

RRA-EMIESS22O609NGA-01Av0

Certification Radio test report

According to the standard:

CFR 47 FCC PART 15

Equipment under test:

**SPORT EDGE DEVICE
BOXY01**

FCC ID: 2A940-BOXY01

Company:

BALLY'S CORPORATION

Distribution: Mr FREMONT

(Company: NG-AI)

Number of pages: 29 with 1 appendix

Ed.	Date	Modified Page(s)	Technical Verification and Quality Approval	
			Name and Function	Visa
0	21-Jun-23	Creation	M. DUMESNIL, Radio Laboratory Manager	

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This document is the result of testing a specimen or a sample of the product submitted. It does not imply an assessment of the conformity of the whole manufactured products of the tested sample.
Information in italics are declared by the manufacturer/customer and are under his responsibility

DESIGNATION OF PRODUCT: *SPORT EDGE DEVICE*

Serial number (S/N): 4622-0038

Reference / model (P/N): *BOXY01*

Software version: 1.0.00027

MANUFACTURER: *NG-AI*

COMPANY CERTIFYING THE PRODUCT:

Company: BALLY'S CORPORATION

Address: 100 Westminster Street, Providence
ROHDE ISLAND 02903
UNITED STATES

Responsible: Mr MIRI

COMPANY SUBMITTING THE PRODUCT FOR TESTS:

Company: NG-AI

Address: 1, RUE FERMAND TRUFFAUT
14800 DEUVILLE
FRANCE

Responsible: Mr FREMONT

Person present during the tests: Mr Bioret (the first day)

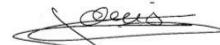
DATES OF TEST: From 5-Dec-22 to 20-Jun-23

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

TESTED AND WRITTEN BY: S. LOUIS

VISA:



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REVISIONS HISTORY

Revision	Date	Modified pages	Modifications
0	21-Jun-23	/	Creation

1. INTRODUCTION

This report presents the results of radio test carried out on the following radio equipment: **SPORT EDGE DEVICE, Model: BOXY01**, in accordance with normative reference.

The equipment under test integrates a Bluetooth Low Energy radio function.

2. PRODUCT DESCRIPTION

Class:	B
Utilization:	Residential
Antenna type and gain:	Low Channel: 1.10 dBi / integral PCB antenna Central Channel: 1.23 dBi / integral PCB antenna High Channel: 1.98 dBi / integral PCB antenna
Operating frequency range:	From 2400 MHz to 2483.5 MHz
Number of channels:	40
Channel spacing:	2MHz
Modulation:	GFSK
Power source:	3.7Vdc by lithium battery
Power settings	10dBm (adjusted by software)

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 (2022) Radio Frequency Devices

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

558074 D01 15.247 Meas Guidance v05r02

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.

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 205: Restricted bands
Paragraph 207: Conducted limits

Paragraph 207: Conducted limits

Paragraph 205: Radiated emission limit
Paragraph 212: Modular transmitter

Paragraph 212: Modular transmitter

Paragraph 215: Additional provisions to the general radiated emission limitations

Paragraph 243: 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

5. TEST EQUIPMENT CALIBRATION DATES

Emitech Number	Model	Type	Last calibration	Calibration interval (years)	Next calibration due
0	BAT-EMC V3.18.0.26	Logiciel	/	/	/
1406	EMCO 6502	Antenne cadre	08/04/2022	1	08/04/2023
4087	Filtek LP03/1000-7GH	Filtre passe-bas	25/02/2020	3	24/02/2023
4088	R&S FSP40	Analyseur de spectre	14/05/2022	2	13/05/2024
7124	A.H. Systems SAS-572	Antenne 18-26GHz	24/05/2022	3	23/05/2025
7190	R&S HL223	Antenne Log-Périodique	17/03/2022	3	16/03/2025
7240	Emco 3110	Antenne biconique	17/03/2022	3	16/03/2025
7279	SUCOFLEX SF104 N 1.5m	Câble	21/05/2022	2	20/05/2024
7299	Microtronics BRM50702	Filtre réjecteur 2,4GHz	17/08/2022	3	16/08/2025
8535	EMCO 3115	Antenne Cornet	28/04/2020	3	28/04/2023
8548	Midwest Microwave 10dB	Atténuateur	25/02/2020	3	24/02/2023
8593	SIDT Cage 2	Chambre anéchoïque	01/04/2022	3	31/03/2025
8704	LUCIX Corp S180265L3201 LNA	Amplificateur à faible bruit	26/07/2022	1	26/07/2023
8750	La Crosse Technology WS-9232	Station météo	25/10/2022	2	24/10/2024
8896	ACQUISYS GPS8	Standard de fréquence synchronisé par satellite	/	/	/
8974	STORM MICROWAE k-20cm	câble	09/12/2021	2	09/12/2023
8975	STORM MICROWAE k-20cm	câble	09/12/2021	2	09/12/2023
10730	Mini-circuit ZFL-1000LN	Amplificateur à faible bruit	30/11/2022	1	30/11/2023
12911	Huber + Suhner N-2m	câble	21/05/2022	2	20/05/2024
14736	MATURO	Contrôleur de plateau et de mât	/	/	/
14831	Fluke 177	Multimètre	01/02/2022	2	01/02/2024
15812	COMP-POWER PAM-118A	Amplificateur à faible bruit 18GHz	23/07/2022	1	23/07/2023
18413	MecHANC	câble N 5m	15/02/2022	2	15/02/2024
/	GPIBShot V2.4	Logiciel	/	/	/

6. TESTS RESULTS SUMMARY

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		Supplied by battery
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				
	(b) Unwanted emissions outside of §15.247 frequency bands	X				Note 3
	(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				Note 5
	(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 without standard connector.

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: The minimum 6 dB bandwidth of the equipment is 711 kHz.

Note 5: Conducted measurement is not possible (integral antenna), so we used the radiated method in open field.

