Pre-amplified/5V Excitation/Gauge XFPM,XFHM Data sheet

■Features

- Two accuracy ranks, ±1.5%FS and ±2.5%FS available
- Volt level output
- On-chip amplification and temperature compensations
- Pre-calibration of offset voltage and span
- Non-corrosive liquid measurable (XFPMC, XFHMC only)

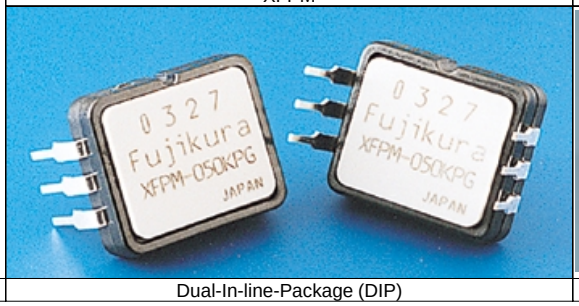
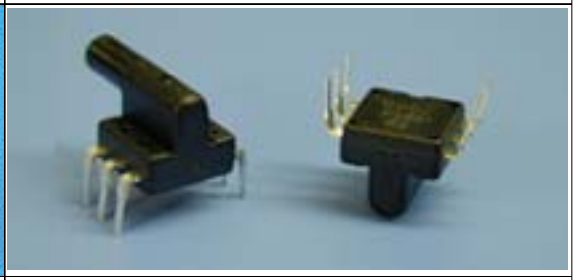
■Applications

- Industrial instrumentation
- Pressure switch, Pneumatic device
- Medical device

■Part number for ordering

XFPM C - 025KP G R H

- Model: XFPM, XFHM
- Available pressure media: No mark : Non-corrosive gas only; C : Non-corrosive gas and liquid (Contact us about availability)
- Rated pressure (Pa)
- Pressure type: G : Gauge (Positive pressure); GV : Gauge (Negative pressure); GW : Gauge (Bipolar pressure)
- Terminal leads direction (See Outline Diagram): No mark : ; R :
- Accuracy: No mark : ±2.5 FS %; H : ±1.5 FS % (Contact us about availability)

Pressure type	Gauge pressure	
Model	XFPM	XFHM
		
Package configuration	Dual-In-line-Package (DIP)	Horizontal pressure port DIP

Measurable pressure range (kPa)	Part number for ordering		
−100 ~100	XFPM-100KPGW	XFPM-100KPGWR	XFHM-100KPGWR
0 ~−100	XFPM-100KPGV	XFPM-100KPGVR	XFHM-100KPGVR
0~25	XFPM-025KPG	XFPM-025KPGR	XFHM-025KPGR
0~50	XFPM-050KPG	XFPM-050KPGR	XFHM-050KPGR
0 ~100	XFPM-100KPG	XFPM-100KPGR	XFHM-100KPGR
0~200	XFPM-200KPG	XFPM-200KPGR	XFHM-200KPGR
0 ~1000	XFPM-001MPG	XFPM-001MPGR	XFHM-001MPGR

■Specifications

Model/Rated pressure	100KPGW	100KPGV	025KPG	050KPG	100KPG	200KPG	001MPG	Unit
Recommended operating conditions								
Pressure type	Gauge pressure							—
Rated pressure	±100	−100	25	50	100	200	1000	kPa
	±1.020	−1.020	0.255	0.510	1.020	2.040	10.20	kg/cm²
Measurable pressure range	−100~100	0~−100	0~25	0~50	0~100	0~200	0~1000	kPa
Pressure media ※1	XFPM, XFHM : Non-corrosive gas only, XFPMC, XFHMC : Non-corrosive gas and liquid							—
Excitation voltage	5.0±0.25							VDC
Absolute maximum rating								
Maximum load pressure	Twice of rated pressure						1.5times of rated pressure	—
Maximum excitation voltage	8							VDC
Operating temperature	−40~125							℃
Storage temperature	−40~125							℃
Operating humidity	30~80 (No dew condensation)							%RH
Electric performances/characteristics(Excitation voltage Vcc=5.0V constant, Ambient temperature Ta=25℃)								
Current consumption	less than 10							mA
Output impedance	less than 10							Ω
Source current	less than 0.2							mA
Sink current	less than 2							mA
Mechanical response time	2 (For the reference)							msec
Full scale span voltage	4.5							V
Offset voltage ※1.2	0.2±0.1125, 0.2±0.0675(H)							V
Full scale span voltage※1.2	4.7±0.1125, 4.7±0.0675(H)							V
Accuracy ※1.2	±2.5, ±1.5(H)							%FS/0~85℃

