The MC2006 is a low-noise, transimpedance amplifier with AGC, manufactured in an advanced, low-cost, submicron CMOS process. Its wide dynamic range, differential output and high-PIN bias make it well suited for telecommunications, especially OC-3/STM-1. However, the MC2006 is intended to meet the needs of both telecom and datacom users. The MC2006 is designed to be used with the MC2045 post-amplifier IC. When combined with a photodiode, the chipset forms a high-performance, low-cost 5V receiver.

**KEY FEATURES**

- Low cost IC, fabricated in advanced sub-micron pure-CMOS process.
- Receiver sensitivity typically -40 dBm at 155 Mbps, when integrated into a module with suitable photodiode and post-amplifier.
- 115 MHz -6 dB bandwidth with multi-pole roll off optimized for OC-3/STM-1.
- Typical differential gain of 200kohms at low signal levels.
- AGC gives continuous operation to > 0 dBm.
- > 35 dB power-supply noise rejection.
- 65 mW power consumption at 5V power supply.
- Available as die or in SOIC8 package.

**Schematic Diagram**

- PIN K
- Series Pass Regulator
- Band Gap 1.234 V
- Reference Generator
- AGC Control
- TZA
- DOUT
- +1

**155 Mbps Pre-Amplifier**

MC2006