

Abstracts

Thin Film Isolators Utilizing MSSW Transducers

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This paper presents a novel concept of ferrite isolators. The new type of isolator is comprised of a nonreciprocal surface wave transducer in the form a miniature strip line mated with a finite ground plane. The transducer is constructed on a thin YIG film grown on a GGG substrate. Since thin magnetic films can be grown on GaAs or Si, the present isolator can be built and integrated on the same chip with other passive and active devices. A 250 microns x 2000 microns version of the new structure gave a 6 dB insertion loss and about 30 dB of isolation at 7.8 GHz. The return loss was more than 20 dB.

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