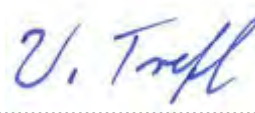


RADIO REPORT FCC 47 CFR Part 15C ISED Canada RSS-247 Frequency hopping systems operating within the 2400.0 MHz - 2483.5 MHz band	
Report Reference No	G0M-2302-1881-TFC247BT-W276-V03
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	    DAkkS - Registration number : D-PL-12092-01-03 (ISED) ISED Testing Laboratory site: 3470A DAkkS - Registration number : D-PL-12092-01-04 (FCC) FCC Filed Test Laboratory, Reg.-No.: 96970
Applicant	u-blox AG
Address	Zürcherstrasse 68 8800 Thalwil Switzerland
Test Specification	47 CFR Part 15C RSS-247, Issue 2, 2017-02 RSS-Gen, Issue 5, Amendment 2, 2021-02
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	MAYA-W2 host-based multiradio modules
Model(s)	MAYA-W276-00B
Additional Model(s)	None
Brand Name(s)	u-blox
Hardware Version(s)	02
Software Version(s)	1.0.0.39.1-18.80.1.p154.38
FCC ID	XPYMAYAW2B
IC	8595A-MAYAW2B
Test Result	PASSED

Possible test case verdicts:		
Required by standard but not tested	N/T	
Not required by standard	N/R	
Not applicable to EUT	N/A	
Test object does meet the requirement	P(PASS)	
Test object does not meet the requirement	F(FAIL)	
Testing:		
Test Lab Temperature	20 °C - 30 °C	
Test Lab Humidity	25 % - 55 %	
Date of receipt of test item	2023-03-02	
Report:		
Compiled by	Radwan Jaafar	
Responsible for Test (+ signature) (Senior Expert Engineer)	Radwan Jaafar	
Approved by (+ signature) (Test Lab Engineer)	Wilfried Treffke	
Date of Issue	2023-12-05	
Total number of pages	168	
General Remarks:		
The test results presented in this report relate only to the object tested. The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.		
Additional Comments:		

ADDITIONAL VARIANTS

Additional Variants (not tested and not evaluated variants)		
Not-tested Variant	Description	
1	Product Type Description	Host-based multiradio module
	Model name	MAYA-W266-00B
	Brand name	u-blox
	Hardware Version	02
	Software Version	1.0.0.39.1-18.80.1.p154.38
	FCC ID	XPYMAYAW2B
	IC	8595A-MAYAW2B
	PMN	MAYA-W266-00B
	HVIN	MAYA-W266-00B
	FVIN	N/A
	HMN	N/A
Comment: Those named additional variants above have not been tested. Those additional variants of the series have been declared by the manufacturer. The test report explicitly states that those variants were neither tested nor assessed nor evaluated.		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2023-11-02	Initial Release	--
02	2023-11-30	Replaced document: G0M-2302-1881-TFC247BT-W276-V01 Replaced by: G0M-2302-1881-TFC247BT-W276-V02 Reason: Correction of the model name and FVIN of the EUT.	R. Jaafar
03	2023-12-05	Replaced document: G0M-2302-1881-TFC247BT-W276-V02 Replaced by: G0M-2302-1881-TFC247BT-W276-V03 Reason: - Correction of the module name in the plots. - Editorial correction to AC powerline conducted emissions at section 3.5. - Add EIRP test results for IC at section 3.3.	R. Jaafar

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
BR	Basic Rate (Bluetooth)
EDR	Enhanced Data Rate (Bluetooth)
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
RBW	Resolution bandwidth
RMS	Root mean square
VBW	Video bandwidth
V _{NOM}	Nominal supply voltage

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1 Equipment (Test Item) Under Test

Description	MAYA-W2 host-based multiradio modules		
Model	MAYA-W276-00B		
Additional Model(s)	None		
Brand Name(s)	u-blox		
Sample Identification	EUT	Sample-ID	Serial Number
	Radiated with integrated antenna	44078	AW86C1DEB9615900400
	Conducted, and Radiated with external antenna	43225	AW86C1DEB9598EC0300
Hardware Version(s)	02		
Software Version(s)	1.0.0.39.1-18.80.1.p154.38		
PMN	MAYA-W276-00B		
HVIN	MAYA-W276-00B		
FVIN	N/A		
HMN	N/A		
FCC ID	XPYMAYAW2B		
IC	8595A-MAYAW2B		
Equipment type	Radio Module		
Radio type	Transceiver		
Assigned frequency bands	2400.0 MHz - 2483.5 MHz		
Radio technology	Bluetooth		
Modulation	GFSK, PI/4-DQPSK, 8-DPSK		
Number of antenna ports	1		
Antenna-1	Type	External	
	Model	ANT-DB1-RAF-SMA	
	Manufacturer	Linx Technologies	
	Gain	4.1 dBi (customer declaration)	
Antenna-2	Type	Integrated	
	Model	custom	
	Manufacturer	ProAnt AB	
	Gain	-4.1 dBi (customer declaration)	
Supply Voltage (1st port)	V _{NOM}	3.3 VDC	
Supply Voltage (2nd port)	V _{NOM}	1.8 VDC	
Operating Temperature	T _{NOM}	20 °C	
AC/DC-Adaptor	Model	None	
Manufacturer	u-blox AG Zürcherstrasse 68 8800 Thalwil Switzerland		

1.1 Photos – Equipment External



Photos deleted.
Refer to separate photo exhibits.

EUT overview - with embedded antenna						
7	6	5	4	3	2	1

Photos deleted.

Refer to separate photo exhibits.

EUT overview - with external antenna

Photos deleted.

Refer to separate photo exhibits.

Evaluation board top view

Photos deleted.

Refer to separate photo exhibits.

Data cable

Photos deleted.
Refer to separate photo exhibits.

Evaluation board side view

Photos deleted.

Refer to separate photo exhibits.

Power adapter

Photos deleted.

Refer to separate photo exhibits.

1.2 Photos – Equipment Internal

RF Module-MW276 (length)

Photos deleted.
Refer to separate photo exhibits.

RF Module-MW276 (width)

Photos deleted.

Refer to separate photo exhibits.

1.3 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Notebook	Dell	Latitude E7250	For configuring test modes
AE	Evaluation Board	u-blox		
CBL	USB-C	---	---	Connection between evaluation board and EUT
CBL	Data cable	---	---	
CBL	SBI cable			
CBL	Ethernet	---	---	Connection between evaluation board and notebook
AE	AC/DC Adapter	EDACPOWER ELECT.	EA1045CR	To power the evaluation board
SFT	Terminal	Debian / Linux	---	For test mode activation
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment:				

1.4 Test Modes

Mode	Description
DH5 Single	Mode = Transmit Modulation = GFSK Spreading = None Packet type = DH5 Duty cycle = 77%
2-DH5 Single	Mode = Transmit Modulation = PI/4-DQPSK Spreading = None Packet type = 2-DH5 Duty cycle = 77%
3-DH5 Single	Mode = Transmit Modulation = 8-DPSK Spreading = None Packet type = 3-DH5 Duty cycle = 77%
DH5 Hopping	Mode = Transmit Modulation = GFSK Spreading = FHSS Packet type = DH5 Duty cycle = 77%
2-DH5 Hopping	Mode = Transmit Modulation = PI/4-DQPSK Spreading = FHSS Packet type = 2-DH5 Duty cycle = 77%
3-DH5 Hopping	Mode = Transmit Modulation = 8-DPSK Spreading = FHSS Packet type = 3-DH5 Duty cycle = 77%
Receive	Mode = Scan mode
Comment: Power level set to maximum (controlled by the communication tester).	

1.5 Test Frequencies

Designator	Mode	Channel	Frequency [MHz]
F1	Tx	0	2402
F2	Tx / Rx	39	2441
F3	Tx	40	2442
F4	Tx	78	2480

1.6 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dB μ V. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB/m)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Field strength limit:

This is the FCC Class B radiated emission limit (in units of dB μ V/m). The FCC limits are given in units of μ V/m. The following formula is used to convert the units of μ V/m to dB μ V/m:

$$\text{Field strength limit (dB}\mu\text{V/m)} = 20 \cdot \log (\mu\text{V/m})$$

Example only for radiated field strength:

Reading + AF	= Net Reading	:	Net reading	- Field strength limit	= Margin
+21.5 dB μ V	+ 26 dB/m	:	47.5 dB μ V/m	- 57.0 dB μ V/m	= -9.5

2 Result Summary

FCC 47 CFR Part 15C, ISED RSS-247				
Product Standard Reference	Requirement	Reference Method	Result	Remarks
ISED RSS-Gen, Issue 5 A2 (section 6.7)	Occupied Bandwidth	ANSI C63.10-2013	N/R	Informational only
FCC § 15.247(a)(1) ISED RSS-247 § 5.1 Issue 2	20 dB Bandwidth	ANSI C63.10-2013	PASS	
FCC § 15.247(a)(1)(iii) ISED RSS-247, Issue 2 (section 5.1)	Number of hopping frequencies	ANSI C63.10-2013	PASS	
FCC § 15.247(a)(1) ISED RSS-247, Issue 2 (section 5.1)	Frequency hopping channel separation	ANSI C63.10-2013	PASS	
FCC § 15.247(a)(1)(iii) ISED RSS-247, Issue 2 (section 5.1)	Time of occupancy (Dwell time)	ANSI C63.10-2013	PASS	
FCC § 15.247(b) ISED RSS-247, Issue 2 (section 5.4)	Maximum peak conducted power	ANSI C63.10-2013	PASS	
FCC § 15.207 ISED RSS-247, Issue 2 (section 3.1)	AC power line conducted emissions	ANSI C63.10-2013	PASS	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Band edge compliance	ANSI C63.10-2013	PASS	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Conducted spurious emissions	ANSI C63.10-2013	PASS	
FCC § 15.247(d) FCC § 15.209 ISED RSS-Gen, Issue 5 A2 (section 6.13)	Transmitter radiated spurious emissions	ANSI C63.10-2013	PASS	
ISED RSS-247, Issue 2 (section 3.1)	Receiver radiated spurious emissions	ANSI C63.4-2014	PASS	
Comment: The Decision Rule is applied on the basis of ETSI TR 102 273 and ETSI TR 100 028. These standards provide guidance on how to calculate and apply measurement uncertainty whilst providing maximum uncertainties allowance. In all cases due consideration will be given to ILAC-G8:09/2019. Where a result is considered conditional in respect of its proximity to the limit line, the customer would be made aware of situation so that they can make an informed decision on how to proceed.				

Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

3 Test Conditions and Results

3.1 Test Conditions and Results - Occupied bandwidth

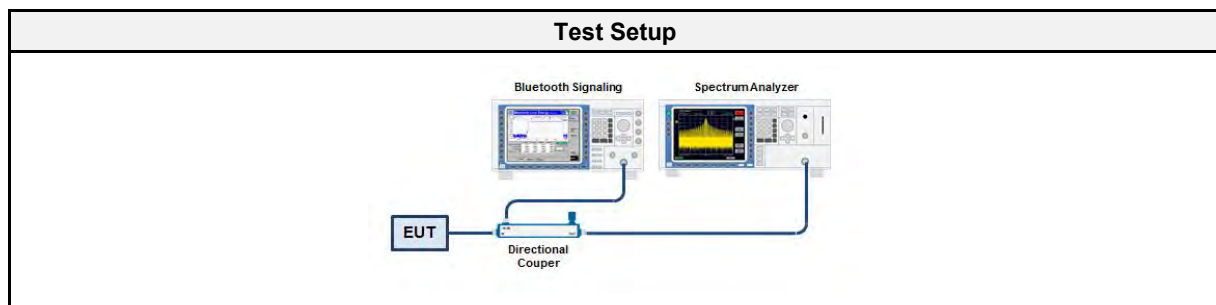
3.1.1 Information

Test Information	
Reference	ISED RSS-Gen, Issue 5 A2 (section 6.7)
Measurement Method	ANSI C63.10 6.9.3
Measurement Uncertainty	$\pm 1.26 \%$
Test Sample ID	43225
Operator	Radwan Jaafar
Date	2023-03-07

3.1.2 Limits

Limits
None (Informational only)

3.1.3 Setup



3.1.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Bluetooth signaling	R&S	CMW 270	EF01169	2022-04	2023-04
Cable (CAABB)	Gigalane	GIGALANE 1730	EF00779	2023-03	2024-03

3.1.5 Procedure

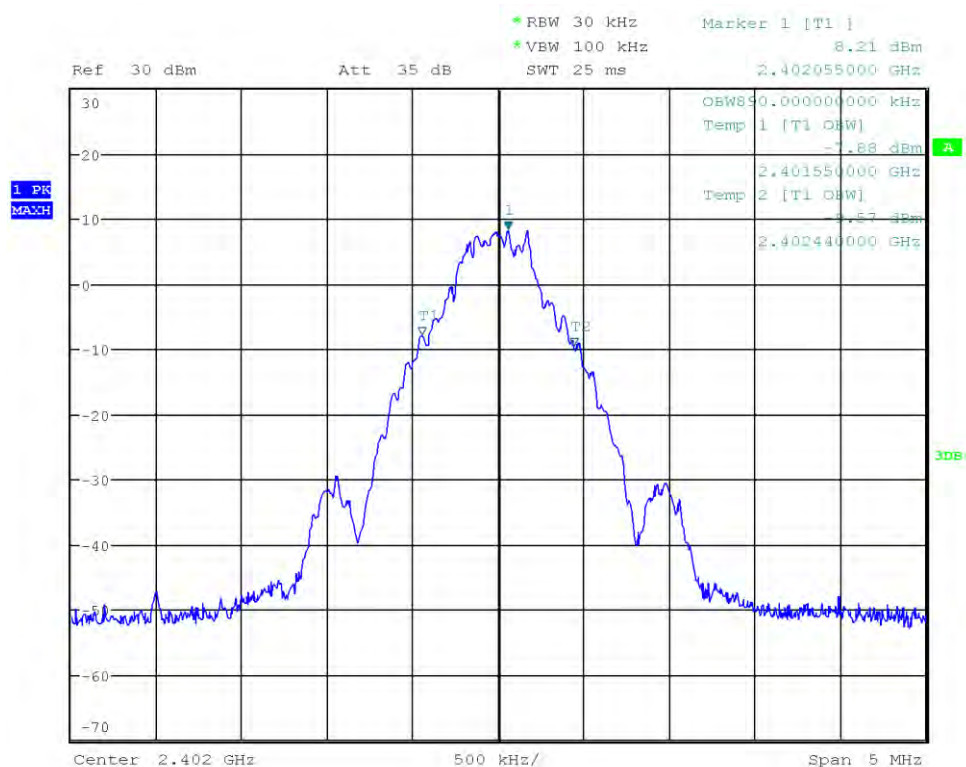
Test Procedure	
1.	EUT transmitter is activated in test mode under normal conditions
2.	The spectrum analyzer is set to peak detection and maximum hold with a span twice the emission spectrum
3.	The resolution bandwidth is set to the range of 1 % to 5 % of the occupied bandwidth
4.	The occupied bandwidth is measured with the build-in analyzer function

3.1.6 Results

Test Results		
Mode	Frequency [MHz]	Bandwidth [MHz]
DH5	2402	0.890
DH5	2441	0.890
DH5	2480	0.890
2-DH5	2402	1.185
2-DH5	2441	1.180
2-DH5	2480	1.185
3-DH5	2402	1.190
3-DH5	2441	1.190
3-DH5	2480	1.190

Occupied Bandwidth

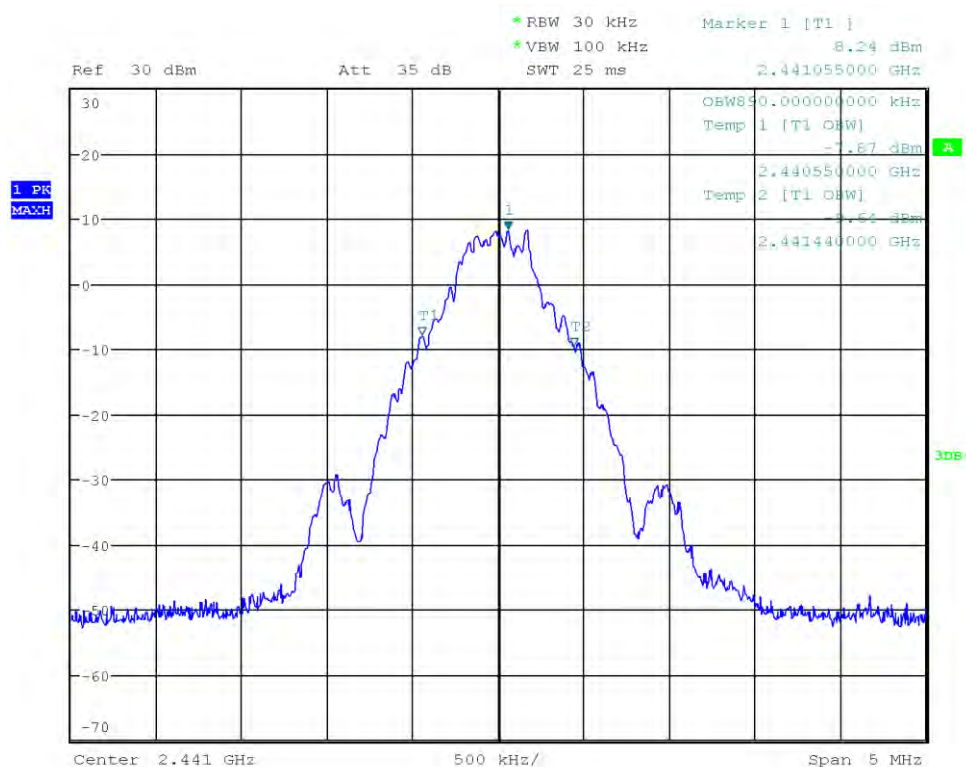
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Occupied Bandwidth [MHz]: 0.890



Date: 7.MAR.2023 16:54:38

Occupied Bandwidth

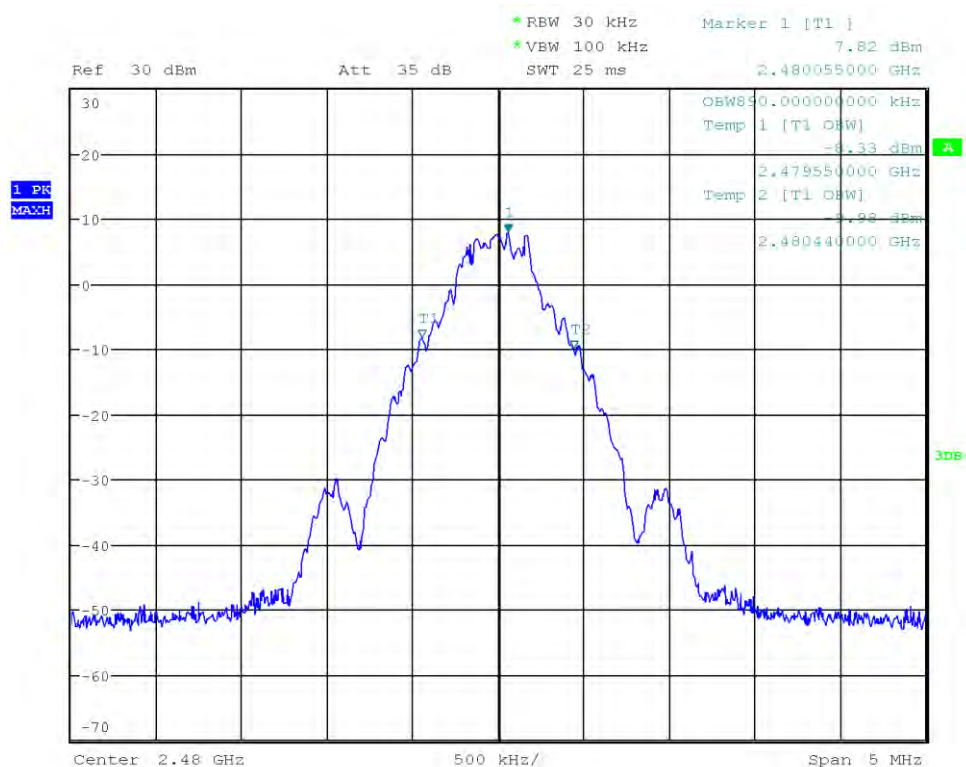
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Occupied Bandwidth [MHz]: 0.890



Date: 7.MAR.2023 16:57:10

Occupied Bandwidth

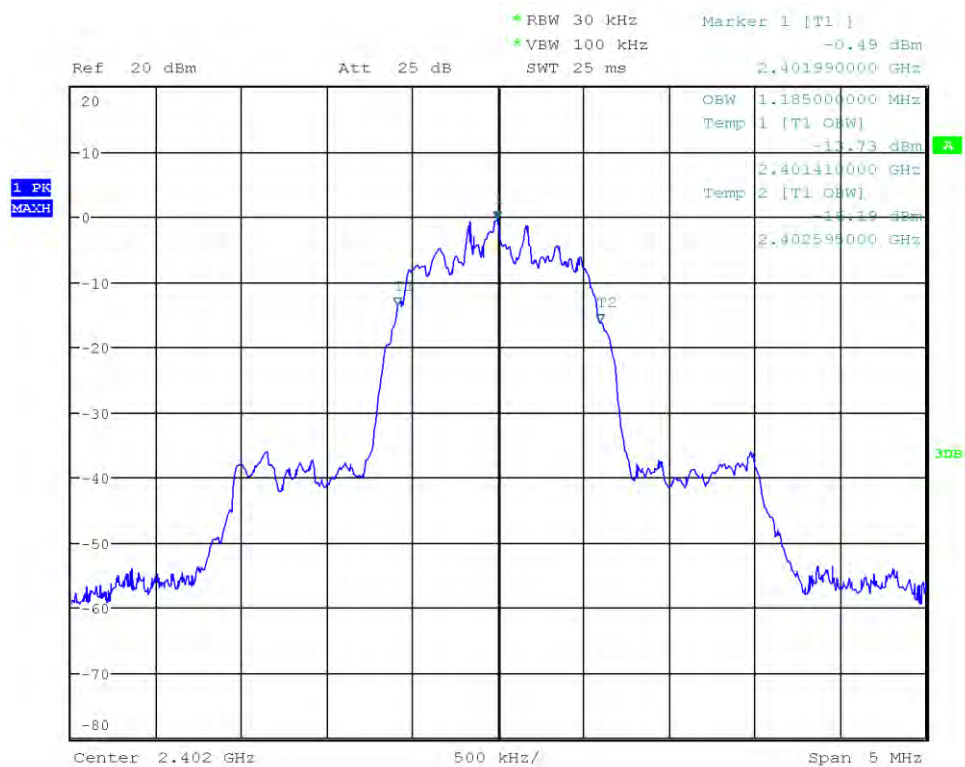
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Occupied Bandwidth [MHz]: 0.890



Date: 7.MAR.2023 16:58:34

Occupied Bandwidth

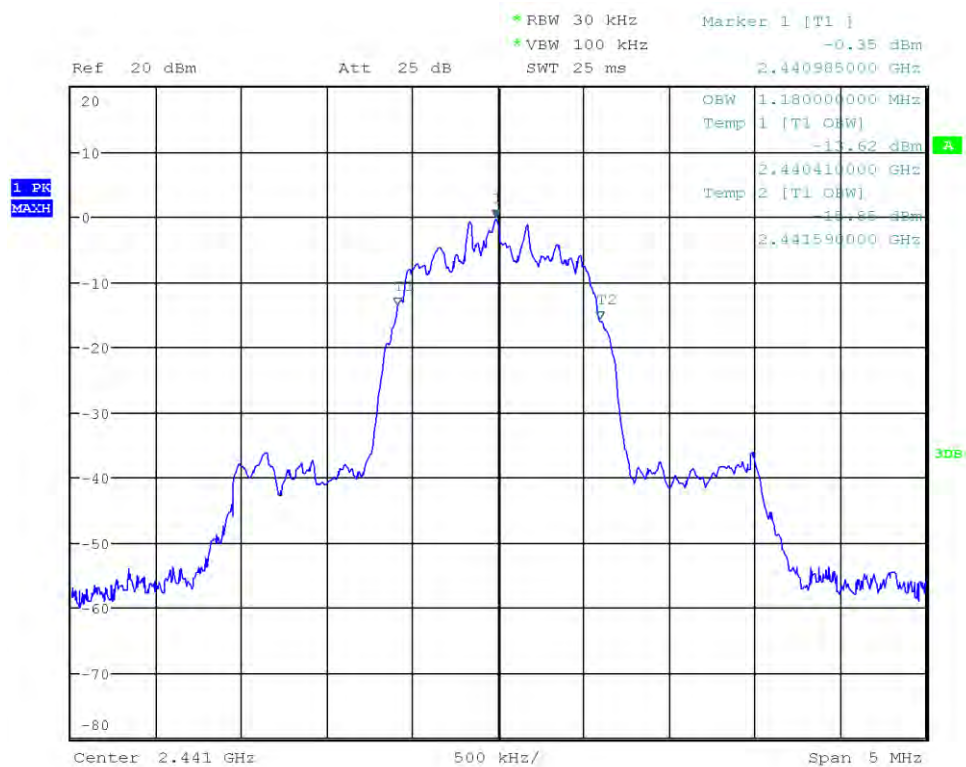
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: 2-DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Occupied Bandwidth [MHz]: 1.185



Date: 7.MAR.2023 17:00:05

Occupied Bandwidth

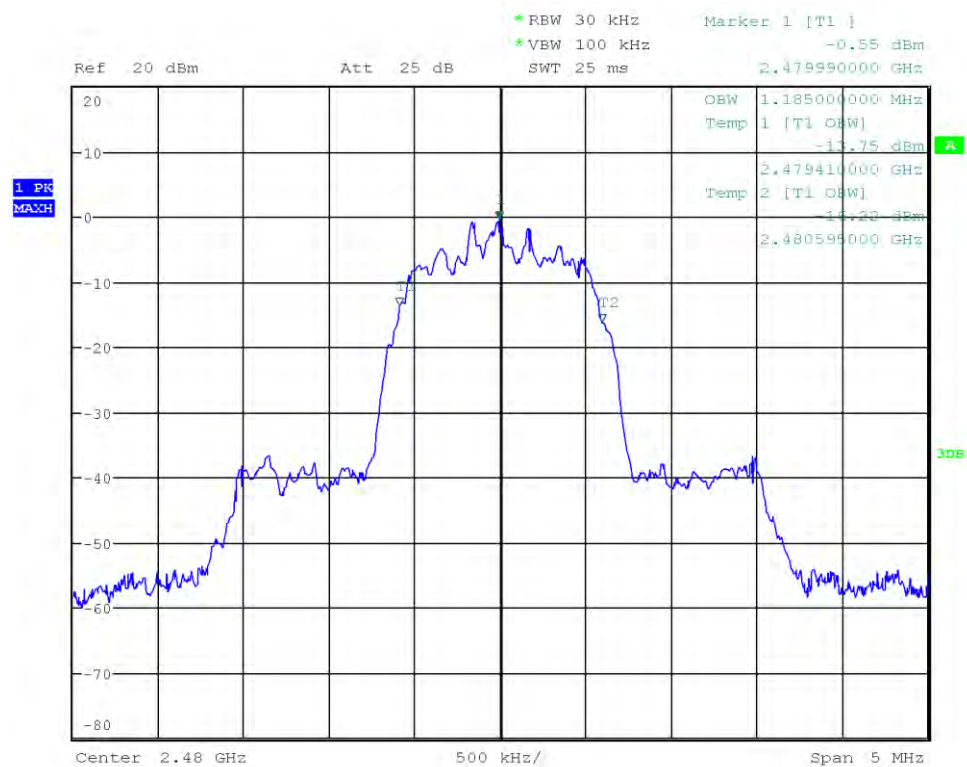
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: 2-DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Occupied Bandwidth [MHz]: 1.180



