CFCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 2

CERTIFICATION TEST REPORT

For

MusicLens

MODEL NUMBER: Modern
ADDITIONAL NUMBER: Geek, Vogue

PROJECT NUMBER: 4788723974

REPORT NUMBER: 4788723974-2

FCC ID: 2ARQG-ML0101

ISSUE DATE: Nov. 14, 2018

Prepared for

MusicLens Inc.

Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
--	11/14/2018	Initial Issue	

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Summary of Test Results			
Clause	**Test Items**	**FCC/IC Rules**	**Test Results**
1	20dB Bandwidth And 99% Bandwidth	FCC 15.247 (a) (1) RSS-247 Clause 5.1 (a)	Pass
2	Peak Conducted Output Power	FCC 15.247 (b) (1) RSS-247 Clause 5.1 (b)	Pass
3	Carrier Hopping Channel Separation	FCC 15.247 (a) (1) RSS-247 Clause 5.1 (b)	Pass
4	Number of Hopping Frequency	15.247 (a) (1) III RSS-247 Clause 5.1 (d)	Pass
5	Time of Occupancy (Dwell Time)	15.247 (a) (1) III RSS-247 Clause 5.1 (d)	Pass
6	Conducted Bandedge	FCC 15.247 (d) RSS-247 Clause 5.5	Pass
7	Radiated Bandedge and Spurious	FCC 15.247 (d) FCC 15.209 FCC 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9 RSS-GEN Clause 8.10	Pass
8	Conducted Emission Test for AC Power Port	FCC 15.207 RSS-GEN Clause 8.8	Pass
9	Antenna Requirement	FCC 15.203 RSS-GEN Clause 8.3	Pass
Remark: The product is powered by battery, and the EUT will shut down during the charge mode .			

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1. ATTESTATION OF TESCT RESULTS

Applicant Information

Company Name:	MusicLens Inc.
Address:	311 E VALLEY BLVD#112 PMB27, SANGABRIEL, CA 91776

Manufacturer Information

Company Name:	Hangzhou Kibey Network Technology Co., Ltd.
Address:	9F，Building 8, Sunking International Building, Yuhang Distrct, Hangzhou, Zhejiang, China

EUT Description

Product Name	MusicLens
Model Name	Modern
Additional number	Geek, Vogue
Sample ID	1883286
Sample Status	Good
Sample Received date	October 24, 2018
Date Tested	October 24~November 14, 2018

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	PASS
ISED RSS-247 Issue 2	PASS
ISED RSS-GEN Issue 5	PASS

Tested By:

Kebo Zhang
Engineer

Checked By:

Shawn Wen
Laboratory Leader

Approved By:

Stephen Guo

Laboratory Manager

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with DA 00-705, KDB414788 D01 Radiated Test Site v01r01, ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 5, and RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

Test Location	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
Address	Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China
Accreditation Certificate	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. The Certificate Registration Number is 4102.01. UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The Designation Number is CN1187. UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. EMC Laboratory has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320.

Note:

1. All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China
2. The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.
3. For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OATS.

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4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Uncertainty for Conduction emission test	2.90dB
Uncertainty for Radiation Emission test (include Fundamental emission) (9KHz-30MHz)	2.2dB
Uncertainty for Radiation Emission test (include Fundamental emission) (30MHz-1GHz)	4.52dB
Uncertainty for Radiation Emission test (1GHz to 26GHz) (include Fundamental emission)	5.04dB(1-6GHz)
	5.30dB (6GHz-18Gz)
	5.23dB (18GHz-26Gz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

Equipment	MusicLens		
Model Name	Modern		
Product Description (Bluetooth)	Operation Frequency	2402 MHz ~ 2480 MHz	
	Modulation Type		Data Rate
	GFSK		1Mbps
	∏/4-DQPSK		2Mbps
	8DPSK		3Mbps
Power Supply （Battery）	Model No.: PL 401086 Output: 3.7V 245mAh 0.91Wh		
Bluetooth Version	5.0		
	This test report is just for the Bluetooth classic mode		
Hardware Version	V1R0		

Note: Geek and Vogue have the same technical construction including circuit diagram, PCB layout, components and component layout, all electrical construction and mechanical construction with Modern sample. The difference lies only on shape, color, logo technic, painting material and decorations.

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5.2. MAXIMUM OUTPUT POWER

Bluetooth Mode	Frequency (MHz)	Channel Number	Max Output Power (dBm)	EIRP (dBm)
GFSK	2402-2480	0-78[79]	-2.31	-1.37
8DPSK	2402-2480	0-78[79]	-3.95	-0.27

5.3. PACKET TYPE CONFIGURATION

Test Mode	Packet Type	Setting(Packet Length)
GFSK	DH1	27
	DH3	183
	DH5	339
∏/4-DQPSK	2-DH1	54
	2-DH3	367
	2-DH5	679
8DPSK	3-DH1	83
	3-DH3	552
	3-DH5	1021

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5.4. CHANNEL LIST

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	20	2422	40	2442	60	2462
01	2403	21	2423	41	2443	61	2463
02	2404	22	2424	42	2444	62	2464
03	2405	23	2425	43	2445	63	2465
04	2406	24	2426	44	2446	64	2466
05	2407	25	2427	45	2447	65	2467
06	2408	26	2428	46	2448	66	2468
07	2409	27	2429	47	2449	67	2469
08	2410	28	2430	48	2450	68	2470
09	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		

5.5. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel Number	Test Channel
GFSK	CH 00, CH 39, CH 78	Low, Middle, High
8DPSK	CH 00, CH 39, CH 78	Low, Middle, High

5.6. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band							
Test Software		BlueTest3					
Modulation Type	Transmit Antenna Number	Test Channel					
		CH 00		CH 39		CH 78	
		Ext	Int	Ext	Int	Ext	Int
GFSK	1	255	50	255	50	255	50
8DPSK	1	255	50	255	50	255	50

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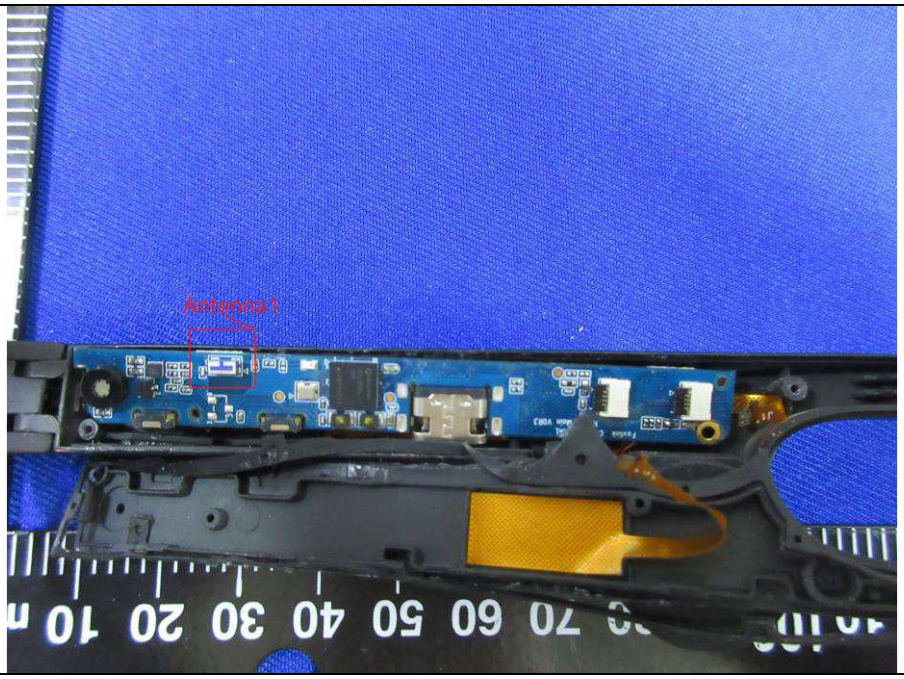
5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2402-2480	PCB Antenna	3.68

Test Mode	Transmit and Receive Mode	Description
GFSK	1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.
8DPSK	1TX, 1RX	Chain 1 can be used as transmitting/receiving antenna.

Antenna


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5.8. WORST-CASE CONFIGURATIONS

Bluetooth Mode	Modulation Technology	Modulation Type	Data Rate (Mbps)
BR	FHSS	GFSK	1Mbit/s
EDR	FHSS	8DPSK	3Mbit/s

Note: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.

