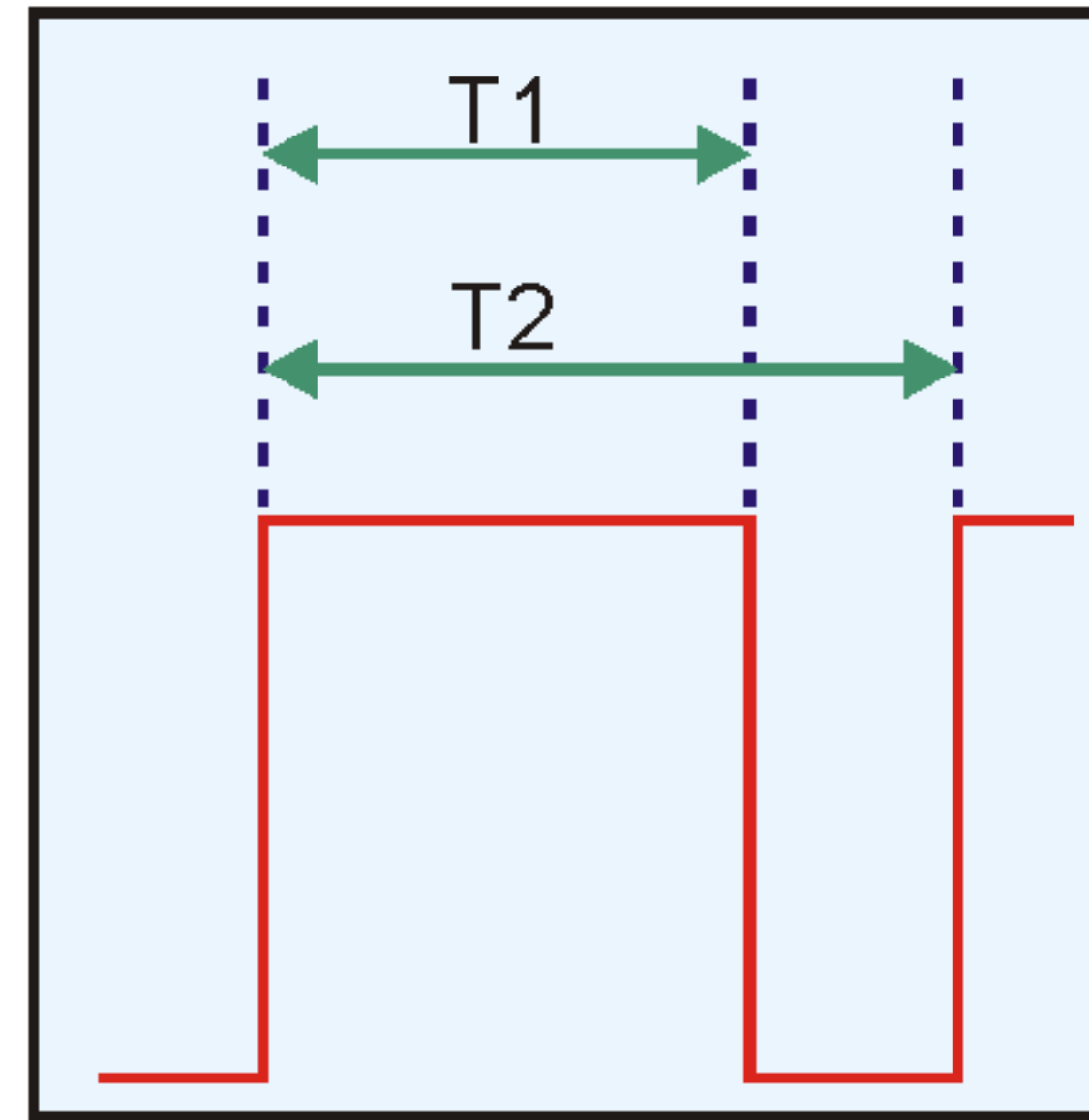
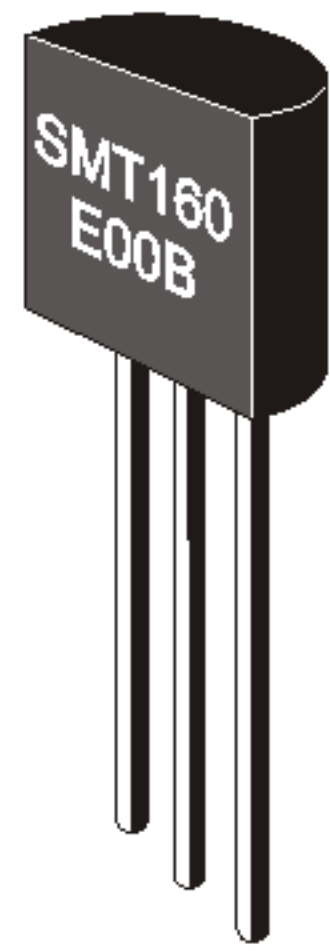
