

# RF Exposure Evaluation

## FCC ID: 2AFRJ-KEYFOB

### 1. Client Information

|              |   |                                             |
|--------------|---|---------------------------------------------|
| Applicant    | : | Noke                                        |
| Address      | : | 2000 Ashton Blvd, Suite 375, Lehi, UT 84043 |
| Manufacturer | : | Noke                                        |
| Address      | : | 2000 Ashton Blvd, Suite 375, Lehi, UT 84043 |

### 2. General Description of EUT

|                        |                      |                                     |
|------------------------|----------------------|-------------------------------------|
| EUT Name               | :                    | Noke                                |
| Models No.             | :                    | keyfob                              |
| Model Difference       | :                    | N/A                                 |
| Product Description    | Operation Frequency: | Bluetooth 5.0(BLE): 2402MHz~2480MHz |
|                        | RF Output Power:     | BLE:-0.145dBm                       |
|                        | Antenna Gain:        | 2dBi PCB Antenna                    |
| Power Supply           | :                    | DC Voltage supplied by DC battery.  |
| Power Rating           | :                    | DC 3V 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.

## 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)] \*  $[\sqrt{f_{\text{GHz}}}] \leq 3.0$  for 1-g SAR

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

## 2. Calculation:

| 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                | -0.145                | $0 \pm 1$                    | 1                                    | 1.25                                | 0.390             | 3.0             |
| 2.442                | -0.303                | $0 \pm 1$                    | 1                                    | 1.25                                | 0.390             | 3.0             |
| 2.480                | -0.740                | $0 \pm 1$                    | 1                                    | 1.25                                | 0.390             | 3.0             |

The worst RF Exposure Evaluation is  $0.390/ \text{cm}^2 < \text{limit } 3.0$ , So standalone SAR measurements are not required.

-----END OF REPORT-----