Description

The F6921 is an ultra-low power consumption, dual-channel, low noise amplifier (LNA) RFIC designed for application in Ku-Band SATCOM planar phased array antennas. The exceptional combination of low power consumption, low noise, high gain, and compact size, maximizes the antenna array G/T while minimizing overall system power dissipation. An externally supplied reference bias current is used to trade LNA power consumption against P1dB and gain, completely shut off (idle) the amplifier during operation or for gain compensation versus temperature.

The LNA is supplied in a compact 23-pin, 0.5mm pitch BGA package with 50Ω matched single-ended RF inputs and outputs for ease of integration onto phased array antenna panels.

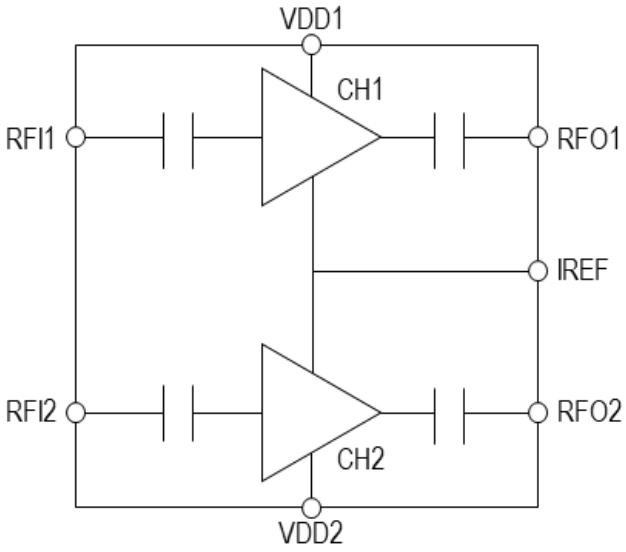
Typical Applications

- Phased array antennas
- Ku-band SATCOM terminals
- Aerospace and maritime
- Instrumentation

Features

- 10.7 – 12.75GHz operation
- Two independent gain/phase-matched channels
- 19dB typical gain
- -5dBm typical output P1dB
- 15mW power consumption
- Supply voltage: 0.95 – 1.05 V
- 2.7 × 2.7 × 0.9 mm, 23-pin FC-BGA package
- -40°C to 85°C ambient operating temperature range

Block Diagram



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Ordering Information

Orderable Part Number	Package	MSL Rating	Carrier Type	Temperature
F6921AVRI	2.7 × 2.7 × 0.9 mm 23-BGA	3	Tray	-40°C to +85°C
F6921AVRI8	2.7 × 2.7 × 0.9 mm 23-BGA	3	Reel	-40°C to +85°C
F6921EVB	F6921 Evaluation Board			

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