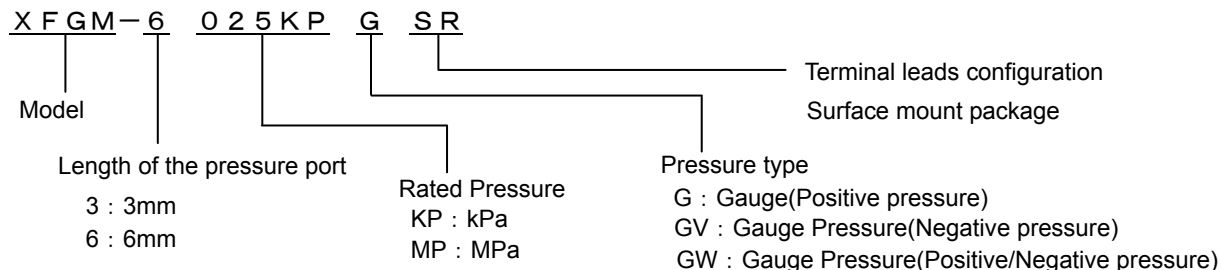


■Features

- On-chip amplification and temperature compensations
- Pre-calibration of offset voltage and span
- Surface mount package

■Ordering Information



| | | | |
|--|----------------|--|----------------|
| | Weight (grams) | | Weight (grams) |
| | 0.3 | | 0.35 |

| Measurable pressure range(kPa) | Part number | |
|--------------------------------|-------------------|-------------------|
| | 3mm pressure port | 6mm pressure port |
| -100 to 100 | XFGM-3100KPGWSR | XFGM-6100KPGWSR |
| 0 to -100 | XFGM-3100KPGVSR | XFGM-6100KPGVSR |
| 0 to 25 | XFGM-3025KPGSR | XFGM-6025KPGSR |
| 0 to 50 | XFGM-3050KPGSR | XFGM-6050KPGSR |
| 0 to 100 | XFGM-3100KPGSR | XFGM-6100KPGSR |
| 0 to 200 | XFGM-3200KPGSR | XFGM-6200KPGSR |
| 0 to 1000 | XFGM-3001MPGSR | XFGM-6001MPGSR |



■Specifications

| Model | 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 |
| Measurable pressure range | -100 to 100 | 0 to -100 | 0 to 25 | 0 to 50 | 0 to 100 | 0 to 200 | 0 to 1000 | kPa |
| Temperature range | 0 to 85 | | | | | | | deg.C |
| Pressure media | Non-corrosive gases only (No liquid) | | | | | | | - |
| Supply voltage(constant) | 5+/-0.25 | | | | | | | VDC |
| Absolute maximum rating | | | | | | | | |
| Maximum load pressure | Twice of rated pressure | | | | | | 1.5 times of rating pressure | - |
| Maximum excitation voltage | 8 | | | | | | | VDC |
| Operating temperature | -40 to 125 | | | | | | | deg.C |
| Storage temperature | -40 to 125 | | | | | | | deg.C |
| Operating humidity | 30 to 80 (Non dew condition) | | | | | | | %RH |
| Electrical characteristics (Excitation voltage Vcc=5.0V constant , ambient temperature Ta=25deg.C) | | | | | | | | |
| Power consumption | 10mA max. | | | | | | | mA |
| Output impedance | 10Ω max. | | | | | | | Ω |
| Source current | 0.2mA max. | | | | | | | mA |
| Sink current | 2mA max. | | | | | | | mA |
| Response time | 2 (for the reference) | | | | | | | msec. |
| Output span voltage | 4.5 | | | | | | | V |
| Offset voltage *1 | *2 | *3 | 0.2+/-0.1125 (at 0 kPa) | | | | V | |
| Output voltage at full scale *1 | *4 | *5 | 4.7+/-0.1125 (at rated pressure) | | | | V | |
| Accuracy *1 | +/-2.5 | | | | | | | %FS/0-85deg.C |

