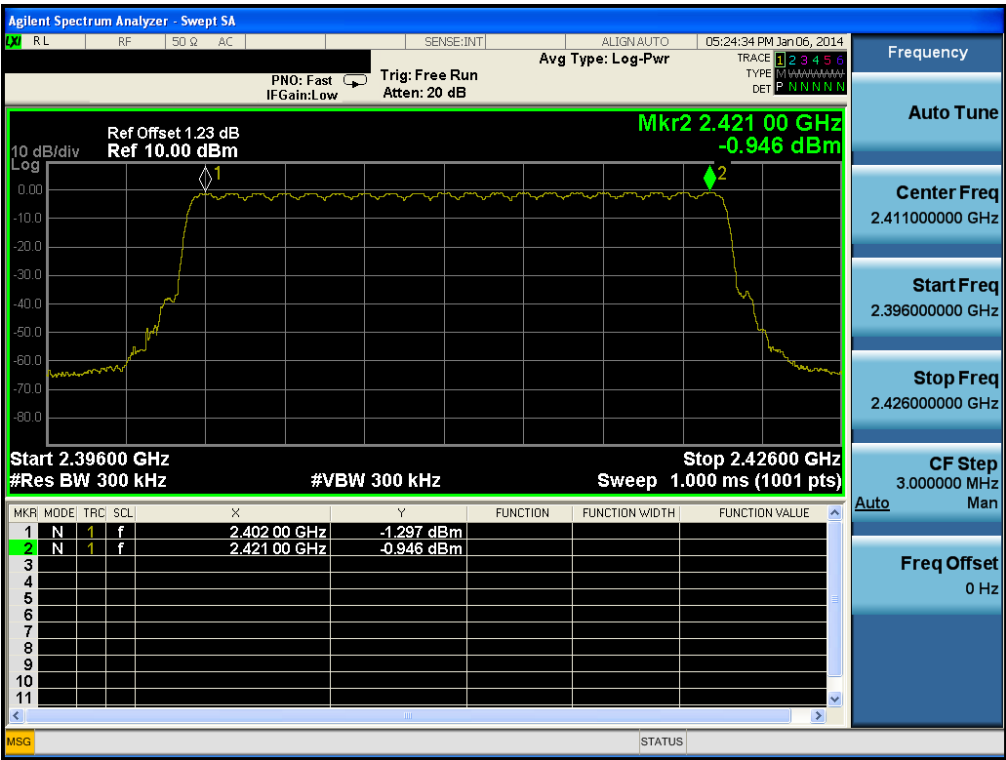
Number of Hopping Frequencies 1(AFH)

Hopping mode: Enable &GFSK



Number of Hopping Frequencies 1(AFH)

Hopping mode: Enable & π /4DQPSK



[illegible]

- Measurement Data: Comply

L40VW2)

- 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

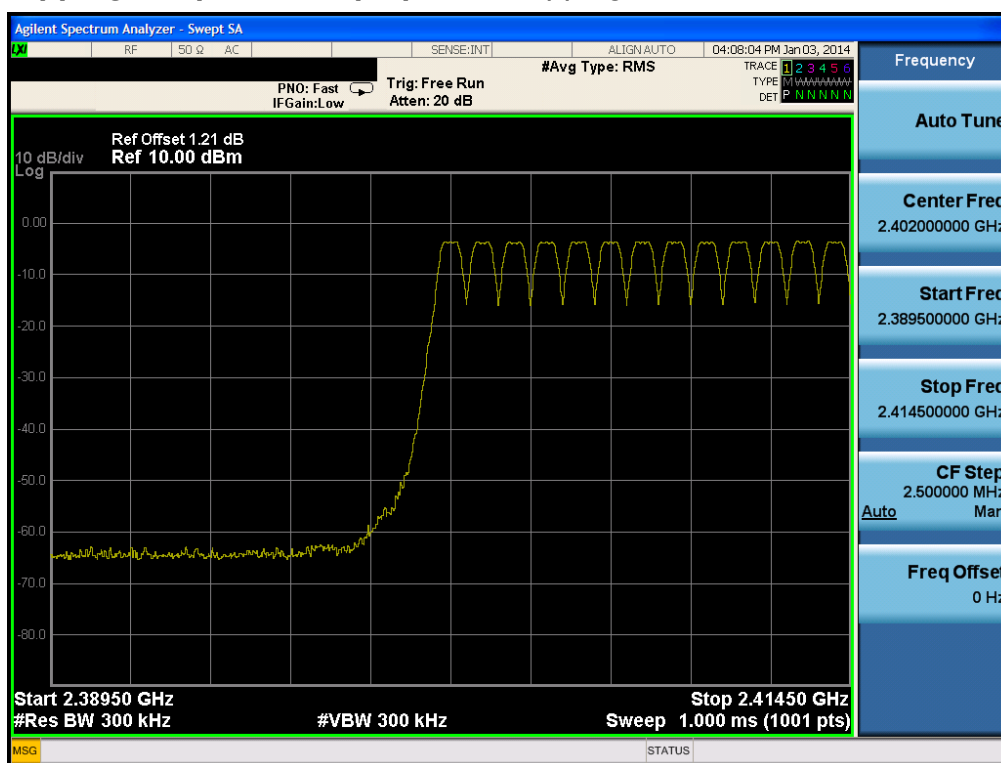
Note 1: See next pages for actual measured spectrum plots.

- Minimum Standard:

At least 15 hops

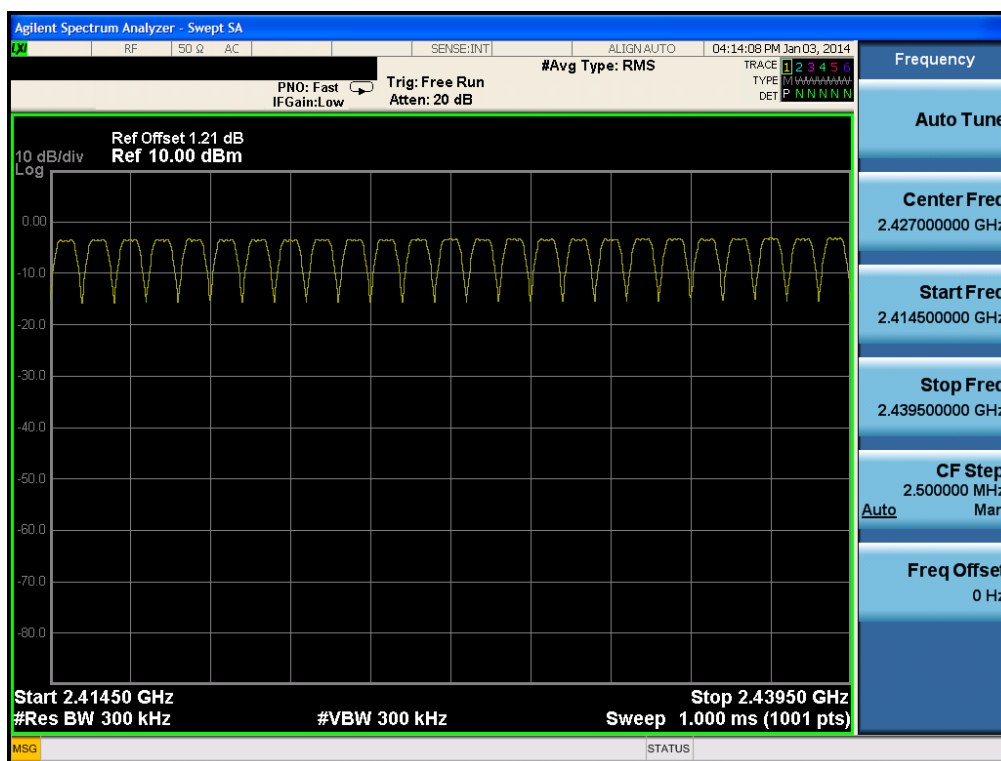
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & GFSK



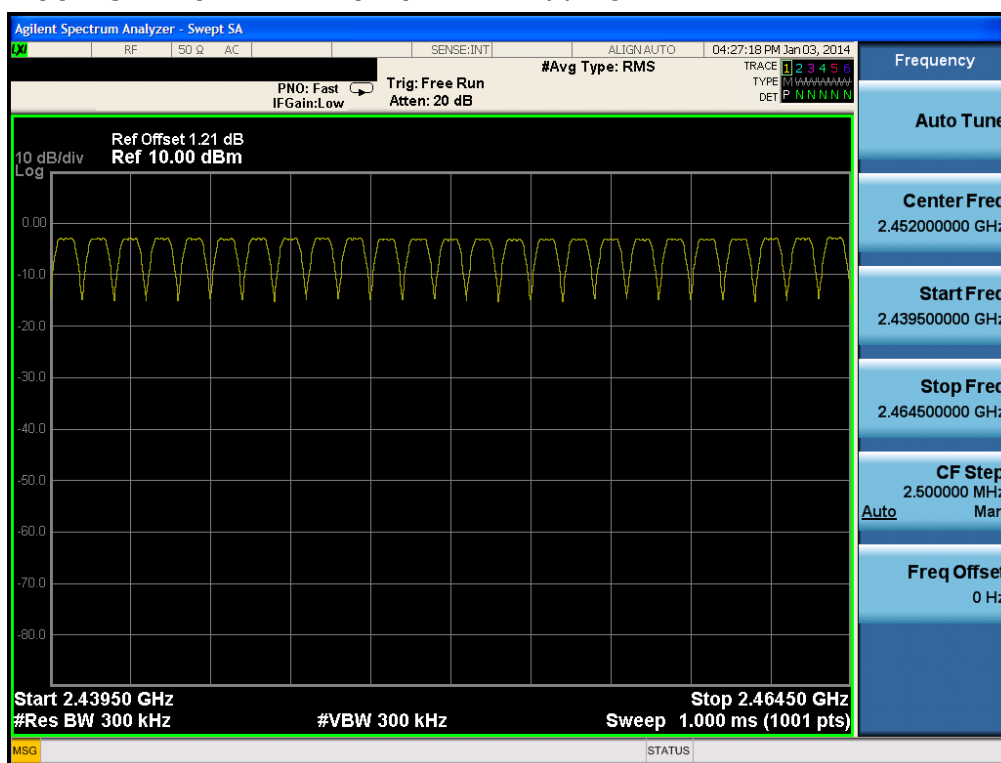
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable & GFSK



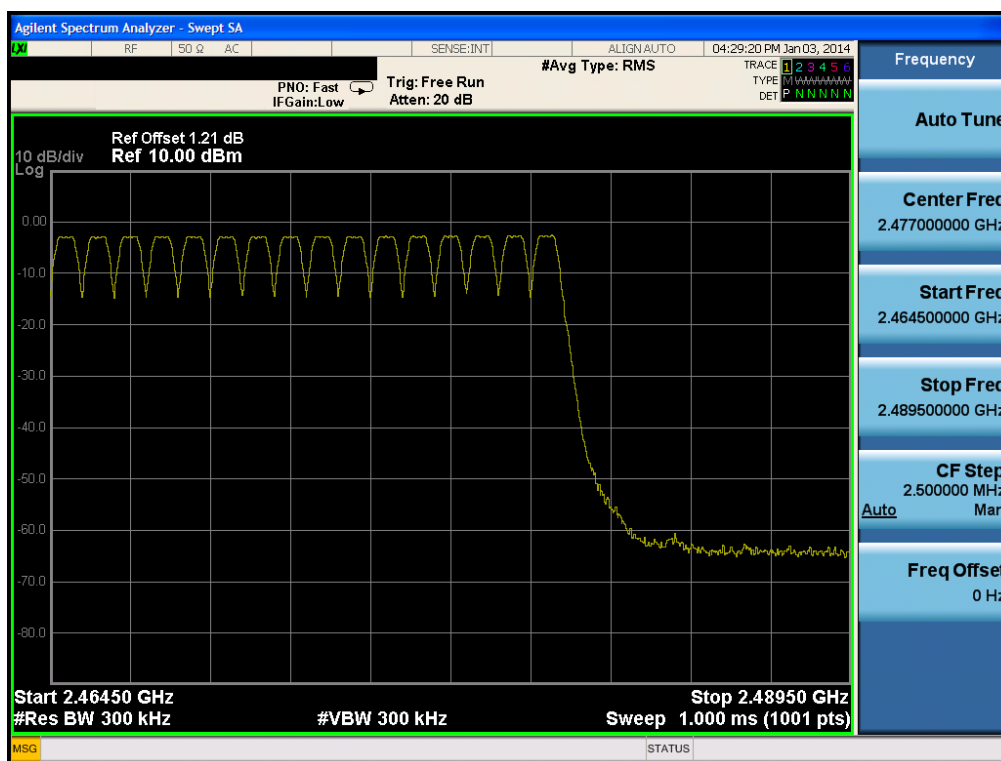
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable & GFSK

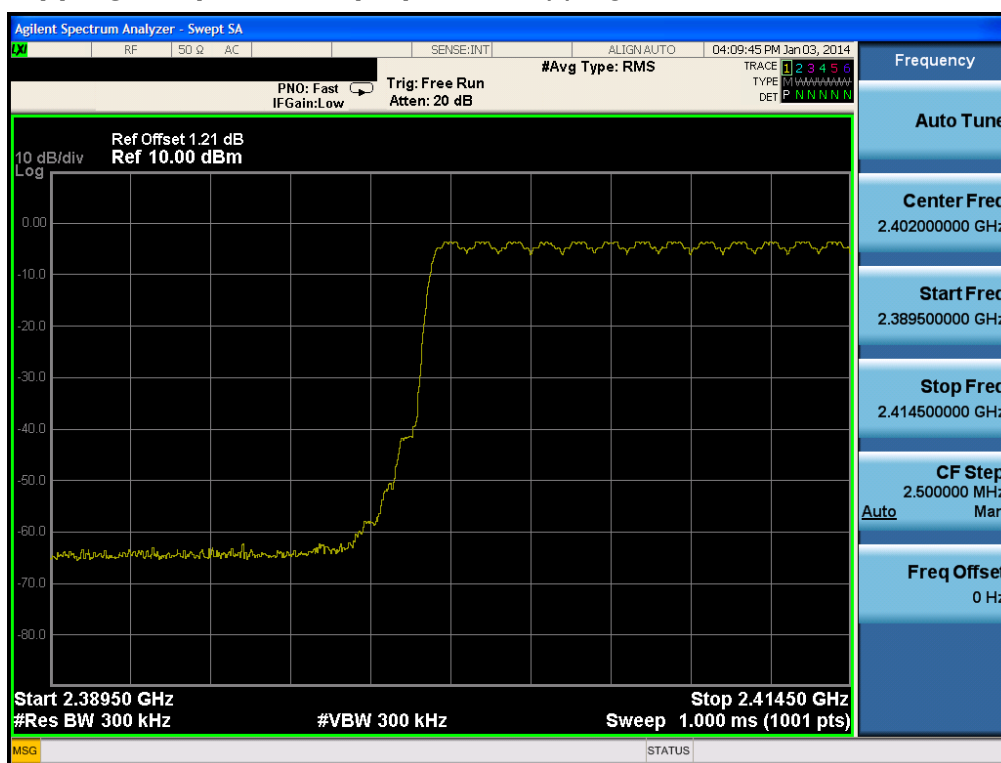


Number of Hopping Frequencies 4(FH)

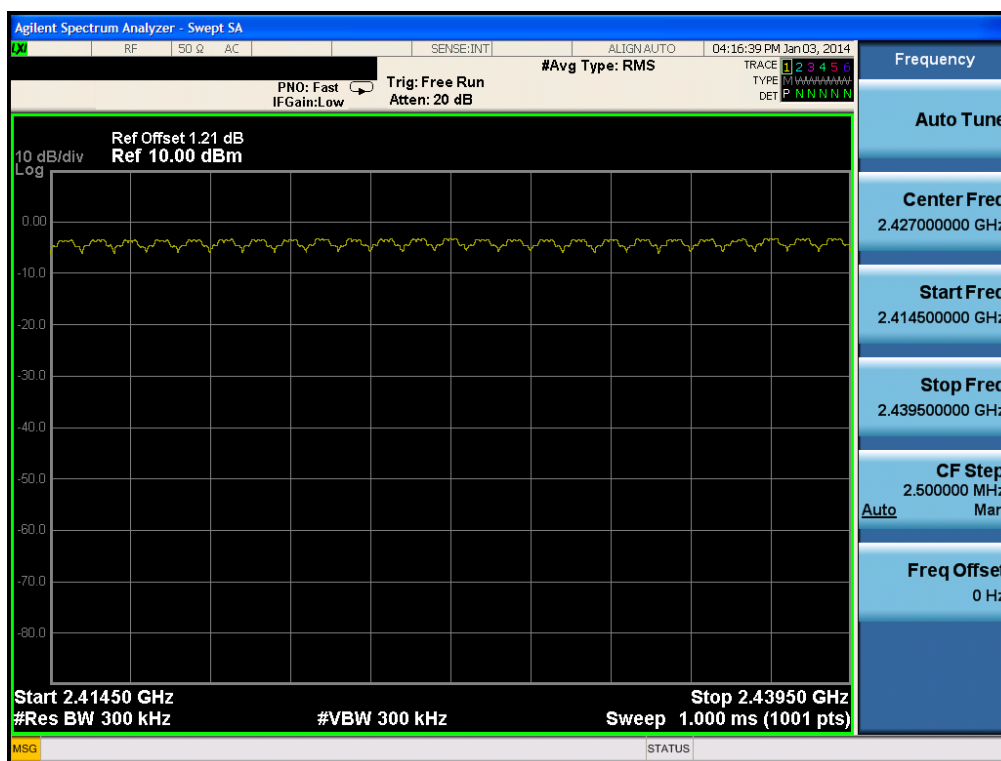
Hopping mode: Enable & GFSK



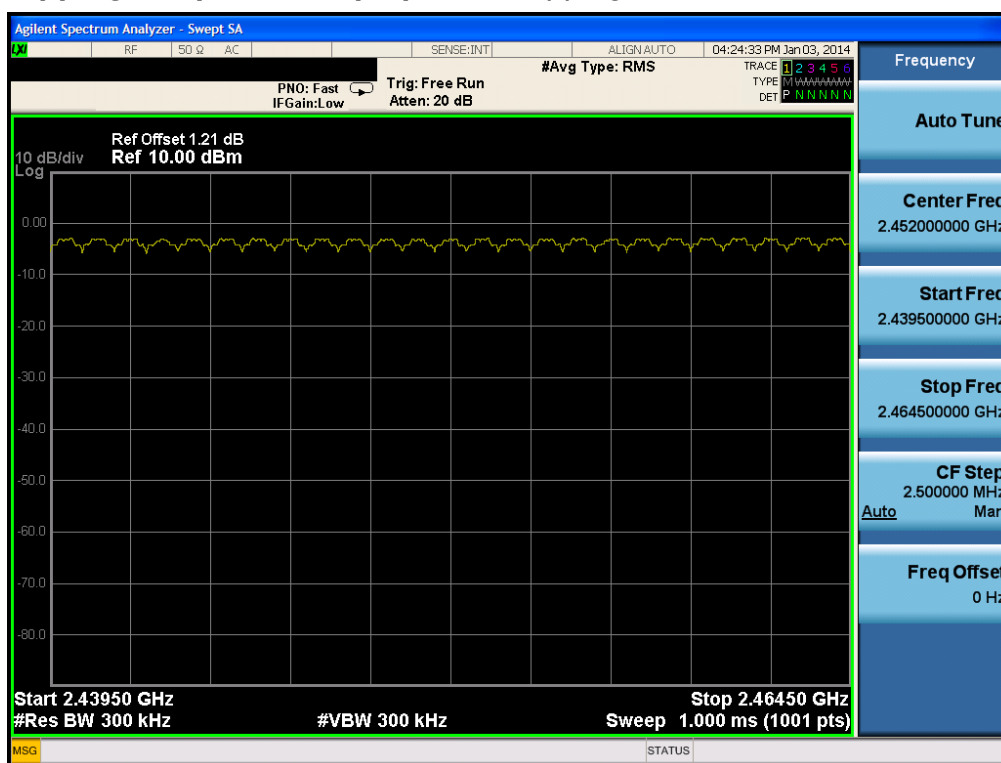
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

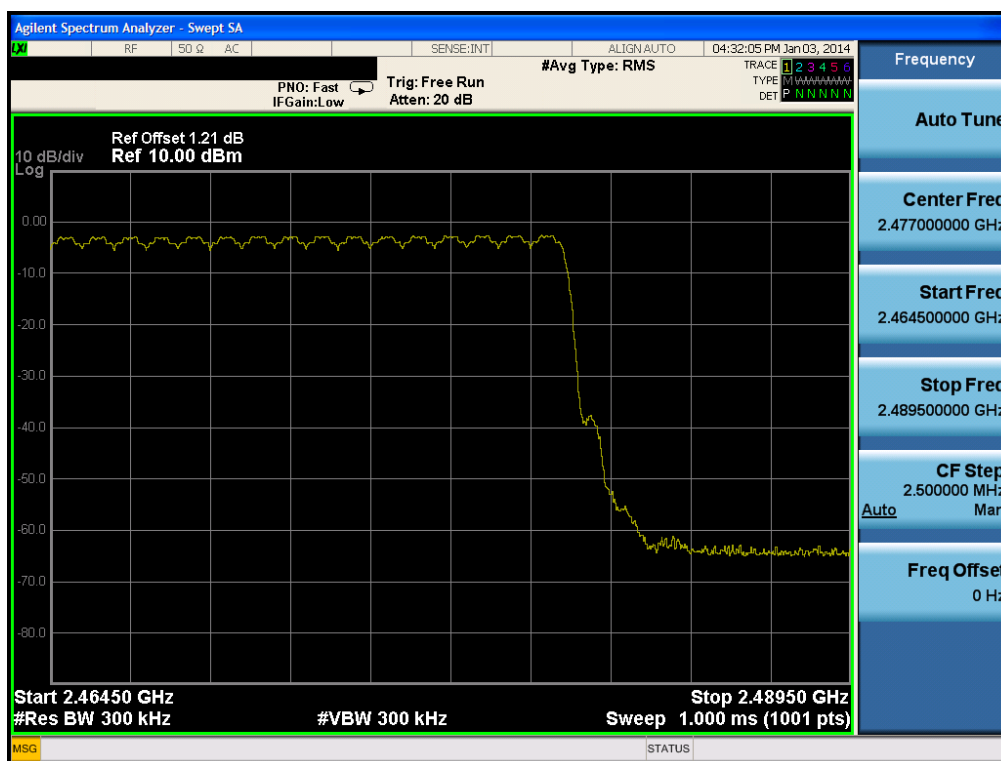
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 3(FH)

