Abstracts

Design and fabrication of SiO/sub 2//Si/sub 3/N/sub 4/ integrated-optics waveguides on silicon substrates

D.A.P. Bulla, B.-H.V. Borges, M.A. Romero, N.I. Morimoto and L.G. Neto. "Design and fabrication of SiO/sub 2//Si/sub 3/N/sub 4/ integrated-optics waveguides on silicon substrates." 2002 Transactions on Microwave Theory and Techniques 50.1 (Jan. 2002, Part I [T-MTT] (Mini-Special Issue on 1999 International Microwave and Optoelectronics Conference (IMOC'99))): 9-12.

In this paper, the design and fabrication of silicon-based optical waveguides are revisited. The goal is to develop a novel design and deposition process to minimize leakage losses. Interface roughness and Si/sub 3/N/sub 4/ stoichiometry are examined. The optical loss is measured and contributions from scattering and absorption are determined.

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