



*Full*

# TEST REPORT

**No. I17D00058-BT**

*For*

**Client : Lenovo (Shanghai) Electronics**

**Technology Co., Ltd**

**Production : Portable Tablet Computer**

**Model Name : TB-X704V**

**FCC ID: O57TBX704V**

**IC ID 10407A-TBX704V**

**Brand Lenovo**

**Hardware Version: Lenovo Tablet TB-X704V**

**Software Version: TB-X704V\_RF01\_20170301**

**Issued date: 2017-06-22**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of ECIT Shanghai.

**Test Laboratory:**

ECIT Shanghai, East China Institute of Telecommunications

Add: 7-8F, G Area, No.668, Beijing East Road, Huangpu District, Shanghai, P. R. China

Tel: (+86)-021-63843300, E-Mail: [welcome@ecit.org.cn](mailto:welcome@ecit.org.cn)

**Revision Version**

Report Number	Revision	Date	Memo
I17D00058-BT	00	2017-06-06	Initial creation of test report
I17D00058-BT	01	2017-06-22	Second creation of test report

**CONTENTS**

<b>1.</b>	<b>TEST LABORATORY .....</b>	<b>5</b>
<b>1.1.</b>	<b>TESTING LOCATION .....</b>	<b>5</b>
<b>1.2.</b>	<b>TESTING ENVIRONMENT .....</b>	<b>5</b>
<b>1.3.</b>	<b>PROJECT DATA .....</b>	<b>5</b>
<b>1.4.</b>	<b>SIGNATURE .....</b>	<b>5</b>
<b>2.</b>	<b>CLIENT INFORMATION .....</b>	<b>6</b>
<b>2.1.</b>	<b>APPLICANT INFORMATION .....</b>	<b>6</b>
<b>2.2.</b>	<b>MANUFACTURER INFORMATION .....</b>	<b>6</b>
<b>3.</b>	<b>EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE) .....</b>	<b>7</b>
<b>3.1.</b>	<b>ABOUT EUT .....</b>	<b>7</b>
<b>3.2.</b>	<b>INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST .....</b>	<b>7</b>
<b>3.3.</b>	<b>INTERNAL IDENTIFICATION OF AE USED DURING THE TEST .....</b>	<b>7</b>
<b>4.</b>	<b>REFERENCE DOCUMENTS .....</b>	<b>8</b>
<b>4.1.</b>	<b>REFERENCE DOCUMENTS FOR TESTING .....</b>	<b>8</b>
<b>5.</b>	<b>SUMMARY OF TEST RESULTS .....</b>	<b>9</b>
<b>5.1.</b>	<b>NOTES .....</b>	<b>10</b>
<b>5.2.</b>	<b>STATEMENTS .....</b>	<b>10</b>
<b>6.</b>	<b>TEST RESULT .....</b>	<b>11</b>
<b>6.1.</b>	<b>PEAK OUTPUT POWER-CONDUCTED .....</b>	<b>11</b>
<b>6.2.</b>	<b>FREQUENCY BAND EDGES-CONDUCTED .....</b>	<b>16</b>
<b>6.3.</b>	<b>CONDUCTED EMISSION .....</b>	<b>23</b>
<b>6.4.</b>	<b>RADIATED EMISSION .....</b>	<b>34</b>
<b>6.5.</b>	<b>TIME OF OCCUPANCY (DWELL TIME) .....</b>	<b>50</b>
<b>6.6.</b>	<b>20DB BANDWIDTH .....</b>	<b>61</b>
<b>6.7.</b>	<b>CARRIER FREQUENCY SEPARATION .....</b>	<b>66</b>



## ***RF Test Report***

Report No.: I17D00058-BT

---

<b>6.8.</b>	<b>NUMBER OF HOPPING CHANNELS .....</b>	<b>69</b>
<b>6.9.</b>	<b>AC POWERLINE CONDUCTED EMISSION.....</b>	<b>73</b>
<b>6.10.</b>	<b>99% OCCUPIED CHANNEL BANDWIDTH .....</b>	<b>75</b>
<b>7.</b>	<b>TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS .....</b>	<b>81</b>
<b>8.</b>	<b>TEST ENVIRONMENT .....</b>	<b>82</b>
<b>ANNEX A.</b>	<b>DEVIATIONS FROM PRESCRIBED TEST METHODS .....</b>	<b>83</b>

## 1. Test Laboratory

### 1.1. Testing Location

Company Name:	ECIT Shanghai, East China Institute of Telecommunications
Address:	7-8F, G Area, No. 668, Beijing East Road, Huangpu District, Shanghai, P. R. China
Postal Code:	200001
Telephone:	(+86)-021-63843300
Fax:	(+86)-021-63843301
IC OAT S Test Site Registration Number	10766A-1

### 1.2. Testing Environment

Normal Temperature:	15-35°C
Extreme Temperature:	0/+45°C
Relative Humidity:	20-75%

### 1.3. Project data

Project Leader:	Chen Minfei
Testing Start Date:	2017-04-01
Testing End Date:	2017-04-10

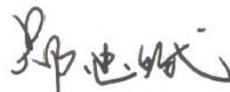
### 1.4. Signature



**Zhang Shiyu**  
(Prepared this test report)



**Ding Li**  
(Reviewed this test report)



**Zheng Zhongbin**  
Director of the laboratory  
(Approved this test report)

## 2. Client Information

### 2.1. Applicant Information

Company Name: Lenovo (Shanghai) Electronics Technology Co., Ltd  
Address: NO.68 BUILDING, 199 FENJU RD, Pilot Free Trade Zone,  
Shanghai, 200131, China  
Contact: Spring Zhou  
Telephone: 13776306969

### 2.2. Manufacturer Information

Company Name: Lenovo PC HK Limited  
Address: 23/F, Lincoln House, Taikoo Place 979 King's Road, Quarry  
Bay, Hong Kong  
Contact: Spring Zhou  
Telephone: 13776306969

### 3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

#### 3.1. About EUT

EUT Description	Portable Tablet Computer
Model name	TB-X704V
BT Frequency	2402MHz-2480MHz
BT Channel	Channel0-Channel78
BT type of modulation	GFSK/ $\pi/4$ DQPSK/8DPSK
Extreme Temperature	0/+45°C
Nominal Voltage	4.0V
Extreme High Voltage	4.35V
Extreme Low Voltage	3.6V

Note: Photographs of EUT are shown in ANNEX A of this test report.

#### 3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
N09	863923030004443	Lenovo Tablet TB-X704V	TB-X704V_RF01_2017 0301	2017-03-17

\*EUT ID: is used to identify the test sample in the lab internally.

#### 3.3. Internal Identification of AE used during the test

AE ID*	Description	SN
AE1	RF cable	---
AE2	---	---

\*AE ID: is used to identify the test sample in the lab internally.

## 4. Reference Documents

### 4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part15	FCC CFR 47, Part 15,Subpart C: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz.	Jun,2016 Edition
ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	2013
DA 00-705	Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems	2013
RSS-247	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices	2015

## 5. Summary of Test Results

A brief summary of the tests carried out is shown as following.

Measurement Items	Sub-clause of Part15C	Sub-clause of IC	Verdict
Maximum Peak Output Power	15.247(b)	RSS-247 5.4	P
Peak Power Spectral Density	15.247(d)	RSS-247 5.2	NA
20dB Occupied Bandwidth	15.247(a)	RSS-247 5.2	P
Band Edges Compliance	15.247(b)	RSS-247 5.5	P
Transmitter Spurious Emission-Conducted	15.247	RSS-247 5.5	P
Transmitter Spurious Emission-Radiated	15.247,15.209,	RSS-247 5.5	P
AC Powerline Conducted Emission	15.107,15.207	RSS-247 Gen 3.2	P
99% Occupied Bandwidth	/	RSS-Gen 6.6	P

Please refer to part 5 for detail.

The measurements are according to and ANSI C63.10.

Terms used in Verdict column

P	Pass, the EUT complies with the essential requirements in the standard.
NP	Not Perform, the test was not performed by ECIT.
NA	Not Applicable, the test was not applicable.
F	Fail, the EUT does not comply with the essential requirements in the standard.

Test Conditions

Tnom	Normal Temperature
Tmin	Low Temperature
Tmax	High Temperature
Vnom	Normal Voltage
Vmin	Low Voltage
Vmax	High Voltage

Hnom	Norm Humidity
Anom	Norm Air Pressure

For this report, all the test case listed above are tested under Normal Temperature and Normal Voltage, and also under norm humidity, the specific conditions as following:

Temperature	Tnom	22°C
Voltage	Vnom	4V
Humidity	Hnom	32%
Air Pressure	Anom	1010hPa

**Note:**

- a. All the test data for each data were verified, but only the worst case was reported.
- b. The GFSK,  $\pi/4$  DQPSK and 8DPSK were set in DH1 for GFSK, 2-DH1 for  $\pi/4$  DQPSK, 3-DH1 for 8DPSK.
- c. The DC and low frequency voltages' measurement uncertainty is  $\pm 2\%$ .

## 5.1. Notes

All reported tests were carried out on a sample equipment to demonstrate limited compliance with section 3.

The test results of this test report relate exclusively to the item(s) tested as specified in section 5.

The following deviation from, additions to, or exclusions from the test specifications have been made. See section 3.

## 5.2. Statements

The product name TB-X704V, supporting WCDMA/WLAN/BT/BLE, manufactured by Lenovo PC HK Limited, is a new product for testing.

ECIT has verified that the compliance of the tested device specified in section 5 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 5 of this test report.

## 6. Test result

### 6.1. Peak Output Power-Conducted

#### 6.1.1 Measurement Limit

Standard	Limit (dBm)
FCC Part 15.247(b)(1)	< 30

#### Measurement Uncertainty:

Measurement Uncertainty	±1.17dB
-------------------------	---------

#### 6.1.2 Test Condition:

Hopping Mode	RBW	VBW	Span	Sweep time
Hopping OFF	3MHz	10MHz	9MHz	Auto

#### 6.1.3 Test procedure

The measurement is according to ANSI C63.10 clause 7.8.5.

1. The output power of EUT was connected to the spectrum analyzer and CBT32 by cable and divide. The path loss was compensated to the results for each measurement.
2. Enable EUT transmitter maximum power continuously.
3. Measure the conducted output power and record the results it.

#### 6.1.4 Measurement Results:

##### For GFSK

Channel	Ch0 2402 MHz	Ch39 2441 MHz	CH78 2480 MHz	Conclusion
Peak Conducted Output Power (dBm)	2.031	2.932	0.459	P
	Fig.1	Fig.2	Fig.3	

##### For $\pi/4$ DQPSK

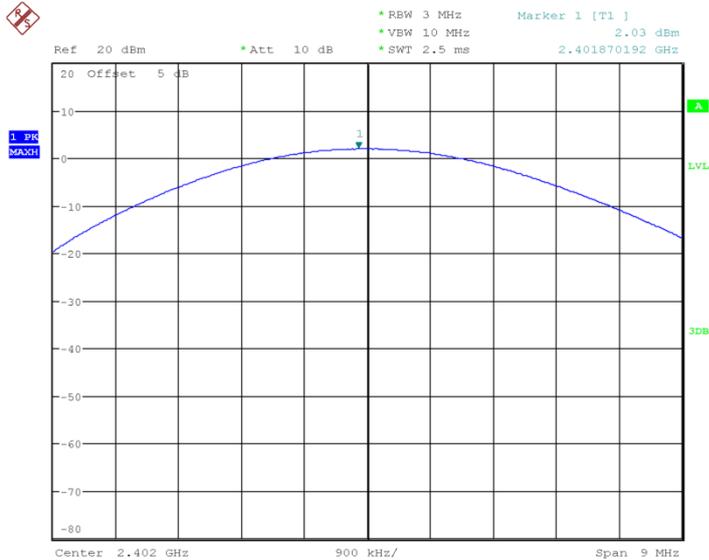
Channel	Ch0 2402 MHz	Ch39 2441 MHz	CH78 2480 MHz	Conclusion
Peak Conducted Output Power (dBm)	1.444	2.397	-0.09	P
	Fig.4	Fig.5	Fig.6	

