Industrial Internet Innovation Center (Shanghai) Co.,Ltd.

MPE REPORT

PRODUCT	Sub Monitor
BRAND	SUNMI
MODEL	NPF10
FCC ID	2AH25NPF10
APPLICANT	Shanghai Sunmi Technology Co.,Ltd.
ISSUE DATE	January 3, 2025
STANDARD(S)	FCC 47 CFR Part 2 §2.1091

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CONTENTS

1 Summary of Test Report

1.1 Test Standard (s)

No.	Test Standard(s)	Title	Version
1	FCC 47 CFR Part 2 §2.1091	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS. Section 2.1091 Radiofrequency radiation exposure evaluation: mobile devices	N/A
NOTE: The standard of FCC 47 CFR Part 2 §2.1091 has not been accredited by A2LA.			

1.2 Reference Documents

No.	Reference Document(s)	Title	Version
1	KDB 447498	General RF Exposure Guidance	D01 v06

1.3 Data Provided by Applicant

No.	Item(s)	Data
1	Maximum tune-up power	NFC: -23.00 dBm
2	Maximum antenna gain	N/A
NOTE: The data of Maximum tune-up power and Maximum antenna gain are provided by the customer may affect the validity of the test results in this report, and the impact and consequences of this shall be undertaken by the customer.		

2 General Information of The Laboratory

2.1 Testing Laboratory

Lab Name	Industrial Internet Innovation Center (Shanghai) Co.,Ltd.
Address	Building 4，No. 766，Jingang Road，Pudong，Shanghai，China
Telephone	021-68866880
FCC Registration No.	708870
FCC Designation No.	CN1364

2.2 Laboratory Environmental Requirements

Temperature	18℃~25℃
Relative Humidity	25%RH~75%RH

2.3 Project Information

Project Manager	Gao Hongning
Test Date	N/A

3 General Information of The Customer

3.1 Applicant

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
Telephone	8618501703215

3.2 Manufacturer

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505,No.388,Song Hu Road,Yang Pu District,Shanghai,China
Telephone	8618501703215

4 General Information of The Product

4.1 Product Description for Equipment under Test (EUT)

Product	Sub Monitor
Model	NPF10
Date of Receipt	N/A
EUT ID*	N/A
SN/IMEI	N/A
Supported Radio Technology and Bands	NFC
Tx Frequency	13.56 MHz
Hardware Version	USBLCD_MB3_V1.0.A
Software Version	T113-ROM1.1.5-UBOOT1.1.3-FW1.1.5-APP1.1.5-RES1.1.0
NOTE1: EUT ID is the internal identification code of the laboratory. NOTE2: Samples in the test report are provided by the customer. The test results are only applicable to the samples received by the laboratory.	

4.2 Description for Auxiliary Equipment (AE)

AE ID*	Description	Model	SN/Remark
N/A	N/A	N/A	N/A
NOTE: AE ID is the internal identification code of the laboratory.			

5 General Description

5.1 Evaluation Distance

Evaluation distance 20cm as a distance between the equipment and the operator or user when it is used normally. The distance used for the assessment had be specified by the manufacturer and be onsistent with the intended usage of the equipment.

5.2 Evaluation Method

For conservative evaluation consideration, only maximum power of each frequency band based on the tighter limits respectively are used to calculate the boundary power density.

Based on the KDB447498 D01 and FCC 47 CFR Part 2 § 2.1091, the DUT is evaluated as a mobile device.

$$S = \frac{P \times G}{4\pi d^2}$$

Where

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

6 Assessment Results

6.1 Standalone Evaluation

6.1.1 Limit/Criterion

Table 6.1.1-1: Limits for Occupational / Controlled Exposure

Limits for Occupational / Controlled Exposure				
Frequency (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (minitues)
0.3 – 3.0	614	1.63	(100)*	6
3.0 – 30	1824/f	4.89/f	($900/f^2$)*	6
30 – 300	61.4	0.163	1	6
300 – 1500	--	--	f/300	6
1500 - 100000	--	--	5	6
Limits for General Population / Uncontrolled Exposure				
Frequency (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (minitues)
0.3 – 1.34	614	1.63	(100)*	30
1.34 – 30	824/f	2.19/f	($180/f^2$)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	--	--	f/1500	30
1500 - 100000	--	--	1	30
NOTE: f = frequency in MHz; * Plane-wave equivalent power density. For the DUT, the limits for General Population / Uncontrolled Exposure are applicable.				

6.1.2 Standalone Evaluation

Table 6.1.2-1: Maximum tune-up power

Band	Frequency (MHz)	dBμV/m @3m	EIRP(dBm)	Maximum Tune up Power(dBm)
NFC	13.56	71.349	-23.879	-23.00
Note: EIRP(dBm)=Radiated field strength(dBμV/m)+20Log(3)-104.77.				

Table 6.1.2-2: Standalone Evaluation

Band	Maximum Tune Up (dBm)	Highest Output Power (dBm)	Highest Output Power (mW)	Antenna Gain(dBi)	Numeric antenna gain	Power density at 20cm(mW/cm²)	Limit (mW/cm²)
NFC	-23.00	-23.00	0.005	N/A	N/A	<0.001	0.979

Annex A: Revised History

Version	Revised Content
V0	Initial

Annex B: Accreditation Certificate

Accredited Laboratory

A2LA has accredited

INDUSTRIAL INTERNET INNOVATION CENTER (SHANGHAI) CO., LTD.

Shanghai, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 20th day of September 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3682.01
Valid to February 28, 2025

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

END OF REPORT