RF Exposure Evaluation Report

Product	:	Omi
Trade mark	:	Seeed Studio
Model/Type reference	:	Omi
Serial Number	:	N/A
Report Number	:	EED32Q82021202
FCC ID	:	Z4T-OMI
Date of Issue	:	Feb. 26, 2025
Test Standards	:	47 CFR Part 1.1307
		47 CFR Part 1.1310
		47 CFR Part 2.1091
		47 CFR Part 2.1093
		KDB 447498 D04 Interim General RF Exposure Guidance v01
Test result	:	PASS

Prepared for:

Seeed Technology Co., Ltd

9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen

Prepared by:

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Date:

Feb. 26, 2025

Report Seal

Check No.: 3457051224

1 Version

Version No.	Date	Description
00	Feb. 26, 2025	Original

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3 General Information

3.1 Client Information

Applicant:	Seeed Technology Co., Ltd
Address of Applicant:	9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen
Manufacturer:	Seeed Technology Co., Ltd
Address of Manufacturer:	9F, G3 Building, TCL International E City, Zhongshanyuan Road, Nanshan District, Shenzhen
Factory:	Shenzhen Xinxian Technology Co.,Limited
Address of Factory:	F5, Building B17, Hengfeng Industrial City, No. 739 Zhoushi Rd, Baoan District, Shenzhen, Guangdong, P.R.C.

3.2 General Description of EUT

Product Name:	Omi
Model No.(EUT):	Omi
Trade Mark:	Seeed Studio

3.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	GFSK, π/4DQPSK	
Test Power Grade:	Default	
Test Software of EUT:	sscom5.13.1.exe	
Antenna Type:	Ceramic Antenna	
Antenna Gain:	4.97dBi	
Power Supply:	Battery:	DC 3.7V
Sample Received Date:	Dec. 18, 2024	
Sample tested Date:	Dec. 18, 2024 to Dec. 29, 2024	
Remark: Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.		

3.4 **Test Location**

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668　　Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.5 **Deviation from Standards**

None.

3.6 **Abnormalities from Standard Conditions**

None.

3.7 **Other Information Requested by the Customer**

None.

4   SAR Evaluation

4.1   RF Exposure Compliance Requirement

4.1.1 Limits

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 Pth (mW).

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

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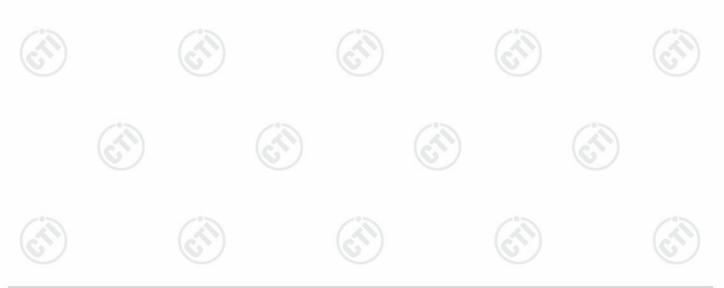
where

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

and f is in GHz, d is the separation distance (cm), and ERP20cm is per Formula (B.1).

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

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.
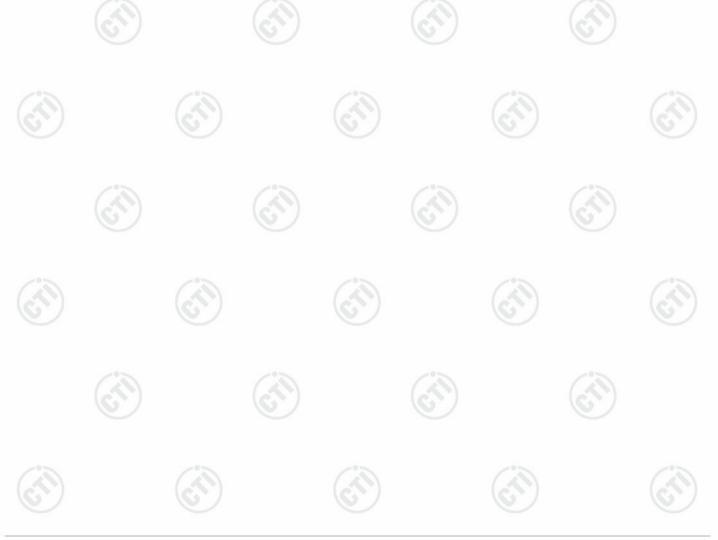
4.1.3 EUT RF Exposure Evaluation

For Stand alone:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
2402	0.5	0.11	4.97	2.93	1.9634	2.7877	0.7043	Pass

Note：

①EIRP=conducted power+antenna gain；

②ERP=EIRP-2.15;

③EIRP(dBm) = Field strength of the fundamental signal(dBuV/m@3m) – 95.23;

④ERP(mW) = $10^{(ERP\ (dBm)/10)}$;

⑤The estimation distance is 0.5cm;

⑥The test data please refer to the report of EED32Q82021201 and only the worst case data was recorded in the report.

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;

2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;

3. The result(s) shown in this report refer(s) only to the sample(s) tested;

4. Unless otherwise stated,the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule stated in ILAC-G8:09/2019/CNAS-GL015:2022;

5. Without written approval of CTI, this report can't be reproduced except in full;

*** End of Report ***