Date: 7.MAR.2023 17:01:22

Occupied Bandwidth

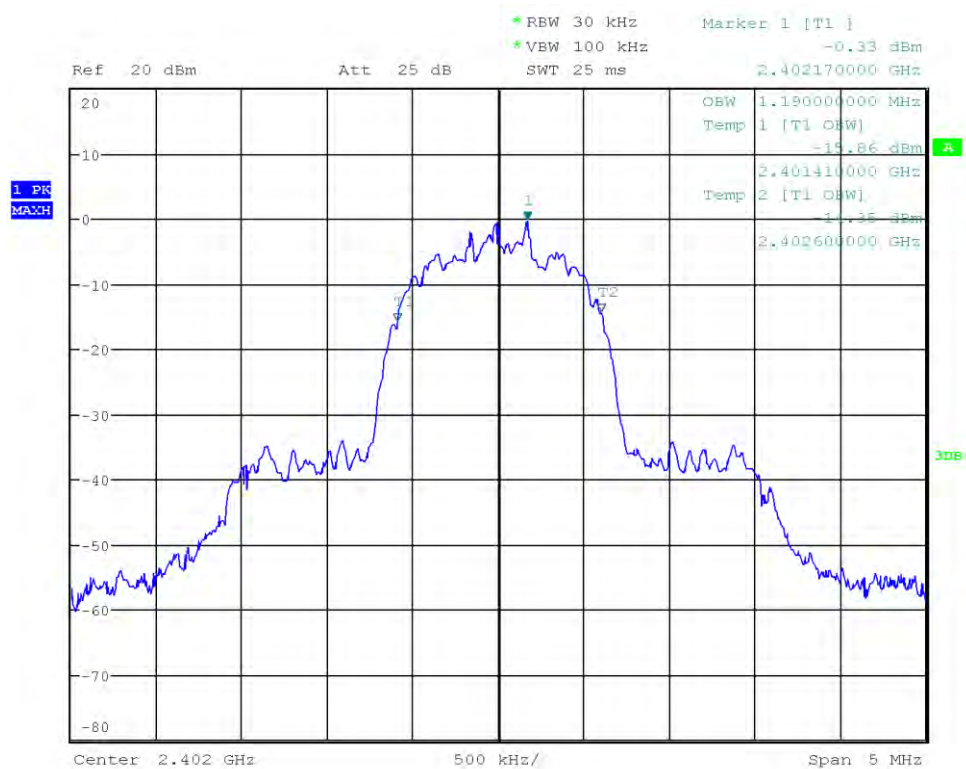
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: 2-DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Occupied Bandwidth [MHz]: 1.185



Date: 7.MAR.2023 17:03:41

Occupied Bandwidth

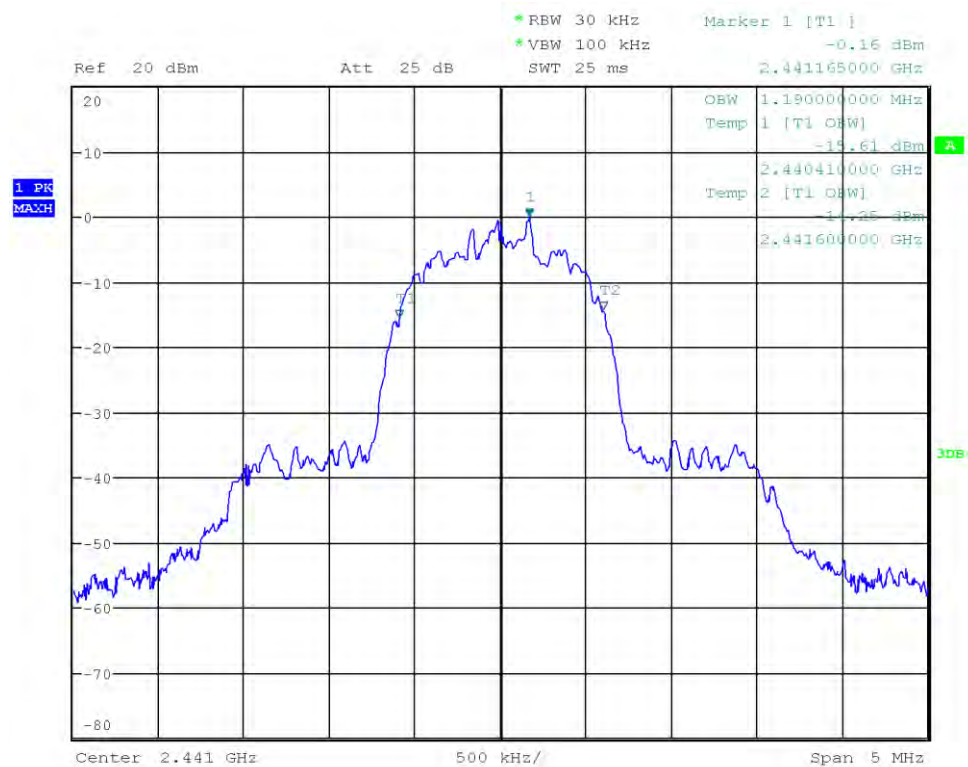
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: 3-DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Occupied Bandwidth [MHz]: 1.190



Date: 7.MAR.2023 17:05:49

Occupied Bandwidth

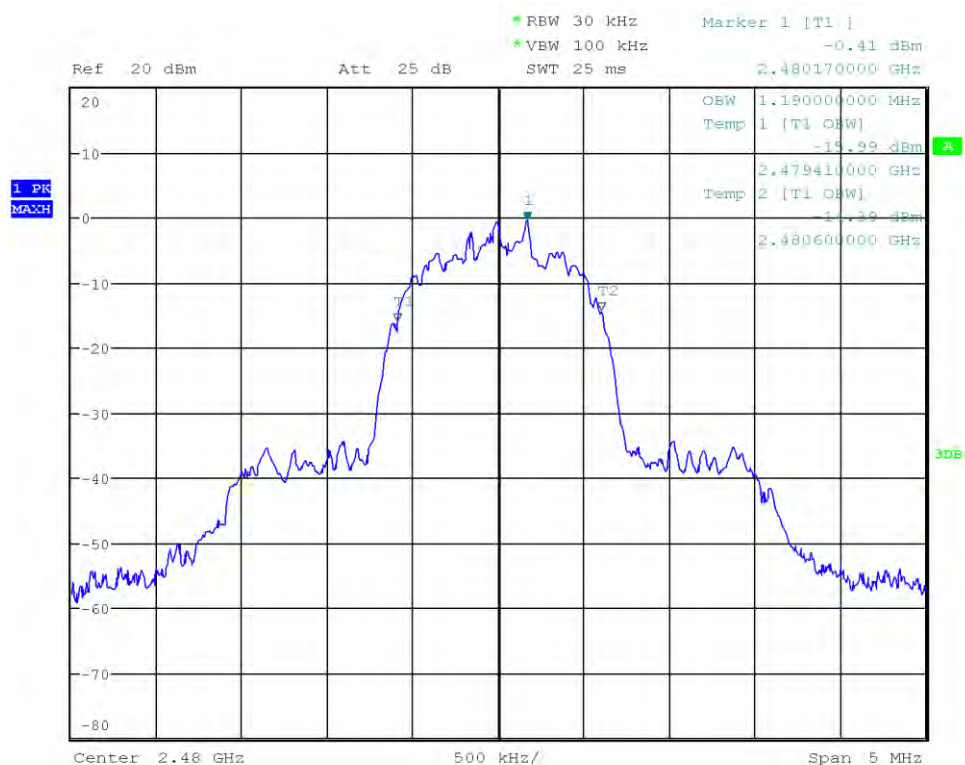
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: 3-DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Occupied Bandwidth [MHz]: 1.190



Date: 7.MAR.2023 17:07:03

Occupied Bandwidth

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: 3-DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Occupied Bandwidth [MHz]: 1.190



Date: 7.MAR.2023 17:12:02

3.2 Test Conditions and Results - 20 dB bandwidth

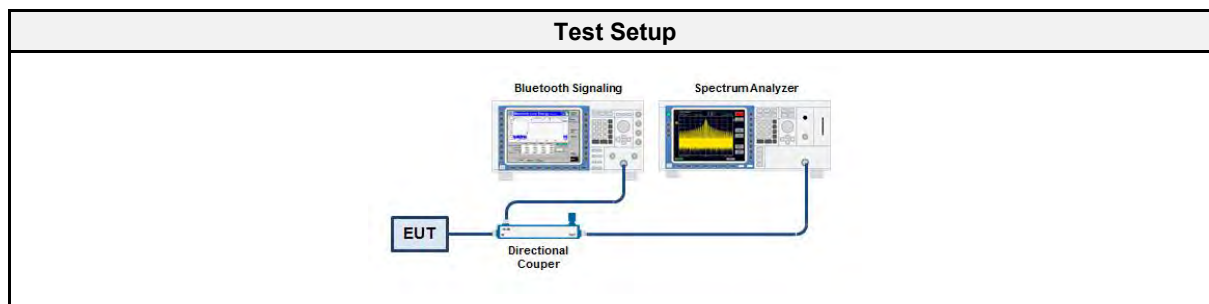
3.2.1 Information

Test Information	
Reference	FCC 15.247(a)(1) / ISSED RSS-247 5.1
Measurement Method	ANSI C63.10 6.9.2
Measurement Uncertainty	± 1.26 %
Test Sample ID	43225
Operator	Radwan Jaafar
Date	2023-03-08

3.2.2 Limits

Limits
None (Informational only)

3.2.3 Setup



3.2.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Bluetooth signaling	R&S	CMW 270	EF01169	2022-04	2023-04
Cable (CAABB)	Gigalane	GIGALANE 1730	EF00779	2023-03	2024-03

3.2.5 Procedure

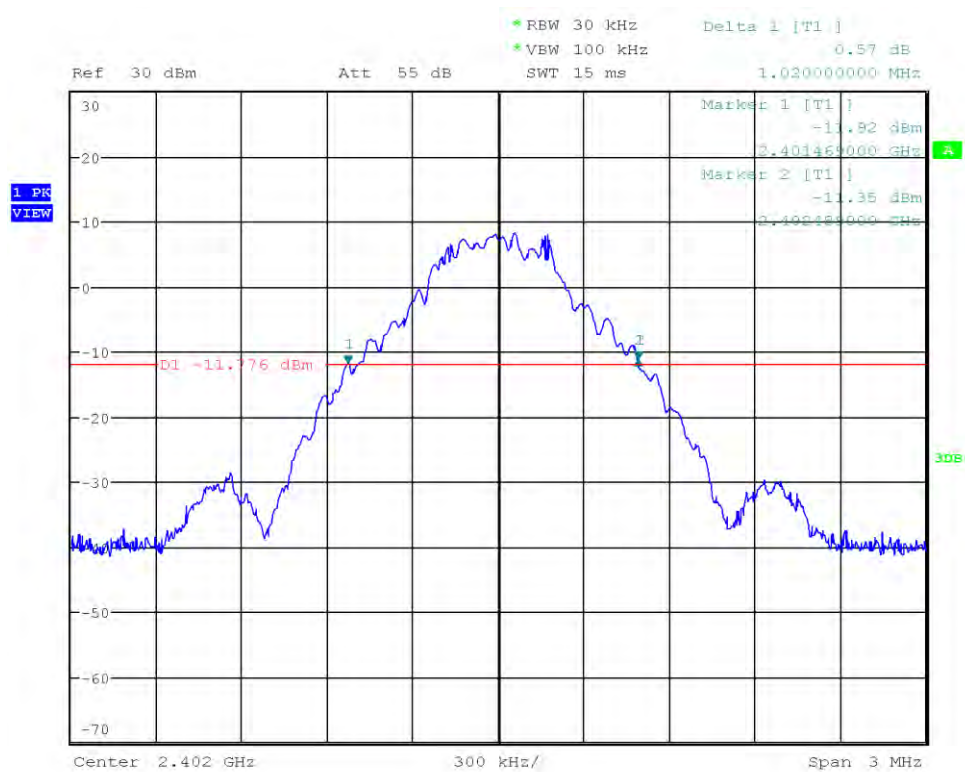
Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span set to at least twice the emission spectrum 3. Detector set to peak and max hold 4. Envelope peak value of emission spectrum is selected 5. Marker on envelope of spectrum is set to level of -20 dB to the left of the peak 6. Marker on envelope of spectrum is set to level of -20 dB to the right of the peak 7. 20dB Bandwidth is determined by marker frequency separation

3.2.6 Results

Test Results		
Mode	Frequency [MHz]	Bandwidth [MHz]
DH5	2402	1.020
DH5	2441	0.984
DH5	2480	0.981
2-DH5	2402	1.329
2-DH5	2441	1.329
2-DH5	2480	1.329
3-DH5	2402	1.305
3-DH5	2441	1.308
3-DH5	2480	1.314

20 dB Bandwidth

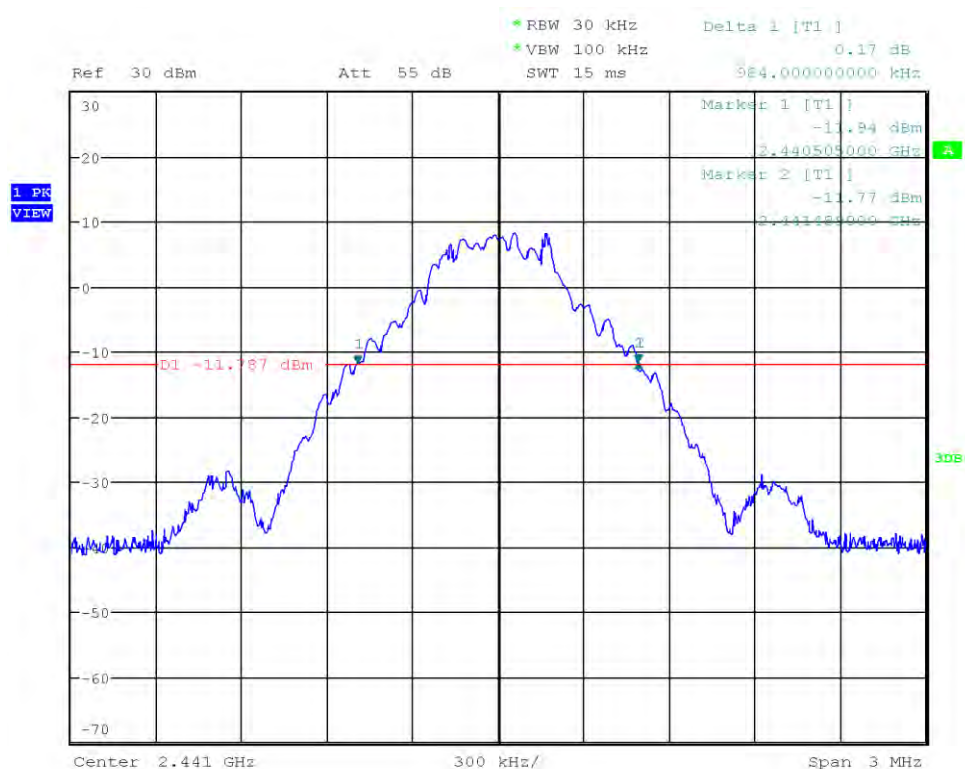
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.2
 Operational Mode: DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Lower Frequency [MHz]: 2401.469
 Upper Frequency [MHz]: 2402.489
 20 dB Bandwidth [MHz]: 1.020



Date: 8.MAR.2023 08:26:21

20 dB Bandwidth

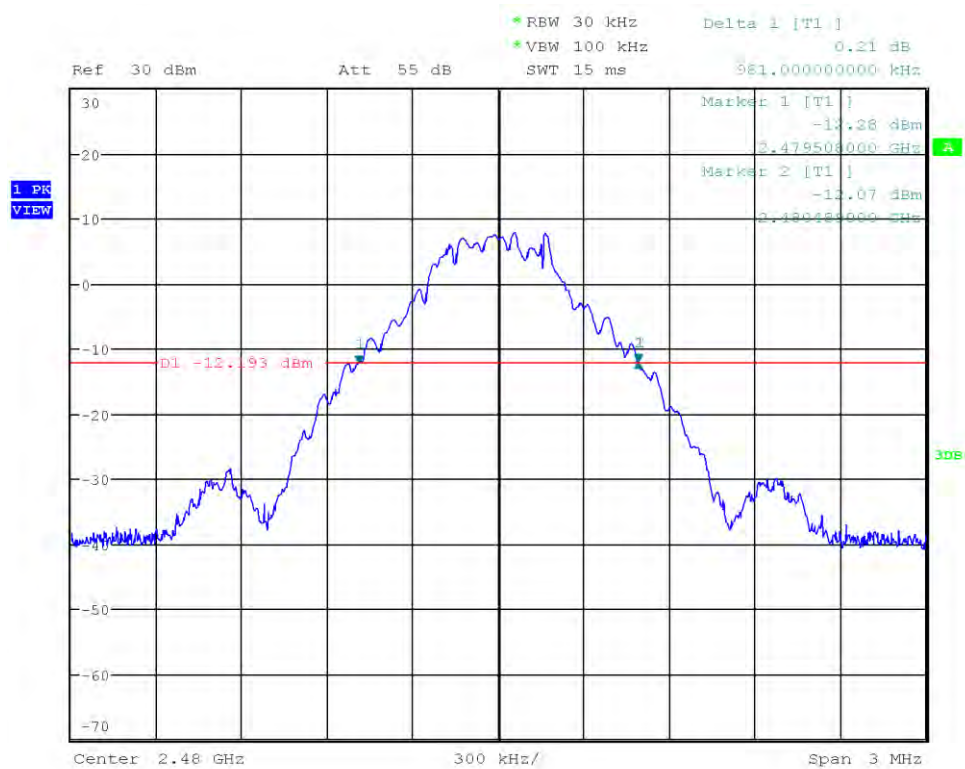
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.2
 Operational Mode: DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Lower Frequency [MHz]: 2440.505
 Upper Frequency [MHz]: 2441.489
 20 dB Bandwidth [MHz]: 0.984



Date: 8.MAR.2023 08:27:32

20 dB Bandwidth

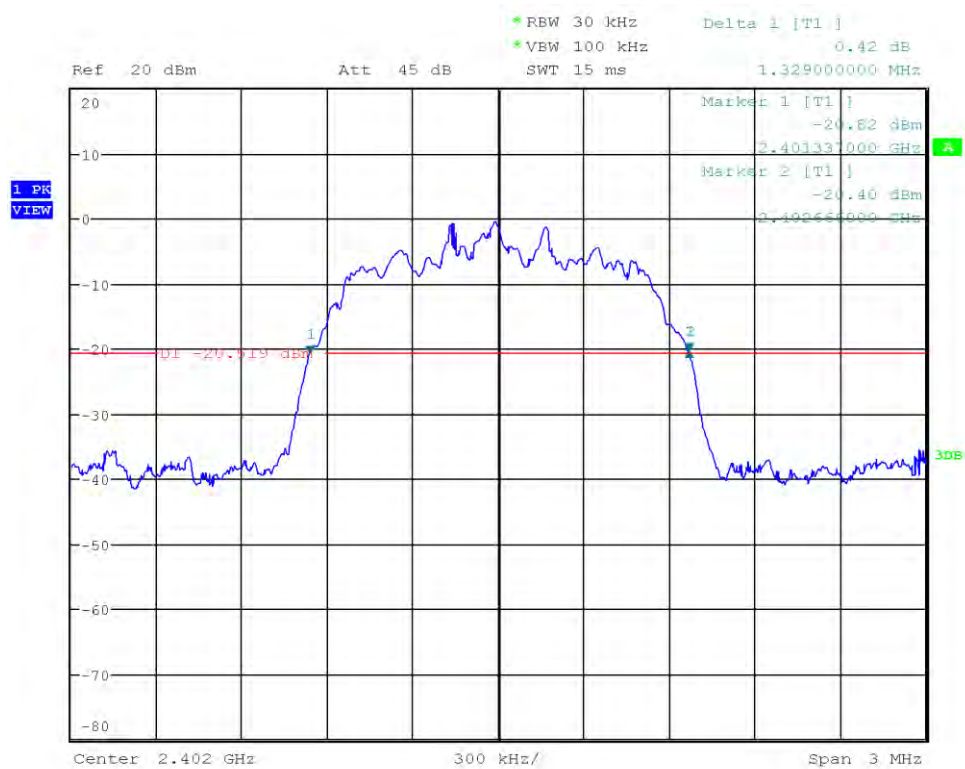
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.2
 Operational Mode: DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Lower Frequency [MHz]: 2479.508
 Upper Frequency [MHz]: 2480.489
 20 dB Bandwidth [MHz]: 0.981



Date: 8.MAR.2023 08:28:52

20 dB Bandwidth

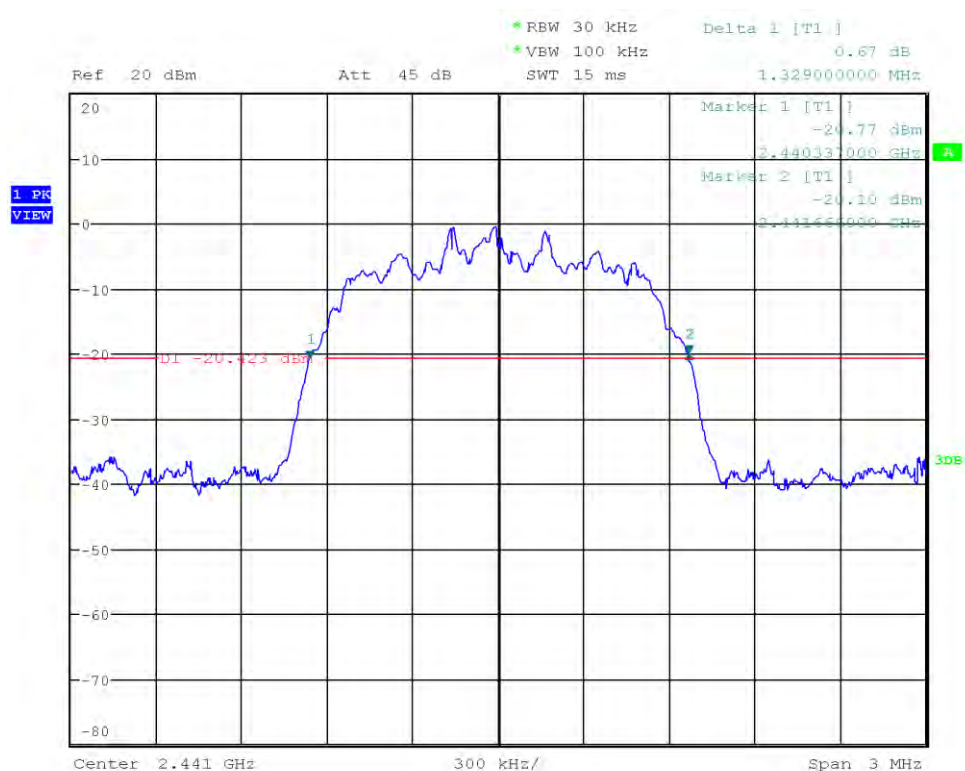
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.2
 Operational Mode: 2-DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Lower Frequency [MHz]: 2401.337
 Upper Frequency [MHz]: 2402.666
 20 dB Bandwidth [MHz]: 1.329



Date: 8.MAR.2023 08:31:02

20 dB Bandwidth

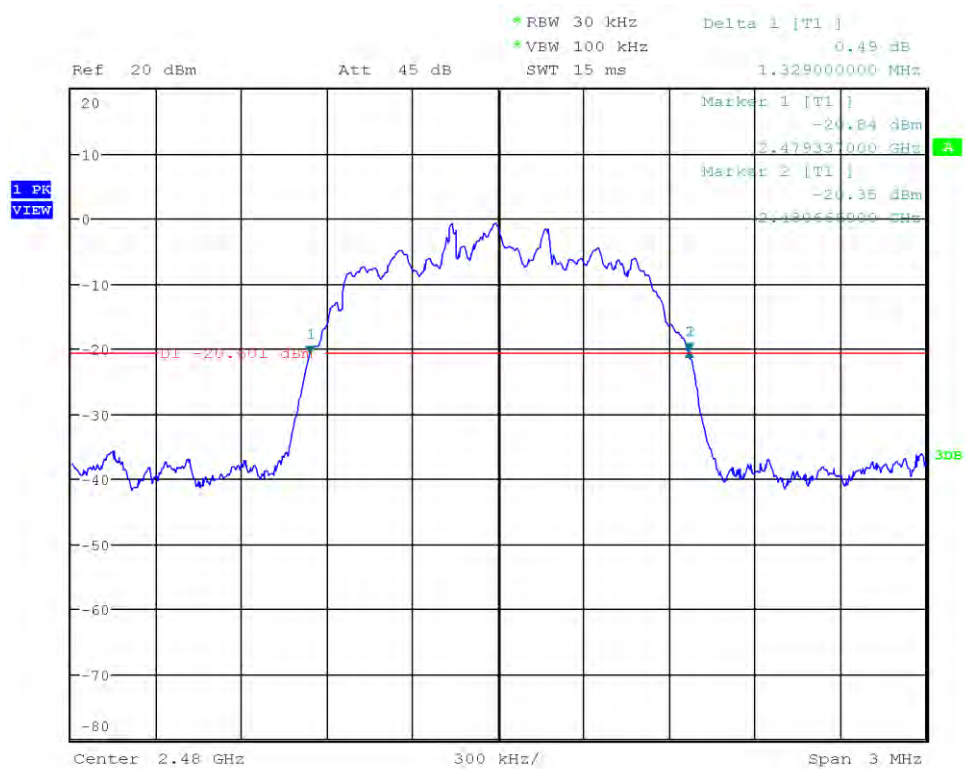
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.2
 Operational Mode: 2-DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Lower Frequency [MHz]: 2440.337
 Upper Frequency [MHz]: 2441.666
 20 dB Bandwidth [MHz]: 1.329



Date: 8.MAR.2023 08:32:08

20 dB Bandwidth

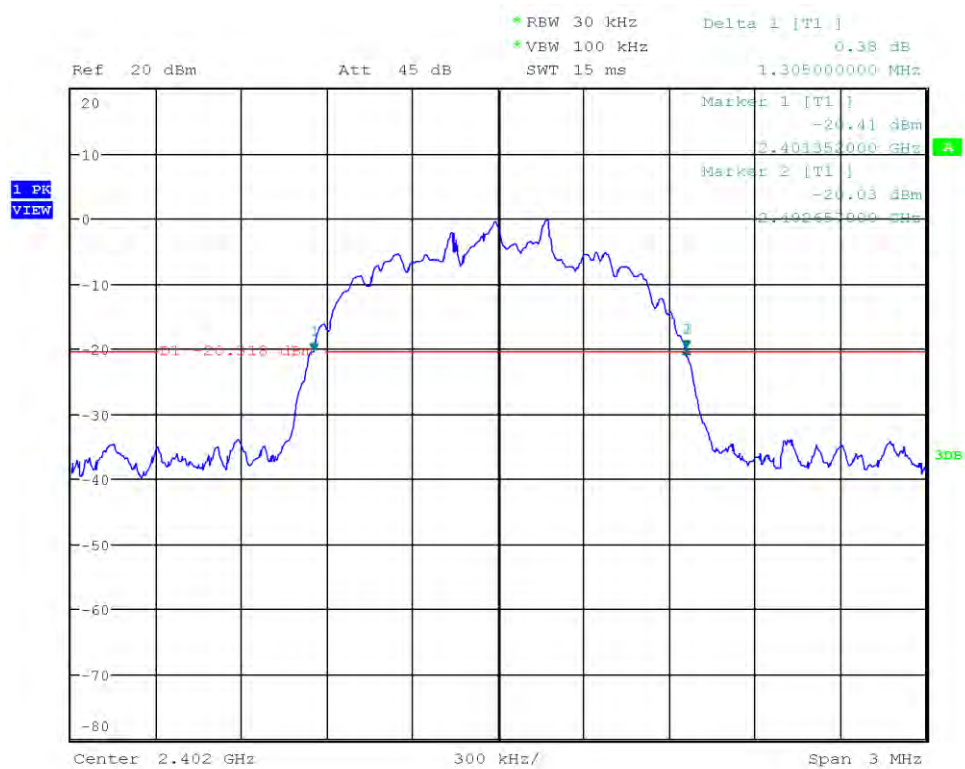
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.2
 Operational Mode: 2-DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Lower Frequency [MHz]: 2479.337
 Upper Frequency [MHz]: 2480.666
 20 dB Bandwidth [MHz]: 1.329



Date: 8.MAR.2023 08:33:18

20 dB Bandwidth

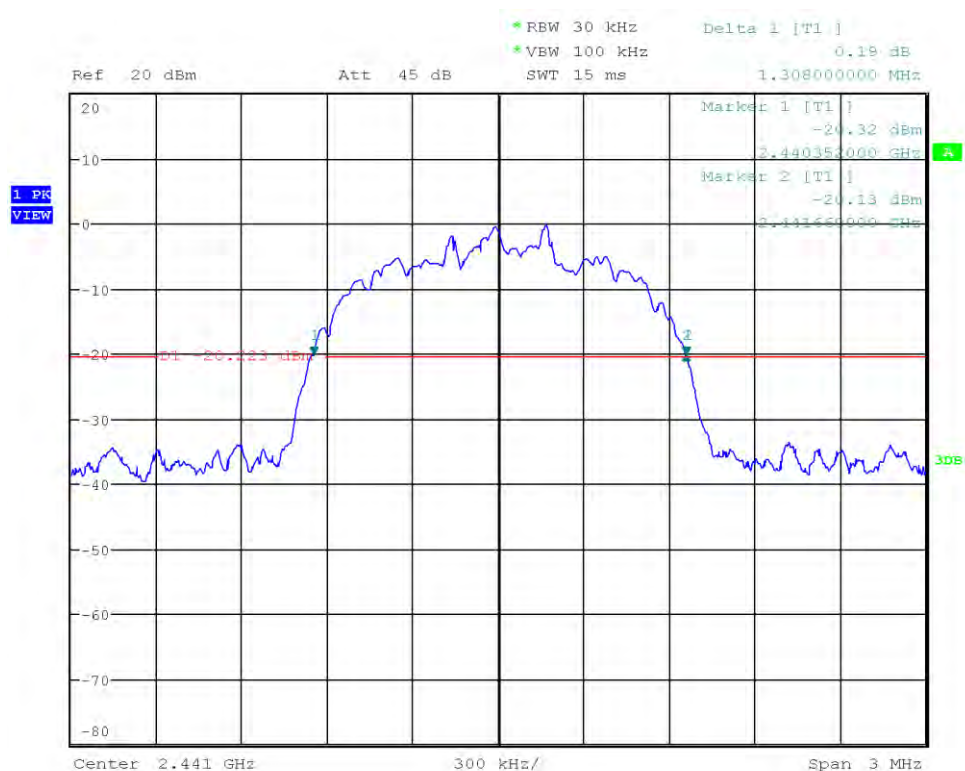
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.2
 Operational Mode: 3-DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Lower Frequency [MHz]: 2401.352
 Upper Frequency [MHz]: 2402.657
 20 dB Bandwidth [MHz]: 1.305



