



## Product Technical Reference Note

**HPA4 High Power Amplifier**  
450 MHz – 512 MHz



**ElectroCom Systems**  
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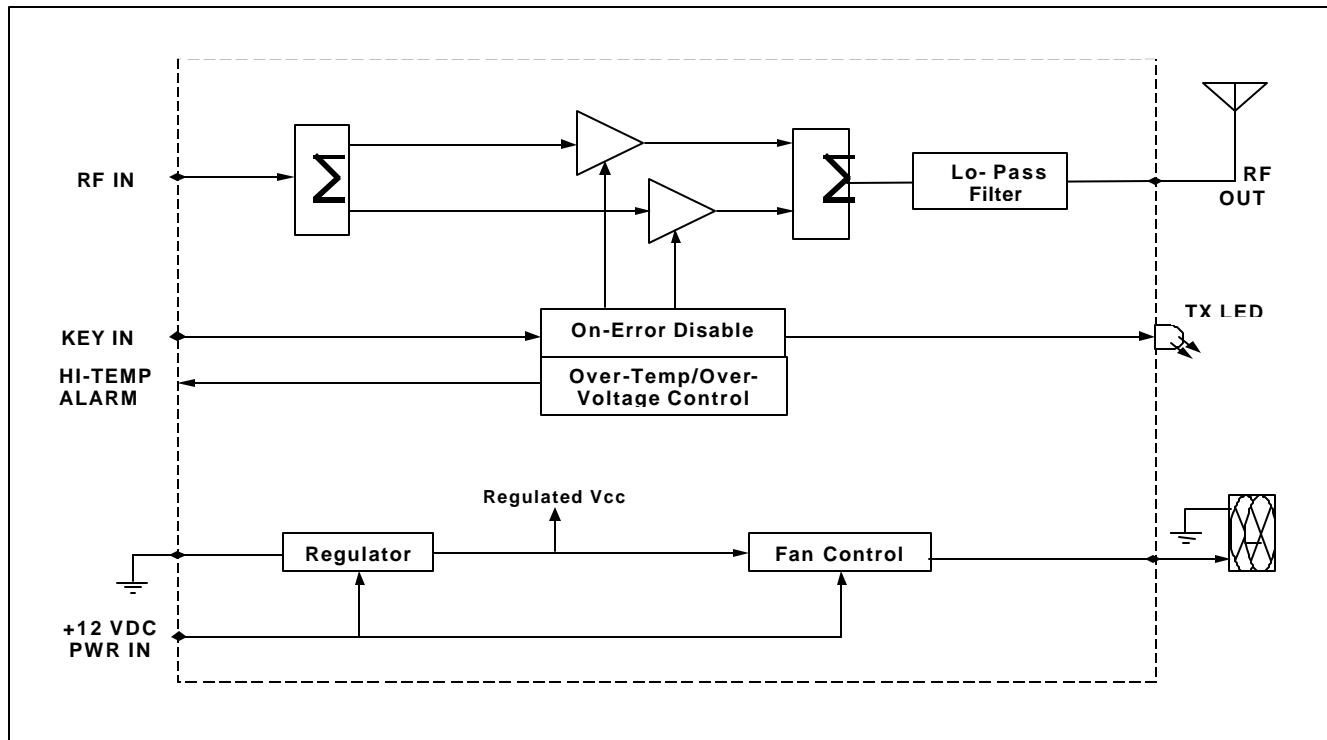
## Overview

The ElectroCom HPA4 High Power Amplifier is designed to complement the ElectroCom IP4 voice/data radio in the 400 MHz to 512 MHz range. Its solid aluminum case/heat sink body assures protection against physical damage, excess emissions and heat build-up. The unit has been designed to provide solid mounting, simplistic interconnect to radio, antenna and power, and to allow fully hands-off operation. The HPA4 is a single-channel amplifier for Frequency Modulated data communications.

The dual-amplifier design of the HPA4 extends the feature of a traditional Class A amplifier, providing graceful degradation of output power under fault conditions. Other features include self-correcting, over-temperature shutdown with alarm, and automatic three-stage thermal equilibration circuitry.

## Specifications

Parameter	Specification
Frequency Range	450 MHz to 512 MHZ
Input Power Supply Voltage	+12 Volts DC, nominal (+15 VDC Maximum)
DC Power Consumption	0 Amps standby, 25 Amps transmitting @ 100 Watt Output Power
RF Input	Power: 20 Watts (nominal); 25 Watts (maximum) Impedance: 50 Ohm Type $^3N^2$ jack
RF Output	Power: 100 Watts (450 – 512 MHz) Impedance: 50 Ohm Type $^3N^2$ jack
Gain	7dB maximum
Duty Cycle	100%
Temperature Range	-30C to + 60C (-22F to +140F) (Operating)
Physical Size	7.28" W x 9.50" L x 6.875" H
Weight	10.5 Lbs.
Emission Designator	20K0FID



**Figure 1**  
**HPA4 High Power Amplifier**  
**Logical Block Diagram**