

RF Exposure Evaluation Report

Product : 70mai Dash Cam
Trade mark : 70mai
Model/Type reference : Midrive D01
Serial Number : N/A
Report Number : EED32J00286702
FCC ID : 2AOK9-MIDRIVED01
Date of Issue : Mar. 12, 2018
47 CFR Part 1.1307
Test Standards : 47 CFR Part 1.1310
KDB 447498 D01v06
Test result : PASS

Prepared for:

70mai Co., Ltd.

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Prepared by:

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2 Version

Version No.	Date	Description
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4 General Information

4.1 Client Information

Applicant:	70mai Co., Ltd.
Address of Applicant:	Room 2220, building 2, No. 588, Zixing road, MinHang District, Shanghai.CHINA
Manufacturer:	70mai Co., Ltd.
Address of Manufacturer:	Room 2220, building 2, No. 588, Zixing road, MinHang District, Shanghai.CHINA
Factory:	Dongguan Apical Electronics Co., Ltd.
Address of Factory:	6#, Shunxing 5 Rd, No.2 Industrial zone, Dajingtou, Dalang Town, DongGuang City

4.2 General Description of EUT

Product Name:	70mai Dash Cam
Model No.:	Midrive D01
Trade Mark:	70mai
EUT Supports Radios application:	WiFi b/g/n20, 2412MHz-2462MHz
Power Supply:	DC12 V

4.3 Product Specification subjective to this standard

Modulation Type:	DSSS, OFDM
Antenna Type:	FPC antenna
Antenna Gain:	-0.11dBi
Test Voltage:	DC12 V
Sample Received Date:	Dec. 15, 2017
Sample tested Date:	Dec. 15, 2017 to Jan. 04, 2018
The tested sample and the sample information are provided by the client.	

4.4 Test Location

All tests were performed at:
 Centre Testing International Group Co., Ltd.
 Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101
 Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385
 No tests were sub-contracted.
 FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

According to FCC Part1.1310: 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 part1.1307(b)

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 ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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
300–1500 .....	.....	.....	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 ²)	30
30–300	27.5	0.073	0.2	30
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

A rough estimation of the expected exposure in power flux density on a given point can be made with the following equation:

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

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

R= distance to the centre of radiation of the antenna

EIRP = P*G

The antenna of the product, under normal use condition is at least 20 cm away from the body of the user.

Warning statement to the user for keeping at least 20cm separation distance and the prohibition of operating to a person has been printed on the user's manual. Therefore, the S of the device is calculated with R=20cm, and if it is below the limits, then we can conclude the device complies with the rules.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit data at lowest, middle and highest channel individually.

5.1.3 EUT RF Exposure Evaluation

Antenna Gain: -0.11dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Channel	Frequency (MHz)	Max Conducted Peak Output Power(dBm)	Gain (dBi)	EIRP* (dBm)	EIRP (mW)	R (cm)	S (mW/cm ²)	Limit (mW/cm ²)	Result
Lowest	2412	19.89	-0.11	19.78	95.06	20	0.019	1.0	Pass

Note: Refer to report No. EED32J00286701 for EUT test Max Conducted Peak Output Power value.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32J00286701 for EUT external and internal photos.

*** End of Report ***

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