

RF Exposure Evaluation Report

Product : MOUNTED COMPUTER
Trade mark : MEFERI
Model/Type reference : MC45, MC45_ROW, MC45_RU, MC47
Serial Number : N/A
Report Number : EED32R80300004
FCC ID : 2A9LJ-MC45
Date of Issue : May 21, 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:

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1 Version

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2 Contents

	Page
1 VERSION	2
2 CONTENTS	3
3 GENERAL INFORMATION	4
3.1 CLIENT INFORMATION	4
3.2 GENERAL DESCRIPTION OF EUT	4
3.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD	4
3.4 TEST LOCATION	6
3.5 DEVIATION FROM STANDARDS	6
3.6 ABNORMALITIES FROM STANDARD CONDITIONS	6
3.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER	6
4 SAR EVALUATION	7
4.1 RF EXPOSURE COMPLIANCE REQUIREMENT	7
4.1.1 Limits	7
4.1.2 Test Procedure	7
4.1.3 EUT RF Exposure Evaluation	8

3 General Information

3.1 Client Information

Applicant:	MEFERI TECHNOLOGIES CO., LTD
Address of Applicant:	5F, A5, Tianfu Software Park, No. 1129, Century City Road, High-tech Zone, 610000, Chengdu, Sichuan, P.R. China
Manufacturer:	MEFERI TECHNOLOGIES CO., LTD
Address of Manufacturer:	5F, A5, Tianfu Software Park, No. 1129, Century City Road, High-tech Zone, 610000, Chengdu, Sichuan, P.R. China
Factory:	MEFERI TECHNOLOGIES CO., LTD
Address of Factory:	5F, A5, Tianfu Software Park, No. 1129, Century City Road, High-tech Zone, 610000, Chengdu, Sichuan, P.R. China

3.2 General Description of EUT

Product Name:	MOUNTED COMPUTER
Model No.:	MC45, MC45_ROW, MC45_RU, MC47
Test Model No.:	MC45
Trade mark:	MEFERI

3.3 Product Specification subjective to this standard

Frequency Range:	BLE/BT: 2402MHz~2480MHz 2.4G Wi-Fi: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz 5G Wi-Fi: U-NII-1: 5150-5250MHz U-NII-2A: 5250-5350MHz U-NII-2C:5500-5700MHz U-NII-3:5745-5825MHz
Modulation Type:	BLE: GFSK BT: GFSK, $\pi/4$ DQPSK, 8DPSK 2.4G Wi-Fi: IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM,QPSK,BPSK) 5G Wi-Fi: IEEE 802.11a: OFDM (BPSK, QPSK, 16QAM, 64QAM) IEEE 802.11n(HT20/HT40): OFDM (BPSK, QPSK, 16QAM, 64QAM) IEEE 802.11ac(VHT20/VHT40/VHT80): OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)
Test Power Grade:	Default
Test Software of EUT:	Adb.exe
Antenna Type:	FPC Antenna
Antenna Gain:	BLE/BT: 4.72 dBi 2.4G Wi-Fi: Antenna 1: 4.72 dBi Antenna 2: 4.39 dBi 5G Wi-Fi: U-NII-1: Antenna 1: 4.44 dBi Antenna 2: 4.52 dBi U-NII-2A: Antenna 1: 4.44 dBi Antenna 2: 4.52 dBi U-NII-2C: Antenna 1: 4.98 dBi Antenna 2: 4.86 dBi U-NII-3:

	Antenna 1: 4.24 dBi Antenna 2: 3.90 dBi	
Power Supply:	Adapter:	DC 12V or Powered by POE
Sample Received Date:	Mar. 24, 2025	
Sample tested Date:	Mar. 24, 2025 to Apr. 26, 2025	

Remark:
Model No.: MC45, MC45_ROW, MC45_RU, MC47
Only the model MC45 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, only the model name, Customer demand and are different for marketing requirements.

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 P_{th} (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). P_{th} is given by Formula

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

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).

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

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:

BLE:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
@2.4GHz	20	6.27	4.72	8.84	7.6560	3060	0.0025	Pass

BT:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
@2.4GHz	20	7.55	4.72	10.12	10.2802	3060	0.0034	Pass

2.4G Wi-Fi:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
@2.4GHz	20	12.98	4.72	15.55	35.8922	3060	0.0117	Pass

5G Wi-Fi:

Frequency (MHz)	Estimation distance (cm)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	MPE ratio	Result
@5GHz	20	12.16	4.52	14.53	28.3792	3060	0.0093	Pass

NFC:

Frequency (MHz)	Estimation distance (cm)	Field strength of the fundamental signal (dBuV/m@3m)	ERP (dBm)	ERP (W)	Threshold ERP (W)	MPE ratio	Result
13.56MHz	20	56.16	-41.22	0.00000008	≤0.7505	0.0000001	Pass

Note:

① EIRP=conducted power+antenna gain;

② ERP=EIRP-2.15;

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

④ ERP(mW) = $10^{(ERP (dBm)/10)}$;

Report No. : EED32R80300006

Page 9 of 10

⑤The estimation distance is 20cm;

⑥The test data please refer to the report of EED32R80300001, EED32R80300002, EED32R80300003, EED32R80300004, EED32R80300005 and only the worst case data was recorded in the report.

For Simultaneous Transmission:

As MPE ratio (BT+2.4G Wi-Fi+5G Wi-Fi+NFC)= $0.0034^2+0.0117^2+0.0093^2+0.0000001^2=0.000235<1$, it's deemed to fulfil the RF exposure requirement.

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;
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*** End of Report ***