

CHT-2 Series Dual In Line Package mV Output, Temperature Compensated Current Supply

DESCRIPTION

Advanced Sensor Ceramic Hybrid Technology (CHT) 2 Series is a temperature compensated, mV output, PCB mounted pressure sensor packaged in a rugged Dual In Line package. The Ceramic Hybrid Technology uses a silicon MEMS pressure sensor bound to a ceramic substrate containing thick film resistors that are uniquely laser trimmed for each sensor. Incorporating a flexible design, the CHT-2 Series is available with no, short or long tubes and can be mounted pin up or pins down to allow OEMs to optimize their board design. The CHT-2 series is powered using a constant current and when configured as in the Application Note, the integrated gain set resistor will ensure sensor field interchangeability. The CHT-2 series superior die performance, coupled with rugged ceramic substrate ensures long term stability with superior temperature performance over wide operating range.

APPLICATIONS

- Pneumatic controls
- Automotive diagnostics
- Medical equipment/instrumentation
- Air Speed and Altitude
- Environmental controls
- Barometric pressure measurement
- Factory Automation
- Process Controls

FEATURES

- 1% Field Interchangeability
- Constant Voltage
- Wide selection of port
- Absolute, Differential or Gage pressures
- Temperature Compensated
- 0.1% Pressure Non Linearity

SPECIFICATIONS

	Symbol	Min	Typical	Max	Unit	Note
Performance Characteristic						
Supply Voltage		0.5	1.5	2.0	mA	
Bridge Resistance, Input & Output		2500		6100	Ω	
Zero Pressure Offset		-2.0	± 0.1	+2.0	mV	
Pressure Non Linearity		-0.1		+0.1	PSI	2
Hysteresis & Repeatability			0.05		%FSS	
Full Scale Span	FSS	75		150	mV	3
Temperature Hysteresis, Offset & Span		-0.20		+0.20	%FSS	4
Thermal Error of Span		-0.5		+0.5	%FSS	
Thermal Error of Offset		-0.5		+0.5	%FSS	
Response Time			100		μ S	
Insulation Resistance		50			M Ω	
Long Term Stability, Offset & Span			± 0.4		%FSS	5
Weight				0.3	grams	
Compensated Temperature			0 to 50		$^{\circ}$ C	
Operating Temperatures			-40 to 125		$^{\circ}$ C	

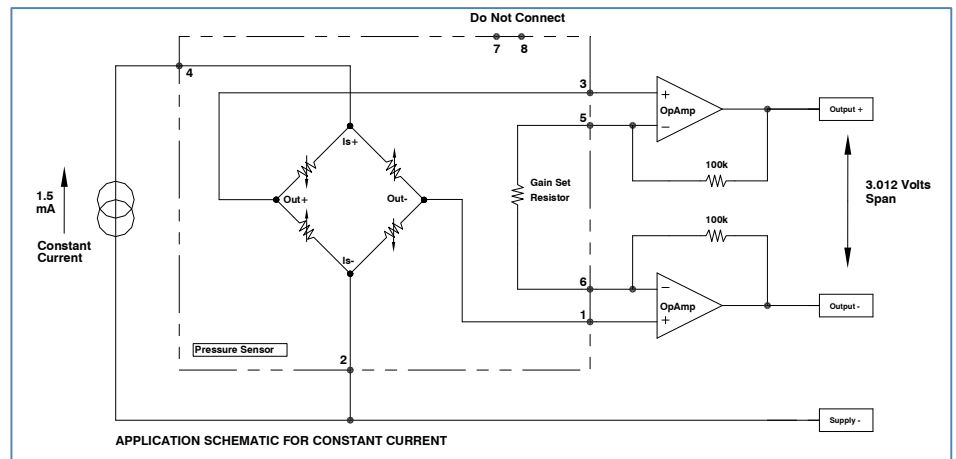
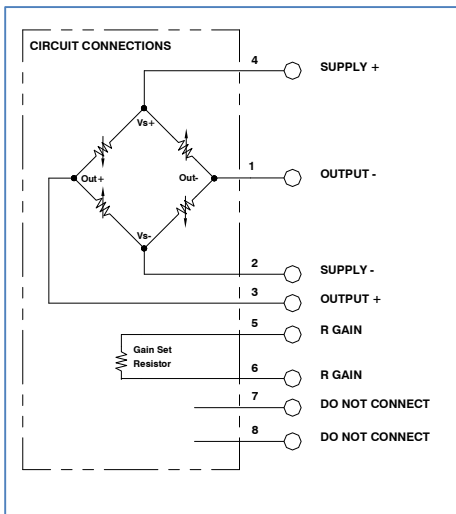
SPECIFICATIONS	Symbol	Min	Typical	Max	Unit	Note
Absolute Maximum Conditions						6
Supply Voltage				3	mA	
Storage Temperature		-50		150	°C	
Overage Pressure						
Burst, Differential Pressure				3x	Range	
Burst , Gauge & Absolute Pressure				10x	Range	
Media Compatibility		CDA, Non Ionic, Non Corrosive Gases				
Wetted Materials		Ceramic, Epoxy, RTV, Silicon, Gold, Aluminum, Palladium Silver PPS (Top Barb Port)				

