

1.5V Low – Dropout (LDO) Voltage Regulator

1. Features

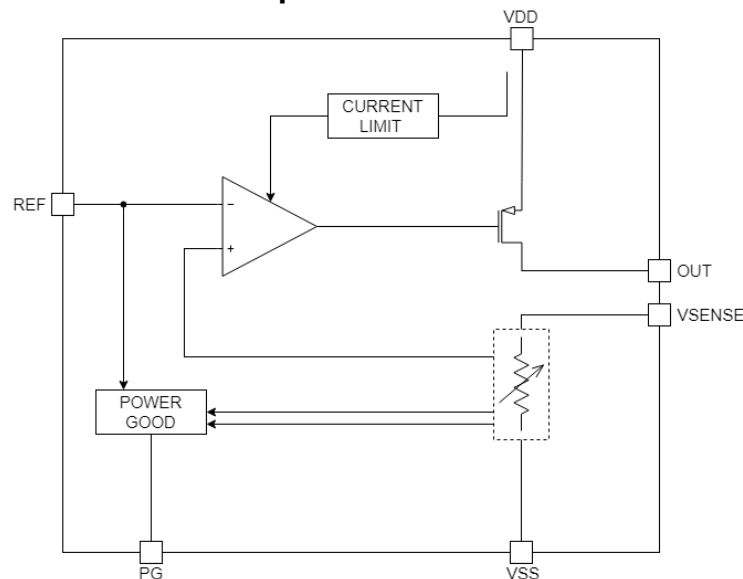
Input voltage: 2.8V to 3.6V
 Output voltage: 1.5V
 Max Output Current: 10 mA
 Quiescent current: 5 μ A
 Leakage current: 0.96 μ A
 Area/Disipation: 111 μ m \times 111 μ m/3 μ A

2. Applications

3. Description

The WEA3615LD45G is a voltage feedback amplifier (series - shunt) which active part is comprised of a telescopic cascode amplifier stage, followed by a PMOS pass – device which operates in saturation as a common source stage. The Current Limit Protection circuit detects an output current bigger than the prescribed value and the Power Good circuit detects when the output voltage of the LDO is within a certain range, in which the output is considered valid. Results validate a 1.5V output voltage from a 2.8 V to 3.6 V input voltage with a current dissipation of 3 μ A.

Simplified Schematic



4.Availability

- Silicon proven in 45nm CMOSSOI at GF
- Portable to 40nm,28nm,22nm GF

5.Deliverables

GDSII, Database, SystemVerilog Models

About weasic

Weasic Microelectronics S.A. designs, develops, and markets high quality complex analog and RF IP for wireless communications and wireless sensors applications, helping semiconductor and system companies to shrink the product design cycle. WEASIC, silicon verified IP is designed in the state of the art CMOS, CMOS-SOI and SiGe processes and can be easily ported and customized to serve the development of 5G and Backhaul communications transceivers, mmWave front-end modules, and RADAR sensors.

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