	BUREAU VERITAS
	RF Exposure Report
Report No.:	SA200710D07
FCC ID:	2AK5B-I1
Test Model:	INT1LFCNA1
Received Date:	Jul. 10, 2020
Test Date:	Jul. 22 to Aug. 9, 2020
Issued Date:	Aug. 19, 2020
Applicant:	Latchable, Inc.
Address:	508 West 26th Street Suite 6G New York, NY 10001 United States
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Lin Kou Laboratories
Lab Address:	No. 47-2, 14 <sup>th</sup> Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan
FCC Registration / Designation Number:	198487 / TW2021
	Testing Laboratory 2021
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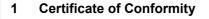
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# **Release Control Record**

Issue No.	ssue No. Description	
SA200710D07	Original release.	Aug. 19, 2020



Product:	Apartment entry intercom device
Brand:	Latch
Test Model:	INT1LFCNA1
Sample Status:	Engineering sample
Applicant:	Latchable, Inc.
Test Date:	Jul. 22 to Aug. 9, 2020
Standards:	FCC Part 2 (Section 2.1091)
	IEEE C95.3 -2002
References Test Guidance:	KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by :

, **Date:** Aug. 19, 2020

Annie Chang / Senior Specialist

Approved by :

**Date:** Aug. 19, 2020

Rex Lai / Associate Technical Manager



# 2 RF Exposure

### 2.1 Limits For Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (minutes)			
Limits For General Population / Uncontrolled Exposure							
0.3-1.34	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			

f = Frequency in MHz ; \*Plane-wave equivalent power density

## 2.2 MPE Calculation Formula

#### $Pd = (Pout*G) / (4*pi*r^2)$

where

 $Pd = power density in mW/cm^2$ 

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

#### 2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.



Frequency Band (MHz)	Max AV Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm²)
2402-2480 (BT LE)	-0.99	2.21	20	0.0003	1
2402-2480 (BT EDR)	6.37	2.21	20	0.0014	1
2412-2462	18.73	2.21	20	0.0247	1
5180-5240	11.54	2.25	20	0.0048	1
5260-5320	11.70	2.25	20	0.0049	1
5500-5700	9.28	2.32	20	0.0029	1
5745-5825	10.32	3.61	20	0.0049	1

### 2.4 Calculation Result Of Maximum Conducted Power

Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm²)
LTE Band 2: 1850.7MHz ~ 1909.3MHz	27.68	20	0.1166	1
LTE Band 4: 1710.7MHz ~ 1909.3MHz	26.91	20	0.0977	1

Frequency Band (MHz)	ERP (dBm)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm²)
LTE Band 12: 699.7MHz ~ 715.3MHz	21.96	24.11	20	0.0513	0.47
Note: EIRP = ERP + 2.15					

Note:

- 1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- 2. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.
- WLAN 2.4GHz & WLAN 5GHz technologies cannot transmit at same time.
  WLAN & BT technologies cannot transmit at same time.
  WLAN & WWAN technologies can transmit at same time.

#### **Conclusion:**

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + .....etc. < 1

CPD = Calculation power density

LPD = Limit of power density

#### WLAN (2.4GHz) + LTE (Band 2) =0.0247/1 + 0.1166/1 = 0.1413

Therefore the maximum calculations of above situations are less than the "1" limit.

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