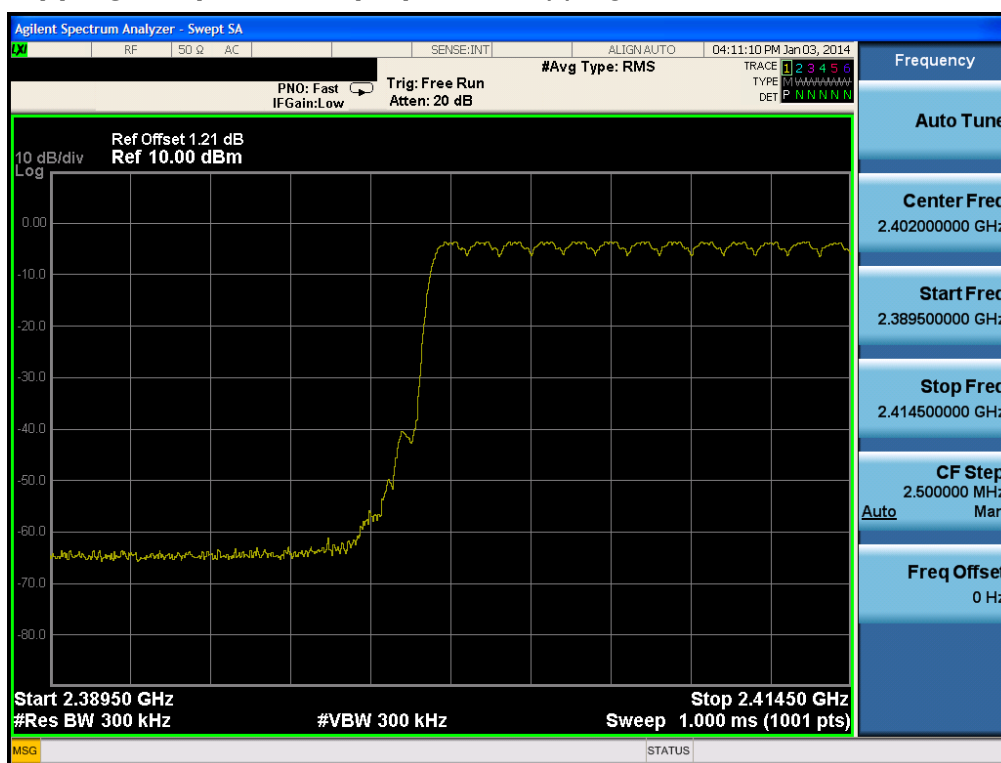
Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 4(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

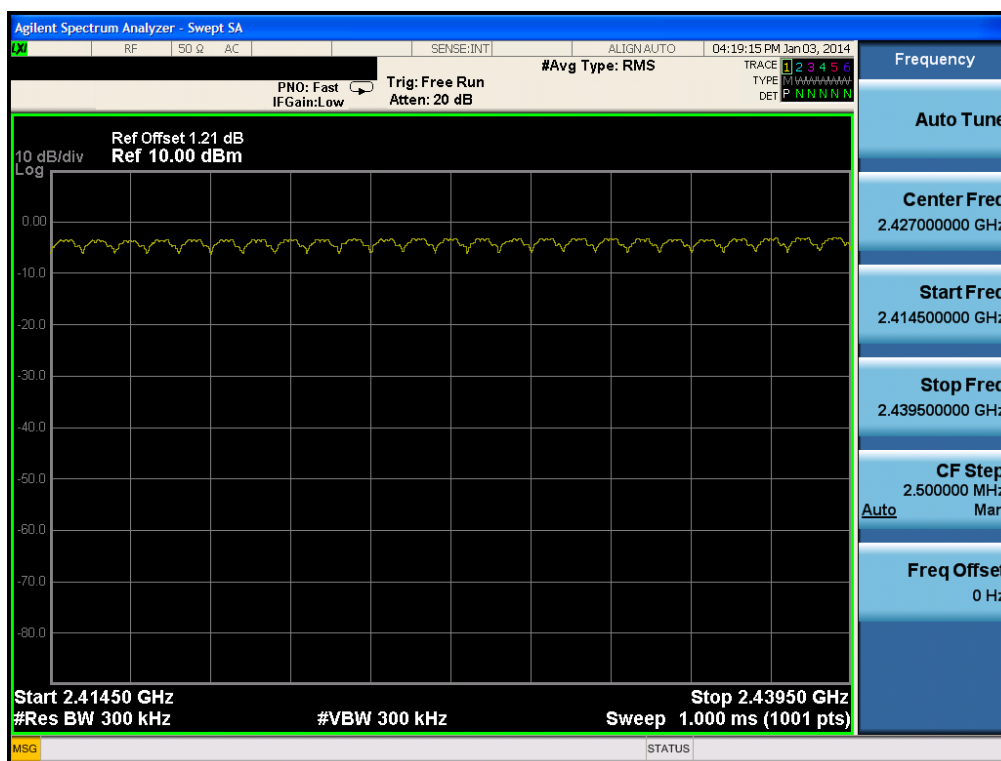
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & 8DPSK



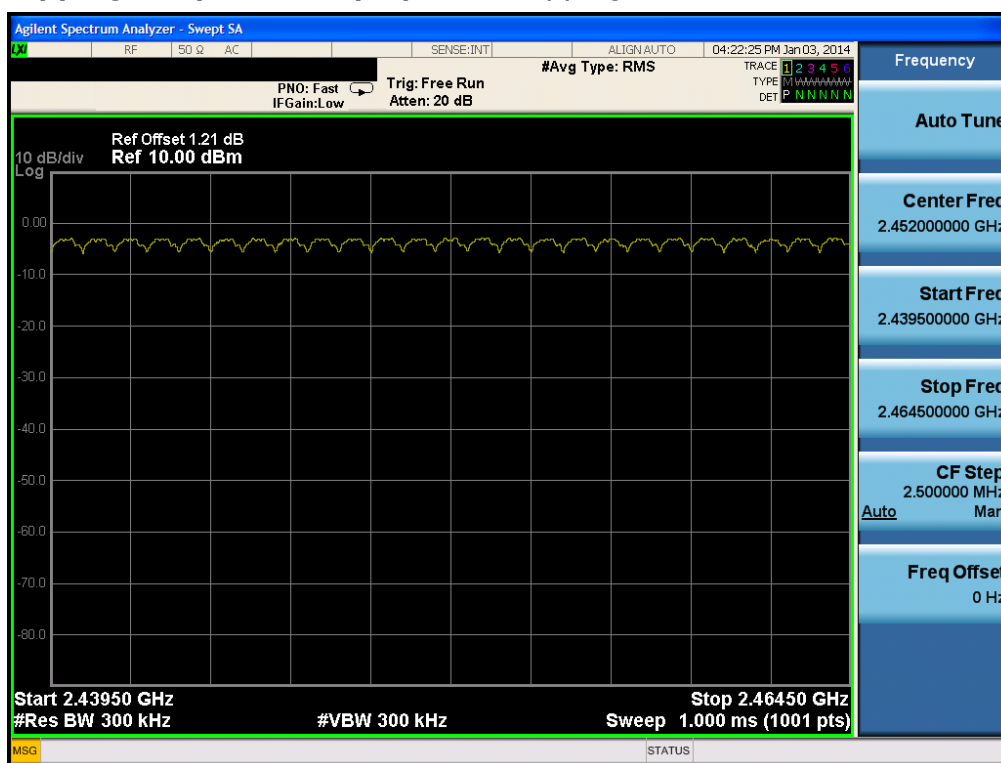
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable & 8DPSK



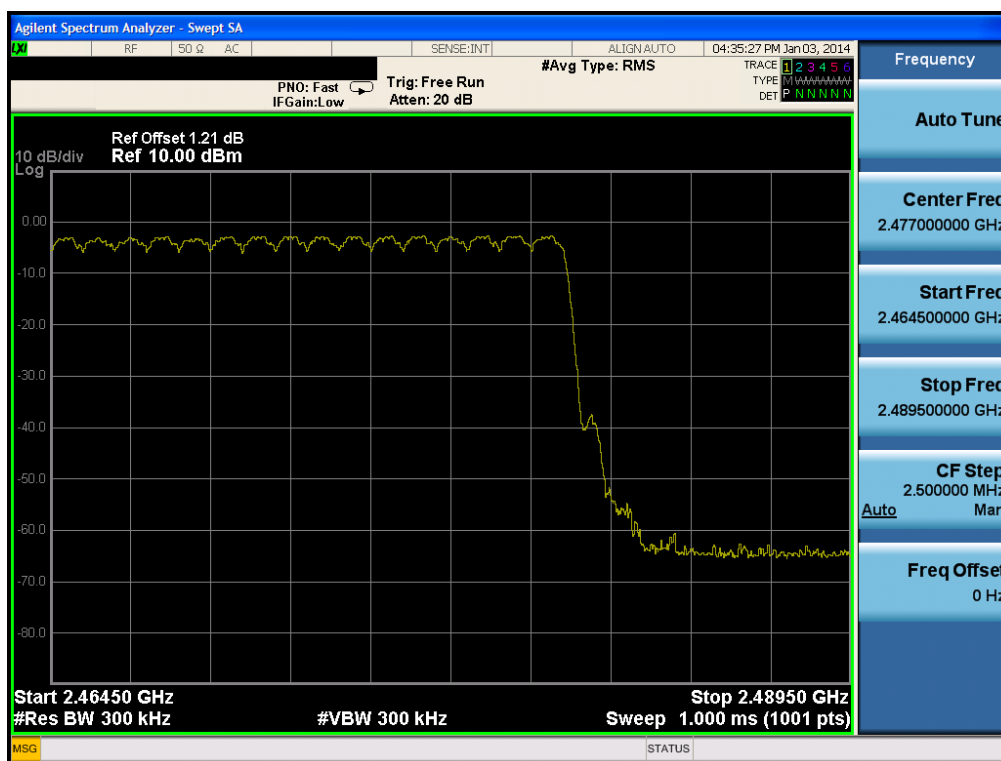
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable & 8DPSK



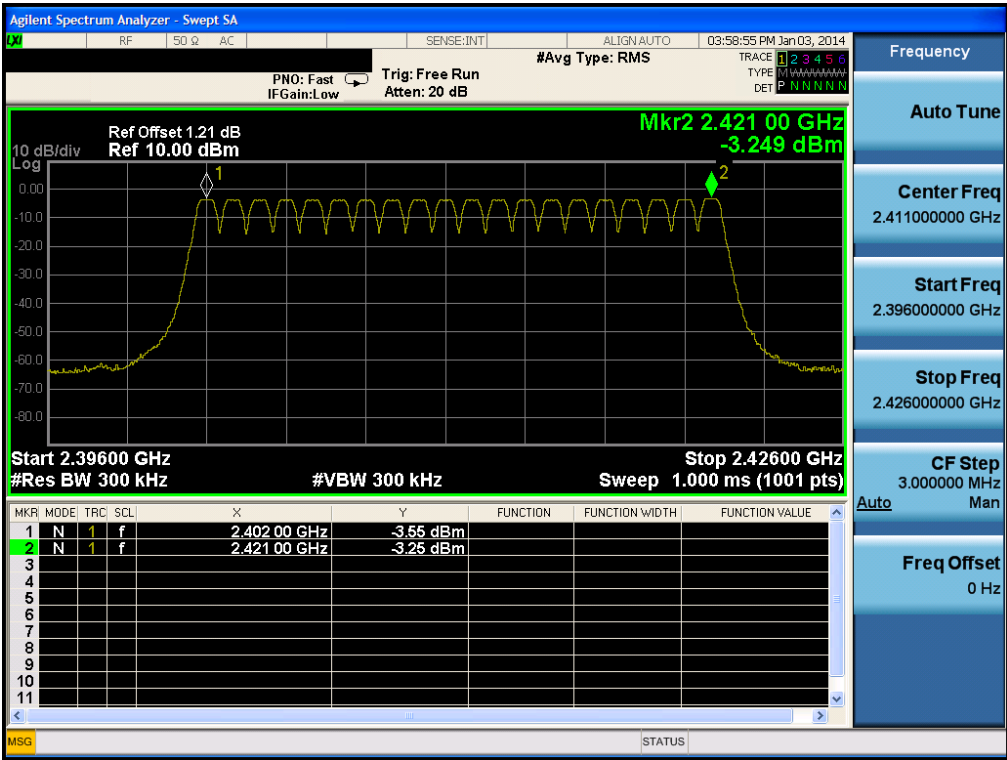
Number of Hopping Frequencies 4(FH)

Hopping mode: Enable & 8DPSK



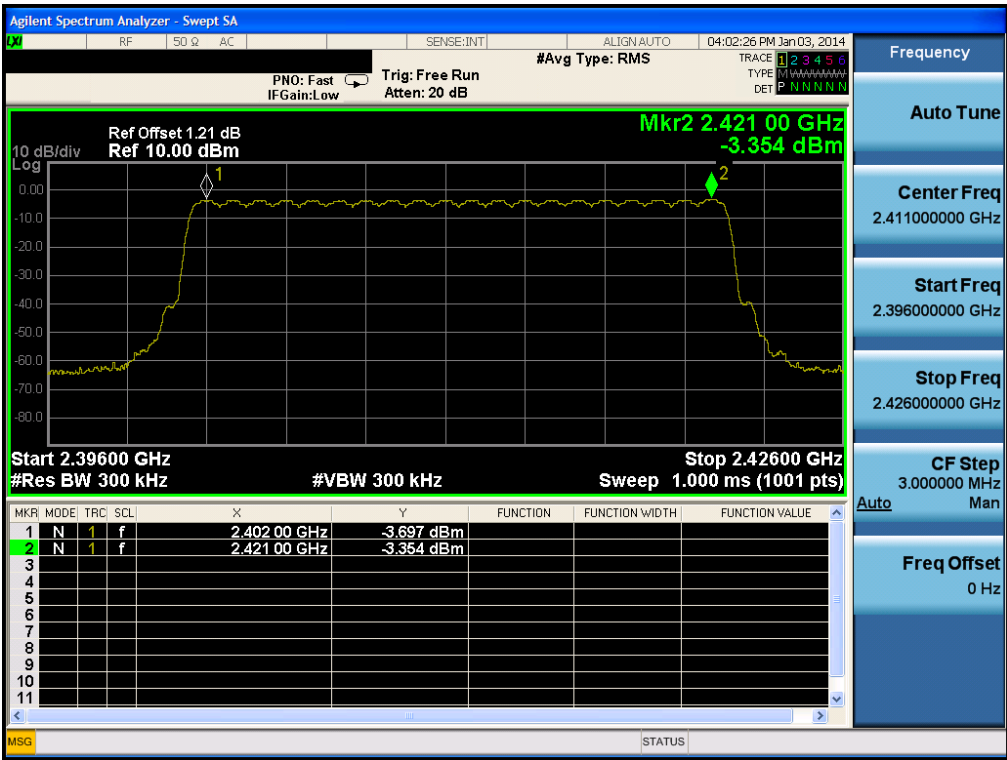
Number of Hopping Frequencies 1(AFH)

Hopping mode: Enable & GFSK

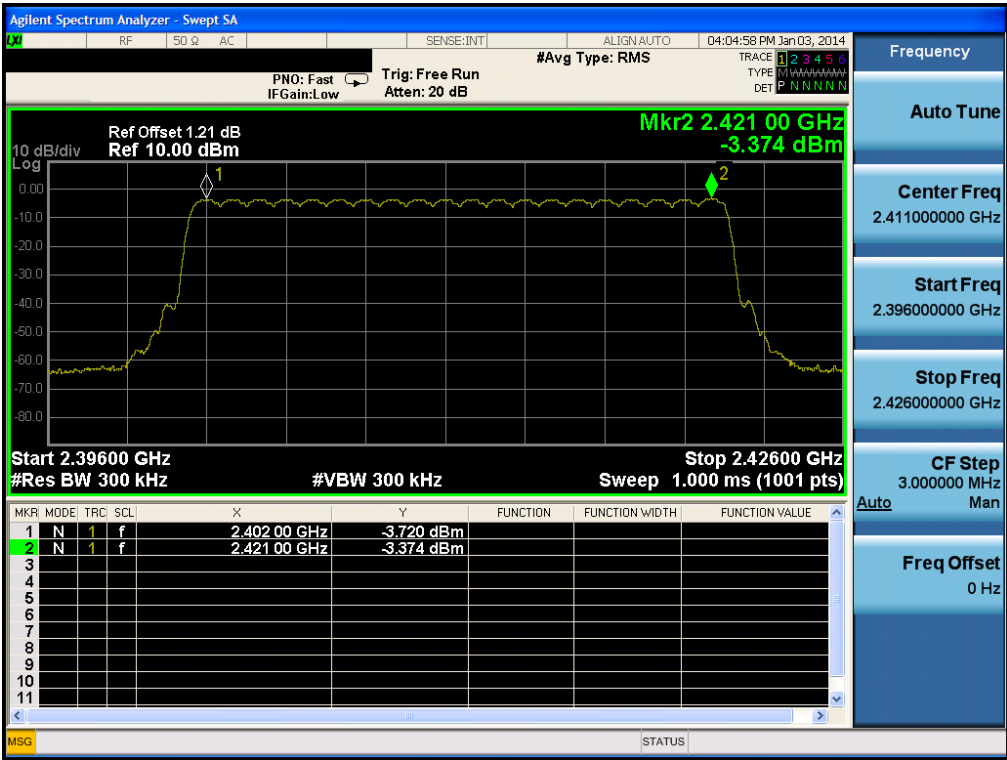


Number of Hopping Frequencies 1(AFH)

Hopping mode: Enable & π /4DQPSK



Number of Hopping Frequencies 1(AFH) Hopping mode: Enable & 8DPSK



- Measurement Data: **Comply**

L41SK2

- 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

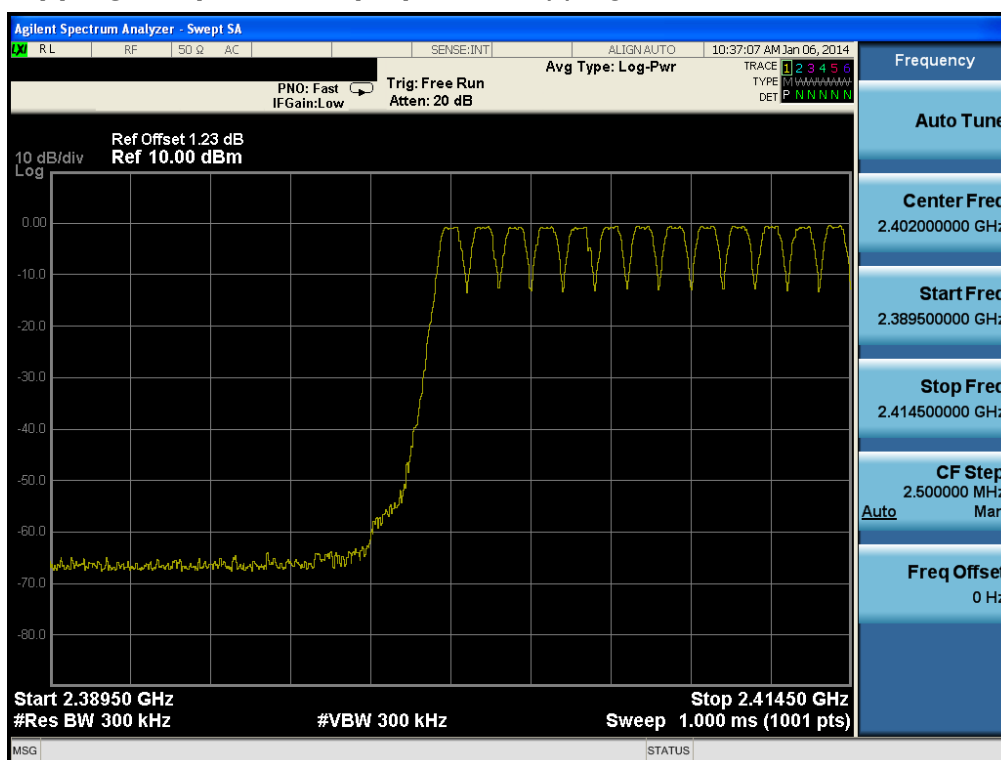
Note 1: See next pages for actual measured spectrum plots.

- Minimum Standard:

At least 15 hops

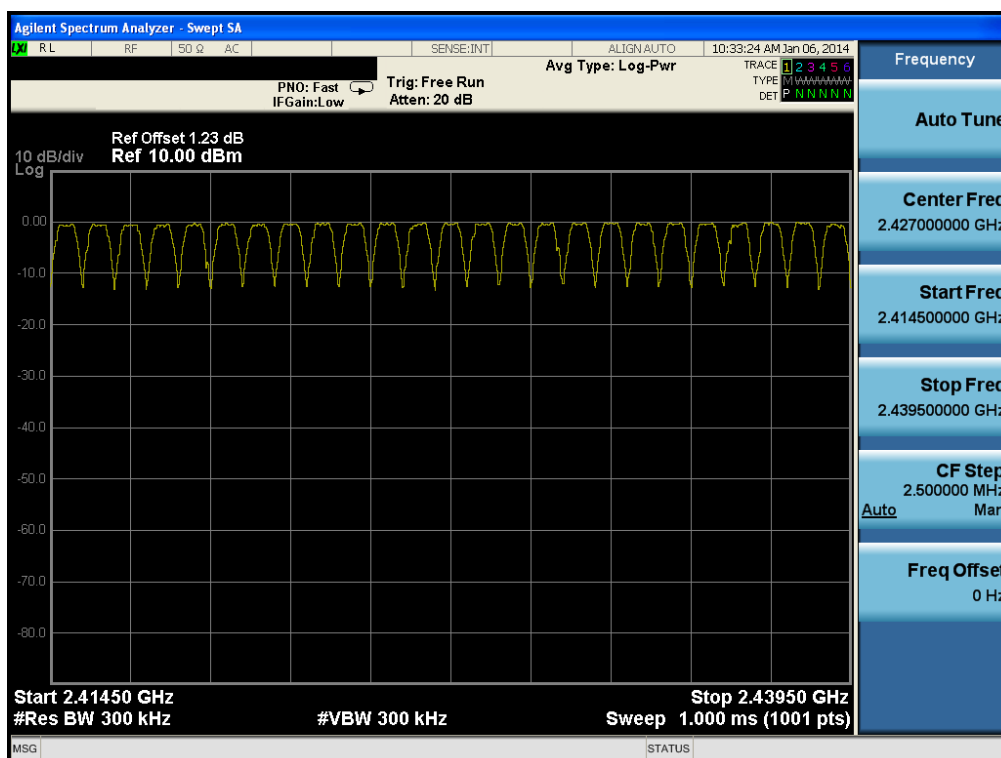
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable &GFSK



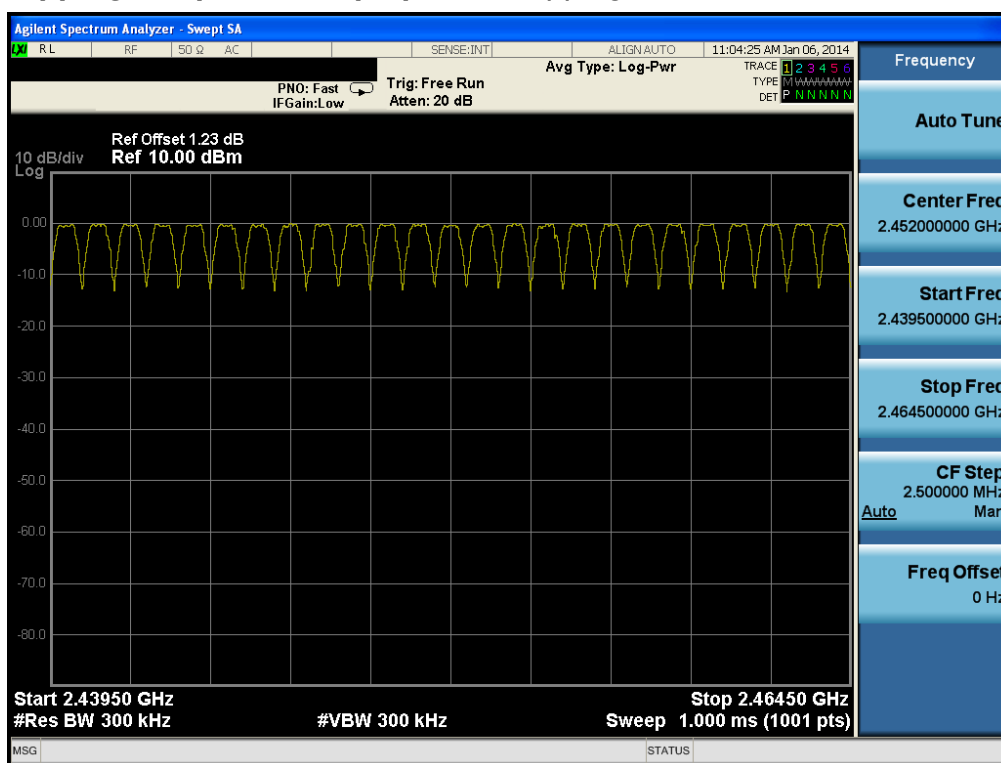
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable &GFSK



