

# TEST REPORT



**DT&C Co., Ltd.**

42, Yurim-ro, 154Beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea, 17042  
Tel : 031-321-2664, Fax : 031-321-1664

1. Report No : DRTFCC1804-0081(1)

2. Customer

- Name : LG Electronics MobileComm USA, Inc.
- Address : 1000 Sylvan Ave., Englewood Cliffs, New Jersey, United States, 07632

3. Use of Report : FCC Original Grant

4. Product Name / Model Name : Mobile Phone / LM-Q710FA

FCC ID : ZNFQ710FA

5. Test Method Used : ANSI C63.10-2013

Test Specification : FCC Part 15 Subpart C.247

6. Date of Test : 2018.03.16 ~ 2018.03.19, 2018.04.27 ~ 2018.04.28

7. Testing Environment : See appended test report.

8. Test Result : Refer to the attached test result.

Affirmation	Tested by  Name : JaeJin Lee  (Signature)	Reviewed by  Name : Geunki Son  (Signature)
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The test results presented in this test report are limited only to the sample supplied by applicant and the use of this test report is inhibited other than its purpose. This test report shall not be reproduced except in full, without the written approval of DT&C Co., Ltd.

2018 . 04 . 30 .

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If this report is required to confirmation of authenticity, please contact to [report@dtnc.net](mailto:report@dtnc.net)

## Test Report Version

Test Report No.	Date	Description
DRTFCC1804-0081	Apr. 20, 2018	Initial issue
DRTFCC1804-0081(1)	Apr. 30, 2018	Updated the Section 7.4.1 and APPENDIX II

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## 1. General Information

### 1.1 Testing Laboratory

<b>DT&amp;C Co., Ltd.</b>		
The 3 m test site and conducted measurement facility used to collect the radiated data are located at the 42, Yurim-ro, 154beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea 17042. The test site comply with the requirements of § 2.948 according to ANSI 63.4-2014.		
<b>- FCC MRA Accredited Test Firm No. : KR0034</b>		
<a href="http://www.dtnc.net">www.dtnc.net</a>		
Telephone	:	+ 82-31-321-2664
FAX	:	+ 82-31-321-1664

### 1.2 Testing Environment

<b>Ambient Condition</b>	
▪ Temperature	+20 °C ~ +25 °C
▪ Relative Humidity	40 % ~ 45 %

### 1.3 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with requirements of ANSI C63.4-2014 and ANSI C63.10-2013. All measurement uncertainty values are shown with a coverage factor of  $k = 2$  to indicate a 95 % level of confidence.

<b>Test items</b>	<b>Measurement uncertainty</b>
Transmitter Output Power	± 0.7 dB (The confidence level is about 95 %, k = 2)
Conducted spurious emission	± 1.1 dB (The confidence level is about 95 %, k = 2)
AC conducted emission	± 2.4 dB (The confidence level is about 95 %, k = 2)
Radiated spurious emission (1 GHz Below)	± 5.1 dB (The confidence level is about 95 %, k = 2)
Radiated spurious emission (1 GHz ~ 18 GHz)	± 5.4 dB (The confidence level is about 95 %, k = 2)
Radiated spurious emission (18 GHz Above)	± 5.3 dB (The confidence level is about 95 %, k = 2)

## 1.4 Details of Applicant

Applicant : LG Electronics MobileComm USA, Inc.  
Address : 1000 Sylvan Ave., Englewood Cliffs, New Jersey, United States, 07632  
Contact person : Kyung-Su Han

## 1.5 Description of EUT

<b>EUT</b>	Mobile Phone
<b>Model Name</b>	LM-Q710FA
<b>Add Model Name</b>	LMQ710FA, Q710FA, LM-Q710RA, LMQ710RA, Q710RA, LM-Q710FM, LMQ710FM, Q710FM, LM-Q710HS, LMQ710HS, Q710HS, LM-Q710HSW, LMQ710HSW, Q710HSW
<b>Serial Number</b>	Identical prototype
<b>Power Supply</b>	DC 3.85 V
<b>Frequency Range</b>	2402 MHz ~ 2480 MHz
<b>Modulation Technique</b>	GFSK, π/4DQPSK, 8DPSK
<b>Number of Channels</b>	79
<b>Antenna Type</b>	LMA Antenna
<b>Antenna Gain</b>	PK : -4.17 dBi

## 1.6 Declaration by the applicant / manufacturer

- NA

## 1.7 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

Note 1 : Pseudorandom Frequency Hopping Sequence Table as below:

Channel: 08, 24, 40, 56, 42, 54, 72, 09, 01, 11, 33, 41, 34, 42, 65, 73, 53, 69, 06, 22, 04,  
20, 36, 52, 38, 46, 70, 78, 68, 76, 21, 29, 10, 26, 41, 58, 44, 60, 76, 13, 03, 11,  
35, 43, 37, 45, 69, 77, 52, 71, 08, 24, 06, 24, 48, 56, 45, 46, 70, 01, 72, 06, 25,  
33, 12, 28, 49, 60, 45, 58, 74, 13, 05, 18, 37, 49 etc

..  
The System receiver have input bandwidths that match the hopping channel bandwidths of  
Their corresponding transmitters and shift frequencies in synchronization with the transmit  
ted signals.

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.

## 1.8 Test Equipment List

Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
Spectrum Analyzer	Agilent	N9020A	17/07/12	18/07/12	US50410399
Spectrum Analyzer	Agilent	N9020A	18/01/03	19/01/03	MY48011700
Multimeter	FLUKE	17B	17/12/26	18/12/26	26030065WS
DC Power Supply	Agilent	66332A	17/09/05	18/09/05	MY43000394
Signal Generator	Rohde Schwarz	SMBV100A	17/12/27	18/12/27	255571
Signal Generator	Rohde Schwarz	SMF100A	17/12/27	18/12/27	102341
Thermohygrometer	BODYCOM	BJ5478	18/01/13	19/01/13	120612-1
Thermohygrometer	BODYCOM	BJ5478	17/09/11	18/09/11	N/A
Power Splitter	Anritsu	K241B	17/12/27	18/12/27	1301184
Bluetooth Tester	TESCOM	TC-3000B	17/12/26	18/12/26	3000B770243
Loop Antenna	ETS	6502	17/03/24	19/03/24	3471
BILOG ANTENNA	Schwarzbeck	VULB 9160	17/04/14	19/04/14	9160-3339
Horn Antenna	ETS-Lindgren	3115	17/01/13	19/01/13	9202-3820
Horn Antenna	Schwarzbeck	BBHA 9120C	17/12/04	19/12/04	9120C-561
Horn Antenna	A.H.Systems Inc.	SAS-574	17/07/31	19/07/31	155
PreAmplifier	tsj	MLA-100K01-B01-26	18/02/19	19/02/19	1252741
PreAmplifier	tsj	MLA-0118-J01-45	18/02/08	19/02/08	17138
PreAmplifier	tsj	MLA-1840-J02-45	17/10/26	18/10/26	16966-10728
EMI Test Receiver	Rohde Schwarz	ESR7	17/07/06	18/07/06	100469
Attenuator	SMAJK	SMAJK-2-3	17/09/06	18/09/06	3
Attenuator	Aeroflex/Weinschel	56-3	17/12/27	18/12/27	Y2370
Attenuator	SRTTechnology	F01-B0606-01	17/09/07	18/09/07	13092403
Attenuator	Hefei Shunze	SS5T2.92-10-40	17/12/27	18/12/27	16012202
High Pass Filter	Wainwright Instruments	WHNX8.0/26.5-6SS	17/12/26	18/12/26	3
High Pass Filter	Wainwright Instruments	WHKX12-935-1000-15000-40SS	17/09/05	18/09/05	8
High Pass Filter	Wainwright Instruments	WHKX10-2838-3300-18000-60SS	17/09/06	18/09/06	1
Power Meter & Wide Bandwidth Sensor	Anritsu	ML2496A MA2411B	17/12/27	18/12/27	1338004 1306053
EMI Test Receiver	Rohde Schwarz	ESCI7	18/02/12	19/02/12	100910
PULSE LIMITER	Rohde Schwarz	ESH3-Z2	17/09/29	18/09/29	101333
LISN	Schwarzbeck	NNLK 8121	18/03/20	19/03/20	06183
Cable	DT&C	CABLE	N/A	N/A	RF-56
Cable	DT&C	CABLE	N/A	N/A	RF-68
Cable	DT&C	CABLE	N/A	N/A	RF-71
Cable	DT&C	CABLE	N/A	N/A	P-IN
Cable	DT&C	CABLE	N/A	N/A	RF-82
Cable	JUNFLON	MWX315	N/A	N/A	J12J101978-00
Cable	Fairview Microwave	FM-F141	N/A	N/A	17050010
Cable	Fairview Microwave	FM-F141	N/A	N/A	17050011
Cable	Fairview Microwave	FM-F141	N/A	N/A	17050012
Cable	Radiall	TESTPRO3	N/A	N/A	RF-74
Cable	Radiall	TESTPRO3	N/A	N/A	RF-66

Note: The measurement antennas were calibrated in accordance to the requirements of ANSI C63.5-2017.

