

# Industry's Highest Power Density Thin SOT23 Buck Switching Regulators

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*LM273x Family of Buck Regulators Offers Clock Speeds of up to 3 MHz in Ultra-Small Packaging*

[National Semiconductor Corporation](#) today introduced a new family of switching buck regulators that combine small-outline packaging with the **industry's best performance for the highest power density.**

The first two members of the family are the LM2734 and LM2736. The LM2734 can convert an input voltage of 3 V to 20 V down to as low as 0.8 V at an output current of up to 1 A. The LM2736 can convert an input voltage of 3 V to 18 V down to as low as 1.25 V at an output current of up to 750 mA. They both operate at switching frequencies as high as 3 MHz and are packaged in a Thin SOT23-6. Because of this

high power density, the regulators are optimized for applications that require high-current switching, such as xDSL modems, consumer applications powered by AC adapters and set-top-boxes. The LM2734 and LM2736 are designed on National's proprietary PVIP050 process, a sub-micron BCD process that increases the products' industry-leading power density.

"The introduction of the LM2734 and LM2736 sets a new standard for power management performance from National Semiconductor," said Paul Greenland, marketing director for National Semiconductor's Power Management group. "The LM2734 and LM2736 combine a high-performance power process and thermally enhanced, small-outline packaging, making them the best solution for applications that are space-constrained, yet still require power management without compromise."

### **About the LM2734 and LM2736**

Key features of National's LM2734 and LM2736 high-frequency buck regulators:

- Thin SOT23-6 package, switching frequencies as high as 3 MHz and minimal external components result in the industry's highest power density
- Current mode control and internal compensation allow stable operation over a wide input voltage range and reduction of line transients
- Pulse width modulation (PWM) provides a predictable, easily filtered switching frequency
- The LM2734 is designed to handle an output current of up to 1 A and the LM2736 handles an output current up to 750 mA
- The LM2734 operates from a 3 V to 20 V input and the LM2736 operates from a 3 V to 18 V input
- Both have 550 KHz, 1.6 MHz and 3 MHz versions. The 550 KHz and 1.6 MHz versions are available now and the 3 MHz version will be available by year end

- The LM2734 can step-down to a voltage as low as 0.8 V and the LM2736 down as low as 1.25 V
- Both parts have protection features such as pulse-by-pulse current limit and thermal shutdown

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