

RF Exposure Calculation TEST REPORT



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Laboratory Accreditations (per ISO/IEC 17025:2017)



American Association for Laboratory Accreditation Certificate Number: 3657.02

This report has been completed in accordance with the requirements of ISO/IEC 17025.

Test results contained in this report are within QAI Laboratories ISO/IEC 17025 accreditations.

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Equipment Tested: OrthoPlus Gen 2 with wireless charger

Model Number: OPi2S-100 / OPi2E-100

FCC ID: 2A6CA-OPI

IC Certification Number: 28421-OPI

Manufacturer: Biolux Technology



REVISION HISTORY

Date	Title	Details	Author's Initials
June 15, 2022	E11284-2201_Biolux_FCC_IC_RF_Exposure_Rev-1.1	Added mobile description, Typo FCC ID	AN
June 10, 2022	E11284-2201_Biolux_FCC_IC_RF_Exposure_Rev-1.0	Final	AN
June 9, 2022	E11284-2201_Biolux_FCC_IC_RF_Exposure_Rev-0.0	Initial release	AN
All previous versions of this report have been superseded by the latest dated revision as listed in the above table. Please dispose of all previous electronic and paper printed revisions accordingly.			

REPORT AUTHORIZATION

The data documented in this report is for the test equipment provided by the manufacturer. The tests were conducted on the sample equipment as requested by the manufacturer for the purpose of demonstrating compliance with the standards outlined in Section I of this report as agreed upon by the Manufacturer under the quote 21RH11022R4.

The Manufacturer is responsible for the tested product configurations, continued product compliance, and for the appropriate auditing of subsequent products as required.

This report may comprise a partial list of tests that are required for FCC and ISED Declaration of Conformity can only be produced by the manufacturer. This is to certify that the following report is true and correct to the best of our knowledge.



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QAI EMC ACCREDITATION

QAI EMC is your one-stop regulatory compliance partner for electromagnetic compatibility (EMC) and electromagnetic interference (EMI). Products are tested to the latest and applicable EMC/EMI requirements for domestic and international markets. QAI EMC goes above and beyond being a testing facility—we are your regulatory compliance partner. QAI EMC has the capability to perform RF Emissions and Immunity for all types of electronics manufacturing including Industrial, Scientific, Medical, Information Technology, Telecom, Wireless, Automotive, Marine and Avionics.

EMC Laboratory Location	FCC Designation (3m SAC)	IC Registration (3m SAC)	A2LA Certificate
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EMC Facility Burnaby BC, Canada



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Section I: Executive Summary of Standards

1.1 Applicable Standards and Results

No.	Test Description	Standard Clause	Mode	Result
1	Radiated Emissions	FCC 47 CFR Part §18.305 & §18.309 RSS-216 Issue 2 Section 6.3.2 <i>Category I</i> FCC Subpart C §15.205(a), §15.209 (a) & §15.247 (d)	Charging Mode while transmitting	Complies
2	RF Exposure-MPE Calculation	FCC KDB 447498 D01 RSS102 Issue 5 (used KDB 447498)	Charging Mode while transmitting	Complies

Documented in this report were performed in accordance with ANSI C63.4-2014 and ANSI C63.10-2013.

1.2 Product Description

The information provided in this section is for the Equipment Under Test (EUT) and the corresponding Auxiliary Equipment needed to perform the tests as a complete system.



EUT

Equipment Under Test (EUT)

Equipment	Manufacturer
Wireless radio module and Charging Cradle	Biolux Technology

Equipment Under Test (EUT) - RF Information

EUT	OrthoPulse Gen 2 with Charger
Functional Description	The device is intended for use during orthodontic treatment. It is used in conjunction with brackets and wires or aligners and helps facilitate minor anterior tooth movement. The intended environment is a home healthcare environment.
Operating Frequency	2400MHz to 2483.5MHz
FCC ID	2A6CA-OPI
IC Certification Number	28421-OPI
Manufacturer	Biolux Technology
HVIN	OPI

1.3 Environmental Conditions

The equipment under test was operated and tested under the following environmental conditions:

Parameter	Conditions
Location	Indoors
Temperature	21°C
Relative Humidity	59.4%
Atmospheric Pressure	101kPa

1.4 Measurement Uncertainty

Parameter	Uncertainty
Radiated Emissions, 30MHz-1GHz	± 2.40 dB
Radiated Emissions, 1GHz-40GHz	± 2.48 dB
Radio Frequency	±1.5 x 10 ⁻⁵ MHz
Total RF Power Conducted	±1.36 dB
Spurious Emissions, Conducted	±1.36 dB
RF Power Density, Conducted	±1.36 dB
Temperature	±1°C
Humidity	±5 %
DC and low frequency voltages	±3 %

1.5 Sample Calculations of Emissions Data

Radiated and conducted emissions were performed using EMC32 software developed by Rohdes & Schwarz. Transducer factors like Antenna factors, Cable Losses and Amplifier gains were stored in the test templates which are used to perform the emissions measurements. After test is finished, data is generated from the EMC32 consisting of product details, emission plots and final data tables as shown below.

