Abstracts

A SAW Pulse Compression Filter Using the Reflective Dot Array

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A new type of pulse compression filter is described using the Reflective Dot Array (RDA). The RDA is similar to the Reflective Array Compressor (RAC), except that the array of reflecting grooves is replaced by an array of reflecting metallic dots. The RDA has the principal advantage of being part of the same mask and metalization as the interdigital transducers, allowing single step fabrication. A linear FM filter was developed with a center frequency of 60 MHz, bandwidth of 20 MHz and differential time delay of 10 mu s, with less than 4/slp deg/ of rms phase deviation from quadratic without phase compensating film, showing that high performance pulse compression filters can be produced at low cost.

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