Test report issued under the responsibility of:
EMITECH MONTPELLIER laboratory
MRA US-EU Designation Number: FR0006
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RADIO TEST REPORT

KDB 996369 D04 v01
FCC part 15.247
FCC part 15.407
RSS-247
(Partial tests)

Company	**VOGO**
Address.....	101 place Pierre Duhem Immeuble Les Centuries II 34000 MONTPELLIER FRANCE
Test item description.	**Radio communication gateway**
Trade Mark.	VOKKERO
Manufacturer.	VOGO
Model/Type reference.....	ELITE SMART GATEWAY / VO8346B
Ratings.....	100-240Vac/50-60Hz
Testing Laboratory	**EMITECH MONTPELLIER laboratory**
Address.....	145 rue de Massacan 34740 VENDARGUES FRANCE
Report Reference No.....	**RR-EVE-21C646-5A**
Test procedure.	FCC IC Certification
Diffusion.....	Mr SAGUIN
Applicant's name.	VOGO
Date of issue.....	February 4, 2022
Total number of pages.....	45
Revision.....	0
Modified page(s).....	Creation
Compiled by.....	Olivier AELBRECHT
Approved by (+ signature).....	Olivier HEYER (Laboratory Manager)

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REVISION HISTORY:

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0	February 4, 2022	/	Creation

1. GENERAL INFORMATIONS

This document submits the results of Radio tests performed on the equipment **Radio communication gateway ELITE SMART GATEWAY / VO8346B** (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..... :	Olivier AELBRECHT
Test supervisor ..... :	None
Date of receipt of test item..... :	N/A
Date (s) of performance of tests..... :	From August the 30th to September the 10th of 2021
APPLICANT'S GENERAL INFORMATIONS:	
Company name..... :	VOGO
Company address. ..... :	101 place Pierre Duhem Immeuble Les Centuries II 34000 MONTPELLIER FRANCE
Person(s) present during the tests. ..... :	Mr DE BARROS
Responsible..... :	Mr SAGUIN

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
OATS	Open area test site	FAR	Full anechoic room	Av	Average detector
VP	Vertical Polarization	HP	Horizontal Polarization	RMS	Root Mean Square
RF	Radio frequency	NTR	Nothing to report	N/C	Not communicated

2. REFERENCE DOCUMENT(S)

NORMATIVE REFERENCES:

The following referenced documents are necessary for the application of the present test report.

KDB 996369 D04 v01: February 2019
Modular transmitter integration guide — Guidance for host product manufacturers

FCC 47 CFR PART 15: September 2021
Code of federal regulations. Title 47- Telecommunication Chapter 1- Federal Communication Commission. Part 15- Radio frequency devices Subpart B- Unintentional Radiators. Limits and methods of measurement of radio disturbance. Characteristic of information technology equipment

FCC part 15.247
Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850MHz. (frequency hopping and digitally modulated)

FCC part 15.407
General technical requirements.

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

RSS/CNR-Gen,_Issue 5, March 2019
Exigences générales et information relatives à la certification du matériel de radiocommunication

ANSI C 63.10:2013
American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

ANSI C 63.4:2014
American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipmentin the Range of 9 kHz to 40 GHz

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. ..... :	Radio communication gateway
Model/Type reference..... :	ELITE SMART GATEWAY / VO8346B
Trade Mark. ..... :	VOKKERO
Serial number (S/N)..... :	00000564
Part number (P/N). ..... :	Batch000001
Software version..... :	*3.01*
Firmware version. ..... :	*3.01*
Type of sample. ..... :	Pre-serial
Function(s)..... :	Digital Analogic Audio Gateway
Manufacturer name. ..... :	VOGO
Address..... :	101 place Pierre Duhem Immeuble Les Centuries II 34000 MONTPELLIER FRANCE

General product information:

N/A

3.2. EUT Marking plate

3.3. EUT General view

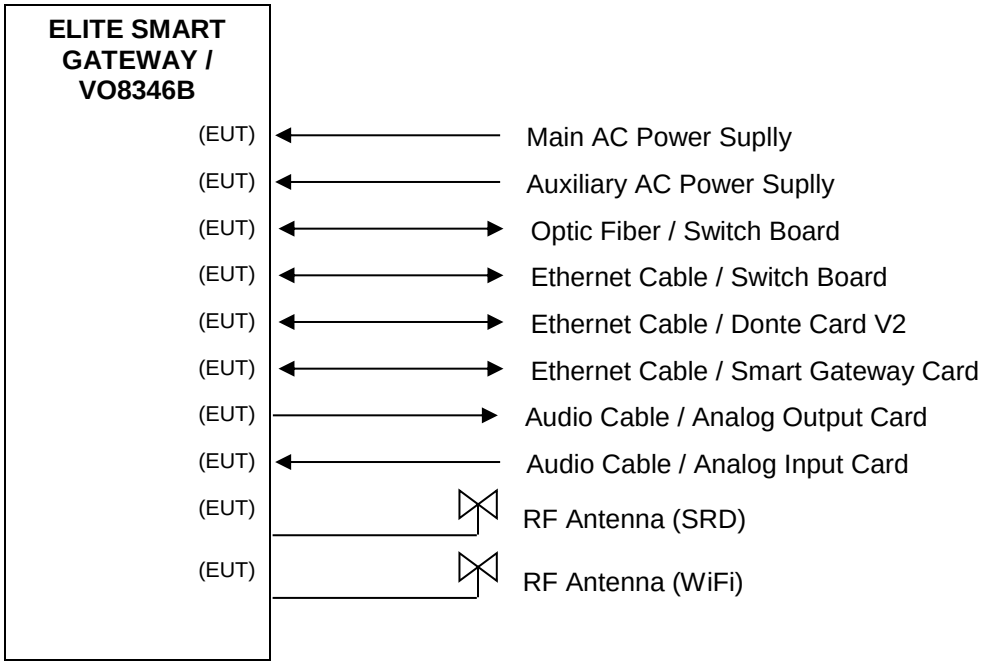
3.4. EUT Mechanical and Electrical Design

Power supply. ..... : *120Vac/60Hz*
Power supply range. ..... : *100-240Vac/50-60Hz*
Power type. ..... : *Single phase with earth*
Power (W). ..... : *90*
Nominal current (A). ..... : *2.5*
Dimensions (L x W x H) (m). ..... : *0.483 x 0.253 x 0.088*
Weight (kg). ..... : *5*
Temperature range (°C). ..... : *0°C to 40°C*
Ground bounding strap. ..... : *No*

Comments:

N/A

3.5. EUT Input/Output ports



PORT	NAME	TYPE	LENGTH	CABLE TYPE	COMMENTS
0	Main frame	N/E	N/A	Metallic	N/A
1	Main AC Power Suplly	AC	>3m	2P+T	120Vac/60Hz
2	Auxilary AC Power Suplly	AC	>3m	2P+T	120Vac/60Hz
3	Optic Fiber / Switch Board	N/E	>3m	Not shielded	N/A
4	Ethernet Cable / Switch Board	I/O	>3m	Shielded	N/A
5	Ethernet Cable / Donte Card V2	I/O	>3m	Shielded	N/A
6	Ethernet Cable / Smart Gateway Card	I/O	>3m	Shielded	N/A
7	Audio Cable / Analog Output Card	I/O	>3m	Shielded	N/A
8	Audio Cable / Analog Input Card	I/O	>3m	Shielded	N/A
9	RF Antenna (SRD)	RF	N/A	N/A	used for SRD (902-928MHz)
10	RF Antenna (WiFi)	RF	N/A	N/A	used for WiFi (2.4GHz and 5GHz)

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

3.6. Supporting Equipment Used During Test

Sample subject to the tests was tested with following equipment.

PRODUCT TYPE	MANUFACTURER	MODEL	N°EMITECH / COMMENTS
HF communication interface	GLENSOUND	GS-FW023	Used to check the analog audio output and input
Laptop	DELL	Latitude 5510	Used to check Ethernet fiber and wifi connectection
Wireless communication Headset	VOKKERO	V08364AA	Used to transmited by RF audio signal (1kHz)

HF COMMUNICATION INTERFACE (AE)

LAPTOP (AE)

WIRELESS COMMUNICATION HEADSET (AE)

3.7. EUT Radio Specifications

a) GENERAL INFORMATIONS
According to manufacturer's declarations : EUT type..... : *Transceiver* Technology ..... : *WiFi + SRD* Environmental profile..... : *Data transmissions* Temperature range..... : *0°C to +40°C* Antenna type ..... : *External* Antenna Gain..... : *Not communicated* **Comments:** *EUT includes RF devices already certified, see appropriates tests report for full testing results:* *The VO8364AA for SRD part and The Sterling-LWB5 for WiFi part.*
b) TRANSMITTER PARAMETERS (TX)
Frequency bands..... : *SRD: 902MHz to 928MHz* *WiFi: 2400MHz to 2483.5MHz* *5150 MHz to 5850 MHz* RF Power..... : *SRD: 24dBm* *Wifi: Not communicated* Number of channels / Separation..... : *SRD: DTS mode 915.4 MHz to 927.4 MHz (15 channels)* *FHSS mode 915.42 MHz to 927.42 MHz (26 channels)* *Wifi: Not communicated* Modulation type ..... : *GFSK* Tested frequency..... : *SRD: 915.42MHz (Low Channel)* *921.42MHz (Mid Channel)* *927.42MHz (High Channel)* ***For SRD part, the EUT was tested with the FHSS setup mode in order to reach the maximum output power wich is the worst case for spurious emissions.*** *Wifi: 2412 MHz* *5180MHz*
c) RECEIVER PARAMETERS (RX)
Frequency bands..... : *SRD: 902MHz to 928MHz* *WiFi: 2400MHz to 2483.5MHz* *5150 MHz to 5850 MHz* Bandwidth..... : *Not communicated*

4. EUT REQUIREMENTS FOR FCC RULES

4.1. Subpart A - General

This part sets out the regulations under which an intentional, unintentional, or incidental radiator may be operated without an individual license. It also contains the technical specifications, administrative requirements and other conditions relating to the marketing of part 15 devices.

The user notice **Not communicated**, shall include the following informations:

a) LABELING REQUIREMENTS (§15.19):

Equipment authorization: Supplier's Declaration of Conformity (SDoC) or Certification

List of different **type of devices** and associated "*statement on product*":

§15.19(a)(1) - Receivers associated with the operation of a licensed radio service:

"This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference."

§15.19(a)(2) - A stand-alone cable input selector switch:

"This device complies with part 15 of the FCC Rules for use with cable television service."

§15.19(a)(3) - All other devices:

"This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

§15.19(a)(4) - Where a device is constructed in two or more sections connected by wires and marketed together:

The statement specified only to the main control unit:

"This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference."

§15.19(a)(5) - When the device is so small:

The statement of §15.19(a) shall be placed in the user manual and must also either be placed on the device packaging or on a removable label attached to the device.

Compliance information (§2.1077):

The identification, by name, address and telephone number or internet contact information, of the responsible party, as defined in § 2.909 of the standard. The responsible party for Supplier's Declaration of Conformity must be located within the United States.

Identification (§2.1074):

(a) Devices subject only to Supplier's Declaration of Conformity shall be uniquely identified by the party responsible for marketing or importing the equipment within the United States.

(b) Devices subject to authorization under Supplier's Declaration of Conformity may be labeled with the following logo on a voluntary basis as a visual indication that the product complies with the applicable FCC requirements.

(image size: 6.7 x 2.8" ;3.5 x 1.4" ;1.6 x .7")

The label shall be located in a conspicuous location on the device.
The label shall not be a stick-on, paper label. The label on these products shall be permanently affixed to the product and shall be readily visible (font of at least 4-point or larger) to the purchaser at the time of purchase.

EUT LABEL

b) DEVICES INCLUDING MODULAR TRANSMITTER(S) (§15.212):

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following:

"Contains Transmitter Module FCC ID: XYZMODEL1" or "Contains FCC ID: XYZMODEL1."

