



Travelling Wave Tube Amplifier

Type AHPA-10-2000



Description

The AHPA-10-2000 is a travelling wave tube amplifier comprising of an Albacom LY132 pulsed I band travelling wave tube and matched, modular power supply. The TWTA produces 2.0kW peak output power at up to 2% duty ratio, and operates from a 24 to 32 volt power source. The LY132 TWT incorporates a shadow gridded gun, ring loop slow wave structure and a single stage depressed collector. The power supply produces all of the TWT electrode voltages to the high standards of stability and ripple required for modern radar system performances. It uses a proven high voltage switch mode power supply and floating deck grid modulator.

Built in features such as monitoring, control and protection circuits ensure safe operation; BITE (built in test equipment) is provided which simplifies fault finding and maintenance. The unit is qualified to meet EMC specification Mil STD 461C.

Features

The AHPA-10-2000 is a pulsed I Band TWTA intended for radar applications.

The TWTA incorporates:-

- LY132 TWT
- Modular PSU
- Monitoring, Control and Protection Circuits
- BITE

Specification

Electrical

Frequency Range 9GHz - 10GHz

Output Power 2.0kW Peak (min)

Duty Ratio 2% (max) - 12% duty ratio for 10ms in burst mode operation

Gain 55dB

Pulse Length 5 μ s (max)

RF Input Connector SMA Female

RF Output Connector UG40A/U Waveguide Flange

Electrical Supply

Connector Amphenol 62GB-57A-16-08-P
Primary Supply 24V DC to 32V DC
Power Consumption 475W at Full Duty Ratio

Cooling

Cooling Conduction
Temperature range -15°C to +65°C

Control Interface

Connector Amphenol 62GB-57A-16-26-P

Control Inputs RS422
Operate Command
Pulse Trigger
HV Command
Reset Command
VSWR Fault
Synch

Status Outputs RS422
Power On
No fault
Standby
HV On

Monitor Outputs

Connector Amphenol 62GB-57A-16-26-S
Cathode Voltage Sample 0.5V/kV
Body Current Sample 100mV/mA

Fault Outputs RS422
Over temperature (TWT/PSU)
High Voltage Fault
Low Voltage Fault
Modulator Fault
VSWR Fault
Supply Fault
Helix Fault
Beam Fault

Physical

Overall Dimensions (approx)	400mm x 250mm x 150mm
Weight	15kg

Albacom Limited reserve the right to alter any product specifications without prior notice.