MEMS optical switch zero voltage

A brief discussion of MEMS-based optical switch technology, fabrication process, switch architectures, actuation mechanism, switch parameters, and related reliability challenges is presented in this ...

In this paper, we report a compact 1x2 MEMS optical switch actuated by less than one voltage. Over past few years, micro-electro-mechanical systems (MEMS) have emerged as a leading ...

Fast reliable optical MEMS switches with low power consumption, low IL, up to 1x64 ports, for Network surveillance and optical test and measurement.

Most of these switches require tens of Volts to actuate, preventing their application in low-voltage applications. In this paper, we report a MEMS optical switch based on a Mach-Zehnder ...

This chapter is a comprehensive review of MEMS-based optical switch architectures, actuating principles and fabrication process. The challenges that MEMS face as an enabling technology for ...

Switches that perform the switching function by converting the optical signal to an electrical signal are not included. MEMS technology (used to create microscale sys-tems in silicon) is ...

In this work, we propose and demonstrate a nonvolatile silicon photonic MEMS switches enabled by tailored stiction effect on the basis of van der Waals (vdW) force.

Current applications, however, do not require fast switching and thus Piezo and 3D MEMS mirror based switches represent the current state of the art for optical circuit switches.

We offer both 2D and 1D movement-based MEMS switches. The 1D motion MEMS mirror (in or out of the light path) offers low crosstalk or high on/off ratio, fault-safe latching, free space platform.

In this paper, we propose and implement a nonvolatile 2×2 silicon photonic MEMS switch compatible with standard silicon photonic foundry processes. Fabricated on 220-nm SOI, this switch employs a ...

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