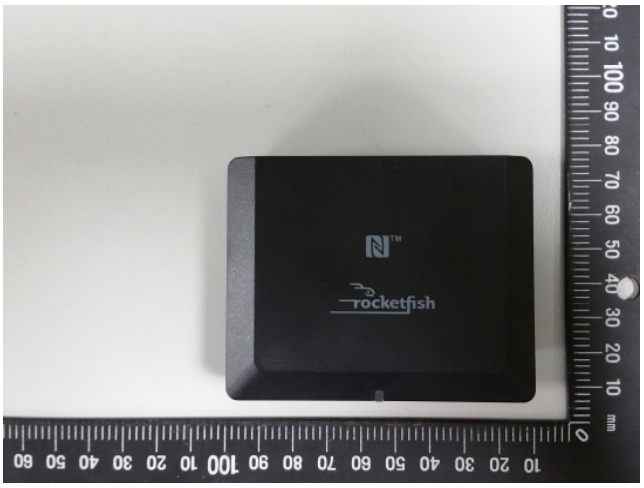
Prüfbericht-Nr.: *Test Report No.*:	**50257345 001**	**Auftrags-Nr.:** *Order No.*:	238105721	Seite 1 von 46 *Page 1 of 46*
Kunden-Referenz-Nr.: *Client Reference No.*:	N/A	**Auftragsdatum:** *Order date*:	22-May-2019	

Auftraggeber: *Client*:	Trans Electric Co., Ltd. 771 Sec.2 Chungsan Rd, Huatang, Changhua, Taiwan 503
Prüfgegenstand: *Test item*:	Bluetooth Audio Receiver
Bezeichnung / Typ-Nr.: *Identification / Type No.*:	RF-BTR319
Auftrags-Inhalt: *Order content*:	FCC Part 15C/ISED RSS-247 Test report (BDR/EDR)
Prüfgrundlage: *Test specification*:	FCC 47CFR Part 15: Subpart C Section 15.247 FCC 47CFR Part 2: Subpart J Section 2.1091 RSS-247 ISSUE 2 Feb 2017 RSS-102 ISSUE 5 Mar 2015

Wareneingangsdatum: *Date of receipt*:	23-May-2019
Prüfmuster-Nr.: *Test sample No.*:	A000927489-001,002
Prüfzeitraum: *Testing period*:	27-May-2019 - 11-Jun-2019
Ort der Prüfung: *Place of testing*:	EMC/RF Laboratory Taipei
Prüflaboratorium: *Testing laboratory*:	TUV Rheinland Taiwan Ltd.
Prüfergebnis*: *Test result**:	Pass



geprüft von / *tested by*:			**kontrolliert von / *reviewed by*:**		
2019-06-27	Mars Y.J. Lin/Project Engineer		2019-06-27	Arvin Ho / Vice General Manager	
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

Sonstiges / *Other*:

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: Passed

5.1.2 PEAK OUTPUT POWER
RESULT: Passed

5.1.3 FREQUENCY SEPARATION
RESULT: Passed

5.1.4 99% BANDWIDTH
RESULT: Passed

5.1.5 20DB BANDWIDTH
RESULT: Passed

5.1.6 CONDUCTED SPURIOUS EMISSIONS AND FREQUENCY BAND EDGE MEASURED IN 100KHZ BANDWIDTH
RESULT: Passed

5.1.7 SPURIOUS EMISSION
RESULT: Passed

5.1.8 NUMBER OF HOPPING FREQUENCY
RESULT: Passed

5.1.9 TIME OF OCCUPANCY
RESULT: Passed

5.2.1 MAINS CONDUCTED EMISSIONS
RESULT: Passed

6.1.1 ELECTROMAGNETIC FIELDS
RESULT: Passed

Contents

1. General Remarks

1.1 Complementary Materials

The following attachments are integral parts of this test report:

Appendix P: Photo Documentation
(File Name: 50257345 001APPENDIX P)
Appendix D: Test Result of Radiated Emissions
(File Name: 50257345 001APPENDIX D)

Test Specifications

The following standards were applied

Table 1: Applied Standard and Test Levels

Radio
FCC CFR47 Part 15: Subpart C Section 15.247
FCC 47CFR Part 2: Subpart J Section 2.1091
ANSI C63.10:2013
KDB558074 D01 DTS Meas Guidance v05
KDB447498 D01 General RF Exposure Guidance v06
RSS-247 Issue 2 Feb 2017
RSS-102 Issue 5 Mar 2015
RSS-Gen Issue 5 Apr 2018

1.2 Complementary Materials

The decision rule of conformity of this test report is following the requirements of the requested standard in the quotation, and agreed among testing laboratory and manufacturer (applicant) to exclude the consideration of Measurement Uncertainty, unless it is required by the specific standard.

2. Test Sites

2.1 Test Laboratory

TUV Rheinland Taiwan Ltd.
Taipei Testing Laboratories

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.
Taipei City 105
Taiwan (R.O.C.)

2.2 Test Facility

TUV Rheinland Taiwan Ltd.

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.
Taipei City 105
Taiwan (R.O.C.)

FCC RegistrationNo.: 180491
IC Canada Registration No.: 9465A
TAF Accredited NCC Test Lab. No.:3567
TAF ISO17025 Certification effective period: 6th-May-2019 to 05th-May-2022

Testing Laboratory
3567

2.3 List of Test and Measurement Instruments

Table 2: List of Test and Measurement Equipment

Kind of Equipment	Manu-facturer	Type	S/N	Last Calibration	Next Calibration
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100797	2019/01/16	2020/01/16
Two-Line V-Network	Rohde & Schwarz	ENV216	101262	2018/07/10	2019/07/10
Telecom ISN 2 Line	Fischer Custom Communications	FCC-TLISN-T2-02-09	101169	2018/08/24	2019/08/24
Telecom ISN 4 Line	Fischer Custom Communications	FFCC-TLISN-T4-02-09	101168	2019/01/02	2020/01/02
Impedance Stabilization Network	TESEQ	ISN T800	51949	2019/02/20	2020/02/20
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	0357.8810.54-102102-HN	2018/06/28	2019/06/28
Test Software	Audix	e3	Ver. 9	N/A	N/A
EMI Test Receiver	Rohde & Schwarz	ESR 7	101062	2018/10/01	2019/10/01
Spectrum Analyzer	Rohde & Schwarz	FSV-40	101514	2019/02/07	2020/02/07
Pre-Amplifier	Hewlett Packard	8447F	2805A03335	2018/08/22	2019/08/22
Pre-Amplifier	EM Electronics	EM01G18G	060558	2018/11/30	2019/11/30
Pre-Amplifier	EMC Instruments	EMC184045SE	980652	2019/02/25	2020/02/25
Bilog Antenna	TESEQ	CBL 6111D	29802	2018/08/22	2019/08/22
Horn Antenna	ETS-Lindgren	3117	00218931	2018/12/27	2019/12/27
Horn Antenna	Com-Power	AH-840	101029	2018/12/22	2019/12/22
Loop Antenna	Schwarzbeck	FMZB 1513	1513-076	2018/06/21	2019/06/21
EMI Test Receiver	Rohde & Schwarz	ESR 7	101549	2018/11/12	2019/11/10
Spectrum Analyzer	Rohde & Schwarz	FSV-40	101112	2018/10/01	2019/10/01
Pre-Amplifier	Hewlett Packard	8447D	2944A09270	2018/08/31	2019/08/31
Pre-Amplifier	EM Electronics	EM01G18G	060649	2018/08/24	2019/08/24
Pre-Amplifier	EMC Instruments	EMC184045SE	980652	2019/02/25	2020/02/25
Bilog Antenna	TESEQ	CBL 6111D	29804	2018/07/02	2019/07/02
Horn Antenna	ETS-Lindgren	3117	00201918	2018/08/23	2019/08/23
Horn Antenna	Com-Power	AH-840	101029	2018/12/22	2019/12/22
Loop Antenna	Schwarzbeck	FMZB 1513	1513-076	2018/06/21	2019/06/21
Spectrum Analyzer	Agilent	N9010A	MY53470241	2018/06/04	2019/06/04
Power Meter	Anritu	ML2495A	1901008	2019/04/29	2020/04/29

2.4 Traceability

All measurement equipment calibrations are traceable to NML(Taiwan)/NIST(USA) or where calibration is performed outside Taiwan, to equivalent nationally recognized standards organizations.

2.5 Calibration

requiring calibration is calibrated periodically in a suitably accredited Calibration Lab. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.6 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements:.

Table 3: Emission Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	± 0.1 ppm
RF power, conducted	± 1.5 dB
Adjacent channel power	± 3 dB
Radiated emission of transmitter, valid up to 26 GHz	± 6 dB
Radiated emission of receiver, valid up to 26 GHz	± 6 dB
Temperature	± 2 ºC
Humidity	± 10 %

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a Bluetooth Audio Receiver. It contains a Bluetooth compatible chip enabling the user to communicate data through a Wireless interface.
For details refer to the User Guide, Data Sheet and Block Diagram.

3.2 System Details and Ratings

Table 4: Basic Information of EUT

Item	EUT information
Kind of Equipment/Test Item	Bluetooth Audio Receiver
Type Identification	RF-BTR319
FCC ID	BY4BTR319
IC ID	3780A-BTR319
HVIN	RF-BTR319

Table 5: Technical Specification of EUT

Technical Specification	Value
Operating Frequency	2402 MHz ~ 2480 MHz
Channel Spacing	1 MHz
Channel number	79
Operation Voltage	110-240 Vac
Modulation	GFSK, π/4 DQPSK, 8 DPSK
Antenna gain	3 dBi

Table 6: Frequency hopping information

Technical Specification	Description
Hopping Range	Hereby we declare that the maximum frequency of this device is: 2402-2480MHz. This is according the Bluetooth Core Specification V2.1+EDR for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04).
Hopping Sequence	Example of a 79 hopping sequence in data mode: 33,04,21,44,23,42,53,46,55,48,40,59,72,29,76,31,08,73, 07,75,09,45,60,39,58,13,47,11,77,52,35,50,65,54,67,56, 69,62,71,64, 7,25,27,66,57,70,74,61,78,63,10,41,05,43, 15,44,64,68,02,70,06,01,51,03,55,05,03,66,53,49,36,47,
Receiver input bandwidth	The input bandwidth of the receiver is 1MHz. In every connection one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings. Repeating of a packer has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.

3.3 Independent Operation Modes

The basic operation modes are:

A. Transmitting
   1. Low channel
   2. Middle channel
   3. High channel

B. Receiving
   1. Low channel
   2. Middle channel
   3. High channel

C. Hopping

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Block Diagram.

3.5 Submitted Documents

- Block Diagram
- Instruction Manual
- Rating Label
- Technical Description

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Setup for testing: Test samples are provided with a USB interface which makes it possible to control them through a test software installed on a notebook computer.

This software, Bluetooth RF test tool “BlueTest3” provided by manufacturer was running on the laptop computer connected to the EUT. It was used to enable the operation modes listed in section 3.3 as appropriate.

The samples were used as follows:
Conducted: **A000927489-002**
Radiation: **A000927489-001**

Full test was applied on all test modes, but only worst case was shown.

4.3 Special Accessories and Auxiliary Equipment

The product has been tested together with the following additional accessories:

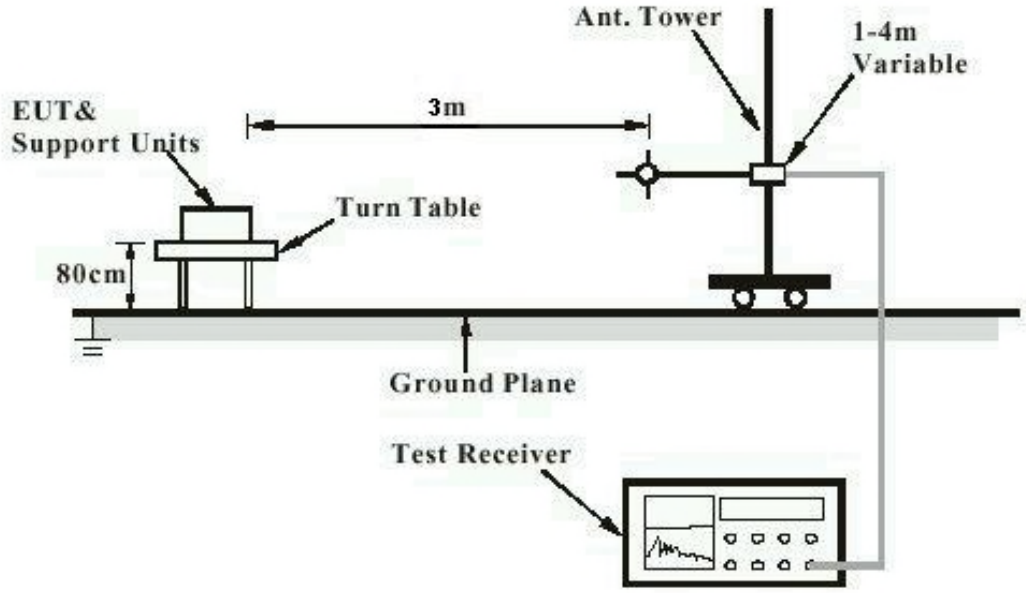
Description	Manufacturer	Model No.	Serial No.
Notebook(EMC-06)	Lenovo	TP00048A	PB-0F8B2
Board Kit	Qualcomm	TRBI200	N171518

