

Silicon-based optical attenuator





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Design and optimization of an SOI-based electro

A silicon-on-insulator (SOI) variable optical attenuator (VOA) based on the plasma dispersion effect is optimized and realized, and the effects of doping

C-Band and O-Band Silicon Photonic Based Low-Power

we propose and experimentally demonstrate low power and broadband variable optical attenuators (VOAs) on the silicon photonics platform.



Silicon-on-Insulator Based Electro-optic Variable Optical Attenuator

An electro-optic variable optical attenuator in silicon-on-insulator is designed and fabricated. A series structure is used to improve the device efficiency. Compared to the attenuator in the single p-i-n

Silicon Rib-waveguide based On-chip Optical Attenuator

A 30- μm length silicon rib-waveguide based on-chip optical attenuator is fabricated and experimentally demonstrated. For a wide range of wavelengths (1490-1590nm), the attenuator offers around 2.6 dB

Silicon thermo-optic variable optical attenuators based on



Abstract We experimentally demonstrate silicon variable optical attenuators (VOAs) based on thermally tunable Mach-Zehnder interferometers (MZIs). Thermo-optic tuning is enabled

Low Power-Consumption and High Response Frequency Thermo-Optic

A novel silicon-on-insulator thermo-optic variable optical attenuator with isolated grooves based on a multimode interference coupler principle is fabricated by the inductive coupled plasma etching

TDFA-Band Silicon Optical Variable Attenuator

In this work, variable optical attenuators VOAs for TDFA-band wavelengths were designed and fabricated based on a silicon-on-insulator SOI platform. By embedding a short PIN junction length of



Silicon thermo-optic variable optical attenuators based on

We experimentally demonstrate silicon variable optical attenuators (VOAs) based on thermally tunable Mach-Zehnder interferometers (MZIs). Thermo-optic tuning is enabled by a silicon

Compactly integrated polarization insensitive 24-channel variable

Abstract A 24-channel variable optical attenuator array with a compact size of 15×10 mm² is demonstrated using silica-based waveguides with 2.0% refractive index difference.

Silicon photonic MEMS variable optical attenuator



We present a design for an on-chip MEMS-actuated Variable Optical Attenuator (VOA) based on Silicon Photonic MEMS technology. The VOA consists of 30 individual mechanically

Variable optical attenuators based on SOI with 3 um top silicon layer

References (21) Abstract In this paper, electro-absorption variable optical attenuators (VOAs) have been designed and fabricated on silicon-on-insulator material with a 3 um thick top

Design and characteristics of a micromachined variable optical

We have designed and characterized a novel micromachined variable optical attenuator (VOA) with a silicon optical wedge (SOW). Micromachined VOAs are being studied for effective



Low-Power-Consumption and Broadband 16-Channel Variable Optical

Low-Power-Consumption and Broadband 16-Channel Variable Optical Attenuator Array Based on Polymer/Silica Hybrid Waveguide Shengyuan Zhang 1, Yuexin Yin 2,* , Zihao Wang 2, Yafan Li 2,

Variable optical attenuators based on SOI with 3 um top

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TDFA-BAND SILICON OPTICAL VARIABLE

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A Pixelized Variable Optical Attenuator Using Liquid Crystal on Silicon

We apply liquid crystal on silicon (LCOS) in 0.8- μm standard complementary metal-oxide semiconductor (CMOS) technology to demonstrate a low-cost, high-performance pixelized liquid

Design and optimization of an SOI-based electro-absorption

A silicon-on-insulator (SOI) variable optical attenuator (VOA) based on the plasma dispersion effect is optimized and realized, and the effects of doping concentration and



distance

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A 24-channel variable optical attenuator array with a compact size of $15 \times 10 \text{ mm}^2$ is demonstrated using silica-based waveguides with 2.0% refractive index difference.

A fast SOI-based variable optical attenuator with a p-i-n structure

According to the plasma dispersion effect of silicon (Si), a silicon-on-insulator (SOI) based variable optical attenuator (VOA) with p-i-n lateral diode structure is demonstrated in this paper. A wire rib



Variable optical attenuator based on photonic crystal waveguide with

variable optical attenuator (VOA) is an essential device in a photonic integrated circuit (PIC) for channel power equalizing in wavelength division multiplex technology. The VOA function can be achieved by

Performance Analysis of Variable Optical Attenuator on Different

We have performed a comparative study and identified Si₃N₄ as the most suitable material for silicon photonics platform based on lower insertion and propagation losses. Si₃N₄ based ridge waveguide

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TDFA-BAND SILICON OPTICAL VARIABLE

attenuators (VOAs) can tune the intensity of light. VOAs are essential components for many applications in optic communications, especially for signal

Silicon Photonics

The core principle involves integrating high-quality optical components with CMOS devices, which enhances electronic circuit functionality, reduces photonic system costs, and enables high



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We propose and experimentally demonstrate low-power and broadband variable optical attenuators (VOAs) on the silicon photonics platform. The VOAs are based on a Mach-Zehnder interferometer

COL-12-0348

An ultra-compact variable optical attenuator based on slow light photonic crystal waveguide with thermo-optic effect is demonstrated. Along with power consumption of as low as 30.7 mW, a variable

TDFA-Band Silicon Optical Variable Attenuator

Combining the Fabry-Perot cavity effect and plasma dispersion effect of silicon, the attenuator could achieve a maximum attenuation of more than 50 dB.



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