



# TEST REPORT

No. B20N00193-BT

**TCL Communication Ltd.**

**GSM/UMTS/LTE Mobile phone**

**Model Name: 5002S/5002L**

**with**

**Hardware Version: 01**

**Software Version: 3C7D**

**FCC ID: 2ACCJH120**

**Issued Date: 2020-03-02**

**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 SAICT.

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## 1. Summary of Test Report

### 1.1. Test Items

|                     |                           |
|---------------------|---------------------------|
| Description         | GSM/UMTS/LTE Mobile phone |
| Model Name          | 5002S/5002L               |
| Applicant's name    | TCL Communication Ltd.    |
| Manufacturer's Name | TCL Communication Ltd.    |

### 1.2. Test Standards

FCC Part15-2018; ANSI C63.10-2013

### 1.3. Test Result

**Pass**

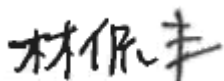
### 1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China

### 1.5. Project data

Testing Start Date: 2020-02-03  
Testing End Date: 2020-02-26

### 1.6. Signature



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Lin Kanfeng  
(Prepared this test report)



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Tang Weisheng  
(Reviewed this test report)



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Zhang Bojun  
(Approved this test report)



## **2. Client Information**

### **2.1. Applicant Information**

Company Name: TCL Communication Ltd.  
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong  
Contact Person: Gong Zhizhou  
E-Mail: zhizhou.gong@tcl.com  
Telephone: 0086-755-36611722  
Fax: 0086-755-36612000-81722

### **2.2. Manufacturer Information**

Company Name: TCL Communication Ltd.  
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong  
Contact Person: Gong Zhizhou  
E-Mail: zhizhou.gong@tcl.com  
Telephone: 0086-755-36611722  
Fax: 0086-755-36612000-81722

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

#### 3.1. About EUT

|                              |                              |
|------------------------------|------------------------------|
| Description                  | GSM/UMTS/LTE Mobile phone    |
| Model Name                   | 5002S/5002L                  |
| Brand Name                   | /                            |
| Frequency Band               | 2400MHz~2483.5MHz            |
| Type of Modulation           | GFSK/π /4 DQPSK/8DPSK        |
| Number of Channels           | 79                           |
| Antenna Type                 | Integrated                   |
| Antenna Gain                 | -5.0dBi                      |
| Power Supply                 | 3.8V DC by Battery           |
| FCC ID                       | 2ACCJH120                    |
| Condition of EUT as received | No abnormality in appearance |

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Shenzhen Academy of Information and Communications Technology.

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

| EUT ID* | IMEI            | HW Version | SW Version | Receive Date |
|---------|-----------------|------------|------------|--------------|
| EUT1    | 015650000020589 | 01         | 3C7D       | 2020-01-20   |
| EUT2    | 015650000020597 | 01         | 3C7D       | 2020-01-20   |

\*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    | Charger     | /  |
| AE2    | Charger     | /  |
| AE3    | Battery     | /  |

##### AE1

|              |              |
|--------------|--------------|
| Model        | CBA0058AGAC5 |
| Manufacturer | MOU,PUAN     |

##### AE2

|              |              |
|--------------|--------------|
| Model        | CBA0058AGAC7 |
| Manufacturer | MOU,CHENYANG |

##### AE3

|              |              |
|--------------|--------------|
| Model        | CAB2880001C1 |
| Manufacturer | BYD          |
| Capacitance  | 3000mAh      |

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



### **3.4. General Description**

The Equipment under Test (EUT) is a model of GSM/UMTS/LTE Mobile phone with integrated antenna and battery.

It consists of normal options: Lithium Battery, Charger and Headset.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.

#### **4. Reference Documents**

##### **4.1. Documents supplied by applicant**

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

##### **4.2. Reference Documents for testing**

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

| <b>Reference</b> | <b>Title</b>                                                                                                                                                                                                              | <b>Version</b> |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| FCC Part 15      | FCC CFR 47, Part 15, Subpart C:<br>15.205 Restricted bands of operation;<br>15.209 Radiated emission limits, general requirements;<br>15.247 Operation within the bands 902–928MHz,<br>2400–2483.5 MHz, and 5725–5850 MHz | 2018           |
| ANSI C63.10      | American National Standard of Procedures for Compliance<br>Testing of Unlicensed Wireless Devices                                                                                                                         | 2013           |

## 5. Test Results

### 5.1. Testing Environment

Normal Temperature: 15~35°C

Relative Humidity: 20~75%

### 5.2. Test Results

| No | Test cases                       | Sub-clause of Part 15C | Verdict |
|----|----------------------------------|------------------------|---------|
| 0  | Antenna Requirement              | 15.203                 | P       |
| 1  | Maximum Peak Output Power        | 15.247 (b)             | P       |
| 2  | Band Edges Compliance            | 15.247 (d)             | P       |
| 3  | Conducted Spurious Emission      | 15.247 (d)             | P       |
| 4  | Radiated Spurious Emission       | 15.247,15.205,15.209   | P       |
| 5  | Occupied 20dB bandwidth          | 15.247(a)              | P       |
| 6  | Time of Occupancy (Dwell Time)   | 15.247(a)              | P       |
| 7  | Number of Hopping Channel        | 15.247(a)              | P       |
| 8  | Carrier Frequency Separation     | 15.247(a)              | P       |
| 9  | AC Power line Conducted Emission | 15.107,15.207          | P       |

See **ANNEX A** for details.

### 5.3. Statements

SAICT has evaluated the test cases requested by the applicant/manufacture as listed in section 5.2 of this report, for the EUT specified in section 3, according to the standards or reference documents listed in section 4.2.

## 6. Test Equipments Utilized

### Conducted test system

| No. | Equipment              | Model   | Serial Number | Manufacturer    | Calibration Due date | Calibration Period |
|-----|------------------------|---------|---------------|-----------------|----------------------|--------------------|
| 1   | Vector Signal Analyzer | FSV40   | 100903        | Rohde & Schwarz | 2021-01-15           | 1 year             |
| 2   | Bluetooth Tester       | CBT32   | 100584        | Rohde & Schwarz | 2021-01-01           | 1 year             |
| 3   | Power Sensor           | U2021XA | MY55430013    | Agilent         | 2021-01-15           | 1 year             |
| 4   | Data Acquisition       | U2531A  | TW55443507    | Agilent         | /                    | /                  |

### Radiated emission test system

| No. | Equipment         | Model                 | Serial Number | Manufacturer | Calibration Due date | Calibration Period |
|-----|-------------------|-----------------------|---------------|--------------|----------------------|--------------------|
| 1   | LISN              | ESH2-Z5               | 100196        | R&S          | 2021-01-02           | 1 year             |
| 2   | Test Receiver     | ESCI                  | 100701        | R&S          | 2020-08-06           | 1 year             |
| 3   | Loop Antenna      | HLA6120               | 35779         | TESEQ        | 2022-05-01           | 3 year             |
| 4   | BiLog Antenna     | VULB9163              | 9163 329      | Schwarzbeck  | 2021-02-16           | 3 year             |
| 5   | Horn Antenna      | 3117                  | 00066585      | ETS-Lindgren | 2022-03-04           | 3 year             |
| 6   | Test Receiver     | ESR7                  | 101675        | R&S          | 2020-07-18           | 1 year             |
| 7   | Spectrum Analyzer | FSP 40                | 100378        | R&S          | 2020-12-12           | 1 year             |
| 8   | Chamber           | FACT5-2.0             | 4166          | ETS-Lindgren | 2021-05-12           | 3 year             |
| 9   | Antenna           | QSH-SL-1<br>8-26-S-20 | 17013         | Q-par        | 2021-01-14           | 3 year             |
| 10  | Antenna           | QSH-SL-2<br>6-40-K-20 | 17014         | Q-par        | 2021-01-10           | 3 year             |

### Test software

| No. | Equipment        | Manufacturer    | Version  |
|-----|------------------|-----------------|----------|
| 1   | TechMgr Software | CAICT           | 2.1.1    |
| 2   | EMC32            | Rohde & Schwarz | 8.53.0   |
| 3   | EMC32            | Rohde & Schwarz | 10.01.00 |

EUT is engineering software provided by the customer to control the transmitting signal.  
The EUT was programmed to be in continuously transmitting mode.

### Anechoic chamber

Fully anechoic chamber by ETS-Lindgren

## 7. Laboratory Environment

### Semi-anechoic chambe

|                                   |                                             |
|-----------------------------------|---------------------------------------------|
| Temperature                       | Min. = 15 °C, Max. = 35 °C                  |
| Relative humidity                 | Min. = 15 %, Max. = 75 %                    |
| Shielding effectiveness           | 0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB   |
| Electrical insulation             | > 2MΩ                                       |
| Ground system resistance          | < 4 Ω                                       |
| Normalised site attenuation (NSA) | < ± 4 dB, 3 m distance, from 30 to 1000 MHz |

### Shielded room

|                          |                                          |
|--------------------------|------------------------------------------|
| Temperature              | Min. = 15 °C, Max. = 35 °C               |
| Relative humidity        | Min. =20 %, Max. = 75 %                  |
| Shielding effectiveness  | 0.014MHz-1MHz> 60 dB; 1MHz-1000MHz>90 dB |
| Electrical insulation    | > 2MΩ                                    |
| Ground system resistance | < 4 Ω                                    |

### Fully-anechoic chamber

|                                    |                                           |
|------------------------------------|-------------------------------------------|
| Temperature                        | Min. = 15 °C, Max. = 35 °C                |
| Relative humidity                  | Min. = 15 %, Max. = 75 %                  |
| Shielding effectiveness            | 0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB |
| Electrical insulation              | > 2MΩ                                     |
| Ground system resistance           | < 4 Ω                                     |
| Voltage Standing Wave Ratio (VSWR) | ≤ 6 dB, from 1 to 18 GHz, 3 m distance    |
| Uniformity of field strength       | Between 0 and 6 dB, from 80 to 6000 MHz   |

## 8. Measurement Uncertainty

| Test Name                                    | Uncertainty ( $k=2$ )                    |        |
|----------------------------------------------|------------------------------------------|--------|
| 1. RF Output Power - Conducted               | 1.32dB                                   |        |
| 2. Time of Occupancy - Conducted             | 0.58ms                                   |        |
| 3. Occupied channel bandwidth - Conducted    | 66Hz                                     |        |
| 4. Transmitter Spurious Emission - Conducted | $30\text{MHz} \leq f \leq 1\text{GHz}$   | 1.41dB |
|                                              | $1\text{GHz} \leq f \leq 7\text{GHz}$    | 1.92dB |
|                                              | $7\text{GHz} \leq f \leq 13\text{GHz}$   | 2.31dB |
|                                              | $13\text{GHz} \leq f \leq 26\text{GHz}$  | 2.61dB |
| 5. Transmitter Spurious Emission - Radiated  | $9\text{kHz} \leq f \leq 30\text{MHz}$   | 1.70dB |
|                                              | $30\text{MHz} \leq f \leq 1\text{GHz}$   | 4.90dB |
|                                              | $1\text{GHz} \leq f \leq 18\text{GHz}$   | 4.60dB |
|                                              | $18\text{GHz} \leq f \leq 40\text{GHz}$  | 4.10dB |
| 6. AC Power line Conducted Emission          | $150\text{kHz} \leq f \leq 30\text{MHz}$ | 3.00dB |

## **ANNEX A: Detailed Test Results**

### **A.0 Antenna requirement**

#### **Measurement Limit:**

| <b>Standard</b>     | <b>Requirement</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FCC CRF Part 15.203 | An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded. |

Conclusion: The Directional gains of antenna used for transmitting is -5.0dBi. The RF transmitter uses an integrate antenna without connector.

## A.1 Maximum Peak Output Power

**Method of Measurement:** See ANSI C63.10-clause 7.8.5.

A peak responding power meter may be used, where the power meter and sensor system video bandwidth is greater than the occupied bandwidth of the unlicensed wireless device, rather than a spectrum analyzer.

**Measurement Limit:**

| Standard                | Limit (dBm) | E.I.R.P Limit (dBm) |
|-------------------------|-------------|---------------------|
| FCC CRF Part 15.247 (b) | < 30        | < 36                |

**Measurement Results:**

**Conducted transmitter power**

| Mode           | Peak Conducted Output Power (dBm) |                |                |
|----------------|-----------------------------------|----------------|----------------|
|                | 2402MHz (Ch0)                     | 2441MHz (Ch39) | 2480MHz (Ch78) |
| GFSK           | 9.26                              | 9.68           | 8.26           |
| $\pi$ /4 DQPSK | 10.07                             | 10.53          | 9.09           |
| 8DPSK          | 10.48                             | 10.95          | 9.45           |

**E.I.R.P**

| Mode           | Peak Conducted Output Power (dBm) |                |                |
|----------------|-----------------------------------|----------------|----------------|
|                | 2402MHz (Ch0)                     | 2441MHz (Ch39) | 2480MHz (Ch78) |
| GFSK           | 4.26                              | 4.68           | 3.26           |
| $\pi$ /4 DQPSK | 5.07                              | 5.53           | 4.09           |
| 8DPSK          | 5.48                              | 5.95           | 4.45           |

Note: E.I.R.P value = Conducted values (with conducted samples) + Antenna Gain.