5.9. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests	
Relative Humidity	55 ~ 65%	
Atmospheric Pressure:	1005Pa	
Temperature	TN	20°C
Voltage	VL	N/A
	VN	Battery: DC3.7V
	VH	N/A

Note: VL= Lower Extreme Test Voltage
VN= Nominal Voltage.
VH= Upper Extreme Test Voltage
TN= Normal Temperature

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5.10. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Remarks
1	Laptop	ThinkPad	E450	N/A

I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	USB	Unshielded	0.5	N/A

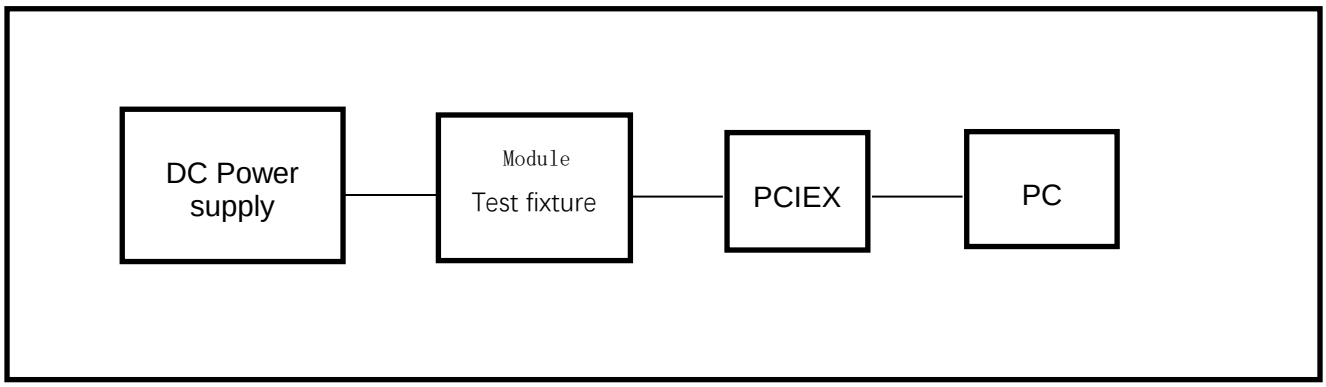
ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	N/A	N/A	N/A	N/A

TEST SETUP

The EUT can work in an engineer mode with a software through a PC.

SETUP DIAGRAM FOR TESTS



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5.11. MEASURING INSTRUMENT AND SOFTWARE USED

	Conducted Emissions						
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	EMI Test Receiver	R&S	ESR3	101961	Dec.20, 2016	Dec.12, 2017	Dec.11, 2018
☑	Two-Line V-Network	R&S	ENV216	101983	Dec.20, 2016	Dec.12, 2017	Dec.11, 2018
☑	Artificial Mains Networks	Schwarzbeck	NSLK 8126	8126465	Feb.10, 2017	Dec.12, 2017	Dec.11, 2018
	Software						
Used	Description			Manufacturer	Name		Version
☑	Test Software for Conducted disturbance			UL	Antenna port		Ver. 7.2
	Radiated Emissions						
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	MXE EMI Receiver	KESIGHT	N9038A	MY56400036	Feb.24, 2017	Dec.12, 2017	Dec.11, 2018
☑	Hybrid Log Periodic Antenna	TDK	HLP-3003C	130960	N/A	Jan.09, 2016	Jan.08, 2019
☑	Preamplifier	HP	8447D	2944A09099	Feb.13, 2017	Dec.12, 2017	Dec.11, 2018
☑	EMI Measurement Receiver	R&S	ESR26	101377	Dec.20, 2016	Dec.12, 2017	Dec.11, 2018
☑	Horn Antenna	TDK	HRN-0118	130939	N/A	Jan. 09, 2016	Jan. 08, 2019
☑	High Gain Horn Antenna	Schwarzbeck	BBHA-9170	691	N/A	Jan.06, 2016	Jan.05, 2019
☑	Preamplifier	TDK	PA-02-0118	TRS-305-00066	Jan.14, 2017	Dec.12, 2017	Dec.11, 2018
☑	Preamplifier	TDK	PA-02-2	TRS-307-00003	Dec.20, 2016	Dec.12, 2017	Dec.11, 2018
☑	Loop antenna	Schwarzbeck	1519B	00008	N/A	Mar. 26, 2016	Mar. 25, 2019
	Software						
Used	Description			Manufacturer	Name		Version
☑	Test Software for Radiated disturbance			Farad	EZ-EMC		Ver. UL-3A1
	Other instruments						
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☑	Spectrum Analyzer	Keysight	N9030A	MY55410512	Dec.20, 2016	Dec.12, 2017	Dec.11, 2018
☑	Power Meter	Keysight	N9031A	MY55416024	Feb.13, 2017	Dec.12, 2017	Dec.11, 2018
☑	Power Sensor	Keysight	N9323A	MY55440013	Feb.13, 2017	Dec.12, 2017	Dec.11, 2018

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6. ANTENNA PORT TEST RESULTS

6.1. ON TIME AND DUTY CYCLE

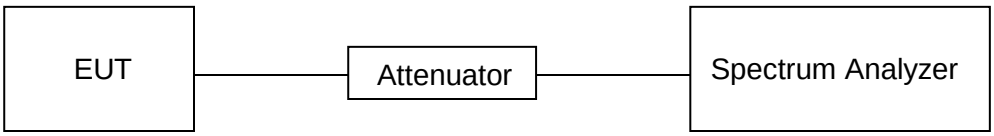
LIMITS

None; for reporting purposes only

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method

TEST SETUP



RESULTS

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/T Minimum VBW (KHz)
GFSK	2.908	3.750	0.775	78	1.107	0.344
8DPSK	2.916	3.750	0.778	78	1.090	0.343

Note: Duty Cycle Correction Factor=10log(1/x).
Where: x is Duty Cycle (Linear)
Where: T is On Time (transmit duration)

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DH5 ON TIME AND DUTY CYCLE MID CH

3DH5 ON TIME AND DUTY CYCLE MID CH

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6.2. 20 dB BANDWIDTH AND 99% BANDWIDTH

LIMITS

FCC Part15 (15.247) Subpart C RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247 (a) (1) RSS-247 Clause 5.1 (a)	20dB Bandwidth	500KHz	2400-2483.5
RSS-Gen Clause 6.6	99% Bandwidth	N/A	2400-2483.5

TEST PROCEDURE

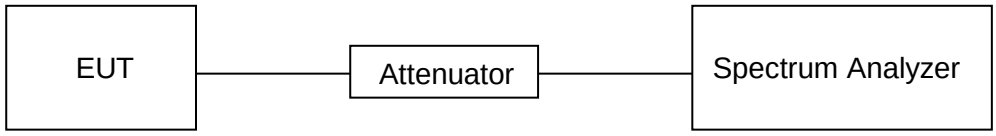
Connect the UUT to the spectrum Analyzer and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	For 20dB Bandwidth:1% of the 20 dB bandwidth For 99% Bandwidth: 1% to 5% of the occupied bandwidth
VBW	For 20dB Bandwidth: ≥ RBW For 99% Bandwidth: approximately 3×RBW
Span	approximately 2 to 3 times the 20 dB bandwidth
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

TEST SETUP

For Peak Power Measurement:



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RESULTS

6.2.1. GFSK MODE

Channel	Frequency (MHz)	20dB bandwidth (MHz)	99% bandwidth (MHz)	Result
Low	2402	1.108	0.959	PASS
Middle	2441	1.110	0.960	PASS
High	2480	1.110	0.957	PASS

Test Graph

20 dB/99% BANDWIDTH LOW CH

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20 dB/99% BANDWIDTH MID CH

20 dB/99% BANDWIDTH HIGH CH

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6.2.2. 8DPSK MODE

Channel	Frequency (MHz)	20dB bandwidth (MHz)	99% bandwidth (MHz)	Result
Low	2402	1.366	1.2096	Pass
Middle	2441	1.373	1.2071	Pass
High	2480	1.369	1.2090	Pass

20 dB/99% BANDWIDTH LOW CH

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20 dB/99% BANDWIDTH MID CH

20 dB/99% BANDWIDTH HIGH CH

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6.3. PEAK CONDUCTED OUTPUT POWER

