



PRODUCT OUTLINE

CM1016ff – 16nA Resistive Current Bias
 Low Voltage (1.0V), Low Power (360nW @ 1.2V)

Part Number

■ CM1016ff

Features

- Low power current bias
- Low TC
- $I_{bias}=15.5nA \pm 10\%$ (without trimming)
- Current consumption around 300nA in active mode
- Flexible voltage operation: 1.0V–2.0V
- Enable control
- Indicative area: 0.0072mm²

Applications

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

Technology

- SiITerra 0.18µm CL180G CMOS

Deliverables

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

Status

- Silicon Proven

Overview

This macro-cell is a low power general purpose current bias generator core designed for SiITerra 0.18µm CL180G CMOS technology.

The circuit generates 7 × NMOS 16nA current branches and 1 × NMOS 8nA branch. The current bias is temperature compensated using the PTAT thermal coefficient (TC) of an integrated resistor.

The core is easily retargeted to any other CMOS technology due to high portability architecture.

Functional Diagram

