

Surface Acoustic Wave Convolution Using Magnetostrictive Galfenol

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Project Description

- Construction and test a surface acoustic wave convolver based on magnetostrictive galfenol (Fe80Ga20) thin films.
- Device made using standard integrated circuit methods.
- Galfenol deposited by rf magnetron sputtering.

Project Results

- Fabricated device shown below. As a SAW delay line device had 25 db untuned insertion at a center frequency of 96 MHz with a 20 MHz bandwidth..
- No convolution observed during testing. Project period over before explanation could be found.

