

RF emission: Theoretical value of the safety distance

from the VHF antenna for the JHS-770S/780D

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

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

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

Duty cycle : 100%

Safety distance: 0.81[m] or more