LIMITS

FCC Part15 (15.247) , Subpart C RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247 (b) (1) RSS-247 Clause 5.4 (b)	Peak Conducted Output Power	1 watt or 30dBm	2400-2483.5

TEST PROCEDURE

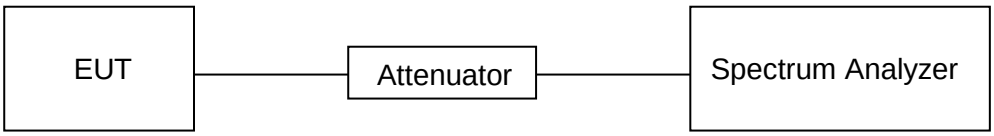
Connect the UUT to the spectrum Analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	≥ 20 dB bandwidth
VBW	≥RBW
Span	Approximately five times the 20 dB bandwidth
Trace	Max hold
Sweep time	Auto couple

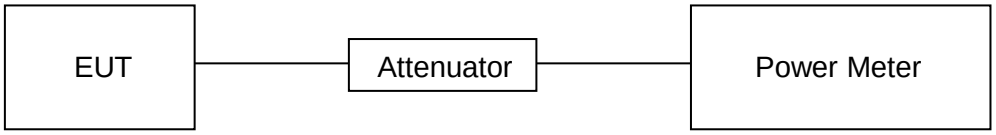
Allow trace to fully stabilize and use peak marker function to determine the peak amplitude level.

TEST SETUP

For peak power measurement:



For average power measurement:



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RESULTS

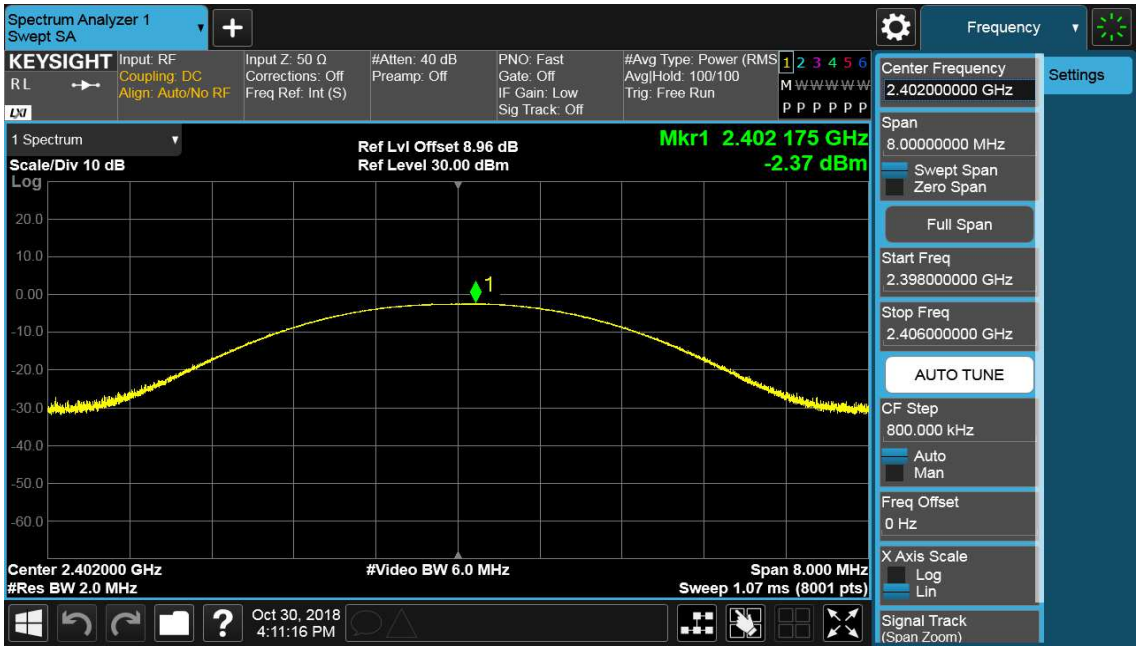
6.3.1. GFSK MODE

Channel	Frequency	Maximum Conducted Output Power(PK)	EIRP	Result
	(MHz)	(dBm)	(dBm)	
Low	2402	-2.37	1.31	Pass
Middle	2441	-2.31	1.37	Pass
High	2480	-2.74	0.94	Pass

Channel	Frequency	Average Conducted Output Power(AV)	EIRP	Result
	(MHz)	(dBm)	(dBm)	
Low	2402	-2.96	0.72	Pass
Middle	2441	-7.71	-4.03	Pass
High	2480	-8.90	-5.22	Pass

Note:1. EIRP= Maximum Conducted Output Power + Antenna Gain
2. The average power is measured by power meter for calculating the tune-up power.

OUTPUT POWER LOW CH



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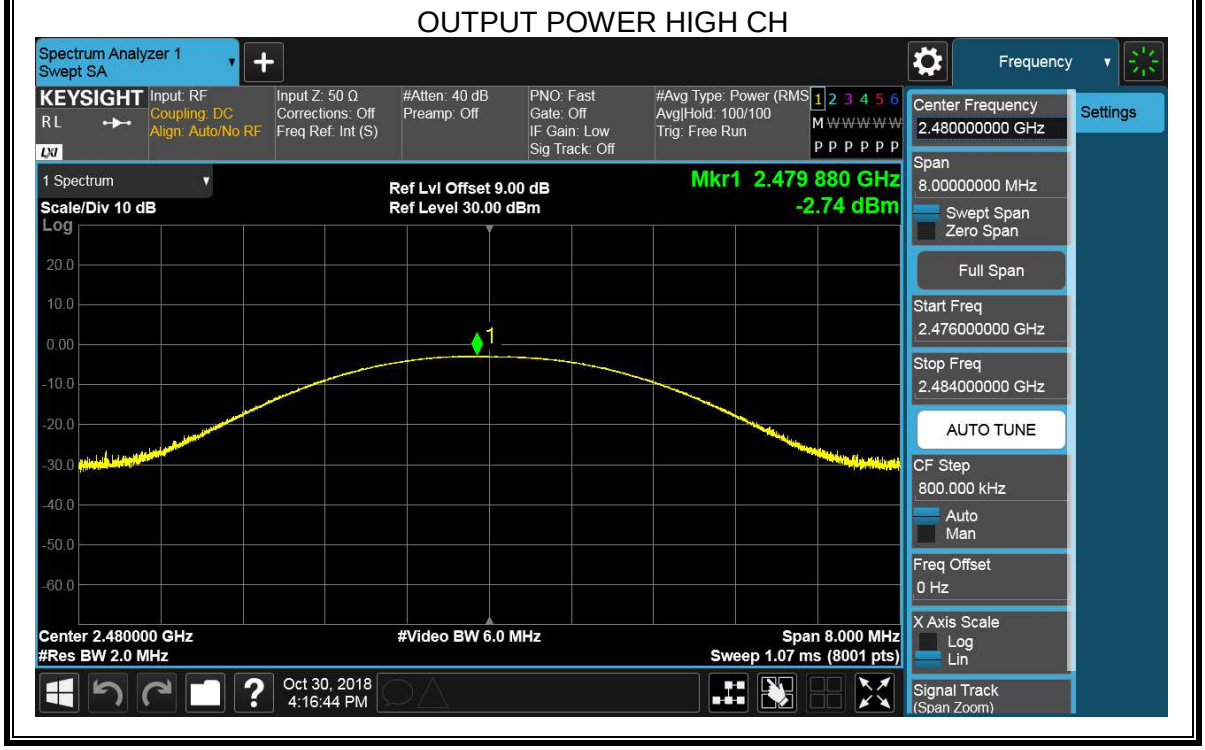
OUTPUT POWER MID CH

OUTPUT POWER HIGH CH



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6.3.2. 8DPSK MODE

Channel	Frequency	Maximum Conducted Output Power(PK)	EIRP	Result
	(MHz)	(dBm)	(dBm)	
Low	2402	-4.12	-0.44	Pass
Middle	2441	-3.95	-0.27	Pass
High	2480	-4.44	-0.76	Pass

Channel	Frequency	Average Conducted Output Power(AV)	EIRP	Result
	(MHz)	(dBm)	(dBm)	
Low	2402	-7.28	-3.60	Pass
Middle	2441	-7.67	-3.99	Pass
High	2480	-8.89	-5.21	Pass

Note:1. EIRP= Maximum Conducted Output Power + Antenna Gain
2. The average power is measured by power meter for calculating the tune-up power.

