



PRODUCT INFORMATION

Component THEMATCHBOX Impedance Matching Transformer

Part Number MBX.22

Image



Description

THEMATCHBOX is a broadband multi-tap transmission-line transformer that raises the magnitude of the characteristically low impedances of electrically short-end fed antennas to an impedance suitable for direct connection to 50-ohm coaxial cable without significant loss or standing wave ratio. Superior to conventional transformers which perform well only above 1 MHz, THEMATCHBOX works well at low frequencies (down to 100 kHz) due to its manganese zinc alloy composition.

The feed-point impedance of electrically short-end fed antennas is heavily influenced by local ground conductivity as well as the quality of the antenna's ground system, in addition to its physical length. Multiple impedance step-up ratios are required to cover a wide range of soil conductivity and ground-system variations encountered in the field. THEMATCHBOX can be field configured for 8 different impedance transformation ratios, matching antennas with feed-point impedances of between 3 and 37 ohms to a 50-ohm coaxial feed line.

THEMATCHBOX is designed for outdoor installation and is housed in a heavy-duty, weatherproof aluminum enclosure for mounting at the antenna feed point. Top and bottom flanges on the enclosure allow for simple installation on a variety of support types.

Please be aware that all products we describe here are subject to availability based on our manufacturing capacity and the shipping dates. While we have made every effort to ensure the accuracy of all information, we do not accept liability for any errors or omissions and reserve the right to change these specifications without notice.

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Specs (cont'd)

Transformer Configurations:

Impedance Ratio	Feed-Point Impedance
1:16	3.1 Ω
1:12	4.2 Ω
1:9	5.6 Ω
1:4	12.5 Ω
1:3	16.7 Ω
1:2.25	22.2 Ω
1:1.75	28.6 Ω
1:1.4	35.7 Ω

Power Rating: 300 Watts Continuous

Frequency Range: 100 kHz to 1.7 MHz

Construction: Multi-Filar on Medium Permeability MnZn Toroid Core

Impedance Selection: Internal Jumper/Screw Terminals

Accessories: Mounting Straps; Ground Jumper/Clamp

Connectors: Coax: SO239; Ground: Internal Stud

Dimensions: Height 6.25"; Width 4.0"; Depth 3.25"

Height including Flanges: 7.5"

Cover Attachment: 4 Screws

Weight: 2.5 lbs

NEMA Rating: 1, 2, 4, 4X, 6, 12 and 13

IP Rating: IP68

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