Abstracts

An Ultra-High-Speed GaAs Prescaler Using a Dynamic Frequency Divider

K. Osafune and K. Ohwada. "An Ultra-High-Speed GaAs Prescaler Using a Dynamic Frequency Divider." 1987 Transactions on Microwave Theory and Techniques 35.1 (Jan. 1987 [T-MTT]): 9-13.

A high-speed, low-power-consumption prescaler for a phase lock stable oscillator is designed and fabricated with a GaAs MESFET BFL circuit. The prescaler of a 1/32 frequency divider is composed of a dynamic frequency divider for the prescaler first stage, a newly developed dual-phase signal generator, and master-slave T-type flip-flops for the presealer post stages. The fabricated 1/32 prescaler operated up to 8.5 GHz at only 540 mW. The 1/2 dynamic frequency divider corresponding to the prescaler first stage shows a maximum operation frequency of 13.2 GHz at only 115 mW.

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