

PRELIMINARY SPECIFICATIONS SUBJECT TO CHANGE

DESCRIPTION

MPM3695A-10 is an ultra-thin, scalable and fully integrated power module with PMBus interface. MPM3695A-10 offers a complete power solution that achieves up to 10A of continuous output current with excellent load and line regulation over a wide input voltage range. MPM3695A-10's 1.6mm height enables it to be placed on the back-side of a PCB for space optimization. MPM3695A-10 operates at a high efficiency over a wide load range and can be paralleled to deliver up to 60A of continuous current.

MPM3695A-10 adopts MPS's proprietary, multi-phase constant-on-time (MCOT) control, which provides ultra-fast transient response and simple loop compensation. The PMBus interface provides module configurations and monitoring of key parameters.

MPM3695A-10 features full protection functions including over-current protection (OCP), over-voltage protection (OVP), under-voltage protection (UVP), and over-temperature protection (OTP).

MPM3695A-10 requires a minimal number of readily available external components and is available in a QFN-45 (8mmx8mmx1.6mm) package.

FEATURES

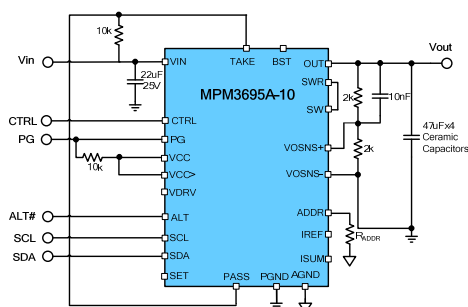
- Wide Input Voltage Range from 3V
 - 3V-14V Input Voltage with an External V_{CC} Bias
 - 4V-14V Input Voltage with Internal V_{CC}
- 0.5V to 1.8V Output Voltage Range
- 10A Continuous Output Current, Parallel for Up to 60A Continuous Current
- Auto-Interleaving for Multi-Phase Operation
- 0.5% Reference Voltage Accuracy Over 0°C to +70°C Junction Temperature Range
- Remote Sense of the Output Voltage
- PMBus 1.3 Compliant
- Telemetry Read-back Including V_{IN} , V_{OUT} , I_{OUT} , Temperature, and Faults
- Programmable via PMBus
 - Output Voltage, Soft-start time
 - OC/OT/OV/UV/UVLO Limits
 - PWM Mode and Switching Frequency
- Available in a QFN-45 (8mmx8mmx1.6mm) Package

APPLICATIONS

- Telecom and Networking Systems
- Industrial Equipment
- Servers and Computing
- FPGA and ASIC power

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TYPICAL APPLICATION



Application circuit for single phase operation at 1.2V output

12V INPUT EFFICIENCY

