

# HIGH POWER AMPLIFIERS

HPA 2500B - 500W TRI-BAND OUTDOOR

ND SATCOM



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**ND SatCom has been a supplier to the satcom industry for over 30 years. All necessary features required in today's satellite communication applications such as serial/parallel M&C interfaces, local and remote panels are available in this HPA product line.**

All RF parameters can be monitored and controlled on the front panel. The modular construction ensures easy servicing. The high voltage section is potted and all other electrical components are coated to protect against humidity and dust.

## Key Features

- / Unmatched RF performance
- / High-tech power supply unit for highly reliable operation
- / Integrated power factor correction
- / Low power consumption (max. 1750 W)
- / Integrated attenuator (35dB range)
- / Compliant to MIL-STD

## Options

- / Integrated X-Band linearizer
- / Redundancy switching
- / Remote control panel

// Unmatched TWT durability and reliability through our intelligent high-tech power supply unit //

# HPA 2500B - 500W TRI-BAND OUTDOOR

## Technical Specifications

### RF SPECIFICATION

<b>HPA Type</b>	HPA 2500B
<b>Frequency Range</b>	5.85 - 6.425 GHz / 7.9 - 8.4 GHz / 13.75 - 14.50 GHz
<b>Flange Power</b>	>325 W, > 55,1 dBm / >420 W, > 56,2 dBm / >380 W, > 55,8 dBm
<b>TWT Power</b>	500 W Tube
<b>Gain @ Rated Power (10 dB OBO)</b>	> 70 dB / > 73 dB
<b>Gain Adjust</b>	> 0 - 35 dB, $\pm 0.1$ dB setability
<b>Gain Stability</b>	< $\pm 0.25$ dB / °C / 24 hrs after 30 min warm-up
<b>Gain Slope</b>	< 0.04 dB / MHz
<b>Gain Variation</b>	< 1.0 dB / in any 80 MHz, < 2.5 dB / in any 500 MHz, < 7 dB / full band
<b>Group Delay (in any 40 MHz)</b>	< 0.01 ns / MHz linear, < 0.005 ns / MHz <sup>2</sup> parabolic, < 0.5 ns ripple
<b>Intermodulation</b>	< -20 dBc at 6 dB below rated power without linearizer < -30 dBc at 4 dB below rated power with linearizer (only X-Band)
<b>AM/PM Conversion</b>	< 2.5° / dB at 6 dB below rated power, < 6° / dB at rated output power
<b>Phase Noise</b>	Meets IESS 308/309
<b>Noise and Spurious Emissions</b>	< -60 dBW / 4 kHz (4 -20 GHz)
<b>Harmonic Output Suppression</b>	< -3 dBc at rated output / < -10 dBc at rated output / < -12 dBc at rated output

### PHYSICAL

<b>Input RF Connector</b>	N-jack (input/testport)
<b>Output RF Connector</b>	WRD 580D28 Waveguide Output, grooved, threaded UNC 6/34
<b>Dimensions (L X W x H)</b>	294 x 233 x 649 mm
<b>Weight</b>	< 36 kg / 79 lbs
<b>Cooling</b>	forced air min. 200 m <sup>3</sup> /h

### MONITOR & CONTROL

<b>Serial Remote Interface</b>	PT 851-00R12-10S50 RS422/RS485
<b>Alarm / Mute Interface</b>	PT 851-00R12-10S50
<b>Parallel Remote Interface</b>	PT 851-00R19-10S50

### GENERAL

<b>Main Power Connector</b>	Binder 694 99 0711 00 05
<b>Noise Level (cooling fan)</b>	< 65 dBA measured in 1 m distance
<b>Prime Power</b>	115 to 240 VAC / 50-60 Hz, single phase
<b>Power Consumption</b>	< 1750 W max.
<b>CE Directive</b>	73/23/EEC and 92/31/EEC 89/336/EEC 1999/5/EC

### ENVIRONMENTAL SPECIFICATION

<b>Temperature Range (operational)</b>	-40°C to +50°C
<b>Humidity</b>	95% condensing at 40°C
<b>Shock and Vibration</b>	Compliant to MIL-STD 810F