

1. Typical Application Circuits

1.1 General Description

The NPA series of pressure sensors combines GE's SenStable® silicon fusion bonded pressure die technology with packaged electronics to provide highly stable, amplified and calibrated pressure measurement in a cost effective surface mount package.

The NPA is offered in a range of pressure ratings. Various port configurations are available to measure absolute, gauge and differential pressures. Versions are offered with either analogue or digital outputs.

This application guide should be read in conjunction with product data sheet 920-477.

1.2 Block Diagram

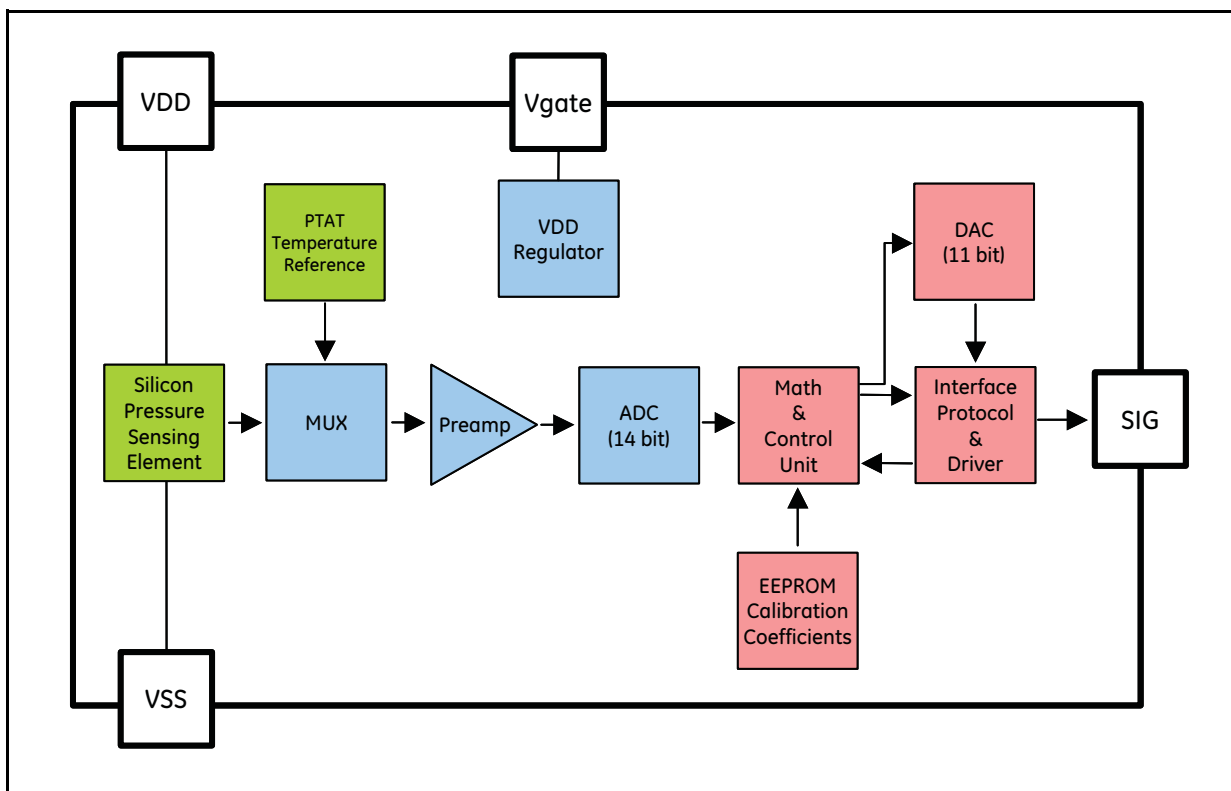


