

Certification Radio test report

According to the standard:

CFR 47 FCC PART 15

RSS GEN – Issue 5

RSS 247 – Issue 2

Equipment under test:

XZBWE112A24

Wireless transmitter

FCC ID: Y7HXZBWE

IC NUMBER: 7002C-XZBWE

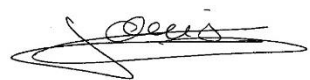
Company:

**Schneider Electric Industries France L'Isle
d'Espagnac**

Distribution: Mr LAIDET

(Company: Schneider Electric Industries France L'Isle d'Espagnac)

Number of pages: 25 with 1 appendix

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			Name and Function	Visa
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DESIGNATION OF PRODUCT: XZBWE112A24

Serial number (S/N): 03056594

Reference / model (P/N): XZBWE112A24

Software version: 1.2

MANUFACTURER: Schneider Electric Industries France L'Isle d'Espagnac

COMPANY SUBMITTING THE PRODUCT:

Company: Schneider Electric Industries France L'Isle d'Espagnac

Address: BP 660 - ZI No.3 L'ISLE D'ESPAGNAC France 16340

Responsible: Mr LAIDET

DATES OF TEST: 13-Sep-21

TESTING LOCATION: EMITECH ANGERS laboratory at JUIGNE SUR LOIRE (49) FRANCE

FCC Accredited under US-EU MRA Designation Number: FR0009
Test Firm Registration Number: 873677

ISED Accredited under CANADA-EU MRA Designation Number: FR0001
Industry Canada Registration Number: 4452A

TESTED BY: T. LEDRESSEUR

VISA:

A handwritten signature in black ink, appearing to be "T. LEDRESSEUR", written over a horizontal line.

WRITTEN BY: T. LEDRESSEUR

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REVISIONS HISTORY

Revision	Date	Modified pages	Modifications
0	22-Sep-21	/	Creation

1. INTRODUCTION

This report presents the results of radio test carried out on the following radio equipment: **XZBWE112A24**, in accordance with normative reference.

The product integrates a Zigbee function

2. PRODUCT DESCRIPTION

Category of equipment (ISED):	I
Class:	B
Utilization:	Wireless transmitter
Antenna type and gain:	0 dBi / integral PCB antenna
Operating frequency range:	2405 MHz
Number of channels:	1
Channel spacing:	Not concerned
Modulation:	OQPSK
Power source:	24Vdc

Power level, frequency range and channels characteristics are not user adjustable.
The details pictures of the product and the circuit boards are joined with this file.

3. NORMATIVE REFERENCE

The standards and testing methods related throughout this report are those listed below.

They are applied on the whole test report even though the extensions (version, date and amendment) are not repeated.

CFR 47 FCC Part 15 (2021) Radio Frequency Devices

ANSI C63.10 2013
Procedures for Compliance Testing of Unlicensed Wireless Devices.

558074 D01 DTS v05 r02 Guidance for compliance measurements on digital transmission system,
frequency hopping spread spectrum system, and hybrid system devices
operating under section 15.247 of the FCC rules.

RSP-100 Issue 12, August 2019
Certification of Radio Apparatus

RSS-Gen Issue 5, April 2018
General Requirements for Compliance of Radio Apparatus

RSS-247 Issue 2, February 2017
Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs)
and Licence-Exempt Local Area Network (LE-LAN) Devices

4. TEST METHODOLOGY

Radio performance tests procedures given in CFR 47 part 15:

Subpart C – Intentional Radiators

- Paragraph 203: Antenna requirement
- Paragraph 205: Restricted bands of operation
- Paragraph 207: Conducted limits
- Paragraph 209: Radiated emission limits; general requirements
- Paragraph 212: Modular transmitter
- Paragraph 215: Additional provisions to the general radiated emission limitations
- Paragraph 247: Operation within the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz

Radio performance tests procedures given in RSS-Gen:

- Paragraph 2 - General
- Paragraph 3 - Normative publications and related documents
- Paragraph 4 - Labelling requirements
- Paragraph 6 - General administrative and technical requirements
- Paragraph 8 - Licence-exempt Radio Apparatus

Radio performance tests procedures given in RSS-247:

- Paragraph 3 - Certification requirements
- Paragraph 4 - Measurement method
- Paragraph 5 - Standard specifications for frequency hopping systems and digital transmission systems operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz

5. TEST EQUIPMENT CALIBRATION DATES

Emitech Number	Model	Type	Last calibration	Calibration interval (years)	Next calibration due
0	BAT-EMC V3.18.0.26	Software	/	/	/
1406	EMCO 6502	Loop antenna	13/04/2021	1	13/04/2022
4087	Filtek LP03/1000-7GH	Low Pass Filter	25/02/2020	3	24/02/2023
4088	R&S FSP40	Spectrum Analyzer	04/05/2020	2	04/05/2022
7124	A.H. Systems SAS-572	Antenna	05/01/2019	3	04/01/2022
7279	SUCOFLEX SF104 N 1.5m	Cable	11/06/2020	2	11/06/2022
7299	Microtronics BRM50702	Reject band filter	04/09/2019	3	03/09/2022
8511	HP 8447D	Low-noise amplifier	26/01/2021	1	26/01/2022
8526	Schwarzbeck VHBB 9124	Biconical antenna	22/08/2021	3	21/08/2024
8535	EMCO 3115	Antenna	28/04/2020	3	28/04/2023
8543	Schwarzbeck UHALP 9108A	Log periodic antenna	05/08/2021	3	04/08/2024
8593	SIDT Cage 2	Anechoic chamber	/	/	/
8704	LUCIX Corp S180265L3201 LNA	Low-noise amplifier	17/08/2021	1	17/08/2022
8750	La Crosse Technology WS-9232	Meteo station	22/09/2020	2	22/09/2022
8775	Fontaine FTN 2515B	Power source	(1)	(1)	(1)
8896	ACQUISYS GPS8	Satellite synchronized frequency standard	/	/	/
8974	STORM MICROWAE k-20cm	cable	14/11/2019	2	13/11/2021
8975	STORM MICROWAE k-20cm	cable	14/11/2019	2	13/11/2021
12590	LUCIX Corp S005180M3201	Low-noise amplifier	26/07/2021	1	26/07/2022
12911	Huber + Suhner N-2m	cable	11/06/2020	2	11/06/2022
14736	MATURO	Turntable and mat controller MCU	/	/	/
14831	Fluke 177	Multimeter	25/02/2020	2	24/02/2022
15882	SUCOFLEX	cable N 5m	26/01/2021	2	26/01/2023

(1) The equipment is not verified; instead, the output voltage is checked before each measurement with the calibrated multimeter.

6. TESTS RESULTS SUMMARY

6.1 CFR 47 part 15 requirements

Test procedure	Description of test	Respected criteria?				Comment
		Yes	No	NAp	NAs	
FCC Part 15.203	ANTENNA REQUIREMENT	X				Note 1
FCC Part 15.205	RESTRICTED BANDS OF OPERATION	X				
FCC Part 15.207	CONDUCTED LIMITS			X		
FCC Part 15.209	RADIATED EMISSION LIMITS; general requirements	X				Note 2
FCC Part 15.212	MODULAR TRANSMITTERS			X		
FCC part 15.215	ADDITIONAL PROVISIONS TO THE GENERAL RADIATED EMISSION LIMITATIONS					
	(a) Alternative to general radiated emission limits	X				Note 3
	(b) Unwanted emissions outside of §15.247 frequency bands	X				
	(c) 20 dB bandwidth and band-edge compliance	X				
FCC Part 15.247	OPERATION WITHIN THE BANDS 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz					
	(a) (1) Hopping systems			X		
	(a) (2) Digital modulation techniques	X				Note 4
	(b) Maximum peak output power	X				
	(c) Operation with directional antenna gains > 6 dBi			X		
	(d) Intentional radiator	X				
	(e) Peak power spectral density	X				
	(f) Hybrid system			X		
	(g) Frequency hopping requirements			X		
	(h) Frequency hopping intelligence			X		
	(i) RF exposure compliance	X				

NAp: Not Applicable

NAs: Not Asked

Note 1: Integral antenna.

Note 2: See FCC part 15.247 (d).

Note 3: See FCC part 15.209. Unwanted emissions levels are all below the fundamental emission field strength level.

Note 4: Conducted measurement is not possible (integral antenna), so we used the radiated method.

6.2 RSS-Gen requirements

Test procedure	Description of test	Criteria respected ?				Comment
		Yes	No	NAp	NAs	
Paragraph 8	Licence-exempt radio apparatus					
§ 8.1	Measurement Bandwidths and Detector Functions	X				
§ 8.2	Pulsed operation	X				
§ 8.3	Prohibition of amplifiers	X				
§ 8.4	User manual notice	X				see certification documents
§ 8.5	Measurement of licence-exempt devices on-site (in-situ)			X		
§ 8.6	Operating frequency range of devices in master/slave networks	X				
§ 8.7	Radio frequency identification (RFID) devices			X		
§ 8.8	AC power line conducted emissions limits			X		
§ 8.9	Transmitter emission limits	X				
§ 8.10	Restricted frequency bands	X				
§ 8.11	Frequency stability			X		

NAP: Not Applicable

NAs: Not Asked

6.3 RSS-247 requirements

Test Procedure RSS-247	Description of test	Criteria respected ?				Comment
		Yes	No	NAp	NAs	
Paragraph 5	Standard specifications for frequency hopping system and digital transmission systems operating in the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz					
5.1	Frequency hopping systems (FHSS)			X		
5.2	Digital transmission systems	X				
5.3	Hybrid systems			X		
5.4	Transmitter output power and equivalent isotropically radiated power (e.i.r.p.) requirements	X				
5.5	Unwanted emissions	X				

NAP: Not Applicable

NAs: Not Asked

7. MEASUREMENT UNCERTAINTY

To declare, or not, the compliance with the specifications, it was not explicitly taken into account of uncertainty associated with the result(s)

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for normal distribution corresponds to a coverage probability of approximately 95%.