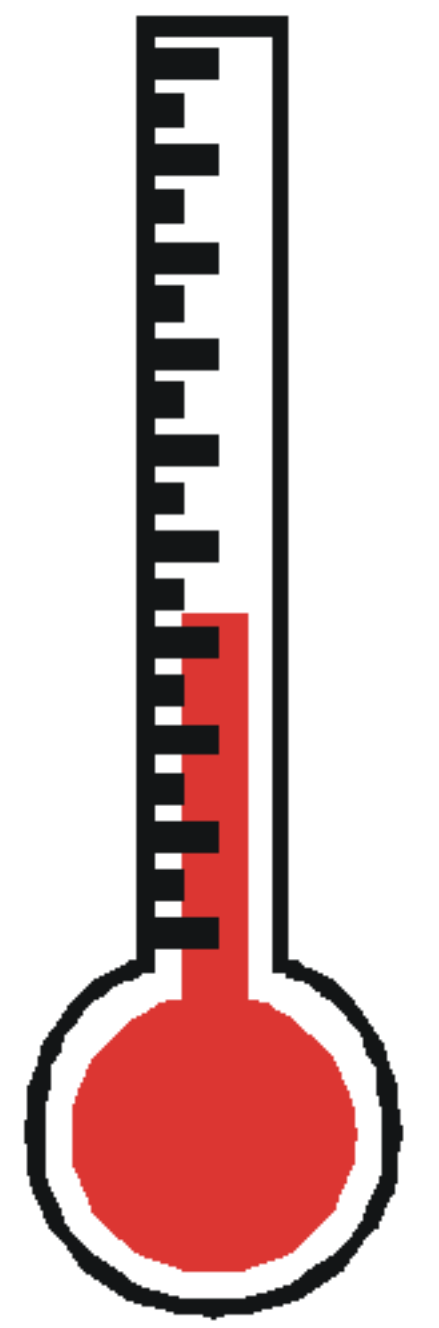


