

Appendix IV RF Exposure evaluation

FCC ID: 2BRLH-ACE-100

According to 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:

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

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

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison.

EDR:

Worse case output power is as below: [2441MHz: 8.71dBm]

Maximum output power is 8.71dBm (7.43mW).

$(7.43\text{mW} / 5\text{mm}) \cdot [\sqrt{2.441} (\text{GHz})] = 2.32 < 3.0 \text{ for 1-g SAR}$

BLE:

Worse case output power is as below: [2440MHz: 6.82dBm]

Maximum output power is 6.82dBm (4.81mW).

$(4.81\text{mW} / 5\text{mm}) \cdot [\sqrt{2.440} (\text{GHz})] = 1.50 < 3.0 \text{ for 1-g SAR}$

Then SAR evaluation is not required.

§ 2.1093 Radiofrequency radiation exposure evaluation: portable devices.

This device is designed to comply with FCC RF exposure standards, with a testing distance of 5mm. It is recommended to avoid direct contact with the body during use and ensure a minimum distance of \geq 5mm.