

## Micromachined thick-metal coplanar coupled-line filters and couplers

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*T.L. Willke, E. Onggosanusi and S.S. Gearhart. "Micromachined thick-metal coplanar coupled-line filters and couplers." 1998 MTT-S International Microwave Symposium Digest 98.1 (1998 Vol. 1 [MWSYM]): 115-118.*

Highly-coupled couplers (3-dB and 6-dB) are necessary for a wide range of millimeter-wave coplanar circuits. The high line-to-line capacitance required for these couplers is impossible to achieve with thin-film planar coupled lines. Using 80  $\mu\text{m}$ -thick conductors patterned using a 3-D X-ray micromachining technique, we have successfully demonstrated a 15 GHz 6-dB coupler and a single-section coupled-line BPF that utilizes a 3-dB coupler geometry.

 [Return to main document.](#)