

FEATURES

- 2.5 Gbps data rate
- Automatic Laser Power Control
- Laser Bias Enable Input
- Differential PECL Inputs
- Temperature Compensated Reference Voltage
- Laser Fault and Fail indicators
- Selectable on-chip Re-Clocking
- 32 Pin TQFP Package

APPLICATIONS

- WDM for SONET OC-48
- OC-48 Fibre optic modules
- OC-48 Line termination equipment

GENERAL DESCRIPTION

The S3049 has three main sections: a reference generator, a high speed current modulation driver, and a laser bias block with automatic power control.

The reference generator generates a temperature stabilized reference voltage, V_{ref} , which can be used to program the bias and the modulation currents.

The high-speed modulation driver can switch up to 50 mA swing through the laser. Using the CLKSEL pin, the input data can be selected to be re-clocked.

The laser bias block sets the bias current of the laser and has an Automatic Power Control (APC) system, which keeps the current through the laser constant by monitoring the current through the monitor photodiode.

The APC loop is also used to detect excessive laser power and low laser power. These conditions are flagged on the LSFault and LSFail output pins respectively.

Figure 1. Typical Operating Circuit

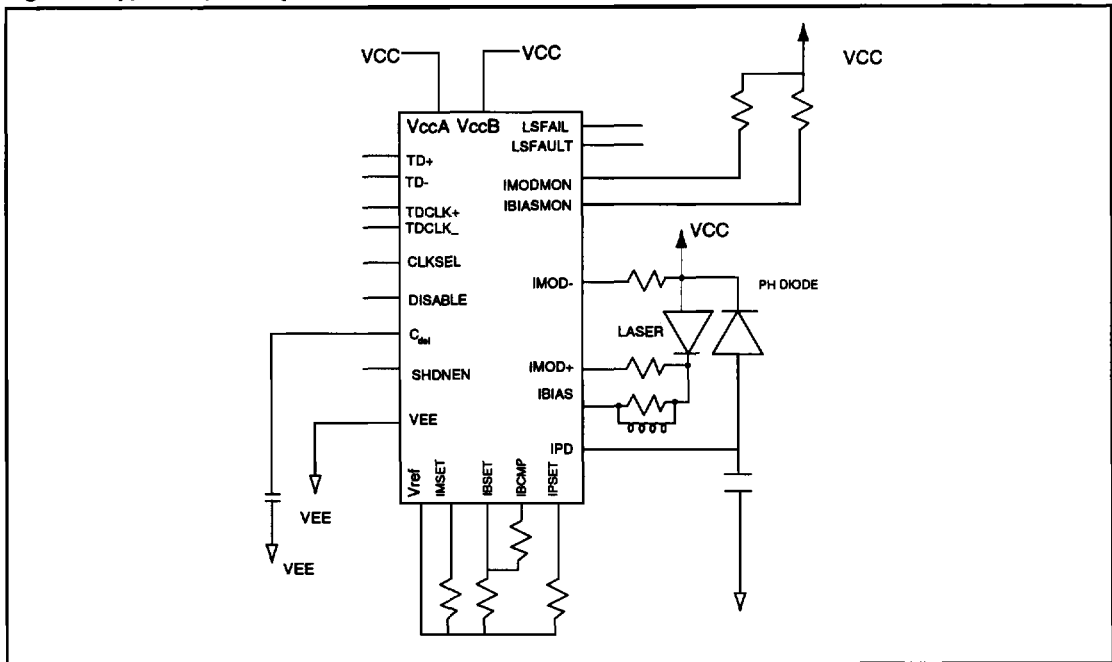


Figure 2. Functional Block Diagram

