

RF Exposure evaluation

Product Name : Cell Phone Signal Booster
Brand Name : N/A
Model : American-5band
Series Model : N/A
FCC ID : 2BWMS-L5-5B-2006
Applicant : **Light Folding Science and Technology Co., Limited**
Address : Room D07, 8/F, Block 2, Kai Tak Factory Building, 99 King Fuk Street, San Po Kong, Hong Kong
Manufacturer : **Light Folding Science and Technology Co., Limited**
Address : Room D07, 8/F, Block 2, Kai Tak Factory Building, 99 King Fuk Street, San Po Kong, Hong Kong
Standard(s) : 47CFR §1.1310, 47CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt : June 05, 2026
Date of Test : June 05, 2026~ July 07, 2026
Issued Date : July 08, 2026

Issued By: **Dongguan Yaxu (AiT) Technology Limited**

No.22, Jinqianling 3rd Street, Jitigang, Huangjiang, Dongguan, Guangdong, China

Tel.: +86-769-8202 0499 Fax.: +86-769-8202 0495

Reviewed by: Emiya Lin
Emiya Lin

Approved by: Simba Huang
Simba Huang



Note: This device has been tested and found to comply with the standard(s) listed, this test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory. This report shall not be reproduced except in full, without the written approval of Dongguan Yaxu (AiT) Technology Limited. If there is a need to alter or revise this document, the right belongs to Dongguan Yaxu (AiT) Technology Limited, and it should give a prior written notice of the revision document. This test report must not be used by the client to claim product endorsement.

Dongguan Yaxu (AiT) Technology Limited

No.22, Jinqianling 3rd Street, Jitigang, Huangjiang, Dongguan, Guangdong, China.



Report Revise Record

Report Version	Issued Date	Notes
M0	July 08, 2026	Initial Release

Contents

1	GENERAL INFORMATION	4
1.1	ENVIRONMENTAL CONDITIONS.....	4
1.2	GENERAL DESCRIPTION OF EUT	4
1.3	TEST FACILITY	5
1.4	MEASUREMENT UNCERTAINTY	5
2	METHOD OF MEASUREMENT	6
2.1	APPLICABLE STANDARD	6
2.2	LIMIT	6
2.3	MPE CALCULATION METHOD	7
2.4	MANUFACTURING TOLERANCE	7
2.5	MPE RESULT	7
2.6	CONCLUSION.....	8

1 GENERAL INFORMATION

1.1 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	25°C
Relative Humidity:	55 %
Air Pressure:	101 kPa

1.2 General Description of EUT

Product Name:	Cell Phone Signal Booster		
Model/Type reference:	American-5band		
Power ratings:	DC 5V from adapter		
Adapter information:	Model: SZXYUT60A-0500500 Input:AC100-240V1.2A 50/60Hz Output:DC5V---5A		
Hardware Version:	V1		
Software Version:	V1		
Sample(s) Status:	AiTDG-260730002-1(Normal sample) AiTDG-260730002-2(Engineer sample)		
Operation Frequency Band:	Frequency Band	Uplink (MHz)	Downlink (MHz)
	Broadband PCS	1850-1915	1930-1995
	AWS-1	1710-1755	2110-2155
	Cellular	824-849	869-894
	Lower 700 MHz	699-716	729-746
	Upper 700 MHz	777-787	746-756
Device Type:	Fixed booster		

Mode	Antenna Type	Frequency(MHz)	Antenna Gain(dBi)	Cable loss(dB)
Uplink	Log Periodic Antenna	1850-1915	9.0	4.70
		1710-1755	9.0	4.60
		824-849	7.5	3.00
		699-716	7.5	2.80
		777-787	7.5	2.85
Downlink	Ceiling Antenna	1930-1995	4.0	4.80
		2110-2155	5.0	5.00
		869-894	3.0	3.00
		729-746	2.0	2.80
		746-756	2.0	2.87
	Built-in Antenna	1930-1995	4.0	0.5
		2110-2155	5.0	0.5
		869-894	3.0	0.5
		729-746	2.0	0.5
		746-756	2.0	0.5

