

The MCT-2A Series
ASIC Compensated
Wide Temperature Range
Multiple Industry Applications



DESCRIPTION

Advanced Sensors Multi Chip Technology (MCT) 2A Series incorporates the latest mixed signal ASIC (Application Specific Integrated Circuit) with a *low pressure* bossed silicon MEMS sensor to provide a high level, temperature compensated transducer. Two electrical outputs ranges with bidirectional or unidirectional pressure types and 3/16in barb ports make it the ideal choice for HVAC or Air Flow measurement applications. The package offers snap tabs for attachment to PCB assemblies and can be easily soldered with only 3 electrical contacts.

APPLICATIONS

- Blocked Filter Detection
- Cabinet Pressure
- Isolation Rooms Control
- Fan Pressure
- Glove Box Pressure

FEATURES

- 1/8in ID Tubing
- ASIC Temperature Compensated
- Two Output Voltage Ranges
- 1% Accuracy
- Minimal Position Stability
- Simple Attachment to PCB

SPECIFICATIONS

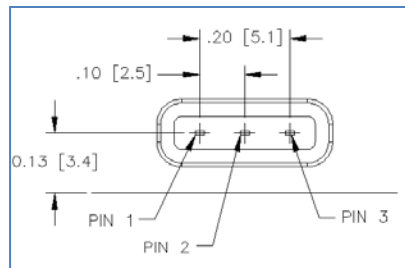
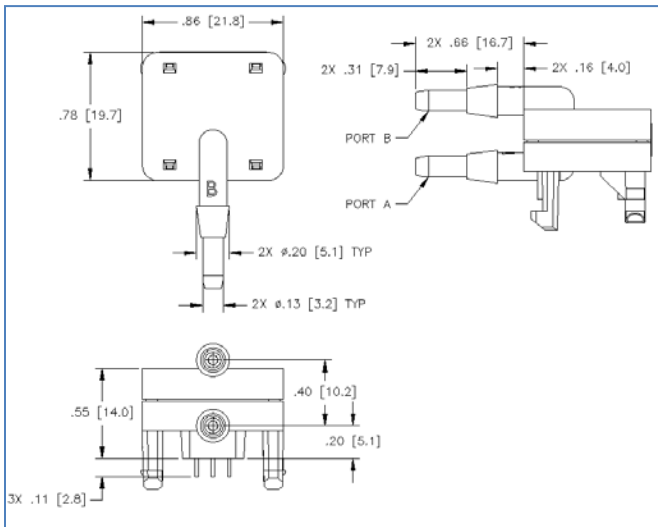
	Symbol	Min	Typical	Max	Unit	Note
Performance Specifications						
Supply Voltage	V_{supply}	2.7	3.30	5.5	V	
Current Consumption				3	mA	
Output DAC Resolution				12	bits	
Output Type 1						
Output at Pmin			10%		V_{supply}	
Output at Pmax			90%		V_{supply}	
Output Type 2						
Output at Pmin			5%		V_{supply}	
Output at Pmax			95%		V_{supply}	
Pressure Accuracy		-0.50		0.50	%FSS	2
Total Error Band	TEB	-1.0		1.0	%FSS	3
Long Term Stability			±0.4		%cts	
Conversion Time			1.0		mS	4
Power On to Valid Data				<10	mS	5
Weight				12	grams	
Compensated Temperature			10 to 60		°C	

SPECIFICATIONS	Symbol	Min	Typical	Max	Unit	Note
Absolute Maximum Conditions						
Supply Voltage				6.5	V	
Storage Temperature		-20		105	°C	
Overage Pressure						
<=10inH2O		5			PSI	
> 10inH2O < 1 psi		7			PSI	
>=1 psi		10			PSI	
Common Mode Pressure				10	PSI	
Media Compatibility		CDA, Non Ionic, Non Corrosive Gases				

Reference Conditions: Vsupply: 3.30Vdc, Ta=25°C. Port A=Positive Pressure.

1. All specification at reference conditions unless otherwise noted. Output is ratio metric to supply voltage.
2. Maximum deviation from a Best Fit Straight Line through Pmin and Pmax measured at 25°C. Errors included Pressure Non Linearity, Pressure Hysteresis and Repeatability.
3. Maximum deviation from the Ideal Transfer Function expressed as a percentage of the %FSS over the compensated temperature range. Includes calibration errors (Offset & Span), temperature errors (Offset & Span), pressure non-linearity, pressure and thermal hysteresis. V_{supply}
4. The time for the output DAC to be updated with new data.
5. The time for the output DAC to have valid data after a power on reset.

MECHANICAL DIMENSIONS in [mm]



Series	Pressure range (psi)	Pressure Units	Pressure Type (Range Availability)	Calibrated Voltage	Output Type
MCT-2A	002 005 010 015 030	W=inH2O	U= Unidirectional (005,010,015,030) B=Bidirectional (All Ranges)	3=3.3Vdc 5=5.0Vdc	1=10-90%Vdd 2=5-95%Vdd
	001	P=PSI	U= Unidirectional (All Ranges) B=Bidirectional (All Ranges)		
	004 010 020 050 100	M=mBar	U= Unidirectional (010,015,030) B=Bidirectional (All Ranges)		

Part Number Example: MCT-2A-005WD31, ±5inH2O, Bidirectional, 0.30 to 3.00Vdc Output,

WARRANTY

Pressure sensors have a limited one-year warranty to the original purchaser. AVSensors will repair or replace, at its option, without charge those items it finds defective. This is the buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall AVSensors be liable for consequential, special, or indirect damages. This warranty does not apply to units that have been modified, misused, neglected or installed where

the application exceeds published ratings. Specifications may change without notice. The information supplied is believed to be accurate and reliable as of this printing, however, we assume no responsibility for its use.