Parameter	Emitech Uncertainty
RF power, conducted	$\pm 0.75\text{dB}$
Radiated emission valid to 26 GHz	
F < 62.5 MHz:	$\pm 5.14\text{ dB}$
62.5 MHz < F < 1 GHz:	$\pm 5.13\text{ dB}$
1 GHz < F < 26 GHz:	$\pm 5.16\text{ dB}$
AC Power Lines conducted emissions	$\pm 3.38\text{ dB}$
Temperature	$\pm 1\text{ }^{\circ}\text{C}$
Humidity	$\pm 5\text{ \%}$

8. OCCUPIED BANDWIDTH

Temperature (°C) : 22

Humidity (%HR): 46

Date : September 13, 2021

Technician : T. LEDRESSEUR

Standard: FCC Part 15
RSS-247

Test procedure:

Method of paragraphs 11.8 of ANSI C63.10 (6dB Measurement)

Method of paragraphs 6.9.3 of ANSI C63.10 (99% Measurement)

Test set up:

Radiated test

Test realized in near field.

Setting:

Measure	6dB	99%
Center frequency	The centre frequency of the channel under test	
Detector	Peak	
Span	2 to 5 times the OBW	1.5 to 5 times the OBW
RBW	100kHz	1% to 5% of the OBW
VBW	300kHz	3 x RBW
Trace	Max hold	
Sweep	Auto	

Test operating condition of the equipment:

The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

Power source: 24 Vdc by an external power supply

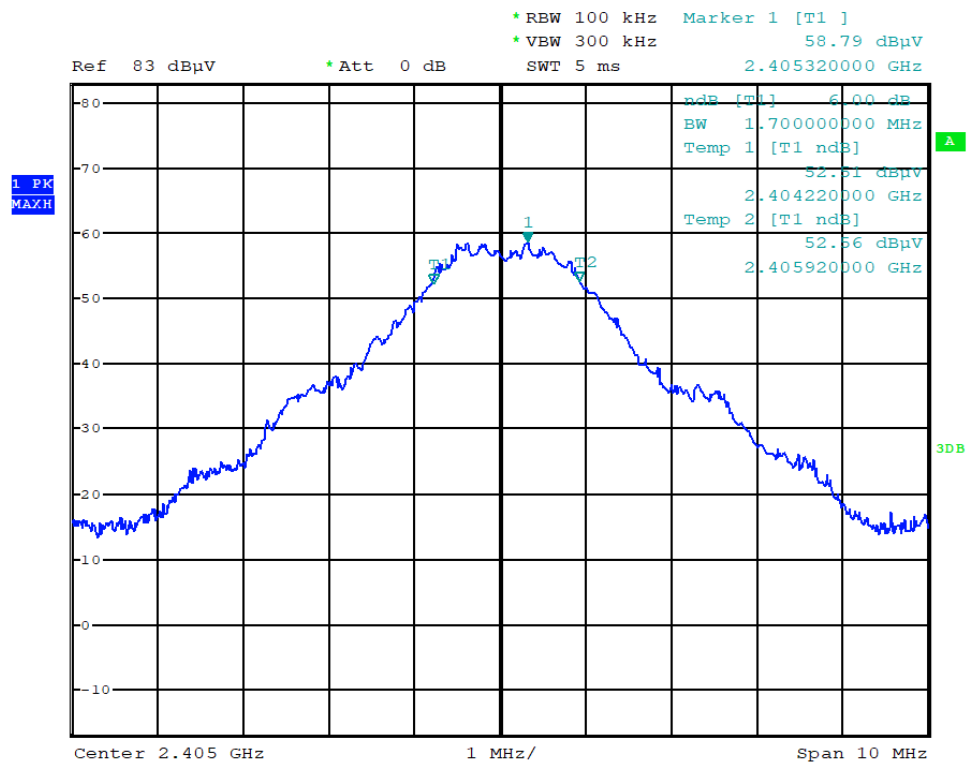
Percentage of voltage variation during the test (%):