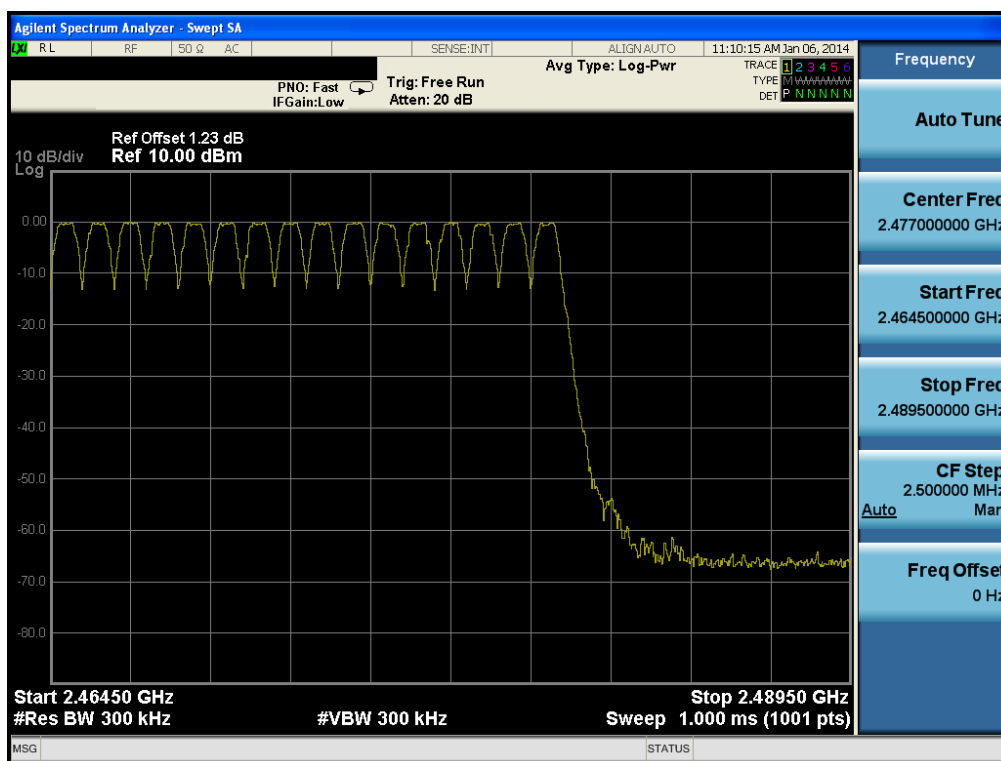
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable &GFSK

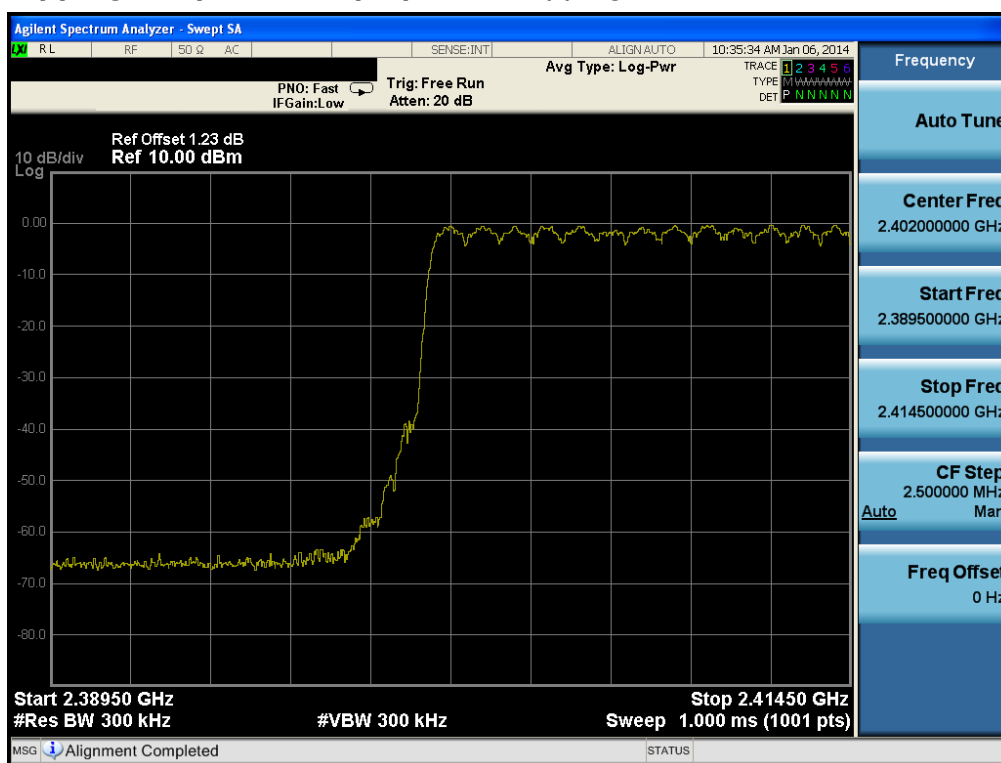


Number of Hopping Frequencies 4(FH)

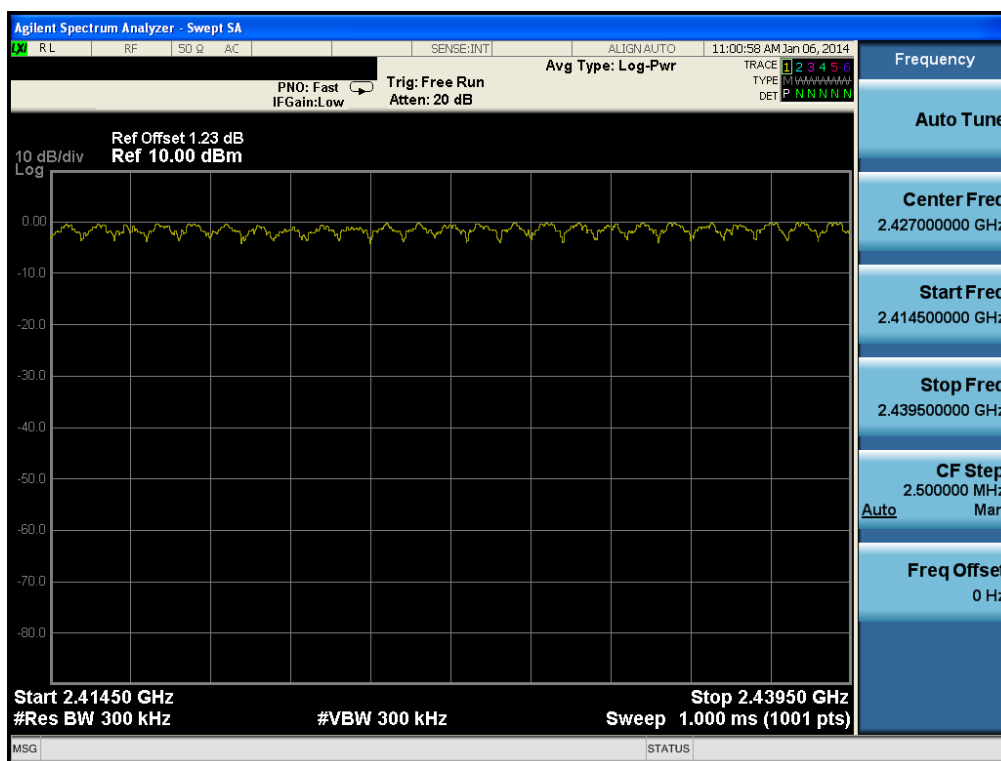
Hopping mode: Enable &GFSK



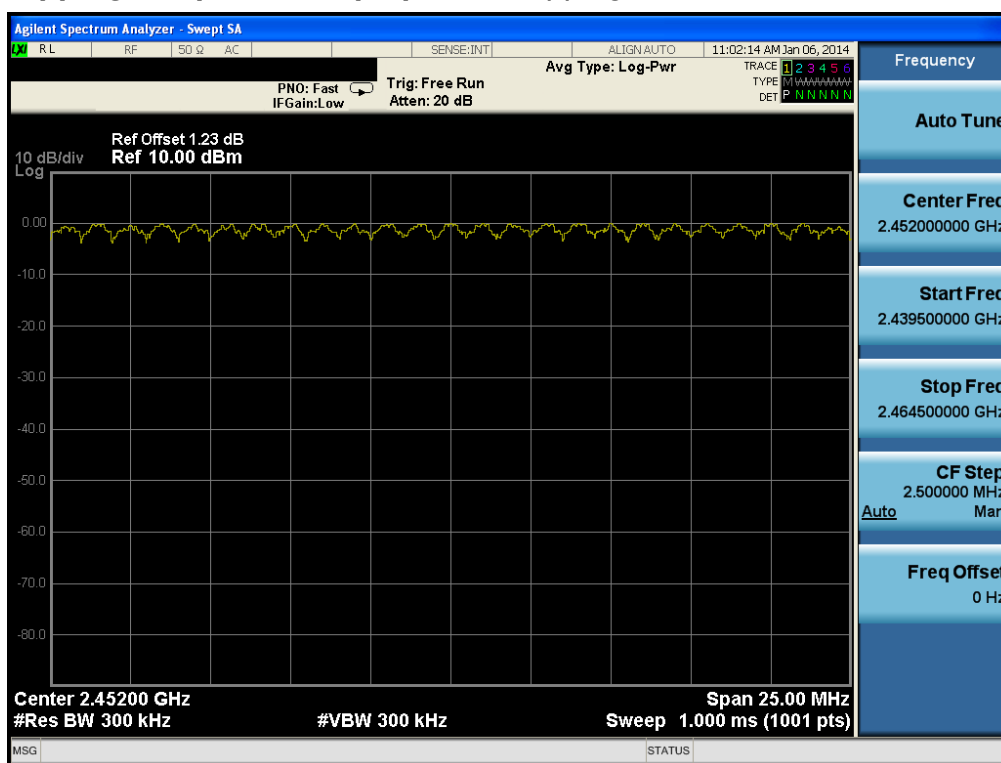
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

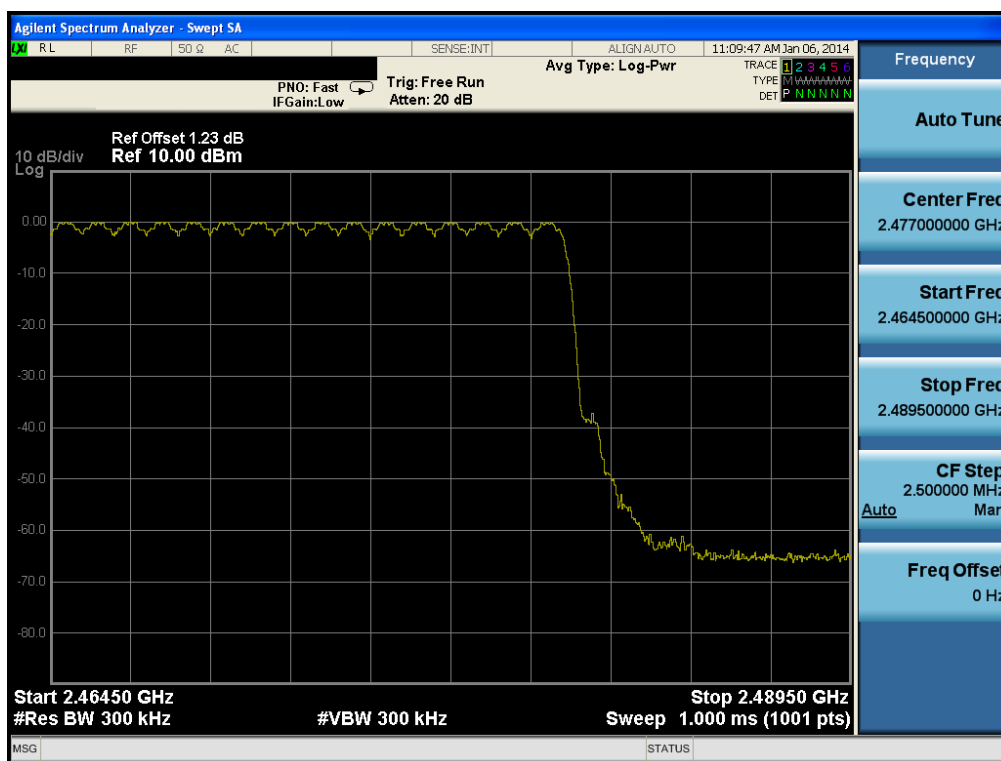
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 3(FH)

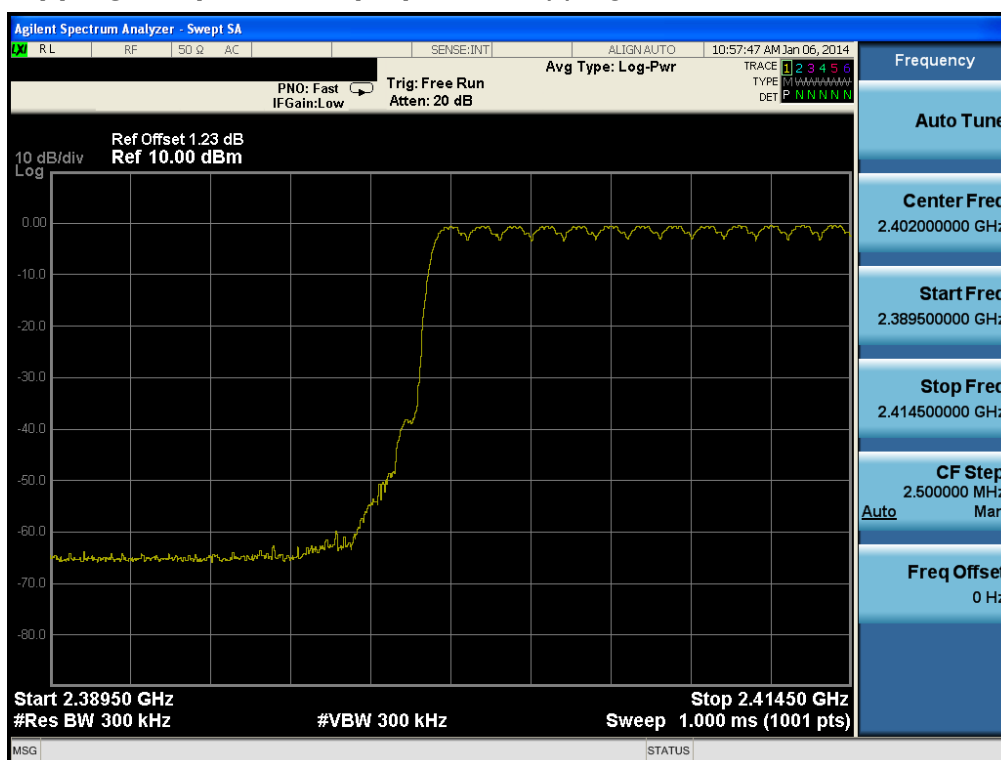
Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 4(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

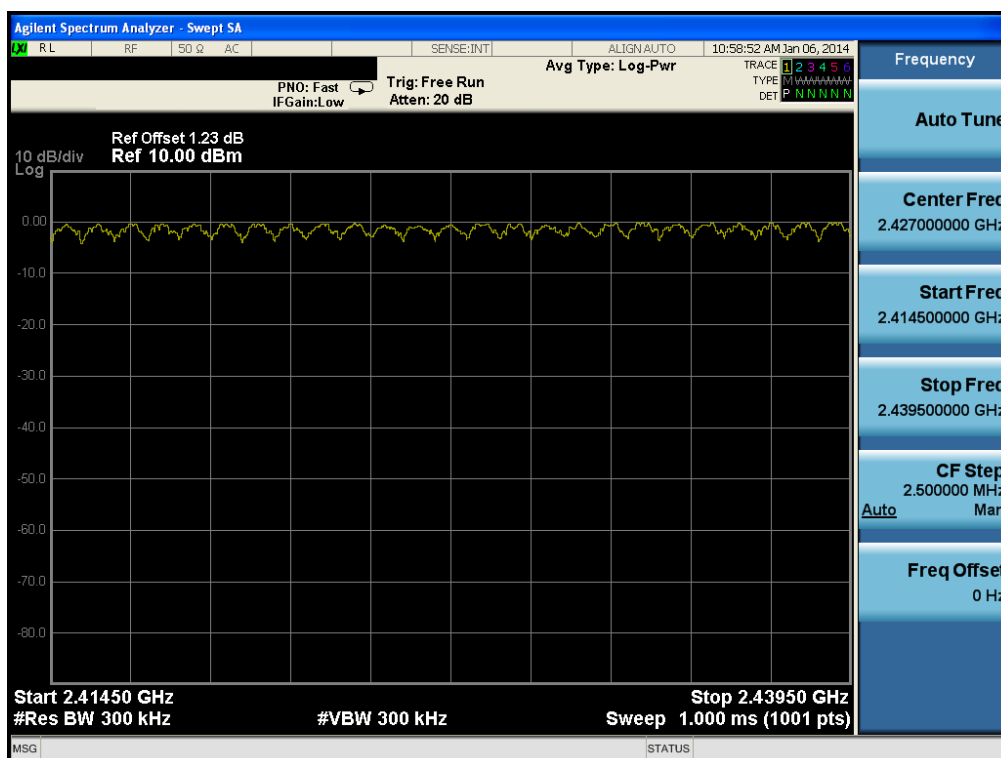
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable &8DPSK



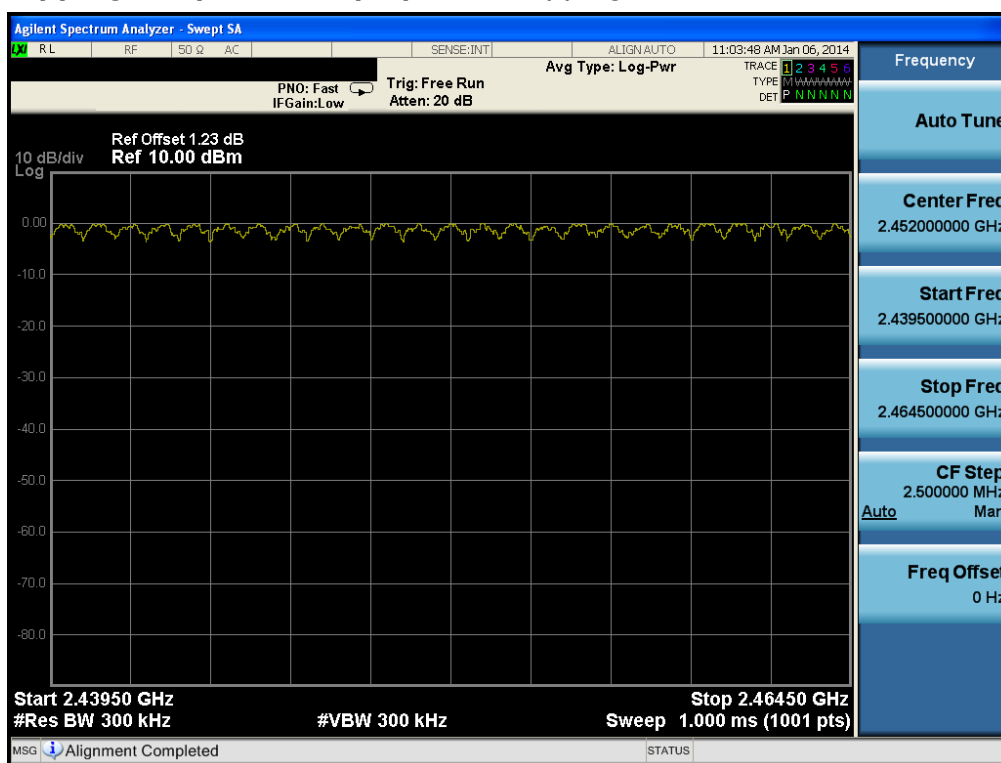
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable &8DPSK



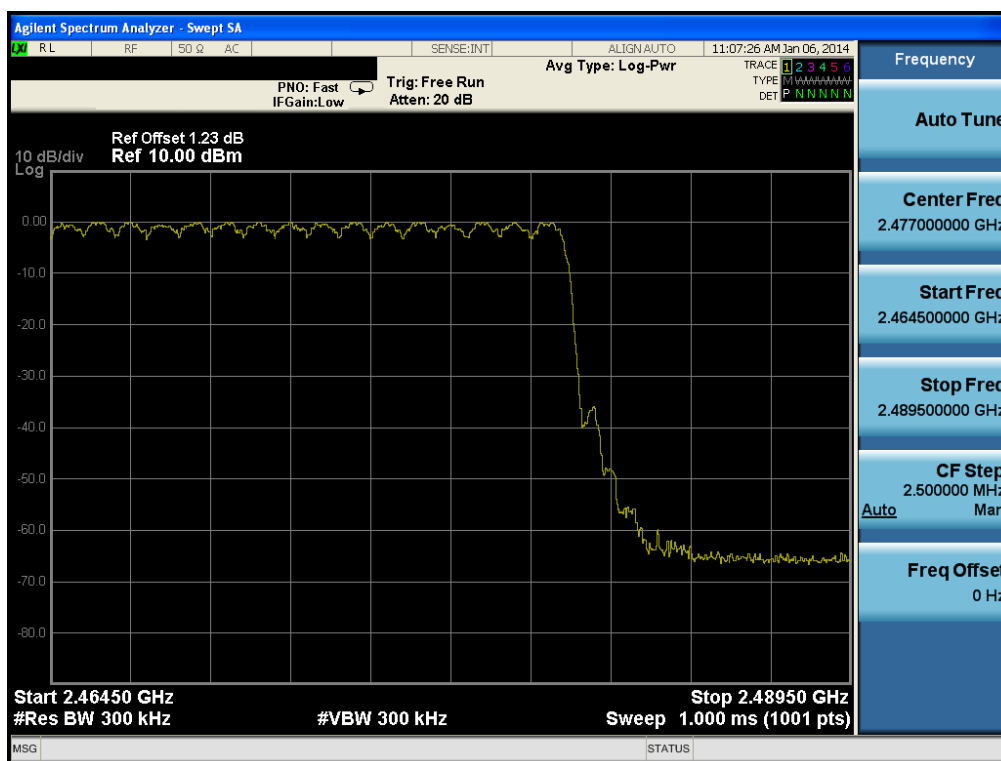
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable &8DPSK



