

MPE TEST REPORT

Applicant	MeiG Smart Technology Co., Ltd
FCC ID	2APJ4-SLM927D
Product	LTE Module
Brand	MEIGLink
Model	SLM927D
Report No.	R2411A1659-M1
Issue Date	December 27, 2024

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

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1 Test Laboratory

1.1 Notes of the Test Report

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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	MeiG Smart Technology Co., Ltd		
Applicant address2nd Floor, Office Building, No.5 Lingxia Road, FeFuyong Street, Bao'an District, Shenzhen, China			
Manufacturer	MeiG Smart Technology Co., Ltd		
Manufacturer address	2nd Floor, Office Building, No.5 Lingxia Road, Fenghuang, Fuyong Street, Bao'an District, Shenzhen, China.		

General Technologies

EUT Description						
Model	SLM927D					
Lab internal SN	R2411A1659/S01					
Hardware Version	SLM927D_MB_V1.01					
SW Version	V01_T04					
	Band	TX (MHz)	RX (MHz)			
	WCDMA Band II	1850 ~ 1910	1930 ~ 1990			
	WCDMA Band IV	1710 ~ 1755	2110 ~ 2155			
	WCDMA Band V	824 ~ 849	869 ~ 894			
	LTE Band 2	1850 ~ 1910	1930 ~ 1990			
	LTE Band 4	1710 ~ 1755	2110 ~ 2155			
	LTE Band 5	824 ~ 849	869 ~ 894			
	LTE Band 7	2500 ~ 2570	2620 ~ 2690			
	LTE Band 12	699 ~ 716	729 ~ 746			
Frequency	LTE Band 13	777 ~ 787	746 ~ 756			
	LTE Band 17	704 ~ 716	734 ~ 746			
	LTE Band 25	1850 ~ 1915	1930 ~ 1995			
	LTE Band 26	814 ~ 849	859 ~ 894			
	LTE Band 41	2496 ~ 2690	2496 ~ 2690			
	LTE Band 66	1710 ~ 1780	2110 ~ 2180			
	LTE Band 71	663 ~ 698	617 ~ 652			
	Bluetooth	2400 ~ 2483.5	2400 ~ 2483.5			
	Wi-Fi 2.4GHz	2400 ~ 2483.5	2400 ~ 2483.5			
	Wi-Fi 5GHz (U-NII-1)	5150 ~ 5250	5150 ~ 5250			



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	Wi-Fi 5GHz (U-NII-2A)	5250 ~ 5350	5250 ~ 5350	
	Wi-Fi 5GHz (U-NII-2C)	5470 ~ 5725	5470 ~ 5725	
	Wi-Fi 5GHz (U-NII-3)	5725 ~ 5850	5725 ~ 5850	
Date of Testing	November 15, 2024 ~ December 12, 2024			
Date of Sample Received	November 15, 2024			

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 Output Power (Measured) /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 Power		Antenna Gain	Numeric Gain	
Bund	(dBm)	(mW)	(dBi)		
WCDMA Band II	25.00	316.228	4.02	2.523	
WCDMA Band IV	25.00	316.228	4.00	2.512	
WCDMA Band V	25.00	316.228	3.52	2.249	
LTE Band 2	25.00	316.228	4.02	2.523	
LTE Band 4	25.00	316.228	4.00	2.512	
LTE Band 5	25.00	316.228	3.52	2.249	
LTE Band 7	25.00	316.228	5.19	3.304	
LTE Band 12	25.00	316.228	3.65	2.317	
LTE Band 13	25.00	316.228	3.15	2.065	
LTE Band 17	25.00	316.228	3.65	2.317	
LTE Band 25	25.00	316.228	4.02	2.523	
LTE Band 26	25.00	316.228	3.52	2.249	
LTE Band 41	25.00	316.228	5.77	3.776	
LTE Band 66	25.00	316.228	4.00	2.512	
LTE Band 71	25.00	316.228	3.19	2.084	
Wi-Fi 2.4GHz	22.00	158.489	3.95	2.483	
Wi-Fi 5GHz	18.00	63.096	1.52	1.419	
Band	Output Power (Measured)		Antenna Gain	Numeric Gain	
	(dBm)	(mW)	(dBi)		
Bluetooth	10.91	12.331	3.95	2.483	
Bluetooth LE	6.58	4.550	3.95	2.483	

