



PRODUCT OUTLINE

CM1011bg – 17.5nA Current Bias

Ultra Low Voltage (1V), Ultra Low Power (90nW)

Part Number

- CM1011bg

Features

- Ultra low power current bias
- $I_{bias}=17.5nA \pm 10\%$ (without trimming)
- Current consumption below 90nA in active mode
- Flexible voltage operation: 1.0V–3.3V
- Enable control
- Indicative area: 0.012mm²

Applications

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

Technology

- LFoundry 0.15μm LF150 CMOS

Deliverables

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

Status

- Silicon Proven

Overview

This macro-cell is an ultra low power general purpose current bias generator core designed for LFoundry 0.15μm LF150 CMOS technology STD (Standard) and LP (Low Power) process.

The circuit generates 5 × PMOS 17.5nA current branches and 1 × PMOS 175nA branch for test purposes. The core can be adjusted or trimmed through a 3-bit digital bus. 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

