Abstracts

Miniature Stub and Filter Designs Using the Microshield Transmission Line

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This paper presents new CPW-type stub and filter configurations which are useful approaches for compact microwave circuit design. It is shown that conventional open- and short-end quarter wavelength stubs can be shortened by a factor of three by folding the center conductor. Also, narrowband open-end stubs are demonstrated which have thin-film overlay capacitors integrated across the stub sections. In this work the circuits have been implemented using microshield transmission line, a geometry in which a 1.4 µm-thick dielectric membrane supports coplanar conducting lines virtually in free-space. The new stub configurations, however, are also suitable for standard substrate-supported CPW.

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