Frequency (MHz)	Q-Peak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Ant. Ht. (cm)	Pol	Turntable Position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
42.663900	33.0	1000.000	120.000	100.0	H	70.0	13.2	7.5	40.5

Quasi-Peak reading shown in the table above is already corrected by the software using correction factor shown in column “Corr.” The correction factor listed under “Corr.” table calculated as:

$$\text{Corr. (dB)} = \text{Antenna factor} + \text{Cable loss}$$

Or

$$\text{Corr. (dB)} = \text{Antenna factor} + \text{Cable Loss} - \text{Amp gain (if pre-amplifier was used)}$$

The final Quasi peak reading shown in the data is calculated by the software using following equation:

$$\text{Corrected Quasi-Peak (dBµV/m)} = \text{Raw Quasi-Peak Reading} + \text{Antenna factor} + \text{Cable loss}$$

To obtain the final Quasi-Peak or Average reading during power line conducted emissions, transducer factors are included in the final measurement as shown below.

Frequency (MHz)	Q-Peak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150	44.3	1000.000	9.000	GND	0.6	21.7	66.0

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150	27.2	1000.000	9.000	GND	0.6	28.8	56.0

Quasi Peak or Average reading shown in above table is already corrected by the software using the correction factor shown in column “Corr.” The correction factor listed under “Corr.” table calculated as:

$$\text{Corr. (dB)} = \text{Antenna factor} + \text{Cable loss}$$

The final Quasi-peak or Average reading shown in the data is calculated by the software using following equation:

$$\text{Corr. Quasi-Peak/Average Reading (dBµV)} = \text{Raw Quasi-Peak/Average Reading} + \text{Antenna factor} + \text{Cable loss}$$

The allowable margin from the limits, as per the standards, were calculated for both radiated and conducted emissions:

$$\text{Margin (dB)} = \text{Limit} - \text{Quasi-Peak or Average reading}$$

1.6 Test Equipment List

The tables below contain all the equipment used by 'QAI Laboratories' in conducting all tests on the Equipment Under Test (EUT) as per Section I.

Emissions Test Equipment

Sl. NO.	Manufacturer	Model	Description	Serial No.	S/W Version	Calibration Due Date
1	AH Systems	PAM118	Amplifier (10KHz-18GHz)	189	N/A	Conditional Use
2	EMCO	3825/2	LISN (150kHz-30MHz)	9002-1601	N/A	2026-Oct-01
3	ETS Lindgren	2165	Turntable	00043677	N/A	N/A
4	ETS Lindgren	2125	Mast	00077487	N/A	N/A
5	ETS Lindgren	S201	5-meter Semi-Anechoic Chamber	1030	N/A	N/A
6	Hewlett Packard	8449B	Preamplifier (1-26 GHz)	2933A00198	N/A	2025-Feb-15
7	Rohde & Schwarz	ESU40	EMI Receiver	100011	EMC32 v10.35.10/ FV 4.73 SP4	2023-Jul-05
8	Sunol Sciences	DRH-118	Horn Antenna, 1.0-18 GHz	A050905	N/A	2023-07-28
9	Sunol Sciences	SM46C	Turntable	051204-2	N/A	N/A
10	Sunol Sciences	TWR95	Mast	TREML0001	N/A	N/A
12	Sunol Sciences	JB3	Biconilog Antenna 30MHz – 3GHz	A042004	N/A	2023-Jul-30
13	TTi	HA1600A	Power Analyzer; Harm/Flicker	318801	N/A	2022-Oct-01
14	TTi	AC1000A	Power Supply, Low Distortion	317113	N/A	2022-Oct-01
15	Keysight	N9322C	Spectrum Analyser	39775	N/A	4/11/2023

Note: Equipment listed above have 3 years calibration interval.

