

Abstracts

Novel Micromachined LIGA Microstrip Transmission Lines and Filters

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The LIGA-micromachined microstrip line is introduced. This transmission line and the filters presented in this paper are fabricated using the LIGA micromachining process. This process allows tall ($1\mu\text{m}$ - 1mm), high-aspect ratio metal structures to be very accurately patterned and is compatible with integrated circuit fabrication processes. The tall metal transmission lines will enable the development of high-power monolithic circuits as well as couplers and filters that require very high coupling levels. In this paper, low-pass and bandpass filters fabricated using 120 and $160\mu\text{m}$ -tall nickel microstrip lines are demonstrated.

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