**Conclusion: Pass**

## A.2 Band Edges Compliance

### Measurement Limit:

| Standard                   | Limit (dBc) |
|----------------------------|-------------|
| FCC 47 CFR Part 15.247 (d) | > 20        |

### Measurement Result:

| Mode          | Channel | Hopping | Test Results | Conclusion |
|---------------|---------|---------|--------------|------------|
| GFSK          | 0       | ON      | Fig.1        | P          |
|               | 78      | ON      | Fig.2        | P          |
| $\pi/4$ DQPSK | 0       | ON      | Fig.3        | P          |
|               | 78      | ON      | Fig.4        | P          |
| 8DPSK         | 0       | ON      | Fig.5        | P          |
|               | 78      | ON      | Fig.6        | P          |

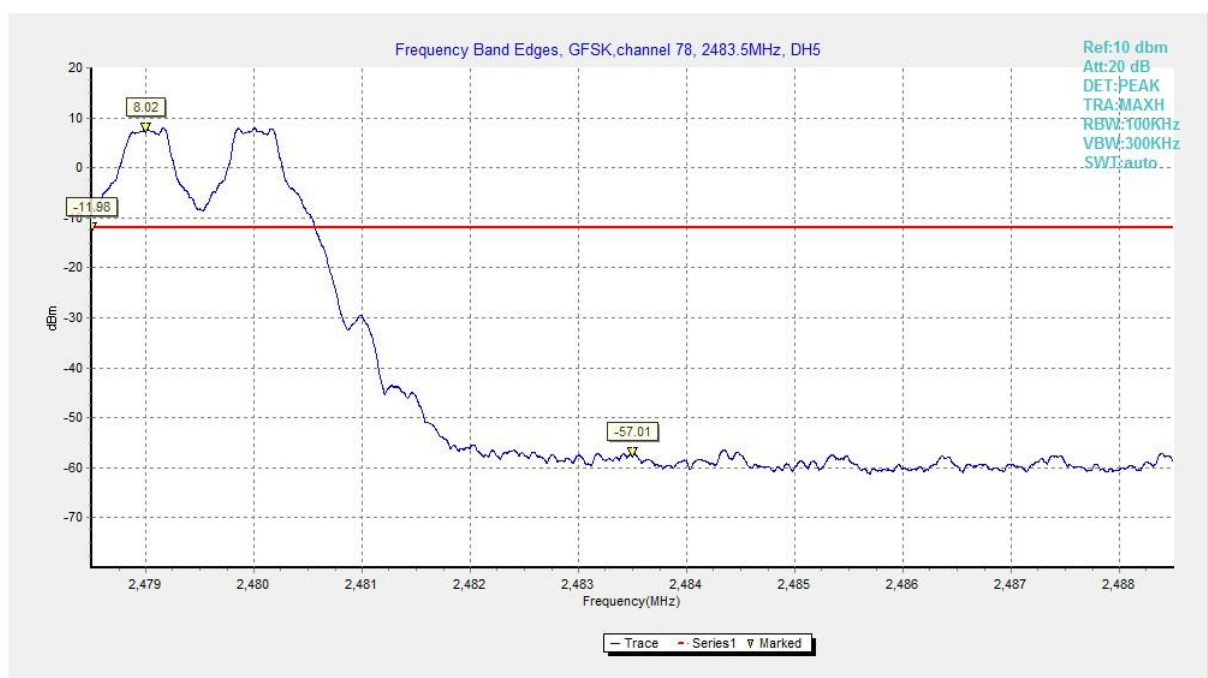
| Mode          | Channel | Hopping | Test Results | Conclusion |
|---------------|---------|---------|--------------|------------|
| GFSK          | 0       | OFF     | Fig.7        | P          |
|               | 78      | OFF     | Fig.8        | P          |
| $\pi/4$ DQPSK | 0       | OFF     | Fig.9        | P          |
|               | 78      | OFF     | Fig.10       | P          |
| 8DPSK         | 0       | OFF     | Fig.11       | P          |
|               | 78      | OFF     | Fig.12       | P          |

See below for test graphs.

Conclusion: Pass



**Fig. 1 Band Edges (GFSK, Ch 0, Hopping ON)**



**Fig. 2 Band Edges (GFSK, Ch 78, Hopping ON)**

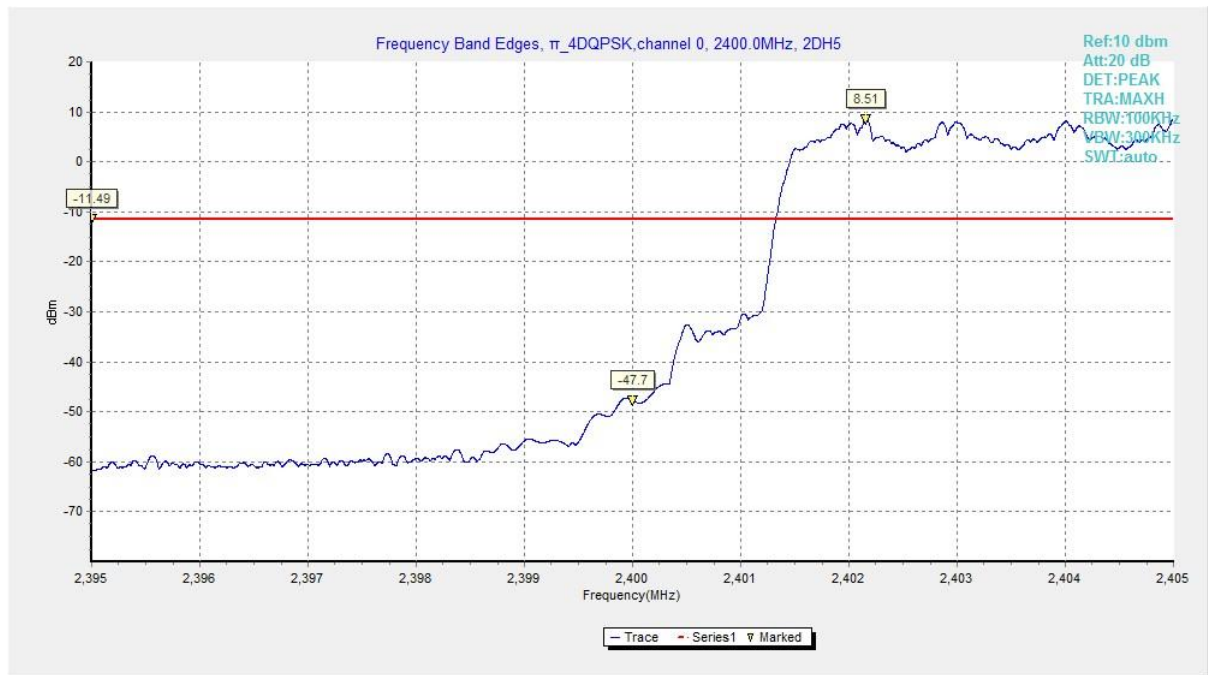


Fig. 3 Band Edges ( $\pi$  /4 DQPSK, Ch 0, Hopping ON)

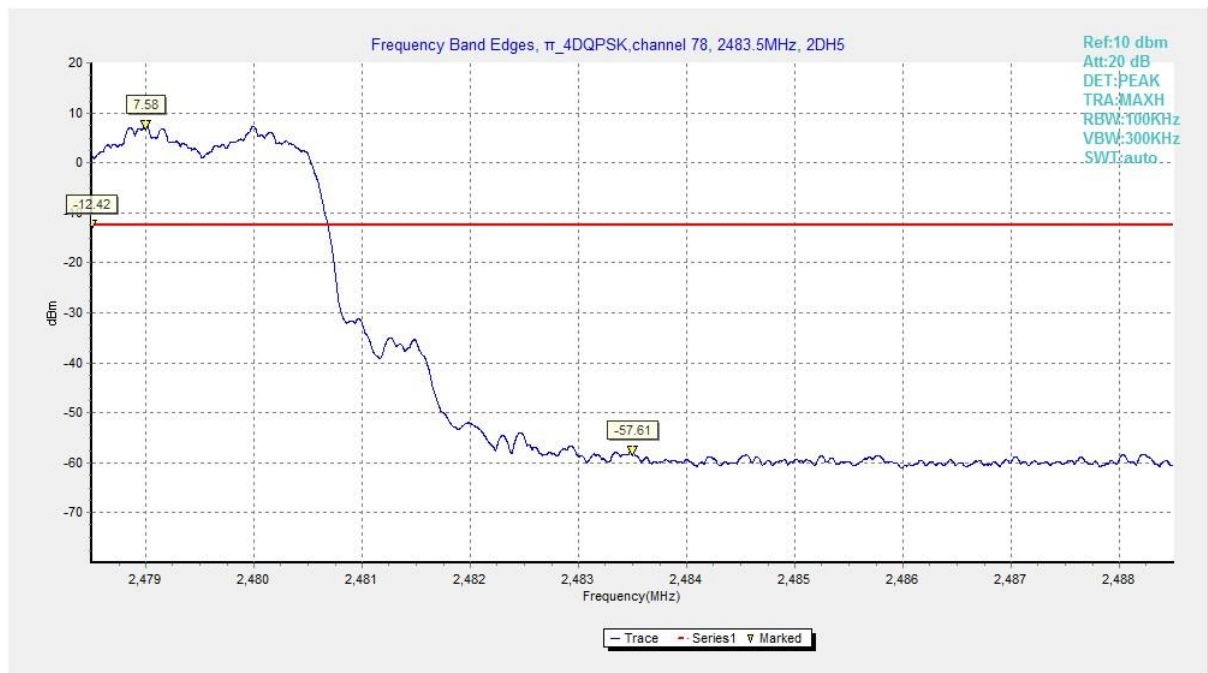
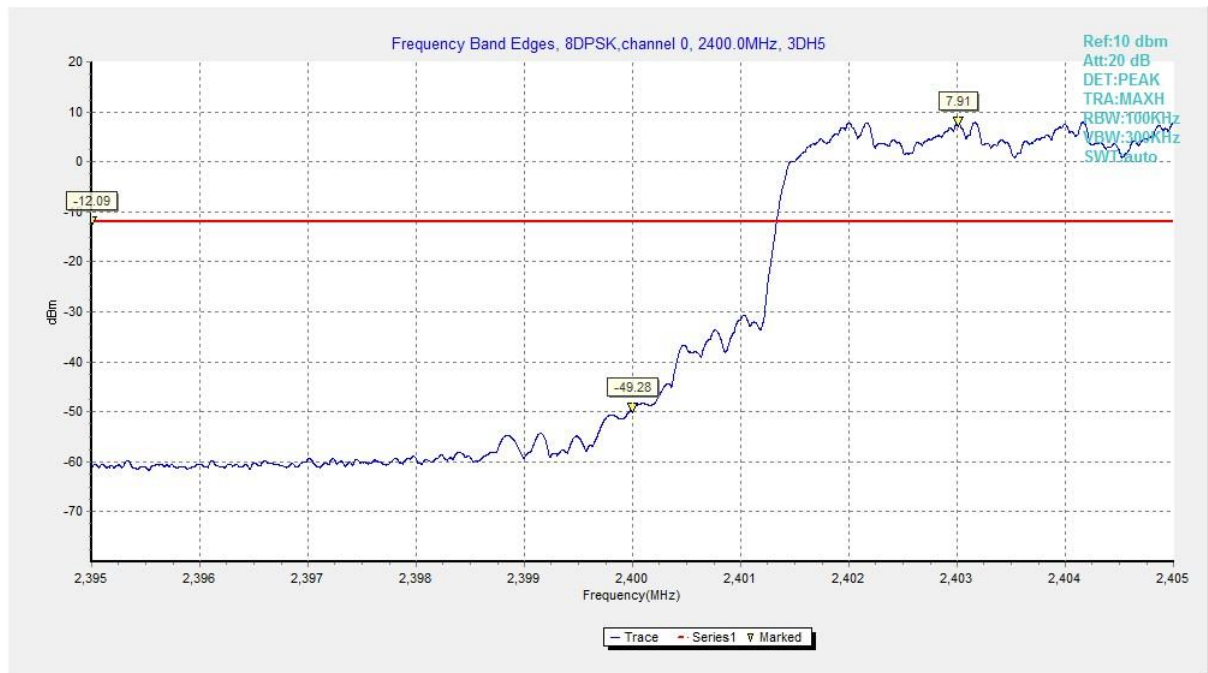
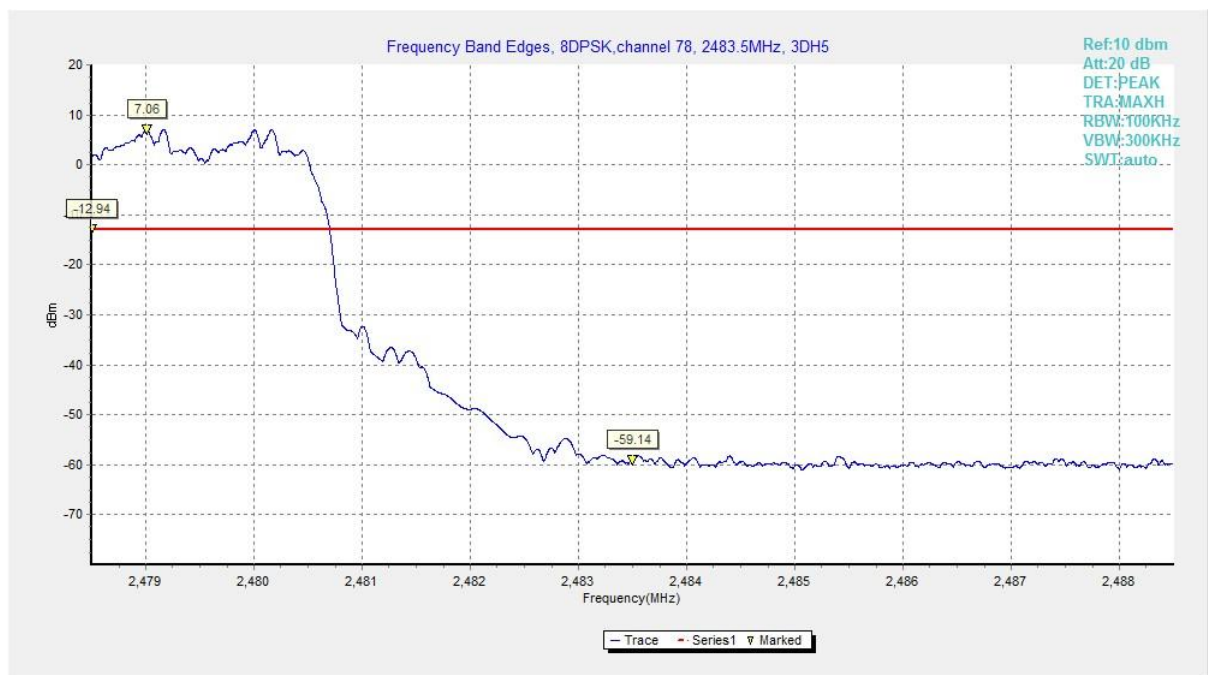


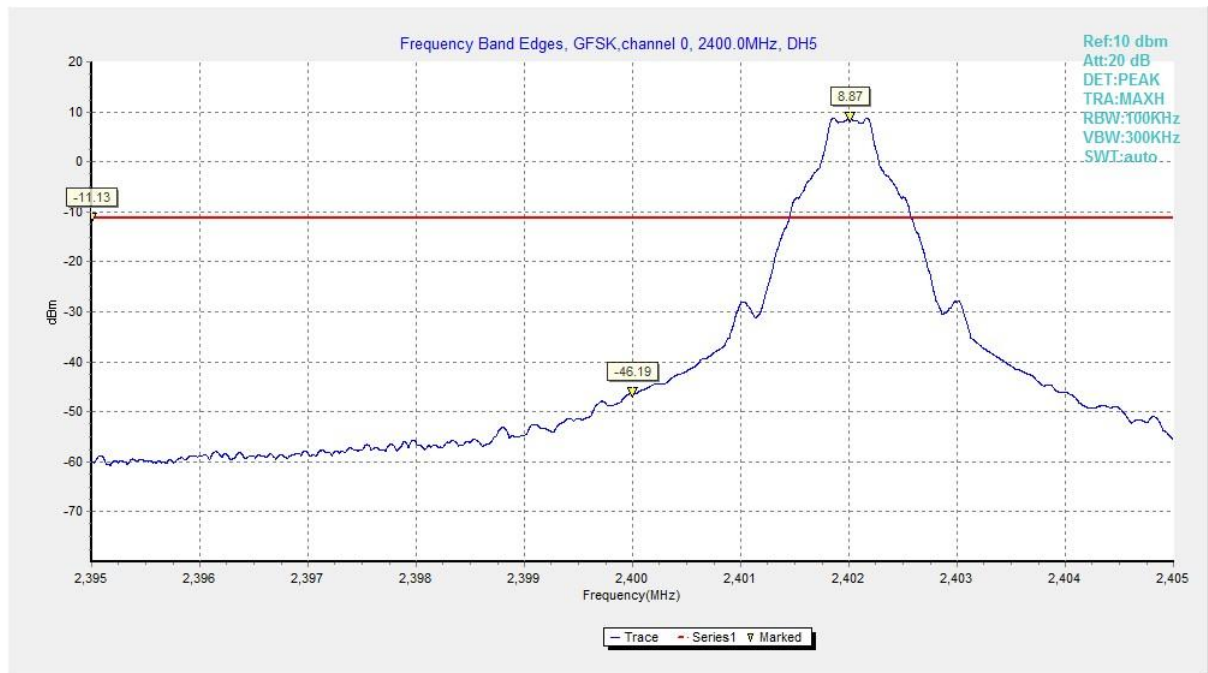
Fig. 4 Band Edges ( $\pi$  /4 DQPSK, Ch 78, Hopping ON)