Device under test includes single modular transmitter(s):

FCC ID:

- ***for SRD: 2AU6N-VO8364AA***
- ***for WIFI: TFB-1004***

IC:

- ***for SRD: 25704-VO8364AA***
- ***for WIFI: 5969A-1004***

c) INFORMATION TO USER (§15.21):

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that:

"The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment"

4.2. Subpart B - Unintentional Radiators

In addition to Subpart A, the user notice Not communicated, shall include the following informations:

a) INFORMATION TO USER (§15.105):
Equipment authorization: Supplier's Declaration of Conformity (SDoC) or Certification **§15.105(a) - For a Class A digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:** *"NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense."* **§15.105(b) - For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:** *"NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:* *—Reorient or relocate the receiving antenna.* *—Increase the separation between the equipment and receiver.* *—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.* *—Consult the dealer or an experienced radio/TV technician for help."*

5. OPINION(S) AND INTERPRETATION(S)

TEST(S) PERFORMED	DEVIATION(S) TO TEST METHOD(S)
ANSI C63.4: 2014	N/A
ANSI C63.10 : 2013	N/A

Comments: N/A

6. RESULT SUMMARY

TEST DESIGNATION	SEVERITY	VERDICT	BASIC STANDARDS / COMMENTS
Conducted emission (measurement)			**FCC part 15.107, 15.207 and RSS-Gen** **ANSI C63.4: 2014**
- 110Vac/60Hz Main	§15.207	**PASS**	
- 110Vac/60Hz Auxiliary	§15.207	**PASS**	
Transmitter radiated spurious emissions at frequencies <30MHz			**FCC part 15.109, 15.209, 15.205, 15.215, 15.247, 15.407** **RSS-247, CNR Gen** **ANSI C63.10: 2013**
- TX mode / 0°	§15.209	**PASS**	
- TX mode / 45°	§15.209	**PASS**	
- TX mode / 90°	§15.209	**PASS**	
Transmitter spurious emissions at frequencies >30MHz			**FCC part 15.109, 15.209, 15.205, 15.215, 15.247, 15.407** **RSS-247, CNR Gen** **ANSI C63.10: 2013**
- 110Vac/60Hz / Radio Off	§15.209	**PASS**	
- 110Vac/60Hz / All channel + Wifi 2.4Ghz	§15.209	**PASS**	
- 110Vac/60Hz / All channel + Wifi 5Ghz	§15.209	**PASS**	
Effective radiated power			**FCC part 15.247, 15.407** **RSS-247** **ANSI C63.10: 2013**
- EIRP / SRD Low Channel	1W	**PASS**	
- EIRP / SRD Mid Channel	1W	**PASS**	
- EIRP / SRD High Channel	1W	**PASS**	
- EIRP / wifi 2.4GHz	1W	**PASS**	
- EIRP / wifi 5GHz	1W	**PASS**	

Sample subject to the test complies for tests done 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 into account of uncertainty associated with the results with the exception of emission tests based on CISPR standards.

TEST(S) PERFORMED	MODIFICATION(S)
ANSI C63.4: 2014	N/A
ANSI C63.10 : 2013	N/A

7. MEASUREMENT UNCERTAINTY

PARAMETER	MAXIMAL EMITECH UNCERTAINTY	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	± 2.3dB	± 3 dB
Occuped bandwidth		
RF power	± 3.8 %	± 5 %
Conducted emission (spurious)		
f ≤ 1 GHz	± 0.8 dB	± 3 dB
1 GHz - 12.75 GHz	± 1.6 dB	
Radiated emission (ERP / EIRP)		
f ≤ 62.5 MHz	± 5.1 dB	± 6 dB
62.5 MHz - 1 GHz	± 5.1 dB	± 6 dB
1 GHz - 18 GHz	± 5.2 dB	± 6 dB
18 GHz – 26 GHz	± 5.1 dB	± 6 dB
26 GHz – 40 GHz	± 5.4 dB	± 6 dB
Radiated emission (magnetic field)		
9kHz – 30MHz	± 3 dB	± 6 dB
RF level for a given BER	± 0.8 dB	± 1.5 dB
Supply voltages	± 3 %	± 3 %
Temperature	± 1 °C	± 1°C
Humidity	± 5 %	± 5 %
Time / Duty cycle	± 4.4 %	± 5 %
Conducted emission (FCC)		
(Artificial Mains Network) 150kHz – 30MHz	± 3.4 dB	± 3.4 dB
Radiated emission (electric field for FCC standard)		
9kHz – 30MHz	± 2.7 dB	/
30MHz – 1GHz	± 5.0 dB	/
1GHz – 18GHz	± 5.6 dB	/
18GHz – 26GHz	± 5.7 dB	/
26GHz – 40GHz	± 5.7 dB	/

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

8. RF EXPOSURE

Maximum EIRP for SRD = 128.8 mW (eirp) at 921.420 MHz
Maximum EIRP for Wifi 2.4GHz = 229.1 mW (eirp) at 2412 MHz
Maximum EIRP for Wifi 5GHz = 154.9 mW (eirp) at 5180 MHz

In accordance with KDB 447498 D01 General RF Exposure Guidance v06:
PSD for SRD = EIRP/(4*π*R2)=128.8/(4*π*(20 cm)²)= 0.0256 mW/cm² (Limit : 0.614 mW/cm²)
PSD for Wifi 2.4GHz = EIRP/(4*π*R2)=229.1/(4*π*(20 cm)²)= 0.0456 mW/cm² (Limit : 0.614 mW/cm²)
PSD for Wifi 5GHz = EIRP/(4*π*R2)=154.9/(4*π*(20 cm)²)= 0.0308 mW/cm² (Limit : 0.614 mW/cm²)

In accordance with RSS-102, Issue 5, Section 2.5.2.,
EIRP for SRD is lower than 1.39W at 921.420 MHz, RF Exposure exemption can be considered.
EIRP for Wifi 2.4GHz is lower than 2.68W at 2412 MHz, RF Exposure exemption can be considered.
EIRP for Wifi 5GHz is lower than 4.53W at 5180 MHz, RF Exposure exemption can be considered.

In accordance with KDB 447498 D04 Interim General RF Exposure Guidance v01 §2.2.2 and RSS-102, Issue 5, Section 3.1.2:

Transmitter	Fréquence (GHz)	EIRP (mW)	ERP (mW)	ERP20cm (mW)	EIRP Limit ISED	ERP/ERP20cm	EIRP/EIRPLimit ISED
SRD	0,92	128,80	78,51	1879,70	1390.53	0,04	0,06
Wifi 2.4GHz	2,41	229,10	139,64	3060,00	2684.03	0,05	0,05
Wifi 5GHz	5,18	154,90	94,42	3060,00	4525.27	0,03	0,02
					SUM (must be ≤1) :	**0,12**	**0,13**

9. TEST CONDITIONS AND RESULTS

9.1. Conducted emission (measurement)

Reference standard:	FCC part 15.107, 15.207 and RSS-Gen
Test method:	ANSI C63.4: 2014

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
110Vac/60Hz Main	150kHz-30MHz	§15.207	EMI4704	**PASS**
110Vac/60Hz Auxiliary	150kHz-30MHz	§15.207	EMI4705	**PASS**

LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	*See Graph(s)*
Relative Humidity	30 to 60 %	*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	KIKUSUI	PCR4000L	3074	25/07/2019	25/09/2021
Cable	EMITECH	Current absorber sheath	9491	23/06/2020	23/08/2022
Cable	C&C	N-3m	14334	18/03/2021	18/05/2023
Ground plane	EMITECH	Test area	11569		
LISN	PMM	L2-16	1209	08/06/2020	08/08/2022
Multimeter	FLUKE	8808A	12446	29/09/2020	29/11/2021
Receiver	Rohde & Schwarz	ESI	9704	24/08/2021	24/10/2022
Software	Nexio	BAT EMC	0000		
Surges Suppressor	Hewlett Packard	11947A	0238	20/12/2019	20/02/2023
Thermohygrometer	Bioblock Scientific	Météostar	0963	07/06/2021	07/08/2023

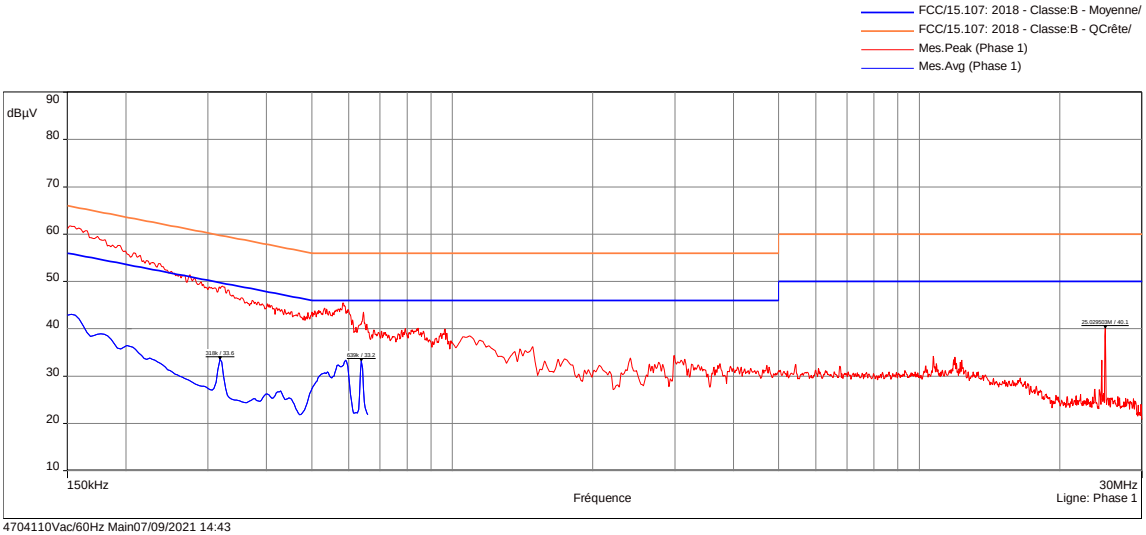
BAT-EMC software version: V3.18.0.26 Blank cells = Permanent validity

CONDUCTED EMISSION (MEASUREMENT) - TABULATED RESULTS						
110VAC/60HZ MAIN						EMI4704
Terminal	Test Frequency (MHz)	Detector (Pk/QP/Avg)	Gain/Loss Factor (dB)	Level dB (µV)	Limit dB (µV)	Margin (dB)
Phase	0.318	Avg	10.09	33.57	49.76	-16.19
Neutral	0.570	Avg	10.12	32.05	46.00	-13.95
Phase	0.591	Avg	10.12	33.37	46.00	-12.63
Neutral	0.639	Avg	10.13	30.54	46.00	-15.46
Phase	0.639	Avg	10.13	33.19	46.00	-12.81
Phase	0.656	Pk	10.13	40.98	46.00	-5.02
Neutral	0.664	Pk	10.13	38.46	46.00	-7.54
Phase	1.090	Pk	10.16	38.50	46.00	-7.50
Phase	25.030	Pk	10.69	40.12	50.00	-9.88
Neutral	25.030	Pk	10.69	39.02	50.00	-10.98
Supplementary information: N/A						

