

A CMOS Current-Mode S-Shape Correction Circuit with Shape-Adjustable Control

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Abstract

A CMOS current-mode S-shape correction circuit with shape-adjustable control is proposed for suiting different LCD panel's characteristics

from different manufactures. The correction shape is divided into three segments for easy curve-fitting using three lower order polynomials.

Each segment could be realized by a corresponding current-mode circuit. The proposed circuit consists of several control points which are designed for tuning the correction shape. The S-shape correction circuit was fabricated using the 0.35 μm TSMC CMOS technology. The measured input dynamic range of the circuit is from 0 μA to 220 μA . The -3 dB bandwidth of the circuit is up to 262 MHz in a high input current region.

Keyword : TFT-LCD, S-shape correction, current-mode circuit, quadratic circuit