OUTPUT POWER LOW CH

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OUTPUT POWER MID CH

OUTPUT POWER HIGH CH

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6.4. CARRIER HOPPING CHANNEL SEPARATION

LIMITS

FCC Part15 (15.247) , Subpart C RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.247 (a) (1) RSS-247 Clause 5.1 (b)	Carrier Hopping Channel Separation	25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater.	2400-2483.5

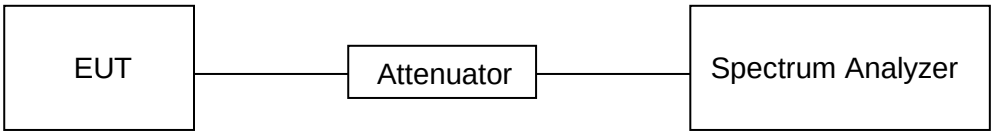
TEST PROCEDURE

Connect the UUT to the spectrum Analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Span	wide enough to capture the peaks of two adjacent channels
Detector	Peak
RBW	≥ 1% of the span
VBW	≥RBW
Trace	Max hold
Sweep time	Auto couple

Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section. Submit this plot.

TEST SETUP



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RESULTS

6.4.1. GFSK MODE

Channel	Carrier Hopping Channel Separation (MHz)	Limit (MHz)	Result
Middle	1.021	≥ two-thirds of the 20 dB Bandwidth Of The Hopping Channel	PASS

Channel Separation MID CH

Note: For 20 dB Bandwidth of The Hopping Channel, please refer to clause 6.2.1.

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6.4.2. 8DPSK MODE

Channel	Carrier Hopping Channel Separation (MHz)	Limit (MHz)	Result
Middle	0.935	≥ two-thirds of the 20 dB Bandwidth Of The Hopping Channel	PASS

Channel Separation MID CH

Note: For 20 dB Bandwidth of The Hopping Channel, please refer to clause 6.2.1.

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6.5. NUMBER OF HOPPING FREQUENCY

LIMITS

FCC Part15 (15.247) , Subpart C RSS-247 ISSUE 2		
Section	Test Item	Limit
15.247 (a) (1) III RSS-247 Clause 5.1 (d)	Number of Hopping Frequency	at least 15 hopping channels

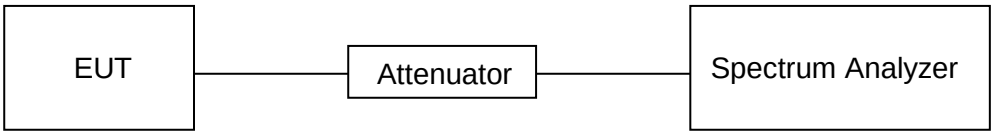
TEST PROCEDURE

Connect the EUT to the spectrum Analyzer and use the following settings:

Detector	Peak
RBW	1% of the span
VBW	≥RBW
Span	The frequency band of operation
Trace	Max hold
Sweep time	Auto couple

Set EUT to transmit maximum output power and switch on frequency hopping function. then set enough count time (larger than 5000 times) to get all the hopping frequency channel displayed on the screen of spectrum analyzer.
Count the quantity of peaks to get the number of hopping channels.
Normal Mode: 79 Channels observed.

TEST SETUP



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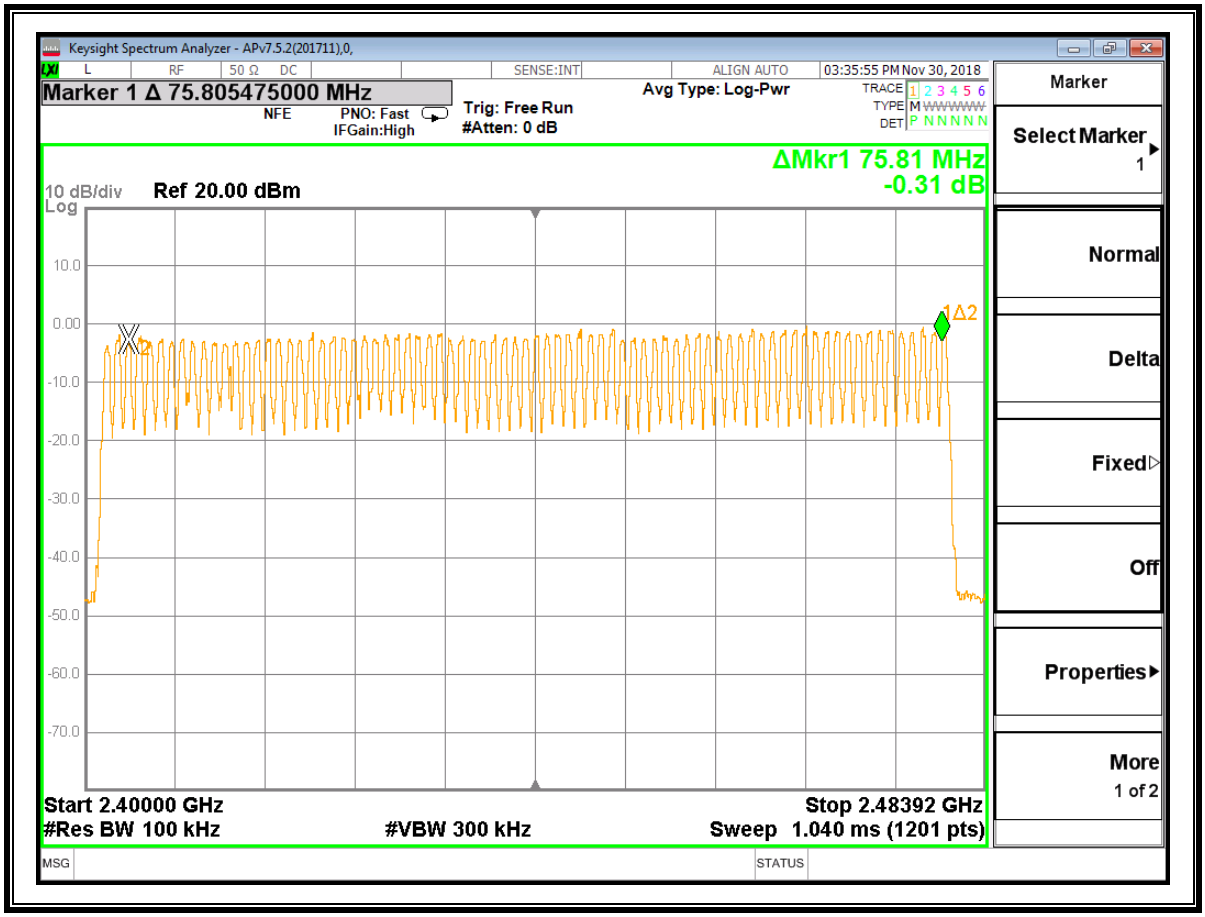
RESULTS

