Registration
No.910917

# TEST REPORT FOR BLUETOOTH TESTING

Report No.: SRTC2017-9004(F)-0043

Product Name: Mobile Phone

Product Model: Hisense F10

Applicant: Hisense International Co., Ltd.

Manufacturer: Hisense Communications Co., Ltd.

Specification: FCC Part 15, Subpart C (October, 2016 edition)

FCC ID: 2ADOBF10

The State Radio_monitoring_center Testing Center (SRTC)

No.80 Beilishi Road Xicheng District Beijing, China

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# 1. GENERAL INFORMATION

## 1.1 Notes of the test report

The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written permission of The State Radio_monitoring_center Testing Center (SRTC).
The test results relate only to individual items of the samples which have been tested.

## 1.2 Information about the testing laboratory

| | |
|---|---|
| Company: | The State Radio_monitoring_center Testing Center (SRTC) |
| Address: | No.80 Beilishi Road, Xicheng District |
| City: | Beijing |
| Country or Region: | P.R.China |
| Contacted person: | Liujia |
| Tel: | +86 10 5799 6181 |
| Fax: | +86 10 5799 6288 |
| Email: | liujiaf@srtc.org.cn |

## 1.3 Applicant's details

| | |
|---|---|
| Company: | Hisense International Co., Ltd. |
| Address: | Floor 22, Hisense Tower, 17 Donghai Xi Road, Qingdao, 266071, China |
| City: | Qingdao |
| Country or Region: | China |
| Grantee Code: | 2ADOB |
| Contacted person: | Zhang Kelin |
| Tel: | +86-532-55753242 |
| Fax: | -------- |
| Email: | zhangkelin@hisense.com |

## 1.4 Manufacturer's details

| | |
|---|---|
| Company: | Hisense Communications Co., Ltd. |
| Address: | 218 Qianwangang Road, Economic & Technological Development Zone, Qingdao, Shandong Province, P.R. China |
| City: | Qingdao |
| Country or Region: | China |
| Contacted person: | Li Xin |
| Tel: | +86-532-55755993 |
| Fax: | --------- |
| Email: | linxin12@hisense.com |

## 1.5 Test Environment

| | |
|---|---|
| Date of Receipt of test sample at SRTC: | 2017.04.24 |
| Testing Start Date: | 2017.05.02 |
| Testing End Date: | 2017.05.02 |

| Environmental Data: | Temperature (°C) | Humidity (%) |
|---|---|---|
| Ambient | 25 | 38 |
| Maximum Extreme | 55 | 50 |
| Minimum Extreme | -10 | --- |

| | |
|---|---|
| Normal Supply Voltage (V d.c.): | 3.8 |
| Maximum Extreme Supply Voltage (V d.c.): | 4.35 |
| Minimum Extreme Supply Voltage (V d.c.): | 3.5 |

# 2 DESCRIPTION OF THE DEVICE UNDER TEST

## 2.1 Final Equipment Build Status

| | |
|---|---|
| Frequency Range | 2.4GHz~2.4835GHz |
| Number of Channel | 79 |
| Modulation Type | GFSK, π/4DQPSK, 8DPSK |
| Duplex Mode | TDD |
| Channel Spacing | 1MHz |
| Data Rate | 1Mbps, 2 Mbps, 3 Mbps |
| Antenna Type | PIFA Antenna |
| Power Supply | Battery or Charger |
| Rated Power Supply Voltage | 3.8V |
| HW Version | V1.00 |
| SW Version | L1402.6.01.01.MX06 |
| IMEI | 863721030069261 |

## 2.2 Support Equipment

The following support equipment was used to exercise the DUT during testing:

Battery 1

| | |
|---|---|
| Equipment | Battery |
| Manufacturer | TMB |
| Model Number | LIW38238 |
| Serial Number | ----- |

Battery 2

| | |
|---|---|
| Equipment | Battery |
| Manufacturer | VEKEN |
| Model Number | LIW38238 |
| Serial Number | ----- |

As the information described above, there are one models of battery manufactured by two companies. The relevant tests have been performed in order to verify in which combination case (EUT exercised by one models of battery manufactured by two companies) the EUT would have the worst features. So all the tests shown in this test report are performed when the EUT exercised by the battery 1 manufactured by TMB.

# 3 REFERENCE SPECIFICATION

| Specification | Version | Title |
|---|---|---|
| 15.35 | Mar. 6, 2014 | Measurement detector functions and bandwidths. |
| 15.209 | Oct. 30, 1997 | Radiated emission limits; general requirements. |
| 15.247 | May 1, 2014 | Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz. |

# 4 KEY TO NOTES AND RESULT CODES

| Code | Meaning |
|---|---|
| PASS | Test result shows that the requirements of the relevant specification have been met. |
| FAIL | Test result shows that the requirements of the relevant specification have not been met. |
| N/T | Test case is not tested. |
| NTC | Nominal voltage, Normal Temperature |
| HV | High voltage, Normal Temperature |
| LV | Low voltage, Normal Temperature |
| HTHV | high voltage, High Temperature |
| LTHV | High voltage, Low Temperature |
| HTLV | Low voltage, High Temperature |
| LTLV | Low voltage, Low Temperature |

# 5 RESULT SUMMARY

| No. | Test case | FCC reference | Verdict |
|---|---|---|---|
| 1 | Occupied Bandwidth | 15.247(a)(1) | Pass |
| 2 | Channel Separation | 15.247(a)(1) | Pass |
| 3 | Peak Power Output | 15.247(b)(1) | Pass |
| 4 | Dwell Time | 15.247(a)(1)(iii) | Pass |
| 5 | Number of Hopping Frequencies | 15.247(a)(1)(iii) | Pass |
| 6 | Conducted out of band emission measurement | 15.247(d) | Pass |
| 7 | Spurious Radiated Emissions | 15.247(d)/15.35(b)/15.209 | Pass |
| 8 | AC Power line Conducted Emission | 15.207 | Pass |

| | |
|---|---|
| This Test Report Is Issued by:<br>Mr. Peng Zhen | Checked by:<br>Ms. Liu Jia |
| Tested by:<br>Mr. He Dengshun | Issued date:<br>20170512 |

# 6 TEST RESULT

## 6.1 Occupied Bandwidth

### 6.1.1 Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 22°C | 40% | 101.5kPa |

### 6.1.2 Test Description

The bandwidth at 20dB down from the highest in-band spectral density is measured with a spectrum analyzer and Bluetooth test set via a power splitter with a known loss which connected to the transmitter antenna terminal of the EUT while the EUT is operating at maximum power and at the appropriate frequencies. All modes of operation were investigated and the worst case configuration results are reported in this section.

### 6.1.3 Test limit

FCC Part15.247 (a)(1)

For frequency hopping system operating in the 2400-2483.5MHz, If the 20dB bandwidth of hopping channel is greater than 25kHz, two-thirds 20dB bandwidth of hopping channel shell be a minimum limit for the hopping channel separation.

### 6.1.4 Test settings

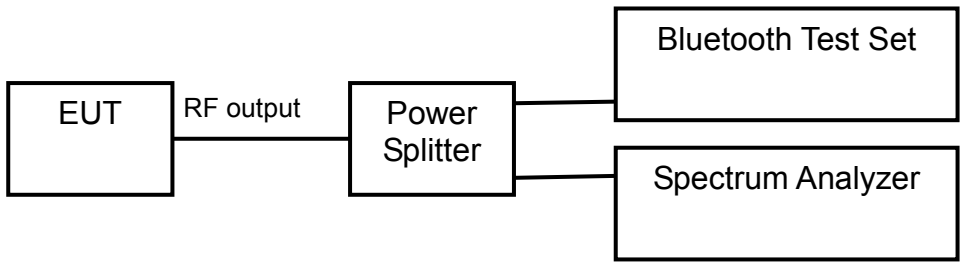
a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.

b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.

c. Measure the frequency difference of two frequencies that were attenuated 30dB from the reference level. Record the frequency difference as the emission bandwidth.

d. Repeat above procedures until all frequencies measured were complete.

### 6.1.5 Test Setup




### 6.1.6 Test result

The test results are shown in Appendix A .

## 6.2 Channel Separation

### 6.2.1 Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 22°C | 40% | 101.5kPa |

### 6.2.2 Test Description

The Equipment Under Test (EUT) was set up in a shielded room to perform the channel separation measurements. The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss.

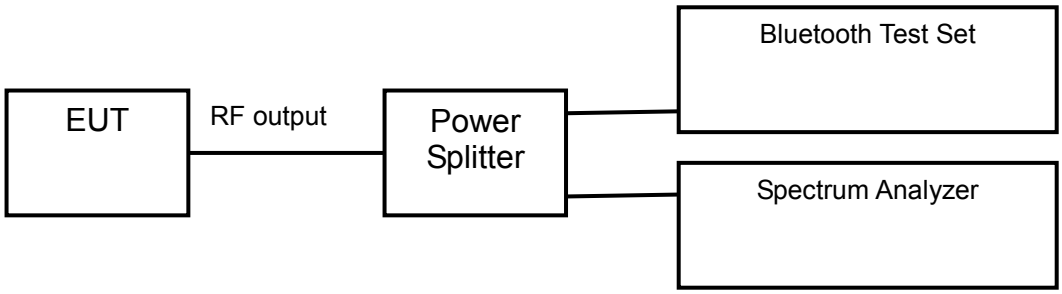
### 6.2.3 Test limit

FCC Part15.247 (a)(1)
Measurement is made with EUT operating in hopping mode. The minimum permissible channel separation for this system is 2/3 the value of the 20dB BW.

### 6.2.4 Test Settings

a) Detector: Peak-Max hold
b) Span: 3 MHz
c) Centre Frequency: 2441 MHz
d) Resolution Bandwidth (RBW): 30 kHz
e) Video Bandwidth (VBW): 1 MHz
f) Sweep Time: Coupled

### 6.2.5 Test Setup




### 6.2.6 Test result

The test results are shown in Appendix A .

## 6.3 Peak Power Output

### 6.3.1 Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 22°C | 40% | 101.5kPa |

### 6.3.2 Test Description

Measurement is made while the EUT is operating in non-hopping transmission mode. The powers shown below were measured using a spectrum analyzer with a Bluetooth signaling test set used only to maintain a Bluetooth link with the EUT.

### 6.3.3 Test limit

FCC Part15.247(b)(1):
For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt.

Used conversion factor: Limit (dBm) = 10 log (Limit (W)/1mW) ➔

| Modulation type | GFSK | π/4DQPSK | 8DPSK |
|---|---|---|---|
| Maximum Output Power | 30.0dBm | 30.0dBm | 30.0dBm |

For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

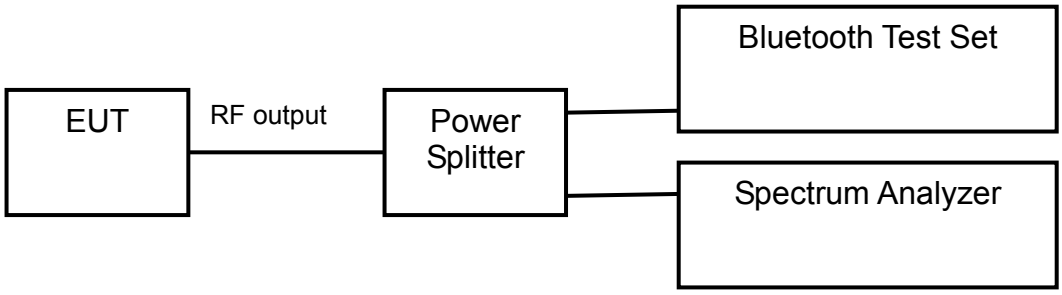
Used conversion factor: Limit (dBm) = 10 log (Limit (W)/1mW) ➔

| Modulation type | GFSK | π/4DQPSK | 8DPSK |
|---|---|---|---|
| Maximum Output Power | 21.0dBm | 21.0dBm | 21.0dBm |

### 6.3.4 Test Settings

| Hopping Mode | Modulation type | RBW | VBW | Span | Sweep time |
|---|---|---|---|---|---|
| Hopping OFF | GFSK | 2MHz | 3MHz | 8MHz | 1ms |
| Hopping OFF | π/4DQPSK | 2MHz | 3MHz | 8MHz | 1ms |
| Hopping OFF | 8DPSK | 2MHz | 3MHz | 8MHz | 1ms |

### 6.3.5 Test Setup




### 6.3.6 Test result

The test results are shown in Appendix A .

## 6.4 Dwell Time

### 6.4.1 Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 22°C | 40% | 101.5kPa |

### 6.4.2 Test Description

The Equipment Under Test (EUT) was set up in a shielded room to perform the dwell time measurements.
The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss.
The time slot length is measured of three different packet types which are available in the Bluetooth technology. Those are DH1, DH3 and DH5 packets. The dwell time is calculated by:
Dwell time = time slot length * hop rate * 31.6/ number of hopping channels with:
- hop rate=1600/2 * 1/s for DH1 packets =800
- hop rate=1600/4 * 1/s for DH3 packets =400
- hop rate=1600/6 * 1/s for DH5 packets =266.67
- number of hopping channels=79
- 31.6 s=0.4 seconds multiplied by the number of hopping channels=0.4s * 79

### 6.4.3 Test limit

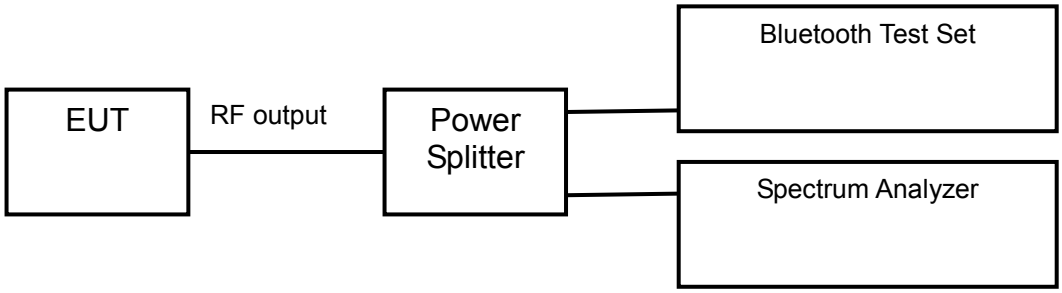
FCC Part15.247(a)(1)(iii)
Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

### 6.4.4 Test Test Settings

a. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
b. Turn on the EUT and connect its antenna terminal to measurement via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated

in its linear range.
c. Adjust the center frequency of SA on any frequency be measured and set SA to zero span mode. And then, set RBW and VBW of spectrum analyzer to proper value.
d. Measure the time duration of one transmission on the measured frequency.
And then plot the result with time difference of this time duration.
e. Repeat above procedures until all different time-slot modes have been completed.

### 6.4.5 Test Setup




### 6.4.6 Test result

The test results are shown in Appendix A .

## 6.5 Number of Hopping Frequencies

### 6.5.1 Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 22°C | 40% | 101.5kPa |

### 6.5.2 Test Description

The Equipment Under Test (EUT) was set up in a shielded room to perform the number of hopping frequencies measurement.The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss.

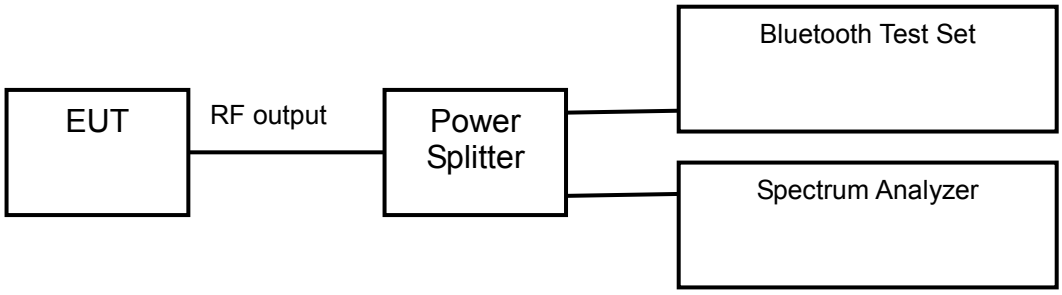
### 6.5.3 Test limit

FCC Part15.247(a)(1)(iii)
Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

### 6.5.4 Test Settings

a) Detector: Peak-Maxhold
b) Start frequency: 2400 MHz
c) Stop frequency: 2483.5 MHz
d) Resolution Bandwidth (RBW): 30 kHz
e) Video Bandwidth (VBW): 1 MHz
f) Sweep Time: Coupled

### 6.5.5 Test Setup




### 6.5.6 Test result

The test results are shown in Appendix A.

## 6.6 Conducted out of band emission measurement

### 6.6.1 Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 22°C | 40% | 101.5kPa |

### 6.6.2 Test Description

The Equipment Under Test (EUT) was set up in a shielded room to perform the spurious emissions measurements. The EUT was connected to the spectrum analyzer and Bluetooth test set via a power splitter with a known loss.