## 1.9 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	>= 25 kHz or >= Two thirds of the 20 dB BW, whichever is greater.	Conducted	C
	Number of Hopping Frequencies	>= 15 hops		C
	20 dB Bandwidth	N/A		C
	Dwell Time	=< 0.4 seconds		C
15.247(b) RSS-247(5.4)	Transmitter Output Power	<b>For FCC</b> =< 1 Watt , if CHs >= 75 Others =< 0.125 W <b>For IC</b> 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	Conducted	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 %)	N/A	Radiated	NA
15.247(d) 15.205 & 209 RSS-247(5.5) RSS-Gen (8.9 & 8.10)	Radiated Spurious Emissions	FCC 15.209 Limits		C Note2
15.207 RSS-Gen(8.8)	AC Conducted Emissions	FCC 15.207 Limits	AC Line Conducted	C
15.203 RSS-Gen(8.3)	Antenna Requirements	FCC 15.203	-	C

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

Note 2 : For radiated emission tests below 30 MHz were performed on semi-anechoic chamber which is correlated with OATS.

## 1.10 Conclusion of worst-case and operation mode

The EUT has three type of modulation (GFSK, π/4DQPSK and 8DPSK). Therefore all applicable requirements were tested with all the modulations. And packet type was tested at the worst case(DH5).

### Tested frequency information,

- Hopping Function : Enable

	TX Frequency (MHz)	RX Frequency (MHz)
<b>Hopping Band</b>	2402 ~ 2480	2402 ~ 2480

- Hopping Function : Disable

	TX Frequency (MHz)	RX Frequency (MHz)
<b>Lowest Channel</b>	2402	2402
<b>Middle Channel</b>	2441	2441
<b>Highest Channel</b>	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. 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.
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

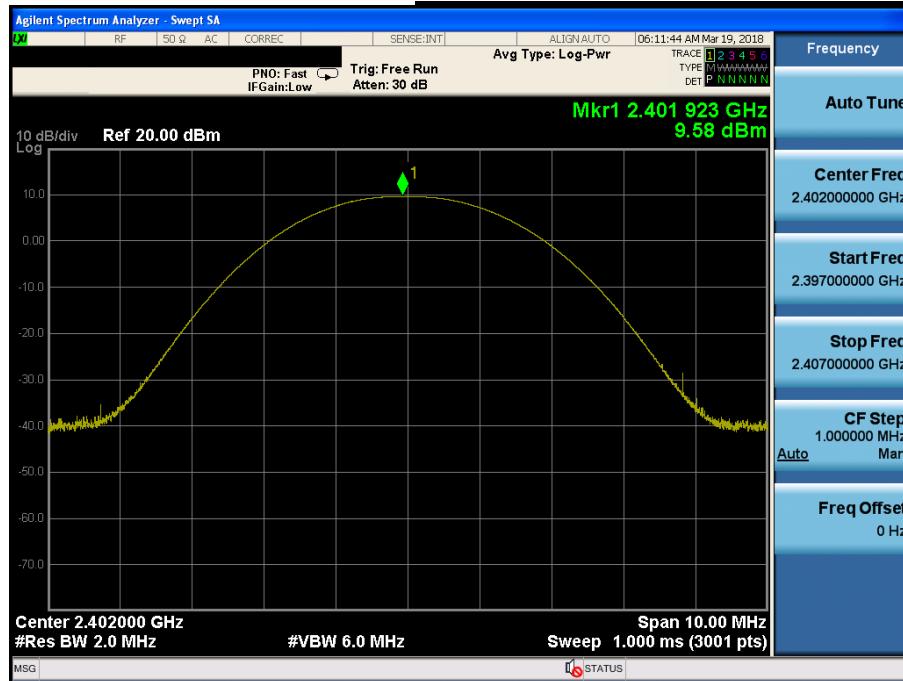
1. The RF output power was measured with a spectrum analyzer connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate center frequency, A spectrum analyzer was used to record the shape of the transmit signal.
2. The peak output power of 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

Modulation	Tested Channel	Burst Average Output Power		Peak Output Power	
		dBm	mW	dBm	mW
<u>GFSK</u>	<b>Lowest</b>	9.25	8.41	9.58	9.08
	<b>Middle</b>	<b>11.30</b>	<b>13.49</b>	<b>11.65</b>	<b>14.62</b>
	<b>Highest</b>	10.37	10.89	11.01	12.62
<u><math>\pi/4</math>DQPSK</u>	<b>Lowest</b>	7.02	5.04	9.40	8.71
	<b>Middle</b>	<b>8.96</b>	<b>7.87</b>	<b>11.50</b>	<b>14.13</b>
	<b>Highest</b>	7.91	6.18	10.81	12.05
<u>8DPSK</u>	<b>Lowest</b>	7.02	5.04	9.49	8.89
	<b>Middle</b>	<b>8.96</b>	<b>7.87</b>	<b>11.57</b>	<b>14.35</b>
	<b>Highest</b>	7.92	6.19	10.94	12.42

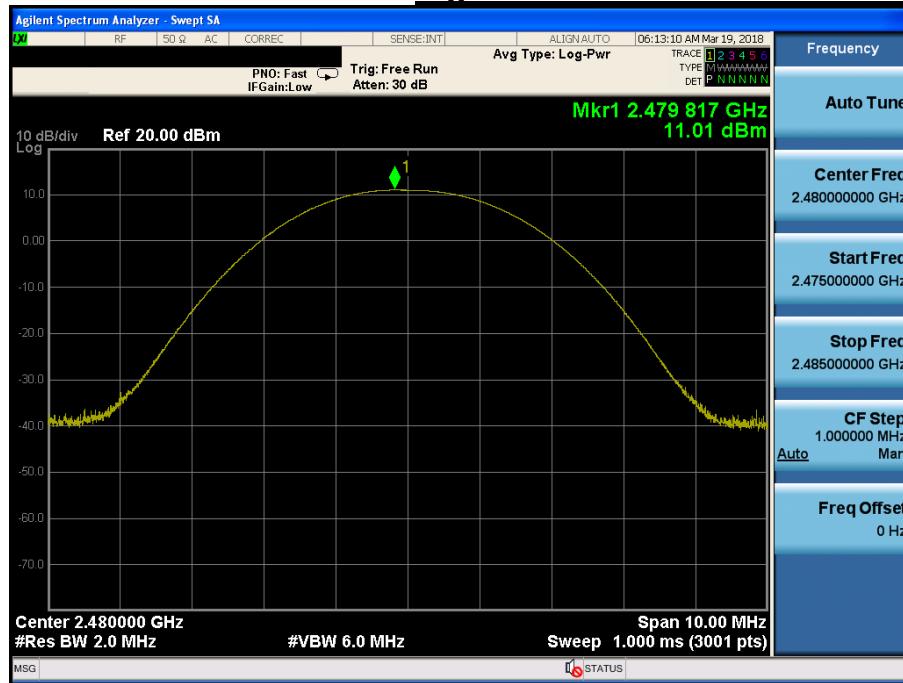
Note 1 : The burst average output power was tested using an average power meter for reference only.

