

maximizes the input compliance by permitting input voltages as low as 3.75 V. This also results in a slight reduction of quiescent current of IC1 and A1, decreasing the error related to their quiescent currents.

The quiescent currents of all components combine and add to the 4-mA output that corresponds to negative full-scale. Consider this 45- μ A current in light of the output-current scale factor, which is proportional to:

$$\frac{119 \text{ mV}/^{\circ}\text{C}}{R1}$$

This yields a current of 106.66 μ A/ $^{\circ}$ C. The 45- μ A quiescent current represents an offset of approximately 0.43 $^{\circ}$ C. Since the current is an offset, it's possible to compensate for it elsewhere (such as in software, when the temperature data is digitized).