This test report cancels and replaces RR-EVE-24D574-4A Ed.0

Test report issued under the responsibility of:

EMITECH MONTPELLIER laboratory

US-EU MRA Designation Number: FR0006 Registration Number: 954701

Canadian CAB Identifier: FR0003 Registration Number: 4379C

RADIO TEST REPORT

FCC 47 CFR PART 15.247: November 2024
RSS-247, Issue 4: July 2025
ANSI C 63.10: 2020

Company ..... :	**STID**
Address..... :	20 PARC D'ACTIVITES DES PRADEAUX 13850 GREASQUE FRANCE

Test item description. ..... :	**RFID radio module included in UHF RFID full range reader**
Trade Mark. ..... :	Spectre Module Access / Spectre Lecteur Access
Manufacturer..... :	STID
Model/Type reference..... :	MUF / MUF included in SLA-W5X
Relevant product family ..... :	Hosts : *SLA-W5X, SLA-R5X, SMA-W5X, SMA-R5X, SLI-W5X, SMI-W5X, SLE-W5X, SME-W5X,*
FCC ID..... :	OVNMUF
IC. ..... :	10520A-MUF
Ratings..... :	9 VDC to 36 VDC

Testing Laboratory ..... :	**EMITECH MONTPELLIER laboratory**
Address..... :	145 rue de Massacan 34740 VENDARGUES FRANCE

Report Reference No..... :	**RR-EVE-24D574-4A**
Test procedure. ..... :	FCC IC Certification
Diffusion..... :	Mr BOALLAL
Applicant's name. ..... :	STID
Date of issue..... :	July 31, 2026
Total number of pages..... :	49
Revision. ..... :	1
Compiled by..... :	Morgan PATEY
Approved by (+ signature). ..... :	Olivier HEYER (Deputy Laboratory Manager)

Duplication of this test report 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.

TESTING ACCREDITATIONS N° 1-7460
LIST OF ACCREDITED SITES AND SCOPE
AVALAIBLE ON WWW.COFRAC.FR

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REVISION HISTORY:

Revision	Date	Modified pages	Modifications
0	July 6, 2026	/	Creation
1	July 31, 2026	1 and 4	Change to the publication date of RSS 247 (updated to Edition 4) and addition of host devices from the product family (Relevant product family)

1. GENERAL INFORMATIONS

This document submits the results of Radio tests performed on the equipment **UHF RFID full range reader SLA-W5X** (denominated hereafter E.U.T.: equipment under test) according to document(s) listed in §2 of this test report.

TESTING PROCEDURE AND TESTING LOCATION:	
Testing Location ..... :	EMITECH MONTPELLIER laboratory
Address. ..... :	145 rue de Massacan 34740 VENDARGUES FRANCE
Test procedure. ..... :	FCC IC Certification
Tested by ..... :	Morgan PATEY
Test supervisor ..... :	None
Date of receipt of test item ..... :	N/A
Date (s) of performance of tests ..... :	From April the 18th to September the 24st of 2025
APPLICANT'S GENERAL INFORMATIONS:	
Company name ..... :	STID
Company address. ..... :	20 PARC D'ACTIVITES DES PRADEAUX 13850 GREASQUE FRANCE
Person(s) present during the tests. ..... :	No representative for company attended the tests.
Responsible. ..... :	Mr BOALLAL

GENERAL REMARKS:

The information in italics is declared by the manufacturer and is under his responsibility
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.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.
Throughout this report the decimal separator is point.

POSSIBLE TEST CASE VERDICTS:

Test case does not apply to the test object.:	N/A
Test case not performed..... :	N/P
Test object does meet the requirement..... :	P (Pass)
Test object does not meet the requirement. ..... :	F (Fail)

DEFINITIONS AND ABBREVIATIONS:

E.U.T.	Equipment Under Test	AE	Ancillary Equipment	Pk	Peak detector
RBW	Resolution BandWidth	VBW	Video BandWidth	QP	Quasi-peak detector
FSOATS	Free Space Open Area Test Site	FAR	Full Anechoic Room	Av	Average detector
VP	Vertical Polarization	HP	Horizontal Polarization	RMS	Root Mean Square
RF	Radio Frequency	N.T.R	Nothing To Report	N/C	Not Communicated
SAC	Semi Anechoic Chamber				

2. REFERENCE DOCUMENT(S)

NORMATIVE REFERENCES:
The following referenced documents are necessary for the application of the present test report. **FCC 47 CFR PART 15: November 2024** Code of federal regulations – Title 47 telecommunication - Part 15 - Radio frequency devices **FCC 47 CFR PART 15.247: November 2024** Operation within the bands 902 928 MHz, 2400 2483.5 MHz, and 5725 5850MHz. (frequency hopping and digitally modulated) **ANSI C63.10: 2020** American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices **RSS-247, Issue 4: July 2025** Digital Transmission Systems, Frequency Hopping Systems and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands **RSS-GEN, Issue 5: April 2018 / AMD1: 2019 / AMD2: 2021** General requirements and Information for the Certification of radio Apparatus Although the product standard uses obsolete technical standards, the latest versions of standards achievable by the laboratory will be used for testing.
INFORMATIVE REFERENCES:
The following referenced documents are not necessary for the application of the present test report but they assist the user with regard to a particular subject area.

3. EQUIPMENT TECHNICAL DESCRIPTION

3.1. Test Conditions

Test item description. ..... :	RFID radio module included in UHF RFID full range reader
Model/Type reference..... :	MUF / MUF included in SLA-W5X
Trade Mark. ..... :	Spectre Module Access / Spectre Lecteur Access
Serial number (S/N)..... :	Not communicated
Part number (P/N). ..... :	Not communicated
Software version..... :	*Not communicated*
Firmware version..... :	*SA281A01*
Type of sample..... :	Pre-serial
Function(s)..... :	UHF RFID reader
Manufacturer name. ..... :	STID
Address. ..... :	20 PARC D'ACTIVITES DES PRADEAUX 13850 GREASQUE FRANCE

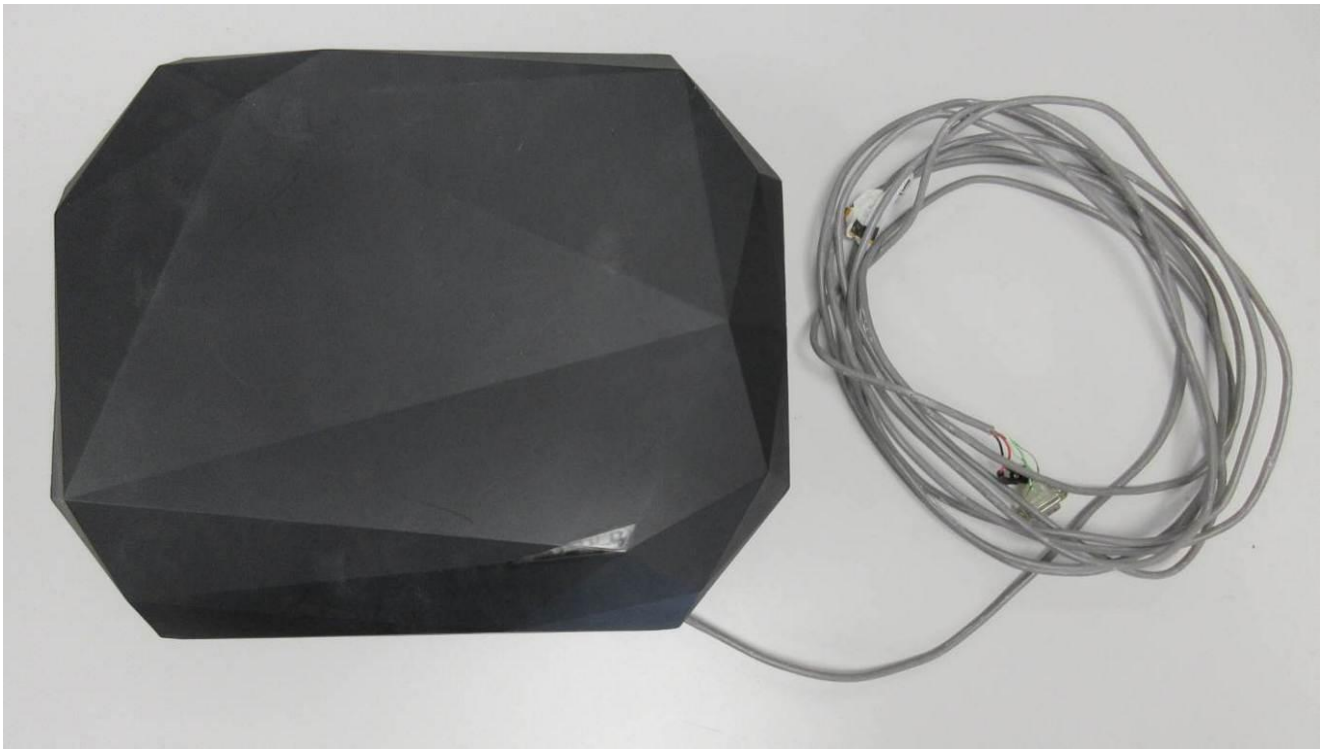
General product information:

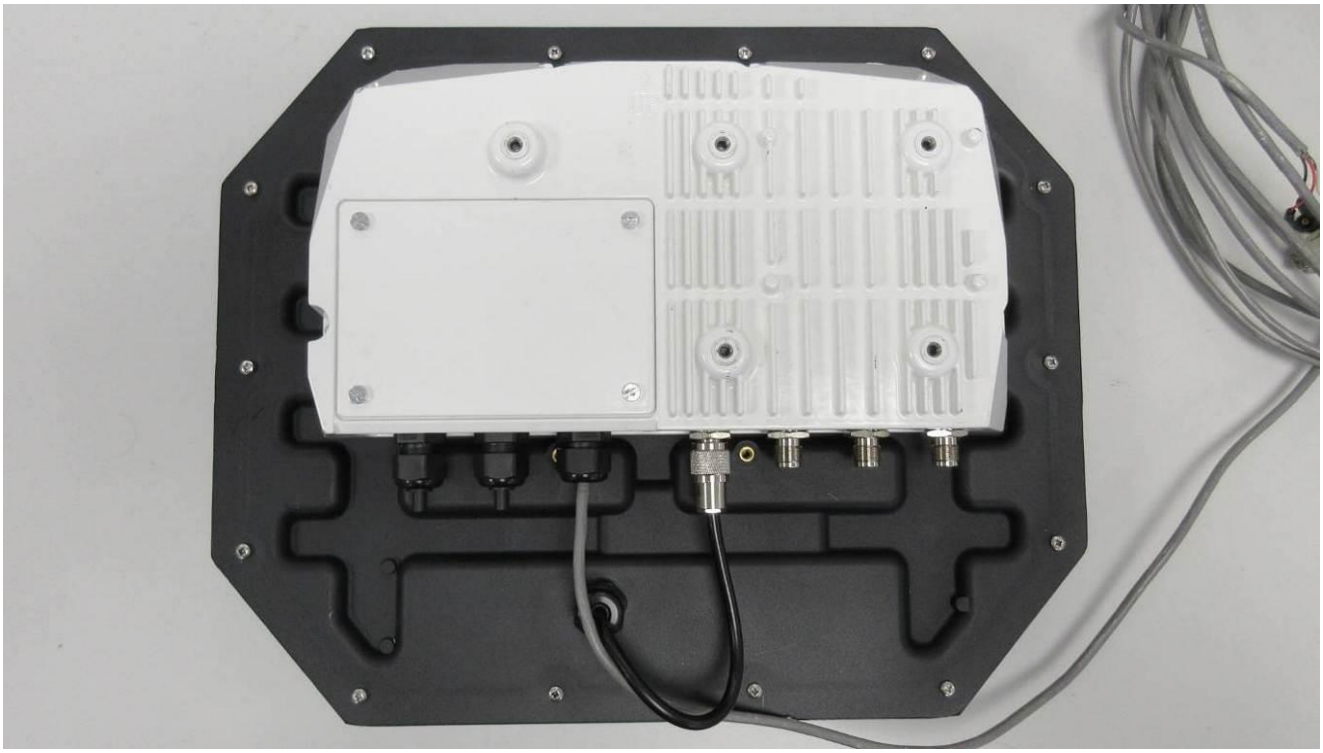
N/A

3.2. E.U.T. Marking plate

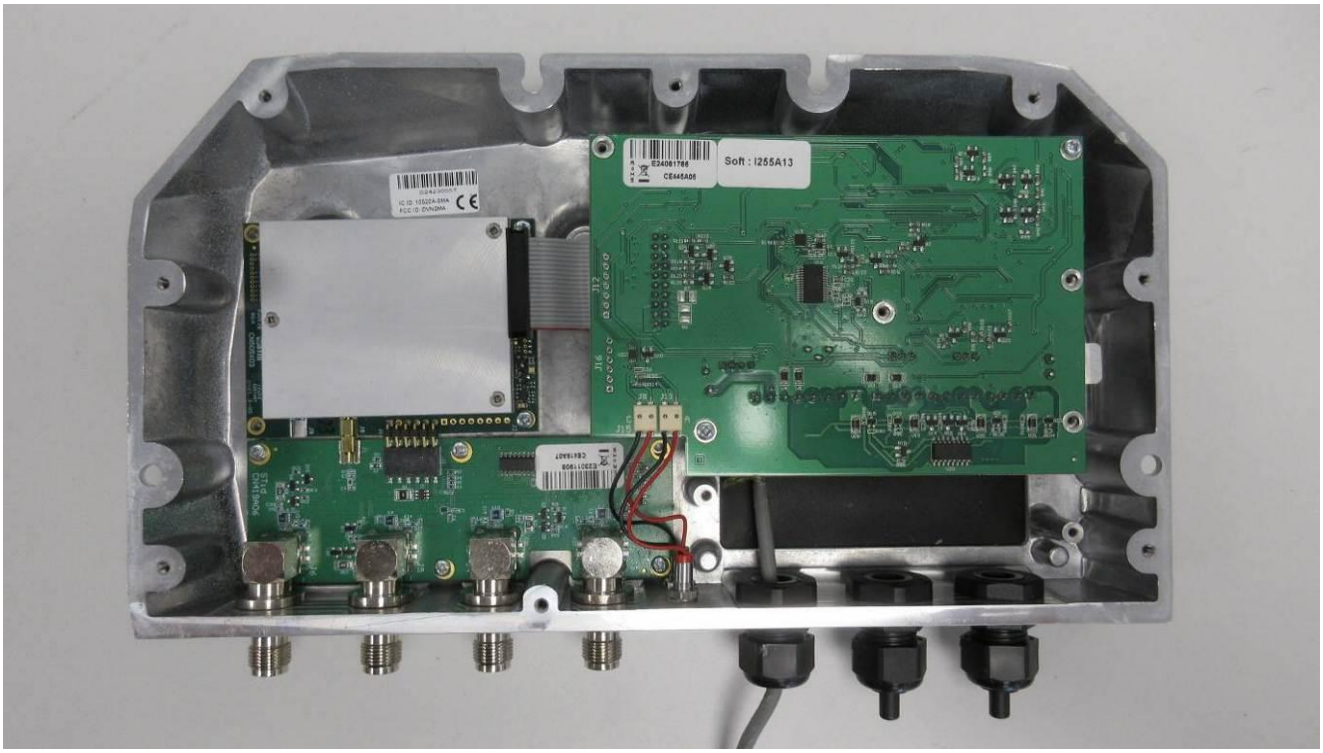
The EUT didn't have its marking plate during testing.
Please refer to the certification documentations.

