RF Exposure Evaluation Declaration

FCC ID:	2APLNCL11
APPLICANT:	SEURA INC
Application Type:	Certification
Product:	Seura Clock
Model No.:	CL.2
Brand Name:	Seura
FCC Classification:	Digital Transmission System (DTS)

Reviewed By : (Kevin Guo)

Approved By : (Robin Wu)

Revision History

Report No.	Version	Description	Issue Date	Note
1801RSU028-U2	Rev. 01	Initial report	06-15-2018	Valid

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	Seura Clock
Model No.	CL.2
Brand Name	Seura
Transmitting Frequency	10.525GHz
Modulation	CW
Components	
Adapter	M/N: RHD10W120050 INPUT: 100-240V ~ 50/60Hz, 1.5A OUTPUT: 12Vdc, 0.5 A

1.2. Description of Available Antennas

Antenna Type	Frequency Band (GHz)	T_X Paths	Maximum Peak Antenna Gain (dBi)
PCB Antenna	10.525	1	8

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where
Pd = power density in mW/cm^2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
Pi = 3.1416
r = distance between observation point and center of the radiator in cm

Pd is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. Test Result of RF Exposure Evaluation

Product	Seura Clock
Test Item	RF Exposure Evaluation

Test Mode	Field strength of fundamental (dBuV/m)	Maximum EIRP (dBm)	Power Density at R = 20 cm (mW/cm^2)	Limit (mW/cm^2)
10.525GHz	102.7	7.5	0.0011	1

Note: EIRP (dBm) = Field strength of fundamental (dBuV/m) – 95.2(dB)

CONCULISON:

The max Power Density at R (20 cm) = 0.0011mW/cm^2 < 1 mW/cm^2 for 10.525GHz.

Therefore, the Min Safety Distance is 20cm.

The End