



VSAT

VERY SMALL APERTURE TERMINAL
FOR SATELLITE COMMUNICATIONS



INESCTEC
TECHNOLOGY & SCIENCE



VSAT

VERY SMALL APERTURE TERMINAL FOR SATELLITE COMMUNICATIONS

A Very Small Aperture Terminal (VSAT) is a two-way satellite dish antenna, typically around 1 metre in diameter. VSAT can be used in both terrestrial ground stations and stabilised maritime antennas, providing data rates up to 4 Mbit/s from satellites in geosynchronous orbit.

This technology allows for simultaneous voice and data communication, including Internet connectivity. Therefore, this is a more practical alternative to terrestrial connectivity, especially when terrestrial networks are not available or reliable such as in remote areas.

INESC TEC specialises in designing and characterising waveguide devices for satellite applications, particularly for VSAT communications. The developed VSAT microwave configuration includes a feed, which illuminates the antenna dish, an orthomode transducer (OMT), necessary to isolate the transmitted and received signals, and a Transmit/Receive (TR) filter, which provides further isolation between the signals.

MAIN FEATURES

Ku band
Simple and affordable fabrication
Lightweight

SPECIFICATIONS

Receive Frequency: 10.7-12.75 GHz
Receive Return Loss: <-25 dB
Transmit Frequency: 13.75-14.5 GHz
Transmit Return Loss: <-26 dB
Transmit/Receive Isolation: >50 dB
Dimensions: 62mm x 172mm x 120mm
Feed radiation pattern: 40° (FWHM)
Total Weight: 400 g



INESC TEC
TECHNOLOGY & SCIENCE
ASSOCIATE LABORATORY
PORTUGAL

CAMPUS DA FEUP
R DR. ROBERTO FRIAS 378
4200 - 465 PORTO
PORTUGAL

T +351 222 094 000
F +351 222 094 050
www@inescporto.pt
www.inescporto.pt

