

# HOPE RF

HSGA0700  
HSGF0700  
HSGC0700

## Absolute Pressure Sensor (0-7 BAR)



- 0 to 700kPa pressure range (7 bar or 100 PSI)
- Absolute pressure sensor
- Silicon/Glass Bonding wafer, high stability
- Miniature surface mount
- RoHS-compatible & Pb-free
- Provide the other gage pressure range sensor

### DESCRIPTION

The Series of pressure sensor is a silicon micro-machined membrane, piezo-resistive sensor. They were designed for extremely cost sensitive applications where the sensing element is to be integral to the OEM equipment, and are intended for use with non-corrosive, non-ionic media. They also may be packaged with application specific sensor die so that the performance characteristics and output range also can be identified.

### FEATURES

- Uncompensated pressure sensor
- High Sensitivity: Output Span 80±30 mV @ 5V
- Temperature Range -40°C ~ +125°C
- Linearity 1% (typical)
- Small size
- Low Cost, High reliability

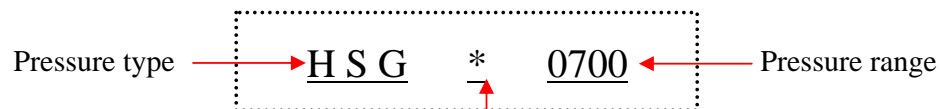
### APPLICATION

- Variometers, tyre pressure test, TPMS
- For high resolution absolute sensor systems
- Engine Controls

### Full Scale Pressure

kPa	bar	mbar	PSI	atm	mmHg	mmH <sub>2</sub> O	kg/cm <sup>2</sup>
700	7	7000	100	7	5250	71451	7

### Part number System



- A: Absolute pressure sensor DIE
- F: mounted on FR4 carrier
- C: mounted on ceramic carrier

Tel: +86-755-82973805 Fax: +86-755-82973550 E-mail: [sales@hoperf.com](mailto:sales@hoperf.com) <http://www.hoperf.cn>

# HOPE RF

## Characteristics

Parameter	Value	Units	Notes
<b>General</b>			
Pressure Range	100	Psi	
Maximum Overpressure	300	Psi	rated pressure
<b>Electrical</b>			
Excitation	5	VDC	
Input Impedance	2.5~5.5	kΩ	
Output Impedance	2.5~5.5	kΩ	
<b>Environmental</b>			
Operating Temperature Range	-40~+125	°C	
Storage Temperature Range	-40~+125	°C	
<b>Mechanical</b>			
Media Compatibility	Clean, dry air & noncorrosive gases		
<b>PERFORMANCE</b>			
Zero Offset	≤50	mV	
Span	80±30	mV	
Bridge Resistance	2.5~5.5	kΩ	
Non-Linearity	-2.5~2.5	%FS	
	-1~1	%FS	
	-0.2~0.2	%FS	
Temperature Coefficient of Zero Offset	-0.08~+0.08	%FS/°C	0°C—80°C
Temperature Coefficient of Span	-0.06~-0.24	%FS/°C	0°C—80°C

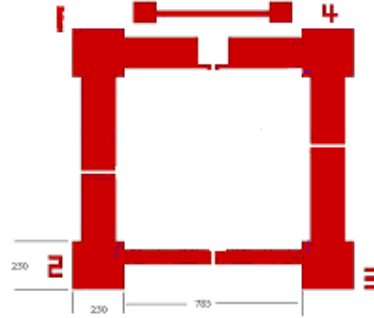
# HOPE RF

## WAFER ELECTRICAL CONNECTIONS

1. Best fit straight line.
2. Coefficients are typical values between -10°C and 40°C.

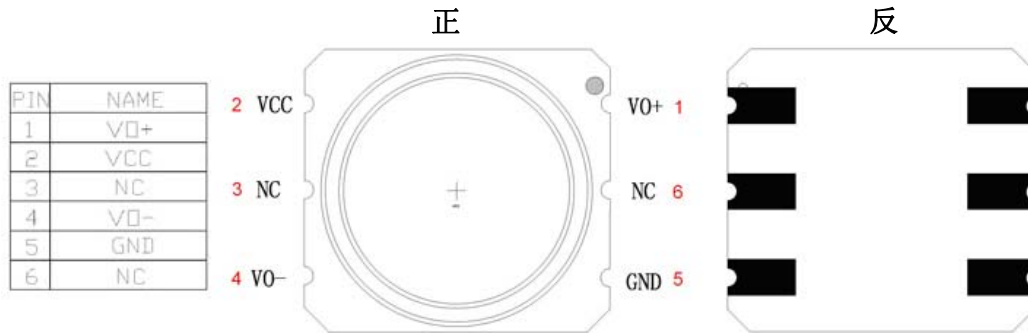
Pad	Connection
1	Vout-
2	GND
3	Vout+
4	VCC