4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested containing the noise suppression parts as in the Photo Appendix and the Test Setup Photos. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test



Note: Measurements above 1 GHz are done with a table height of 1.5m

Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

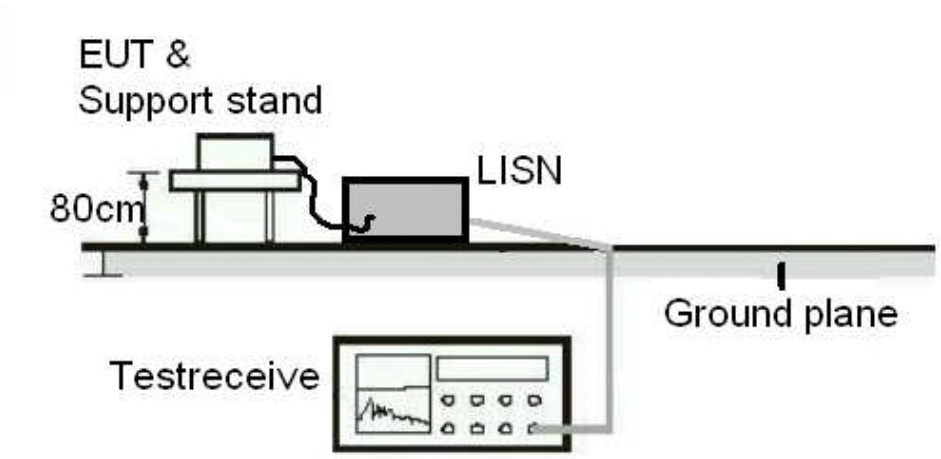
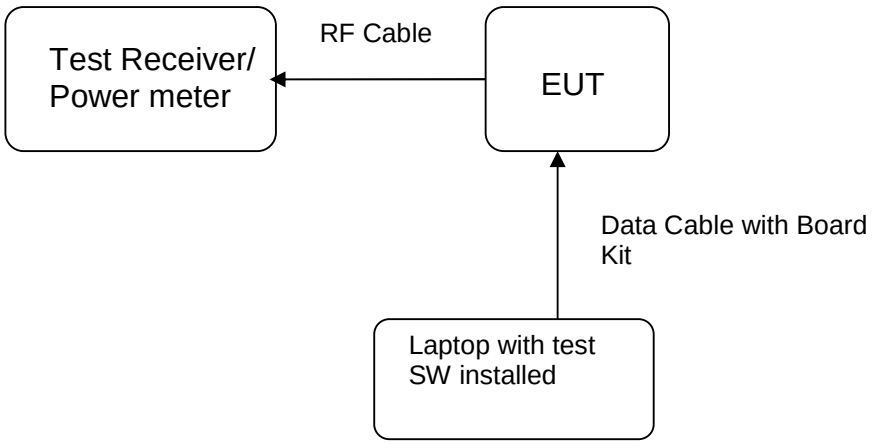


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Passed**

Test standard	:	FCC Part 15.247(b)(4), Part 15.203 and RSS-Gen 6.8
Requirement	:	use of approved antennas only with directional gains that do not exceed 6 dBi

According to the manufacturer declaration, the EUT has an antenna with a directional gain of 3 dBi . The antenna is a Chip Antenna soldered to the PCB with no possibility of replacement with a non-approved antenna by the end-user. Therefore, the EUT is considered to comply with this provision.

Refer to EUT photo for details.

5.1.2 Peak Output Power

RESULT: **Passed**

Test standard	:	FCC Part 15.247(b)(1), RSS-247 5.4(b)
Basic standard	:	ANSI C63.10:2013, KDB558074
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	22-26 °C
Relative humidity	:	50-65 %
Atmospheric pressure	:	100-103 kPa

Table 7: Test result of Peak Output Power, GFSK modulation

Channel	Channel Frequency	Peak Output Power		Limit
	(MHz)	(dBm)	(W)	(W)
Low Channel	2402	9.81	0.00957	0.125
Middle Channel	2441	9.85	0.00966	0.125
High Channel	2480	9.91	0.00979	0.125

Table 8: Test result of Peak Output Power, π/4 DQPSK modulation

Channel	Channel Frequency	Peak Output Power		Limit
	(MHz)	(dBm)	(W)	(W)
Low Channel	2402	11.97	0.01574	0.125
Middle Channel	2441	11.99	0.01581	0.125
High Channel	2480	12.13	0.01633	0.125

Table 9: Test result of Peak Output Power, 8DPSK modulation

Channel	Channel Frequency	Peak Output Power		Limit
	(MHz)	(dBm)	(W)	(W)
Low Channel	2402	12.01	0.01589	0.125
Middle Channel	2441	12.03	0.01596	0.125
High Channel	2480	12.16	0.01644	0.125

Pmax: 16.4437mW

5.1.3 Frequency Separation

RESULT: **Passed**

Test standard	:	FCC part 15.247(a)(1) RSS-247 5.1(b)
Basic standard	:	ANSI C63.10:2013
Limit	:	≥ 25kHz or 2/3 of 20dB bandwidth, whichever is greater
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Hopping On
Operation Mode	:	C
Ambient temperature	:	22-26°C
Relative humidity	:	50-65%
Atmospheric pressure	:	100-103 kPa

Table 10: Test result of GFSK Frequency Separation

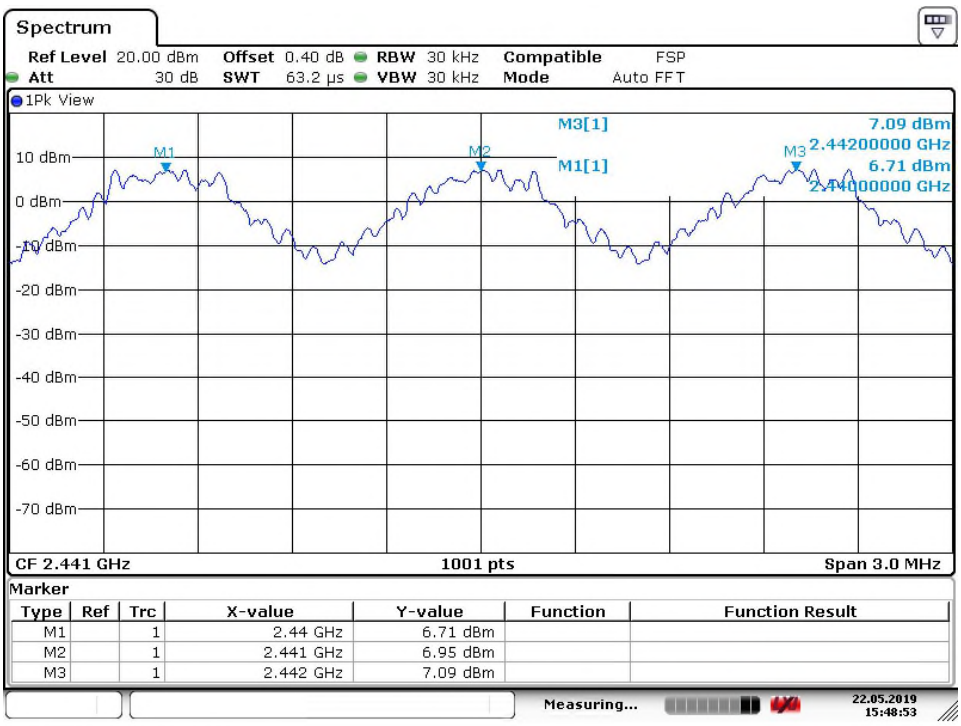
Channel	Channel Frequency (MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
Record Channel	2441	1	≥ 25kHz or 2/3 of 20dB bandwidth	Pass
Record Channel adj 1	2440			
Record Channel adj 2	2442			

Table 11: Test result of 8DPSK Frequency Separation

Channel	Channel Frequency (MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
Record Channel	2441	1	≥ 25kHz or 2/3 of 20dB bandwidth	Pass
Record Channel adj 1	2440			
Record Channel adj 2	2442			

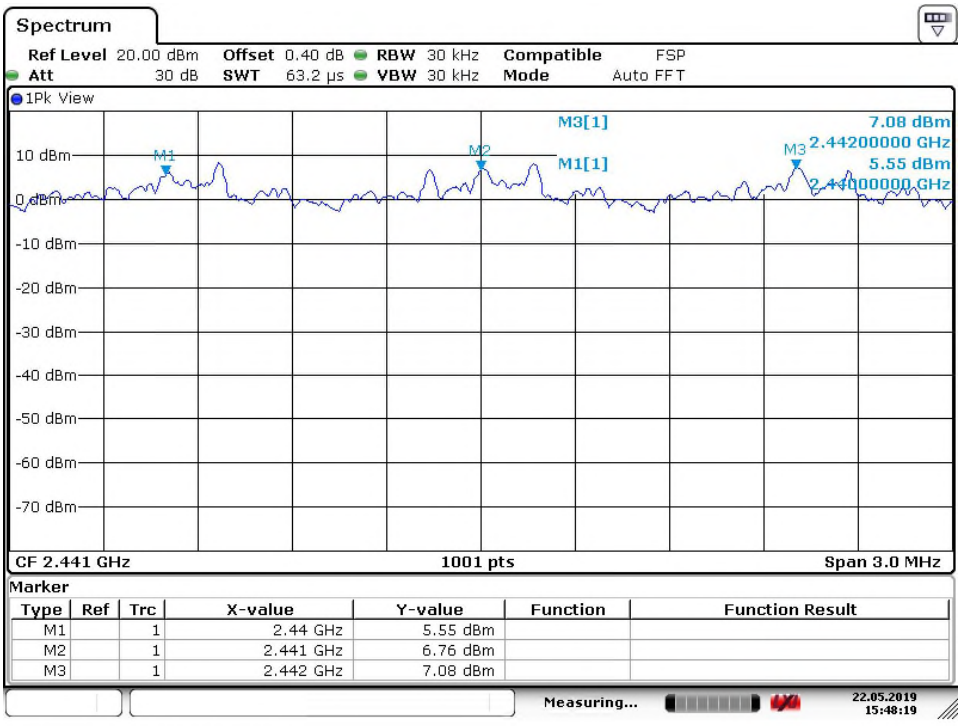
Test Plot of Frequency Separation

GFSK



Date: 22.MAY.2019 15:48:53

8DPSK



Date: 22.MAY.2019 15:48:18

5.1.4 99% Bandwidth

RESULT: **Passed**

Test standard	:	RSS-Gen
Basic standard	:	RSS-Gen
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Middle
Operation Mode	:	A

Ambient temperature	:	22-26°C
Relative humidity	:	50-65%
Atmospheric pressure	:	100-103 kPa

Table 12: Test result of 99% Bandwidth, GFSK modulation

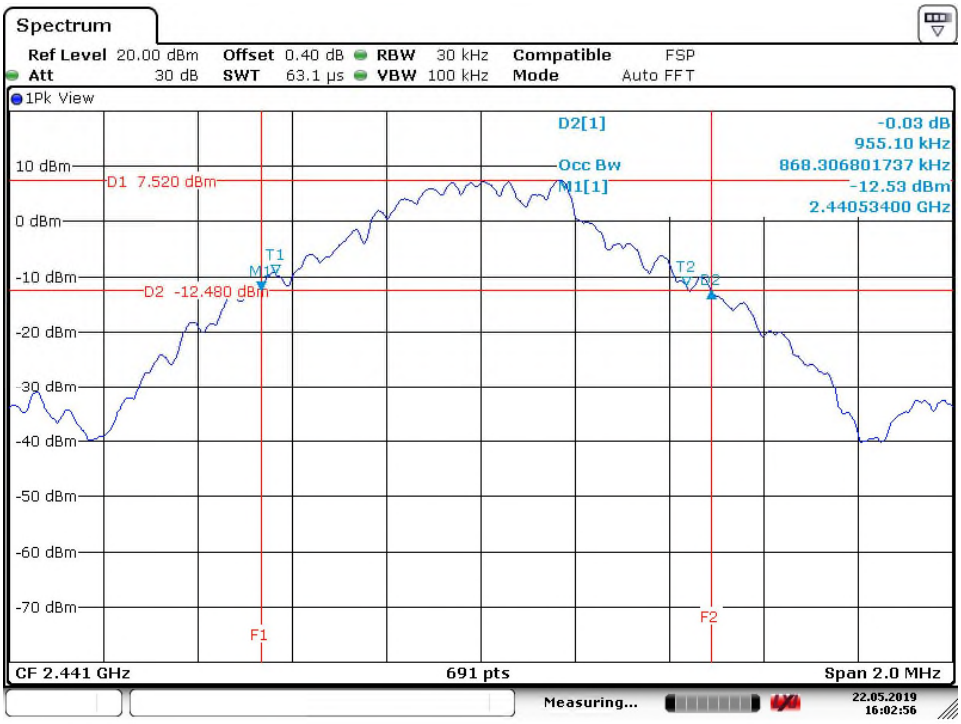
Channel	Channel Frequency (MHz)	99% Bandwidth (kHz)
Mid Channel	2441	868.31

