

# NPP-301 Series

## Surface Mount Pressure Sensor



### 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

*NPP-301 Series package diagram*

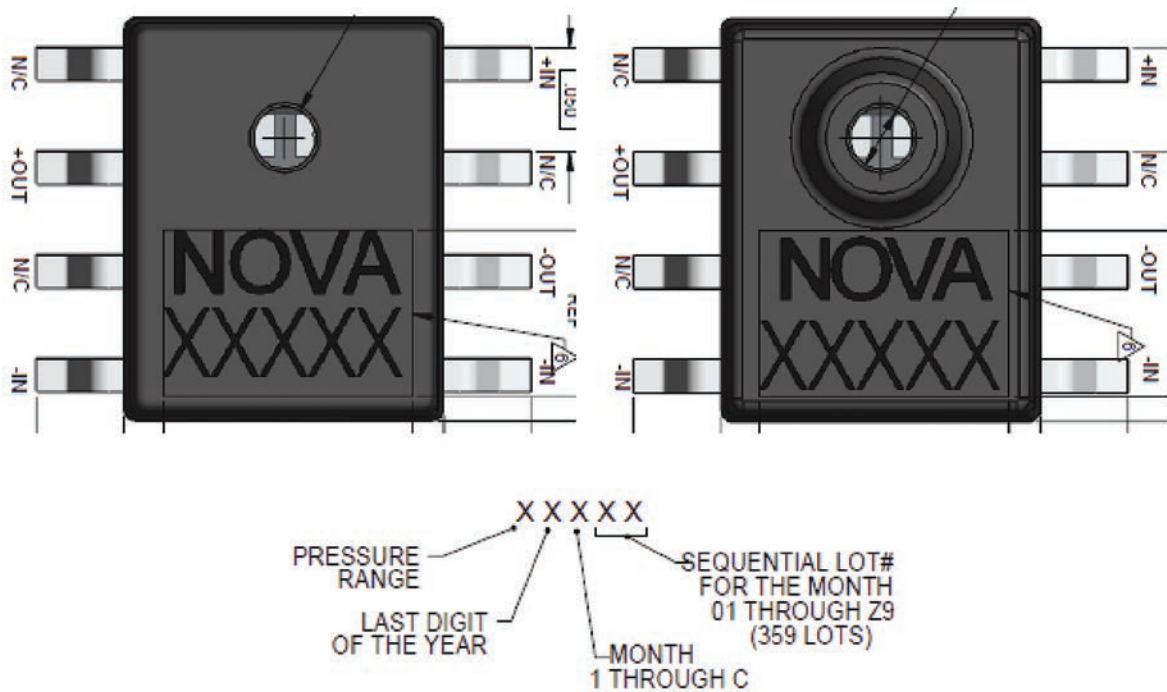
# NPP-301 Series Specifications

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

Parameter	Value	Units	Notes
<b>General</b>			
Media Compatibility	Clean, dry air and non-corrosive gases		

Parameter	Units	Minimum	Type	Maximum	Notes
<b>Performance Parameters (Note 2)</b>					
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 NovaSensor 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.



1st character: Pressure range: 5 = 15 psi, 3 = 30 psi, 0 = 100 psi 2nd character: Last digit of year of manufacture; i.e. 4 ==> 2014 3rd character: 1-9, A, B, C, where 1 = January and C= December 4th and 5th character: Work lot 01 to Z9 NPP-301B-100AT = 15 psi, so the marking will start with a "5" NPP-301B- 700AT= 100 psi, so the marking will start with a "0"