# FCC RF TEST REPORT

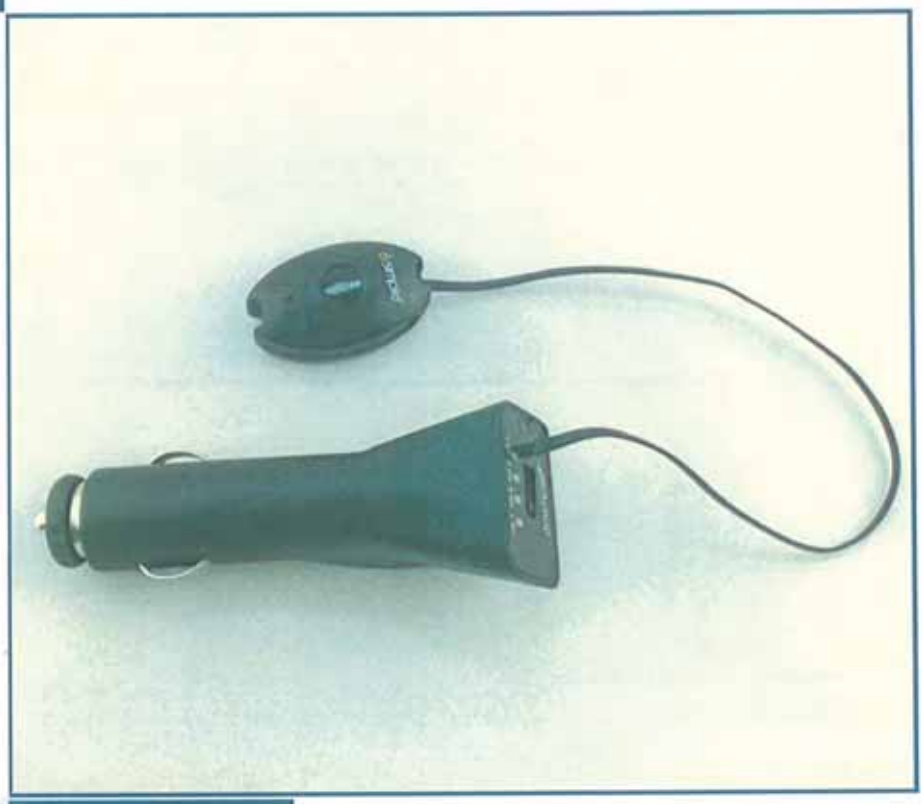
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

**Bluetooth audio with FM transmitter and charger**

ISSUED TO
AAMP of Florida, dba AAMP of America

13190 56th Court, Suite 401, Clearwater, FL 33760



Prepared by: Zhang Yanqing
Zhang Yanqing
(Reporting Specialist)
Date Dec 9, 2014

Approved by:
Wei Yanquan
(Chief Engineer)
Date Dec 9, 2014

| | |
|---|---|
| Report No.: | BL-SZ1470121-601 |
| EUT Type: | Bluetooth audio with FM transmitter and charger |
| Model Name: | ISBT42 |
| Brand Name: | iSimple |
| Test Standard: | 47 CFR Part 15 Subpart C |
| FCC ID: | XBD-ISBT4 |
| Test conclusion: | PASS |
| Test Date: | Aug 18, 2014 ~ Aug 28, 2014 |
| Date of Issue: | Dec 9, 2014 |



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**Revision History**

| Version | Issue Date | Revisions |
|---|---|---|
| Rev. 01 | Dec 9, 2014 | Initial Issue |

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# 1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

## 1.1 Identification of the Testing Laboratory

| | |
|---|---|
| Company Name | Shenzhen BALUN Technology Co., Ltd. |
| Address | Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China |
| Phone Number | +86 755 6683 3402 |
| Fax Number | +86 755 6182 4271 |

## 1.2 Identification of the Responsible Testing Location

| | |
|---|---|
| Test Location | Shenzhen BALUN Technology Co., Ltd. |
| Address | Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China |
| Accreditation Certificate | The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1.<br>The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625.<br>The laboratory has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ISO/IEC Standard 17025:2005. The accreditation certificate number is TL-588.<br>The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791. |
| Description | All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055 |

## 1.3 Announce

(1) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.

(2) The test report is invalid if there is any evidence and/or falsification.

(3) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.

(4) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.

(5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

# 2 PRODUCT INFORMATION

## 2.1 Applicant

| | |
|---|---|
| Applicant | AAMP of Florida, dba AAMP of America |
| Address | 13190 56th Court, Suite 401, Clearwater, FL 33760 |

## 2.2 Manufacturer

| | |
|---|---|
| Manufacturer | Skytech Creations Limited |
| Address | Qiaotou Industrial district, Qiaoli Zone, Changping town, Dongguan |

## 2.3 General Description for Equipment under Test (EUT)

| | |
|---|---|
| EUT Type | Bluetooth audio with FM transmitter and charger |
| Model Name | ISBT42 |
| Hardware Version | N/A |
| Software Version | N/A |
| Network and Wireless connectivity | BT3.0, FM |
| About the Product | The equipment is Bluetooth audio receiver with FM transmitter battery, operating at 2.4GHz ISM band and 88MHz to 108MHz band, only BT 3.0 was tested in this report. |

## 2.4 Technical Information

| | | |
|---|---|---|
| TX/ RX Operating Range | 2400~2483.5MHz band<br>$f_c$ = 2402 MHz + N*1 MHz, where<br>- $f_c$ = “Operating Frequency” in MHz,<br>- N = “Channel Number” with the range from 0 to 78. | |
| Modulation Type | Carrier | Frequency Hopping Spread Spectrum |
| | Digital | GFSK, π/4-DQPSK, 8DPSK |
| Antenna Type | PCB Antenna | |
| Antenna Gain | 0dBi | |

## 2.5 Ancillary Equipment

| | |
|---|---|
| Ancillary Equipment | Audio line |

# 3 SUMMARY OF TEST RESULTS

## 3.1 Test Standards

| No. | Identity | Document Title |
|---|---|---|
| 1 | 47 CFR Part 15, Subpart C (12-30-13 Edition) | Miscellaneous Wireless Communications Services |
| 2 | FCC PUBLIC NOTICE DA 00-705 (Mar. 30, 2000) | Filling and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems |
| 3 | ANSI C63.4-2014 | American National Standard for Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz |
| 4 | ANSI C63.10-2013 | American National Standard for Testing Unlicensed Wireless Devices |

## 3.2 Verdict

| No. | Description | FCC Part No. | Test Result | Verdict |
|---|---|---|---|---|
| 1 | Antenna Requirement | 15.203 | -- | PASS Note 1 |
| 2 | Number of Hopping Frequency | 15.247(a) | ANNEX A.1 | PASS |
| 3 | Peak Output Power | 15.247(b) | ANNEX A.2 | PASS |
| 4 | Occupied Bandwidth | 15.247(a) | ANNEX A.3 | PASS |
| 5 | Carrier Frequency Separation | 15.247(a) | ANNEX A.4 | PASS |
| 6 | Time of Occupancy (Dwell time) | 15.247(a) | ANNEX A.5 | PASS |
| 7 | Conducted Spurious Emission | 15.247(d) | ANNEX A.6 | PASS |
| 8 | Conducted Emission | 15.207 | -- | N/A Note 2 |
| 9 | Radiated Spurious Emission | 15.209<br>15.247(d) | ANNEX A.7 | PASS |
| 10 | Band Edge | 15.209<br>15.247(d) | ANNEX A.8 | PASS |
| Note 1: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.<br>Note 2: The EUT only support car charger power supply, So the Conducted Emission test was not applicable. | | | | |

# 4 GENERAL TEST CONFIGURATIONS

## 4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

| | | |
|---|---|---|
| Relative Humidity (%) | 45 - 55 | |
| Atmospheric Pressure (kPa) | 90 - 96 | |
| Temperature | NT (Normal Temperature) | +22℃ to +25℃ |
| Working Voltage of the EUT | NV (Normal Voltage) | DC 12V |

## 4.2 Test Equipment List

| Description | Manufacturer | Model | Serial No. | Cal. Date | Cal. Due |
|---|---|---|---|---|---|
| Spectrum Analyzer | AGILENT | E4440A | MY45304434 | 2014.07.07 | 2015.07.06 |
| Spectrum Analyzer | ROHDE&SCHWARZ | FSL3 | 103640/003 | 2014.07.07 | 2015.07.06 |
| Bluetooth Tester | ROHDE&SCHWARZ | CBT | 101005 | 2014.07.07 | 2015.07.06 |
| Power Splitter | KMW | DCPD-LDC | 1305003215 | 2014.07.07 | 2015.07.06 |
| Power Sensor | ROHDE&SCHWARZ | NRP-Z21 | 103971 | 2014.07.07 | 2015.07.06 |
| Attenuator (20dB) | KMW | ZA-S1-201 | 110617091 | -- | -- |
| Attenuator (6dB) | KMW | ZA-S1-61 | 1305003189 | -- | -- |
| DC Power Supply | ROHDE&SCHWARZ | HMP2020 | 018141664 | 2014.07.07 | 2015.07.06 |
| Temperature Chamber | ANGELANTIONI SCIENCE | NTH64-40A | 1310 | 2014.07.07 | 2015.07.06 |
| Test Antenna-Loop(9kHz-30MHz) | SCHWARZBECK | FMZB 1519 | 1519-037 | 2013.07.03 | 2015.07.02 |
| Test Antenna-Bi-Log(30MHz-3GHz) | SCHWARZBECK | VULB 9163 | 9163-624 | 2013.07.02 | 2015.07.01 |
| Test Antenna-Horn(1-18GHz) | SCHWARZBECK | BBHA 9120D | 9120D-1148 | 2013.07.02 | 2015.07.01 |
| Test Antenna-Horn(15-26.5GHz) | SCHWARZBECK | BBHA 9170 | 9170-305 | 2013.07.02 | 2015.07.01 |
| Anechoic Chamber | RAINFORD | 9m*6m*6m | N/A | 2014.10.07 | 2015.10.06 |

## 4.3 Test Configurations

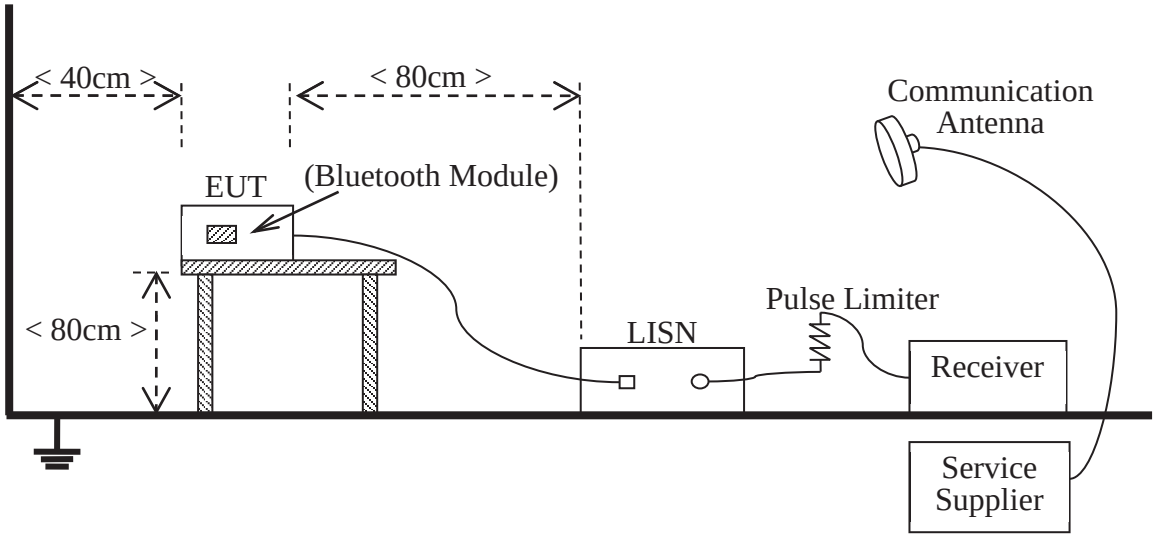
| Test Configurations (TC) NO. | Description | |
|---|---|---|
| | Signal Description | Operating Frequency |
| Transmitter | | |
| TC01 | GFSK modulation, package type DH5, hopping on | -- |
| TC02 | GFSK modulation, package type DH5, hopping off | Ch No. 0/ 2402MHz |
| TC03 | GFSK modulation, package type DH5, hopping off | Ch No. 39/ 2441MHz |
| TC04 | GFSK modulation, package type DH5, hopping off | Ch No. 78/ 2480MHz |
| TC05 | π/4-DQPSK modulation, package type DH5, hopping on | -- |
| TC06 | π/4-DQPSK modulation, package type DH5, hopping off | Ch No. 0/ 2402MHz |
| TC07 | π/4-DQPSK modulation, package type DH5, hopping off | Ch No. 39/ 2441MHz |
| TC08 | π/4-DQPSK modulation, package type DH5, hopping off | Ch No. 78/ 2480MHz |
| TC09 | 8DPSK modulation, package type DH5, hopping on | -- |
| TC10 | 8DPSK modulation, package type DH5, hopping off | Ch No. 0/ 2402MHz |
| TC11 | 8DPSK modulation, package type DH5, hopping off | Ch No. 39/ 2441MHz |
| TC12 | 8DPSK modulation, package type DH5, hopping off | Ch No. 78/ 2480MHz |

## 4.4 Description of Test Setup

### 4.4.1 For Antenna Port Test

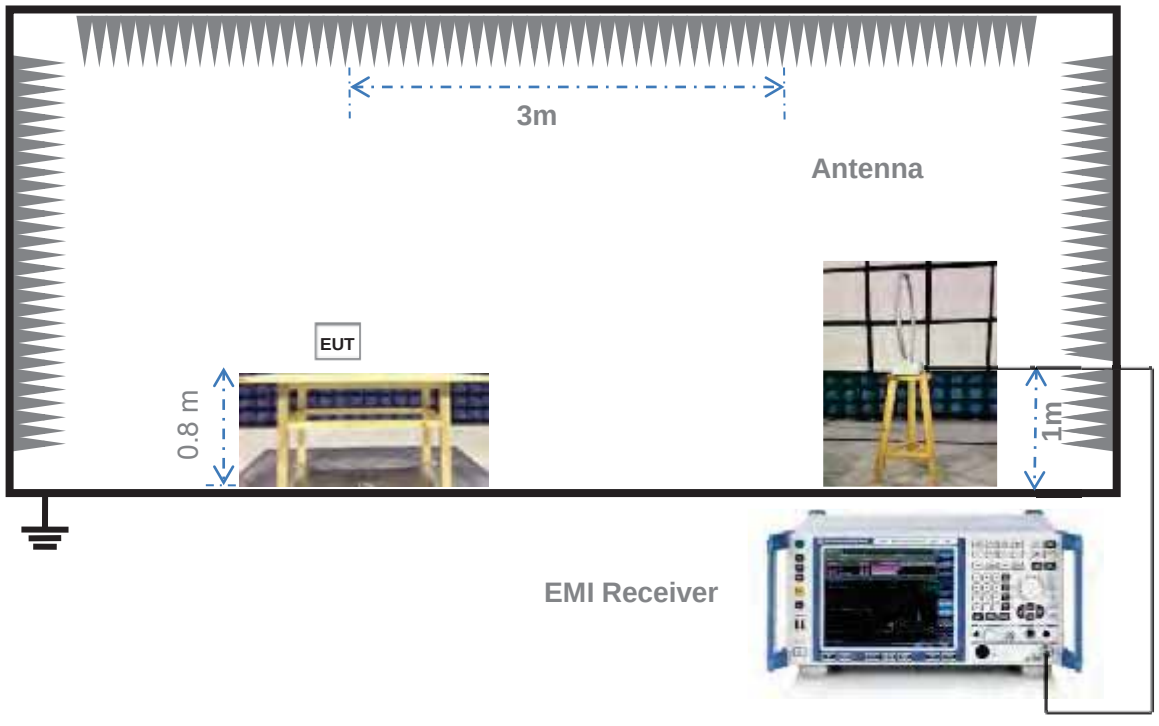

**(Diagram 1)**

4.4.2 For AC Power Supply Port Test



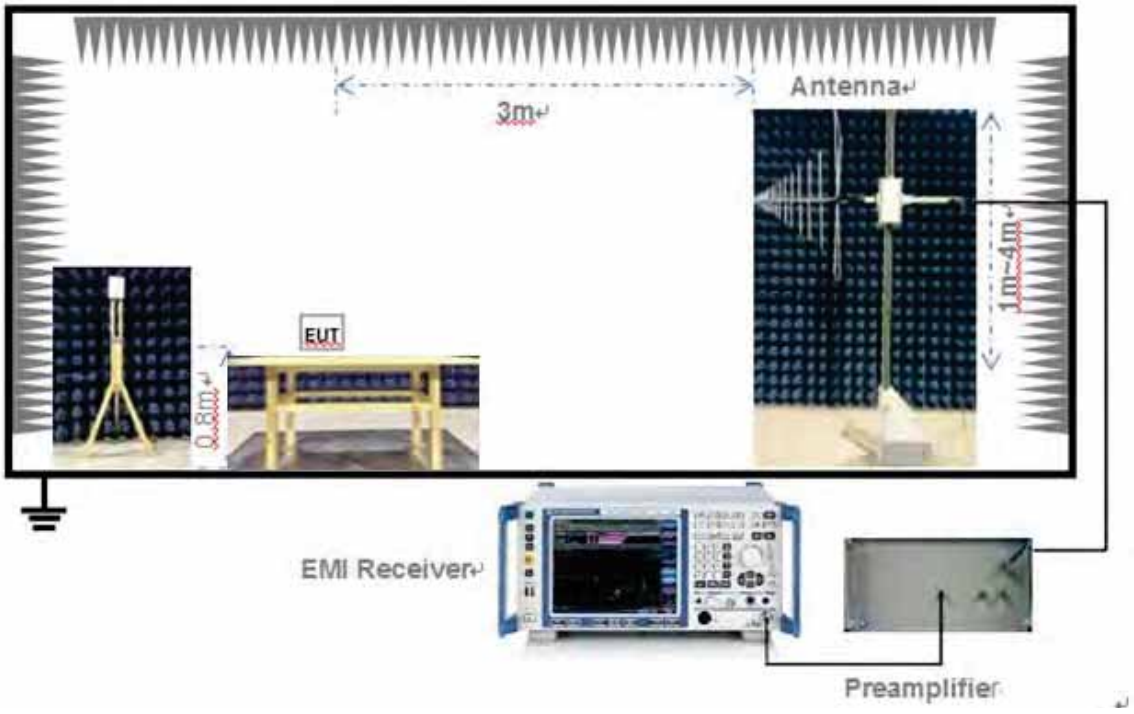

**(Diagram 2)**

4.4.3 For Radiated Test (Below 30MHz)



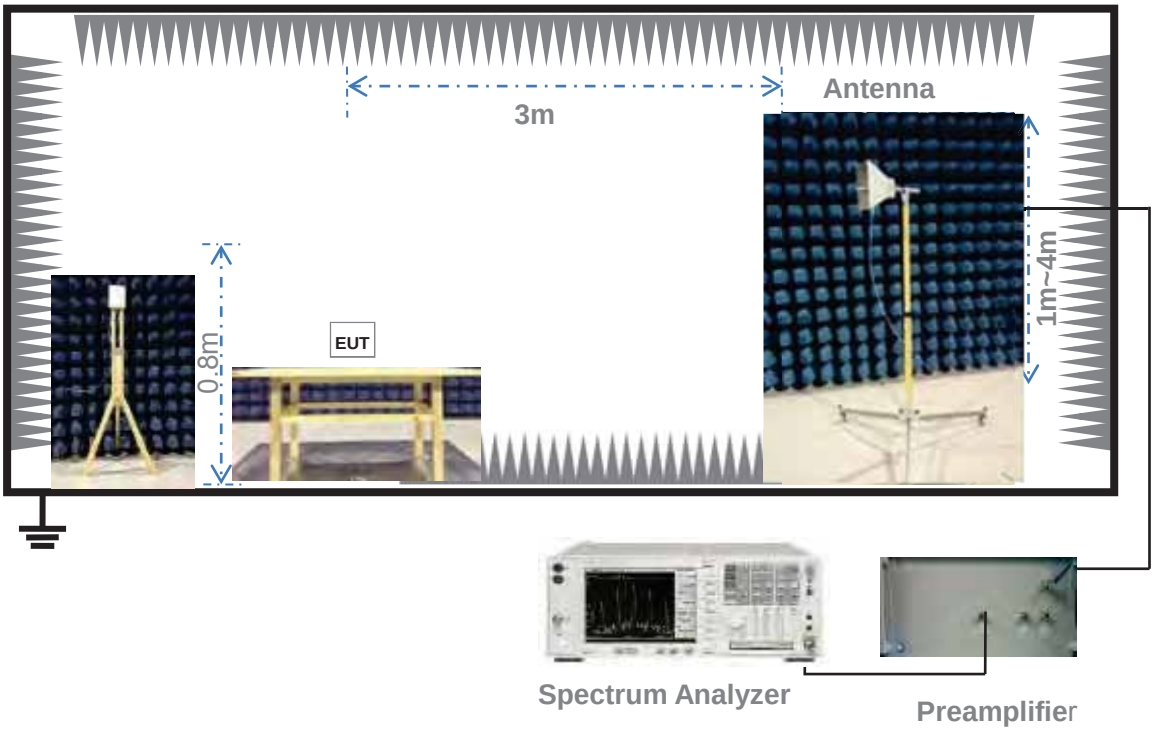

**(Diagram 3)**

4.4.4 For Radiated Test (30MHz-1GHz)




**(Diagram 4)**

4.4.5 For Radiated Test (Above 1GHz)




**(Diagram 5)**

## 4.5 Test Conditions

| Test Case | Test Conditions | | |
|---|---|---|---|
| | Test Env. | Test Setup Note 1 | Test Configuration Note 2 |
| Number of Hopping Frequency | NTNV | Test Setup 1 | TC01, TC05, TC09 |
| Peak Output Power | NTNV | Test Setup 1 | TC02, TC03, TC04, TC06, TC07, TC08, TC10, TC11, TC12 |
| Occupied Bandwidth | NTNV | Test Setup 1 | TC03, TC07, TC011 |
| Carrier Frequency Separation | NTNV | Test Setup 1 | TC01, TC05, TC09 |
| Time of Occupancy (Dwell time) | NTNV | Test Setup 1 | TC01, TC05, TC09 |
| Conducted Spurious Emission | NTNV | Test Setup 1 | TC02, TC03, TC04, TC06, TC07, TC08, TC10, TC11, TC12 |
| Conducted Emission | NTNV | Test Setup 2 | TC02, TC03, TC04, TC06, TC07, TC08, TC10, TC11, TC12 |
| Radiated Emission | NTNV | Test Setup 3<br>Test Setup 4<br>Test Setup 5 | TC02, TC03, TC04, TC06, TC07, TC08, TC10, TC11, TC12 |
| Band Edge | NTNV | Test Setup 5 | TC01, TC02, TC04, TC05, TC06, TC08, TC09, TC10, TC12 |

Note:
1. Please refer to section 4.4 for test setup details.
2. Please refer to section 4.3 for test setup details.

# 5 TEST ITEMS

## 5.1 Antenna Requirements

### 5.1.1 Standard Applicable

FCC §15.203 & 15.247(b)

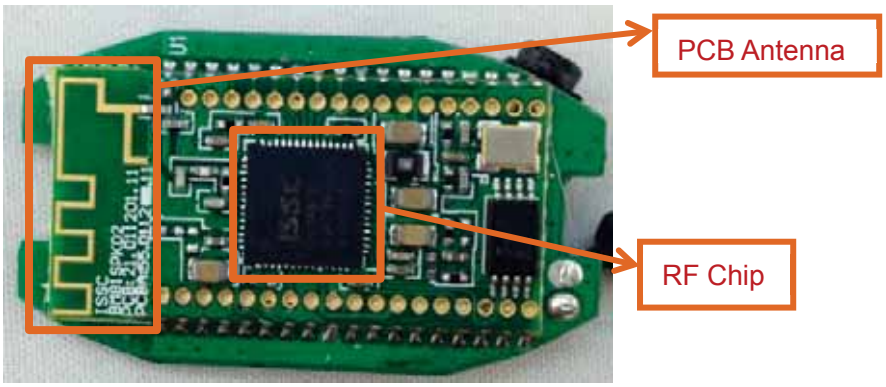
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply 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.

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. 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 FCC rule.

### 5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

| Protected Method | Description |
|---|---|
| The antenna is An embedded-in | An embedded-in antenna design is used. |

| Reference Documents | Item |
|---|---|
| Photo |  |

### 5.1.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

## 5.2 Number of Hopping Frequency

### 5.2.1 Limit

FCC §15.247(a)(1)(iii)

Frequency hopping systems operating in the 2400MHz to 2483.5MHz bands shall use at least 15 hopping frequencies.

### 5.2.2 Test Procedure

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = the frequency band of operation

RBW ≥ 1% of the span

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize

## 5.3 Peak Output Power

### 5.3.1 Test Limit

FCC § 15.247(b)

For frequency hopping systems that operates in the 2400MHz to 2483.5MHz band employing at least 75 hopping channels, the maximum peak output power of the intentional radiator shall not exceed 1Watt.

### 5.3.2 Test Procedure

The Bluetooth Module operates at hopping-off test mode. The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power of the Module.

Use the following spectrum analyzer settings:

Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel

RBW > the 20 dB bandwidth of the emission being measured

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

## 5.4 Occupied Bandwidth

### 5.4.1 Limit

FCC §15.247(a)

The 20dB bandwidth is known as the 99% emission bandwidth, or 20dB bandwidth (10*log1%=20dB) taking the total RF output power.

### 5.4.2 Test Procedure

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

RBW ≥ 1% of the 20 dB bandwidth

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

## 5.5 Carrier Frequency Separation

### 5.5.1 Limit

FCC §15.247(a)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater.

### 5.5.2 Test Procedure

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = wide enough to capture the peaks of two adjacent channels

Resolution (or IF) Bandwidth (RBW) ≥ 1% of the span

Video (or Average) Bandwidth (VBW) ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

## 5.6 Time of Occupancy (Dwell time)

### 5.6.1 Limit

FCC §15.247(a)

Frequency hopping systems in the 2400 - 2483.5MHz band shall use at least 15 non-overlapping 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.

### 5.6.2 Test Procedure

The average time of occupancy on any channel within the Period can be calculated with formulas:

For DH1 package type

{Total of Dwell} = {Pulse Time} * (1600 / 2) / {Number of Hopping Frequency} * {Period}

{Period} = 0.4s * {Number of Hopping Frequency}

For DH3 package type

{Total of Dwell} = {Pulse Time} * (1600 / 4) / {Number of Hopping Frequency} * {Period}

{Period} = 0.4s * {Number of Hopping Frequency}

For DH5 package type

{Total of Dwell} = {Pulse Time} * (1600 / 6) / {Number of Hopping Frequency} * {Period}

{Period} = 0.4s * {Number of Hopping Frequency}

The lowest, middle and highest channels are selected to perform testing to record the dwell time of each occupation measured in this channel, which is called Pulse Time here.

## 5.7 Conducted Spurious Emission

### 5.7.1 Limit

FCC §15.247(d)

In any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

### 5.7.2 Test Procedure

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
RBW = 100 kHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold
Allow the trace to stabilize

## 5.8 Conducted Emission

### 5.8.1 Limit

FCC §15.207

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

| Frequency range (MHz) | Conducted Limit (dBμV) | |
|---|---|---|
| | Quai-peak | Average |
| 0.15 - 0.50 | 66 to 56 | 56 to 46 |
| 0.50 - 5 | 56 | 46 |
| 0.50 - 30 | 60 | 50 |

### 5.8.2 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

## 5.9 Radiated Spurious Emission

### 5.9.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Frequency (MHz) | Field Strength (μV/m) | Measurement Distance (m) |
|---|---|---|
| 0.009 - 0.490 | 2400/F(kHz) | 300 |
| 0.490 - 1.705 | 24000/F(kHz) | 30 |
| 1.705 - 30.0 | 30 | 30 |
| 30 - 88 | 100 | 3 |
| 88 - 216 | 150 | 3 |
| 216 - 960 | 200 | 3 |
| Above 960 | 500 | 3 |

Note:

1. Field Strength (dBμV/m) = 20*log[Field Strength (μV/m)].
2. In the emission tables above, the tighter limit applies at the band edges.
3. For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
4. For above 1000MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

### 5.9.2 Test Procedure

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured
RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz
VBW ≥ RBW
Sweep = auto
Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

## 5.10 Band Edge

### 5.10.1 Limit

FCC §15.209&15.247(d)

In any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

### 5.10.2 Test Procedure

Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation

RBW ≥ 1% of the span

VBW ≥ RBW

Sweep = auto

Detector function = peak /AV

Trace = max hold

Allow the trace to stabilize.

E [dBμV/m] =UR + AT + AFactor [dB]; AT =LCable loss [dB]-Gpreamp [dB]

AT: Total correction Factor except Antenna

UR: Receiver Reading

Gpreamp: Preamplifier Gain

AFactor: Antenna Factor at 3m

# ANNEX A TEST RESULT

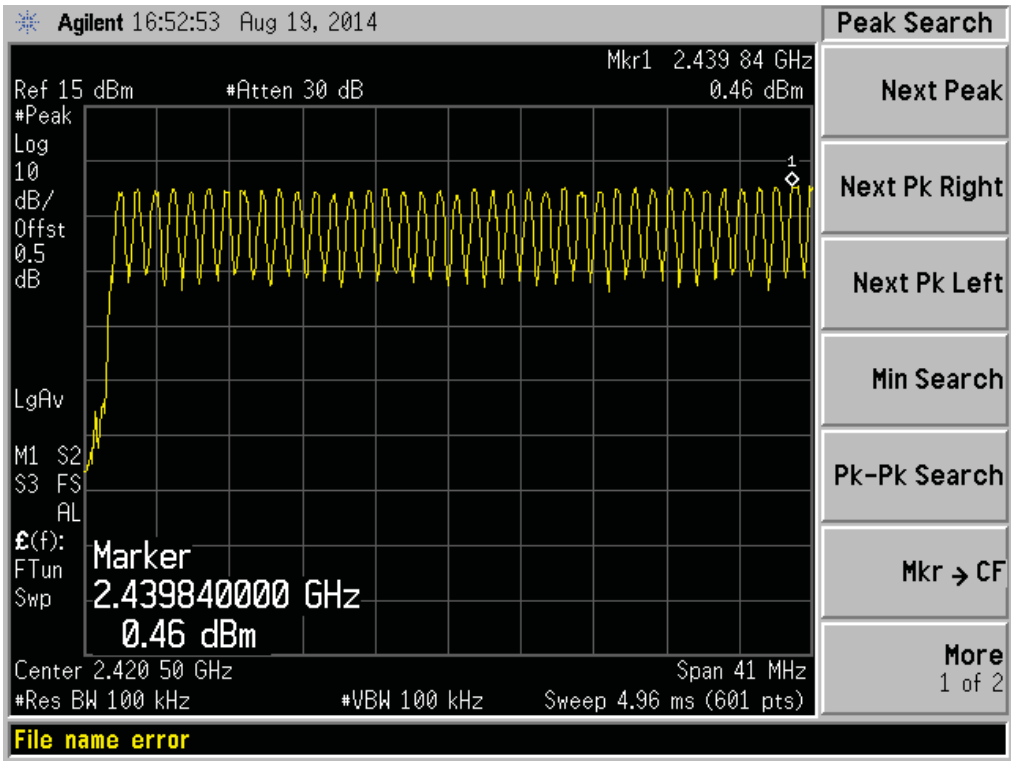
## A.1 Number of Hopping Frequency

Test Data

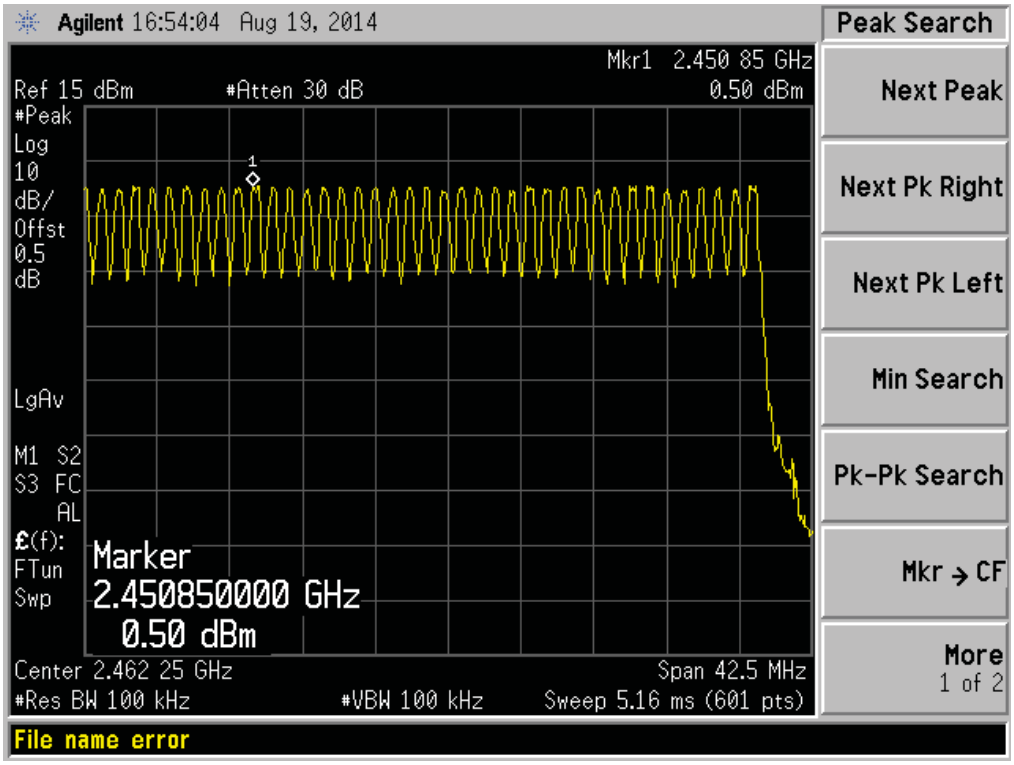
| Test Mode | Frequency Block (MHz) | Measured Channel Numbers | Min. Limit | Verdict |
|---|---|---|---|---|
| GFSK | 2400 - 2483.5 | 79 | 15 | PASS |
| ∏/4-DQPSK | 2400 - 2483.5 | 79 | 15 | PASS |
| 8-DPSK | 2400 - 2483.5 | 79 | 15 | PASS |

Test plots

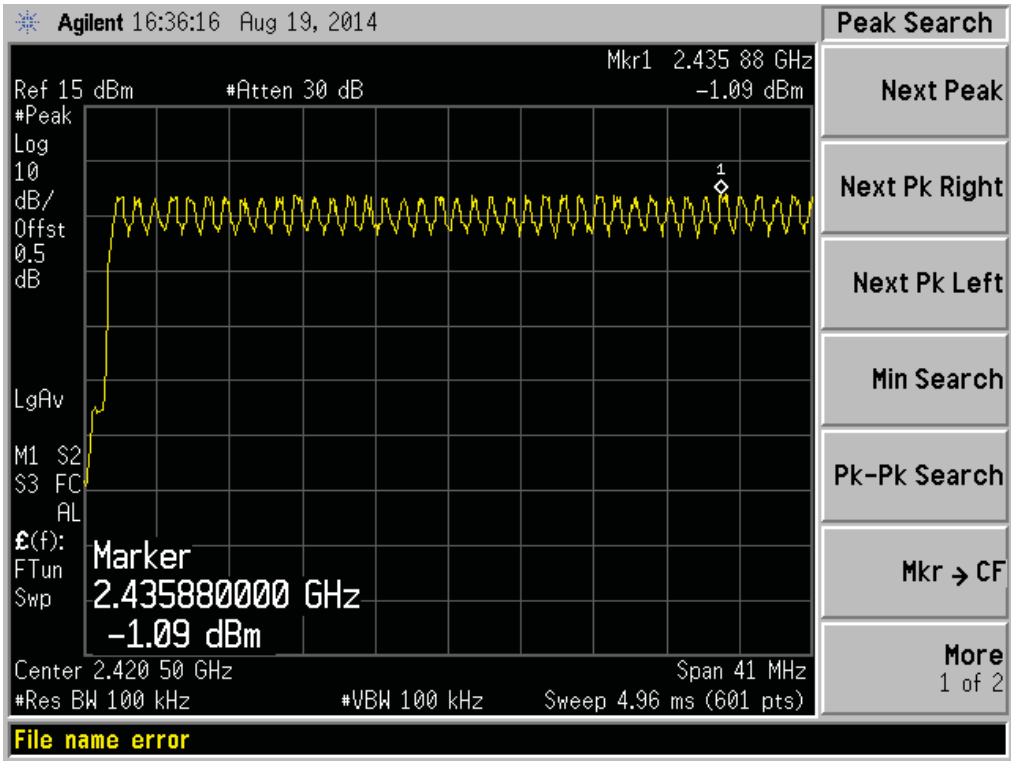
GFSK 2.4GHz~2.4415GHz



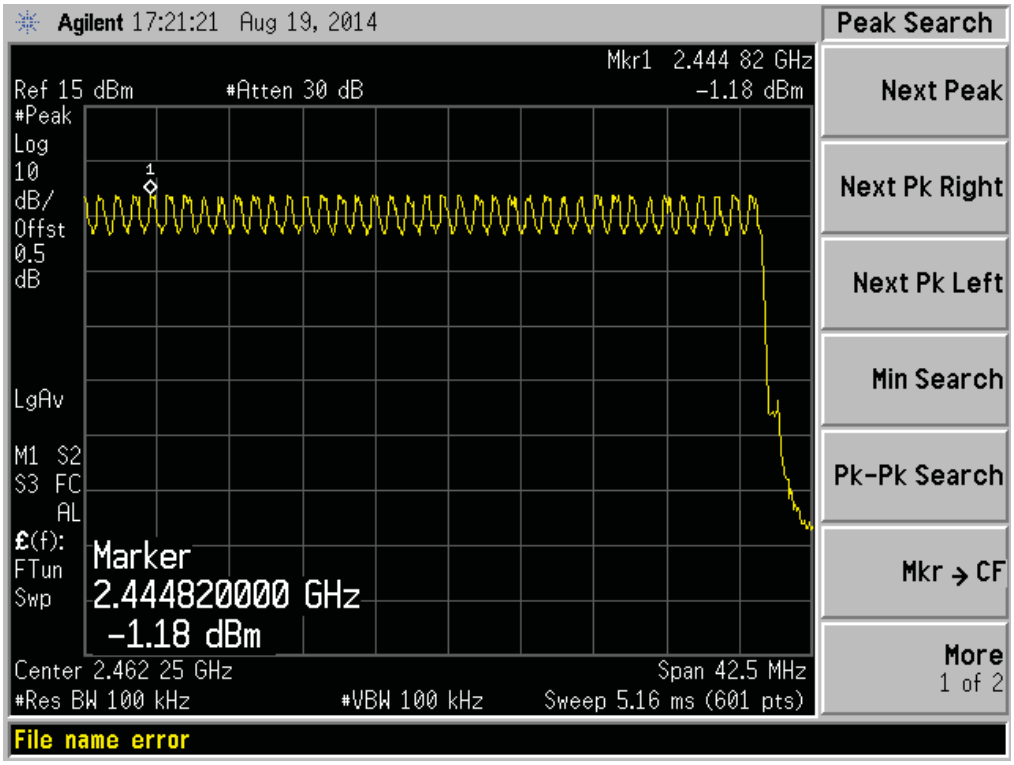
GFSK 2.4415GHz~2.4835GHz



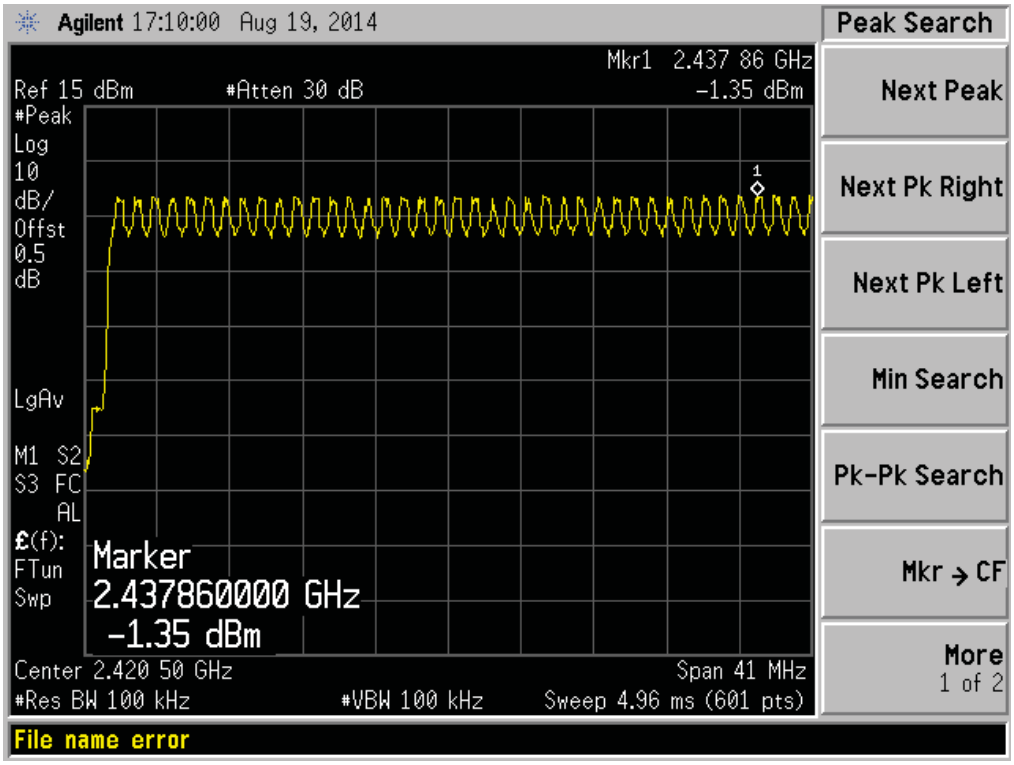

Π/4-DQPSK 2.4GHz~2.4415GHz



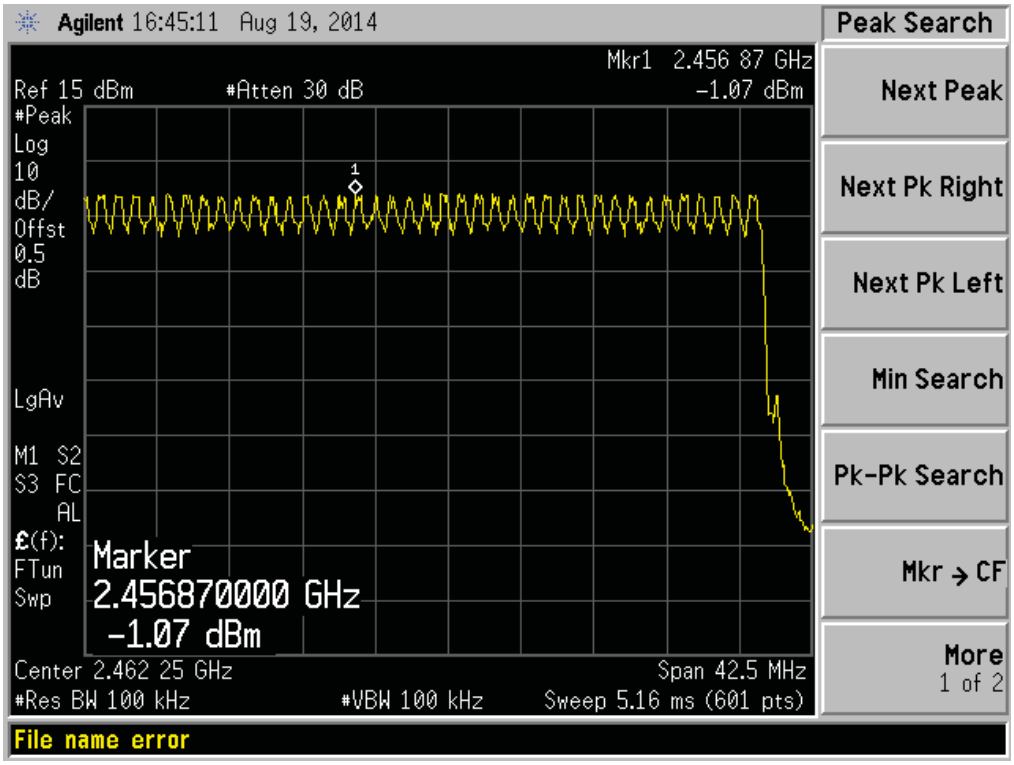
## Π/4-DQPSK 2.4415GHz~2.4835GHz




## 8-DPSK 2.4GHz~2.4415GHz



8-DPSK 2.4415GHz~2.4835GHz



## A.2 Peak Output Power

Test Data

GFSK Mode:

| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---|---|---|---|---|---|---|
| | | dBm | mW | dBm | mW | |
| Low | 2402 | 0.45 | 1.11 | 30 | 1000 | PASS |
| Middle | 2441 | 0.76 | 1.19 | | | PASS |
| High | 2480 | 0.76 | 1.19 | | | PASS |

∏/4-DQPSK Mode:

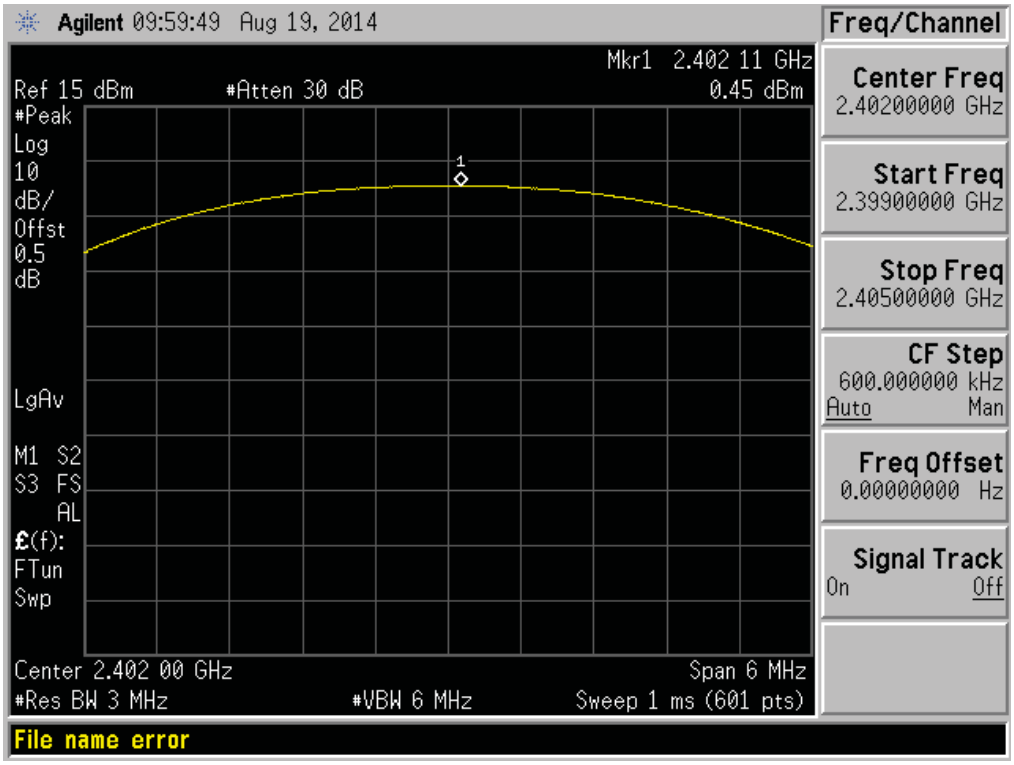
| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---|---|---|---|---|---|---|
| | | dBm | mW | dBm | mW | |
| Low | 2402 | -1.36 | 0.73 | 30 | 1000 | PASS |
| Middle | 2441 | -0.97 | 0.80 | | | PASS |
| High | 2480 | -0.89 | 0.81 | | | PASS |

8-DPSK Mode:

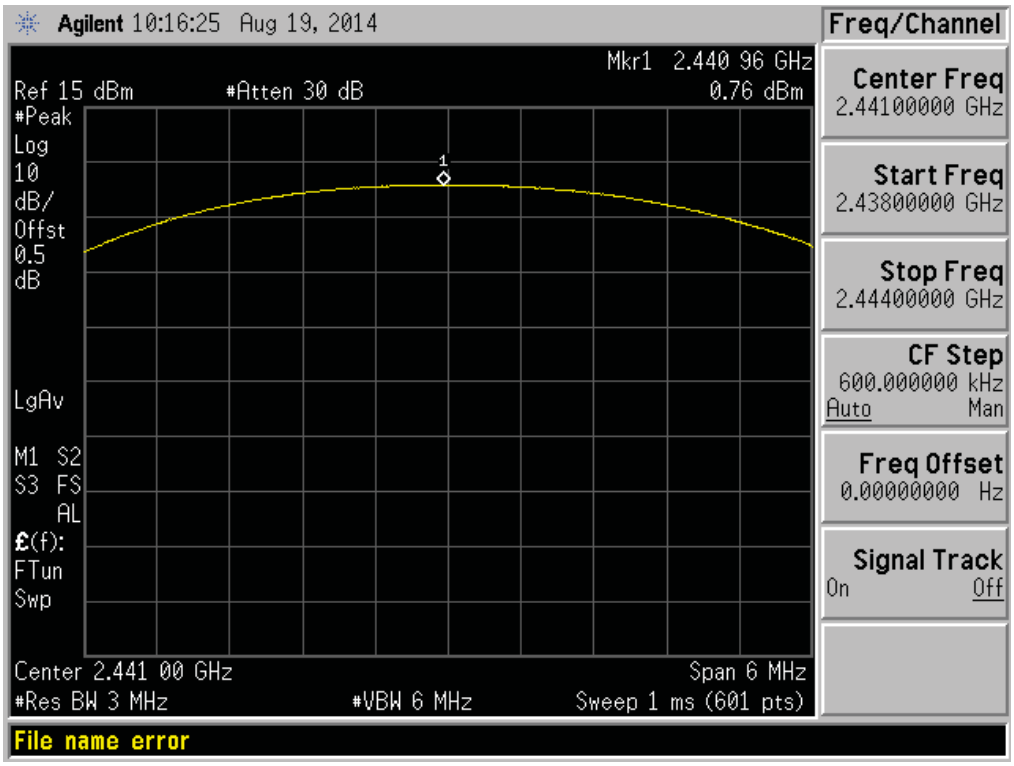
| Channel | Frequency (MHz) | Measured Output Peak Power | | Limit | | Verdict |
|---|---|---|---|---|---|---|
| | | dBm | mW | dBm | mW | |
| Low | 2402 | -0.59 | 0.87 | 30 | 1000 | PASS |
| Middle | 2441 | 0.06 | 1.01 | | | PASS |
| High | 2480 | -0.36 | 0.92 | | | PASS |

