

NPA

Surface-Mount Pressure Sensor Series



The NPA product series is provided in a miniature size as a cost effective solution for applications that require calibrated performance. Packaged in a SOIC14 pin surface mount, the NPA Series is available in Gauge, Absolute or Differential pressure ranges with either mV, amplified analog or digital outputs. The sensor is intended for printed circuit board mounting and delivered in tape and reel form to simplify manufacturing handling.

Features

- Surface Mountable
- Differential, Gauge, Absolute & Low Pressure
- 10" H₂O to 30 PSI Full Scale
- Output Options: Amplified Analog, Digital Serial (14bit), Digital I²C, Uncalibrated mV
- On chip temperature sensor in digital mode
- Operating temperature range of -40 to 125°C
- Total Error Band < ±1.5% FSO
- Up to 60 psi proof pressure

General NPA Specifications

Parameter	Value	Units	Notes
Environmental			
Temperature Range			
Operating	-40 to +125	°C	-40 to +257°F
Compensated	0 to 60	°C	+32 to +157°F
Storage	-40 to +125	°C	-40 to +257°F
Mechanical			
Weight	~1	grams	
Media Compatibility			
Positive differential and gauge ports	Compatible with exposed materials		1
Negative differential ports	Dry gases only		

Notes: 1. Exposed materials are thermoset plastic, silicon, epoxy, RTV, pyrex and silicone

Parameter	Units	Min	Typ	Max	Notes
Common Parameters					
Accuracy (Total Error Band)	%FSO	-1.5		1.5	
Proof Pressure (10"H2O to 1 psi)	psi		35		
Proof Pressure (>1 psi to 30 psi)	psi		60		
Maximum Package Pressure			60		
Pressure ranges		10"H2O		30psi	

Series	Excitation Voltage	Min/Max	Notes
NPA-100	1.5mA		NPA Uncompensated, mV
NPA-300	3.3V	3.135 V to 3.465 V	NPA Compensated, low power amplified analog
NPA-500	5.0V	4.75 V to 5.25 V	NPA Compensated, amplified analog
NPA-600	5.0V *	4.75 V to 5.25 V	NPA Compensated, digital serial
NPA-700	5.0V *	4.75 V to 5.25 V	NPA Compensated, digital I ² C

* 3.3V optional, contact factory for more details