# Abstracts

## Results for a simple compact narrow-wall directional coupler

*L.T. Hildebrand. "Results for a simple compact narrow-wall directional coupler." 2000 Microwave and Guided Wave Letters 10.6 (Jun. 2000 [MGWL]): 231-232.*

Results are presented for a compact narrow-wall directional coupler which is suited for use in low-profile beamforming networks. This geometry, based on the Riblet short-slot coupler, makes use of continuous coupling between adjacent waveguides through a common full-height slot in the narrow wall. From the point-of-view of design and manufacturing this coupler geometry is attractive since it does not require capacitive loading. This comes at the expense of bandwidth: measured results show that over a 6.5% bandwidth /spl plusmn/0.125-dB power equality, 30 dB isolation and 1.07 VSWR is achieved for a coupler of length 1.25 /spl lambda//sub g/. Although this is less than the 15% achieved for capacitively-loaded couplers it is sufficient for many applications and the simplicity of the geometry makes it an attractive option in narrowband designs.

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