



Buffered Current Source

Description

This current source is a voltage to current converter where V_{IBES} is the voltage that set the voltage for the converter. This voltage is mirrored via the op amp to the inverting input and applied across the current setting resistor R_{SET} . The current output I_o is directly determined by the equation: $I_o = V_{BIAS}/R_{SET}$. This current source can supply very low currents accurately. Optionally, V_{BIAS} can also be set precisely by using an EPAD(R) MOSFET such as the ALD1108E. To increase current output, the current output MOSFET can be built by parallel connection of n number of MOSFETs (all the drain terminals connected to each other, all the sources connected together and all gates shorted together). Alternatively, a power MOSFET can be employed to boost current output.

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