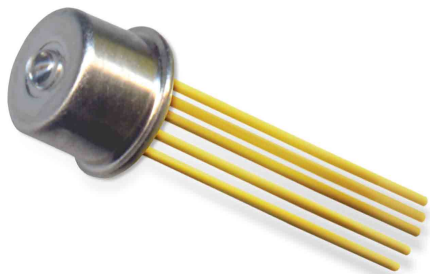


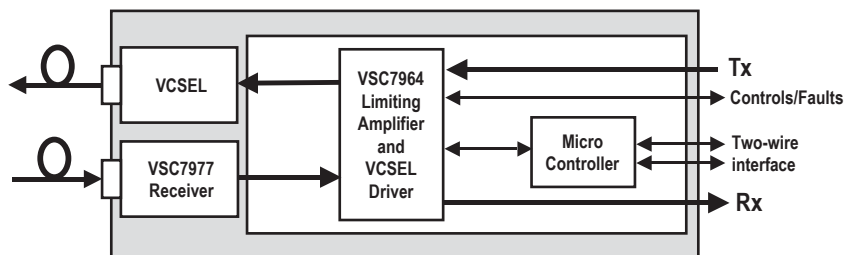
# VSC7975, VSC7977

VITESSE

## 1/2/4 Gbps Multirate Transimpedance Amplifier



### APPLICATION DIAGRAM:



### FEATURES:

- ▶ Dual Bandwidth Selection
- ▶ 6k $\Omega$  Differential Transimpedance
- ▶ Linear Optical Power Monitor
- ▶ On-chip Photo Diode Filter
- ▶ Extended Operating Temperature
- ▶ Available as Bare Dice or in a 5-pin TO-46 Package

### BENEFITS:

- ▶ Allows the User to Optimize the Bandwidth of the TIA to the Incoming Optical Line Rate, which Improves the Optical Input Sensitivity at Lower Data Rates and Provides Superior Interoperability with Legacy Optical Devices
- ▶ Provides High Gain and Improved Sensitivity
- ▶ Facilitates an Accurate Measurement of the Incoming Optical Power, Enhancing the Diagnostics Capabilities of the System without Using External Components
- ▶ Provides a Positive Bias to the Photodetector, Eliminating the Need for External Components
- ▶ Supports Industrial Temperature Applications
- ▶ Available in a TO-46 Package, Reducing the Time and Costs Associated with the Design, Assembly and Test of the Receiver

### SPECIFICATIONS:

- ▶ Input Noise: 400nA
- ▶ Supply Current: 30mA
- ▶ Sensitivity at 4.25G (in OMA): 18.4dBm
- ▶ Max Input Current: 2.2 mA
- ▶ Supply Voltage: 3.3V
- ▶ Operating Temp: -40C to +105C (Case)

### APPLICATIONS:

- ▶ Gigabit Ethernet Transceivers
- ▶ Fibre Channel Transceivers (1x, 2x and 4x)
- ▶ Infiniband Transceivers



# VSC7975, VSC7977

## 1/2/4 Gbps Multirate Transimpedance Amplifier

### GENERAL DESCRIPTION:

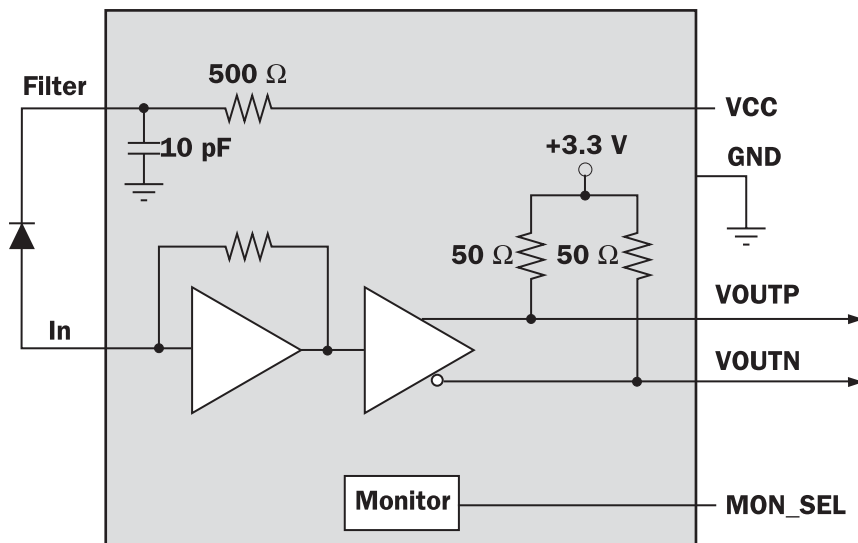


The VSC7975 and VSC7977 are multirate transimpedance amplifiers for Gigabit Ethernet, Fibre Channel, and Infiniband applications. The devices provide a means for adjusting their bandwidth to allow full compliance with multiple Gigabit Ethernet, Fibre Channel, and Infiniband standards. The VSC7975 and VSC7977 are equipped with a single pin that serves both as a control for bandwidth as well as a linear received optical power monitor. This allows

the device to have multirate bandwidth control, power monitoring, and differential outputs and be assembled in a standard 5-pin TO-46 package. A space-saving filter connection is provided for positive bias to the photodiode through a filter resistor to VCC.

The VSC7977 is available in die form or 5-pin TO-46 package with short wavelength PIN photo detector. The VSC7975 is available in a 5-pin TO-46 package with long wavelength PIN photo detector.

### BLOCK DIAGRAMS:



For more information on Vitesse Products visit the Vitesse web site at [www.vitesse.com](http://www.vitesse.com) or contact Vitesse Sales at (800) VITESSE or [sales@vitesse.com](mailto:sales@vitesse.com)

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