Test plots

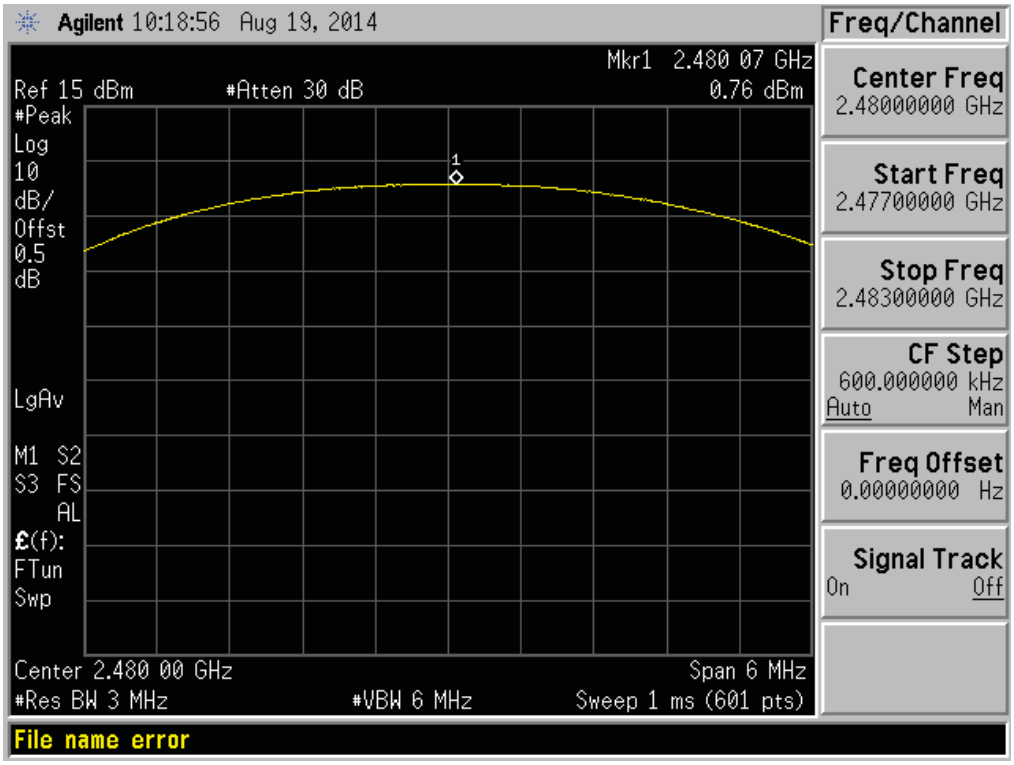
## GFSK LOW CHANNEL



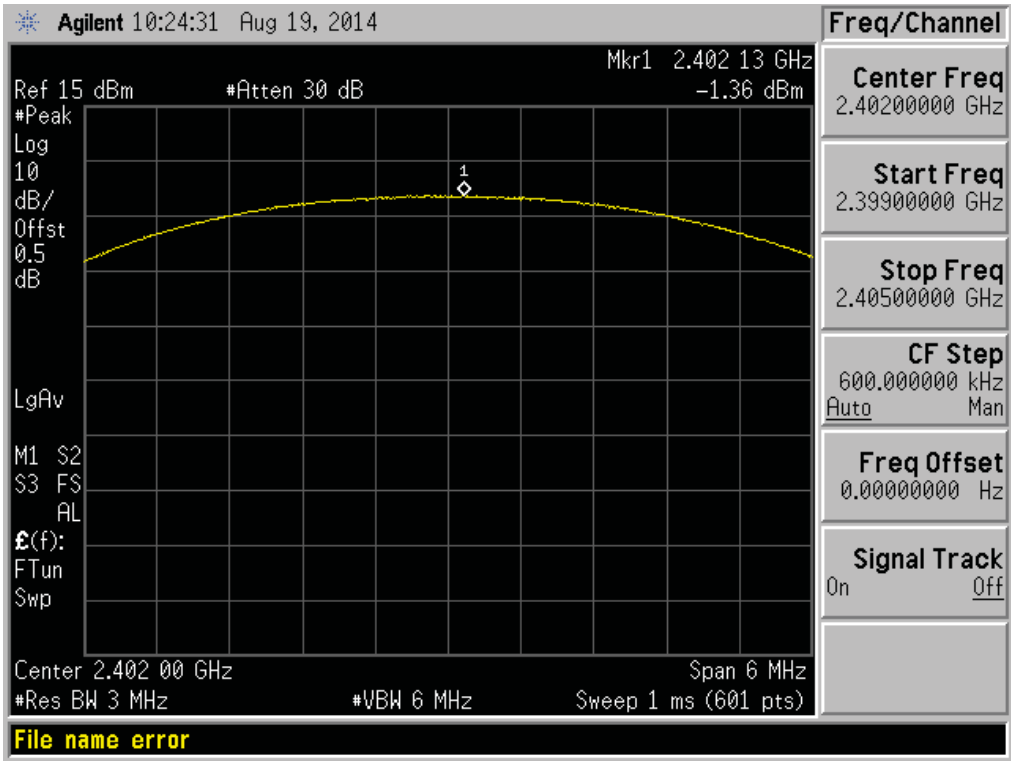

## GFSK MID CHANAEL



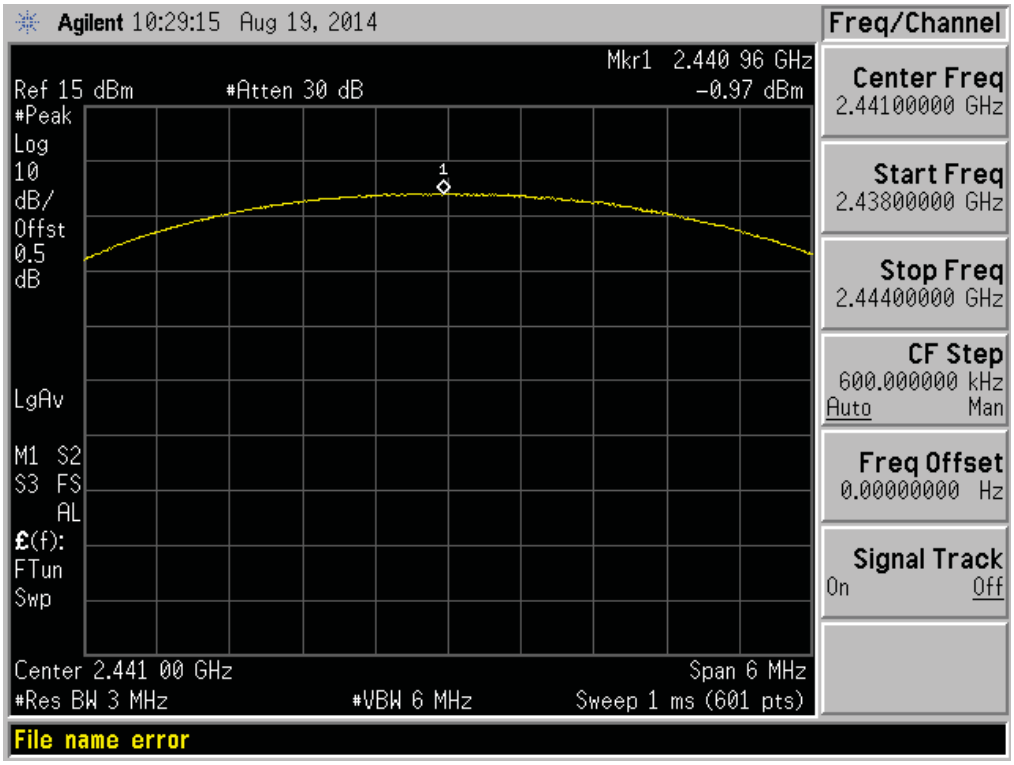
## GFSK HIGH CHANNEL



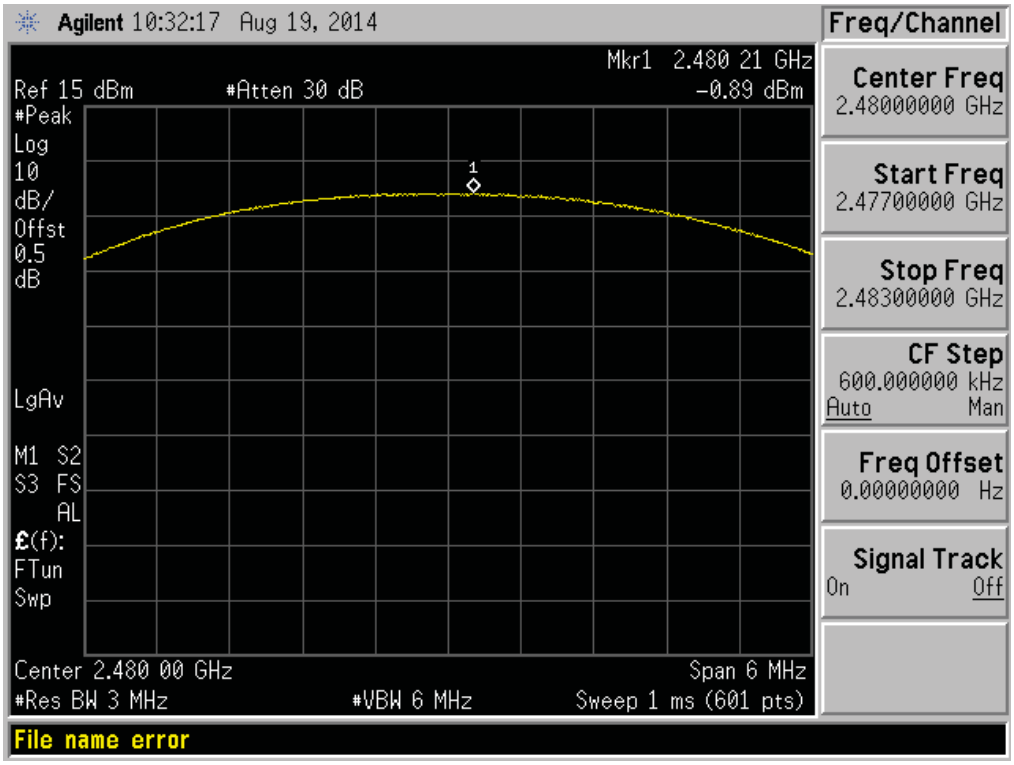

## Π/4-DQPSK LOW CHANNEL



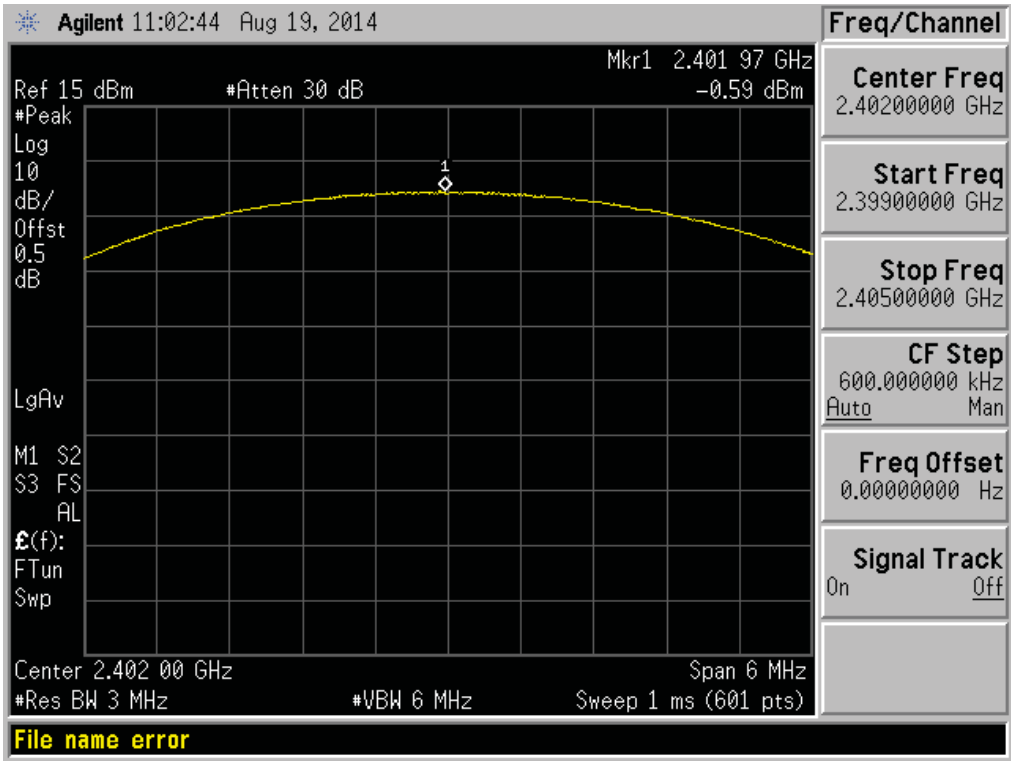
## Π/4-DQPSK MID CHANAEL



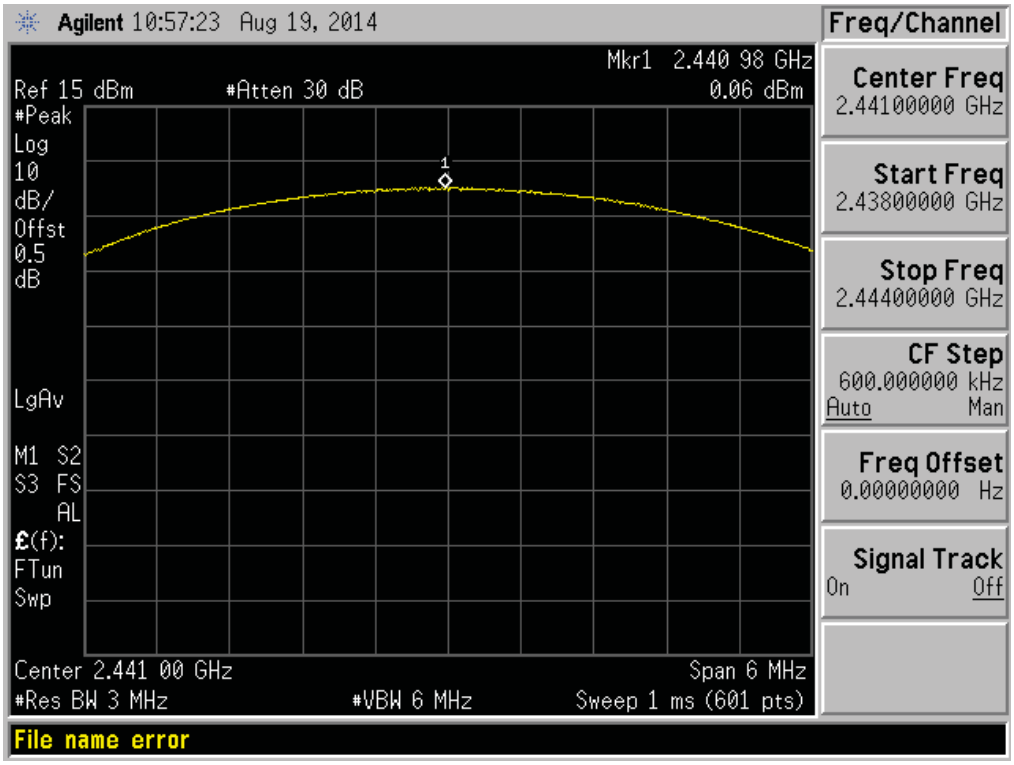

## Π/4-DQPSK HIGH CHANNEL



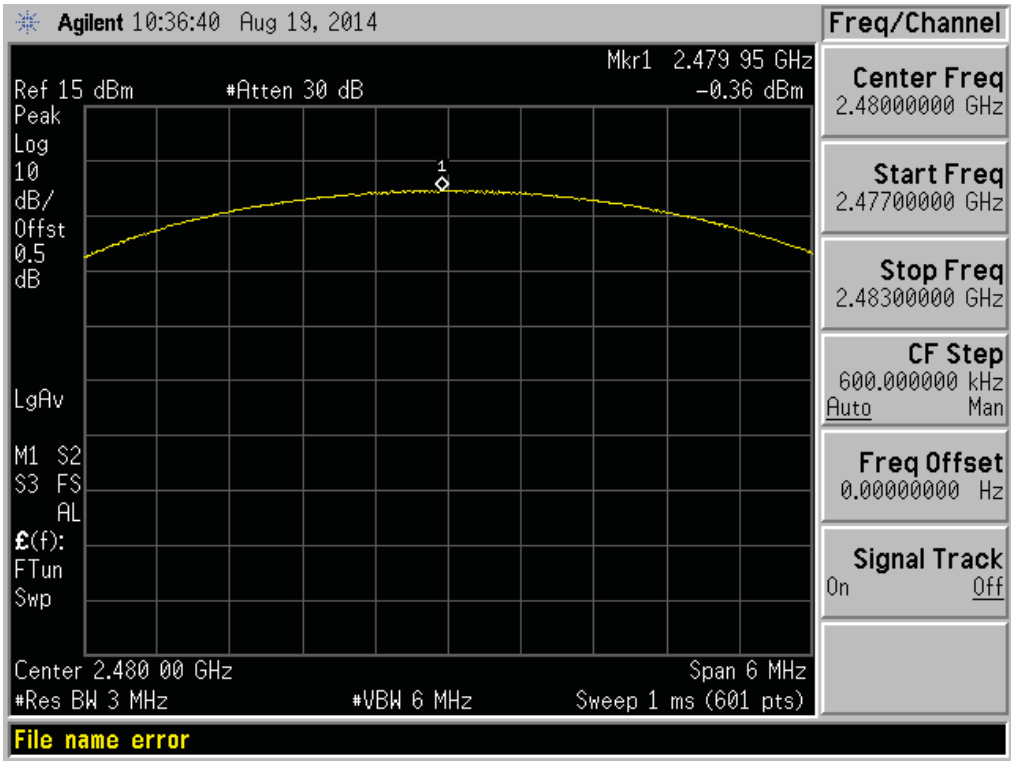
## 8-DPSK LOW CHANNEL




## 8-DPSK MID CHANAEL



## 8-DPSK HIGH CHANNEL



## A.3 20dB and 99% bandwidth

Test Data

GFSK Mode:

| Channel | Frequency (MHz) | 20 dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
|---|---|---|---|
| Low | 2402 | 1.139 | 1.0046 |
| Middle | 2441 | 1.128 | 1.0011 |
| High | 2480 | 1.129 | 1.0007 |

∏/4-DQPSK Mode:

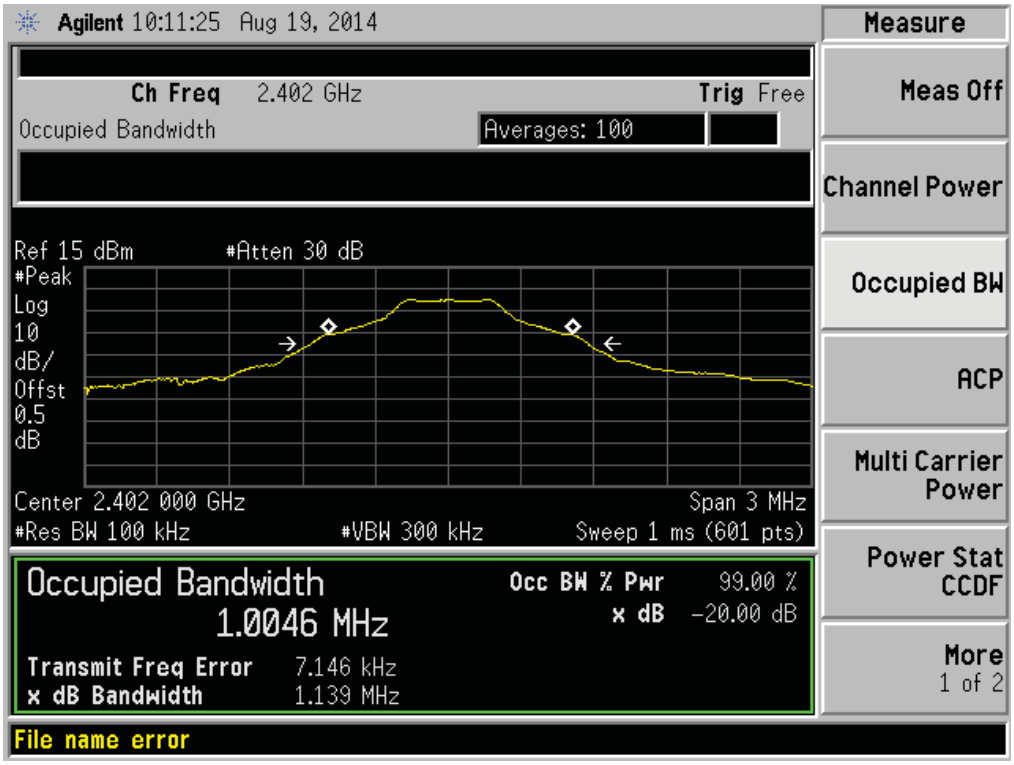
| Channel | Frequency (MHz) | 20 dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
|---|---|---|---|
| Low | 2402 | 1.352 | 1.1951 |
| Middle | 2441 | 1.353 | 1.1926 |
| High | 2480 | 1.349 | 1.1918 |

8-DPSK Mode:

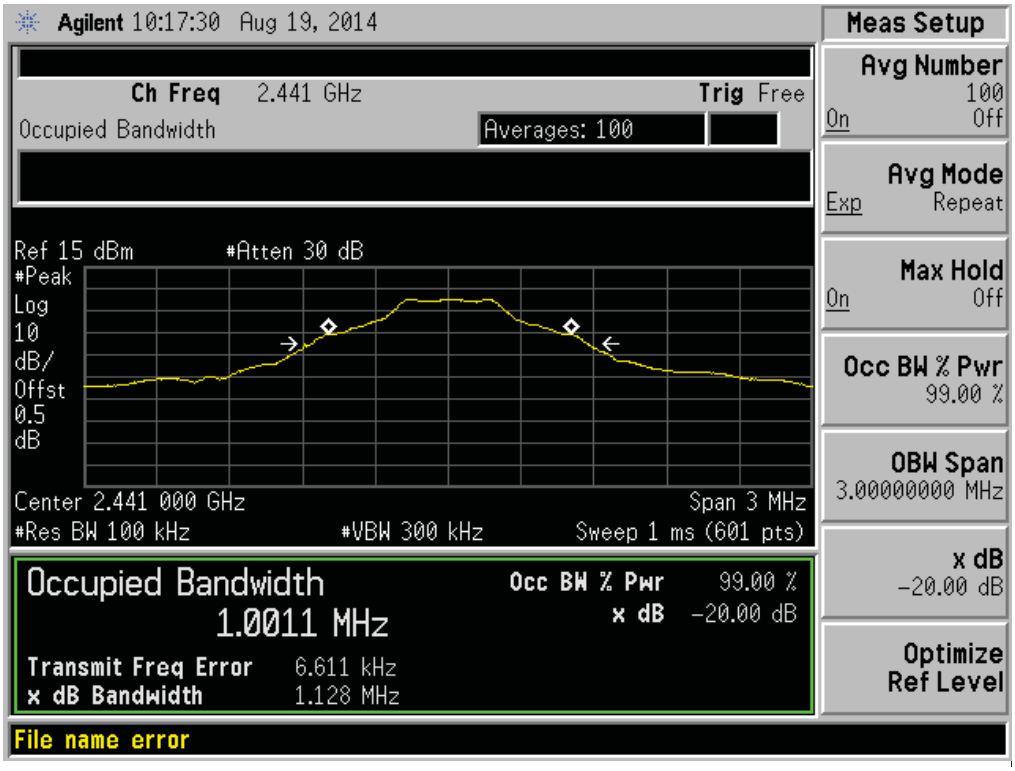
| Channel | Frequency (MHz) | 20 dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
|---|---|---|---|
| Low | 2402 | 1.372 | 1.2073 |
| Middle | 2441 | 1.368 | 1.2021 |
| High | 2480 | 1.366 | 1.2039 |

Test plots

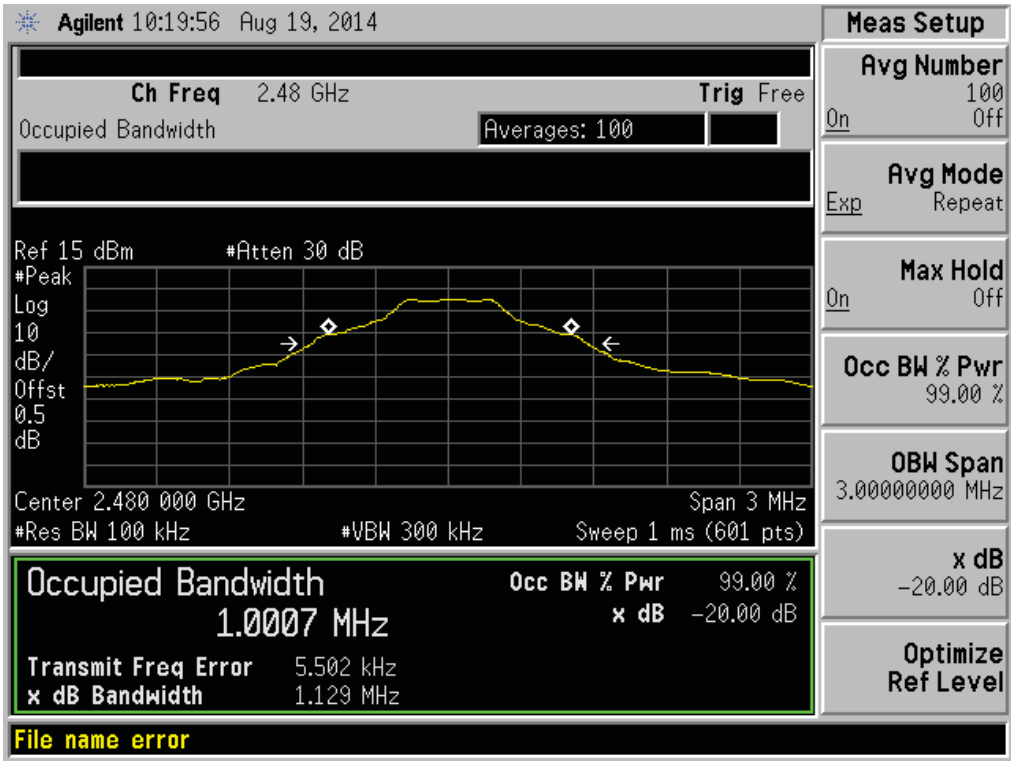
## GFSK LOW CHANNEL



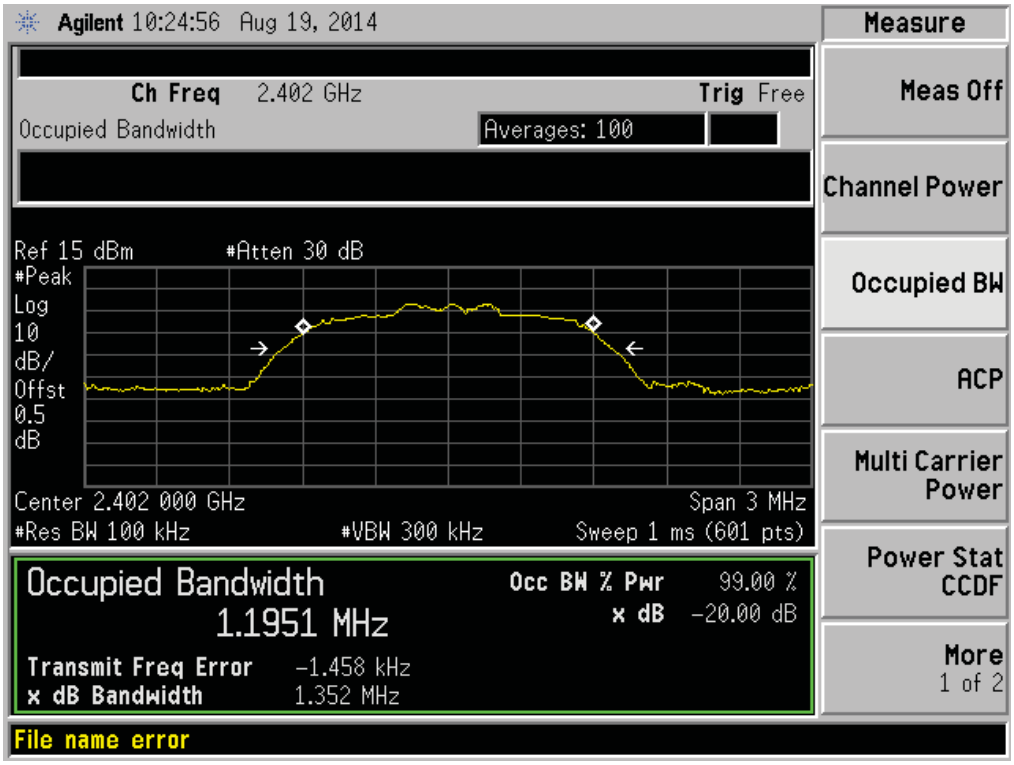

## GFSK MID CHANAEL



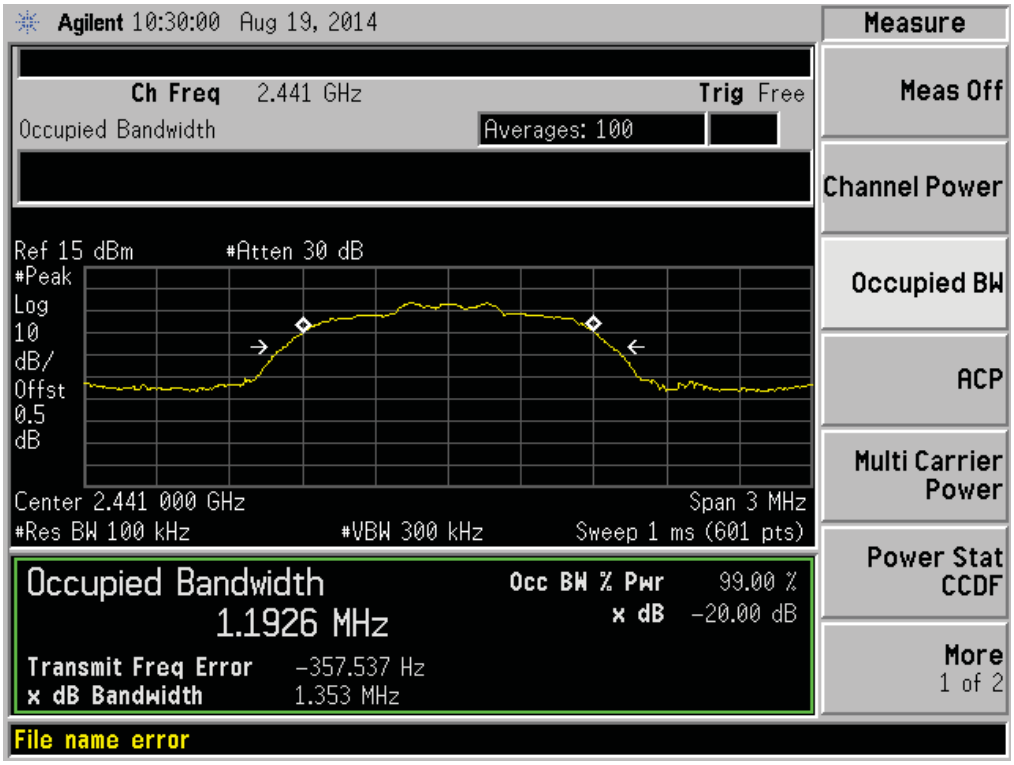
## GFSK HIGH CHANNEL



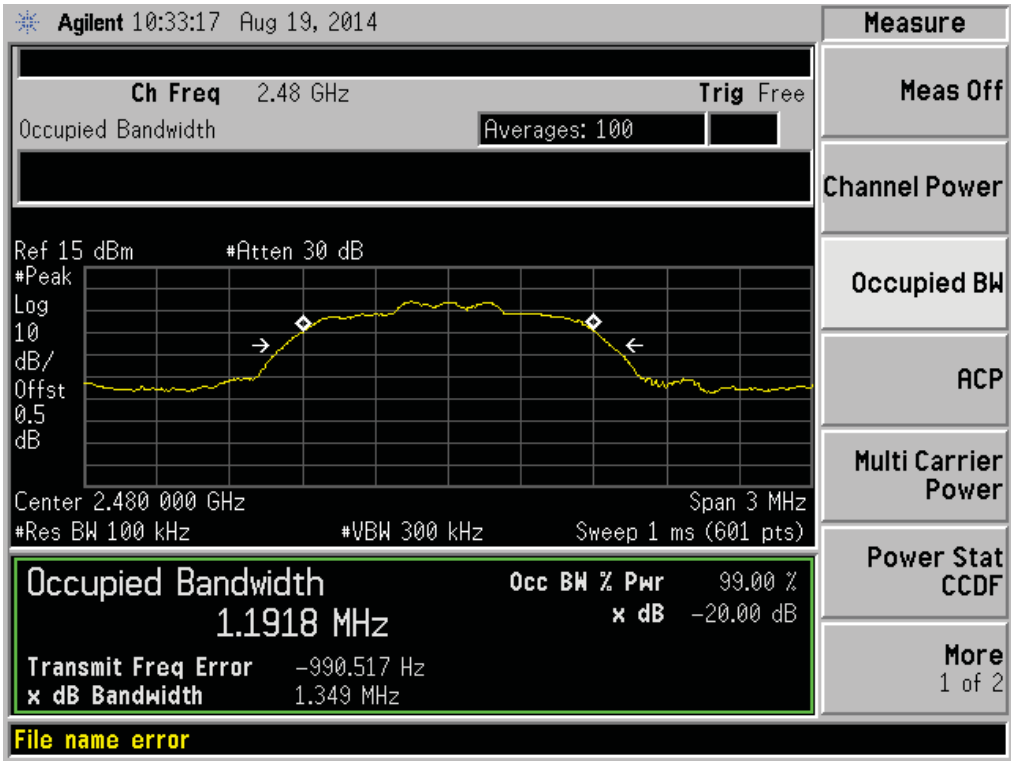

## Π/4-DQPSK LOW CHANNEL



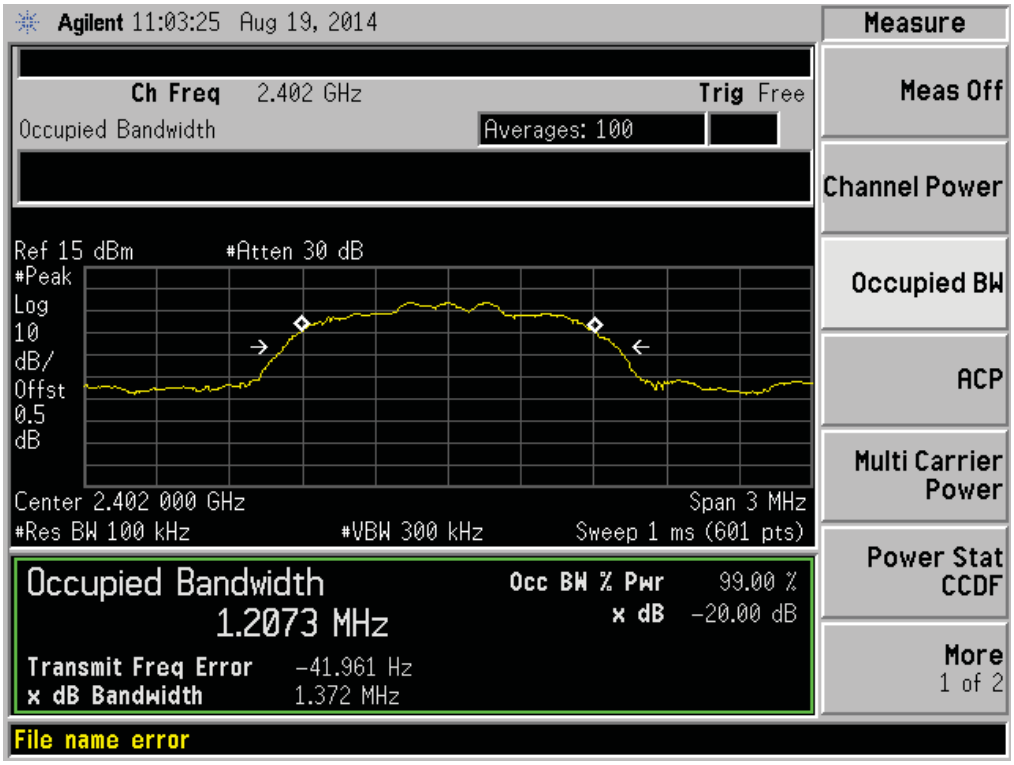
## Π/4-DQPSK MID CHANAEL



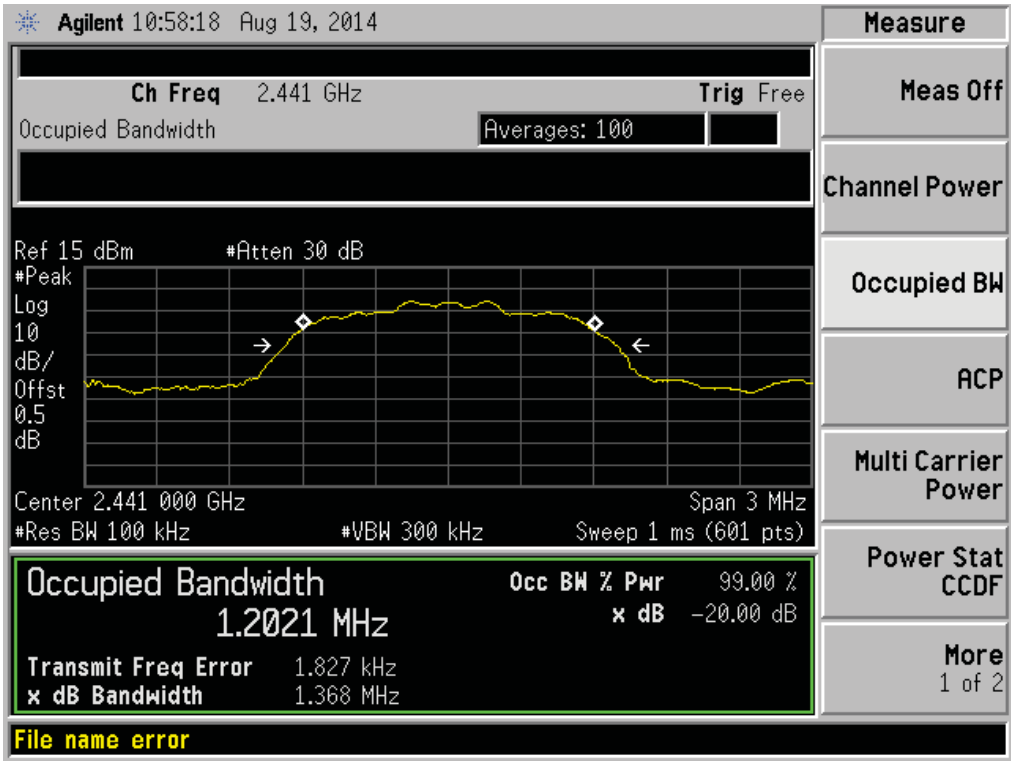

## Π/4-DQPSK HIGH CHANNEL



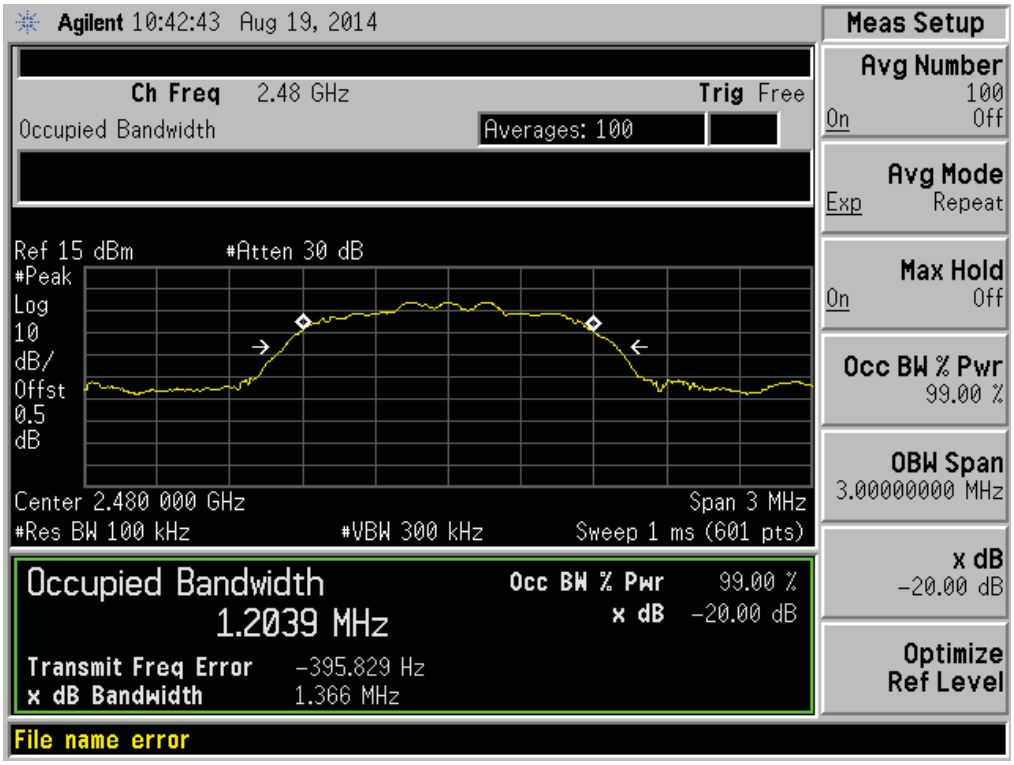
## 8-DPSK LOW CHANNEL




## 8-DPSK MID CHANAEL



## 8-DPSK HIGH CHANNEL



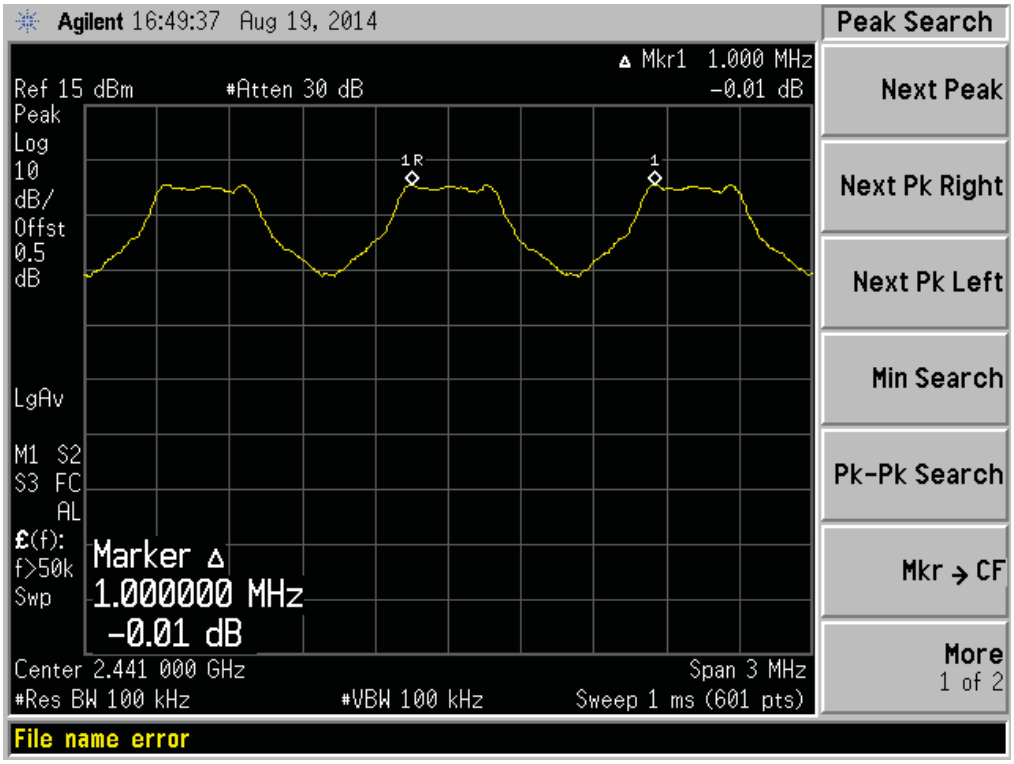
## A.4 Hopping Frequency Separation

Test Data

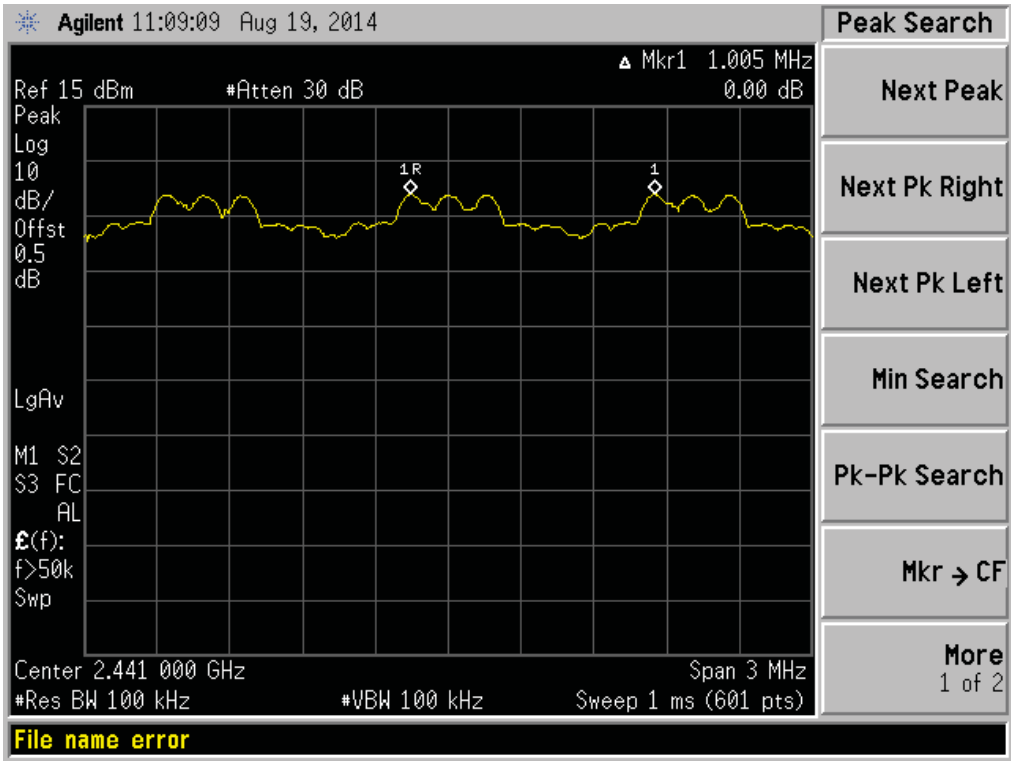
| Mode | Frequency separation (MHz) | Max 20 dB Bandwidth (MHz) | Two-thirds of the 20dB bandwidth (MHz) | Verdict |
|---|---|---|---|---|
| GFSK | 1.000 | 1.139 | 0.759 | PASS |
| Π/4-DQPSK Mode | 1.005 | 1.353 | 0.902 | PASS |
| 8-DPSK Mode | 1.010 | 1.372 | 0.915 | PASS |

Test plots

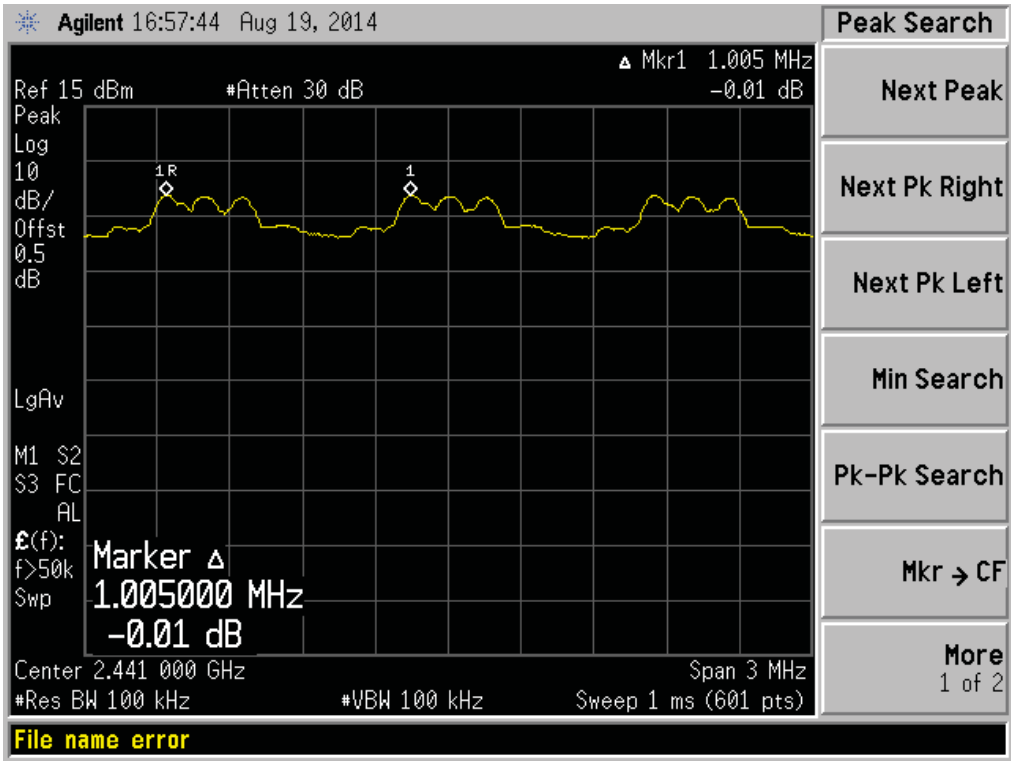
GFSK



## Π/4-DQPSK




## 8-DPSK



## A.5 Average Time of Occupancy

Test Data

GFSK Mode:

| DH Packet | Pulse Width (ms) | Total of Dwell (ms) | Limit (sec) | Verdict |
|---|---|---|---|---|
| DH 1 | 0.400 | 128.004 | 0.4 | PASS |
| DH 3 | 1.653 | 264.488 | 0.4 | PASS |
| DH 5 | 2.900 | 309.343 | 0.4 | PASS |

∏/4-DQPSK Mode:

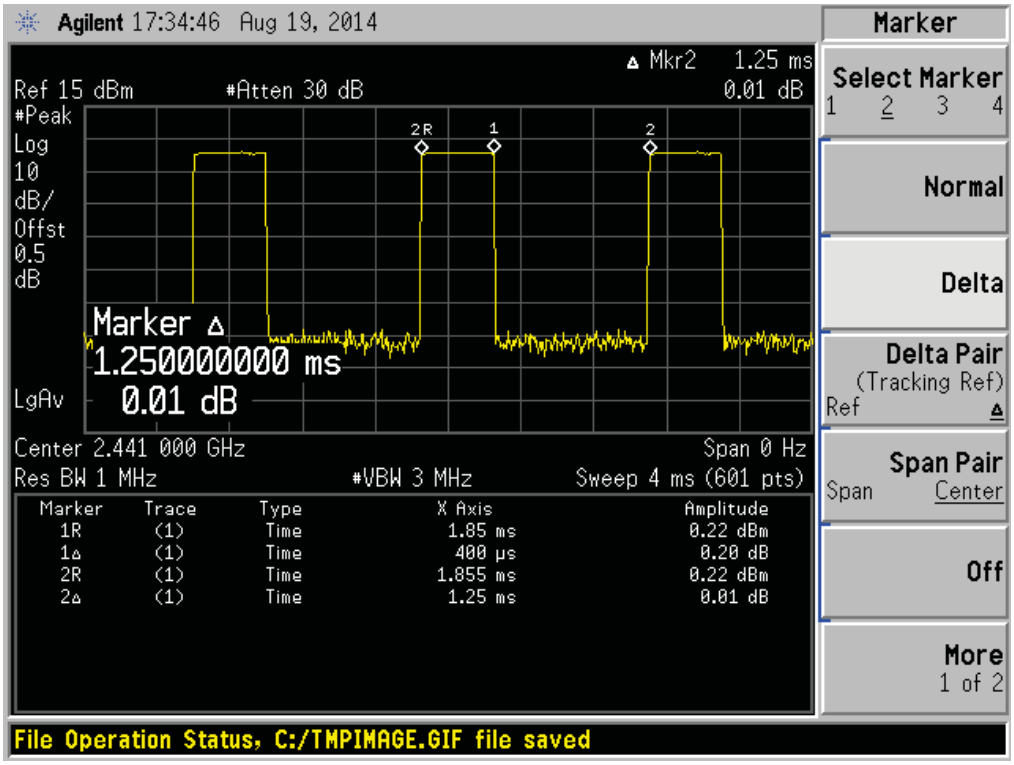
| DH Packet | Pulse Width (ms) | Total of Dwell (ms) | Limit (sec) | Verdict |
|---|---|---|---|---|
| DH 1 | 0.400 | 128.004 | 0.4 | PASS |
| DH 3 | 1.653 | 264.488 | 0.4 | PASS |
| DH 5 | 2.900 | 309.343 | 0.4 | PASS |

8-DPSK Mode:

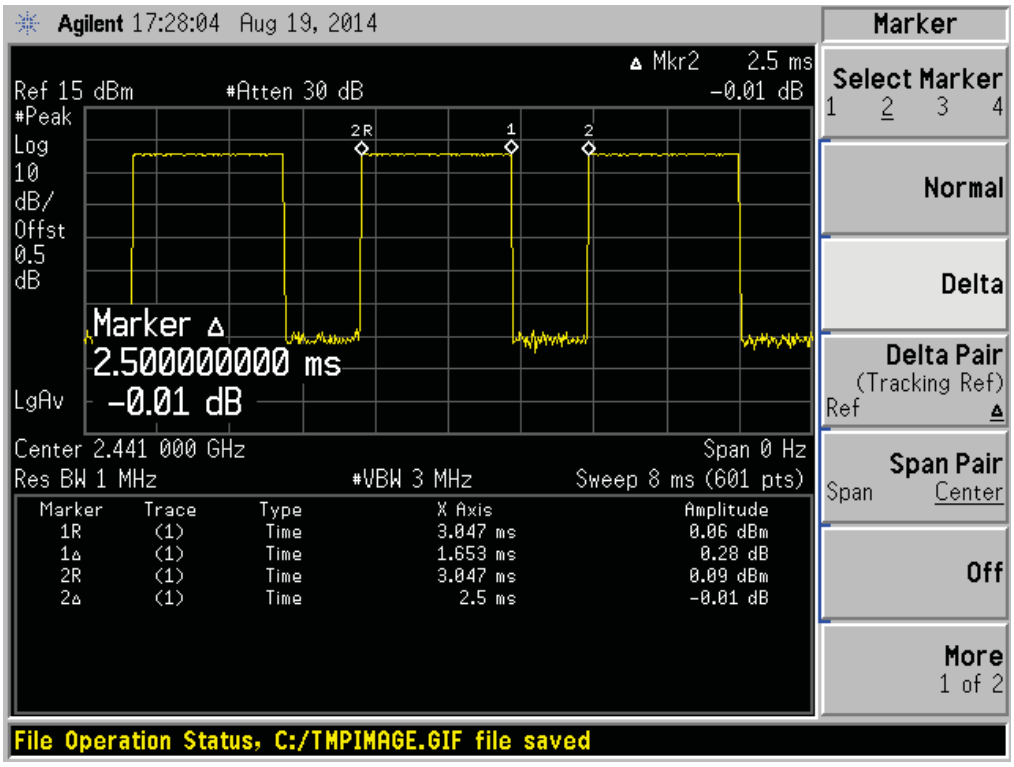
| DH Packet | Pulse Width (ms) | Total of Dwell (ms) | Limit (sec) | Verdict |
|---|---|---|---|---|
| DH 1 | 0.400 | 128.004 | 0.4 | PASS |
| DH 3 | 1.653 | 264.488 | 0.4 | PASS |
| DH 5 | 2.900 | 309.343 | 0.4 | PASS |

