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PHYSICAL PREREQUISITES OF CONSTRUCTION OF MATHEMATICAL MODELS OF ELECTRIC RESISTANCE OF PLASMA-EROSIVE LOADS

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Abstract

In the present article are described the features of the influence of the physical processes taking place during the flow of pulsed electric currents in multichannel plasma-erosive loads on the current form and the form of parametric and non-linear dependency of the equivalent resistance of such loads. A comparative analysis of the relevance and range of applicability of parametric and non-linear models of equivalent electric resistance plasma-erosive loads is given. It is shown that consideration of multimodal pulse currents is only possible with the use of parametric and stochastic-parametric models of plasma-erosive load resistance. It is shown that the use of parametric models of such loads is more appropriate at higher values of time constant of the transient or the period of free oscillation of circuits with them and their minimal

modifications. References 30, figures 5.

Key words: plasma-erosive load, discharge current, parametric model, non-linear model, the adequacy.

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