RF Exposure Evaluation
FCC ID: 2AFRJ-UCON2

1. Client Information

Applicant	:	Noke
Address	:	2000 Ashton Blvd, Suite 375, Lehi, UT 84043
Manufacturer	:	Mapleaf technology CO., LIMITED
Address	:	5B1003, Shengtaoshajunyuan, Baoan District, Shenzhen City, Guangdong, China

2. General Description of EUT

EUT Name	:	electric door strike locks	
Models No.	:	DESS1	
Model Difference	:	N/A	
Product Description	:	Operation Frequency:	Bluetooth 5.0(BT): 2402MHz~2480MHz
		RF Conducted Power:	ANT1 Module1(nRF52832): 1.013 dBm ANT2 Module2(nRF52840): -3.104 dBm
		Antenna Gain:	ANT1:2dBi Internal Wire Antenna ANT2:2dBi Internal Wire Antenna
Power Supply	:	DC Voltage supplied by DC battery.	
Power Rating	:	DC 3.6V by DC battery	
Software Version		N/A	
Hardware Version		N/A	
Connecting I/O Port(S)	:	Please refer to the User's Manual	

Note: More test information about the EUT please refer the RF Test Report.

TB-RF-074-1.0

SAR Test Exclusion Calculations

1. **FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.**

    (1) Clause 4.3: General SAR test reduction and exclusion guidance

    　　Sub clause 4.31: Standalone SAR test exclusion considerations

    　　1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance $\leq$ 5 mm are determined by:

    　　[(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] $\leq$ 3.0 for 1-g SAR

    　　[(max. power of channel, including tune-up tolerance, mW)/(min. test separation, mm)]*[$\sqrt{f_{(GHz)}}$] $\leq$ 7.5.0 for 10-g SAR

2. Calculation:

ANT1+ANT2

Test separation: 5mm						
BLE Mode (GFSK)						
Frequency (GHz)	Conducted Total Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	2.435	2±1	3	1.9953	0.618	**3.0**
2.442	2.029	2±1	3	1.9953	0.624	**3.0**
2.480	1.489	2±1	3	1.9953	0.628	**3.0**

ANT1 Module1:

Test separation: 5mm						
BLE Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	1.013	1±1	2	1.585	0.491	**3.0**
2.442	0.533	1±1	2	1.585	0.495	**3.0**
2.480	-0.001	0±1	1	1.259	0.397	**3.0**

ANT2 Module2:

Test separation: 5mm						
BLE Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dbm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	-3.104	-3±1	-2	0.631	0.196	**3.0**
2.442	-3.327	-3±1	-2	0.631	0.197	**3.0**
2.480	-3.881	-3±1	-2	0.631	0.199	**3.0**

Test separation: 5mm	
The worst RF Exposure Evaluation	
Total Calculation Value	Threshold Value
0.628	**3.0**

The worst RF Exposure Evaluation is *0.628/ cm2 < limit 3.0*, So standalone SAR measurements are not required.

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