

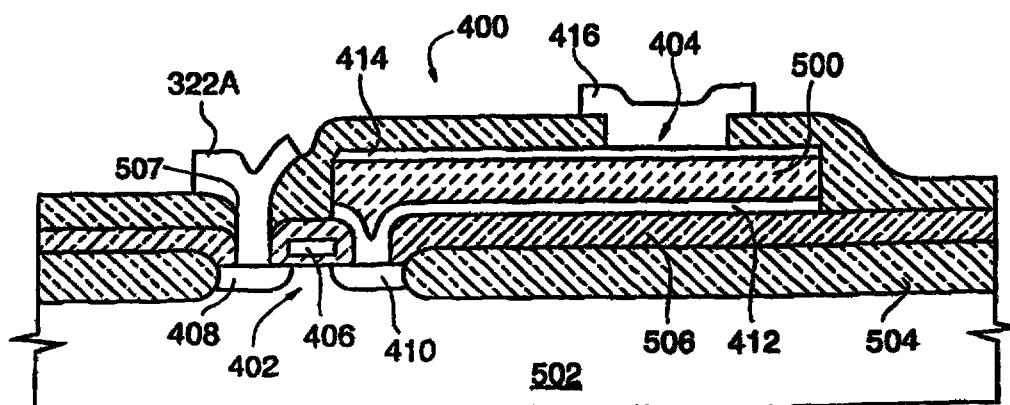


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(54) Title: STRONTIUM BISMUTH NIOBATE TANTALATE FERROELECTRIC THIN FILM**(57) Abstract**

A thin film ferroelectric material (500) for use in integrated memory circuits (300, 400), such as FERAMS (300) and the like, contains strontium bismuth niobium tantalate having an empirical formula $\text{SrBi}_{2+E}(\text{Nb}_X\text{Ta}_{2-X})\text{O}_{9+3E/2}$, wherein E is a number representing an excess amount of bismuth ranging from zero to 2; and X is a number representing an excess amount of niobium ranging from 0.01 to 0.9. A method of operating a ferroelectric memory cell (400) including providing such a material having the foregoing formula in a first polarization state, subjecting the thin film ferroelectric material in the first polarization state to a plurality of unidirectional voltage pulses; and thereafter switching the ferroelectric material to a second polarization state essentially free of imprint from the plurality of unidirectional voltage pulses.