

TEST REPORT

DT&C Co., Ltd. 42, Yurim-ro, 154Beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea Tel : 031-321-2664, Fax : 031-321-1664	Report No : DRTFCC1510-0227(1) Pages:(1) / (125) page	 Dt&C			
1. Customer - Name : SD Biosensor, Inc. - Address : C-4th&5th Floor Digital Empire Building 980-3, Yeo Suwon-si, Kyonggi-do, Korea 449-813 2. Use of Report : FCC Original Grant 3. Product Name (Model) : SD MultiCare Analyzer (03MA20) 4. Date of Test : 2015-09-21 ~ 2015-12-21 5. Test Method Used: FCC Part 15 Subpart C.247 6. Testing Environment : See appended test report 7. Test Result : ☒ Pass ☐ Fail The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full. <table border="1"><tr><td>Affirmation</td><td>Tested by Name : HyunSu Son (Signature)</td><td>Technical Manager Name : GeunKi Son (Signature)</td></tr></table> 2015. 12. 22 DT&C Co., Ltd.			Affirmation	Tested by Name : HyunSu Son (Signature)	Technical Manager Name : GeunKi Son (Signature)
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Test Report Version

Test Report No.	Date	Description
DRTFCC1510-0227	Oct. 30, 2015	Initial issue
DRTFCC1510-0227(1)	Dec. 22, 2015	Updated the conducted data

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1. General Information

1.1 Testing Laboratory

DT&C Co., Ltd.			
Standard		Site number	Address
FCC	☒	165783	42, Yurim-ro 154 beon-gil, Cheoin -gu, Yongin-si, Gyeonggi -do, South Korea 449-935
	☐	804488	42, Yurim-ro 154 beon-gil, Cheoin -gu, Yongin-si, Gyeonggi -do, South Korea 449-935
	☐	596748	42, Yurim-ro 154 beon-gil, Cheoin -gu, Yongin-si, Gyeonggi -do, South Korea 449-935
	☐	678747	683-3, Yubang-dong, Cheoin-gu, Yongin-si, Kyeonggi-do, Korea, 449-080
IC	☐	5740A-3	42, Yurim-ro 154 beon-gil, Cheoin -gu, Yongin-si, Gyeonggi -do, South Korea 449-935
	☐	5740A-2	683-3, Yubang-dong, Cheoin-gu, Yongin-si, Kyeonggi-do, Korea, 449-080
www.dtnet.net			
Telephone		:	+ 82-31-321-2664
FAX		:	+ 82-31-321-1664

1.2 Details of Applicant

Applicant : SD Biosensor, Inc.
 Address : C-4th&5th Floor Digital Empire Building 980-3, Yeo Suwon-si, Kyonggi-do, Korea 449-813
 Contact person : Kim Jae Young

1.3 Description of EUT

EUT	SD MultiCare Analyzer
Model Name	03MA20
Serial Number	Identical prototype
Hardware version	HBR v1.0
Software version	V1.0-R001
Power Supply	Battery : DC 6.0 V Adaptor : DC 5.0 V
Battery type	Standard Battery: Lithium Ion Battery
Frequency Range	2402 MHz ~ 2480 MHz
Modulation Technique	GFSK, $\pi/4$ -DQPSK, 8DPSK
Number of Channels	79
Antenna Type	Internal Antenna
Antenna Gain	PK : 0.50 dBi

1.4 Declaration by the applicant / manufacturer

- NA

1.5 Information about the FHSS characteristics

- This Bluetooth module has been tested by a Bluetooth Qualification Lab, and we confirm the following :
 - A) The hopping sequence is pseudorandom
 - B) All channels are used equally on average
 - C) The receiver input bandwidth equals the transmit bandwidth
 - D) The receiver hops in sequence with the transmit signal
- 15.247(g) : In accordance with the Bluetooth Industry Standard, the system is designed to comply with all of the regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) system.
- 15.247(h) : In accordance with the Bluetooth Industry Standard, the system does not coordinate its channels selection / hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters.
- 15.247(h) : The EUT employs Adaptive Frequency Hopping (AFH) which identifies sources of interference namely devices operating in 802.11 WLAN and excludes them from the list of available channels. The process of re-mapping reduces the number of test channels from 79 channels to a minimum number of 20 channels.

1.6 Test conditions

Ambient Condition	
▪ Temperature	+22 ~ +24 °C
▪ Relative Humidity	41 ~ 44%

1.7 Test Equipment List

Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
MXA Signal Analyzer	Agilent	N9020A	15/02/26	16/02/26	MY50200816
DIGITAL MULTIMETER	Agilent	34401A	15/01/06	16/01/06	US36099541
Dynamic Measurement DC Source	Agilent	66332A	15/09/09	16/09/09	MY43000440
Power Meter & Wide Bandwidth Sensor	Anritsu	ML2495A MA2490A	15/03/26	16/03/26	1306007 1249001
Vector Signal Generator	Rohde Schwarz	SMBV100A	15/01/06	16/01/06	255571
Signal Generator	Rohde Schwarz	SMF100A	15/06/29	16/06/29	102341
Thermohygrometer	BODYCOM	BJ5478	15/05/08	16/05/08	120612-2
Low Noise Pre Amplifier	tsj	MLA-010K01- B01-27	15/04/09	16/04/09	1844538
PreAmplifier	Agilent	8449B	15/02/26	16/02/26	3008A00370
LOOP ANTENNA	Laplace Instrument LTD	RF300	14/02/18	16/02/18	9067
TRILOG Broadband Test-Antenna(30MHz- 1GHz)	Schwarzbeck	VULB 9160	14/04/30	16/04/30	3358
Double-Ridged Guide Antenna	ETS	3117	14/05/12	16/05/12	140394
Horn Antenna	A.H.Systems	SAS-574	15/04/30	17/04/30	154
EMI TEST RECEIVER	R&S	ESR7	14/10/21	15/10/21	101109
			15/10/19	16/10/19	
High-pass filter	Wainwright Instruments	WHKX3.0	15/01/06	16/01/06	12
EMI TEST RECEIVER	R&S	ESCI	15/02/25	16/02/25	100364
ARTIFICIAL MAINS NETWORK	Narda S.T.S. / PMM	PMM L2-16B	14/06/26	15/06/26	000WX20305
			15/06/26	16/06/26	
SINGLE-PHASE MASTER	NF	4420	15/09/09	16/09/09	3049354420023

1.8 Summary of Test Results

FCC Part RSS Std.	Parameter	Limit (Using in 2400~ 2483.5 MHz)	Test Condition	Status Note 1
15.247(a) RSS-247(5.1)	Carrier Frequency Separation	≥ 20 dB BW or $\geq$ Two thirds of the 20 dB BW, whichever is greater.	Conducted	C
	Number of Hopping Frequencies	≥ 15 hops		C
	20 dB Bandwidth	None		C
	Dwell Time	≤ 0.4 seconds		C
15.247(b) RSS-247(5.4)	Transmitter Output Power	For FCC ≤ 1 Watt , if CHs ≥ 75 Others ≤ 0.125 W For IC if CHs ≥ 75 ≤ 1 Watt For Conducted Power ≤ 4 Watt For e.i.r.p, Others ≤ 0.125 W For Conducted Power. ≤ 0.5 Watt For e.i.r.p		C
15.247(d) RSS-247(5.5)	Conducted Spurious Emissions	The radiated emission to any 100 kHz of out-band shall be at least 20 dB below the highest in-band spectral density.		C
RSS Gen(6.6)	Occupied Bandwidth (99 %)	RSS-Gen		NA
15.205 & 209 RSS-247(5.5) RSS-Gen (8.9 & 8.10)	Radiated Spurious Emissions	FCC 15.209 Limits RSS-Gen 8.9	Radiated	C ^{Note2}
15.207 RSS-Gen(8.8)	AC Conducted Emissions	FCC 15.207 Limits	AC Line Conducted	C
15.203 RSS-Gen(6.7)	Antenna Requirements	FCC 15.203	-	C

Note 1 : **C** = Comply **NC** = Not Comply **NT** = Not Tested **NA** = Not Applicable

Note 2 : This test item was performed in each axis and the worst case data was reported.

Note 3 : The sample was tested according to the following specifications :

- ANSI C63.10-2013

1.9 Conclusion of worst-case and operation mode

The EUT has three type of modulation (GFSK, $\pi/4$ DQPSK and 8DPSK).

Therefore all applicable requirements were tested with all the modulations.

The field strength of spurious emission was measured in three orthogonal EUT positions (X-axis, Y-axis and Z-axis).

Tested frequency information,

- Hopping Function : Enable

	TX Frequency (MHz)	RX Frequency (MHz)
Hopping Band	2402 ~ 2480	2402 ~ 2480

- Hopping Function : Disable

	TX Frequency (MHz)	RX Frequency (MHz)
Lowest Channel	2402	2402
Middle Channel	2441	2441
Highest Channel	2480	2480

2. Maximum Peak Output Power Measurement

2.1 Test Setup

Refer to the APPENDIX I.

2.2 Limit

■ FCC Requirements

The maximum peak output power of the intentional radiator shall not exceed the following :

1. §15.247(a)(1), Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.
2. §15.247(b)(1), For frequency hopping systems operating in the 2400 – 2483.5 MHz employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725 – 5805 MHz band : 1 Watt.

■ IC Requirements

1. RSS-247(5.4), For FHSs operating in the band 2400 - 2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W and the e.i.r.p. shall not exceed 4 W if the hopset uses 75 or more hopping channels the maximum peak conducted output power shall not exceed 0.125 W and the e.i.r.p. shall not exceed 0.5 W if the hopset uses less than 75 hopping channels

2.3 Test Procedure

1. The RF output power was measured with a spectrum analyzer connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate center frequency, A spectrum analyzer was used to record the shape of the transmit signal.
2. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using ;
Span = approximately 5 times of the 20 dB bandwidth, centered on a hopping channel
RBW $\geq$ 20 dB BW
VBW $\geq$ RBW
Sweep = auto
Detector function = peak
Trace = max hold

2.4 Test Results

<Battery DC 6 V>

Modulation	Tested Channel	Frame Average Output Power		Peak Output Power	
		dBm	mW	dBm	mW
<u>GFSK</u>	Lowest	-3.48	0.449	-1.18	0.762
	Middle	-2.64	0.545	-0.03	0.993
	Highest	-2.40	0.575	0.61	1.151
<u>$\pi/4$DQPSK</u>	Lowest	-7.07	0.196	-3.54	0.443
	Middle	-6.61	0.218	-2.36	0.581
	Highest	-6.48	0.225	-2.00	0.631
<u>8DPSK</u>	Lowest	-7.05	0.197	-3.27	0.471
	Middle	-6.59	0.219	-2.09	0.618
	Highest	-6.43	0.228	-1.80	0.661

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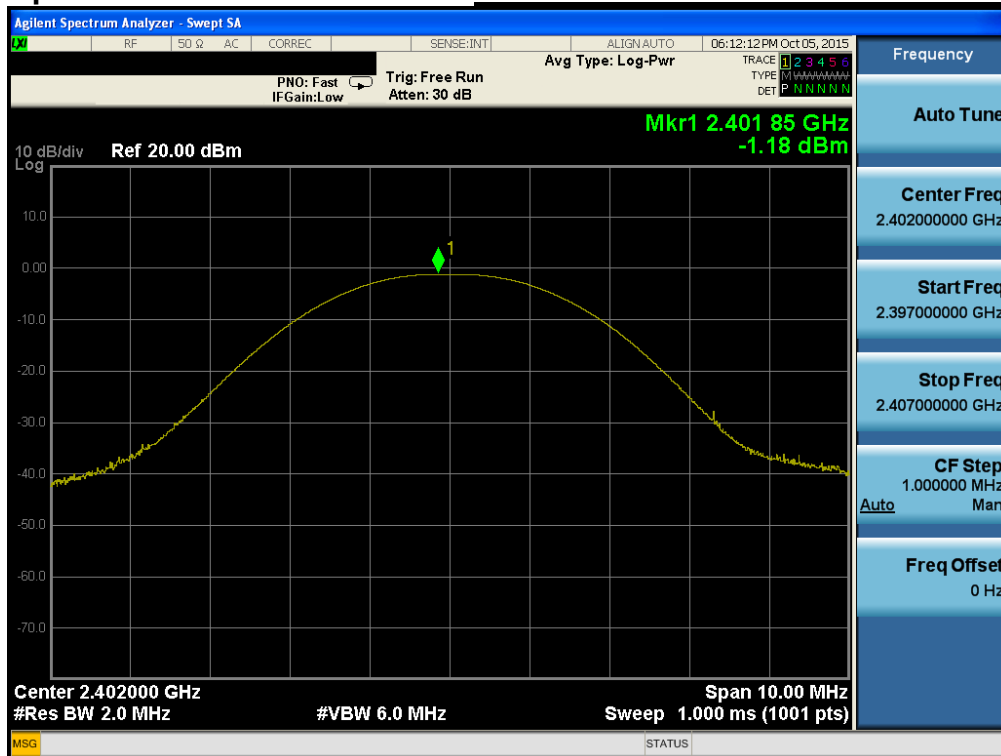
Modulation	Tested Channel	Frame Average Output Power		Peak Output Power	
		dBm	mW	dBm	mW
<u>GFSK</u>	Lowest	-3.49	0.448	-1.25	0.750
	Middle	-2.68	0.540	-0.05	0.989
	Highest	-2.49	0.564	0.92	1.236
<u>$\pi/4$DQPSK</u>	Lowest	-7.11	0.195	-3.58	0.439
	Middle	-6.67	0.215	-2.28	0.592
	Highest	-6.52	0.223	-2.03	0.627
<u>8DPSK</u>	Lowest	-7.10	0.195	-3.31	0.467
	Middle	-6.65	0.216	-2.01	0.630
	Highest	-6.49	0.224	-1.84	0.655

Note 1 : Average output power was using the average power meter for reference only.

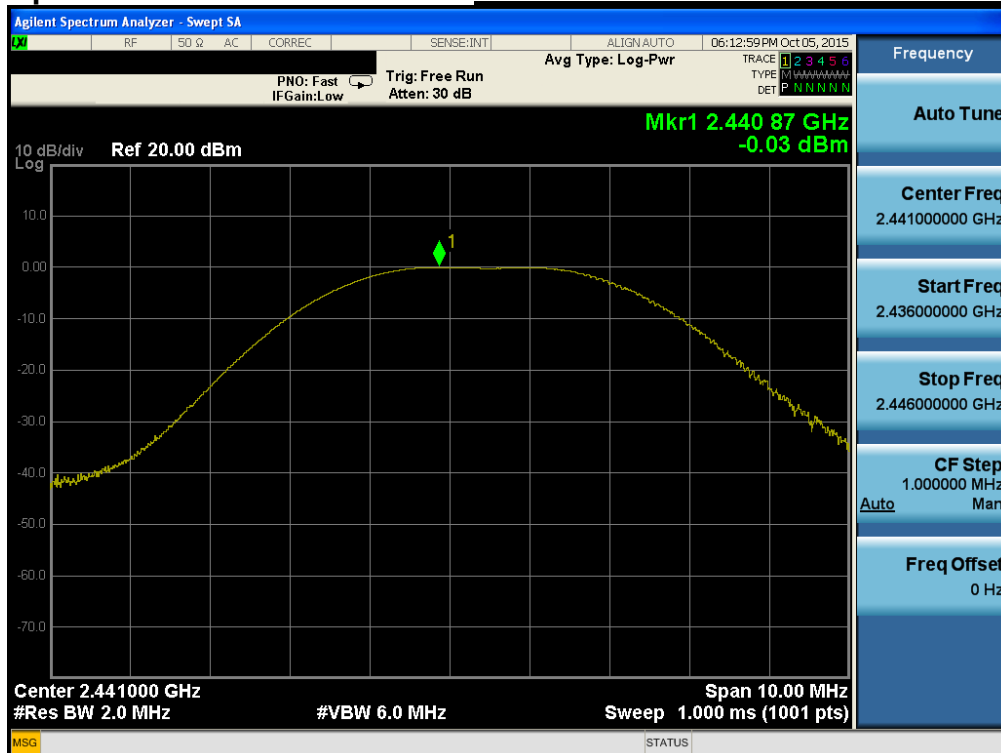
Note 2 : See next pages for actual measured spectrum plots.

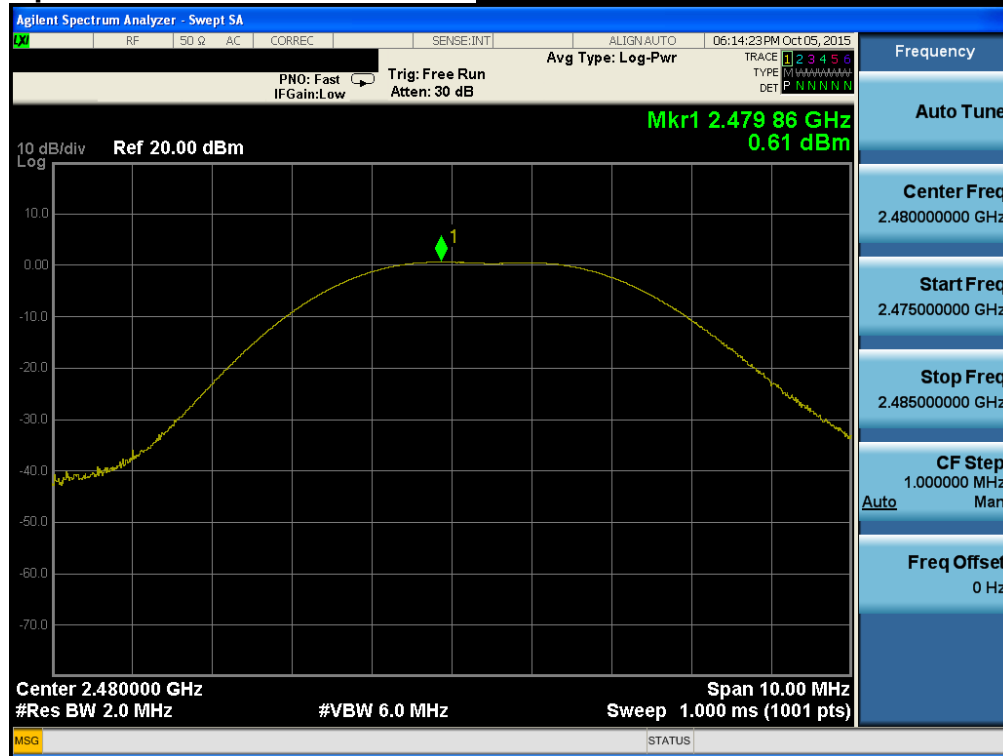
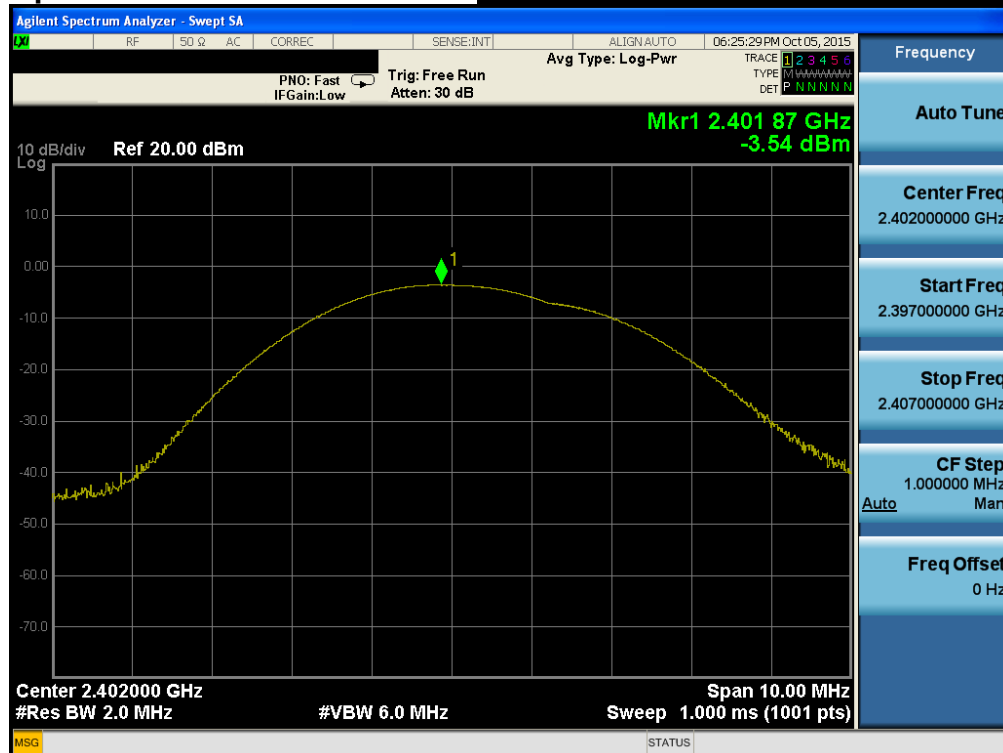
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Peak Output Power