*1 Excluding input voltage error. 0-85deg.C

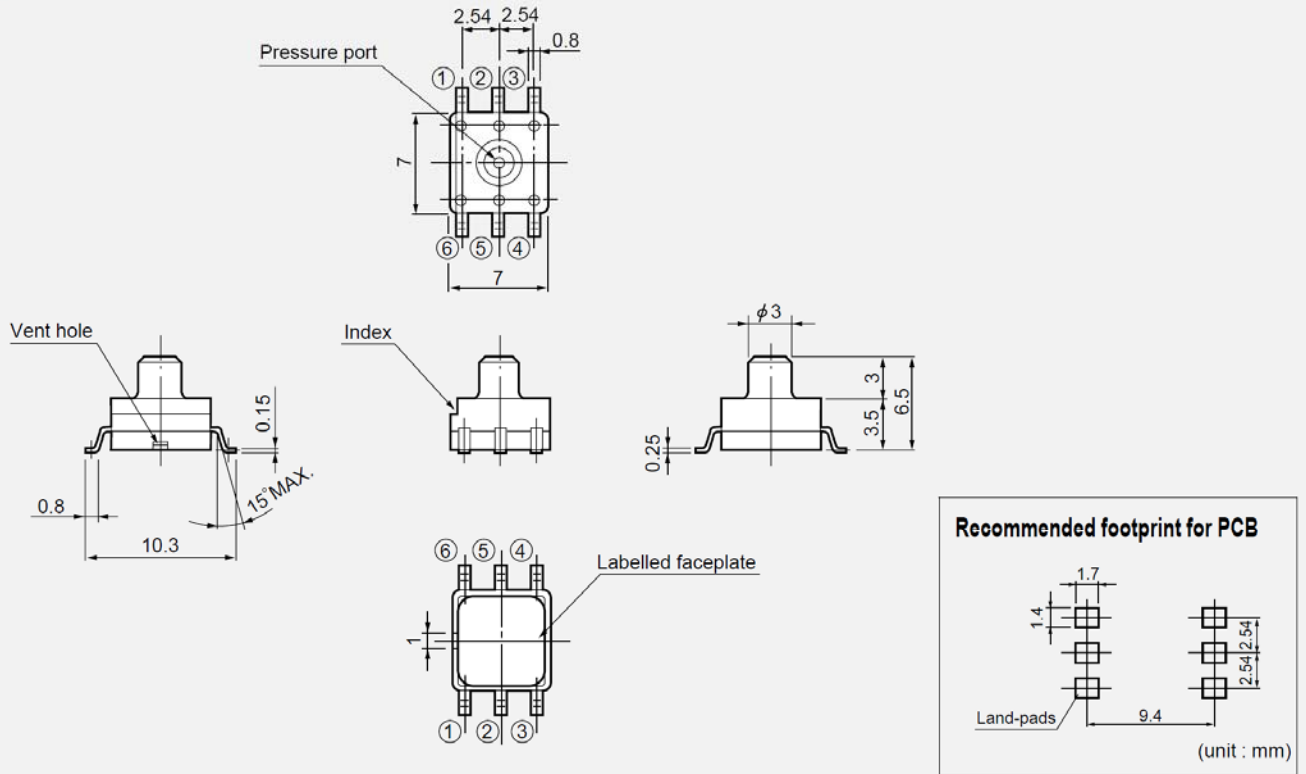
*2 0.2+/-0.1125V(at -100kPa) *3 0.2+/-0.1125V(at 0kPa)

*4 4.7+/-0.1125V(at +100kPa) *5 4.7+/-0.1125V(at -100kPa)

