

PMU - POWER MANAGEMENT UNIT

Features

- Wide input voltage range, from 1.60V to 1.98V
- Advanced Power Controller with *Power-On-Reset*
- External voltage detector with *UVLO*
- Integrated references and startup control
- High power, low ripple DCDC (up to 1A output current)
- 5-bits programmable DCDC output voltage ranging from 0.6V up to 1.39375V (6.25mV step)
- DCDC with soft start, over-current protection and up to 90% efficiency

Applications

- Digital camera modules
- Wireless communications
- Video applications

Applications Diagram



General Description

The *SGCPMU_02_TSMC_28HPCp* is a *PMU* designed for high power digital cores with fast activity variation (where most *DCDC* converters fail). It includes an *Advanced Power Controller (SGC21412)* and an ultra-fast response, high output current, step down *DCDC* regulator (*SGC67x family*). Including monitoring and *POR* functionalities, the *PMU* uses advanced control techniques to achieve soft startup, superb transient response and instantaneous over-current protection. It is specified from $T_J = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ and designed to achieve 4% overall accuracy (over Load/Line/Temp).

Quick Reference

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNIT
V_I	Input Sup.	1.60	-	1.98	V
V_{DD}	Digital Sup.	0.70	-	1.20	V
V_{REF}	Ref. Voltage	-	0.75	-	V
DCDC V_O	DCDC V_{OUT}	0.6	-	1.394	V
DCDC I_O	DCDC I_{OUT}	0	-	1000	mA