

# Abstracts

## Microwave Photonic Multichip Modules Packaged on a Glass-Silicon Substrate

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*S. Iezekiel, E.A. Soshea, M.F. O'Keefe and C.M. Snowden. "Microwave Photonic Multichip Modules Packaged on a Glass-Silicon Substrate." 1995 Transactions on Microwave Theory and Techniques 43.9 (Sep. 1995, Part II [T-MTT] (Special Issue on Microwave and Millimeter Wave Photonics)): 2421-2427.*

A hybrid microwave photonic integration technology known as optoelectronic glass microwave integrated circuit (opto-GMIC) has been developed. It is a multichip module approach that rises a glass substrate on a silicon carrier to interconnect both discrete and monolithic microwave and optoelectronic devices. The glass substrate can support both lumped and distributed elements, thus reducing the number of parts in assembly. In addition, a wide variety of microwave photonic multichip module designs can be produced from the same production line. This has been demonstrated by the fabrication of prototype fiber-optic repeaters, transmitters, and receivers designed for synchronous optical network applications at a bit rate of 622.08 Mb/s and a wavelength of 1.3  $\mu$ m.

[Return to main document.](#)