



TMOD0110G 10 Gbits/s Modulator Driver

Features

- Operation from dc to 10 Gbits/s (NRZ)
- Differential outputs adjustable to 2.7 V_{p-p} each (R_L = 50 Ω)
- Internal 50 Ω input/output terminations
- Integrated output offset control for chirp reduction
- Integrated eye crossover (duty cycle) control
- Single -6.8 V (or -5.2 V) power supply
- 32-lead surface-mount package

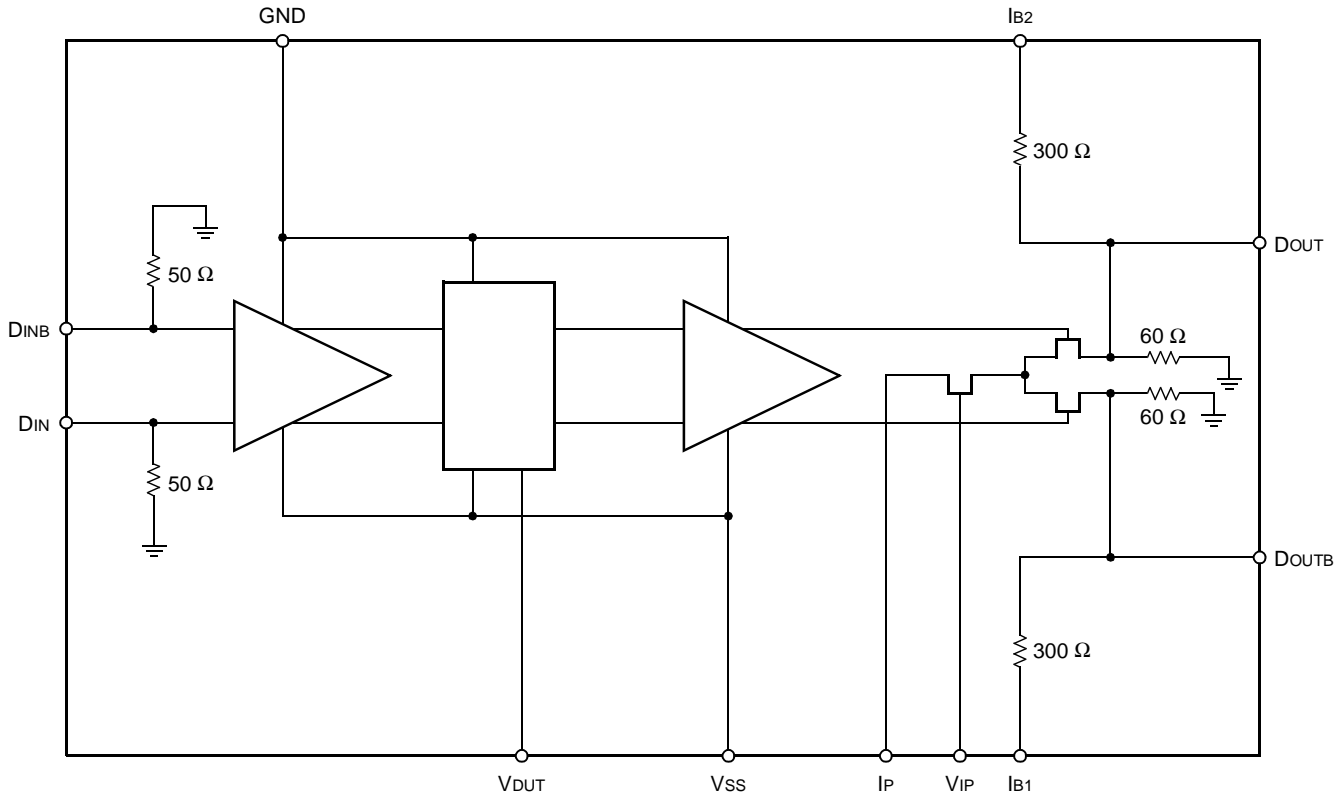
Applications

- Electroabsorption modulated lasers (EMLs) and Mach-Zehnder lithium niobate modulators
- SONET/SDH OC-192/STM-64 transmission systems
- SONET/SDH test equipment
- Digital video transmission
- Optical transmitters

Functional Description

The TMOD0110G is a gallium arsenide (GaAs) integrated circuit used to provide voltages to drive optical modulators in high-speed, non-return-to-zero (NRZ) transmission systems. The TMOD0110G is designed for use in SONET OC-192 and SDH STM-64 transmitter applications. An input buffer with complementary inputs and 50 Ω terminations provides an excellent match for differential sources. The eye crossover (duty cycle), modulator dc offset, and peak-to-peak output voltage swing are all user-adjustable by setting the dc voltage on the respective control pin. The differential outputs allow the TMOD0110G to drive lithium niobate modulators. For single-ended output EML applications, the user may terminate the unused output with a load that best matches the load of the EML. The TMOD0110G can be tuned at the factory to operate on either a -6.8 V or a -5.2 V power supply. The TMOD0110G is available in a 32-lead hermetic, surface-mount package.

Functional Description (continued)



0717(F)

Figure 1. TMOD0110G Block Diagram

For additional information, contact your Microelectronics Group Account Manager or the following:

INTERNET: <http://www.lucent.com/micro>

E-MAIL: docmaster@micro.lucent.com

N. AMERICA: Microelectronics Group, Lucent Technologies Inc., 555 Union Boulevard, Room 30L-15P-BA, Allentown, PA 18109-3286

1-800-372-2447, FAX 610-712-4106 (In CANADA: 1-800-553-2448, FAX 610-712-4106)

ASIA PACIFIC: Microelectronics Group, Lucent Technologies Singapore Pte. Ltd., 77 Science Park Drive, #03-18 Cintech III, Singapore 118256

Tel. (65) 778 8833, FAX (65) 777 7495

CHINA: Microelectronics Group, Lucent Technologies (China) Co., Ltd., A-F2, 23/F, Zao Fong Universe Building, 1800 Zhong Shan Xi Road, Shanghai 200233 P. R. China Tel. (86) 21 6440 0468, ext. 325, FAX (86) 21 6440 0652

JAPAN: Microelectronics Group, Lucent Technologies Japan Ltd., 7-18, Higashi-Gotanda 2-chome, Shinagawa-ku, Tokyo 141, Japan

Tel. (81) 3 5421 1600, FAX (81) 3 5421 1700

EUROPE: Data Requests: MICROELECTRONICS GROUP DATALINE: Tel. (44) 7000 582 368, FAX (44) 1189 328 148

Technical Inquiries: GERMANY: (49) 89 95086 0 (Munich), UNITED KINGDOM: (44) 1344 865 900 (Ascot),

FRANCE: (33) 1 40 83 68 00 (Paris), SWEDEN: (46) 8 594 607 00 (Stockholm), FINLAND: (358) 9 3507670 (Helsinki),

ITALY: (39) 02 6608131 (Milan), SPAIN: (34) 1 807 1441 (Madrid)

Lucent Technologies Inc. reserves the right to make changes to the product(s) or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information.

