

Solid State Pressure Sensor

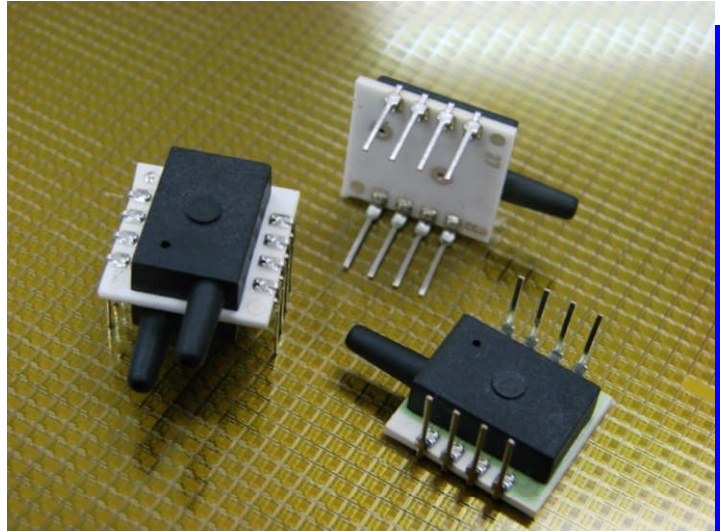
ANALOG
OUTPUT



CCD 54 Series – Model 54A Low Pressure

FEATURES

- Dual-in-line Package
- Calibrated Span and Offset
- Multi-order Temperature Compensation
- Low Profile Package
- 0.15 PSI to 3.0 PSI
- Custom Configuration Upon Request



DESCRIPTION

The CCD 54A Series is a smart pressure sensor with calibrated and amplified analog output. Compensation of sensor offset, sensitivity, temperature drift and nonlinearity are accomplished in the factory via the latest ASIC technology with calibration coefficients stored in an on-chip EEPROM.

A variety of output configurations, including response time and voltage levels are available to provide a simple and ready-to-use solution for a wide range of applications. The low voltage version operates from 2.7 to 3.3V while the regular version operates from 4.5 to 5.5V.

The CCD Series including Models 53 and 54, are available for pressure ranges from 0.15 psi to 150 psi. Custom ranges and calibrations are available. Please contact the factory for details.



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Characteristics

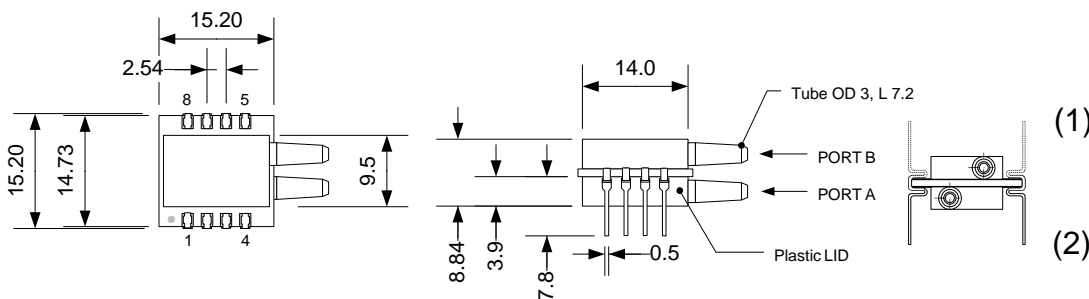
Unless otherwise specified, all parameters are measured at 25 °C, 60% RH and 5 Vdc excitation

Parameters	Min	Typ	Max	Unit
Supply Voltage ^{Note 4}	2.7 to 3.3		4.5 to 5.5	V
Supply Current			2.5	mA
Pressure Range ^{Note3}	0.15		3.0	psi
Zero Output (Offset)	0.412	0.500	0.588	V
Full Scale Output	4.412	4.500	4.588	V
Accuracy ^{NOTE 1}			2.2	%FS
Response Time		1	2	ms
Linearity	-0.5		+0.5	%FS
Thermal Hysteresis	-0.15		+0.15	%FS
Over Pressure ^{Note 5}			3X or 2.5 psi	Rated Pressure
Temp - Compensated	0		+50	°C
Temp - Operating	-20		+85	°C
Temp - Storage	-40		+125	°C

Notes:

1. Accuracy includes non-linearity, hysteresis, TCS and TCO inside the compensated temperature range, best fit straight line definition
2. Wetted materials contains PPA, RTV, glass, silicon and ceramic (Port A & B) and Au (Port A)
3. See ordering information for list of available pressure ranges
4. Specify desired operating voltage range when ordering. Output is Ratiometric to supply voltage
5. Whichever is higher

Dimensions:



Pin #	Description
1	N.C.
2	VSS
3	OUT
4	Vdd
5	N.C.
6	N.C.
7	N.C.
8	N.C.

