# Abstracts

## The Implementation of Surface Acoustic Wave Devices in Avionics Systems

*W.C. Eppers, Jr. and W.J. Edwards. "The Implementation of Surface Acoustic Wave Devices in Avionics Systems." 1980 MTT-S International Microwave Symposium Digest 80.1 (1980 [MWSYM]): 29-29.*

The introduction of Surface Acoustic Wave Devices into military electronic systems has resulted in equipment which has improved performance characteristics and greater reliability. This paper presents a brief review of the techniques and materials utilized in the construction of SAW devices. SAW devices function as frequency control elements, pulse compression filters and correlators, nondispersive filters, nondispersive time delays, matched filters and correlators, and acousto-optic modulators. A compilation of various military systems incorporating SAW devices is included with commentary on selected implementations. Although SAW devices have been applied in over thirty Air Force systems, their use (quantities) is dwarfed by their widespread use in commercial TV. The production of SAW devices for avionics systems is very limited with production rates ranging from as low as ten per year to a few thousand per year.

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