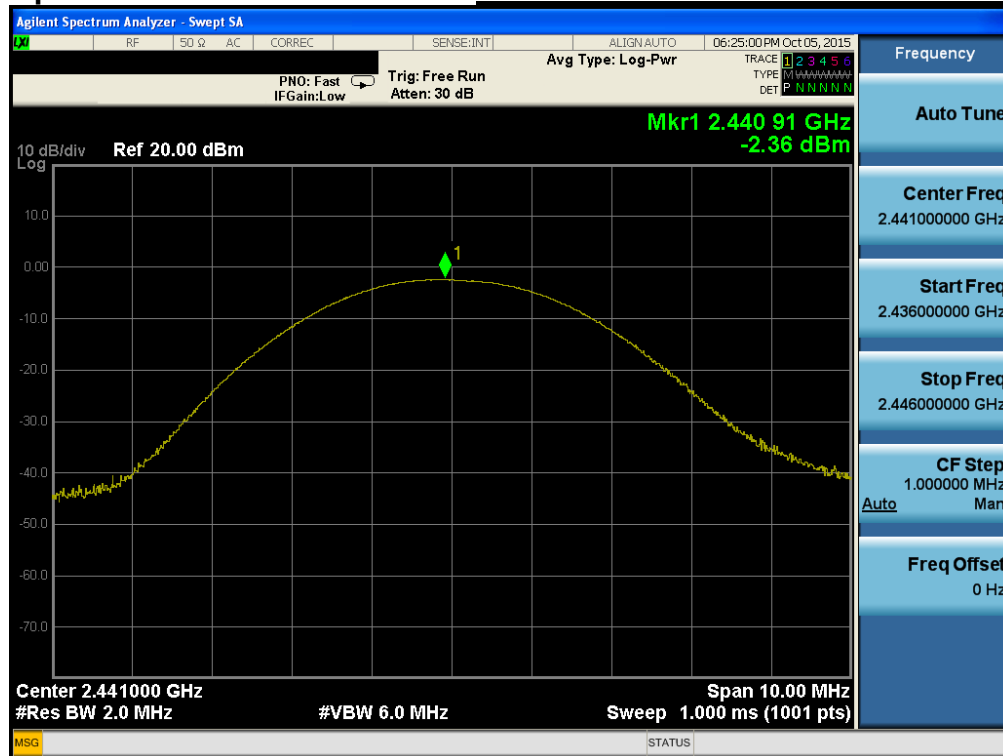
Lowest Channel & Modulation : GFSK

Peak Output Power

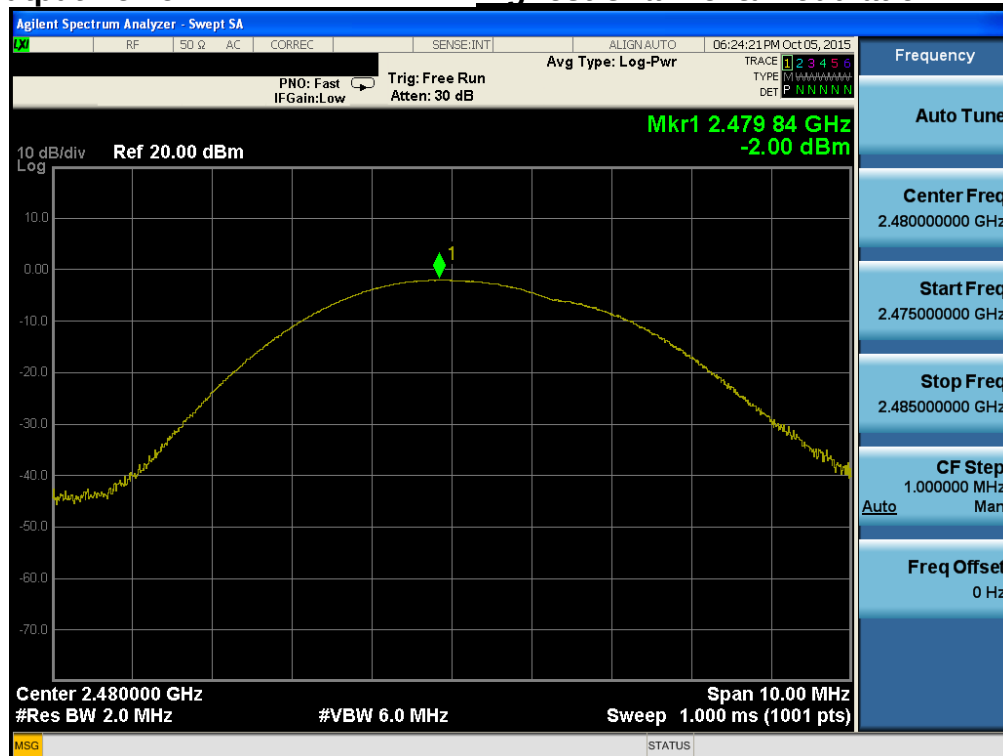
Middle Channel & Modulation : GFSK

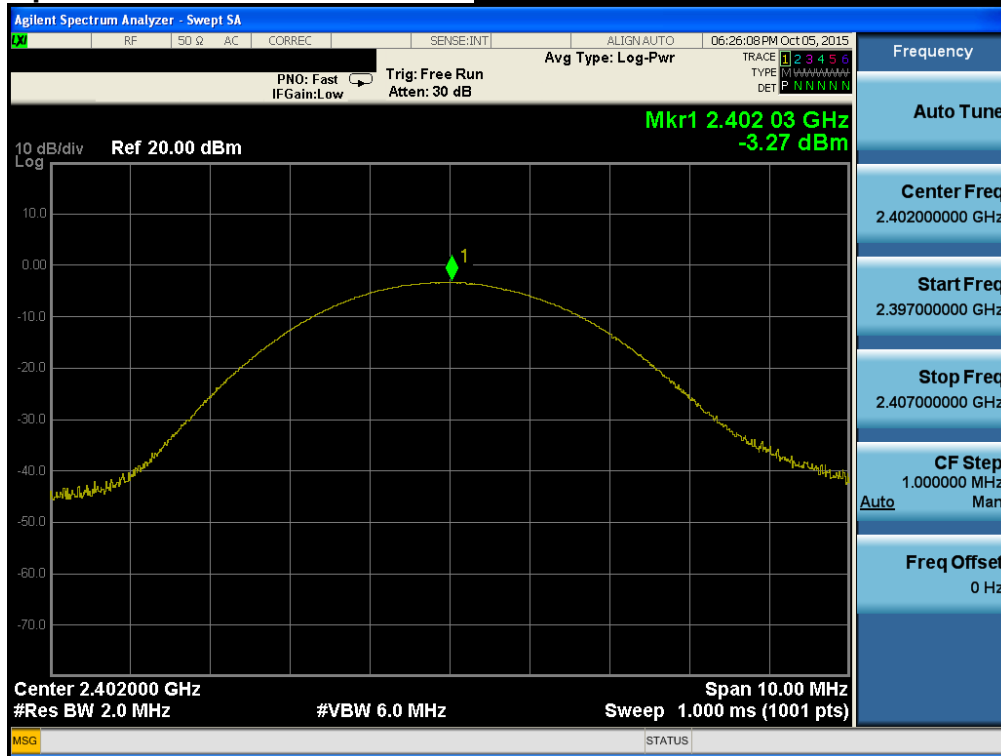
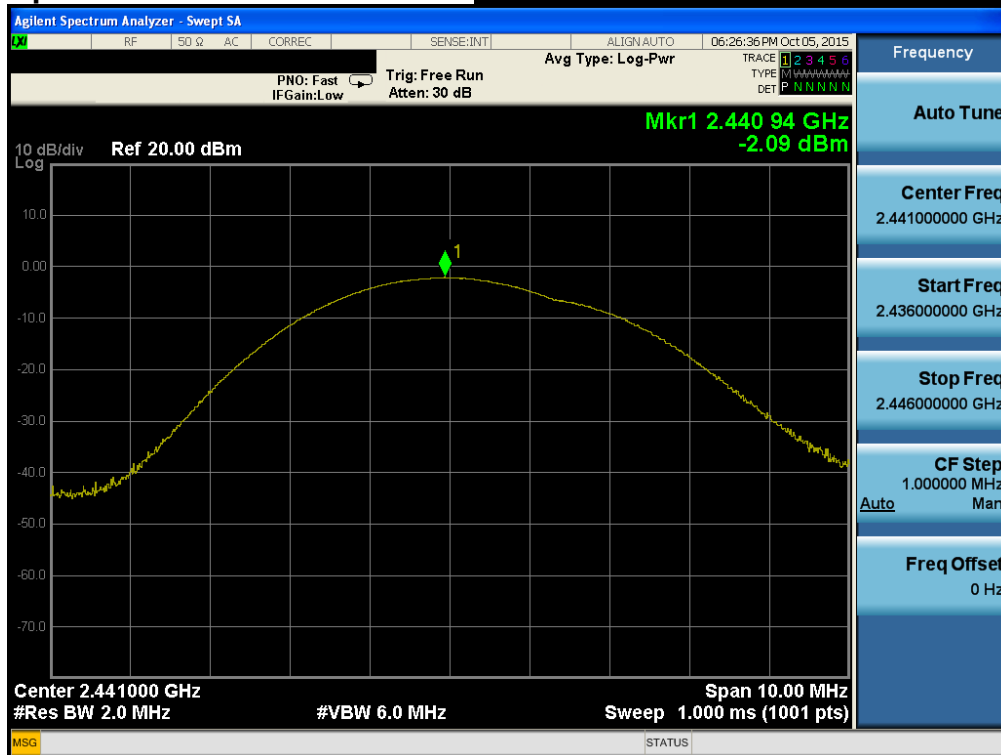
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Peak Output Power

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

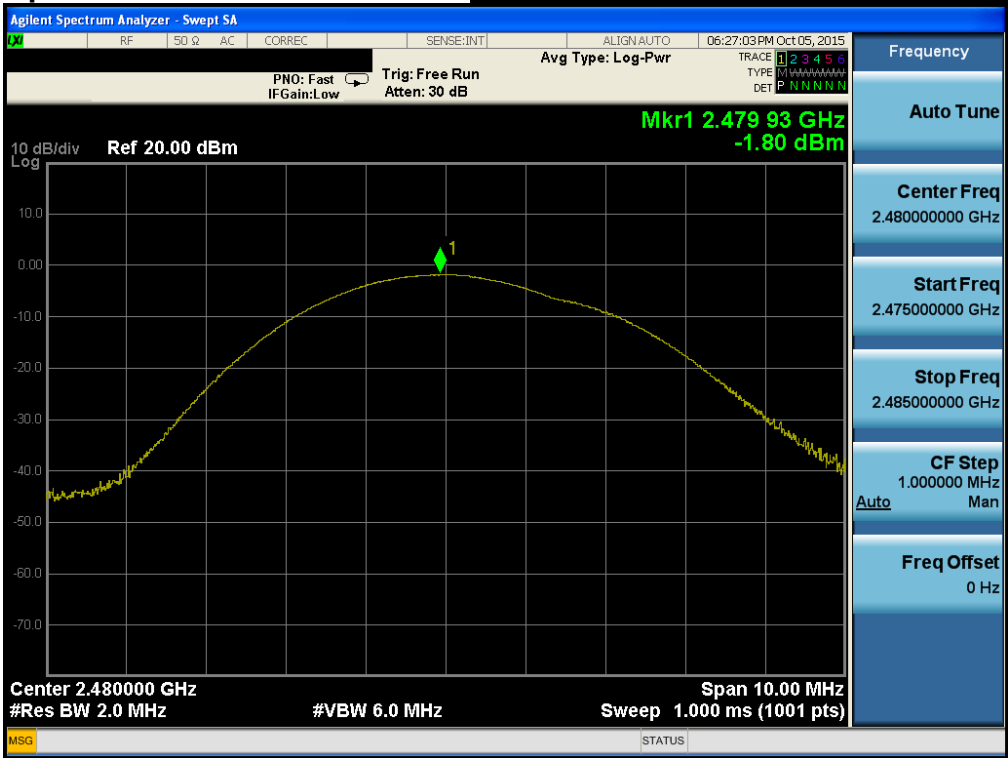
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Highest Channel & Modulation : $\pi/4$ DQPSK

Peak Output Power***Lowest Channel & Modulation : 8DPSK*****Peak Output Power*****Middle Channel & Modulation : 8DPSK***

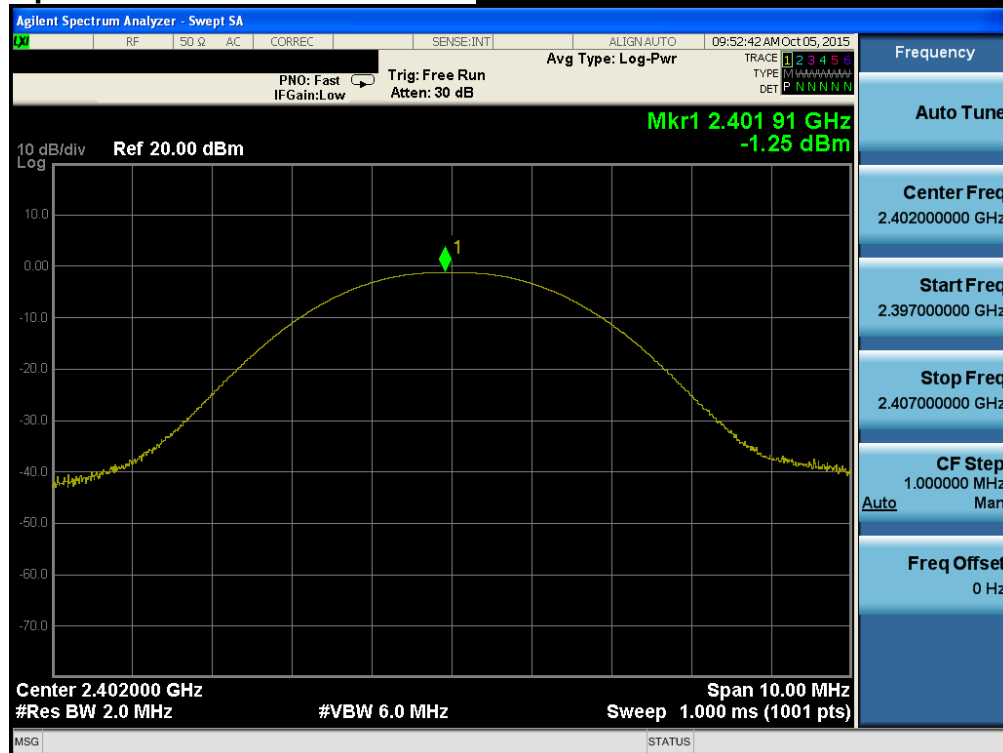
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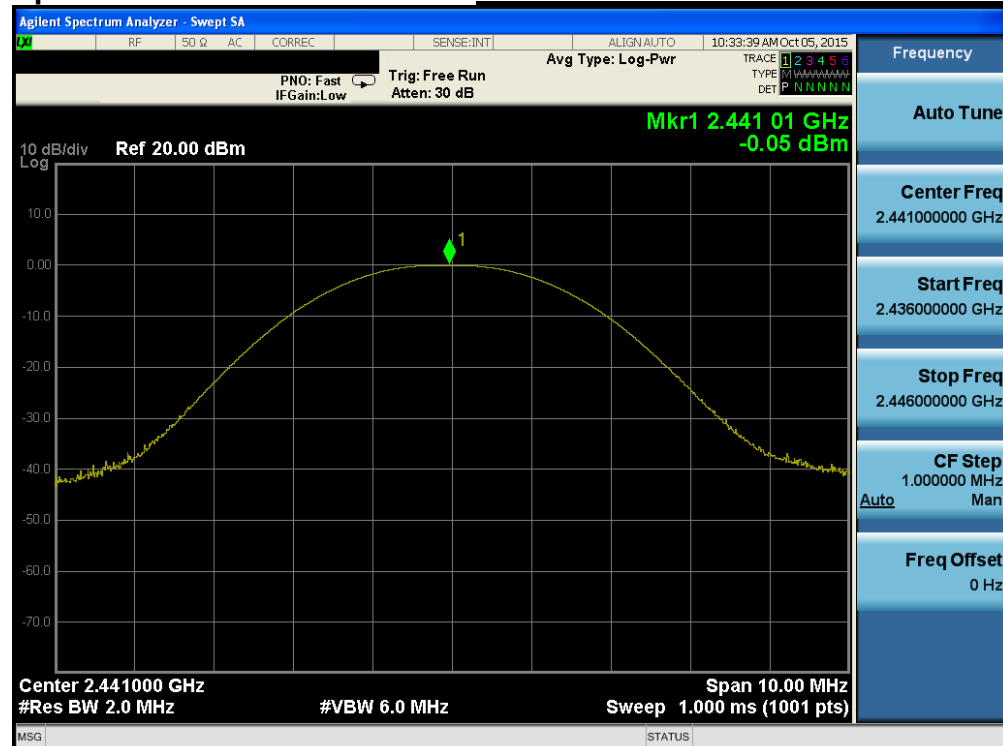


