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simulation and design of the multi-channel isolated charging for solid-state MARX generators

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In recent years, High pulsed power technology has been widely used in industry. In this field, MARX generators based on solid-state devices plays a most significant role during the process of energy charge and storage. This circuit structure has solved many technical problems and improves the level of pulsed power technology. With the development of the solid-state Marx generators, MARX generators derive many different types of structure. Each one has its unique advantages, but the charging mode is a general problem. In this paper, one of charging methods–the multi-channel isolated charging mode has been described. Its advantage lies in its transient Voltage balance performance such as reliability and stability. For this purpose, many simulations and analysis have been finished.

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