Abstracts

Travelling-Wave Optoelectronic Devices for Microwave Applications

D. Jager, R. Kremer and A. Stohr. "Travelling-Wave Optoelectronic Devices for Microwave Applications." 1995 MTT-S International Microwave Symposium Digest 95.1 (1995 Vol. I [MWSYM]): 163-166.

In this paper, we will discuss the fundamental concepts of ultrafast microwave photonic devices based upon the interaction between propagating microwaves and optical signal beams. Such travelling-wave optoelectronic devices utilizing, for example, microstrip or coplanar transmission lines as electrical waveguides exhibit cut-off frequencies not limited by the usual RC time constant. As a result, a high bandwidth together with improved eftlciency and power capabilities are expected. In particular, travelling-wave photodetector:, waveguide and vertical electrooptical modulators, micrcrostrip optical switches and coplanar laser diodes are presented, Preliminary experimental results are also discussed.

❑ Return to main document.