

THE INFLUENCE OF LITHIUM POLYMER BATTERY LEVEL C RATING ON BATTERY VOLTAGE REDUCTION IN FIXED WING TYPE UAV AIRCRAFT

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ABSTRACT

Lithium Polymer Batteries or commonly referred to as LiPo are one type of battery that is often used in UAVs. In Lithium Polymer batteries, even though the number of cells and the amount of battery capacity are the same, LiPo batteries can still be distinguished by the C Rating value. The results of this research on LiPo batteries explain that in testing with a propeller load, the highest power at 25% remote throttle, 50% throttle, 75% throttle and 100% throttle is found in the LiPo 120c battery. 2. In the no-load test the propeller usage time or the longest voltage drop time at 25% remote throttle and 50% throttle is found in 80c LiPo battery. As for the remote throttle 75% and remote throttle 100% the longest usage time or voltage drop time is on a 120c LiPo battery. In testing with a propeller load, the longest time of use or the longest voltage drop at the remote throttle 25% is on the 80c LiPo battery. As for the remote throttle 50%, remote throttle 75% and remote throttle 100% usage time or the longest voltage drop time is on a 120c LiPo battery. In flight testing of fixed wing UAV aircraft, it shows that at 50% remote throttle, 75% throttle and 100% throttle the highest final voltage is found in the 80c LiPo battery.

Keywords : Battery, C Rating, Lithium Polymer, Voltage Drop, UAV