Date: 8.MAR.2023 08:34:43

20 dB Bandwidth

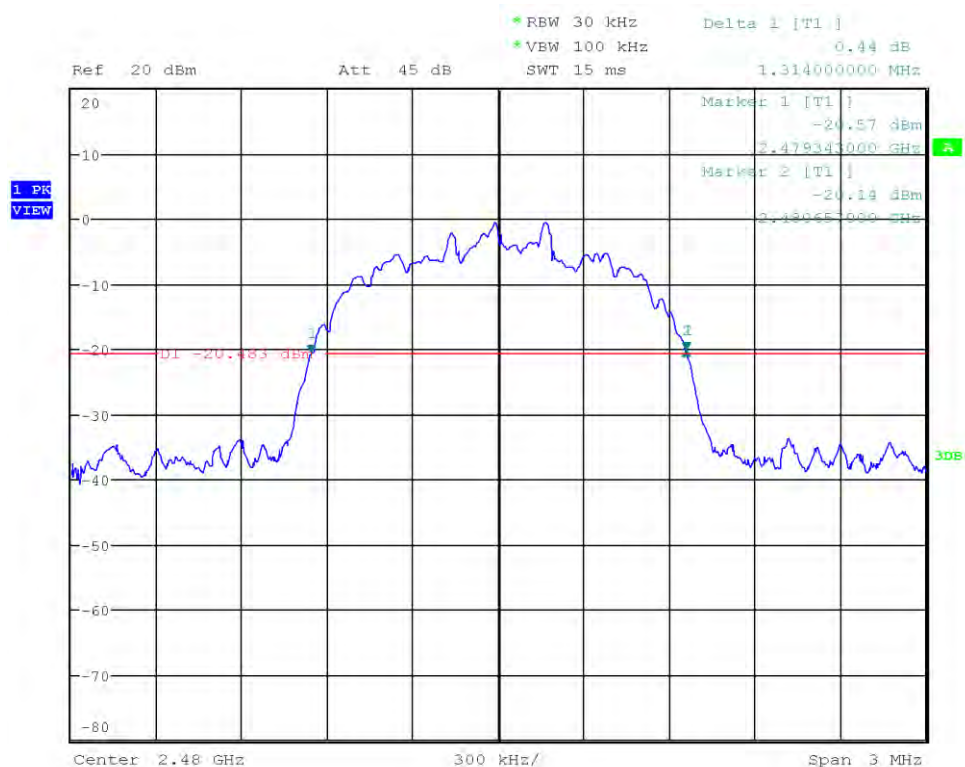
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.2
 Operational Mode: 3-DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Lower Frequency [MHz]: 2440.352
 Upper Frequency [MHz]: 2441.660
 20 dB Bandwidth [MHz]: 1.308



Date: 8.MAR.2023 08:35:57

20 dB Bandwidth

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.2
 Operational Mode: 3-DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Lower Frequency [MHz]: 2479.343
 Upper Frequency [MHz]: 2480.657
 20 dB Bandwidth [MHz]: 1.314



Date: 8.MAR.2023 08:37:07

3.3 Test Conditions and Results - Number of hopping frequencies

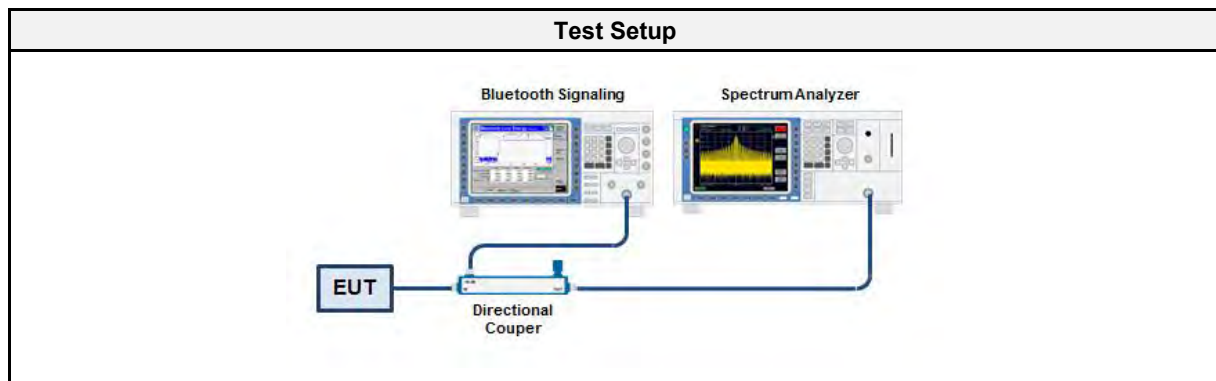
3.3.1 Information

Test Information	
Reference	FCC § 15.247(a)(1)(iii); ISED RSS-247, Issue 2 (section 5.1)
Measurement Method	ANSI C63.10 7.8.3
Operator	Radwan Jaafar
Date	2023-03-08

3.3.2 Limits

Limits
≥ 15

3.3.3 Setup



3.3.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Bluetooth signaling	R&S	CMW 270	EF01169	2022-04	2023-04
Cable (CAABB)	Gigalane	GIGALANE 1730	EF00779	2023-03	2024-03

3.3.5 Procedure

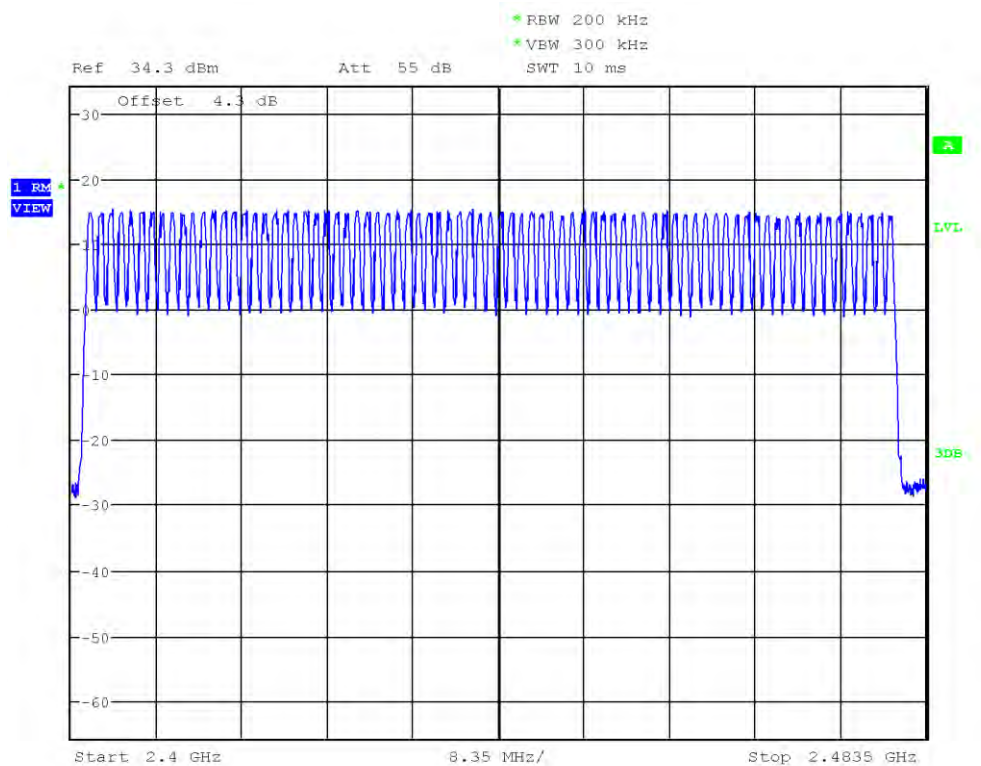
Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span set to measurement frequency range 3. Detector set to peak and max hold 4. Resolution bandwidth is set small enough to resolve hopping channel emission spectra 5. The number of peaks is counted to determine number of hopping frequencies

3.3.6 Results

Test Results		
Number of hopping frequencies	Limit	Verdict
79	79	PASS

Number of hopping frequencies

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.27 (a)(1)(iii)
 Reference Method: ANSI C63.10:2013 7.8.3
 Operational Mode: Bluetooth, DH5, Hopping Mode
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Number of Hopping Channels: 79



Date: 8.MAR.2023 14:18:43

3.4 Test Conditions and Results - Frequency hopping channel separation

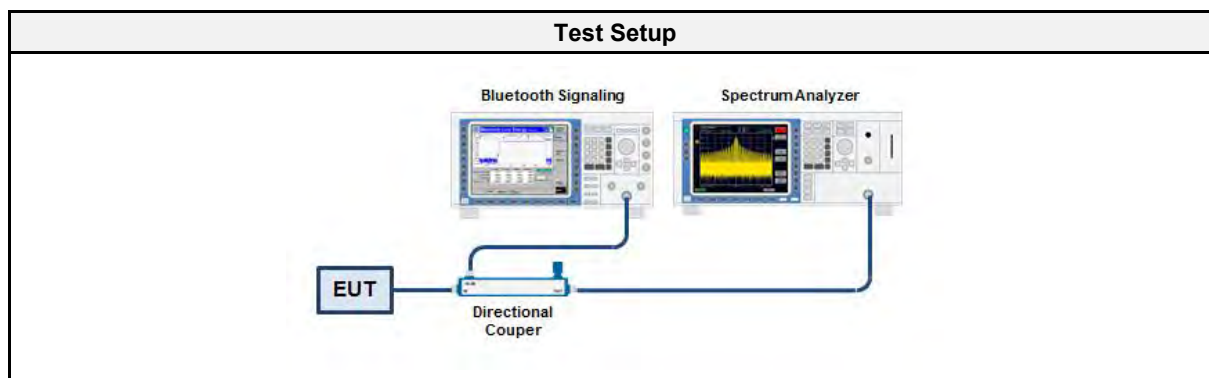
3.4.1 Information

Test Information	
Reference	FCC § 15.247(a)(1); ISED RSS-247, Issue 2 (section 5.1)
Measurement Method	ANSI C63.10 7.8.4
Measurement Uncertainty	± 3.14 %
Operator	Radwan Jaafar
Date	2023-03-08

3.4.2 Limits

Limit
≥ 25 kHz or ⅓ of 20 dB bandwidth

3.4.3 Setup



3.4.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Bluetooth signaling	R&S	CMW 270	EF01169	2022-04	2023-04
Cable (CAABB)	Gigalane	GIGALANE 1730	EF00779	2023-03	2024-03

3.4.5 Procedure

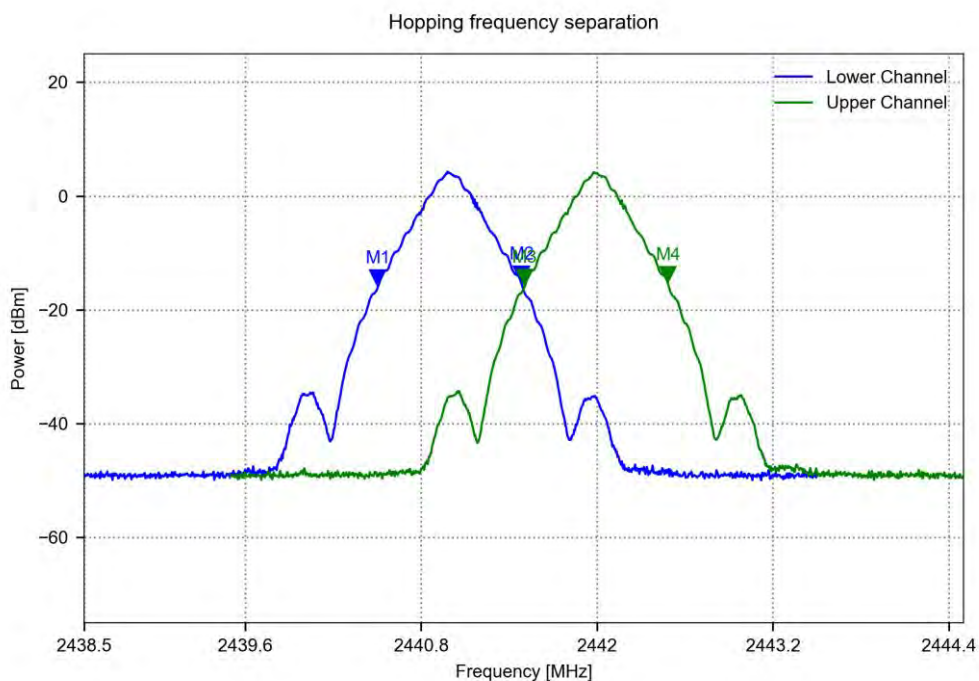
Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span set to measurement frequency range 3. Detector set to peak and max hold 4. Resolution bandwidth is set small enough to resolve hopping channel emission spectra 5. The two adjacent channel peaks are marked 6. Channel separation is determined from frequency separation of markers

3.4.6 Results

Test Results			
Mode	Channel separation [kHz]	Limit [kHz]	Verdict
DH5 Hopping	1000	$\geq \frac{2}{3} \cdot 984.0 = 656.0$	PASS
2-DH5 Hopping	1000	$\geq \frac{2}{3} \cdot 1329.0 = 886.0$	PASS
3-DH5 Hopping	997	$\geq \frac{2}{3} \cdot 1308.0 = 872.0$	PASS

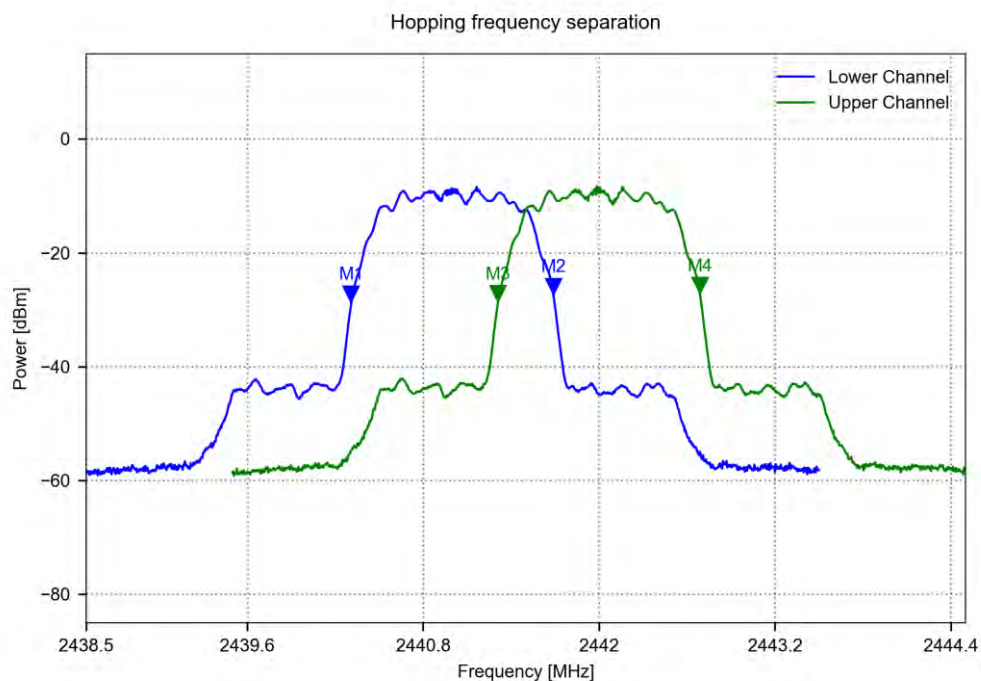
Hopping frequency separation

Project Number:	G0M-2302-1881
Applicant:	u-blox AG
Model Description:	Host-based multiradio module
Model:	MAYA-W276-00B
Test Sample ID:	43225
Reference Standards:	FCC 15.247(a)(1)
Reference Method:	ANSI C63.10:2013 7.8.2
Operational Mode:	Bluetooth, DH5, Channels: 2441 + 2442 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Radwan Jaafar
Test Site:	Eurofins Product Service GmbH
Test Date:	2023-03-08
Lower Frequency (M1) [MHz]:	2440.505
Upper Frequency (M2) [MHz]:	2441.485
Lower Frequency (M3) [MHz]:	2441.505
Upper Frequency (M4) [MHz]:	2442.485
Lower center Frequency [MHz]:	2440.995
Upper center Frequency [MHz]:	2441.995
Hopping Frequency Separation [MHz]:	1.000



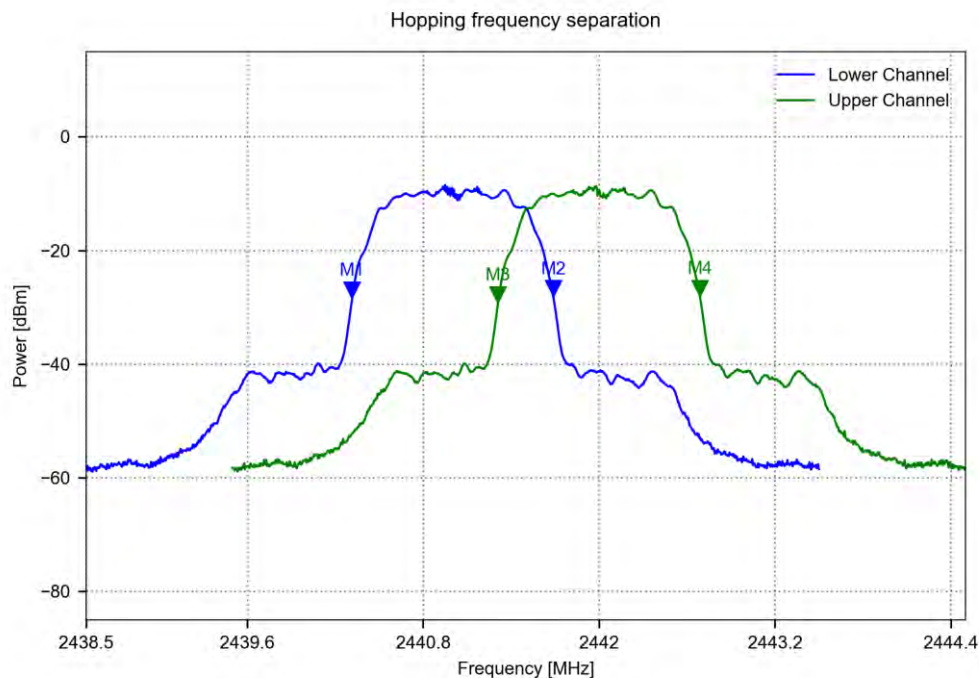
Hopping frequency separation

Project Number:	G0M-2302-1881
Applicant:	u-blox AG
Model Description:	Host-based multiradio module
Model:	MAYA-W276-00B
Test Sample ID:	43225
Reference Standards:	FCC 15.247(a)(1)
Reference Method:	ANSI C63.10:2013 7.8.2
Operational Mode:	Bluetooth, 2-DH5, Channels: 2441 + 2442 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Radwan Jaafar
Test Site:	Eurofins Product Service GmbH
Test Date:	2023-03-08
Lower Frequency (M1) [MHz]:	2440.310
Upper Frequency (M2) [MHz]:	2441.690
Lower Frequency (M3) [MHz]:	2441.310
Upper Frequency (M4) [MHz]:	2442.690
Lower center Frequency [MHz]:	2441.000
Upper center Frequency [MHz]:	2442.000
Hopping Frequency Separation [MHz]:	1.000



Hopping frequency separation

Project Number:	G0M-2302-1881
Applicant:	u-blox AG
Model Description:	Host-based multiradio module
Model:	MAYA-W276-00B
Test Sample ID:	43225
Reference Standards:	FCC 15.247(a)(1)
Reference Method:	ANSI C63.10:2013 7.8.2
Operational Mode:	Bluetooth, 3-DH5, Channels: 2441 + 2442 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Radwan Jaafar
Test Site:	Eurofins Product Service GmbH
Test Date:	2023-03-08
Lower Frequency (M1) [MHz]:	2440.315
Upper Frequency (M2) [MHz]:	2441.690
Lower Frequency (M3) [MHz]:	2441.310
Upper Frequency (M4) [MHz]:	2442.690
Lower center Frequency [MHz]:	2441.003
Upper center Frequency [MHz]:	2442.000
Hopping Frequency Separation [MHz]:	0.997



3.5 Test Conditions and Results - Time of occupancy (Dwell time)

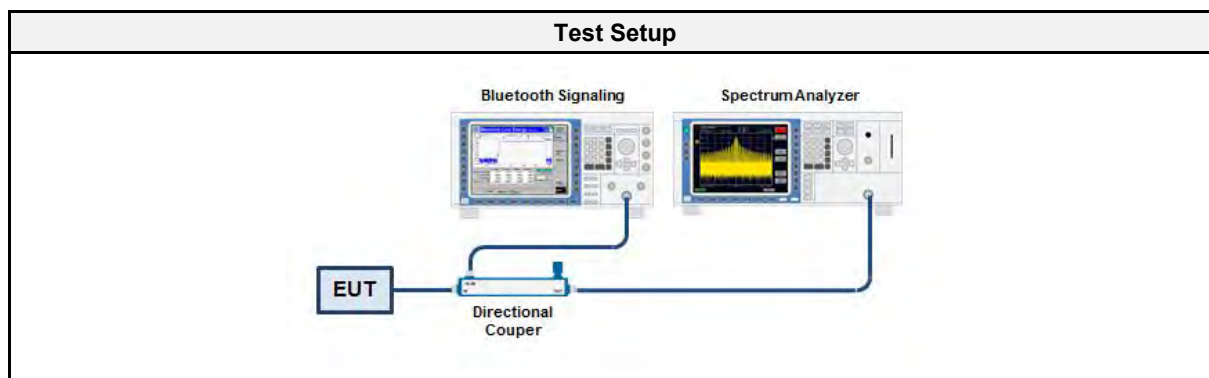
3.5.1 Information

Test Information	
Reference	FCC § 15.247(a)(1)(iii); ISED RSS-247, Issue 2 (section 5.1)
Measurement Method	ANSI C63.10 7.8.2
Measurement Uncertainty	± 78.53 %
Operator	Radwan Jaafar
Date	2023-03-08

3.5.2 Limits

Limits
≤ 0.4 s within 0.4 s · Number of hopping channels

3.5.3 Setup



3.5.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Bluetooth signaling	R&S	CMW 270	EF01169	2022-04	2023-04
Cable (CAABB)	Gigalane	GIGALANE 1730	EF00779	2023-03	2024-03

3.5.5 Procedure

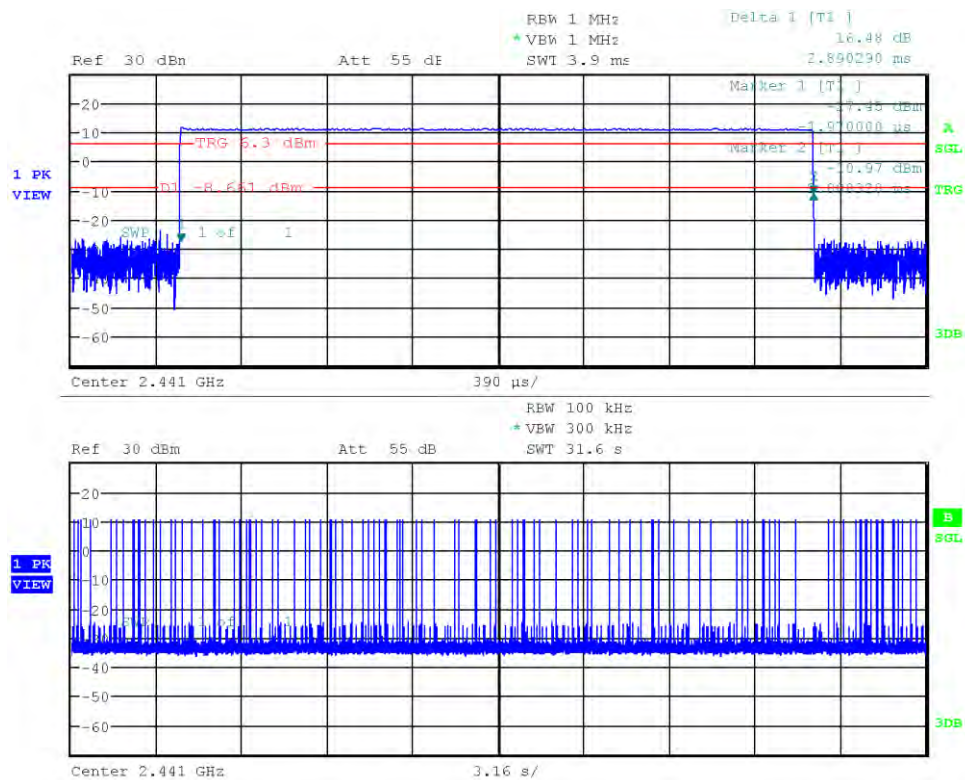
Test Procedure
- EUT set to test hopping mode (Communication tester is used if needed) - Analyzer span is set to zero span - Detector set to peak and max hold - RBW is set to 100 kHz and VBW to 300 kHz - The sweep time is set to capture one single dwell time - Trigger is set to video trigger - A marker is set to the start and end positions of the burst - The dwell time is determined from the marker difference - Another sweep is initiated without trigger and sweep time set to the observation time - The number of hops is counted - The total time of occupancy is calculated from the dwell time per hop multiplied by the number of hops

3.5.6 Results

Test Results					
Observation Period [s]	Number of Hops	Dwell time per Hop [s]	Time of occupancy [s]	Limit [s]	Margin [s]
31.6	107	0.00289	0.309	0.4	-0.091

Time of occupancy

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Method: ANSI C63.10:2013 7.8.4
 Operational Mode: DH5, Hopping mode
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Dwell Time per Hop [ms]: 2.890
 Number of Hops: 107
 Time of occupancy [s]: 0.309



Date: 8.MAR.2023 14:54:27

3.6 Test Conditions and Results - Maximum peak conducted output power

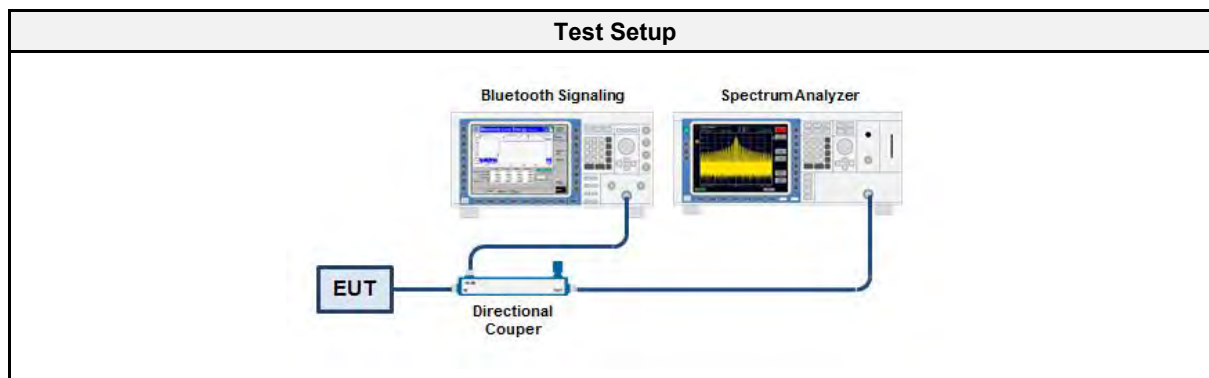
3.6.1 Information

Test Information	
Reference	FCC § 15.247(b); ISSED RSS-247, Issue 2 (section 5.4)
Measurement Method	ANSI C63.10 7.8.5
Measurement Uncertainty	± 2.86 dB
Operator	Radwan Jaafar
Date	2023-03-07

3.6.2 Limits

Limits	
Condition	Power
Number of hopping channels ≥ 75	1 W (30 dBm)
75 > Number of hopping channels ≥ 15	0.125 W (21 dBm)
FCC: The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.	
ISED: The e.i.r.p. shall not exceed 4 W.	

