Abstracts

Fully monolithic four channel transmitter IC for RF/optical subcarrier multiplexed communications

S. Han, C.-H. Lee, B. Martinpour, J. Laskar and D.J. Blumenthal. "Fully monolithic four channel transmitter IC for RF/optical subcarrier multiplexed communications." 2000 Microwave and Guided Wave Letters 10.7 (Jul. 2000 [MGWL]): 282-284.

A compact four channel RF/optical subcarrier multiplexed (OSCM) transmitter MMIC has been implemented in a commercial 0.6 /spl mu/m GaAs MESFET process. The designed MMIC consists of four voltage controlled oscillators (VCO) with a frequency range of 3.8-5.5 GHz for subcarrier generation and four modulators for on-off keying (OOK) subcarrier modulation. This MMIC supports up to 200 Mb/s data rate per each channel. This transmitter IC occupies a die area of 120/spl times/120 mil/sup 2/. We present design and characterization of the first fully monolithic four channel transmitter IC for multichannel OSCM link applications.

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