



H.B. Compliance Solutions

Maximum Permissible Exposure Statement

For the

Thrive Smart Systems

Transmitter

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Prepared for:

Thrive Smart Systems

980 Queens Drive

American Fork, Utah 84003

Prepared By:

H.B. Compliance Solutions

5005 S. Ash Avenue, Suite # A-10

Tempe, Arizona 85282

Reviewed By:

A handwritten signature in black ink, appearing to read 'Hoosamuddin Bandukwala'.

Hoosamuddin Bandukwala



Cert # ATL-0062-E

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG/4\pi R^2$$

Where,

S = power density (mW/cm²)

P = output power at the antenna terminal (mW)

G = gain of transmit antenna (numeric)

R = distance from transmitting antenna (cm)

For LoRa Transmitter

Maximum peak output power at antenna input terminal = 18.30 (dBm) *

Maximum peak output power at antenna input terminal = 67.60 (mW)

Antenna gain (typical) = 2.1(dBi)

Maximum antenna gain = 1.64 (numeric)

Prediction distance = 20 (cm)

Prediction frequency = 903.5 (MHz)

MPE limit for uncontrolled exposure at prediction frequency = 0.6 (mW/cm²)

Power density at prediction frequency = 0.022 (mW/cm²)

*Includes 1dB of manufacturer output power tolerance.

To solve for the minimum mounting distance required;

$$R = \sqrt{PG/4\pi S}$$

$$R = \sqrt{67.6 \times 1.64 / 4\pi \times 0.022} = \underline{20 \text{ cm}} \text{ (Based on continuous transmission)}$$

END OF TEST REPORT