##### For 8DPSK

Channel	Ch0 2402 MHz	Ch39 2441 MHz	CH78 2480 MHz	Conclusion
Peak Conducted Output Power (dBm)	1.657	2.604	0.139	P
	Fig.7	Fig.8	Fig.9	

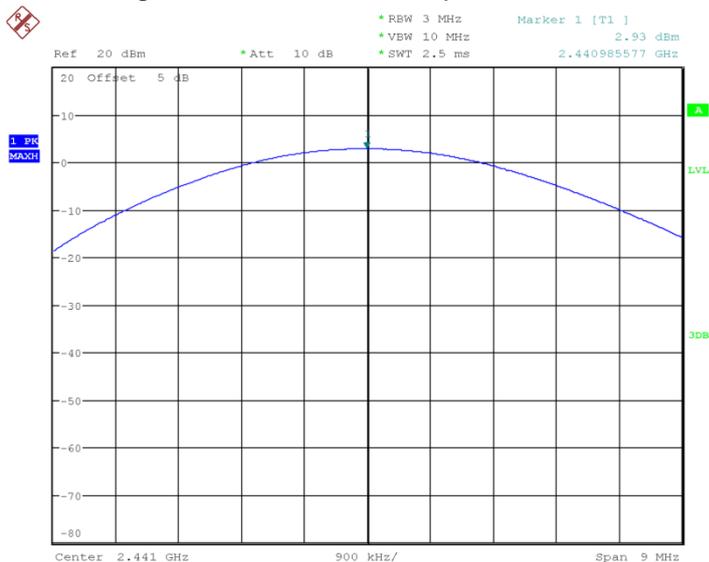
**Conclusion: PASS**

Test graphs an below



Date: 7.APR.2017 15:56:10

Fig.1 Peak Conducted Output Power CH0, DH1



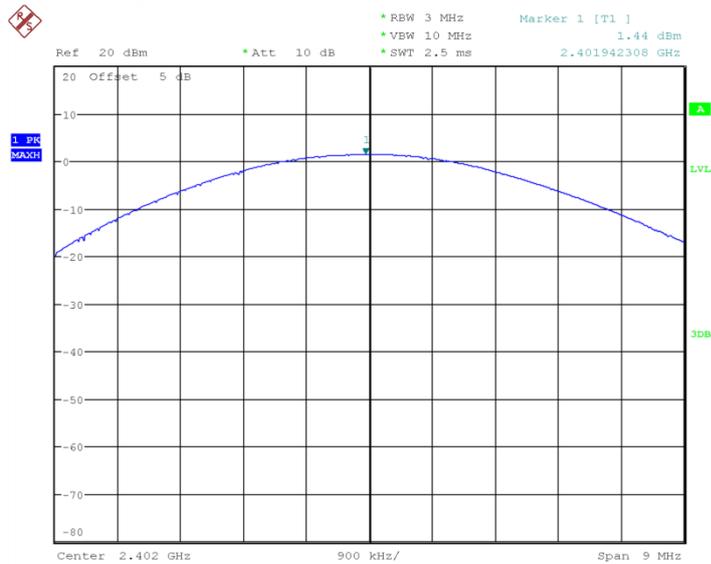
Date: 7.APR.2017 15:56:25

Fig.2 Peak Conducted Output Power CH39, DH1



Date: 7.APR.2017 15:56:40

Fig.3 Peak Conducted Output Power CH78, DH1



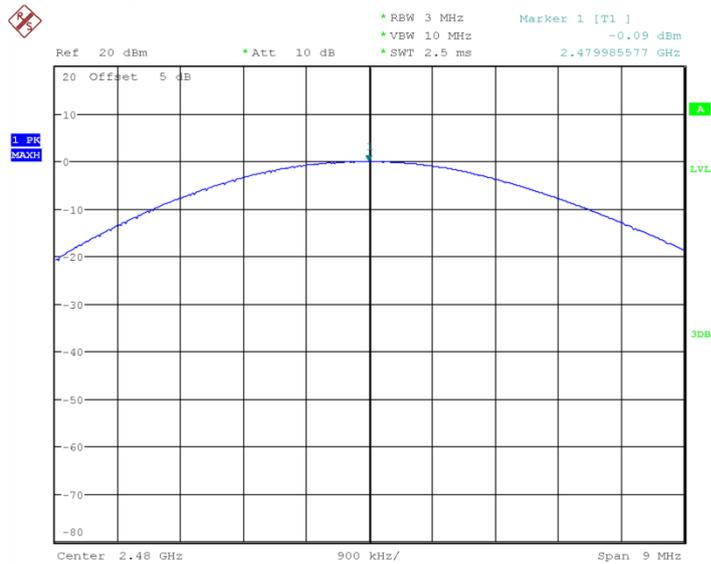
Date: 7.APR.2017 15:56:55

Fig.4 Peak Conducted Output Power CH0, 2DH1



Date: 7.APR.2017 15:57:10

Fig.5 Peak Conducted Output Power CH39, 2DH1



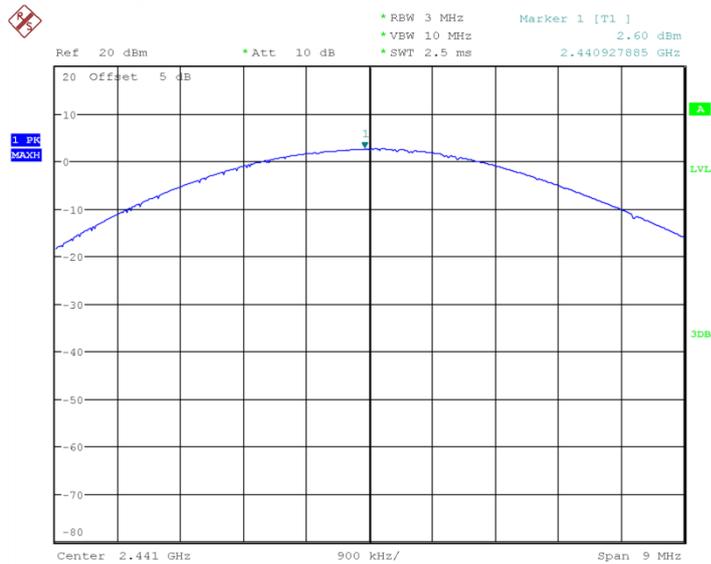
Date: 7.APR.2017 15:57:25

Fig.6 Peak Conducted Output Power CH78, 2DH1



Date: 7.APR.2017 15:57:40

Fig.7 Peak Conducted Output Power CH0, 3DH1



Date: 7.APR.2017 15:57:54

Fig.8 Peak Conducted Output Power CH39, 3DH1



Date: 7.APR.2017 15:58:09

Fig.9 Peak Conducted Output Power CH78, 3DH1

## 6.2. Frequency Band Edges-Conducted

### 6.2.1 Measurement Limit:

Standard	Limited(dBc)
FCC 47 CFR Part 15.247(d)	>20

### Measurement Uncertainty:

Measurement Uncertainty	0.75dB
-------------------------	--------

### 6.2.2 Test procedure

The measurement is according to ANSI C63.10 clause 7.8.6.

1. Connect the EUT to spectrum analyzer.
2. Set RBW=100KHz, VBW=300KHz, span more than 1.5 times channel bandwidth (2MHz).
3. Detector =peak, sweep time=auto couple, trace mode=max hold.
4. Allow sweep to continue until the trace stabilizes.

### 6.2.3 Measurement results

#### For GFSK

Channel	Hopping	Band Edge Power (dBc)	Conclusion

0	Hopping OFF	Fig.10	P
	Hopping ON	Fig.11	P
78	Hopping OFF	Fig.12	P
	Hopping ON	Fig.13	P

**For  $\pi/4$  DQPSK**

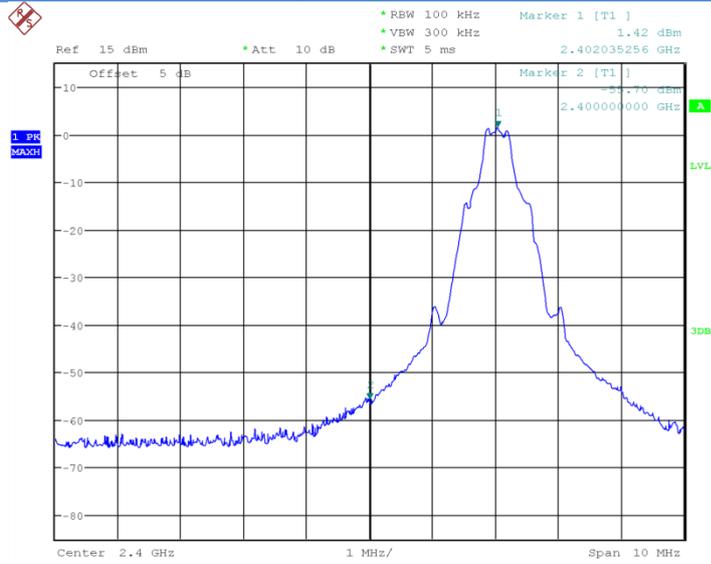
Channel	Hopping	Band Edge Power (dBc)	Conclusion
0	Hopping OFF	Fig.14	P
	Hopping ON	Fig.15	P
78	Hopping OFF	Fig.16	P
	Hopping ON	Fig.17	P

**For 8DPSK**

Channel	Hopping	Band Edge Power (dBc)	Conclusion
0	Hopping OFF	Fig.18	P
	Hopping ON	Fig.19	P
78	Hopping OFF	Fig.20	P
	Hopping ON	Fig.21	P

