

RF Exposure Report

(Portable mode)

Report No.: SFCDBM-WTW-P22060902

FCC ID: QOQ-GM240S

Test Model: MGM240S22A

Series Model: BGM240S22A

Evaluation Date: Aug. 23, 2022

Issued Date: Oct. 12, 2022

Applicant: Silicon Laboratories Finland Oy

Address: Alberga Business Park - Bldg D/Floor 5, Bertel Jungin aukio 3, 02600
ESPOO, FINLAND

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City
33383, TAIWAN

FCC Registration / 788550 / TW0003
Designation Number:



This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 SAR Exclusion Evaluation.	5

Release Control Record

Issue No.	Description	Date Issued
SFCDBM-WTW-P22060902	Original Release	Oct. 12, 2022

1 Certificate of Conformity

Product: Bluetooth Low Energy and 802.15.4 wireless radio module

Brand: SILICON LABS

Test Model: MGM240S22A

Series Model: BGM240S22A

Sample Status: Engineering samples fully representing production modules

Applicant: Silicon Laboratories Finland Oy

Evaluation Date: Aug. 23, 2022

Rule Part: FCC Part 2 (Section 2.1093)

References Test Guidance: KDB 447498 D04 Interim General RF Exposure Guidance v01

The above equipment has been evaluated by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above guidances. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Lena Wang, **Date:** Oct. 12, 2022
Lena Wang / Specialist

Approved by : Jeremy Lin, **Date:** Oct. 12, 2022
Jeremy Lin / Project Engineer

2 SAR Exclusion Evaluation.

According to KDB 447498 D04, the SAR test exclusion condition is based on source-based time-averaged maximum conducted output power or effective radiated power (ERP), whichever is greater and adjusted for tune-up tolerance. The minimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following formula.

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

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

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

d = the separation distance (cm);

The distance (d) above formula from 0.5 cm to 20 cm and frequency (f) from 0.3 GHz to 6 GHz. The calculated unit for distance is cm, frequency is GHz. The exclusion evaluations are shown as below table. When extremity exposure condition applies, SAR exclusion threshold is considered by applying a factor of 2.5 to exclusion threshold.

RF Source	Operating Frequency (GHz)	Antenna Gain (dBi)	Tune-up Power (dBm)	Higher of tune-up power or ERP (dBm)	Higher of tune-up power or ERP (mW)	Minimum distance of SAR exemption applied. (mm)
Bluetooth	2.4	2.80	10.5	11.15	13.03	12
	2.4	1.48	10.5	10.5	11.22	11
SRD (802.15.4)	2.4	2.8	10.5	11.15	13.03	12
	2.4	1.48	10.5	10.5	11.22	11

Note:

1. The table above demonstrated the minimum separation distance that SAR exemption applied for each configuration.
2. The evaluations were specified by clients in this report.
3. The manufacturer reserves the right to further limit the max RF TX power in the firmware of production modules.

---END---