



### **Cymbet EnerChip Solid State Batteries Verified 100% Biocompatible**

*In vivo tests show EnerChip™ batteries are biologically safe for all types of applications*

**Nuremberg, Germany May 14, 2013** - Cymbet Corporation announced today at the PCIM Europe show the successful results of in vivo biocompatibility feasibility studies that were conducted to evaluate the biological safety of the EnerChip™ Rechargeable Solid State Battery. EnerChip bare die batteries were crushed and combined into a saline solution which was introduced into an in vivo test setting. No ill effects were recorded nor were any test article related lesions observed in this study.

These excellent in vivo test results reinforce similar findings from Cymbet's July 2012 in vitro studies in which EnerChip bare die battery samples were gamma sterilized and evaluated using two in vitro test methods for cytotoxicity and the EnerChips demonstrated 100% non-cytotoxicity.

#### **No Harmful Effects Found From In-Body Exposure of Crushed EnerChip Batteries**

Cymbet EnerChip solid state batteries are uniquely fabricated using standard semiconductor manufacturing processes using patented construction techniques. One of the most rigorous ways to test the intrinsic biological safety of the EnerChip battery is to introduce crushed EnerChip bare die into in vivo test settings. Crushing the battery replicates the case of an EnerChip-powered implanted medical device that is catastrophically destroyed. In this trauma situation, the EnerChip battery components would be exposed directly to the in vivo setting. The results of this in vivo testing showed no harmful effects from having the crushed EnerChips in the body.

#### **EnerChip Solid State Batteries are Uniquely Safe for use in New Product Designs**

EnerChip batteries have the same handling and die attach mechanisms as the other Integrated Circuits found in electronic devices. This makes EnerChips ideal for co-packaging with other ICs to create advanced Systems in Package (SIP) devices. EnerChips are also packaged in standard plastic DFN semiconductor packages that ship on tape and reel. There are many global environmental and safety standards and directives that cover batteries. EnerChip solid state batteries are the ideal solution as they address: RoHS, China RoHS, REACH, CE Mark, UL-Underwriters Laboratory, JEDEC IC Packaging Standards, IEC, NEMA/ANSI, UN Air Safety Regulations, WEEE Directive, Battery Directive, MSDS and OSHA Information, End-of-Life Disposal Instructions and Biocompatibility Standards.

For more information on environmental standards and eco-friendly features please download this EnerChip Product Information Brief at: <http://www.cymbet.com/pdfs/PI-72-04.pdf>.

EnerChip rechargeable solid state batteries are available from Cymbet global distribution partners including: Avnet Abacus, Farnell, Element14, RS, DigiKey, Mouser and others.

#### **About Cymbet**

Cymbet Corporation is the leader in solid state energy storage technology. The company is the first to market eco-friendly rechargeable storage devices that provide embedded systems designers with new embedded energy capabilities. The company's EnerChip™ solid state batteries with integrated power management enable new concepts in energy storage application for ICs and new products for medical, sensor, RFID, industrial control, communications and portable electronic devices. Visit Cymbet online at [www.cymbet.com](http://www.cymbet.com).

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