



PRODUCT OUTLINE

CM4013ae – 12MHz Internal Oscillator
Low Power ($5\mu\text{A}@12\text{MHz}@3.3\text{V}$)

Part Number

■ CM4013ae

Features

- 12MHz internal oscillator
- Low consumption ($< 5\mu\text{A}$)
- Supply voltage: 2.7–3.6V
- Frequency calibrated (typ. $2\pm\%$)
- Internal level shifter
- Power down mode
- Indicative area: 0.017mm^2

Applications

- Microcontrollers
- Battery powered equipment
- General purpose ICs

Technology

- X-FAB $0.35\mu\text{m}$ XH035 CMOS

Deliverables

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

Status

- Silicon Proven

Overview

This macro-cell is a general purpose, low power internal oscillator core designed for X-FAB $0.35\mu\text{m}$ XH035 CMOS technology.

The circuit has internal level shifting and start-up circuits. A 4-bit digital bus allows frequency calibration against process variations.

The core is easily retargeted to any other CMOS technology due to its MOSFET-only oscillator architecture.

Functional Diagram