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	± 0.8 dB
Radiated emission valid to 26 GHz	
9kHz – 30MHz	± 2.7 . dB
30MHz – 1GHz	± 5.0 dB
1GHz – 18GHz	± 5.3 dB
18GHz – 40GHz	± 6.1 dB
AC Power Lines conducted emissions	± 3.4 dB
Temperature	± 1 °C
Humidity	± 5 %

8. OCCUPIED BANDWIDTH

Temperature (°C) : 21.6

Humidity (%HR): 35

Date : December 5, 2022

Technician : S. LOUIS

Standard: FCC Part 15

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:

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:

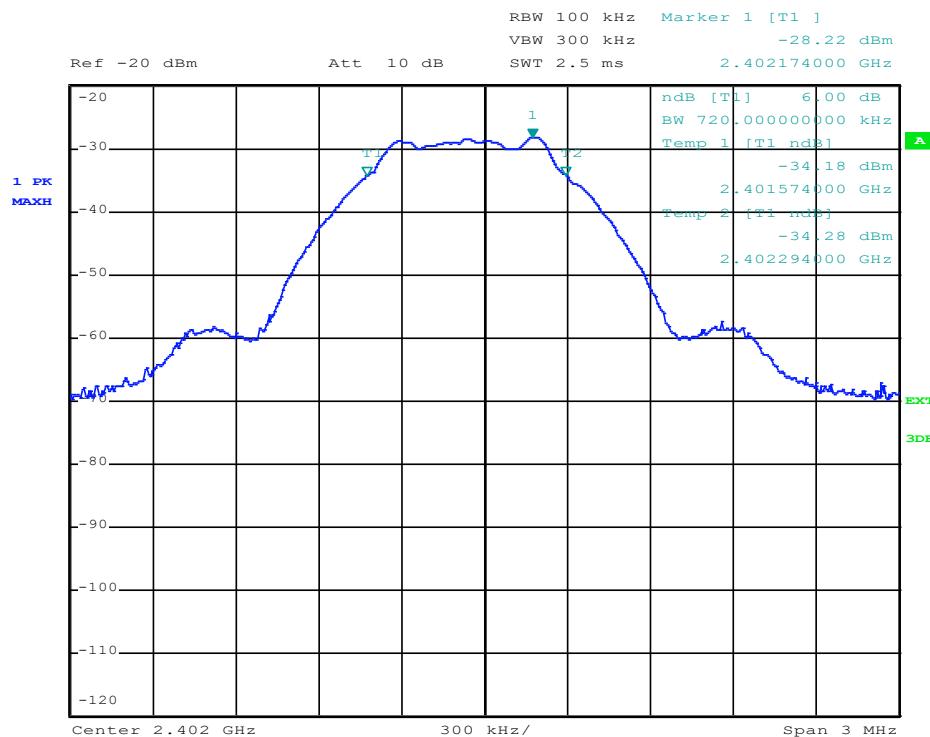
The equipment under test is blocked in continuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

We used for power source the internal 3.7Vdc lithium battery fully charged of the equipment.

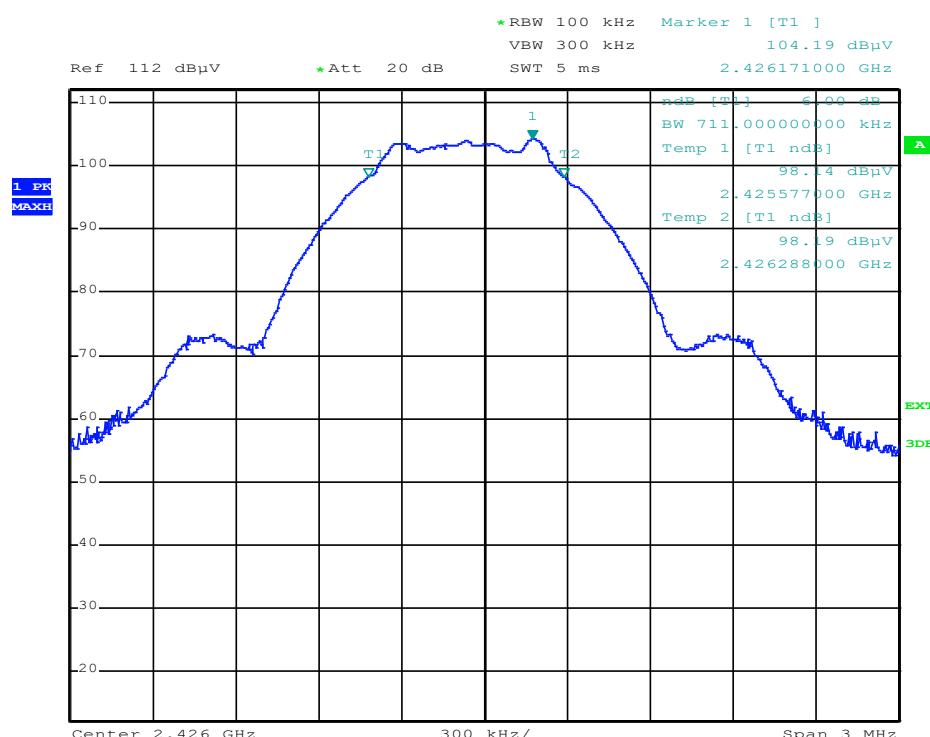
Results:

Sample N° 1

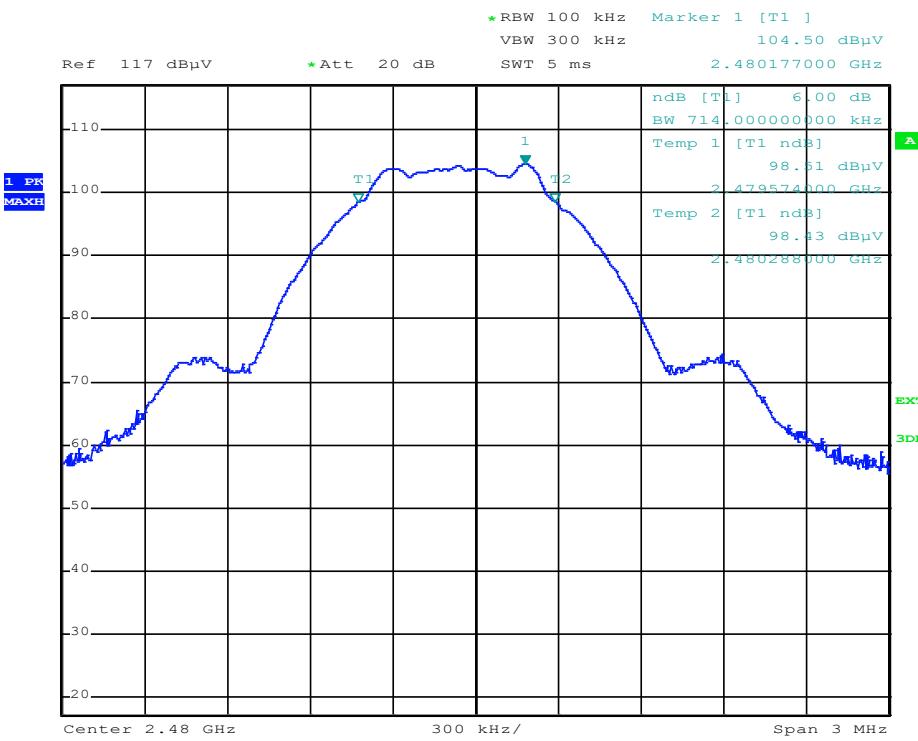
6dB bandwidth – Channel 2402 MHz



6dB bandwidth – Channel 2426 MHz

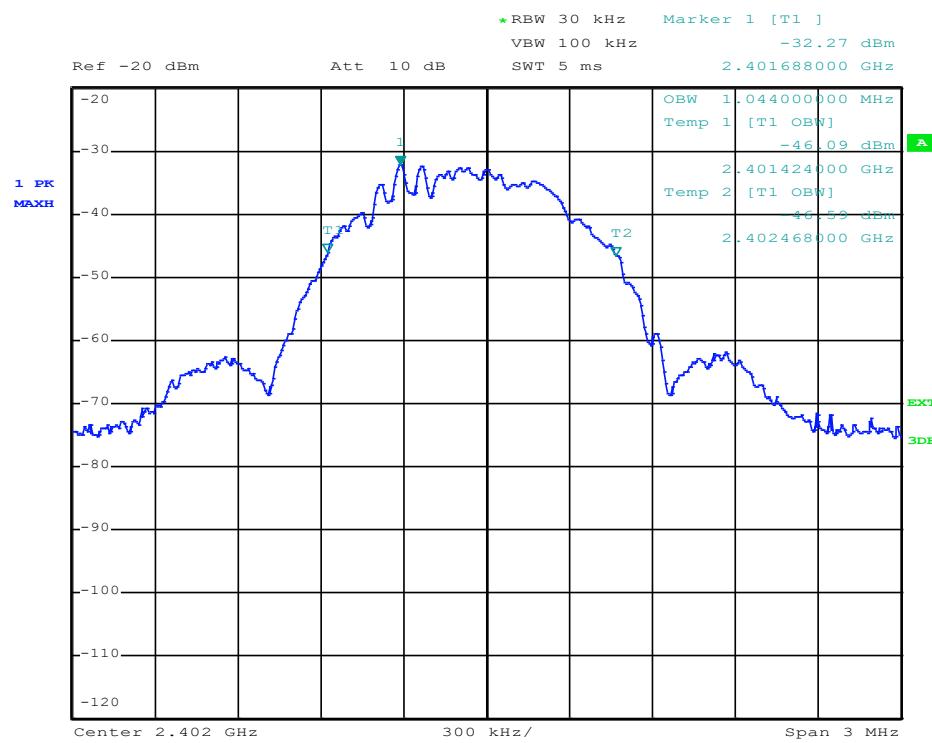


6dB bandwidth – Channel 2480 MHz

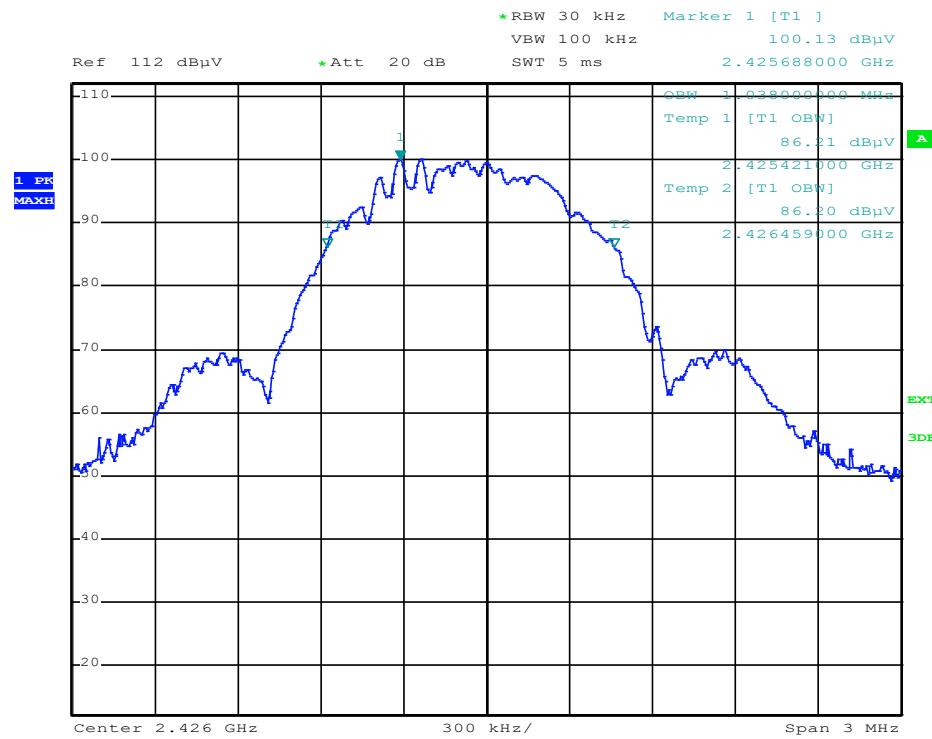

Limit:

