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Ultrafast Switching Utilizing an IVA Topology for Chopper Applications

Sunday 10 August 2025 15:00 (3 hours)

Recent trends in power electronics indicate increasing demand for fast response switching networks with sub nanosecond switching speed at a variety of voltages. Gate driving networks meet the desired switching speeds using COTS (Commercial Off-The Shelf) parts. This work describes an IVA (Inductive Voltage Adder) system capable of switching in the single digits of ns with a projected voltage output of 2 kV, using a gate driving topology to drive GaN (Gallium Nitride) HEMTs (High Electron Mobility Transistor). These rapid switching systems are proposed to be used in the LAMP (LANSCE Accelerator Modernization Project) chopper to effectively produce clean beam to select target stations, producing the needed output.

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No

Would you like to submit this poster in student poster session on Sunday (August 10th)

Yes

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

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