

Kinetic Technologies Announces World's first 100V Power Converter IC with Integrated 5kV Isolation

KTB1100: 7V-100V, 15W Flyback Converter with Integrated Feedback and Digital Isolator

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/EINPresswire.com/ -- Power management and video/audio interface leader, [Kinetic Technologies](#), is expanding its power conversion product portfolio with the world's first highly integrated, high voltage flyback converters utilizing secondary digital isolation feedback. The KTB1100 operates directly from a wide 7V to 100V input supply and integrates all

the major components, bar the transformer and rectifier diode, to create a highly efficient 15W isolated flyback converter with typically 1% output accuracy.



"The KTB1100 allows design engineers to simplify and reduce the size of their design, by integrating many of the external components normally required in isolated flyback designs", says, Jia Hu, Senior Director of ESIA Product Marketing at Kinetic. "Adding digital isolated feedback allows designers to achieve high output voltage accuracy and regulation, without an external opto-coupler, compared to equivalent PSR designs."

The KTB1100 also reduces the BOM and solution size by integrating a robust, internally protected 150V, low 350mΩ resistance output switching MOSFET and achieves close to 88% peak efficiency. Current-mode, constant on-time control, with an adjustable switching frequency of 100kHz to 1MHz, is used for fast transient response as well as superior output voltage regulation. The device features an active-high enable pin that can be connected directly to the input supply (up to 100V) with a soft-start function to limit the in-rush current at start-up.

With 5kVRMS isolation (UL1577 compliance pending), the KTB1100 also features several protection functions including undervoltage lockout, overvoltage lockout, cycle-by-cycle current limiting, short circuit protection and thermal shutdown protection.



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*Jia Hu, Kinetic Technologies
Senior Director of ESIA
Product Marketing*

The KTB1100 is supplied in a lead-free, RoHS, green wide-bodied SOIC-16pin package and is rated over the -40 to +85OC ambient temperature range.

Key applications for the new KTB1100 include battery management system (BMS) in electrical vehicles, telecom and communications power systems, industrial PLCs, smart meters, PoE, bias supply for isolated DC-DC converters and low-power isolated power modules.

KTB1100 pre-production samples are available now. [Visit Kinetic Technologies](#) for more information.

Product features include:

- Wide VIN Range: 7V to 100V
- Integrated 150V, 350mΩ (typ.) on-resistance MOSFET Switch
- Integrated Feedback with Digital Isolator
 - o 5000VRMS Isolation
 - o UL1577 Certification (Pending)
- Internal Startup Regulator
- Adjustable Soft-Start
- ±1% Feedback Voltage Reference
- Adjustable Switching Frequency from 100kHz to 1MHz
- Precision Enable for Adjustable UVLO
- Optional Primary Side Bias for Optimized Efficiency
 - o Up to 88%
- Comprehensive Integrated Protection
 - o Input UVLO
 - o Input Overvoltage Protection
 - o Cycle-by-Cycle Current Limit
 - o Over Current Protection
 - o Short-Circuit Protection
 - o Thermal Shutdown Protection
- Pb-free SOIC-16 Wide Body (10.3mm x 7.5mm)
- RoHS and Green Compliant
- -40°C to +85°C Operating Temperature Range

About Kinetic Technologies

Kinetic Technologies designs, develops and markets proprietary high-performance analog and mixed-signal power and protection semiconductors across consumer, communications,

industrial, automotive and enterprise markets, to deliver protected solutions tolerant of real-world fault conditions. The company's product sit "Behind Every Port™", deliver solutions to not only provide, protect, regulate, and monitor power consumed by analog and digital semiconductors and other electronic loads, but to also switch, transform and protect high resolution video, audio and data signals. Kinetic Technologies develops application-specific products that solve audio-video interface, protection, and power management needs across smartphones, tablets and wearables, as well as serving a wide range of industrial, automotive and enterprise solutions. Kinetic Technologies, a Cayman Corporation, has R&D centers in Silicon Valley and Asia, with operations and logistics based in Asia. For more information, please visit <http://www.kinet-ic.com/>.

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