



PPA-100S S-Band Solid State Power Amplifier

Profen's S-Band line of Solid-State Power Amplifiers (SSPA) is intended for satellite up-link applications. The SSPA offers 100 watts output power across the standard 2.0 to 2.4 GHz satellite uplink band. Its compact and weatherproof enclosure make it possible to use it in an antenna hub or outdoors in applications where a low loss desired in between the SSPA and the antenna. The amplifiers feature a user intuitive M&C system over ethernet that facilitates easy setup and control.

Options

- 1:1 and 1:2 redundant systems

Typical Applications

- Earth Observation and Imaging
- Remote Sensing
- Satellite Communication
- TT&C for LEO/MEO satellite system
- Telemetry for missile and UAV satcom and testing

Key Features

- 100 W saturated output power
- 68 dB small and 65 dB saturated gain
- Built-in RS232/RS485 M&C port. Ethernet port option.
- 25 dB range digital gain adjustment with 0.5dB steps
- RF output sample port (-40dBc)
- Lightweight IP67 outdoor type closure
- Suitable to mount on small and large antennas

PPA-100S Specification*

Electrical	
Frequency Range	2.00 - 2.40 GHz
Gain, at maximum gain setting	44 P1dB, 50 dB Psat @2.2 GHz
Gain Adjust Range	20 dB, adjustable with 0.5dB gain steps
Gain Flatness	±1.5 dB (Full band @P1)
Gain Stability vs. Temperature	±1.0 ±1.5 dB (between -20 to +50 °C)
Input Power	-20 to 0 dBm
Output Power	37 dBm min and 50dBm sat
Two-tone Intermodulation	< -27 dBc (at 3dB back-off from Psat)
Group Delay	Linear 0.03 ns/MHz Ripple 1.0 ns p-p
Noise Figure	10 dB (at maximum gain)
VSWR	Input 1.33:1
Output Sample Port	-40 dBc
Remote Control	
M&C Interface	RS232/RS485 serial, Ethernet (option) Parameters monitored and controlled over M&C interface: RF ON/OFF Power Supply Voltage and Current RF Signal Input, Output and Reflected Power Gain M&C interface status Monitored Alarms: Fan, Mains Voltage and Current, Temperature, RF Signal Input, Output and Reflected Power
Mechanical & Environmental	
Connectors	Input Type N Female, 50 Ohm Output Type N Female, 50 Ohm Sample Port Type N Female, 50 Ohm I/O 10-pin MS, mate supplied Power 3-pin MS, mate supplied
Dimensions & Weight	280.5 x 524.30 x 263.10 mm (LxWxH), 21 kg
Temperature	-30°C - +55°C (Operational) -40°C - +65°C (Survival)
Humidity	98% Relative Humidity

*Specifications is subject to change without notice