Test Plots

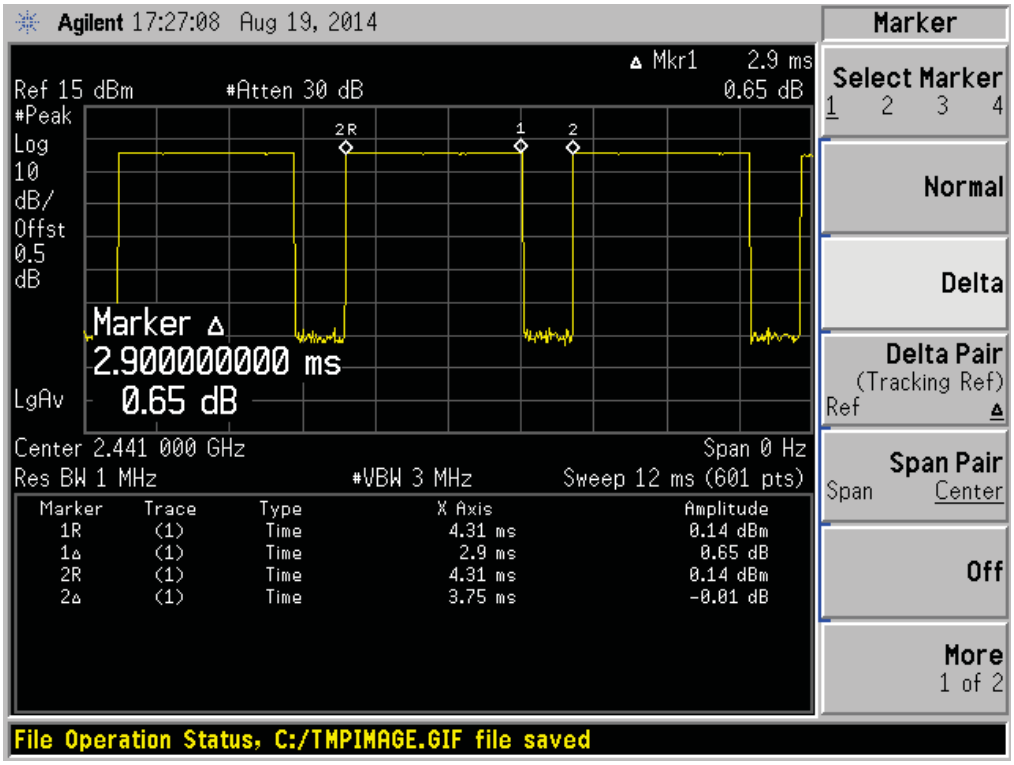
## GFSK DH1



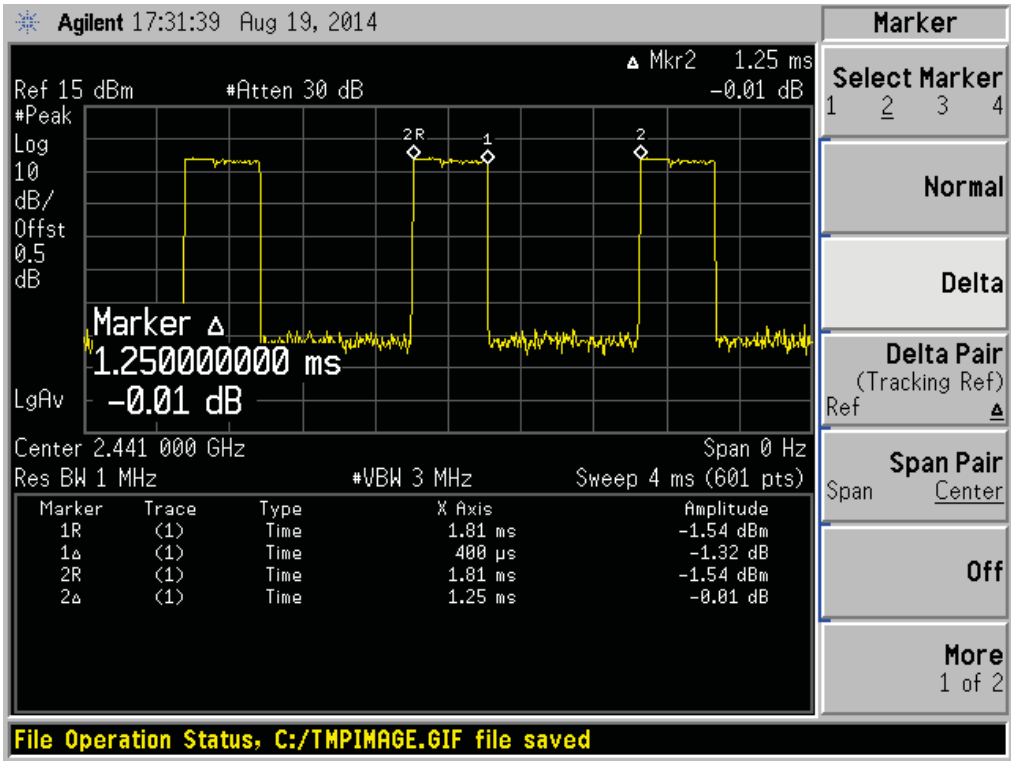

## GFSK DH3



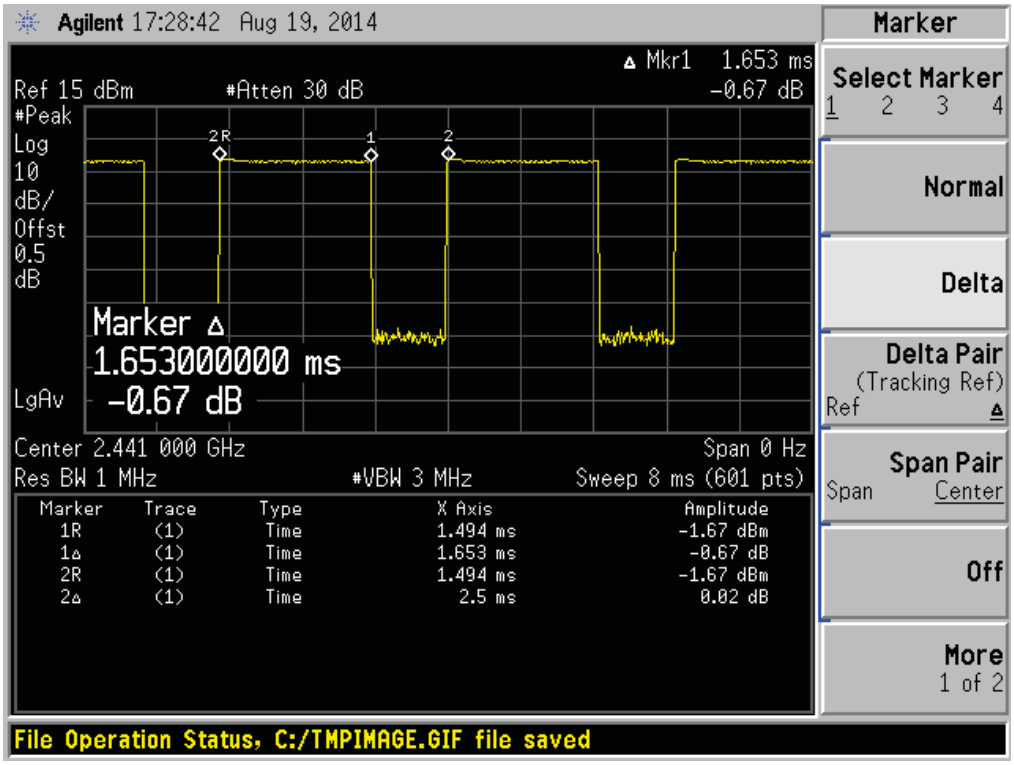
## GFSK DH5



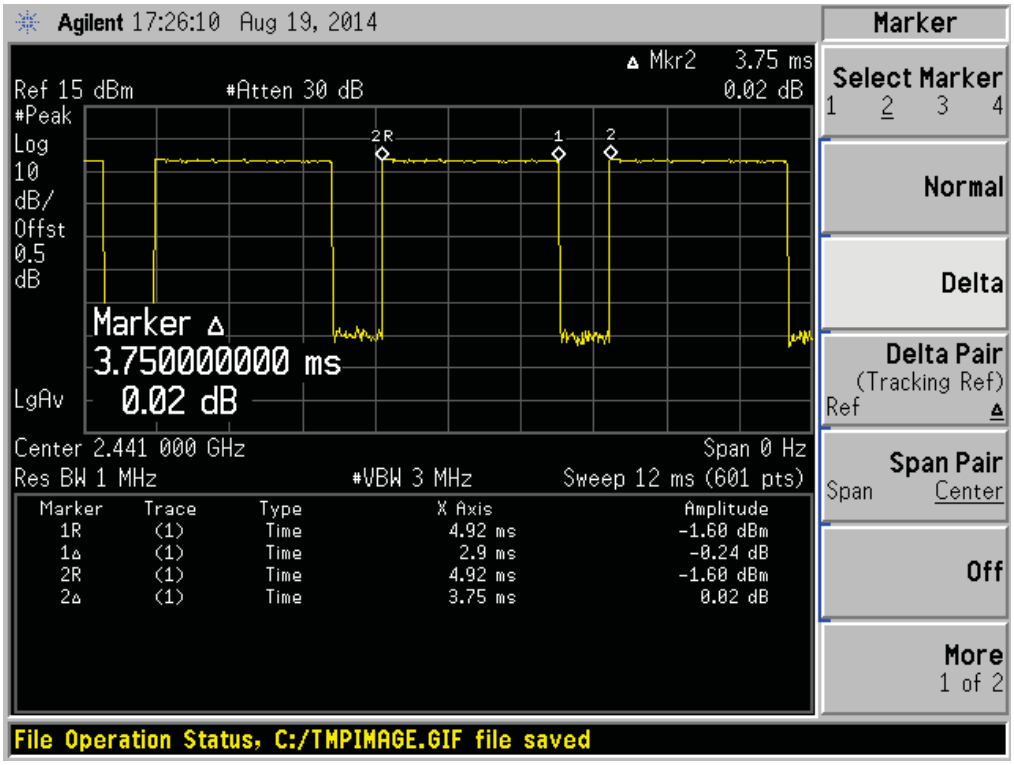

## Π/4-DQPSK DH1



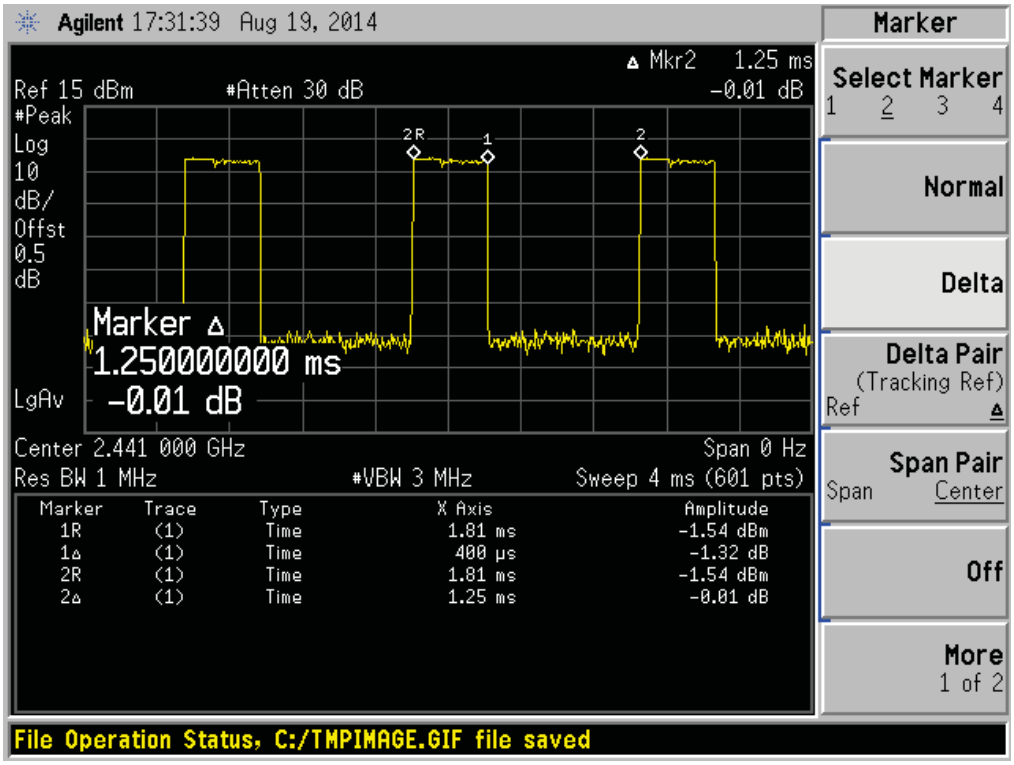
## Π/4-DQPSK DH3



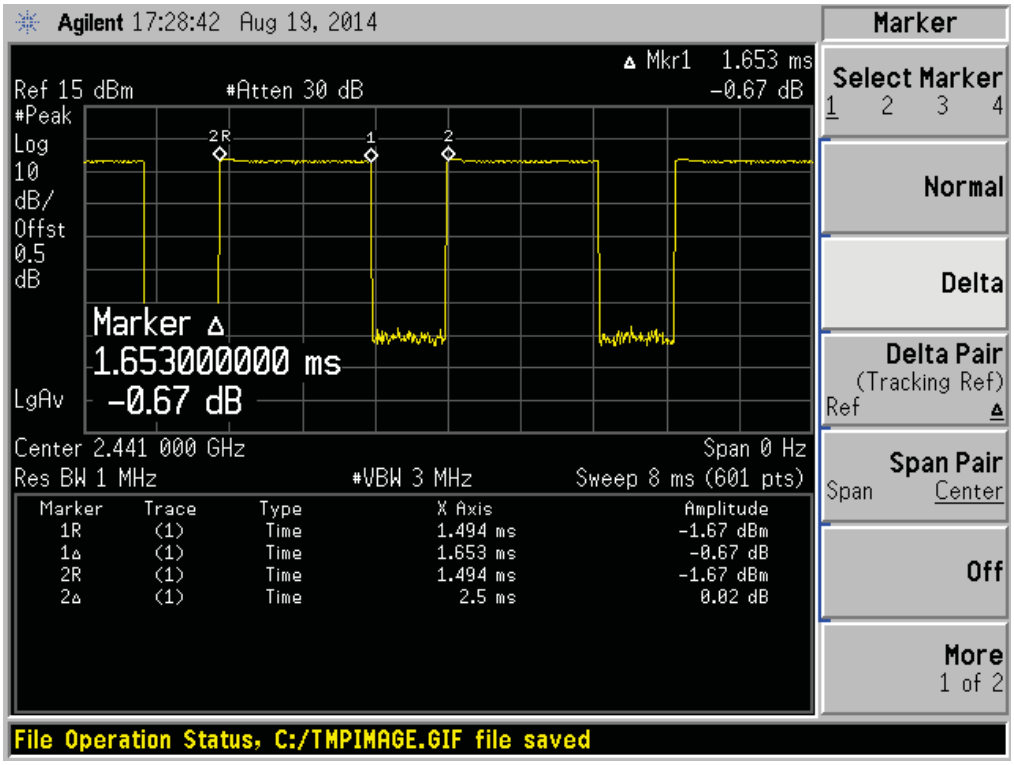

## Π/4-DQPSK DH5



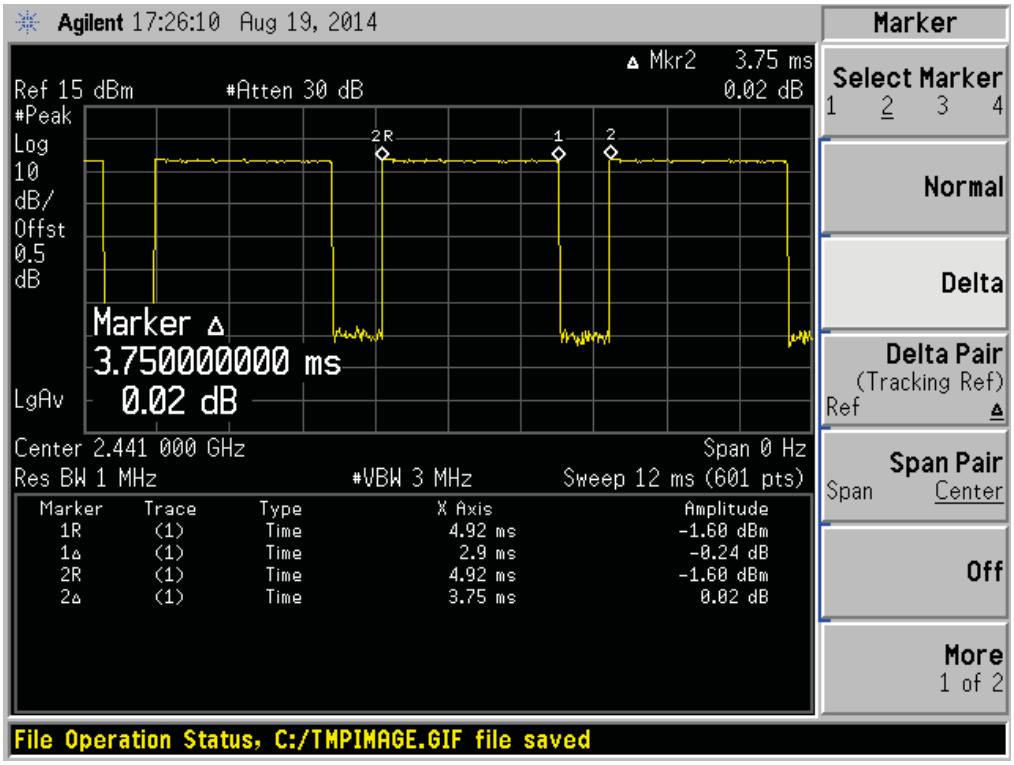
## 8-DPSK DH1




## 8-DPSK DH3



## 8-DPSK DH5


Agilent 17:26:10 Aug 19, 2014
Marker
Mkr2 3.75 ms
Ref 15 dBm
#Atten 30 dB
0.02 dB
#Peak
Log
10
dB/
Offst
0.5
dB
2R
1
2
Marker Δ
3.750000000 ms
0.02 dB
LgAv
Center 2.441 000 GHz
Span 0 Hz
Res BW 1 MHz
#VBW 3 MHz
Sweep 12 ms (601 pts)
Marker Trace Type X Axis Amplitude
1R (1) Time 4.92 ms -1.60 dBm
1Δ (1) Time 2.9 ms -0.24 dB
2R (1) Time 4.92 ms -1.60 dBm
2Δ (1) Time 3.75 ms 0.02 dB
Select Marker
1 2 3 4
Normal
Delta
Delta Pair
(Tracking Ref)
Ref
Span Pair
Span Center
Off
More
1 of 2
File Operation Status, C:/TMPIMAGE.GIF file saved

## A.6 Conducted Spurious Emissions

Test Data

GFSK Mode:

| Channel | Frequency (MHz) | Measured Max. Out of Band Emission (dBm) | Limit (dBm) | | Verdict |
|---|---|---|---|---|---|
| | | | Carrier Level | Calculated 20 dBc Limit | |
| Low | 2402 | -39.28 | -0.44 | -20.4 | PASS |
| Middle | 2441 | -41.97 | -0.03 | -20.0 | PASS |
| High | 2480 | -40.70 | 0.09 | -19.9 | PASS |

∏/4-DQPSK Mode:

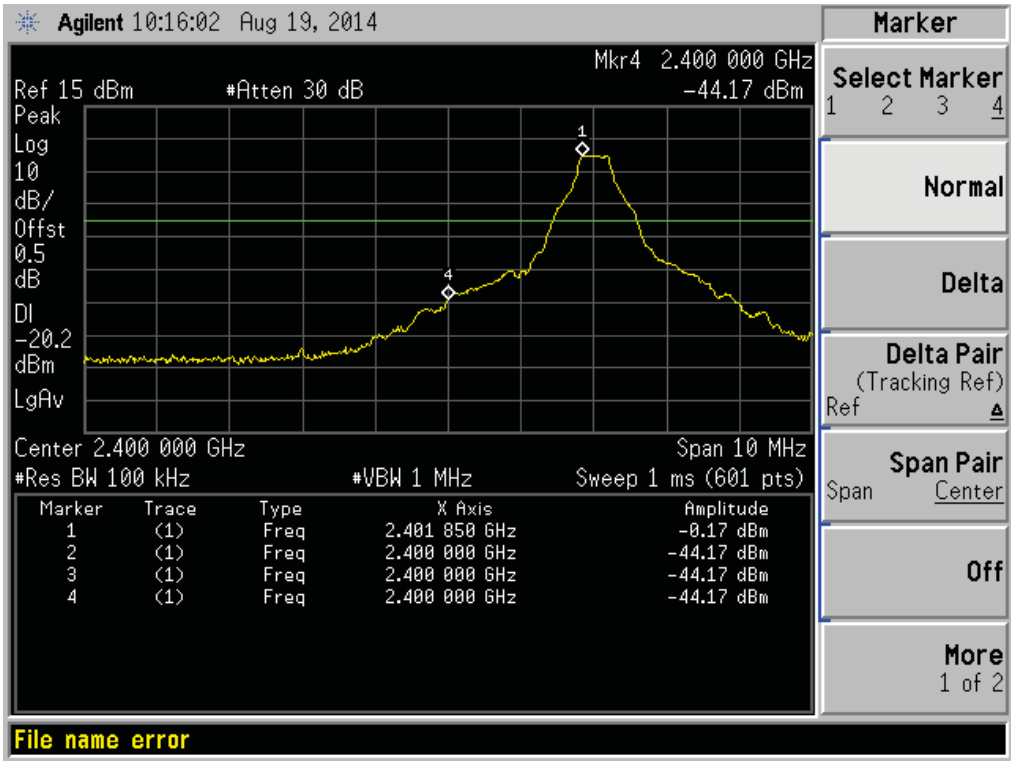
| Channel | Frequency (MHz) | Measured Max. Out of Band Emission (dBm) | Limit (dBm) | | Verdict |
|---|---|---|---|---|---|
| | | | Carrier Level | Calculated 20 dBc Limit | |
| Low | 2402 | -47.27 | -2.27 | -22.3 | PASS |
| Middle | 2441 | -43.22 | -3.03 | -23.0 | PASS |
| High | 2480 | -47.56 | -2.25 | -22.2 | PASS |

8-DPSK Mode:

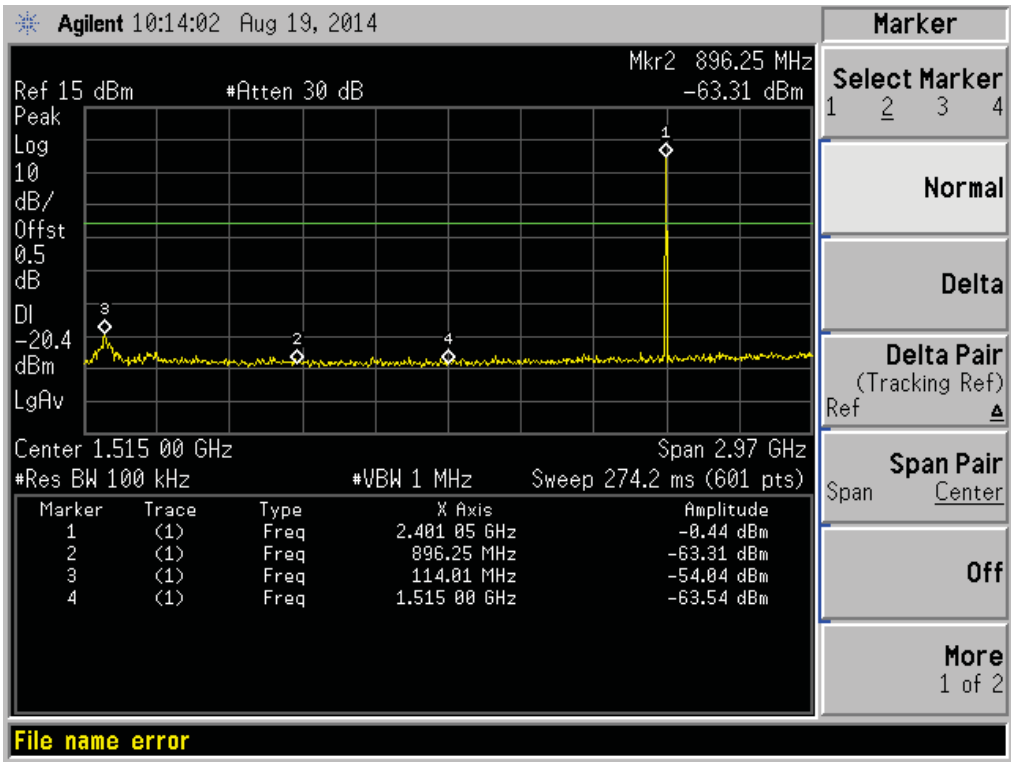
| Channel | Frequency (MHz) | Measured Max. Out of Band Emission (dBm) | Limit (dBm) | | Verdict |
|---|---|---|---|---|---|
| | | | Carrier Level | Calculated 20 dBc Limit | |
| Low | 2402 | -48.31 | -1.52 | -21.5 | PASS |
| Middle | 2441 | -43.59 | -1.51 | -21.5 | PASS |
| High | 2480 | -46.00 | -1.36 | -21.4 | PASS |

Test Plots

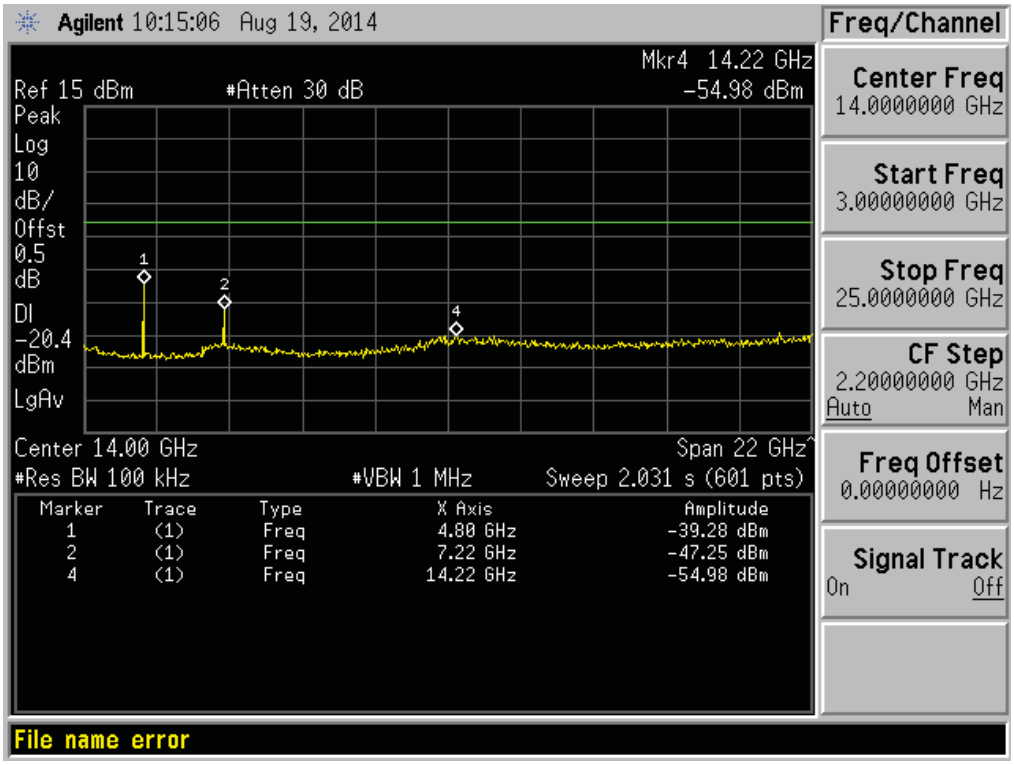
GFSK LOW CHANNEL , BANDEDGE



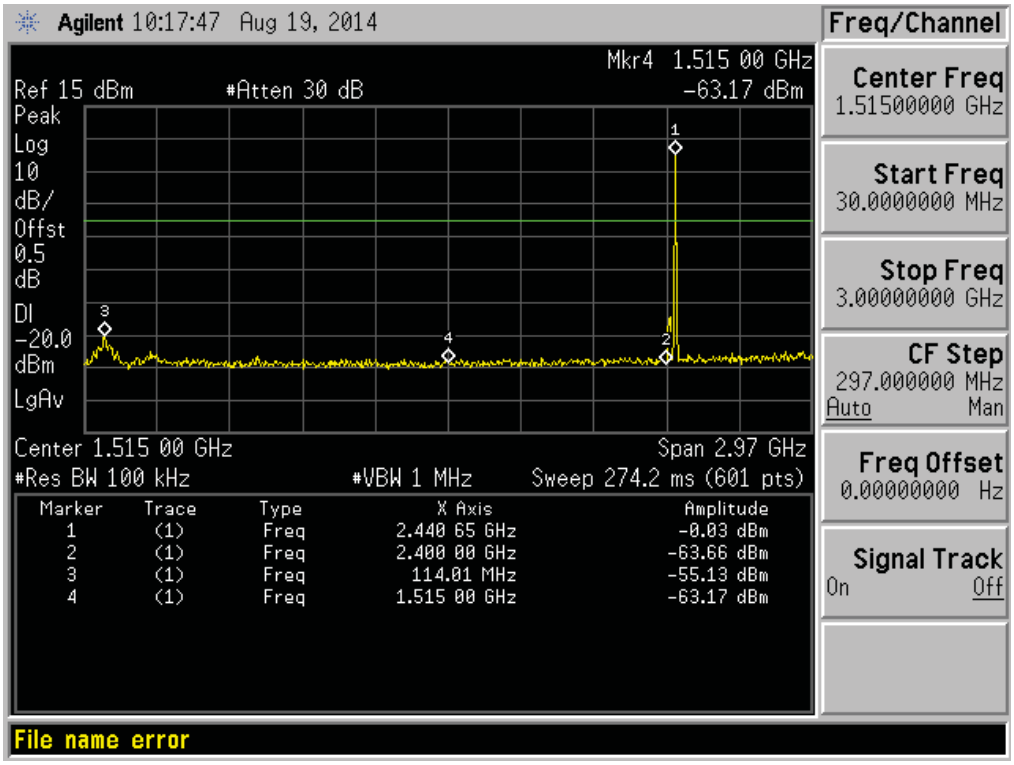

GFSK LOW CHANNEL , SPURIOUS 30MHz~3GHz



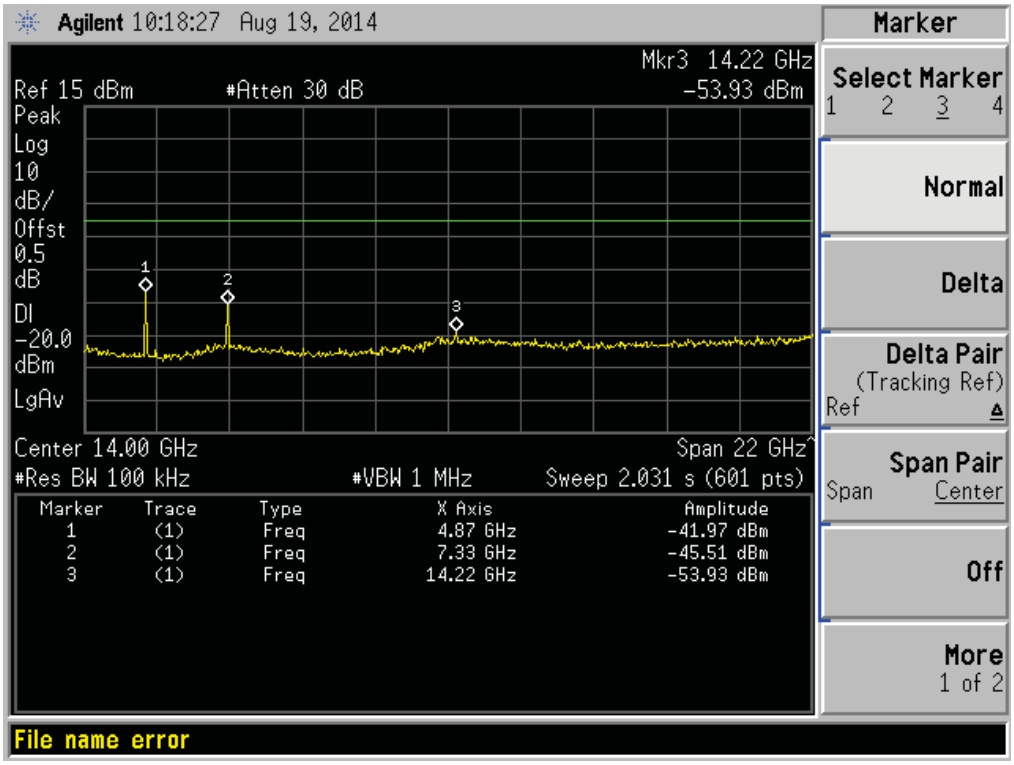
## GFSK LOW CHANNEL , SPURIOUS 3GHz~25GHz



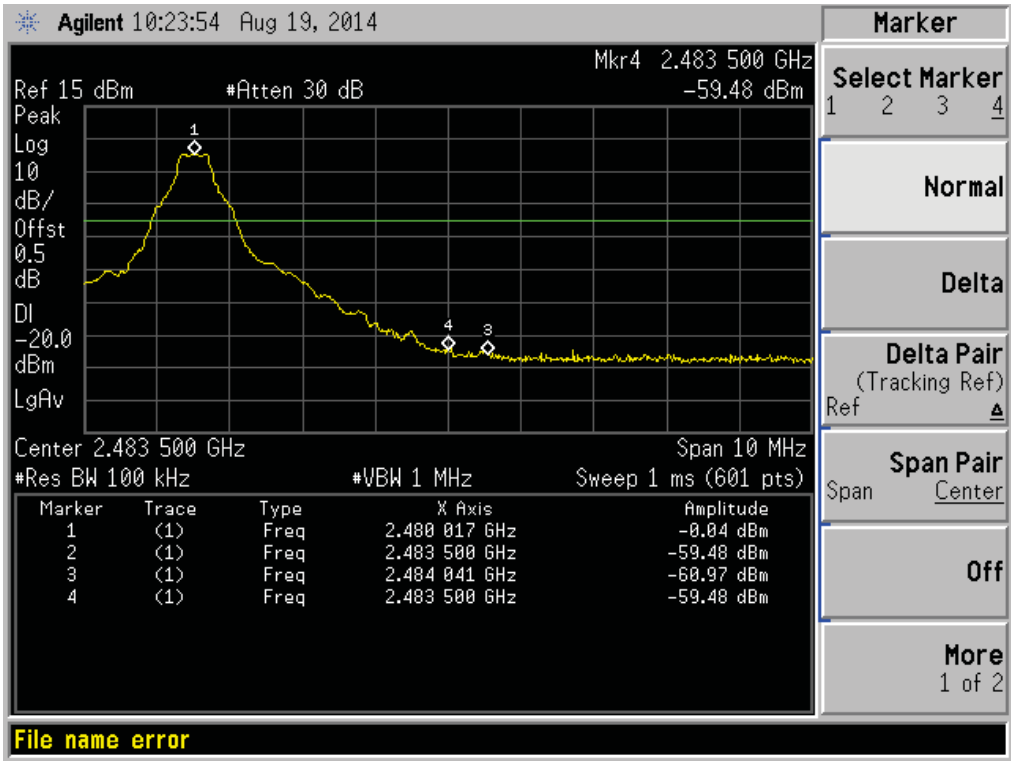

## GFSK MID CHANNEL , SPURIOUS 30MHz~3GHz



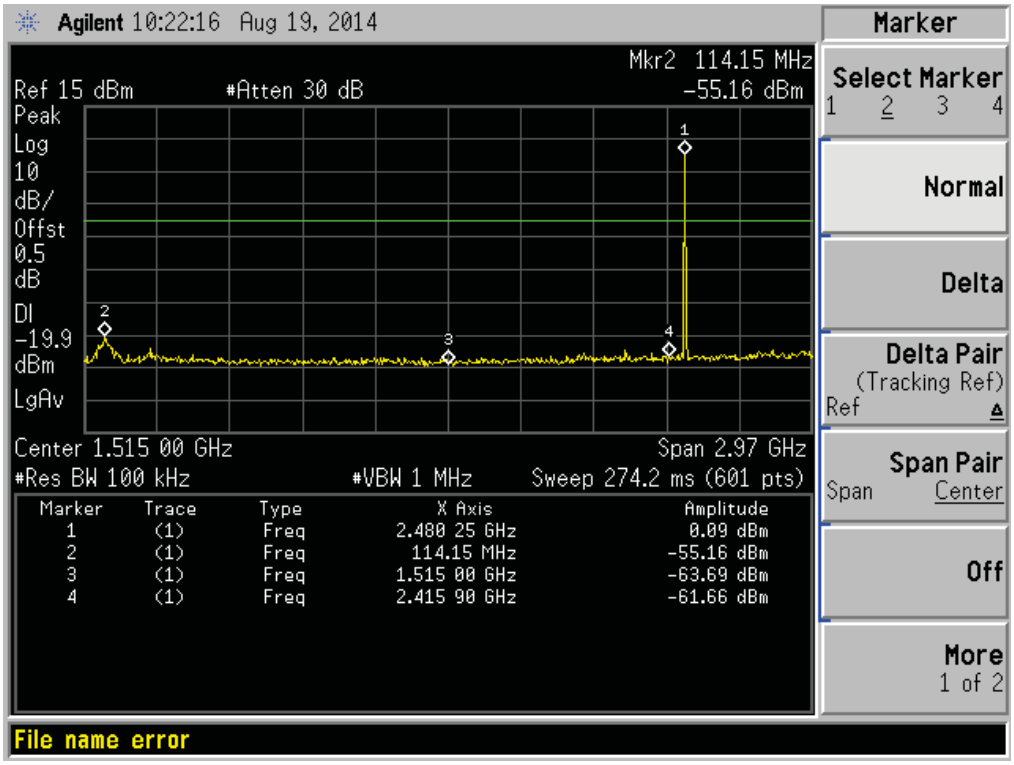
## GFSK MID CHANNEL , SPURIOUS 3GHz~25GHz



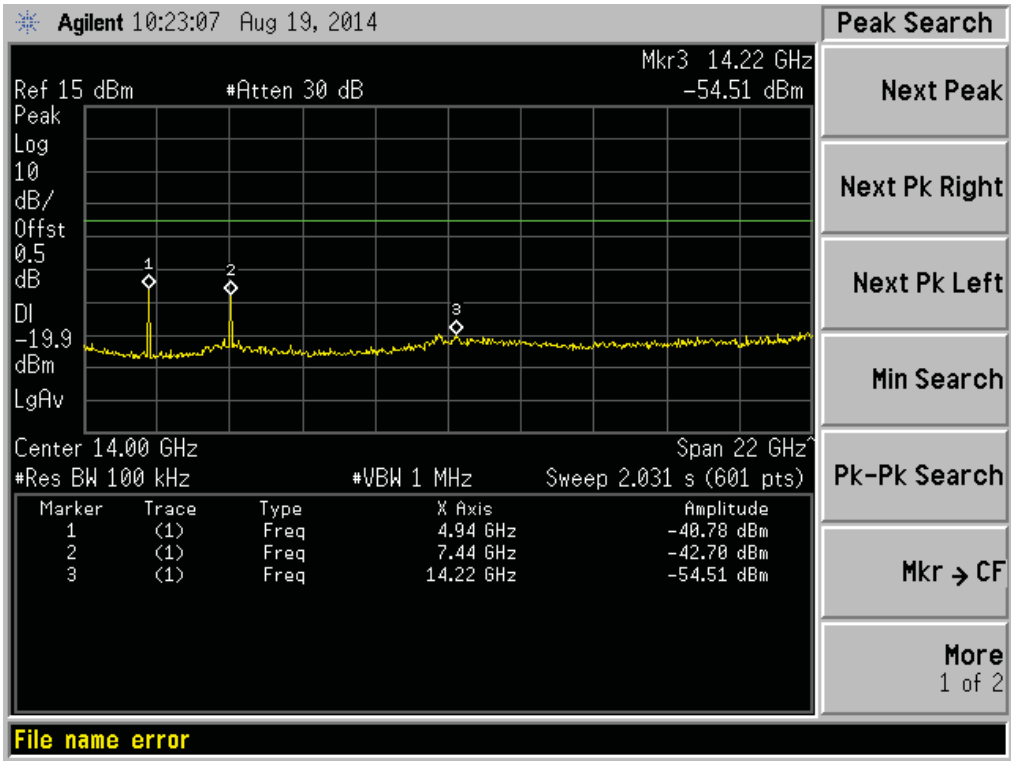

## GFSK HIGH CHANNEL , BANDEDGE



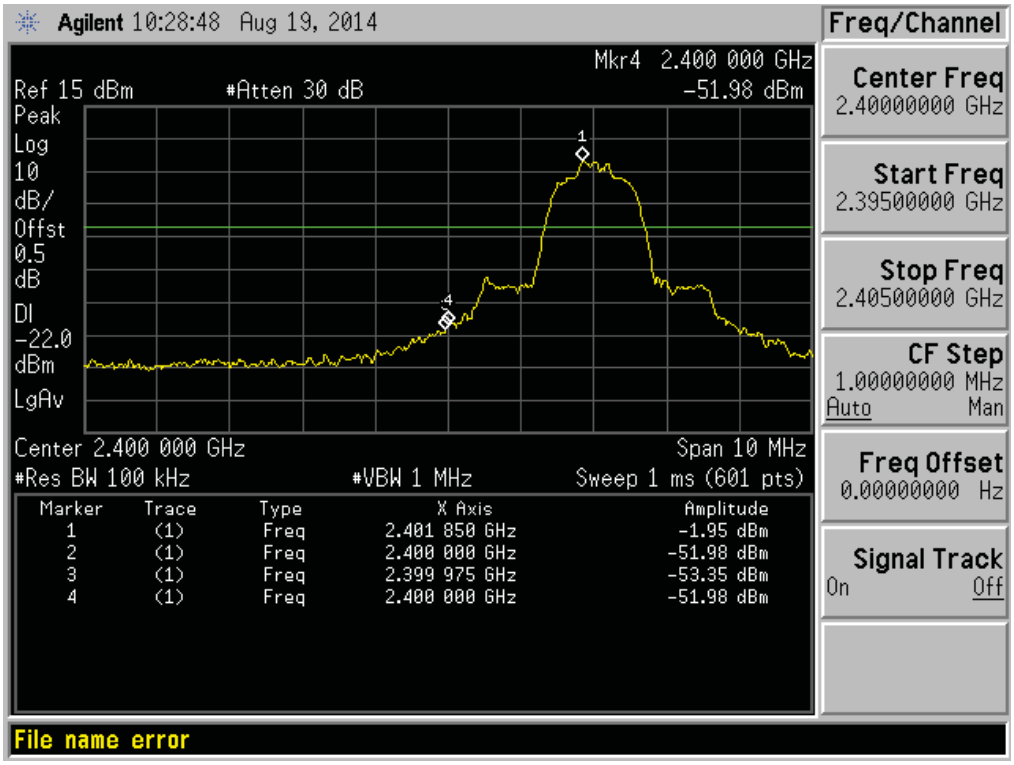
## GFSK HIGH CHANNEL , SPURIOUS 30MHz~3GHz



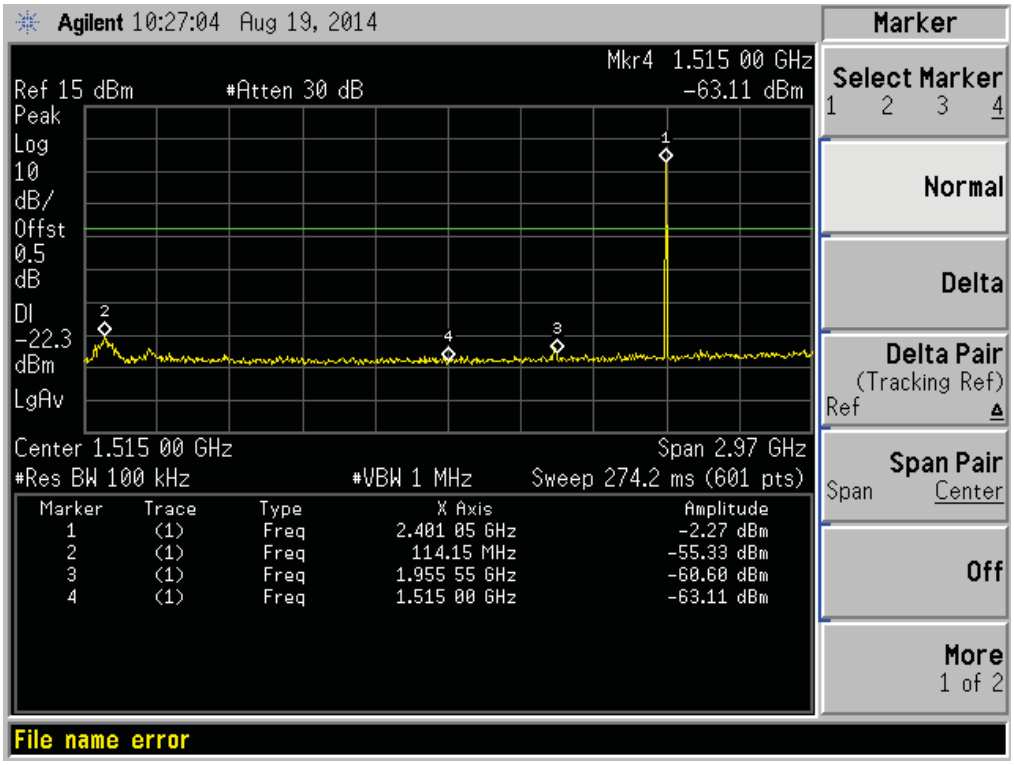

## GFSK HIGH CHANNEL , SPURIOUS 3GHz~25GHz



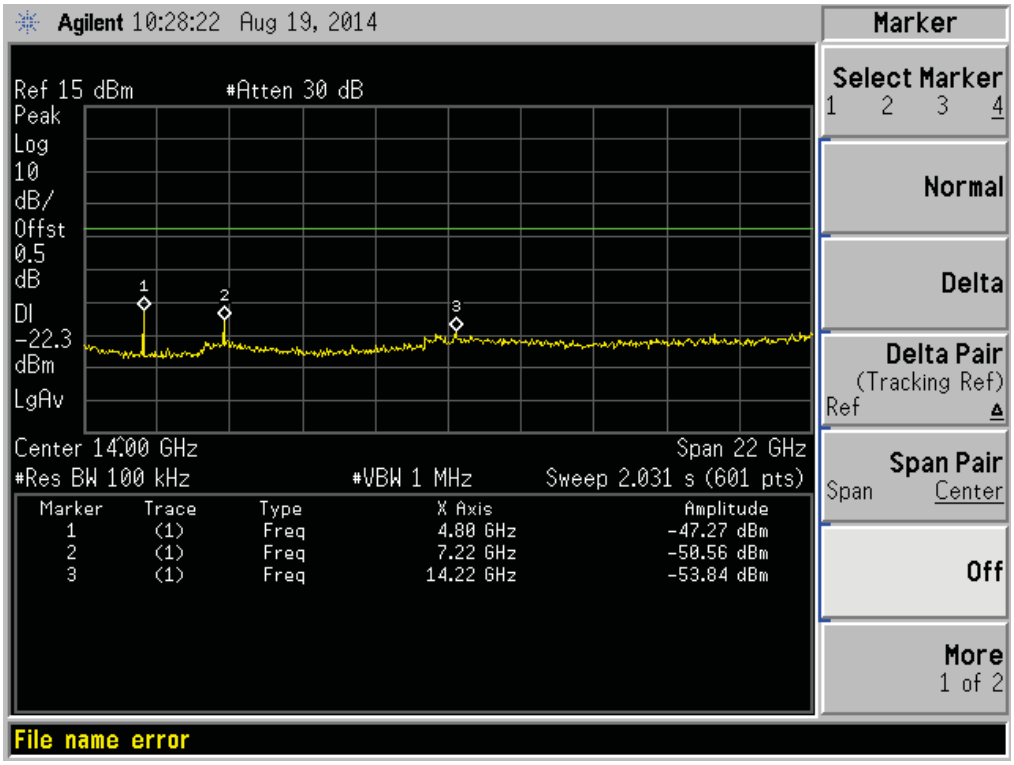
## Π/4-DQPSK LOW CHANNEL , BANDEDGE



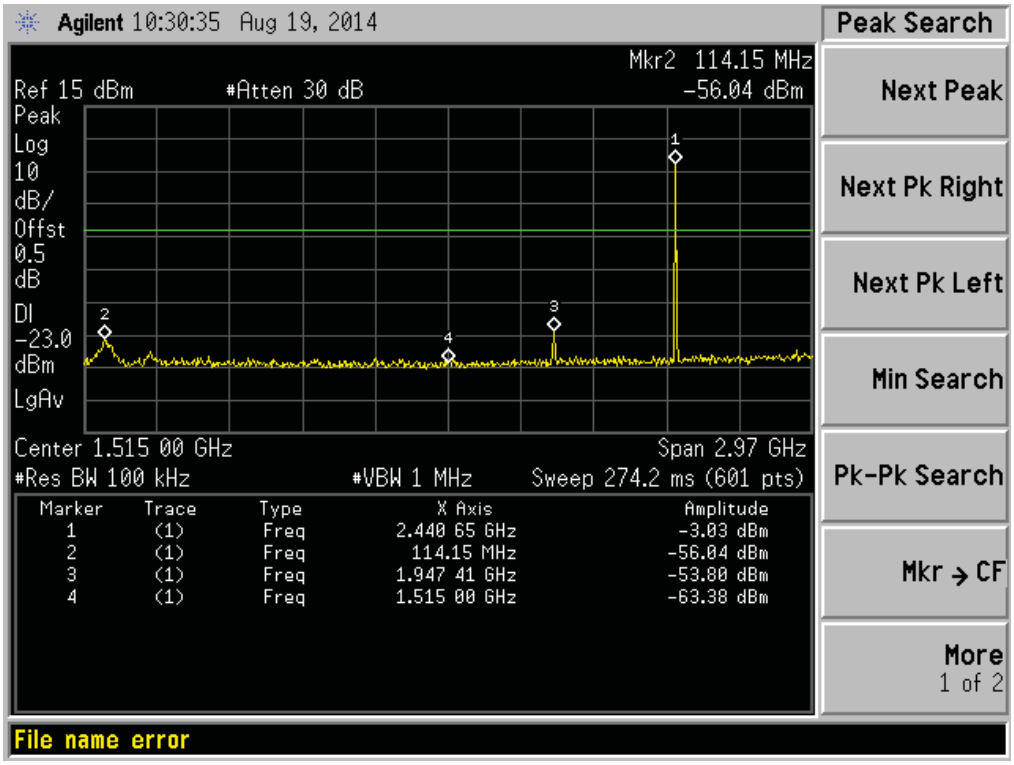

## Π/4-DQPSK LOW CHANNEL , SPURIOUS 30MHz~3GHz



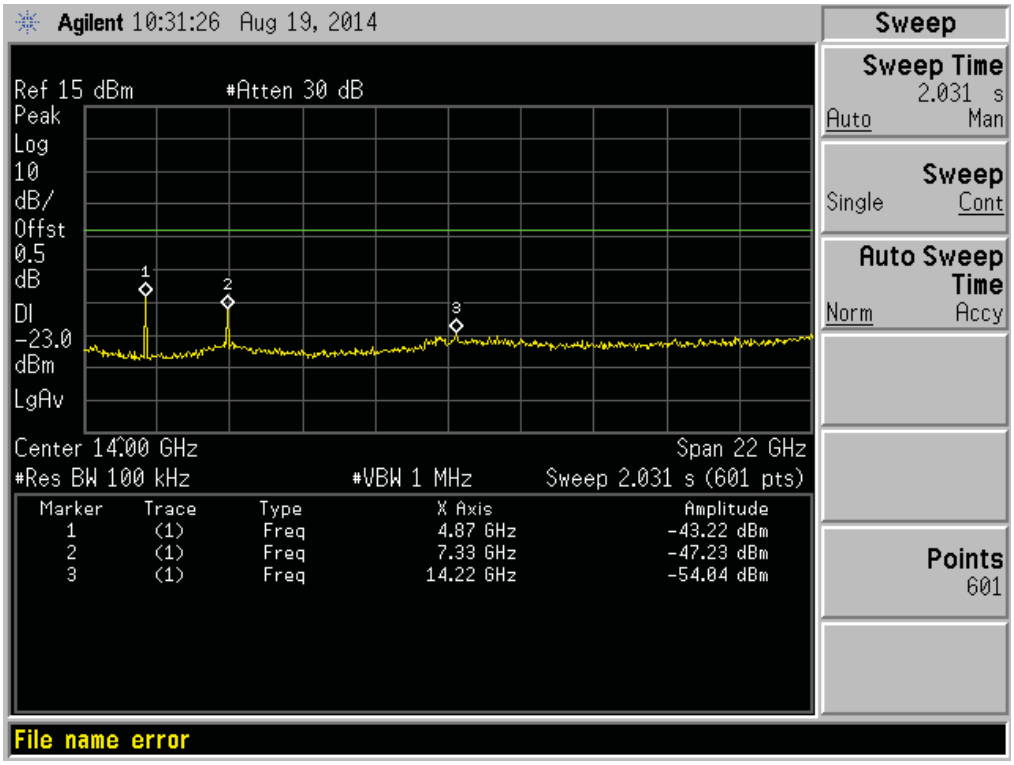
## Π/4-DQPSK LOW CHANNEL , SPURIOUS 3GHz~25GHz



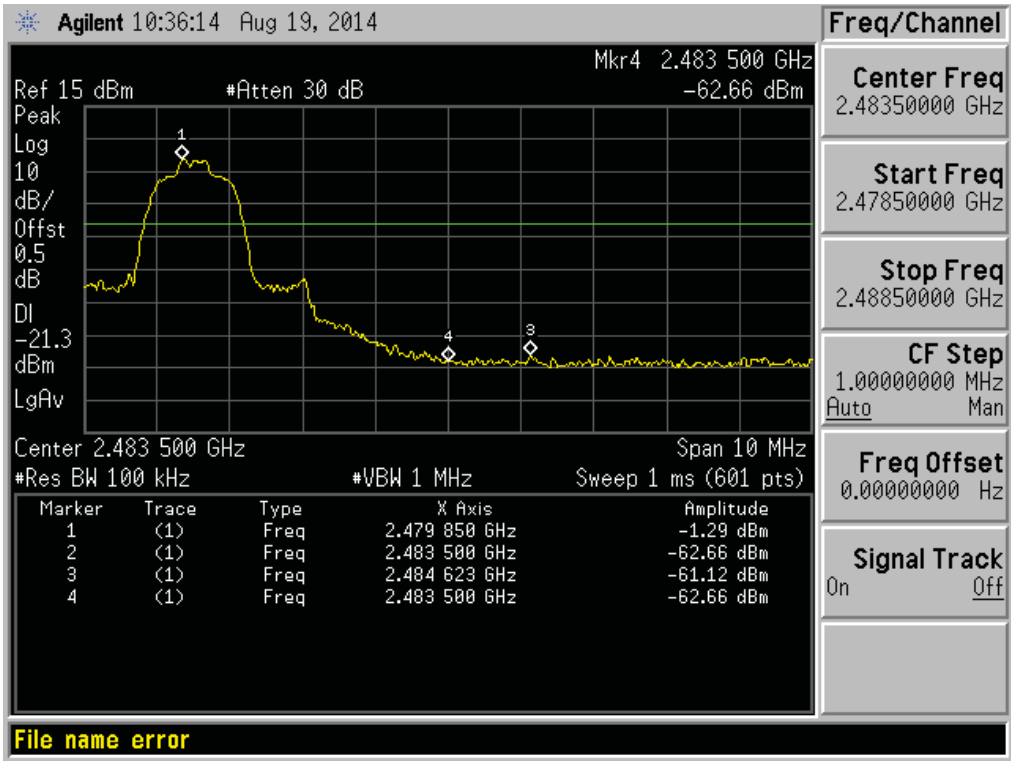

## Π/4-DQPSK MID CHANNEL , SPURIOUS 30MHz~3GHz



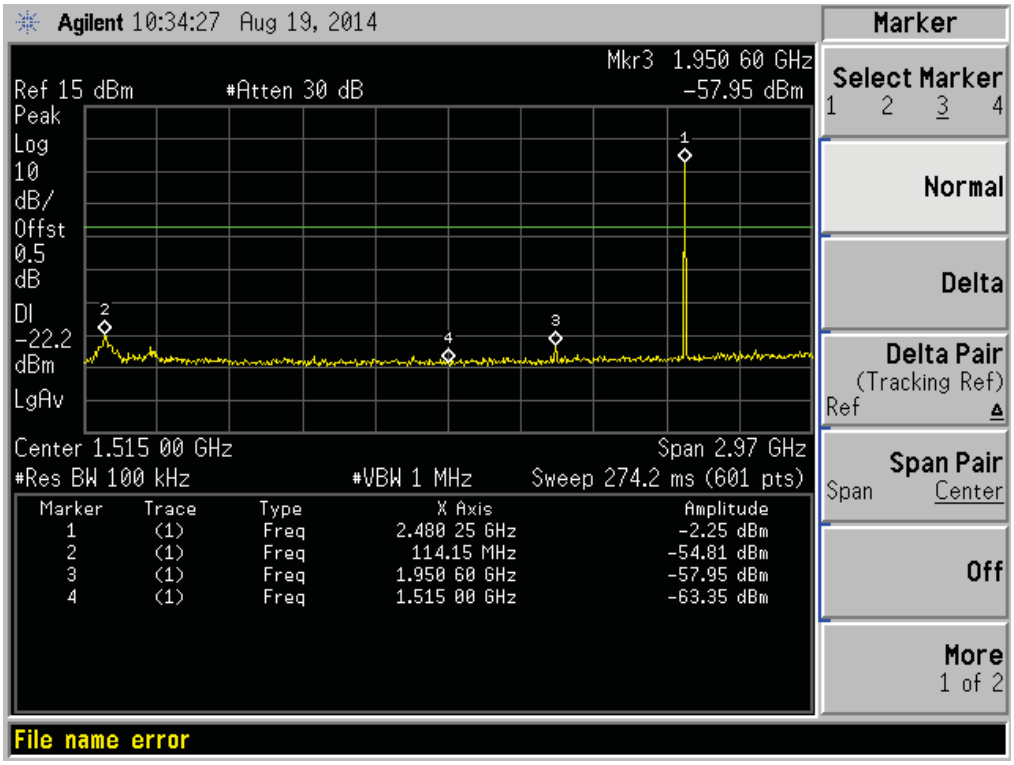
## Π/4-DQPSK MID CHANNEL , SPURIOUS 3GHz~25GHz



