

RTC AND PMU CONTROLLER

Features

- Nano power *Real Time Clock (RTC)* with 32kHz oscillator
- PMU control: individual regulators enable / disable control in high / low / ultra-low / adaptive ultra-low power
- Ultra-low power adaptive mode (*Ludicrous*)
- Configurable supply domains isolation support
- Configurable reset and shutdown causes
- Anti-temper mechanisms
- Different wake sources
- 48-bit time counter, 32-bit general-purpose register and 2 alarms
- Ultra-low leakage design
- Fast start-up time

Applications

- Time keeping applications
- Wireless Power devices
- Metering devices

Applications Diagram

General Description

SGC22300_01_GF_22FDSOI is a *Real Time Clock (RTC)* based on the leading *SGC21510* solution. Using advanced analog design techniques, to guarantee ultra-low power and ultra-low leakage, it was designed to be the brain of the *Power Management Unit (PMU)*. Controlling the state of each regulator of the PMU, it controls if the regulators are in high, low, ultra-low or adaptive ultra-low power. Additionally, it includes anti-temper mechanisms, wake, reset or shutdown causes, that can be masked, allowing also to configure the effect of a *reset*. Being specified from $T_J = -40^{\circ}\text{C}$ to 125°C , it also includes ultra-low leakage configuration registers to allow the system architect to save the status bits.

Quick Reference

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNIT
V_{AVDD}	Analog Sup.	1.10	—	1.98	V
V_{DVDD}	Digital Sup.	0.70	—	0.90	V
F_{CLK}	XTAL Freq.	—	32.768	—	kHz