

RRA-EMIESS22Q230DAV-06Av0

Certification Radio test report

According to the standard:

CFR 47 FCC PART 15

RSS GEN – Issue 5

RSS 210 - Issue 10

Equipment under test:

DAVEYTRONIC PROGRAMMING UNIT PU

FCC ID: 2AUQC-PUDAVEY23

IC NUMBER: 25586-PUDAVEY23

Company:

DAVEY BICKFORD

Distribution: Mrs STOJANOVIC

(Company: DAVEY BICKFORD)

Number of pages: 25 with 2 annexes

Ed.	Date	Modified Page(s)	Technical Verification and Quality Approval	
			Name and Function	Visa
0	21-Aug-23	Creation	S. LOUIS, Radio Technician	

Duplication of this document is only permitted for an integral photographic facsimile. It includes the number of pages referenced here above.

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: *DAVEYTRONIC PROGRAMMING UNIT PU*

Serial number (S/N): 2903

Reference / model (P/N): *PU-23*

Software version: *User interface V2.6.4*
Driver V3.1.1

MANUFACTURER: *DAVEY BICKFORD*

COMPANY SUBMITTING THE PRODUCT:

Company: DAVEY BICKFORD

Address: LE MOULIN GASPARD
CHEMIN DE LA PYROTECHNIE
89550 HERY
FRANCE

Responsible: Mrs STOJANOVIC

DATE(S) OF TEST: From 17-Jul-23 to 25-Jul-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

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

TESTED BY: B. VOVARD

VISA:



WRITTEN BY: B. VOVARD

CONTENTS

TITLE	PAGE
1. INTRODUCTION	4
2. PRODUCT DESCRIPTION	4
3. NORMATIVE REFERENCE	5
4. TEST METHODOLOGY	5
5. TEST EQUIPMENT CALIBRATION DATES	6
6. TESTS RESULTS SUMMARY	7
7. MEASUREMENT UNCERTAINTY	10
8. OCCUPIED BANDWIDTH	11
9. BAND EDGE	13
10. OPERATION WITHIN THE BAND 13.110 – 14.010 MHZ	15
11. FIELD STRENGTH OUTSIDE THE BAND 13.110-14.01 MHZ	18
APPENDIX 1: PHOTOGRAPHIES OF THE EQUIPMENT UNDER TEST	20
APPENDIX 2: TEST EQUIPMENT LIST	23

REVISIONS HISTORY

Revision	Date	Modified pages	Modifications
0	17-Aug-23	/	Creation

1. INTRODUCTION

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

The device under test integrates:

- RFID Reader not already certified,

This report concerns only RFID Radio part.

The host device of certified module(s) shall be properly labeled to identify the module(s) within.

2. PRODUCT DESCRIPTION

Category of equipment (ISED): I

Class: A

Utilization: Industrial

Antenna type and gain: integral antenna (unknown gain)

Operating frequency range: From 13.11 MHz to 14.01 MHz

Number of channels: 1

Channel spacing: Not concerned

Modulation: ASK

Power source: 3.65Vdc 6800 mAh Li-Ion rechargeable battery

The radio is not operational during charge mode.

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 (2023)	Radio Frequency Devices
ANSI C63.10	2013 Procedures for Compliance Testing of Unlicensed Wireless Devices.
RSP-100	Issue 12, August 2019 Certification of Radio Apparatus and Broadcasting equipment
RSS-Gen	Issue 5, April 2018 General Requirements for Compliance of Radio Apparatus
RSS-210	Issue 10, December 2019 Licence-Exempt Radio Apparatus: Category I equipment.