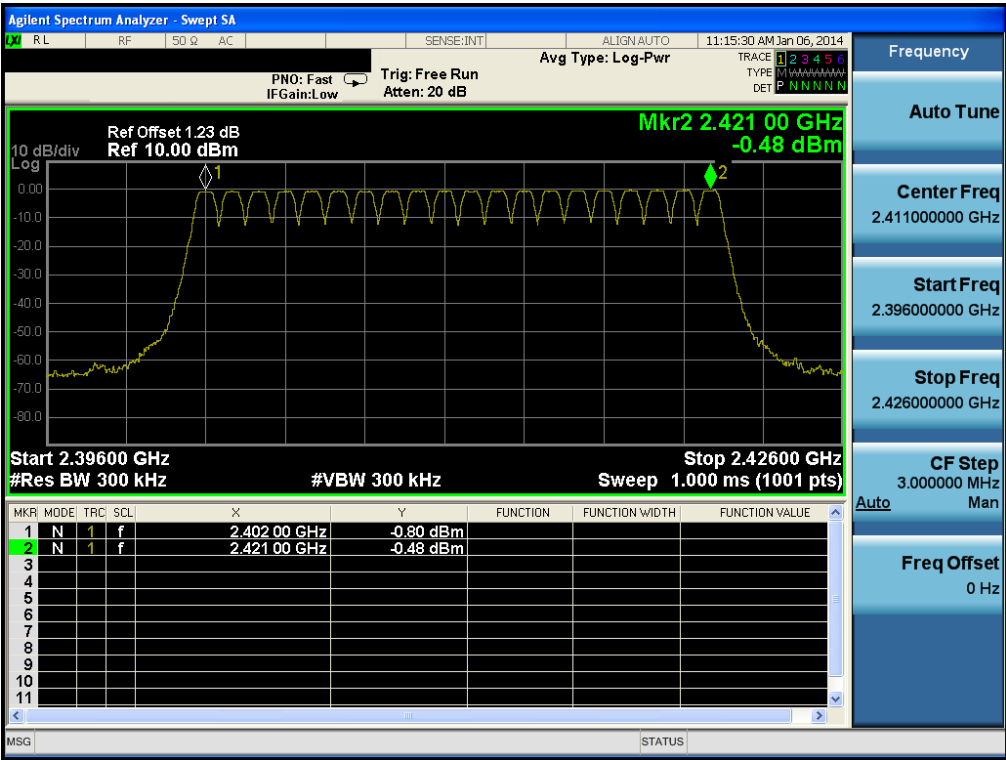
Number of Hopping Frequencies 4(FH)

Hopping mode: Enable &8DPSK



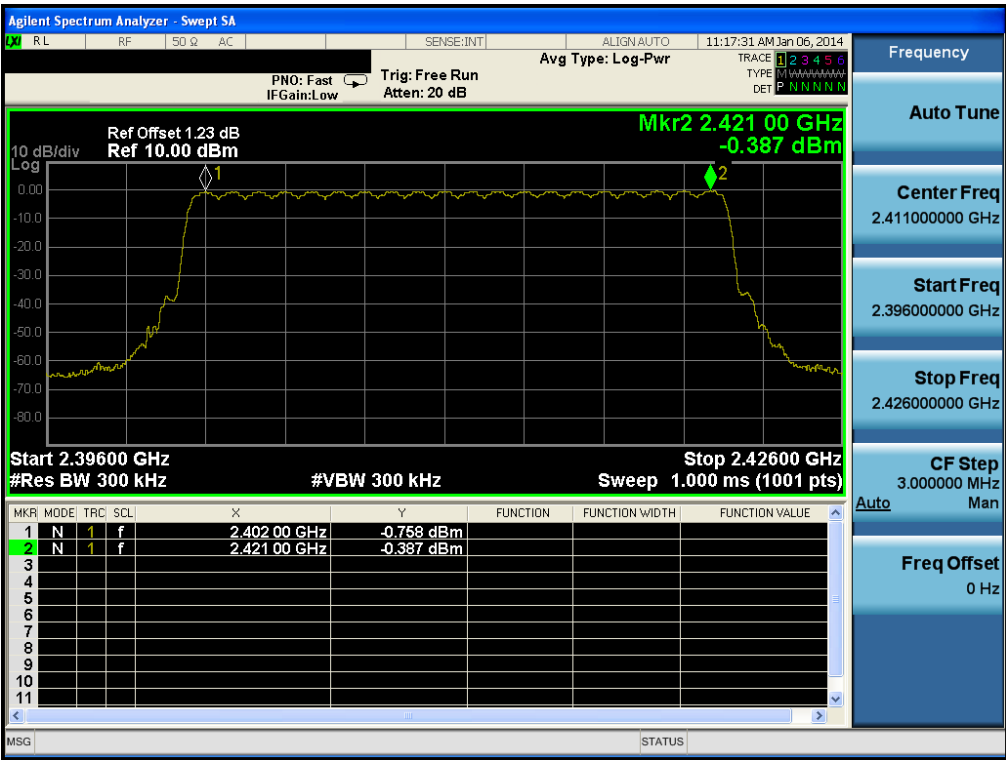
Number of Hopping Frequencies 1(AFH)

Hopping mode: Enable &GFSK

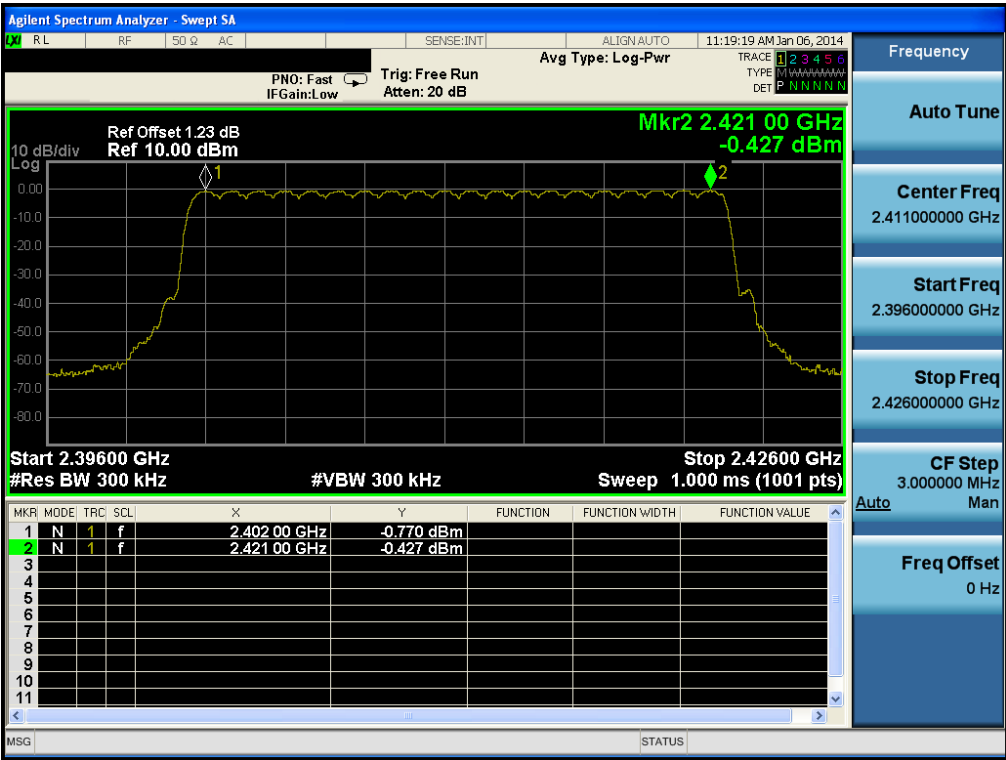


Number of Hopping Frequencies 1(AFH)

Hopping mode: Enable & $\pi/4$ DQPSK



Number of Hopping Frequencies 1(AFH) Hopping mode: Enable &8DPSK



- Measurement Data: Comply**L41VW2****- 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

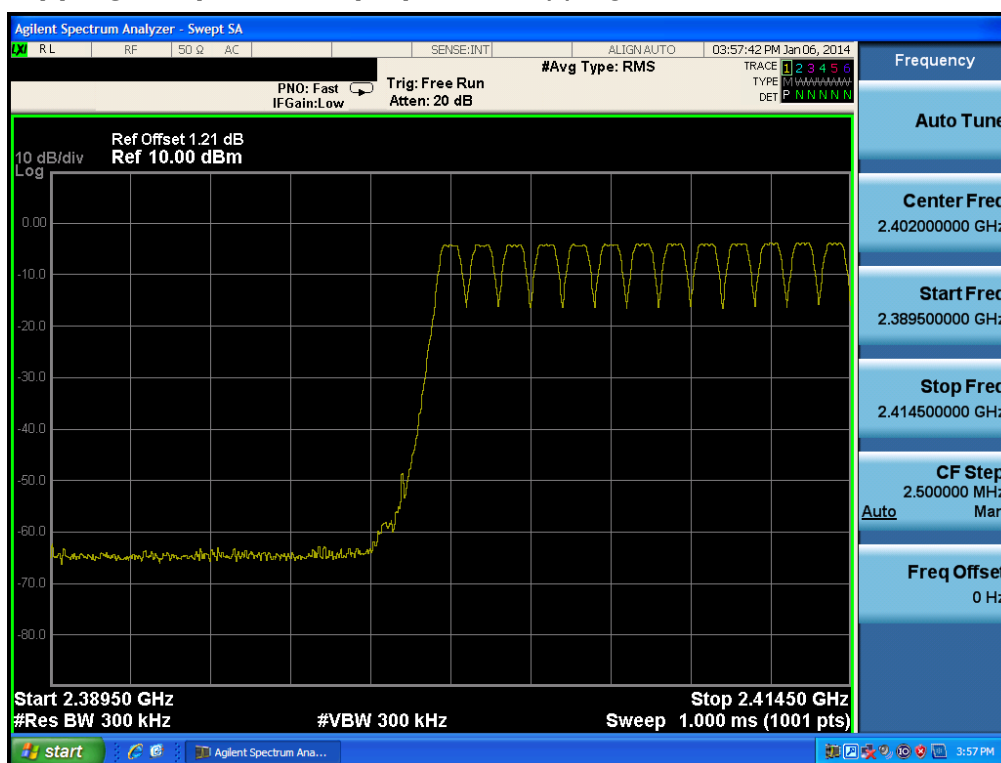
Note 1: See next pages for actual measured spectrum plots.

- Minimum Standard:

At least 15 hops

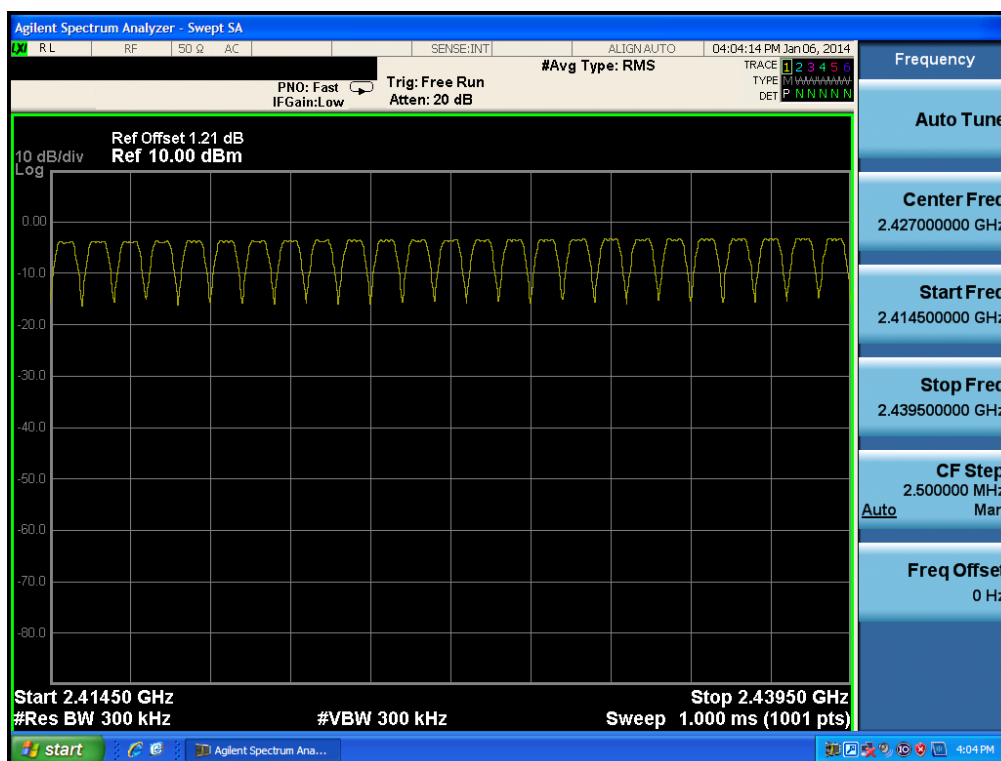
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & GFSK



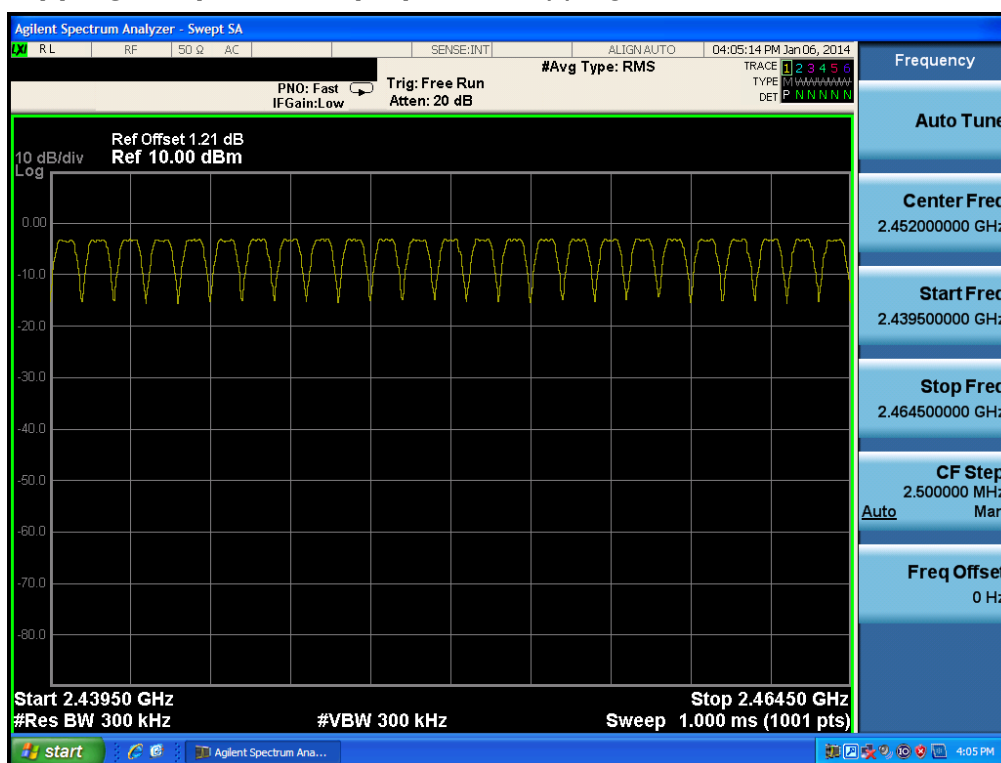
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable & GFSK



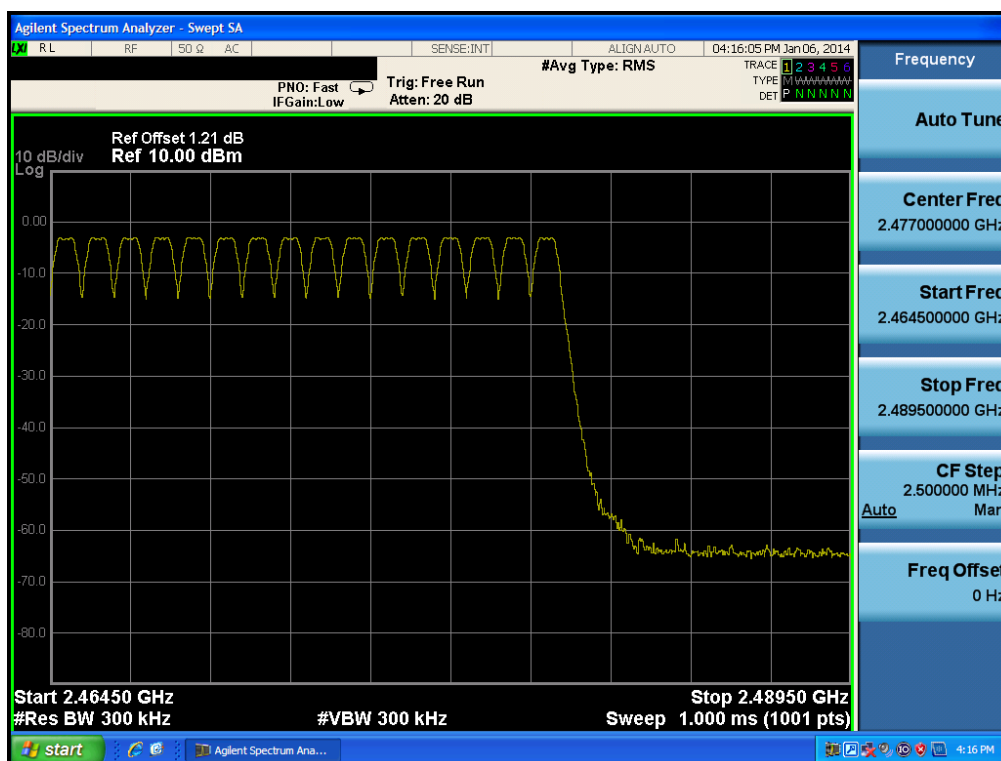
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable & GFSK

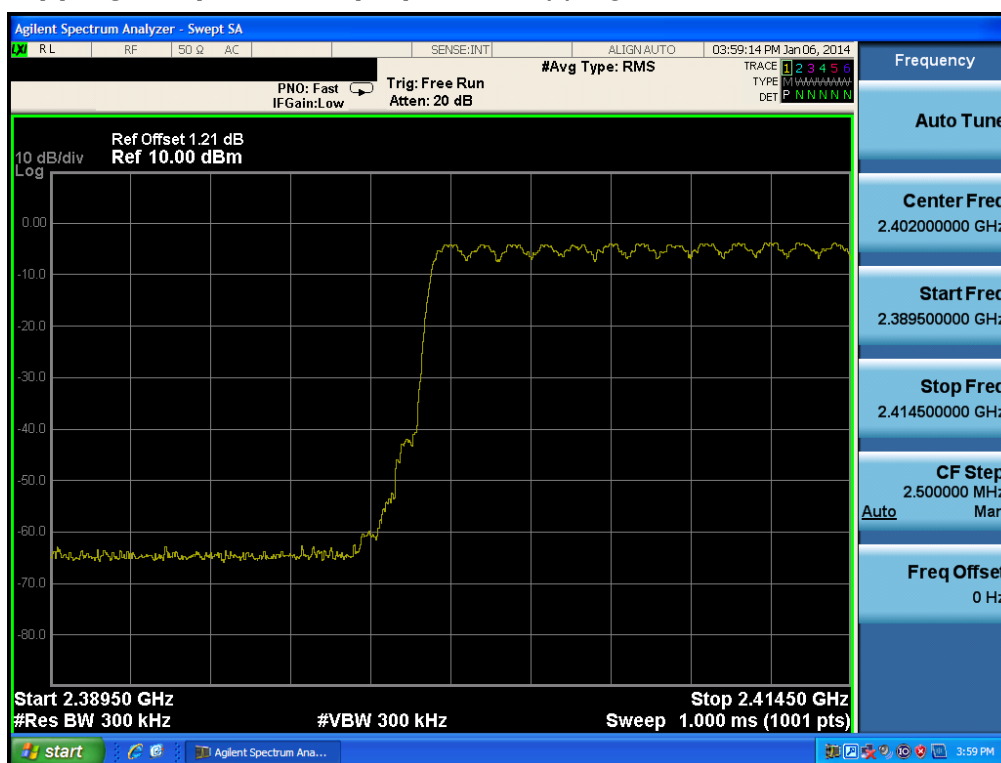


Number of Hopping Frequencies 4(FH)

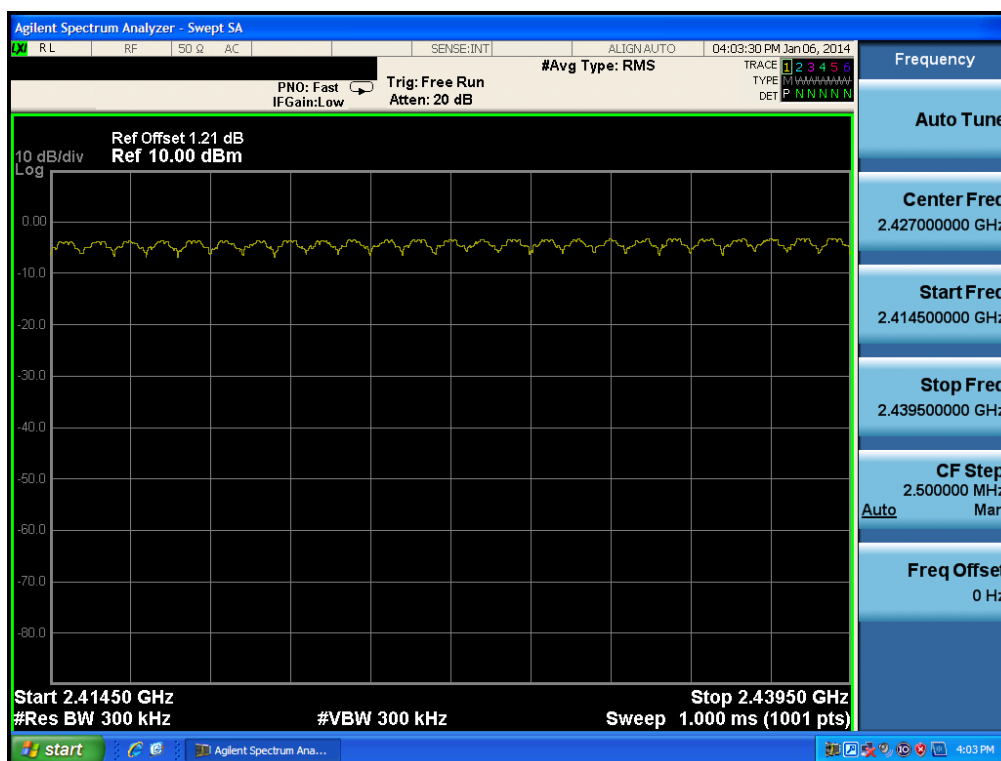
Hopping mode: Enable & GFSK



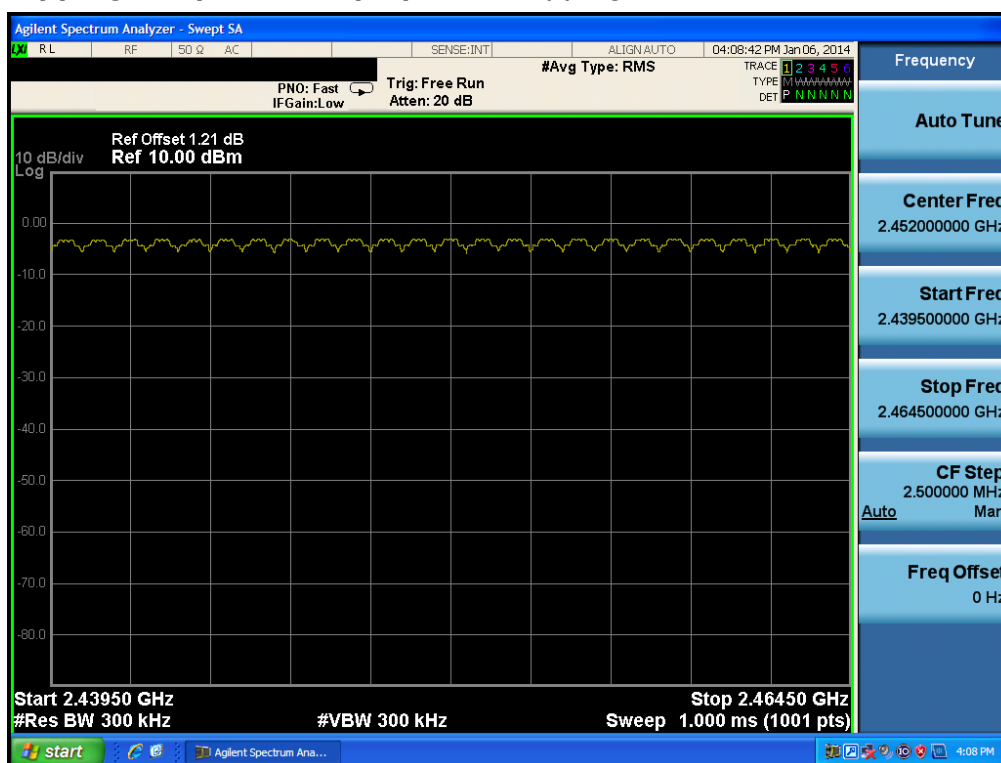
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

