Test report issued under the responsibility of:
EMITECH MONTPELLIER laboratory
MRA US-EU Designation Number: FR0006
Canadian CAB Identifier: FR0003

RADIO TEST REPORT

FCC 47 CFR PART 15.247
RSS-247_Issue 2, February 2017

Company ..... :	**XPLORER**
Address..... :	40 chemin du Moulin 31320 MERVILLA FRANCE

Test item description. ..... :	**Wireless metal detection sensor**
Trade Mark. ..... :	FMF
Manufacturer..... :	XPLORER
Model/Type reference..... :	XPMF / FMF22
FCC ID. ..... :	XFJMF
IC. ..... :	8392A-MF
Ratings..... :	3.45Vdc to 4.2Vdc

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

Report Reference No..... :	**RR410-20-101751-11A**
Test procedure. ..... :	FCC IC Certification
Diffusion..... :	Mr LOUBET
Applicant's name. ..... :	XPLORER
Date of issue..... :	October 21, 2021
Total number of pages..... :	120
Revision. ..... :	0
Modified page(s). ..... :	Creation
Compiled by..... :	Alexis TOUZET
Approved by (+ signature). ..... :	Olivier HEYER (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.

REPORT INDEX:

REVISION HISTORY:

Revision	Date	Modified pages	Modifications
0	October 21, 2021	/	Creation

1. GENERAL INFORMATIONS

This document submits the results of Radio tests performed on the equipment **Wireless metal detection sensor Disk FMF 22cm** (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 & Alexis TOUZET
Test supervisor ..... :	Olivier AELBRECHT
Date of receipt of test item ..... :	N/A
Date (s) of performance of tests ..... :	From February the 15th of 2021 to April the 30th of 2021
APPLICANT'S GENERAL INFORMATIONS:	
Company name ..... :	XPLORER
Company address. ..... :	40 chemin du Moulin 31320 MERVILLA FRANCE
Person(s) present during the tests. ..... :	No representative for company attended the tests.
Responsible. ..... :	Mr LOUBET

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.

FCC 47 CFR PART 15: 2017
Code of federal regulations – Title 47 telecommunication
Part 15- Radio frequency devices

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

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, April 2018, Amd1: 2019, Amd2: 2021
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 from low-voltage Electrical and Electronic Equipment in 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. ..... :	Wireless metal detection sensor
Model/Type reference..... :	XPMF / FMF22
Trade Mark. ..... :	FMF
FCC ID. ..... :	XFJMF
IC. ..... :	8392A-MF
Serial number (S/N). ..... :	513046
Part number (P/N). ..... :	Not communicated
Software version. ..... :	*20210126*
Firmware version. ..... :	*Not communicated*
Type of sample. ..... :	Pre-serial
Function(s)..... :	Wireless object detection sensor
Manufacturer name. ..... :	XPLORER
Address. ..... :	8 rue du Développement - ZI de Vic 31320 CASTANET-TOLOSAN FRANCE

General product information:

N/A

3.2. EUT Marking plate

3.3. EUT General view

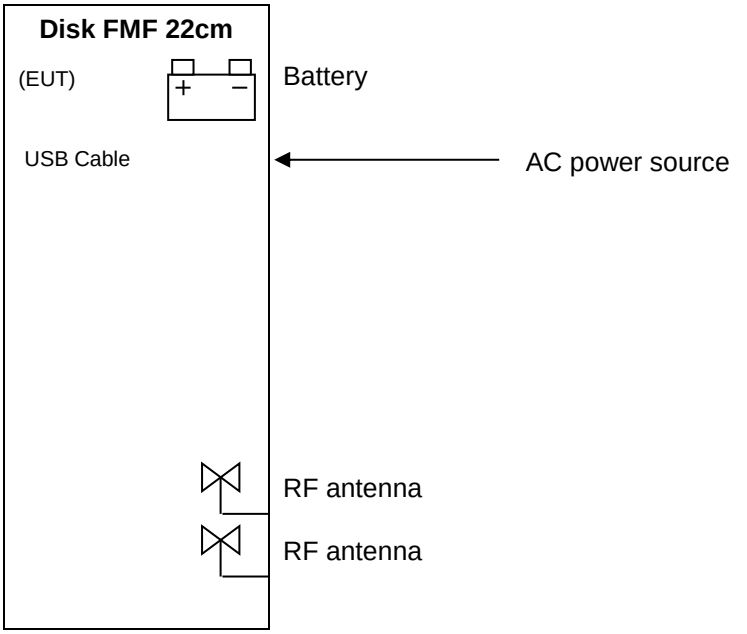
3.4. EUT Mechanical and Electrical Design

Power supply.	:	*3.7Vdc*
Power supply range.	:	*3.45Vdc to 4.2Vdc*
Power type.	:	*Battery powered*
Power (W).	:	*5*
Nominal current (A).	:	*1*
Dimensions (L x W x H) (m).	:	*0.225x0.225x0.04*
Weight (kg).	:	*0.323*
Temperature range (°C).	:	*-5°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	Plastic	
1	Battery	DC	N/A	N/A	
2	AC power source	AC/DC	1m	2P	
3	RF antenna	RF	N/A	N/A	2.4GHz
4	RF antenna	RF	N/A	N/A	Metal detector

AC/DC :	AC/DC Converter port	AC ..... :	Alternative current port	DC ..... :	Discontinuous current port
I/O ..... :	Input or Output port	TP ..... :	Telecommunication port	RF ..... :	Radio frequency port
N/E ..... :	Non Electrical 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
Battery charger (AC/DC)	Sinohero Industrial Ltd.	SJ-0510-E	Used for conducted emission

BATTERY CHARGER (AC/DC) (AE)


3.7. EUT Radio Specifications

a) GENERAL INFORMATIONS

According to manufacturer's declarations :

EUT type	:	*Transmitter*
Technology	:	*SRD (Metal and object detection sensors)* *SRD 2.4GHz*
Environmental profile	:	*Data transmissions*
Temperature range	:	*-5°C to +40°C*
Antenna type	:	*Integral*
Antenna Gain	:	*Not communicated*

Comments:

N/A

b) TRANSMITTER PARAMETERS (TX)

Frequency bands.	:	*1kHz to 148.5kHz* *2400 MHz to 2483.5MHz*
RF Power	:	*Not communicated*
Number of channels / Separation	:	*Multiple*
Modulation type	:	*GFSK*
Duty cycle	:	*Not communicated*
Tested frequency	:	*4.1kHz Low Channel* *45.19kHz High Channel* *2404MHz Low channel* *2440MHz Mid channel* *2476 High channel*

c) RECEIVER PARAMETERS (RX)

Frequency bands.	:	*1kHz to 148.5kHz* *2400 MHz to 2483.5MHz*
Category/Class	:	*N/A* *Category 2*
Bandwidth	:	*N/A* *2404MHz to 2476MHz*

4. OPINION(S) AND INTERPRETATION(S)

TEST(S) PERFORMED	DEVIATION(S) TO TEST METHOD(S)
FCC part 15.247 subclause d) and RSS-247	N/A
FCC part 15.247 and RSS-247	N/A
FCC part 15.109, 15.209, 15.205, 15.215, CNR-Gen	N/A
FCC part 15.109, 15.209, 15.205, 15.215, CNR-Gen	The EUT is encapuslated in a casing. We were not able to measure its voltage supply during radiated tests
FCC part 15.109, 15.209, 15.205, 15.215 RSS-247, CNR Gen	N/A
FCC part 15 Radio part 15.215 and RSS Gen	N/A
ANSI C63.4: 2014	N/A

Comments: N/A

5. 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	Class B	PASS	15.107
Radiated emission limits	Class B	PASS	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

TEST DESIGNATION	SEVERITY	VERDICT	BASIC STANDARDS / COMMENTS
SUBPART C –INTENTIONAL RADIATORS			
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 and glued antenna**
External radio frequency power amplifiers and antenna modifications		**N/A**	**15.204**
Restricted bands of operation		**PASS**	**15.204**
Conducted limits	**Class B**	**PASS**	**15.207**
Radiated emission limits; general requirements	**Class B**	**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		N/A	a) (1)
- Digital modulation system		PASS	a) (2)
- **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		N/A	b) (2)
- For system using digital modulation in the 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz bands		PASS	b) (3)
- **Operation with directional antenna gains > 6 dBi**		**N/A**	**c)**
- **Out-of-band emissions**		**PASS**	**d)**
- **Power spectral density conducted**		**PASS**	**e)**
- **Hybrid system**		**N/A**	**f)**
- **Frequency hopping additional requirements**		**N/A**	**g)**
- **Frequency hopping intelligence**		**N/A**	**h)**
- **RF exposure compliance**		**PASS**	**i)**

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

TEST(S) PERFORMED	MODIFICATION(S)
FCC part 15.247 subclause d) and RSS-247	N/A
FCC part 15.247 and RSS-247	N/A
FCC part 15.109, 15.209, 15.205, 15.215, CNR-Gen	N/A
FCC part 15.109, 15.209, 15.205, 15.215 RSS-247, CNR Gen	N/A
FCC part 15 Radio part 15.215 and RSS Gen	N/A
ANSI C63.4: 2014	N/A

6. 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
RF power (EN 300328 / EN 301893)	± 1.3dB	± 1.5 dB
Power spectral density	± 2.3dB	± 3 dB
Occuped bandwidth		
RF power	± 3.8 %	± 5 %
RF power (EN 300328 / EN 301893)	± 3.8 %	± 5 %
Maximum frequency deviation		
300 Hz < audio frequency < 6 kHz	± 1.2 %	± 5 %
6 kHz < audio frequency < 25 kHz	± 1.2 %	± 3 dB
Adjacent channel power	± 1.6 dB	± 3 dB
Sensibility 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 emission (PAR / PIRE / RNE)		
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
180-1000 MHz / 1 – 12.75 GHz (EN 301 908-1)	± 3.0 / 2.9 dB	± 3 dB
RF power (EN 300328 / EN 301893)	± 5.3 dB	± 6 dB
PIRE and power spectral density with diode	± 5.2 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 %
Adaptivity	± 2.9 dB	/
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).

7. RF EXPOSURE

Maximum EIRP = 0.251dBm (1.78 mW) at 2404MHz

In accordance with KDB 447498 D01 General RF Exposure Guidance v06:
PSD= EIRP/(4*π*R2)=1.78/(4*π*(20 cm)²)= 0.00035 mW/cm²
Limit= 1 mW/cm²

8. TEST CONDITIONS AND RESULTS

8.1. 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 80cm 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 power supply / All channels	150kHz-30MHz	Class B	EMI5889	**PASS**
120Vac/60Hz power supply / Standby mode	150kHz-30MHz	Class B	EMI5891	**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	CHROMA	61603	12532	25/07/2019	25/09/2021
Cable	N	3m	16422	04/05/2019	04/07/2021
Cable	EMITECH	Current absorber sheath	9491	23/06/2020	23/08/2022
Cable	C&C	N-3m	14331	18/03/2021	18/05/2023
Ground plane	EMITECH	Test area	11569		
LISN	PMM	L2-16	1209	08/06/2020	08/08/2022
LISN	AFJ	LT32C\10	12007	11/01/2019	11/03/2021
Multimeter	FLUKE	8808A	12446	29/09/2020	29/11/2021
Receiver	Rohde & Schwarz	ESHS10	3371	27/04/2020	27/06/2021
Receiver	Rohde & Schwarz	FPL1003	16027	14/08/2020	14/10/2021
Software	Nexio		0000		
Surges Suppressor	Hewlett Packard	11947A	0238	20/12/2019	20/02/2023
Thermohygrometer	Testo	608-H1	7562	26/01/2019	26/09/2021
Thermohygrometer	Testo	608-H2	12268	07/05/2020	07/07/2022
Thermohygrometer	Bioblock Scientific	Météostar	0963	26/01/2019	26/09/2021
TV	DESIMET	TVC 2437B	0903		

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

TEST SETUP PHOTO(S) - 120VAC/60HZ POWER SUPPLY / LOW CHANNEL

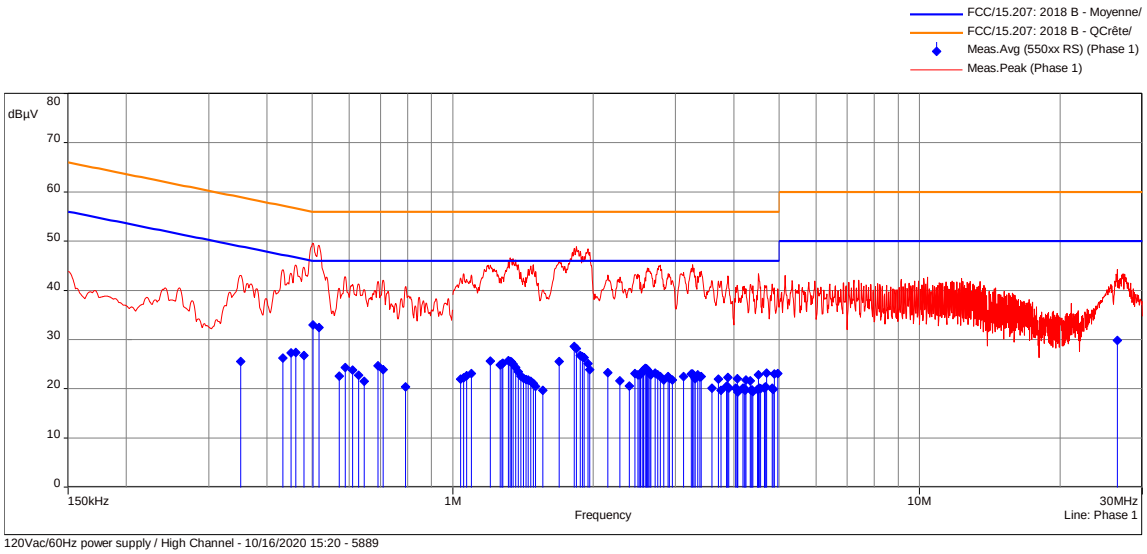
CONDUCTED EMISSION (MEASUREMENT) - TABULATED RESULTS						
120VAC/60HZ POWER SUPPLY / TX MODE ALL CHANNELS						EMI5889
Terminal	Test Frequency (MHz)	Gain/Loss Factor (dB)	Level Pk (dBµV)	Level Avg (dBµV)	Limit Avg (dBµV)	Margin Lvl Avg - Limit Avg (dB)
Neutral	0.431	10.39	41.13	27.72	47.23	-19.51
Neutral	0.459	10.4	40.6	28.7	46.72	-18.02
Neutral	0.475	10.4	41.14	30.01	46.43	-16.42
Neutral	0.506	10.4	48.05	36.02	46	-9.98
Neutral	0.522	10.4	40.49	31.09	46	-14.91
Neutral	0.593	10.41	40.06	24.62	46	-21.38
Neutral	1.203	10.45	41.44	26.74	46	-19.26
Neutral	1.315	10.45	41.37	27.54	46	-18.46
Neutral	1.330	10.46	41.96	27.05	46	-18.95
Neutral	1.347	10.46	42.22	26.44	46	-19.56
Neutral	1.478	10.46	40.87	23.91	46	-22.09
Neutral	1.704	10.47	41.87	28.61	46	-17.39
Neutral	1.816	10.48	44.89	31.11	46	-14.89
Neutral	1.833	10.48	45.63	31.06	46	-14.94
Neutral	1.851	10.48	44.13	30.81	46	-15.19
Neutral	1.886	10.48	42.73	30.33	46	-15.67
Neutral	1.955	10.48	44.02	28.44	46	-17.56
Neutral	2.597	10.5	39.57	25.93	46	-20.07
Neutral	2.616	10.5	41.03	25.75	46	-20.25
Neutral	2.631	10.5	41.03	25.46	46	-20.54
Neutral	2.748	10.51	39.97	24.75	46	-21.25
Neutral	2.785	10.51	41.05	24.35	46	-21.65
Phase	0.351	10.38	42.31	25.52	48.94	-23.42
Phase	0.432	10.39	45.8	26.25	47.2	-20.95
Phase	0.450	10.39	45.34	27.26	46.88	-19.62
Phase	0.461	10.4	44.87	27.42	46.68	-19.26
Phase	0.480	10.4	44.28	26.75	46.34	-19.59
Phase	0.502	10.4	50.98	32.98	46	-13.02
Phase	0.517	10.4	50.52	32.41	46	-13.59
Phase	0.571	10.41	43.15	22.57	46	-23.43
Phase	0.588	10.41	44.33	24.33	46	-21.67
Phase	0.610	10.41	42.46	23.79	46	-22.21
Phase	0.628	10.41	41.84	22.72	46	-23.28
Phase	0.646	10.41	39.31	21.55	46	-24.45
Phase	0.692	10.42	43.28	24.68	46	-21.32
Phase	0.710	10.42	45.01	23.86	46	-22.14
Phase	1.040	10.44	42.29	21.98	46	-24.02
Phase	1.055	10.44	42.74	22.19	46	-23.81
Phase	1.071	10.44	42.88	22.68	46	-23.32
Phase	1.096	10.44	41.66	23.08	46	-22.92
Phase	1.203	10.45	45.3	25.66	46	-20.34
Phase	1.263	10.45	42.28	24.85	46	-21.15
Phase	1.275	10.45	42.16	25.05	46	-20.95
Phase	1.281	10.45	42.56	25.2	46	-20.8
Phase	1.317	10.45	45.69	25.68	46	-20.32

CONDUCTED EMISSION (MEASUREMENT) - TABULATED RESULTS						
120VAC/60HZ POWER SUPPLY / TX MODE ALL CHANNELS						EMI5889
Terminal	Test Frequency (MHz)	Gain/Loss Factor (dB)	Level Pk (dBµV)	Level Avg (dBµV)	Limit Avg (dBµV)	Margin Lvl Avg - Limit Avg (dB)
Phase	1.328	10.45	46.49	25.53	46	-20.47
Phase	1.335	10.46	45.98	25.45	46	-20.55
Phase	1.346	10.46	46.83	25.02	46	-20.98
Phase	1.364	10.46	45.54	24.31	46	-21.69
Phase	1.381	10.46	43.95	23.48	46	-22.52
Phase	1.399	10.46	42.53	22.55	46	-23.45
Phase	1.417	10.46	42.19	22.14	46	-23.86
Phase	1.435	10.46	42.51	21.9	46	-24.1
Phase	1.452	10.46	43.94	21.75	46	-24.25
Phase	1.469	10.46	43.69	21.54	46	-24.46
Phase	1.487	10.46	43.69	21.05	46	-24.95
Phase	1.505	10.46	43.49	20.46	46	-25.54
Phase	1.560	10.47	40.02	19.71	46	-26.29
Phase	1.689	10.47	45.72	25.54	46	-20.46
Phase	1.823	10.48	48.23	28.56	46	-17.44
Phase	1.841	10.48	49.37	28.13	46	-17.87
Phase	1.877	10.48	46.56	26.76	46	-19.24
Phase	1.895	10.48	46.38	26.48	46	-19.52
Phase	1.913	10.48	47.17	26.35	46	-19.65
Phase	1.948	10.48	46.92	25.07	46	-20.93
Phase	1.965	10.48	47.48	23.88	46	-22.12
Phase	2.150	10.49	44.11	23.24	46	-22.76
Phase	2.283	10.49	41.87	21.64	46	-24.36
Phase	2.388	10.5	39.74	20.55	46	-25.45
Phase	2.457	10.5	42.73	23.05	46	-22.95
Phase	2.494	10.5	42.97	22.86	46	-23.14
Phase	2.508	10.5	43.66	22.81	46	-23.19
Phase	2.526	10.5	42.25	22.94	46	-23.06
Phase	2.548	10.5	41.95	23.31	46	-22.69
Phase	2.562	10.5	41.93	23.77	46	-22.23
Phase	2.585	10.5	44.29	24.15	46	-21.85
Phase	2.603	10.5	45.36	24.04	46	-21.96
Phase	2.614	10.5	44.59	23.78	46	-22.22
Phase	2.629	10.5	45.32	23.48	46	-22.52
Phase	2.647	10.5	44.08	23.02	46	-22.98
Phase	2.658	10.5	45.07	22.83	46	-23.17
Phase	2.711	10.51	42.08	23.22	46	-22.78
Phase	2.750	10.51	45.32	22.8	46	-23.2
Phase	2.782	10.51	44.82	22.44	46	-23.56
Phase	2.831	10.51	42.07	21.79	46	-24.21
Phase	2.895	10.51	43.83	22.46	46	-23.54
Phase	2.911	10.51	42.71	22.12	46	-23.88
Phase	2.952	10.51	42.61	21.81	46	-24.19
Phase	3.122	10.52	44.34	22.45	46	-23.55
Phase	3.243	10.52	44.02	23.02	46	-22.98
Phase	3.264	10.52	45.55	22.96	46	-23.04

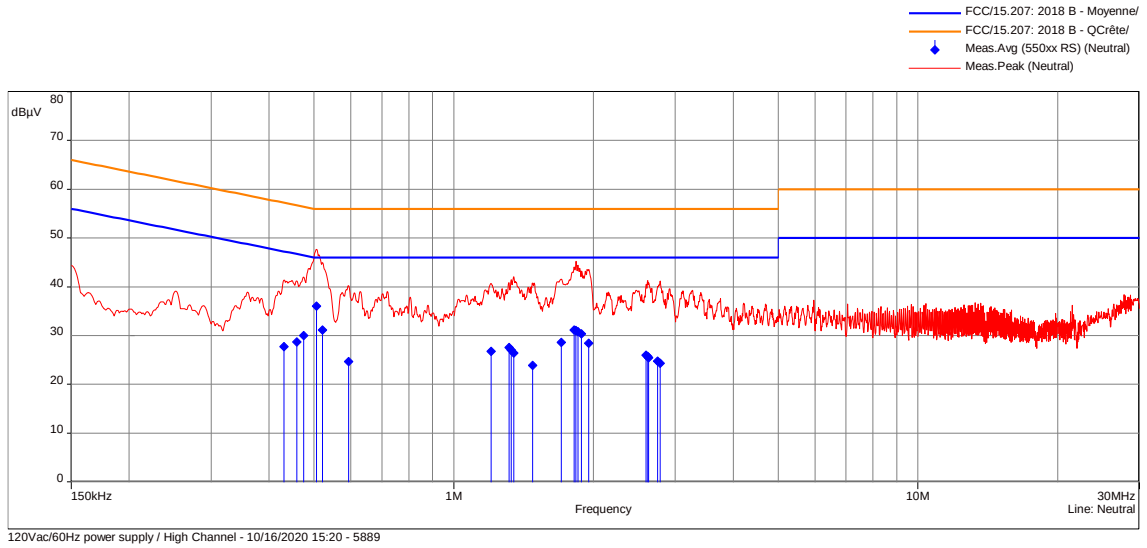
CONDUCTED EMISSION (MEASUREMENT) - TABULATED RESULTS						
120VAC/60HZ POWER SUPPLY / TX MODE ALL CHANNELS						EMI5889
Terminal	Test Frequency (MHz)	Gain/Loss Factor (dB)	Level Pk (dBµV)	Level Avg (dBµV)	Limit Avg (dBµV)	Margin Lvl Avg - Limit Avg (dB)
Phase	3.284	10.52	43.74	22.61	46	-23.39
Phase	3.304	10.52	43.23	22.07	46	-23.93
Phase	3.345	10.52	42.69	22.84	46	-23.16
Phase	3.384	10.52	43.58	22.43	46	-23.57
Phase	3.404	10.52	44.1	22.49	46	-23.51
Phase	3.706	10.53	41.45	21.98	46	-24.02
Phase	3.887	10.53	42.37	22.27	46	-23.73
Phase	4.069	10.54	40.55	22.06	46	-23.94
Phase	4.248	10.54	41.18	21.81	46	-24.19
Phase	4.342	10.54	41.2	21.63	46	-24.37
Phase	4.519	10.55	42.27	22.87	46	-23.13
Phase	4.700	10.55	41.48	23.18	46	-22.82
Phase	4.881	10.55	41.08	23.04	46	-22.96
Phase	4.971	10.55	41.03	23.09	46	-22.91
Phase	26.532	10.57	43.91	29.82	50	-20.18

CONDUCTED EMISSION (MEASUREMENT) - TABULATED RESULTS						
120VAC/60HZ POWER SUPPLY / STANDBY MODE						EMI5891
Terminal	Test Frequency (MHz)	Gain/Loss Factor (dB)	Level Pk (dBµV)	Level Avg (dBµV)	Limit Avg (dBµV)	Margin Lvl Avg - Limit Avg (dB)
Neutre	0.494	10.40	40.78	16.30	46.10	-29.80
Neutre	0.510	10.40	42.70	18.33	46.00	-27.67
Neutre	0.523	10.40	38.15	13.45	46.00	-32.55
Phase 1	0.497	10.40	45.37	13.96	46.04	-32.08
Phase 1	0.507	10.40	46.35	14.46	46.00	-31.54
Phase 1	0.520	10.40	42.58	10.49	46.00	-35.51
Phase 1	1	10.44	36.63	8.97	46.00	-37.03
Phase 1	1.036	10.44	37.17	9.12	46.00	-36.88
Phase 1	1.053	10.44	36.33	8.74	46.00	-37.26
Phase 1	1.156	10.45	37.39	9.00	46.00	-37.00
Phase 1	1.180	10.45	38.06	9.15	46.00	-36.85
Phase 1	1.195	10.45	37.63	9.07	46.00	-36.93
Phase 1	1.490	10.46	37.47	9.07	46.00	-36.93
Phase 1	1.515	10.46	38.30	8.92	46.00	-37.08
Phase 1	1.827	10.48	39.11	9.01	46.00	-36.99
Phase 1	1.849	10.48	38.80	8.71	46.00	-37.29
Phase 1	1.935	10.48	37.88	8.62	46.00	-37.38
Phase 1	1.959	10.48	39.36	8.95	46.00	-37.05
Phase 1	2.460	10.50	36.74	8.71	46.00	-37.29
Phase 1	2.480	10.50	36.04	8.37	46.00	-37.63
Phase 1	2.787	10.51	36.15	8.46	46.00	-37.54
Phase 1	2.931	10.51	36.99	8.74	46.00	-37.26
Phase 1	3.087	10.51	36.38	8.71	46.00	-37.29
Phase 1	3.105	10.51	36.68	8.37	46.00	-37.63
Phase 1	3.253	10.52	36.67	8.48	46.00	-37.52

CONDUCTED EMISSION (MEASUREMENT) - GRAPH			
120VAC/60HZ POWER SUPPLY / ALL CHANNELS		**EMI5890**	
EUT mode:	Tx mode	**T (°C):**	21.5
Test Date:	19/10/2020	**H (%):**	37.3
Test Operator:	OAT	**P (hPa):**	1009



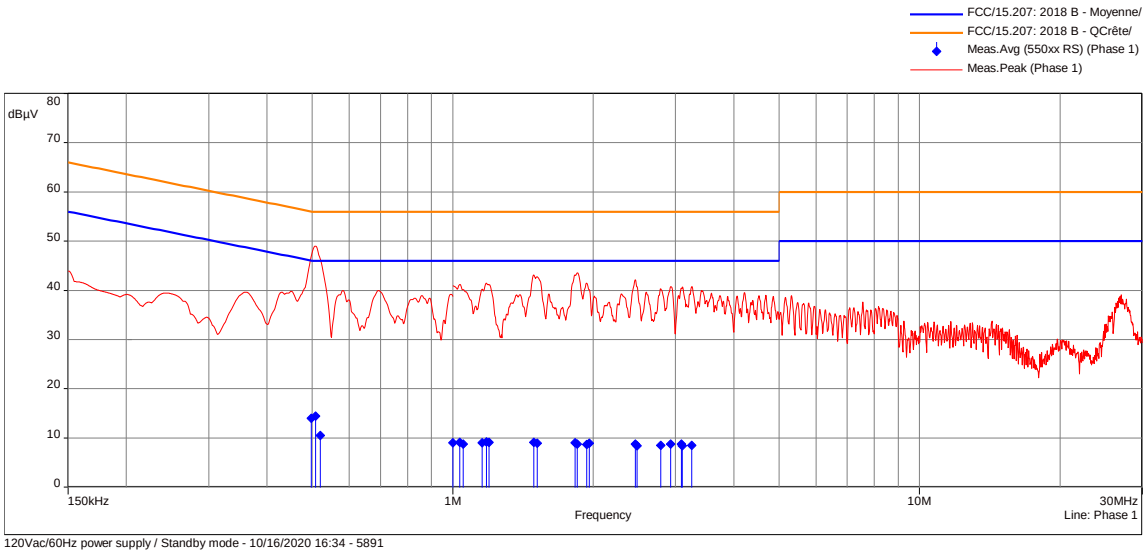
120Vac/60Hz power supply / High Channel - 10/16/2020 15:20 - 5889



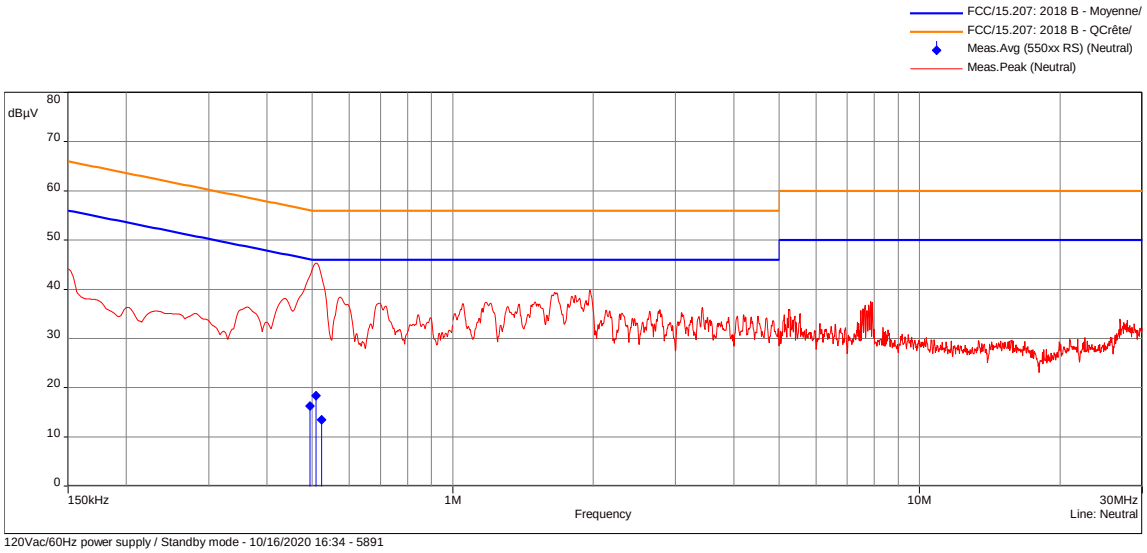
120Vac/60Hz power supply / High Channel - 10/16/2020 15:20 - 5889

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Neutral	150kHz-1MHz	10kHz	30kHz	Peak; AVG
Neutral	1MHz-10MHz	10kHz	30kHz	Peak; AVG
Neutral	10MHz-30MHz	10kHz	30kHz	Peak
Phase 1	150kHz-1MHz	10kHz	30kHz	Peak; AVG
Phase 1	1MHz-10MHz	10kHz	30kHz	Peak; AVG
Phase 1	10MHz-30MHz	10kHz	30kHz	Peak
Measure with:	A.M.N.			
Comments:	N/A			
EUT modification(s): N/A				

CONDUCTED EMISSION (MEASUREMENT) - GRAPH			
120VAC/60HZ POWER SUPPLY / STANDBY MODE		**EMI5891**	
EUT mode:	Standby mode	**T (°C):**	21.5
Test Date:	16/10/2020	**H (%):**	37.3
Test Operator:	ATO	**P (hPa):**	1009



120Vac/60Hz power supply / Standby mode - 10/16/2020 16:34 - 5891



120Vac/60Hz power supply / Standby mode - 10/16/2020 16:34 - 5891

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Neutral	150kHz-1MHz	10kHz	30kHz	Peak; AVG
Neutral	1MHz-10MHz	10kHz	30kHz	Peak; AVG
Neutral	10MHz-30MHz	10kHz	30kHz	Peak
Phase 1	150kHz-1MHz	10kHz	30kHz	Peak; AVG
Phase 1	1MHz-10MHz	10kHz	30kHz	Peak
Phase 1	10MHz-30MHz	10kHz	30kHz	Peak
Measure with:	A.M.N.			
Comments:	N/A			
EUT modification(s): N/A				

8.2. 6dB bandwidth

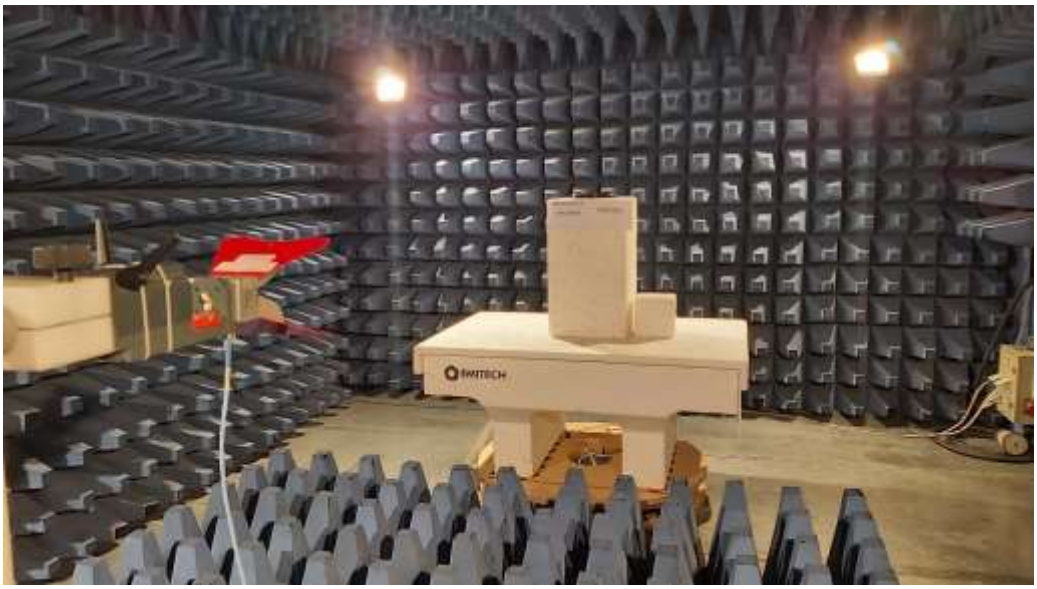
Reference standard:	FCC part 15 Radio part 15.247 and RSS-247
Test method:	FCC part 15.247 and RSS-247
Test description: a) (2): Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz. EUT is connected to the measuring receiver via 50Ω attenuator(s). Tests are done in max-hold mode in order to capture all channels.	