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 215: Additional provisions to the general radiated emission limitations
- Paragraph 225: Operation within the band 13.110-14.010 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-210:

- Paragraph 5 – RSS-Gen compliance
- Paragraph 7 - Technical specifications
- Annex B - Devices Operating in Frequency Bands for Any Application
 - Annex B.6 Band 13.110-14.010 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	11/04/2023	1	10/04/2024
4088	R&S FSP40	Spectrum Analyzer	13/05/2022	2	12/05/2024
7190	R&S HL223	Antenna	17/03/2022	3	16/03/2025
7240	Emco 3110	Biconical antenna	17/03/2022	3	16/03/2025
7274	Hewlett Packard 6038A	Power Supply	(1)	/	(1)
7566	Testo 608-H1	Meteo station	12/12/2022	2	11/12/2024
8528	Schwarzbeck VHA 9103	Biconical antenna	19/05/2022	3	18/05/2025
8549	Midwest Microwave 20dB	Attenuator	07/03/2022	3	06/03/2025
8732	Emitech	OATS	28/03/2022	3	27/03/2025
8750	La Crosse Technology WS-9232	Meteo station	24/10/2022	1	24/10/2023
8783	EMCO 3147	Log periodic antenna	17/03/2022	3	16/03/2025
8855	EMITECH	Turntable and mat controller	/	/	/
8864	Champ libre Juigné. V3.5	Software	/	/	/
8896	ACQUISYS GPS8	Satellite synchronized frequency standard	/	/	/
9398	N-1.5m	cable	22/07/2022	2	21/07/2024
10730	Mini-circuit ZFL-1000LN	Low-noise amplifier	30/11/2022	1	30/11/2023
10759	COMTEST Cage 3	Anechoic chamber	/	/	/
10789	MATURO	Turntable and mat controller NCD	/	/	/
14303	SUCOFLEX N-2m	cable	01/12/2022	2	30/11/2024
14475	Oregon Scientific BAR206	Meteo station	11/04/2023	1	10/04/2024
14716	GMH 3710	Precision Thermometer - 30°C/+100°C	28/03/2023	1	27/03/2024
14903	Fluke 177	Multimeter	01/02/2022	2	01/02/2024
15883	SUCOFLEX	cable N 5m	08/02/2023	2	07/02/2025
15913	SUCOFLEX SF104 N 2.5m	Cable	01/12/2022	2	30/11/2024
16059	CLIMATS EXCAL ² 1411-TA	Climatic chamber	/	/	/
17008	R&S ESW44	Test receiver	08/02/2023	1	08/02/2024
//	RS Commander V1.6.4	Software	/	/	/

(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		Radio not operational in charging mode
FCC Part 15.209	RADIATED EMISSION LIMITS; general requirements	X				Note 2
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 §15.225 frequency bands	X				Note 3
	(c) 20 dB bandwidth and band-edge compliance	X				
FCC Part 15.225	OPERATION WITHIN THE BAND 13.110-14.010 MHZ					
	(a) Field strength within the band 13.553-13.567 MHz	X				
	(b) Field strength within the bands 13.410-13.553 MHz and 13.567-13.710 MHz	X				
	(c) Field strength within the bands 13.110-13.410 MHz and 13.710-14.010 MHz	X				
	(d) Field strength outside the band 13.110-14.010 MHz	X				
	(e) Carrier frequency tolerance	X				
	(f) Powered tags			X		

NAp: Not Applicable NAs: Not Asked

Note 1: Integral antenna without standard connector

Note 2: See FCC part 15.225 (d).

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

6.2 RSS-Gen requirements

Test procedure	Description of test	Criteria respected ?				Comment
		Yes	No	NAp	NAs	
Paragraph 2	General	X				
Paragraph 3	Normative publications and related documents	X				
Paragraph 4	Labelling requirements	X				
Paragraph 6	General administrative and technical requirements	X				
§ 6.7	Occupied bandwidth (or 99% emission bandwidth) and x dB bandwidth	X				
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		Not operational in charging mode
§ 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-210 requirements

Test Procedure RSS-210	Description of test	Criteria respected ?				Comment
		Yes	No	NAP	NAs	
Paragraph 5	RSS-Gen compliance	X				
Paragraph 7	Technical Specifications					
7.1	Emission Falling Within Restricted Frequency Bands	X				
7.2	General Field Strength Limits	X				
7.3	Transmitters with wanted and unwanted emissions that are within the general field strength limits	X				
7.4	Cordless Telephones			X		
Annex B	Device Operating in Frequency Bands for Any Application					
Annex B.6	Band 13.110-14.010 MHz					
(a) i	Field strength within the band 13.553-13.567 MHz	X				
(a) ii	Field strength within the bands 13.410-13.553 MHz and 13.67-13.710 MHz	X				
(a) iii	Field strength within the bands 13.110-13.410 MHz and 13.710-14.010 MHz	X				
(a) iv	Field strength outside the band 13.110-14.010 MHz	X				
(b)	Carrier frequency stability	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	$\pm 0.8\text{dB}$
Radiated emission valid to 26 GHz	
9kHz – 30MHz	$\pm 2.7. \text{ dB}$
30MHz – 1GHz	$\pm 5.0 \text{ dB}$
1GHz – 18GHz	$\pm 5.3 \text{ dB}$
18GHz – 40GHz	$\pm 6.1 \text{ dB}$
AC Power Lines conducted emissions	$\pm 3.4 \text{ dB}$
Temperature	$\pm 1 \text{ }^{\circ}\text{C}$
Humidity	$\pm 5 \%$

