# ADS8860 + TLE214x

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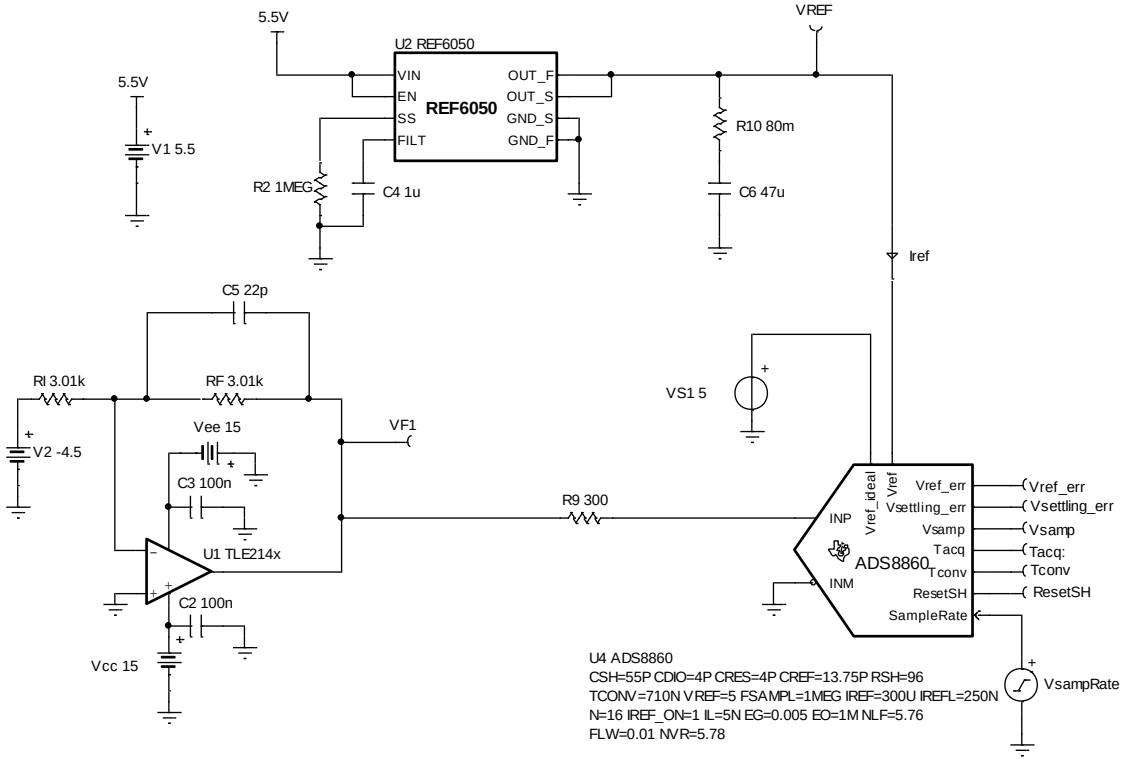
# TACQ and accuracy target

$$tacq = \frac{1}{500\ kHz} - 300\ ns = 1.7\ \mu s$$

$$\frac{5\ V}{2^{16}} = 76.294\ \mu V \qquad 1\ LSB$$

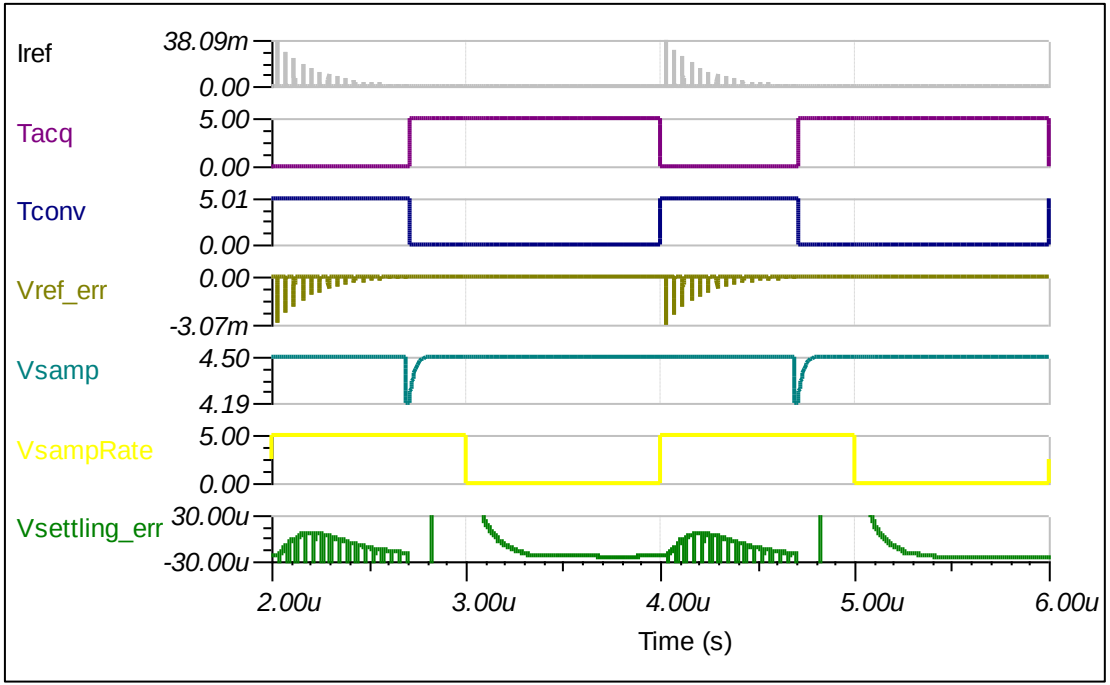
$$\frac{5\ V}{2^{16}} \cdot .5 = 38.147\ \mu V \qquad \frac{1}{2}\ LSB$$

