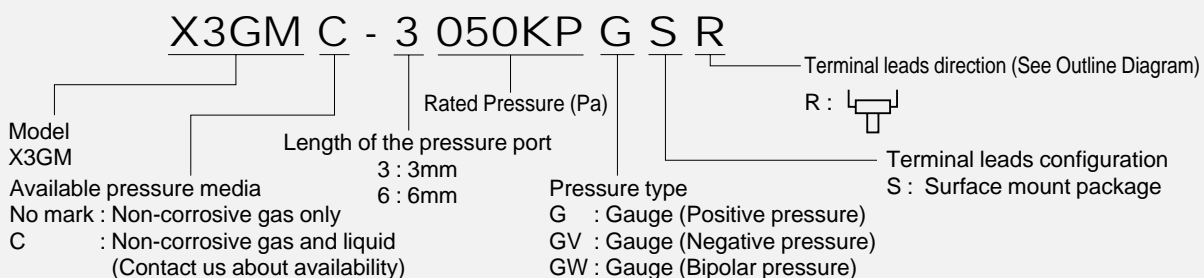


## Features

- 3V excitation, Battery operation available
- Volt level output
- On-chip amplification and temperature compensations
- Pre-calibration of offset voltage and span
- Non-corrosive liquid measurable (X3GMC only)

## Part number for ordering



| Pressure type         | Gauge pressure                           |  |
|-----------------------|--|--|
|                       | X3GM-3                                   | X3GM-6                                   |
| Model                 |  |  |
| Package configuration | Surface mount package, 3mm pressure port | Surface mount package, 6mm pressure port |

| Measurable pressure range (kPa) | Part number for ordering |                 |
|---------------------------------|--------------------------|-----------------|
| -100~100                        | X3GM-3100KPGWSR          | X3GM-6100KPGWSR |
| 0~-100                          | X3GM-3100KPGVSR          | X3GM-6100KPGVSR |
| 0~50                            | X3GM-3050KPGSR           | X3GM-6050KPGSR  |
| 0~100                           | X3GM-3100KPGSR           | X3GM-6100KPGSR  |
| 0~200                           | X3GM-3200KPGSR           | X3GM-6200KPGSR  |
| 0~1000                          | X3GM-3001MPGSR           | X3GM-6001MPGSR  |

## Specifications

| Model/Rated pressure   | 100KPGW   | 100KPGV | 050KPG | 100KPG | 200KPG | 001MPG                     | Unit               |
|--|---|---------|--------|--------|--------|----------------------------|--------------------|
| <b>Recommended operating conditions</b>  |   |         |        |        |        |                            |                    |
| Pressure type  | Gauge pressure  |         |        |        |        |                            | —                  |
| Rated pressure   | ±100  | -100    | 50     | 100    | 200    | 1000                       | kPa                |
|  | ±1.020  | -1.020  | 0.510  | 1.020  | 2.040  | 10.20                      | kg/cm <sup>2</sup> |
| Measurable pressure range  | -100~100  | 0~-100  | 0~50   | 0~100  | 0~200  | 0~1000                     | kPa                |
| Pressure media ※1  | XFGM : Non-corrosive gas only, XFGMC : Non-corrosive gas and liquid |         |        |        |        |                            | —                  |
| Excitation voltage   | 3.0±0.15  |         |        |        |        |                            | VDC                |
| <b>Absolute maximum rating</b>   |   |         |        |        |        |                            |                    |
| Maximum load pressure  | Twice of rated pressure   |         |        |        |        | 1.5times of rated pressure | —                  |
| Maximum excitation voltage   | 6   |         |        |        |        |                            | VDC                |
| Operating temperature  | -10~80  |         |        |        |        |                            | °C                 |
| Storage temperature  | -20~100   |         |        |        |        |                            | °C                 |
| Operating humidity   | 30~80 (No dew condensation)   |         |        |        |        |                            | %RH                |
| <b>Electric performances/characteristics (Excitation voltage Vcc=3.0V constant, Ambient temperature Ta=25°C)</b> |   |         |        |        |        |                            |                    |
| Current consumption  | less than 6   |         |        |        |        |                            | mA                 |
| Output impedance   | less than 10  |         |        |        |        |                            | Ω                  |
| Source current   | less than 0.1   |         |        |        |        |                            | mA                 |
| Sink current   | less than 1   |         |        |        |        |                            | mA                 |
| Mechanical response time   | 2 (For the reference)   |         |        |        |        |                            | msec               |
| Full scale span voltage  | 1.5   |         |        |        |        |                            | V                  |
| Offset voltage※1.2   | 0.5±0.075   |         |        |        |        |                            | V                  |
| Full scale span voltage※1.2  | 2.0±0.075   |         |        |        |        |                            | V                  |
| Accuracy※1.2   | ±5.0  |         |        |        |        |                            | %FS/0~50°C         |

