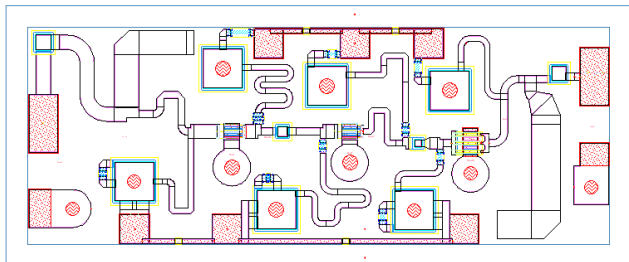


Ka Band Wideband LNA/Driver

TGA1319C



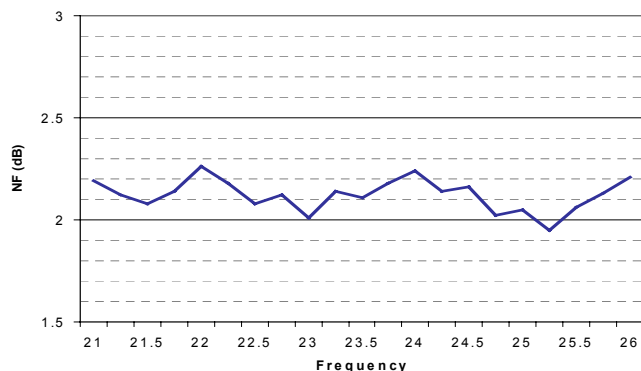
Chip Dimensions 2.169 mm x .904 mm

Key Features and Performance

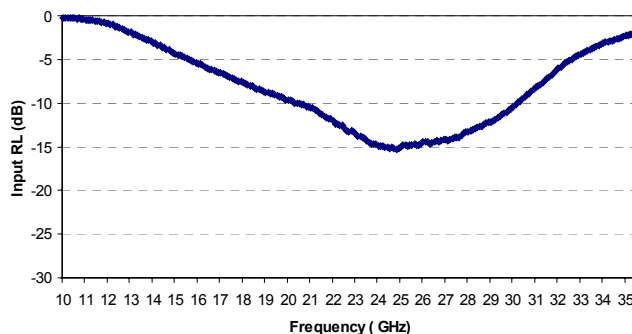
- 0.15um pHEMT Technology
- 16-30 GHz Frequency Range
- 2.25 dB Nominal Noise Figure midband
- 21 dB Nominal Gain
- 14 dBm Pout
- 5V, 60 mA

Primary Applications

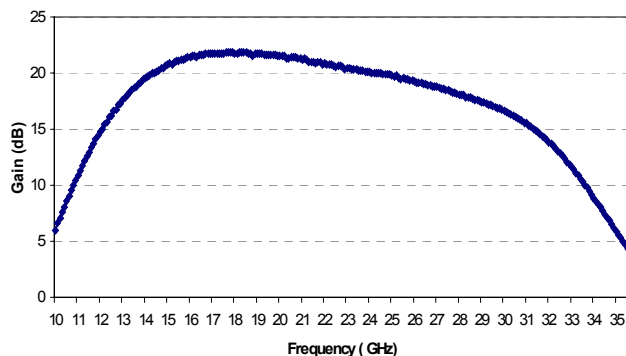
- Point-to-Point Radio
- Point-to-Multipoint Communications



