



H.B. Compliance Solutions

Maximum Permissible Exposure Statement

For the

Alpine Electronics

Jeep Speaker

November 6, 2018

Prepared for:

Alpine Electronics

1500 Atlantic Blvd,

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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)

Maximum peak output power at antenna input terminal = 7.39 (dBm)

Maximum peak output power at antenna input terminal = 5.48 (mW)

Antenna gain (typical) = 2.73(dBi)

Maximum antenna gain = 2.0(numeric)

Prediction distance = 20 (cm)

Prediction frequency = 2480 (MHz)

MPE limit for uncontrolled exposure at prediction frequency = 1 (mW/cm²)

Power density at prediction frequency = 0.00218 (mW/cm²)

To solve for the minimum mounting distance required;

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

$$R = \sqrt{5.48 \times 2.0 / 4\pi \times 0.00218} = \underline{20 \text{ cm}} \text{ (Based on continuous transmission)}$$

END OF TEST REPORT