 ± 1

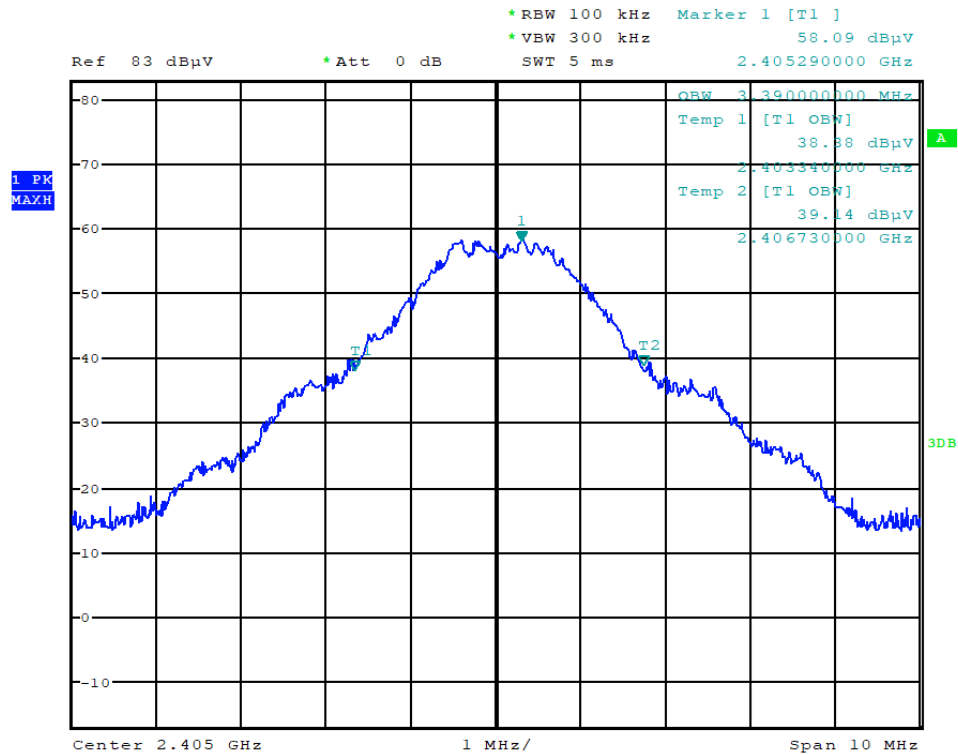
Results:

Sample N° 1

6dB bandwidth



99% bandwidth



Measure realized for reporting only

Test conclusion:

RESPECTED STANDARD

9. BAND EDGE

Temperature (°C) : 22

Humidity (%HR): 46

Date : September 13, 2021

Technician : T. LEDRESSEUR

Standard: FCC Part 15
RSS-247

Test procedure:

DTS:

Method of paragraph 11.13.2 of ANSI C63.10

Test set up:

Test realized in near field. All field strength measurements are correlated with the radiated maximum peak output power

Test operating condition of the equipment:

The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

Power source: 24 Vdc by an external power supply

Percentage of voltage variation during the test (%): ± 1

Results:

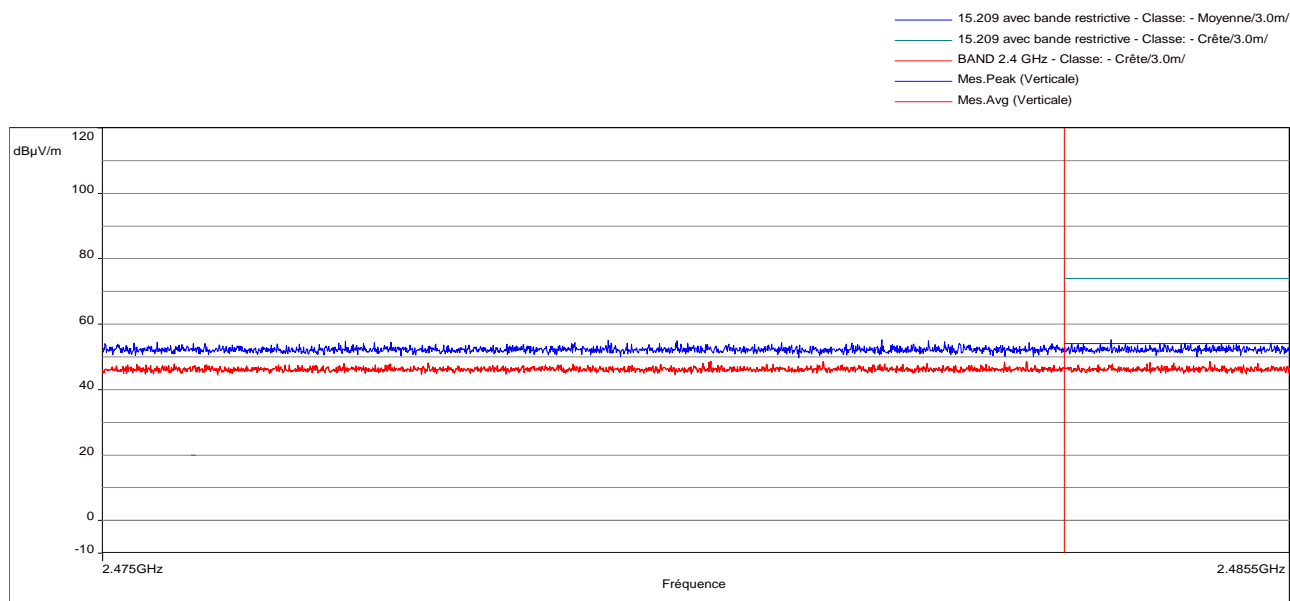
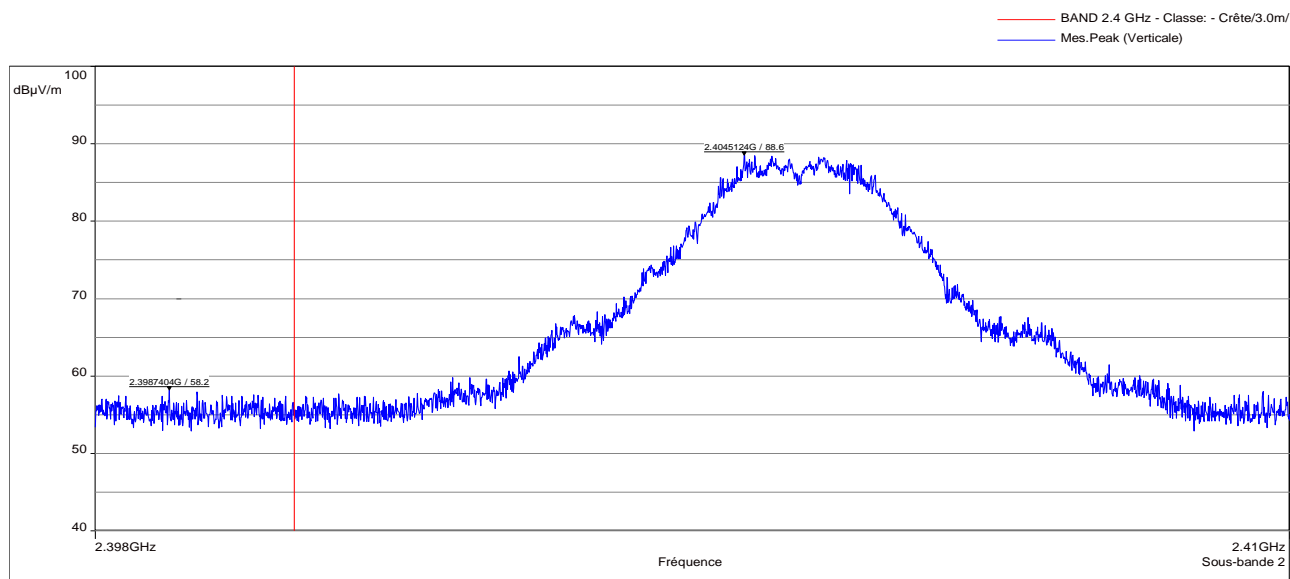
Lower Band Edge: From 2398 MHz to 2400 MHz