3.6.3 Setup



3.6.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Bluetooth signaling	R&S	CMW 270	EF01169	2022-04	2023-04
Cable (CAABB)	Gigalane	GIGALANE 1730	EF00779	2023-03	2024-03

3.6.5 Procedure

Test Procedure				
1.	EUT set to test mode (Communication tester is used if needed)			
2.	Analyzer resolution bandwidth is set $\geq$ DTS bandwidth			
3.	Detector set to peak and max hold			
4.	Sweep time is set to auto			
5.	After the trace has stabilized a marker is set to peak of envelope			

3.6.6 Results

Test Results DH5 - FCC				
Channel [MHz]	Conducted Power [dBm]	Conducted Power [W]	Conducted Limit [W]	Verdict
2402	15.747	0.0376	1.0	PASS
2441	15.700	0.0372	1.0	PASS
2480	15.334	0.0342	1.0	PASS

Test Results 2-DH5 - FCC				
Channel [MHz]	Conducted Power [dBm]	Conducted Power [W]	Conducted Limit [W]	Verdict
2402	8.890	0.0077	1.0	PASS
2441	9.037	0.0080	1.0	PASS
2480	8.883	0.0077	1.0	PASS

Test Results 3-DH5 - FCC				
Channel [MHz]	Conducted Power [dBm]	Conducted Power [W]	Conducted Limit [W]	Verdict
2402	9.149	0.0082	1.0	PASS
2441	9.278	0.0085	1.0	PASS
2480	9.118	0.0082	1.0	PASS

Test Results DH5 - ISED							
Channel [MHz]	Conducted Power [dBm]	Conducted Power [W]	Conducted Limit [W]	EIRP Power [dBm]	EIRP Power [W]	EIRP Limit [W]	Verdict
2402	15.747	0.0376	1.0	19.847	0.0965	4.0	PASS
2441	15.700	0.0372	1.0	19.8	0.0954	4.0	PASS
2480	15.334	0.0342	1.0	19.434	0.0877	4.0	PASS

Test Results 2-DH5 - ISED							
Channel [MHz]	Conducted Power [dBm]	Conducted Power [W]	Conducted Limit [W]	EIRP Power [dBm]	EIRP Power [W]	EIRP Limit [W]	Verdict
2402	8.890	0.0077	1.0	12.99	0.0199	4.0	PASS
2441	9.037	0.0080	1.0	13.137	0.0205	4.0	PASS
2480	8.883	0.0077	1.0	12.983	0.0198	4.0	PASS

Test Results 3-DH5 - ISED							
Channel [MHz]	Conducted Power [dBm]	Conducted Power [W]	Conducted Limit [W]	EIRP Power [dBm]	EIRP Power [W]	EIRP Limit [W]	Verdict
2402	9.149	0.0082	1.0	13.249	0.0211	4.0	PASS
2441	9.278	0.0085	1.0	13.378	0.0217	4.0	PASS
2480	9.118	0.0082	1.0	13.218	0.0209	4.0	PASS

Peak Conducted Output Power

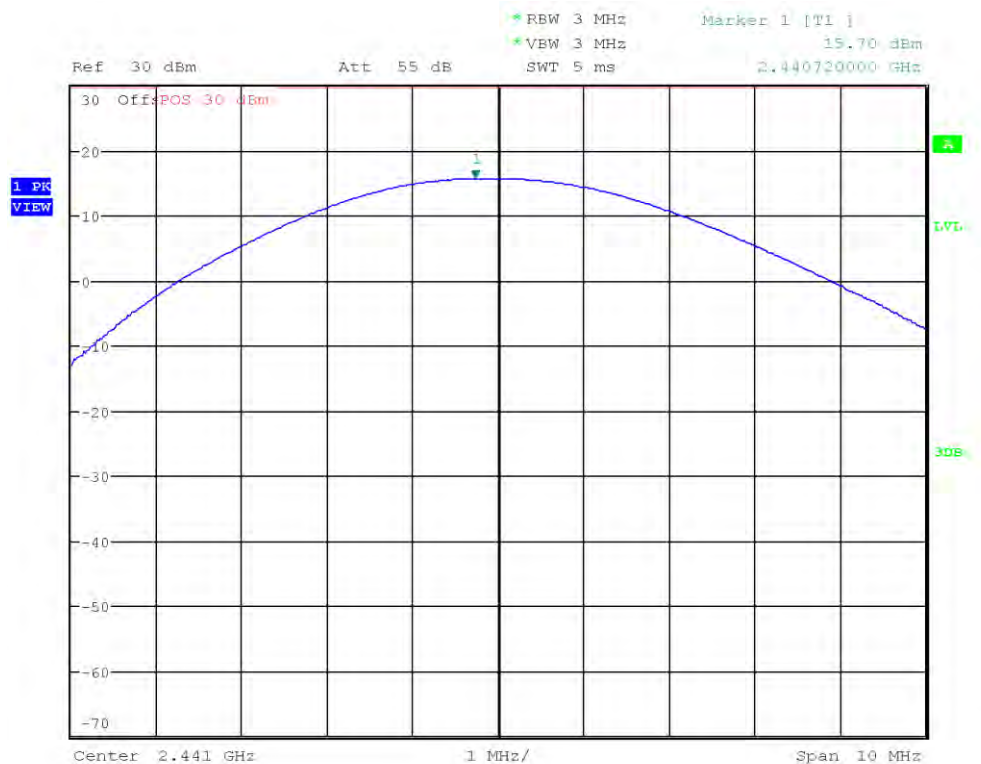
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.5
 Operational Mode: DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Peak Power [dBm]: 15.747
 Peak Power [W]: 0.0376



Date: 7.MAR.2023 16:23:14

Peak Conducted Output Power

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.5
 Operational Mode: DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Peak Power [dBm]: 15.700
 Peak Power [W]: 0.0372



Date: 7.MAR.2023 16:28:30

Peak Conducted Output Power

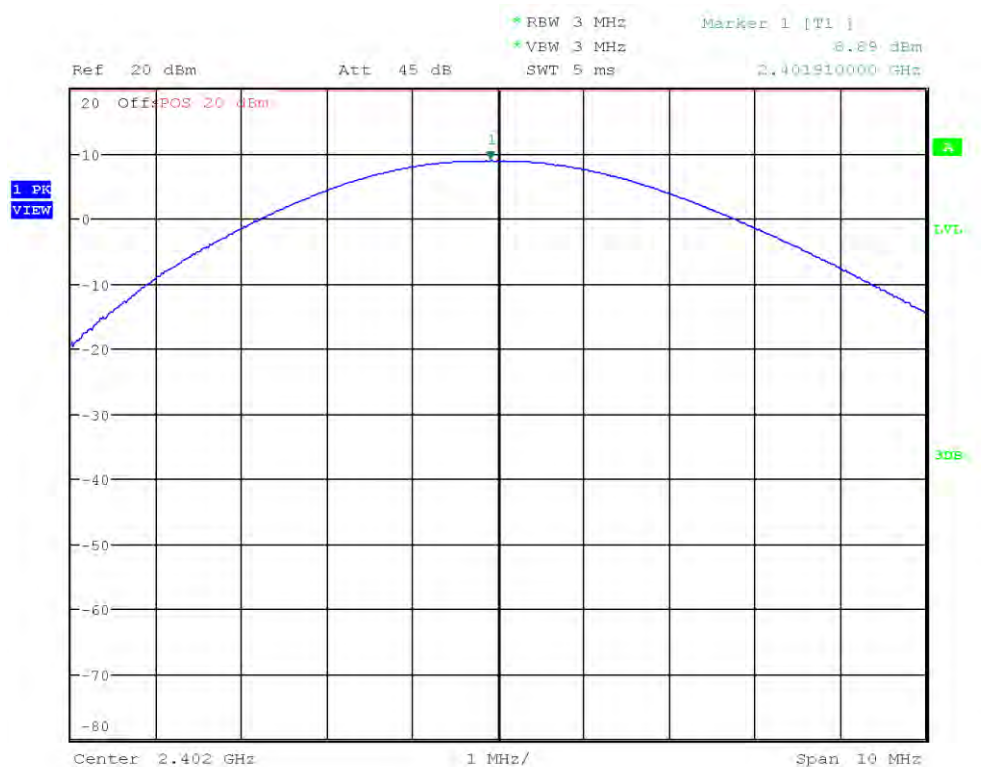
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.5
 Operational Mode: DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Peak Power [dBm]: 15.334
 Peak Power [W]: 0.0342



Date: 7.MAR.2023 16:30:27

Peak Conducted Output Power

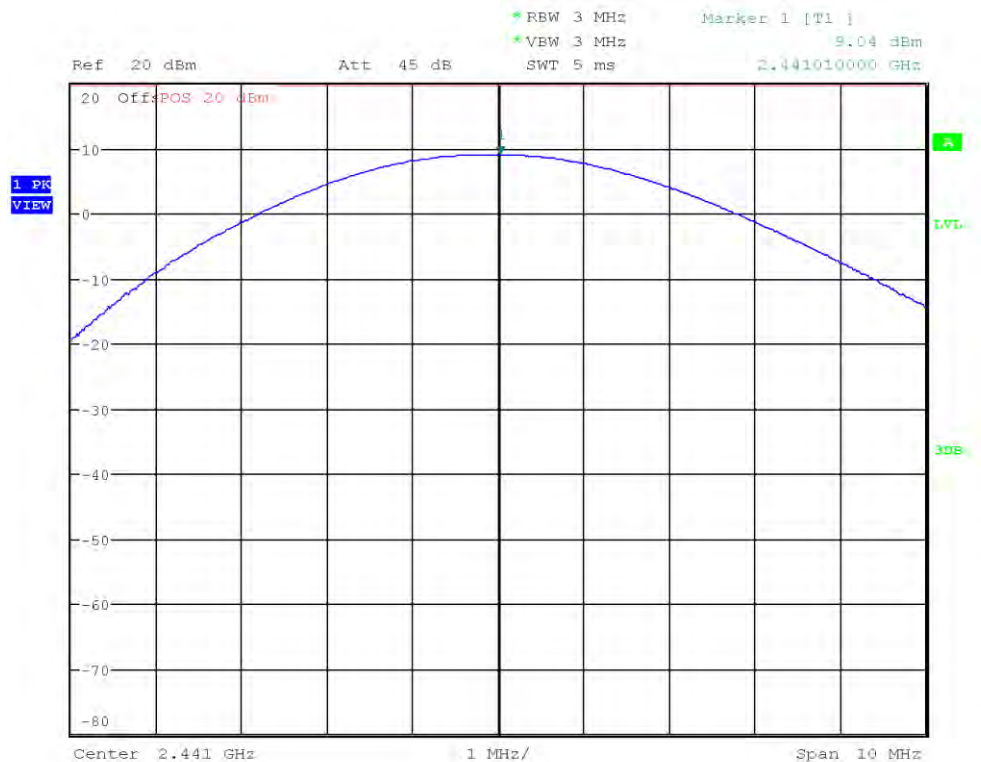
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.5
 Operational Mode: 2-DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Peak Power [dBm]: 8.890
 Peak Power [W]: 0.0077



Date: 7.MAR.2023 16:33:13

Peak Conducted Output Power

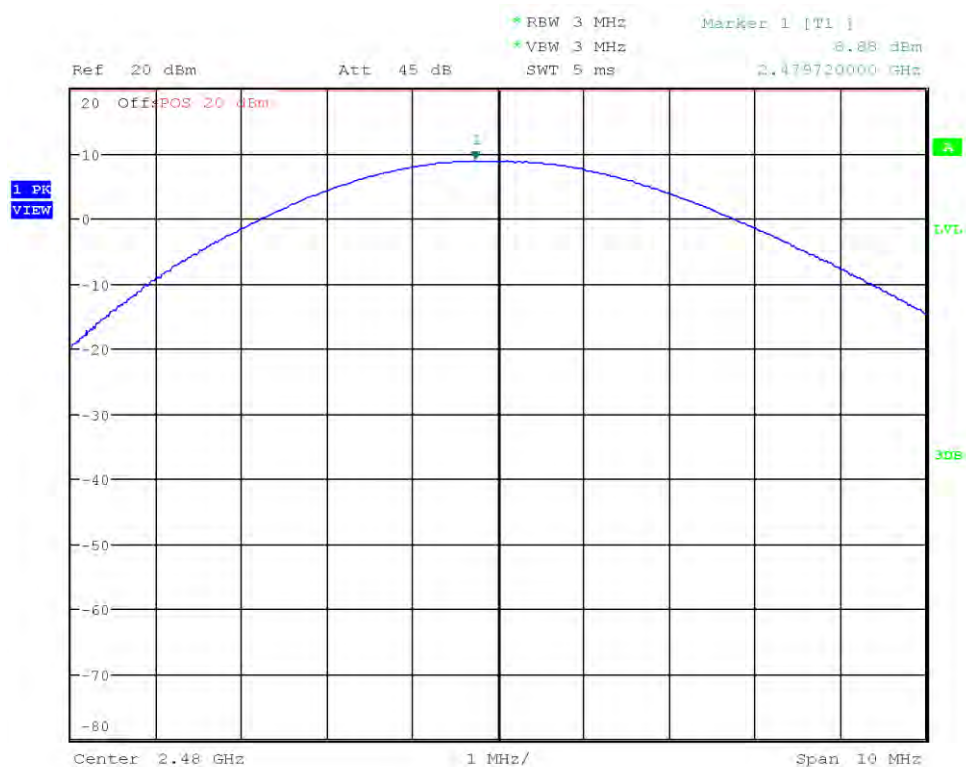
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.5
 Operational Mode: 2-DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Peak Power [dBm]: 9.037
 Peak Power [W]: 0.0080



Date: 7.MAR.2023 16:37:10

Peak Conducted Output Power

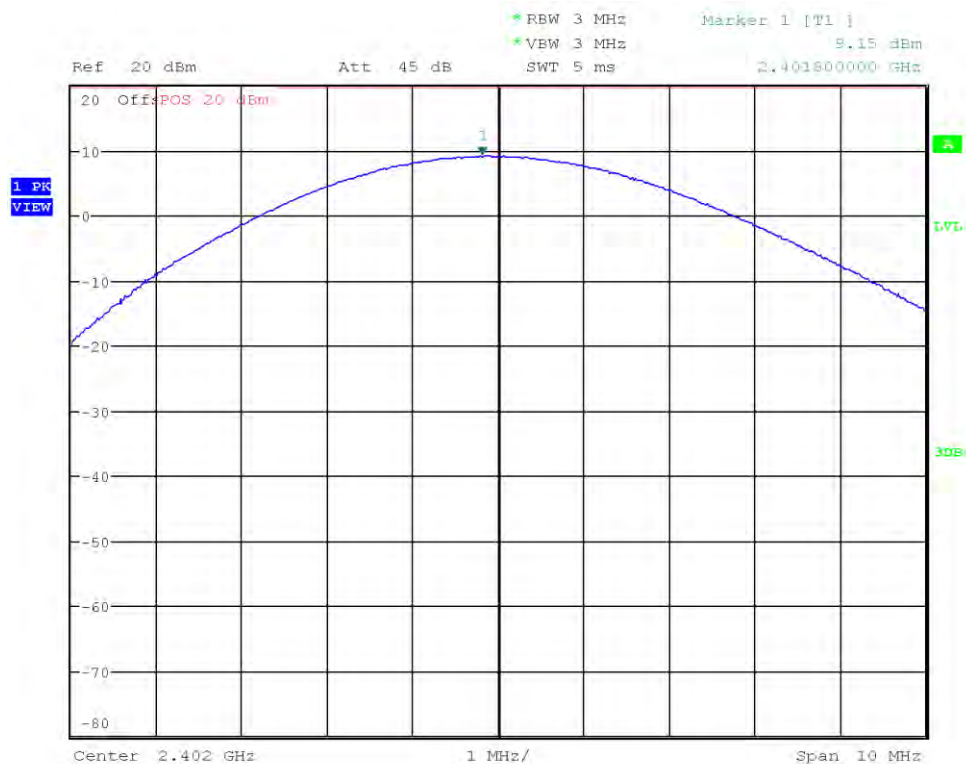
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.5
 Operational Mode: 2-DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Peak Power [dBm]: 8.883
 Peak Power [W]: 0.0077



Date: 7.MAR.2023 16:38:57

Peak Conducted Output Power

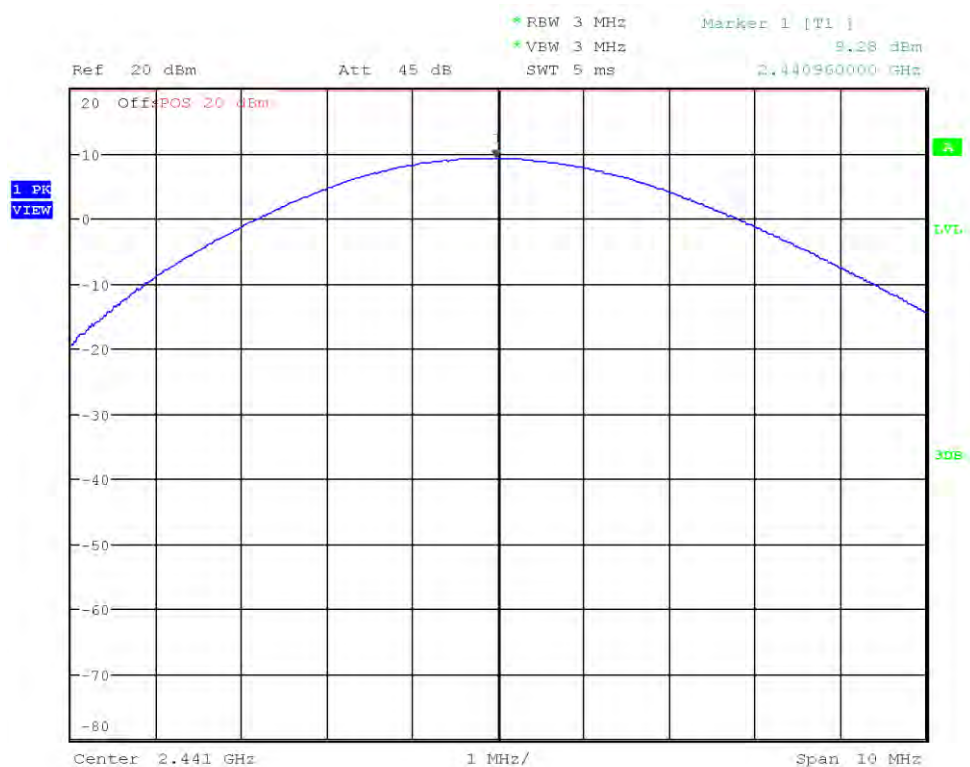
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.5
 Operational Mode: 3-DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Peak Power [dBm]: 9.149
 Peak Power [W]: 0.0082



Date: 7.MAR.2023 16:41:00

Peak Conducted Output Power

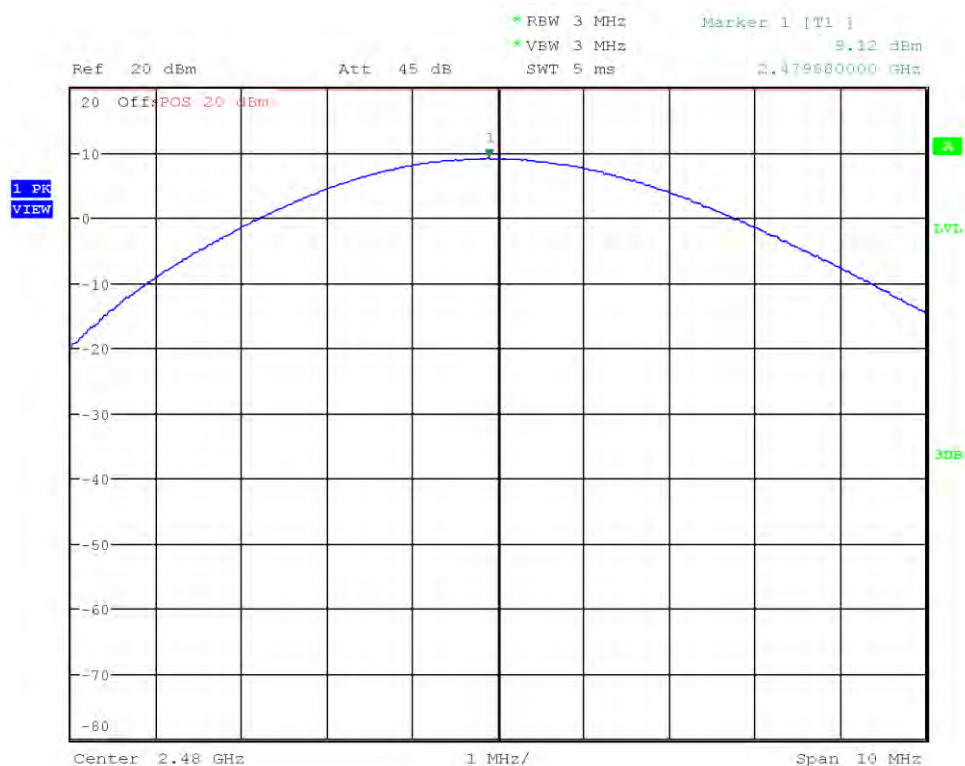
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.5
 Operational Mode: 3-DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Peak Power [dBm]: 9.278
 Peak Power [W]: 0.0085



Date: 7.MAR.2023 16:42:26

Peak Conducted Output Power

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.5
 Operational Mode: 3-DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-07
 Peak Power [dBm]: 9.118
 Peak Power [W]: 0.0082



Date: 7.MAR.2023 16:43:30

3.7 Test Conditions and Results - AC powerline conducted emissions

3.7.1 Information

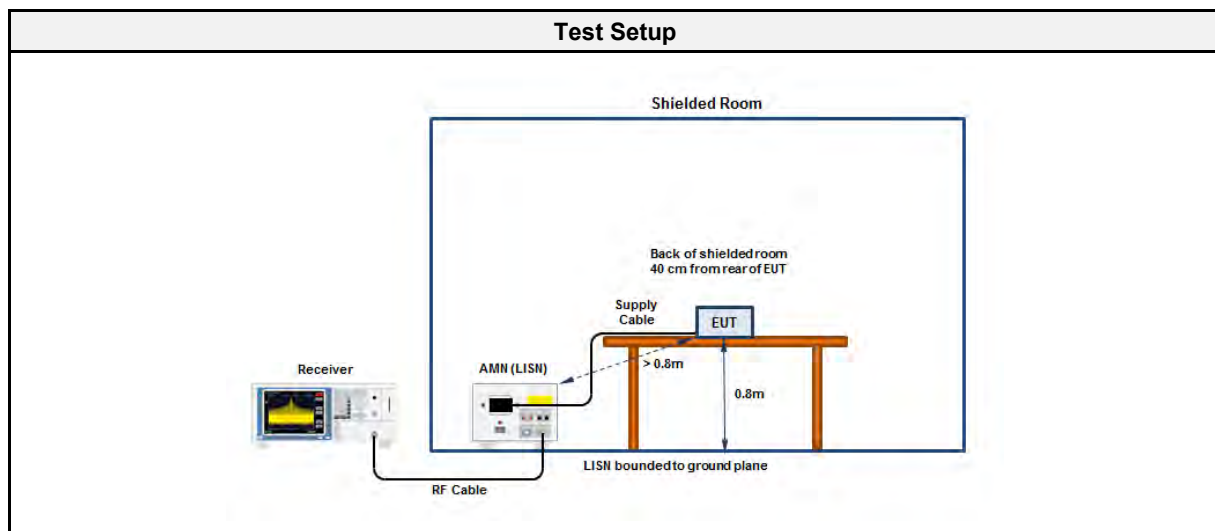
Test Information	
Reference	FCC § 15.207; ISED RSS-247, Issue 2 (section 3.1)
Measurement Method	ANSI C63.10 6.2
Measurement Uncertainty	± 3.82 dB
Operator	Odai Qawasmeh
Date	2023-04-26

3.7.2 Limits

Limits		
Frequency [MHz]	Quasi-Peak [dBμV]	Average [dBμV]
0.15 - 0.5	66 - 56*	56 - 46*
0.5 - 5	56	46
5 - 30	60	50

* Limit decreases linearly with the logarithm of the frequency

3.7.3 Setup



3.7.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI Test Receiver	R&S	ESR7	EF00943	2022-07	2023-07
Pulse Limiter	R&S	ESH3-Z2	EF01222	2021-07	2023-07
LISN	R&S	ESH3-Z5	EF00036	2021-08	2023-08

3.7.5 Setup Photos

Setup for measurements 150 kHz - 30 MHz

Photos deleted.

Refer to separate photo exhibits.

EUT Test Setup

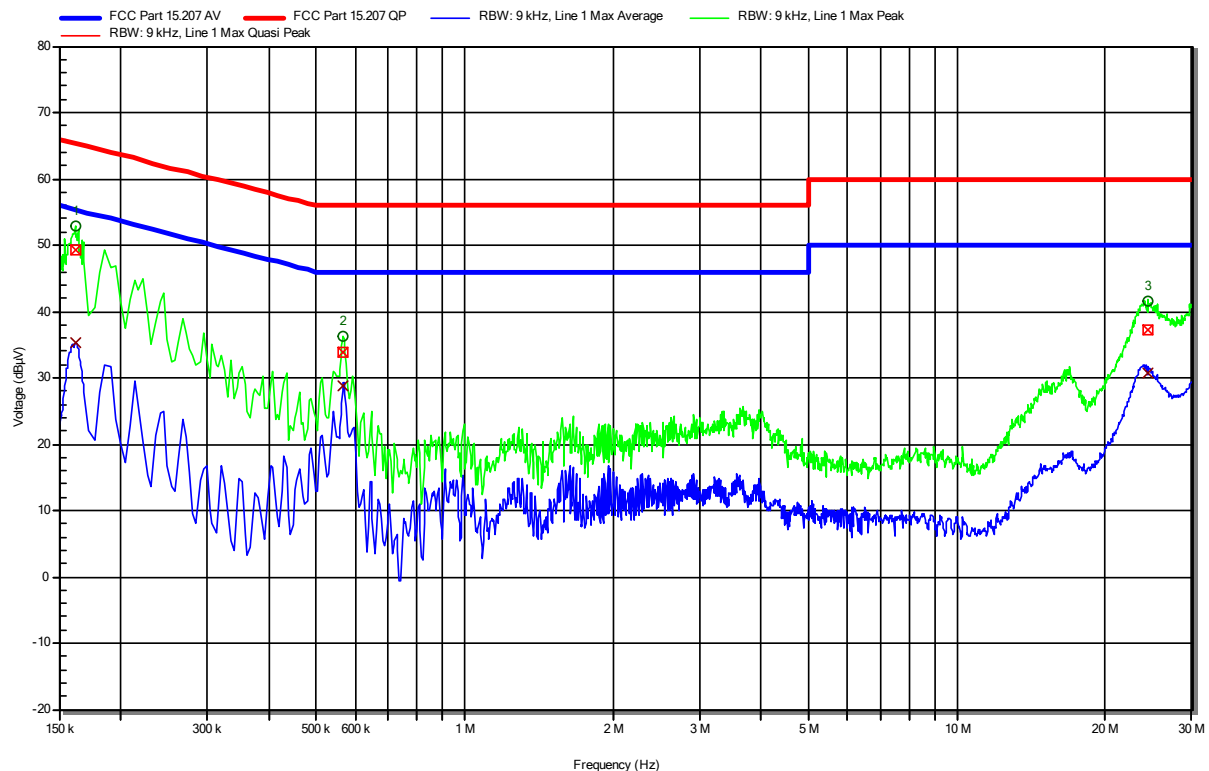
Photos deleted.

Refer to separate photo exhibits.

