

Compliance with 47 CFR 95.1125

“Portable devices as defined in §2.1093(b) of this chapter operating in the WMTS are subject to radio frequency radiation exposure requirements as specified in §§1.1307(b) and 2.1093 of this chapter. Applications for equipment authorization of WMTS devices must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be submitted to the Commission upon request.”

The Model 96281 can be used less than 20 cm from the user. Therefore, the device can be considered a portable transmitter per 47 CFR 2.1093(b). The 1400 MHz transmitter inside the Model 96281 uses two antennas. The maximum antenna gain is -4.2 dBi from the ceramic chip antenna. The maximum antenna gain from the ECG lead-wire antenna is 4 dBi. The conducted output power is split asymmetrically between the two antennas to approximately compensate the difference in gain. This is intended to provide diversity in respect to patient movement and posture. The maximum radiated field strength is 97.6 dBuV/m which is equal to a radiated output power of 1.7 mW EIRP.

The 1400 MHz transmitter is excluded from SAR evaluation and therefore deemed compliant with FCC RF exposure requirements as described below:

FCC KDB 447498 D01 v05r02 Section 4.3.1

“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

- $f(\text{GHz})$ 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
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.”

The device has a maximum conducted output power of 1.7 mW at 1.43 GHz. The closest spacing of the antenna to the user’s torso is 0 cm. The table below shows the results of the calculation. The value of 0.406 is well below the exclusion threshold of 3.0, therefore the unit is excluded from SAR evaluation and deemed compliant with FCC RF exposure requirements.

Output Power (mW)	Test Separation (mm)	Transmit Frequency (GHz)	Exclusion Threshold	Specification
1.7	5	1.43	0.406	≤ 3.0

The applicant’s radio, FCC ID: CM6-670-1632-1400, is compliant with the requirements of FCC 95.1125.

A certified Bluetooth radio module, FCC ID: CM6-WT12, will be co-located inside the device with the 1400 MHz transmitter. The Bluetooth radio has a maximum antenna gain of 0.5 dBi, a maximum peak conducted output power of 2.1 mW, and a maximum peak radiated power of 2.36 mW (EIRP). It is also exempt from routine SAR evaluation.

Output Power (mW)	Test Separation (mm)	Transmit Frequency (GHz)	Exclusion Threshold	Specification
2.1	5	2.45	0.657	≤ 3.0