

SGC75050_01_TSMC_28HPCp

LDO CAPLESS FAST RESPONSE W/ ECO MODE

Features

- Low-Dropout Low Capacitance Voltage Regulator (LDO) with enable
- Input range from 1.08 V to 1.98 V
- Output range, from 0.74 V to 1.04 V
- High output current 50 mA
- Power good detector
- Fast transient response
- Small internal capacitor, from 3 nF to 5 nF
- Soft start and over current protection
- Core area: 0.086 mm²

Applications

- SoC

General Description

The SGC75050_01_TSMC_28HPCp is a low-dropout (LDO), high current, fast response, low quiescent linear regulator IP for integration on SoC. It offers high power supply rejection (PSR), soft start and over current protection. The IP uses advanced control techniques to achieve excellent transient response and still maintain low dropout and low quiescent. The SGC75050_01_TSMC_28HPCp is stable with an internal output capacitor in the range 3 nF to 5 nF. It is specified from $T_J = -40\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$ and is designed to achieve 4% overall 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_O | Output Volt. | 0.74 | - | 1.04 | V |
| V_{REF} | Ref. Voltage | - | 500 | - | mV |
| I_{PB1U} | Bias Current | 0.7 | 1.0 | 1.3 | μA |

Applications Diagram