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	Electric Field	Magnetic Field	Power Density	Averaging Time
(MHz)	Strength	Strength	- (***)	554 245
357555 676	(∨/m)	(A/m)	(mW/cm2)	(minutes)
	(A) Limits for Occu	upational/Controlle	d Exposures	
0.3-3.0	614	1.63	*(100)	6
3-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B)	Limits for General	Population/Uncont	rolled Exposure	
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

TABLE 1 – LIMITS FOR MAXIMUN PERMISSIBLE EXPOSURE (MPE)

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.



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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)
WCDMA Band II	0.549
WCDMA Band IV	1.000
WCDMA Band V	1.000
LTE Band 2	1.000
LTE Band 4	1.000
LTE Band 5	0.549
LTE Band 7	1.000
LTE Band 12	0.466
LTE Band 13	0.518
LTE Band 17	0.469
LTE Band 25	1.000
LTE Band 26	0.543
LTE Band 41	1.000
LTE Band 66	1.000
LTE Band 71	0.442
Wi-Fi 2.4GHz	1.000
Wi-Fi 5GHz	1.000
Bluetooth	1.000
Bluetooth LE	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
WCDMA Band II	25.00	4.02	29.020	797.995	0.159	0.549	0.289
WCDMA Band IV	25.00	4.00	29.000	794.328	0.158	1.000	0.158
WCDMA Band V	25.00	3.52	28.520	711.214	0.141	1.000	0.141
LTE Band 2	25.00	4.02	29.020	797.995	0.159	1.000	0.159
LTE Band 4	25.00	4.00	29.000	794.328	0.158	1.000	0.158
LTE Band 5	25.00	3.52	28.520	711.214	0.141	0.549	0.258
LTE Band 7	25.00	5.19	30.190	1044.720	0.208	1.000	0.208
LTE Band 12	25.00	3.65	28.650	732.825	0.146	0.466	0.313
LTE Band 13	25.00	3.15	28.150	653.131	0.130	0.518	0.251
LTE Band 17	25.00	3.65	28.650	732.825	0.146	0.469	0.311
LTE Band 25	25.00	4.02	29.020	797.995	0.159	1.000	0.159
LTE Band 26	25.00	3.52	28.520	711.214	0.141	0.543	0.261
LTE Band 41	25.00	5.77	30.770	1193.988	0.238	1.000	0.238
LTE Band 66	25.00	4.00	29.000	794.328	0.158	1.000	0.158
LTE Band 71	25.00	3.19	28.190	659.174	0.131	0.442	0.297
Wi-Fi 2.4GHz	22.00	3.95	25.950	393.550	0.078	1.000	0.078
Wi-Fi 5GHz	18.00	1.52	19.520	89.536	0.018	1.000	0.018
Bluetooth	10.91	3.95	14.860	30.620	0.006	1.000	0.006
Bluetooth LE	6.58	3.95	10.530	11.298	0.002	1.000	0.002
Note: R = 20cm π = 3.1416 The MPE Ratio = Mac Result÷Limit Value							

So the simultaneous transmitting antenna pairs as below:

TER = Wi-Fi 2.4GHz Antenna MPE ratio + Wi-Fi 5GHz Antenna MPE ratio + Bluetooth Antenna MPE ratio + WWAN Antenna MPE ratio = 0.078 + 0.018 + 0.006 + 0.313 = 0.415 < 1

Note: For transmitters, 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 ******