



PRODUCT OUTLINE

CM1013eh – 12nA Current Bias

Ultra Low Voltage (1V), Ultra Low Power (50nW)

Part Number

- CM1013eh

Features

- Ultra low power current bias
- $I_{bias}=12nA \pm 10\%$ (without trimming)
- Current consumption below 50nA in active mode
- Flexible voltage operation: 1.0V–3.3V
- Enable control
- Indicative area: 0.006mm²

Applications

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

Technology

- UMC 0.13μm 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 current bias generator core designed for UMC 0.13μm CMOS technology.

The circuit generates 1 × PMOS 12nA current branch and 1 × PMOS 120nA branch for test purposes. The current bias is temperature compensated.

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

Functional Diagram