Conducted emissions at the mains power port according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Test Date: 2023-04-26
 Operating Conditions: ambient temperature: 24 °Celsius
 power input: 3.3 VDC
 LISN: ESH3-Z5 (L)
 Operational Mode & EUT Configuration: Tx, BT 5.3, 2441 MHz, PRBS9, DH5, P = max
 Applied to Port: 120 VAC / 60 Hz

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RadiMation



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	161.7 kHz	49.38 dBμV	65.38 dBμV	-16 dB	Pass	Line 1
2	565.8 kHz	33.77 dBμV	56 dBμV	-22.23 dB	Pass	Line 1
3	24.342 MHz	37.23 dBμV	60 dBμV	-22.77 dB	Pass	Line 1

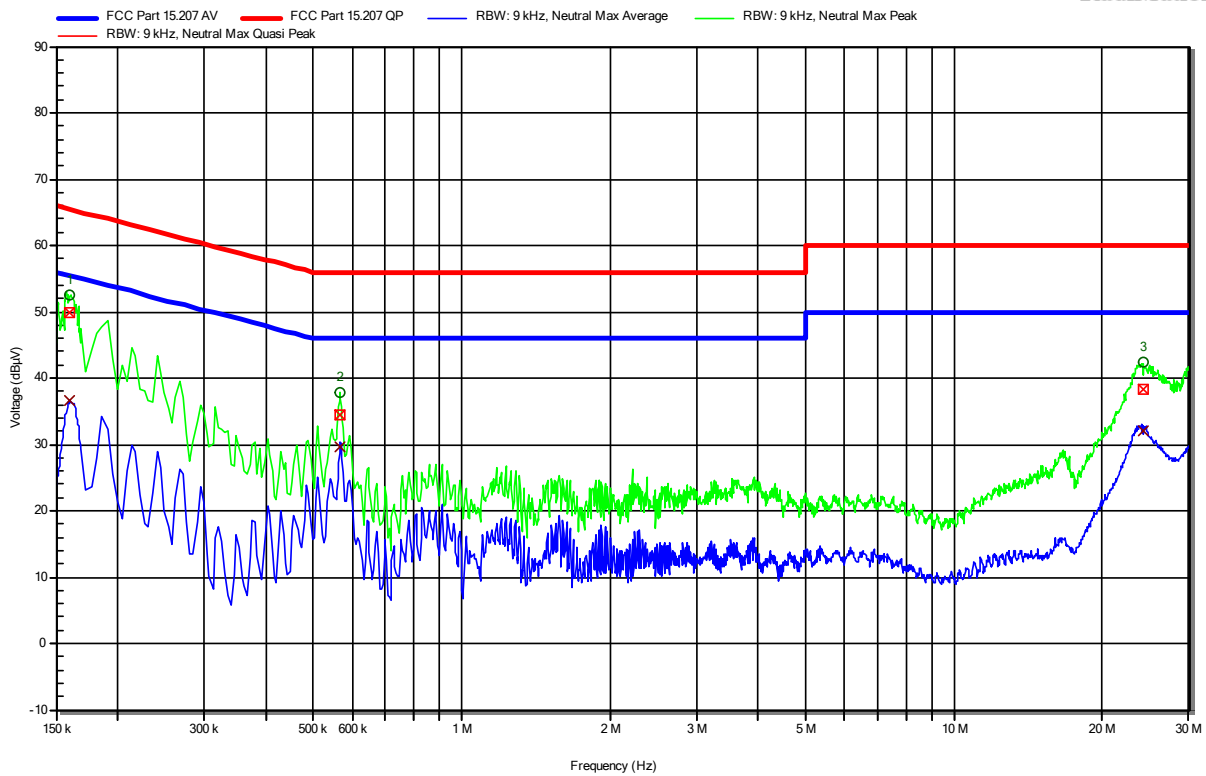
Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	161.7 kHz	35.34 dBμV	55.38 dBμV	-20.04 dB	Pass	Line 1
2	565.8 kHz	28.87 dBμV	46 dBμV	-17.13 dB	Pass	Line 1
3	24.342 MHz	30.72 dBμV	50 dBμV	-19.28 dB	Pass	Line 1

Conducted emissions at the mains power port according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Test Date: 2023-04-26
 Operating Conditions: ambient temperature: 24 °Celsius
 power input: 3.3 VDC
 LISN: ESH3-Z5 (N)
 Operational Mode & EUT Configuration: Tx, BT 5.3, 2441 MHz, PRBS9, DH5, P = max
 Applied to Port: 120 VAC / 60 Hz
 Note 1:

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RadiMation



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	160.35 kHz	49.89 dBµV	65.45 dBµV	-15.56 dB	Pass	Neutral
2	565.35 kHz	34.46 dBµV	56 dBµV	-21.54 dB	Pass	Neutral
3	24.153 MHz	38.31 dBµV	60 dBµV	-21.69 dB	Pass	Neutral

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	160.35 kHz	36.7 dBµV	55.45 dBµV	-18.74 dB	Pass	Neutral
2	565.35 kHz	29.63 dBµV	46 dBµV	-16.37 dB	Pass	Neutral
3	24.153 MHz	32.09 dBµV	50 dBµV	-17.91 dB	Pass	Neutral

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

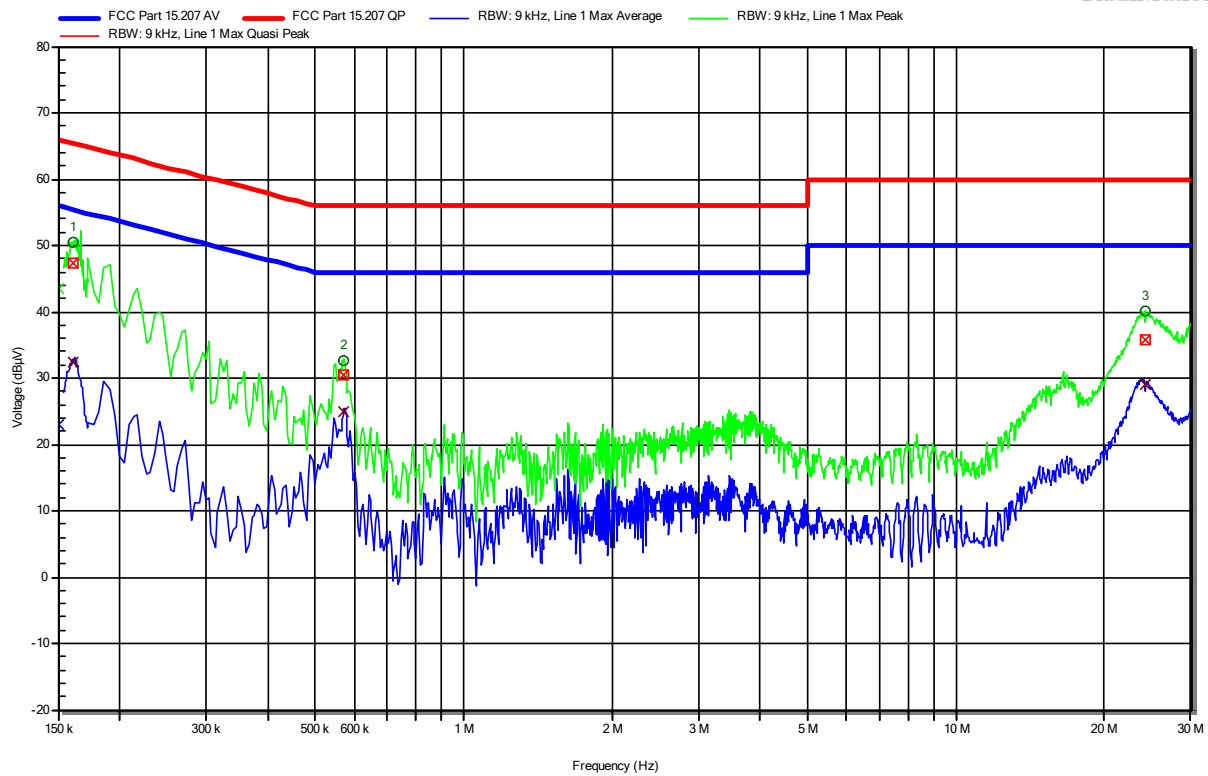
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Test Date: 2023-04-26
 Operating Conditions: ambient temperature: 24 °Celsius
 power input: 3.3 VDC
 LISN: ESH3-Z5 (L)
 Operational Mode & EUT Configuration: Rx, BT 5.3, 2441 MHz
 Applied to Port: 120 VAC / 60 Hz
 Note 1:

Index 22

RadiMation



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	161.25 kHz	47.41 dBµV	65.4 dBµV	-17.99 dB	Pass	Line 1
2	569.85 kHz	30.44 dBµV	56 dBµV	-25.56 dB	Pass	Line 1
3	24.234 MHz	35.73 dBµV	60 dBµV	-24.27 dB	Pass	Line 1

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	161.25 kHz	32.45 dBµV	55.4 dBµV	-22.94 dB	Pass	Line 1
2	569.85 kHz	24.94 dBµV	46 dBµV	-21.06 dB	Pass	Line 1
3	24.234 MHz	28.92 dBµV	50 dBµV	-21.08 dB	Pass	Line 1

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

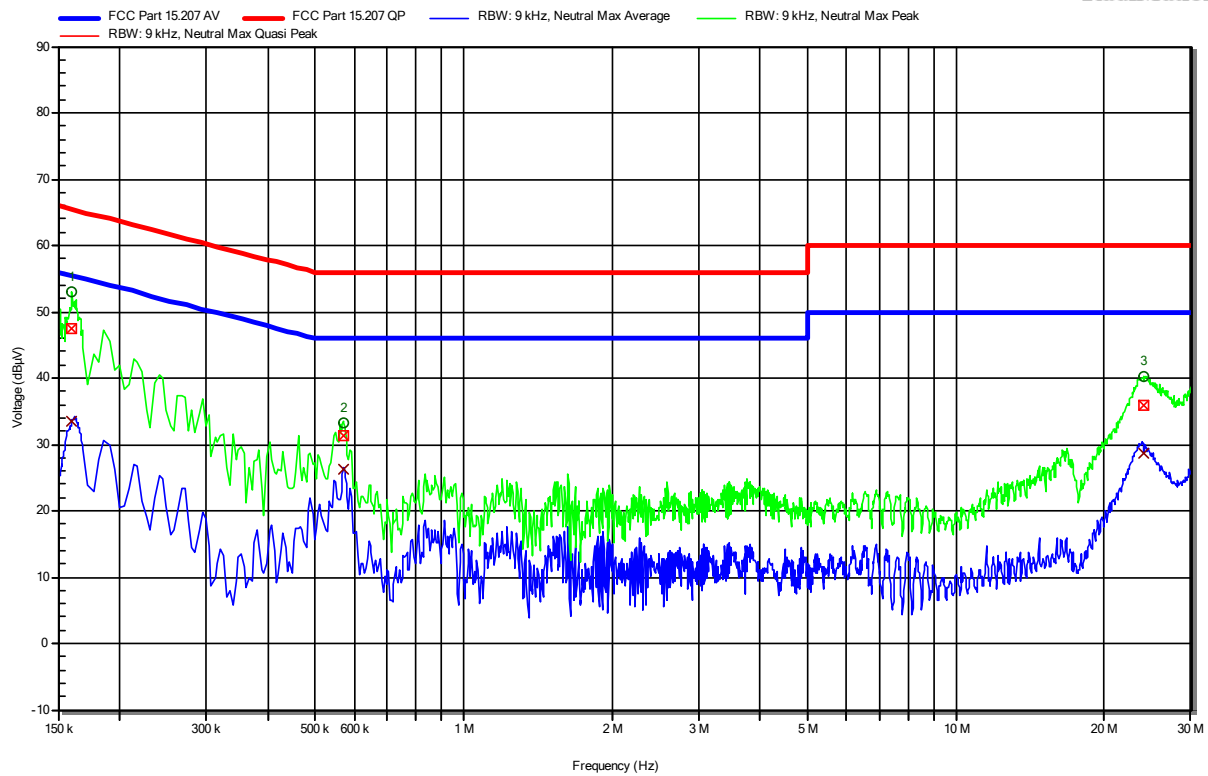
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Test Date: 2023-04-26
 Operating Conditions: ambient temperature: 24 °Celsius
 power input: 3.3 VDC
 LISN: ESH3-Z5 (N)
 Operational Mode & EUT Configuration: Rx, BT 5.3, 2441 MHz
 Applied to Port: 120 VAC / 60 Hz
 Note 1:

Index 21

RadiMation



Peak Number	Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	LISN
1	159.9 kHz	47.56 dBµV	65.47 dBµV	-17.91 dB	Pass	Neutral
2	569.85 kHz	31.3 dBµV	56 dBµV	-24.7 dB	Pass	Neutral
3	24.086 MHz	35.84 dBµV	60 dBµV	-24.16 dB	Pass	Neutral

Peak Number	Frequency	Average	Average Limit	Average Difference	Average Status	LISN
1	159.9 kHz	33.58 dBµV	55.47 dBµV	-21.89 dB	Pass	Neutral
2	569.85 kHz	26.38 dBµV	46 dBµV	-19.62 dB	Pass	Neutral
3	24.086 MHz	28.77 dBµV	50 dBµV	-21.23 dB	Pass	Neutral

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

3.8 Test Conditions and Results - Band-edge compliance

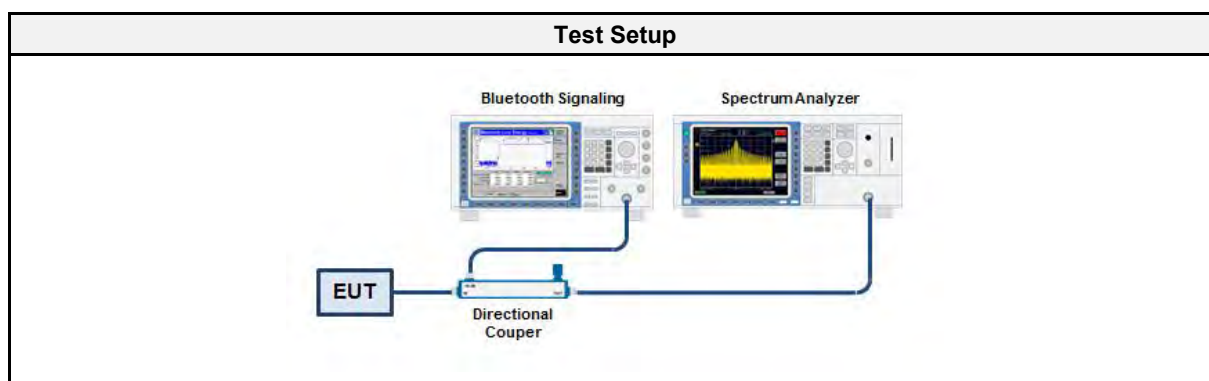
3.8.1 Information

Test Information	
Reference	FCC § 15.247(d); ISED RSS-247, Issue 2 (section 5.5)
Measurement Uncertainty	± 3.64 dB
Measurement Method	ANSI C63.10 6.10
Operator	Radwan Jaafar
Date	2023-03-08

3.8.2 Limits

Limits	
Power Measurement	Out-of-band attenuation [dB]
Peak	20
RMS	30

3.8.3 Setup



3.8.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Bluetooth signaling	R&S	CMW 270	EF01169	2022-04	2023-04
Cable (CAABB)	Gigalane	GIGALANE 1730	EF00779	2023-03	2024-03

3.8.5 Procedure

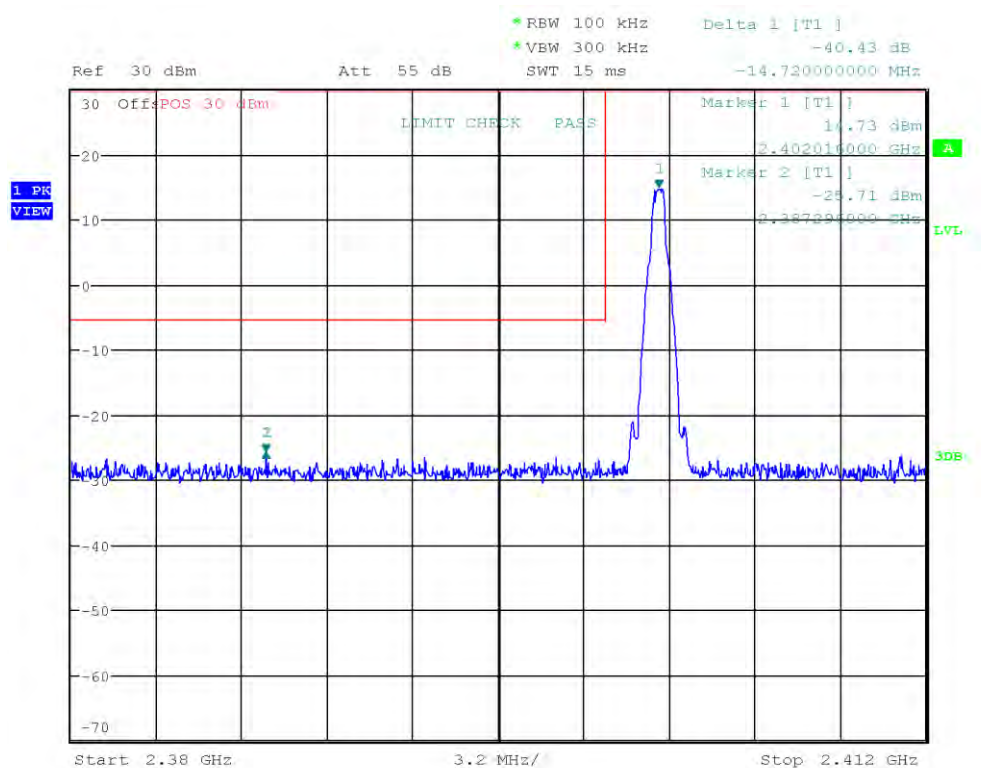
Test Procedure	
1.	EUT set to test mode (Communication tester is used if needed)
2.	Span set around lower band edge and detector is set to peak and max hold
3.	Resolution bandwidth is set to 100 kHz
4.	Markers are set to peak emission levels within frequency band and outside frequency band
5.	Band edge attenuation is determined from level difference

3.8.6 Results

Test Results				
Mode	Channel [MHz]	Out-of-band Attenuation [dB]	Limit [dB]	Verdict
DH5 single	2402	-40.43	-20	PASS
DH5 single	2480	-40.72	-20	PASS
DH5 hopping	2402	-39.96	-20	PASS
DH5 hopping	2480	-39.86	-20	PASS
2-DH5 single	2402	-42.2	-20	PASS
2-DH5 single	2480	-42.22	-20	PASS
2-DH5 hopping	2402	-41.57	-20	PASS
2-DH5 hopping	2480	-41.02	-20	PASS
3-DH5 single	2402	-41.86	-20	PASS
3-DH5 single	2480	-41.46	-20	PASS
3-DH5 hopping	2402	-41.76	-20	PASS
3-DH5 hopping	2480	-41.48	-20	PASS

Emissions in nonrestricted frequency bands at the Band-edge

Project Number:	G0M-2302-1881
Applicant:	u-blox AG
Model Description:	Host-based multiradio module
Model:	MAYA-W276-00B
Test Sample ID:	43225
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 7.8.6, 6.10.4
Operational Mode:	DH5, Channel: 0, 2402 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Radwan Jaafar
Test Site:	Eurofins Product Service GmbH
Test Date:	2023-03-08
Band-edge	Lower
In-band Frequency [MHz]:	2402.016
Max. in-band Level [dBm/100 kHz]:	14.726
Out-of-band Frequency [MHz]:	2387.296
Max. out-of-band Level [dBm/100 kHz]:	-25.708
Attenuation [dB]:	-40.43



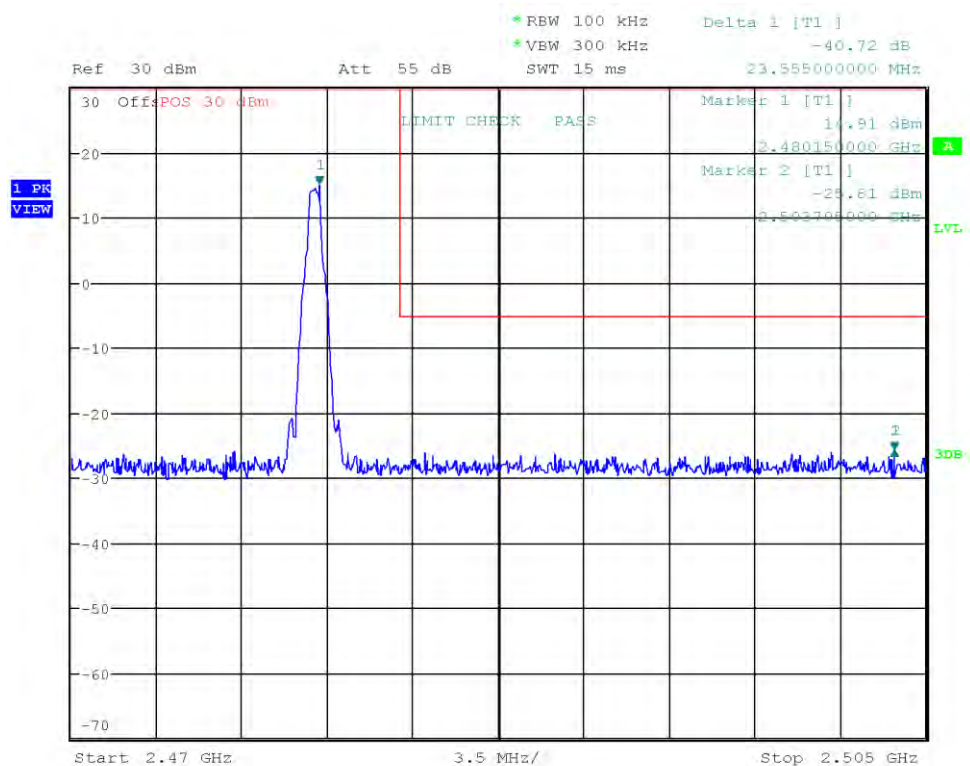
Date: 8.MAR.2023 10:29:31

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operational Mode: DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Band-edge: Upper
 In-band Frequency [MHz]: 2480.15
 Max. in-band Level [dBm/100 kHz]: 14.909
 Out-of-band Frequency [MHz]: 2503.705
 Max. out-of-band Level [dBm/100 kHz]: -25.811
 Attenuation [dB]: -40.72



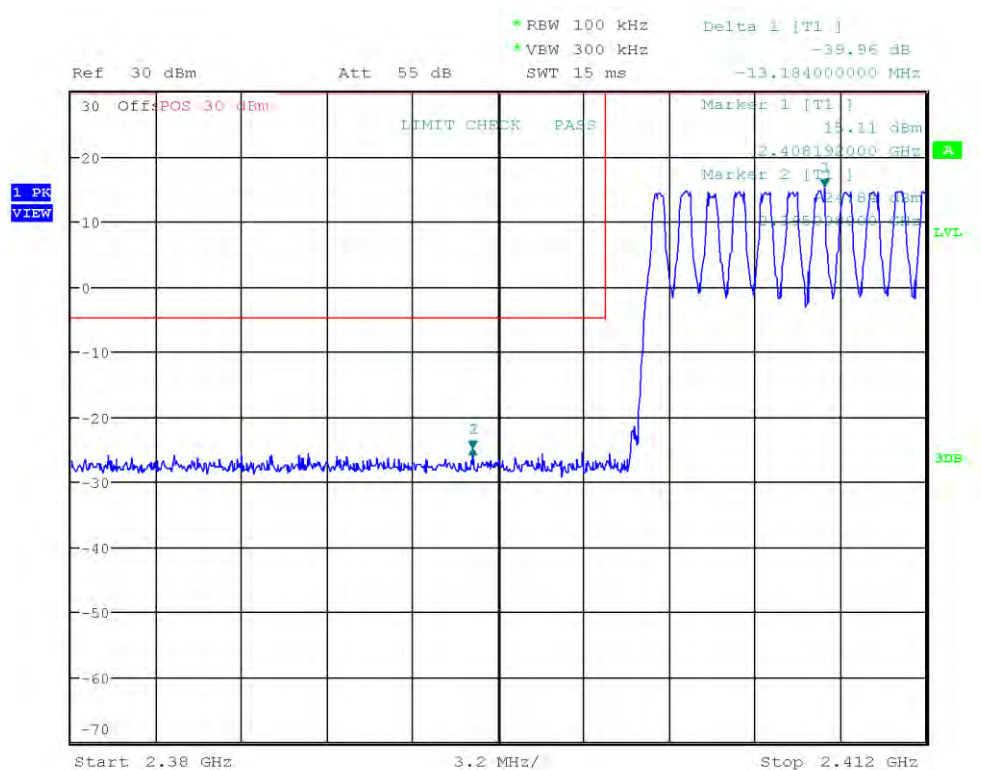
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Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number:	G0M-2302-1881
Applicant:	u-blox AG
Model Description:	Host-based multiradio module
Model:	MAYA-W276-00B
Test Sample ID:	43225
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 7.8.6, 6.10.4
Operational Mode:	DH5, Hopping
Operating Conditions:	Tnom/Vnom
Operator:	Radwan Jaafar
Test Site:	Eurofins Product Service GmbH
Test Date:	2023-03-08
Band-edge	Lower
In-band Frequency [MHz]:	2408.192
Max. in-band Level [dBm/100 kHz]:	15.114
Out-of-band Frequency [MHz]:	2395.008
Max. out-of-band Level [dBm/100 kHz]:	-24.843
Attenuation [dB]:	-39.96



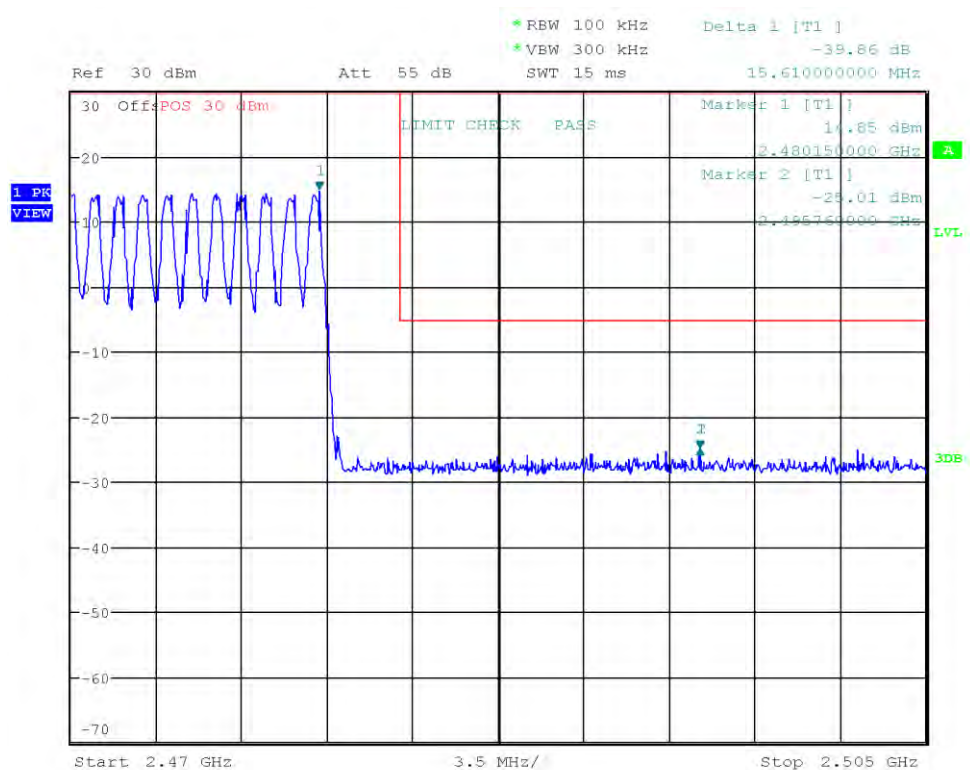
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Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operational Mode: DH5, Hopping
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Band-edge: Upper
 In-band Frequency [MHz]: 2480.15
 Max. in-band Level [dBm/100 kHz]: 14.848
 Out-of-band Frequency [MHz]: 2495.76
 Max. out-of-band Level [dBm/100 kHz]: -25.012
 Attenuation [dB]: -39.86



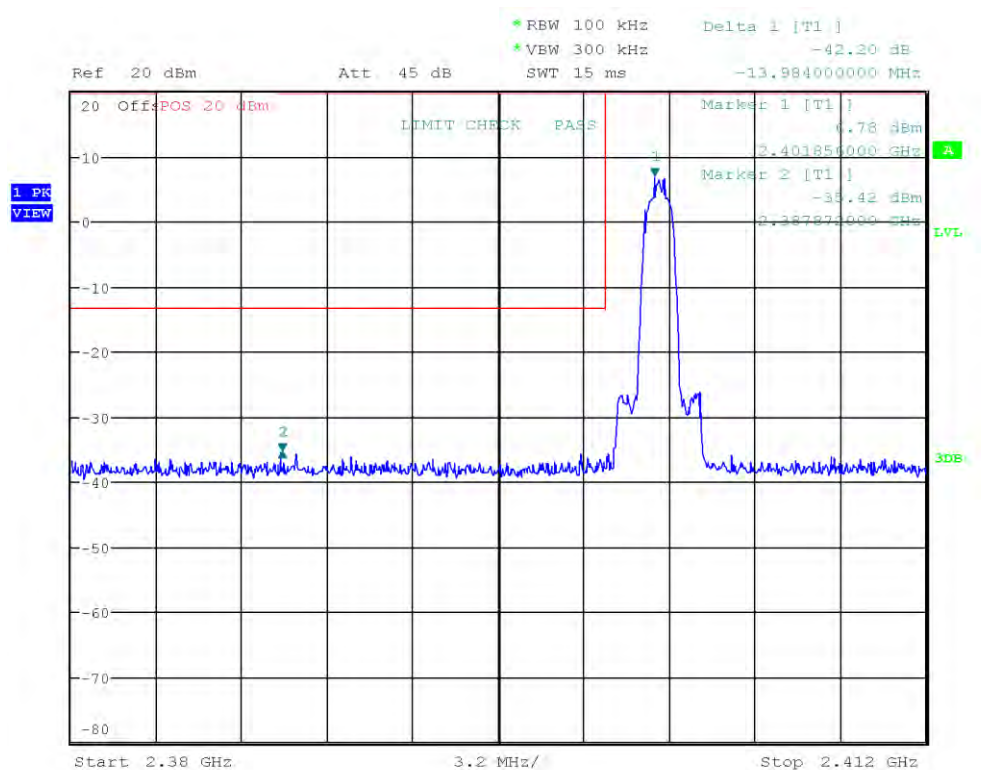
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Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operational Mode: 2-DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Band-edge: Lower
 In-band Frequency [MHz]: 2401.856
 Max. in-band Level [dBm/100 kHz]: 6.778
 Out-of-band Frequency [MHz]: 2387.872
 Max. out-of-band Level [dBm/100 kHz]: -35.419
 Attenuation [dB]: -42.2



