Digital Temperature Sensor IC SOP-8



Digital Temperature Sensor Tsic -50˚C to 150˚C

Digital, fully, precisely calibrated temperature sensor with high precision bandgap reference with a PTAT (proportional-to-absolute-temperature) output, a low-power and high-precision ADC and an on-chip DSP core with an EEPROM.

Product Name: TSic 306 SOP-8
Operating temperature range: -50 °C to +150 °C (boundaries: ± 3°C)
Accuracy: ± 0.3 °C in range +10 °C to +90 °C
Output signal: Digital (ZAC wire)
Resolution: 0.1 °C
Package/housing: SOP-8
Supply voltage: 5V
Sample rate: 10 Hz
Bit size: 11-bit
Product Old code: 030.00006
Product code: 103483

Product details

TSic 306/303/301 - Accuracy of ±0.3 K in a range of 80 K

The characteristics of the TSic 306/303/301 sensors at a glance:

- Fully calibrated
- Custom calibration and assembly available
- Outstanding accuracy of ±0.3 K (TSic 30x)
- Calibrated accuracy range of 80 K can be shifted (default: +10 °C to +90 °C)
- Very low power consumption
- Available with digital, analog and ratiometric output signal

The TSic 306/303/301 Series of temperature sensor ICs is specifically designed as a low-power solution for temperature measurement in building automation, industrial and mobile applications. With a standard calibration and an accuracy of ±0.3 K in a temperature range of 80 K (e.g. +10 °C to +90 °C), the TSic sensors are more accurate than a class F0.3 (IEC 60751) platinum sensor in the range of 80 K. The range can be shifted up or downwards to reach a high accuracy of between e.g. -30 °C to +50 °C.

The TSic has a high precision bandgap reference with a PTAT (proportional-to-absolute-temperature) output, a low-power and high-precision ADC and an on-chip DSP core with an EEPROM for the precisely calibrated output signal. The TSic temperature sensor is fully calibrated, meaning no further calibration effort is required by the customer. Extended long wires (> 10 m) will not influence the accuracy.

The TSic 306/303/301 sensors are available with digital (ZacWire, TSic x06), analog (0 V to 1 V, TSic x01) or ratiometric (10 % to 90 % V+, TSic x03) output signal. The low power consumption makes it suitable for many applications.

Quality

Consistent with the well-known, high-quality standards in Switzerland, IST AG is certified according to ISO 9001:2015 (quality) and ISO 14001:2015 (environment). Appropriate processes are part of our daily work. They are regularly audited and extended parallel to the growth of our company.

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The online shop

Quantity (pieces)	Price (per piece)
10-49	CHF 8.62
51-99	CHF 7.25
100-150	CHF 6.65

Stock: **371**