

KP106

Integrated Pressure Sensor IC for Side Crash Detection

Application

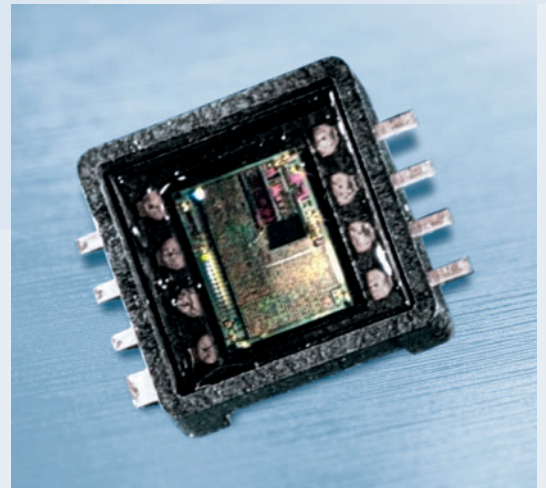
The KP106 is a pressure sensor for the detection of side crashes in passenger cars.

In this application, the pressure sensor is assembled in a module located within the car's side door. When the door is compressed due to a side impact, the KP106 provides a signal pulse which is proportional to the pressure change inside the door. The height of the signal pulse depends on the relative pressure change. Therefore the output signal is independent of the ambient pressure.

Features

- On chip current modulator
- On chip voltage regulator
- User specified protocol
- EE-PROM for ID number, calibration and mode selection
- Synchronous or asynchronous data transmission
- 2 wire interface and SPI interface available
- Online self test
- Reverse polarity protection

PG-DSOF-8-12



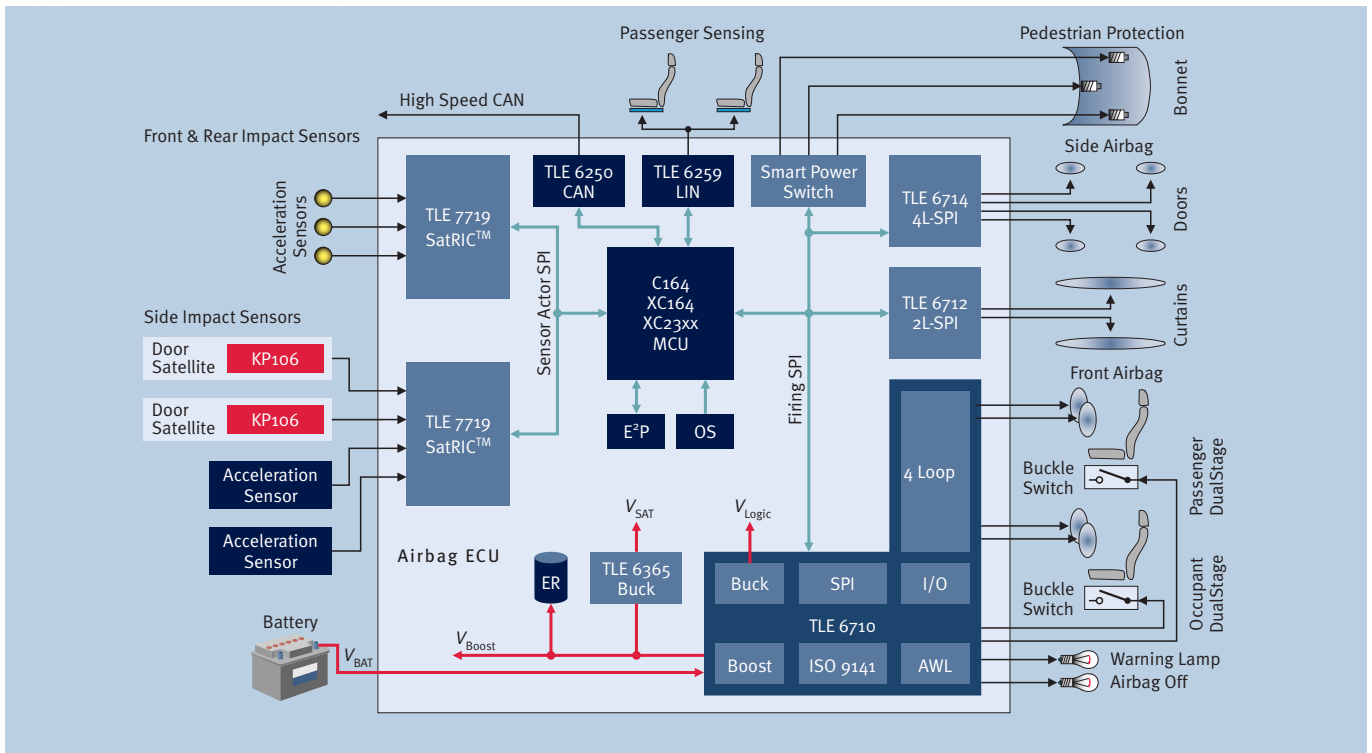
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Sensors



Never stop thinking.

Application Example: Side Crash Detection



INFINEON TECHNOLOGIES offers an extensive product portfolio for occupant safety systems from micromachined sensors to smart power ICs and microcontrollers. The KP106 as an integrated pressure sensor for side crash detection, is a benchmark in terms of reliability and integration level.

Parameter	Range			Unit
	min.	typ.	max.	
Ambient Pressure Range	60	–	130	kPa
Supply Voltage	4.5	–	14	V
Supply Current into V_{DD}	5	–	10	mA
Signal Modulation Current	20	25	30	mA
Operating Temperature	-40	–	90	°C
Life Time	–	15	–	Years
Mechanical Shock Survival	-2000	–	2000	g

The surface micro-machined capacitive pressure sensor KP106 is designed to provide the relative pressure as a digital Manchester encoded output signal. This configuration is optimal for a single IC satellite system, where no further logic IC is used in the door module.

Type	Sales Code	Package
KP106	On request ¹⁾	PG-DSOF-8-12

1) Please contact your regional sales office.

The sensor IC is mounted in an 8-pin plastic SMD PG-PSOF-8-12 package. First engineering samples available in November 2005.

How to reach us:
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