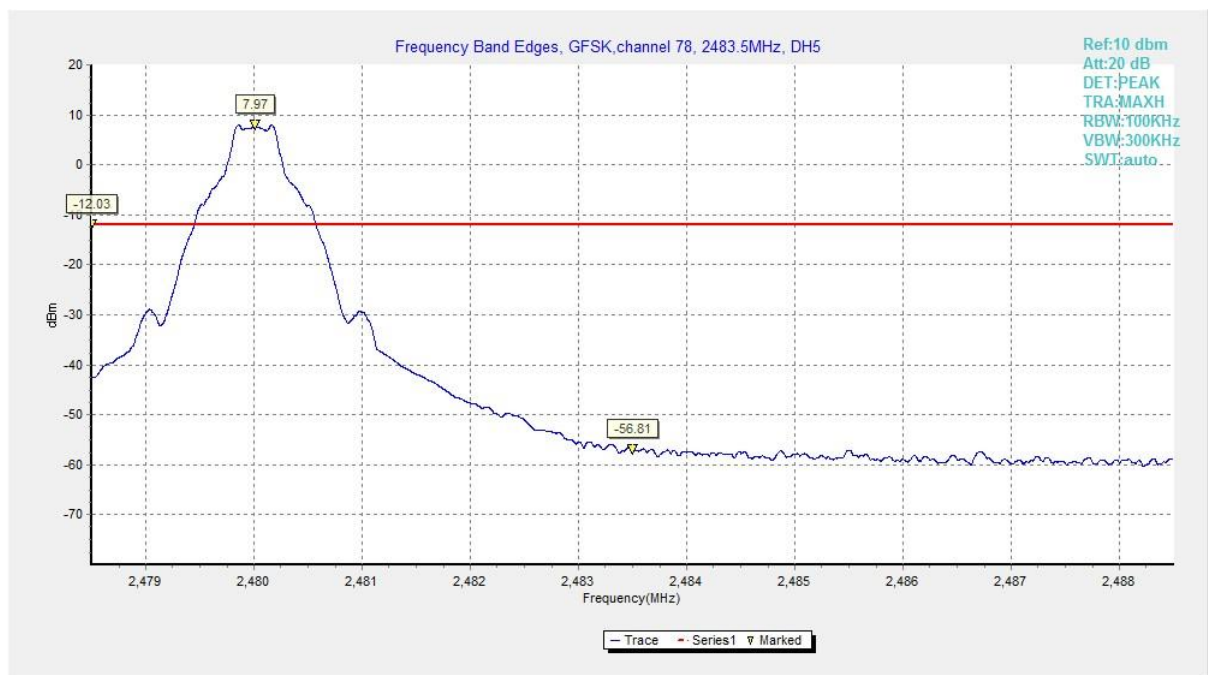
**Fig. 5 Band Edges (8DPSK, Ch 0, Hopping ON)**



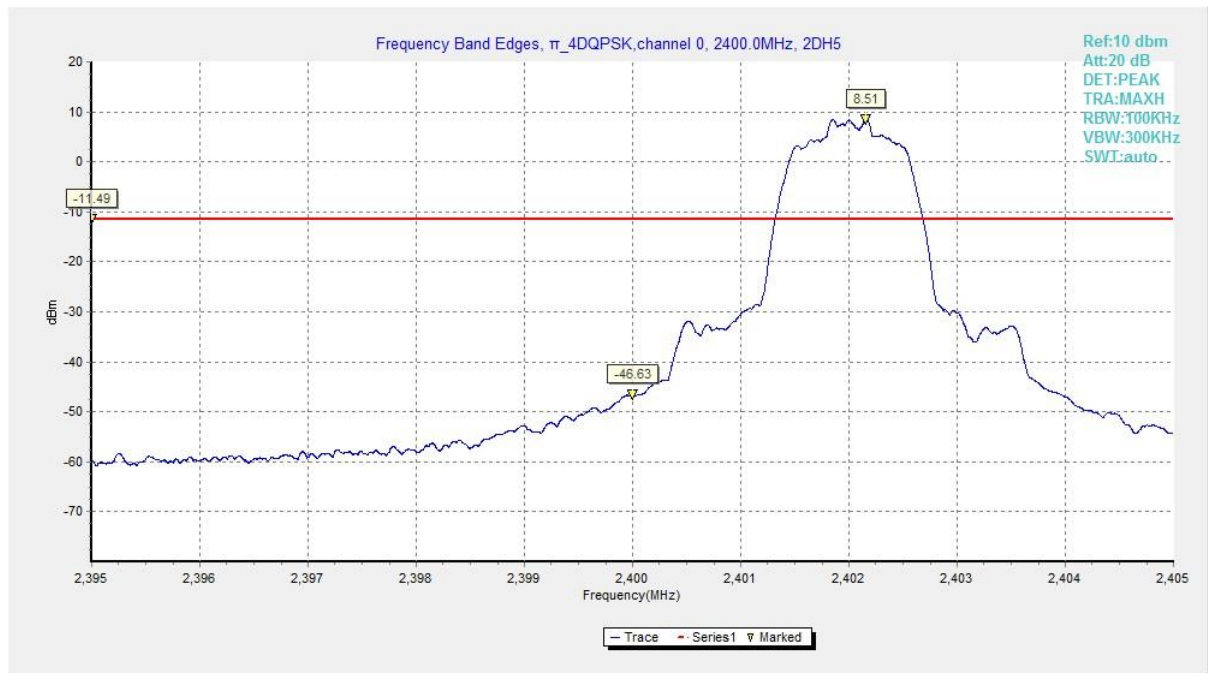
**Fig. 6 Band Edges (8DPSK, Ch 78, Hopping ON)**



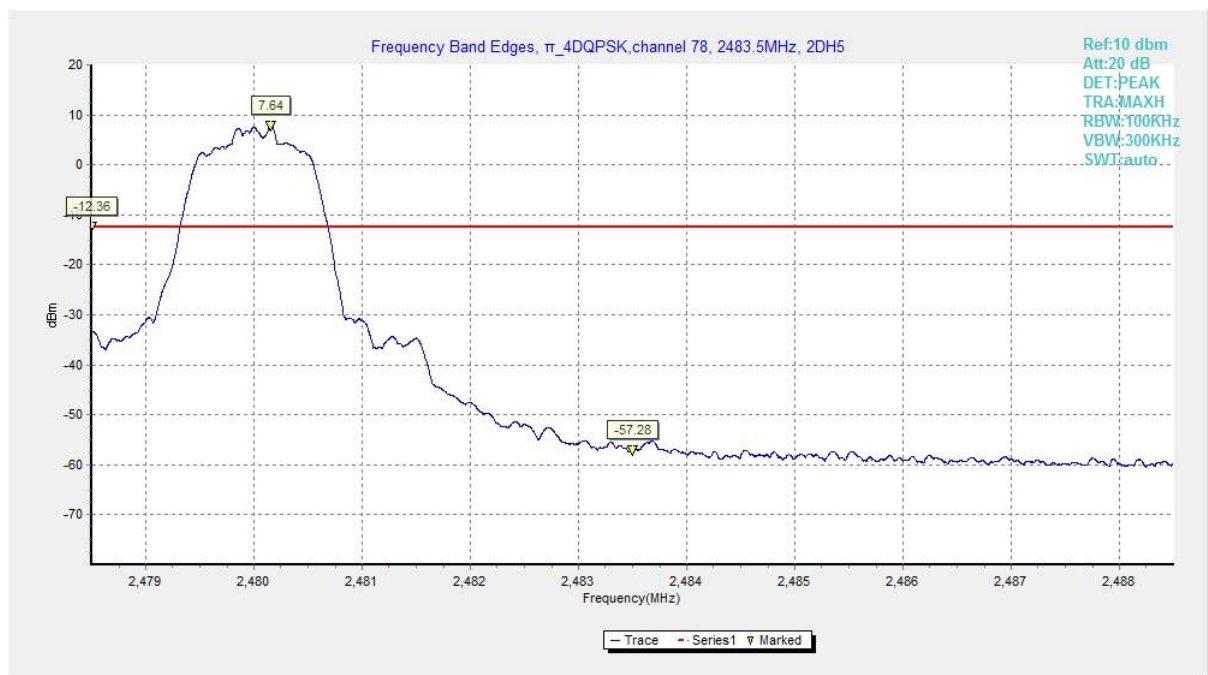
**Fig. 7 Band Edges (GFSK, Ch 0, Hopping OFF)**



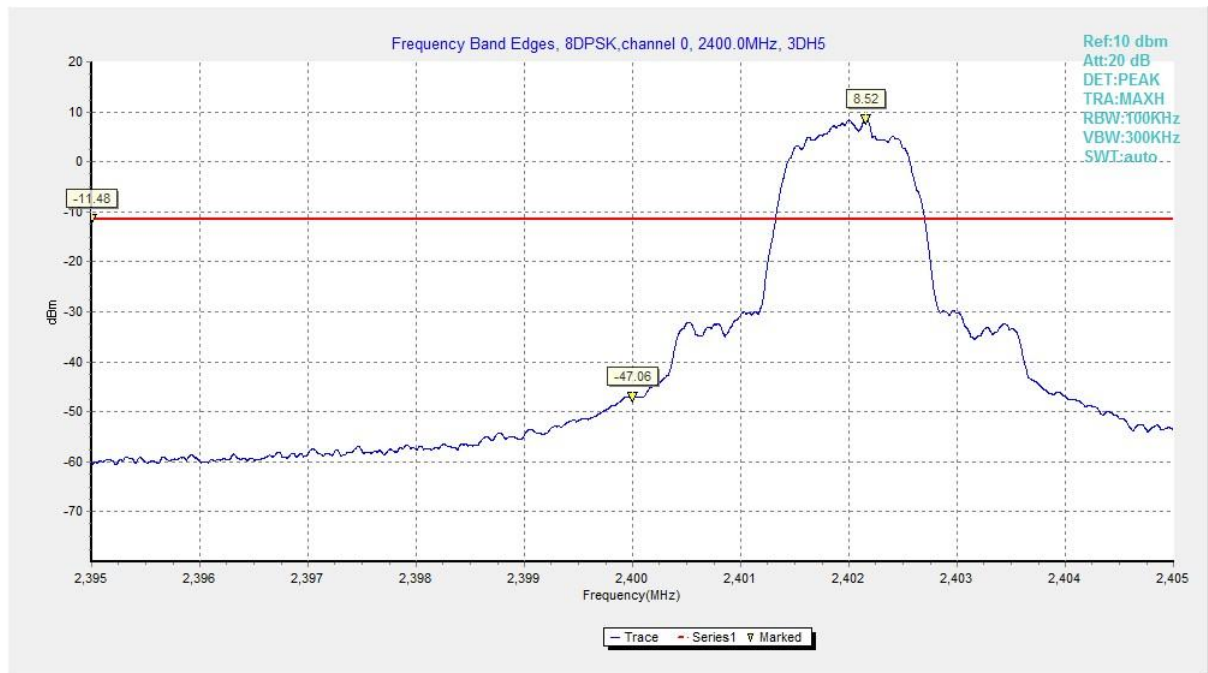
**Fig. 8 Band Edges (GFSK, Ch 78, Hopping OFF)**



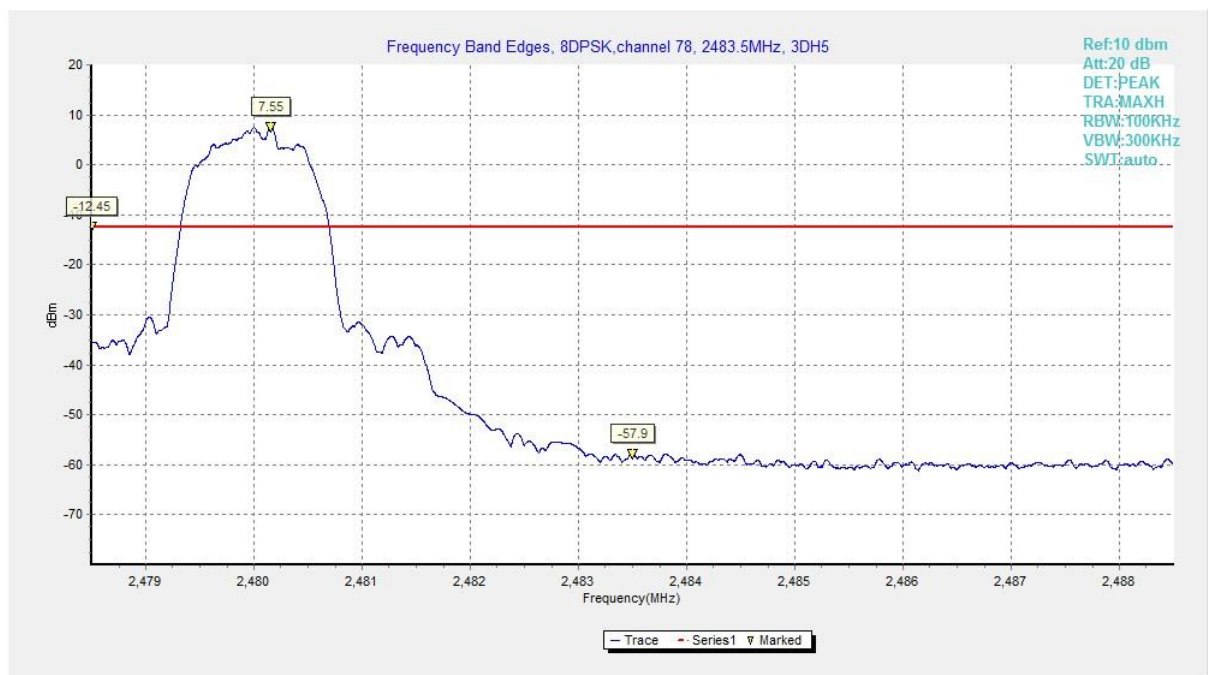
**Fig. 9 Band Edges ( $\pi/4$  DQPSK, Ch 0, Hopping OFF)**



**Fig. 10 Band Edges ( $\pi/4$  DQPSK, Ch 78, Hopping OFF)**



**Fig. 11 Band Edges (8DPSK, Ch 0, Hopping OFF)**



**Fig. 12 Band Edges (8DPSK, Ch 78, Hopping OFF)**

### A.3 Conducted Emission

#### Measurement Limit:

| Standard                   | Limit                                                |
|----------------------------|------------------------------------------------------|
| FCC 47 CFR Part 15.247 (d) | 20dB below peak output power in<br>100 kHz bandwidth |

#### Measurement Results:

| MODE          | Channel      | Frequency Range | Test Results | Conclusion |
|---------------|--------------|-----------------|--------------|------------|
| GFSK          | 0            | 2.402 GHz       | Fig.13       | P          |
|               |              | 1GHz-3GHz       | Fig.14       | P          |
|               |              | 3GHz-10GHz      | Fig.15       | P          |
|               | 39           | 2.441 GHz       | Fig.16       | P          |
|               |              | 1GHz-3GHz       | Fig.17       | P          |
|               |              | 3GHz-10GHz      | Fig.18       | P          |
|               | 78           | 2.480 GHz       | Fig.19       | P          |
|               |              | 1GHz-3GHz       | Fig.20       | P          |
|               |              | 3GHz-10GHz      | Fig.21       | P          |
| $\pi/4$ DQPSK | 0            | 2.402 GHz       | Fig.22       | P          |
|               |              | 1GHz-3GHz       | Fig.23       | P          |
|               |              | 3GHz-10GHz      | Fig.24       | P          |
|               | 39           | 2.441 GHz       | Fig.25       | P          |
|               |              | 1GHz-3GHz       | Fig.26       | P          |
|               |              | 3GHz-10GHz      | Fig.27       | P          |
|               | 78           | 2.480 GHz       | Fig.28       | P          |
|               |              | 1GHz-3GHz       | Fig.29       | P          |
|               |              | 3GHz-10GHz      | Fig.30       | P          |
| 8DPSK         | 0            | 2.402 GHz       | Fig.31       | P          |
|               |              | 1GHz-3GHz       | Fig.32       | P          |
|               |              | 3GHz-10GHz      | Fig.33       | P          |
|               | 39           | 2.441 GHz       | Fig.34       | P          |
|               |              | 1GHz-3GHz       | Fig.35       | P          |
|               |              | 3GHz-10GHz      | Fig.36       | P          |
|               | 78           | 2.480 GHz       | Fig.37       | P          |
|               |              | 1GHz-3GHz       | Fig.38       | P          |
|               |              | 3GHz-10GHz      | Fig.39       | P          |
| /             | All channels | 30 MHz-1GHz     | Fig.40       | P          |
|               |              | 10GHz-26GHz     | Fig.41       | P          |

See below for test graphs.

Conclusion: Pass

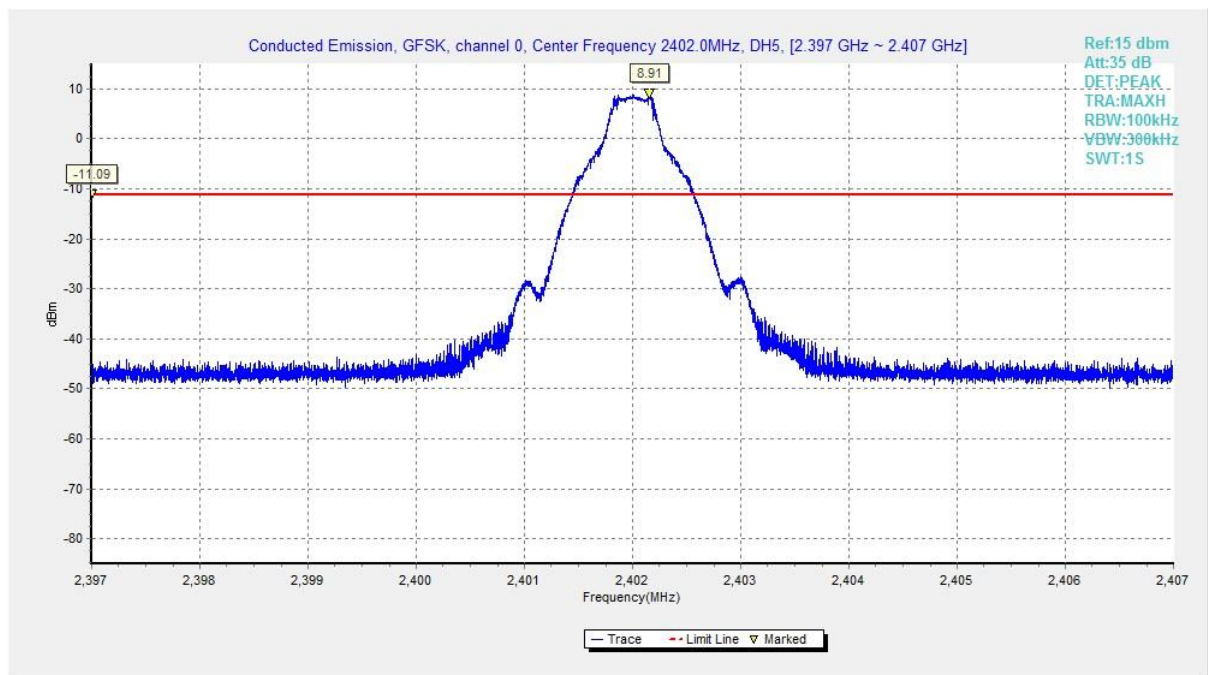


Fig. 13 Conducted Spurious Emission (GFSK, Ch0, 2.402GHz)

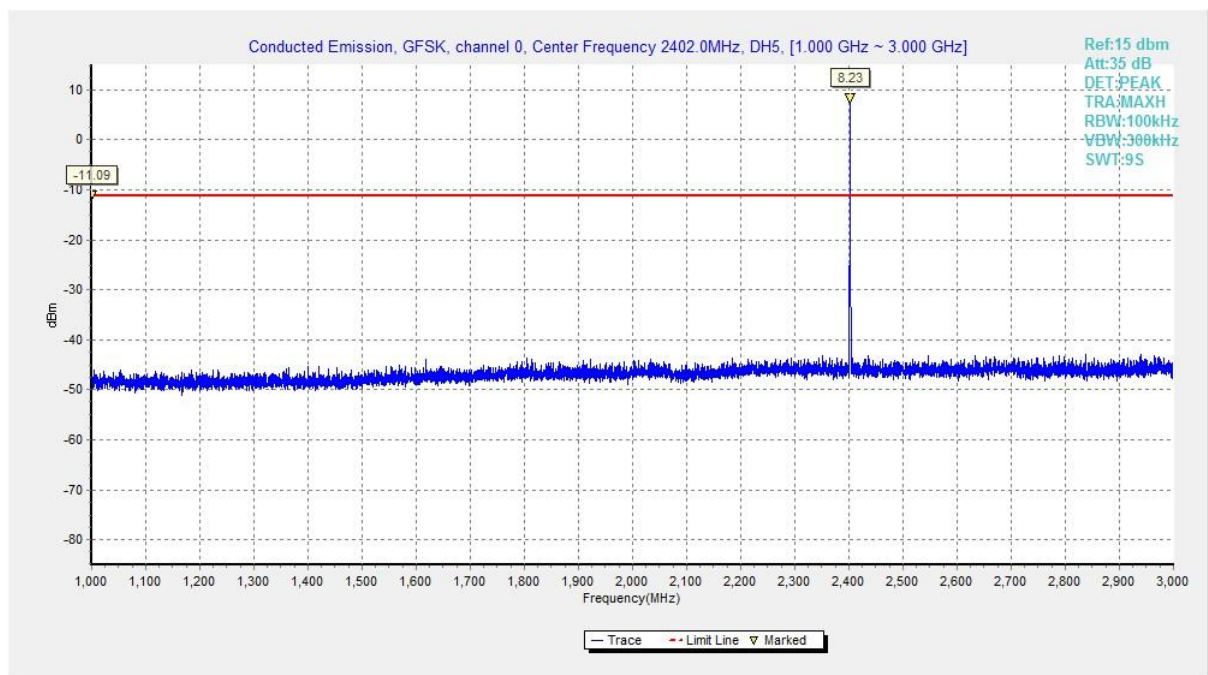


Fig. 14 Conducted Spurious Emission (GFSK, Ch0, 1 GHz-3 GHz)

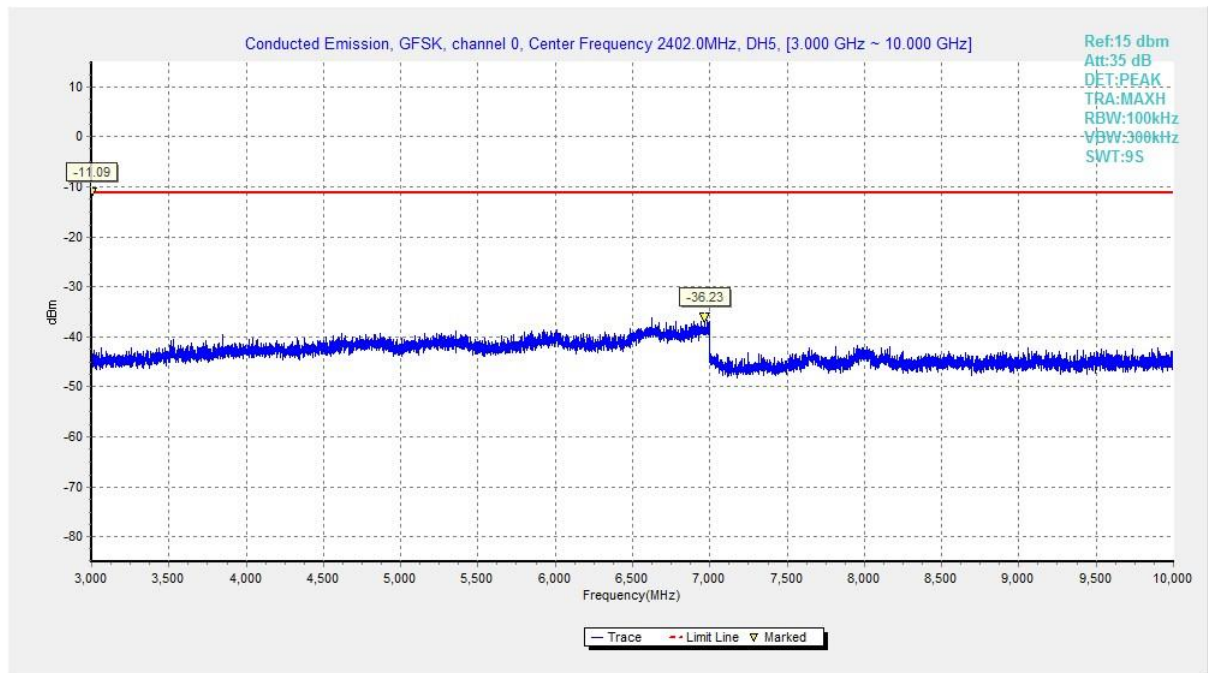


Fig. 15 Conducted Spurious Emission (GFSK, Ch0, 3GHz-10 GHz)

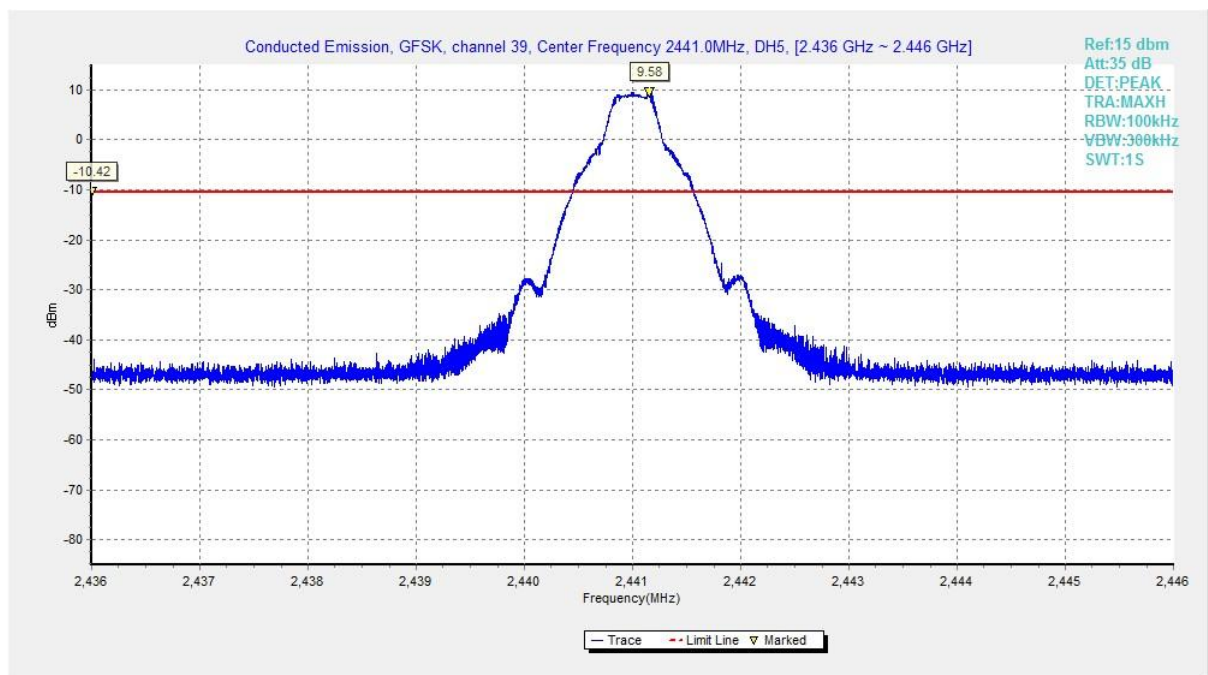


Fig. 16 Conducted Spurious Emission (GFSK, Ch39, 2.441GHz)

