



RF Exposure Evaluation

FCC ID: 2A5Z4-AT202C
APPLICANT: Largan Medical Co., Ltd.
Application Type: Certification
Product: "LARGAN" ECG Holter
Model No.: AT-202C
Trademark: LARGAN
FCC Rule Part(s): Part 2.1093 (Portable)
Test Date: April 14 ,2022

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The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date
2203TW5402-U2	1.0	Original Report	2022-04-19

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	"LARGAN" ECG Holter
Model No.	AT-202C
Trademark	LARGAN
Supports Radios Spec.	Bluetooth Single Mode: V4.2
Operating Frequency	BLE: 2402 ~ 2480 MHz
Modulation	GFSK

1.2. Antenna Description

BLE	
Antenna Type	Chip
Antenna M/N	SWLP.2450.10.4.A.02
Antenna Gain	-1.0dBi

2. RF Exposure Evaluation

2.1. FCC Limits

According to FCC KDB 447498 D04.

SAR-based thresholds are derived based on frequency, power, and separation distance of the RF source. The formula defines the thresholds in general for either available maximum time-averaged power or maximum time-averaged ERP, whichever is greater.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

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

where

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

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

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

2.2. Test Result of RF Exposure Evaluation

Mode	Frequency Band (MHz)	Average Output Power (dBm)	Output Power (mW)	FCC SAR Test Exclusion Threshold (mW)
BLE	2402~2480	-0.96	0.80	3

So, this device can complies the SAR test exclusion.

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