

عنوان مقاله:

Design and Fabrication of the Compact Dual-mode Bandpass Planar Tunable Filter in VHF and UHF Band with Constant Absolute Bandwidth

محل انتشار:

چهارمین کنفرانس بین المللی توسعه فناوری در مهندسی برق ایران (سال: 1399)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

In this paper, a Compact Dual-mode Bandpass Planar Tunable Filter in VHF and UHF Band from the frequency of 200 MHz to 400 MHz is proposed. The proposed filter is designed with a microstrip line and an open loop resonator, but with a new design for Miniaturize and compression of the structure, which reduces the occupied space and thus the cost of fabrication. In order to improve the filter response, a transmission zero is used at the top of the passband. Three Varactor diodes are used in this structure. The tuning of the passband frequency becomes simple with a single dc-bias circuit. This filter has a wide Tuning range (over 66%). The bandwidth in the simulation is 33+3 MHz and in manufacture sample is 37 MHz. The design for the minimum return loss drop is 15 dB. The maximum insertion loss in the design of 1.2 dB and in the manufacture sample is 3.1 dB

کلمات کلیدی:

Bandpass, Planar, Tunable filter, UHF, Varactor, VHF

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