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. ..... :	**Headset for wireless metal detection sensor**
Trade Mark. ..... :	WSA II
Manufacturer..... :	XPLORER
FCC ID. ..... :	XFJWSA2
IC. ..... :	8392A-WSA2
Model/Type reference..... :	XPWSA2 / Headset WSA Pro XL
Ratings..... :	3.45Vdc to 4.2Vdc

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

Report Reference No..... :	**RR410-20-101751-16A**
Test procedure. ..... :	FCC IC Certification
Diffusion..... :	Mr LOUBET
Applicant's name. ..... :	XPLORER
Date of issue..... :	October 25, 2021
Total number of pages..... :	98
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 25, 2021	/	Creation

1. GENERAL INFORMATIONS

This document submits the results of Radio tests performed on the equipment **Headset for wireless metal detection system WSA Pro XL** (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.	:	Headset for wireless metal detection system
FCC ID.	:	XFJWSA2
IC.	:	8392A-WSA2
Model/Type reference.	:	XPWSA2 / Headset WSA Pro XL
Trade Mark.	:	WSA Pro XL
Serial number (S/N).	:	Not communicated
Part number (P/N).	:	Not communicated
Software version.	:	*20210126*
Firmware version.	:	*Not communicated*
Type of sample.	:	Pre-serial
Function(s).	:	Headset for wireless object detection system
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

No marking plate on EUT during tests

3.3. EUT General view

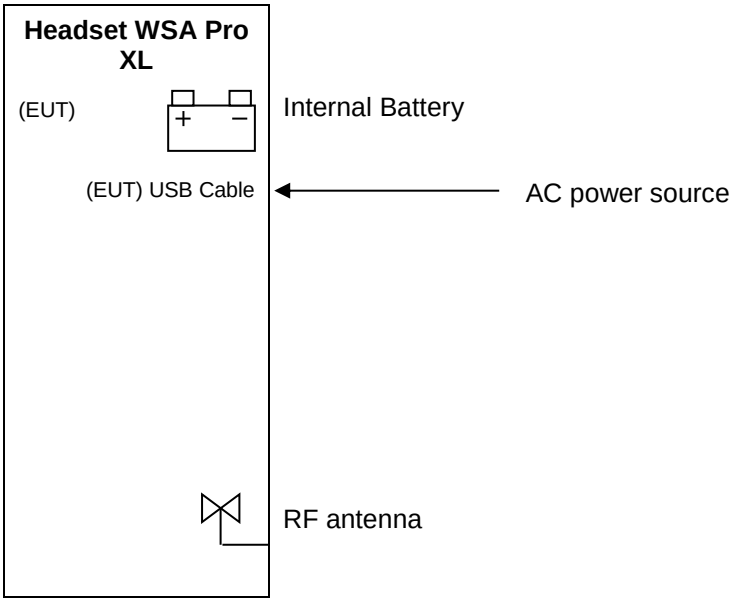
3.4. EUT Mechanical and Electrical Design

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). ..... : *0.15x0.15x0.07*
Weight (kg). ..... : *0.8*
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

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

3.6. Supporting Equipment Used During Test

Sample subject to the tests was tested with following equipment.

PRODUCT TYPE	MANUFACTURER	MODEL	N°EMITECH / COMMENTS
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 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	*2400 MHz to 2483.5MHz*
RF Power	*Not communicated*
Number of channels / Separation	*Multiple*
Modulation type	*GFSK*
Duty cycle	*Not communicated*
Tested frequency	*2404MHz Low channel* *2440MHz Mid channel* *2476 High channel*

c) RECEIVER PARAMETERS (RX)	
Frequency bands	*2400 MHz to 2483.5MHz*
Category/Class	*Category 2*
Bandwidth	*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 A	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 = -3.91Bm (0.000123 mW) at 2404MHz

In accordance with KDB 447498 D01 General RF Exposure Guidance v06:
PSD= EIRP/(4*π*R2)=0.000123/(4*π*(20 cm)²)= 0.0000000245 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	EMI7579	**PASS**
120Vac/60Hz power supply / Charging mode	150kHz-30MHz	Class B	EMI7580	**PASS**

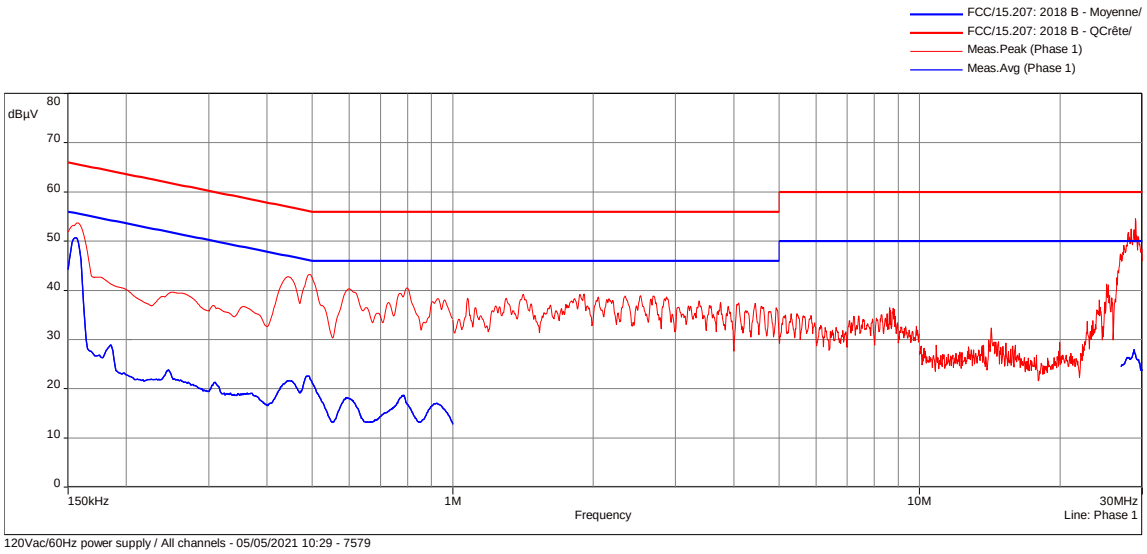
LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	*See Graph(s)*
Relative Humidity	30 to 60 %	*See Graph(s)*
Atmospheric pressure	N/A	*See Graph(s)*
Test method deviation: N/A		
Supplementary information: N/A		

TEST EQUIPMENT USED					
CATEGORY	**BRAND**	**TYPE**	**IDENTIFIER**	**CAL. DATE**	**CAL. DUE**
Cable	EMITECH	Current absorber sheath	9491	23/06/2020	23/08/2022
Cable	C&C	N-3m	14331	18/03/2021	18/05/2023
LISN	PMM	L2-16	1209	08/06/2020	08/08/2022
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	Bioblock Scientific	Météostar	0963	26/01/2019	26/09/2021

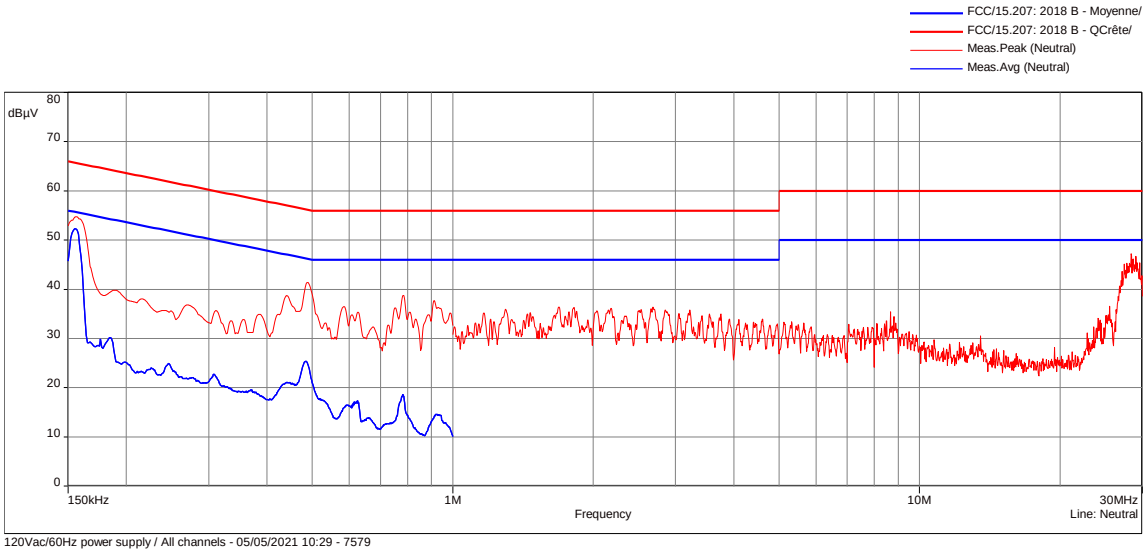
BAT-EMC software version: V3.18.0.26 Blank cells = Permanent validity

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

CONDUCTED EMISSION (MEASUREMENT) - GRAPH			
120VAC/60HZ POWER SUPPLY / ALL CHANNELS		**EMI7579**	
EUT mode:	Tx mode	**T (°C):**	18.1
Test Date:	05/05/2021	**H (%):**	55.8
Test Operator:	ATO	**P (hPa):**	1008



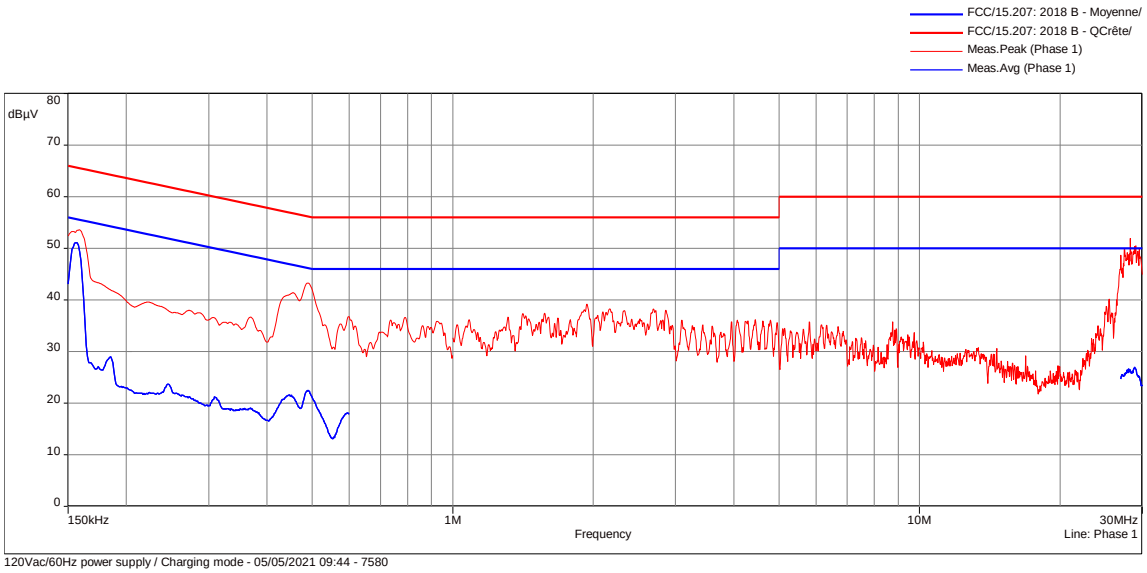
120Vac/60Hz power supply / All channels - 05/05/2021 10:29 - 7579



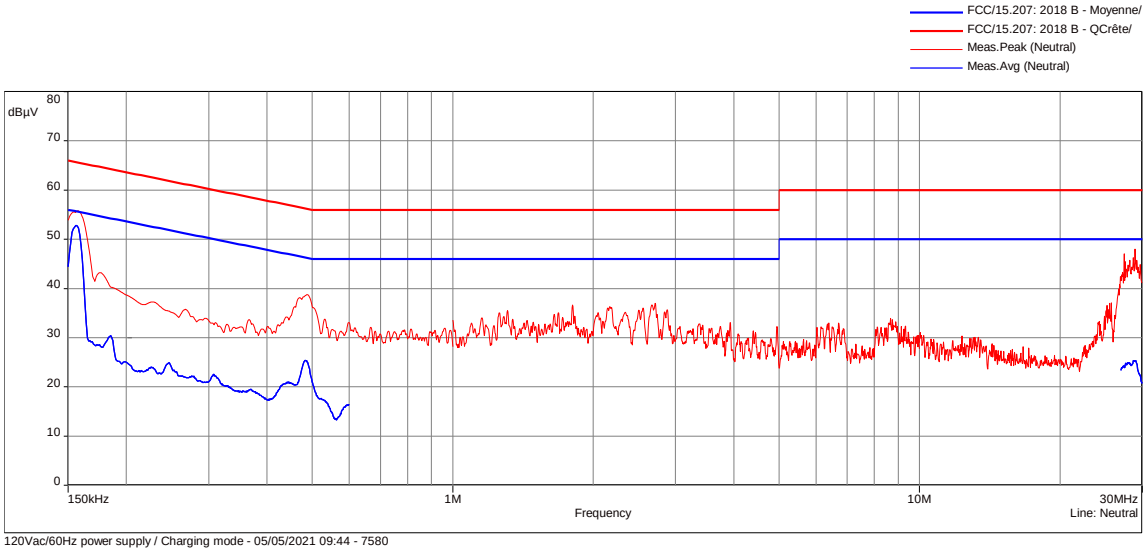
120Vac/60Hz power supply / All channels - 05/05/2021 10:29 - 7579

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Neutral	150kHz-1MHz	10kHz	30kHz	Peak
Neutral	1MHz-10MHz	10kHz	30kHz	Peak
Neutral	10MHz-30MHz	10kHz	30kHz	Peak
Phase 1	150kHz-1MHz	10kHz	30kHz	Peak
Phase 1	1MHz-10MHz	10kHz	30kHz	Peak
Phase 1	10MHz-30MHz	10kHz	30kHz	Peak
Neutral	150kHz-1MHz	10kHz	30kHz	Average
Phase 1	27MHz-30MHz	10kHz	30kHz	Average
Phase 1	150kHz-1MHz	10kHz	30kHz	Average
Phase 1	27MHz-30MHz	10kHz	30kHz	Average
Measure with:	A.M.N.			
Comments:	N/A			
EUT modification(s): N/A				

CONDUCTED EMISSION (MEASUREMENT) - GRAPH			
120VAC/60HZ POWER SUPPLY / CHARGING MODE		**EMI7580**	
EUT mode:	Tx mode	**T (°C):**	18.1
Test Date:	05/05/2021	**H (%):**	55.8
Test Operator:	ATO	**P (hPa):**	1008



120Vac/60Hz power supply / Charging mode - 05/05/2021 09:44 - 7580



120Vac/60Hz power supply / Charging mode - 05/05/2021 09:44 - 7580

POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Neutral	150kHz-1MHz	10kHz	30kHz	Peak
Neutral	1MHz-10MHz	10kHz	30kHz	Peak
Neutral	10MHz-30MHz	10kHz	30kHz	Peak
Phase 1	150kHz-1MHz	10kHz	30kHz	Peak
Phase 1	1MHz-10MHz	10kHz	30kHz	Peak
Phase 1	10MHz-30MHz	10kHz	30kHz	Peak
Neutral	150kHz-600kHz	10kHz	30kHz	Average
Neutral	27MHz-30MHz	10kHz	30kHz	Average
Phase 1	150kHz-600kHz	10kHz	30kHz	Average
Phase 1	27MHz-30MHz	10kHz	30kHz	Average
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	EMI8079	**PASS**
Mid Channel	>500kHz	EMI8080	**PASS**
High Channel	>500kHz	EMI8081	**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

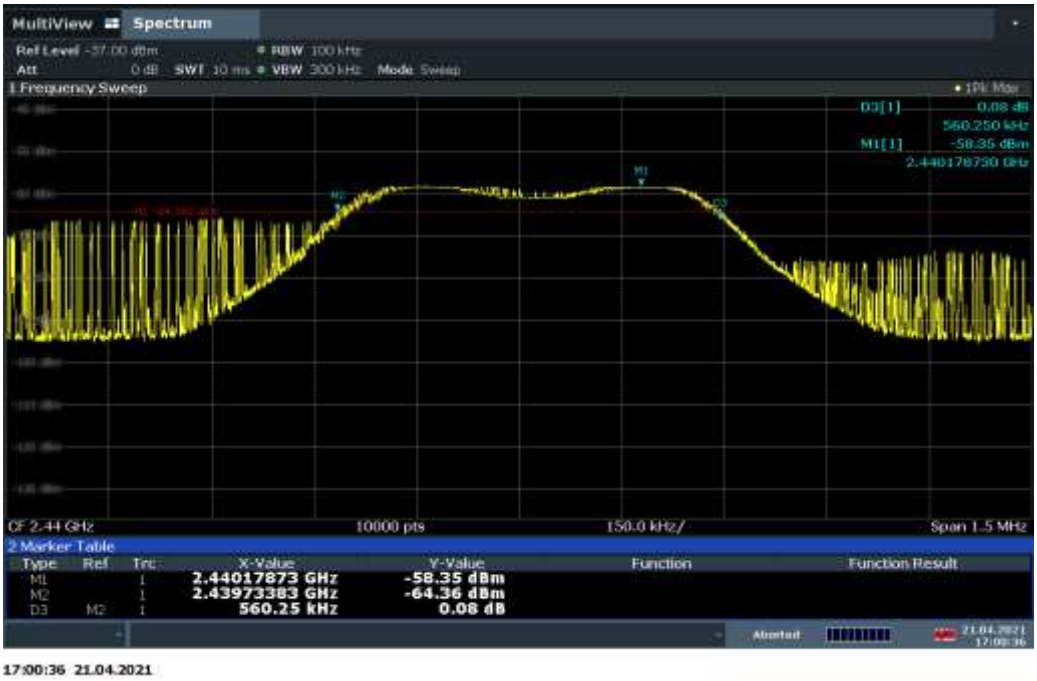
TEST SETUP PHOTO(S) – 6DB BANDWIDTH
   

6dB Bandwidth - Graph		
Low Channel		EMI8079
EUT mode:	Modulated	
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	519.15 kHz	>500kHz

6dB Bandwidth - Graph		
Mid Channel		EMI8080
EUT mode:	Modulated	
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	560.25 kHz	>500kHz

6dB Bandwidth - Graph		
High Channel		EMI8081
EUT mode:	Modulated	
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	513.75 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	EMI8082	**PASS**
Mid Channel	>500kHz	EMI8083	**PASS**
High Channel	>500kHz	EMI8084	**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		EMI8082
EUT mode:	Modulated	
Test Date:	30/04/2021	
Test Operator:	ATO	

EUT modification(s): N/A

OCCUPIED BANDWIDTH - TABULATED RESULTS			
LOW CHANNEL			
Frequency	**RBW**	**OBW 99%**	**Limit**
2404 MHz	100 kHz	1383.80 kHz	> 500kHz

OCCUPIED BANDWIDTH - GRAPH		
MID CHANNEL		EMI8083
EUT mode:	Modulated	
Test Date:	30/04/2021	
Test Operator:	ATO	

11:19:01 30.04.2021

EUT modification(s): N/A

OCCUPIED BANDWIDTH - TABULATED RESULTS			
MID CHANNEL			
Frequency	**RBW**	**OBW 99%**	**Limit**
2440 MHz	100 kHz	1655.56 kHz	> 500kHz

OCCUPIED BANDWIDTH - GRAPH		
HIGH CHANNEL		EMI8084
EUT mode:	Modulated	
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	1118.31 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	EMI6597	**PASS**
EIRP / All Positions / Mid channel	2.438GHz-2.442GHz	30dBm	EMI6598	**PASS**
EIRP / All Positions / High channel	2.474GHz-2.478GHz	30dBm	EMI6599	**PASS**

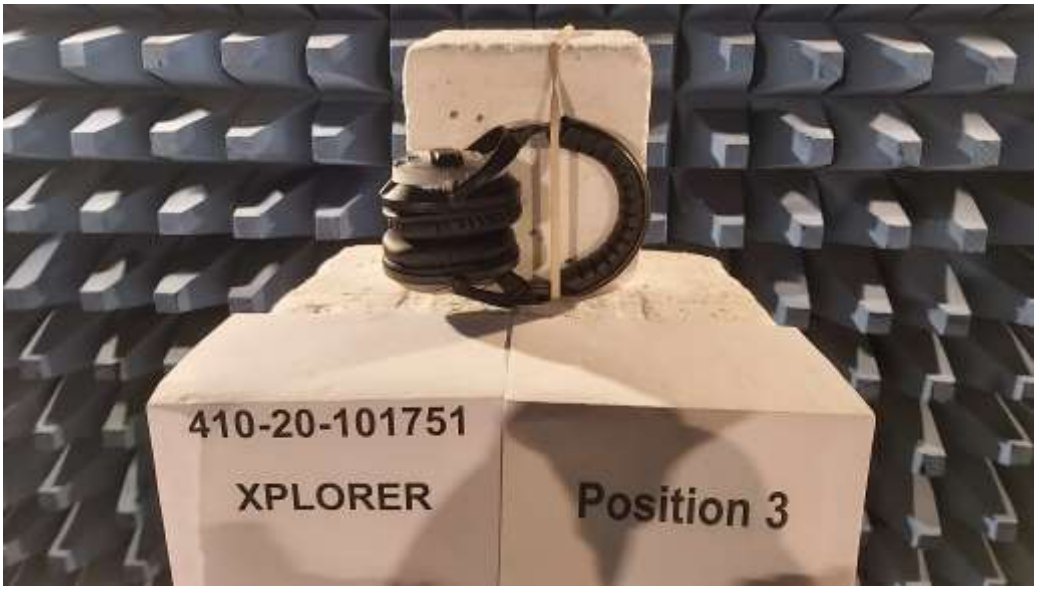
LABORATORY PARAMETERS:	REQUIRED PRIOR TO THE TEST	DURING THE TEST
Ambient Temperature	15 to 35 °C	*See Graph(es)*
Relative Humidity	20 to 75 %	*See Graph(es)*
Atmospheric pressure	N/A	*See Graph(es)*
Test method deviation: N/A		
Supplementary information: N/A		

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

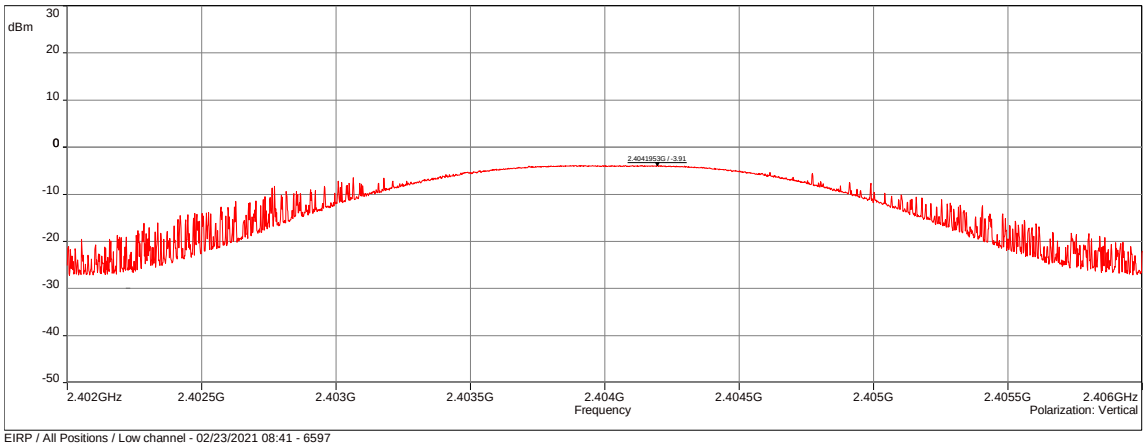

TEST SETUP PHOTO(S) - POSITION 3


TEST SETUP PHOTO(S) - EIRP


EFFECTIVE ISOTROPIC RADIATED POWER - GRAPH			
EIRP / ALL POSITIONS / LOW CHANNEL		EMI6597	
EUT mode:	Unmodulated	**T (°C):**	20.4
Test Date:	23/02/2021	**H (%):**	51.3
Test Operator:	ATO & OAT	**P (hPa):**	1024