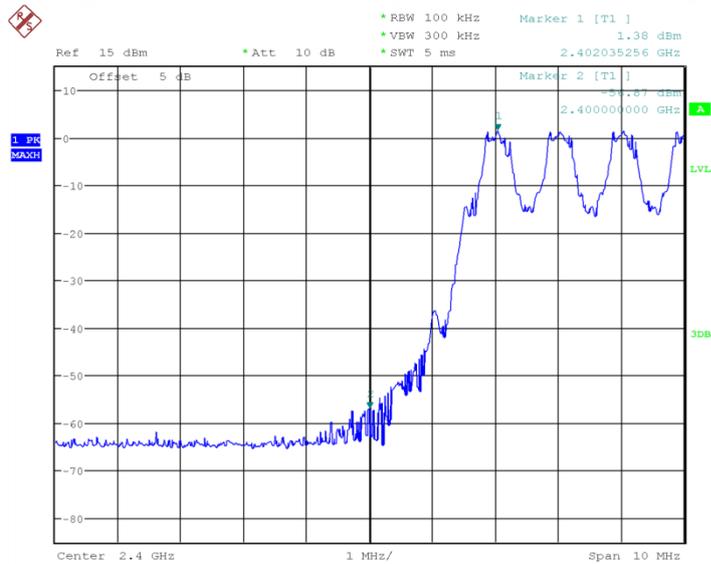
**Conclusion: PASS**

**Test graphs an below**



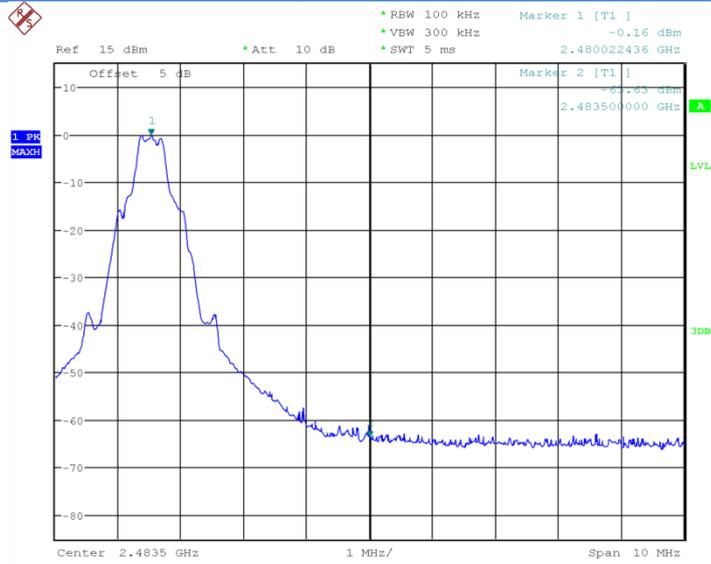
Date: 7.APR.2017 15:59:21

Fig.10 Frequency Band Edge: GFSK, Ch0, Hopping OFF



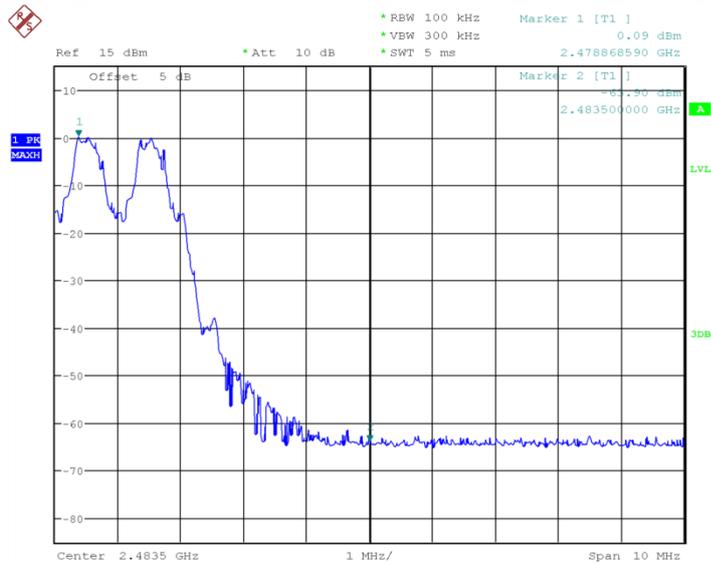
Date: 7.APR.2017 16:01:27

Fig.11 Frequency Band Edge: GFSK, Ch0, Hopping ON



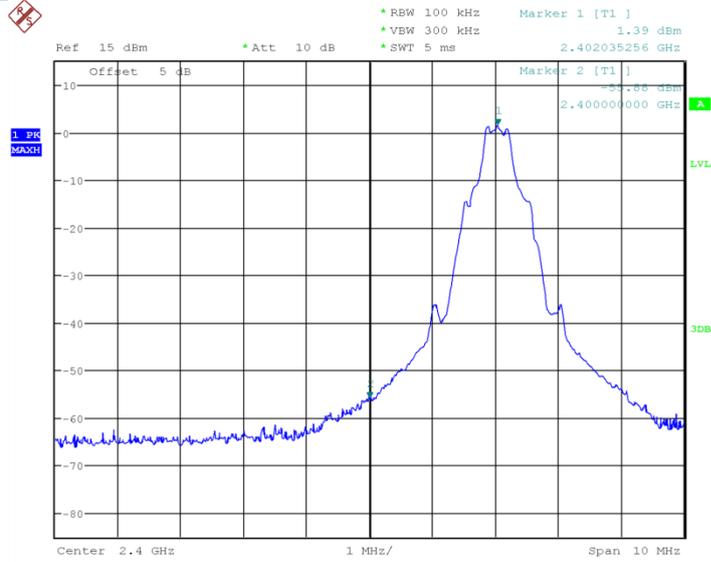
Date: 7.APR.2017 16:07:34

Fig.12 Frequency Band Edge: GFSK, Ch78, Hopping OFF



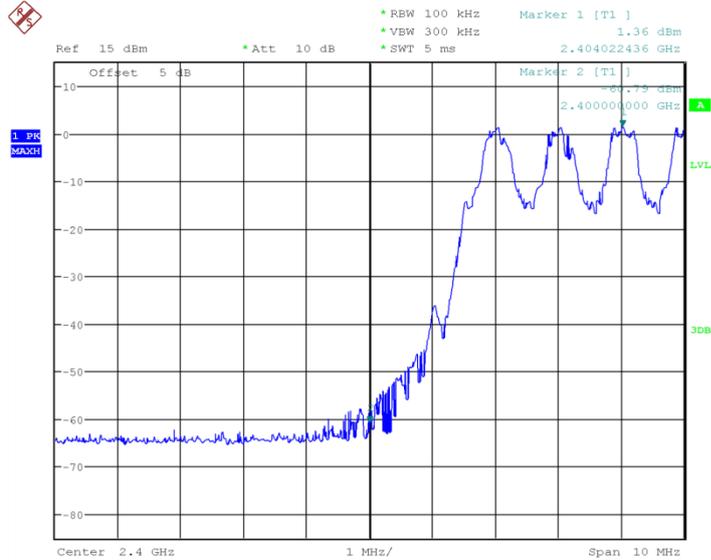
Date: 7.APR.2017 16:09:41

Fig.13 Frequency Band Edge: GFSK, Ch78, Hopping ON



Date: 7.APR.2017 16:02:05

Fig.14 Frequency Band Edge:  $\pi/4$  DQPSK, Ch0, Hopping OFF

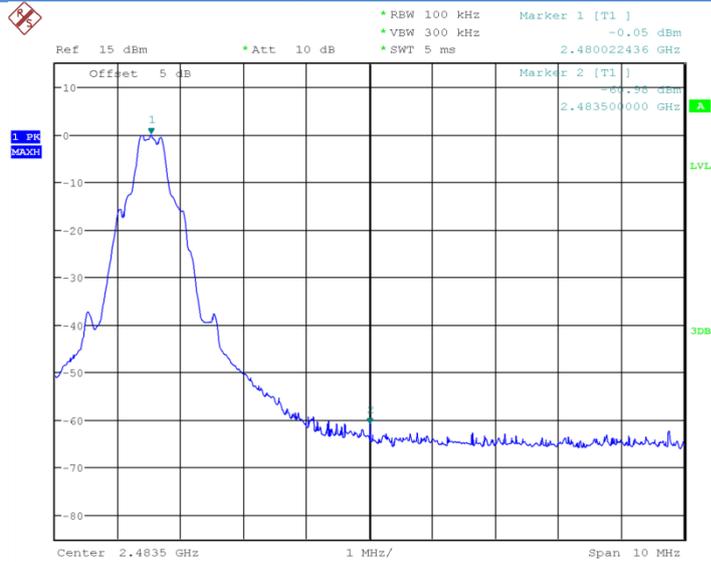


Date: 7.APR.2017 16:04:12

Fig.15 Frequency Band Edge:  $\pi/4$  DQPSK, Ch0, Hopping ON

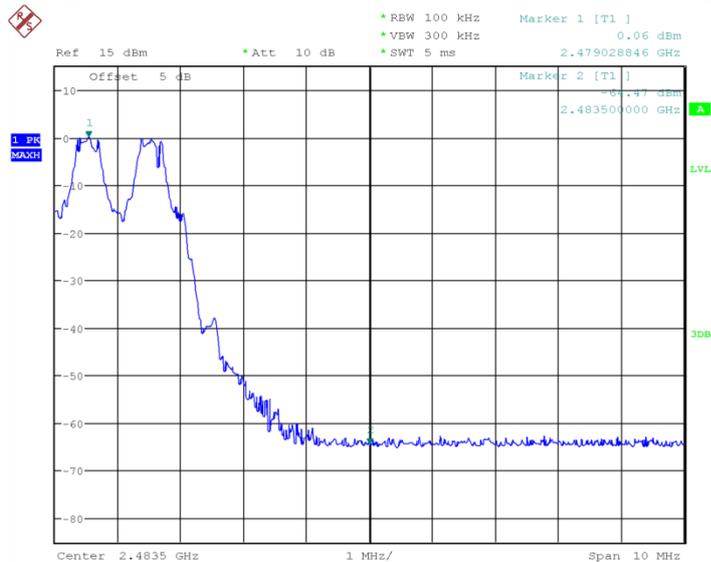






Date: 7.APR.2017 16:13:02

Fig.20 Frequency Band Edge: 8DPSK, Ch78, Hopping OFF



Date: 7.APR.2017 16:15:09

Fig.21 Frequency Band Edge: 8DPSK, Ch78, Hopping ON

## 6.3. Conducted Emission

### 6.3.1 Measurement Limit:

Standard	Limit
FCC 47 CFR Part15.247 (d)	20dB below peak output power in 100KHz bandwidth

### Measurement Uncertainty:

Frequency Range	Uncertainty
30MHz ≤ f ≤ 2GHz	0.63
2GHz ≤ f ≤ 3.6GHz	0.82
3.6GHz ≤ f ≤ 8GHz	1.55
8GHz ≤ f ≤ 20GHz	1.86
20GHz ≤ f ≤ 22GHz	1.90
22GHz ≤ f ≤ 26GHz	2.20

### 6.3.2 Test procedures

The measurement is according to ANSI C63.10 clause 7.8.8.

1. Connect the EUT to spectrum analyzer.
2. Set RBW=100KHz, VBW=300KHz.
3. Detector =peak, sweep time=auto couple, trace mode=max hold.

### 6.3.3 Measurement Results:

#### For GFSK

Channel	Frequency Range	Test Results	Conclusion
<b>Ch0 2402MHz</b>	Center Freq.	Fig.22	P
	30MHz~26GHz	Fig.23	P
<b>Ch39 2441MHz</b>	Center Freq.	Fig.24	P
	30MHz~26GHz	Fig.25	P
<b>Ch78 2480MHz</b>	Center Freq.	Fig.26	P
	30MHz~26GHz	Fig.27	P

#### For π/4 DQPSK

Channel	Frequency Range	Test Results	Conclusion
<b>Ch0 2402MHz</b>	Center Freq.	Fig.28	P
	30MHz~26GHz	Fig.29	P
<b>Ch39 2441MHz</b>	Center Freq.	Fig.30	P
	30MHz~26GHz	Fig.31	P
<b>Ch78 2480MHz</b>	Center Freq.	Fig.32	P

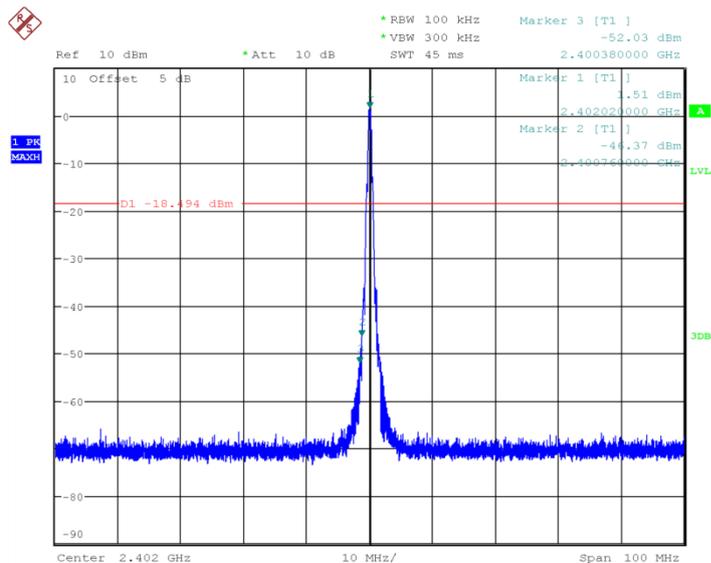
	30MHz~26GHz	Fig.33	P
--	-------------	--------	---

For 8DPSK

Channel	Frequency Range	Test Results	Conclusion
Ch0 2402MHz	Center Freq.	Fig.34	P
	30MHz~26GHz	Fig.35	P
Ch39 2441MHz	Center Freq.	Fig.36	P
	30MHz~26GHz	Fig.37	P
Ch78 2480MHz	Center Freq.	Fig.38	P
	30MHz~26GHz	Fig.39	P