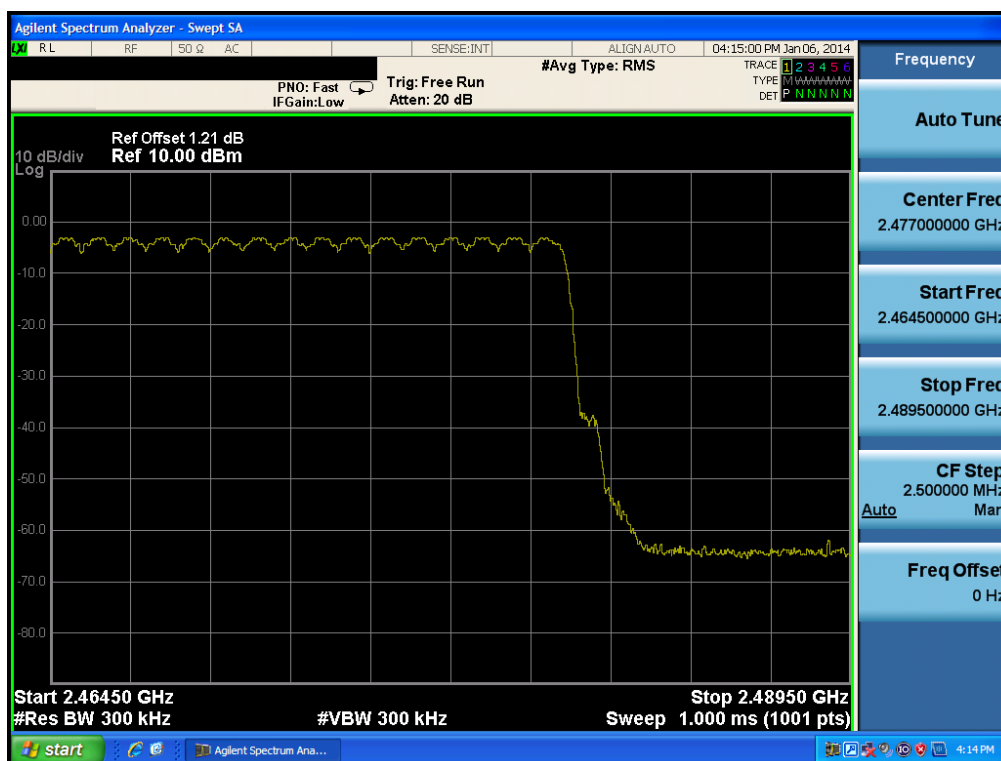
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 3(FH)

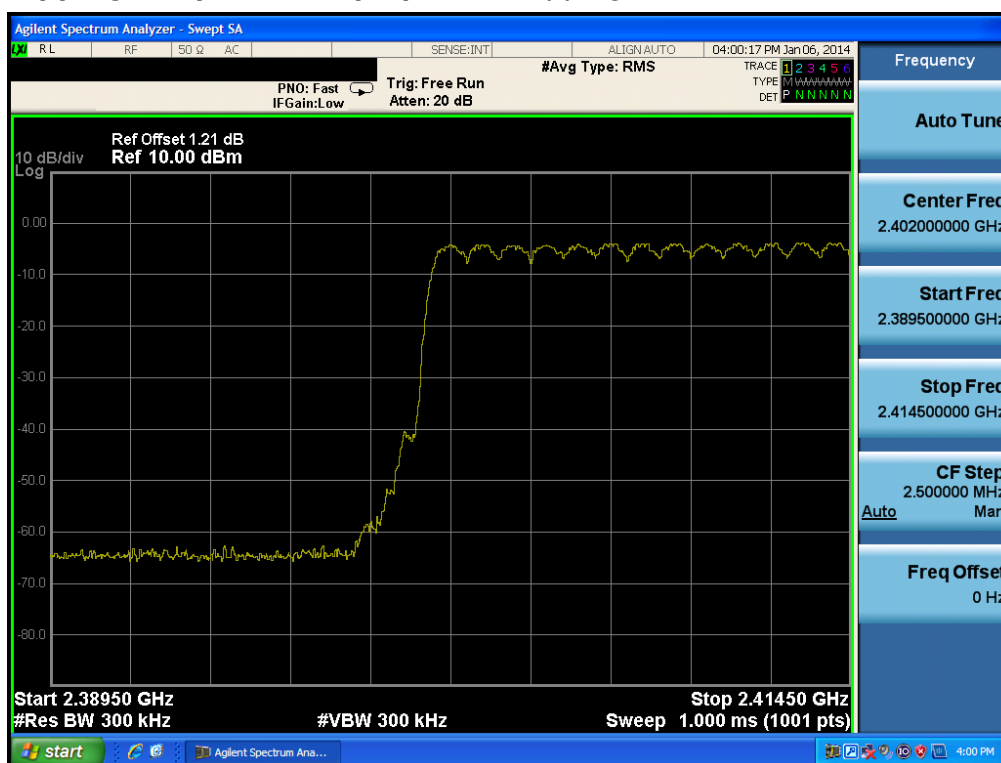
Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 4(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

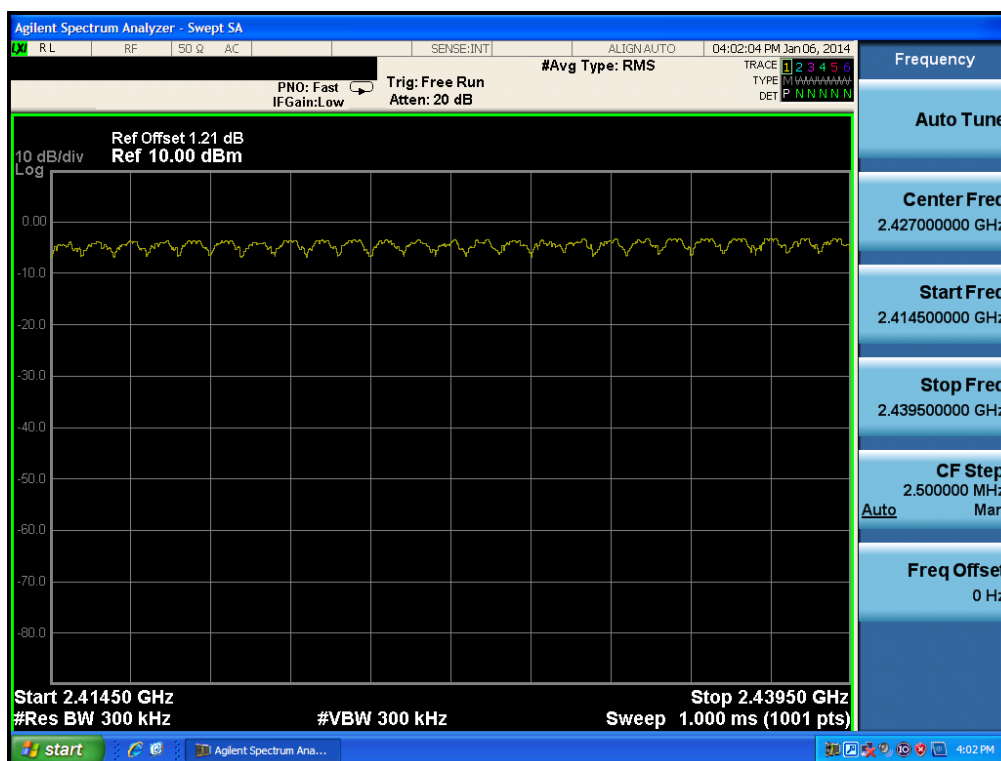
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & 8DPSK



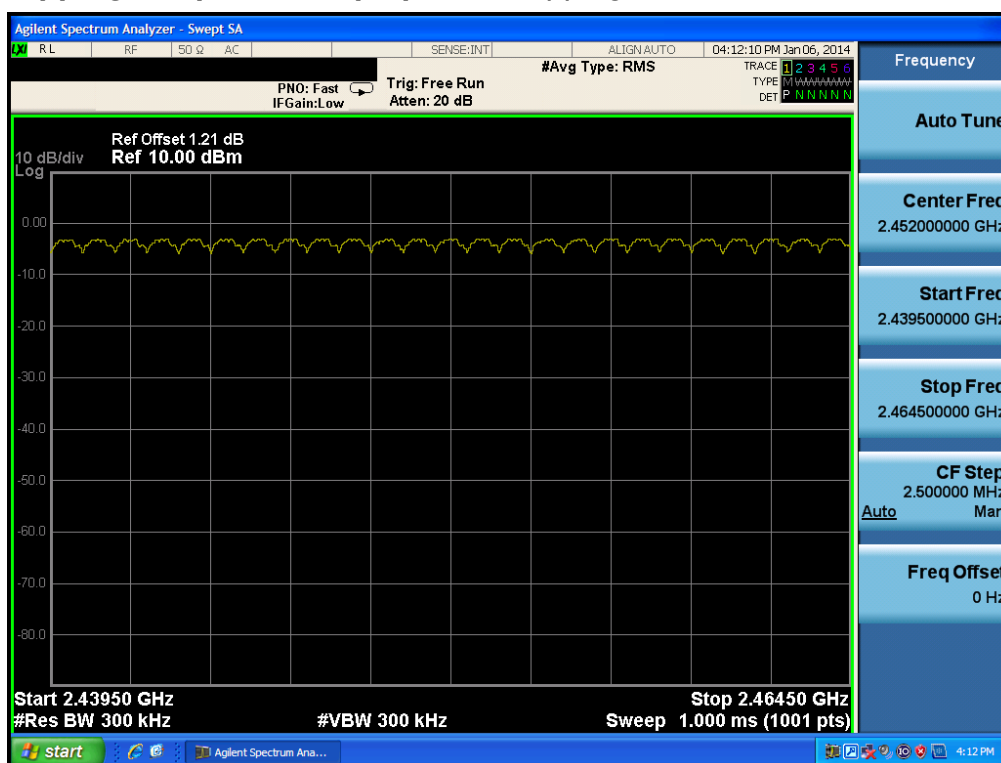
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable & 8DPSK



Number of Hopping Frequencies 3(FH)

Hopping mode: Enable & 8DPSK

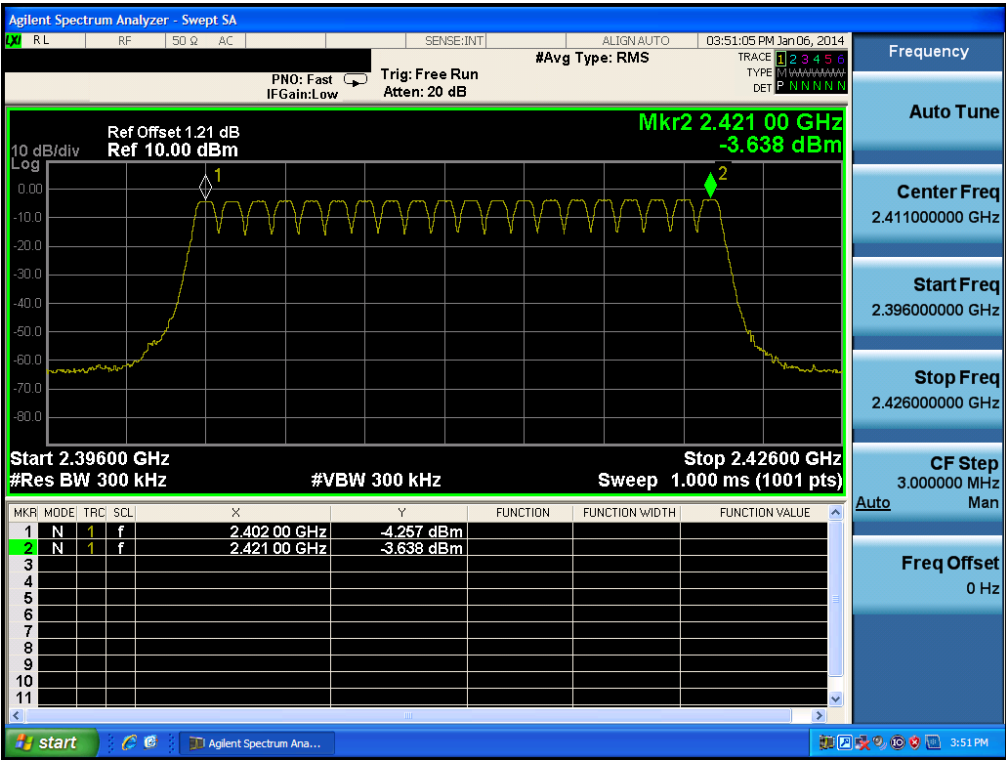


Number of Hopping Frequencies 4(FH)

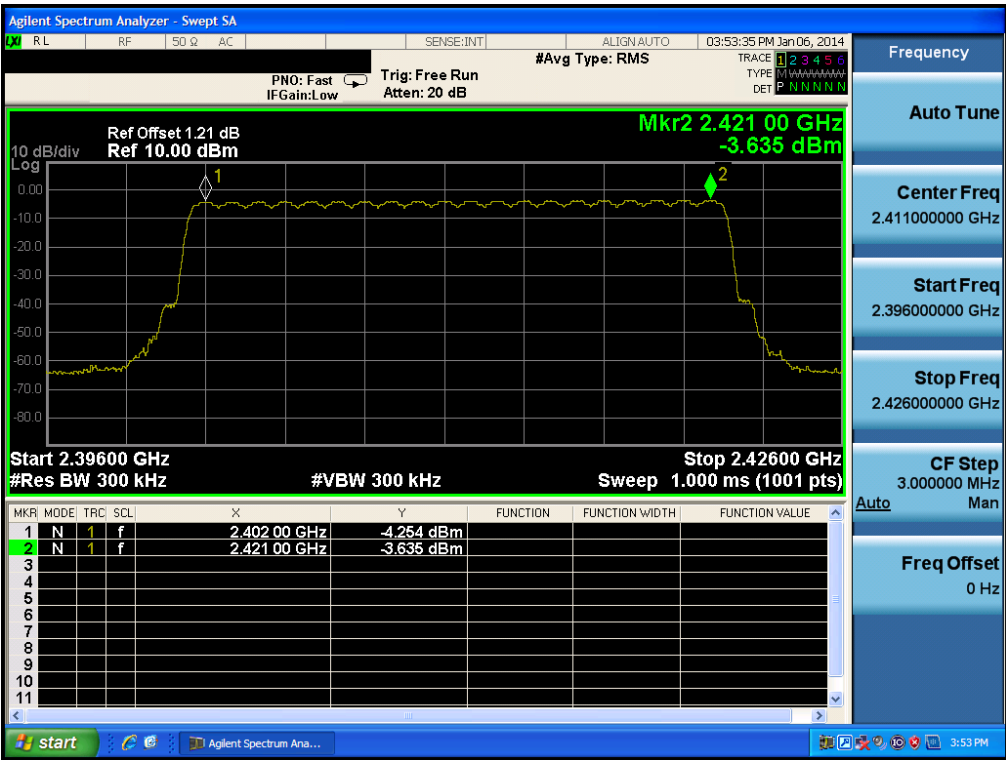
Hopping mode: Enable & 8DPSK



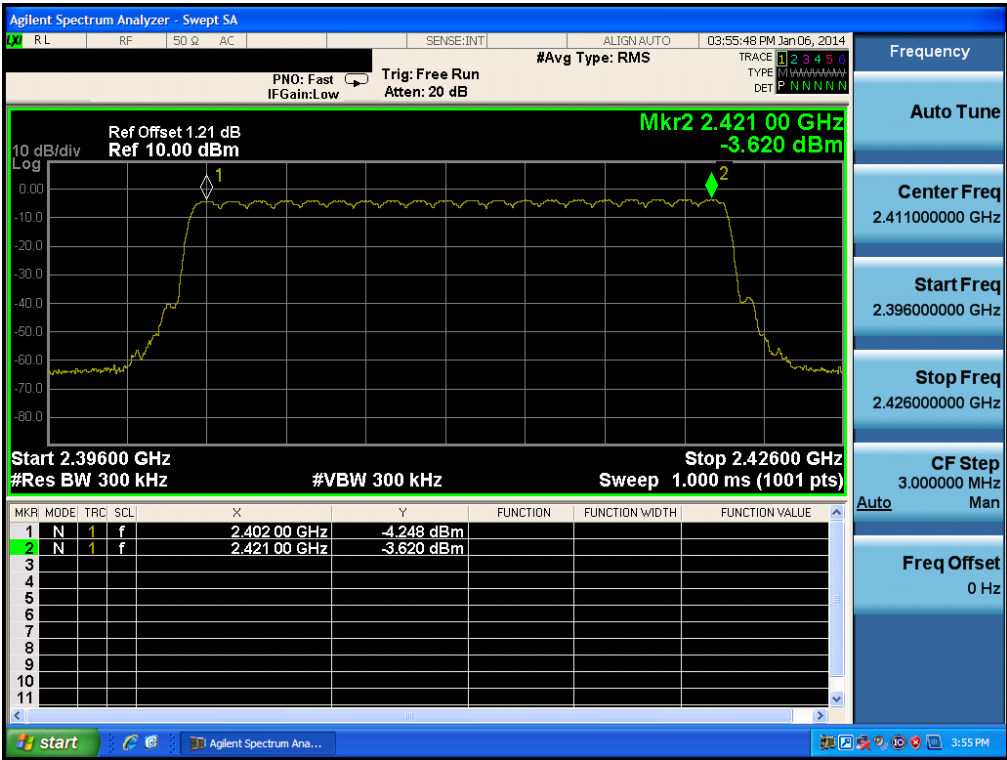
Number of Hopping Frequencies 1(AFH) Hopping mode: Enable & GFSK



Number of Hopping Frequencies 1(AFH) Hopping mode: Enable & $\pi/4$ DQPSK



Number of Hopping Frequencies 1(AFH) Hopping mode: Enable & 8DPSK



- Measurement Data: Comply**L42VW2****- 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

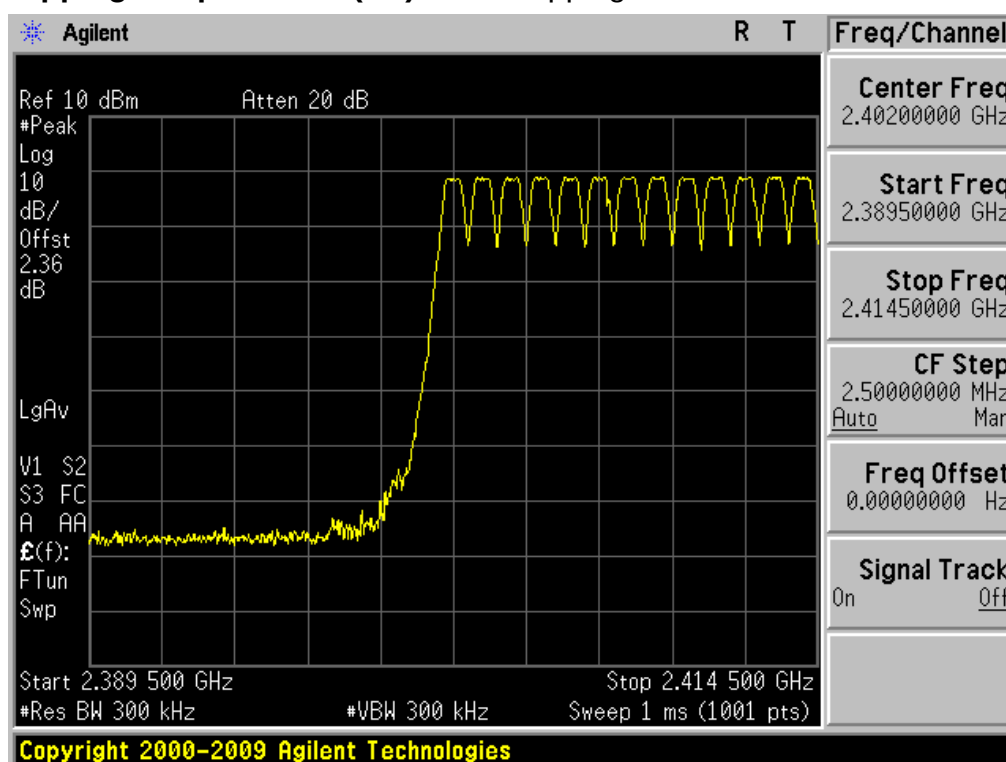
Note 1: See next pages for actual measured spectrum plots.

