

REVERSE PROTECTED CHARGER REGULATOR

Features

- Low-Dropout Unidirectional Regulator
- Charger present detection
- End-of-charge detection
- Active reverse protection diode
- Bypass mode
- Programmable output voltage
- Programmable current limitation
- Large input voltage range, from 3.4V to 5.5V
- Soft start and over current protection

Applications

- Headsets
- Small portable applications
- Wearables

Applications Diagram



General Description

SGC71400_01_TSMC_CM018MG

is a unidirectional low-dropout linear regulator intended for use in charger systems. It offers high stability and programmable voltage regulation. Due to its internally controlled boot sequence, it allows fast system startups with low bat and, using advanced control techniques, it guarantees excellent current and voltage control while maintain low quiescent. It is stable with a 2.2 μ F to 22 μ F output capacitor and specified from $T_J = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$, being designed to achieve 5% overall voltage 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.	3.4	—	5.5	V
V_{DVDD}	Digital Sup.	1.4	—	2.0	V
V_{SYS}	Out Voltage	4.0	—	5.5	V
C_O	Out Cap	2.2	—	22	μ F