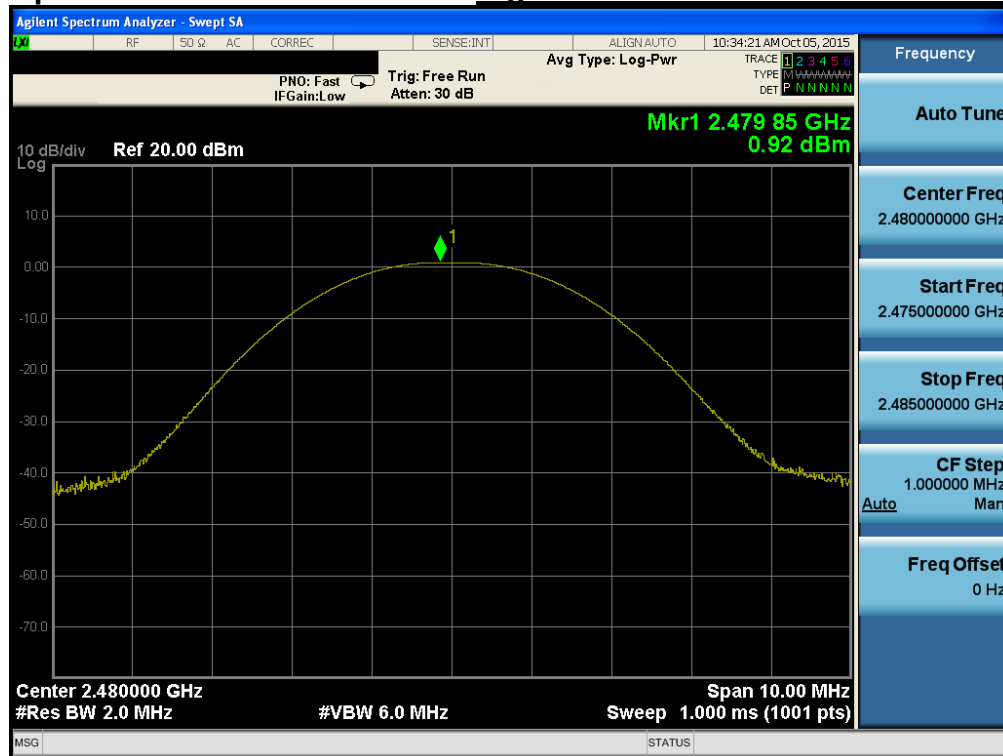
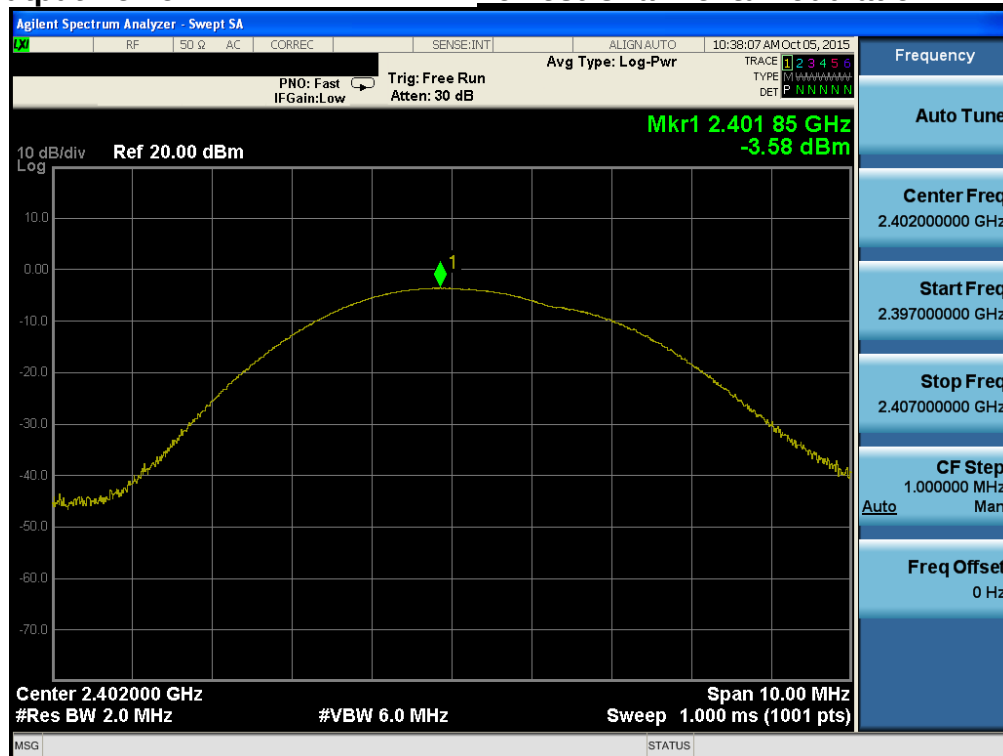
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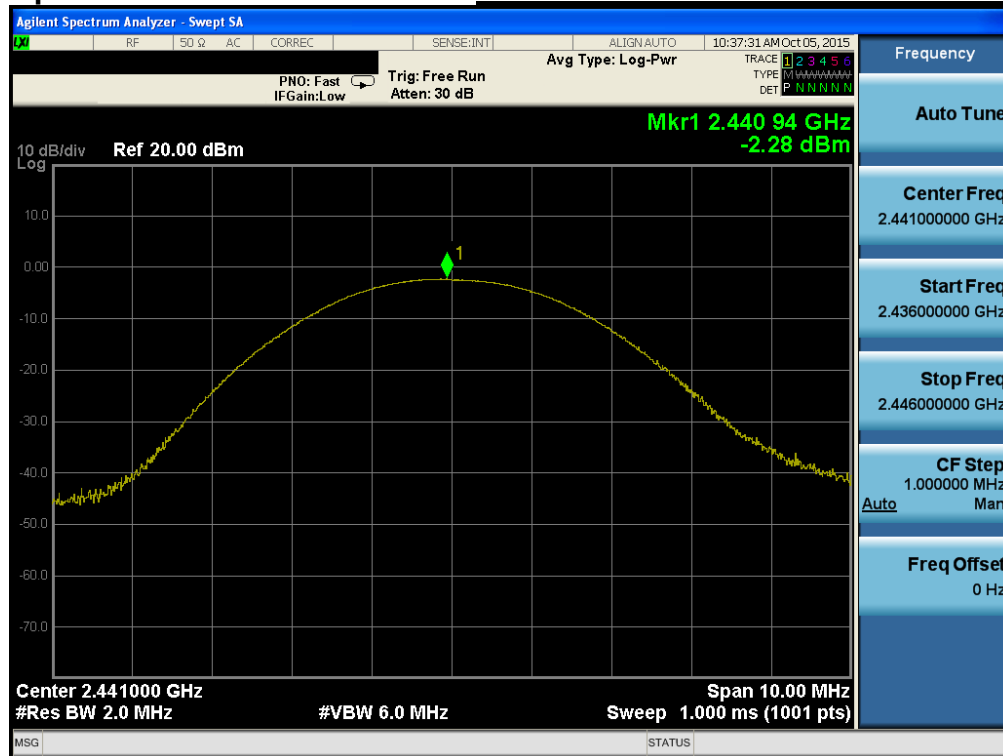
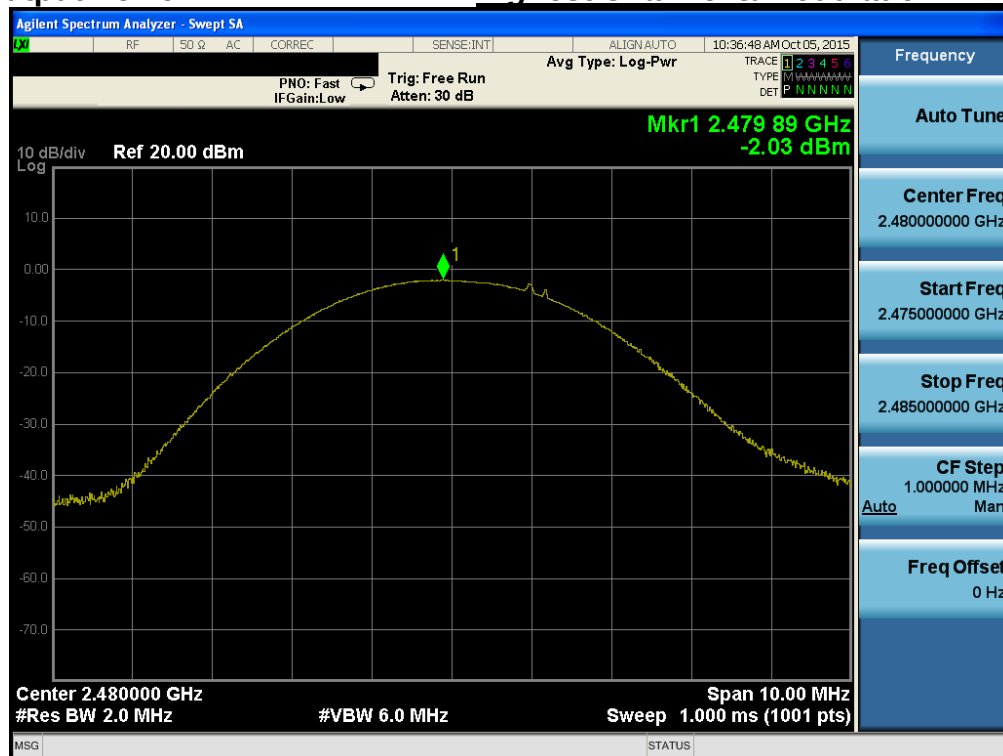
Peak Output Power

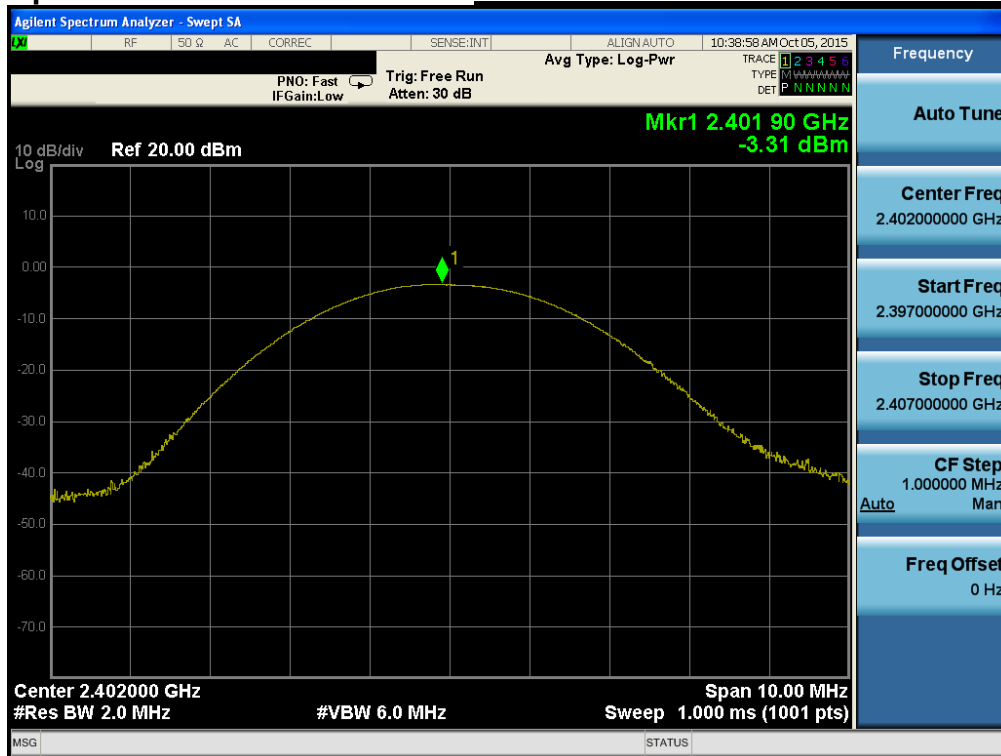
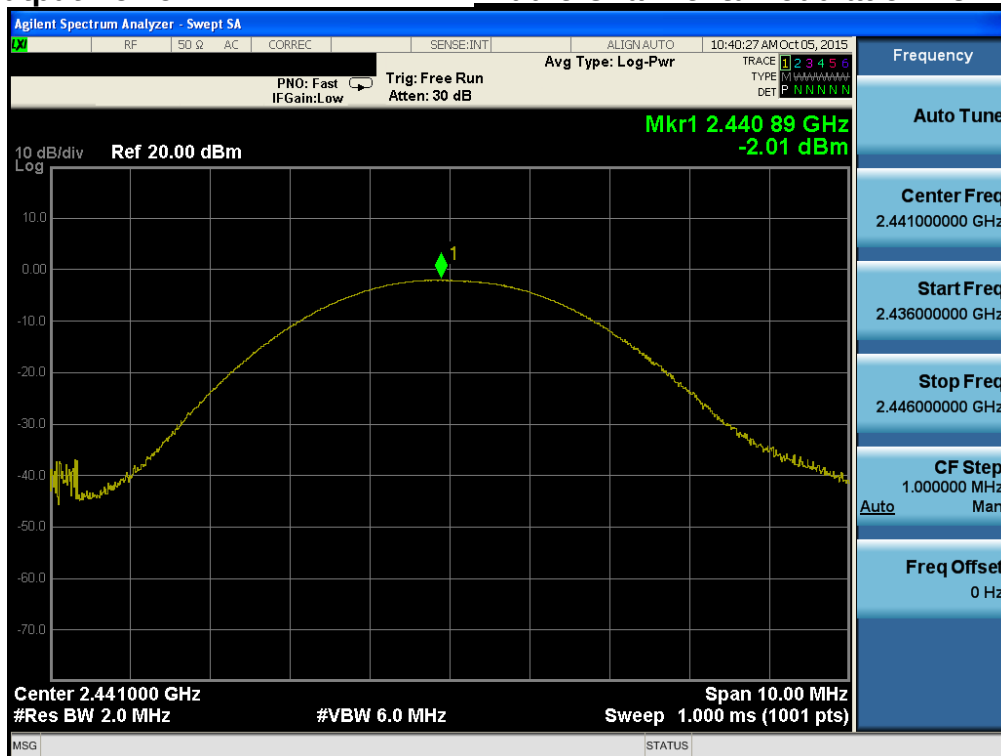
Lowest Channel & Modulation : GFSK

Peak Output Power

Middle Channel & Modulation : GFSK

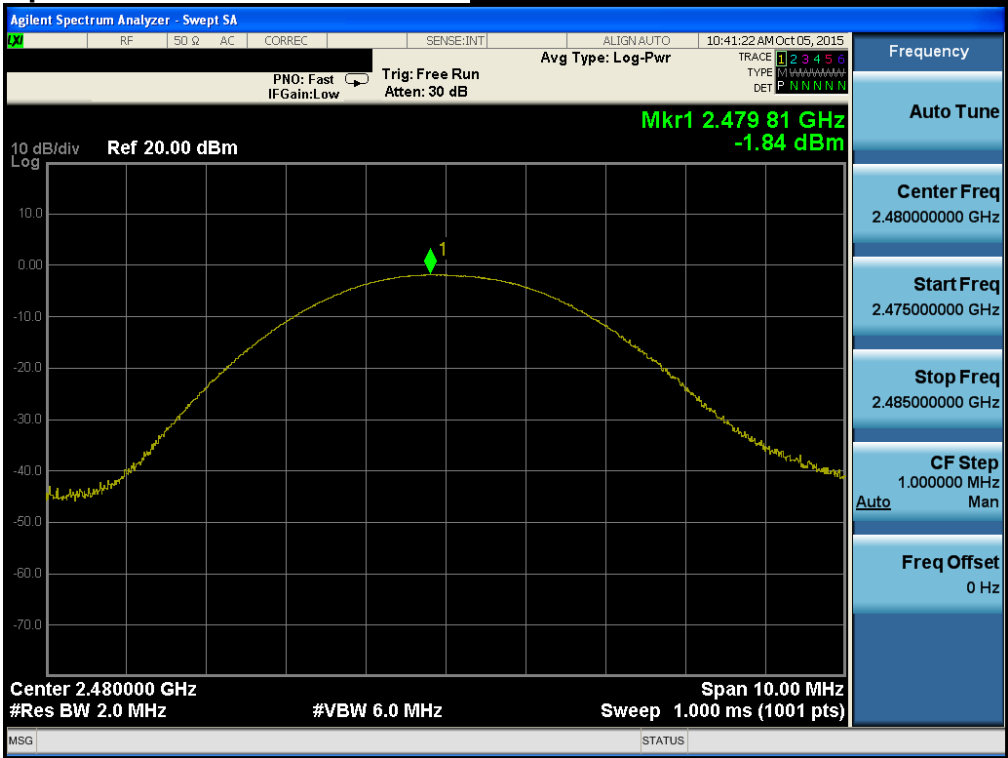
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Peak Output Power***Middle Channel & Modulation : $\pi/4$ DQPSK*****Peak Output Power*****Highest Channel & Modulation : $\pi/4$ DQPSK***

Peak Output Power**Lowest Channel & Modulation : 8DPSK****Peak Output Power****Middle Channel & Modulation : 8DPSK**

Peak Output Power

Highest Channel & Modulation : 8DPSK



3. 20 dB BW

3.1 Test Setup

Refer to the APPENDIX I.

3.2 Limit

Limit : Not Applicable

3.3 Test Procedure

1. The 20 dB bandwidth were measured with a spectrum analyzer connected to RF antenna Connector (conducted measurement) while EUT was operating in transmit mode. The analyzer center frequency was set to the EUT carrier frequency, using the analyzer.
2. The bandwidth of the fundamental frequency was measured with the spectrum analyzer using $RBW \geq 1\%$ of the 20 dB bandwidth, $VBW \geq RBW$, Span = 3 MHz.

3.4 Test Results

<Battery DC 6 V>

Modulation	Tested Channel	20 dB BW (MHz)
<u>GFSK</u>	Lowest	0.923
	Middle	0.921
	Highest	0.924
<u>$\pi/4$DQPSK</u>	Lowest	1.262
	Middle	1.260
	Highest	1.279
<u>8DPSK</u>	Lowest	1.253
	Middle	1.255
	Highest	1.256

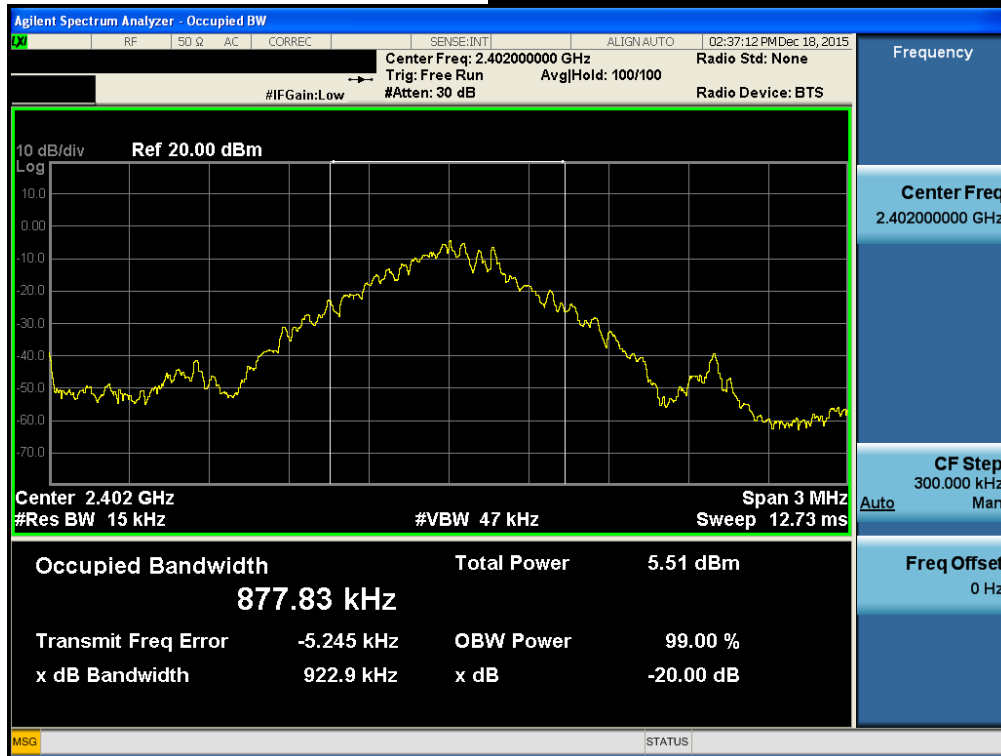
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Modulation	Tested Channel	20 dB BW (MHz)
<u>GFSK</u>	Lowest	0.920
	Middle	0.921
	Highest	0.921
<u>$\pi/4$DQPSK</u>	Lowest	1.260
	Middle	1.257
	Highest	1.276
<u>8DPSK</u>	Lowest	1.254
	Middle	1.259
	Highest	1.257

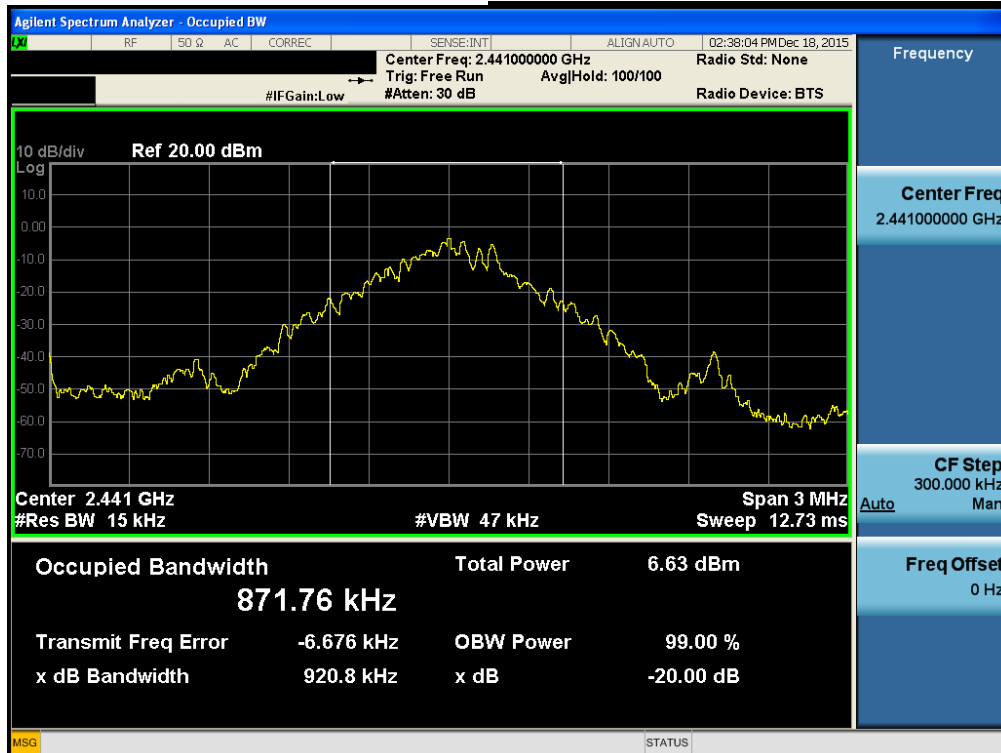
Note 1 : See next pages for actual measured spectrum plots.

