



Product Brief 2011

Pressure Sensors

for Barometric Measurements in Consumer Applications

The EPCOS **T5400** digital pressure transmitter technology is the world's most compact packaged sensor of its kind.

It provides a 16-bit resolution at the serial digital interface, which can be a user selected, high-speed I²C or SPI protocol. All pressure sensitive functionality is packed into an extremely flat design with a footprint of 2.23 x 2.78 mm² and an insertion height of only 0.8 mm (max).


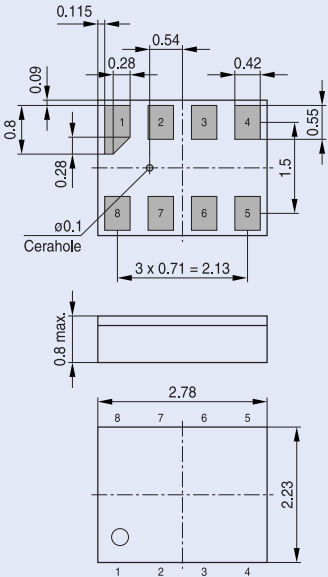
A supply voltage range of 1.7 V to 3.6 V and a low current consumption of only 0.3 μ A (standby) and 3 μ A (average current consumption with one sample per second) makes the T5400

ideal for battery-powered mobile consumer devices. It is fully factory calibrated and delivers both pressure and temperature readings along with calibration coefficients over the serial bus.

Together with a GPS-determined location, the altitude measurement permits precise 3D positioning. Applications include navigation devices and altitude determination for advanced control in HDD.



Technical Data

Characteristics			
Type	C953 (T5400)		
	Pressure measurement	Absolute	
	Measurement media	Non-aggressive gases	
	Output signal	Pressure, temperature and calibration data over digital serial bus	
	Pressure port location	Bottom side	
Dimensions			
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	Footprint	mm	2.23 x 2.78
	Total height (max.)	mm	0.8
Maximum ratings			
	Measuring range	hPa	300 ... 1100
	Storage temperature	°C	-40 ... +85
	Operating temperature	°C	-30 ... +85
	Supply voltage V_{DD}	V	1.7 ... 3.6
Output			
	Pressure resolution	Bit	16
	Pressure resolution	Pa	2.9
	Accuracy pressure	hPa	± 2.0 (300 ... 1100 hPa, +25 °C)
	Temperature resolution	Bit	16
	Accuracy temperature	K	± 1 (0 ... +70 °C)
	Interfaces		I ² C, SPI
Others			
	Soldering temperature	°C	260; 10 s
	RoHS compatible		Yes
	Ordering code		Upon request

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