3.3. E.U.T. General view





3.4. E.U.T. Internal view & Electronic board



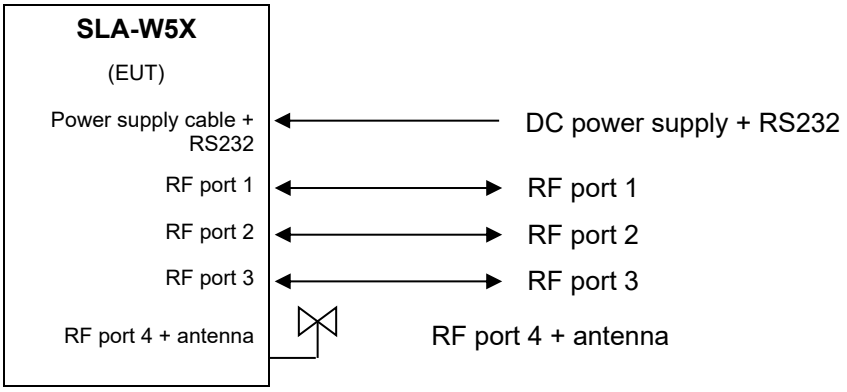
3.5. E.U.T. Mechanical and Electrical Design

Power supply. ..... :	*12 VDC*
Power supply range..... :	*9 VDC to 36 VDC*
Power type..... :	*DC*
Power (W)..... :	*Not communicated*
Nominal current (A). ..... :	*0.6*
Dimensions (L x W x H) (m). ..... :	*0.272 x 0.150 x 0.044*
Weight (kg). ..... :	*<1.5kg*
Temperature range (°C). ..... :	*-25 to +60*
Ground bounding strap..... :	*No*

Comments:

N/A

3.6. E.U.T. Input/Output ports



PORT	NAME	TYPE	LENGTH	CABLE TYPE	COMMENTS
0	Main frame	N/E	N/A	Metallic	N/A
1	DC power supply + RS232	DC	> 3m	Shielded	12 VDC + RS232
2	RF port 1	RF	N/A	N/A	N/A
3	RF port 2	RF	N/A	N/A	N/A
4	RF port 3	RF	N/A	N/A	N/A
5	RF port 4 + antenna	RF	N/A	N/A	868 MHz

AC/DC :	AC/DC Converter port	AC .....:	Alternative current port	DC ..... :	Direct current port
I/O .....:	Input or Output port	TP.....:	Telecommunication port	RF..... :	Radio frequency port
N/E .....:	Non Electrical port				

3.7. Supporting Equipment Used During Test

Sample subject to the tests was tested with following equipment.

Product Type	Manufacturer	Model	N°Emitech / Comments
Laptop	XPS	Not communicated	Used to set EUT operation modes through RS232
AC/DC block	MEAN WELL	GE40I12-P1J	Used as EUT's power supply for AC main conducted measurement

Laptop (AE)

AC/DC block (AE)

3.8. EUT Radio Specifications

a) General Informations
According to manufacturer's declarations : EUT type..... : *Transceiver* Technology ..... : *RFID UHF* Environmental profile..... : *Data transmissions* Temperature range..... : *-25°C to +60°C* Antenna type ..... : *Circular* Antenna Gain..... : *7.28 dBi (antenna + 12m cable)* **Comments:** *All tests were conducted on the RF port identified as the worst-case (Port 4).* *Software Tx RF power was set to the value 290.*
b) Transmitter Parameters (Tx)
Frequency bands..... : *902 MHz to 928 MHz* RF Power..... : *30 dBm (1 W)* Number of channels / Separation..... : *50 / 500 kHz* Modulation type ..... : *AM* Duty cycle ..... : *Not communicated* Tested frequency..... : *902.75 MHz (low channel)* *915.75 MHz (mid. channel)* *927.25 MHz (high channel)*
c) Receiver Parameters (Rx)
Frequency bands..... : *902 MHz to 928 MHz*

4. RESULT SUMMARY

TEST DESIGNATION	SEVERITY	VERDICT	BASIC STANDARDS / COMMENTS
SUBPART A - GENERAL			
Labeling requirements		PASS	15.19 / See certification documents
Information to user		PASS	15.21 / See certification documents
Home-built devices		N/A	15.23
Kits		N/A	15.25
Special Accessories		PASS	15.27 / See certification documents
Inspection by the Commission		N/A	15.29
Measurement standards		PASS	15.31
Test procedure for CPU boards and computer power supplies		N/A	15.32
Frequency range of radiated measurements		PASS	15.33
Measurement detector functions and bandwidths		PASS	15.35
Transition provisions for compliance with the rules		PASS	15.37 / See certification documents
SUBPART B – UNINTENTIONAL RADIATORS			
Equipment authorization			15.101
- Verification		N/A	
- Declaration of Conformity		N/A	
CPU boards and power supplies used in personal computers		N/A	15.102
Exempted device		N/A	15.103
Information to the user		PASS	15.105 / See certification documents
Conducted limits		N/A	15.107
Radiated emission limits		N/A	15.109
Antenna power conduction limits for receivers		N/A	15.111
Power line carrier systems		N/A	15.113
TV interface devices, including cable system terminal devices		N/A	15.115
TV broadcast receivers		N/A	15.117
Cable ready consumer electronics equipment		N/A	15.118
Program blocking technology requirements for TV receivers		N/A	15.120
Scanning receivers and frequency converters used with scanning receivers		N/A	15.121
Labeling of digital cable ready products		N/A	15.123
SUBPART C –INTENTIONAL RADIATORS			

TEST DESIGNATION	SEVERITY	VERDICT	BASIC STANDARDS / COMMENTS
Equipment authorization requirement		**PASS**	**15.201 / Transmitter part is subject to Certification procedure**
Certified operating frequency range		**N/A**	**15.202**
Antenna requirement		**PASS**	**15.203 / Dedicated integral antenna**
External radio frequency power amplifiers and antenna modifications		**N/A**	**15.204**
Restricted bands of operation		**PASS**	**15.205**
Conducted limits		**PASS**	**15.207**
Radiated emission limits; general requirements		**PASS**	**15.209**
Tunnel radio systems		**N/A**	**15.211**
Modular transmitters		**N/A**	**15.212**
Cable locating equipment		**N/A**	**15.213**
Cordless telephones		**N/A**	**15.214**
Additional provisions to the general radiated emission limits		**PASS**	**15.215**
Operation within the band 902-928MHz, 2400-2483.5MHz and 5725-5850MHz			**15.247**
- **Frequency hopping and digitally modulated**		**-**	**a)**
- Frequency hopping system		**PASS**	a) (1)
- Digital modulation system		**N/A**	a) (2) **FHSS equipment**
- **Maximum peak conducted output power**		**-**	**b)**
- For hopping system in the 2400-2483.5 MHz and 5725-5850 MHz bands		N/A	b) (1)
- For hopping system in the 902-928MHz band		PASS	b) (2)
- For system using digital modulation in the 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz bands		N/A	b) (3) **FHSS equipment**
- **Operation with directional antenna gains > 6 dBi**		**N/A**	**c)**
- **Out-of-band emissions**		**PASS**	**d)**
- **Power spectral density conducted**		**N/A**	**e) FHSS equipment**
- **Hybrid system**		**N/A**	**f)**
- **Frequency hopping additional requirements**		**N/P**	**g) See certification documents**
- **Frequency hopping intelligence**		**N/P**	**h) See certification documents**
- **RF exposure compliance**		**N/P**	**i) See certification documents**

Sample subject to the test complies with the requirements of the reference document(s) listed in §2 of this test report and, where applicable, with deviation(s) specified in this document.

To declare, or not, the compliance with the specifications, it was not explicitly taken account of uncertainty associated with the results.

Opinion(s) and interpretation(s): N/A

5. MEASUREMENT UNCERTAINTY

PARAMETER	MAXIMAL EMITECH UNCERTUNCERTAINTY	MINIMAL STANDARD UNCERTAINTY
Radio frequency	± 1 x 10^{-7}	±1 x 10^{-7}
RF power, conducted		
RF power	± 0.8dB	± 1 dB
Power spectral density	± 2.7dB	± 3 dB
Occuped bandwidth		
RF power	± 3.8 %	± 5 %
Adjacent channel power	± 1.6 dB	± 3 dB
Sensitivity of receiver (conducted)	± 2.0 dB	± 3 dB
Blocking	± 4.0 dB	± 4 dB
Transient		
Amplitude	± 8.5 %	± 20 %
At the frequency	± 166 Hz	± 250 Hz
Conducted emission (spurious)		
f ≤ 1 GHz	± 0.8 dB	± 3 dB
1 GHz - 12.75 GHz	± 1.6 dB	
Radiated power (ERP / EIRP / spurious)		
f ≤ 62.5 MHz	± 5.2 dB	± 6 dB
62.5 MHz - 1 GHz	± 5.4 dB	± 6 dB
1 GHz - 18 GHz(~)	± 5.2 dB	± 6 dB
18 GHz – 40 GHz	± 5,8 dB	± 6 dB
40 GHz – 110 GHz	± 5.5 dB	Between ± 6 to 10 dB
EIRP and power spectral density with diode	± 5.4 dB	± 6 dB
Radiated emission (magnetic field)		
9kHz – 30MHz	± 4,3 dB	± 6 dB
RF level for a given BER	± 0.8 dB	± 1.5 dB
Supply voltages	± 2,9 %	± 3 %
Temperature	± 0,95 °C	± 1°C
Humidity	± 4,6 %	± 5 %
Time / Duty cycle	± 4.4 %	± 5 %
Adaptivity	± 3.2 dB	/
Conducted emission (FCC)		
(Artificial Mains Network) 150kHz – 30MHz	± 3.7 dB	/
Radiated emission (electric field for FCC standard)		
9kHz – 30MHz	± 4.3 dB	/
30MHz – 1GHz	± 5.9 dB	/
1GHz – 18GHz	± 4,8 dB	/
18GHz – 40GHz	± 5,9 dB	/
40GHz – 140GHz	± 5.7 dB	/

For the calculation of expanded uncertainty, the confidence interval is 95 % (k=2).

6. TEST CONDITIONS AND RESULTS

6.1. Conducted emission

Reference standard:	FCC 47 CFR PART 15.107, & 15.207 RSS-Gen; RSS-247
Test method:	ANSI C63.10: 2020
General test setup: EUT is set on an insulating support at 40cm from the ground reference plane. All power was connected to the system through Artificial Mains Network (AMN). The AMN is placed at 80cm from the boundary of the EUT and bonded to a ground reference plane. All tested telecommunications lines (if applicable) were connected to an Asymmetric Artificial Network (AAN) and conducted voltage measurements on telecommunications lines were made at the output of the AAN. Where an AAN was not appropriate or available, measurements were made using a Capacitive Voltage Probe and/or a Current probe. Additionnal ground terminals (if any) are connected to earth terminal of the AMN.	