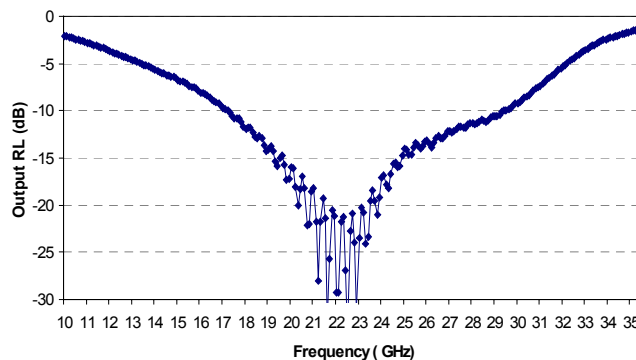
Typical NF @ 25C



Typical S11 @ 25C

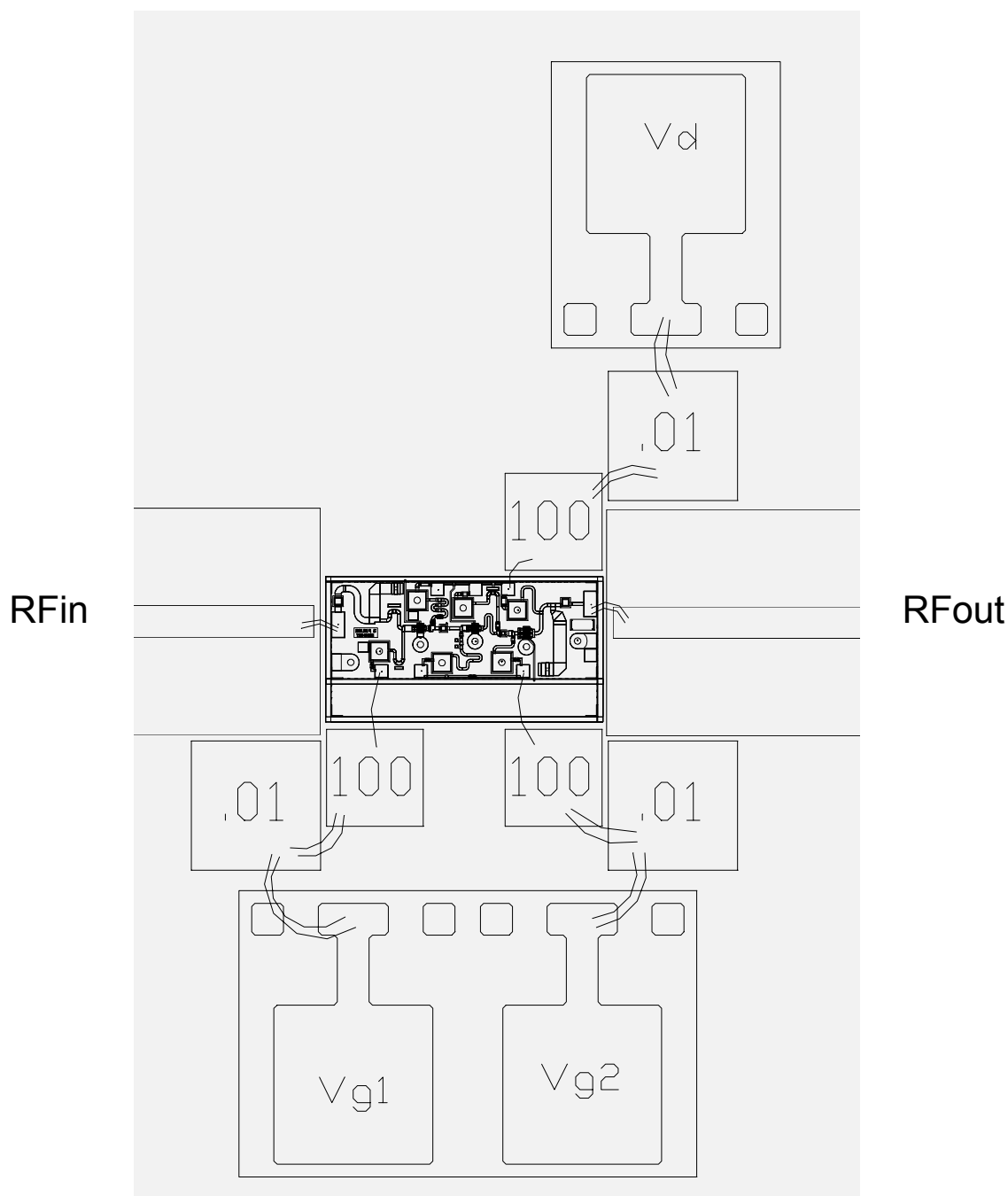


Typical Gain @ 25C



Typical S22 @ 25C

Note: Devices designated as EPU are typically early in their characterization process prior to finalizing all electrical and process specifications. Specifications subject to change without notice



TGA1319C- Recommended Assembly Drawing

Note: Devices designated as EPU are typically early in their characterization process prior to finalizing all electrical and process specifications. Specifications subject to change without notice



Assembly Process Notes

Reflow process assembly notes:

- AuSn (80/20) solder with limited exposure to temperatures at or above 300 °C
- alloy station or conveyor furnace with reducing atmosphere
- no fluxes should be utilized
- coefficient of thermal expansion matching is critical for long-term reliability
- storage in dry nitrogen atmosphere

Component placement and adhesive attachment assembly notes:

- vacuum pencils and/or vacuum collets preferred method of pick up
- avoidance of air bridges during placement
- force impact critical during auto placement
- organic attachment can be used in low-power applications
- curing should be done in a convection oven; proper exhaust is a safety concern
- microwave or radiant curing should not be used because of differential heating
- coefficient of thermal expansion matching is critical

Interconnect process assembly notes:

- thermosonic ball bonding is the preferred interconnect technique
- force, time, and ultrasonics are critical parameters
- aluminum wire should not be used
- discrete FET devices with small pad sizes should be bonded with 0.0007-inch wire
- maximum stage temperature: 200 °C

GaAs MMIC devices are susceptible to damage from Electrostatic Discharge. Proper precautions should be observed during handling, assembly and test.

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