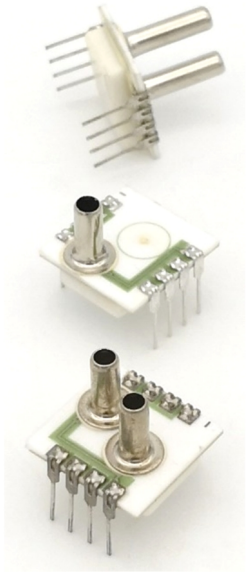
Senther P2103



High accuracy MEMS pressure sensor

Performance

Pressure range(FS) .....1~75 mbar
Accuracy(BFSL typical)..... ±0.25% FS
Span stability(typical) ..... ±0.5% FS/1000H
Total error band(>5mbar) ..... ±1% FS
Total error band(≤5mbar) ..... ±3% FS
Response frequency(typical) 2KHz
Load resistance ..... >5MΩ

Electrical

Excitation ..... 3.3±0.3Vdc
Supply current(@3.3Vdc typical) 2mA
Excitation ..... 5±0.25Vdc
Supply current(@5Vdc typical) 3mA
Warm up ..... <7ms
FSO(@5.25Vdc, 25°C) 5V
ESD susceptibility 4KV

Environmental

Operation temperature ..... –40 to 125°C
Compensated temperature ..... 0 to 60°C
Solder temperature..... 5s Max. at 250℃
Thermal hysteresis ..... ±0.5% FS
Gravity(1g) sensitivity .....±0.15% FSO
Pressure cycles ..... 10 million FS cycles
Overload..... >2 * FS
Burst pressure(75mbar)..... >3 * FS
Burst pressure(<75mbar)..... >5 * FS
Vibration .....<20 g@10~2000Hz
Shock .....<100 g, 11ms pulse
Media ..... CDA, Non Ionic, Non Corrosive Gases
Cover ..... Ceramic
Substrate ..... Ceramic
Sealing ..... Silicone epoxy
Pressure port .....Short/long/No tube
Electrical connection..... DIP

Features

- Piezoresistive MEMS element
- Analog voltage output
- ASIC fully calibrated
- Gas and non-corrosive fluids
- Low cost OEM
- Range: 1 to 75 mbar
- Temperature compensated
- Various package
- Small size
- Energy efficient
- Excellent long-term stability
- Industry-leading Total Error Band
- RoHS compliant.
- I^2C or SPI interface available(R)

TEB=Total Error Band
ASIC=Application Specific Integrated Circuit

Application

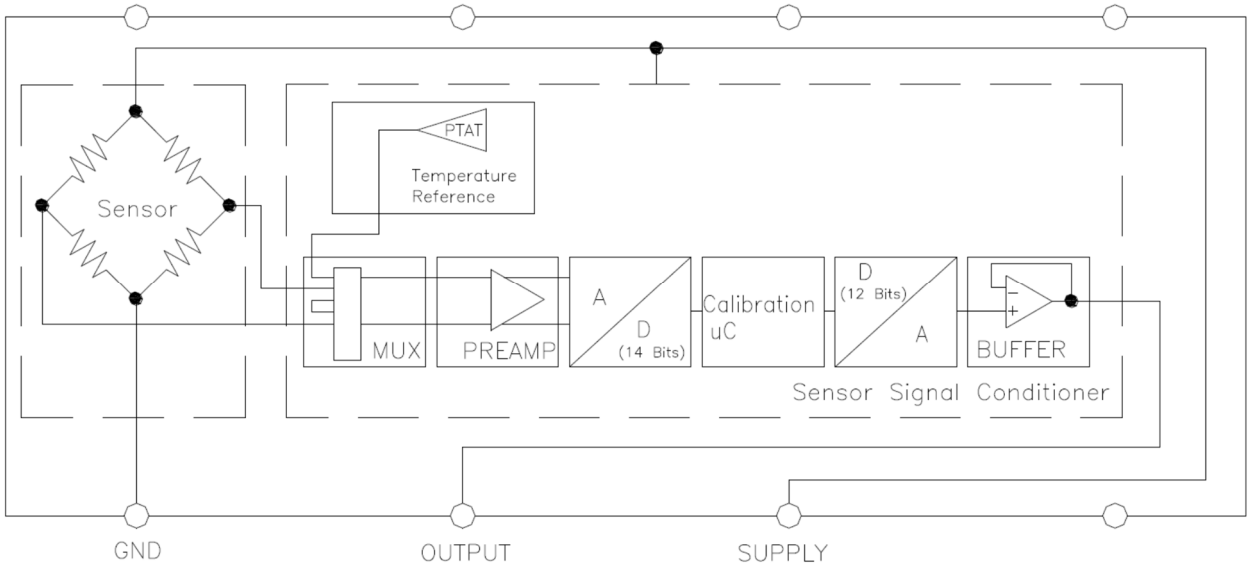
- Pneumatic controls
- Automotive diagnostics
- Medical instrumentation
- Air Speed and Altitude
- Environmental controls
- Barometric pressure
- Factory Automation
- Process Controls

Ordering Information

P2103-10MG-SO-5

- Range in mbar: 5/10/15/25/50/75 for Gauge; 1/5/10/15/25/50/75 for Differential
- Reference type: G= Gauge pressure; D= Differential
- Excitation type: 3.3= 3.3Vdc; 5= 5Vdc
- Pin and Port out: S= Same side; O= Opposite side
- Port type: S= Short tube; L= Long tube; N= No tube

Schematic & Dimension:



PIN	DESCRIPTION
1	NC
2	**GROUND**
3	NC
4	**SERIAL DATA (SDA)**
5	**SERIAL CLOCK (SCL)**
6	NC
7	**V_{exc} = 5.000 VDC**
8	**ANALOG OUTPUT**

NOTES:
- Do **not** connect to NC pins.
- External connections to NC pins will cause part malfunction.

LONG TUBE SHORT TUBE NO TUBE