TEST CASE AND CONDITIONS	SEVERITY	RESULT TAB.	VERDICT
Low Channel	>500kHz	EMI8049	**PASS**
Mid Channel	>500kHz	EMI8050	**PASS**
High Channel	>500kHz	EMI8051	**PASS**

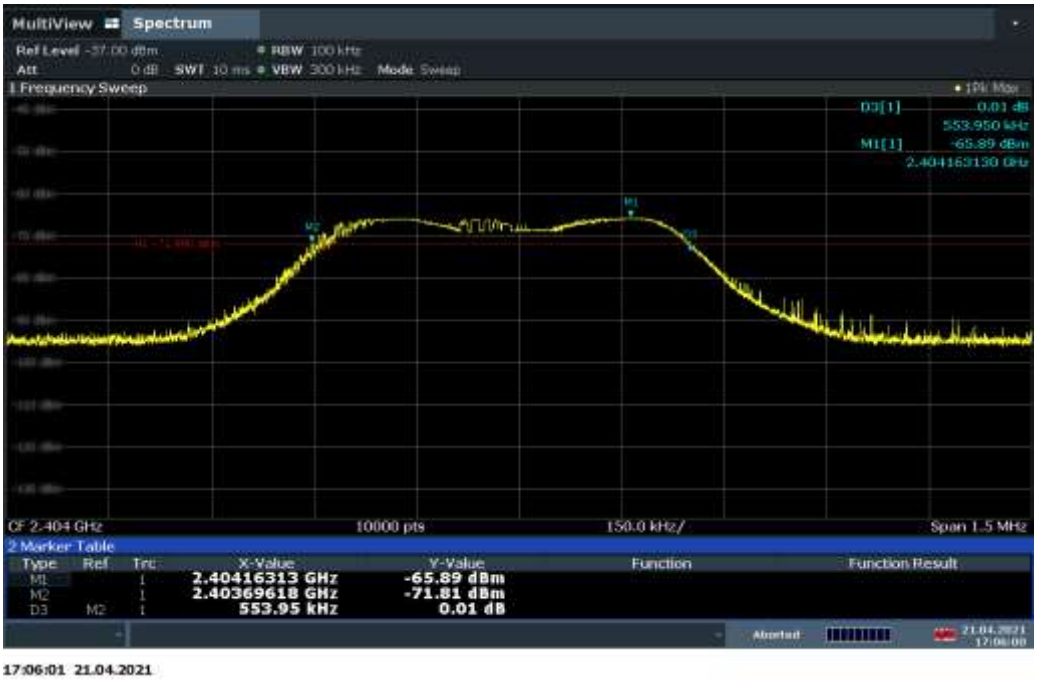
LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	22.1 °C
Relative Humidity	20 to 75 %	47.3 %
Atmospheric pressure	N/A	999 hPa
Test method deviation: N/A		
Supplementary information:		

TEST EQUIPMENT USED					
CATEGORY	**BRAND**	**TYPE**	**IDENTIFIER**	**CAL. DATE**	**CAL. DUE**
Antenna	ETS-Lindgren	3117	5456	24/07/2019	24/09/2022
Cable	SUCOFLEX	N-3m	14379	25/06/2019	25/08/2021
Cable	SUCOFLEX	N-5,5m	14381	25/06/2019	25/08/2021
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
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		0000		
Thermohygrometer	Testo	608-H1	7562	25/01/2019	25/03/2021
Thermohygrometer	Bioblock Scientific	Météostar	0963	26/01/2019	26/09/2021

Blank cells = Permanent validity

TEST SETUP PHOTO(S) – 6DB BANDWIDTH
   

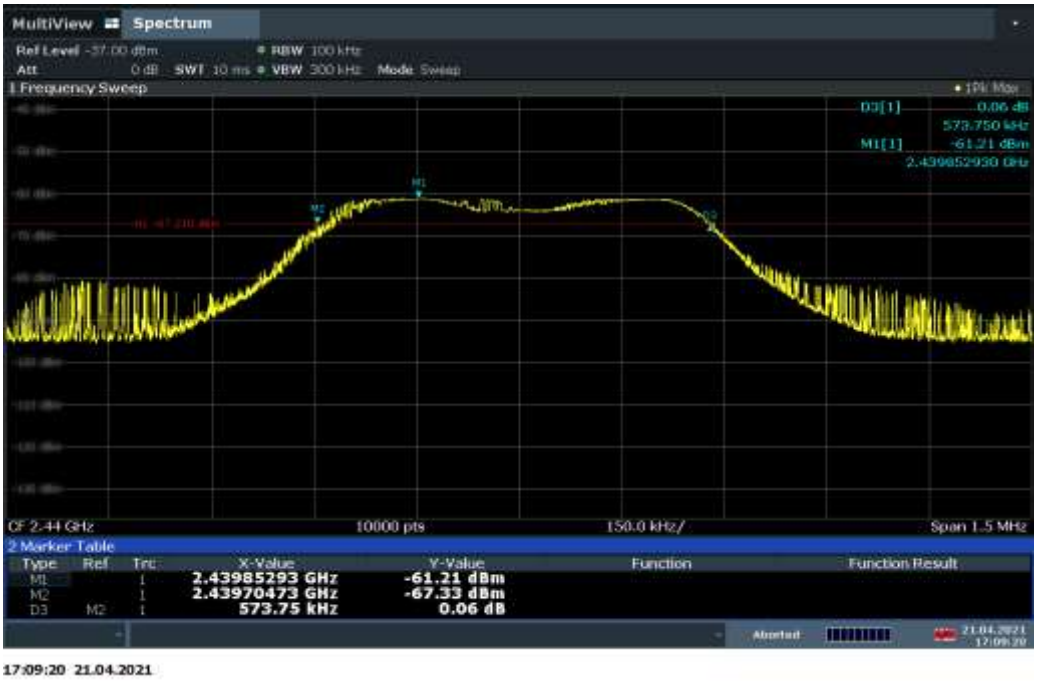
6dB Bandwidth - Graph		
Low Channel		EMI8049
EUT mode:	#1	
Test Date:	21/04/2021	
Test Operator:	ATO	



EUT modification(s): N/A

6dB Bandwith - Tabulated Results			
Low channel			
Frequency	**RBW**	**6 dB Bandwith**	**Limit**
2404 MHz	100kHz	553.95 kHz	>500kHz

6dB Bandwidth - Graph		
Mid Channel		EMI8050
EUT mode:	#1	
Test Date:	21/04/2021	
Test Operator:	ATO	



EUT modification(s): N/A

6dB Bandwith - Tabulated Results			
Mid Channel			
Frequency	**RBW**	**6 dB Bandwith**	**Limit**
2440 MHz	100kHz	573.75 kHz	>500kHz

6dB Bandwidth - Graph		
High Channel		EMI8051
EUT mode:	#1	
Test Date:	21/04/2021	
Test Operator:	ATO	

EUT modification(s): N/A

6dB Bandwith - Tabulated Results			
High channel			
Frequency	**RBW**	**6 dB Bandwith**	**Limit**
2476 MHz	100kHz	518.55 kHz	>500kHz

8.3. Occupied bandwidth

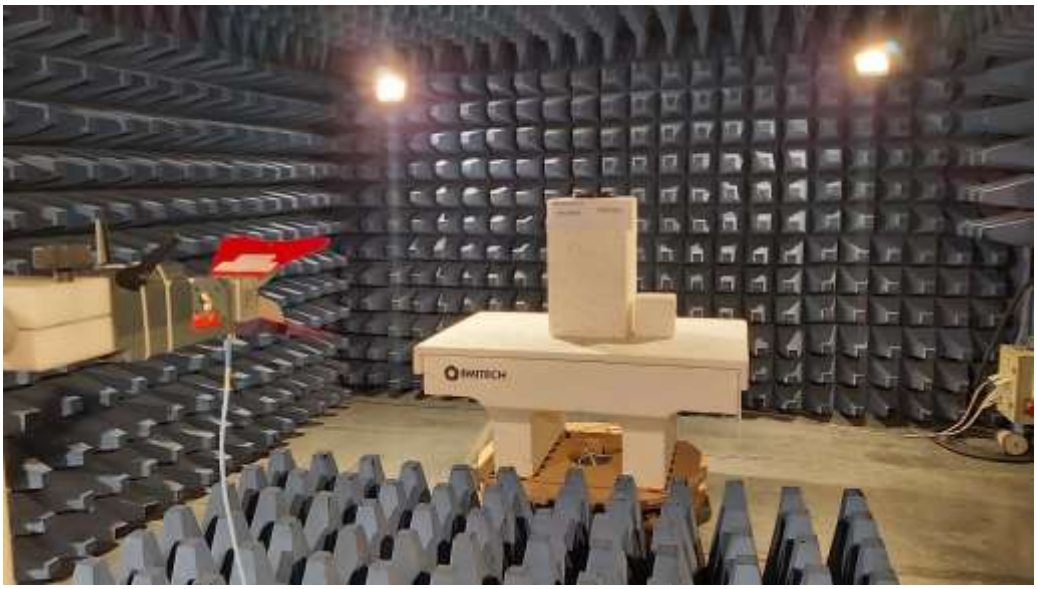
Reference standard:	FCC part 15 Radio part 15.247 and RSS-247
Test method:	FCC part 15.247 and RSS-247
Test description: The occupied bandwidth (OBW) is the Frequency Range in which 99 % of the total mean power of a given emission falls. The residual part of the total power being denoted as β, which, 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.	

TEST CASE AND CONDITIONS	SEVERITY	RESULT TAB.	VERDICT
Low Channel	>500kHz	EMI8052	**PASS**
Mid Channel	>500kHz	EMI8053	**PASS**
High Channel	>500kHz	EMI8054	**PASS**

LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	21.8 °C
Relative Humidity	20 to 75 %	42.1 %
Atmospheric pressure	N/A	1005 hPa
Test method deviation: N/A		
Supplementary information:		

TEST EQUIPMENT USED					
CATEGORY	**BRAND**	**TYPE**	**IDENTIFIER**	**CAL. DATE**	**CAL. DUE**
Antenna	ETS-Lindgren	3117	5456	24/07/2019	24/09/2022
Cable	SUCOFLEX	N-3m	14379	25/06/2019	25/08/2021
Cable	SUCOFLEX	N-5,5m	14381	25/06/2019	25/08/2021
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
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		0000		
Thermohygrometer	Testo	608-H1	7562	25/01/2019	25/03/2021
Thermohygrometer	Bioblock Scientific	Météostar	0963	26/01/2019	26/09/2021

Blank cells = Permanent validity

TEST SETUP PHOTO(S) – OCCUPIED BANDWIDTH
   

OCCUPIED BANDWIDTH - GRAPH		
LOW CHANNEL		EMI8052
EUT mode:	#1	
Test Date:	30/04/2021	
Test Operator:	ATO	

11:23:43 30.04.2021

EUT modification(s): N/A

OCCUPIED BANDWIDTH - TABULATED RESULTS			
LOW CHANNEL			
Frequency	**RBW**	**OBW 99%**	**Limit**
2404 MHz	100 kHz	631.3 kHz	> 500kHz

OCCUPIED BANDWIDTH - GRAPH		
MID CHANNEL		EMI8053
EUT mode:	#1	
Test Date:	30/04/2021	
Test Operator:	ATO	

EUT modification(s): N/A

OCCUPIED BANDWIDTH - TABULATED RESULTS			
MID CHANNEL			
Frequency	**RBW**	**OBW 99%**	**Limit**
2440 MHz	100 kHz	681.12 MHz	> 500kHz

OCCUPIED BANDWIDTH - GRAPH		
HIGH CHANNEL		EMI8054
EUT mode:	#1	
Test Date:	30/04/2021	
Test Operator:	ATO	

EUT modification(s): N/A

OCCUPIED BANDWIDTH - TABULATED RESULTS			
HIGH CHANNEL			
Frequency	**RBW**	**OBW 99%**	**Limit**
2476 MHz	100 kHz	1021.26 kHz	> 500kHz

8.4. Maximum effective isotropic radiated power

Reference standard:	FCC part 15 Radio part 15.247 and RSS-247
Test method:	FCC part 15.247 and RSS-247
Test description: 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 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
EIRP / All Positions / Low channel	2.402GHz-2.406GHz	30dBm	EMI6688	**PASS**
EIRP / All Positions / Mid channel	2.438GHz-2.442GHz	30dBm	EMI6689	**PASS**
EIRP / All Positions / High channel	2.474GHz-2.478GHz	30dBm	EMI6690	**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		

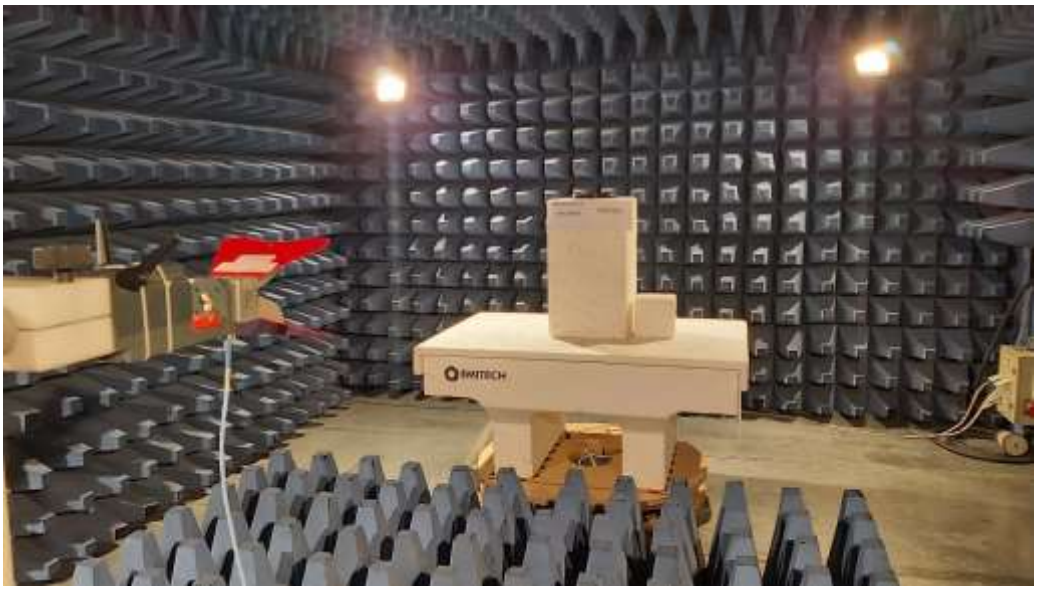
TEST EQUIPMENT USED					
CATEGORY	**BRAND**	**TYPE**	**IDENTIFIER**	**CAL. DATE**	**CAL. DUE**
Antenna	ETS-Lindgren	3117	5456	24/07/2019	24/09/2022
Attenuator	EMITECH	SUB.V2-H	14495	13/01/2021	13/03/2022
Attenuator	EMITECH	SUB.V2-V	14496	13/01/2021	13/03/2022
Cable	MegaPhase	N-3m	14852	30/10/2018	30/06/2021
Cable	SUCOFLEX	N-5,5m	14381	25/06/2019	25/08/2021
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
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		0000		
Thermohygrometer	Testo	608-H1	7562	25/01/2019	25/03/2021
Thermohygrometer	Bioblock Scientific	Météostar	0963	25/01/2019	25/03/2021

Blank cells = Permanent validity

TEST SETUP PHOTO(S) - POSITION 1


TEST SETUP PHOTO(S) - POSITION 2

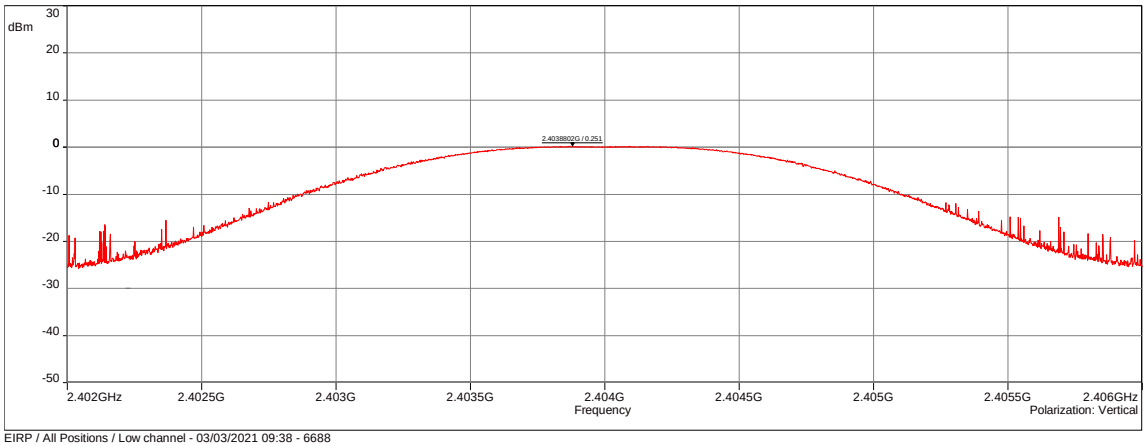

TEST SETUP PHOTO(S) - POSITION 3


TEST SETUP PHOTO(S) - EIRP


EFFECTIVE ISOTROPIC RADIATED POWER - GRAPH			
EIRP / ALL POSITIONS / LOW CHANNEL		EMI6688	
EUT mode:	Unmodulated	**T (°C):**	20.9
Test Date:	03/03/2021	**H (%):**	34.6
Test Operator:	ATO & OAT	**P (hPa):**	1023

Meas.Peak (Vertical)

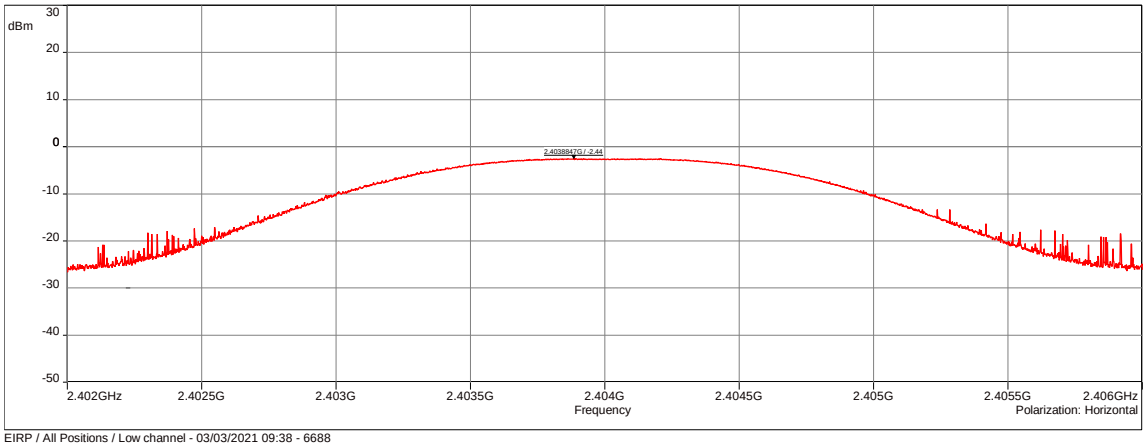
Sub-range 1
Frequencies: 2.402 GHz - 2.406 GHz (Analyser mode) 8000 Points
Settings: RBW: 1MHz, VBW: 3MHz, Auto, Attenuation: 10 dB, Sweep count 1, Preamp: Off, LN Preamp: Off, Preselector: Off
Polarization:Vertical
Distance: 3 m



EIRP / All Positions / Low channel - 03/03/2021 09:38 - 6688

Meas.Peak (Horizontal)

Sub-range 2
Frequencies: 2.402 GHz - 2.406 GHz (Analyser mode) 8000 Points
Settings: RBW: 1MHz, VBW: 3MHz, Auto, Attenuation: 10 dB, Sweep count 1, Preamp: Off, LN Preamp: Off, Preselector: Off
Polarization:Horizontal
Distance: 3 m

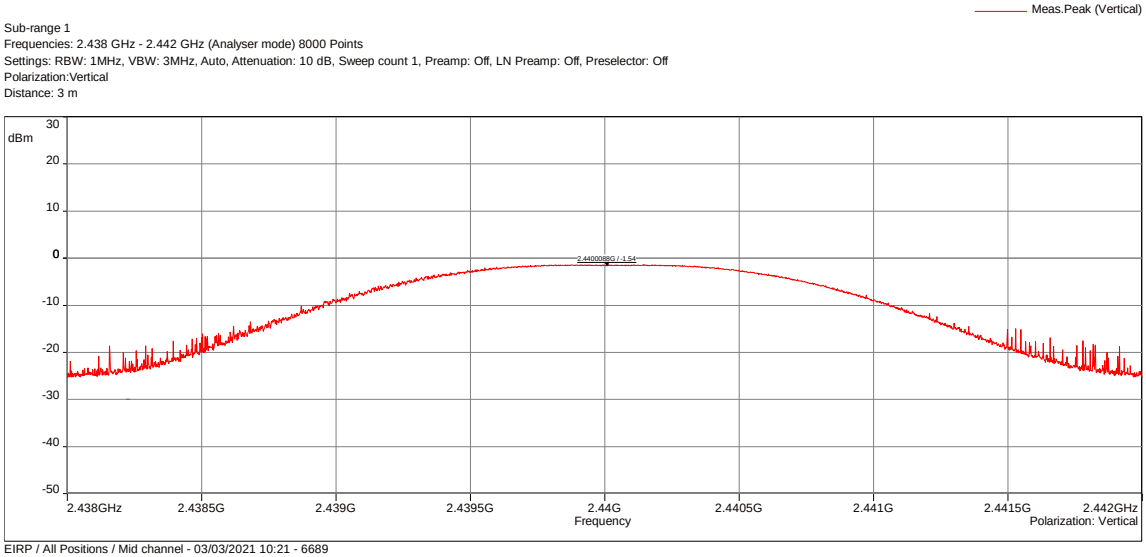


EIRP / All Positions / Low channel - 03/03/2021 09:38 - 6688

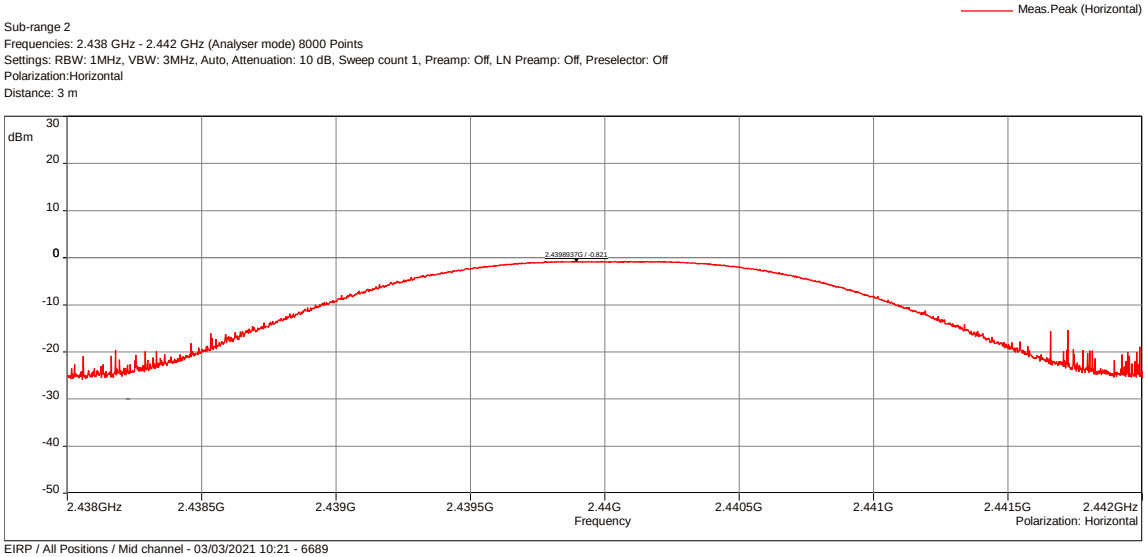
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.402GHz-2.406GHz	1MHz	3MHz	Peak
Horizontal	2.402GHz-2.406GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

EFFECTIVE ISOTROPIC RADIATED POWER - TABULATED RESULTS			
EIRP / ALL POSITIONS / LOW CHANNEL			EMI6688
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2403.88	Vertical	0.251	30
2403.88	Horizontal	-2.44	30

EFFECTIVE ISOTROPIC RADIATED POWER - GRAPH			
EIRP / ALL POSITIONS / MID CHANNEL		EMI6689	
EUT mode:	Unmodulated	**T (°C):**	20.9
Test Date:	03/03/2021	**H (%):**	34.6
Test Operator:	ATO & OAT	**P (hPa):**	1023



EIRP / All Positions / Mid channel - 03/03/2021 10:21 - 6689



EIRP / All Positions / Mid channel - 03/03/2021 10:21 - 6689

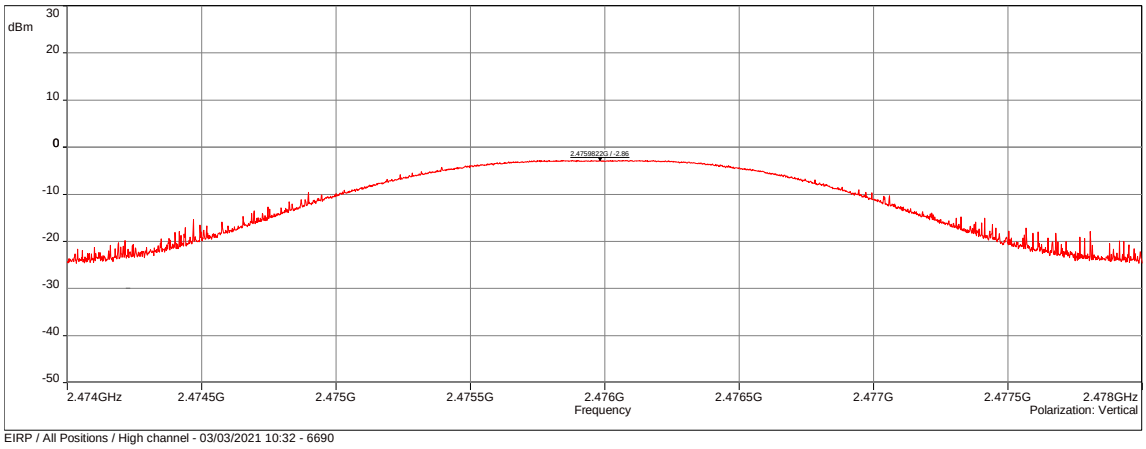
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.438GHz-2.442GHz	1MHz	3MHz	Peak
Horizontal	2.438GHz-2.442GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

EFFECTIVE ISOTROPIC RADIATED POWER - TABULATED RESULTS			
EIRP / ALL POSITIONS / MID CHANNEL			EMI6689
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2440.00	Vertical	-1.54	30
2439.89	Horizontal	-0.821	30

EFFECTIVE ISOTROPIC RADIATED POWER - GRAPH			
EIRP / ALL POSITIONS / HIGH CHANNEL		EMI6690	
EUT mode:	Unmodulated	**T (°C):**	20.9
Test Date:	03/03/2021	**H (%):**	34.6
Test Operator:	ATO & OAT	**P (hPa):**	1023

Meas.Peak (Vertical)

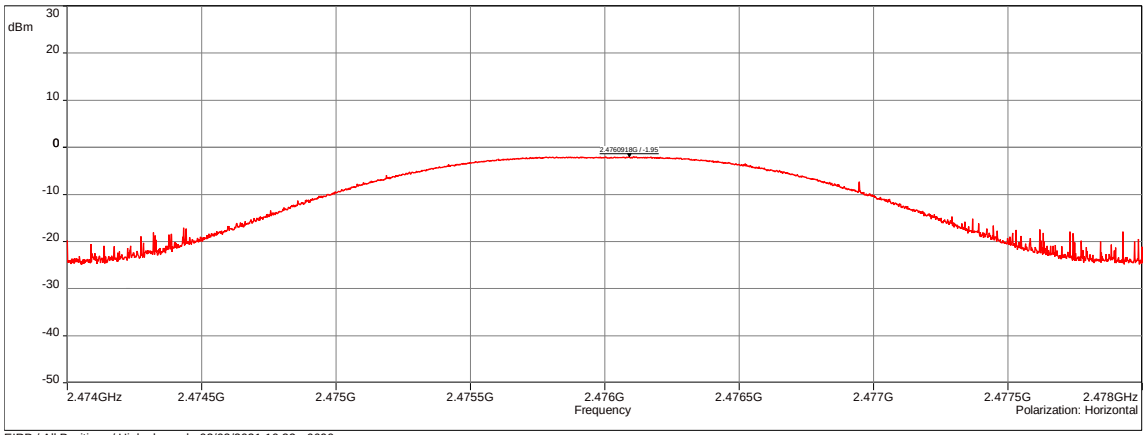
Sub-range 1
Frequencies: 2.474 GHz - 2.478 GHz (Analyser mode) 8000 Points
Settings: RBW: 1MHz, VBW: 3MHz, Auto, Attenuation: 10 dB, Sweep count 1, Preamp: Off, LN Preamp: Off, Preselector: Off
Polarization:Vertical
Distance: 3 m



EIRP / All Positions / High channel - 03/03/2021 10:32 - 6690

Meas.Peak (Horizontal)

Sub-range 2
Frequencies: 2.474 GHz - 2.478 GHz (Analyser mode) 8000 Points
Settings: RBW: 1MHz, VBW: 3MHz, Auto, Attenuation: 10 dB, Sweep count 1, Preamp: Off, LN Preamp: Off, Preselector: Off
Polarization:Horizontal
Distance: 3 m



EIRP / All Positions / High channel - 03/03/2021 10:32 - 6690

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.474GHz-2.478GHz	1MHz	3MHz	Peak
Horizontal	2.474GHz-2.478GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

EFFECTIVE ISOTROPIC RADIATED POWER - TABULATED RESULTS			
EIRP / ALL POSITIONS / HIGH CHANNEL			EMI6690
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2475.98	Vertical	-2.86	30
2476.09	Horizontal	-1.95	30

8.5. Band-edge compliance

Reference standard:	FCC part 15 Radio part 15.247 and RSS-247
Test method:	FCC part 15.247 subclause d) and RSS-247

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
All Positions / Low channel	2.38GHz-2.5GHz	>20dBc	EMI6717	**PASS**
All Positions / Mid channel	2.38GHz-2.5GHz	>20dBc	EMI6719	**PASS**
All Positions / High channel	2.38GHz-2.5GHz	>20dBc	EMI6721	**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		

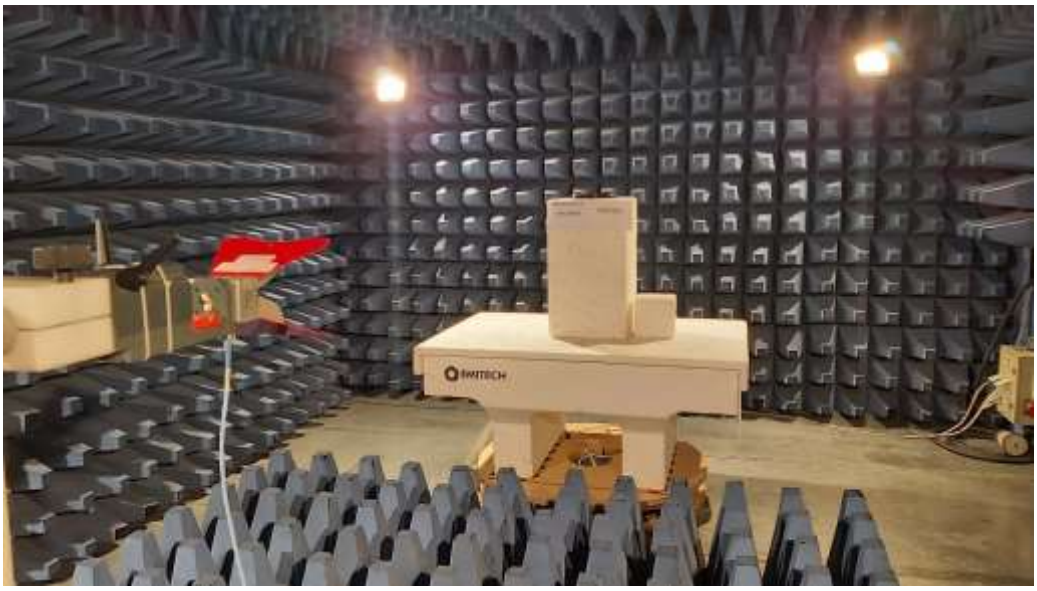
TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Antenna	ETS-Lindgren	3117	5456	24/07/2019	24/09/2022
Cable	SUCOFLEX	N-3m	14379	25/06/2019	25/08/2021
Cable	SUCOFLEX	N-5,5m	14381	25/06/2019	25/08/2021
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
Receiver	Rohde & Schwarz	FSW43	14830	29/07/2020	29/09/2021
Shielded enclosure	RAY PROOF	C.V2	1423	04/10/2019	04/12/2022
Software	Nexio		0000		
Thermohygrometer	Testo	608-H1	7562	25/01/2019	25/03/2021
Thermohygrometer	Bioblock Scientific	Météostar	0963	25/01/2019	25/03/2021

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

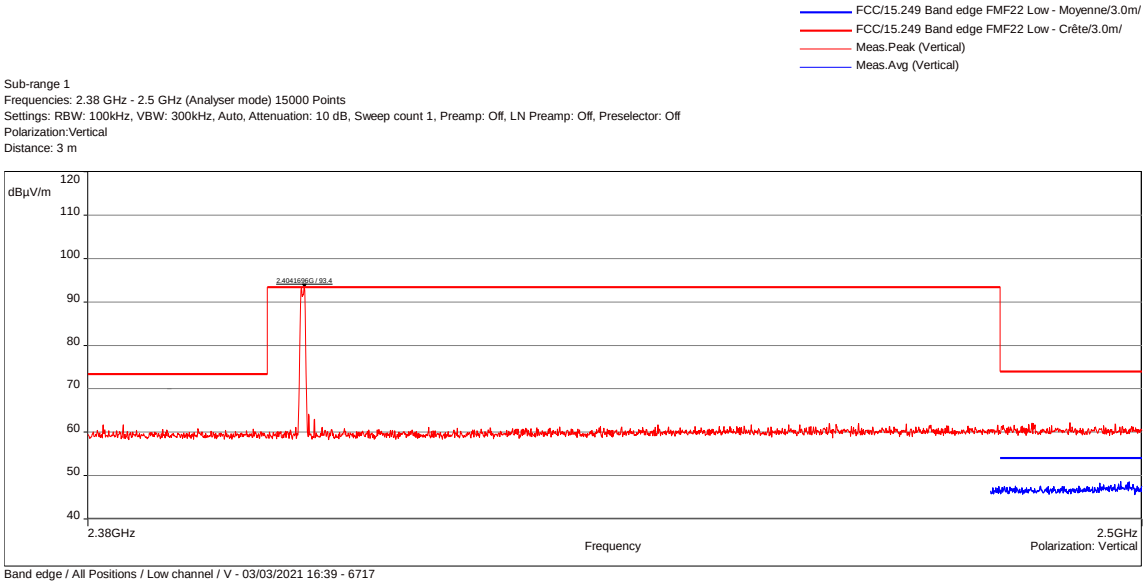
TEST SETUP PHOTO(S) - BAND EDGE / POSITION 1


TEST SETUP PHOTO(S) - BAND EDGE / POSITION 2

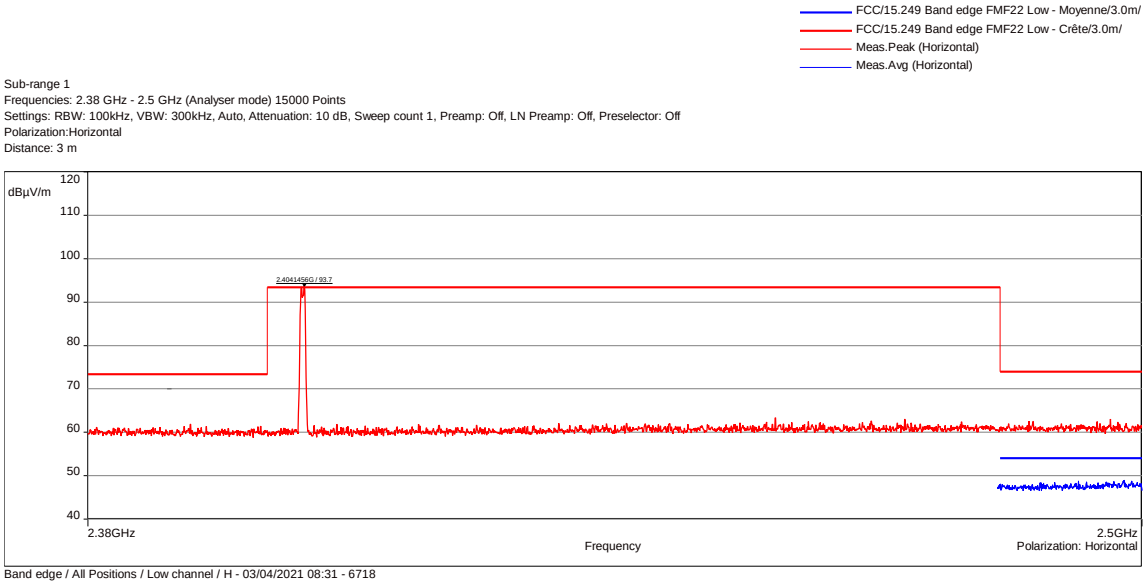

TEST SETUP PHOTO(S) - BAND EDGE / POSITION 3


TEST SETUP PHOTO(S) - BAND EDGE


BAND EDGE - GRAPH			
ALL POSITIONS / LOW CHANNEL		EMI6717	
EUT mode:	Modulated	**T (°C):**	20.0
Test Date:	03/03/2021	**H (%):**	39.5
Test Operator:	ATO & OAT	**P (hPa):**	1015



