

# 0.1 GHz to 2.5 GHz 70 dB Logarithmic Detector/Controller

AD8313

## **FEATURES**

Wide bandwidth: 0.1 GHz to 2.5 GHz min
High dynamic range: 70 dB to ±3.0 dB
High accuracy: ±1.0 dB over 65 dB range (@ 1.9 GHz)
Fast response: 40 ns full-scale typical
Controller mode with error output
Scaling stable over supply and temperature
Wide supply range: 2.7 V to 5.5 V
Low power: 40 mW at 3 V
Power-down feature: 60 mW at 3 V

Complete and easy to use

## **APPLICATIONS**

RF transmitter power amplifier setpoint control and level monitoring

Logarithmic amplifier for RSSI measurement cellular base stations, radio link, radar

## **FUNCTIONAL BLOCK DIAGRAM**

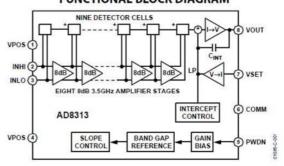


Figure 1.



## LF-2.7 GHz RF/IF Gain and Phase Detector

AD8302

## **FEATURES**

Measures Gain/Loss and Phase up to 2.7 GHz Dual Demodulating Log Amps and Phase Detector Input Range –60 dBm to 0 dBm in a 50  $\Omega$  System Accurate Gain Measurement Scaling (30 mV/dB) Typical Nonlinearity < 0.5 dB

Accurate Phase Measurement Scaling (10 mV/Degree)
Typical Nonlinearity < 1 Degree
Measurement/Controller/Level Comparator Modes

Operates from Supply Voltages of 2.7 V-5.5 V Stable 1.8 V Reference Voltage Output Small Signal Envelope Bandwidth from DC to 30 MHz

**APPLICATIONS** 

RF/IF PA Linearization
Precise RF Power Control
Remote System Monitoring and Diagnostics
Return Loss/VSWR Measurements
Log Ratio Function for AC Signals

## FUNCTIONAL BLOCK DIAGRAM

