

# Series AC3030

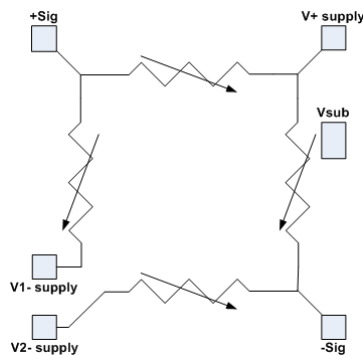
## 20 to 500 mbar

### Low Pressure Sensor Die

The AC3030 series pressure die is a new generation of low-pressure die. It has been designed to replace existing low-pressure die with a much smaller foot-print, and improved zero-stability, reduced g-sensitivity and reduced sensitivity to humidity.

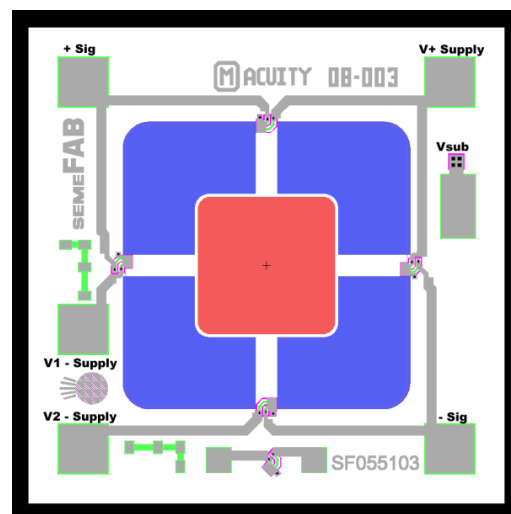
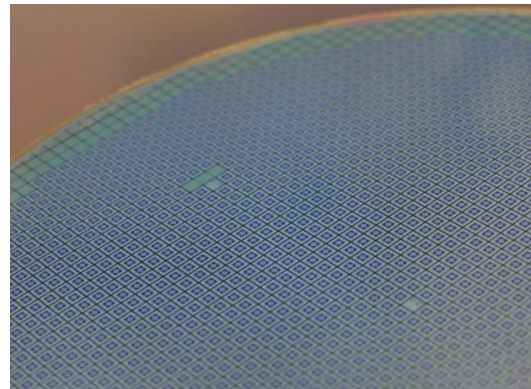
Based on the same basic structure and sensing element as the lower pressure AC3050 series, the AC3030 is a small (1.6 mm square) die that was originally optimized for 20 mbar to 100 mbar full-scale. Two new ranges of 200 and 500 mbar have recently been introduced. The AC3030 can be driven to higher pressures with good performance, or further amplified for lower pressure sensitivity.

Suitable for a wide range of packages, it is particularly designed for low-pressure differential sensing in such applications as HVAC, air-flow, and a variety of industrial pressure and flow applications.



#### Equivalent Circuit Diagram

*For maximum performance, Vsub should be tied to the highest voltage in the circuit.*



#### Pin-out of AC3030 Low-Pressure Die

+ Sig increases and -Sig decreases when pressure is applied to the top of the die

Specification	Low Pressure Sensor - AC3030					Note
		Min	Nominal	Max	Unit	
<b>Mechanical</b>						
Stepping size	X	1.599	1.600	1.601	mm	
	Y	1.599	1.600	1.601	mm	
Unconstrained wafer thickness	Z	0.401	0.406	0.411	mm	
<b>Electrical</b>						
<b>Resistance</b>						
Bridge resistance - 3.5k		3.25	3.70	4.25	kohms	1
TCR		2300	2800	3100	ppm/degree C	2
Resistance Ratiometricity		-1.0	0.1	1.0	%	3
<b>Offset</b>						
Offset - No Pressure		-100.0	0.0	25.0	mV	1
Offset Ratiometricity		-0.2	0	0.2	mV/V	3
TCO		-25	2	25	microV/V/degree C	2
<b>Leakage</b>						
Current Leakage - individual		0.1	1.2	20	nA	4
<b>Sensitivity</b>						
Span		30	55	82	mV for 20, 50, and 100 mBar	5
		105	150	200	mV for 200 and 500 mBar	5
TCS		-2100	-1800	-1400	ppm/degree C	2
Pressure Nonlinearity		-0.75	0.15	0.75	%	6
Pressure Nonlinearity - F/B		-1.25	0.15	1.25	%	7
<b>Mechanical Pressure</b>						
<b>Full Scale Pressure Ranges</b>		<b>20, 50, 100, 200, and 500</b>			<b>mBar</b>	<b>8</b>
Overpressure - Burst		>15X			FS Pressure	9
Overpressure - Proof		>5X			FS Pressure	9

**Note**

- 1 Measured at 5.0 volts
- 2 Measured at +25 and +70 °C, normalized by reading at 25 °C
- 3 Measured at -2.5 and 5.0 Volts, normalized by reading at 5.0 volts
- 4 Measured from VSub substrate contact to any Resistor Pad at 10 V
- 5 Full scale output at 5 Volt drive and rated pressure
- 6 1/2 TBNL (Terminal Base Nonlinearity at 0, 50%, and 100% FS) with topside pressure
- 7 Ratio of sensitivity with +FS and - FS pressures applied
- 8 For custom pressure ranges, consult APSP.
- 9 For 200 and 500 mBar, Burst Pressure is >5X and Proof Pressure is >3X

**Ordering Information:****AC3030-XXX**

where XXX = 020 for 20 mBar,  
= 050 for 50 mBar,  
= 100 for 100 mBar,  
= 200 for 200 mBar, and  
= 500 for 500 mBar

APSP reserves the right to make changes to its products and specifications at any time, without notice. All sales are made pursuant to APSP standard terms and conditions of sale. While the information in this publication has been checked, APSP makes no representations or warranties other than as specifically set forth in the terms and conditions of sale. APSP assumes no responsibility for the use of any information or products described herein, conveys no license under any patent or other right, and makes no representation that the information or products are free of patent infringement. APSP does not recommend the use of any of its products in life support or other critical applications. Products are not authorized for use in such applications and customer assumes the full risk of any such use. APSP and the APSP logo are trademarks of APSP.

## We are here for you. Addresses and Contacts.

---

### Headquarter Switzerland:

Angst+Pfister Sensors and Power AG  
Thurgauerstrasse 66  
CH-8050 Zurich  
Phone +41 44 877 35 00  
[sensorsandpower@angst-pfister.com](mailto:sensorsandpower@angst-pfister.com)

### Office Germany:

Angst+Pfister Sensors and Power Deutschland GmbH  
Edisonstraße 16  
D-85716 Unterschleißheim  
Phone +49 89 374 288 87 00  
[sensorsandpower.de@angst-pfister.com](mailto:sensorsandpower.de@angst-pfister.com)

### Office North America:

Angst+Pfister North America Inc.  
10391 Brecksville Rd.  
US-Brecksville, OH 44141  
Phone +1 440 375-5212  
[info.apus@angst-pfister.com](mailto:info.apus@angst-pfister.com)

---

Scan here and get an overview of personal contacts!



<https://sensorsandpower.angst-pfister.com/en/>

---