Meas.Peak (Vertical)

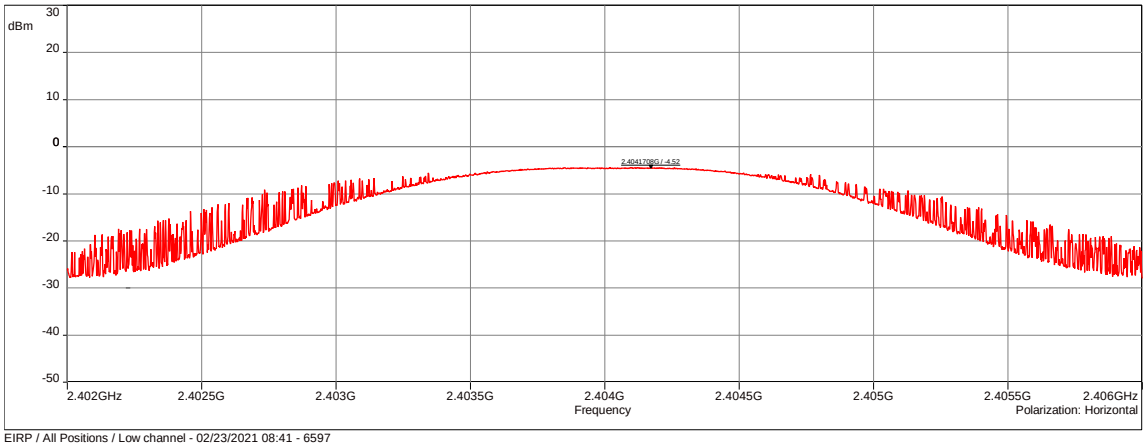
Sub-range 1
Frequencies: 2.402 GHz - 2.406 GHz (Analyser mode) 8000 Points
Settings: RBW: 1MHz, VBW: 3MHz, Auto, Attenuation: 10 dB, Sweep count 1, Preamp: Off, LN Preamp: Off, Preselector: Off
Polarization:Vertical
Distance: 3 m



EIRP / All Positions / Low channel - 02/23/2021 08:41 - 6597

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 - 02/23/2021 08:41 - 6597

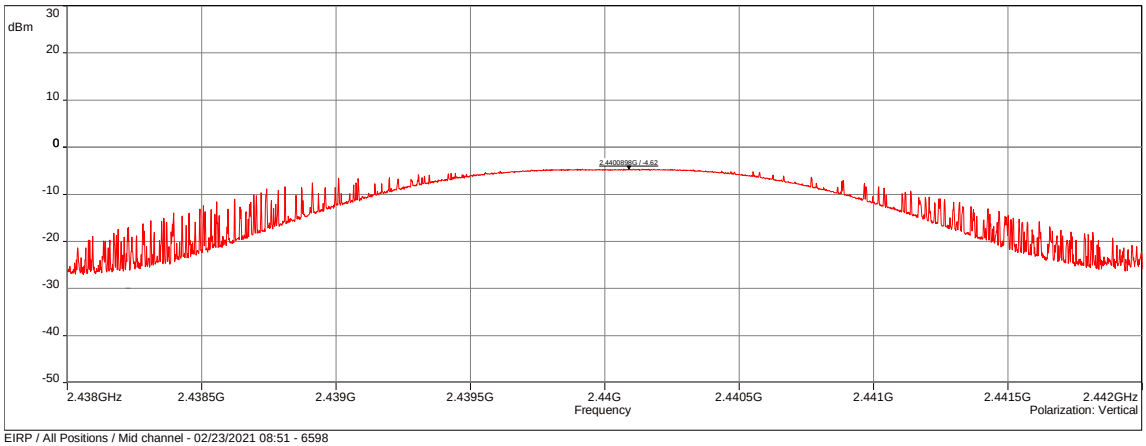
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.402GHz-2.406GHz	1MHz	3MHz	Peak
Horizontal	2.402GHz-2.406GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

EFFECTIVE ISOTROPIC RADIATED POWER - TABULATED RESULTS			
EIRP / ALL POSITIONS / LOW CHANNEL			EMI6597
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2404.19	Vertical	-3.91	30
2404.17	Horizontal	-4.52	30

EFFECTIVE ISOTROPIC RADIATED POWER - GRAPH			
EIRP / ALL POSITIONS / MID CHANNEL		EMI6598	
EUT mode:	Unmodulated	**T (°C):**	20.4
Test Date:	23/02/2021	**H (%):**	51.3
Test Operator:	ATO & OAT	**P (hPa):**	1024

Meas.Peak (Vertical)

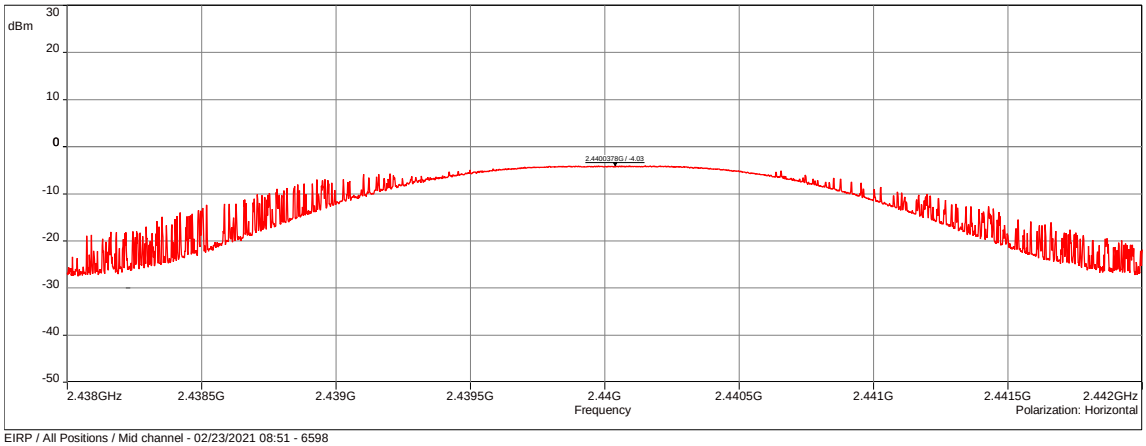
Sub-range 1
Frequencies: 2.438 GHz - 2.442 GHz (Analyser mode) 8000 Points
Settings: RBW: 1MHz, VBW: 3MHz, Auto, Attenuation: 10 dB, Sweep count 1, Preamp: Off, LN Preamp: Off, Preselector: Off
Polarization:Vertical
Distance: 3 m



EIRP / All Positions / Mid channel - 02/23/2021 08:51 - 6598

Meas.Peak (Horizontal)

Sub-range 2
Frequencies: 2.438 GHz - 2.442 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 / Mid channel - 02/23/2021 08:51 - 6598

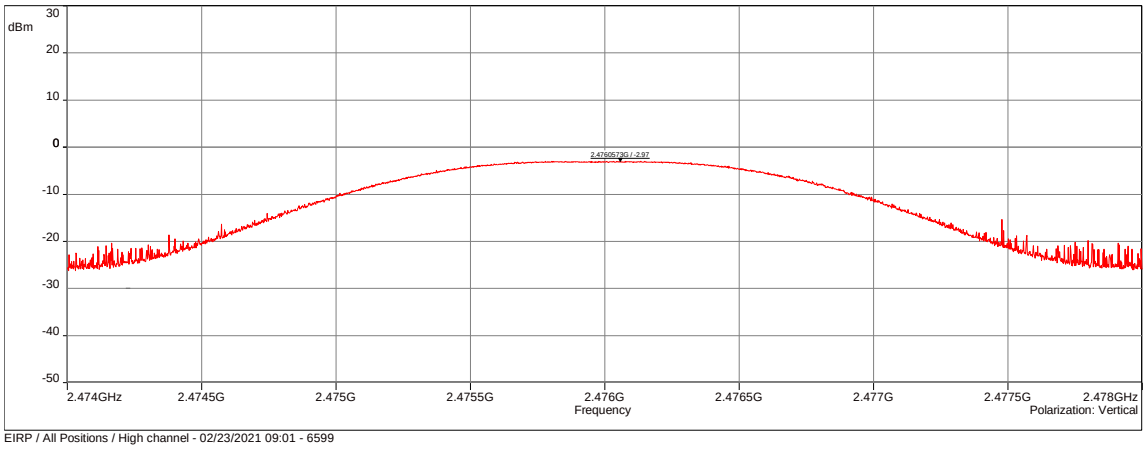
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.438GHz-2.442GHz	1MHz	3MHz	Peak
Horizontal	2.438GHz-2.442GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

EFFECTIVE ISOTROPIC RADIATED POWER - TABULATED RESULTS			
EIRP / ALL POSITIONS / MID CHANNEL			EMI6598
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2440.08	Vertical	-4.62	30
2440.03	Horizontal	-4.03	30

EFFECTIVE ISOTROPIC RADIATED POWER - GRAPH			
EIRP / ALL POSITIONS / HIGH CHANNEL		EMI6599	
EUT mode:	Unmodulated	**T (°C):**	20.4
Test Date:	23/02/2021	**H (%):**	51.3
Test Operator:	ATO & OAT	**P (hPa):**	1024

Meas.Peak (Vertical)

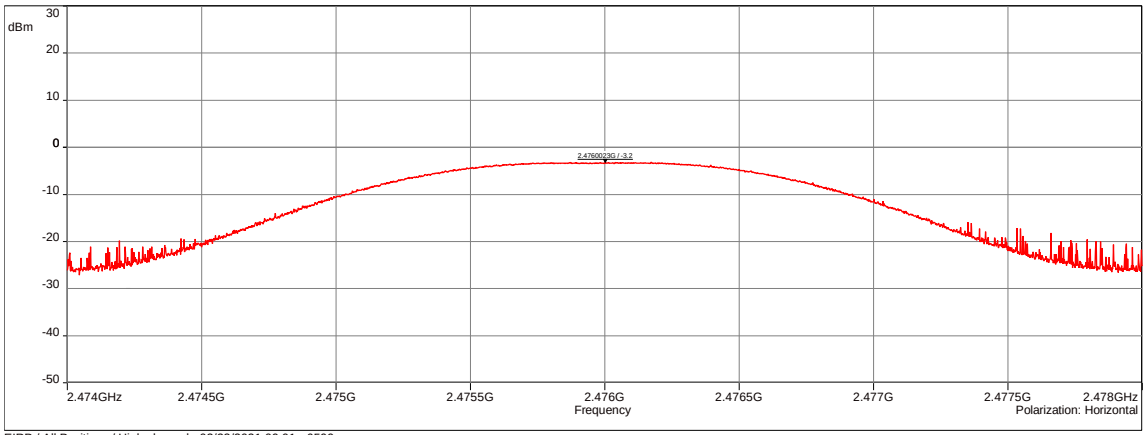
Sub-range 1
Frequencies: 2.474 GHz - 2.478 GHz (Analyser mode) 8000 Points
Settings: RBW: 1MHz, VBW: 3MHz, Auto, Attenuation: 10 dB, Sweep count 1, Preamp: Off, LN Preamp: Off, Preselector: Off
Polarization:Vertical
Distance: 3 m



EIRP / All Positions / High channel - 02/23/2021 09:01 - 6599

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 - 02/23/2021 09:01 - 6599

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			EMI6599
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2476.05	Vertical	-2.97	30
2476.00	Horizontal	-3.2	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	EMI7328	**PASS**
All Positions / Mid channel	2.38GHz-2.5GHz	>20dBc	EMI7330	**PASS**
All Positions / High channel	2.38GHz-2.5GHz	>20dBc	EMI7332	**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

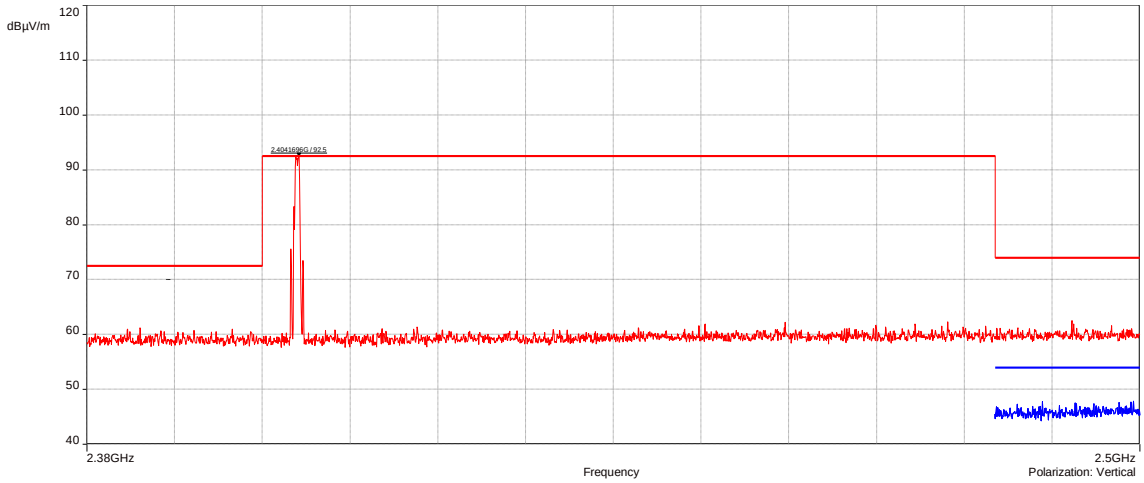
TEST SETUP PHOTO(S) - POSITION 1

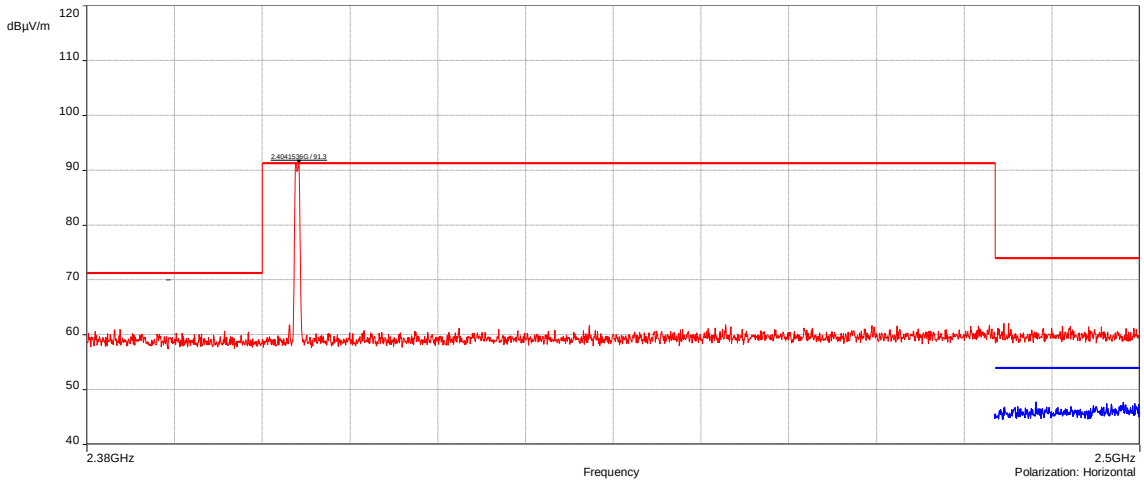

TEST SETUP PHOTO(S) - POSITION 2


TEST SETUP PHOTO(S) - POSITION 3


TEST SETUP PHOTO(S) – BAND EDGE

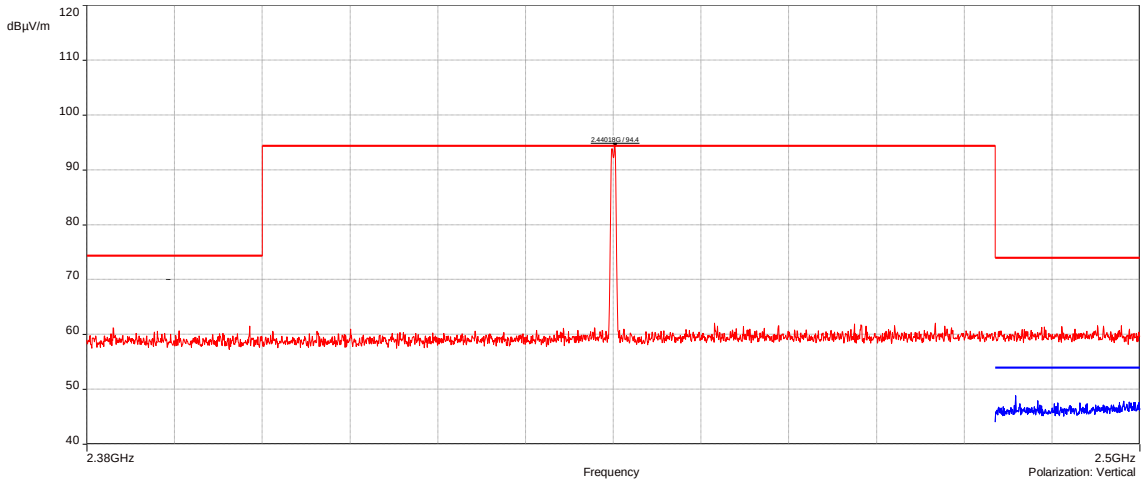

BAND EDGE - GRAPH			
ALL POSITIONS / LOW CHANNEL		EMI7328	
EUT mode:	Modulated	**T (°C):**	22.7
Test Date:	21/04/2021	**H (%):**	37.5
Test Operator:	ATO & OAT	**P (hPa):**	1010

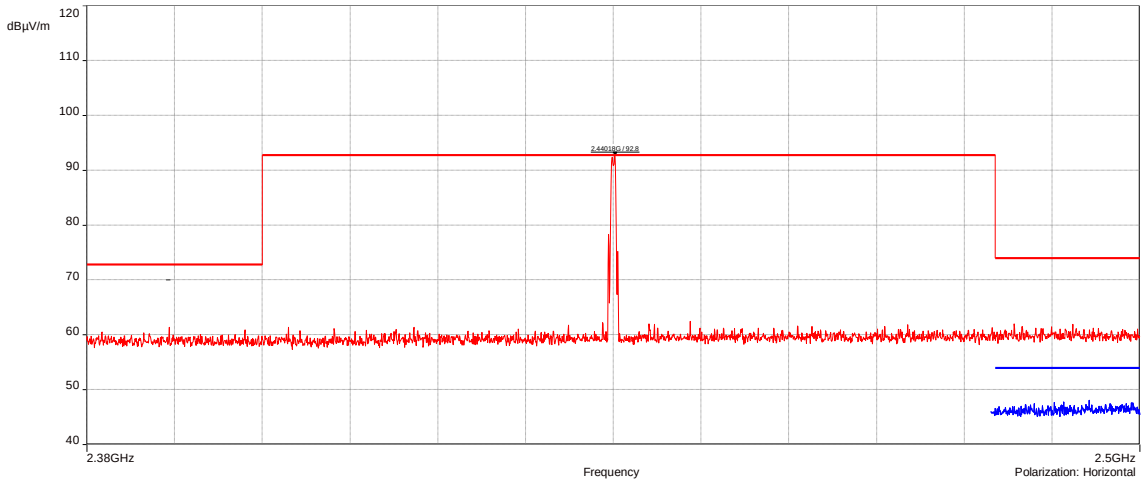




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.38GHz-2.5GHz	100kHz	300kHz	Peak
Horizontal	2.38GHz-2.5GHz	100kHz	300kHz	Peak
Vertical	2.48GHz-2.5GHz	100kHz	20kHz	Peak
Horizontal	2.48GHz-2.5GHz	100kHz	20kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

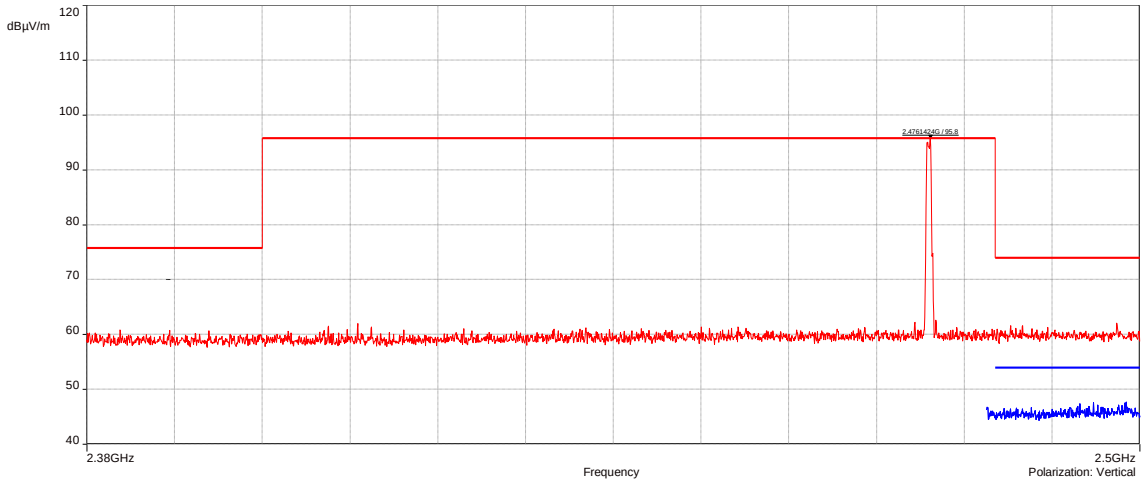
BAND EDGE - GRAPH			
ALL POSITIONS / MID CHANNEL		EMI7330	
EUT mode:	Modulated	**T (°C):**	22.7
Test Date:	21/04/2021	**H (%):**	37.5
Test Operator:	ATO & OAT	**P (hPa):**	1010

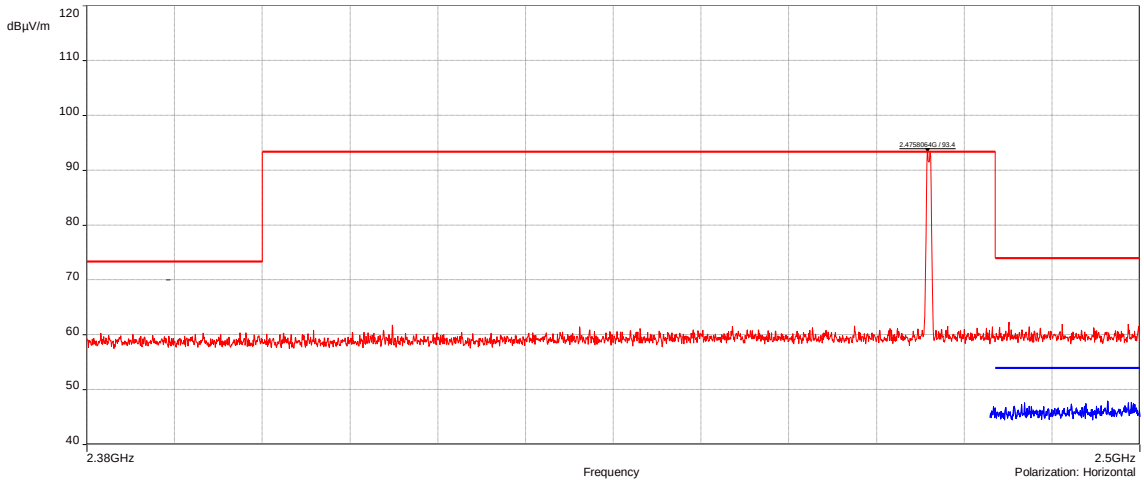




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.38GHz-2.5GHz	100kHz	300kHz	Peak
Horizontal	2.38GHz-2.5GHz	100kHz	300kHz	Peak
Vertical	2.48GHz-2.5GHz	100kHz	20kHz	Peak
Horizontal	2.48GHz-2.5GHz	100kHz	20kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

