



# SM95-007-S-040-000 Differential, Vertical Package, 16Bit I<sup>2</sup>C Pressure Sensor

The SM95-007-S-040-000 is a 16-bit digital & analog, low pressure MEMS sensor offering state-of-the-art pressure transducer technology and CMOS mixed signal processing technology to produce a differential, fully conditioned, multi-order pressure and temperature compensated sensor in JEDEC standard SOIC-16 package with Vertical ports. Pressurized from backside to protect top side electronics. The complete datasheet (40DS7860) and I2C Application Note (40AN7000) will be also available by contacting SMI Sales at (408) 577-0100 or sales@si-micro.com.

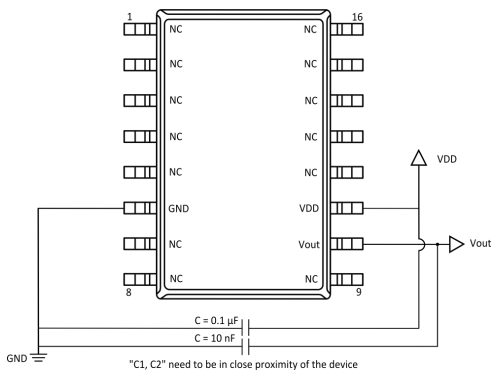
Part number SM95-007-S-040-000 is shipped in sticks and part number SM95-007-S-040-000 is shipped in Tape and Reel.

## Sensor Specification

All parameters are specified at VDD = 3.3 V DC supply voltage at 25°C, unless otherwise noted.

No.	Characteristic	Symbol	Minimum	Typical	Maximum	Units
1	Supply Voltage	VDD	3.0	3.3	3.6	V
2	Supply Current	IDD		4.5		mA
3	Calibration Pressure	P <sub>MIN</sub> / P <sub>MAX</sub>	0		40	cmH2O
4	Compensated Temperature	T <sub>COMP</sub>	-20		85	°C
5	Digital Pressure Output @ P <sub>MIN</sub>	DOUT <sub>MIN</sub>		-26214		Counts
6	Digital Pressure Output @ P <sub>MAX</sub>	DOUT <sub>MAX</sub>		26214		Counts
7	Digital Full Scale Span	DFS		52428		Counts
8	Resolution (Digital Output)			16		Bits
9	Update Rate			2000		S/sec
10	Bandwidth	BW		125		Hz
11	Digital Output Accuracy	DACC	-1		+1	%FS
12	Analog Pressure Output @ P <sub>MIN</sub>	AOUT <sub>MIN</sub>		10		%VDD
13	Analog Pressure Output @ P <sub>MAX</sub>	AOUT <sub>MAX</sub>		90		%VDD
14	Analog Full Scale Span	AFS		80		%VDD
15	Analog Output Accuracy	AACC	-1.5		+1.5	%FS

### Connection Circuit



### Pinout table

Pin No.	Pin function	Pin No.	Pin function
1	NC	9	NC
2	NC	10	V <sub>OUT</sub> (analog output)
3	NC	11	VDD
4	NC	12	I <sup>2</sup> C SCK
5	NC	13	I <sup>2</sup> C SDA
6	GND	14	NC
7	NC	15	NC
8	NC	16	NC

\*For package dimension information, please refer to the complete datasheet.