6.5.1. GFSK MODE

Hopping numbers	Limit	Results
79	>15	Pass



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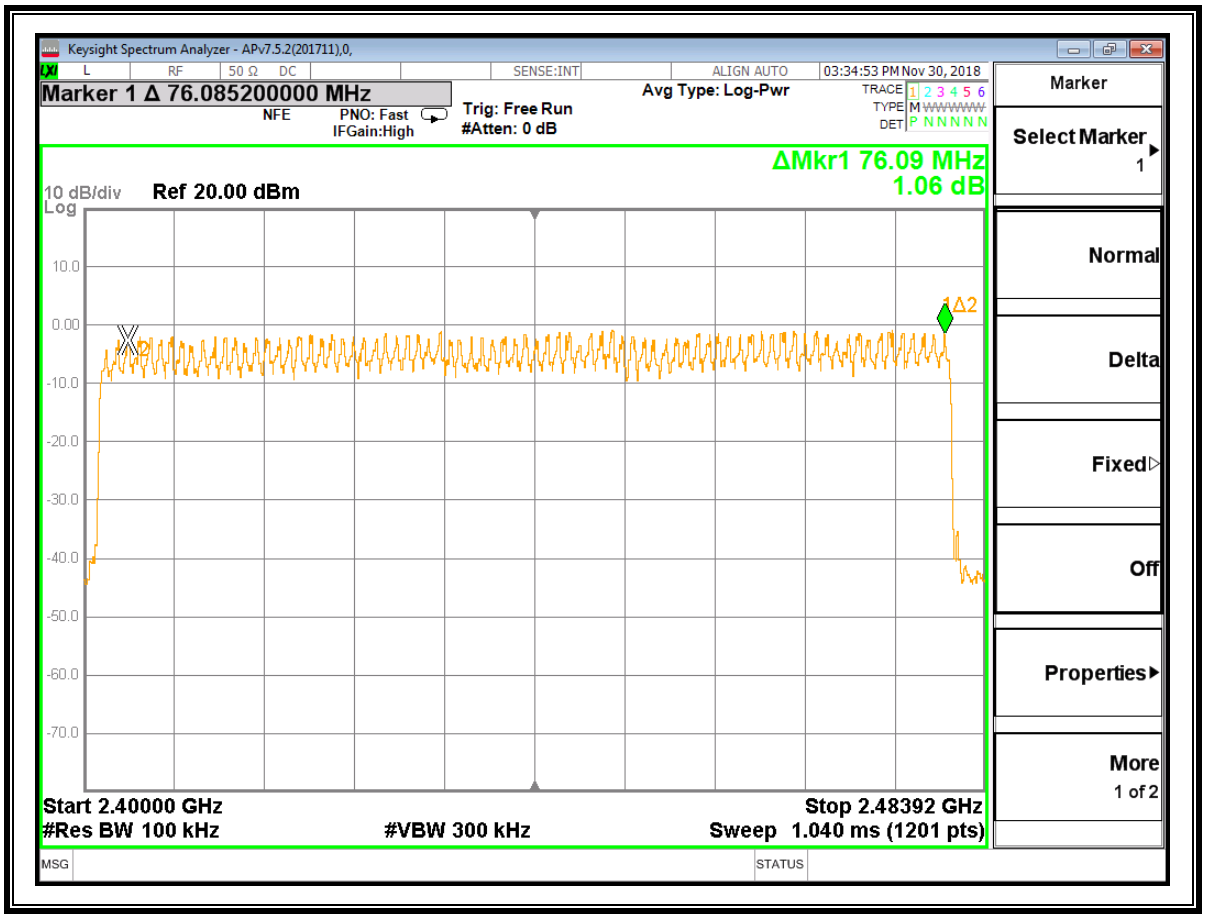
6.5.2. 8DPSK MODE

Hopping numbers	Limit	Results
79	>15	Pass



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6.6. TIME OF OCCUPANCY (DWELL TIME)

LIMITS

FCC Part15 (15.247) , Subpart C RSS-247 ISSUE 2		
Section	Test Item	Limit
15.247 (a) (1) III RSS-247 Clause 5.1 (d)	Time of Occupancy (Dwell Time)	The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds, multiplied by the number of hopping channels employed.

TEST PROCEDURE

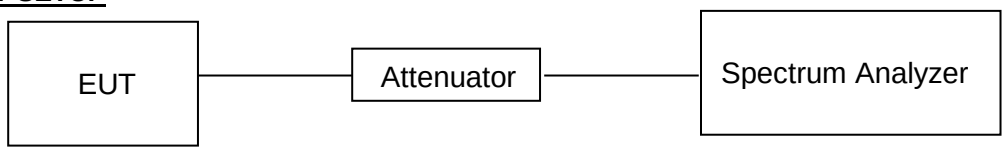
Connect the UUT to the spectrum Analyzer and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	1 MHz
VBW	≥RBW
Span	zero span
Trace	Max hold
Sweep time	As necessary to capture the entire dwell time per hopping channel

a. The transmitter output (antenna port) was connected to the spectrum analyzer
b. Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
c. Use a video trigger with the trigger level set to enable triggering only on full pulses.
d. Sweep Time is more than once pulse time.
e. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
f. Measure the maximum time duration of one single pulse.
g. Set the EUT for DH5, DH3 and DH1 packet transmitting.
h. Measure the maximum time duration of one single pulse.
A Period Time = (channel number)*0.4

For Normal Mode (79 Channel):
DH1 Time Slot: Reading * (1600/2)*31.6/(channel number)
DH3 Time Slot: Reading * (1600/4)*31.6/(channel number)
DH5 Time Slot: Reading * (1600/6)*31.6/(channel number)

TEST SETUP



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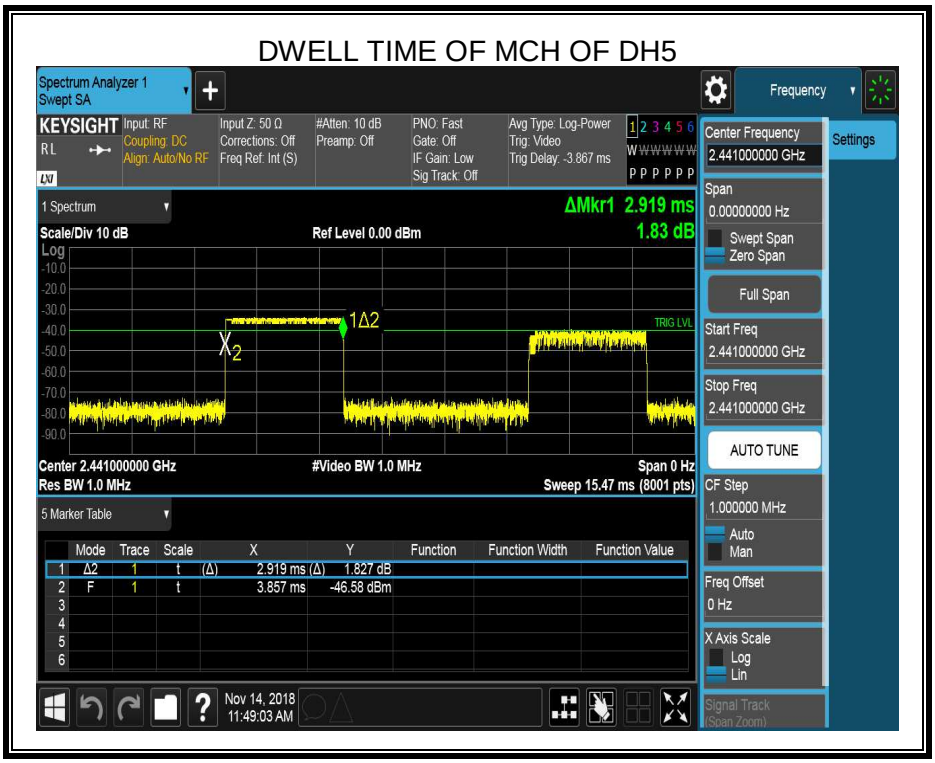
RESULTS

6.6.1. GFSK MODE

Normal Mode				
Packet	**Channel**	**Burst Width [ms/hop/ch]**	**Dwell Time [ms]**	**Results**
DH1	MCH	0.371	118.720	PASS
DH3	MCH	1.625	260.800	PASS
DH5	MCH	2.919	311.370	PASS

Note: DH5 is the worst case, so only the graph of the result of DH5 mode has been showed.

Graph (the worst case-DH5)



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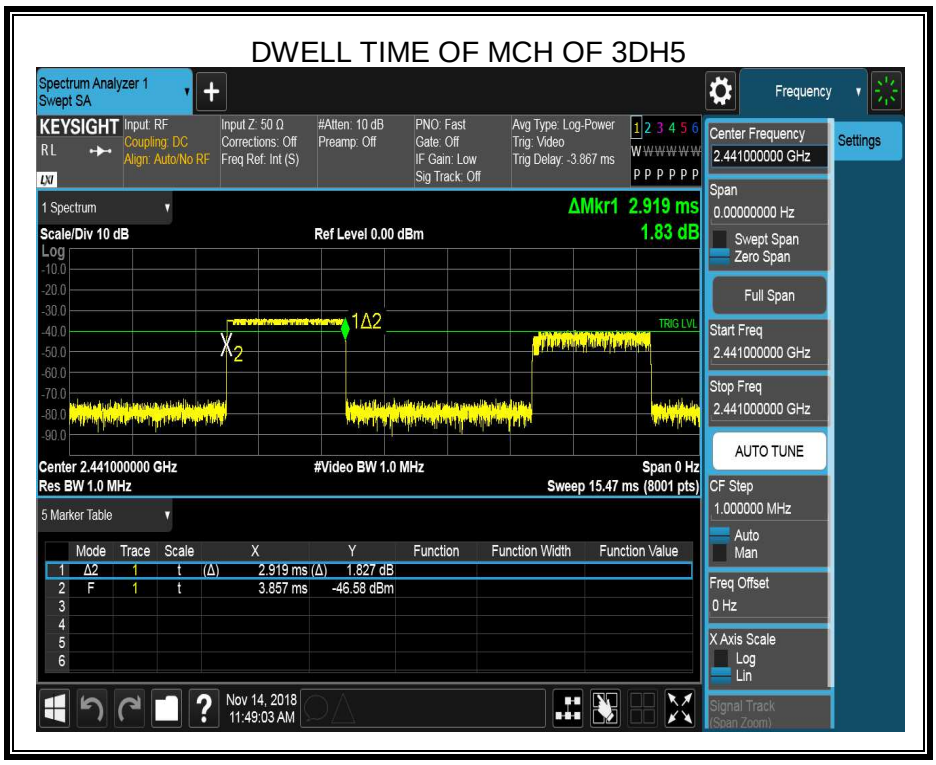
6.6.2. 8DPSK MODE

