N

The NPP-301 Series features silicon pressure sensors in surface mount packages. An ultra-small Silicon Fusion Bonded (SFB), ultra-high stability SenStable® piezoresistive chip from NovaSensor is placed in a plastic package that exploits high volume, leadframe package technology to bring forth a low-cost sensor alternative to the OEM user.

Features

- Low-cost surface mount package: SO-8
- Wide operating temperature range: -40°F to 257°F (–40°C to 125°C)
- Static accuracy <0.20% FSO maximum
- Suitable for automated component assembly
- Four element Wheatstone bridge configuration for circuit design flexibility
- Solid-state reliability
- 100, 200 and 700 kPa absolute pressure ranges available

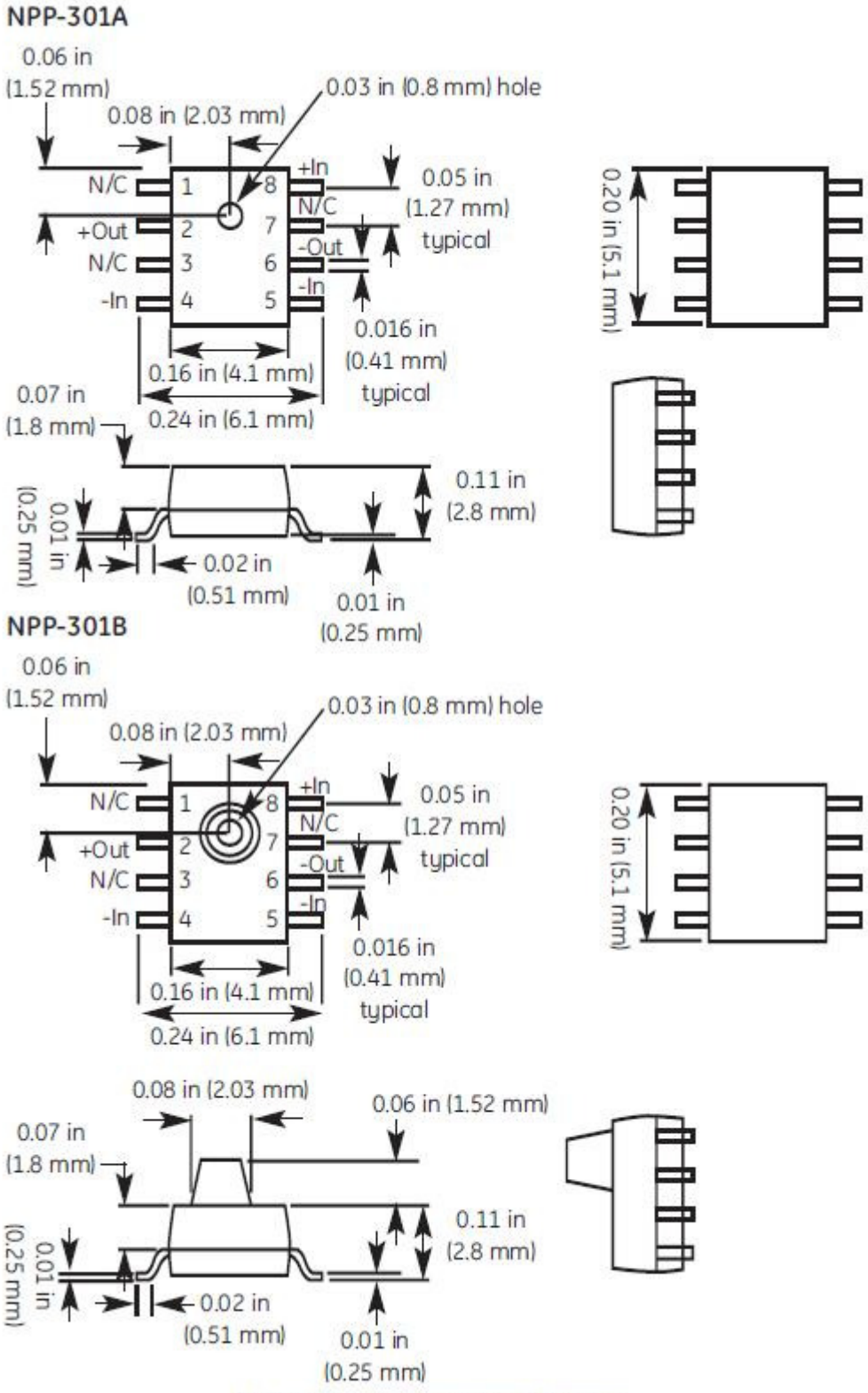
Applications

- Automotive tire pressure
- Pneumatic controls
- Pressure switches and controllers
- Altimeters and barometers
- Cable leak detection
- Consumer appliances
- Portable gauges and manometers

