Abstracts

Low Loss Multipole SAW Resonator Filters

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Associated with modern rf communications systems is need to perform complex signal processing. Multipole crystal filter technology performs a unique function in these systems. A new type of low loss multipole filter technology using surface acoustic wave resonators is described in this paper. Previous attempts to fabricate coupled resonator filters with more than four poles were frustrated by low Q in these structures. More recent fabrication techniques, to be described in this paper, have led to high Q surface wave structures. Multipole resonator structures with up to eight poles of selectivity are now possible. Applications for narrowband crystal filters have traditionally been limited to the vhf frequency range. Using surface acoustic waves, the frequency range for these types of filters can be extended to the upper UHF range and perhaps into L-band itself.

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