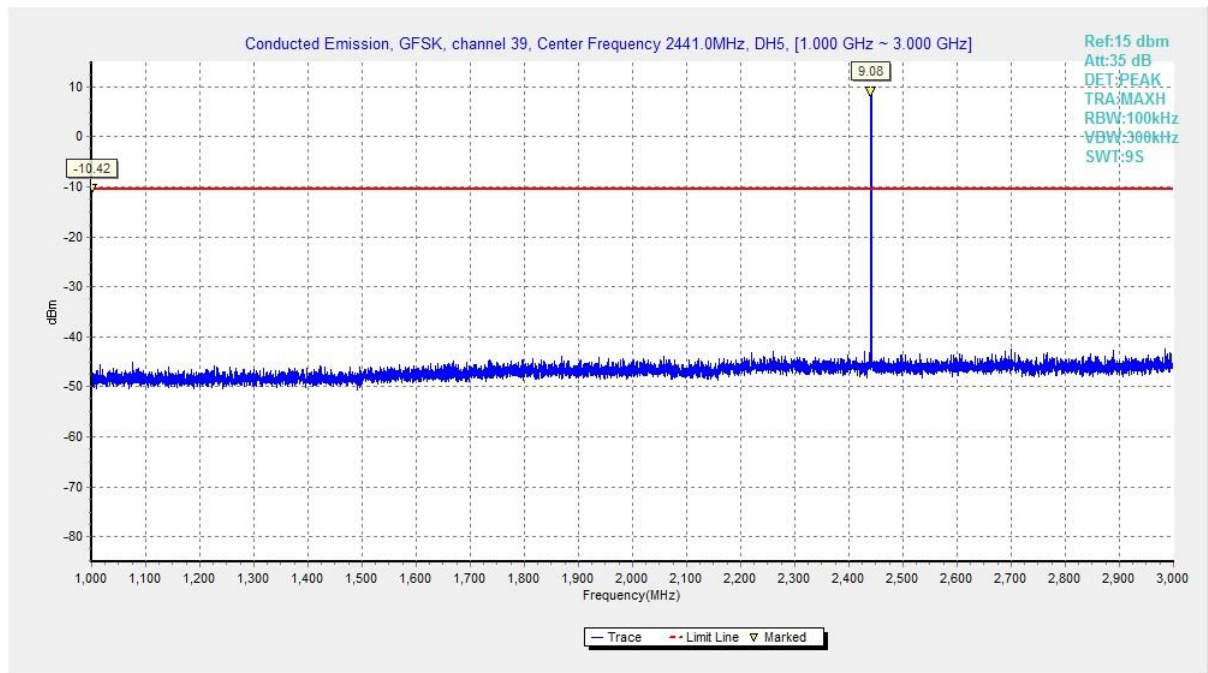


Fig. 17 Conducted Spurious Emission (GFSK, Ch39, 1GHz-3 GHz)

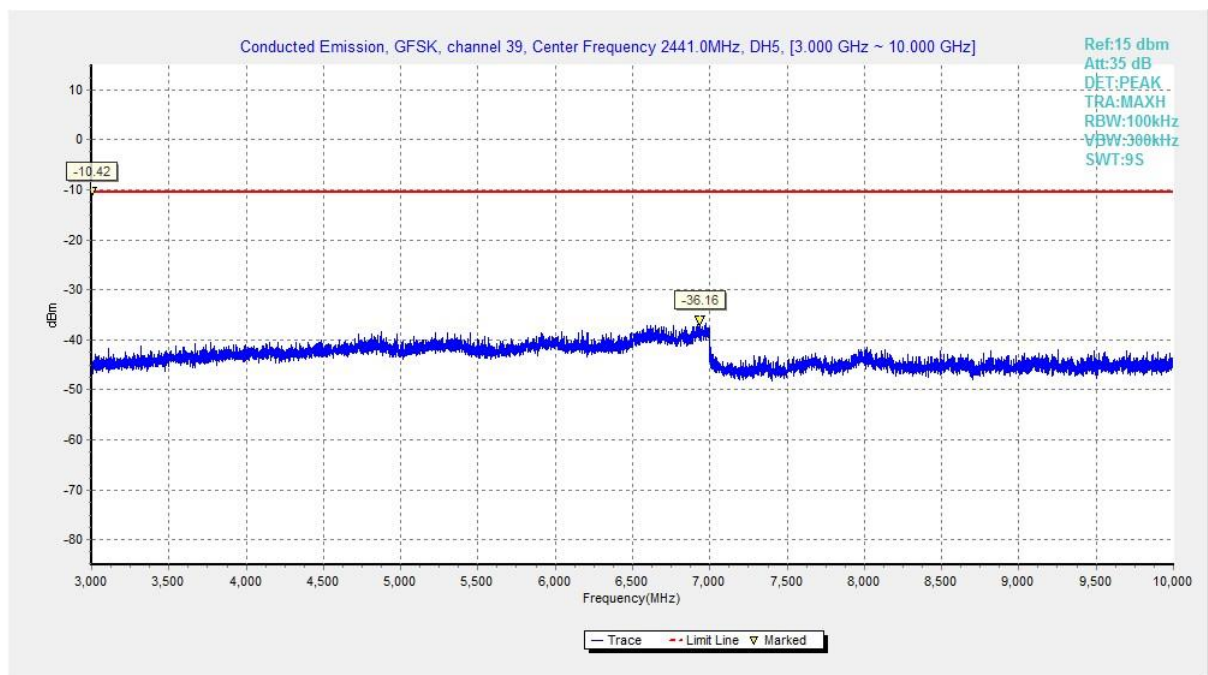


Fig. 18 Conducted Spurious Emission (GFSK, Ch39, 3GHz-10 GHz)

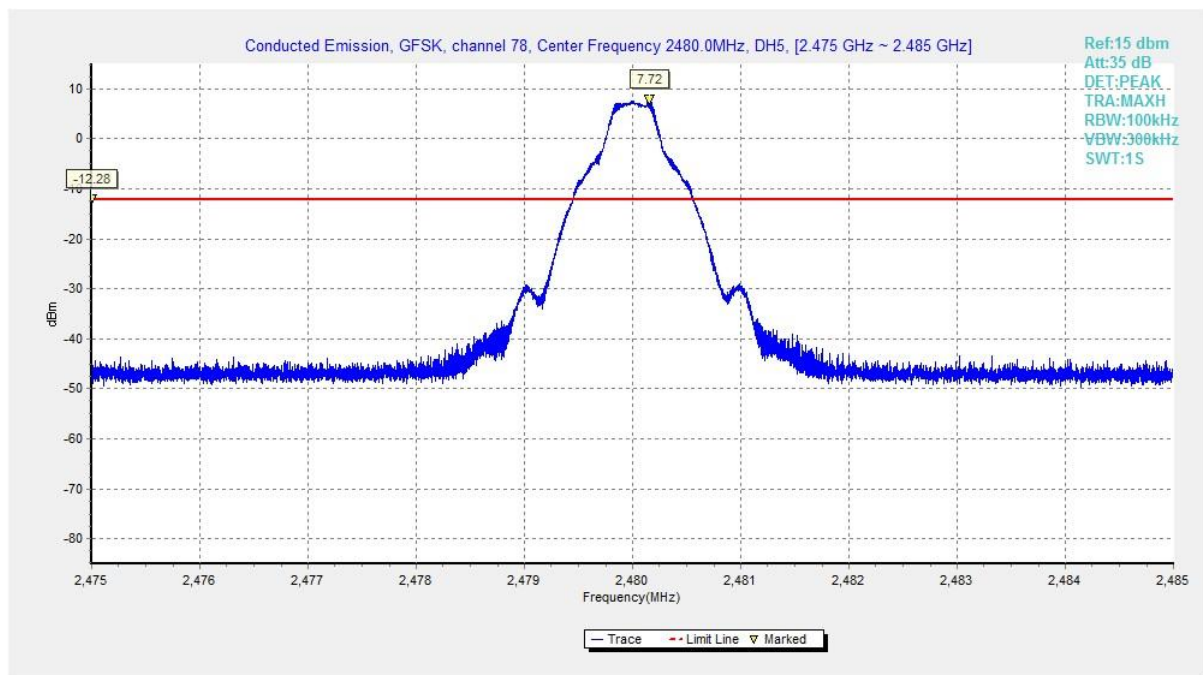


Fig. 19 Conducted Spurious Emission (GFSK, Ch78, 2.480GHz)

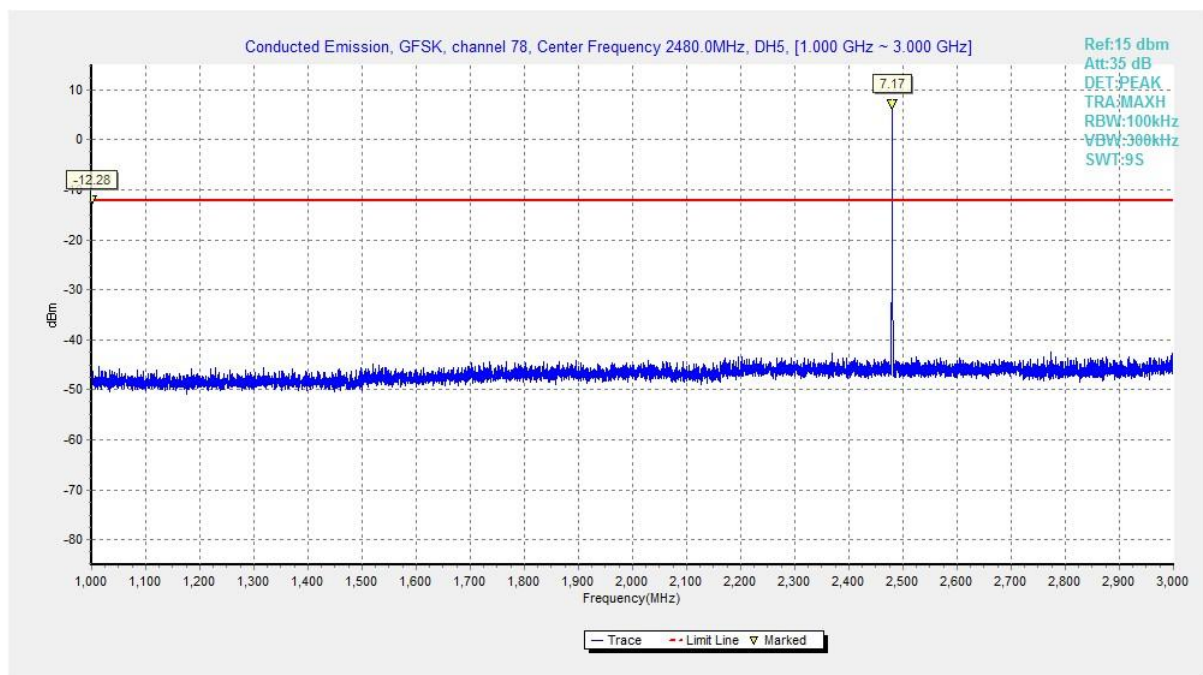


Fig. 20 Conducted Spurious Emission (GFSK, Ch78, 1GHz-3 GHz)

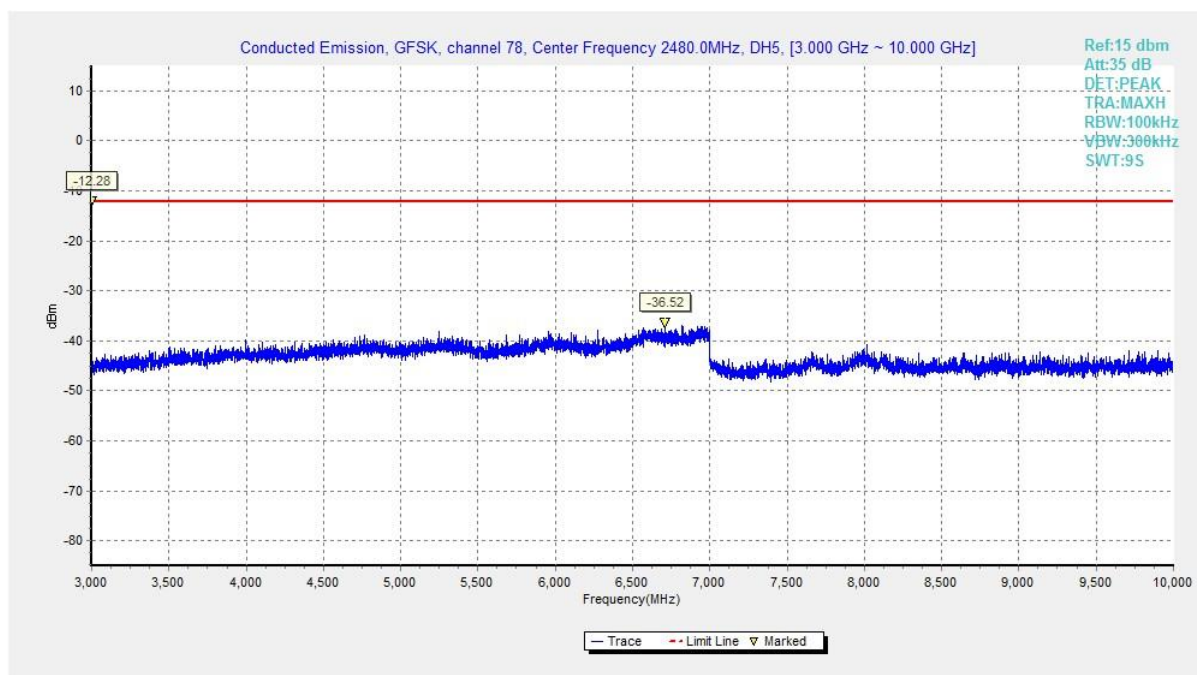


Fig. 21 Conducted Spurious Emission (GFSK, Ch78, 3GHz-10 GHz)

