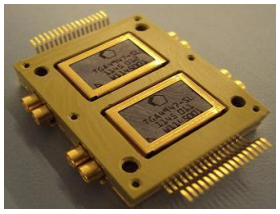
TGA4947-MOD

Quad channel 100Gb/s Modulator Driver

` Applications

- 100 Gb/s Optical Systems: DP-QPSK



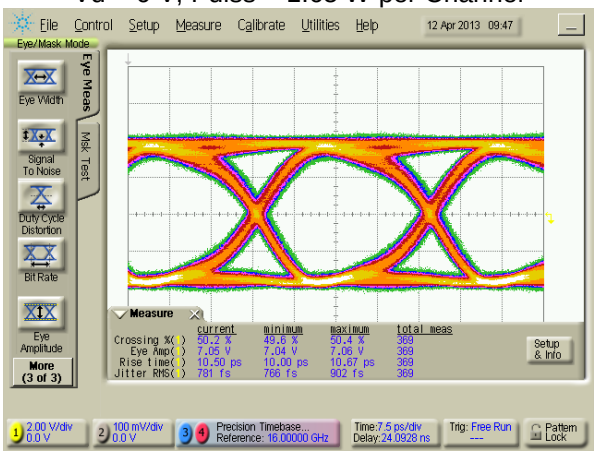
Bottom View

Product Features

- 100 Gb/s Performance
- Quad Channel
- Integrated broadband bias tees, blocking caps and necessary bypass capacitors
- Adjustable Output Amplitude, 3 Vpp – 9 Vpp
- Channel / Channel Isolation > 30 dB to 40 GHz
- Low Additive RMS Jitter, 700 fsec
- High Output Drive, 8 Vpp with 0.4 Vpp Input
- Gain, 27 dB at 18 GHz
- Low DC Power Dissipation, 6.6 W total 4 channels for Vout = 7 Vpp at Vd = 6 V
- Rise and Fall Times <12 psec
- Hot Pluggable & Heat-side up
- Module Size: 45.0 x 33.4 x 7.0 mm

Functional Block Diagram

Vout = 7 Vpp, 32 Gbps, Vin = 0.5 Vpp,
Vd = 6 V, Pdiss = 1.65 W per Channel



General Description

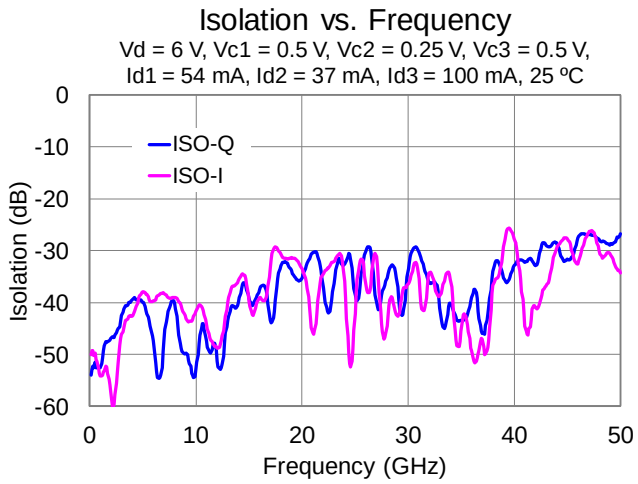
The TriQuint TGA4947-MOD is a 4-channel optical modulator driver amplifier designed to operate at frequencies that target the 100 Gb/s optical market using a 45.0 x 33.4 x 7.0 mm surface mount module.

The TGA4947-MOD consists of four channels of high performance wideband amplifiers and integrated broadband bias tees, DC blocking caps, and necessary bypass caps assembled in a metal surface mount housing. A single TGA4947-MOD placed between the MUX and OIF compliant Optical Modulator provides OEMs with a modulator driver solution.

The TGA4947-MOD provides Metro and Long Haul designers with system critical features such as: low power dissipation, high signal to noise (SNR) ratio, high voltage drive capability (3 Vpp amplitude adjustable up to 9 Vpp), low output jitter, and low input drive sensitivity (0.4 Vpp – 1 Vpp at Vout = 8 Vpp).

The TGA4947-MOD finish is lead-free. RoHS compliant. Evaluation boards and bias boards are available upon request.

Pin Configuration



Ordering Information

Part No.	ECCN	Description
TGA4947-MOD	5A991.b	Quad Channel 100 Gb/s Modulator Driver