

APPLICATION CERTIFICATION FCC Part 15C  
On Behalf of  
Xiamen Prima Techngnology Inc.

WiFi module

Model No.: M632USA1

FCC ID: 2ADID-M632USA

Prepared for : Xiamen Prima Technology Inc.  
Address : No.178, Xinfeng Road, Xiamen, Fujian, P.R. China

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Report No. : ATE20172552  
Date of Test : Jan. 09, 2018-Feb. 26, 2018  
Date of Report : Feb. 27, 2018

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## Test Report Certification

Applicant : Xiamen Prima Technology Inc.  
Address : No.178, Xinfeng Road, Xiamen, Fujian, P.R. China.  
Manufacturer : Xiamen Prima Technology Inc.  
Address : No.178, Xinfeng Road, Xiamen, Fujian, P.R. China.  
Product : WiFi module  
Model No. : M632USA1  
Trade name : PRIMA

Measurement Procedure Used:

**FCC Rules and Regulations Part 15 Subpart C Section 15.247  
ANSI C63.10: 2013**

The device described above is tested by SHENZHEN ACCURATE TECHNOLOGY CO. LTD to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C Section 15.247 limits. The measurement results are contained in this test report and SHENZHEN ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of SHENZHEN ACCURATE TECHNOLOGY CO. LTD.

Date of Test :

Jan. 09, 2018-Feb. 26, 2018

Date of Report :

Feb. 27, 2018

Prepared by :



Approved & Authorized Signer :

( Sean Liu, Manager)

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

EUT : WiFi module  
Model Number : M632USA1  
Bluetooth version : BT V4.0 Dual Mode  
This report is for BT classic mode  
Frequency Range : 2402MHz-2480MHz  
Number of Channels : 79  
Antenna Gain(Max) : 2dBi  
Antenna type : External Antenna  
Trade Name : PRIMA  
Rating : DC 3.3V  
Modulation mode : GFSK,  $\pi/4$  DQPSK, 8DPSK  
Applicant : Xiamen Prima Technology Inc.  
Address : No.178, Xinfeng Road, Xiamen, Fujian, P.R. China  
Manufacturer : Xiamen Prima Technology Inc.  
Address : No.178, Xinfeng Road, Xiamen, Fujian, P.R. China  
Date of sample received : Jan. 09, 2018  
Date of Test : Jan. 09, 2018-Feb. 26, 2018

### 1.2. Accessory and Auxiliary Equipment

PC                      Manufacturer: LENOVO  
                          M/N: 4290-RT8  
                          S/N: R9-FW93G 11/08

### 1.3.Description of Test Facility

- EMC Lab : Recognition of accreditation by Federal Communications Commission (FCC)  
The Designation Number is CN1189  
The Registration Number is 708358
- Listed by Innovation, Science and Economic Development Canada (ISED)  
The Registration Number is 5077A-2
- Accredited by China National Accreditation Service for Conformity Assessment (CNAS)  
The Registration Number is CNAS L3193
- Accredited by American Association for Laboratory Accreditation (A2LA)  
The Certificate Number is 4297.01
- Name of Firm : Shenzhen Accurate Technology Co., Ltd.  
Site Location : 1/F., Building A, Changyuan New Material Port, Science & Industry Park, Nanshan District, Shenzhen, Guangdong, P.R. China

### 1.4.Measurement Uncertainty

- Conducted Emission Expanded Uncertainty = 2.23dB, k=2
- Power Disturbance Expanded Uncertainty = 2.92 dB, k=2
- Radiated emission expanded uncertainty (9kHz-30MHz) = 3.08dB, k=2
- Radiated emission expanded uncertainty (30MHz-1000MHz) = 4.42dB, k=2
- Radiated emission expanded uncertainty (Above 1GHz) = 4.06dB, k=2

## 2. MEASURING DEVICE AND TEST EQUIPMENT

**Table 1: List of Test and Measurement Equipment**

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 06, 2018	Jan. 05, 2019
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 06, 2018	Jan. 05, 2019
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 06, 2018	Jan. 05, 2019
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 06, 2018	Jan. 05, 2019
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 06, 2018	Jan. 05, 2019
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 06, 2018	Jan. 05, 2019
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 06, 2018	Jan. 05, 2019
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 06, 2018	Jan. 05, 2019
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 06, 2018	Jan. 05, 2019
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 06, 2018	Jan. 05, 2019
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 06, 2018	Jan. 05, 2019
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/2510 -60/11SS	N/A	Jan. 06, 2018	Jan. 05, 2019

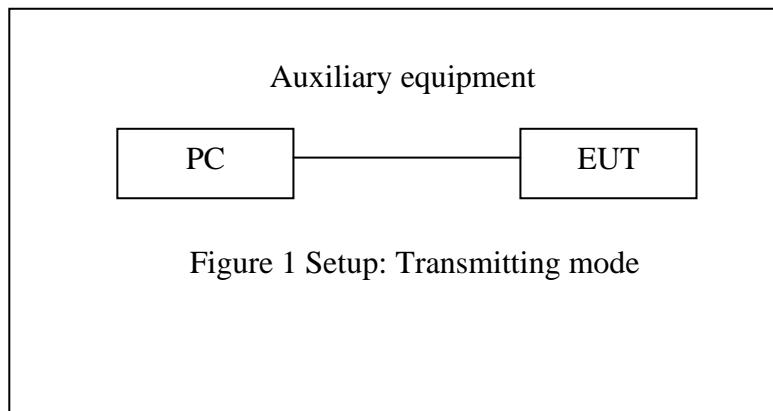
### 3. OPERATION OF EUT DURING TESTING

#### 3.1. Operating Mode

The mode is used: Transmitting mode

Low Channel: 2402MHz  
Middle Channel: 2441MHz  
High Channel: 2480MHz  
Hopping

#### 3.2. Configuration and peripherals



(EUT: WiFi module)

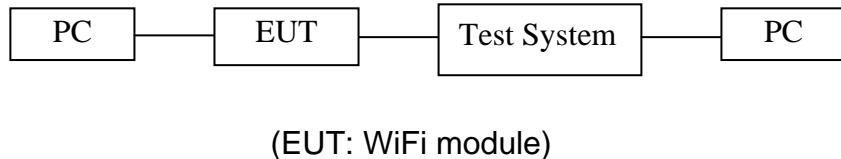
## 4. TEST PROCEDURES AND RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission Test	N/A
Section 15.247(a)(1)	20dB Bandwidth Test	Compliant
Section 15.247(a)(1)	Carrier Frequency Separation Test	Compliant
Section 15.247(a)(1)(iii)	Number Of Hopping Frequency Test	Compliant
Section 15.247(a)(1)(iii)	Dwell Time Test	Compliant
Section 15.247(b)(1)	Maximum Peak Output Power Test	Compliant
Section 15.247(d) Section 15.209	Radiated Emission Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.203	Antenna Requirement	Compliant

Note: The power supply mode of the EUT is DC 3.3V, According to the FCC standard requirements, conducted emission is not applicable.

## 5. 20DB BANDWIDTH TEST

### 5.1. Block Diagram of Test Setup



### 5.2. The Requirement For Section 15.247(a)(1)

Section 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.

### 5.3. EUT Configuration on Measurement

The equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 5.4. Operating Condition of EUT

5.4.1. Setup the EUT and simulator as shown as Section 5.1.

5.4.2. Turn on the power of all equipment.

5.4.3. Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.

### 5.5. Test Procedure

5.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

5.5.2. Set RBW of spectrum analyzer to 100 kHz and VBW to 300 kHz.

5.5.3. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

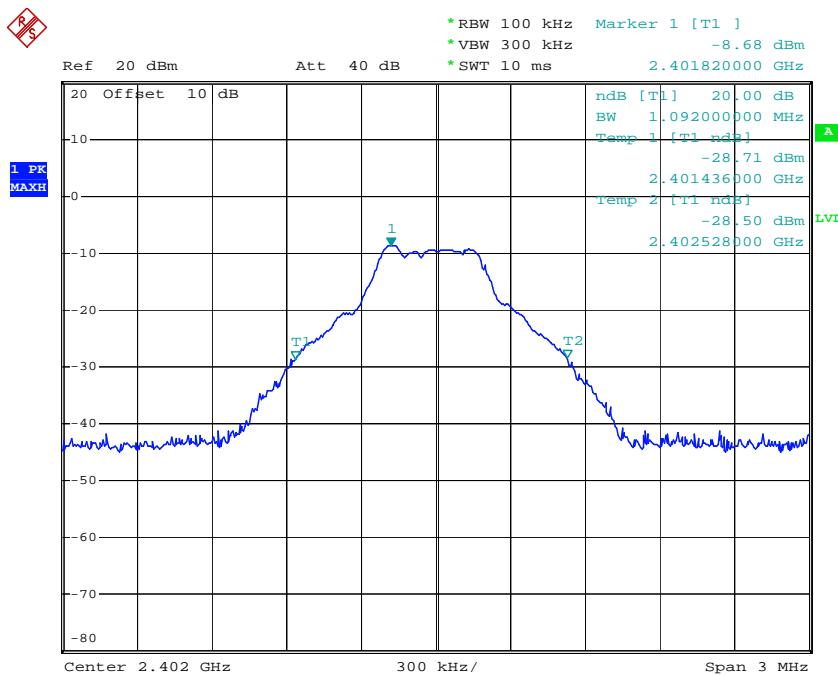
## 5.6. Test Result

Channel	Frequency (MHz)	GFSK 20dB Bandwidth (MHz)	$\Pi/4$ DQPSK 20dB Bandwidth (MHz)	8DPSK 20dB Bandwidth (MHz)	Result
Low	2402	1.092	1.290	1.326	Pass
Middle	2441	1.086	1.314	1.290	Pass
High	2480	1.098	1.290	1.296	Pass

The spectrum analyzer plots are attached as below.

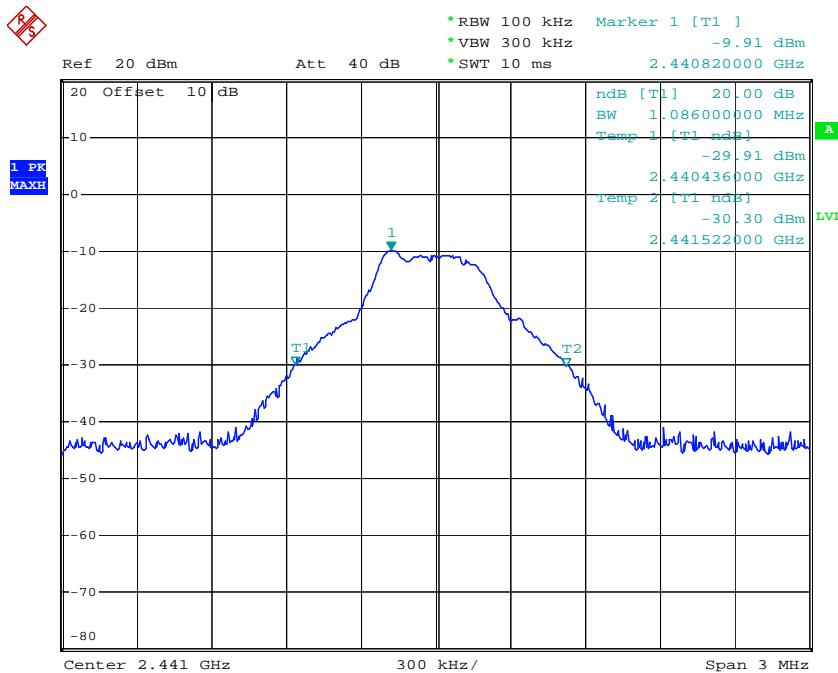
## GFSK Mode

## Low channel



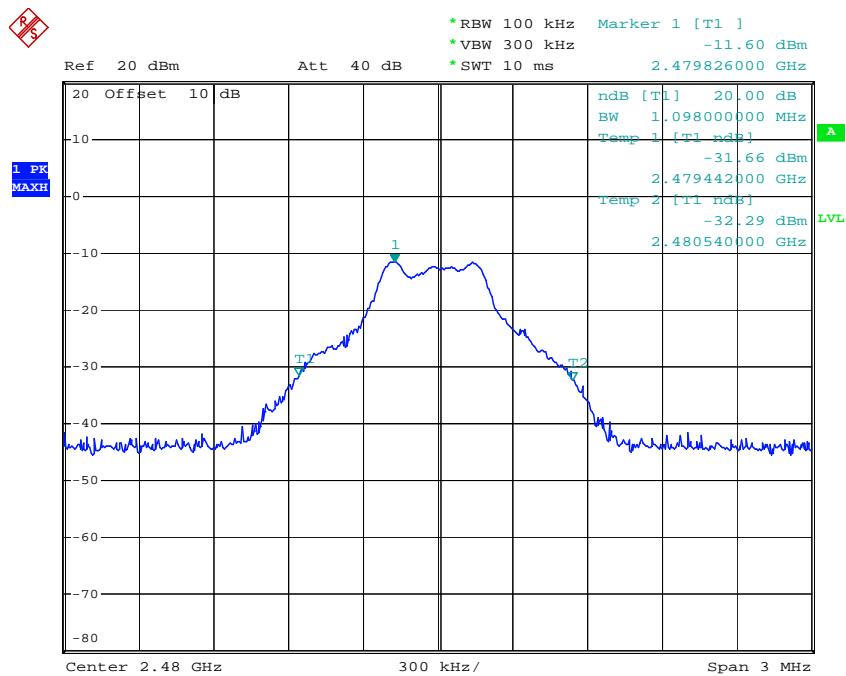
Comment A:  
 Date: 18.JAN.2018 16:07:27

## Middle channel



Comment A:  
 Date: 18.JAN.2018 16:09:16

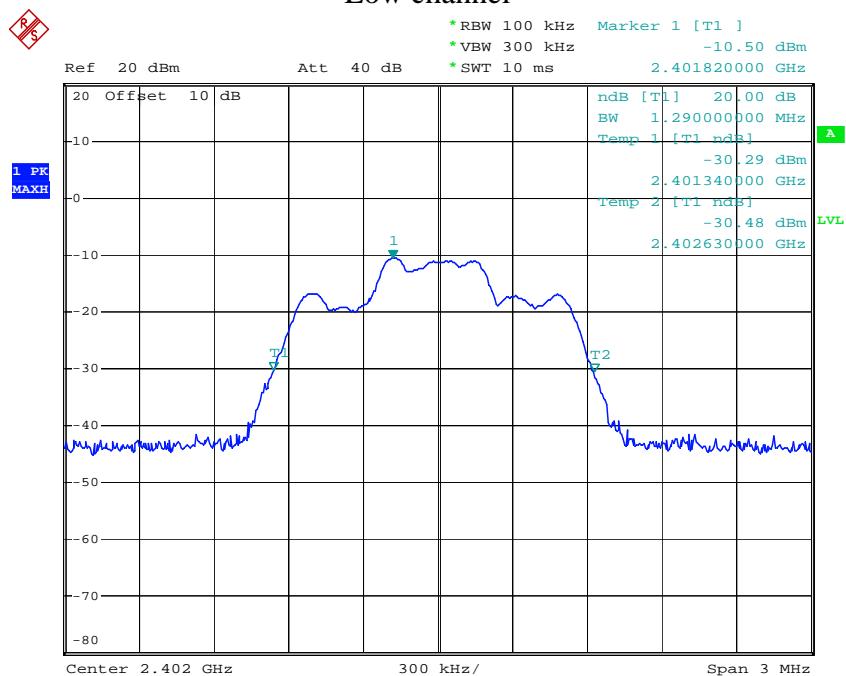
## High channel



Comment A:  
 Date: 18.JAN.2018 16:10:47

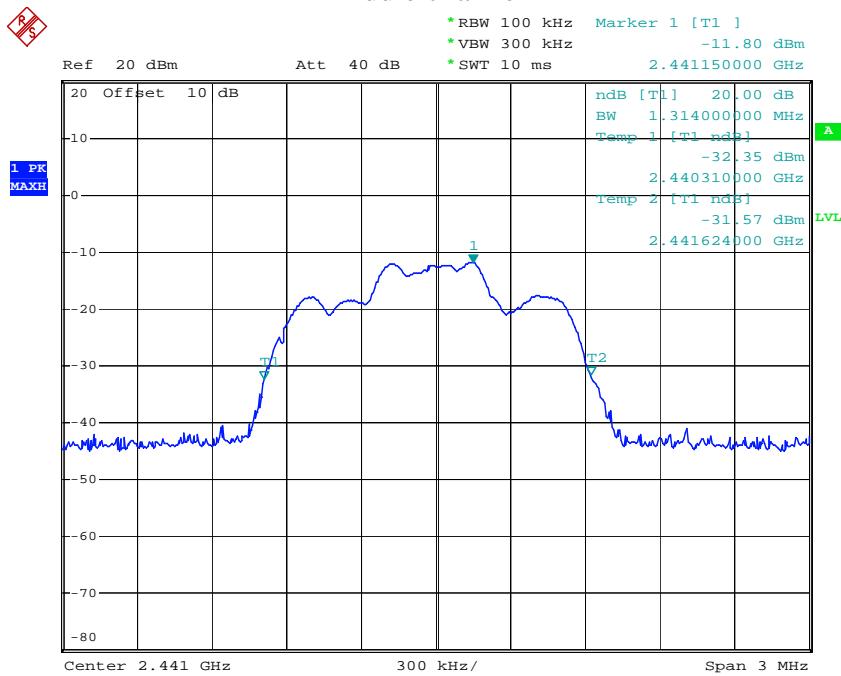
 $\Pi/4$  DQPSK Mode

## Low channel



Comment A:  
 Date: 18.JAN.2018 16:16:11

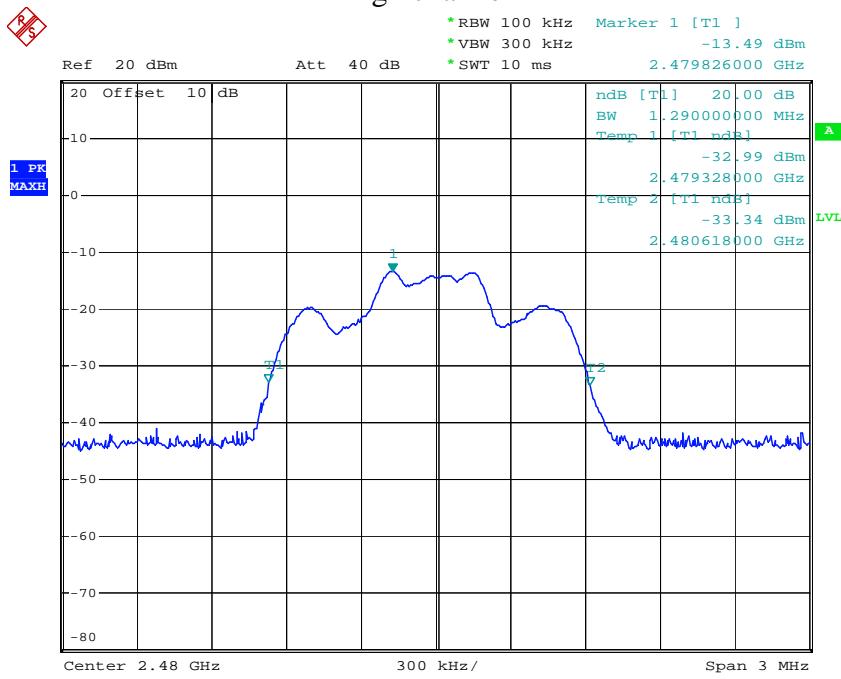
## Middle channel



Comment A:

Date: 18.JAN.2018 16:15:15

## High channel

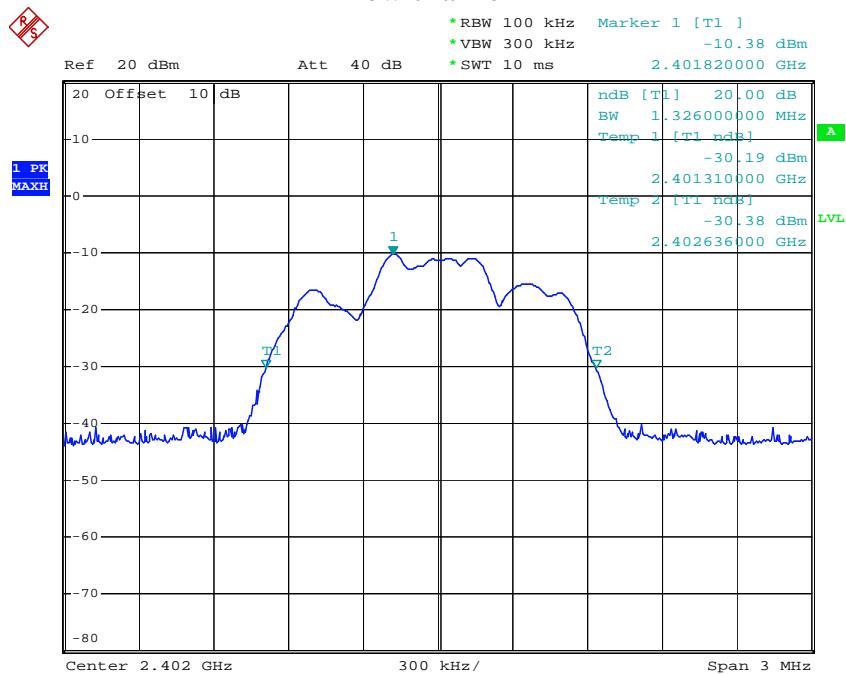


Comment A:

Date: 18.JAN.2018 16:14:21

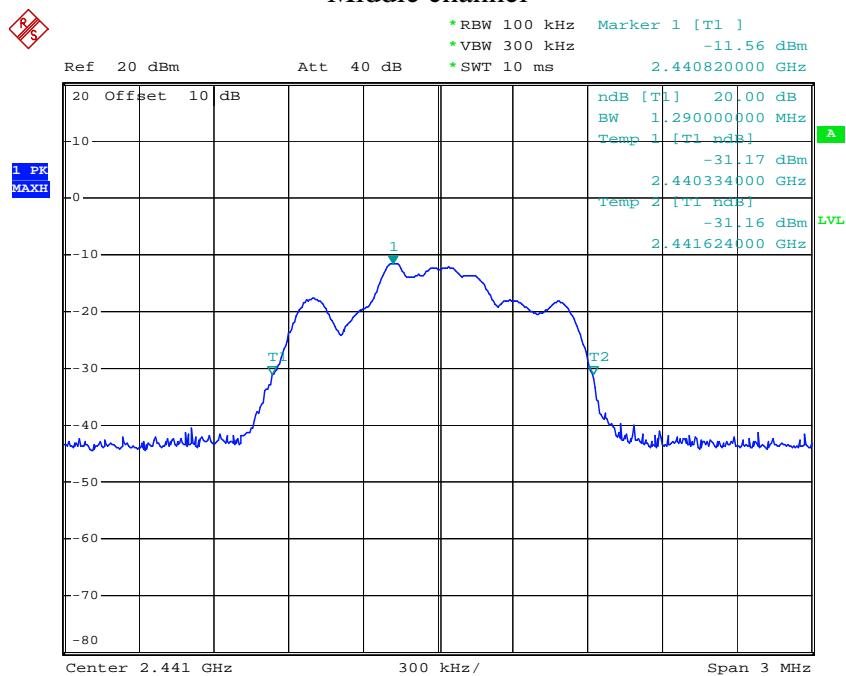
## 8DPSK Mode

Low channel

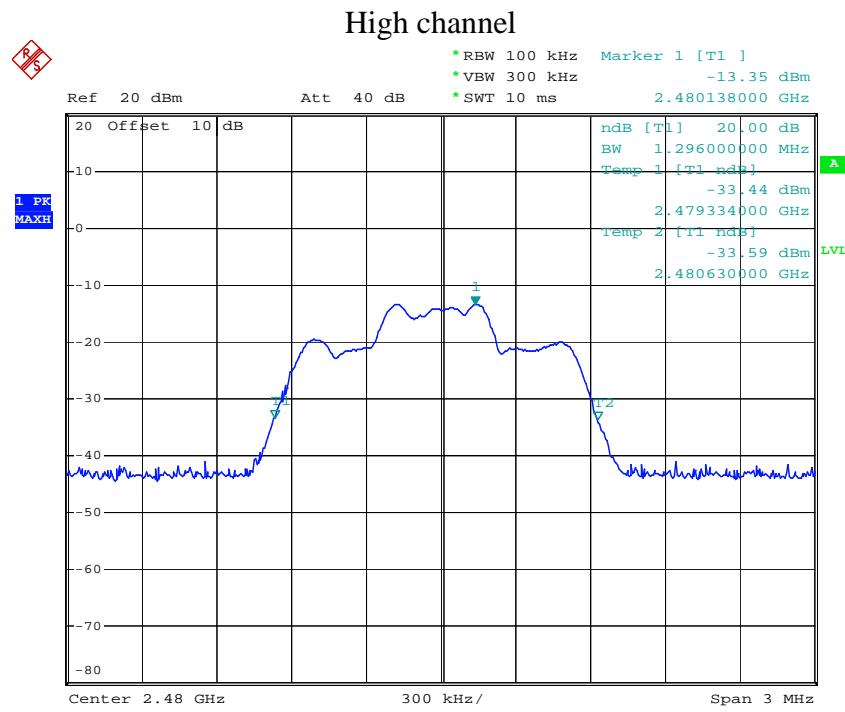


Comment A:  
 Date: 18.JAN.2018 16:19:51

Middle channel



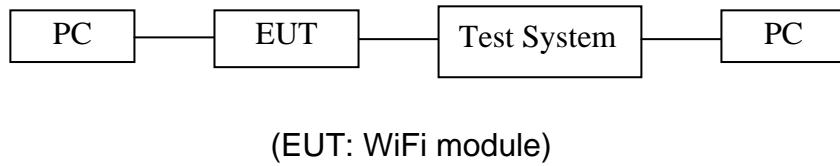
Comment A:  
 Date: 18.JAN.2018 16:21:44



