Abstracts

New Module Structure Using Flip-Chip Technology for High-Speed Optical Communication ICs

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This paper describes a new module structure for 40-Gbit/s class ICs. This structure can eliminate cavity resonance in the package and excitation of parasitic propagation modes in RF feedthroughs. Additionally the design makes use of flip-chip technology to minimize the parasitic reactance that can occur at interconnections between chips and substrates. These features make module operation stable at frequencies beyond 40 GHz. We also demonstrate a DC-to-40-GHz distributed amplifier IC module that uses this new technology.

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