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# Power Integrations' TinySwitch-PK IC Delivers Up to 280% Peak Power

Enables Simple, Flexible Designs with Fewer Components than Traditional Solution for Consumer Products, Low Power Motors and More

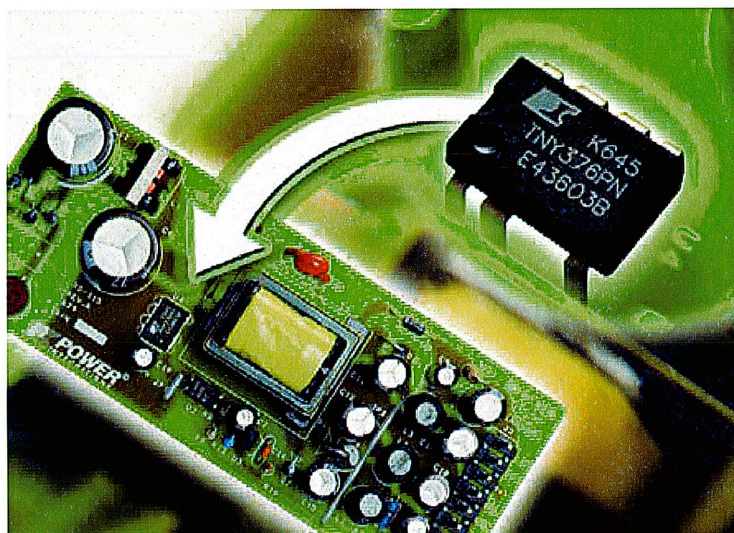
Power Integrations introduced the TinySwitch®-PK integrated power supply control IC with peak power mode. TinySwitch-PK delivers up to 280 percent peak power for short periods of time, enabling designers to specify transformers rated for the continuous power level, significantly reducing size, weight and cost of designs. With its high level of integration and robust feature set, TinySwitch-PK enables simple, flexible designs with far fewer components than competing discrete and integrated solutions.

"The On/Off control method employed by our industry-leading TinySwitch family is very efficient, easy-to-use and has fantastic transient response," explains Doug Bailey, vice president of marketing at Power Integrations. "Such devices with fixed frequency and current limit are, by nature, limited in their peak output power. Our new TinySwitch-PK family delivers all of the design benefits of the TinySwitch and extends the peak power available on-demand."

Many consumer products have seldom-used motors, buzzers or lights that require extra power for short periods. DVD player drawer-opening motors or PVR disk drive motors are good examples. The rest of the time, the hardware performs standard tasks and consumes much less power, yet all the system components such as transformers, output diodes and bulk storage capacitors must be specified for use at the occasional higher power requirement. The challenge in these systems is to design a power supply that can provide the necessary peaks when needed, but does not burden the application with

peak costs. By automatically entering into a special peak mode doubling operating frequency and boosting current limit for the duration of the peak power requirement, TinySwitch-PK coaxes up to 280 percent of the design power level out of the same transformer and integrated MOSFET. Moreover, TinySwitch-PK simplifies the

minimize EMI. TinySwitch-PK also includes selectable current limits, allowing the designer to choose any of three current limit values for each family member without any additional IC pins or external components. This capability enables designers to optimize their power supplies for either maximum efficiency or greatest power output.



transformer construction for multiple-output designs. Due to the chip's higher operating frequency, the number of primary turns may be reduced, making it easier to match common voltage ratios and consequently fit all of the turns onto a short bobbin, reducing total copper usage and cost.

TinySwitch-PK features a 700V MOSFET alongside low-voltage control circuitry on a monolithic IC. Other features include integrated auto-restart, input under-voltage and output over-voltage protection, hysteretic thermal shutdown, and frequency jittering to

TinySwitch-PK is available in lead-free, plastic through-hole DIP-8. Pricing in 1000-piece quantities for the TNY375P, a 6W (12.5W peak) part in a DIP-8 package, is \$0.65 each. Small quantities are available now, with production quantities of TNYPK375-377 available in early Q3 and TNYPK378-380 available in late Q3.

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