

DC/DC - FAST RESPONSE BUCK

Features

- Optimal response, high efficiency DC/DC Buck Regulator
- High output current (200mA)
- Large input voltage range, from 2.4V to 5.5V
- Programmable output voltage range from 1.26V up to 1.57V, with 10mV steps
- 50kHz switching mode designed to reduce noise on the audible frequencies
- Soft start and over current protection
- Power good comparator and flag

Applications

- Headsets
- Wireless communications
- Portable Media Players
- Digital camera modules

Applications Diagram



General Description

SGC67020_01_TSMC_CM018MG is a high output current, step down switched DC/DC regulator designed for *SoC* integration. Due to its ultra-fast response, it is the best solution to supply high power digital cores with fast activity variation (where most regulators fail). It offers soft start-up, superb transient response and instantaneous over current protection. Moreover, it includes a mode to limit the DC/DC minimum switching frequency to 50kHz to avoid noise on the audible frequencies. The *SGC67020_01_TSMC_CM018MG* is designed to achieve 3% overall accuracy (over Load / Line / Temp), being specified from $T_J = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$. It can be found integrated into *PMUs* (as for example in *SGCPMU_01_TSMC_CM018MG*) or as an isolated IP.

Quick Reference

SYMBOL	DESCRIPTION	MIN	TYP	MAX	UNIT
V_{IN}	Input Sup.	2.4	—	5.5	V
V_{DVDD}	Digital Sup.	1.4	—	2.0	V
V_O	Out Voltage	1.26	—	1.57	V
I_O	Out Current	0	—	200	mA