Abstracts

Optically Controlled Photoconductive N-Bit Switched Microwave Signal Attenuator

N.A. Riza and S.E. Saddow. "Optically Controlled Photoconductive N-Bit Switched Microwave Signal Attenuator." 1995 Microwave and Guided Wave Letters 5.12 (Dec. 1995 [MGWL]): 448-450.

An optical architecture for N-bit digital control of microwave signals is introduced that uses the photoconductive effect in microwave waveguides for variable rf attenuation control. A 2-bit optically controlled microwave attenuator based on a transmission line fabricated on a silicon photoconductive substrate is experimentally demonstrated at 990 MHz. This attenuator provided 0, 5.8, 11.2, and 15.6 dB of independent optically switched attenuation levels.

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