Normal Mode				
Packet	**Channel**	**Burst Width [ms/hop/ch]**	**Dwell Time [ms]**	**Results**
3DH1	MCH	0.379	121.280	PASS
3DH3	MCH	1.628	260.480	PASS
3DH5	MCH	2.919	311.370	PASS

Note: 3DH5 is the worst case, so only the graph of the result of 3DH5 mode has been showed.

Test Graph (the worst case-3DH5)



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6.7. CONDUCTED SPURIOUS EMISSION

LIMITS

FCC Part15 (15.247) , Subpart C RSS-247 ISSUE 2		
Section	Test Item	Limit
FCC §15.247 (d) RSS-247 5.5	Conducted Spurious Emission	at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

TEST PROCEDURE

For Band-edge use the following settings:

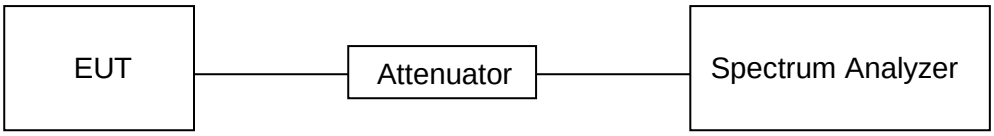
Detector	Peak
RBW	RBW ≥ 1% of the span
VBW	≥RBW
Span	wide enough to fully capture the emission being measured
Trace	Max hold
Sweep time	Auto couple.

For Spurious Emission use the following settings:

Detector	Peak
RBW	100K
VBW	≥ RBW
Span	wide enough to fully capture the emission being measured
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level**.**

TEST SETUP



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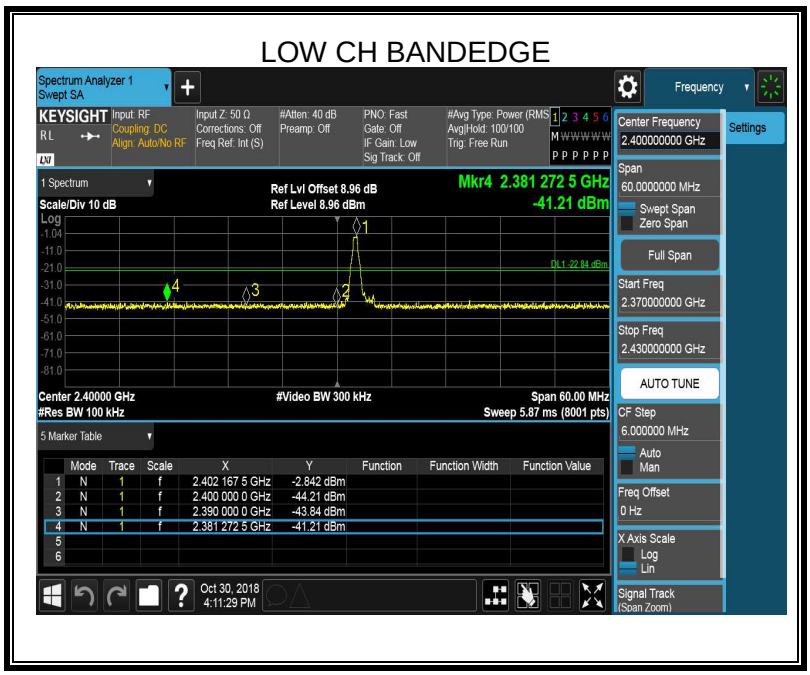
RESULTS

6.7.1. GFSK MODE

SPURIOUS EMISSIONS, LOW CHANNEL



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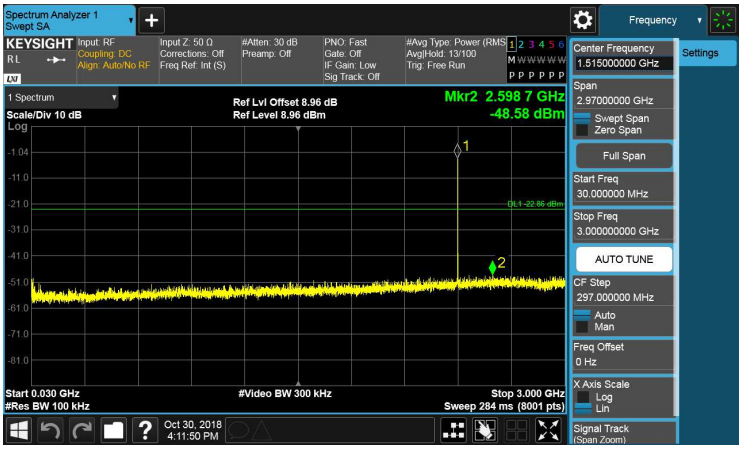
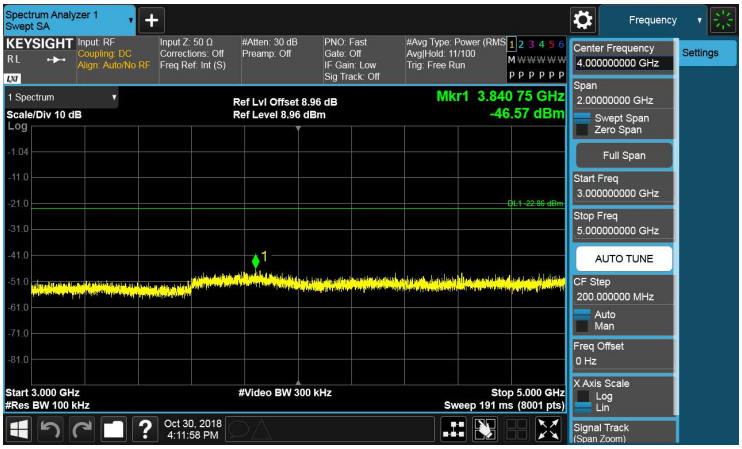
LOW CH SPURIOUS