■ Outline dimensions ■

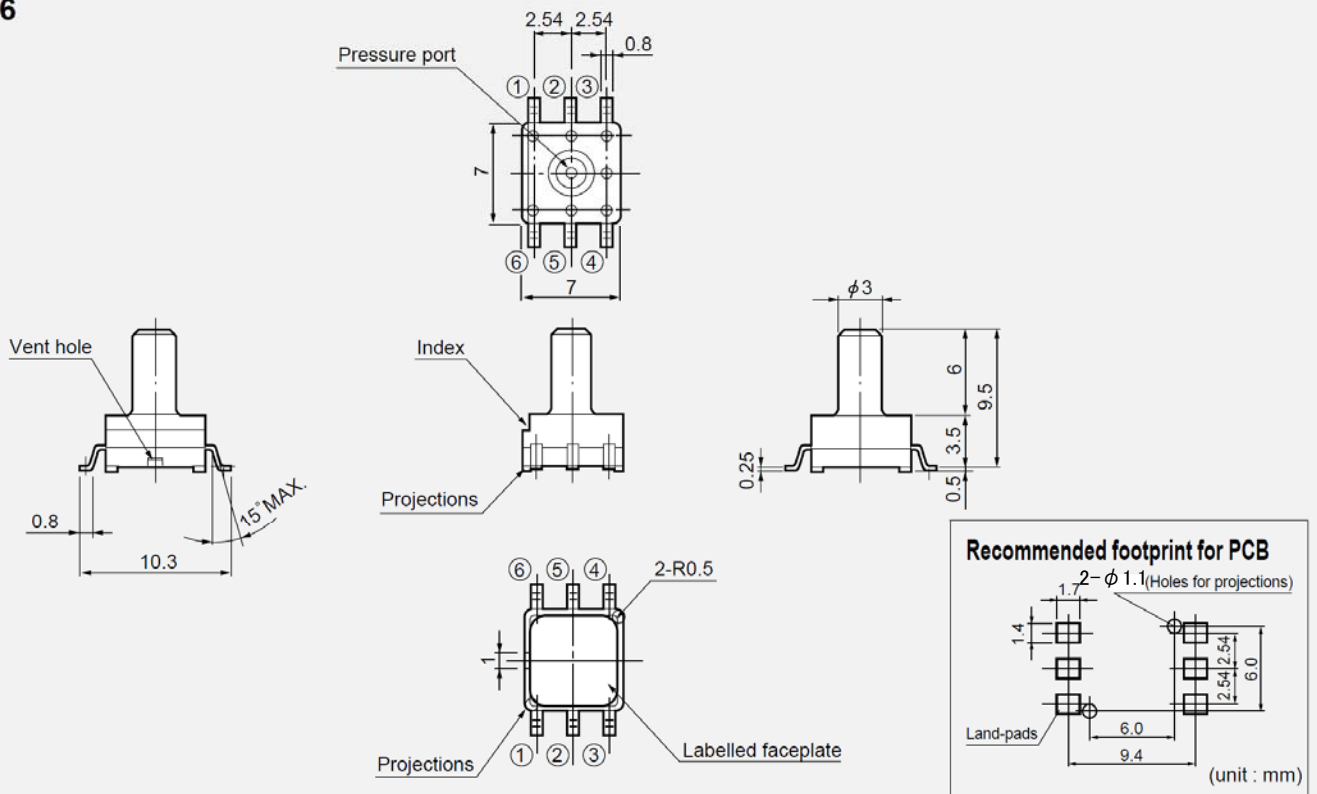
XFGM-3

unit : mm

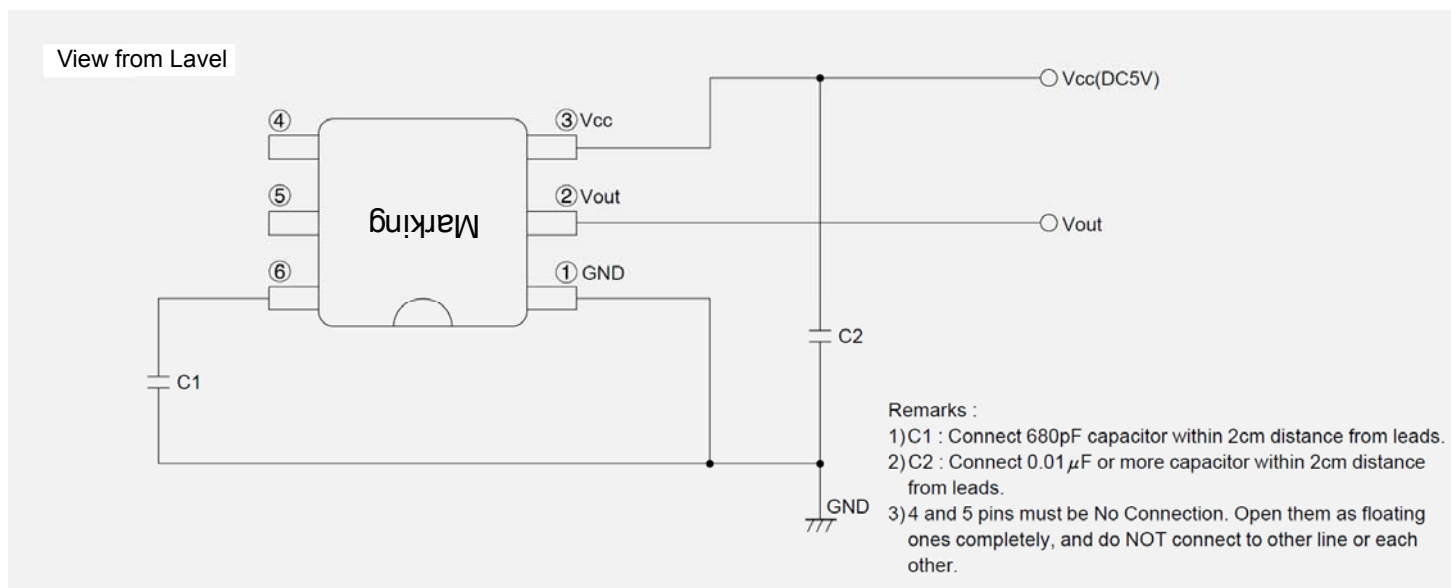


XFGM-6

unit : mm



■Connection diagram■



■Transfer Function■

