Upon the formation of a film on a semiconductor substrate by spin coating method, a polyimide precursor solution as a film forming solution is supplied dropwise onto the semiconductor substrate, and then the semiconductor substrate is started to be rotated at a low revolving speed of 1,000 rpm while pure water as an adhesion protecting liquid is injected upon the backside of the semiconductor substrate. By this operation, the polyimide precursor solution is spread out over the above surface of the semiconductor substrate by the rotation thereof. On the other hand, pure water is injected on the backside of the substrate before the dropped solution reaches the periphery of the substrate. As a result, the polyimide precursor liquid is prevented from going around to the backside of the substrate by the injection of pure water, thus protecting the adhesion of the polyimide precursor solution onto the backside of the substrate.

10 Claims, 4 Drawing Sheets