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Improving low power (30W to 250W average) pulsed power performance and reliability by improving High Voltage power quality

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Introduction:
When researching improvements to low power (30W to 250W average) pulsed power systems knowledge of High Voltage power quality terms, specifications, and key performance factors can be essential to selecting or improving the best available technology or for working with suppliers on specific needs. Examples of key High Voltage Power Supply elements resulting in performance & reliability gains are outlined. This material can enable system researchers & designers to identify key observations, facilitate change, and ultimately deliver better performance, accuracy, and repeatability.
Methods:
Test stand configuration diagram along with unique test fixture requirements will be outlined. Commercial High Voltage and Low voltage test equipment used for control & measurement will be listed with accuracy data. Overall accuracy and repeatability of HV measurement will be established with data & graphs. High Voltage devices evaluated for performance will be identified.
Preliminary Data (Abstract):
High Voltage power source quality terms will be defined. Data presented for High Voltage charge rates, overshoot, settling, stability (drift over time, temperature, pulse-to-pulse), and response time measurements (Tables & Graphs) from example high power density / high voltage density modular High Voltage devices. Key observations will be outlined with conclusions and will illustrate key parameters of High Voltage power quality.
Novel Aspect:
High Voltage power quality specifications, device selection, and performance verification can directly improve pulse power system performance & reliability.

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