8. OCCUPIED BANDWIDTH

Temperature (°C) : 22

Humidity (%HR): 57

Date : July 25, 2023

Technician : B. VOVARD

Standard: FCC Part 15
RSS-210**Test procedure:**

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

Test set up:

Test realized in near field.

Settings:

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

Test operating condition of the equipment:

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

Power source: 3.65 Vdc by an external power supply

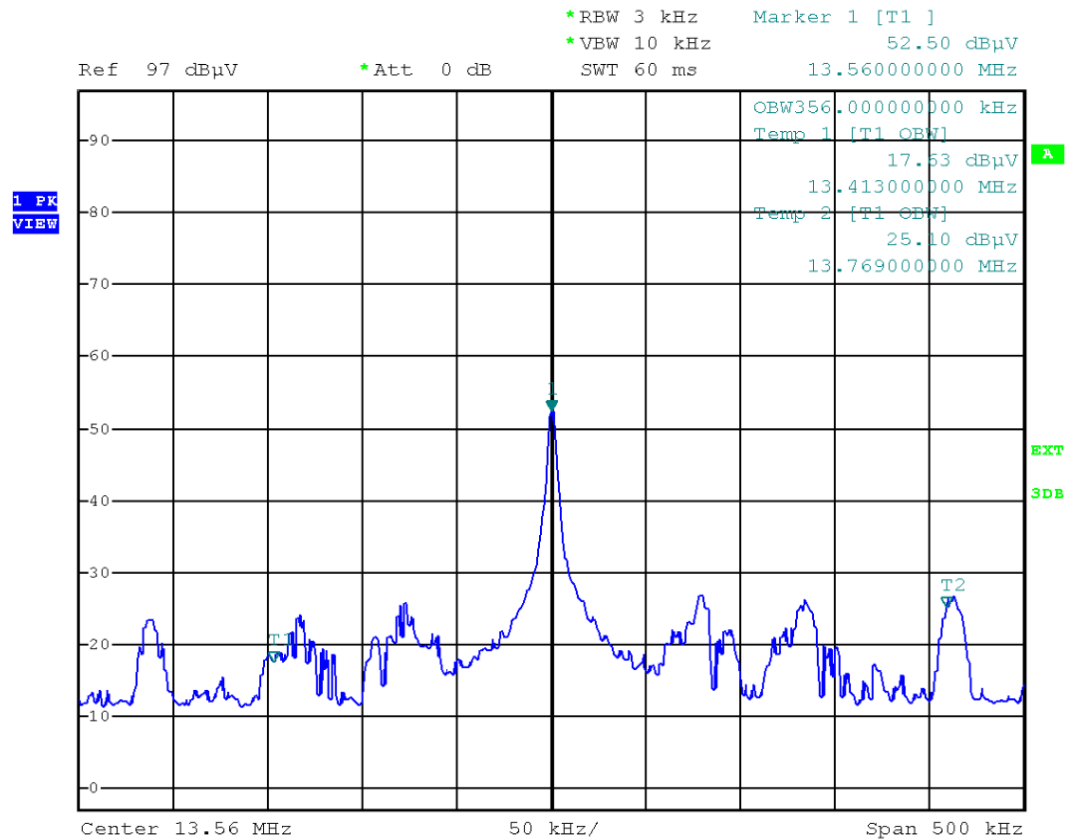
Percentage of voltage variation during the test (%):

 ± 1

Results:

Sample N° 1

99% bandwidth



Limit:

Measure realized for reporting only

9. BAND EDGE**Temperature (°C) :** 22**Humidity (%HR):** 57**Date :** July 25, 2023**Technician :** B. VOVARD**Standard:** FCC Part 15**Test procedure:**

For FCC Part 15: § 15.215

Method of § 6.10.6 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 discontinuous modulated transmission mode, at the highest output power level at which the transmitter is intended to operate.

