

RFPA03S-10 is a stage Power Amplifier that operates from 2 - 6 GHz and can be used in low-power S, and C band applications or to drive the high-power amplifier. The amplifier provides 28 dB small signal gain and 26.7 dBm of Output P1dB. The input and output are matched to 50 ohms with on-chip DC blocking capacitors. The device is specifically designed for use in 2 - 6 GHz frequency in point-to-point radios for cellular backhaul Applications, 5G RF transceivers & SATCOM. The technology used to design DA is 0.1um GaAs pHEMT Process. Results are shown in the datasheet with all parasitic & coupling effects at the desired frequency.

Features:

- RF Frequency: 2-6 GHz
- Gain of 28 dB.
- Output P1dB of 26.7 dBm.
- Noise Figure of 2.5 dB.
- OIP3 is 36 dBm.
- Output Saturated Power: 29 dBm.
- Bias: VDD1= 4V, VGG1=-0.5V, ID= 399mA
- 0.1um GaAs pHEMT Technology.
- Die Size: 1.2 mm x 0.8 mm

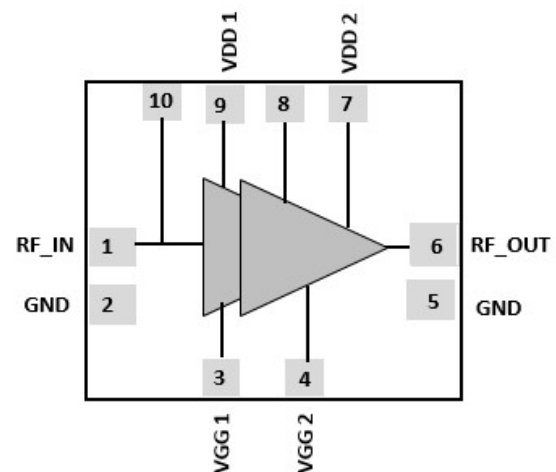
Application:

- 5G mobile system.
- Satellite Communication.
- Point-to-point communication system.
- Wi-Fi.
- IoT.

Tech Specs:

- Part Number: RFPA03S-10
- Provider: RFIC Solutions Inc.
- Foundry node: 0.1um GaAs pHEMT Win Semiconductors
- Porting: IP can be ported to 65nm Si / CMOS node
- Maturity: IC is fabricated and tested.
- Availability: Now

Functional Block Diagram:



Deliverables:

- Schematic and Netlist
- Abstract Model (.lib file)
- Layout View(Optional)
- Behavioral model (Circuit & EM simulation)
- Extracted View(Optional)
- GDSII
- DRC, LVS, Antenna report
- Test bench with configuration(Optional)
- Documentation

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