Abstracts

A 13-Channel Magnetostatic Wave Filterbank

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The magnetostatic wave filterbank shows particular promise as a key component in high dynamic range channelized receivers for future electronic warfare systems. It consists of an array of narrowband magnetostatic wave delay lines which have a common microstrip input transducer and separate output transducers. The center frequency of each channel is determined by a magnetic bias field supplied by a permanent magnet with a linear field gradient. This paper describes the construction and performance of an improved version of a 13-channel filterbank operating at S-band with a 24 MHz (3dB) channel bandwidth and a 50 dB dynamic range. A comparison of present and projected performance data is given.

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