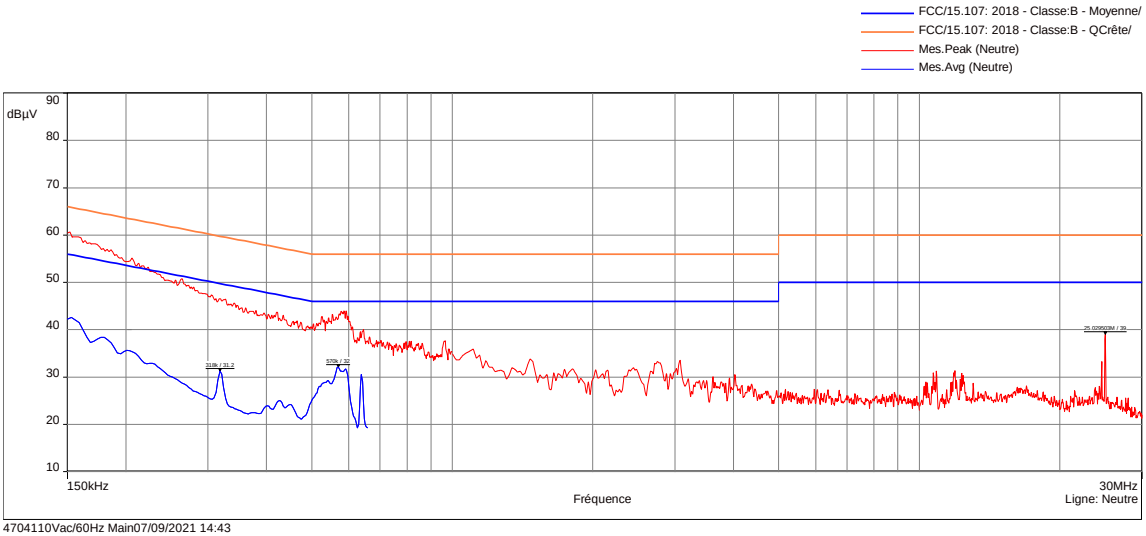
CONDUCTED EMISSION (MEASUREMENT) - TABULATED RESULTS						
110VAC/60HZ AUXILIARY						EMI4705
Terminal	Test Frequency (MHz)	Detector (Pk/QP/Avg)	Gain/Loss Factor (dB)	Level dB (µV)	Limit dB (µV)	Margin (dB)
Phase	0.150	QP	10.08	61.65	66.00	-4.35
Neutral	0.150	QP	10.08	60.38	66.00	-5.62
Phase	0.153	Avg	10.08	46.56	55.84	-9.28
Neutral	0.153	Avg	10.08	45.22	55.84	-10.62
Phase	0.190	Avg	10.08	40.59	54.04	-13.45
Neutral	0.190	Avg	10.08	39.37	54.04	-14.67
Phase	0.571	Avg	10.12	31.67	46.00	-14.33
Neutral	1.018	Pk	10.16	35.98	46.00	-10.02
Phase	1.072	Pk	10.16	39.20	46.00	-6.80
Neutral	3.147	Pk	10.27	34.09	46.00	-11.91
Phase	4.391	Pk	10.33	33.90	46.00	-12.10
Phase	25.030	Pk	10.69	38.13	50.00	-11.87
Supplementary information: N/A						

TEST SETUP PHOTO(S)

CONDUCTED EMISSION (MEASUREMENT) - GRAPH			
110VAC/60HZ MAIN		EMI4704	
EUT mode:	Continuous modulated Tx mode	**T (°C):**	25.5
Test Date:	07/09/2021	**H (%):**	52.4
Test Operator:	OAT	**P (hPa):**	1011



4704110Vac/60Hz Main07/09/2021 14:43

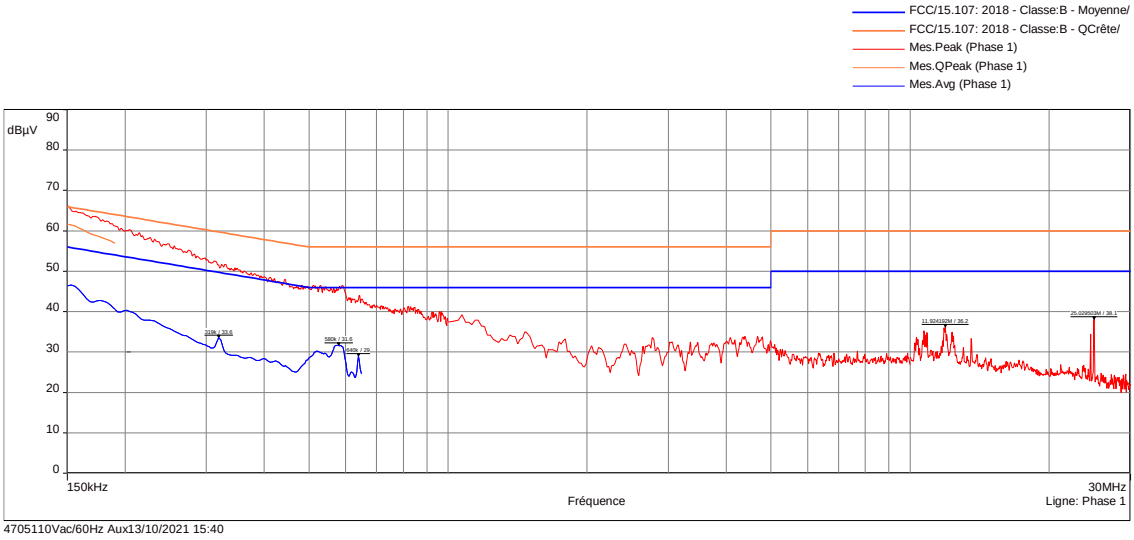


4704110Vac/60Hz Main07/09/2021 14:43

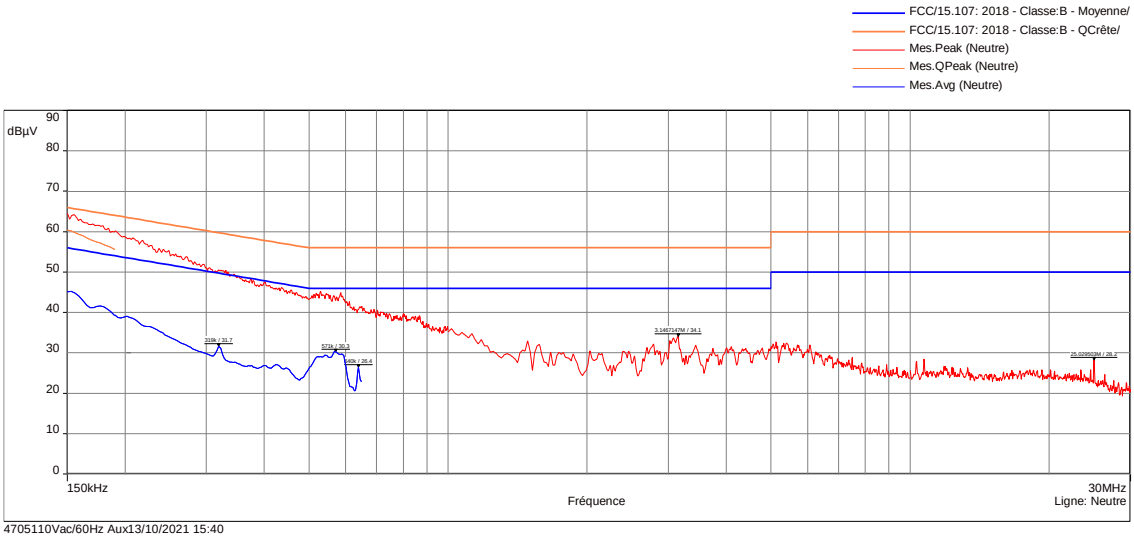
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Neutral	150kHz-1MHz	10kHz	30kHz	Peak
Neutral	1MHz-10MHz	10kHz	30kHz	Peak
Neutral	10MHz-30MHz	10kHz	30kHz	Peak
Phase 1	150kHz-1MHz	10kHz	30kHz	Peak
Phase 1	1MHz-10MHz	10kHz	30kHz	Peak
Phase 1	10MHz-30MHz	10kHz	30kHz	Peak
Phase 1	150kHz-660kHz	10kHz	30kHz	Average
Neutral	150kHz-660kHz	10kHz	30kHz	Average
Measure with:	A.M.N.			
Comments:	N/A			

EUT modification(s): N/A

CONDUCTED EMISSION (MEASUREMENT) - GRAPH			
110VAC/60HZ AUXILIARY		EMI4705	
EUT mode:	Continuous modulated Tx mode	**T (°C):**	25.5
Test Date:	07/09/2021	**H (%):**	52.4
Test Operator:	OAT	**P (hPa):**	1011



4705110Vac/60Hz Aux13/10/2021 15:40



4705110Vac/60Hz Aux13/10/2021 15:40

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Neutral	150kHz-1MHz	10kHz	30kHz	Peak
Neutral	1MHz-10MHz	10kHz	30kHz	Peak
Neutral	10MHz-30MHz	10kHz	30kHz	Peak
Phase 1	150kHz-1MHz	10kHz	30kHz	Peak
Phase 1	1MHz-10MHz	10kHz	30kHz	Peak
Phase 1	10MHz-30MHz	10kHz	30kHz	Peak
Neutral	150kHz-190kHz	10kHz	30kHz	QPeak
Neutral	190kHz-650kHz	10kHz	30kHz	Average
Phase 1	150kHz-190kHz	10kHz	30kHz	QPeak
Phase 1	190kHz-650kHz	10kHz	30kHz	Average
Measure with:	A.M.N.			
Comments:	N/A			

EUT modification(s): N/A

9.2. Transmitter radiated spurious emissions at frequencies <30MHz

Reference standard:	FCC part 15 Radio part 15.247 and RSS-247
Test method:	ANSI C63.10 : 2013

Test description: Spurious domain emission limits are limits on emissions at frequencies other than those of the carrier and sidebands associated with normal test modulation**.**

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 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.

All frequencies were investigated, where applicable.

TESTED CONFIGURATION	PARAMETER	SEVERITY	RESULT TAB.	VERDICT
TX mode / 0°	9kHz-30MHz	§15.209	EMI4662	**PASS**
TX mode / 45°	9kHz-30MHz	§15.209	EMI4667	**PASS**
TX mode / 90°	9kHz-30MHz	§15.209	EMI4668	**PASS**

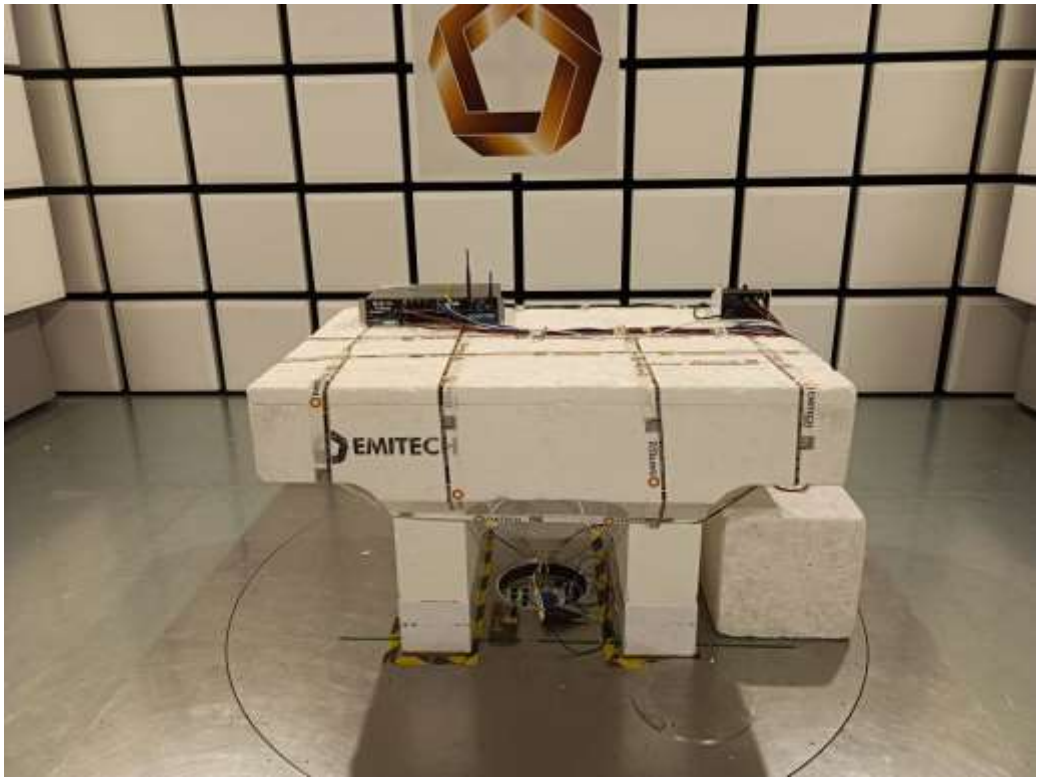
LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	*See Graph(s)*
Relative Humidity	20 to 75 %	*See Graph(s)*
Atmospheric pressure	N/A	*See Graph(s)*
Test method deviation: N/A		
Supplementary information: Limit indicated on the curves is calculated with 40 dB/decade extrapolation factor and 51.5 dB conversion factor.		

TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Antenna	Rohde & Schwarz	HFH2-Z2	5825	24/04/2020	24/06/2022
Cable	SUCOFLEX	N-6,5m	14380	25/07/2019	25/09/2021
Cable	MegaPhase	N-8m	15813	14/01/2021	14/03/2023
Cable	MegaPhase	TM18-N1N1-118	12842	02/12/2020	02/02/2023
Receiver	Rohde & Schwarz	ESW26	17791	14/04/2021	14/06/2022
Shielded enclosure	COMTEST	SAC 3m	14494	02/10/2019	02/12/2022
Software	Nexio	BAT EMC	0000		
Thermohygrometer	Testo	608-H2	12269	07/05/2020	07/07/2022
Thermohygrometer	Bioblock Scientific	Météostar	0963	07/06/2021	07/08/2023

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

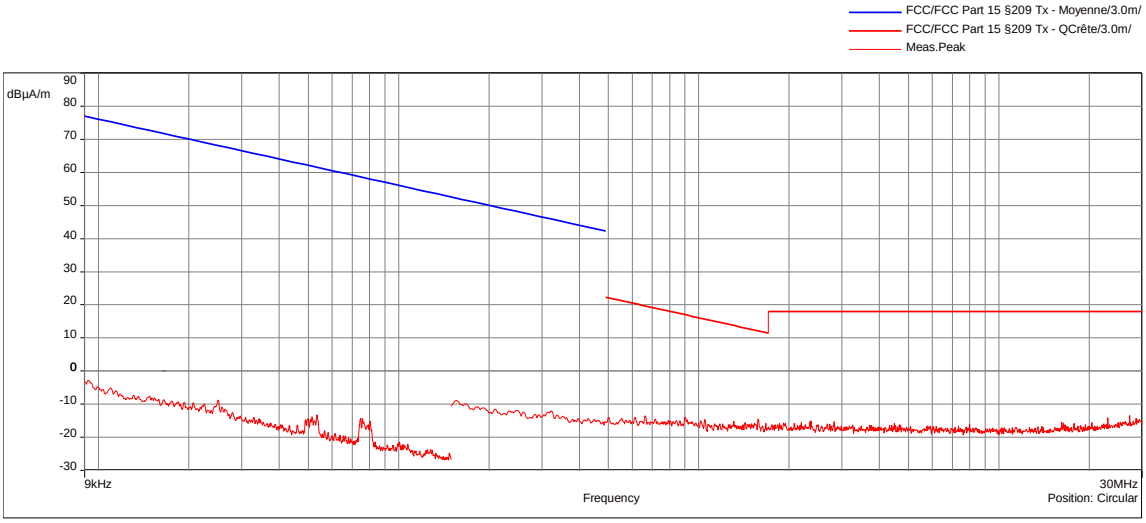
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - TABULATED RESULTS			
Frequency (MHz)	**Antenna Position**	**Level (dBµA/m)**	**Limit (dBµA/m)**
N/A	N/A	N/A	N/A

No spurious emissions were detected.

TEST SETUP PHOTO(S) – EUT POSITION


TEST SETUP PHOTO(S)

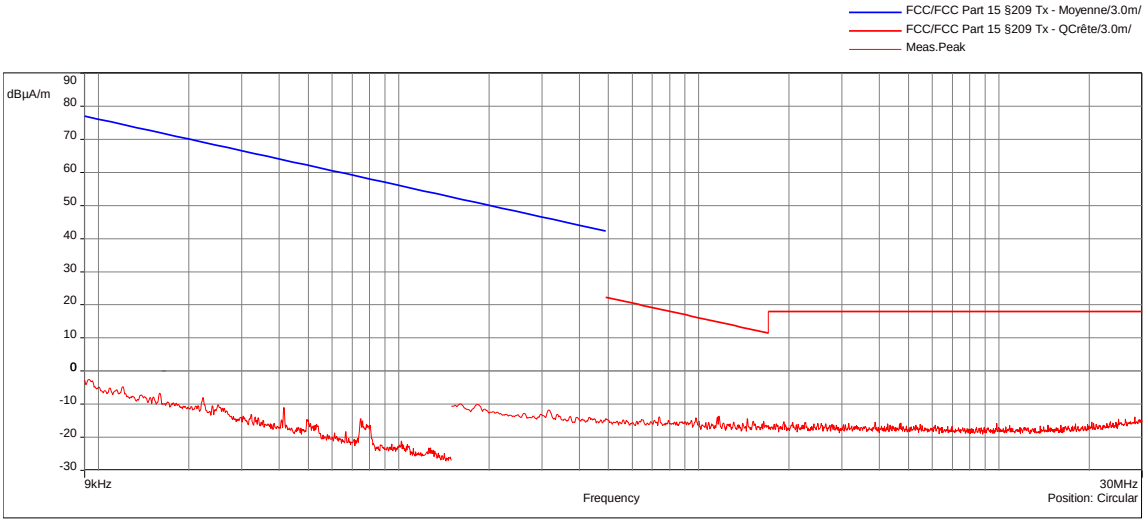
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / 0°		EMI4662	
EUT mode:	Continuous modulated Tx mode	**T (°C):**	22.1
Test Date:	07/09/2021	**H (%):**	62.4
Test Operator:	OAT	**P (hPa):**	1011



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

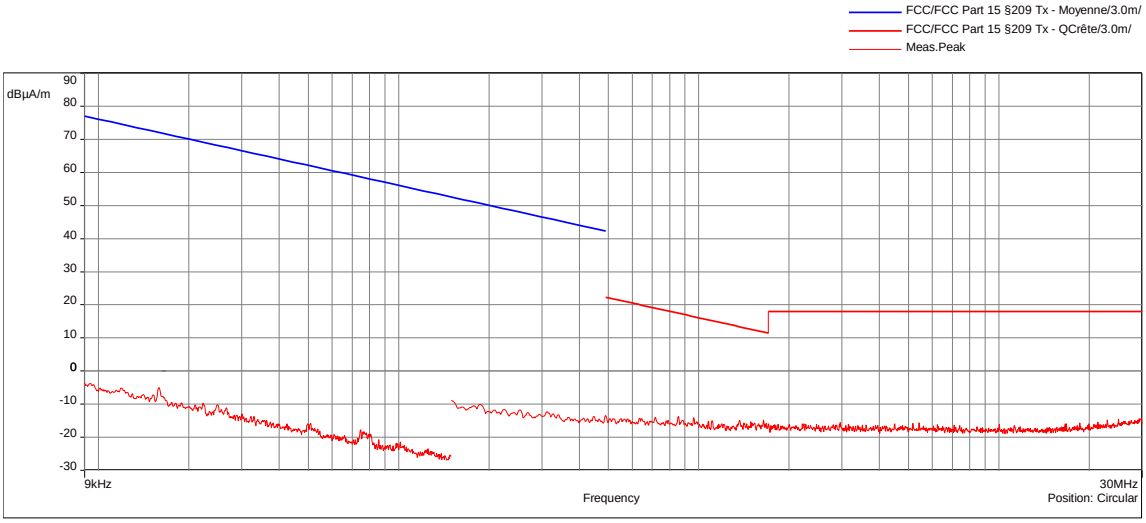
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / 45°		EMI4667	
EUT mode:	Continuous modulated Tx mode	**T (°C):**	22.1
Test Date:	07/09/2021	**H (%):**	62.4
Test Operator:	OAT	**P (hPa):**	1011



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

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / 90°		EMI4668	
EUT mode:	Continuous modulated Tx mode	**T (°C):**	22.1
Test Date:	07/09/2021	**H (%):**	62.4
Test Operator:	OAT	**P (hPa):**	1011



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

9.3. Transmitter radiated spurious emissions at frequencies >30MHz

Reference standard:	FCC part 15 Radio part 15.247 and RSS-247
Test method:	ANSI C63.10 : 2013

General test setup: EUT is set on an insulating support at 801cm for Freq < 1GHz and 150cm for Freq > 1GHz 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.

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
110Vac/60Hz / Radio Off	30MHz-18GHz	§15.209	EMI4671	**PASS**
110Vac/60Hz / All channel + Wifi 2.4Ghz	30MHz-18GHz	§15.209	EMI4672	**PASS**
110Vac/60Hz / All channel + Wifi 5Ghz	30MHz-18GHz	§15.209	EMI4682	**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	KIKUSUI	PCR4000L	3074	25/07/2019	25/09/2021
Antenna	ETS-Lindgren	3117	5456	24/07/2019	24/09/2022
Antenna	Electro Metrics	BIA-30HF	1107	27/06/2018	27/02/2022
Antenna	Rohde & Schwarz	HL223	1137	27/06/2018	27/02/2022
Attenuator	Techniwave	TWSMA-10dB-18G-SMA	14674	27/12/2019	27/02/2023
Cable	MegaPhase	F135N1N28	16664	25/10/2019	25/12/2021
Cable	MegaPhase	F135N1N28	16668	25/10/2019	25/12/2021
Cable	cables and connectors	N-1.5m	4201	27/01/2021	27/03/2023
Cable	cables and connectors	N-1.5m	4203	27/01/2021	27/03/2023
Cable	/	N-1m	3625	27/01/2021	27/03/2023
Cable	SUCOFLEX	N-3m	14378	25/06/2019	25/02/2022
Cable	SUCOFLEX	N-3m	14379	25/06/2019	25/02/2022
Cable	SUCOFLEX	N-6,5m	14380	25/07/2019	25/09/2021
Cable	MegaPhase	N-8m	15813	14/01/2021	14/03/2023

CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Cable	Huber + Suhner	SF102K	16042	24/03/2021	24/05/2023
Cable	MegaPhase	TM18-N1N1-118	12842	02/12/2020	02/02/2023
Filter	Micro-Tronics	HPM 15162	10273	12/01/2019	12/03/2022
Filter	Micro-Tronics	HPM15600	6607	03/09/2019	03/11/2022
Filter	Micro-Tronics	HPM18865	12843	09/06/2018	09/02/2022
Filter	Micro-Tronics	LPM15601	6606	03/09/2019	03/11/2022
Multimeter	FLUKE	8808A	12446	29/09/2020	29/11/2021
Preamplifier	Techniwave	APS16-0087	14040	02/12/2020	02/02/2022
Preamplifier	IMPULSE	CA118-546ACN	9169	13/01/2021	13/03/2022
Receiver	Rohde & Schwarz	ESW26	17791	14/04/2021	14/06/2022
Receiver	Rohde & Schwarz	FSW43	14830	29/07/2020	29/09/2021
Shielded enclosure	RAY PROOF	C.V2	1423	04/10/2019	04/12/2022
Shielded enclosure	COMTEST	SAC 3m	14494	02/10/2019	02/12/2022
Software	Nexio	BAT EMC	0000		
Thermohygrometer	Testo	608-H2	12269	07/05/2020	07/07/2022
Thermohygrometer	Bioblock Scientific	Météostar	0963	07/06/2021	07/08/2023