**Conclusion: PASS**

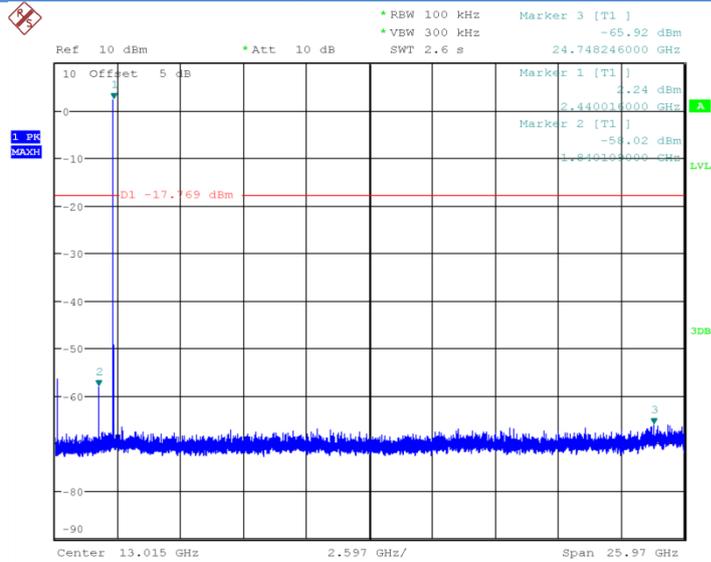
Test graphs as below



Date: 7.APR.2017 16:16:08

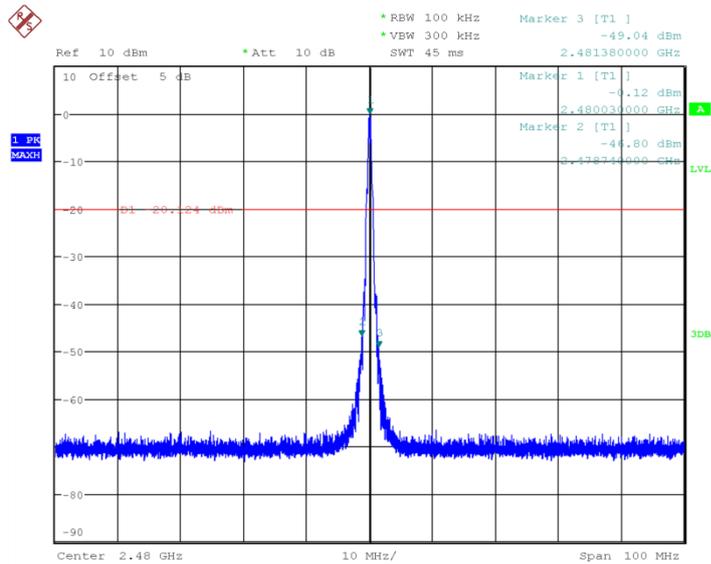
Fig.22 Conducted spurious emission: GFSK, Ch0, 2402MHz