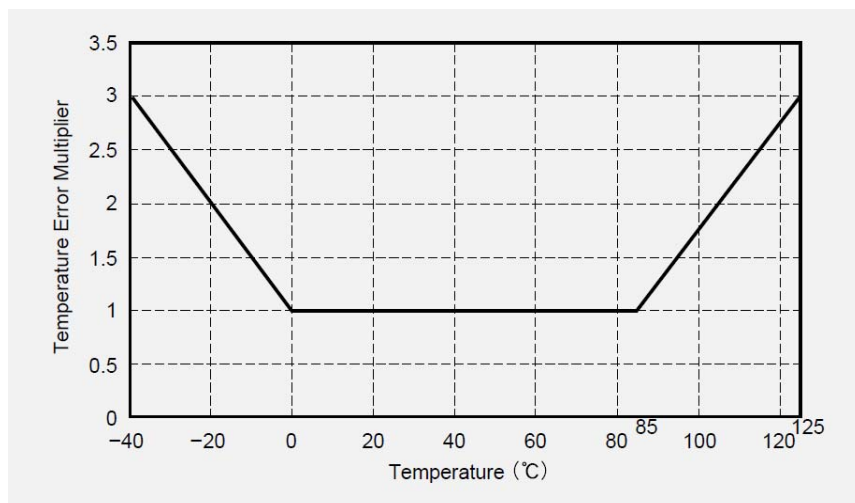
$$V_{out} = V_s \times (P \times \alpha + \beta) \pm (\text{Pressure Error} \times \text{Temperature Error Multiplier} \times \alpha \times V_s)$$

