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RF Exposure Evaluation Report

Application No.: KSCR2404000747AT
FCC ID: 2APJ4-MA922
Applicant: MeiG Smart Technology Co., Ltd
Address of Applicant: 2nd Floor, Office Building, No.5 Lingxia Road, Fenghuang, Fuyong Street, Bao'an District, Shenzhen
Manufacturer: MeiG Smart Technology Co., Ltd
Address of Manufacturer: 2nd Floor, Office Building, No.5 Lingxia Road, Fenghuang, Fuyong Street, Bao'an District, Shenzhen
Equipment Under Test (EUT):
EUT Name: Wireless communication module
Model No.: MA922
Trade Mark: MEIGLink
Standard(s) : FCC Rules 47 CFR §2.1091
KDB 447498 D04 interim General RF Exposure Guidance v01
Date of Receipt: 2024-04-28
Date of Test: 2024-04-29 to 2024-06-29
Date of Issue: 2024-07-01

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.



Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

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<i>Revision Record</i>			
<i>Version</i>	<i>Description</i>	<i>Date</i>	<i>Remark</i>
00	Original	2024-07-01	/

Authorized for issue by:			
Tested By	<i>Maker Qi</i>		

	Maker_Qi/Project Engineer		
Approved By	<i>Terry Hou</i>		

	Terry Hou /Reviewer		



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3 General Information

3.1 General Description of E.U.T.

Power supply:	3.3 V~ 4.3 V
Test voltage:	3.8V

3.2 Details of E.U.T.

3G

Operation Frequency Band:	UMTS B2, B4, B5
Modulation Type:	UL QPSK, BPSK DL QPSK, BPSK
Antenna Type:	External antenna
Antenna Gain:	UMTS B2: 2.3dBi (Provided by the manufacturer) UMTS B4: 3.05dBi (Provided by the manufacturer) UMTS B5: 2.69dBi (Provided by the manufacturer)

4G

LTE Operation Frequency Band:	LTE Band 2,4,5,7,12,13,14,17,25,26, 41,66,71
Modulation Type:	QPSK, 16QAM, 64QAM
Antenna Type:	External antenna
Antenna Gain:	Band 2: 2.3dBi(Provided by the manufacturer) Band 4: 3.05dBi(Provided by the manufacturer) Band 5: 2.69dBi(Provided by the manufacturer) Band 7: 3.07dBi(Provided by the manufacturer) Band 12: 5.29dBi(Provided by the manufacturer) Band 13: 3.52dBi(Provided by the manufacturer) Band 14:3.52dBi(Provided by the manufacturer) Band 17: 5.29dBi(Provided by the manufacturer) Band 25: 2.3dBi(Provided by the manufacturer) Band 26: 2.69dBi(Provided by the manufacturer) Band 41: 3.7dBi(Provided by the manufacturer) Band 66: 3.05dBi(Provided by the manufacturer) Band 71:5.29dBi(Provided by the manufacturer)

5G

LTE Operation Frequency Band:		5G NR n2,5,12,25,41,66,71,77,78					
Type of Modulation		DFTs-OFDM: BPSK\QPSK\16QAM\64QAM\256QAM CP-OFDM: QPSK\16QAM\64QAM\256QAM					
Antenna Type:		External antenna					
Antenna Gain:		n2: 2.3dBi(Provided by the manufacturer) n5: 2.69dBi(Provided by the manufacturer) n12: 5.29dBi(Provided by the manufacturer) n25: 2.3dBi(Provided by the manufacturer) n41: 3.07dBi(Provided by the manufacturer) n66: 3.05dBi(Provided by the manufacturer) n71: 5.29 dBi(Provided by the manufacturer) n77a: 3.06dBi(Provided by the manufacturer) n77d: 3.9dBi(Provided by the manufacturer) n78a: 3.06dBi(Provided by the manufacturer) n78e: 3.4dBi(Provided by the manufacturer)					
Frequency Band(s)	SISO Band	Supported Channel Bandwidth(MHz)				TX(MHz)	RX(MHz)
	NR Band n2	5	10	15	20	1850-1910	1930-1990
		25	30	40	/		
	NR Band n5	5	10	15	20	824-849	869-894
	NR Band n12	5	10	15	/	699-716	729-746
	NR Band n25	5	10	15	20	1850-1915	1850-1915
		25	30	40	/		
	NR Band n41	20	30	40	50	2496-2690	2496-2690
		60	70	80	90		
		100	/	/	/		
	NR Band n66	5	10	15	20	1710-1780	2110-2200
		25	30	40	/		
	NR Band n71	5	10	15	20	663 ~ 698	663 ~ 698
	NR Band n77	20	30	40	50	3700-3980	3770-3980
		60	70	80	90	3450-3550	3450-3550
		100	/	/	/		
	NR Band n78	20	30	40	50	3700-3800	3700-3800
		60	70	80	90	3450-3550	3450-3550
100		/	/	/			