Measurement Software List

Sl. No.	Manufacturer	Model	Version	Description
1	Rhode & Schwarz	EMC 32	10.35.10	Emissions Test Software
2	TESEQ	WIN 3000	1.2.0	Surge, EFT & Voltage Dips Immunity Test Program
3	Thurlby Thandar Instruments	HA-PC Link Version	2.02	Harmonics and Flicker Test Program
4	VI Automation	Via EMC Immunity Executive	1.0.308	Radiated and Conducted Immunity Test Program

Immunity Testing Equipment

Sl. No.	Manufacturer	Model	Description	Serial No.	S/W Version	Calibration Due Date
1	Chase	emCELL	RF Immunity Chamber	1016	N/A	N/A
2	EMC Partner	CN-EFT1000	Capacitive Clamp	#408	N/A	N/A
3	ETS Lindgren	S201	5-meter Semi-Anechoic Chamber	1030	N/A	N/A
5	FCC	F-120-9A	Bulk Injection Clamp	399	N/A	N/A
6	Haefely Trench	PESD 1600	ESD Generator	H601-018	N/A	2022-Aug-28
7	HP	8648C	Signal Generator	3623A03622	N/A	N/A
8	Ophir	5048FE	RF Amplifier 0.15-230 MHz	1035	N/A	N/A
9	Ophir	5125FE	RF Amplifier 20-1000 MHz	1030	N/A	N/A
10	Ophir	5163FE	RF Amplifier 0.8-4.2 GHz	1044	N/A	N/A
11	Rohde & Schwarz	SMP04 (Opt.B1,B2,B5,B12,B13&B14)	Signal Generator	847908/003	N/A	N/A
12	Teseq	NSG 3060	EMC multifunction Generator 6kV with CDN and INA	184	WIN3000 v1.3.2 / FV V2.20	2023-Oct-08
13	Teseq	CDN 3061	Surge CDN	184	N/A	2023-Oct-08
14	Teseq	INA 6502-CIB	Step up Transformer	124	N/A	2023-Oct-08

DATA & TEST RESULTS

2.1 Radiated Emissions

Measurement Method:

The EUT was positioned at the edge of the turntable in the 3m SAC with all cables dropped down on the side 40 cm off the ground plate. The emissions were measured in the frequency range of 10 kHz – 1 GHz using the appropriate receivers, antennas, amplifiers, attenuators and filters.

Emissions in both horizontal and vertical polarizations were measured while rotating the Equipment Under Test (EUT) 360° on the turntable, to maximize measured emissions. 10kHz – 30 MHz antenna was placed at 3m distance and 150 cm height. 30 MHz – 1 GHz: antenna was placed at 3m distance and scanned in 104 m range of height.

Refer to [Section 1.5](#) of this report for Sample Calculations of Emissions Data.

Modification:

Client device (load) was put in hopping mode.

Result: The EUT complies with the applicable standards.

Required Limits:

- 1) FCC 47 CFR Part §18.305
- (a) ISM equipment operating on a frequency specified in § 18.301 is permitted unlimited radiated energy in the band specified for that frequency.

ISM frequency	Tolerance
6.78 MHz	±15.0 kHz
13.56 MHz	±7.0 kHz
27.12 MHz	±163.0 kHz
40.68 MHz	±20.0 kHz
915 MHz	±13.0 MHz
2,450 MHz	±50.0 MHz
5,800 MHz	±75.0 MHz
24,125 MHz	±125.0 MHz
61.25 GHz	±250.0 MHz
122.50 GHz	±500.0 MHz
245.00 GHz	±1.0 GHz

§ 18.301 Operating frequencies

- (b) The field strength levels of emissions which lie outside the bands specified in § 18.301, unless otherwise indicated, shall not exceed the following:

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	Below 500 500 or more	25 $25 \times \text{SQRT}(\text{power}/500)$	300 ¹ 300
	Any non-ISM frequency	Below 500 500 or more	15 $15 \times \text{SQRT}(\text{power}/500)$	300 ¹ 300
Industrial heaters and RF stabilized arc welders	On or below 5,725 MHz Above 5,725 MHz	Any Any	10 (²)	1,600 (²)
Medical diathermy	Any ISM frequency	Any	25	300
	Any non-ISM frequency	Any	15	300
Ultrasonic	Below 490 kHz	Below 500 500 or more	$2,400/F(\text{kHz})$ $2,400/F(\text{kHz}) \times \text{SQRT}(\text{power}/500)$	300 ³ 300
	490 to 1,600 kHz	Any	$24,000/F(\text{kHz})$	30
	Above 1,600 kHz	Any	15	30
Induction cooking ranges	Below 90 kHz	Any	1,500	⁴ 30
	On or above 90 kHz	Any	300	⁴ 30

2) RSS-216 Issue – Category I

The client device (load) is a Class A wireless module. The following was found to best apply to the limits.