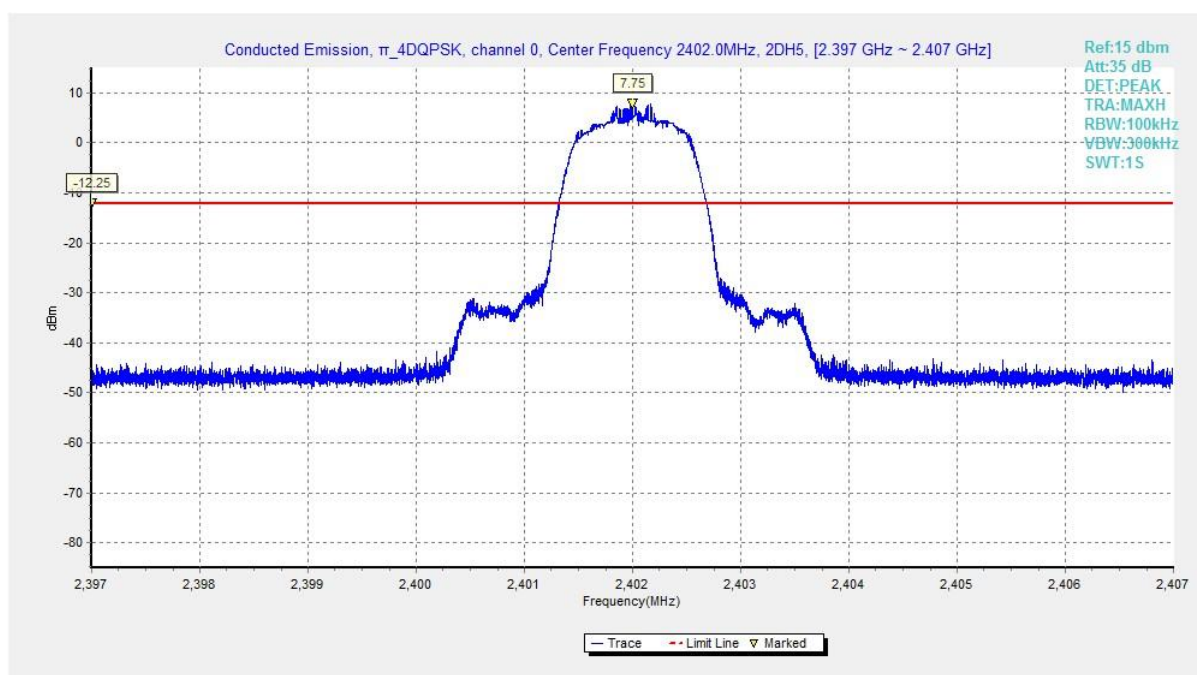
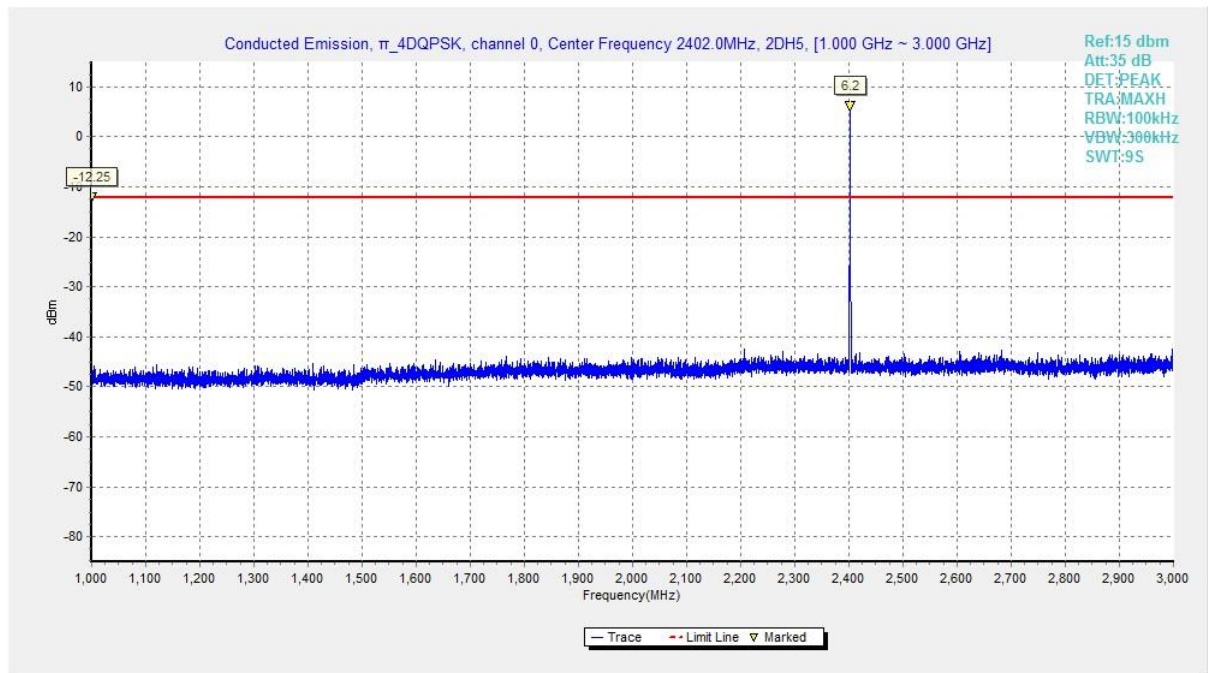
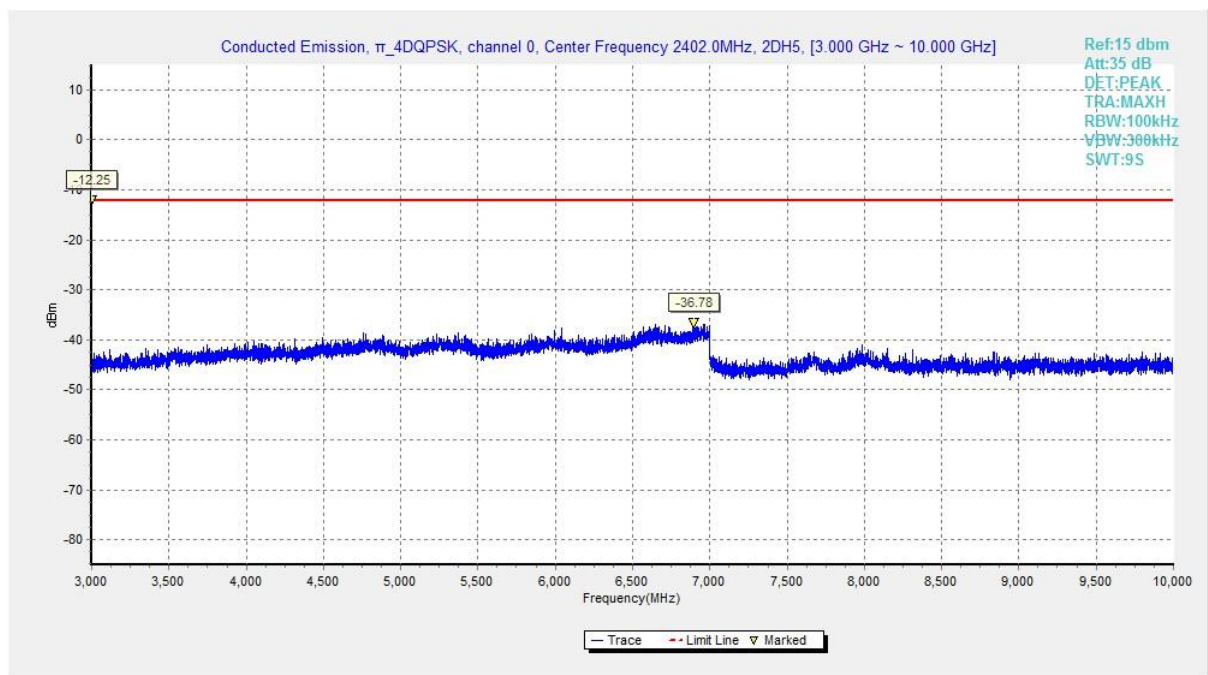


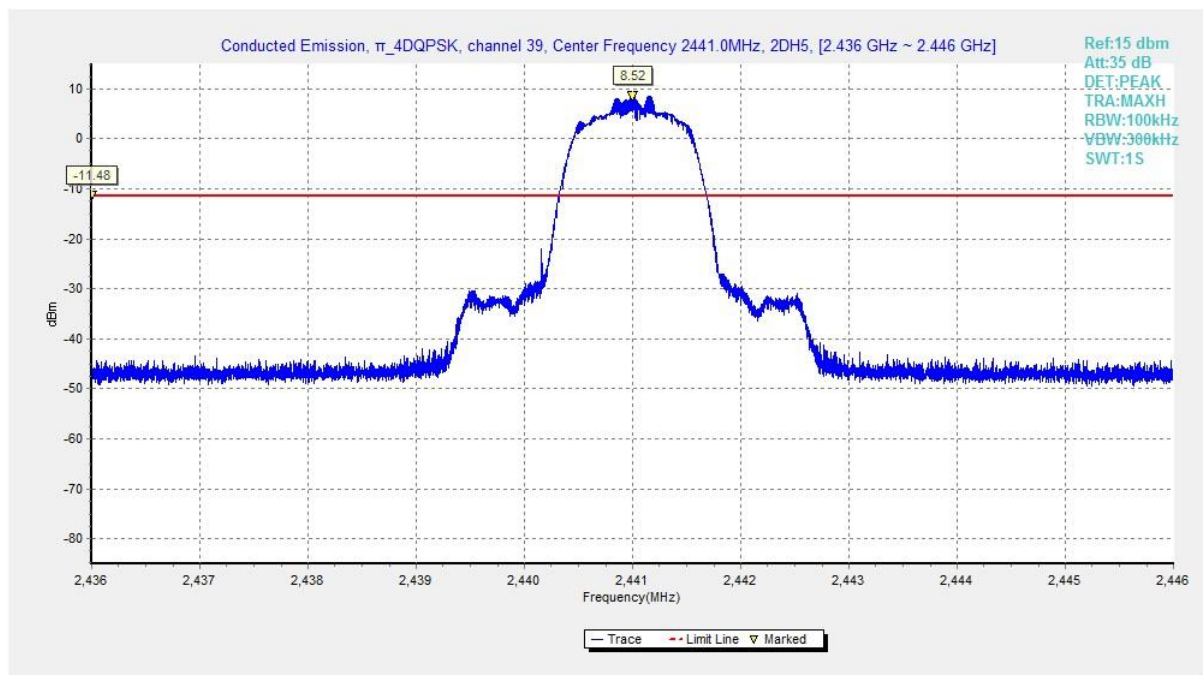
Fig. 22 Conducted Spurious Emission ( $\pi_4$  DQPSK, Ch0, 2.402GHz)



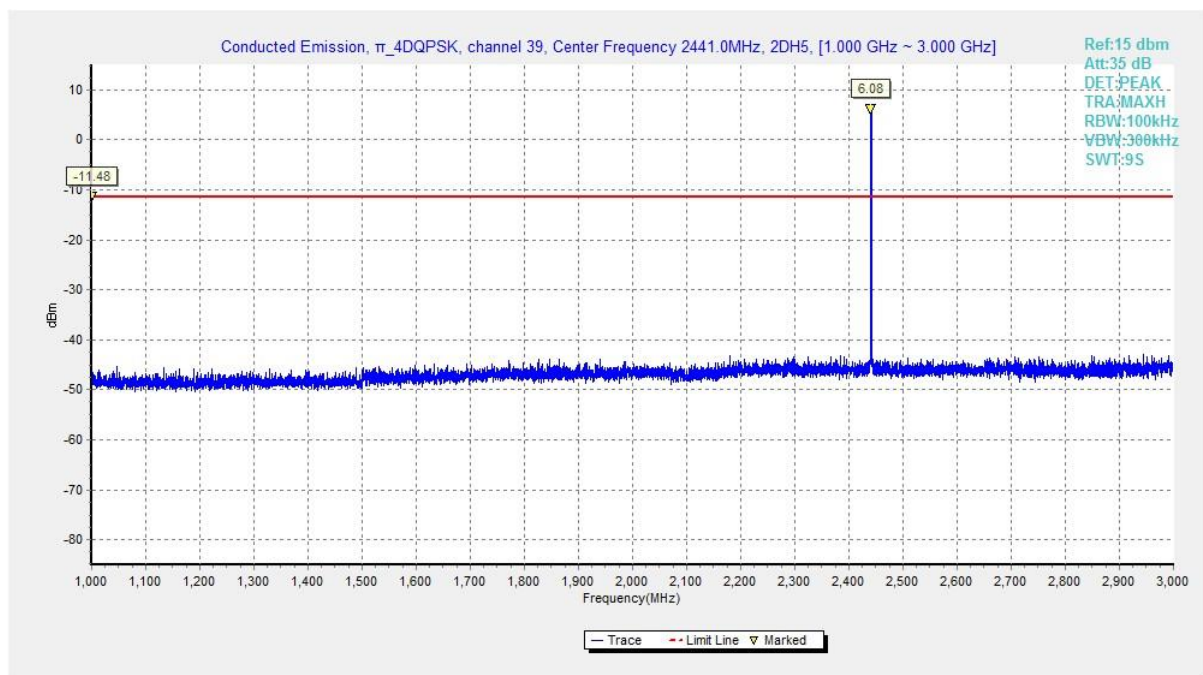
**Fig. 23 Conducted Spurious Emission ( $\pi/4$  DQPSK, Ch0, 1GHz-3 GHz)**



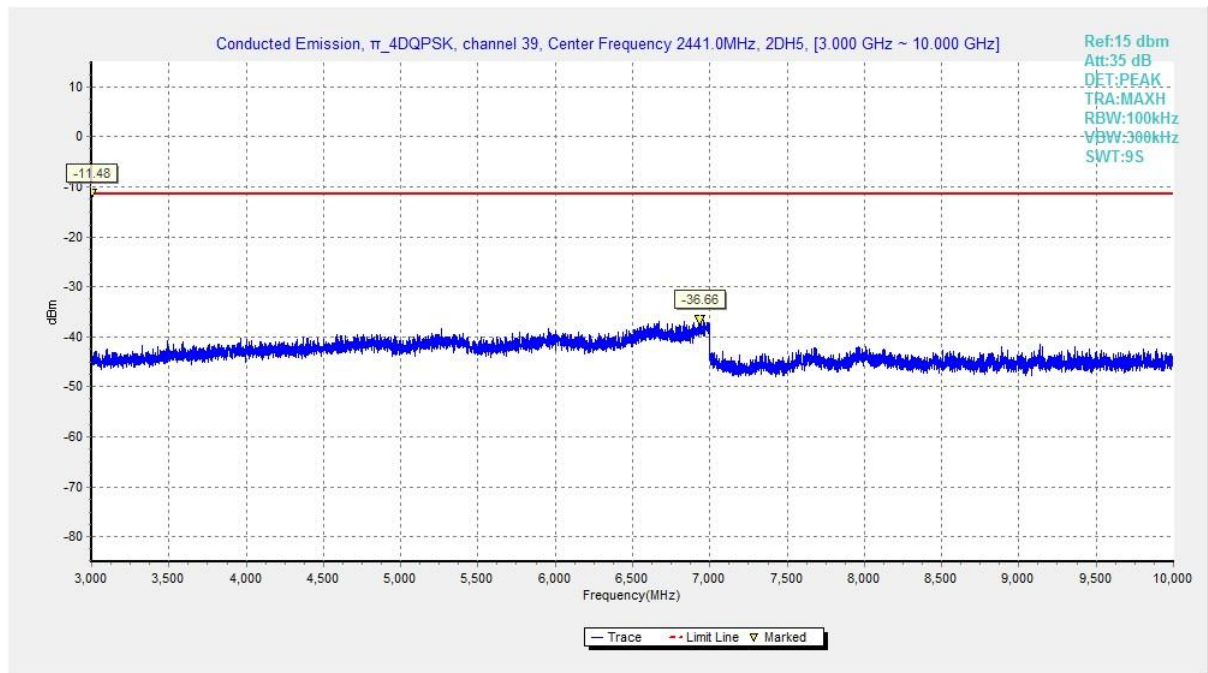
**Fig. 24 Conducted Spurious Emission ( $\pi/4$  DQPSK, Ch0, 3GHz-10 GHz)**



