



Date: 2017-08-08

Report Number: 60.790.17.029.01

Model No.: SHB4385

Radiofrequency radiation exposure evaluation

According to KDB 447498 D01v06 section 4.3.1, For frequencies between 100 MHz to 6GHz and test separation distances ≤ 50 mm, the Numeric threshold is determined as:

Step a)

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

>> The fundamental frequency of the EUT is 2402-2480MHz,
the test separation distance is ≤ 50 mm.
(Manufacturer specified the separation distance is: 5mm)

Step a)

>> Numeric threshold (2402MHz), $\text{mW} / 5\text{mm} \cdot \sqrt{2.402\text{GHz}} \leq 3.0$
Numeric threshold (2402MHz) $\leq 9.678\text{mW}$

>> Numeric threshold (2440MHz), $\text{mW} / 5\text{mm} \cdot \sqrt{2.441\text{GHz}} \leq 3.0$
Numeric threshold (2440MHz) $\leq 9.601\text{mW}$

>> Numeric threshold (2480MHz), $\text{mW} / 5\text{mm} \cdot \sqrt{2.480\text{GHz}} \leq 3.0$
Numeric threshold (2480MHz) $\leq 9.525\text{mW}$



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Left, FHSS:

>> The power of EUT measured (2402MHz) is: 2.85dBm = 1.927mW
The power of EUT measured (2441MHz) is: 3.95dBm = 2.480mW
The power of EUT measured (2480MHz) is: 4.17dBm = 2.612mW

Left, BLE:

>> The power of EUT measured (2402MHz) is: -0.29dBm = 0.935mW
The power of EUT measured (2441MHz) is: 0.95dBm = 1.244mW
The power of EUT measured (2480MHz) is: 0.70dBm = 1.174mW

Right, FHSS:

>> The power of EUT measured (2402MHz) is: 2.12dBm = 1.629mW
The power of EUT measured (2440MHz) is: 3.60dBm = 2.291mW
The power of EUT measured (2480MHz) is: 3.65dBm = 2.371mW

Right, BLE:

>> The power of EUT measured (2402MHz) is: -1.46dBm = 0.714mW
The power of EUT measured (2440MHz) is: -0.02dBm = 0.995mW
The power of EUT measured (2480MHz) is: -0.11dBm = 0.975mW

Which is smaller than the Numeric threshold.
Therefore, the device is exempt from stand-alone SAR test requirements.