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Report No.: GTI20150741F-2

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TEST REPORT

Product Name: Action Camera

Trademark: E13

Model/Type reference: Explorer

Listed Model(s): \

FCC ID.....: 2AGUA-EXPLORER

Test Standards: FCC Per 47 CFR 2.1093(d)

Applicant: HK ELEPHONE COMMUNICATION TECH CO.,LIMITED

Address of applicant: UNIT 04,7/F BRIGHT WAY TOWER NO.33 MONG KOK RD
KL, Hong Kong

Date of Receipt: Nov. 30, 2015


Date of Test Date.....: Dec. 03, 2015 - Dec. 08, 2015

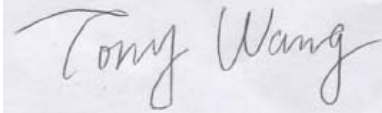
Data of issue.: Dec. 09, 2015

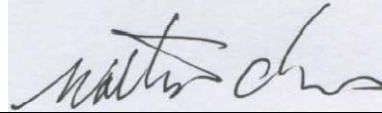
Test result	Pass *
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* In the configuration tested, the EUT complied with the standards specified above

GENERAL DESCRIPTION OF EUT	
Equipment:	Action Camera
Model Name:	Explorer
Manufacturer:	HK ELEPHONE COMMUNICATION TECH CO.,LIMITED
Manufacturer Address:	UNIT 04,7/F BRIGHT WAY TOWER NO.33 MONG KOK RD KL, Hong Kong
Power Rating:	DC 3.7V form 1050mAh by rechargeable battery or DC 5.0V $\overline{\text{---}}$ 1A form USB Cable

Compiled By: 
(Thomas Morgan)

Reviewed By: 
(Tony Wang)

Approved By: 
(Walter Chen)

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1. SUMMARY

1.1. Test Facility

1.3.1 Address of the test laboratory

Shenzhen GTI Technology Co., Ltd

1F, 2 Block, Jiaquan Building, Guanlan High-tech Park Baoan District, Shenzhen, Guangdong, China

1.3.2 Laboratory accreditation

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

IC Registration No.: 9783A

The 3m alternate test site of Shenzhen GTI Technology Co., Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Aug, 2011.

FCC-Registration No.: 214666

Shenzhen GTI Technology Co., Ltd. EMC Laboratory 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. Registration 214666, Sep 19, 2011

1.2. Statement of the measurement uncertainty

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.57 dB	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=1.96$.

2. GENERAL INFORMATION

2.1. Environmental conditions

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

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

2.2. General Description of EUT

Product Name:	Action Camera
Model/Type reference:	Explorer
Listed model:	\
Power supply:	DC 3.7V form 1050mAh by rechargeable battery or DC 5.0V===1A form USB Cable
Hardware version:	iT_X1_V2.3
Software version:	20151116V1.0
WIFI :	
Supported type:	802.11b/802.11g/802.11n(H20)/802.11n(H40)
Modulation:	802.11b: DSSS 802.11g/802.11n(H20)/802.11n(H40): OFDM
Operation frequency:	802.11b/802.11g/802.11n(H20): 2412MHz~2462MHz 802.11n(H40): 2422MHz~2452MHz
Channel number:	802.11b/802.11g/802.11n(H20): 11 802.11n(H40): 7
Channel separation:	5MHz
Antenna type:	PCB Antenna
Antenna gain:	1.86dBi

Note: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

3. Method of measurement

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 §RSS-102, Devices that have a radiating element normally operating at separation distances greater than 20 cm between the user and the device shall undergo an RF exposure evaluation. SAR evaluation may be performed in lieu of an RF exposure evaluation for devices operating below 6 GHz with a separation distance of greater than 20 cm between the user and the device.

According to §1.1310, KDB447498 and §2.1093 RF exposure is required.

Limit

According to the KDB447498 D01 General RF Exposure Guidance v06, the test exclusion threshold is determined by the closet separation between the antenna and the user, if the test separation distance is <5mm, 5mm is used to determine SAR exclusion threshold.

Per KDB447498 D01, 4.3.1. Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusion Thresholds are calculate below

MHz	5	mm
2402	9.68	SAR Test Exclusion Threshold (mW)
2412	9.66	
2422	9.64	
2437	9.61	
2440	9.60	
2441	9.60	
2452	9.58	
2462	9.56	
2480	9.53	

RF Exposure Evaluation

From the peak EUT RF output power and power drift from Tune-up Procedure provide by manufacturer as following states:



**Manufacturing tolerance
For WiFi**

Test Mode	Test Frequency (MHz)	Max Output Power (dBm)	Max Output Power (mW)	Tune-up Limit (dBm)	Output Power Adjusted for tune-up tolerance (mW)	SAR Test Exclusion Threshold (mW)	Verdict
802.11b	2412	8.10	6.46	9	7.94	9.66	PASS
	2437	8.56	7.18	9	7.94	9.61	PASS
	2462	8.27	6.71	9	7.94	9.56	PASS
802.11g	2412	8.50	7.08	9	7.94	9.66	PASS
	2437	8.47	7.03	9	7.94	9.61	PASS
	2462	8.48	7.05	9	7.94	9.56	PASS
802.11n(ht20)	2412	7.81	6.04	8.5	7.08	9.66	PASS
	2437	7.93	6.21	8.5	7.08	9.61	PASS
	2462	7.60	5.75	8.5	7.08	9.56	PASS
802.11n(ht40)	2422	7.48	5.60	8.5	7.08	9.64	PASS
	2437	7.56	5.70	8.5	7.08	9.61	PASS
	2452	7.46	5.57	8.5	7.08	9.58	PASS

Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 D01 v06.

*****THE END*****