Table 13: Test result of 99% Bandwidth, 8DPSK modulation

Channel	Channel Frequency (MHz)	99% Bandwidth (kHz)
Mid Channel	2441	1183.8

Test Plot of 99% Bandwidth, GFSK modulation

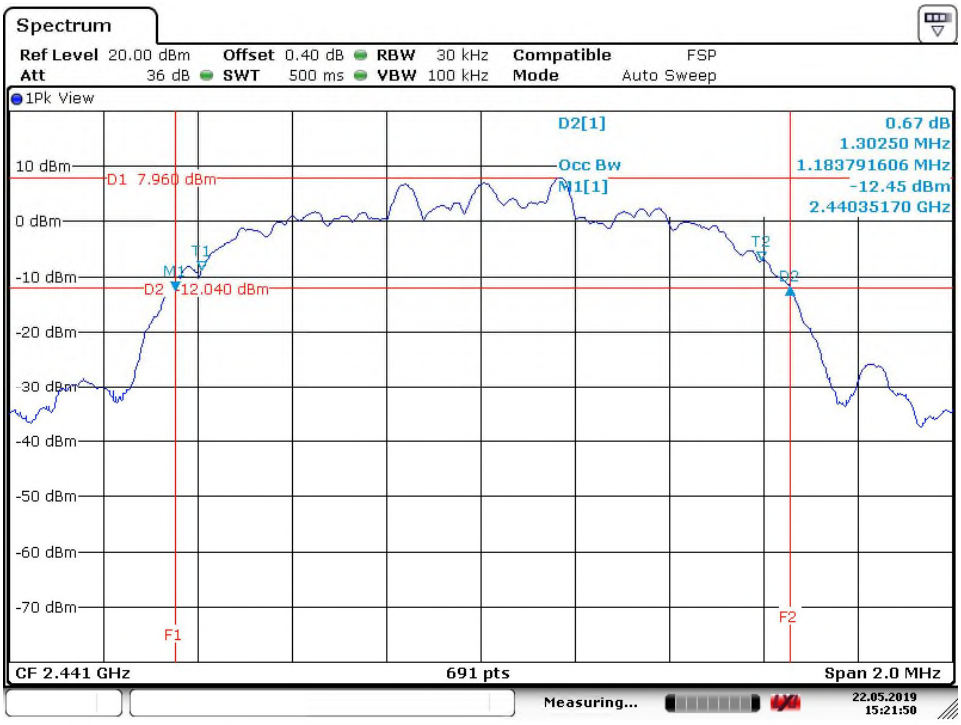
Middle Channel



Date: 22.MAY.2019 16:02:56

Test Plot of 99% Bandwidth, 8DPSK modulation

Middle Channel



Date: 22.MAY.2019 15:21:49

5.1.5 20dB Bandwidth

RESULT: **Passed**

Test standard	:	FCC Part 15.247(a)(1), RSS-247 5.1(a)
Basic standard	:	ANSI C63.10 (2013)
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	°C
Relative humidity	:	50-65%
Atmospheric pressure	:	100-103kPa

Table 14: Test result of 20dB Bandwidth, GFSK modulation

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	955.10	1.5	Pass
Mid Channel	2441	955.10	1.5	Pass
High Channel	2480	955.10	1.5	Pass

Note: Limit is for Channel Separation of 1 MHz and a power limit of 125 mW.

Table 15: Test result of 20dB Bandwidth, 8DPSK modulation

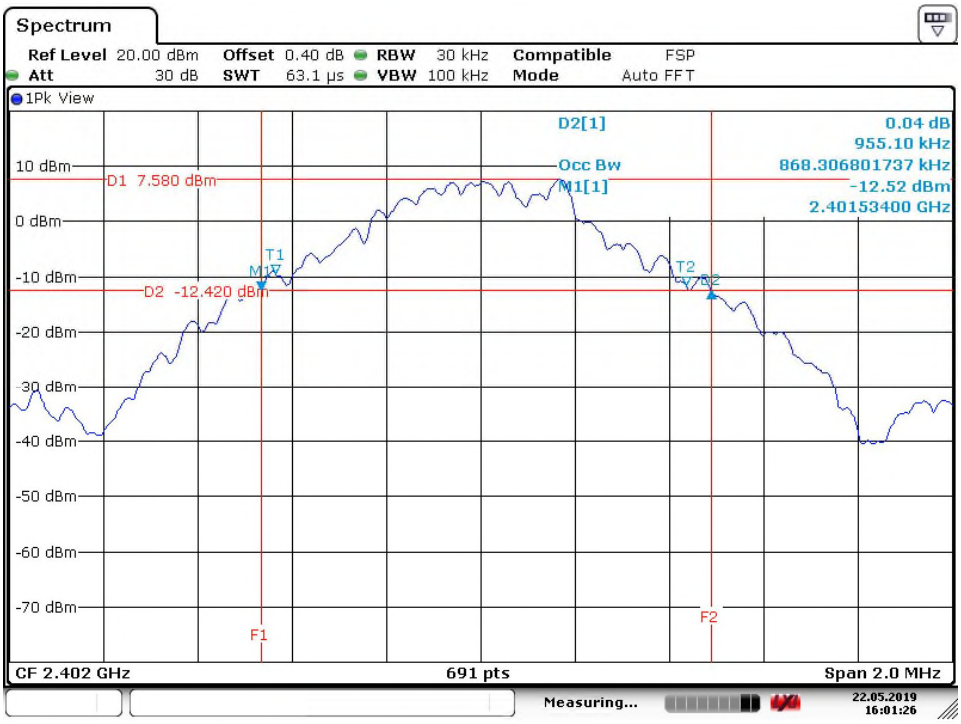
Channel	Channel Frequency (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Result
Low Channel	2402	1.3054	1.5	Pass
Mid Channel	2441	1.3025	1.5	Pass
High Channel	2480	1.3025	1.5	Pass

Note: Limit is for Channel Separation of 1 MHz and a power limit of 125 mW.

If the carrier separation frequency of a Bluetooth Device is set at 1 MHz due to the firmware setting and the Bluetooth Standard, then for power <125 mW the limit for the 20 dB Bandwidth, becomes 1 MHz / 0.66666 = 1.5 MHz.

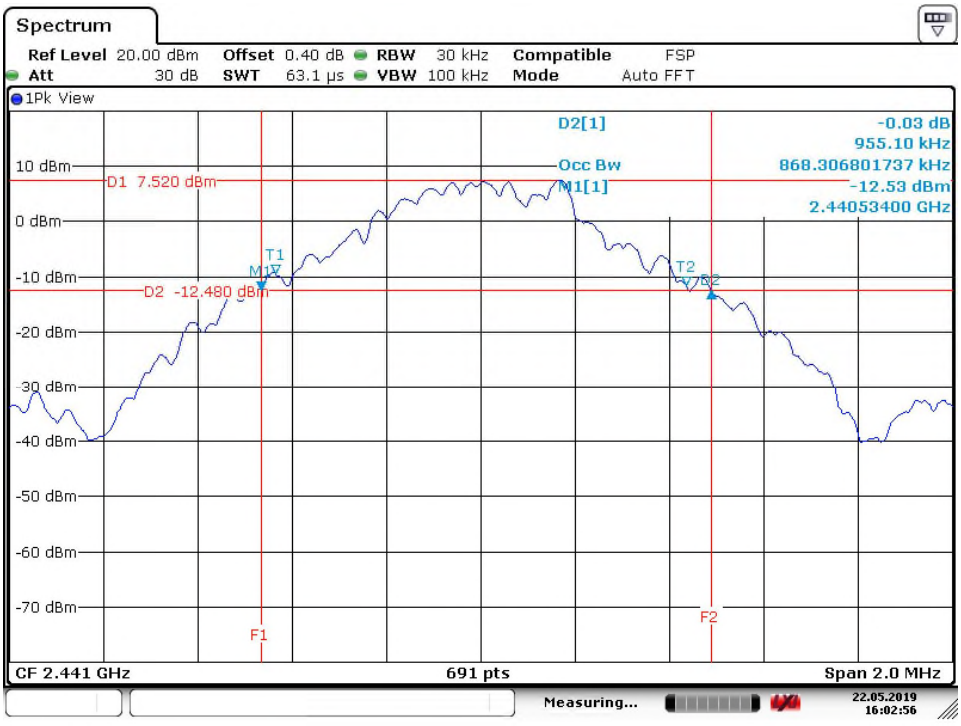
Test Plot of 20dB Bandwidth, GFSK modulation

