

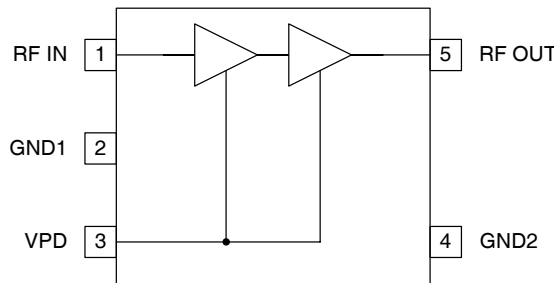


## Features

- Low Noise and High Intercept Point
- 18dB Gain
- Power Down Control
- Single 3.0V Power Supply
- PCS and W-CDMA Band Operation
- 1.8GHz to 2.5GHz Operation

## Applications

- CDMA PCS LNA
- TDMA PCS LNA
- W-CDMA/CDMA2000 LNA
- General Purpose Amplification
- Commercial and Consumer Systems



Functional Block Diagram

## Product Description

The RF2364 is a low noise amplifier with a high dynamic range designed for CDMA and TDMA PCS, as well as W-CDMA/CDMA2000 applications. The device functions as an outstanding front end low noise amplifier and the bias current can be set externally. The IC includes a power down feature used to completely turn-off the device and is featured in a standard SOT 5-lead plastic package.

## Ordering Information

|             |                                  |
|-------------|----------------------------------|
| RF2364      | 3V PCS Low Noise Amplifier       |
| RF2364 PCBA | Fully Assembled Evaluation Board |

## Optimum Technology Matching® Applied

- |                                              |                                      |                                     |                                   |
|----------------------------------------------|--------------------------------------|-------------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> GaAs HBT | <input type="checkbox"/> SiGe BiCMOS | <input type="checkbox"/> GaAs pHEMT | <input type="checkbox"/> GaN HEMT |
| <input type="checkbox"/> GaAs MESFET         | <input type="checkbox"/> Si BiCMOS   | <input type="checkbox"/> Si CMOS    |                                   |
| <input type="checkbox"/> InGaP HBT           | <input type="checkbox"/> SiGe HBT    | <input type="checkbox"/> Si BJT     |                                   |

Absolute Maximum Ratings

| Parameter           | Rating       | Unit            |
|---------------------|--------------|-----------------|
| Supply Voltage      | -0.5 to +8.0 | V <sub>DC</sub> |
| Input RF Level      | +10          | dBm             |
| Storage Temperature | -40 to +150  | °C              |



Caution! ESD sensitive device.

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| Parameter                             | Specification |      |      | Unit | Condition                                                              |
|---------------------------------------|---------------|------|------|------|------------------------------------------------------------------------|
|                                       | Min.          | Typ. | Max. |      |                                                                        |
| Operating Range                       |               |      |      |      |                                                                        |
| Overall Frequency Range               | 1930          |      | 1990 | MHz  |                                                                        |
| Supply Voltage (V <sub>CC</sub> )     | 2.7           | 3.0  | 3.3  | V    |                                                                        |
| Power Down Voltage (V <sub>PD</sub> ) | 2.7           |      | 2.9  | V    | For normal operation                                                   |
|                                       |               |      | 0.9  | V    | For power down operation                                               |
| Current Consumption                   |               | 17.0 | 23.5 | mA   | V <sub>CC</sub> =3.0V, Values reflect I <sub>CC</sub> +I <sub>PD</sub> |
| Power Down Current                    |               |      | 10   | μA   | V <sub>CC</sub> =3.0V, V <sub>PD</sub> ≤0.9V                           |
| Operating Ambient Temperature         | -40           |      | +85  | °C   |                                                                        |
| Input Impedance                       |               | 50   |      | Ω    |                                                                        |
| Output Impedance                      |               | 50   |      | Ω    |                                                                        |
| Low Noise Amplifier Performance       |               |      |      |      | T=25°C                                                                 |
| Power Gain                            |               | 18   | 21   | dB   | V <sub>CC</sub> =3.0V, I <sub>CC</sub> =17 mA                          |
| Noise Figure                          |               | 1.8  |      | dB   |                                                                        |
| Input IP3                             |               | +5   |      | dBm  | V <sub>CC</sub> =3.0V                                                  |
| Input VSWR                            |               |      | 2:1  |      |                                                                        |
| Output VSWR                           |               |      | 2:1  |      | With external matching components.                                     |
| Input P1dB                            |               | -8.5 |      | dBm  |                                                                        |

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GENERAL PURPOSE  
AMPLIFIERS (LNAs,  
HPAs, LINEAR AMPs)