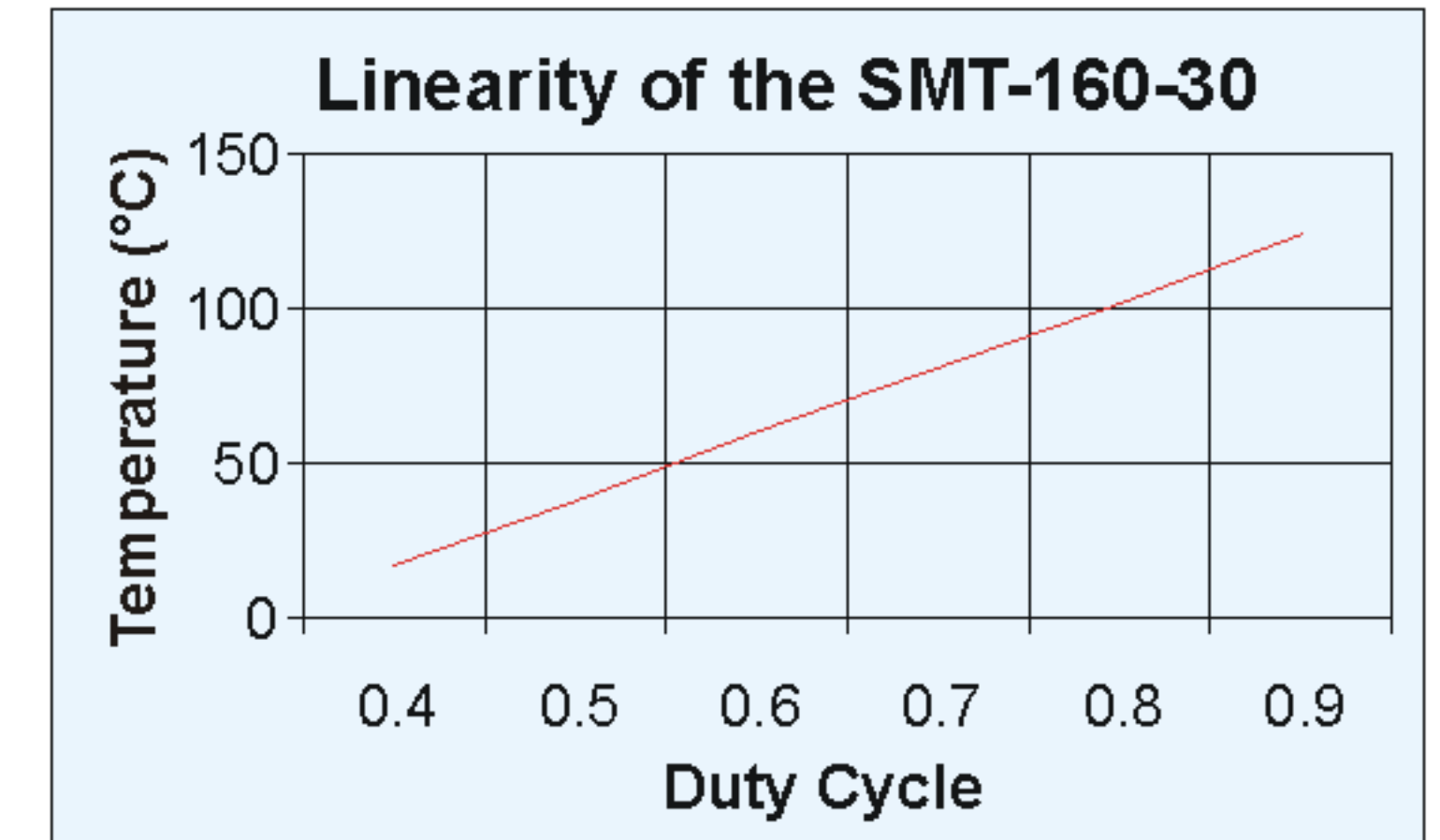
SMT-160-30

The integrated Smartec temperature sensor, with Duty Cycle output



Output signal

$$t = \frac{(T1 / T2) - 0.32}{0.0047} [^{\circ}\text{C}]$$



SMT-160-30/T092

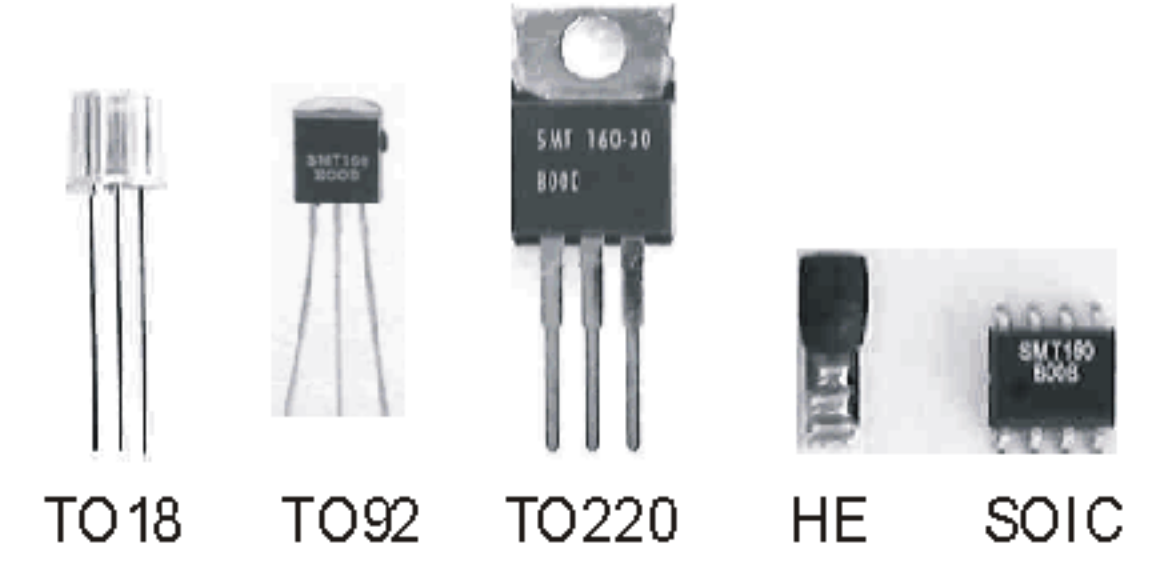
- On chip calibration
- **No Xtal**-reference needed
- Very high resolution (**0.005 K**)
- Output is linear within **0.2 °C**
- Absolute accuracy **0.7 °C**
- **Analogue** as well as **digital**
- Competitive, for **hardware** becomes **software**
- Multiple sensors are easily multiplexed
- Temperature range 175 °C (-45 °C to +130 °C)