Low Channel



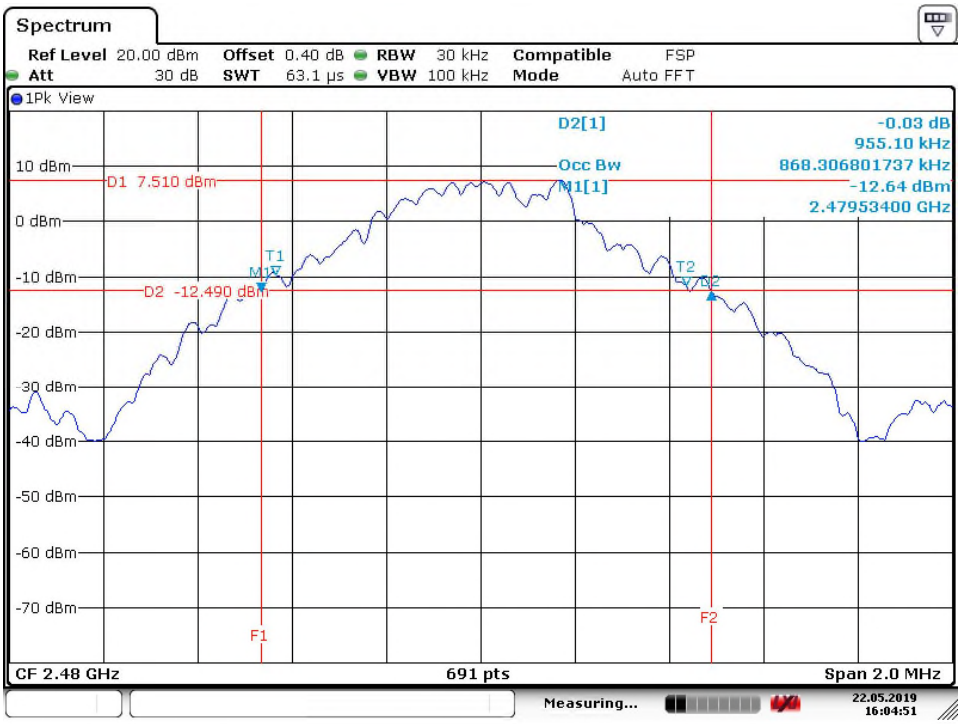
Date: 22.MAY.2019 16:01:26

Middle Channel



Date: 22.MAY.2019 16:02:56

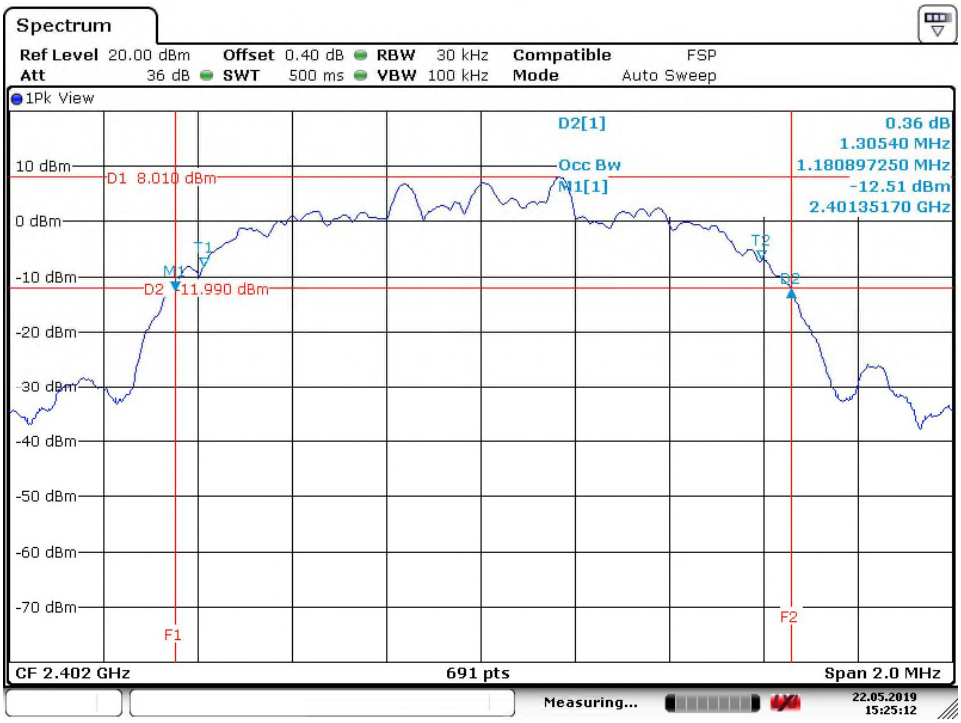
High Channel



Date: 22.MAY.2019 16:04:51

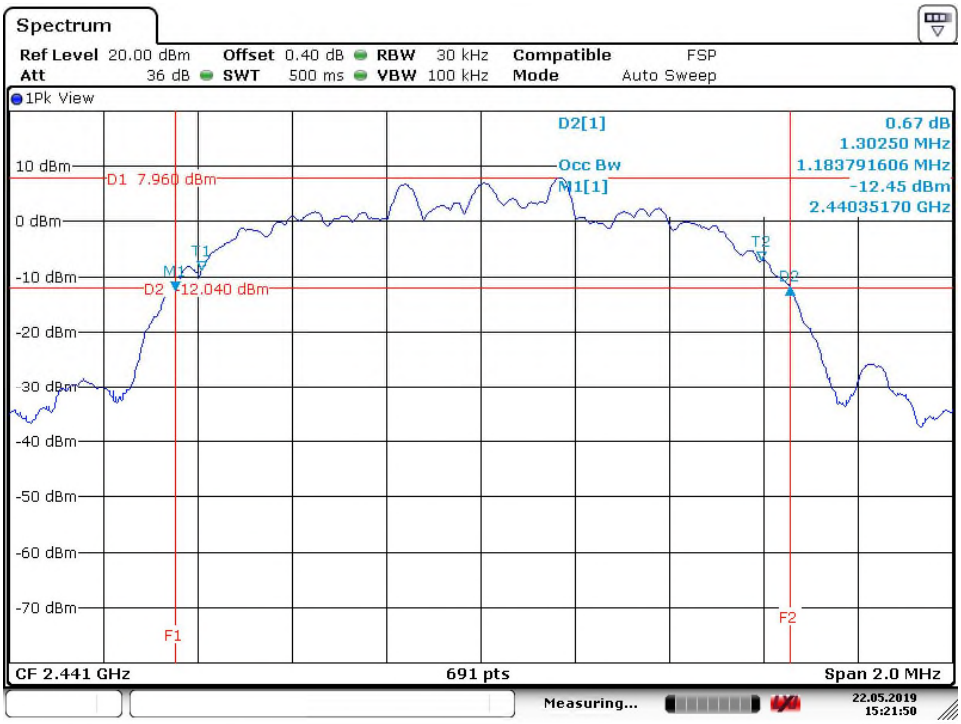
Test Plot of 20dB Bandwidth, 8DPSK modulation

Low Channel



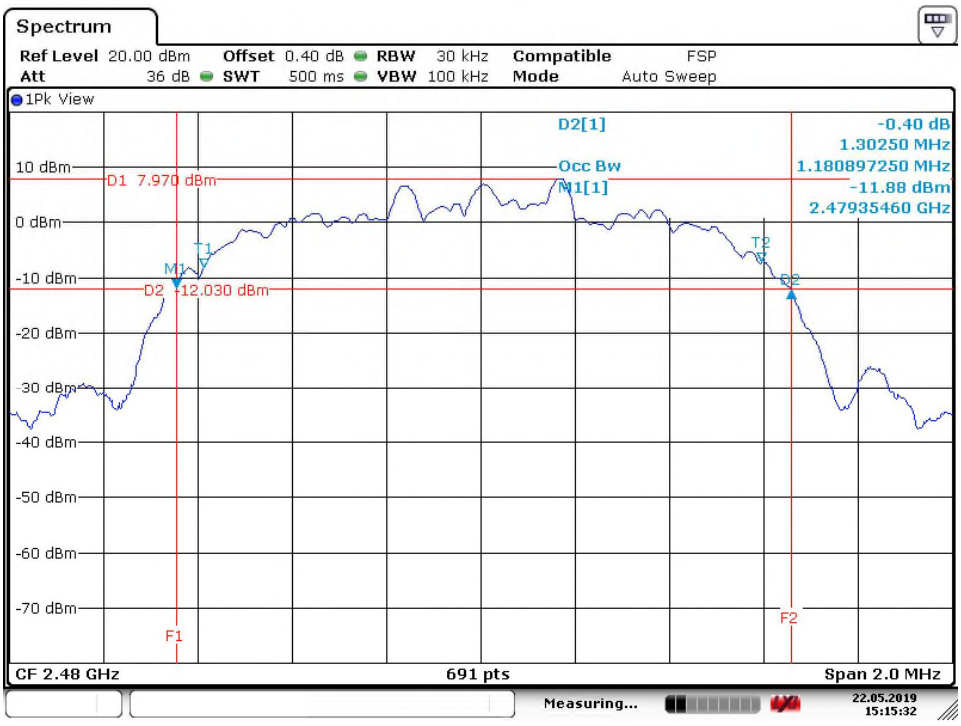
Date: 22.MAY.2019 15:25:12

Middle Channel



Date: 22.MAY.2019 15:21:49

High Channel



Date: 22.MAY.2019 15:15:31

5.1.6 Conducted spurious emissions and Frequency Band Edge measured in 100kHz Bandwidth

RESULT: **Passed**

Test standard	:	FCC part 15.247(d), RSS-247 5.5
Basic standard	:	ANSI C63.10 (2013), KDB558074
Limit	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power)
Kind of test site	:	Shielded room

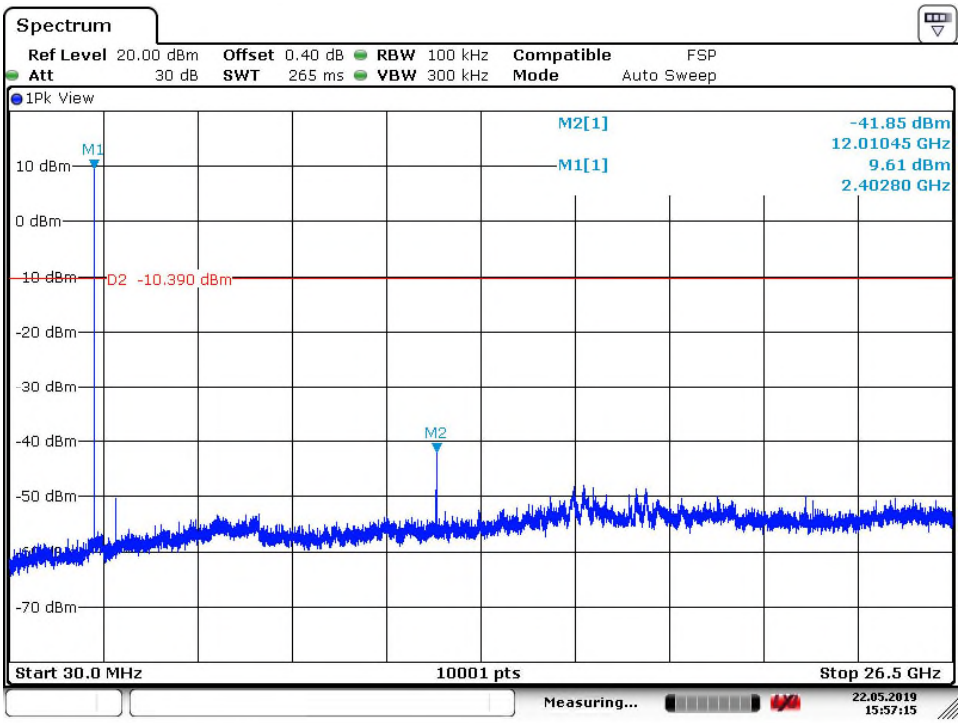
Test setup

Test Channel	:	Low/ Middle/ High for Conducted Spurious Emissions Low/ High/ Hopping on for Frequency Band Edge
Operation Mode	:	A
Ambient temperature	:	22-26°C
Relative humidity	:	50-65%
Atmospheric pressure	:	100-103 kPa

All emissions are more than 20dB below fundamental, details refer to following test plot, and compliance is achived as well.
Due to the small size of the product and that there are no inductive components of significant size, 9kHz to 30MHz frequency range is not tested based on technical judgment.

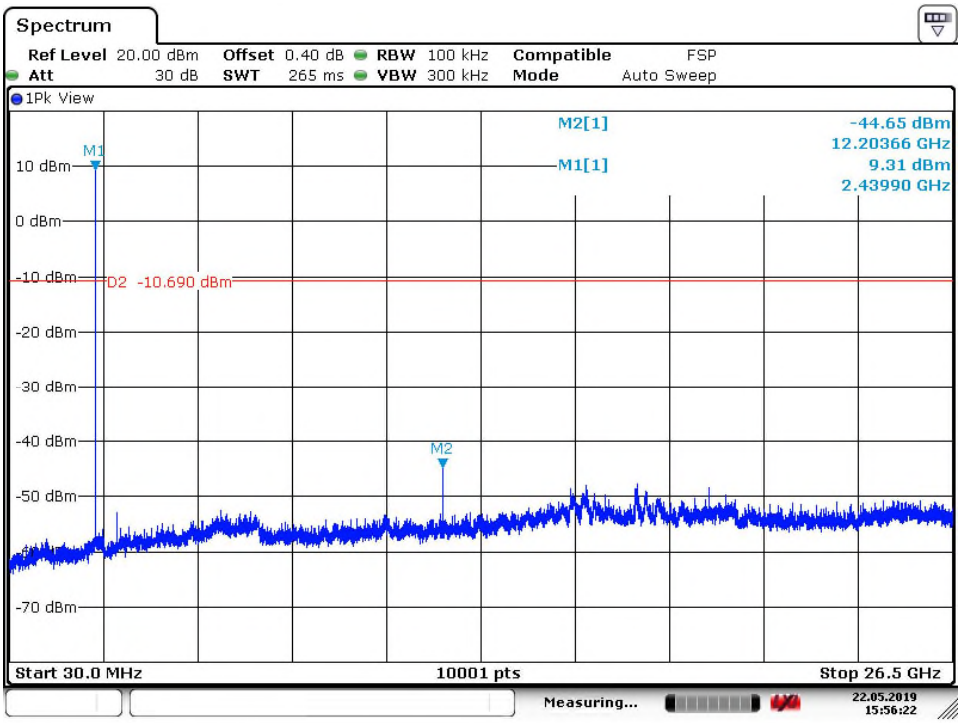
Test Plot of 100kHz Conducted Emissions, GFSK modulation