TESTED CABLE	PARAMETER	SEVERITY	RESULT TAB.	VERDICT
120Vac / 60Hz	150kHz-30MHz	15.207	EMI5019	**PASS**

LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	See Graph(s)
Relative Humidity	10 to 90 %	See Graph(s)
Atmospheric pressure	N/A	See Graph(s)
Test method deviation: N/A		
Supplementary information: N/A		

TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
AC power source	GW Instek	APS-1102	17782	04/09/2024	04/11/2025
Cable	C&C	N-3m	14335	09/06/2025	09/08/2027
Cable	EMITECH	Current absorber sheath	18366	02/09/2025	02/11/2027
Ground plane	EMITECH	Test area	11569		
LISN	Rohde & Schwarz	ENV216	17925	06/12/2023	06/02/2026
Multimeter	FLUKE	8808A	12446	14/03/2025	14/05/2026
PE choke	EMITECH	CISPR 16-2-1 : 2008	10071		
Receiver	Rohde & Schwarz	ESI	9704	31/03/2025	31/05/2026
Software	Nexio	BAT EMC	0000		
Thermohygrometer	Bioblock Scientific	Météostar	0963	25/09/2023	25/11/2025
Thermohygrometer	Testo	608-H2	12268	18/02/2025	18/04/2027

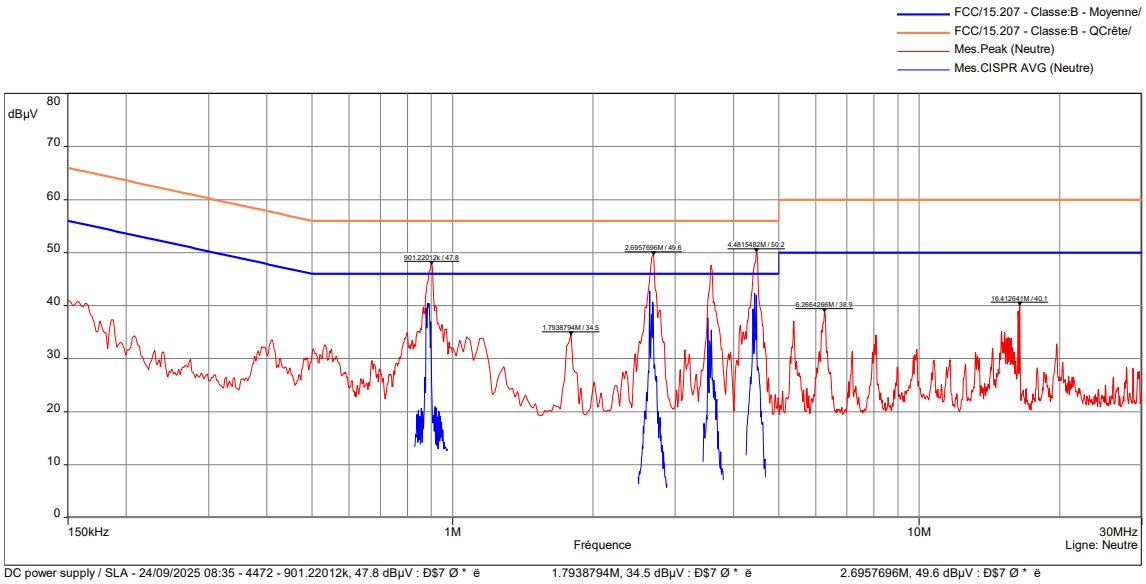
BAT-EMC software version: V3.18.0.26 Blank cells = Permanent validity

.

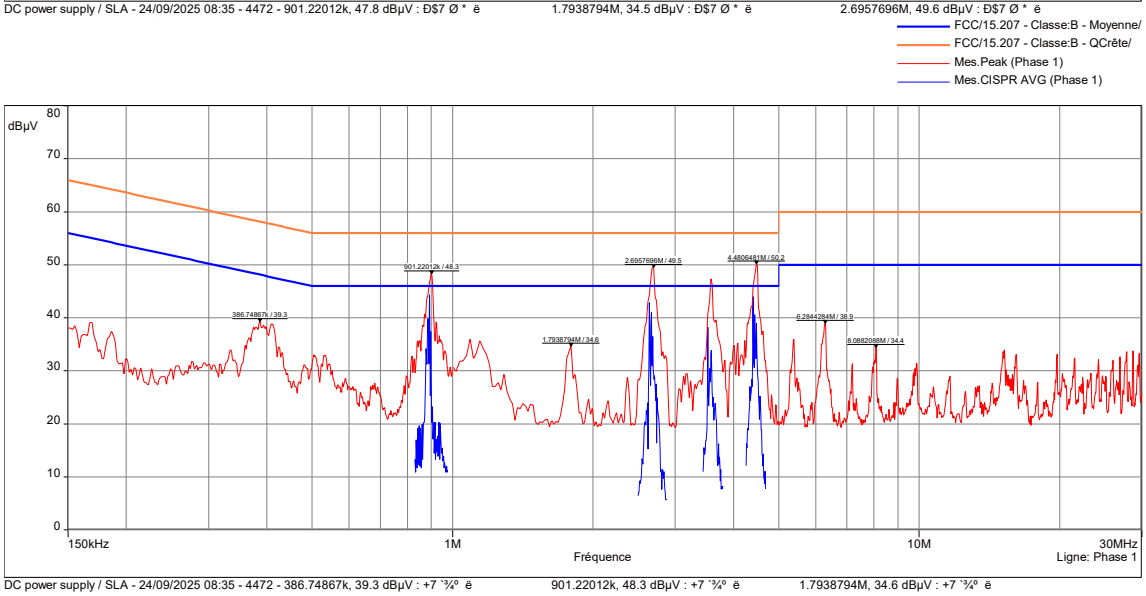
TEST SETUP PHOTO(S)

CONDUCTED EMISSION - TABULATED RESULTS								
120VAC / 60Hz							EMI5019	
Frequency (MHz)	Terminal	Peak level (dBµV)	Average level (dBµV)	Average limit (dBµV)	Average margin (dBµV)	QPeak level (dBµV)	QPeak limit (dBµV)	QPeak margin (dBµV)
0.901	Neutral	47.83	40.42	46	-5.58	N/P	56	-8.17
2.696	Neutral	49.59	42.79	46	-3.21	N/P	56	-6.41
3.579	Neutral	47.64	37.72	46	-8.28	N/P	56	-8.36
4.481	Neutral	50.19	42.25	46	-3.75	N/P	56	-5.81
16.293	Neutral	38.94	N/P	50	-11.06	N/P	60	-21.06
16.413	Neutral	40.11	N/P	50	-9.89	N/P	60	-19.89
0.387	Line	39.27	N/P	48.13	-8.86	N/P	58.13	-18.86
0.901	Line	48.28	44.29	46	-1.71	N/P	56	-7.72
2.696	Line	49.54	42.83	46	-3.17	N/P	56	-6.46
3.579	Line	47.30	38.23	46	-7.77	N/P	56	-8.70
4.481	Line	50.16	44.02	46	-1.98	N/P	56	-5.84
6.284	Line	38.91	N/P	50	-11.09	N/P	60	-21.09
Comments:	When margin between Peak measurements and QPeak or Average limit is greater than 6dB, no QPeak or Average measurements were performed.							

CONDUCTED EMISSION - GRAPH			
120VAC / 60Hz		EMI5019	
EUT mode:	Tx mode	**T (°C):**	23.9
Test Date:	24/09/2025	**H (%):**	41.5
Test Operator:	MPA	**P (hPa):**	1006



DC power supply / SLA - 24/09/2025 08:35 - 4472 - 901.22012k, 47.8 dBµV : Ð$7 Ø * ë 1.7938794M, 34.5 dBµV : Ð$7 Ø * ë 2.6957696M, 49.6 dBµV : Ð$7 Ø * ë



DC power supply / SLA - 24/09/2025 08:35 - 4472 - 386.74867k, 39.3 dBµV : +7 `¾° ë 901.22012k, 48.3 dBµV : +7 `¾° ë 1.7938794M, 34.6 dBµV : +7 `¾° ë

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Neutral	150kHz-1MHz	10kHz	30kHz	Peak
Neutral	1MHz-10MHz	10kHz	30kHz	Peak
Neutral	10MHz-30MHz	10kHz	30kHz	Peak
Line	150kHz-1MHz	10kHz	30kHz	Peak
Line	1MHz-10MHz	10kHz	30kHz	Peak
Line	10MHz-30MHz	10kHz	30kHz	Peak
Neutral	830kHz-975kHz	9kHz	-	Average
Neutral	2.5MHz-2.88MHz	9kHz	-	Average
Neutral	3.44MHz-3.8MHz	9kHz	-	Average
Neutral	4.26MHz-4.68MHz	9kHz	-	Average
Line	830kHz-975kHz	9kHz	-	Average
Line	2.5MHz-2.88MHz	9kHz	-	Average
Line	3.44MHz-3.8MHz	9kHz	-	Average
Line	4.26MHz-4.68MHz	9kHz	-	Average
Measure with:	A.M.N.			
Comments:	N/A			
EUT modification(s): N/A				

6.2. Unwanted radiated emissions

Reference standard:	FCC 47 CFR PART 15.109, & 15.209, & 15.247 RSS-Gen; RSS-247
Test method:	ANSI C63.10: 2020

- **General test setup:** For f < 30MHz, EUT is set on an insulating support at 80cm above the ground reference plane.
  Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3-meter in a semi-anechoic chamber. The EUT was rotated 360°in order to maximize radiated levels. Test antenna was oriented in 3 axes (0°, 45° and 90°).
  Final measurements (quasi-peak) were then performed in a 10-meter Open Area Test Site that complies to CISPR 16 in the same measurement conditions.
- For 30MHz < f < 1GHz, EUT is set on an insulating support at 80cm above the ground reference plane.
  Preliminary (peak) measurements were performed at an antenna to EUT separation distance of 3-meter. The EUT was rotated 360° about its azimuth with the receive antenna located at various heights in horizontal and vertical polarities.
  Final measurements (quasi-peak or average) were then performed in a semi-anechoic chamber or Open Area Test Site that complies to CISPR 16. The EUT was rotated 360° about its azimuth and adjusting the receive antenna height from 1 to 4 m.
- For f > 1GHz, EUT is set on an insulating support at 150cm above the ground reference plane.
  RF Absorbent material are placed between EUT and measurement antenna.
  Final measurements (Peak or average) were then performed in a Full Anechoic Room (FAR) that complies to CISPR 16. The EUT was rotated 360° about its azimuth and the receive antenna height is 150cm.

All frequencies were investigated, where applicable.

For portable equipements a research of maximum level is done on the 3 axes. Only the highest levels are recorded.

TESTED CONFIGURATION	PARAMETER	SEVERITY	RESULT TAB.	VERDICT
Radiated measurement / 0°	9kHz-30MHz	15.209	EMI5114	**PASS**
Radiated measurement / 45°	9kHz-30MHz	15.209	EMI5115	**PASS**
Radiated measurement / 90°	9kHz-30MHz	15.209	EMI5116	**PASS**
Radiated emissions / 30 MHz to 1 GHz	30MHz-1GHz	15.209	EMI5136	**PASS**
Radiated emissions / 1 GHz to 9.3 GHz	1GHz-9.3GHz	15.209	EMI5126	**PASS**

LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	10 to 40 °C	See Graph(s)
Relative Humidity	10 to 90 %	See Graph(s)
Atmospheric pressure	N/A	See Graph(s)

Test method deviation: N/A

Supplementary information:

From 9 kHz to 30 MHz, the limit indicated on graphs is calculated with 40 dB/decade extrapolation factor and 51.5 dB conversion factor.

From 30 MHz to 1 GHz, quasi-peak limit provided is the limit given in §15.209.

Above 1 GHz average limit in restricted bands §15.205 is 54 dBµV/m. Otherwise, the limit is 20 dB under carrier emission level at 3 meter without averaging.

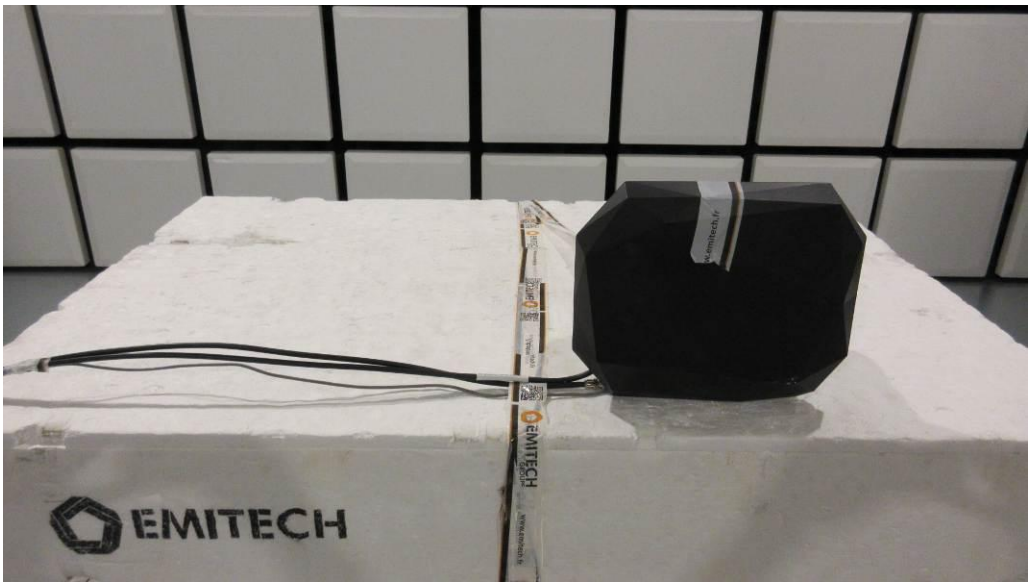
Test is made with antenna an 12m cable

TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
AC power source	GW Instek	APS-1102	17782	04/09/2024	04/11/2025
Antenna	ETS-Lindgren	3117	8387	24/03/2023	24/05/2026
Antenna	ETS lindgren	3142E	14523 note2	08/08/2025	08/10/2028
Antenna	Rohde & Schwarz	HFH2-Z2	5825 note1	17/08/2022	17/05/2025
Cable	Techniwave	N-1.5m	18342	20/05/2024	20/07/2026
Cable	/	N-1m	3625 note2	09/06/2025	09/08/2027
Cable	SUCOFLEX	N-3m	14378	17/08/2023	17/10/2025
Cable	SUCOFLEX	N-3m	14379 note2	01/09/2025	01/11/2027
Cable	Techniwave	N-3m	18346	17/08/2023	17/10/2025
Cable	SUCOFLEX	N-6,5m	14380	17/08/2023	17/10/2025
Cable	Techniwave	N-8m	18349	17/08/2023	17/10/2025
Cable	MegaPhase	TM18-N1N1-118	12841	03/12/2024	03/02/2027
Filter	Micro-Tronics	HPM15162	19385	25/03/2024	25/05/2026
Filter	Micro-Tronics	HPM18865	12843	03/12/2024	03/02/2028
Multimeter	FLUKE	8808A	12446	14/03/2025	14/05/2026
Preamplifier	Techniwave	APS16-0087	14040	17/07/2024	17/03/2026
Receiver	Rohde & Schwarz	ESW8	19536 note1	14/06/2024	14/08/2025
Receiver	Rohde & Schwarz	FSW43	14830 note2	07/07/2025	07/09/2027
Shielded enclosure	RAY PROOF	C.V1	1123	05/11/2024	05/01/2028
Shielded enclosure	COMTEST	SAC 3m	14494	08/08/2023	08/10/2026
Software	Nexio	BAT EMC	0000		
Thermohygrometer	Testo	608-H1	7561	20/12/2024	20/02/2026
Thermohygrometer	Testo	608-H2	12269	18/02/2025	18/04/2027
Thermohygrometer	Bioblock Scientific	Météostar	0963	25/09/2023	25/11/2025

