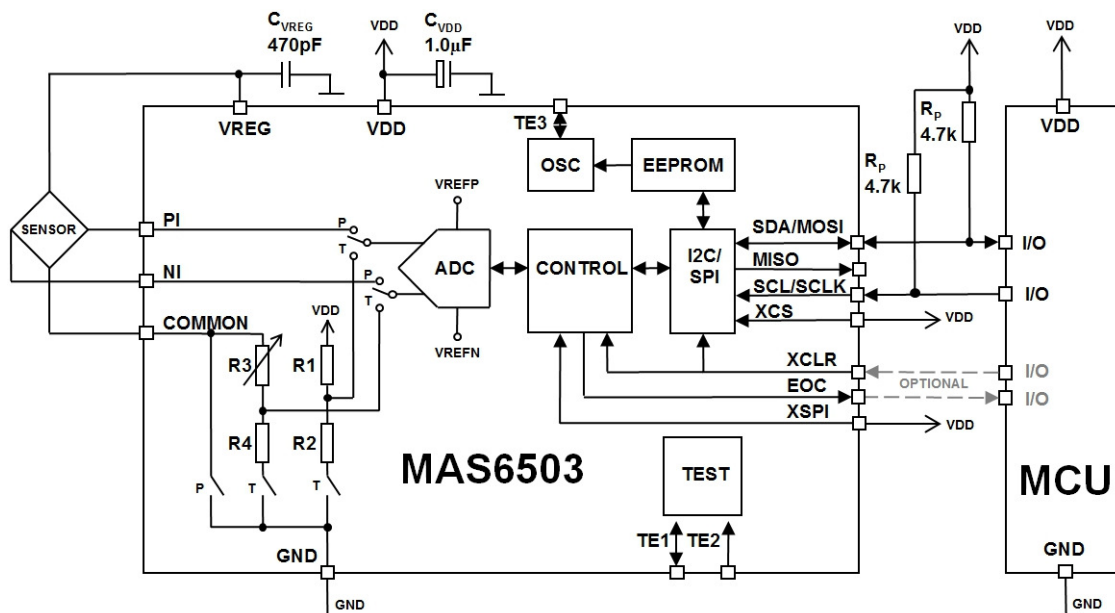


Micro Analog Systems releases high resolution Low Power Piezo Resistive Sensor Signal Interface IC

Targeted for MEMS based pressure sensor modules

Helsinki, Finland – 3 October 2013 - Micro Analog Systems Oy today announced [MAS6503](#), a 24-bit Piezo Resistive Sensor Signal Interface IC primarily intended for MEMS based pressure sensor modules.

The device uses a ratiometric AD-converter principle employing a delta-sigma ($\Delta\Sigma$) conversion technique, giving very good noise performance. Its current consumption is extremely low (18.3 μ A, one pressure conversion in a second at maximum resolution and including sensor bridge current) and it can operate at low supply voltage from 1.8 V to 3.6 V which makes it an ideal solution for interfacing a piezo-resistive sensor in power consumption critical portable applications. The effective number of bits (ENOB) of the ADC is 17.4 bits. The over sampling ratio (OSR) of the $\Delta\Sigma$ -converter has five values to choose from for further optimization between conversion accuracy, speed and current consumption. MAS6503 also features supply voltage monitoring mode which is especially useful in battery operated systems. The external sensor bridge can be used to sense not only pressure but also temperature, using the built-in sensor sampling switches. The MAS6503 communicates via a standard 2-wire I²C serial bus interface.



FEATURES

- Low Standby Current Consumption 10 nA Typ
- Very Low Supply Current: 0.9 μ A...18.3 μ A Typ
- Supply Voltage: 1.8 V...3.6 V
- Ratiometric $\Delta\Sigma$ Conversion
- Selectable Input Signal Ranges (VDD=2.7V):
 - ┌ 373, 253, 172 and 115 mV_{PP}
- Selectable Optional Offsets (VDD=2.7V):
 - ┌ ± 126 , ± 86 , ± 57 and ± 40 mV
- Selectable Sensor Resistance Values
 - ┌ 2, 2.5, 3, 3.5, 4, 4.5, 5 and 10 k Ω
- Over Sampling Ratio: 4096, 2048, 1024, 512 and 256
- Internal System Clock Signal 250 kHz
- Conversion Times 1.41 ms...16.77 ms Typ
- 2-Wire Serial Data Interface (I²C Bus)
- 256 Bit EEPROM Memory
- Good Noise Performance thanks to the $\Delta\Sigma$ Architecture
- VDD monitoring mode

MAS6503 is available in a QFN-16 4x4x0.75 package as well as tested wafer or die in wafer pack. For further information and samples please contact Micro Analog Systems Oy.

About Micro Analog Systems

Founded in 1984, Micro Analog Systems Oy is a privately owned fabless semiconductor house located in Helsinki, Finland. MAS supplies Application Specific Standard Parts and ASICs for worldwide customer base. MAS current product portfolio consists of time signal receiver ICs, crystal oscillator ICs and AD converters for sensor applications as well as of other high performance analog ICs.

For More Information

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