MPE TEST REPORT

Applicant	MOONS' Electric (Taicang) co., Ltd.
FCC ID	2BRS4-PG126173
Product	Wireless Gateway
Brand	MOONS'
Model	MSPG126173
Report No.	EFTA25110018-IE-03-M1V1
Issue Date	December 3, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC 47 CFR Part 1 §1.1310, §2.1091.** The test results show that the equipment tested can demonstrate compliance with the requirements as documented in this report.

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Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	November 26, 2025
Rev.1	Updated data. Updated information.	December 3, 2025
Note: This revised report (Report No.: EFTA25110018-IE-03-M1V1) supersedes and replaces the previously issued report (Report No.: EFTA25110018-IE-03-M1). Please discard or destroy the previously issued report and dispose of it accordingly.		

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1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test Facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

1.3 Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
Address:	Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
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1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25°C
Relative humidity	Min. = 20%, Max. = 80%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

2 Description of Equipment Under Test

Client Information

Applicant	MOONS' Electric (Taicang) co., Ltd.
Applicant address	No.18, Yingang Road, Fuqiao Town, 215400 Taicang, Jiangsu Province, China
Manufacturer	MOONS' Electric (Taicang) co., Ltd.
Manufacturer address	No.18, Yingang Road, Fuqiao Town, 215400 Taicang, Jiangsu Province, China

General Technologies

EUT Description			
Model	MSPG126173		
Lab Internal SN	EFTA25110018-IE-03/S01		
Hardware Version	V2		
Software Version	V2		
Frequency	Band	TX (MHz)	RX (MHz)
	LTE Band 2	1850 ~ 1910	1930 ~ 1990
	LTE Band 4	1710 ~ 1755	2110 ~ 2155
	LTE Band 5	824 ~ 849	869 ~ 894
	LTE Band 12	699 ~ 716	729 ~ 746
	LTE Band 13	777 ~ 787	746 ~ 756
	LTE Band 14	788 ~ 798	758 ~ 768
	LTE Band 25	1850 ~ 1915	1930 ~ 1995
	LTE Band 26	814 ~ 849	859 ~ 894
	Wi-Fi 2.4GHz	2400 ~ 2483.5	2400 ~ 2483.5
	Bluetooth (Low Energy)	2400 ~ 2483.5	2400 ~ 2483.5
	SUBG	904 ~ 926	904 ~ 926
EUT Accessory			
AC Adapter 1	Manufacturer: SHENZHEN SUNSHINE TECHNOLOGICS CO., LTD. Model: XSP-20TUSAC-GaN		
AC Adapter 2	Manufacturer: Shenzhen Huajin Electron Co.,Ltd Model: HJ-1202000		
Date of Testing	November 5, 2025 ~ November 19, 2025		
Date of Sample Received	November 5, 2025		

Note:

1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.
2. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.

3 Maximum Tune up and Antenna Gain

The numeric gain (G) of the antenna with a gain specified in dB is determined by
Numeric gain (G)=10^ (antenna gain/10)

Band	Maximum Tune up Tolerance		Antenna Gain (dBi)	Numeric Gain
	(dBm)	(mW)		
LTE Band 2 Internal Antenna	25.00	316.23	3.70	2.34
LTE Band 4 Internal Antenna	25.00	316.23	3.70	2.34
LTE Band 5 Internal Antenna	25.00	316.23	2.10	1.62
LTE Band 12 Internal Antenna	25.00	316.23	1.60	1.45
LTE Band 13 Internal Antenna	25.00	316.23	1.60	1.45
LTE Band 14 Internal Antenna	25.00	316.23	1.60	1.45
LTE Band 25 Internal Antenna	25.00	316.23	3.70	2.34
LTE Band 26 Internal Antenna	25.00	316.23	2.10	1.62
Wi-Fi 2.4GHz Internal Antenna	20.00	100.00	3.44	2.21
Bluetooth LE Internal Antenna	20.00	100.00	3.44	2.21
SUBG Internal Antenna	20.00	100.00	4.39	2.75
LTE Band 2 External Antenna	25.00	316.23	2.17	1.65
LTE Band 4 External Antenna	25.00	316.23	2.16	1.64
LTE Band 5 External Antenna	25.00	316.23	-0.23	0.95
LTE Band 12 External Antenna	25.00	316.23	-1.08	0.78
LTE Band 13 External Antenna	25.00	316.23	0.87	1.22
LTE Band 14 External Antenna	25.00	316.23	0.87	1.22
LTE Band 25 External Antenna	25.00	316.23	2.17	1.65
LTE Band 26 External Antenna	25.00	316.23	0.48	1.12
SUBG External Antenna	20.00	100.00	0.95	1.24

4 MPE Limit

According to section 1.1310 of FCC 47 CFR Part 1, limits for maximum permissible exposure (MPE) are as following.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*($900/f^2$)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) Limits for General Population/Uncontrolled Exposure				
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
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

*f = frequency in MHz. * = Plane-wave equivalent power density.*

Note1. Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational / controlled limits apply provided he or she is made aware of the potential for exposure.

