

New Products

Time-Interval Analyzer

Brilliant Instruments' BI200 Time Interval Analyzer is a PCI Express-based instrument-on-a-card for time and frequency measurement. The BI200 consumes 20 W and occupies a single x1 PCIe slot, yet it delivers 4 million time-interval measurements per second with input-signal frequency of up to 2 GHz or 4 Gb/s (without pre-scaling) and minimum pulse width of 150 ps. The time intervals can be the period, or pulse width of one signal, or the time difference (skew) between two signals, or one of 10 other functions, while each of the measurements has a resolution of 3 ps.

Applications include digitally controlled power systems with dc-dc converters, which can benefit from the ability to continuously measure the pulse-width modulation directly on each and every pulse. This capability provides an easy direct measurement of the dynamic response of the power supply controller. Pricing for the analyzer is \$20,000.

*Brilliant Instruments
Campbell, Calif.
www.b-i-inc.com*

Supercapacitor Charger

The LTC3225 from Linear Technology is an inductorless programmable supercapacitor charger for addressing high peak power and battery backup needs in portable applications. The device employs a low-noise charge-pump architecture to charge two supercapacitors in series to a fixed output voltage (4.8-V/5.3-V selectable) from a 2.8-V to 5.5-V input supply. The charge current is resistor programmable up to 150 mA, and the device's automatic cell-balancing feature maintains equal voltages on both cells (2.4-V/2.65-V selectable) without requiring balancing resistors. This protects each supercapacitor from overvoltage damage caused by mismatches in cell capacitance or leakage, while minimizing current drain on the capacitors.

The LTC3225 is housed in a 10-lead,

low-profile 2-mm × 3-mm DFN package. Pricing starts at \$2 each in 1000-piece quantities.

*Linear Technology
Milpitas, Calif.
www.linear.com*

Varistor

The SFS14K385E2 varistor from EPCOS eliminates the risk of fire or explosion resulting from overvoltages or excessive leakage currents. The special plastic coating also prevents smoke from developing. Therefore, in the event of a fault, no other components in the immediate vicinity of the varistor are damaged, thus increasing the reliability of the entire circuit.

The varistor is designed for 385 V_{RMS}. Its surge-current capability is 5000 A, and its maximum energy consumption is 136 J for 2 ms. Pricing starts at \$0.50 each in quantities of 1000.



*EPCOS
Iselin, N.J.
www.epcos.com*

High-Side Load Switches

Micrel's MIC94040/1/2/3 family of high-side load switches feature the company's MLF package. The package technology extends battery life by reducing the on-resistance of the devices down to 28 mΩ. Also, thermal performance of the package technology allows more than 3 A of continuous current from a 1.2-mm × 1.2-mm package. Each device operates from 1.7-V to 5.5-V input and can be controlled with 1.5-V logic due to a novel level-shift circuitry that allows it to

control higher voltage supplies.

The MIC94040 and MIC94041 feature rapid turn-on, while the MIC94042 and MIC94043 provide a slew rate controlled soft-start turn-on of 116 μs (typical) to prevent inrush current. Pricing starts at \$0.34 each in quantities of 10,000.

*Micrel
San Jose, Calif.
www.micrel.com*

Epoxy Potting Systems

Cytec Industries' CONAP CONAPOXY FR-1800 series of epoxy potting systems is recognized to UL 94V-O, is RoHS compliant and has excellent processing properties. The epoxy potting compounds extend the life cycle of electronic and electrical devices such as coils, controls, sensors and transformers. Providing an ambient cure and storage stability, each product in the FR-1800 series is formulated with a nonabrasive filler to reduce wear on machine metering/dispensing equipment.

The FR-1810 is an 80 Shore D flexible two-component, low exotherm, flame-retardant, long-life epoxy potting and casting system. A fast gelation epoxy, the FR-1820 is for designs requiring fast line speed potting of electronic modules, components and electrical devices. The FR-1830's mixed viscosity of 2100 cps at 25°C gives it a low viscosity.

*Cytec Industries
West Paterson, N.J.
www.cytec.com/conap*

Conformal Coating Handbook

HumiSeal Europe has published a new edition of the *Conformal Coating Facts and Data Handbook*. At more than 30 pages, the book is currently available as an interactive PDF document giving readers access to information ranging from the different chemistry type and application methods, to a full and comprehensive glossary of terms. The company also will be publishing a hardcopy version

of the document. The revised edition is designed to form a readily understandable, introductory guide focusing on the main issues of selecting a coating material and putting it into process. Its objective is to present the salient facts in a succinct style.

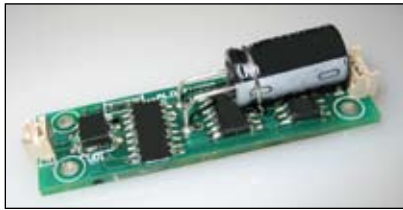
*HumiSeal Europe
Surrey, England
www.humiseal.eu*

Energy Harvesting

Advanced Linear Devices' energy-harvesting module development kits provide an assortment of components and electronic circuitry that enables the capture and storage of electrical energy generated from ambient energy sources such as light, vibration, heat, chemical reaction, air and fluid flow. Energy-harvesting modules supply power to circuits for intermittent duty-cycle operations.

The ALD EH301 kit comes with two of ALD's proven EPAD energy-

harvesting modules (for applications that require 3.3-V to 5.2-V power supply), as well as cables and connectors that will link to power sources and applications. The two modules in the ALD EH300 kit are for applications that require 1.8-V to 3.6-V power supply. Both kits are priced at \$120.



*Advanced Linear Devices
Sunnyvale, Calif.
www.aldinc.com*

High-Current Inductors

West Coast Magnetics' WCM307 series of power inductors use the company's shaped-foil technology to handle high current levels in a compact package. Featuring inductance values

ranging from 8.6 μ H to 193.4 μ H, the inductors are rated for currents ranging from 20 A rms to 108 A rms for a temperature rise of 40°C. The parts handle ac ripple currents at frequencies ranging from 60 Hz up to 500 kHz. DC resistance values range from 0.5 m Ω to 14.72 m Ω . In addition, the inductors are rated for operation at 200°C.

*West Coast Magnetics
Stockton, Calif.
www.wcmagnetics.com*

P-Channel MOSFET

Vishay Intertechnology's Si8445DB 20-V p-channel TrenchFET power MOSFET combines a profile of 0.59 mm with a 0.495- Ω on-resistance at ratings down to 1.2 V. With a footprint of 1.2 mm \times 1 mm, the Si8445DB is priced at \$0.15 each in 100,000-piece quantities.

*Vishay Intertechnology
Malvern, Pa.
www.vishay.com*

PETech

CATALOG

PRODUCT MARKETPLACE

New 2008 Powerex Short Form Catalog



This new publication from Powerex, your Global Power-Semiconductor Solution Provider, includes technical specifications and outline drawings for all Powerex products recommended for new designs.

To obtain a copy of the new Powerex catalog, please contact Kelly Bandieramonte at kbandieramonte@prx.com

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HIGH VOLTAGE RESISTORS

27 page catalog of high voltage, high power non-inductive thick film resistors. Ohmic value ranges 0.1 ohm - 10 gigohm; voltage ranges 1 - 60 kV; wattage ranges of 1 - 600 watts and tolerances \pm 0.1% - \pm 10%. TCR begins as low as \pm 15ppm/C with a standard of \pm 100ppm/C.

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