

## FCC RF Exposure

EUT Description: Dash Camera

Model No.: S50

FCC ID: 2A804-S50

Equipment type: mobile equipment

### 1. Limits

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 <sup>2</sup> )	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 <sup>2</sup> )	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 <sup>2</sup> )	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

F = frequency in MHz

Formula:  $Pd = (P_{out} * G) / (4 * \pi * r^2)$

Where :

Pd = power density in mW/cm<sup>2</sup>,

P<sub>out</sub> = output power to antenna in mW;

G = gain of antenna in linear scale,

$\pi$  = 3.14;

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

Pd is the limit of MPE, 1 mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

### 2. Test Procedure

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

### 3. Test Result of RF Exposure Evaluation

Modulation	Channel Freq. (MHz)	Conduct ed power (dBm)	Max tune-up power (mW)	Antenna Gain (dBi)	Antenna gain numeric	Evaluation result (mW/cm2 )	Power density Limits (mW/cm2)
802.11b	2412	10.49	11.19	1.96	1.57	0.00350	1
	2437	9.75	9.44	1.96	1.57	0.00295	1
	2462	9.78	9.51	1.96	1.57	0.00297	1
802.11g	2412	10.29	10.69	1.96	1.57	0.00334	1
	2437	9.35	8.61	1.96	1.57	0.00269	1
	2462	9.06	8.05	1.96	1.57	0.00252	1
802.11n	2412	9.99	9.98	1.96	1.57	0.00312	1
	2437	9.07	8.07	1.96	1.57	0.00252	1
	2462	8.89	7.74	1.96	1.57	0.00242	1

Conclusion: the max result :  $0.00350 \leq 1.0$  compliance with FCC's RF Exposure.