# Measurement of OPA211 and OPA188: With Filter



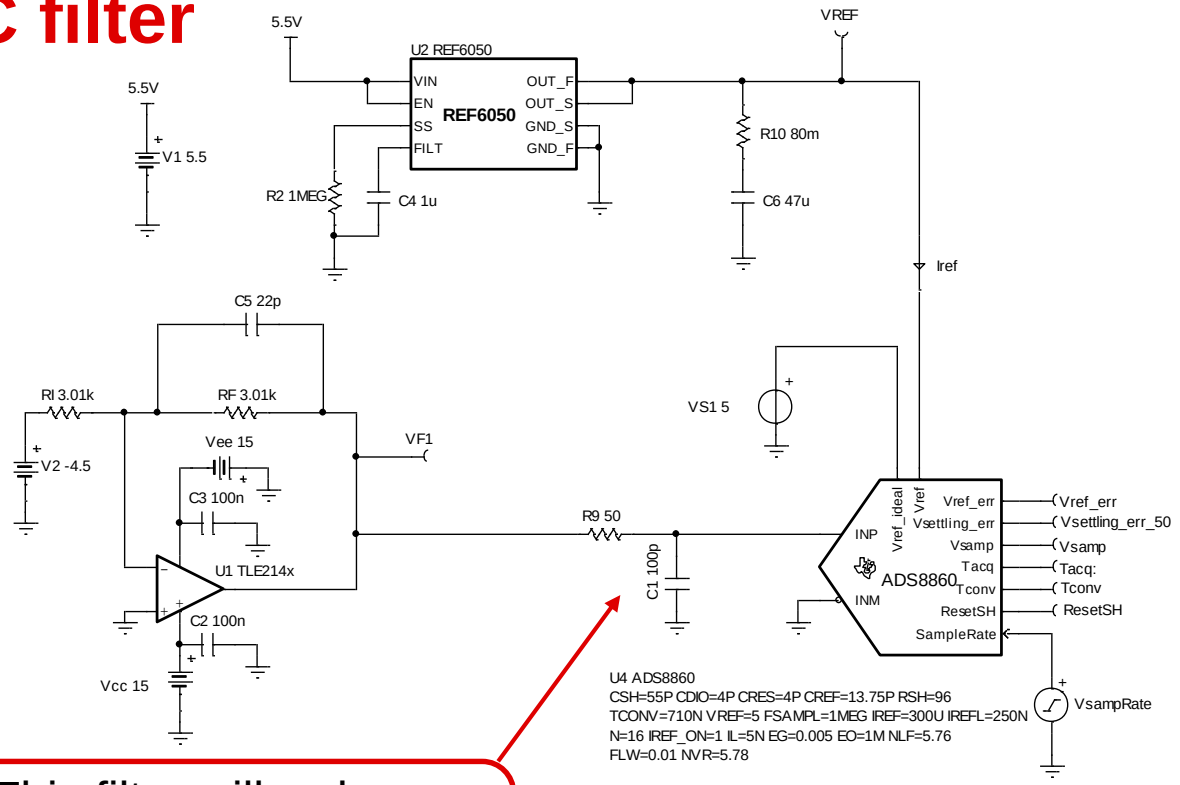

This is the circuit I simulated

# Simulation results




Here is the transient simulation result with fs = 500kHz. The key curve to look at is the bottom “settling_error” curve. This error settles out to less than 30uV

# Optional RC filter




This filter will reduce noise and generally gives better settling

# Settling 300 ohm vs 50 ohm x 100pF