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### **Surface Mounted Neutron Generators**

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A deuterium-tritium (DT) base reaction pulsed neutron generator packaged in a flat computer chip shape of 1.54 cm (0.600 in) wide by 3.175 cm (1.25 in) length and 0.3 cm (0.120 in) thick has been successfully demonstrated to produce 14 MeV neutrons at a rate of  $10^9$  neutrons per second. The neutron generator is based on a deuterium ion beam accelerated to impact a tritium loaded target. The accelerating voltage is in the 15 to 20 kV in a 3 mm (0.120 in) gap, the ion beam is shaped by using a lens design to produce a flat ion beam that conforms to the flat rectangular target. The ion source is a simple surface mounted deuterium filled titanium film with a fused gap that operates at a current-voltage design to release the deuterium during a pulse length of about 1  $\mu$ s. We present the general description of the working prototypes, which we have labeled the "NEUTRISTOR."

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