

APC – ADVANCED POWER CONTROLLER

Features

- Advanced Power Controller w/ *Power On Reset*
- Power-up sequencing controller
- Large input voltage range, from 2.4V to 5.5V
- Dual domain input supply support
- Internal supply regulators: analog and digital supplies
- Level shifter disable signal generation
- V_{ref} with independently decoupled outputs
- Multiple bias current outputs
- Voltage monitors
- Clock generation

Applications

- Headsets

Applications Diagram

General Description

SGC21412_01_TSMC_CM018MG is an *Advanced Power Controller (APC)*, designed for systems with integrated battery charger, which delivers all the necessary auxiliary supply, monitoring, protection and *POR* functions for any *Power Management Unit (PMU)* that supports dual domain input supply. It offers high *PSRR*, start-up sequencing and independent voltage reference decoupling without the need for extra package pins. The *SGC21412_01_TSMC_CM018MG* generated references include digital trimming bits, for increased performance or yield, being the IP specified from $T_J = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$, achieving 1% overall voltage reference accuracy (over Load / Line / Temp / Process). The *SGC21412_01_TSMC_CM018MG* can be found as an isolated IP or integrated into *PMUs*.

Quick Reference

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNIT
V_{IN}	Input Sup.	2.4	—	5.5	V
V_{SYS}	System Sup.	2.4	—	5.5	V
V_{BAT}	Bat Voltage	1.3	—	5.5	V
V_{DVDD}	Digital Sup.	1.0	—	2.0	V
F_{CLK}	Clock Freq.	—	1.2	—	MHz