EASP-WHF05-ANT/N
EASP-WHF05-NT/R
Wideband HF
antenna 1KW PEP

Highlights

• Minimal maintenance requirements
• High Reliability
• Broadband radiator, a decade frequency interval typical
• No tuning devices
• SWR 1:1.5 typical
• 50 ohm coax feed line
• RF power 1KW PEP
• Rugged fiberglass whip element and stainless steel mounting hardware

Mechanical Features

• Length 10 meters
• Weight 25 Kg
• Sections 2
• Bottom Ø 52 mm
• Whip material epoxy fiberglass
• Finishing polyurethane paint
• Colour grey RAL 7030
• Radiator high Q Teflon line
• Ferrule inox steel per AISI 316
• Operating temp. -35 °C to +80 °C
• Max wind speed 180 Km/h

Electrical Features

• Frequency 2 to 30 MHz
• Impedance 50 ohm
• Polarization Vertical
• H radiation 360 °
• V radiation See diagram
• TX feed cable RG-213/U
• Ground Yes
Wideband HF antenna 1KW PEP

EASP-WHF05-ANT/N and EASP-WHF05-ANT/R

The EASP-WHF05-ANT is a relative high efficiency broadband vertical radiator intended for use with frequency agile transmission systems over the 2 - 30 MHz HF band (i.e.: HF/ALE systems). It is produced in two different versions, respectively EASP-WHF05-ANT/R for the roof mounting solution and EASP-WHF05-ANT/N for the naval mounting solution.

Working Principle

The EASP-WHF05-ANT is a wideband HF whip antenna intended for use with ALE capable transceivers for HF communication.

Although no external tuning is necessary for operation over the entire HF band, an ATU (Antenna Tuner Unit) can be used to improve SWR ratio. By the way, working principle is based on unique method of coupling transmission line transformers with travelling wave monopole radiator. A detailed analysis of the impedance adapter network revealed that it actually consists of two separate transformers with inter-coupled windings. This technique is used in conjunction with a virtually infinite length of aperiodic transmission line. Such a linear and lumped disperse elements network provide fifty ohm impedance adaption over the entire HF band.

Physical layout

The antenna is constituted by the 10 meter whip sustained by ATU that performs also as support. The impedance adaptor, along with transmission line transformers, is mounted in an aluminum enclosure with integral heat sink.

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<td>Wide band HF antenna 1KW PEP Naval Mounting</td>
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Radiation Patterns

- 3 MHz
- 7 MHz
- 14 MHz
- 20 MHz
- 26 MHz