

General-Purpose Buck Regulator for a Wide Variety of Applications

Allegro expands their current family of step-down regulators by adding a 3 A fixed off-time, current-mode-controlled buck-switching regulator. This general-purpose buck regulator is targeted at the consumer electronics and industrial markets. This new device can be used in a wide variety of applications; the 8 V to 50 V input range makes it ideal where a wide range of input voltages may occur.

Allegro's A8498 can handle a wide input of operating voltage ranges. The regulator requires an external clamping diode, inductor and filter capacitor, and the off time is determined by an external resistor. It will operate in both continuous and discontinuous modes. An internal blanking circuit will be used to filter out transients due to the reverse recovery of the external clamp diode. Typical blanking time is 200 nS, and the output voltage is adjustable from 0.8 V to 24 V based on a resistor divider and the 0.8 V \pm 3 percent reference.

This new device is ideal for various end products including applications with 8 V to 50 V input voltage range needing a buck regulator for 3 A output current, consumer equipment power, uninterruptible power supplies, 12 V lighter-powered applications (portable DVD, etc.), automotive 12V or 24V input applications with higher voltage protection, point of sale (POS) applications, and industrial applications with 24 V or 36 V bus.

Allegro's A8498 is supplied in an eSOIC-8L package has a 12 week lead-time to market.
