Abstracts

Over-60-GHz operation of SCFL dynamic frequency divider using InP-based HEMTs

Y. Umeda, K. Osafune, T. Enoki, H. Yokoyama, Y. Ishii and Y. Imamura. "Over-60-GHz operation of SCFL dynamic frequency divider using InP-based HEMTs." 1997 MTT-S International Microwave Symposium Digest 2. (1997 Vol. II [MWSYM]): 457-460.

A toggle operation of 39 to 63.5 GHz has been achieved by a digital dynamic frequency divider. The frequency divider employs a pair of clocked inverters with source coupled FET logic (SCFL) and uses 0.1-/spl mu/m-gate InAlAs/InGaAs/InP HEMTs with high uniformity and performance. On a 2-in. wafer the frequency divider showed a maximum toggle frequency of 59.1/spl plusmn/3.3 GHz with a fabrication yield of 89%. This is the highest operation frequency yet obtained by a broadband digital frequency divider.

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