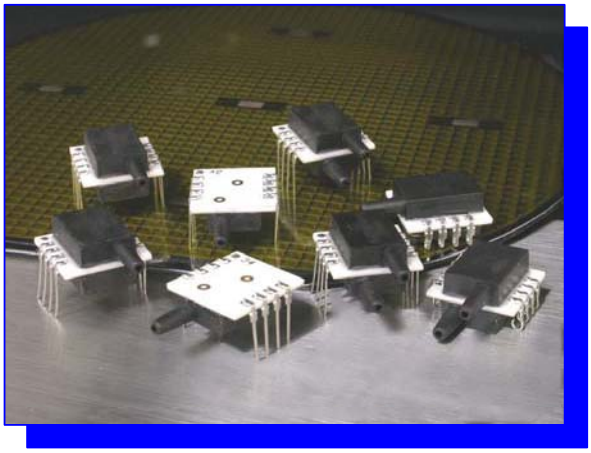
Solid State Pressure Sensor

ANALOG OUTPUT

CCD Series – Model 54A

FEATURES

- DIP or SMD Package
- Calibrated Span and Offset
- Multi-order Temperature compensation
- Multi choice of output
- 3V or 5V Supply
- Customized Configuration upon request



DESCRIPTION

The Series CCD Model 54A is a smart pressure transducer with ratiometric analog output. Digital compensation of sensor offset, sensitivity, temperature drift and nonlinearity is accomplished in factory via an internal DSP running a correction algorithm with calibration coefficients stored in on-chip EEPROM.

A variety of characteristic configuration, including accuracy, sampling rate, temperature compensated range are available to provide simple and ready-to-use solution for a wide rage of application. It can be operated in supply voltage of 3V or 5V, and can be extended to 30V with an external JFET.

The Series CCD 54A is available for pressure range from 0.15 psi to 150 psi. Special configuration as low as 2.5 mbar is also applicable. Please contact factory for detail.

Ordering Information

Series CCD 54 Analog

54A L – XXX G – X 0 X X

Series

Supply Voltage
Blank = 4.75 to 5.25 V
L = 2.75 to 3.33 V

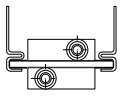
Pressure range
005 = 0 ~ 5 psi
007 = 0 ~ 7 psi
015 = 0 ~ 15 psi
030 = 0 ~ 30 psi
050 = 0 ~ 50 psi
100 = 0 ~ 100 psi
150 = 0 ~ 150 psi
(belwo are Low-Pressure)
L03 = 0 ~ 0.03 psi
L07 = 0 ~ 0.07 psi
L15 = 0 ~ 0.15 psi
L30 = 0 ~ 0.3 psi
L50 = 0 ~ 0.5 psi
L70 = 0 ~ 0.7 psi
001 = 0 ~ 1 psi
002 = 0 ~ 2 psi
003 = 0 ~ 3 psi

Notes:
Custom ranges and units are available upon request. Please contact factory.

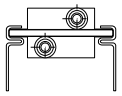
Type of Pressure
G: Gage (Port B only)
H: Gage (Dual Port)
A: Absolute (Port A only)
D: Differential
I: Negative Gage (Port B only)

Leading Direction

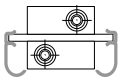
1 = Leads opposite side as Port A



2 = Leads same side as Port A



3 = J-bend Leads same side as Port A



1. Port B is used for positive differential
2. Port A is used for absolute
3. Port B is used for gage

Type of Output
0 = 1-wire P
1 = 1-wire P+T
2 = 0.5 to 4.5 V
3 = 0.2 to 4.8 V
4 = N/A
5 = 0 to 1 V
6 = 0.2 to 4.7 V
7 = N/A
8 = I^2C
9 = SPI
S = Special

Option
10: No special reguest
97: Compensated Temp 0~85 degC

Other options available upon request.

NOTES:
1. Specifying differential pressure means a ± pressure range.
2. Differential pressure can be specified to a maximum of +/- 150 psi.
3. Custom output, pressure range and temperature compensated range are available.
4. Negative gage normally has offset (0.5V) at 0 psi and full scale output (4.5V). Reverse is also applicable.
5. Accuracy may vary on pressure range
6. Minimum absolute pressure that can be specified is 15 psia
7. Medium is available for clean air. For other medium please contact factory.