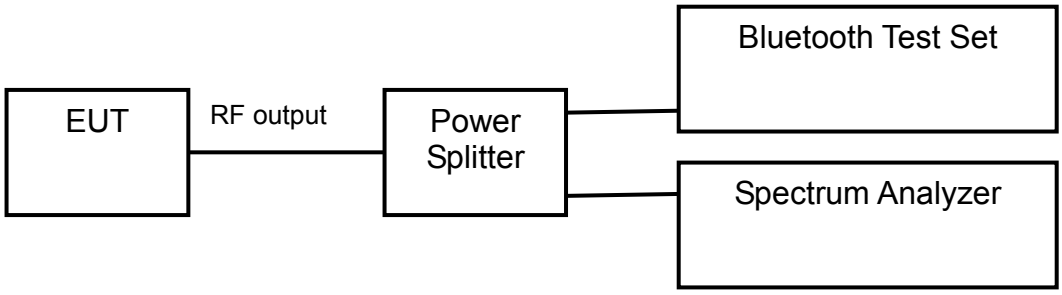
### 6.6.3 Test limit

FCC Part15.247(d):
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

### 6.6.4 Test Settings

a) Set RBW = 100 kHz.
b) Set VBW =300 kHz.
c) Set span to encompass the spectrum to be examined
d) Detector = peak.
e) Trace Mode = max hold.
f) Sweep = auto couple. Detector: Peak-Maxhold
g) Frequency range: 30 ~25000 MHz

### 6.6.5 Test Setup




### 6.6.6 Test result

The test results are shown in Appendix A .

The spectrum plots are attached on the following images. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

## 6.7 Spurious Radiated Emissions

### 6.7.1 Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 20.8°C | 36.5% | 100.9kPa |

### 6.7.2 Test Description

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at maximum power and at the appropriate frequencies. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

### 6.7.3 Test limit

FCC Part15.247(d):
In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in below Table per Section 15.209.

| Frequency [MHz] | Field strength [ μV/m ] | Measured Distance [meters] |
|---|---|---|
| 30～88 | 100 | 3 |
| 88～216 | 150 | 3 |
| 216～960 | 200 | 3 |
| Above 960 | 500 | 3 |

**Radiated Limits**

FCC Part15.35(b):
there is also a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above

the maximum permitted average limit
Used conversion factor: Limit (dBμV/m) = 20 log (Limit (μV/m)/1μV/m)

| Frequency of Emission(MHz) | Limits | |
|---|---|---|
| | Detector | Unit (dBμV/m) |
| 30～88 | Quasi-peak | 40.0 |
| 88～216 | Quasi-peak | 43.5 |
| 216～960 | Quasi-peak | 46.0 |
| 960～1000 | Quasi-peak | 54.0 |
| 1000～5th harmonic of the highest frequency or 40GHz, whichever is lower | Average | 54.0 |
| | Peak | 74.0 |

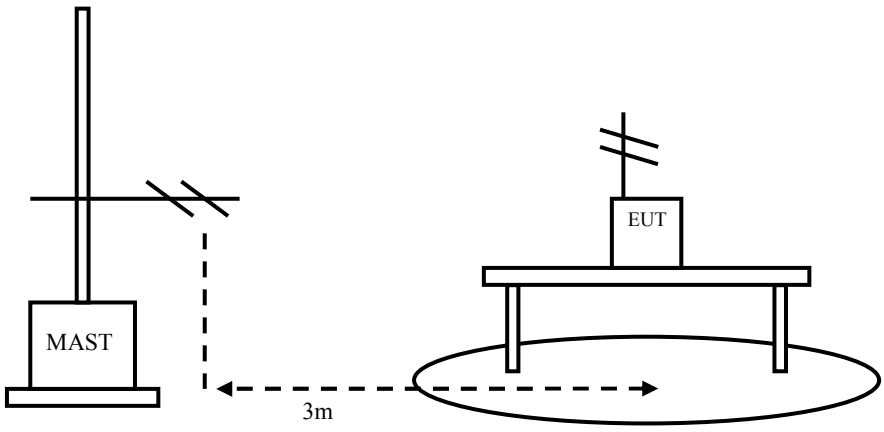
**Conversion Radiated limits**

### 6.7.4 Test Settings

The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration. During the test, the antenna height and EUT azimuth were varied in order to identify the maximum level of emission from the EUT. The height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees.
The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

### 6.7.5 Test Setup

The EUT and measurement equipment were set up as shown in the diagram below
The Equipment Under Test (EUT) was set up on a non-conductive table in the semi-anechoic




chamber. The test was performed at the distance of 3 m between the EUT and the receiving antenna. The radiated emissions measurements were made in a typical installation configuration. Then start the test software ES-K1. Sweep the whole frequency band through the range from 30MHz to 1GHz or above, using receive log period antenna HL562 or Ridge horn antenna HF906.
During the test, the antenna height and EUT azimuth were varied in order to identify the maximum level of emission from the EUT. The height of receive antenna shall be moved from 1 to 4 meters,

and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees. The measurements shall be repeated with orthogonal polarization of the test antenna. The results shall be showed the worst case of the three orthogonal axes.
The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing.

### 6.7.6 Test result

The test results are shown in Appendix B.

## 6.8 AC Power line Conducted Emission

### 6.8.1 Ambient condition

| Temperature | Relative humidity | Pressure |
|---|---|---|
| 20.8°C | 36.5% | 100.9kPa |

### 6.8.2 Test limit

FCC Part15.207

| Frequency of Emission (MHz) | Conducted Limit (dBuV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15-0.5 | 66 to 56 * | 56 to 46 * |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

* Decreases with the logarithm of the frequency.

The measurement is made according to ANSI C63.4-2014

### 6.8.3 Test result

The test results are shown in Appendix B .

# 7 MEASUREMENT UNCERTAINTIES

| Items | Uncertainty | |
|---|---|---|
| Occupied Bandwidth | 3kHz | |
| Peak power output | 0.67dB | |
| Band edge compliance | 1.20dB | |
| Spurious emissions | 30MHz～1GHz | 2.83dB |
| | 1GHz～12.75GHz | 2.50dB |
| | 12.75GHz～25GHz | 2.75dB |

# 8 TEST EQUIPMENTS

| No. | Name/ Model | Manufacturer | S/N | Cal Due date |
|---|---|---|---|---|
| 1. | Spectrum Analyzer FSV | ROHDE&SCHWARZ | 101065 | 2017.08.20 |
| 2. | Bluetooth Test Set MT8852B | Anritsu | 1142010 | 2018.03.01 |
| 3. | Cable 104EA | SUCOFLEX | 9272/4EA | 2018.03.01 |
| 4. | Cable 104EA | SUCOFLEX | 9266/4EA | 2018.03.01 |
| 5. | Power Splitter 11850C | Agilent | 026057 | 2017.08.20 |
| 6. | 12.65m×8.03m×7.50m Fully-Anechoic Chamber | FRANKONIA | ----- | ----- |
| 7. | 23.18m×16.88m×9.60m Semi-Anechoic Chamber | FRANKONIA | --- | ----- |
| 8. | Turn table Diameter:1m | HD | ----- | ----- |
| 9. | Turn table Diameter:5m | HD | ----- | ----- |
| 10. | Antenna master FAC(MA4.0) | MATURO | ----- | ----- |
| 11. | Antenna master SAC(MA4.0) | MATURO | ----- | ----- |
| 12. | 9.080m×5.255m×3.525m Shielding room | FRANKONIA | ----- | ----- |
| 13. | HF 906 Double-Ridged Waveguide Horn Antenna | R&S | 100030 | 2017.08.20 |
| 14. | HF 906 Double-Ridged Waveguide Horn Antenna | R&S | 100029 | 2017.08.20 |
| 15. | HL562 Ultra log antenna | R&S | 100016 | 2017.08.20 |
| 16. | 3160-09 Receive antenna | SCHWARZ-BECK | 002058-002 | 2017.08.20 |
| 17. | ESI 40 EMI test receiver | R&S | 100015 | 2017.08.20 |
| 18. | Radio tester | CMU 200 | 114667 | 2017.08.20 |
| 19. | ESCS30 EMI test receiver | R&S | 100029 | 2017.08.20 |
| 20. | HL562 Receive antenna | R&S | 100167 | 2017.08.20 |
| 21. | ESH3-Z5 LISN | R&S | 100020 | 2017.08.20 |

## APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Please refer to the attachment.

## APPENDIX B – TEST DATA OF RADIATED EMISSION

Please refer to the attachment.

## APPENDIX C – TEST SETUP

Please refer to the attachment.

# APPENDIX A – TEST DATA OF CONDUCTED EMISSION

## Occupied Bandwidth

Modulation type: GFSK

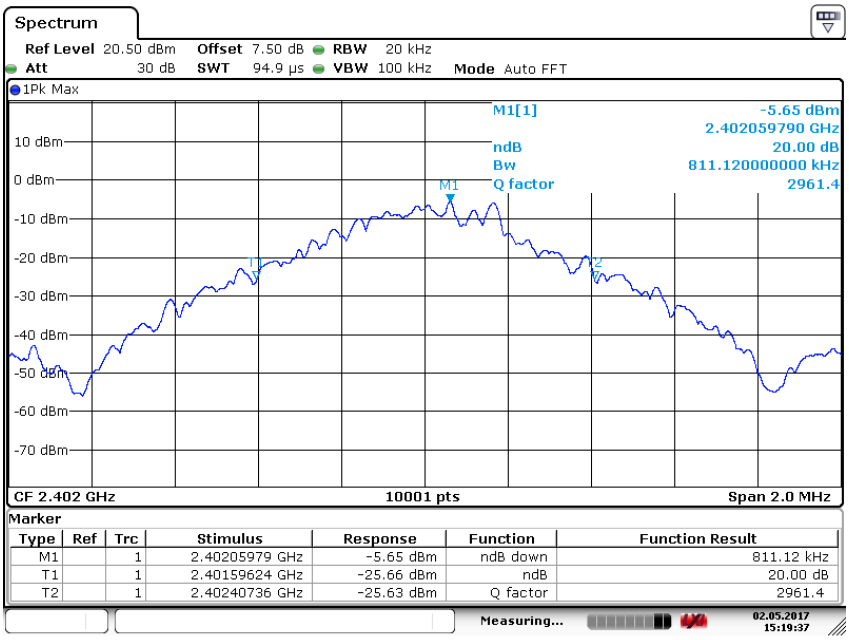
| Carrier frequency (MHz) | Channel No. | 20 dB bandwidth(kHz) |
|---|---|---|
| 2402 | 0 | 811.1 |
| 2441 | 39 | 812.1 |
| 2480 | 78 | 811.9 |

Modulation type: π/4DQPSK

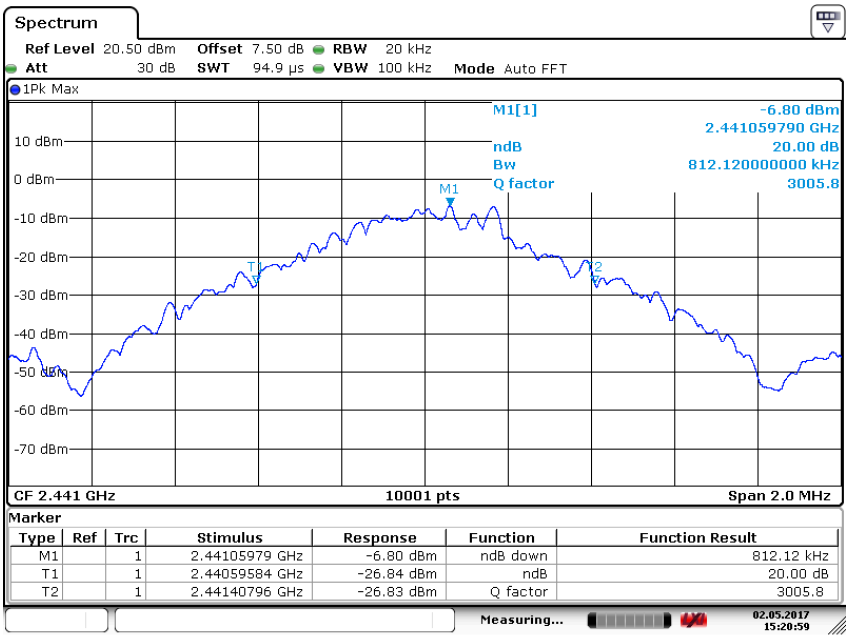
| Carrier frequency (MHz) | Channel No. | 20 dB bandwidth(kHz) |
|---|---|---|
| 2402 | 0 | 1206.1 |
| 2441 | 39 | 1205.7 |
| 2480 | 78 | 1225.3 |

Modulation type: 8DPSK

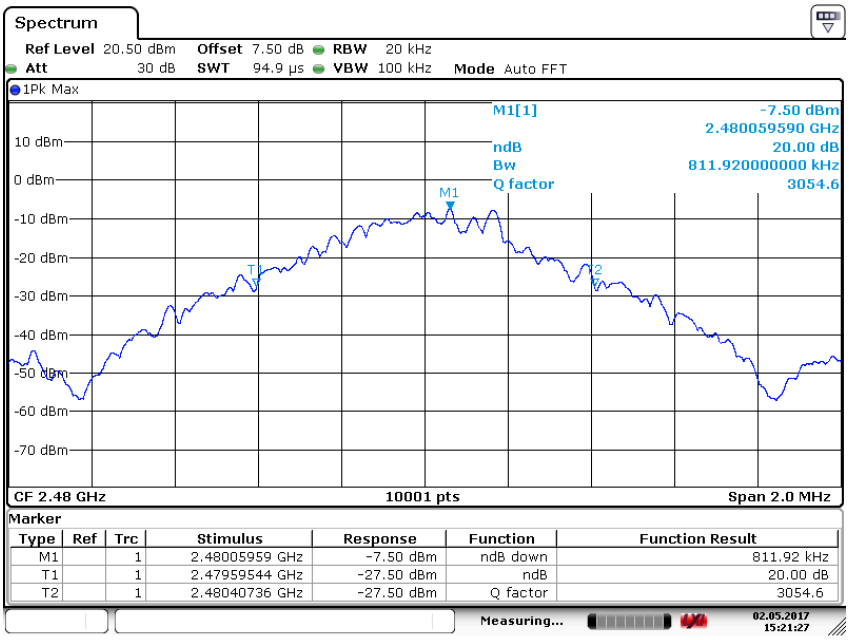
| Carrier frequency (MHz) | Channel No. | 20 dB bandwidth(kHz) |
|---|---|---|
| 2402 | 0 | 1253.3 |
| 2441 | 39 | 1252.7 |
| 2480 | 78 | 1256.5 |