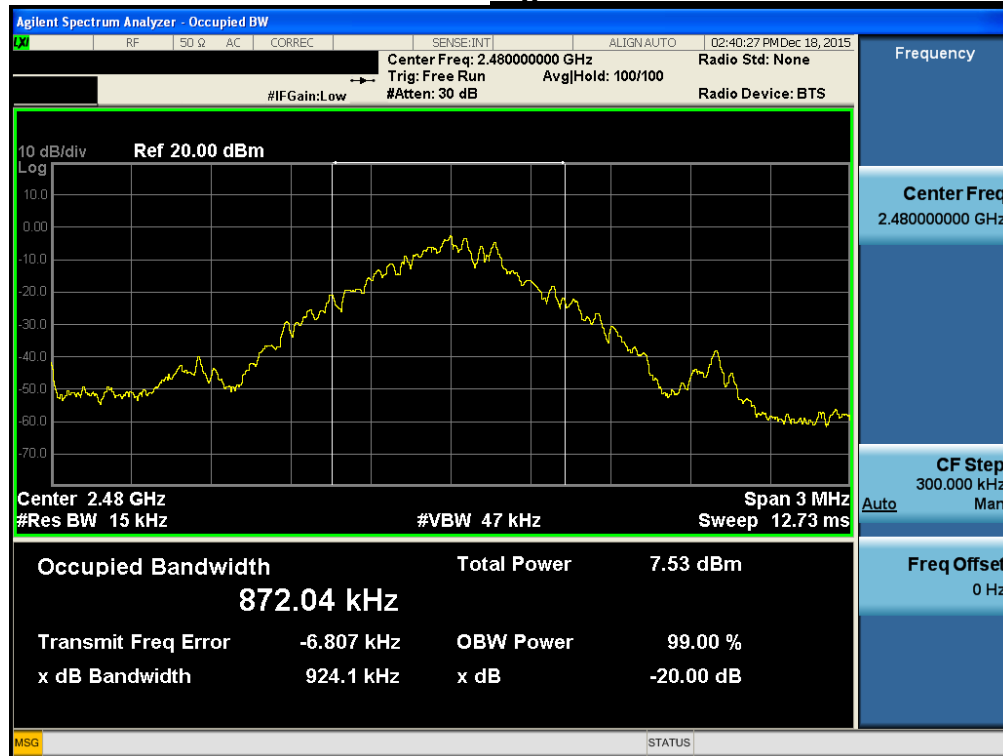
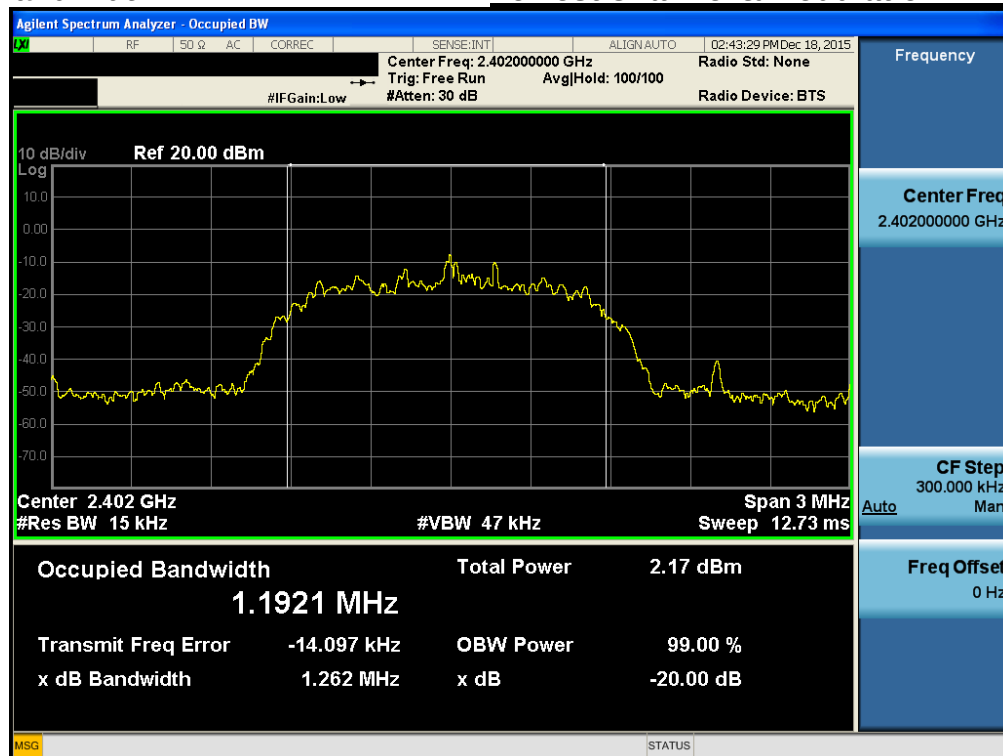
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20 dB Bandwidth

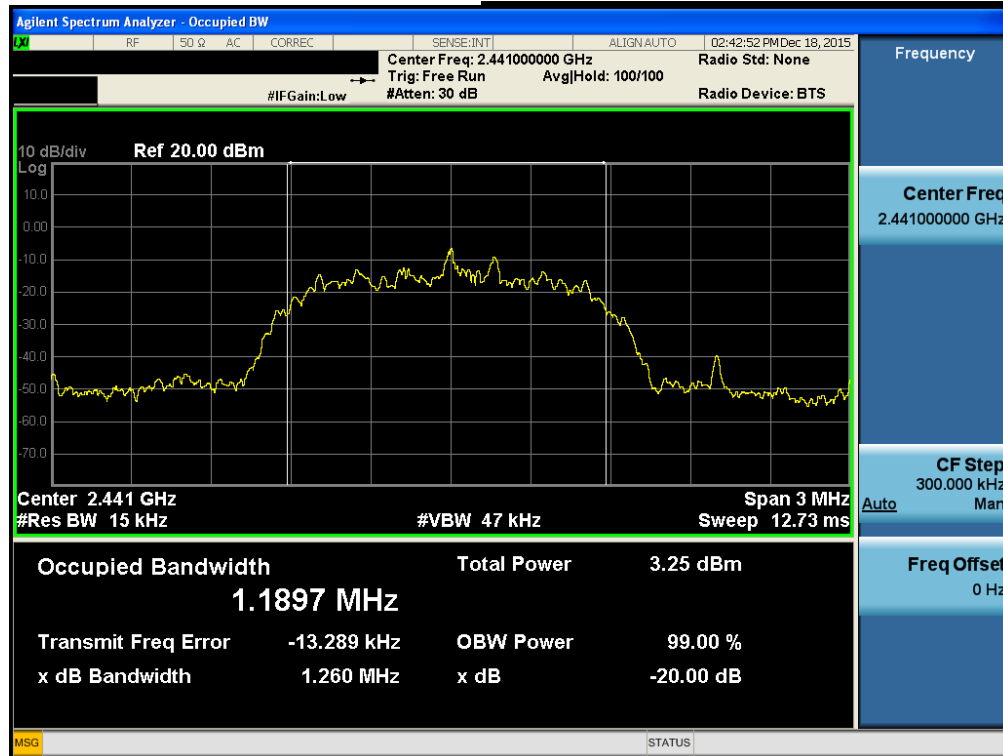
Lowest Channel & Modulation : GFSK

20 dB Bandwidth

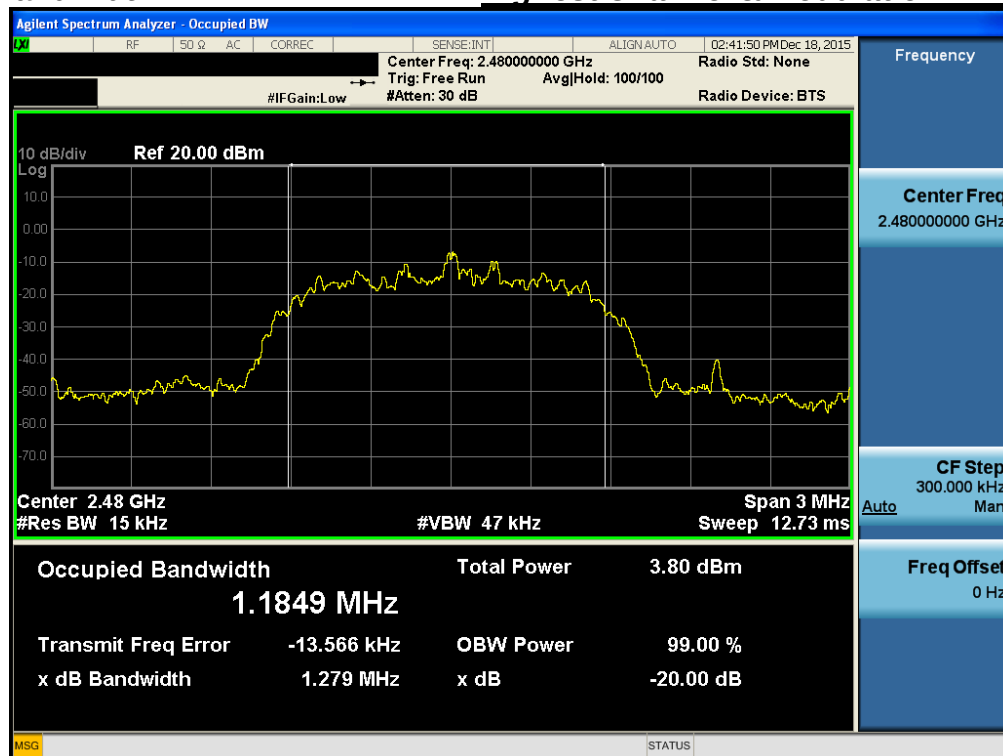
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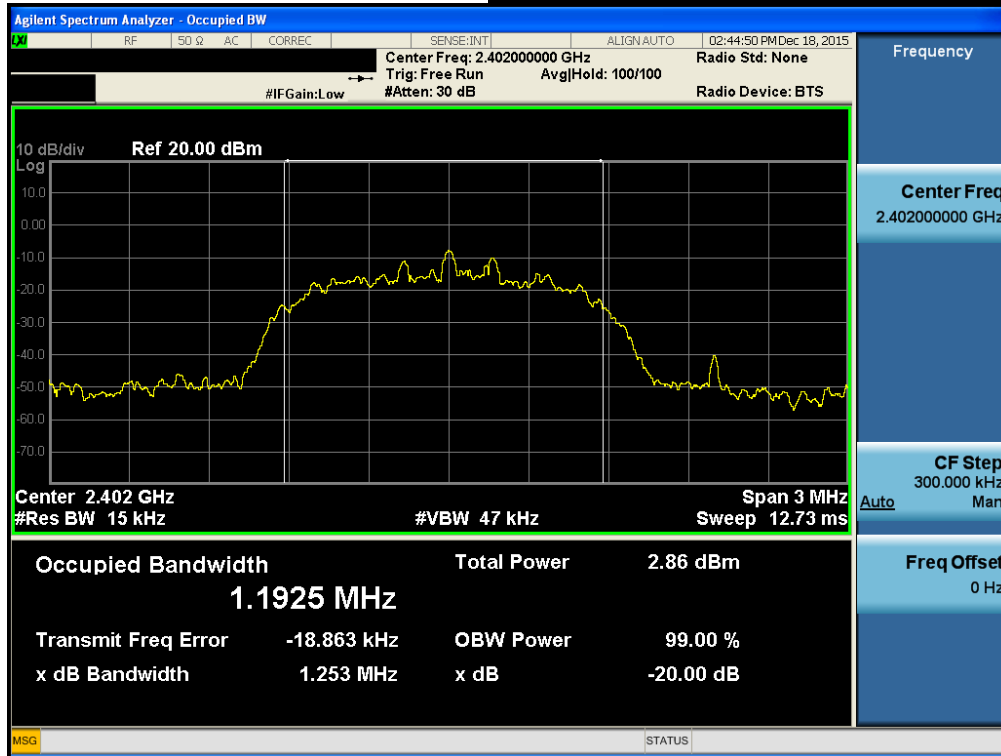
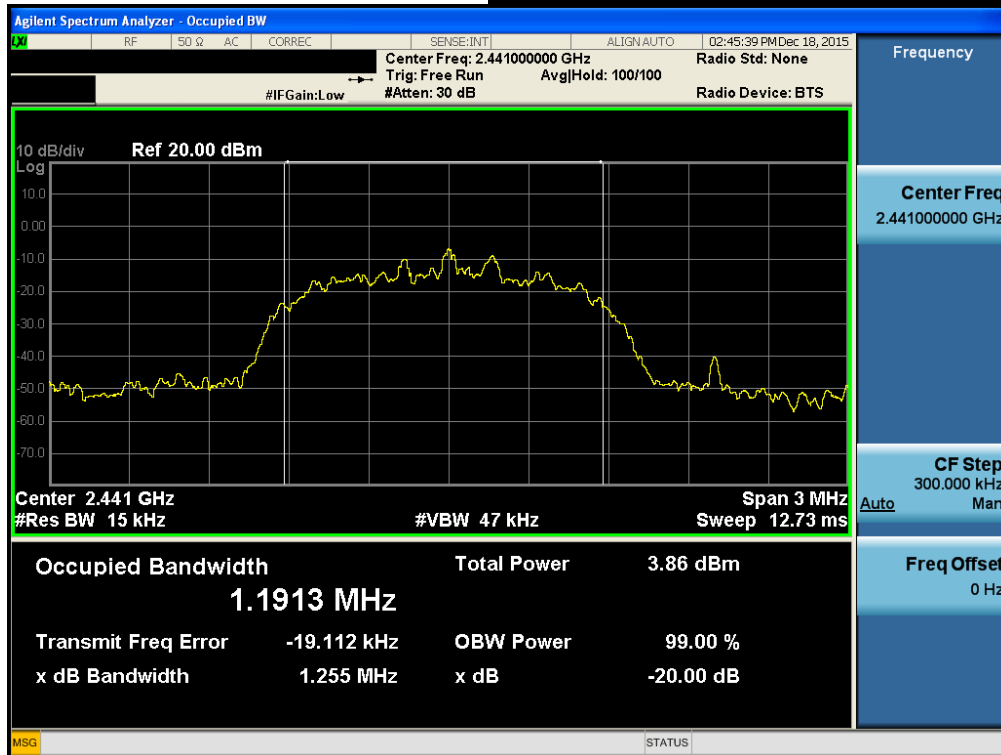
20 dB Bandwidth***Highest Channel & Modulation : GFSK*****20 dB Bandwidth*****Lowest Channel & Modulation : $\pi/4$ DQPSK***

20 dB Bandwidth

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

20 dB Bandwidth

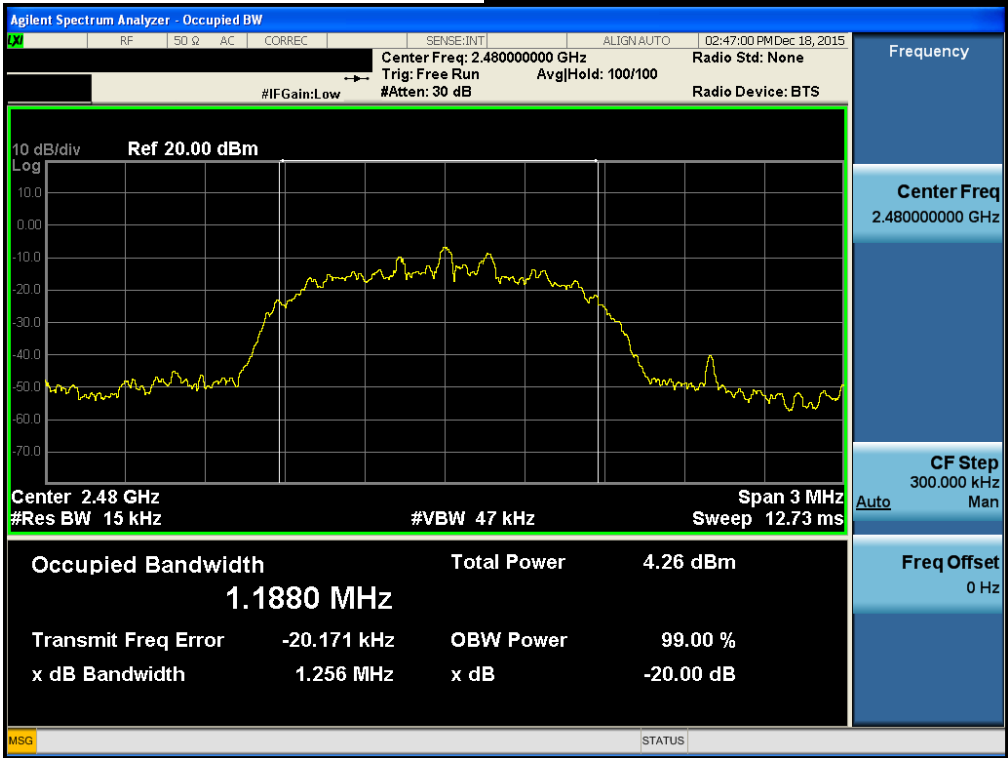
Highest Channel & Modulation : $\pi/4$ DQPSK

20 dB Bandwidth**Lowest Channel & Modulation : 8DPSK****20 dB Bandwidth****Middle Channel & Modulation : 8DPSK**