Power source: 3.65 Vdc by an external power supply

Percentage of voltage variation during the test (%):

 ± 1

Results:

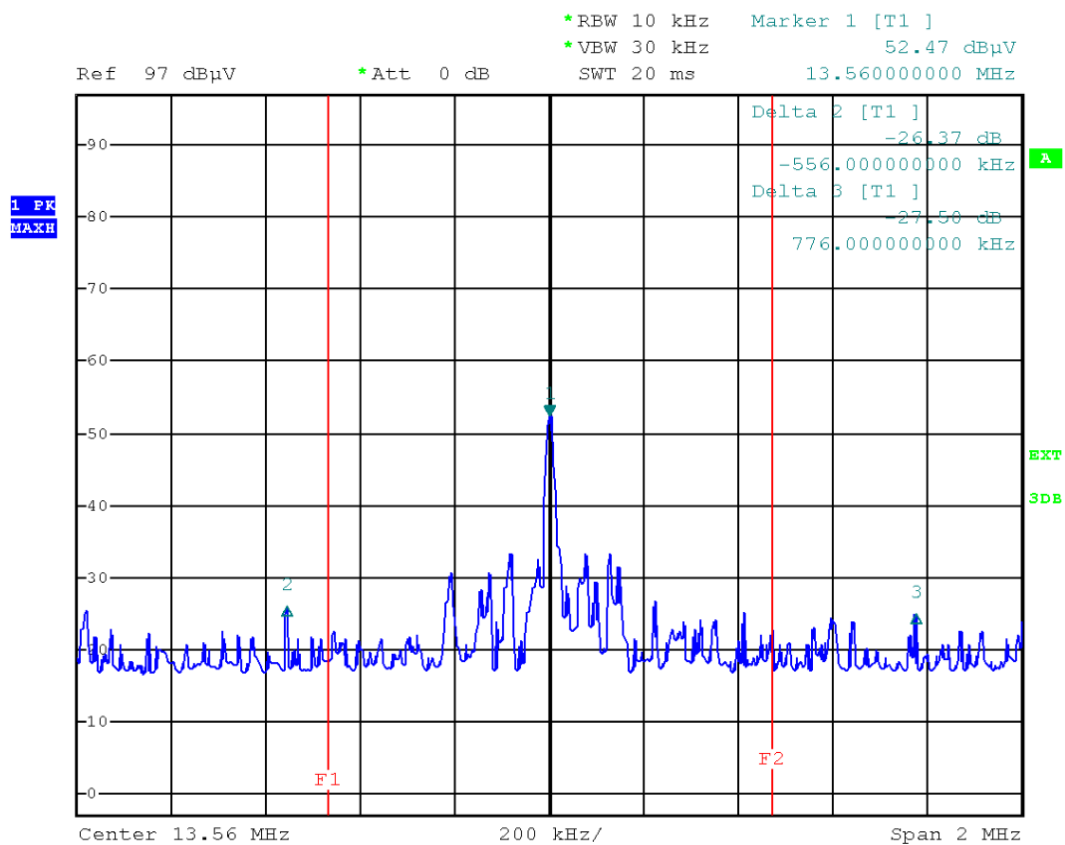
Lower Band Edge: From 13.090 MHz to 13.110 MHz

Upper Band Edge: From 14.010 MHz to 14.030 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 (dBμV/m)	Margin (dB)
13.56	32.84	Peak	13.004	-26.37	6.47	48.63	42.16
13.56	32.84	Peak	14.336	-27.50	5.34	48.63	43.29

(1) Marker-Delta method



Test conclusion:

RESPECTED STANDARD

10. OPERATION WITHIN THE BAND 13.110 – 14.010 MHZ**Temperature (°C) :** 22 to 26**Humidity (%HR):** 43 to 57**Date :** July 18, 2023 to July 25, 2023**Technician :** B. VOVARD**Standard:** FCC Part 15
RSS-210**Test procedure:**

For FCC Part 15: § 15.209, § 15.225 (a), (b), (c), (e)

For RSS-210: § Annex B.6 (a), (b), (c)

Method of § 6.3 of ANSI C63.10

Method of § 6.4 of ANSI C63.10

Method of § 6.8 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 an open area test site (OATS). The EUT is placed on a rotating table, 0.8 m from a ground plane. Zero degree azimuth corresponds to the front of the equipment under test.