Figure 1: NPA Pressure Sensor Block Diagram

1.3 Analog Circuits

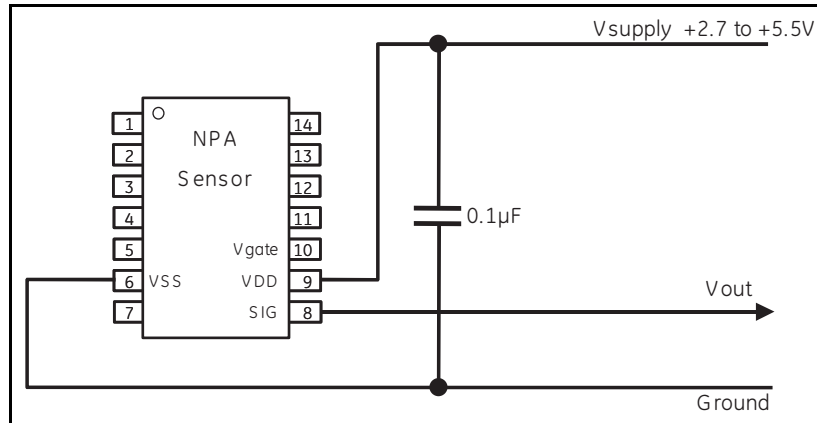


Figure 2: Ratiometric Voltage Output

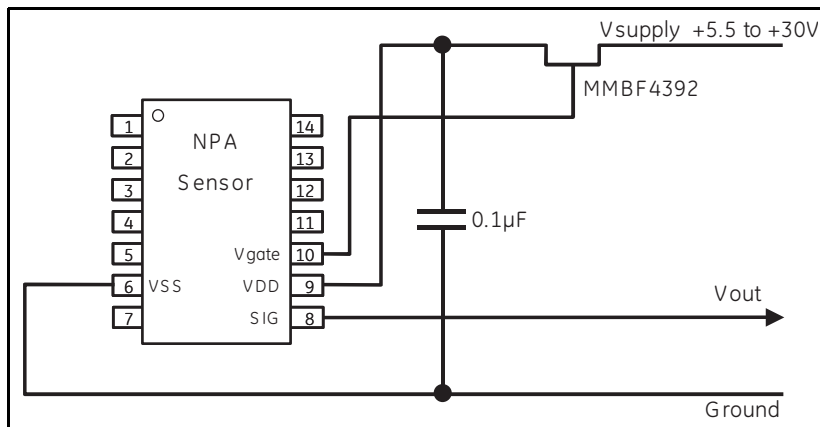


Figure 3: Absolute Voltage Output

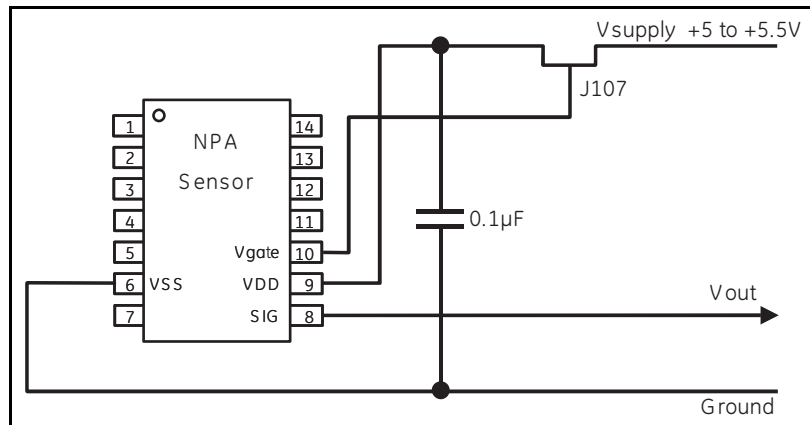


Figure 4: Ratiometric Voltage Output with Overvoltage Protection

Note: Standard analogue versions of NPA are configured for ratiometric operation as shown in Figure 2. For the circuits in Figures 3 and 4, a special version of the NPA with pin 10 (Vgate) activated should be used.

Typical output load resistor R_L (to V_{supply} or Ground) = 10 k Ω (minimum 2.5 k Ω)

Typical output load capacitance C_L = 10 nF (maximum 15 nF)