BROADCOM®

Product Brief

AFSI-Q21Q3S

1.25 Gb/s to 11.1 Gb/s SR Laser Driver and Limiting Amplifier IC

Overview

The Broadcom® AFSI-Q21Q3S is a laser driver and limiting amplifier IC. It provides a single channel of up to 11.1 Gb/s VCSEL-compatible electrical output, DC-coupled to the anode of the VCSEL, and a programmable limiting amplifier. A two-wire serial (TWS) bus interface enables programmability, register access, and digital optical monitoring.

Applications

1.25 Gb/s to 11.1 Gb/s SR transceivers and active optical cables.

Key Features

- Data rates: 1.25 Gb/s to 11.1 Gb/s
- Automatic power control loop
- 8b/10b to 64b/66b coding for Ethernet and Fibre Channel applications
- Programmable TX input PCB equalizer
- Programmable laser pre-emphasis
- Optical crosspoint adjustment
- Laser shutdown upon fault (high or low optical power)
- Lane polarity inversion per channel
- RX optical and TX electrical squelch on LoS
- Input-offset DC cancellation for TX and RX (cutoff frequency adjustable on RX)
- Adjustable output amplitude
- TWS interface for optimal configuration
- Eliminates need for microcontroller and many passives for significant cost savings
- Supply: 3.3V (±5%)
- Input-offset DC cancellation
- 5 mm × 5 mm 32-pin RoHS-compliant QFN Package
- –40°C to +110°C junction operating temperature

Ordering Information

Product Code	Description
AFSI-Q21Q3S	1.25 Gb/s to 11.1 Gb/s SR Laser Driver and Limiting Amplifier IC

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