Comment A:  
Date: 18.JAN.2018 16:23:39

## 6. CARRIER FREQUENCY SEPARATION TEST

### 6.1. Block Diagram of Test Setup



### 6.2. The Requirement For Section 15.247(a)(1)

Section 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. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

### 6.3. EUT Configuration on Measurement

The equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 6.4. Operating Condition of EUT

6.4.1. Setup the EUT and simulator as shown as Section 6.1.

6.4.2. Turn on the power of all equipment.

6.4.3. Let the EUT work in TX (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.

## 6.5. Test Procedure

6.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

6.5.2. Set RBW of spectrum analyzer to 30 kHz and VBW to 100 kHz. Adjust Span to 2MHz.

6.5.3. Set the adjacent channel of the EUT Maxhold another trace.

6.5.4. Measurement the channel separation

## 6.6. Test Result

GFSK

Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
Low	2402	1.002	25KHz or 2/3*20dB bandwidth	PASS
	2403			
Middle	2440	1.008	25KHz or 2/3*20dB bandwidth	PASS
	2441			
High	2479	1.002	25KHz or 2/3*20dB bandwidth	PASS
	2480			

$\Pi/4$  DQPSK

Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
Low	2402	1.002	25KHz or 2/3*20dB bandwidth	PASS
	2403			
Middle	2440	1.008	25KHz or 2/3*20dB bandwidth	PASS
	2441			
High	2479	1.002	25KHz or 2/3*20dB bandwidth	PASS
	2480			

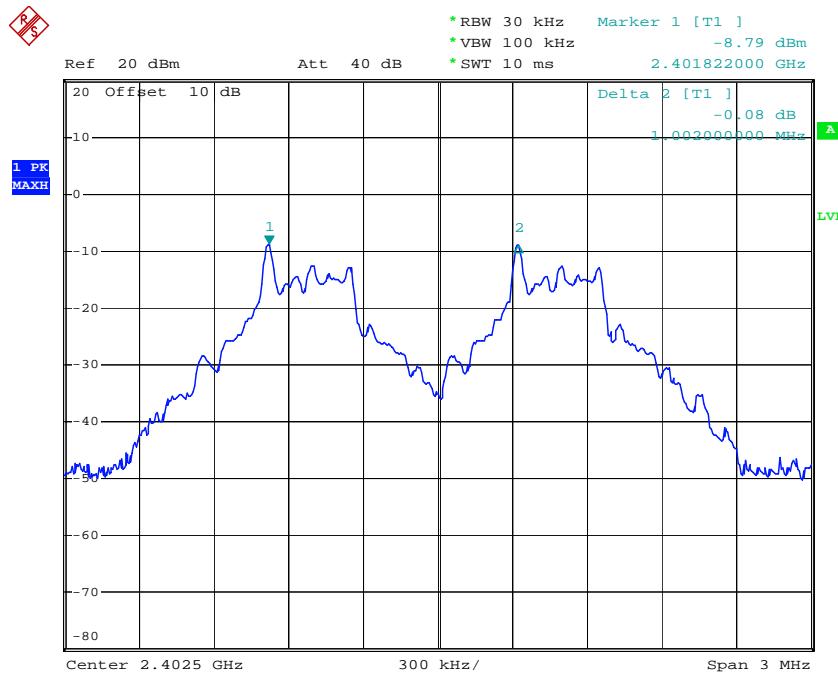
8DPSK

Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
Low	2402	1.002	25KHz or 2/3*20dB bandwidth	PASS
	2403			
Middle	2440	1.008	25KHz or 2/3*20dB bandwidth	PASS
	2441			
High	2479	1.002	25KHz or 2/3*20dB bandwidth	PASS
	2480			

The spectrum analyzer plots are attached as below.

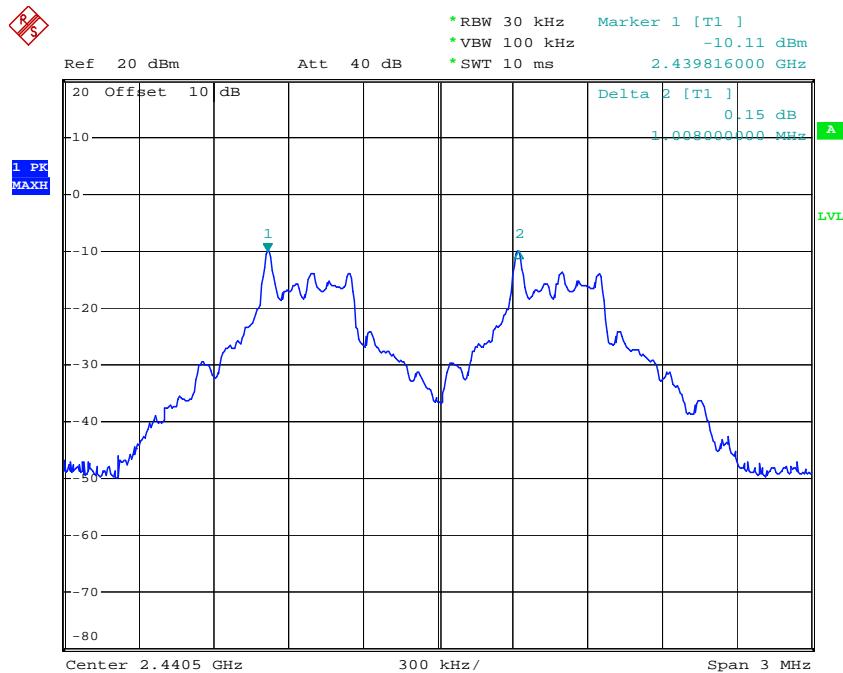
## GFSK Mode

## Low channel



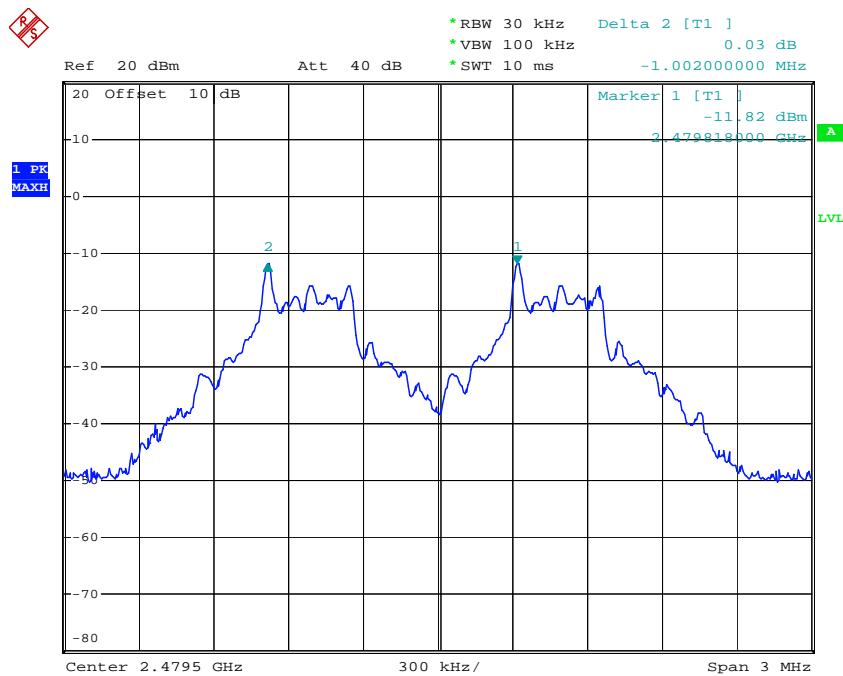
Comment A:  
Date: 18.JAN.2018 15:44:21

## Middle channel



Comment A:  
Date: 18.JAN.2018 15:45:53

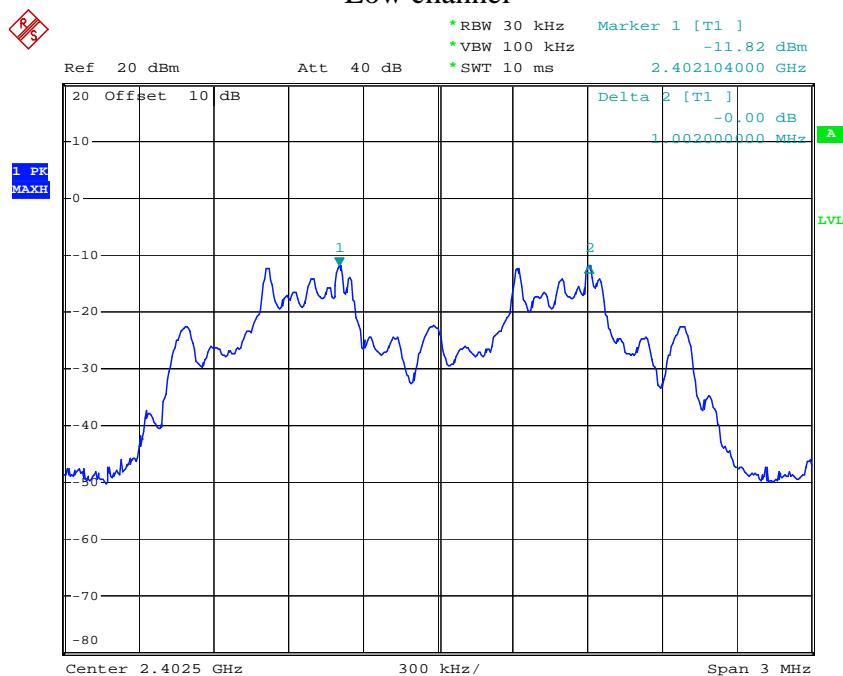
## High channel



Comment A:  
Date: 18.JAN.2018 15:46:51

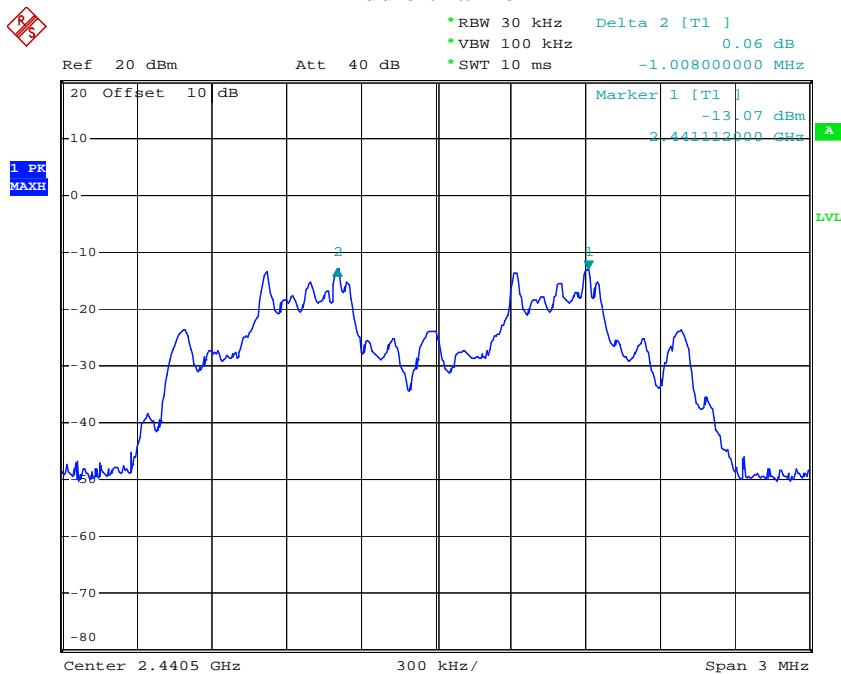
 $\Pi/4$  DQPSK Mode

## Low channel



Comment A:  
Date: 18.JAN.2018 15:51:57

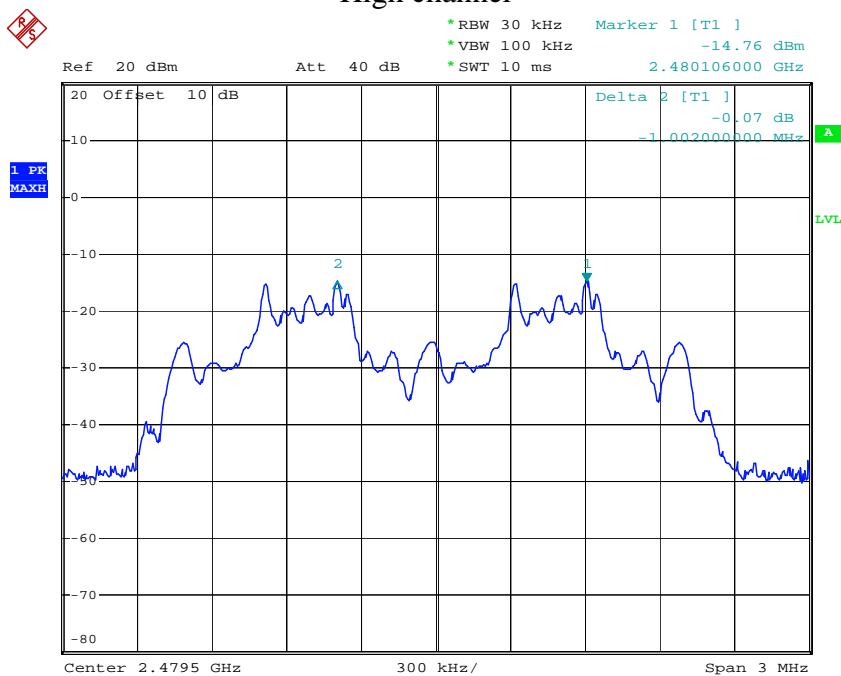
## Middle channel



Comment A:

Date: 18.JAN.2018 15:50:39

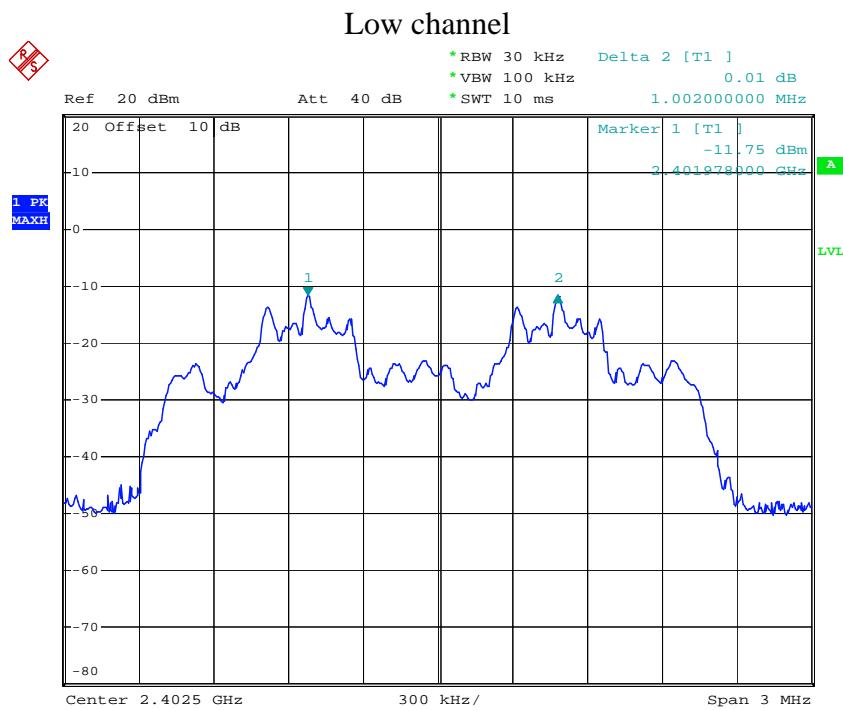
## High channel



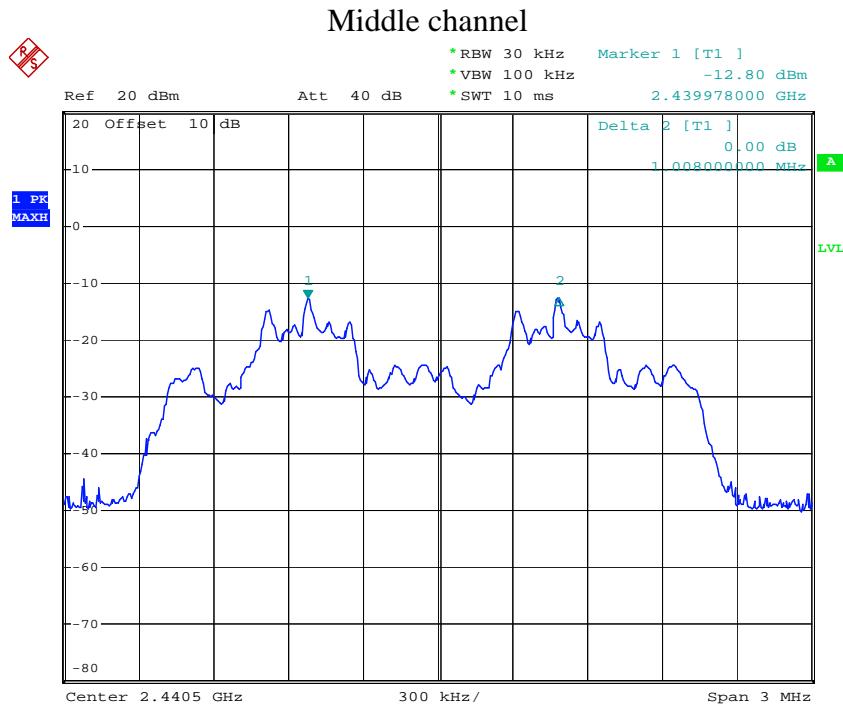
Comment A:

Date: 18.JAN.2018 15:48:35

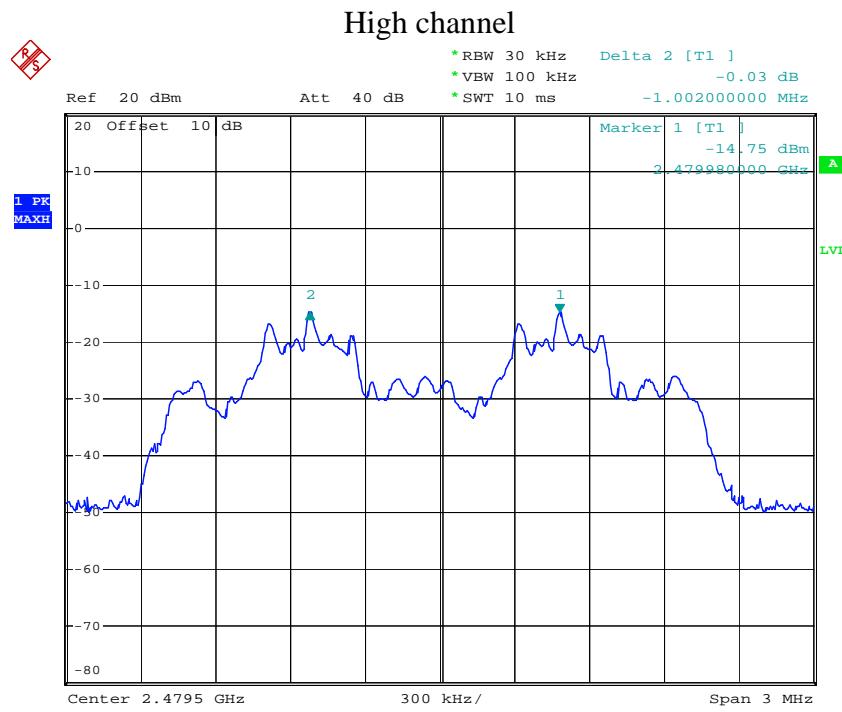
## 8DPSK Mode



Comment A:  
Date: 18.JAN.2018 15:53:10



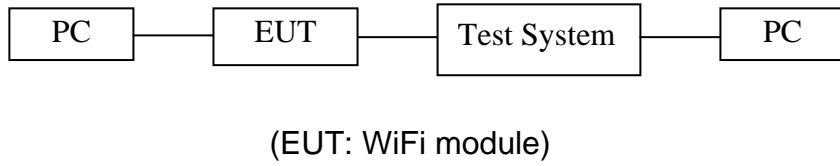
Comment A:  
Date: 18.JAN.2018 15:54:26



Comment A:  
Date: 18.JAN.2018 15:55:31

## 7. NUMBER OF HOPPING FREQUENCY TEST

### 7.1. Block Diagram of Test Setup



### 7.2. The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

### 7.3. EUT Configuration on Measurement

The equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 7.4. Operating Condition of EUT

7.4.1. Setup the EUT and simulator as shown as Section 7.1.

7.4.2. Turn on the power of all equipment.

7.4.3. Let the EUT work in TX (Hopping on) modes measure it.

### 7.5. Test Procedure

7.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

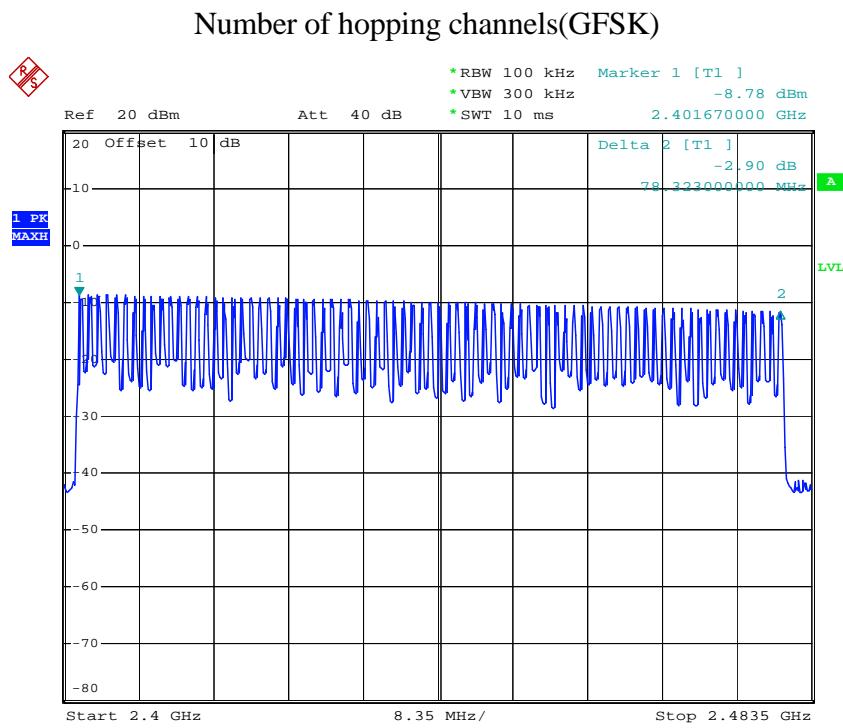
7.5.2. Set the spectrum analyzer as Span=83.5MHz, RBW=100 kHz, VBW=300 kHz.

