

## KP125

### Integrated Pressure Sensor IC for Barometric Air Pressure Measurement

#### Applications

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 optimise engine efficiency. In automotive applications where high production volumes are common there is substantial interest in precision, low-cost and fully integrated sensors. In this context the developed BAP sensor KP125 is a promising approach in.

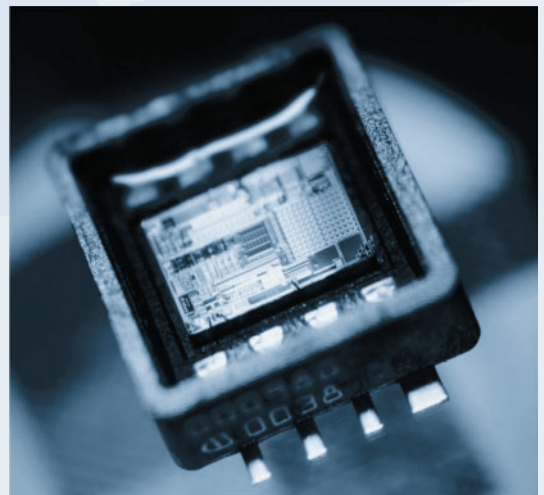
Applications for the barometric pressure sensor KP125 are diesel and gasoline engine management.

#### Features

- Absolute air pressure measurement
- Excellent accuracy of 1.2 kPa over a large temperature range
- Ratiometric analog output
- Output signal fully compensated
- Pressure range from 40 to 150 kPa
- Temperature range from -40 to +125°C
- SMD package (PG-DSOF-8-12)
- Output clamping (optional)

For further information, please see: [www.infineon.com/kp125](http://www.infineon.com/kp125).

PG-DSOF-8-12



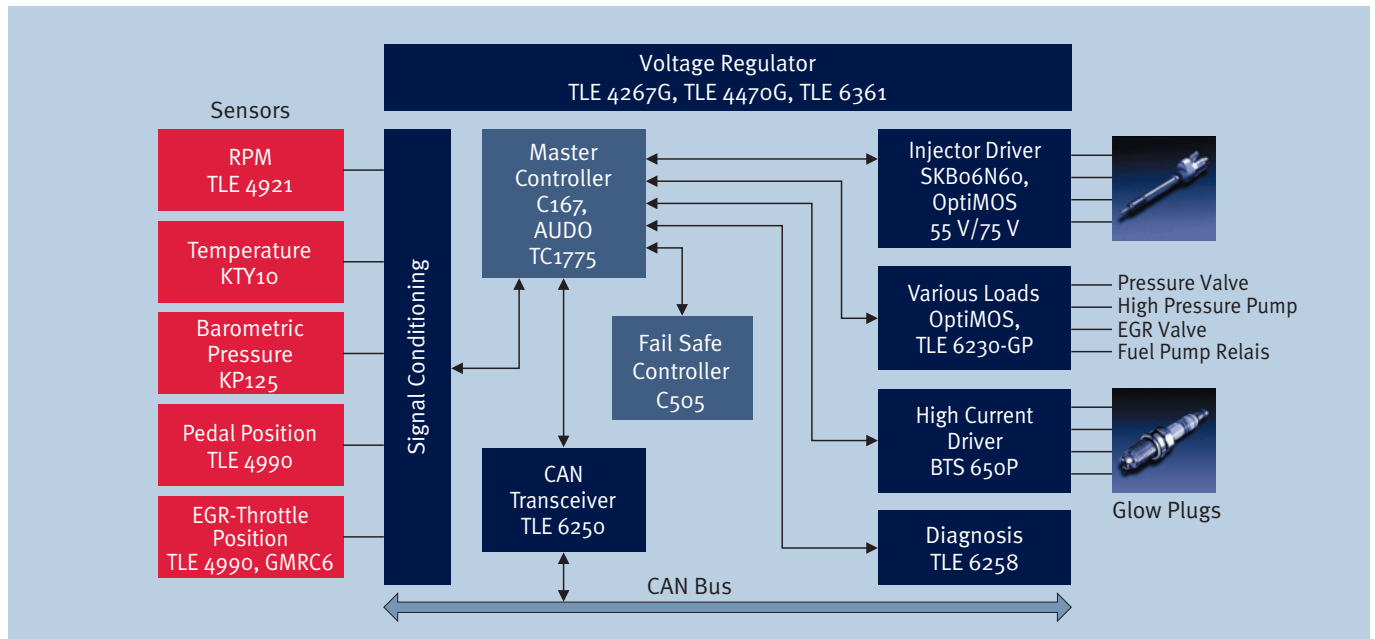
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## Sensors



Never stop thinking.

## Application Example: Diesel Engine Management



INFINEON TECHNOLOGY offers an extensive product portfolio for Diesel engine management systems, from micro-machined sensors to smart power ICs which are capable to work in a 42 V board network today. The KP125 as an integrated pressure sensor for barometric pressure measurement, is a benchmark in terms of accuracy and space requirements concerning engine management systems.

Parameter	Range			Unit
	min.	typ.	max.	
Pressure Range	40	–	150	kPa
Accuracy (0 ... 85°C)	–	1.2	–	kPa
Accuracy (-40 ... 125°C)	–	2.4	–	kPa
Supply voltage	4.5	5.0	5.5	V
Output current Sink/Source	–	–	1.0	mA
Output voltage (ratiometric)	0.1	–	4.85	V
Operating temperature	-40	–	+125	°C
Life time	–	15	–	Years
Response Time	–	5	–	ms

The surface micromachined capacitive pressure sensor KP125 is de-signed to measure the absolute pressure within the range of 40 to 150 kPa. Applicable for vehicular engine management, covering a temperature range from -40 to +125°C. The IC provides an analogue ratiometric, rail-to-rail output voltage, with a pressure accuracy over the whole temperature range of 2.4 kPa (0 ... 85°C: 1.2 kPa).

Type	Sales Code	Package
KP125	Q62705-K792	PG-DSOF-8-12

The sensor IC is mounted in an 8-pin plastic SMD PG-DSOF-8-12 package whereas 3 pins are used for  $V_{DD}$ , GND and  $Signal_{OUT}$ . Another 3 pins are used for calibration.

How to reach us:  
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### Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office.

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