
FCC §15.319 (i) & §2.1093 - RF EXPOSURE

Applicable Standard

According to FCC §15.319 (i) Unlicensed PCS devices are subject to the radiofrequency radiation exposure requirements specified in §1.1307(b), 2.1091 and 2.1093 of this chapter, as appropriate. All equipment shall be considered to operate in a general population/uncontrolled environment. Applications for equipment authorization of devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request. According to KDB 447498 D01 Mobile Portable RF Exposure v05 Appendix A, SAR can be exempted if the output power is less than the SAR exclusion threshold:

For $f = 1921.536$ MHz the output power is less than 10.82 mW at distance of 5 mm.

RF Exposure Evaluation

Maximum peak output power at antenna input terminal:

1921.536 MHz: 19.62 dBm = 91.62 mW

Time-based average output power at antenna input terminal = Peak output power * Duty cycle
= $91.62 * 3.95\% = 3.62$ mW

SAR exclusion threshold $10.82 \text{ mW} > 3.62 \text{ mW}$

So the SAR evaluation is not necessary.

Note: The time-base average output power depends on the duty cycle, and this device's duty cycle is 3.95%.