

ABSTRACT

A semiconductor memory device includes a substrate; a plurality of semiconductor patterns on the substrate and spaced apart from each other in a first direction perpendicular to an upper surface of the substrate; a plurality of interlayer insulating patterns between adjacent semiconductor patterns in the first direction; and data storage devices on the plurality of semiconductor patterns, wherein the plurality of semiconductor patterns include at least one dummy pattern and a plurality of channel patterns, and the at least one dummy pattern includes a first element with a smaller atomic size than silicon.

FIG. 4