Silicon Photonics MZ Modulator Driver

Overview

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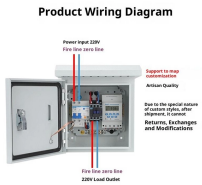
This work presents a 25Gb/s silicon-photonic MZM driver designed in a standard 65nm-CMOS process, which is then co-packaged with an 180nm SOI-CMOS MZ modulator.

Abstract— A voltage mode modulator driver is proposed in the TSMC 65nm low power CMOS process. In the electrical testing, the driver itself can achieve a bit rate of 40Gb/s with the single-ended output ...

The MAOM-005324 is a high performance single channel linear differential Mach-Zender modulator driver for 400G applications using 53 Gbaud PAM4 modulation.



As an essential block in optical communication systems, silicon (Si) Mach–Zehnder modulators (MZMs) are approaching the limits of possible performance for high-speed applications.

High-Baud rate Si-photonic based optical systems will enable the next generation of low power optical modules for datacenter and long-reach applications. In thi.

The refractive index of silicon can be changed through the free-carrier plasma dispersion effect where the electron and hole densities change the refractive index

A CMOS-based optical modulator driver circuit is designed and characterized for plasma-dispersion effect-based Mach-Zehnder Modulator. The transient response of anode and cathode drivers for the ...

As explained in the introduction, a Mach-Zehnder modulator is based on a Mach-Zehnder interferometer (MZI), which splits the light in two branches and then recombines them by interference. In each ...

In this paper, we review the recent progress at photonics research group of Ghent university-imec on carrier-depletion-based silicon modulator. The two most prevalent doping patterns, i.e. the lateral ...

ur-level pulse-amplitude modulation (PAM4) driver for silicon photonic Mach-Zehnder modulator (MZM) is pres. nted. The driver is designed in a 45-nm RF-SOI CMOS technology and consists of a pre ...

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