

NEW CONTACT SHAPE FOR GIGA SCALE BORDERLESS CONTACTS AND METHOD FOR MAKING THE SAME

ABSTRACT

A borderless contact (11) for giga-scale groundrule is widened perpendicular to the wordline (14) direction (parallel to the MO metal line) resulting in improvements in all process steps. This is accomplished by making an otherwise square borderless contact (10) structure into a rectangular structure (11). Process misalignments are mitigated, and contact resistance is lowered and kept uniform. The maximum allowable contact area (12) is available even under misalignment configurations.

FIG. 1B