

**HI-8570, HI-8571**

The HI-8570 and HI-8571 are CMOS integrated circuits designed to directly drive the ARINC 429 bus in an 8-pin package. Two logic inputs control a differential voltage between the output pins producing a +10 volt One, a -10 volt Zero, and a 0 volt Null.

The HI-8570 and HI-8571 operate with +/-5V supplies to generate the ARINC signals. If the intended application does not possess a -5V supply the following example may be implemented.

**MAX1673**

A MAX1673, charge pump inverter, can provide a low cost, compact way of supplying the HI-8570 or HI-8571 with -5V at up to 125mA. This device is available from Maxim Integrated Circuits. MAX1673 requires 3 capacitors and 2 resistors to supply HI-8570 or HI-8571 with a -5V supply. This device is available in an 8pin SOIC package.

Figure 1 is an example for generating the required supply voltage.

For the circuit in Figure 1, the following formulas were used:

$$V_{OUT} = -V_{IN}R2 / R1$$

Where R2 and R1 have a voltage-divider current of 50uA to minimize the effect of FB input current :

$$R2 = V_{IN} / 50\mu A$$

$$R1 = -V_{OUT} / 50\mu A$$

For more applications information about MAX1673, please visit <http://maxim-ic.com>

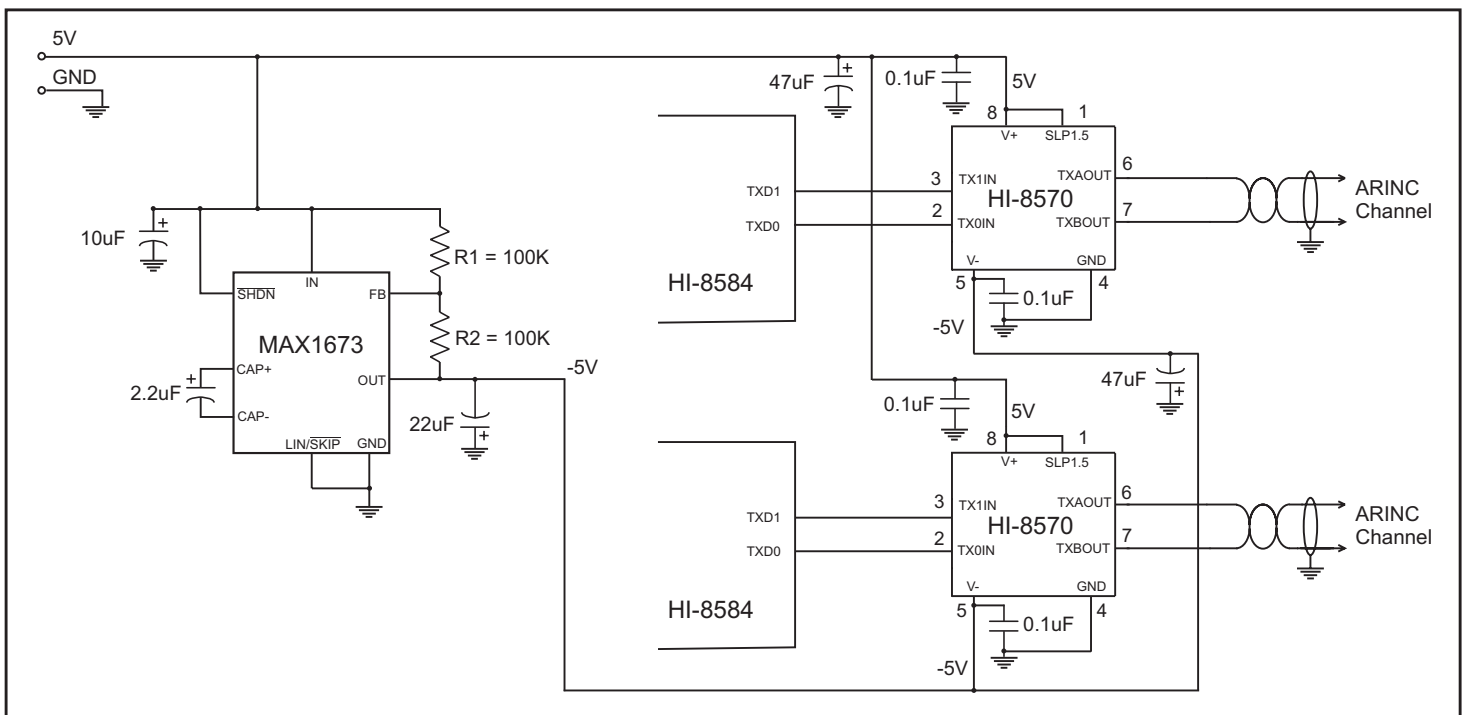


Figure 1: Example circuit for generating -5V from +5V within an HI-8570 application.