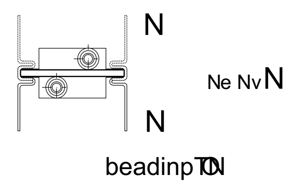
Characteristics

OnlessT therwiseTspeEifiedpTall TparametersTareTmeasuredTatTNdNNpTNNT T TandTN0%TRt

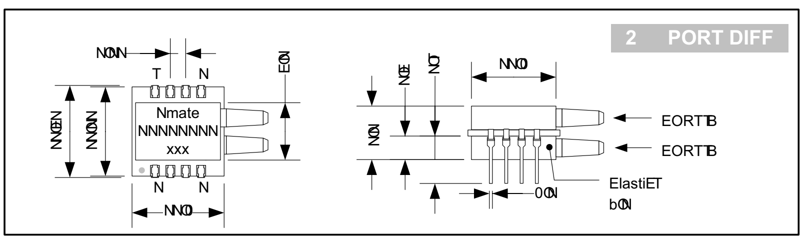
TTTEarameters	e in	Typ	e ax	Onit
TTTNupplyTN: ltapeT[N]	NONN		NONN	N
TTTNupplyTT urrentT[N]		NON		mB
TTTEressureTRanpeT[N]	N		NN0	ENO
TTTE er: TOutputT[N]	00NNT	00N0	00NNN	N
TTTNpanTOutputT[N]		N000		N
TTTBEEuraEyT[N]			NOT	%FN
TTTbinearityT[N]	m0ON		r 00N	%FN
TTTThermalTt ysteresisT[N]	m0ONN		Tr 00NN	%FN
TTTResp: nseTTime		N	N	ms
TTTOverTEressureT[N]			NN	RatedTEressure
TTTTempTmT : mpensatinp	0		r N0	°T
TTTTempTmOperatinp	mN0		r TN	°T
TTTTempTmNt: rape	mN0		r NNN	°T

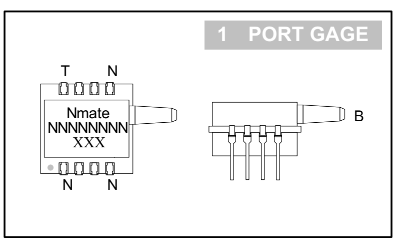
NOTEN:
NONupplyTNNT rTNNTmustTbeT rderedTseparatelyO
NONmallerTranpeTandT therTunitsTareTals: TavailableTT: rT rderinp
NOBEEuraEyTnEludesTNObpThysterisispTTT NTandTTT OT verTOdN0°T pBFNbTdefiniti: n
NOF: rTdifferentialpT ffsetTvTN0N0NpTNpanTvTKNO0N
NONONNT: rTNN0Tpsi
NOE ettedTmaterial:TEBpTRTNpTEp: xypTEerami EpTBupThiEEelTandTsiliE n
NOOutputTTsTrati: metriEtT: TsupplyTv: ltape
TOOutputT: adTesistanEeT: TNssT rTNdd:TNOKΩTvminypTN0KΩTvtypy

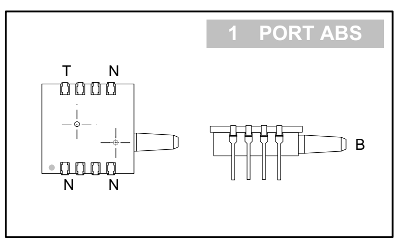
Dimension



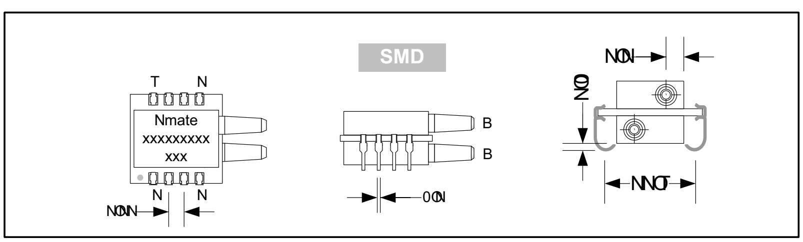
NOTE:
NOE: rTBTTsTusedTT: rTp: sitiveTdifferentialT
NOE: rTBTTsTusedTT: rTabs: lute
NOE: rTBTTsTusedTT: rTpape
NOBllTdimensi: nsTareTmm
NOTubeTNii e:TTyp: nTubepTNTv OOyTNONTvOOyTmm







EinT	NesEripti: n
N	NOT O
N	N_{NN}
N	OOT
N	N_{NN}
NOT	NOT O



NOTEN:
NOT OpinsTmustTbeTeftTTl: atinp
A 0.1uf capacitor must be connected between V_{DD} and V_{SS}
EaEEapeTTNNTpEsdube

Sensormate Enterprise Co.,Ltd.
N0pTOdustriesTEORdOOOOTbuEanpp
ThanpT uapTTaiwanTN0NNN
Tel:Tr TTNNTNTNNTNETFax:Tr TTNNTNTNNTNN