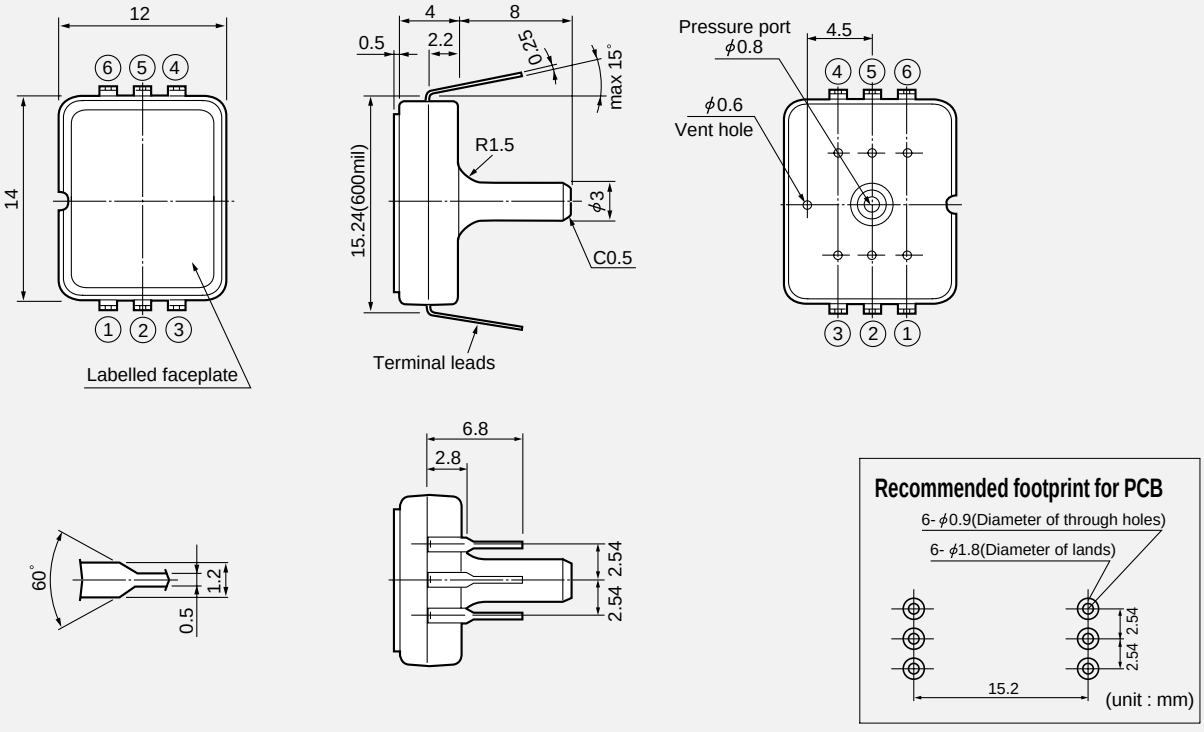
Note ; ※1) Please consult us available when you choose the C models and the H models.
※2) Excluding input voltage error.