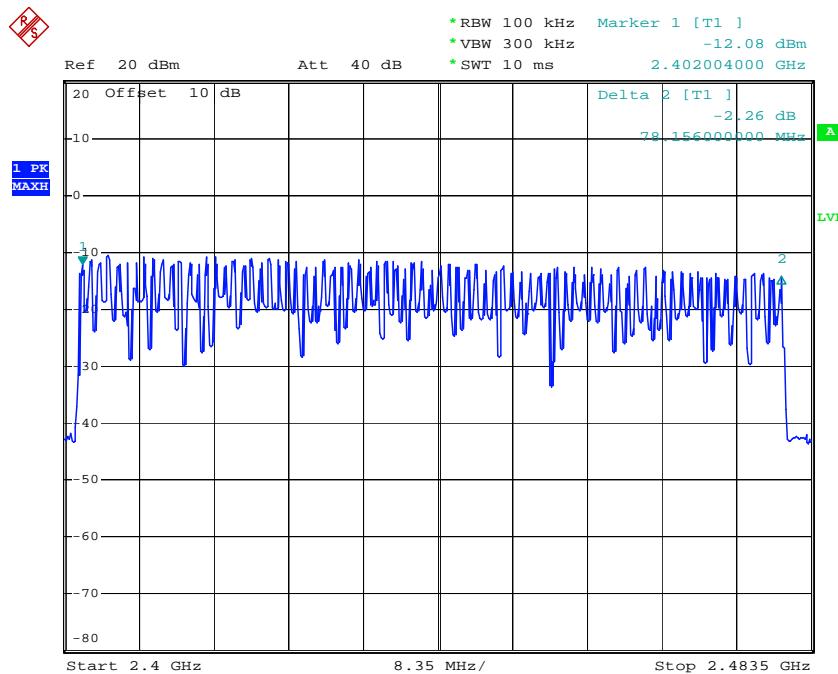
7.5.3. Max hold, view and count how many channel in the band.

## 7.6. Test Result

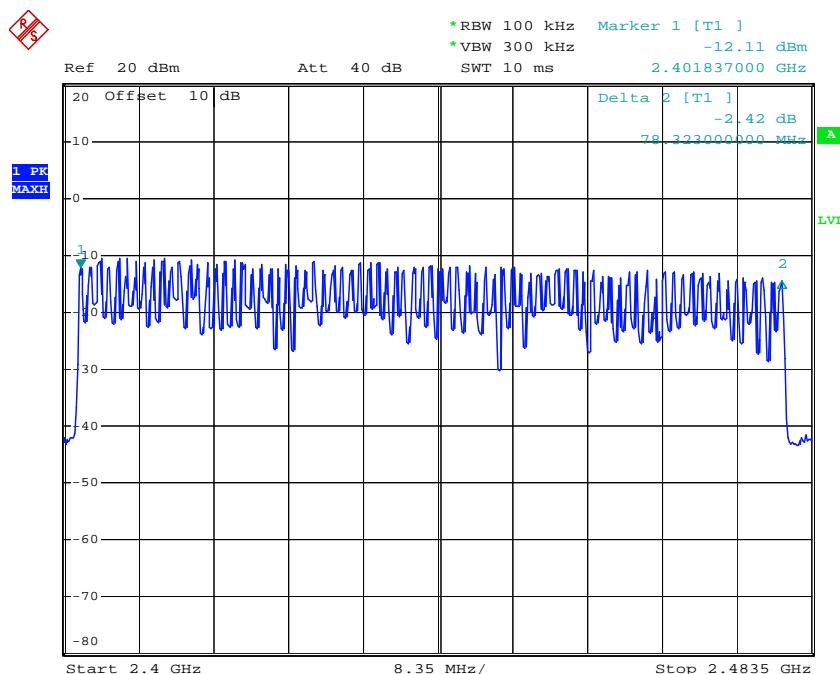
Total number of hopping channel	Measurement result(CH)	Limit(CH)
	79	$\geq 15$

The spectrum analyzer plots are attached as below.



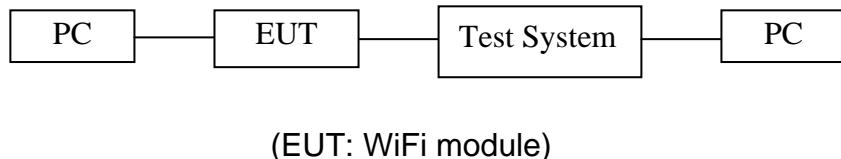
Number of hopping channels( $\Pi/4$  DQPSK)

## Number of hopping channels(8DPSK)



## 8. DWELL TIME TEST

### 8.1. Block Diagram of Test Setup



### 8.2. The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. 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. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

### 8.3. EUT Configuration on Measurement

The equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 8.4. Operating Condition of EUT

8.4.1. Setup the EUT and simulator as shown as Section 8.1.

8.4.2. Turn on the power of all equipment.

8.4.3. Let the EUT work in TX (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.

### 8.5. Test Procedure

8.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

8.5.2. Set center frequency of spectrum analyzer = operating frequency.

8.5.3. Set the spectrum analyzer as RBW=1MHz, VBW=3MHz, Span=0Hz, Adjust Sweep=5ms, 10ms, 15ms. Get the pulse time.

8.5.4.Repeat above procedures until all frequency measured were complete.

## 8.6.Test Result

### GFSK Mode

Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
DH1	2402	0.390	124.80	400
	2441	0.390	124.80	400
	2480	0.390	124.80	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(2*79)) \times 31.6$				
DH3	2402	1.680	268.80	400
	2441	1.660	265.60	400
	2480	1.690	270.40	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(4*79)) \times 31.6$				
DH5	2402	2.950	314.67	400
	2441	2.950	314.67	400
	2480	2.950	314.67	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(6*79)) \times 31.6$				

### $\Pi/4$ DQPSK

Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
DH1	2402	0.410	131.20	400
	2441	0.400	128.00	400
	2480	0.400	128.00	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(2*79)) \times 31.6$				
DH3	2402	1.670	267.20	400
	2441	1.700	272.00	400
	2480	1.700	272.00	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(4*79)) \times 31.6$				
DH5	2402	2.960	315.73	400
	2441	2.960	315.73	400
	2480	2.930	312.53	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(6*79)) \times 31.6$				

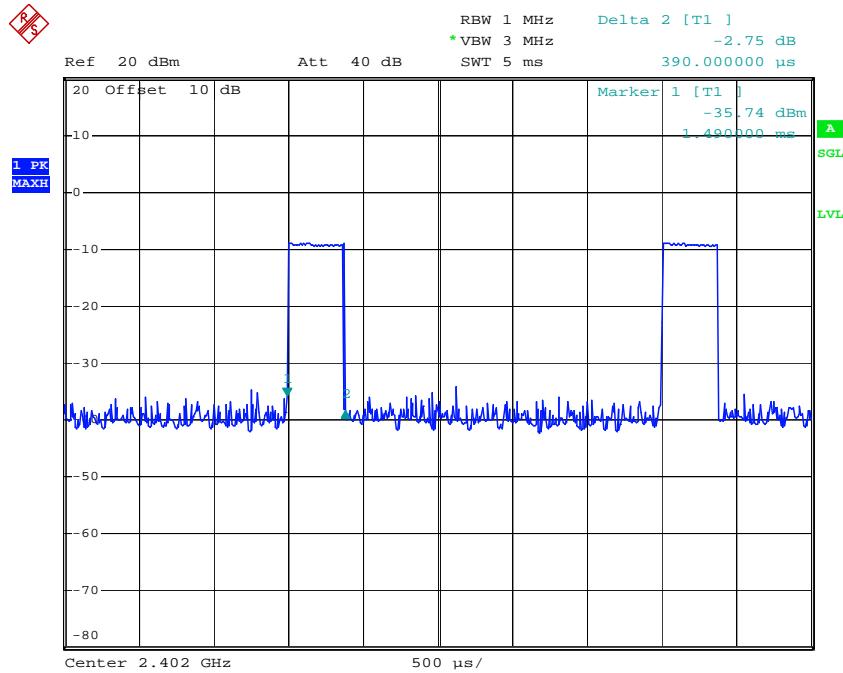
## 8DPSK Mode

Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
DH1	2402	0.400	128.00	400
	2441	0.400	128.00	400
	2480	0.400	128.00	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(2*79)) \times 31.6$				
DH3	2402	1.690	270.40	400
	2441	1.680	268.80	400
	2480	1.690	270.40	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(4*79)) \times 31.6$				
DH5	2402	2.970	316.80	400
	2441	2.940	313.60	400
	2480	2.930	312.53	400
A period transmit time = $0.4 \times 79 = 31.6$ Dwell time = pulse time $\times (1600/(6*79)) \times 31.6$				

The spectrum analyzer plots are attached as below.