- Minimum Standard:

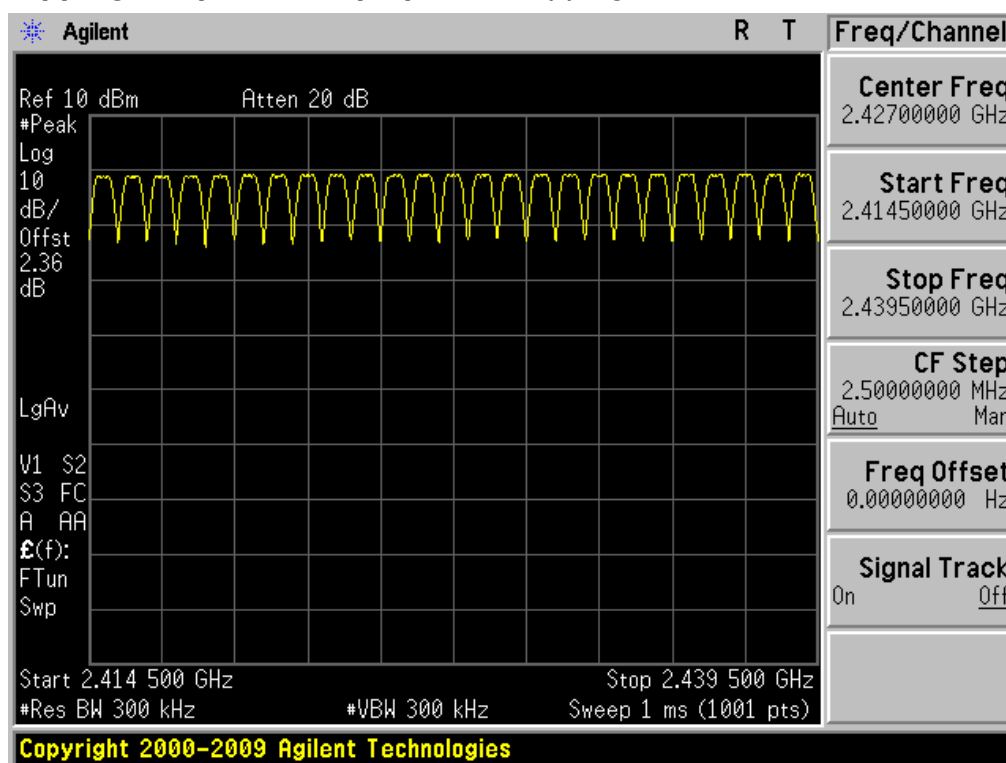
At least 15 hops

Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & GFSK

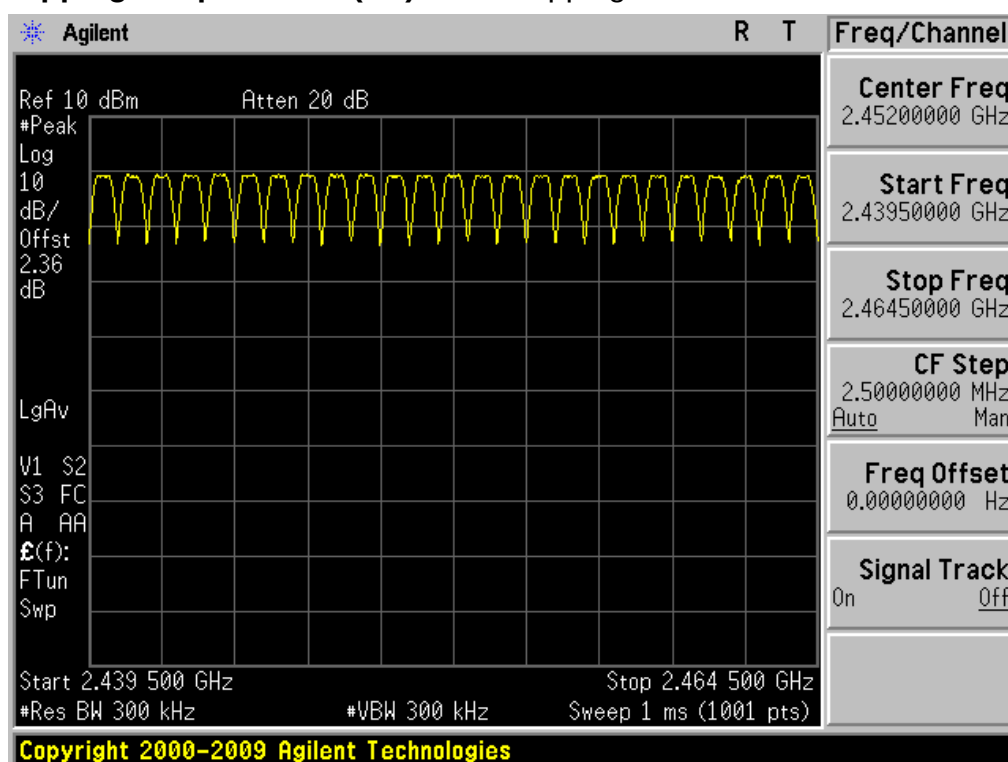
**Number of Hopping Frequencies 2(FH)**

Hopping mode: Enable & GFSK

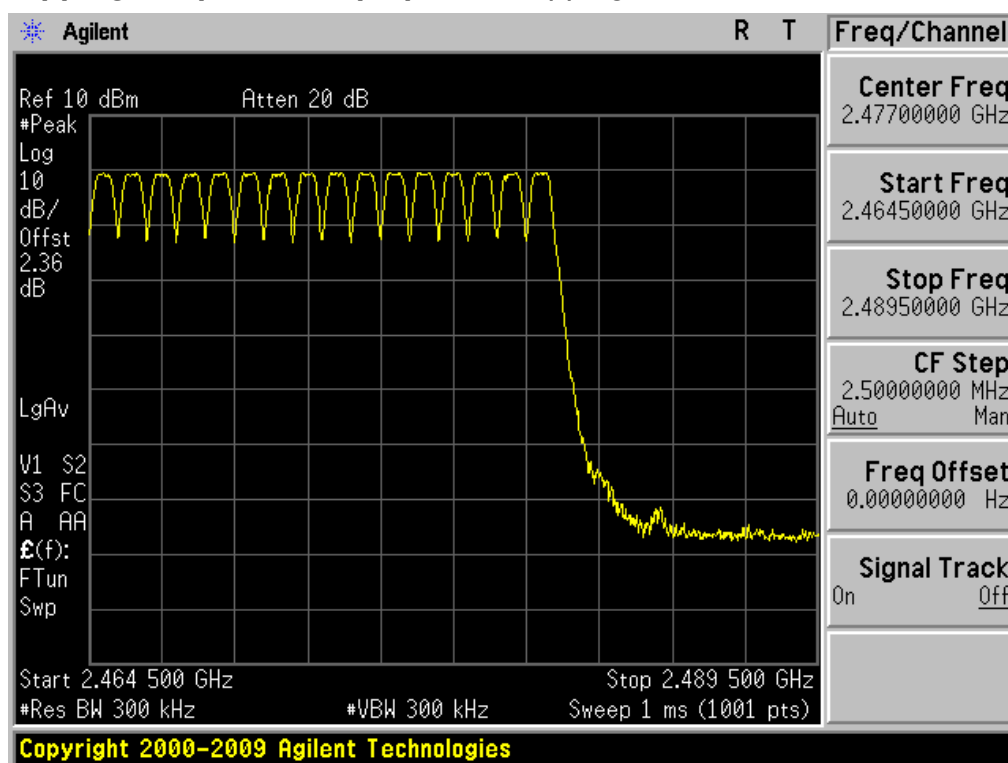


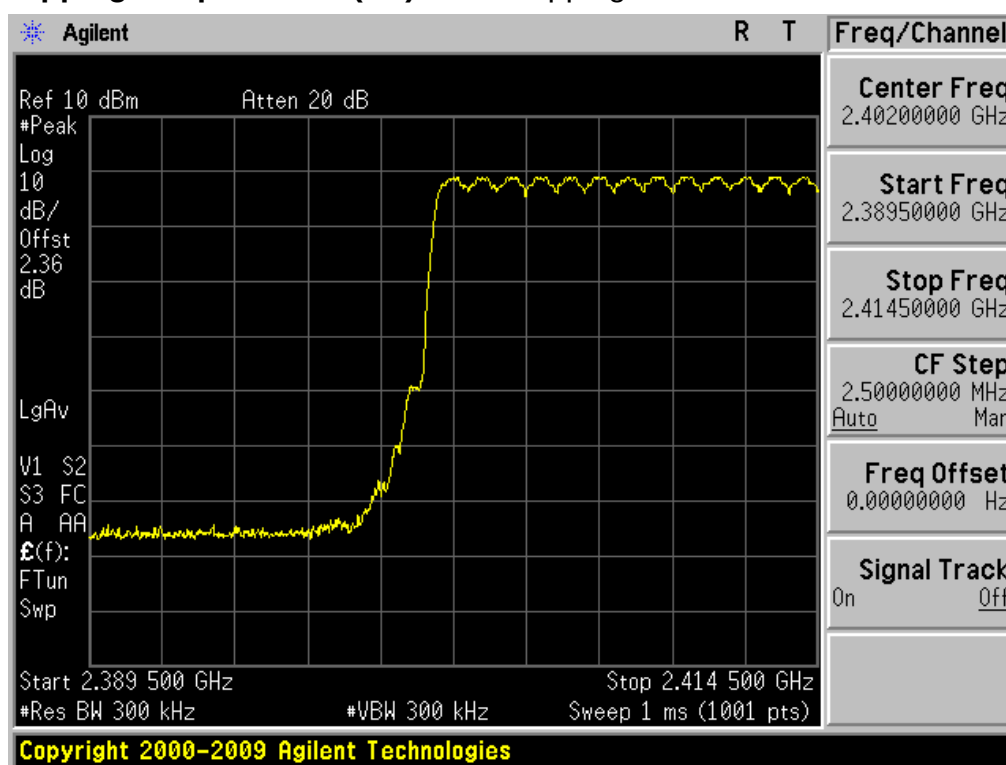
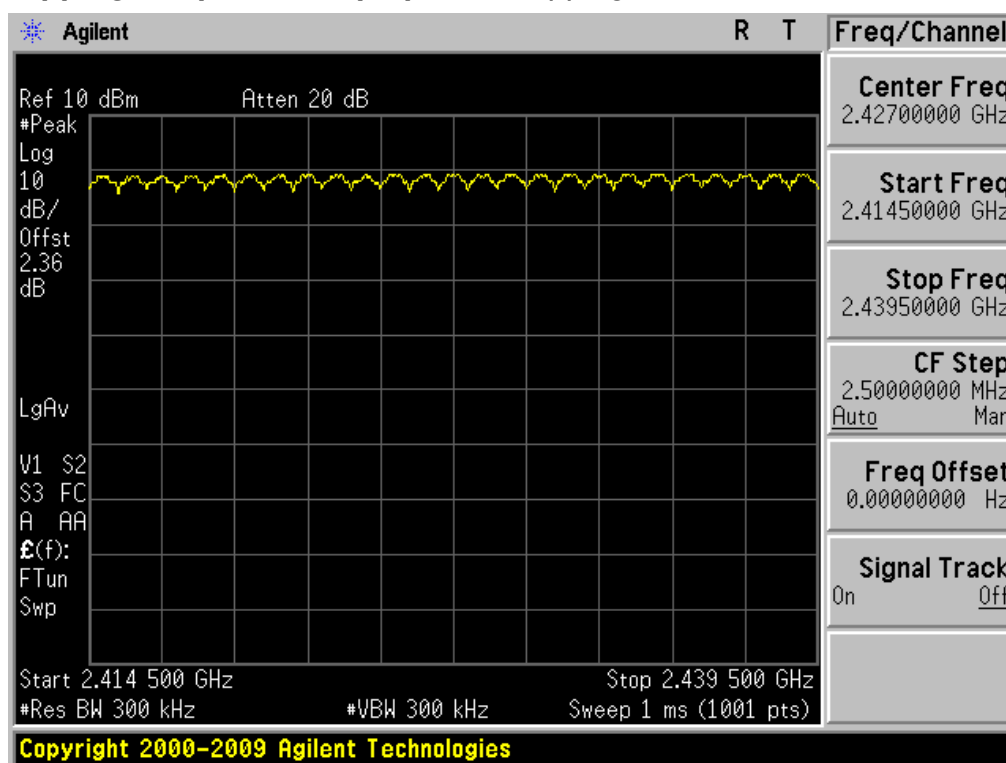
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable & GFSK

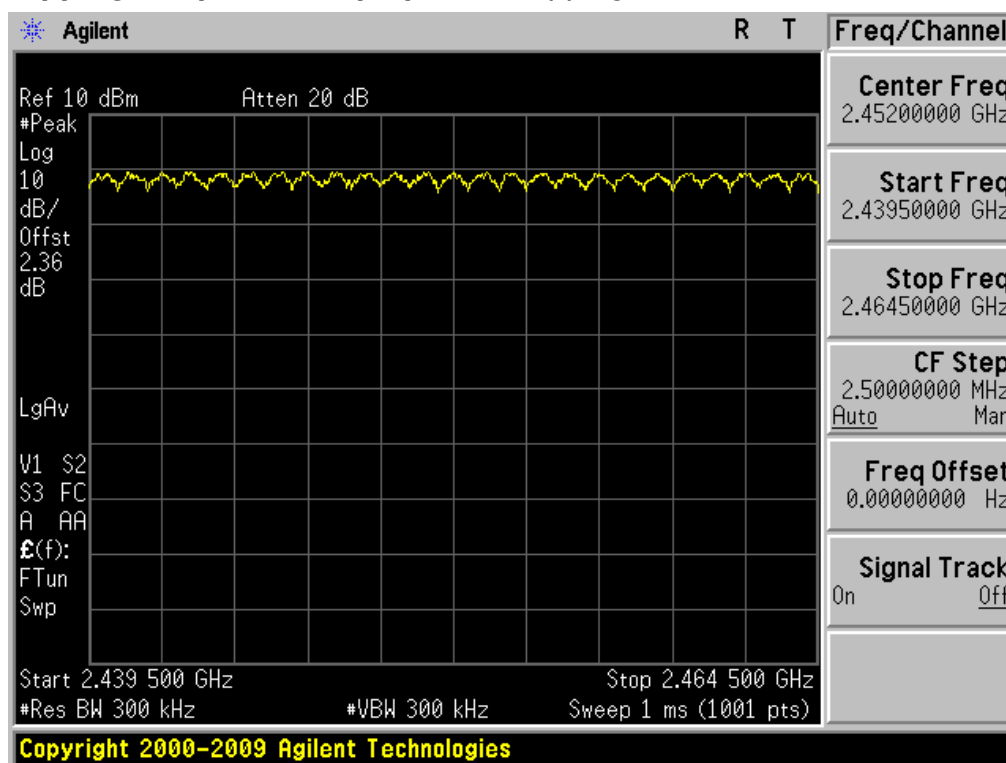
**Number of Hopping Frequencies 4(FH)**

Hopping mode: Enable & GFSK

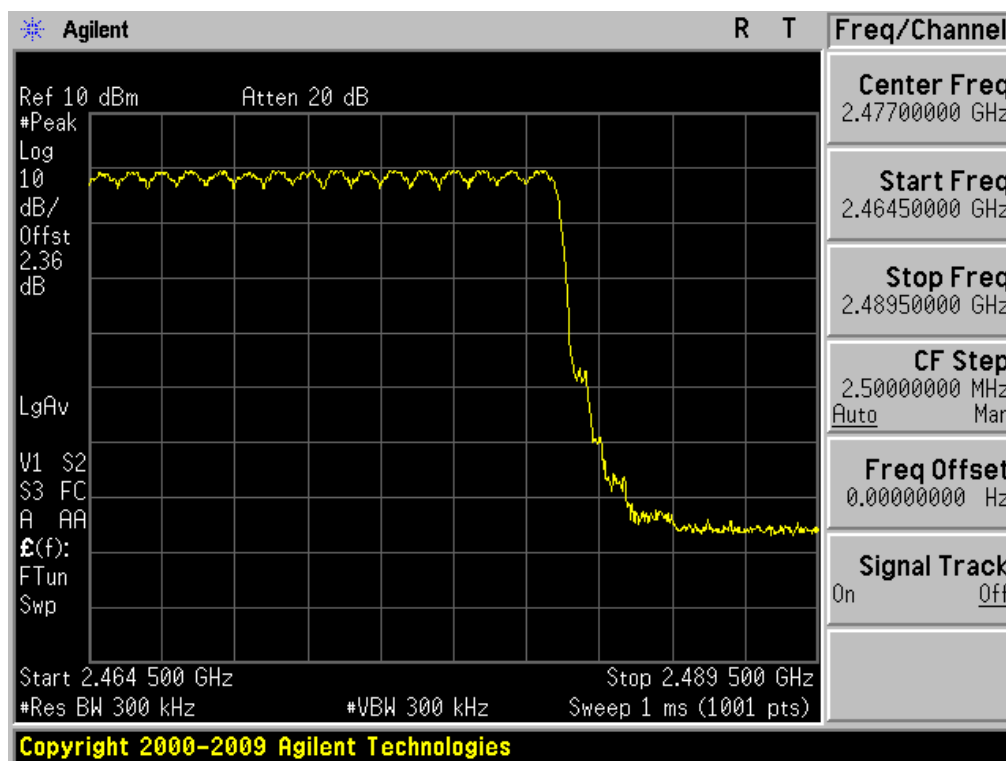


Number of Hopping Frequencies 1(FH)Hopping mode: Enable & $\pi/4$ DQPSK**Number of Hopping Frequencies 2(FH)**Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 3(FH)

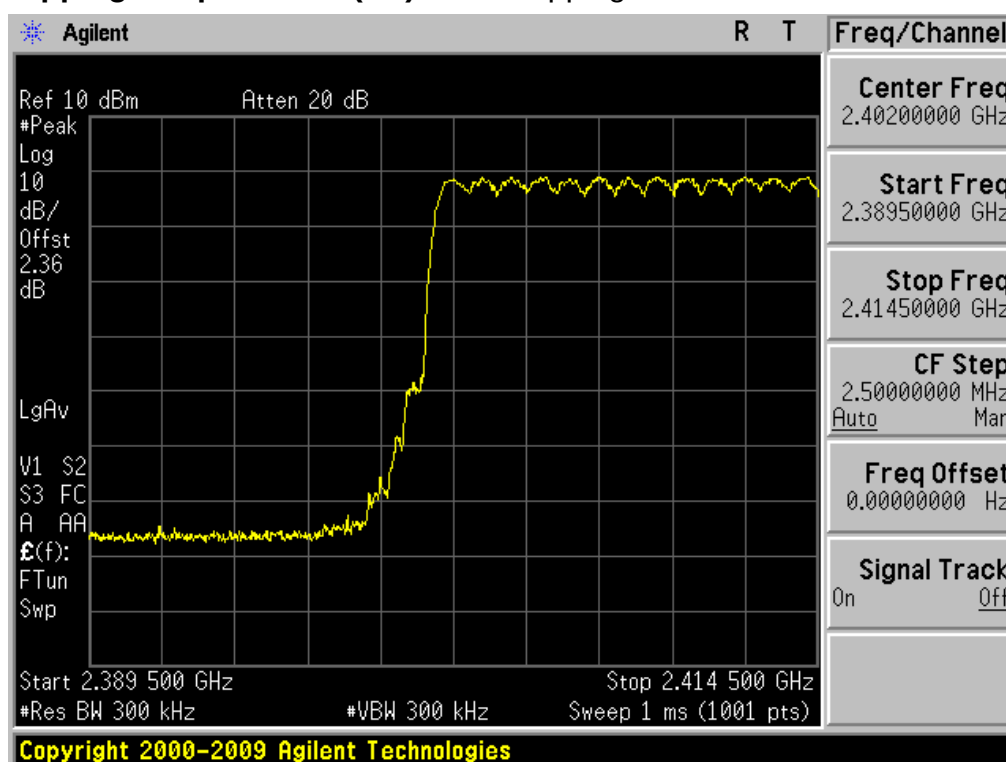
Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 4(FH)

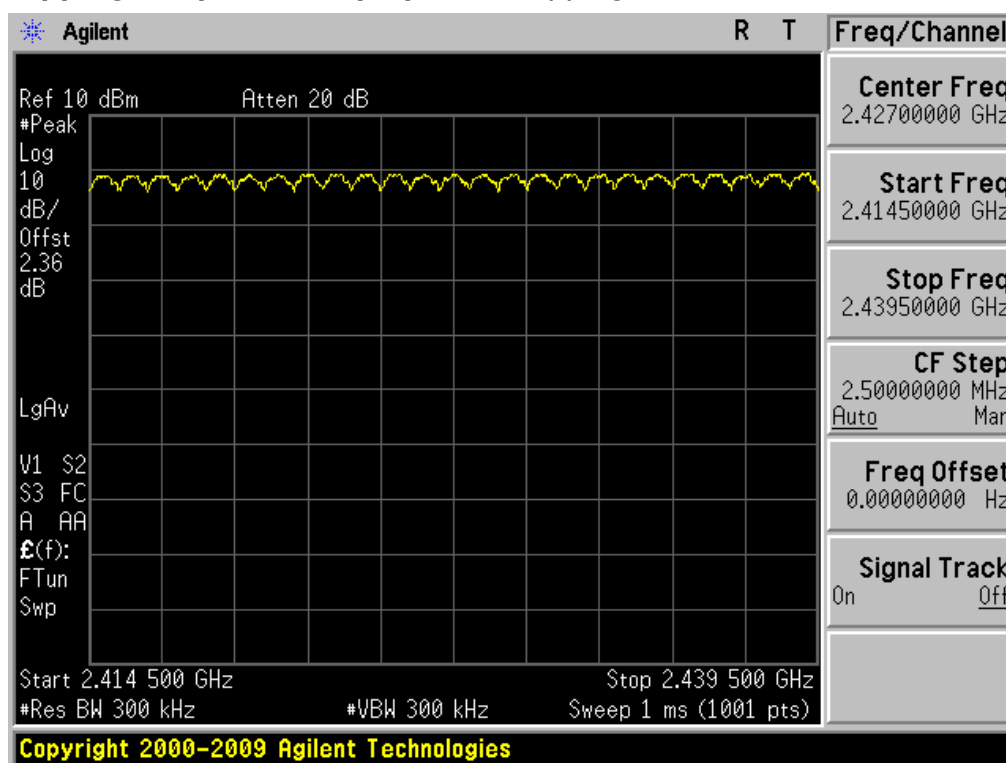
Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & 8DPSK