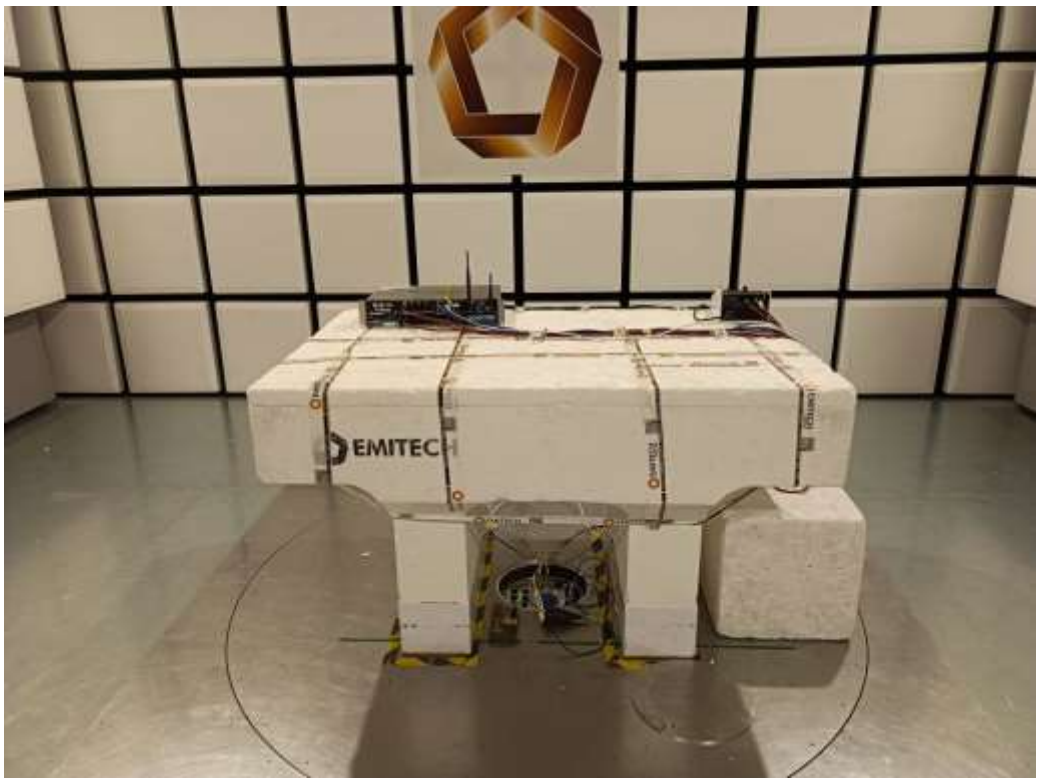
BAT-EMC software version: V3.18.0.26

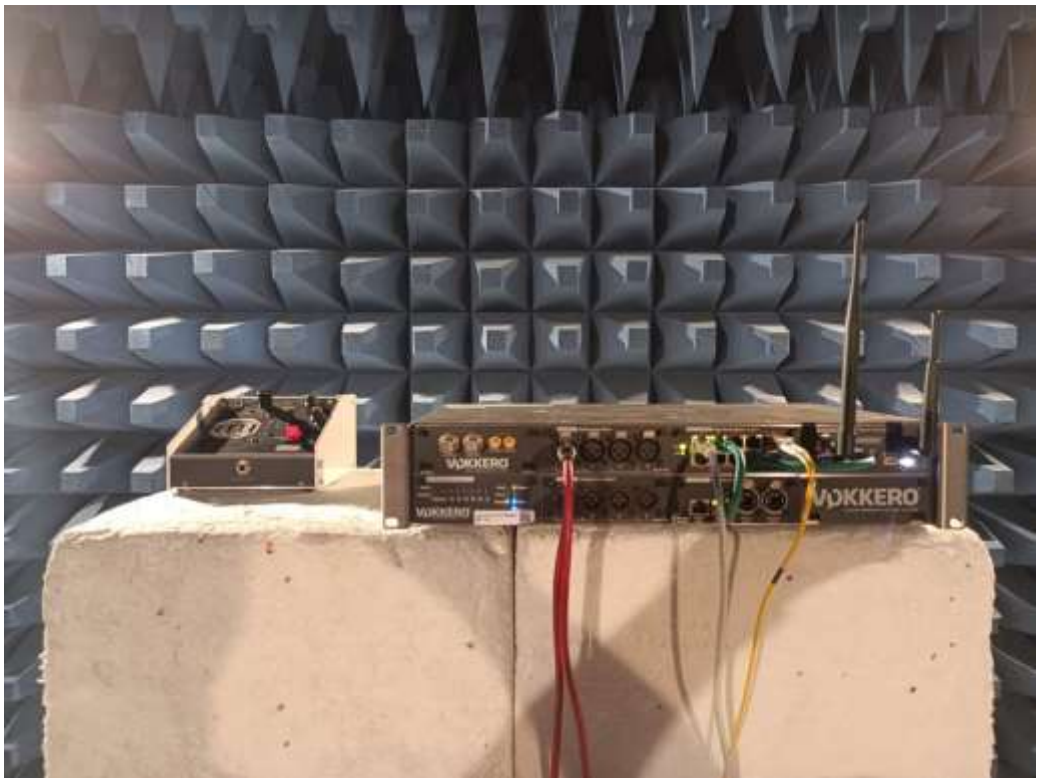
Blank cells = Permanent validity

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - TABULATED RESULTS					
110VAC/60HZ / RADIO OFF				EMI4671	
Frequency (MHz)	Polarization	Level Peak (dBµV/m)	Leve Qpeak (dBµV/m)	Limit Qpeak (dBµ/m)	Margin (Level – Limit)
38.905	Vertical	36.61	30.53	40.00	-9.47
41.753	Vertical	36.71	30.12	40.00	-9.88
81.219	Vertical	36.31	30.53	40.00	-9.47
150.014	Horizontal	41.56	39.70	43.50	-3.80
150.014	Vertical	42.56	40.01	43.50	-3.49
172.032	Horizontale	38.04	36.23	43.50	-7.27
275.009	Horizontale	40.77	38.93	46.00	-7.07
375.022	Vertical	44.96	43.24	46.00	-2.76
375.022	Horizontale	45.92	44.22	46.00	-1.78
425.028	Vertical	42.92	40.33	46.00	-5.67
525.041	Horizontale	40.88	38.27	46.00	-7.73
875.084	Horizontale	40.25	34.45	46.00	-11.55
EUT modification(s): N/A					

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - TABULATED RESULTS					
110VAC/60HZ / ALL CHANNEL + WIFI 2.4GHZ				EMI4672	
Frequency (MHz)	Polarization	Level Peak (dBµV/m)	Leve Qpeak (dBµV/m)	Limit Qpeak (dBµ/m)	Margin (Level – Limit)
38.905	Verticale	36.61	30.53	40.00	-9.47
41.753	Verticale	36.71	30.12	40.00	-9.88
81.219	Verticale	36.31	30.53	40.00	-9.47
150.014	Horizontale	42.26	40.01	43.50	-3.49
150.014	Verticale	41.56	39.67	43.50	-3.83
172.032	Horizontale	38.04	36.23	43.50	-7.27
275.009	Horizontale	40.77	38.93	46.00	-7.07
375.022	Verticale	44.96	43.24	46.00	-2.76
375.022	Horizontale	45.92	44.22	46.00	-1.78
425.028	Verticale	42.92	40.33	46.00	-5.67
525.041	Horizontale	40.88	38.27	46.00	-7.73
575.047	Verticale	40.96	N/P	46.00	-5.04
875.084	Horizontale	34.45	40.25	46.00	-5.75
EUT modification(s): N/A					

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - TABULATED RESULTS					
110VAC/60HZ / ALL CHANNEL + WIFI 5GHZ				EMI4682	
Frequency (MHz)	**Polarization**	**Level Peak (dBµV/m)**	**Leve Qpeak (dBµV/m)**	**Limit Qpeak (dBµ/m)**	**Margin (Level – Limit)**
38.905	Verticale	36.61	30.53	40.00	-9.47
41.753	Verticale	36.71	30.12	40.00	-9.88
81.219	Verticale	36.31	30.53	40.00	-9.47
150.014	Horizontale	42.26	40.01	43.50	-3.49
150.014	Verticale	41.56	39.67	43.50	-3.83
172.032	Horizontale	38.04	36.23	43.50	-7.27
275.009	Horizontale	40.77	38.93	46.00	-7.07
375.022	Verticale	44.96	43.24	46.00	-2.76
375.022	Horizontale	45.92	44.22	46.00	-1.78
425.028	Verticale	42.92	40.33	46.00	-5.67
525.041	Horizontale	40.88	38.27	46.00	-7.73
875.084	Horizontale	40.25	34.45	46.00	-11.55
EUT modification(s): N/A					

TEST SETUP PHOTO(S) – EUT POSITION FOR FREQ < 1GHZ


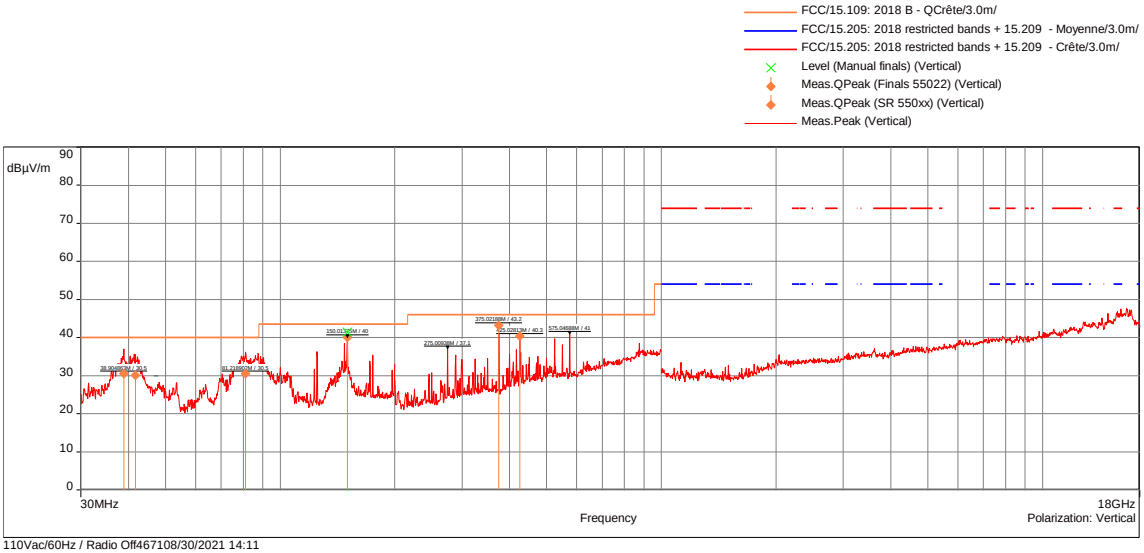
TEST SETUP PHOTO(S) – EUT POSITION FOR FREQ > 1GHZ


TEST SETUP PHOTO(S) – SETUP FOR FREQ < 200MHZ

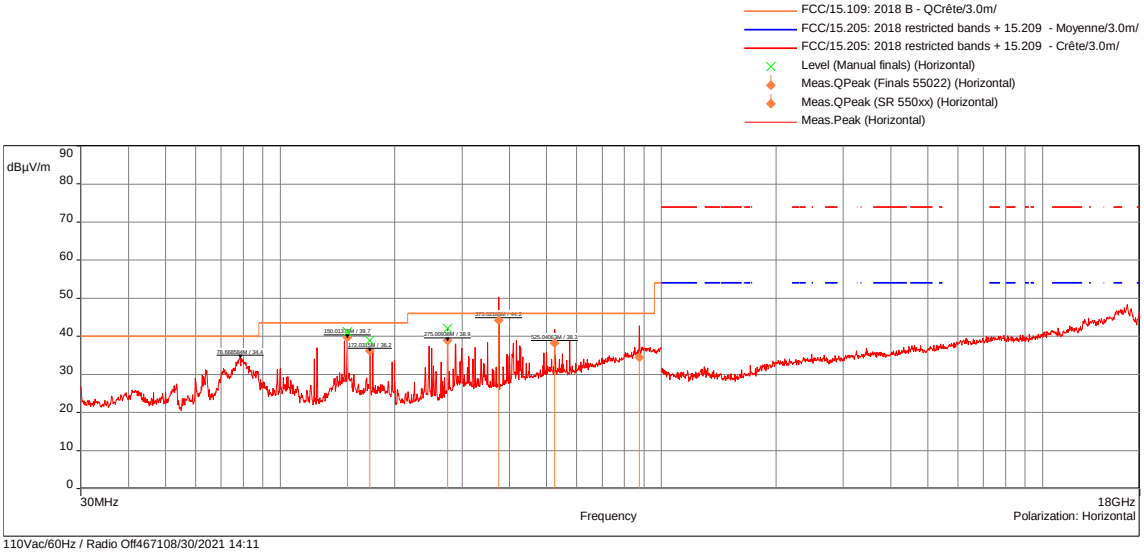
TEST SETUP PHOTO(S) - SETUP FOR 200MHZ < FREQ < 1GHZ

TEST SETUP PHOTO(S) - SETUP FOR FREQ > 1GHZ

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
110VAC/60HZ / RADIO OFF		EMI4671	
EUT mode:	Radio Off	**T (°C):**	21.8
Test Date:	30/08/2021	**H (%):**	45.0
Test Operator:	OAT	**P (hPa):**	1010



