` DISTRIBUTED AMPLIFIER

PRE-RELEASE DATASHEET RFDBA26

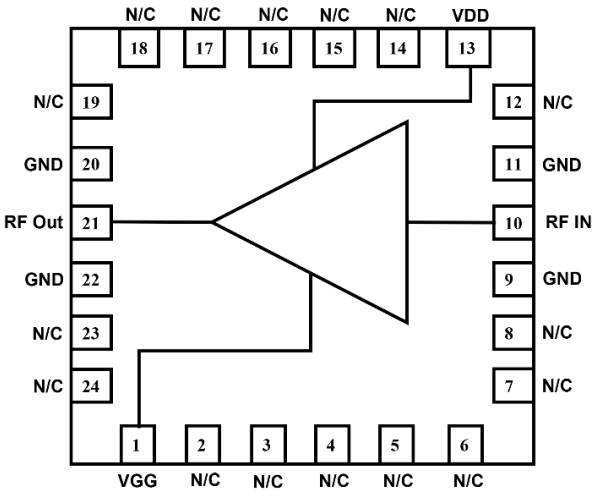
The RFDBA26 is a wideband RF distributed amplifier designed to support broadband operation using transmission-line-based architecture**.** The amplifier employs multiple gain stages distributed along artificial transmission lines at the input and output, enabling wide bandwidth performance compared to conventional lumped amplifiers.

By utilizing transmission line theory, the distributed topology allows the RFDBA26 to achieve broadband gain with improved input and output matching across a wide frequency range. The multi-stage architecture also helps in distributing the gain and improving the overall frequency response. The RFDBA26 is suitable for RF systems requiring wideband amplification where consistent gain over frequency is desired.

Features:

- RF Frequency: DC to 26 GHz
- Small signal gain: 15.7 dB
- Input return loss: 15 dB
- Output return loss: 15.7 dB
- Noise figure: 2.3 dB
- Output P1 dB: 11.65 dBm
- Saturated output power: 19 dBm
- DC drain bias voltage: 4 V
- Dc supply current: 110 mA
- 100 nm GaAs pHEMT Technology.
- Die Size: 0.9mm * 2.6mm
- 0.1um GaAs pHEMT Technology.

Functional Block Diagram



Applications:

- GPS
- Satellite communications
- Radar

Pin Configuration

Pin No.	Pin Name	Description
9,11,20,22	GND	RF Ground
10	RF_IN	RF Input
21	RF_OUT	RF Output
13	VDD	Drain Bias Voltage
1	VGG	Gate Bias Voltage
2,3,4,5,6,7,8,12, 14,15,16,17,18, 19,23,24	N/C	Not Connected

Tech Specs:

- Part Number: RFDBA26
- Provider: Millimeterchips Pvt. Ltd.
- Foundry node: 0.1um GaAs pHEMT Win Semiconductors