‘Category I wireless modules that are included in WPT devices shall comply with RSS-Gen and with the other RSSs applicable to the specific wireless technologies used in the device.’

These limits reference FCC Subpart C §15.205(a), §15.209 (a) & §15.247 (d), the most stringent of which would be as follows:

FCC Section §15.209

Frequency, <i>f</i> (MHz)	Maximum Field strength Quasi-peak (dBμV/m at 3 m)
0.009 – 0.490	$(20 \times \log(2400/f(\text{kHz}))) + 40 \text{ dB}$
0.490 – 1.705	$(20 \times \log(24000/f(\text{kHz}))) + 20 \text{ dB}$
1.705 – 30.0	49.5
30 – 88	40.0
88 – 216	43.5
216 – 960	46.0
above 960	54.0
<p>Note 1: The above field strength limits are specified at a distance of 3 meters. The tighter limits apply at the band edges.</p> <p>Note 2: The emissions limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.</p>	

1) Restricted Bands of Operation:

Unwanted emissions that fall into the restricted bands specified on the table below shall comply with the limits specified on the table limits above as per §15.209 and Clause 8.9 of RSS-Gen.

MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138	--	

* Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

Restricted Bands – RSS Gen Issue 5

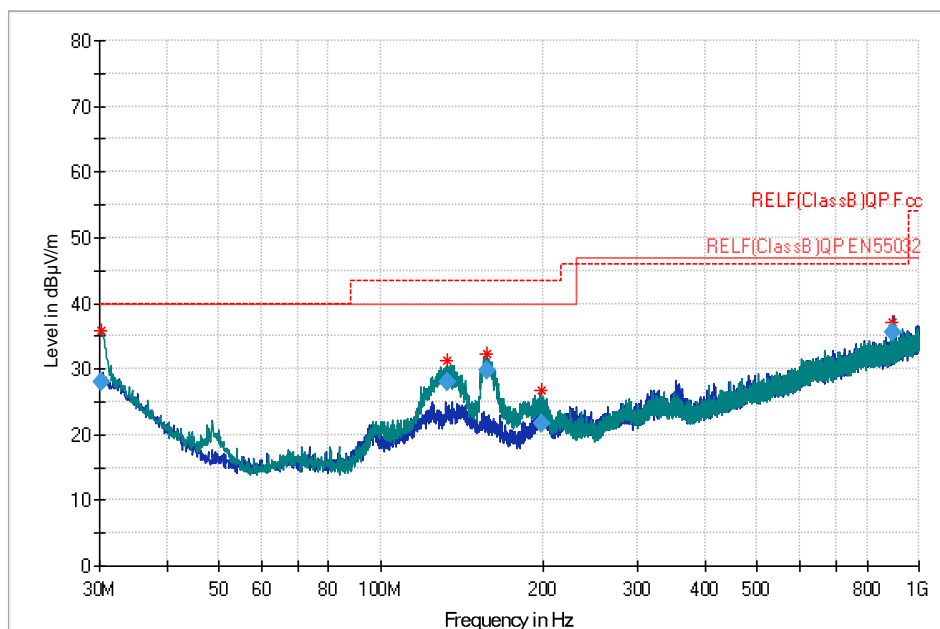
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

Restricted Bands – FCC Part

Measurement Data:

Part 1 – Radiated Emissions from 10kHz – 30 MHz

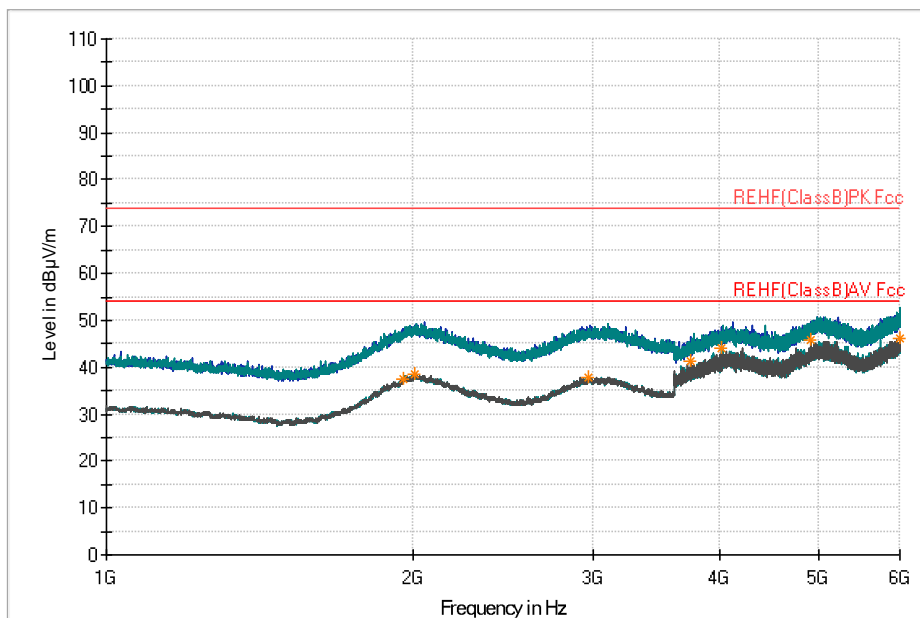
Date performed: June 3, 2022



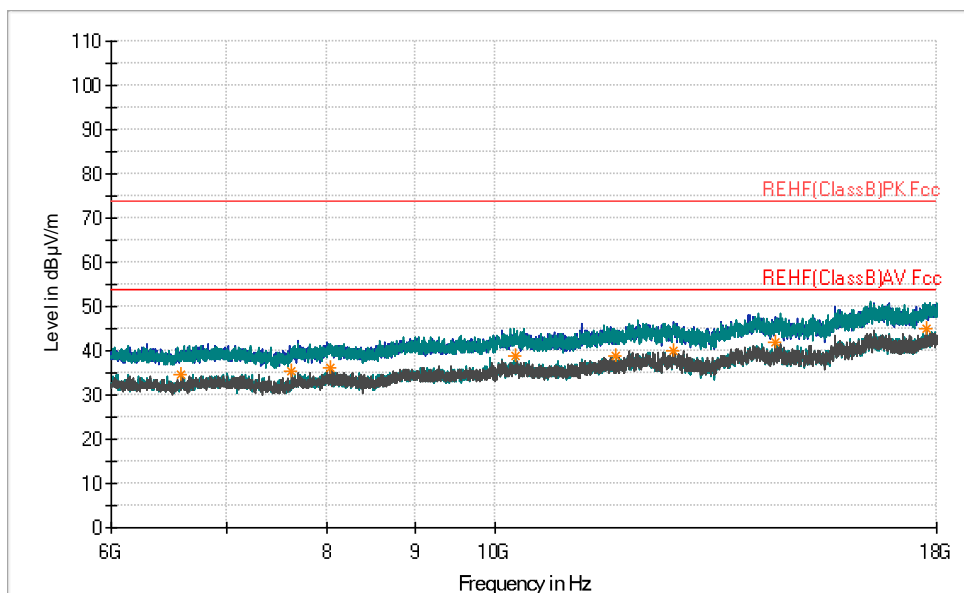
Plot 1: Radiated Emissions at 3m SAC- Charging and transmitter Mode Above 30 MHz –Class B Limit

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Measurement Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.1370	27.91	40.00	12.09	1000.0	120.0	171.0	V	196	26.5
132.8364	27.98	40.00	12.02	1000.0	120.0	100.0	V	146	19.2
157.5571	29.74	40.00	10.26	1000.0	120.0	111.0	V	144	18.0
199.4489	21.67	40.00	18.33	1000.0	120.0	100.0	V	173	18.9
895.9997	35.59	47.00	11.41	1000.0	120.0	217.0	H	266	29.0

Table 1: Data of Radiated Emissions at 3m SAC Charging and transmitter Mode-Above 30 MHz–Class B Limit



Full Spectrum



Plot 2: Quasi Peak Data of Radiated Emissions Above 1G Hz, Class B

Frequency (MHz)	MaxPeak (dBµV/)	Average (dBµV/ m)	Limit (dBµV/ m)	Margin (dB)	Azimuth (deg)	Corr. (dB)	Height (cm)	Pol
1956.0000	---	37.48	54.00	16.52	0	-0.3	100.0	H
2009.5000	---	38.58	54.00	15.42	98	0.3	100.0	V
2970.0000	---	37.85	54.00	16.15	286	0.0	400.0	H
3737.0000	---	41.33	54.00	12.67	332	1.7	250.0	V
4016.5000	---	44.16	54.00	9.84	0	2.4	400.0	H
4909.0000	---	45.78	54.00	8.22	154	4.2	350.0	V
5996.0000	---	46.25	54.00	7.75	250	5.6	250.0	V