Shall be at least 500 kHz

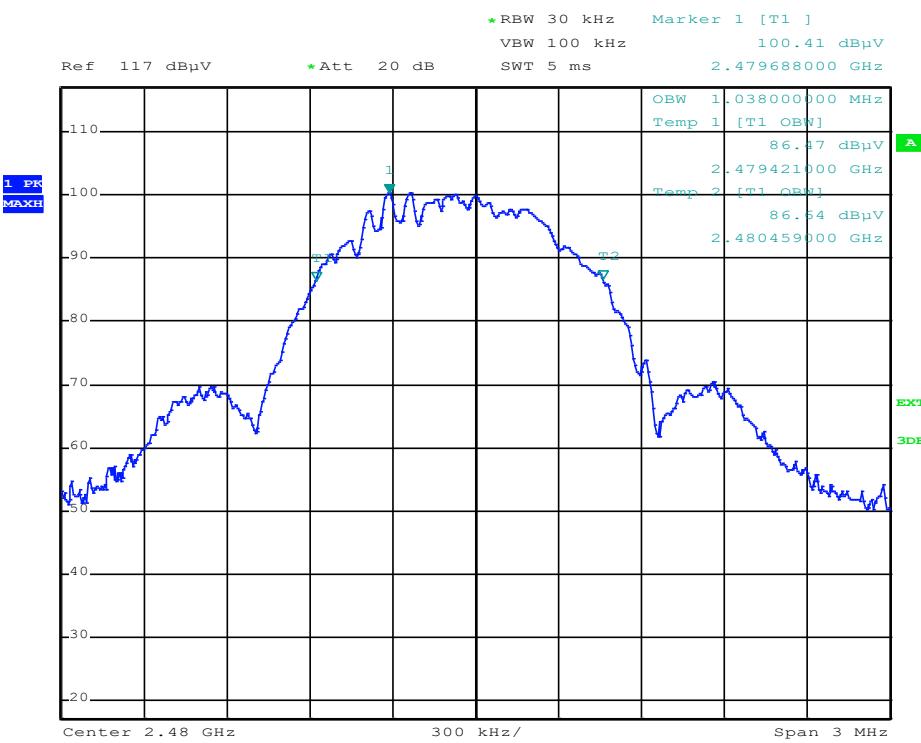
99% bandwidth – Channel 2402 MHz



99% bandwidth – Channel 2426 MHz



99% bandwidth – Channel 2480 MHz



Measure realized for reporting only

Test conclusion:

RESPECTED STANDARD

9. BAND EDGE
Temperature (°C) : 21.6
Humidity (%HR): 35
Date : December 5, 2022
Technician : S. LOUIS
Standard: FCC Part 15
Test procedure:

Method of paragraph 11.13.2 of ANSI C63.10

Method of paragraph 11.13.3 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.

We used for power source the internal 3.7Vdc lithium battery fully charged of the equipment.

Results:

Lower Band Edge: From 2400 MHz to 2402 MHz

Upper Band Edge: From 2483.5 MHz to 2485.5 MHz

Sample N° 1

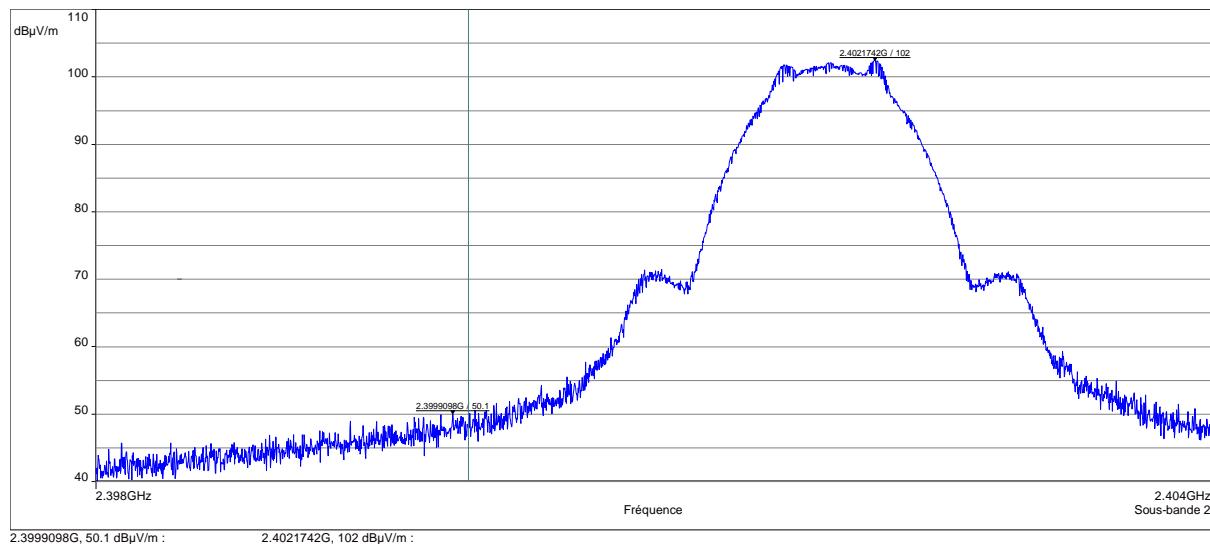
Fundamental frequency (MHz)	Field Strength Level of fundamental (dB μ V/m)	Detector (Peak or Average)	Frequency of maximum Band-edges Emission (MHz)	Delta Marker (dB) (1)	Calculated Max Out-of-Band Emission Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
2402	103.4	Peak	2399.91	-51.9	51.5	83.4	31.9
2480	104.1	Peak	2483.52	-45.8	58.3	74	15.8
2480	104.1	Average	2483.52	-56.7	47.4	54	6.6

