

High-Temperature Superconductive Passive Microwave Devices

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Two important classes of passive superconductive microwave devices are described that have been recently demonstrated using thin films of the high-temperature superconductor YBa/sub 2/Cu/sub 3/O/sub 7-x/. The devices include tapped-delay-line transversal filters with multigigahertz bandwidths, with time-bandwidth products as large as 30, and narrowband (less than three-percent bandwidth) microstrip filters. These devices illustrate the potential performance advantages superconductive thin films offer to the designer of a high-frequency, wide-bandwidth analog signal processing system.

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