

AN E-BEAM INSPECTION STRUCTURE FOR LEAKAGE ANALYSIS

ABSTRACT

A testing structure, and method of using the testing structure, where the testing structure comprised of at least one of eight test structures that exhibits a discernable defect characteristic upon voltage contrast scanning when it has at least one predetermined structural defect. The eight test structures being: 1) having an Active Area (AA) / P-N junction leakage; 2) having an isolation region to ground; 3) having an AA / P-N junction and isolation region; 4) having a gate dielectric leakage and gate to isolation region to ground; 5) having a gate dielectric leakage through AA / P-N junction to ground leakage; 6) having a gate dielectric to ground and gate / one side isolation region leakage to ground; 7) having an oversized gate dielectric through AA / P-N junction to ground leakage; and 8) having an AA / P-N junction leakage gate dielectric leakage.

Figure 2A

Figure 2B