

Film bulk acoustic wave resonator filter for Ku-band applications

Abstract

The design and analysis of Ku-band ladder-type filters based on film bulk acoustic wave resonator (FBAR) is presented. The proposed FBAR filter has an insertion loss of -3dB, out-of-band rejection of -12dB, centre frequency of 15.5GHz with 3dB bandwidth of 1.0GHz. Based on the characteristics of the FBAR filter, the expected characteristics of FBAR resonators are determined by using the Butterworth Van Dyke (BVD) equivalent circuit.

Keywords

FBAR; FBAR filter; Ku-band; MEMS; RF

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