Reference Conditions: Vsupply: 1.500mA, Ta=25 °C.

1. All specification at reference conditions unless otherwise noted. Output is ratio metric to supply voltage.
2. ½ Terminal Base Non Linearity (Measured at 0, 50% and 100% FS).
3. Full Scale Span output with sensor only. Field Interchangeability of 1% is guaranteed with use of Application Note.
4. Deviation between 50 °C and 0 °C expressed as percentage of reading at 25 °C.
5. Deviation after 1 year period measured at reference conditions.
6. Exceeding Absolute Maximum Specification may damage the device. Extended exposure beyond the operating conditions may affect device reliability.

EQUIVALENT CIRCUIT

APPLICATION CIRCUIT

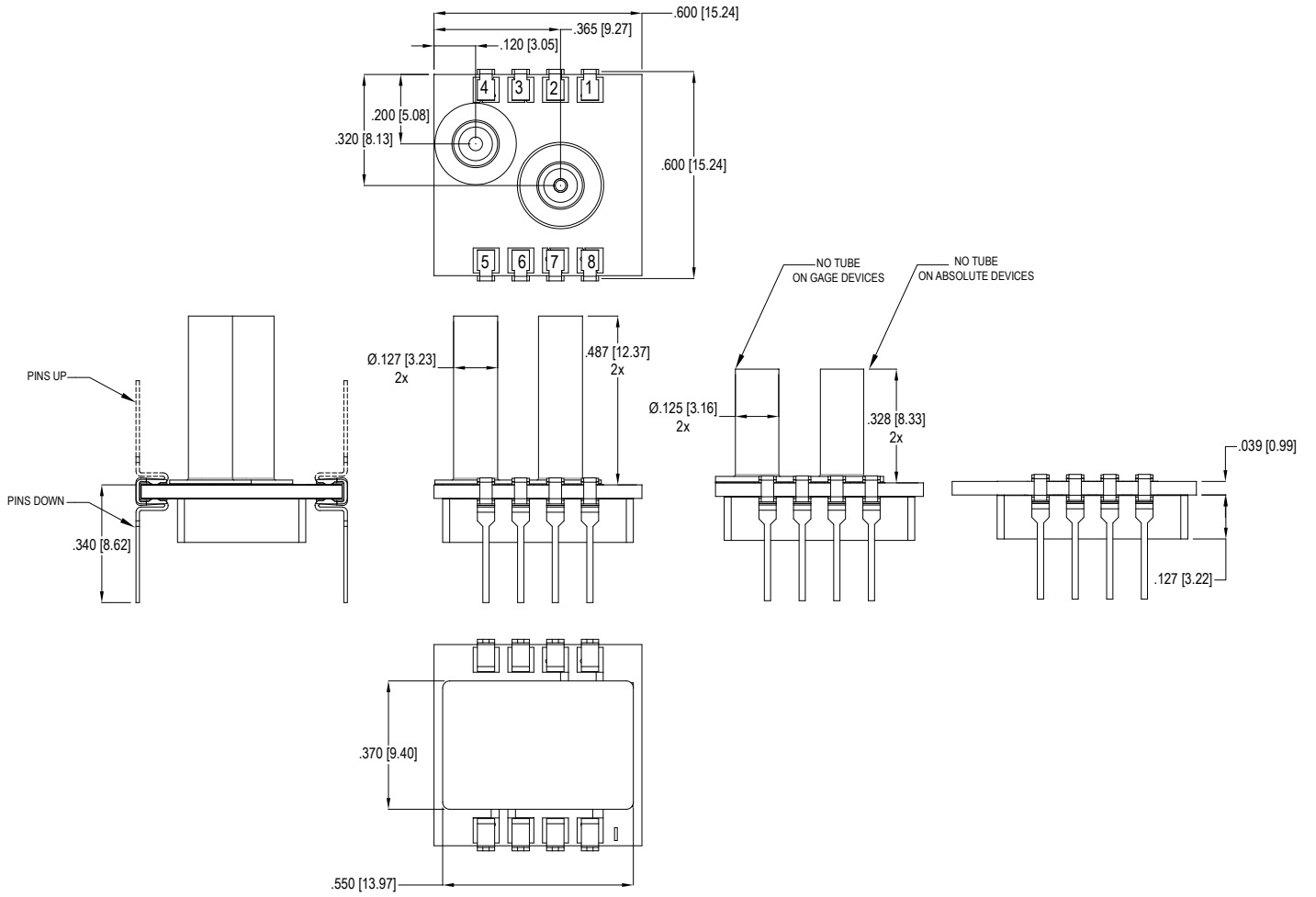


MECHANICAL DIMENSIONS in [mm]

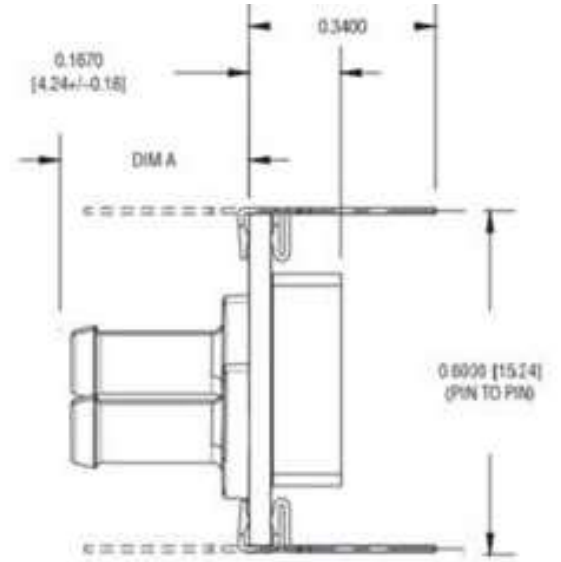
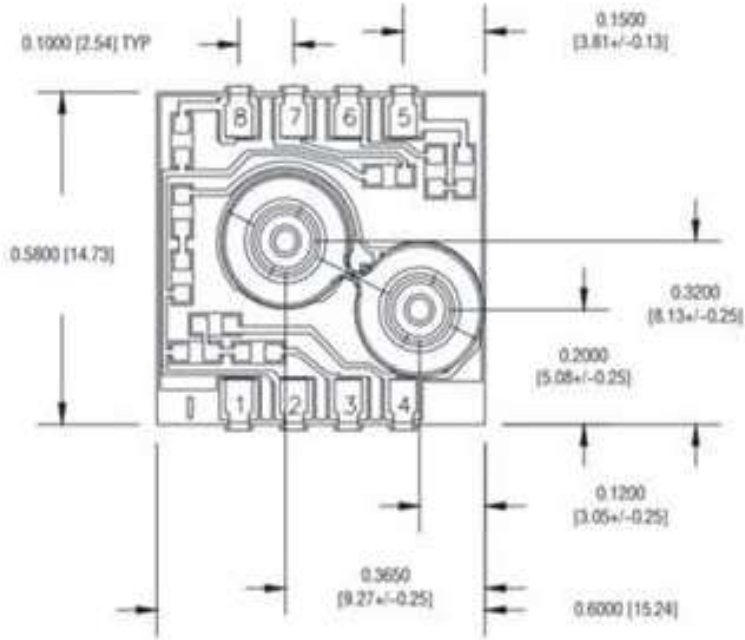
LONG TUBE

SHORT TUBE

NO TUBE



TOP BARB



PART NUMBERING FOR ORDERS

Series	Port Style	Pressure Range	Pressure Units	Pressure Type (Range Availability) [Package Availability]	Pin Orientation
CHT-2	NT=No Tube ST=Short Tube LT=Long Tube TB=Top Barb	001 002 005 015 030 050 100 150	P=PSI	A=Absolute (15,30,50,100,150) [NT,ST,LT] G=Gauge (All Ranges) [NT,ST,LT] D=Differential (All Ranges) [NT,ST,LT]	3= Down 1= Up

Part Number Example: HCT-2NT005PD3 0-5PSI Differential, No Tube, Pins Down, CHT-2 Product

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.