

“Combined lowpass-bandpass filter response using different shapes of microstrip dual-mode resonators”, pp.326-332

Mohamed H. Awida, Atallah Balalem, Amr M. E. Safwat, Hadia El-Hennawy, and Abbas Omar

Abstract – A novel type of dual-band lowpass-bandpass filters using microstrip dual-mode resonator are proposed. The proposed filters combine the attractive features of dual-mode filters, such as the small size and the elliptical bandpass response, and provide a fair lowpass response. Both the microstrip patch and ring dual-mode resonators have been utilized in the design of the proposed filter. A modified version of the filter is proposed for a better control of the reject-band, as well. The designed and fabricated filters have very compact size with a very sharp transition and sufficient rejection between the lowpass response and the bandpass response.

