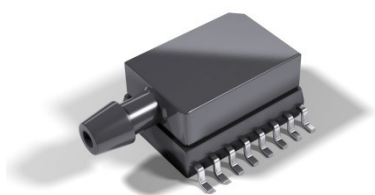


Medium Pressure Sensor Analog Output

SM6844-015-A-B-5-S

FEATURES



- Analog pressure calibrated and temperature compensated output
- Amplified analog output
- Compensated temperature range: 0 to 85°C
- Absolute pressure configuration
- Insensitive to mounting orientation
- Robust JEDEC SOIC-16 package for automated assembly
- Manufactured according to ISO9001 and ISO/TS 16949 standards
- RoHS & REACH compliant
- Pressure range: 15 PSIA (103 kPa)

DESCRIPTION

The SM6844 Series is an absolute pressure MEMS sensor family offering state-of-the-art pressure transducer technology and CMOS mixed signal processing technology to produce an analog, fully conditioned, pressure and temperature compensated sensor in JEDEC standard SOIC-16 package with a single horizontal porting option.

Combining the pressure sensor with a signal-conditioning ASIC in a single package simplifies the use of advanced silicon micro-machined pressure sensors. The pressure sensor can be mounted directly on a standard printed circuit board and a high level, calibrated pressure signal can be acquired from the analog output. This eliminates the need for additional circuitry, such as a compensation network or microcontroller containing a custom correction algorithm.

The SM6844 is shipped in sticks or tape & reel.

Medical	Industrial	Consumer
Sleep Apnea	Airflow Measurement	Sports Equipment
CPAP	Pneumatic Gauges	Appliances
Ventilators	Pressure Switches	
Gas Flow Instrumentation	Safety Cabinets	
Air Flow Monitors	Life Sciences	
Negative Pressure Wound Therapy	Gas Flow Instrumentation	

ABSOLUTE MAXIMUM RATINGS

All parameters are specified at V_{DD} = 5 V DC supply voltage at 25°C, unless otherwise noted.

No.	Characteristic	Symbol	Minimum	Typical	Maximum	Units
1	Supply Voltage	V _{DD}	0.0		6.0	V
2	Supply Current	I _{VDD}	0.0	2.0	4.0	mA
3	Operating Temperature ^(a)	T _{OP}	-40		+125	°C
4	Storage Temperature ^(a)	T _{STG}	-40	-	+125	°C

Notes:

a. Tested on a sample basis.

b. Clean, dry gas compatible with wetted materials. Wetted materials include Pyrex glass, silicon, alumina ceramic, epoxy, RTV, gold, aluminum, and nickel.

No.	Product Number	Operating Pressure	Proof Pressure (P _{PROOF}) ^(a)	Burst Pressure (P _{BURST}) ^(a)
5	SM6844-015-A-B-5-S	0 to 15 PSIA	±45 PSI	±75 PSI

Notes:

a. Tested on a sample basis.

