

# Abstracts

## A Highly Integrated Two Channel MMIC Down Converter with Gain Control

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*J. Staudinger, W. Seely, J.M. Golio and B. Beckwith. "A Highly Integrated Two Channel MMIC Down Converter with Gain Control." 1990 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 90.1 (1990 [MCS]): 11-14.*

A complete MMIC down converter with variable gain control has been fabricated. A 6-8 GHz RF input signal is converted using a fixed 10 GHz LO to a two channel 2-4 GHz IF. The die is highly integrated, including an RF preamplifier, double balanced mixer, LO amplifier, power divider, IF amplification, and two voltage controlled IF amplifiers which provide variable gain adjustment. Back vias are utilized to establish grounding for both dc and rf. Probe pads are also included for measuring chip level performance.

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