

## Intertek Testing Services

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Question #11: MPE compliance can be addressed through estimation (calculation). Please provide it.

For the MPE evaluation, refer to Page 19 of Supplement C (Edition 01-01). Transmitters using indoor antennas operate at 20 cm or more from nearby persons and operating at 4W EIRP (2.4 W ERP) or less at 2450MHz, generally are not expected to exceed MPE limits when nearby persons are 20 cm or more from most antennas.

The measured field strength (FS) was 124.6dB $\mu$ V/m at 2442MHz. The distance (D) between the antenna and the equipment under test (EUT) was 3 meters. The antenna gain (G) of the EUT was 1.5dBi.

From these data, the EIRP can be calculated by:

$$\begin{aligned} \text{EIRP} &= (\text{FS} \cdot \text{D})^2 / 30 \cdot \text{G} \\ &= 0.577\text{W} \end{aligned}$$

Based on the above calculation, it is concluded that the EUT would not exceed MPE limits when nearby persons are 20 cm or more from its antenna.

The caution statement was already included in the user manual to ensure the 20 cm distance clearance for satisfying FCC RF exposure requirements.