ABSTRACT OF THE DISCLOSURE

INTEGRATED CIRCUIT METALLIZATION USING A TITANIUM/ALUMINUM ALLOY

An integrated circuit metallization structure (30) using a titanium/aluminum alloy, and a method to generate such a structure, provide reduced leakage current by allowing mobile impurities such as water, oxygen, and hydrogen to passivate structural defects in the silicon layer of the IC. A titanium layer (32) of the structure is at least partially alloyed with an aluminum layer (34), thereby restricting the ability of the titanium to getter the mobile impurities within the various layers of the IC. Despite the alloying of the titanium and aluminum, the metallization structure (30) exhibits the superior contact resistance and electromigration properties associated with titanium.

Figure 3