Abstracts

InP-based MMIC components for an optical phase-locked loop

P.G. Goetz, H. Eisele, K. Yang, Kao-Chih Syao, O. Qasaimeh and P. Bhattacharya. "InP-based MMIC components for an optical phase-locked loop." 1999 Transactions on Microwave Theory and Techniques 47.7 (Jul. 1999, Part II [T-MTT] (Special Issue on Microwave and Millimeter-Wave Photonics)): 1241-1250.

Gilbert-cell and photoreceiver circuits were designed for an integrated optical phase-locked loop (OPLL) to generate stable channel offsets in dense wavelength-division multiplexing (DWDM). These circuits were fabricated using a p-i-n/heterojunction bipolar transistor layer structure. Various configurations of an OPLL employing Gilbert-cell phase detectors and photoreceiver circuits were tested, and wavelength separations from 1.0 to beyond 27.11 GHz were obtained.

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