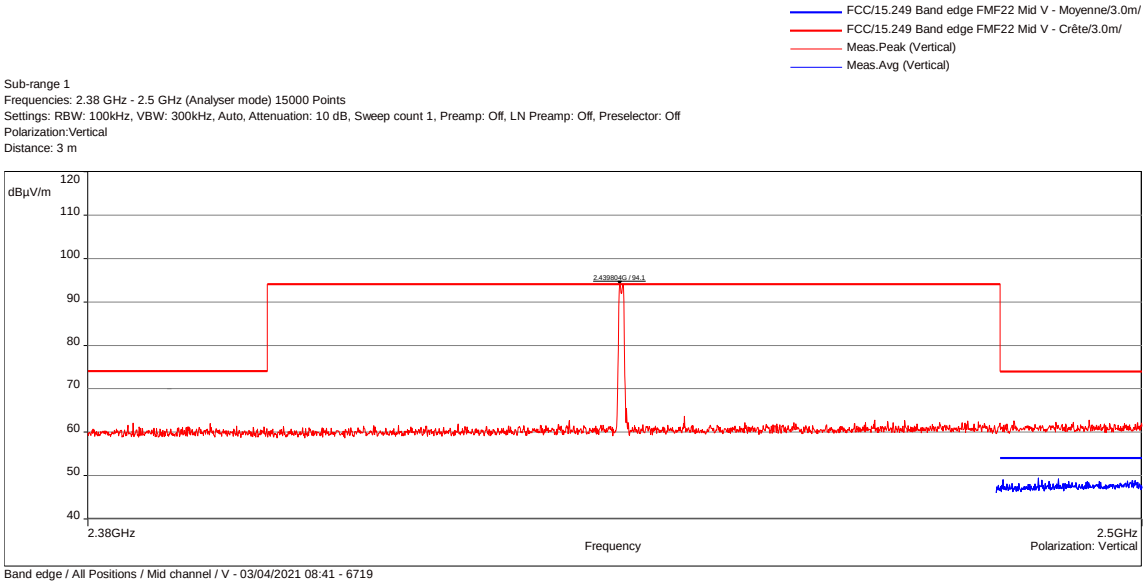
Band edge / All Positions / Low channel / V - 03/03/2021 16:39 - 6717



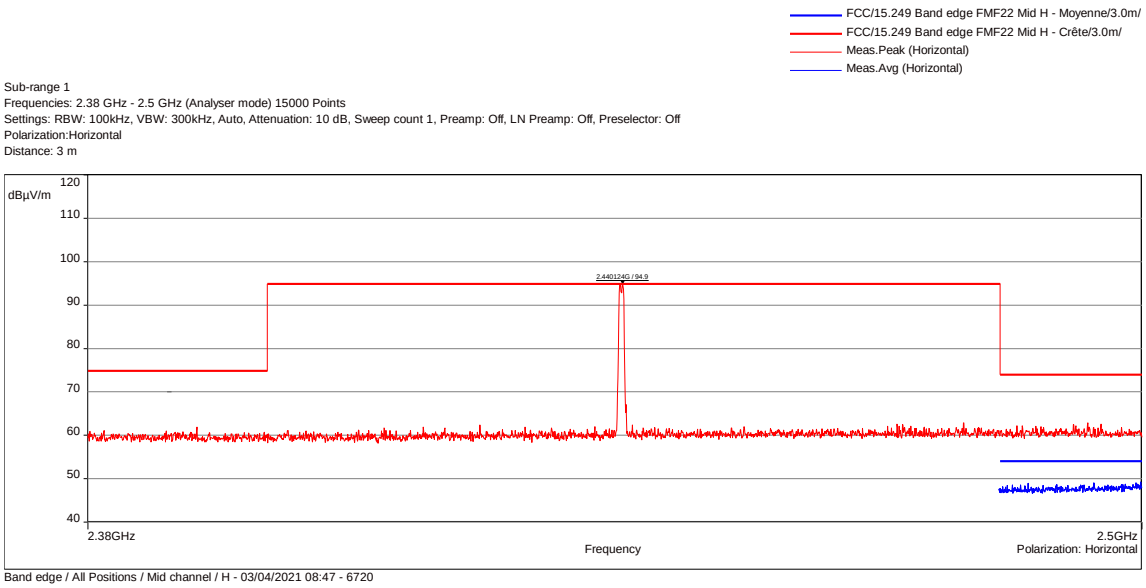
Band edge / All Positions / Low channel / H - 03/04/2021 08:31 - 6718

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.38GHz-2.5GHz	100kHz	300kHz	Peak
Horizontal	2.38GHz-2.5GHz	100kHz	300kHz	Peak
Vertical	2.48GHz-2.5GHz	100kHz	20kHz	Peak
Horizontal	2.48GHz-2.5GHz	100kHz	20kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

BAND EDGE - GRAPH			
ALL POSITIONS / MID CHANNEL		EMI6719	
EUT mode:	Modulated	**T (°C):**	20.0
Test Date:	04/03/2021	**H (%):**	39.5
Test Operator:	ATO & OAT	**P (hPa):**	1015



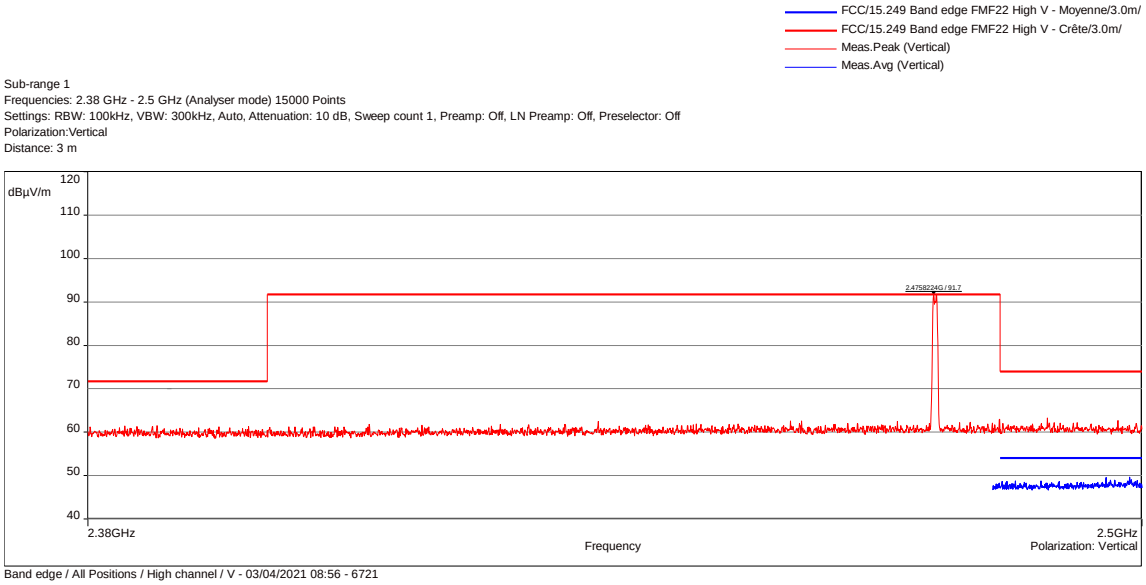
Band edge / All Positions / Mid channel / V - 03/04/2021 08:41 - 6719



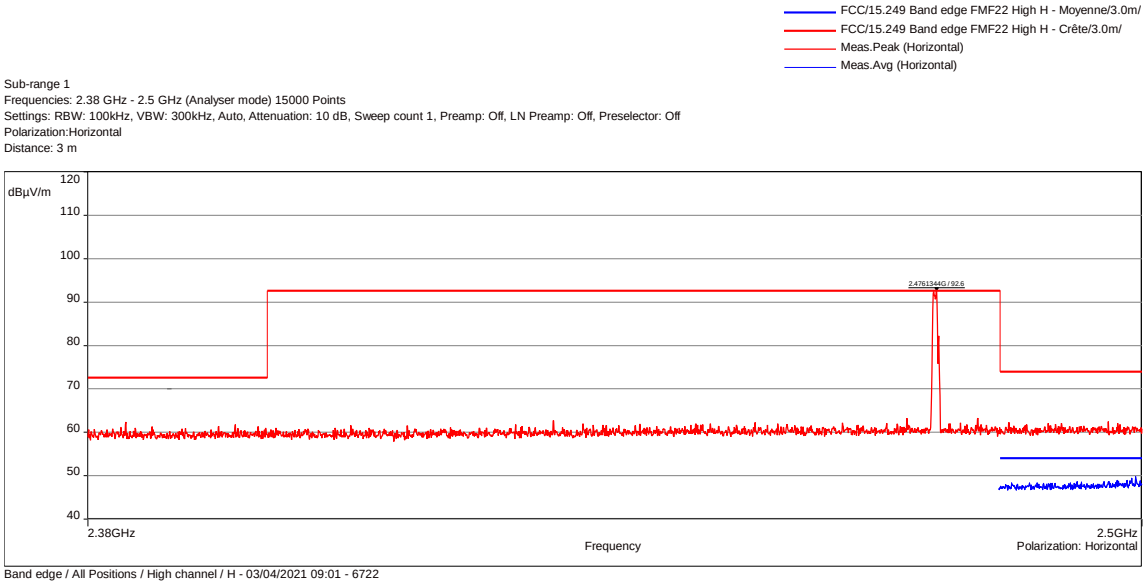
Band edge / All Positions / Mid channel / H - 03/04/2021 08:47 - 6720

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.38GHz-2.5GHz	100kHz	300kHz	Peak
Horizontal	2.38GHz-2.5GHz	100kHz	300kHz	Peak
Vertical	2.48GHz-2.5GHz	100kHz	20kHz	Peak
Horizontal	2.48GHz-2.5GHz	100kHz	20kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

BAND EDGE - GRAPH			
ALL POSITIONS / HIGH CHANNEL		EMI6721	
EUT mode:	Modulated	**T (°C):**	20.0
Test Date:	04/03/2021	**H (%):**	39.5
Test Operator:	ATO & OAT	**P (hPa):**	1015



Band edge / All Positions / High channel / V - 03/04/2021 08:56 - 6721



Band edge / All Positions / High channel / H - 03/04/2021 09:01 - 6722

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.38GHz-2.5GHz	100kHz	300kHz	Peak
Horizontal	2.38GHz-2.5GHz	100kHz	300kHz	Peak
Vertical	2.48GHz-2.5GHz	100kHz	20kHz	Peak
Horizontal	2.48GHz-2.5GHz	100kHz	20kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

8.6. Power spectral density

Reference standard:	FCC part 15 Radio part 15.247 and RSS-247
Test method:	FCC part 15.247 and RSS-247
Test description: e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density. EUT is connected to the measuring receiver via 50Ω attenuator(s).Only the highest levels are recorded.	

TESTED CONFIGURATION	PARAMETER	SEVERITY	RESULT TAB.	VERDICT
All Positions / Low channel	2.4035GHz-2.4045GHz	8dBm/3kHz	EMI6703	**PASS**
All Positions / Mid channel	2.4395GHz-2.4405GHz	8dBm/3kHz	EMI6704	**PASS**
All Positions / High channel	2.4755GHz-2.4765GHz	8dBm/3kHz	EMI6705	**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
Antenna	ETS-Lindgren	3117	5456	24/07/2019	24/09/2022
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	SUCOFLEX	N-3m	14379	25/06/2019	25/08/2021
Cable	MegaPhase	N-3m	14852	30/10/2018	30/06/2021
Cable	SUCOFLEX	N-5,5m	14381	25/06/2019	25/08/2021
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
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		0000		
Thermohygrometer	Testo	608-H1	7562	25/01/2019	25/03/2021
Thermohygrometer	Bioblock Scientific	Météostar	0963	25/01/2019	25/03/2021

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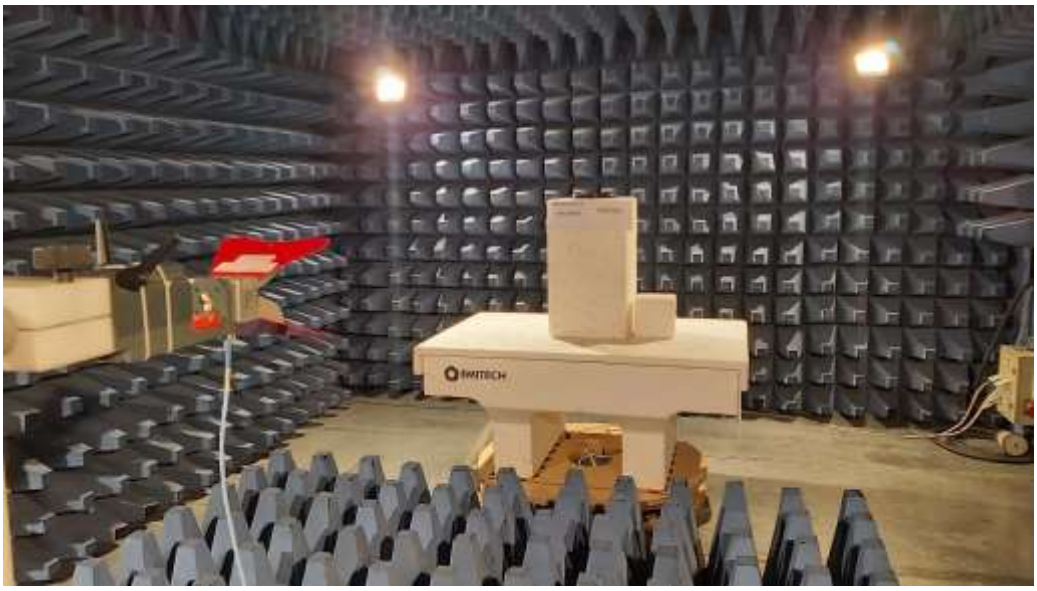
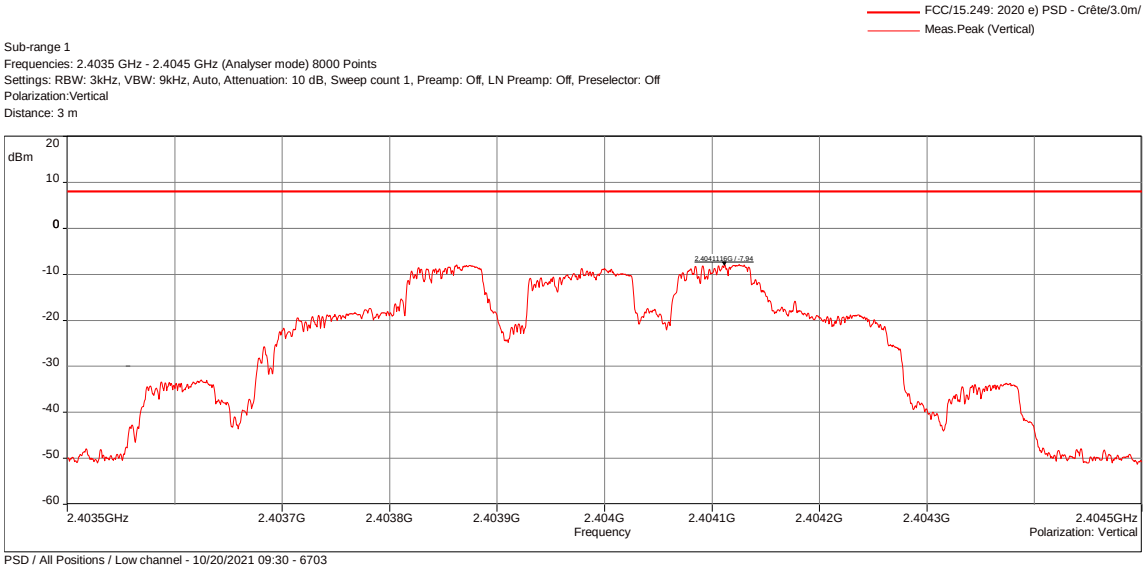
TEST SETUP PHOTO(S) - PSD / POSITION 1


TEST SETUP PHOTO(S) - PSD / POSITION 2

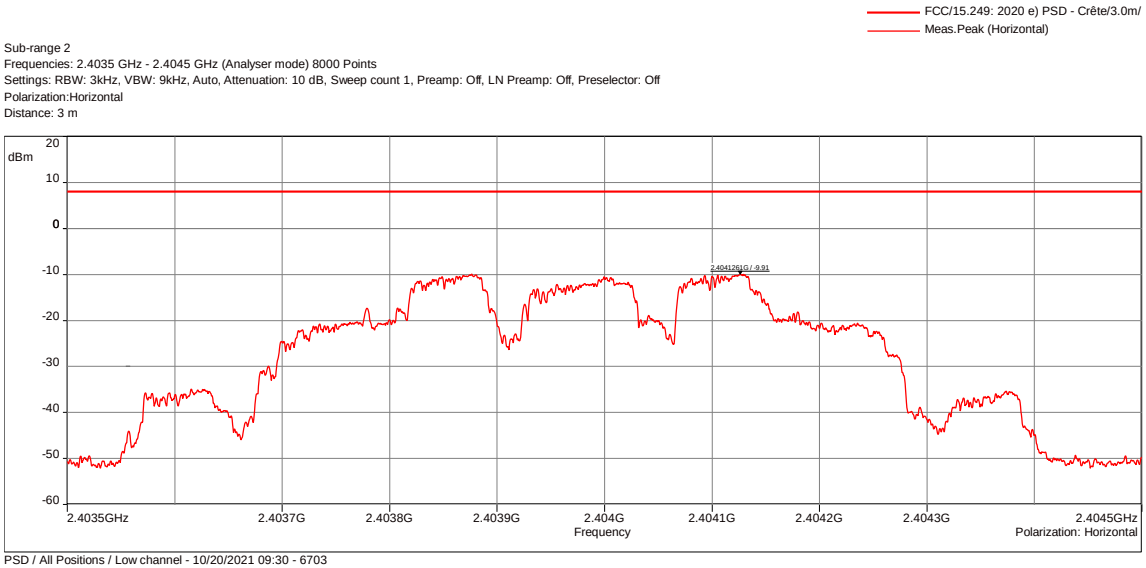

TEST SETUP PHOTO(S) - PSD / POSITION 3


TEST SETUP PHOTO(S) - PSD


POWER SPECTRAL DENSITY - GRAPH			
ALL POSITIONS / LOW CHANNEL		EMI6703	
EUT mode:	Modulated	**T (°C):**	20.7
Test Date:	03/03/2021	**H (%):**	362
Test Operator:	ATO & OAT	**P (hPa):**	1023



PSD / All Positions / Low channel - 10/20/2021 09:30 - 6703

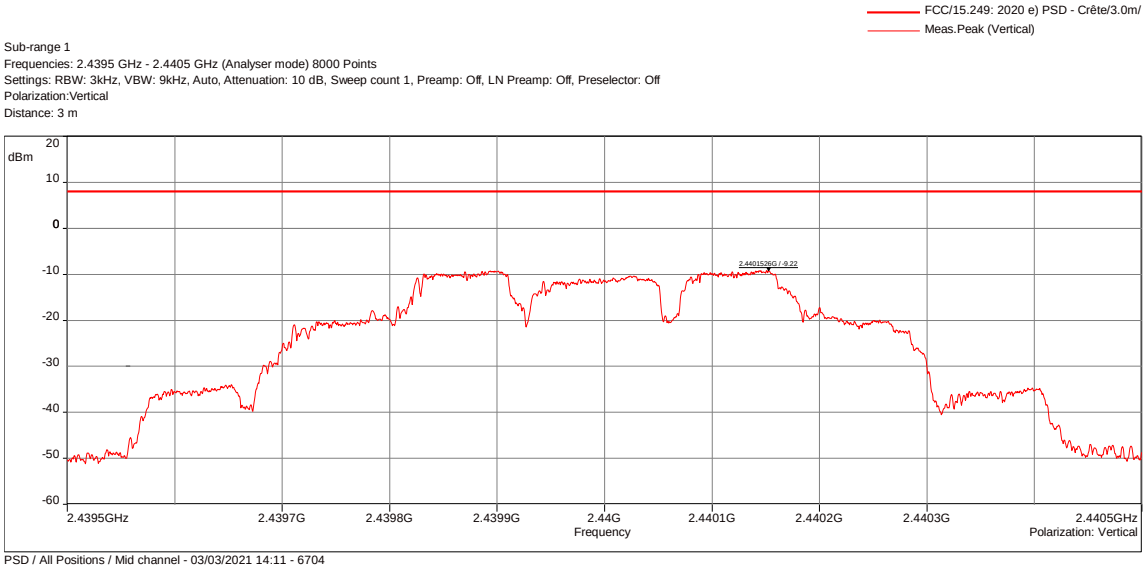


PSD / All Positions / Low channel - 10/20/2021 09:30 - 6703

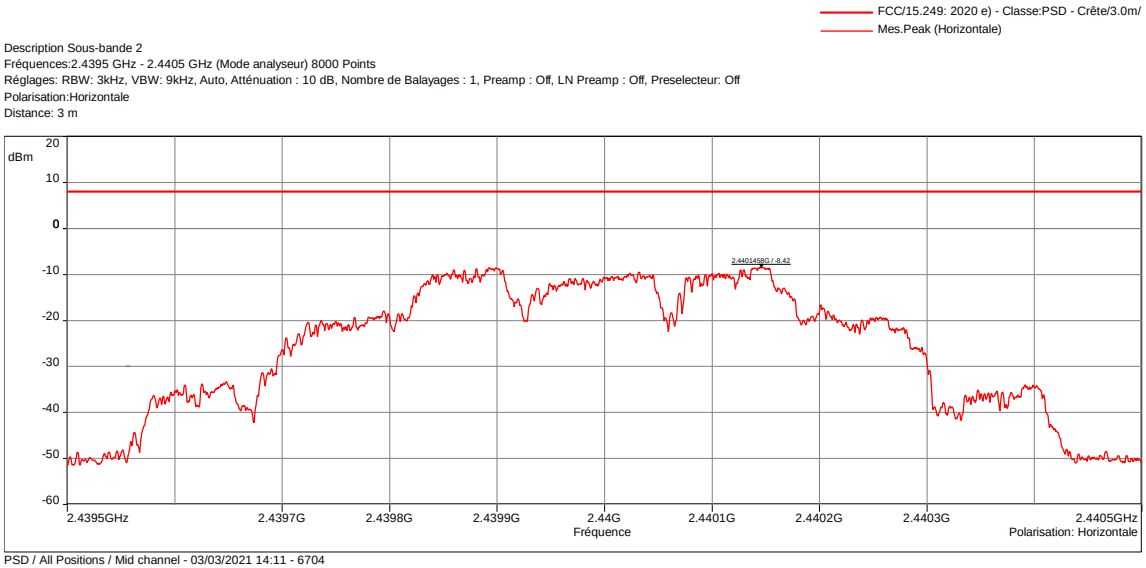
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.4035GHz-2.4045GHz	3kHz	9kHz	Peak
Horizontal	2.4035GHz-2.4045GHz	3kHz	9kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

POWER SPECTRAL DENSITY - TABULATED RESULTS			
ALL POSITIONS / LOW CHANNEL			EMI6703
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2404.11	Vertical	-7.94	8
2404.12	Horizontal	-9.91	8

POWER SPECTRAL DENSITY - GRAPH			
PSD / ALL POSITIONS / MID CHANNEL		**EMI6704**	
EUT mode:	Modulated	**T (°C):**	20.7
Test Date:	03/03/2021	**H (%):**	362
Test Operator:	ATO & OAT	**P (hPa):**	1023



PSD / All Positions / Mid channel - 03/03/2021 14:11 - 6704

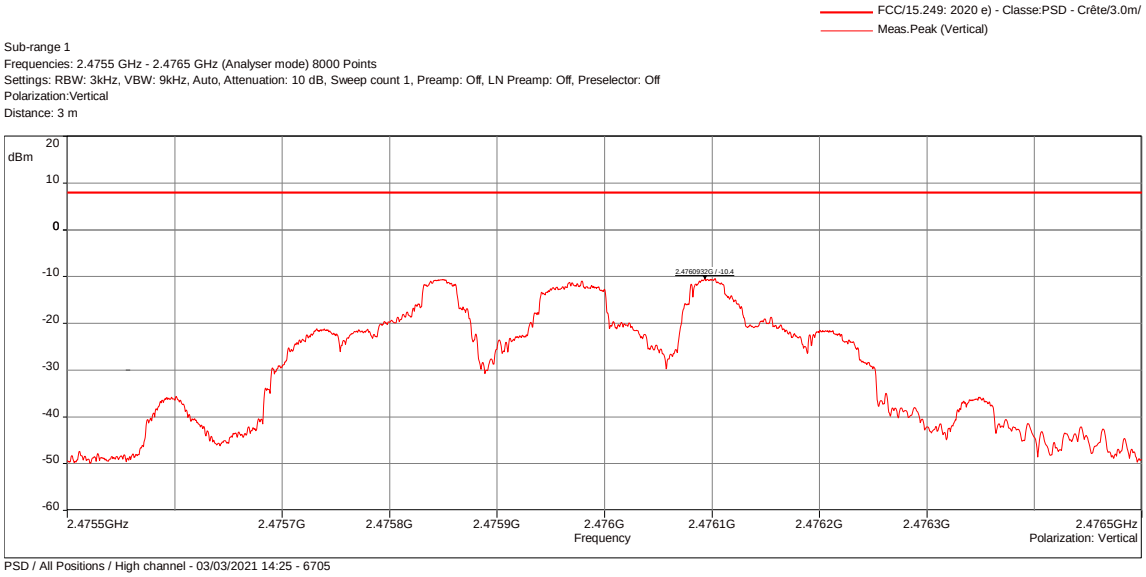


PSD / All Positions / Mid channel - 03/03/2021 14:11 - 6704

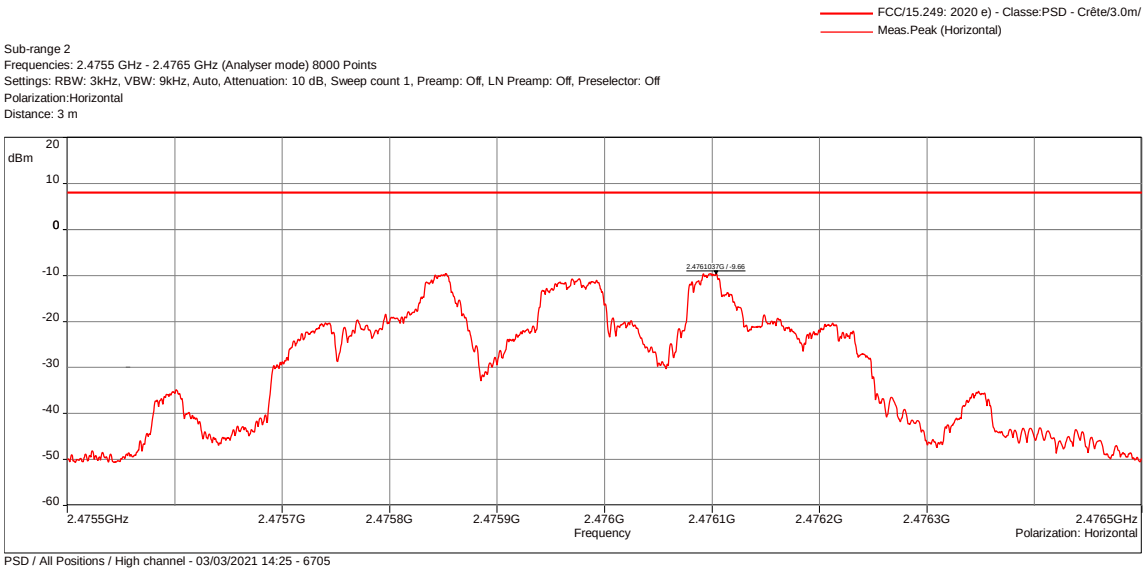
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.4395GHz-2.4405GHz	3kHz	9kHz	Peak
Horizontal	2.4395GHz-2.4405GHz	3kHz	9kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

POWER SPECTRAL DENSITY - TABULATED RESULTS			
PSD / ALL POSITIONS / MID CHANNEL			EMI6704
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2440.15	Vertical	-9.22	8
2440.14	Horizontal	-8.42	8

POWER SPECTRAL DENSITY - GRAPH			
ALL POSITIONS / HIGH CHANNEL		EMI6705	
EUT mode:	Modulated	**T (°C):**	20.7
Test Date:	03/03/2021	**H (%):**	362
Test Operator:	ATO & OAT	**P (hPa):**	1023



PSD / All Positions / High channel - 03/03/2021 14:25 - 6705



PSD / All Positions / High channel - 03/03/2021 14:25 - 6705

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.4755GHz-2.4765GHz	3kHz	9kHz	Peak
Horizontal	2.4755GHz-2.4765GHz	3kHz	9kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

POWER SPECTRAL DENSITY - TABULATED RESULTS			
ALL POSITIONS / HIGH CHANNEL			EMI6705
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2476.09	Vertical	-10.4	8
2476.10	Horizontal	-9.66	8

8.7. Transmitter radiated spurious emissions at frequencies <30MHz

Reference standard:	FCC part 15 Radio part 15.247 and RSS-247
Test method:	FCC part 15.109, 15.209, 15.205, 15.215 RSS-247, CNR Gen

General test setup: 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 / Low channel / 0° - Position 1	9kHz-30MHz	15.209	EMI5053	**PASS**
Tx Mode / Low channel / 45° - Position 1	9kHz-30MHz	15.209	EMI5054	**PASS**
Tx Mode / Low channel / 90° - Position 1	9kHz-30MHz	15.209	EMI5055	**PASS**
Tx Mode / Low channel / 0° - Position 2	9kHz-30MHz	15.209	EMI5056	**PASS**
Tx Mode / Low channel / 45° - Position 2	9kHz-30MHz	15.209	EMI5057	**PASS**
Tx Mode / Low channel / 90° - Position 2	9kHz-30MHz	15.209	EMI5058	**PASS**
Tx Mode / Low channel / 0° - Position 3	9kHz-30MHz	15.209	EMI5059	**PASS**
Tx Mode / Low channel / 45° - Position 3	9kHz-30MHz	15.209	EMI5060	**PASS**
Tx Mode / Low channel / 90° - Position 3	9kHz-30MHz	15.209	EMI5061	**PASS**
Tx Mode / High channel / 0° - Position 1	9kHz-30MHz	15.209	EMI5062	**PASS**
Tx Mode / High channel / 45° - Position 1	9kHz-30MHz	15.209	EMI5063	**PASS**
Tx Mode / High channel / 90° - Position 1	9kHz-30MHz	15.209	EMI5064	**PASS**
Tx Mode / High channel / 0° - Position 2	9kHz-30MHz	15.209	EMI5065	**PASS**
Tx Mode / High channel / 45° - Position 2	9kHz-30MHz	15.209	EMI5066	**PASS**
Tx Mode / High channel / 90° - Position 2	9kHz-30MHz	15.209	EMI5067	**PASS**
Tx Mode / High channel / 0° - Position 3	9kHz-30MHz	15.209	EMI5068	**PASS**
Tx Mode / High channel / 45° - Position 3	9kHz-30MHz	15.209	EMI5069	**PASS**
Tx Mode / High channel / 90° - Position 3	9kHz-30MHz	15.209	EMI5070	**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:

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

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

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

TEST EQUIPMENT USED					
CATEGORY	BRAND	TYPE	IDENTIFIER	CAL. DATE	CAL. DUE
Antenna	Rohde & Schwarz	HFH2-Z2	5825	24/04/2020	24/06/2022
Cable	MegaPhase	N-3m	14852	29/10/2018	29/12/2020
Cable	SUCOFLEX	N-6,5m	14380	25/07/2019	25/09/2021
Cable	MegaPhase	N-8m	15813	12/11/2018	12/01/2021
Receiver	Rohde & Schwarz	FPL1003	16027	14/08/2020	14/10/2021
Shielded enclosure	COMTEST	SAC 3m	14494	02/10/2019	02/12/2022
Software	Nexio		0000		
Thermohygrometer	Testo	608-H1	7561	25/01/2019	25/03/2021
Thermohygrometer	Bioblock Scientific	Météostar	0963	25/01/2019	25/03/2021

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

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - TABULATED RESULTS				
TX MODE / LOW CHANNEL - ALL POSITIONS (OATS)				
Frequency (kHz)	**Preliminary measurement (Pk) (dBµA/m)**	**Final measurement (Avg) (dBµA/m)**	**Limit Avg (dBµA/m)**	**Margin (Avg-Limit)**
12.322	52.62	23.50	53.60	-30.10
20.533	42.33	15.62	48.74	-33.12
28.762	40.61	13.83	45.94	-32.11
36.973	25.12	8.02	43.82	-35.80
53.412	32.11	5.92	40.70	-34.78
61.623	22.85	-0.99	39.34	-40.33
69.852	26.45	0.03	38.29	-38.25
102.730	21.64	-4.75	34.93	-39.68

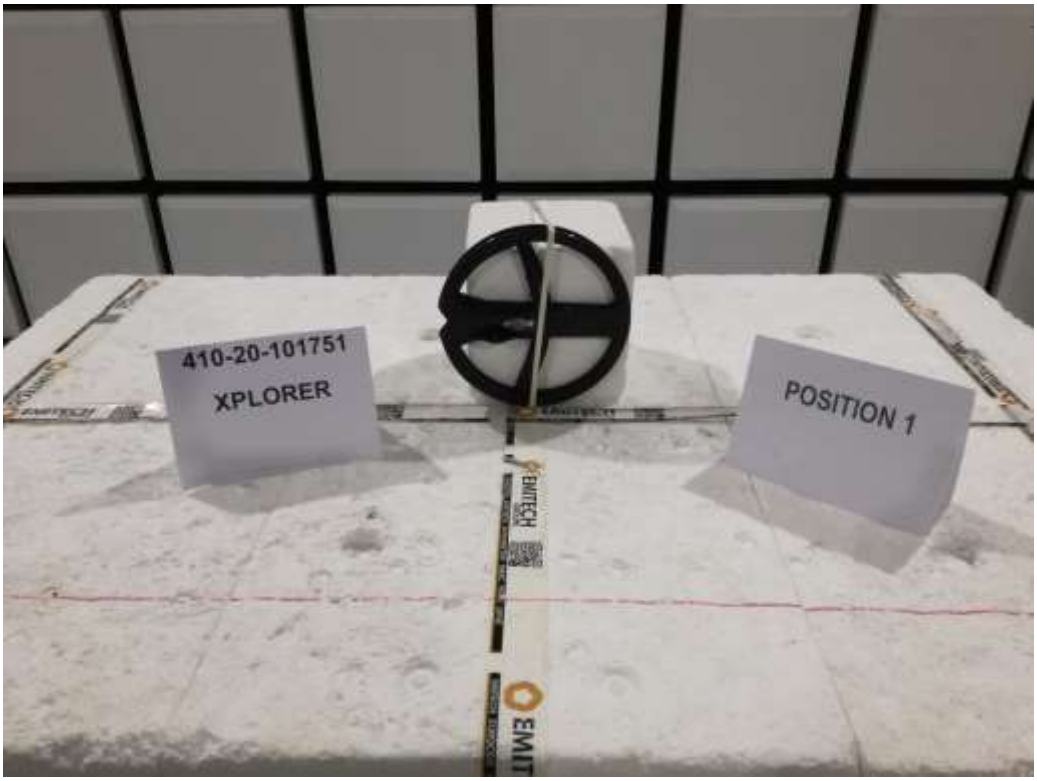
Supplementary information:

Spurious which has more than 40 dB of margin compared to the applicable limit is not necessarily reported.

