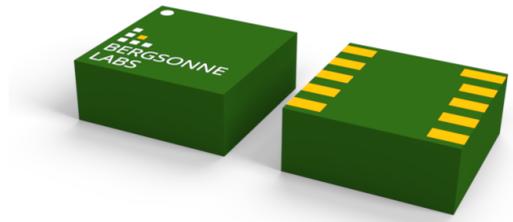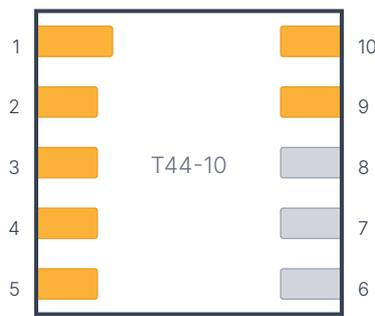# Sense.BP

dual-range absolute pressure

Barometric pressure and temperature sensor based on the ST ILPS22QS. Dual full-scale modes cover up to 1260 hPa or 4060 hPa, with 24-bit pressure output and 0.5 hPa accuracy. Integrated Qvar electrostatic sensing supports touch and gesture detection. Communicates over I²C (up to 1 MHz), SPI (up to 10 MHz), or I3C (up to 12.5 MHz) to provide data at output rates of up to 200Hz with a 128-sample deep FIFO buffer.

Overview

Revision	a
Package	T44-10
Supply	1.8–3.6V
Component	ILPS22QS
Interfaces	I2C, SPI, I3C

Pad Assignments

(top view)

PAD	TYPE	FUNCTION	NOTE
1	power	GND	
2	digital	I2C.AD0	internal pull-up resistor sets the I2C address to 0x5D; connect to GND to switch to 0x5C
	interface	SPI.MISO	
3	digital	I2C.EN	internal pull-up resistor enabled I2C by default; connect to GND to switch to SPI
	interface	SPI.CS	
4	interface	I2C.CLK	
	interface	SPI.CLK	
5	interface	I2C.DAT	
	interface	SPI.MOSI	
9	digital	INT	configurable interrupt output
10	power	V+	1.8-3.6V

Interfaces

I2C   I2C

Mode	slave
Max Clock	1MHz
Addresses	0x5D, 0x5C
Format	7-bit addr

FUNCTION	REQ	PAD(S)
I2C.CLK	No	4
I2C.DAT	No	5

SPI   SPI

Mode	slave
Max Clock	10MHz

FUNCTION	REQ	PAD(S)
SPI.MISO	No	2
SPI.CS	No	3
SPI.CLK	No	4
SPI.MOSI	No	5

I3C   I3C

Mode	slave
Max Clock	12.5MHz (SDR)

FUNCTION	REQ	PAD(S)
I3C.CLK	No	4
I3C.DAT	No	5