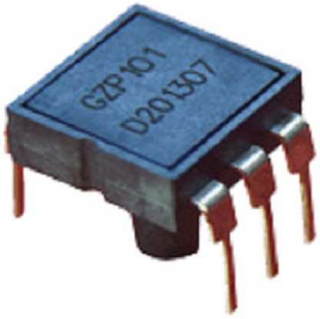
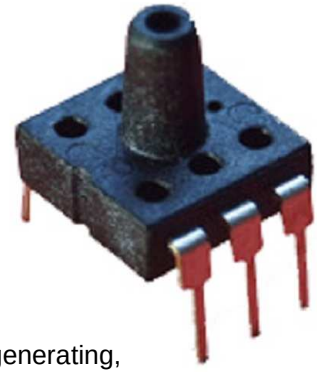
GLOBAL
MEASUREMENT
SRL

PRESSURE SENSOR
TYPE GM-DIP6





MAIN FEATURES:

- Ranges. -100~7kPaG…700kPaG (-15~1psi…150psig)
- MEMS technology, solid-state reliability
- Dual-In-Line (DIP 6 pins)
- Pressurize from back side of the chip
- For non-corrosive gas or liquid
- Easy to use and embed in OEM equipment
- Working Temp.: -30℃ ~ +100℃

APPLICATIONS:

- For medical field, such as digital blooding pressure meter, breathing machine, oxygen generating, monitor etc, medical instruments and device.
- For consumer & automotive electronics field, such as tire pressure gauge, MAP sensor etc.
- For other fields, such environment monitoring, liquid level measurement, sport and fitness equipment, air bed, metereology, other pneumatic device.

INTRODUCTION:

GM-DIP6 is a surface mounting pressure sensor based on CF sensor silicon based piezoresistive pressure sensor die. The sensor die is bonded on substrate with plastic cap and packged in a 6-pin dip. With standard DIP6 package, this sensor is easy for users to install through hole board assembly. With good repeatability, linearity, stability and sensibility, thi sensor is very easy for users to calibrate output & thermal drift and make temperature compensation by using exterior operational amplifier or integrated circuit.

ELECTRIC PERFORMANCE:

- Power supply ≤10VDC or ≤3.0mADC
- Input impedance: 4KΩ~6KΩ
- Output Impedance: 4kΩ~6kΩ
- Insultion resistor: 100MΩ, 100VDC
- Over pressure: -100~10kPa…200kPa: 2X rated pressure
  -100~500kPa…1000kPa: 1.5X rated pressure

CONSTRUCTION:

- Sensing die: silicon
- Die mounting glue: silicon glue (≤200kPa) or Epoxy glue (<200kPa)
- Leading wire: gold wire
- Package housing: PPS (Phenylene sulphide)
- Net weight: 1g
- Pin: silver plated copper

ENVIRONMENT CONDITION:

- Orientation: deviate 90°from any direction, zero change ≤0.05% FS
- Shock: no change at 10gRMS, (20~2000)Hz condition
- Impact: 100g, 11ms
- Medium compatability:
  - Pressure side: air or gas compatible with silicone, silicone glue, epoxy glue or PPS
  - Reference side: dry and non-corrosive gas compatible with PPS, silicone glue or epoxy, gold, aluminium and silver.

TEST CONDITION:

- Medium: Gas (clean, air and non-corrosive gases)
- Medium Temp.: (25±1)℃ / (77±1.8)℉
- Environment Temp.: (25±1)℃ / (77±1.8)℉
- Shock: 0.1g (1m/s2) max.
- Humidity: (50%±10%) RH
- Power supply: 5±0.005)VDC

SPECIFICATIONS:

		Min.	Typ.	Max.	Unit
Range		-100-7-10-20-40-100-200-500-700			kPa
		-15-1-1.5-2.9-5.8-15-30-105			PSI
		-750-53-75-150-300-750-1500-3750			mmHg
Ambient Temp.		-30/-22		+100/212	℃/℉
Storage Temp.		-40/-40		+125/257	C/℉
Bridge Resistance		4	5	6	kΩ
Zero Output		-5		+10	mV
FS Output	**≤10kPa**	20	35	50	mV
	20kPa	30	45	60	mV
	40kPa	50	70	90	mV
	≥100kPa	60	90	150	mV
Temp. Coeff-resistance		2000	2500	3000	ppm/℃
Temp. Coeff-Zero		-0.2②		0.2②	%FS/℃
		-0.6③		0.6③	%FS/℃
Temp. Coeff-span		-0.25②	-0.21②	-0.17②	%FS/℃
		-0.06③		0.06③	%FS/℃
Linearity		-0.3		0.3	%FS
Hysteresis		-0.2		0.2	%FS
Repeatability		-0.2		0.2	%FS
Long-term drift		-1.0		1.0	%FS
Response time			2		mSec.

Note:
① The max negative pressure specified above is exactly 98.07kPa in actual application.
② Excited by constant voltage
③ Excited by constant current
④ Defined as best fit straight line
⑤ Temp. Coefficent is measured from 0℃ to 80℃.
Unless otherwise specified, measurements were taken on base of above testing condition.