Additional Products
TOTTEressureTTransmitters
TOTTEressureTe eters

0NMN0NNTTTNN0

Characteristics

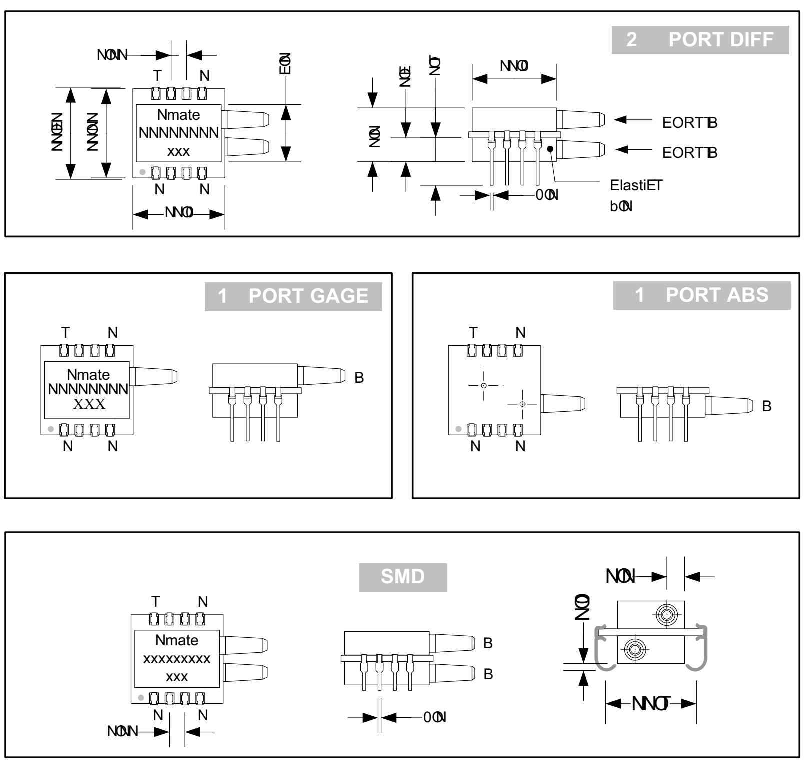
OnlessT therwiseTspeEifiedpTall parametersTareTmeasuredTatTNdNNpTNNTT TandTN0%TRt

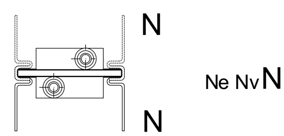
TTTEarameters	e in	Typ	e ax	Onit
TTTNupplyTN: ltapeT[N]	N0N		N0N	N
TTTNupplyTT urrentT[N]		N0N		mB
TTTEressureTRanpeT[N]	00N		N	ENO
TTTE er: TOutputT[N]	00NN	000	00NTT	N
TTTNpanTOutputT[N]		N000		N
TTTBEEuraEyT[N]			N0N	%FN
TTTbinearityT[N]	-00N		r 00N	%FN
TTTThermalTt ysteresisT[N]	-00N		Tr 00N	%FN
TTTResp: nseTTime		N	N	ms
TTTOverTEressureT[N]		NN		RatedTEressure
TTTTempT-T: mpensatinp	0		r N0	°T
TTTTempT-Operatinp	-N0		r TN	°T
TTTTempT-Nt: rape	-N0		r NNN	°T

NOTEN:

N0NupplyTNNT rTNNTmustTbeT rderedTseparatelyO
N0NmallerTranpeTandT therTunitsTareTals: TavailableT: rT rderinp
N0BEEuraEyTnEludesTNObpThysterisispTTT NTandTTT OT verTDdN0°TpTBFNbTdefiniti: n
N0F: rTdifferentialpT ffsetTv TN0N0NpTNpanTv TKN00N
N0Over-pressureTwillTvaryT nTdifferentTranpe
N0E ettedTmaterial:TEBpTRTNpEp: xypEeramiEpBupThiEEelTandTsiliE n
N0OutputTisTrati: metriETt: TsupplyTv: ltape
T0OutputT: adTesistanEeT: TNssT rTNdd:TN0KΩTvminypTN0KΩTvypy
EOT er: inpTatTinstallati: nTisTrexuired

Dimension





beadinpTN0

NOTE:

N0E: rTBTisTusedT: rTp: sitiveTdifferentialT
N0E: rTBTisTusedT: rTabs: lute
N0E: rTBTisTusedT: rTpape
N0BllTdimensi: nsTareTmm
N0TubeTNii e:TTyp: nTubepTNTv: 0TyTN0NTv0TyTmm

EinT	NesEripti: n
N	N0T O
N	N NN
N	OOT
N	N NN
N0T	N0T O

NOTEN:

N0T0pinsTmustTbeTeftTl: atinp
A 0.1uf capacitor must be connected between V_{DD} and V_{SS}
EaEEapeTNNTpEsdube

N0pTndustriesTEORdO0T0ptbuEanpp
ThanpT uapTTaiwanTN0NNN
Tel:Tr TTNNTNTNNTNETFax:Tr TTNNTNTNNTNN

Additional Products
TTTTEressureTTransmitters
TTTTEressureTe eters

0N-N0NNTTNN0

Sensormate Enterprise Co.,Ltd.