Upper Band Edge: From 2483.5 MHz to 2485.5 MHz

Sample N° 1

Fundamental frequency (MHz)	Field Strength Level of fundamental (dBμV/m)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Calculated Max Out-of-Band Emission Level (dBμV/m)	Limit	Margin (dB)
2405	88.6	Peak	2398.8136	30.4	/	-20 dBc	10.4
2405	88.6	Peak	2483.9175	33.385	55.215	74 dBμV/m	18.785
2405	88.6	Average	2484.79	40.073	48.527	54 dBμV/m	5.473

(1) Marker-Delta method



Test conclusion:

RESPECTED STANDARD

10. PEAK CONDUCTED OUTPUT POWER**Temperature (°C) :** 22**Humidity (%HR):** 46**Date :** September 13, 2021**Technician :** T. LEDRESSEUR**Standard:** FCC Part 15
RSS-247**Test procedure:**

For FCC Part 15: paragraph 15.247 (b)

For RSS-247: paragraph 5.4

RBW≥DTS bandwidth method of paragraph 11.9.1.1 of ANSI C63.10

Test set up:

First an exploratory radiated measurement was performed. During this phase the product is oriented in these two normal positions

Then the final measurement is realized with the product on the most critical orientation.

The system is tested in anechoic chamber, the EUT is placed on a rotating table, 1.5 m from a ground plane.

Zero degree azimuths correspond to the front of the device under test.

See photos in appendix 2.

Distance of antenna: 3 meters (in anechoic room)**Antenna height:** 1.5 meter (in anechoic room)**Antenna polarization:** vertical and horizontal (only the highest level is recorded)

The measurement of the radiated electro-magnetic field is realized with an analyser and peak detector. The resolution bandwidth is adjusted at 3 MHz and video bandwidth at 10 MHz.

Finally the radiated electro-magnetic field is converted in dBm with the following formula:

$EIRP(dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance in meters and antenna Gain = 0 dBi.

Equipment under test operating condition:

The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

Power source: 24 Vdc by an external power supply**Percentage of voltage variation during the test (%):** ± 1

Results:Sample N° 1

	Electro-magnetic field (dBμV/m):	Maximum Peak conducted output power (1)		Limit (W)
		(dBm)	(W)	
Nominal supply voltage:	92.5	-2.76	0.000530	8

Polarization of test antenna: Vertical (height: 150 cm)

Position of equipment: 1 (azimuth: 255 degrees)

Maximum Peak conducted output power:

$EIRP(dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance in meters and antenna Gain = 0 dBi.

