

## RF exposure Estimation

### 1. Introduction

Applicant:	Chamberlain Group LLC, The
Address:	300 Windsor Drive, Oak Brook, Illinois 60523, United States
Product:	Wireless Commercial Keypad
FCC ID:	HBW1808-1
Model No.:	KPW5
Reference RF report #	6891225003001

### 2. Limit and Guidelines on Exposure to Electromagnetic Fields

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

The 1 mW blanket exemption applies at separation distances less than 0.5 cm, including where there is no separation. This exemption shall not be used in conjunction with other exemption criteria other than those for multiple RF sources in paragraph § 1.1307(b)(3)(ii)(A).

The 1 mW exemption is independent of service type and covers the full range of 100 kHz to 100 GHz, but it shall not be used in conjunction with other exemption criteria or in devices with higher-power transmitters operating in the same time-averaging period. Exposure from such higher-power transmitters would invalidate the underlying assumption that exposure from the lower-power transmitter is the only contributor to SAR in the relevant volume of tissue.

### 3. RF Exposure Evaluation

Per the test report included here is 315MHz

According to C63.10-2020 Annex G

$$\text{EIRP} = \text{pt} \times \text{gt} = (\text{E} \times \text{d})^2 / 30$$

where

pt is the transmitter output power in watts

gt is the numeric gain of the transmitting antenna (dimensionless)

E is the electric field strength in V/m

d is the measurement distance in meters(m)

$$\text{ERP} = \text{EIRP} / 1.64 = (\text{E} \times \text{d})^2 / (30 \times 1.64) = (\text{E} \times \text{d})^2 / 49.2$$

Field Strength ( $E_{\text{Meas}}$ ):	86.70 (dBuV/m) (f=0.315GHz)
Measurement Distance( $d_{\text{Meas}}$ ):	3 (m)
Equivalent Isotropically Radiated Power(ERP):	0.1427 (mW)
Limit: 1mW	

So, the device is qualified for SAR test exemption, the exemption report is in lieu of the SAR report.



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