

RF emission: Theoretical value of the safety distance
from the VHF antenna for the JHS-800S

1. Specifications

Maximum output: RF power 25W
Antenna gain: 0dBd, 3dB(Marine dB)
Antenna pattern: Omni-direction in a horizontal plane
Frequency: 156.0MHz – 162.5MHz
Modulation: Frequency modulation

2. Calculation

$$d[m] = \sqrt{\frac{\text{AntennaGain} \times \text{Power}}{4\pi \times \text{RFlimit}}} = \sqrt{\frac{10^{(2.15+3)/10+\log 25000}}{4\pi \times 1}} \div 100 = 0.807[m]$$

Power density : $\text{RFlimit} = 1.0[mW/cm^2]$ (OET Bulletin No. 65)

Duty cycle : 100%

Safety distance: 0.81[m] or more