(1) Marker-Delta method

Sample N° 1 Channel 37 (F = 2402 MHz) – BLE

LEGEND:

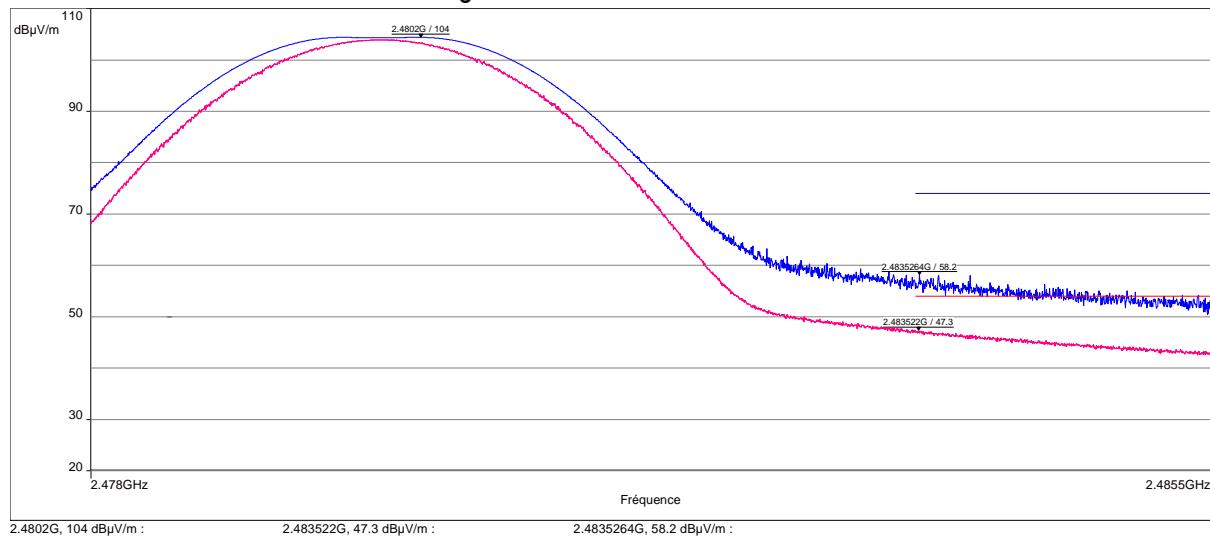
- Results obtained with 100 kHz RBW
- Blue curve represent measure with a peak detector
- Green curve are the limit of the band. (2400 MHz)



Sample N° 1 Channel 39 (F = 2480 MHz) – BLE

LEGEND:

- Results obtained with 1 MHz RBW
- Blue curve represent measure and limit with a peak detector
- Red curve: limit with average detector.
- Pink curve is the measure with average detector



Test conclusion:

RESPECTED STANDARD

10. PEAK CONDUCTED OUTPUT POWER

Temperature (°C) : 21.6

Humidity (%HR): 35

Date : December 5, 2022 a

Technician : S. LOUIS

Standard: FCC Part 15

Test procedure: paragraph 15.247 (b)

RBW \geq 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 three orthogonal planes.

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

Antenna height: 1.5 meter

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 1 MHz and video bandwidth at 3 MHz. (11.9.1.1 of ANSI C63.10)

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

EIRP(dBm) = E (dB μ V/m) + 20log(D) - 104.8; where D is the measurement distance in meters and antenna

Gain:

Low Channel: 1.10 dBi / integral PCB antenna

Central Channel: 1.23 dBi / integral PCB antenna

High Channel: 1.98 dBi / integral PCB antenna

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.

We used for power source the internal 3.7Vdc lithium battery fully charged of the equipment.

Results:
Sample N° 1 Low Channel (F = 2402 MHz)

	Electro-magnetic field at 3 (dB μ V/m):	Maximum Peak conducted output power (1)		Limit (W)
		(dBm)	(W)	
Nominal supply voltage:	103.4	7.04	0.00509	1

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

Position of equipment: Flat Position - (azimuth: 270 degrees)

(1) Maximum Peak conducted output power:

$$\text{EIRP(dBm)} = E \text{ (dB μ V/m)} + 20\log(D) - 104.8$$
; where D is the measurement distance in meters and antenna Gain = 1.10 dBi (declared by the applicant)

Sample N° 1 Central Channel (F = 2426 MHz)

	Electro-magnetic field at 3 (dB μ V/m):	Maximum Peak conducted output power (1)		Limit (W)
		(dBm)	(W)	
Nominal supply voltage:	103.6	7.14	0.00518	1

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

Position of equipment: Flat Position - (azimuth: 270 degrees)

(1) Maximum Peak conducted output power:

$$\text{EIRP(dBm)} = E \text{ (dB μ V/m)} + 20\log(D) - 104.8$$
; where D is the measurement distance in meters and antenna Gain = 1.23 dBi (declared by the applicant)

Sample N° 1 High Channel (F = 2480 MHz)

	Electro-magnetic field at 3 (dB μ V/m):	Maximum Peak conducted output power (1)		Limit (W)
		(dBm)	(W)	
Nominal supply voltage:	104.1	6.89	0.00489	1

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

Position of equipment: Flat Position - (azimuth: 270 degrees)

(1) Maximum Peak conducted output power:

$$\text{EIRP(dBm)} = E \text{ (dB μ V/m)} + 20\log(D) - 104.8$$
; where D is the measurement distance in meters and antenna Gain = 1.98 dBi (declared by the applicant)

Test conclusion:

RESPECTED STANDARD

11. RADIATED SPURIOUS EMISSIONS

Temperature (°C) : 21.6 / 22

Humidity (%HR): 35 / 33

Date : December 5, 2022 and
December 6, 2022

Technician : S. LOUIS

Standard: FCC Part 15

Test procedure: paragraph 15.205, paragraph 15.209, paragraph 15.247 (d)

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 three orthogonal planes.