Test conclusion:

RESPECTED STANDARD

11. RADIATED SPURIOUS EMISSIONS**Temperature (°C) :** 22**Humidity (%HR):** 46**Date :** September 13, 2021**Technician :** T. LEDRESSEUR**Standard:** FCC Part 15
RSS-247**Test procedure:**

For FCC Part 15: paragraph 15.205, paragraph 15.209, paragraph 15.247 (d)

For RSS-247: paragraph 5.5

Emissions in non-restricted frequency bands method of paragraph 11.11 of ANSI C63.10

Emissions in restricted frequency bands method of paragraph 11.12 of ANSI C63.10

Test set up:

First an exploratory radiated measurement was performed. During this phase the product is oriented in these two normal positions

Then the final measurement is realized with the product on the most critical orientation.

The measure is realized on open area test site under 1 GHz and in anechoic chamber above 1 GHz.

When the system is tested in an open area test site (OATS), the EUT is placed on a rotating table, 0.8m from a ground plane.

When the system is tested in anechoic chamber, the EUT is placed on a rotating table, 1.5 m from a ground plane.

Zero degree azimuths correspond to the front of the device under test.

See photos in appendix 2.

Frequency range: From 9 kHz to 10th harmonic of the highest fundamental frequency (2405 MHz)**Detection mode:** Quasi-peak (F < 1 GHz)

Peak / Average (F > 1 GHz)

Bandwidth: 200Hz (9 kHz < F < 150kHz)
9 kHz (150 kHz < F < 30MHz)
120 kHz (30 MHz < F < 1 GHz)
100 kHz / 1 MHz (F > 1 GHz)**Distance of antenna:** 10 meters (in open area test site) / 3 meters (in anechoic room)

Antenna height: 1 to 4 meters (in open area test site) / 1.5 meter (in anechoic room)

Antenna polarization: vertical and horizontal (only the highest level is recorded)

Equipment under test operating condition:

The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

Power source: 24 Vdc by an external power supply

Percentage of voltage variation during the test (%): ± 1

Results:

Sample N° 1

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	Azimuth (degree)	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 3m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
4810 (1)	P	150	120	1000	H	45.69 (2)	54	8.31
7215	P	150	0	100	V	45.2 (3)	68.6	23.4
9620	P	150	0	100	V	46.77 (3)	68.6	21.83

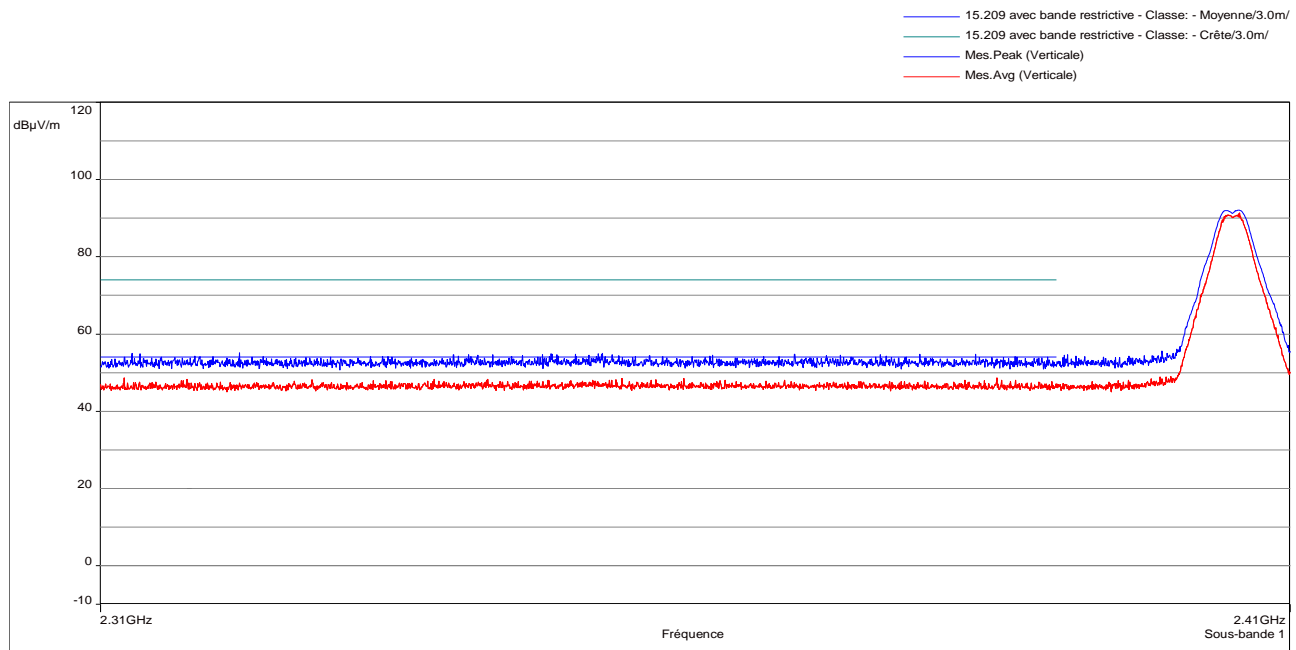
P= Peak, QP=Quasi-peak, Av=Average

(1) Restricted bands of operation in 15.205 and in Table 6 of RSS-Gen

(2) The peak level is lower than the average limit (54 dB μ V/m)

(3) Noise floor

Band edge worst case measurement (band 2.31GHz to 2.39GHz)



Applicable limits: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

The highest level recorded in a 100 kHz bandwidth is 88.6 dBμV/m.

