

Description

The F6923 is an ultra-low power consumption, dual-channel, low noise amplifier (LNA) RFIC designed for application in Ku-band 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.

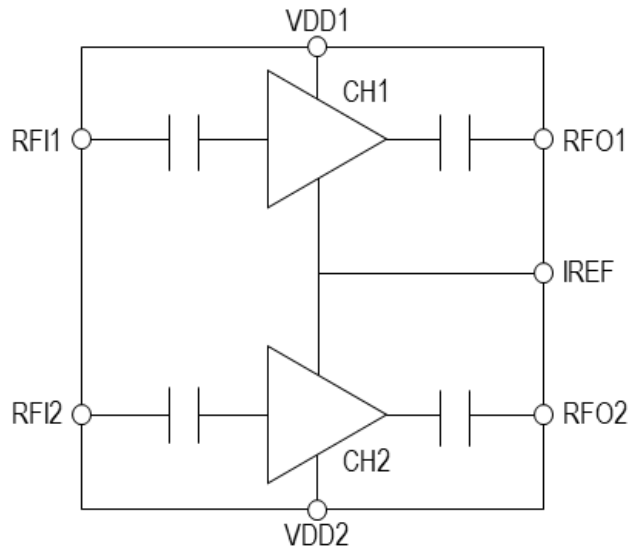
Typical Applications

- Phased array antennas
- Ku-band SATCOM terminals
- Common Data Link (CDL) terminals
- Ku-band radar
- Aerospace and maritime
- Instrumentation

Features

- 13.75 – 17.3GHz operation
- Two independent gain/phase-matched channels
- 19dB typical gain
- -2dBm typical output P1dB
- 20mW 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



Ordering Information

| Orderable Part Number | Package | MSL Rating | Carrier Type | Temperature |
|-----------------------|---------------------------|------------|--------------|----------------|
| F6923AVRI | 2.7 × 2.7 × 0.9 mm 23-BGA | 3 | Tray | -40°C to +85°C |
| F6923AVR18 | 2.7 × 2.7 × 0.9 mm 23-BGA | 3 | Reel | -40°C to +85°C |
| F6923EVB | F6923 Evaluation Board | | | |

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