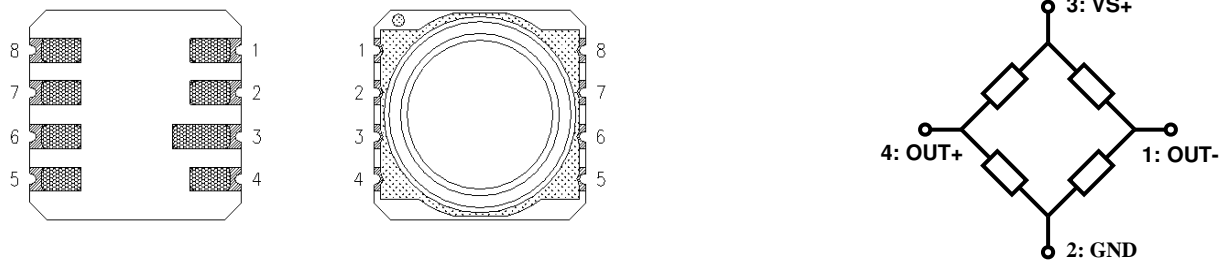


## MS54XX

Miniature SMD Pressure Sensor

### PIN CONFIGURATION

VERSION WITH CERAMIC CARRIER AND METAL CAP



### PIN DESCRIPTION

Pin Name	Pin No	Function
OUT-	1	Negative output voltage of Wheatstone bridge
GND	2	Ground
VS+	3	Supply voltage of Wheatstone bridge
OUT+	4	Positive output voltage of Wheatstone bridge

### ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Conditions	Min	Max	Unit
Supply voltage	VS+	Ta = 25 °C	-	20	V
Storage temperature	Ts		-40	+125	°C
Overpressure MS5401-AM			-	5	
MS5401-BM (1)	P	Ta = 25 °C	-	10	bar
MS5407-AM (2)			-	21	
MS5412-BM			-	30	
MS5470-AM			-	180	

### NOTES

- 1) The MS5401-BM is qualified referring to ISO Standard 2281 and can withstand an absolute pressure of 11 bar in salt water or 100 m water respectively.
- 2) The MS5407-AM is qualified referring to ISO Standard 2281 and can withstand an absolute pressure of 21 bar in salt water or 200 m water specifically.

**ELECTRICAL CHARACTERISTICS**

**HIGH SENSITIVITY VERSION**

(Vs+ = 5 V; Ta = 25 °C)

	Parameter	Min	Typ	Max	Unit	Notes
MS5401-AM	Operating pressure range	0	-	1	bar	
	Full-scale span (FS)	190	240	290	mV	
	Sensitivity	190	240	290	mV/bar	
	Linearity	-	±0.15	±0.40	% FS	1, 6
MS5407-AM	Operating pressure range	0	-	7	bar	
	Full-scale span (FS)	322	392	462	mV	
	Sensitivity	46	56	66	mV/bar	
	Linearity		±0.15	±0.40	% FS	1, 6
MS5470-AM	Operating pressure range	0	-	70	bar	
	Full-scale span (FS)	250	310	370	mV	
	Sensitivity	3.6	4.4	5.3	mV/bar	
	Linearity		±0.25	±0.50	% FS	1, 6
All Ranges	Operating temperature range	-40	-	125	°C	
	Zero pressure offset	-40	0	40	mV	
	Pressure hysteresis	-	-	±0.20	% FS	2, 6
	Temperature hysteresis	-	0.3	0.8	% FS	3, 6
	Repeatability	-	-	±0.20	% FS	4, 6
	Bridge resistance	3.0	3.4	3.8	kΩ	
	Temperature coefficient of resistance	+2'400	2'900	+3'300	ppm/°C	5, 6
Temperature coefficient of span	-1'500	-1'900	-2'300	ppm/°C	5, 6	
Temperature coefficient of offset	-80	-	+80	μV/°C	5, 6	

**NOTES**

- 1) Deviation at one half full-scale pressure from the least squares best line fit over pressure range.
- 2) Maximum difference of output voltage after 1 pressure cycle at any pressure within the operating pressure range.
- 3) Maximum difference in offset after one thermal cycle from -40°C to +125°C.
- 4) Same as 2) after 10 pressure cycles.
- 5) Slope of the end-point straight line from 25°C to 60°C.
- 6) Not 100% tested.