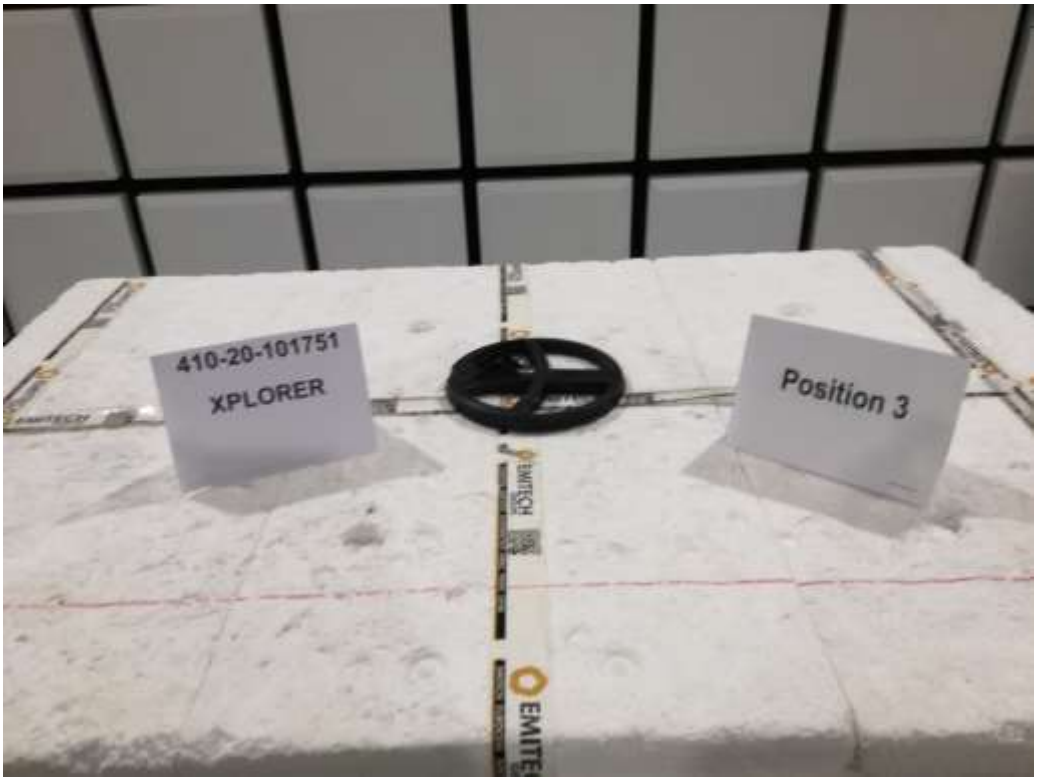
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - TABULATED RESULTS				
TX MODE / HIGH CHANNEL - ALL POSITIONS (OATS)				
Frequency (kHz)	**Preliminary measurement (Pk) (dBµA/m)**	**Final measurement (Avg) (dBµA/m)**	**Limit Avg (dBµA/m)**	**Marging (Avg-Limit)**
45.201	51.71	25.19	42.08	-16.89
135.592	32.70	6.73	32.54	-25.81
225.961	24.00	-0.30	28.11	-28.41
316.347	18.29	-2.40	25.19	-27.59

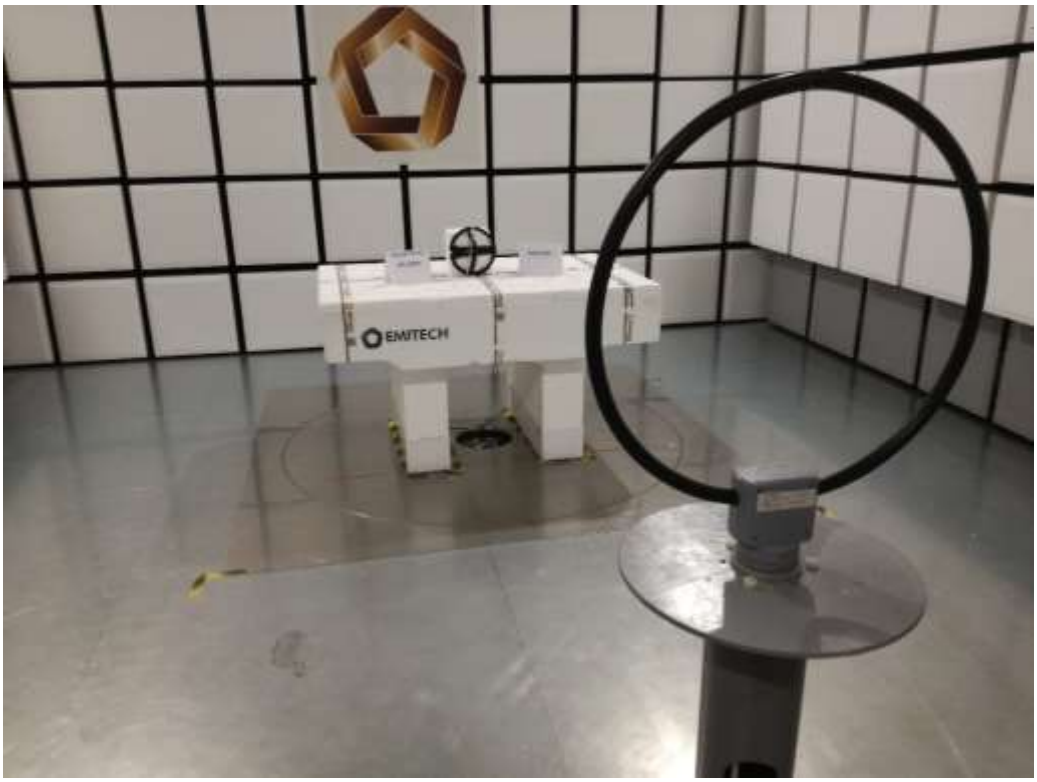
Supplementary information:

Spurious which has more than 30 dB of margin compared to the applicable limit is not necessarily reported.
The frequency 45.201 kHz is the utile signal.

TEST SETUP PHOTO(S) - TX MODE - POSITION 1


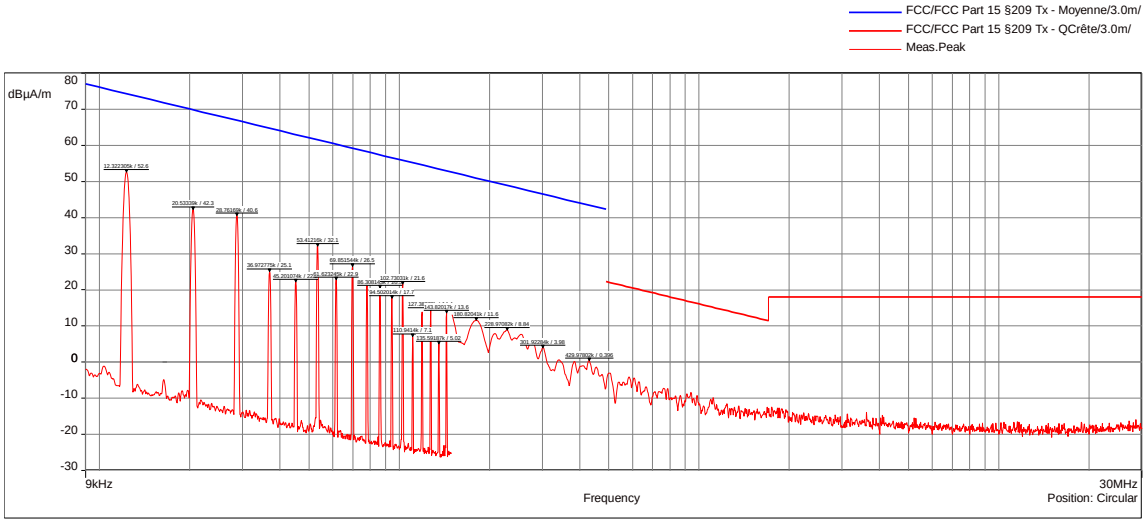
TEST SETUP PHOTO(S) - TX MODE – POSITION 2


TEST SETUP PHOTO(S) - TX MODE - POSITION 3


TEST SETUP PHOTO(S) – TX MODE


TEST SETUP PHOTO(S) - (OATS) - FOR FINAL MEASUREMENT


TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / LOW FREQ / 0° - POSITION 1		EMI5053	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	02/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011

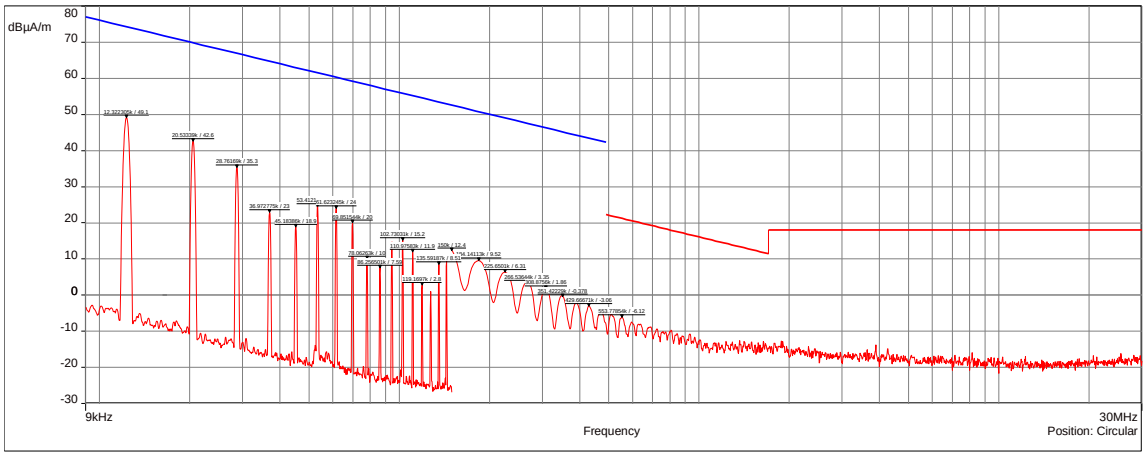


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak

Configuration:	N/A
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

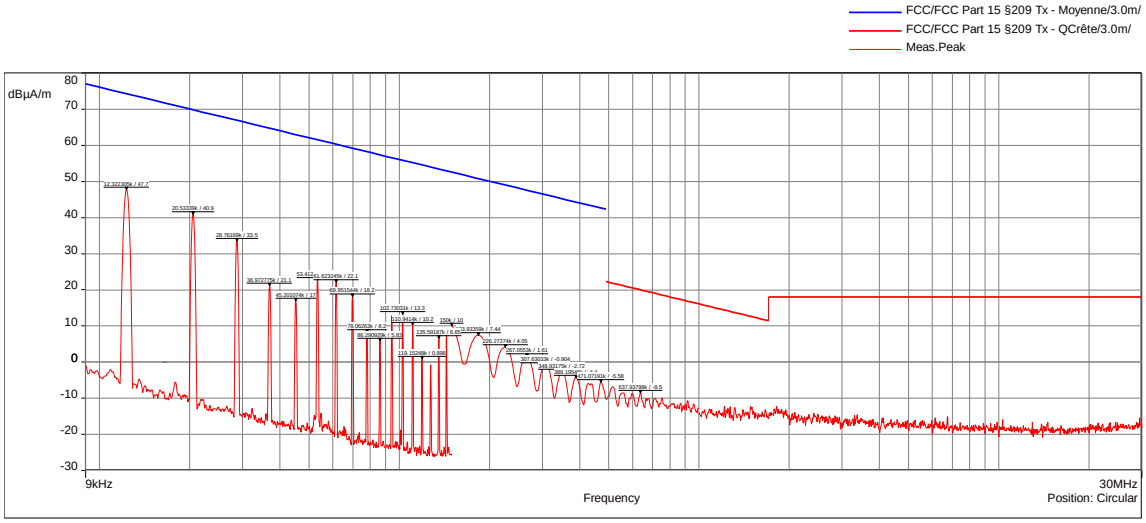
EUT modification(s): N/A

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / LOW FREQ / 45° - POSITION 1		EMI5054	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011



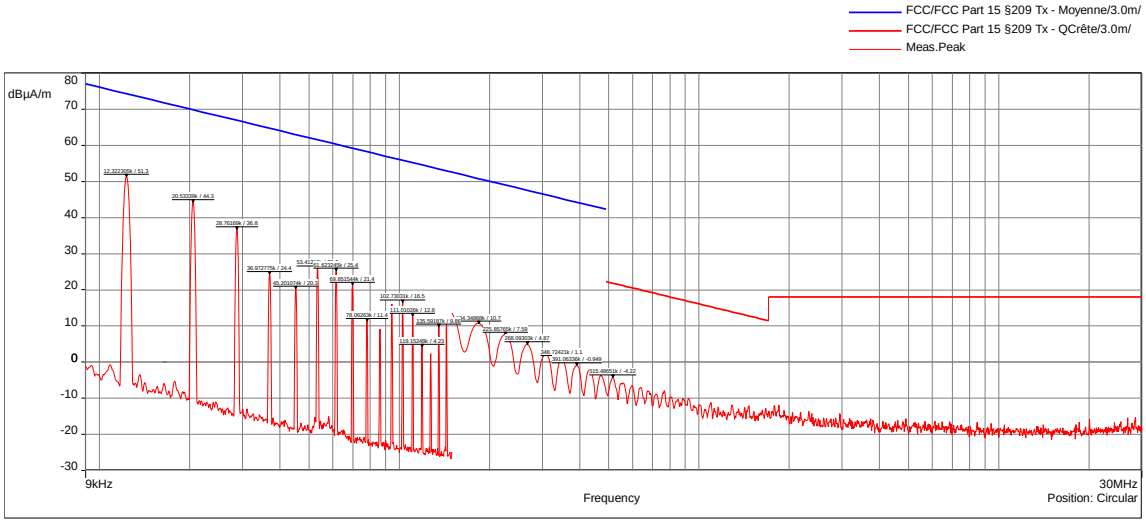
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.			
EUT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

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / LOW FREQ / 90° - POSITION 1		EMI5055	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
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 / LOW FREQ / 0° - POSITION 2		EMI5056	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011

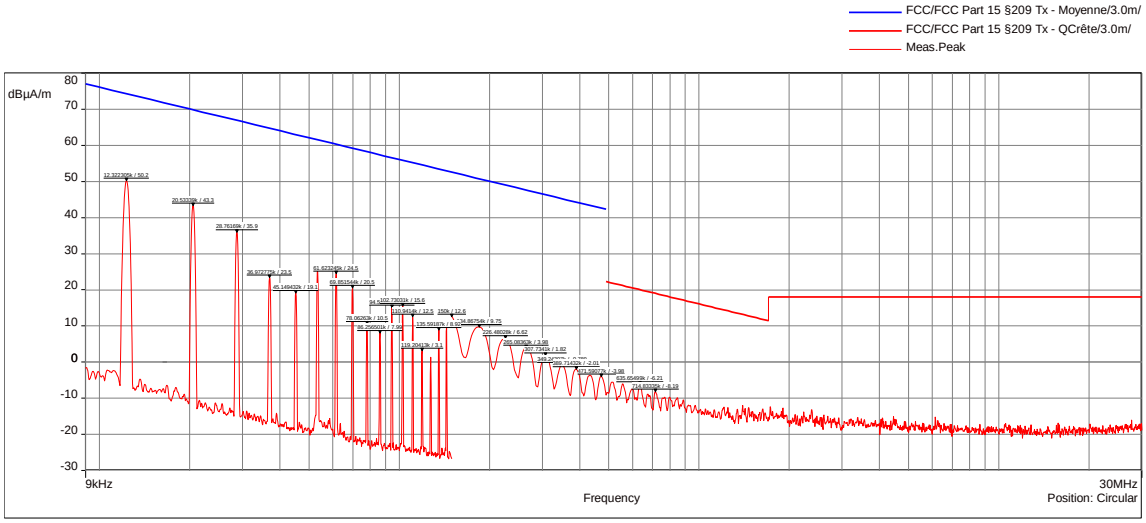


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak

Configuration:	N/A
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

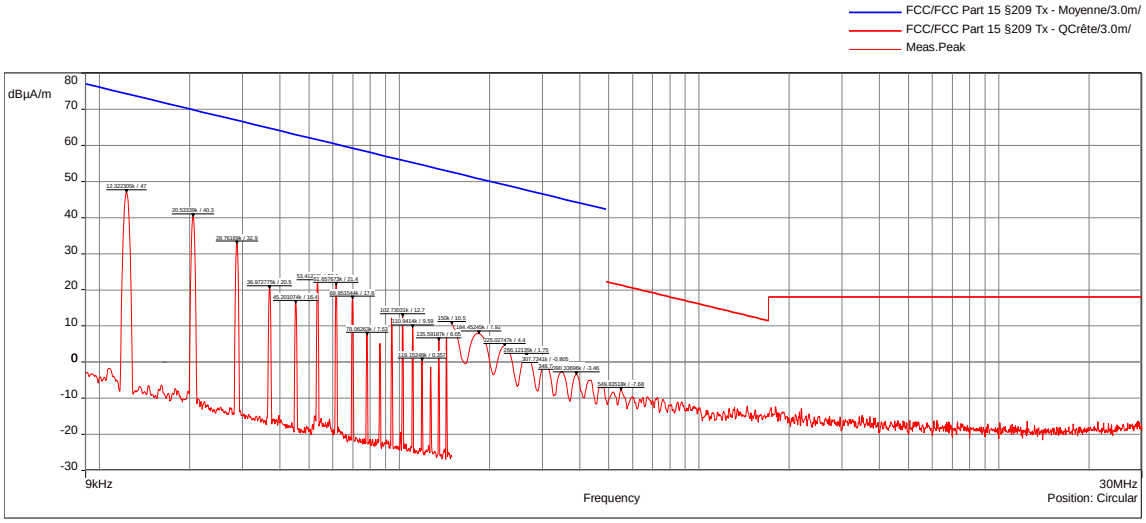
EUT modification(s): N/A

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / LOW FREQ / 45° - POSITION 2		EMI5057	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011



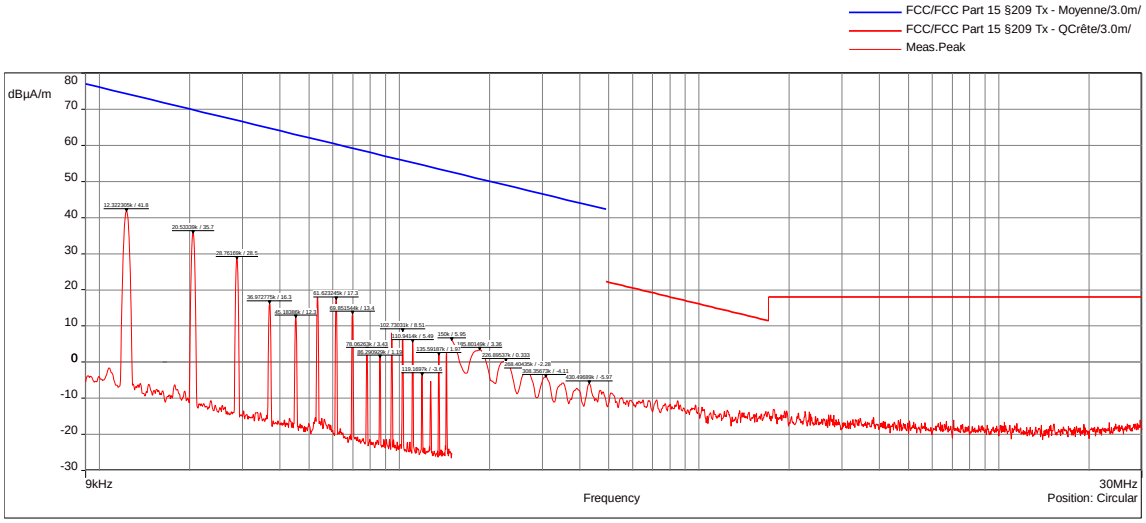
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.			
EUT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

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / LOW FREQ / 90° - POSITION 2		EMI5058	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
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 / LOW FREQ / 0° - POSITION 3		EMI5059	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011

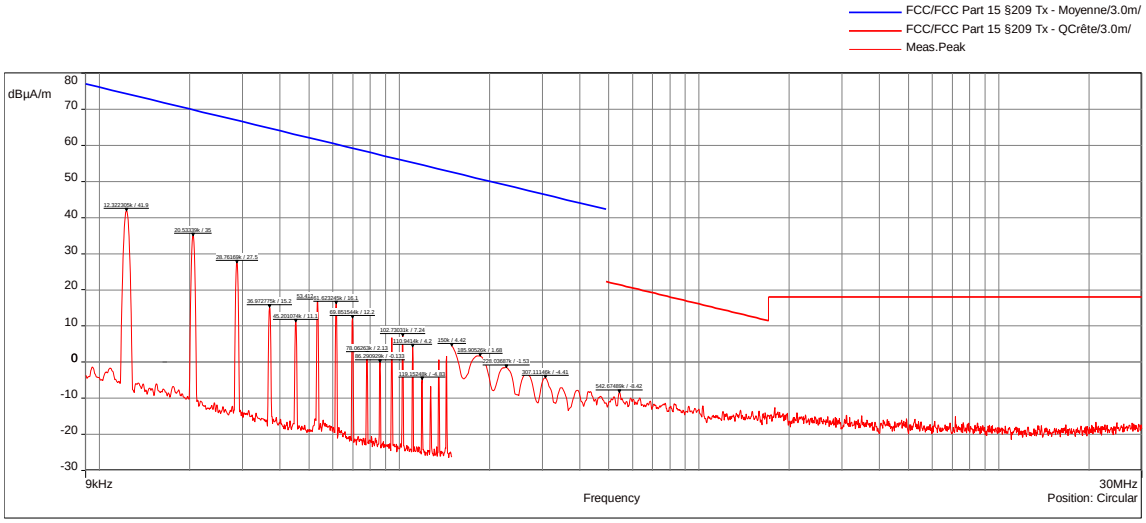


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak

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 / LOW FREQ / 45° - POSITION 3		EMI5060	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011

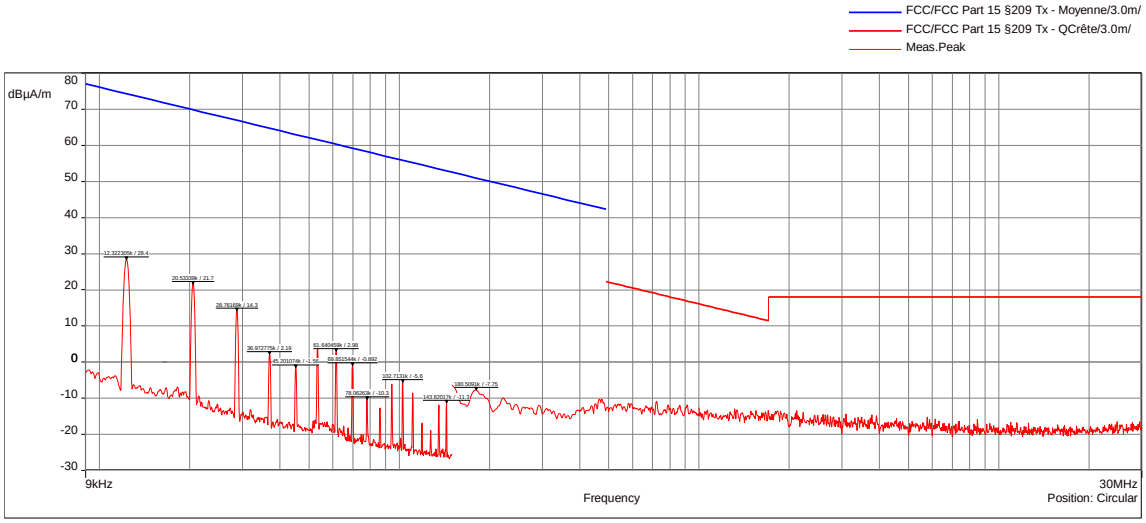


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak

Configuration:	N/A
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

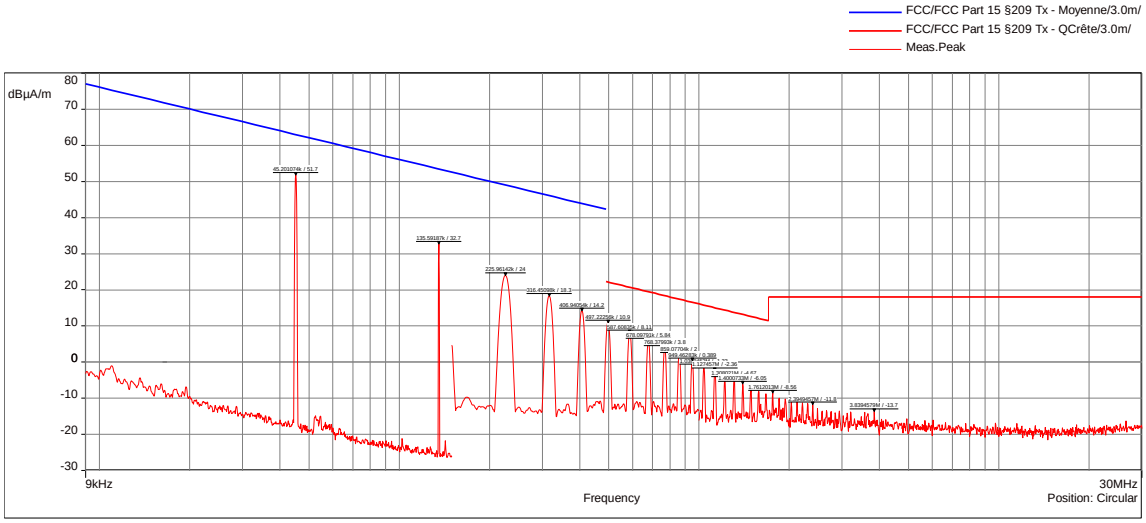
EUT modification(s): N/A

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / LOW FREQ / 90° - POSITION 3		EMI5061	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011



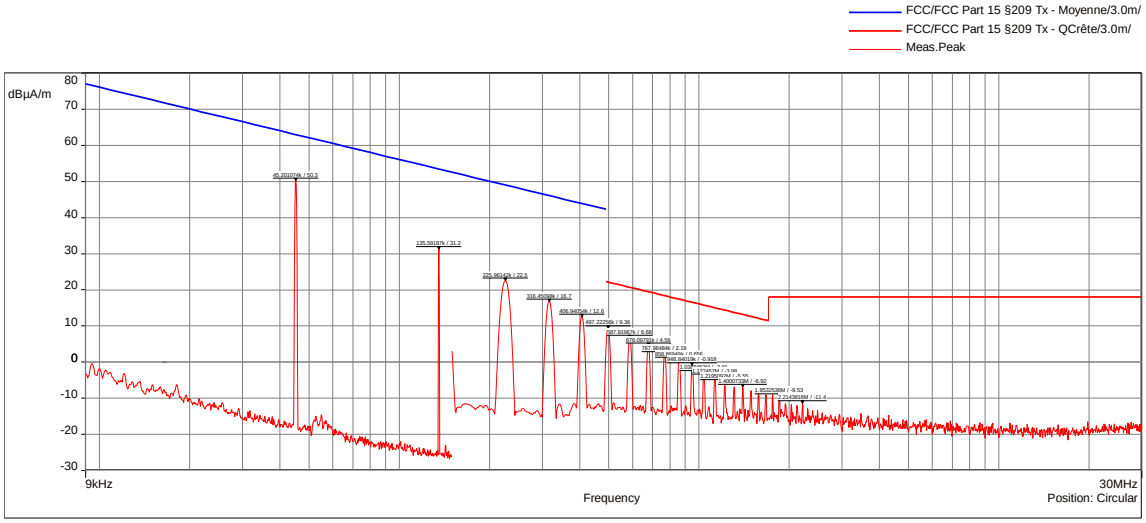
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.			
EUT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

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / HIGH FREQ / 0° - POSITION 1		EMI5062	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
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 / HIGH FREQ / 45° - POSITION 1		EMI5063	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011

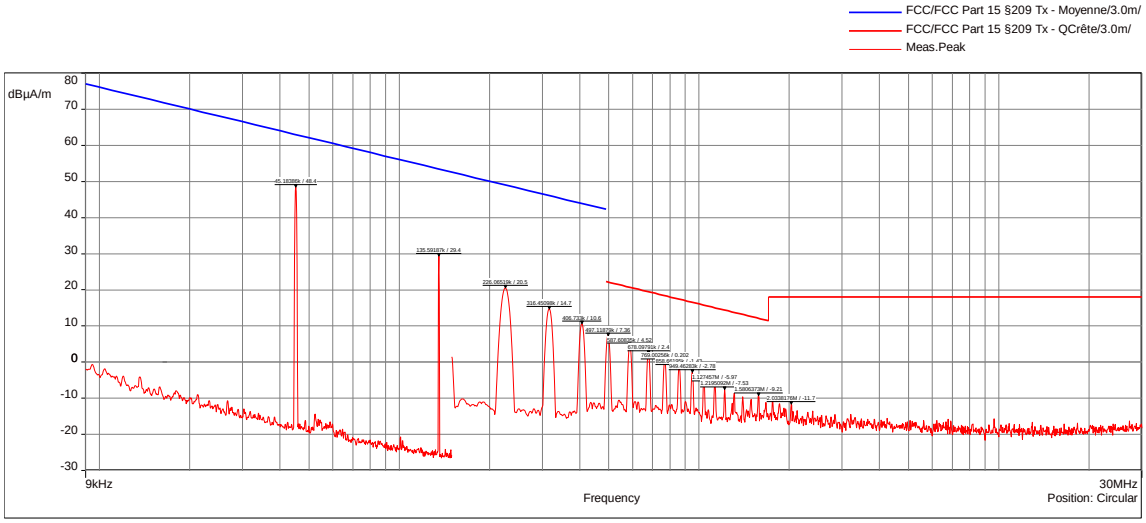


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak

Configuration:	N/A
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

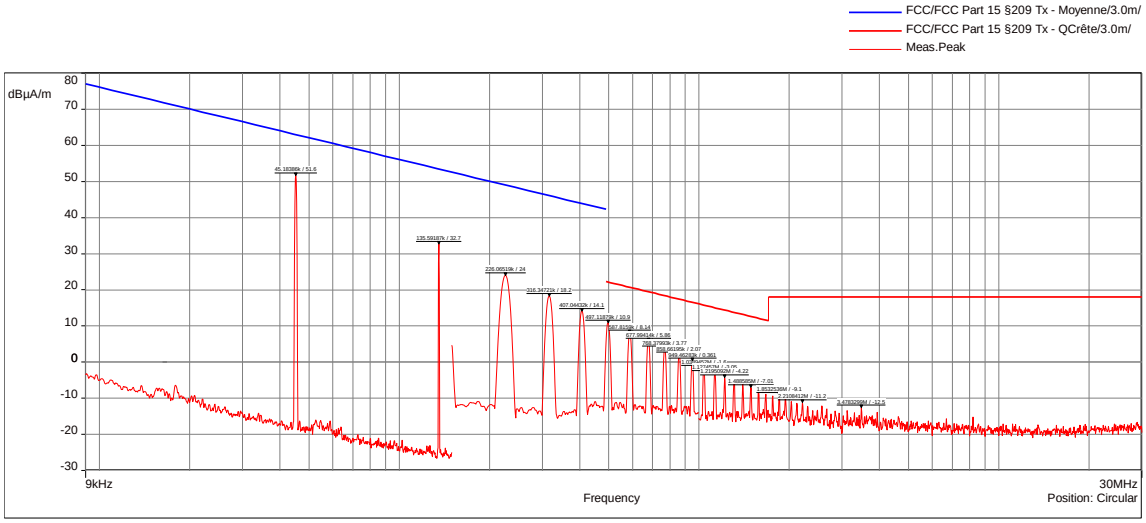
EUT modification(s): N/A

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / HIGH FREQ / 90° - POSITION 1		EMI5064	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
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 / HIGH FREQ / 0° - POSITION 2		EMI5065	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011

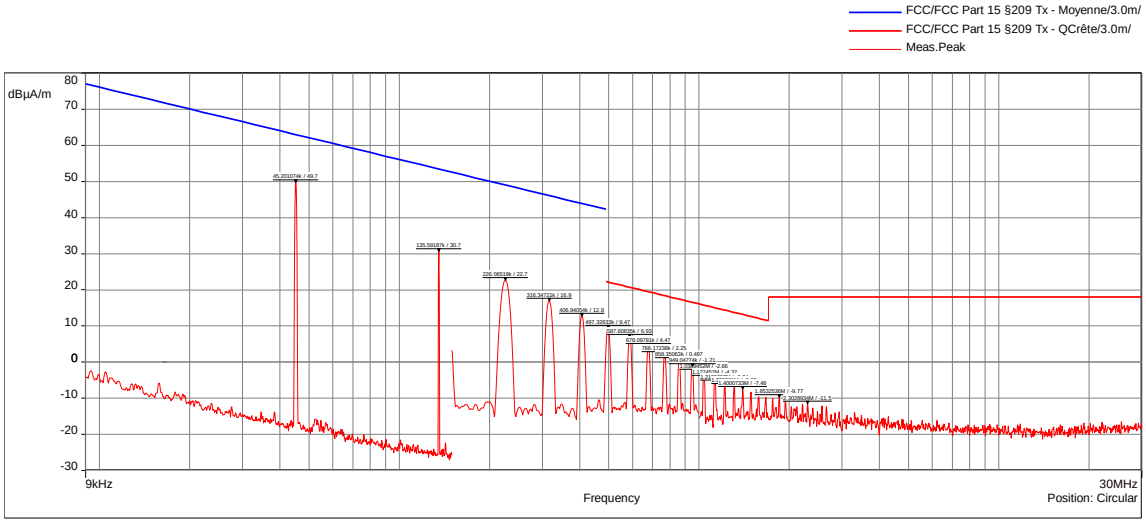


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak

Configuration:	N/A
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

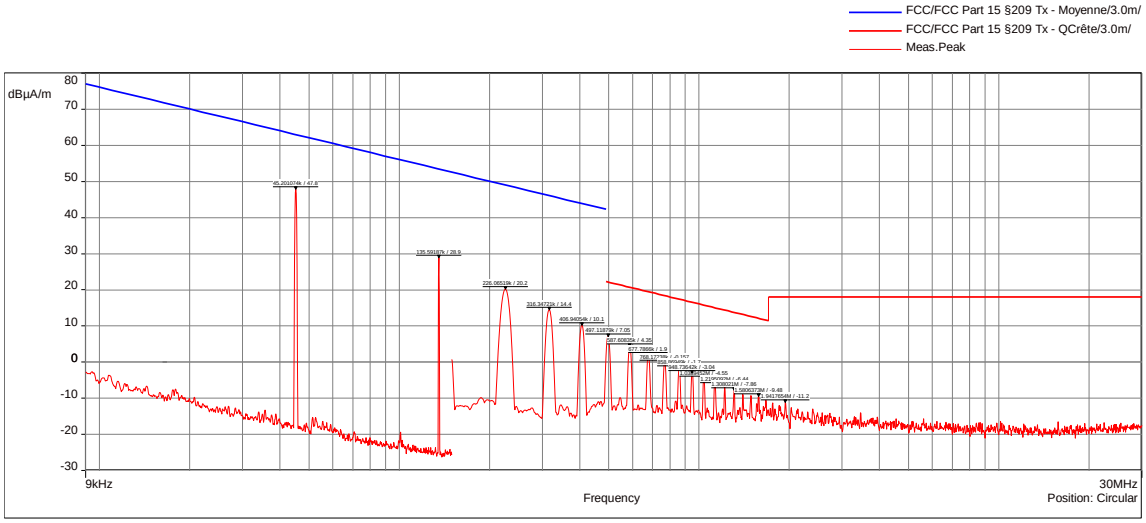
EUT modification(s): N/A

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / HIGH FREQ / 45° - POSITION 2		EMI5066	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
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 / HIGH FREQ / 90° - POSITION 2		EMI5067	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011

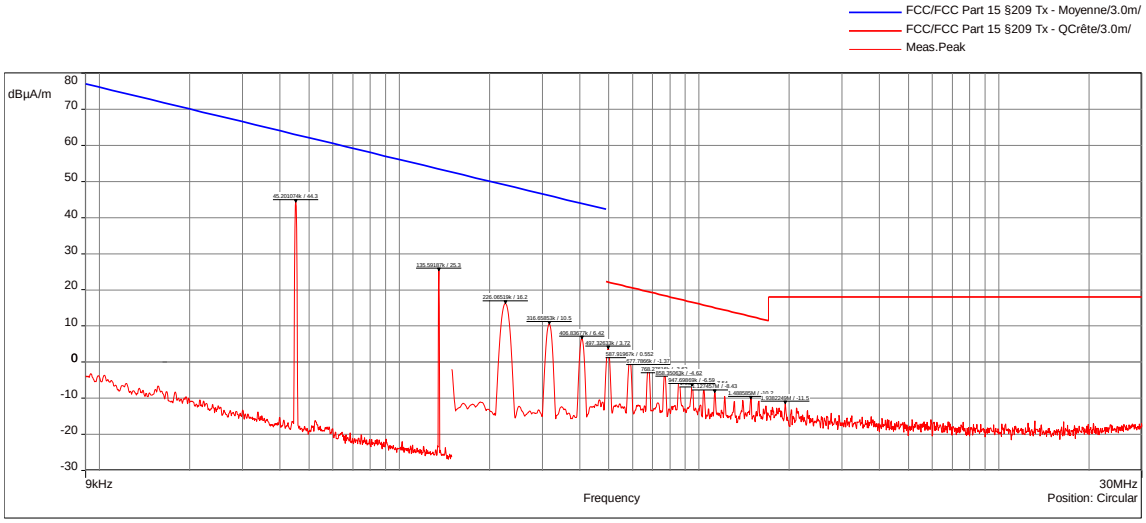


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak

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 / HIGH FREQ / 0° - POSITION 3		EMI5068	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
Test Operator:	OAT	**P (hPa):**	1011

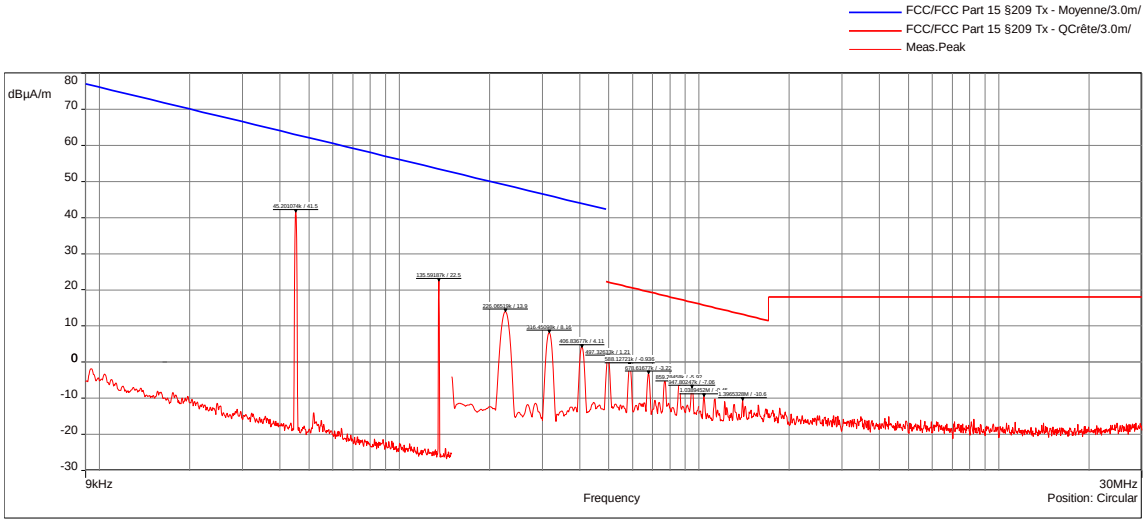


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak

Configuration:	N/A
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.

