

Customization Process for Energy-Saving Optical Directional Couplers for FTTR





Customization Process for Energy-Saving Optical Directional Coupler

A fixed phase tunable directional coupler based on coupling tuning

In this study, we introduce a design of a TDC based on coupling constant tuning in the thin film Lithium Niobate platform and present an optimized design.

Directional Coupler

A directional coupler is defined as a device that couples only to waves traveling in a specific direction, allowing for the measurement of forward and reverse power levels in transmission



Designing Smarter Directional Couplers with Parametric

Learn how to leverage IPKISS to optimize the design of directional couplers and implement advanced parametric modeling. Introduction A directional coupler

Flame-fused Optical Fiber Directional Couplers:

Abstract and Figures A microprocessor controlled system for fabrication of 2 x 2 flame-fused biconical single-mode fiber directional couplers

Fiber Directional Coupler

A fiber directional coupler is defined as an optical component that splits and combines optical signals by utilizing the interference of evanescent waves from two closely positioned fibers, enabling power



Analysis of directional coupler electro-optic switches using effective

The effective-index-based matrix method (EIMM) has been used to simulate the characteristics of integrated-optic directional coupler switch (both the uniform-?? and reversed-??)

Design of All-Optical Directional Coupler Using Plasmonic

The proposed 10-dB directional coupler and 3-dB directional coupler feature good energy confinement, ultra-compact, and low propagation loss, which has potential applications in photonic



Optical couplers (Chapter 5)

The most straightforward, yet important, application is to route optical waves around for coupling different devices. Sophisticated applications include devices such as polarization

Analysis and optimisation of bidirectional optical couplers in PCBs

Integrated optical waveguides on board level gain more interest with growing bandwidth. Due to limited space on board level, a new approach is to use bidirectional optical transmission on

Robust reconfigurable optical mode mux/demux using

We propose a novel reconfigurable integrated optical mode (de)multiplexer using



cascaded multiport directional couplers and phase shifter

Highly efficient and selective integrated directional couplers for

A compact directional coupler structure-based duplexer has been investigated, provided with the higher output power coupling ratio for combining wavelengths equal to 1530 nm and 1653.7 nm.

Designing Smarter Directional Couplers with Parametric

In this tutorial, we'll uncover the benefits of creating a parametric model for directional couplers, leveraging the advanced layout and model-building



Particle Swarm Optimized Optical Directional Couplers with Ultrasmall

Abstract Optical directional couplers are the basic components of many optical information devices. The optical directional couplers based on silicon-on-insulator are very attractive due to the

GaN directional couplers for on-chip optical interconnect

Here, we propose, fabricate and characterize GaN directional couplers for on-chip optical interconnect on a GaN-on-silicon platform. Suspended InGaN/GaN multiple-quantum-well diodes are

Compact Integrated Optical Directional Coupler with



Compact integrated optical directional couplers with symmetrically- and asymmetrically etched S-bend waveguides on SOI platform have been designed,

Design and fabrication of a photonic crystal directional coupler for

We have designed and fabricated a photonic crystal directional coupler for use as an optical switch. The design is for the SOI material system, and includes a silica overlayer and infilling of the etched

Design of All-Optical Directional Coupler Using

The proposed 10-dB directional coupler and 3-dB directional coupler feature good energy confinement, ultra-compact, and low propagation loss, which



On-chip optical mode exchange using tapered directional coupler

We present an on-chip optical mode exchange between two multiplexed modes by using tapered directional couplers on silicon-on-insulator platform. The device consisting of mode multiplexing and

Robust Characterization of Integrated Photonics Directional Couplers

To address these challenges, we propose a novel direct measurement technique that offers greater robustness to variations in optical interfaces, while by-passing extinction ratio

Fabrication Tolerant Directional Coupler



We present the design of a fabrication-tolerant directional coupler in a passive photonic integrated chip fabricated on Imec's iSiPP50G silicon photonics platform.

Tunable Directional Couplers for High Contrast Optical Meshes

We describe the operation, design, and fabrication of MEMS-tunable silicon-photonics directional couplers, with potential for smaller footprint, less sensitivity to fabrication errors, and

Chapter 11

Such a directional coupler that allows the transfer of light from one channel to another is one of the building blocks of optical integrated circuits. We shall describe below the first operation of such a



Particle Swarm Optimized Optical Directional Couplers with

However, the size of couplers designed by traditional ways could not meet the requirements of on-chip integrated optical systems. In this paper, two cross directional optical couplers on silicon-on-insulator

Switching behavior engineerable, electro-optic directional couplers in

Electro-optic (EO) mechanisms have been used to achieve a fast and active (power) switching in directional couplers as first demonstrated in lithium niobate (LiNbO₃) waveguides by

Multi-Octave All-Dielectric Directional Coupler Using



Here, we experimentally demonstrate highly efficient transmission and reception of a terahertz slab-mode beam over a 3-dB bandwidth spanning a 6.4:1

Design and modeling of a fabrication tolerant and broadband

Based on the finite difference eigenmode and finite-difference time-domain simulation results, we analyze the effects of fabrication errors on the coupling of these directional couplers.

On-chip optical mode exchange using tapered directional coupler

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Highly efficient and selective integrated directional couplers for

Several optical passive components, including directional couplers (DC), Mach-Zehnder interferometers (MZI), arrayed waveguide gratings (AWG), and multimode interference couplers (MMI)

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