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.

Frequency range: From 9 kHz to 25GHz - 10th harmonic of the highest fundamental frequency (2480MHz)

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.

We used for power source the internal 3.7Vdc lithium battery fully charged of the equipment.

Results:
Sample N° 1 Low Channel (F = 2402 MHz)

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Position	Polarization H: Horizontal V: Vertical	Field strength Measured at 3m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
7206	P	150	100	Stand up	H	57.4	84.1	26.7
9608	P	150	100	Flat	H	57.1	84.1	27.0
12010 (1)	P	150	1000	Flat	H	60.3	74	13.7
12010 (1)	Av	150	1000	Flat	H	53.4	54	0.6

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

(1) Restricted bands of operation in 15.205

Sample N° 1 Central Channel (F = 2426 MHz)

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Position	Polarization H: Horizontal V: Vertical	Field strength Measured at 3m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
7278 (1)	P	150	1000	Stand up	H	59.1	74	14.9
7278 (1)	Av	150	1000	Stand up	H	53.8	54	0.2
9704	P	150	100	Flat	H	57.6	84.1	26.5
12130 (1)	P	150	1000	Flat	H	59.9	74	14.1
12130 (1)	Av	150	1000	Flat	H	52.9	54	1.1

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

(1) Restricted bands of operation in 15.205

Sample N° 1 High Channel (F = 2480 MHz)

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	RBW (kHz)	Position	Polarization H: Horizontal V: Vertical	Field strength Measured at 3m (dB μ V/m)	Limits at 3 m (dB μ V/m)	Margin (dB)
7440 (1)	P	150	1000	Stand up	H	58.6	74	15.4
7440 (1)	Av	150	1000	Stand up	H	53.1	54	0.9
9920	P	150	100	Flat	H	61.8	84.1	22.3
12400 (1)	P	150	1000	Flat	H	58.8	74	15.2
12400 (1)	Av	150	1000	Flat	H	51.5	54	2.5

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

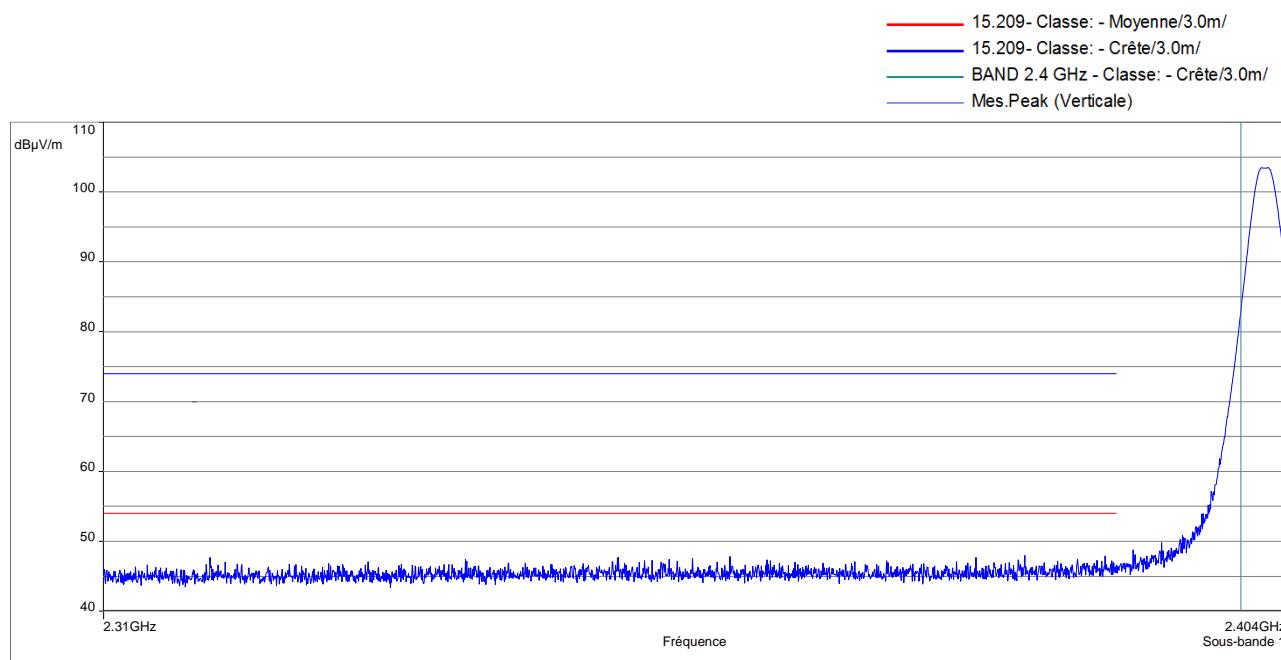
(1) Restricted bands of operation in 15.205

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 104.1 dB μ V/m on high channel.
So the applicable limit is 84.1 dB μ V/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)).

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



Test conclusion:

RESPECTED STANDARD

12. PEAK CONDUCTED POWER SPECTRAL DENSITY

Temperature (°C) : 21.6

Humidity (%HR): 35

Date : December 5, 2022

Technician : S. LOUIS

Standard: FCC Part 15

Test procedure: paragraph 15.247 (e), paragraph 15.247 (f)

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 three orthogonal planes.

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

Antenna height: 1.5 meter

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

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

Span: 4MHz

Resolution bandwidth: 3kHz

Video bandwidth: 10kHz

Detector: Peak

Number of points: 8001

Sweep time: Auto

Trace mode: MaxHold

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:

Low Channel: 1.10 dBi / integral PCB antenna

Central Channel: 1.23 dBi / integral PCB antenna

High Channel: 1.98 dBi / integral PCB antenna

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.