BAND EDGE - GRAPH			
ALL POSITIONS / HIGH CHANNEL		EMI7332	
EUT mode:	Modulated	**T (°C):**	22.7
Test Date:	21/04/2021	**H (%):**	37.5
Test Operator:	ATO & OAT	**P (hPa):**	1010





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	EMI7324	**PASS**
All Positions / Mid channel	2.4395GHz-2.4405GHz	8dBm/3kHz	EMI7325	**PASS**
All Positions / High channel	2.4755GHz-2.4765GHz	8dBm/3kHz	EMI7326	**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

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

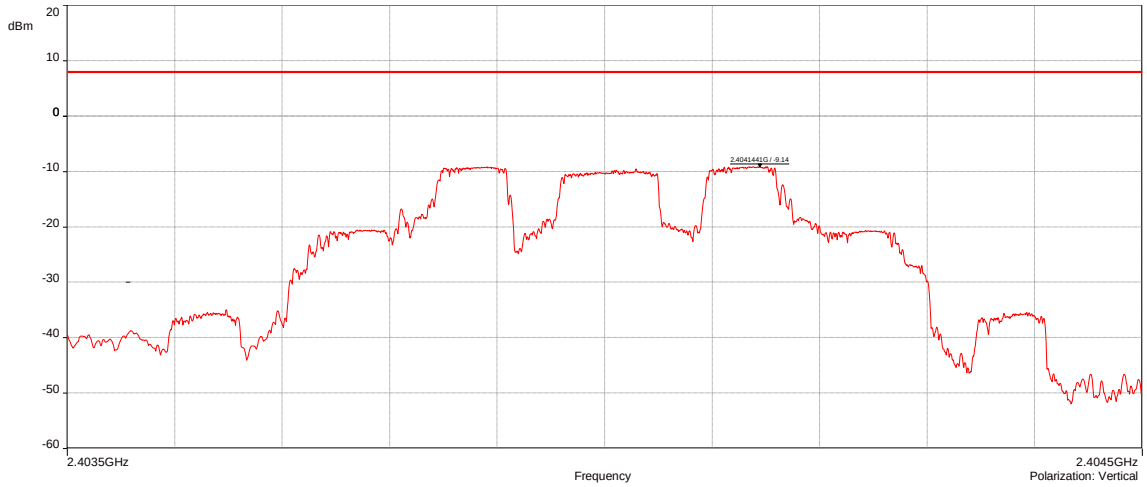
TEST SETUP PHOTO(S) - POSITION 1

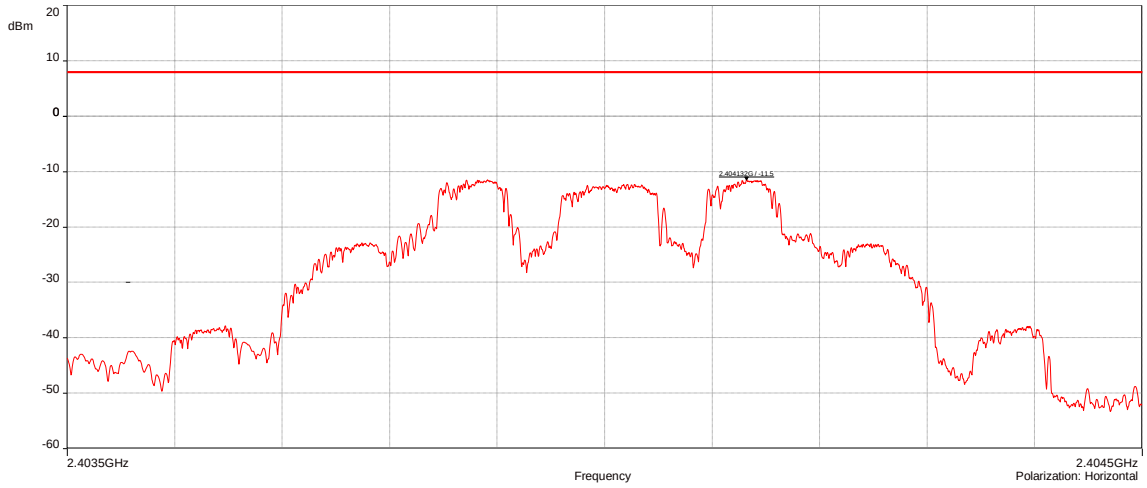

TEST SETUP PHOTO(S) - POSITION 2


TEST SETUP PHOTO(S) - POSITION 3


TEST SETUP PHOTO(S) – PSD


POWER SPECTRAL DENSITY - GRAPH			
ALL POSITIONS / LOW CHANNEL		EMI7324	
EUT mode:	Modulated	**T (°C):**	21.2
Test Date:	21/04/2021	**H (%):**	38.1
Test Operator:	ATO & OAT	**P (hPa):**	1010

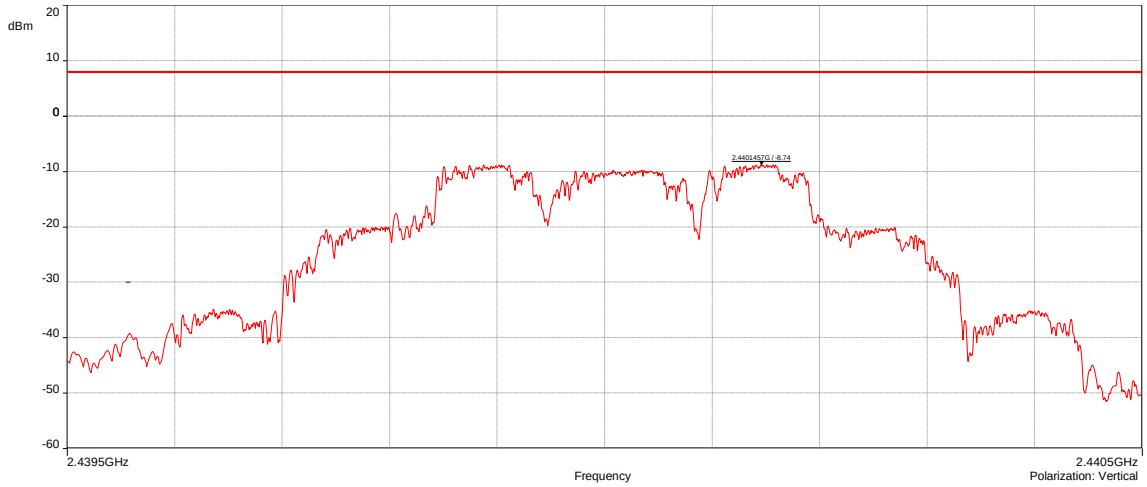


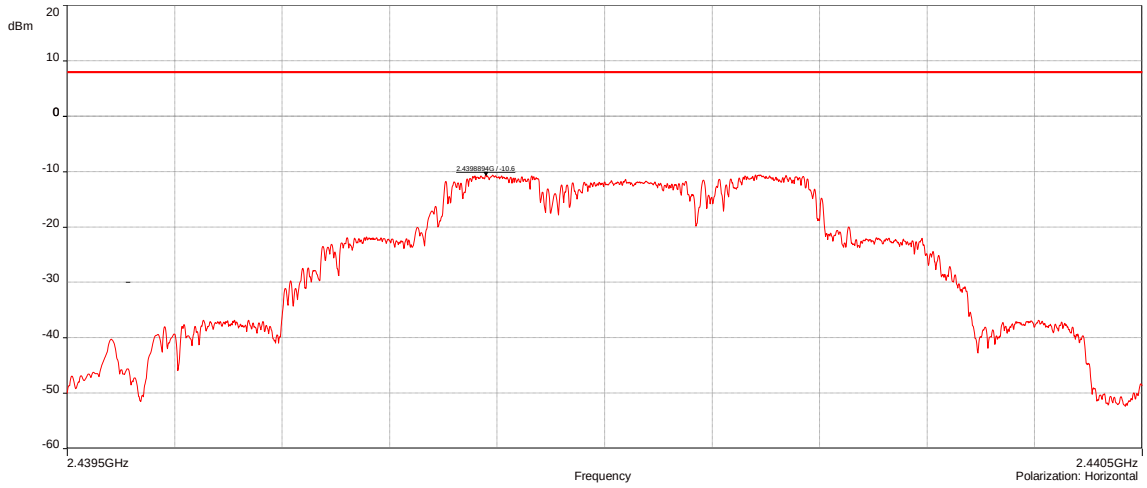


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.4035GHz-2.4045GHz	3kHz	9kHz	Peak
Horizontal	2.4035GHz-2.4045GHz	3kHz	9kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

POWER SPECTRAL DENSITY - TABULATED RESULTS			
ALL POSITIONS / LOW CHANNEL			EMI7324
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2404.14	Vertical	-9.14	8
2404.13	Horizontal	-11.5	8

POWER SPECTRAL DENSITY - GRAPH			
PSD / ALL POSITIONS / MID CHANNEL		EMI7325	
EUT mode:	Modulated	**T (°C):**	21.2
Test Date:	21/04/2021	**H (%):**	38.1
Test Operator:	ATO & OAT	**P (hPa):**	1010

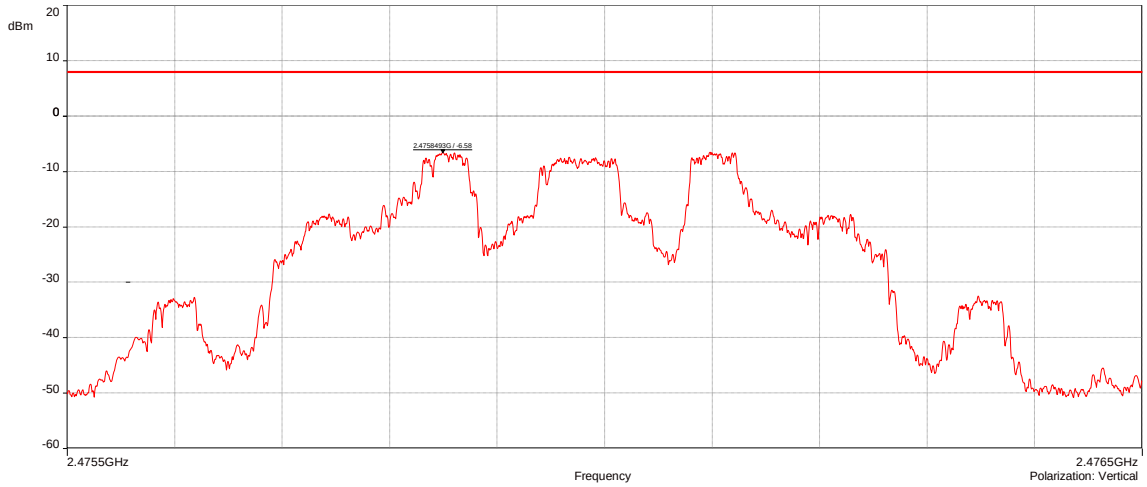


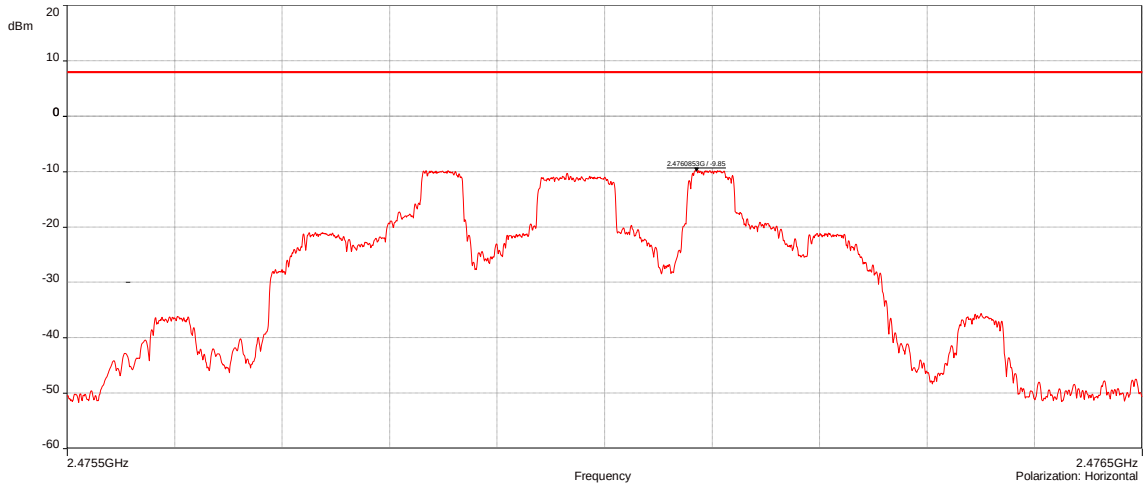


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	2.4395GHz-2.4405GHz	3kHz	9kHz	Peak
Horizontal	2.4395GHz-2.4405GHz	3kHz	9kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

POWER SPECTRAL DENSITY - TABULATED RESULTS			
PSD / ALL POSITIONS / MID CHANNEL			EMI7325
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2440.14	Vertical	-8.74	8
2439.88	Horizontal	-10.6	8

POWER SPECTRAL DENSITY - GRAPH			
ALL POSITIONS / HIGH CHANNEL		EMI7326	
EUT mode:	Modulated	**T (°C):**	21.2
Test Date:	03/03/2021	**H (%):**	38.1
Test Operator:	ATO & OAT	**P (hPa):**	1010





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			EMI7326
Frequency (MHz)	**Polarization**	**Level (dBm)**	**Limit (dBm)**
2475.84	Vertical	-6.58	8
2476.08	Horizontal	-9.85	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 / All positions / All channels / 0°	9kHz-30MHz	Tx	EMI7056	**PASS**
Tx mode / All positions / All channels / 45°	9kHz-30MHz	Tx	EMI7057	**PASS**
Tx mode / All positions / All channels / 90°	9kHz-30MHz	Tx	EMI7058	**PASS**
Charging + Tx mode / All positions / All channels / 0°	9kHz-30MHz	Tx	EMI7063	**PASS**
Charging + Tx mode / All positions / All channels / 45°	9kHz-30MHz	Tx	EMI7064	**PASS**
Charging + Tx mode / All positions / All channels / 45°	9kHz-30MHz	Tx	EMI7065	**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

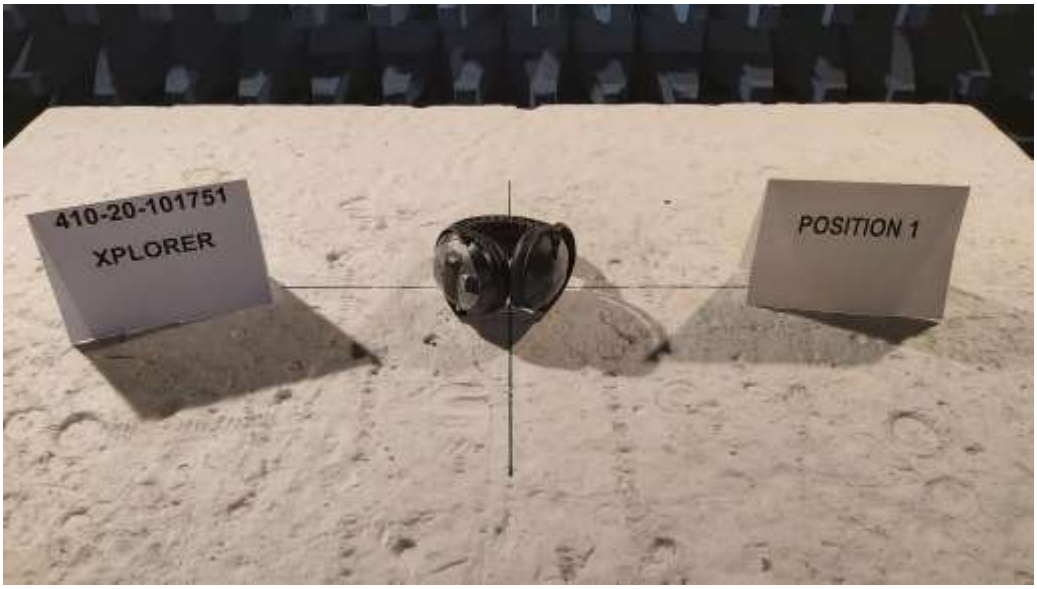
Supplementary information:

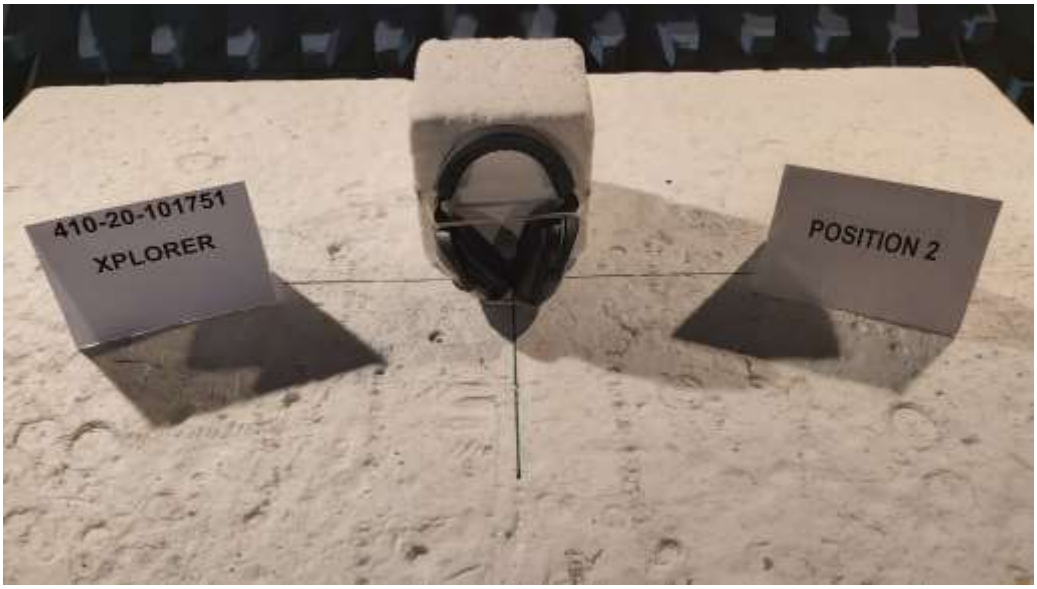
From 9 kHz to 30MHz: limit indicated on the curves is calculated with 40 dB/decade extrapolation factor and 51.5 dB conversion factor.

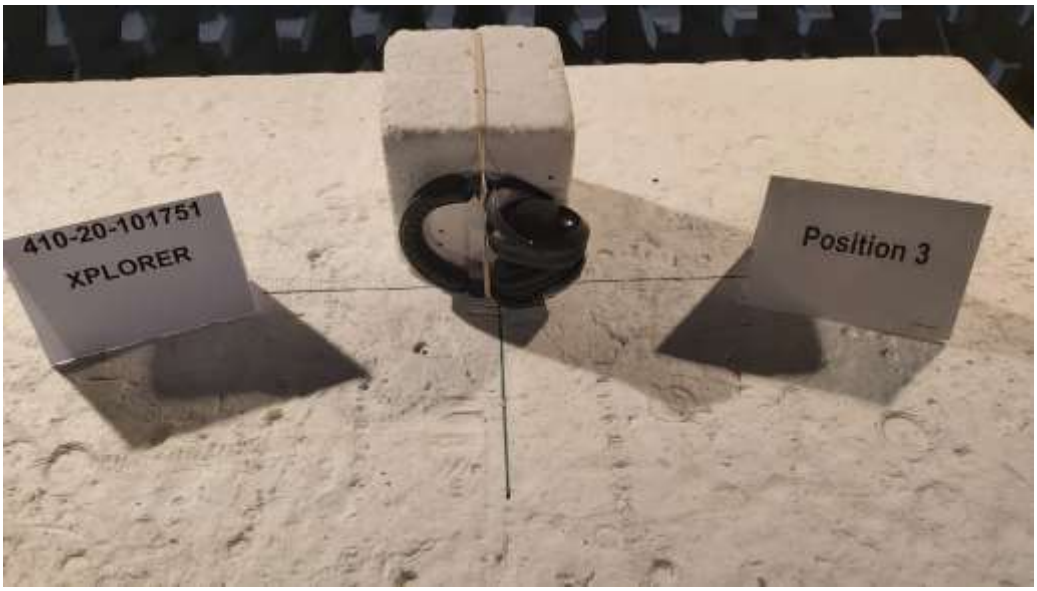
TEST EQUIPMENT USED					
CATEGORY	**BRAND**	**TYPE**	**IDENTIFIER**	**CAL. DATE**	**CAL. DUE**
Antenna	Rohde & Schwarz	HFH2-Z2	5825	24/04/2020	24/06/2022
Cable	MegaPhase	N-3m	14853	12/05/2020	12/07/2022
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
Cable	MegaPhase	TM18-N1N1-197	12840	14/08/2020	14/10/2022
Receiver	Rohde & Schwarz	FSW43	14830	29/07/2020	29/09/2021
Shielded enclosure	RAY PROOF	C.V2	1423	04/10/2019	04/12/2022
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) -EUT POSITIONS

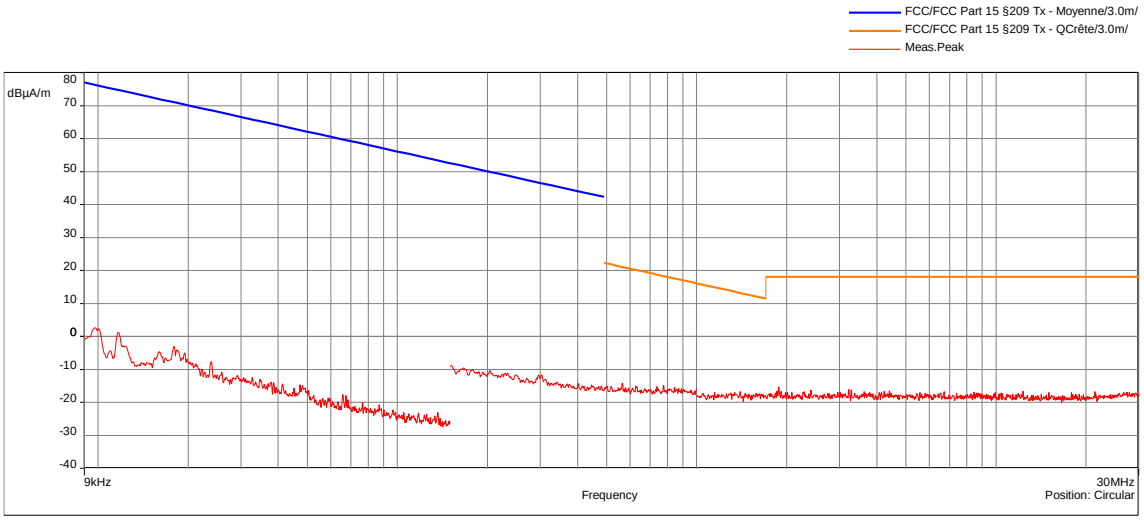






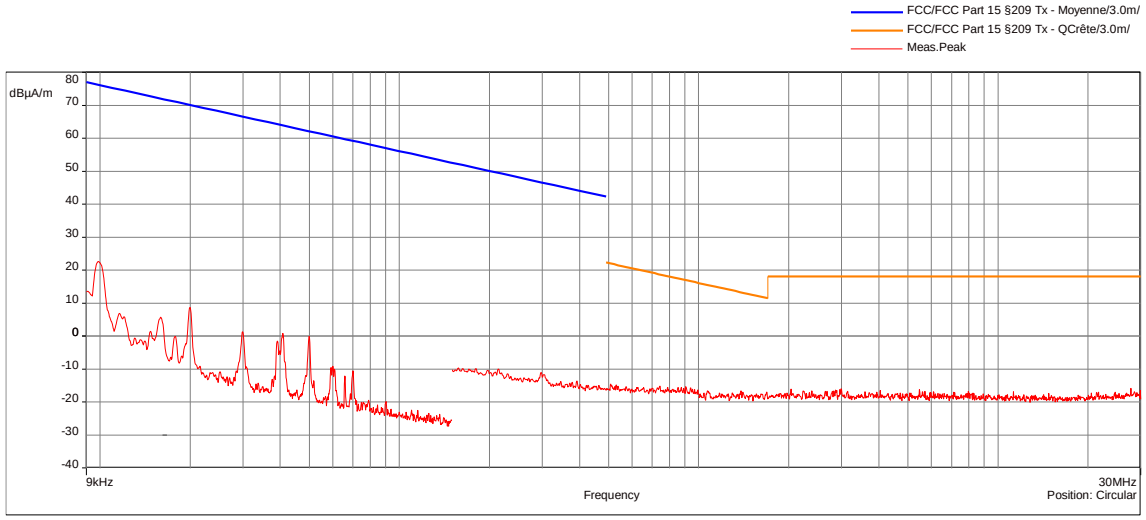
TEST SETUP PHOTO(S)


TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / ALL POSITIONS / ALL CHANNELS / 0°		EMI7056	
EUT mode:	Modulated	**T (°C):**	21.6
Test Date:	26/03/2021	**H (%):**	36.7
Test Operator:	ATO & OAT	**P (hPa):**	1014



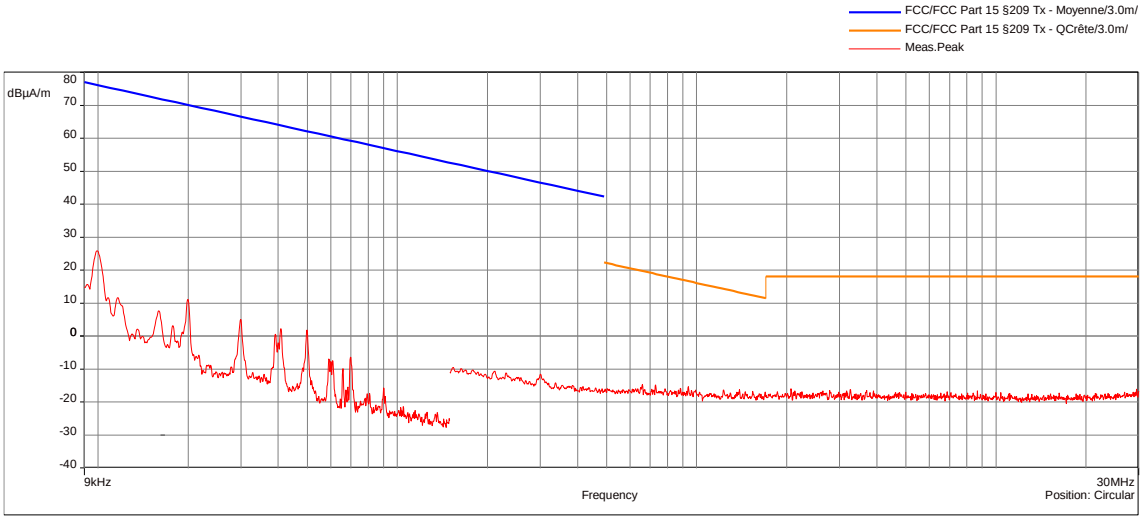
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.			
EUT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

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / ALL POSITIONS / ALL CHANNELS / 45°		EMI7057	
EUT mode:	Modulated	**T (°C):**	21.6
Test Date:	26/03/2021	**H (%):**	36.7
Test Operator:	ATO & OAT	**P (hPa):**	1014



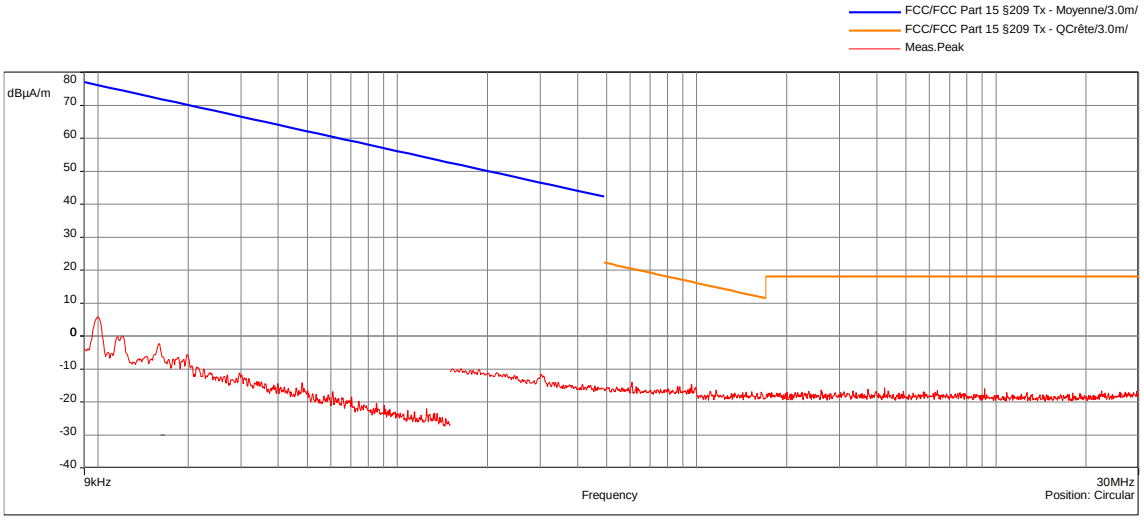
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor			
EUT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

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
TX MODE / ALL POSITIONS / ALL CHANNELS / 90°		EMI7058	
EUT mode:	Modulated	**T (°C):**	21.6
Test Date:	26/03/2021	**H (%):**	36.7
Test Operator:	ATO & OAT	**P (hPa):**	1014



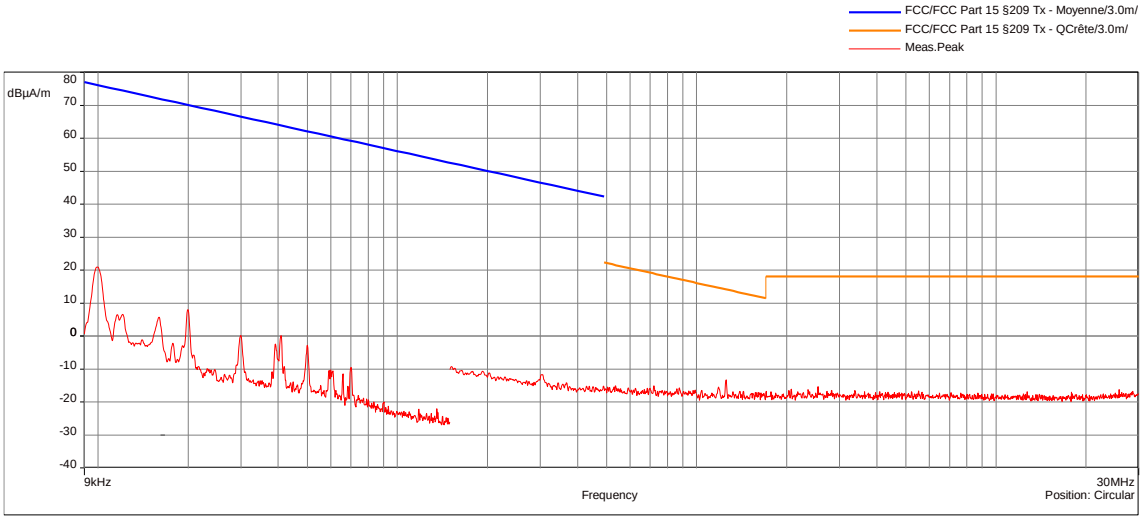
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.			
EUT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

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS / 0°		EMI7063	
EUT mode:	Modulated	**T (°C):**	22.8
Test Date:	26/03/2021	**H (%):**	36.0
Test Operator:	ATO & OAT	**P (hPa):**	1014



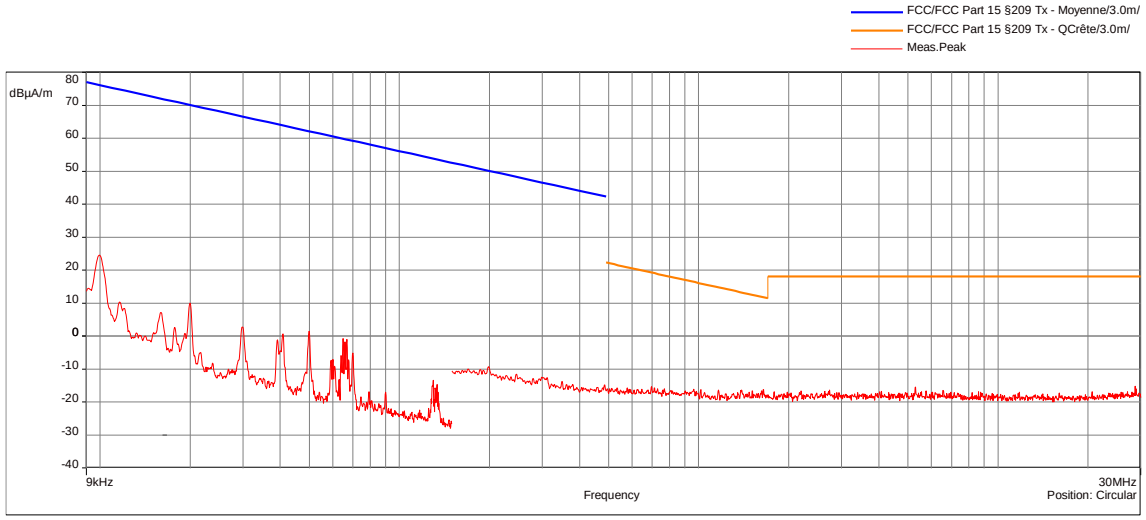
POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Circular	9kHz-150kHz	300Hz	1kHz	Peak
Circular	150kHz-1MHz	10kHz	30kHz	Peak
Circular	1MHz-30MHz	10kHz	30kHz	Peak
Configuration:	N/A			
Comments:	Limit indicated on these plots are calculated with 40 dB/decade extrapolation factor and 51.5dB conversion factor.			
EUT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

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES <30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS / 45°		EMI7064	
EUT mode:	Modulated	**T (°C):**	22.8
Test Date:	26/03/2021	**H (%):**	36.0
Test Operator:	ATO & OAT	**P (hPa):**	1014



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			
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS / 9°		EMI7065	
EUT mode:	Modulated	**T (°C):**	22.8
Test Date:	26/03/2021	**H (%):**	36.0
Test Operator:	ATO & OAT	**P (hPa):**	1014



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 Positions / All Channels / For freq <1GHz	30MHz-1GHz	15.209	EMI7259	**PASS**
Charging + Tx mode / All Positions / All Channels / For freq <1GHz	30MHz-1GHz	15.209	EMI7260	**PASS**
Tx mode / All Positions / Low channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7194	**PASS**
Tx mode / All Positions / Mid channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7195	**PASS**
Tx mode / All Positions / High channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7196	**PASS**
Charging + Tx mode / All Positions / Low channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7206	**PASS**
Charging + Tx mode / All Positions / Mid channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7207	**PASS**
Charging + Tx mode / All Positions / High channel / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7208	**PASS**
Tx mode / All Positions / Low channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7246	**PASS**
Tx mode / All Positions / Mid channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7247	**PASS**
Tx mode / All Positions / High channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7248	**PASS**
Charging + Tx mode / All Positions / Low channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7286	**PASS**
Charging + Tx mode / All Positions / Mid channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7287	**PASS**
Charging + Tx mode / All Positions / High channel / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7288	**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

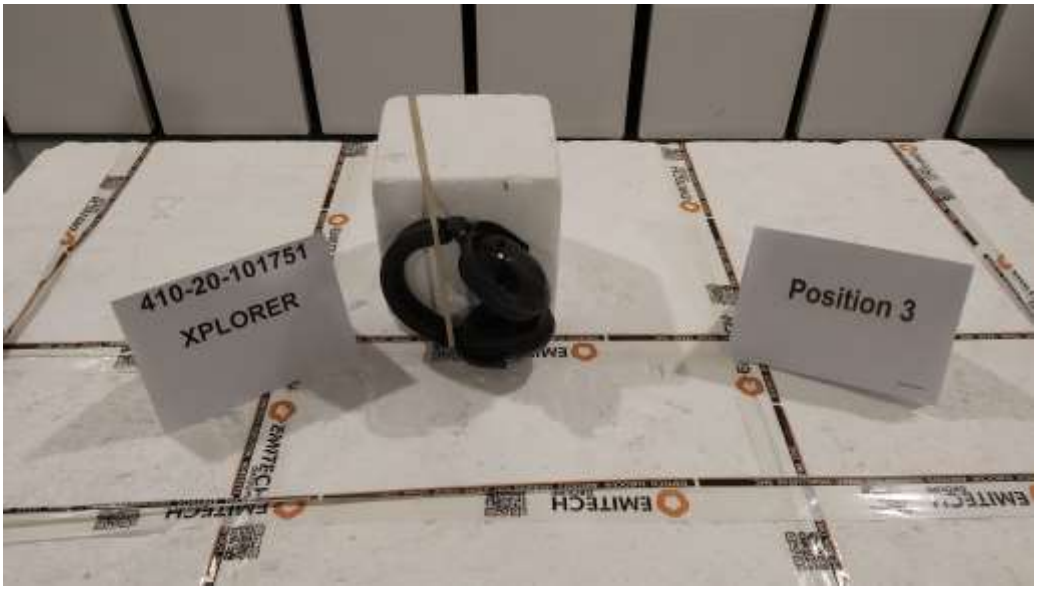
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ- TABULATED RESULTS					
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS / FOR FREQ <1GHZ				EMI7260	
Frequency MHz	**Polarization**	**Level peak dBµV/m**	**Level Qpeak dBµV/m**	**Limit dBµV/m**	**Margin dB**
30.19	Vertical	31.08	23.76	40	-16.24
30.32	Vertical	32.67	24.4	40	-15.6
30.74	Vertical	35.75	26.94	40	-13.06
30.96	Vertical	37.76	28.02	40	-11.98
31.23	Vertical	39.38	29.06	40	-10.94
31.34	Vertical	39.73	29.8	40	-10.2
31.55	Vertical	39.3	30.05	40	-9.95
31.74	Vertical	39.63	30.13	40	-9.87
31.93	Vertical	38.76	29.93	40	-10.07
32.13	Vertical	39.51	30.1	40	-9.9
32.36	Vertical	39.38	29.6	40	-10.4
32.76	Vertical	40.08	29.8	40	-10.2
32.93	Vertical	40.33	30.63	40	-9.37
33.08	Vertical	40.78	23.33	40	-16.67
33.38	Vertical	42.28	25.45	40	-14.55
33.51	Vertical	40.03	24.21	40	-15.79
33.83	Vertical	40.48	24.86	40	-15.14
34.02	Vertical	42.45	27.07	40	-12.93
34.17	Vertical	41.99	26.05	40	-13.95
34.34	Vertical	44.01	27.66	40	-12.34
34.53	Vertical	42.8	26.74	40	-13.26
34.65	Vertical	41.99	27.66	40	-12.34
34.95	Vertical	43.16	28.07	40	-11.93
35.27	Vertical	44.5	27.82	40	-12.18
35.55	Vertical	45.28	29.99	40	-10.01
35.78	Vertical	45.03	31.03	40	-8.97
35.93	Vertical	44.8	30.75	40	-9.25
36.21	Vertical	45.98	32.21	40	-7.79
36.46	Vertical	47.11	32.86	40	-7.14
36.86	Vertical	47.17	32.78	40	-7.22
37.18	Vertical	46.1	31.59	40	-8.41
37.37	Vertical	44.75	29.77	40	-10.23
37.65	Vertical	45.57	31.25	40	-8.75
37.88	Vertical	45.59	31.32	40	-8.68
38.08	Vertical	44.85	30.65	40	-9.35
38.27	Vertical	43.55	29.79	40	-10.21
38.61	Vertical	42.14	28.94	40	-11.06
38.82	Vertical	40.62	27.69	40	-12.31
39.05	Vertical	40.4	27.82	40	-12.18
39.29	Vertical	39.39	26.73	40	-13.27
39.52	Vertical	38.48	25.67	40	-14.33
40.03	Vertical	37.03	24.28	40	-15.72
40.24	Vertical	35.79	23.84	40	-16.16
40.61	Vertical	34.79	22.56	40	-17.44

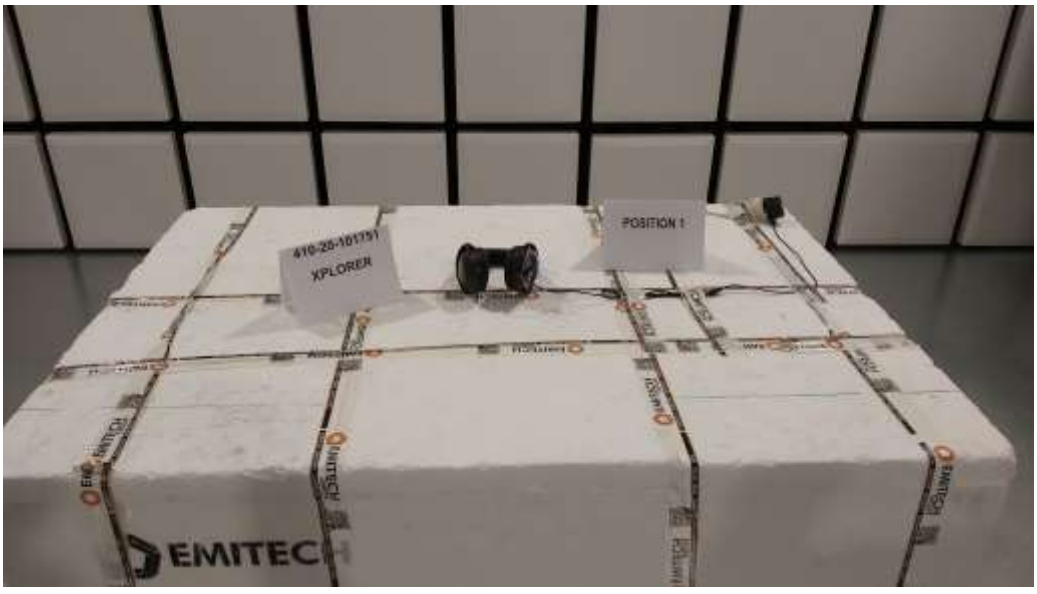
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ- TABULATED RESULTS					
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS / FOR FREQ <1GHZ				EMI7260	
40.99	Vertical	34.96	21.97	40	-18.03
41.16	Vertical	34.8	21.86	40	-18.14
41.39	Vertical	35.69	22.02	40	-17.98
41.77	Vertical	37.44	24.35	40	-15.65
42.01	Vertical	39.94	26.27	40	-13.73
42.33	Vertical	41.03	26.82	40	-13.18
42.58	Vertical	40.13	25.72	40	-14.28
42.90	Vertical	38.37	24.34	40	-15.66
43.20	Vertical	37.48	23.54	40	-16.46
43.56	Vertical	37.29	23.1	40	-16.9
43.88	Vertical	35.57	22.13	40	-17.87
44.43	Vertical	35.35	21.01	40	-18.99
44.83	Vertical	34.92	20.76	40	-19.24
45.30	Vertical	34.72	21.06	40	-18.94
45.79	Vertical	34.78	20.97	40	-19.03
68.04	Vertical	31.05	19.02	40	-20.98
68.19	Vertical	32.03	19.08	40	-20.92
68.40	Vertical	30.46	18.98	40	-21.02
68.59	Vertical	30.49	18.93	40	-21.07
68.70	Vertical	31.22	18.93	40	-21.07
68.83	Vertical	30.63	19.1	40	-20.9
68.98	Vertical	29.37	18.89	40	-21.11
69.08	Vertical	30.01	18.83	40	-21.17
69.21	Vertical	29.21	18.84	40	-21.16
69.42	Vertical	30.23	18.79	40	-21.21
69.55	Vertical	29.2	18.79	40	-21.21
69.68	Vertical	29.22	18.79	40	-21.21
69.74	Vertical	29.91	18.85	40	-21.15
69.93	Vertical	28.83	18.8	40	-21.2
70.08	Vertical	30.04	24.44	40	-15.56
70.27	Vertical	30.66	24.75	40	-15.25
70.49	Vertical	30.36	24.77	40	-15.23
70.61	Vertical	30.52	24.72	40	-15.28
70.83	Vertical	30.85	24.46	40	-15.54
70.91	Vertical	31	24.62	40	-15.38
71.04	Vertical	30.49	24.19	40	-15.81
71.21	Vertical	30.17	23.89	40	-16.11
71.27	Vertical	29.69	23.85	40	-16.15
71.46	Vertical	29.92	23.41	40	-16.59
71.57	Vertical	29.4	23.17	40	-16.83
71.72	Vertical	29.81	22.67	40	-17.33
71.87	Vertical	29.15	22.43	40	-17.57
71.95	Vertical	28.75	22.13	40	-17.87
72.12	Vertical	28.88	21.72	40	-18.28

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

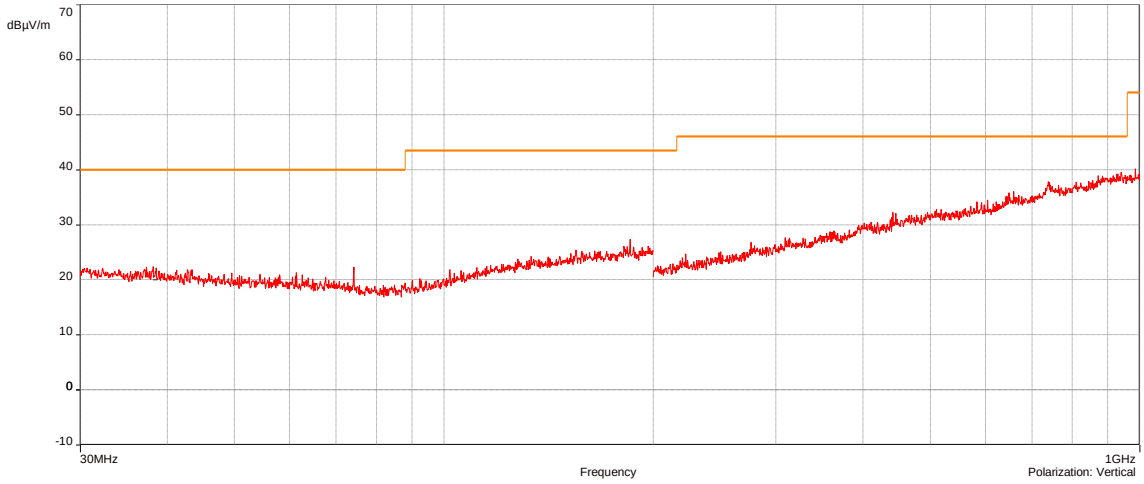

TEST SETUP PHOTO(S) – TX MODE – 30MHZ TO 200MHZ

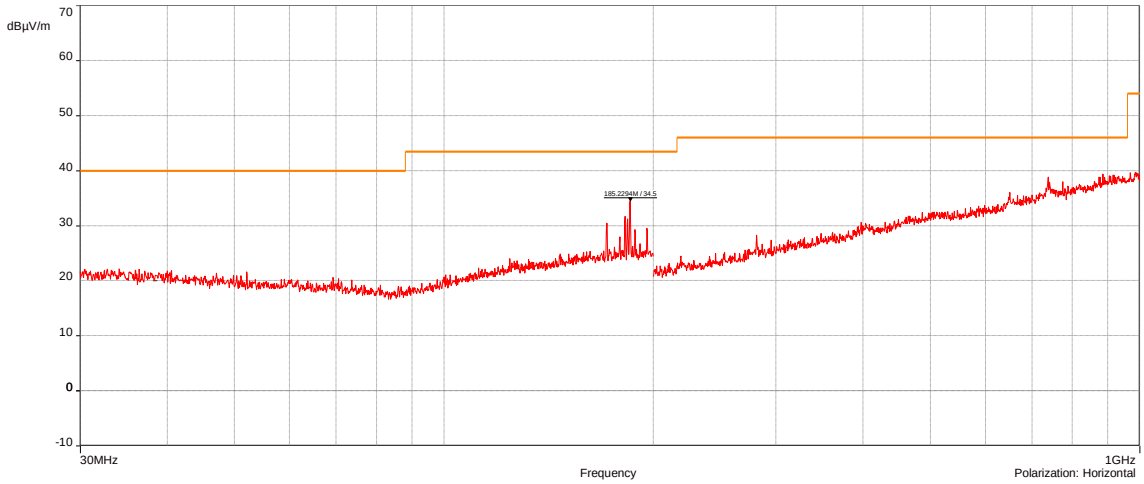

TEST SETUP PHOTO(S) – TX MODE – 200MHZ TO 1GHZ


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


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

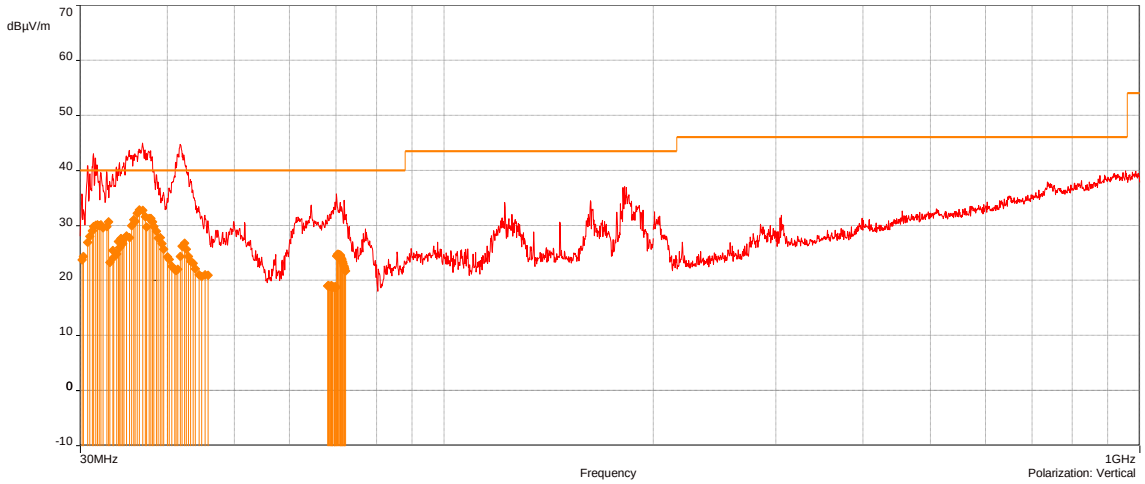

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / ALL CHANNELS / FOR FREQ <1GHZ		EMI7259	
EUT mode:	D-M2	**T (°C):**	17.0
Test Date:	Modulated	**H (%):**	42.2
Test Operator:	ATO & OAT	**P (hPa):**	1007

