

### DESCRIPTION

The MPM3695-10 is an ultra-thin, scalable, 10A, fully integrated power module with PMBus interface. It offers a full power solution that achieves up to 10A of output current with excellent load and line regulation over a wide input supply range. The MPM3695-10's 1.6mm height enables it to be placed on the back side of the PCB to save board space. The MPM3695-10 operates at a high efficiency over a wide output current load range. The MPM3695-10 can be paralleled with any phase.

The MPM3695-10 adopts MPS's proprietary multi-phase constant-on-time (MCOT) control, which provides fast transient response and eases loop stabilization. The MPM3695-10 also provides redundancy to protect the load. The PMBus interface provides module configurations and the monitoring of key parameters.

Fully integrated protection features include over-current protection (OCP), over-voltage protection (OVP), under-voltage protection (UVP), and over-temperature protection (OTP).

The MPM3695-10 requires a minimal number of readily available, standard, external components and is available in a QFN-45 (8mmx8mmx1.6mm) package.

Please email "[mpm3695-10info@monolithicpower.com](mailto:mpm3695-10info@monolithicpower.com)" for more information.

### FEATURES

- 4V to 16V Input Voltage Range
- 0.5V to 5.5V Output Voltage Range
- 10A Output Current, Parallel up to 250A
- Auto Interleaving for Paralleling Operation
- Auto Compensation with Adaptive COT for Ultrafast Transient Response
- 0.5% Reference Voltage Over 0°C to +70°C Junction Temperature Range
- Output Voltage True Remote Sense
- PMBus 1.3 Compliant
- Output Voltage/Current, Temperature, and Faults Reporting
- Programmable via PMBus
  - Current Limit
  - Pulse-Skip or CCM
  - Soft-Start Time
  - Switching Frequency
  - Selection of Hiccup or Latch-Off for OCP, OVP, and OTP
- Available in a QFN-45 (8mmx8mmx1.6mm) Package

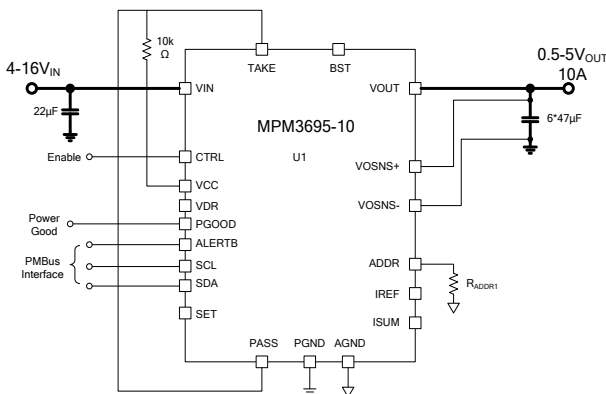
### APPLICATIONS

- Telecom and Networking Systems
- Industrial Equipment
- Servers and Computing

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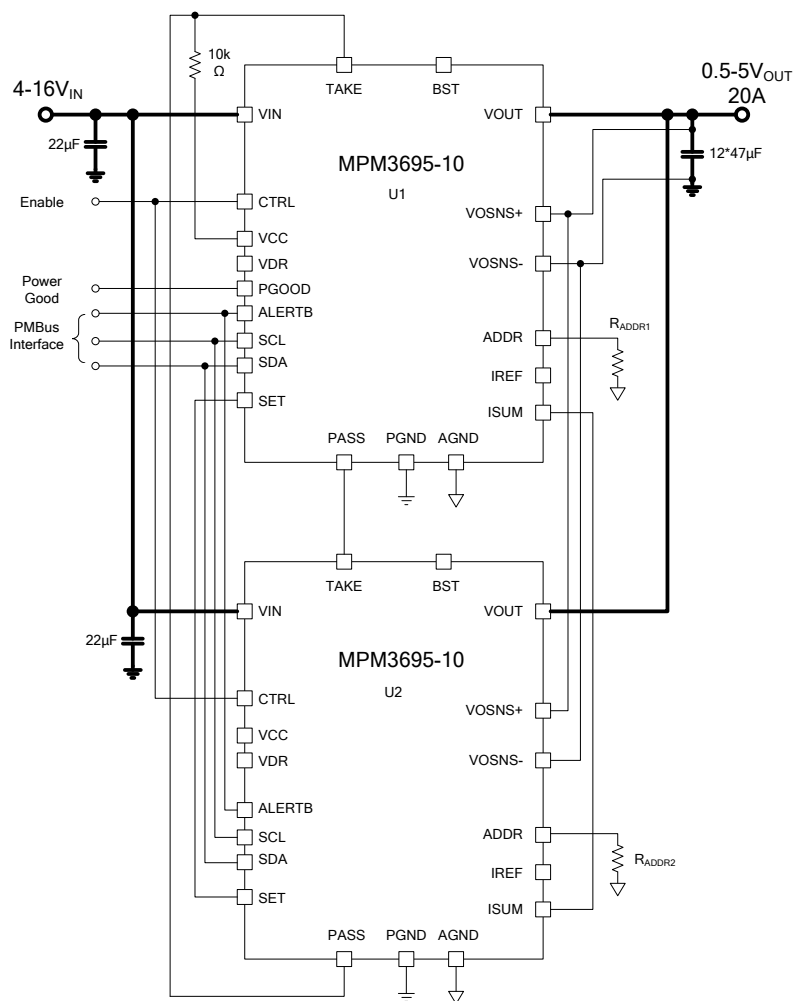
### TYPICAL APPLICATION

#### Single-Phase Operation



## TYPICAL APPLICATION (continued)

### Two-Phase Operation



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