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

**Peak Output Power**
**Lowest Channel & Modulation : GFSK**

**Peak Output Power**
**Middle Channel & Modulation : GFSK**


## Peak Output Power

## Highest Channel & Modulation : GFSK



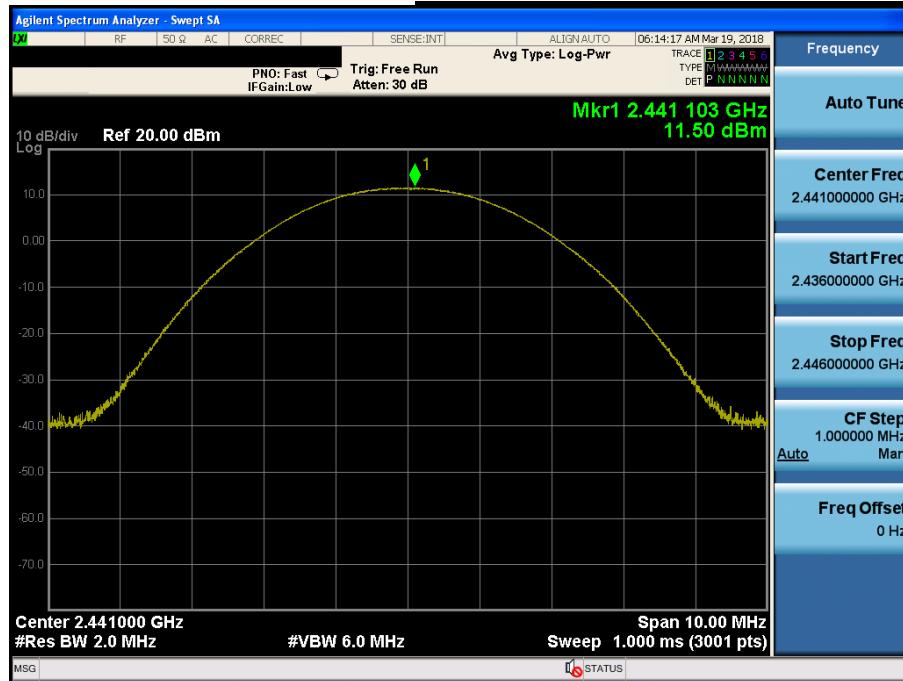
## Peak Output Power

## Lowest Channel & Modulation : π/4DQPSK



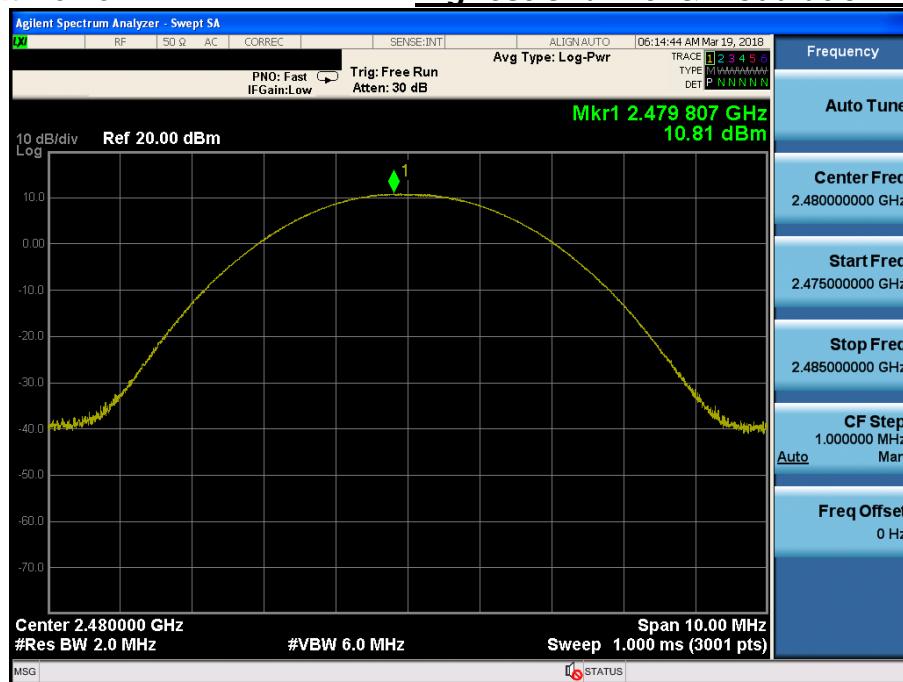
## Peak Output Power

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



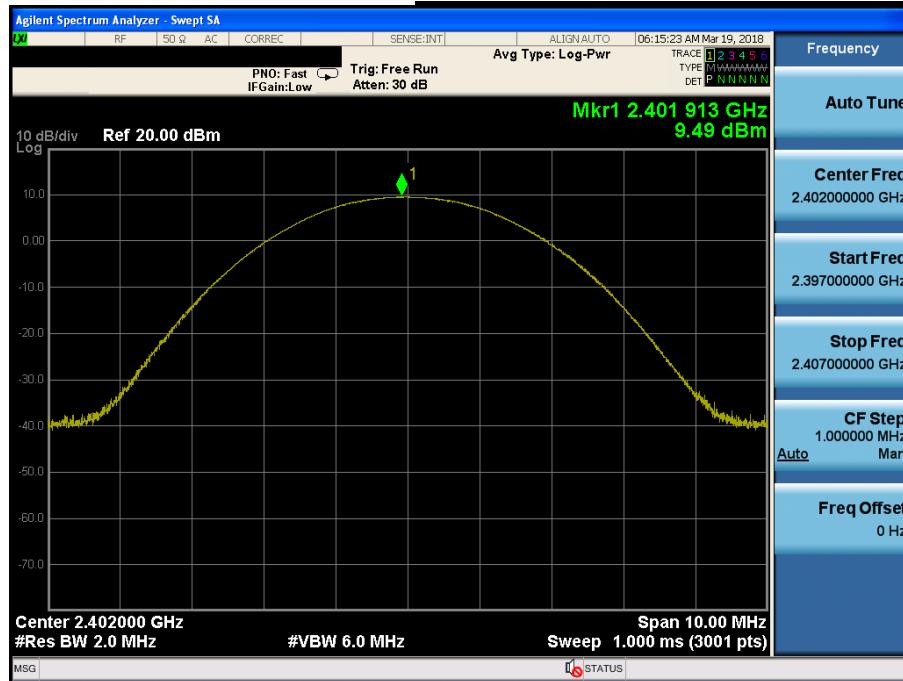
## Peak Output Power

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



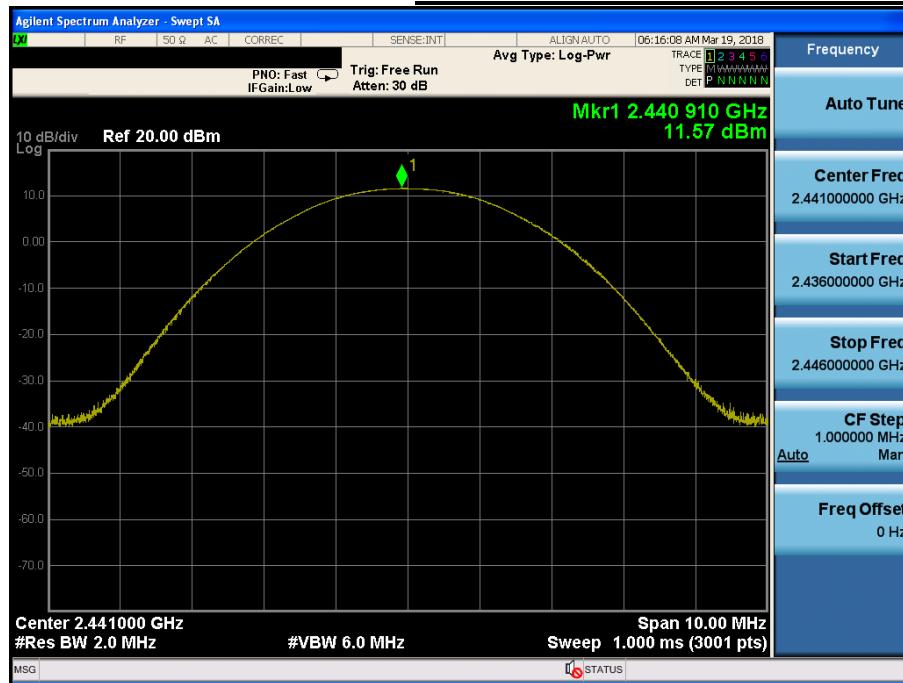
## Peak Output Power

## Lowest Channel & Modulation : 8DPSK



## Peak Output Power

## Middle Channel & Modulation : 8DPSK



**Peak Output Power**
**Highest Channel & Modulation : 8DPSK**


### 3. 20 dB BW & Occupied 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 & Occupied 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 below setting:

RBW = 1% to 5% of the 20 dB BW & Occupied BW

VBW  $\geq$  3  $\times$  RBW

Span = between two times and five times the 20 dB bandwidth & Occupied BW

Sweep = auto

Detector function = peak

Trace = max hold

#### 3.4 Test Results

Modulation	Tested Channel	20 dB BW (MHz)	Occupied BW (MHz)
<u>GFSK</u>	Lowest	0.931	-
	Middle	<b>0.934</b>	-
	Highest	0.929	-
<u><math>\pi/4</math>DQPSK</u>	Lowest	<b>1.315</b>	-
	Middle	1.311	-
	Highest	1.315	-
<u>8DPSK</u>	Lowest	1.266	-
	Middle	<b>1.273</b>	-
	Highest	<b>1.273</b>	-

**20 dB Bandwidth**
**Lowest Channel & Modulation : GFSK**

**20 dB Bandwidth**
**Middle Channel & Modulation : GFSK**


## 20 dB Bandwidth

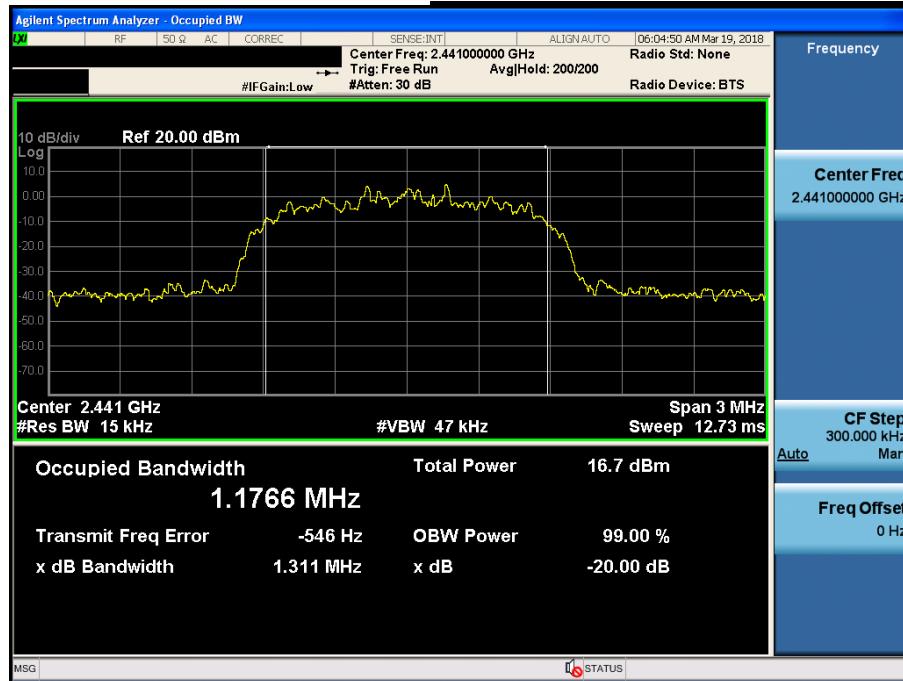
## Highest Channel & Modulation : GFSK



## 20 dB Bandwidth

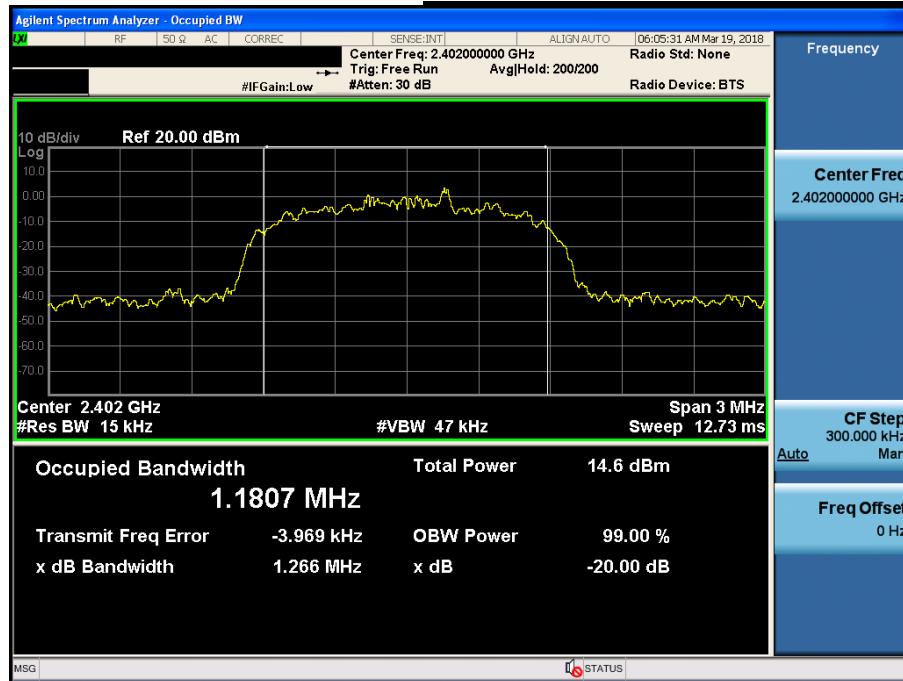
## Lowest Channel & Modulation : π/4DQPSK



**20 dB Bandwidth**
**Middle Channel & Modulation :  $\pi/4$ DQPSK**

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


## 20 dB Bandwidth

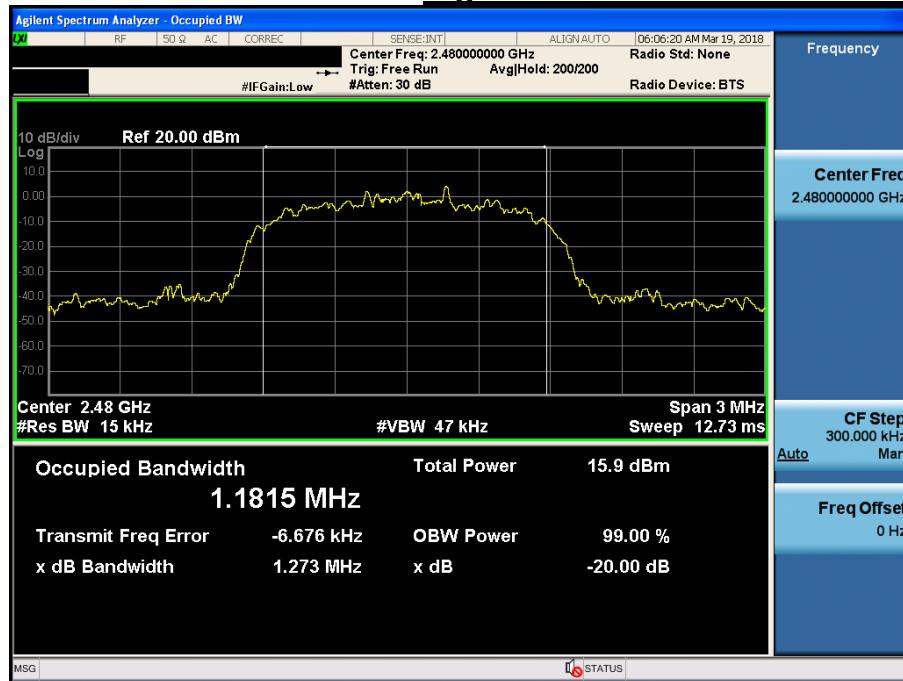
## Lowest Channel & Modulation : 8DPSK



## 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 :  $\geq$  25 kHz or  $\geq$  Two-Thirds of the 20 dB BW whichever is greater.

