

- **SURFACE MOUNT AND DIP PRESSURE SENSORS LOW-COST PACKAGED DIE**

DESCRIPTION

Silicon Microstructures provides its two most popular pressure sensor die in surface mount dual in-line package (SO-16) configuration. All parts in these series are uncompensated high-performance die mounted in an injection-molded package designed for surface mounting.

These packaged sensor die provide a way for OEM manufacturers to incorporate pressure sensors at costs close to raw die prices, without the need to handle, attach, or wire bond silicon sensor die.

Options include pressure range, absolute or gage configuration, and a choice of cap configurations. The result is a versatile product line suitable for a wide range of OEM applications.

The low-pressure series (model **SM5470**) incorporate Silicon Microstructures unique low-pressure die to achieve high performance in pressure ranges from 0.15 PSI full-scale to 3 PSI full-scale in gauge and differential configuration.

The model **SM5430** comes in gauge, differential, and absolute versions for pressure ranges from 5 PSI to 100 PSI.



FEATURES

- Low pressure (from 0-0.15 to 0-100 PSI FS)
- Easy to Use
- Compact and Light-weight
- High-performance, Stable Silicon Chip and Package
- Easily Embedded in OEM Equipment
- High-volume, Low Cost

APPLICATIONS

- Altimeters
- Barometric Correction
- Tire Gauges
- Digital Pressure Gauges
- Environmental Monitoring
- Appliances
- Consumer and Sports
- HVAC
- Medical Instrumentation and Monitoring
- Pressure Differential and Flow Monitoring
- Hand-held Gauges

**Now Available in
Tape and Reel**

SM5430/SM5470

CHARACTERISTICS FOR SM5430/SM5470 - SPECIFICATIONS

All parameters measure at 5V excitation at room temperature, unless otherwise specified.

All Models

Parameter	Min.	Typ.	Max.	Units	Notes	
Excitation Voltage	0	5.0	10.0	V		
Excitation Current	0	1.5	3.0	mA		
Offset	SM5470	-75	-30	+25	mV	
	SM5430	-50	0	+50	mV	
TC Span	-15	-19	-24	%FS/100°C	1	
TC Resistance	33	28	25	%/100°C	1	
Bridge Impedance	2.7	3.3	4.0	kΩ		
Operating Temp	-40		85	°C		
Storage Temp	-55		125	°C		

SM5430 Standard Pressure Series

Span (FS Range), PSI (kPa)	Min.	Typ.	Max.	Units	Notes
5 (34)	75	100	125	mV	3
15 (103)	105	145	175	mV	3
30 (207)	115	165	195	mV	3
60 (414)	115	180	220	mV	3
100 (689)	115	200	250	mV	3
Linearity	-0.2	± 0.07	+0.2	%FS	4
TC Offset	-5	-1	+5	%FS/100°C	1
Burst Pressure	>5X			Rated FS Pressure	2

SM5470 Low Pressure Series Only

Span (FS Range), PSI (kPa)	Min.	Typ.	Max.	Units	Notes
0.15 (1.03)	25	50	85	mV	3
0.30 (2.07)	25	50	85	mV	3
0.80 (5.52)	25	50	85	mV	3
1.50 (10.3)	25	50	85	mV	3
3.00 (20.7)	25	50	85	mV	3
Linearity	-0.3	± 0.1	+0.3	%FS	4
TC Offset		± 12		%FS/100°C	1
Burst Pressure	15X			Rated FS Pressure	2

Notes:

1. Measured from 0 to 70°C
2. Sensor die will survive pressure specified for all ranges. Maximum package pressure is 150 PSI.
3. Measured at 5V, constant voltage excitation
4. Defined as best-fit straight line (BFSL); for 0.3 PSI full-scale, linearity is ± 0.5%FS. For 0.15 PSI full-scale, linearity is ± 2.5%FS.

ORDERING INFORMATION

Model Number Pressure Type

SM5470 - 008 - G - B

Pressure Range Cap Type

Pressure Type

- A: Absolute (except 5470)
- G: Gauge
- D: Differential

Available Cap Type

- B: Horizontal Barbed port(s)
- C: Vertical Barbed port(s)

Std. Pressure Ranges

PSI	5430
5	005
15	015
30	030
60	060
100	100

Low Pressure Ranges

PSI	5470
0.15	001
0.30	003
0.80	008
1.50	015
3.00	030

Rev 1.3 07_06

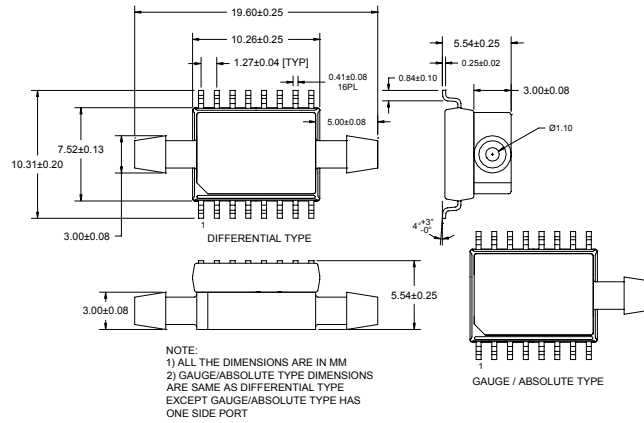
© 2004-2006

Pin Out -- SM5430/SM5470

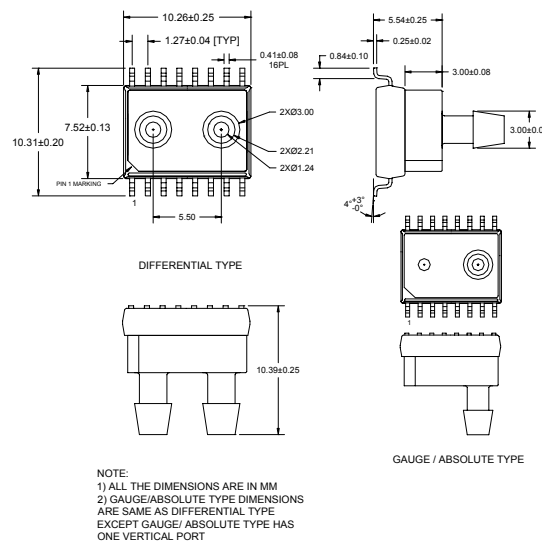


SM5430/SM5470

B- Horizontal Barb Configuration



C- Vertical Barb Configuration



Dimensions (in millimeters) -- SM5430/SM5470

Notice:

Silicon Microstructures, Inc. reserves the right to make changes to the product contained in this publication. Silicon Microstructures, Inc. assumes no responsibility for the use of any circuits described herein, conveys no license under any patent or other right, and makes no representation that the circuits are free of patent infringement. While the information in this publication has been checked, no responsibility, however, is assumed for inaccuracies.

Silicon Microstructures, Inc. does not recommend the use of any of its products in life support applications where the failure or malfunction of the product can reasonably be expected to cause failure of a life-support system or to significantly affect its safety or effectiveness. Products are not authorized for use in such applications.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.