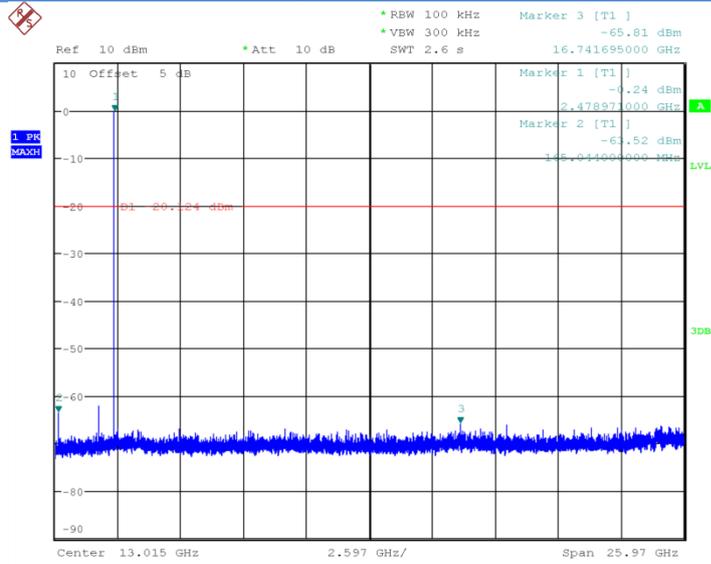
Date: 7.APR.2017 16:17:25

Fig.25 Conducted spurious emission: GFSK, Ch39, 30MHz~26GHz



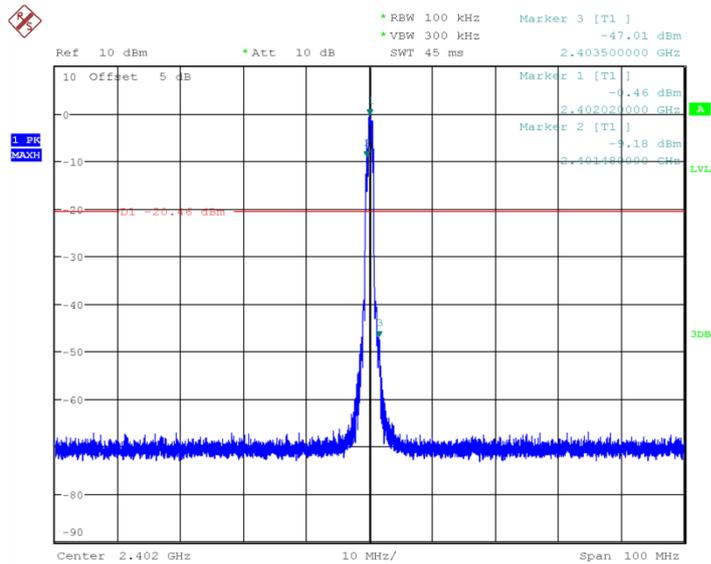
Date: 7.APR.2017 16:17:52

Fig.26 Conducted spurious emission: GFSK, Ch78, 2480MHz



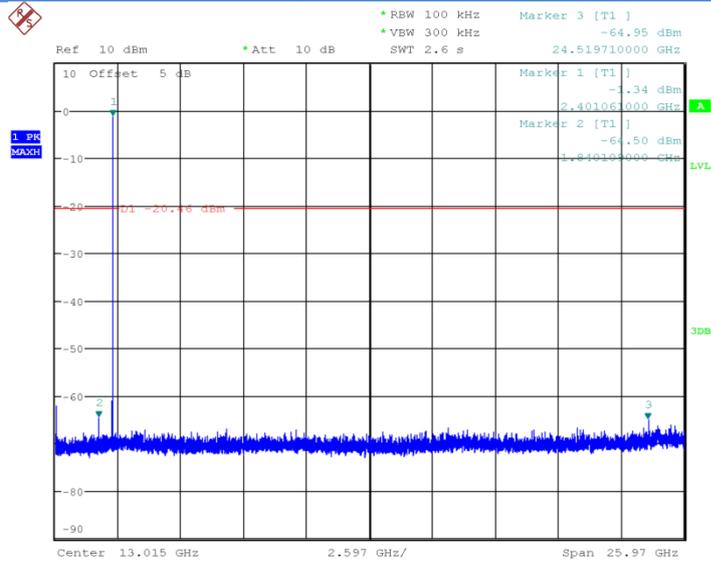
Date: 7.APR.2017 16:18:18

Fig.27 Conducted spurious emission: GFSK, Ch78, 30MHz~26GHz



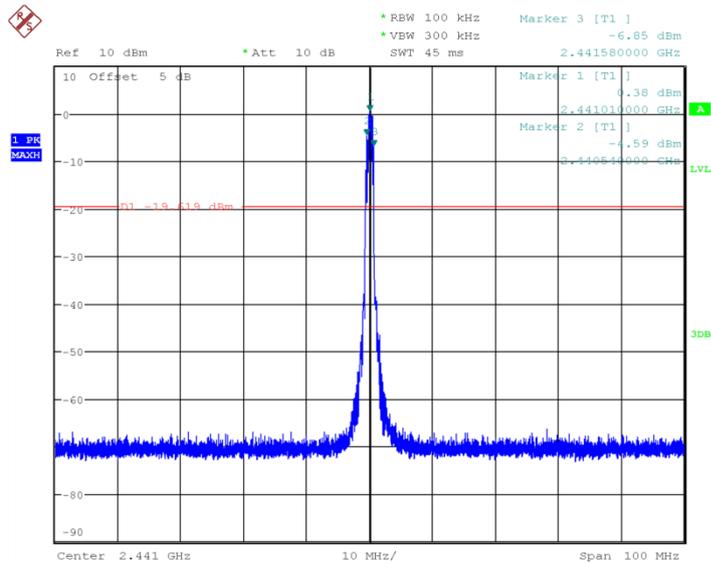
Date: 7.APR.2017 16:18:45

Fig.28 Conducted spurious emission:  $\pi/4$  DQPSK, Ch0, 2402MHz



Date: 7.APR.2017 16:19:11

Fig.29 Conducted spurious emission:  $\pi/4$  DQPSK, Ch0, 30MHz~26GHz

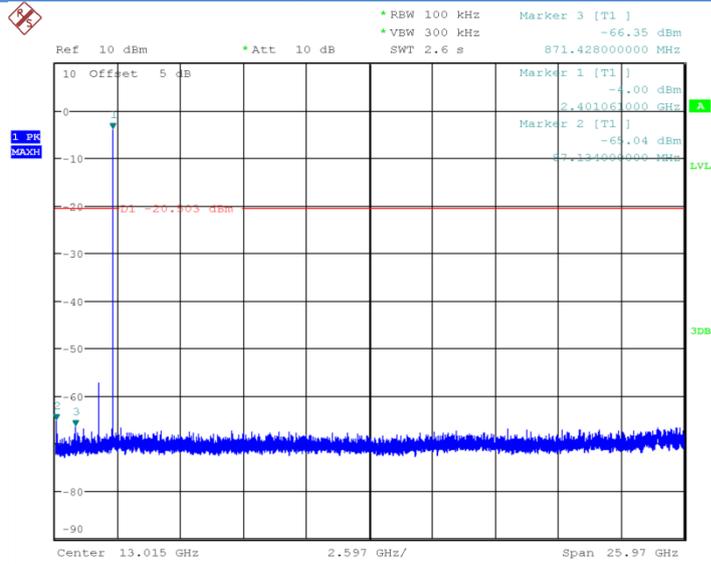


Date: 7.APR.2017 16:19:37

Fig.30 Conducted spurious emission:  $\pi/4$  DQPSK, Ch39, 2441MHz

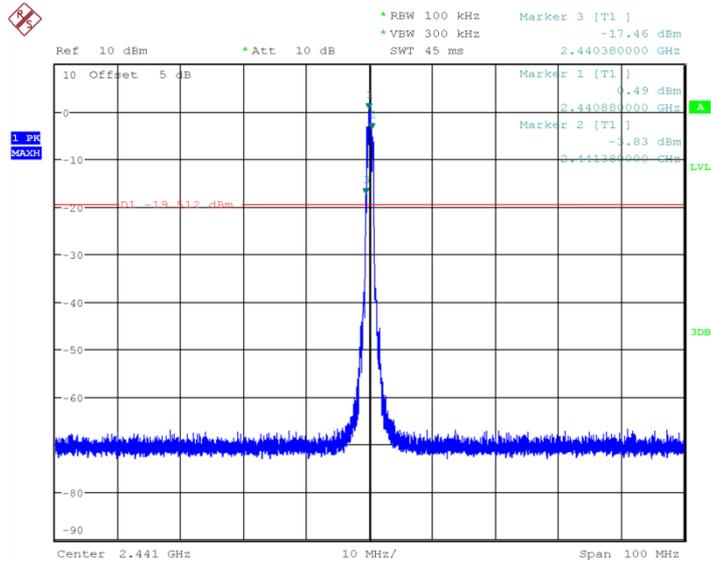






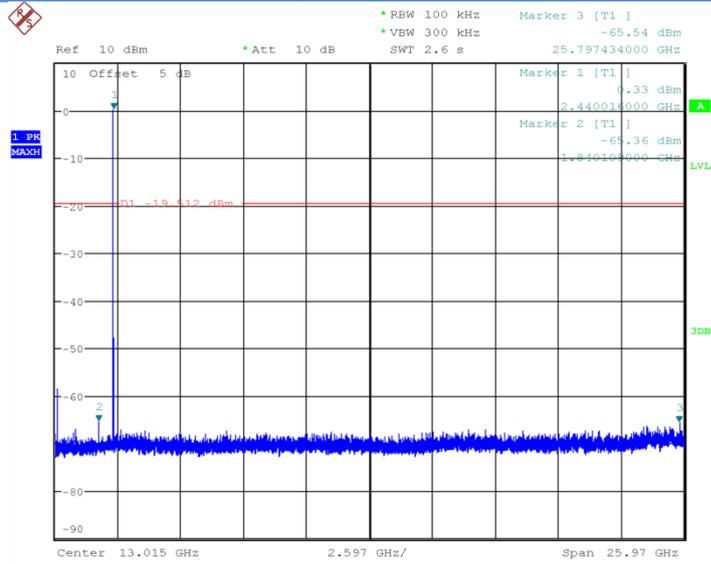
Date: 7.APR.2017 16:21:48

Fig.35 Conducted spurious emission: 8DPSK, Ch0, 30MHz~26GHz



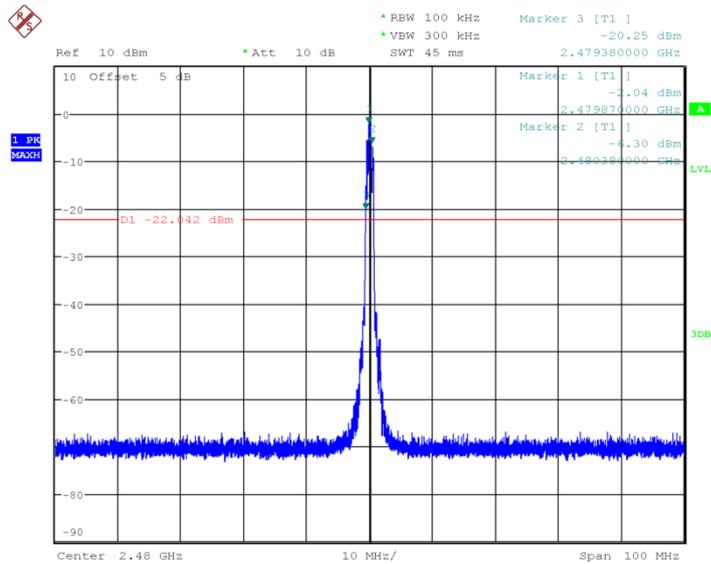
Date: 7.APR.2017 16:22:15

Fig.36 Conducted spurious emission: 8DPSK, Ch39, 2441MHz



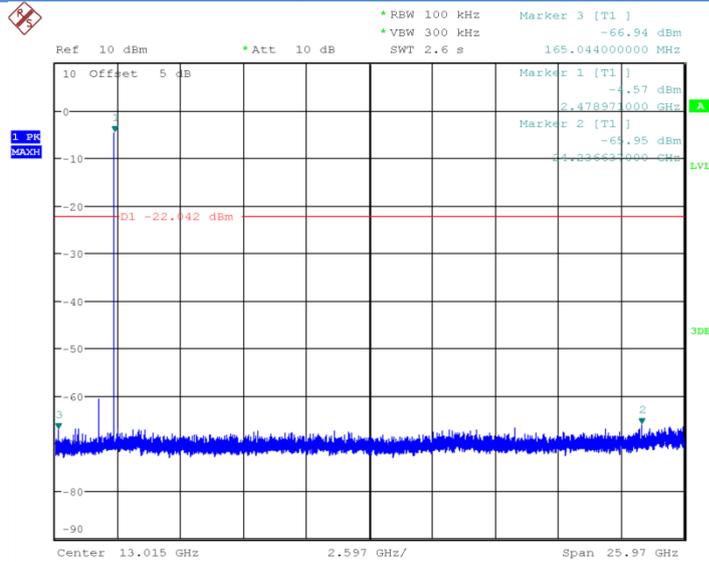
Date: 7.APR.2017 16:22:40

Fig.37 Conducted spurious emission: 8DPSK, Ch39, 30MHz~26GHz



Date: 7.APR.2017 16:23:07

Fig.38 Conducted spurious emission: 8DPSK, Ch78, 2480MHz



Date: 7.APR.2017 16:23:32

Fig.39 Conducted spurious emission: 8DPSK, Ch78, 30MHz~26GHz

## 6.4. Radiated Emission

### 6.4.1 Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247, 15.205, 15.209	20dB below peak output power

In addition, radiated emissions which fall in the restricted bands, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a) (see 15.205(c)).

### Measurement Uncertainty:

Measurement Uncertainty	±5.82dB
-------------------------	---------

### Limit in restricted band:

Frequency of emission (MHz)	Field strength (uV/m)	Field strength (dBuV/m)
30~88	100	40
88~216	150	43.5
216~960	200	46
Above 960	500	54

### 6.4.2 Test Method

Portable, small, lightweight, or modular devices that may be handheld, worn on the body,

or placed on a table during operation shall be positioned on a non-conducting platform, the top of which is 80 cm above the reference ground plane. The preferred area occupied by the EUT arrangement is 1 m by 1.5 m, but it may be larger or smaller to accommodate various sized EUTs. For testing purposes, ceiling- and wall-mounted devices also shall be positioned on a tabletop (see also ANSI C63.10-2013 section 6.3.4 and 6.3.5). In making any tests involving handheld, body-worn, or ceiling-mounted equipment, it is essential to recognize that the measured levels may be dependent on the orientation (attitude) of the three orthogonal axes of the EUT. Thus, exploratory tests as specified in 8.3.1 shall be carried out for various axes orientations to determine the attitude having maximum or near-maximum emission level.

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

Frequency of emission (MHz)	RBW/VBW	Sweep Time (s)
30~1000	100KHz/300KHz	5
1000~4000	1MHz/1MHz	15
4000~18000	1MHz/1MHz	40
18000~26500	1MHz/1MHz	20

### 6.4.3 Measurement Results:

A “reference path loss” is established and  $A_{Rpi}$  is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

$$A_{Rpi} = \text{Cable loss} + \text{Antenna Gain} - \text{Preamplifier gain}$$

$$\text{Result} = P_{\text{Mea}} + A_{Rpi}$$

**NOTE: Only the worst mode wrote in the report**

**For GFSK**

Channel	Frequency Range	Test Results	Conclusion
Ch0 2402MHz	30MH~1GHz	Fig.40	P
	1GHz~3GHz	Fig.41	P
	3GHz~18GHz	Fig.42	P
Power	2.38GHz~2.4GHz	Fig.43	P
Power	2.45GHz~2.5GHz	Fig.44	P

**For  $\pi/4$  DQPSK**

Channel	Frequency Range	Test Results	Conclusion
Ch0 2402MHz	30MH~1GHz	Fig.45	P
	1GHz~3GHz	Fig.46	P
	3GHz~18GHz	Fig.47	P
Power	2.38GHz~2.4GHz	Fig.48	P
Power	2.45GHz~2.5GHz	Fig.49	P

**For 8DPSK**

Channel	Frequency Range	Test Results	Conclusion
Ch0 2402MHz	30MH~1GHz	Fig.50	P
	1GHz~3GHz	Fig.51	P
	3GHz~18GHz	Fig.52	P
Power	2.38GHz~2.4GHz	Fig.53	P
Power	2.45GHz~2.5GHz	Fig.54	P

**GFSK Ch0 30MHz-1GHz (Peak)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
34.040568	14.87	-26.6	41.47	V
35.35524	17.17	-26.6	43.77	V
45.046496	13.23	-23.5	36.73	V
50.750456	15.67	-23.4	39.07	V
638.039864	15.41	-13.4	28.81	H
800.18054	17.72	-11	28.72	V

**GFSK Ch0 1GHz-3GHz (Peak)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
----------------	----------------	-----------	--------------	----------

2618.398846	51.76	9	42.76	V
2807.116539	53.08	9.9	43.18	V
2844.737308	53.23	10.7	42.53	H
2879.581923	54.91	10.7	44.21	V
2918.345962	53.45	10.6	42.85	V
2968.799039	52.53	10.8	41.73	H

**GFSK Ch0 1GHz-3GHz (Average)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2879.581923	41.07	10.7	30.37	V

**GFSK Ch0 3GHz-18GHz (Peak)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
13275.95433	52.58	17.2	35.38	V
14287.88713	54.71	20.6	34.11	V
14911.75413	56.01	22.2	33.81	H
15453.34113	56.56	23.3	33.26	V
16497.76993	59.16	26.9	32.26	H
17084.58307	59.6	27.1	32.5	V

**GFSK Ch0 3GHz-18GHz (Average)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
14287.88713	42.69	20.6	22.09	V
14911.75413	44.09	22.2	21.89	H
15453.34113	44.65	23.3	21.35	V
16497.76993	47.15	26.9	20.25	H
17084.58307	47.73	27.1	20.63	V

 **$\pi/4$  DQPSK Ch0 30MHz-1GHz (Peak)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
----------------	----------------	-----------	--------------	----------

32.775992	9.55	-26.3	35.85	V
34.541376	8.81	-26.7	35.51	V
41.434004	10.64	-23.6	34.24	V
50.380432	7.65	-23.3	30.95	V
100.432324	5.68	-23.7	29.38	H
573.179692	14.51	-14.3	28.81	H

 **$\pi/4$  DQPSK Ch0 1GHz-3GHz (Peak)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2690.767115	52.21	9.4	42.81	V
2820.613654	52.86	10.2	42.66	H
2835.445961	53.82	10.5	43.32	V
2901.790385	53.17	10.6	42.57	V
2944.897884	53.6	10.5	43.1	H
2979.277884	53.74	10.9	42.84	V

 **$\pi/4$  DQPSK Ch0 3GHz-18GHz (Peak)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
15442.65027	56.16	23.3	32.86	H
15791.4432	58.01	24.6	33.41	V
16278.82113	58.62	25.2	33.42	H
17053.11613	59.94	27.1	32.84	V
17317.82433	61.89	28.4	33.49	H
17613.686	61.89	29.4	32.49	H

 **$\pi/4$  DQPSK Ch0 3GHz-18GHz (Average)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
14933.12213	44.56	22	22.56	V
15694.0644	45.74	23.8	21.94	V

16247.98433	46.09	25.4	20.69	H
16476.6946	47.88	26.6	21.28	H
17027.40267	49.12	27.1	22.02	H

**8DPSK Ch0 30MHz-1GHz (Peak)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
32.007416	16.6	-26.2	42.8	V
33.614956	14.79	-26.5	41.29	V
35.680792	14.68	-26.3	40.98	V
43.873556	9.53	-23.5	33.03	V
61.662608	7.52	-24.9	32.42	H
876.626092	19.09	-9.6	28.69	V

**8DPSK Ch0 1GHz-3GHz (Peak)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2580.451539	50.57	8.6	41.97	H
2690.825962	52.14	9.4	42.74	V
2745.775961	51.78	9.4	42.38	H
2843.560385	53.01	10.6	42.41	V
2888.253654	54.42	10.7	43.72	H
2981.783462	53.07	10.9	42.17	V

**8DPSK Ch0 1GHz-3GHz (Average)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
2888.253654	41.25	10.7	30.55	H

**8DPSK Ch0 3GHz-18GHz (Peak)**

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
14314.59813	55.15	20.6	34.55	H
14894.28593	56.35	22.1	34.25	V

15712.96207	57.86	24	33.86	V
16516.14927	58.67	26.7	31.97	V
16805.20093	59.14	27.4	31.74	V
17612.5246	62.12	29.4	32.72	V

### 8DPSK Ch0 3GHz-18GHz (Average)

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	PMea(dBuV/m)	Polarity
14314.59813	42.57	20.6	21.97	H
14894.28593	44.27	22.1	22.17	V
15712.96207	45.42	24	21.42	V
16516.14927	47	26.7	20.3	V
16805.20093	47.46	27.4	20.06	V
17612.5246	49.91	29.4	20.51	V

**Conclusion: PASS**

Test graphs as below:

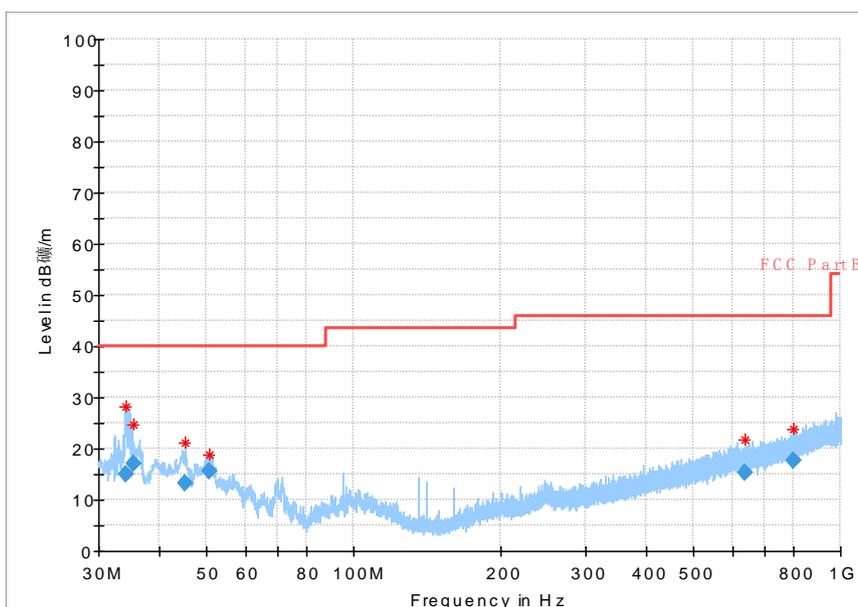


Fig.40 Radiated emission: GFSK, Ch0, 30MHz~1GHz

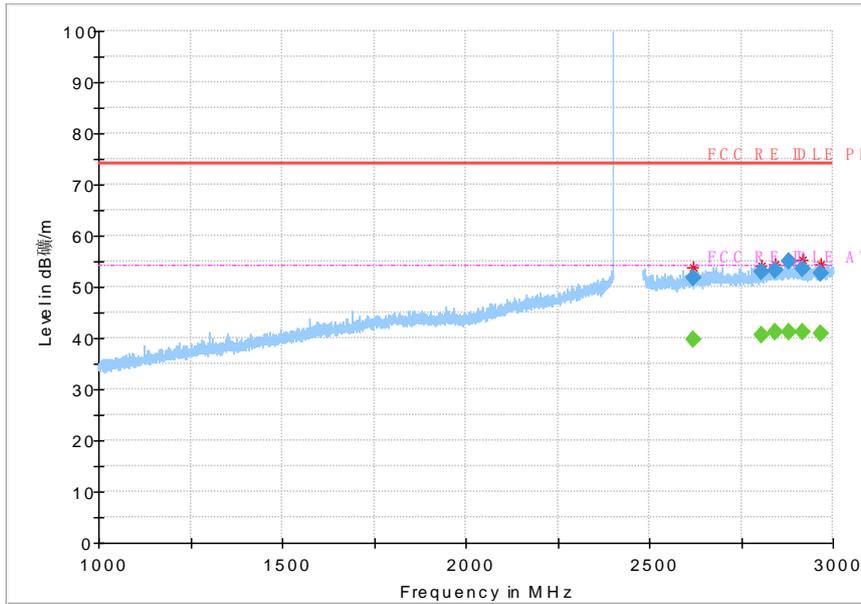


Fig.41 Radiated emission: GFSK, Ch0, 1GHz~3GHz

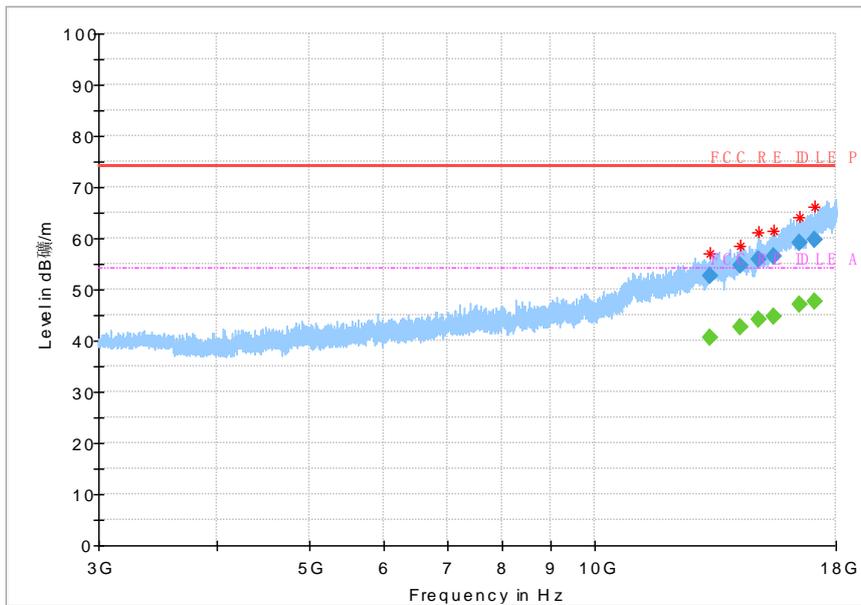
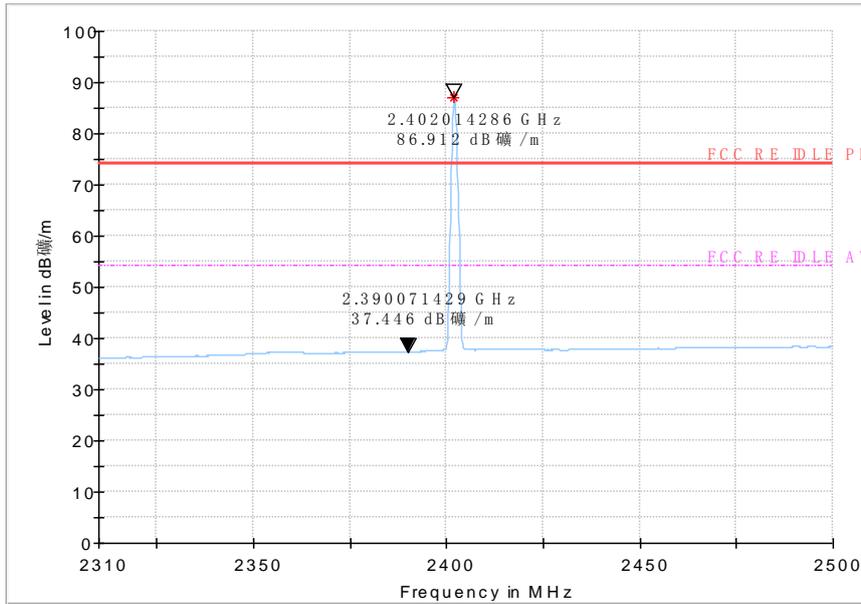
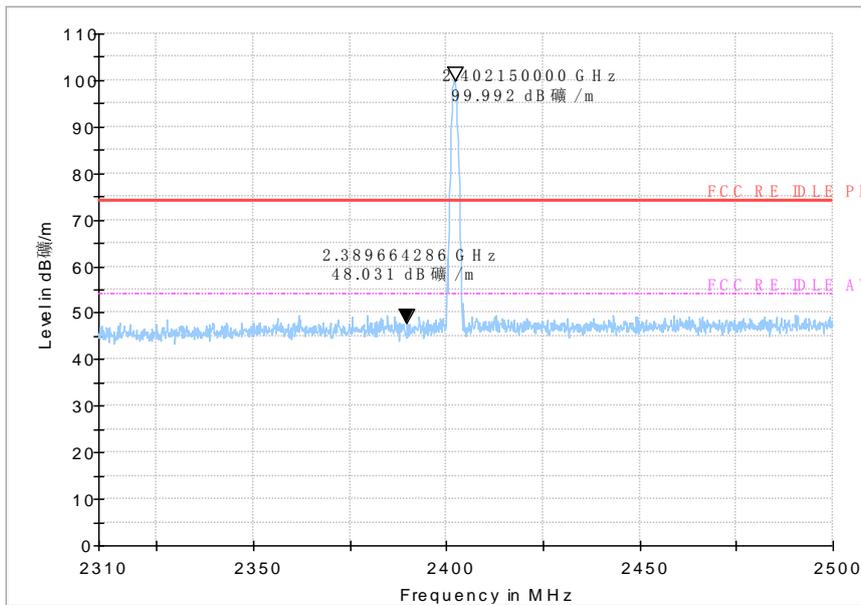