1.3 Test Facility

Test Laboratory: Dongguan Yaxu (AiT) Technology Limited

No.22, Jinqianling 3rd Street, Jitigang, Huangjiang, Dongguan, Guangdong, China

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

CNAS-Registration No: L6177

Dongguan Yaxu (AiT) technology Limited is accredited to ISO/IEC 17025:2017 general Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the competence of testing and calibration laboratories) on April 18, 2022

FCC-Registration No.: 703111 Designation Number: CN1313

Dongguan Yaxu (AiT) Technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC-Registration No.: 6819A CAB identifier: CN0122

The 3m Semi-anechoic chamber of Dongguan Yaxu (AiT) Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 6819A

A2LA-Lab Cert. No.: 6317.01

Dongguan Yaxu (AiT) Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

1.4 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16 - 4"Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Dongguan Yaxu (AiT) Technology Limited's quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Yaxu (AiT) laboratory is reported:

Test	Measurement Uncertainty	Notes
Power Line Conducted Emission	150KHz~30MHz ± 1.20 dB	(1)
Radiated Emission	9KHz~30Hz ± 3.10 dB	(1)
Radiated Emission	9KHz~1GHz ± 3.75 dB	(1)
Radiated Emission	1GHz~18GHz ± 3.88 dB	(1)
Radiated Emission	18GHz~40GHz ± 3.88 dB	(1)
RF power, conducted	30MHz~6GHz ± 0.16 dB	(1)
RF power density, conducted	± 0.24 dB	(1)
Spurious emissions, conducted	± 0.21 dB	(1)
Temperature	$\pm 1^{\circ}\text{C}$	(1)
Humidity	$\pm 3\%$	(1)
DC and low frequency voltages	$\pm 1.5\%$	(1)
Time	$\pm 2\%$	(1)
Duty cycle	$\pm 2\%$	(1)
Bandwidth	$\pm 1.5 \times 10^{-6}$	(1)

The report uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty Multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

2 Method of measurement

2.1 Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

FCC KDB447498 D01 General RF Exposure Guidance v06: Mobile and Portable Device, RF Exposure, Equipment Authorization Procedures

2.2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
3.0 – 30	1842/f	4.89/f	(900/f)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for Occupational/Controlled 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 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz

*=Plane-wave equivalent power density

2.3 MPE Calculation Method

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

Where: S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

2.4 Manufacturing Tolerance

Mode	Band	Max.Target Power (dBm)	Tolerance (dBm)
Uplink	Broadband PCS	19.5	±1
	AWS-1	19.0	±1
	Cellular	19.0	±1
	Lower 700 MHz	19.0	±1
	Upper 700 MHz	19.0	±1
Downlink	Broadband PCS	9.5	±1
	AWS-1	9.0	±1
	Cellular	9.0	±1
	Lower 700 MHz	9.0	±1
	Upper 700 MHz	9.0	±1

2.5 MPE Result

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, $r = 20\text{cm}$, as well as the gain of the used antenna is refer to section 2.2, the RF power density can be obtained.

Mode	Frequency Band	Max Output power with tune_up		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)
		dBm	mW				
Uplink	Broadband PCS	20.5	112.2018	9.0	7.9433	0.17731	1.0000
	AWS-1	20.0	100.0000	9.0	7.9433	0.15803	1.0000
	Cellular	20.0	100.0000	7.5	5.6234	0.11187	0.5493
	Lower 700 MHz	20.0	100.0000	7.5	5.6234	0.11187	0.4660
	Upper 700 MHz	20.0	100.0000	7.5	5.6234	0.11187	0.5180
Downlink	Broadband PCS	10.50	11.2202	4.0	2.5119	0.00561	1.0000
	AWS-1	10.00	10.0000	5.0	3.1623	0.00629	1.0000
	Cellular	10.00	10.0000	3.0	1.9953	0.00397	0.5793
	Lower 700 MHz	10.00	10.0000	2.0	1.5849	0.00315	0.4860
	Upper 700 MHz	10.00	10.0000	2.0	1.5849	0.00315	0.4973

Remark:

1. For conservativeness, the lowest uplink & downlink frequency of each band is used to determine the MPE limit of that band.

2. MPE evaluate distance is 20cm from user manual provide by manufacturer.



2.6 Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

***** End of Report *****