ABRIDGED DATA SHEET

EVALUATION KIT AVAILABLE

MAX2180A

AM/FM Car Antenna Low-Noise Amplifier

General Description

The MAX2180A is a highly integrated AM/FM variable-gain low-noise amplifier ideal for use in automotive active antenna applications. The device features separate AM and FM signal paths, each providing 30dB of gain range, controlled by individual on-chip power detectors. The AM signal path covers a 148kHz to 30MHz input frequency range, while the FM signal path covers 65MHz to 162.5MHz.

The device integrates a voltage regulator and pass transistor, allowing operation using battery voltages in the +6V to +24V range. On-chip thermal protection automatically limits junction temperatures during extreme thermal conditions.

The device is available in a small, 4mm x 4mm, TQFN package and operates over the extended industrial temperature range (-40ºC to +85ºC).

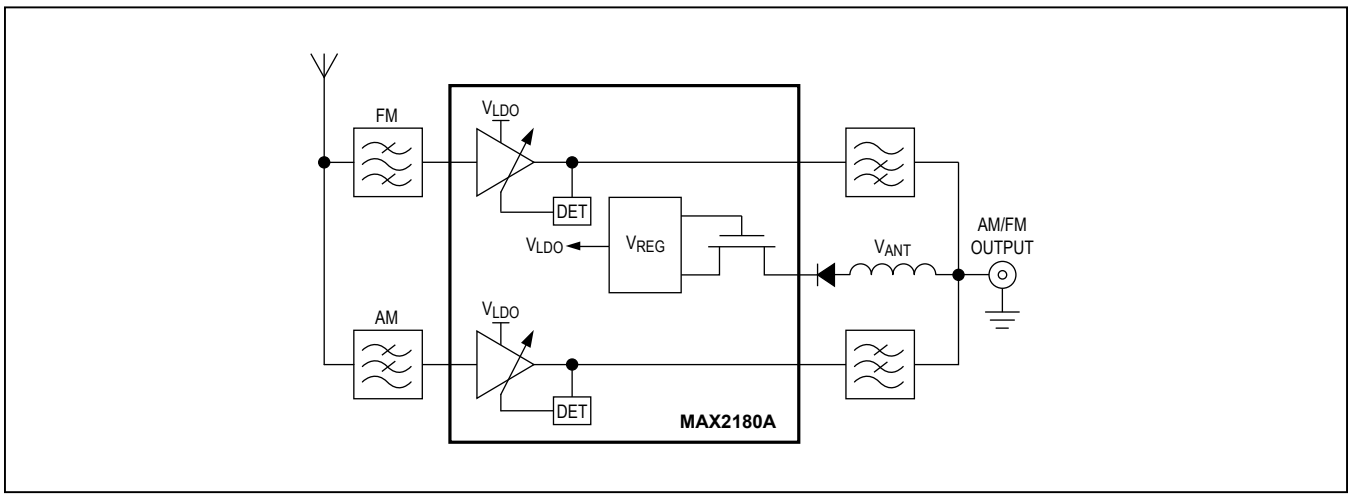
Features

- +6V to +24V Supply Voltage Range
- Integrated AGC Function Eliminates External Pin Diodes
- High Dynamic Range
- Low-Noise, Sub 3dB Noise Figure
- Low External BOM
- Integrated Thermal Protection
- Small Package (4mm x 4mm TQFN)
- Integrated Pass Device and Linear Regulator
- Integrated Power Detector
- Integrated Antenna Sense

Applications

- Automotive Active Antenna

Simplified Block Diagram



Ordering Information ***appears at end of data sheet.***

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