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DEPENDENCES OF POWER CHARACTERISTICS OF CIRCUIT AT CHARGE OF SUPERCAPACITORS

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Abstract

Available dependences of power characteristics of charge circuits of supercapacitors (charge of which is nonlinear function of voltage on their terminals) on ideal source EMF, which for capacitive storages can be the accumulator battery are defined in this work. Comparison of power characteristics of charge circuits of supercapacitors and usual capacitors is executed. Conditions of decrease of electric power losses in charge circuits of nonlinear and linear capacitors from the accumulator battery are defined. Features of influence of energy of initial and final voltages of capacitors and their capacities on such losses are determined. References 15, figures 3, tables 4.

Key words: transient process, capacity, charge, supercapacitor, nonlinearity, internal resistance, accumulator battery, electric power losses.

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