See photos in appendix 2

The frequency stability measure is realized in near-field with the product in a climatic chamber.

Detection mode: Quasi-peak ($F < 1$ GHz)**Bandwidth:** 9 kHz ($150 \text{ kHz} < F < 30\text{MHz}$)**Distance of antenna:** 10 meters**Antenna height:** 1 meter**Antenna polarization:** oriented in the vertical plane. The lowest point of the loop is 1m above ground level.**Equipment under test operating condition:**

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

We used for power source the internal battery of the equipment and we noted:

Voltage at the beginning of test (Vdc): 3.72

Voltage at the end of test (Vdc): 3.61

Percentage of voltage drop during the test (%): 2.95

For Climatic Chamber :

Power source: 3.65 Vdc by an external power supply

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

Results:

Sample N° 1:

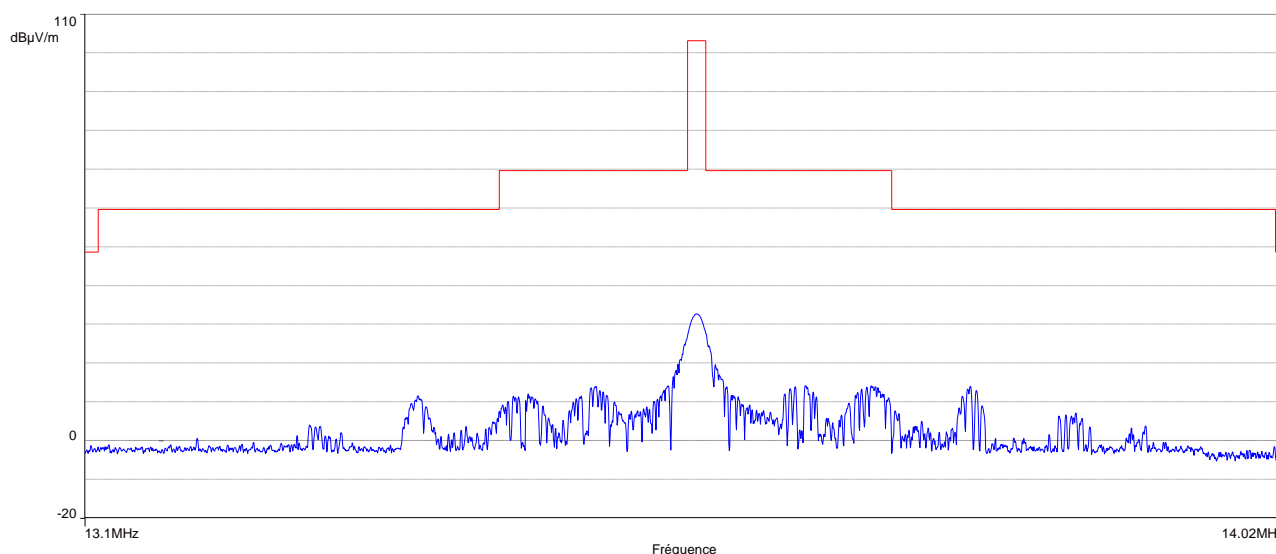
Carrier field strength

	Field strength (dB μ V/m) at frequency: 13.56 MHz
Normal test conditions measure at 10 m	32.84
Normal test conditions correlated at 30 m	13.76
Limits at 30m (dB μ V/m)	84
Margin (dB)	70.24

Polarization of test antenna: perpendicular at the equipment at 0 degree.

Position of equipment: Position 2 - see photos in appendix 2 (azimuth: 250°)

Field strength within the band 13.110-14.010 MHz



Frequency stability

Results for temperature variation

Realized with a power source at 3.65Vdc by an external source.