30MHz-3GHz



3GHz-5GHz



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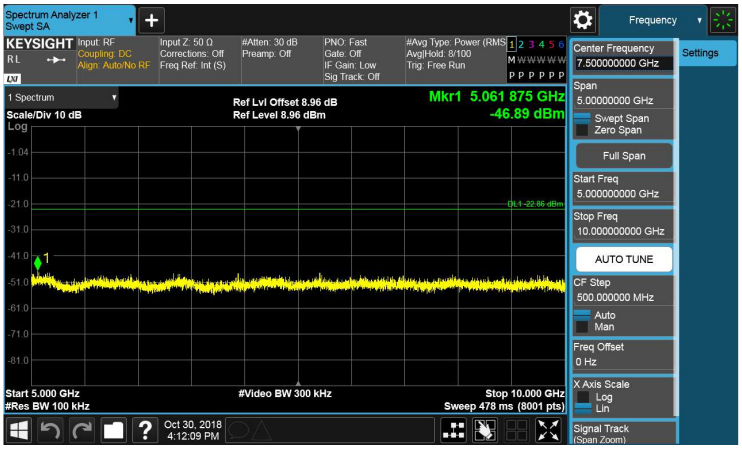
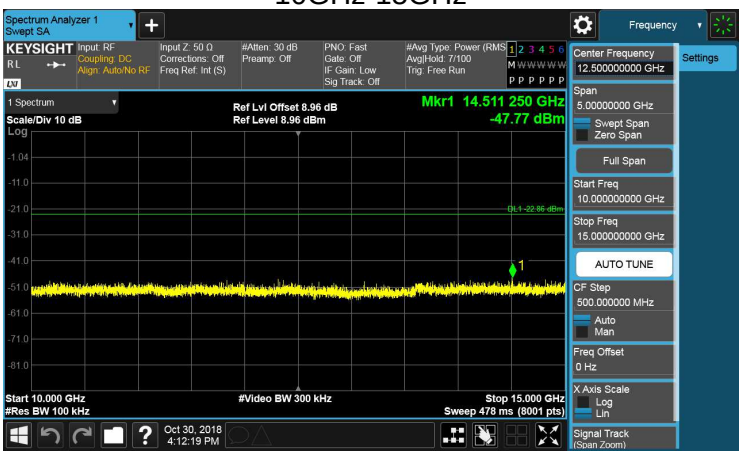
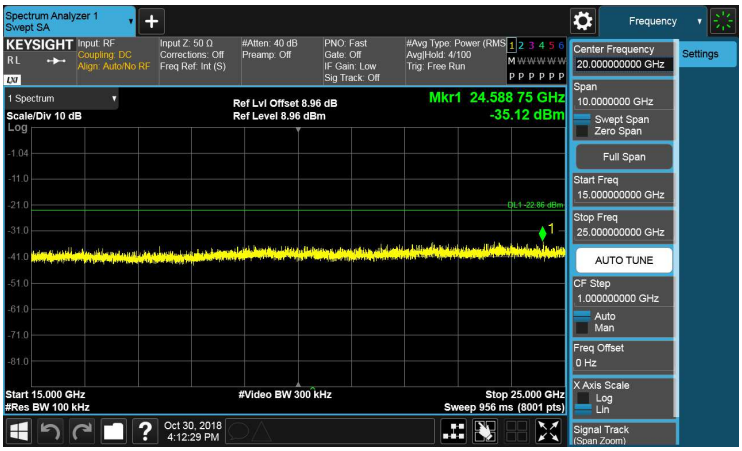
LOW CH SPURIOUS
5GHz - 10GHz



10GHz-15GHz



15GHz-25GHz



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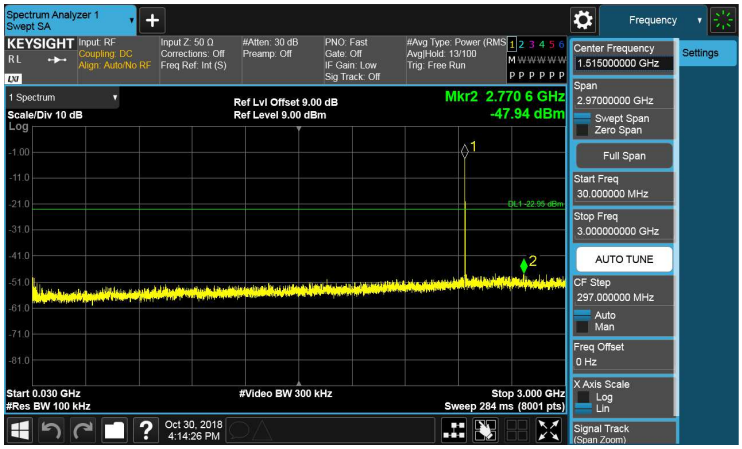
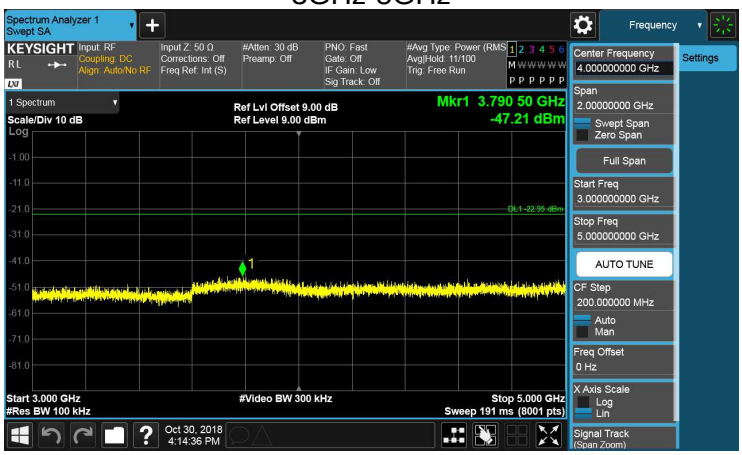
SPURIOUS EMISSIONS, MID CHANNEL

MID CH SPURIOUS

30MHz-3GHz



3GHz-5GHz



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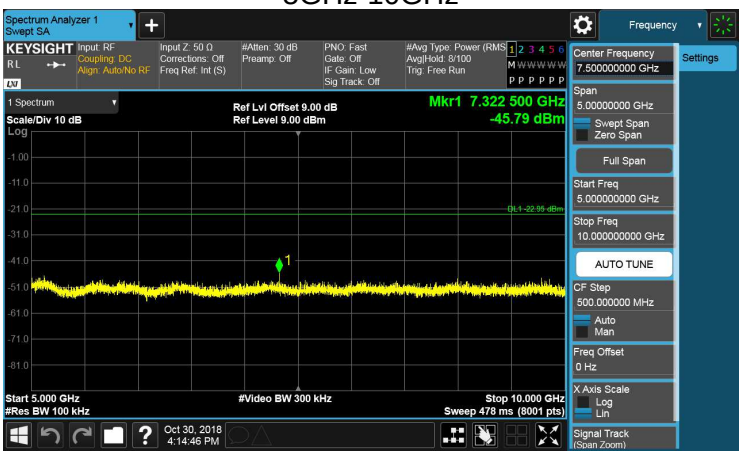
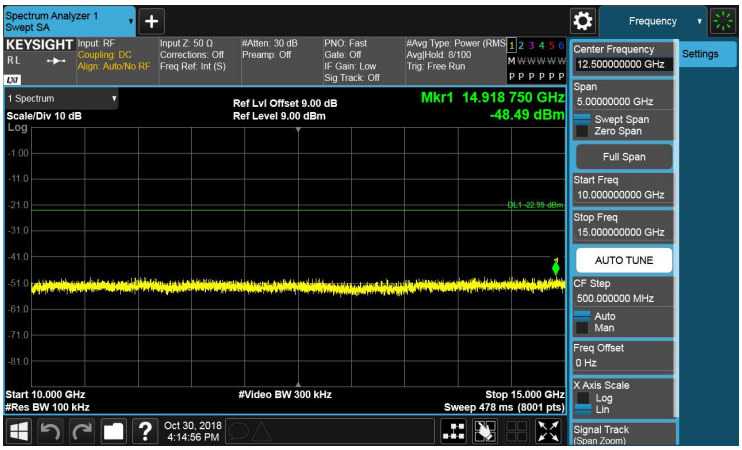
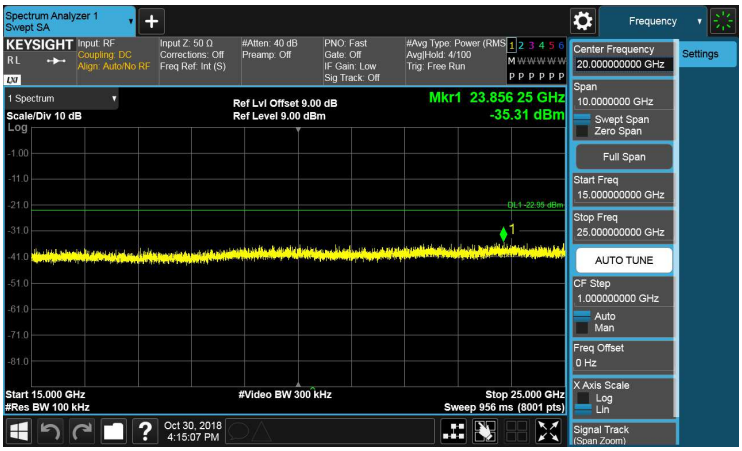
MID CH SPURIOUS
5GHz-10GHz