$$V_s = V_{cc} = 5.0V$$

$$P = \text{Input pressure (kPa)}$$

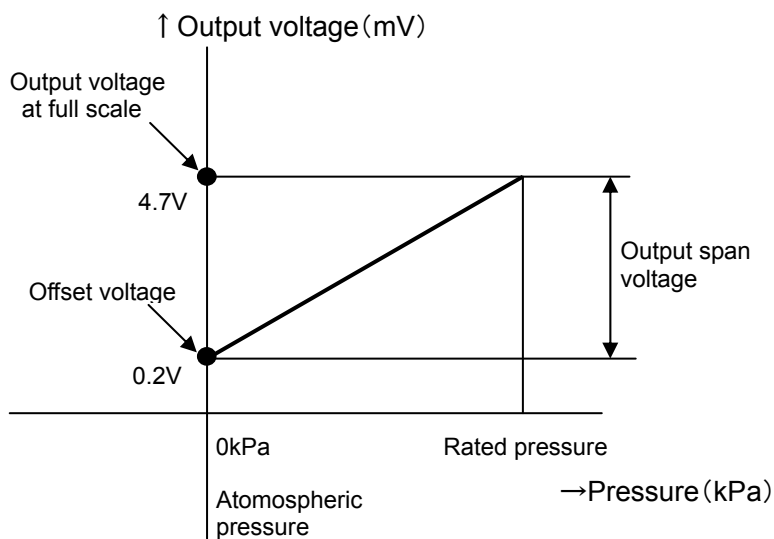
| Model | | Measurable pressure range(kPa) | α | β | Pressure Error (kPa) |
|-----------------|-----------------|--------------------------------|----------|---------|----------------------|
| XFGM-3100KPGWSR | XFGM-6100KPGWSR | -100 to 100 | 0.0045 | 0.49 | 5 |
| XFGM-3100KPGVSR | XFGM-6100KPGVSR | 0 to -100 | -0.009 | 0.04 | 2.5 |
| XFGM-3025KPGSR | XFGM-6025KPGSR | 0 to 25 | 0.036 | 0.04 | 0.625 |
| XFGM-3050KPGSR | XFGM-6050KPGSR | 0 to 50 | 0.018 | 0.04 | 1.25 |
| XFGM-3100KPGSR | XFGM-6100KPGSR | 0 to 100 | 0.009 | 0.04 | 2.5 |
| XFGM-3200KPGSR | XFGM-6200KPGSR | 0 to 200 | 0.0045 | 0.04 | 5 |
| XFGM-3001MPGSR | XFGM-6001MPGSR | 0 to 1000 | 0.0009 | 0.04 | 25 |

Temperature Error Multiplier

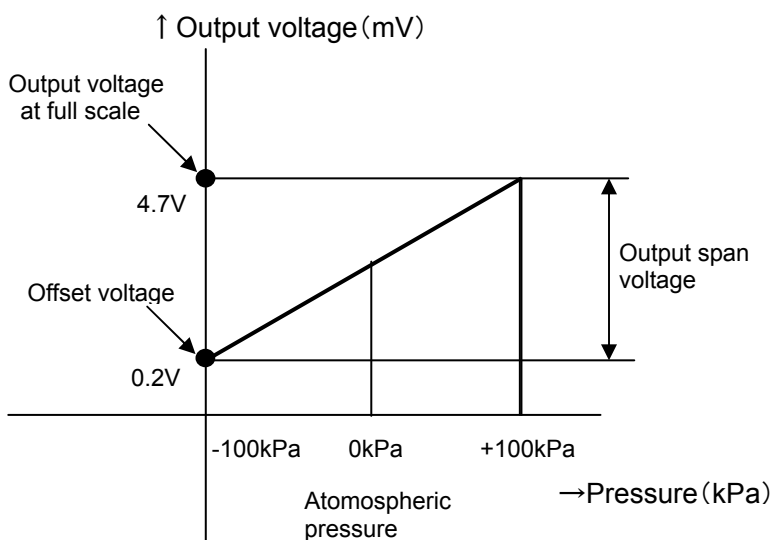


■Output characteristics■

| | |
|-----------------|-----------------|
| XFGM-3100KPGVSR | XFGM-6100KPGVSR |
| XFGM-3025KPGSR | XFGM-6025KPGSR |
| XFGM-3050KPGSR | XFGM-6050KPGSR |
| XFGM-3100KPGSR | XFGM-6100KPGSR |
| XFGM-3200KPGSR | XFGM-6200KPGSR |
| XFGM-3001MPGSR | XFGM-6001MPGSR |



