

SGC21412_01_TSMC_28HPCp

APC - ADV POWER CONTROLLER W POR

Features

- Advanced Power Controller w/ POR
- Low IQ: 30 μ A
- Large input voltage range, from 1.60 V to 1.98 V
- Internal supply regulator: vcasn
- Level shifter disable signal generation
- Vref with independently decoupled outputs
- Multiple bias current outputs
- Power-up sequencing controller
- Multiple Power Good monitors
- External voltage detector w/ UVLO
- Power-On-Reset
- Clock generation (opt)
- Core area: 0.15 mm²

Applications

- SoC

Applications Diagram

General Description

The SGC21412_01_TSMC_28HPCp is an Advanced Power Controller (APC) for integration in SoC. It includes all the necessary auxiliary functions to support the Power Management Unit (PMU) for SoC, or be the companion for any voltage regulator or simply the robust POR with advanced functions for any SoC. It offers high power rejection (PSRR), start-up sequencing and independent voltage reference decoupling without the need for extra package pins. All generated references include digital trimming bits for increased performance or yield improvement. It is specified from $T_J = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ and is designed to achieve 1% overall voltage reference accuracy (over Load/Line/Temp/Process).

Quick Reference

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNIT
V_I	Input Voltage	1.60	-	1.98	V
V_{DD}	Digital Sup.	0.70	0.81	1.32	V
V_{REF}	Ref. Voltage	-	750	-	mV
I_{PB1U}	Bias Current	0.7	1.0	1.3	μ A
F_{CLKA}	Freq. (opt)	2.4	3.6	4.8	MHz