

## Relative Pressure Sensor System

### HRP01

#### HRP01 Product Summary

The HRP01 series is a relative pressure sensor module, The design of pressure sensor in the module is based on mems and IC technology. HopeRF company's product is cheap but with good quality. The technology assures that the PN junction reverse current is less than  $10^{-10}$  A , So that the module is high sensitive, good linear and sensitivity, low tcs and super reliable.

#### Applications

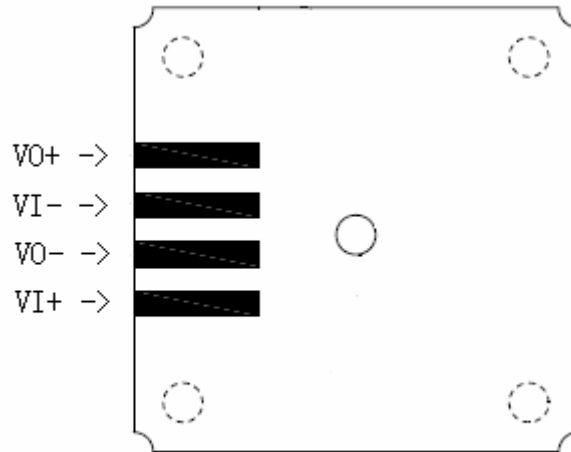
- \_ pulse measuring
- \_ high speed analyzing for small amount material
- \_ breath monitoring system
- \_ breath machine
- \_ pressure switch
- \_ environment control
- \_ liquid level control
- \_ air flow
- \_ filtering monitor
- \_ HAV fan control
- \_ all kinds of leakage detection systems

#### Package Information

##### 1. HRP01 (surface mont able)

Pin	Name	Comment
1	VO+	Detection Positive Voltage Output
2	VI-	Supply Negative Voltage
3	VO-	Detection Negative Voltage Output
4	VI+	Supply Positive Voltage

## 2.HRP01 Pin Description



Bottom View

## Specifications

### 1. ABSOLUTE MAXIMUM RATINGS:

Parameter	Symbol	Conditions	Min	Max	Unit
Supply voltage	US+	Ta = 25°C		12	V
Storage temperature	Ts		-40	+150	°C
Pressure overload				90	KPa

