

## RF exposure evaluation

### § 2.1093 Radiofrequency radiation exposure evaluation: Portable Devices.

According to § 15.247(i) and § 1.1307b(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidance.

The 1-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g 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
- When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm according is applied to determine SAR test exclusion.
- The result is rounded to one decimal place for comparison

| Channel | Frequency (GHz) | Tune up Power (dBm) | Max. Tune up Power (dBm) | Max. Tune up Power (mW) |
|---------|-----------------|---------------------|--------------------------|-------------------------|
| CH 00   | 2.402           | 0±1                 | 1                        | 1.26                    |
| CH 39   | 2.441           | 0±1                 | 1                        | 1.26                    |
| CH 78   | 2.480           | -1±1                | 0                        | 1.00                    |

| Channel | Frequency (GHz) | Power (dBm) | Max. Power (mW) | Test distance (mm) | Result | exclusion thresholds for 1-g SAR |
|---------|-----------------|-------------|-----------------|--------------------|--------|----------------------------------|
| CH 00   | 2.402           | 0.58        | 1.14            | 5                  | 0.35   | 3.0                              |

#### Result:

Base on the calculation value, No SAR measurement is required.