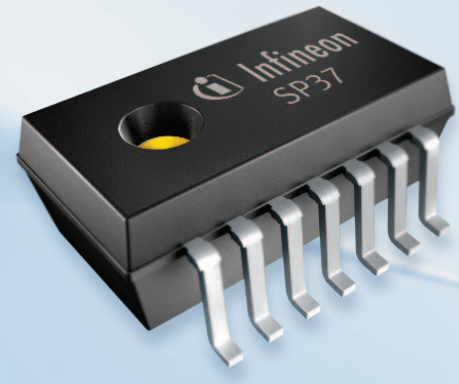
Product Brief

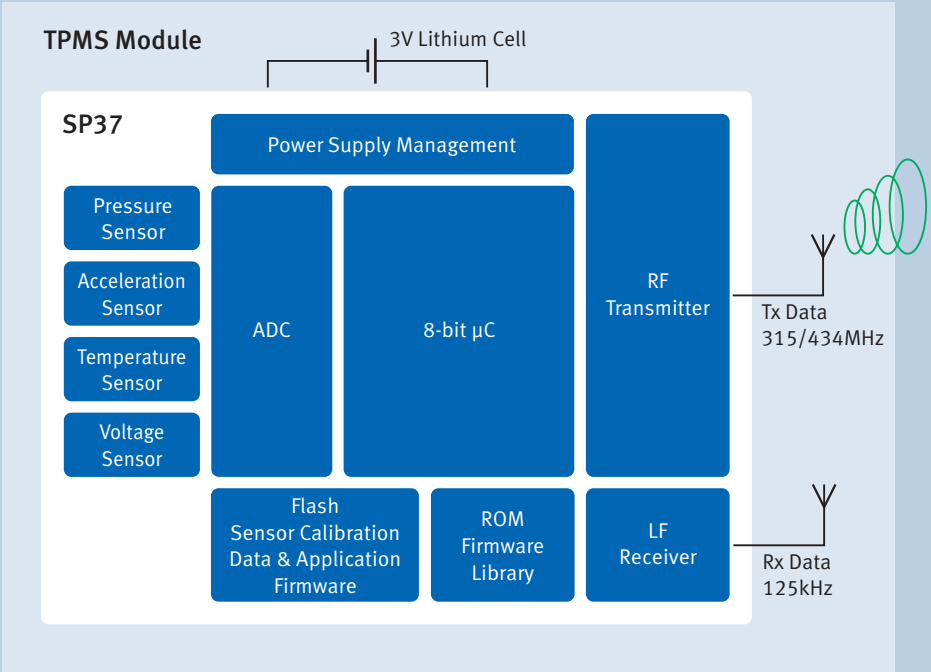


SP37 1300kPa
Tire Pressure Sensor

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 1300kPa.
Numerous embedded firmware functions and a development kit enable fast development cycles.



www.infineon.com/sensors

Features

- Pressure sensor with a range from 100 up to 1300kPa
- 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 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

Green

RoHS

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Tire Pressure Sensor

Parameter	Symbol	Values			Unit	Note/Test Condition
		Min.	Typ.	Max.		
Input Pressure Range	P_{in}	100	–	500	kPa	T = -40...125°C
Measurement Error	p_{Error}	-35	–	35	kPa	T = -40...0°C
	p_{Error}	-23	–	23	kPa	T = 0...80°C
	p_{Error}	-50	–	50	kPa	T = 80...125°C
Input Pressure Range	p_{in}	500	–	1050	kPa	T = -40...125°C
Measurement Error	p_{Error}	-30	–	30	kPa	T = -40...0°C
	p_{Error}	-23		23	kPa	T = 0...40°C
	p_{Error}	-30		30	kPa	T = 40...80°C
	p_{Error}	-40	–	40	kPa	T = 80...125°C
Input Pressure Range	p_{in}	1050	–	1300	kPa	T = -40...125°C
Measurement Error	p_{Error}	-35	–	35	kPa	T = -40...0°C
	p_{Error}	-25		25	kPa	T = 0...40°C
	p_{Error}	-30		30	kPa	T = 40...80°C
	p_{Error}	-50	–	50	kPa	T = 80...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	–

tions are available on request.

Product Summary

Sales Name	Description	Order Code
SP370-23-156-0	Tire Pressure Sensor	SP000878364

Published by
Infineon Technologies AG
85579 Neubiberg, Germany

Visit us:
www.infineon.com

Order Number: B142-H0000-X-X-7600
Date: 06 / 2012

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