### 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 = Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.

VBW  $\geq$  RBW                              Sweep = auto  
Detector function = peak                      Trace = max hold

### 4.4 Test Results

#### FH mode

Hopping Mode	Modulation	Peak of center channel (MHz)	Peak of adjacent Channel (MHz)	Test Result (MHz)
Enable	GFSK	2441.015	2442.015	1.000
	$\pi/4$ DQPSK	2440.841	2441.841	1.000
	8DPSK	2441.173	2442.173	1.000

#### AFH mode

Hopping Mode	Modulation	Peak of center channel (MHz)	Peak of adjacent Channel (MHz)	Test Result (MHz)
Enable	GFSK	2411.016	2412.016	1.000
	$\pi/4$ DQPSK	2410.838	2411.838	1.000
	8DPSK	2411.160	2412.160	1.000

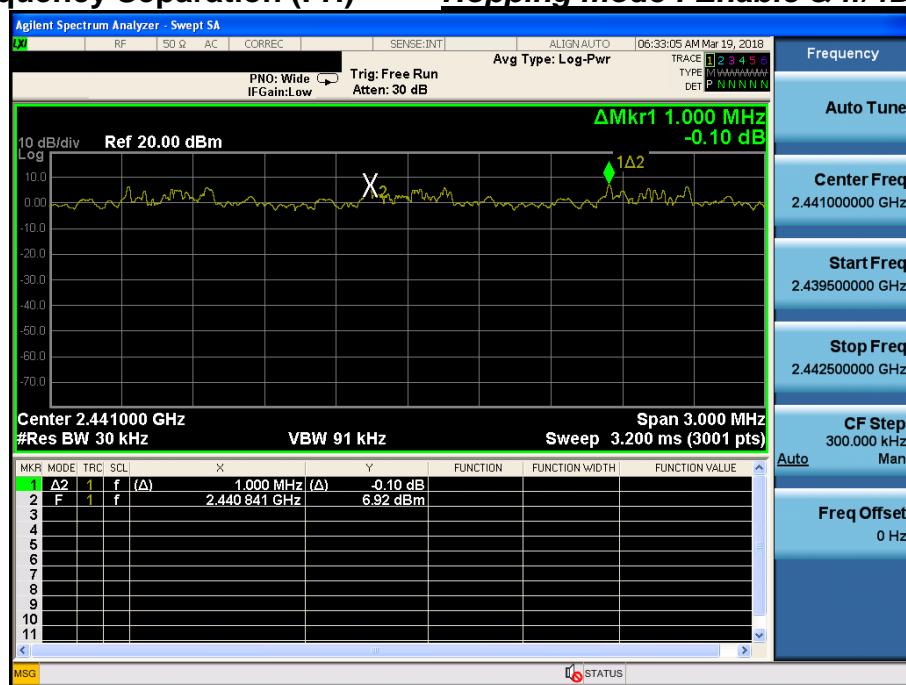
Note 1 : See next pages for actual measured spectrum

#### - 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.

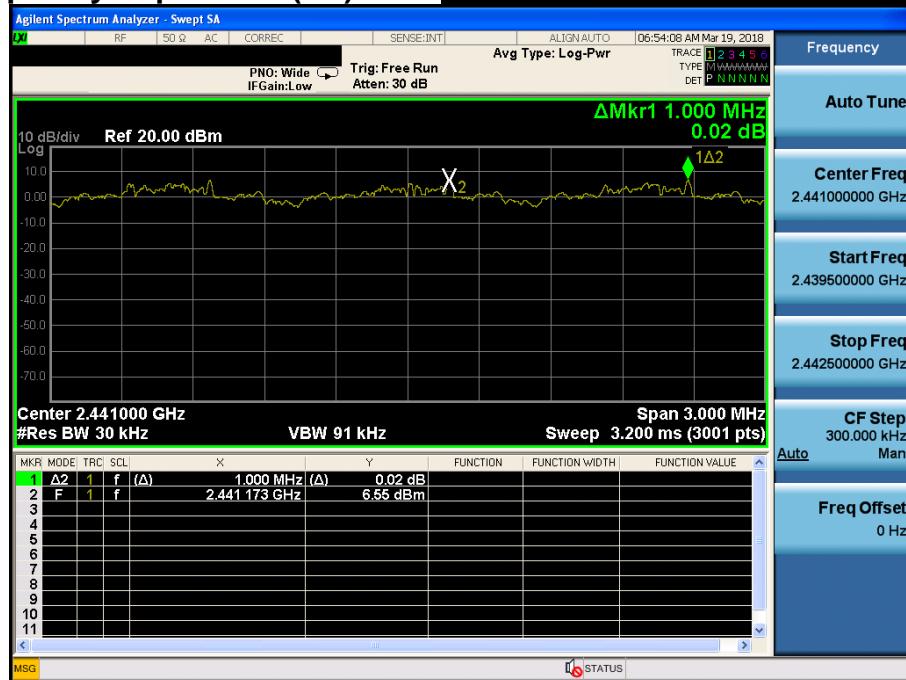
Alternatively, frequency hopping systems operating in the 2400 - 2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than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

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

**Carrier Frequency Separation (FH)**
*Hopping mode : Enable & π/4DQPSK*


## Carrier Frequency Separation (FH)

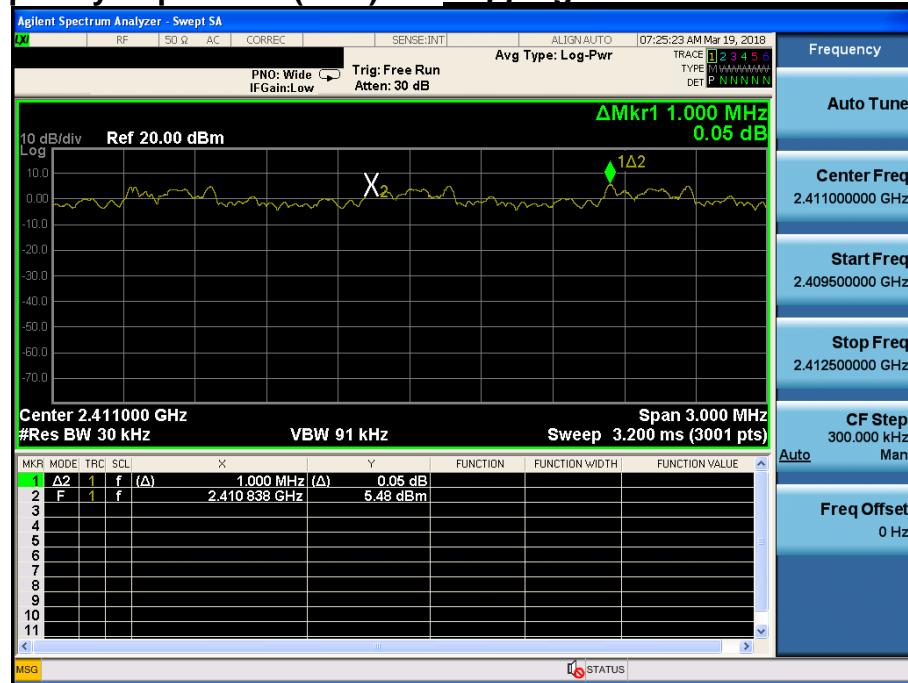
Hopping mode : Enable & 8DPSK



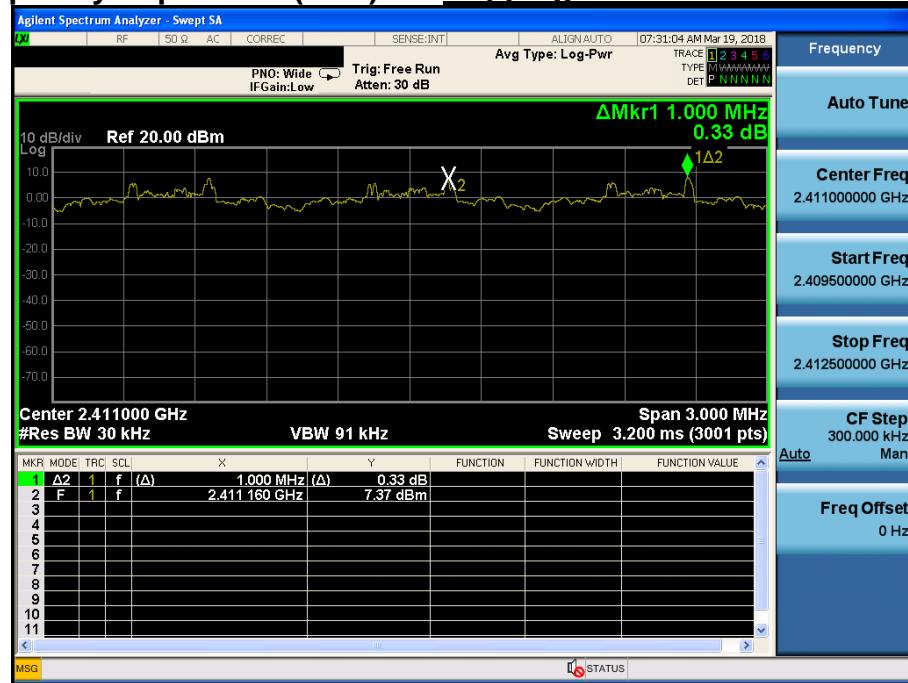
## Carrier Frequency Separation (AFH)      Hopping mode : Enable & GFSK