BAT-EMC software version: V3.18.0.26 Blank cells = Permanent validity

note1 : Equipment used for test performed from April the 18th to the 24th of 2025
note2 : Equipment used for test performed on September the 16th of 2025

TEST SETUP PHOTO(S)



TEST SETUP PHOTO(S) - 9 KHZ TO 30 MHZ

TEST SETUP PHOTO(S) – 30 MHZ TO 1 GHZ

TEST SETUP PHOTO(S) – 1 GHZ TO 9.3 GHZ

UNWANTED RADIATED EMISSIONS – TABULATED RESULTS							
RADIATED MEASUREMENT / 0°						EMI5114	
FREQUENCY (MHz)	PEAK LEVEL (dBµV/m)	QPEAK LEVEL (dBµA/m)	QPEAK LIMIT (dBµA/m)	QPEAK MARGIN (dB)	AVERAGE LEVEL (dBµA/m)	AVERAGE LIMIT (dBµA/m)	AVERAGE MARGIN (dB)
0.029	-5.68	N/A	N/A	N/A	N/P	66.95	-72.63
0.032	-4.4	N/A	N/A	N/A	N/P	66.06	-70.46
0.065	-6.78	N/A	N/A	N/A	N/P	59.78	-66.56
0.085	-10.36	N/A	N/A	N/A	N/P	57.54	-67.90
0.113	-14.3	N/A	N/A	N/A	N/P	55.06	-69.36
0.141	-17.5	N/A	N/A	N/A	N/P	53.11	-70.61
Comments:	When margin between Peak measurements and QPeak or Average limit is greater than 6dB, no QPeak or Average measurements were performed.						

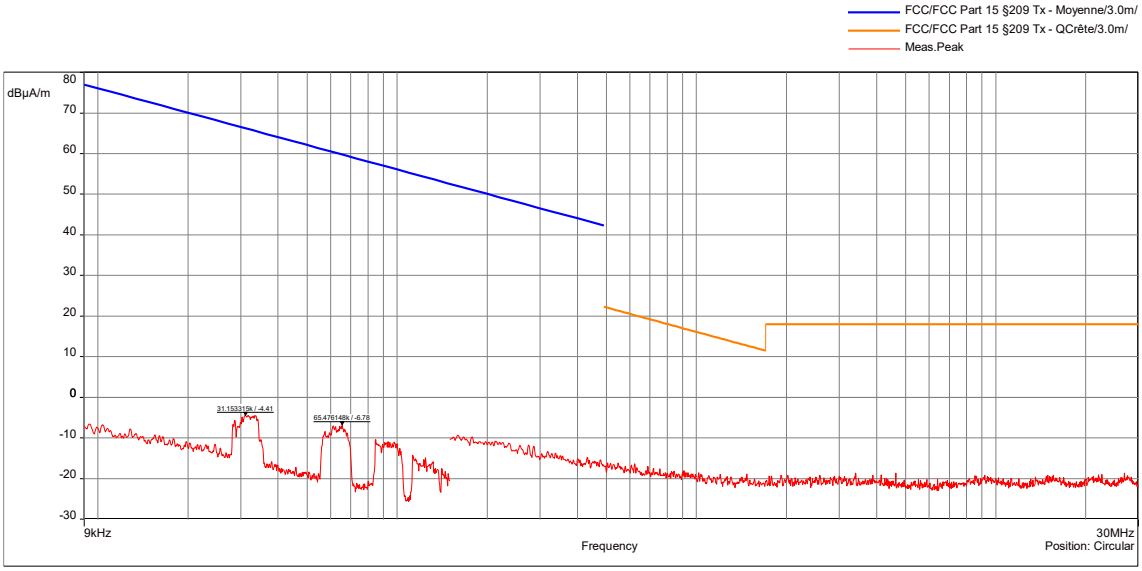
UNWANTED RADIATED EMISSIONS – TABULATED RESULTS							
RADIATED MEASUREMENT / 45°						EMI5115	
FREQUENCY (MHz)	PEAK LEVEL (dBµV/m)	QPEAK LEVEL (dBµA/m)	QPEAK LIMIT (dBµA/m)	QPEAK MARGIN (dB)	AVERAGE LEVEL (dBµA/m)	AVERAGE LIMIT (dBµA/m)	AVERAGE MARGIN (dB)
0.033	-2.05	N/A	N/A	N/A	N/P	65.82	-67.87
0.056	-5.40	N/A	N/A	N/A	N/P	61.07	-66.47
0.085	-7.99	N/A	N/A	N/A	N/P	57.54	-65.53
0.113	-11.66	N/A	N/A	N/A	N/P	55.04	-66.70
0.124	-12.49	N/A	N/A	N/A	N/P	54.22	-66.71
0.141	-15.73	N/A	N/A	N/A	N/P	53.12	-68.85
Comments:	When margin between Peak measurements and QPeak or Average limit is greater than 6dB, no QPeak or Average measurements were performed.						

UNWANTED RADIATED EMISSIONS – TABULATED RESULTS							
RADIATED MEASUREMENT / 90°						EMI5116	
FREQUENCY (MHz)	PEAK LEVEL (dBµV/m)	QPEAK LEVEL (dBµA/m)	QPEAK LIMIT (dBµA/m)	QPEAK MARGIN (dB)	AVERAGE LEVEL (dBµA/m)	AVERAGE LIMIT (dBµA/m)	AVERAGE MARGIN (dB)
0.056	-9.51	N/A	N/A	N/A	N/P	61.07	-70.58
0.085	-12.24	N/A	N/A	N/A	N/P	57.56	-69.80
0.093	-12.29	N/A	N/A	N/A	N/P	56.72	-69.01
0.113	-16.02	N/A	N/A	N/A	N/P	55.06	-71.08
0.124	-17.21	N/A	N/A	N/A	N/P	54.22	-71.43
0.141	-19.83	N/A	N/A	N/A	N/P	53.12	-72.95
Comments:	When margin between Peak measurements and QPeak or Average limit is greater than 6dB, no QPeak or Average measurements were performed.						

UNWANTED RADIATED EMISSIONS – TABULATED RESULTS					
RADIATED MEASUREMENT / 30 MHZ TO 1 GHZ					EMI5136
FREQUENCY (MHz)	POLARIZATION	PEAK LEVEL (dBµV/m)	QPEAK LEVEL (dBµV/m)	QPEAK LIMIT (dBµV/m)	QPEAK MARGIN (dB)
412.024	Vertical	33.11	N/P	46	-12.89
419.979	Vertical	33.40	N/P	46	-12.60
435.986	Vertical	31.72	N/P	46	-14.28
444.037	Vertical	31.18	N/P	46	-14.82
451.992	Vertical	33.51	N/P	46	-12.49
857.978	Vertical	41.01	36.34	46	-9.66
403.972	Horizontal	31.46	N/P	46	-14.54
419.979	Horizontal	31.60	N/P	46	-14.40
435.986	Horizontal	31.05	N/P	46	-14.95
451.992	Horizontal	31.93	N/P	46	-14.07
460.044	Horizontal	31.79	N/P	46	-14.21
853.321	Horizontal	39.55	N/P	46	-6.45
COMMENT:	When margin between peak measurements and QPeak limit is greater than 6dB, no QPeak measurements were performed.				

UNWANTED RADIATED EMISSIONS – TABULATED RESULTS					
RADIATED MEASUREMENT / 1 GHZ TO 9.3 GHZ					EMI5126
FREQUENCY (MHz)	POLARIZATION	PEAK LEVEL (dBµV/m)	AVERAGE LEVEL (dBµV/m)	AVERAGE LIMIT (dBµV/m)	MARGIN (dB)
2708.197	Vertical	67.53	52.7	54	-1.3
2747.208	Vertical	68.98	53.65	54	-0.35
2781.793	Vertical	68.52	53.36	54	-0.64
3610.990	Vertical	45.45	N/P	54	-8.55
3683.203	Vertical	47.23	N/P	54	-6.77
3700.910	Vertical	45.15	N/P	54	-8.85
4551.412	Vertical	44.55	N/P	54	-9.45
2708.197	Horizontal	58.67	51.93	54	-2.07
2747.208	Horizontal	64.35	50.76	54	-3.24
2781.793	Horizontal	57.82	52.91	54	-1.09
4578.803	Horizontal	49.82	46.47	54	-7.53
4636.075	Horizontal	49.56	44.86	54	-9.14
Comments:	When margin between peak measurements and Average limit is greater than 6dB, no Average measurements were performed.				

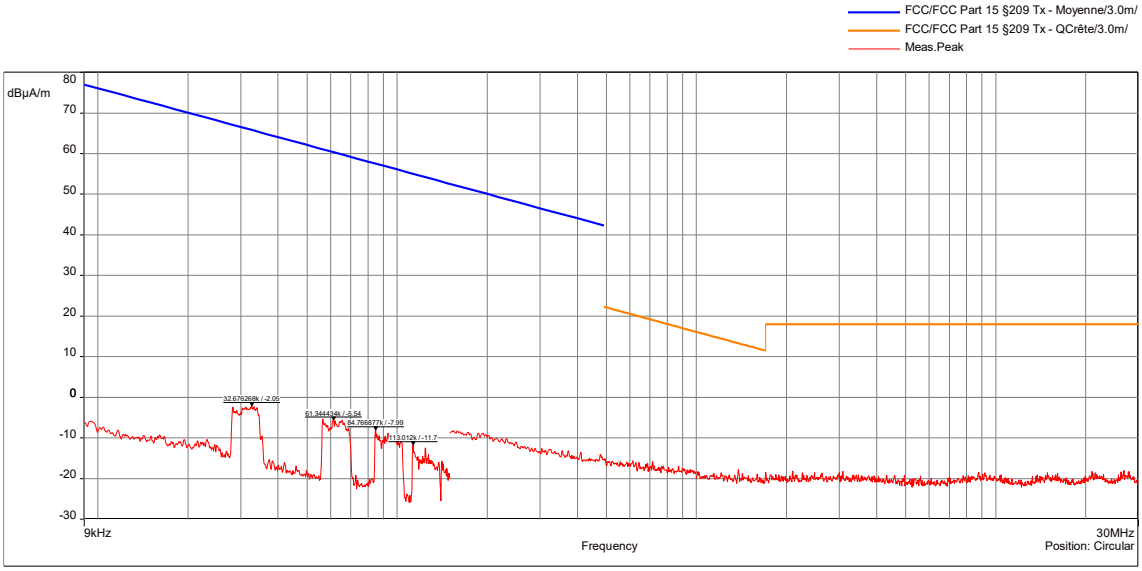
UNWANTED RADIATED EMISSIONS - GRAPH			
RADIATED MEASUREMENT / 0°		EMI5114	
EUT mode:	Tx mode / All channels	**T (°C):**	19.8
Test Date:	24/04/2025	**H (%):**	47.1
Test Operator:	MPA	**P (hPa):**	1018



POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.			

EUT modification(s): N/A

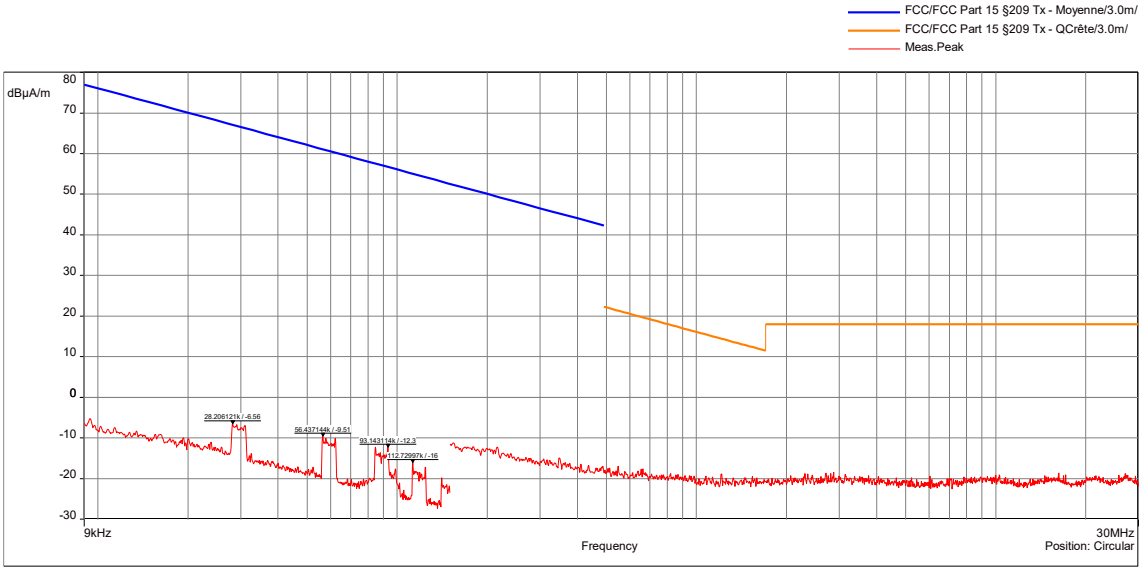
UNWANTED RADIATED EMISSIONS - GRAPH			
RADIATED MEASUREMENT / 45°		EMI5115	
EUT mode:	Tx mode / All channels	**T (°C):**	19.8
Test Date:	24/04/2025	**H (%):**	47.1
Test Operator:	MPA	**P (hPa):**	1018



POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.			