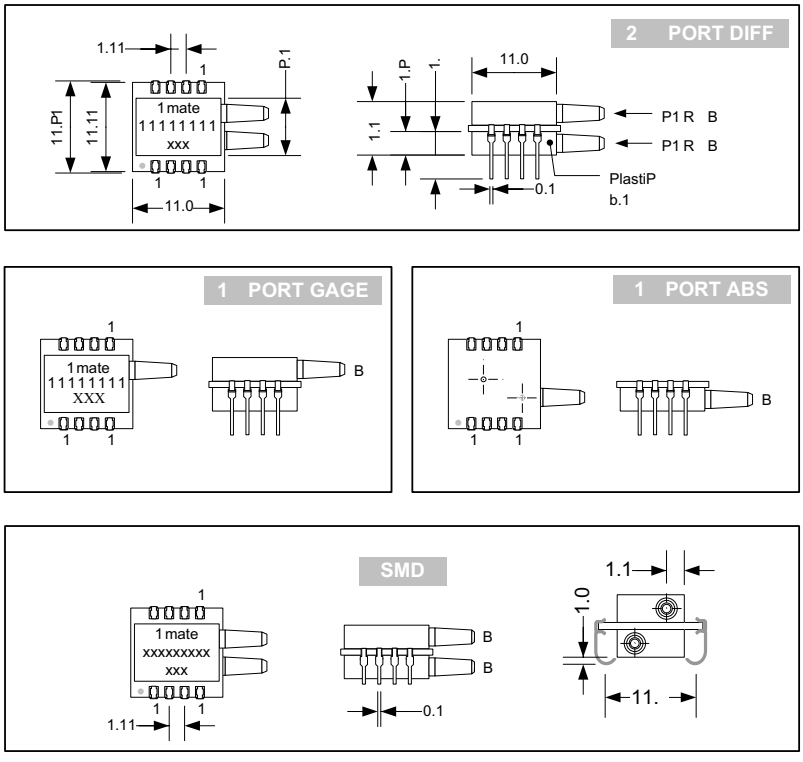
Characteristics

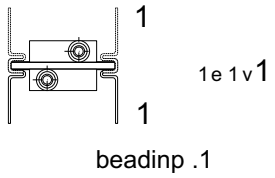
. nless otherwise speFfiedpall parameters are measured at 1d11p11 ° and 10% Rt

Parameters	e in	yp	e ax	. nit
1upply 1oltape [1]	1.11		1.11	1
1upply urrent [1]		1.1		mB
Pressure Ranpe [1]	1		110	P1.
oero 1utput [1]	0.11	0.10	0.111	1
1pan 1utput [1]		1.00		1
BPPuraPy [1]			1.	%F1
binearity [1]	m0.1		r 0.1	%F1
hermal t ysteresis [1]	m0.11		r 0.11	%F1
Response ime		1	1	ms
1ver Pressure [1]			11	Rated Pressure
emp m ompensatinp	0		r 1	°
emp m1peratinp	m10		r 1	°
emp m1torape	m10		r 111	°

11 P1r
1. 1upply 11 or 11 must be ordered separately.
1. 1maller ranpe and other units are also available for orderinp
1. BPPuraPy inPludes 1 1 bphysterisisp 1 and 1 over 0d10° pBF1b definition
1. For differentialpoffset v 1.101p1pan v K1.001
1. 1.11 for 110 psi
1. P etted materialr PBpR 1pPpoxypPeramiPpBupniPPel and siliPon
1. 1utput is ratiometriPto supply voltape
. 1utput load resistanPe to 1ss or 1ddr 1.1KΩ vminyp10KΩ vtypy

Dimension





NOTE:
1. Port B is used for positive differential
1. Port B is used for absolute
1. Port B is used for pape
1. Bll dimensions are mm
1. ube 1ii er ypon tubep1vo.d.y1.1 vi.d.ymm

Pin o	1esPription
1	1. .
1	1 11
1	1.
1	1 11
1.	1. .

11 P1r
1. . pins must be left floatinp
A 0.1uf capacitor must be connected between V_{DD} and V_{SS}
PaPPape r 11 pPsdube

Additional Products
- Pressure ransmitters
- Pressure e eters