Abstracts

A Monolithic L-Band Limiting Amplifier and Dual-Modulus Prescaler GaAs Integrated Circuit

A.E. Geissberger, R.A. Sadler, H.P. Singh, G.K. Lewis, I.J. Bahl and M.L. Balzan. "A Monolithic L-Band Limiting Amplifier and Dual-Modulus Prescaler GaAs Integrated Circuit." 1988 MTT-S International Microwave Symposium Digest 88.2 (1988 Vol. II [MWSYM]): 569-572.

We present fabrication details, RF-yield results, and RF performance vs. temperature for an ECL-compatible, L-band, limiting dual-modulus (÷10/11) prescaler. This new process for monolithic integration of analog and digital circuit functions uses refractory self-aligned gate FET technology. When tested with -22 dBm input signal power, one lot of six wafers had a total RF chip yield of 19%, with a best-wafer yield of 43%. The average operating frequency was 1.45 GHz (SD = 51 MHz) with an average power dissipation of 696 mW (SD = 23 mW).

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