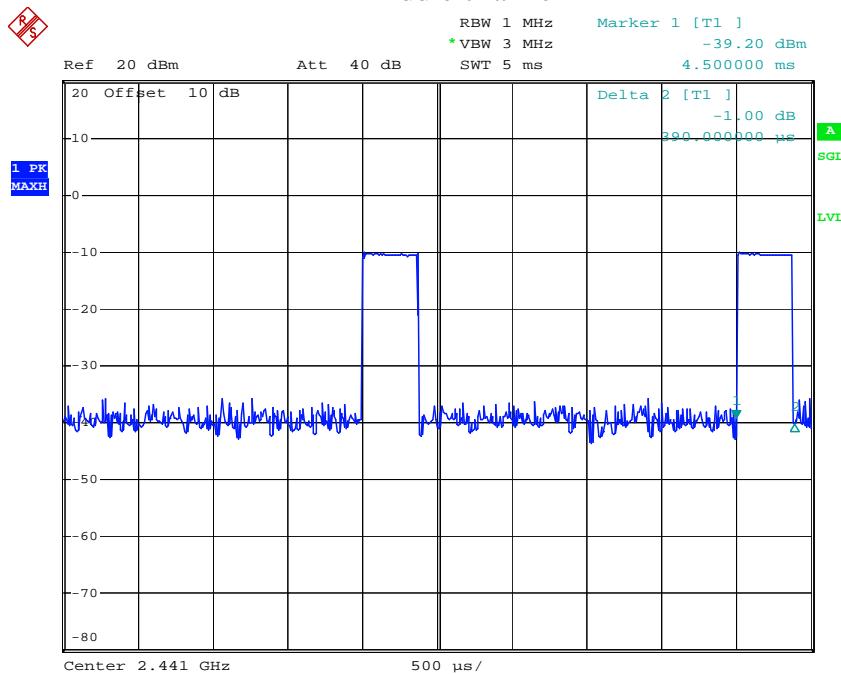
## GFSK Mode

DH1 Low channel



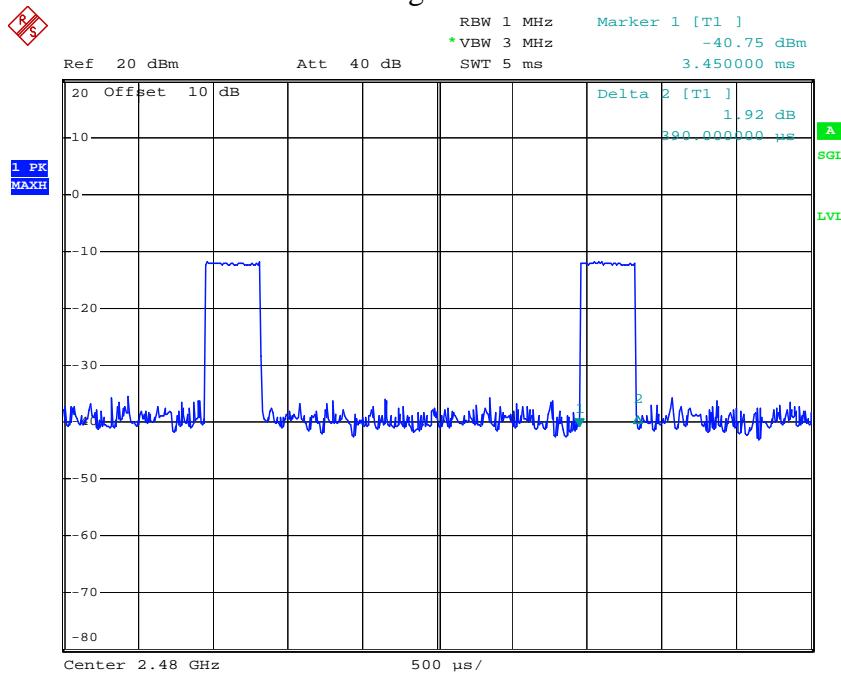
Comment A:  
Date: 18.JAN.2018 16:26:37

## DH1 Middle channel



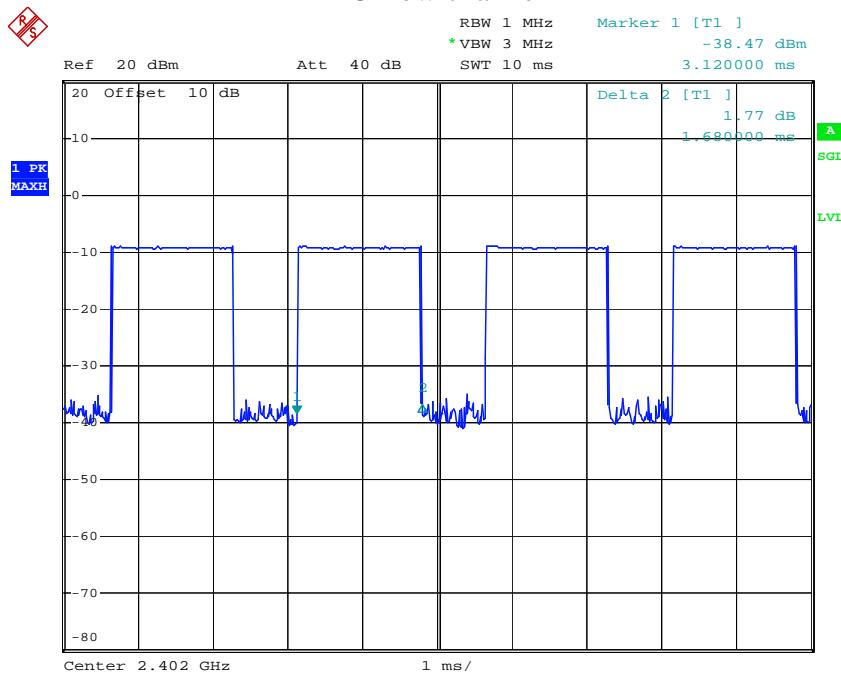
Comment A:  
Date: 18.JAN.2018 16:33:06

## DH1 High channel



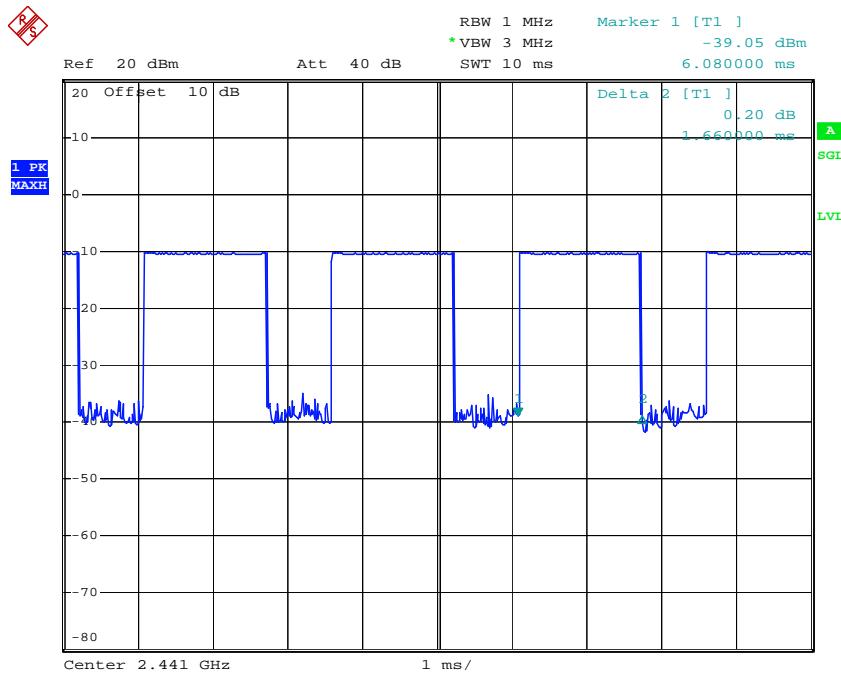
Comment A:  
Date: 18.JAN.2018 16:33:52

## DH3 Low channel



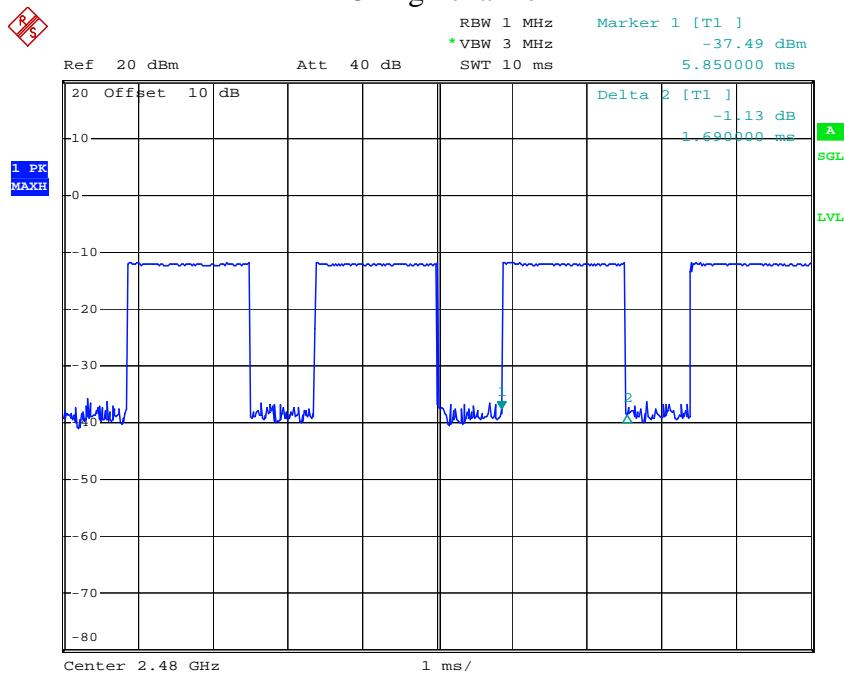
Comment A:  
Date: 18.JAN.2018 16:27:46

## DH3 Middle channel



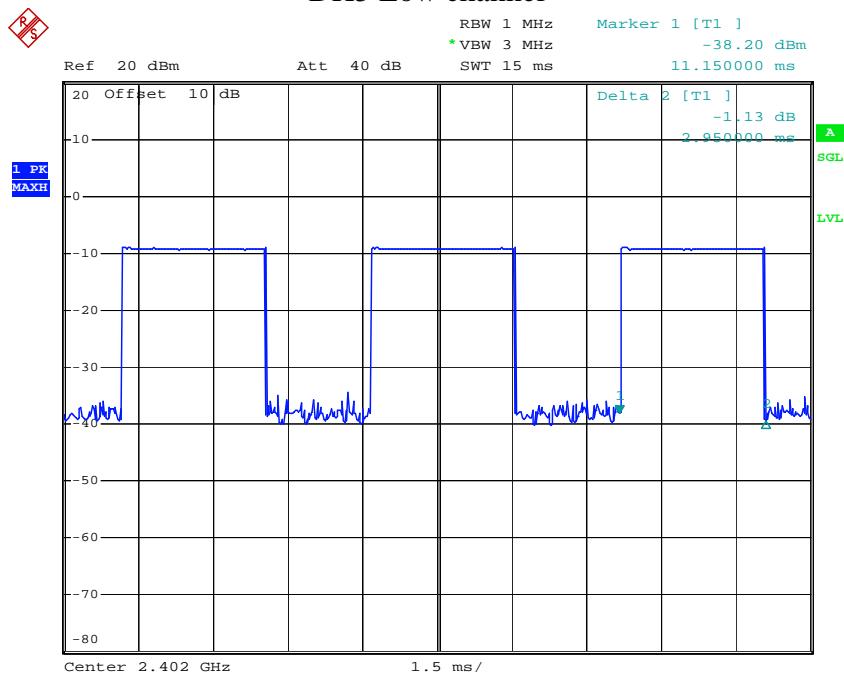
Comment A:  
Date: 18.JAN.2018 16:32:22

## DH3 High channel



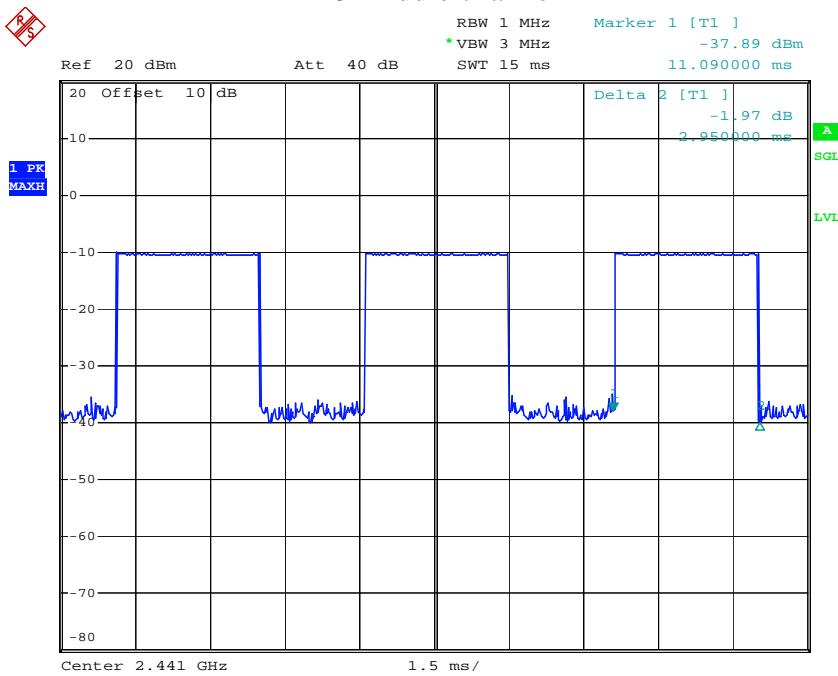
Comment A:  
Date: 18.JAN.2018 16:34:41

## DH5 Low channel



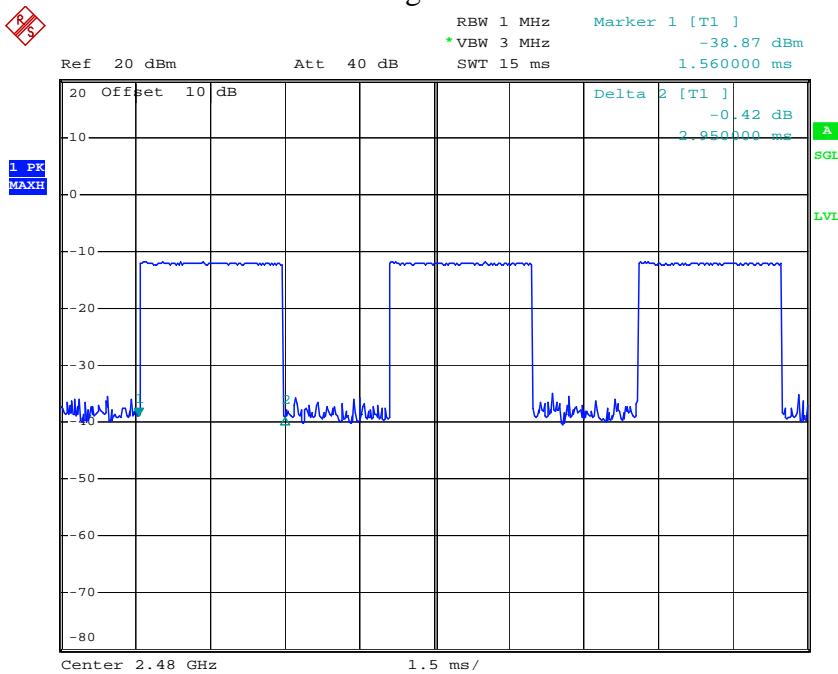
Comment A:  
Date: 18.JAN.2018 16:30:33

## DH5 Middle channel



Comment A:  
Date: 18.JAN.2018 16:31:37

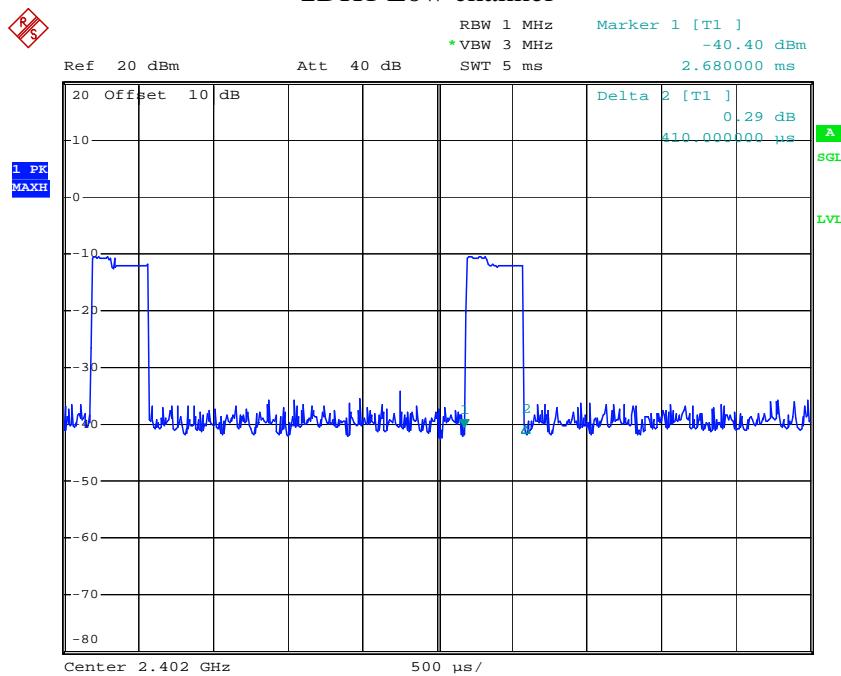
## DH5 High channel



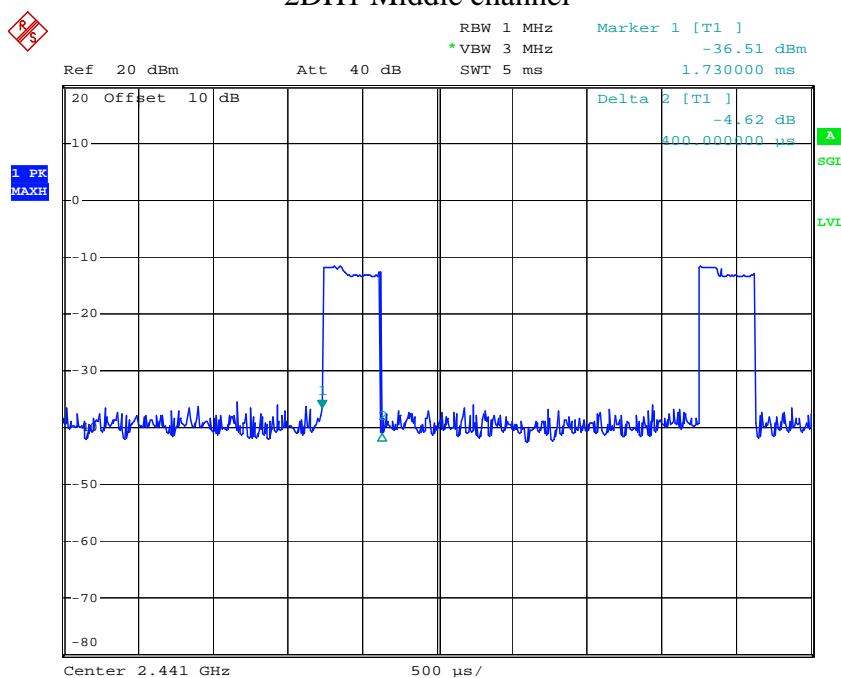
Comment A:  
Date: 18.JAN.2018 16:35:33

$\Pi/4$  DQPSK

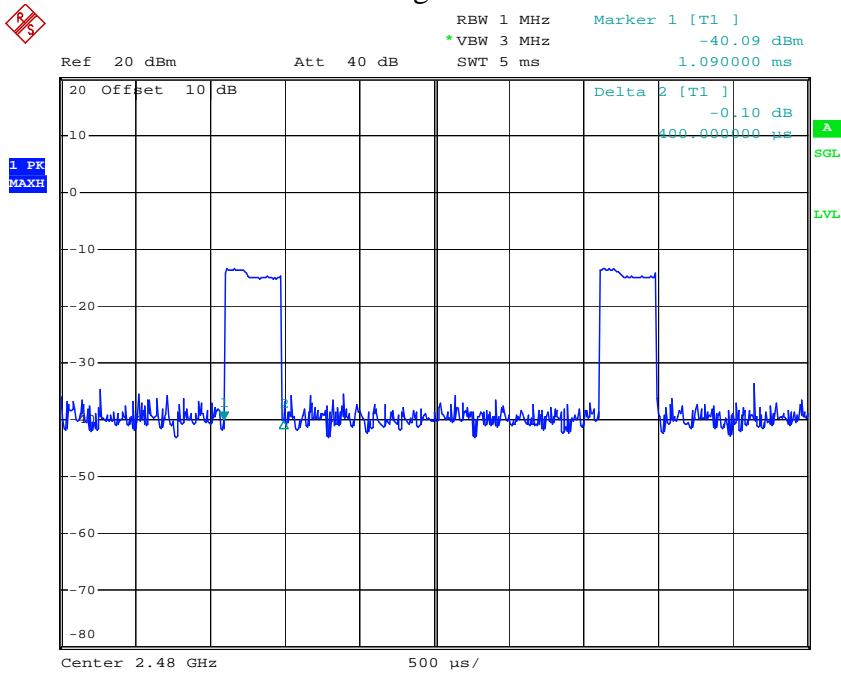
## 2DH1 Low channel



## 2DH1 Middle channel

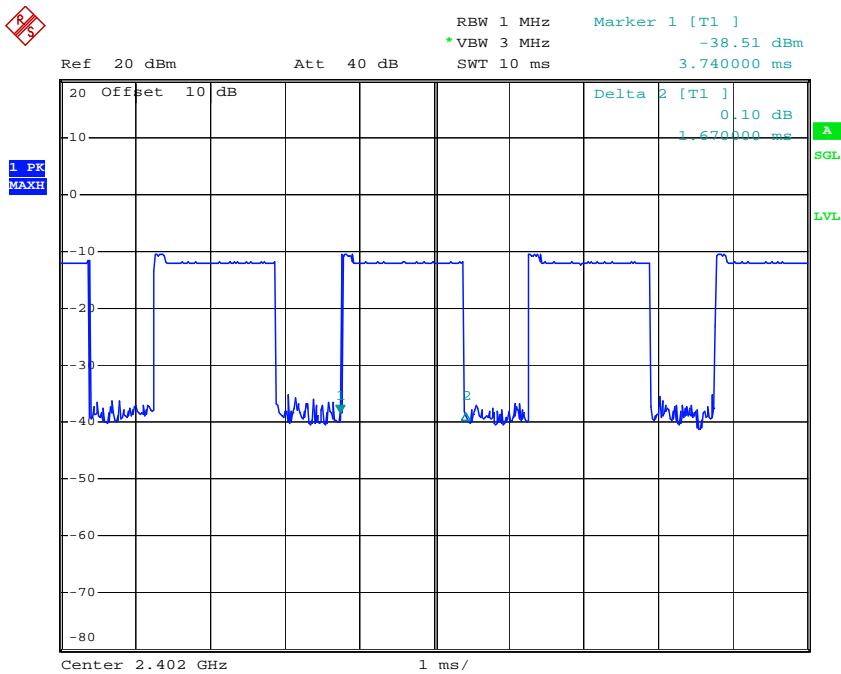


## 2DH1 High channel



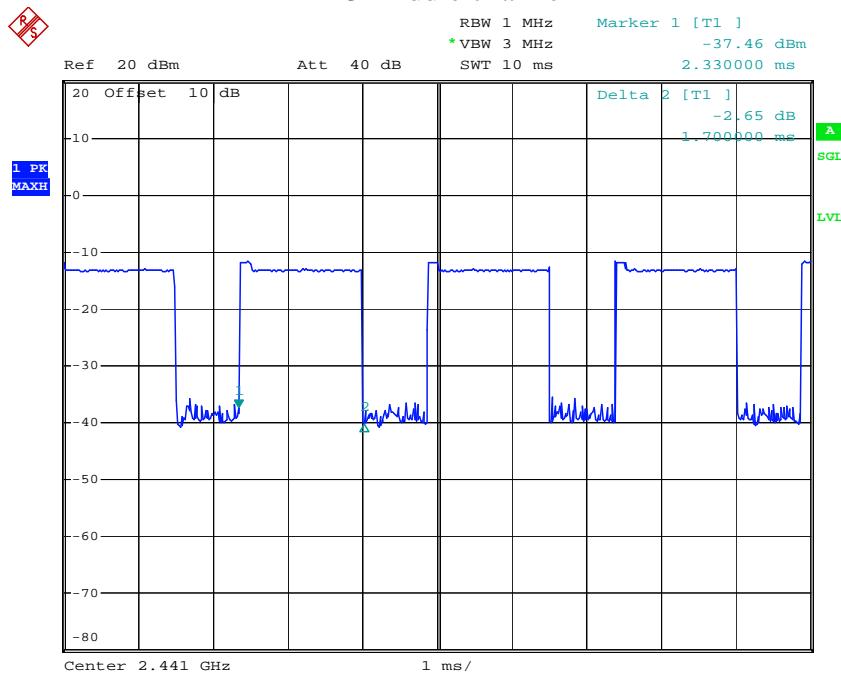
Comment A:  
Date: 18.JAN.2018 16:41:58

## 2DH3 Low channel



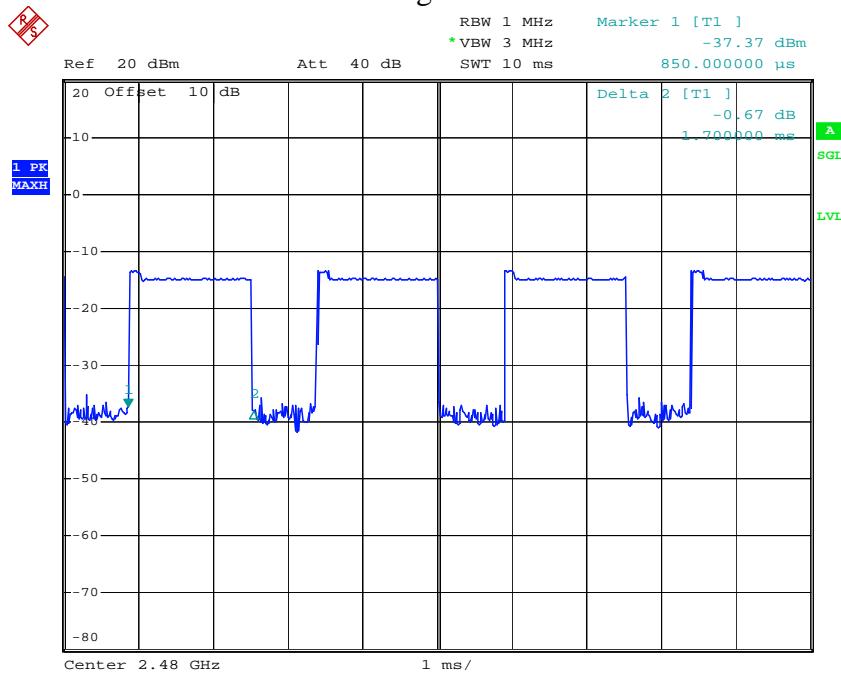
Comment A:  
Date: 18.JAN.2018 16:38:01

## 2DH3 Middle channel



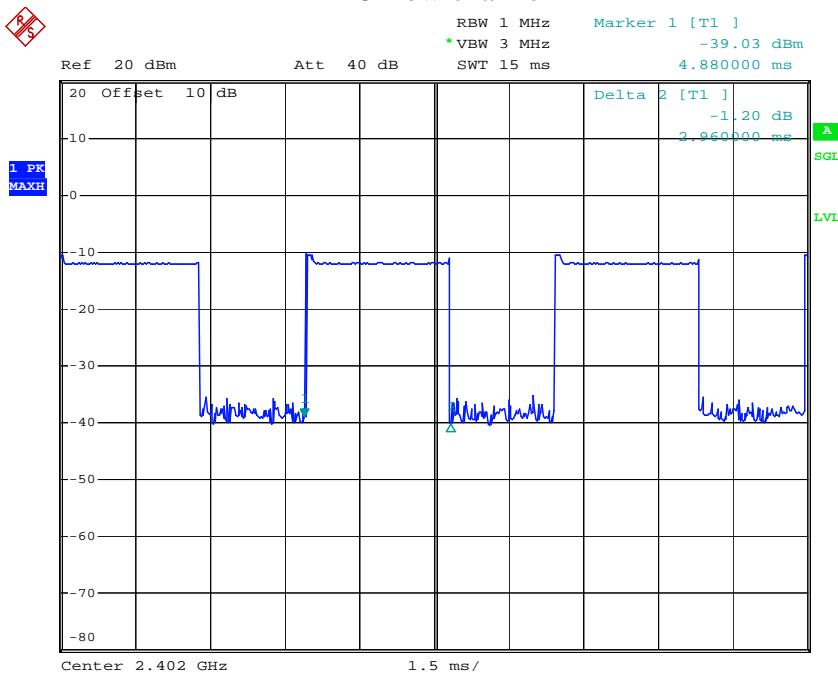
Comment A:  
Date: 18.JAN.2018 16:40:10

## 2DH3 High channel



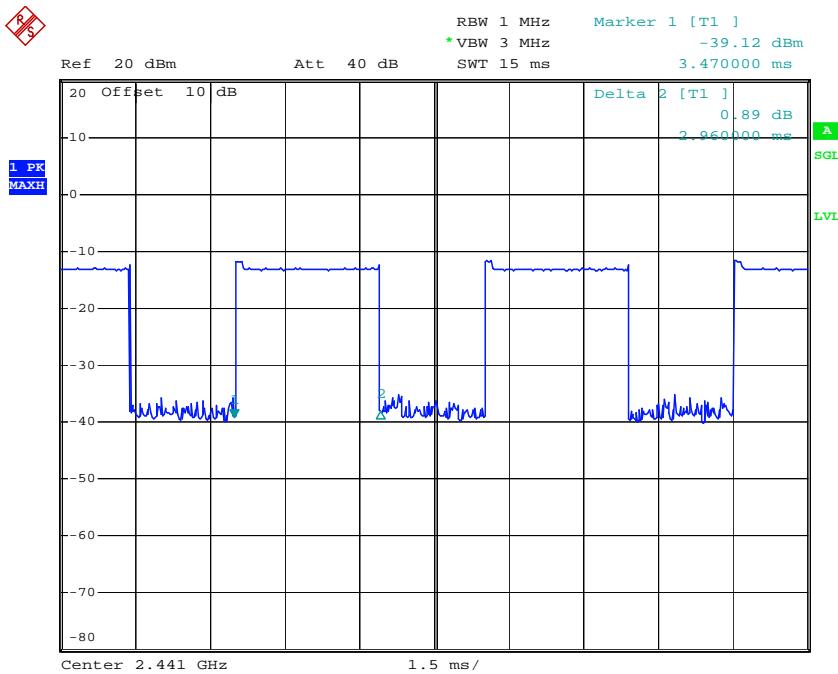
Comment A:  
Date: 18.JAN.2018 16:42:36

## 2DH5 Low channel



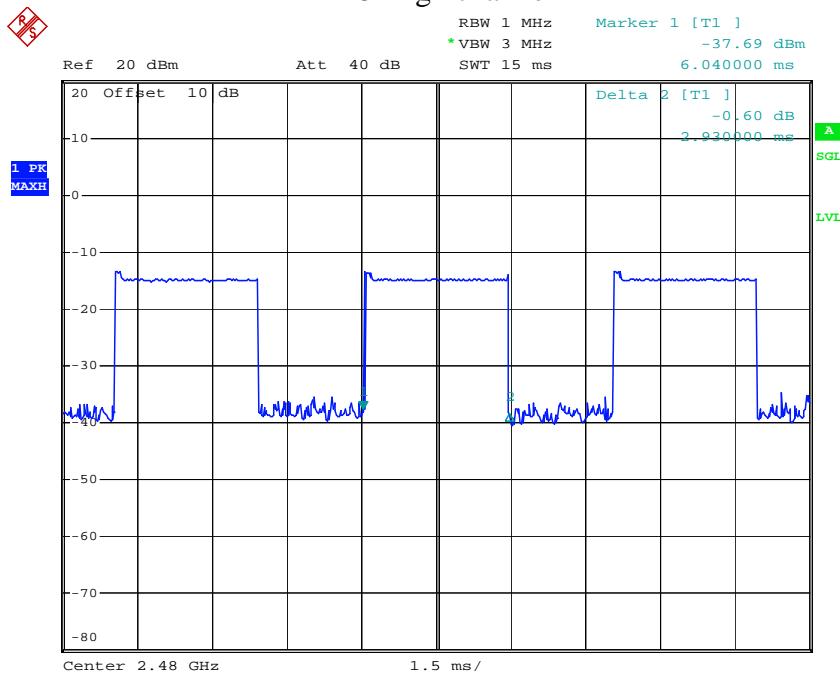
Comment A:  
Date: 18.JAN.2018 16:38:53

## 2DH5 Middle channel



Comment A:  
Date: 18.JAN.2018 16:39:31

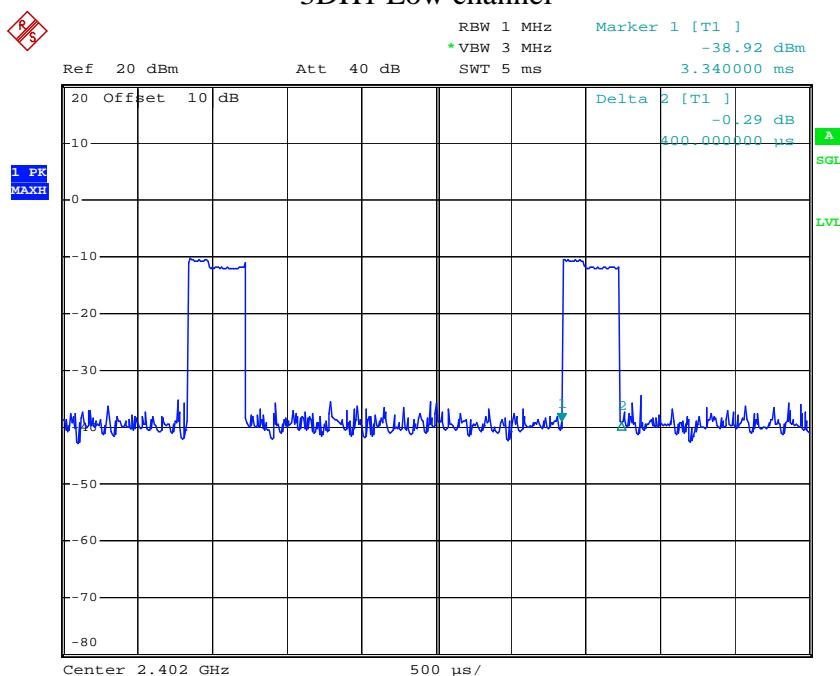
## 2DH5 High channel



Comment A:  
Date: 18.JAN.2018 16:43:12

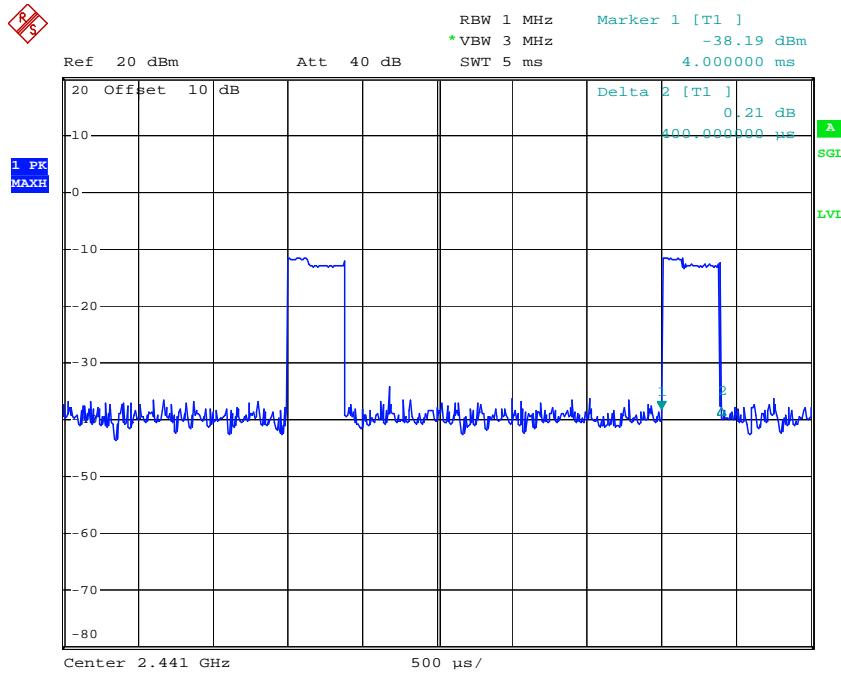
## 8DPSK Mode

## 3DH1 Low channel



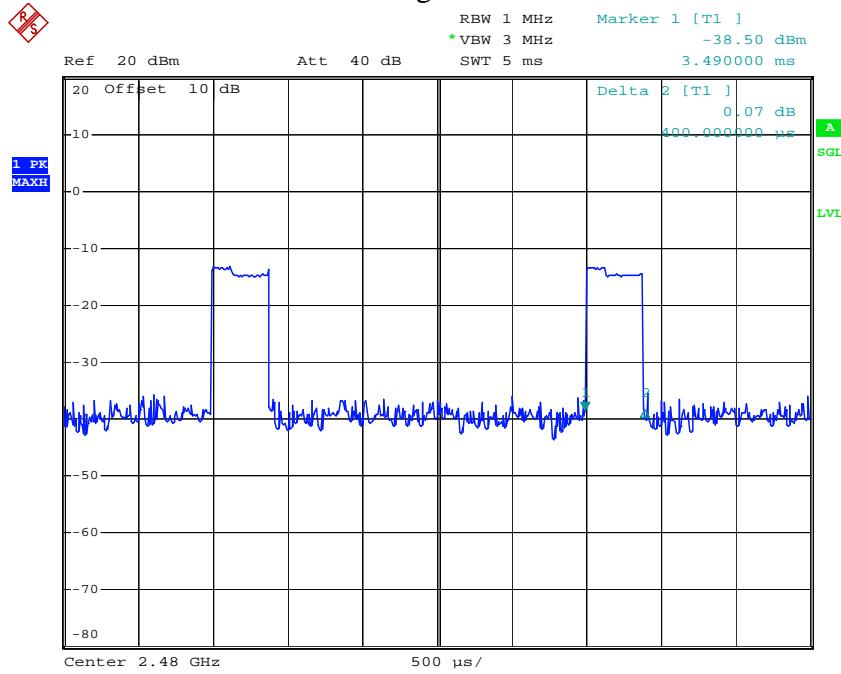
Comment A:  
Date: 18.JAN.2018 16:52:00

## 3DH1 Middle channel



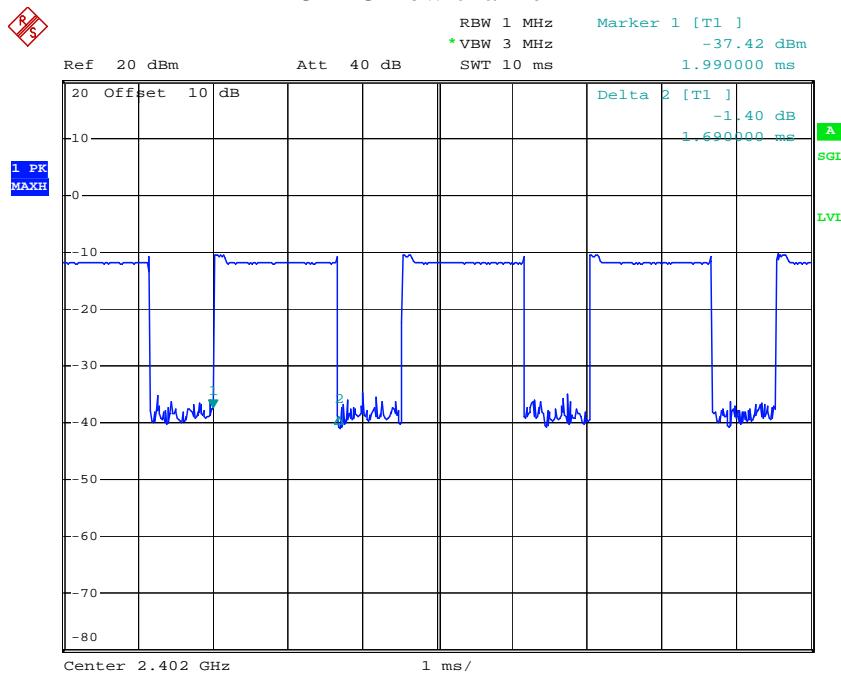
Comment A:  
Date: 18.JAN.2018 16:47:33

## 3DH1 High channel



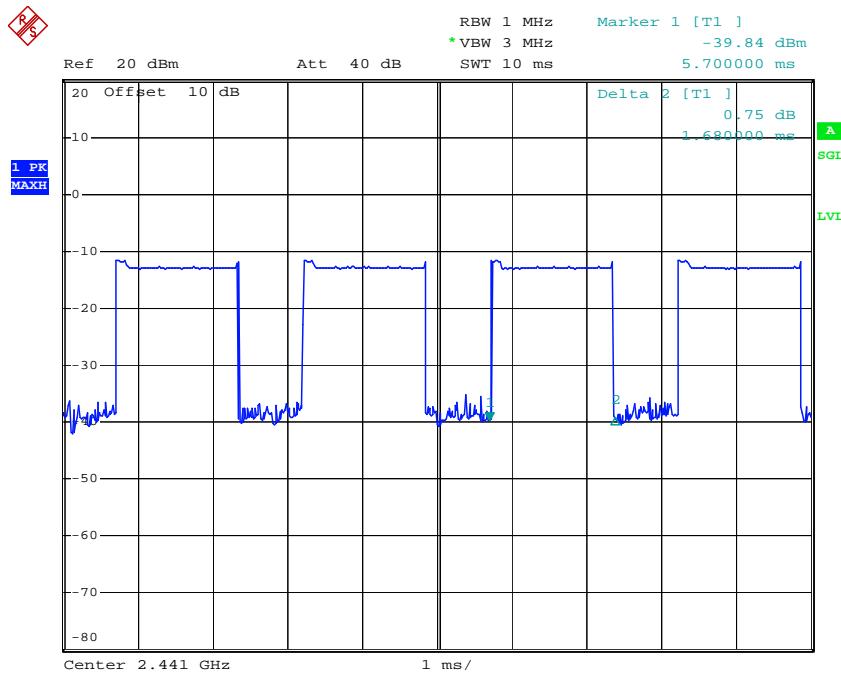