10GHz-15GHz



15GHz-25GHz



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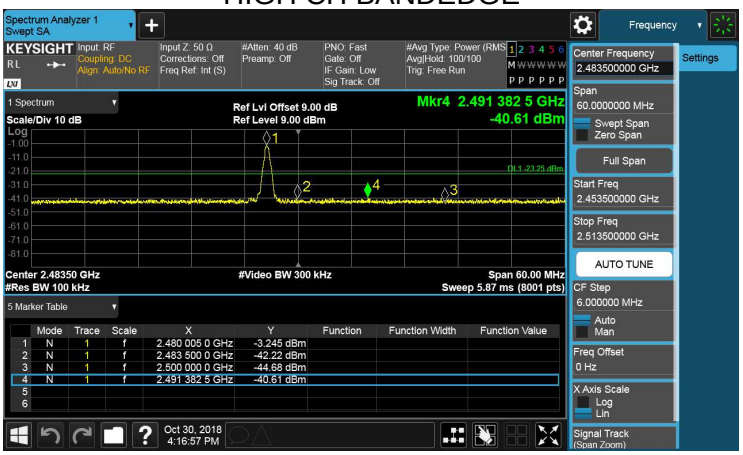
SPURIOUS EMISSIONS, HIGH CHANNEL

HIGH CH BANDEDGE



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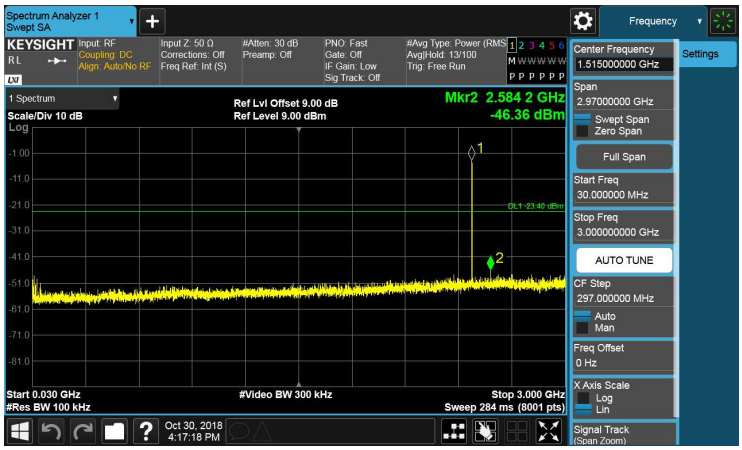
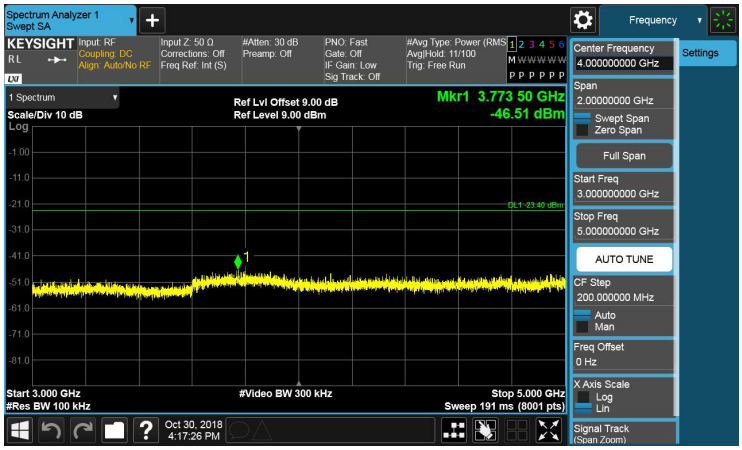
HIGH CH SPURIOUS

30MHz - 3GHz



3GHz-5GHz



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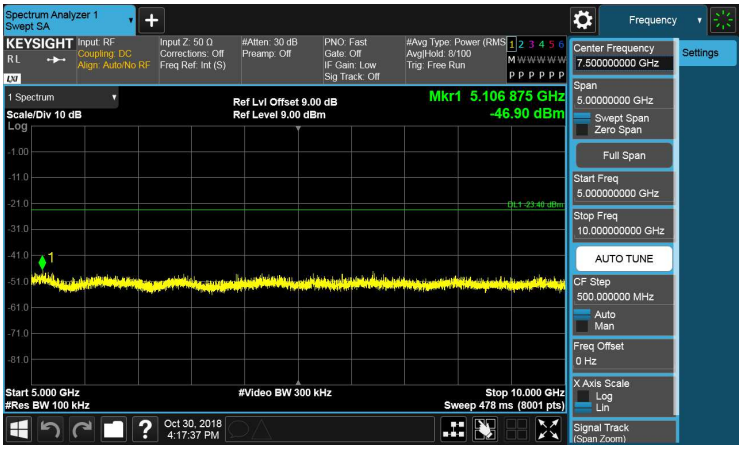
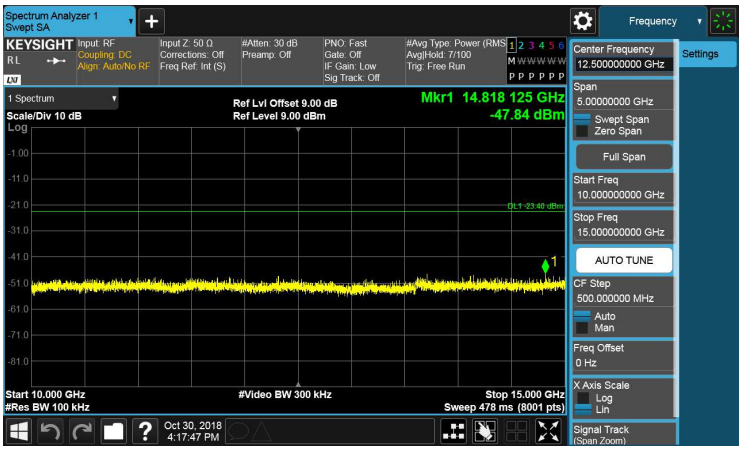
HIGH CH SPURIOUS

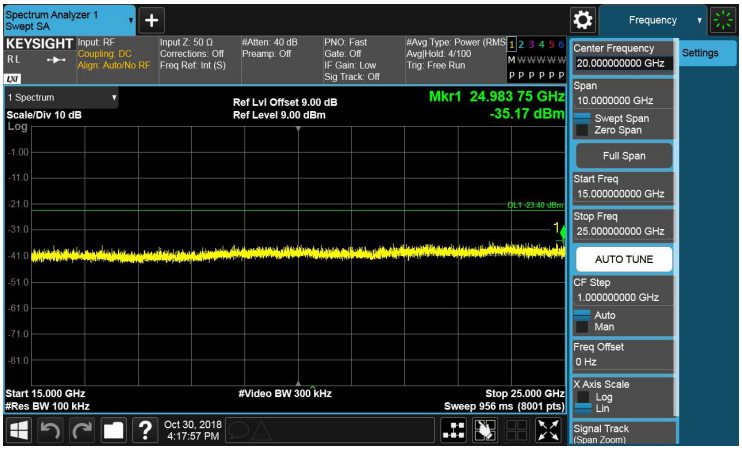
5GHz - 10GHz



10GHz - 15GHz



15GHz - 25GHz



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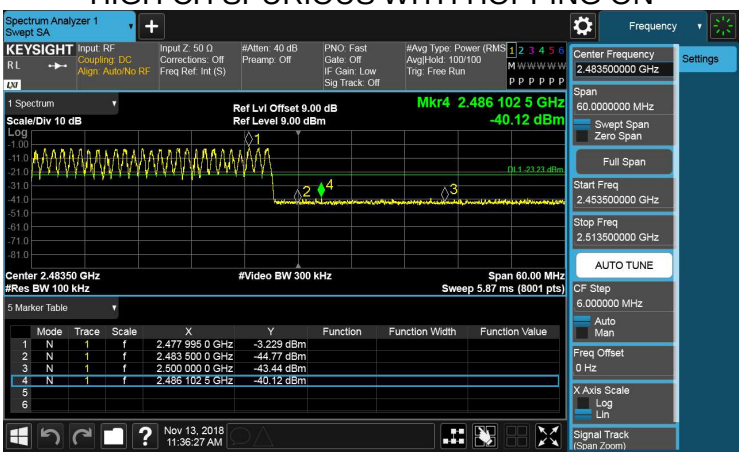
SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON

LOW CH BANDEDGE WITH HOPPING ON

HIGH CH SPURIOUS WITH HOPPING ON



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