Low Channel



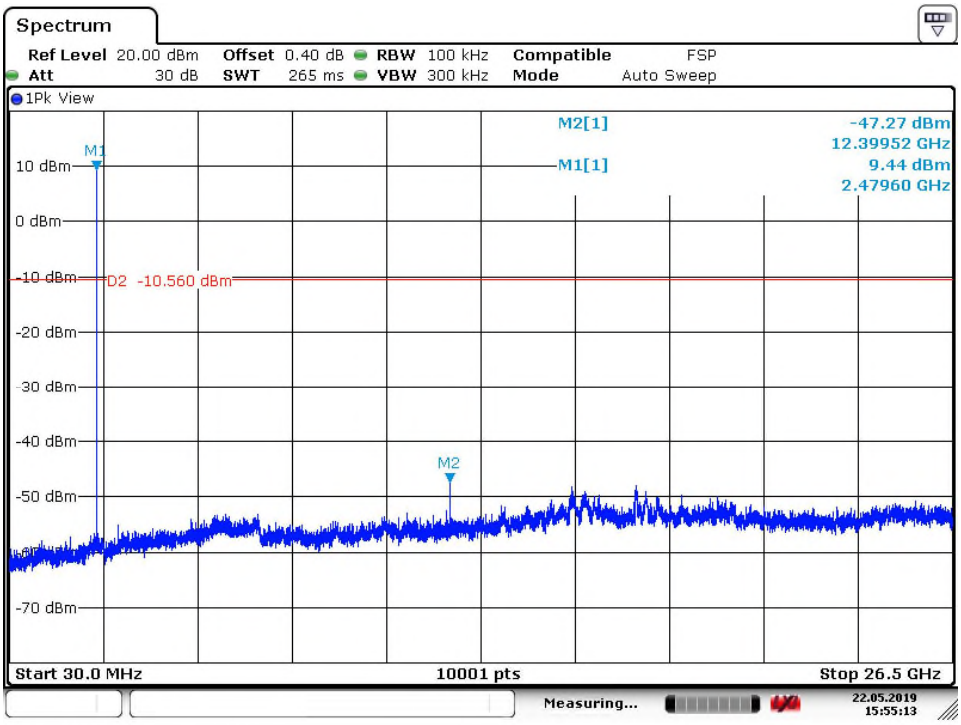
Date: 22.MAY.2019 15:57:15

Middle Channel



Date: 22.MAY.2019 15:56:22

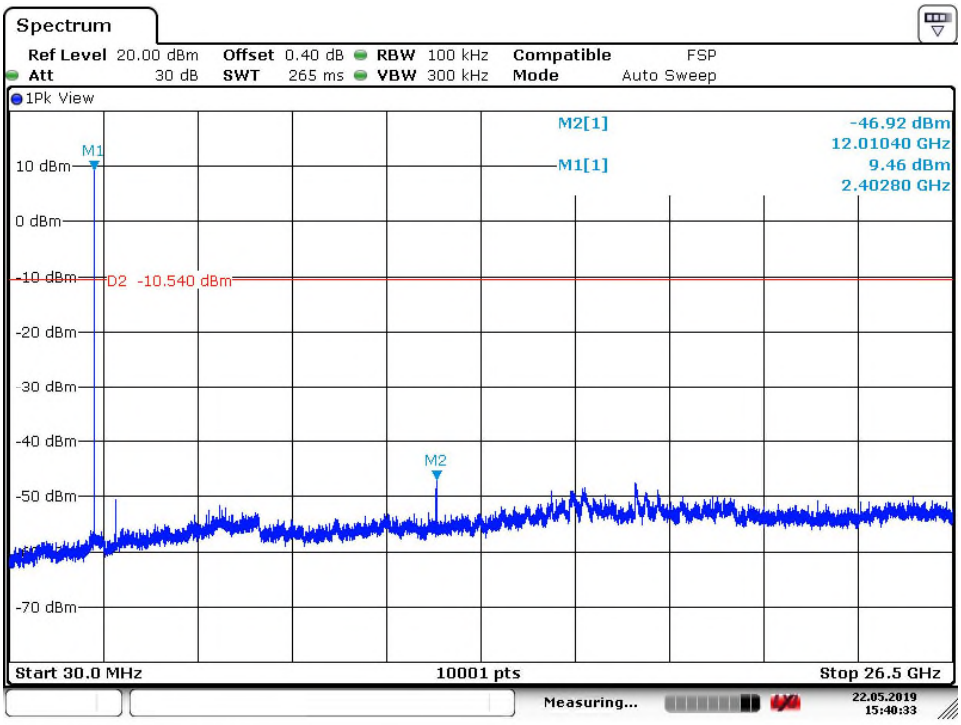
High Channel



Date: 22.MAY.2019 15:55:13

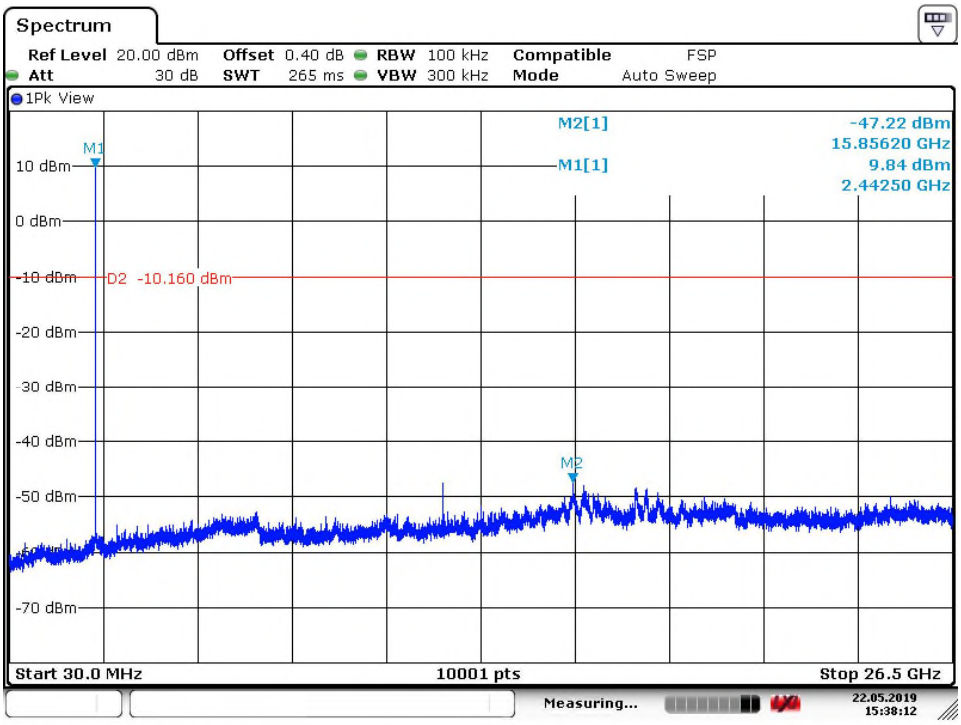
Test Plot of 100kHz Conducted Emissions, 8DPSK modulation

Low Channel



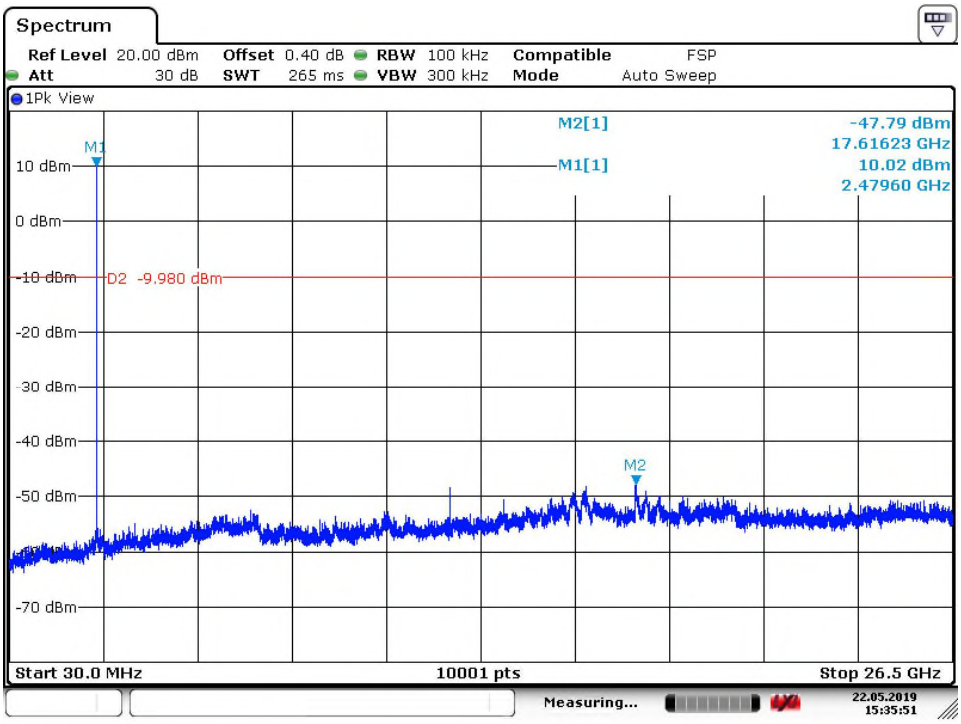
Date: 22.MAY.2019 15:40:33

Middle Channel



Date: 22.MAY.2019 15:38:12

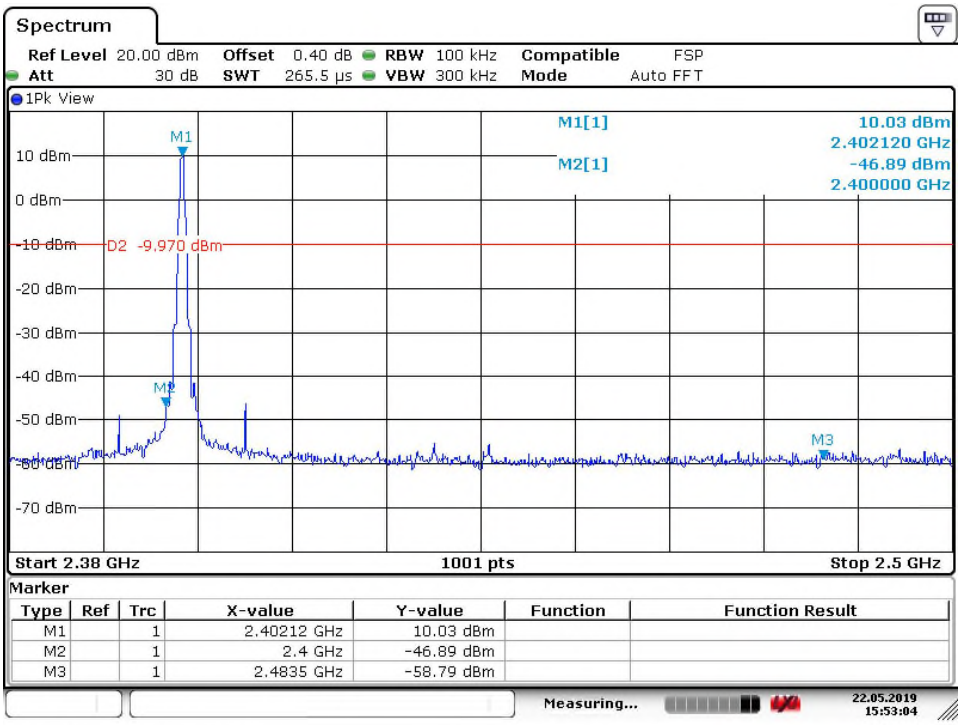
High Channel



Date: 22.MAY.2019 15:35:51

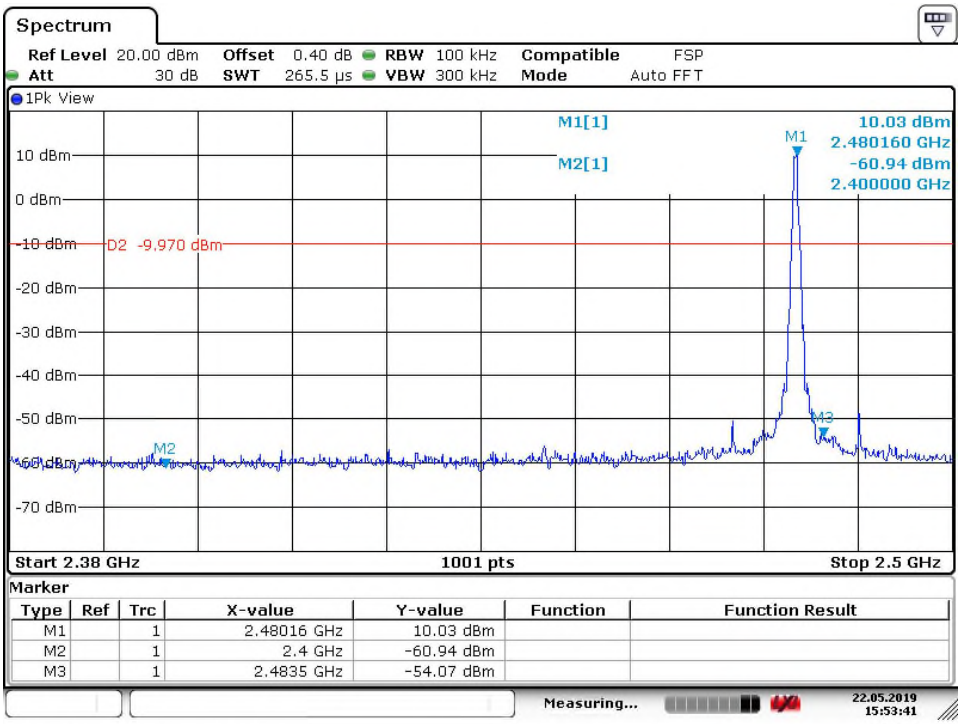
Test Plot of 100kHz Bandwidth of Frequency Band Edge, GFSK modulation