Frequency (MHz)	MaxPeak (dBµV/)	Average (dBµV/ m)	Limit (dBµV/ m)	Margin (dB)	Azimuth (deg)	Corr. (dB)	Height (cm)	Pol
6583.2000	---	34.73	54.00	19.27	38	-7.5	150.0	H
7632.0000	---	35.28	54.00	18.72	163	-5.3	250.0	V
8024.4000	---	36.27	54.00	17.73	15	-4.5	250.0	V
10276.8000	---	38.92	54.00	15.08	351	1.5	200.0	H
11754.0000	---	38.84	54.00	15.16	215	3.9	250.0	H
12678.0000	---	40.07	54.00	13.93	137	4.7	250.0	V
14524.8000	---	41.90	54.00	12.10	168	6.7	150.0	V
17754.0000	---	44.81	54.00	9.19	Azim	Corr.	100.0	V

Table 2: Data of Radiated Emissions at 3m SAC Charging and transmitter Mode-below 30 MHz–Class B Limit

2.2 RF Exposure Calculation

Date Performed: May 30, June 09, 2022

Test Standard: [Per section 1.1](#)

Test Method: ANSI C63.4-2014

Modifications: No modification was required to comply for this test.

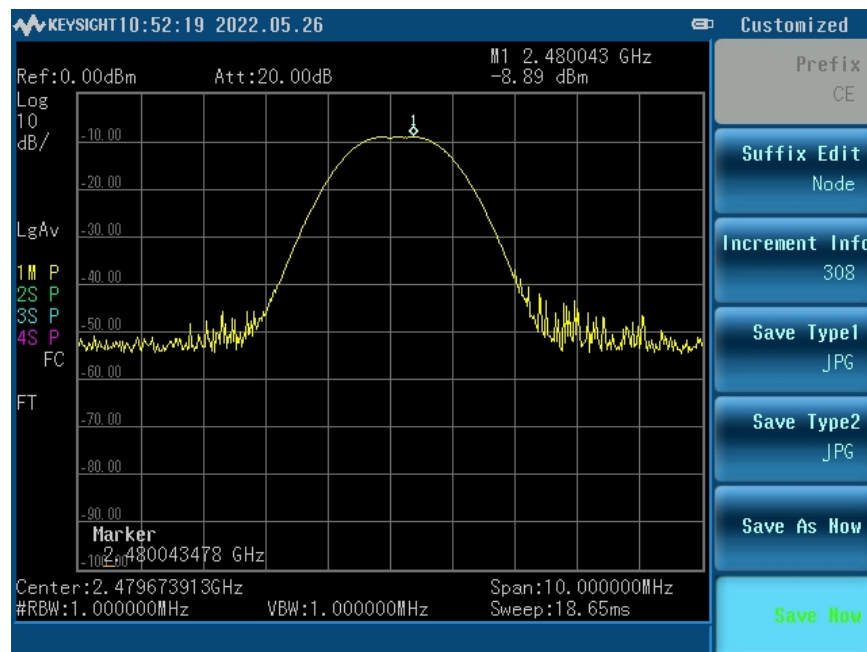
Result: The radio module activates only the first minute of when the product puts in the charger. Therefore, the product is categorized as Mobile. It does not transmit when it is in the mouth!
Please note the above measurements are extracted during simultaneous emissions, i.e. EUT is in the charger and EUT was forced to be continuously transmitting during the testing. EUT complies with the applicable standard.

Part A FCC

47 CFR § 1.1310 - Radiofrequency radiation exposure limits, (2) For operations within the frequency range of 300 kHz and 6 GHz (inclusive), the limits for maximum permissible exposure (MPE), derived from whole-body SAR limits and listed in Table 1 in paragraph (e)(1) of this section, may be used instead of whole-body SAR limits as set forth in paragraphs (a) through (c) of this section to evaluate the environmental impact of human exposure to RF radiation as specified in § 1.1307(b) of this part, except for portable devices as defined in § 2.1093 of this chapter as these evaluations shall be performed according to the SAR provisions in § 2.1093.

