



- ***OEM PRESSURE TRANSDUCER FULLY TEMPERATURE COMPENSATED AND CALIBRATED DUAL-IN-LINE PACKAGE***

DESCRIPTION

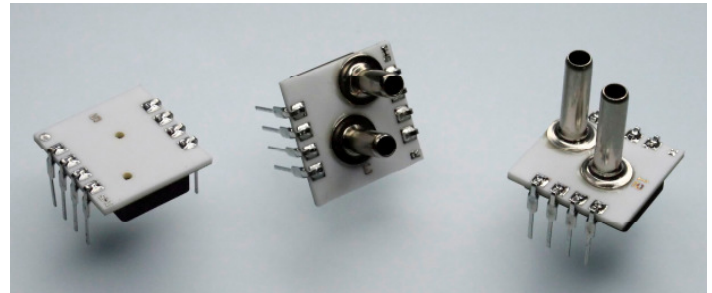
The **SM5600** Series of OEM pressure sensors are fully calibrated, temperature compensated pressure sensors in dual in-line packages for printed circuit board mounting. These sensors offer improved performance as well as the option for either constant current or constant voltage excitation. Ultra-low pressure ranges are also available (see **SM5651/SM5652** datasheet), resulting in the broadest selection of standard pressure ranges in the industry.

The **SM5600** Series pressure sensors are constructed by attaching a highly stable piezoresistive pressure sensor chip to a ceramic substrate. Thick film resistors on the ceramic are laser trimmed during manufacturing to provide zero offset calibration, temperature compensation for zero offset, and temperature compensation for sensitivity. In the Model **SM5611**, an additional resistor is trimmed to normalize the output of an external differential amplifier to provide span calibration when the sensor is driven by a constant current supply. In the Model **SM5612**, a constant voltage supply can be used and the normalized output span of each sensor can then be easily amplified.

The model **SM5611** is designed for constant current excitation.

The model **SM5612** is designed for constant voltage excitation.

Various electrical pin and pressure port configurations are available for flexibility in matching this product to specific applications.



FEATURES

- 15, 30, 60, and 100 PSI FS Ranges Available
- Constant voltage and constant current versions
- Easy to use dual in-line package (DIP)
- Wide 0-60°C compensated temperature range
- Span calibration to $\pm 2\%$
- Zero offset calibration
- High performance, stable packaged silicon chip
- Gage, differential, and absolute pressure configurations

APPLICATIONS

- Barometric Pressure
- Medical Instrumentation
- Environmental Control
- Altimeters
- Automotive Diagnostics
- Appliances



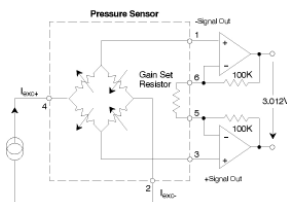
CHARACTERISTICS FOR SM5611/SM5612 - SPECIFICATIONS

Test Conditions: Model SM5611 w/excitation = 1.500mA @ 25 °C, Model SM5612 w/excitation = 10.00Vdc @ 25 °C, unless otherwise specified.

	Min.	Typ.	Max.	Units	Notes
Excitation					
Current (SM5611)	0.00	1.50	3.00	mA	
Voltage (SM5612)	0.00	10.00	20.00	V	
Output					
Span (SM5611)	75.0	105.0	150.0	mV	1
Span (SM5612)	39.5	40.0	40.5	mV	2
Offset	-2.00	±0.20	2.00	mV	
Temperature Performance					
TC Span	-0.5	±0.2	0.5	%FS	3
TC Offset	-0.5	±0.2	0.5	%FS	3
Temp Hysteresis		±0.1		%FS	
Accuracy					
Linearity	-0.10	±0.05	0.10	%FS	4
Repeatability	-0.10	±0.05	0.10	%FS	
Pressure Hysteresis	-0.10	±0.05	0.10	%FS	
Sensitivity Matching	-2.00	±0.20	+2.00	%FS	1, 5
Impedance (SM5611)					
Z Input	1.80	3.00	3.80	kΩ	
Z Output	2.70	3.30	3.80	kΩ	
Impedance (SM5612)					
Z Input	4.50	8.00	25.00	kΩ	
Z Output	2.00	2.50	3.80	kΩ	
Temperature Range					
Calibration	0		60	°C	
Operating	-40		125	°C	
Storage	-55		125	°C	
Dynamic Characteristics					
Proof Pressure	3X or 225 PSI, whichever is less			FS Pressure	
Burst Pressure	5X or 225 PSI, whichever is less			FS Pressure	