*no hardware,
but software,
fast development*

Evaluation kit available:

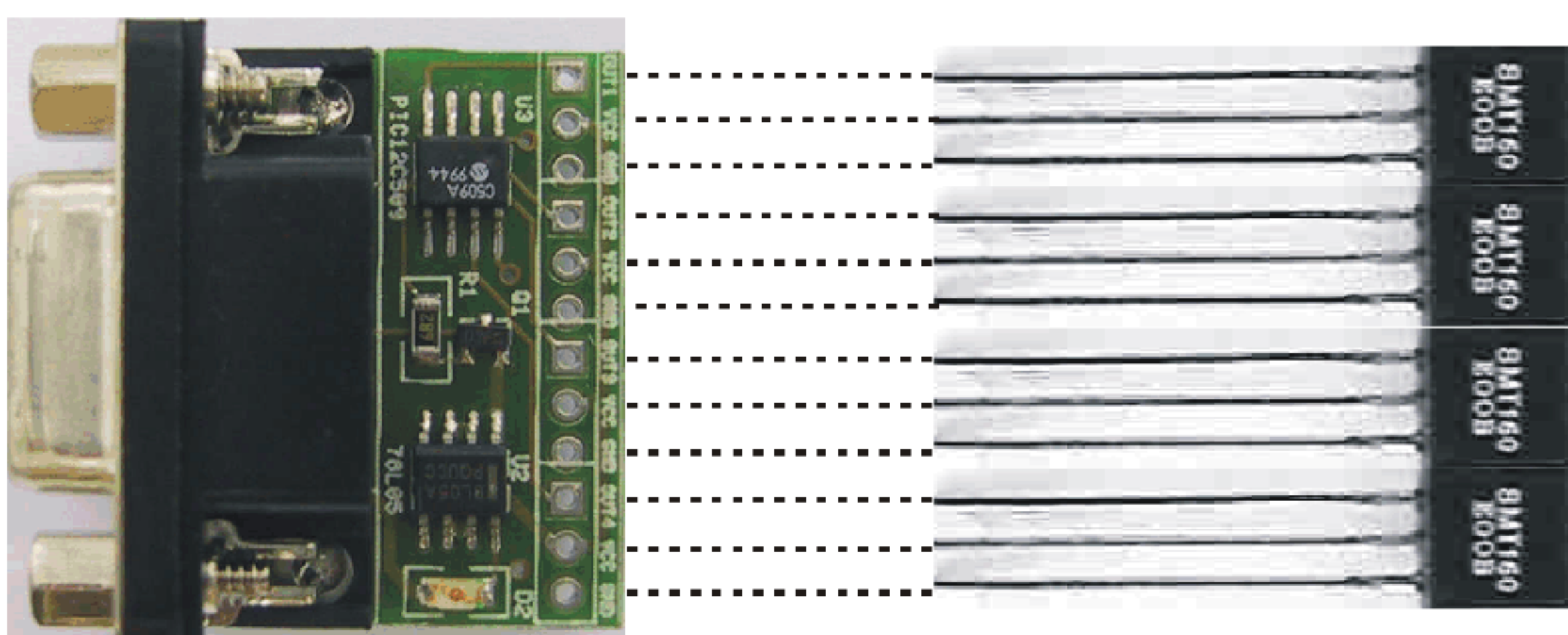


Packages:



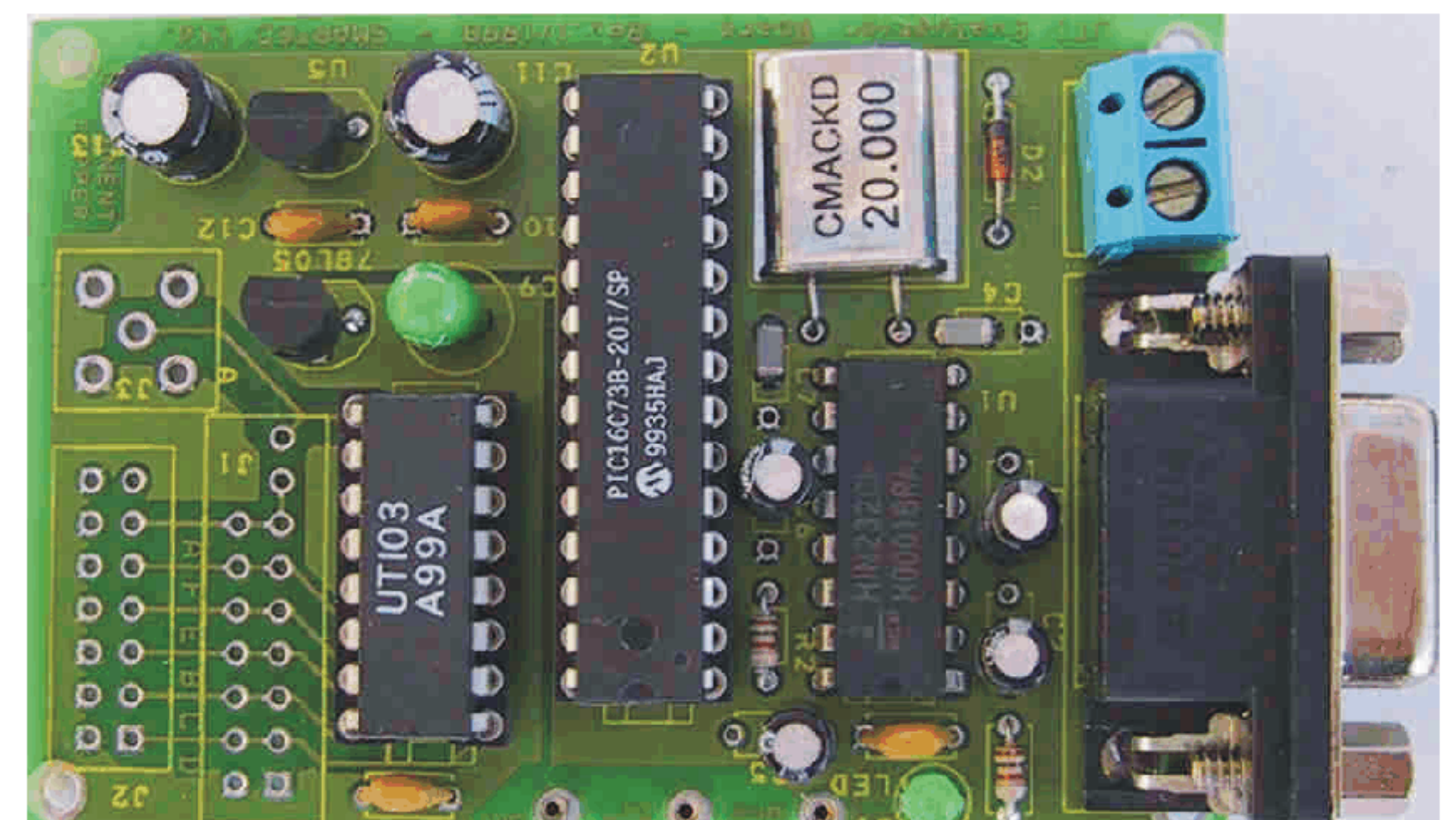
Evaluation kit SMT

This kit can be directly connected to a PC through the RS232 port. The kit is powered by the port. The temperature of **4 sensors** can be monitored simultaneously with a terminal emulator (Windows 95/98, Windows NT, Windows 2000), or with a simple script or program.



Evaluation kit UTI

This kit can be directly connected to a PC through the RS232 port. All **16 UTI modes** can be controlled from the PC, so it's very easy to connect **all** supported sensor types to the UTI and to measure them. The data can be read with a terminal emulator program (Windows 95/98, Windows NT, Windows 2000), or with a simple script. A **Labview** program comes standard with the kit.



UTI

The Smartec UTI (Universal Transducer Interface) is a sensor-to-time signal converter. The UTI has 16 different modes.

