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## PRAM Switching Device By Using Current Pulse Modulation

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PRAM switching device by using current pulse modulation was investigated to verify its possibility for 3D architecture. In this work, two phase change materials connected in series having a different crystallization temperature are used. Its structural for different phase change material was evaluated by electrical resistance. We confirmed that Germanium-Antimony-Tellurium (GST) alloy and Germanium-Copper-Tellurium (GCT) alloy material were selected according to crystallization temperature,  $\sim 180^{\circ}\text{C}$  for switching and  $\sim 240^{\circ}\text{C}$  for memory devices, respectively. From this research, it is expected that phase change switching device could have advantages of process in terms of material similarity and structural simplification.

**Keywords:** PRAM, Switching device