

Abstract: A new current-mode multi-function filter is proposed. The filter uses only two operational amplifiers, four operational trans-conductance amplifiers (OTAs) and one multiple-output third-generation current-conveyor (CCIII+/-). Without using any external passive elements, lowpass, highpass, bandpass, notch and allpass responses can be realized without changing the circuit topology and without any matching or cancellation conditions. The parameters $\omega(o)$ and $\omega(o)/Q(o)$, can be electronically tuned by adjusting the bias currents of the OTAs. The proposed circuit enjoys low sensitivities.