



PRODUCT OUTLINE

CM1217hf – Low-Noise Bandgap Reference

Low noise: 63nV/sqrtHz, PSRR: -80dB

Part Number

- CM1217hf

Features

- Reference voltage: 1.185±1% after trimming
- Low noise: 63nV/√Hz (10Hz to 25kHz)
- High PSRR: -80dB (up to 100kHz)
- Temperature compensated: < 40ppm/°C
- Supply voltage: 5.0 ±10%
- Buffered reference output: 100µA (max)
- PTAT reference current output available
- Indicative area: 0.101mm²

Applications

- Active RFID tag ICs
- Battery powered equipment
- Energy Harvesting ICs
- Hearing Aids

Technology

- TSMC 0.18µm CLM18 CMOS

Deliverables

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

Status

- Silicon Proven

Overview

This macro-cell is a low noise, high PSRR voltage reference core designed for TSMC 0.18µm (CLM18) CMOS technology. The core is ideal for applications where noise performance is critical.

The circuit generates a buffered 1.185V, temperature-compensated bandgap voltage reference (40ppm/°C). A 5-bit trimming is available and guarantees ±1.5% output voltage accuracy. A 25µA reference current source (PTAT) for external use is also included.

The core is easily re-targeted to any other CMOS technology.

Functional Diagram