## Carrier Frequency Separation (AFH)      Hopping mode : Enable & π/4DQPSK



## 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 = 2391.5 MHz, Stop Frequency = 2441.5 MHz

RBW = To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.

VBW ≥ RBW                           Sweep = auto

Detector function = peak           Trace = max hold

### 5.4 Test Results

#### FH mode

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

#### AFH mode

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

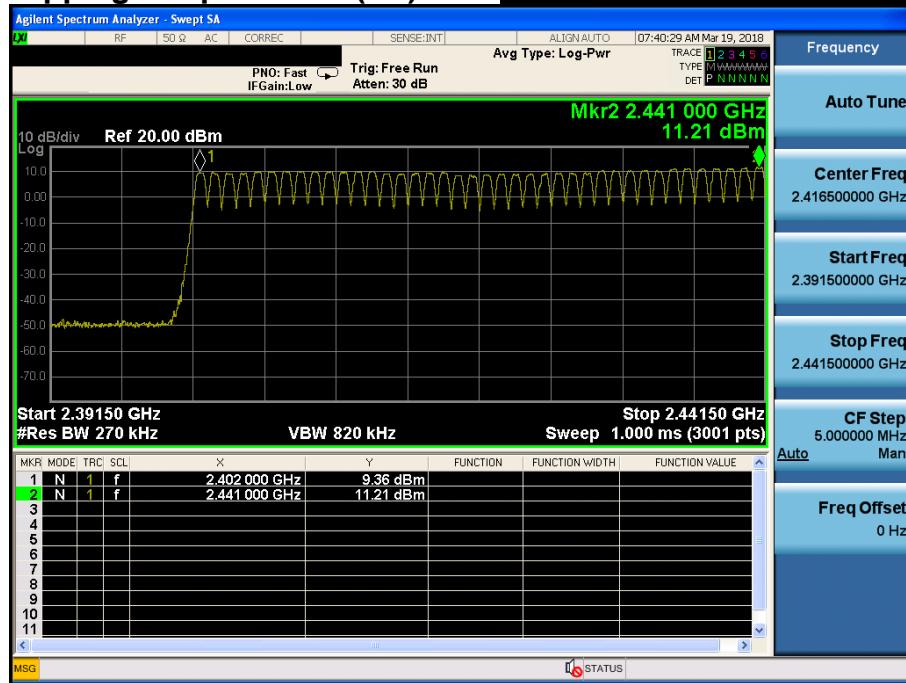
Note 1 : See next pages for actual measured spectrum plots.

#### - Minimum Standard :

At least 15 hopes

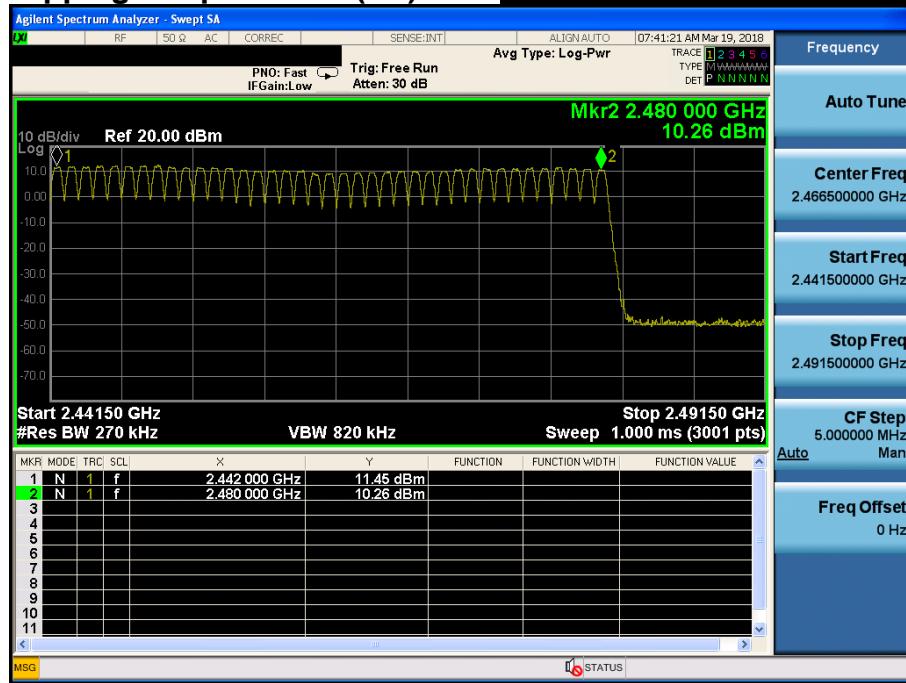
## Number of Hopping Frequencies 1(FH)

*Hopping mode : Enable & GFSK*



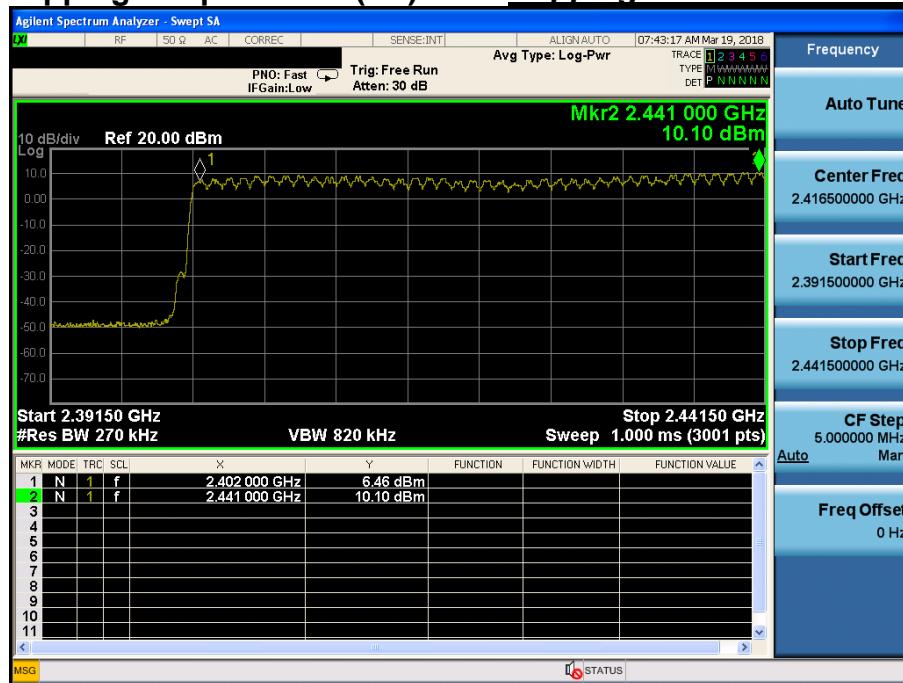
## Number of Hopping Frequencies 2(FH)

