



PRODUCT OUTLINE

CM6216ea – High-precision temperature sensor
15 μ A 0.1 $^{\circ}$ C accuracy extended temperature range

Part Number

- CM6216ea

Features

- $\pm 0.1^{\circ}\text{C}$ temperature accuracy
- Voltage slope: 840 $\mu\text{V}/^{\circ}\text{C}$
- Temp. range: -60°C to 160°C
- Supply voltage: 2.7V to 5.5V
- Low power consumption (15 μA)
- Buffered analog output

Applications

- Environmental monitoring
- Health care application
- IoT nodes

Technology

- UMC 0.25 μm HV/LL

Deliverables

- Datasheet / Integration Guide
- HDL Model
- Flat GDS Database / LVS Netlist
- Customer Support

Status

- Under development

Overview

CM6216ea is a temperature sensor macro with a linear analog output that enables a temperature measurement with $\pm 0.1^{\circ}\text{C}$ accuracy. The differential output voltage presents a slope of +840 $\mu\text{V}/^{\circ}\text{C}$. CM6216ea consumes only 15 μA .

CM6216ea requires an external clock to control internal compensation circuitry. The enable pin allow it to enter a stand-by mode with minimal power consumption, ideal for extreme low power applications that make use of low duty-cycle operation mode.

Preliminary measurements carried out on prototypes show $\pm 0.25^{\circ}\text{C}$ temperature accuracy.

Functional Diagram

