

ULTRA-COMPACT X-RAY SOURCE FOR HANDHELD AND PORTABLE XRF APPLICATIONS

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Moxtek is the manufacturer of miniature x-ray sources, used largely in portable x-ray applications such as handheld XRF. Both the X-ray tube and a high voltage power supply (HVPS) need to be small and low power consumption for successful use in portable x-ray applications. Moxtek HV power supplies are now smaller and more versatile, as compared to our present monoblock x-ray sources. The HVPS is also modular, with the high voltage section constrained to size of a 2.5x2.5x8.9cm (1"x1"x3.5"), with stable 50kV capability. Additional features include a number of acceptable inputs and outputs for control. Full characterization data for this new HV power supply, coupled with Moxtek's MAGNUM® x-ray tube will be presented, including turn on speed, power consumption, power efficiency, x-ray flux stability, and high voltage stability.