



Category: Current Source

CIRCUIT IDEAS FOR DESIGNERS

Schematic no. cs_11007.2

High Output Impedance Cascode Current Sink

Description

This current source uses a reference current and produces an output current that has substantially higher dynamic output impedance, particularly for low current levels of less than 100 μ A. This current source buffers the reference current and produces a constant current for a wide voltage range. This current source utilizes two pairs of N-channel matched pair MOSFETs connected in a cascode configuration. The bottom MOSFET pair must be a matched pair and the top MOSFET pair must also be a matched pair. However, the top pair and the bottom pair do not have to be the same model. The lower voltage compliance range is determined by the 2 x V_{GS}(th) and the upper voltage compliance voltage are limited by breakdown voltage. Use very low V_{GS}(th) devices such as ALD110802 and ALD110800 to reduce the lower voltage compliance limit.

For full schematic diagram and notes, please register and login at aldinc.com

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