Carrier frequency (MHz): 2402
Channel No.:0
Modulation type: GFSK

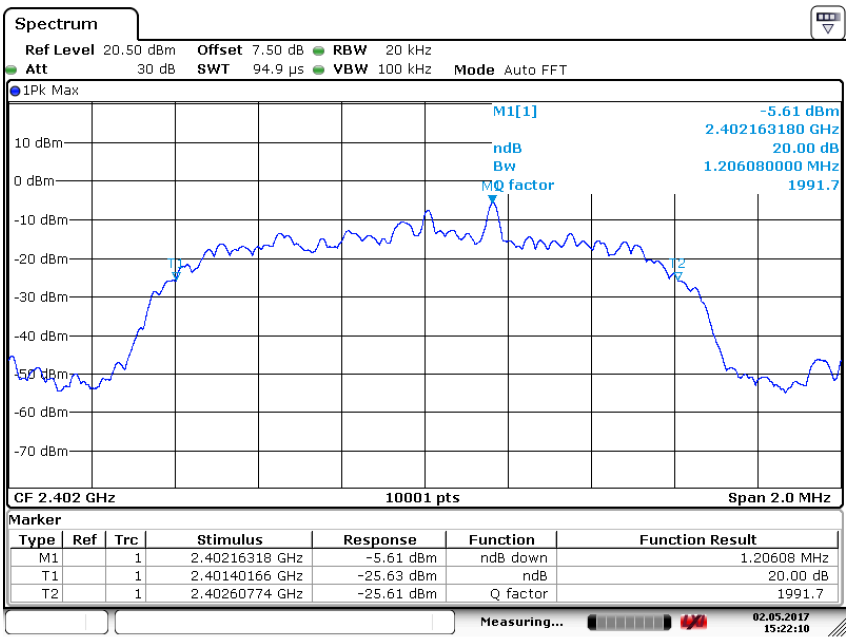



Carrier frequency (MHz): 2441
Channel No.:39
Modulation type: GFSK



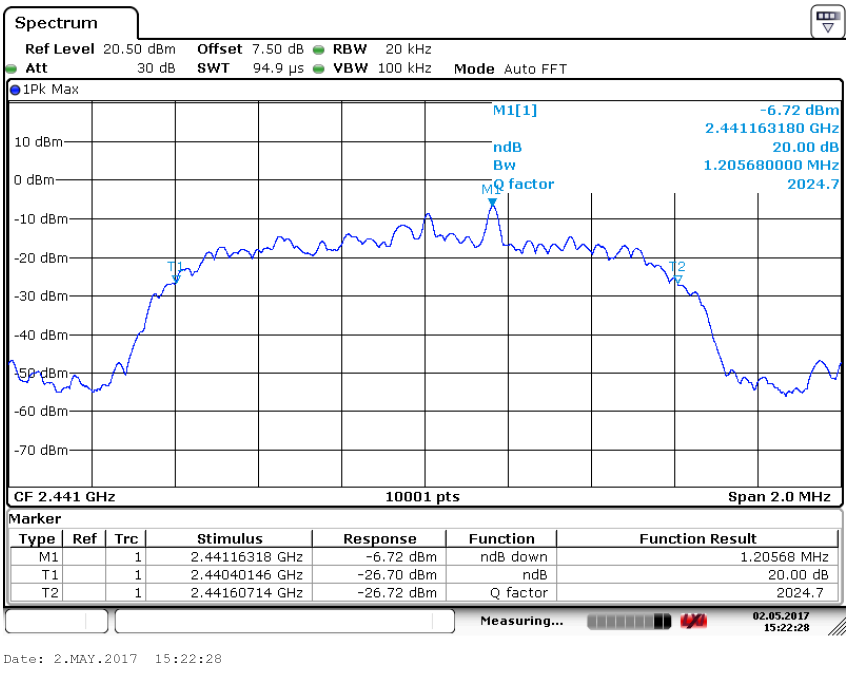

Date: 2.MAY.2017 15:21:27

Carrier frequency (MHz): 2480
Channel No.:78
Modulation type: GFSK



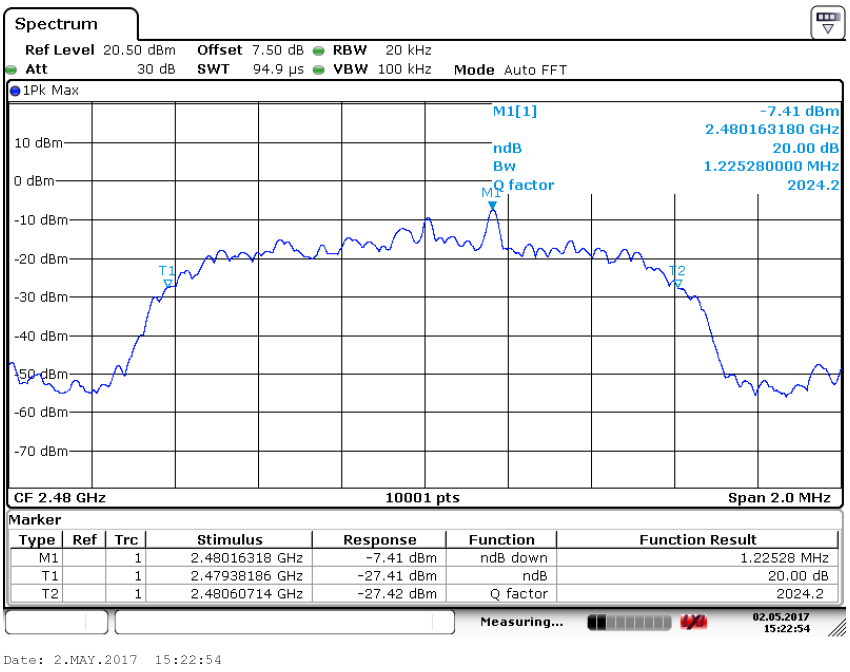

Date: 2.MAY.2017 15:22:09

Carrier frequency (MHz): 2402
Channel No.:0
Modulation type: π/4DQPSK



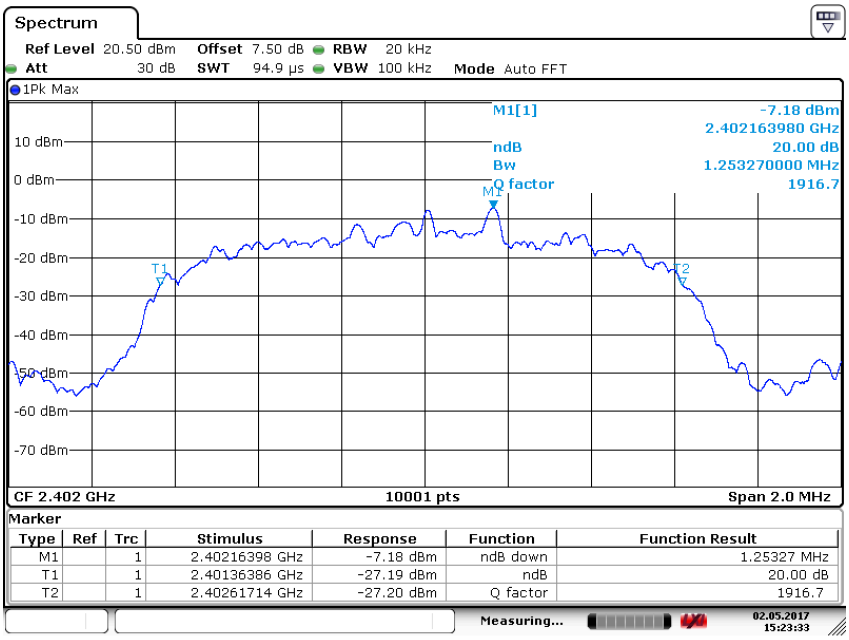

Date: 2.MAY.2017 15:22:28

Carrier frequency (MHz): 2441
Channel No.:39
Modulation type: π/4DQPSK



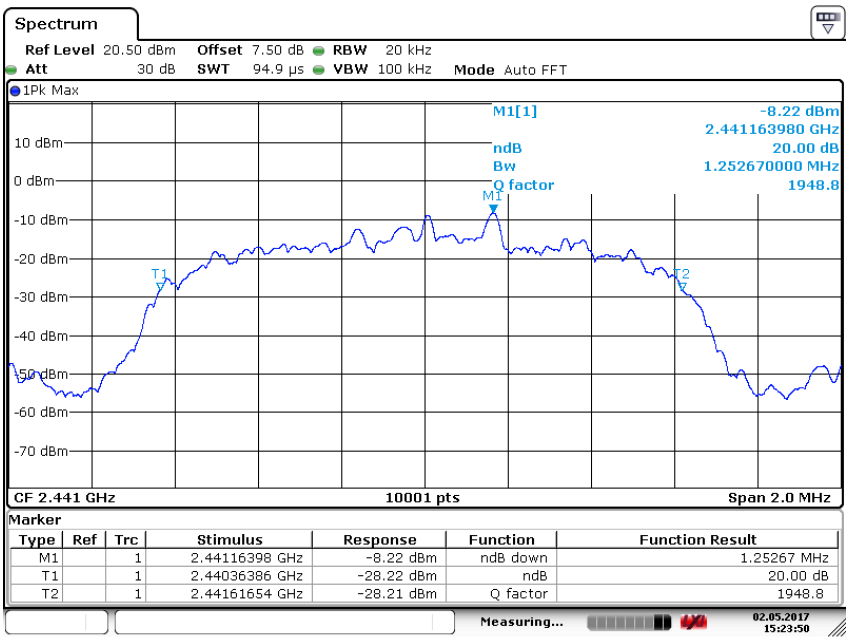

Date: 2.MAY.2017 15:22:54

Carrier frequency (MHz): 2480
Channel No.:78
Modulation type: π/4DQPSK



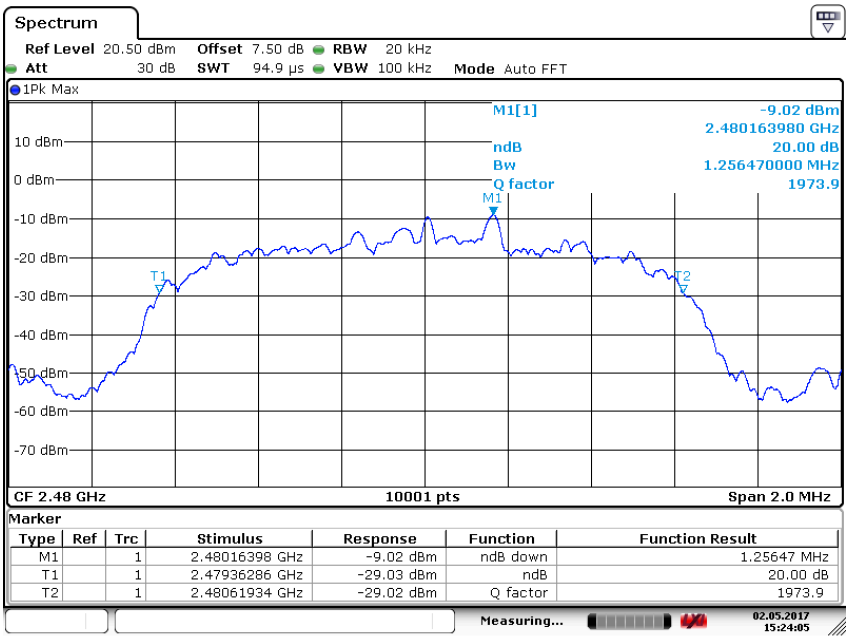

Date: 2.MAY.2017 15:23:33

Carrier frequency (MHz): 2402
Channel No.:0
Modulation type: 8DPSK




Date: 2.MAY.2017 15:23:50

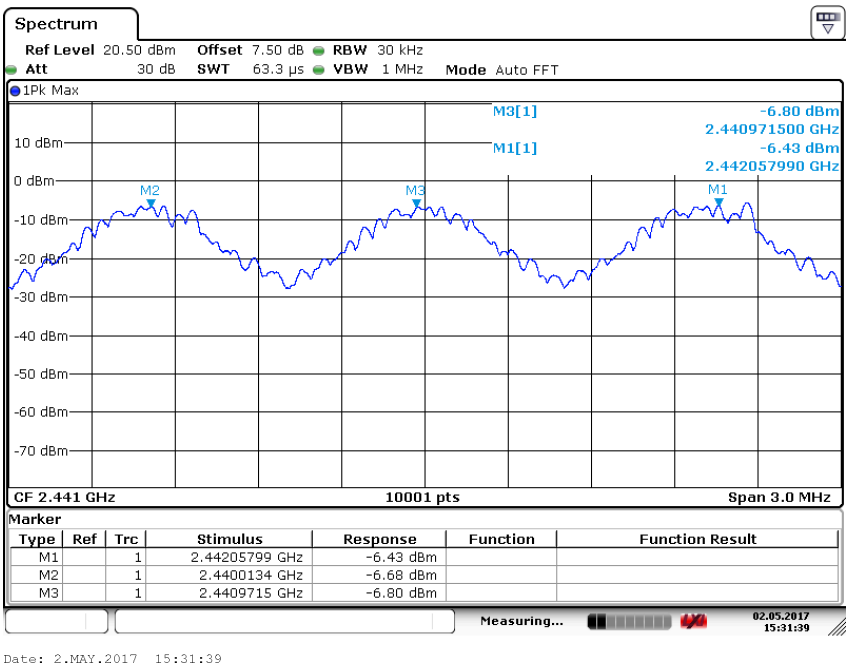
Carrier frequency (MHz): 2441
Channel No.:39
Modulation type: 8DPSK




Carrier frequency (MHz): 2480
Channel No.:78
Modulation type: 8DPSK

## Channel Separation

| Op-mode | Channel separation MHz |
|---|---|
| Hopping mode | 1 |



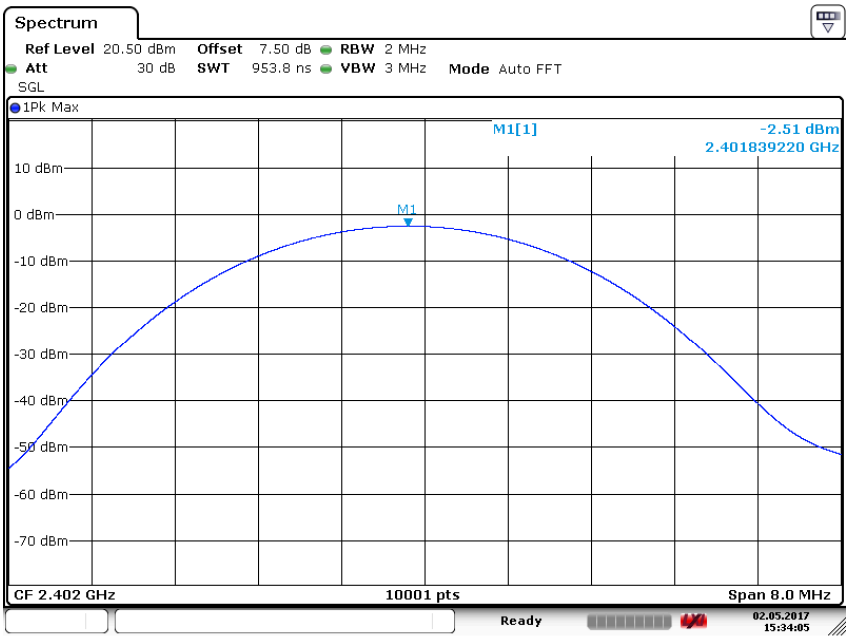

Op-mode: Hopping mode

## Peak Power Output

| Modulation type | Average Power Output (dBm) | | |
|---|---|---|---|
| | 2402MHz (Ch0) | 2441MHz (Ch39) | 2480MHz (Ch78) |
| GFSK | -3.45 | -4.58 | -5.19 |
| π/4DQPSK | -3.27 | -4.39 | -5.36 |
| 8DPSK | -3.11 | -4.59 | -5.89 |

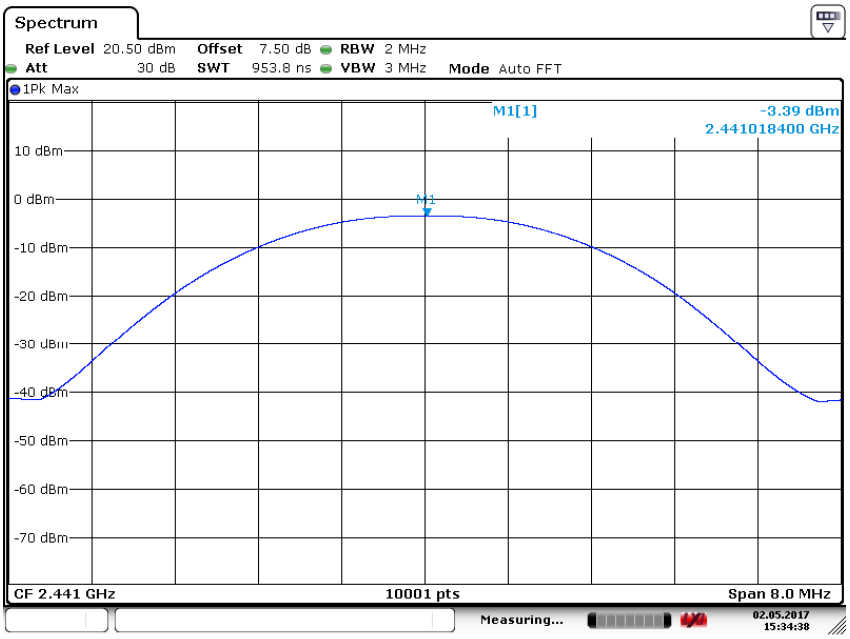
Average power data is provided to determine the need for Bluetooth SAR testing according to KDB 447498 D01 v05r01.

| Modulation type | Peak Power Output (dBm) | | |
|---|---|---|---|
| | 2402MHz (Ch0) | 2441MHz (Ch39) | 2480MHz (Ch78) |
| GFSK | -2.51 | -3.39 | -4.07 |
| π/4DQPSK | -2.54 | -3.89 | -4.55 |
| 8DPSK | -2.42 | -3.56 | -4.24 |



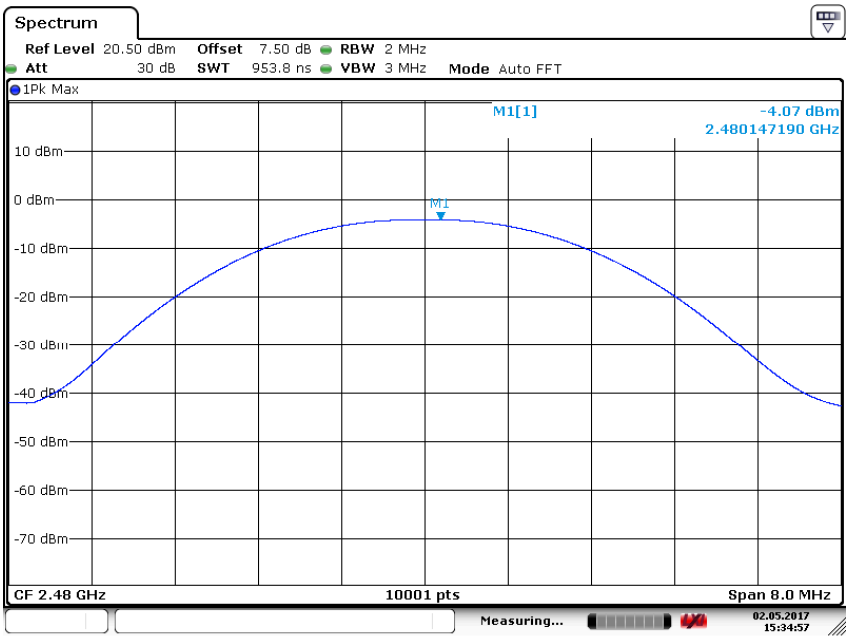

Date: 2.MAY.2017 15:34:05

Carrier frequency (MHz): 2402
Channel No.:0
Modulation type: GFSK

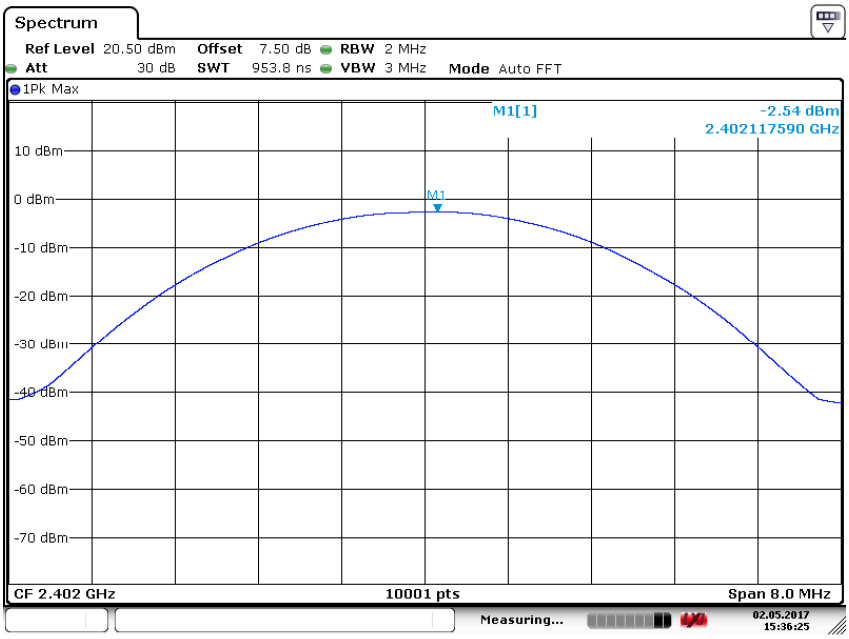



Date: 2.MAY.2017 15:34:38

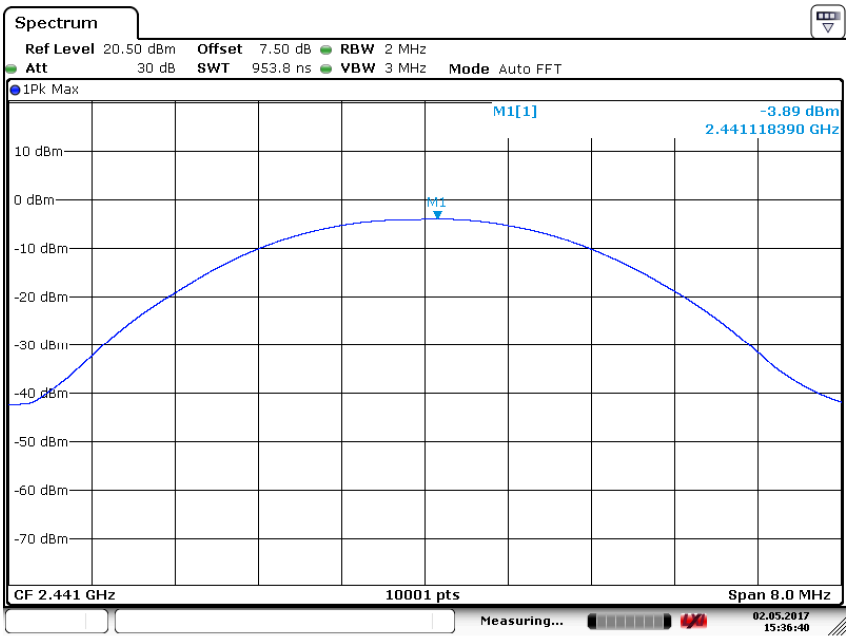
Carrier frequency (MHz): 2441
Channel No.:39
Modulation type: GFSK




Carrier frequency (MHz): 2480
Channel No.:78
Modulation type: GFSK

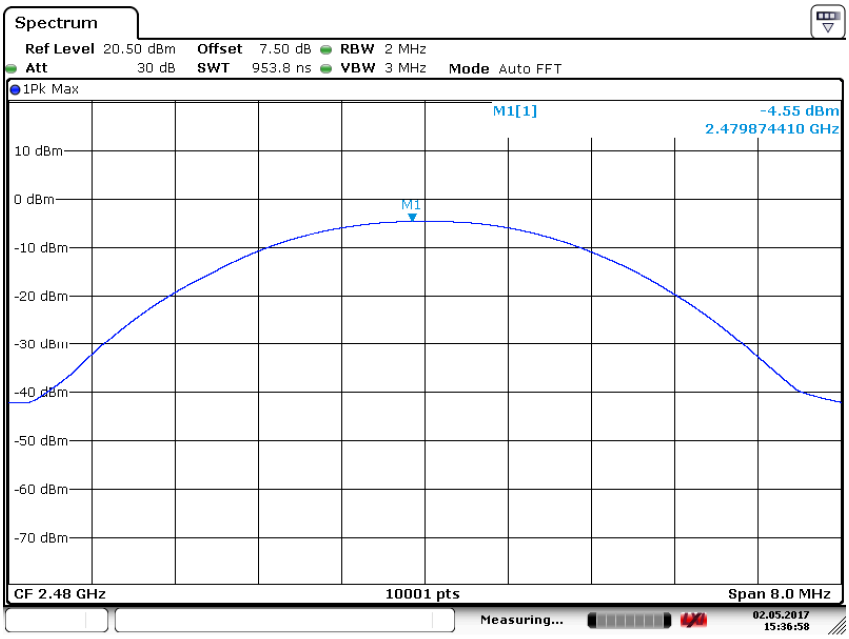



Carrier frequency (MHz): 2402
Channel No.:0
Modulation type: π/4DQPSK



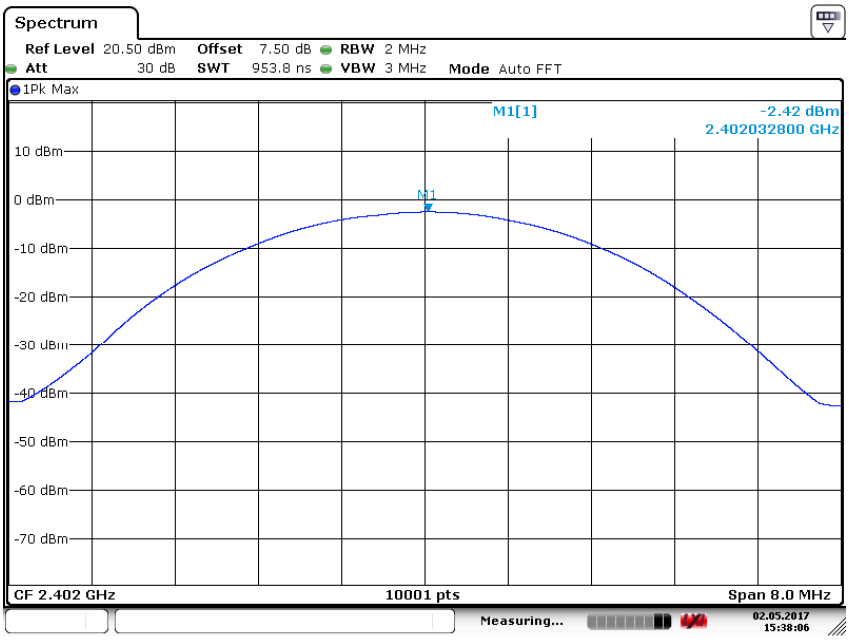

Date: 2.MAY.2017 15:36:40

Carrier frequency (MHz): 2441
Channel No.:39
Modulation type: π/4DQPSK



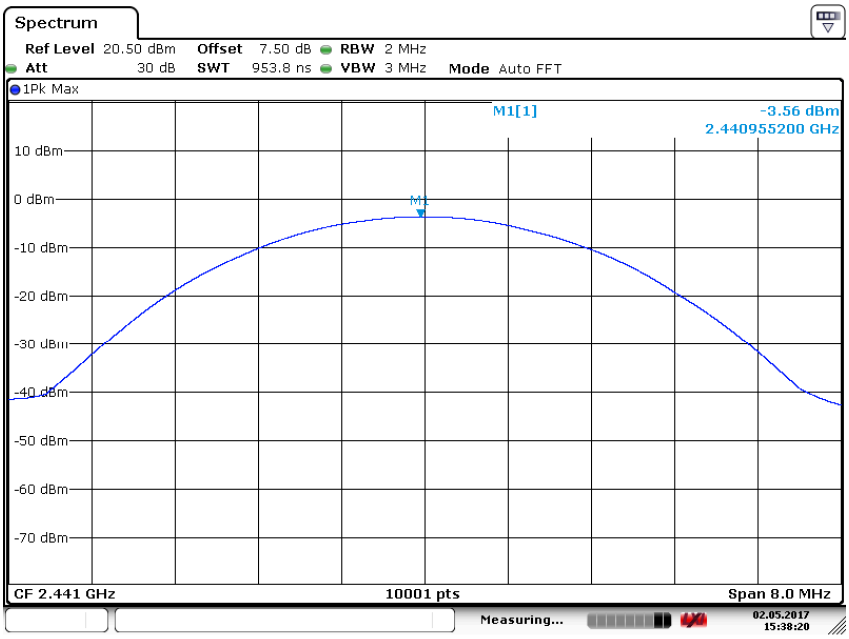

Date: 2.MAY.2017 15:36:57

Carrier frequency (MHz): 2480
Channel No.:78
Modulation type: π/4DQPSK



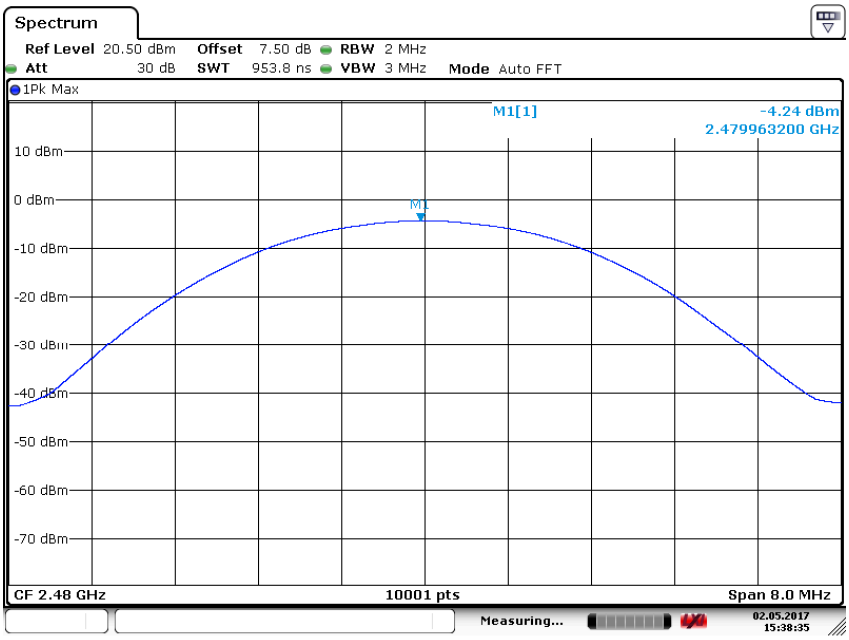

Date: 2.MAY.2017 15:38:06

Carrier frequency (MHz): 2402
Channel No.:0
Modulation type: 8DPSK




Date: 2.MAY.2017 15:38:20

Carrier frequency (MHz): 2441
Channel No.:39
Modulation type: 8DPSK

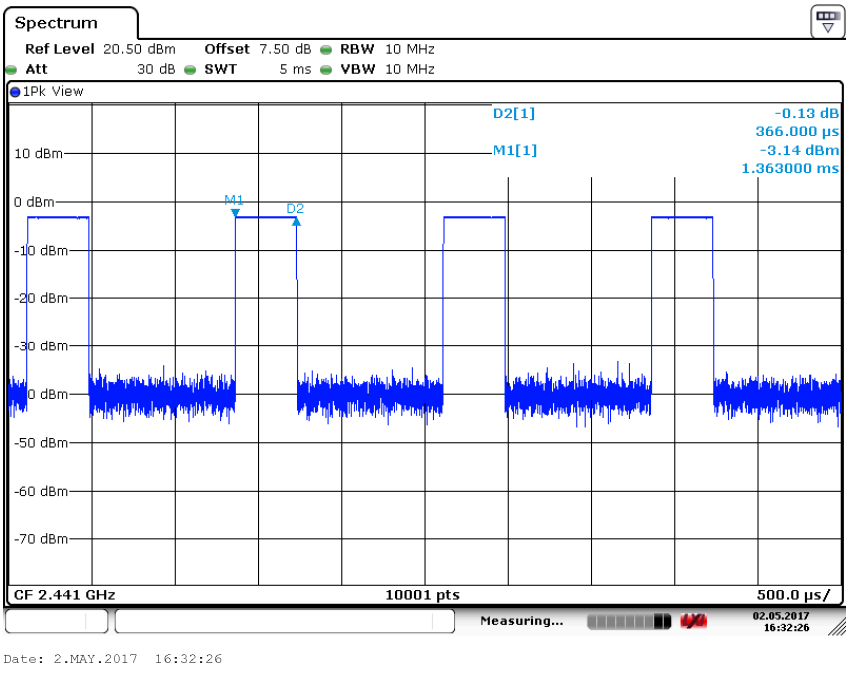



Carrier frequency (MHz): 2480
Channel No.:78
Modulation type: 8DPSK

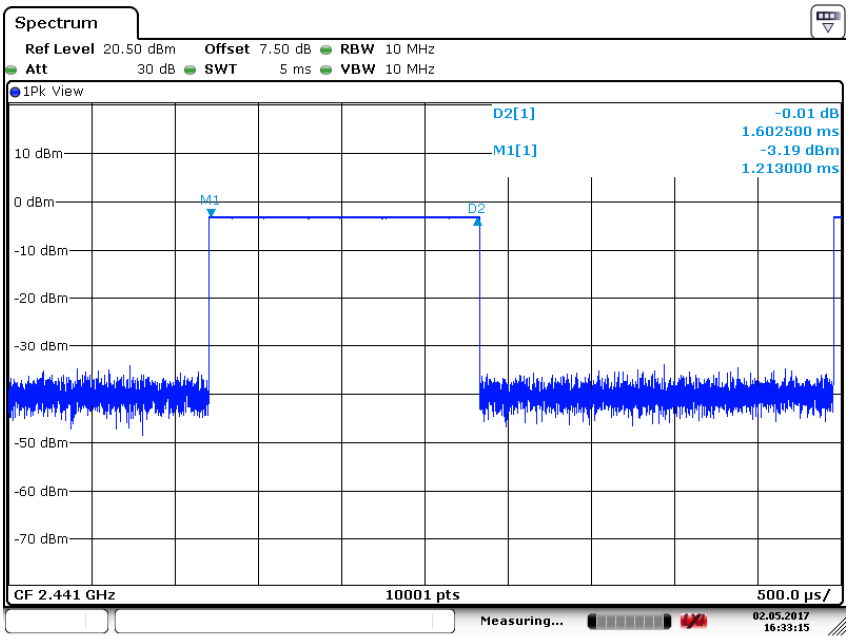
## Dwell Time

Modulation type: GFSK

| Packet type | Time slot length μs | Dwell time | Dwell time ms |
|---|---|---|---|
| DH1 | 366 | time slot length *31.6 *1600/2 /79 | 117 |
| DH3 | 1603 | time slot length * 31.6 *1600/4 /79 | 256 |
| DH5 | 2846 | time slot length * 31.6 *1600/6 /79 | 304 |

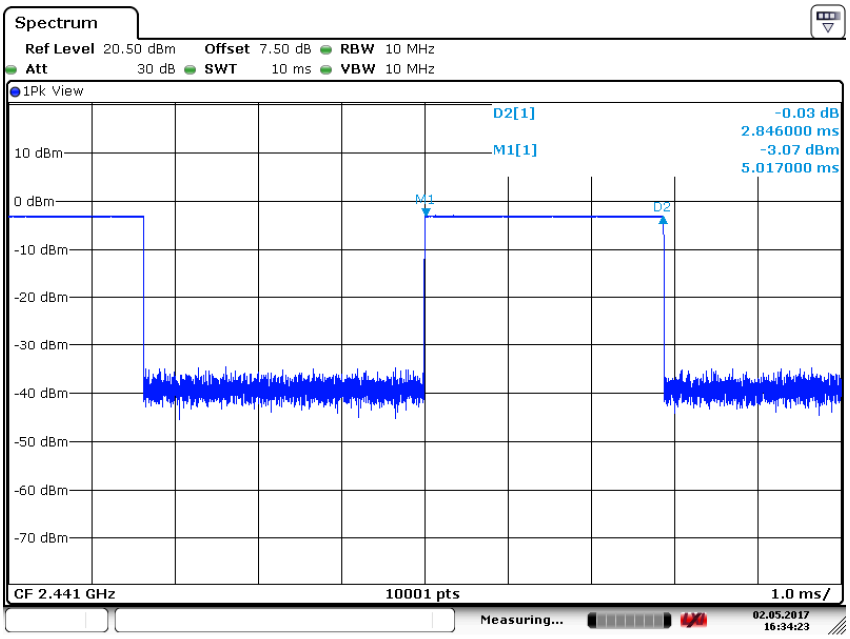



Carrier frequency (MHz): 2441
Packet type: DH1
Modulation type: GFSK




Date: 2.MAY.2017 16:33:15

Carrier frequency (MHz): 2441
Packet type: DH3
Modulation type: GFSK

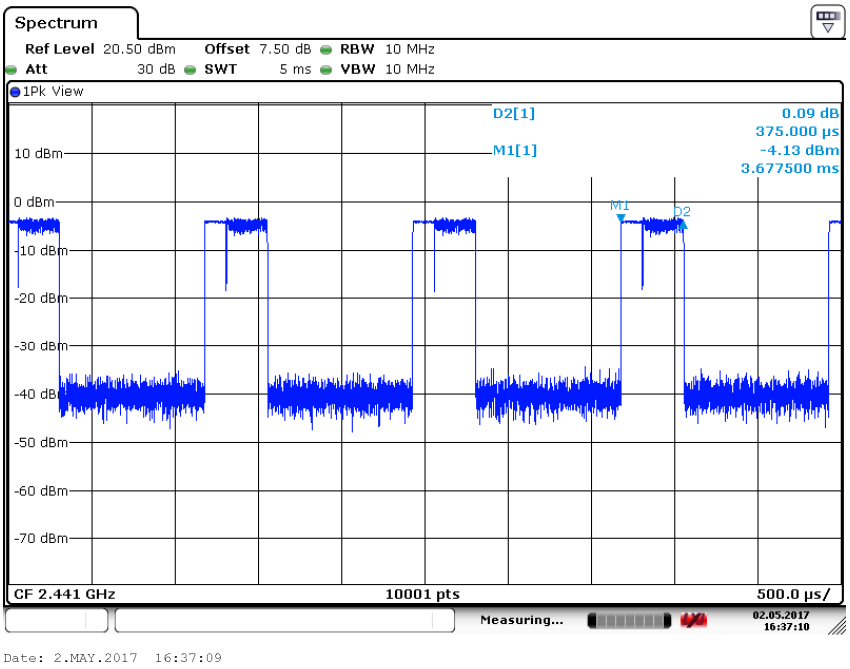



Date: 2.MAY.2017 16:34:22

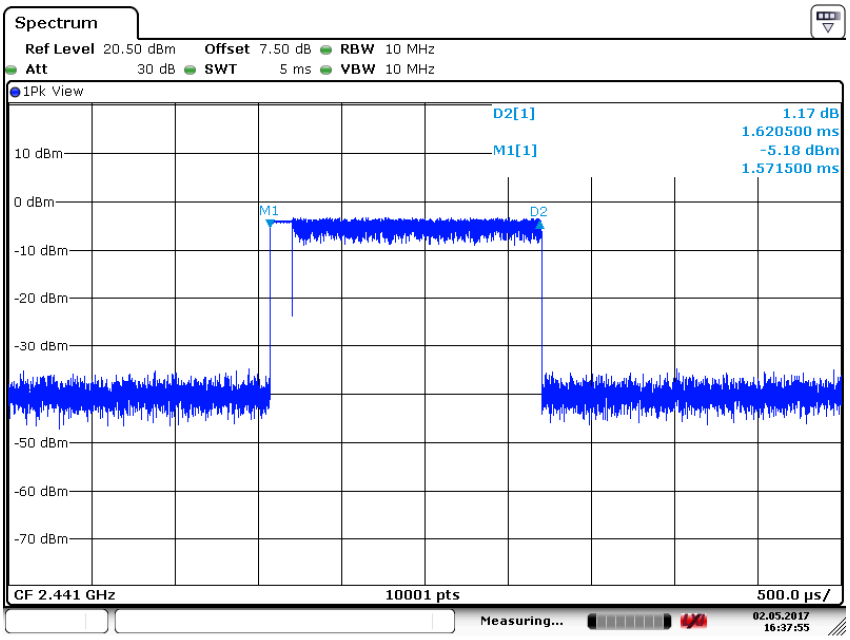
Carrier frequency (MHz): 2441
Packet type: DH5
Modulation type: GFSK

