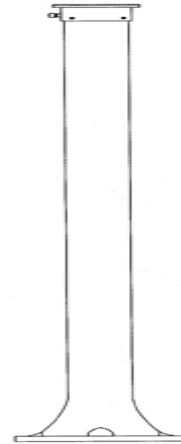


SB- 4163 Dual Channel UHF Dipole Antenna

Features

- **Broadband**
- **Light weight**
- **Shipboard applications**
- **Receiving or transmitting mode**
- **Weatherproof**



Detailed Description

The SB-4163 dual UHF channel antenna is a rugged, self supporting vertically polarized broadband antenna covering the frequency range of 225 to 400 MHz. This light weight purpose antenna can be used in the transmit or receive mode.

The antenna is designed for use under severe environmental conditions encountered aboard shipboard.

The two independent radiating elements are housed in a single fiberglass radome with an internal fiberglass mounting base. A feed-through cable runs from the base to the top aluminium flange of the antenna so that another antenna type can be mounted on the top flange.

The two antenna channels are high power, balanced dipoles each capable of handling power levels of up to 1 KW average. The isolation between the two channels is excess of 25 dB. Each channel input VSWR on the 50 ohm impedance is less than 3.0:1 with average VSWR 2.5:1 over the entire 225 to 400 MHz frequency range.

The antenna has been designed to meet the vibration requirements of MIL-STD-167, type I and II, shock requirements of MIL-S-901, and the environmental requirements of MIL-E-16400H.

Reference Data

Name: *Dual Channel UHF Dipole Antenna*

Category: *UHF Antennas*

Diagram(s): *Dimensions and Mounting Details*

Photo(s): *SB-4163*

Height: *96 in (243.8 cm) (repeated below)*

Frequency Range: *225 MHz to 400 MHz - for antennas (repeated below)*

Features:

- * *Broadband*
- *Lightweight*
- *Shipboard applications*
- *Receiving or transmitting mode*
- *Weatherproof*

Description:

The SB-4163/URC dual channel, UHF antenna is a rugged, self-supporting, vertically polarized, broadband antenna covering the frequency range of 225 MHz to 400 MHz. This lightweight antenna can be used in either the transmit mode or the receive mode.

The antenna is designed for use under the severe environmental conditions encountered in a shipboard environment.

The two independent radiating elements are housed in a single fiberglass radome with an integral fiberglass mounting base. A feed-through cable running from the base to the top aluminum flange allows for the mounting of another antenna, such as the 390, atop the SB-4163.

The two antenna channels are high power, balanced dipoles, each dipole is capable of handling power levels of up to 1 KW average. The isolation between the two channels is greater than 25 dB. Each channel exhibits a nominal input impedance of 50 ohms and a VSWR of 3.0:1 maximum and 2.5:1 average over the entire frequency range of 225 MHz to 400 MHz.

The antenna has been designed to meet the vibration requirements of MIL-STD-167, TYPE I and II, the shock requirements of MIL-S-901 and the environmental requirements of MIL-E-16400H

Notes: *1. do not use lead base pain to touch-up or repaint antenna*

Electrical Characteristics

<i>Frequency Range:</i>	<i>225 MHz to 400 MHz</i>
<i>Polarization:</i>	<i>Vertical</i>
<i>Power Rating:</i>	<i>1000 W average (each channel)</i>
<i>Azimuth Coverage</i>	
<i>[Radiation Pattern]:</i>	<i>Omni-directional</i>
<i>Impedance:</i>	<i>50 Ohms nominal</i>
<i>VSWR:</i>	<i>2.5:1 average, 3.0:1 maximum</i>
<i>Gain:</i>	<i>2 dBic (average)</i>
<i>Input Connection:</i>	<i>Three N-Type Receptacles</i>

Mechanical Characteristics

<i>Height/Length:</i>	<i>96 in (243.8 cm)</i>
<i>Weight:</i>	<i>40 Lbs. (18.2 kg)</i>
<i>Centre of Gravity:</i>	<i>33 in (83.8 cm) up from base</i>
<i>Operating Temperature:</i>	<i>-55 C to +65 C</i>
<i>Radiating Element:</i>	<i>Aluminium</i>
<i>Radome and Base Flange:</i>	<i>epoxy fibreglass</i>
<i>Top Mounting Flange:</i>	<i>Aluminium</i>
<i>Finish:</i>	<i>Haze gray silicone alkyd enamel</i>

Environmental Characteristics

<i>Humidity:</i>	<i>MIL-STD-810E, Procedure III</i>
<i>Vibration:</i>	<i>MIL-STD-167-1 Type 1</i>
<i>Shock:</i>	<i>MIL-S-901-1 Grade A</i>

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