Comment A:  
Date: 18.JAN.2018 16:45:35

## 3DH3 Low channel



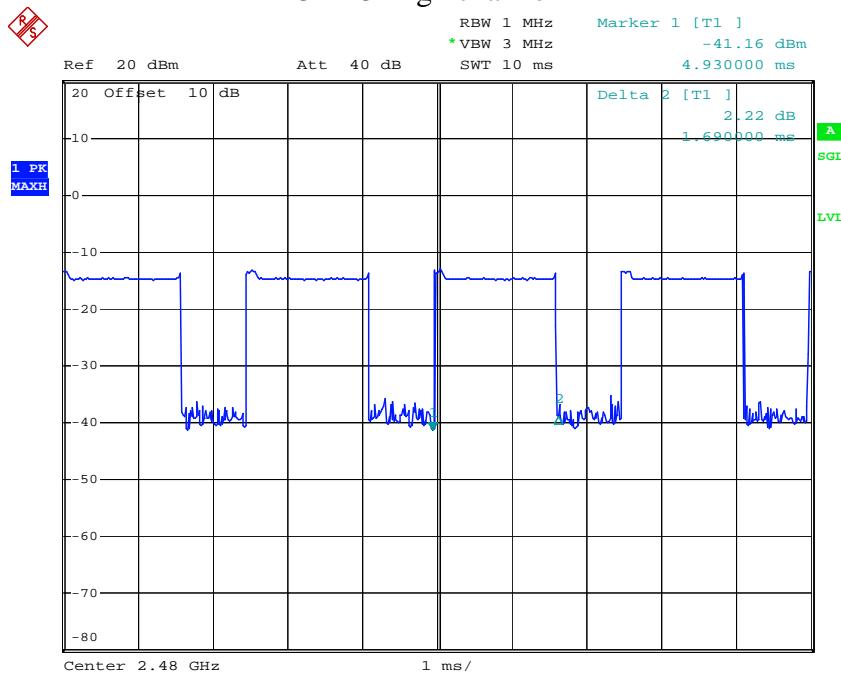
Comment A:  
Date: 18.JAN.2018 16:51:15

## 3DH3 Middle channel



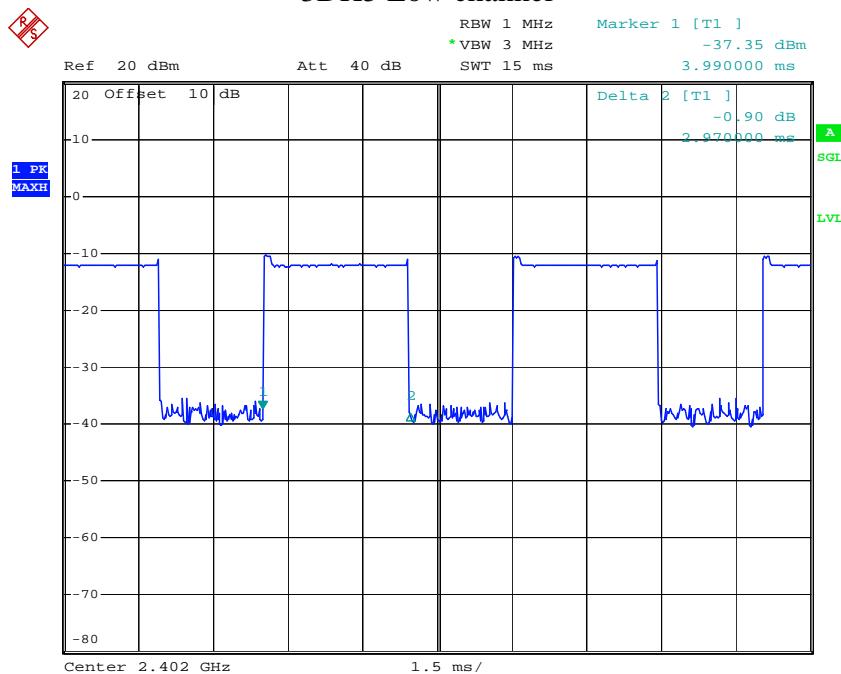
Comment A:  
Date: 18.JAN.2018 16:49:11

## 3DH3 High channel



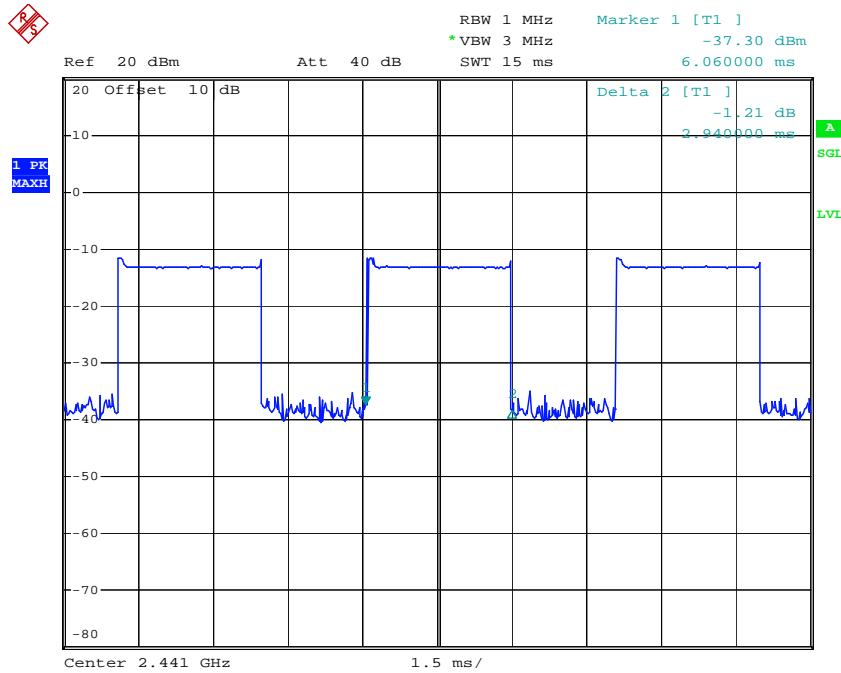
Comment A:  
Date: 18.JAN.2018 16:44:46

## 3DH5 Low channel



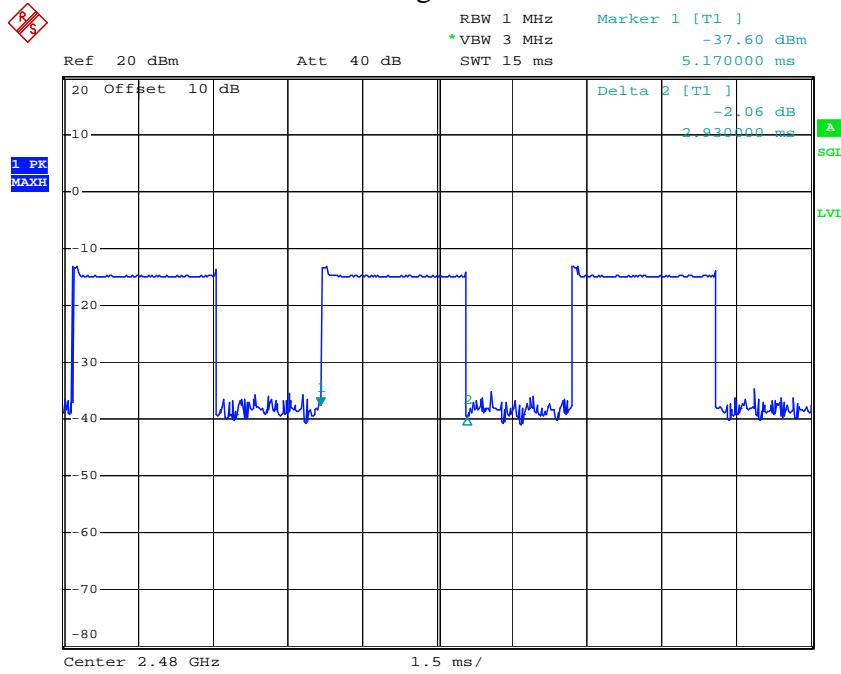
Comment A:  
Date: 18.JAN.2018 16:50:41

## 3DH5 Middle channel



Comment A:  
Date: 18.JAN.2018 16:49:43

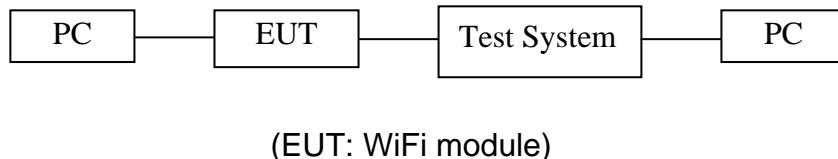
## 3DH5 High channel



Comment A:  
Date: 18.JAN.2018 16:44:04

## 9. MAXIMUM PEAK OUTPUT POWER TEST

### 9.1. Block Diagram of Test Setup



### 9.2. The Requirement For Section 15.247(b)(1)

Section 15.247(b)(1): For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

### 9.3. EUT Configuration on Measurement

The equipment are installed on the emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 9.4. Operating Condition of EUT

9.4.1. Setup the EUT and simulator as shown as Section 9.1.

9.4.2. Turn on the power of all equipment.

9.4.3. Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, and 2480MHz TX frequency to transmit.

### 9.5. Test Procedure

9.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

9.5.2. Set RBW of spectrum analyzer to 3MHz and VBW to 3MHz for GFSK mode

9.5.3. Set RBW of spectrum analyzer to 3MHz and VBW to 3MHz for other mode

9.5.4. Measurement the maximum peak output power.

## 9.6. Test Result

### GFSK Mode

Channel	Frequency (MHz)	Peak Output Power (dBm/W)	Limits dBm / W
Low	2402	-8.64/0.00014	21 / 0.125
Middle	2441	-9.59/0.00011	21 / 0.125
High	2480	-11.31/0.00007	21 / 0.125

### $\Pi/4$ DQPSK Mode

Channel	Frequency (MHz)	Peak Output Power (dBm/W)	Limits dBm / W
Low	2402	-9.95/0.00010	21 / 0.125
Middle	2441	-10.92/0.00008	21 / 0.125
High	2480	-13.17/0.00005	21 / 0.125

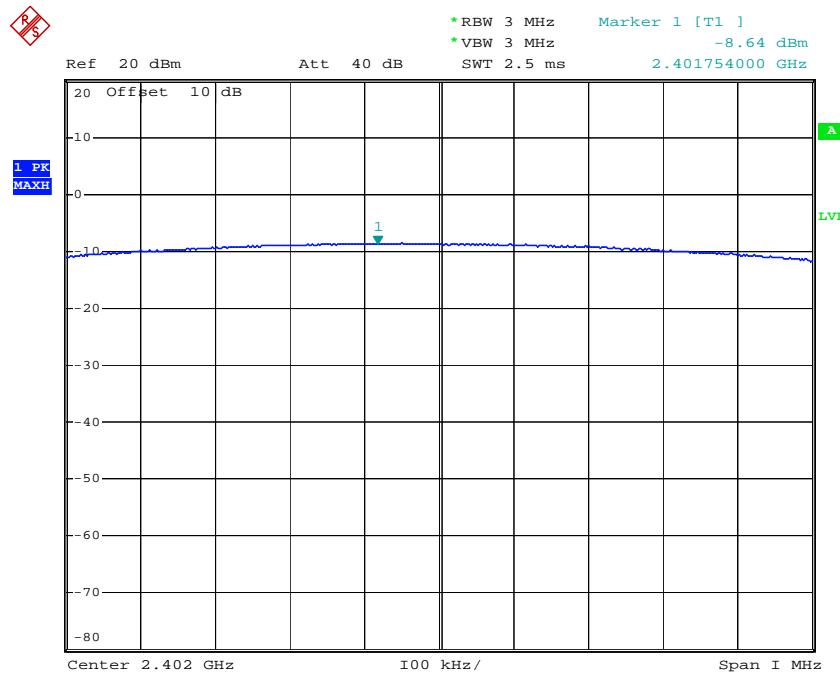
### 8DPSK Mode

Channel	Frequency (MHz)	Peak Output Power (dBm/W)	Limits dBm / W
Low	2402	-9.69/0.00011	21 / 0.125
Middle	2441	-11.08/0.00008	21 / 0.125
High	2480	-12.82/0.00005	21 / 0.125

The spectrum analyzer plots are attached as below.

