Abstracts

Wideband S-C Band Monolithic Phase Shifter

Y. Ayasli, S.W. Miller, R.L. Mozzi and L.K. Hanes. "Wideband S-C Band Monolithic Phase Shifter." 1984 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 84.1 (1984 [MCS]): 11-13.

A wideband monolithic phase shifter operating in the 2-8 GHz frequency range is reported. Six GaAs FETs per bit are used as switch elements in a bridge configuration which alternatively becomes a highpass 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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