

Abstract

1. Universal filter

2.1. Previously known universal filters have a relatively expensive circuit construction or overhead. The object of the invention is to construct a universal filter which has a simple and very small circuit construction.

2.2 In accordance with the invention, the universal filter in the form of a biquad filter comprises three inputs V_h , V_b and V_l as well as an output V_{out} and two trans-conductance amplifiers G_{m1} and G_{m2} , four capacitors mC_0 , $(1-m)C_0$, 0 and $1C_0$ as well as an amplifier K having the amplification factor k and also a voltage following means having a high resistance input (Fig. 2). The universal filter is formed either as a high-pass filter or a low-pass filter or a band-pass filter or a band-stop filter (trap filter) or as an all-pass filter or some other sort of active filter in dependence on the input loading of the inputs V_h , V_b and V_l . The different filter characteristics such as the Q -factor, the steepness of the edges, the centre frequency, the amplification etc can be set in dependence on the dimensioning of the parameters G_{m1} , G_{m2} , m , 1 and k .

2.3 Television receivers, especially multi-norm television receivers, radio receivers

3. Fig. 2

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