

## **Integrated Offline Switcher IC Cuts No-load Power Waste to 0.00 W**



Power Integrations introduced the newest member of its “Zero” product portfolio, LinkZero-LP. This highly integrated offline switcher IC automatically enters an innovative zero-input-power mode when the load is disconnected, cutting no-load power consumption to 0.00 watts. The new IC targets chargers and adapters up to 3.2 W for a broad range of small portable devices, including mobile phones, media players, eBook readers, tools, and toothbrushes.

No-load power – the energy consumed by chargers left plugged into an outlet while disconnected from the end product – has been estimated to account for two-thirds of all energy consumed by mobile devices. Short of unplugging the charger, the only means of eliminating this waste until now has been with a mechanical switch – a feature rarely found on mobile-device chargers.

LinkZero-LP eliminates no-load waste without a mechanical switch, using PI’s patented EcoSmart™ energy-efficiency technology, in combination with a proprietary power-down mode that senses when no load is present and then disables switching of the IC’s internal high-voltage MOSFET. The LinkZero-LP device automatically restarts when a load is detected.

LinkZero-LP is based on the successful LinkSwitch™-LP family of ICs, which is used widely in mobile phone chargers and other low-power charger/adaptor applications. LinkZero-LP maintains the hallmark simplicity of LinkSwitch-LP, enabling power supplies with fewer than 20 external components. The new device is even backward-compatible with existing LinkSwitch-LP designs, enabling quick, easy conversion to zero-no-load with no increase in component count.

Suitable for low-cost clampless designs, LinkZero-LP exhibits very tight IC parameter tolerances which improves system manufacturing yield. An extended creepage distance in the SO-8C package, plus an integrated 700 V MOSFET with hysteretic thermal shutdown protection, further improves system field reliability. Moreover, the 100 kHz operating frequency minimizes charger size, and frequency jittering greatly reduces the cost of EMI filtering.

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