## Schematic and Wire Bond Diagram

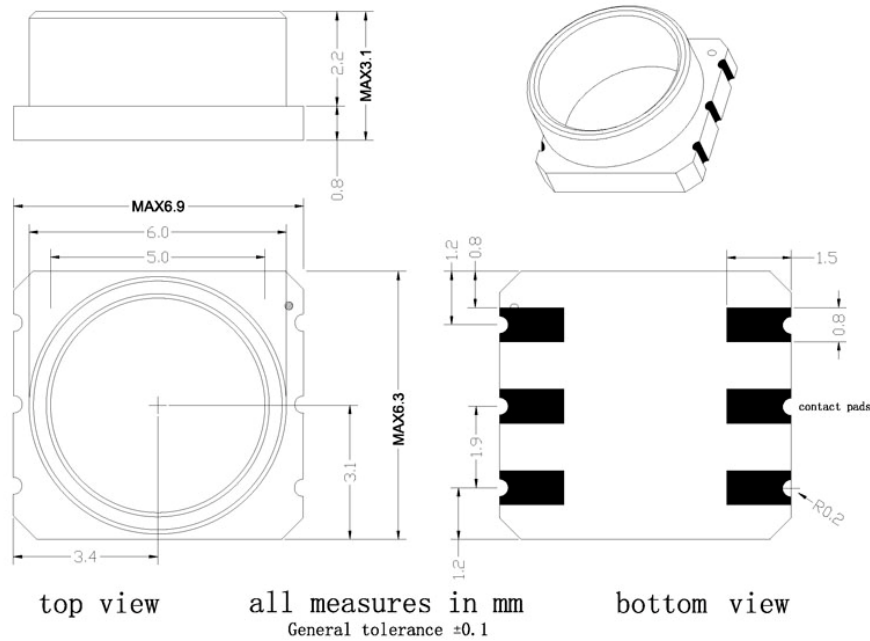


Wafer Size: 1.5mm\*1.5mm\*0.9mm

## Pin Configuration



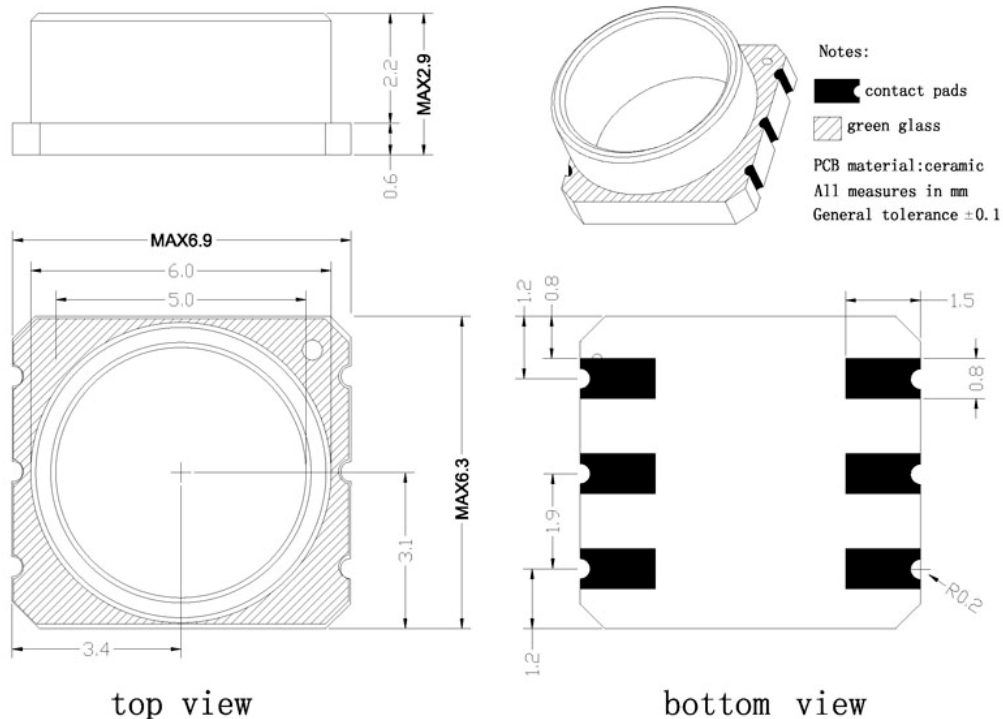
## FR4 Package Outlines



Tel: +86-755-82973805 Fax: +86-755-82973550 E-mail: [sales@hoperf.com](mailto:sales@hoperf.com) <http://www.hoperf.cn>

# HOPE RF

## Ceremic Package Outlines



## ORDERING INFORMATION

Product Code	Description
HSGA0700	700kpa Absolute Pressure Sensor Die
HSGF0700	700kpa SMD pressure sensor mounted on FR4 Carrier
HSGC0700	700kpa SMD pressure sensor mounted on ceramic Carrier

<p><b>HOPE MICROELECTRONICS CO.,LTD</b> 4/F, Block B3, East Industrial Area, Huaqiaocheng, Shenzhen, Guangdong, China Tel: 86-755-82973805 Fax: 86-755-82973550 Email: <a href="mailto:sales@hoperf.com">sales@hoperf.com</a> Website: <a href="http://www.hoperf.com">http://www.hoperf.com</a> <a href="http://www.hoperf.cn">http://www.hoperf.cn</a> <a href="http://hoperf.en.alibaba.com">http://hoperf.en.alibaba.com</a></p>	<p>This document may contain preliminary information and is subject to change by Hope Microelectronics without notice. Hope Microelectronics assumes no responsibility or liability for any use of the information contained herein. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of Hope Microelectronics or third parties. The products described in this document are not intended for use in implantation or other direct life support applications where malfunction may result in the direct physical harm or injury to persons. NO WARRANTIES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MECHANICAL FITNESS OR FITNESS FOR A PARTICULAR PURPOSE, ARE OFFERED IN THIS DOCUMENT.</p> <p>©2006, HOPE MICROELECTRONICS CO.,LTD. All rights reserved.</p>
--	---

Tel: +86-755-82973805 Fax: +86-755-82973550 E-mail: [sales@hoperf.com](mailto:sales@hoperf.com) <http://www.hoperf.cn>