

Description

The F0110 is a dual-path 1500MHz to 2300MHz High Gain / Ultra-Low Noise Amplifier used in receiver applications.

The F0110 LNA is operated as a *balanced amplifier* where the inputs and outputs are combined via external 90° couplers and provides 18dB of gain with 0.6dB noise figure and 39dBm OIP3 performance. The device uses a single 5V supply and 120mA typical of total I_{CC} .

The F0110 is packaged in a 4 x 4 mm, 16-VFQFPN with 50Ω single-ended RF input and output impedances for ease of integration into the signal path.

Competitive Advantage

- Ultra-low noise performance of 0.6dB over wide bandwidths improves receiver sensitivity
- High gain and linearity

Typical Applications

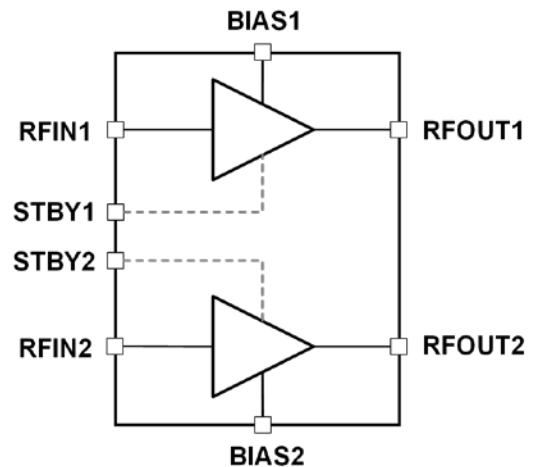
- 3G, 4G, 5G wireless infrastructure
- Public safety infrastructure
- General-purpose RF

Features

- 1500MHz to 2300MHz operating range
- 18.5dB typical gain at 1950MHz
- 0.55dB typical NF at 1950MHz
- +39dBm typical OIP3 at 1950MHz
- 50Ω single-ended input/output impedances
- +5V power supply
- I_{CC} = 55mA per channel
- Independent channel standby modes for power savings
- 1.8V logic standby control
- Operating temperature (T_{EP}) range: -40°C to +105°C
- 4 x 4 mm, 16-VFQFPN package

Block Diagram

Figure 1. Block Diagram



Ordering Information

Orderable Part Number	Package	MSL Rating	Shipping Packaging	Temperature
F0110NBTI	4 × 4 × 0.75 mm 16-VFQFPN	1	Tray	-40° to +105°C
F0110NBTI8	4 × 4 × 0.75 mm 16-VFQFPN	1	Tape and Reel	-40° to +105°C
F0110EVB	Evaluation Board			

Revision History

Revision Date	Description of Change
April 28, 2020	Initial release.

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