Fig.42 Radiated emission: GFSK, Ch0, 3GHz~18GHz

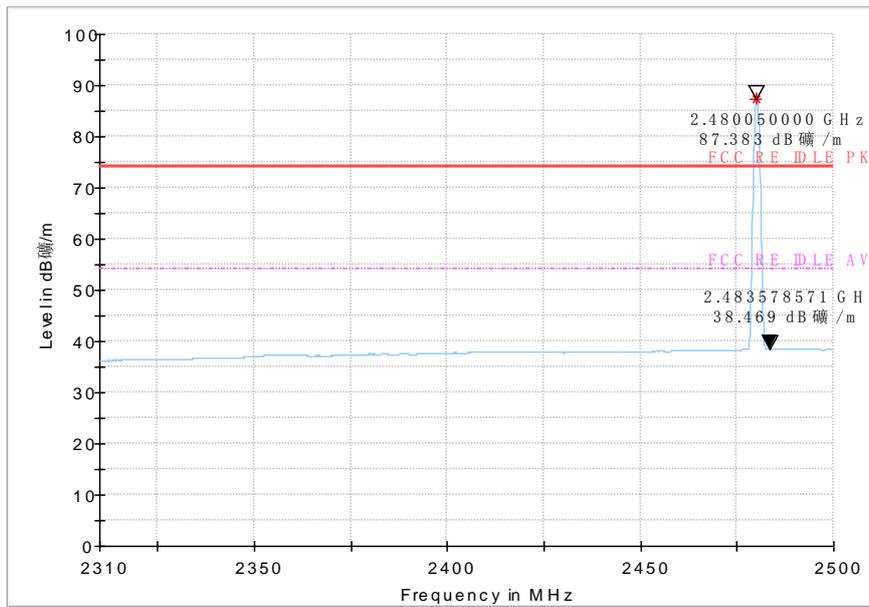


AV detector

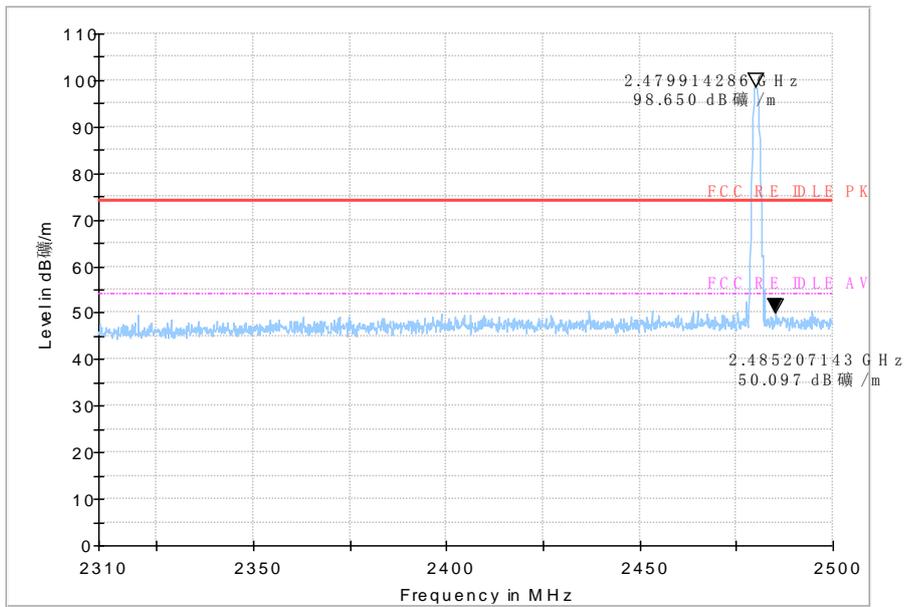


Peak detector

Fig.43 Radiated emission (Power): GFSK, low channel



AV detector



Peak detector

Fig.44 Radiated emission (Power): GFSK, high channel

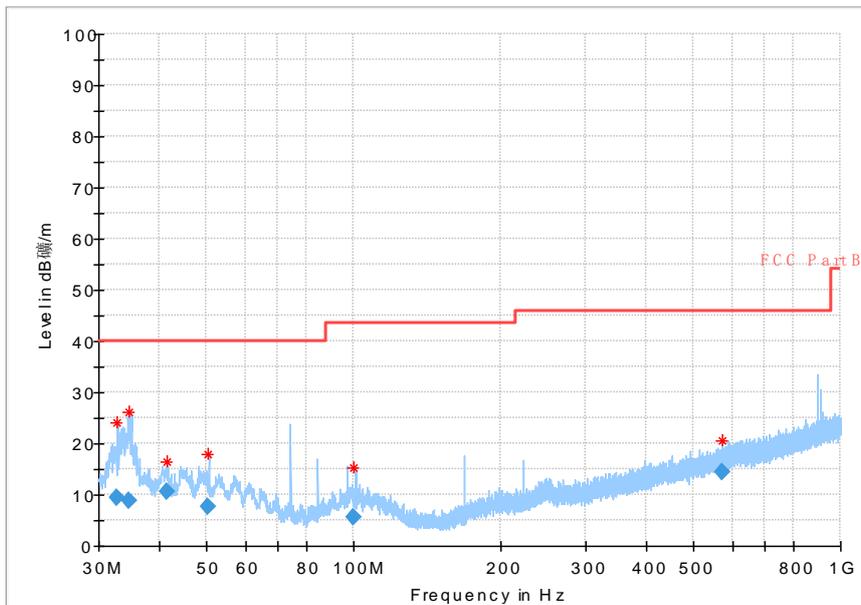


Fig.45 Radiated emission: π/4 DQPSK, Ch0, 30MHz~1GHz

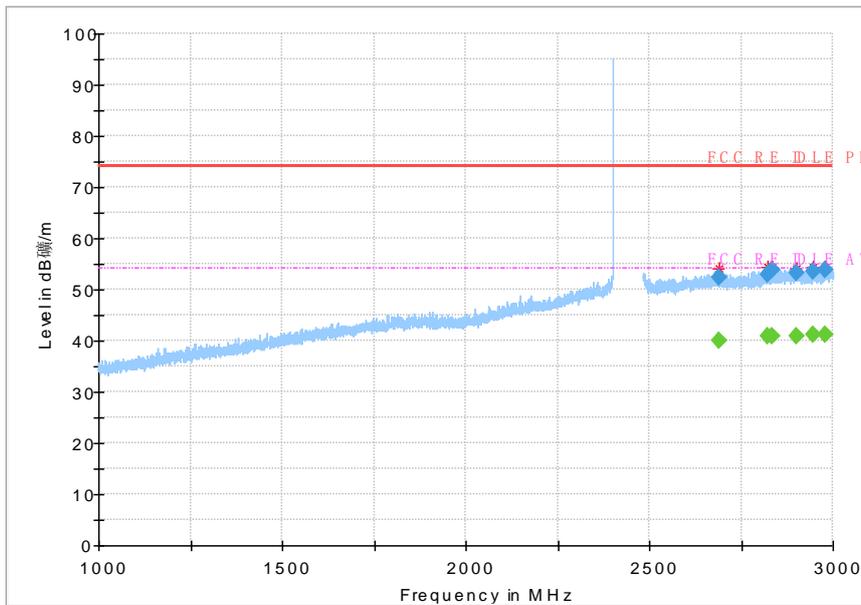


Fig.46 Radiated emission: π/4 DQPSK, Ch0, 1GHz~3GHz

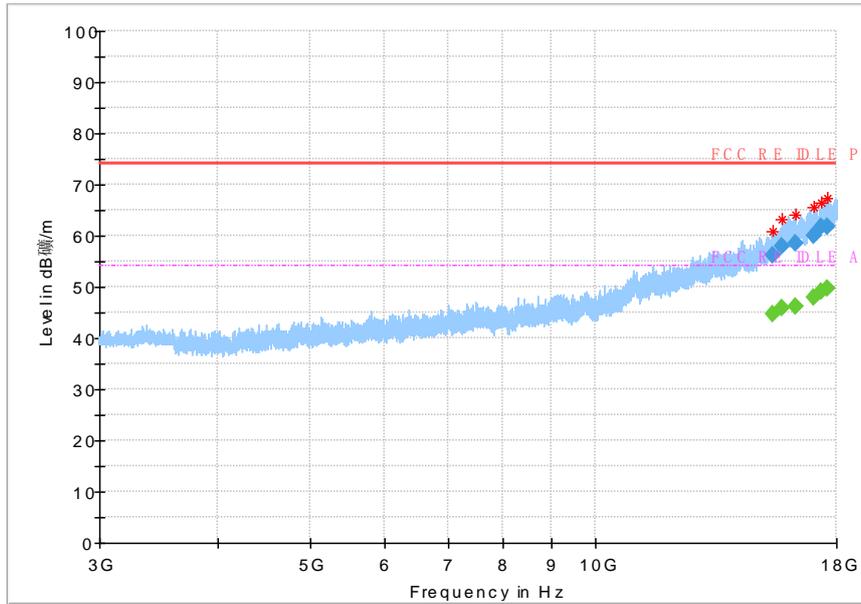
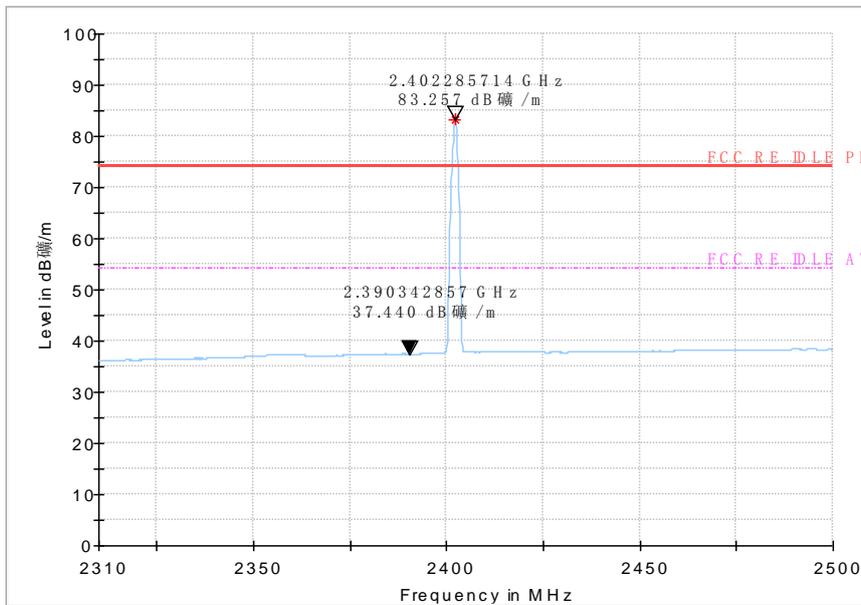
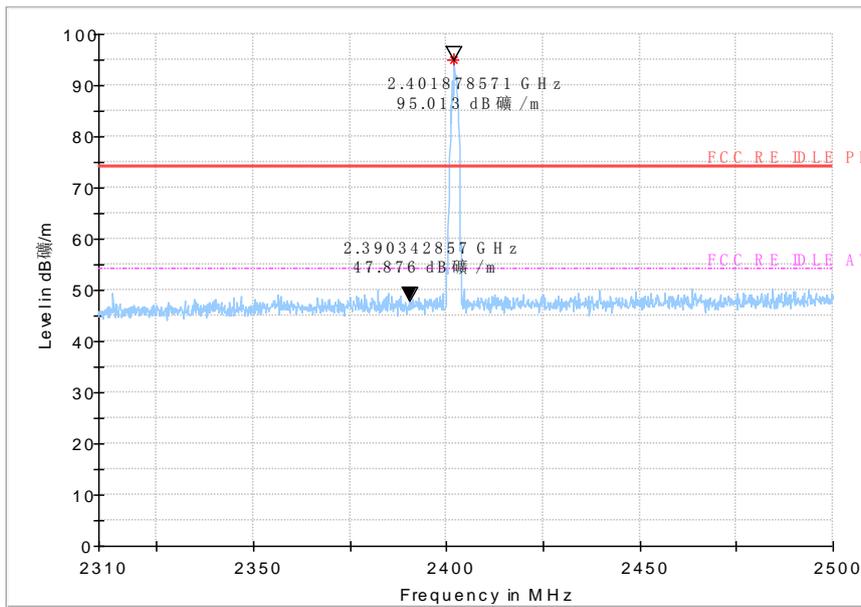