So the applicable limit is 68.6 dBμV/m.

In addition, radiated emissions which fall in the restricted band, as defined in section 15.205 (a), must also comply with the radiated emission limits specified in section 15.209 (a) (see section 15.205 (c)).

In addition, radiated emissions which fall in the restricted band, as defined in Table 6 of RSS-Gen, must also comply with the radiated emission limits specified in Table 4 and Table 5 of RSS-Gen.

Test conclusion:

RESPECTED STANDARD

12. PEAK CONDUCTED POWER SPECTRAL DENSITY**Temperature (°C) :** 22**Humidity (%HR):** 46**Date :** September 13, 2021**Technician :** T. LEDRESSEUR**Standard:** FCC Part 15
RSS-247**Test procedure:**

For FCC Part 15: paragraph 15.247 (e), paragraph 15.247 (f)

For RSS-247: paragraph 5.2

PKPSD (Peak PSD) method of paragraph 11.10.2 of ANSI C63.10

Test set up:

First an exploratory radiated measurement was performed. During this phase the product is oriented in these two normal positions

Then the final measurement is realized with the product on the most critical orientation.

The system is tested in anechoic chamber, the EUT is placed on a rotating table, 1.5 m from a ground plane.

Zero degree azimuths correspond to the front of the device under test.

See photos in appendix 2.

Distance of antenna: 3 meters (in anechoic room)**Antenna height:** 1.5 meter (in anechoic room)**Antenna polarization:** vertical and horizontal (only the highest level is recorded)

The measurement of the radiated electro-magnetic field is realized with an analyser.

Then the peak marker function is used.

Finally the radiated electro-magnetic field is converted in dBm with the following formula:

$EIRP(dBm) = E (dB\mu V/m) + 20\log(D) - 104.8$; where D is the measurement distance in meters and antenna Gain = 0 dBi.

Equipment under test operating condition:

The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

Power source: 24 Vdc by an external power supply**Percentage of voltage variation during the test (%):** ± 1

Results:

Sample N° 1

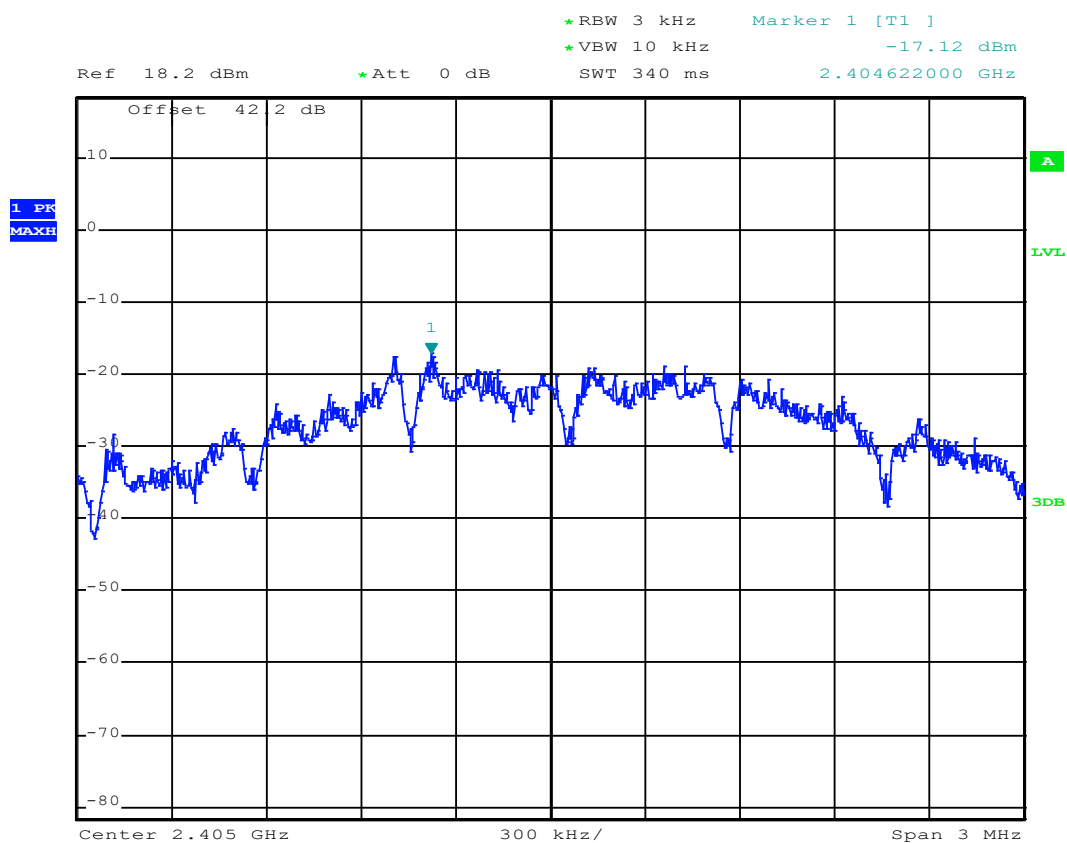
	Electro-magnetic field (dBμV/m):	Maximum Peak conducted power density (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	78.14	-17.12	1