Low Channel



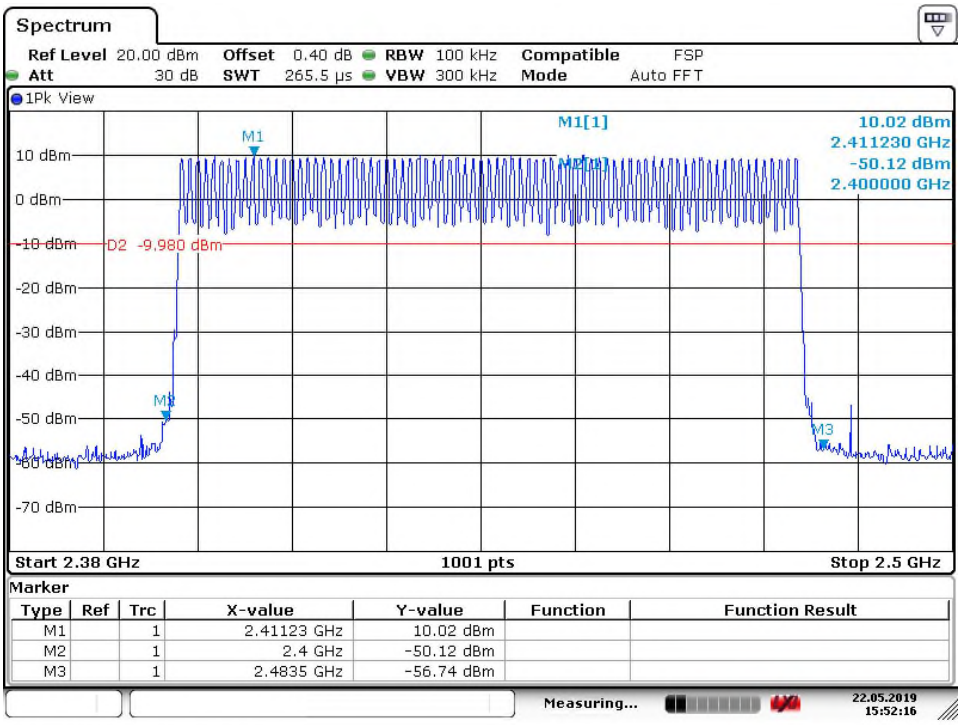
Date: 22.MAY.2019 15:53:04

High Channel



Date: 22.MAY.2019 15:53:41

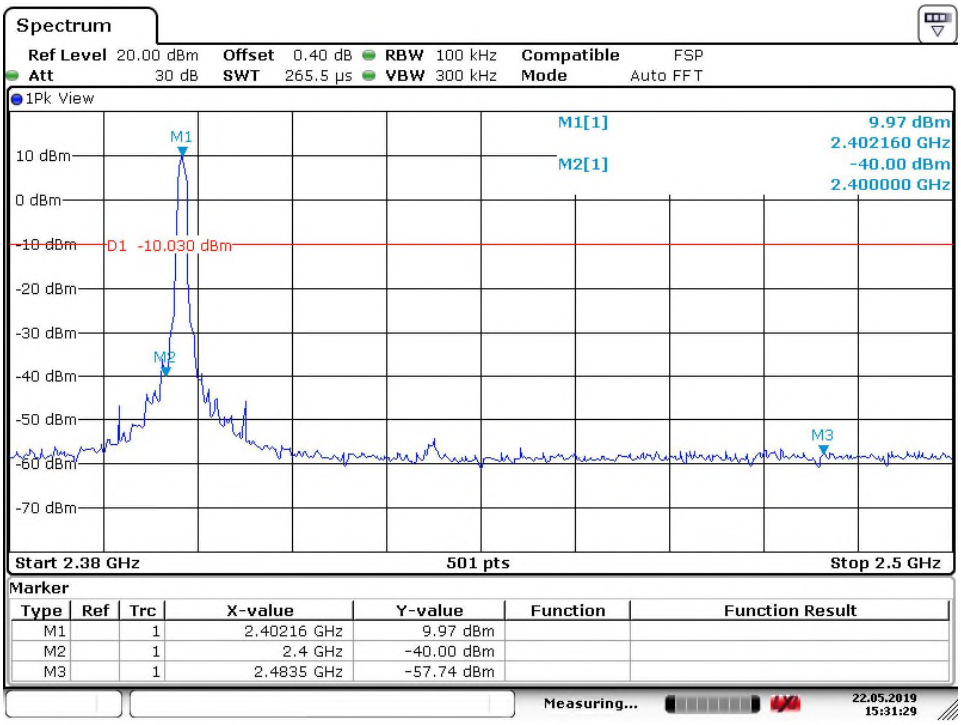
Hopping ON



Date: 22.MAY.2019 15:52:16

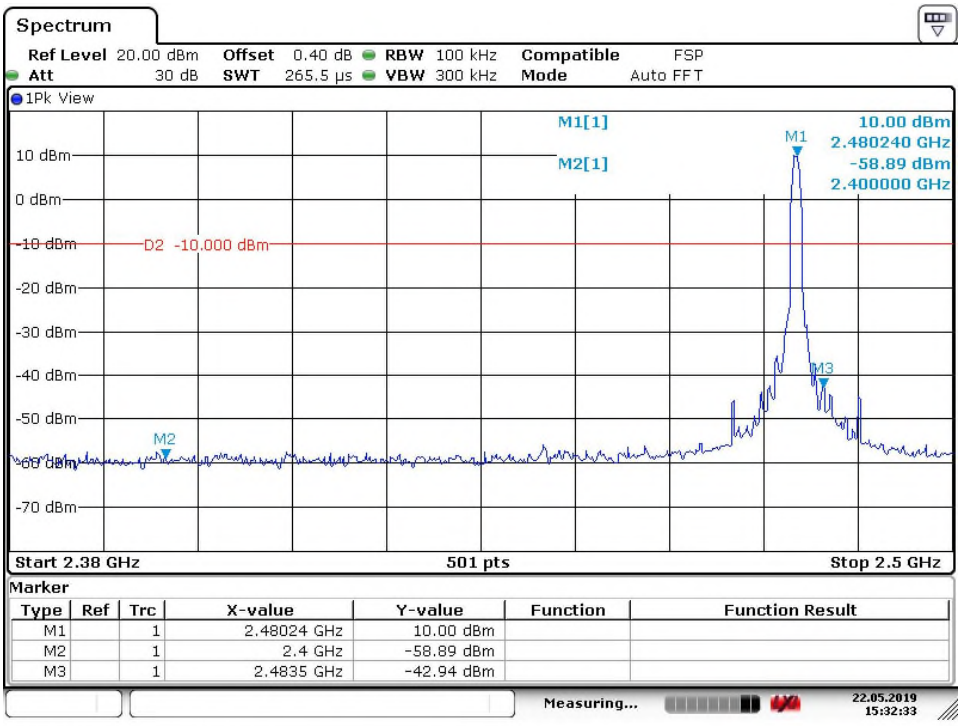
Test Plot of 100kHz Bandwidth of Frequency Band Edge, 8DPSK modulation

Low Channel



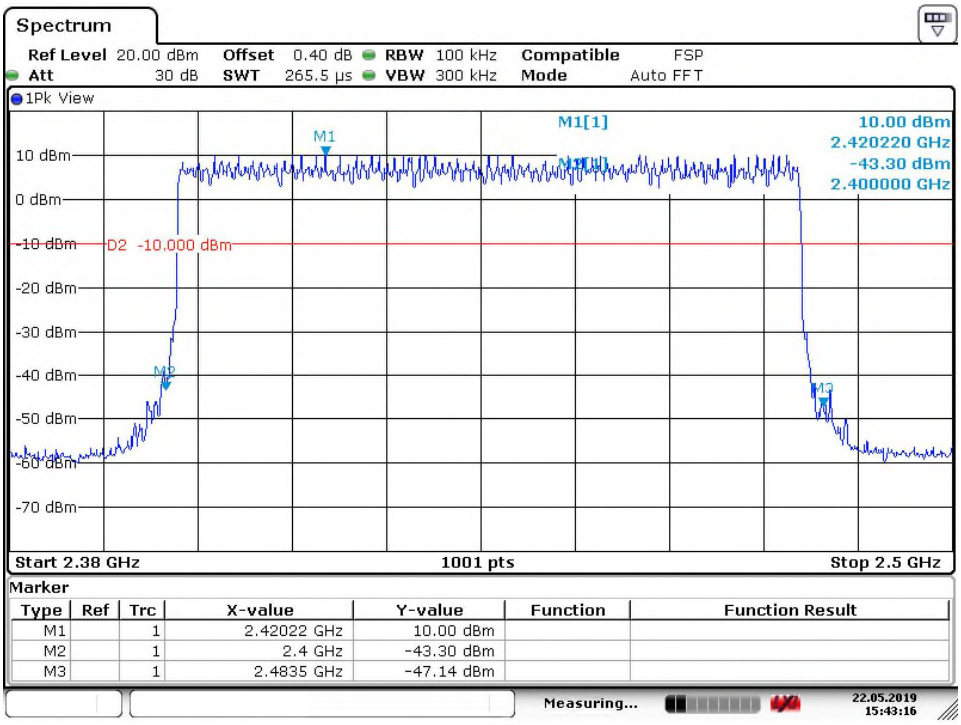
Date: 22.MAY.2019 15:31:29

High Channel



Date: 22.MAY.2019 15:32:33

Hopping ON



Date: 22.MAY.2019 15:43:16

5.1.7 Spurious Emission

RESULT: **Passed**

Test standard	:	FCC part 15.247(d), FCC 15.205, FCC 15.209, RSS-Gen 8.9 and RSS-Gen 8.10
Basic standard	:	ANSI C63.10 (2013)
Limits	:	Radiated emissions which fall in the restricted bands, as defined in FCC 15.205(a) and RSS-Gen i5, 8.10 (Table 7), must comply with the radiated emission limits specified in FCC 15.209(a) and RSS-Gen 5, 8.9 (Table 5 and 6). Emission radiated outside the restricted and authorized frequency bands must either comply with the radiated emission limits specified for the restricted bands or in FCC15.247(d) and RSS-247 i2, 5.5
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	22-26°C
Relative humidity	:	50-65%
Atmospheric pressure	:	100-103 kPa

Remark: Testing was carried out within frequency range 9kHz to the tenth harmonic. For details refer to Appendix D. The Radiated Emissions testing was performed in the X, Y and Z axis orientation. The worst-case Axis orientation is recorded in this test report.

5.1.8 Number of hopping frequency

RESULT: **Passed**

Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 5.1(e)
Basic standard	:	ANSI C63.10 (2013)
Kind of test site	:	Shielded room

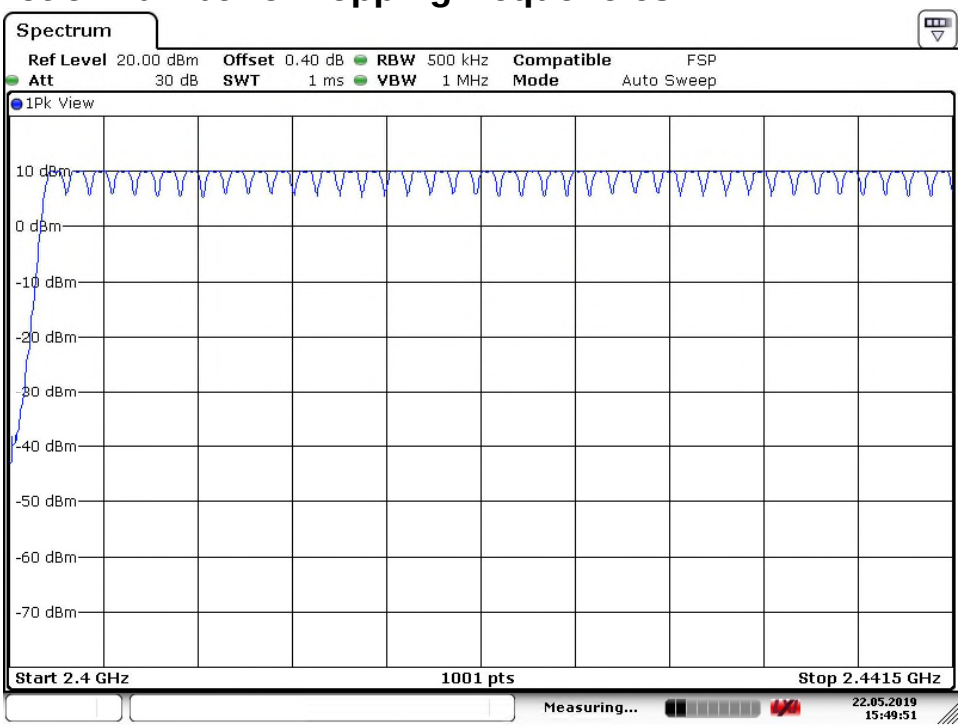
Test setup

Test Channel	:	Hopping On
Operation Mode	:	C
Ambient temperature	:	22-26°C
Relative humidity	:	50-65%
Atmospheric pressure	:	100-103 kPa

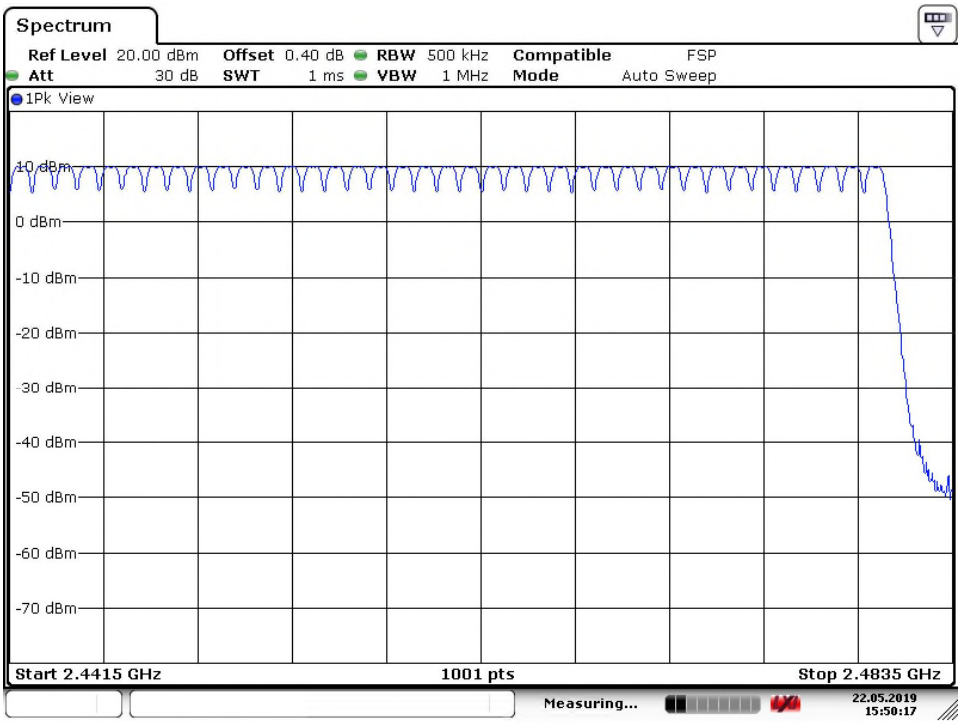
Table 16: Test result of Number of hopping frequency

Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
2400 to 2483.5 MHz	79	≥15	Pass

