Abstracts

Millimeter-Wave QPSK Modulator in Fin Line

G.B. Gajda and C.J. Verver. "Millimeter-Wave QPSK Modulator in Fin Line." 1986 MTT-S International Microwave Symposium Digest 86.1 (1986 [MWSYM]): 233-236.

A PIN diode QPSK modulator in unilateral fin line is described for use at millimeter-wave frequencies. A parallel configuration, consisting of two 180-deqree bi-phase modulators and quadrature and in-phase hybrids, is used in order to accommodate pre-filtered data. All circuitry was implemented using unilateral fin line printed on a single side of the substrate. No stringent dimensional tolerances for either the circuit or the housing were required. Experimental results gave an overall insertion loss of 6.5 dB, and maximum phase error of 5 degrees at the design frequency (28.4 GHz). This approach for implementing a QPSK modulator lends itself to low-cost manufacturing.

❑ Return to main document.