Modulation type: π/4DQPSK

| Packet type | Time slot length μs | Dwell time | Dwell time ms |
|---|---|---|---|
| DH1 | 375 | time slot length *31.6 *1600/2 /79 | 120 |
| DH3 | 1621 | time slot length * 31.6 *1600/4 /79 | 259 |
| DH5 | 2864 | time slot length * 31.6 *1600/6 /79 | 305 |

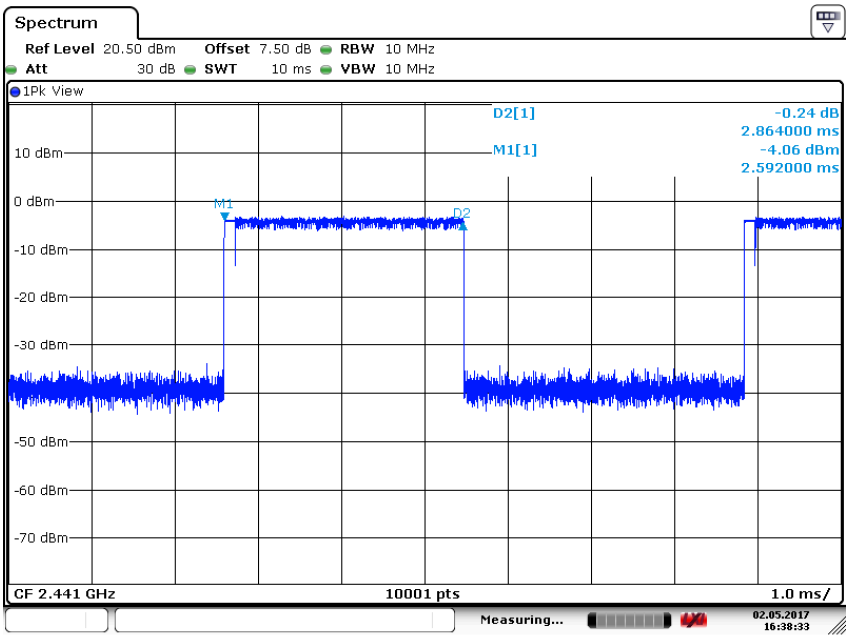



Carrier frequency (MHz): 2441
Packet type: DH1
Modulation type: π/4DQPSK




Date: 2.MAY.2017 16:37:54

Carrier frequency (MHz): 2441
Packet type: DH3
Modulation type: π/4DQPSK

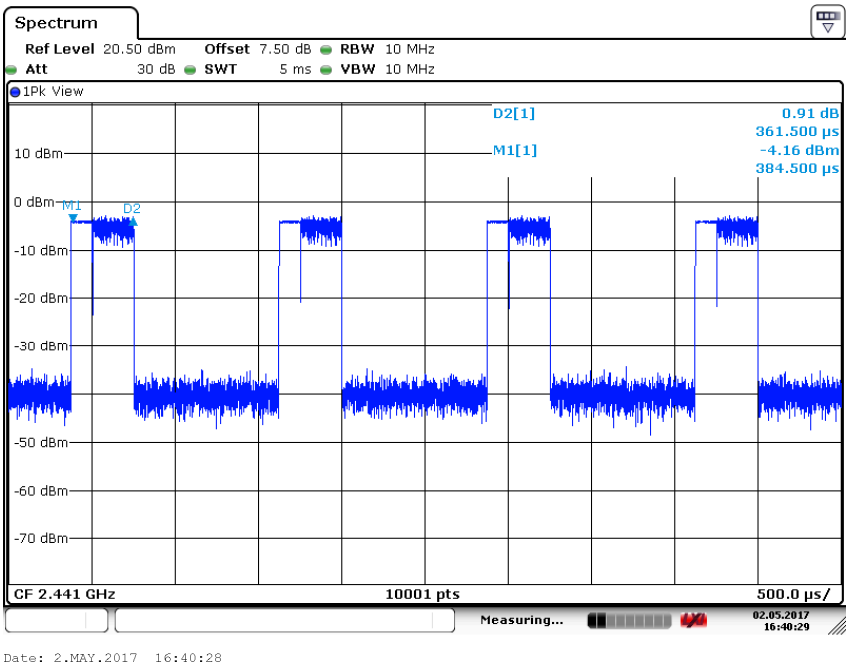



Date: 2.MAY.2017 16:38:32

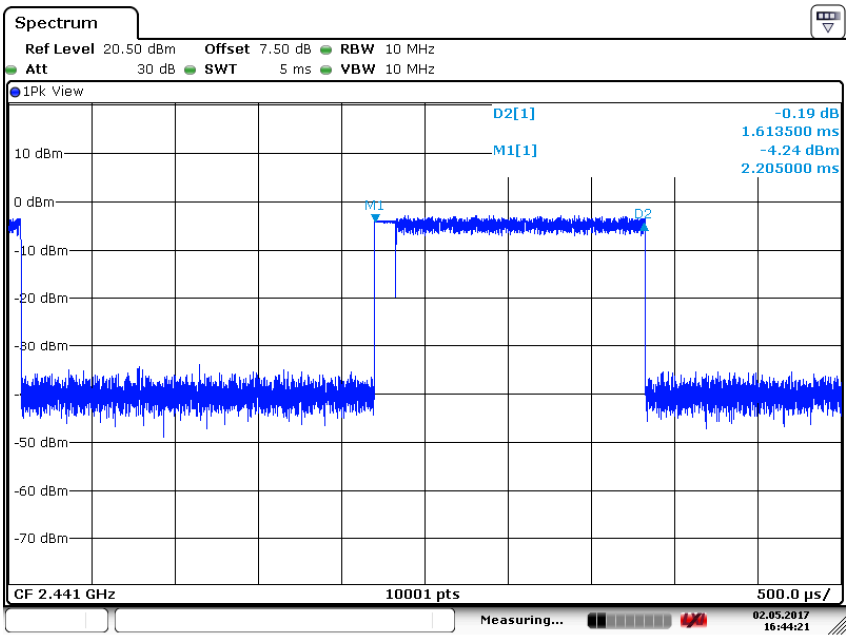
Carrier frequency (MHz): 2441
Packet type: DH5
Modulation type: π/4DQPSK

Modulation type: 8DPSK

| Packet type | Time slot length μs | Dwell time | Dwell time ms |
|---|---|---|---|
| DH1 | 362 | time slot length *31.6 *1600/2 /79 | 116 |
| DH3 | 1614 | time slot length * 31.6 *1600/4 /79 | 258 |
| DH5 | 2868 | time slot length * 31.6 *1600/6 /79 | 306 |

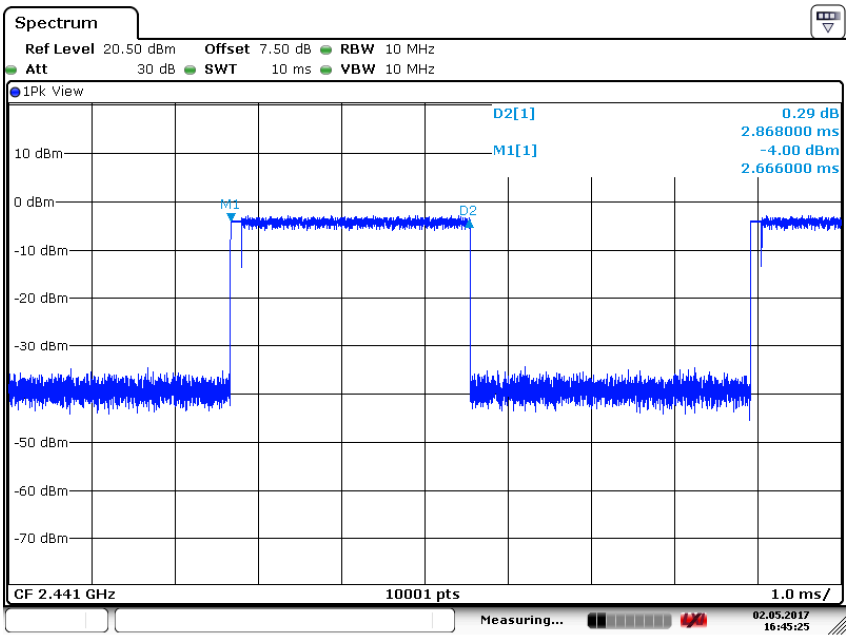



Carrier frequency (MHz): 2441
Packet type:DH1
Modulation type: 8DPSK




Date: 2.MAY.2017 16:44:21

Carrier frequency (MHz): 2441
Packet type:DH3
Modulation type: 8DPSK

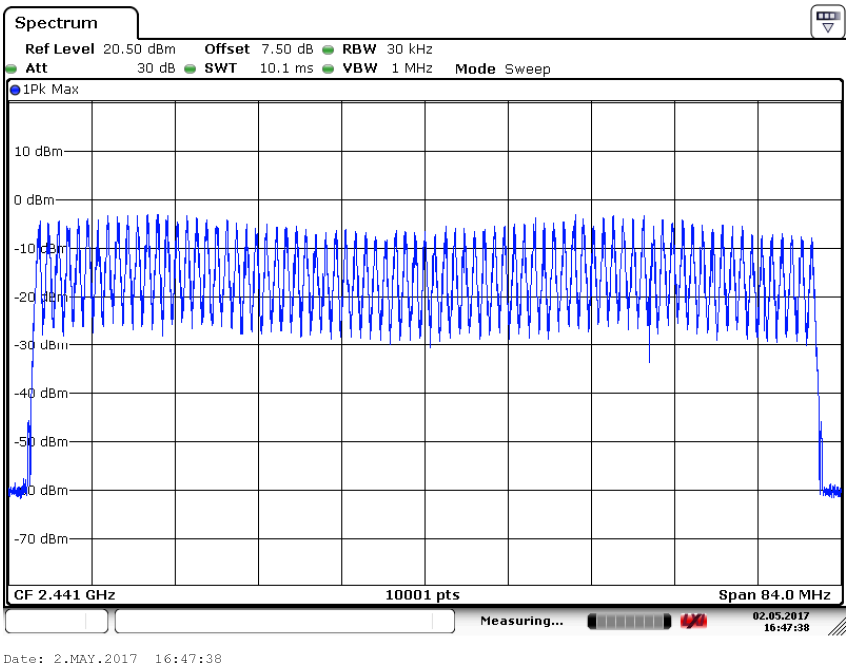



Date: 2.MAY.2017 16:45:24

Carrier frequency (MHz): 2441
Packet type:DH5
Modulation type: 8DPSK

## Number of Hopping Frequencies

| Op-mode | Result |
|---|---|
| Hopping mode | 79 |

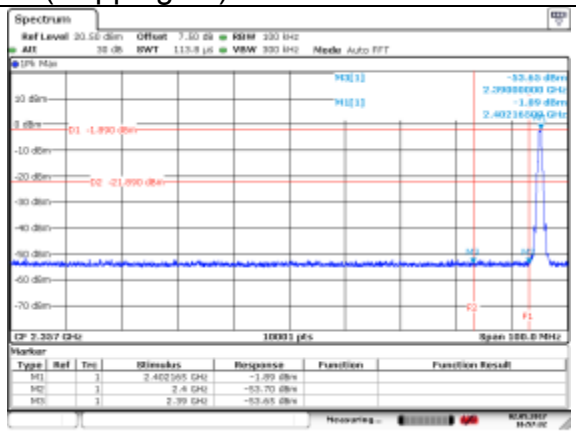


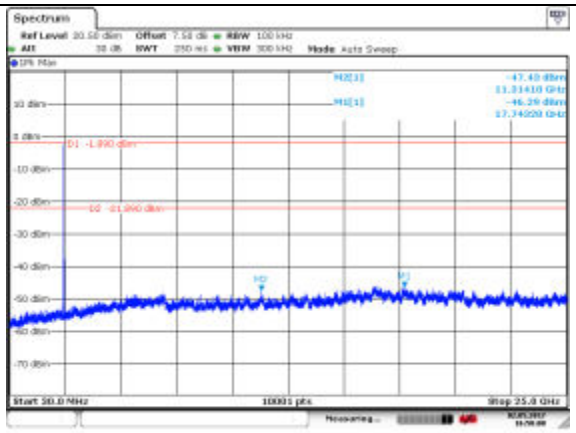

Op-mode: Hopping mode

## Conducted out of band emission measurement

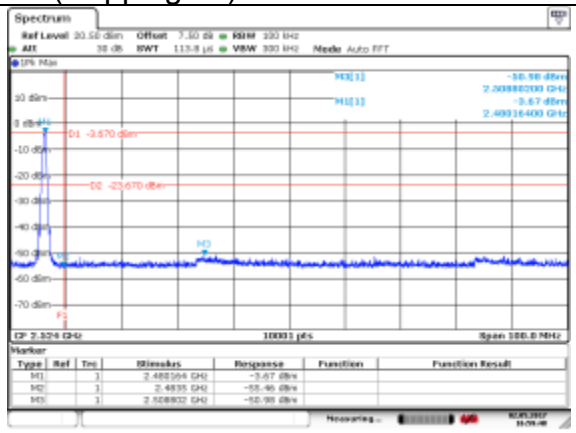
### GFSK

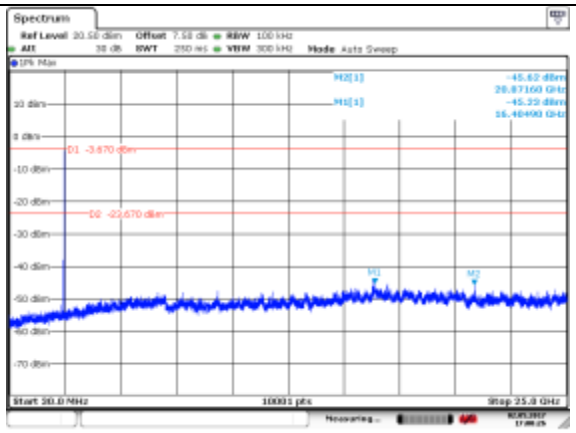
CH0 (Hopping off)



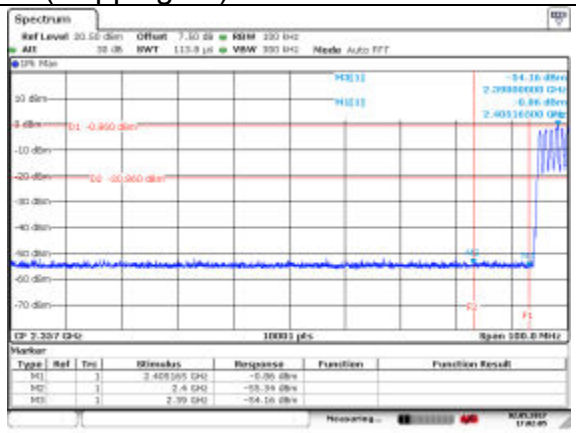


CH78(Hopping off)