We used for power source the internal 3.7Vdc lithium battery fully charged of the equipment.

Results:

Sample N° 1 Low Channel (F = 2402 MHz)

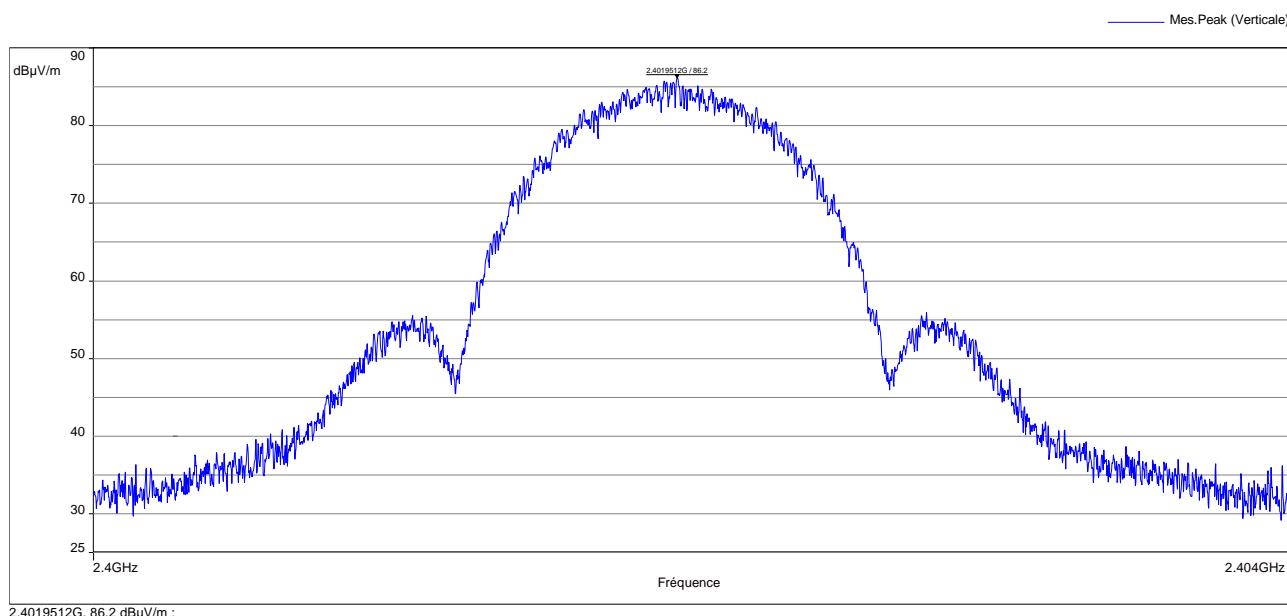
	Electro-magnetic field at 3m (dB μ V/m):	Maximum Peak conducted power density(1) (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	86.2	-10.13	8

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

Position of equipment: Flat Position - (azimuth: 270 degrees)

Maximum Peak conducted power density:

EIRP(dBm / 3 kHz) = E (dB μ V/m / 3 kHz) + 20log(D) - 104.8; where D is the measurement distance in meters and antenna Gain = 1.10 dBi.



Sample N° 1 Central Channel (F = 2426 MHz)

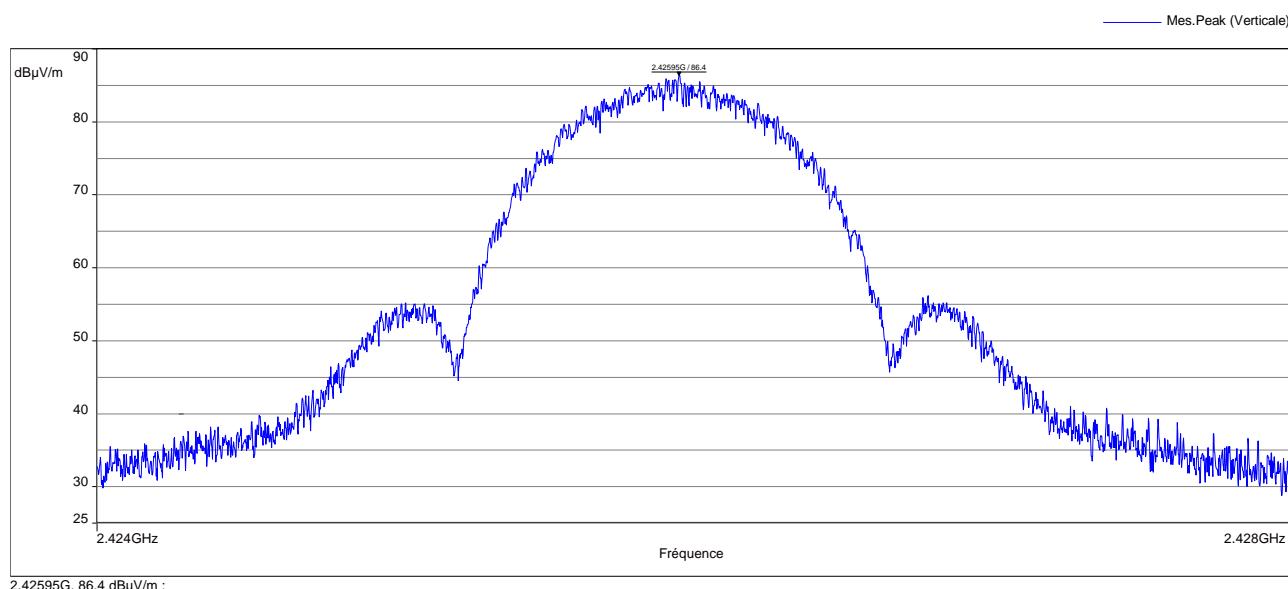
	Electro-magnetic field at 3m (dB μ V/m):	Maximum Peak conducted power density(1) (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	86.4	-10.06	8

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

Position of equipment: Flat Position - (azimuth: 270 degrees)

Maximum Peak conducted power density:

EIRP(dBm / 3 kHz) = E (dB μ V/m / 3 kHz) + 20log(D) - 104.8; where D is the measurement distance in meters and antenna Gain = 1.23 dBi.



