# Abstracts

## A Wilkinson power divider on a low resistivity Si substrate with a polyimide interface layer for wireless circuits (2002 Vol. I [MWSYM])

*J. Papapolymerou, G.E. Ponchak and E.M. Tentzeris. "A Wilkinson power divider on a low resistivity Si substrate with a polyimide interface layer for wireless circuits (2002 Vol. I [MWSYM])." 2002 MTT-S International Microwave Symposium Digest 02.1 (2002 Vol. I [MWSYM]): 593-596 vol.1.*

A 3-dB Wilkinson power divider on a low resistivity silicon substrate (20 /spl Omega/-cm) with a polyimide interface layer is presented for the first time. The divider utilizes Finite Ground Coplanar (FGC) line technology, and operates at a center frequency of 15 GHz. Low insertion loss and high return loss and isolation is achieved by using a 20 /spl mu/m thick polyimide interface layer on top of the silicon wafer, and a line geometry that minimizes field interaction with the lossy Si substrate. The attenuation of the FGC lines is comparable with that of thin film microstrip lines on similar substrates. Experimental and full-wave analysis results are provided.

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