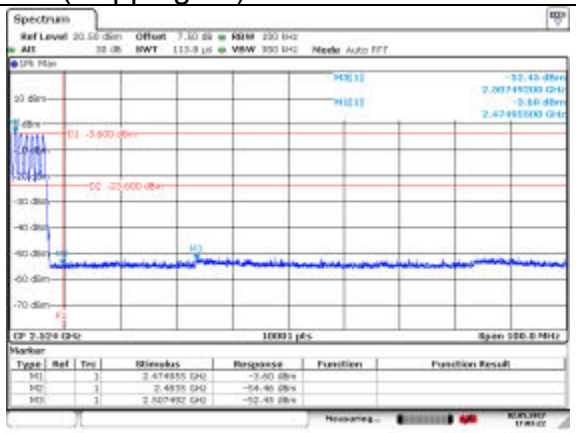




CH0 (Hopping on)

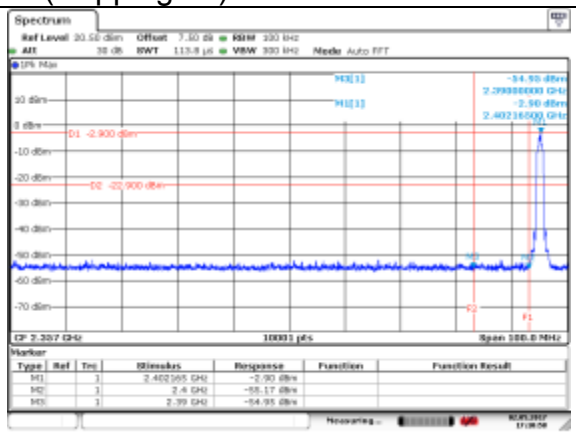


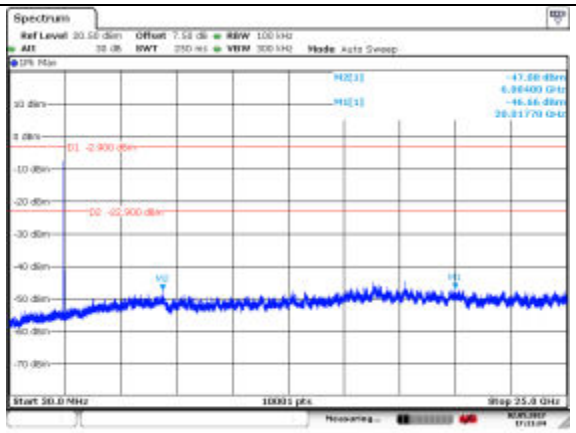
CH78 (Hopping on)



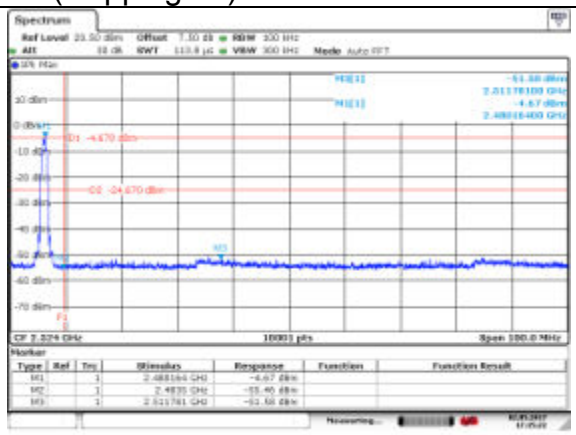
**π/4DQPSK**

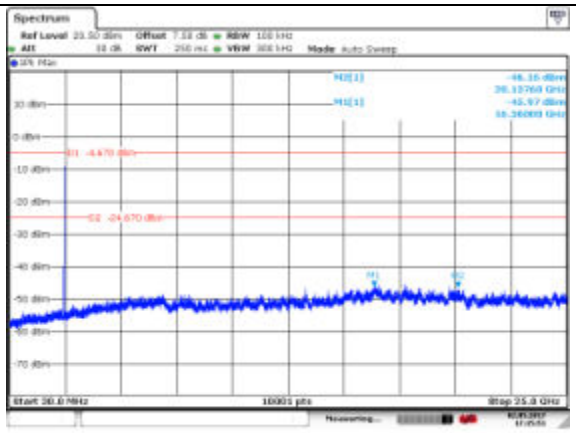
CH0 (Hopping off)



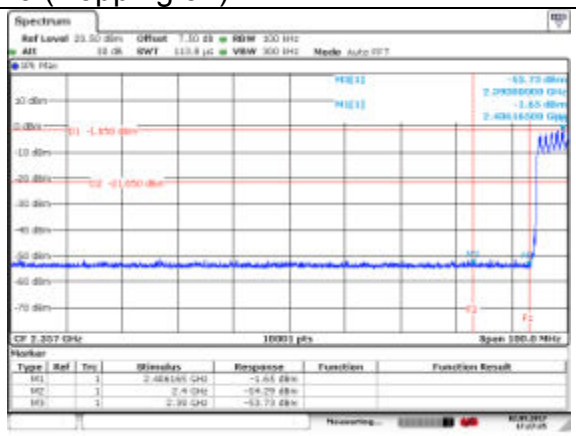


CH78(Hopping off)

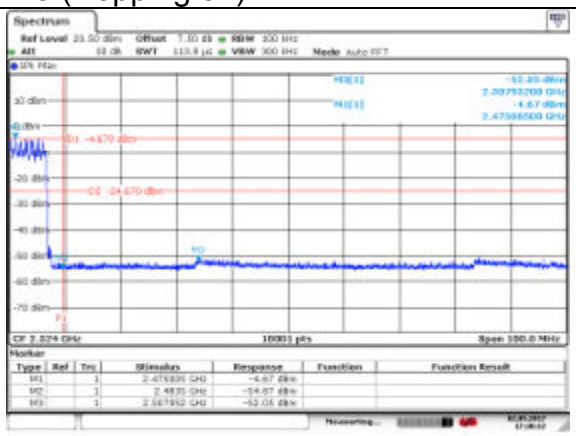




CH0 (Hopping on)

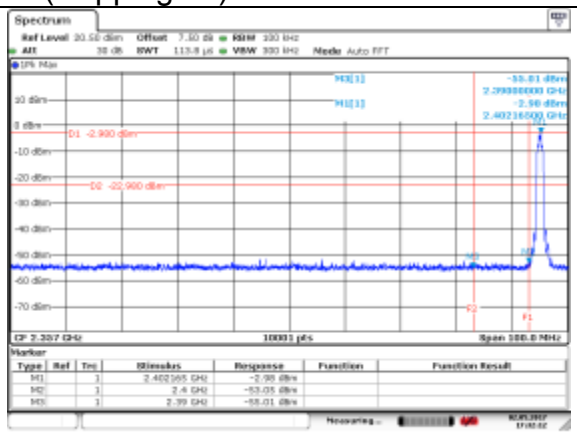


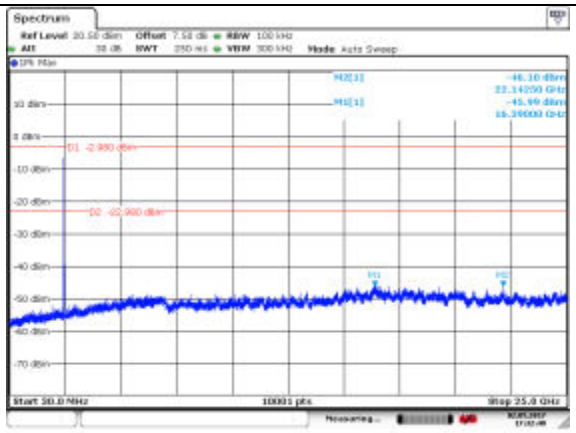
CH78 (Hopping on)



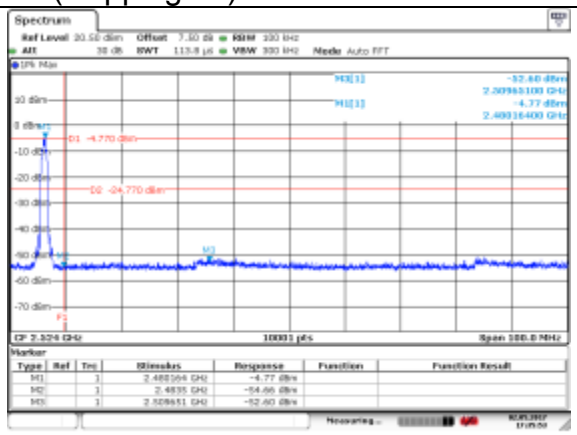
**8DPSK**

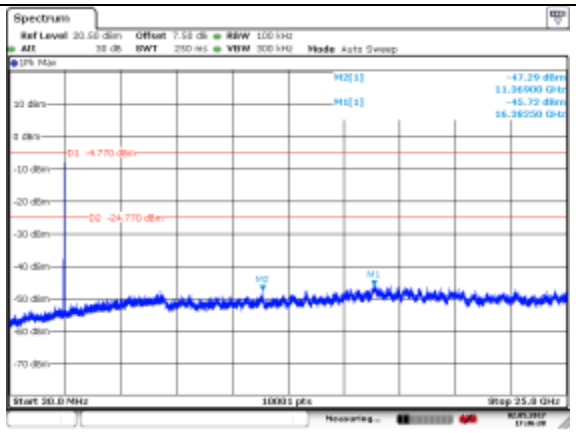
CH0 (Hopping off)



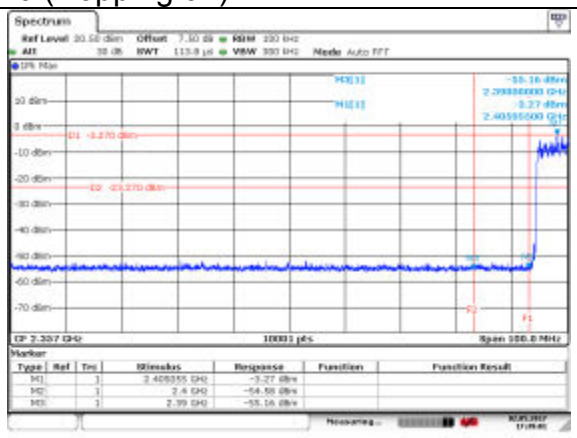


CH78(Hopping off)

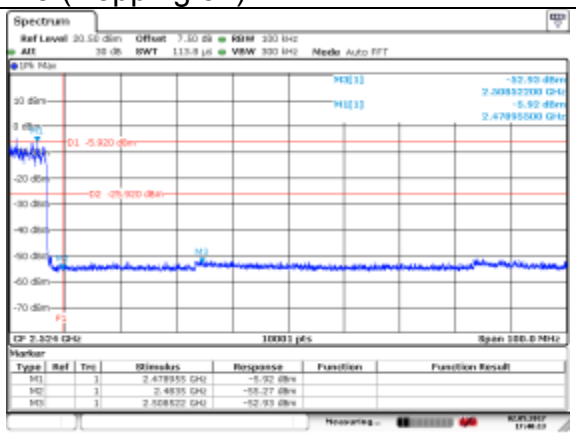




CH0 (Hopping on)



CH78 (Hopping on)



# APPENDIX B – TEST DATA OF RADIATED EMISSION

**Spurious Radiated Emissions**

The worst case attitude: The mobile lay down.

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK
Polarity: Vertical
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 87.61 | 53.61 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 58.29 | 24.29 | -15.71 | 74.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK
Polarity: Horizontal
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 86.52 | 52.52 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 56.02 | 22.02 | -17.98 | 74 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK
Polarity: Vertical
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 80.47 | 46.47 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 40.19 | 6.19 | -13.81 | 54.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK
Polarity: Horizontal
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 78.02 | 44.02 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 42.69 | 8.69 | -11.31 | 54 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: GFSK
Polarity: Vertical
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 88.00 | 54.00 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 58.25 | 24.25 | -15.75 | 74.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: GFSK
Polarity: Horizontal
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 85.39 | 51.39 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 56.32 | 22.32 | -17.68 | 74 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: GFSK
Polarity: Vertical
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 80.41 | 46.41 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 41.62 | 7.62 | -12.38 | 54.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: GFSK
Polarity: Horizontal
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 76.20 | 42.20 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 42.65 | 8.65 | -11.35 | 54 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: π/4DQPSK
Polarity: Vertical
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 88.10 | 54.10 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 56.47 | 22.47 | -17.53 | 74.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: π/4DQPSK
Polarity: Horizontal
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 85.42 | 51.42 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 57.27 | 23.27 | -16.73 | 74 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: π/4DQPSK
Polarity: Vertical
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 79.45 | 45.45 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 42.21 | 8.21 | -11.79 | 54.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: π/4DQPSK
Polarity: Horizontal
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 78.68 | 44.68 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 42.40 | 8.40 | -11.60 | 54 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: π/4DQPSK
Polarity: Vertical
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 88.19 | 54.19 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 57.12 | 23.12 | -16.88 | 74.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: π/4DQPSK
Polarity: Horizontal
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 87.73 | 53.73 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 55.83 | 21.83 | -18.17 | 74 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: π/4DQPSK
Polarity: Vertical
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 78.73 | 44.73 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 39.09 | 5.09 | -14.91 | 54.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: π/4DQPSK
Polarity: Horizontal
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 75.96 | 41.96 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 42.13 | 8.13 | -11.87 | 54 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: 8DPSK
Polarity: Vertical
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 89.22 | 55.22 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 57.56 | 23.56 | -16.44 | 74.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: 8DPSK
Polarity: Horizontal
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 86.35 | 52.35 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 55.44 | 21.44 | -18.56 | 74 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: 8DPSK
Polarity: Vertical
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 78.19 | 44.19 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 39.12 | 5.12 | -14.88 | 54.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: 8DPSK
Polarity: Horizontal
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2402 | 78.46 | 44.46 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2390 | 42.76 | 8.76 | -11.24 | 54 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: 8DPSK
Polarity: Vertical
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 88.15 | 54.15 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 57.01 | 23.01 | -16.99 | 74.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: 8DPSK
Polarity: Horizontal
Detector: Peak

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 88.28 | 54.28 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 55.14 | 21.14 | -18.86 | 74 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: 8DPSK
Polarity: Vertical
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 78.96 | 44.96 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 40.95 | 6.95 | -13.05 | 54.00 | 8.90 | 25.10 |

Carrier frequency (MHz): 2480
Channel No.:78
Test Mode: 8DPSK
Polarity: Horizontal
Detector: Average

| No | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | cable loss (dB) | antenna factor (dB) |
|---|---|---|---|---|---|---|---|
| 1 | 2480 | 78.57 | 44.57 | N/A | N/A | 8.90 | 25.10 |
| 2 | 2483.5 | 41.11 | 7.11 | -12.89 | 54 | 8.90 | 25.10 |

***Sample Calculations***

Determining Spurious Emissions Levels

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

The measurement results are obtained as described below:

Result= $P_{mea}$ + $A_{Rpl}$

Channel No.:39

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) |
|---|---|---|---|---|---|
| 31.943888 | 32.60 | 20.0 | 12.60 | Vertical | 40.0 |
| 35.831663 | 27.20 | 18.2 | 9.00 | Vertical | 40.0 |
| 43.607214 | 26.10 | 14.1 | 12.00 | Vertical | 40.0 |
| 59.158317 | 20.10 | 7.2 | 12.90 | Vertical | 40.0 |
| 624.829659 | 22.70 | 23.6 | -0.90 | Vertical | 46.0 |
| 951.402806 | 28.50 | 28.4 | 0.10 | Vertical | 46.0 |

For π/4DQPSK

Channel No.:39

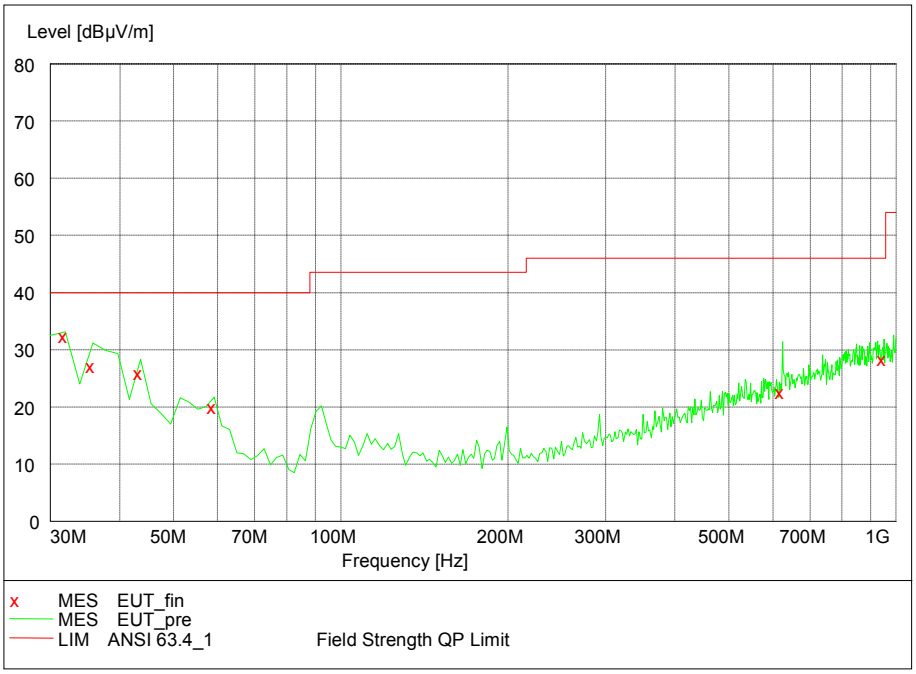
| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) |
|---|---|---|---|---|---|
| 30.000000 | 28.60 | 21.0 | 7.50 | Vertical | 40.0 |
| 33.887776 | 28.10 | 19.0 | 9.10 | Vertical | 40.0 |
| 61.102204 | 18.70 | 7.1 | 11.60 | Vertical | 40.0 |
| 624.829659 | 22.70 | 23.6 | -0.90 | Vertical | 46.0 |
| 723.967936 | 24.60 | 25.4 | -0.80 | Vertical | 46.0 |
| 930.020040 | 28.10 | 28.2 | -0.10 | Vertical | 46.0 |

