# RF Exposure Evaluation Report

## 1 RF EXPOSURE

| | |
|---|---|
| Product Name: | Dash Camera |
| Model No.: | K9, M1, M2, M9, M3, M5, M11, M16, W1, W2, W5, W6, M8, M10, W8, W9 |
| FCC ID: | 2BGQO-K9 |

## 2. RF Exposure Evaluation

FCC KDB447498 D01 General RF Exposure Guidance v06: Mobile and Portable Device, RF Exposure, Equipment Authorization Procedures.

FCC CFR 47 part1 1.1310: Radiofrequency radiation exposure limits.

FCC CFR 47 part2 2.1091: Radiofrequency radiation exposure evaluation: mobile devices.

### 2.1 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 to § 1.1310(e)(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) |
|---|---|---|---|---|
| (i) 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 |
| (ii) 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 Friis Formula

Friis transmission formula: Pd = (Pout*G)/(4* Pi * R 2) Where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

Pd id the limit of MPE . 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.

## 2.2 EUT RF EXPOSURE EVALUATION

WIFI ANT Gain: 3.5dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.0 in linear scale.

The Max Conducted Peak Output Power data refer to report No.: DACE240517024RL001

2.4GWIFI worst mode and channel:

| Test channel | Conducted Power (dBm) | Maximum tune-up Power (dbm) | Maximum tune-up Power (dbm) | Maximum tune-up Power (mW) | Calculated value (mW/cm2) | Limit (mW/cm2) |
|---|---|---|---|---|---|---|
| 802.11B-2412MHz | 17.70 | 17±1 | 18 | 63.096 | 0.028 | 1.0 |
| 802.11B-2437MHz | 16.55 | 17±1 | 18 | 63.096 | 0.028 | 1.0 |
| 802.11B-2462MHz | 17.74 | 17±1 | 18 | 63.096 | 0.028 | 1.0 |

Remark: 1.Pd = (Pout*G)/(4* Pi * $R^2$)=( 63.096*2.2387)/(4*3.1415*20*20)= 0.028,   G=$10^{gain/10}$ =2.2387

2.EUT wifi module and ANT is more than 20cm away from the human body.

**Conclusion**: Calculated value is less than the limit value of 1.0, so there is no sar requirement.