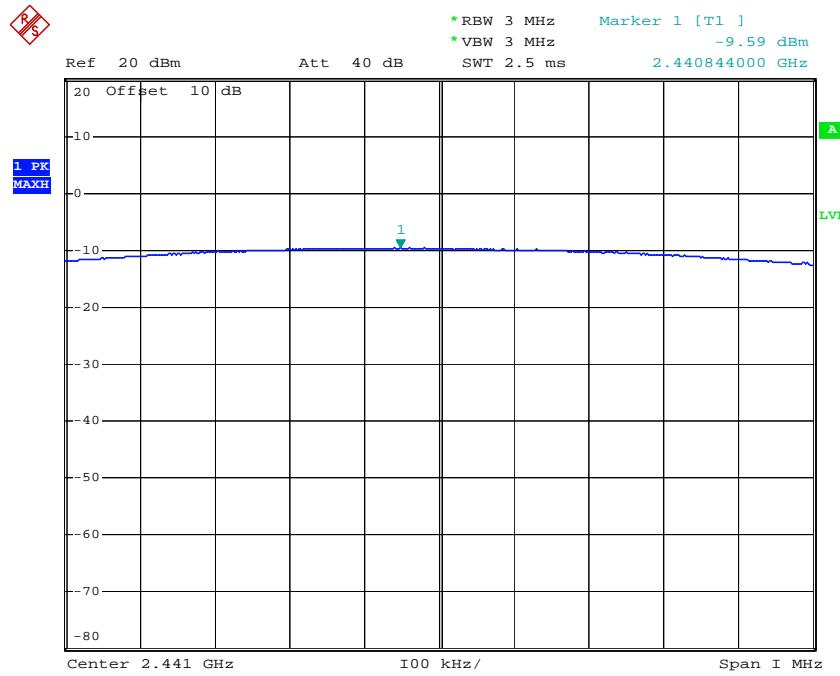
## GFSK Mode

## Low channel



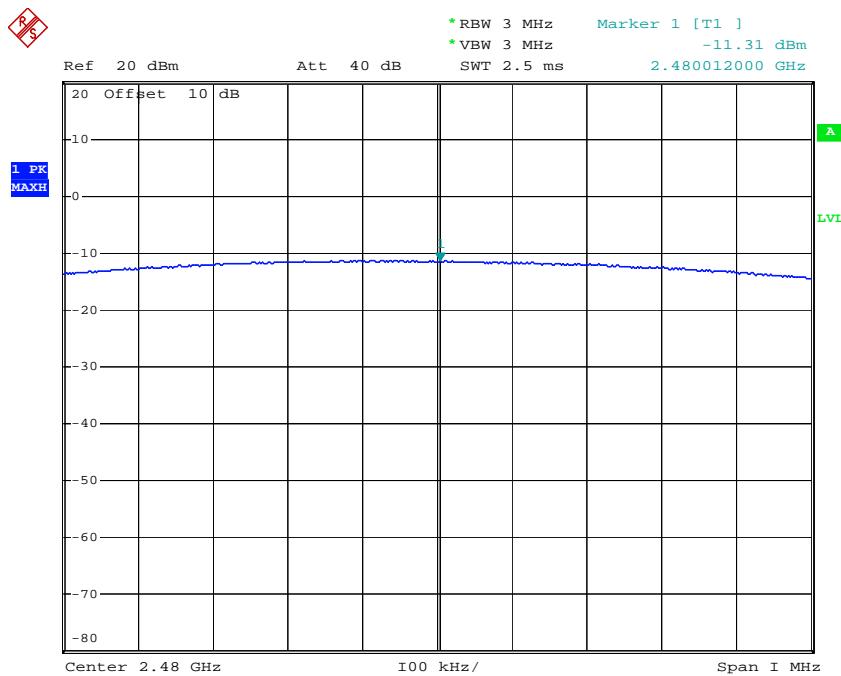
Comment A:  
Date: 18.JAN.2018 15:08:25

## Middle channel



Comment A:  
Date: 18.JAN.2018 15:13:26

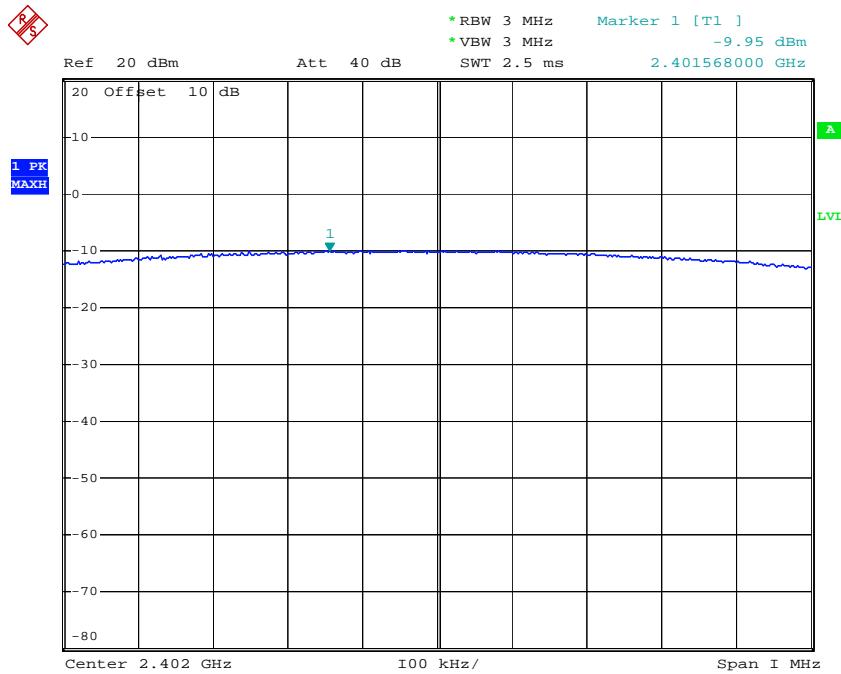
## High channel



Comment A:  
Date: 18.JAN.2018 15:14:40

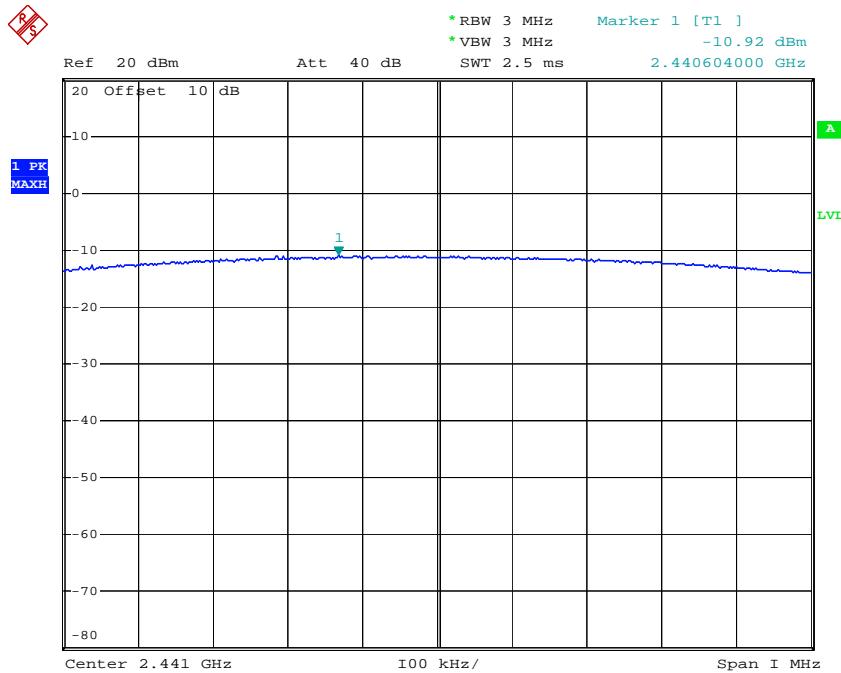
## Pi/4 DQPSK Mode

## Low channel



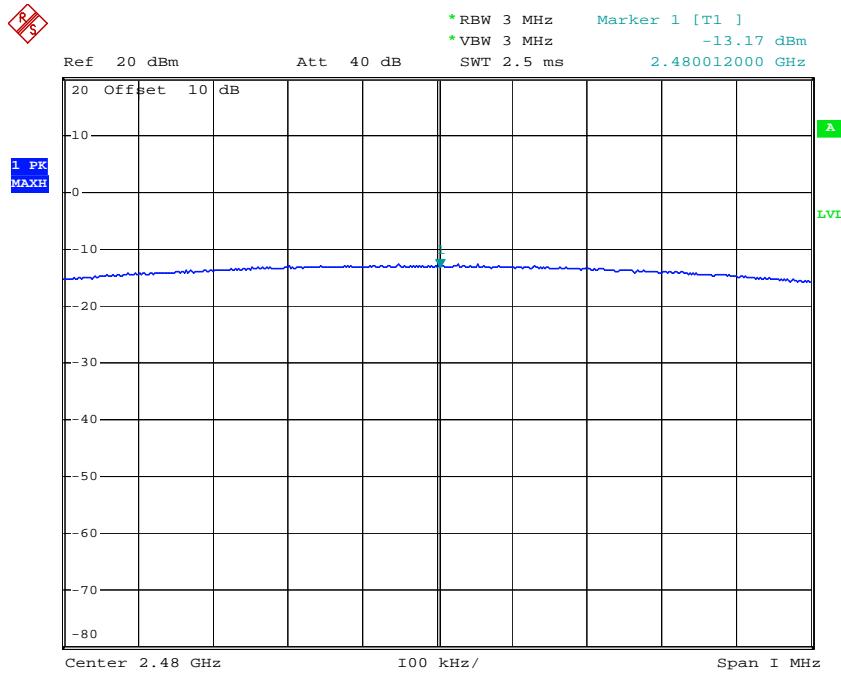
Comment A:  
Date: 18.JAN.2018 15:16:43

## Middle channel



Comment A:  
Date: 18.JAN.2018 15:15:59

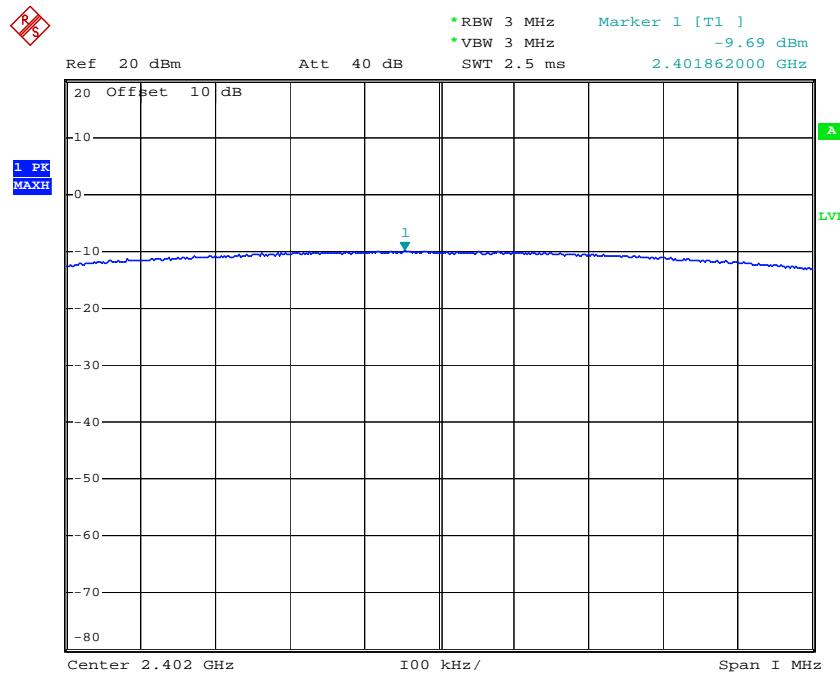
## High channel



Comment A:  
Date: 18.JAN.2018 15:15:25

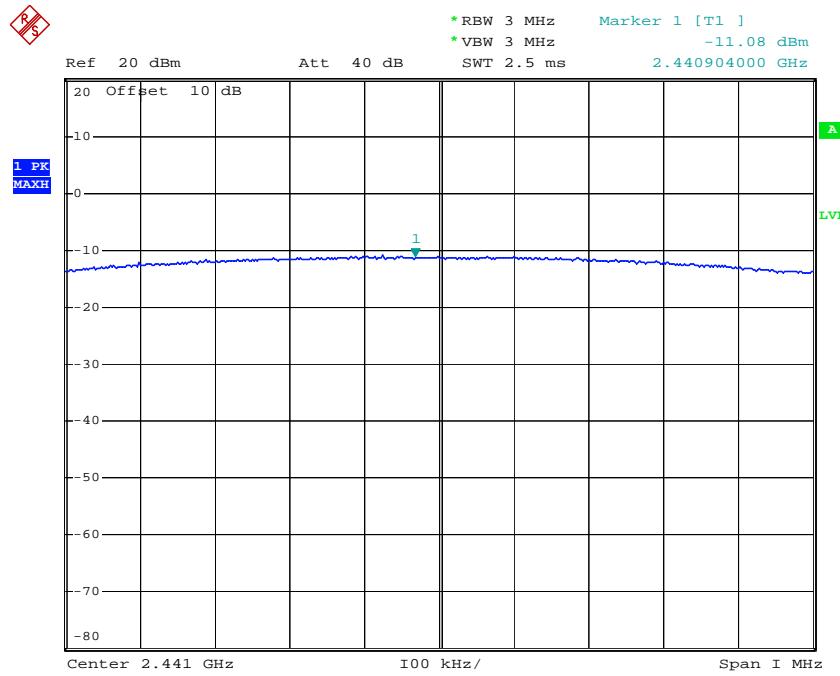
## 8DPSK Mode

## Low channel



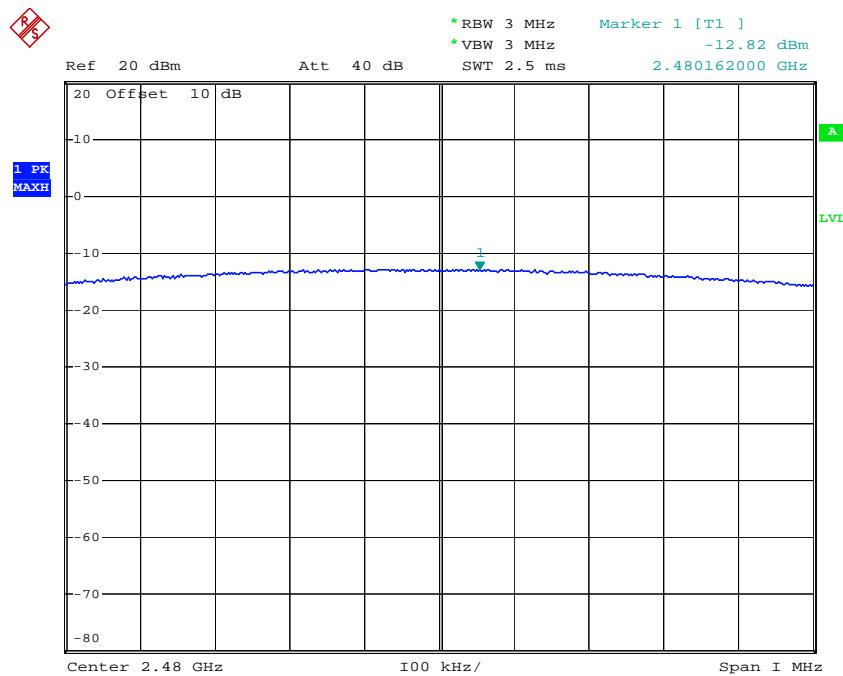
Comment A:  
Date: 18.JAN.2018 15:17:08

## Middle channel



Comment A:  
Date: 18.JAN.2018 15:17:35

## High channel



Comment A:  
Date: 18.JAN.2018 15:18:08

## 10.RADIATED EMISSION TEST

### 10.1.Block Diagram of Test Setup

#### 10.1.1.Block diagram of connection between the EUT and peripherals

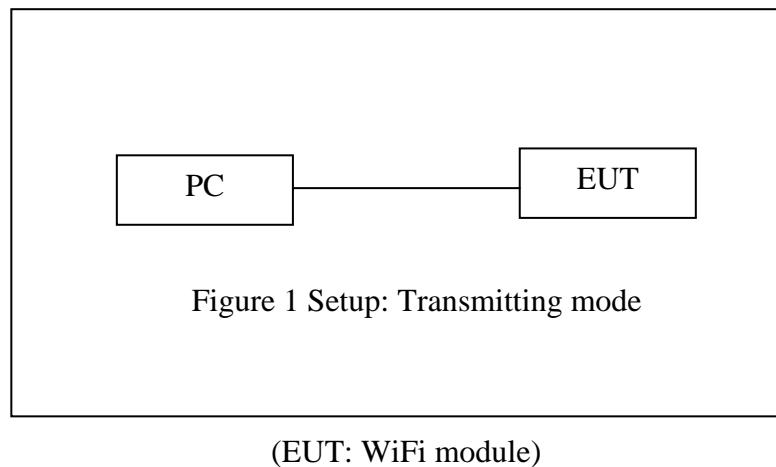
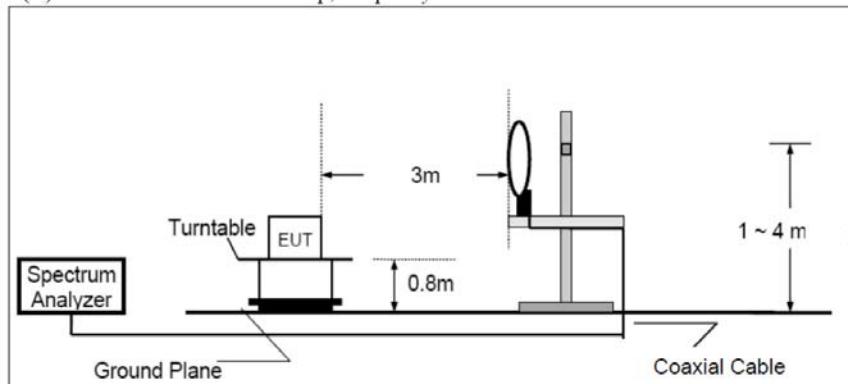


Figure 1 Setup: Transmitting mode

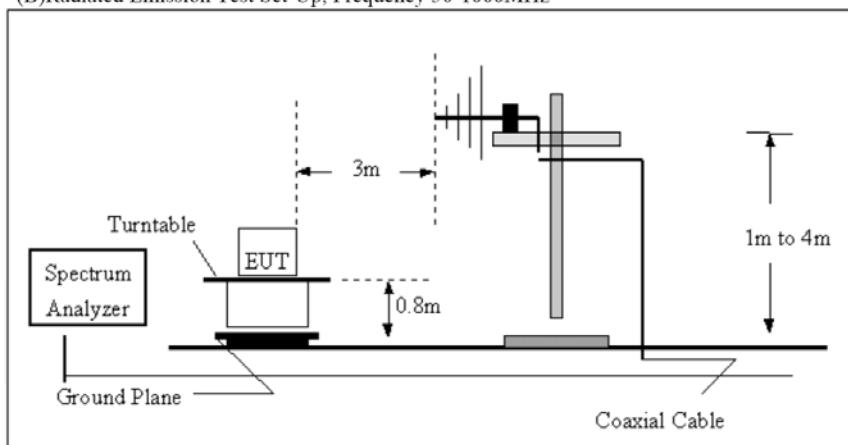
(EUT: WiFi module)

#### 10.1.2.Semi-Anechoic Chamber Test Setup Diagram

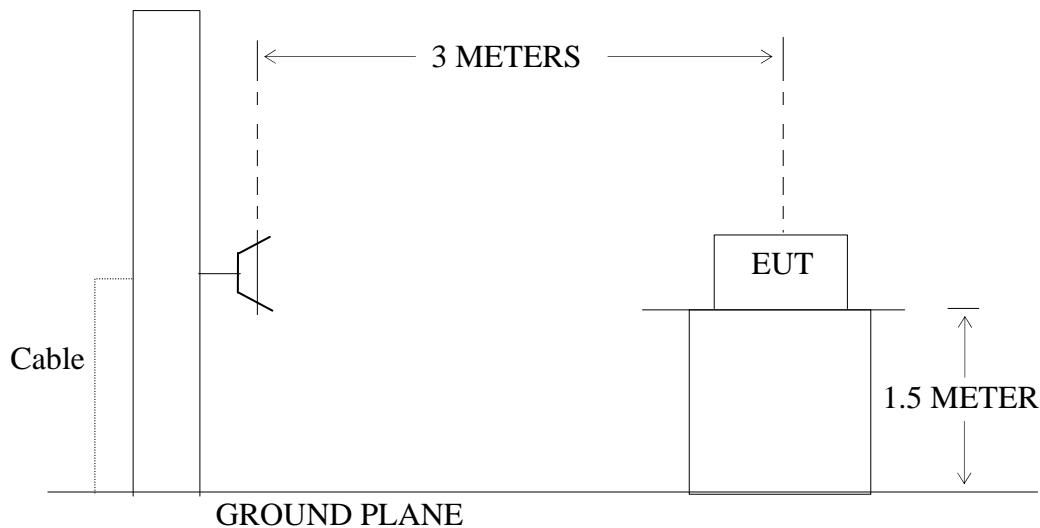
(A)Radiated Emission Test Set-Up, Frequency below 30MHz



(B)Radiated Emission Test Set-Up, Frequency 30-1000MHz



## (C) Radiated Emission Test Set-Up, Frequency above 1GHz



## 10.2.The Limit For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

### 10.3.Restricted bands of operation

#### 10.3.1.FCC Part 15.205 Restricted bands of operation

- (a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

<sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510

<sup>2</sup>Above 38.6

- (b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

### 10.4.Configuration of EUT on Measurement

The equipment is installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

## 10.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground(Below 1GHz). The EUT and its simulators are placed on a turntable, which is 1.5 meter high above ground(Above 1GHz). The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bi-log antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the EUT location must be manipulated according to ANSI C63.10:2013 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

During the radiated emission test, the spectrum analyzer was set with the following configurations:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for peak measurement with peak detector at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average measurement with peak detection at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

## 10.6. The Field Strength of Radiation Emission Measurement Results

**Note: 1. We tested GFSK mode,  $\Pi/4$  DQPSK Mode & 8DPSK mode and recorded the worst case data**

**(GFSK mode) from 30MHz-1GHz.**

**2. The test frequency is from 9KHz to 25GHz, The radiation emission from 9KHz-30MHz and 18-25GHz are not reported, because the levels are too low against the limit.**

## Below 1GHz



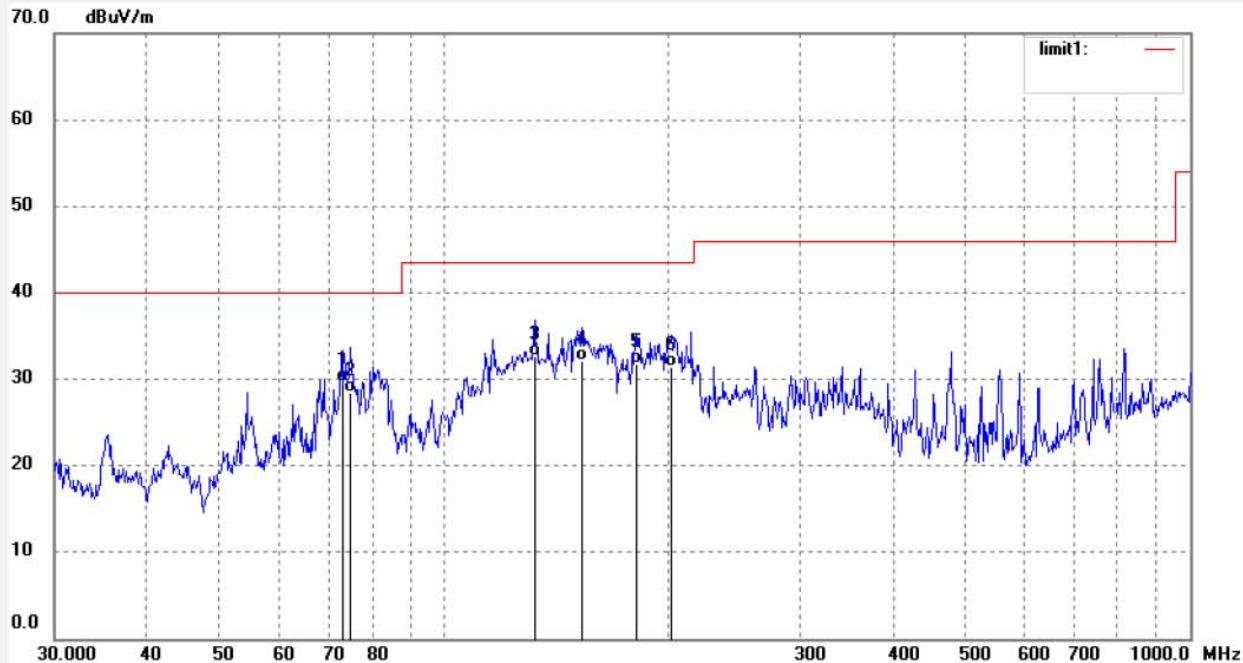
ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.ChinaSite: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #101  
 Standard: FCC Class B 3M Radiated  
 Test item: Radiation Test  
 Temp.( C)/Hum.(%) 25 C / 55 %  
 EUT: Wifi module  
 Mode: TX 2402MHz(GFSK)  
 Model: M632USA1  
 Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal  
 Power Source: DC 3.3V  
 Date: 2018/01/23  
 Time: 17:31:52  
 Engineer Signature:  
 Distance: 3m

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	73.2330	57.38	-27.63	29.75	40.00	-10.25	QP	200	354	
2	74.7934	56.15	-27.69	28.46	40.00	-11.54	QP	200	128	
3	132.1489	60.48	-27.77	32.71	43.50	-10.79	QP	200	198	
4	153.1627	59.95	-27.77	32.18	43.50	-11.32	QP	200	48	
5	180.6639	57.80	-25.97	31.83	43.50	-11.67	QP	200	145	
6	201.4539	55.67	-24.30	31.37	43.50	-12.13	QP	200	132	



## ACCURATE TECHNOLOGY CO., LTD.

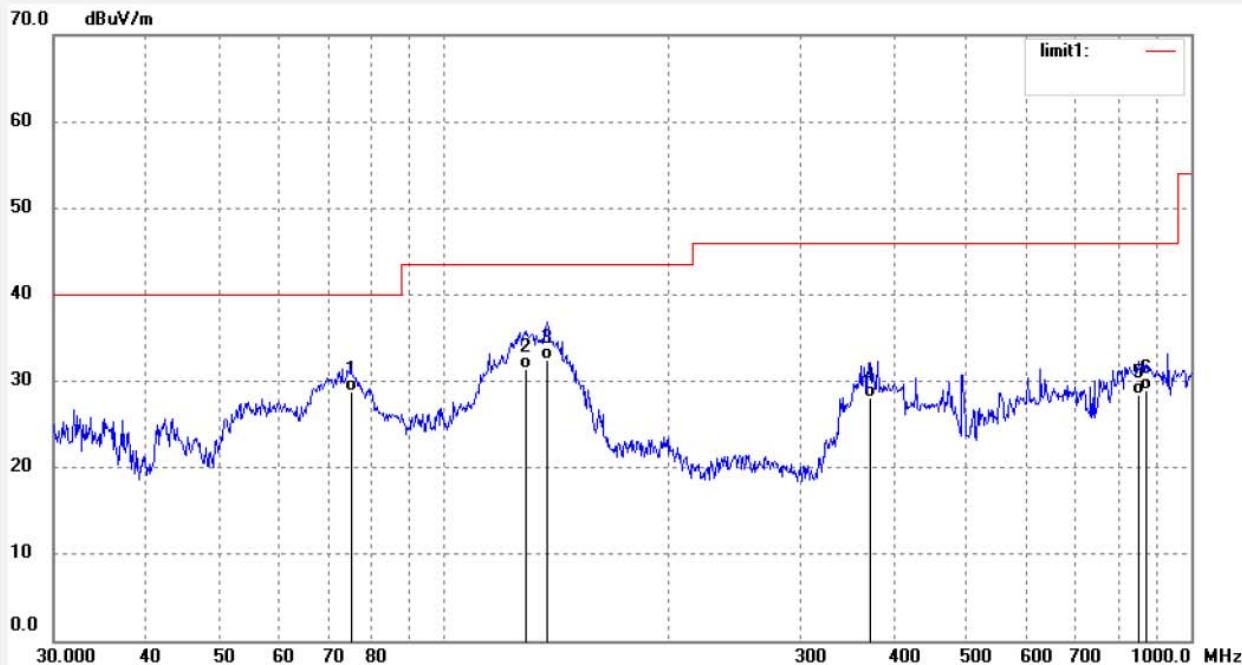
F1,Bldg.A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #102  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 55 %  
EUT: Wifi module  
Mode: TX 2402MHz(GSFK)  
Model: M632USA1  
Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical  
Power Source: DC 3.3V  
Date: 2018/01/23  
Time: 17:29:25  
Engineer Signature:  
Distance: 3m

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	75.0566	56.48	-27.70	28.78	40.00	-11.22	QP	100	320	
2	128.4858	59.12	-27.67	31.45	43.50	-12.05	QP	100	354	
3	137.3565	60.32	-27.89	32.43	43.50	-11.07	QP	100	249	
4	372.5747	46.78	-18.74	28.04	46.00	-17.96	QP	100	145	
5	850.7603	36.45	-8.01	28.44	46.00	-17.56	QP	100	325	
6	871.9442	36.58	-7.67	28.91	46.00	-17.09	QP	100	127	



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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #104

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: DC 3.3V

Test item: Radiation Test

Date: 2018/01/23

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 17:31:52

EUT: Wifi module

Engineer Signature:

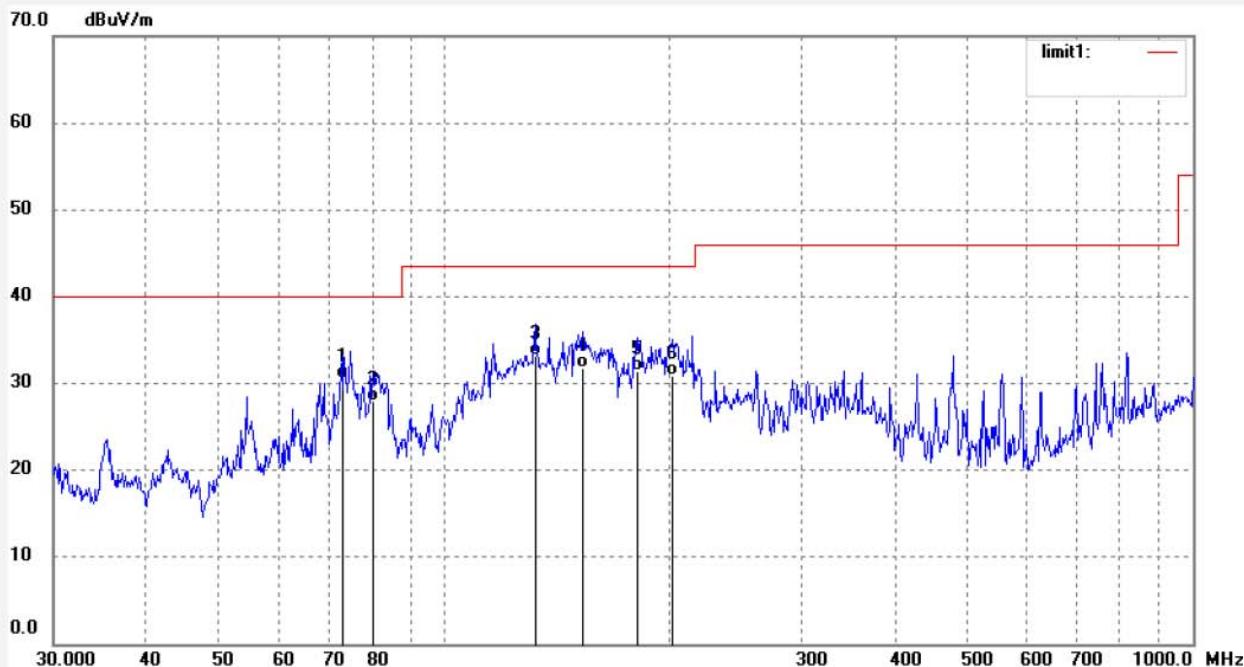
Mode: TX 2441MHz(GFSK)