EUT modification(s): N/A

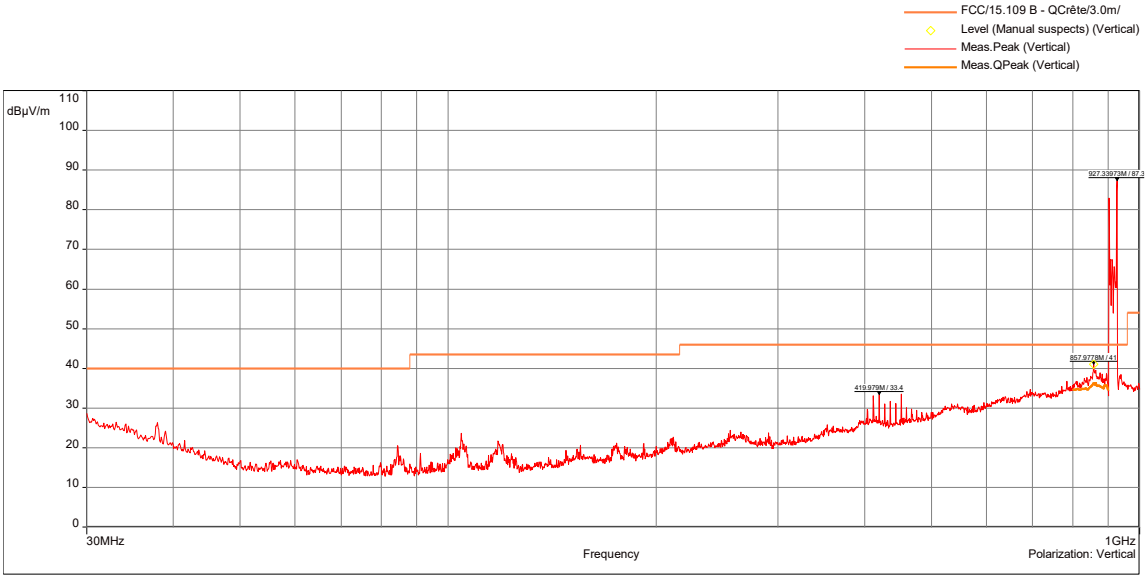
UNWANTED RADIATED EMISSIONS - GRAPH			
RADIATED MEASUREMENT / 90°		EMI5116	
EUT mode:	Tx mode / All channels	**T (°C):**	19.8
Test Date:	24/04/2025	**H (%):**	47.1
Test Operator:	MPA	**P (hPa):**	1018

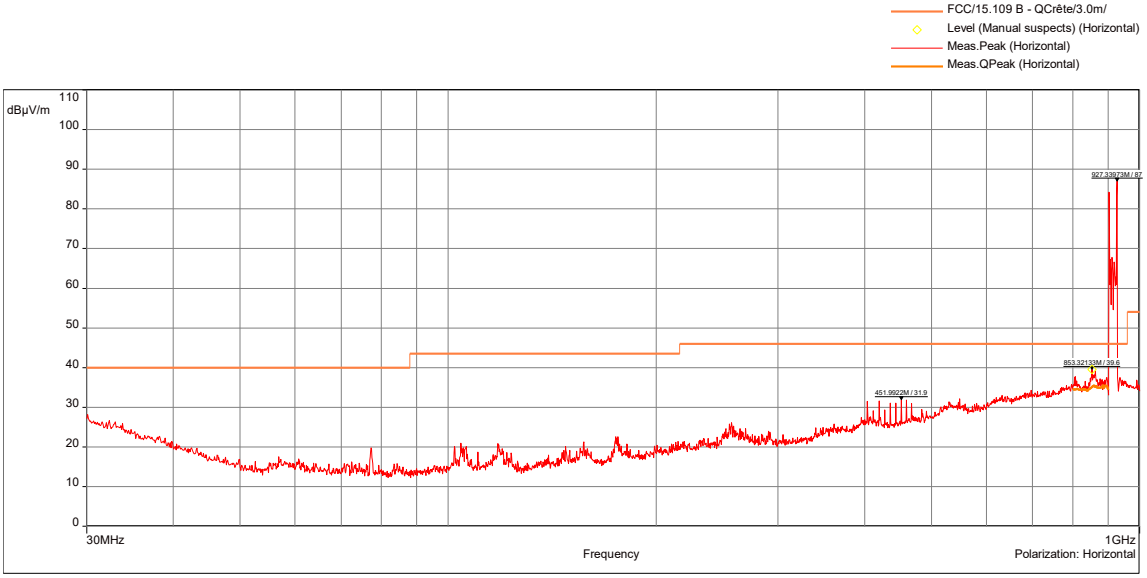


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.			

EUT modification(s): N/A

UNWANTED RADIATED EMISSIONS - GRAPH			
RADIATED EMISSIONS / 30 MHZ TO 1 GHZ		EMI5136	
EUT mode:	Tx mode / All channels	**T (°C):**	24.0
Test Date:	16/09/2025	**H (%):**	56.3
Test Operator:	MPA	**P (hPa):**	1010





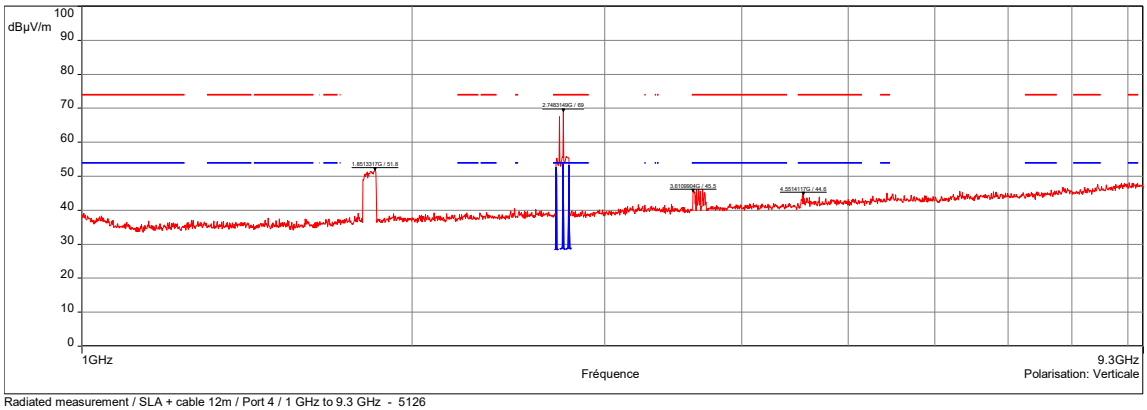
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	30MHz-1GHz	100kHz	300kHz	Peak
Horizontal	30MHz-1GHz	100kHz	300kHz	Peak
Vertical	800MHz-902MHz	120kHz	360kHz	QPeak
Horizontal	800MHz-902MHz	120kHz	360kHz	QPeak
Configuration:	N/A			
Comments:	Frequencies from 902.75 MHz to 927.25 MHz are the main carrier frequencies of the EUT's RFID UHF signal.			

EUT modification(s): N/A

UNWANTED RADIATED EMISSIONS - GRAPH			
RADIATED MEASUREMENT / SLA / 1 GHZ TO 9.3 GHZ		EMI5126	
EUT mode:	Tx mode / All channels	**T (°C):**	20.3
Test Date:	18/04/2025	**H (%):**	52.0
Test Operator:	MPA	**P (hPa):**	1006

FCC/15.205: 2018 restricted bands + 15.209 - Classe: - Moyenne/3.0m/
FCC/15.205: 2018 restricted bands + 15.209 - Classe: - QCrête/3.0m/
FCC/15.205: 2018 restricted bands + 15.209 - Classe: - Crête/3.0m/
Mes.Peak (Verticale)
Mes.Avg (Verticale)

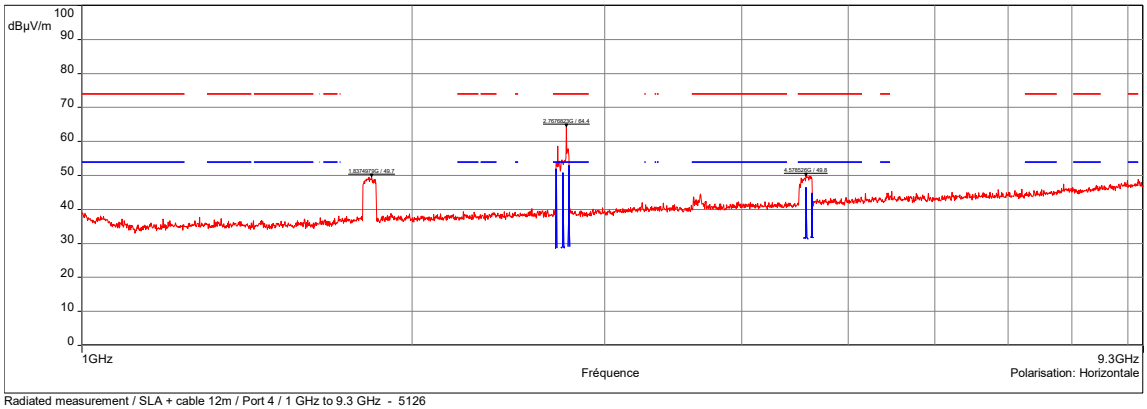
Description Sous-bande 1
Fréquences:1 GHz - 9.3 GHz (Mode analyseur) 30000 Points
Réglages: RBW: 1MHz, VBW: Auto, Auto, Atténuation : Auto, Nombre de Balayages : 1, Preamp : Off, LN Preamp : Off, Preselecteur: Off
Polarisation:Verticale
Distance: 3 m



Radiated measurement / SLA + cable 12m / Port 4 / 1 GHz to 9.3 GHz - 5126

FCC/15.205: 2018 restricted bands + 15.209 - Classe: - Moyenne/3.0m/
FCC/15.205: 2018 restricted bands + 15.209 - Classe: - QCrête/3.0m/
FCC/15.205: 2018 restricted bands + 15.209 - Classe: - Crête/3.0m/
Mes.Peak (Horizontale)
Mes.Avg (Horizontale)

Description Sous-bande 2
Fréquences:1 GHz - 9.3 GHz (Mode analyseur) 30000 Points
Réglages: RBW: 1MHz, VBW: Auto, Auto, Atténuation : Auto, Nombre de Balayages : 1, Preamp : Off, LN Preamp : Off, Preselecteur: Off
Polarisation:Horizontale
Distance: 3 m



Radiated measurement / SLA + cable 12m / Port 4 / 1 GHz to 9.3 GHz - 5126

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-9.3GHz	1MHz	3MHz	Peak / Average
Horizontal	1GHz-9.3GHz	1MHz	3MHz	Peak / Average
Configuration:	N/A			
Comments:	When margin between Peak measurements and Average limit is greater than 6dB, no Average measurements were performed.			

EUT modification(s): N/A

6.3. 20 dB bandwidth & 99% Occupied Bandwidth, Carrier Frequency separation and Number of Hopping Channels

Reference standard:	FCC part 15 Radio part 15.247, 15.215 RSS-247 & RSS-GEN
Test method:	ANSI C63.10: 2020

Test description: a) (1):

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

a) (1) (i):

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

The occupied bandwidth (OBW) is the Frequency Range in which 99 % of the total mean power of a given emission falls. The residual part of the total power being denoted as β, which, in cases of symmetrical spectra, splits up into β/2 on each side of the spectrum. Unless otherwise specified, β/2 is taken as 0,5 %.

The maximum occupied bandwidth includes all associated side bands above the appropriate emissions level and the frequency error or drift under extreme test conditions.

EUT is connected to the measuring receiver via 50Ω attenuator(s).