§ 1.1310(e)(1) - LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30



Plot 3: RF Peak Output Power

	Carrier Frequency (MHz)	Ch	Conducted Peak (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Duty Cycle	Corrected EIRP (mW)	Extrapolate to 20cm Mobile Device EIRP (mW/cm ²)	Limit (mW/cm ²)	Result
1	2480	40	-8.49	-1	-9.49	0.11246	62%	0.07	1.4 Exp-5	1.0	Complies

Note: The above measurement is highest peak extracted from RF peak output power of radio module, and limit is at 20 cm distance for worst case scenario of mobile equipment.

$$\text{Power Density, } S = \text{EIRP} / 4 * \pi * R^2 = 0.00007 / (4 * 3.1415 * 0.2 * 0.2) = 0.00014 \text{ W/m}$$

The MPE was calculated at 20 cm to show compliance with the power density limit. The following formula was used to calculate the Power Density: $S = \text{PG} / 4\pi R^2$ Where: S = Power Density P = Output Power at Antenna Terminals G = Gain of Transmit Antenna (linear gain) R = Distance from Transmitting Antenna

	Carrier Frequency (MHz)	Radiated Peak (dBuV/m @ 3 m)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Extrapolate EIRP (mW/cm ²)	Limit (mW/cm ²)	Result
1	157	30.2	-1	-66.2	0.00020	0.3Exp-8	0.2	Complies
3	896.1	36.7	-1	-60.6	0.00014	0.5Exp-8	0.5	Complies

Note: The above measurement is highest peak extracted from radiated emission testing, at SAC, and limit is at 20 cm distance for worst case scenario of mobile equipment.

Part B ISED

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $\text{Limit} = 1.31 \times 10^{-2} f^{0.6834} \text{ W}$ (adjusted for tune-up tolerance), where f is in MHz

	Carrier Frequency (MHz)	Ch	Conducted Peak (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Duty Cycle	Corrected EIRP (W)	Limit (W)	Result
1	2480	40	-8.49	-1	-9.49	0.00011246	62%	0.00007	2.735	Complies

Note: The above measurement is highest peak extracted from RF peak output power of radio module.

	Carrier Frequency (MHz)	Radiated Peak (dBuV/m @ 3 m)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (mW)	Result
1	157	30.2	-1	-66.2	0.00000025	0.000317	Complies
3	896.1	36.7	-1	-60.6	0.00000087	0.001041	Complies

Note: The above measurement is highest peak extracted from radiated emission testing of EUT with Charger at SAC.

APPENDIX A: TEST SET-UP PHOTOS

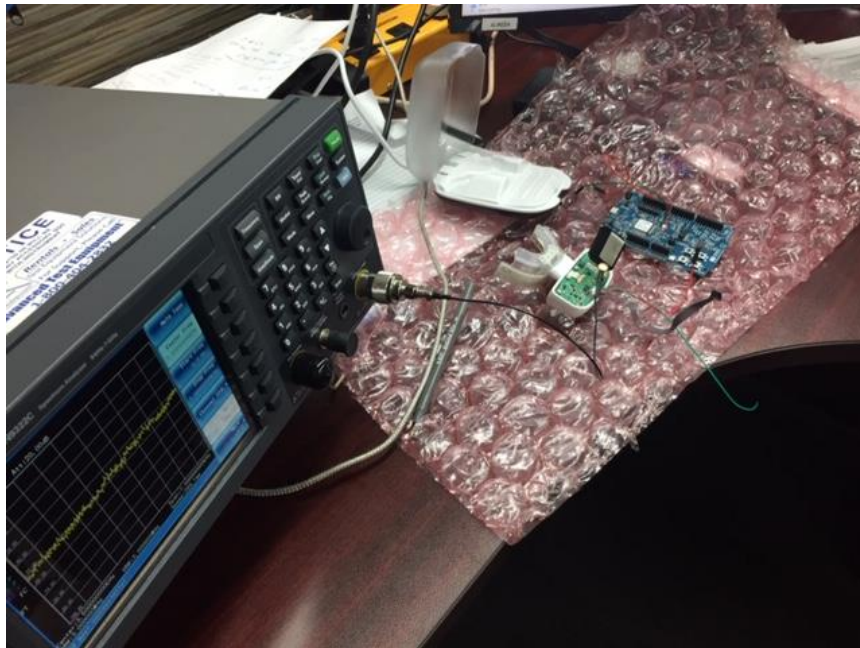


Figure 1: RF Output Power Measurement

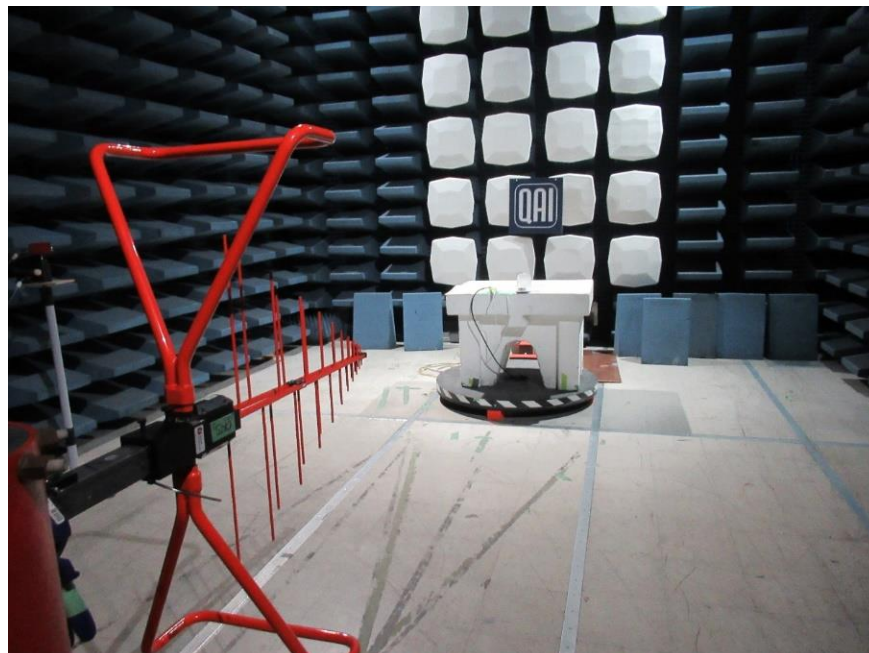


Figure 2: Radiated Emissions (30 MHz – 1 GHz)

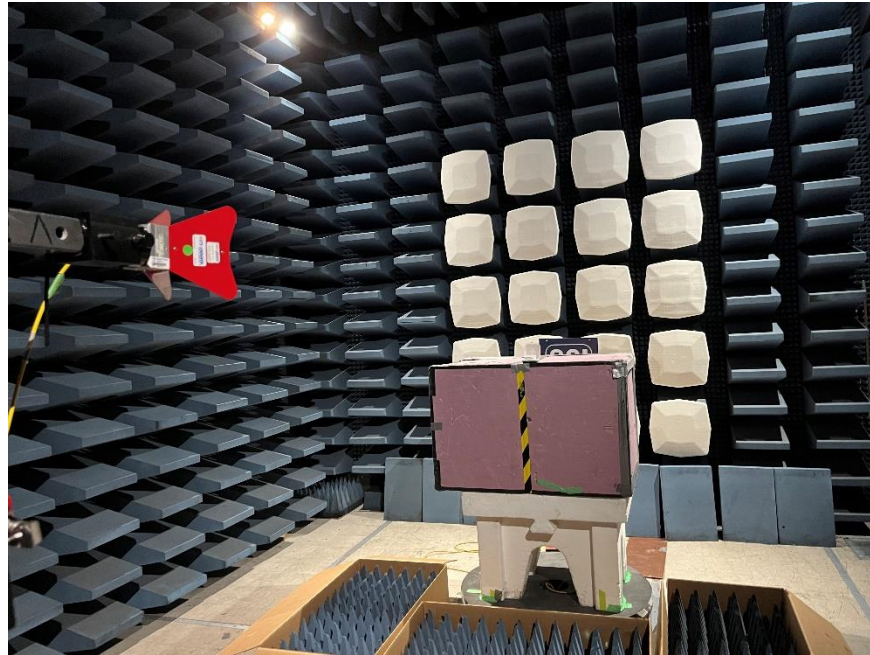


Figure 3: Radiated Emissions above 1GHz performed at the 3m SAC

Appendix B: ABBREVIATIONS

Abbreviation	Definition
AC	Alternating Current
AM	Amplitude Modulation
CE	European Conformity
CISPR	Comité International Spécial des Perturbations Radioélectriques (International Special Committee on Radio Interference)
DC	Direct Current
EFT	Electrical Fast Transient
EMC	Electro Magnetic Compatibility
EMI	Electro Magnetic Interference
ESD	Electrostatic Discharge
EUT	Equipment Under Test
FCC	Federal Communications Commission
IC	Industry Canada
ICES	Interference Causing Equipment Standard
IEC	International Electrotechnical Commission
LISN	Line Impedance Stabilizing Network
OATS	Open Area Test Site
RF	Radio Frequency
RMS	Root-Mean-Square
SAC	Semi-Anechoic Chamber

END OF REPORT