



**TÜVRheinland**<sup>®</sup>  
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# RF Exposure Report

## FCC Part 2.1091

**EUT Name:** MyQ B-Hub

**EUT Model:** MyQ B-Hub

*Prepared for:*

The Chamberlain Group Incorporated  
300 Windsor Drive  
Oak Brook, IL 60523  
USA

*Prepared by:*

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# Statement of Compliance

*Manufacturer:* The Chamberlain Group Incorporated  
300 Windsor Drive  
Oak Brook, IL 60523

*Name of Equipment:* MyQ B-Hub  
*Model No.* MyQ B-Hub  
*Application of Regulations:* FCC Part 2.1091

*Guidance Documents:*

FCC Part 2.1091

*Test Methods:*

FCC Part 1.1310, KDB 447498 D01

The electromagnetic compatibility test and documented data described in this report has been performed and recorded by TUV Rheinland, in accordance with the standards and procedures listed herein. As the responsible authorized agent of the EMC laboratory, I hereby declare that the equipment described above has been shown to be compliant with the EMC requirements of the stated regulations and standards based on these results. If any special accessories and/or modifications were required for compliance, they are listed in this report.

This report must not be used to claim product endorsement by A2LA or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written authorization of TUV Rheinland of North America.

Josie Sabado                      April 22, 2019  
Test Engineer                      Date

David Spencer                      April 22, 2019  
Laboratory Signatory              Date



**Test Cert. # 3331.02**

# 1 Product Specifications

## 1.1 Product Description

Garage Remote Control

## 1.2 Product Specifications

EUT Specifications	
Exposure Type	<input checked="" type="checkbox"/> General Population / Uncontrolled <input type="checkbox"/> Occupational / Controlled
Multiple Antenna Feeds:	<input checked="" type="checkbox"/> Yes, 3 <input type="checkbox"/> No

## 1.3 Air Interfaces

Air Interface	Supported Capabilities	Modulation	Maximum Duty Cycle	Frequency Range (MHz)	Maximum Output Power Including Tolerance (dBm)
300 MHz	-	• OOK	100%	310 – 390	-13.29
900 MHz	-	• GFSK • FSK	100%	902 – 928	10
WLAN: 802.11 b/g/n	• b/g mode • n mode, HT20	• BPSK • QPSK • 16QAM • 64QAM	100%	2400 – 2483.5	18
Bluetooth	• Low Energy	• GFSK	LE: 77%	2400 – 2483.5	10.5

## 2 RF Exposure Evaluation

### 2.1 Purpose

This report will demonstrate the compliance of RF exposure to the human body of the MyQ B-Hub according to FCC rule part 2.1091. All transmitters, regardless if it is categorically excluded, are assessed to ensure the product can operate in manners that meet or exceed the minimum test separation distance as required by KDB 447498.

### 2.2 Maximum Permissible Exposure Limit

The Maximum Permissible Exposure (MPE) limits for general population/uncontrolled exposure is as follows:

Frequency Range (MHz)	E-field strength (V/m)	H-field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
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
300-1,500	-	-	f/1500	30
1,500-100,000	-	-	1.0	30

\* = Plane-wave equivalent power density

### 2.3 Assessment Methods

The power density is calculated according to the following equation

$$S = \frac{EIRP}{4\pi R^2}$$

Where

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

EIRP = Effective Isotropic Radiated Power (mW)

R = Minimum distance between the human body and antenna (cm)

## 2.4 Assessment Calculation

The maximum output power and antenna gain is declared by the manufacturer and used in this assessment. The minimum RF exposure distance during normal operation is 20 cm.

### Stand Alone Analysis

Frequency Band (MHz)	Operating Mode	EIRP (mW)	Power Density (mW/cm <sup>2</sup> )	Power Density Limit (mW/cm <sup>2</sup> )	Percentage of Limit
310 – 390	300 MHz Transceiver	0.047	0.000009	0.260	0.0%
902 – 928	900 MHz Transceiver	10	0.0020	0.619	0.3%
2400 – 2483.5	802.11b/g/n	63.10	0.013	1.0	1.3%
2400 – 2483.5	Bluetooth LE	11.22	0.0022	1.0	0.2%

### Simultaneous Transmission Analysis

For each simultaneous transmission configuration, the sum of the percentages to the limit of each radio should not exceed 100%.

Simultaneous Transmission Configuration	Percentage of Limit	Sum of Percentages
300 MHz Transceiver	0.0%	1.5%
802.11b/g/n	1.3%	
Bluetooth LE	0.2%	
900 MHz Transceiver	0.3%	1.8%
802.11b/g/n	1.3%	
Bluetooth LE	0.2%	

## 2.5 Conclusion

The EUT was found to be compliant to the requirements of FCC part 1.1310 and part 2.1091 with a minimum distance of 20 cm.