For 8DPSK

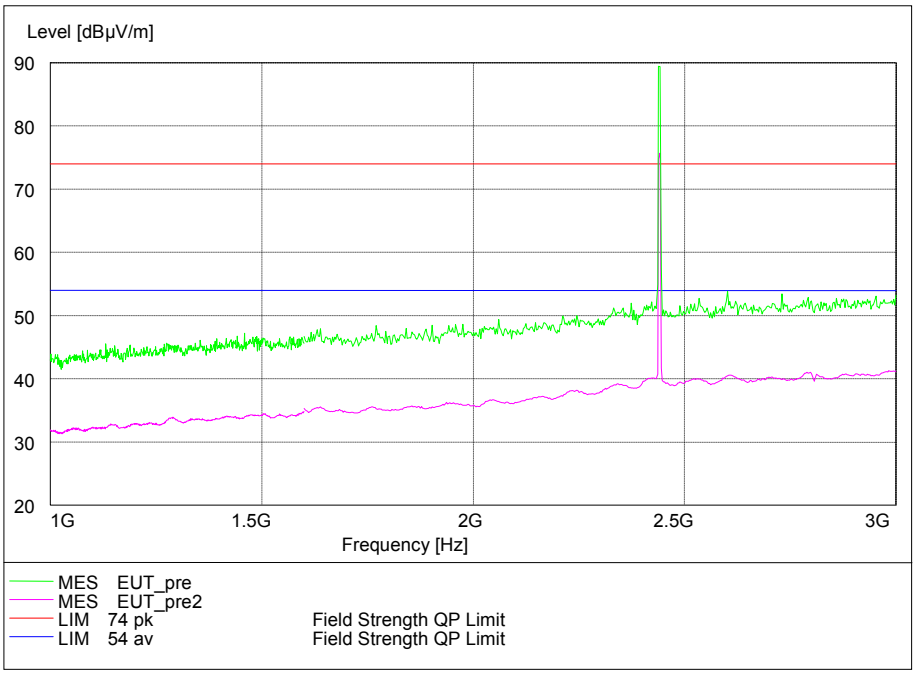
Channel No.:39

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) |
|---|---|---|---|---|---|
| 30.000000 | 28.70 | 21.0 | 7.70 | Vertical | 40.0 |
| 59.158317 | 19.10 | 7.2 | 11.90 | Vertical | 40.0 |
| 92.204409 | 19.50 | 11.3 | 8.20 | Vertical | 43.5 |
| 554.849699 | 21.30 | 22.3 | -1.00 | Vertical | 46.0 |
| 624.829659 | 22.70 | 23.6 | -0.90 | Vertical | 46.0 |
| 955.290581 | 28.60 | 28.6 | -0.00 | Vertical | 46.0 |

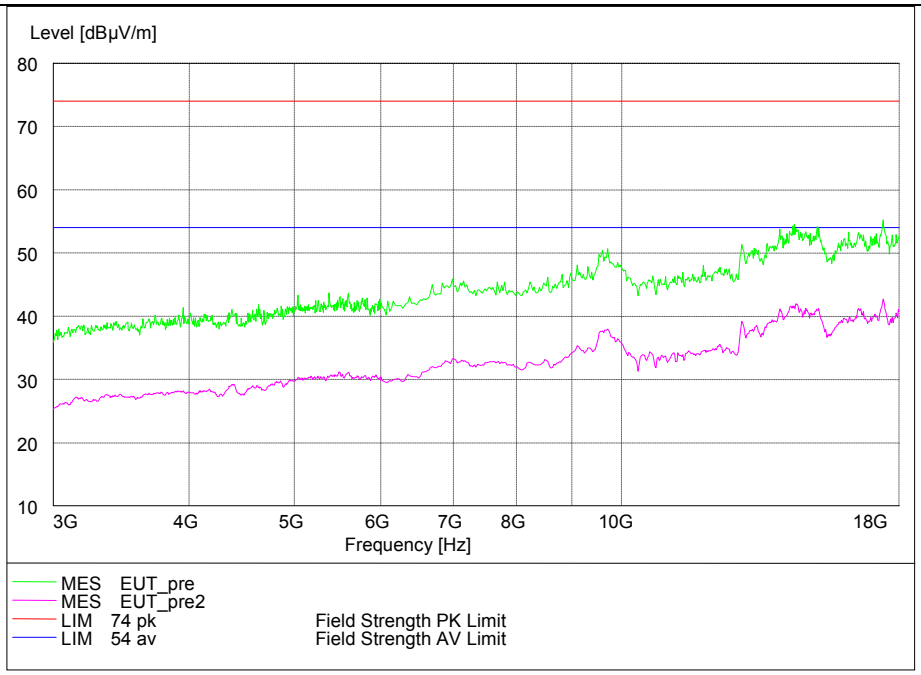
Carrier frequency (MHz): 2441
Channel No.:39