C (2pF)

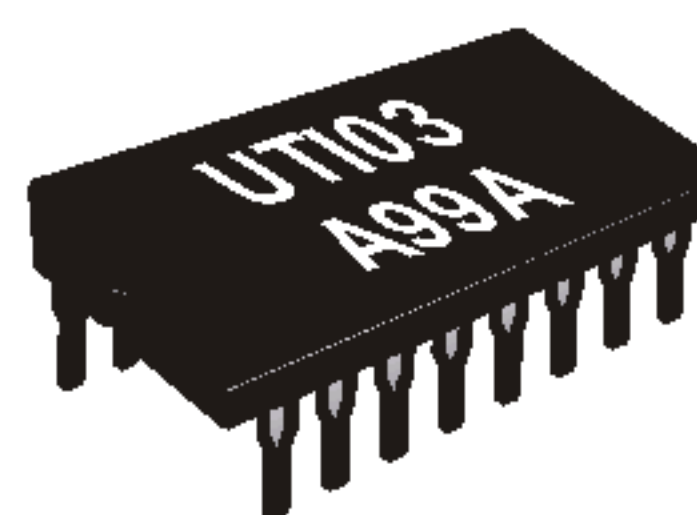


Pt 100(0)

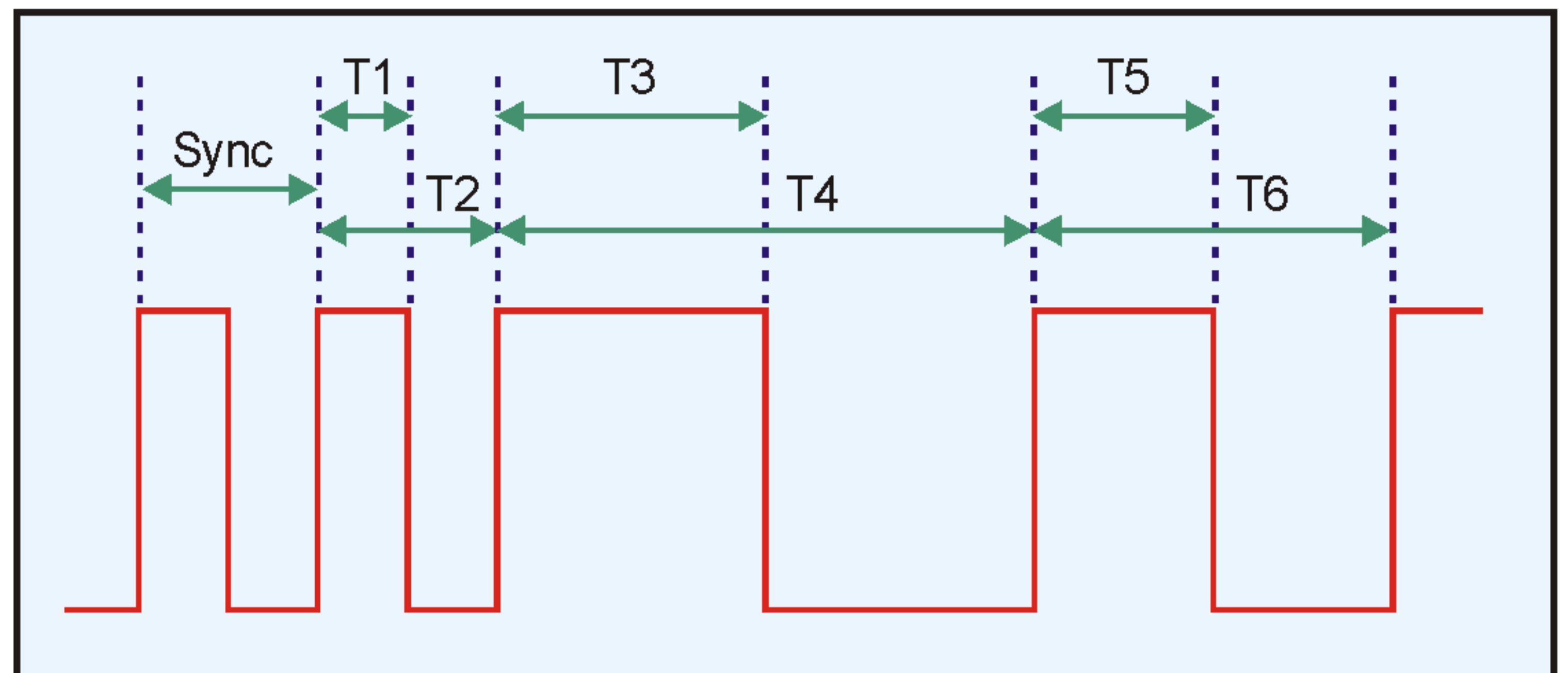


+ Other modes !

