I3C/I2C-Bus ±0.4 °C Accurate Digital Temperature Sensor

P3T1084UK

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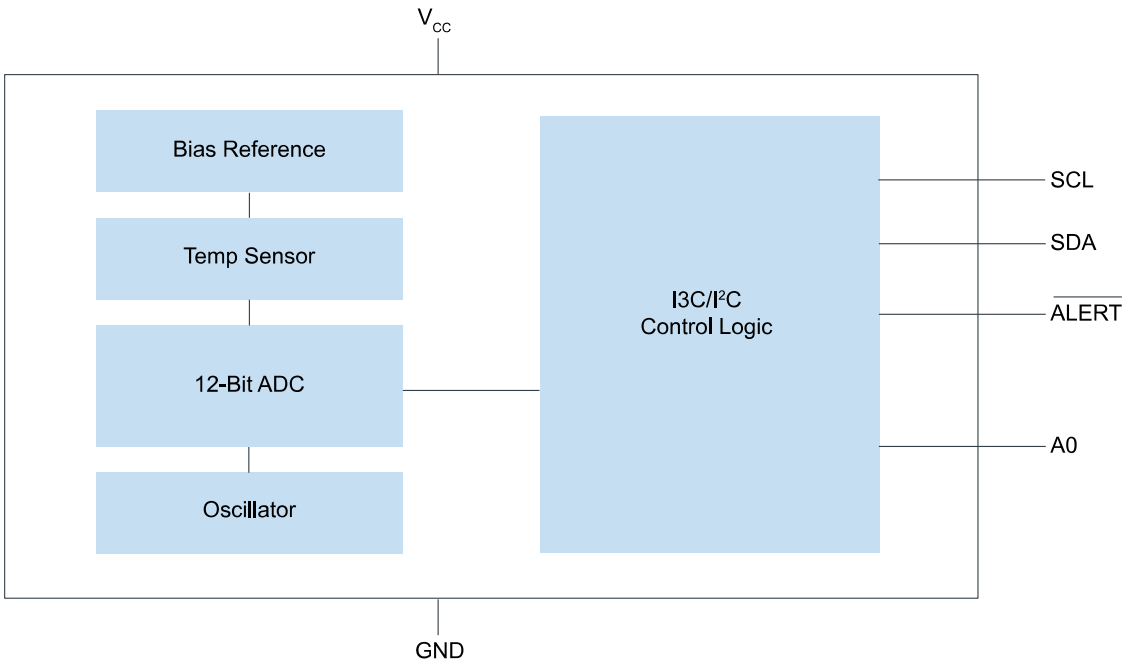
P3T1084UK is a ±0.4 °C accurate temperature-to-digital converter with a -40 °C to +125 °C range. It uses an on-chip band gap temperature sensor and A-to-D conversion technique with overtemperature detection. The temperature register always stores a 12 bit two's complement data, giving a temperature resolution of 0.0625 °C.

P3T1084UK can be configured for different operation conditions: continuous conversion, one-shot mode or shutdown mode. The device supports 2-wire serial I3C (up to 12.5 MHz) and I^2C (up to 3.4 MHz) as communication interface. In I^2C, the device supports up to four target addresses and an alert function. In I3C, the devices supports in band interrupt (IBI), where the same bus is used to report the alert interrupts.

I3C/I2C-Bus ±0.4 °C Accurate Digital Temperature Sensor Block Diagram



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