

## Solid State Power Amplifier 25 to 450 MHz, 400 Watts Pulsed MODEL BPHED27457-400/10007

### Features:

- Solid State Broadband Pulsed Amplifier
- Rugged Design for Airborne Radar
- Dummy Load for Pre-Flight Go/No-Go Check
- Internal T/R Switches
- Internal DC to DC Converters
- Remote Control Via RS-422/485 Interfaces
- Air-Cooled
- Extreme Temperature Range Usage



Comtech PST is pleased to introduce Model BPHED27457-400, a new high power pulsed broadband amplifier for Synthetic Aperture Radar (SAR) applications covering the frequency range of 25-450MHz. This amplifier provides a high power pulsed RF output into one of three selectable antenna ports.

The amplifier is designed to operate in an airborne Foliage Penetration (FOPEN) or Ground Penetrating Radar (GPR) SAR application. The amplifier is packaged in a single mountable assembly, which includes integrated T/R switches, a dummy load, harmonic filtering, and DC-to-DC converters. It is suited for payloads with limitations in size, weight and power. The entire assembly is just 12" x 12" x 24", weighs less than 60 pounds, and requires less than 700 watts. The unit is air cooled.

The BPHED27457-400 delivers full rated power into a 3:1 load VSWR with an input drive level of 1 milliwatt (0dbm) +/-1dB. The amplifier is fully self protected from excessive input overdrive, high ambient temperature, over-voltage, under voltage, over current and high duty factor. Pre-flight Go/No Go check out is accomplished through a switchable dummy load. The unit exhibits excellent harmonic performance; achieved by utilizing push-pull matching networks and 90 degree quadrature combiners and low pass filters. The amplifier system can be remotely controlled through its RS-422/485 interfaces. A high speed noise quieting (blinking) circuit is featured providing remote noise output reduction to -155dbm /Hz in < 50  $\mu$ S.

### SPECIFICATIONS:

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|---------------------------|------------------------------|
| • Frequency Range:        | VHF: 25-88, UHF: 225-450 MHz |
| • V/UHF Switchable RF Out | 400 Watts One of 3 Outputs   |
| • Duty factor             | <15%                         |
| • Pulse Width             | <200 $\mu$ S                 |
| • Sample Ports            | FWD and REV Detectors        |
| • RF Input Power:         | 0 dBm +/- 1dBm               |
| • Gain @ Rated Power      | 56 dB minimum                |
| • DC Input                | + 28Vdc, 25A (22-29 VDC)     |
| • Altitude                | < 25,000 Feet AGL            |
| • Temperature Range       | -55° to 30° C (Forced Air)   |