

CURRENT FORMING OF RESISTIVE RANDOM ACCESS MEMORY (RRAM) CELL FILAMENT

ABSTRACT OF THE DISCLOSURE

A memory device includes a metal oxide material disposed between and in electrical contact with first and second conductive electrodes, and an electrical current source configured to apply one or more electrical current pulses through the metal oxide material. For each of the one or more electrical current pulses, an amplitude of the electrical current increases over time during the electrical current pulse to form a conductive filament in metal oxide material.

Figure 3