Test Plot of Number of hopping frequencies



Date: 22.MAY.2019 15:49:50



Date: 22.MAY.2019 15:50:17

5.1.9 Time of Occupancy

RESULT: **Passed**

Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 5.1(e)
Basic standard	:	ANSI C63.10 (2013)
Limits	:	0.4s
Kind of test site	:	Shield room

Test setup

Test Channel	:	Middle
Operation Mode	:	A
Ambient temperature	:	22-26°C
Relative humidity	:	50-65%
Atmospheric pressure	:	100-103 kPa

Table 17: Test result of Time of Occupancy

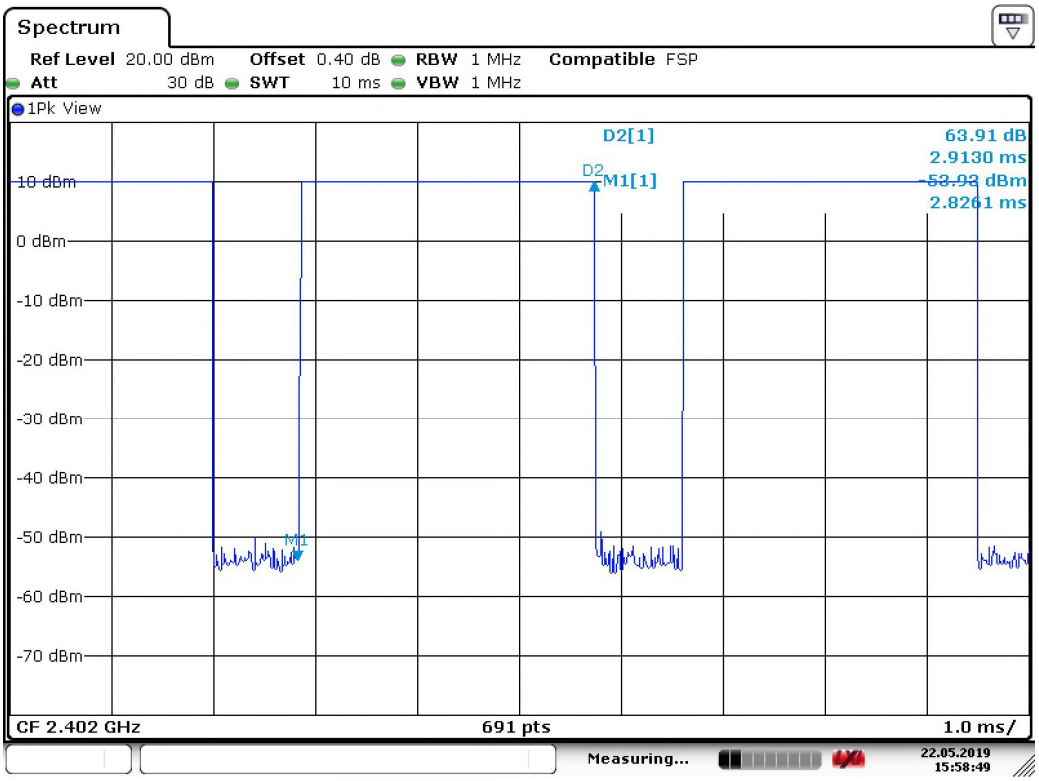
Data Mode	Captured Burst (s)	Dwell time (s)	On+Off time (s)	Limit (s)	Result
DH5	0.00291	0.3104	0.00375	0.4	Pass
3DH5	0.00290	0.3093	0.00375	0.4	Pass

Note:
Dwell time = Pulse width x (Hopping rate / Number of channels) x Period

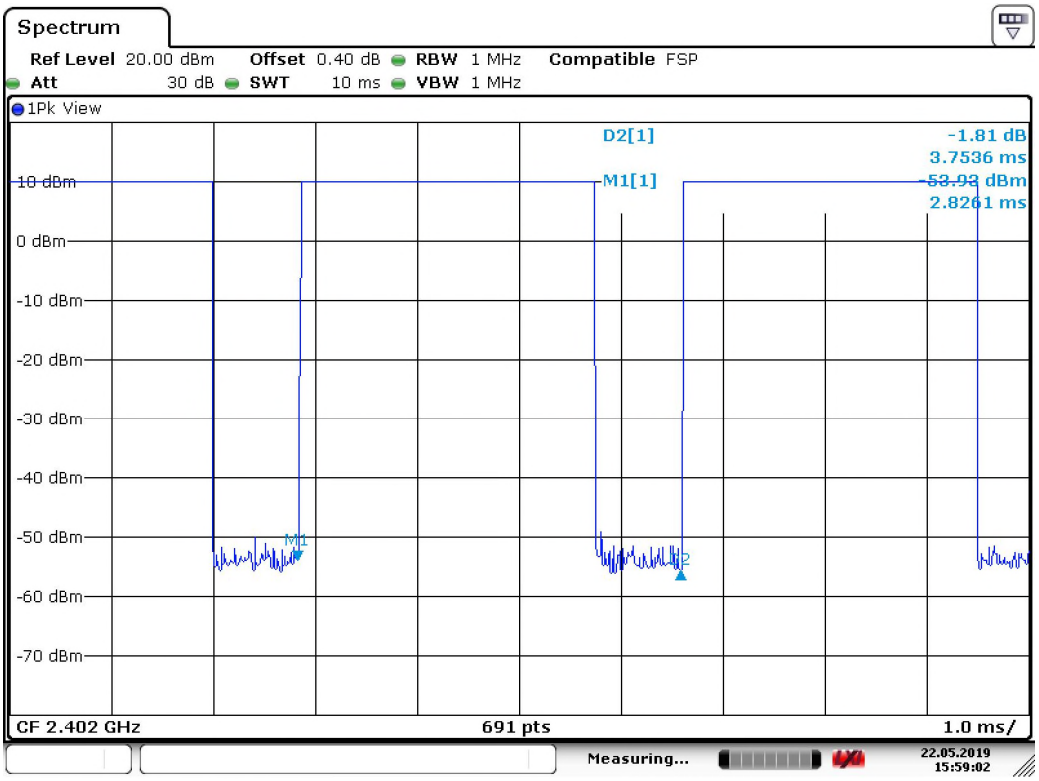
Period = 0.4 (seconds/ channel) x 79 (channel) = 31.6 seconds.

Hopping rate = 1 / (On+Off time) = 266 Hz

Test Plot of Time of Occupancy, GFSK modulation

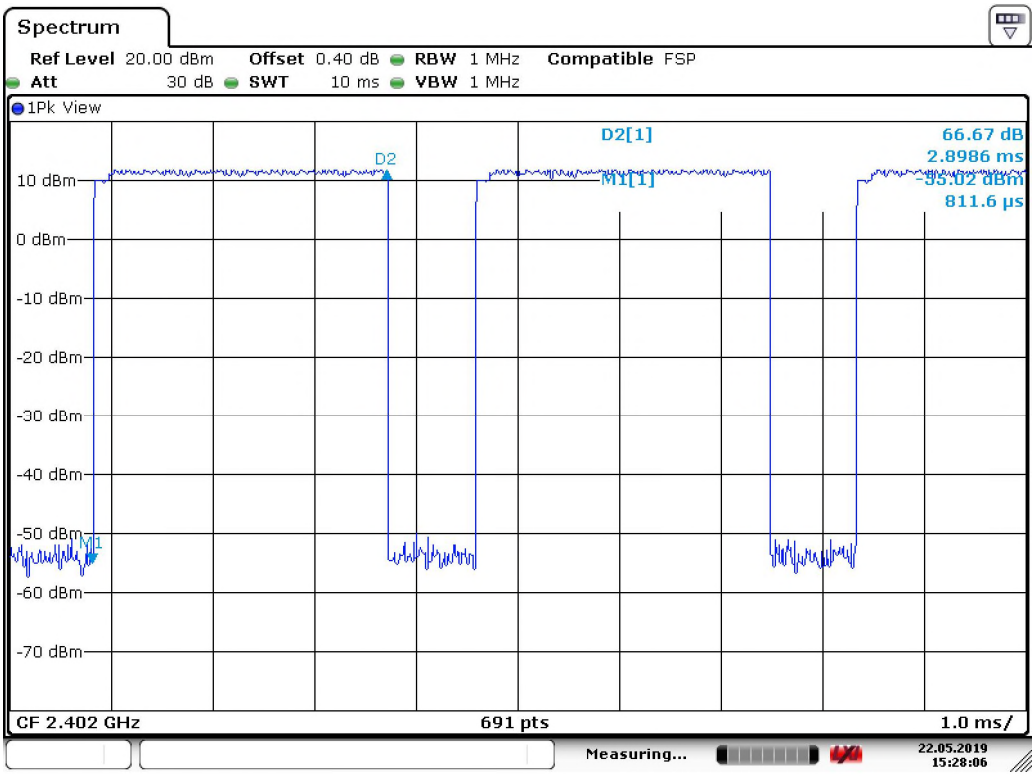


Date: 22.MAY.2019 15:58:49

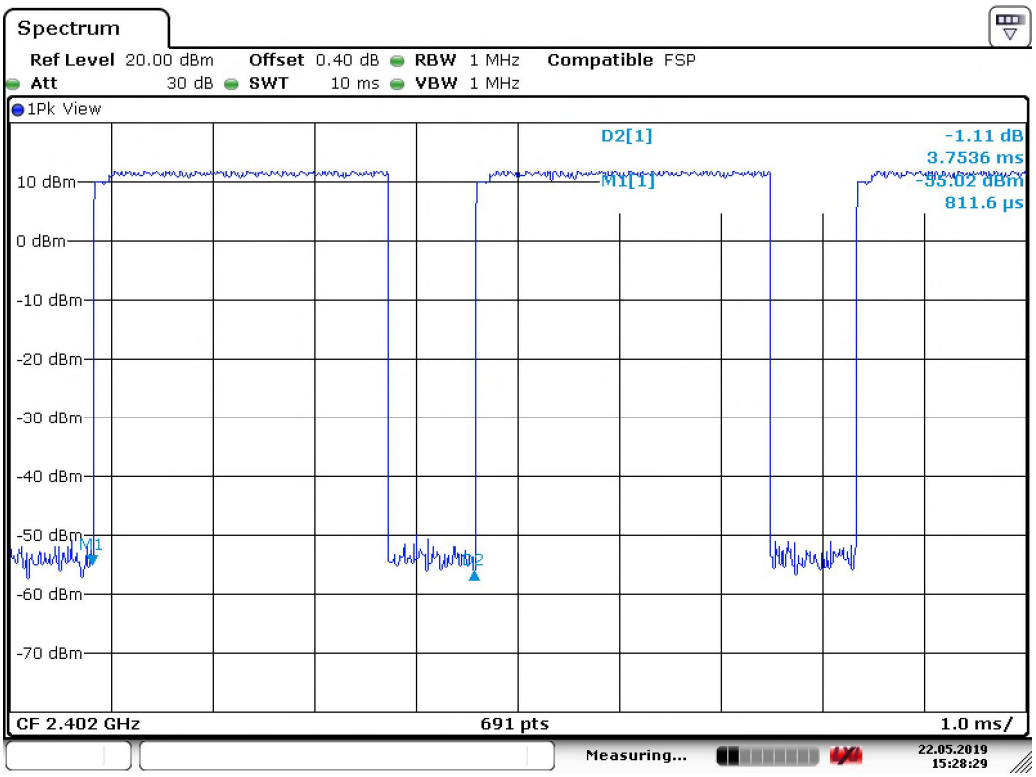


Date: 22.MAY.2019 15:59:02

Test Plot of Time of Occupancy, 8DPSK modulation



Date: 22.MAY.2019 15:28:05



Date: 22.MAY.2019 15:28:28

5.2 Mains Emissions

5.2.1 Mains Conducted Emissions

RESULT: **Passed**

Test standard	:	FCC Part 15.207 FCC Part 15.107 RSS-Gen 8.8
Limits	:	Mains Conducted emissions as defined in above test standards must comply with the mains conducted emission limits specified
Kind of test site	:	Shielded Room

Test setup

Test Channel	:	Middle
Operation mode	:	A
Ambient temperature	:	22-26°C
Relative humidity	:	50-65%
Atmospheric pressure	:	100-103 kPa

Remark: For details refer to Appendix D.

6. Safety Human exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT: **Passed**

Test standard : FCC KDB Publication 447498 D01 v06

Separation distance is more than 20 cm, thus mobile device exposure limits can be applied.