3.3 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1.SGS is not responsible for wrong test results due to incorrect information (e.g. max. clock frequency, highest internal frequency, antenna gain, cable loss, etc) is provided by the applicant. (if applicable).

2.SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (if applicable).

3. Sample source: sent by customer.

3.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

- **FCC**

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

- **ISED**

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

- **VCCI**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

4 FCC Radiofrequency radiation exposure limits

According to §1.1310, The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part 1.1307(b)

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

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report KSCR240400074701, KSCR240400074702, KSCR240400074703.

5.2 MPE Calculation

According to the formula $S=P/4\pi R^2$, we can calculate S which is MPE.

Note:

- 1) P (mW)
- 2) R = distance to the center of radiation of antenna (in centimeter)

Test Mode	Max Average power (dBm)	tune up power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit of Power Density S(mW/cm ²) for FCC	Result
UMTS B2	24.32	24.5	2.3	26.8	0.48	20	0.095	1	Pass
UMTS B4	24.34	24.5	3.05	27.55	0.57	20	0.113	1	Pass
UMTS B5	25.02	25.5	2.69	28.19	0.66	20	0.131	0.55	Pass
LTE B2	24.04	24.5	2.3	26.8	0.48	20	0.095	1	Pass
LTE B4	24.20	24.5	3.05	27.55	0.57	20	0.113	1	Pass
LTE B5	24.63	24.5	2.69	27.19	0.52	20	0.104	0.549	Pass
LTE B7	23.86	24	3.07	27.07	0.51	20	0.101	1	Pass
LTE B12	24.21	24.5	5.29	29.79	0.95	20	0.190	0.466	Pass
LTE B13	24.02	24.5	3.52	28.02	0.63	20	0.126	0.518	Pass
LTE B14	24.02	24.5	3.52	28.02	0.63	20	0.126	0.525	Pass
LTE B17	24.23	24.5	5.29	29.79	0.95	20	0.190	0.469	Pass
LTE B25	24.28	24.5	2.3	26.8	0.48	20	0.095	1	Pass
LTE B26a	23.04	24	2.69	26.69	0.47	20	0.093	0.543	Pass
LTE B26b	23.38	24	2.69	26.69	0.47	20	0.093	0.543	Pass
LTE B41	24.00	24	3.7	27.7	0.59	20	0.117	1	Pass
LTE B66	23.96	24	3.05	27.05	0.51	20	0.101	1	Pass
LTE B71	24.56	24.6	5.29	29.89	0.97	20	0.194	0.442	Pass
5G NR n2	23.68	24	2.3	26.3	0.43	20	0.085	1	Pass
5G NR n5	23.84	24	2.69	26.69	0.47	20	0.093	0.549	Pass
5G NR n12	23.56	24	5.29	29.29	0.85	20	0.169	0.466	Pass
5G NR n25	23.73	24	2.3	26.3	0.43	20	0.085	1	Pass
5G NR n41	26.41	26.5	3.07	29.57	0.91	20	0.180	1	Pass
5G NR n66	23.69	24	3.05	27.05	0.51	20	0.101	1	Pass
5G NR n71	23.48	24	5.29	29.29	0.85	20	0.169	1	Pass
5G NR n77a	26.57	26.6	3.06	29.86	0.97	20	0.193	1	Pass
5G NR n77d	25.87	26	3.9	29.9	0.98	20	0.195	1	Pass
5G NR n78a	25.96	26	3.06	29.06	0.81	20	0.160	1	Pass
5G NR n78e	25.68	26	3.4	29.4	0.87	20	0.173	1	Pass

So the device is exclusion from SAR test.

--End of the Report--