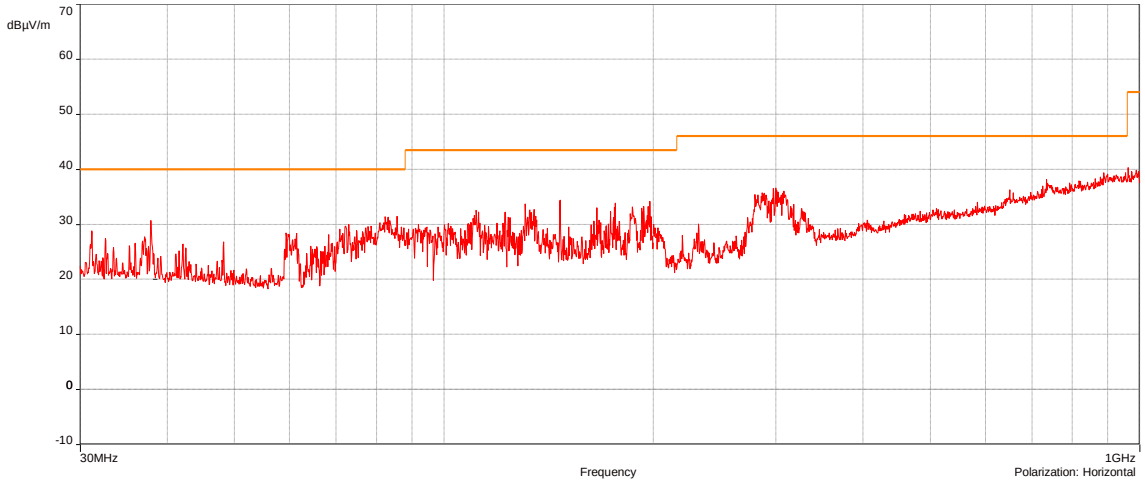




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	30MHz-200MHz	100kHz	300kHz	Peak
Horizontal	30MHz-200MHz	100kHz	300kHz	Peak
Horizontal	200MHz-1GHz	100kHz	300kHz	Peak
Vertical	200MHz-1GHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

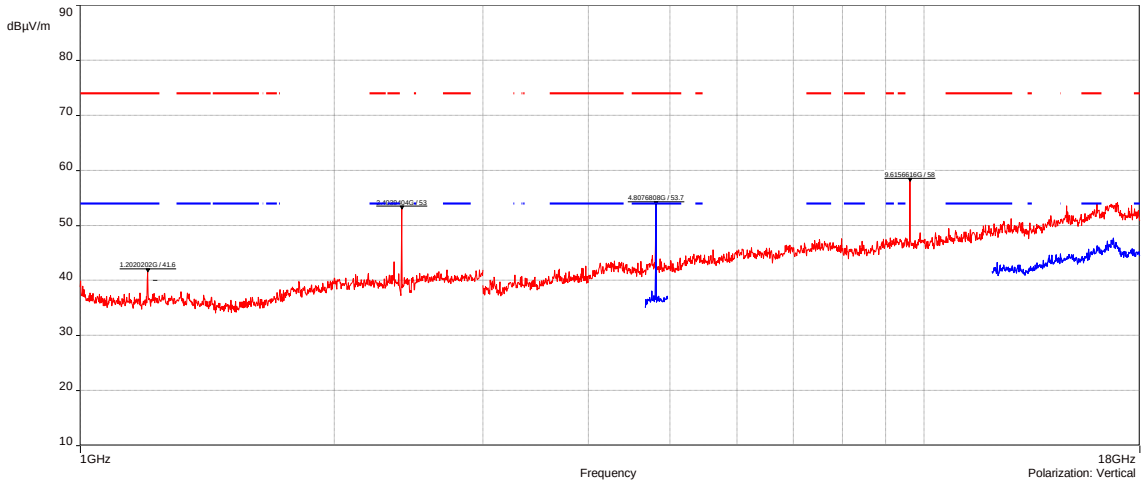
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / ALL CHANNELS / FOR FREQ <1GHZ		EMI7260	
EUT mode:	Modulated	**T (°C):**	17.0
Test Date:	09/04/2021	**H (%):**	42.2
Test Operator:	ATO & OAT	**P (hPa):**	1007

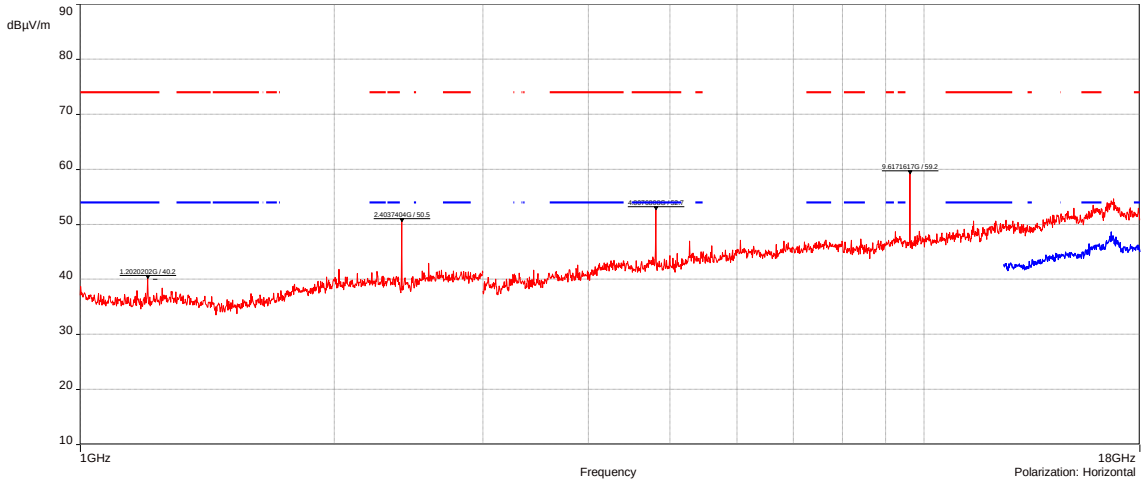




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	30MHz-200MHz	100kHz	300kHz	Peak
Horizontal	30MHz-200MHz	100kHz	300kHz	Peak
Vertical	200MHz-1GHz	100kHz	300kHz	Peak
Horizontal	200MHz-1GHz	100kHz	300kHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

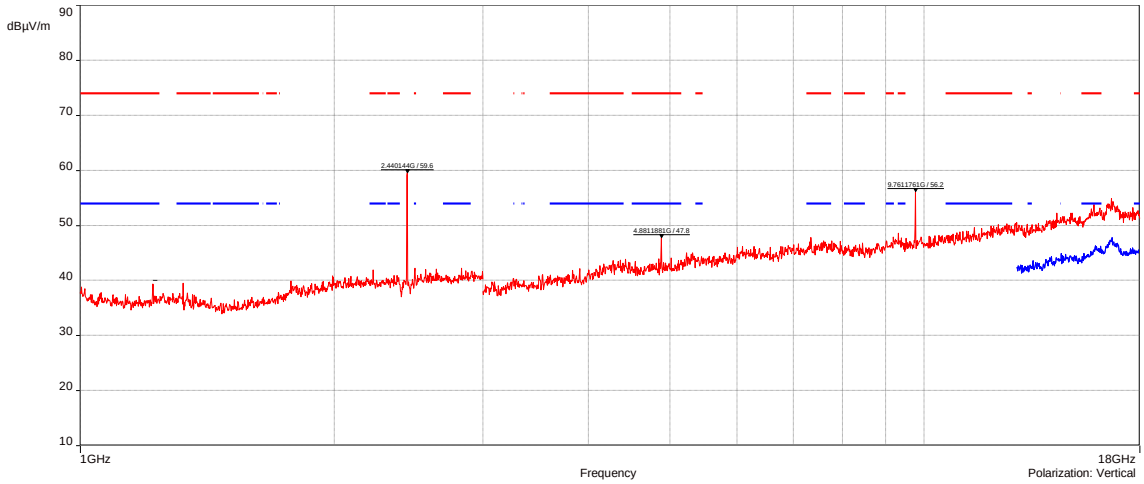
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / LOW CHANNEL / 1GHZ TO 18GHZ		EMI7194	
EUT mode:	Modulated	**T (°C):**	23.8
Test Date:	06/04/2021	**H (%):**	24.1
Test Operator:	ATO & OAT	**P (hPa):**	1009

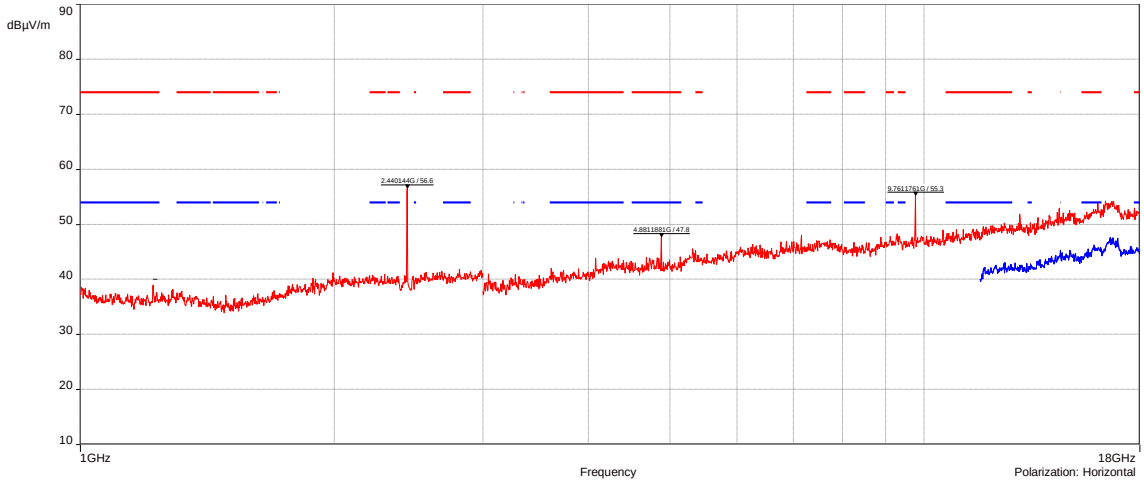




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	4.6GHz-5GHz	1MHz	50kHz	Peak
Vertical	10GHz-18GHz	1MHz	50kHz	Peak
Horizontal	10GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	2.4GHz is due to operating frequency			
EUT modification(s): N/A				

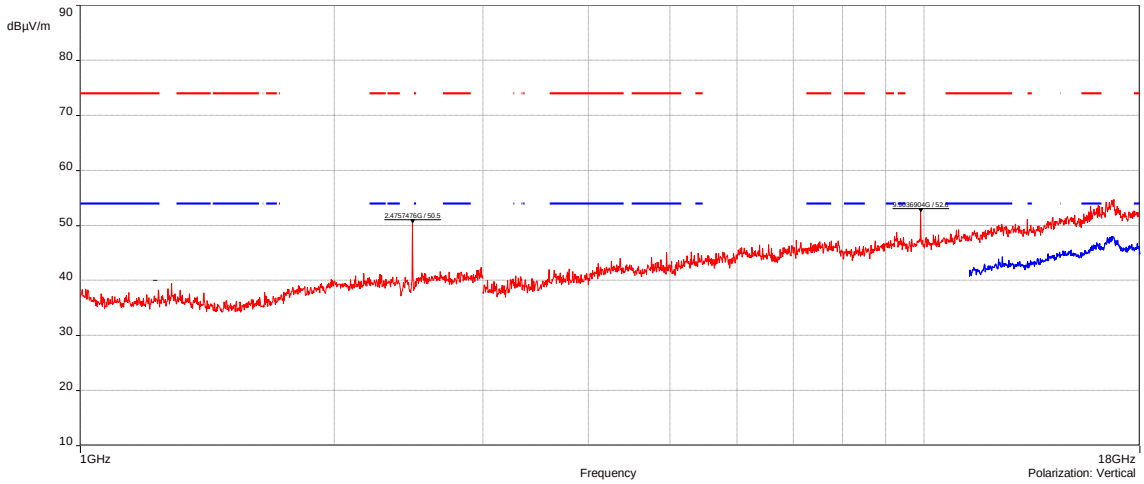
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / MID CHANNEL / 1GHZ TO 18GHZ		EMI7195	
EUT mode:	Modulated	**T (°C):**	23.8
Test Date:	06/04/2021	**H (%):**	24.1
Test Operator:	ATO & OAT	**P (hPa):**	1009

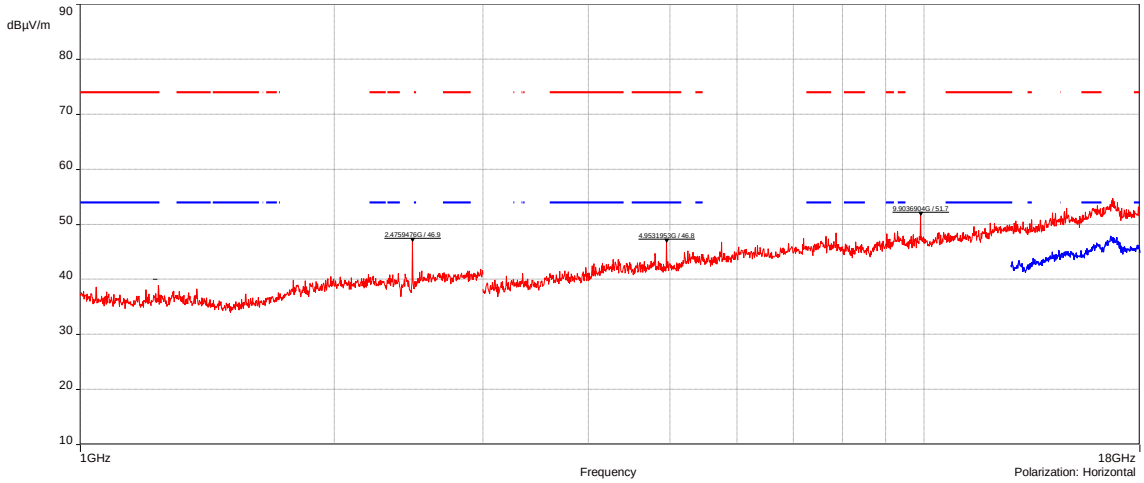




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	10GHz-18GHz	1MHz	50kHz	Peak
Horizontal	10GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	2.4GHz is due to operating frequency			
EUT modification(s): N/A				

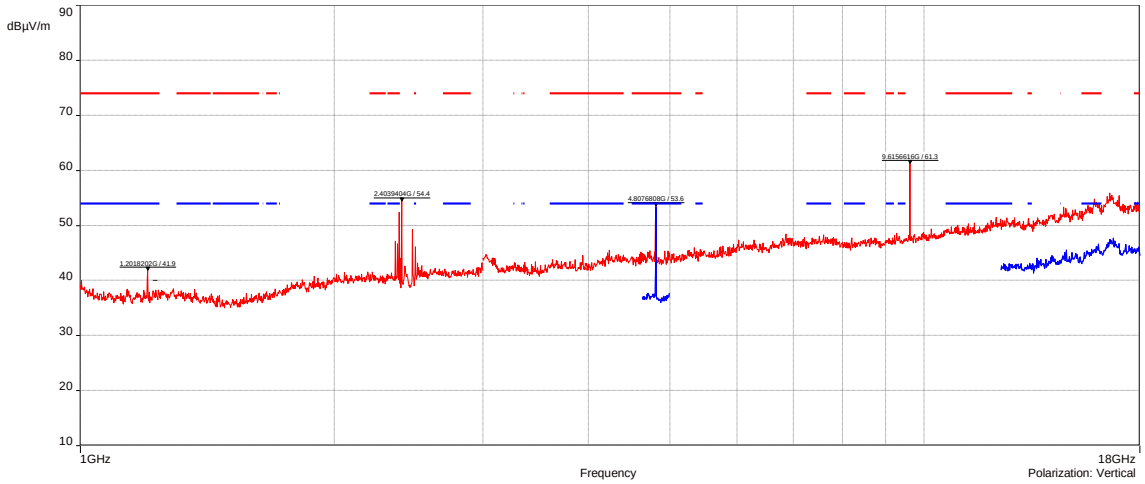
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / HIGH CHANNEL / 1GHZ TO 18GHZ		EMI7196	
EUT mode:	Modulated	**T (°C):**	23.8
Test Date:	06/04/2021	**H (%):**	24.1
Test Operator:	ATO & OAT	**P (hPa):**	1009

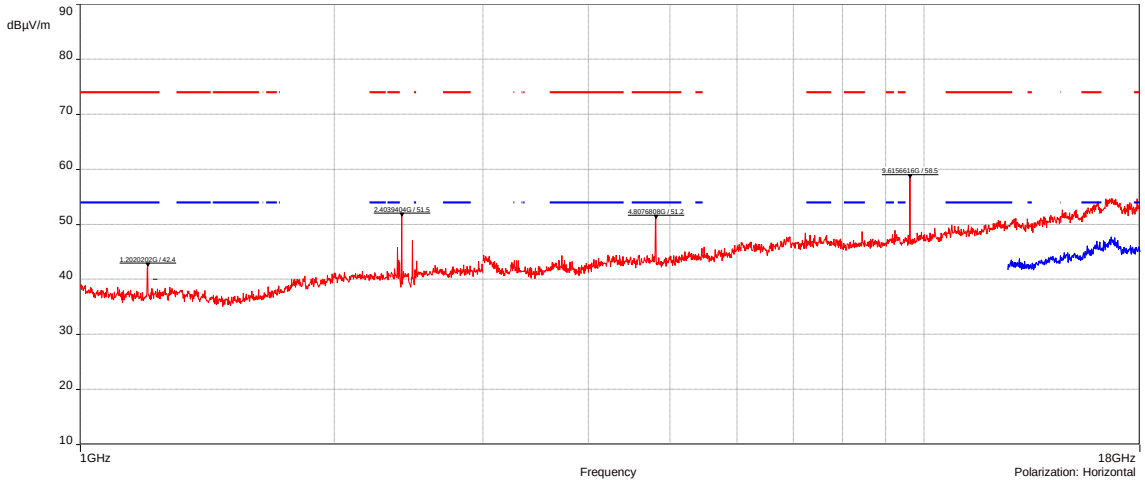




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	10GHz-18GHz	1MHz	50kHz	Peak
Horizontal	10GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	2.4GHz is due to operating frequency			
EUT modification(s): N/A				

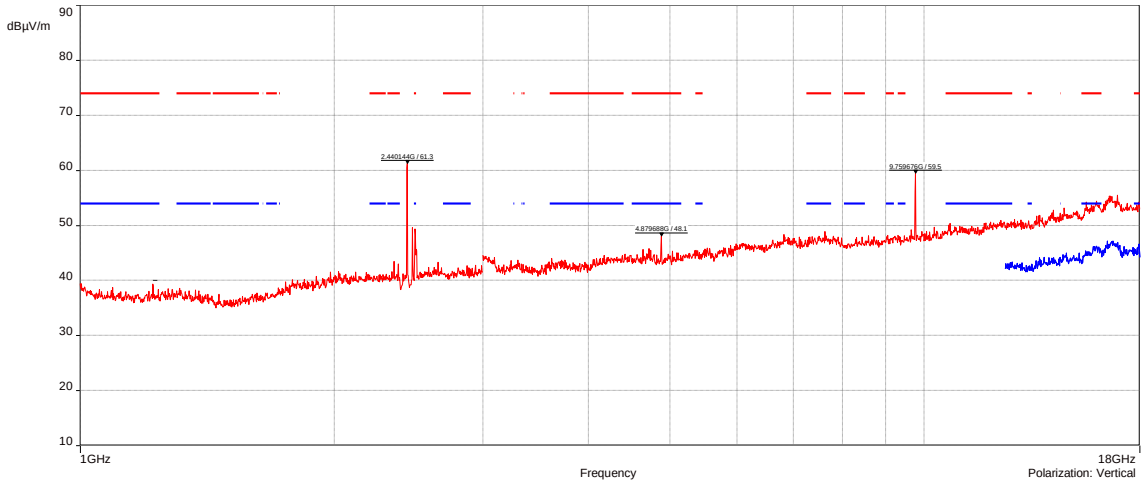
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / LOW CHANNEL / 1GHZ TO 18GHZ		EMI7206	
EUT mode:	Modulated	**T (°C):**	20.4
Test Date:	07/04/2021	**H (%):**	17.0
Test Operator:	ATO & OAT	**P (hPa):**	1017

