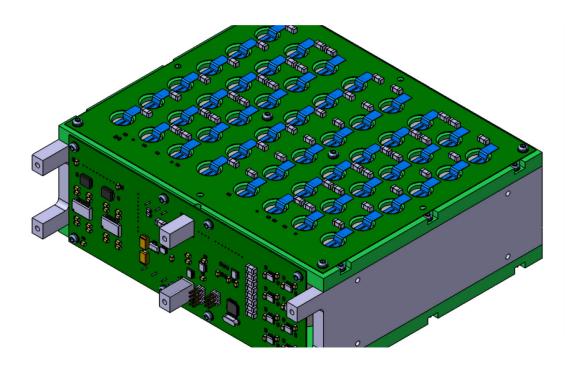
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DESIGN AND MANUFACTURE
OF AVIONICS BATTERIES FOR
SPACE APPLICATIONS

OVERVIEW



The cells used are NCA-type (Nickel Cobalt Aluminum - Lithium), and feature a specific energy of 243 Wh/kg with a nominal capacity of 3.35Ah. Each cell undergoes a rigorous selection process based on a statistical analysis of its capacities.

Our battery stands out for:

Designed for launch vehicles: Advanced battery with high capacity and adaptability to various operating conditions, ideal for demanding applications.

High-energy performance: Effective operational capacity of 19.6Ah, ensuring reliability under intensive use conditions.

Thermal versatility: Reliable operational temperature range from -10° C to 45° C, capable of withstanding extreme environmental conditions.

Balanced performance: Stable and safe voltages during charge and discharge, optimizing lifespan.

Adaptive power: Supports charge and discharge currents of up to 20A, providing reliable performance in high-demand energy applications.

Guaranteed durability: Designed to operate within a safe depth of discharge (DOD) level, maximizing lifespan and reliability.



MAIN FEATURES

BOL (beginning od life) Capacity

20.4Ah (3.4Ah / cell at C/10 discharge rate)

BOL Capacity under real operating conditions

19.6Ah (3.25Ah / cell at C/2 discharge rate)

Maximum operating temp. range

-10°C to 45°C

Optimal operating temp. range 5°C to 30°C

Maximum charging voltage (100% SOC)

33.6V (4.2V / cell)

Minimum discharge voltage (0% SOC)

24V (3V / cell)

Average discharge voltage 29.6V between 50% and 80% SOC (3.7V / cell)

Maximum charging current 20A

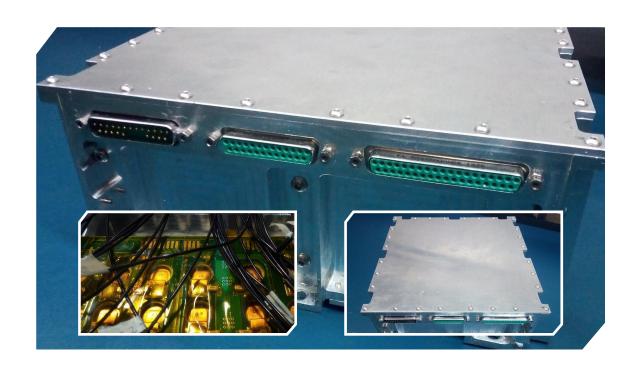
Nominal charging current 12A (6 × 2A)

Maximum discharge current 20A

Nominal discharge current 12A

Minimum safe DOD 20%

Recommendad op. DOD $\geq 40\%$







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