

What's New in Power

- **LM2267X SIMPLE SWITCHER Regulators**
- **LM315X SIMPLE SWITCHER Controllers**
- **LM3421/23 Versatile High Voltage LED Driver Controllers**
- **LM5118 Wide Input Voltage Range Buck Boost Controller**

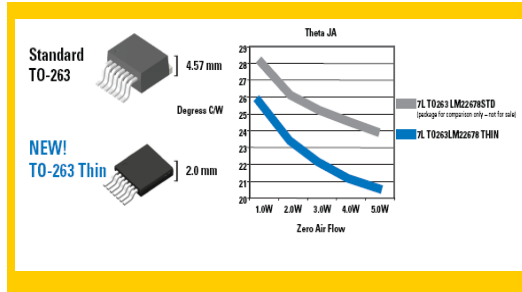


1

Looking for what's new in power?
National has just released 4 new devices:
The LM2267X Series of SIMPLE SWITCHER Regulators
The LM315X Family of SIMPLE SWITCHER Controllers
The new LM3421/23 Constant Current LED Driver
AND
The LM5118 75Vin Buck Boost Controller

LM2267x/LM22680 Simple Switcher® Series Makes Design Easy

- ✓ Wide Vin to Vout step-down ratios
- ✓ Frequency synchronization ~1MHz to better manage EMI
- ✓ Superior load transient response
- ✓ Pin-to-Pin compatible with LM267X Series
- ✓ Halogen Free and Lead-Free packaging



AND...Get 10% Better Thermal Performance with New TO-263 THIN Package!



2

The LM2267x/LM22680 and Simple Switcher® Step-Down Regulator Series is the next generation to the widely popular LM267x Simple Switcher® Regulators. Numerous enhancements and improvements have been added such as the implementation of a wider input voltage range down from 4.5V to 42V, tighter output accuracy, adjustable switching frequency, a precision enable, and enhanced thermal and green packages. These regulators are not only more efficient, but they provide up to a 50% reduction in output ripple over the LM267X regulators resulting in lower system noise. They also offer better load transient response over the LM267X and come in a new TO263 thin package with a moisture sensitivity level 1—which means that they have an almost infinite shelf life without the need for baking.

This family of SIMPLE SWITCHERS is ideal for industrial applications such as security and automation, automotive applications including telematics, driver information and infotainment and telecom and datacom applications.

Moreover, these new Simple Switcher Regulators are fully supported by the new Webench Power Designer allowing you to complete your designs accurately and quickly while delivering enhanced performance and flexibility to help you meet your design and application requirements.

LM315x Synchronous SIMPLE SWITCHER® Controllers with New MOSFET Selector Tool

SIMPLE SWITCHER® Controllers & WEBENCH® MOSFET Selector Tool

Design Made Easy

- 1 EXPLORE & LEARN
- 2 COMPARE & SELECT
- 3 DESIGN & BUILD

LM3150

New MOSFET Selector Tool recommends MOSFETs for you based on calculated BOM



3

- ✓ Support wide V_{in} : 6V - 42V
- ✓ Features Constant on Time Regulation with ERM to reduce ESR for low output ripple and fast transient response
- ✓ Support wide loads up to 12A

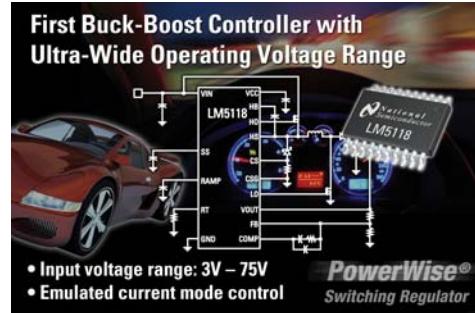
Designed to support higher current applications, the LM315x Simple Switcher® Controller Family features a synchronous architecture and is capable of delivering up to 12A of output current, and supporting a wide input voltage range from 6 to 42V. The LM3150 supports output voltages down to 0.6V and has an adj. frequency range up to 1MHz. The LM3151/2 and 3 for their part, support fixed output voltages of 2.5V, 3.3V and 5V and support fixed frequencies of 250, 500 and 750 kHz.

These Simple Switcher Controllers come with a complete package of design tools (and are fully supported by WEBENCH as well as the new MOSFET Selector tool) to assist with every step of the design process. The

LM315X family also features a low external component count (11-15 components to reduce the overall solution size) and a constant on time architecture to simplify the design process. This constant on time architecture eliminates the need for external compensation circuitry while still providing a fixed output voltage and frequency

LM5118: Industry's First ECM Buck-Boost Controller

- ✓ Employs gradual phase-in based on duty cycle to achieve smoother transition between modes
- ✓ Supports smart current limit adjustment during transition
- ✓ Operates up to 500kHz for more flexibility in inductor sizing
- ✓ Has ultra low current draw during shutdown to reduce battery drain



Emulated Current Mode (ECM) control provides enhanced stability



4

The LM5118 is the industry's first emulated current mode buck-boost controller. Emulated current mode technology allows the LM5118 to provide superior line transient response and low duty cycle operation over a wide voltage range that is not achievable with traditional current-mode control. The controller also offers best-in-class operating range of 3V to 75V, making it an ideal part for automotive, telecommunication and battery-powered systems. Its unique buck-boost topology maintains output voltage regulation when the input voltage is either less than or greater than the output voltage. This makes the LM5118 particularly well-suited for automotive application whose batteries may drop to 4V or below during cold-crank conditions.

The LM5118 features programmable switching frequency up to 500kHz, ultra-low shutdown current and smooth transition between buck and buck-boost modes. Its peak efficiency of 95 percent, positions the LM5118 among National's PowerWise family of energy efficient products.

For More Information

National.com/power



6