Silicon Photonic Modulator 3dB Bandwidth

Two electro-absorption modulator variants with lengths of 40 µm and 20 µm exhibit electro optic 3-dB bandwidths of 100 GHz and well beyond 110 GHz, respectively. Co-integrated ...

What this means from a frequency perspective is that our modulator must convert all of the frequencies within our input signal just as effectively as one another. See similar questions with ...

In this paper, an idea is proposed and verified in numerical analysis to realize the significant expansion of modulation bandwidth of the Silicon Photonics modulators without increasing ...

M. Verplaetse, H. Ramon, N. Singh, B. Moeneclaey, P. Ossieur and G. Torfs, "A 4-to-1 120Gb/s PAM-4 MUX with a 7-tap mixed-signal FFE in 55nm BiCMOS", Custom Integrated Circuits Conference ...

Here, we demonstrate a compact pure silicon modulator that shatters present bandwidth ceiling to 110 gigahertz. The proposed modulator is built on a cascade corrugated waveguide ...

We present high performance silicon photonic circuits (PICs) defined for off-chip or on-chip photonic interconnects, where PN depletion Mach-Zehnder modulators and evanescent-coupled...

We report a novel strip waveguide-based silicon modulator with an estimated 3-dB bandwidth (f3dB) of ~9.3 GHz with the possibility to enhance this value beyond 40 GHz after further optimization.

Abstract We present a novel technique for enhancing the bandwidth of a silicon traveling-wave modula-tor by incorporating micro-capacitors distributed along its electrode.

The design and simulation results of a differential travelling wave silicon photonic Mach-Zehnder modulator (MZM) is presented. At 2V reverse bias, the 3dB electro-optic bandwidth of the modulator ...

In this paper, an idea is proposed and verified in numerical analysis to realize the significant expansion of modulation bandwidth of the Silicon Photonics ...

Recent developments of silicon photonic modulators have been dedicated towards tackling high modulation efficiencies, high bandwidth, and low driver voltages challenges by optimizing the plasma ...

Electro-optic modulation, the imprinting of a radio-frequency (RF) waveform on an optical carrier, is one of the most important photonics functions, being crucial for high-bandwidth signal

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