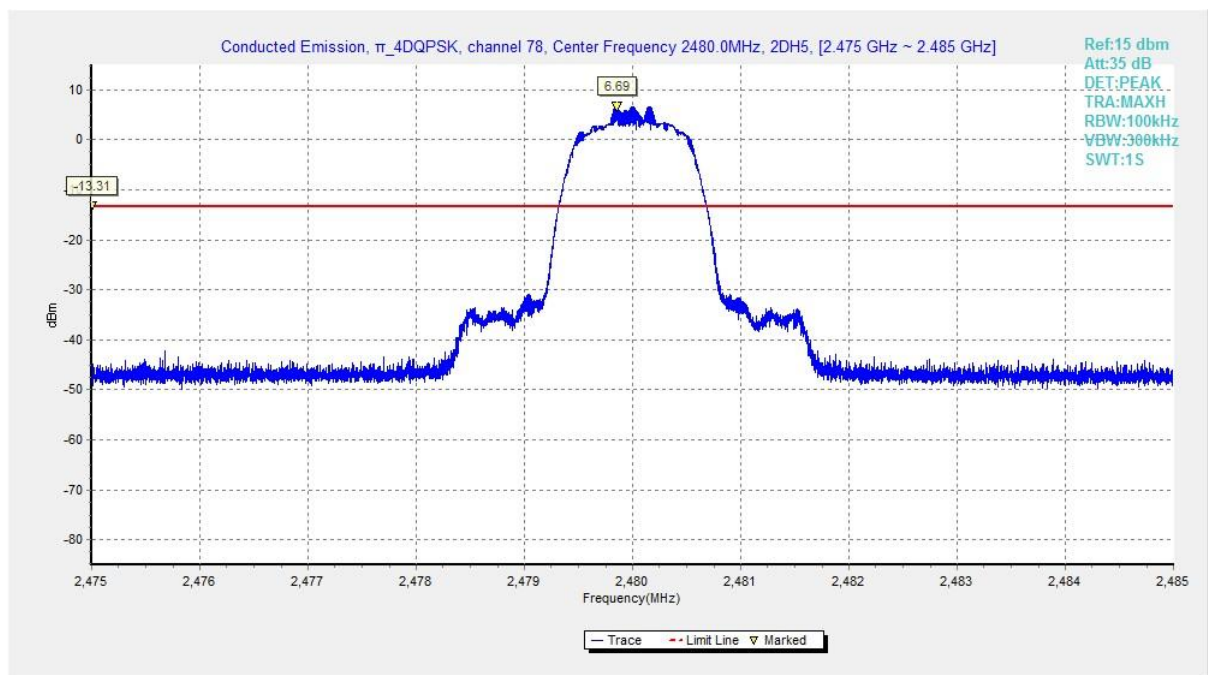
**Fig. 25 Conducted Spurious Emission ( $\pi/4$  DQPSK, Ch39, 2.441GHz)**



**Fig. 26 Conducted Spurious Emission ( $\pi/4$  DQPSK, Ch39, 1GHz-3 GHz)**



**Fig. 27 Conducted Spurious Emission ( $\pi$  /4 DQPSK, Ch39, 3GHz-10 GHz)**



**Fig. 28 Conducted Spurious Emission ( $\pi$  /4 DQPSK, Ch78, 2.480GHz)**

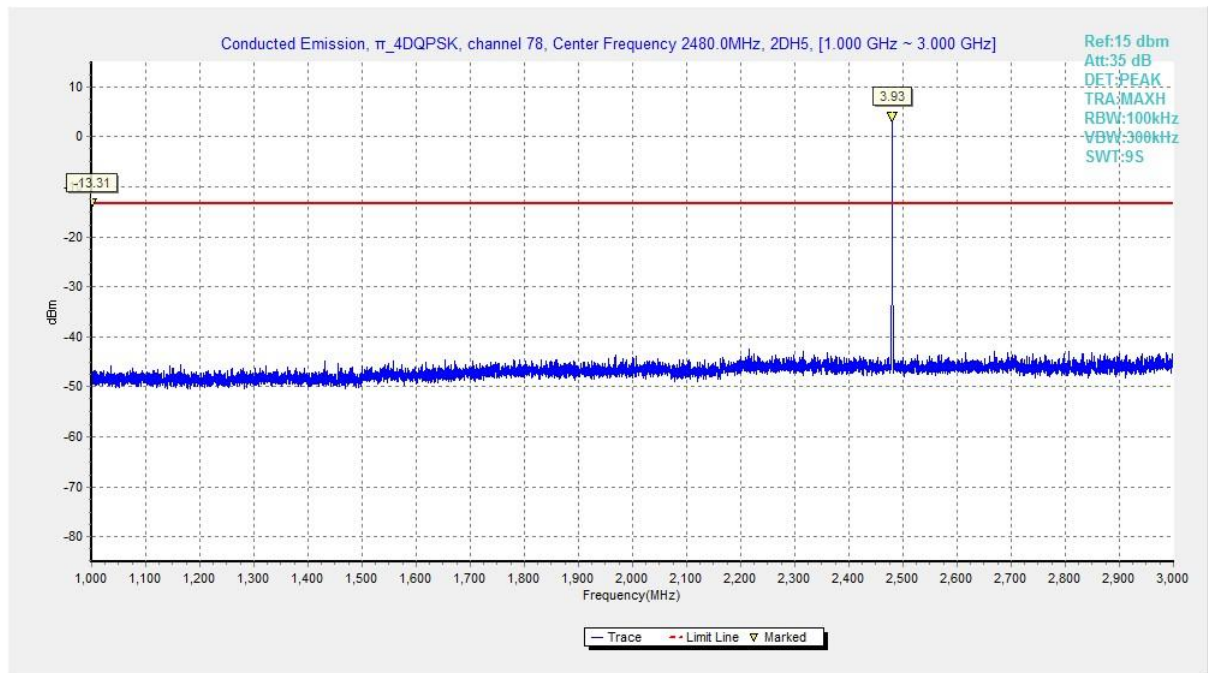


Fig. 29 Conducted Spurious Emission ( $\pi$  /4 DQPSK, Ch78, 1GHz-3 GHz)

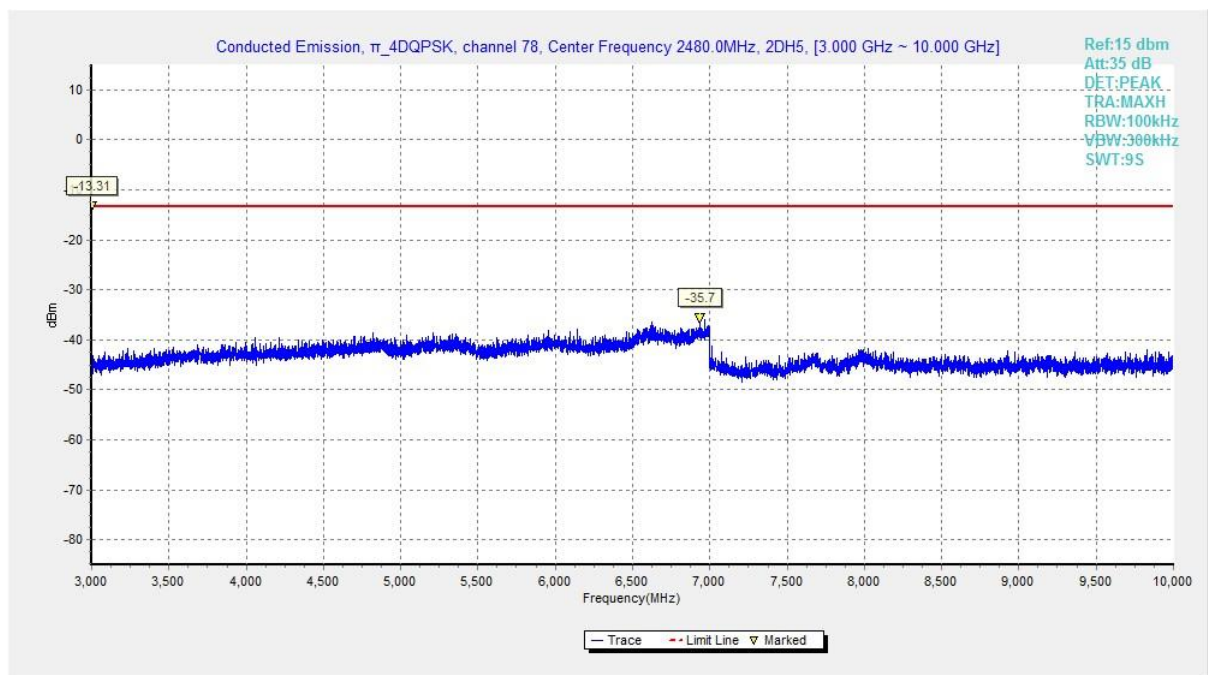
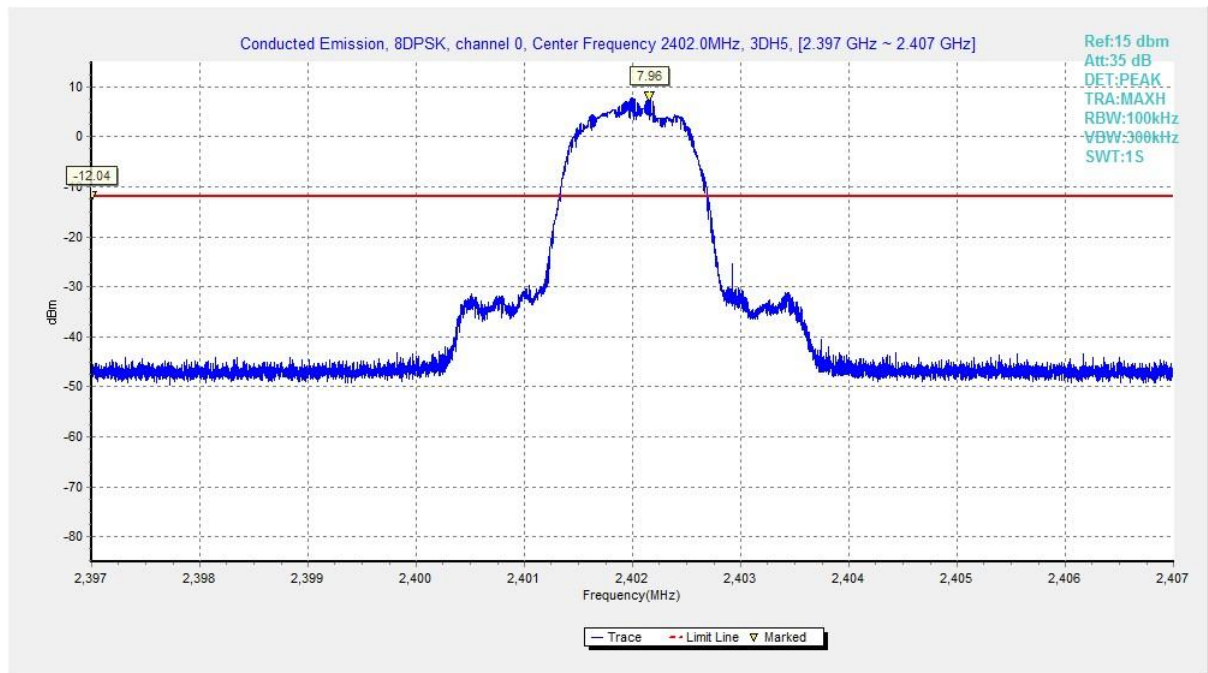
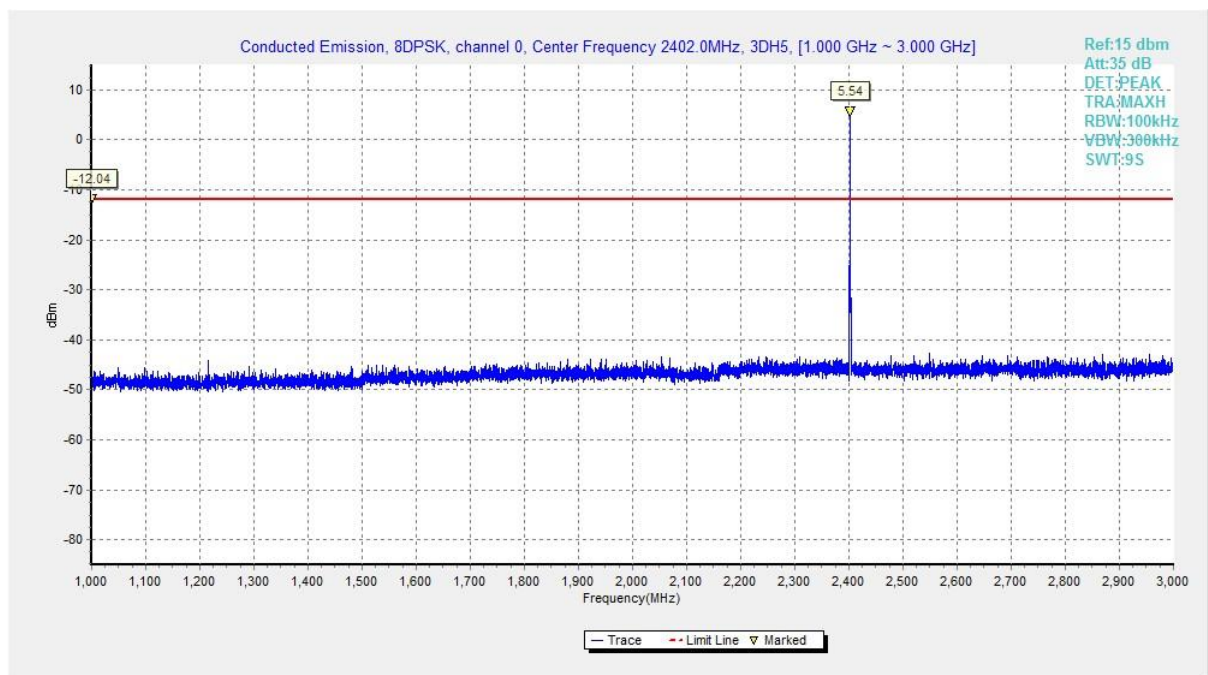


Fig. 30 Conducted Spurious Emission ( $\pi$  /4 DQPSK, Ch78, 3GHz-10 GHz)



**Fig. 31 Conducted Spurious Emission (8DPSK, Ch0, 2.402GHz)**



**Fig. 32 Conducted Spurious Emission (8DPSK, Ch0, 1GHz-3 GHz)**

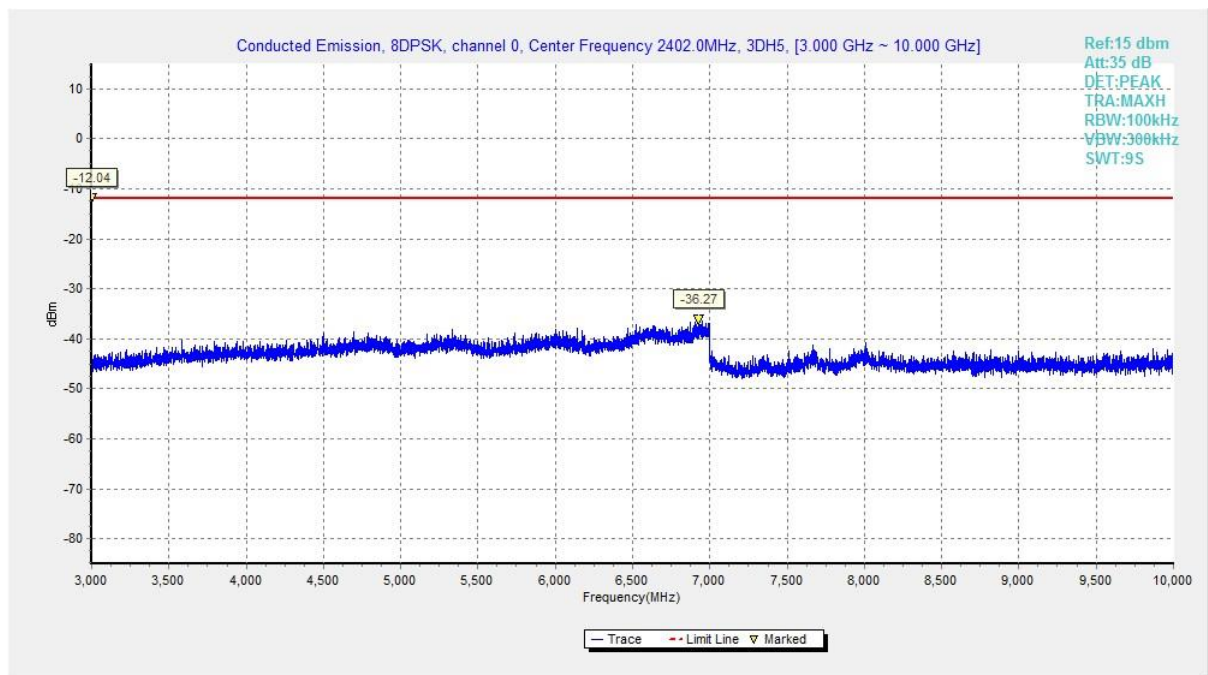


Fig. 33 Conducted Spurious Emission (8DPSK, Ch0, 3GHz-10 GHz)