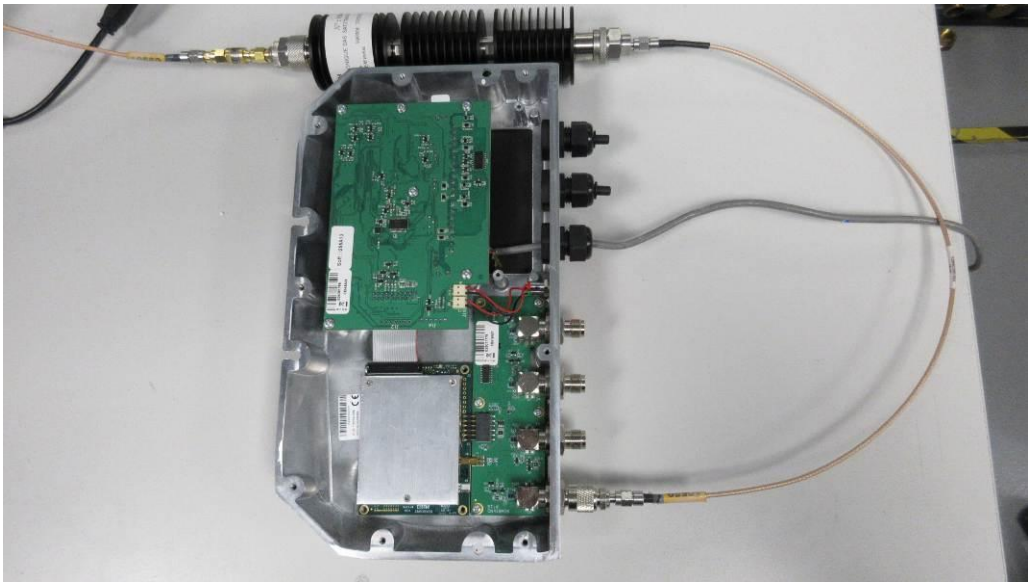
TESTED PARAMETER	RESULT	SEVERITY	RESULT TAB.	VERDICT
Number of channels	50	≥50	EMI6008	**PASS**
Channels separation	≥500kHz	≥71.515 kHz	EMI6007	**PASS**
20 dB bandwidth / Low channel	71.345 kHz	< 250 kHz	EMI6001	**PASS**
20 dB bandwidth / Mid channel	71.345 kHz		EMI6002	**PASS**
20 dB bandwidth / High channel	71.515 kHz		EMI6003	**PASS**
99% OBW / Low channel	70.816 kHz	Within the band	EMI6004	**PASS**
99% OBW / Mid channel	70.938 kHz		EMI6005	**PASS**
99% OBW / High channel	70.855 kHz		EMI6006	**PASS**

LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	*See Graph(es)*
Relative Humidity	20 to 75 %	*See Graph(es)*
Atmospheric pressure	N/A	*See Graph(es)*
Test method deviation: N/A		
Supplementary information: N/A		

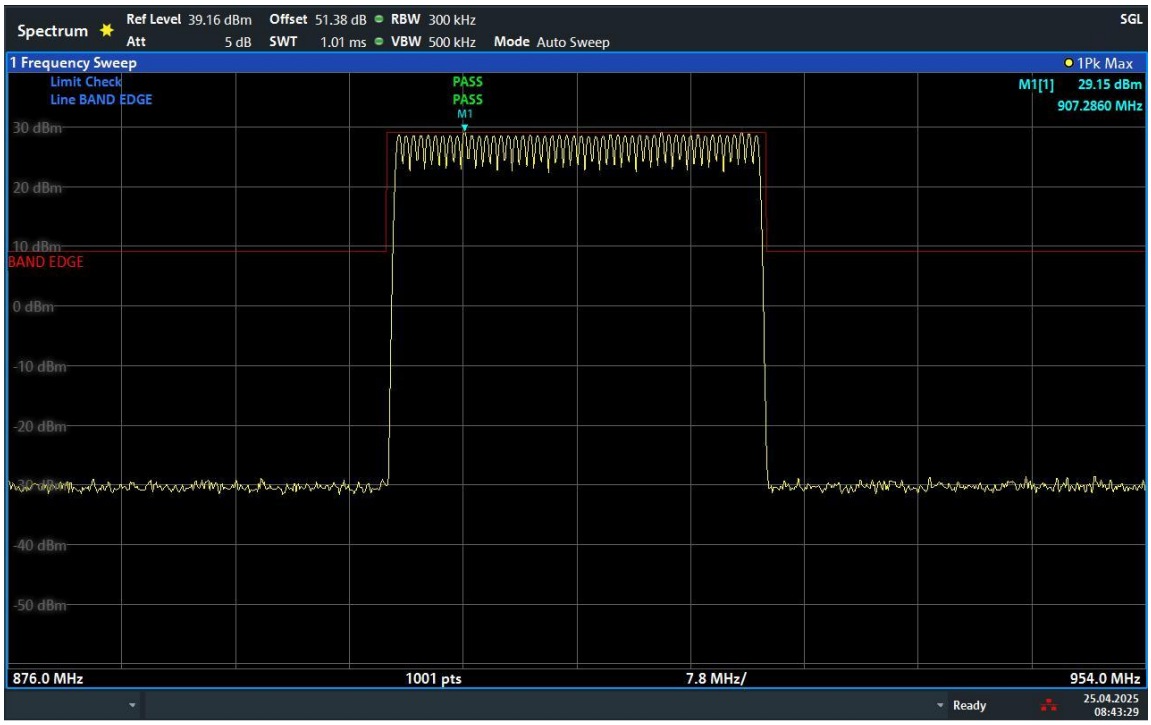
TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
AC power source	GW Instek	APS-1102	17782	04/09/2024	04/11/2025
Attenuator	Techniwave	TWSMA-20dB-18G-SMA	14679	07/03/2023	07/05/2026
Attenuator	MATECH ELECTRONIQUE SAS	SAT27B803018G-8	19413	25/03/2024	25/05/2027
Cable	Radiall	SMA-0,5m	16559	16/08/2023	16/04/2026
Cable	Radiall	SMA-1m	16562	16/08/2023	16/04/2026
Multimeter	FLUKE	8808A	12446	14/03/2025	14/05/2026
Spectrum analyzer	Rohde & Schwarz	FPL1007	17908	04/04/2025	04/06/2026
Thermohygrometer	Bioblock Scientific	Météostar	0963	28/09/2023	28/05/2026
Thermohygrometer	Testo	608-H2	12269	18/02/2025	18/04/2027

Blank cells = Permanent validity

TEST SETUP PHOTO(S)



NUMBER OF CHANNELS FOR FREQUENCY HOPPING SYSTEMS - GRAPH			
NUMBER OF CHANNELS		EMI6008	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015



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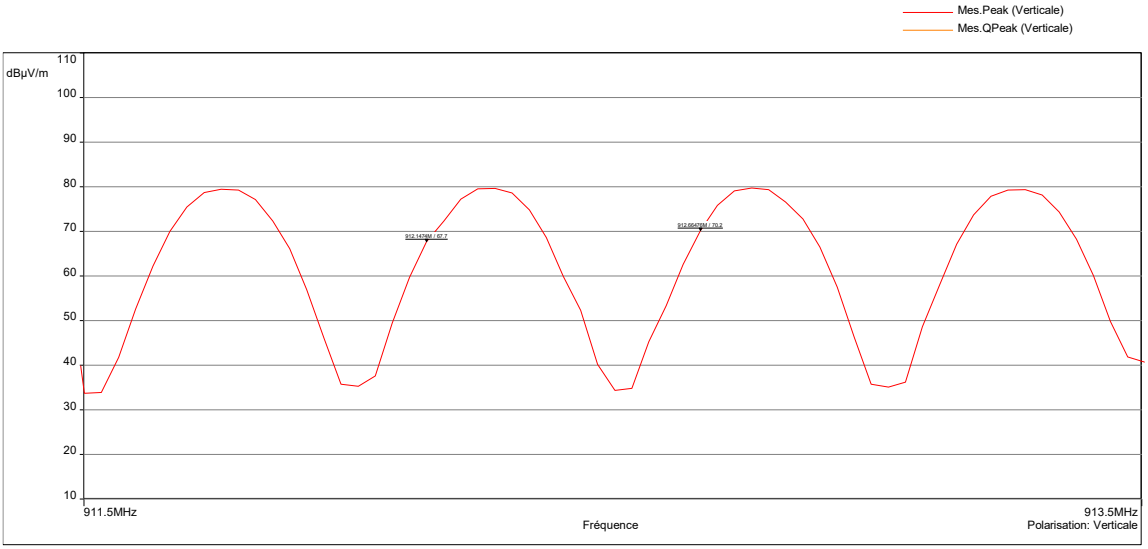
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Conducted	876MHz-854MHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	The system uses 50 channels.			
EUT modification(s): N/A				

CHANNEL SEPARATION FOR FREQUENCY HOPPING SYSTEMS - GRAPH			
CHANNEL SEPARATION		EMI6007	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015



POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Conducted	911.5MHz-913.5MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	The channels separation is at least 500 kHz.			

EUT modification(s): N/A

20 dB BANDWIDTH BANDWIDTH - GRAPH			
20 dB BANDWIDTH / LOW CHANNEL		EMI6001	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015

08:19:27 25.04.2025

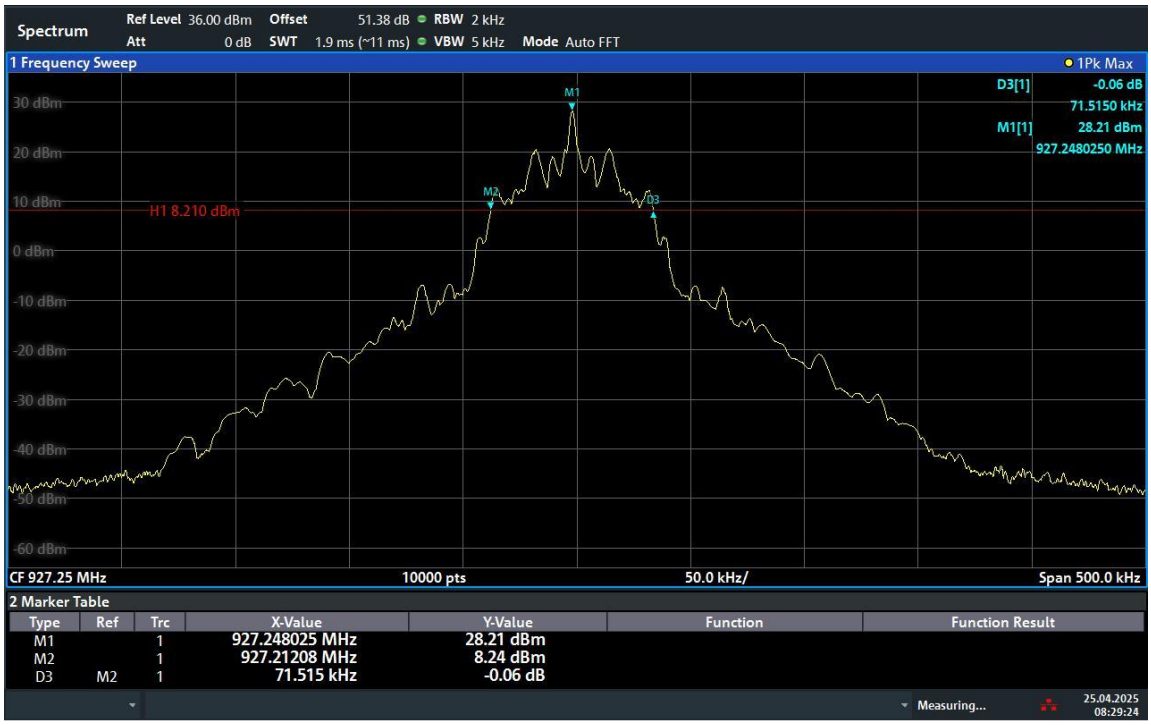
FREQUENCIES	RBW	VBW	DETECTOR
902.75 MHz	2 kHz	5 kHz	Peak
Configuration:	N/A		
Comments:	The 20 dB bandwidth is 71.345 kHz		
EUT modification(s): N/A			

20 dB BANDWIDTH BANDWIDTH - GRAPH			
20 dB BANDWIDTH / MID CHANNEL		EMI6002	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015

08:26:50 25.04.2025

FREQUENCIES	RBW	VBW	DETECTOR
915.75 MHz	2 kHz	5 kHz	Peak
Configuration:	N/A		
Comments:	The 20 dB bandwidth is 71.345 kHz		
EUT modification(s): N/A			

20 dB BANDWIDTH BANDWIDTH - GRAPH			
20 dB BANDWIDTH / HIGH CHANNEL		EMI6003	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015



08:29:25 25.04.2025

FREQUENCIES	RBW	VBW	DETECTOR
927.25 MHz	2 kHz	5 kHz	Peak
Configuration:	N/A		
Comments:	The 20 dB bandwidth is 71.515 kHz		
EUT modification(s): N/A			

99% OCCUPIED BANDWIDTH - GRAPH			
99% OBW / LOW CHANNEL		EMI6004	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015

08:21:36 25.04.2025

FREQUENCIES	RBW	VBW	DETECTOR
902.75 MHz	2 kHz	5 kHz	Peak
Configuration:	N/A		
Comments:	The 99% OBW is 70.816 kHz and is within the operating band.		

EUT modification(s): N/A

99% OCCUPIED BANDWIDTH - GRAPH			
99% OBW / MID CHANNEL		EMI6005	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015

08:25:16 25.04.2025

FREQUENCIES	RBW	VBW	DETECTOR
915.75 MHz	2 kHz	5 kHz	Peak
Configuration:	N/A		
Comments:	The 99% OBW is 70.938 kHz and is within the operating band.		

EUT modification(s): N/A

99% OCCUPIED BANDWIDTH - GRAPH			
99% OBW / HIGH CHANNEL		EMI6006	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015

08:31:34 25.04.2025

FREQUENCIES	RBW	VBW	DETECTOR
927.25 MHz	2 kHz	5 kHz	Peak
Configuration:	N/A		
Comments:	The 99% OBW is 70.855 kHz and is within the operating band.		

EUT modification(s): N/A

6.4. Average time of occupancy

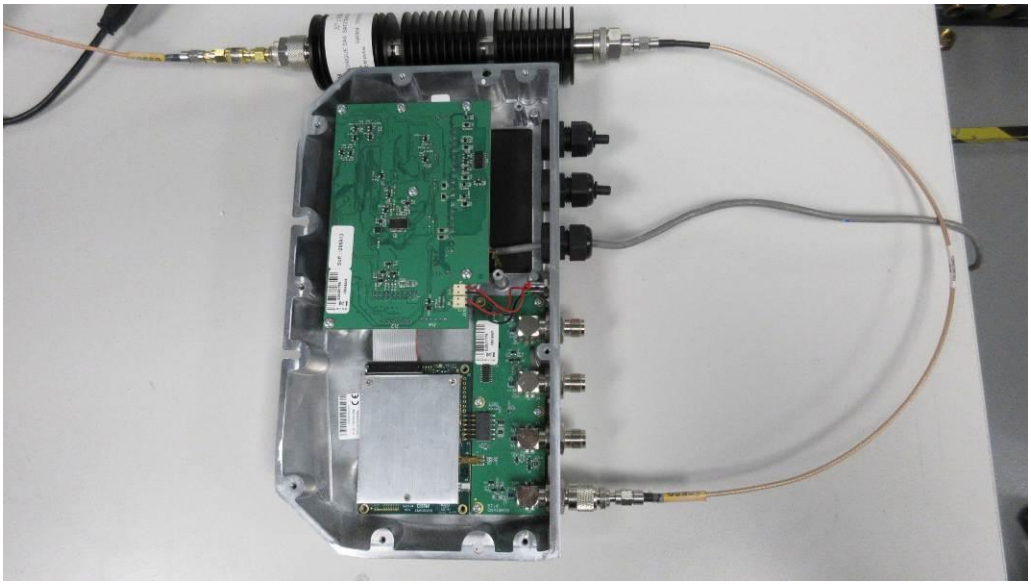
Reference standard:	FCC part 15 Radio part 15.247, 15.215 RSS-247 & RSS-GEN
Test method:	ANSI C63.10: 2020
Test description: a) (1) (i): For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.	

