RF Exposure

Applicant	:	Litetronics International Inc.
Address	:	6969 W 73rd St Bedford Park IL 60638 United States
Product Name	:	Bluetooth Sensor
Brand Mark	:	Litetronics
Model	:	SC010
FCC ID	:	2BP7BLIS2025
Report Number	:	BLA-EMC-202506-A3003
Date of Receipt	:	June 10, 2025
Date of Test	:	June 10, 2025 to June 20, 2025
Test Standard	:	47 CFR Part 15, Part1.1307 47 CFR Part 15, Part2.1093 KDB447498D04 General RF Exposure Guidance v01
Test Result	:	Pass

Compiled by: Hugh **Review by:** Xavier **Approved by:** Blue Zheng

Issued Date: June 20, 2025

BlueAsia of Technical Services(Shenzhen) Co.,Ltd.
Address: Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province, China

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Revise Record

Version No.	Date	Description
01	June 20, 2025	Original

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1 General information

1.1 General information

Applicant	Litetronics International Inc.
Address	6969 W 73rd St Bedford Park IL 60638 United States
Manufacturer	Litetronics International Inc.
Address	6969 W 73rd St Bedford Park IL 60638 United States
Factory	Litetronics International Inc.
Address	6969 W 73rd St Bedford Park IL 60638 United States

1.2 General description of EUT

Product name	Bluetooth Sensor
Model no.	SC010
Series model	N/A
Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK
Rate data:	1Mbps; 2Mbps
Channel Spacing:	2MHz
Number of Channels:	40
Antenna Type:	PCB antenna
Antenna Gain:	-1.37dBi(Provided by customer)
Power supply or adapter information	DC12V
Hardware Version	1.0
Software Version	N/A
Note: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.	

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2 Laboratory and accreditations

The test facility is recognized, certified, or accredited by the following organizations:

Company name:	BlueAsia of Technical Services(Shenzhen) Co., Ltd.
Address:	Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province, China
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A2LA Cert. No.:	5071.01
FCC Designation No.:	CN1252
ISED CAB identifier No.:	CN0028
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3 RF Exposure Compliance Requirement

3.1 Standard Requirement

According to 447498 D04 Interim General RF Exposure Guidance v01

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

3.2 Limits

$$P_{\text{th}}\ (\text{mW}) = \begin{cases} ERP_{20\ \text{cm}}(d/20\ \text{cm})^x & d \le 20\ \text{cm} \\ ERP_{20\ \text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases} \qquad \text{(B.2)}$$

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 $ERP_{20\text{cm}}$ is per Formula (B.1).

Example values shown in Table B.2 are for illustration only.

Table B.2—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

$$P_{\text{th}}\ (\text{mW}) = ERP_{20\ \text{cm}}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases} \qquad \text{(B.1)}$$

3.3 Result

EIRP = pt x gt = $(E \times d)^2/30$

Where:

pt = transmitter output power in watts,

gt = numeric gain of the transmitting antenna (unitless),

E = electric field strength in V/m,

d = measurement distance in meters (m)

Spot = $(EXd)^2/30$ x gt

Separation distance= 0.5cm

For BLE(Worst):

Ant gain = -1.37dBi

Max Output power = 0.224dBm @ 2402MHz

EIRP =0.224-0.58=-0.356dBm=0.921mW< 2.788mW

ERP =-0.356-2.15= 0.562dBm

Comply with RF exposure exemption limit.

----END OF REPORT----

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