110Vac/60Hz / Radio Off467108/30/2021 14:11

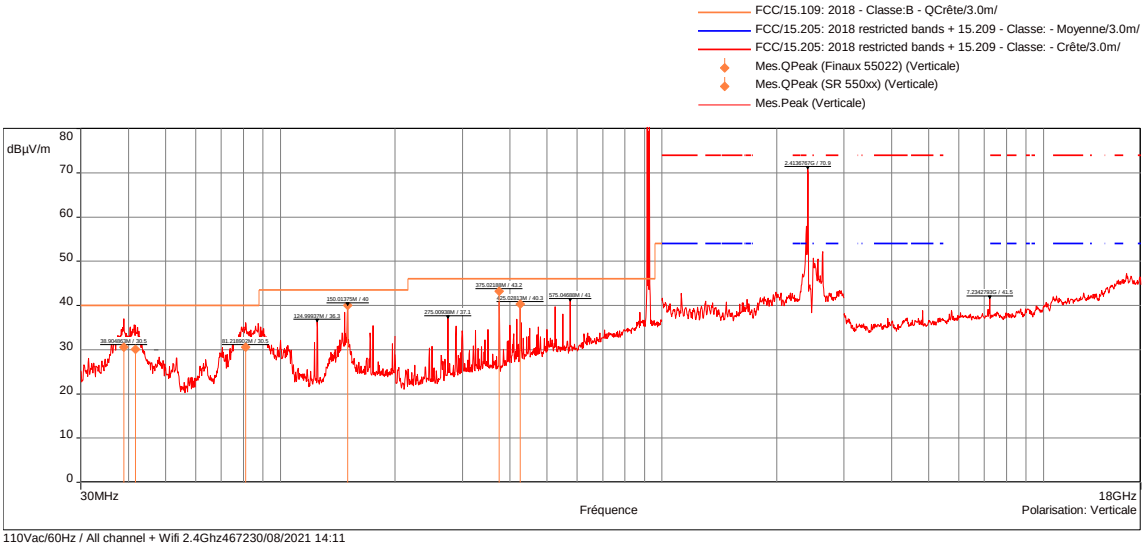


110Vac/60Hz / Radio Off467108/30/2021 14:11

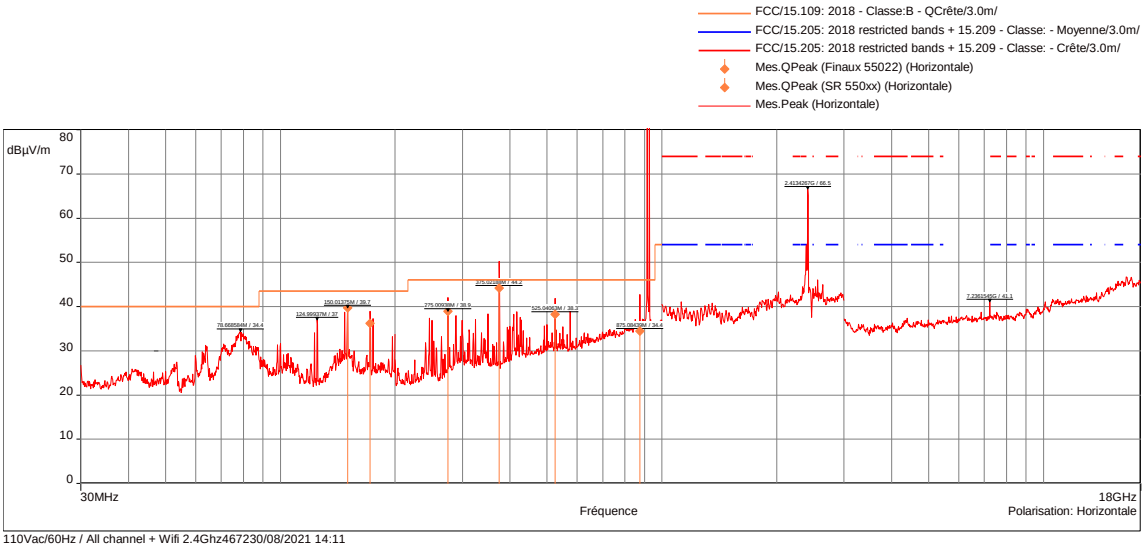
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	30MHz-200MHz	100kHz	300kHz	Peak; QPeak
Horizontal	30MHz-200MHz	100kHz	300kHz	Peak; QPeak
Horizontal	200MHz-1GHz	100kHz	300kHz	Peak; QPeak
Vertical	200MHz-1GHz	100kHz	300kHz	Peak; QPeak
Vertical	1GHz-18GHz	1MHz	3MHz	Peak
Horizontal	1GHz-18GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			

EUT modification(s): N/A

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
110VAC/60HZ / ALL CHANNEL + WIFI 2.4GHZ		EMI4672	
EUT mode:	Continuous modulated Tx mode	**T (°C):**	21.8
Test Date:	30/08/2021	**H (%):**	45.0
Test Operator:	OAT	**P (hPa):**	1010



110Vac/60Hz / All channel + Wifi 2.4Ghz467230/08/2021 14:11

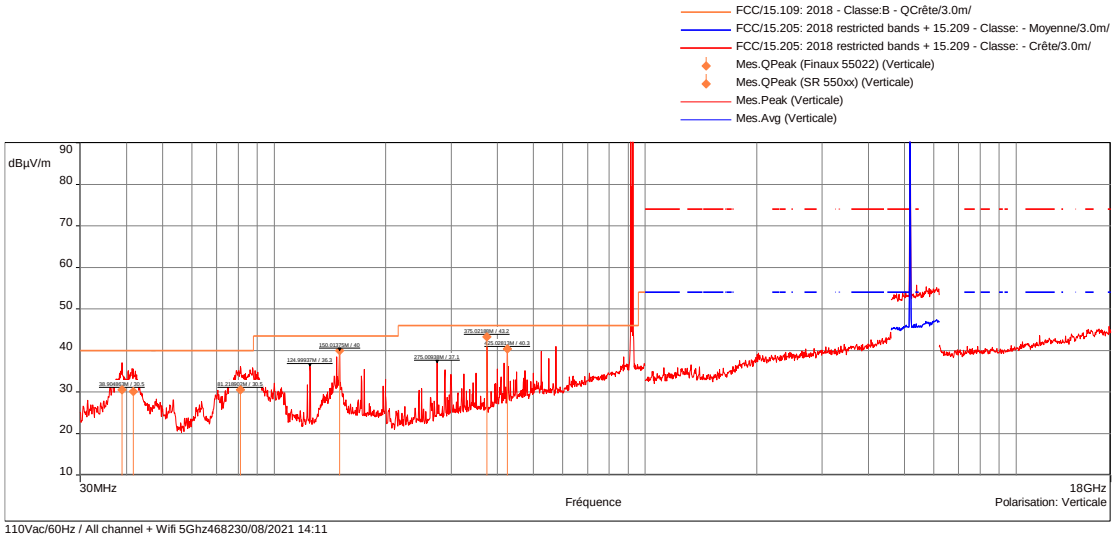


110Vac/60Hz / All channel + Wifi 2.4Ghz467230/08/2021 14:11

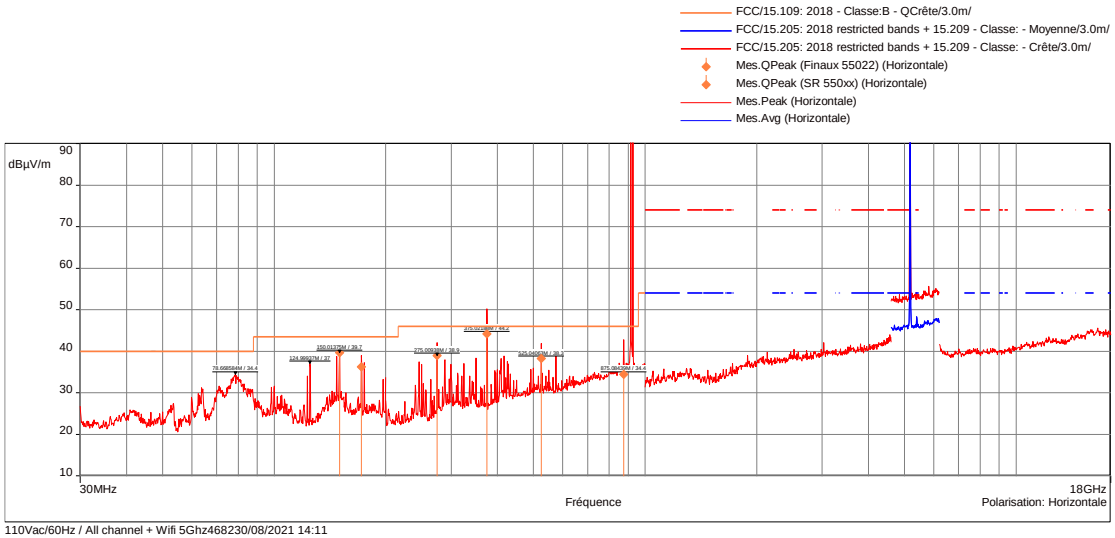
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	30MHz-200MHz	100kHz	300kHz	Peak; QPeak
Horizontal	30MHz-200MHz	100kHz	300kHz	Peak; QPeak
Horizontal	200MHz-1GHz	100kHz	300kHz	Peak; QPeak
Vertical	200MHz-1GHz	100kHz	300kHz	Peak; QPeak
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	Frequencies between 902MHz-920MHz and 2400MHz-2483.5MHz are respectively the SRD and the WiFi 2.4GHz main carrier signal.			

EUT modification(s): N/A

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
110VAC/60HZ / ALL CHANNEL + WIFI 5GHZ		EMI4682	
EUT mode:	Continuous modulated Tx mode	**T (°C):**	21.8
Test Date:	30/08/2021	**H (%):**	45.0
Test Operator:	OAT	**P (hPa):**	1010



110Vac/60Hz / All channel + Wifi 5Ghz468230/08/2021 14:11



110Vac/60Hz / All channel + Wifi 5Ghz468230/08/2021 14:11

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	30MHz-200MHz	100kHz	300kHz	Peak; QPeak
Horizontal	30MHz-200MHz	100kHz	300kHz	Peak; QPeak
Horizontal	200MHz-1GHz	100kHz	300kHz	Peak; QPeak
Vertical	200MHz-1GHz	100kHz	300kHz	Peak; QPeak
Vertical	1GHz-4.6GHz	1MHz	3MHz	Peak
Horizontal	1GHz-4.6GHz	1MHz	3MHz	Peak
Vertical	6.2GHz-18GHz	1MHz	3MHz	Peak
Horizontal	6.2GHz-18GHz	1MHz	3MHz	Peak
Vertical	4.6GHz-6.2GHz	1MHz	3MHz	Peak; Avg
Horizontal	4.6GHz-6.2GHz	1MHz	3MHz	Peak; Avg
Configuration:	N/A			
Comments:	Frequencies between 902MHz-920MHz and 5150MHz-5850MHz are respectively the SRD and the WiFi 5GHz main carrier signal.			

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH	
110VAC/60HZ / ALL CHANNEL + WIFI 5GHZ	EMI4682
EUT modification(s): N/A	

9.4. Effective isotropic radiated power

Reference standard:	FCC part 15 Radio part 15.245, 15.407 and RSS-247, RSS-Gen
Test method:	ANSI C63.10 : 2013

General test setup: EUT is set on an insulating support at 150cm above the ground reference plane.

