



SP37 450kPa Tire Pressure Sensor

The SP37 is a highly integrated device which performs all necessary functions for a Tire Pressure Monitoring System (TPMS) wheel module suited for high-volume applications. The device contains the sensing elements, the microcontroller, the LF receiver, the RF transmitter and more in one package requiring only few external components to complete a TPMS module.

Since 2003, more than 150 million TPMS sensors of our continuously improved product generations were sold worldwide.

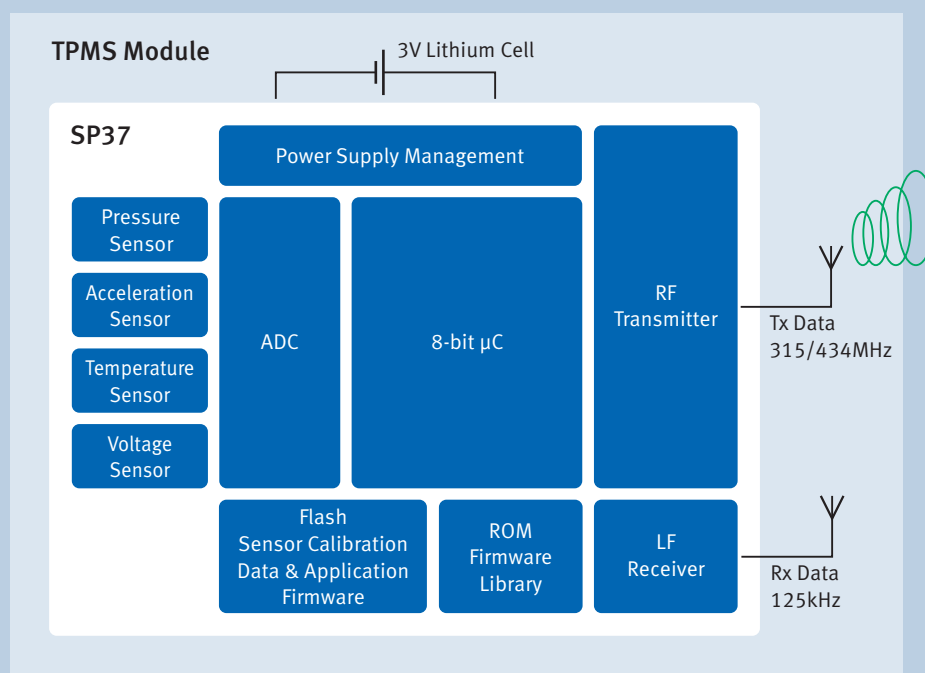
The sensor design of the SP37 is based upon Infineon's patented bulk micro-machined sensing technology which allows highly reliable measurements in harsh environments.

The SP37 measures pressure, radial acceleration, temperature and supply voltage. The device is compliant to the RoHS standard, with a pressure range from 100 up to 450kPa.

Numerous embedded firmware functions and a development kit enable fast development cycles.

Features

- Pressure sensor with a range from 100 up to 450kPa
- Radial acceleration sensor
- Temperature sensor
- Supply voltage sensor
- Embedded 8051 compatible 8-bit microcontroller
- 6kB on-chip FLASH memory
- 256Byte RAM
- 315 and 434MHz FSK/ASK RF-transmitter
- Selectable output power of 5 or 8dBm
- 125kHz ASK high-sensitivity LF-receiver
- Advanced power control/ wake-up system to minimize battery consumption
- Ultra low standby current (< 0.7µA)
- Supply voltage range 1.9...3.6V
- Operating temperature range -40...125°C
- PG-DSOSP-14-6 package
- RoHS compliant, green package



SP37 450kPa

Tire Pressure Sensor

Parameter	Symbol	Values			Unit	Note/Test Condition
		Min.	Typ.	Max.		
Input Pressure Range	P _{in}	100	–	450	kPa	T = -40...125°C
Measurement Error	p _{Error}	-7	–	+7	kPa	T = 0...50°C
	p _{Error}	-9	–	+9	kPa	T = 50...70°C
	p _{Error}	-17.5	–	+17.5	kPa	T = -40...0°C T = 70...125°C
Input Acceleration Range	a _{in}	-115	–	115	g	T = -40...125°C
Sensitivity Error	a _{Sensitivity}	-18.75	–	+18.75	%	T = -40...90°C
	a _{Sensitivity}	-24	–	+24	%	T = 90...125°C
Offset Error	A _{Offset}	-6	–	+6	g	T = -20...70°C
	A _{Offset}	-8.5	–	+8.5	g	T = -40...-20°C T = 70...90°C
	A _{Offset}	-12	–	+12	g	T = 90...125°C
Temperature Measurement Error	T _{Error}	-3	–	+3	°C	T = -20...70°C
	T _{Error}	-5	–	+5	°C	T = -40...-20°C T = 70...125°C
Voltage Measurement Error	V _{Error}	-100	–	+100	mV	–

Tighter specifications are available on request.

Product Summary

Sales Name	Description	Order Code
SP370-25-106-0	Tire Pressure Sensor	SP000934274

Published by
Infineon Technologies AG
85579 Neubiberg, Germany

© 2012 Infineon Technologies AG.
All Rights Reserved.

Visit us:
www.infineon.com

Order Number: B142-H9490-G1-X-7600
Date: 06 / 2012

ATTENTION PLEASE!

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenheitsgarantie"). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

INFORMATION

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (www.infineon.com).

WARNINGS

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office. Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Infineon:

[SP370-25-106-0](#) [SP370251060XTMA1](#) [SP370231560XTMA1](#) [SP370-25-116-0](#) [SP370-23-156-0](#)
[SP370251160XTMA1](#)