OPERATING CHARACTERISTICS TABLE

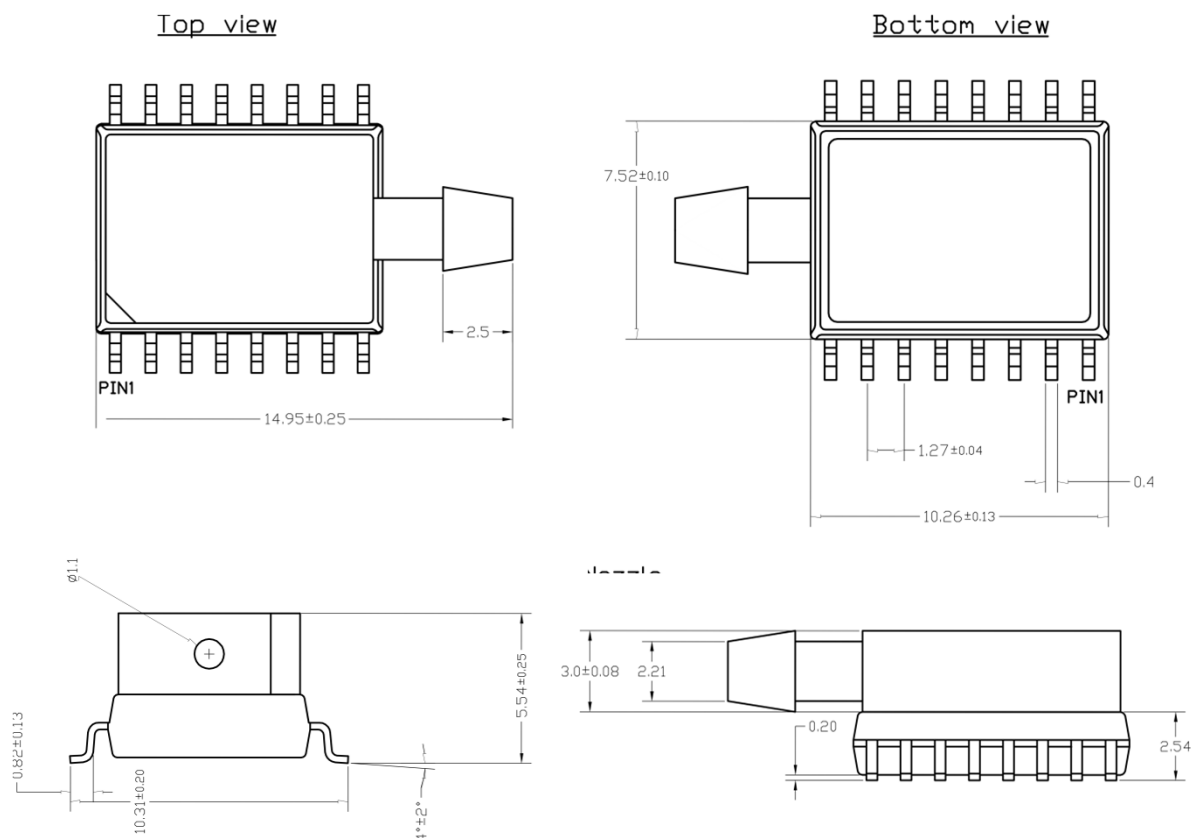
All parameters are specified at V_{DD} = 5 V DC supply voltage at 25°C, unless otherwise noted.

Single-Ended						
No.	Characteristic	Symbol	Minimum	Typical	Maximum	Units
6	Supply Voltage	V _{DD}	4.75	5	5.25	V FS
7	Full Scale Span	FSP		4		V
8	Zero Offset Voltage	V _{ZERO}		0.5		V
9	Compensated Temperature Range	T _{COMP}	-0		+85	°C
10	Accuracy ^(c)	ACC	-1		+1	%FS

Notes:

c. The accuracy specification applies over all operating conditions. This specification includes the combination of linearity, repeatability, and hysteresis errors over pressure & temperature.

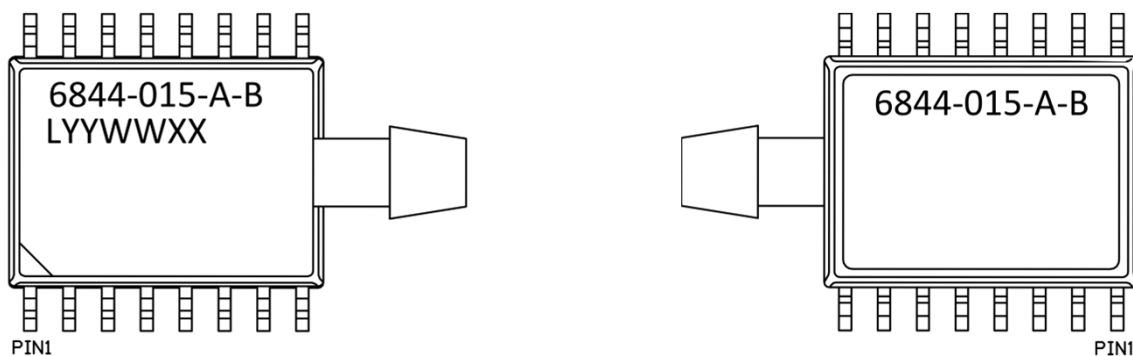
SOIC-16 (B) Single-Horizontal Package Dimensions