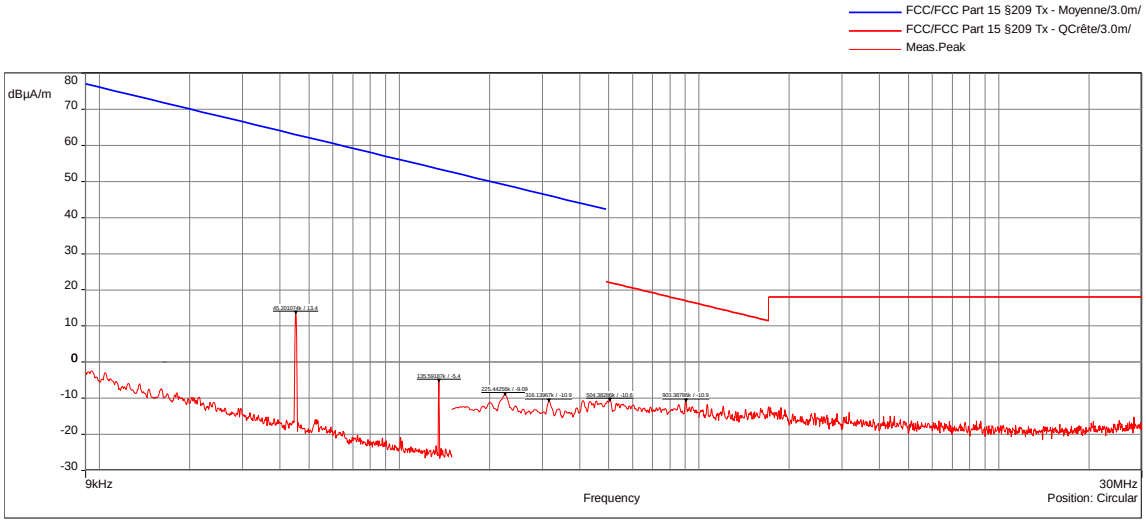
EUT modification(s): N/A

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / HIGH FREQ / 45° - POSITION 3		EMI5069	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
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 / HIGH FREQ / 90° - POSITION 3		EMI5070	
EUT mode:	Tx mode	**T (°C):**	22.3
Test Date:	03/09/2020	**H (%):**	45.4
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

8.8. Transmitter radiated spurious emissions at frequencies >30MHz

Reference standard:	FCC part 15 Radio part 15.209 & CNR-Gen
Test method:	FCC part 15.109, 15.209, 15.205, 15.215, CNR-Gen

General test setup: 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.

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
Tx mode / All Freq - All Positions	30MHz-1GHz	15.209	EMI5042	**PASS**
Charging + Tx mode / All Positions / All Freq	30MHz-1GHz	15.209	EMI6983	**PASS**
Tx mode / All Positions / Low channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI6738	**PASS**
Tx mode / All Positions / Mid channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI6741	**PASS**
Tx mode / All Positions / High channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI6742	**PASS**
Charging + Tx mode / All Positions / Low channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7038	**PASS**
Charging + Tx mode / All Positions / Mid channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7047	**PASS**
Charging + Tx mode / All Positions / High channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7048	**PASS**
Tx mode / All Positions / Low channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI6764	**PASS**
Tx mode / All Positions / Mid channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI6765	**PASS**
Tx mode / All Positions / High channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI6768	**PASS**
Charging + Tx mode / All Positions / Low channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7271	**PASS**
Charging + Tx mode / All Positions / Mid channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7272	**PASS**
Charging + Tx mode / All Positions / High channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7273	**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
Antenna	ETS-Lindgren	3117	5456	24/07/2019	24/09/2022
Antenna	ETS lindgren	3160-09	14690	26/09/2017	26/05/2021
Antenna	Electro Metrics	BIA-30HF	0824	13/06/2018	13/08/2021
Antenna	Rohde & Schwarz	HL223	3126	13/06/2018	13/08/2021
Cable	MegaPhase	F135N1N28	16664	25/10/2019	25/12/2021
Cable	MegaPhase	F135N1N28	16666	25/10/2019	25/12/2021
Cable	JYE BAO	K30K30-5003-40G1	14887	25/06/2019	25/08/2021
Cable	Huber + Suhner	K-5m	14460	25/06/2019	25/08/2021
Cable	C&C	N-1.5m	10554	20/12/2019	20/02/2022
Cable	/	N-1m	3625	27/01/2021	27/03/2023
Cable	/	N-1m	3626	27/01/2021	27/03/2023
Cable	SUCOFLEX	N-3m	14379	25/06/2019	25/08/2021
Cable	MegaPhase	N-3m	14852	29/10/2018	29/12/2020
Cable	MegaPhase	N-3m	14852	30/10/2018	30/06/2021
Cable	SUCOFLEX	N-5,5m	14381	25/06/2019	25/08/2021
Cable	SUCOFLEX	N-6,5m	14380	25/07/2019	25/09/2021
Cable	MegaPhase	N-8m	15813	12/11/2018	12/01/2021
Cable	MegaPhase	N-8m	15813	14/01/2021	14/03/2023
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
Cable	MegaPhase	TM18-N1N1-118	12841	14/08/2020	14/10/2022
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	HPM18865	12843	09/06/2018	09/08/2021
Filter	Wainwright Instruments	WRCGV 2402/2480-2380/2500-40/10EE-200W	9771	08/01/2019	08/03/2022
Preamplifier	Techniwave	APS16-0087	14040	02/12/2020	02/02/2022
Preamplifier	Wright Technologie	ASL40-B3015	14851	12/08/2020	12/10/2021
Preamplifier	IMPULSE	CA118-546ACN	9169	13/01/2021	13/03/2022
Preamplifier	Mini-circuit	ZFL-1000LN	1321	25/06/2019	25/02/2021
Receiver	Agilent Technologies	E4440A	5824	22/10/2020	22/12/2022
Receiver	Rohde & Schwarz	ESI	9704	03/03/2020	03/05/2021
Receiver	Rohde & Schwarz	FPL1003	16027	14/08/2020	14/10/2021
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		0000		
Thermohygrometer	Testo	608-H1	7562	25/01/2019	25/03/2021
Thermohygrometer	Testo	608-H2	12269	07/05/2020	07/07/2022
Thermohygrometer	Bioblock Scientific	Météostar	0963	25/01/2019	25/03/2021

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

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHz- TABULATED RESULTS					
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS				EMI6983	
Frequency MHz	**Polarization**	**Level peak dBµV/m**	**Level Qpeak dBµV/m**	**Limit dBµV/m**	**Margin dB**
37.668	Verticale	39.67	33.28	40	-6.72
38.093	Verticale	37.78	30.58	40	-9.42
38.433	Verticale	38.71	31.01	40	-8.99
38.960	Verticale	38.60	31.05	40	-8.95
39.198	Verticale	38.89	30.32	40	-9.68
39.419	Verticale	39.65	31.46	40	-8.54
39.623	Verticale	40.15	31.92	40	-8.08
39.878	Verticale	41.03	31.69	40	-8.31
40.167	Verticale	41.02	32.46	40	-7.54
40.303	Verticale	42.46	32.77	40	-7.23
40.830	Verticale	44.37	35.17	40	-4.83
40.983	Verticale	43.66	35.36	40	-4.64
41.153	Verticale	44.34	36.41	40	-3.59
41.374	Verticale	45.19	36.50	40	-3.5
41.833	Verticale	46.50	37.25	40	-2.75
42.105	Verticale	45.49	36.56	40	-3.44
42.360	Verticale	44.35	35.48	40	-4.52
42.581	Verticale	42.70	34.13	40	-5.87
42.700	Verticale	42.99	33.66	40	-6.34
42.853	Verticale	41.64	32.72	40	-7.28
43.278	Verticale	40.94	32.49	40	-7.51
43.686	Verticale	39.31	31.34	40	-8.66
44.009	Verticale	39.74	32.35	40	-7.65
44.281	Verticale	43.11	33.73	40	-6.27
44.655	Verticale	42.23	34.75	40	-5.25
44.842	Verticale	42.61	35.31	40	-4.69
45.234	Verticale	42.52	35.37	40	-4.63
45.591	Verticale	40.95	34.38	40	-5.62
46.050	Verticale	40.01	34.00	40	-6
46.356	Verticale	41.07	34.78	40	-5.22
46.764	Verticale	40.83	34.59	40	-5.41
47.104	Verticale	39.79	33.93	40	-6.07
47.461	Verticale	39.14	33.29	40	-6.71
47.954	Verticale	38.78	32.33	40	-7.67
48.464	Verticale	38.52	31.07	40	-8.93
48.974	Verticale	36.88	29.39	40	-10.61
49.314	Verticale	35.27	28.50	40	-11.5
49.552	Verticale	34.89	28.00	40	-12
49.807	Verticale	33.97	27.32	40	-12.68
176.725	Verticale	32.95	25.61	43.5	-17.89
177.014	Verticale	34.26	25.84	43.5	-17.66
177.133	Verticale	34.99	25.76	43.5	-17.74
177.422	Verticale	33.79	25.99	43.5	-17.51
177.796	Verticale	35.17	26.17	43.5	-17.33
178.289	Verticale	34.51	26.64	43.5	-16.86

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ- TABULATED RESULTS					
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS				EMI6983	
178.493	Verticale	35.83	26.65	43.5	-16.85
178.969	Verticale	35.02	26.98	43.5	-16.52
179.326	Verticale	34.98	26.96	43.5	-16.54
179.598	Verticale	35.02	27.12	43.5	-16.38
179.819	Verticale	34.71	27.09	43.5	-16.41
180.176	Verticale	35.26	27.36	43.5	-16.14
180.669	Verticale	35.59	27.77	43.5	-15.73
180.822	Verticale	35.84	27.90	43.5	-15.6
181.162	Verticale	35.78	28.26	43.5	-15.24
181.417	Verticale	35.99	28.63	43.5	-14.87
181.740	Verticale	35.87	28.96	43.5	-14.54
181.961	Verticale	36.39	29.25	43.5	-14.25
182.250	Verticale	36.88	29.64	43.5	-13.86
182.454	Verticale	37.64	30.01	43.5	-13.49
182.692	Verticale	36.98	30.32	43.5	-13.18
183.032	Verticale	38.12	30.64	43.5	-12.86
183.338	Verticale	37.98	30.99	43.5	-12.51
183.627	Verticale	37.92	31.19	43.5	-12.31
183.984	Verticale	37.76	31.48	43.5	-12.02
184.528	Verticale	37.69	31.61	43.5	-11.89
184.698	Verticale	37.76	31.65	43.5	-11.85
185.124	Verticale	37.84	31.60	43.5	-11.9
185.277	Verticale	37.50	31.47	43.5	-12.03
185.549	Verticale	37.88	31.29	43.5	-12.21
186.042	Verticale	37.31	30.97	43.5	-12.53
186.365	Verticale	37.14	30.61	43.5	-12.89
186.722	Verticale	36.52	30.23	43.5	-13.27
187.147	Verticale	36.56	29.65	43.5	-13.85
187.555	Verticale	35.22	28.93	43.5	-14.57
187.912	Verticale	35.07	28.47	43.5	-15.03
188.269	Verticale	34.54	28.06	43.5	-15.44
188.711	Verticale	34.76	27.86	43.5	-15.64
189.085	Verticale	34.39	27.79	43.5	-15.71
189.476	Verticale	34.31	27.79	43.5	-15.71
189.663	Verticale	34.89	27.93	43.5	-15.57
190.071	Verticale	34.56	28.14	43.5	-15.36
190.326	Verticale	34.97	28.31	43.5	-15.19
190.649	Verticale	34.55	28.35	43.5	-15.15
190.853	Verticale	35.11	28.44	43.5	-15.06
191.176	Verticale	35.12	28.45	43.5	-15.05
191.601	Verticale	35.12	28.57	43.5	-14.93
192.026	Verticale	34.99	28.26	43.5	-15.24
192.366	Verticale	35.30	28.07	43.5	-15.43
192.621	Verticale	34.76	27.86	43.5	-15.64
192.859	Verticale	34.63	27.56	43.5	-15.94
193.063	Verticale	34.09	27.36	43.5	-16.14
193.267	Verticale	34.37	27.05	43.5	-16.45
193.777	Verticale	34.14	26.29	43.5	-17.21
153.330	Horizontale	34.65	25.56	43.5	-17.94

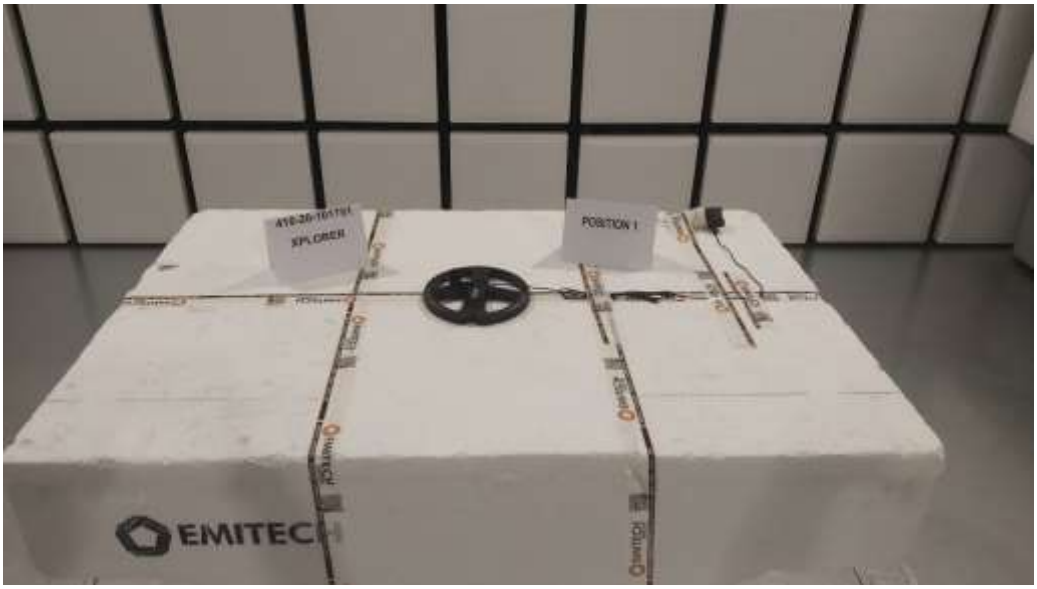
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ- TABULATED RESULTS					
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS				EMI6983	
153.517	Horizontale	35.11	25.92	43.5	-17.58
153.721	Horizontale	35.88	26.31	43.5	-17.19
153.993	Horizontale	36.79	26.77	43.5	-16.73
154.282	Horizontale	37.28	27.50	43.5	-16
154.588	Horizontale	37.73	28.27	43.5	-15.23
154.877	Horizontale	38.20	28.96	43.5	-14.54
155.082	Horizontale	38.63	29.43	43.5	-14.07
155.184	Horizontale	39.05	29.73	43.5	-13.77
155.405	Horizontale	39.17	30.25	43.5	-13.25
155.643	Horizontale	39.88	30.79	43.5	-12.71
155.847	Horizontale	40.16	31.21	43.5	-12.29
156.119	Horizontale	40.59	31.82	43.5	-11.68
156.374	Horizontale	40.95	32.27	43.5	-11.23
156.578	Horizontale	41.68	32.56	43.5	-10.94
157.020	Horizontale	40.92	33.08	43.5	-10.42
157.173	Horizontale	41.35	33.22	43.5	-10.28
157.428	Horizontale	41.14	33.34	43.5	-10.16
157.615	Horizontale	41.10	33.40	43.5	-10.1
157.802	Horizontale	40.30	33.50	43.5	-10
158.108	Horizontale	40.36	33.47	43.5	-10.03
158.278	Horizontale	39.86	33.47	43.5	-10.03
158.550	Horizontale	39.72	33.44	43.5	-10.06
158.788	Horizontale	39.59	33.25	43.5	-10.25
158.958	Horizontale	38.83	33.23	43.5	-10.27
159.230	Horizontale	38.57	33.17	43.5	-10.33
159.502	Horizontale	38.22	33.01	43.5	-10.49
159.740	Horizontale	38.39	32.84	43.5	-10.66
159.944	Horizontale	37.75	32.66	43.5	-10.84
160.233	Horizontale	37.47	32.46	43.5	-11.04
160.505	Horizontale	37.58	32.23	43.5	-11.27
160.641	Horizontale	37.36	32.16	43.5	-11.34
160.777	Horizontale	37.66	32.08	43.5	-11.42
160.998	Horizontale	37.09	31.86	43.5	-11.64
161.202	Horizontale	37.29	31.72	43.5	-11.78
161.423	Horizontale	36.82	31.56	43.5	-11.94
161.627	Horizontale	36.57	31.35	43.5	-12.15
161.797	Horizontale	36.97	31.15	43.5	-12.35

Spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported

TEST SETUP PHOTO(S) – TX MODE / POSITION 1


TEST SETUP PHOTO(S) – TX MODE – POSITION 2


TEST SETUP PHOTO(S) – TX MODE – POSITION 3

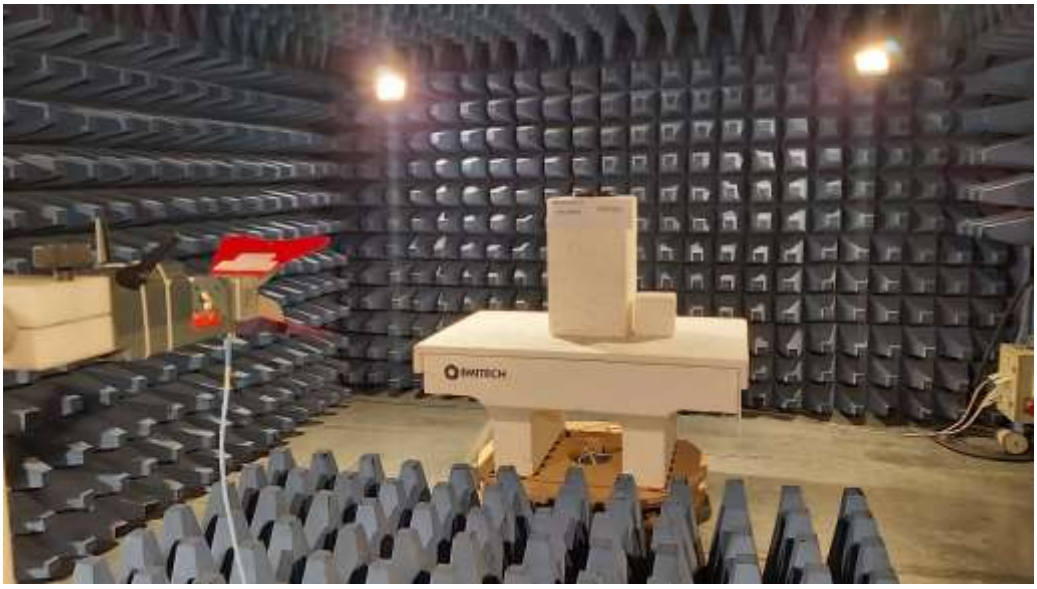

TEST SETUP PHOTO(S) – CHARGING + TX MODE – POSITION 1


TEST SETUP PHOTO(S) - CHARGING + TX MODE – POSITION 2


TEST SETUP PHOTO(S) - CHARGING + TX MODE – POSITION 3

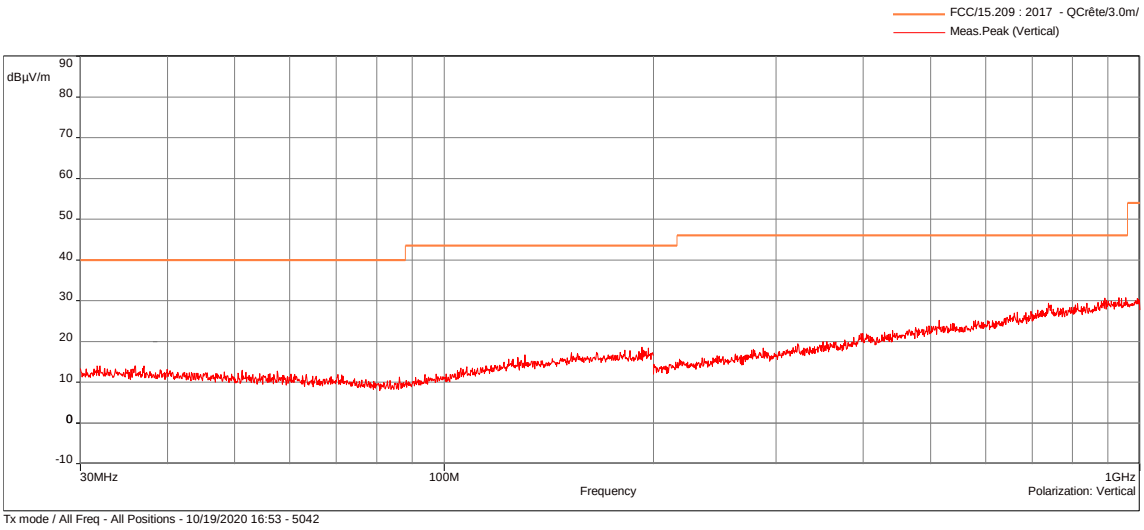

TEST SETUP PHOTO(S) – TX MODE – 30MHZ TO 200MHZ


TEST SETUP PHOTO(S) – TX MODE – 200MHZ TO 1GHZ

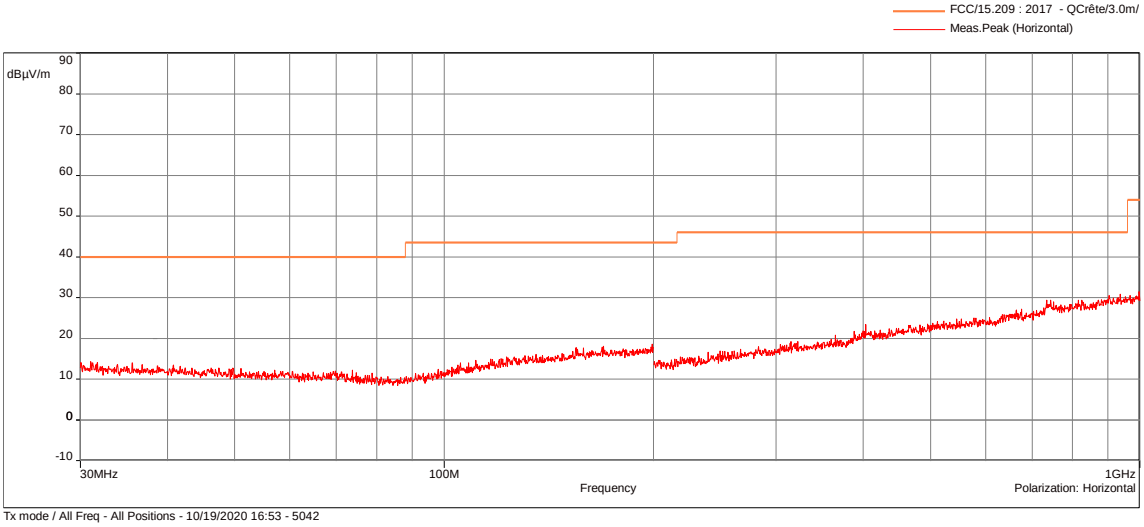

TEST SETUP PHOTO(S) – TX MODE – 1GHZ TO 18GHZ


TEST SETUP PHOTO(S) - TX MODE / 18GHZ TO 26.5GHZ


TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL CHANNELS / ALL POSITIONS		EMI5042	
EUT mode:	Modulated	**T (°C):**	23.5
Test Date:	03/09/2020	**H (%):**	52.6
Test Operator:	OAT	**P (hPa):**	1015



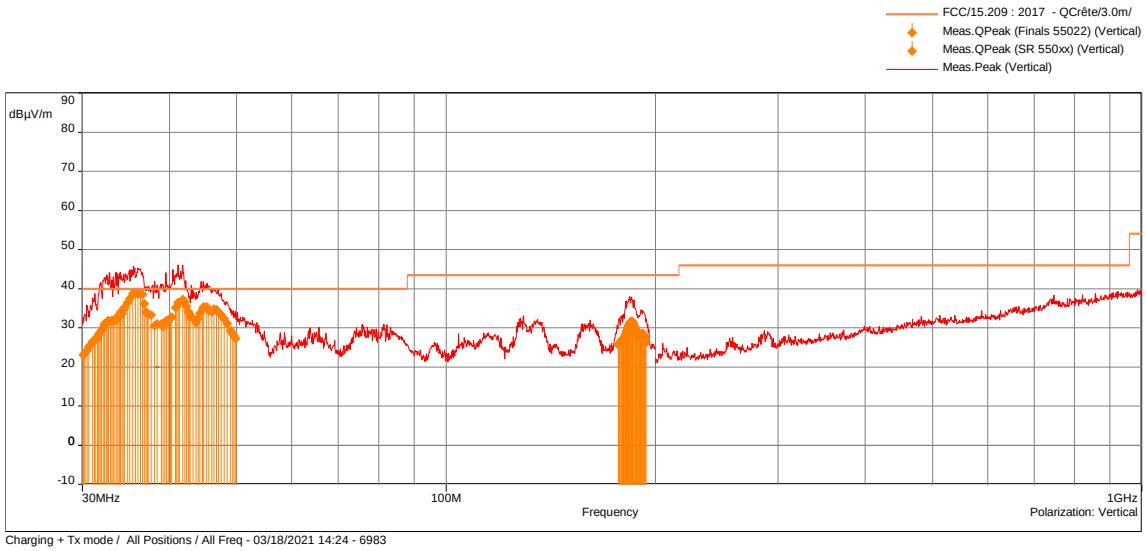
Tx mode / All Freq - All Positions - 10/19/2020 16:53 - 5042



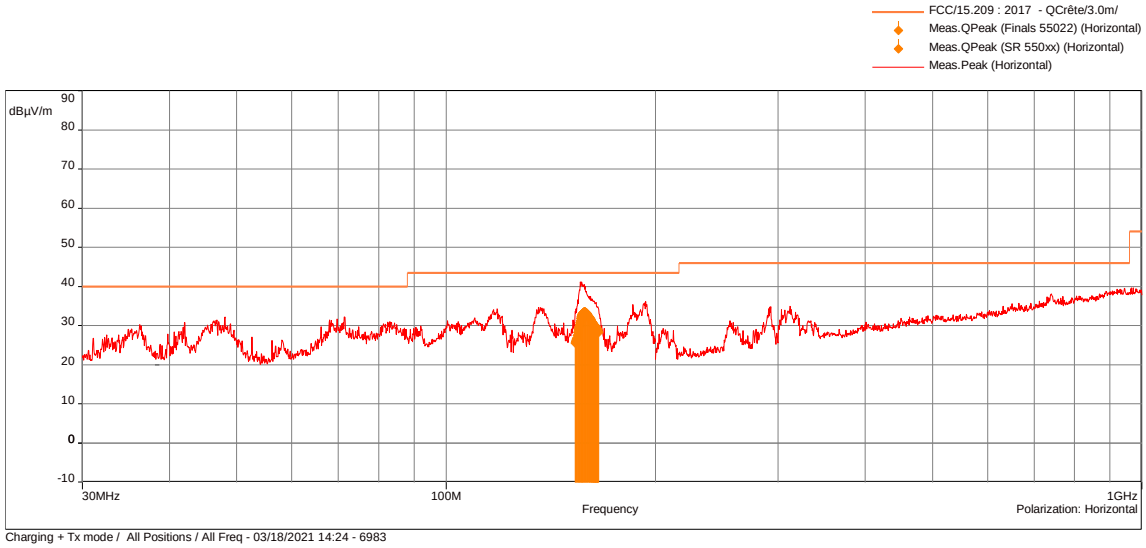
Tx mode / All Freq - All Positions - 10/19/2020 16:53 - 5042

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	30MHz-200MHz	100kHz	300kHz	Peak
Horizontal	30MHz-200MHz	100kHz	300kHz	Peak
Vertical	200MHz-1GHz	100kHz	300kHz	Peak
Horizontal	200MHz-1GHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS		EMI6983	
EUT mode:	Modulated	**T (°C):**	20.5
Test Date:	18/03/2021	**H (%):**	21.1
Test Operator:	OAT	**P (hPa):**	1011



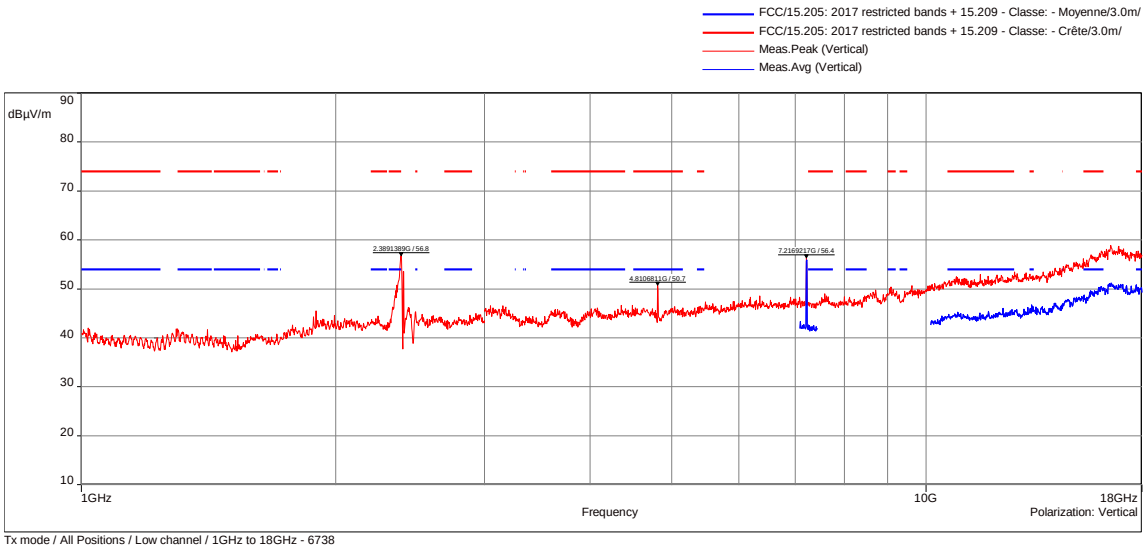
Charging + Tx mode / All Positions / All Freq - 03/18/2021 14:24 - 6983



