# Radio Exposure Evaluation Report

| | | |
|---|---|---|
| **FCC ID** | : | **HBW-C39VXXW** |
| **Equipment** | : | **myQ Smart Outdoor Battery Camera** |
| **Brand Name** | : | **myQ** |
| **Model Name** | : | **MYQ-C39VXXW、MYQ-C392XXW** |
| **Applicant** | : | **The Chamberlain Group LLC<br>300 Windsor Drive Oak Brook, IL 60523 USA** |
| **Manufacturer** | : | **The Chamberlain Group, LLC<br>300 Windsor Drive Oak Brook, IL 60523 USA** |
| **Standard** | : | **47 CFR FCC Part 2 Subpart J, section 2.1091** |

**The product was received on Mar. 17, 2025, and testing was started from Mar. 27, 2025 and completed on Apr. 15, 2025. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR FCC Part 2 Subpart J, section 2.1091 and shown compliance with the applicable technical standards.**

**The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.**

Approved by: Jackson Tsai

***SPORTON INTERNATIONAL INC. Hsinhua Laboratory***
*No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)*

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# History of this test report

| Report No. | Version | Description | Issued Date |
|---|---|---|---|
| FA521817 | 01 | Initial issue of report | Apr. 17, 2025 |
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# Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items | Result (PASS/FAIL) | Remark |
|---|---|---|---|---|
| 2 | - | Exposure evaluation | PASS | - |

| **Declaration of Conformity:** |
|---|
| The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. |
| **Comments and Explanations:** |
| None |

**Reviewed by: Ben Tseng**

**Report Producer: Michelle Tsai**

# 1 General Description

## 1.1 Information

### 1.1.1 EUT General Information

| RF General Information | | | |
|---|---|---|---|
| **Evaluation Mode** | **Frequency Range (MHz)** | **Operating Frequency (MHz)** | **Modulation Type** |
| 2.4GHz WLAN | 2400-2483.5 | 2412-2462 | 802.11b: DSSS (DBPSK, DQPSK, CCK)<br>802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) |
| Bluetooth | 2400-2483.5 | 2402-2480 | LE: DSSS (GFSK) |

### 1.1.2 Antenna Information

| Ant. | Brand | Model Name | Antenna Type | Connector | Support |
|---|---|---|---|---|---|
| 1 | Primax | RFMTA330800NNAB001 | Metal antenna | N/A | 2.4G |
| 2 | Primax | RFFPA301707IMAB301 | FPC antenna | I-Pex | BLE |

| Ant. | Port | Gain (dBi) | |
|---|---|---|---|
| | | **2.4G** | **Bluetooth** |
| 1 | 1 | 2.68 | - |
| 2 | 1 | - | 1.81 |

Note 1: The EUT has two antennas.

**For 2.4GHz function:**

For IEEE 802.11 b/g/n mode (1TX/1RX)

Ant. 1 (port 1) could transmit/receive.

**For BT function:**

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Ant. 2 (port 1) could transmit/receive.

### 1.1.3 Table for Multiple Listing

The model names in the following table are all refer to the identical product.

| Model Name | Description |
|---|---|
| MYQ-C39VXXW、MYQ-C392XXW | All the models are identical, the different model served as different package design. |

Note: The model MYQ-C39VXXW was measured during the test.

### 1.1.4 Accessories

| Accessories Information | | | | |
|---|---|---|---|---|
| **USB Charging Cable** | Brand Name | NA | Model Name | NA |
| | Power Cord | 0.5 meter, non-shielded cable, w/o ferrite core | | |
| **Mount** | Brand Name | NA | Model Name | NA |
| **Mounting Plate** | Brand Name | NA | Model Name | NA |
| **Battery** | Brand Name | KAYO | Model Name | INR18650-33V A-1S2P |
| | Power Rating | 3.6Vdc, 6200mAh | Type | Li-ion |

Reminder: Regarding to more detail and other information, please refer to user manual.

## 1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 2 Subpart J, section 2.1091
- KDB 447498 D04 Interim General RF Exposure Guidance v01

The following reference test guidance is not within the scope of accreditation of TAF.

- 47 CFR Part 1.1307
- 47 CFR Part 1.1310

## 1.3 Testing Location

| **Test Lab.：Sporton International Inc. Hsinhua Laboratory** | | | |
|---|---|---|---|
| ☒ | Hsinhua **(TAF:** 3785**)** | **ADD:** No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.) | |
| | | **TEL:** 886-3-327-3456 | **FAX:** 886-3-327-0973 |
| | | Test site Designation No. TW3785 with FCC. | |
| ☐ | Wen 33rd.St. **(TAF:** 3785**)** | **ADD:** No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) | |
| | | **TEL:** 886-3-318-0787 | **FAX:** 886-3-318-0287 |
| | | Test site Designation No. TW0008 with FCC. | |

# 2 Maximum Permissible Exposure

## 2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm²) | Averaging Time \|E\|²,\|H\|² or S (minutes) |
|---|---|---|---|---|
| 0.3-3.0 | 614 | 1.63 | (100)* | 6 |
| 3.0-30 | 1842 / f | 4.89 / f | (900 / f²)* | 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

