

Maximum Permissible Exposure

Elkay Manufacturing Co.

FCC ID: 2AC8R-BSNAE

IC: 12430A-BSNAE

Purpose

The purpose of this test is to ensure that the RF energy intentionally transmitted, in terms of power density emitted from the EUT at a stated operating distance does not exceed the limits listed below as defined in the applicable test standard, as calculated based upon readings obtained during testing. This helps protect human exposure to excessive RF fields.

Limit(s) and Method

The limits, as defined in FCC 1.1310 Table 1 (B) limits for general public exposure was applied. The limit for the frequency range of 300 MHz to 1.5 GHz is $f/1500$ mW/cm².

Therefore, the limits for this device are as follows:

MPE Limits	
Frequency	Limit
902 – 927.3 MHz	0.601 mW/cm ² (worst case in frequency range)

The distance used for calculations was 20cm, as this is the minimum distance a user will be from the EUT during normal operation.

Prediction methods from OET Bulletin 65, Edition 97-01 are applied.

Results

The EUT passed the requirements. The worst case calculated power density is under limits, and meets the MPE test exclusion requirement.

Calculations for 15.247 device

$$P_d = (P * G) / (4 * \pi * R^2)$$

Where:

P = Power input into the antenna = 467.7 mW

G = Power gain of antenna = 1.9 dBi = 1.55 (numeric) as per antenna data.

R = 20cm

$$P_d = (467.7 \text{ mW} * 1.55) / (4 * \pi * 20^2 \text{ cm}^2)$$

$$P_d = \mathbf{0.144 \text{ mW/cm}^2} < \mathbf{0.601 \text{ mW/cm}^2}$$

MPE test exclusion applies.