Xref +



UTI



Output signal

The value of the unknown = $f(T1, T2, \dots, T6, Xref)$

- No Xtal reference needed
- Measurement of multiple sensors
- Low cost: hardware becomes software
- Automatic calibration of Offset and Gain
- Accuracy and resolution up to 13 and 14 bits resp
- 2,9 - 5,5V supply voltage (current < 3 mA)
- Platinum resistors Pt100, Pt1000, 2/3/4 wire
- Capacitive sensors 0-2 pF, 0-12 pF or 300pF variable
- Resistive bridges with an imbalance of 0.25 % to 4 %

*no hardware,
but software,
fast development*

Packages:



SOIC

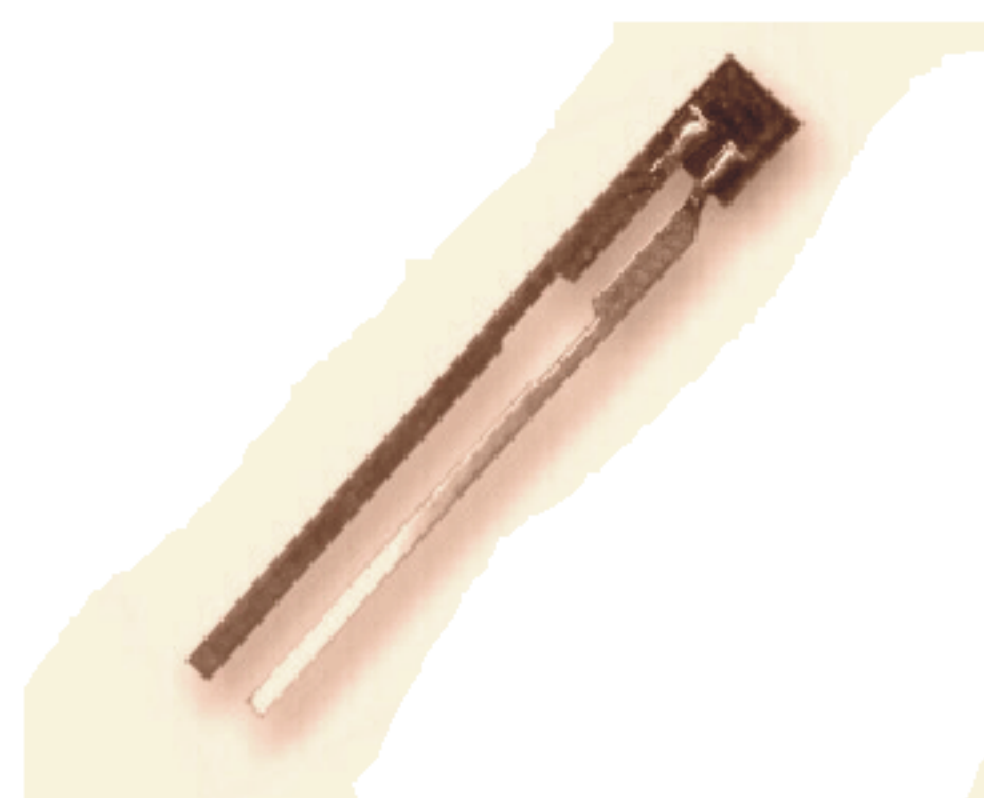


DIP 16

Evaluation kit available p.t.o.

HS-10

The humidity sensor is a capacitor, the value of which increases, when water molecules are absorbed in its active electrical polymer



- Linear from 0 - 100 % RH (non condensing)
- High accuracy (2 à 3 %)
- Reliable construction
- Good performance
- Very good Long Term Stability
- Low cost

SMTIR9901/02

The infrared sensors SMTIR9901 and SMTIR9902 are advanced sensors made of silicon and built of thermopiles



- Excellent accuracy
- Fast response time (40 ms)
- High sensitivity (110 V/W)
- Low resistance (50 kOhm) and therefore a good signal to noisy ratio
- Affordable thin film-technology
- Built in temp. sensor (SMTIR9902).