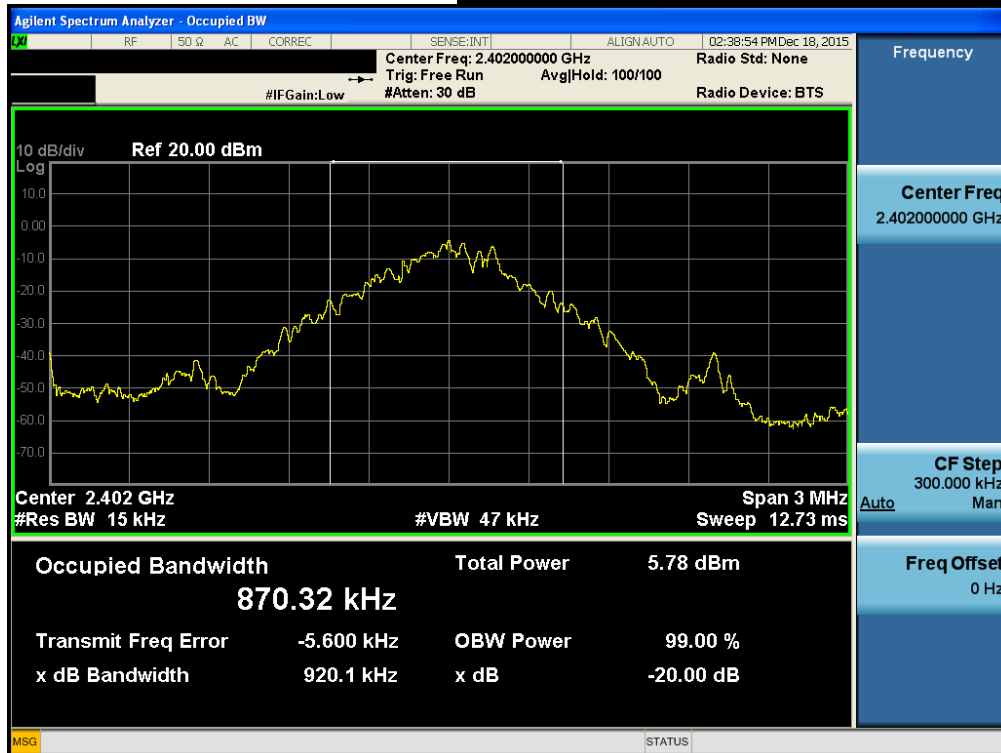
20 dB Bandwidth

Highest Channel & Modulation : 8DPSK

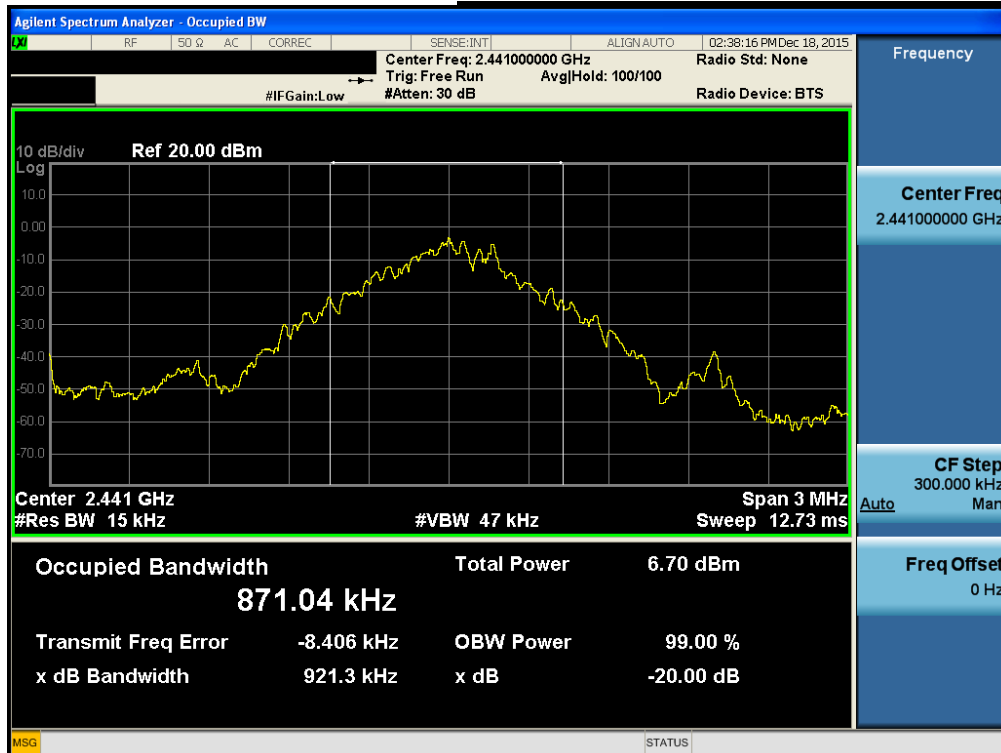


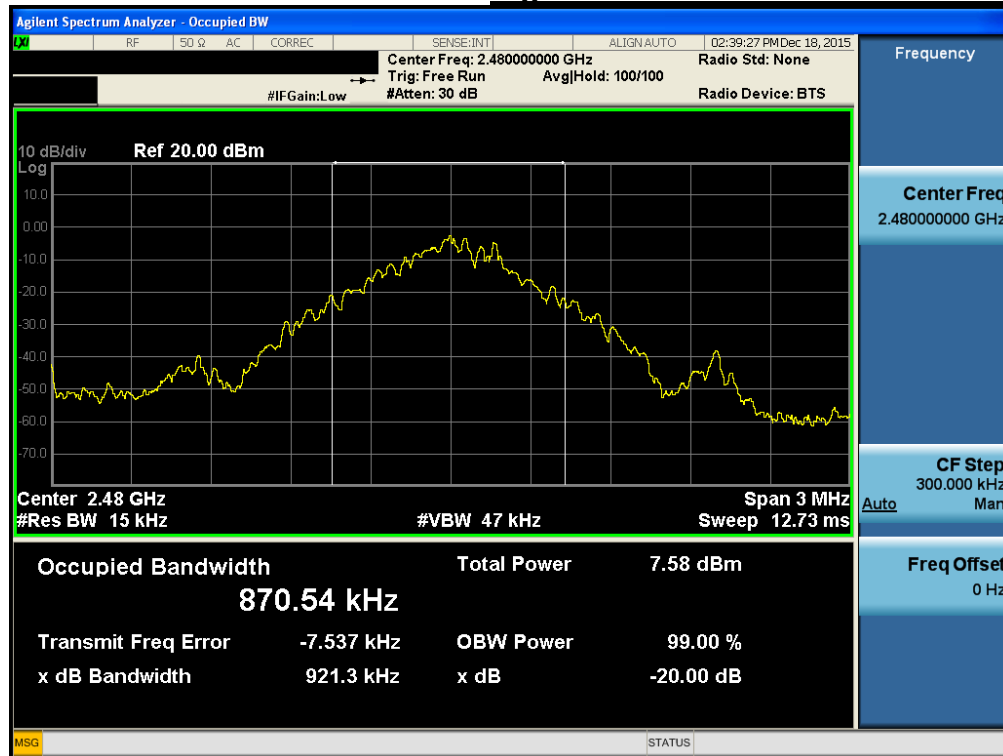
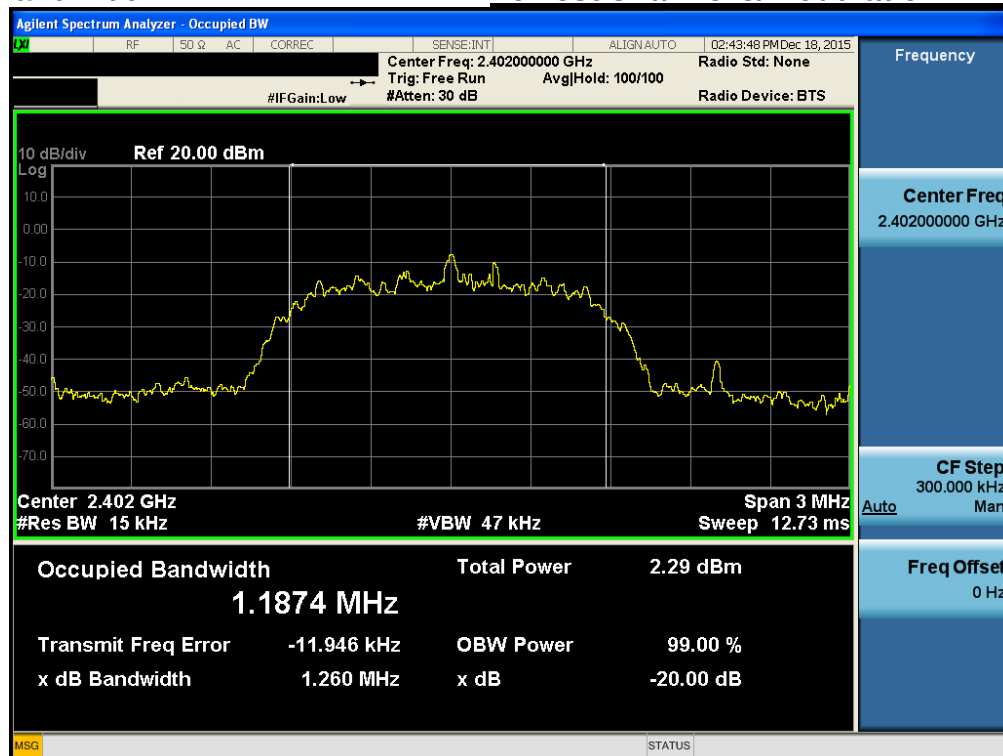
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20 dB Bandwidth

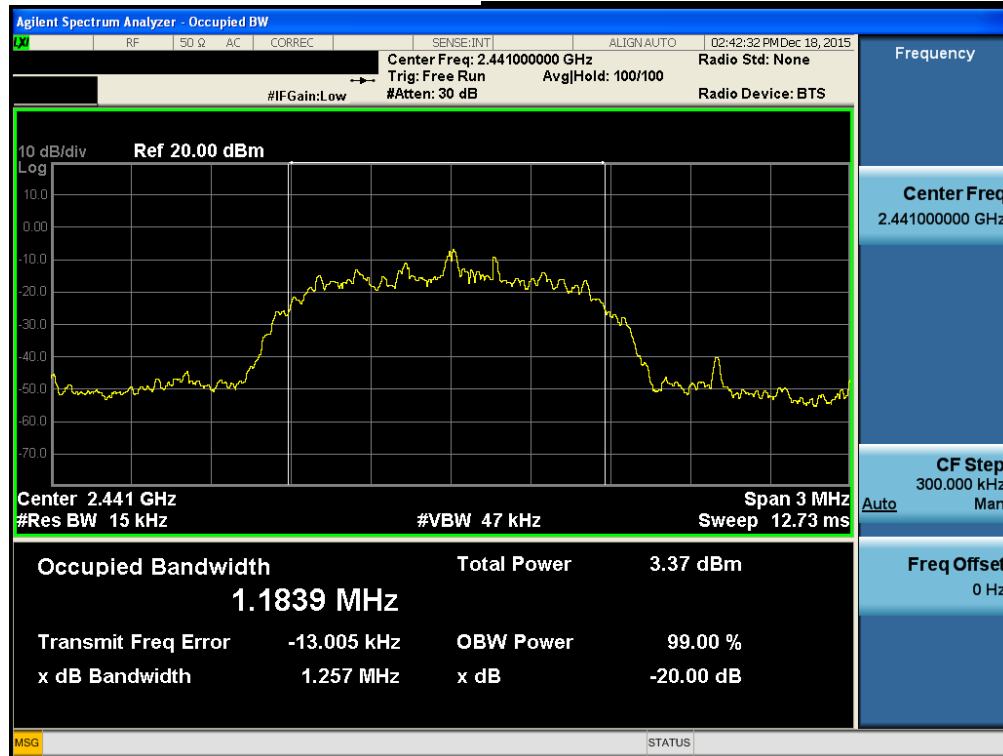
Lowest Channel & Modulation : GFSK

20 dB Bandwidth

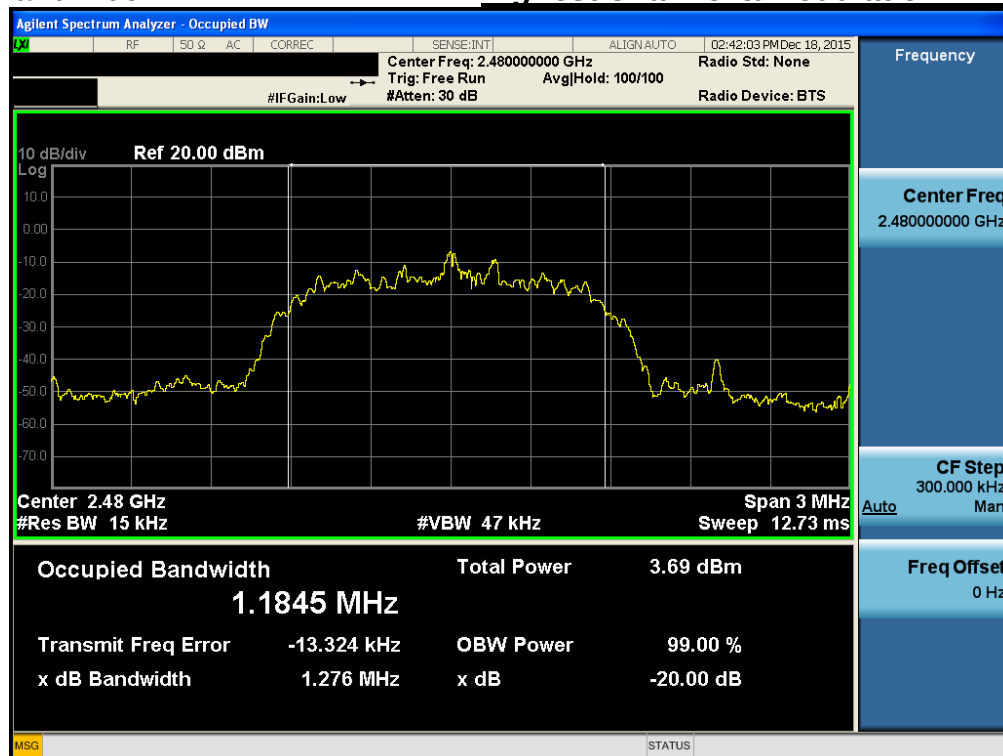
Middle Channel & Modulation : GFSK

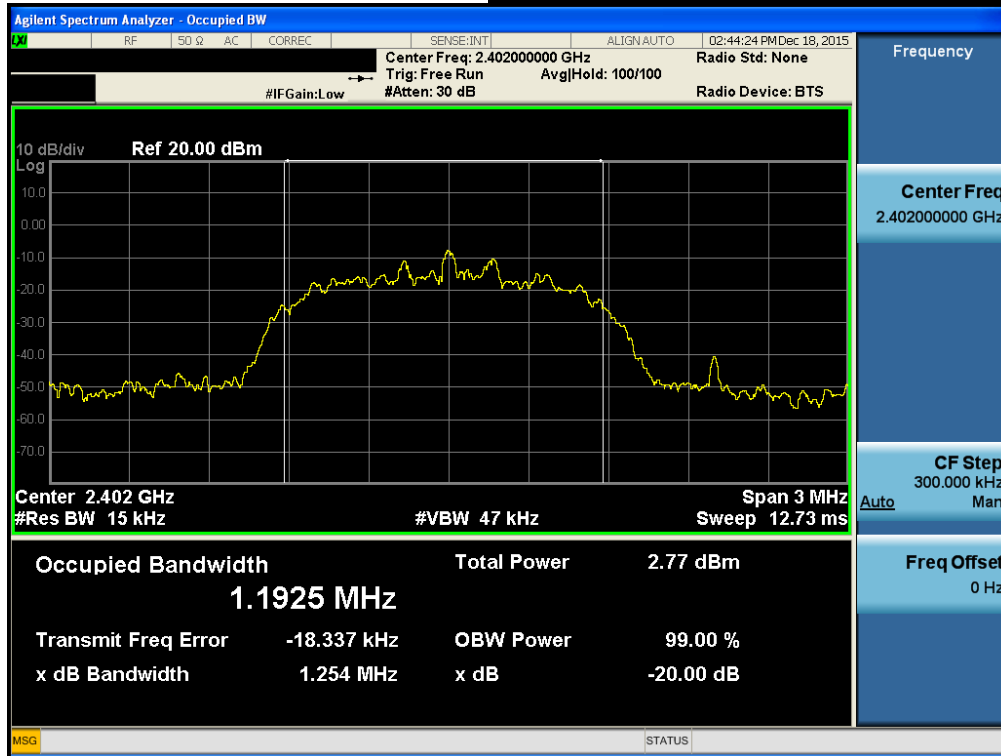
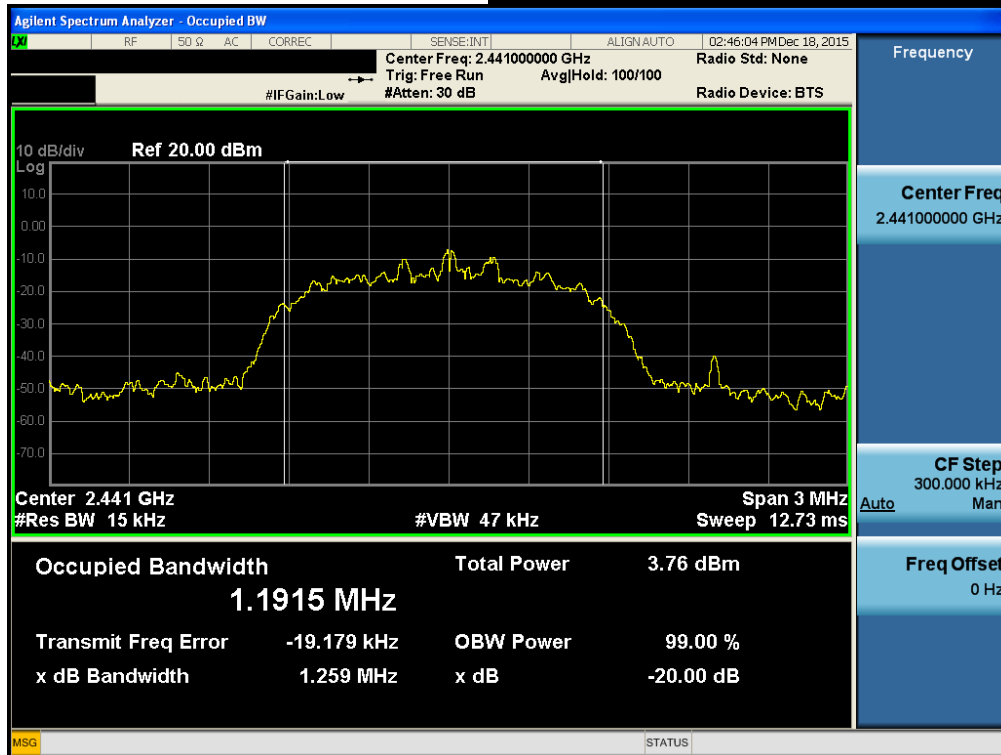
20 dB Bandwidth***Highest Channel & Modulation : GFSK*****20 dB Bandwidth*****Lowest Channel & Modulation : π /4DQPSK***

20 dB Bandwidth

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

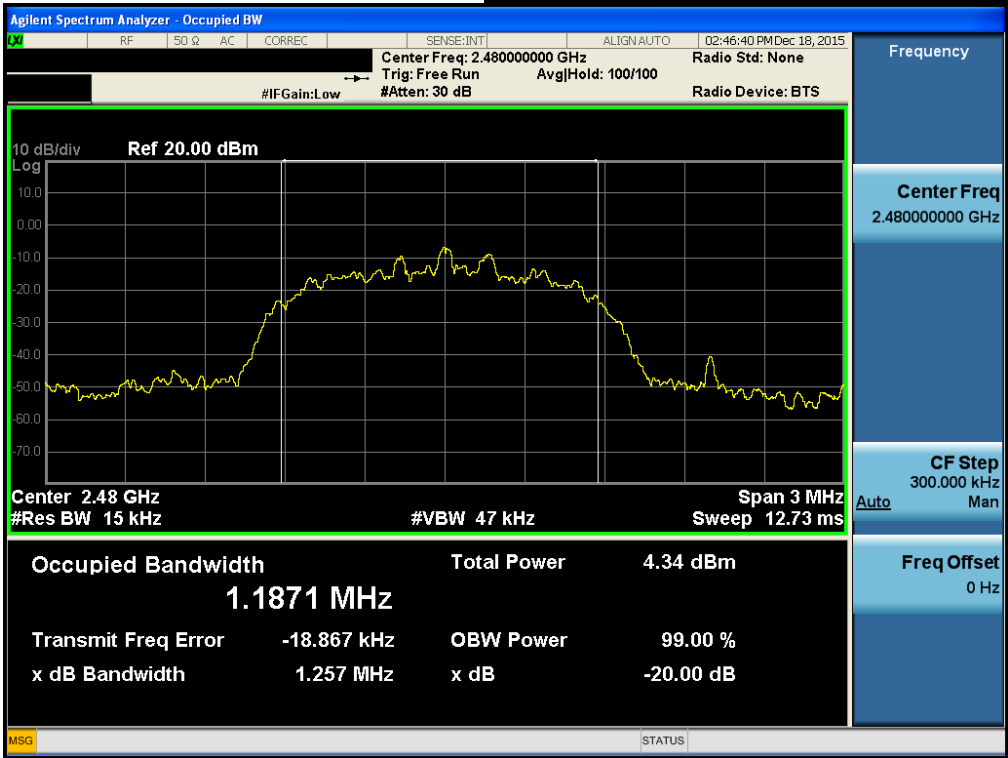
20 dB Bandwidth

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

20 dB Bandwidth***Lowest Channel & Modulation : 8DPSK*****20 dB Bandwidth*****Middle Channel & Modulation : 8DPSK***

20 dB Bandwidth

Highest Channel & Modulation : 8DPSK



4. Carrier Frequency Separation

4.1 Test Setup

Refer to the APPENDIX I.

