

## FCC RF Exposure

EUT Description: NS87 KEYBORD

Model No.: NS87

FCC ID: 2BBYJ-NS87

## 1. Limits

According to KDB 447498 D01 General RF Exposure Guidance v06 The 1 - g and 10 - g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$$[(\text{max power of channel, including tune - up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1 - g SAR and } \leq 7.5 \text{ for 10 - g extremity SAR.}$$

Where:

$$\text{Result} = P/D * \sqrt{F}$$

F= the RF channel transmit frequency in GHz

P=Maximum turn - up power in mw

D=Min. test separation distance in mm

## 2. Test Result of RF Exposure Evaluation

BLE:

| Frequency<br>(MHz) | Output<br>power<br>(dBm) | Tune Up<br>Power<br>(dBm) | Max<br>Tune Up<br>power<br>dBm/mW | Min test<br>separati<br>on<br>distance<br>mm | Result | Limit<br>(mW/cm <sup>2</sup> ) | SAR Test<br>Exclusion |
|--------------------|--------------------------|---------------------------|-----------------------------------|--|--------|--------------------------------|-----------------------|
| 2440               | 3.69                     | 3 ± 1                     | 4/2.512                           | 5  | 0.785  | 3.0                            | Pass                  |

Note:

PK Output power= conducted power.

Conducted power see the test report **HK2305302228-1E**, antenna gain= 0dBi

2.4G:

$$\text{EIRP (dBm)} = 101.49(\text{dBuV/m}) - 95.2 = 6.29(\text{dBm})$$

| Frequency (MHz) | Output power (dBm) | Tune Up Power (dBm) | Max Tune Up power dBm/mW | Min test separation distance mm | Result | Limit (mW/cm <sup>2</sup> ) | SAR Test Exclusion |
|-----------------|--------------------|---------------------|--------------------------|---------------------------------|--------|-----------------------------|--------------------|
| 2480            | 6.29               | 6 ± 1               | 7/5.012                  | 5                               | 1.579  | 3.0                         | Pass               |

Note:

PK Output power= conducted power.

Conducted power see the test report **HK2305302228-2E**, antenna gain= 0dBi

Per KDB 447498 D01, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine RF Exposure test exclusion. The test exclusion threshold is 1.579 which is  $\leq 3$ , RF Exposure testing is not required.

Note: Exclusion Thresholds Results =  $\frac{(\text{max. power of channel, including tune-up tolerance, mW})}{(\text{min. test separation distance, mm})} \cdot [\sqrt{f(\text{GHz})}]$

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Distance = 5mm