Temperature (°C)	Measure at startup		Measure at 2 min		Measure at 5 min		Measure at 10 min		Drift limit (kHz)
	Frequency measured (MHz)	Frequency drift (kHz)	Frequency measured (MHz)	Frequency drift (kHz)	Frequency measured (MHz)	Frequency drift (kHz)	Frequency measured (MHz)	Frequency drift (kHz)	
50	13.560156	0.156	13.560156	0.156	13.560158	0.158	13.560156	0.156	± 1.356 (a)
40	13.560136	0.136	13.560154	0.154	13.560156	0.156	13.560158	0.158	
30	13.560160	0.160	13.560160	0.160	13.560164	0.164	13.560158	0.158	
20	13.560160	0.160	13.560172	0.172	13.560176	0.176	13.560182	0.182	
10	13.560180	0.180	13.560182	0.182	13.560182	0.182	13.560184	0.184	
0	13.560184	0.184	13.560184	0.184	13.560192	0.192	13.560194	0.194	
-10	13.560196	0.196	13.560201	0.201	13.560202	0.202	13.560206	0.206	
-20	13.560202	0.202	13.560206	0.206	13.560206	0.206	13.560202	0.202	

(a) ±0.01% of the operating frequency

Results for power supply variation

Realized at +20 °C

Power supply (Vac)	Frequency measured (MHz)	Frequency drift (kHz)	Drift limit (kHz)
3.1025	13.560182	0.182	± 1.356 (b)
3.65	13.560182	0.182	
4.1978	13.560182	0.182	

(b) ±0.01% of the operating frequency

Test conclusion:

RESPECTED STANDARD

11. FIELD STRENGTH OUTSIDE THE BAND 13.110-14.01 MHZ**Temperature (°C) :** 24 to 25**Humidity (%HR):** 43**Date :** July 18, 2023 and July 19, 2023**Technician :** B. VOVARD**Standard:** FCC Part 15**Standard:** FCC Part 15
RSS-210**Test procedure:**

For FCC Part 15: § 15.209, § 15.225 (d)

For RSS-210: § Annex B.6 (d)

Method of § 6.3 of ANSI C63.10

Method of § 6.4 of ANSI C63.10

Method of § 6.5 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.

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.

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

See photos in appendix 2.

Frequency range: From 9 kHz to 140MHz - 10th harmonic of the highest fundamental frequency (13.56MHz)**Detection mode:** Quasi-peak (F < 1 GHz)**Bandwidth:** 200Hz (9 kHz < F < 150kHz)

9 kHz (150 kHz < F < 30MHz)

120 kHz (30 MHz < F < 1 GHz)

Distance of antenna: 10 meters (in open area test site)**Antenna height:** 1 to 4 meters (in open area test site)**Antenna polarization:** vertical and horizontal (only the highest level is recorded)

Equipment under test operating condition:

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

We used for power source the internal battery of the equipment and we noted:

Voltage at the beginning of test (Vdc): 3.72

Voltage at the end of test (Vdc): 3.60

Percentage of voltage drop during the test (%): 3.22

Results:

Sample N° 1:

Below 30 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	Azimuth (degree)	RBW (kHz)	Polarization (Parallel Perpendicular Horizontal)	Field strength Measured at 10 m (dBμV/m)	Field strength Computed at 30 m (dBμV/m)	Limits (dBμV/m)	Margin (dB)
27.12	P	100	0	10	Perpendicular	26.50	7.42	29.54	22.11

Above 30 MHz

Frequencies (MHz)	Detector P QP Av	Antenna height (cm)	Position	RBW (kHz)	Polarization H: Horizontal V: Vertical	Field strength Measured at 10 m (dBμV/m)	Field strength Computed at 3 m (dBμV/m)	Limits (dBμV/m) or (dBm)	Margin (dB)
40.68	P	120	3	100	V	25.3	35.76	40	4.24
54.24	P	120	3	100	V	25.4	35.86	40	4.14
67.8	P	120	2	100	V	18.14	28.6	40	11.4
81.36	P	120	1	100	V	14.87	25.33	40	14.67
122.04	P	120	2	100	V	18.16	28.62	43.5	14.88

