Senther P2102

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(SIP/DIP)	5s Max. at 250℃
Reflow peak temperature (SMT)	15s Max. at 250℃
Thermal hysteresis	±0.5% FS
Gravity(1g) sensitivity	±0.15% FSO
Pressure cycles	10 million FS cycles
Overload(1mbar)	>100 * FS
Overload(5mbar)	>40 * FS
Overload(10/25mbar)	>20 * FS
Overload(15/50/75mbar)	>10 * FS
Burst pressure	>3 * Overload
Vibration	<20 g@10~2000Hz
Shock	<100 g, 11ms pulse
Media	Ceramic,Silicon,Glass,Silicone epoxy compatible
Cover	Polyamide
Substrate	Ceramic
Sealing	Silicone epoxy
Pressure port	1/8” barbed ports(for 3/32” ID tubing)
Electrical connection	DIP,SIP or SMT

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

- Anesthesia machines
- Spirometers
- Hospital room air pressure
- Nebulizers
- VAV control
- Static duct pressure
- HVAC transmitters
- Clogged HVAC filter detection

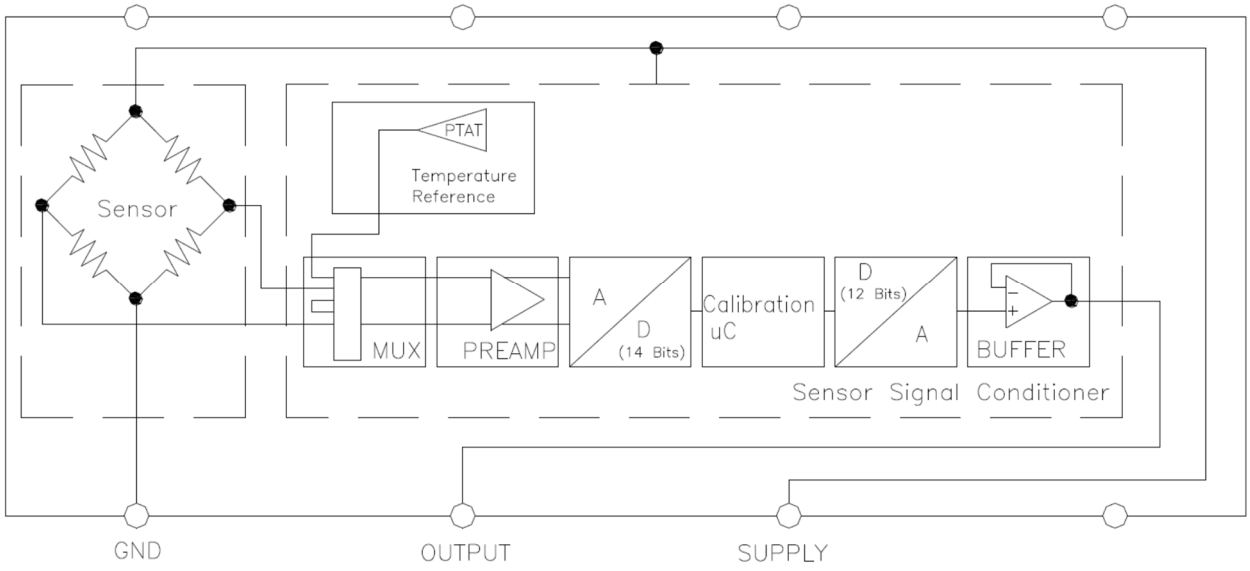
VAV=Variable Air Volume
HVAC=Heating, Ventilation, Air Conditioning

Ordering Information

P2102-10MG-SD-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
- Solder type: D= DIP
- Port type: S= Sider port

Schematic & Dimension:



CONNECTION DIAGRAM								
Output type	1	2	3	4	5	6	7	8
Analog	Blank	V_{supply}	Signal	Ground	Blank	Blank	Blank	Blank