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■ Outline dimensions ■

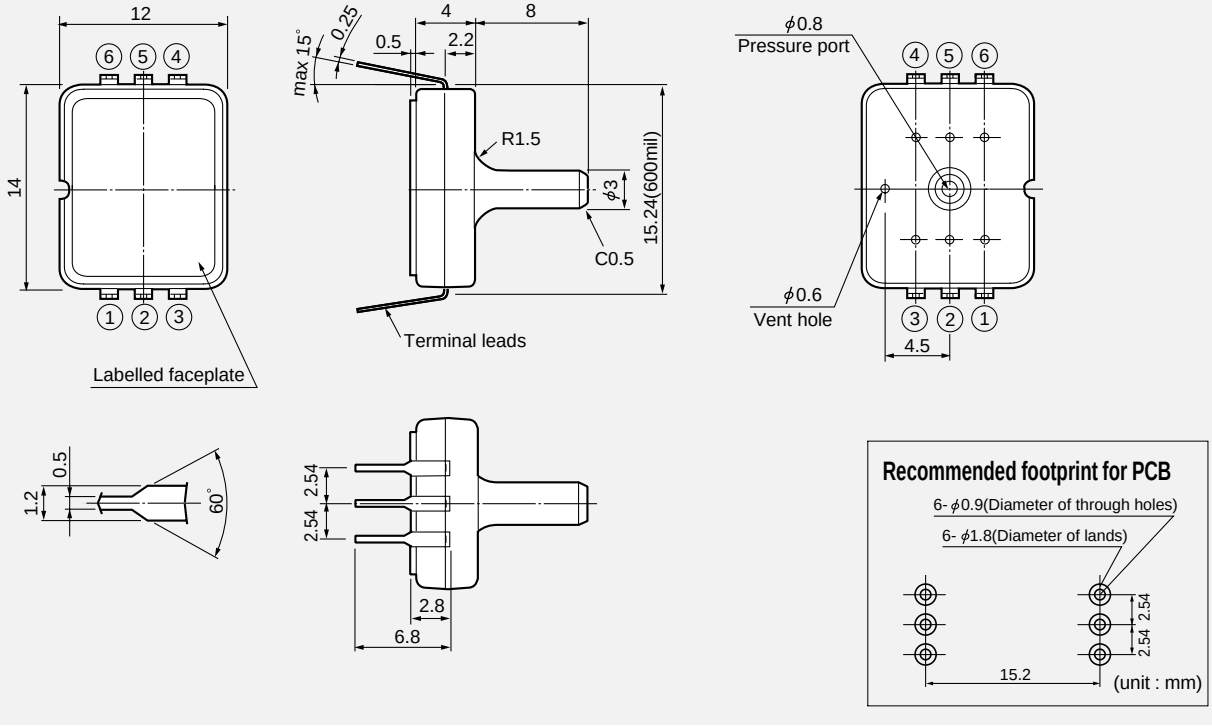
unit : mm

XFPM



unit : mm

XFPM-R

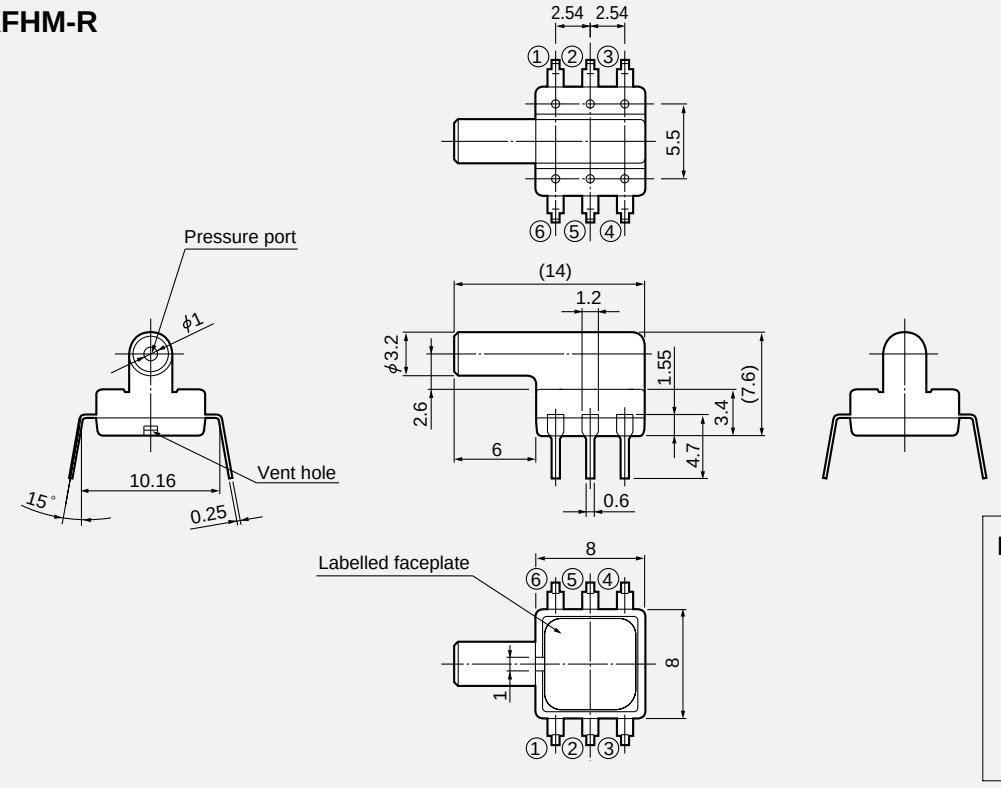


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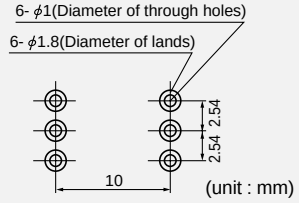
■ Outline dimensions ■

unit : mm

XFHM-R



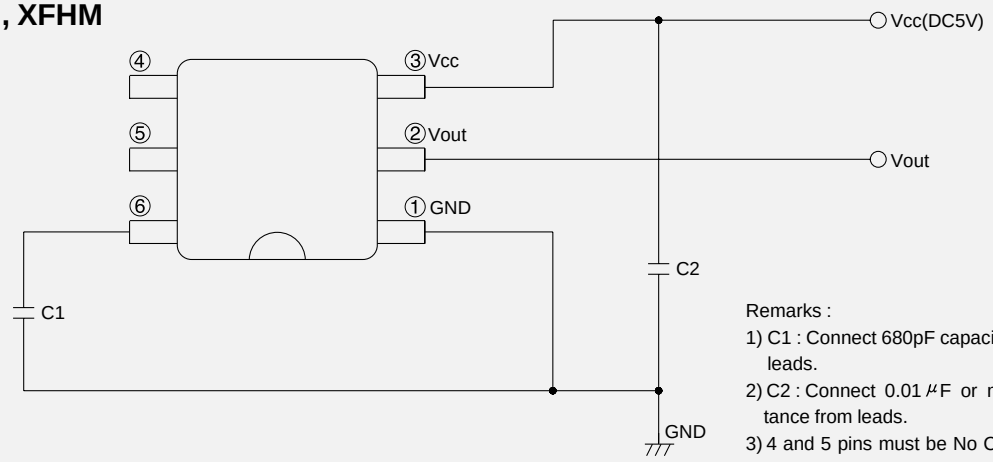
Recommended footprint for PCB



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■ Connection diagram ■

XFPM, XFHM



Remarks :
1) C1 : Connect 680pF capacitor within 2cm distance from leads.
2) C2 : Connect 0.01μF or more capacitor within 2cm distance from leads.
3) 4 and 5 pins must be No Connection. Open them as floating ones completely, and do NOT connect to other line or each other.

■ Transfer Function ■

