

Method to monitor critical dimension of IC interconnect

Abstract

An example method of monitoring and measuring the line width of interconnects comprising the following steps. First, we measure an I-V profile of a sample interconnect structure to obtain a sample I-V profile. The I-V profile is comprised of leakage current measurements at two or more voltages. The sample interconnect structure is comprised of spaced lines having a line spacing. Next we compare the sample I-V profile with a reference I-V profile at a reference line spacing to determine if sample interconnect structure is not defective. If the sample I-V profile is similar to the reference I-V profile, then leakage currents for the sample interconnect structure are derived from the I-V profiles at a selected voltages. Then we calculate the line spacing of the sample interconnect structure using the sample I-V profile.

Figure 9