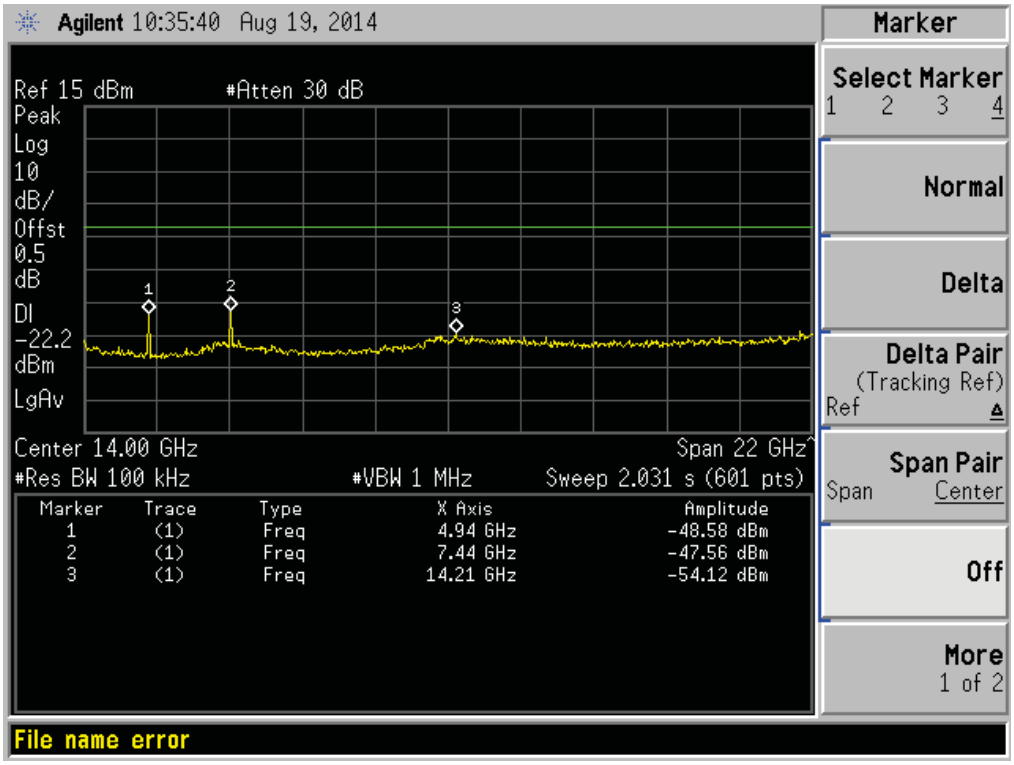

## Π/4-DQPSK HIGH CHANNEL , BANDEDGE



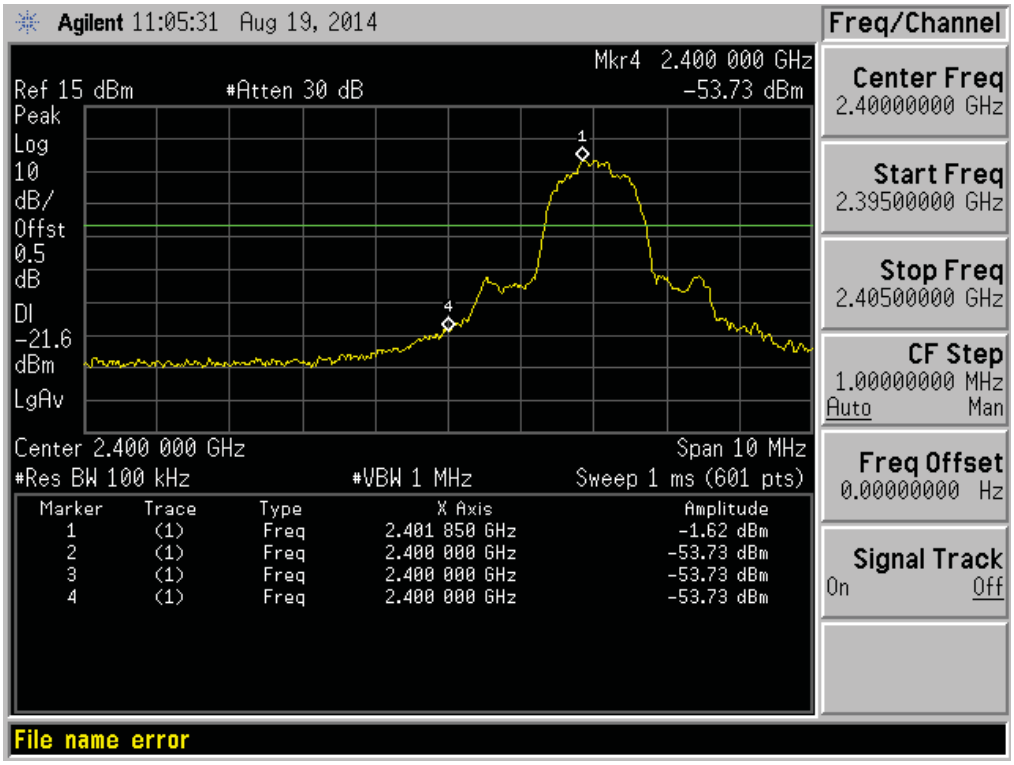
## Π/4-DQPSK HIGH CHANNEL , SPURIOUS 30MHz~3GHz



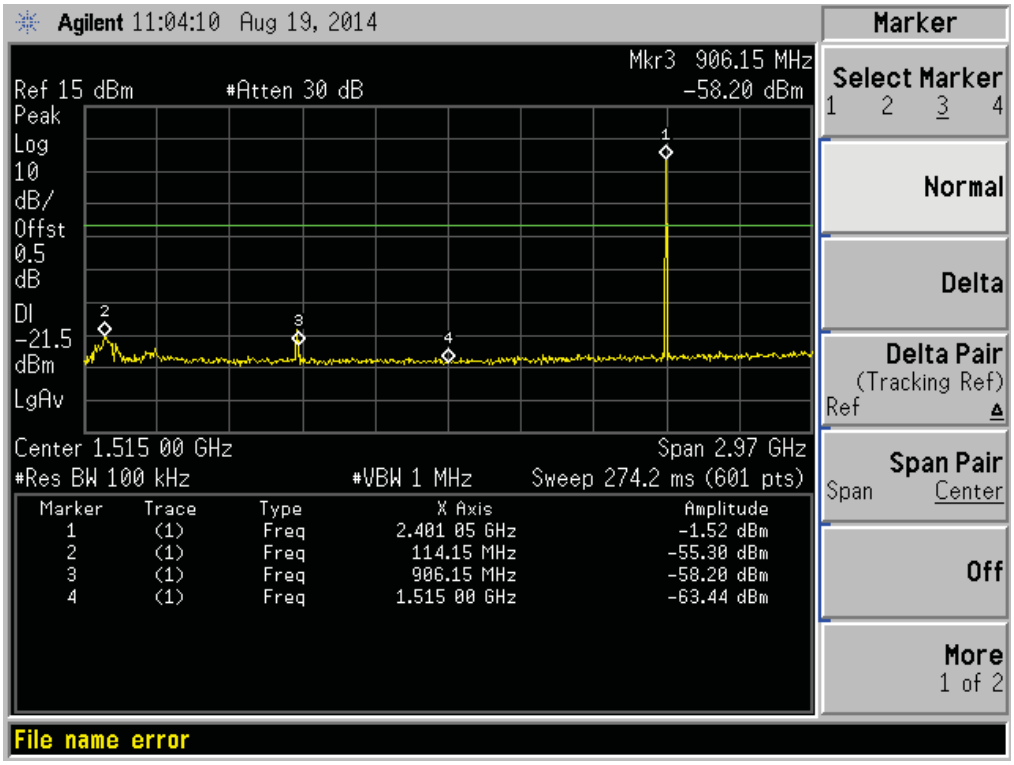

## Π/4-DQPSK HIGH CHANNEL , SPURIOUS 3GHz~25GHz



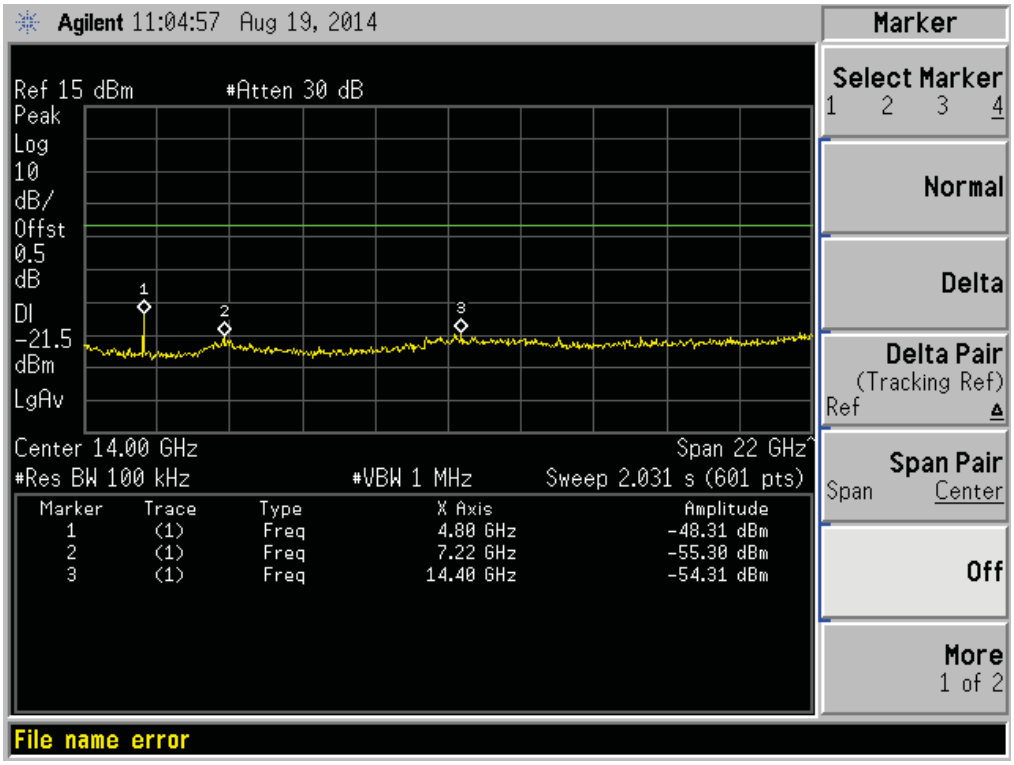
## 8-DPSK LOW CHANNEL , BANDEDGE



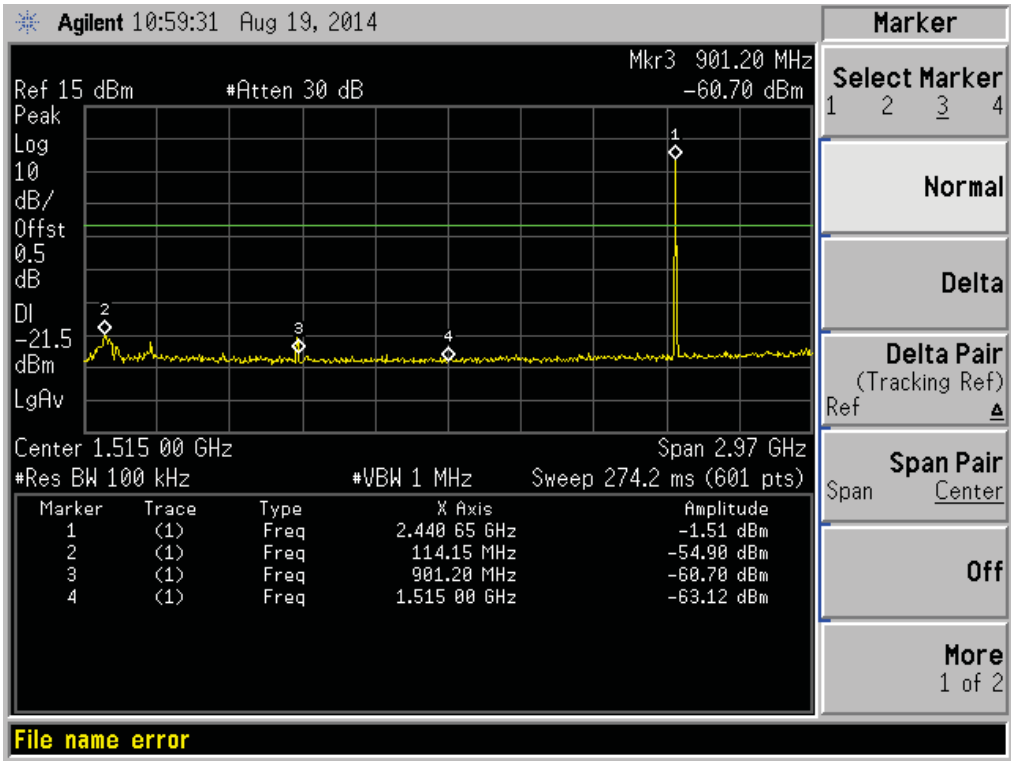

## 8-DPSK LOW CHANNEL , SPURIOUS 30MHz~3GHz



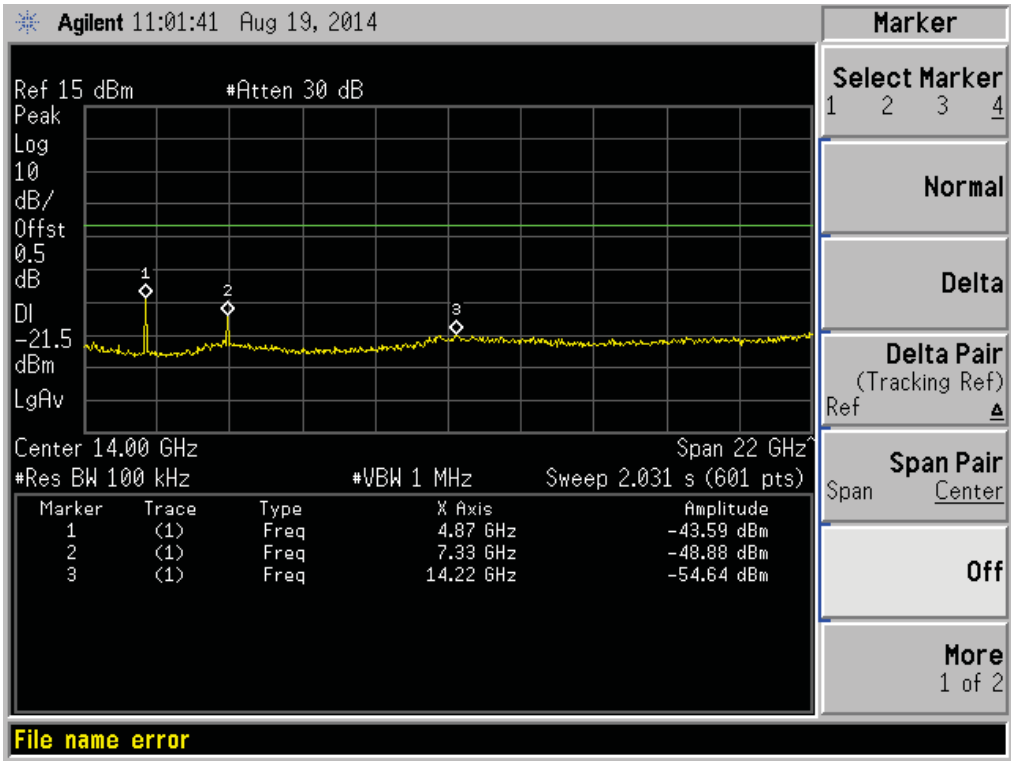
## 8-DPSK LOW CHANNEL , SPURIOUS 3GHz~25GHz



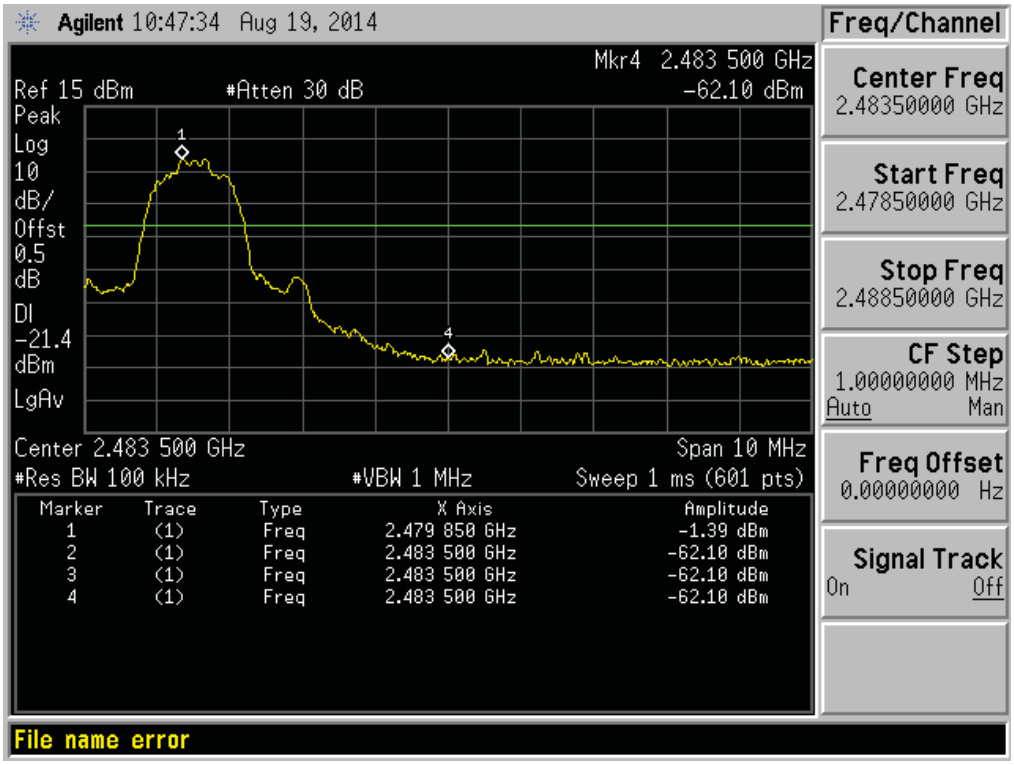

## 8-DPSK MID CHANNEL , SPURIOUS 30MHz~3GHz



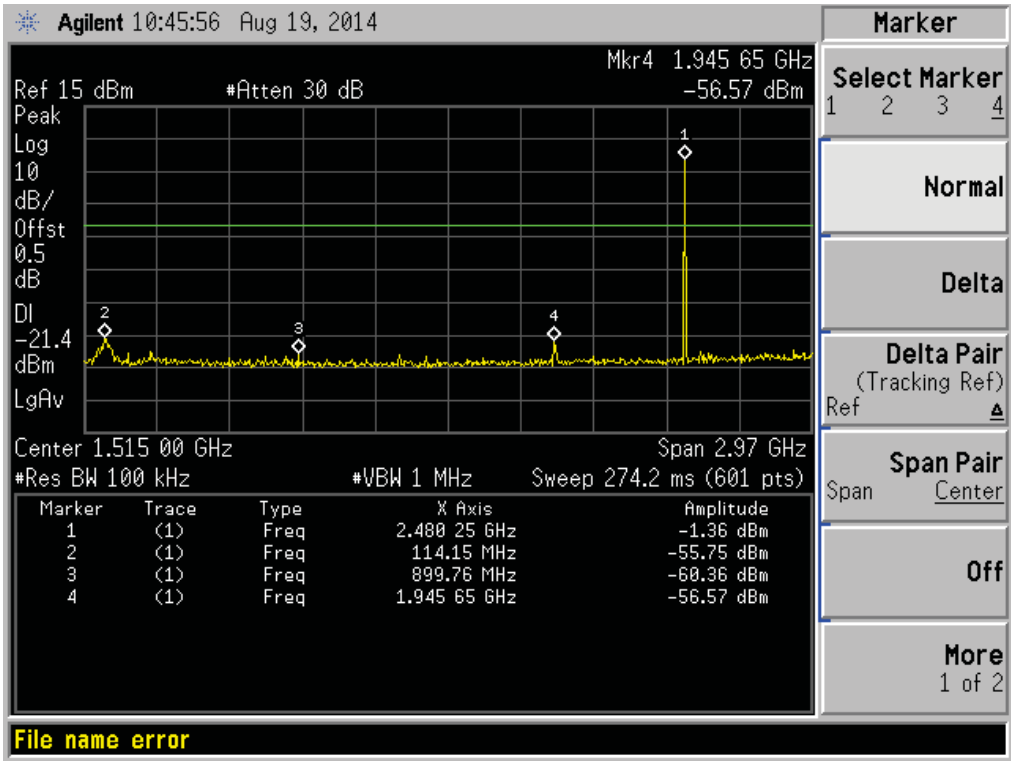
## 8-DPSK MID CHANNEL , SPURIOUS 3GHz~25GHz



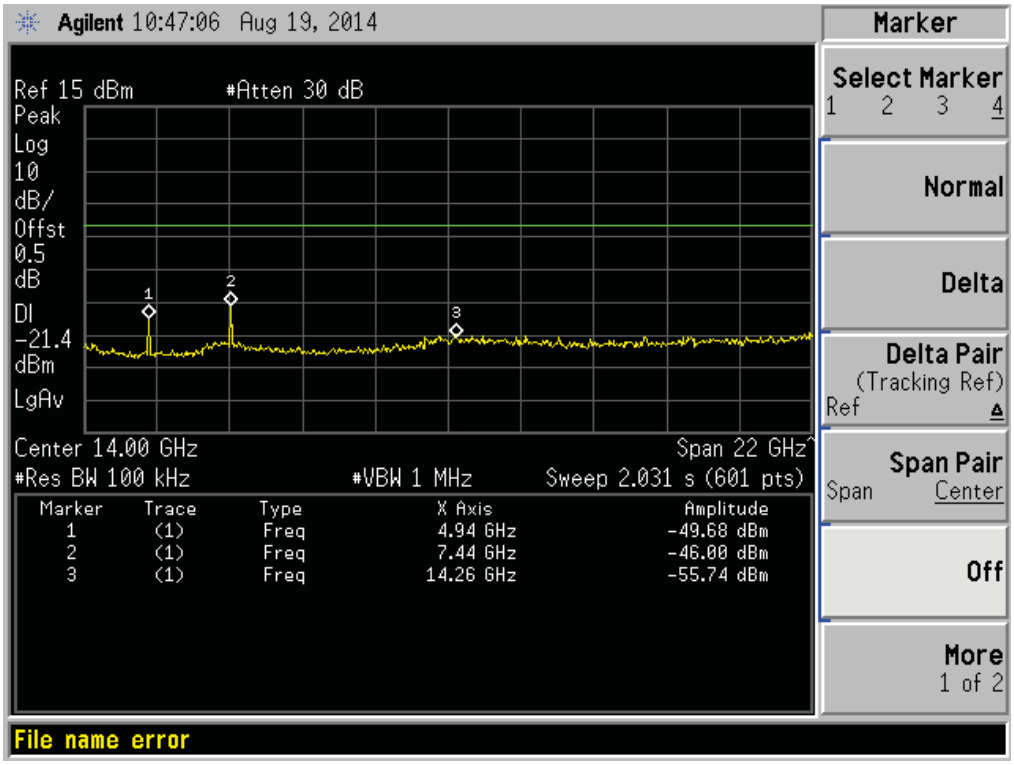

## 8-DPSK HIGH CHANNEL , BANDEDGE



## 8-DPSK HIGH CHANNEL , SPURIOUS 30MHz~3GHz




## 8-DPSK HIGH CHANNEL , SPURIOUS 3GHz~25GHz



## A.7 Radiated Emission

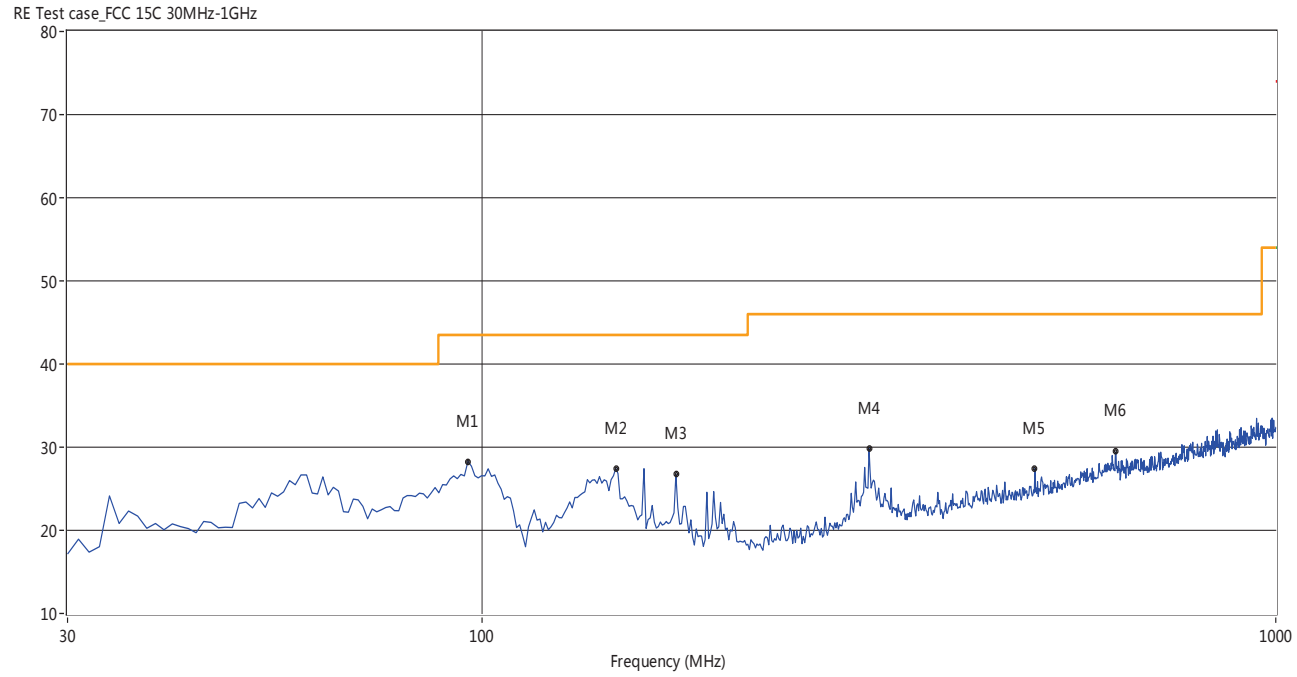
Note 1: The symbol of "--" in the table which means not application.

Note 2: For the test data above 1GHz，According the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

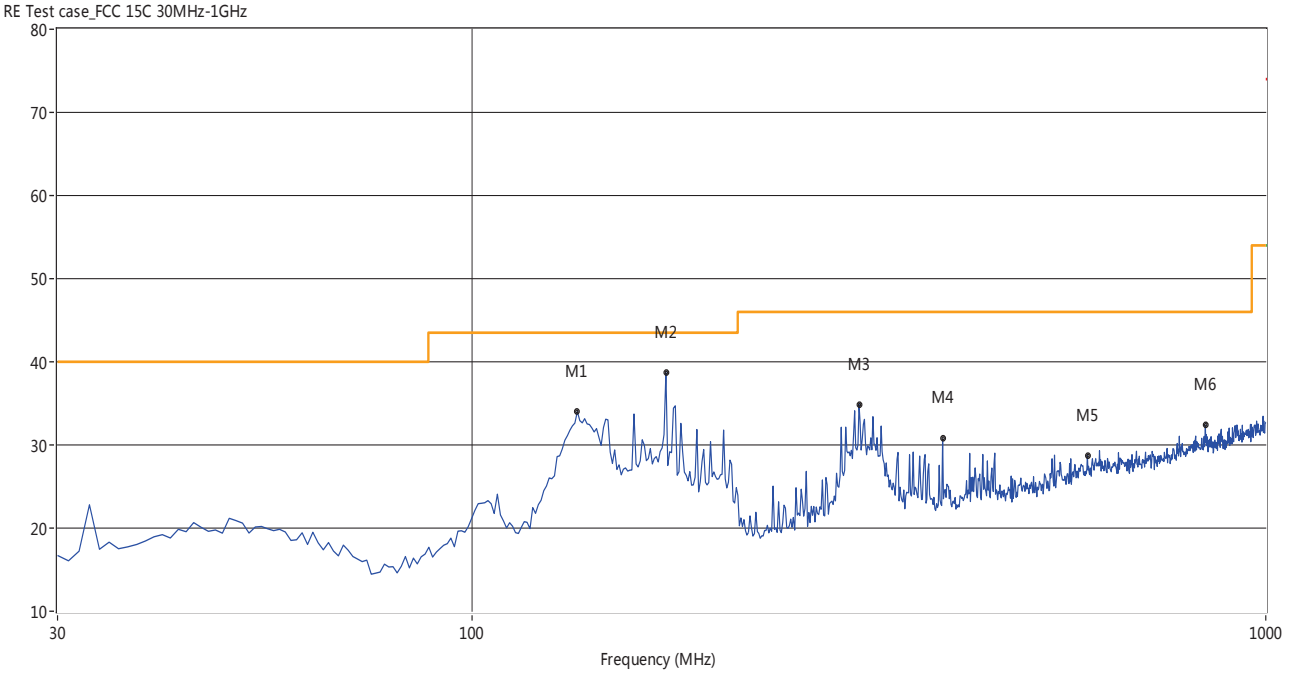
Note 4: All configurations have been tested, only the worst configuration (GFSK Low Channel) shown here.

30MHz to 1GHz, ANT V




| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 95.89 | 28.29 | | | -20.33 | -- | 43.5 | -- | 15.21 | 127.50 | 100 | Vertical | PASS |
| 147.25 | 27.45 | | | -23.07 | -- | 43.5 | -- | 16.05 | 328.30 | 100 | Vertical | PASS |
| 175.35 | 26.72 | | | -21.86 | -- | 43.5 | -- | 16.78 | 228.10 | 100 | Vertical | PASS |
| 307.14 | 29.86 | | | -17.18 | -- | 46.0 | -- | 16.14 | 0.80 | 100 | Vertical | PASS |
| 497.07 | 27.43 | | | -12.73 | -- | 46.0 | -- | 18.57 | 359.20 | 100 | Vertical | PASS |
| 628.86 | 29.44 | | | -9.77 | -- | 46.0 | -- | 16.56 | 359.60 | 100 | Vertical | PASS |

## 30MHz to 1GHz, ANT H

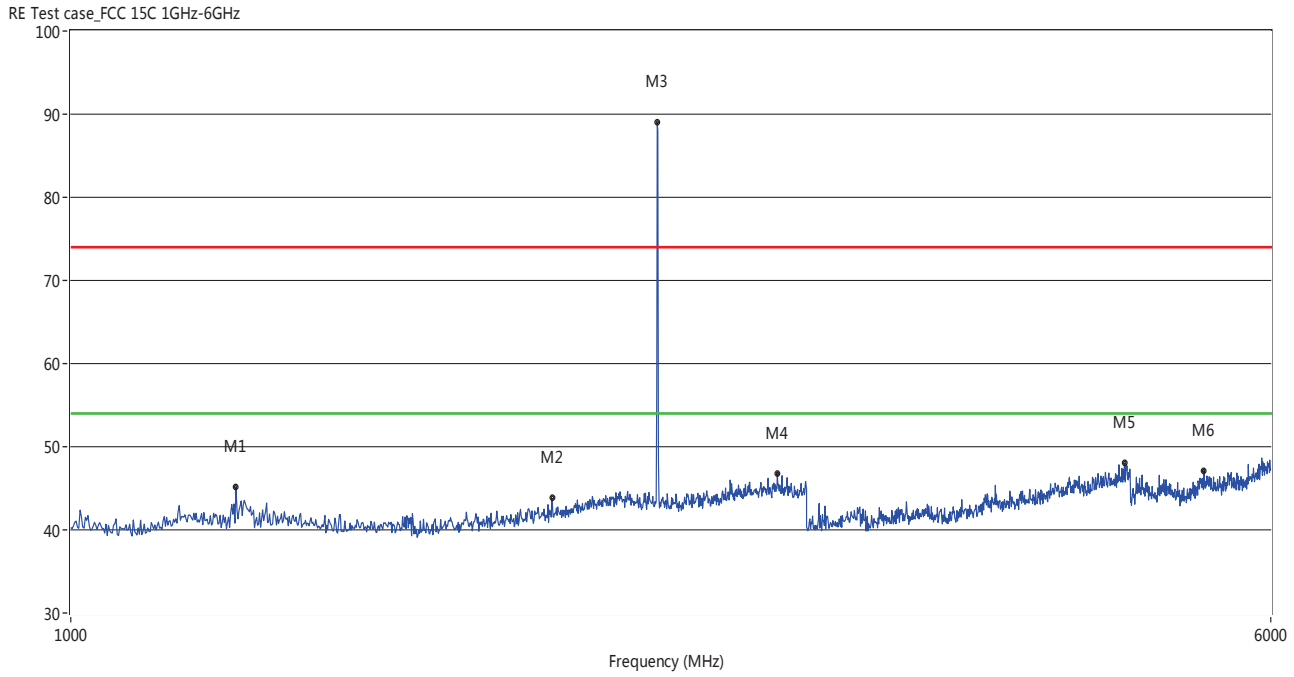



| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 135.62 | 34.01 | | | -22.96 | -- | 43.5 | -- | 9.49 | 29.90 | 100 | Horizontal | PASS |
| 175.35 | 38.69 | | | -21.86 | -- | 43.5 | -- | 4.81 | 359.70 | 100 | Horizontal | PASS |
| 307.14 | 34.88 | | | -17.18 | -- | 46.0 | -- | 11.12 | 25.10 | 100 | Horizontal | PASS |
| 391.45 | 30.73 | | | -14.98 | -- | 46.0 | -- | 15.27 | 150.90 | 100 | Horizontal | PASS |
| 595.91 | 28.78 | | | -10.31 | -- | 46.0 | -- | 17.22 | 39.90 | 100 | Horizontal | PASS |
| 839.14 | 32.39 | | | -6.24 | -- | 46.0 | -- | 13.61 | 70.30 | 100 | Horizontal | PASS |

Note: The marked spikes near 2400MHz with circle should be ignored because they are Fundamental signal.

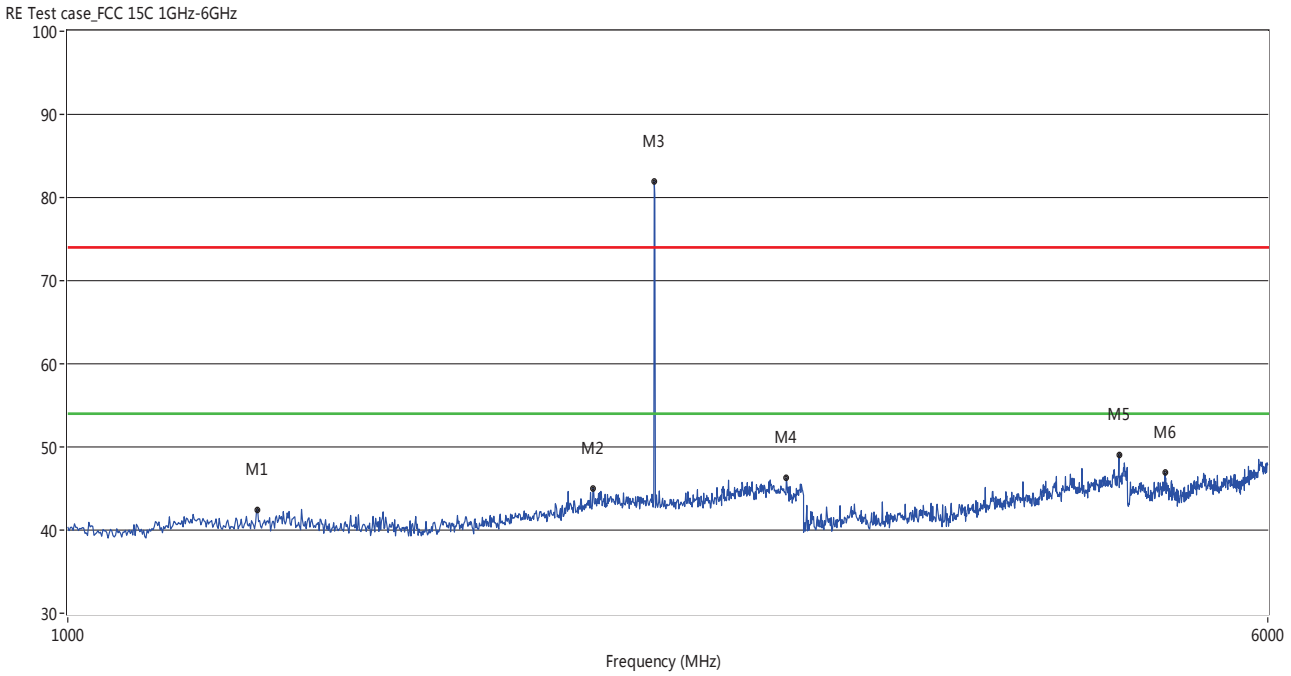
Test Data and Plots(1GHz ~ 10th Harmonic)

## GFSK LOW CHANNEL 1GHz to 6GHz, ANT V



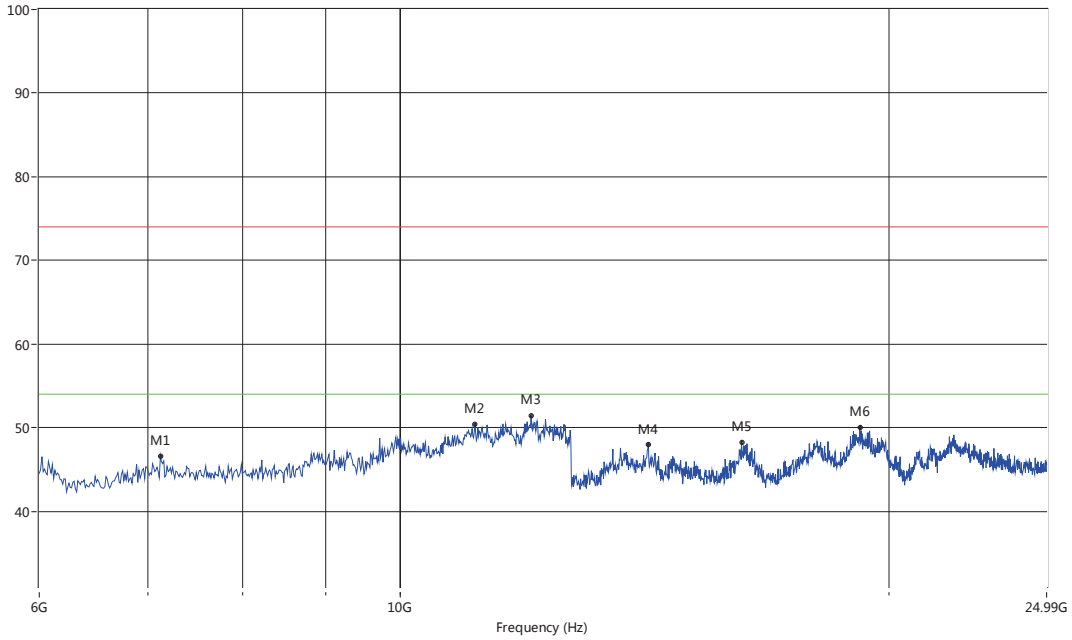

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1279.72 | 45.09 | | | -4.14 | 74.0 | -- | 54.0 | 8.91 | 4.20 | 100 | Vertical | PASS |
| 2050.95 | 43.80 | | | -2.21 | 74.0 | -- | 54.0 | 10.20 | 226.00 | 100 | Vertical | PASS |
| 2400.60 | 89.01 | | | -0.67 | 74.0 | -- | 54.0 | -35.01 | 287.50 | 100 | Vertical | N/A |
| 2872.13 | 46.75 | | | 2.13 | 74.0 | -- | 54.0 | 7.25 | 150.80 | 100 | Vertical | PASS |
| 4822.18 | 47.99 | | | 12.59 | 74.0 | -- | 54.0 | 6.01 | -0.00 | 100 | Vertical | PASS |
| 5430.57 | 47.13 | | | 13.23 | 74.0 | -- | 54.0 | 6.87 | 360.30 | 100 | Vertical | PASS |

## GFSK LOW CHANNEL 1GHz to 6GHz, ANT H



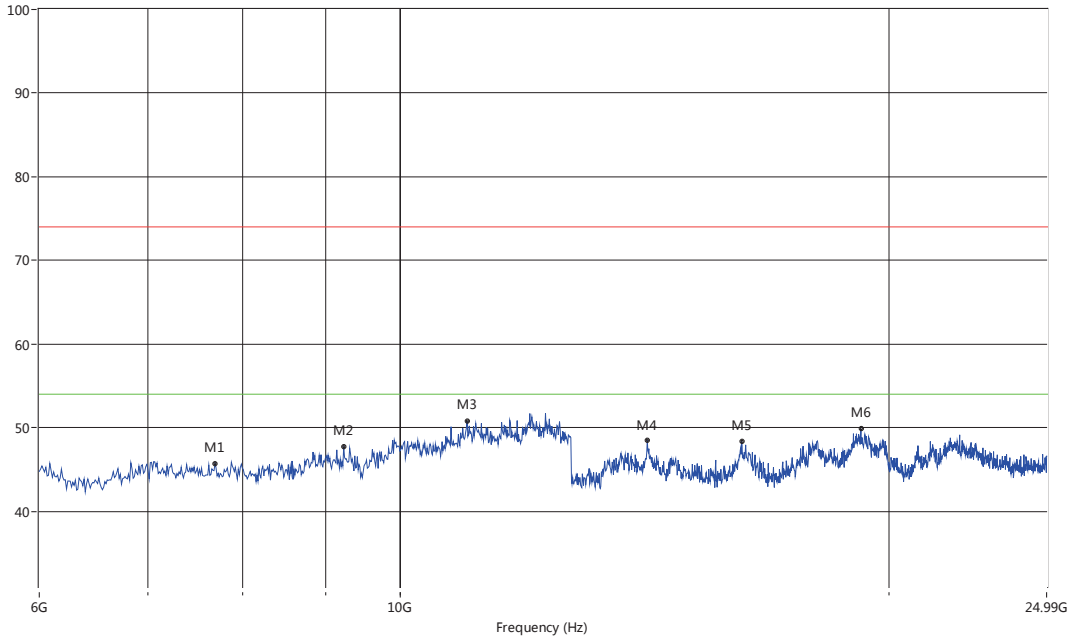

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1327.67 | 42.48 | | | -4.12 | 74.0 | -- | 54.0 | 11.52 | 54.80 | 100 | Horizontal | PASS |
| 2190.81 | 45.07 | | | -0.73 | 74.0 | -- | 54.0 | 8.93 | 295.80 | 100 | Horizontal | PASS |
| 2400.60 | 81.99 | | | -0.67 | 74.0 | -- | 54.0 | -27.99 | 116.60 | 100 | Horizontal | N/A |
| 2924.08 | 46.26 | | | 2.38 | 74.0 | -- | 54.0 | 7.74 | 47.70 | 100 | Horizontal | PASS |
| 4804.20 | 49.11 | | | 12.35 | 74.0 | -- | 54.0 | 4.89 | 105.70 | 100 | Horizontal | PASS |
| 5145.85 | 46.91 | | | 13.31 | 74.0 | -- | 54.0 | 7.09 | 223.80 | 100 | Horizontal | PASS |

## GFSK LOW CHANNEL 6GHz to 25GHz, ANT V



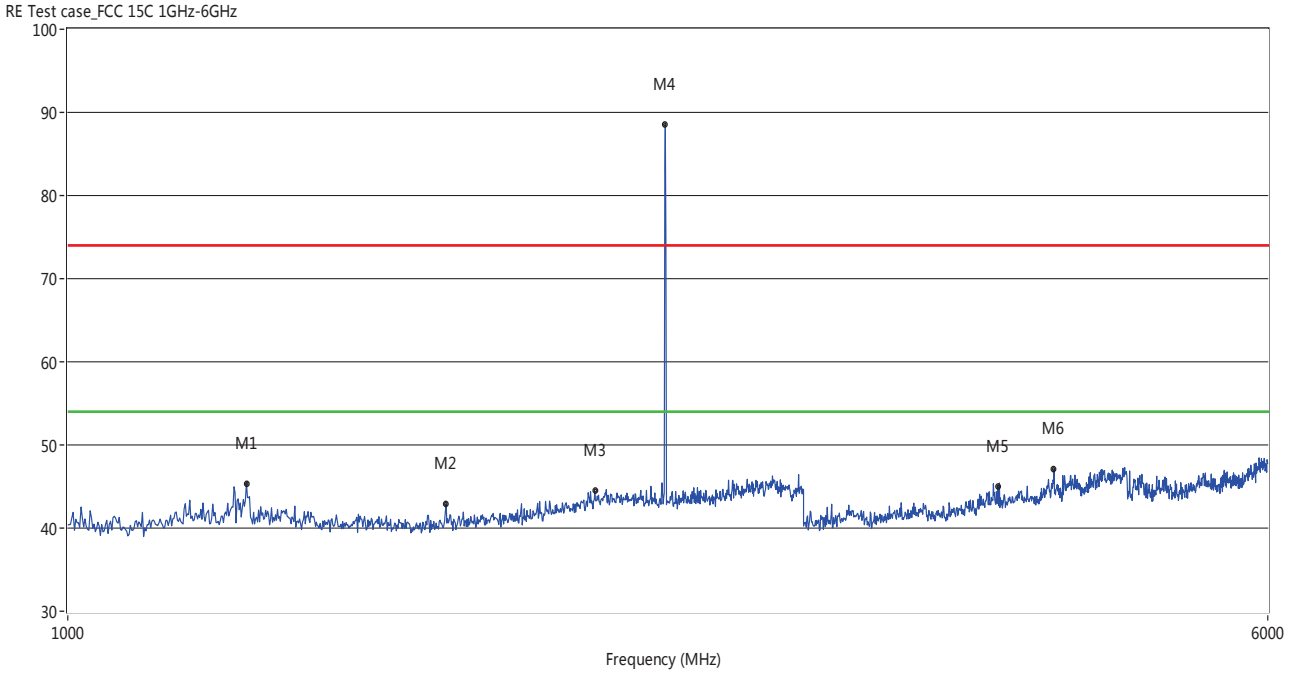

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7123.13 | 46.64 | -- | -- | 74.0 | -- | 54.0 | 27.36 | 106 | 100 | Vertical | PASS |
| 11121.46 | 50.43 | -- | -- | 74.0 | -- | 54.0 | 23.57 | 88 | 100 | Vertical | PASS |
| 12042.43 | 51.44 | -- | -- | 74.0 | -- | 54.0 | 22.56 | 35 | 100 | Vertical | PASS |
| 14216.31 | 48.03 | -- | -- | 74.0 | -- | 54.0 | 25.97 | 267 | 100 | Vertical | PASS |
| 16223.38 | 48.26 | -- | -- | 74.0 | -- | 54.0 | 25.74 | 206 | 100 | Vertical | PASS |
| 19179.70 | 50.00 | -- | -- | 74.0 | -- | 54.0 | 24.00 | 126 | 100 | Vertical | PASS |

## GFSK LOW CHANNEL 6GHz to 25GHz, ANT H



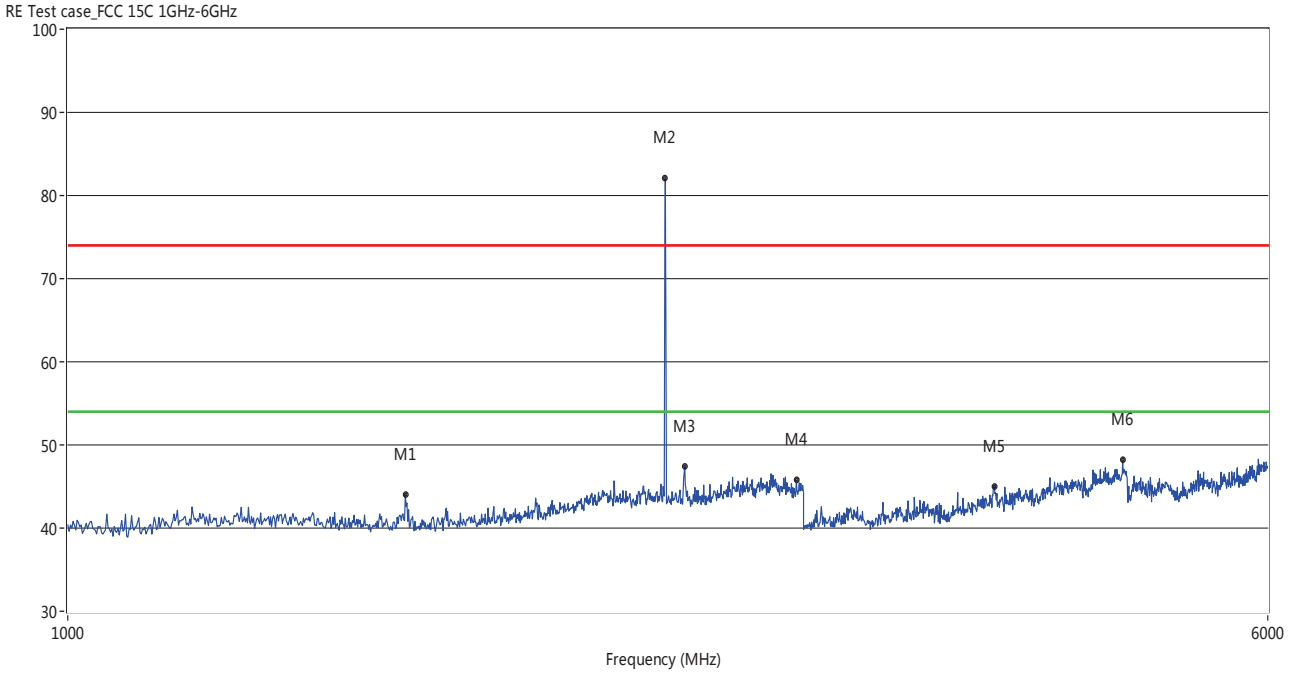

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7695.92 | 45.72 | -- | -- | 74.0 | -- | 54.0 | 28.28 | 114 | 100 | Horizontal | PASS |
| 9234.61 | 47.75 | -- | -- | 74.0 | -- | 54.0 | 26.25 | 117 | 100 | Horizontal | PASS |
| 10997.92 | 50.80 | -- | -- | 74.0 | -- | 54.0 | 23.20 | 206 | 100 | Horizontal | PASS |
| 14195.51 | 48.52 | -- | -- | 74.0 | -- | 54.0 | 25.48 | 43 | 100 | Horizontal | PASS |
| 16223.38 | 48.41 | -- | -- | 74.0 | -- | 54.0 | 25.59 | 303 | 100 | Horizontal | PASS |
| 19209.65 | 49.87 | -- | -- | 74.0 | -- | 54.0 | 24.13 | 81 | 100 | Horizontal | PASS |

## GFSK MID CHANNEL 1GHz to 6GHz, ANT V



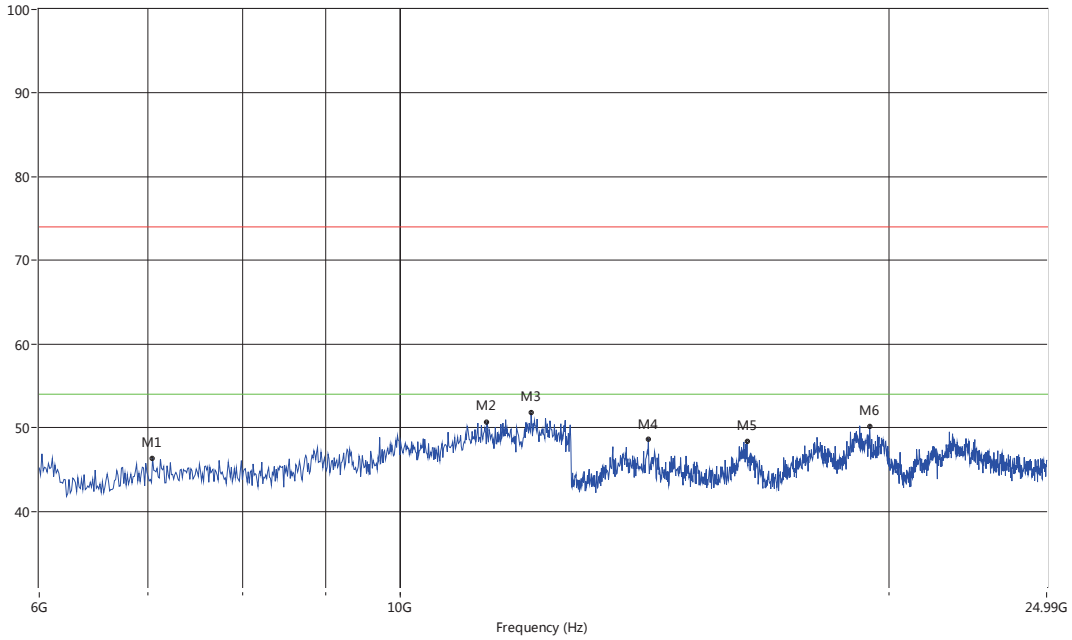

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1305.69 | 45.40 | | | -4.09 | 74.0 | -- | 54.0 | 8.60 | 4.20 | 100 | Vertical | PASS |
| 1759.24 | 42.91 | | | -3.57 | 74.0 | -- | 54.0 | 11.09 | 150.50 | 100 | Vertical | PASS |
| 2196.80 | 44.48 | | | -0.78 | 74.0 | -- | 54.0 | 9.52 | 20.30 | 100 | Vertical | PASS |
| 2440.56 | 88.63 | | | -0.54 | 74.0 | -- | 54.0 | -34.63 | 301.00 | 100 | Vertical | N/A |
| 4009.99 | 45.06 | | | 9.96 | 74.0 | -- | 54.0 | 8.94 | 355.90 | 100 | Vertical | PASS |
| 4360.64 | 47.06 | | | 11.09 | 74.0 | -- | 54.0 | 6.94 | 306.00 | 100 | Vertical | PASS |