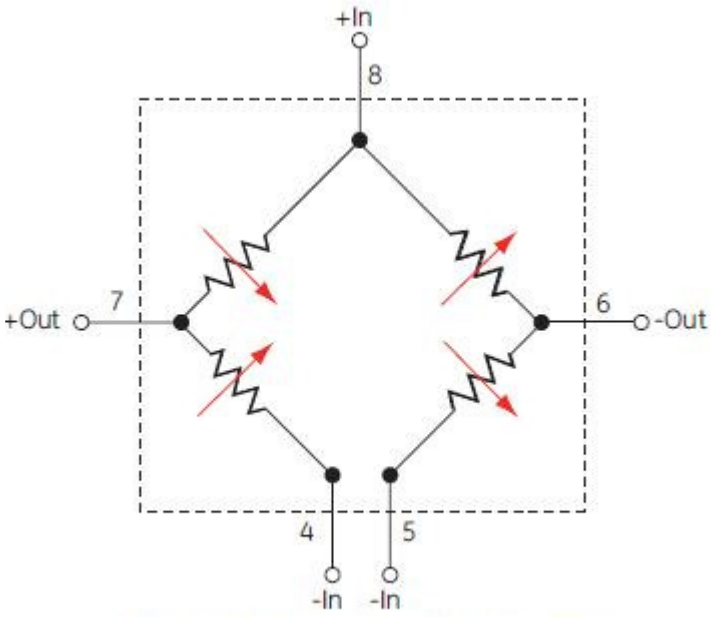
Specifications

The NPP-301 Series features silicon pressure sensors in surface mount packages. An ultra-small Silicon F (SFB), ultra-high stability SenStable® piezoresistive chip from NovaSensor is placed in a plastic package tl volume, leadframe package technology to bring forth a low-cost sensor alternative to the OEM user. The N produces a voltage output that is linearly proportional to the input pressure. The user can provide NPP Seri signal conditioning circuitry to amplify the output signal or to maximize OEM value added. The NPP-301 Se

with most non-corrosive gases and dry air.



NPP-301 Series package diagram



NPP-301 Series schematic diagram

Parameter	Value	Units	Notes
General			
Pressure Range	100	kPa	≈15 psi
	200	kPa	≈30 psi
	700	kPa	≈100 psi
Maximum Pressure	3x		rated pressure
Electrical @ 77°F (25°C) unless otherwise stated			
Excitation	3.0	V	10 VDC maximum
Input Impedance	5,000 ±20%	Ω	
Output Impedance	5,000 ±20%	Ω	
Environmental			
Electrostatic Damage (ESD)	Class 1		
Operating Temperature Range	-40°F to 257°F		(-40°C to 125°C)
Mechanical [1]			
Weight	≈ 0.0002	lb	(0.10 g)
Media Compatibility	Clean, dry air and non-corrosive gases		

Parameter	Units	Minimum	Type	Maximum	Notes
Performance Parameters (Note 2)					
Offset	mV/V		±10		
Full Scale Output	mV		60 ±20		
Linearity	%FSO		±0.20		3
Hysteresis and Repeatability	%FSO		0.1		
Thermal Coefficient of Zero	%FSO/°C		0.04		4
Thermal Coefficient of Resistance	%/°C		0.3		4
Thermal Coefficient of Sensitivity	%FSO/°C		-0.2		4
Thermal Hysteresis of Zero	%FSO		0.1		5
Long-Term Stability of FSO	%FSO		0.2		6

1. *Standard IC industry bake operations should be used prior to surface mount operations. Consult GE for further information.*
2. *Values measured at 3 VDC and 77°F (25°C), unless otherwise noted.*
3. *Best fit straight line.*
4. *Typical coefficients, between 32°F to 158°F (0° to 70°C).*
5. *32°F to 158°F (0° to 70°C).*
6. *Typical value over one year.*

Ordering Information

The code number to be ordered may be specified as follows:

NPP-

Code	Description	Shipping
301A-100A	15 psia (1.03 bar), non-ported	IC tubes
301A-200A	30 psia (2.06 bar), non-ported	IC tubes
301A-700A	100 psia (6.89 bar), non-ported	IC tubes
301A-100AT	15 psia (1.03 bar), non-ported	Tape and reel
301A-200AT	30 psia (2.06 bar), non-ported	Tape and reel
301A-700AT	100 psia (6.89 bar), non-ported	Tape and reel
301B-100A	15 psia (1.03 bar), ported	IC tubes
301B-200A	30 psia (2.06 bar), ported	IC tubes
301B-700A	100 psia (6.89 bar), ported	IC tubes
301B-100AT	15 psia (1.03 bar), ported	Tape and reel
301B-200AT	30 psia (2.06 bar), ported	Tape and reel
301B-700AT	100 psia (6.89 bar), ported	Tape and reel

NPP - _____ Typical model number

Download

Descriptions	English
NPP-301 Brochure	