RF Exposure Evaluation

FCC ID: 2AINY-9028

1. Client Information

Applicant	:	Shenzhen iCar multimedia Industry Co., Ltd
Address	:	7F /A Building, HuaYua Industry, Areo, Fenghuang Frist Industry Zoom, Fuyong Stree, Baoan, Shenzhen, China
Manufacturer	:	Shenzhen iCar multimedia Industry Co., Ltd
Address	:	7F /A Building, HuaYua Industry, Areo, Fenghuang Frist Industry Zoom, Fuyong Stree, Baoan, Shenzhen, China

2. General Description of EUT

EUT Name	:	Action camera	
Models No.	:	9028, 9031, 9032, 9035, 9022, 9180, 9029, 9300, 9500, 9057, 9058	
Models Difference	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is model name for commercial.	
Product Description	:	Operation Frequency: 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz	
		Number of Channel:	802.11b/g/n(HT20):11 channels 802.11n(HT40): 7 channels
		Max Peak Output Power:	802.11b: 9.27 dBm 802.11g: 9.18 dBm 802.11n (HT20): 9.08 dBm 802.11n (HT40): 9.06 dBm
		Antenna Gain:	0.44 dBi PCB Antenna
		Modulation Type:	802.11b: CCK, QPSK, BPSK 802.11g: OFDM 802.11n: OFDM
Power Supply	:	DC Voltage supplied from Host System by USB cable. DC power supplied by AC/DC Adapter. DC power by Li-ion Battery.	
Power Rating	:	DC 5.0V by USB cable. DC 3.7V by 1050mAh Li-ion Battery. AC/DC Adapter: Input:100~240V, 50/60Hz Output:5V, 1A	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

Note: More test information about the EUT please refer the RF Test Report.

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SAR Test Exclusion Calculations

1. **FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v05r02.**
   (1) Clause 4.3: General SAR test reduction and exclusion guidance
   Sub clause 4.31: Standalone SAR test exclusion considerations
   1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance≤5 mm are determined by:
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤3.0 for 1-g SAR
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] ≤7.5.0 for 10-g SAR

2. Calculation:

Test separation: 5mm					
WiFi Mode(802.11b)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	9.27	±0.5	9.484	2.946	**3.0**
2.437	9.25	±0.5	9.441	2.948	**3.0**
2.462	9.19	±0.5	9.311	2.922	**3.0**
WiFi Mode(802.11g)					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	9.18	±0.5	9.290	2.885	**3.0**
2.437	9.14	±0.5	9.204	2.874	**3.0**
2.462	9.09	±0.5	9.099	2.855	**3.0**
WiFi Mode(802.11n(HT20))					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.412	9.04	±0.5	8.995	2.794	**3.0**
2.437	9.08	±0.5	9.078	2.834	**3.0**
2.462	9.01	±0.5	8.933	2.803	**3.0**
WiFi Mode(802.11n(HT40))					
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.422	8.98	±0.5	8.872	2.761	**3.0**
2.437	9.00	±0.5	8.913	2.783	**3.0**
2.452	9.06	±0.5	9.036	2.830	**3.0**

So standalone SAR measurements are not required.