

## APC - ADV POWER CONTROLLER W POR

### Features

- Advanced Power Controller w/ POR
- Low IQ: 30  $\mu$ 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 mm<sup>2</sup>

### 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	$\mu$ A
$F_{CLKA}$	Freq. (opt)	2.4	3.6	4.8	MHz