Abstracts

Wide-Band Monolithic Phase Shifter

Y. Ayasli, S.W. Miller, R. Mozzi and L.K. Hanes. "Wide-Band Monolithic Phase Shifter." 1984 Transactions on Microwave Theory and Techniques 32.12 (Dec. 1984 [T-MTT] (1984 Symposium Issue)): 1710-1714.

A wide-band monolithic phase shifter operating in the 2-8 GHz frequency range is described. Six GaAs FET's per bit are used as switch elements in a bridge configuration which alternatively becomes a high-pass or a low-pass section. Their low-impedance state is modeled as a resistor, the high-impedance state as a combination of capacitors and resistors. In the design approach, the high-impedance state equivalent shunt capacitor is not resonated. Instead, these capacitors become part of the resulting high-pass, low-pass sections. In this way, the maximum theoretical bandwidth that a high-pass, low-pass section can provide is achieved despite the nonideal switching elements.

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