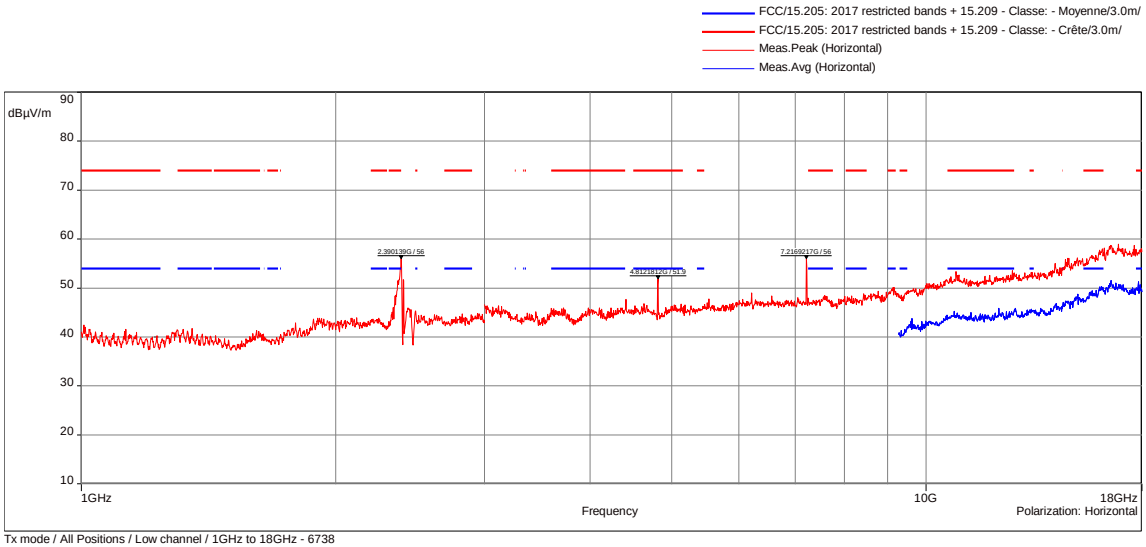
Charging + Tx mode / All Positions / All Freq - 03/18/2021 14:24 - 6983

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	30MHz-200MHz	100kHz	300kHz	Peak
Horizontal	30MHz-200MHz	100kHz	300kHz	Peak
Vertical	200MHz-1GHz	100kHz	300kHz	Peak
Horizontal	200MHz-1GHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / LOW CHANNEL / 1GHZ TO 18GHZ		EMI6738	
EUT mode:	Modulated	**T (°C):**	22.1
Test Date:	05/03/2021	**H (%):**	39.6
Test Operator:	ATO & OAT	**P (hPa):**	1015



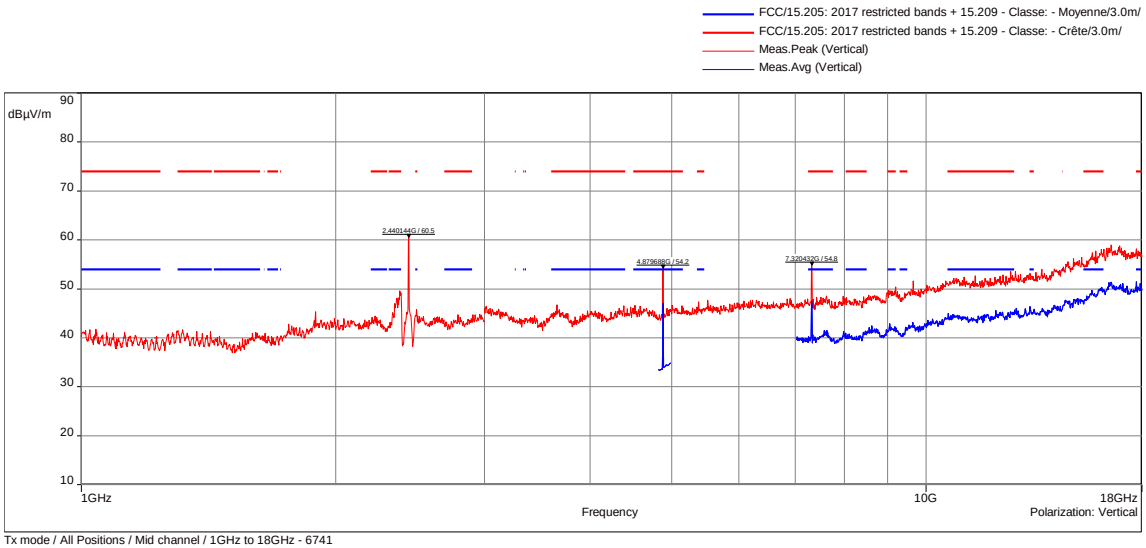
Tx mode / All Positions / Low channel / 1GHz to 18GHz - 6738



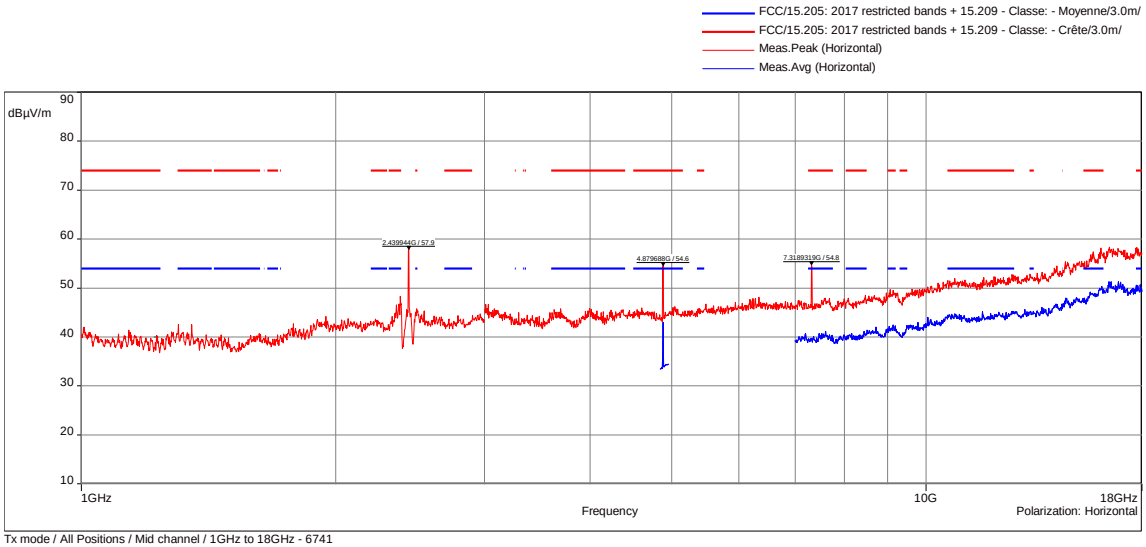
Tx mode / All Positions / Low channel / 1GHz to 18GHz - 6738

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	7GHz-7.4GHz	1MHz	50kHz	Peak
Vertical	9GHz-18GHz	1MHz	50kHz	Peak
Horizontal	9GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / MID CHANNEL / 1GHZ TO 18GHZ		EMI6741	
EUT mode:	Modulated	**T (°C):**	22.1
Test Date:	04/03/2021	**H (%):**	39.6
Test Operator:	ATO & OAT	**P (hPa):**	1015



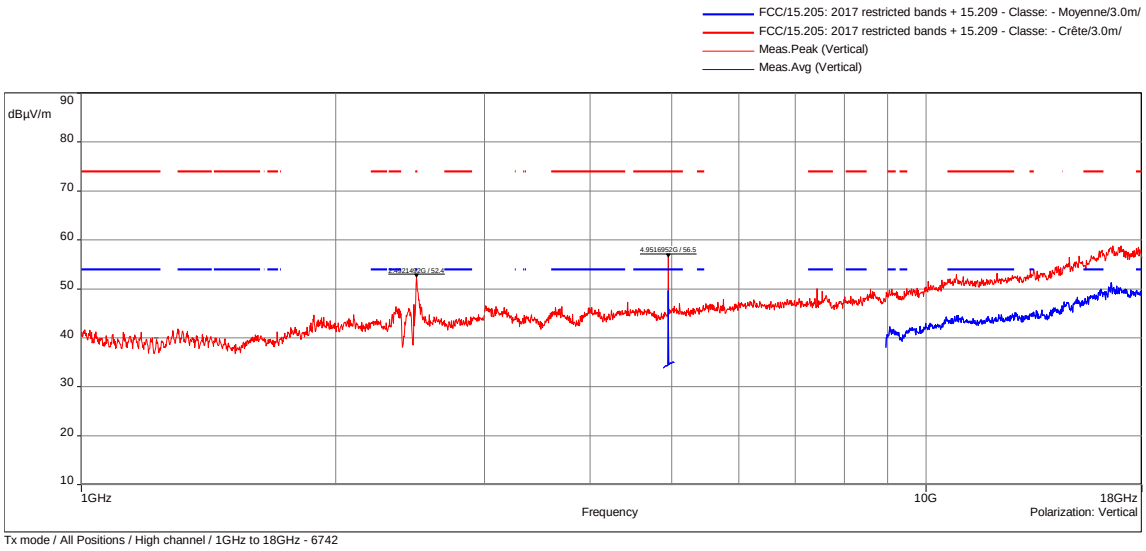
Tx mode / All Positions / Mid channel / 1GHz to 18GHz - 6741



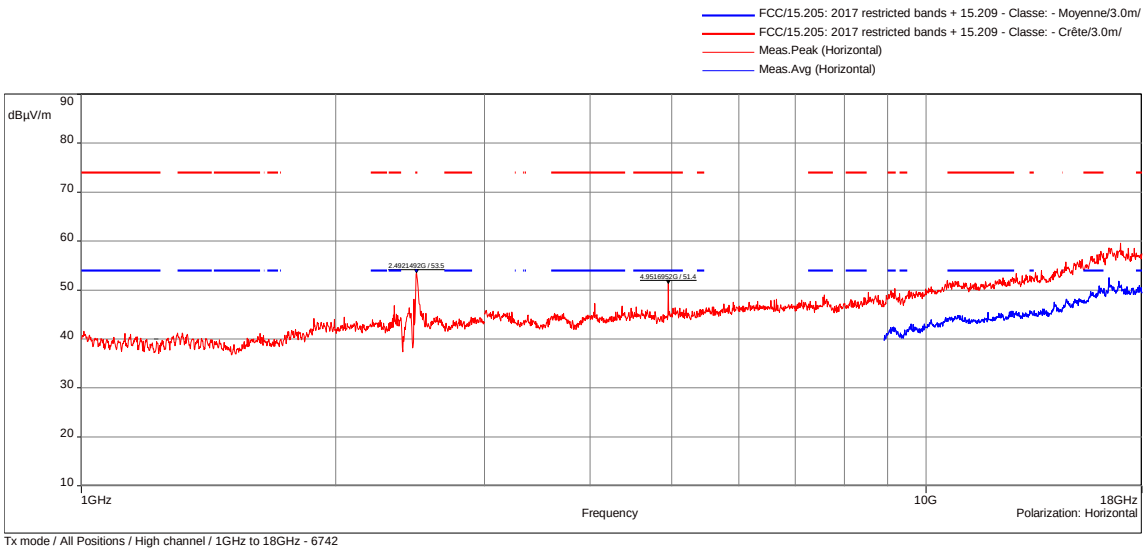
Tx mode / All Positions / Mid channel / 1GHz to 18GHz - 6741

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	7.7GHz-7.9GHz	1MHz	50kHz	Peak
Horizontal	7.7GHz-7.9GHz	1MHz	50kHz	Peak
Vertical	7GHz-18GHz	1MHz	50kHz	Peak
Horizontal	7GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / HIGH CHANNEL / 1GHZ TO 18GHZ		EMI6742	
EUT mode:	Modulated	**T (°C):**	22.1
Test Date:	04/03/2021	**H (%):**	39.6
Test Operator:	ATO & OAT	**P (hPa):**	1015



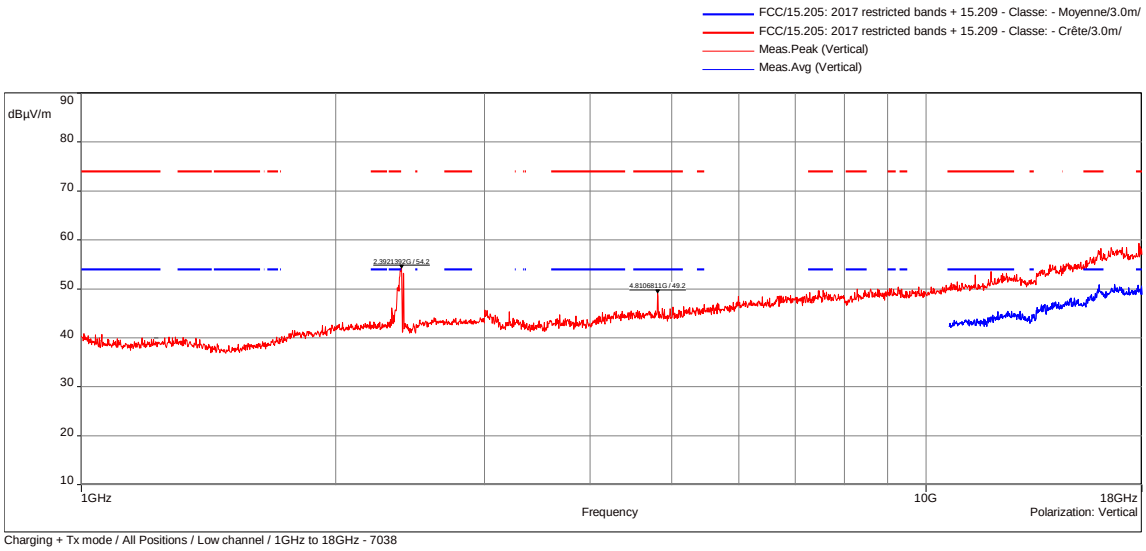
Tx mode / All Positions / High channel / 1GHz to 18GHz - 6742



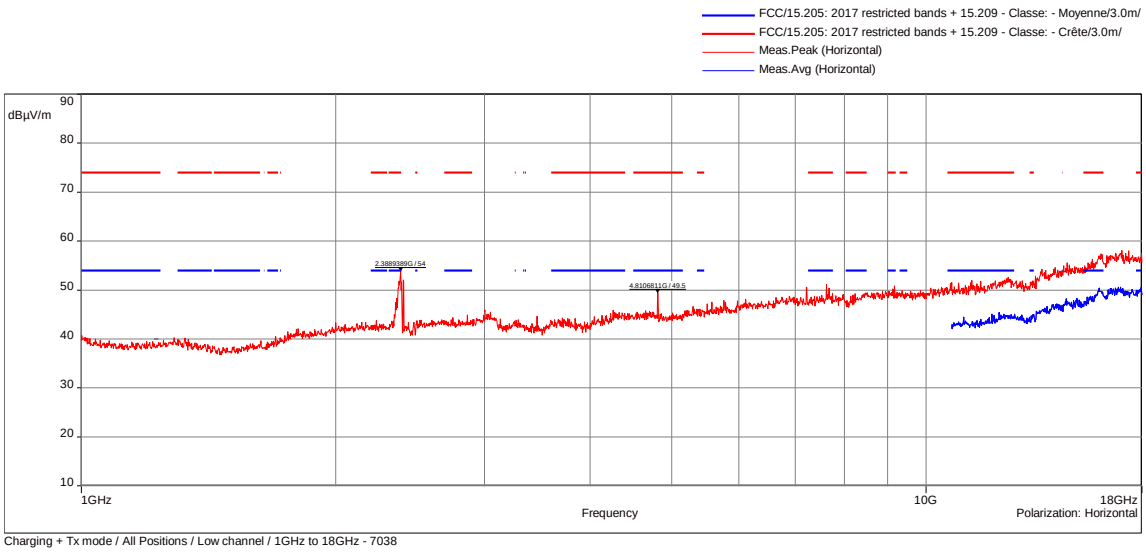
Tx mode / All Positions / High channel / 1GHz to 18GHz - 6742

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	4.8GHz-5.1GHz	1MHz	50kHz	Peak
Vertical	9GHz-18GHz	1MHz	50kHz	Peak
Horizontal	9GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / LOW CHANNEL / 1GHZ TO 18GHZ		EMI7038	
EUT mode:	Modulated	**T (°C):**	23.4
Test Date:	23/03/2021	**H (%):**	22.4
Test Operator:	ATO & OAT	**P (hPa):**	1012



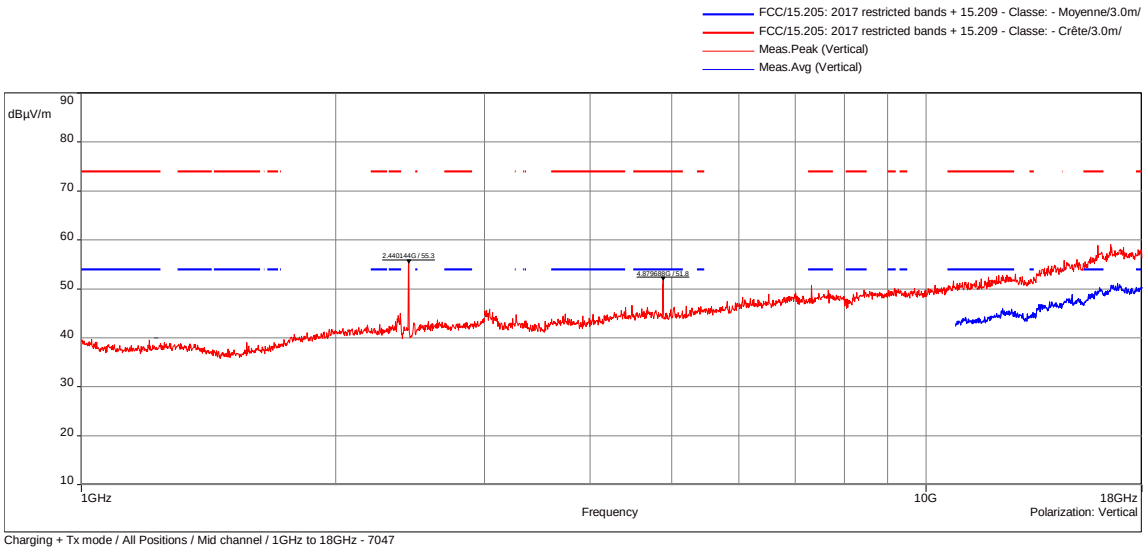
Charging + Tx mode / All Positions / Low channel / 1GHz to 18GHz - 7038



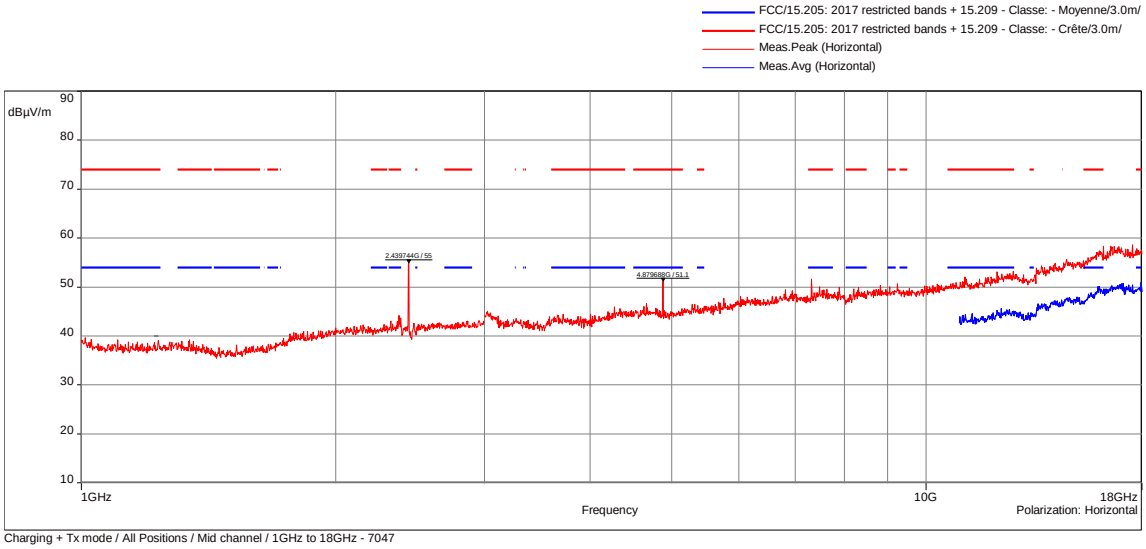
Charging + Tx mode / All Positions / Low channel / 1GHz to 18GHz - 7038

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	10GHz-18GHz	1MHz	50kHz	Peak
Horizontal	10GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / MID CHANNEL / 1GHZ TO 18GHZ		EMI7047	
EUT mode:	Modulated	**T (°C):**	23.4
Test Date:	23/03/2021	**H (%):**	22.4
Test Operator:	ATO & OAT	**P (hPa):**	1012



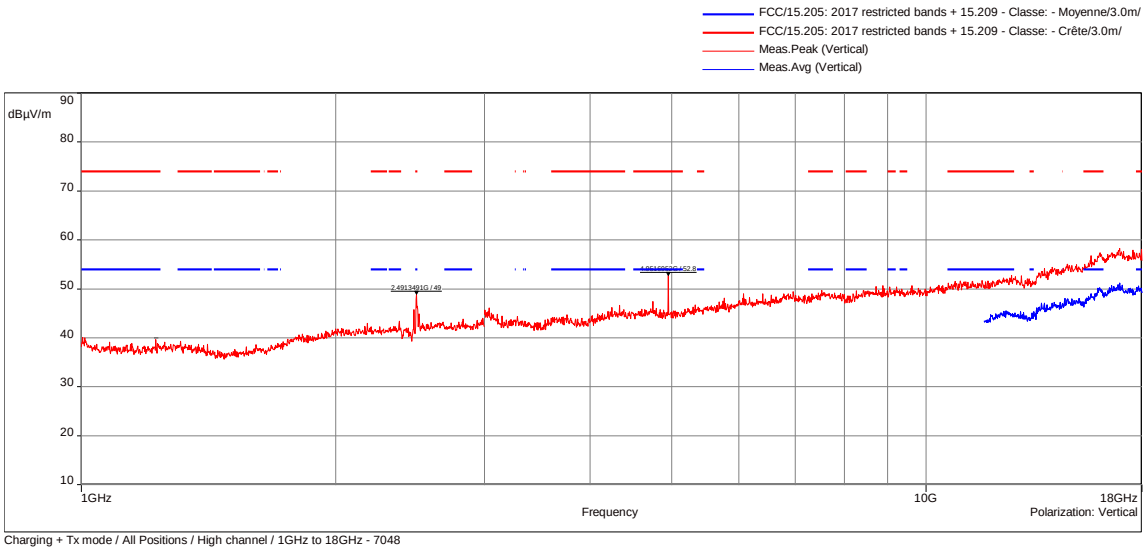
Charging + Tx mode / All Positions / Mid channel / 1GHz to 18GHz - 7047



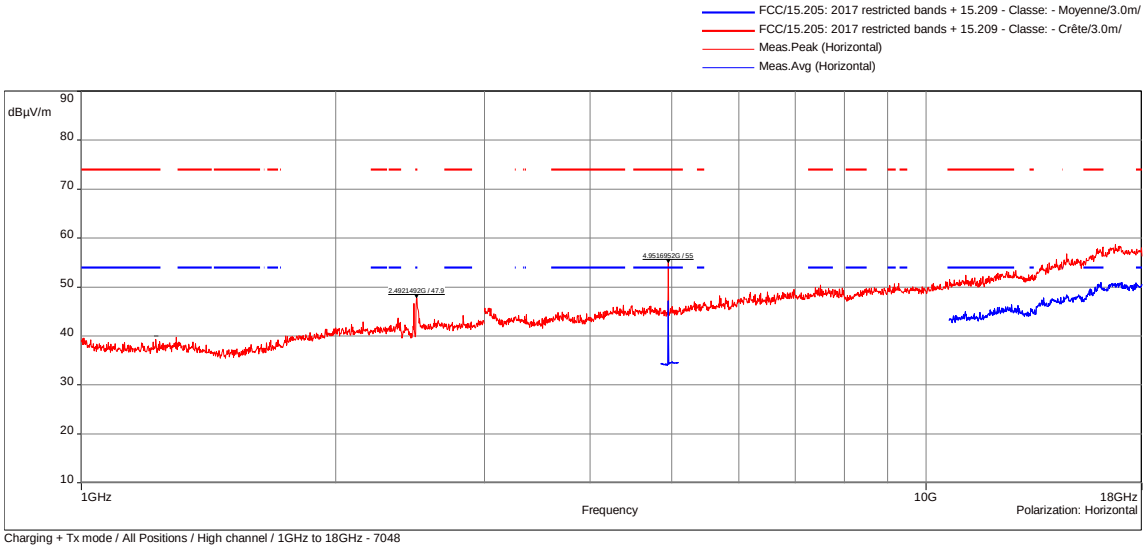
Charging + Tx mode / All Positions / Mid channel / 1GHz to 18GHz - 7047

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	10GHz-18GHz	1MHz	50MHz	Peak
Horizontal	10GHz-18GHz	1MHz	50MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / HIGH CHANNEL / 1GHZ TO 18GHZ		EMI7048	
EUT mode:	Modulated	**T (°C):**	23.4
Test Date:	23/03/2021	**H (%):**	22.4
Test Operator:	ATO & OAT	**P (hPa):**	1012



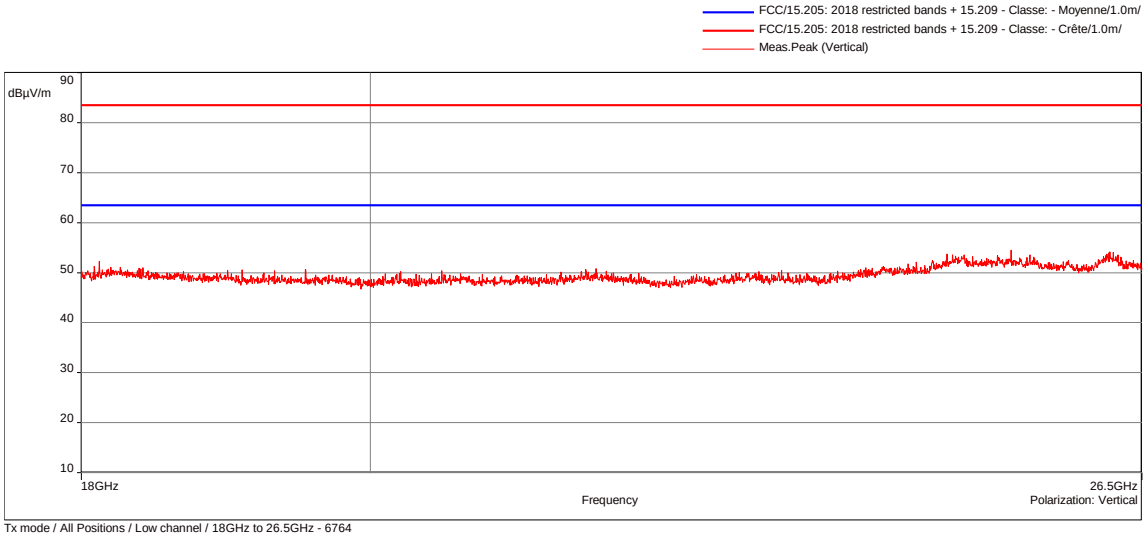
Charging + Tx mode / All Positions / High channel / 1GHz to 18GHz - 7048



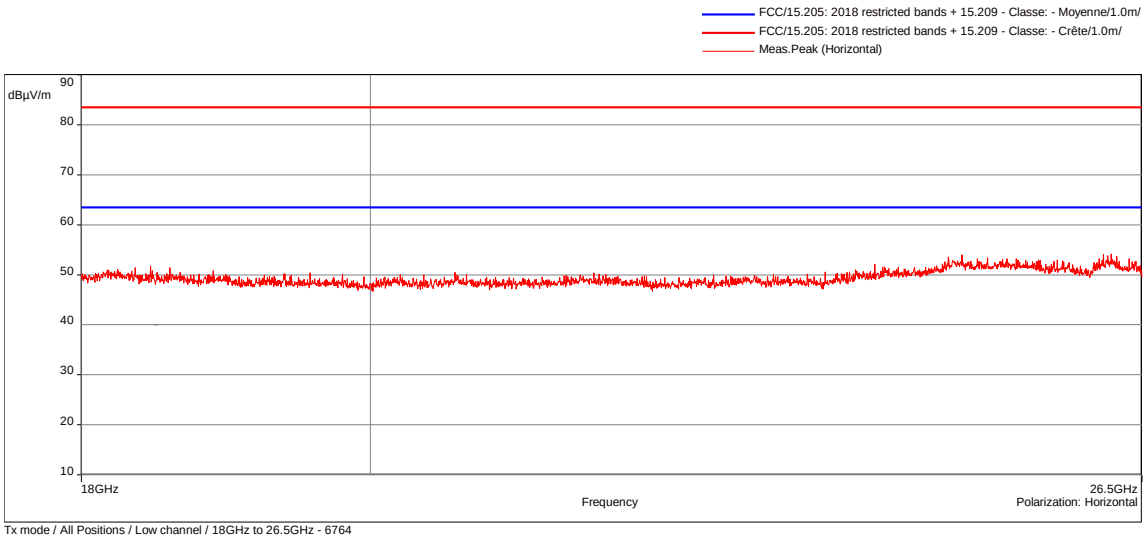
Charging + Tx mode / All Positions / High channel / 1GHz to 18GHz - 7048

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	10GHz-18GHz	1MHz	50kHz	Peak
Horizontal	4.8GHz-5.2GHz	1MHz	50kHz	Peak
Horizontal	10GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / LOW CHANNEL / 18GHZ TO 26.5GHZ		EMI6764	
EUT mode:	Modulated	**T (°C):**	23.8
Test Date:	05/03/2021	**H (%):**	35.7
Test Operator:	ATO & OAT	**P (hPa):**	1009



Tx mode / All Positions / Low channel / 18GHz to 26.5GHz - 6764

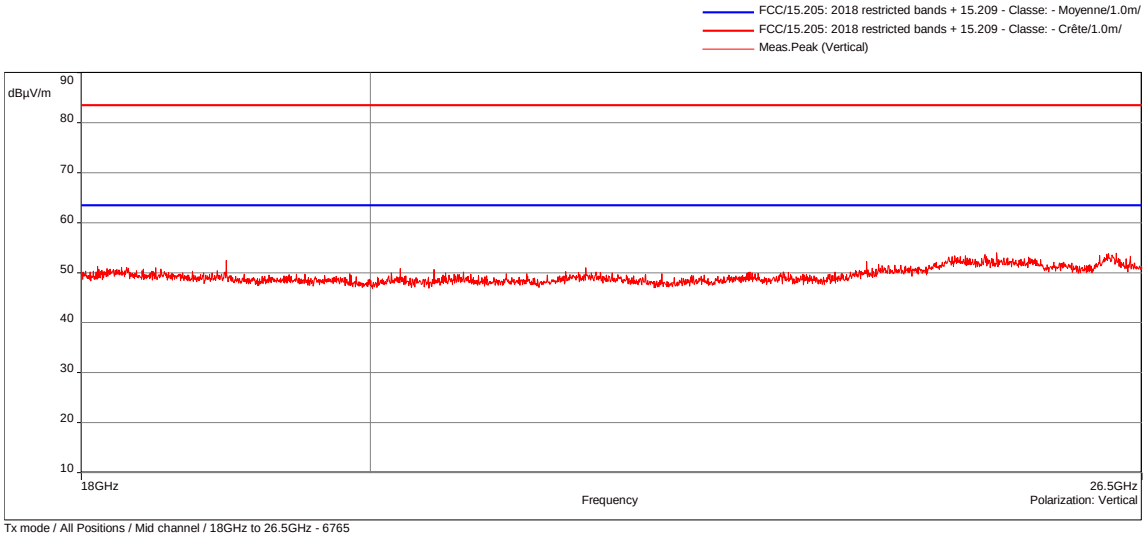


Tx mode / All Positions / Low channel / 18GHz to 26.5GHz - 6764

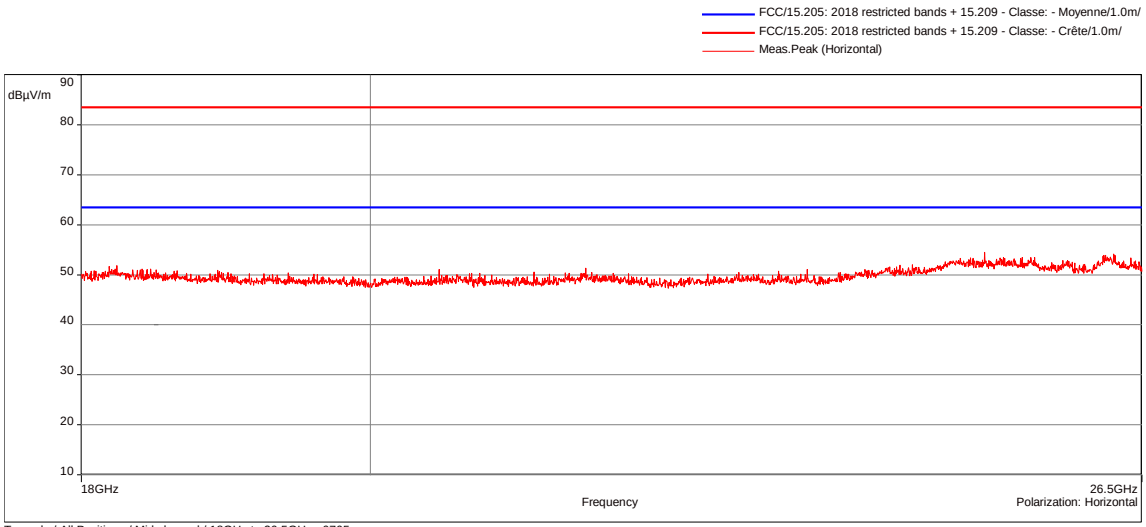
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

No spurious emissions were detected.