Maximum Exposure:

Power to Antenna (mW)	16.444 mW
Power to Antenna (dBm)	12.2 dBm
Antenna Gain	3 dBi
Power+Ant Gain	32.8 mW
Distance	20 cm
S=	0.007 mW/cm^2

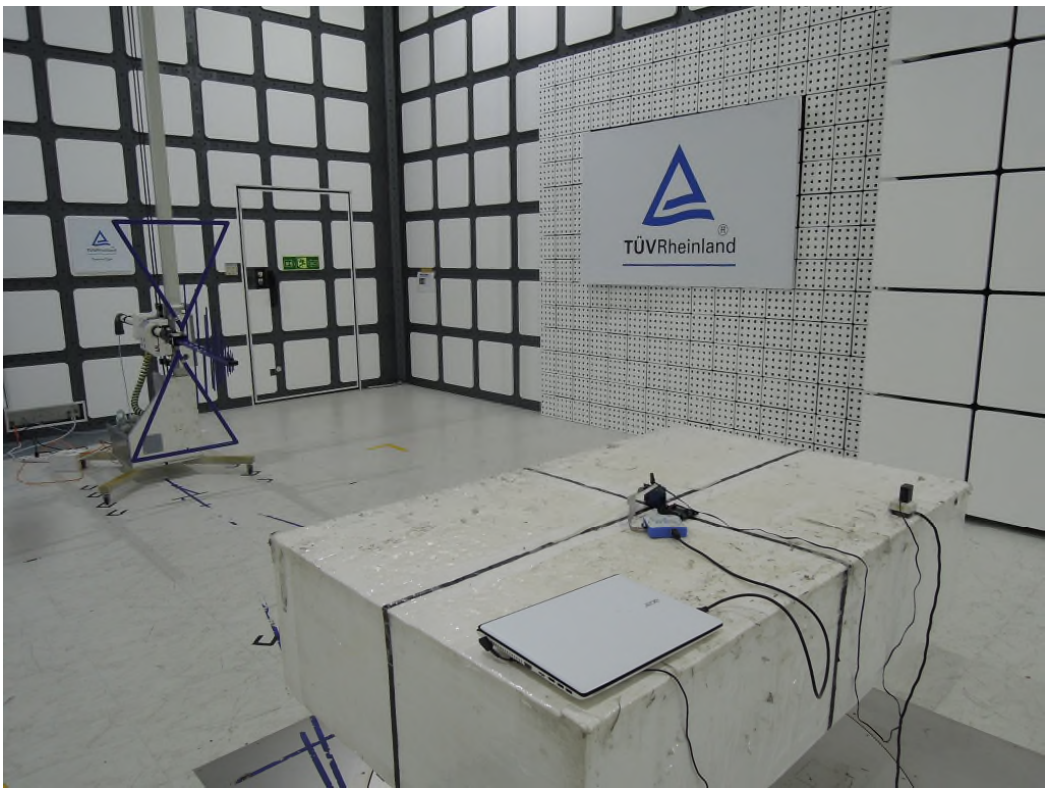
Limit FCC:
1500-100,000 MHz 1.0 mW/cm^2

---End---

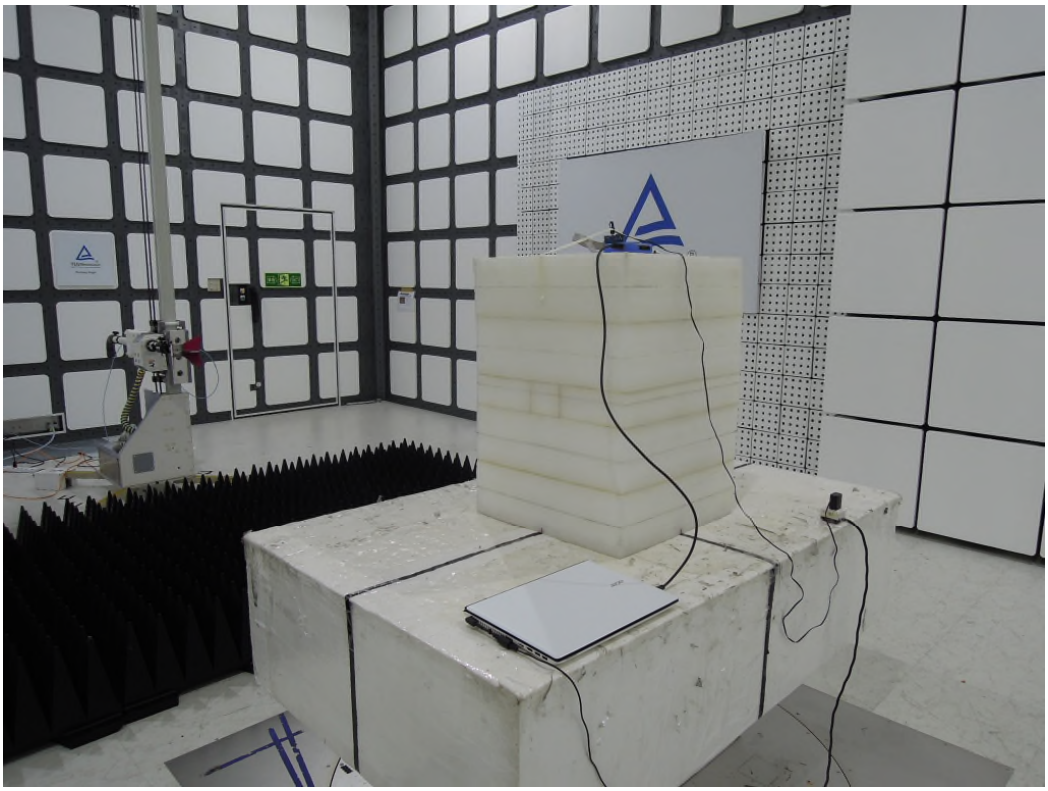
7. Photographs of the Test Set-Up

Photograph 1: Set-up for Spurious Emissions (Front View)

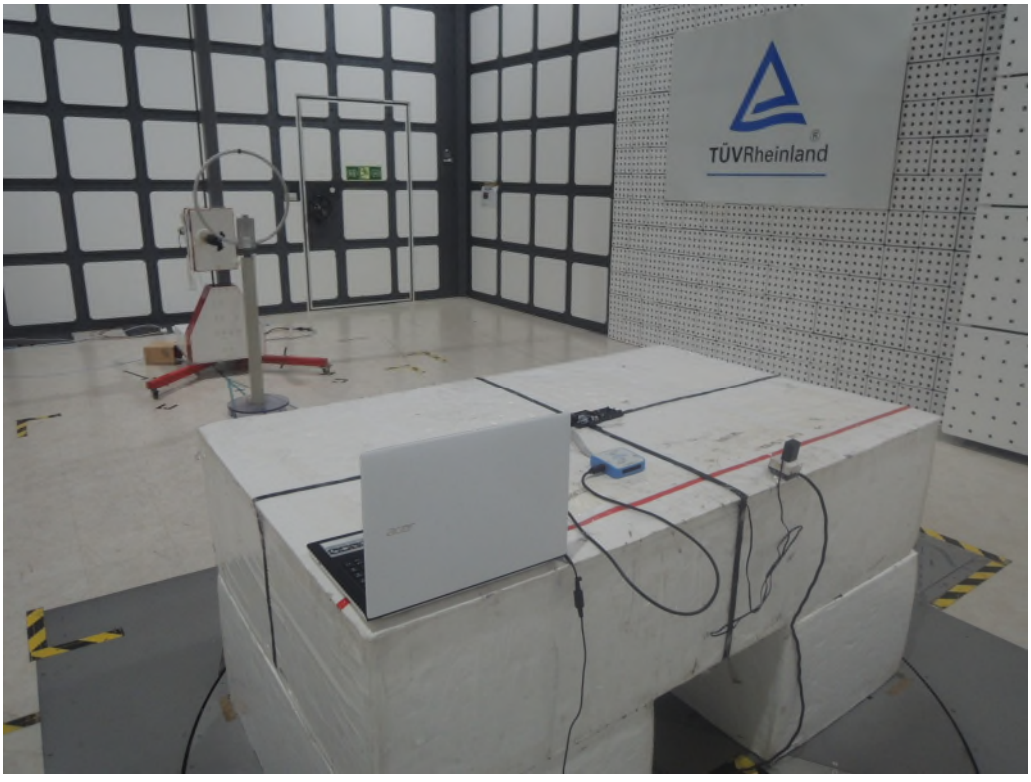
Photograph 2: Set-up for Spurious Emissions (Back View 1)



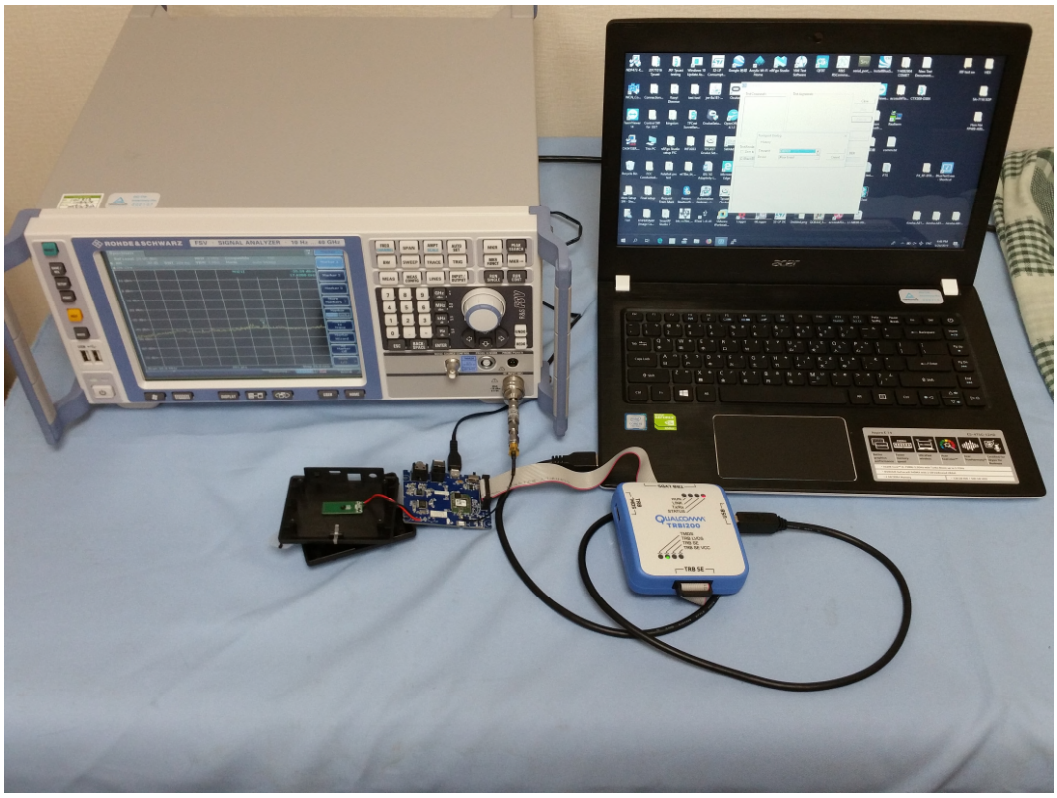
Photograph 3: Set-up for Spurious Emissions (Back View 2)



Photograph 4: Set-up for Spurious Emissions (Back View 3)

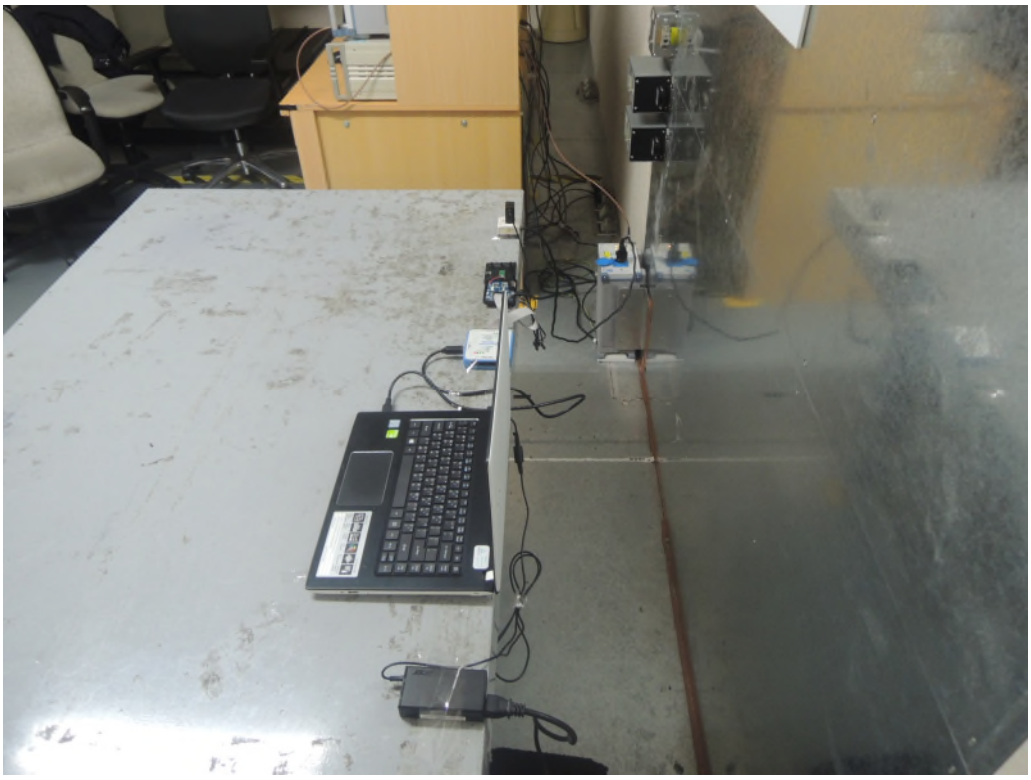


Photograph 5: Set-up for Conducted testing



Photograph 6: Set-up for Mains Conducted testing Front

Photograph 7: Set-up for Mains Conducted testing Back



8. List of Tables

9. List of Photographs