

PERFORMANCE SPECIFICATIONS

Supply Voltage: 3Vdc

Ambient Temperature: 25°C (unless otherwise specified)

PARAMETERS	MIN	TYP	MAX	UNITS	NOTES
ADC			24	bit	
Input Voltage Range	1.8		3.6	V	2
Supply Current		See Table 1		mA	
Pressure Resolution		See Table 3		%Span	3
Pressure Accuracy		±0.3		%Span	
Total Error Band		See Graph 1		%Span	
Conversion Time		See Table 2		ms	3
Long Term Stability		±0.2		%Span/yr	
Compensated Temperature	-20		+85	°C	
Temperature Resolution		See Table 3		°C	
Temperature Accuracy	-2		+2	°C	
Operating Temperature	-40		+85	°C	
Storage Temperature	-40		+125	°C	
Pressure Overload			2X	Rated	4
Pressure Burst			3X	Rated	5
Interface Type		I ² C			6
Media, Pressure Port	Liquids and gases compatible with 316/316L Stainless Steel				

Notes

1. Coefficients must be read by microcontroller software and are to be used in a mathematical calculation for converting D1 and D2 into compensated pressure and temperature values. For calculation methods and coefficients, see application note APP-01006.
2. Output is not ratiometric to supply voltage.
3. Accuracy: Combined linearity, hysteresis and repeatability.
4. Oversampling ratio: 256 / 512 / 1024 / 2048 / 4096. See Table 2.
5. 2X or 400psi, whichever is less. The maximum pressure that can be applied without changing the transducer's performance or accuracy.
6. 3X or 600psi, whichever is less. The maximum pressure that can be applied to a transducer without rupture of either the sensing element or transducer.
7. Output protocol is I²C only. CSB is tied to GND, setting I²C address: 0x77 (1110111)
8. Device marking: All units are marked with part number, pressure range type, lot number, serial number and date code.
9. Recommend Molex connector 52746-071 (or equivalent) to mate with FPC cable
10. Shipping: Devices are shipped individually packaged in a plastic vial with anti-static foam. For devices without fittings, diaphragms are protected by a static dissipative cap.
11. Direct mechanical contact with diaphragm is prohibited. Diaphragm surface must remain free of defects (scratches, punctures, dents, fingerprints, etc) for device to operate properly. Caution is advised when handling parts with exposed diaphragms. Use protective cap whenever devices are not in use.

Table 1: Supply Current Characteristics

PARAMETERS	Symbol	Conditions	MIN	TYP	MAX	UNITS
Supply Current (1 Sample per second)	I_{DD}	OSR 4096		12.5		μA
		2048		6.3		
		1024		3.2		
		512		1.7		
		256		0.9		
Peak Supply Current		During Conversion		1.4		mA
Standby Supply Current		@ 25°C		0.02	0.14	μA

Table 2: Analog Digital Converter (ADC)

PARAMETERS	Symbol	Conditions	MIN	TYP	MAX	UNITS
Conversion Time	t_c	OSR 4096	7.40	8.22	9.04	ms
		2048	3.72	4.13	4.54	
		1024	1.88	2.08	2.28	
		512	0.95	1.06	1.17	
		256	0.48	0.54	0.60	

Table 3: Typical Resolution

OSR	Typical Pressure Resolution (%Span)	Typical Temperature Resolution (°C)
4096	0.0015	0.002
2048	0.0025	0.003
1024	0.003	0.005
512	0.005	0.008
256	0.008	0.012

Graph 1:

