



PRODUCT OUTLINE

CM9011ff – UHF Passive RFID Front-End
EPCGlobal Class 1 Gen 2/ISO18000-6C Compliant

Part Number

■ CM9011ff

Features

- -12dBm read sensitivity
- Output supply voltage from 1V to 1.8V
- Internal 1.12V voltage reference
- Internal 15.5nA current bias
- Internal 2MHz oscillator
- Built-in POR
- Persistence flags generator
- Current consumption: 1.5µA

Applications

- Passive/Active EPCGlobal C1G2 / ISO18000-6C RFID tag ICs

Technology

- SiTerra 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 an ultra low power analog/RF front-end core designed for SiTerra 0.18µm CMOS technology. It is ideal for use in passive UHF RFID integrated circuits compliant with EPCGlobal Class 1 Gen 2 / ISO18000-6C standards.

The circuit features a complete analog/RF front-end including rectifier, demodulator, backscattering modulator, a power management unit (PMU) and a short-term memory (STM) that generates the persistence flags. The PMU includes an output supply voltage limiter, internal voltage and current references, built-in power-on-reset (POR), and oscillator. Internal blocks are trimmable via a digital word that can reside in the non-volatile memory of the chip.

Functional Diagram