4.2 Limit

Limit : ≥ 20 dB BW or $\geq$ Two-Thirds of the 20 dB BW

4.3 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

4.4 Test Results

<Battery DC 6 V>

FH mode

Hopping Mode	Test Mode	Peak of center channel (MHz)	Peak of adjacent Channel (MHz)	Test Result (MHz)
Enable	GFSK	2440.994	2441.999	1.005
	$\pi/4$ -DQPSK	2441.006	2442.008	1.002
	8DPSK	2441.006	2442.008	1.002

AFH mode

Hopping Mode	Test Mode	Peak of center channel (MHz)	Peak of adjacent Channel (MHz)	Test Result (MHz)
Enable	GFSK	2411.000	2412.002	1.002
	$\pi/4$ -DQPSK	2411.003	2412.002	0.999
	8DPSK	2411.006	2412.002	0.996

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

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FH mode

Hopping Mode	Test Mode	Peak of center channel (MHz)	Peak of adjacent Channel (MHz)	Test Result (MHz)
Enable	GFSK	2440.997	2442.002	1.005
	$\pi/4$ -DQPSK	2441.006	2442.005	0.999
	8DPSK	2441.003	2442.008	1.005

AFH mode

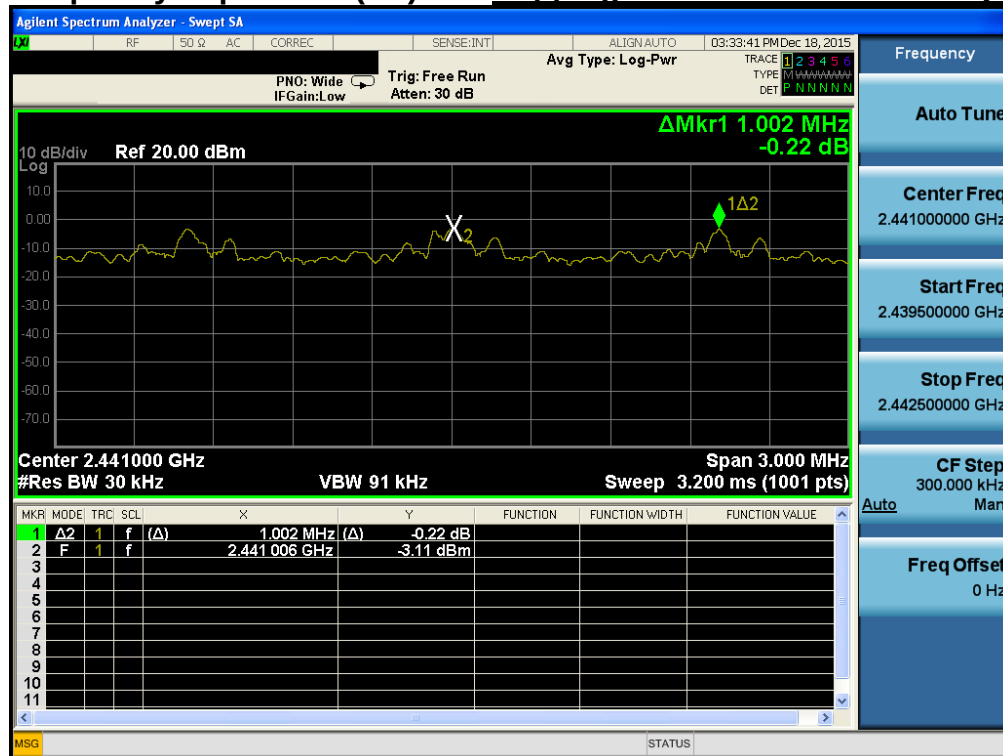
Hopping Mode	Test Mode	Peak of center channel (MHz)	Peak of adjacent Channel (MHz)	Test Result (MHz)
Enable	GFSK	2411.006	2411.999	0.993
	$\pi/4$ -DQPSK	2411.003	2412.005	1.002
	8DPSK	2411.003	2412.002	0.999

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

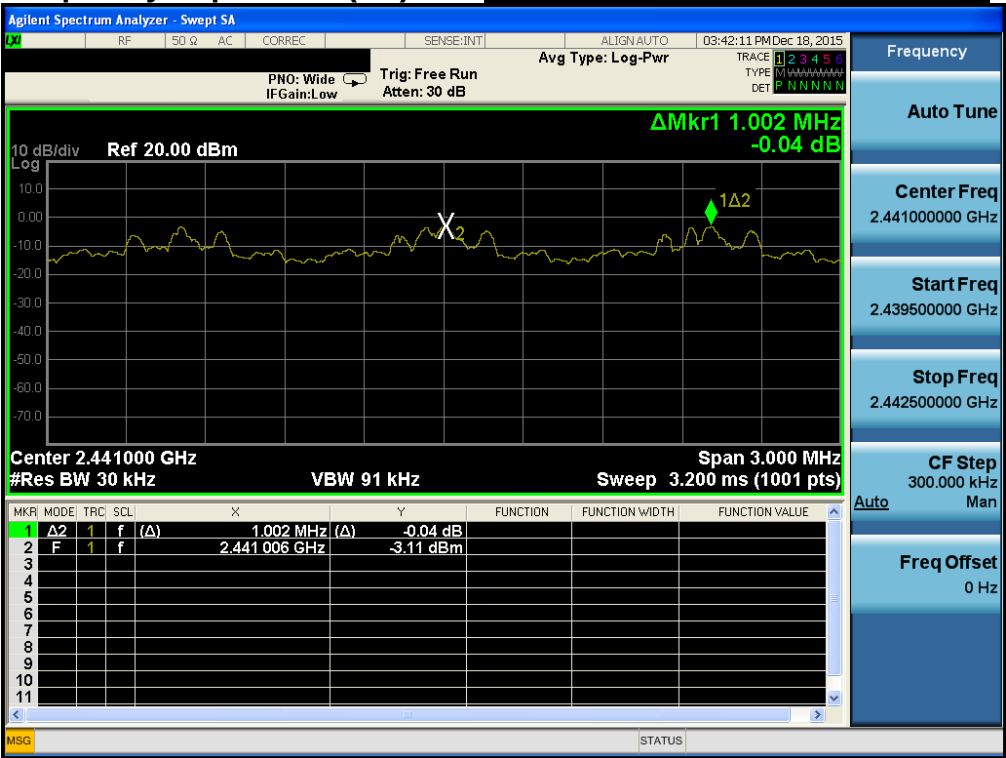
<Battery DC 6 V>

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



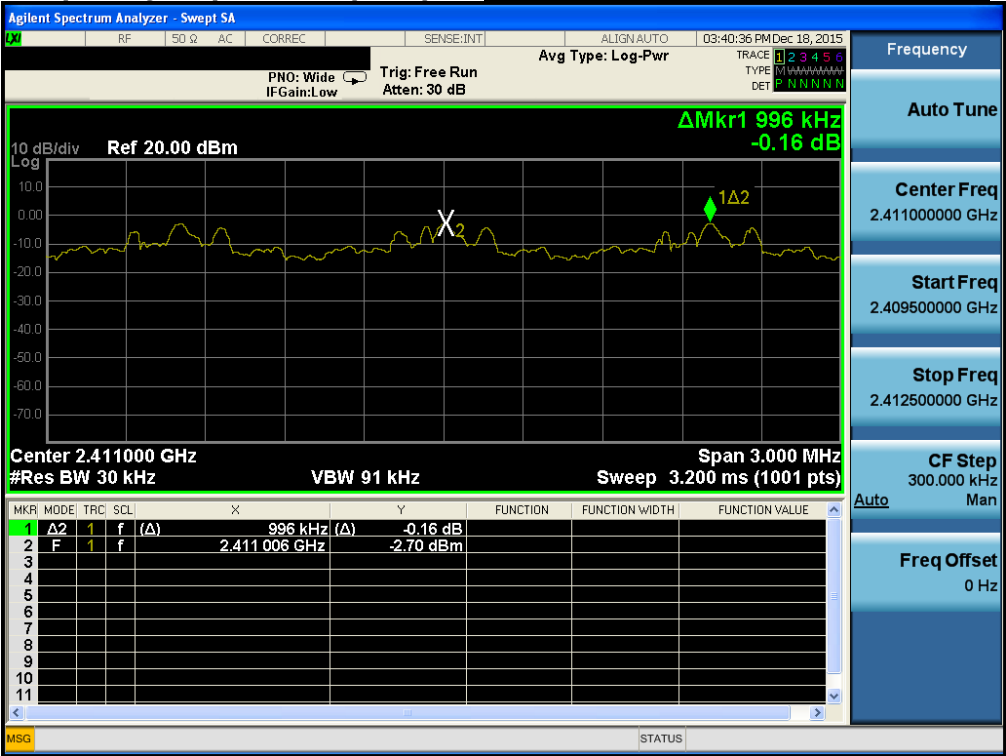
Carrier Frequency Separation (FH)

Hopping mode : Enable & 8DPSK



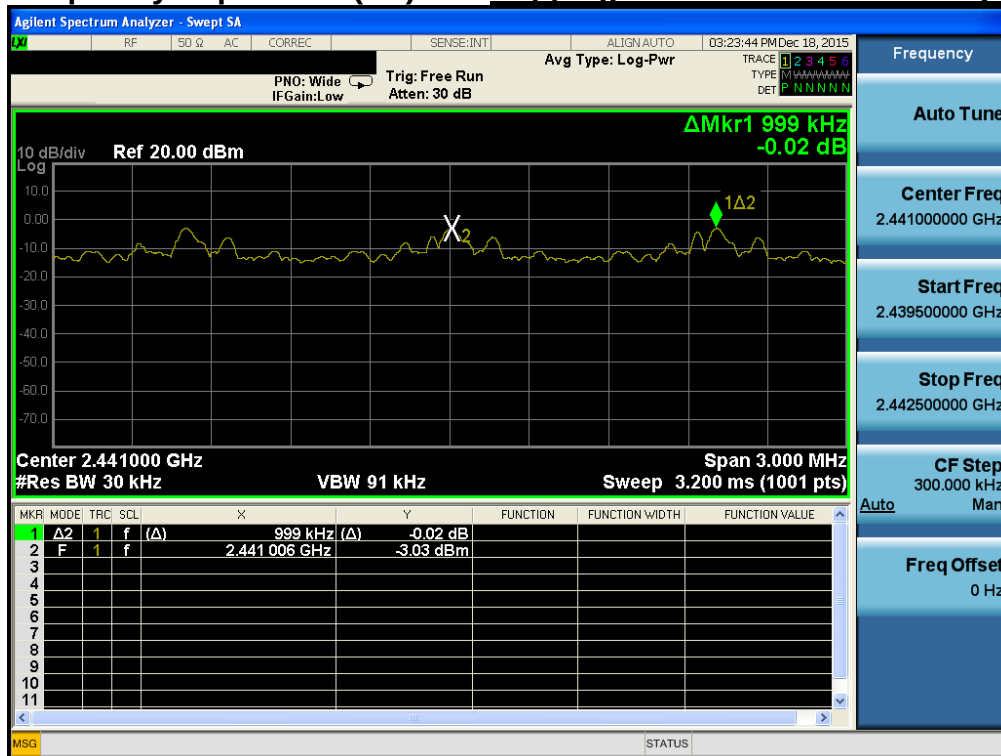
Carrier Frequency Separation (AFH) *Hopping mode : Enable & GFSK***Carrier Frequency Separation (AFH) *Hopping mode : Enable & $\pi/4$ -QPSK***

Carrier Frequency Separation (AFH) *Hopping mode : Enable & 8DPSK*



<Adaptor DC 5 V>

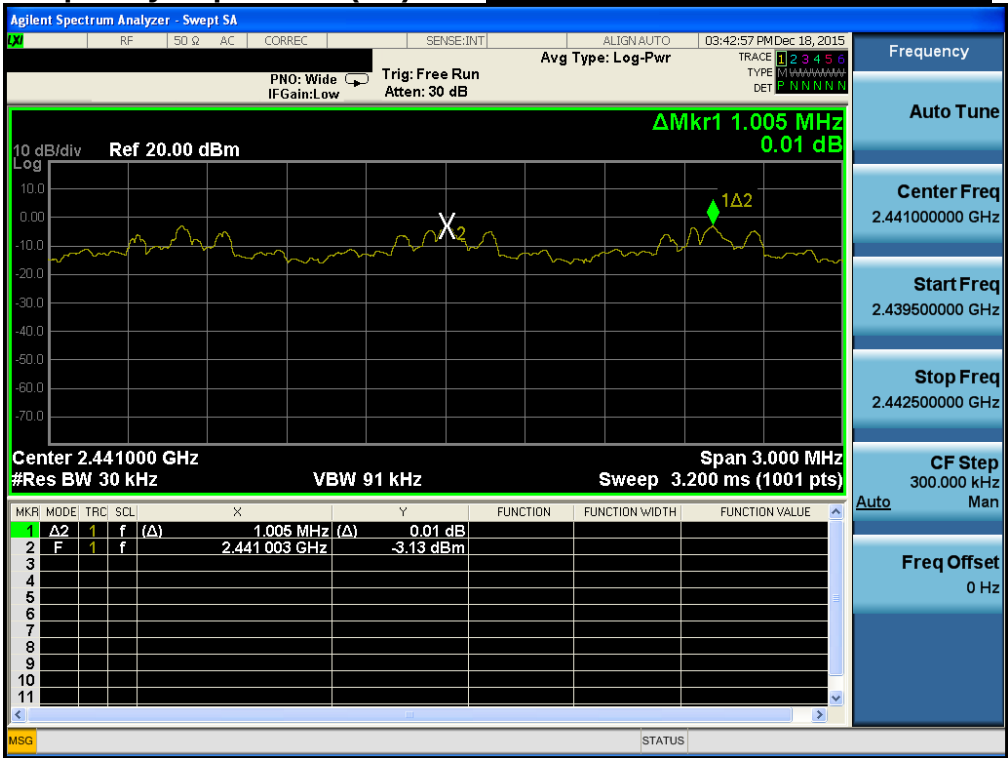
Carrier Frequency Separation (FH) Hopping mode : Enable & GFSK

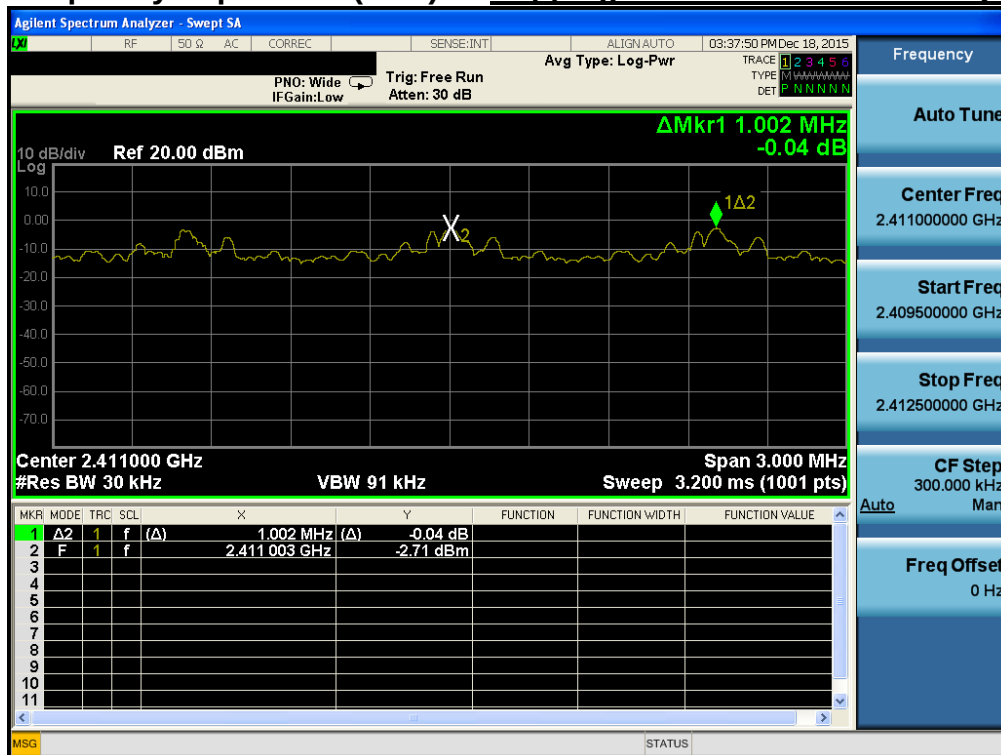
Carrier Frequency Separation (FH) Hopping mode : Enable & $\pi/4$ -DQPSK




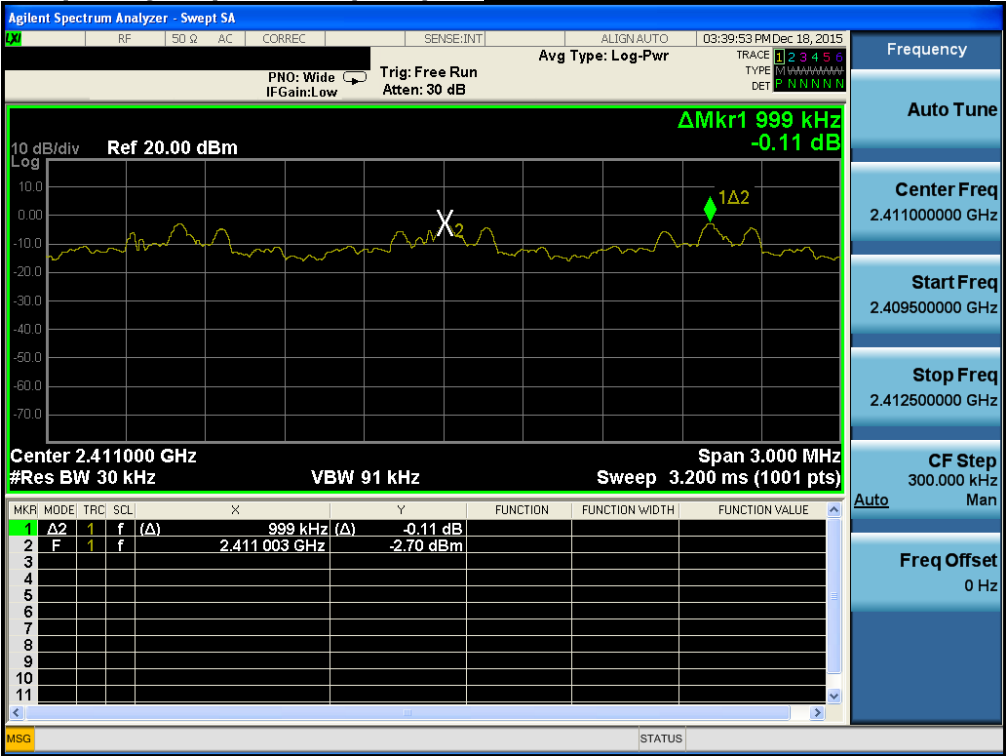
Carrier Frequency Separation (FH)

Hopping mode : Enable & 8DPSK



Carrier Frequency Separation (AFH) *Hopping mode : Enable & GFSK***Carrier Frequency Separation (AFH) *Hopping mode : Enable & $\pi/4$ -QPSK***

Carrier Frequency Separation (AFH) *Hopping mode : Enable & 8DPSK*



5. Number of Hopping Frequencies

5.1 Test Setup

Refer to the APPENDIX I.

