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Proposed

RFHA3942

35W GaN WIDEBAND POWER AMPLIFIER

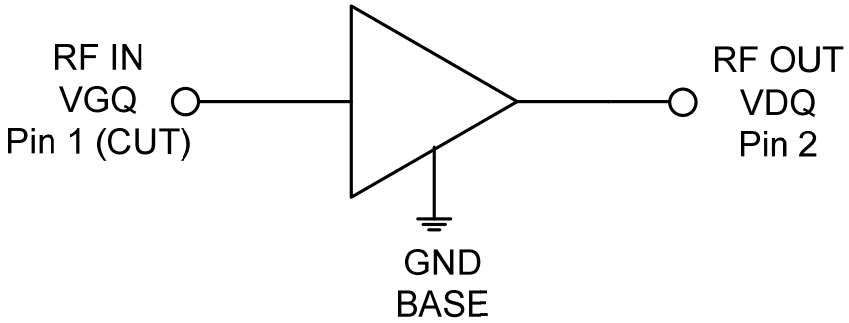
Package: Flanged Ceramic, 2-pin, RF360-2

Features

- Broadband Operation
  - Tunable from DC to 4GHz
  - Instantaneous: 800MHz to 2500MHz
- Advanced GaN HEMT Technology
- Peak Modulated Power >30W
- Advanced Heat-Sink Technology
- 48V Typical Modulated Performance
  - P_{OUT} 39.5dBm
  - Gain 14.5dB
  - Drain Efficiency 35%
  - ACP -40dBc
- 48V Typical CW Performance
  - P_{OUT} 45.5dBm
  - Gain 15dB
  - Drain Efficiency 56%
- -40°C to 85°C Operating Temperature

Applications

- Civilian and Military Radar
- Military Communications
- General Purpose Broadband Amplifiers
- Electronic Warfare
- Public Mobile Radios
- Commercial Wireless Infrastructure
- Cellular and WiMAX Infrastructure
- Industrial, Scientific, and Medical



Functional Block Diagram

Product Description

The RFHA3942 is a 48V, 35W high power discrete amplifier designed for military communications, radar, electronic warfare, general purpose broadband amplifier, commercial wireless infrastructure, and industrial/scientific/Medical applications. Using a second generation advanced high power density Gallium Nitride (GaN) semiconductor process with improved linearity, these high-performance amplifiers achieve high efficiency, excellent linearity, and flat gain and power over a broad frequency range in a single amplifier design. The RFHA3942 is an unmatched GaN transistor, packaged in a hermetic flanged ceramic package. This package provides excellent thermal stability through the use of advanced heat sink and power dissipation technologies. Ease of integration is accomplished by incorporating simple, optimized matching networks external to the package that provide wideband gain and power performance in a single amplifier.

Ordering Information

RFHA3942	35W GaN Power Amplifier
RFHA3942PCBA-410	Fully Assembled Evaluationat Board Optimized for 2.14GHz; 48V

Optimum Technology Matching® Applied

☐ GaAs HBT	☐ SiGe BiCMOS	☐ GaAs pHEMT	☑ GaN HEMT
☐ GaAs MESFET	☐ Si BiCMOS	☐ Si CMOS	☐ BiFET HBT
☐ InGaP HBT	☐ SiGe HBT	☐ Si BJT	

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