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Report No.: 2309TW8201-U3
Report Version: 1.0
Issue Date: 2023-11-24

RF Exposure Evaluation Declaration

FCC ID:	2AS8DS23E
APPLICANT:	Sequent AG
Application Type:	Certification
Product:	Sequent SolarCharger
Model No.:	SO2.3
Series Model No.	SO2.3 TIDE, SO2.3 STEEL
Brand Name:	SEQUENT
Trademark:	
FCC Rule Part(s):	Part 2.1093 (Portable)
Test Procedure(s):	KDB 447498 D01v06
Received Date:	September 26, 2023

Reviewed By : Paddy Chen

(Paddy Chen)

Approved By : Chenz Ker

(Chenz Ker)

Testing Laboratory
3261

Revision History

Report No.	Version	Description	Issue Date	Note
2309TW8201-U3	1.0	Original Report	2023-11-24	

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	Sequent SolarCharger
Model No.	SO2.3
Series Model No.	SO2.3 TIDE, SO2.3 STEEL
Brand Name	SEQUENT
Trademark	
Supports Radios Spec.	Bluetooth Single Mode: V5.0
Operating Frequency	2402~2480MHz
Type of modulation	GFSK
Accessary	
Docking	Brand: SEQUENT M/N:SO23 Dock
USB Cable	Brand: SEQUENT M/N:YDS-C-AC-1

Note:

Model Difference Description:

Product Name	Model No.	Model Difference
Sequent SolarCharger	SO2.3 TIDE	Plastic shell with fiberglass added.
Sequent SolarCharger	SO2.3 STEEL	Case material is steel.
Sequent SolarCharger	SO2.3	Case material is Plastic.

1.2. Antenna Description

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	RIMON TECHNOLOGY CO., LTD	WAN3216F245C0X	Chip	1.75dBi

2. RF Exposure Evaluation

2.1. FCC Limits

According to FCC KDB 447498 D04V01 - SAR-Based Exemption

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula .

$$P_{\text{th}}\ (\text{mW}) = \begin{cases} ERP_{20\ \text{cm}}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\ \text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\ \text{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and ERP_{20cm} is per Formula.

$$P_{\text{th}}\ (\text{mW}) = ERP_{20\ \text{cm}}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

The example values shown as below are for illustration only.

Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)									
	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169

2.2. Test Result of RF Exposure Evaluation

Mode	Frequency Band (MHz)	Average Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	EIRP (mW)	FCC SAR Test Exclusion Threshold (mW)
BLE	2402~2480	-0.02	1.00	1.75	1.49	3

So, this device can complies the SAR test exclusion.

The End