

SPACE POWER SYMPOSIUM (C3)
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THE RESEARCH OF HIGH POWER DC CONVERTER FOR REGENERATE FUEL BATTERY
SYSTEM IN SPACE

Abstract

Introduce the research about high-power bi-directional DC converter which is the key part of the space regenerate fuel battery system according to the use of power and space environment. Converter structure and power component make the heat analysis, simulate and test in simulated space environment. Power structure which keep water and electron into integrate and optimized power topology was designed according to work feature to meet the requirement of mass, size and efficiency. The developed 60kW bi-directional DC converter meet the work requirement in space through test.