



**The SPA series power amplifiers are a ruggedized and compact solution for providing up to 20W linear power in a single band of operation.**



**Its optimized design provides minimum size, weight and power consumption enabling deployment in virtually all platforms. The power amplifier covers one of the UHF, L/S, C, and Ku bands in a single, compact, lightweight, environmentally sealed package.**

**KEY FEATURES:**

- Linear Amplification in UHF, L/S, C or Ku-Bands
- Low Cost, Size, Weight and Power (SWaP)
- Ruggedized and Compact
- RS-485 Monitoring and Control
- Vortex® and Rover® Compatible
- High Linearity Compatible with Virtually All Modulation Forms
- Qualified on Multiple Programs
- Deployed on Numerous Platforms

## SPA Series Power Amplifier

The SPA series provides linear amplification in one of the UHF, L/S, C or Ku frequency bands. The RS-485 digital control interface allows for dynamic configuration in operation, as well as output power control. This provides for increased versatility by supporting maximum transmit power for FSK and FM modulated carriers as well as linear operation for QPSK & OQPSK signals without detrimental spectral regrowth.



### SINGLE BAND POWER AMPLIFIER PERFORMANCE SPECIFICATIONS

| Specification                 | Frequency Band  |                               |                               |                |
|-------------------------------|---|-------------------------------|-------------------------------|----------------|
|                               | UHF   | L/S                           | C                             | Ku             |
| Frequency Range               | 400-470 MHz   | 1710-1850 MHz & 2200-2500 MHz | 4400-5000 MHz & 5250-5850 MHz | 14.5-15.35 GHz |
| RF Output Power ( $P_{1dB}$ ) | 20 W minimum  | 20 W minimum                  | 15 W minimum                  | 8 W minimum    |
| RF Input Power                | -5 to +10 dBm   |                               |                               |                |
| Maximum RF Input              | +15 dBm   |                               |                               |                |
| VSWR (Input and Output)       | 2.0:1 maximum   |                               |                               |                |
| Spurious and Harmonic EMI     | IAW MIL-STD-461E  |                               |                               |                |
| RF Output Protection          | Will operate into any load at any phase angle.            |                               |                               |                |
| DC Input Power                | +28 ± 4VDC @ 7.5A Max (Reverse polarity protected)        |                               |                               |                |
| Size and Weight               | 4 x 6 x 1", 2.5 pounds maximum                            |                               |                               |                |
| RF Connectors                 | 2x SMA  |                               |                               |                |
| Operating Temperature         | -20 to +70°C baseplate                                    |                               |                               |                |
| Power and Control             | Fischer 102 (DC Power) & Fischer 1031 (RS-485 & Discrete) |                               |                               |                |
| Environmental                 | IAW MIL-STD-810F  |                               |                               |                |



SPA Power Amplifier



Ramona Research also supplies a variety of Single and Quad Band Power Amplifiers