KP23x Integrated Pressure Sensor
Barometric Air Pressure

**Product:** The KP23x automotive pressure sensor family is a miniaturized absolute pressure sensor IC based on the capacitive principle. It is surface-micromachined with a monolithic integrated fully digital signal conditioning circuit, implemented in state-of-the-art 0.5 micron BiCMOS technology with analog output signal, broken wire detection, optional clamping and other useful features.

**Application:** The barometric air pressure (BAP) is an important parameter to compute the air-fuel ratio provided to the engine and for controlling spark advance to optimize engine efficiency for diesel and gasoline engines. Other automotive applications are Turbo protection or seat comfort using a virtual differential pressure measurement.

**Package:** PG-DSOF-8-16 with integrated lid.

**Target Market:** High accuracy and robust design makes this sensor family a perfect fit for automotive applications.

**Availability:** A Sample Kit is available (SP000753082).

**Similar Products:** KP21x / KP22x product family for automotive Manifold Air Pressure range: up to 400 kPa(MAP) measurement.

**Feature**
- Absolute air pressure measurement based on capacitive principle
- Excellent accuracy of 1.0 kPa over a large temperature range
- Ratiometric analog output proportional to the applied pressure
- Output clamping (optional)
- Pressure range from 40 to 165 kPa
- Temperature range from -40 to 125°C
- Open bond detection for supply and GND (OBD)
- Inverse polarity protection
- „Green SMD package (PG_DSOF-8-16)"

www.infineon.com/sensors
INFINEON TECHNOLOGY offers an extensive product portfolio for diesel engine management systems from micromachined sensors to smart power ICs and microcontrollers. The KP23x an an integrated pressure sensor for barometric pressure measurement, is a benchmark in terms of reliability, performance and integrated level.

### Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Derivatives</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Basic Accuracy</td>
<td>1.5% F:S</td>
<td>kPa</td>
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<tr>
<td>Transfer Function Pressure Min.</td>
<td>1.2</td>
<td>kPa</td>
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<td>Transfer Function Pressure Mix.</td>
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