| | |
|-----------------|-----------------|
| XFGM-3100KPGWSR | XFGM-6100KPGWSR |
|-----------------|-----------------|

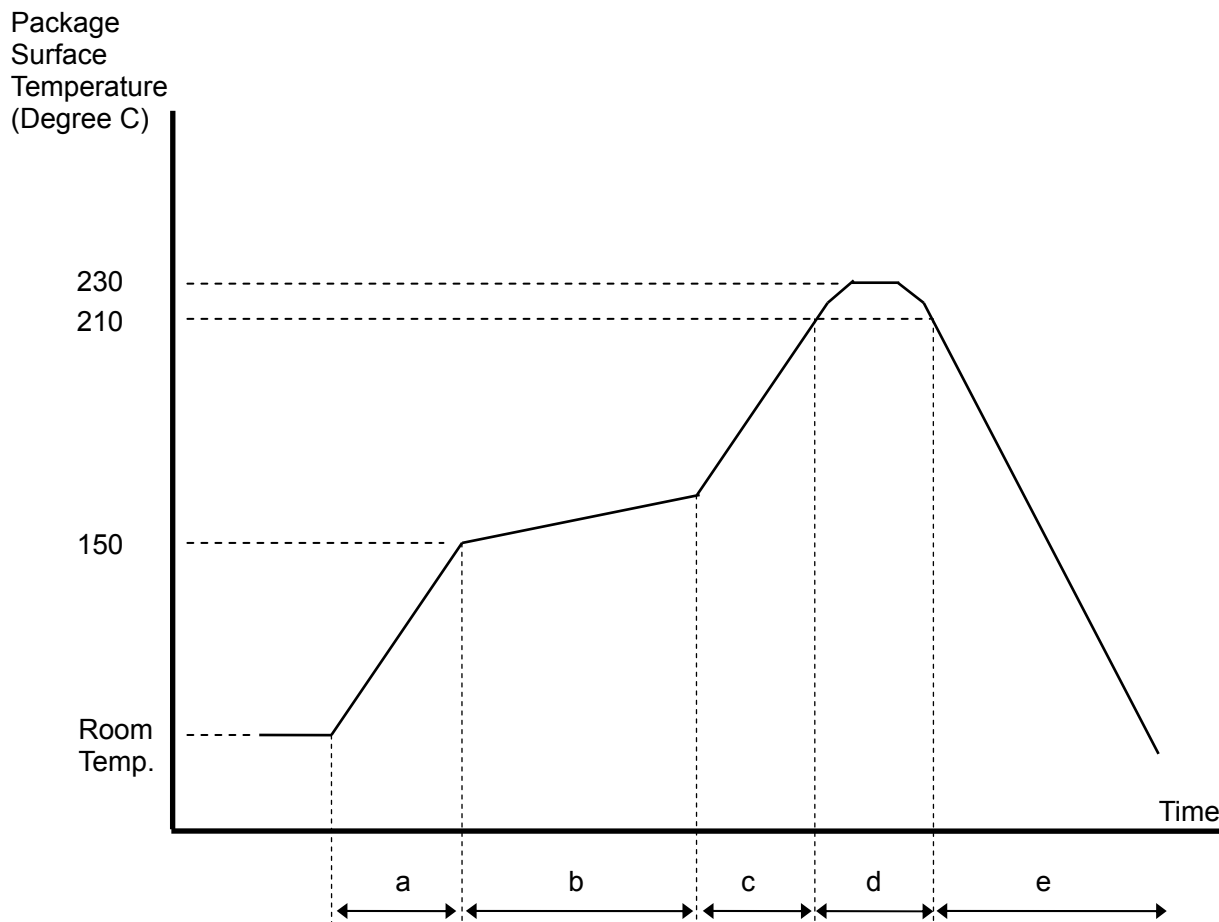


Note ; Please read instruction "Notes" before using the sensor.
Fujikura reserves the right to change specifications without notice.

Please keep the sensors sealed using static shielding bags on storage. The pins of the sensor are plated by Ag. If the sensors expose to an atmosphere, the pins will be black by sulfuration.

Please set Zero-calibration function up your products. The offset voltage may be shifted some mechanical stress such as mounting, installation and etc. over longtime using.

Reflow Soldering process recommendation profile



| | |
|-------------------|--|
| a: Ramp up rate | 1 or 2 deg.C/sec. |
| b: Pre-heating | 150 to 180 deg.C, within 60 to 120sec. |
| c: Ramp up rate | 1 to 2 deg.C/sec. |
| d: Heating | max. 230 deg.C, max. 10sec. 210 deg.C, within 30sec. |
| e: Ramp down rate | 1 or 2 deg.C/sec. |

- Note ;
- 1) Temperature means Surface temperature of the sensor package.
 - 2) Reflow process max. 2 times.
 - 3) Do not wash the sensor.
 - 4) Do not put the solder and flux on the sensor package.

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

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