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Semtech GN1153B/C

11.3 Gbps DFB/FP Laser Driver

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Overview

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The GN1153B and GN1153C are low power 11.3 Gbps laser and modulator drivers for optical fiber transceiver applications.

They are suitable to drive Fabry-Perot (FP) and Distributed Feedback (DFB) laser diodes. Both devices offer identical functionality, though the GN1153C is optimized to deliver improved performance at the high bit rates.

Both devices use a single 3.3V supply (optional 5V output stage). The inputs are designed to be AC-coupled, and have internal 100 ohms differential terminations. The output is internally terminated with 25 ohms. External pull-up inductors may be used on the outputs to provide adequate head room, to allow large signal swings from a 3.3V supply.

The devices have control inputs for laser output power, extinction ratio (ER) and output crossing point adjustments. Additional control pins are available to further optimize the output eye.

Features

- > Low power laser driver designed to meet the power requirements of SFP+
- > Single 3.3V supply
 - > Optional 5V output stage supply
- > Crossing point control
- > Jitter optimization
- > Max modulation current: 80 mA-pp (differential drive into 25Ω TOSA)
- > Max bias current: 120 mA
- > Input: AC coupled CML compatible, differential 100Ω on-chip termination
- > Output: 25Ω output termination
- > Bias and modulation current control
- > Transmitter disable pin

Applications

- > This DFB/FP laser driver is designed to meet the needs of Xenpak, X2, XFP or SFP+ optical fiber transceiver applications, including:
 - > 9.95 Gbps OC-192 and 10.7 Gbps OC-192 with Forward Error Correction (FEC)
 - > 10.3 Gbps Ethernet
 - > 10.52 Gbps Fiber Channel (FC)
 - > 11.1 Gbps Ethernet over SONET
 - > 11.3 Gbps FC with FEC

Order Codes

Part No	Package
GN1153BINE3	24 pin QFN
GN1153CINE3	24 pin QFN

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