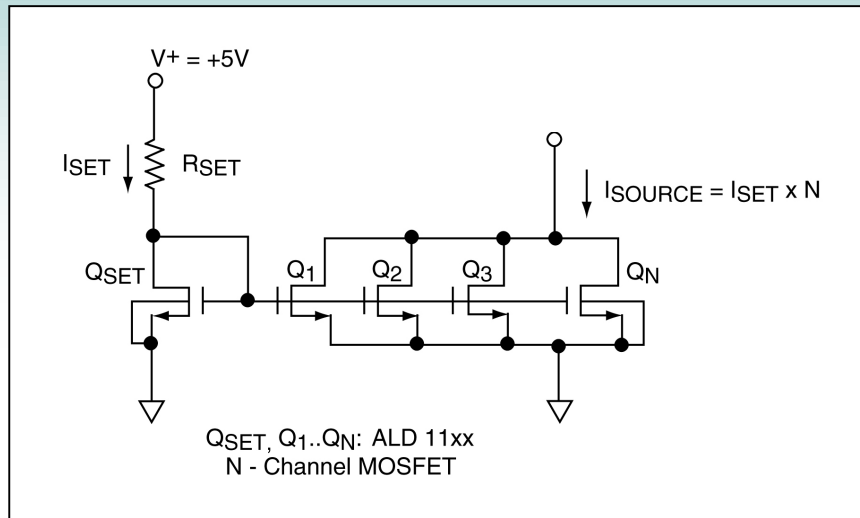




Current Source Multiplication



Description

This is a current multiplication circuit. Current ISET is set by determining V+ and RSET values. ISET is given by the equation: $I_{SET} = (V_+ - V_{DS}) / R_{SET}$ where VDS is the drain and gate connected voltage of Qset at the selected current level ISET. The output current ISOURCE is given by $I_{SOURCE} = (n \times I_{SET})$ where n is the number of FETs connected in parallel. Note that all Q, QSET, Q1, Q2 .. QN must be of the same device type and the same threshold voltages but not necessarily from the same IC package. Devices from the same package would deliver better results due to close tracking of adjacent MOSFETs. ALD1108xx devices would generally give better results. If QSET is from ALD1108xx, then Q1 through QN must also be from the same ALD1108xx types.

Recommended Components

ALD1101, 1/2 ALD1103, ALD1106, ALD1116, ALD1108xx, ALD1109xx

Other Related Circuit Ideas

Schematic no. cs_11007.0 High Output Impedance Current Source