Abstracts

A Ka-Band GaAs Monolithic Phase Shifter

V. Sokolov, J.J. Geddes, A. Contolatis, P.E. Bauhahn and C. Chao. "A Ka-Band GaAs Monolithic Phase Shifter." 1983 Transactions on Microwave Theory and Techniques 31.12 (Dec. 1983 [T-MTT] (1983 Symposium Issue)): 1077-1083.

The design and performance of a GaAs monolithic 1800 one-bit switched line phase shifter test circuit for Ka-band operation is presented. A self-aligned gate (SAG) fabrication technique is also described that reduces resistive parasitic in the switching FET's. Over the 27.5-30 GHz band, typical measured differential insertion phase is within 10-20° of the ideal time delay characteristic. Over the same band, the insertion loss for the SAG phase shifter is about 2.5-3 dB per bit. The SAG fabrication technique holds promise in reducing phase shifter insertion loss to about 1.5 dB/bit for 30-GHz operation.

❑ Return to main document.