

APC - ADV POWER CONTROLLER W POR

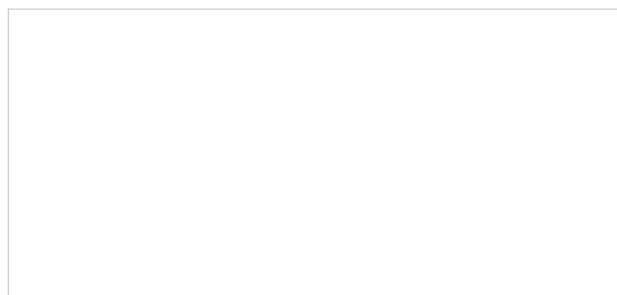
Features

- Advanced Power Controller w/ POR
- Low eco mode IQ: 10 μ A
- Large input voltage range, from 1.08 V to 1.98 V
- Internal supply regulator: vcasn
- Level shifter disable signal generation
- Vref with independently decoupled outputs
- Power-up sequencing controller
- Power Good monitors for 1.2 V, 1.8 V and 3.3 V
- External voltage detector w/ UVLO
- Power-On-Reset
- Core area: 0.276 mm²

Applications

- SoC
- Controllers

Applications Diagram



General Description

POR Power on Reset: The SGC21412_TSMC_16FFC is an Advanced Power Controller for integration in SoC. It is a configurable core, delivering all the necessary auxiliary supply, monitoring, protection and POR functions. The APC is the backbone for a Power Management Unit (PMU). 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 for increased performance or yield improvement. The SGC21412_TSMC_FFC does not require 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 | — | 1.98 | V |
| V_{DD} | Digital Sup. | 0.6 | — | 1.0 | V |
| V_{REF} | Ref. Voltage | 495 | 500 | 505 | mV |
| I_{BP1U} | Bias Current | 0.7 | 1.0 | 1.3 | μ A |