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600 kV BIPOLAR OUTPUT TESLA-BLUMLEIN GENERATOR WITH FREQUENCY BANDWIDTH >1 GHz

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The paper describes the development of a repetitive 10 GW, Tesla-driven Blumlein pulsed power generator that produces a bipolar voltage output in excess of 600 kV peak-to-peak, with an initial rise time of about 300 ps and a frequency bandwidth larger than 1 GHz. The design of the system required PSpice simulations to be combined with three-dimensional analysis using the Computer Simulation Technology (CST) electromagnetic microwave studio software. Technical details, together with experimental results will be provided.

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