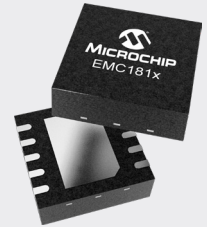


EMC181x (2/3/4/5)

Temperature Sensor Family with Rate of Change Reporting

General Information

The EMC181x is a family of multi-channel temperature sensors that provides up to four external temperature monitors. The device reports rate of change of temperature in addition to standard temperature, which provides an additional protective layer to manage varying system temperatures. EMC181x is ideal for any low-cost, highly flexible and accurate solution for critical temperature monitoring applications.



Features

- Measures temperature rate of change calculation with preemptive alert(s) limits
- Up to four external temperature monitors:
 - $\pm 1^{\circ}\text{C}$ maximum accuracy (+25°C to +125°C TA, 0°C to +125°C TD)
- Internal temperature sensor:
 - $\pm 1^{\circ}\text{C}$ maximum accuracy, -40°C to +125°C
- Operating voltage: 1.62V–3.6V
- 2-Wire/I²C compatible interface (up to 400 kHz)
- Supports beta compensation, configurable ideality factor, resistance error correction
- Programmable or fixed address options
- Temperature sensor resolution (internal/external): 0.125°C
- Configurable alert pins
- Available in 8-lead 2 × 2 mm WDFN and 10-lead 2.5 × 2.0 mm VDFN packages

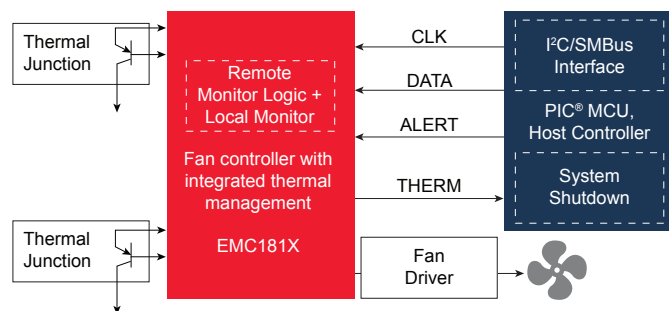
Applications

- Portable electronics
- IoT devices and applications
- Temperature sensitive storage
- Computing
- Industrial systems

Benefits

- Beta compensation feature eliminates temperature errors
- Resistance error correction feature automatically eliminates the temperature error
- Unique preemptive thermal alerts with “rate of change” temperature measurements to help reduce risk of failure
- Multichannel integration lowers cost
- Smaller footprint equals less PCB space and cost

Closed Loop Fan Controllers



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