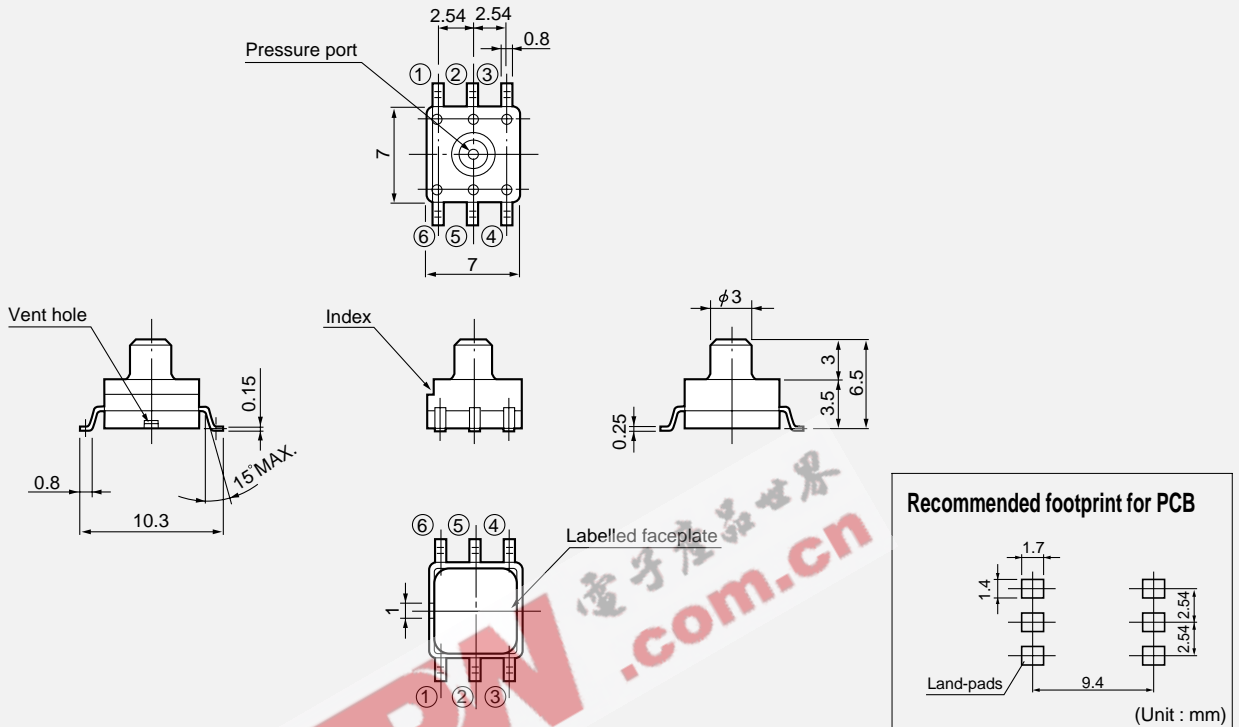
Note ; ※1) Please consult us available when you choose the C models.