Distance: 3m

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	73.2330	58.21	-27.63	30.58	40.00	-9.42	QP	200	51	
2	80.2382	55.31	-27.40	27.91	40.00	-12.09	QP	200	196	
3	132.1489	60.92	-27.77	33.15	43.50	-10.35	QP	200	254	
4	153.1627	59.54	-27.77	31.77	43.50	-11.73	QP	200	52	
5	180.6639	57.32	-25.97	31.35	43.50	-12.15	QP	200	351	
6	201.4539	55.19	-24.30	30.89	43.50	-12.61	QP	200	103	



## ACCURATE TECHNOLOGY CO., LTD.

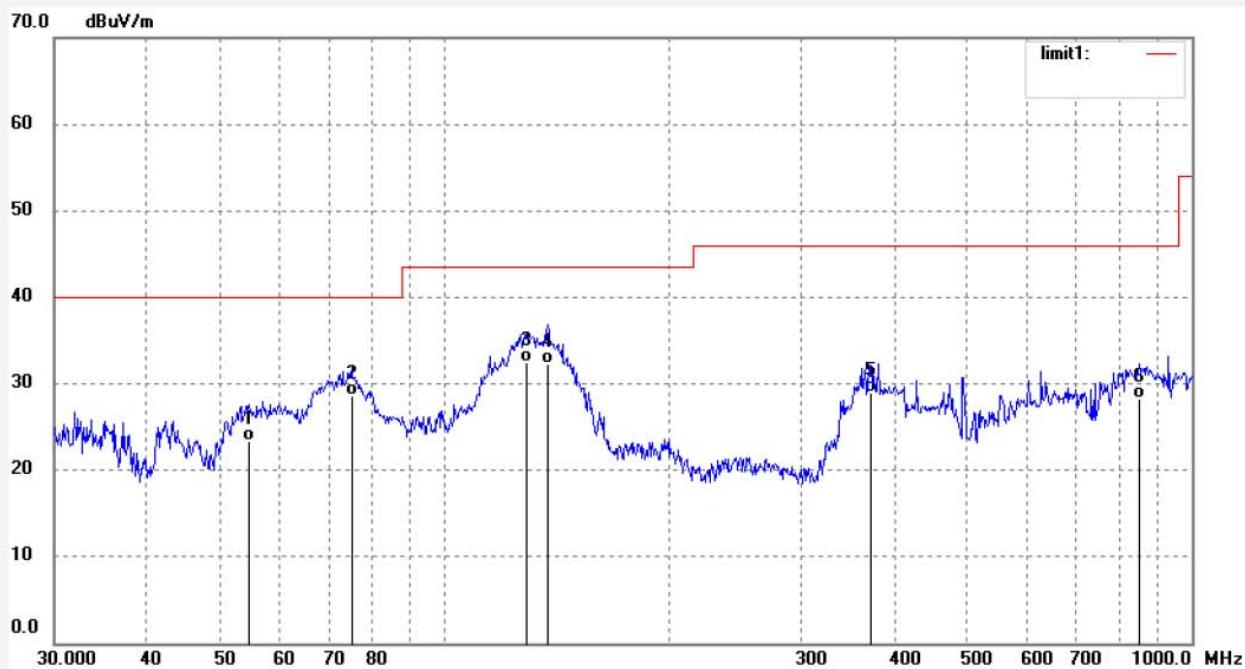
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #103  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 55 %  
EUT: Wifi module  
Mode: TX 2441MHz(GSFK)  
Model: M632USA1  
Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical  
Power Source: DC 3.3V  
Date: 2018/01/23  
Time: 17:29:25  
Engineer Signature:  
Distance: 3m

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	54.7085	50.32	-26.96	23.36	40.00	-16.64	QP	100	302	
2	75.0566	56.25	-27.70	28.55	40.00	-11.45	QP	100	324	
3	128.4858	60.15	-27.67	32.48	43.50	-11.02	QP	100	178	
4	137.3565	60.26	-27.89	32.37	43.50	-11.13	QP	100	97	
5	372.5747	47.65	-18.74	28.91	46.00	-17.09	QP	100	28	
6	850.7603	36.25	-8.01	28.24	46.00	-17.76	QP	100	128	



## ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #105

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: DC 3.3V

Test item: Radiation Test

Date: 2018/01/23

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 17:31:52

EUT: Wifi module

Engineer Signature:

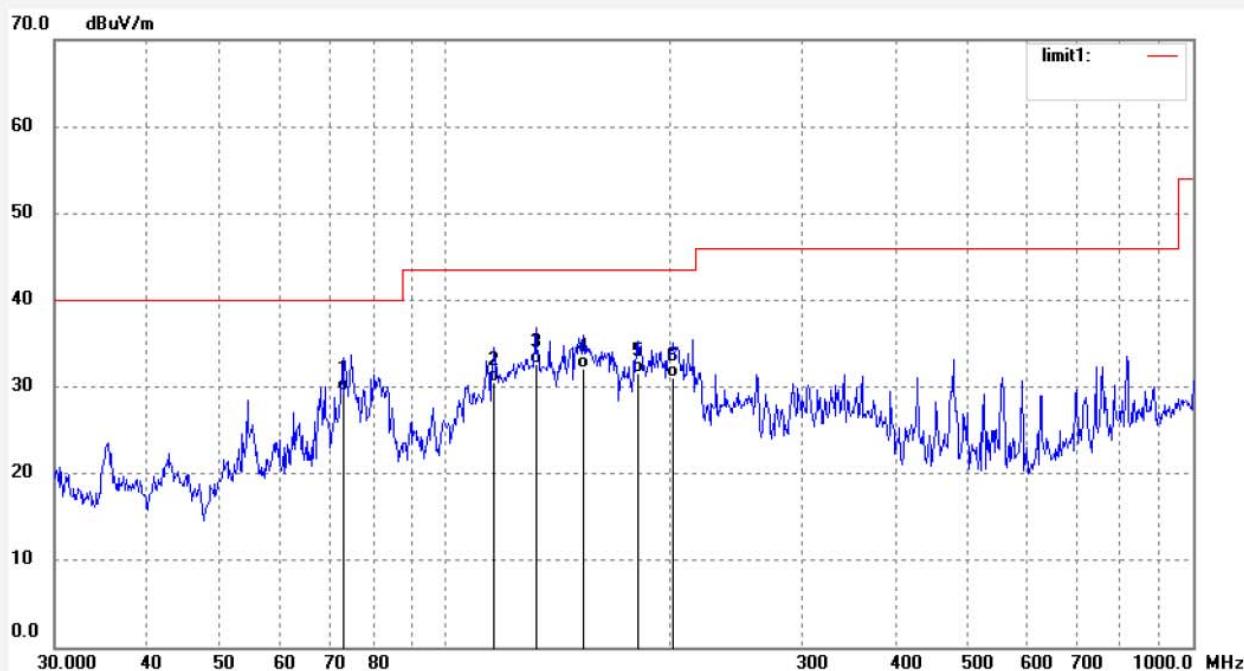
Mode: TX 2480MHz(GFSK)

Distance: 3m

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	73.2330	57.18	-27.63	29.55	40.00	-10.45	QP	200	254	
2	116.0391	57.95	-27.37	30.58	43.50	-12.92	QP	200	320	
3	132.1489	60.34	-27.77	32.57	43.50	-10.93	QP	200	184	
4	153.1627	59.87	-27.77	32.10	43.50	-11.40	QP	200	48	
5	180.6639	57.64	-25.97	31.67	43.50	-11.83	QP	200	52	
6	201.4539	55.32	-24.30	31.02	43.50	-12.48	QP	200	189	



## ACCURATE TECHNOLOGY CO., LTD.

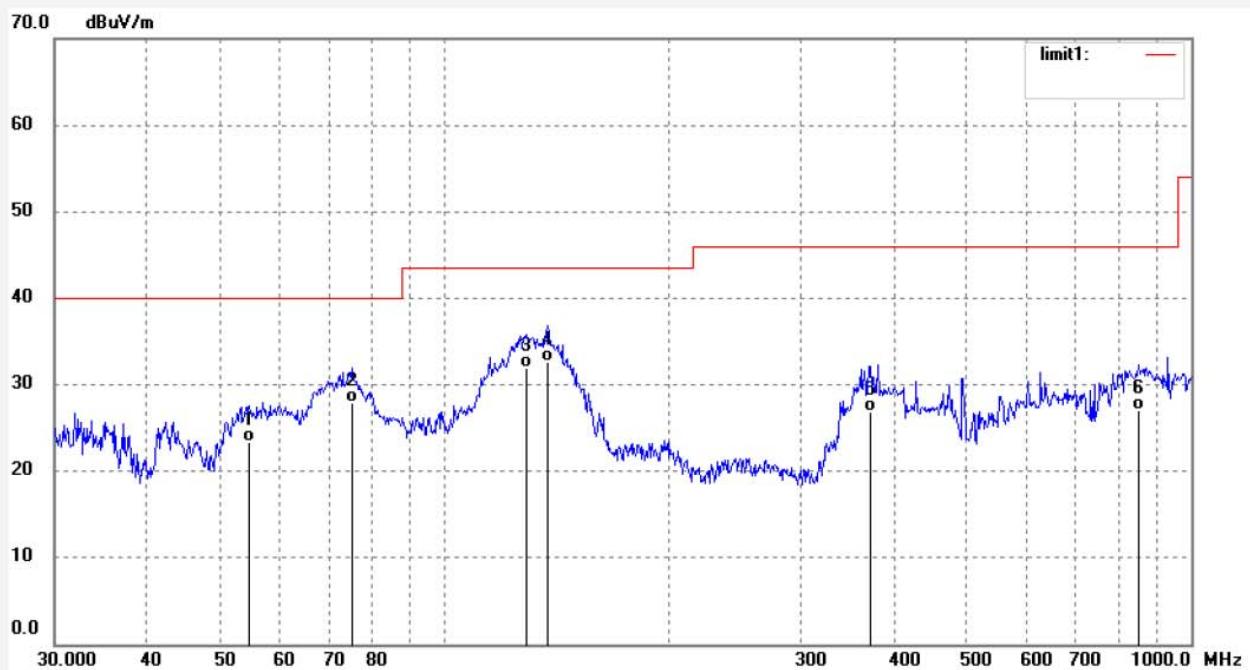
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #106  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 55 %  
EUT: Wifi module  
Mode: TX 2480MHz(GSFK)  
Model: M632USA1  
Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical  
Power Source: DC 3.3V  
Date: 2018/01/23  
Time: 17:29:25  
Engineer Signature:  
Distance: 3m

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	54.7085	50.33	-26.96	23.37	40.00	-16.63	QP	100	102	
2	75.0566	55.61	-27.70	27.91	40.00	-12.09	QP	100	198	
3	128.4858	59.67	-27.67	32.00	43.50	-11.50	QP	100	65	
4	137.3565	60.48	-27.89	32.59	43.50	-10.91	QP	100	215	
5	372.5747	45.67	-18.74	26.93	46.00	-19.07	QP	100	352	
6	850.7603	35.02	-8.01	27.01	46.00	-18.99	QP	100	147	

## Above 1GHz



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Science & Industry Park,Nanshan Shenzhen,P.R.ChinaSite: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #125

Polarization: Horizontal

Standard: FCC PK

Power Source: DC 3.3V

Test item: Radiation Test

Date: 18/01/26/

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 9/05/05

EUT: Wifi module

Engineer Signature:

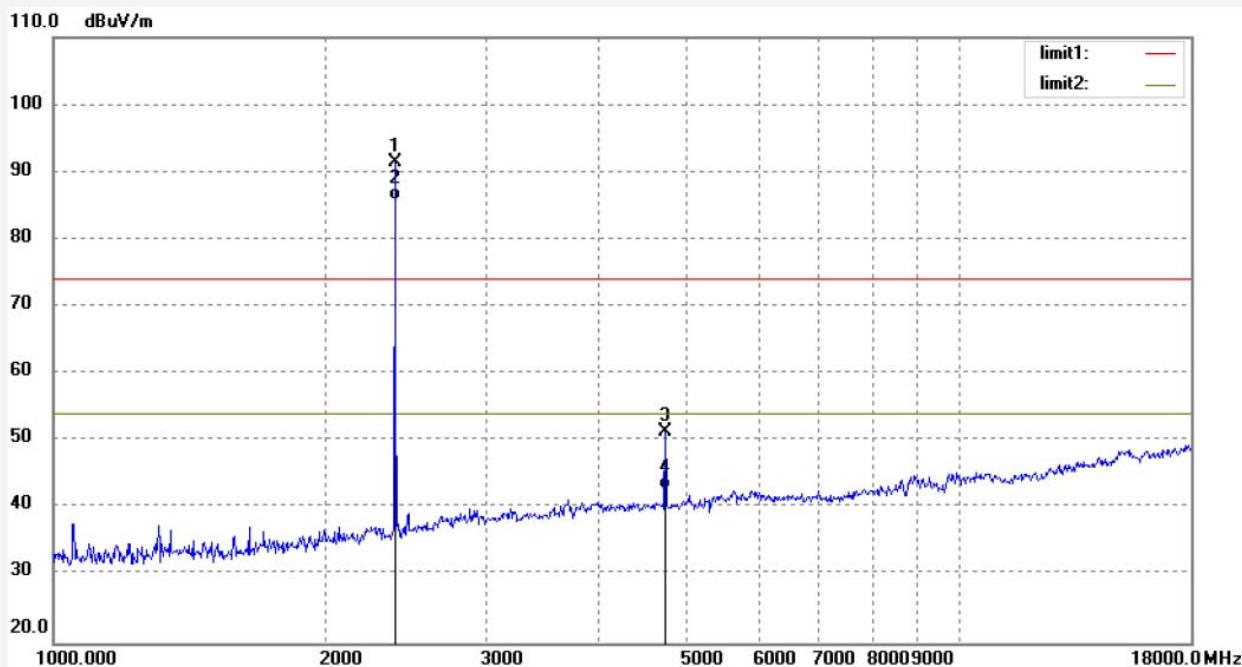
Mode: TX 2402MHz(GSFK)

Distance: 3m

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.119	95.70	-4.37	91.33			peak	200	132	
2	2402.119	90.15	-4.37	85.78			AVG	200	218	
3	4804.257	48.58	2.70	51.28	74.00	-22.72	peak	200	294	
4	4804.257	40.15	2.70	42.85	54.00	-11.15	AVG	200	198	



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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #126

Polarization: Vertical

Standard: FCC PK

Power Source: DC 3.3V

Test item: Radiation Test

Date: 18/01/26/

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 9/07/19

EUT: Wifi module

Engineer Signature:

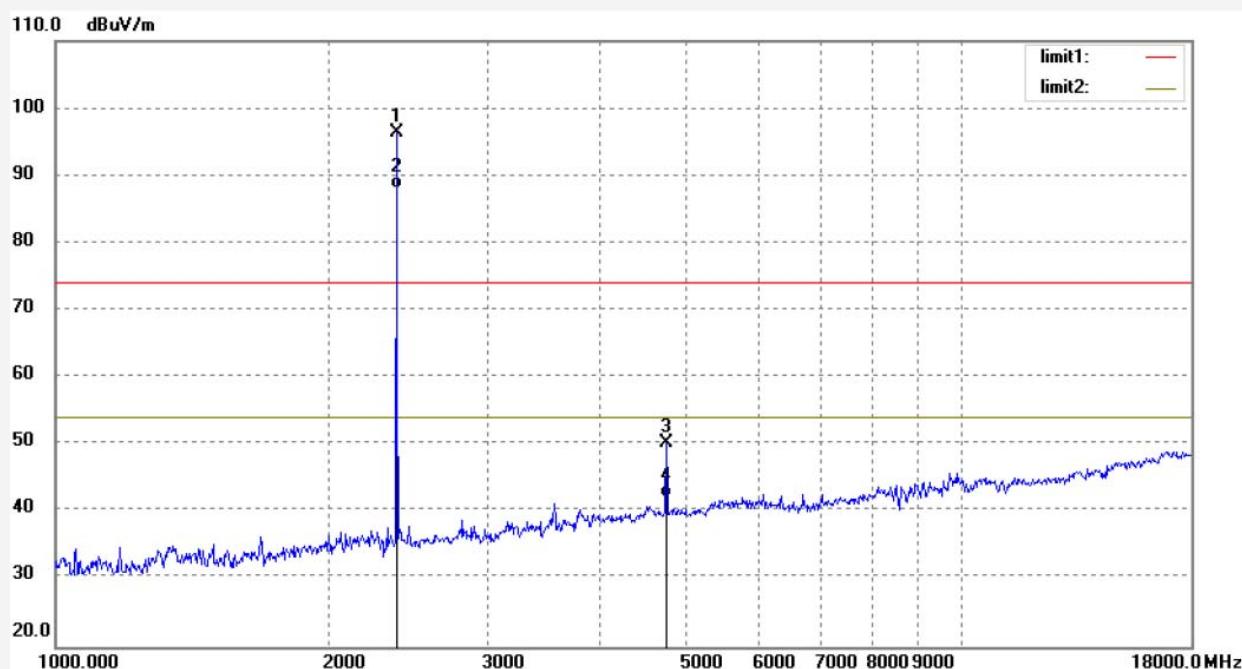
Mode: TX 2402MHz(GSFK)

Distance: 3m

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.119	100.71	-4.37	96.34			peak	150	120	
2	2402.119	92.45	-4.37	88.08			AVG	150	94	
3	4804.257	47.46	2.70	50.16	74.00	-23.84	peak	250	167	
4	4804.257	39.48	2.70	42.18	54.00	-11.82	AVG	250	245	



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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #128

Polarization: Horizontal

Standard: FCC PK

Power Source: DC 3.3V

Test item: Radiation Test

Date: 18/01/26/

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 9/09/58

EUT: Wifi module

Engineer Signature:

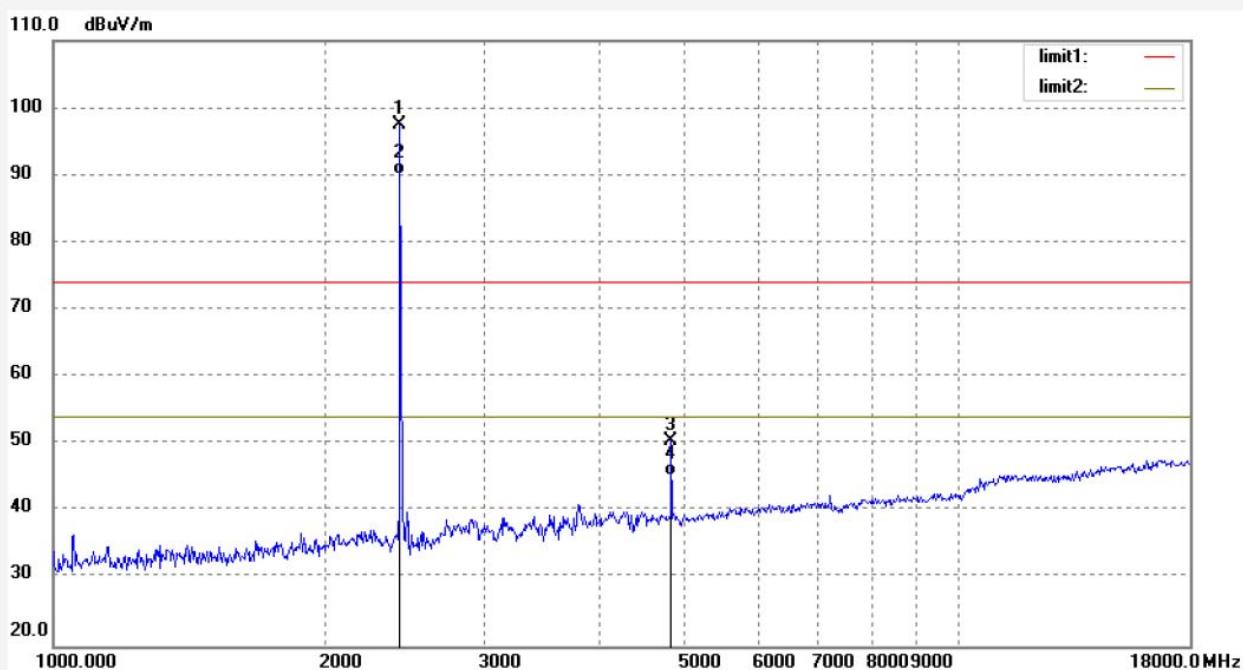
Mode: TX 2441MHz(GSFK)

Distance: 3m

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.121	101.79	-4.20	97.59			peak	250	328	
2	2441.121	94.34	-4.20	90.14			AVG	250	184	
3	4882.244	47.48	3.07	50.55	74.00	-23.45	peak	200	28	
4	4882.244	42.15	3.07	45.22	54.00	-8.78	AVG	200	164	



## ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #127

Polarization: Vertical

Standard: FCC PK

Power Source: DC 3.3V

Test item: Radiation Test

Date: 18/01/26/

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 9/08/50

EUT: Wifi module

Engineer Signature:

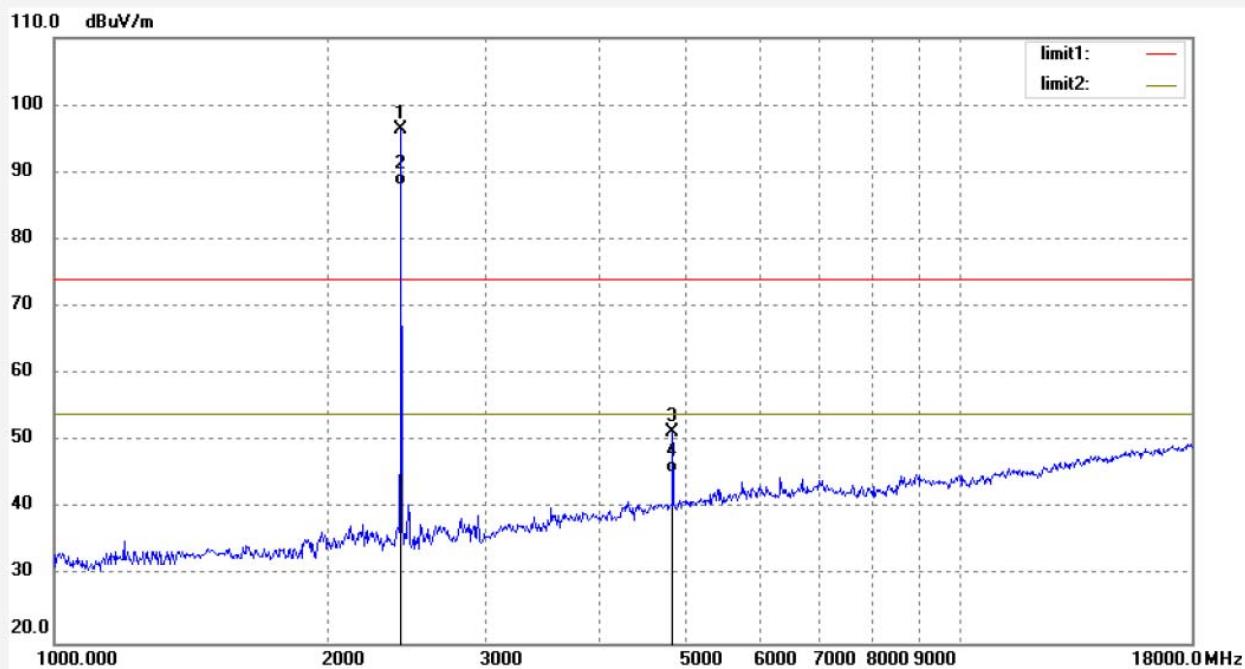
Mode: TX 2441MHz(GSFK)