Note2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

The maximum permissible exposure for 300~1500 MHz is f/1500, for 1500~100,000MHz is 1.0. So

Band	The Maximum Permissible Exposure (mW/cm^2)
LTE Band 2	1.000
LTE Band 4	1.000
LTE Band 5	0.549
LTE Band 12	0.466
LTE Band 13	0.518
LTE Band 14	0.525
LTE Band 25	1.000
LTE Band 26	0.543
Wi-Fi 2.4GHz	1.000
Bluetooth LE	1.000
SUBG	1.000

5 RF Exposure Evaluation Result

RF exposure evaluation method is based on KDB 447498 D01，this calculation is based on the conducted power, maximum power and antenna gain with provides the minimum separation distance. The formula shown below is from OET Bulletin 65 Edition 97-01 Per KDB 447498 D01:

$$S= PG / 4\pi R^2$$

Where: S = power density (in appropriate units, e.g. mW/cm^2)
P = Time-average maximum tune up procedure (in appropriate units, e.g., mW)
G = the numeric gain of the antenna
R = distance to the center of radiation of the antenna (20 cm = limit for MPE)

Band	Maximum Tune up (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)	PG (mW)	Result (mW/cm^2)	Limit Value (mW/cm^2)	The MPE Ratio
LTE Band 2 Internal Antenna	25.000	3.700	28.700	741.310	0.147	1.000	0.147
LTE Band 4 Internal Antenna	25.000	3.700	28.700	741.310	0.147	1.000	0.147
LTE Band 5 Internal Antenna	25.000	2.100	27.100	512.861	0.102	0.549	0.186
LTE Band 12 Internal Antenna	25.000	1.600	26.600	457.088	0.091	0.466	0.195
LTE Band 13 Internal Antenna	25.000	1.600	26.600	457.088	0.091	0.518	0.176
LTE Band 14 Internal Antenna	25.000	1.600	26.600	457.088	0.091	0.525	0.173
LTE Band 25 Internal Antenna	25.000	3.700	28.700	741.310	0.147	1.000	0.147
LTE Band 26 Internal Antenna	25.000	2.100	27.100	512.861	0.102	0.543	0.188
Wi-Fi 2.4GHz Internal Antenna	20.000	3.440	23.440	220.800	0.044	1.000	0.044
Bluetooth LE Internal Antenna	20.000	3.440	23.440	220.800	0.044	1.000	0.044
SUBG Internal Antenna	20.000	4.390	24.390	274.789	0.055	1.000	0.055
LTE Band 2 External Antenna	25.000	2.170	27.170	521.195	0.104	1.000	0.104
LTE Band 4 External Antenna	25.000	2.160	27.160	519.996	0.103	1.000	0.103
LTE Band 5 External Antenna	25.000	-0.230	24.770	299.916	0.060	0.549	0.109
LTE Band 12 External Antenna	25.000	-1.080	23.920	246.604	0.049	0.466	0.105
LTE Band 13 External Antenna	25.000	0.870	25.870	386.367	0.077	0.518	0.148
LTE Band 14 External Antenna	25.000	0.870	25.870	386.367	0.077	0.525	0.146
LTE Band 25 External Antenna	25.000	2.170	27.170	521.195	0.104	1.000	0.104
LTE Band 26 External Antenna	25.000	0.480	25.480	353.183	0.070	0.543	0.129
SUBG External Antenna	20.000	0.950	20.950	124.451	0.025	1.000	0.025

Note: **R** = 20cm
π= 3.1416
The MPE Ratio = Mac Result÷Limit Value

This device only supports simultaneous transmission via Wi-Fi 2.4GHz and WWAN or Bluetooth and WWAN or SUBG and WWAN.

So, the simultaneous transmitting antenna pairs as below:
TER = SUBG Antenna MPE Ratio +WWAN Antenna MPE Ratio = 0.055 + 0.195 = 0.250<1

So, the limit is kept.
Note: For this device, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.

ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

********END OF REPORT ********