Description

The F1429 family is a series of differential input / single-ended output 1400MHz to 6000MHz high gain RF amplifiers. The combination of low noise figure and high linearity performance allows these devices to be used in both receiver and transmitter applications.

The F1429 series is designed to operate with a single 5V power supply using a nominal 70mA of I_{CC}. With a supply voltage of 5V, the F1429 provides 18dB typical gain with 4dB noise figure and +35dBm OIP3 at 3600MHz.

Each F1429 variant is packaged in a 2mm x 2mm, 12-pin DFN, with either 50Ω or 100Ω differential RF input and 50Ω single-ended RF output impedances for ease of integration into the signal-path.

Competitive Advantage

- High Gain
- Excellent Gain Flatness Over Frequency
- Outstanding Gain Variance Over Temperature
- STBY Feature
- Differential Input for Direct Interface with Transceiver Outputs
- Optional DC Feed Capability

Typical Applications

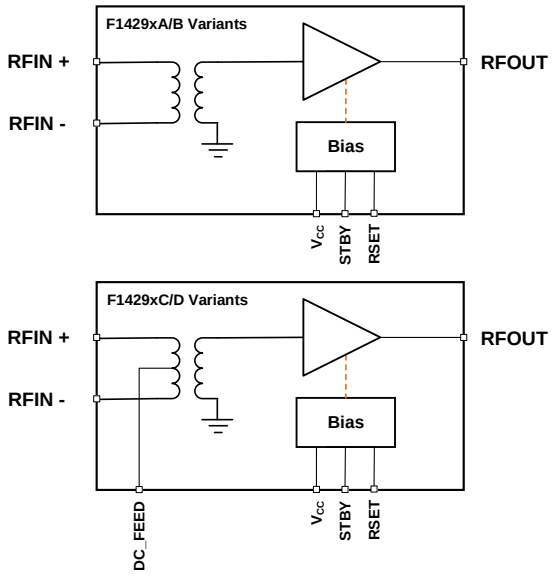
- 5G / MIMO Base Stations
- 4G TDD & FDD Base Stations
- 2G/3G Base Stations
- Repeaters and DAS
- Point to Point Infrastructure
- Public Safety Infrastructure
- Military Handhelds

Features

- RF Range: 1400MHz to 6000MHz
  - F1429Lx Variants: 1400MHz to 3200MHz
  - F1429Mx Variants: 3000MHz to 4200MHz
  - F1429Hx Variants: 4000MHz to 6000MHz
- Gain = 18dB @ 3600MHz
- Noise Figure = 4dB @ 3600MHz
- OIP3 = +35dBm @ 3600MHz
- Output P1dB = +21dBm @ 3600MHz
- Near-Constant Gain versus Temperature
- 5V Power Supply
- I_{CC} = 70mA @ 5V
- 2mA Standby Current
- 350mW Typical DC Power @ 5V Supply
- 50Ω or 100Ω Differential Input Impedances with or without DC Feed Functionality
  - F1429xA Variants: 50Ω Differential Inputs
  - F1429xB Variants: 100Ω Differential Inputs
  - F1429xC Variants: 50Ω Differential Inputs with DC Feed
  - F1429xD Variants: 100Ω Differential Inputs with DC Feed
- 50Ω Single-ended Output Impedances
- 1.8V and 3.3V Logic Support for STBY Control
- Operating Temperature (T_{EP}) Range: -40°C to +115°C
- 2mm x 2mm, 12-pin DFN Package

Block Diagram

Figure 1. Block Diagrams



Component Family Variants

Base Part Number	Frequency Band	Frequency Coverage	DC Feed Option	Differential Input Impedance
F1429LA	Low	1400MHz to 3200MHz	NO	50Ω
F1429LB				100Ω
F1429LC			YES	50Ω
F1429LD				100Ω
F1429MA	Mid	3000MHz to 4200MHz	NO	50Ω
F1429MB				100Ω
F1429MC			YES	50Ω
F1429MD				100Ω
F1429LA	High	4000MHz to 6000MHz	NO	50Ω
F1429LB				100Ω
F1429LC			YES	50Ω
F1429LD				100Ω

Ordering Information

Orderable Part Number	Package	MSL Rating	Shipping Packaging	Temperature
F1429LANELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429LANELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429LBNELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429LBNELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429LCNELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429LCNELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429LDNELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429LDNELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429MANELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429MANELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429MBNELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429MBNELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429MCNELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429MCNELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429MDNELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429MDNELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429HANELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429HANELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429HBNELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429HBNELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429HCNELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429HCNELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429HDNELI	2mm x 2mm x 0.75mm 12 pin DFN	1	Tray	-40° to +115°C
F1429HDNELI8	2mm x 2mm x 0.75mm 12 pin DFN	1	Reel	-40° to +115°C
F1429EVB	Evaluation Board			

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