



TECHNICAL MANUAL

VTM-11-003

AS-5042/URC COAXIAL STUB DIPOLE ANTENNA

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SCOPE

The scope of this technical manual is to provide the basic operational characteristics of the AS-5042/URC COAXIAL STUB DIPOLE ANTENNA, as well as, provide installation and maintenance information for field use.

DESCRIPTION

The AS-5042/URC antenna is a UHF coaxial stub dipole antenna intended for shipboard applications, offering wide frequency band capabilities in a ruggedized package. The antenna is ideally suited for any communications system operating between 220MHz and 400MHz, providing vertically polarized, omni-directional radiation patterns. It is designed to easily handle 200 W of RF input power with a maximum of 2:1 VSWR.

The AS-5042/URC is comprised of two small cylindrical stub radiators with an integral support bar. It is designed to withstand the harsh environmental conditions unique to seagoing vessels. This antenna is ideally suited for mounting to a flat surface from the included mounting clamp.

This antenna comes from our factory completely assembled, ready for installation. The following table lists the major replaceable sub-assemblies of the antenna system:

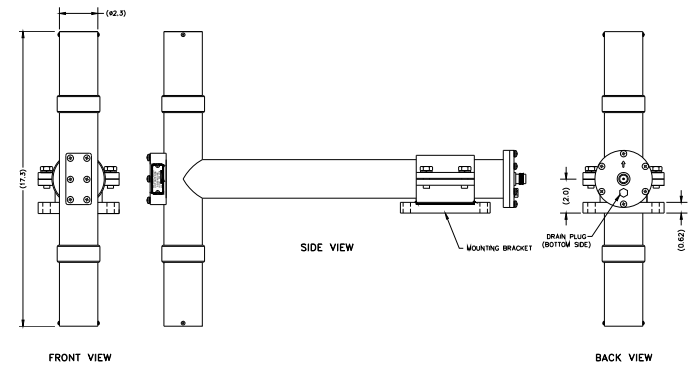
QTY	Part Number	Description
1 per	VD-11-00059-1	AS-5042/URC Assembly
1 per	VC-11-00068-1	AS-5042/URC Antenna Mount Bottom
1 per	VC-11-00070-2	AS-5042/URC Antenna Mount Top

ELECTRICAL CHARACTERISTICS

Frequency	220 MHz to 400 MHz
Polarization	Vertical
Radiation Pattern	Omni-directional
Impedance	50 Ohms Nominal
VSWR	Less than 2:1
Gain	+1 dBi
Input connector	N-Type, female
Power Handling	200 W (Average)

MECHANICAL CHARACTERISTICS

Weight	4.5 lbs (2.0 kg) + 2.5 lbs (1.1 kg) mounting bracket
Height	21.69 in (55.1 cm)
Width	17.25 in (43.8 cm) assembled
Temperature	-40°F to +300°F (-40°C to +150°C)
Finish	Haze Grey Epoxy Polyamide



ASSEMBLY INSTRUCTIONS

No Assembly Required.

INSTALLATION INSTRUCTIONS

As shipped, the AS-5042/URC antenna is designed with a mounting bracket intended to mount to a flat surface. The bracket can be loosened and swivelled for either a horizontal or vertical mount. The arrow located on the connector flange indicates which direction is to face “up” to when the antenna is mounted, so as to maintain an omnidirectional radiation pattern.

OPERATING INSTRUCTIONS

Connect a suitable RF coaxial cable (such as RG-142) from the ship’s radio setup to the bottom of the antenna. An N-type connector is required for this.

There are no other user connections or settings required to use the antenna.

MAINTENANCE

The antenna is completely assembled, tuned and tested at the factory. There are no adjustments required after delivery of the antenna.

General maintenance would include inspecting the antenna for signs of physical damage, such as, bent or broken elements, cracked insulator section or damaged input connector. The input connector and cable should be inspected for signs of damage or loosening. All mechanical joints and fasteners should be periodically inspected for signs of loosening.

Take note: At the base of the antenna near the connector and mount is a small drain plug, which must be periodically loosened to allow trapped moisture to escape. When reinstalling, ensure the drain plug is snug.

Replacement parts may be ordered from the factory (subject to availability) using the contact information on page 7. The factory should be contacted if any substantial repair is required.

CONTACT INFORMATION

Postal address:	Shipping address:
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