

RSM6G15 — 140A, Dual-Phase TLVR Smart Power Block

Features

High-Current Dual-Phase Power

- 2.5V to 15V input voltage range
- Up to 140A continuous output current
 - 70A per phase
- Two independent 70A phases or 140A parallel operation

High-Performance TLVR Operation

- Native TLVR support for fast transient response
- Up to 2MHz switching frequency
- Up to 89% peak efficiency ($V_{IN} = 13.5V$, $V_{OUT} = 0.8V$)

Integrated Sensing & Protection

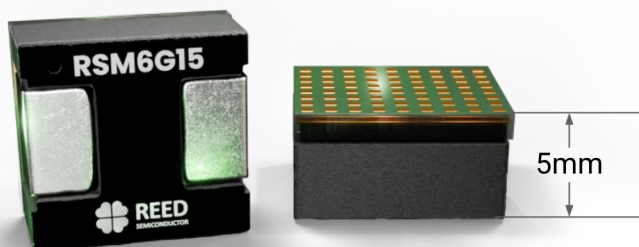
- Integrated current and temperature sensing
- VIN and VCC undervoltage lockout (UVLO)
- High-side overcurrent protection
- Cycle-by-cycle overcurrent limiting
- Overtemperature protection (OTP)

Compact, Thermally Enhanced Package

- 10mm × 9mm × 5mm 72-pin LGA package
- -40°C to 125°C operating temperature range
- RoHS compliant

Applications

- AI Accelerators
- GPUs
- FPGA and ASIC Core Power
- Servers and Data Centers
- High-Performance Computing (HPC)



Description

The RSM6G15 is a high-current, dual-phase TLVR Smart Power Block designed for high-performance AI, computing, FPGA, and ASIC core power applications. Operating from a 2.5V to 15V input, it delivers up to 140A continuous output current, with up to 70A per phase.

The RSM6G15 integrates power MOSFETs, smart gate drivers, inductors, and current and temperature sensing into a compact power stage. Native TLVR support enables fast transient response and reduced output capacitance for high-current loads with rapidly changing power demands. When paired with Reed [multiphase controllers](#), the RSM6G15 enables scalable, high-density Vcore power solutions for demanding AI and high-performance computing systems.

Integrated protection includes VIN and VCC undervoltage lockout (UVLO), high-side overcurrent protection, cycle-by-cycle current limiting, and overtemperature protection (OTP). The RSM6G15 is offered in a thermally enhanced 10mm × 9mm × 5mm 72-pin LGA package for high-density power designs.

Typical Application Circuit