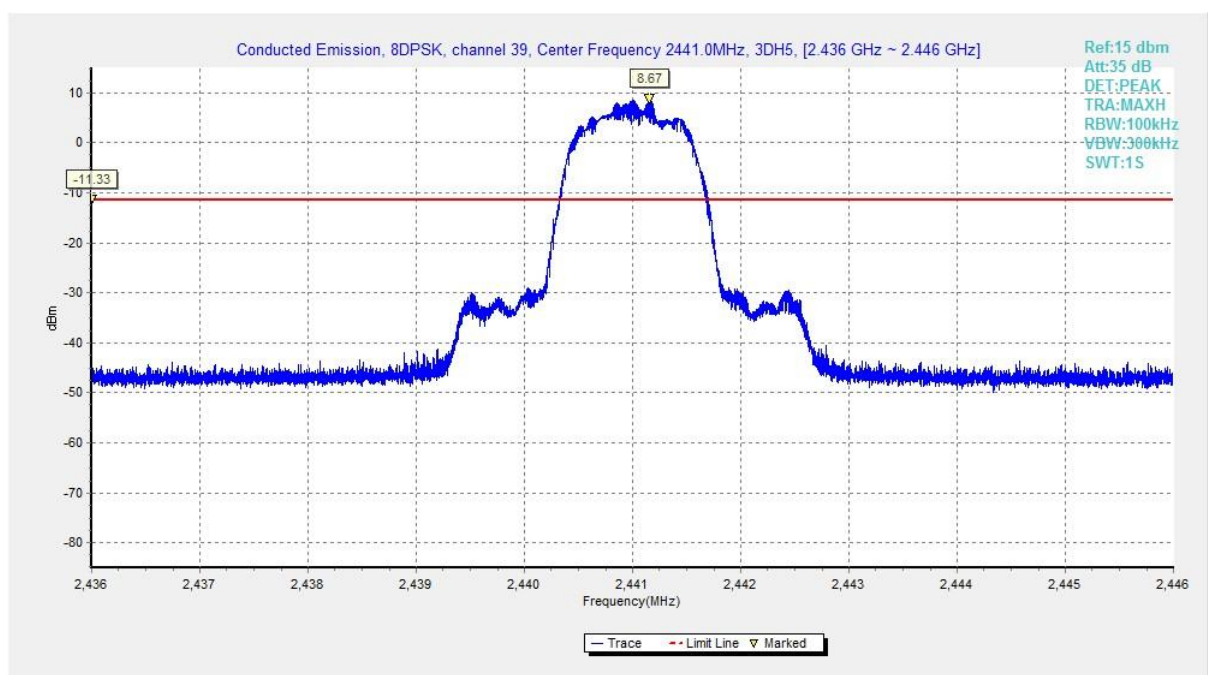


Fig. 34 Conducted Spurious Emission (8DPSK, Ch39, 2.441GHz)

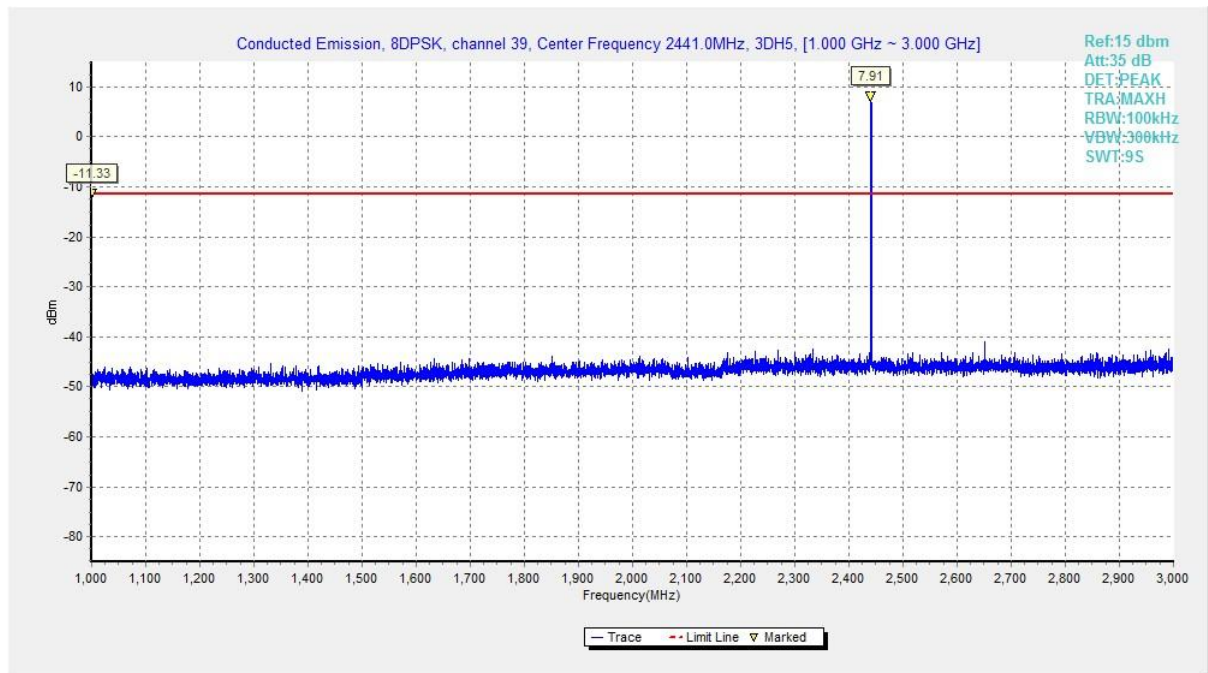


Fig. 35 Conducted Spurious Emission (8DPSK, Ch39, 1GHz-3 GHz)

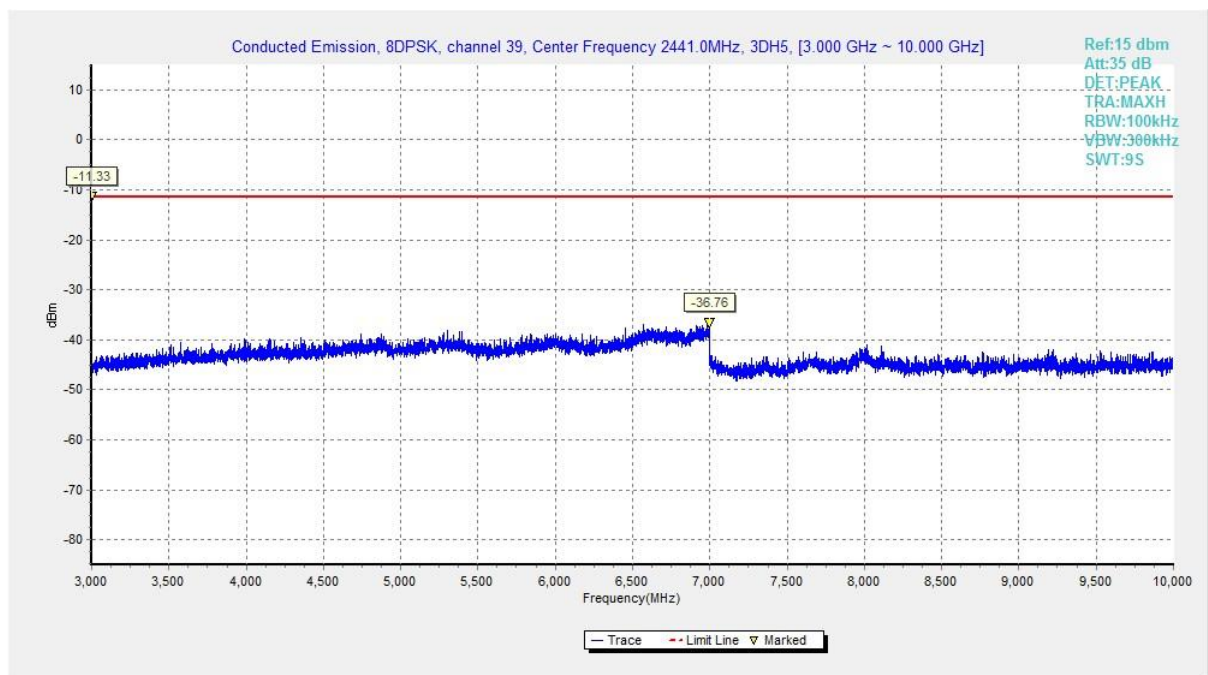
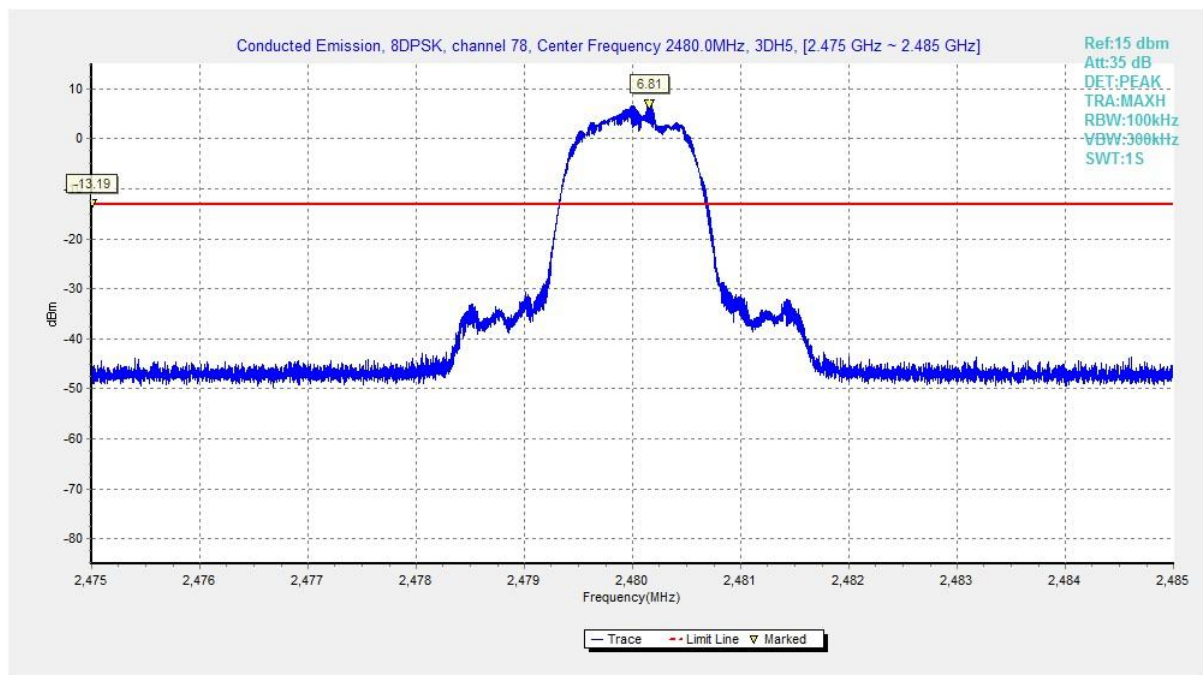
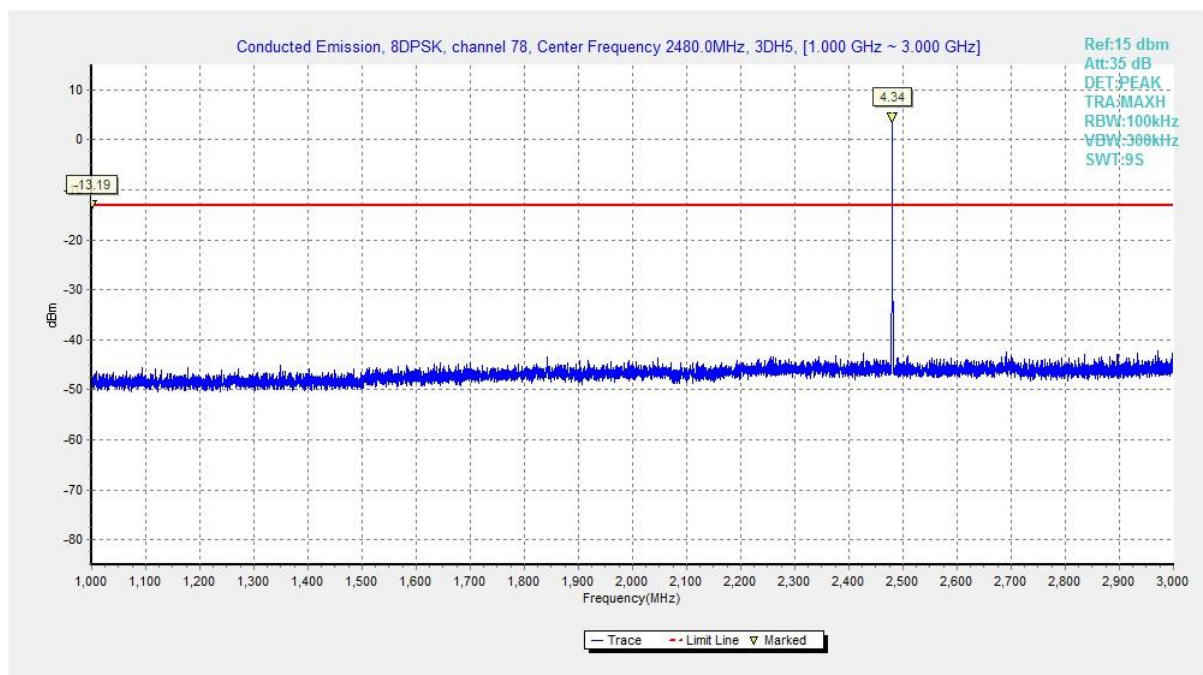


Fig. 36 Conducted Spurious Emission (8DPSK, Ch39, 3GHz-10 GHz)



**Fig. 37 Conducted Spurious Emission (8DPSK, Ch78, 2.480GHz)**



**Fig. 38 Conducted Spurious Emission (8DPSK, Ch78, 1GHz-3 GHz)**