Fig.47 Radiated emission:  $\pi/4$  DQPSK, Ch0, 3GHz~18GHz

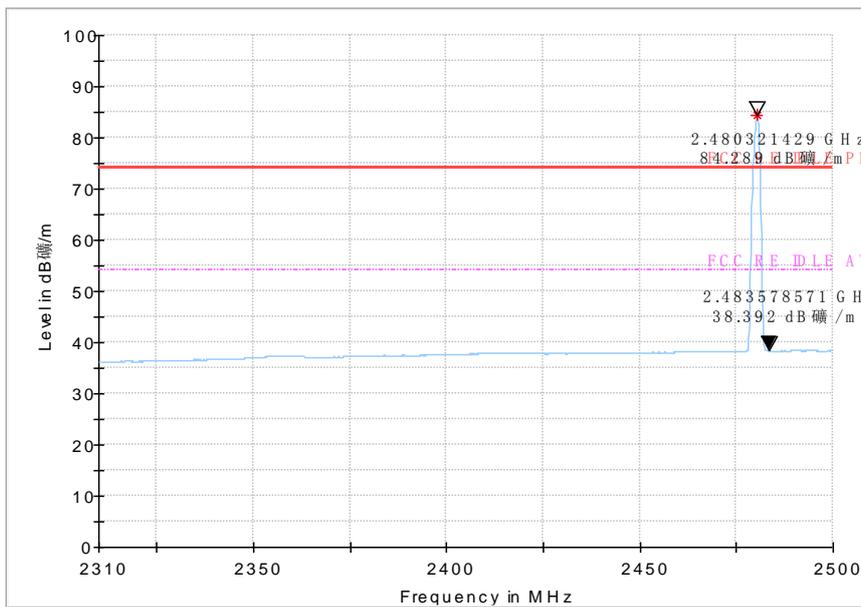


AV detector

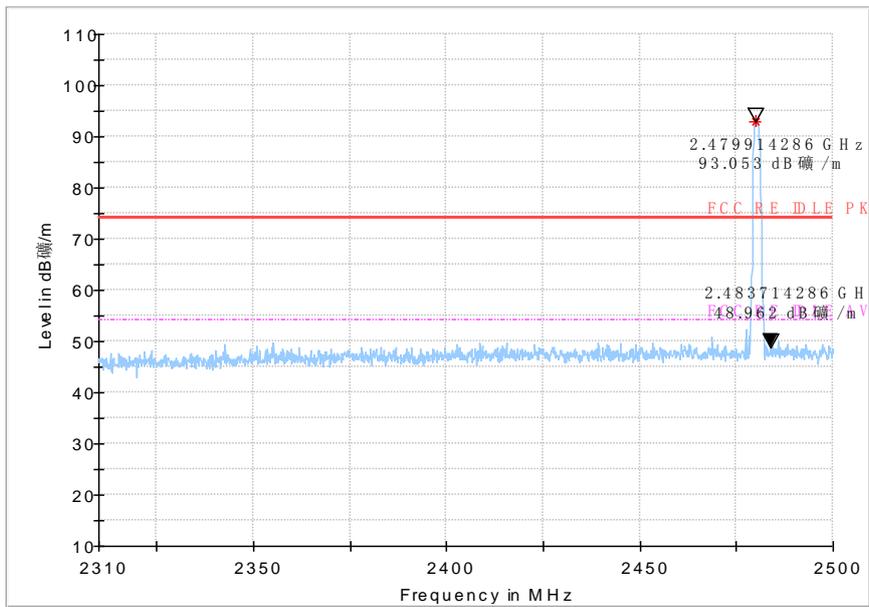


Peak detector

Fig.48 Radiated emission (Power):  $\pi/4$  DQPSK, low channel



AV detector



Peak detector

Fig.49 Radiated emission (Power):  $\pi/4$  DQPSK, high channel

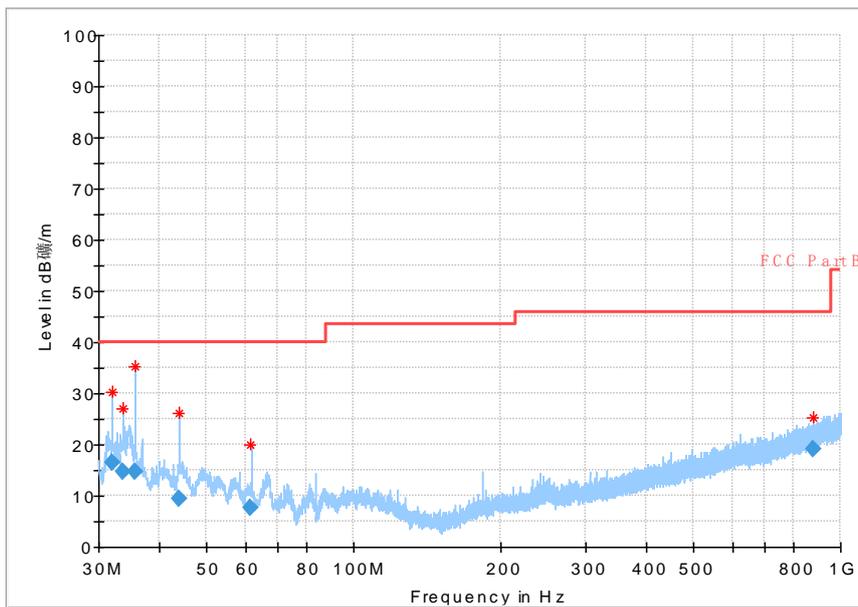


Fig.50 Radiated emission: 8DPSK, Ch0, 30MHz~1GHz

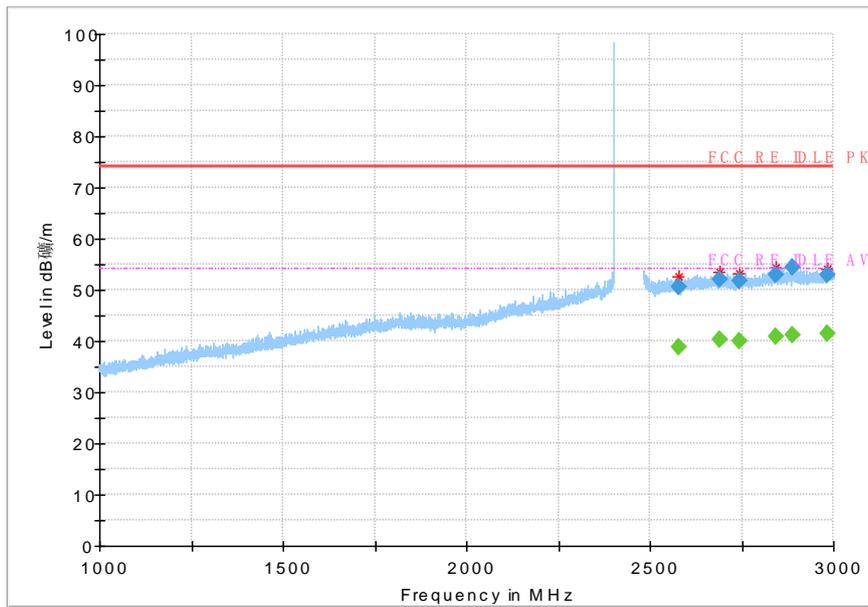


Fig.51 Radiated emission: 8DPSK, Ch0, 1GHz~3GHz

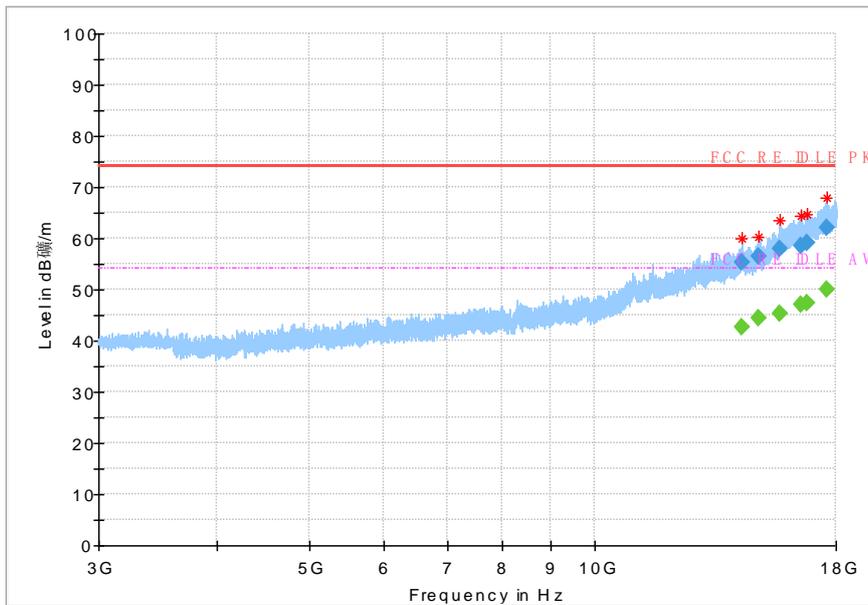
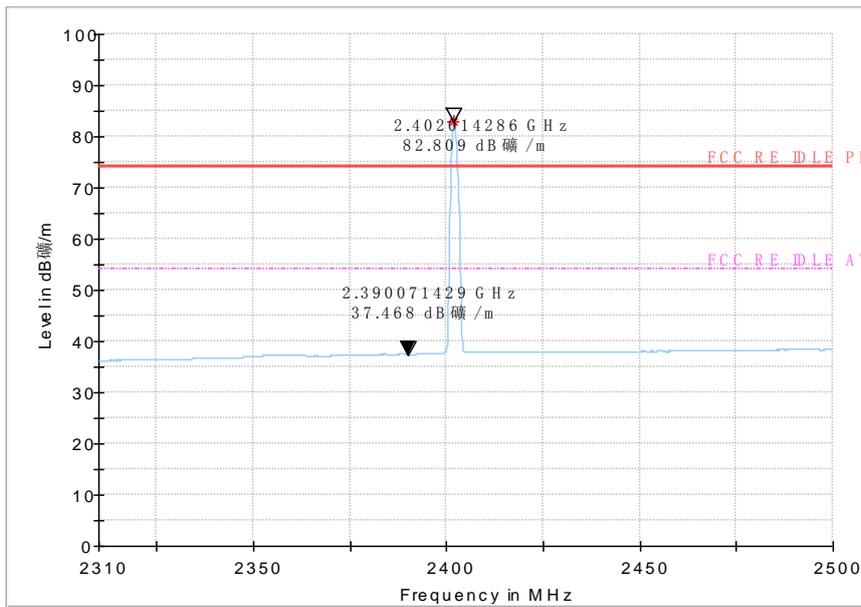
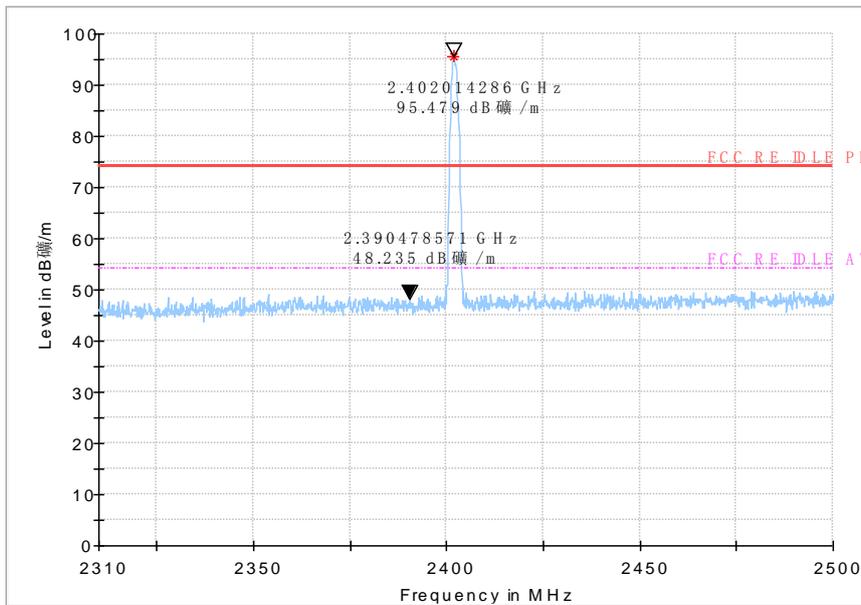


Fig.52 Radiated emission: 8DPSK, Ch0, 3GHz~18GHz

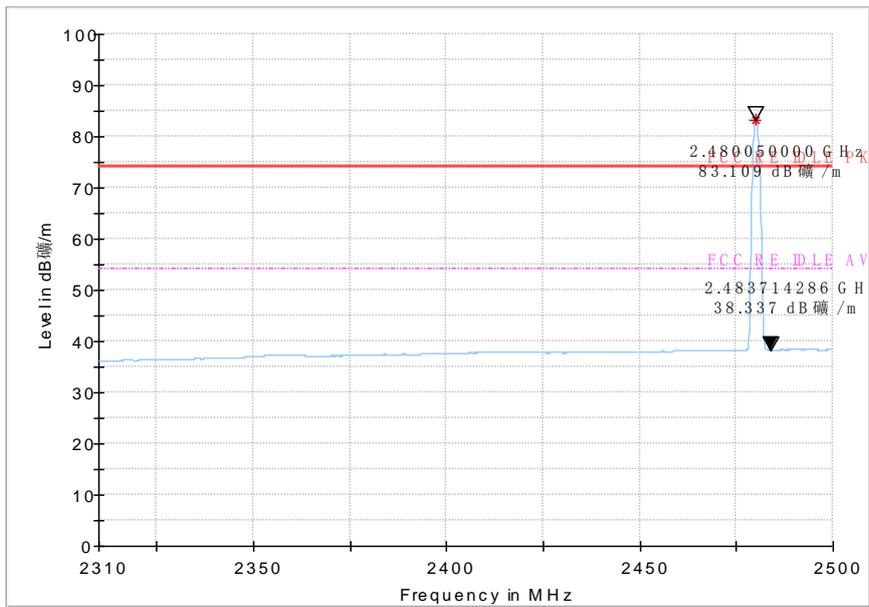


AV detector

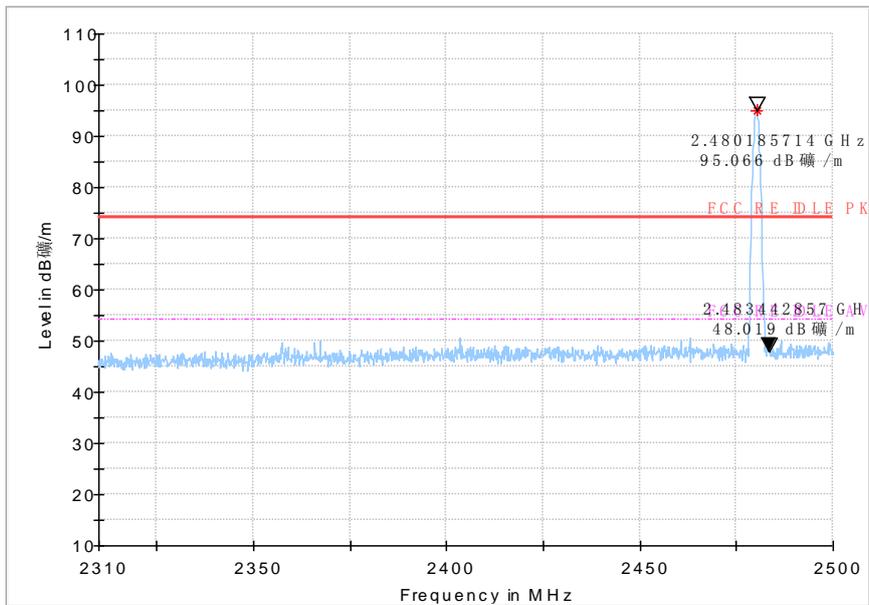


Peak detector

Fig.53 Radiated emission (Power): 8DPSK, low channel



AV detector



Peak detector

Fig.54 Radiated emission (Power): 8DPSK, high channel

## 6.5. Time Of Occupancy (Dwell Time)

### 6.5.1 Measurement Limit:

Standard	Limit (ms)