

Abstracts

A compact 5-bit phase-shifter MMIC for K-band satellite communication systems

C.F. Campbell and S.A. Brown. "A compact 5-bit phase-shifter MMIC for K-band satellite communication systems." 2000 Transactions on Microwave Theory and Techniques 48.12 (Dec. 2000 [T-MTT] (Special Issue on 2000 International Microwave Symposium)): 2652-2656.

The design and performance of a compact K-band 5-bit phase-shifter monolithic microwave integrated circuit (MMIC) is presented. Extensive electromagnetic simulation and compact circuit design techniques were employed to yield an MMIC with a $1.693 \text{ mm} \times 0.750 \text{ mm}$ (1.27 mm^2) die size. Measured performance of the phase shifter at 19 GHz demonstrates 5 dB/spl plusmn/0.6 dB insertion loss and 30 r.m.s. phase error.

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