RSM6G05 2.5V to 15V 140A Two-Phase Smart Power Block

Features

Performance

- Wide 2.5V to 15V input voltage range
- Up to 140A continuous output current (70A per phase)
- Up to 2MHz switching frequency
- Peak efficiency up to 90% ($13.5V_{IN}$ to $0.8V_{OUT}$)

High Integration

- Dual independent outputs configurable for dual-rail operation or paralleled for up to 140A output current
- Integrated smart drivers, MOSFETs, and inductors
- Accurate current and junction temperature sensing
- Integrated power stage reduces PCB area and routing losses

Robust Protection

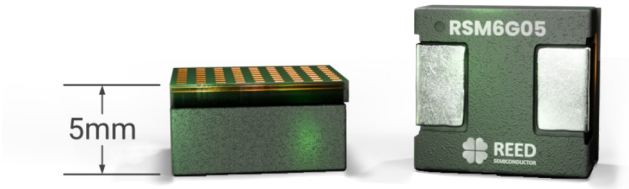
- VIN and VDRV UVLO
- High-side overcurrent protection
- Cycle-by-cycle current limiting
- Overtemperature protection (OTP)

Package

- Compact 10mm × 9mm × 5mm, 72-pin LGA package
- Operating junction temperature: −40°C to +125°C
- RoHS compliant

Applications

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



Description

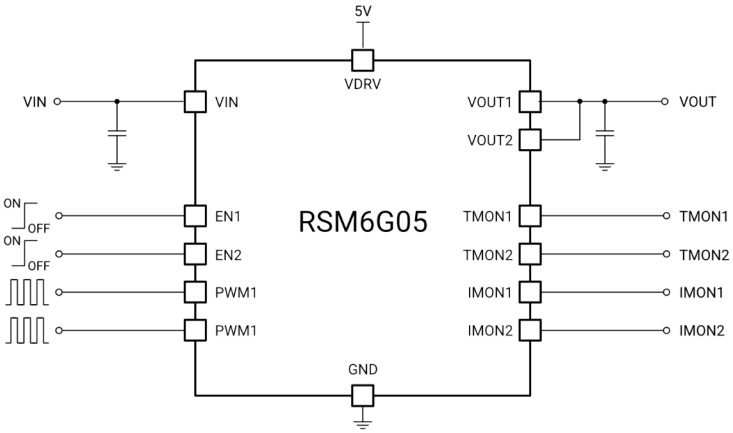
The RSM6G05 is a highly integrated 140A (70A/phase) two-phase DC-DC power block that combines smart gate drivers, power MOSFETs, and inductors in a compact package to simplify high-current power supply design.

Designed for AI accelerators, GPUs, FPGAs, ASICs, networking equipment, and data center power systems, the RSM6G05 delivers exceptional power density while minimizing PCB area, routing complexity, and power loss. Its compact 10mm × 9mm footprint enables high power density in space-constrained server, accelerator, and high-performance computing platforms.

Combined with Reed Semiconductor's multiphase DC-DC controllers, the RSM6G05 provides a complete, scalable power solution for high-current computing and AI applications.

Integrated current sensing, junction temperature monitoring, undervoltage lockout (UVLO), overcurrent protection, cycle-by-cycle current limiting, and overtemperature protection simplify system design while improving reliability. The compact, thermally enhanced LGA package is optimized for automated assembly and efficient thermal management.

Typical Application Circuit



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