Distance: 3m

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.121	100.68	-4.20	96.48			peak	150	105	
2	2441.121	92.18	-4.20	87.98			AVG	150	93	
3	4882.244	48.40	3.07	51.47	74.00	-22.53	peak	150	48	
4	4882.244	42.15	3.07	45.22	54.00	-8.78	AVG	150	197	



## ACCURATE TECHNOLOGY CO., LTD.

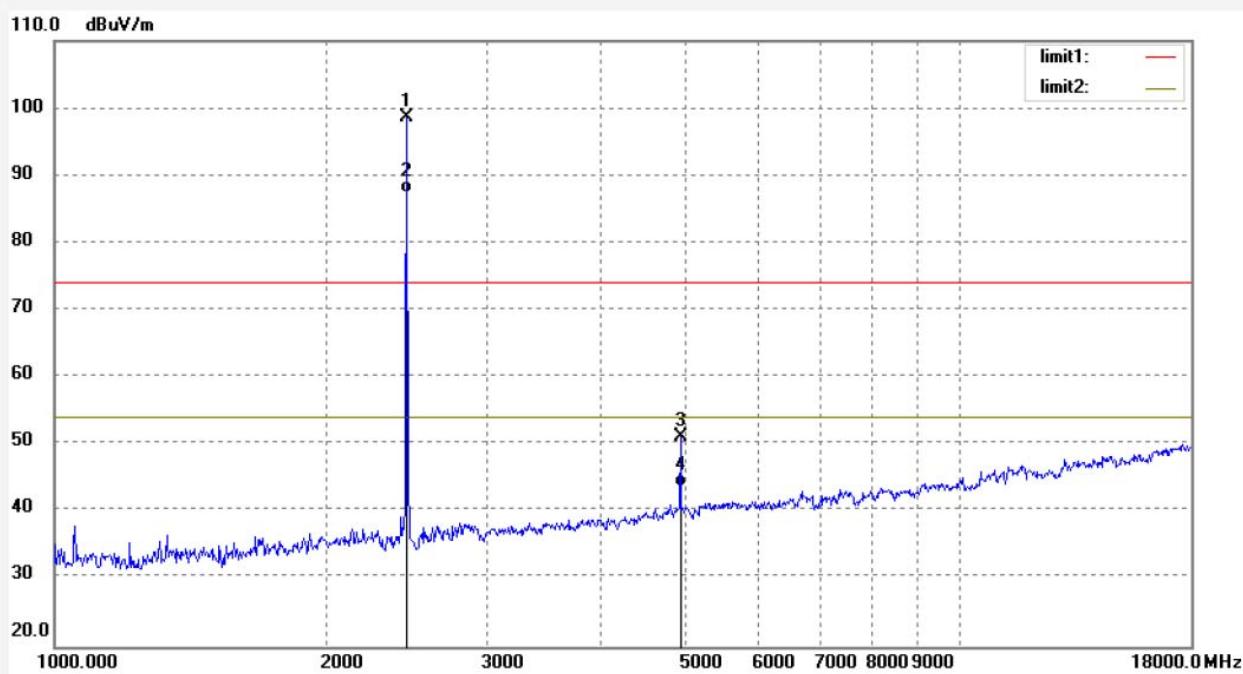
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #129  
Standard: FCC PK  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 55 %  
EUT: Wifi module  
Mode: TX 2480MHz(GSFK)  
Model: M632USA1  
Manufacturer: Xiamen Prima Technology Inc.

Polarization: Horizontal  
Power Source: DC 3.3V  
Date: 18/01/26/  
Time: 9/11/36  
Engineer Signature:  
Distance: 3m

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.034	102.68	-4.04	98.64			peak	250	102	
2	2480.034	91.35	-4.04	87.31			AVG	250	321	
3	4960.064	47.75	3.50	51.25	74.00	-22.75	peak	250	285	
4	4960.064	40.32	3.50	43.82	54.00	-10.18	AVG	250	348	



## ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #130

Polarization: Vertical

Standard: FCC PK

Power Source: DC 3.3V

Test item: Radiation Test

Date: 18/01/26/

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 9/12/11

EUT: Wifi module

Engineer Signature:

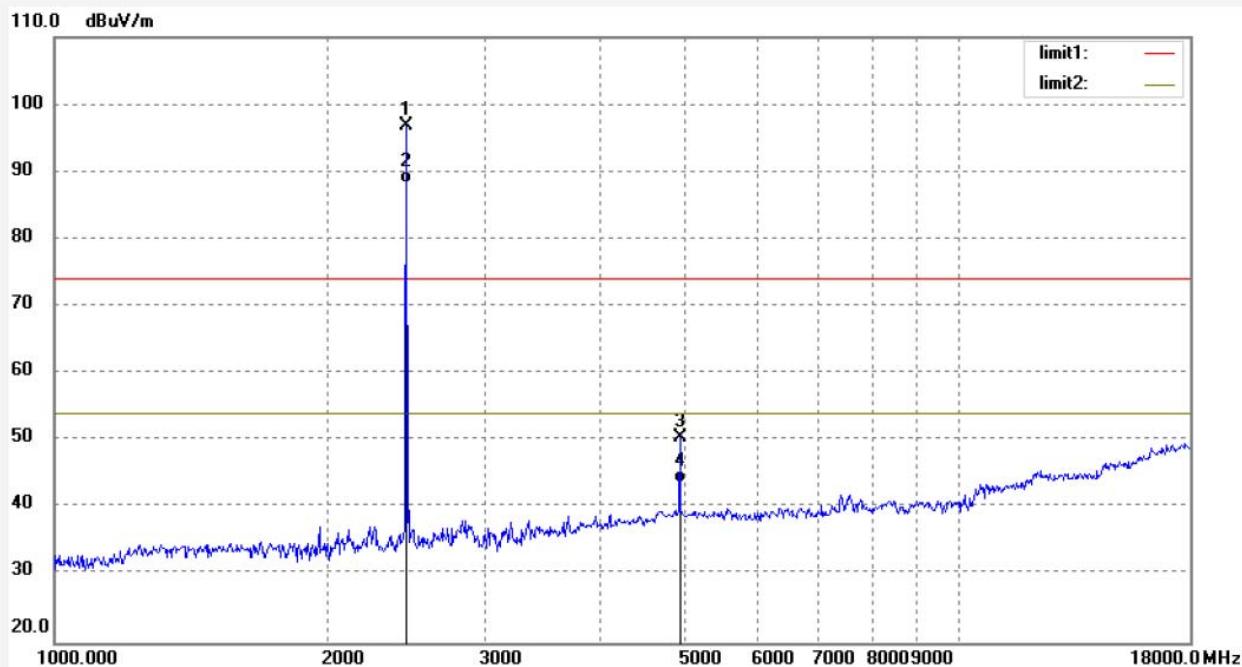
Mode: TX 2480MHz(GSFK)

Distance: 3m

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.034	100.96	-4.04	96.92			peak	150	120	
2	2480.034	92.34	-4.04	88.30			AVG	150	109	
3	4960.064	46.95	3.50	50.45	74.00	-23.55	peak	150	235	
4	4960.064	40.21	3.50	43.71	54.00	-10.29	AVG	150	96	



## ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #136

Polarization: Horizontal

Standard: FCC PK

Power Source: DC 3.3V

Test item: Radiation Test

Date: 18/01/26/

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 9/18/22

EUT: Wifi module

Engineer Signature:

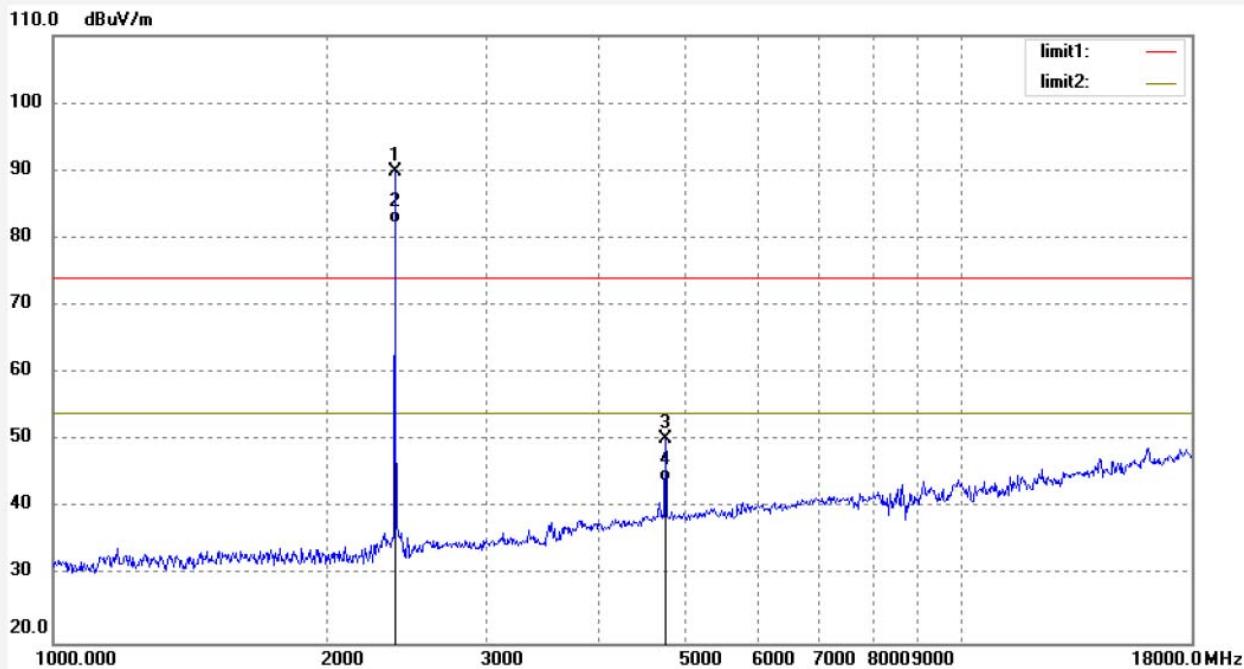
Mode: TX 2402MHz(Π/4 DQPSK)

Distance: 3m

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.119	94.17	-4.37	89.80			peak	250	38	
2	2402.119	86.48	-4.37	82.11			Avg	250	287	
3	4804.257	47.51	2.70	50.21	74.00	-23.79	peak	250	24	
4	4804.257	41.37	2.70	44.07	54.00	-9.93	Avg	250	132	



## ACCURATE TECHNOLOGY CO., LTD.

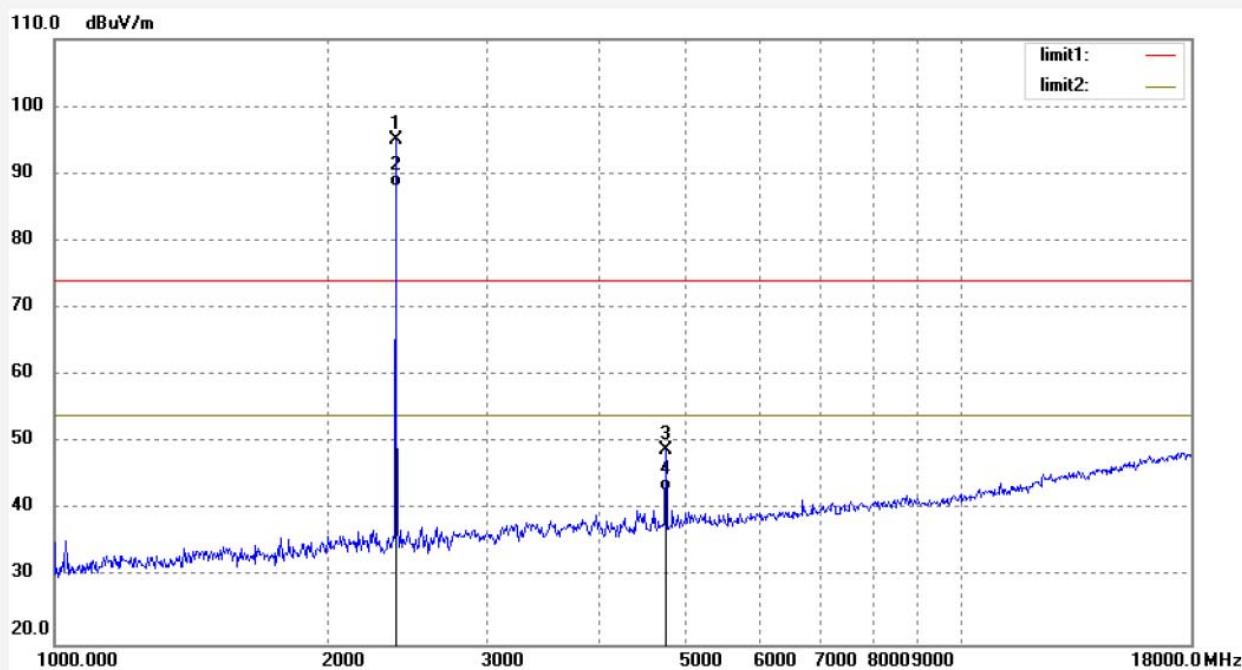
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #135  
Standard: FCC PK  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 55 %  
EUT: Wifi module  
Mode: TX 2402MHz(1/4 DQPSK)  
Model: M632USA1  
Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical  
Power Source: DC 3.3V  
Date: 18/01/26/  
Time: 9/17/42  
Engineer Signature:  
Distance: 3m

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.119	99.43	-4.37	95.06			peak	150	138	
2	2402.119	92.37	-4.37	88.00			AVG	150	248	
3	4804.257	46.11	2.70	48.81	74.00	-25.19	peak	200	38	
4	4804.257	40.12	2.70	42.82	54.00	-11.18	AVG	200	154	



## ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #133

Polarization: Horizontal

Standard: FCC PK

Power Source: DC 3.3V

Test item: Radiation Test

Date: 18/01/26/

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 9/15/04

EUT: Wifi module

Engineer Signature:

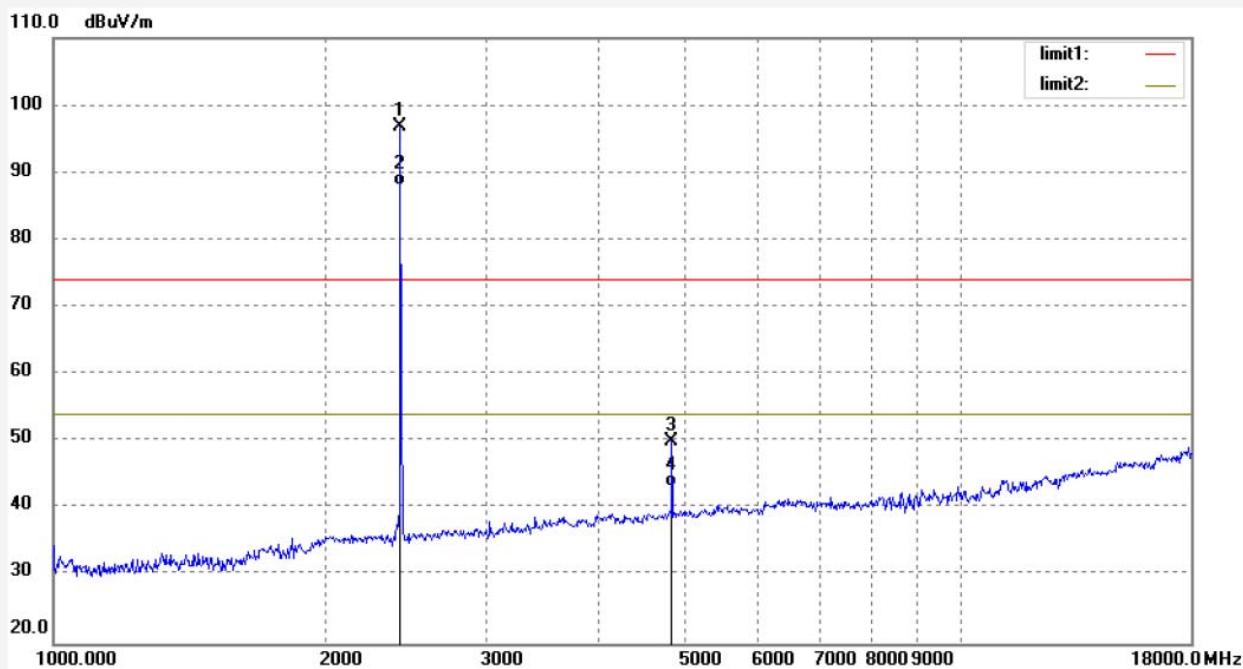
Mode: TX 2441MHz( $\pi/4$  DQPSK)

Distance: 3m

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.121	101.14	-4.20	96.94			peak	200	312	
2	2441.121	92.24	-4.20	88.04			AVG	200	201	
3	4882.244	47.08	3.07	50.15	74.00	-23.85	peak	250	84	
4	4882.244	40.18	3.07	43.25	54.00	-10.75	AVG	250	154	



## ACCURATE TECHNOLOGY CO., LTD.

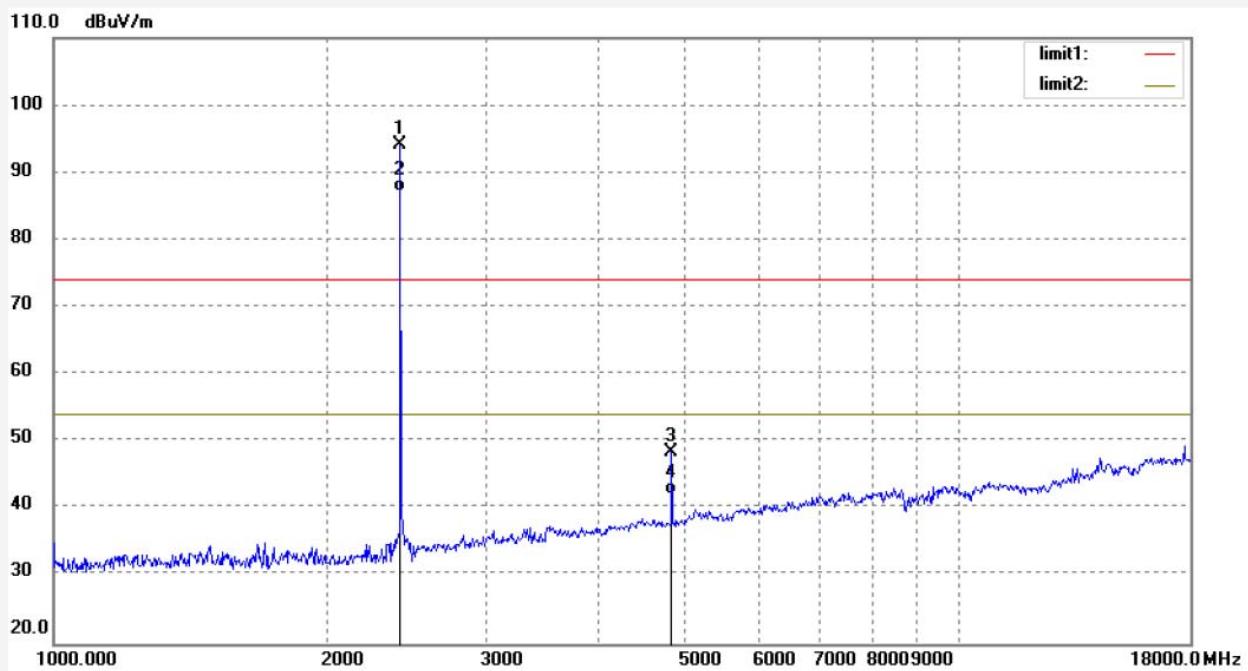
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: frank2018 #134  
Standard: FCC PK  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 55 %  
EUT: Wifi module  
Mode: TX 2441MHz(Π/4 DQPSK)  
Model: M632USA1  
Manufacturer: Xiamen Prima Technology Inc.

Polarization: Vertical  
Power Source: DC 3.3V  
Date: 18/01/26/  
Time: 9/15/44  
Engineer Signature:  
Distance: 3m

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.121	98.34	-4.20	94.14			peak	150	99	
2	2441.121	91.32	-4.20	87.12			AVG	150	187	
3	4882.244	45.42	3.07	48.49	74.00	-25.51	peak	150	215	
4	4882.244	39.18	3.07	42.25	54.00	-11.75	AVG	150	83	

Job No.: frank2018 #132

Polarization: Horizontal

Standard: FCC PK

Power Source: DC 3.3V

Test item: Radiation Test

Date: 18/01/26/

Temp.( C)/Hum.(%) 25 C / 55 %

Time: 9/14/07

EUT: Wifi module

Engineer Signature:

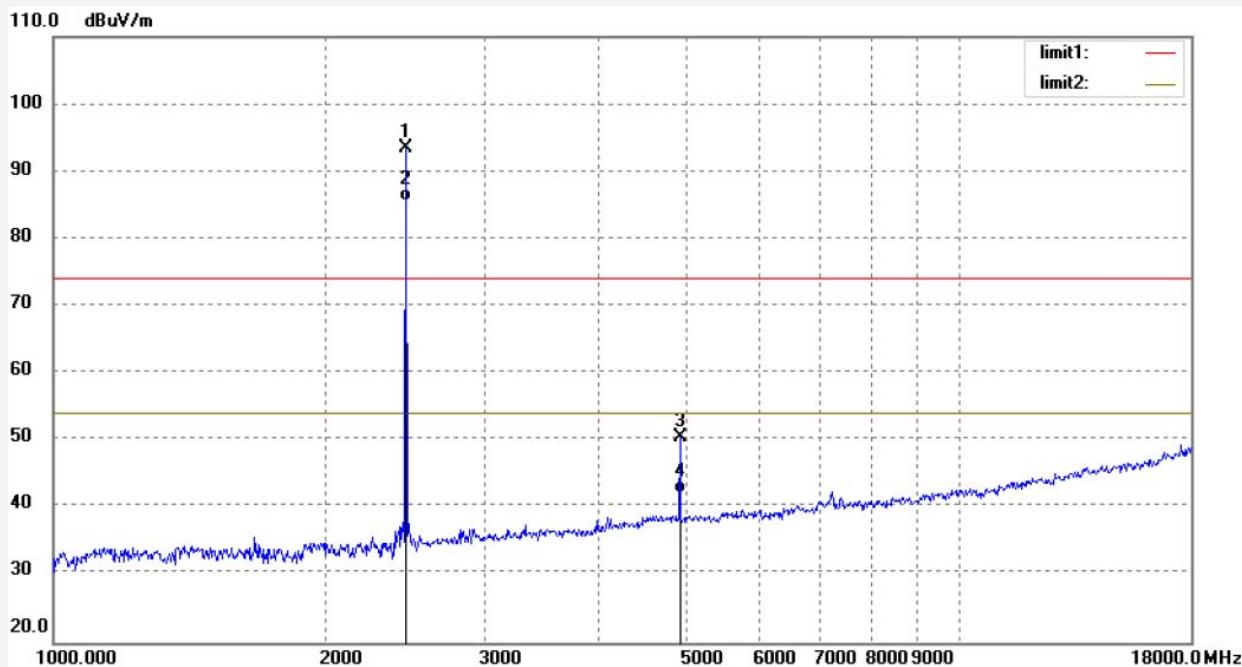
Mode: TX 2480MHz(1/4 DQPSK)

Distance: 3m

Model: M632USA1

Manufacturer: Xiamen Prima Technology Inc.

Note: Report NO.:ATE20172552



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.034	97.43	-4.04	93.39			peak	200	138	
2	2480.034	89.67	-4.04	85.63			Avg	200	222	
3	4960.064	46.93	3.50	50.43	74.00	-23.57	peak	200	156	
4	4960.064	38.68	3.50	42.18	54.00	-11.82	Avg	200	97	