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Attention: Reviewing Engineer

The HZB-U58-100 radio is designed for fixed-mount point-to-point applications.

The maximum EIRP for the HZB-U58-100 as defined in FCC 15.407 is +53 dBm at 5.725-5.825 GHz band, the power density at 1.5 meters from an antenna is:

$$S = \text{EIRP}/4\pi R^2 = 7.1 \text{ W/m}^2 = 0.71 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

Where: S = Power density

R = distance to the center of radiation of the antenna

The near field power density is : $S_{nf} = 16\eta P/\pi D^2$. The worst case of near-field power density is when the radio output at the certified power of 51mW, $\eta=1$, and antenna dimension is the smallest (1 foot panel, with 1.414 foot diagonal distance)

$$S_{nf \text{ max}} = 16 \times 0.051 / \pi (1.414 \times 0.3048)^2 = 1.4 \text{ W/m}^2 = 0.14 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

Where: S_{nf} = maximum near -field power density

P = power fed to the antenna

η = aperture efficiency

D = antenna diameter

Therefore, the power density is compliant with the limit for General Population/ Uncontrolled Exposure as specified in rule 1.1310.

If you should have any questions regarding this submission, please feel free to contact the undersigned.

Yours truly,

A handwritten signature in black ink, appearing to read "Caroline Yu".

Caroline Yu
Homologation Product Manager
Western Multiplex Corporation