CERTIFICATION TEST REPORT

Report Number. : 13378408-E1V1

Applicant	:	**Ossia Inc.**
		1100 112th Ave NE, Suite 301,
		Bellevue, WA, 98004
		U.S.A
Model	:	Cota Tx203
FCC ID	:	2AS57OSSIACOTATX203
EUT Description	:	Wireless Power Source
Test Standard(s)	:	FCC 47 CFR PART 1 SUBPART I
		FCC 47 CFR PART 2 SUBPART J

Date Of Issue:
September 22, 2020

Prepared by:
UL Verification Services Inc.
47173 Benicia Street
Fremont, CA 94538 U.S.A.
TEL: (510) 319-4000
FAX: (510) 661-0888

NVLAP TESTING
ilac-MRA
NVLAP Lab code: 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
V1	9/2/2020	Initial Issue	--
V2	9/22/2020	Section 7 – Added modular radio MPE	Dave Weaver

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: OSSIA INC.

EUT DESCRIPTION: WIRELESS POWER SOURCE

MODEL NUMBER: Cota Tx203

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 1 SUBPART I & PART 2 SUBPART J	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:

Dave Weaver
OPERATIONS LEADER
UL Verification Services Inc.

2. TEST METHODOLOGY

All calculations were made in accordance with FCC KDB 447498 D01.

3. REFERENCES

The power levels used for calculations were declared by the applicant as maximums.

Antenna gain data is excerpted from the applicable test report.

4. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, and 47658 Kato Road, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

5. DESCRIPTION OF EUT

The EUT is a wireless power source. In addition to the wireless power source there is also an 802.15.4 radio for communication with client devices.

The 802.15.4 maximum declared output power is 0dBm.

The antenna gain is 2.15 dBi

There is also a WLAN radio from an installed modular transmitter (FCC ID: 2ABCB-RPI4B).

The RF exposure for the wireless power source is addressed in UL report 13378408-S1V2.

6. MAXIMUM PERMISSIBLE RF EXPOSURE

6.1. FCC RULES

§1.1310 The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

TABLE 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)
(A) 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
(B) 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

f = frequency in MHz

* = Plane-wave equivalent power density

Notes:

(1) Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when a person is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

(2) General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure

6.2. EQUATIONS

POWER DENSITY

Power density is given by:

S = EIRP / (4 * Pi * D^2)

Where

S = Power density in mW/cm^2
EIRP = Equivalent Isotropic Radiated Power in mW
D = Separation distance in cm

Power density in units of mW/cm^2 is converted to units of W/m^2 by multiplying by 10.

DISTANCE

Distance is given by:

D = SQRT (EIRP / (4 * Pi * S))

Where

D = Separation distance in cm
EIRP = Equivalent Isotropic Radiated Power in mW
S = Power density in mW/cm^2

SOURCE-BASED DUTY CYCLE

Where applicable (for example, multi-slot cell phone applications) a duty cycle factor may be applied.

Source-based time-averaged EIRP = (DC / 100) * EIRP

Where

DC = Duty Cycle in %, as applicable
EIRP = Equivalent Isotropic Radiated Power in W

7. RF EXPOSURE RESULTS

7.1. MPE Calculations

In the table(s) below, Power and Gain are entered in units of dBm and dBi respectively and conversions to linear forms are used for the calculations.

Single Chain and non-colocated transmitters								
Band	Mode	Separation Distance (cm)	Output Peak Power (dBm)	Antenna Peak Gain (dBi)	Duty Cycle (%)	EIRP (mW)	FCC Power Density (mW/cm^2)	FCC Power Density Limit (mW/cm^2)
2.4GHz	Zigbee	20	0.00	2.15	100.0	1.64	0.00	1.0
2.4GHz	802.11[1]	20	13.4	3.5	100.0	49.0	0.01	1.0
5GHz	802.11[1]	20	14.5	2.3	100.0	47.9	0.01	1.0

Note 1, This is the WLAN radio from the installed modular transmitter (FCC ID: 2ABCB-RPI4B).

The transmitters listed are capable of simultaneous transmission. The sum of the power densities is 0.02 mW/cm^2 which is below the power density limit.

END OF REPORT