5.2 Limit

Limit : ≥ 15 hops

5.3 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 for FH mode = 50 MHz Start Frequency = 2391.5 MHz, Stop Frequency = 2441.5 MHz

Start Frequency = 2441.5 MHz, Stop Frequency = 2491.5 MHz

Span for AFH mode = 30 MHz Start Frequency = 2396.0 MHz, Stop Frequency = 2426.0 MHz

RBW = less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.

VBW = $\geq$ RBW

Detector function = peak

Trace = max hold

Sweep = auto

5.4 Test Results

<Battery DC 6 V>

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.

<Adaptor DC 5 V>

FH mode

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

AFH mode

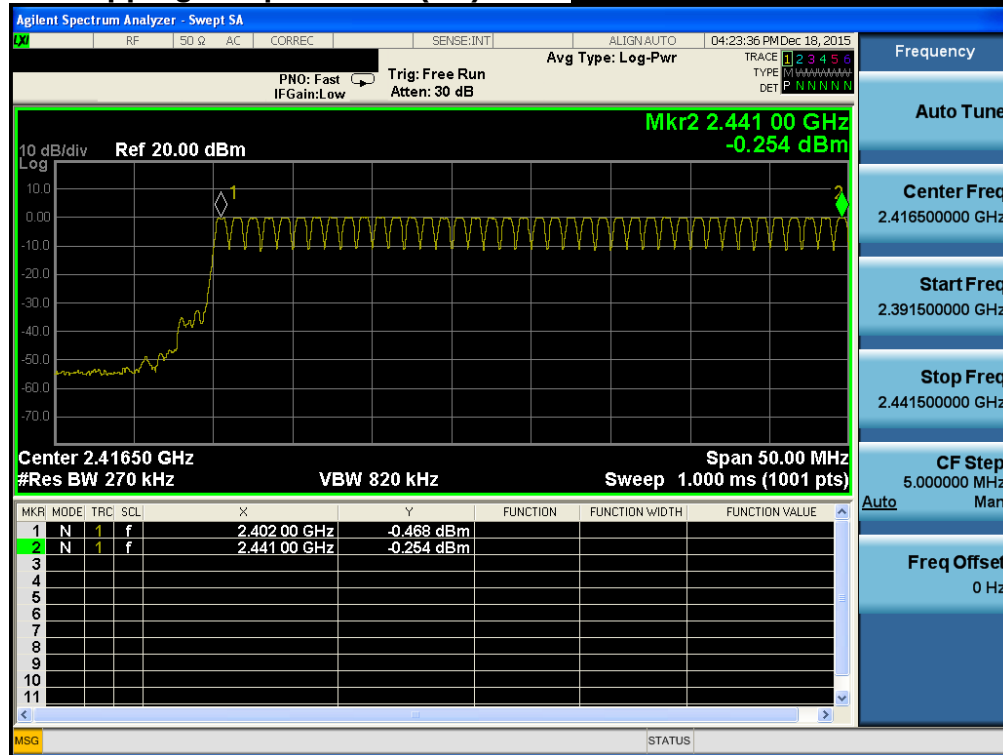
Hopping mode	Test mode	Test Result (Total Hops)
Enable	GFSK	20
	$\pi/4$ -DQPSK	20
	8DPSK	20

- Minimum Standard :

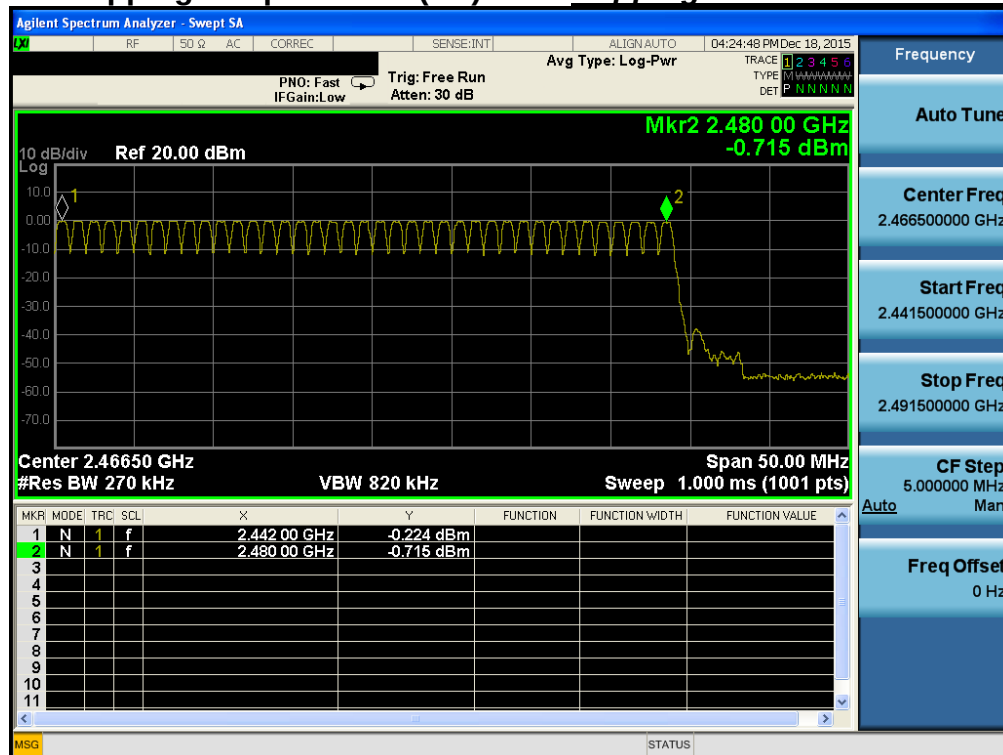
At least 15 hops

<Battery DC 6 V>

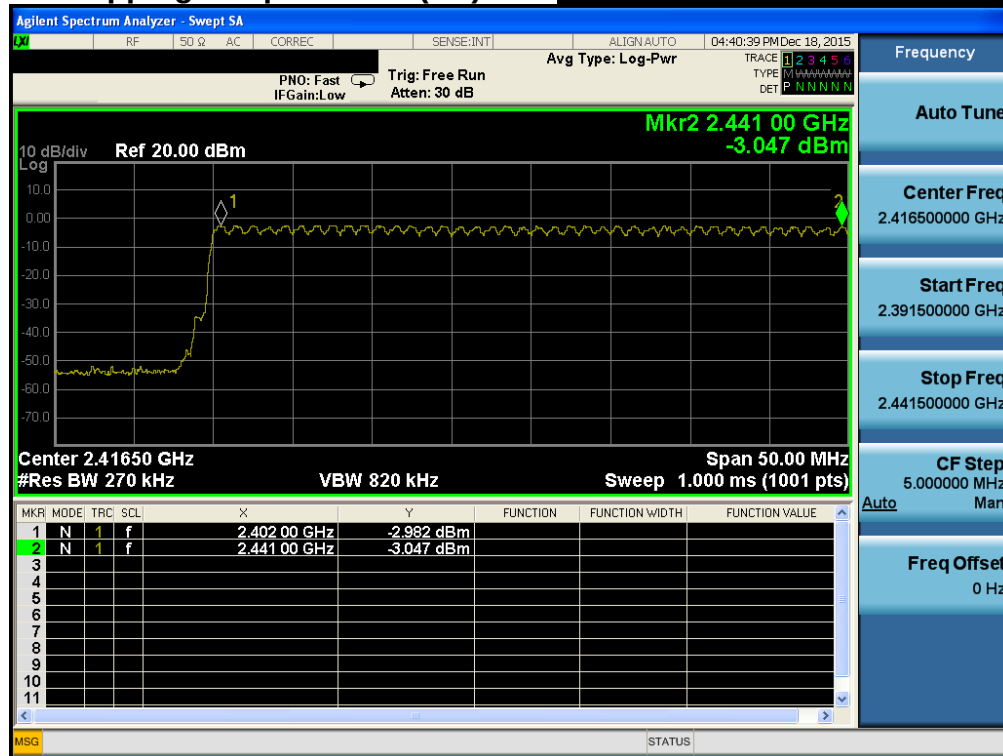
Number of Hopping Frequencies 1(FH)

Hopping mode : Enable & GFSK

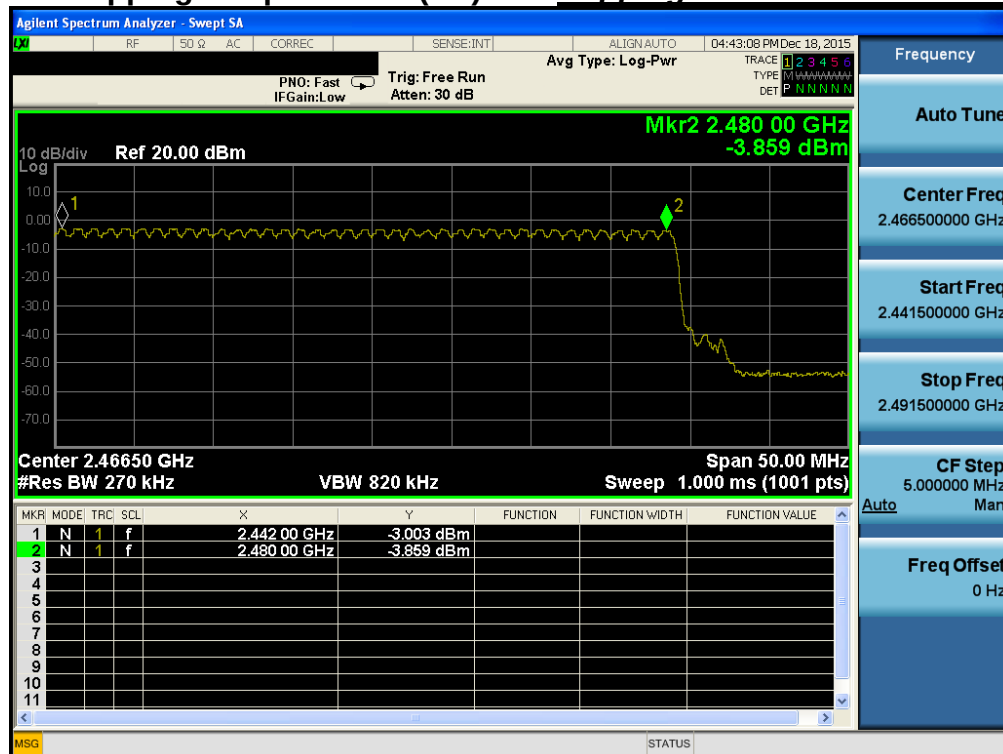
Number of Hopping Frequencies 2(FH)

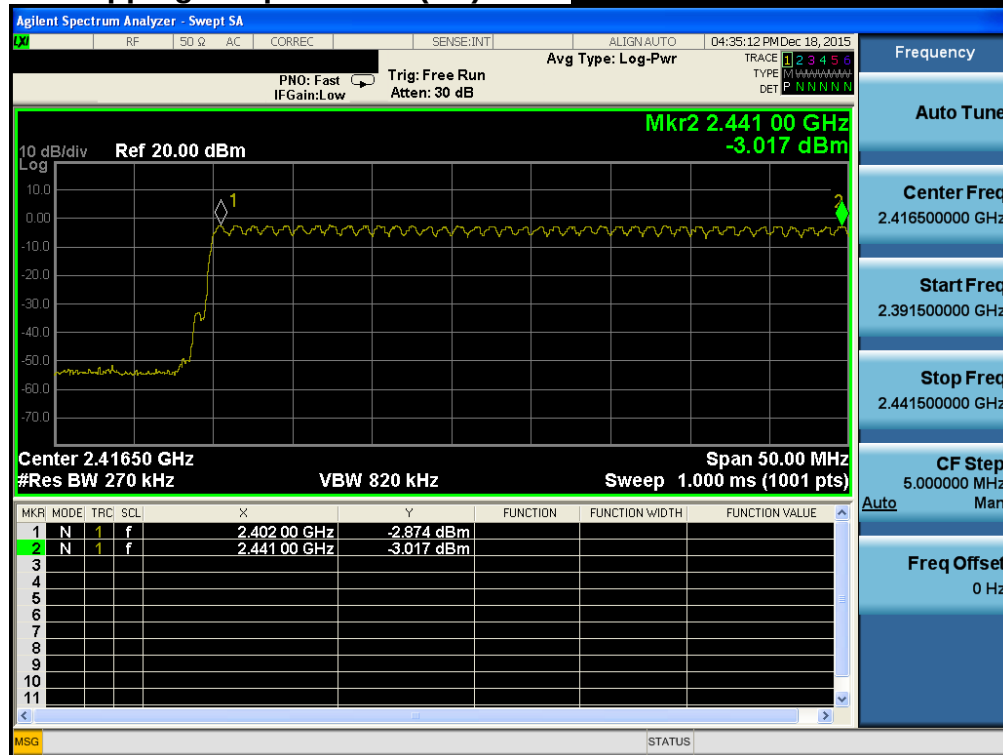
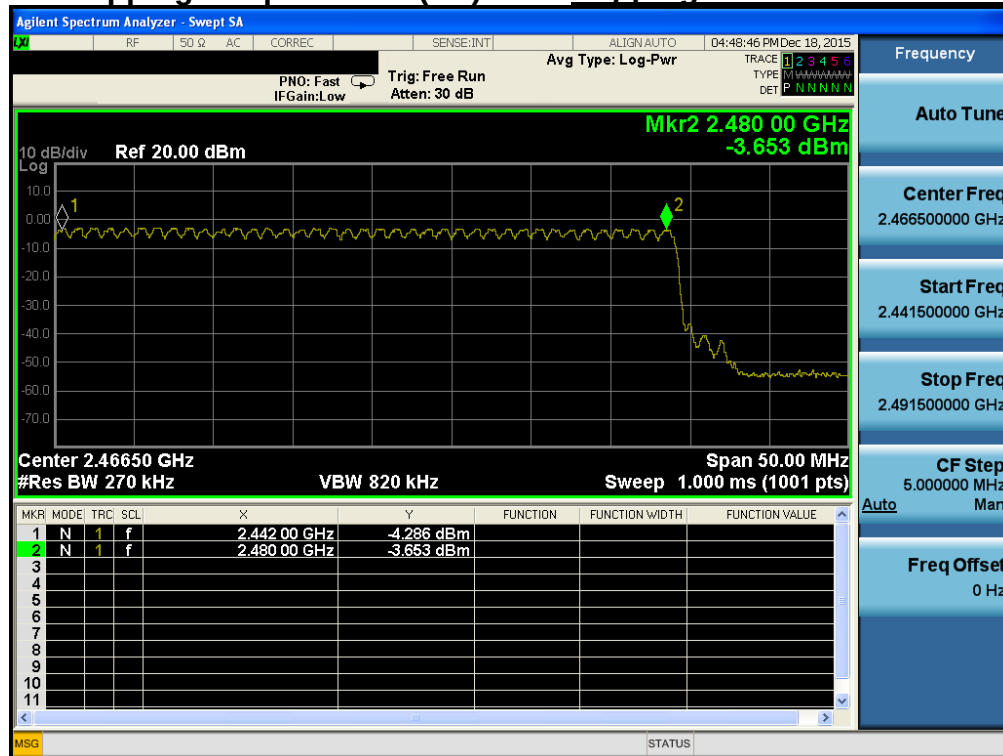
Hopping mode : Enable & GFSK

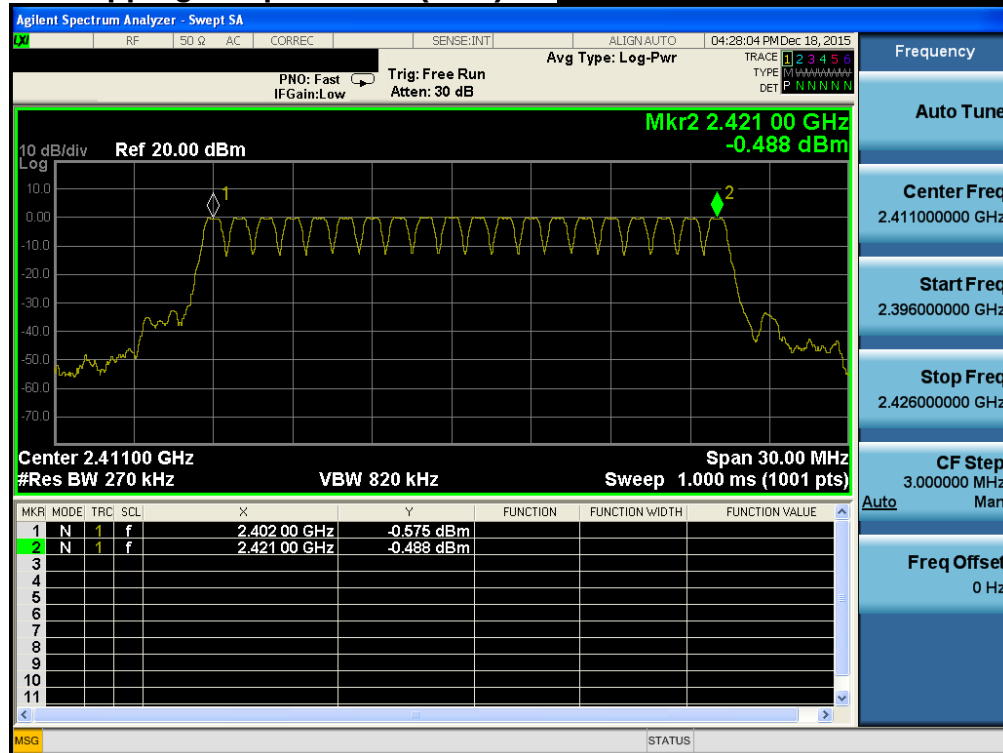
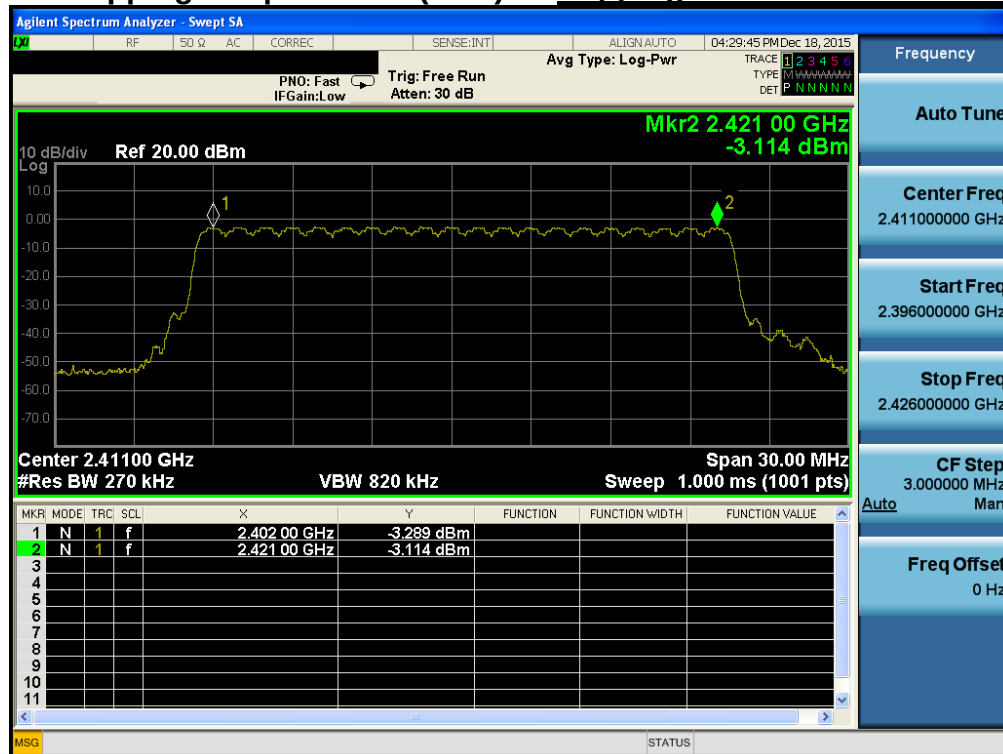
Number of Hopping Frequencies 1(FH)