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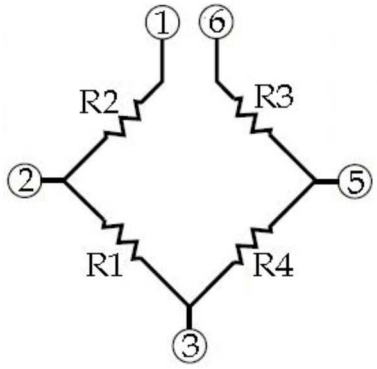
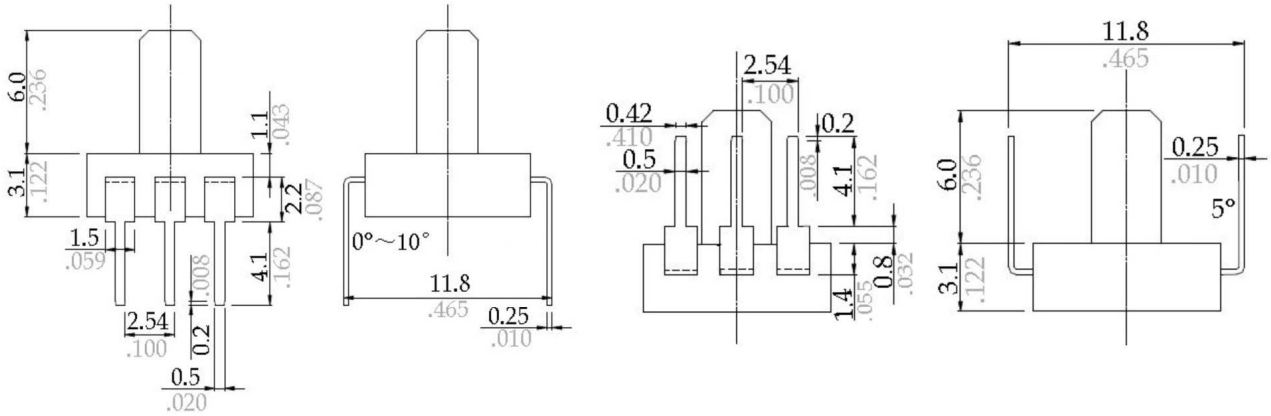
PIN CONNECTION:

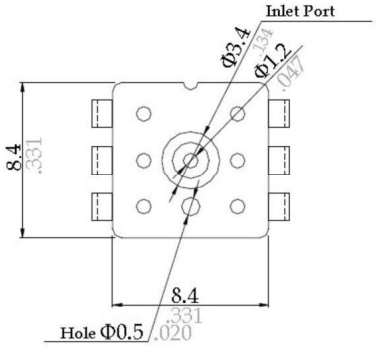


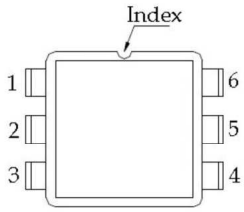
PIN	1	2	3	4	5	6
Definition B1	Vo-	Vs+	Vo+	N/C	GND	Vo-
Definition B2	GND	Vo+	Vs+	N/C	Vo-	GND
Definition B3	GND	Vo-	Vs+	N/C	Vo+	GND

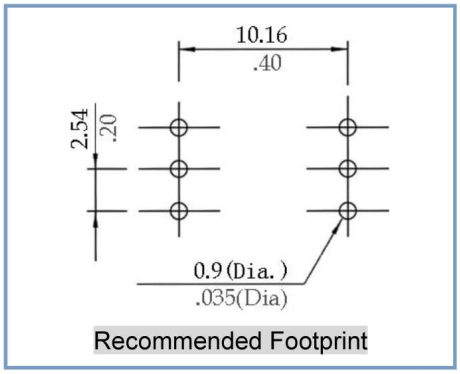
Symbol	Vs+	GND	Vo+	Vo-
Definition	Power+	Power-	Output+	Output-

OUTLINE DIMENSIONS:









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HOW TO ORDER:

XGZP	Piezo-resistive Pressure Sensor				
	Code	Range	100kPa=0.1mKp=750mmHg=10MH2O≈1bar≈14.5PSI		
	007G	0～7kPa	Available for Negative pressure(-7～7kPa)		
	010G	0～10kPa	Available for Negative pressure(-10～10kPa)		
	020G	0～20kPa	Available for Negative pressure(-40～20kPa)		
	040G	0～40kPa	Available for Negative pressure(-40～40kPa)		
	101G	0～100kPa	Available for Negative pressure(-100～100kPa)		
	201G	0～200kPa	Available for Negative pressure(-100～200kPa)		
	501G	0～500kPa	Available for Negative pressure(-100～500kPa)		
	701G	0～700kPa	Available for Negative pressure(-100～700kPa)		
		Code	Package Type		
		D	DIP		
			Code	PIN	
			B1	PIN Def.1	
			B2	PIN Def.2	
			B3	PIN Def.3	
				Code	R:  F: 
				R	
				F	
XGZP	101G	D	B1	the whole spec.	

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