

SEMICONDUCTOR CHIP PRODUCTION METHOD AND SURFACE PROTECTION TAPE

ABSTRACT

After grinding is performed on a semiconductor wafer, the semiconductor wafer is fixed on the electrostatic chuck so as to cause the front surface side of the semiconductor wafer to face the electrostatic chuck. Next, a masking material layer is formed on the rear surface of the ground semiconductor wafer in a state where a surface protection tape is bonded thereto. Then, a masking tape is cut by irradiating, from the rear surface side, portions thereof corresponding to a plurality of streets appropriately formed in a grid shape in a pattern surface with a laser beam so as to form openings for the streets in the semiconductor wafer. Then, SF_6 plasma irradiation is performed from the rear surface side so as to etch the semiconductor wafer that has been exposed in the street portions. Finally, ashing is performed using O_2 plasma.

Fig. 5A