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## (54) HIGH VOLTAGE GENERATOR AND CONTROL METHODS THEREOF

(71) Applicants: SHANGHAI UNITED IMAGING
HEALTHCARE CO., LTD., Shanghai
(CN); SHANGHAI ADVANCED
RESEARCH INSTITUTE, CHINESE
ACADEMY OF SCIENCES, Shanghai
(CN)

(72) Inventors: Guoping ZHU, Shanghai (CN); Xu CHU, Shanghai (CN)

(73) Assignees: SHANGHAI UNITED IMAGING
HEALTHCARE CO., LTD., Shanghai
(CN); SHANGHAI ADVANCED
RESEARCH INSTITUTE, CHINESE
ACADEMY OF SCIENCES, Shanghai
(CN)

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#### (57) ABSTRACT

A high voltage generator is provided. The high voltage generator includes an inverter bridge including a first bridge leg and a second bridge leg, a first resonant branch coupled in series to the first bridge leg, a transformer coupled in series between the first resonant branch and the second bridge leg, a second resonant branch coupled in series with the transformer, and a rectifier circuit coupled with the transformer for providing an output voltage to an X-ray source.