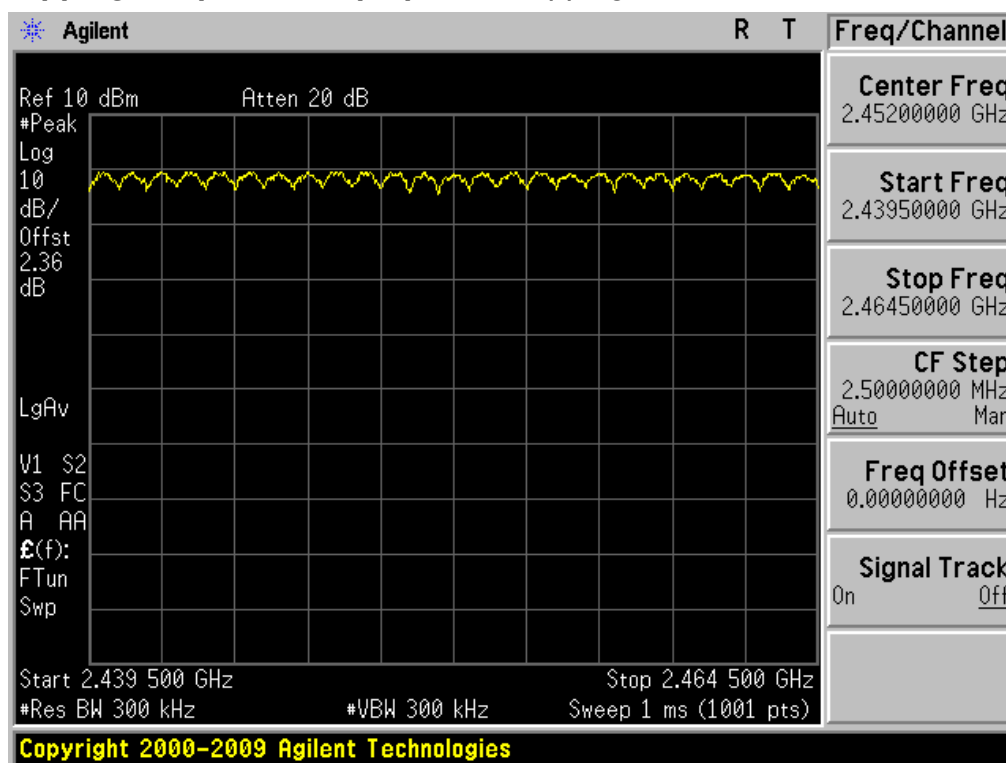
**Number of Hopping Frequencies 2(FH)**

Hopping mode: Enable & 8DPSK

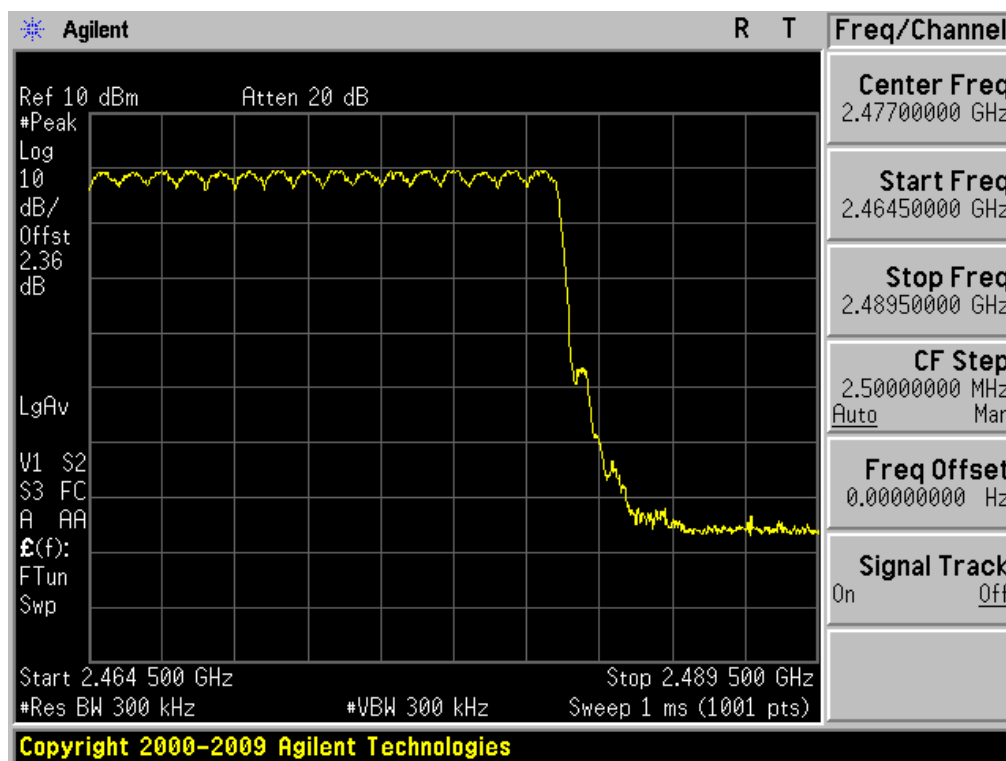


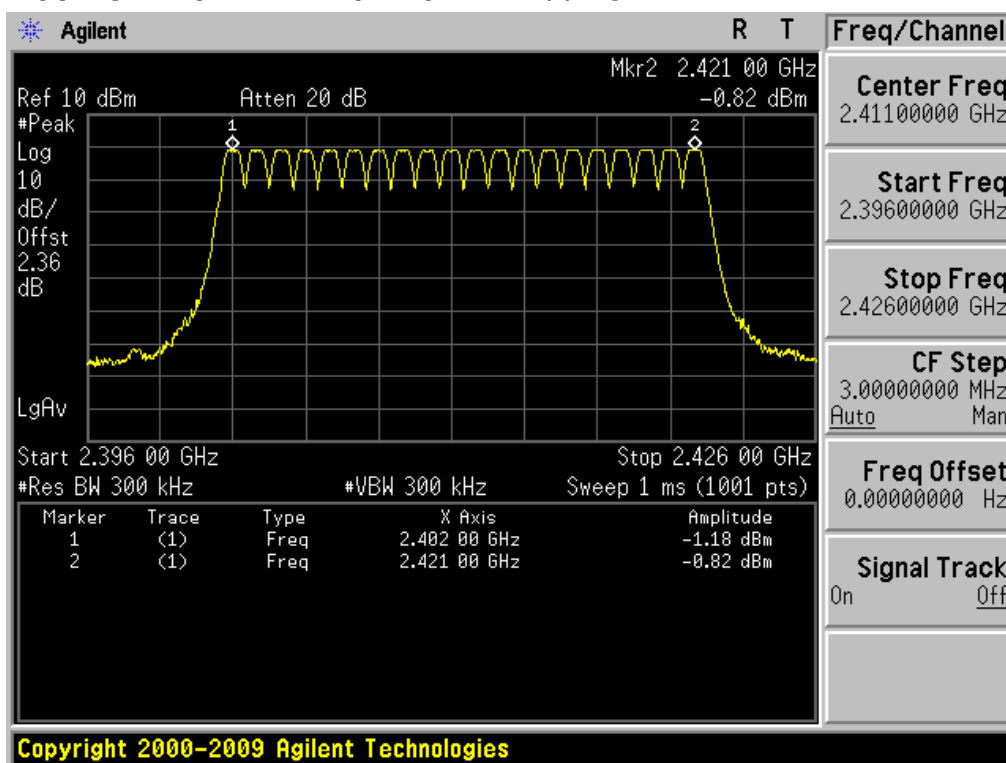
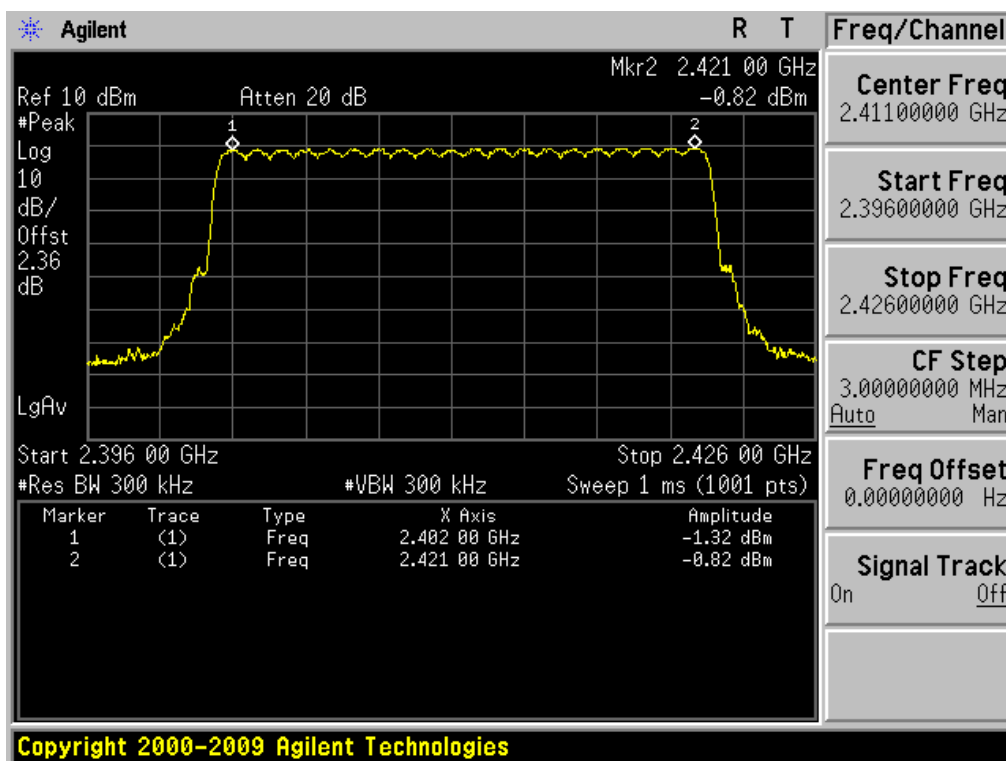
Number of Hopping Frequencies 3(FH)

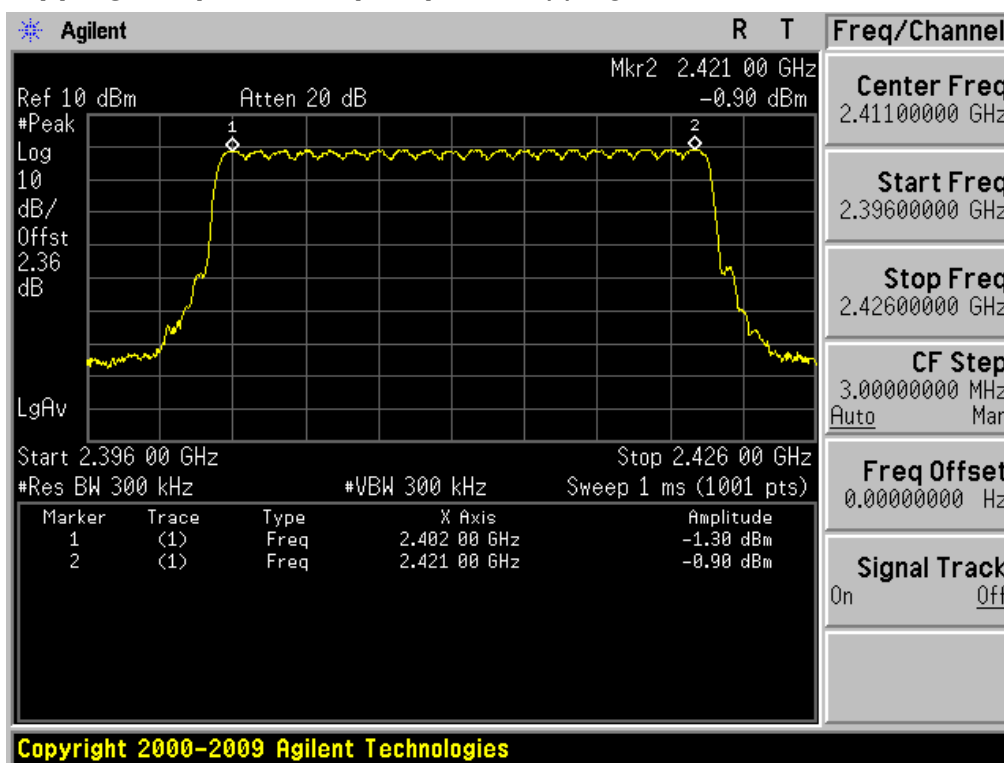
Hopping mode: Enable & 8DPSK

**Number of Hopping Frequencies 4(FH)**

Hopping mode: Enable & 8DPSK



Number of Hopping Frequencies 1(AFH) Hopping mode: Enable & GFSK**Number of Hopping Frequencies 1(AFH) Hopping mode: Enable & $\pi/4$ DQPSK**

Number of Hopping Frequencies 1(AFH) Hopping mode: Enable & 8DPSK

- Measurement Data: Comply**L52SK2****- 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

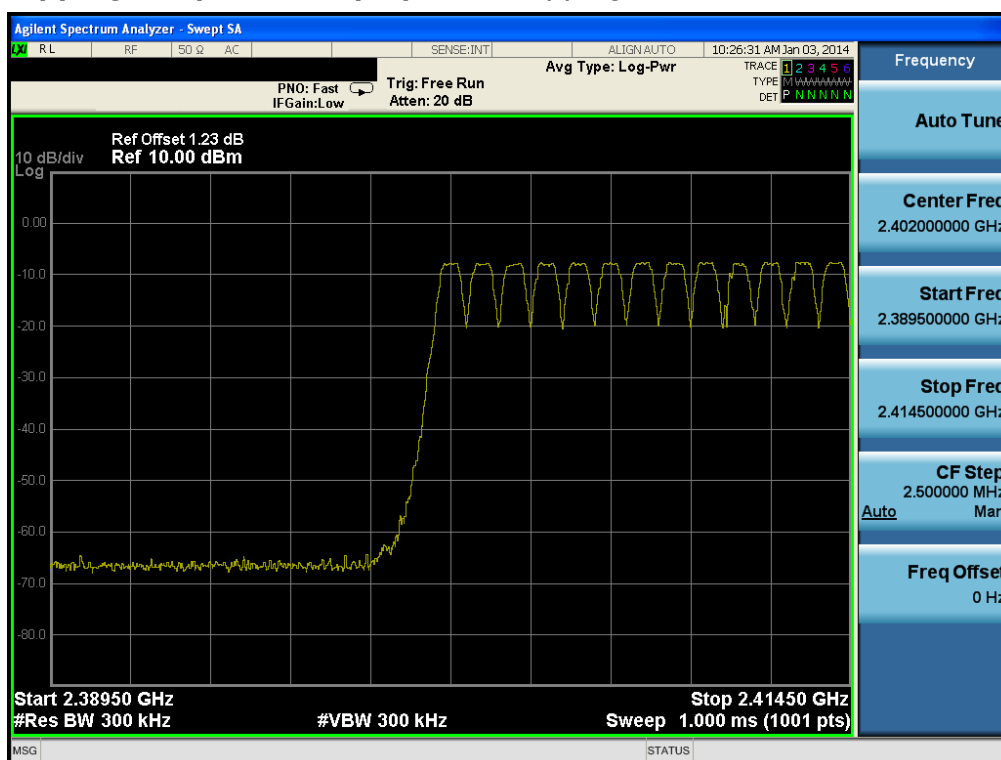
Note 1: See next pages for actual measured spectrum plots.

- Minimum Standard:

At least 15 hops

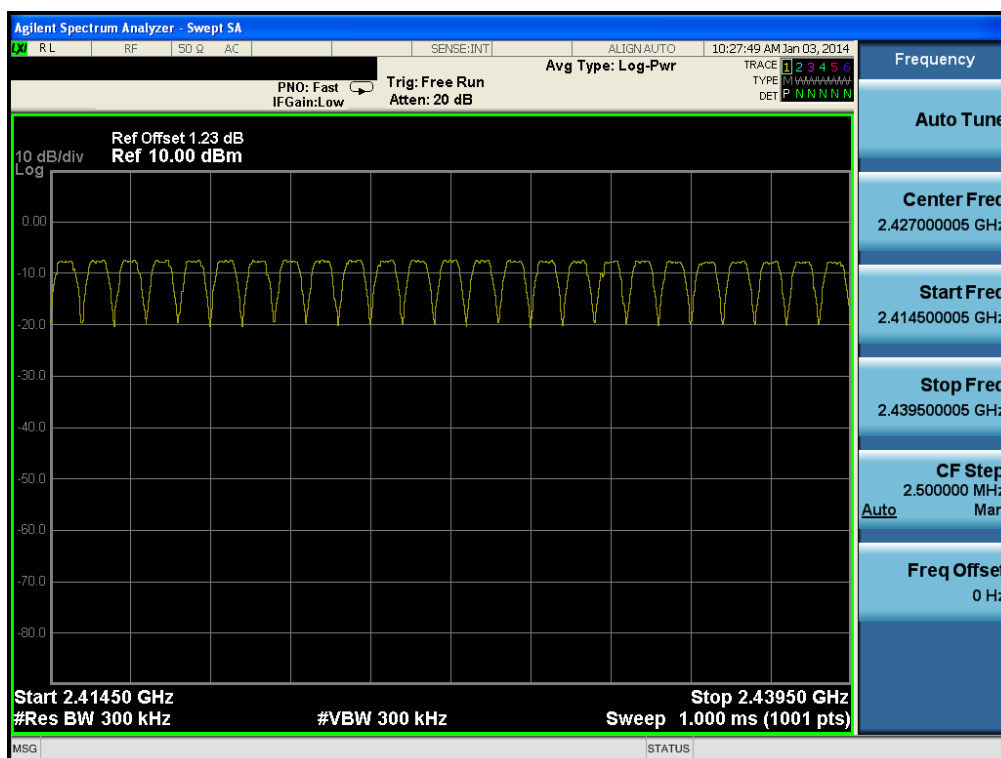
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable &GFSK



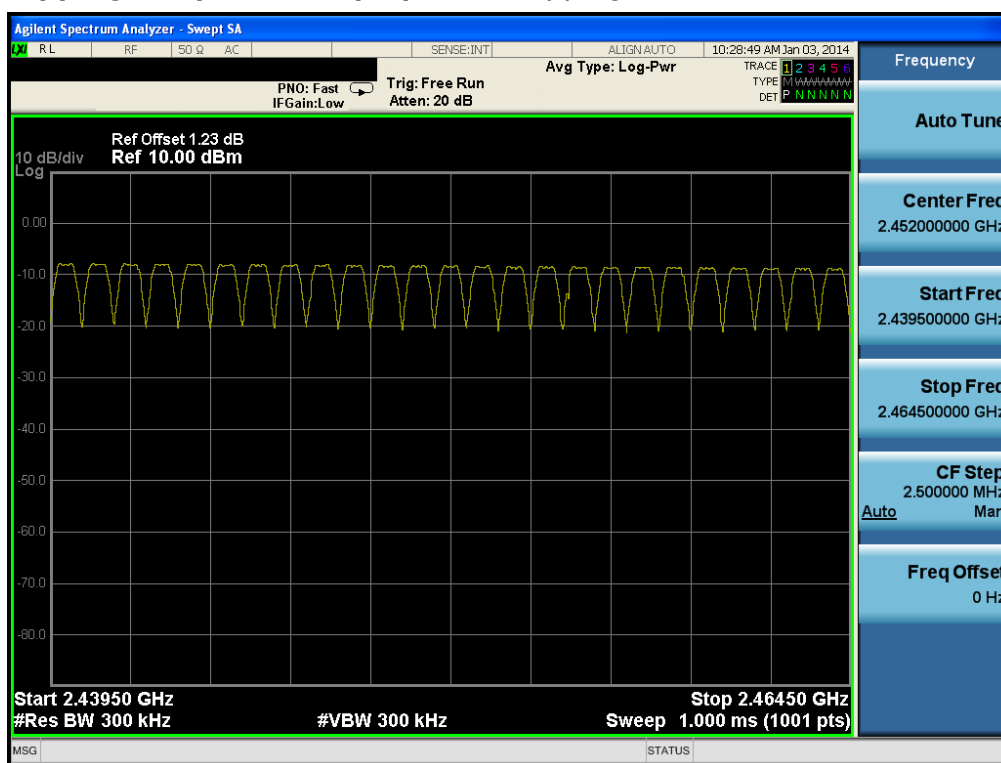
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable &GFSK



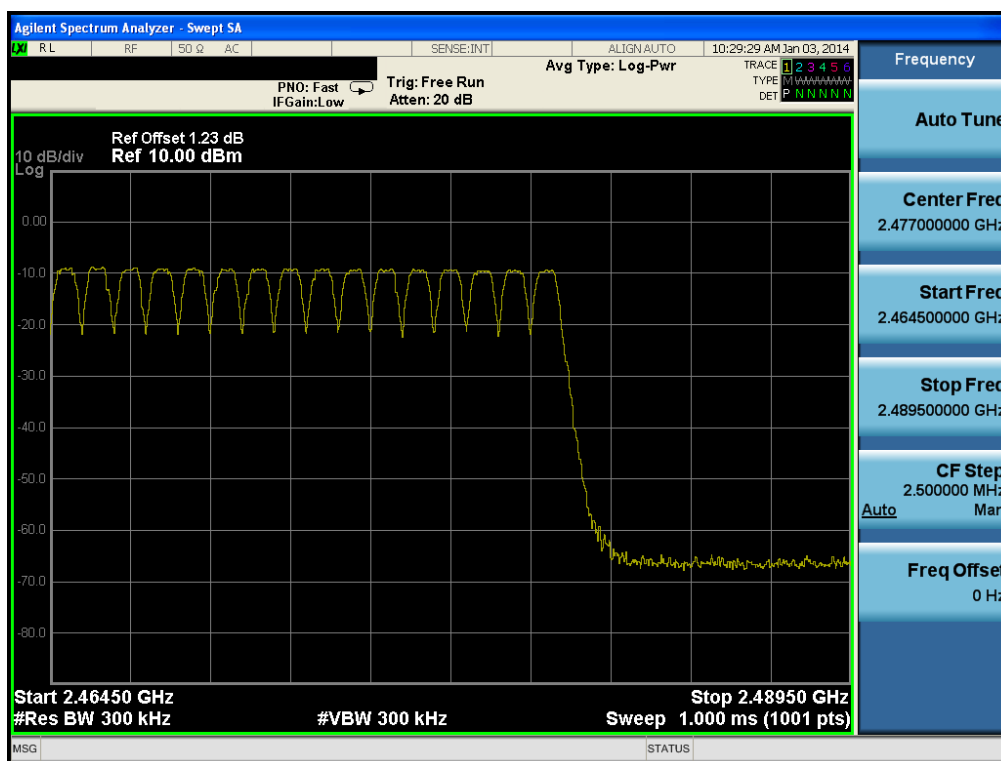
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable &GFSK

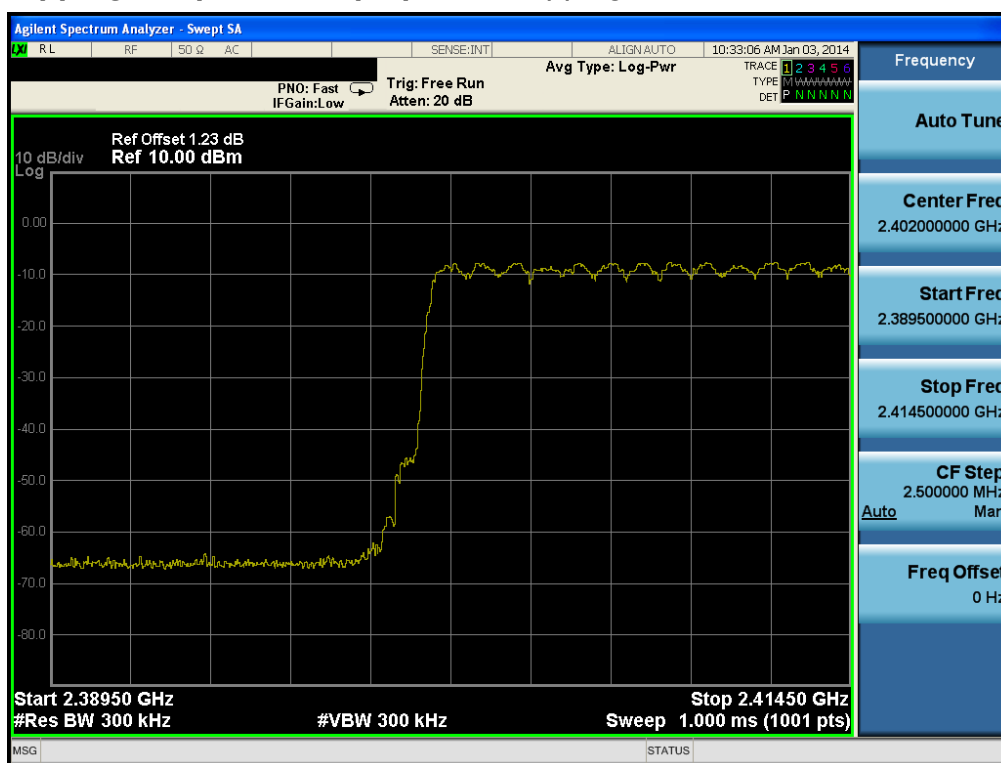


Number of Hopping Frequencies 4(FH)