Sample N° 1 High Channel (F = 2480 MHz)

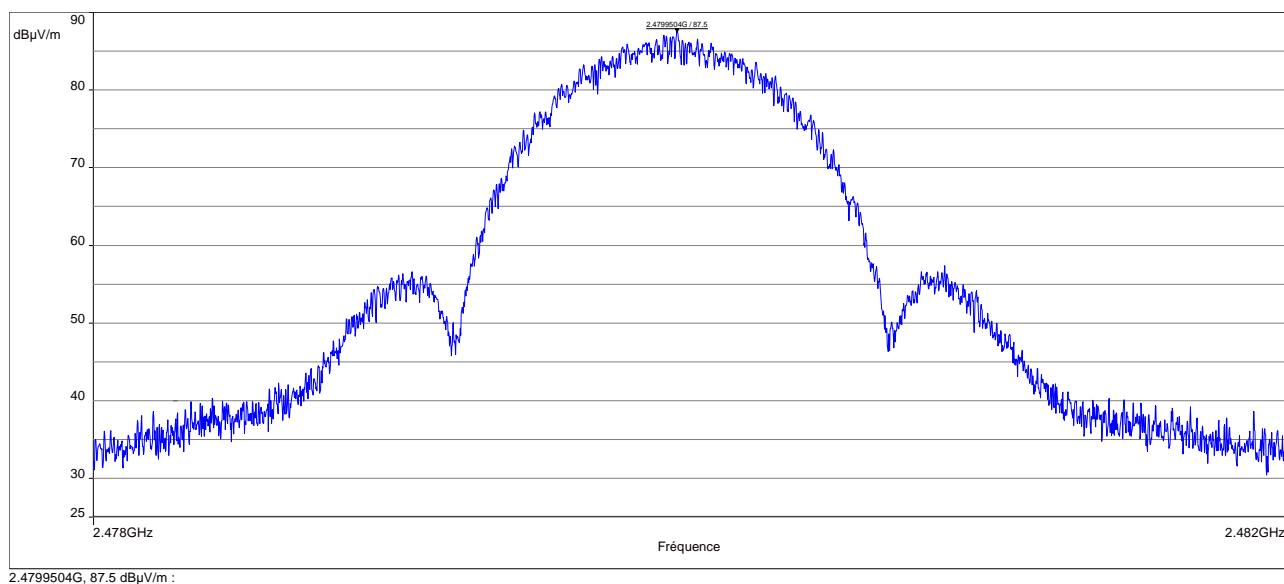
	Electro-magnetic field at 3m (dB μ V/m):	Maximum Peak conducted power density(1) (dBm / 3 kHz)	Limit (dBm / 3 kHz)
Nominal supply voltage:	87.5	-9.71	8

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

Position of equipment: Flat Position - (azimuth: 270 degrees)

Maximum Peak conducted power density:

EIRP(dBm / 3 kHz) = E (dB μ V/m / 3 kHz) + 20log(D) - 104.8; where D is the measurement distance in meters and antenna Gain = 1.98 dBi.



Test conclusion:

RESPECTED STANDARD

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

APPENDIX 1: Test equipment list

Occupied bandwidth

TYPE	MANUFACTURER	EMITECH NUMBER
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Anechoic Chamber	EMITECH	8593
Turntable controller 1060C	MATURO	14736
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Antenna 3115	EMCO	8535
Low-noise amplifier PAM-118A	COM-POWER	15812
N-1.5M Cable	SUCOFLEX	7279
N-2M Cable	Huber + Suhner	12911
N-5M Cable	Mechanc	18413
Attenuator 10dB	Midwest Microwave	8548
Multimeter 177	Fluke	14831
Meteo station WS-9232	La Crosse Technology	8750
Software	GPIBShot V2.4	/

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
Low-noise amplifier PAM-118A	COM-POWER	15812
N-1.5M Cable	SUCOFLEX	7279
N-2M Cable	Huber + Suhner	12911
N-5M Cable	Mechanc	18413
Multimeter 177	Fluke	14831
Attenuator 10dB	Midwest Microwave	8548
Meteo station WS-9232	La Crosse Technology	8750
Software	GPIBShot V2.4	/

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
Low-noise amplifier PAM-118A	COM-POWER	15812
N-1.5M Cable	SUCOFLEX	7279
N-2M Cable	Huber + Suhner	12911
N-5M Cable	Mechanc	18413
Attenuator 10dB	Midwest Microwave	8548
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 3110	Emco	7240
Log periodic antenna HL223	Rohde & Schwarz	7190
Antenna 3115	EMCO	8535
Antenna SAS-572	A.H Systems	7124
Low-noise amplifier ZFL-1000LN	Mini-circuit	10730
Low-noise amplifier PAM-118A	COM-POWER	15812
Low-noise amplifier S180265L3201	LUCIX Corp.	8704
N-1.5M Cable	SUCOFLEX	7279
N-2M Cable	Huber + Suhner	12911
N-5M Cable	Mechanc	18413
Attenuator 10dB	Midwest Microwave	8548
Cable k-20cm	STORM MICROWAE	8974
Cable k-20cm	STORM MICROWAE	8975
Low pass filter LP03/1000-7GH	Filttek	4087
Reject band filter BRM50702	Microtronics	7299
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
Low-noise amplifier PAM-118A	COM-POWER	15812
N-1.5M Cable	SUCOFLEX	7279
N-2M Cable	Huber + Suhner	12911
N-5M Cable	Mechanc	18413
Attenuator 10dB	Midwest Microwave	8548
Multimeter 177	Fluke	14831
Meteo station WS-9232	La Crosse Technology	8750
Software	BAT-EMC V3.18.0.26	0000