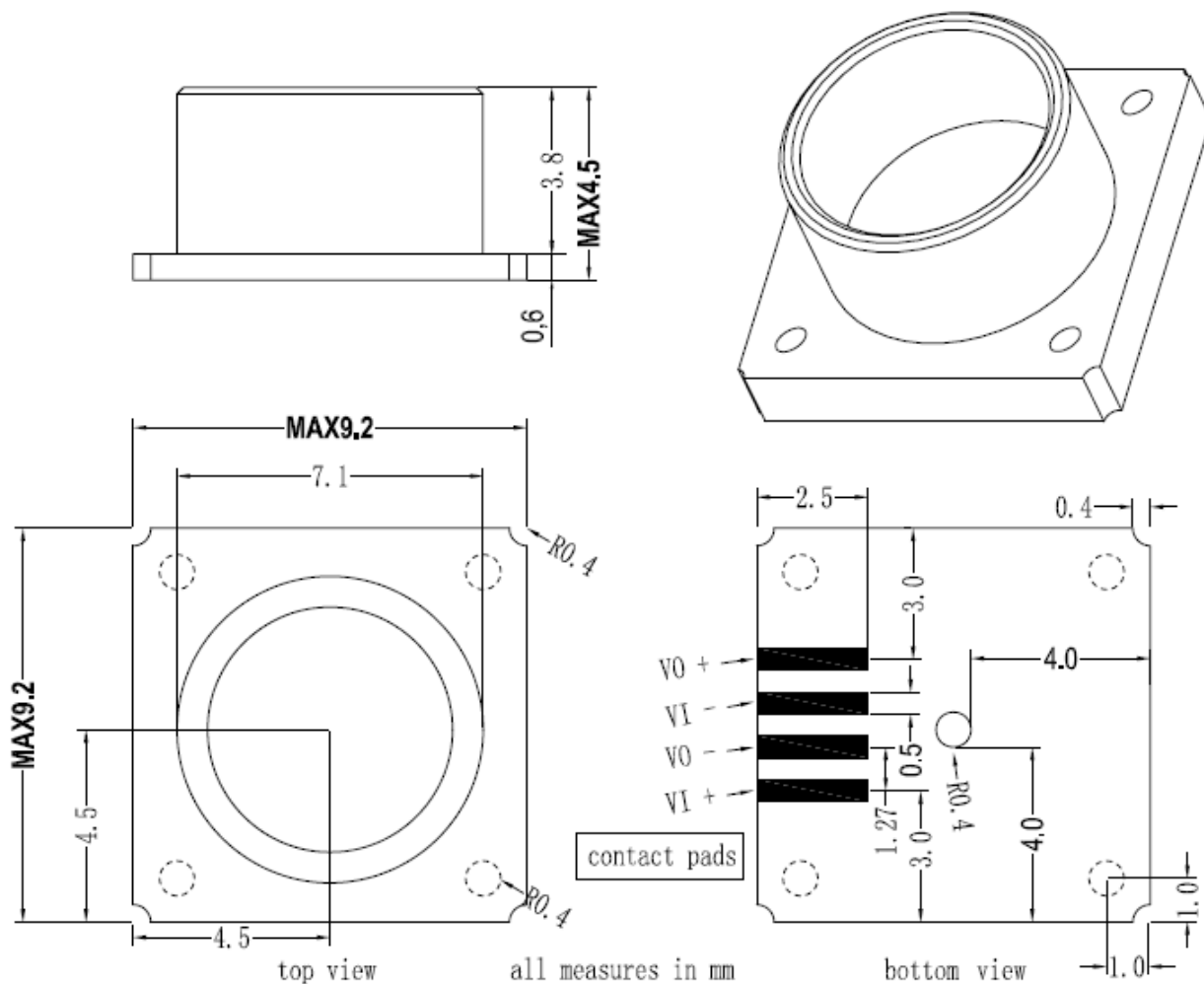
### 2. ELECTRICAL CHARACTERISTICS

(Reference condition: Supply Voltage Vs+ = 5 Vdc; Ambient Temperature Ta = 25°C )

Parameter	Min	Typ	Max	Unit	Notes
Operating Pressure Range	0	-	30	Kpa	
Operating Temperature Range	-40		+125	°C	
Bridge Resistance	4000		4800	Ω	
Zero Pressure Offset	-40	0	40	mv	
Span (Full scale range )					
30 Kpa	60	70	80	mv	
15 Kpa	30	35	40	mv	
10 Kpa	20	23.3	26.7	mv	

Linearity ( Full scall range )				
30 Kpa		$\pm 0.2$	$\pm 0.4$	% FS
15 Kpa		$\pm 0.1$	$\pm 0.2$	% FS
10 Kpa		$\leq \pm 0.1$	$\pm 0.2$	% FS
Temperature Coefficient of				
Resistance	+2500	+2770	+3400	ppm/°C
Span	-2800	-3100	-3400	ppm/°C
Offset	-54	-27	0	$\mu\text{V}/^{\circ}\text{C}$
Pressure hysteresis	-0.1		-0.1	% FS
Repeatability	-0.1		-0.1	% FS
Temperature hysteresis	-0.15		0.15	% FS
Position sensitivity	0		0.15	% FS
Response time		1.0		ms
Warm-up time		1		s

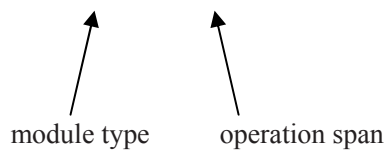
## Mechanical Dimension



## Module Model Definition

Model name=module type-operation band

**HRP01 – 30**



- example: 1, HRP01 module at 30Kpa operation span , HRP01-30.  
2, HRP01 module at 15Kpa operation span , HRP01-15.

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