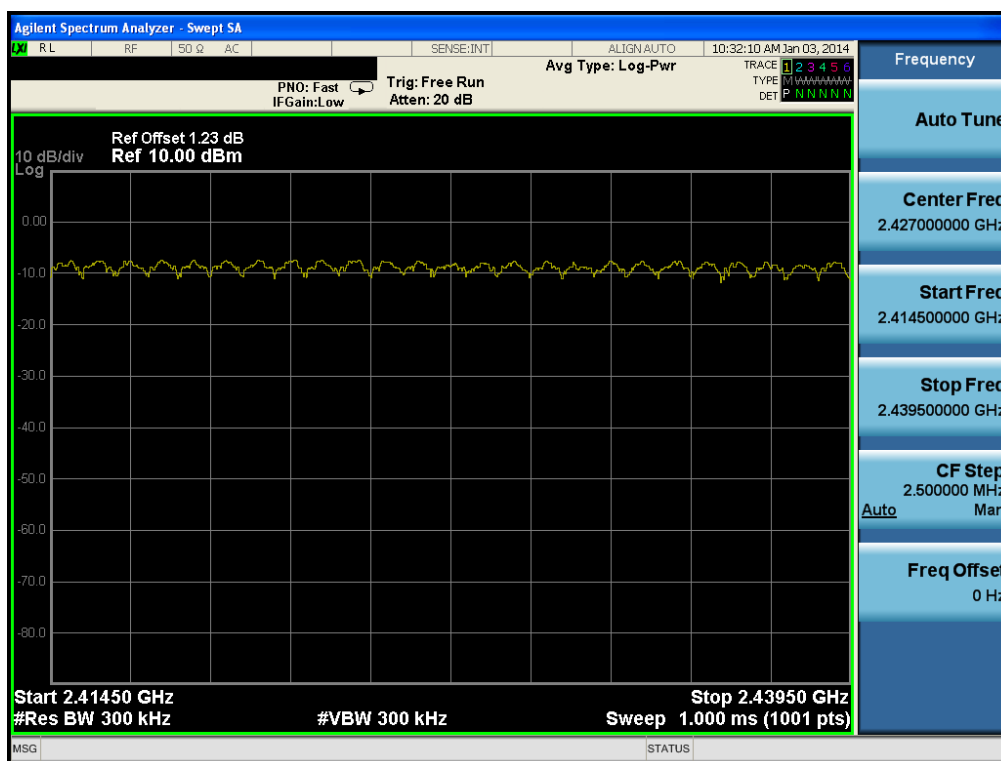
Hopping mode: Enable &GFSK



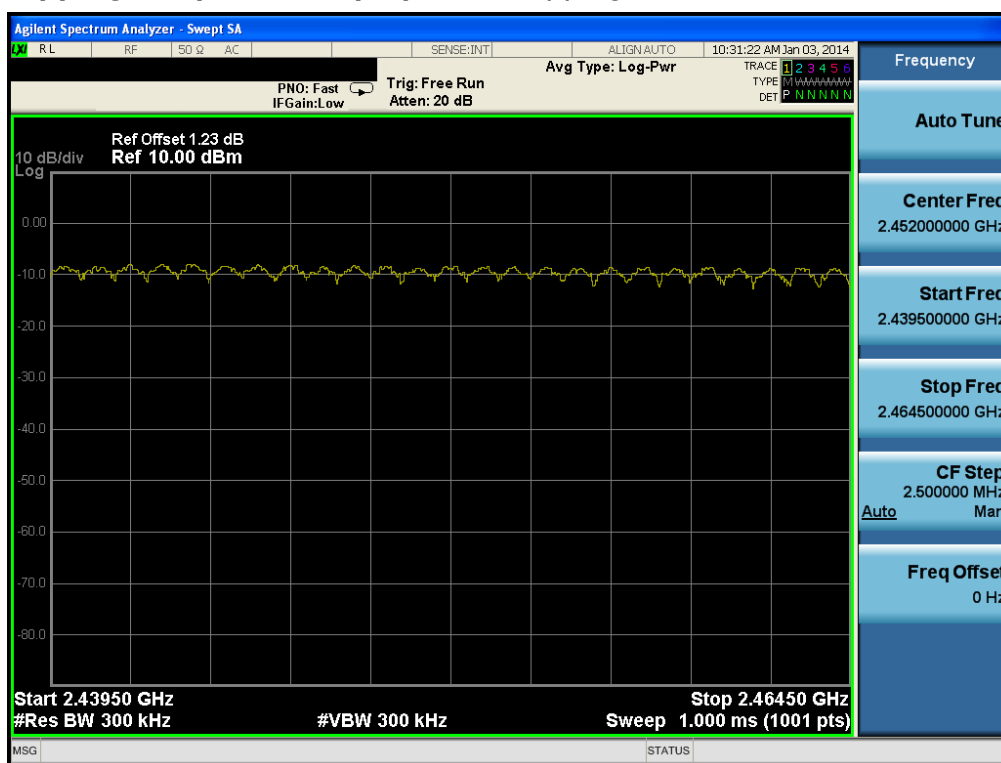
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

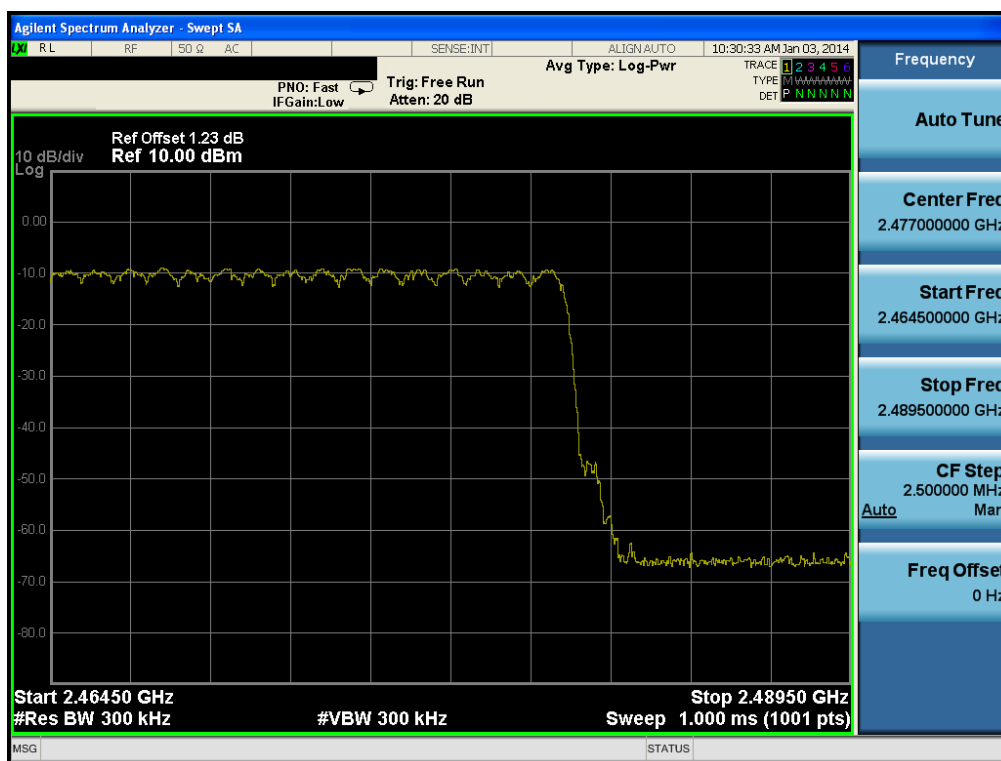
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 3(FH)

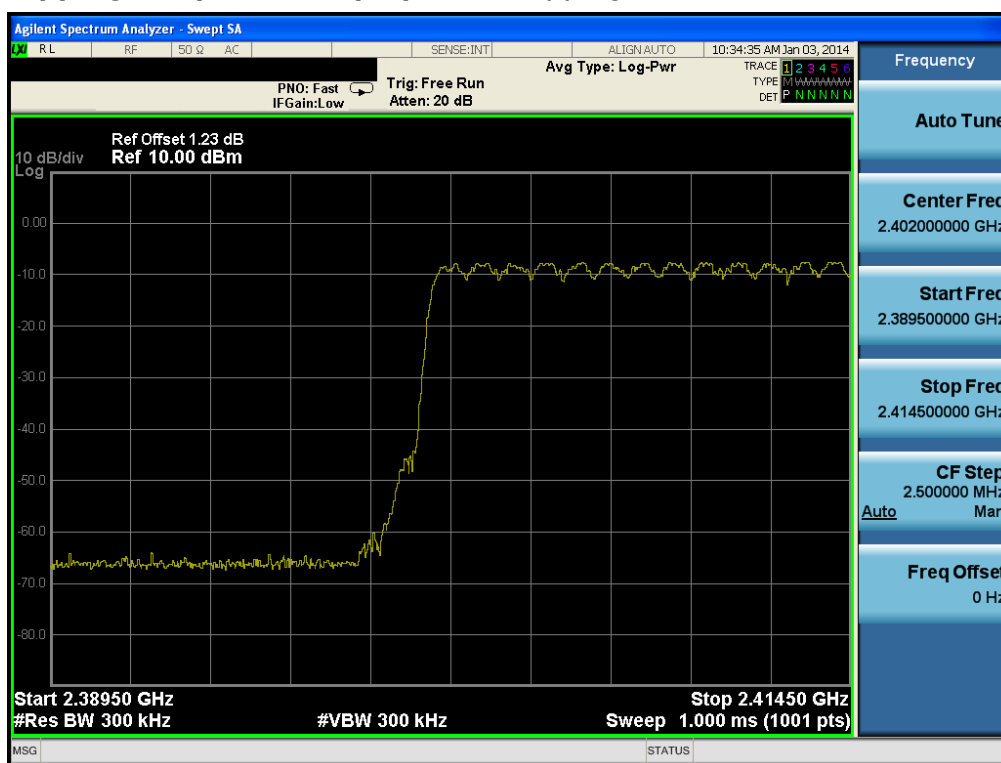
Hopping mode: Enable & $\pi/4$ DQPSK

Number of Hopping Frequencies 4(FH)

Hopping mode: Enable & $\pi/4$ DQPSK

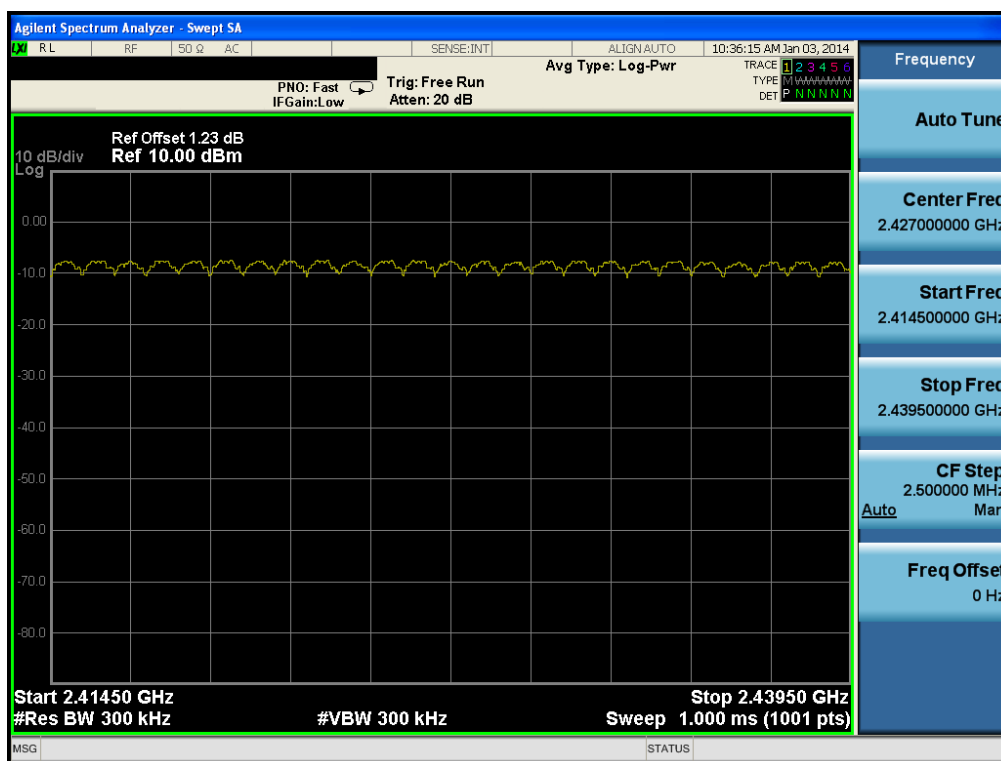
Number of Hopping Frequencies 1(FH)

Hopping mode: Enable &8DPSK



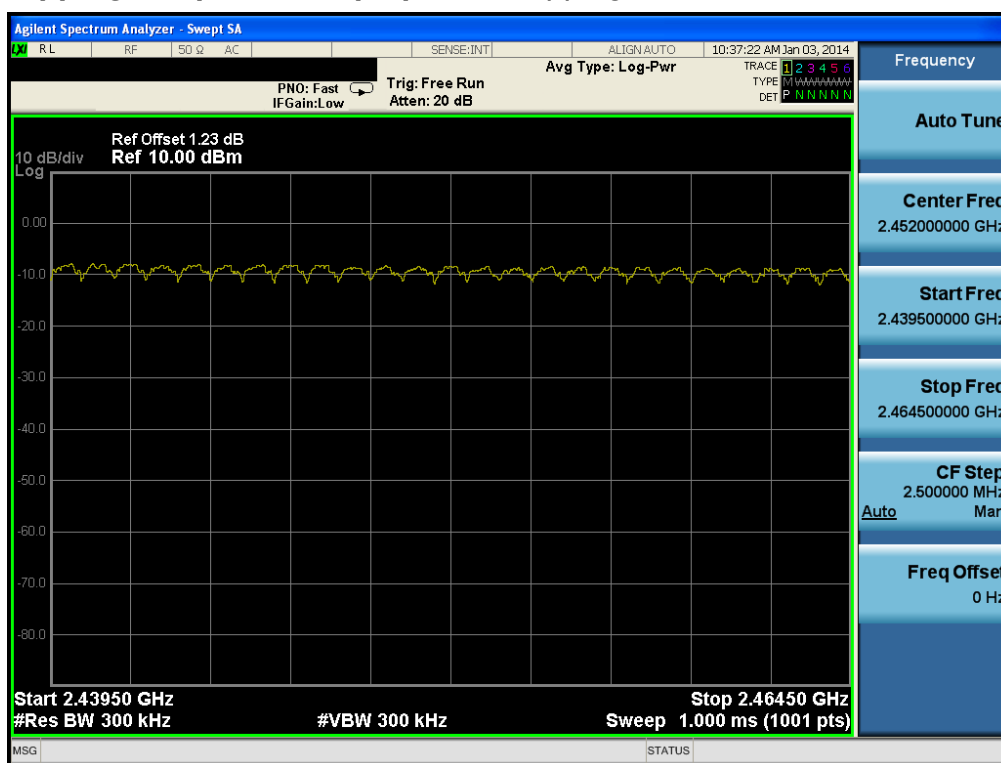
Number of Hopping Frequencies 2(FH)

Hopping mode: Enable &8DPSK



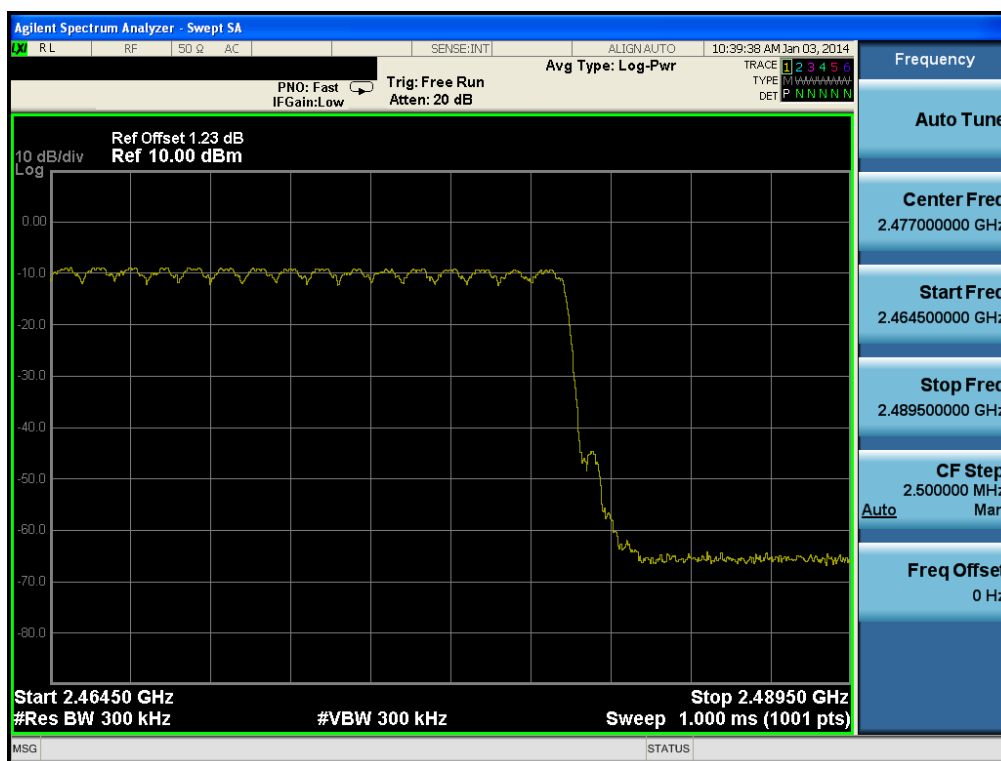
Number of Hopping Frequencies 3(FH)

Hopping mode: Enable &8DPSK



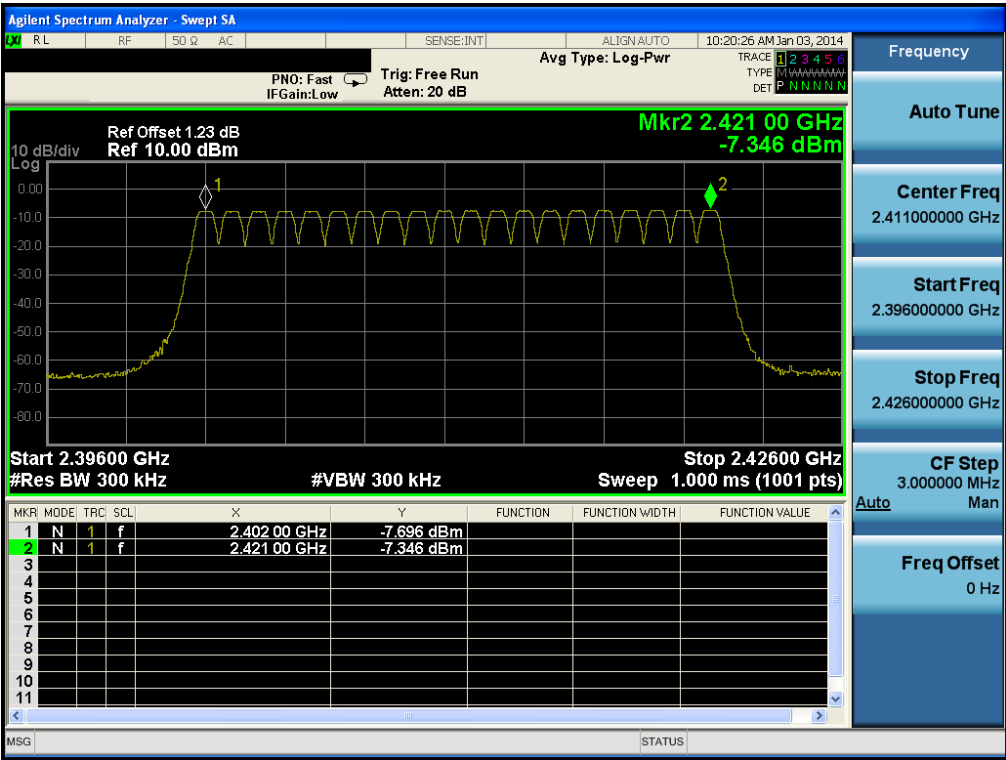
Number of Hopping Frequencies 4(FH)

Hopping mode: Enable &8DPSK



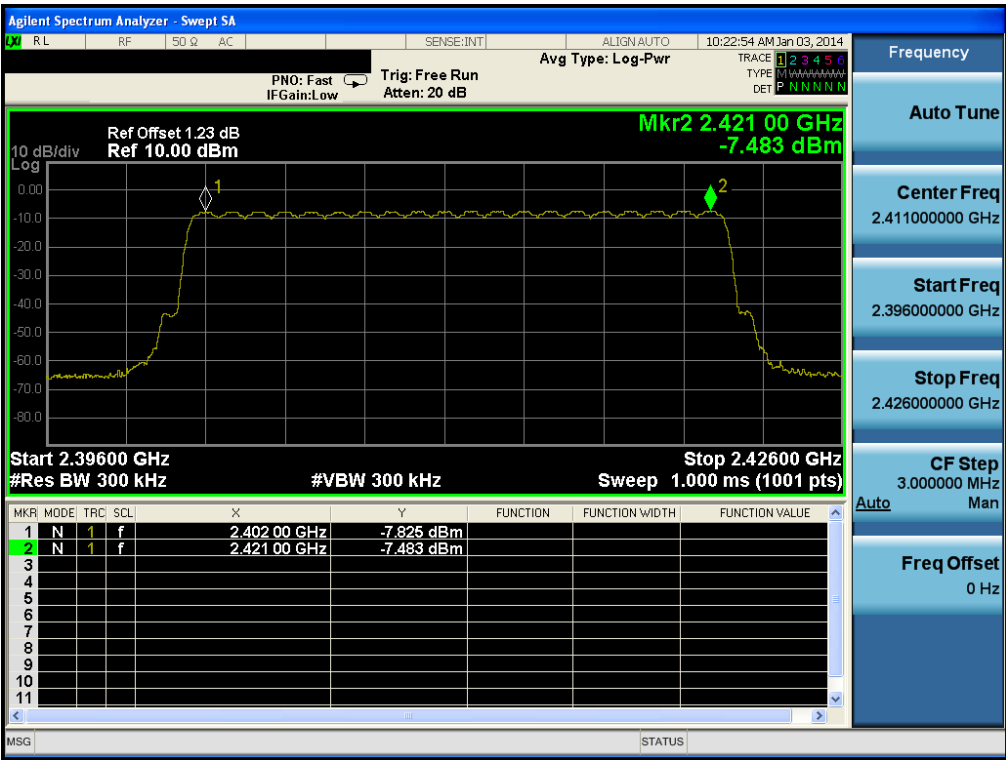
Number of Hopping Frequencies 1(AFH)

Hopping mode: Enable &GFSK

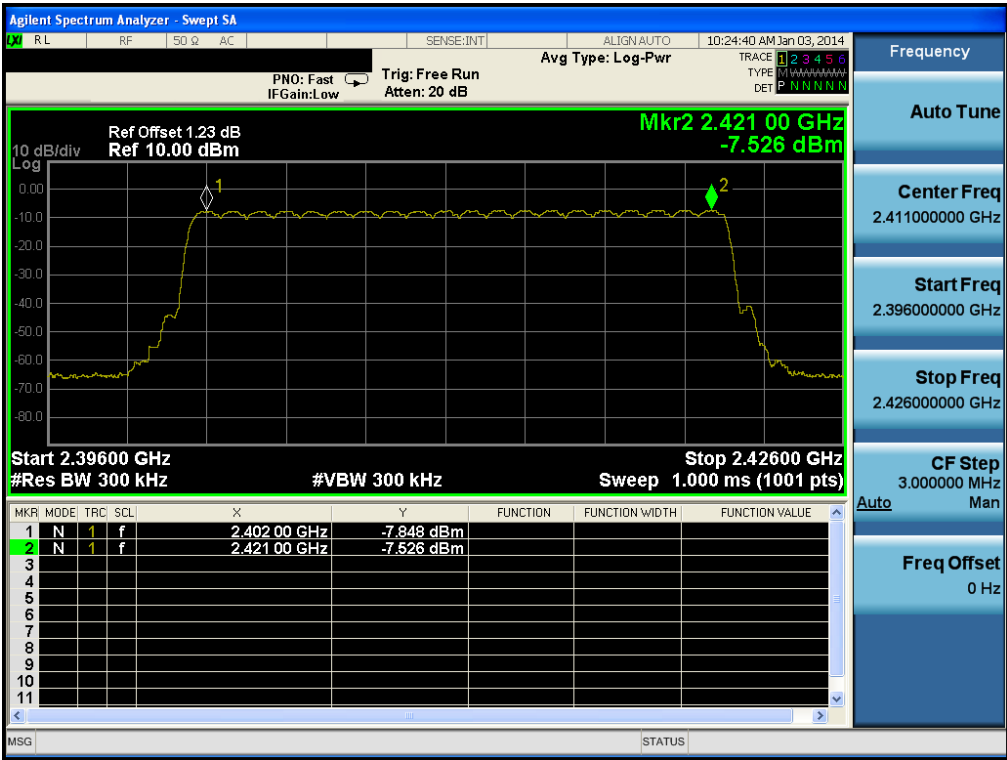


Number of Hopping Frequencies 1(AFH)

Hopping mode: Enable & $\pi/4$ DQPSK



Number of Hopping Frequencies 1(AFH) Hopping mode: Enable &8DPSK



- Measurement Data: Comply**L53VW2****- 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 hops