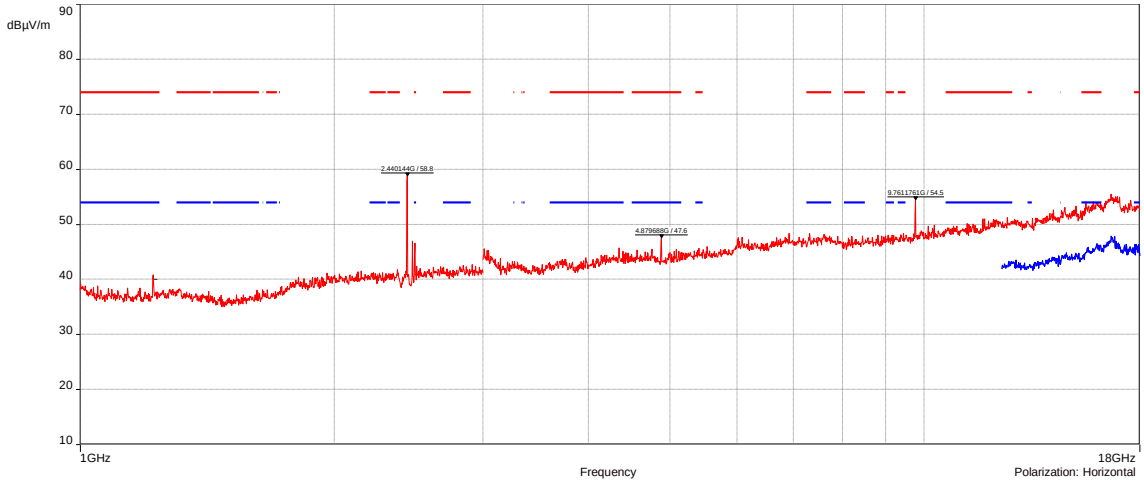




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	10GHz-18GHz	1MHz	50kHz	Peak
Horizontal	10GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	2.4GHz is due to operating frequency			
EUT modification(s): N/A				

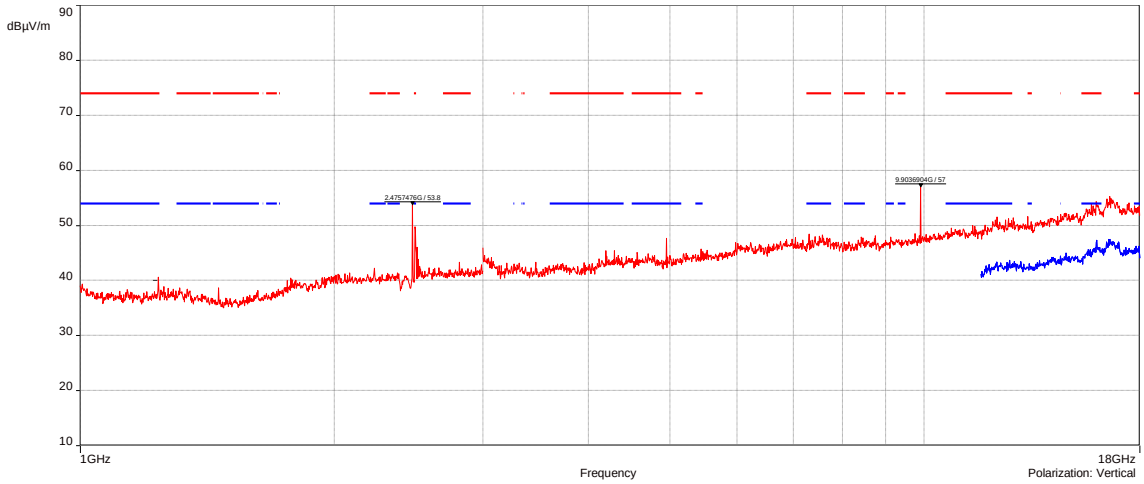
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / MID CHANNEL / 1GHZ TO 18GHZ		EMI7207	
EUT mode:	D-M2	**T (°C):**	20.4
Test Date:	07/04/2021	**H (%):**	17.0
Test Operator:	ATO & OAT	**P (hPa):**	1017

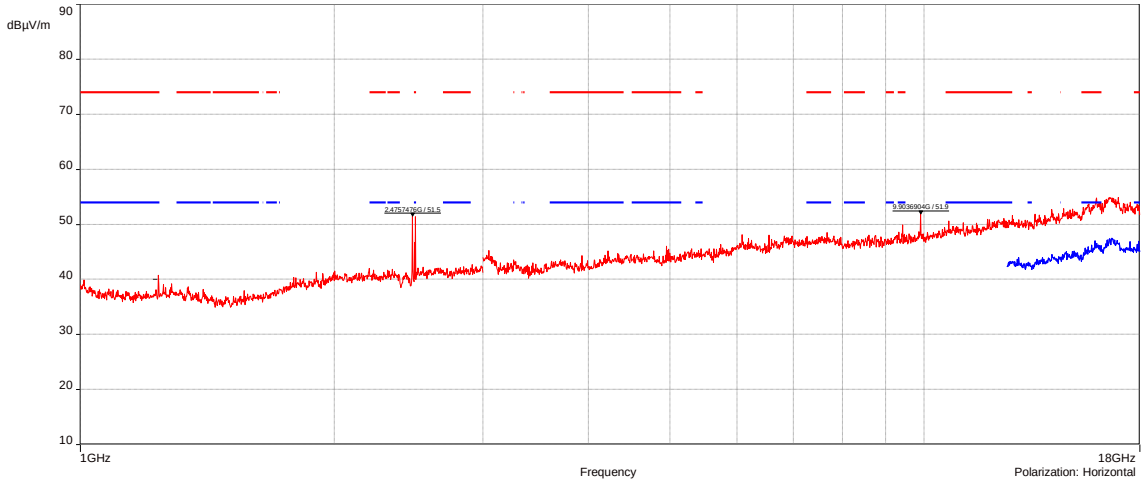




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	10GHz-18GHz	1MHz	50kHz	Peak
Horizontal	10GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	2.4GHz is due to operating frequency			
EUT modification(s): N/A				

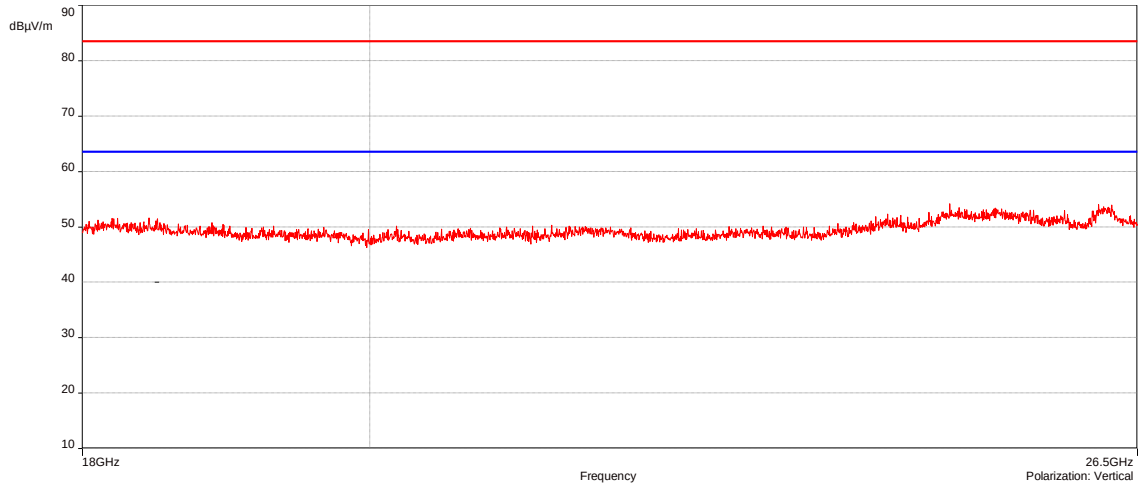
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / HIGH CHANNEL / 1GHZ TO 18GHZ		EMI7208	
EUT mode:	D-M2	**T (°C):**	20.4
Test Date:	07/04/2021	**H (%):**	17.0
Test Operator:	ATO & OAT	**P (hPa):**	1017

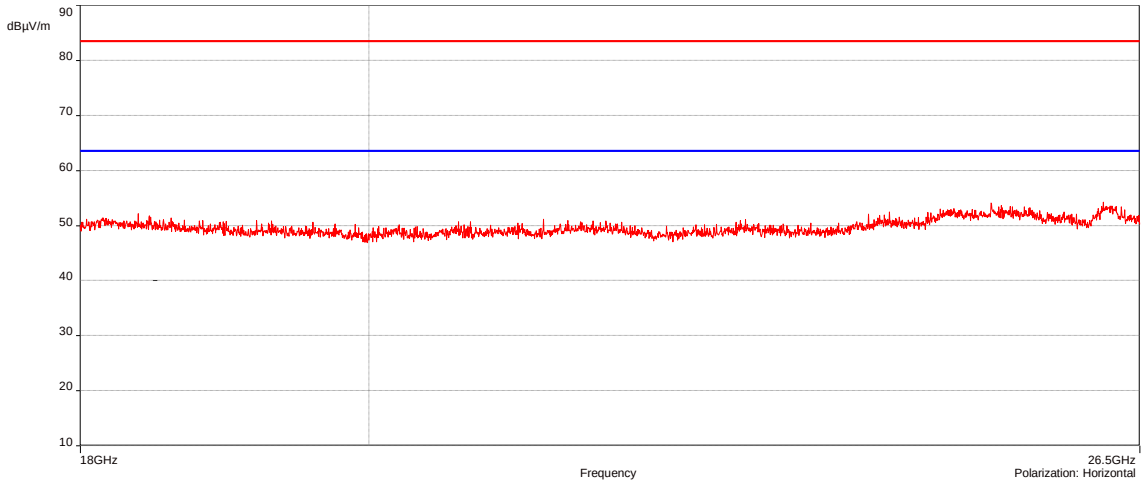




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	1GHz-3GHz	1MHz	3MHz	Peak
Horizontal	1GHz-3GHz	1MHz	3MHz	Peak
Vertical	3GHz-18GHz	1MHz	3MHz	Peak
Horizontal	3GHz-18GHz	1MHz	3MHz	Peak
Vertical	10GHz-18GHz	1MHz	50kHz	Peak
Horizontal	10GHz-18GHz	1MHz	50kHz	Peak
Configuration:	N/A			
Comments:	2.4GHz is due to operating frequency			
EUT modification(s): N/A				

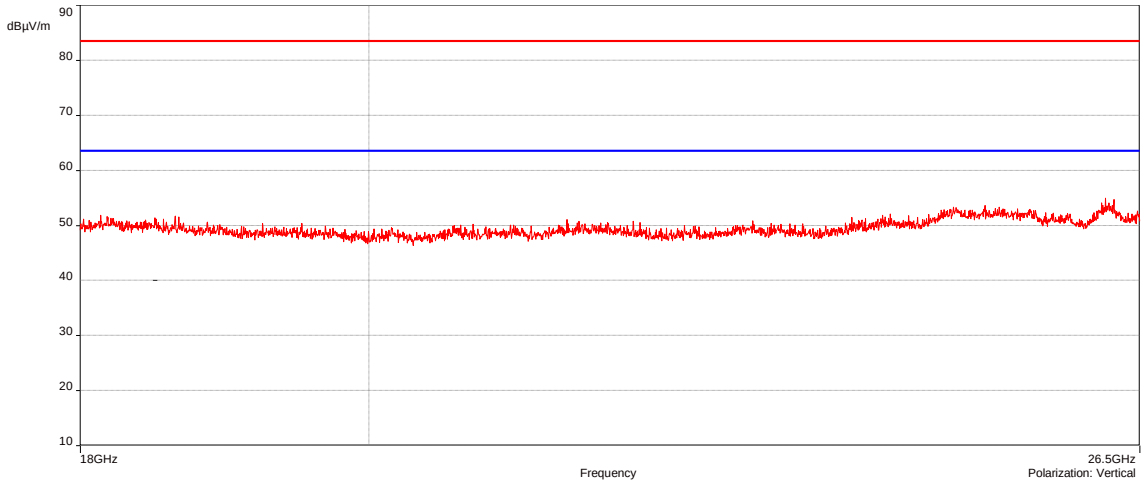
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / LOW CHANNEL / 18GHZ TO 26.5GHZ		EMI7246	
EUT mode:	Modulated	**T (°C):**	21.6
Test Date:	08/04/2021	**H (%):**	25.4
Test Operator:	ATO & OAT	**P (hPa):**	1015

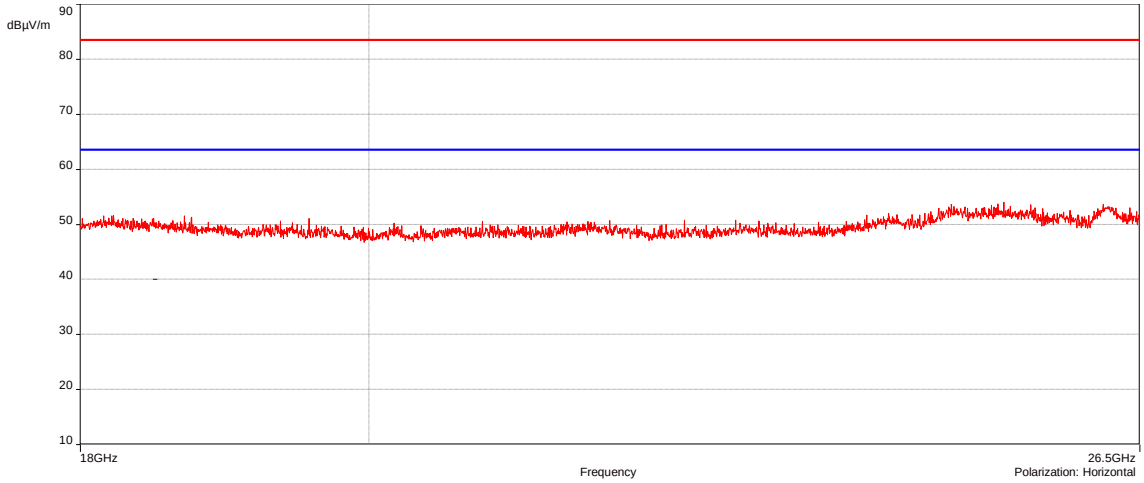




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

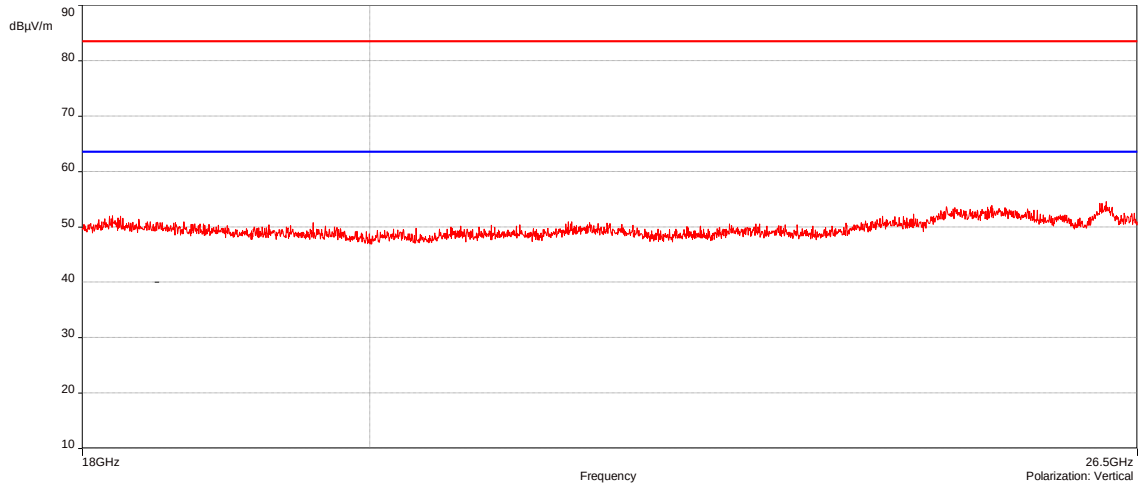
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / MID CHANNEL / 18GHZ TO 26.5GHZ		EMI7247	
EUT mode:	Modulated	**T (°C):**	21.6
Test Date:	08/04/2021	**H (%):**	25.4
Test Operator:	ATO & OAT	**P (hPa):**	1015

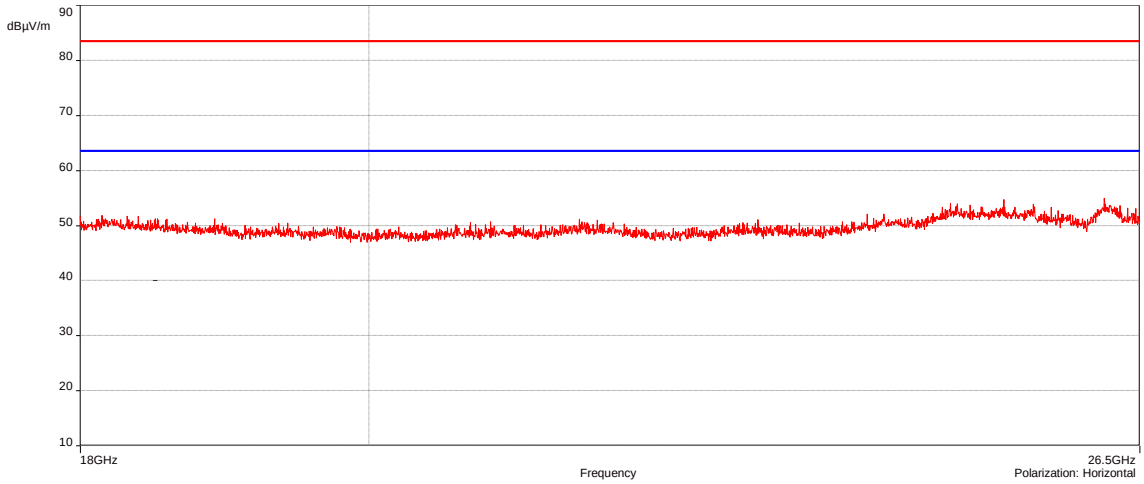




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

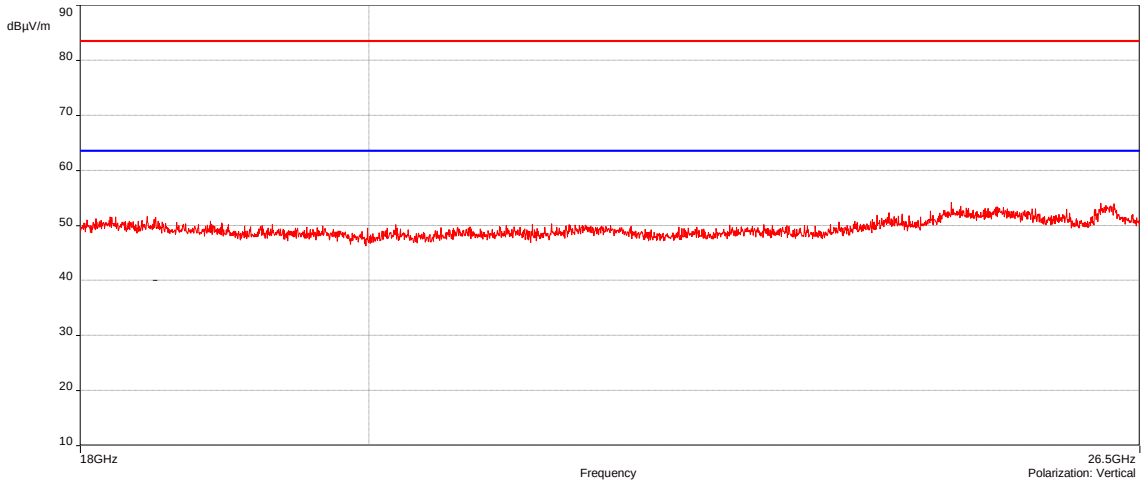
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
TX MODE / ALL POSITIONS / HIGH CHANNEL / 18GHZ TO 26.5GHZ		EMI7248	
EUT mode:	Modulated	**T (°C):**	21.6
Test Date:	08/04/2021	**H (%):**	25.4
Test Operator:	ATO & OAT	**P (hPa):**	1015

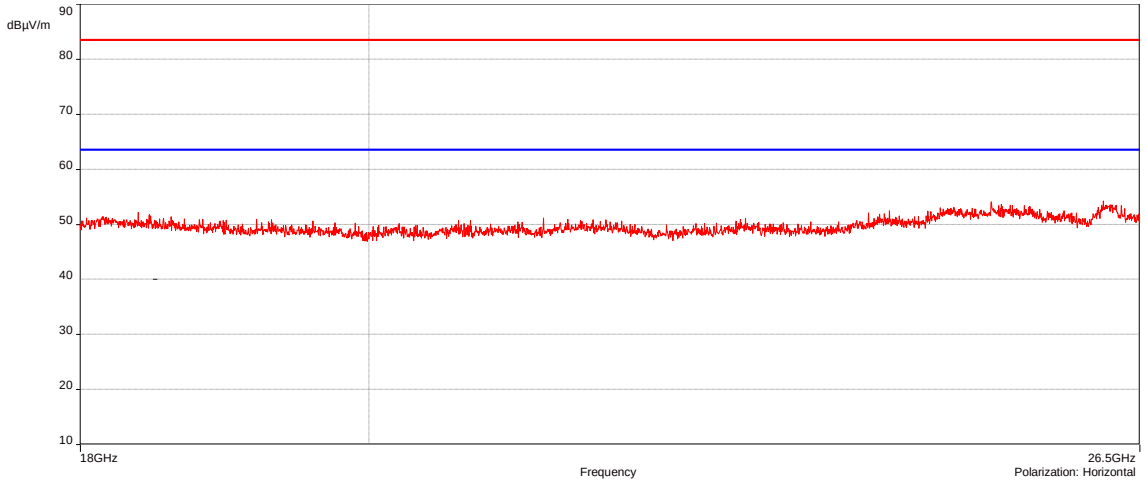




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

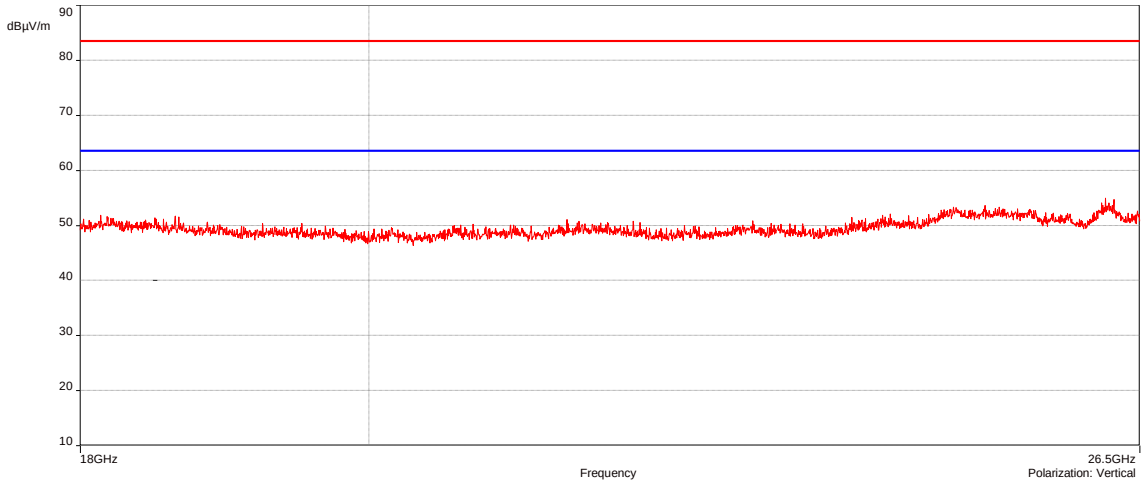
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / LOW CHANNEL / 18GHZ TO 26.5GHZ		EMI7286	
EUT mode:	Modulated	**T (°C):**	21.6
Test Date:	08/04/2021	**H (%):**	25.4
Test Operator:	ATO & OAT	**P (hPa):**	1015