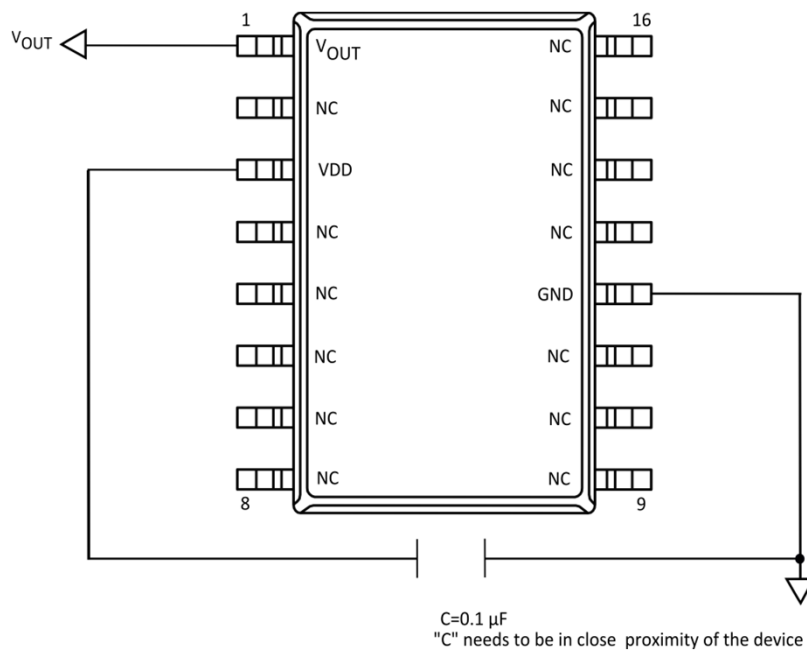
Notes:

- All dimensions in units of [mm].
- Moisture Sensitivity Level (MSL): Level 3.
- Wetted materials: Silicon, glass, copper, silicone, epoxy, mold compound.
- Tolerance on all dimensions ±0.13 mm unless otherwise specified.

Part & Lot Number Identification



SM6844 + Family Applications Circuit



Package Labeling	
Pin No.	Pin Function
1	Vout (Amplified Analog Output)
2	NC
3	VDD
4	NC
5	NC
6	NC
7	NC
8	NC
9	NC
10	NC
11	NC
12	GND
13	NC
14	NC
15	NC
16	NC

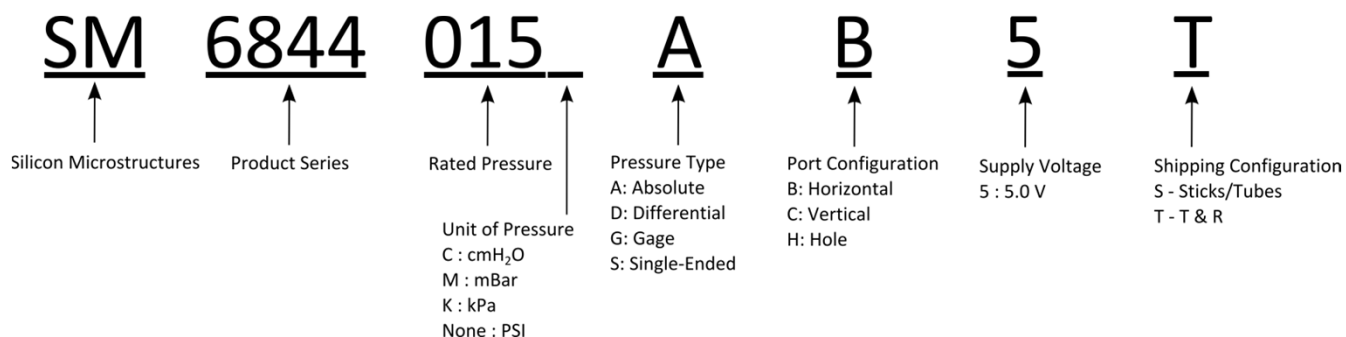
NOTES:

- Do not connect to NC pins

Ordering Information

Order Code	Part Marking	Negative Pressure Range	Positive Pressure Range	Pressure Type	Tube Configuration	Shipping Method
SM6844-015-A-B-5-T	SM6844	0 PSI	15 PSI	Absolute	Single Horizontal	Sticks or Tape & Reel

Part Number Legend



QUALIFICATION STANDARDS

REACH Compliant

RoHS Compliant

PFOS/PFOA Compliant

For qualification specifications, please contact Sales at sales@si-micro.com



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