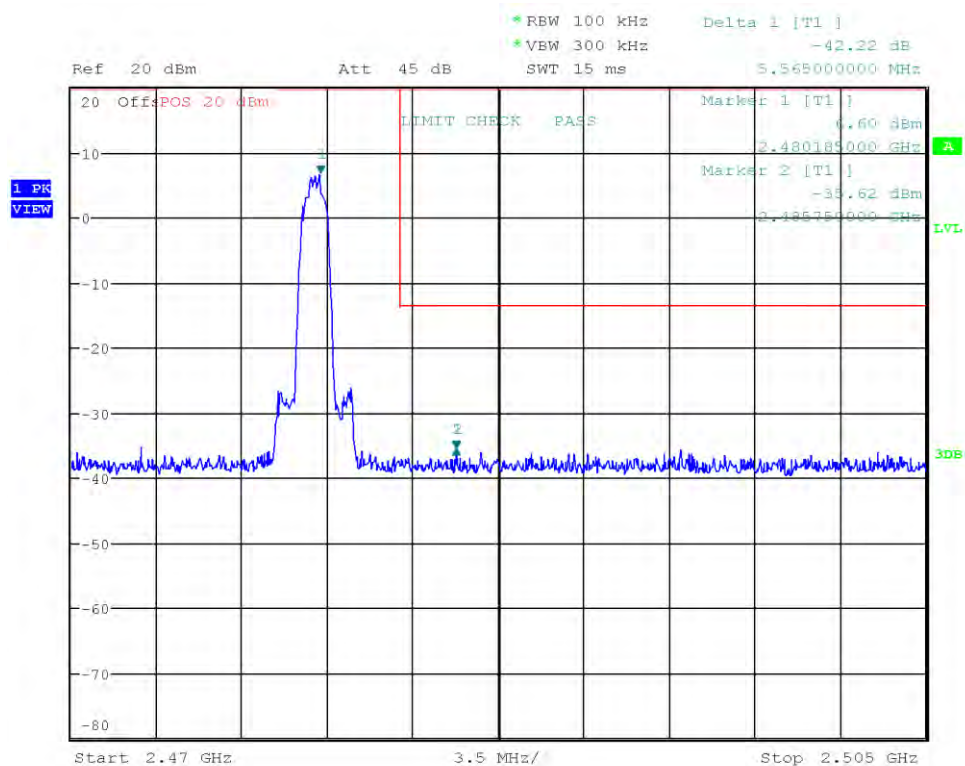
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Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operational Mode: 2-DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Band-edge: Upper
 In-band Frequency [MHz]: 2480.185
 Max. in-band Level [dBm/100 kHz]: 6.597
 Out-of-band Frequency [MHz]: 2485.75
 Max. out-of-band Level [dBm/100 kHz]: -35.622
 Attenuation [dB]: -42.22



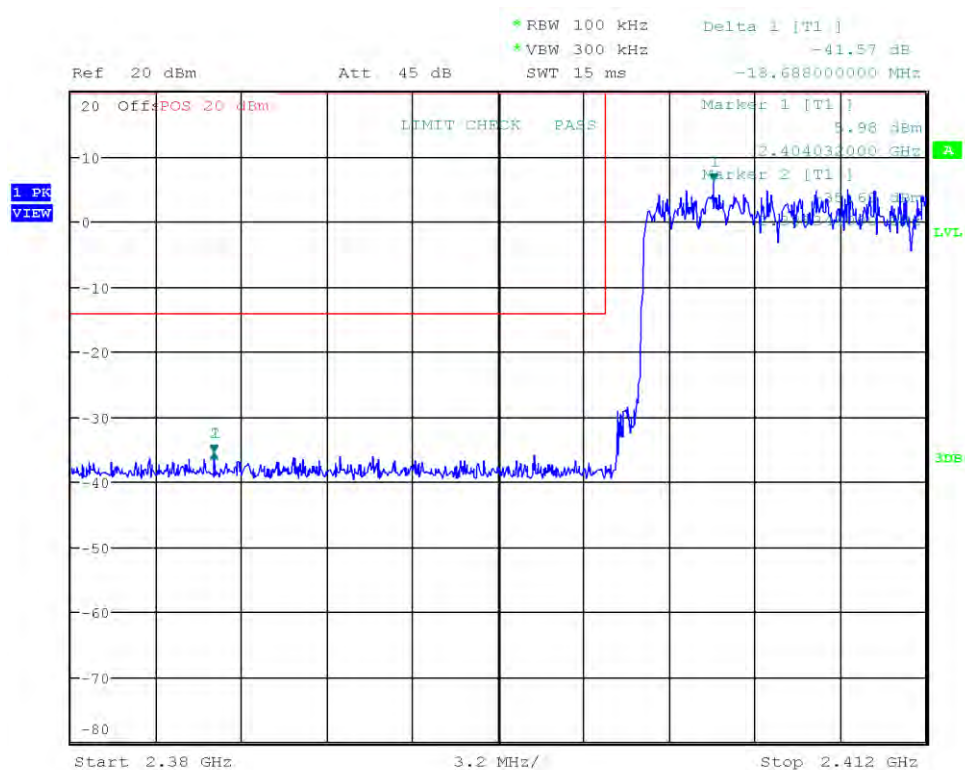
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Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number:	G0M-2302-1881
Applicant:	u-blox AG
Model Description:	Host-based multiradio module
Model:	MAYA-W276-00B
Test Sample ID:	43225
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 7.8.6, 6.10.4
Operational Mode:	2-DH5, Hopping
Operating Conditions:	Tnom/Vnom
Operator:	Radwan Jaafar
Test Site:	Eurofins Product Service GmbH
Test Date:	2023-03-08
Band-edge	Lower
In-band Frequency [MHz]:	2404.032
Max. in-band Level [dBm/100 kHz]:	5.978
Out-of-band Frequency [MHz]:	2385.344
Max. out-of-band Level [dBm/100 kHz]:	-35.596
Attenuation [dB]:	-41.57



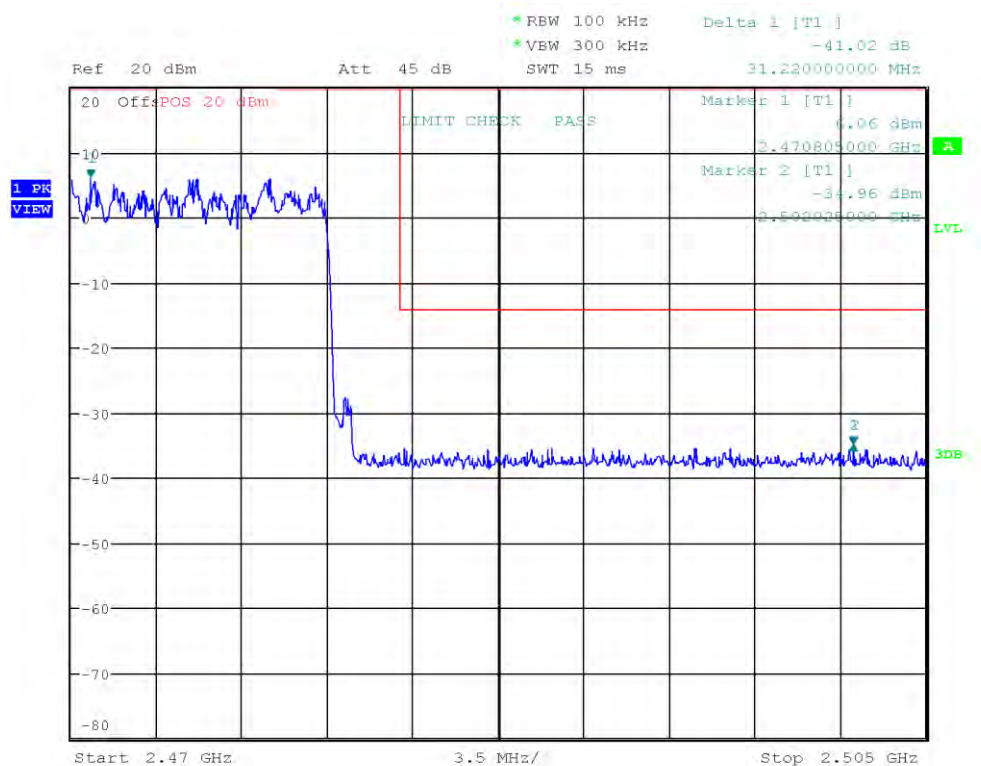
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Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operational Mode: 2-DH5, Hopping
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Band-edge: Upper
 In-band Frequency [MHz]: 2470.805
 Max. in-band Level [dBm/100 kHz]: 6.061
 Out-of-band Frequency [MHz]: 2502.025
 Max. out-of-band Level [dBm/100 kHz]: -34.96
 Attenuation [dB]: -41.02



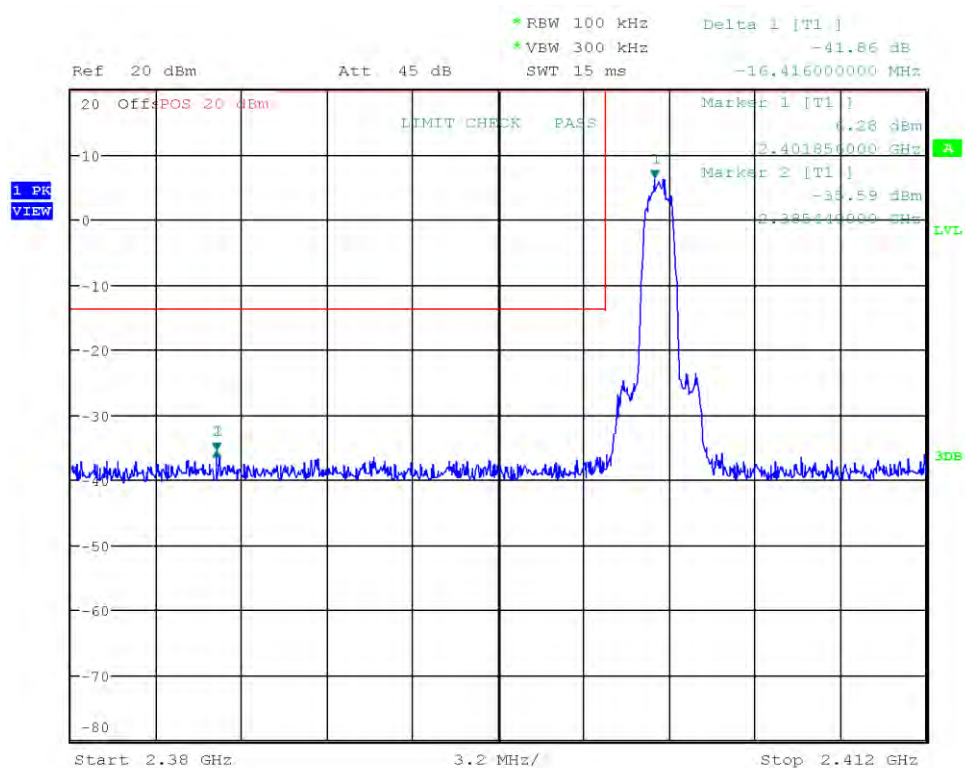
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Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number:	G0M-2302-1881
Applicant:	u-blox AG
Model Description:	Host-based multiradio module
Model:	MAYA-W276-00B
Test Sample ID:	43225
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 7.8.6, 6.10.4
Operational Mode:	3-DH5, Channel: 0, 2402 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Radwan Jaafar
Test Site:	Eurofins Product Service GmbH
Test Date:	2023-03-08
Band-edge	Lower
In-band Frequency [MHz]:	2401.856
Max. in-band Level [dBm/100 kHz]:	6.277
Out-of-band Frequency [MHz]:	2385.44
Max. out-of-band Level [dBm/100 kHz]:	-35.586
Attenuation [dB]:	-41.86



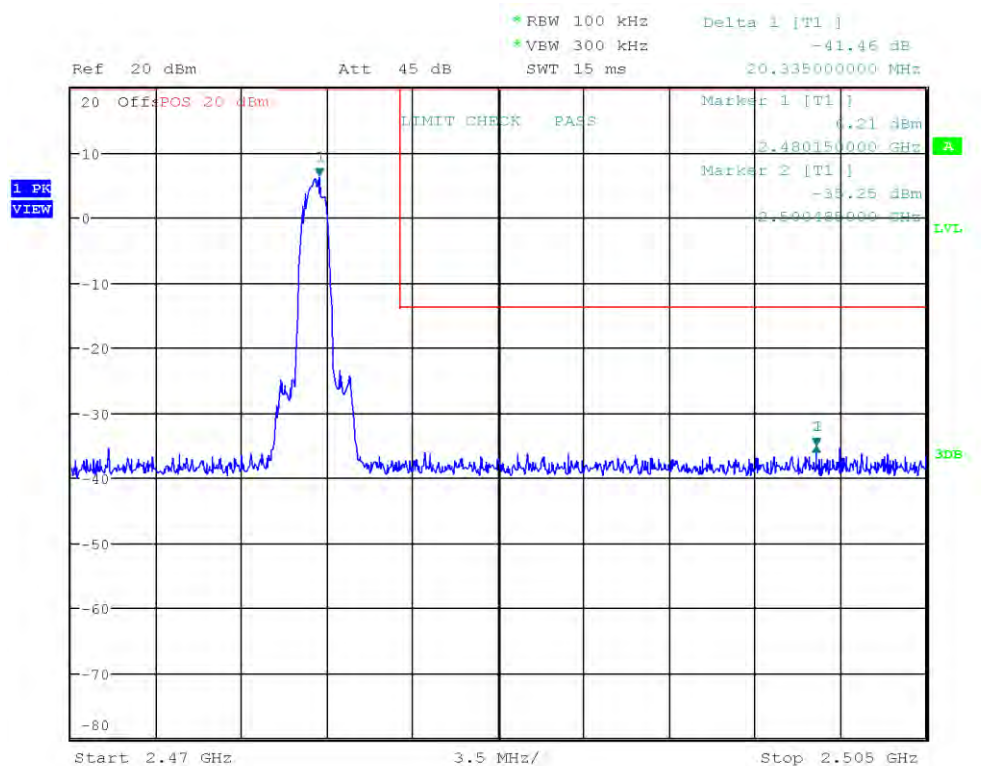
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Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number:	G0M-2302-1881
Applicant:	u-blox AG
Model Description:	Host-based multiradio module
Model:	MAYA-W276-00B
Test Sample ID:	43225
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 7.8.6, 6.10.4
Operational Mode:	3-DH5, Channel: 78, 2480 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Radwan Jaafar
Test Site:	Eurofins Product Service GmbH
Test Date:	2023-03-08
Band-edge	Upper
In-band Frequency [MHz]:	2480.15
Max. in-band Level [dBm/100 kHz]:	6.213
Out-of-band Frequency [MHz]:	2500.485
Max. out-of-band Level [dBm/100 kHz]:	-35.249
Attenuation [dB]:	-41.46



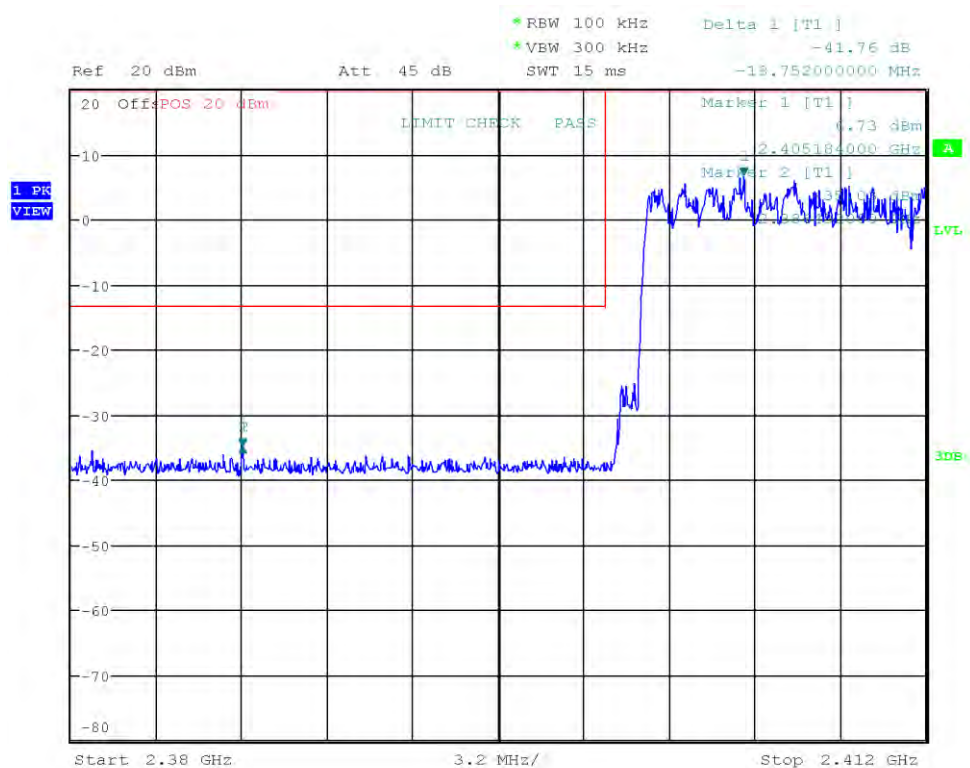
Date: 8.MAR.2023 11:04:09

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number:	G0M-2302-1881
Applicant:	u-blox AG
Model Description:	Host-based multiradio module
Model:	MAYA-W276-00B
Test Sample ID:	43225
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 7.8.6, 6.10.4
Operational Mode:	3-DH5, Hopping
Operating Conditions:	Tnom/Vnom
Operator:	Radwan Jaafar
Test Site:	Eurofins Product Service GmbH
Test Date:	2023-03-08
Band-edge	Lower
In-band Frequency [MHz]:	2405.184
Max. in-band Level [dBm/100 kHz]:	6.727
Out-of-band Frequency [MHz]:	2386.432
Max. out-of-band Level [dBm/100 kHz]:	-35.029
Attenuation [dB]:	-41.76



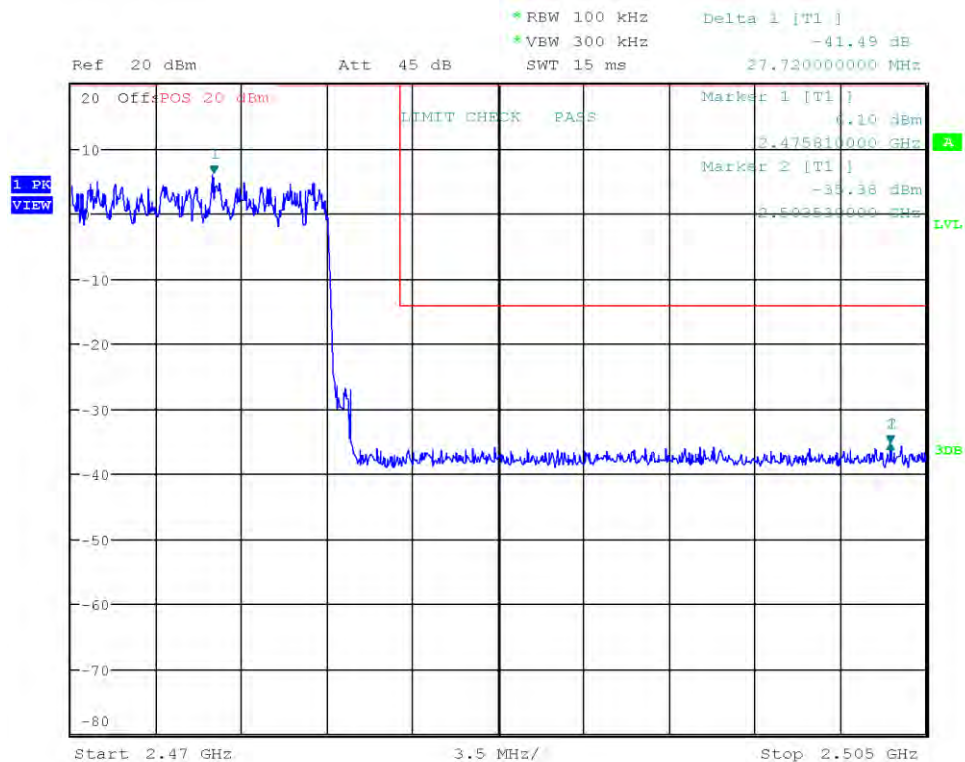
Date: 8.MAR.2023 13:10:59

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operational Mode: 3-DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-03-08
 Band-edge: Upper
 In-band Frequency [MHz]: 2475.81
 Max. in-band Level [dBm/100 kHz]: 6.102
 Out-of-band Frequency [MHz]: 2503.53
 Max. out-of-band Level [dBm/100 kHz]: -35.383
 Attenuation [dB]: -41.48



Date: 8.MAR.2023 12:57:04

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

3.9 Test Conditions and Results - Conducted spurious emissions

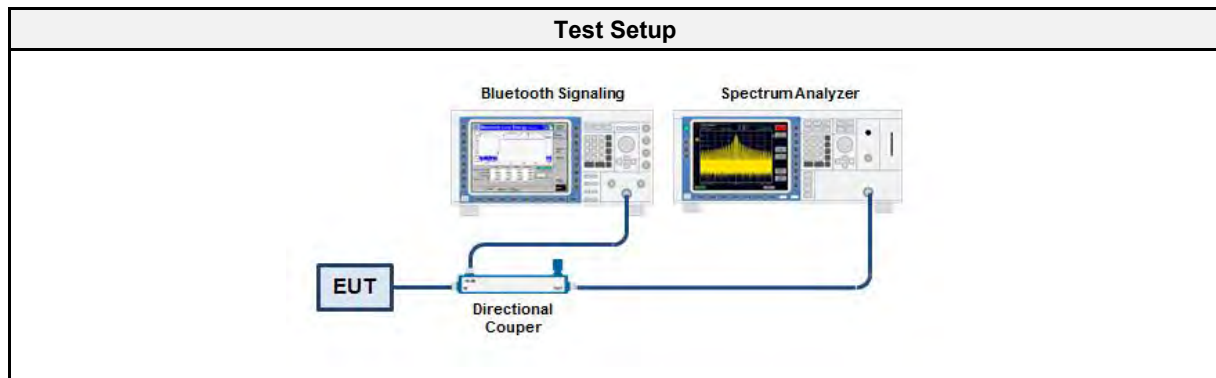
3.9.1 Information

Test Information	
Reference	FCC § 15.247(d); ISSED RSS-247, Issue 2 (section 5.5)
Measurement Uncertainty	± 4.25 dB
Measurement Method	ANSI C63.10 6.10
Operator	Radwan Jaafar
Date	2023-04-19

3.9.2 Limits

Limits	
Power Measurement	Out-of-band attenuation [dB]
Peak	20
RMS	30

3.9.3 Setup



3.9.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Bluetooth signaling	R&S	CMW 270	EF01169	2022-04	2023-04
Cable (CAABY)	Sucoflex	SUCOFLEX 1102EA	EF00779	2023-03	2024-03

3.9.5 Procedure

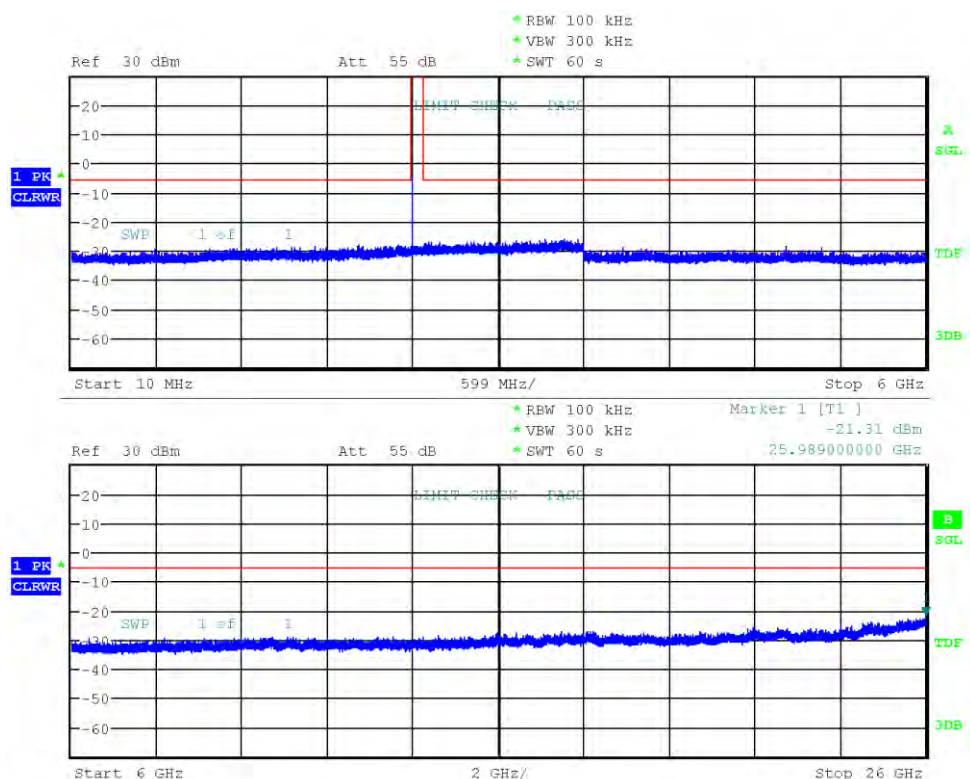
Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span set around lower band edge and detector is set to peak and max hold 3. Resolution bandwidth is set to 100 kHz 4. Markers are set to peak emission levels outside frequency band

3.9.6 Results

Test Results		
Mode	Channel [MHz]	Verdict
DH5	2402	PASS
DH5	2441	PASS
DH5	2480	PASS
2-DH5	2402	PASS
2-DH5	2441	PASS
2-DH5	2480	PASS
3-DH5	2402	PASS
3-DH5	2441	PASS
3-DH5	2480	PASS

Conducted Spurious Emissions

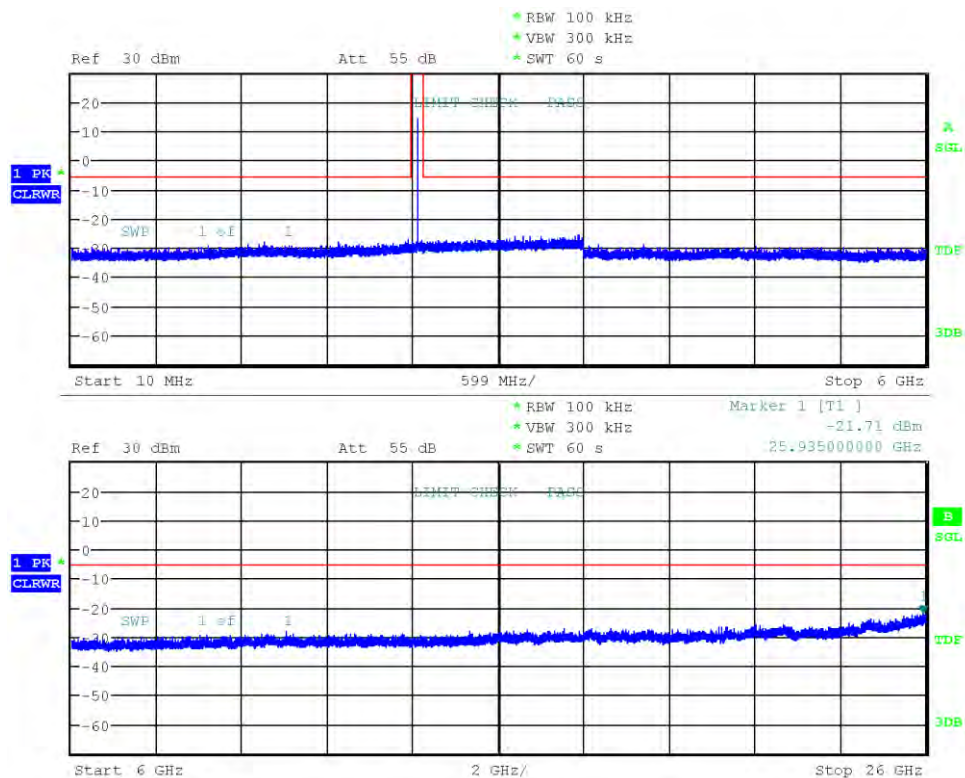
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-04-19
 Note: Mode:DH5, Power maximum
 Max. in-band Frequency [MHz]: 2402.2
 Max. in-band Level [dBm/100 kHz]: 14.9
 Out-of-band Limit [dBm/100 kHz]: -5.1



