TGA4957-SM

28 Gb/s Differential Modulator Driver

Applications

- 40 Gb/s Optical Market: DQPSK and DP-BPSK
- 100 Gb/s ODB

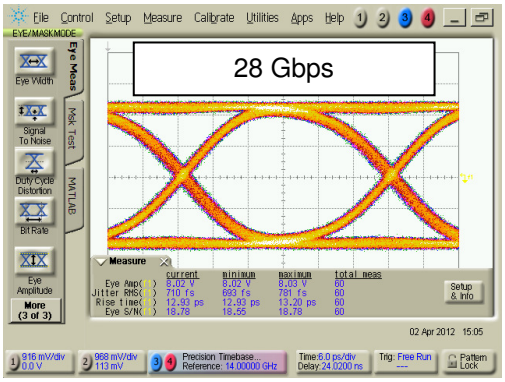
QFN 6x6mm 40L

Product Features

- 40 Gb/s Performance
- Differential Input and Output
- Adjustable Output Amplitude, 4 Vpp – 8 Vpp
- Low Additive RMS Jitter, 600 fsec
- High Output Drive, 8 Vpp differential output with 1 Vpp differential Input
- Gain, 22 dB at 14 GHz
- Low DC Power Dissipation, 2.3 W for Vout = 8 Vpp at Vd=5 V
- Rise and Fall Times, 13 psec
- QFN Package Size: 6x6 mm, 40 Lead

Typical Eye Diagram

Bias: Vd1 = Vd2 = Vd3 = 5 V, Vg2 = -0.4 V (-0.6 V for 4 Vpp), Vg3 = -1.1 V, Vc3 varied for different eye amplitude values



General Description

The TriQuint TGA4957-SM is a differential input and output optical modulator driver designed to operate at frequencies that target the 40 Gb/s and 100 Gb/s optical markets.

The TGA4957-SM consists of a wideband amplifier assembled in a QFN surface mount package combined with a minimum of external components. A single TGA4957-SM placed between the MUX and Optical Modulator provides OEMs with a differential modulator driver surface mount solution.

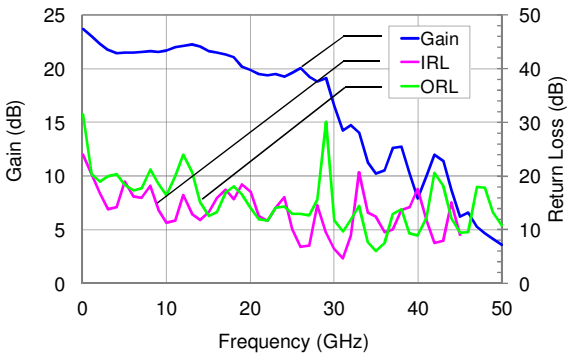
The TGA4957-SM provides Metro and Long Haul designers with system critical features such as: low power dissipation, low rail ripple, high voltage drive capability (4 Vpp amplitude adjustable up to 8 Vpp), and very low output jitter.

Several of the bias pins on the TGA4957-SM are internally set to simplify the users PCB design. Alternatively, these same pins can be adjusted by the user, if desired. Duplicate pins are available to enable biasing from either side of the package. The TGA4957-SM can be biased using a minimum of four separate power supplies.

The TGA4957-SM is RoHS compliant. Evaluation boards are available upon request.

Typical S-Parameters

Gain and Return Loss vs Frequency
Vd = 5 V, Id = 468 mA, Vg2 = -0.4 V, Vg3 = -1.1 V, Vc3 = 0 V
Differential Measurement



Ordering Information

Part No.	ECCN	Description
TGA4957-SM	5A991.b	**28** Gb/s Diff Mod Driver

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