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / MID CHANNEL / 18GHZ TO 26.5GHZ		EMI6765	
EUT mode:	Modulated	**T (°C):**	23.8
Test Date:	05/03/2021	**H (%):**	35.7
Test Operator:	ATO & OAT	**P (hPa):**	1009



Tx mode / All Positions / Mid channel / 18GHz to 26.5GHz - 6765

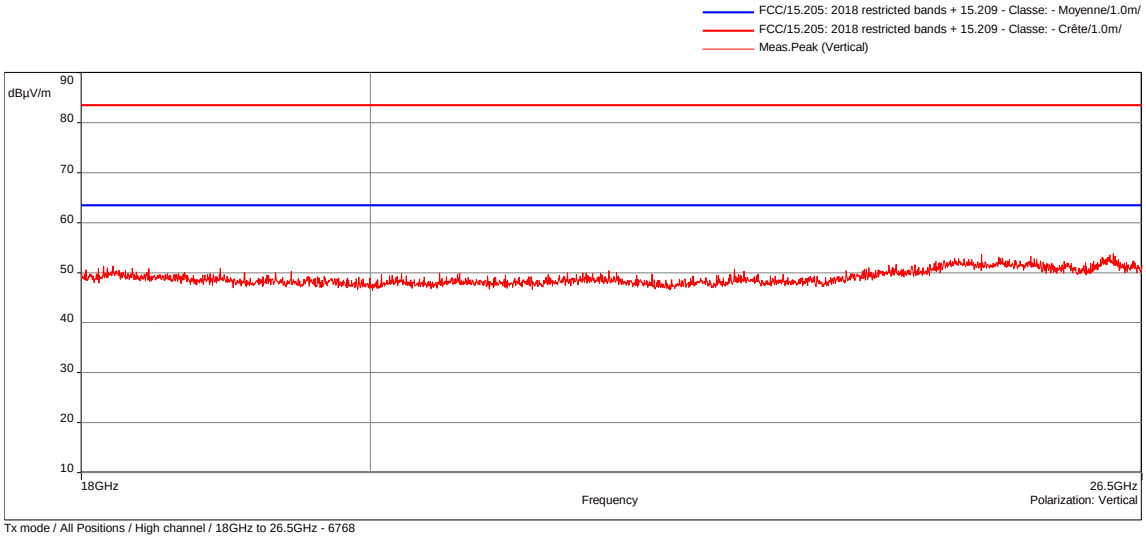


Tx mode / All Positions / Mid channel / 18GHz to 26.5GHz - 6765

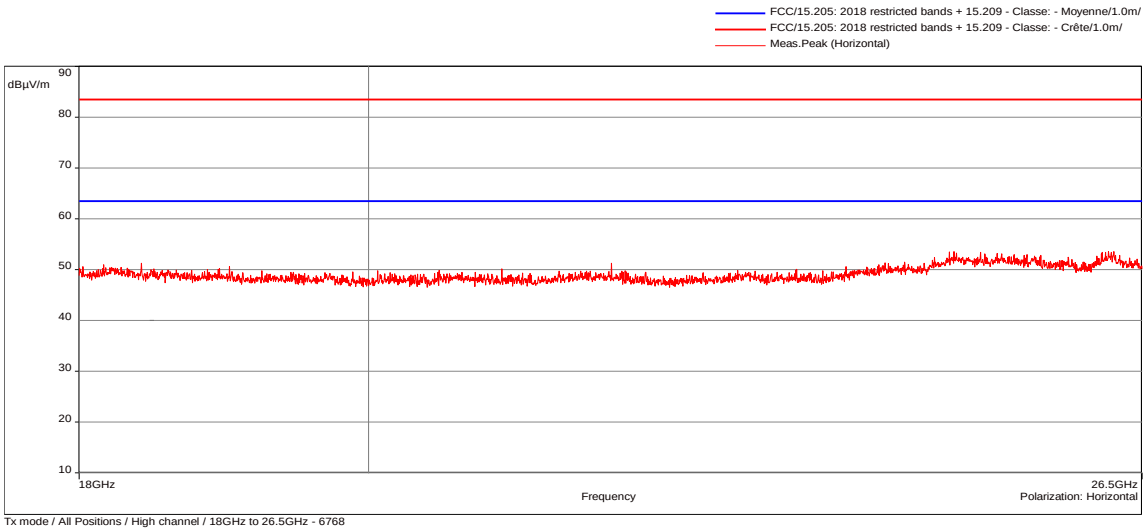
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

No spurious emissions were detected.

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / HIGH CHANNEL / 18GHZ TO 26.5GHZ		EMI6768	
EUT mode:	Modulated	**T (°C):**	23.8
Test Date:	05/03/2021	**H (%):**	35.7
Test Operator:	ATO & OAT	**P (hPa):**	1009



Tx mode / All Positions / High channel / 18GHz to 26.5GHz - 6768

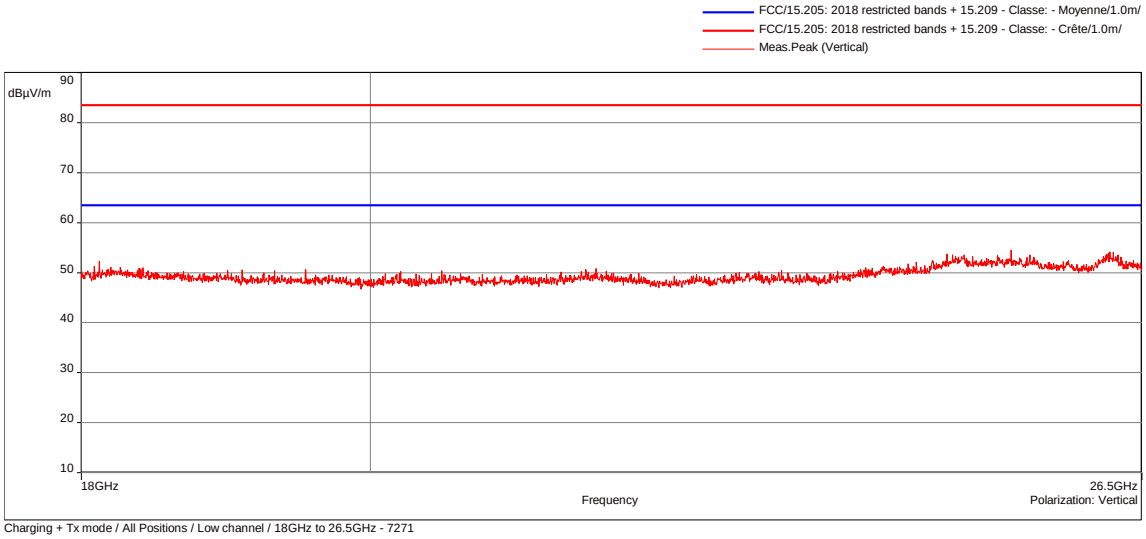


Tx mode / All Positions / High channel / 18GHz to 26.5GHz - 6768

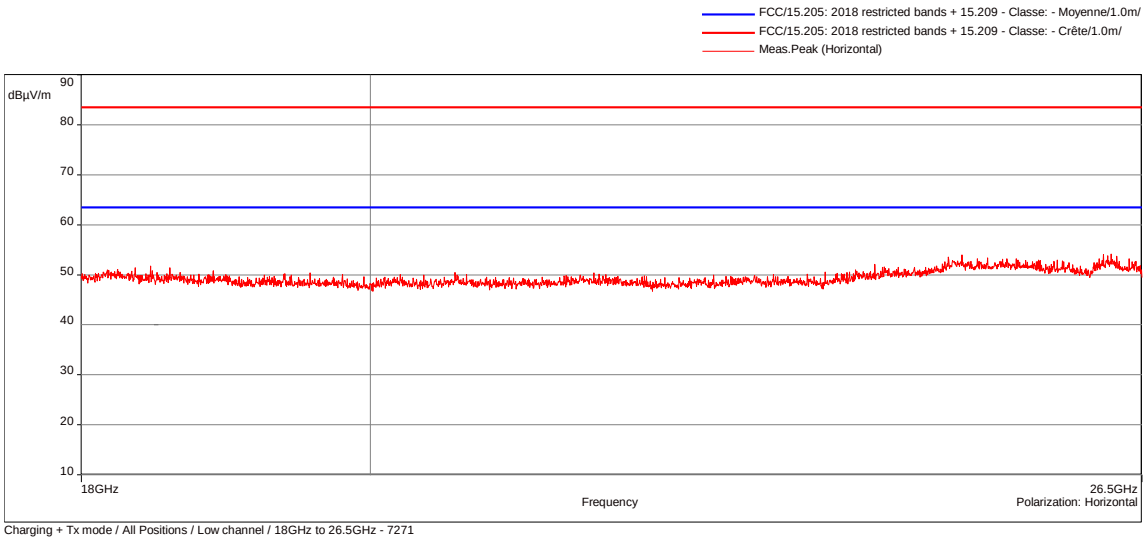
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

No spurious emissions were detected.

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / LOW CHANNEL / 18GHZ TO 26.5GHZ		EMI7271	
EUT mode:	Modulated	**T (°C):**	23.8
Test Date:	05/03/2021	**H (%):**	35.7
Test Operator:	ATO & OAT	**P (hPa):**	1009



Charging + Tx mode / All Positions / Low channel / 18GHz to 26.5GHz - 7271

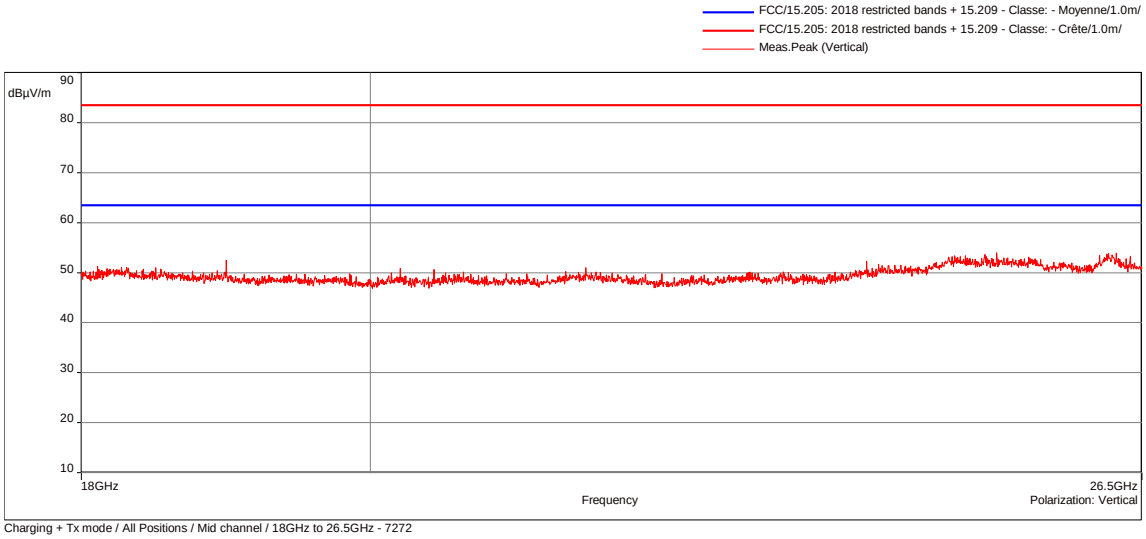


Charging + Tx mode / All Positions / Low channel / 18GHz to 26.5GHz - 7271

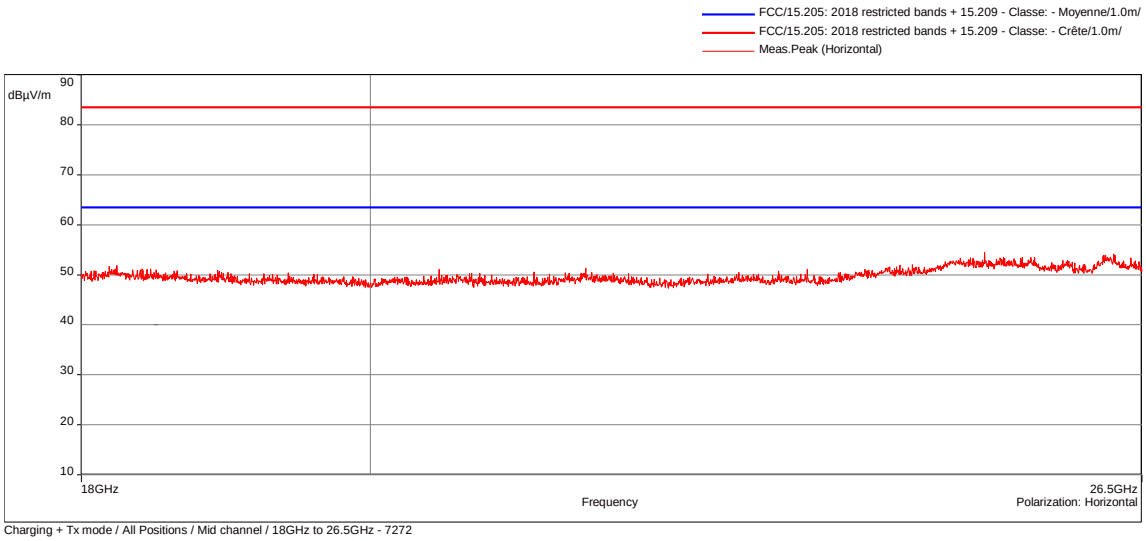
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

No spurious emissions were detected.

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / MID CHANNEL / 18GHZ TO 26.5GHZ		EMI7272	
EUT mode:	Modulated	**T (°C):**	23.8
Test Date:	05/03/2021	**H (%):**	35.7
Test Operator:	ATO & OAT	**P (hPa):**	1009



Charging + Tx mode / All Positions / Mid channel / 18GHz to 26.5GHz - 7272

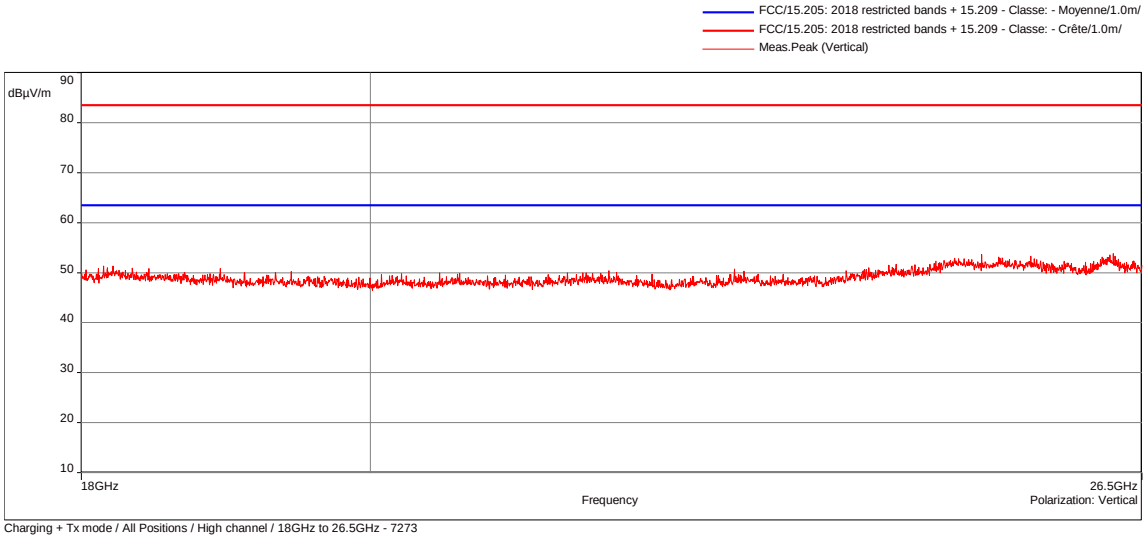


Charging + Tx mode / All Positions / Mid channel / 18GHz to 26.5GHz - 7272

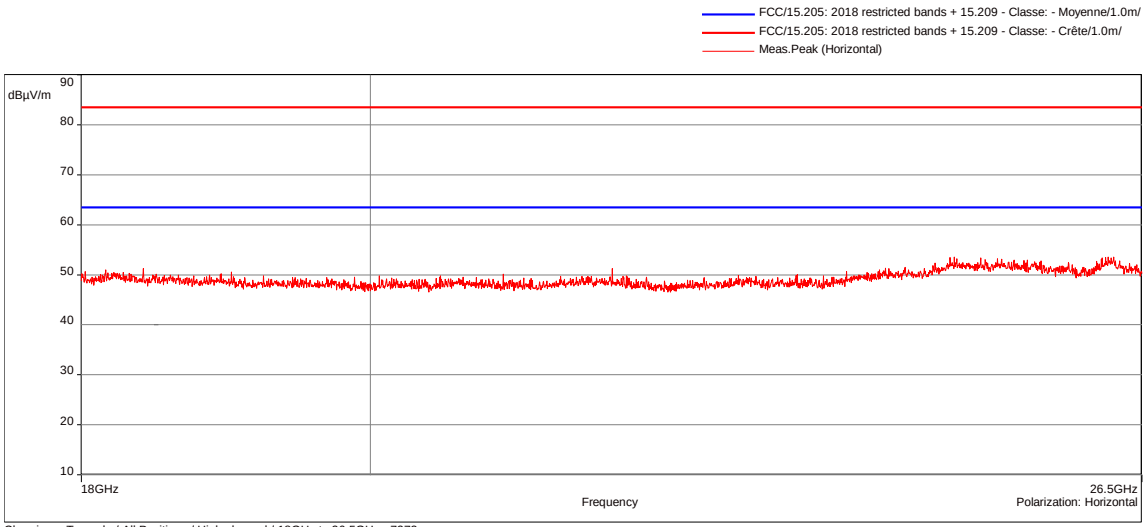
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

No spurious emissions were detected.

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / HIGH CHANNEL / 18GHZ TO 26.5GHZ		EMI7273	
EUT mode:	Modulated	**T (°C):**	23.8
Test Date:	05/03/2021	**H (%):**	35.7
Test Operator:	ATO & OAT	**P (hPa):**	1009



Charging + Tx mode / All Positions / High channel / 18GHz to 26.5GHz - 7273



Charging + Tx mode / All Positions / High channel / 18GHz to 26.5GHz - 7273

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

No spurious emissions were detected.

8.9. Radiated spurious emissions (receiver)

Reference standard:	FCC part 15 Radio part 15.209 & CNR-Gen
Test method:	FCC part 15.109, 15.209, 15.205, 15.215, CNR-Gen

General test setup: EUT is set on an insulating support at 80cm 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
Rx mode / All Positions / All channels/ For freq <1GHz	30MHz-1GHz	15.209	EMI6973	**PASS**
Charging + Rx mode / All Positions / All channels	30MHz-1GHz	15.209	EMI6976	**PASS**
Rx mode / All Positions / All channels / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7024	**PASS**
Charging + Rx mode / All Positions / All channels / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7028	**PASS**
Rx mode / All Positions / All channels / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7294	**PASS**
Charging + Rx mode / All Positions / All channels / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7306	**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
Antenna	ETS-Lindgren	3117	5456	24/07/2019	24/09/2022
Antenna	ETS lindgren	3160-09	14690	26/09/2017	26/11/2021
Antenna	Electro Metrics	BIA-30HF	0824	13/06/2018	13/08/2021
Antenna	Rohde & Schwarz	HL223	3126	13/06/2018	13/08/2021
Cable	MegaPhase	F135N1N28	16664	25/10/2019	25/12/2021
Cable	MegaPhase	F135N1N28	16666	25/10/2019	25/12/2021
Cable	JYE BAO	K30K30-5003-40G1	14887	25/06/2019	25/08/2021
Cable	Huber + Suhner	K-5m	14460	25/06/2019	25/08/2021
Cable	/	N-1m	3625	27/01/2021	27/03/2023
Cable	SUCOFLEX	N-5,5m	14381	25/06/2019	25/08/2021
Cable	SUCOFLEX	N-6,5m	14380	25/07/2019	25/09/2021
Cable	MegaPhase	N-8m	15813	14/01/2021	14/03/2023
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
Cable	Huber + Suhner	SF102K	16042	24/03/2021	24/05/2023
Cable	MegaPhase	TM18-N1N1-118	12841	14/08/2020	14/10/2022
Cable	MegaPhase	TM18-N1N1-118	12842	02/12/2020	02/02/2023
Preamplifier	Wright Technologie	ASL40-B3015	14851	12/08/2020	12/10/2021
Preamplifier	IMPULSE	CA118-546ACN	9169	13/01/2021	13/03/2022
Receiver	Agilent Technologies	E4440A	5824	22/10/2020	22/12/2022
Receiver	Rohde & Schwarz	ESI	9704	03/03/2020	03/05/2021
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		0000		
Thermohygrometer	Testo	608-H1	7562	25/01/2019	25/03/2021
Thermohygrometer	Testo	608-H2	12268	07/05/2020	07/07/2022
Thermohygrometer	Testo	608-H2	12269	07/05/2020	07/07/2022
Thermohygrometer	Bioblock Scientific	Météostar	0963	25/01/2019	25/03/2021
Thermohygrometer	Bioblock Scientific	Météostar	0963	26/01/2019	26/09/2021

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

RADIATED SPURIOUS EMISSIONS (RECEIVER)- TABULATED RESULTS					
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS				EMI6976	
Frequency MHz	Polarization	Level peak dBµV/m	Level Qpeak dBµV/m	Limit dBµV/m	Margin dB
30.068	Verticale	36.29	26.52	40	-13.48
30.119	Verticale	35.92	26.7	40	-13.3
30.221	Verticale	37.11	28.32	40	-11.68
30.408	Verticale	38.16	28.17	40	-11.83
30.578	Verticale	39.83	30.26	40	-9.74
30.731	Verticale	40.43	29.94	40	-10.06
30.867	Verticale	41.78	31.53	40	-8.47
30.969	Verticale	42.58	32.8	40	-7.2
31.139	Verticale	43.64	32.39	40	-7.61
31.275	Verticale	44.92	34.68	40	-5.32
31.343	Verticale	45.17	34.83	40	-5.17
31.428	Verticale	45.79	34.25	40	-5.75
31.530	Verticale	45.9	35.21	40	-4.79
31.785	Verticale	46.16	35.06	40	-4.94
31.887	Verticale	46.09	34.72	40	-5.28
31.972	Verticale	45.84	35.35	40	-4.65
32.176	Verticale	44.81	33.15	40	-6.85
32.244	Verticale	44.67	32.94	40	-7.06
32.601	Verticale	42.32	32.68	40	-7.32
33.009	Verticale	40.46	33.33	40	-6.67
33.281	Verticale	39.4	33.17	40	-6.83
33.451	Verticale	40.31	34.14	40	-5.86
33.689	Verticale	40.24	34.44	40	-5.56
33.774	Verticale	41.19	34.84	40	-5.16
33.876	Verticale	41.57	34.92	40	-5.08
34.284	Verticale	42.67	35.93	40	-4.07
34.505	Verticale	43.85	36.83	40	-3.17
34.811	Verticale	43.98	37.3	40	-2.7
34.947	Verticale	44.52	37.45	40	-2.55
35.169	Verticale	44.07	37.68	40	-2.32
35.526	Verticale	43.17	37.58	40	-2.42
35.662	Verticale	43.2	36.94	40	-3.06
35.985	Verticale	42.53	36.62	40	-3.38
36.223	Verticale	42.15	36.71	40	-3.29
36.427	Verticale	41.1	35.96	40	-4.04
36.767	Verticale	38.45	32.74	40	-7.26
36.920	Verticale	36.9	31.14	40	-8.86
37.039	Verticale	37.51	30.61	40	-9.39
37.124	Verticale	37.48	30.67	40	-9.33
37.243	Verticale	36.46	30.52	40	-9.48
37.311	Verticale	37.38	30.61	40	-9.39
37.447	Verticale	37.91	30.74	40	-9.26
37.617	Verticale	36.23	30.14	40	-9.86
37.838	Verticale	36.5	29.39	40	-10.61
37.923	Verticale	35.18	28.92	40	-11.08

RADIATED SPURIOUS EMISSIONS (RECEIVER)- TABULATED RESULTS					
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS				EMI6976	
38.025	Verticale	36.58	29.04	40	-10.96
38.195	Verticale	37.12	28.9	40	-11.1
38.331	Verticale	37.07	29.19	40	-10.81
38.620	Verticale	38.36	29.55	40	-10.45
38.756	Verticale	37.35	29.43	40	-10.57
38.909	Verticale	37.35	29.85	40	-10.15
39.317	Verticale	39.04	30.76	40	-9.24
39.606	Verticale	39.95	32.18	40	-7.82
39.861	Verticale	40.51	32.1	40	-7.9
39.946	Verticale	41	32.98	40	-7.02
40.065	Verticale	40.81	32.9	40	-7.1
40.167	Verticale	40.08	32.88	40	-7.12
40.303	Verticale	41.83	34.2	40	-5.8
40.439	Verticale	41.41	33.49	40	-6.51
40.558	Verticale	42.76	34.56	40	-5.44
40.711	Verticale	42.62	34.37	40	-5.63
40.813	Verticale	42.8	34.83	40	-5.17
40.881	Verticale	42.97	34.67	40	-5.33
40.966	Verticale	42.81	35.02	40	-4.98
41.085	Verticale	41.78	33.77	40	-6.23
41.255	Verticale	42.48	34.41	40	-5.59
41.357	Verticale	41.6	33.5	40	-6.5
41.442	Verticale	42.25	32.8	40	-7.2
41.595	Verticale	41.57	32.84	40	-7.16
41.748	Verticale	40.14	30.81	40	-9.19
42.105	Verticale	39.28	30.27	40	-9.73
42.343	Verticale	39.6	30.06	40	-9.94
42.564	Verticale	39.04	31.05	40	-8.95
42.785	Verticale	39.6	32	40	-8
43.074	Verticale	40.21	33.25	40	-6.75
43.142	Verticale	40.68	33.9	40	-6.1
43.261	Verticale	41.15	34.44	40	-5.56
43.516	Verticale	40.35	34.38	40	-5.62
43.635	Verticale	40.87	34.7	40	-5.3
43.873	Verticale	41.7	35.94	40	-4.06
44.077	Verticale	41.6	36.37	40	-3.63
44.162	Verticale	42.19	36.54	40	-3.46
44.536	Verticale	42.14	36.81	40	-3.19
44.587	Verticale	42.3	36.95	40	-3.05
44.791	Verticale	41.22	36.39	40	-3.61
44.927	Verticale	41.49	36.6	40	-3.4
45.149	Verticale	40.73	35.94	40	-4.06
45.540	Verticale	39.2	34.81	40	-5.19
45.625	Verticale	39.39	34.52	40	-5.48
45.795	Verticale	38.78	34.29	40	-5.71
45.880	Verticale	38.56	33.96	40	-6.04
45.999	Verticale	38.45	33.52	40	-6.48
46.084	Verticale	38.52	33.55	40	-6.45
46.339	Verticale	37.76	32.79	40	-7.21

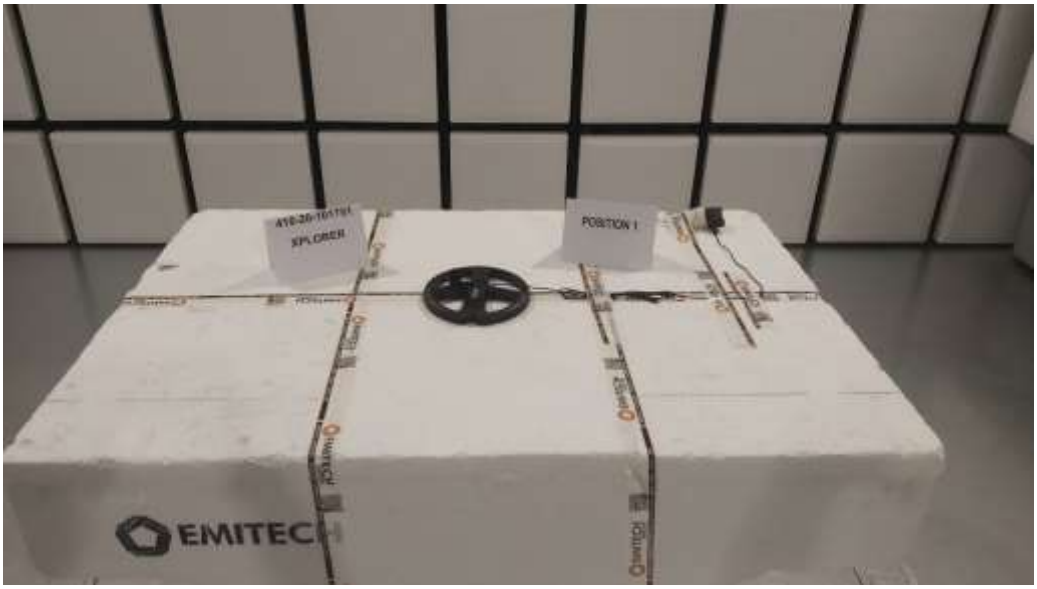
RADIATED SPURIOUS EMISSIONS (RECEIVER)- TABULATED RESULTS					
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS				EMI6976	
46.424	Verticale	37.7	32.8	40	-7.2
46.713	Verticale	37.1	31.67	40	-8.33
46.917	Verticale	35.89	30.91	40	-9.09
30.799	Horizontale	31.2	21.48	40	-18.52
30.986	Horizontale	34.1	23.38	40	-16.62
31.020	Horizontale	33.81	23.76	40	-16.24
31.088	Horizontale	35.31	24.29	40	-15.71
31.156	Horizontale	35.81	24.86	40	-15.14
31.207	Horizontale	36.42	25.25	40	-14.75
31.292	Horizontale	36.96	25.89	40	-14.11
31.428	Horizontale	38	26.54	40	-13.46
31.496	Horizontale	38.26	26.17	40	-13.83
31.598	Horizontale	37.99	25.67	40	-14.33
31.649	Horizontale	38.07	25.28	40	-14.72
31.717	Horizontale	37.27	24.96	40	-15.04
31.785	Horizontale	37.68	24.65	40	-15.35
31.904	Horizontale	36.49	24.14	40	-15.86
31.972	Horizontale	35.34	23.51	40	-16.49
32.040	Horizontale	35.46	23.02	40	-16.98
32.108	Horizontale	34.89	22.69	40	-17.31
32.227	Horizontale	34.09	22.24	40	-17.76
32.295	Horizontale	33.51	21.83	40	-18.17
32.346	Horizontale	32.85	21.56	40	-18.44
32.414	Horizontale	32.08	21.28	40	-18.72
32.499	Horizontale	31.97	21.22	40	-18.78
32.584	Horizontale	31.6	21.04	40	-18.96
32.720	Horizontale	30.93	20.92	40	-19.08
32.771	Horizontale	31.16	20.86	40	-19.14
32.890	Horizontale	29.93	20.67	40	-19.33
33.043	Horizontale	30.04	20.54	40	-19.46
33.196	Horizontale	29.34	20.53	40	-19.47
33.366	Horizontale	29.5	20.4	40	-19.6
33.536	Horizontale	28.83	20.26	40	-19.74
33.604	Horizontale	28.33	20.19	40	-19.81
33.842	Horizontale	27.86	20.18	40	-19.82
179.972	Horizontale	35.76	24.93	43.5	-18.57
180.414	Horizontale	35.62	24.87	43.5	-18.63
180.618	Horizontale	35.57	24.87	43.5	-18.63
180.703	Horizontale	35.57	24.86	43.5	-18.64
180.822	Horizontale	35.97	24.91	43.5	-18.59
180.941	Horizontale	35.96	25	43.5	-18.5
181.145	Horizontale	35.97	25.04	43.5	-18.46
181.298	Horizontale	35.79	25.08	43.5	-18.42
181.468	Horizontale	37.24	25.17	43.5	-18.33
181.621	Horizontale	35.79	25.07	43.5	-18.43
181.842	Horizontale	36.29	25.16	43.5	-18.34
181.944	Horizontale	35.61	25.25	43.5	-18.25
182.114	Horizontale	36.01	25.2	43.5	-18.3
182.318	Horizontale	36.16	25.28	43.5	-18.22

RADIATED SPURIOUS EMISSIONS (RECEIVER)- TABULATED RESULTS					
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS				EMI6976	
182.488	Horizontale	36.31	25.23	43.5	-18.27
182.624	Horizontale	35.49	25.27	43.5	-18.23
182.879	Horizontale	35.89	25.26	43.5	-18.24
182.981	Horizontale	35.91	25.26	43.5	-18.24
183.338	Horizontale	35.64	25.34	43.5	-18.16
183.576	Horizontale	35.64	25.29	43.5	-18.21
183.729	Horizontale	36.52	25.28	43.5	-18.22
184.188	Horizontale	35.75	25.49	43.5	-18.01
184.290	Horizontale	35.42	25.26	43.5	-18.24
184.562	Horizontale	35.17	25.39	43.5	-18.11
184.902	Horizontale	35.91	25.33	43.5	-18.17
184.970	Horizontale	34.99	25.24	43.5	-18.26
185.192	Horizontale	35.32	25.29	43.5	-18.21
185.583	Horizontale	35.35	25.24	43.5	-18.26
186.450	Horizontale	35.84	25.34	43.5	-18.16
187.045	Horizontale	34.5	25.3	43.5	-18.2
187.334	Horizontale	34.52	25.26	43.5	-18.24
187.623	Horizontale	35.25	25.17	43.5	-18.33
187.878	Horizontale	34.91	25.17	43.5	-18.33
188.660	Horizontale	34.42	24.85	43.5	-18.65
189.153	Horizontale	33.36	24.7	43.5	-18.8
189.340	Horizontale	33.5	24.56	43.5	-18.94
189.629	Horizontale	32.67	24.46	43.5	-19.04
189.782	Horizontale	33.88	24.41	43.5	-19.09
190.156	Horizontale	32.59	24.33	43.5	-19.17
190.717	Horizontale	33.2	24.3	43.5	-19.2
191.040	Horizontale	32.98	24.24	43.5	-19.26
191.125	Horizontale	32.43	24.3	43.5	-19.2
191.227	Horizontale	32.39	24.26	43.5	-19.24
191.431	Horizontale	31.3	24.29	43.5	-19.21
191.771	Horizontale	31.93	24.33	43.5	-19.17
191.992	Horizontale	31.8	24.36	43.5	-19.14
192.366	Horizontale	32.57	24.35	43.5	-19.15
192.995	Horizontale	32.04	24.38	43.5	-19.12
193.114	Horizontale	31.37	24.45	43.5	-19.05