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

Applicable limits:

for 9 kHz ≤ F ≤ 490 kHz :	2400/F(kHz) at 300 meters
for 490 kHz < F ≤ 1.705 MHz :	24000/F(kHz) at 30 meters
for 1.705 MHz < F ≤ 30 MHz :	29.5 dBμV/m at 30 meters
for 30 MHz < F ≤ 88 MHz :	40 dBμV/m at 3 meters
for 88 MHz < F ≤ 216 MHz :	43.5 dBμV/m at 3 meters
for 216 MHz < F ≤ 960 MHz :	46 dBμV/m at 3 meters
Above 960 MHz :	54 dBμV/m at 3 meters

Test conclusion:

RESPECTED STANDARD

□□□ End of report, 2 appendixes to be forwarded □□□

APPENDIX 1: Photographies of the equipment under test

General view







APPENDIX 2: Test equipment list

Occupied bandwidth

TYPE	MANUFACTURER	EMITECH NUMBER
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Attenuator 20dB	Midwest Microwave	8549
Climatic chamber EXCAL ² 1411-TA	CLIMATS	16059
Power source 6038A	Hewlett Packard	7274
Multimeter 177	Fluke	14903
Meteo station WS-9232	La Crosse Technology	8750
Software RS Commander	Rohde et Schwarz	//

Band edge

TYPE	MANUFACTURER	EMITECH NUMBER
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Attenuator 20dB	Midwest Microwave	8549
Climatic chamber EXCAL ² 1411-TA	CLIMATS	16059
Power source 6038A	Hewlett Packard	7274
Multimeter 177	Fluke	14903
Meteo station WS-9232	La Crosse Technology	8750
Software RS Commander	Rohde et Schwarz	//

Operation within the band 13.110 – 14.010 MHz

TYPE	MANUFACTURER	EMITECH NUMBER
Open test site	EMITECH	8732
Turntable and mat controller	EMITECH	8855
Full anechoic chamber	EMITECH	10759
Turntable and mat controller NCD	MATURO	10789
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Test receiver ESW44	Rohde & Schwarz	17008
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Loop antenna 6502	EMCO	1406
Climats EXCAL ² 1411-TA	CLIMATS	16059
Precision thermometer GMH 3710	GHM Greisinger	14716
N-1.5M Cable	SUCOFLEX	9398
N-2M Cable	SUCOFLEX	14303
N-5M Cable	SUCOFLEX	15883
N-2.5M Cable	H & S	15913
Power source 6038A	Hewlett Packard	7274
Multimeter 177	Fluke	14903
Meteo station 608-H1	Testo	7566
Meteo station WS-9232	La Crosse Technology	8750
Meteo station BAR206	Oregon Scientific	14475
Software	BAT-EMC V3.18.0.26	0000
Software	Champ libre Juigné. V3.5	8864

Field strength outside the band 13.110-14.010 MHz

TYPE	MANUFACTURER	EMITECH NUMBER
Open test site	EMITECH	8732
Turntable and mat controller	EMITECH	8855
Full anechoic chamber	EMITECH	10759
Turntable and mat controller NCD	MATURO	10789
Satellite synchronized frequency standard GPS8	ACQUISYS	8896
Test receiver ESW44	Rohde & Schwarz	17008
Spectrum Analyzer FSP40	Rohde & Schwarz	4088
Loop antenna 6502	EMCO	1406
Biconical antenna VHA 9103	Schwarzbeck	8528
Biconical antenna 3110	Emco	7240
Log periodic antenna 3147	EMCO	8783
Log periodic antenna HL223	Rohde & Schwarz	7190
Low-noise amplifier ZFL-1000LN	Mini-circuit	10730
N-1.5M Cable	SUCOFLEX	9398
N-2M Cable	SUCOFLEX	14303
N-5M Cable	SUCOFLEX	15883
N-2.5M Cable	H & S	15913
Power source 6038A	Hewlett Packard	7274
Multimeter 177	Fluke	14903
Meteo station 608-H1	Testo	7566
Meteo station BAR206	Oregon Scientific	14475
Software	BAT-EMC V3.18.0.26	0000
Software	Champ libre Juigné. V3.5	8864