Date: 19.APR.2023 15:57:20

Conducted Spurious Emissions

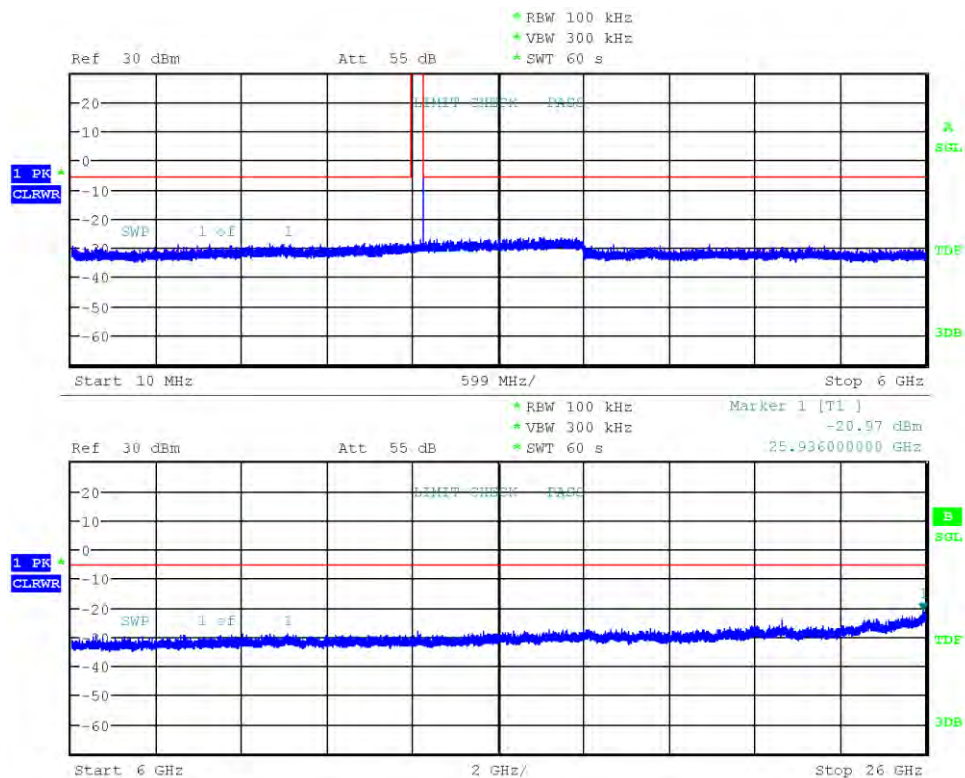
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-04-19
 Note: Mode:DH5, Power maximum
 Max. in-band Frequency [MHz]: 2441.2
 Max. in-band Level [dBm/100 kHz]: 14.8
 Out-of-band Limit [dBm/100 kHz]: -5.2



Date: 19.APR.2023 16:29:45

Conducted Spurious Emissions

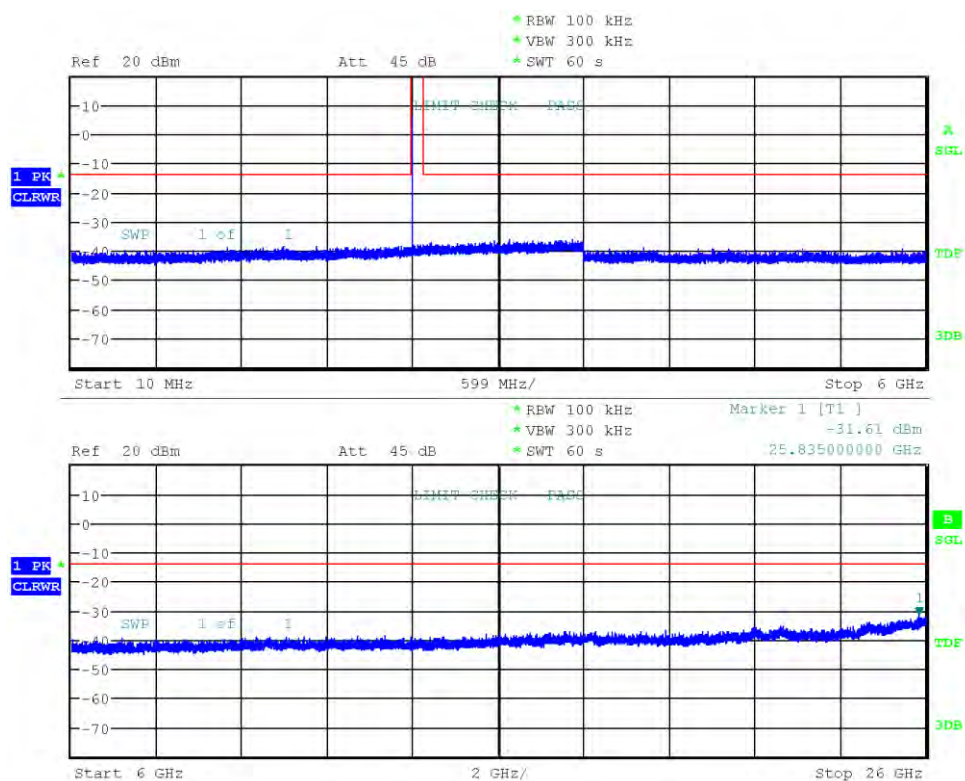
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-04-19
 Note: Mode:DH5, Power maximum
 Max. in-band Frequency [MHz]: 2480.2
 Max. in-band Level [dBm/100 kHz]: 14.6
 Out-of-band Limit [dBm/100 kHz]: -5.4



Date: 19.APR.2023 16:33:10

Conducted Spurious Emissions

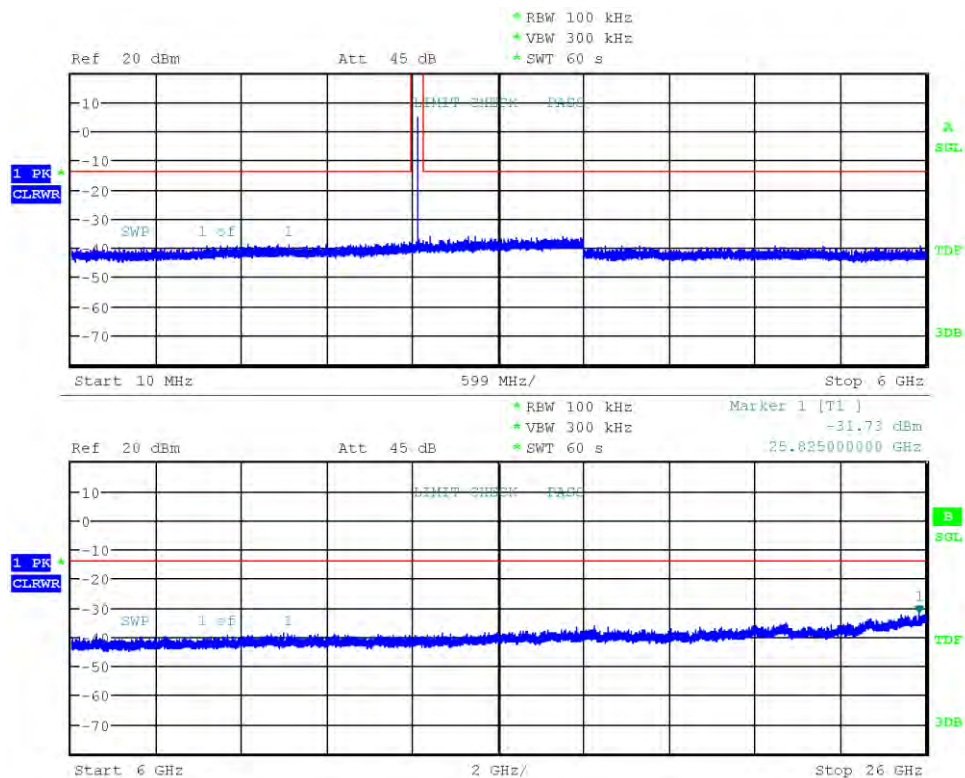
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: 2_DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-04-19
 Note: Mode:2DH5, Power maximum
 Max. in-band Frequency [MHz]: 2401.8
 Max. in-band Level [dBm/100 kHz]: 6.5
 Out-of-band Limit [dBm/100 kHz]: -13.5



Date: 19.APR.2023 16:37:28

Conducted Spurious Emissions

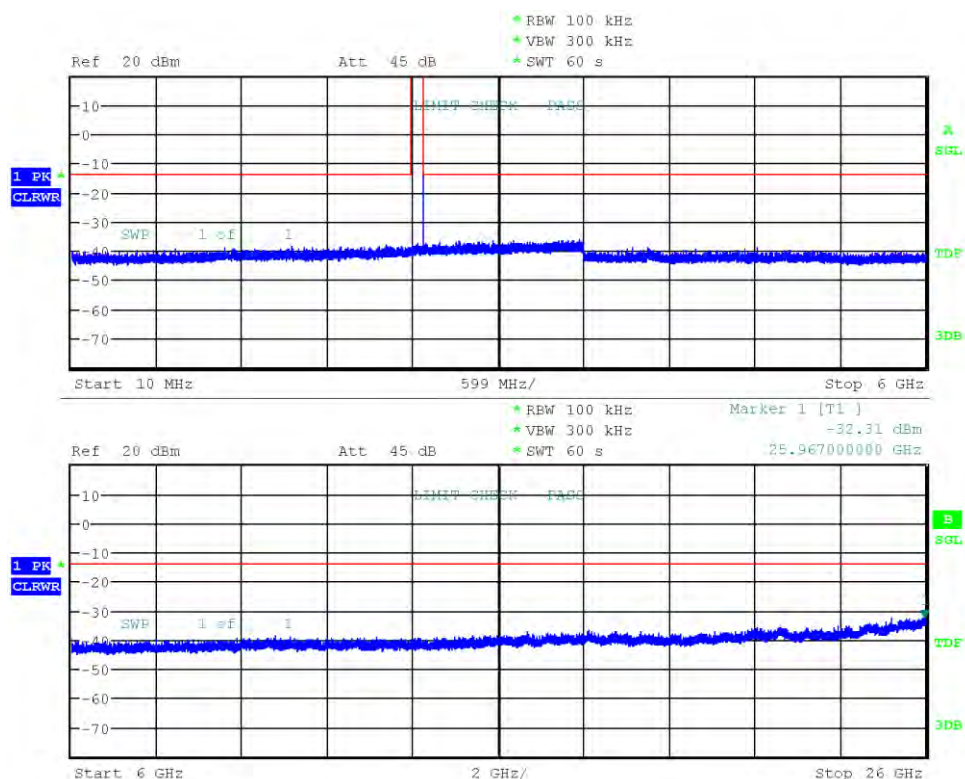
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: 2_DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-04-19
 Note: Mode:2DH5, Power maximum
 Max. in-band Frequency [MHz]: 2440.8
 Max. in-band Level [dBm/100 kHz]: 6.4
 Out-of-band Limit [dBm/100 kHz]: -13.6



Date: 19.APR.2023 16:42:07

Conducted Spurious Emissions

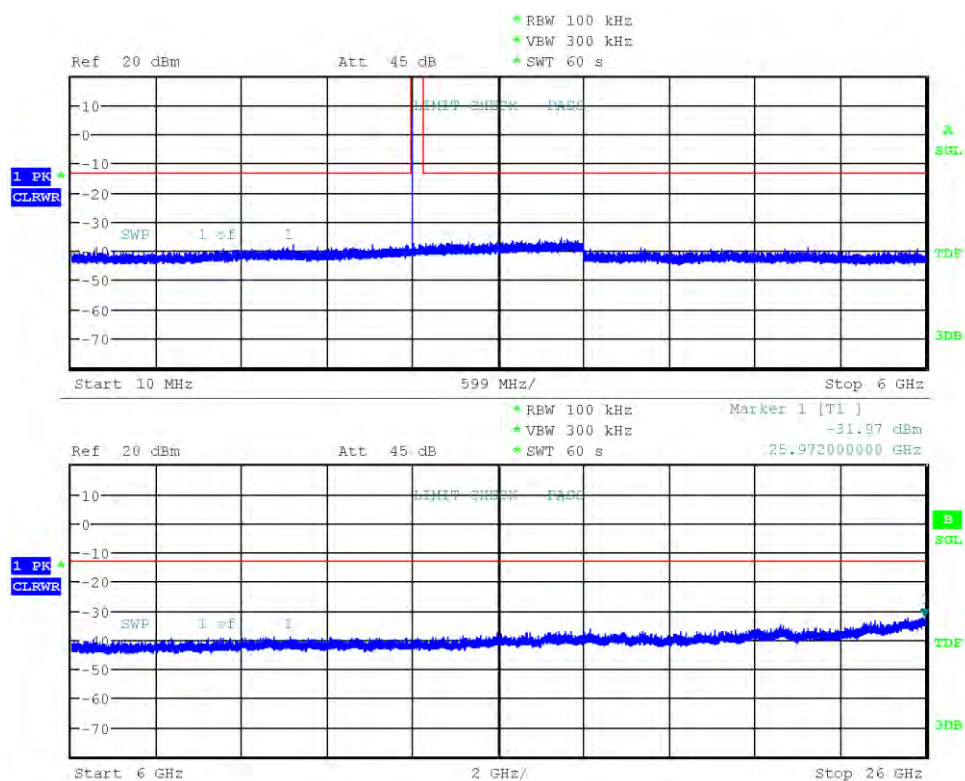
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: 2_DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-04-19
 Note: Mode:2DH5, Power maximum
 Max. in-band Frequency [MHz]: 2479.8
 Max. in-band Level [dBm/100 kHz]: 6.5
 Out-of-band Limit [dBm/100 kHz]: -13.5



Date: 19.APR.2023 16:58:54

Conducted Spurious Emissions

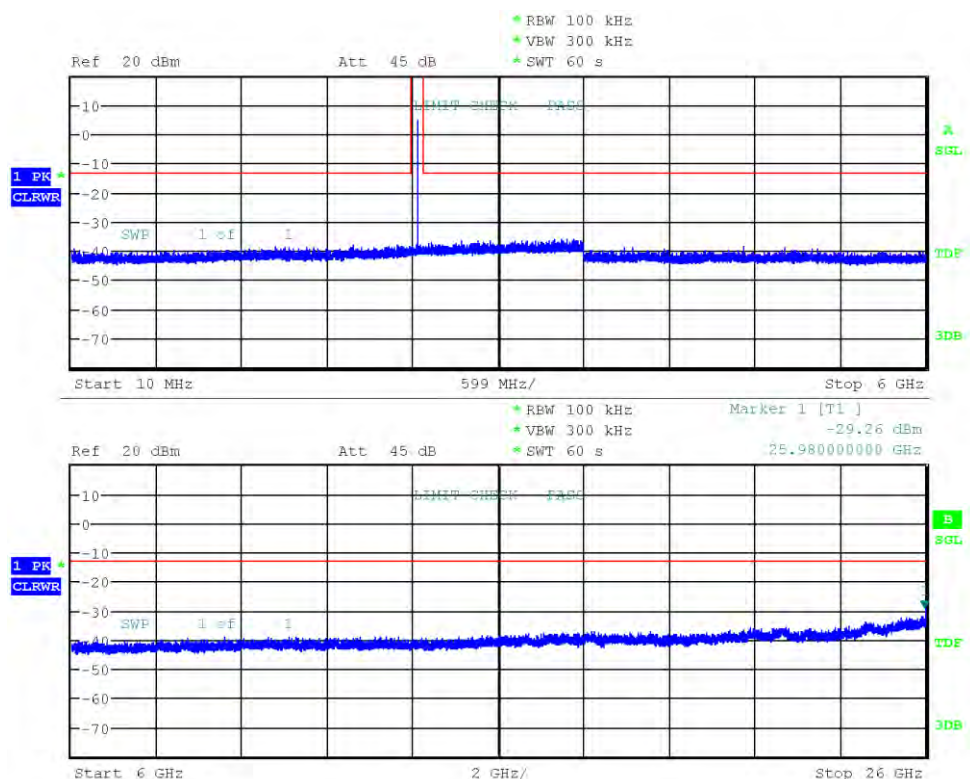
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: 3_DH5, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-04-19
 Note: Mode:3DH5, Power maximum
 Max. in-band Frequency [MHz]: 2402.2
 Max. in-band Level [dBm/100 kHz]: 6.7
 Out-of-band Limit [dBm/100 kHz]: -13.3



Date: 19.APR.2023 17:03:31

Conducted Spurious Emissions

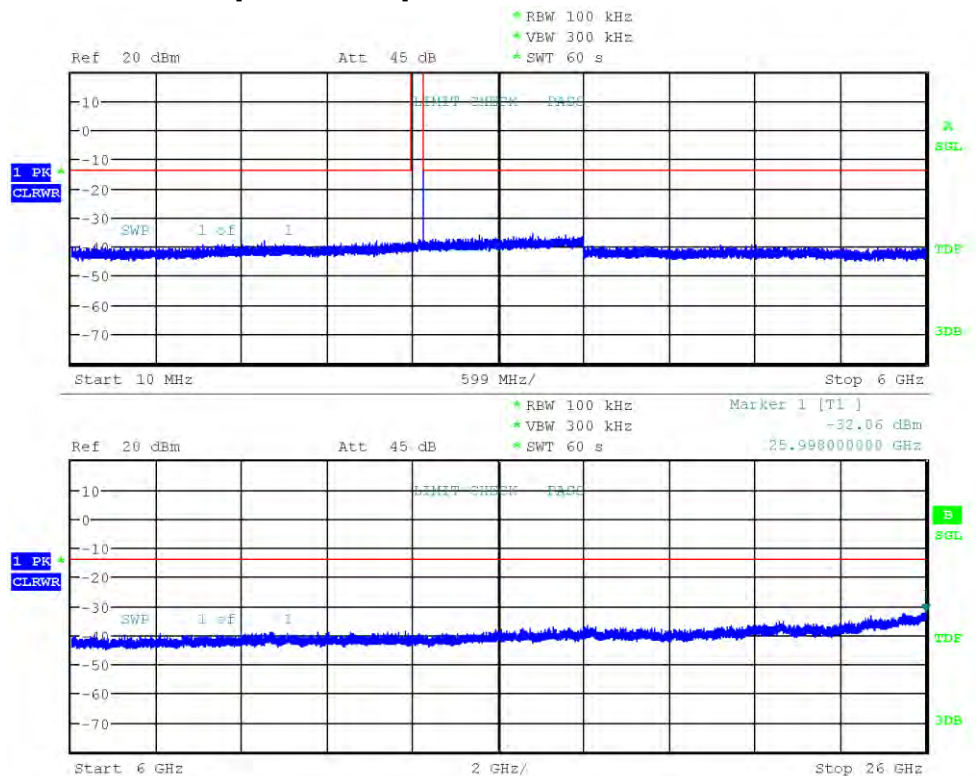
Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: 3_DH5, Channel: 39, 2441 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-04-19
 Note: Mode:3DH5, Power maximum
 Max. in-band Frequency [MHz]: 2441.2
 Max. in-band Level [dBm/100 kHz]: 6.7
 Out-of-band Limit [dBm/100 kHz]: -13.3



Date: 19.APR.2023 17:07:01

Conducted Spurious Emissions

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: 3_DH5, Channel: 78, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Radwan Jaafar
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-04-19
 Note: Mode:3DH5, Power maximum
 Max. in-band Frequency [MHz]: 2480.2
 Max. in-band Level [dBm/100 kHz]: 6.5
 Out-of-band Limit [dBm/100 kHz]: -13.5



Date: 19.APR.2023 17:10:53

3.10 Test Conditions and Results - Transmitter radiated emissions

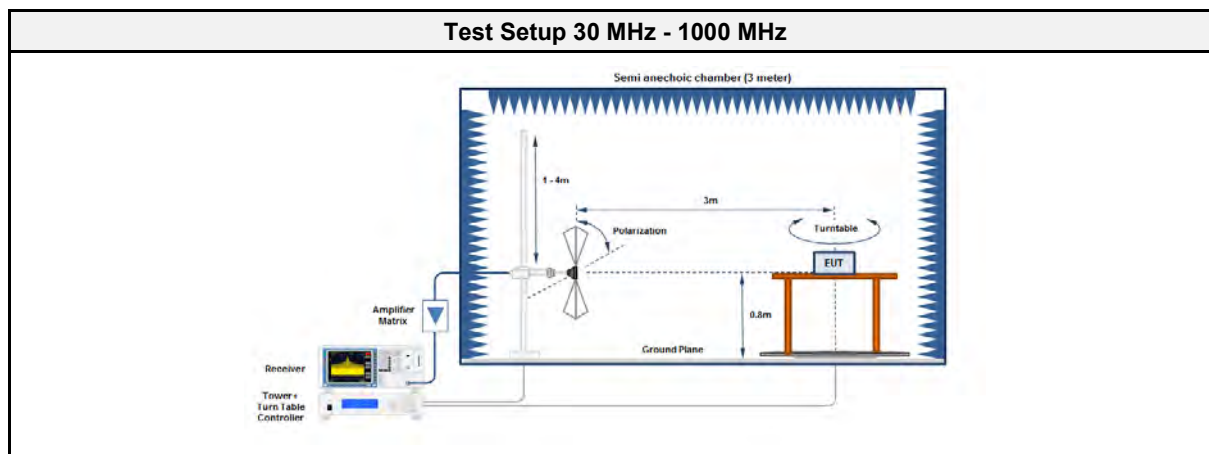
3.10.1 Information

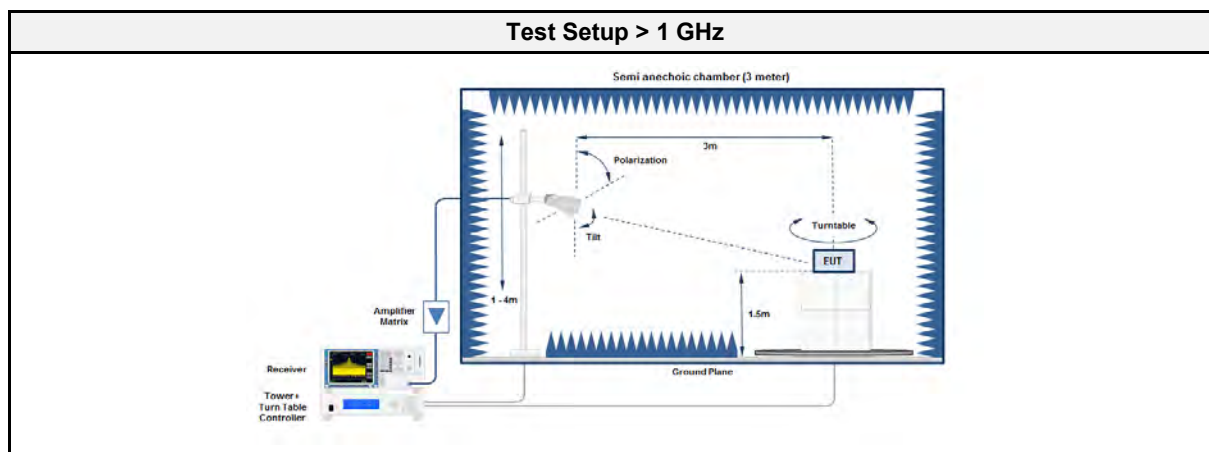
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISSED RSS-Gen, Issue 5 A2 (section 6.13)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6
Operator	F. Voigt; G. Offorji
Date	2023-03-10 – 2023-04-05

3.10.2 Limits

Limits			
Frequency range [MHz]	Detector	Field strength [µV/m]	Measurement distance [m]
0.009 - 0.09	Average	2400/F[kHz]	300
0.09 - 0.110	Quasi-Peak	2400/F[kHz]	300
0.110 - 0.490	Average	2400/F[kHz]	300
0.490 - 1.705	Quasi-Peak	24000/F[kHz]	30
1.705 - 30.0	Quasi-Peak	30	30
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.10.3 Setup





3.10.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 MHz - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2022-11	2025-11
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2023-02	2024-02
Antenna	Schwarzbeck	VULB 9168	EF01824	2022-10	2023-10

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC2	EF01616	2022-10	2023-10
Spectrum analyzer	R&S	FSW43	EF00896	2022-08	2023-08
Antenna	Schwarzbeck	BBHA 9120B	EF01678	2021-03	2024-03
Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2024-03
Antenna	Amplifier Research	AT4560	EF00302	2021-06	2023-06

3.10.5 Procedure

Test Procedure 30 MHz - 1000 MHz
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

Test Procedure > 1 GHz
1. EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground 2. EUT set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector

3.10.6 Results

Test Results - DH5 (with External antenna)						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	1439.9	39.41	pk	ver	74.00	-34.59
2402	1439.9	32.43	avg	ver	54.00	-21.57
2402	2266.9	40.24	pk	ver	74.00	-33.76
2402	2266.9	33.00	avg	ver	54.00	-21.00
2402	2341.8	50.74	pk	ver	74.00	-23.26
2402	2341.8	43.86	avg	ver	54.00	-10.14
2402	2375.8	50.80	pk	ver	74.00	-23.20
2402	2375.8	43.67	avg	ver	54.00	-10.33
2441	7323.3	47.21	pk	ver	74.00	-26.79
2441	7323.3	43.33	avg	ver	54.00	-10.67
2441	18053	45.40	pk	ver	74.00	-28.60
2441	18053	38.23	avg	ver	54.00	-15.77
2480	7440	48.56	pk	ver	74.00	-25.44
2480	7440	45.15	avg	ver	54.00	-08.85
2480	19945	47.77	pk	ver	74.00	-26.23
2480	19945	35.36	avg	ver	54.00	-18.64

Test Results - 2-DH5 (with External antenna)						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	1439.8	39.67	pk	ver	74.00	-34.33
2402	1439.8	30.99	avg	ver	54.00	-23.01
2402	2380.8	52.03	pk	ver	74.00	-21.97
2402	2380.8	43.82	avg	ver	54.00	-10.18
2402	4804	40.63	pk	ver	74.00	-33.37
2402	4804	34.33	avg	ver	54.00	-19.67
2441	1440	35.33	pk	ver	74.00	-38.67
2441	1440	28.33	avg	ver	54.00	-25.67
2441	7323.1	48.28	pk	ver	74.00	-25.72
2441	7323.1	41.89	avg	ver	54.00	-12.11
2441	18110	48.06	pk	ver	74.00	-25.94
2441	18110	36.76	avg	ver	54.00	-17.24
2480	1280	42.62	pk	ver	74.00	-31.38
2480	1280	35.50	avg	ver	54.00	-18.50
2480	2483.6	54.74	pk	ver	74.00	-19.26
2480	2483.6	44.04	avg	ver	54.00	-09.96
2480	7440	48.25	pk	ver	74.00	-25.75
2480	7440	44.69	avg	ver	54.00	-09.31

Test Results - 3-DH5 (with External antenna)						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	2369.9	53.99	pk	ver	74.00	-20.01
2402	2369.9	42.33	avg	ver	54.00	-11.67
2402	12010	42.92	pk	ver	74.00	-31.08
2402	12010	32.68	avg	ver	54.00	-21.32
2402	17783	43.80	pk	ver	74.00	-30.20
2402	17783	32.36	avg	ver	54.00	-21.64
2402	18128	48.08	pk	hor	74.00	-25.92
2402	18128	36.91	avg	hor	54.00	-17.09
2441	4882.4	39.42	pk	ver	74.00	-34.58
2441	4882.4	32.60	avg	ver	54.00	-21.40
2441	7322.8	48.15	pk	hor	74.00	-25.85
2441	7322.8	43.28	avg	hor	54.00	-10.72
2441	17839	43.43	pk	ver	74.00	-30.57
2441	17839	32.54	avg	ver	54.00	-21.46
2441	18135	48.31	pk	ver	74.00	-25.69
2441	18135	36.27	avg	ver	54.00	-17.73
2480	2483.6	57.22	pk	ver	74.00	-16.78
2480	2483.6	46.59	avg	ver	54.00	-07.41
2480	7441	46.32	pk	ver	74.00	-27.68
2480	7441	39.71	avg	ver	54.00	-14.29
2480	18224	47.02	pk	ver	74.00	-26.98
2480	18224	37.63	avg	ver	54.00	-16.37

Test Results - DH5 (with Embedded antenna)						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	4803.7	41.54	pk	ver	74.00	-32.46
2402	4803.7	38.65	avg	ver	54.00	-15.35
2441	4882	40.52	pk	ver	74.00	-33.48
2441	4882	37.42	avg	ver	54.00	-16.58
2441	7322.8	46.80	pk	ver	74.00	-27.20
2441	7322.8	42.72	avg	ver	54.00	-11.28
2480	7440	45.94	pk	ver	74.00	-28.06
2480	7440	40.91	avg	ver	54.00	-13.09

Test Results - 2-DH5 (with Embedded antenna)						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	1440	38.13	pk	ver	74.00	-35.87
2402	1440	31.71	avg	ver	54.00	-22.29
2441	1440	35.40	pk	ver	74.00	-38.60
2441	1440	30.85	avg	ver	54.00	-23.15
2441	4881.9	38.57	pk	ver	74.00	-35.43
2441	4881.9	31.52	avg	ver	54.00	-22.48
2441	7323.1	47.19	pk	ver	74.00	-26.81
2441	7323.1	42.52	avg	ver	54.00	-11.48
2480	1280	41.12	pk	ver	74.00	-32.88
2480	1280	34.76	avg	ver	54.00	-19.24
2480	7440	45.45	pk	ver	74.00	-28.55
2480	7440	41.15	avg	ver	54.00	-12.85

Test Results - 3-DH5 (with Embedded antenna)						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	1440	38.05	Vertical	ver	74.00	-35.95
2402	1440	33.11	Vertical	ver	54.00	-20.89
2402	2355	51.63	Vertical	ver	74.00	-22.37
2402	2355	43.70	Vertical	ver	54.00	-10.30
2441	132.6987	27.20	Vertical	ver	43.50	-16.33
2480	7440	46.67	Vertical	ver	74.00	-27.33
2480	7440	43.03	Vertical	ver	54.00	-10.97

3.10.7 Setup Photos

Setup for measurements below 1 GHz

Photos deleted.
Refer to separate photo exhibits.

