

Nickel-based energy storage system provides long life in high temperature



Announced today by VARTA Microbattery is the addition of HVCAP35, a Nickel (Ni) based energy storage system to the V-Cap Series. VARTA Microbattery's new Ni based energy storage system is a hybrid technology that combines the high energy density advantage of batteries, with the high power advantage of supercapacitors. The energy storage system is uniquely designed to provide a long life in high temperature, continuous stand-by and charge/discharge operation. The new HVCAP35 rechargeable products can withstand a continuous charge at +70°C and discharge at +85°C. VARTA Microbattery HVCAP technology provides approximately 10 times the energy density of traditional supercapacitors in the same volume. Therefore, HVCAP35 product features a typical capacitance rating of 100F.

HVCAP35 cells are engineered for a broad range of high temperature applications including servers, automotive, instrumentation, medical, and consumer products. The robust cells significantly outperform all other energy storage technologies in the event of an accident, in harsh temperature environments, extreme operating conditions, and in high temperature, long life applications. The Ni based hybrid energy storage system features a non-flammable aqueous electrolyte, and offers the highest safety properties achievable in a passive technology (boiling point 110° C vs. 82° C for traditional supercapacitors). The product is 100% environmentally friendly, no cadmium, mercury or lead.

With a failure rate of less than 5 parts per million (5ppm), VARTA Microbattery's Ni based energy storage technology has undergone over 10 years of field experience in high temperature applications. The product can be recharged at any time without having to be fully discharged as its chemical composition eliminates the

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"memory effect". It additionally maintains a stable voltage throughout most of the discharge cycle and maximizes charge rate without the risk of overheating/imbalance during charge. No balancing electronics is necessary for multi-cell configurations. HVCAP35 is capable of high power discharge rates up to 3A, and of fast charge rate is up to 1A. Products may be charged using the CC/CV (constant current-constant voltage) or CC/CC (constant current with voltage limitation) charging methods.

VARTA Microbattery's compact, thin profile Ni based product measures 24.1mm (L) x 34.1mm (W) x and only 3mm (H) to support high-density packaging applications. Parts weigh approximately 7.5 grams (0.264 oz.). VARTA Microbattery's HVCAP35 product is priced at \$3.50 each in quantities of 10,000. Delivery time is to 2-4 weeks.

Varta Microbattery

www.varta-microbattery.com/en.html [1]

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