Vout=Vs×(P×α+β)±(Pressure Error×Temperature Error Multiplier×α× Vs)

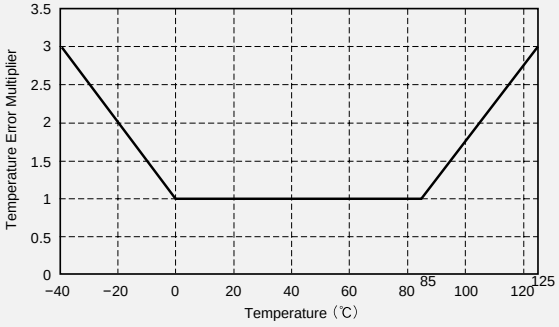
※Vs=5.0volts

Notes ; The output voltage (Vout) is no perfect ratiometric with the power supply voltage.

※P=Input Pressure(kPa)

Model	pressure range	α	β	Pressure Error(kPa)
025KPG(D)	0～25kPa	0.036	0.04	0.625
050KPG(D)	0～50kPa	0.018	0.04	1.25
100KPG(D)	0～100kPa	0.009	0.04	2.5
100KPGV	0～−100kPa	−0.009	0.04	2.5
100KPGW(DW)	−100～+100kPa	0.0045	0.49	5.0
200KPG(D)	0～200kPa	0.0045	0.04	5.0
001MPG(D)	0～1MPa	0.0009	0.04	25
115KPA	15～115kPa.abs	0.009	−0.095	2.5

※Temperature Error Multiplier



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

If you have any questions regarding technical issues or specifications, please contact us.
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