Notes:

1. Positive Pressure is defined as entry on the bottom side of the die; gain, during factory calibration, is set using negative pressure
2. Output span of unamplified sensor
3. Measured over a temperature range of 0 to 60 °C.
4. Best fit straight line
5. Sensitivity matching relates to part-to-part matching



Circuit Configuration for SM5611

Model 5611 Pin-out

- 1 -Signal Out
- 2 -I_{exc}
- 3 +Signal Out*
- 4 +I_{exc}
- 5 Gainset Resistor
- 6 Gainset Resistor

Model 5612 Pin-Out

- 1 -Signal Out
- 2 -V_{exc}
- 3 +Signal Out*
- 4 +V_{exc}
- 5
- 6

*Output increases as pressure is increased on Positive Differential Tube or Absolute Tube

DO NOT connect to unlabeled pins

ORDERING INFORMATION:

Excitation
1: Constant Current
2: Constant Voltage

Pin Configuration
3: Pins opposite direction of tube
5: Surface mountable Pins opposite side of tubes

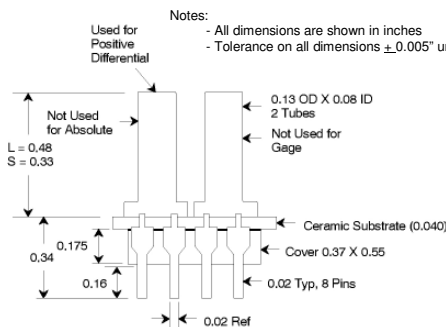
Tube Length
L: Long (0.480" ± 0.005")
N: No Tube
S: Short Tube (0.330" ± 0.005")

Pressure Type
A: Absolute (1 Tube)
D: Differential (2 Tubes)
G: Gauge (1 Tube)

Model Number
SM5612 - 005 - D - 3 - L
Pin Configuration
Excitation Pressure range Pressure Type Tube Length

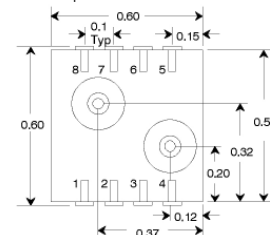
Pressure Ranges

PSI	5611/ 5612
15	015
30	030
60	060
100	100



Notes:

- All dimensions are shown in inches
- Tolerance on all dimensions ±0.005" unless otherwise specified.



NOTICE

Information in this document is provided solely to enable software and system implementers to use Silicon Microstructures, Inc. products and/or services. No express or implied copyright licenses are granted hereunder to design or fabricate any silicon-based microstructures based on the information in this document.

Silicon Microstructures, Inc. makes no warranty, representation, or guarantee regarding the suitability of its products for any particular purpose, nor does Silicon Microstructures, Inc. assume any liability arising out of the application or use of any product or silicon-based microstructure, and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Parameters that may be provided in Silicon Microstructures, Inc. data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. Silicon Microstructures, Inc. assumes no responsibility for any inaccuracies and/or errors in this publication. All operating parameters, must be validated for each customer application by customer's technical experts. Silicon Microstructures, Inc. does not convey any license under its patent rights nor the rights of others. Silicon Microstructures, Inc. makes no representation that the circuits are free of patent infringement. Silicon Microstructures, Inc. products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Silicon Microstructures, Inc. product could create a situation where personal injury or death may occur. Should Buyer purchase or use Silicon Microstructures products for any such unintended or unauthorized application, Buyer shall indemnify and hold Silicon Microstructures, Inc. and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that Silicon Microstructures, Inc. was negligent regarding the design or manufacture of the part. Silicon Microstructures, Inc. reserves the right to make changes without further notice to any products herein

Silicon Microstructures, Inc.™ and the Silicon Microstructures, Inc. logo are trademarks of Silicon Microstructures, Inc. All other service or product names are the property of their respective owners.
© Silicon Microstructures, Inc. 2001-2007. All rights reserved.

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9