



PRODUCT OUTLINE

CM1212bg – 750mV Voltage Reference
Ultra Low Voltage (1V), Ultra Low Power (500nW)

Part Number

■ CM1212bg

Features

- Ultra low power voltage reference
- $V_{ref}=750\text{mV} \pm 2\%$ (after trimming)
- Current consumption below 500nA in active mode
- Flexible voltage operation: 1.0–3.6V
- Automatic start-up as soon as power supply starts
- Indicative area: 0.012mm^2

Applications

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

Technology

- LFoundry $0.15\mu\text{m}$ LF150 CMOS

Deliverables

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

Status

- GDSII Available

Overview

This macro-cell is an ultra low power general purpose voltage reference generator core designed for LFoundry $0.15\mu\text{m}$ LF150 CMOS technology STD (Standard) and LP (Low Power) process.

The circuit generates an unbuffered 750mV, temperature compensated voltage reference ($200\text{ppm}/^\circ\text{C}$). It can be digitally trimmed against process variations. Internal start-up circuit allows the reference voltage to be available as soon as the power supply ramps up, so that no enable/disable function is necessary for start-up.

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

Functional Diagram