TEST SETUP PHOTO(S) – RX MODE / POSITION 1


TEST SETUP PHOTO(S) – RX MODE – POSITION 2


TEST SETUP PHOTO(S) – RX MODE – POSITION 3

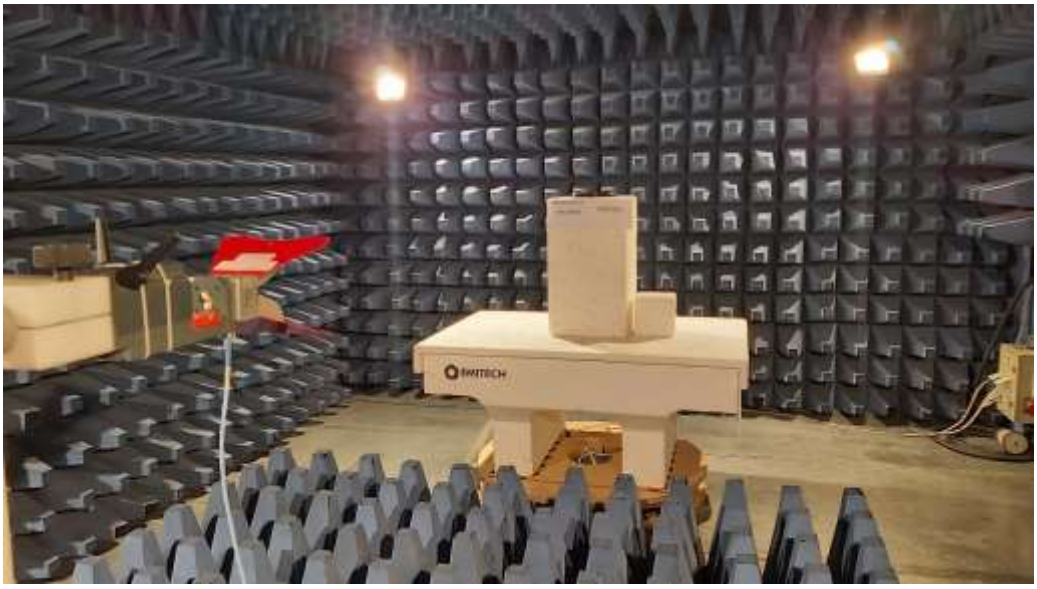

TEST SETUP PHOTO(S) – CHARGING + RX MODE – POSITION 1


TEST SETUP PHOTO(S) - CHARGING + RX MODE – POSITION 2


TEST SETUP PHOTO(S) - CHARGING + RX MODE – POSITION 3

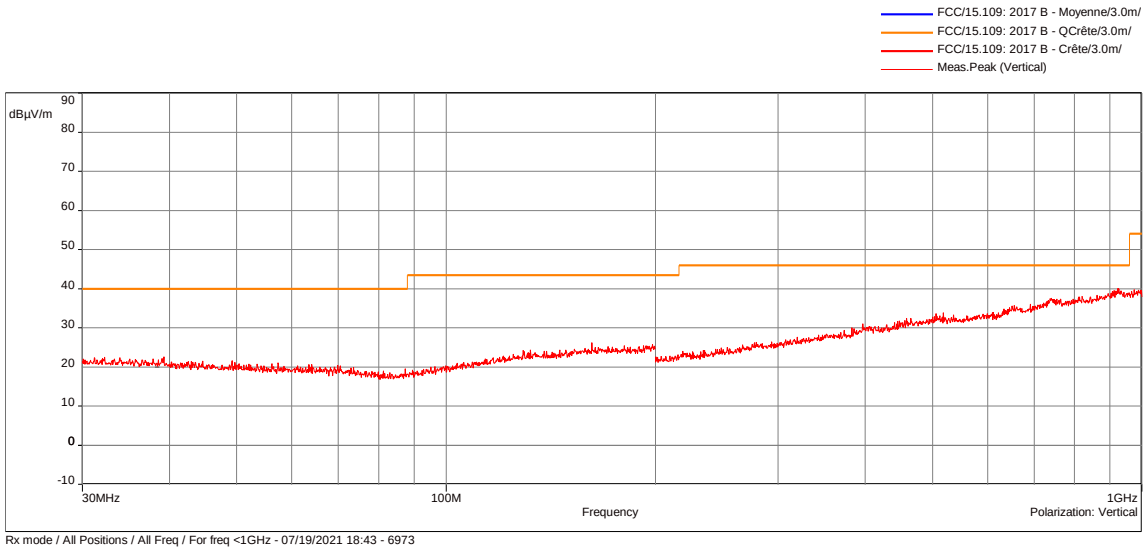

TEST SETUP PHOTO(S) – RX MODE – 30MHZ TO 200MHZ


TEST SETUP PHOTO(S) – RX MODE – 200MHZ TO 1GHZ

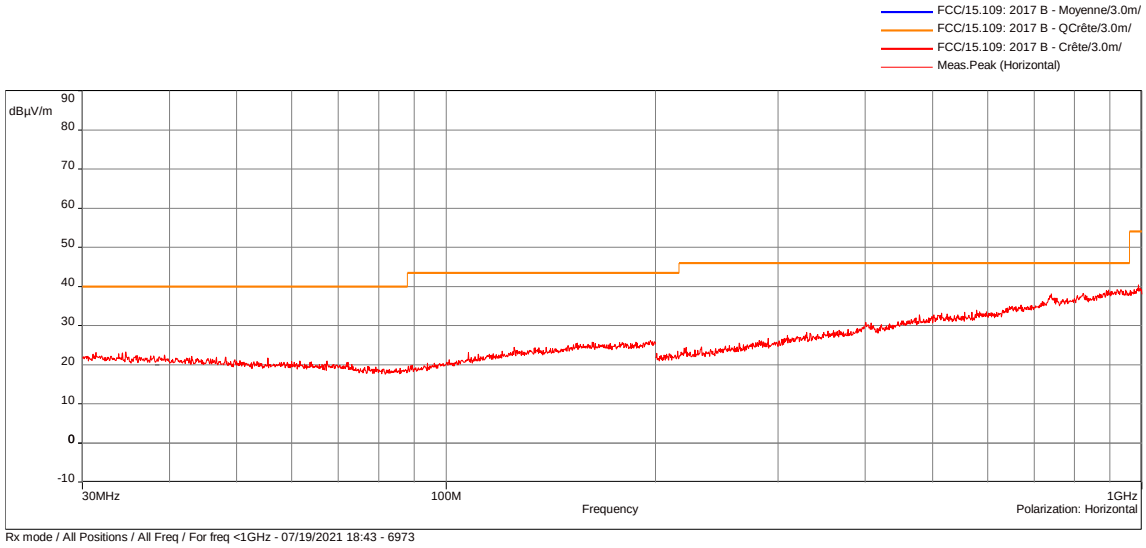

TEST SETUP PHOTO(S) – RX MODE – 1GHZ TO 18GHZ


TEST SETUP PHOTO(S) - RX MODE / 18GHZ TO 26.5GHZ


RADIATED SPURIOUS EMISSIONS (RECEIVER) - GRAPH			
RX MODE / ALL POSITIONS / ALL CHANNELS / FOR FREQ <1GHZ		EMI6973	
EUT mode:	Rx mode	**T (°C):**	21.2
Test Date:	18/03/2021	**H (%):**	23.2
Test Operator:	ATO & OAT	**P (hPa):**	1011



Rx mode / All Positions / All Freq / For freq <1GHz - 07/19/2021 18:43 - 6973

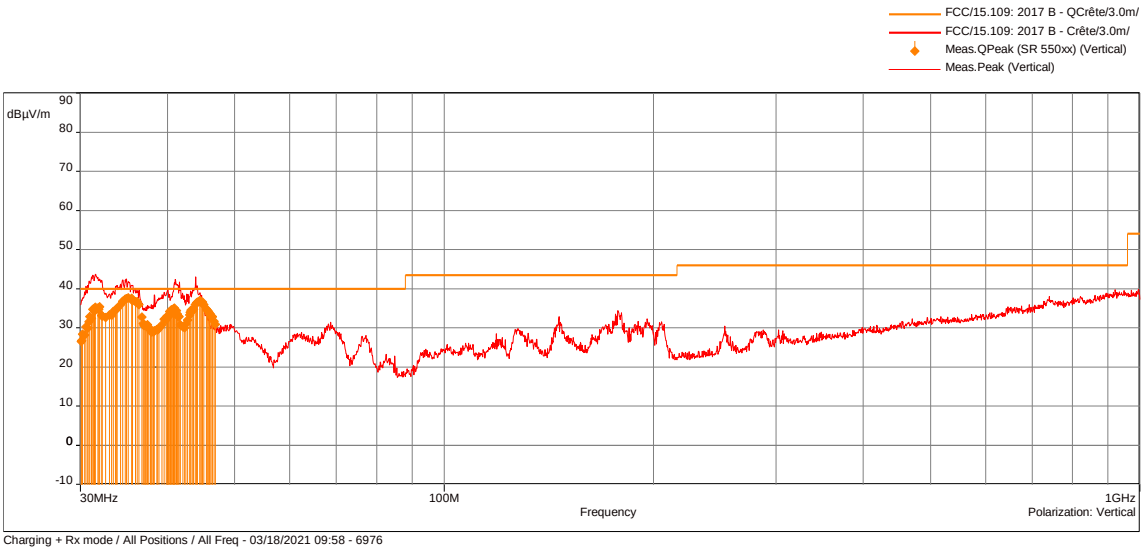


Rx mode / All Positions / All Freq / For freq <1GHz - 07/19/2021 18:43 - 6973

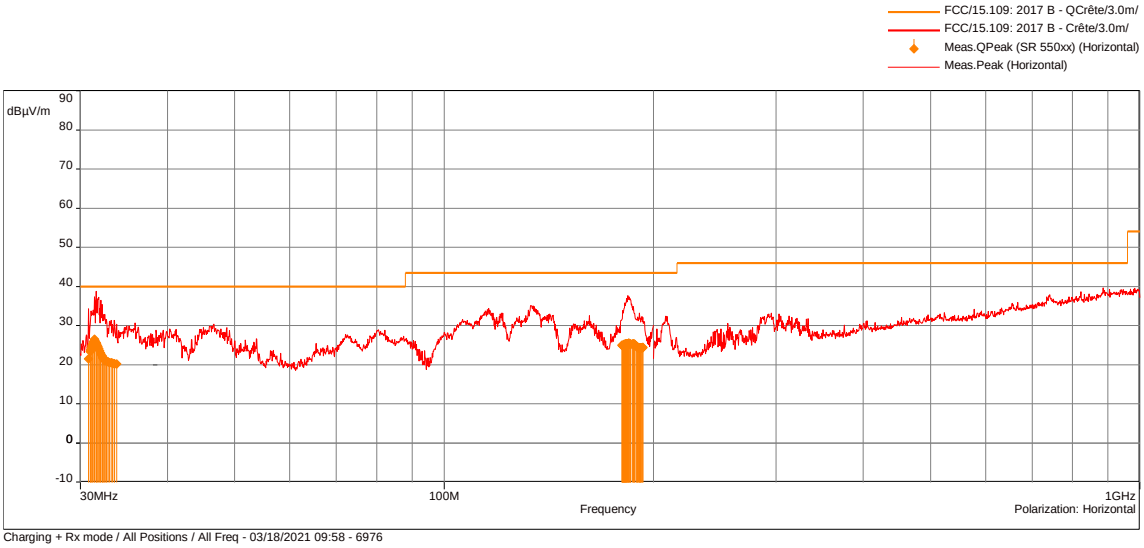
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	30MHz-200MHz	100kHz	300kHz	Peak
Horizontal	30MHz-200MHz	100kHz	300kHz	Peak
Vertical	200MHz-1GHz	100kHz	300kHz	Peak
Horizontal	200MHz-1GHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

No spurious emissions were detected.

RADIATED SPURIOUS EMISSIONS (RECEIVER) - GRAPH			
CHARGING + RX MODE / ALL POSITIONS / ALL CHANNELS		EMI6976	
EUT mode:	Rx mode	**T (°C):**	21.2
Test Date:	18/03/2021	**H (%):**	23.2
Test Operator:	ATO & OAT	**P (hPa):**	1011



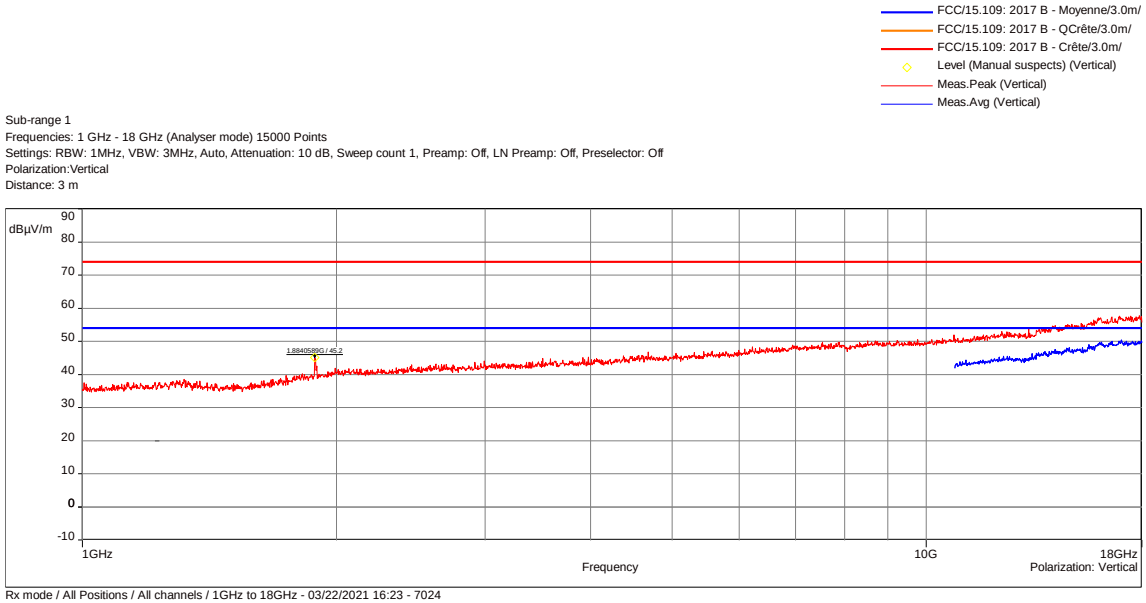
Charging + Rx mode / All Positions / All Freq - 03/18/2021 09:58 - 6976

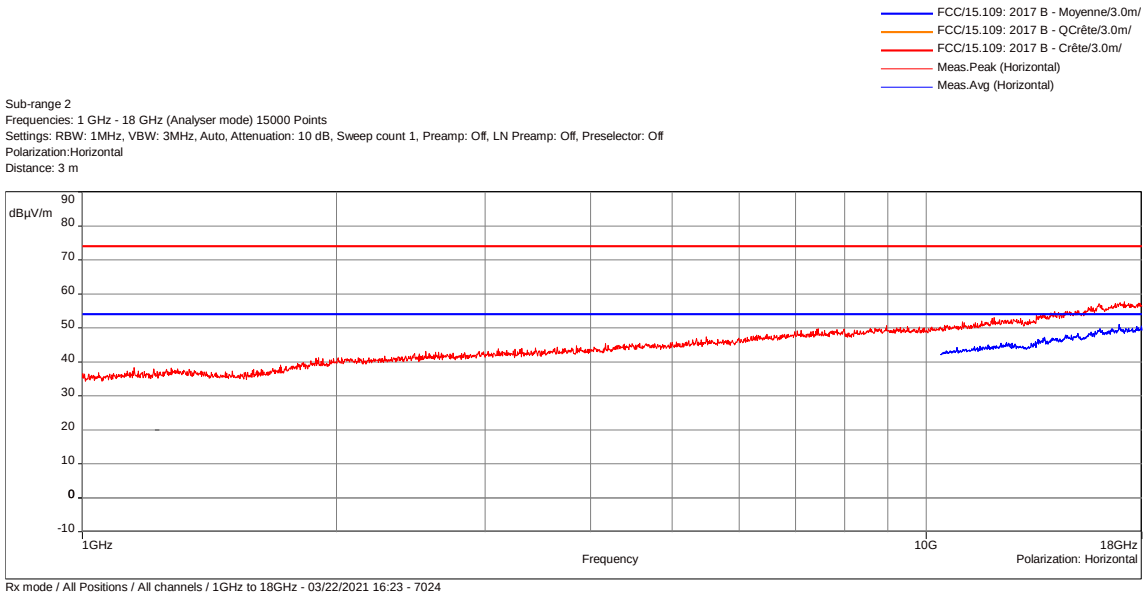


Charging + Rx mode / All Positions / All Freq - 03/18/2021 09:58 - 6976

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	30MHz-200MHz	100kHz	300kHz	Peak
Horizontal	30MHz-200MHz	100kHz	300kHz	Peak
Vertical	200MHz-1GHz	100kHz	300kHz	Peak
Horizontal	200MHz-1GHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

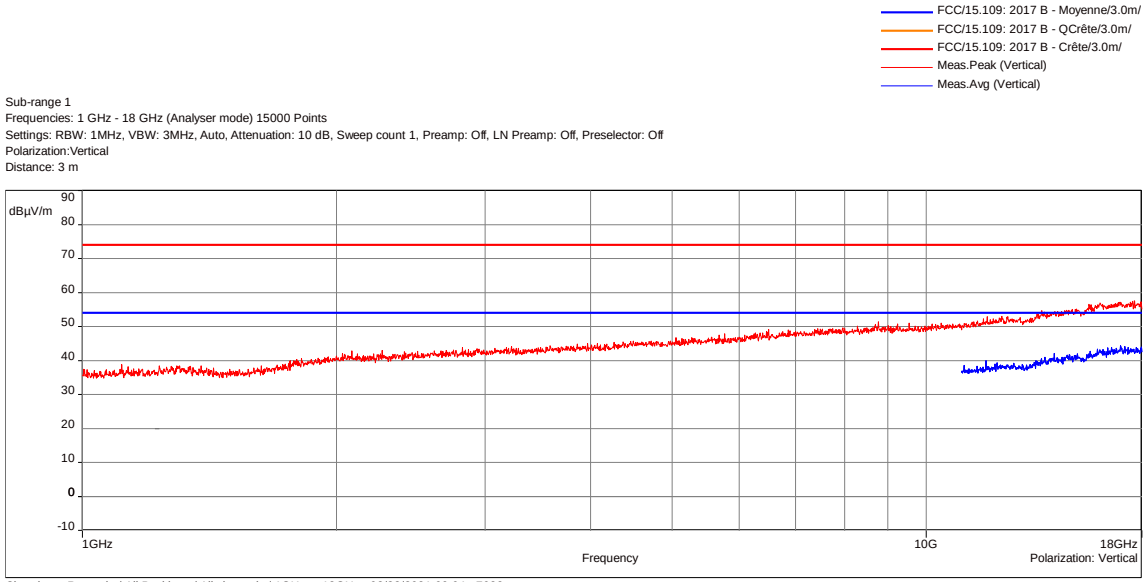
RADIATED SPURIOUS EMISSIONS (RECEIVER) - GRAPH			
RX MODE / ALL POSITIONS / ALL CHANNELS / 1GHZ TO 18GHZ		EMI7024	
EUT mode:	Rx mode	**T (°C):**	24.2
Test Date:	22/03/2021	**H (%):**	20.0
Test Operator:	ATO & OAT	**P (hPa):**	1006



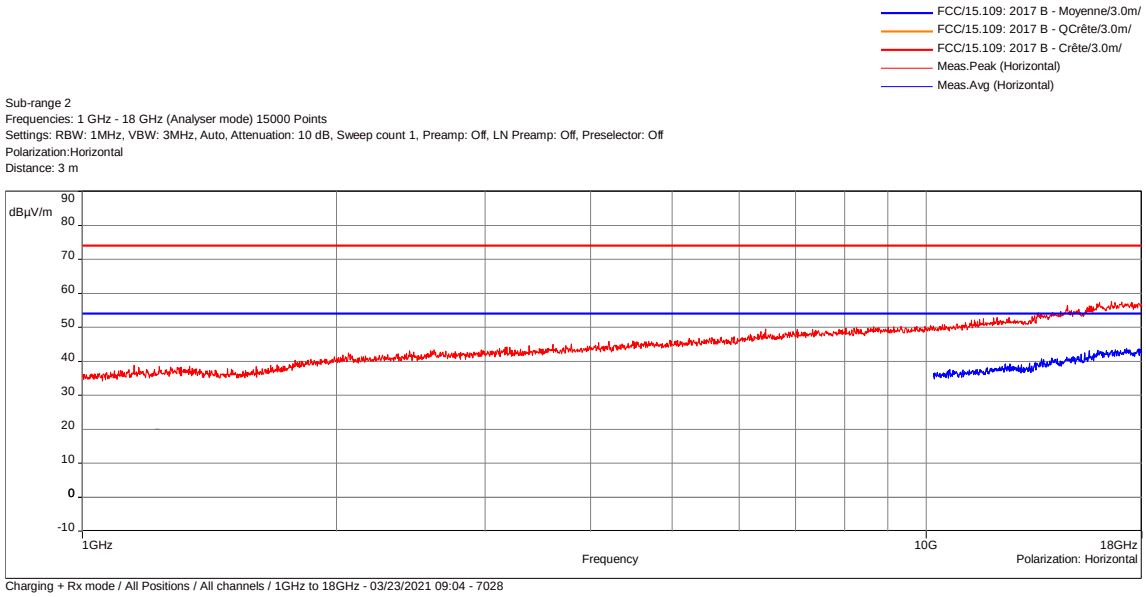


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-18GHz	1MHz	3MHz	Peak
Horizontal	1GHz-18GHz	1MHz	3MHz	Peak
Vertical	10GHz-18GHz	1MHz	3MHz	Peak
Horizontal	10GHz-18GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

RADIATED SPURIOUS EMISSIONS (RECEIVER) - GRAPH			
CHARGING + RX MODE / ALL POSITIONS / ALL CHANNELS / 1GHZ TO 18GHZ		EMI7028	
EUT mode:	Rx mode	**T (°C):**	20.0
Test Date:	23/03/2021	**H (%):**	23.5
Test Operator:	ATO & OAT	**P (hPa):**	1012



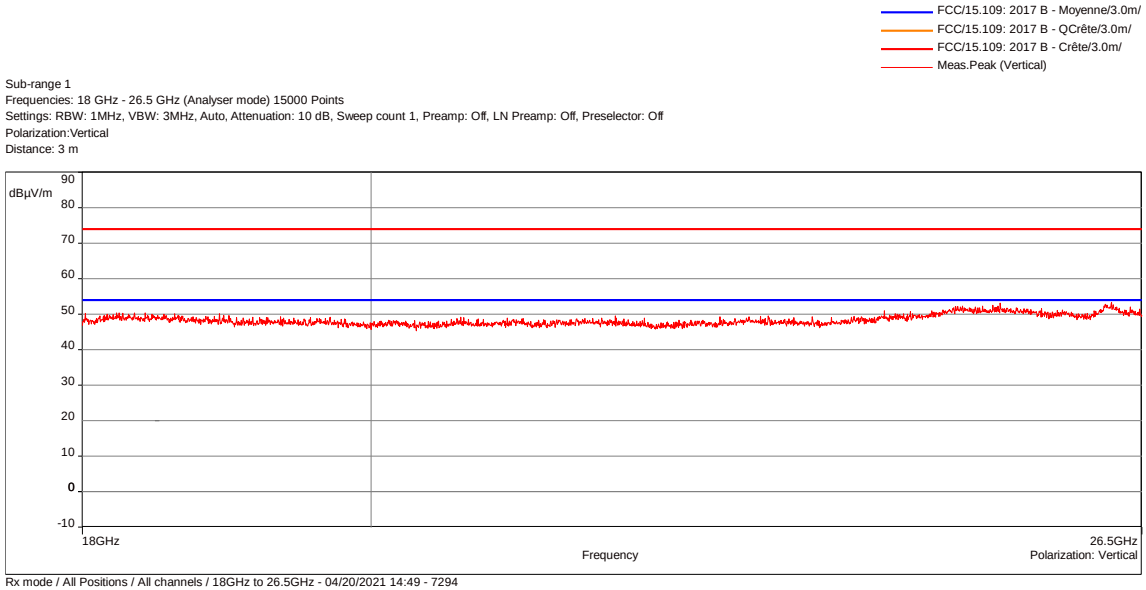
Charging + Rx mode / All Positions / All channels / 1GHz to 18GHz - 03/23/2021 09:04 - 7028



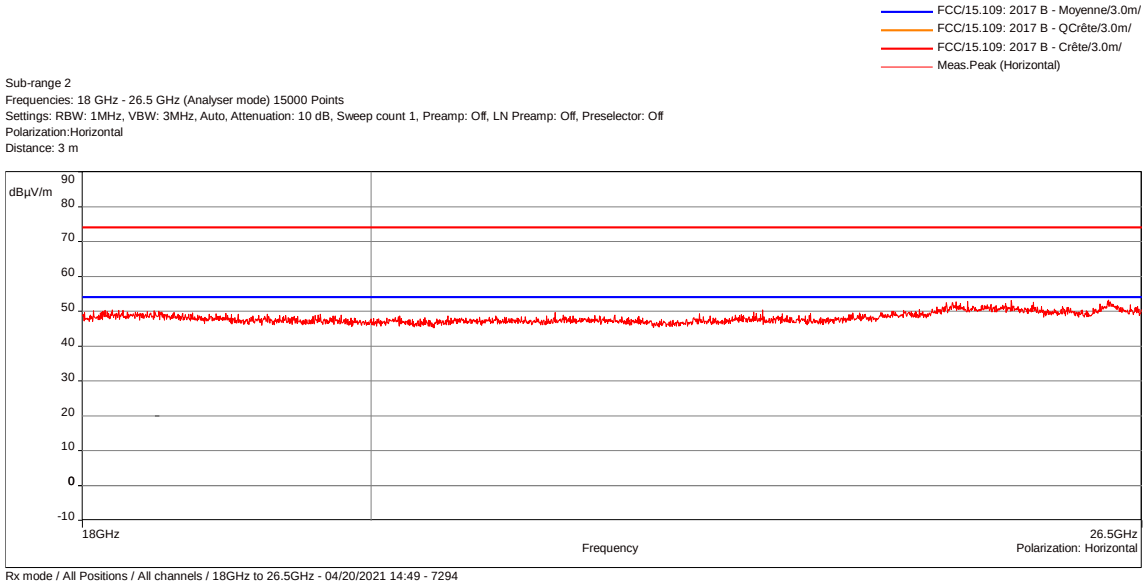
Charging + Rx mode / All Positions / All channels / 1GHz to 18GHz - 03/23/2021 09:04 - 7028

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-18GHz	1MHz	3MHz	Peak
Horizontal	1GHz-18GHz	1MHz	3MHz	Peak
Vertical	10GHz-18GHz	1MHz	50kHz	Peak
Horizontal	10GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

RADIATED SPURIOUS EMISSIONS (RECEIVER) - GRAPH			
RX MODE / ALL POSITIONS / ALL CHANNELS / 18GHZ TO 26.5GHZ		EMI7294	
EUT mode:	Rx mode	**T (°C):**	21.8
Test Date:	20/04/2021	**H (%):**	31.3
Test Operator:	ATO & OAT	**P (hPa):**	1012



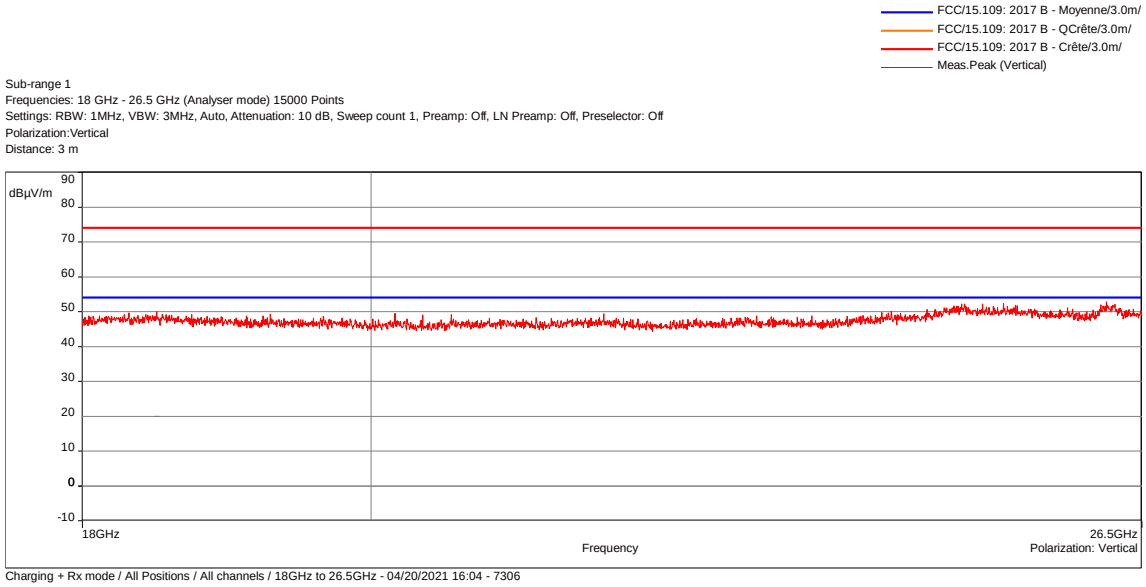
Rx mode / All Positions / All channels / 18GHz to 26.5GHz - 04/20/2021 14:49 - 7294



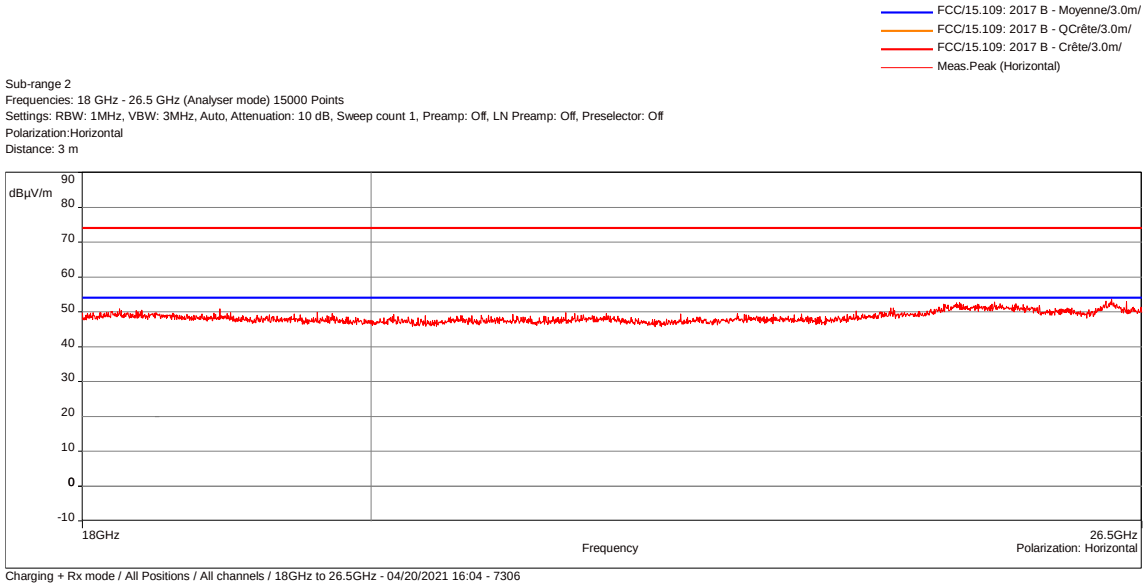
Rx mode / All Positions / All channels / 18GHz to 26.5GHz - 04/20/2021 14:49 - 7294

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

RADIATED SPURIOUS EMISSIONS (RECEIVER) - GRAPH			
CHARGING + RX MODE / ALL POSITIONS / ALL CHANNELS / 18GHZ TO 26.5GHZ		EMI7306	
EUT mode:	Rx mode	**T (°C):**	21.8
Test Date:	20/04/2021	**H (%):**	31.3
Test Operator:	ATO & OAT	**P (hPa):**	1012



Charging + Rx mode / All Positions / All channels / 18GHz to 26.5GHz - 04/20/2021 16:04 - 7306



Charging + Rx mode / All Positions / All channels / 18GHz to 26.5GHz - 04/20/2021 16:04 - 7306

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

8.10. Frequency error

Reference standard:	FCC part 15 Radio part 15.215 and RSS Gen
Test method:	FCC part 15 Radio part 15.215 and RSS Gen
Test description: Frequency error is the difference between the measured unmodulated carrier frequency under extreme conditions and the nominal Centre Frequency as stated by the manufacturer. This measurement procedure only applies if the EUT can generate an unmodulated carrier. EUT is set inside the climatic enclosure. It is connected to the measuring receiver via 50Ω attenuator(s). RBW=200Hz	

TEST CASE	EUT MODE	SEVERITY	RESULT TAB.	VERDICT
Low channel / 25°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI6786	**PASS**
Low channel / 25°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI6787	**PASS**
Low channel / 25°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI6788	**PASS**
Mid channel / 25°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI6789	**PASS**
Mid channel / 25°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI6790	**PASS**
Mid channel / 25°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI6791	**PASS**
High channel / 25°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI6812	**PASS**
High channel / 25°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI6813	**PASS**
High channel / 25°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI6814	**PASS**
Low channel / -5°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI6851	**PASS**
Low channel / -5°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI6852	**PASS**
Low channel / -5°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI6853	**PASS**
Mid channel / -5°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI6854	**PASS**
Mid channel / -5°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI6855	**PASS**
Mid channel / -5°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI6856	**PASS**
High channel / -5°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI6857	**PASS**
High channel / -5°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI6858	**PASS**
High channel / -5°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI6859	**PASS**
Low channel / 40°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI6923	**PASS**
Low channel / 40°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI6924	**PASS**
Low channel / 40°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI6925	**PASS**
Mid channel / 40°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI6926	**PASS**
Mid channel / 40°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI6927	**PASS**
Mid channel / 40°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI6928	**PASS**
High channel / 40°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI6929	**PASS**
High channel / 40°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI6930	**PASS**
High channel / 40°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI6931	**PASS**

LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	22.1 °C
Relative Humidity	20 to 75 %	47.3 %
Atmospheric pressure	N/A	999 hPa
Test method deviation: N/A		
Supplementary information: EUT power supply is replaced by a stabilized power supply.		

TEST EQUIPMENT USED					
CATEGORY	**BRAND**	**TYPE**	**IDENTIFIER**	**CAL. DATE**	**CAL. DUE**
Attenuator	Radiall	R412710124	17328	22/06/2020	22/08/2023
Attenuator	Radiall	R412710124	17329	22/06/2020	22/08/2023
Cable	N	3m	16417	04/05/2019	04/07/2021
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
Cable	Radiall	SMA-0,5m	14890	17/06/2020	17/08/2022
Climatic enclosure	CLIMATS	EXCAL 7714-HA	14261	19/09/2019	19/11/2020
Multimeter	FLUKE	8808A	12446	29/09/2020	29/11/2021
Power supply	TTI	PL303QMD	8496		
Receiver	Rohde & Schwarz	FPL1003	16027	14/08/2020	14/10/2021
Thermo-Hygro-Baromètre	LUFFT	OPUS 20	14563	11/12/2019	11/02/2021
Thermohygrometer	Testo	608-H2	12268	07/05/2020	07/07/2022
Thermohygrometer	Bioblock Scientific	Météostar	0963	25/01/2019	25/03/2021
Wattmeter	Rohde & Schwarz	HMC 8015	17005	05/03/2020	05/05/2021

Blank cells = Permanent validity

TEST SETUP PHOTO(S) – FREQUENCY ERROR

FREQUENCY ERROR - TABULATED RESULTS				
TEST CASE	FREQUENCY	FREQUENCY ERROR	LIMIT	RESULT TAB.
Low channel / 25°C/ 3.7Vdc	2.403950470 GHz	0 %	0.001 %	EMI6786
Low channel / 25°C/ 4.2Vdc	2.403950490 GHz	0.0000008 %	0.001 %	EMI6787
Low channel / 25°C/ 3.45Vdc	2.403950484 GHz	0.0000006 %	0.001 %	EMI6788
Mid channel / 25°C/ 3.7Vdc	2.439949987 GHz	0 %	0.001 %	EMI6789
Mid channel / 25°C/ 4.2Vdc	2.439949920 GHz	0.0000027 %	0.001 %	EMI6790
Mid channel / 25°C/ 3.45Vdc	2.439949880 GHz	0.0000044 %	0.001 %	EMI6791
High channel / 25°C/ 3.7Vdc	2.475949258 GHz	0 %	0.001 %	EMI6812
High channel / 25°C/ 4.2Vdc	2.475949224 GHz	0.0000014 %	0.001 %	EMI6813
High channel / 25°C/ 3.45Vdc	2.475949147 GHz	0.0000045 %	0.001 %	EMI6814
Low channel / -5°C/ 3.7Vdc	2.403950281 GHz	0.0000079 %	0.001 %	EMI6851
Low channel / -5°C/ 4.2Vdc	2.403950279 GHz	0.0000079 %	0.001 %	EMI6852
Low channel / -5°C/ 3.45Vdc	2.403950332 GHz	0.0000057 %	0.001 %	EMI6853
Mid channel / -5°C/ 3.7Vdc	2.439949563 GHz	0.0000174 %	0.001 %	EMI6854
Mid channel / -5°C/ 4.2Vdc	2.439949577 GHz	0.0000168 %	0.001 %	EMI6855
Mid channel / -5°C/ 3.45Vdc	2.439949627 GHz	0.0000148 %	0.001 %	EMI6856
High channel / -5°C/ 3.7Vdc	2.475948863 GHz	0.0000160 %	0.001 %	EMI6857
High channel / -5°C/ 4.2Vdc	2.475948864 GHz	0.0000159 %	0.001 %	EMI6858
High channel / -5°C/ 3.45Vdc	2.475948916 GHz	0.0000138 %	0.001 %	EMI6859
Low channel / 40°C/ 3.7Vdc	2.403945679 GHz	0.0001993 %	0.001 %	EMI6923
Low channel / 40°C/ 4.2Vdc	2.403945671 GHz	0.0001998 %	0.001 %	EMI6924
Low channel / 40°C/ 3.45Vdc	2.403945647 GHz	0.0002006 %	0.001 %	EMI6925
Mid channel / 40°C/ 3.7Vdc	2.439944857 GHz	0.0002103 %	0.001 %	EMI6926
Mid channel / 40°C/ 4.2Vdc	2.439944876 GHz	0.0002095 %	0.001 %	EMI6927
Mid channel / 40°C/ 3.45Vdc	2.439944855 GHz	0.0002103 %	0.001 %	EMI6928
High channel / 40°C/ 3.7Vdc	2.475944101 GHz	0.0002038 %	0.001 %	EMI6929
High channel / 40°C/ 4.2Vdc	2.475944096 GHz	0.0002085 %	0.001 %	EMI6930
High channel / 40°C/ 3.45Vdc	2.475944085 GHz	0.0002089 %	0.001 %	EMI6931

End of test report