

MPE Calculation for TC-XX10

The Maximum Permissible Exposure (MPE) power density per ANSI C95.1 Table 2 is $f/1500 \text{ mW/cm}^2$, where f is measured in MHz.

The maximum EIRP of the TC-XX10 is extrapolated from the highest conducted measurement of 28.49dBm along with the peak gain of +1dBi of the antenna to yield a maximum numerical EIRP of 29.49dBm, or 0.889W.

As described in Part 3 of the TCXX10 Test Report, there is a duty cycle correction factor of 4.7% which will be multiplied to the maximum numerical EIRP, thus yielding a EIRP = 41.8mW.

$$\begin{aligned} S &= \text{EIRP} / 4\pi R^2 \\ 915 / 1500 &= (41.8) / 4\pi R^2 \\ R &= 2.34\text{cm.} \end{aligned}$$

The antenna inside the TC-XX10 is installed inside an electric meter on the side of a building. Given the low duty cycle and its installed location, it is highly unlikely that any individual will be in proximity of the device. Typical exposure distances are expected to be in excess of 1 meter.

The TC-XX10 also meets the exception of RSS102 Iss.2 2.5.2 as the separation distance between the user and the device exceeds 20cm and that its source-based time-averaged output power is less than 2.5W. As such, only Annex C of the IC Appendix I-II form needs to be signed and submitted.