

GMP01-WB01 Silicon Pressure Sensor

General Introduction

GMP01-WB01 is an absolute type silicon pressure sensor especially designed for applications requiring pressure measurement from 0 to 400 kPa. The pressure sensor is based on the industry-recognized piezo-resistive technology featuring long-term stability and EMC robustness. Its small size, $0.9 \times 0.9 \text{ mm}^2$, benefits the miniature packages.

Features

- Operation range: 0~400 kPa
- Absolute type sensor
- Constant current or constant voltage drive
- Small size: $0.9 \times 0.9 \text{ mm}^2$
- Low cost

Applications

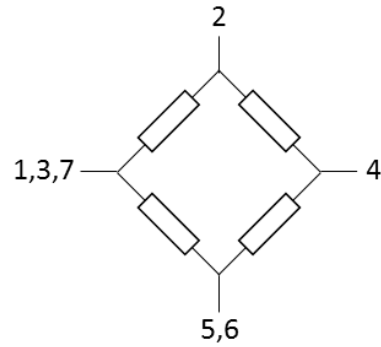
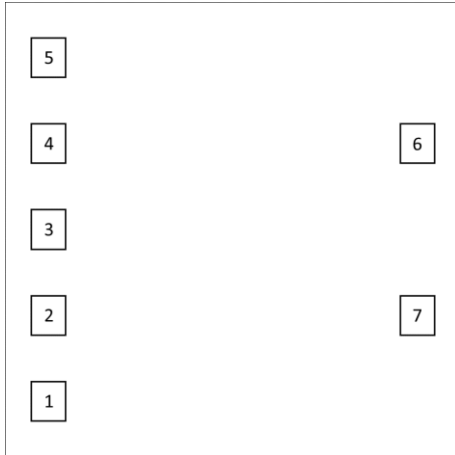
Tire pressure sensor, pressure gauge, industrial sensor

- Tire pressure sensor
- Industrial sensor
- Pressure gauge

Specifications

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Operation voltage	V _{in}		—	5	10	V
Operation current	I ₀		—	1	2	mA
Bridge impedance			5	5.4	6	kΩ
Pressure range			0		400	kPa
Full scale span	FS	V _{in} =5V		260		mV
Offset		V _{in} =5V	20	35	60	mV
Linearity			-0.3	±0.15	+0.3	%FS
TC span		Constant voltage	-0.17	-0.22	-0.27	%FS/°C
		Constant current	-0.08	±0.02	+0.08	%FS/°C
TC offset			-0.08	-0.05	+0.08	%FS/°C
Burst pressure					3X	Rated FS
Temperature range			-40	25	+85	°C
Storage temperature			-40		+125	°C

Pads layout and definition



- Die size: 0.9mm×0.9mm (without scribe line)
- Pad size: 70μm×80μm
- Scribe line: 80μm

Pin#	Name	Description
1	Vout+	Output voltage +
2	Vin	Power supply in
3	Vout+	Output voltage +
4	Vout-	Analog output voltage -
5	GND	Ground pad
6	GND	Ground pad
7	Vout+	Output voltage +