



PRODUCT OUTLINE

CM1213eh – 750mV Voltage Reference
Ultra Low Voltage (1V), Ultra Low Power (400nW)

Part Number

- CM1213eh

Features

- Ultra low power voltage reference
- $V_{ref}=750\text{mV} \pm 2\%$ (after trimming)
- Current consumption below 400nA in active mode
- Flexible voltage operation: 1.0–3.3V
- Enable control
- Indicative area: 0.011mm^2

Applications

- Battery powered equipment
- Passive/active RFID tag ICs
- Energy Haversting ICs
- Hearing Aids

Technology

- UMC $0.13\mu\text{m}$ CMOS

Deliverables

- Datasheet/Integration Guide
- HDL Model
- Flat GDSII database/LVS netlist
- Customer Support

Status

- Silicon Under Tests

Overview

This macro-cell is an ultra low power general purpose voltage reference generator core designed for UMC $0.13\mu\text{m}$ CMOS technology.

The circuit generates an unbuffered 750mV, temperature compensated voltage reference ($150\text{ppm}/^\circ\text{C}$). The reference can be trimmed against process variations by a 4-bit digital bus.

The core is easily retargeted to any other CMOS technology due to high portability MOSFET-only voltage reference architecture.

Functional Diagram

