

## DC/DC – ULTRA LOW QUIESCENT BUCK

### Features

- Low power DC/DC Buck Regulator
- Output current up to 40mA
- Large input voltage range, from 2.4V to 5.5V
- Soft start and over current protection
- Power good comparator and flag
- Programmable output voltage range from 0.60V up to 0.91V, with 10mV steps
- Low noise mode designed to reduce substrate noise with minimum efficiency degradation

### Applications

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

### Applications Diagram



### General Description

#### *SGC62040\_01\_TSMC\_CM018MG*

is a fast response, ultra-low quiescent current step down switched DC/DC regulator designed for *SoC* integration. It is the best supply solution for low power digital cores with fast activity variation (where most regulators fail). The *SGC62040\_01\_TSMC\_CM018MG* offers soft start-up, instantaneous over current protection and superb transient response. It includes a novel low noise mode to reduce the substrate noise, generated during switching, with minimum efficiency degradation, making it ideal for noise sensitive applications. Being specified from  $T_J = -40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ , the *SGC62040\_01\_TSMC\_CM018MG* is designed to achieve 3% overall accuracy (over Load / Line / Temp). It can be found as an isolated IP or integrated into *PMUs* (as for example in *SGCPMU\_01\_TSMC\_CM018MG*).

### 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	0.6	—	0.91	V
$I_O$	Out Current	0	—	40	mA