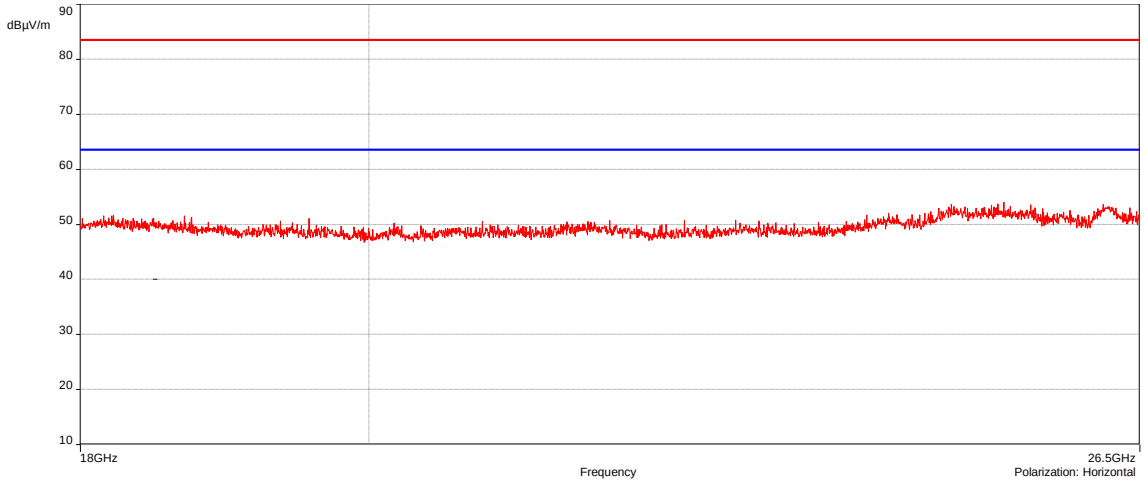




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

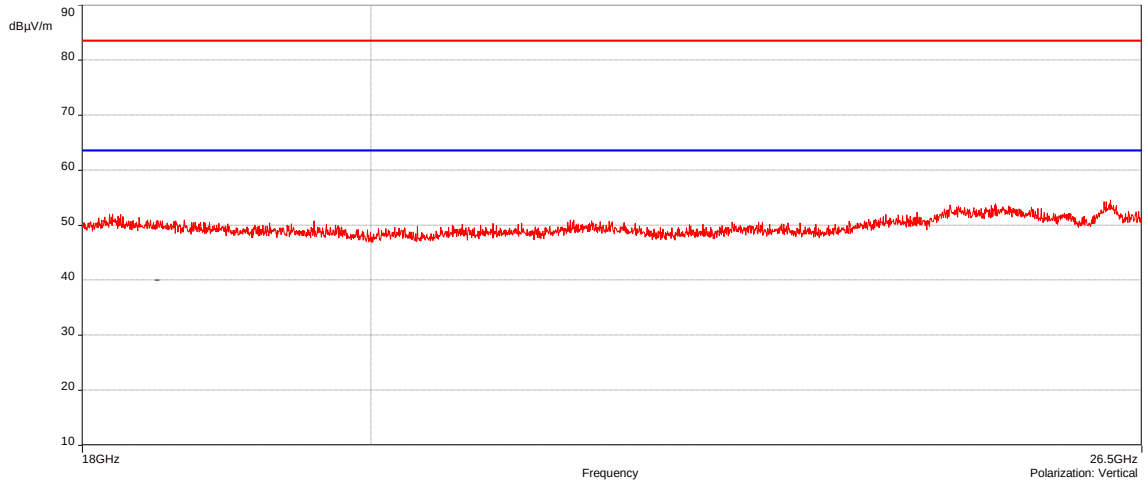
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / MID CHANNEL / 18GHZ TO 26.5GHZ		EMI7287	
EUT mode:	Modulated	**T (°C):**	21.6
Test Date:	08/04/2021	**H (%):**	25.4
Test Operator:	ATO & OAT	**P (hPa):**	1015

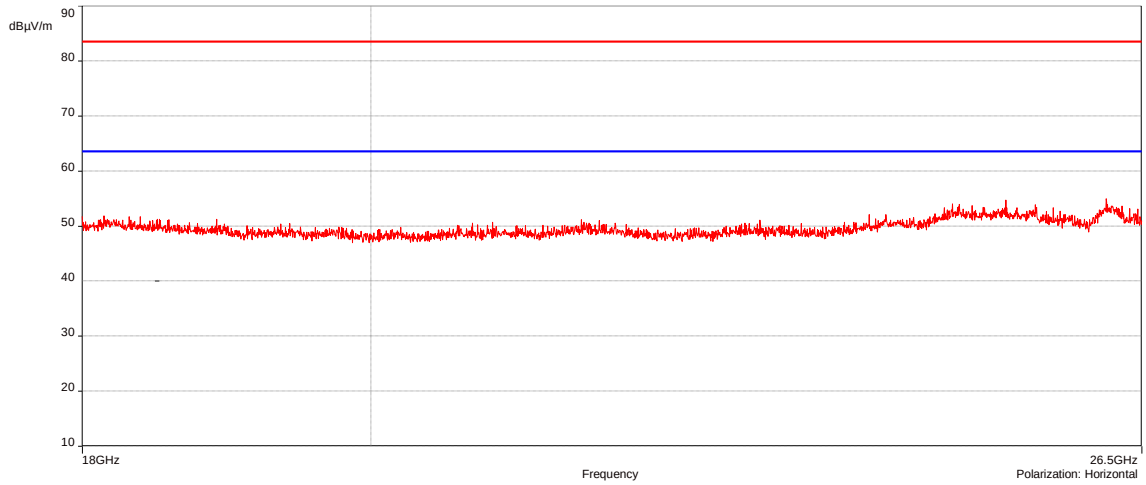




POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + TX MODE / ALL POSITIONS / HIGH CHANNEL / 18GHZ TO 26.5GHZ		EMI7288	
EUT mode:	Modulated	**T (°C):**	21.6
Test Date:	08/04/2021	**H (%):**	25.4
Test Operator:	ATO & OAT	**P (hPa):**	1015





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				

8.9. 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	EMI7266	**PASS**
Charging + Rx mode / All Positions / All channels	30MHz-1GHz	15.209	EMI7267	**PASS**
Rx mode / All Positions / All channels / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7073	**PASS**
Charging + Rx mode / All Positions / All channels / 1GHz to 18GHz	1GHz-18GHz	15.209	EMI7075	**PASS**
Rx mode / All Positions / All channels / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7300	**PASS**
Charging + Rx mode / All Positions / All channels / 18GHz to 26.5GHz	18GHz-26.5GHz	15.209	EMI7311	**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

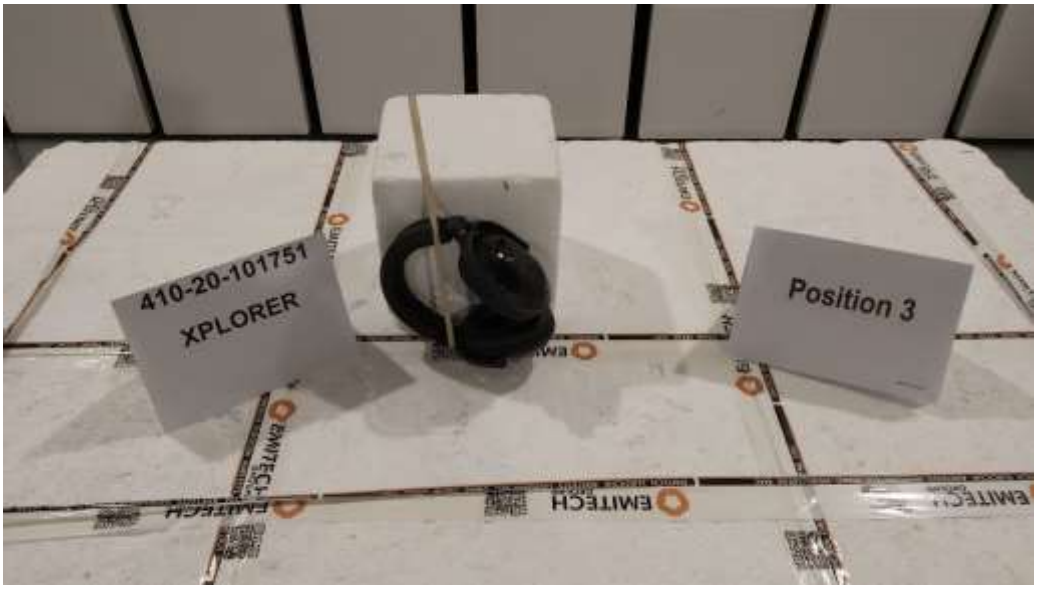
BAT-EMC software version: V3.18.0.26 Blank cells = Permanent validity

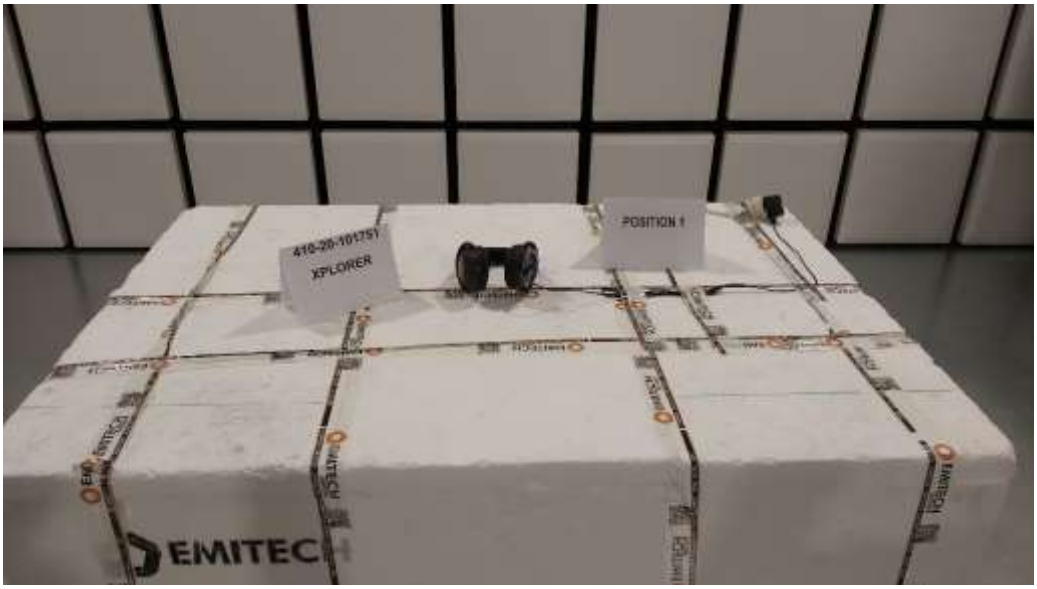
RADIATED SPURIOUS EMISSIONS (RECEIVER)- TABULATED RESULTS					
CHARGING + RX MODE / ALL POSITIONS / ALL CHANNELS / FOR FREQ <1GHZ				EMI7267	
Frequency MHz	**Polarization**	**Level peak dBµV/m**	**Level Qpeak dBµV/m**	**Limit dBµV/m**	**Margin dB**
30.14	Vertical	31.21	23.89	40	-16.11
30.88	Vertical	37.43	27.82	40	-12.18
30.99	Vertical	37.7	28.14	40	-11.86
31.55	Vertical	39.68	30.29	40	-9.71
31.89	Vertical	39.29	30.45	40	-9.55
32.07	Vertical	38.52	29.96	40	-10.04
32.38	Vertical	39.17	30.16	40	-9.84
32.62	Vertical	41.01	30.12	40	-9.88
32.81	Vertical	39.58	23.86	40	-16.14
33.20	Vertical	41.09	23.79	40	-16.21
33.43	Vertical	41.78	26.17	40	-13.83
33.60	Vertical	40.51	24.73	40	-15.27
33.79	Vertical	42.05	26.77	40	-13.23
34.25	Vertical	41.92	26.41	40	-13.59
34.71	Vertical	42.3	27.71	40	-12.29
34.96	Vertical	43.84	27.66	40	-12.34
35.29	Vertical	43.86	28.76	40	-11.24
35.56	Vertical	45.25	30.24	40	-9.76
35.66	Vertical	44.05	28.45	40	-11.55
36.38	Vertical	45.57	30.85	40	-9.15
36.90	Vertical	46.41	31.13	40	-8.87
37.16	Vertical	44.58	29.9	40	-10.1
37.28	Vertical	45.43	30.61	40	-9.39
37.57	Vertical	44.67	29.69	40	-10.31
37.77	Vertical	45.38	31.07	40	-8.93
38.01	Vertical	44.71	30.29	40	-9.71
38.96	Vertical	40.17	27.45	40	-12.55
39.45	Vertical	38.1	25.87	40	-14.13
39.67	Vertical	37.46	25.11	40	-14.89
40.01	Vertical	36.89	24.13	40	-15.87
40.34	Vertical	36.47	23.23	40	-16.77
40.59	Vertical	34.34	22.2	40	-17.8
40.86	Vertical	34.66	21.94	40	-18.06
41.24	Vertical	35.01	21.51	40	-18.49
41.65	Vertical	37.05	23.38	40	-16.62
41.90	Vertical	38.97	25.51	40	-14.49
42.11	Vertical	40.29	26.43	40	-13.57
42.43	Vertical	40.79	26.59	40	-13.41
42.62	Vertical	40.36	25.65	40	-14.35
42.94	Vertical	38.26	24.27	40	-15.73
43.30	Vertical	37.46	23.49	40	-16.51
43.74	Vertical	35.42	22.05	40	-17.95
44.25	Vertical	34.76	21.23	40	-18.77
44.86	Vertical	34.8	20.81	40	-19.19

RADIATED SPURIOUS EMISSIONS (RECEIVER)- TABULATED RESULTS					
CHARGING + RX MODE / ALL POSITIONS / ALL CHANNELS / FOR FREQ <1GHZ				EMI7267	
45.15	Vertical	34.22	20.3	40	-19.7
45.44	Vertical	34.67	21.05	40	-18.95
45.73	Vertical	35.12	21.32	40	-18.68
46.15	Vertical	34.39	20.25	40	-19.75
46.39	Vertical	34.15	20.18	40	-19.82
47.04	Vertical	35.73	21.71	40	-18.29
47.32	Vertical	35.77	21.26	40	-18.74
47.49	Vertical	35.44	21.71	40	-18.29
48.43	Vertical	35.32	21.74	40	-18.26
48.67	Vertical	35.56	21.71	40	-18.29
48.92	Vertical	34.94	22.61	40	-17.39
49.06	Vertical	35.13	22.51	40	-17.49
49.47	Vertical	34.31	22.09	40	-17.91
50.16	Vertical	34.23	21.59	40	-18.41
50.30	Vertical	34.08	21.17	40	-18.83
50.73	Vertical	33.61	21.1	40	-18.9
51.01	Vertical	33.69	20.75	40	-19.25
51.15	Vertical	33.68	20.14	40	-19.86
51.66	Vertical	33.42	19.95	40	-20.05
51.81	Vertical	33.39	19.89	40	-20.11
51.93	Vertical	32.68	19.72	40	-20.28
52.10	Vertical	33.11	19.71	40	-20.29
52.63	Vertical	32.64	19.34	40	-20.66
53.02	Vertical	32.16	19.03	40	-20.97

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

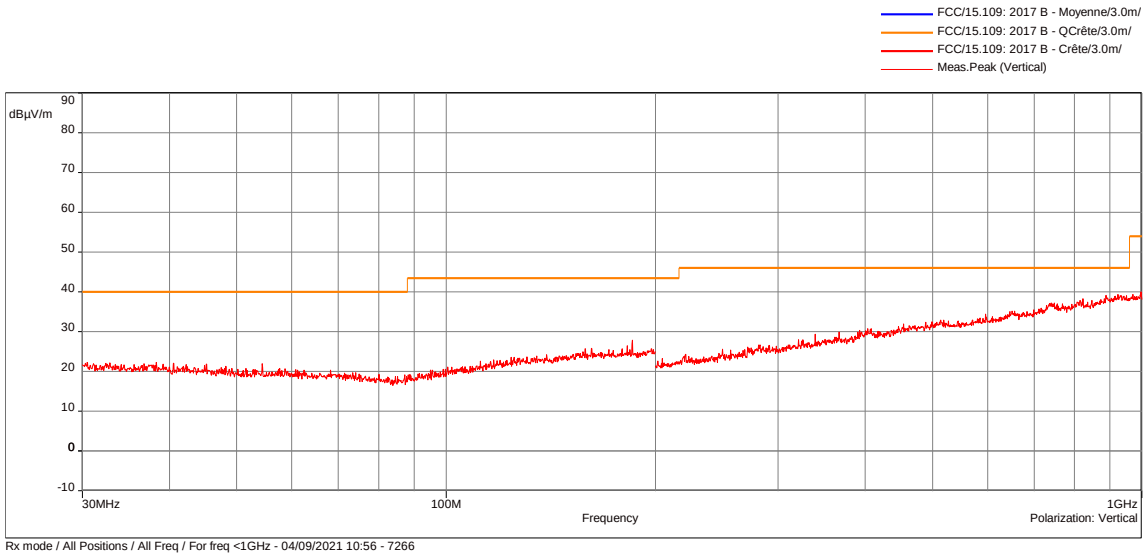

TEST SETUP PHOTO(S) – RX MODE – 30MHZ TO 200MHZ


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

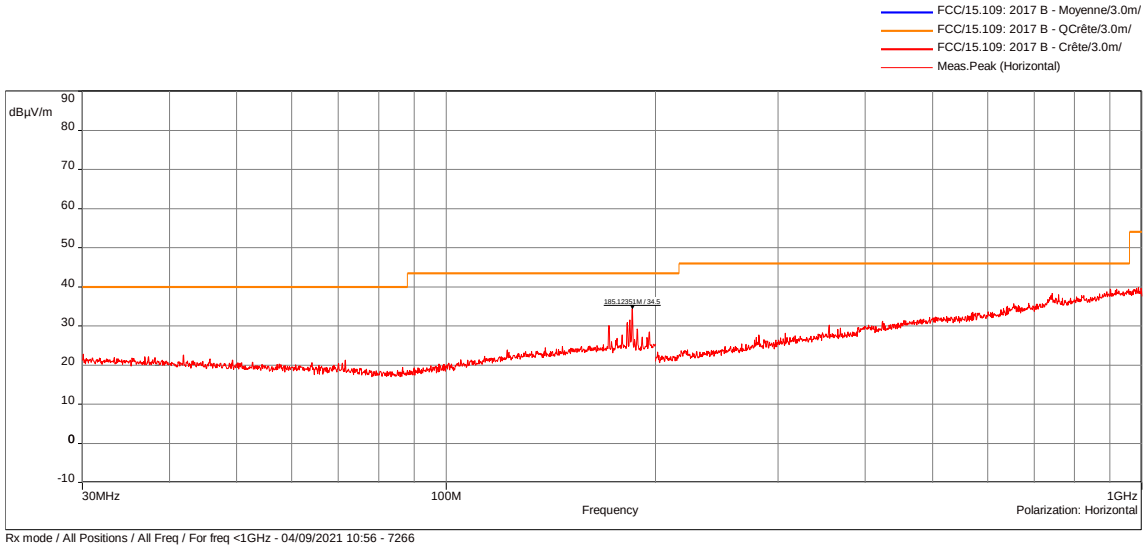

TEST SETUP PHOTO(S) – RX MODE – 1GHZ TO 18GHZ


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


TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
RX MODE / ALL POSITIONS / ALL FREQ / FOR FREQ <1GHZ		EMI7266	
EUT mode:	Rx mode	**T (°C):**	17.0
Test Date:	09/04/2021	**H (%):**	42.2
Test Operator:	ATO & OAT	**P (hPa):**	1007



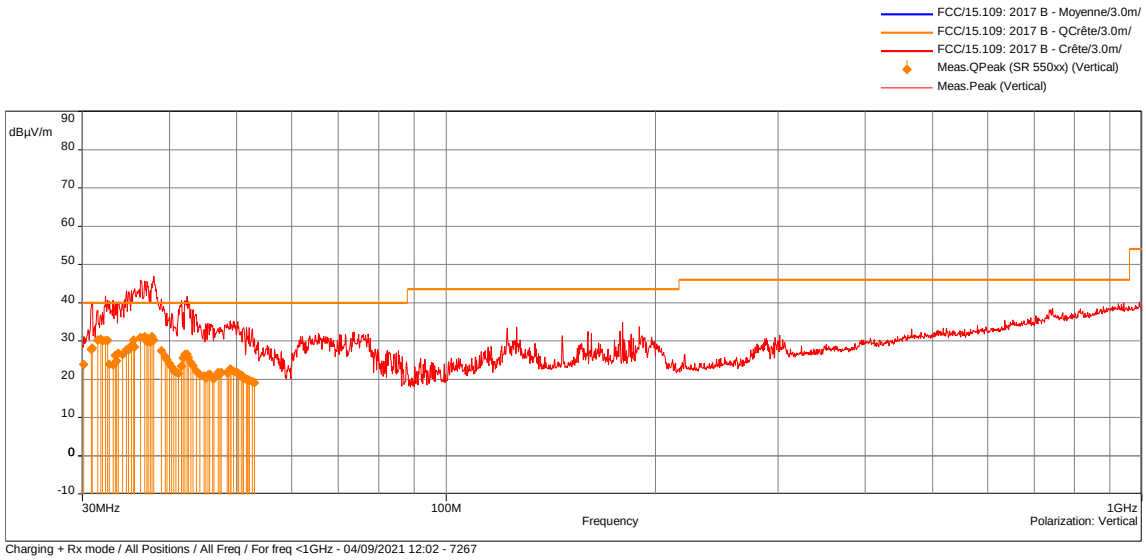
Rx mode / All Positions / All Freq / For freq <1GHz - 04/09/2021 10:56 - 7266



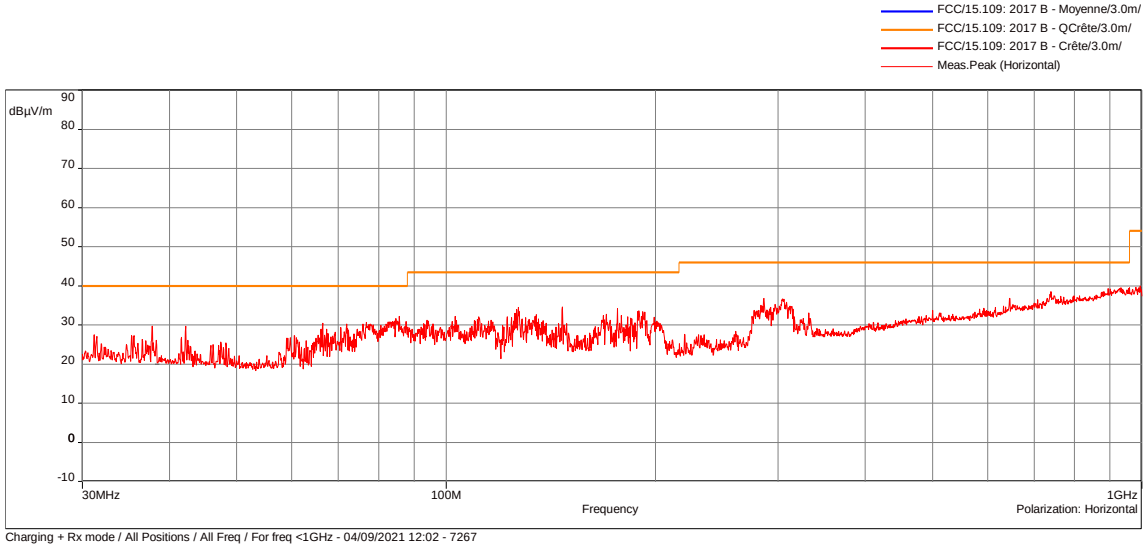
Rx mode / All Positions / All Freq / For freq <1GHz - 04/09/2021 10:56 - 7266

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 + RX MODE / ALL POSITIONS / ALL FREQ / FOR FREQ <1GHZ		EMI7267	
EUT mode:	Rx mode	**T (°C):**	17.0
Test Date:	09/04/2021	**H (%):**	42.2
Test Operator:	ATO & OAT	**P (hPa):**	1007