※2) Excluding input voltage error.

■ Outline dimensions ■

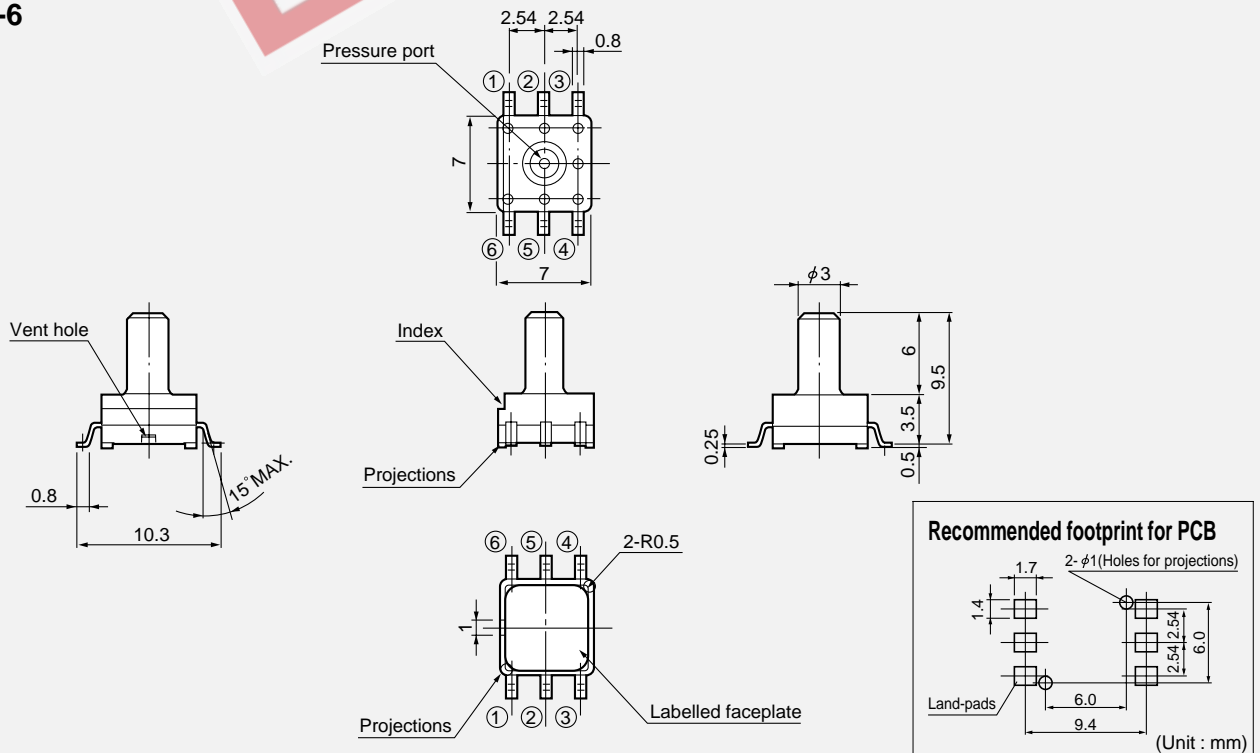
X3GM-3

Unit : mm

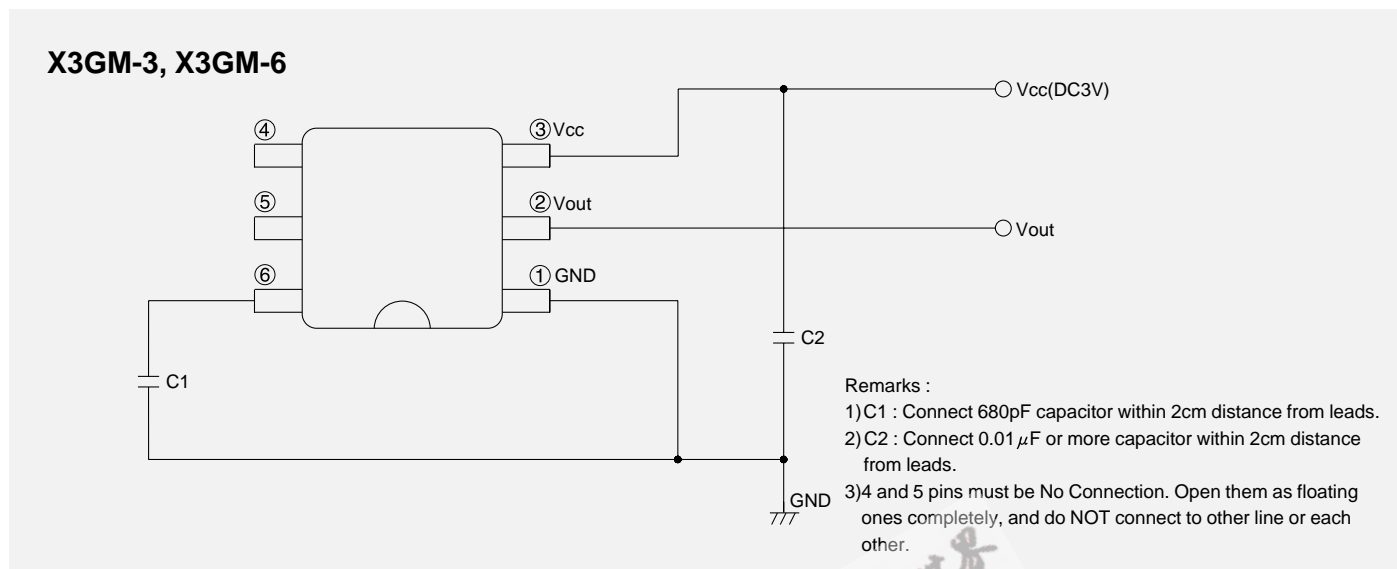


X3GM-6

Unit : mm



## ■ Connection diagram ■



## ■ Transfer Function ■

$$V_{out} = V_s \times (P \times \alpha + \beta) \pm (\text{Pressure Error} \times \text{Temperature Error Multiplier} \times \alpha \times V_s)$$

$$\text{※ } V_s = 3.0 \text{ volts}$$

Notes ; The output voltage ( $V_{out}$ ) is no perfect ratiometric with the power supply voltage.

$$\text{※ } P = \text{Input Pressure (kPa)}$$

| Model       | pressure range | $\alpha$ | $\beta$ | Pressure Error(kPa) |
|-------------|----------------|----------|---------|---------------------|
| 050KPG(D)   | 0~50kPa        | 0.01     | 0.1667  | 2.5                 |
| 100KPG(D)   | 0~100kPa       | 0.005    | 0.1667  | 5.0                 |
| 100KPGV     | 0~-100kPa      | -0.005   | 0.1667  | 5.0                 |
| 100KPGW(DW) | -100~+100kPa   | 0.0025   | 0.4167  | 10.0                |
| 200KPG(D)   | 0~200kPa       | 0.0025   | 0.1667  | 10.0                |
| 001MPG(D)   | 0~1MPa         | 0.0005   | 0.1667  | 50.0                |
| 115KPA      | 15~115kPa.abs  | 0.005    | 0.09167 | 5.0                 |

$$\text{※ Temperature Error Multiplier} = 1$$

Note ; Please read instruction "Notes" before using the sensor.  
Fujikura reserves the right to change specifications without notice.

# Fujikura Ltd.

If you have any questions regarding technical issues or specifications, please contact us.  
Sensor Engineering Department 5-1 Kiba 1-chome, Koto-ku, Tokyo 135-8512, Japan  
Phone +81-(0)3-5606-1072 Fax. +81-(0)3-5606-1538  
E-mail : sensor@fujikura.co.jp