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

TESTED CONFIGURATION	PARAMETER	SEVERITY	RESULT TAB.	VERDICT
EIRP / SRD Low Channel	915.17MHz-915.67MHz	30dBm (1W)	EMI4546	**PASS**
EIRP / SRD Mid Channel	921.17MHz-921.67MHz	30dBm (1W)	EMI4547	**PASS**
EIRP / SRD High Channel	927.17MHz-927.67MHz	30dBm (1W)	EMI4548	**PASS**
EIRP / WiFi 2.4GHz	2.362GHz-2.462GHz	30dBm (1W)	EMI4681	**PASS**
EIRP / WiFi 5GHz	5.155GHz-5.205GHz	30dBm (1W)	EMI4686	**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	KIKUSUI	PCR2000L	0800	24/07/2019	24/09/2021
Antenna	ETS-Lindgren	3117	5456	24/07/2019	24/09/2022
Antenna	Rohde & Schwarz	HL223	3126	28/06/2018	28/02/2022
Attenuator	EMITECH	SUB.V2-H	14495	13/01/2021	13/03/2022
Attenuator	EMITECH	SUB.V2-V	14496	13/01/2021	13/03/2022
Cable	MegaPhase	F135N1N28	16666	25/10/2019	25/12/2021
Cable	cables and connectors	N-1.5m	4201	27/01/2021	27/03/2023
Cable	cables and connectors	N-1.5m	4203	27/01/2021	27/03/2023
Cable	SUCOFLEX	N-3m	14378	25/06/2019	25/02/2022
Cable	SUCOFLEX	N-3m	14379	25/06/2019	25/02/2022
Cable	SUCOFLEX	N-5,5m	14381	25/06/2019	25/02/2022
Cable	Huber + Suhner	SF102K	16042	24/03/2021	24/05/2023
Multimeter	FLUKE	8808A	12446	29/09/2020	29/11/2021

CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Receiver	Rohde & Schwarz	FSW43	14830	29/07/2020	29/09/2021
Shielded enclosure	RAY PROOF	C.V2	1423	04/10/2019	04/12/2022
Software	Nexio	BAT EMC	0000		
Thermohygrometer	Testo	608-H2	12268	07/05/2020	07/07/2022
Thermohygrometer	Bioblock Scientific	Météostar	0963	07/06/2021	07/08/2023

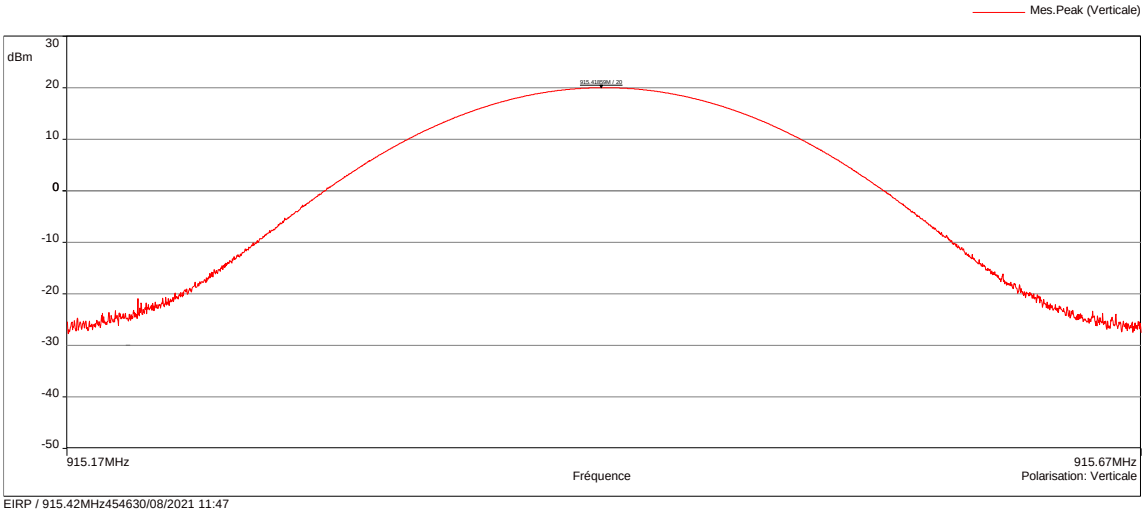
BAT-EMC software version: V3.18.0.26 Blank cells = Permanent validity

TEST SETUP PHOTO(S) – EUT POSITION

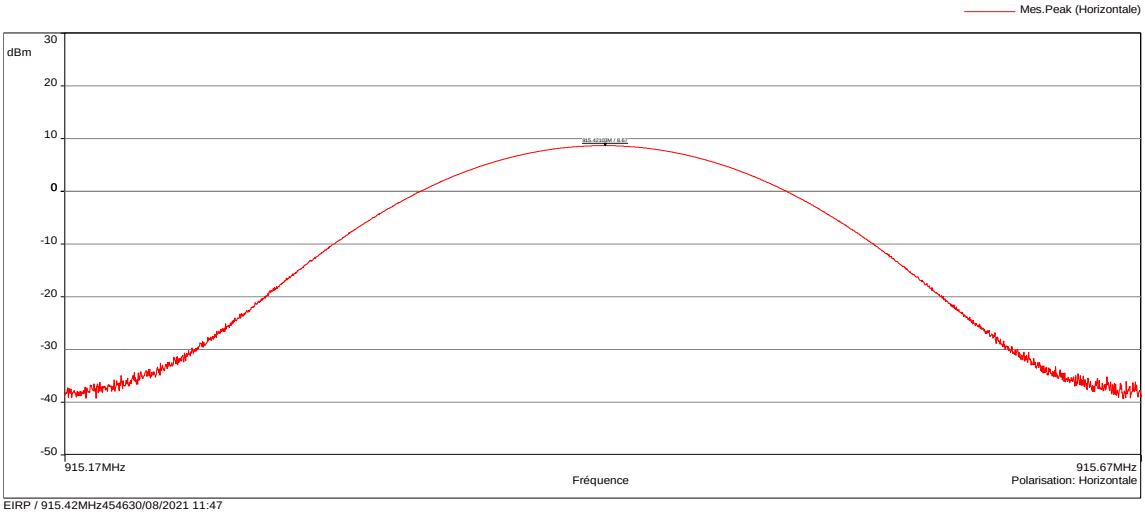
TEST SETUP PHOTO(S) – FOR FREQ < 1GHZ

TEST SETUP PHOTO(S) – FOR FREQ > 1GHZ

EFFECTIVE RADIATED POWER - GRAPH			
EIRP / SRD LOW CHANNEL		EMI4546	
EUT mode:	Continuous unmodulated Tx mode	**T (°C):**	21.8
Test Date:	30/08/2021	**H (%):**	45.0
Test Operator:	OAT	**P (hPa):**	1010



EIRP / 915.42MHz454630/08/2021 11:47



EIRP / 915.42MHz454630/08/2021 11:47

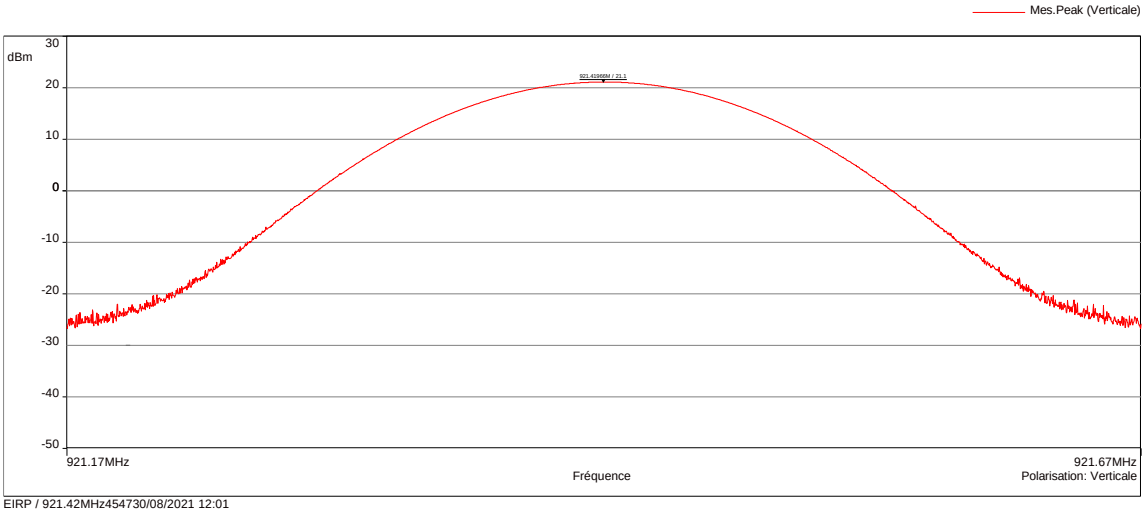
*

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	915.17MHz-915.67MHz	100kHz	300kHz	Peak
Horizontal	915.17MHz-915.67MHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	N/A			

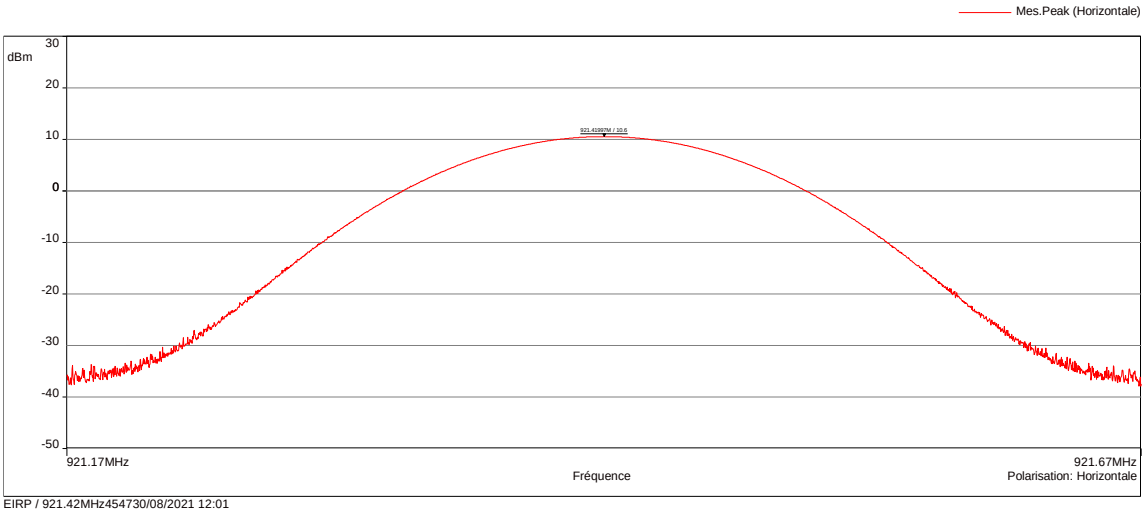
EUT modification(s): N/A

Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
915.420	Vertical	20.0	30.0
915.420	Horizontal	8.67	30.0

EFFECTIVE RADIATED POWER - GRAPH			
EIRP / SRD MID CHANNEL		EMI4547	
EUT mode:	Continuous unmodulated Tx mode	**T (°C):**	21.8
Test Date:	30/08/2021	**H (%):**	45.0
Test Operator:	OAT	**P (hPa):**	1010



EIRP / 921.42MHz454730/08/2021 12:01



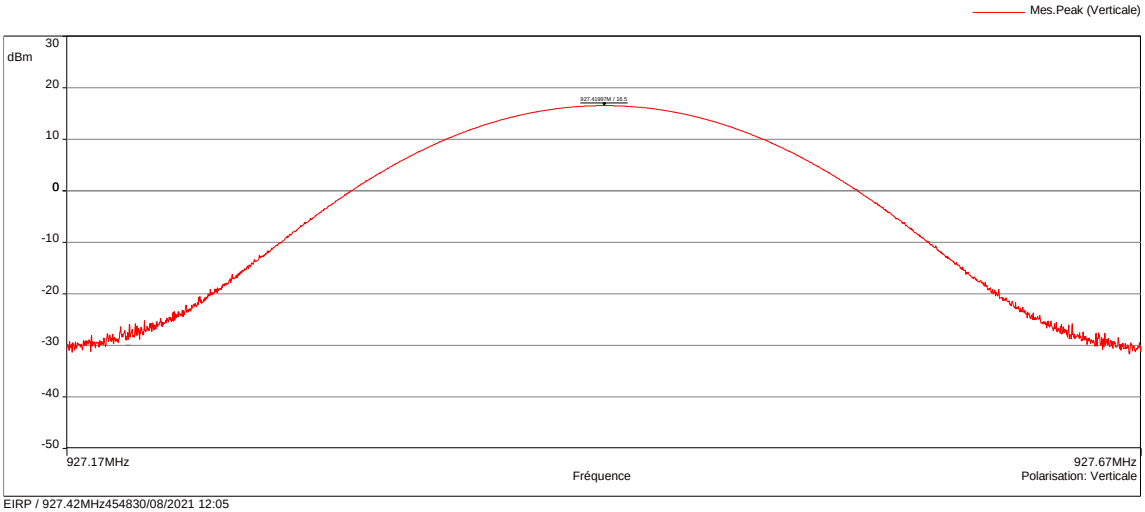
EIRP / 921.42MHz454730/08/2021 12:01

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	921.17MHz-921.67MHz	100kHz	300kHz	Peak
Horizontal	921.17MHz-921.67MHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	N/A			

