



# MPE TEST REPORT

**Applicant** MeiG Smart Technology Co., Ltd  
**FCC ID** 2APJ4-SLM750V  
**Product** SLM750  
**Brand** MEIGLink  
**Model** SLM750  
**Report No.** R1908A0527-M1V1  
**Issue Date** November 6, 2019

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

This report shall not be reproduced in full or partial, without the written approval of **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)**

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

### **IC (recognition number is 8510A)**

TA Technology (Shanghai) Co., Ltd. has been listed by industry Canada to perform electromagnetic emission measurement.

### **VCCI (recognition number is C-4595, T-2154, R-4113, G-10766)**

TA Technology (Shanghai) Co., Ltd. has been listed by industry Japan to perform electromagnetic emission measurement.

### **A2LA (Certificate Number: 3857.01)**

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform electromagnetic emission measurement.



### 1.3 Testing Location

Company: TA Technology (Shanghai) Co., Ltd.  
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China  
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### 1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25 °C
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 $\Omega$
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

<b>Applicant</b>	MeiG Smart Technology Co., Ltd
<b>Applicant address</b>	3F,No.88,Qinjiang Road, Xuhui District,Shanghai,China
<b>Manufacturer</b>	MeiG Smart Technology Co., Ltd
<b>Manufacturer address</b>	3F,No.88,Qinjiang Road, Xuhui District,Shanghai,China

### General Technologies

<b>Model</b>	SLM750
<b>IMEI</b>	863879041726491
<b>Hardware Version</b>	SLM750-V_MB_V1.00
<b>Software Version</b>	SLM750-V_2.0.2D_EQ100
<b>Date of Testing:</b>	September 4, 2019 ~ September 24, 2019

### 3 Maximum conducted output power (measured) and antenna Gain

The numeric gain (G) of the antenna with a gain specified in dB is determined by

Numeric gain (G)=10<sup>(antenna gain/10)</sup>

Band		Burst Turn up Power(dBm)	Division Factors (dB)	Time-Averaged Tune up Power (dBm)
GSM 850	GSM	32.34	-9.03	23.31
	GPRS	1 Txslot	-9.03	23.47
		2 Txslots	-6.02	26.41
		3 Txslots	-4.26	28.05
		4 Txslots	-3.01	29.19
GSM 1900	GSM	31.65	-9.03	22.62
	GPRS	1 Txslot	-9.03	22.69
		2 Txslots	-6.02	25.63
		3 Txslots	-4.26	27.32
		4 Txslots	-3.01	29.32

Note:

Division Factors

To average the power, the division factor is as follows:

1Txslot = 1 transmit time slot out of 8 time slots

=> conducted power divided by (8/1) => -9.03 dB

2Txslots = 2 transmit time slots out of 8 time slots

=> conducted power divided by (8/2) => -6.02 dB

3Txslots = 3 transmit time slots out of 8 time slots

=> conducted power divided by (8/3) => -4.26 dB

4Txslots = 4 transmit time slots out of 8 time slots

=> conducted power divided by (8/4) => -3.01 dB

Band	Maximum Conducted Output Power		Antenna Gain (dBi)	Numeric gain
	(dBm)	(mW)		
GSM 850	29.19	829.851	1.8	1.514
GSM 1900	29.32	855.067	2.5	1.778
CDMA BC0	24.00	251.189	1.8	1.514
CDMA BC1	24.00	251.189	2.5	1.778
WCDMA II	25.00	316.228	2.5	1.778
WCDMA IV	25.00	316.228	2.5	1.778
WCDMA V	25.00	316.228	1.8	1.514
LTE Band 2	25.70	371.535	2.5	1.778
LTE Band 4	25.70	371.535	2.5	1.778
LTE Band 5	25.70	371.535	1.8	1.514
LTE Band 12	25.70	371.535	1.8	1.514
LTE Band 13	25.70	371.535	1.8	1.514
LTE Band 17	25.70	371.535	1.8	1.514
LTE Band 25	25.70	371.535	2.5	1.778
LTE Band 26(part 22)	25.70	371.535	1.8	1.514
LTE Band 26(part 90)	25.70	371.535	1.8	1.514
LTE Band 41	25.70	467.735	3.9	2.455

## 4 Test Result

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

TABLE 1 – LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0 .....	614	1.63	*(100)	6
3-30 .....	1842/f	4.89/f	*(900/f <sup>2</sup> )	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/Uncontrolled Exposure				
0.3-1.34 .....	614	1.63	*(100)	30
1.34-30 .....	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300 .....	27.5	0.073	0.2	30
300-1500 .....			f/1500	30
1500-100,000 .....			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
GSM850	0.55mW/cm <sup>2</sup>
GSM1900	1.0mW/cm <sup>2</sup>
CDMA BC0	0.55mW/cm <sup>2</sup>
CDMA BC1	1.0mW/cm <sup>2</sup>
WCDMA II	1.0mW/cm <sup>2</sup>
WCDMA IV	1.0mW/cm <sup>2</sup>
WCDMA V	0.55mW/cm <sup>2</sup>
LTE Band 2	1.0mW/cm <sup>2</sup>
LTE Band 4	1.0mW/cm <sup>2</sup>
LTE Band 5	0.55mW/cm <sup>2</sup>
LTE Band 12	0.47mW/cm <sup>2</sup>
LTE Band 13	0.52mW/cm <sup>2</sup>
LTE Band 17	0.53mW/cm <sup>2</sup>
LTE Band 25	1.0mW/cm <sup>2</sup>
LTE Band 26(part 22)	0.54mW/cm <sup>2</sup>
LTE Band 26(part 90)	0.54mW/cm <sup>2</sup>
LTE Band 41	1.0mW/cm <sup>2</sup>

### RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided. This calculation is based on the conducted power, considering maximum power and antenna gain. The formula shown in KDB 447498 D01 is used in the calculation.

Equation from KDB 447498 D01 General RF Exposure Guidance v06 (10/23/2015) is:

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

Where: S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

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	PG (mW)	Test Result (mW/cm <sup>2</sup> )	Limit Value (mW/cm <sup>2</sup> )	Conclusion
GSM850	1256.030	0.250	0.550	Pass
GSM1900	1520.548	0.303	1.000	Pass
CDMA BC0	380.189	0.076	0.550	Pass
CDMA BC1	446.684	0.089	1.000	Pass
WCDMA II	562.341	0.112	1.000	Pass
WCDMA IV	562.341	0.112	1.000	Pass
WCDMA V	478.630	0.095	0.550	Pass
LTE Band 2	660.693	0.131	1.000	Pass
LTE Band 4	660.693	0.131	1.000	Pass
LTE Band 5	562.341	0.112	0.550	Pass
LTE Band 12	562.341	0.112	0.470	Pass
LTE Band 13	562.341	0.112	0.520	Pass
LTE Band 17	562.341	0.112	0.530	Pass
LTE Band 25	660.693	0.131	1.000	Pass
LTE Band 26(part 22)	562.341	0.112	0.540	Pass
LTE Band 26(part 90)	562.341	0.112	0.540	Pass
LTE Band 41	1148.154	0.228	1.000	Pass
Note: R = 20cm $\pi$ = 3.1416				

Note: For transmitters, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.