

APC - ADV POWER CONTROLLER W POR

Features

- Advanced Power Controller w/ POR
- Low eco mode IQ: 11 μ A
- Large input voltage range, from 1.08 V to 1.98 V
- Internal supply regulator: vcasn
- Level shifter disable signal generation
- Vref generation
- Bias current output
- Power-up sequencing controller
- External voltage detector w/ UVLO
- Power-On-Reset
- Core area: 0.15 mm²

Applications

- SoC
- Controllers

Applications Diagram

General Description

The SGC21412_03_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). Additionally it also generates the reset signals based on the monitoring of the regulated voltages. It offers high power rejection (PSRR), start-up sequencing and independent voltage reference decoupling without the need for extra package pins. The generated references have digital trimming bits for increased performance or yield improvement. The SGC21412_03_TSMC_28HPCp is stable without any external decoupling capacitor. 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	1.08	1.80	1.98	V
V_{DD}	Digital Sup.	0.70	0.90	0.99	V
V_{REF}	Ref. Voltage	-	500	-	mV
I_{PB1U}	Bias Current	0.7	1.0	1.3	μ A