RF EXPOSURE Test Report

Report No.: MTi210805005-02E2

Date of issue: Aug. 27, 2021

Applicant: China Etech Groups Ltd
STELLARIS WIRELESS

Product name: SPEAKER + STARLIGHT PROJECTOR

Model(s): MI-S071B

FCC ID: 2AS5O-S071B

Shenzhen Microtest Co., Ltd.

http://www.mtitest.com

Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.

Tel: (86-755)88850135   Fax: (86-755) 88850136   Web:www.mtitest.com   E-mail: mti@51mti.com

Instructions

1. The report shall not be partially reproduced without the written consent of the laboratory;

2. The test results of this report are only responsible for the samples submitted;

3. This report is invalid without the seal and signature of the laboratory;

4. This report is invalid if transferred, altered or tampered with in any form without authorization;

5. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.

Tel: (86-755)88850135   Fax: (86-755) 88850136   Web:www.mtitest.com   E-mail: mti@51mti.com

Microtest
微 测 检 测

TEST RESULT CERTIFICATION

Applicant's name..............	China Etech Groups Ltd
Address...........................	16/F, Block C, 2nd Phase of Central Avenue, Haihong Industrial Area, Xixiang Road, Baoan District, Shenzhen, China
Manufacturer's Name	China Etech Groups Ltd
Address...........................	16/F, Block C, 2nd Phase of Central Avenue, Haihong Industrial Area, Xixiang Road, Baoan District, Shenzhen, China

Product description

Product name	STELLARIS WIRELESS SPEAKER + STARLIGHT PROJECTOR
Trademark	ETECH
Model Name	MI-S071B
Serial Model	N/A
Standards.........................	N/A
Test procedure.................	KDB 447498 D01 v06

Date of Test

Date (s) of performance of tests .... :	Aug. 17, 2021 ~Aug. 23, 2021
Test Result... :	Pass

This device described above has been tested by Shenzhen Microtest Co., Ltd. and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Testing Engineer 　　　　　　:

(Danny Xu)

Technical Manager 　　　　　:

(Leon Chen)

Authorized Signatory 　　　　:

(Tom Xue)

Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.

Tel: (86-755)88850135　　　　Fax: (86-755) 88850136　　　　Web:www.mtitest.com　　　　E-mail: mti@51mti.com

RF EXPOSURE EVALUATION

According to FCC 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 §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			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/f²	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

MPE Calculation Method

Friis transmission formula: $Pd = (Pout*G)\backslash(4*pi*R^2)$

Where

Pd= Power density in mW/cm2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1415926

R= distance between observation point and center of the radiator in cm(20cm)

Pd the limit of MPE, 1mW/cm2. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.

Tel: (86-755)88850135   Fax: (86-755) 88850136   Web:www.mtitest.com   E-mail: mti@51mti.com

Measurement Result

BT:

Operation Frequency: GFSK, π/4-DQPSK, 8DPSK: 2402-2480MHz

Power density limited: 1mW/ cm^2

Antenna Type: BT Antenna: PCB Antenna;
BT antenna gain: 0dBi

R=20cm

mW=10^(dBm/10)

antenna gain Numeric=10^(0dBi/10)= 10^(0/10)=1.00

BR+EDR:

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
				tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK	-0.776	0±1	1	1.259	0	1.00	0.0003	1
2441		-0.419	0±1	1	1.259	0	1.00	0.0003	1
2480		-0.309	0±1	1	1.259	0	1.00	0.0003	1
2402	π/4-DQPSK	0.227	0±1	1	1.259	0	1.00	0.0003	1
2441		0.565	0±1	1	1.259	0	1.00	0.0003	1
2480		0.641	0±1	1	1.259	0	1.00	0.0003	1
2402	8DPSK	0.606	0±1	1	1.259	0	1.00	0.0003	1
2441		0.963	0±1	1	1.259	0	1.00	0.0003	1
2480		1.055	1±1	2	1.585	0	1.00	0.0003	1

Conclusion:

For the max result: 0.0003≤ 1.0 for 1g SAR, No SAR is required.

----END OF REPORT----

Address: 101, No. 7, Zone 2, Xinxing Industrial Park, Fuhai Avenue, Xinhe Community, Fuhai Street, Bao' an District, Shenzhen, Guangdong, China.

Tel: (86-755)88850135   Fax: (86-755) 88850136   Web:www.mtitest.com   E-mail: mti@51mti.com