

5.5 V, 500 mA Linear Regulator

Features

- Qualified for Automotive Applications
- AEC-Q100 Qualified with the Following Results:
 - . Device Temperature Grade 1: -40 °C to 125 °C
- Ambient Operating Temperature Range
 - . Device HBM ESD Classification Level H1C
 - . Device CDM ESD Classification Level C4A
- Wide Input Voltage Range (2.3 V to 5.5 V)
- 2% Output Accuracy ($V_{OUT} \geq 3.3$ V)
- 2% FB Pin Voltage Accuracy - Adjustable Output Option
- Low Dropout Voltage: 200 mV at 500 mA (typ. $V_{OUT} \geq 2.5$ V)
- Output Voltage Options: 0.8, 1, 1.8, 2.5, 2.8, 3.3 and 5 V
- Output Voltage Range: 0.8 V to 5 V
 - . Adjustable Output Option
- Feedback Pin Available: Remote Sensing
- Stable with 1 uF Ceramic Input and Output Capacitors
- 1 uA Off-State Quiescent Current
- Thermal Overload Protection
- Foldback Current Limiting
- Output Automatic Discharge for Fast Turn-off
- Ground Pin Current: 60 uA (typ.) at No-load
- Enable Pin

Applications

- Automotive Infotainment
- Telematics Systems
- ADAS Cameras and Radar
- Navigation Systems

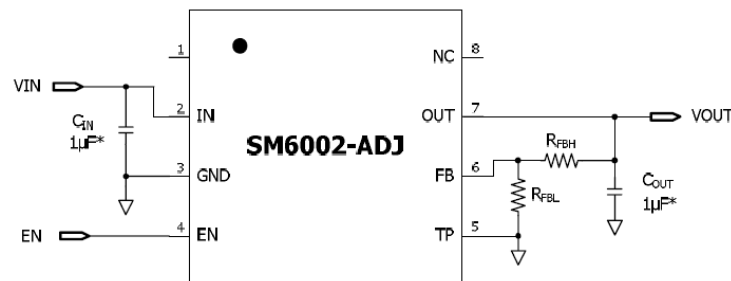
Description

The SM6002 low-dropout CMOS linear regulators provide tight output tolerance (typ. 2%), extremely low dropout voltage (200 mV at 500 mA load current, $V_{OUT} \geq 2.5$ V) and excellent AC performance using ultralow equivalent series resistance (ESR) ceramic output capacitors. The low thermal resistance of the DFN package allows use of the full operating current even in high ambient temperature environments. The device is designed to work with a 1 uF input and output ceramic capacitor.

Device Information

Part	Package	Size
SM6002	8 DFN	3 mm x 3 mm

Simplified Block Diagram



Silicon Mitus cannot assume any responsibility for the consequence of use of information furnished nor for any infringement of patents or other rights of third parties which may result from its use. No Circuit patent licenses are implied. Silicon Mitus reserves the right to change the circuitry and specifications without notice at any time. This publication supersedes and replaces all information previously supplied. Silicon Mitus products are not authorized for use as critical components in life support devices or systems without the express written approval of Silicon Mitus.

© 2017 Silicon Mitus, Inc. - Printed in Korea - All Rights Reserved