RF Exposure evaluation

Product Description: Bluetooth Smart Padlock
Model Number: LE-01-5.2
FCC ID: 2AR3KPLBC00001

According to 447498 D01 General RF Exposure Guidance v05 The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by: [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

f(GHz) is the RF channel transmit frequency in GHz
Power and distance are rounded to the nearest mW and mm before calculation

According to the follow transmitter output power (P_t) formula :
$P_t = (E \times d)^2 / (30 \times g_t)$
P_t=transmitter output power in watts
g_t=numeric gain of the transmitting antenna (unitess)
E=electric field strength in V/m
d=measurement distance in meters (m)

According to the above test data,
P_t=2.490dBm=1.77mW

The result is rounded to one decimal place for comparison
Worse case is as below: [2480MHz -3.0mW output power]
(1.77mW /5mm).[√2.480(GHz)]= 0.56<3.0 for 1-g SAR
Then SAR evaluation is not required

NOTE: For the maximum power, you can refer FCC test report.

RF Exposure evaluation

Product Description: Bluetooth Smart Padlock
Model Number: LE-01-5.2
IC: 24605-PLBC00001

According to Clause 2.5.1 of RSS-102 Issue 5 SAR evaluation – Exemption limits for routine evaluation based on frequency and separation distance4,5

Frequency(MHz)	**At separation distance of** ≤5 mm
2450	4 mW

According to the follow transmitter output power（Pt）formula：

P_{MAX}=2.490dBm(Max EIRP Power=Max radiation field-95.2)

Antenna gain=0dBi

P_{EIRP}=2.490+0=2.490dBm=1.77mW <4mW

Then SAR evaluation is not required

NOTE: For the maximum power, you can refer IC test report.