

INTERTEK TESTING SERVICE

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RF Exposure Evaluation

For Maximum Permissible Exposure (MPE) evaluation of the device, the maximum power density at 20 cm from this mobile transmitter shall be less than the General Population / Uncontrolled MPE limit in OET Bulletin 65.

For the device of tested model of GES2181, the maximum conducted measured power (P) was 64.12mW. From these data, the exposed power density at a distance (R) of 20cm from the center of radiation of the antenna can be calculated according to OET Bulletin 65 as follow:

The maximum peak conducted power = 64.12mW

The power density at 20 cm from the antenna
= $P / 4\pi R^2$
= 0.013 mWcm⁻²

The measured maximum field strength (FS) was 117.0 dB μ V/m. The distance (D) between the antenna and the equipment under test (EUT) was 3 meters. From these data, the radiated (EIRP) can be calculated by:

The radiated power = $(FS \cdot D)^2 / 30$ mW
= 150.4 mW

The power density at 20 cm from the antenna
= $P / 4\pi R^2$
= 0.03 mWcm⁻²

In the frequency range of 2.4-2.4835 GHz, the MPE limit is 1.0 mWcm⁻² for general population and uncontrolled exposure. As the measured power density at 20cm from the transmitter is lower than the MPE limit, the compliance to the MPE limit can be ensured by indicating the minimum 20cm separation between the transmitter's radiating structures and body of the user or nearby persons.

The following RF exposure statement is included in the user manual:

“FCC RF Radiation Exposure Statement: This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.”