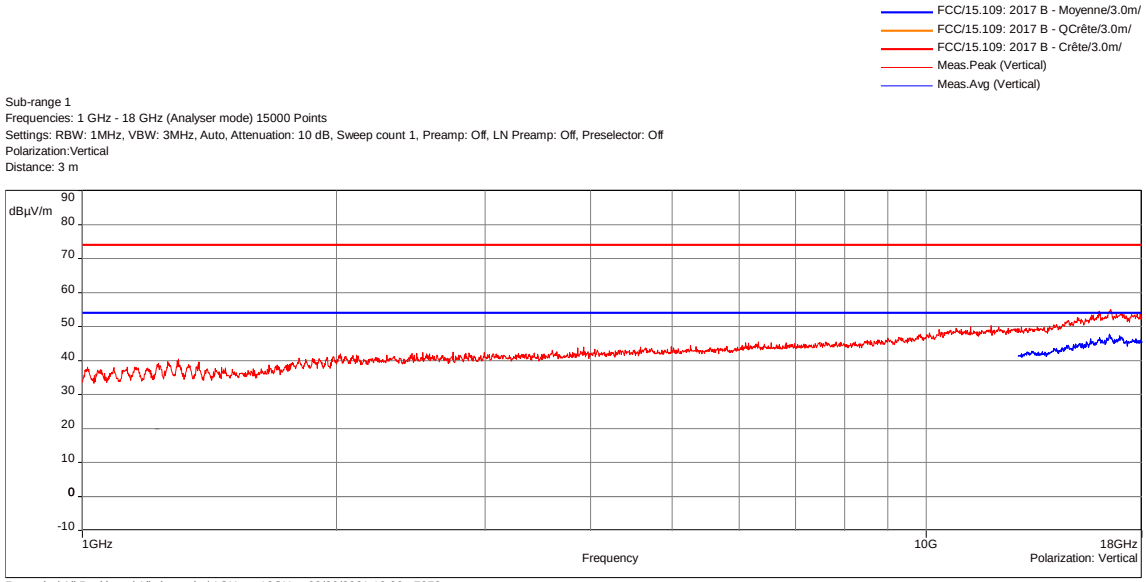
Charging + Rx mode / All Positions / All Freq / For freq <1GHz - 04/09/2021 12:02 - 7267



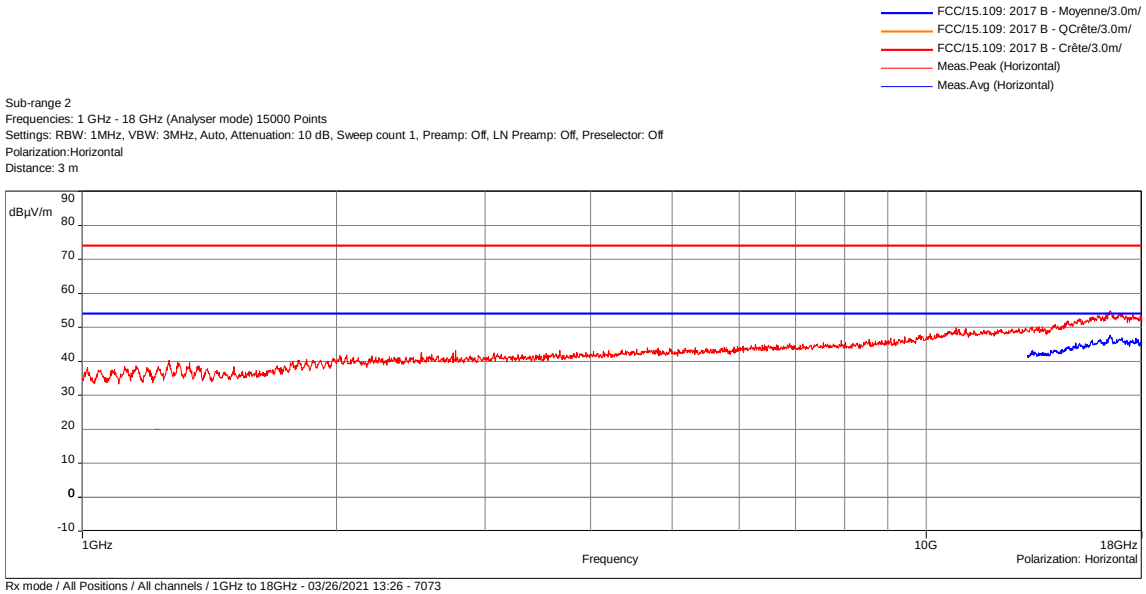
Charging + Rx mode / All Positions / All Freq / For freq <1GHz - 04/09/2021 12:02 - 7267

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				

RECEIVER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
RX MODE / ALL POSITIONS / ALL CHANNELS / 1GHZ TO 18GHZ		EMI7073	
EUT mode:	Rx mode	**T (°C):**	23.7
Test Date:	26/03/2021	**H (%):**	35.9
Test Operator:	ATO & OAT	**P (hPa):**	1015



Rx mode / All Positions / All channels / 1GHz to 18GHz - 03/26/2021 13:26 - 7073



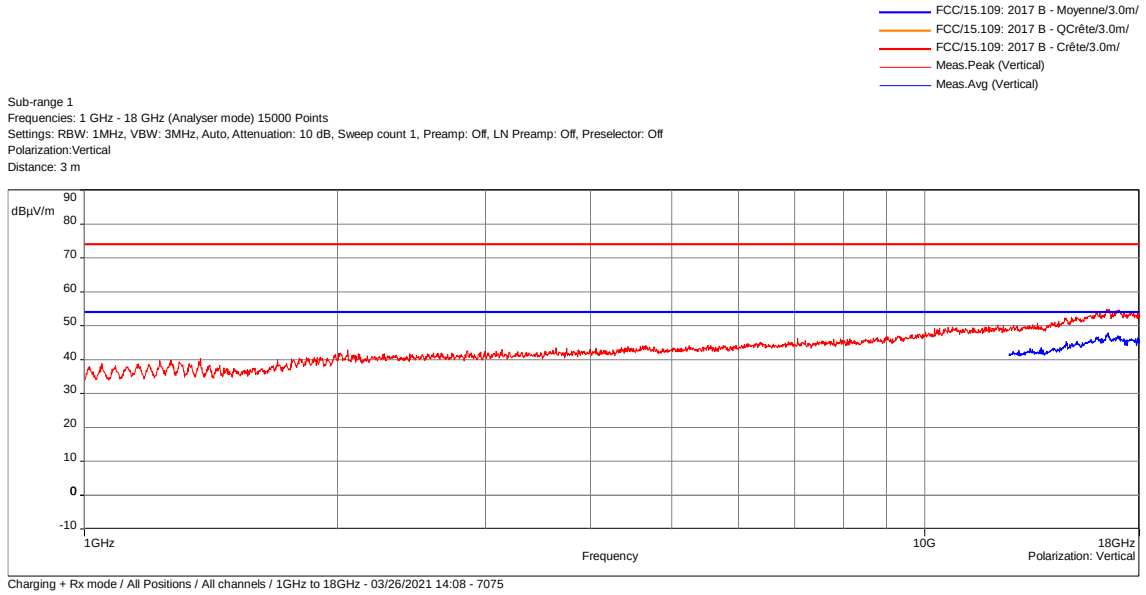
Rx mode / All Positions / All channels / 1GHz to 18GHz - 03/26/2021 13:26 - 7073

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

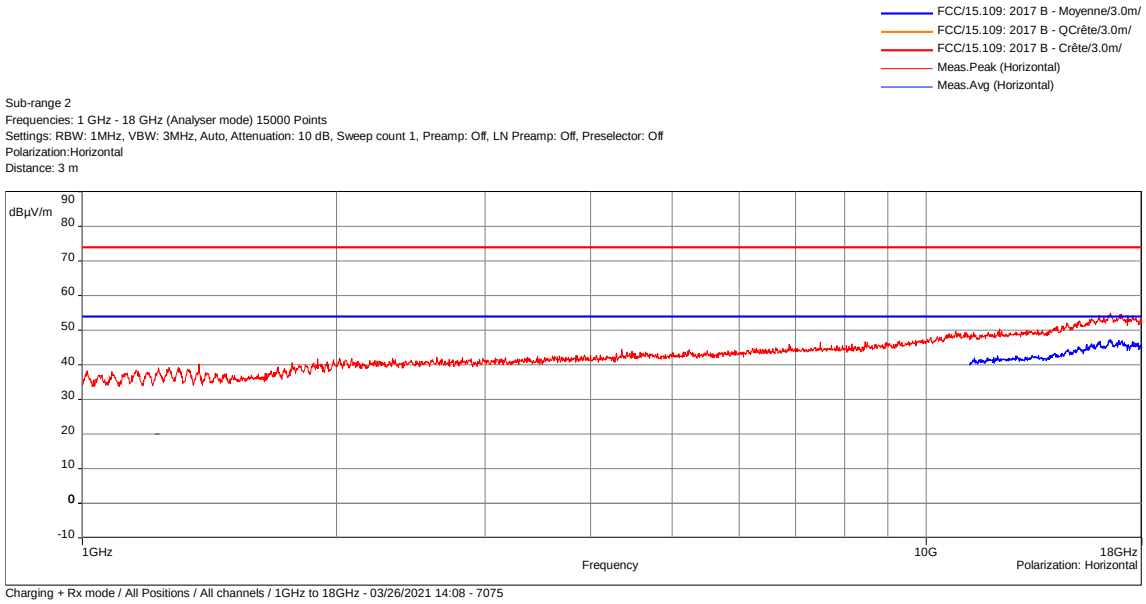
Configuration:	N/A
Comments:	N/A

EUT modification(s): N/A

RECEIVER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + RX MODE / ALL POSITIONS / ALL CHANNELS / 1GHZ TO 18GHZ		EMI7075	
EUT mode:	Rx mode	**T (°C):**	22.0
Test Date:	26/03/2021	**H (%):**	42.3
Test Operator:	ATO & OAT	**P (hPa):**	1015



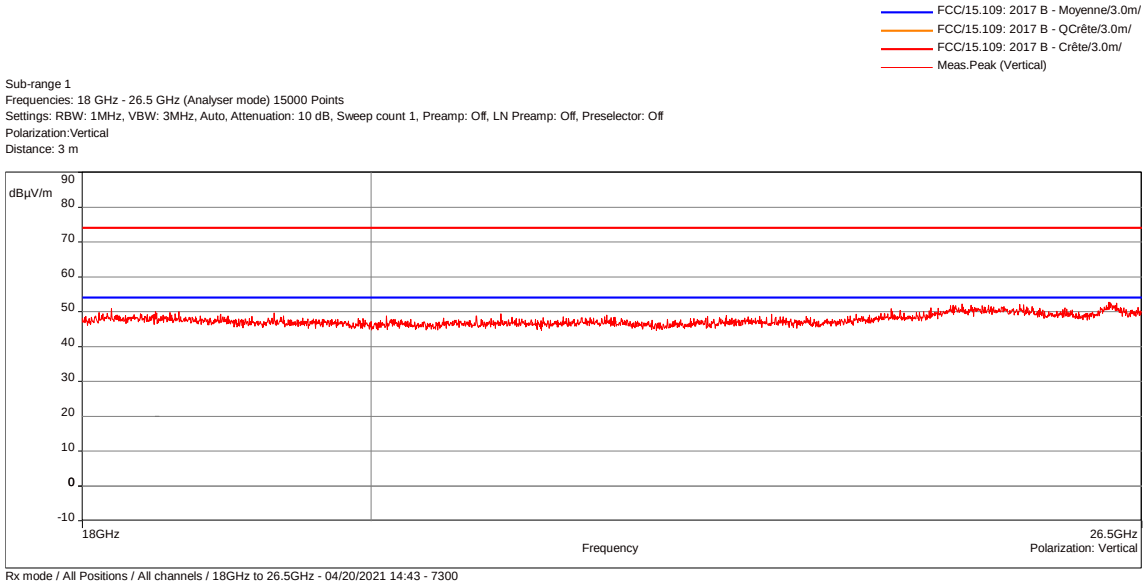
Charging + Rx mode / All Positions / All channels / 1GHz to 18GHz - 03/26/2021 14:08 - 7075

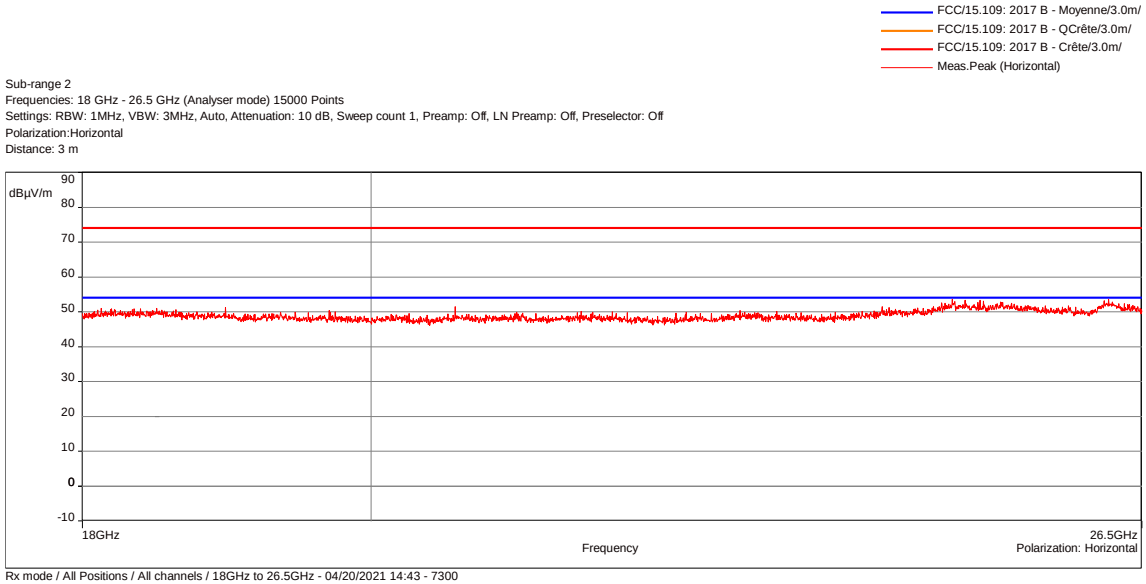


Charging + Rx mode / All Positions / All channels / 1GHz to 18GHz - 03/26/2021 14:08 - 7075

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				

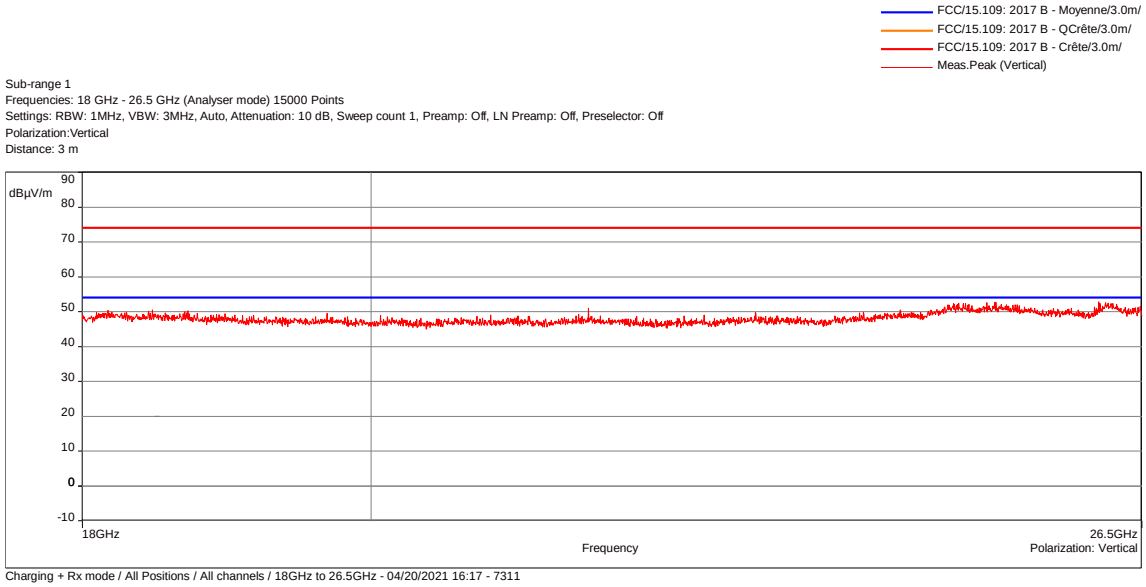
TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
RX MODE / ALL POSITIONS / ALL CHANNELS / 18GHZ TO 26.5GHZ		EMI7300	
EUT mode:	Rx mode	**T (°C):**	21.8
Test Date:	20/04/2021	**H (%):**	31.3
Test Operator:	ATO & OAT	**P (hPa):**	1012



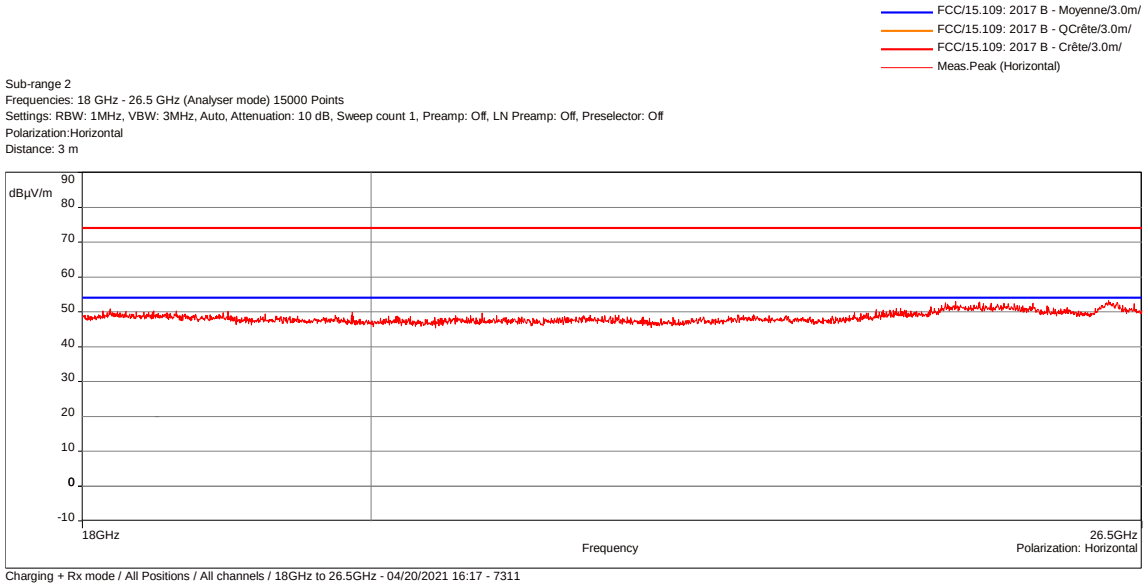


POSITION	FREQUENCIES	RBW	VBW	DETECTOR
Vertical	18GHz-26.5GHz	1MHz	3MHz	Peak
Horizontal	18GHz-26.5GHz	1MHz	3MHz	Peak
Configuration:	N/A			
Comments:	N/A			
EUT modification(s): N/A				

TRANSMITTER RADIATED SPURIOUS EMISSIONS AT FREQUENCIES >30MHZ - GRAPH			
CHARGING + RX MODE / ALL POSITIONS / ALL CHANNELS / 18GHZ TO 26.5GHZ		EMI7311	
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 16:17 - 7311



Charging + Rx mode / All Positions / All channels / 18GHz to 26.5GHz - 04/20/2021 16:17 - 7311

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 %	EMI7542	**PASS**
Low channel / 25°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI7543	**PASS**
Low channel / 25°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI7544	**PASS**
Mid channel / 25°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI7545	**PASS**
Mid channel / 25°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI7546	**PASS**
Mid channel / 25°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI7547	**PASS**
High channel / 25°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI7548	**PASS**
High channel / 25°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI7549	**PASS**
High channel / 25°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI7550	**PASS**
Low channel / -5°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI7551	**PASS**
Low channel / -5°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI7552	**PASS**
Low channel / -5°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI7553	**PASS**
Mid channel / -5°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI7554	**PASS**
Mid channel / -5°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI7555	**PASS**
Mid channel / -5°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI7556	**PASS**
High channel / -5°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI7557	**PASS**
High channel / -5°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI7558	**PASS**
High channel / -5°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI7559	**PASS**
Low channel / 40°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI7560	**PASS**
Low channel / 40°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI7561	**PASS**
Low channel / 40°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI7562	**PASS**
Mid channel / 40°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI7563	**PASS**
Mid channel / 40°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI7564	**PASS**
Mid channel / 40°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI7565	**PASS**
High channel / 40°C/ 3.7Vdc	Continuous Tx	0.001 %	EMI7566	**PASS**
High channel / 40°C/ 4.2Vdc	Continuous Tx	0.001 %	EMI7567	**PASS**
High channel / 40°C/ 3.45Vdc	Continuous Tx	0.001 %	EMI7568	**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 %	39.9 %
Atmospheric pressure	N/A	1014 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	16421	04/05/2019	04/07/2021
Cable	Huber + Suhner	SF102K	16041	28/02/2019	28/04/2021
Cable	Radiall	SMA-0,5m	16557	30/07/2019	30/09/2021
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	2.403968804GHz	0%	0.001 %	EMI7542
Low channel / 25°C/ 4.2Vdc	2.403968718GHz	0.0000036%	0.001 %	EMI7543
Low channel / 25°C/ 3.45Vdc	2.403968867GHz	0.0000026%	0.001 %	EMI7544
Mid channel / 25°C/ 3.7Vdc	2.439968068GHz	0%	0.001 %	EMI7545
Mid channel / 25°C/ 4.2Vdc	2.439968053GHz	0.0000006%	0.001 %	EMI7546
Mid channel / 25°C/ 3.45Vdc	2.439968036GHz	0.0000013%	0.001 %	EMI7547
High channel / 25°C/ 3.7Vdc	2.475967502GHz	0%	0.001 %	EMI7548
High channel / 25°C/ 4.2Vdc	2.475967495GHz	0.0000003%	0.001 %	EMI7549
High channel / 25°C/ 3.45Vdc	2.475967485GHz	0.0000007%	0.001 %	EMI7550
Low channel / -5°C/ 3.7Vdc	2.403971521GHz	0.0001130%	0.001 %	EMI7551
Low channel / -5°C/ 4.2Vdc	2.403971450GHz	0.0001101%	0.001 %	EMI7552
Low channel / -5°C/ 3.45Vdc	2.403971356GHz	0.0001062%	0.001 %	EMI7553
Mid channel / -5°C/ 3.7Vdc	2.439971167GHz	0.0001270%	0.001 %	EMI7554
Mid channel / -5°C/ 4.2Vdc	2.439970994GHz	0.0001199%	0.001 %	EMI7555
Mid channel / -5°C/ 3.45Vdc	2.439970953GHz	0.0001182%	0.001 %	EMI7556
High channel / -5°C/ 3.7Vdc	2.475970233GHz	0.0001103%	0.001 %	EMI7557
High channel / -5°C/ 4.2Vdc	2.475970203GHz	0.0001091%	0.001 %	EMI7558
High channel / -5°C/ 3.45Vdc	2.475970159GHz	0.0001073%	0.001 %	EMI7559
Low channel / 40°C/ 3.7Vdc	2.403960099GHz	0.0003621%	0.001 %	EMI7560
Low channel / 40°C/ 4.2Vdc	2.403960086GHz	0.0003627%	0.001 %	EMI7561
Low channel / 40°C/ 3.45Vdc	2.403960082GHz	0.0003628%	0.001 %	EMI7562
Mid channel / 40°C/ 3.7Vdc	2.439959512GHz	0.0003507%	0.001 %	EMI7563
Mid channel / 40°C/ 4.2Vdc	2.439959482GHz	0.0003519%	0.001 %	EMI7564
Mid channel / 40°C/ 3.45Vdc	2.439959482GHz	0.0003519%	0.001 %	EMI7565
High channel / 40°C/ 3.7Vdc	2.475958952GHz	0.0003453%	0.001 %	EMI7566
High channel / 40°C/ 4.2Vdc	2.475958949GHz	0.0003454%	0.001 %	EMI7567
High channel / 40°C/ 3.45Vdc	2.475958944GHz	0.0003456%	0.001 %	EMI7568

End of test report