

HIGH POWER MODULATOR FOR KLYSTRON OF PROTON ACCELERATOR

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Abstract

KAPRA is under the processing of 700MHz 1MW Klystron development project for PEPF. We have already developed a modulator of high voltage power source to conduct a basic performance test of klystron. This power source of -95kV and 16.5A for 2ms pulses is designed to meet the drop within about 5%. The system is composed of the DC electric charging power supply, the high energy capacitor, the pulse switching unit, the cathode heating transformer, the discharging unit and the pulse controller. Recently, both the high voltage conditioning test and the cathode heating experiment for the klystron have been completed successfully. The beam conditioning and the RF conditioning was performed at -95kV and the peak current generated was measured to be 16A.

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