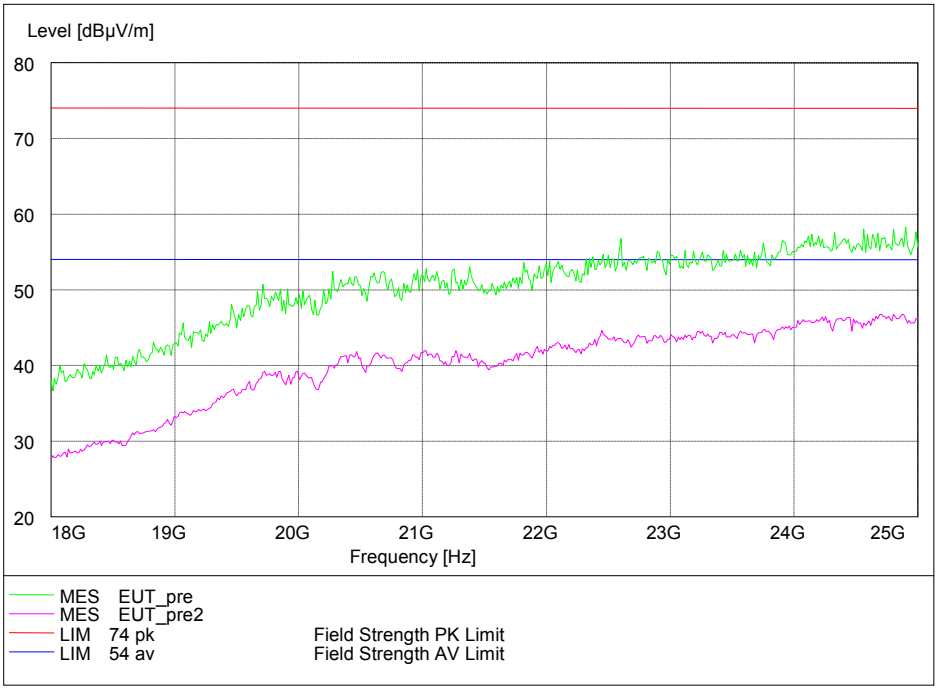

Frequency Range: 30MHz-1000MHz
Detector: QP mode
Modulation type: GFSK



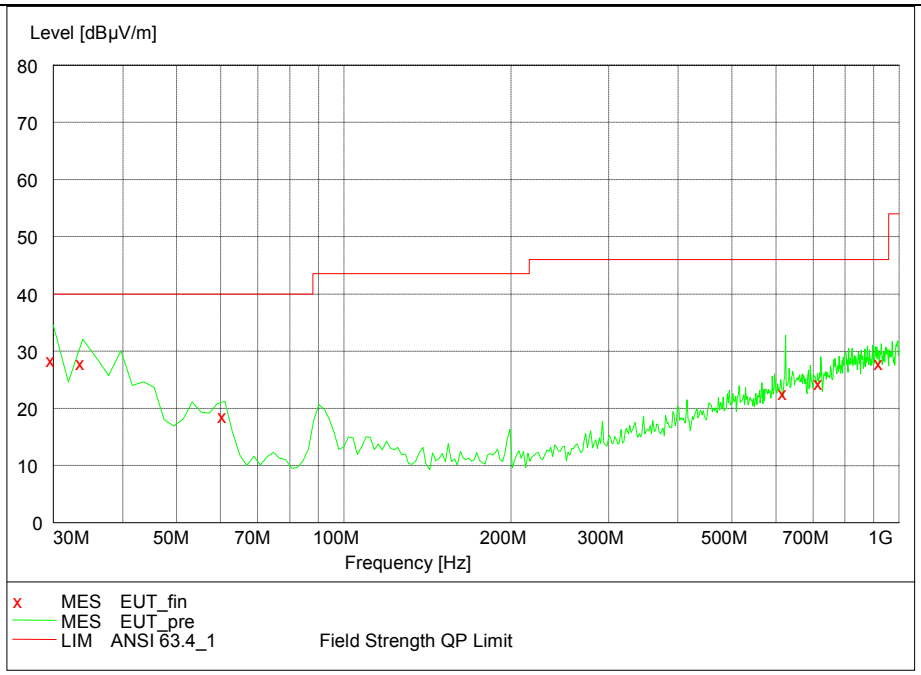

Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK



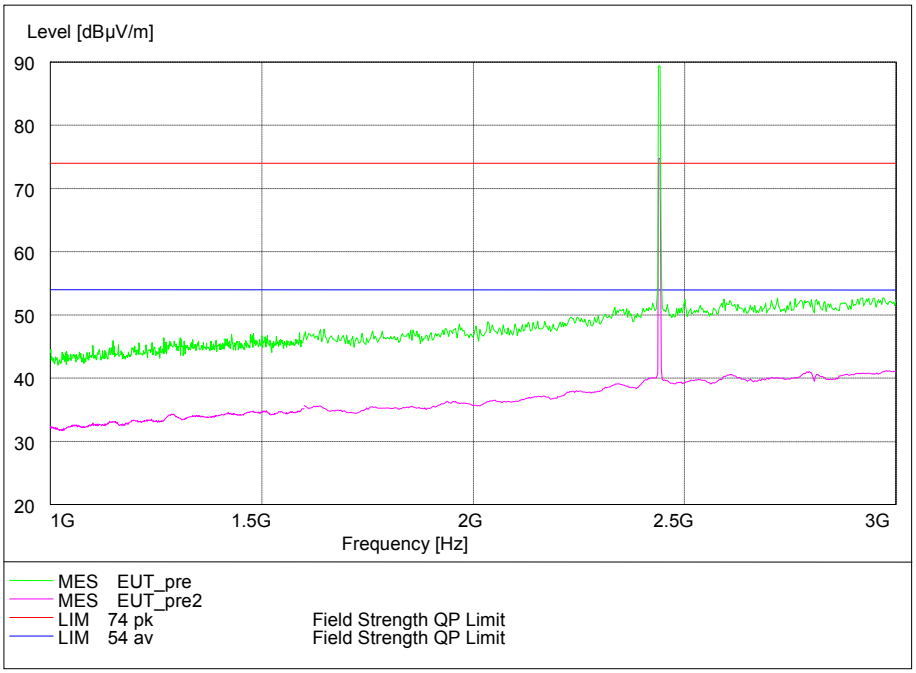

Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK



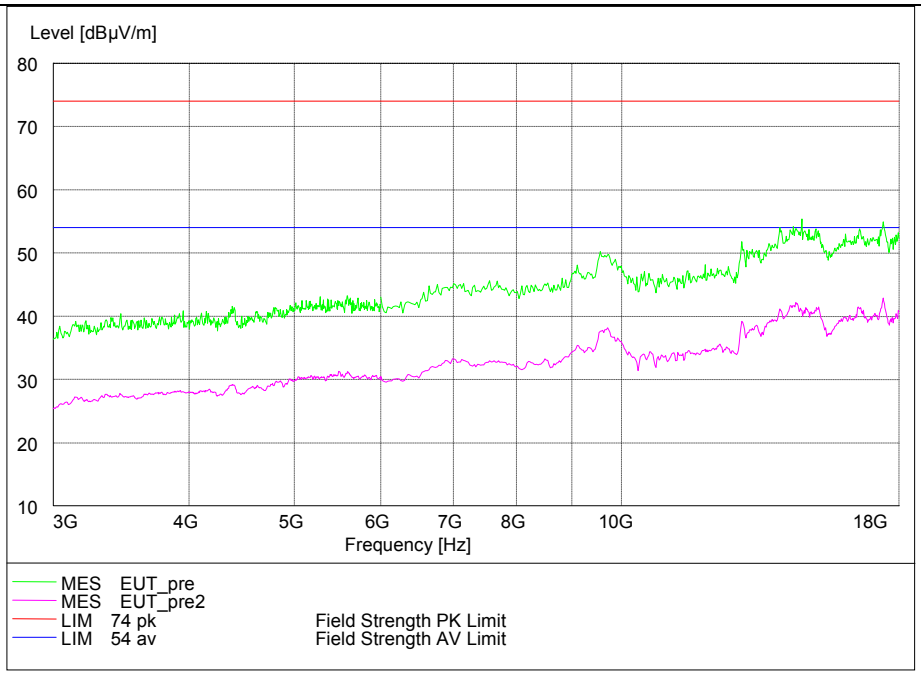

Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK



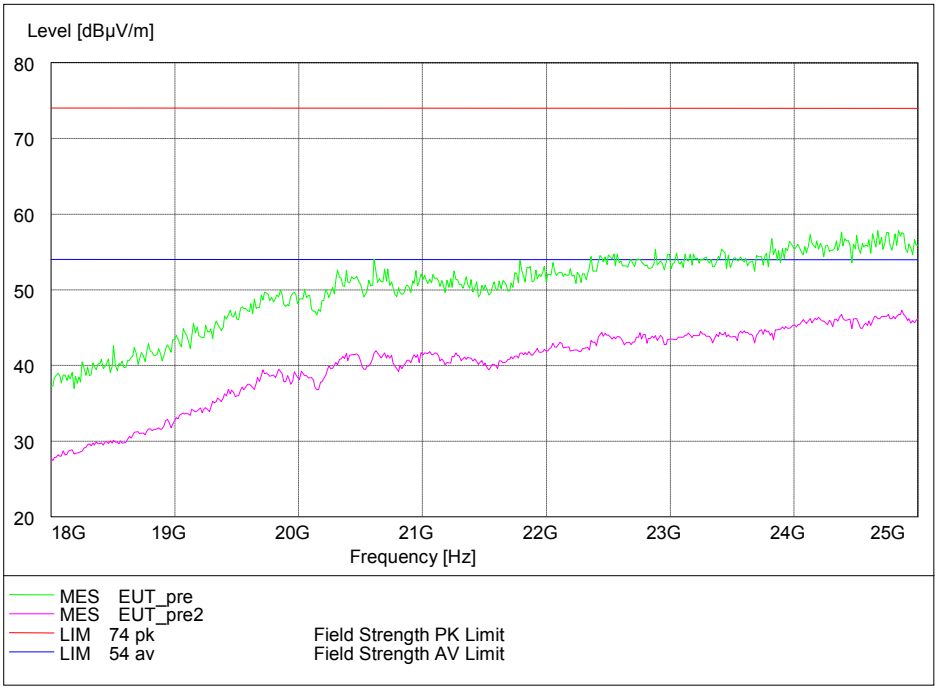

Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: π/4DQPSK



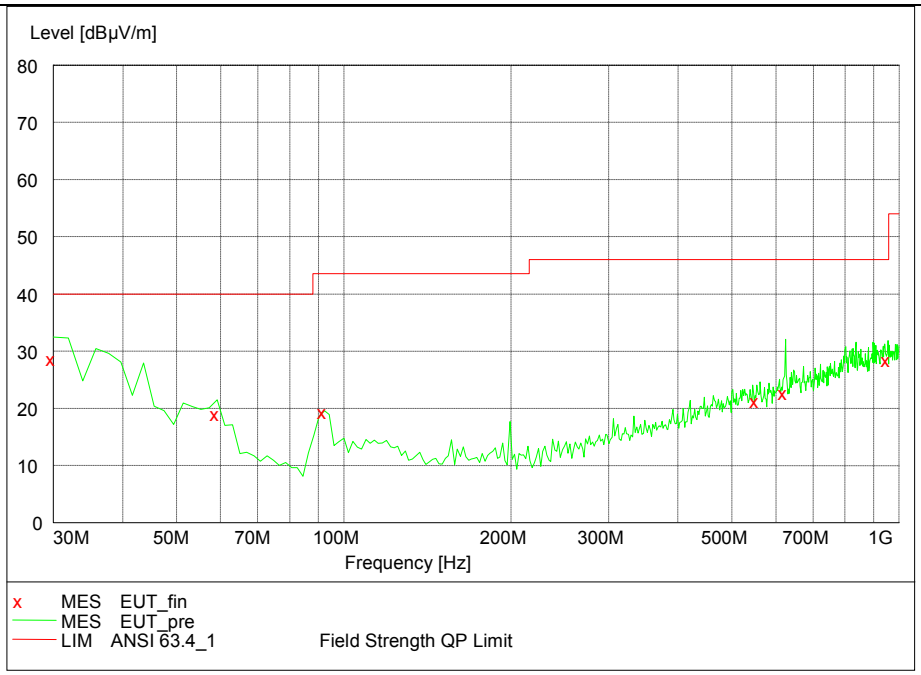

Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



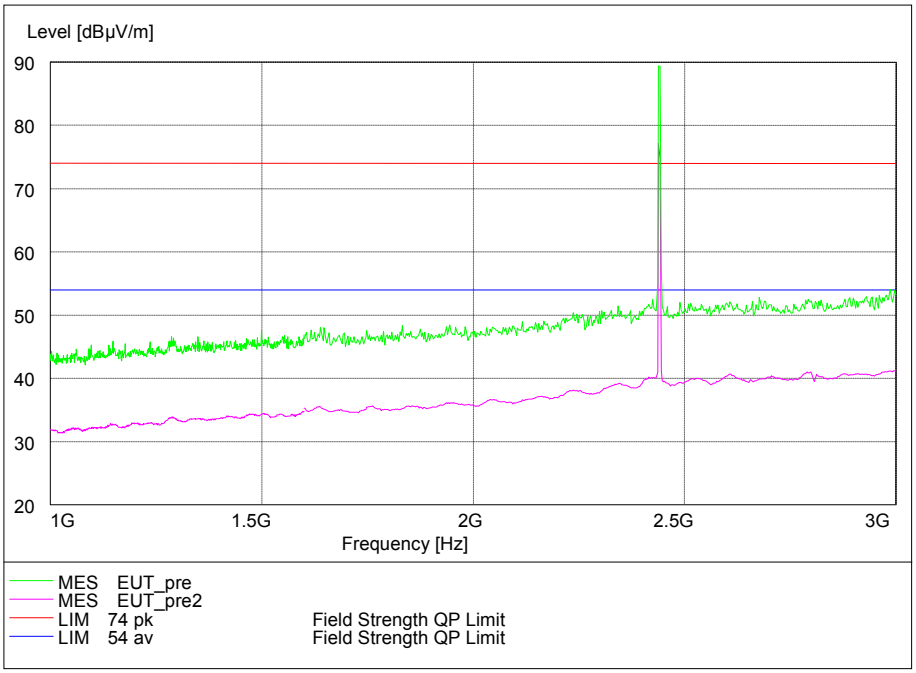

Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



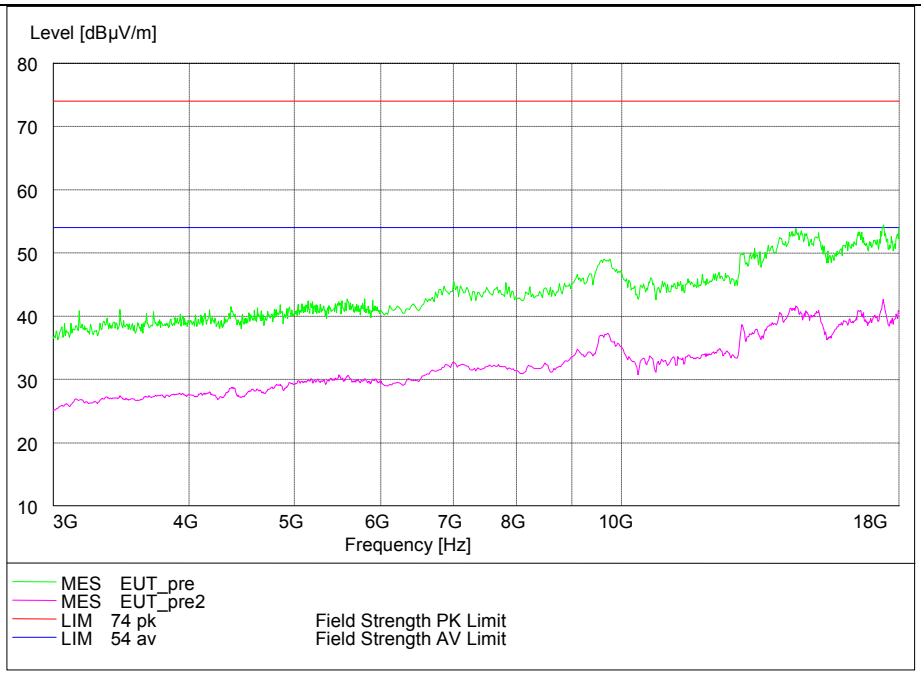

Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: π/4DQPSK



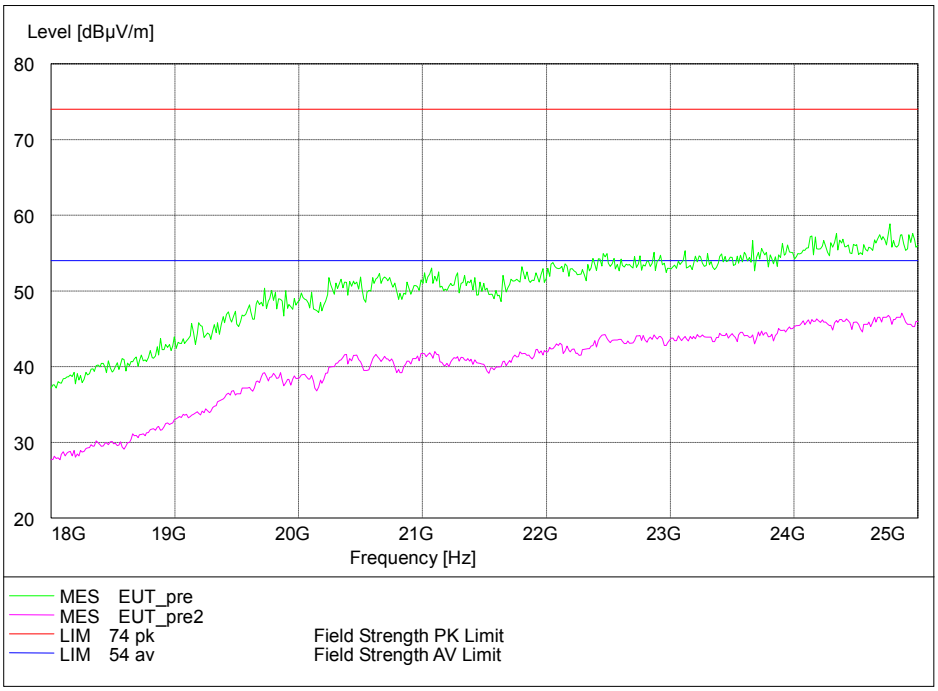

Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: 8DPSK




Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK



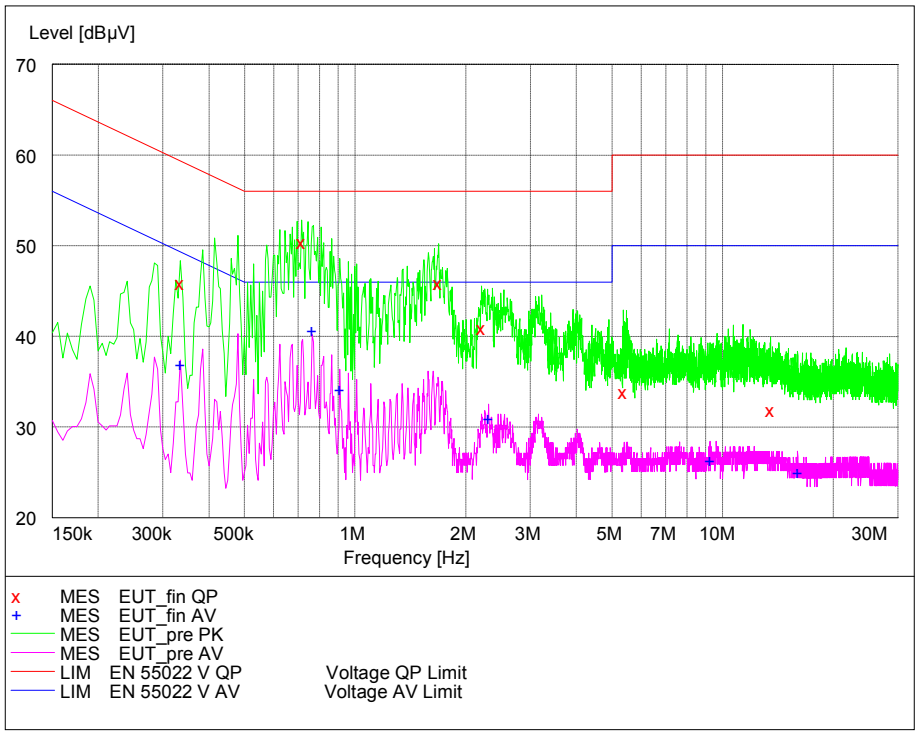

Frequency Range: 3GHz-18GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK




Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

## AC Power line Conducted Emission

Noise Level of the Measuring Instrument



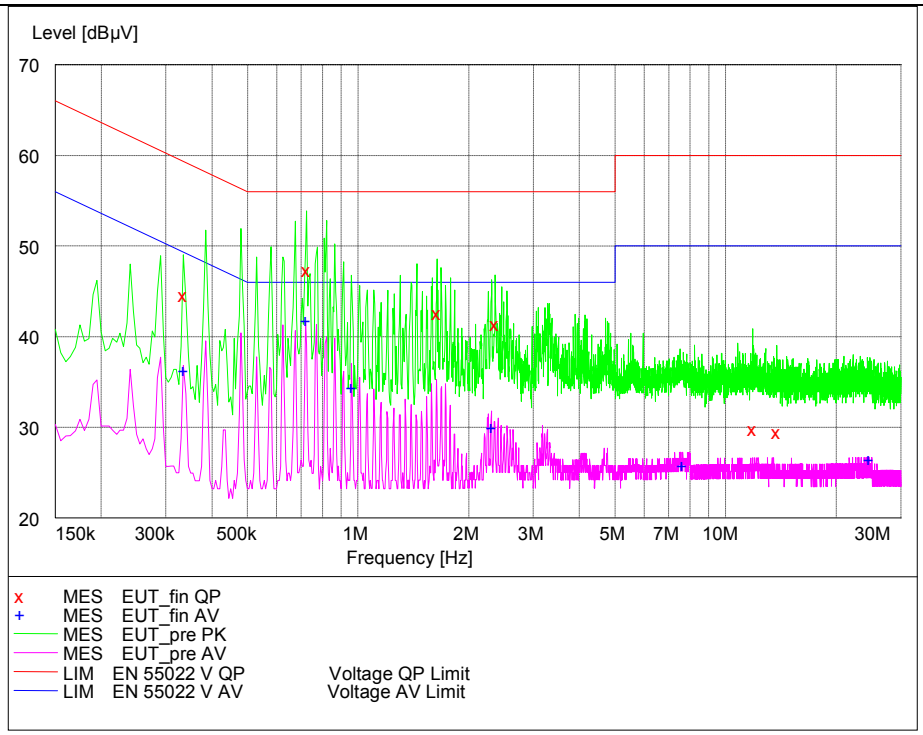

L Line

***MEASUREMENT RESULT: "EUT_fin QP"***

| Frequency | Level | Transd | Limit | Margin | Line | PE |
|---|---|---|---|---|---|---|
| 0.335000 | 46.00 | 29.6 | 59 | 13.3 | --- | --- |
| 0.715000 | 50.50 | 29.5 | 56 | 5.5 | --- | --- |
| 1.685000 | 45.90 | 29.5 | 56 | 10.1 | --- | --- |
| 2.210000 | 41.00 | 29.5 | 56 | 15.0 | --- | --- |
| 5.380000 | 33.90 | 29.6 | 60 | 26.1 | --- | --- |
| 13.515000 | 32.00 | 30.0 | 60 | 28.0 | --- | --- |

***MEASUREMENT RESULT: "EUT_fin AV"***

| Frequency | Level | Transd | Limit | Margin | Line | PE |
|---|---|---|---|---|---|---|
| MHz | dBµV | dB | dBµV | dB | | |
| 0.335000 | 36.90 | 29.6 | 49 | 12.4 | --- | --- |
| 0.765000 | 40.60 | 29.4 | 46 | 5.4 | --- | --- |
| 0.910000 | 34.20 | 29.5 | 46 | 11.8 | --- | --- |
| 2.310000 | 31.00 | 29.6 | 46 | 15.0 | --- | --- |
| 9.255000 | 26.30 | 29.8 | 50 | 23.7 | --- | --- |
| 15.995000 | 25.00 | 30.1 | 50 | 25.0 | --- | --- |




N Line

***MEASUREMENT RESULT: "EUT_fin QP"***

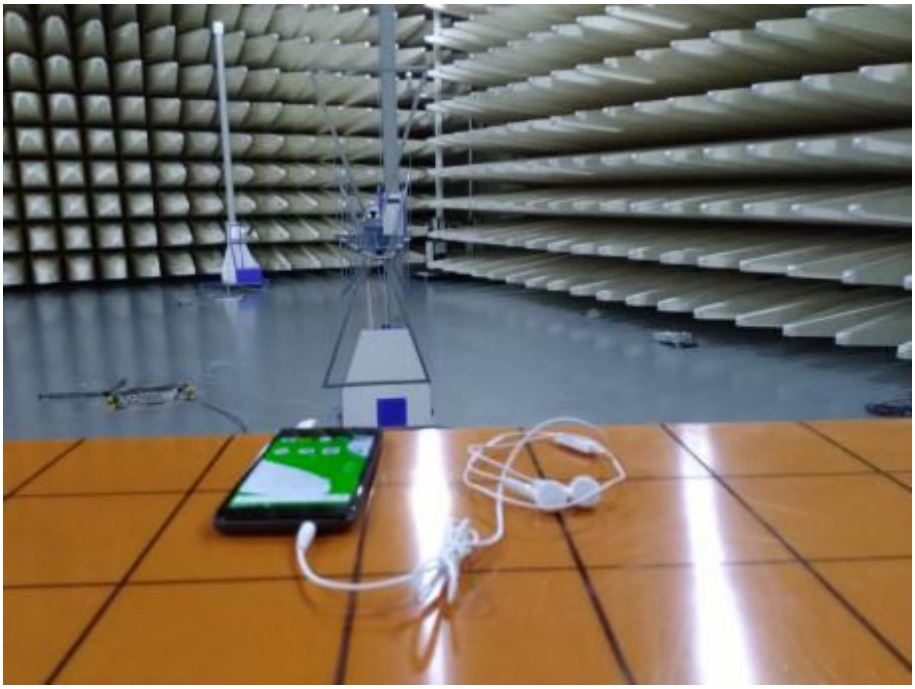
| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Line | PE |
|---|---|---|---|---|---|---|
| 0.335000 | 44.70 | 29.6 | 59 | 14.7 | --- | --- |
| 0.725000 | 47.50 | 29.5 | 56 | 8.5 | --- | --- |
| 1.640000 | 42.70 | 29.5 | 56 | 13.3 | --- | --- |
| 2.360000 | 41.50 | 29.5 | 56 | 14.5 | --- | --- |
| 11.870000 | 29.90 | 29.9 | 60 | 30.1 | --- | --- |
| 13.795000 | 29.50 | 30.0 | 60 | 30.5 | --- | --- |

***MEASUREMENT RESULT: "EUT_fin AV"***

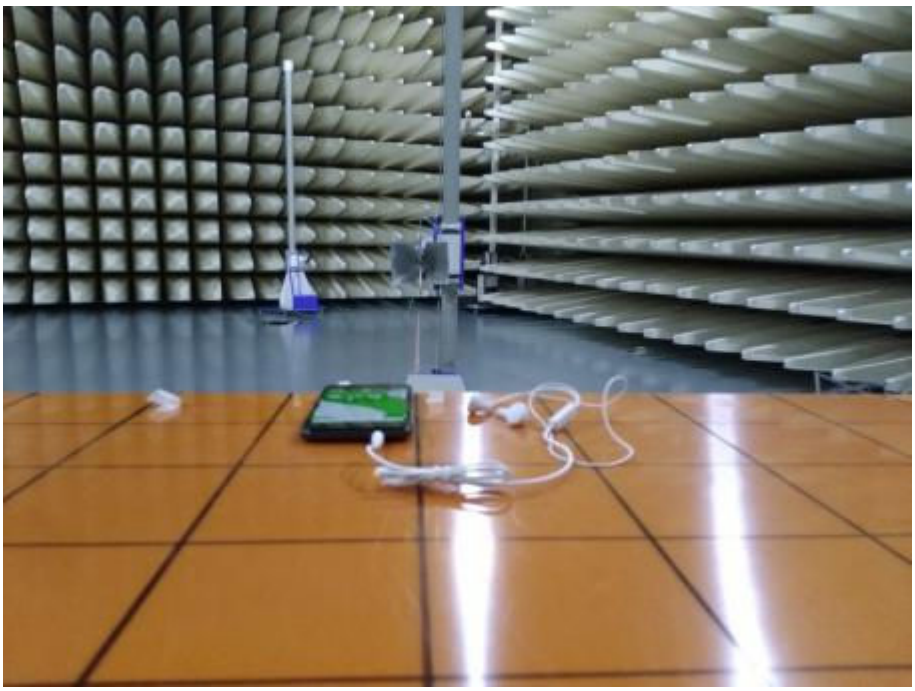
| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Line | PE |
|---|---|---|---|---|---|---|
| 0.335000 | 36.30 | 29.6 | 49 | 13.1 | --- | --- |
| 0.720000 | 41.80 | 29.5 | 46 | 4.2 | --- | --- |
| 0.960000 | 34.40 | 29.5 | 46 | 11.6 | --- | --- |
| 2.305000 | 30.00 | 29.6 | 46 | 16.0 | --- | --- |
| 7.635000 | 25.80 | 29.7 | 50 | 24.2 | --- | --- |
| 24.520000 | 26.50 | 31.1 | 50 | 23.5 | --- | --- |

# APPENDIX C – TEST SETUP

Spurious RF Conducted Emissions Test setup



Spurious Radiated Emissions Test setup (30MHz~1GHz)



Spurious Radiated Emissions Test setup (1GHz~25GHz)

---End of Test Report---