*Hopping mode : Enable & GFSK*



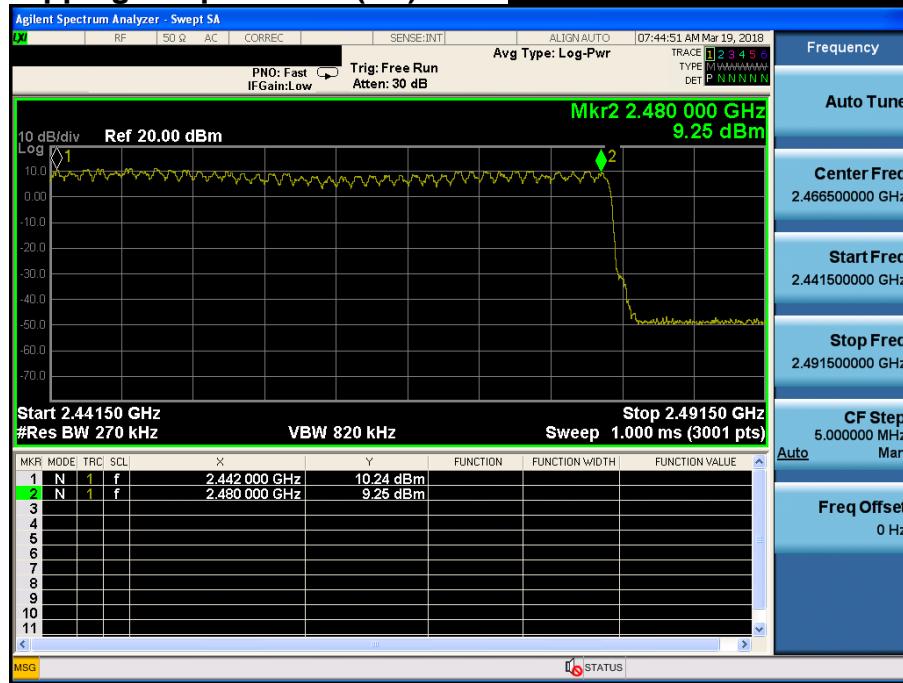
## Number of Hopping Frequencies 1(FH)

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



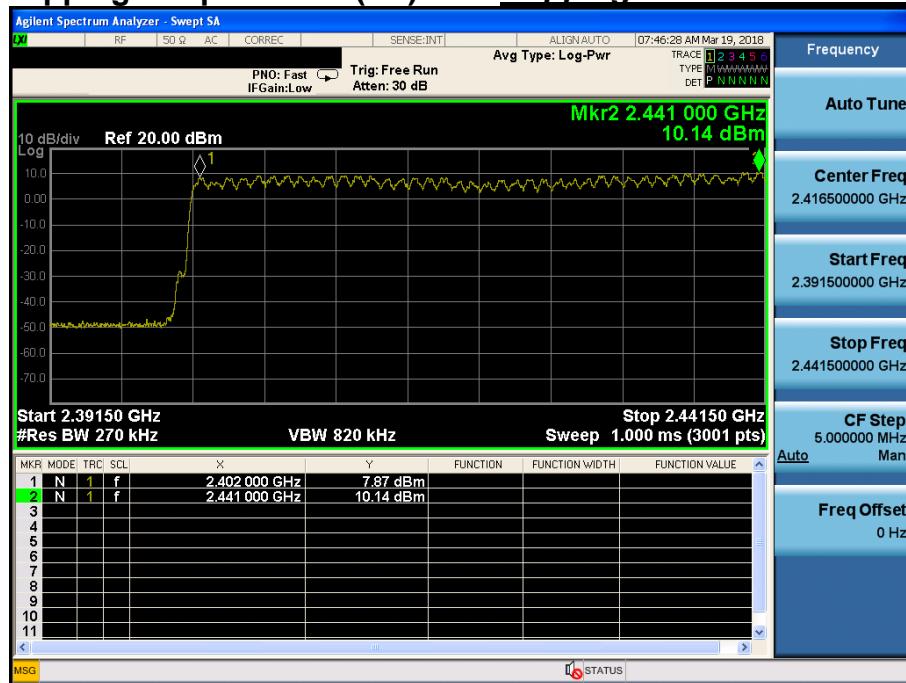
## Number of Hopping Frequencies 2(FH)

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



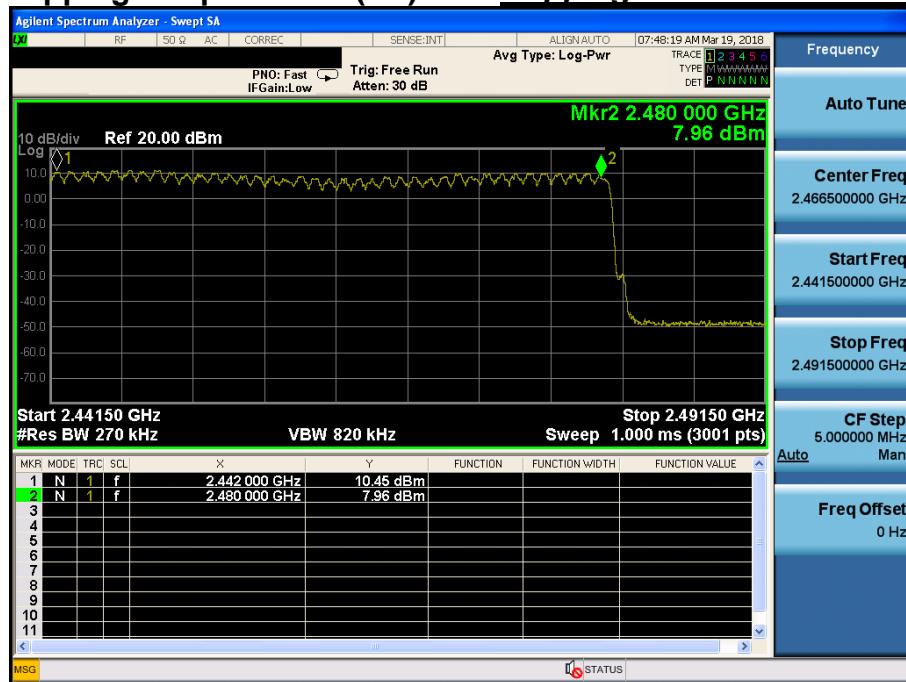
## Number of Hopping Frequencies 1(FH)

*Hopping mode : Enable & 8DPSK*



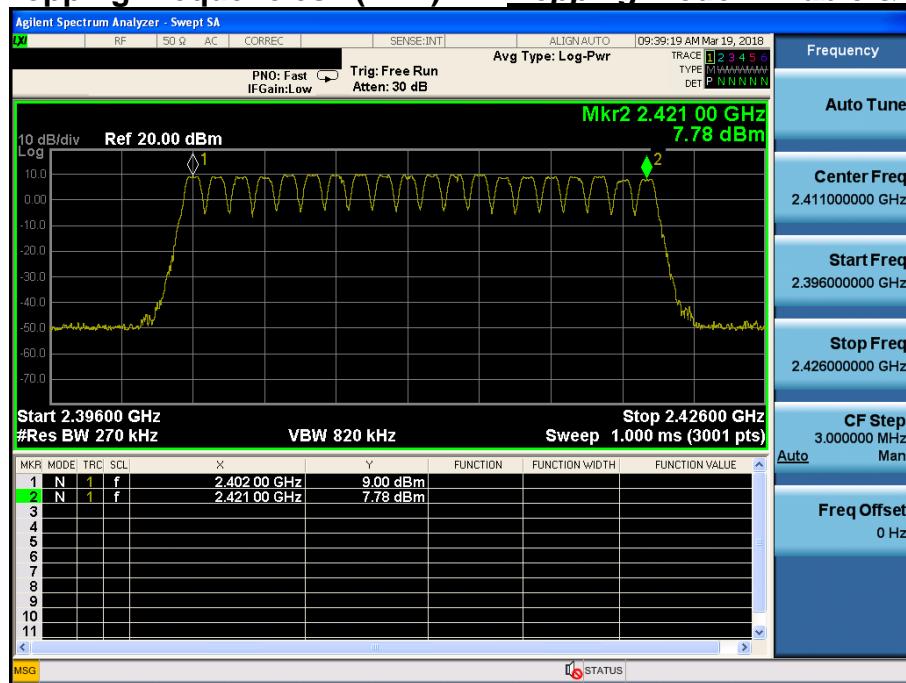
## Number of Hopping Frequencies 2(FH)

