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RF Exposure Evaluation Report

Report No. :	CQASZ20190600481E-02
Applicant:	Dynamox Solucoes Criativas Ltda - ME
Address of Applicant:	Rodovia SC 401 KM 1 - Edificio Celta Sala G1 09-SN, Florianopolis, Brazil
Manufacturer:	Dynamox Solucoes Criativas Ltda - ME
Address of Manufacturer:	Rodovia SC 401 KM 1 - Edificio Celta Sala G1 09-SN, Florianopolis, Brazil
Equipment Under Test (EUT):	
Product:	Data Logger
Model No.:	DynaLogger TcA
Brand Name:	Dynamox
FCC ID:	2AT3M010202
Standards:	47 CFR Part 1.1307 47 CFR Part 2.1093 KDB447498D01 General RF Exposure Guidance v06
Date of Test:	2019-06-28 to 2019-07-17
Date of Issue:	2019-07-17
Test Result :	**PASS***

Tested By: (Tom Chen)

Reviewed By: (Aaron Ma)

Approved By: (Jack Ai)

SHENZHEN HUAXIA TESTING TECHNOLOGY CO.,LTD APPROVED

* In the configuration tested, the EUT complied with the standards specified above.

1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20190600481E-02	Rev.01	Initial report	2019-07-17

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3 General Information

3.1 Client Information

Applicant:	DYNAMOX SOLUCOES CRIATIVAS LTDA - ME
Address of Applicant:	RODOVIA SC 401 KM1 - EDIFICIO CELTA - SALA G1 09, SN, 88030-000, FLORIANÓPOLIS, SC, Brasil CNPJ: 09.008.497/0001-69
Manufacturer:	DYNAMOX SOLUCOES CRIATIVAS LTDA - ME
Address of Manufacturer:	RODOVIA SC 401 KM1 - EDIFICIO CELTA - SALA G1 09, SN, 88030-000, FLORIANÓPOLIS, SC, Brasil CNPJ: 09.008.497/0001-69

3.2 General Description of EUT

Product Name:	Data Logger
Model No.:	DynaLogger TcA
Trade Mark:	Dynamox
Hardware Version:	1.0Ver
Software Version:	1.0Ver
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	5.0
Modulation Type:	GFSK
Transfer Rate:	1Mbps
Number of Channel:	40
Product Type:	☐ Mobile ☒ Portable ☐ Fix Location
Test Software of EUT:	9304 BLE Connector 5.0.11 (manufacturer declare)
Antenna Type:	Wire Antenna
Antenna Gain:	-0.6dBi
EUT Power Supply:	DC 3.0V via internal non rechargeable lithium battery

4 SAR Evaluation

4.1 FCC RF Exposure Compliance Requirement

4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. 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.

4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

f(GHz) is the RF channel transmit frequency in GHz
Power and distance are rounded to the nearest mW and mm before calculation[17]
The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion

4.1.3 EUT RF Exposure

Measurement Data

For BLE:

Test mode : GFSK_1Mbps						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	-0.9	-0.5±0.5	0	1.000	0.310	3.0
Middle (2440MHz)	-1.28	-1.5±0.5	-1	0.794	0.248	
Highest (2480MHz)	-1.62	-1.5±0.5	-1	0.794	0.250	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20190600481E-01