TESTED PARAMETER	RESULT	SEVERITY	RESULT TAB.	VERDICT
Average time	195.699 ms	< 0.4 s on within a 20 s period	EMI9001	**PASS**

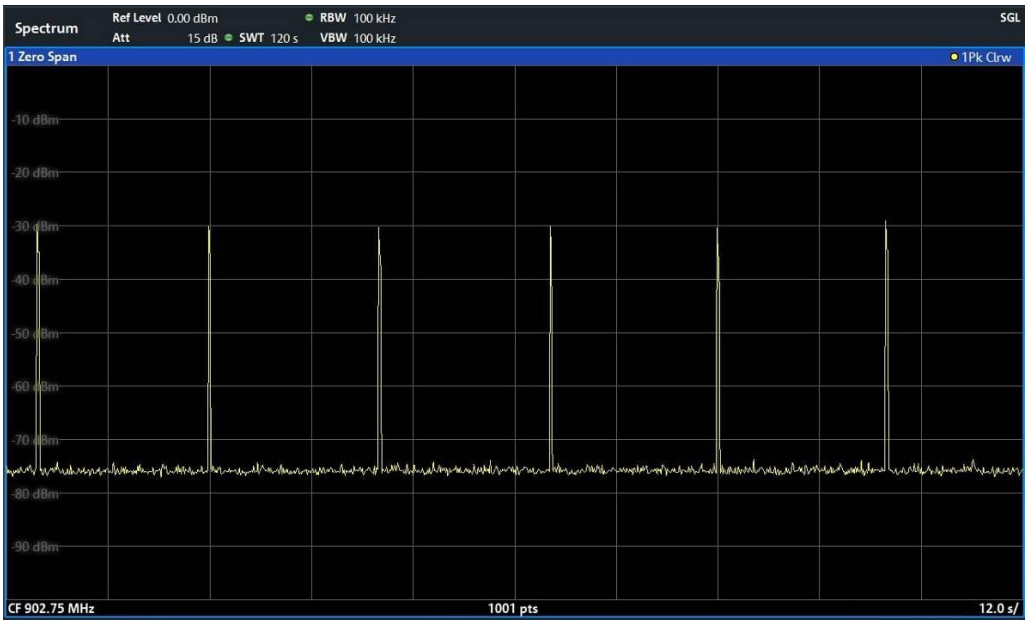
LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	*See Graph(es)*
Relative Humidity	20 to 75 %	*See Graph(es)*
Atmospheric pressure	N/A	*See Graph(es)*
Test method deviation: N/A		
Supplementary information: N/A		

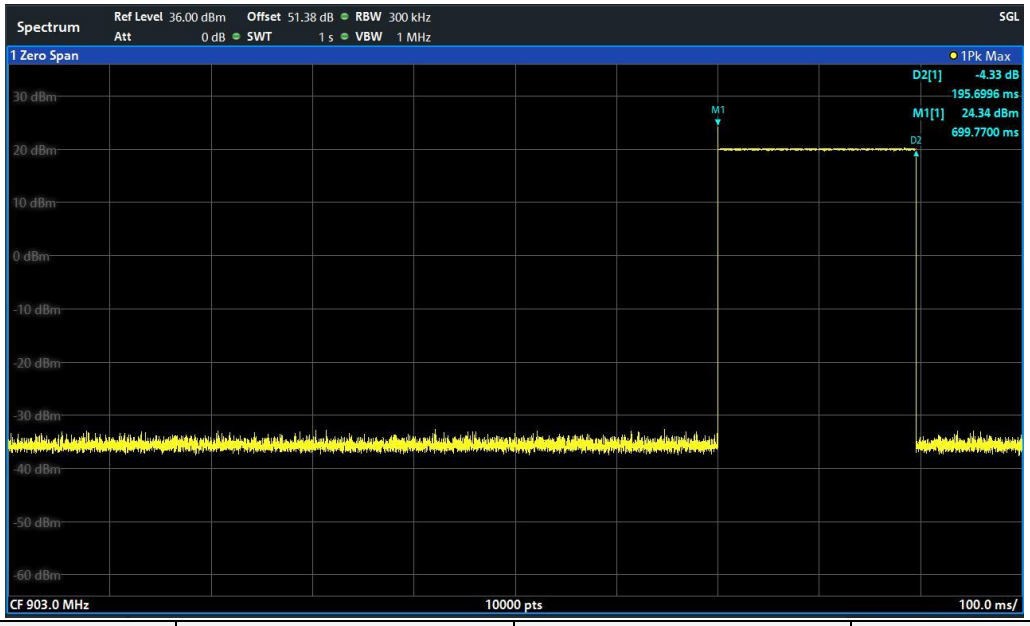
TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
AC power source	GW Instek	APS-1102	17782	04/09/2024	04/11/2025
Attenuator	Techniwave	TWSMA-20dB-18G-SMA	14679	07/03/2023	07/05/2026
Attenuator	MATECH ELECTRONIQUE SAS	SAT27B803018G-8	19413	25/03/2024	25/05/2027
Cable	Radiall	SMA-0,5m	16559	16/08/2023	16/04/2026
Cable	Radiall	SMA-1m	16562	16/08/2023	16/04/2026
Multimeter	FLUKE	8808A	12446	14/03/2025	14/05/2026
Spectrum analyzer	Rohde & Schwarz	FPL1007	17908	04/04/2025	04/06/2026
Thermohygrometer	Bioblock Scientific	Météostar	0963	28/09/2023	28/05/2026
Thermohygrometer	Testo	608-H2	12269	18/02/2025	18/04/2027

Blank cells = Permanent validity

TEST SETUP PHOTO(S)


Average time of occupancy - GRAPH			
AVERAGE TIME		EMI9001	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015





FREQUENCIES	RBW	VBW	DETECTOR
902.75 MHz	100 kHz	100 kHz	Peak
Configuration:	N/A		
Comments:	Six transmissions were observed over a 120-second period (i.e. one transmission every 20 seconds on average). The duration of a single transmission is 195.699 ms. Therefore, over a 20-second interval, the average transmission time is 195.699 ms.		
EUT modification(s): N/A			

6.5. Maximum peak power of the intentional radiator

Reference standard:	FCC 47 CFR PART 15.247 RSS-247
Test method:	ANSI C63.10 : 2020

Test description: b) (2)

For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.

For EUT without dedicated or integral antenna, EUT is connected to the measuring receiver via 50Ω attenuator(s). Radiated power limit applies to the maximum measured conducted power value adjusted by the antenna gain and beamforming gain.

For EUT with integral or dedicated antenna, measurements are done on a normalized test site. EUT is set on an insulating support at 150 cm above the ground reference plane. Measurement is done on a normalized test site by the substitution method. The test antenna is oriented in the two polarizations (vertical and horizontal), and the product is rotated at 360° in the horizontal plane (See photo(s) for initial position of the EUT(0°)). If applicable the test antenna was raised and lowered through the specified range of height until a maximum signal level is detected.

For portable equipments:

- For frequencies < 1GHz a research of maximum level is done on 3 axes
- For frequencies > 1GHz styrofoam wedges, precut to the 30°, 60°, and 90° angles, are used to support the EUT in the 6 different orientations.

Only the highest levels are recorded.

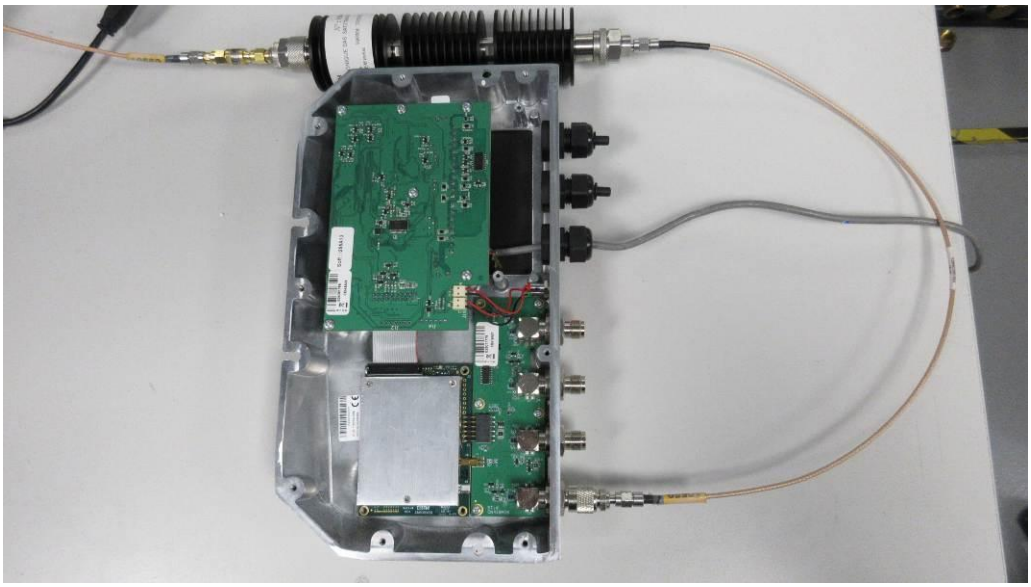
Tested Configuration	Parameter	Severity	Result Tab.	Verdict
RF output power / Low channel	902.75 MHz	1 W (30 dBm)	EMI7001	**PASS**
RF output power / Mid channel	915.75 MHz	1 W (30 dBm)	EMI7002	**PASS**
RF output power / High channel	927.25 MHz	1 W (30 dBm)	EMI7003	**PASS**

Laboratory parameters:	Required prior to the test	During the test
Ambient Temperature	15 to 35 °C	*See Graph(s)*
Relative Humidity	20 to 75 %	*See Graph(s)*
Atmospheric pressure	N/A	*See Graph(s)*
Test method deviation: N/A		
Supplementary information: N/A		

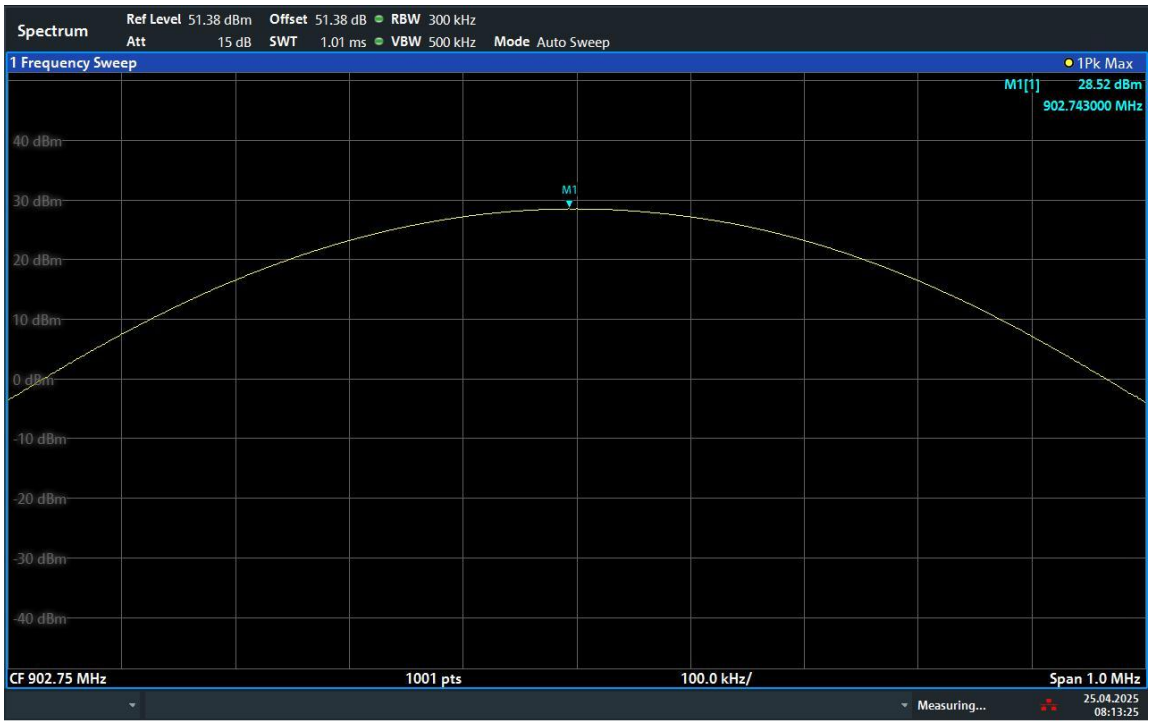
TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
AC power source	GW Instek	APS-1102	17782	04/09/2024	04/11/2025
Attenuator	Techniwave	TWSMA-20dB-18G-SMA	14679	07/03/2023	07/05/2026
Attenuator	MATECH ELECTRONIQUE SAS	SAT27B803018G-8	19413	25/03/2024	25/05/2027
Cable	Radiall	SMA-0,5m	16559	16/08/2023	16/04/2026
Cable	Radiall	SMA-1m	16562	16/08/2023	16/04/2026
Multimeter	FLUKE	8808A	12446	14/03/2025	14/05/2026
Spectrum analyzer	Rohde & Schwarz	FPL1007	17908	04/04/2025	04/06/2026
Thermohygrometer	Bioblock Scientific	Météostar	0963	28/09/2023	28/05/2026
Thermohygrometer	Testo	608-H2	12269	18/02/2025	18/04/2027

