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(54) **VOLTAGE REGULATOR CIRCUITS,  
RADIATION DEVICES AND RADIATION  
SYSTEMS INCLUDING THE SAME**

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(57) **ABSTRACT**

A radiation system includes a modulator and at least one voltage regulator. The modulator is configured to output a voltage for operation of a magnetron and an electron gun of the radiation system. The at least one voltage regulator circuit is electrically connected between the modulator and at least one of the magnetron or the electron gun, and configured to control a magnitude of the voltage output from the modulator for operation of the magnetron and the electron gun.