EUT Test Setup

Photos deleted.

Refer to separate photo exhibits.

Setup for measurements above 1 GHz

Photos deleted.

Refer to separate photo exhibits.

3.11 Test Conditions and Results - Receiver radiated emissions

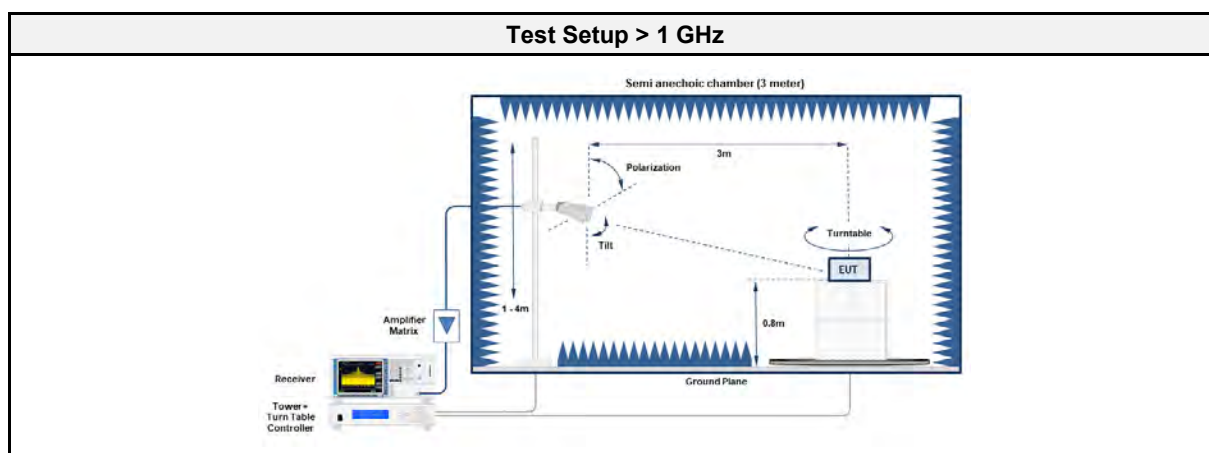
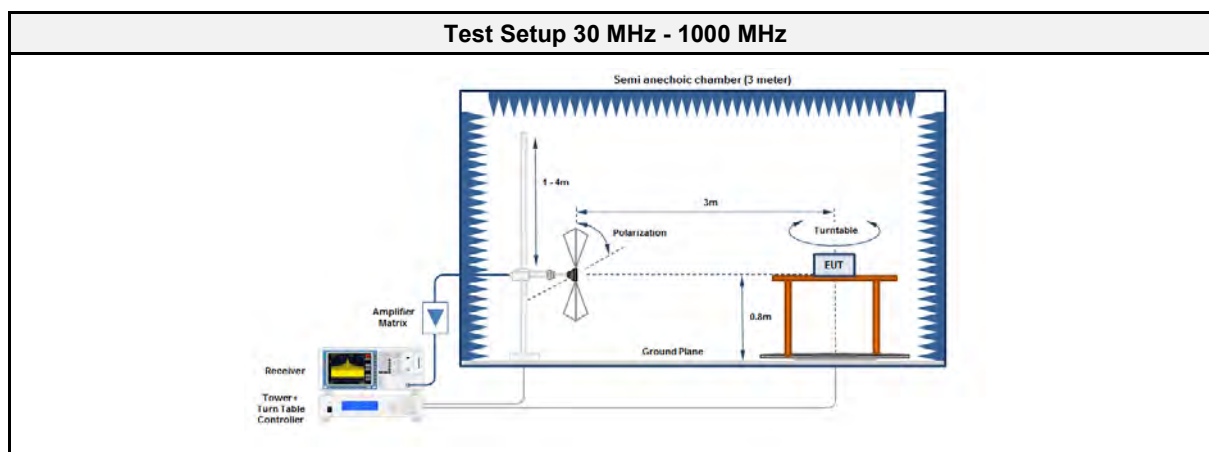
3.11.1 Information

Test Information	
Reference	ISED RSS-247, Issue 2 (section 3.1)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.4-2014 8.1-8.3
Operator	Odai Qawasmeh
Date	2023-04-04

3.11.2 Limits

Limits			
Frequency range [MHz]	Detector	Field strength [$\mu\text{V/m}$]	Measurement distance [m]
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.11.3 Setup



3.11.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 MHz - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2023-01
Antenna	Schwarzbeck	VULB 9168	EF01824	2022-10	2023-10

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF01011	2022-06	2025-06
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2023-01
Antenna	Schwarzbeck	BBHA 9120D	EF01561	2021-11	2024-11
Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2024-03

3.11.5 Procedure

Test Procedure	
1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT is set to test mode 3. The receiver is set to peak detection with max hold 4. The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m 5. All significant emissions are measured again using the corresponding final detector	

3.11.6 Results

Test Results (with Antenna-1)						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
Scan mode	799.986	36.00	pk	hor	46.00	-10.02
Scan mode	1280	38.71	pk	ver	74.00	-35.29
Scan mode	1280	35.99	avg	ver	53.98	-17.99
Scan mode	17863	41.04	pk	ver	74.00	-32.96
Scan mode	17863	31.96	avg	ver	53.98	-22.02

Test Results (with Antenna-2)						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
Scan mode	58.7848	28.10	pk	ver	40.00	-11.89
Scan mode	6375	38.66	avg	ver	53.98	-15.32
Scan mode	16146	28.82	avg	ver	53.98	-25.16

3.11.7 Setup Photos

Setup for measurements below 1 GHz

Photos deleted.
Refer to separate photo exhibits.

Setup for measurements above 1 GHz

Photos deleted.

Refer to separate photo exhibits.

EUT Test Setup

Photos deleted.

Refer to separate photo exhibits.

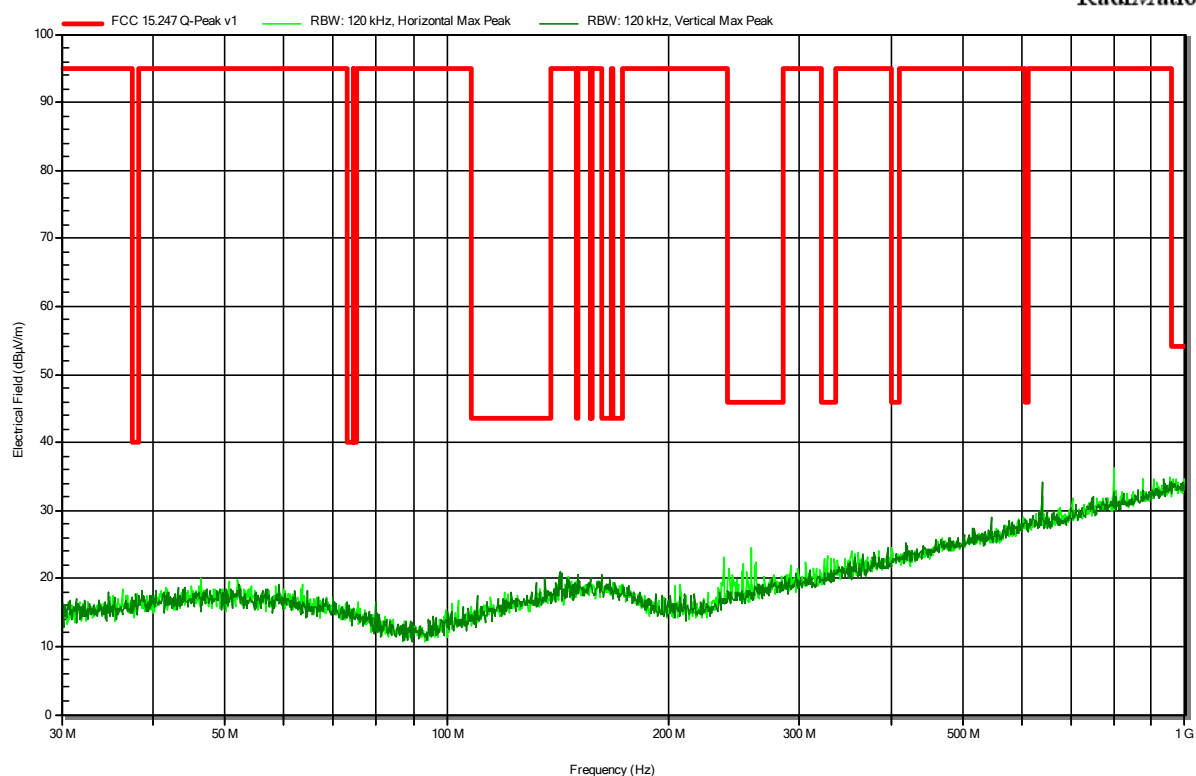
ANNEX A Transmitter spurious emissions with External antenna

Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Voigt
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 3.3 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; BT 5.3, 2402 MHz, PRBS9, DH5, P = max
 Test Date: 2023-03-10

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RadiMation

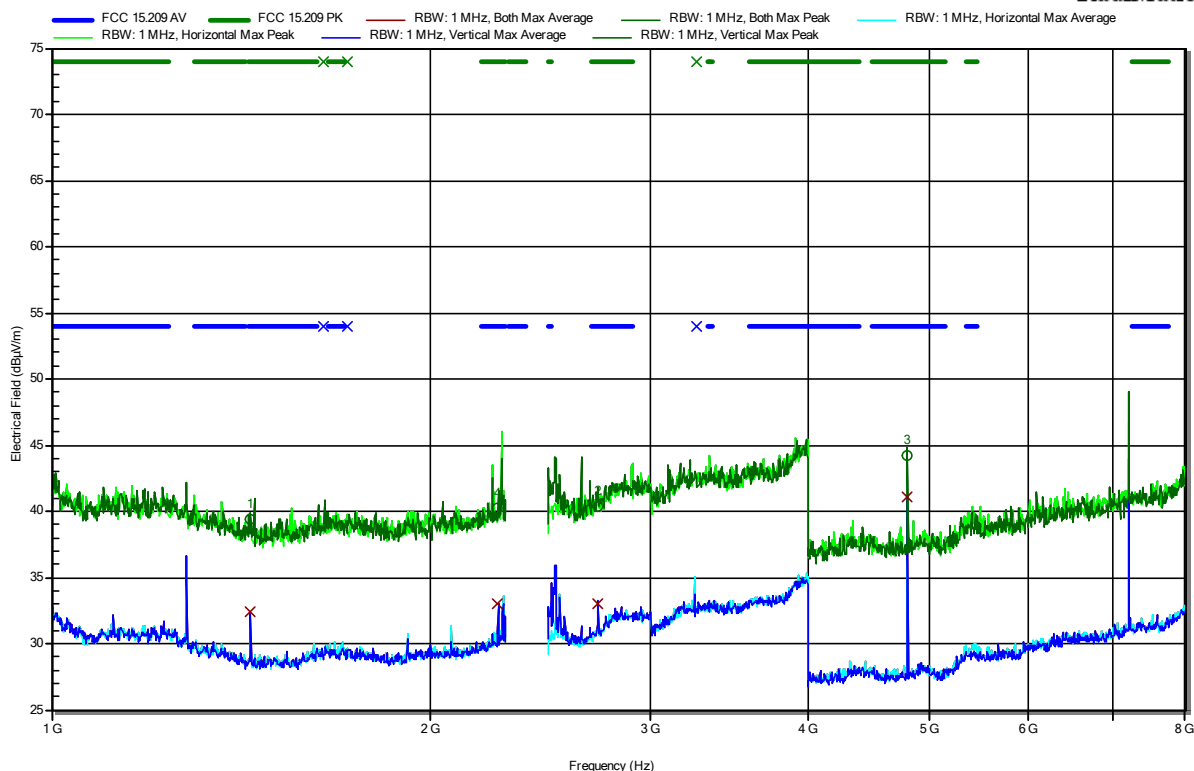


Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Test Site: Eurofins Product Service GmbH
 Operator: Godson Oforji
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom: 3.3 VDC and 1.8 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT 5.3, 2402 MHz, PRBS9, DH5, P = max
 Test Date: 2023-04-05
 Note: EUT Hor

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.4399 GHz	39.41 dBμV/m	74 dBμV/m	-34.59 dB	Pass	Vertical
2.2669 GHz	40.24 dBμV/m	74 dBμV/m	-33.76 dB	Pass	Vertical
2.722 GHz	40.41 dBμV/m	74 dBμV/m	-33.59 dB	Pass	Vertical
4.804 GHz	44.19 dBμV/m	74 dBμV/m	-29.81 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.4399 GHz	32.43 dBμV/m	54 dBμV/m	-21.57 dB	Pass	Vertical
2.2669 GHz	33 dBμV/m	54 dBμV/m	-21 dB	Pass	Vertical
2.722 GHz	32.97 dBμV/m	54 dBμV/m	-21.03 dB	Pass	Vertical
4.804 GHz	41.11 dBμV/m	54 dBμV/m	-12.89 dB	Pass	Vertical

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

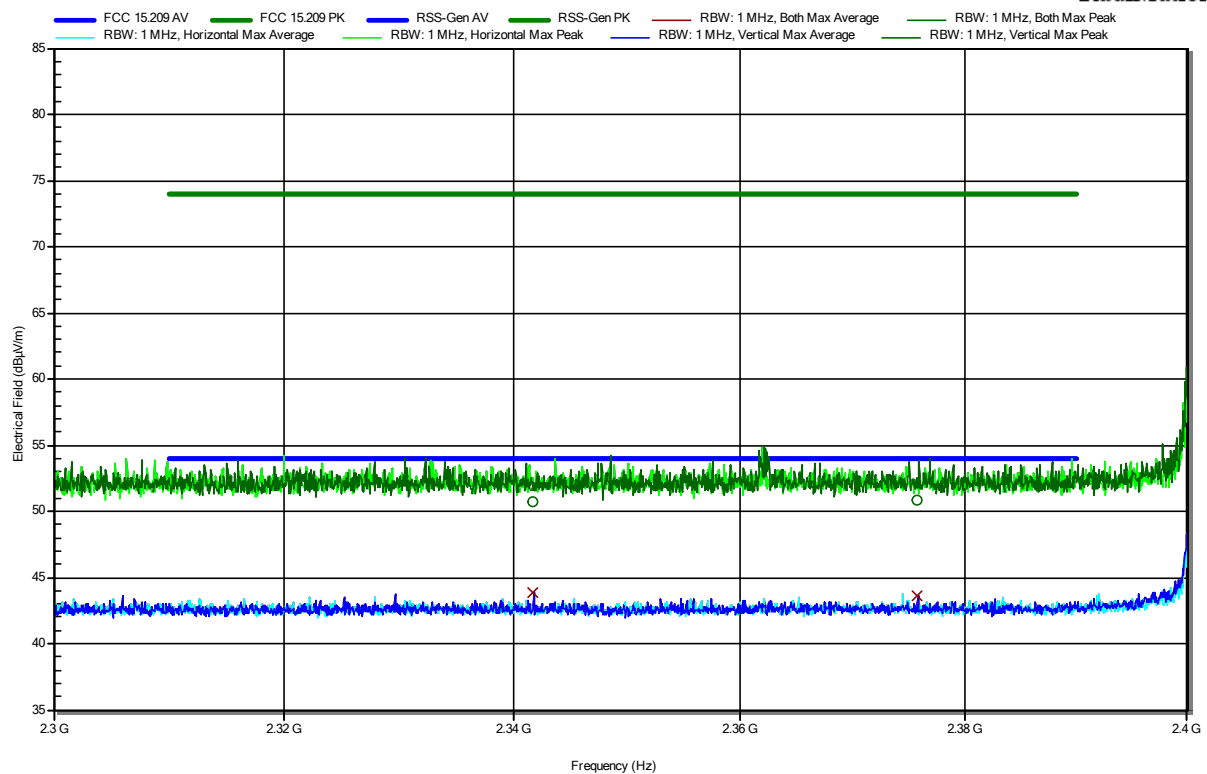
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Test Site: Eurofins Product Service GmbH
 Operator: Godson Offorji
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom: 3.3 VDC and 1.8 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT 5.3, 2402 MHz, PRBS9, DH5, P = max
 Test Date: 2023-04-05
 Note: lower bandedge

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3418 GHz	50.74 dBμV/m	74 dBμV/m	-23.26 dB	Pass	Vertical
2.3758 GHz	50.8 dBμV/m	74 dBμV/m	-23.2 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3418 GHz	43.86 dBμV/m	54 dBμV/m	-10.14 dB	Pass	Vertical
2.3758 GHz	43.67 dBμV/m	54 dBμV/m	-10.33 dB	Pass	Vertical

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

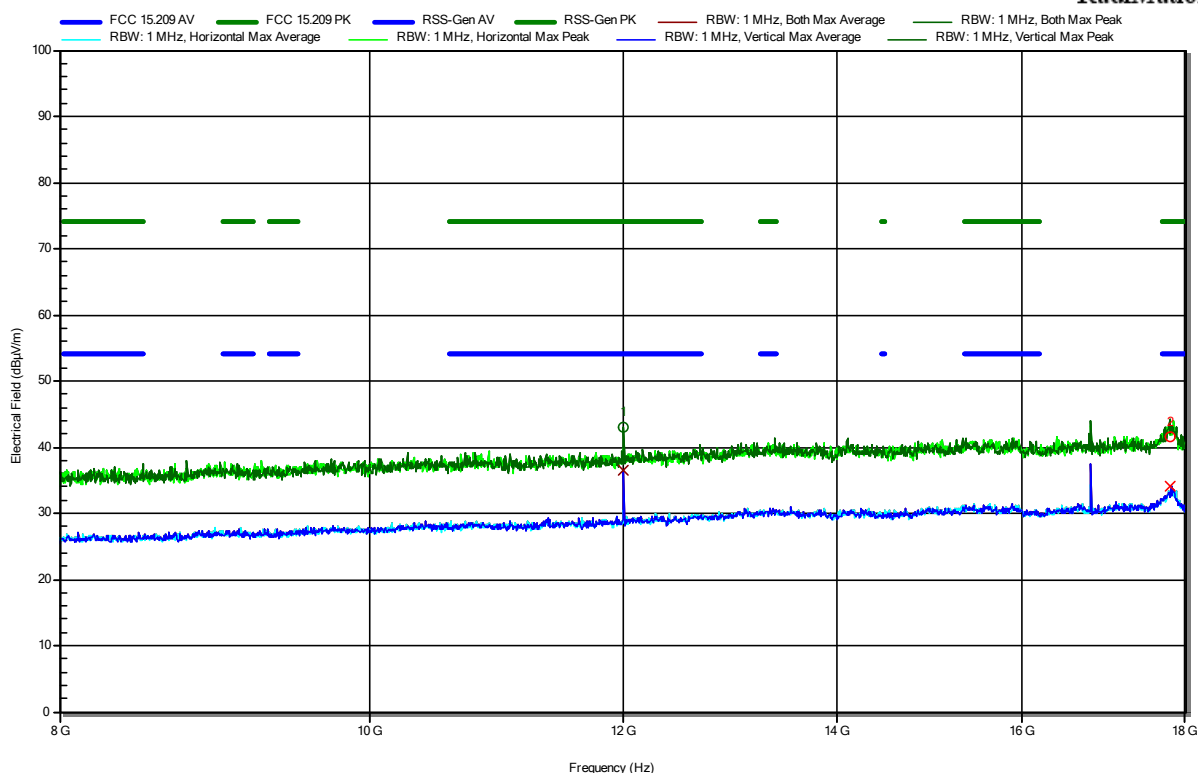
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Test Site: Eurofins Product Service GmbH
 Operator: Godson Offorji
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom: 3.3 VDC and 1.8 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BT 5.3, 2402 MHz, PRBS9, DH5, P = max
 Test Date: 2023-04-11
 Note: EUT Hor

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
12.011 GHz	43.12 dBμV/m	74 dBμV/m	-30.88 dB	Pass	Vertical
17.814 GHz	41.49 dBμV/m	74 dBμV/m	-32.51 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
12.011 GHz	36.51 dBμV/m	54 dBμV/m	-17.49 dB	Pass	Vertical
17.814 GHz	34.11 dBμV/m	54 dBμV/m	-19.89 dB	Pass	Vertical

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

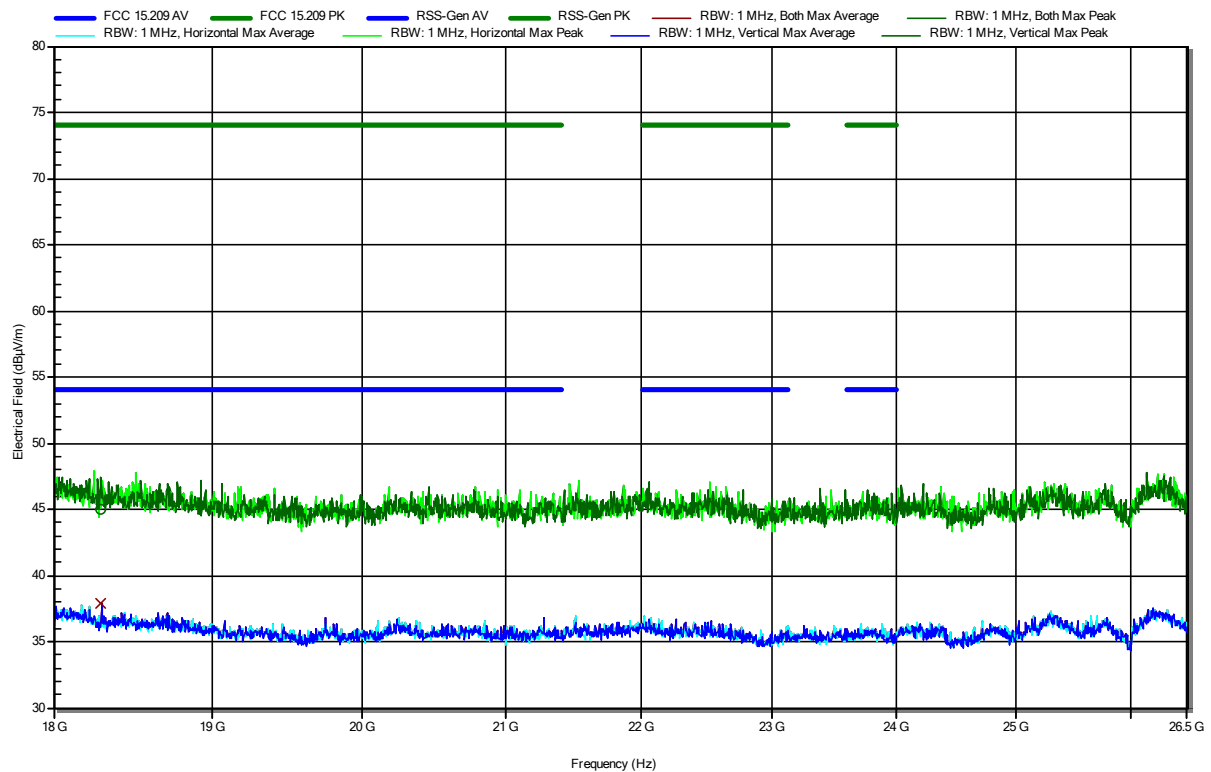
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Test Site: Eurofins Product Service GmbH
 Operator: Godson Offorji
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom: 3.3 VDC and 1.8 VDC
 Antenna: Amplifier Research AT4560
 Measurement distance: 3 m
 Mode: Tx; BT 5.3, 2402 MHz, PRBS9, DH5, P = max
 Test Date: 2023-04-11
 Note: EUT Hor

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RadiMation



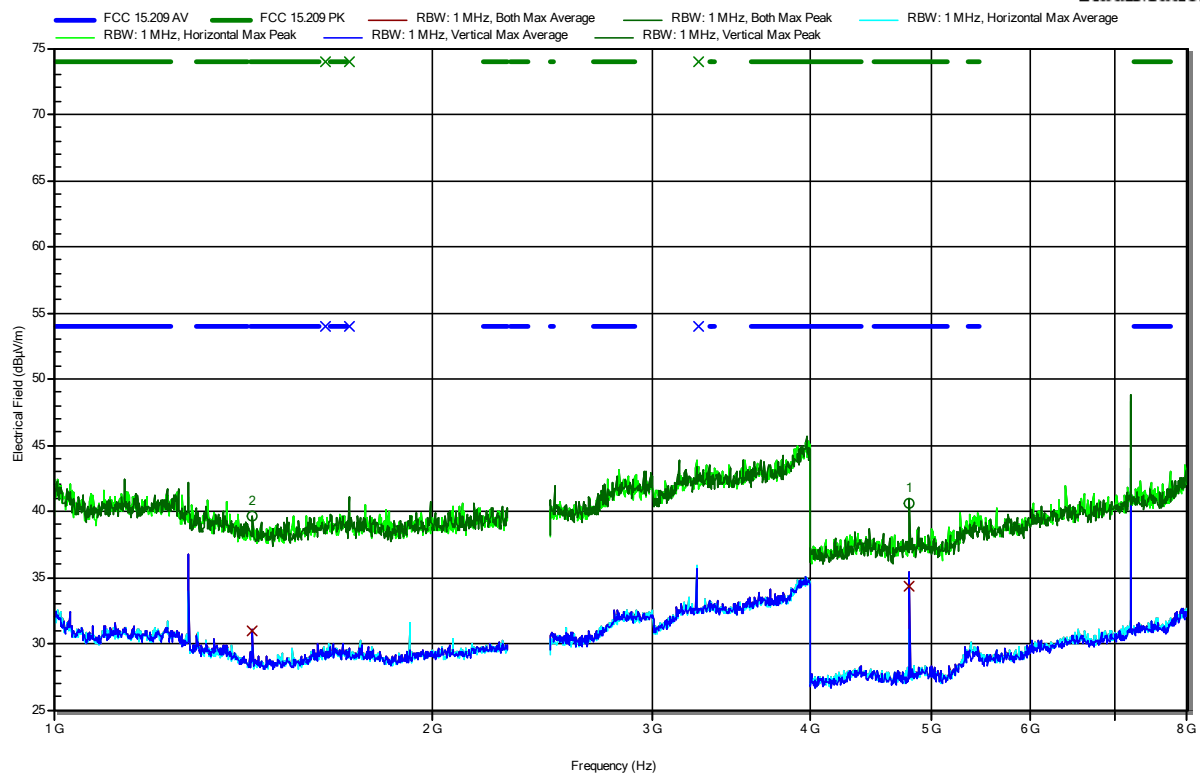
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
18.296 GHz	44.97 dBμV/m	74 dBμV/m	-29.03 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
18.296 GHz	37.85 dBμV/m	54 dBμV/m	-16.15 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2302-1881
 Applicant: u-blox AG
 Model Description: Host-based multiradio module
 Model: MAYA-W276-00B
 Test Sample ID: 43225
 Test Site: Eurofins Product Service GmbH
 Operator: Godson Offorji
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom: 3.3 VDC and 1.8 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT 5.3, 2402 MHz, PRBS9, 2-DH5, P = max
 Test Date: 2023-04-06
 Note: EUT Hor

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.4398 GHz	39.67 dBμV/m	74 dBμV/m	-34.33 dB	Pass	Vertical
4.804 GHz	40.63 dBμV/m	74 dBμV/m	-33.37 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.4398 GHz	30.99 dBμV/m	54 dBμV/m	-23.01 dB	Pass	Vertical
4.804 GHz	34.33 dBμV/m	54 dBμV/m	-19.67 dB	Pass	Vertical

Test Report No.: G0M-2302-1881-TFC247BT-W276-V03

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany