



SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

SZEMC-TRF-01 Rev. A/1

Report No.: SZEM240400262703

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RF Exposure Report

Application No.: SZEM2404002627AT
Applicant: OnePlus Technology (Shenzhen) Co., Ltd.
Address of Applicant: 18C02, 18C03, 18C04 and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen, China
Manufacturer: OnePlus Technology (Shenzhen) Co., Ltd.
Address of Manufacturer: 18C02, 18C03, 18C04, and 18C05, Shum Yip Terra Building, Binhe Avenue North, Futian District, Shenzhen, Guangdong, P.R. China
Equipment Under Test (EUT):
EUT Name: Pencil
Model No.: OPN2402
Trade Mark: ONEPLUS
FCC ID: 2ABZ2-OPN2402
Standard(s) : FCC Rules 47 CFR §2.1093
KDB 447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2024-04-07
Date of Test: 2024-04-18 to 2024-04-26
Date of Issue: 2024-05-15

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu

Keny Xu
EMC Laboratory Manager



SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch EMC Laboratory

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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2024-05-15		Original

Authorized for issue by:				
		Darren Yuan		
		Darren Yuan/Project Engineer		
		Eric Fu		
		Eric Fu/Reviewer		



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2 General Information

2.1 General Description of E.U.T.

Product Type:	☒ Portable device
	☐ Mobile device
	☐ Fixed device

2.2 Details of E.U.T.

Power supply:	Powered by Rechargeable Li-ion Cell. Battery information Model: 60340 Rated Capacity: 80mA, 0.308Wh Rated Voltage: 3.85Vdc
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.0 LE
Date Rate:	1Mbps, 2Mbps
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Antenna Type:	FPC Antenna
Antenna Gain:	1.2dBi

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

Separation Distance

Minimum test separation distance:	5mm
Remark: This minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander.	

2.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

2.4 Test Facility

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

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI (Member No. 1937)

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1336

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.



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3 Technical Requirements Specification

3.1 RF Exposure Evaluation

3.1.1 Limit & Test Method

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:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- 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

3.1.2 Conclusion

The Max. power (including tune-up tolerance) is -0.97 dBm on the lowest channel 2.402 GHz (*)
-0.97 dBm logarithmic terms convert to numeric result is nearly 0.80 mW

According to the formula. calculate the test exclusion thresholds:

$$\left[\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})}$$

$$\text{General RF Exposure} = (0.80 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.402 \text{ GHz}} = 0.25 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

$$(1) < (2)$$

So the SAR report is not required.

(*) Max. power refer to Report No.:SZEM240400262702

Note: Simultaneous transmission was evaluated on tablet SAR report declared by applicant.

FCC ID of tablet is 2ABZ2-OPD2403.

--End of the Report--



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