

FCC RF Exposure

EUT Description: Gaming keyboard

Model No.: K7PRO

FCC ID: 2BBEO-K7PRO

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 ≤ 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 (MHz) | Output power (dBm) | Tune Up Power (dBm) | Max Tune Up power dBm/mW | Min test separati on distance mm | Result | Limit (mW/cm ²) | SAR Test Exclusion |
|--------------------|--------------------------|---------------------------|-----------------------------------|--|--------|--------------------------------|-----------------------|
| 2480 | 3.39 | 3 ± 1 | 4/2.512 | 5 | 0.791 | 3.0 | Pass |

Note:

PK Output power= conducted power.

Conducted power see the test report **HK2305111872-1E**, antenna gain= 2.69dBi

2.4G:

$$\text{EIRP (dBm)} = 101.81(\text{dBuV/m}) - 95.3 = 6.51(\text{dBm})$$

| Frequency (MHz) | Output power (dBm) | Tune Up Power (dBm) | Max Tune Up power dBm/mW | Min test separation distance mm | Result | Limit (mW/cm ²) | SAR Test Exclusion |
|-----------------|--------------------|---------------------|--------------------------|---------------------------------|--------|-----------------------------|--------------------|
| 2479 | 6.51 | 5.7 ± 1 | 6.7/4.677 | 5 | 1.473 | 3.0 | Pass |

Note:

PK Output power= conducted power.

Conducted power see the test report **HK2305111872-2E**, antenna gain= 2.69dBi

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 1.473 which is ≤ 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