## GFSK MID CHANNEL 1GHz to 6GHz, ANT H



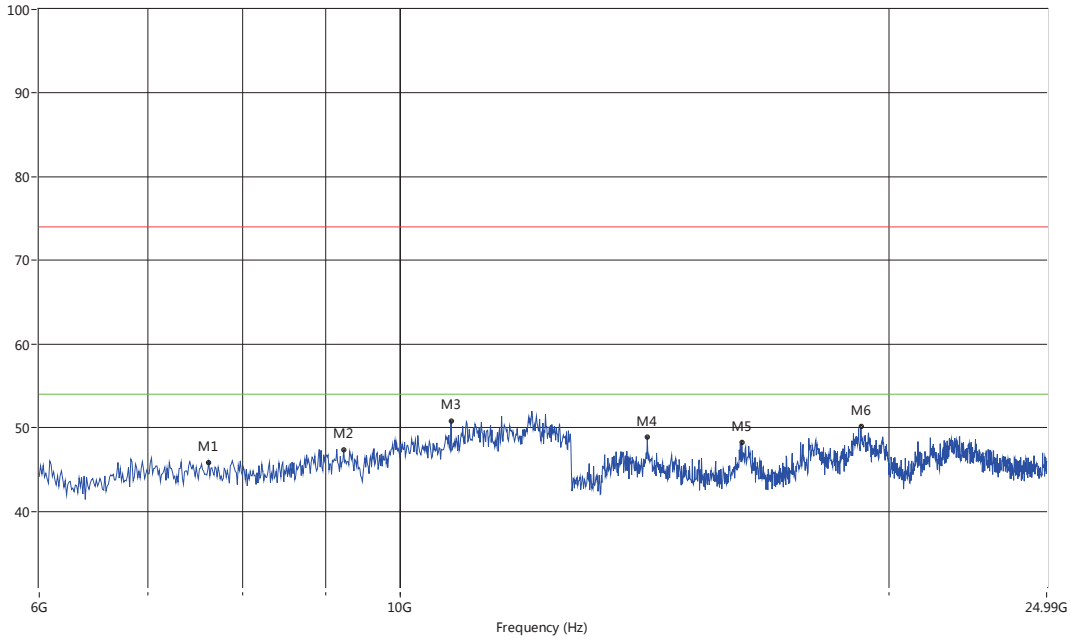

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1655.34 | 44.08 | | | -4.33 | 74.0 | -- | 54.0 | 9.92 | 67.90 | 100 | Horizontal | PASS |
| 2440.56 | 82.17 | | | -0.54 | 74.0 | -- | 54.0 | -28.17 | 7.60 | 100 | Horizontal | N/A |
| 2512.49 | 47.41 | | | -0.41 | 74.0 | -- | 54.0 | 6.59 | 67.90 | 100 | Horizontal | PASS |
| 2968.03 | 45.76 | | | 2.10 | 74.0 | -- | 54.0 | 8.24 | 67.90 | 100 | Horizontal | PASS |
| 3989.01 | 45.00 | | | 10.17 | 74.0 | -- | 54.0 | 9.00 | 126.00 | 100 | Horizontal | PASS |
| 4831.17 | 48.19 | | | 12.87 | 74.0 | -- | 54.0 | 5.81 | 179.70 | 100 | Horizontal | PASS |

## GFSK MID CHANNEL 6GHz to 25GHz, ANT V



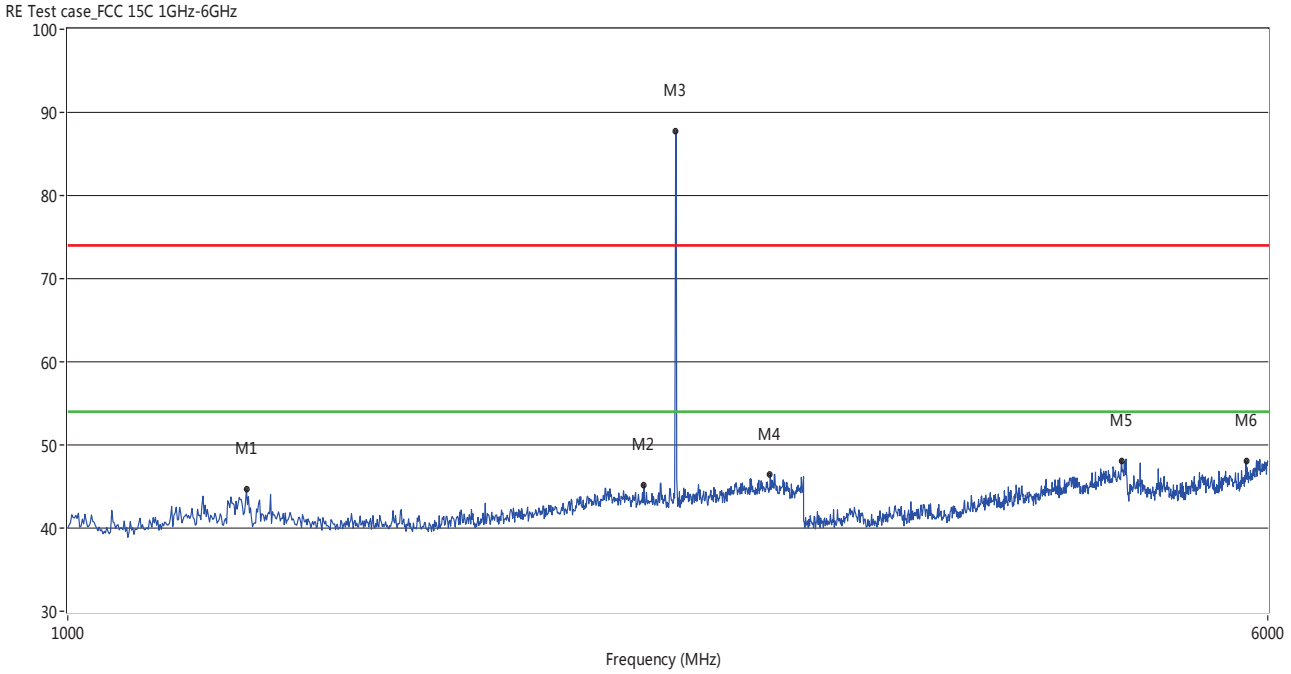

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7044.51 | 46.36 | -- | -- | 74.0 | -- | 54.0 | 27.64 | 116 | 100 | Vertical | PASS |
| 11312.40 | 50.63 | -- | -- | 74.0 | -- | 54.0 | 23.37 | 102 | 100 | Vertical | PASS |
| 12042.43 | 51.80 | -- | -- | 74.0 | -- | 54.0 | 22.20 | 60 | 100 | Vertical | PASS |
| 14216.31 | 48.65 | -- | -- | 74.0 | -- | 54.0 | 25.35 | 215 | 100 | Vertical | PASS |
| 16348.17 | 48.31 | -- | -- | 74.0 | -- | 54.0 | 25.69 | 24 | 100 | Vertical | PASS |
| 19449.25 | 50.13 | -- | -- | 74.0 | -- | 54.0 | 23.87 | 279 | 100 | Vertical | PASS |

## GFSK MID CHANNEL 6GHz to 25GHz, ANT H



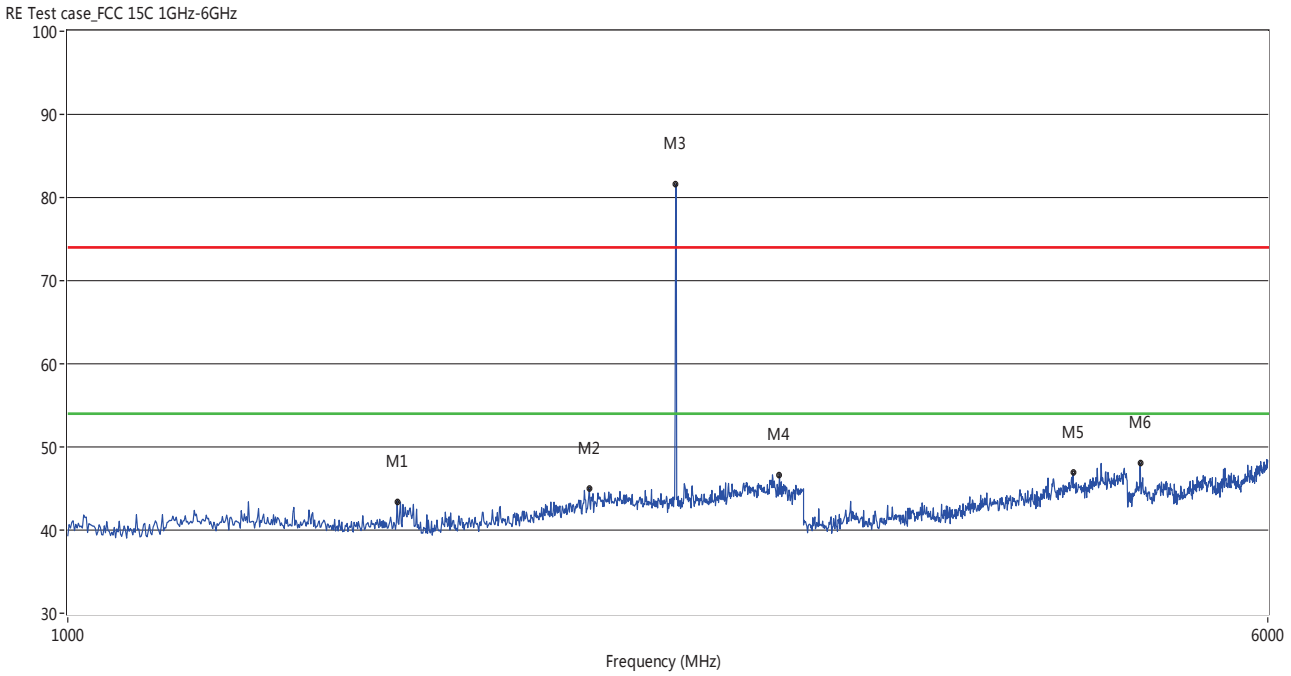

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7628.54 | 45.85 | -- | -- | 74.0 | -- | 54.0 | 28.15 | 202 | 100 | Horizontal | PASS |
| 9234.61 | 47.34 | -- | -- | 74.0 | -- | 54.0 | 26.66 | 229 | 100 | Horizontal | PASS |
| 10750.83 | 50.74 | -- | -- | 74.0 | -- | 54.0 | 23.26 | 169 | 100 | Horizontal | PASS |
| 14195.51 | 48.86 | -- | -- | 74.0 | -- | 54.0 | 25.14 | 310 | 100 | Horizontal | PASS |
| 16223.38 | 48.23 | -- | -- | 74.0 | -- | 54.0 | 25.77 | 89 | 100 | Horizontal | PASS |
| 19209.65 | 50.10 | -- | -- | 74.0 | -- | 54.0 | 23.90 | 220 | 100 | Horizontal | PASS |

## GFSK HIGH CHANNEL 1GHz to 6GHz, ANT V



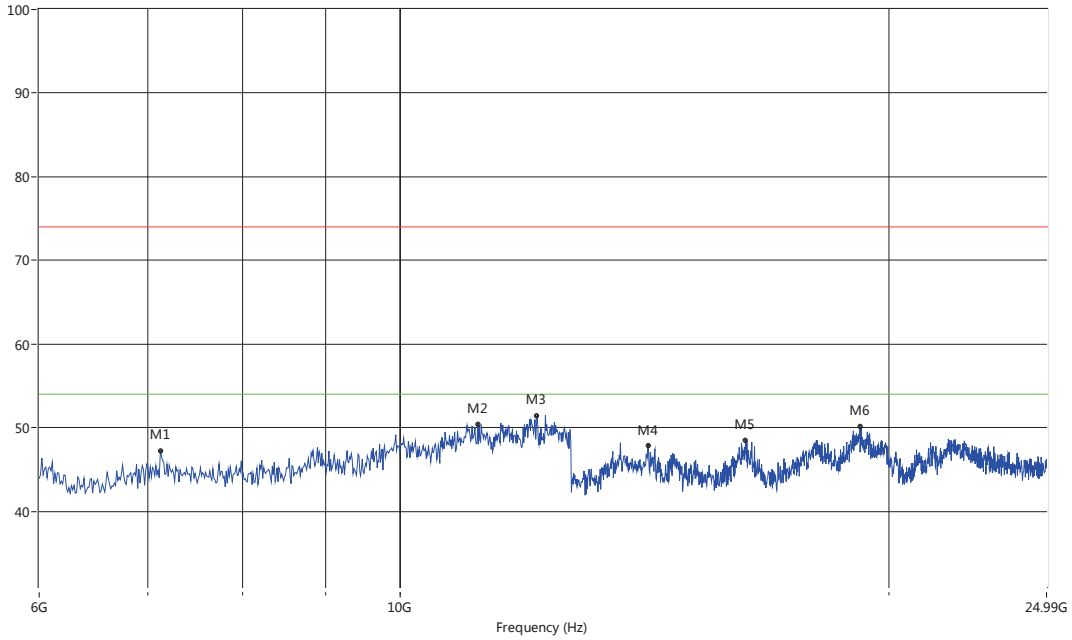

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1305.69 | 44.62 | | | -4.09 | 74.0 | -- | 54.0 | 9.38 | 0.50 | 100 | Vertical | PASS |
| 2364.64 | 45.16 | | | -0.55 | 74.0 | -- | 54.0 | 8.84 | 307.30 | 100 | Vertical | PASS |
| 2478.52 | 87.67 | | | -0.62 | 74.0 | -- | 54.0 | -33.67 | 300.30 | 100 | Vertical | N/A |
| 2854.15 | 46.53 | | | 2.35 | 74.0 | -- | 54.0 | 7.47 | 88.40 | 100 | Vertical | PASS |
| 4822.18 | 48.09 | | | 12.59 | 74.0 | -- | 54.0 | 5.91 | 346.40 | 100 | Vertical | PASS |
| 5808.19 | 48.06 | | | 14.53 | 74.0 | -- | 54.0 | 5.94 | 336.40 | 100 | Vertical | PASS |

## GFSK HIGH CHANNEL 1GHz to 6GHz, ANT H



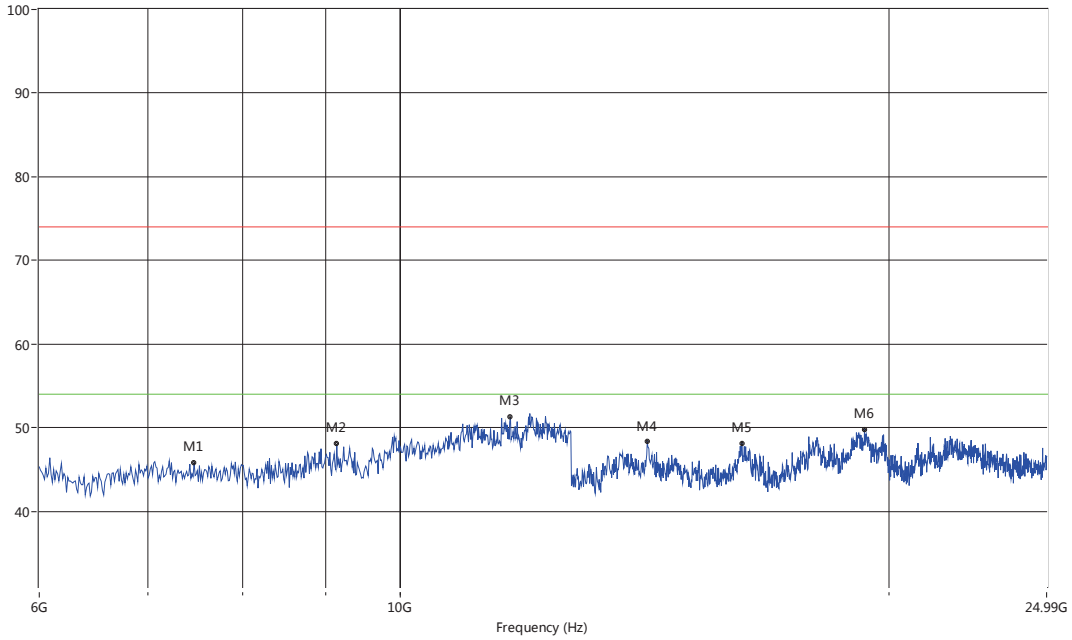

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1635.36 | 43.44 | | | -4.30 | 74.0 | -- | 54.0 | 10.56 | 360.00 | 100 | Horizontal | PASS |
| 2178.82 | 45.05 | | | -0.72 | 74.0 | -- | 54.0 | 8.95 | 150.60 | 100 | Horizontal | PASS |
| 2478.52 | 81.58 | | | -0.62 | 74.0 | -- | 54.0 | -27.58 | 7.50 | 100 | Horizontal | N/A |
| 2894.11 | 46.65 | | | 1.88 | 74.0 | -- | 54.0 | 7.35 | 82.10 | 100 | Horizontal | PASS |
| 4486.51 | 46.86 | | | 10.93 | 74.0 | -- | 54.0 | 7.14 | 126.80 | 100 | Horizontal | PASS |
| 4960.04 | 48.00 | | | 12.64 | 74.0 | -- | 54.0 | 6.00 | 48.70 | 100 | Horizontal | PASS |

## GFSK HIGH CHANNEL 6GHz to 25GHz, ANT V



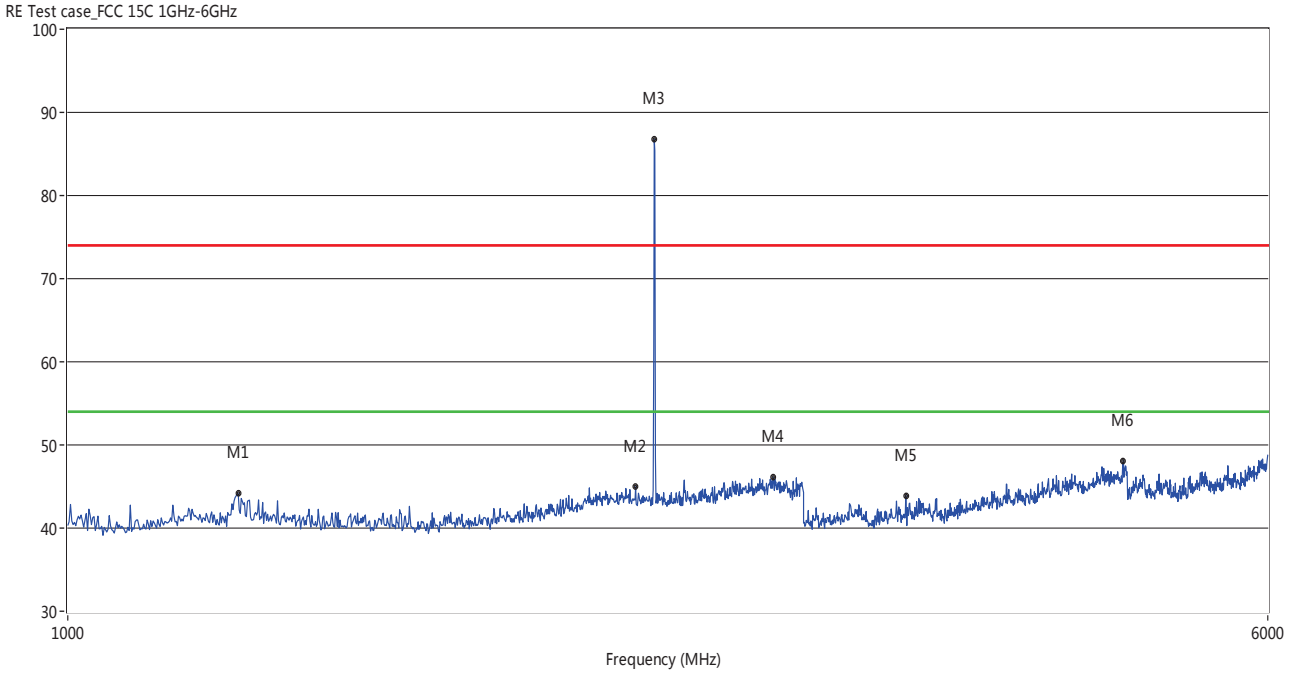

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7123.13 | 47.17 | -- | -- | 74.0 | -- | 54.0 | 26.83 | 317 | 100 | Vertical | PASS |
| 11166.39 | 50.40 | -- | -- | 74.0 | -- | 54.0 | 23.60 | 236 | 100 | Vertical | PASS |
| 12143.51 | 51.42 | -- | -- | 74.0 | -- | 54.0 | 22.58 | 248 | 100 | Vertical | PASS |
| 14216.31 | 47.91 | -- | -- | 74.0 | -- | 54.0 | 26.09 | 242 | 100 | Vertical | PASS |
| 16316.97 | 48.49 | -- | -- | 74.0 | -- | 54.0 | 25.51 | 342 | 100 | Vertical | PASS |
| 19179.70 | 50.12 | -- | -- | 74.0 | -- | 54.0 | 23.88 | 97 | 100 | Vertical | PASS |

## GFSK HIGH CHANNEL 6GHz to 25GHz, ANT H



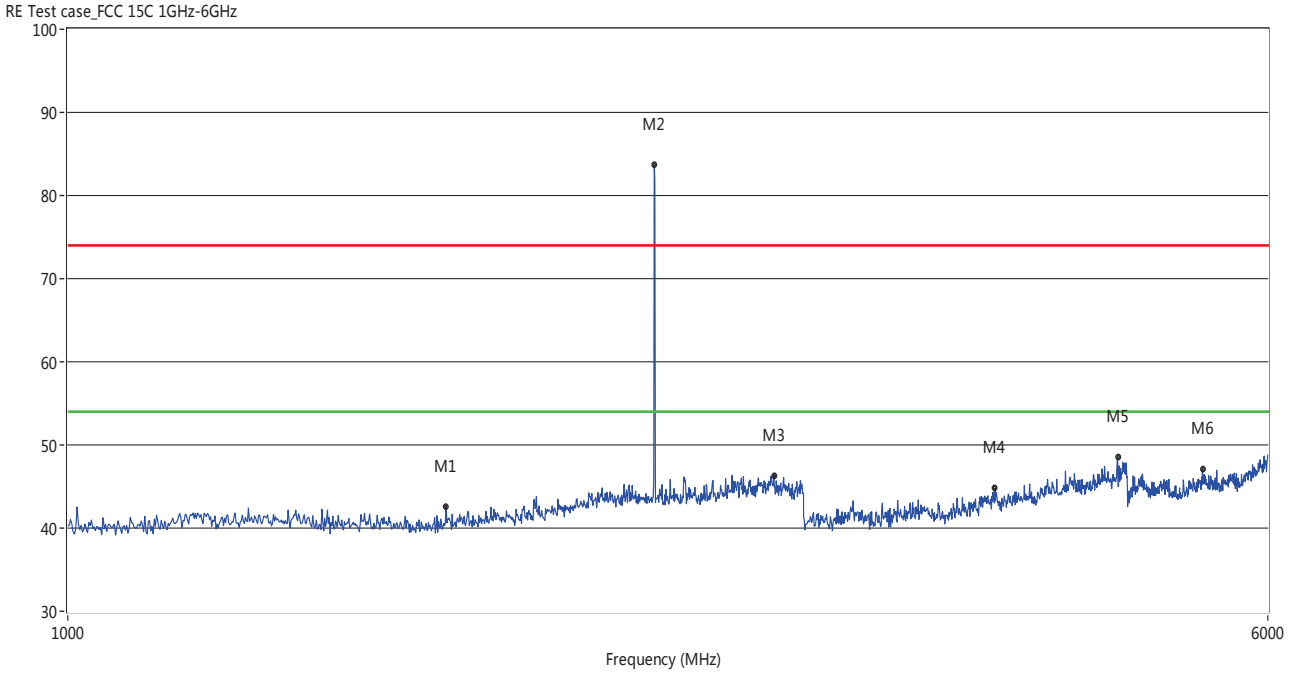

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7471.30 | 45.83 | -- | -- | 74.0 | -- | 54.0 | 28.17 | 38 | 100 | Horizontal | PASS |
| 9144.76 | 48.05 | -- | -- | 74.0 | -- | 54.0 | 25.95 | 13 | 100 | Horizontal | PASS |
| 11694.26 | 51.26 | -- | -- | 74.0 | -- | 54.0 | 22.74 | 106 | 100 | Horizontal | PASS |
| 14195.51 | 48.39 | -- | -- | 74.0 | -- | 54.0 | 25.61 | 49 | 100 | Horizontal | PASS |
| 16233.78 | 48.15 | -- | -- | 74.0 | -- | 54.0 | 25.85 | 254 | 100 | Horizontal | PASS |
| 19309.48 | 49.82 | -- | -- | 74.0 | -- | 54.0 | 24.18 | 30 | 100 | Horizontal | PASS |

## Π/4-DQPSK LOW CHANNEL 1GHz to 6GHz, ANT V



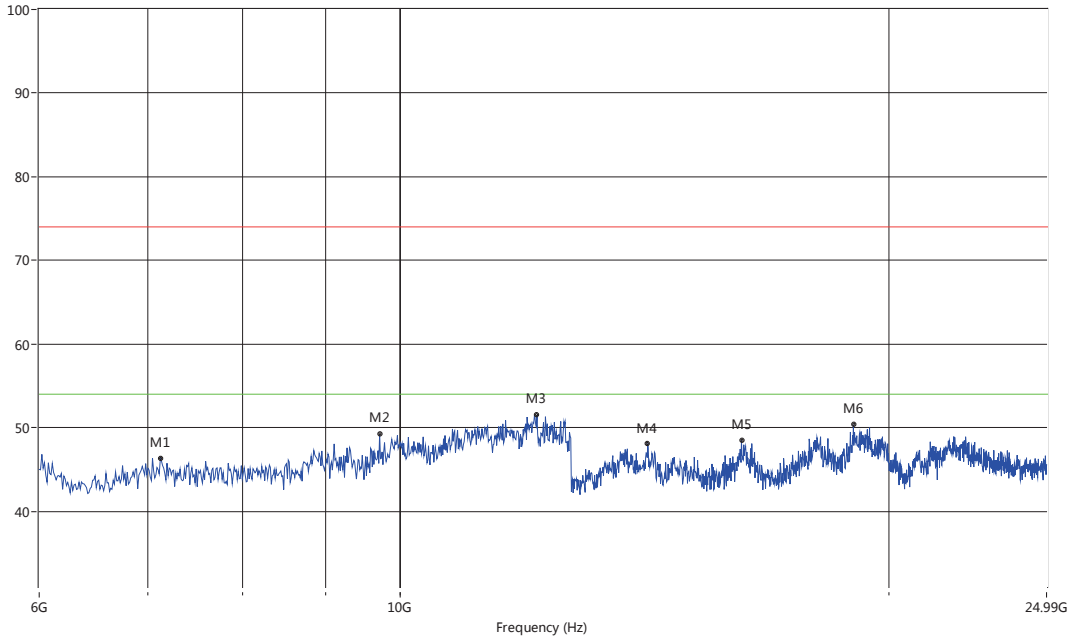

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1289.71 | 44.16 | | | -4.28 | 74.0 | -- | 54. | 9.84 | 1.10 | 100 | Vertical | PASS |
| 2334.67 | 44.97 | | | -0.58 | 74.0 | -- | 54.0 | 9.03 | 218.40 | 100 | Vertical | PASS |
| 2400.60 | 86.77 | | | -0.67 | 74.0 | -- | 54.0 | -32.77 | 300.30 | 100 | Vertical | N/A |
| 2866.13 | 46.09 | | | 2.32 | 74.0 | -- | 54.0 | 7.91 | 190.60 | 100 | Vertical | PASS |
| 3494.51 | 43.93 | | | 8.86 | 74.0 | -- | 54.0 | 10.07 | 53.00 | 100 | Vertical | PASS |
| 4837.16 | 48.14 | | | 13.00 | 74.0 | -- | 54.0 | 5.86 | 326.40 | 100 | Vertical | PASS |

## Π/4-DQPSK LOW CHANNEL 1GHz to 6GHz, ANT H



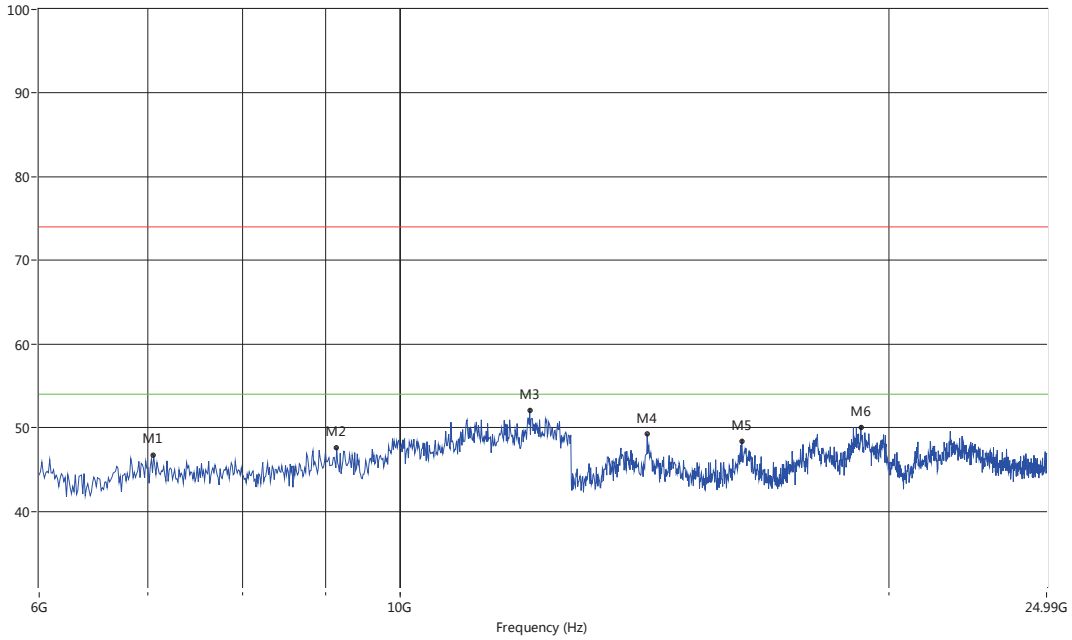

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1759.24 | 42.65 | | | -3.57 | 74.0 | - | 4. | 11.35 | 355.00 | 100 | Horizontal | PASS |
| 2400.60 | 83.67 | | | -0.67 | 74.0 | -- | 54.0 | -29.67 | 7.80 | 100 | Horizontal | N/A |
| 2870.13 | 46.36 | | | 2.19 | 74.0 | -- | 54.0 | 7.64 | 288.60 | 100 | Horizontal | PASS |
| 3992.01 | 44.76 | | | 10.15 | 74.0 | -- | 54.0 | 9.24 | 169.80 | 100 | Horizontal | PASS |
| 4795.20 | 48.48 | | | 12.36 | 74.0 | -- | 54.0 | 5.52 | 1.10 | 100 | Horizontal | PASS |
| 5442.56 | 47.09 | | | 13.52 | 74.0 | -- | 54.0 | 6.91 | 355.80 | 100 | Horizontal | PASS |

## Π/4-DQPSK LOW CHANNEL 6GHz to 25GHz, ANT V



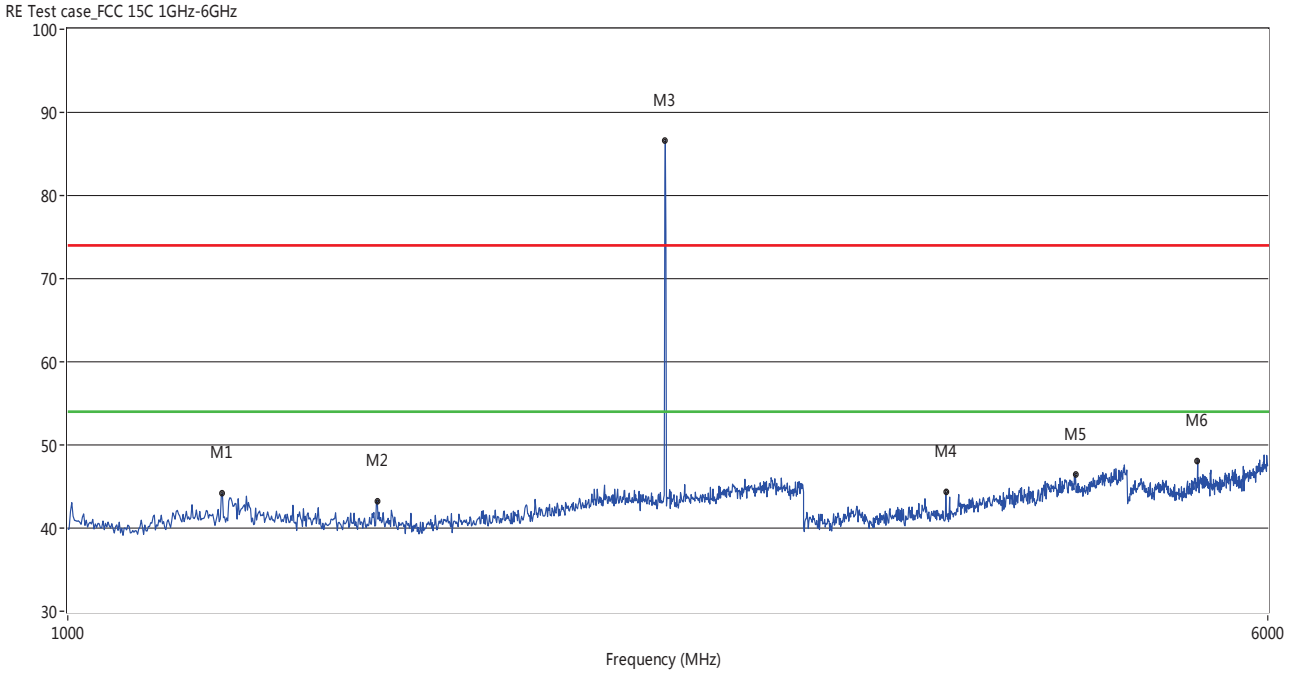

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7123.13 | 46.34 | -- | -- | 74.0 | - | 54.0 | 27.66 | 34 | 100 | Vertical | PASS |
| 9717.55 | 49.22 | -- | -- | 74.0 | -- | 54.0 | 24.78 | 54 | 100 | Vertical | PASS |
| 12143.51 | 51.53 | -- | -- | 74.0 | -- | 54.0 | 22.47 | 171 | 100 | Vertical | PASS |
| 14205.91 | 48.09 | -- | -- | 74.0 | -- | 54.0 | 25.91 | 142 | 100 | Vertical | PASS |
| 16223.38 | 48.48 | -- | -- | 74.0 | -- | 54.0 | 25.52 | 87 | 100 | Vertical | PASS |
| 19009.98 | 50.34 | -- | -- | 74.0 | -- | 54.0 | 23.66 | 288 | 100 | Vertical | PASS |

## Π/4-DQPSK LOW CHANNEL 6GHz to 25GHz, ANT H



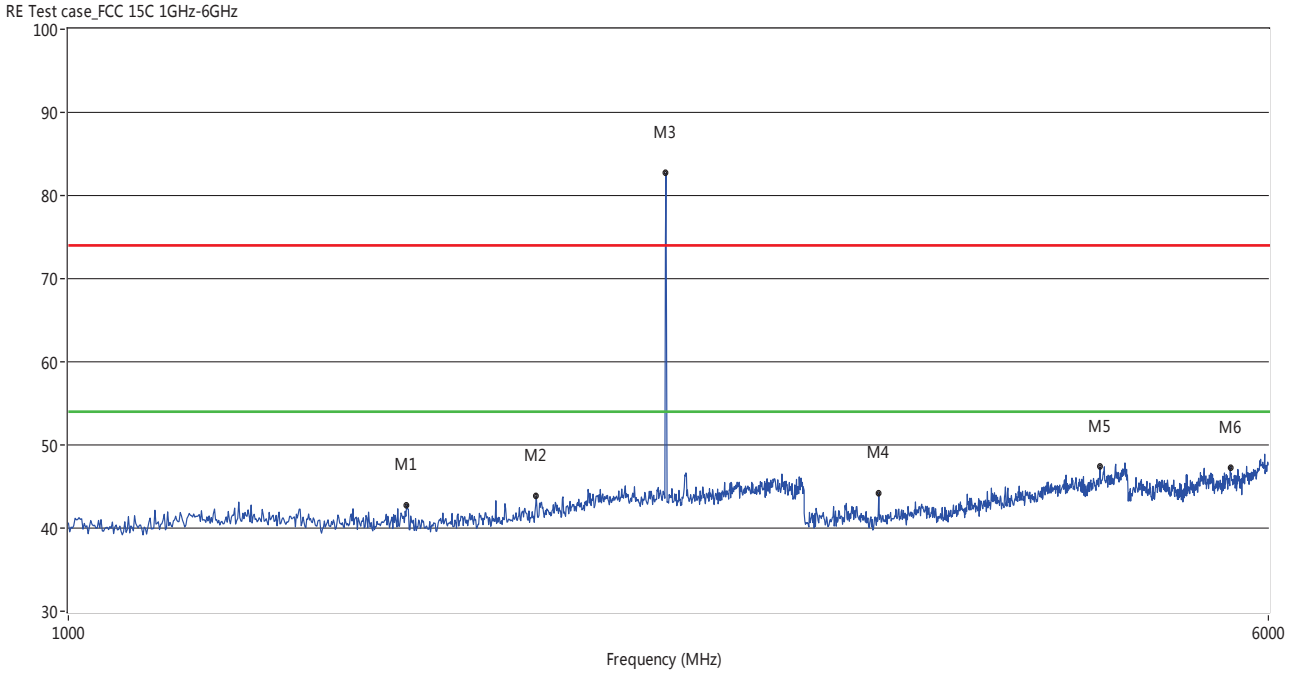

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7055.74 | 46.69 | -- | -- | 74.0 | - | 54.0 | 27.31 | 102 | 100 | Horizontal | PASS |
| 9144.76 | 47.60 | -- | -- | 74.0 | -- | 54.0 | 26.40 | 213 | 100 | Horizontal | PASS |
| 12019.97 | 52.09 | -- | -- | 74.0 | -- | 54.0 | 21.91 | 107 | 100 | Horizontal | PASS |
| 14195.51 | 49.24 | -- | -- | 74.0 | -- | 54.0 | 24.76 | 201 | 100 | Horizontal | PASS |
| 16233.78 | 48.33 | -- | -- | 74.0 | -- | 54.0 | 25.67 | 312 | 100 | Horizontal | PASS |
| 19209.65 | 50.05 | -- | -- | 74.0 | -- | 54.0 | 23.95 | 336 | 100 | Horizontal | PASS |

## Π/4-DQPSK MID CHANNEL 1GHz to 6GHz, ANT V



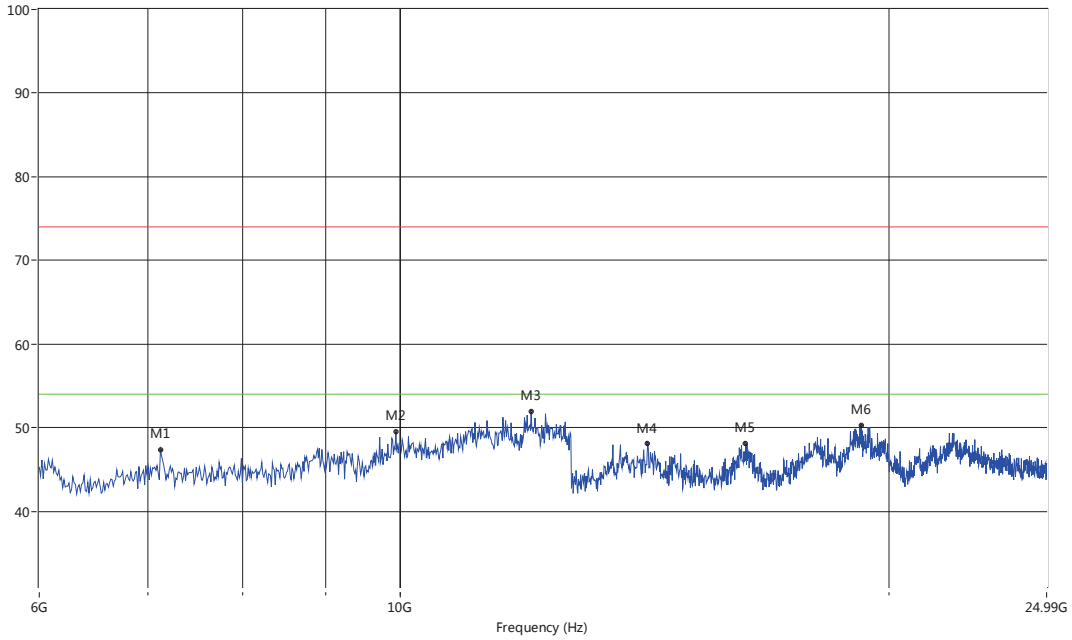

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1259. 4 | 44.16 | | | -4.13 | 7 .0 | -- | 54. | 9.84 | 355.90 | 100 | Vertical | PASS |
| 1587.41 | 43.31 | | | -4.36 | 74.0 | -- | 54.0 | 10.69 | 214.80 | 100 | Vertical | PASS |
| 2440.56 | 86.63 | | | -0.54 | 74.0 | -- | 54.0 | -32.63 | 304.30 | 100 | Vertical | N/A |
| 3710.29 | 44.31 | | | 8.84 | 74.0 | -- | 54.0 | 9.69 | 272.70 | 100 | Vertical | PASS |
| 4501.50 | 46.53 | | | 10.97 | 74.0 | -- | 54.0 | 7.47 | 0.00 | 100 | Vertical | PASS |
| 5403.60 | 48.12 | | | 13.09 | 74.0 | -- | 54.0 | 5.88 | 214.20 | 100 | Vertical | PASS |

## Π/4-DQPSK MID CHANNEL 1GHz to 6GHz, ANT H



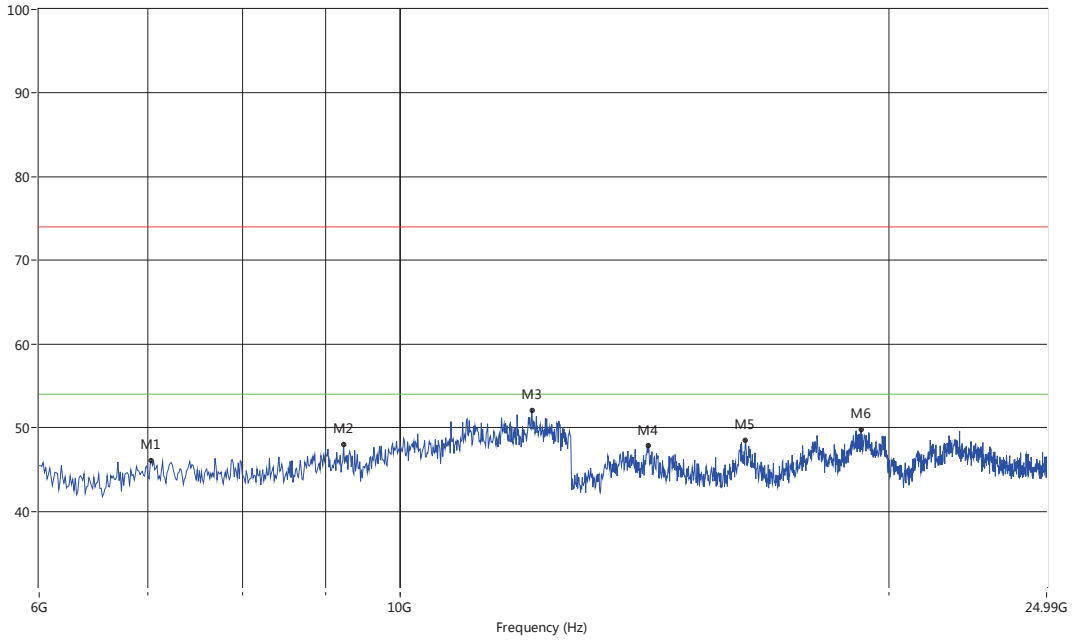

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1657.34 | 42.80 | | | -4.30 | 74.0 | -- | 54.0 | 11.20 | 61.10 | 100 | Horizontal | PASS |
| 2010.99 | 43.85 | | | -2.63 | 74.0 | -- | 54.0 | 10.15 | 212.90 | 100 | Horizontal | PASS |
| 2440.56 | 82.71 | | | -0.54 | 74.0 | -- | 54.0 | -28.71 | 7.80 | 100 | Horizontal | N/A |
| 3353.65 | 44.19 | | | 8.11 | 74.0 | -- | 54.0 | 9.81 | 238.10 | 100 | Horizontal | PASS |
| 4666.33 | 47.38 | | | 11.38 | 74.0 | -- | 54.0 | 6.62 | 183.70 | 100 | Horizontal | PASS |
| 5667.33 | 47.32 | | | 13.95 | 74.0 | -- | 54.0 | 6.68 | 135.20 | 100 | Horizontal | PASS |

## Π/4-DQPSK MID CHANNEL 6GHz to 25GHz, ANT V



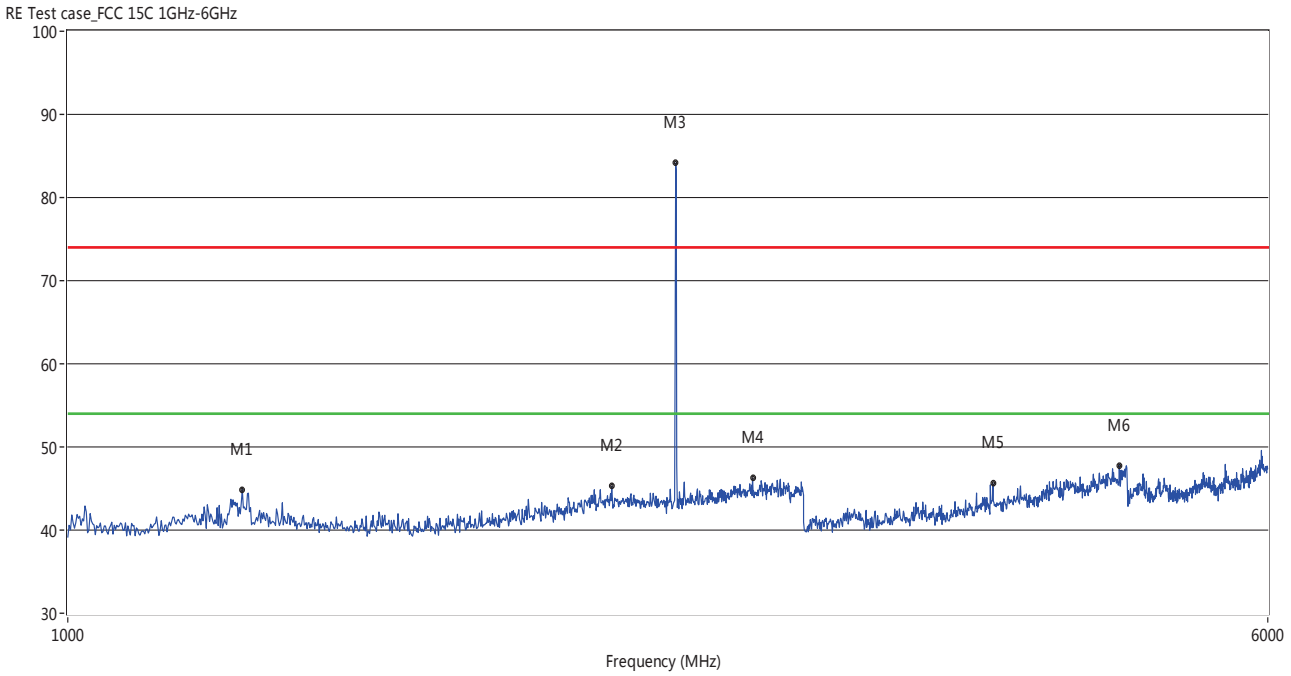

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7123.13 | 47.33 | -- | -- | 74.0 | - | 54.0 | 26.67 | 17 | 100 | Vertical | PASS |
| 9942.18 | 49.51 | -- | -- | 74.0 | -- | 54.0 | 24.49 | 228 | 100 | Vertical | PASS |
| 12042.43 | 51.91 | -- | -- | 74.0 | -- | 54.0 | 22.09 | 92 | 100 | Vertical | PASS |
| 14205.91 | 48.11 | -- | -- | 74.0 | -- | 54.0 | 25.89 | 198 | 100 | Vertical | PASS |
| 16316.97 | 48.07 | -- | -- | 74.0 | -- | 54.0 | 25.93 | 135 | 100 | Vertical | PASS |
| 19219.63 | 50.30 | -- | -- | 74.0 | -- | 54.0 | 23.70 | 335 | 100 | Vertical | PASS |

## Π/4-DQPSK MID CHANNEL 6GHz to 25GHz, ANT H



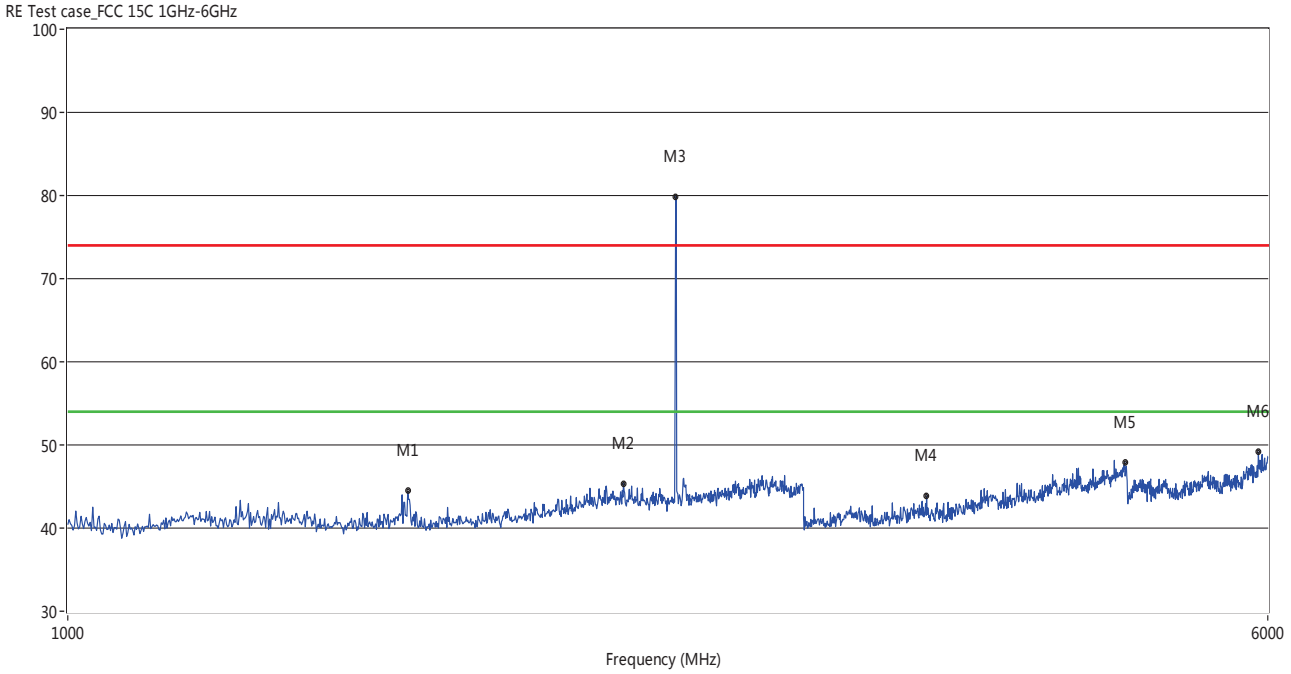

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7033.28 | 46.02 | -- | -- | 74.0 | - | 54.0 | 27.98 | 229 | 100 | Horizontal | PASS |
| 9234.61 | 47.94 | -- | -- | 74.0 | -- | 54.0 | 26.06 | 246 | 100 | Horizontal | PASS |
| 12053.66 | 52.08 | -- | -- | 74.0 | -- | 54.0 | 21.92 | 247 | 100 | Horizontal | PASS |
| 14226.70 | 47.84 | -- | -- | 74.0 | -- | 54.0 | 26.16 | 186 | 100 | Horizontal | PASS |
| 16316.97 | 48.53 | -- | -- | 74.0 | -- | 54.0 | 25.47 | 256 | 100 | Horizontal | PASS |
| 19209.65 | 49.81 | -- | -- | 74.0 | -- | 54.0 | 24.19 | 355 | 100 | Horizontal | PASS |

## Π/4-DQPSK HIGH CHANNEL 1GHz to 6GHz, ANT V



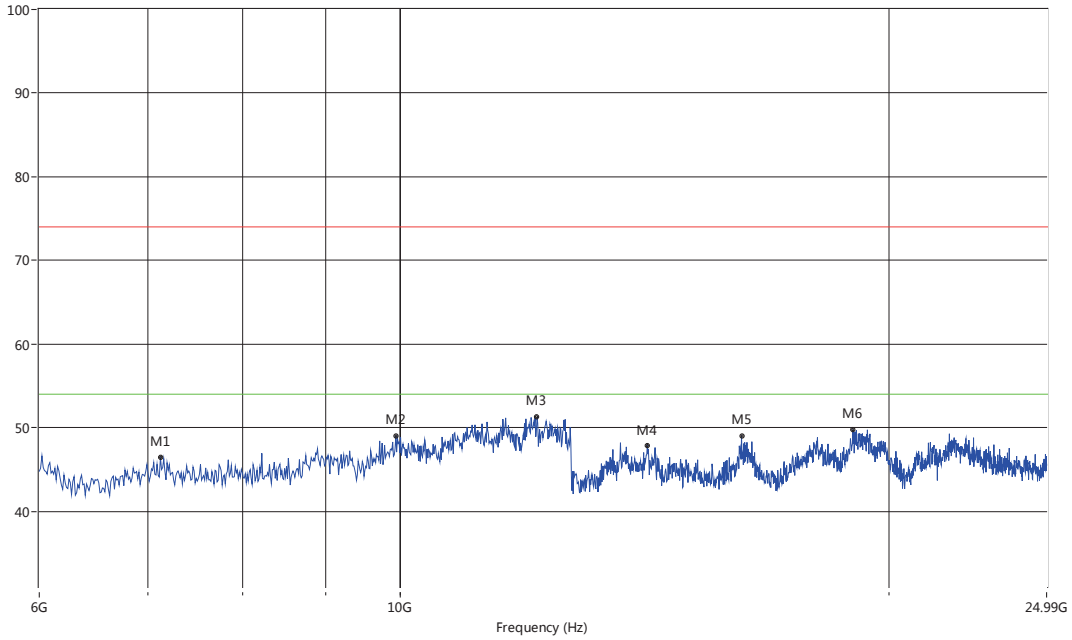

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 129 .70 | 44.88 | | | -4.13 | 74.0 | -- | 54 0 | 9.12 | 1.10 | 100 | Vertical | PASS |
| 2252.75 | 45.26 | | | -0.67 | 74.0 | -- | 54.0 | 8.74 | 116.80 | 100 | Vertical | PASS |
| 2478.52 | 84.15 | | | -0.62 | 74.0 | -- | 54.0 | -30.15 | 294.30 | 100 | Vertical | N/A |
| 2780.22 | 46.26 | | | 1.99 | 74.0 | -- | 54.0 | 7.74 | 47.40 | 100 | Vertical | PASS |
| 3980.02 | 45.57 | | | 10.14 | 74.0 | -- | 54.0 | 8.43 | 341.20 | 100 | Vertical | PASS |
| 4807.19 | 47.82 | | | 12.37 | 74.0 | -- | 54.0 | 6.18 | 341.20 | 100 | Vertical | PASS |

