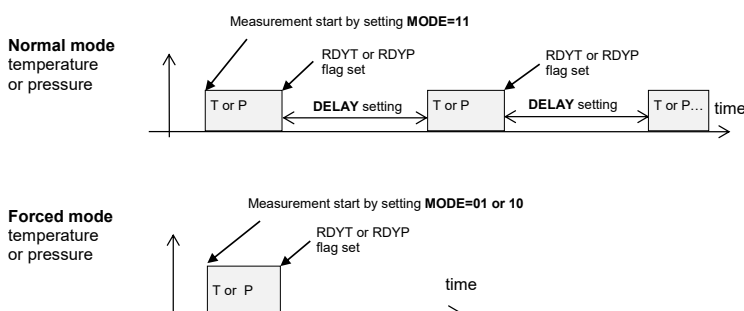
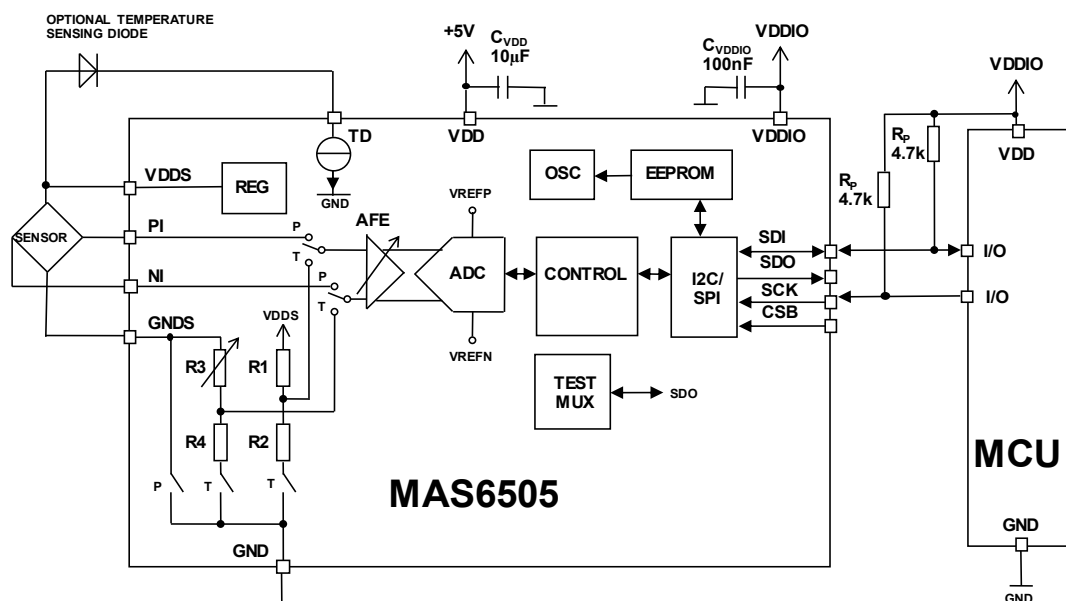


Low Power Piezoresistive Sensor Interface IC

The MAS6505 uses analog front-end (AFE) comprising of a chopper amplifier with very low noise performance (0.27 μVrms). The analog-to-digital converter (ADC) employs a delta-sigma conversion technique to achieve high resolution (22-bit). It can operate from very wide range of supply voltages (1.71V...5.5V) and it has extremely low current consumption (down to 0.8 μA , one measurement in a second) which make it an ideal solution for battery powered applications. Two different temperature sensing methods are supported; sensor bridge resistance sensing or using external temperature sensing diode. The 512-bit EEPROM memory is available for storing sensor trimming and calibration coefficients on chip. The device is operated using standard I2C and SPI serial bus interfaces.

Features

- ◆ 22-bit ratiometric ADC + chopper AFE
- ◆ Low noise Analog Front End 0.27 μVrms
- ◆ IIR filter options: 2, 4, 8, 16
- ◆ Normal Mode: automated measurements
- ◆ Forced mode: planned measurements
- ◆ Seven OSR resolution options
- ◆ Very low current consumption max. 25 μA
- ◆ Internal clock oscillator
- ◆ I2C- and SPI-Bus
- ◆ 512 Bit EEPROM memory



Applications

MAS6505 is a high resolution sensor signal interface IC designed for piezoresistive sensor modules.

- ◆ MEMS pressure sensor modules
- ◆ Altimeters
- ◆ Barometers
- ◆ Navigation systems
- ◆ Temperature measurement
- ◆ Battery powered systems
- ◆ Industrial and process control applications