*Hopping mode : Enable & 8DPSK*



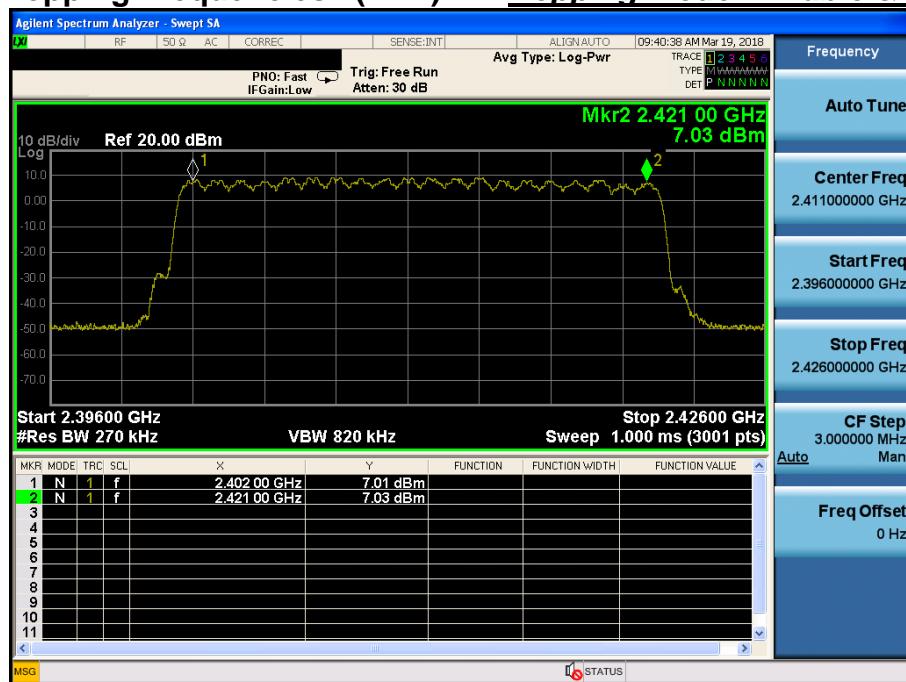
## Number of Hopping Frequencies 1(AFH)

*Hopping mode : Enable & GFSK*

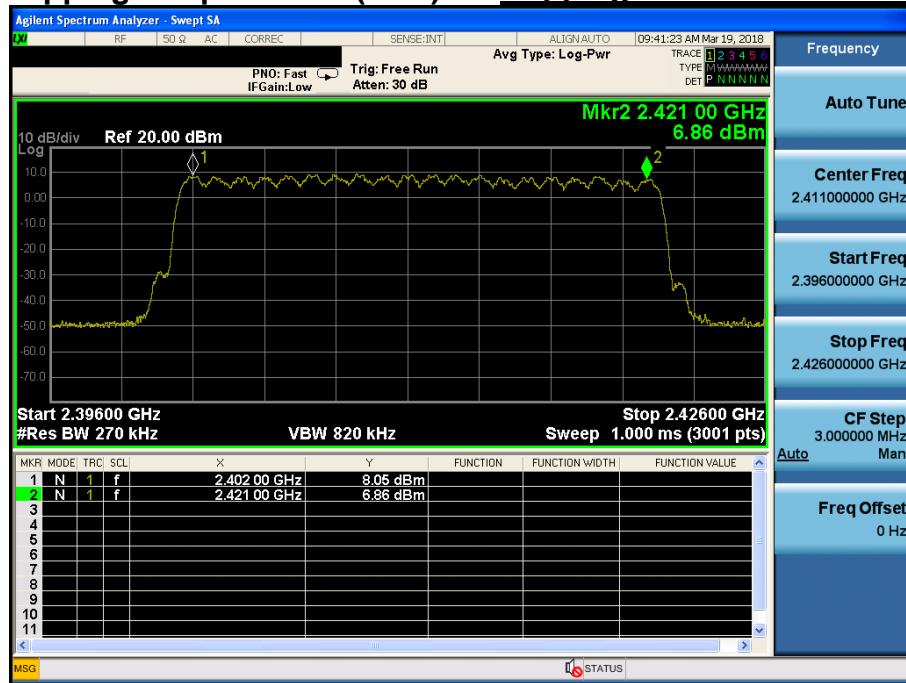


## Number of Hopping Frequencies 1(AFH)

*Hopping mode : Enable & π/4DQPSK*



## Number of Hopping Frequencies 1(AFH)

*Hopping mode : Enable & 8DPSK*


## 6. Time of Occupancy (Dwell Time)

### 6.1 Test Setup

Refer to the APPENDIX I.

### 6.2 Limit

The maximum permissible time of occupancy is 400 ms within a period of 400 ms multiplied by the number of hopping channels employed.

### 6.3 Test Procedure

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

The spectrum analyzer is set to :

Center frequency = 2441 MHz Span = zero

RBW = 1 MHz (RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel)

VBW ≥ RBW Detector function = peak

Trace = max hold

### 6.4 Test Results

#### FH mode

Hopping mode	Packet Type	Number of hopping Channels	Burst On Time (ms)	Period (ms)	Test Result (sec)
Enable	DH 5	79	2.880	3.750	0.307
	2 DH 5	79	2.880	3.750	0.307
	3 DH 5	79	2.880	3.750	0.307

#### AFH mode

Hopping mode	Packet Type	Number of hopping Channels	Burst On Time (ms)	Period (ms)	Test Result (sec)
Enable	DH 5	20	2.880	3.750	0.154
	2 DH 5	20	2.880	3.750	0.154
	3 DH 5	20	2.880	3.750	0.154

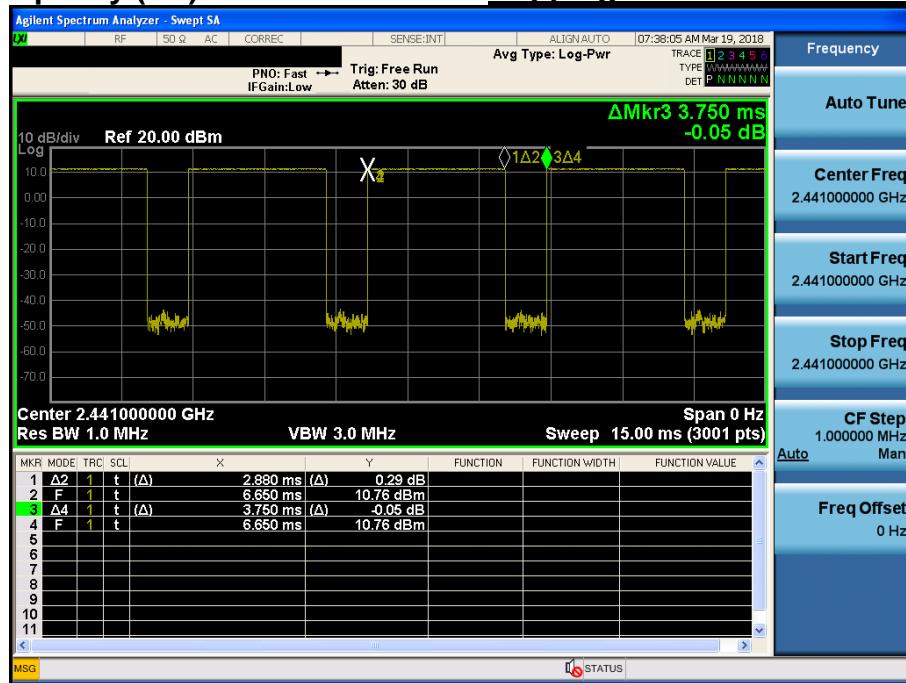
Note 1 : Dwell Time = 0.4 × Hopping channel × Burst ON time ×  
(Hopping rate ÷ Time slots) ÷ Hopping channel)

- Time slots for DH5 = 6 slots (TX = 5 slot / RX = 1 slot)
- Hopping Rate = 1600 for FH mode & 800 for AFH mode

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

## Time of Occupancy (FH)

## Hopping mode : Enable & DH5



## Time of Occupancy (FH)

## Hopping mode : Enable & 2-DH5

