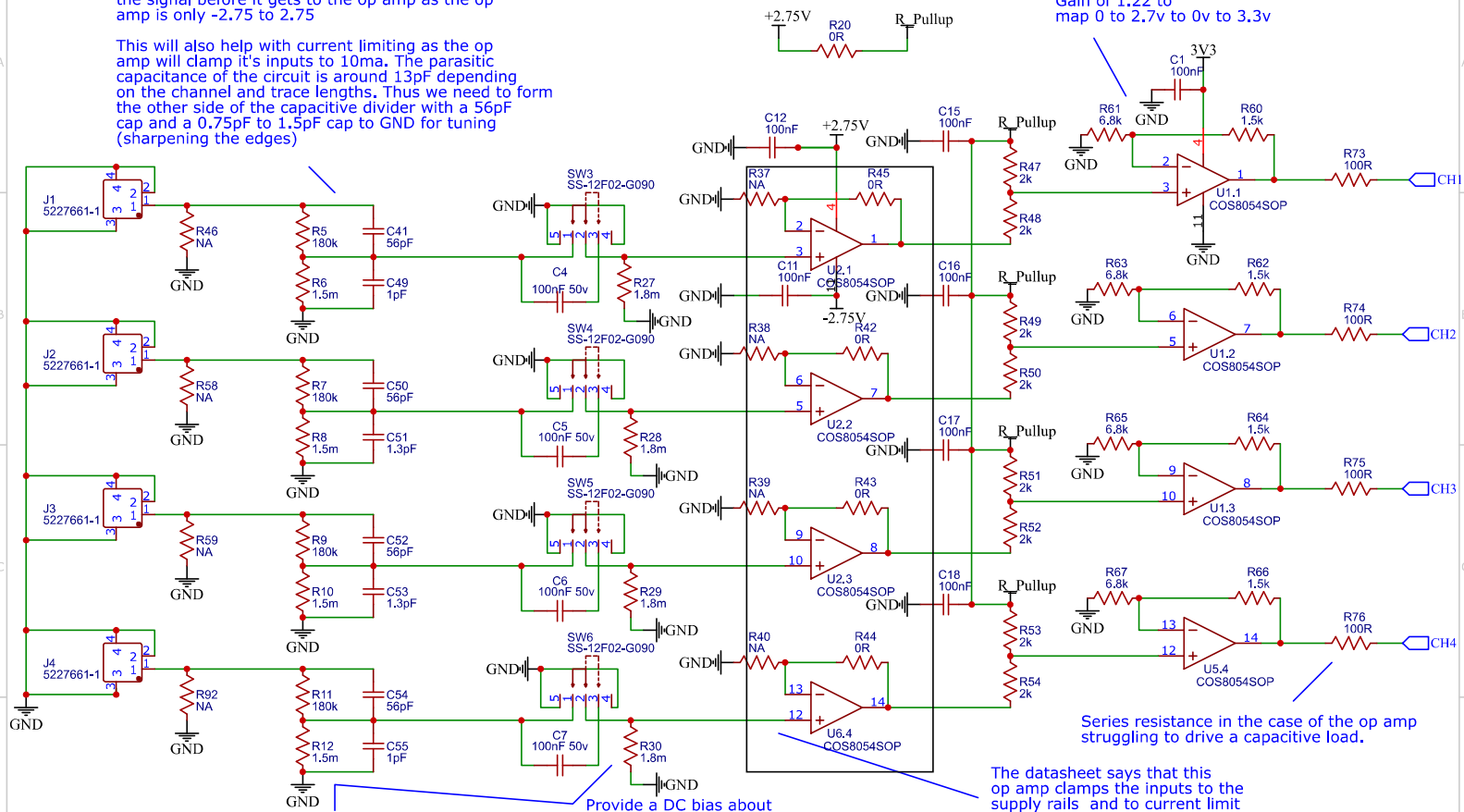


We want a voltage/capacitive divider with a gain of 0.82 in order to attenuate the signal before it gets to the op amp as the op amp is only -2.75 to 2.75

This will also help with current limiting as the op amp will clamp its inputs to 10ma. The parasitic capacitance of the circuit is around 13pF depending on the channel and trace lengths. Thus we need to form the other side of the capacitive divider with a 56pF cap and a 0.75pF to 1.5pF cap to GND for tuning (sharpening the edges)

Gain of 1.22 to map 0 to 2.7v to 0v to 3.3v



The ESR of both these resistors is about 820k thus we still get our desired voltage divider

Provide a DC bias about GND after capacitor

with a 10Meg resistor and a 100nF cap it gives an RC time constant of about 1 seconds. within about 6 seconds the pre-charge in the capacitor will be diminished and an accurate AC waveform can be taken.

The datasheet says that this op amp clamps the inputs to the supply rails and to current limit the inputs to 10ma.

All the resistors and caps in this input processing section (resistor dividers, op amp gain, capacitive dividers) directly affect the accuracy of the reading. Use at least 1% resistors or 0.5% for better results

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