NOTE:
 N.C. pins must be left floating
 A 0.1 uF capacitor must be connected between Vss and Vdd

NOTE:

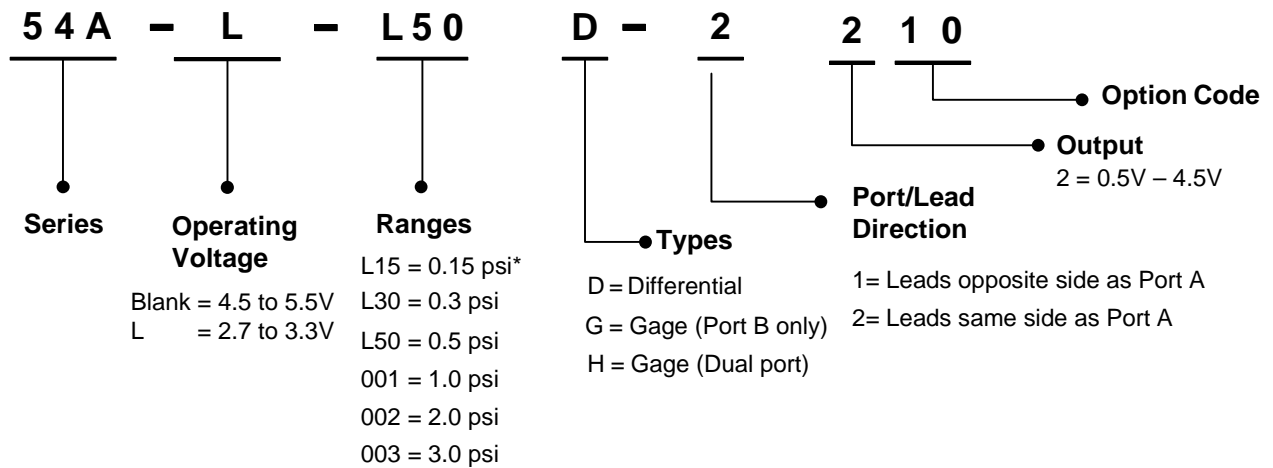
1. Port B is used for positive differential
2. Port A is used for absolute
3. Port B is used for Gage
4. All dimensions are in mm
5. Recommended tube: OD 4 ID 2.5 TygonTube
6. Solder reflow max. 250 °C 5s

Delivery : 12 pcs per tube



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Ordering Information



Note:

- 1) To specify differential single ended pressure (one side is always more +ve than the other) specify gage pressure with Dual port configuration. The device can be used for differential pressure by simply connecting the reference port (Port A) to the reference pressure instead of atmosphere.
- 2) Specifying Differential pressure means a +/- pressure range.
- 3) Custom outputs and pressure ranges available. Please contact us with your request.

Example:

Part number 54A L30 D 22 20 corresponds to an output of 2.5V (@ 0 psi) +/- 2V (@ +/- 0.3 psi)

Part number 54A L30 G 22 20 corresponds to an output of 0.5V (@ 0 psi) to 4.5V (@ 0.3 psi) for gage applications only

Part number 54A L30 H 22 20 corresponds to an output of 0.5V (@0 psi) to 4.5V (@ 0.3 psi) for gage or single ended differential applications.

* For pressure range L15 (0.15 psi) accuracy is 2.7% FS

Disclaimer/Warranty/Notice

Senphire Ltd products are not authorized for use in applications where failure could result in loss of life or injury. While Senphire provides application assistance personally, through our literature and website, it is the responsibility of the customer to determine the suitability of the product for the intended application.

All information provided is believed to be accurate at the time of publishing however Senphire Ltd reserves the right to make changes without prior notice.

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