

VSC7716

1.25 Gbps Burst Mode Transimpedance Amplifier for GE-PON (EPON) Systems



FEATURES:

- ▶ Wide 27 dBm Dynamic Range
- ▶ Supports Input Power Greater than -3 dBm
- ▶ Accomodates Both PIN and Avalanche (APD) Photodetectors
- ▶ Designed for 4-pin or 5-pin TO-46 Packages

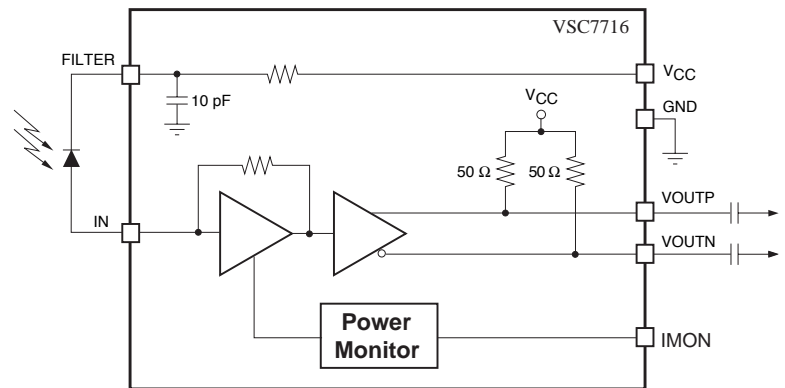
BENEFITS:

- ▶ Provides High Sensitivity Without Compromising Overload Performance
- ▶ High Input Overload Power Enable Operation in Diverse Network Environments
- ▶ Flexible Support for 10 km and 20 km Applications
- ▶ Easy Implementation in Standard Packaging

SPECIFICATIONS:

- ▶ 100 ns Typical Receiver Settling Time
- ▶ 80 mA Modulation Current DC-coupled to Laser
- ▶ 80 mW Typical Power Dissipation
- ▶ 3.3 V Power Supply

BLOCK DIAGRAM:



GENERAL DESCRIPTION:

The VSC7716 device is a transimpedance amplifier (TIA) for GE-PON ONU and OLT applications. The output settling time is sufficiently fast to meet GE-PON OLT receiver requirements but slow enough to pass GE-PON ONU traffic. The VSC7716 device is equipped with an optional photocurrent monitor pin to provide a means of monitoring continuous optical receive power for photodetector alignment and digital diagnostics. The device padout is optimized for standard 4-pin and 5-pin TO-46 packages and accommodates both PIN detector and Avalanche photodiode (APD) designs. A space-saving filter connection is provided for positive bias to the photodiode through a filter resistor to VCC. The VSC7716 device is available in bare die only.

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