

MPE REPORT

FCC ID:2AT7Q-PSF140

Date of issue: July 07, 2020

Report number:	MTi20060910-2E2
Sample description:	cloud frame, digital photo frame, PHOTOshare
Model(s):	FSM014ESB, FSM014BL, FSM014BLB
Applicant:	SWITCHMATE HOME LLC.
Address:	6601 OWENS DR STE 250, PLEASANTON, CA94588, UNITED STATES
Date of test:	June 20, 2020 to July 01, 2020

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>

This test report is valid for the tested samples only. It cannot be reproduced except in full without prior written consent of Shenzhen Microtest Co., Ltd.

Tel: (86-755) 88850135

Fax: (86-755) 88850136

Web: <http://www.mtitest.com>

E-mail: mti@51mti.com

Address: No.102A & 302A, East Block, Hengfang Industrial Park, Xingye Road, Xixiang, Bao'an District, Shenzhen, Guangdong, China



TEST RESULT CERTIFICATION	
Applicant's name:	SWITCHMATE HOME LLC.
Address:	6601 OWENS DR STE 250, PLEASANTON, CA94588, UNITED STATES
Manufacturer's name:	SHENZHEN ALONG ELECTRONICS CO., LTD.
Address:	NO.35 XIANYUAN INDUSTRIAL PARK, GUSHU COMMUNITY, XIXIANG, BAOAN, SHENZHEN, GUANGDONG, CHINA
Product name:	cloud frame, digital photo frame, PHOTOshare
Trademark:	SIMPLYSMARTHOME
Model and/or type reference:	FSM014ESB
Serial model:	FSM014BL, FSM014BLB
RF exposure procedures:	KDB 447498 D01 v06

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.

Tested by:

Demi Mu

July 01, 2020

Reviewed by:

Leo Su

July 07, 2020

Approved by:

Tom Xue

July 07, 2020



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/cm ²)	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/f ²	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/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

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

Friis transmission formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

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

P_d 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.



Measurement Result

WIFI:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,

802.11n HT40: 2422-2452MHz,

Power density limited: 1mW/ cm²

Antenna Type: Wifi Antenna: FPC Antenna;

WIFI antenna gain: 3.74dBi

R=20cm

$mW=10^{(dBm/10)}$

antenna gain Numeric= $10^{(dBi/10)}=10^{(3.74/10)}=2.37$

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain Numeric	Power density(mW/cm ²)	(mW/cm ²)
		Ant A	Ant A	Ant A	Ant A	Ant A	Ant A	
2412	802.11b	14.65	15±1	16	39.811	2.37	0.01877	1
2437		15.99	15±1	16	39.811	2.37	0.01877	1
2462		15.79	15±1	16	39.811	2.37	0.01877	1
2412	802.11g	13.59	14±1	15	31.623	2.37	0.01491	1
2437		14.79	14±1	15	31.623	2.37	0.01491	1
2462		14.60	14±1	15	31.623	2.37	0.01491	1
2412	802.11n H20	13.60	14±1	15	31.623	2.37	0.01491	1
2437		14.60	14±1	15	31.623	2.37	0.01491	1
2462		14.55	14±1	15	31.623	2.37	0.01491	1
2422	802.11n H40	14.23	14±1	15	31.623	2.37	0.01491	1
2437		14.81	14±1	15	31.623	2.37	0.01491	1
2452		14.56	14±1	15	31.623	2.37	0.01491	1

Conclusion:

For the max result: $0.01877 \leq 1.0$ for 1g SAR, No SAR is required.

----END OF REPORT----