Abstract

There are many materials having non-volatile resistance change has been studied as potential candidates for next generation of non-volatile memory devices, in this device, information is stored as a change in resistance due to the formation of the metallic filament via the reduction of metal ions in the solid electrolyte. Key attributes are low voltage, low current, rapid write and erase, good retention and endurance, and the ability for the storage cells to be physically scaled to a few nm. This paper presents experimental I-V characteristics and switching time results for solid state devices based on silver sulfide (Ag2S) as new generation of non-volatile memory.

References

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Index Terms

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