

# RF Exposure Report

**Project Number: 5214055****Proposal: SUW-202408006976****Report Number: 5214055EMC11****Revision Level: 3****Client: Alarm.com Incorporated****Equipment Under Test: Alarm.com 4MP Indoor/Outdoor Spotlight Battery Camera****Model: ADC-V731B****FCC ID: YL6-143V731B****IC ID: 9111A-143V731B****Applicable Standards: 47 CFR §§ 2.1091****FCC KDB 447498 D01 General RF Exposure Guidance v06****FCC OET Bulletin 65****RSS-102, Issue 6 (December 15, 2023)****Report issued on: 23 April 2025****Report revised on: 29 May 2025****Result: Compliant**

FOR THE SCOPE OF ACCREDITATION UNDER CERTIFICATE NUMBER: 3212.01

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# 1 General Information

## 1.1 Client Information

Company Name: Alarm.com Incorporated  
Address: 8281 Greensboro Drive, Suite 100  
City, State, Zip, Country: Tysons, VA 22102, USA

## 1.2 Test Laboratory

Name: SGS North America, Inc.  
Address: 620 Old Peachtree Road NW, Suite 100  
City, State, Zip, Country: Suwanee, GA 30024, USA

Accrediting Body: A2LA  
Type of lab: Testing Laboratory  
Certificate Number: 3212.01

## 1.3 General Information of EUT

Manufacturer: Alarm.com Incorporated  
Product Marketing Name (PMN): Alarm.com 4MP Indoor/Outdoor Spotlight Battery Camera  
Model Number: ADC-V731B  
Serial Number: 50407410F2F1 (Conducted Sample); 50407410F2B2 (Radiated Sample)

Type / Frequency / Data Modes: Bluetooth Low Energy / 2402 – 2480 MHz / 1Mbps / 2Mbps  
Type / Frequency / Data Modes: 2.4GHz WLAN / 2412 – 2462 MHz / (802.11b; 11g; 11n)  
Type / Frequency / Data Modes: 5 GHz WLAN / 5180 – 5825 MHz / (802.11a; 11n; 11ac)

Antenna\*:

| 2.4GHz | Frequency(MHz) | 2400 | 2450 | 2500 |
|--------|----------------|------|------|------|
| Ant.1  | Peak Gain(dBi) | 1.7  | 1.5  | 1.4  |
|        | Efficiency(%)  | 62   | 60   | 59   |
| Ant.2  | Peak Gain(dBi) | 1.9  | 2.0  | 1.7  |
|        | Efficiency(%)  | 62   | 60   | 57   |
| 5GHz   | Frequency(MHz) | 5150 | 5550 | 5850 |
| Ant.1  | Peak Gain(dBi) | 3.2  | 2.3  | 4.0  |
|        | Efficiency(%)  | 60   | 59   | 63   |
| Ant.2  | Peak Gain(dBi) | 3.8  | 2.9  | 3.8  |
|        | Efficiency(%)  | 61   | 59   | 65   |

Max Conducted Output Power:

| BLE  | 2.4GHz WLAN | 5GHz WLAN |     |
|------|-------------|-----------|-----|
| 5.05 | 24.22       | 16.74     | dBm |

*\*Data was not measured by SGS laboratory and therefore SGS is not responsible for accuracy. Data obtained via customer, specification sheet, previous regulatory filing or other.*

## 1.4 Operating Modes and Conditions

Maximum power levels were utilized for calculations.

## 2 RF Exposure

### 2.1 Test Results

| Test Description | Product Specific Standard | Test Result |
|------------------|---------------------------|-------------|
| RF Exposure      | FCC Part 1.1310 & RSS-102 | Compliant   |

### 2.2 Test Method

The formula below calculates power density.

$$S = \frac{PG}{4\pi R^2} \quad \text{Or} \quad S = \frac{EIRP}{4\pi R^2}$$

where;

S = Power density (mW/cm<sup>2</sup>)

P = Maximum sourced based average power delivered to antenna port (mW)

G = Maximum numeric power gain of antenna relative to an isotropic radiator (dBi -> linear)

R = Distance between by-stander and antenna (cm)

EIRP = Equivalent (or effective) isotropically radiated power

The limits for general population / uncontrolled exposure were used at a distance of 20cm.

### 2.3 FCC Single transmission RF Exposure Levels (mW/cm<sup>2</sup>)

| Band of Operation   |             | Conducted Power w/tolerance | Antenna Gain | Cable Loss | Average EIRP |     | Distance (R) | Power Density EIRP <sub>avg</sub> /(4πR <sup>2</sup> ) | FCC                | % of Limit | Verdict |
|---------------------|-------------|-----------------------------|--------------|------------|--------------|-----|--------------|--------------------------------------------------------|--------------------|------------|---------|
| Type                | MHz         | dBm                         |              |            | dBm          | mW  | cm           | mW/cm <sup>2</sup>                                     | mW/cm <sup>2</sup> |            |         |
| WLAN 2.4            | 2400-2483.5 | 24.2                        | 2.0          | 0.0        | 26.2         | 419 | 20           | 0.083                                                  | 1.00               | 8%         | Pass    |
| Bluetooth           | 2400-2483.5 | 5.1                         | 2.0          | 0.0        | 7.1          | 5   | 20           | 0.001                                                  | 1.00               | 0%         | Pass    |
| WLAN 5 GHz (UNII-2) | 5250-5700   | 16.7                        | 4.0          | 0.0        | 20.7         | 119 | 20           | 0.024                                                  | 1.00               | 2%         | Pass    |

### 2.4 ISED Single transmission RF Exposure Levels (W/m<sup>2</sup>)

| Band of Operation   |             | Conducted Power w/tolerance | Antenna Gain | Cable Loss | Average EIRP |     | Distance (R) | Power Density EIRP <sub>avg</sub> /(4πR <sup>2</sup> ) | IC               | % of Limit | Verdict |
|---------------------|-------------|-----------------------------|--------------|------------|--------------|-----|--------------|--------------------------------------------------------|------------------|------------|---------|
| Type                | MHz         | dBm                         |              |            | dBm          | mW  | cm           | W/m <sup>2</sup>                                       | W/m <sup>2</sup> |            |         |
| WLAN 2.4            | 2400-2483.5 | 24.2                        | 2.0          | 0.0        | 26.2         | 419 | 20           | 0.833                                                  | 5.35             | 16%        | Pass    |
| Bluetooth           | 2400-2483.5 | 5.1                         | 2.0          | 0.0        | 7.1          | 5   | 20           | 0.010                                                  | 5.35             | 0%         | Pass    |
| WLAN 5 GHz (UNII-2) | 5250-5700   | 16.7                        | 4.0          | 0.0        | 20.7         | 119 | 20           | 0.236                                                  | 9.13             | 3%         | Pass    |

### 2.5 Simultaneous Conditions

No Simultaneous transmission.

### 3 Revision History

| Revision Level | Description of changes         | Revision Date    |
|----------------|--------------------------------|------------------|
| Draft          | Draft Release                  | 25 February 2025 |
| 0              | Initial Release                | 23 April 2025    |
| 1              | Corrected equipment under test | 02 May 2025      |
| 2              | Updated Equipment Under Test   | 14 May 2025      |
| 3              | Updated BLE measured value.    | 29 May 2025      |
|                |                                |                  |
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