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Selective Filters and Sinusoidal Oscillators Using CFA Transimpedance Pole

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Abstract Using a single current feedback amplifier (CFA) device, two new variable frequency sinusoidal RC oscillators are presented. The transadmittance pole of the device (AD-844) has been utilized in the design for generating sine wave signals covering a range of 1 MHz $\leq f_0 \leq$ 31 MHz. Under open-loop conditions, both circuits exhibit resonance characteristics at moderate Q-values ($1 \leq Q \leq 9$). These responses have been experimentally verified with hardware circuit implementation and PSPICE macromodel simulation.

Keywords Active filter · CFA · Oscillator

1 Introduction

Research on the design of analog signal processing circuits and systems has received renewed impetus with the availability of the current feedback amplifier (CFA) as an active building block in the recent past [5, 6, 24, 25]. The literature indicates a num-

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