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

Number of Hopping Frequencies 2(FH)

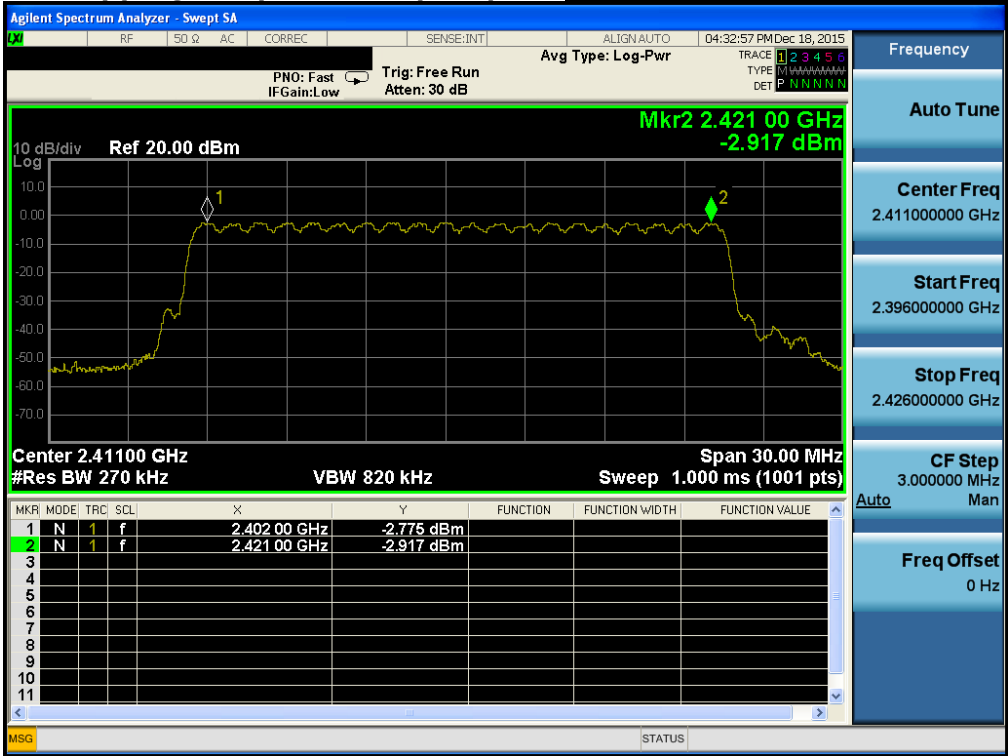
Hopping mode : Enable & $\pi/4$ -DQPSK

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

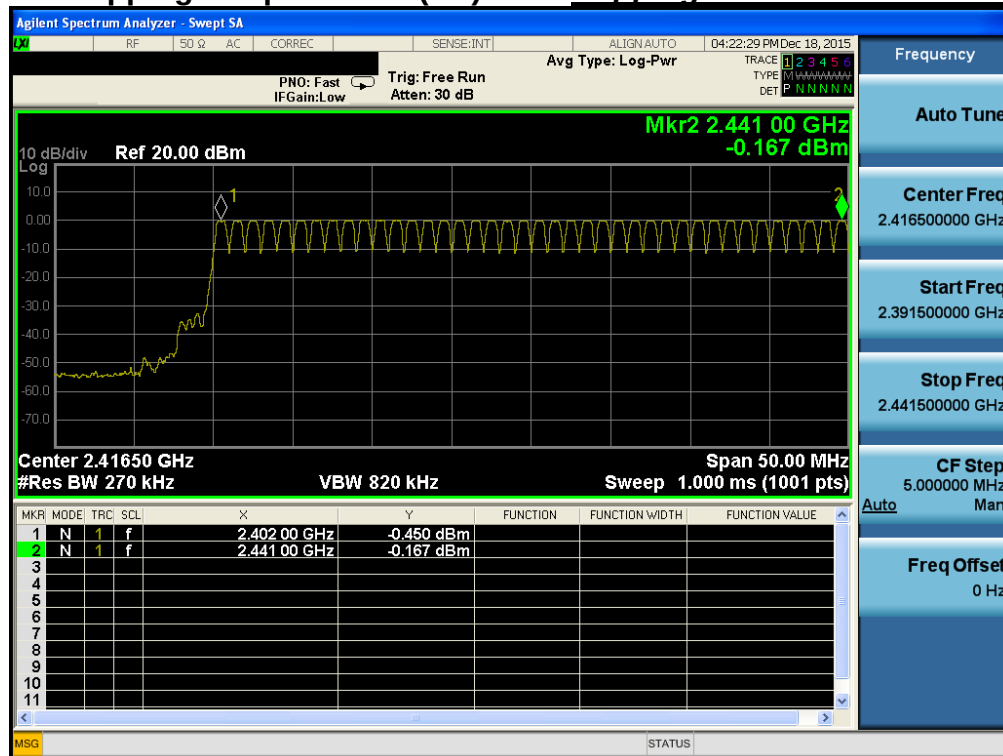


Number of Hopping Frequencies 1(AFH) *Hopping mode : Enable & 8DPSK*

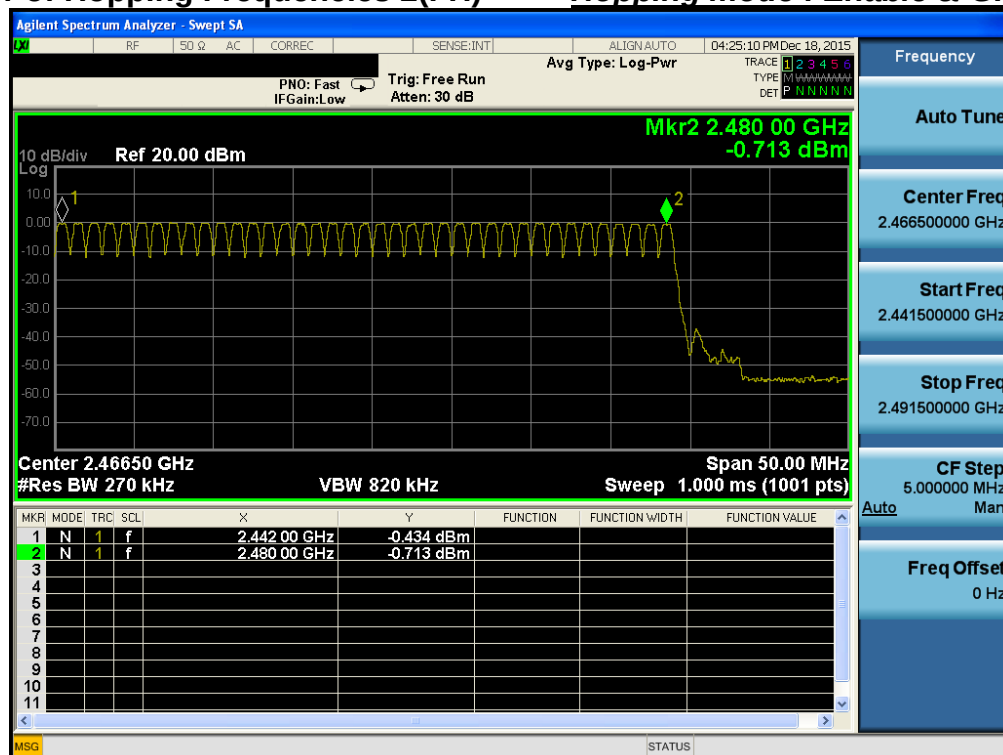


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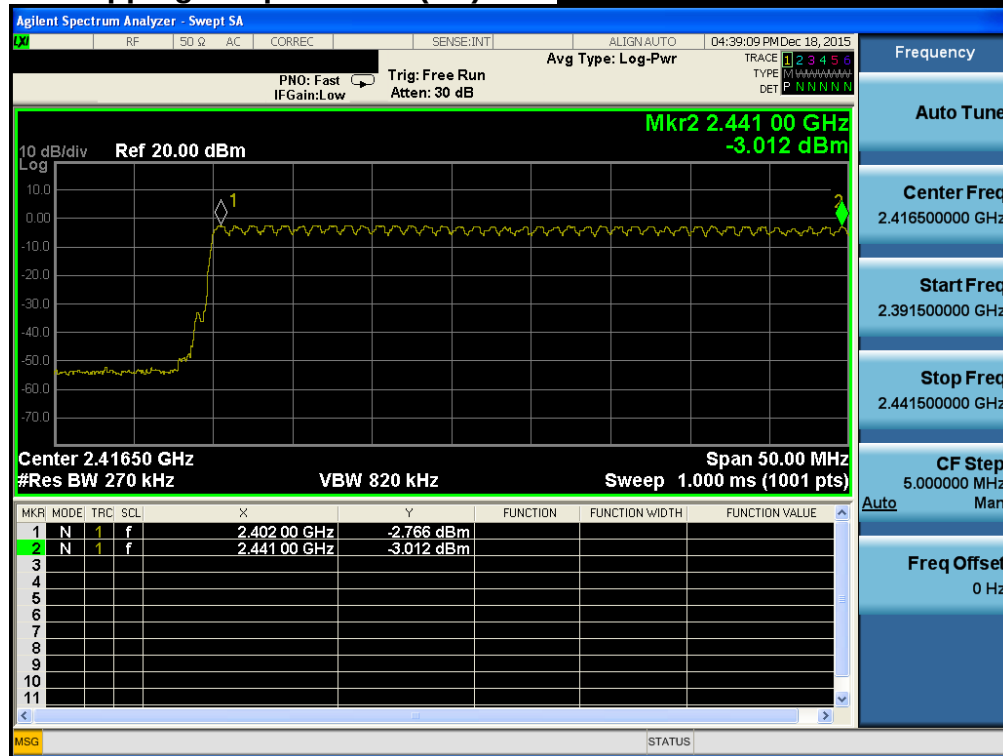
Number of Hopping Frequencies 1(FH)

Hopping mode : Enable & GFSK

Number of Hopping Frequencies 2(FH)

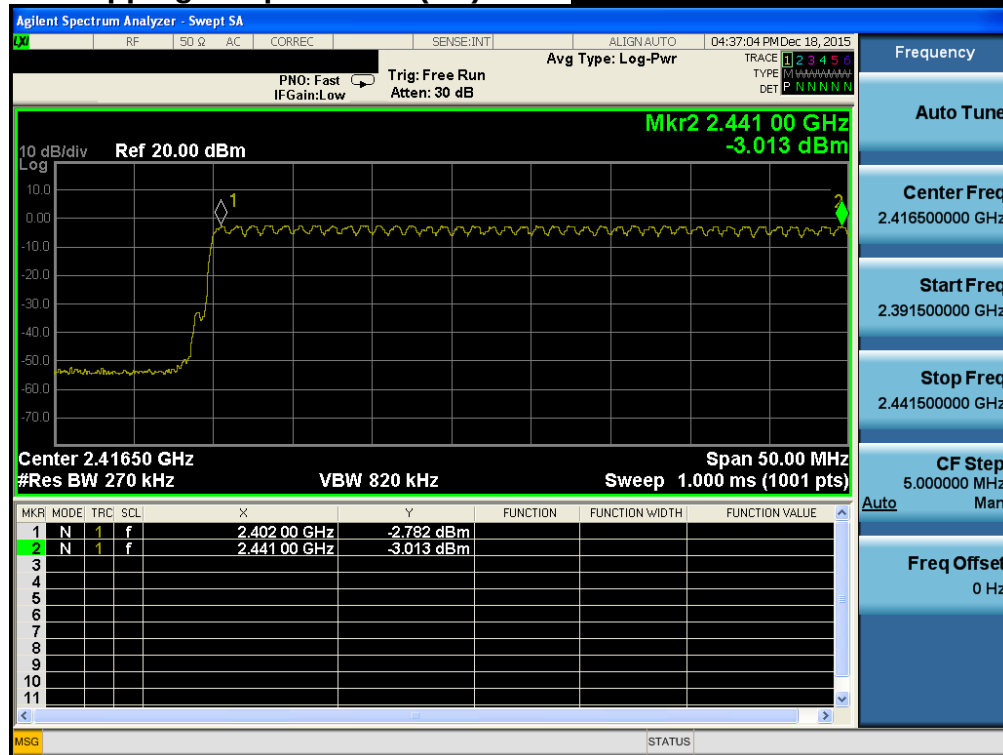
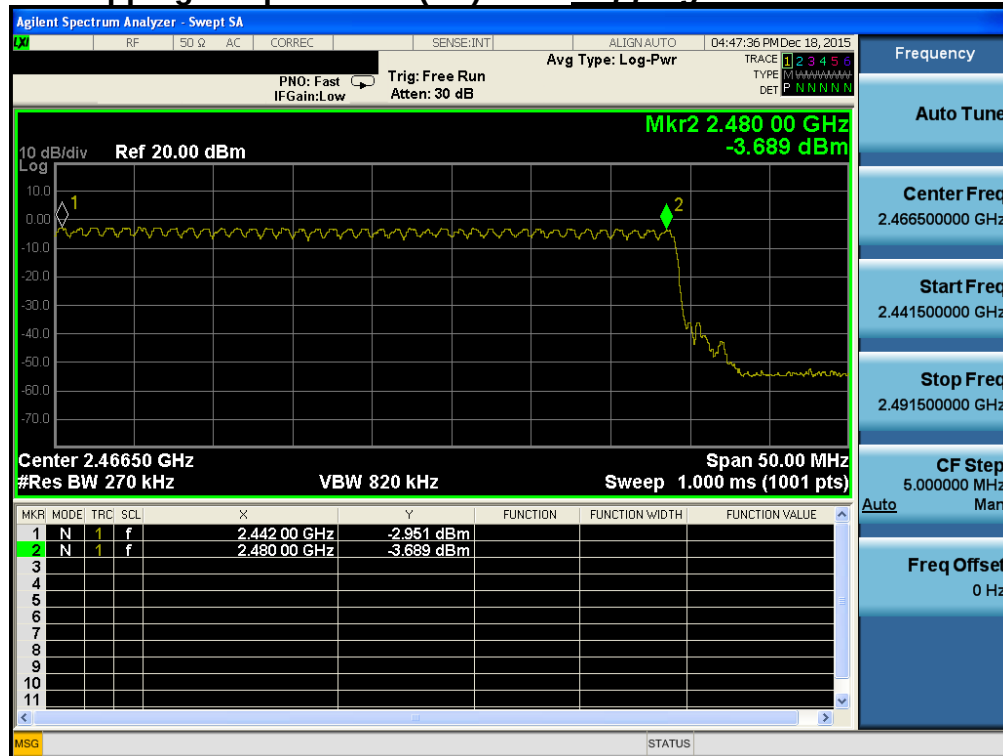
Hopping mode : Enable & GFSK

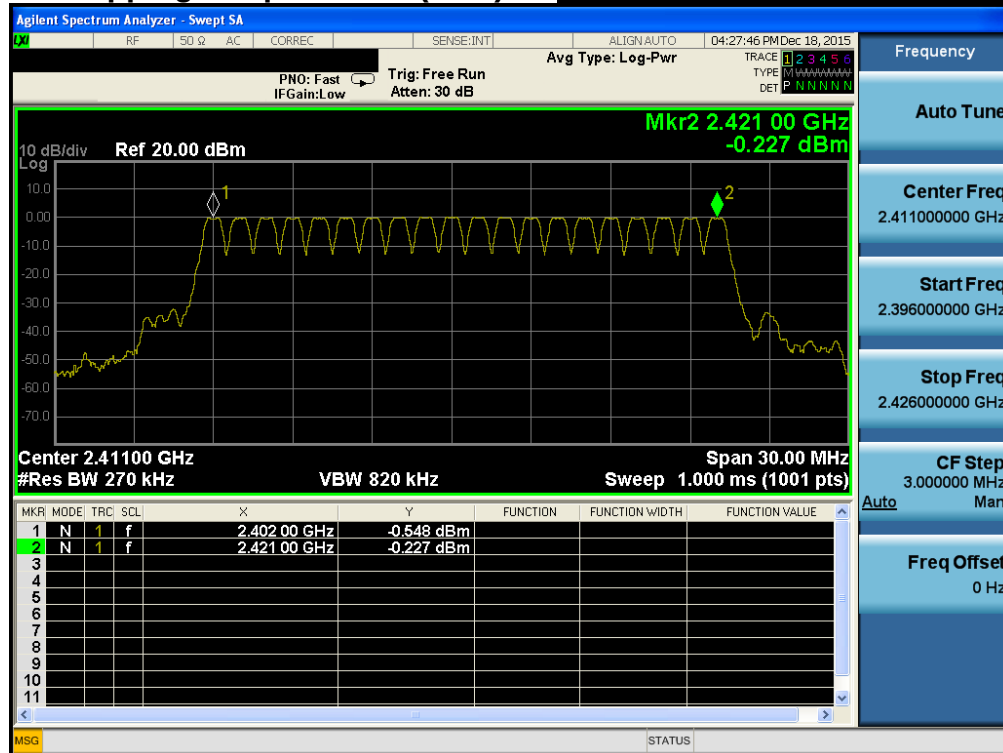
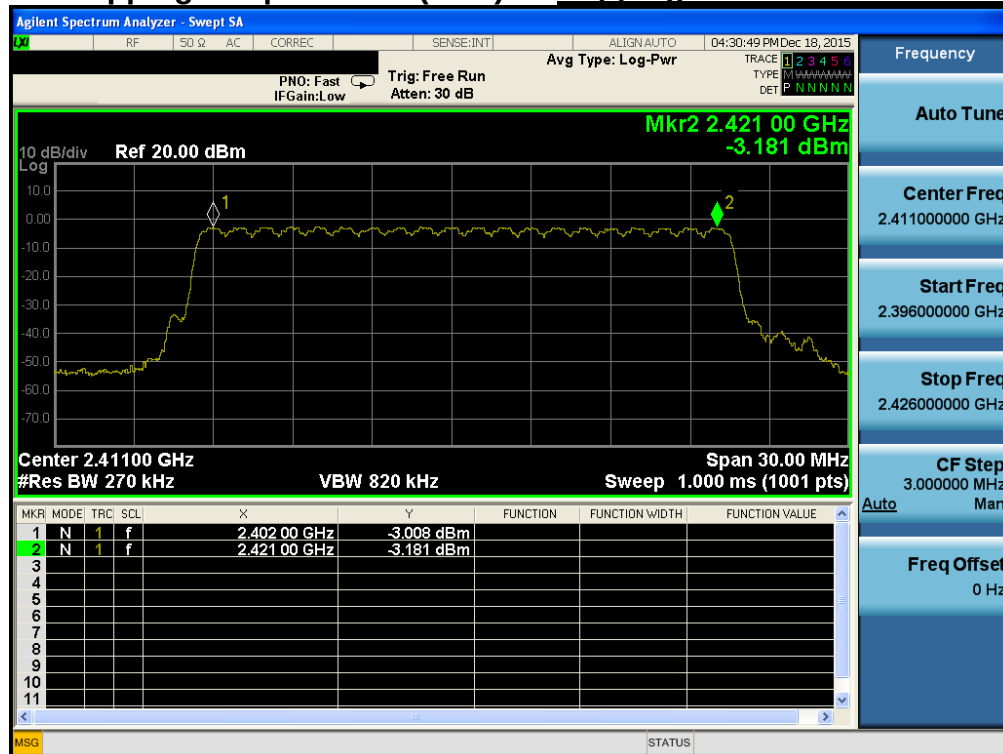
Number of Hopping Frequencies 1(FH)

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

Number of Hopping Frequencies 2(FH)

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

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