Blank cells = Permanent validity

TEST SETUP PHOTO(S)



MAXIMUM PEAK POWER OF THE INTENTIONAL RADIATOR - GRAPH			
RF OUTPUT POWER / LOW CHANNEL		EMI7001	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015



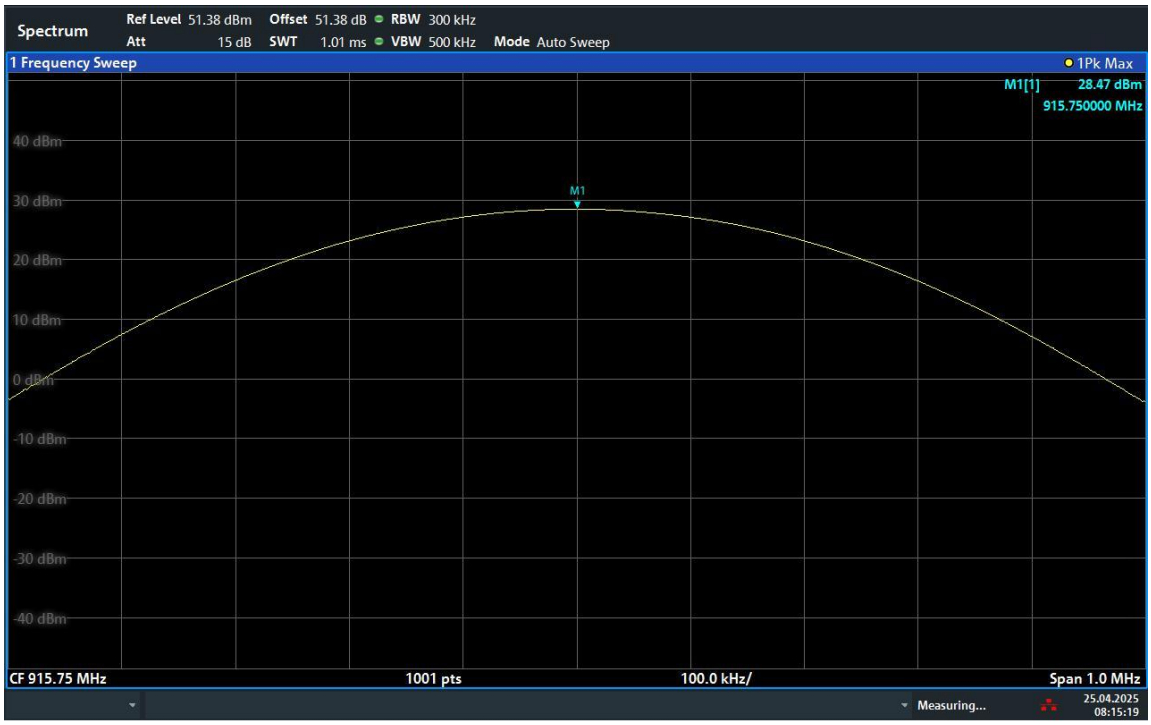
08:13:25 25.04.2025

Frequency (MHz)	Configuration	Level (dBm)	Limit (dBm)
902.75	Conducted	28.52	30

Configuration:	N/A
Comments:	*Software Tx RF power was set to the value 290.*

EUT modification(s): N/A

MAXIMUM PEAK POWER OF THE INTENTIONAL RADIATOR - GRAPH			
RF OUTPUT POWER / MID CHANNEL		EMI7002	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015



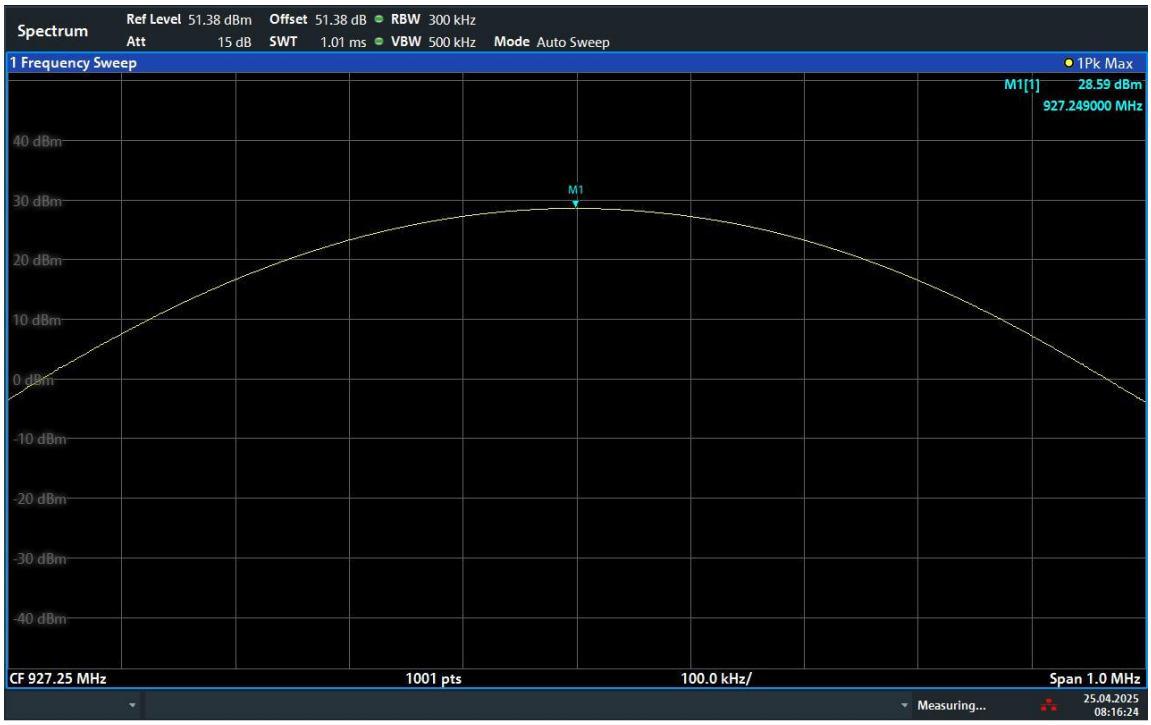
08:15:20 25.04.2025

Frequency (MHz)	Configuration	Level (dBm)	Limit (dBm)
915.75	Conducted	28.47	30

Configuration:	N/A
Comments:	*Software Tx RF power was set to the value 290.*

EUT modification(s): N/A

MAXIMUM PEAK POWER OF THE INTENTIONAL RADIATOR - GRAPH			
RF OUTPUT POWER / HIGH CHANNEL		EMI7003	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015



08:16:25 25.04.2025

Frequency (MHz)	Configuration	Level (dBm)	Limit (dBm)
927.25	Conducted	28.59	30

Configuration:	N/A
Comments:	*Software Tx RF power was set to the value 290.*

EUT modification(s): N/A

6.6. Band-edge compliance of emissions

Reference standard:	FCC part 15 Radio part 15.247 RSS-247
Test method:	ANSI C63.10: 2020

Test description: d)

In any 100 kHz bandwidth outside the frequency band in which the 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, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

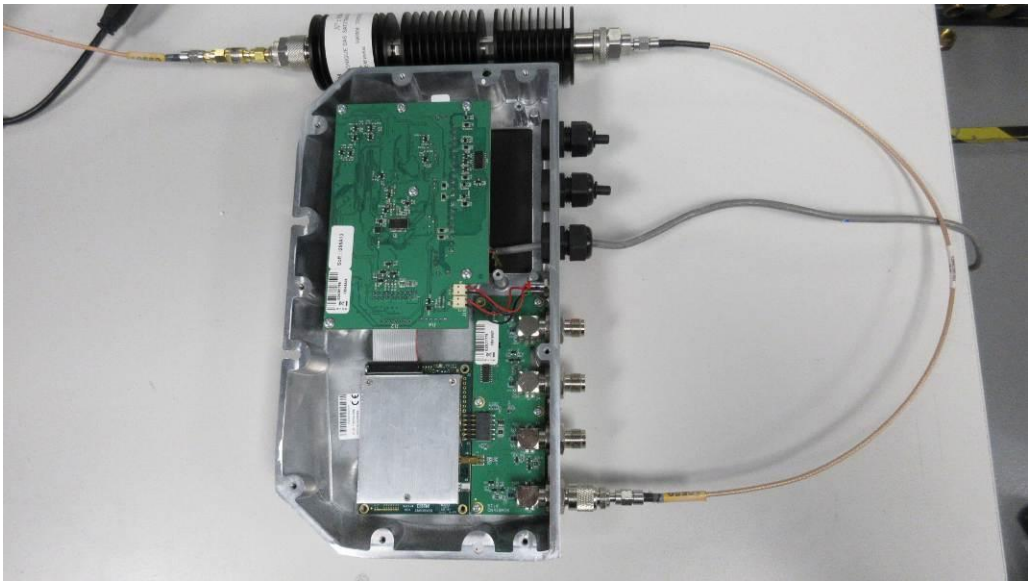
EUT is connected to the measuring receiver via 50Ω attenuator(s).Only the highest levels are recorded.

TESTED CONFIGURATION	PARAMETER	SEVERITY	RESULT TAB.	VERDICT
Band edge	876MHz-954MHz	20dBc	EMI8001	**PASS**

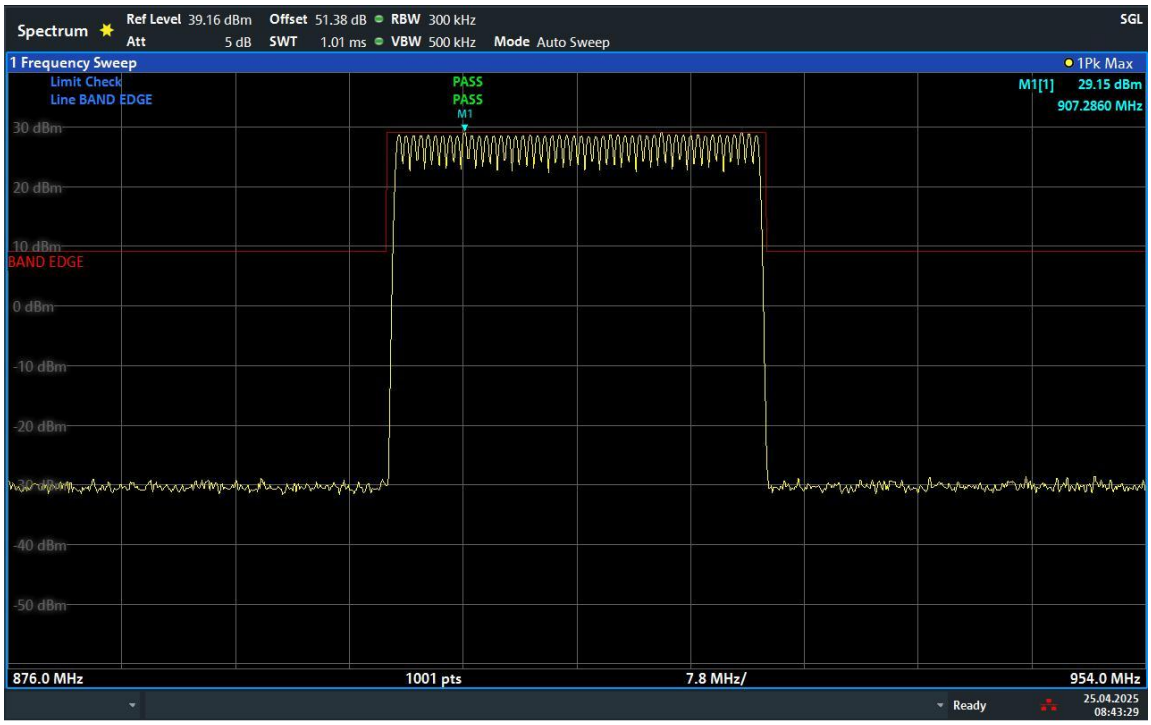
LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	*See Graph(s)*
Relative Humidity	20 to 75 %	*See Graph(s)*
Atmospheric pressure	N/A	*See Graph(s)*
Test method deviation: N/A		
Supplementary information: N/A		

TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
AC power source	GW Instek	APS-1102	17782	04/09/2024	04/11/2025
Attenuator	Techniwave	TWSMA-20dB-18G-SMA	14679	07/03/2023	07/05/2026
Attenuator	MATECH ELECTRONIQUE SAS	SAT27B803018G-8	19413	25/03/2024	25/05/2027
Cable	Radiall	SMA-0,5m	16559	16/08/2023	16/04/2026
Cable	Radiall	SMA-1m	16562	16/08/2023	16/04/2026
Multimeter	FLUKE	8808A	12446	14/03/2025	14/05/2026
Spectrum analyzer	Rohde & Schwarz	FPL1007	17908	04/04/2025	04/06/2026
Thermohygrometer	Bioblock Scientific	Météostar	0963	28/09/2023	28/05/2026
Thermohygrometer	Testo	608-H2	12269	18/02/2025	18/04/2027

Blank cells = Permanent validity

TEST SETUP PHOTO(S)


BAND EDGE COMPLIANCE EMISSIONS - GRAPH			
BAND EDGE		EMI8001	
EUT mode:	Tx mode	**T (°C):**	19.7
Test Date:	25/04/2025	**H (%):**	41.1
Test Operator:	MPA	**P (hPa):**	1015



08:43:29 25.04.2025

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Conducted	876MHz-854MHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	No emission outside the operating band was detected.			
EUT modification(s): N/A				

✪✪✪ End of test report ✪✪✪