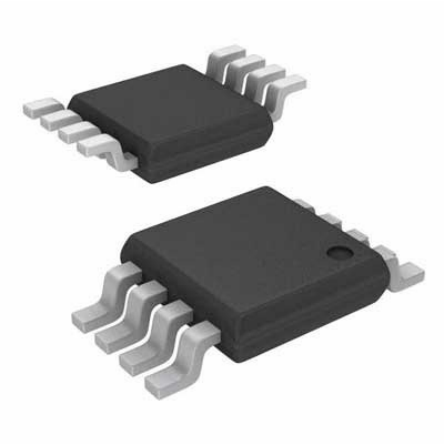
EMC1422-1-ACZL-TR

Data Sheet

1C Temperature Sensor with Hardware Thermal Shutdown,Board Mount Temperature Sensors Dual Temp Snsr

Manufacturers	Microchip Technology, Inc
Package/Case	MSOP-8
Product Type	Temperature Sensors
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for EMC1422-1-ACZL-TR or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The EMC1422 is a high accuracy, low cost, System Management Bus (SMBus) temperature sensor. Advanced features such as Resistance Error Correction (REC), Beta Compensation (to support CPU diodes requiring the BJT/transistor model including 45nm, 65nm and 90nm processors) and automatic diode type detection combine to provide a robust solution for complex environmental monitoring applications.

Additionally, the EMC1422 provides a hardware programmable system shutdown feature that is programmed at part power-up via two pull-up resistor values and that cannot be masked or corrupted through the SMBus.

Each device provides ±1° accuracy for external diode temperatures and ±2°C accuracy for the internal diode temperature. The EMC1422 monitors two temperature channels (one external and one internal).

Resistance Error Correction automatically eliminates the temperature error caused by series resistance allowing greater flexibility in routing thermal diodes. Beta Compensation eliminates temperature errors caused by low, variable beta transistors common in today's fine geometry processors. The automatic beta detection feature monitors the external diode/transistor and determines the optimum sensor settings for accurate temperature measurements regardless of processor technology. This frees the user from providing unique sensor configurations for each temperature monitoring application. These advanced features plus ±1°C measurement accuracy provide a low-cost, highly flexible and accurate solution for critical temperature monitoring applications.

Features

Features

Hardware Thermal Shutdown

triggers dedicated SYS_SHDN pin

hardware configured range 77°C to 112°C in 1°C steps

cannot be disabled or modified by software

Support for diodes requiring the BJT/transistor model

Designed to support 45nm processors

Support for 90nm and 65nm CPU diodes

Pin compatible with ADM1032, MAX6649, and LM99

Automatically determines external diode type and optimal settings

Resistance Error Correction

External Temperature Monitors

0.125°C resolution

Supports up to 2.2nF diode filter capacitor

Internal Temperature Monitor

3.3V Supply Voltage

Programmable temperature limits for ALERT#

Small 8-pin MSOP RoHS Compliant package

Application

Notebook Computers

Desktop Computers

Industrial

Embedded applications

Related Products

EMC1412-2-ACZL-TR

Microchip Technology, Inc

MSOP-8

EMC1047-2-AIZL-TR

Microchip Technology, Inc

MSOP-10

EMC1424-1-AIZL-TR

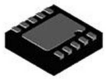
Microchip Technology, Inc

MSOP-10

EMC1423-1-AIZL-TR

Microchip Technology, Inc

MSOP-10



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Microchip Technology, Inc

VDFN-10

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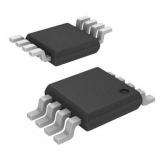
MSOP-10



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MSOP-8

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