Polarization of test antenna: Vertical (height: 150 cm)

Position of equipment: 1 (azimuth: 255 degrees)

Maximum Peak conducted power density:

$EIRP(dBm / 3 kHz) = E (dBμV/m / 3 kHz) + 20\log(D) - 104.8$; where D is the measurement distance in meters and antenna Gain = 0 dBi.



Test conclusion:

RESPECTED STANDARD

□□□ End of report, (1) appendix to be forwarded □□□

APPENDIX 1: Test equipment list

Occupied bandwidth

TYPE	MANUFACTURER	EMITECH NUMBER
Anechoic Chamber	EMITECH	8593
Turntable controller 1060C	MATURO	14736
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Antenna 3115	EMCO	8535
N-1.5M Cable	SUCOFLEX	7279
N-2M Cable	Huber + Suhner	12911
N-5M Cable	SUCOFLEX	15882
Power source FTN 2515B	Fontaine	8775
Multimeter 177	Fluke	14831
Meteo station WS-9232	La Crosse Technology	8750
Software	RS Commander	-

Band edge

TYPE	MANUFACTURER	EMITECH NUMBER
Anechoic Chamber	EMITECH	8593
Turntable controller 1060C	MATURO	14736
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Antenna 3115	EMCO	8535
N-1.5M Cable	SUCOFLEX	7279
N-2M Cable	Huber + Suhner	12911
N-5M Cable	SUCOFLEX	15882
Power source FTN 2515B	Fontaine	8775
Multimeter 177	Fluke	14831
Meteo station WS-9232	La Crosse Technology	8750
Software	BAT-EMC V3.18.0.26	0000

Peak conducted output power

TYPE	MANUFACTURER	EMITECH NUMBER
Anechoic Chamber	EMITECH	8593
Turntable controller 1060C	MATURO	14736
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Antenna 3115	EMCO	8535
N-1.5M Cable	SUCOFLEX	7279
N-2M Cable	Huber + Suhner	12911
N-5M Cable	SUCOFLEX	15882
Power source FTN 2515B	Fontaine	8775
Multimeter 177	Fluke	14831
Meteo station WS-9232	La Crosse Technology	8750
Software	BAT-EMC V3.18.0.26	0000

Radiated spurious emissions

TYPE	MANUFACTURER	EMITECH NUMBER
Anechoic Chamber	EMITECH	8593
Turntable controller 1060C	MATURO	14736
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Loop antenna 6502	EMCO	1406
Biconical antenna VHBB 9124	Schwarzbeck	8526
Log periodic antenna UHALP 9108A	Schwarzbeck	8543
Antenna 3115	EMCO	8535
Antenna SAS-572	A.H Systems	7124
Low-noise amplifier 8447D	Hewlett Packard	8511
Low-noise amplifier S005180M3201	LUCIX Corp.	12590
Low-noise amplifier S180265L3201	LUCIX Corp.	8704
N-1.5M Cable	SUCOFLEX	7279
N-2M Cable	Huber + Suhner	12911
N-5M Cable	SUCOFLEX	15882
Cable k-20cm	STORM MICROWAE	8974
Cable k-20cm	STORM MICROWAE	8975
Low pass filter LP03/1000-7GH	Filtek	4087
Reject band filter BRM50702	Microtronics	7299
Power source FTN 2515B	Fontaine	8775
Multimeter 177	Fluke	14831
Meteo station WS-9232	La Crosse Technology	8750
Software	BAT-EMC V3.18.0.26	0000

Peak conducted power spectral density

TYPE	MANUFACTURER	EMITECH NUMBER
Anechoic Chamber	EMITECH	8593
Turntable controller 1060C	MATURO	14736
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Antenna 3115	EMCO	8535
N-1.5M Cable	SUCOFLEX	7279
N-2M Cable	Huber + Suhner	12911
N-5M Cable	SUCOFLEX	15882
Power source FTN 2515B	Fontaine	8775
Multimeter 177	Fluke	14831
Meteo station WS-9232	La Crosse Technology	8750
Software	BAT-EMC V3.18.0.26	0000