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/ cm²) | Averaging Time \|E\|²,\|H\|² or S (minutes) |
|---|---|---|---|---|
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 |
| 1.34-30 | 824/f | 2.19/f | (180/f²)* | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | - | - | F/1500 | 30 |
| 1500-100,000 | - | - | 1.0 | 30 |

Note: f = frequency in MHz ; *Plane-wave equivalent power density

## 2.2 RF Exposure Exempt Measurement

| Option | Refer Std. | Exemption Exposure Thresholds (TL) |
|---|---|---|
| A | §1.1307(b)(3)(i)(A) | Available maximum time-averaged power is no more than 1 mW |
| B | §1.1307(b)(3)(i)(B) | $\mathrm{P}th(mW)=\begin{cases} ERP_{20cm}(d/20cm)^{x} \rightarrow d \le 20cm \\ ERP_{20cm} \rightarrow 20cm < d \le 40cm \end{cases}$<br>$x=-\log_{10}\left(\frac{60}{ERP_{20cm}\sqrt{f}}\right)$ and f is in GHz<br>$\begin{cases} ERP_{20cm}: 0.3GHz \le f < 1.5GHz \rightarrow 2040f(mW) \\ ERP_{20cm}: 1.5GHz \le f \le 6GHz \rightarrow 3060(mW) \end{cases}$ |
| C | §1.1307(b)(3)(i)(C) | $\begin{cases} 0.3 \sim 1.34MHz \rightarrow ERP(\mathrm{W}) = 1920R^2 \\ 1.34 \sim 30MHz \rightarrow ERP(\mathrm{W}) = 3450R^2 / f^2 \\ 30 \sim 300MHz \rightarrow ERP(\mathrm{W}) = 3.83R^2 \\ 300 \sim 1500MHz \rightarrow ERP(\mathrm{W}) = 0.0128R^2 f \\ 1500 \sim 100000MHz \rightarrow ERP(\mathrm{W}) = 19.2R^2 \end{cases}$<br>f is in MHz; R is in m; $\mathrm{R} > \lambda/2\pi$ |

## 2.3 Multiple RF Sources Exposure

| Refer Std. | Exemption Exposure Thresholds (TL) |
|---|---|
| §1.1307(b)(3)(ii)(A) | The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required) |
| §1.1307(b)(3)(ii)(B) | $\sum_{i=1}^{a}\frac{P_i}{P_{th,i}}+\sum_{j=1}^{b}\frac{ERP_j}{ERP_{th,j}}+\sum_{k=1}^{c}\frac{Evaluated_k}{ExposureLimit_k}\le 1$<br>a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph §1.1307(b)(3)(i)(B) of this section for P , including existing exempt transmitters and those being added.<br>b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph §1.1307(b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.<br>c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.<br>$P_i$ = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).<br>$P_{th,i}$ = the exemption threshold power ( $P_{th}$ ) according to paragraph §1.1307(b)(3)(i)(B) of this section for fixed, mobile, or portable RF source i.<br>$ERP_j$ = the ERP of fixed, mobile, or portable RF source j.<br>$ERP_{th,j}$ = exemption threshold ERP for fixed, mobile, or portable RF source j, at a distance of at least λ/2π according to the applicable formula of paragraph §1.1307 (b)(3)(i)(C) of this section.<br>$Evaluated_k$ = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.<br>$Evaluated\ Limit_k$ = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k, as applicable from § 1.1310 of this chapter. |

## 2.4 MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.
The following formula was used to calculate the Power Density:

E (V/m) = $\frac{\sqrt{30 \times P \times G}}{d}$ Power Density: *Pd* (W/m²) = $\frac{E^2}{377}$

**E** = Electric field (V/m)

**P** = RF output power (W)

**G** = EUT Antenna numeric gain (numeric)

**d** = Separation distance between radiator and human body (m)

The formula can be changed to

***Pd*** = $\frac{30 \times P \times G}{377 \times d^2}$

## 2.5 Calculated Result and Limit

**Exposure Environment: General Population / Uncontrolled Exposure**

**WLAN 2.4GHz**

| Mode | DG (dBi) | Power (dBm) | ERP (dBm) | Tolerance (dB) | Tune-up ERP (mW) | Distance (cm) | Option | TL ERP (mW) | TL Ratio |
|---|---|---|---|---|---|---|---|---|---|
| 2.4G;G1D | 2.68 | 19.75 | 20.28 | 0.50 | 119.674 | 20 | B | 3060.0 | 0.0391 |
| 2.4G;D1D | 2.68 | 20.13 | 20.66 | 0.50 | 130.617 | 20 | B | 3060.0 | 0.0427 |

**Bluetooth**

| Mode | DG (dBi) | Power (dBm) | ERP (dBm) | Tolerance (dB) | Tune-up ERP (mW) | Distance (cm) | Option | TL ERP (mW) | TL Ratio |
|---|---|---|---|---|---|---|---|---|---|
| 2.4G;BT-LE | 1.81 | 2.54 | 2.20 | 0.50 | 1.862 | 20 | B | 3060.0 | 0.0006 |

Note 1: Option A, B and C refer as clause 2.2
Note 2: For option B, Pth(mW) convert to TL ERP(mW); For option C, ERP(W) convert to TL ERP(mW)
Note 3: TL Ratio=Tune-up ERP(mW)/TL ERP(mW)

———THE END———