## Π/4-DQPSK HIGH CHANNEL 1GHz to 6GHz, ANT H



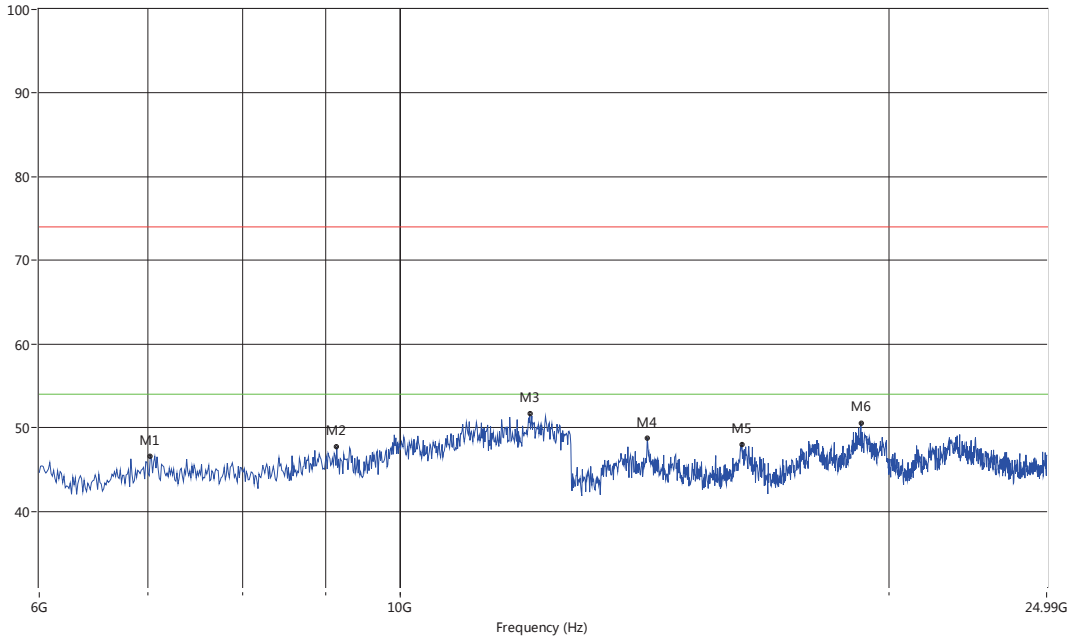

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1661.34 | 44.44 | | | -4.34 | 74.0 | -- | 54.0 | 9.56 | 360.00 | 100 | Horizontal | PASS |
| 2292.71 | 45.38 | | | -0.56 | 74.0 | -- | 54.0 | 8.62 | 273.50 | 100 | Horizontal | PASS |
| 2478.52 | 79.90 | | | -0.62 | 74.0 | -- | 54.0 | -25.90 | 4.40 | 100 | Horizontal | N/A |
| 3605.39 | 43.87 | | | 8.65 | 74.0 | -- | 54.0 | 10.13 | 321.90 | 100 | Horizontal | PASS |
| 4846.15 | 47.86 | | | 12.95 | 74.0 | -- | 54.0 | 6.14 | 307.10 | 100 | Horizontal | PASS |
| 5916.08 | 49.15 | | | 15.29 | 74.0 | -- | 54.0 | 4.85 | 360.30 | 100 | Horizontal | PASS |

## Π/4-DQPSK HIGH CHANNEL 6GHz to 25GHz, ANT V



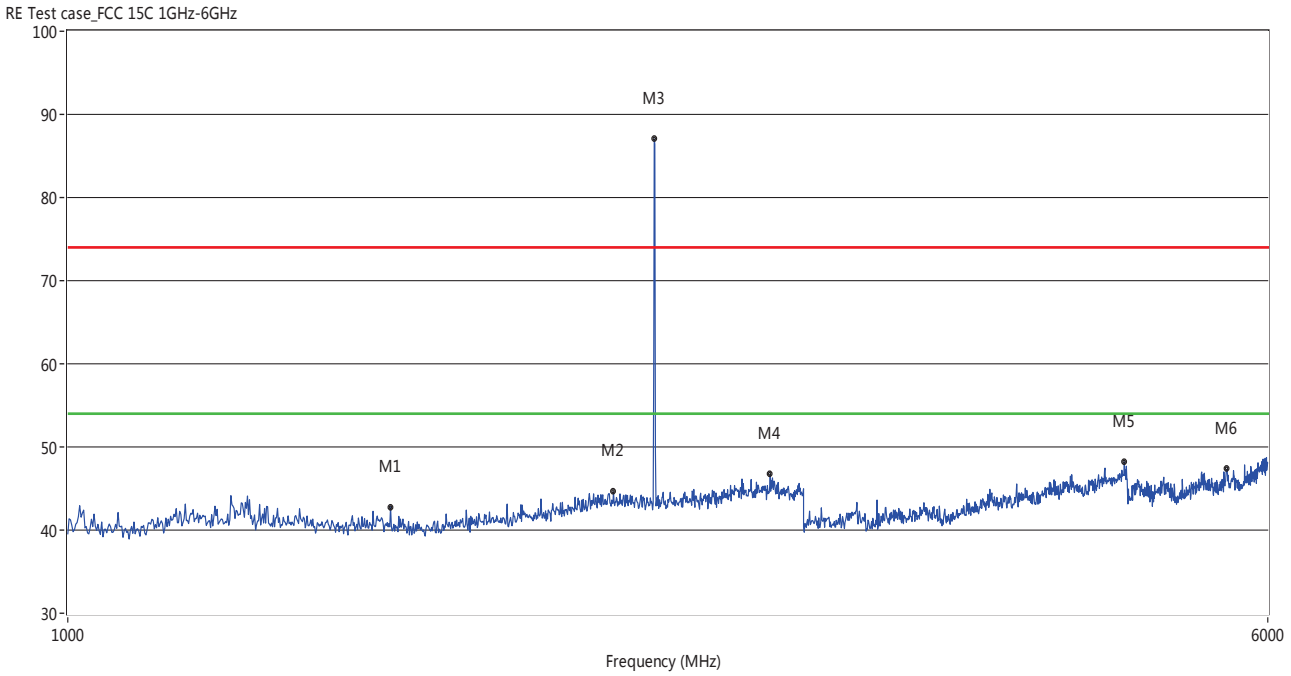

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7123.13 | 46.46 | -- | -- | 74.0 | - | 54.0 | 27.54 | 101 | 100 | Vertical | PASS |
| 9942.18 | 49.04 | -- | -- | 74.0 | -- | 54.0 | 24.96 | 65 | 100 | Vertical | PASS |
| 12143.51 | 51.25 | -- | -- | 74.0 | -- | 54.0 | 22.75 | 41 | 100 | Vertical | PASS |
| 14195.51 | 47.89 | -- | -- | 74.0 | -- | 54.0 | 26.11 | 287 | 100 | Vertical | PASS |
| 16223.38 | 49.04 | -- | -- | 74.0 | -- | 54.0 | 24.96 | 165 | 100 | Vertical | PASS |
| 18989.60 | 49.76 | -- | -- | 74.0 | -- | 54.0 | 24.24 | 93 | 100 | Vertical | PASS |

## Π/4-DQPSK HIGH CHANNEL 6GHz to 25GHz, ANT H



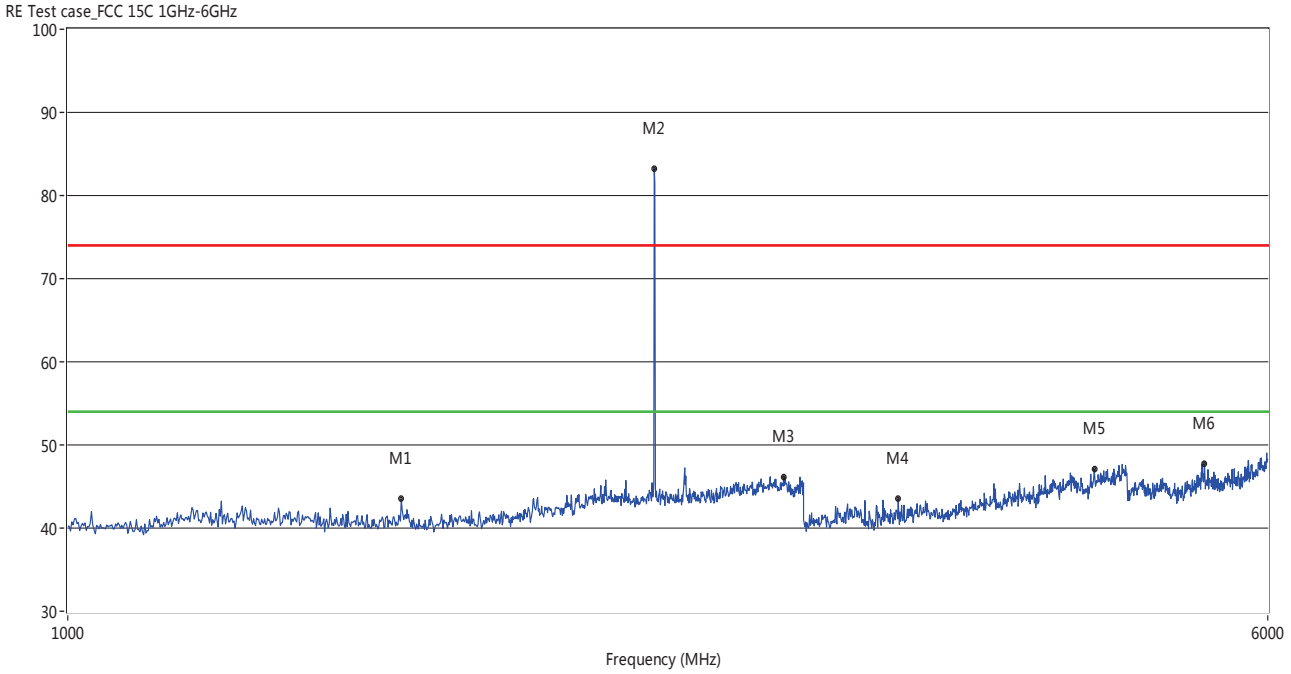

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7022.05 | 46.55 | -- | -- | 74.0 | - | 54.0 | 27.45 | 147 | 100 | Horizontal | PASS |
| 9144.76 | 47.71 | -- | -- | 74.0 | -- | 54.0 | 26.29 | 121 | 100 | Horizontal | PASS |
| 12019.97 | 51.61 | -- | -- | 74.0 | -- | 54.0 | 22.39 | 47 | 100 | Horizontal | PASS |
| 14195.51 | 48.72 | -- | -- | 74.0 | -- | 54.0 | 25.28 | 198 | 100 | Horizontal | PASS |
| 16233.78 | 48.00 | -- | -- | 74.0 | -- | 54.0 | 26.00 | 244 | 100 | Horizontal | PASS |
| 19209.65 | 50.52 | -- | -- | 74.0 | -- | 54.0 | 23.48 | 21 | 100 | Horizontal | PASS |

## 8-DPSK LOW CHANNEL 1GHz to 6GHz, ANT V



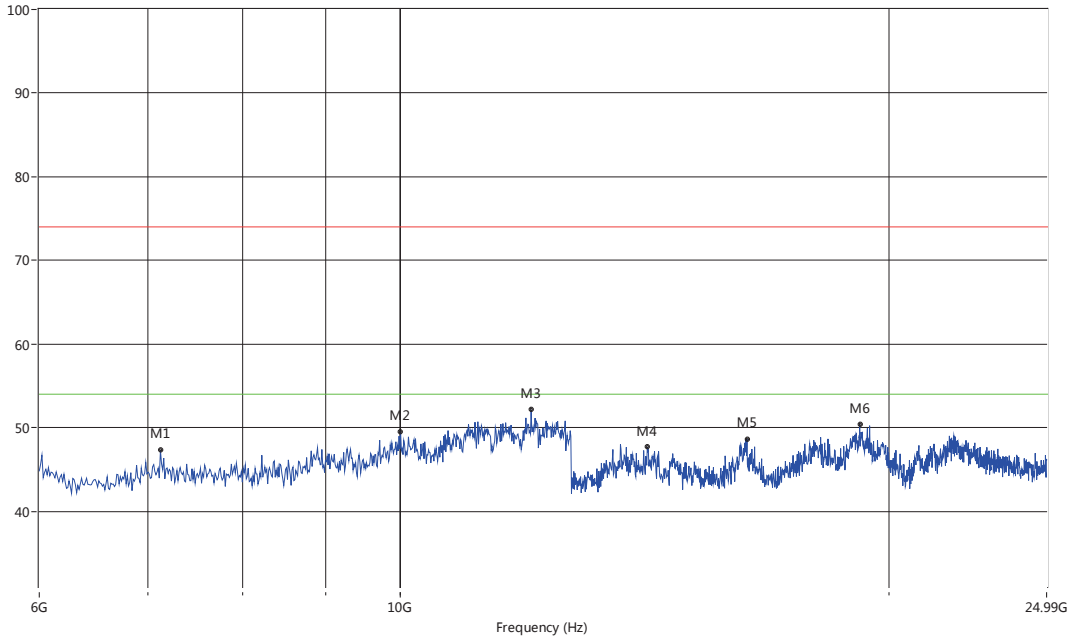

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1619.38 | 42.79 | | | -4.45 | 74.0 | -- | 54.0 | 11.21 | 341.40 | 100 | Vertical | PASS |
| 2258.74 | 44.60 | | | -0.76 | 74.0 | -- | 54.0 | 9.40 | 218.60 | 100 | Vertical | PASS |
| 2400.60 | 87.05 | | | -0.67 | 74.0 | -- | 54.0 | -33.05 | 301.00 | 100 | Vertical | N/A |
| 2854.15 | 46.73 | | | 2.35 | 74.0 | -- | 54.0 | 7.27 | 204.50 | 100 | Vertical | PASS |
| 4843.16 | 48.21 | | | 13.03 | 74.0 | -- | 54.0 | 5.79 | 335.60 | 100 | Vertical | PASS |
| 5646.35 | 47.35 | | | 13.90 | 74.0 | -- | 54.0 | 6.65 | 316.00 | 100 | Vertical | PASS |

## 8-DPSK LOW CHANNEL 1GHz to 6GHz, ANT H



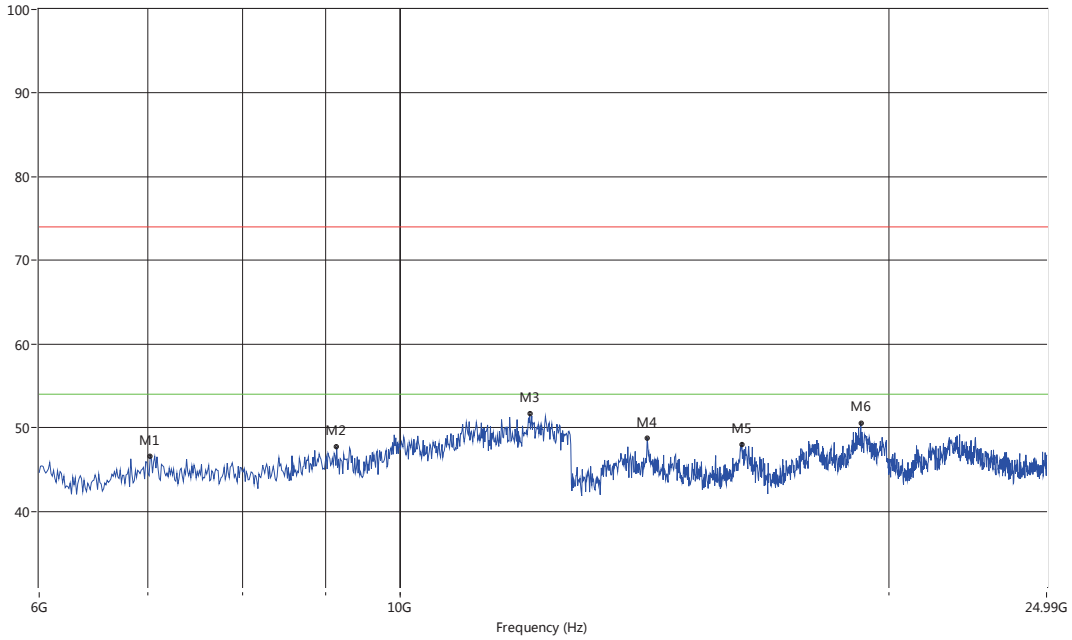

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1645.35 | 43.50 | | | -4.33 | 74.0 | -- | 54.0 | 10.50 | 14.80 | 100 | Horizontal | PASS |
| 2400.60 | 83.23 | | | -0.67 | 74.0 | -- | 54.0 | -29.23 | 8.70 | 100 | Horizontal | N/A |
| 2912.09 | 46.17 | | | 2.29 | 74.0 | -- | 54.0 | 7.83 | 296.70 | 100 | Horizontal | PASS |
| 3455.54 | 43.54 | | | 9.07 | 74.0 | -- | 54.0 | 10.46 | 273.80 | 100 | Horizontal | PASS |
| 4630.37 | 47.04 | | | 11.31 | 74.0 | -- | 54.0 | 6.96 | 0.70 | 100 | Horizontal | PASS |
| 5457.54 | 47.74 | | | 13.52 | 74.0 | -- | 54.0 | 6.26 | 322.30 | 100 | Horizontal | PASS |

## 8-DPSK LOW CHANNEL 6GHz to 25GHz, ANT V



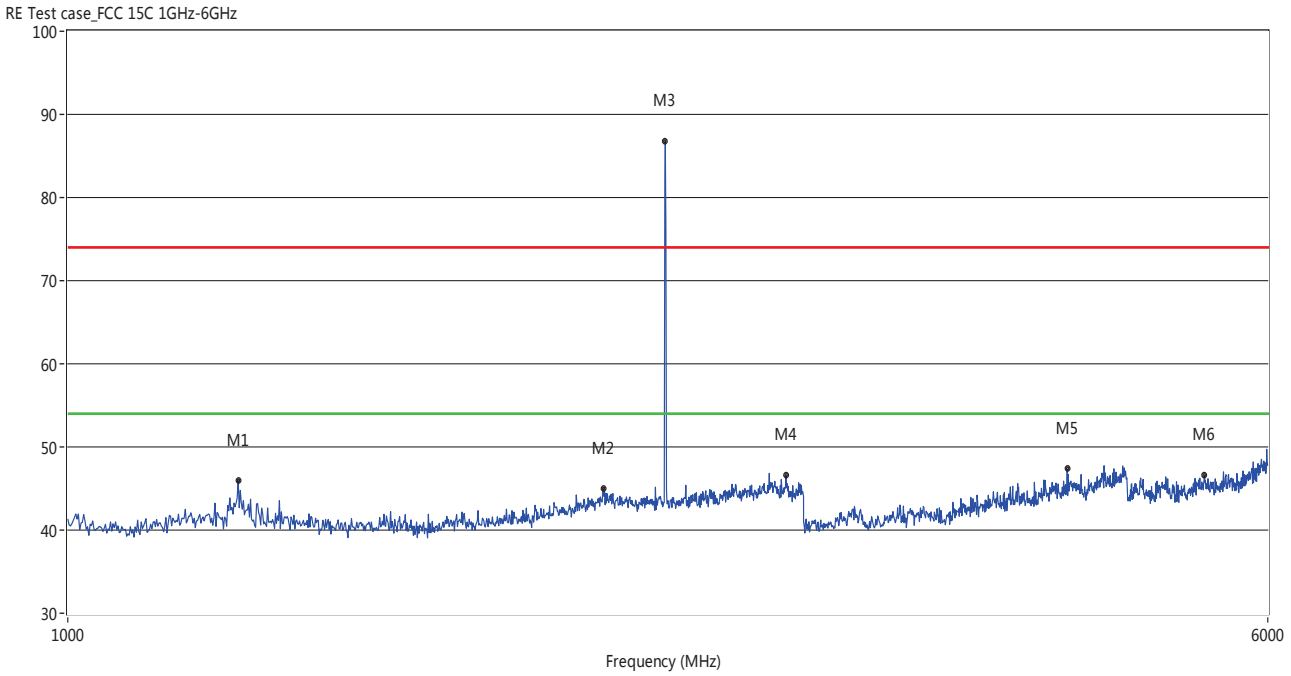

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7123.13 | 47.29 | -- | -- | 74.0 | -- | 54.0 | 26.71 | 99 | 100 | Vertical | PASS |
| 10009.57 | 49.49 | -- | -- | 74.0 | -- | 54.0 | 24.51 | 343 | 100 | Vertical | PASS |
| 12042.43 | 52.13 | -- | -- | 74.0 | -- | 54.0 | 21.87 | 299 | 100 | Vertical | PASS |
| 14195.51 | 47.70 | -- | -- | 74.0 | -- | 54.0 | 26.30 | 275 | 100 | Vertical | PASS |
| 16348.17 | 48.67 | -- | -- | 74.0 | -- | 54.0 | 25.33 | 342 | 100 | Vertical | PASS |
| 19179.70 | 50.42 | -- | -- | 74.0 | -- | 54.0 | 23.58 | 344 | 100 | Vertical | PASS |

## 8-DPSK LOW CHANNEL 6GHz to 25GHz, ANT H



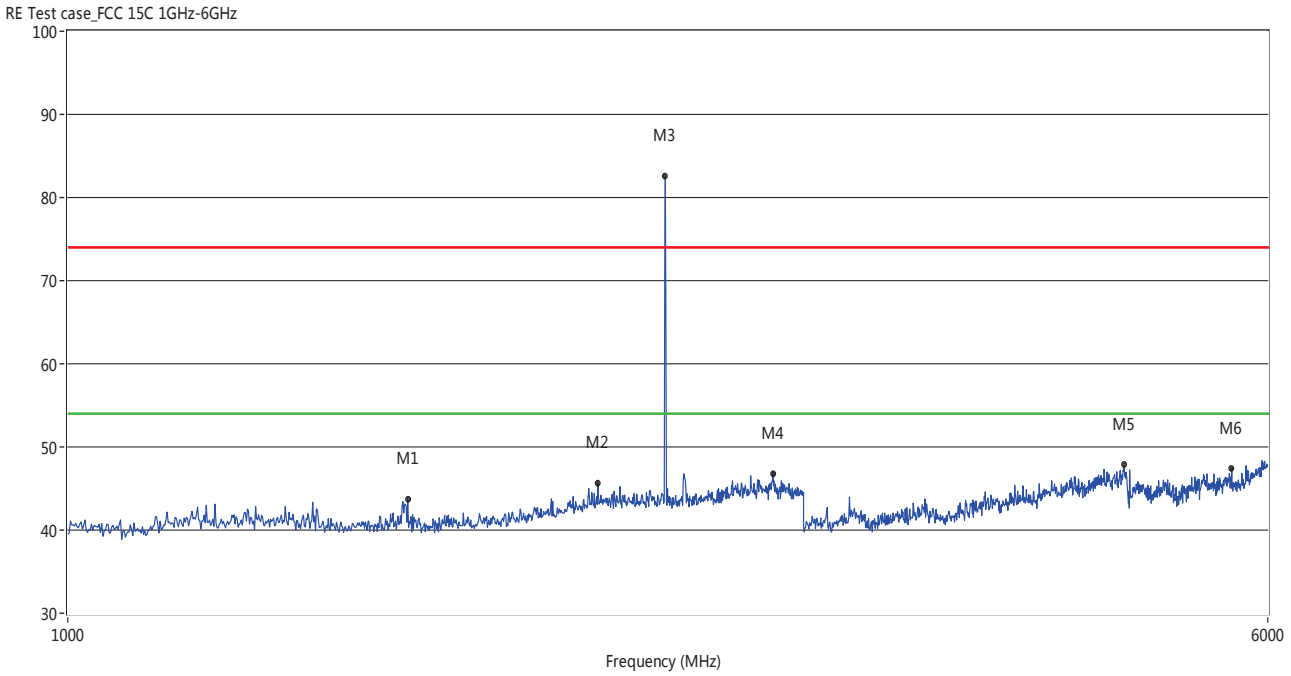

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7022.05 | 46.55 | -- | -- | 74.0 | -- | 54.0 | 27.45 | 12 | 100 | Horizontal | PASS |
| 9144.76 | 47.71 | -- | -- | 74.0 | -- | 54.0 | 26.29 | 229 | 100 | Horizontal | PASS |
| 12019.97 | 51.61 | -- | -- | 74.0 | -- | 54.0 | 22.39 | 155 | 100 | Horizontal | PASS |
| 14195.51 | 48.72 | -- | -- | 74.0 | -- | 54.0 | 25.28 | 112 | 100 | Horizontal | PASS |
| 16233.78 | 48.00 | -- | -- | 74.0 | -- | 54.0 | 26.00 | 40 | 100 | Horizontal | PASS |
| 19209.65 | 50.52 | -- | -- | 74.0 | -- | 54.0 | 23.48 | 158 | 100 | Horizontal | PASS |

## 8-DPSK MID CHANNEL 1GHz to 6GHz, ANT V



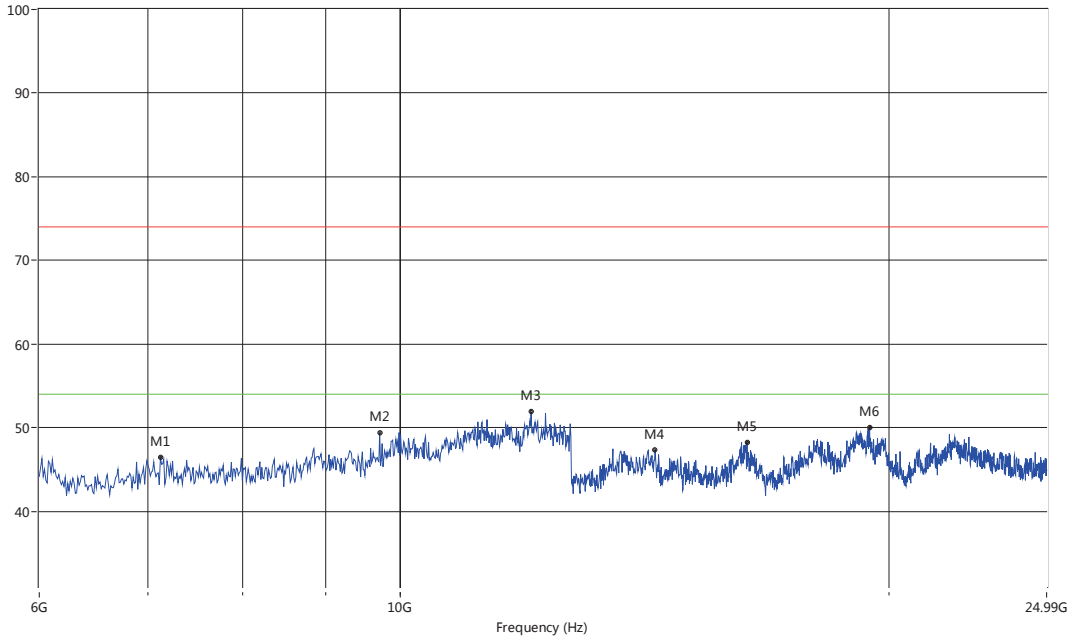

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1289.71 | 45.95 | | | -4.28 | 74.0 | -- | 54.0 | 8.05 | 7.50 | 100 | Vertical | PASS |
| 2224.78 | 45.02 | | | -0.71 | 74.0 | -- | 54.0 | 8.98 | 95.40 | 100 | Vertical | PASS |
| 2440.56 | 86.85 | | | -0.54 | 74.0 | -- | 54.0 | -32.85 | 301.20 | 100 | Vertical | N/A |
| 2922.08 | 46.58 | | | 2.38 | 74.0 | -- | 54.0 | 7.42 | 1.10 | 100 | Vertical | PASS |
| 4447.55 | 47.35 | | | 10.80 | 74.0 | -- | 54.0 | 6.65 | 88.60 | 100 | Vertical | PASS |
| 5460.54 | 46.55 | | | 13.43 | 74.0 | -- | 54.0 | 7.45 | 93.00 | 100 | Vertical | PASS |

## 8-DPSK MID CHANNEL 1GHz to 6GHz, ANT H



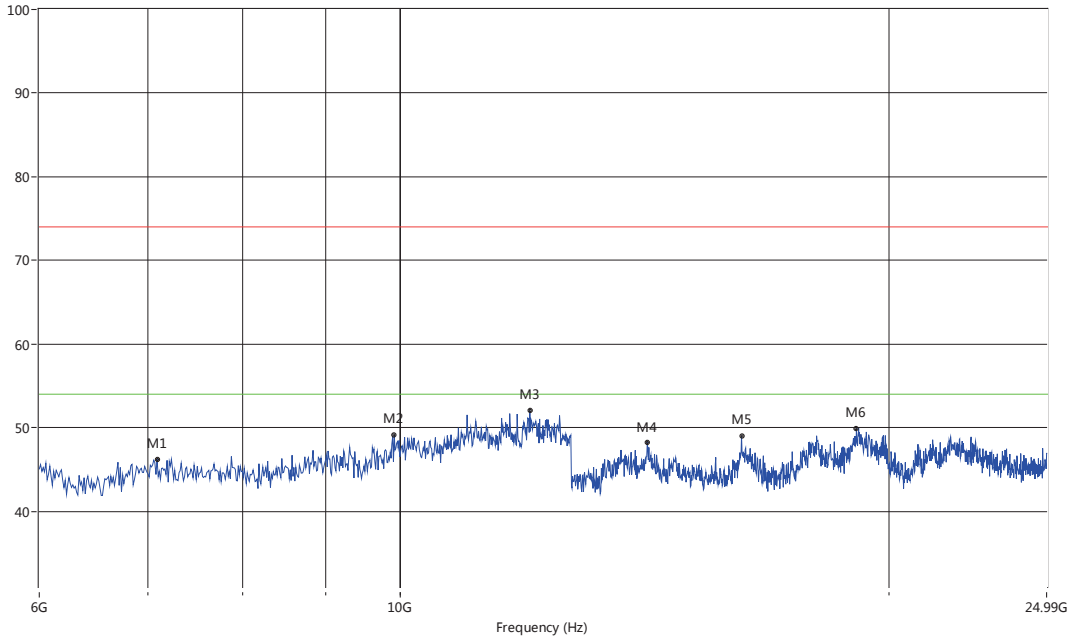

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1661.34 | 43.69 | | | -4.34 | 74.0 | -- | 54.0 | 10.31 | 61.90 | 100 | Horizontal | PASS |
| 2206.79 | 45.61 | | | -0.70 | 74.0 | -- | 54.0 | 8.39 | 2.30 | 100 | Horizontal | PASS |
| 2440.56 | 82.60 | | | -0.54 | 74.0 | -- | 54.0 | -28.60 | 7.80 | 100 | Horizontal | N/A |
| 2866.13 | 46.83 | | | 2.32 | 74.0 | -- | 54.0 | 7.17 | 281.80 | 100 | Horizontal | PASS |
| 4840.16 | 47.85 | | | 13.03 | 74.0 | -- | 54.0 | 6.15 | 360.30 | 100 | Horizontal | PASS |
| 5685.31 | 47.44 | | | 14.00 | 74.0 | -- | 54.0 | 6.56 | 194.10 | 100 | Horizontal | PASS |

## 8-DPSK MID CHANNEL 6GHz to 25GHz, ANT V



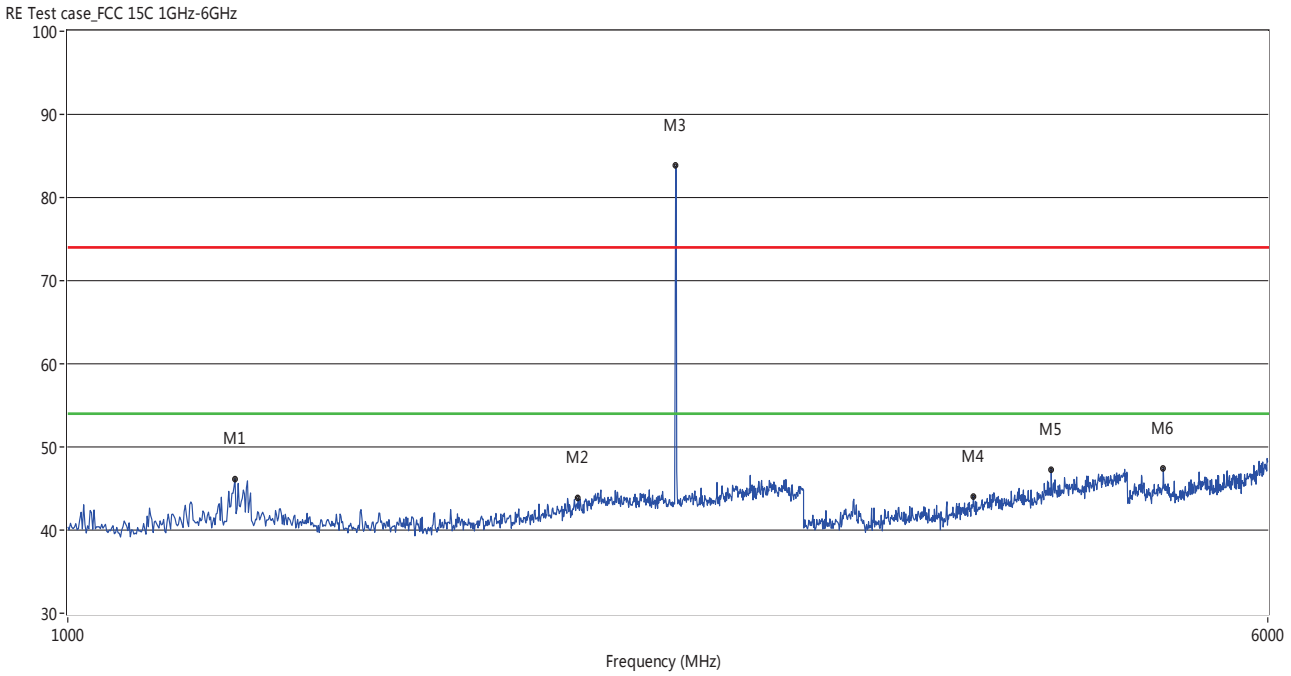

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7123.13 | 46.50 | -- | -- | 74.0 | -- | 54.0 | 27.50 | 31 | 100 | Vertical | PASS |
| 9717.55 | 49.38 | -- | -- | 74.0 | -- | 54.0 | 24.62 | 346 | 100 | Vertical | PASS |
| 12042.43 | 51.89 | -- | -- | 74.0 | -- | 54.0 | 22.11 | 88 | 100 | Vertical | PASS |
| 14351.50 | 47.31 | -- | -- | 74.0 | -- | 54.0 | 26.69 | 139 | 100 | Vertical | PASS |
| 16348.17 | 48.29 | -- | -- | 74.0 | -- | 54.0 | 25.71 | 215 | 100 | Vertical | PASS |
| 19449.25 | 49.96 | -- | -- | 74.0 | -- | 54.0 | 24.04 | 41 | 100 | Vertical | PASS |

## 8-DPSK MID CHANNEL 6GHz to 25GHz, ANT H



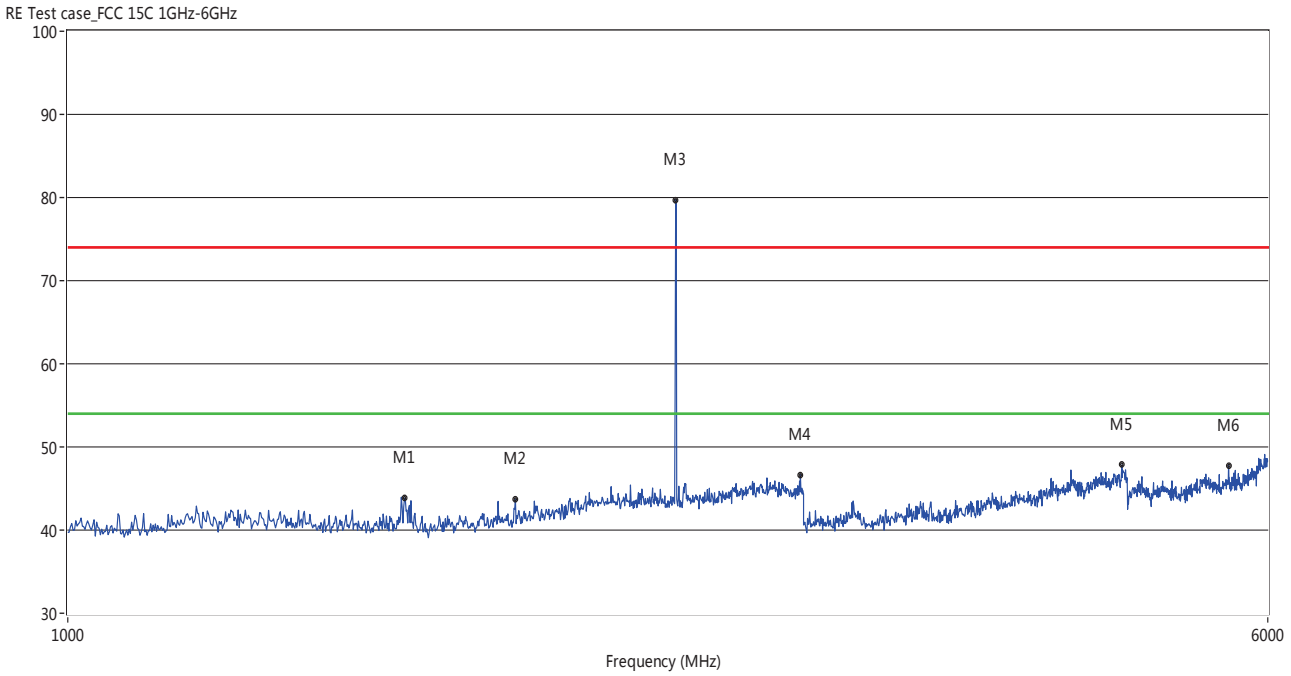

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7089.43 | 46.23 | -- | -- | 74.0 | -- | 54.0 | 27.77 | 80 | 100 | Horizontal | PASS |
| 9919.72 | 49.13 | -- | -- | 74.0 | -- | 54.0 | 24.87 | 170 | 100 | Horizontal | PASS |
| 12019.97 | 52.05 | -- | -- | 74.0 | -- | 54.0 | 21.95 | 10 | 100 | Horizontal | PASS |
| 14195.51 | 48.27 | -- | -- | 74.0 | -- | 54.0 | 25.73 | 119 | 100 | Horizontal | PASS |
| 16223.38 | 49.01 | -- | -- | 74.0 | -- | 54.0 | 24.99 | 232 | 100 | Horizontal | PASS |
| 19089.85 | 49.91 | -- | -- | 74.0 | -- | 54.0 | 24.09 | 48 | 100 | Horizontal | PASS |

## 8-DPSK HIGH CHANNEL 1GHz to 6GHz, ANT V



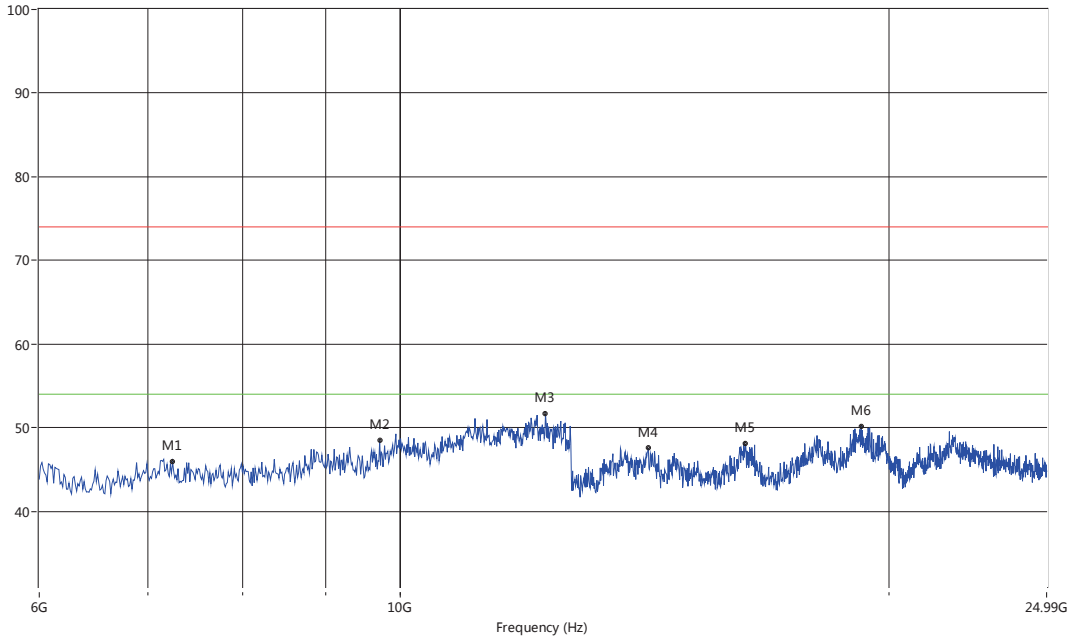

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1283.72 | 46.18 | | | -4.27 | 74.0 | -- | 54.0 | 7.82 | 2.60 | 100 | Vertical | PASS |
| 2142.86 | 43.86 | | | -1.34 | 74.0 | -- | 54.0 | 10.14 | 359.60 | 100 | Vertical | PASS |
| 2478.52 | 83.81 | | | -0.62 | 74.0 | -- | 54.0 | -29.81 | 296.50 | 100 | Vertical | N/A |
| 3866.13 | 44.06 | | | 9.99 | 74.0 | -- | 54.0 | 9.94 | 359.50 | 100 | Vertical | PASS |
| 4342.66 | 47.30 | | | 10.78 | 74.0 | -- | 54.0 | 6.70 | 350.50 | 100 | Vertical | PASS |
| 5133.87 | 47.40 | | | 13.21 | 74.0 | -- | 54.0 | 6.60 | 317.10 | 100 | Vertical | PASS |

## 8-DPSK HIGH CHANNEL 1GHz to 6GHz, ANT H



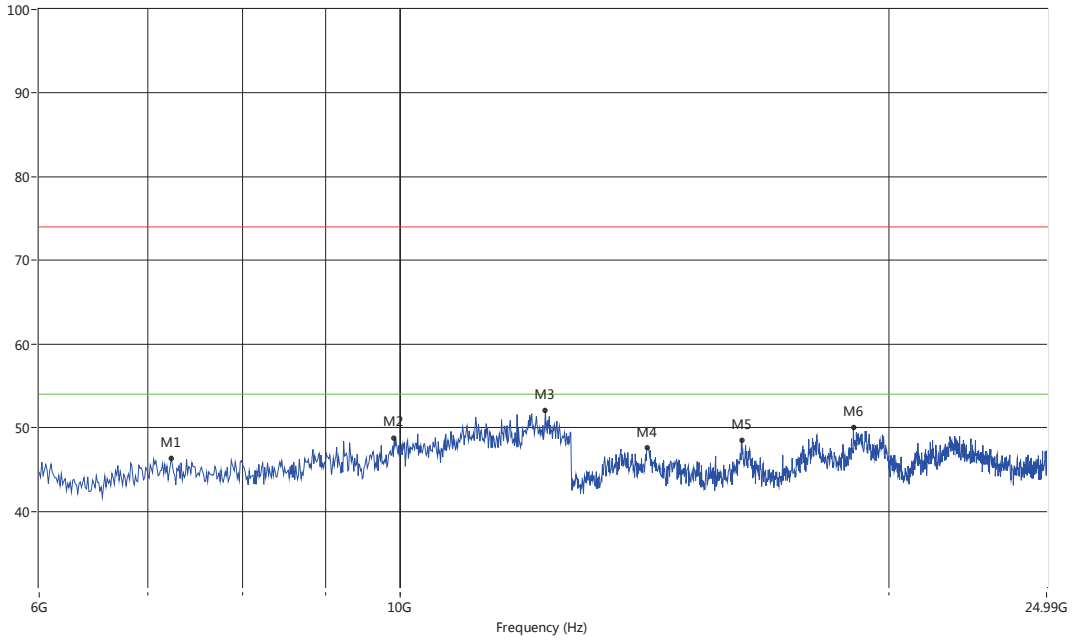

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1653.35 | 43.85 | | | -4.34 | 74.0 | -- | 54.0 | 10.15 | 68.70 | 100 | Horizontal | PASS |
| 1951.05 | 43.74 | | | -3.02 | 74.0 | -- | 54.0 | 10.26 | 157.50 | 100 | Horizontal | PASS |
| 2478.52 | 79.74 | | | -0.62 | 74.0 | -- | 54.0 | -25.74 | 7.80 | 100 | Horizontal | N/A |
| 2986.01 | 46.68 | | | 2.27 | 74.0 | -- | 54.0 | 7.32 | 95.80 | 100 | Horizontal | PASS |
| 4825.17 | 47.83 | | | 12.67 | 74.0 | -- | 54.0 | 6.17 | 360.70 | 100 | Horizontal | PASS |
| 5658.34 | 47.79 | | | 13.95 | 74.0 | -- | 54.0 | 6.21 | 346.00 | 100 | Horizontal | PASS |

## 8-DPSK HIGH CHANNEL 6GHz to 25GHz, ANT V




| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7246.67 | 45.88 | -- | -- | 74.0 | -- | 54.0 | 28.12 | 150 | 100 | Vertical | PASS |
| 9717.55 | 48.46 | -- | -- | 74.0 | -- | 54.0 | 25.54 | 32 | 100 | Vertical | PASS |
| 12289.52 | 51.66 | -- | -- | 74.0 | -- | 54.0 | 22.34 | 138 | 100 | Vertical | PASS |
| 14216.31 | 47.55 | -- | -- | 74.0 | -- | 54.0 | 26.45 | 287 | 100 | Vertical | PASS |
| 16316.97 | 48.05 | -- | -- | 74.0 | -- | 54.0 | 25.95 | 80 | 100 | Vertical | PASS |
| 19219.63 | 50.21 | -- | -- | 74.0 | -- | 54.0 | 23.79 | 191 | 100 | Vertical | PASS |

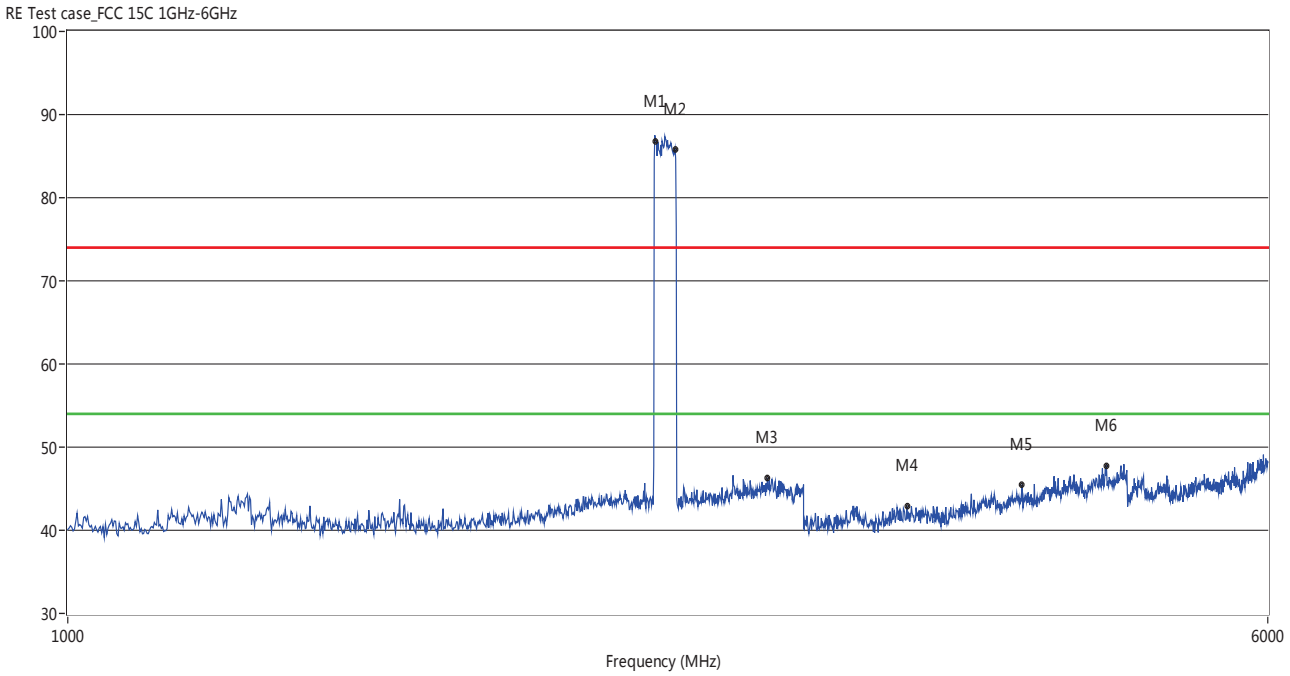
## 8-DPSK HIGH CHANNEL 6GHz to 25GHz, ANT H




| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7235.44 | 46.38 | -- | -- | 74.0 | -- | 54.0 | 27.62 | 220 | 100 | Horizontal | PASS |
| 9919.72 | 48.78 | -- | -- | 74.0 | -- | 54.0 | 25.22 | 119 | 100 | Horizontal | PASS |
| 12289.52 | 52.10 | -- | -- | 74.0 | -- | 54.0 | 21.90 | 112 | 100 | Horizontal | PASS |
| 14195.51 | 47.61 | -- | -- | 74.0 | -- | 54.0 | 26.39 | 200 | 100 | Horizontal | PASS |
| 16223.38 | 48.46 | -- | -- | 74.0 | -- | 54.0 | 25.54 | 150 | 100 | Horizontal | PASS |
| 19009.98 | 50.05 | -- | -- | 74.0 | -- | 54.0 | 23.95 | 67 | 100 | Horizontal | PASS |

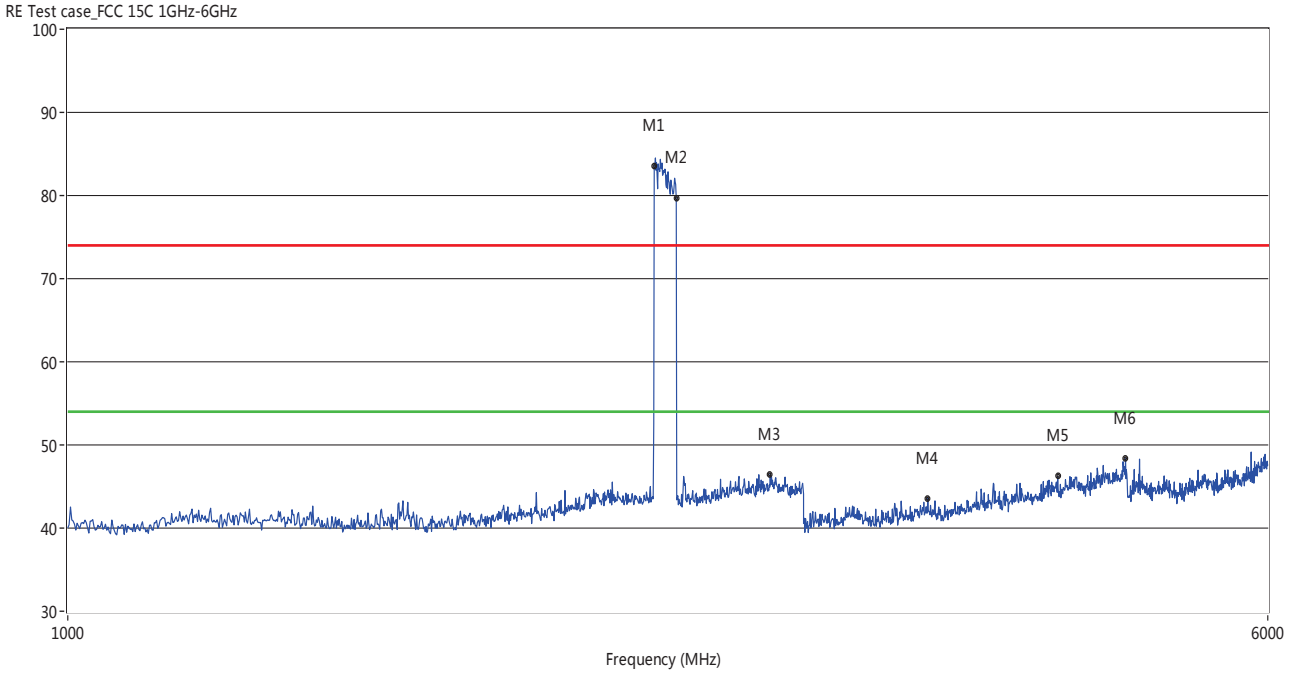
Hopping Mode:

## GFSK MODE 1GHz to 6GHz, ANT V



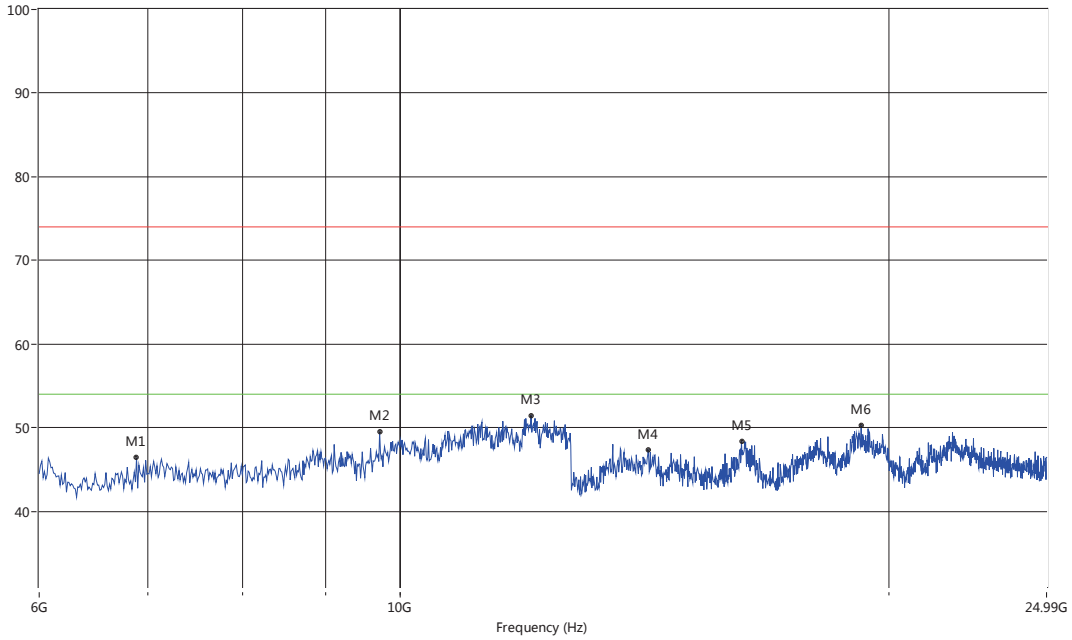

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2404.60 | 86.75 | | | -0.78 | 74.0 | -- | 54.0 | -32.75 | 288.50 | 100 | Vertical | N/A |
| 2476.52 | 85.88 | | | -0.57 | 74.0 | -- | 54.0 | -31.88 | 302.20 | 100 | Vertical | N/A |
| 2842.16 | 46.31 | | | 2.05 | 74.0 | -- | 54.0 | 7.69 | 205.40 | 100 | Vertical | PASS |
| 3500.50 | 42.96 | | | 8.89 | 74.0 | -- | 54.0 | 11.04 | 322.00 | 100 | Vertical | PASS |
| 4156.84 | 45.50 | | | 10.18 | 74.0 | -- | 54.0 | 8.50 | 248.40 | 100 | Vertical | PASS |
| 4714.29 | 47.81 | | | 11.81 | 74.0 | -- | 54.0 | 6.19 | 1.10 | 100 | Vertical | PASS |