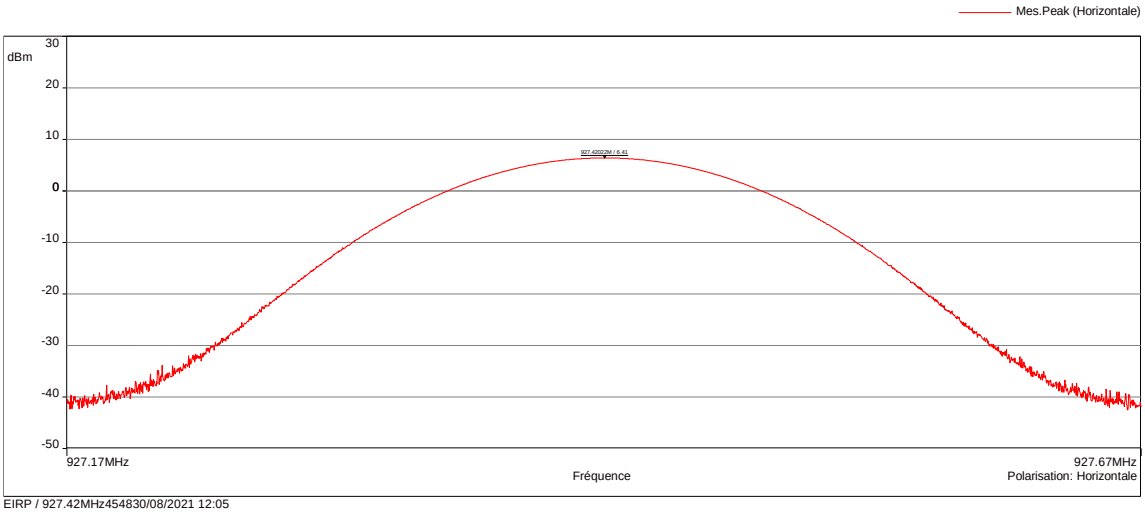
EUT modification(s): N/A

Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
921.420	Vertical	21.1	30.0
921.420	Horizontal	10.6	30.0

EFFECTIVE RADIATED POWER - GRAPH			
EIRP / SRD HIGH CHANNEL		EMI4548	
EUT mode:	Continuous unmodulated Tx mode	**T (°C):**	21.8
Test Date:	30/08/2021	**H (%):**	45.0
Test Operator:	OAT	**P (hPa):**	1010



EIRP / 927.42MHz454830/08/2021 12:05



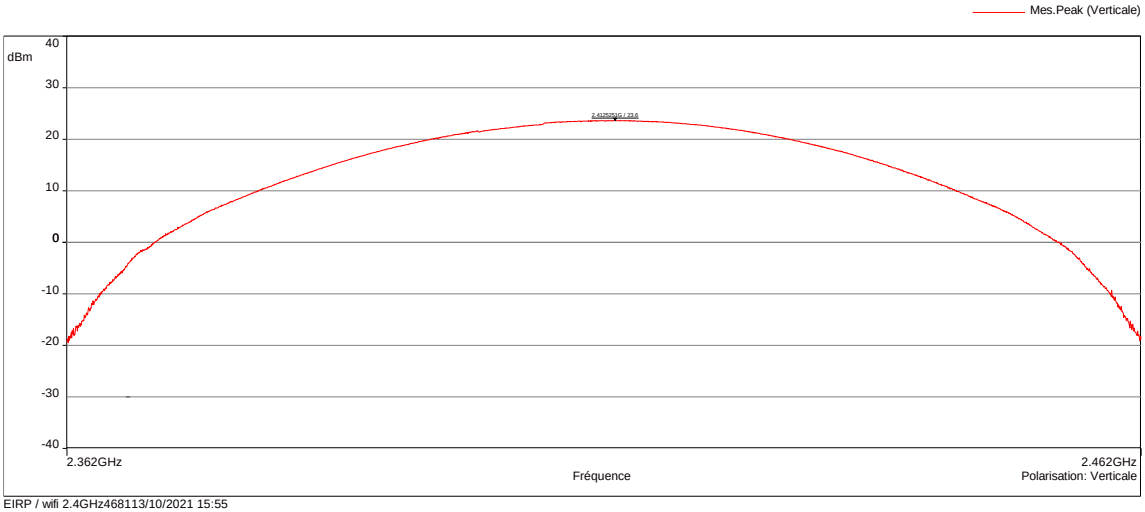
EIRP / 927.42MHz454830/08/2021 12:05

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	927.17MHz-927.67MHz	100kHz	300kHz	Peak
Horizontal	927.17MHz-927.67MHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	N/A			

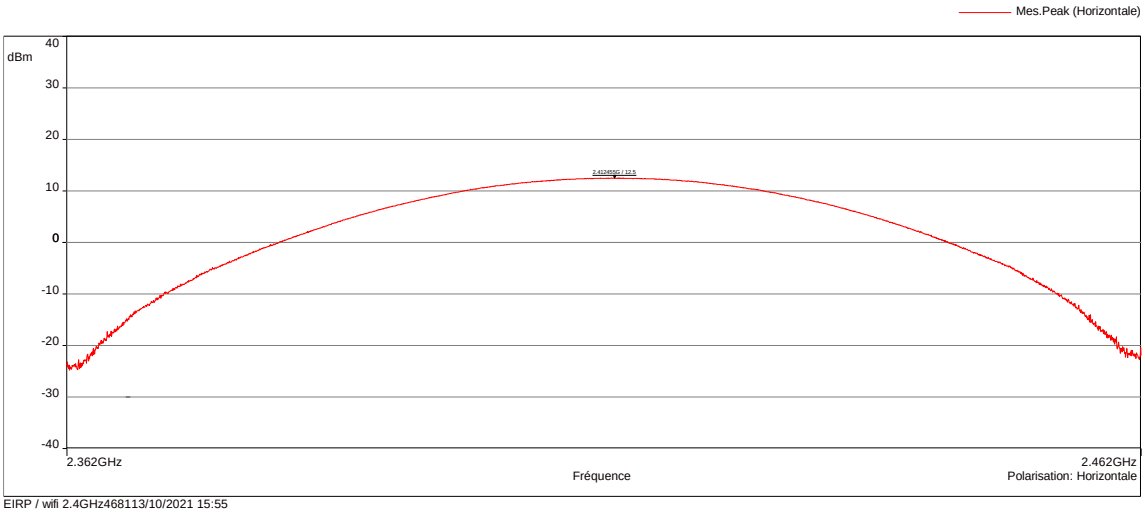
EUT modification(s): N/A

Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
927.420	Vertical	16.50	30.0
927.420	Horizontal	6.41	30.0

EFFECTIVE RADIATED POWER - GRAPH			
EIRP / WIFI 2.4GHZ		EMI4681	
EUT mode:	Modulated Tx mode	**T (°C):**	21.6
Test Date:	10/09/2021	**H (%):**	52.7
Test Operator:	OAT	**P (hPa):**	1009



EIRP / wifi 2.4GHz468113/10/2021 15:55



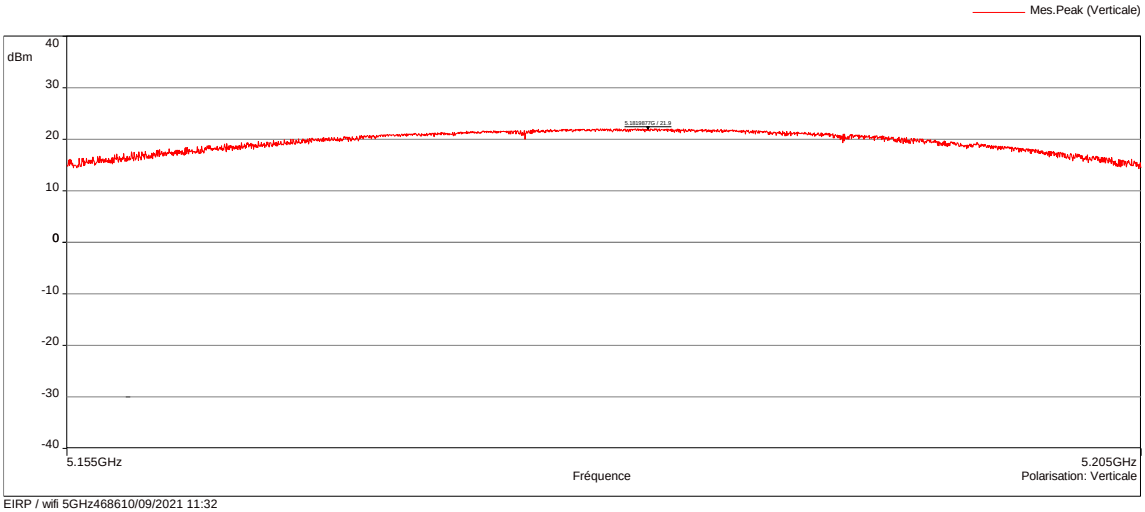
EIRP / wifi 2.4GHz468113/10/2021 15:55

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.362GHz-2.462GHz	30MHz	30MHz	Peak
Horizontal	2.362GHz-2.462GHz	30MHz	30MHz	Peak
Configuration:	N/A			
Comments:	N/A			

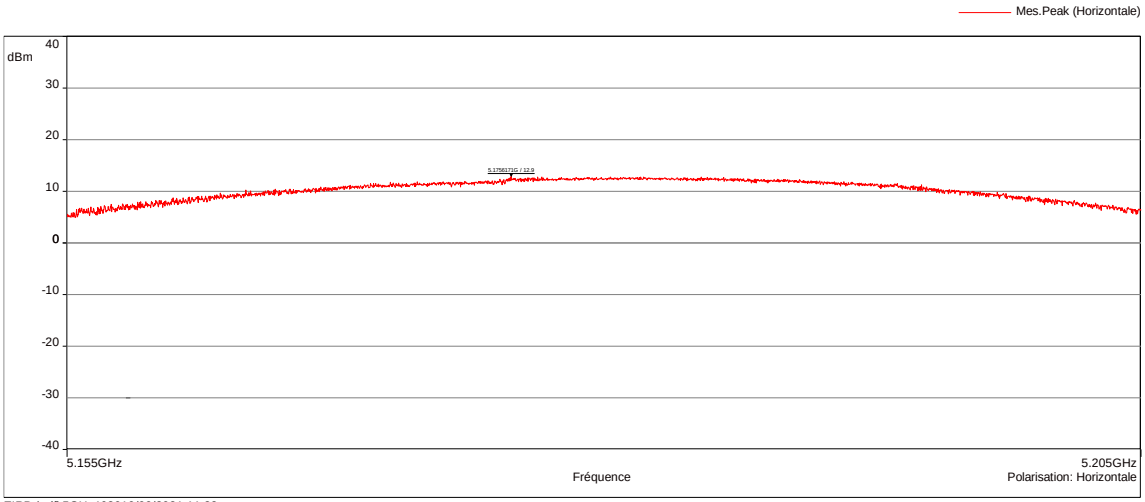
EUT modification(s): N/A

Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
2412.000	Vertical	23.6	30.0
2412.000	Horizontal	12.5	30.0

EFFECTIVE RADIATED POWER - GRAPH			
EIRP / WIFI 5GHZ		EMI4686	
EUT mode:	Modulated Tx mode	**T (°C):**	21.6
Test Date:	10/09/2021	**H (%):**	52.7
Test Operator:	OAT	**P (hPa):**	1009



EIRP / wifi 5GHz468610/09/2021 11:32



EIRP / wifi 5GHz468610/09/2021 11:32

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	5.155GHz-5.205GHz	30MHz	30MHz	Peak
Horizontal	5.155GHz-5.205GHz	30MHz	30MHz	Peak
Configuration:	N/A			
Comments:	N/A			

EUT modification(s): N/A

Frequency (MHz)	Polarization	Level (dBm)	Limit (dBm)
5180.000	Vertical	21.9	30.0
5180.000	Horizontal	12.9	30.0

✪✪✪ End of test report ✪✪✪