

TLMA0110G 10 Gbits/s Limiting Amplifier

Features

- 31 dB gain, 37 dB differential
- Wideband response: 25 kHz to 10 GHz
- Complementary 50 Ω I/Os
- Adjustable threshold control
- Low power dissipation
- Single -5.0 V power supply
- 24-lead surface-mount package

Applications

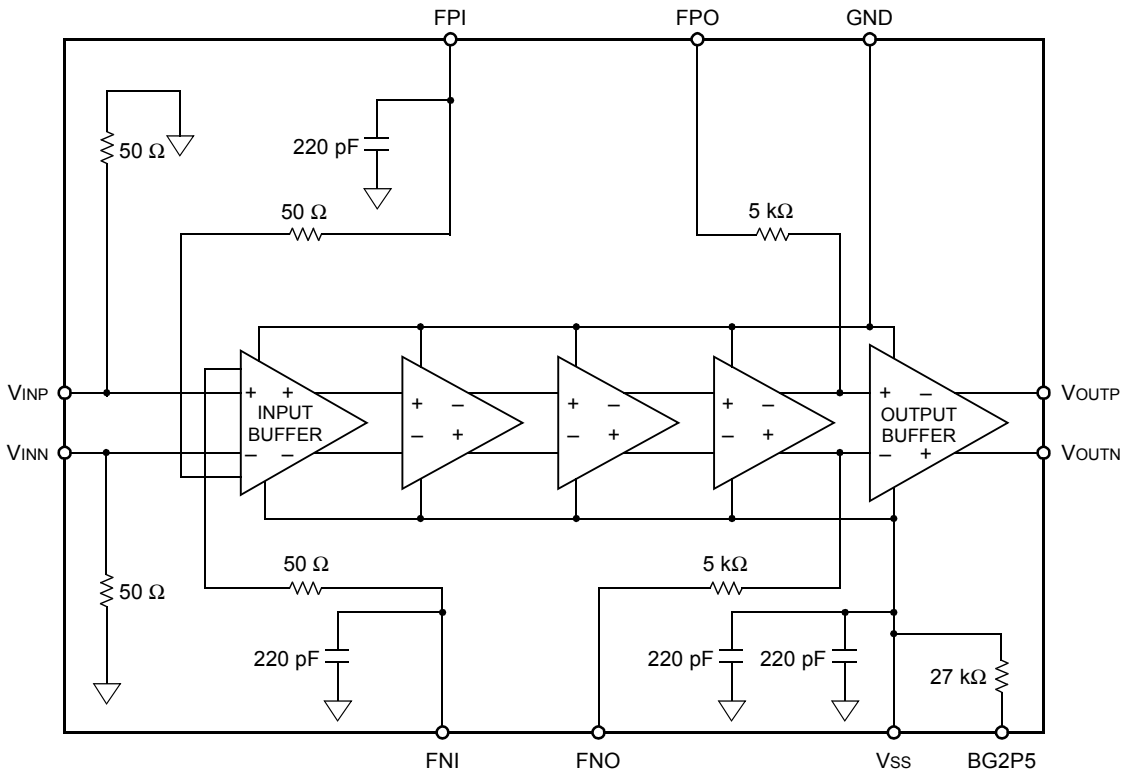
- Data/clock main amplifier in SONET/SDH OC-192/STM-64 transmission systems and DWDM systems
- Digital video transmission
- SONET/SDH test equipment

Functional Description

Agere Systems Inc.'s TLMA0110G is a wideband limiting amplifier with differential inputs and outputs. It provides 31 dB of gain (37 dB differential) and 10 GHz of bandwidth in a 50 Ω environment. The TLMA0110G consists of a 50 Ω input buffer followed by three gain stages and a 50 Ω output buffer. The threshold level can be adjusted by inserting an external voltage or current source into the amplifier's positive or negative feedback loops. At input levels below 10 mVp-p (single-ended), the device acts as a linear amplifier. For input levels from 10 mVp-p up to 1 Vp-p, the device operates in its limiting mode, providing a constant typical output of 500 mVp-p (single-ended).

The TLMA0110G is designed for use in SONET OC-192 and SDH STM-64 receiver/regenerator applications. Amplifier operation is from a single -5.0 V power supply. The TLMA0110G is available as a die or in a 24-lead, hermetic, surface-mount package.

Functional Description (continued)



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Figure 1. Block Diagram

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