# Abstracts

## A Technique for Improving the Figure-of-Merit of a Twin-Slab Nonreciprocal Ferrite Phase Shifter (Correspondence)

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An RF phaser of considerable importance for phased-array applications is the twin-slab nonreciprocal ferrite phase shifter whose cross section is shown in Fig. 1. This device has been treated extensively in the literature and a number of techniques directed towards optimizing the figure-of-merit (phase shift/insertion loss) have been discussed. In general, these optimization techniques involve variations in the waveguide width W, the toroid branch width w, the toroid slot width s, and the dielectric constant of the slot-filling dielectric material. An additional technique that can be employed to obtain as much as a 20-percent increase in the figure-of-merit without degradation to other parameters of the device involves chamfering the corners of the toroid which results in a device whose cross section is shown in Fig. 2.

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