## GFSK MODE 1GHz to 6GHz, ANT H



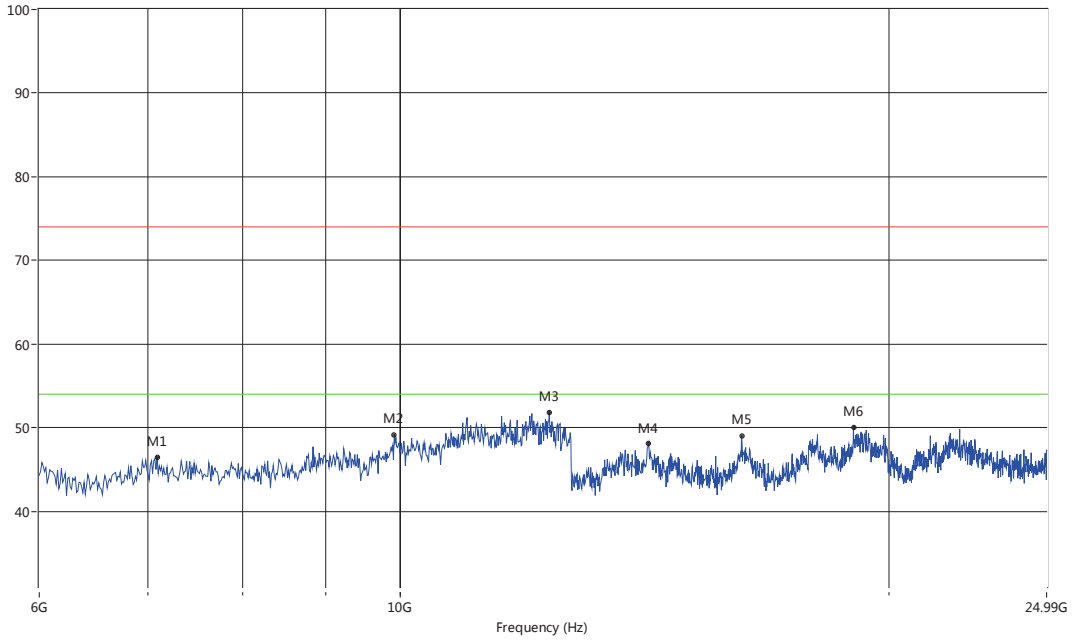

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2400.60 | 83.60 | | | -0.67 | 74.0 | -- | 54.0 | -29.60 | 294.10 | 100 | Horizontal | N/A |
| 2480.52 | 79.61 | | | -0.66 | 74.0 | -- | 54.0 | -25.61 | 1.00 | 100 | Horizontal | N/A |
| 2854.15 | 46.50 | | | 2.35 | 74.0 | -- | 54.0 | 7.50 | 0.00 | 100 | Horizontal | PASS |
| 3611.39 | 43.60 | | | 8.56 | 74.0 | -- | 54.0 | 10.40 | 41.90 | 100 | Horizontal | PASS |
| 4384.62 | 46.23 | | | 10.73 | 74.0 | -- | 54.0 | 7.77 | 247.80 | 100 | Horizontal | PASS |
| 4852.15 | 48.43 | | | 12.70 | 74.0 | -- | 54.0 | 5.57 | 164.40 | 100 | Horizontal | PASS |

## GFSK MODE 6GHz to 25GHz, ANT V



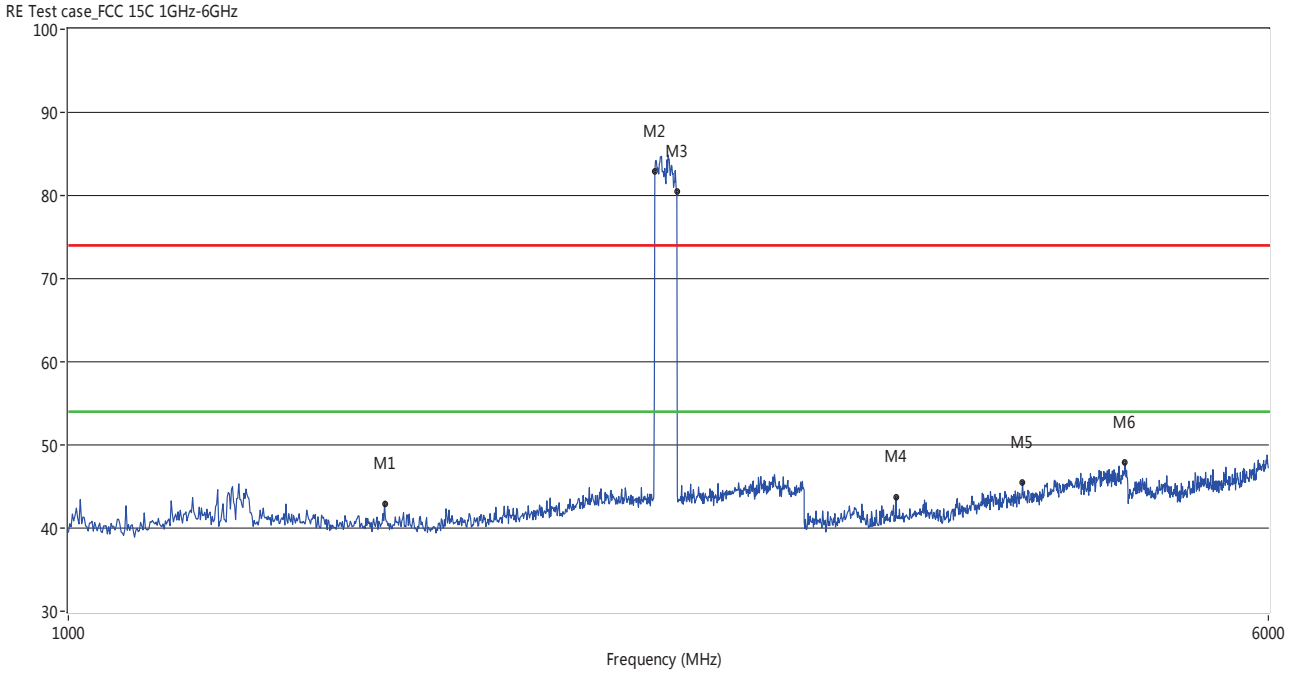

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6887.27 | 46.40 | -- | -- | 74.0 | -- | 54.0 | 27.60 | 210 | 100 | Vertical | PASS |
| 9717.55 | 49.52 | -- | -- | 74.0 | -- | 54.0 | 24.48 | 108 | 100 | Vertical | PASS |
| 12042.43 | 51.48 | -- | -- | 74.0 | -- | 54.0 | 22.52 | 140 | 100 | Vertical | PASS |
| 14216.31 | 47.37 | -- | -- | 74.0 | -- | 54.0 | 26.63 | 33 | 100 | Vertical | PASS |
| 16223.38 | 48.40 | -- | -- | 74.0 | -- | 54.0 | 25.60 | 54 | 100 | Vertical | PASS |
| 19219.63 | 50.28 | -- | -- | 74.0 | -- | 54.0 | 23.72 | 162 | 100 | Vertical | PASS |

## GFSK MODE 6GHz to 25GHz, ANT H



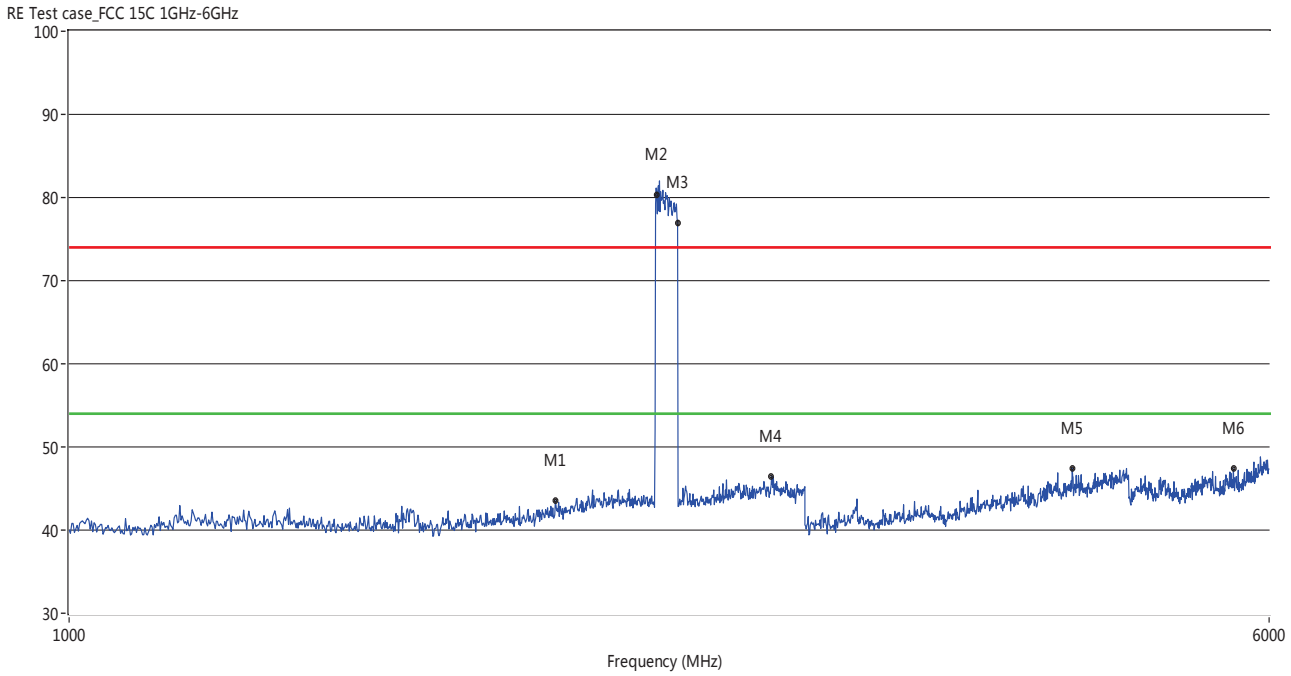

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7089.43 | 46.48 | -- | -- | 74.0 | -- | 54.0 | 27.52 | 257 | 100 | Horizontal | PASS |
| 9919.72 | 49.11 | -- | -- | 74.0 | -- | 54.0 | 24.89 | 176 | 100 | Horizontal | PASS |
| 12356.91 | 51.84 | -- | -- | 74.0 | -- | 54.0 | 22.16 | 160 | 100 | Horizontal | PASS |
| 14226.70 | 48.12 | -- | -- | 74.0 | -- | 54.0 | 25.88 | 351 | 100 | Horizontal | PASS |
| 16223.38 | 48.98 | -- | -- | 74.0 | -- | 54.0 | 25.02 | 77 | 100 | Horizontal | PASS |
| 19009.98 | 50.05 | -- | -- | 74.0 | -- | 54.0 | 23.95 | 217 | 100 | Horizontal | PASS |

## Π/4-DQPSK MODE 1GHz to 6GHz, ANT V



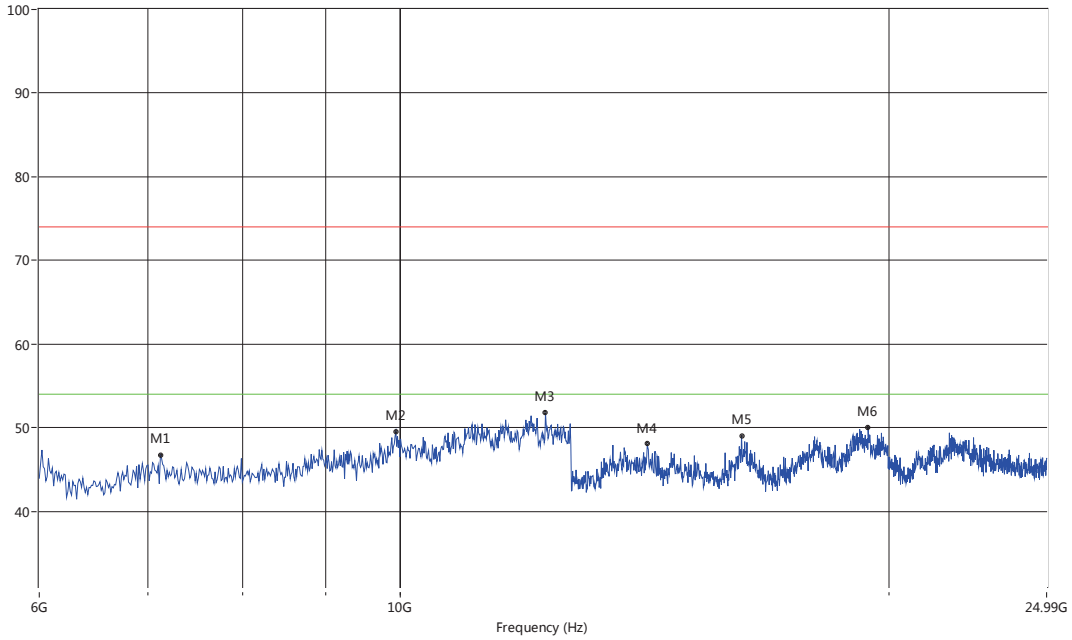

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1603.40 | 42.93 | | | -4.43 | 74.0 | -- | 54.0 | 11.07 | 2.20 | 100 | Vertical | PASS |
| 2400.60 | 82.85 | | | -0.67 | 74.0 | -- | 54.0 | -28.85 | 294.60 | 100 | Vertical | N/A |
| 2480.52 | 80.53 | | | -0.66 | 74.0 | -- | 54.0 | -26.53 | 280.50 | 100 | Vertical | N/A |
| 3440.56 | 43.71 | | | 8.88 | 74.0 | -- | 54.0 | 10.29 | 169.60 | 100 | Vertical | PASS |
| 4156.84 | 45.51 | | | 10.18 | 74.0 | -- | 54.0 | 8.49 | 27.50 | 100 | Vertical | PASS |
| 4843.16 | 47.84 | | | 13.03 | 74.0 | -- | 54.0 | 6.16 | 291.90 | 100 | Vertical | PASS |

## Π/4-DQPSK MODE 1GHz to 6GHz, ANT H



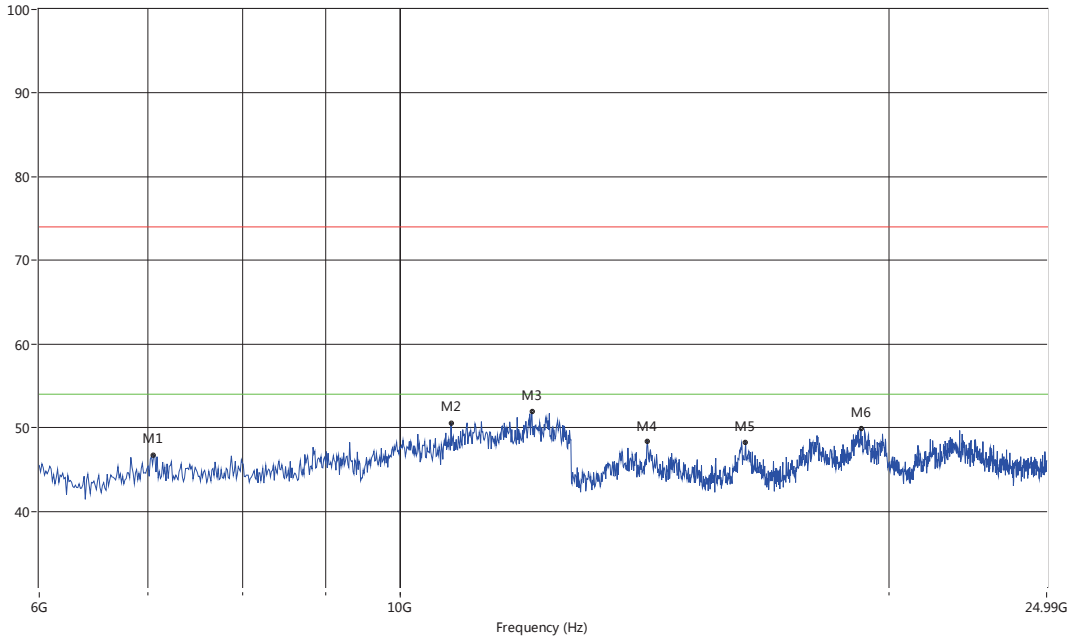

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2066.93 | 43. 1 | | | -2.29 | 4.0 | -- | 54.0 | 10.49 | 241.30 | 100 | Horizontal | PASS |
| 2404.60 | 80.30 | | | -0.78 | 74.0 | -- | 54.0 | -26.30 | 5.00 | 100 | Horizontal | N/A |
| 2480.52 | 76.92 | | | -0.66 | 74.0 | -- | 54.0 | -22.92 | 0.60 | 100 | Horizontal | N/A |
| 2854.15 | 46.50 | | | 2.35 | 74.0 | -- | 54.0 | 7.50 | 241.30 | 100 | Horizontal | PASS |
| 4471.53 | 47.44 | | | 11.07 | 74.0 | -- | 54.0 | 6.56 | 360.30 | 100 | Horizontal | PASS |
| 5688.31 | 47.36 | | | 14.07 | 74.0 | -- | 54.0 | 6.64 | 346.00 | 100 | Horizontal | PASS |

## Π/4-DQPSK MODE 6GHz to 25GHz, ANT V



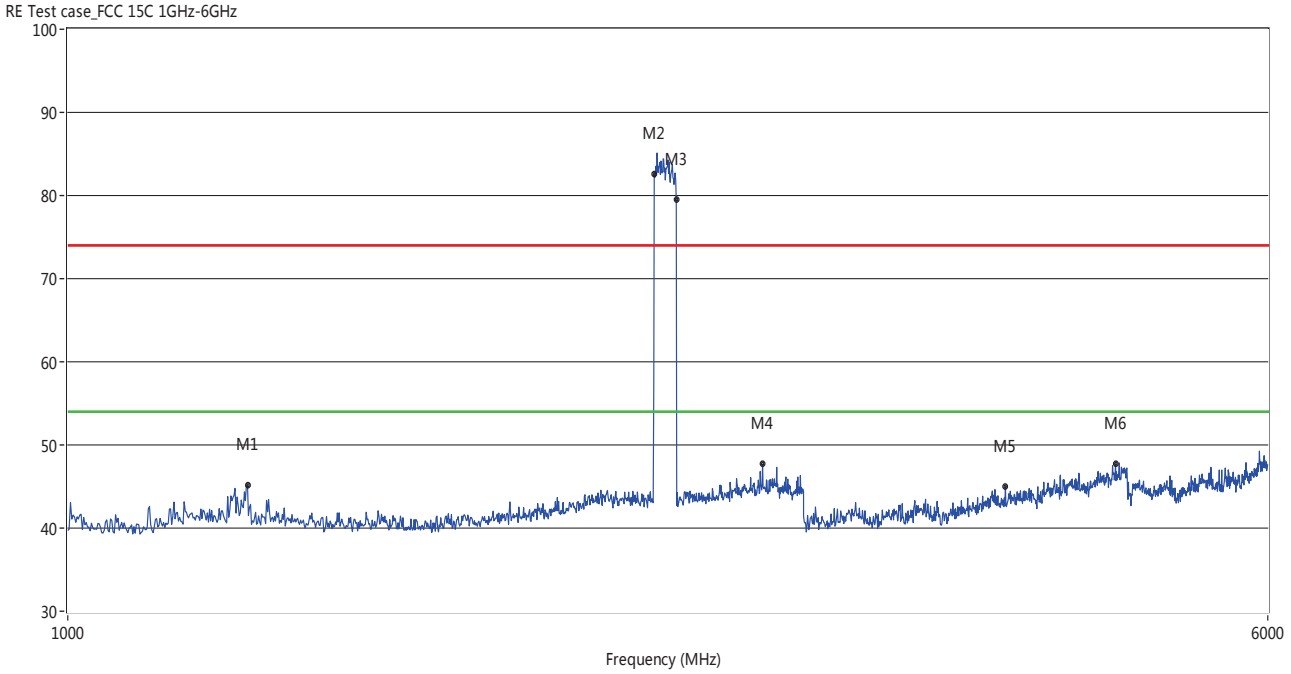

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7123.13 | 46.71 | -- | -- | 74.0 | -- | 54.0 | 7.29 | 38 | 100 | Vertical | PASS |
| 9942.18 | 49.54 | -- | -- | 74.0 | -- | 54.0 | 24.46 | 230 | 100 | Vertical | PASS |
| 12289.52 | 51.77 | -- | -- | 74.0 | -- | 54.0 | 22.23 | 53 | 100 | Vertical | PASS |
| 14195.51 | 48.07 | -- | -- | 74.0 | -- | 54.0 | 25.93 | 270 | 100 | Vertical | PASS |
| 16223.38 | 49.05 | -- | -- | 74.0 | -- | 54.0 | 24.95 | 102 | 100 | Vertical | PASS |
| 19409.32 | 49.95 | -- | -- | 74.0 | -- | 54.0 | 24.05 | 357 | 100 | Vertical | PASS |

## Π/4-DQPSK MODE 6GHz to 25GHz, ANT H



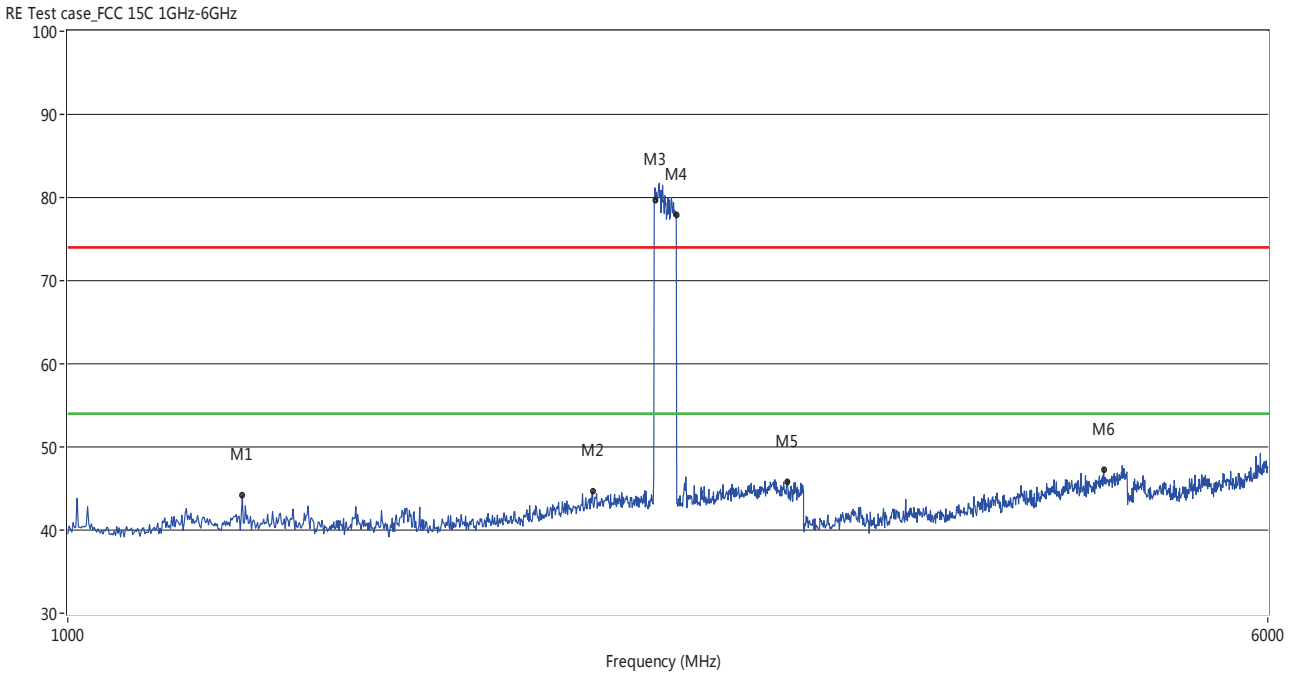

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7055.74 | 46.71 | -- | -- | 74.0 | -- | 54.0 | 7.29 | 330 | 100 | Horizontal | PASS |
| 10750.83 | 50.54 | -- | -- | 74.0 | -- | 54.0 | 23.46 | 193 | 100 | Horizontal | PASS |
| 12053.66 | 51.89 | -- | -- | 74.0 | -- | 54.0 | 22.11 | 302 | 100 | Horizontal | PASS |
| 14195.51 | 48.38 | -- | -- | 74.0 | -- | 54.0 | 25.62 | 352 | 100 | Horizontal | PASS |
| 16316.97 | 48.27 | -- | -- | 74.0 | -- | 54.0 | 25.73 | 247 | 100 | Horizontal | PASS |
| 19209.65 | 49.87 | -- | -- | 74.0 | -- | 54.0 | 24.13 | 76 | 100 | Horizontal | PASS |

## 8-DPSK MODE 1GHz to 6GHz, ANT V



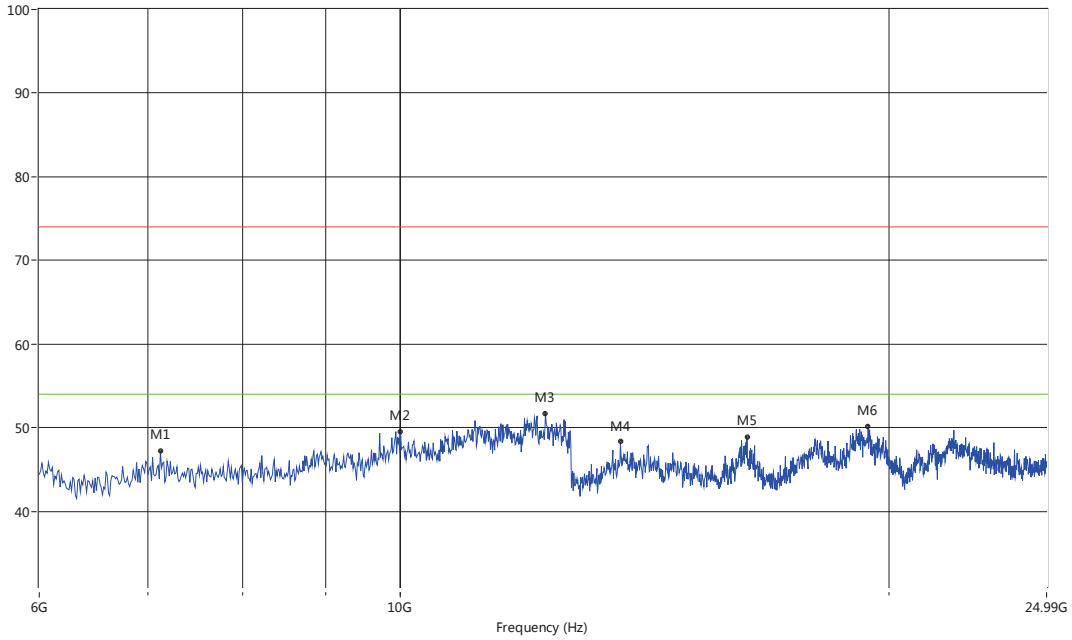

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1307.69 | 45.19 | | | -4.05 | 74.0 | -- | 54.0 | 8.81 | 2.10 | 100 | Vertical | PASS |
| 2400.60 | 82.65 | | | -0.67 | 74.0 | -- | 54.0 | -28.65 | 60.70 | 100 | Vertical | N/A |
| 2480.52 | 79.56 | | | -0.66 | 74.0 | -- | 54.0 | -25.56 | 307.00 | 100 | Vertical | N/A |
| 2822.18 | 47.70 | | | 1.93 | 74.0 | -- | 54.0 | 6.30 | 293.30 | 100 | Vertical | PASS |
| 4054.95 | 45.05 | | | 10.13 | 74.0 | -- | 54.0 | 8.95 | 346.30 | 100 | Vertical | PASS |
| 4780.22 | 47.72 | | | 12.30 | 74.0 | -- | 54.0 | 6.28 | 155.30 | 100 | Vertical | PASS |

## 8-DPSK MODE 1GHz to 6GHz, ANT H



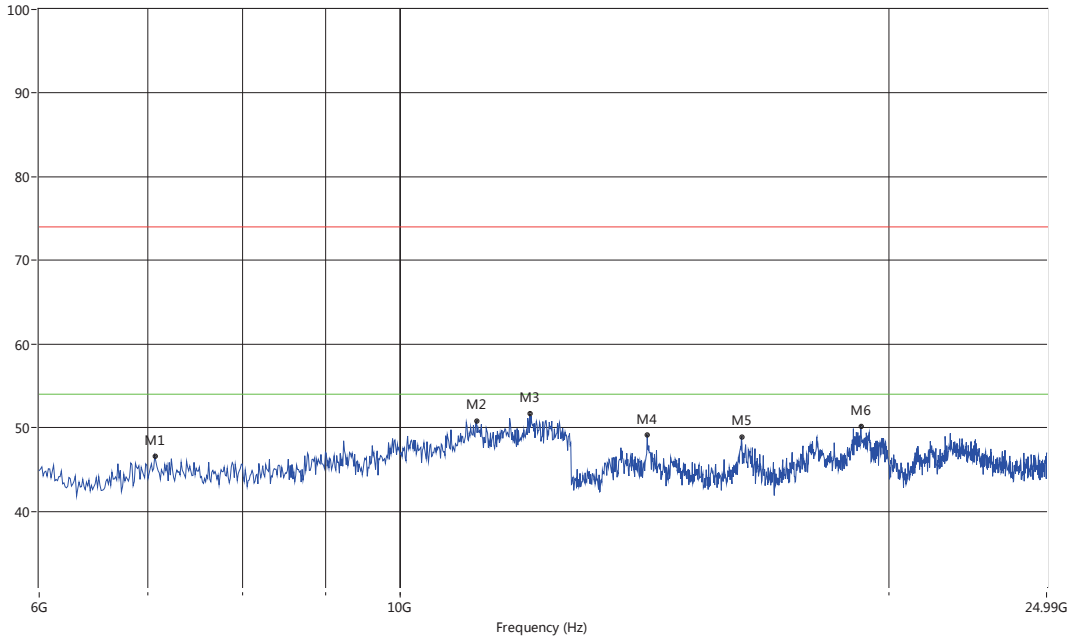

| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | Factor (dB) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1297.70 | 44.16 | | | -4.13 | 74.0 | -- | 54.0 | 9.84 | 75.20 | 100 | Horizontal | PASS |
| 2188.81 | 44.61 | | | -0.68 | 74.0 | -- | 54.0 | 9.39 | 212.00 | 100 | Horizontal | PASS |
| 2406.59 | 79.71 | | | -0.78 | 74.0 | -- | 54.0 | -25.71 | 7.60 | 100 | Horizontal | N/A |
| 2480.52 | 77.97 | | | -0.66 | 74.0 | -- | 54.0 | -23.97 | 1.10 | 100 | Horizontal | N/A |
| 2928.07 | 45.85 | | | 2.40 | 74.0 | -- | 54.0 | 8.15 | 354.40 | 100 | Horizontal | PASS |
| 4696.30 | 47.25 | | | 11.72 | 74.0 | -- | 54.0 | 6.75 | 301.80 | 100 | Horizontal | PASS |

## 8-DPSK MODE 6GHz to 25GHz, ANT V




| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7123.13 | 47.21 | -- | -- | 74.0 | -- | 54.0 | 26.79 | 102 | 100 | Vertical | PASS |
| 10009.57 | 49.55 | -- | -- | 74.0 | -- | 54.0 | 24.45 | 9 | 100 | Vertical | PASS |
| 12289.52 | 51.69 | -- | -- | 74.0 | -- | 54.0 | 22.31 | 248 | 100 | Vertical | PASS |
| 13665.14 | 48.31 | -- | -- | 74.0 | -- | 54.0 | 25.69 | 87 | 100 | Vertical | PASS |
| 16348.17 | 48.82 | -- | -- | 74.0 | -- | 54.0 | 25.18 | 347 | 100 | Vertical | PASS |
| 19409.32 | 50.12 | -- | -- | 74.0 | -- | 54.0 | 23.88 | 219 | 100 | Vertical | PASS |

## 8-DPSK MODE 6GHz to 25GHz, ANT H




| Frequency (MHz) | Peak Level (dBuV/m) | Q-peak Level (dBuV/m) | Average Level (dBuV/m) | PK Limit (dBuV/m) | QP Limit (dBuV/m) | AV Limit (dBuV/m) | Margin (dB) | Table (o) | Height (cm) | ANT | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7066.97 | 46.63 | -- | -- | 74.0 | -- | 54.0 | 27.37 | 309 | 100 | Horizontal | PASS |
| 11143.93 | 50.72 | -- | -- | 74.0 | -- | 54.0 | 23.28 | 39 | 100 | Horizontal | PASS |
| 12019.97 | 51.65 | -- | -- | 74.0 | -- | 54.0 | 22.35 | 144 | 100 | Horizontal | PASS |
| 14195.51 | 49.15 | -- | -- | 74.0 | -- | 54.0 | 24.85 | 298 | 100 | Horizontal | PASS |
| 16223.38 | 48.91 | -- | -- | 74.0 | -- | 54.0 | 25.09 | 356 | 100 | Horizontal | PASS |
| 19209.65 | 50.18 | -- | -- | 74.0 | -- | 54.0 | 23.82 | 272 | 100 | Horizontal | PASS |

## A.8 Band Edge

Test Data

The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots are show the worst case.

Test Plots

GFSK LOW CHANNEL, PEAK

## GFSK LOW CHANNEL, AVERAGE


Date: 21.AUG.2014 12:02:35

## GFSK HIGH CHANNEL, PEAK


Date: 21.AUG.2014 14:20:31

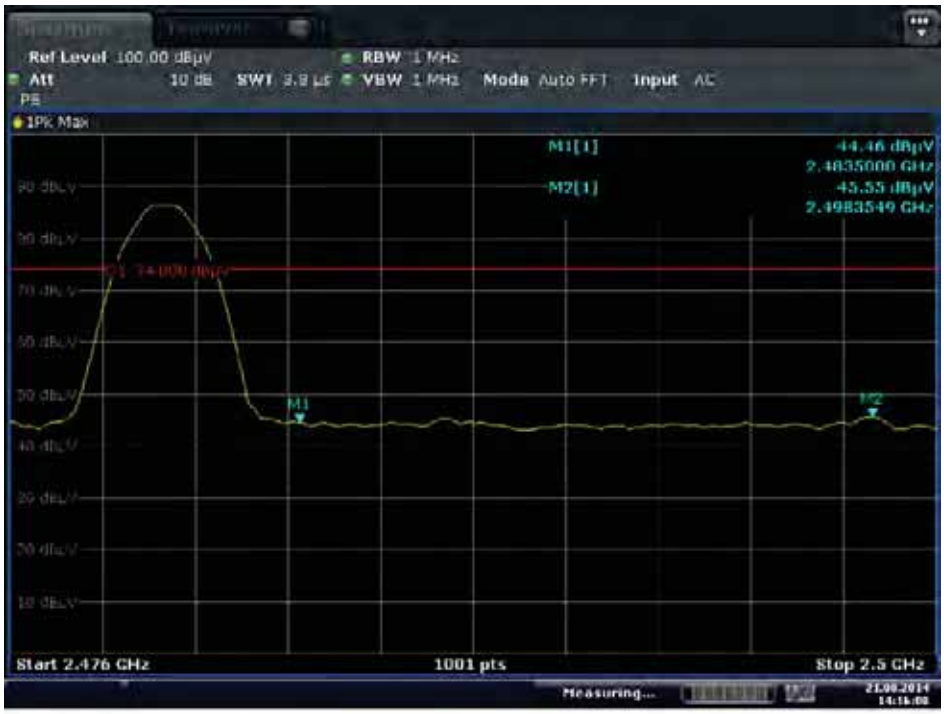
## GFSK HIGH CHANNEL, AVERAGE


## π /4DQPSK LOW CHANNEL, PEAK

## π /4DQPSK LOW CHANNEL, AVERAGE


Date: 21.AUG.2014 12:04:41

## π /4DQPSK HIGH CHANNEL, PEAK




Date: 21.AUG.2014 14:16:00

## π /4DQPSK HIGH CHANNEL, AVERAGE


Date: 21.AUG.2014 14:17:14

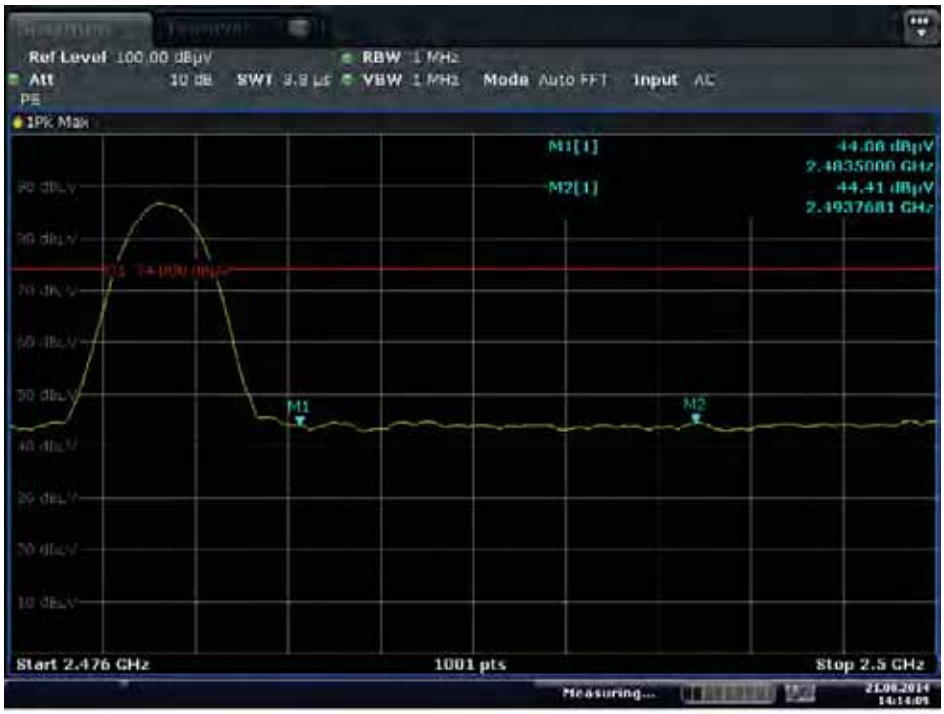
## 8-DPSK LOW CHANNEL, PEAK


Date: 21.AUG.2014 12:00:15

## 8-DPSK LOW CHANNEL, AVERAGE


Date: 21.AUG.2014 12:00:32

## 8-DPSK HIGH CHANNEL, PEAK




Date: 21.AUG.2014 14:14:09

## 8-DPSK HIGH CHANNEL, AVERAGE

Hopping Mode:

## GFSK LOW FREQUENCY BAND, PEAK


Date: 20.AUG.2014 11:01:46

## GFSK LOW FREQUENCY BAND, AVERAGE


Date: 20.AUG.2014 11:05:16

## GFSK HIGH FREQUENCY BAND, PEAK


Date: 20.AUG.2014 11:09:13

## GFSK HIGH FREQUENCY BAND, AVERAGE


Date: 20.AUG.2014 11:07:32

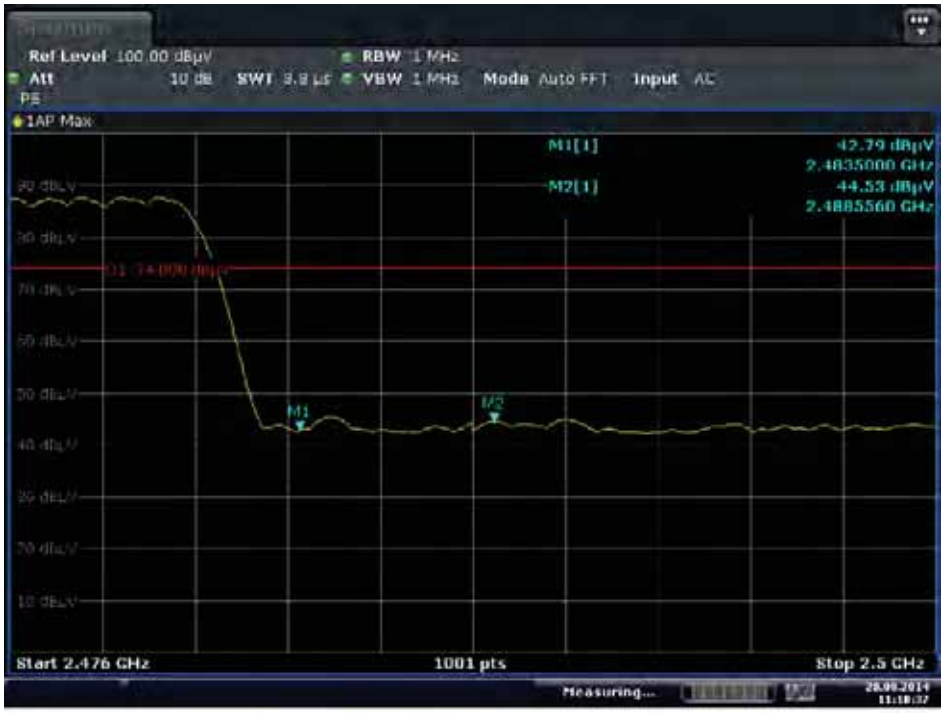
## π /4DQPSK LOW FREQUENCY BAND, PEAK


Date: 20.AUG.2014 11:13:22

## π /4DQPSK LOW FREQUENCY BAND, AVERAGE


Date: 20.AUG.2014 11:14:24

## π /4DQPSK HIGH FREQUENCY BAND, PEAK




Date: 20.AUG.2014 11:10:37

## π /4DQPSK HIGH FREQUENCY BAND, AVERAGE


Date: 20.AUG.2014 11:10:42

## 8-DPSK LOW FREQUENCY BAND, PEAK


Date: 20.AUG.2014 11:12:44

## 8-DPSK LOW FREQUENCY BAND, AVERAGE


Date: 20.AUG.2014 11:15:34

## 8-DPSK HIGH FREQUENCY BAND, PEAK

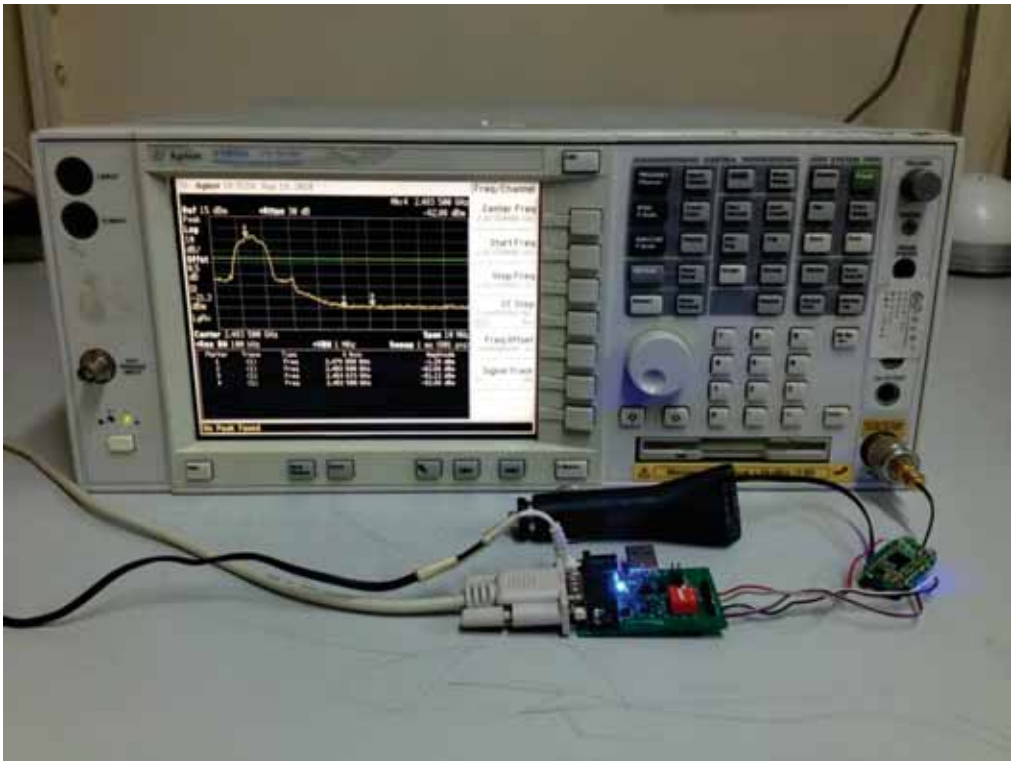

Date: 20.AUG.2014 11:11:21

## 8-DPSK HIGH FREQUENCY BAND, AVERAGE

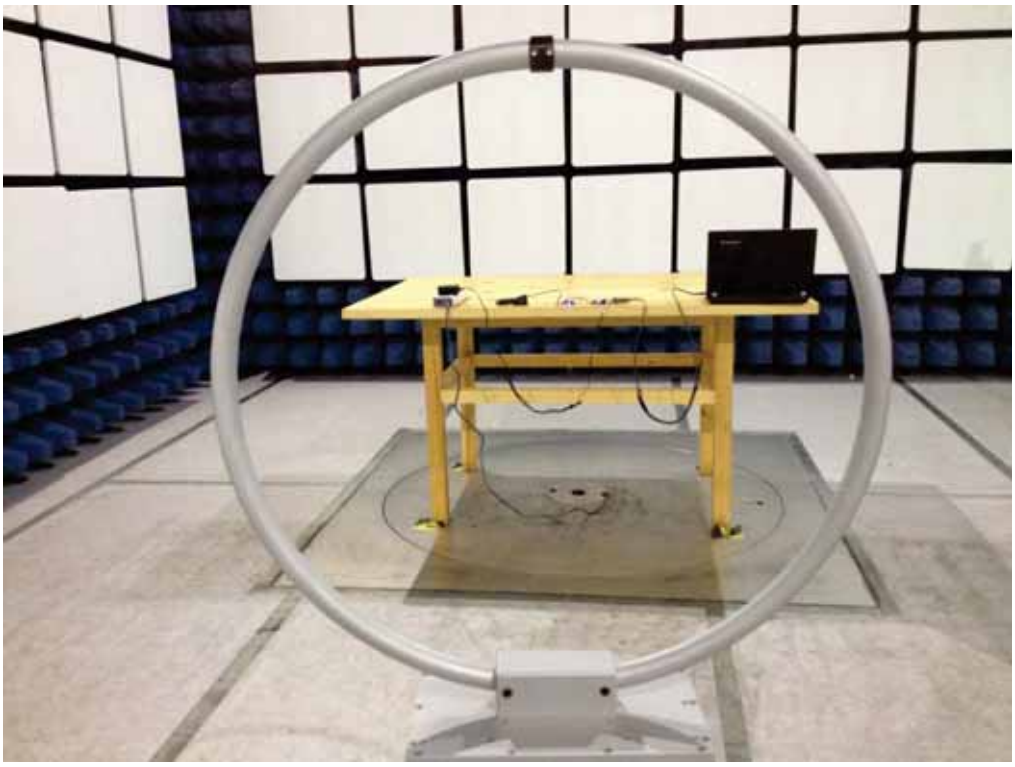

Date: 20.AUG.2014 11:17:05

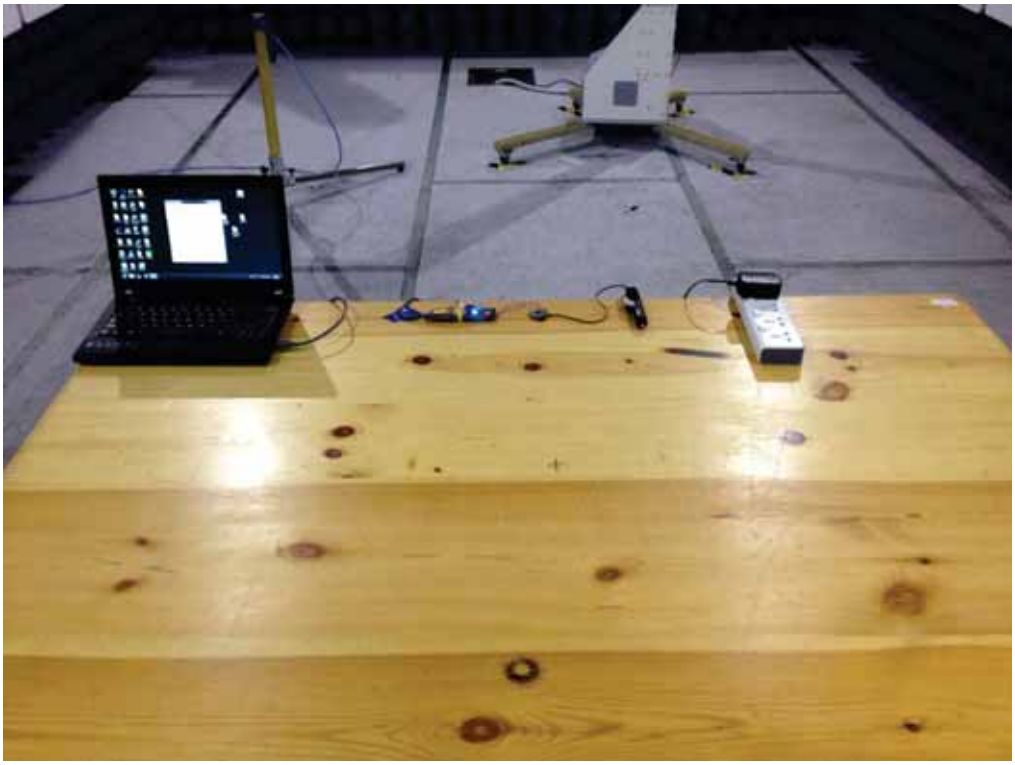
# ANNEX B TEST SETUP PHOTOS

## B.1 Conducted Test Photo

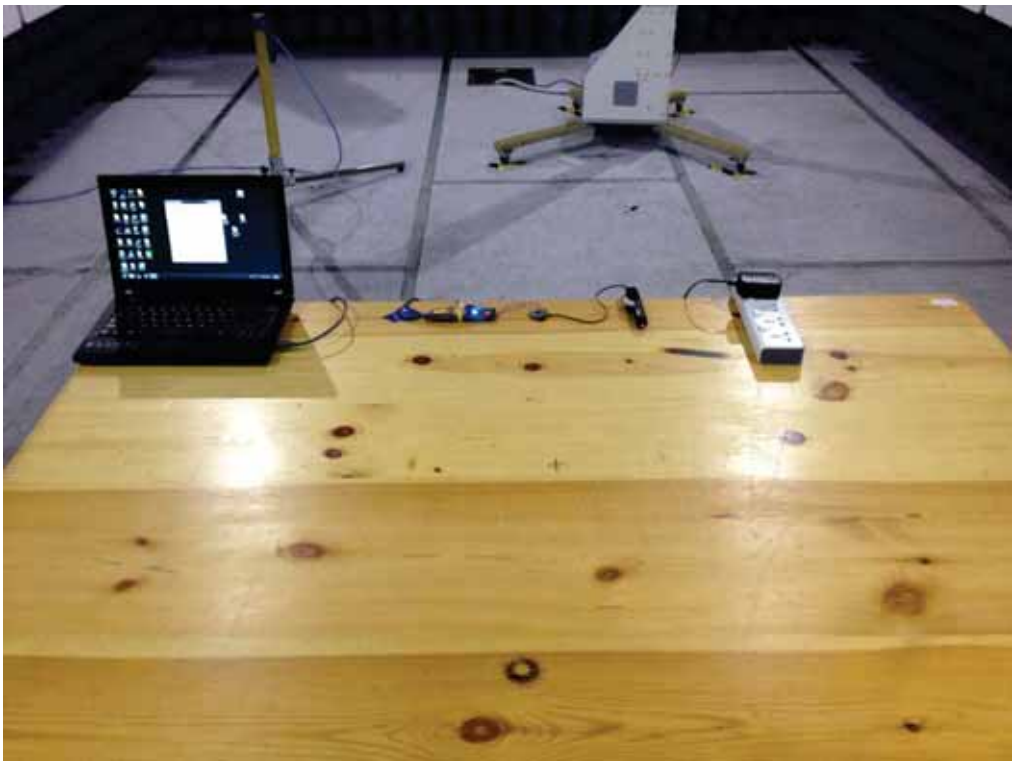


## B.2 Radiated Test Photo

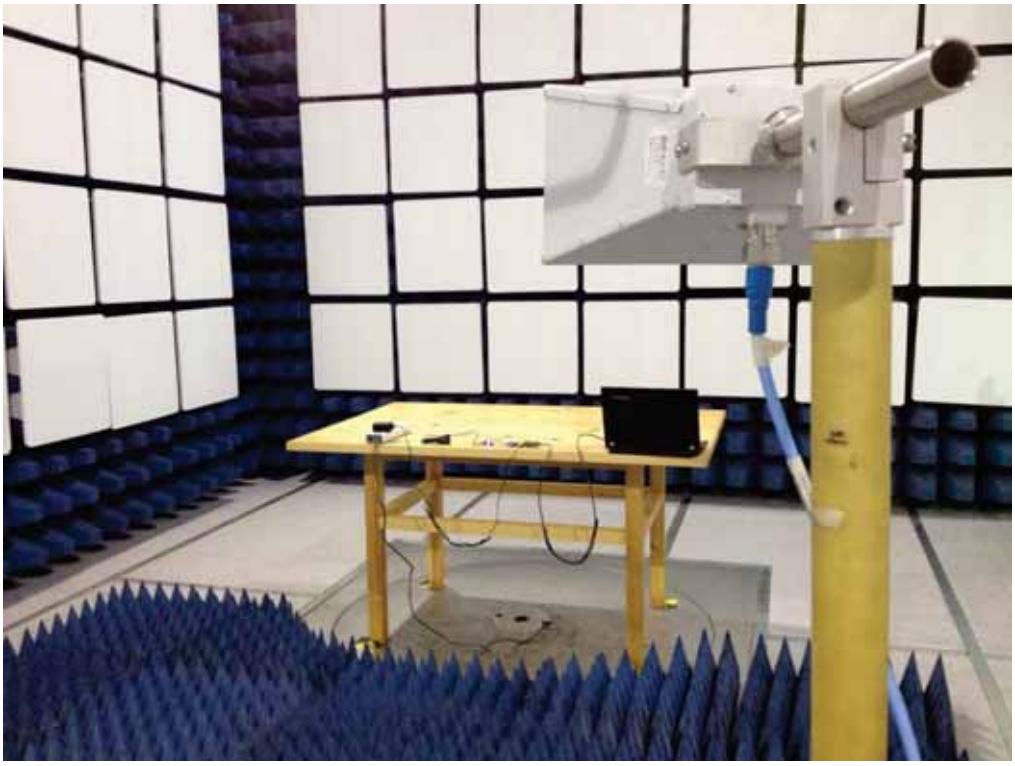


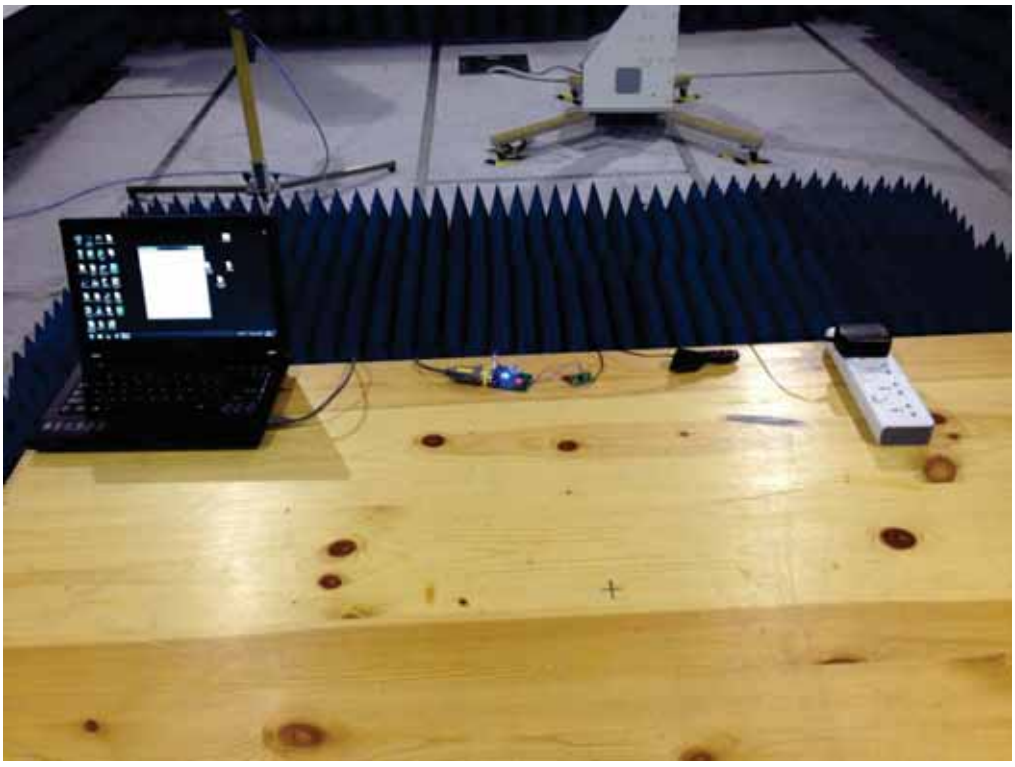


Below 30MHz



30MHz to 1GHz





Above 1GHz

# ANNEX C EUT PHOTOS

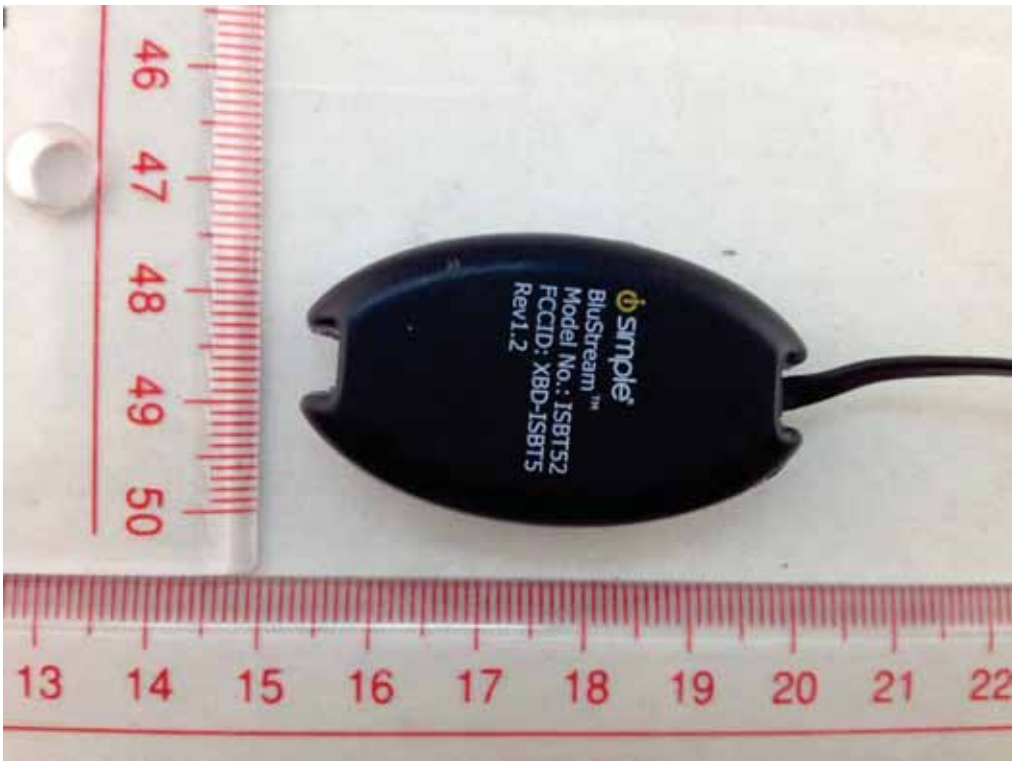
## C.1 Appearance of the EUT

THE OVERALL FRONT OF EUT

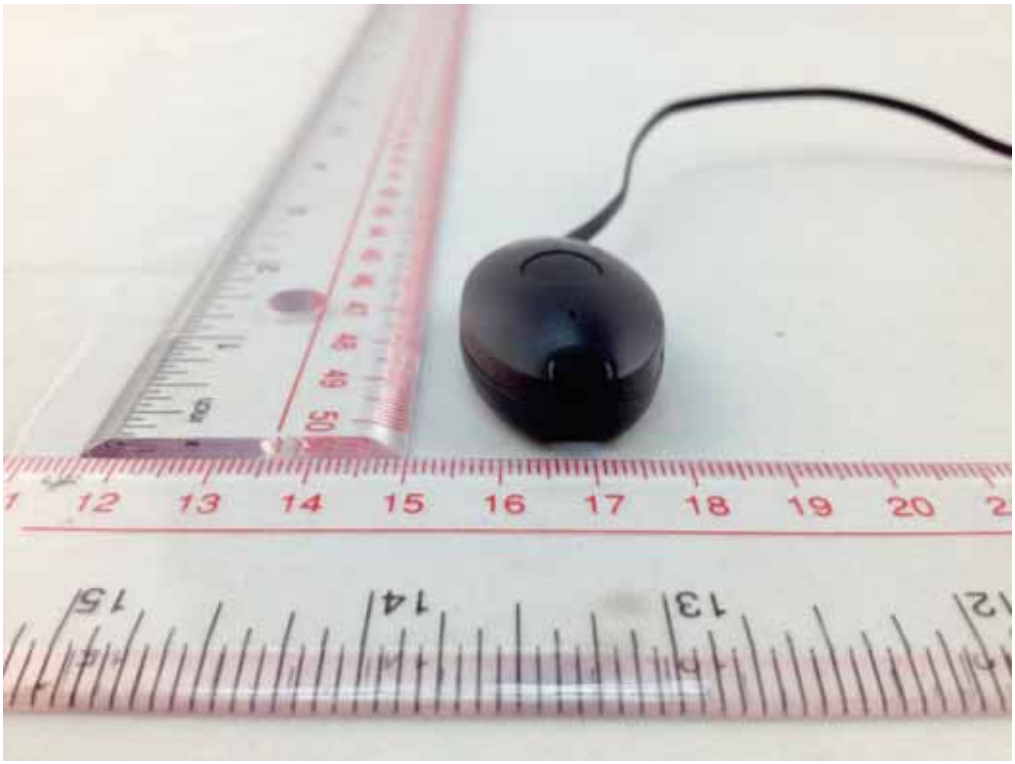
THE OVERALL BACK OF EUT

BT PART:

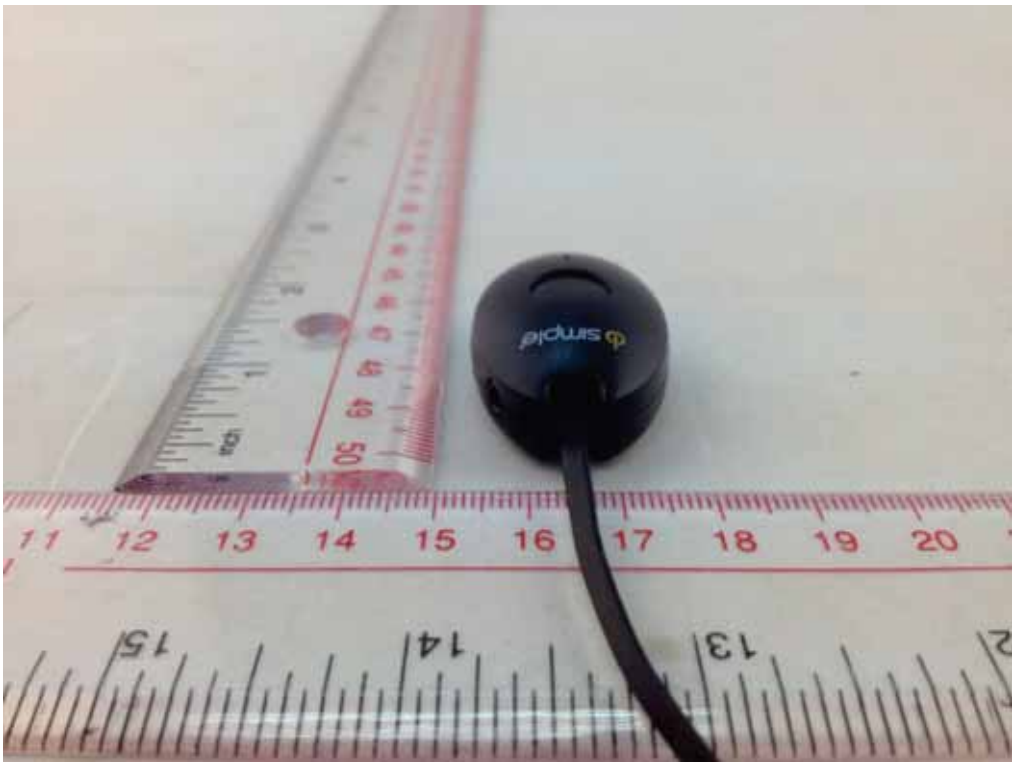

THE FRONT OF BT




THE BACK OF BT

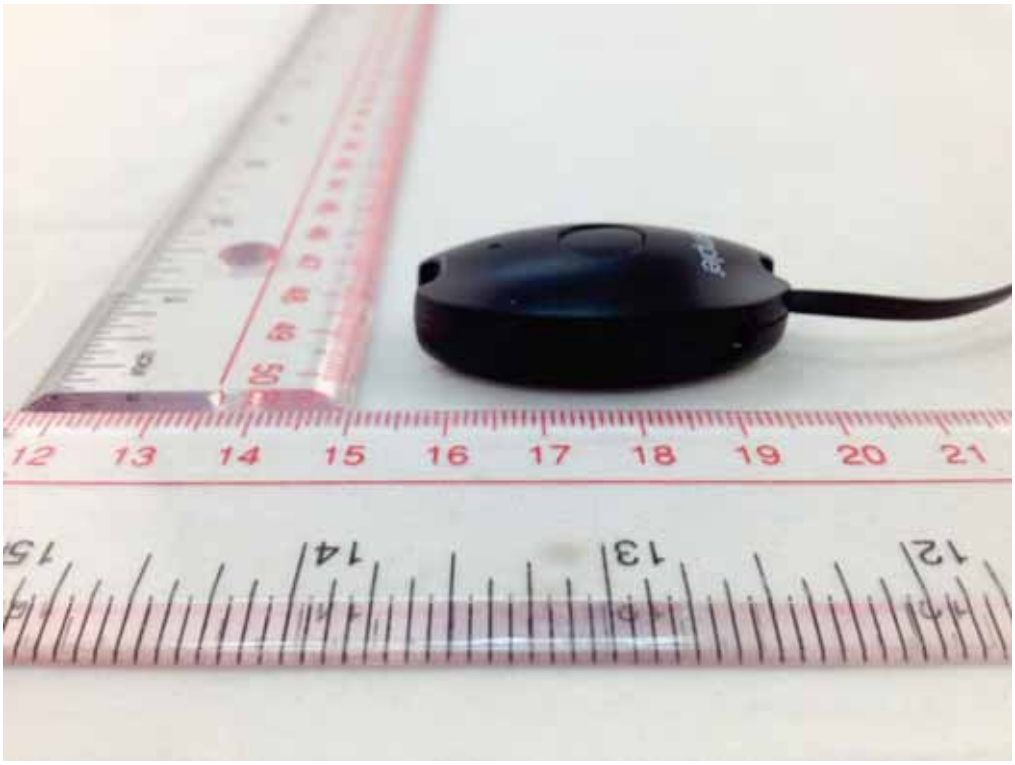


THE DOWN OF BT



THE UP OF BT


THE LEFT OF BT

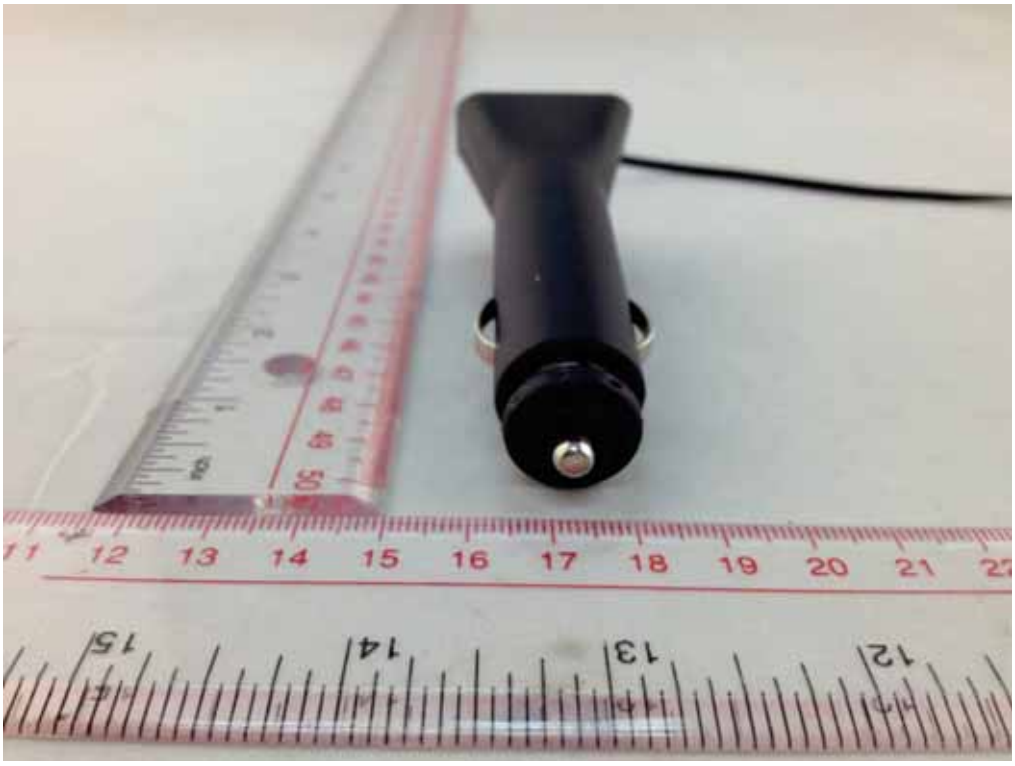



THE RIGHT OF BT

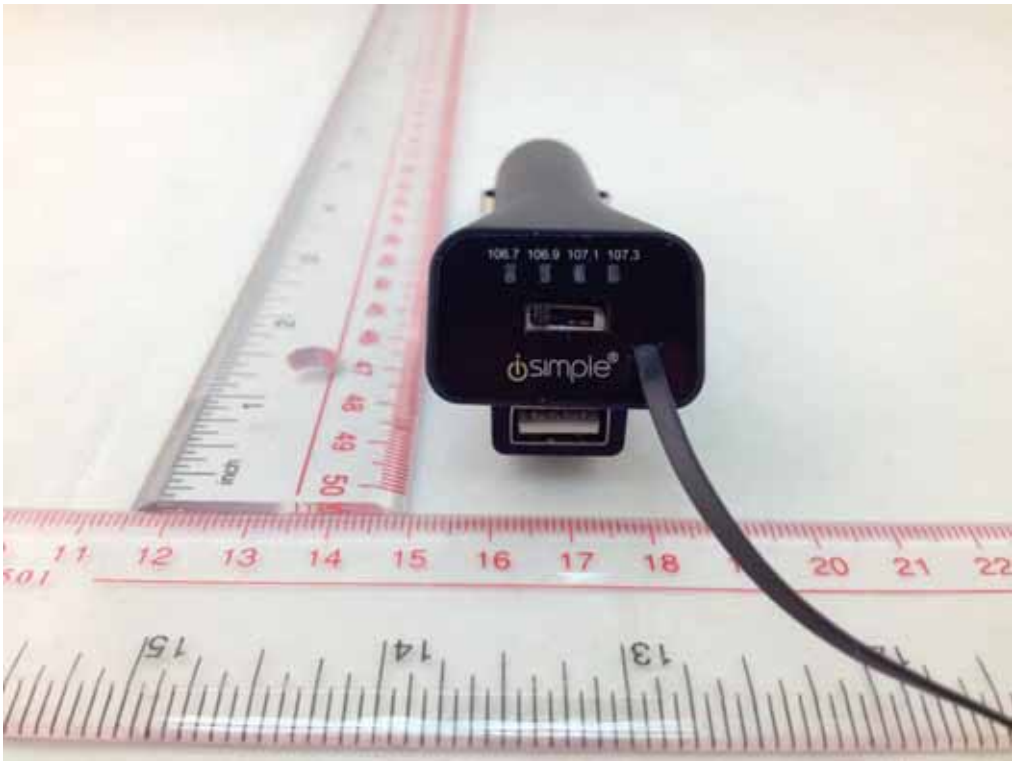
FM PART


THE FRONT OF FM


THE BACK OF FM



THE DOWN OF FM




THE UP OF FM

THE LEFT OF FM

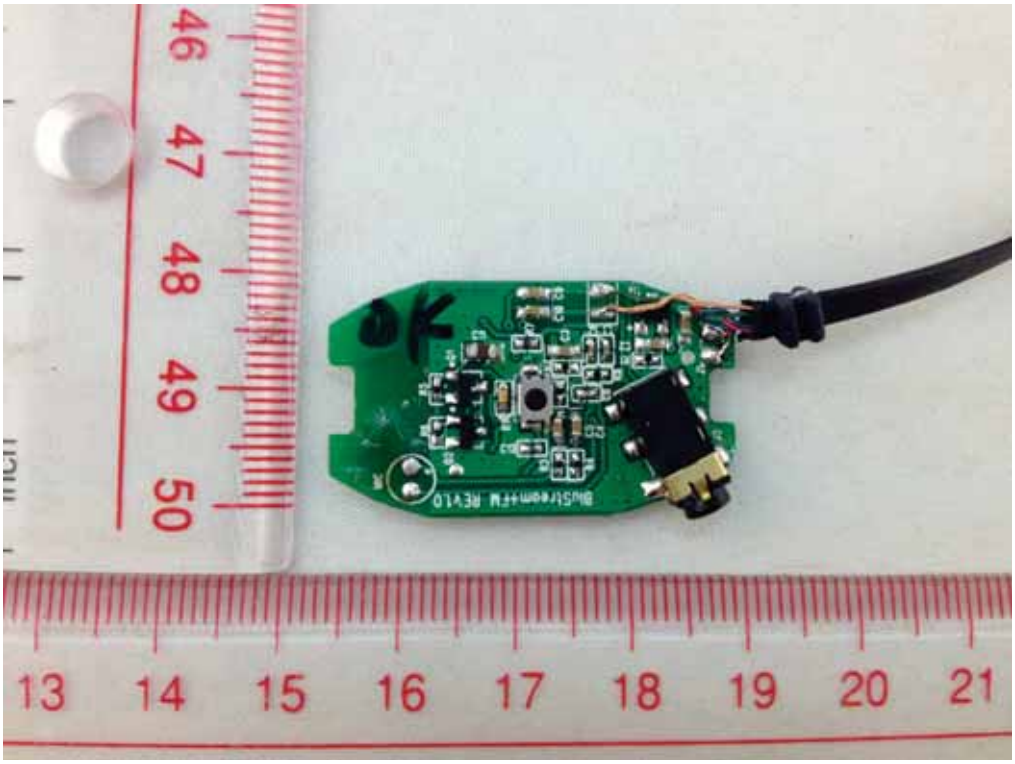
THE RIGHT OF FM


THE AUDIO LINE OF EUT

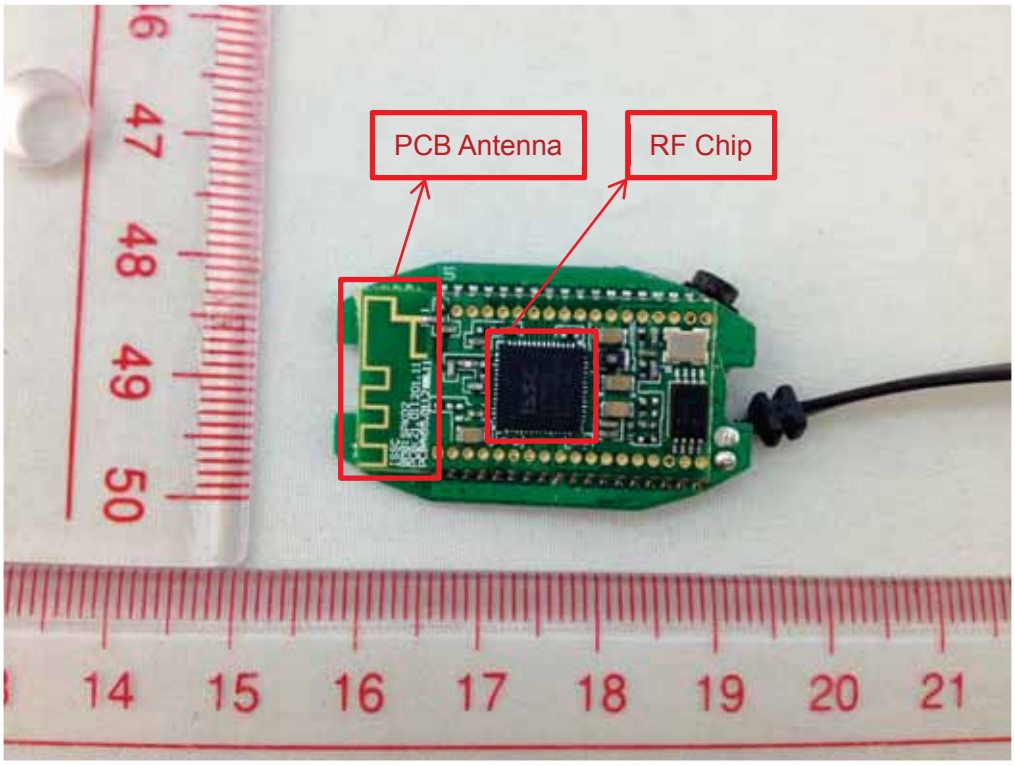
## C.2 Inside of the EUT

BT PART

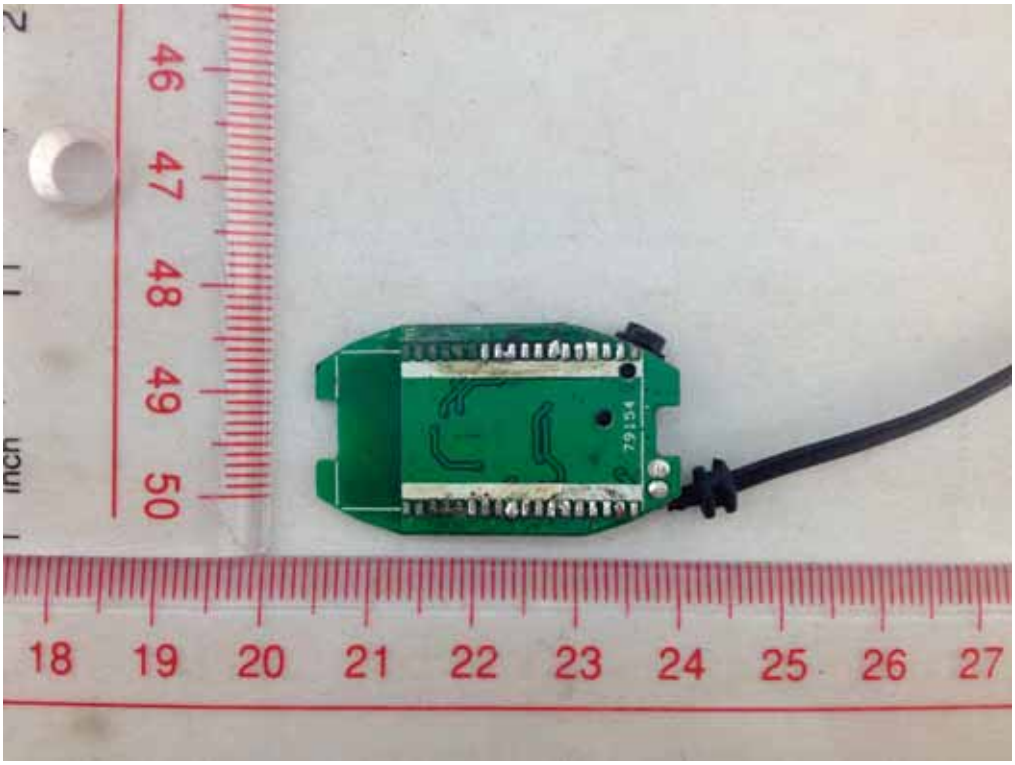
BT UNCOVER VIEW



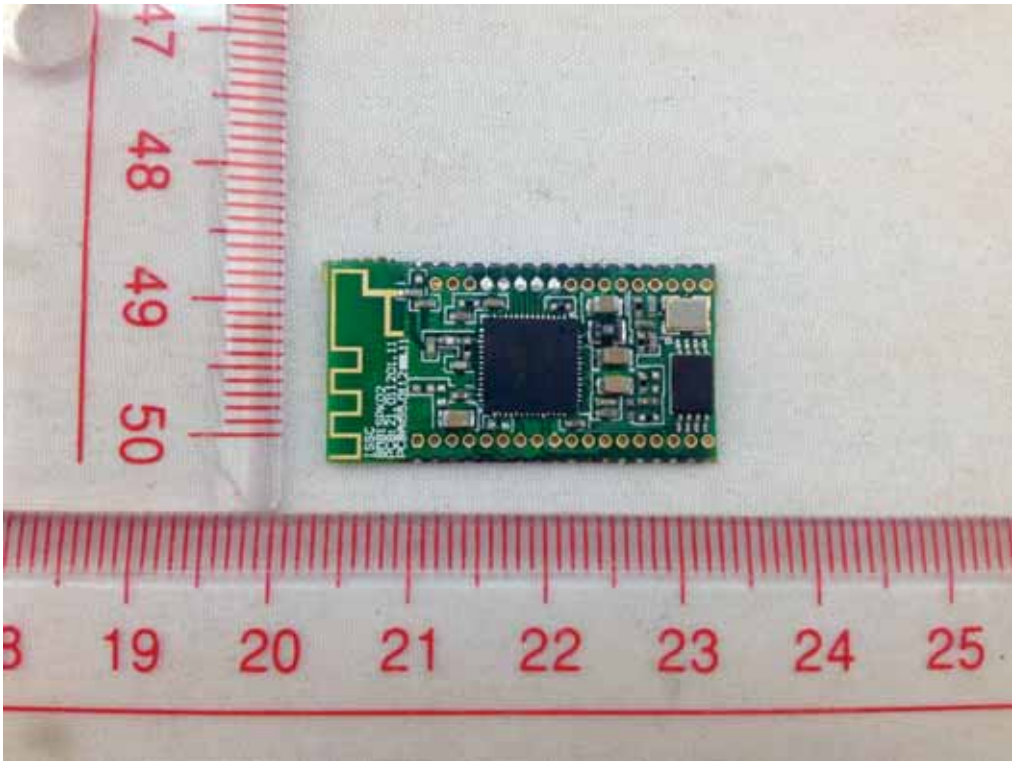
MAIN BOARD TOP VIEW



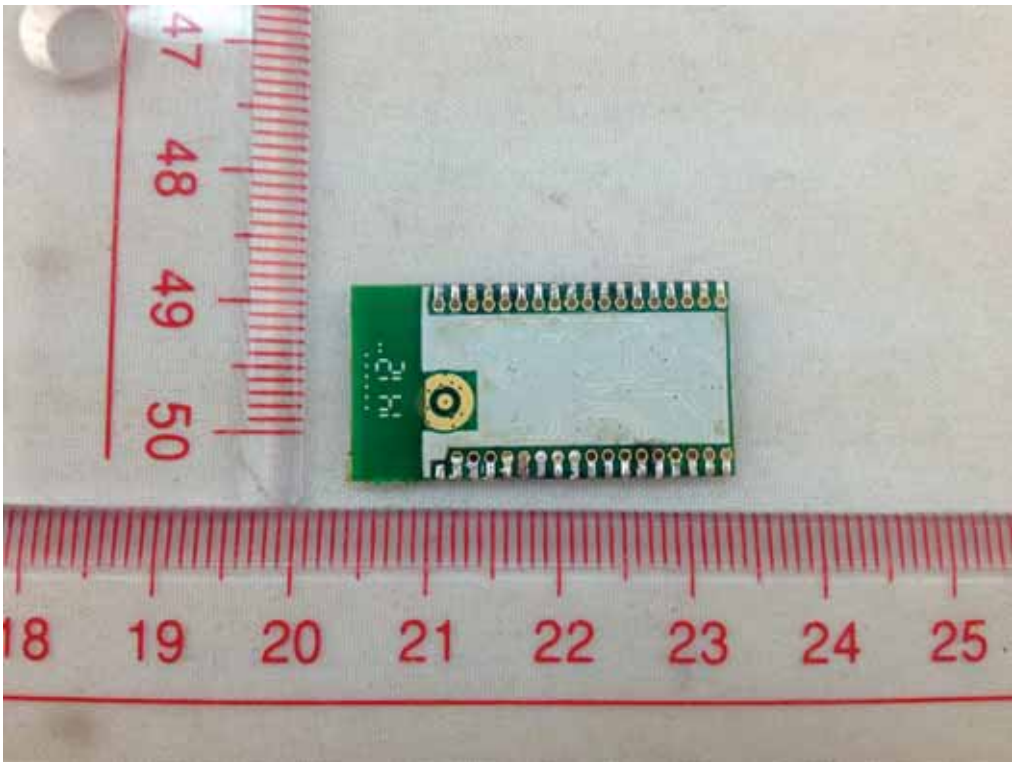

MAIN BOARD BACK VIEW 1



MAIN BOARD BACK VIEW 2

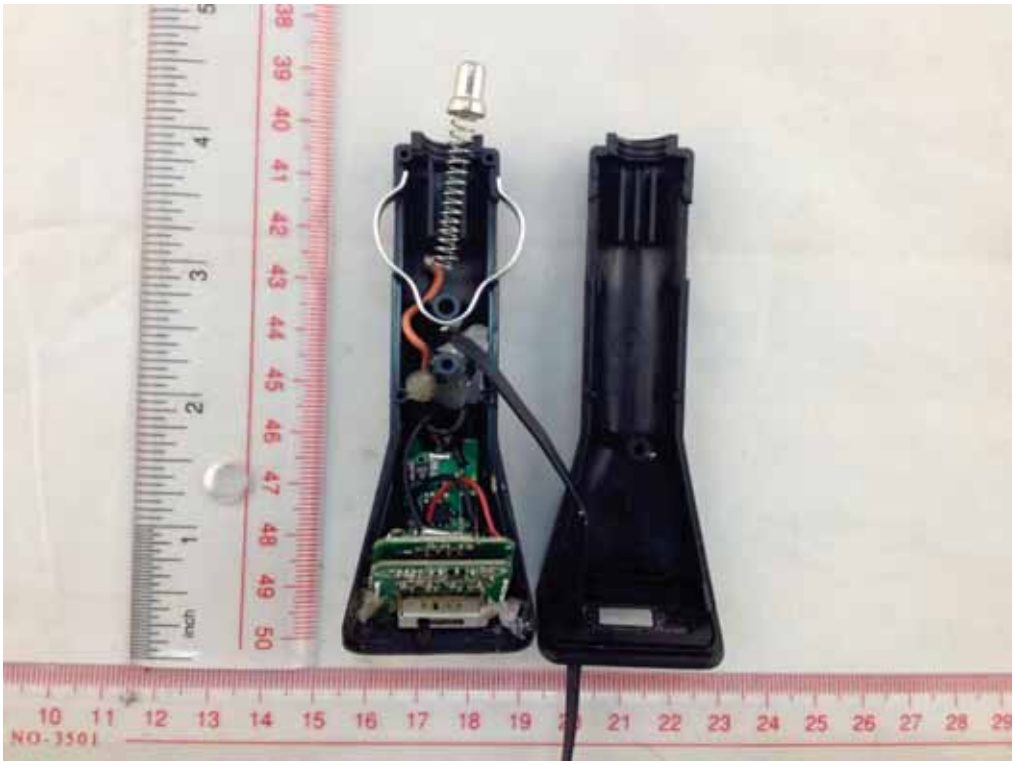



THE PHOTO OF RF MOUDLE 1

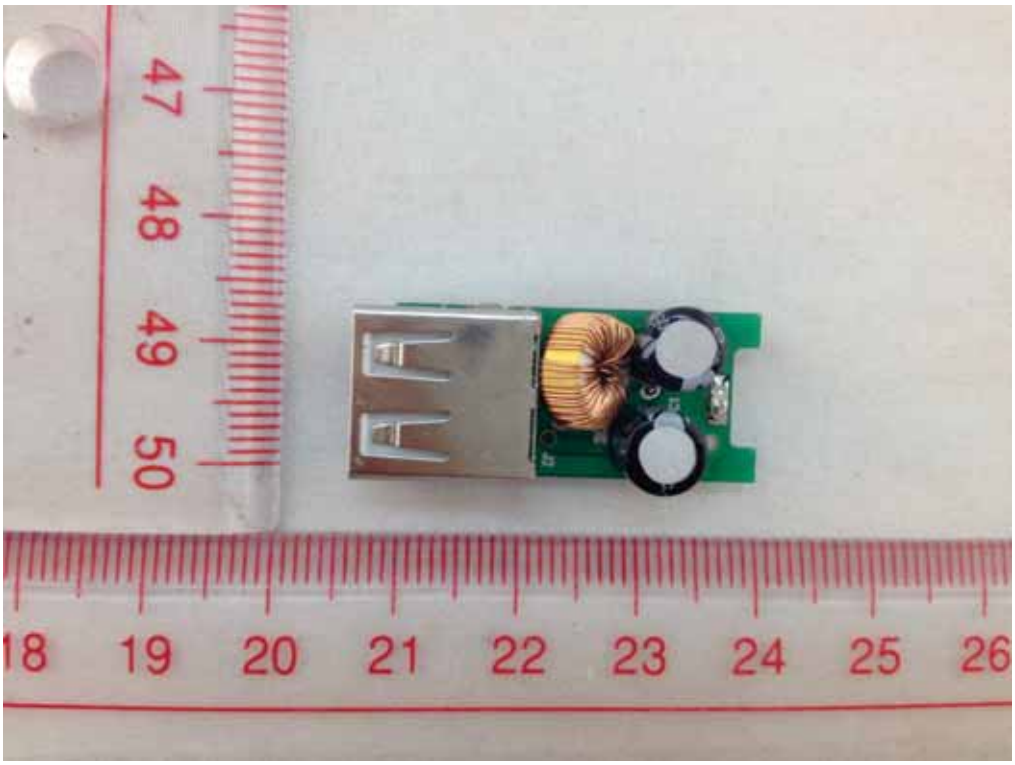



THE PHOTO OF RF MOUDLE 2

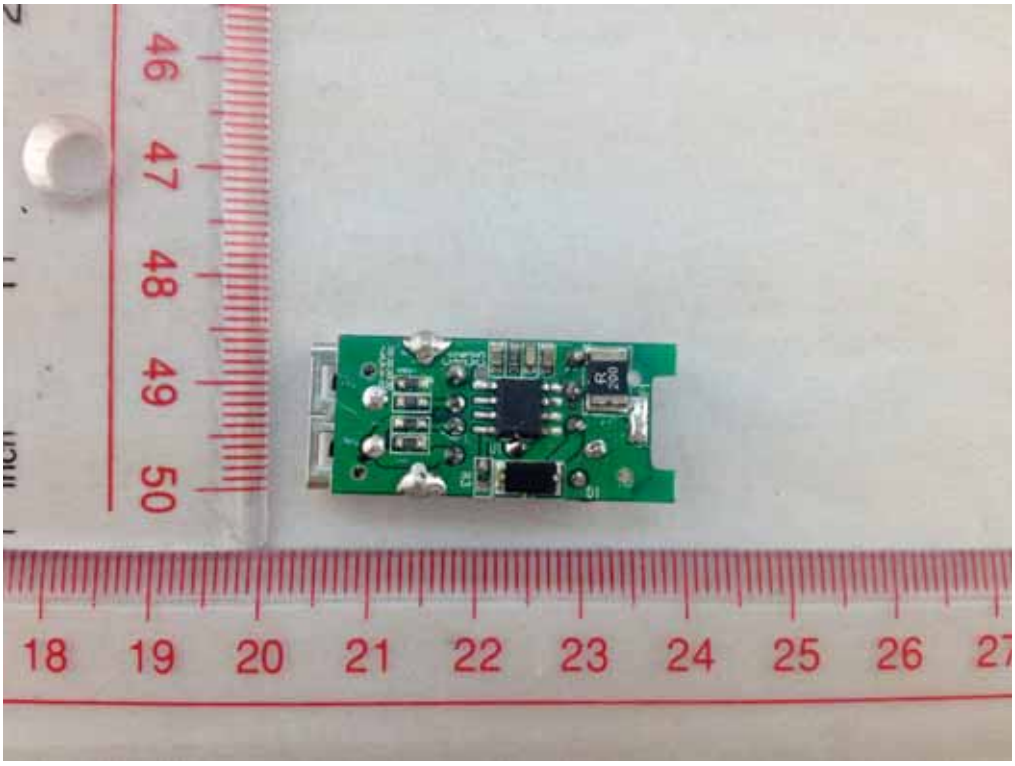
FM PART



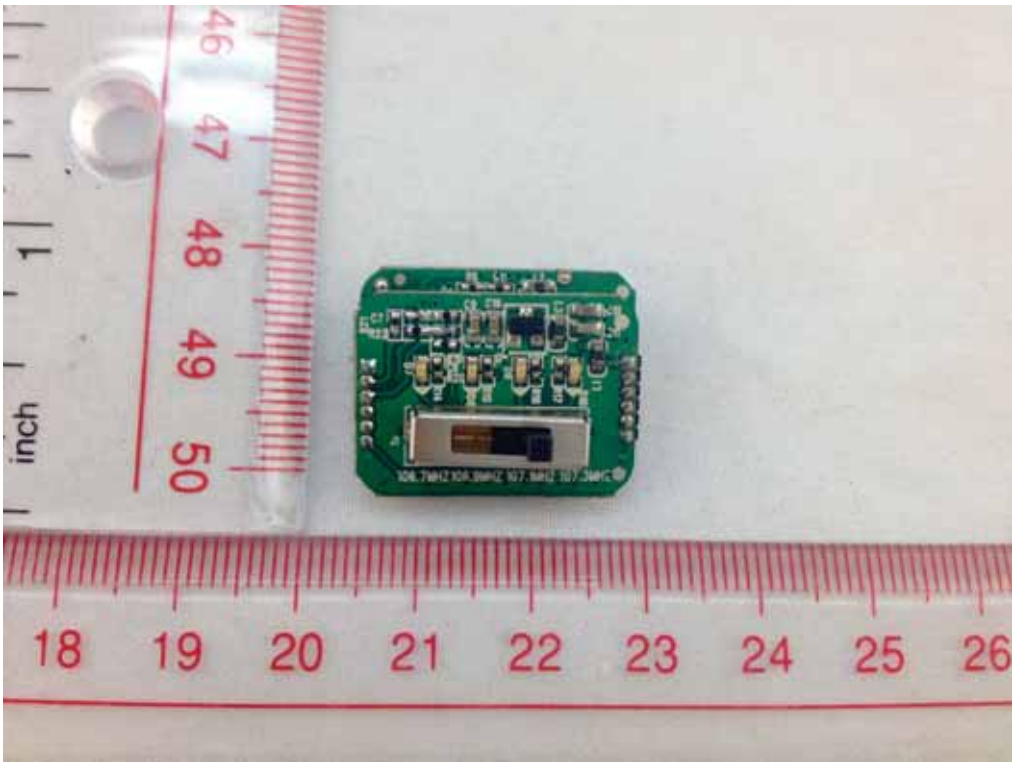
FM UNCOVER VIEW



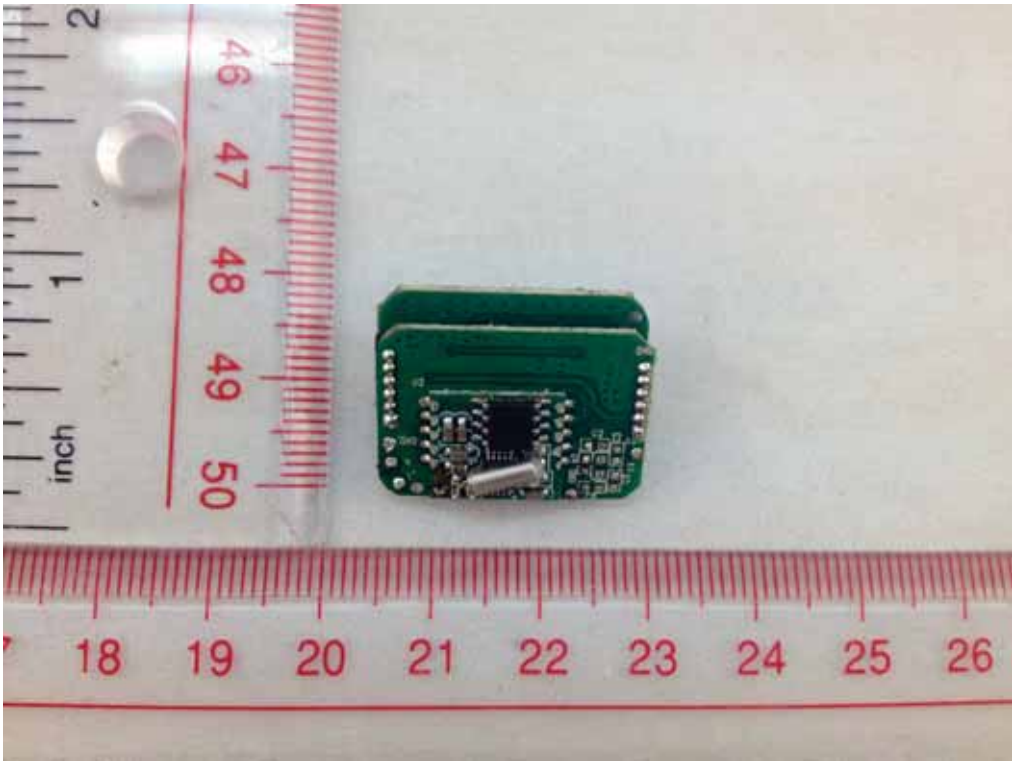
MAIN BOARD TOP VIEW 1



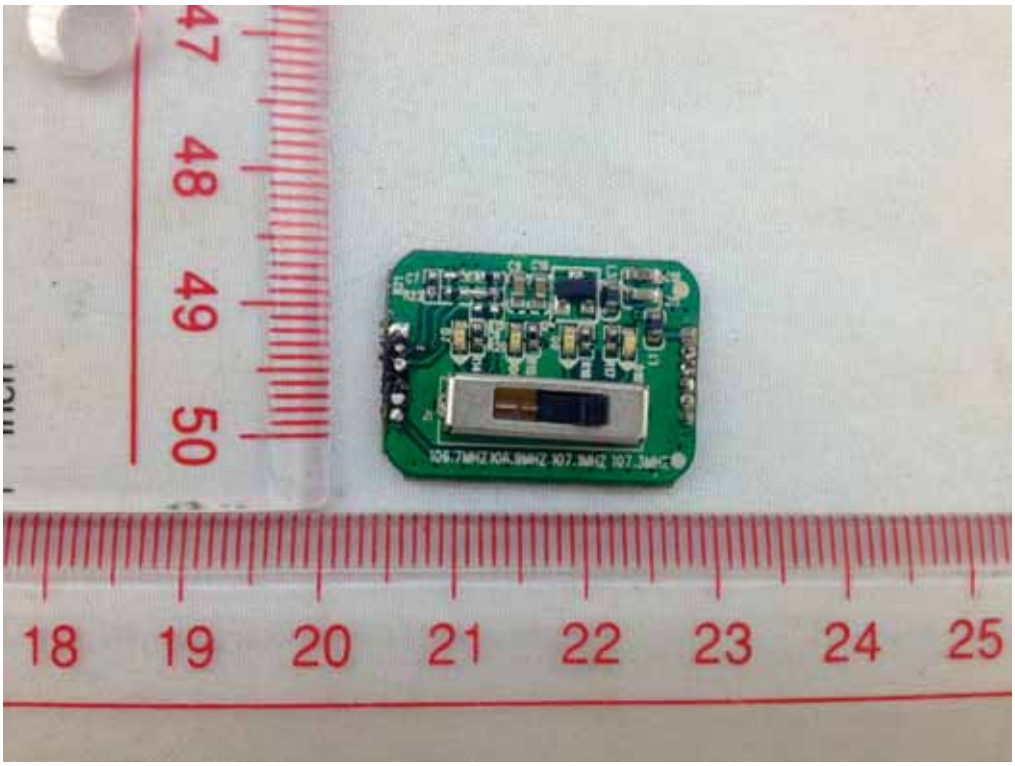

MAIN BOARD BACK VIEW 1



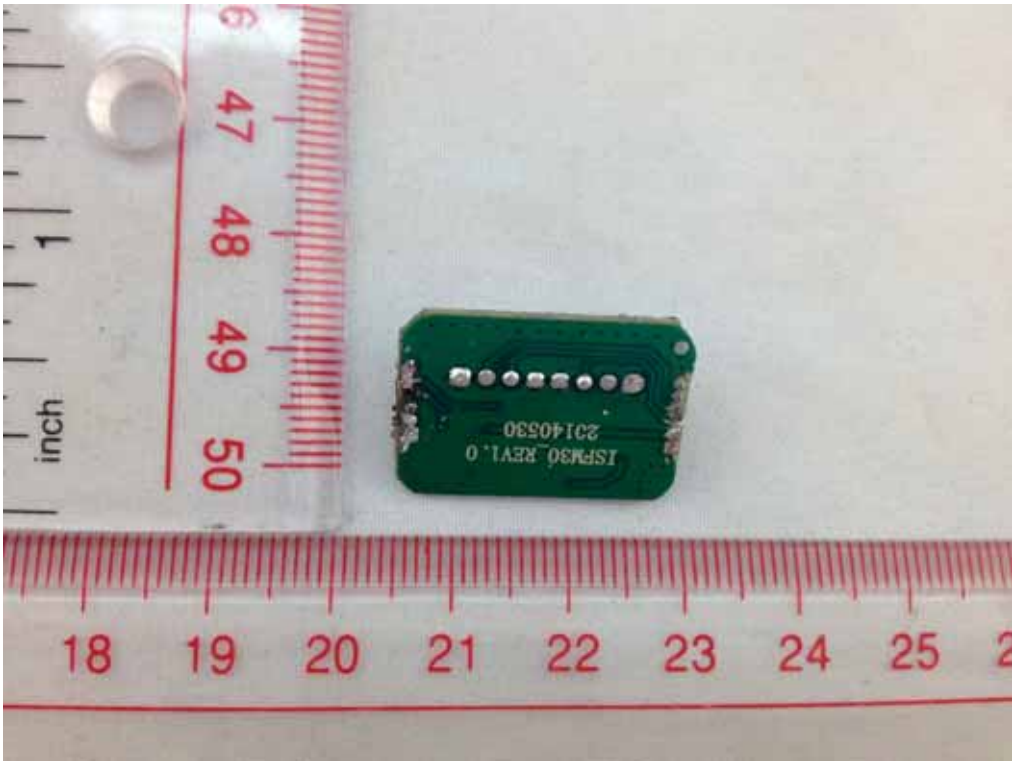

MAIN BOARD UP VIEW 2



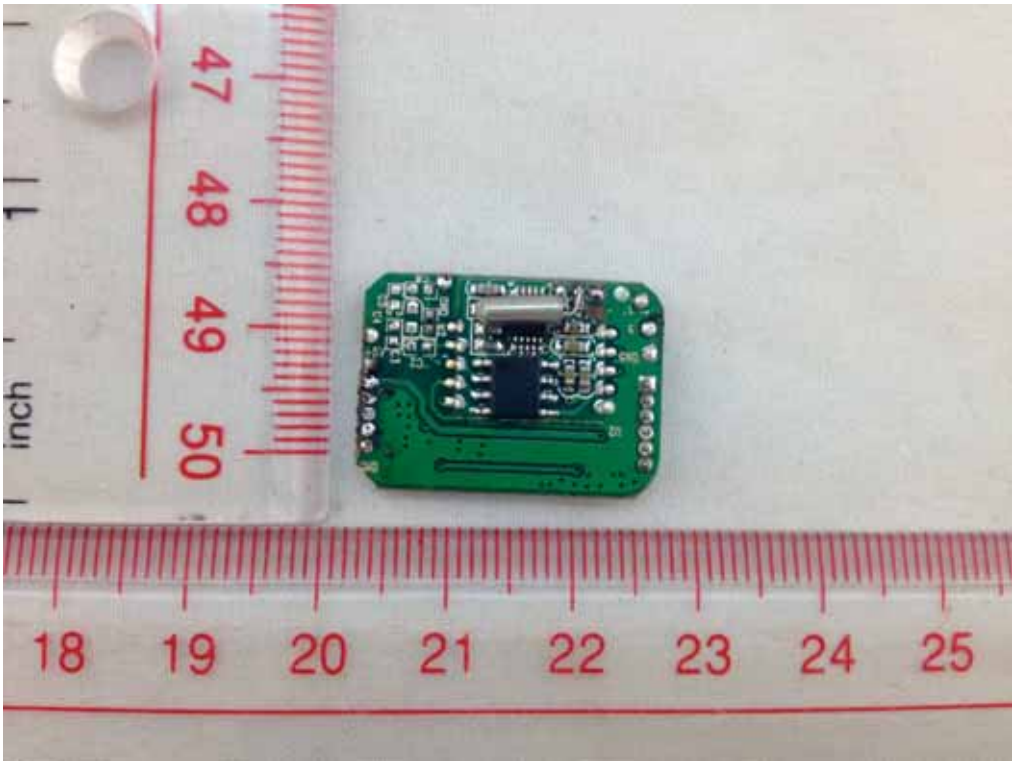

MAIN BOARD BACK VIEW 2



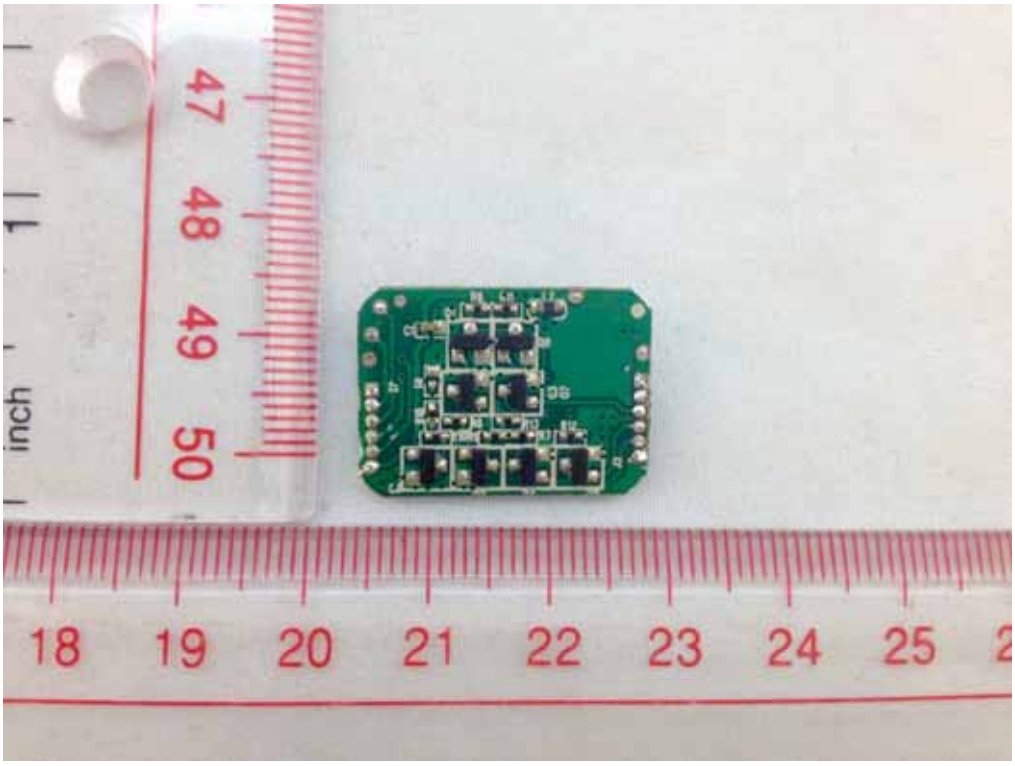

MAIN BOARD UP VIEW 3




MAIN BOARD BACK VIEW 3




MAIN BOARD UP VIEW 4




MAIN BOARD BACK VIEW 4

--END OF REPORT--