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(54) Title: PROJECTED MEMORY DEVICE WITH CARBON-BASED PROJECTION COMPONENT

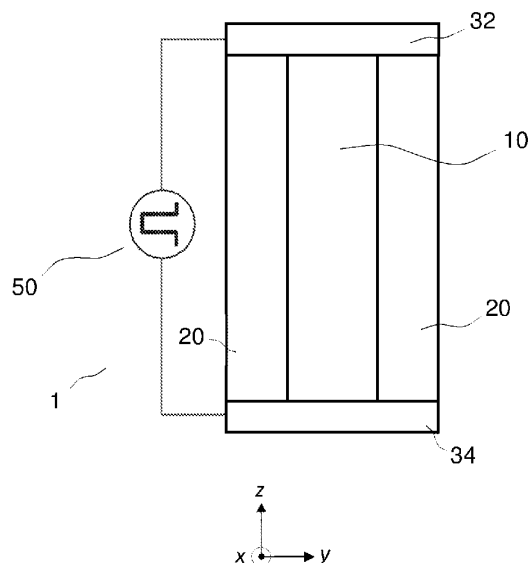


FIG. 1A

(57) Abstract: A projected memory device (1) includes a carbon-based projection component (20). The device (1) includes two elec-
trodes (32, 34), a memory segment (10), and a projection component (20). The projection component (20) and the memory segment (10)
form a dual element that connects the two electrodes (32, 34). The projection component (20) extends parallel to and in contact with the
memory segment (10). The memory segment (10) includes a resistive memory material, while the projection component (20) includes
a thin film of non-insulating material that essentially comprises carbon. In a particular implementation, the non-insulating material and
the projection component (20) essentially comprise amorphous carbon. Using carbon and, in particular, amorphous carbon, as a main
component of the projection component (20), allows unprecedented flexibility to be achieved when tuning the electrical resistance of
the projection component (20).

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