TRENCH SCRIBE LINE FOR DECREASED CHIP SPACING

ABSTRACT OF THE DISCLOSURE

A method of scribing and separating chips on a semiconductor wafer (21) wherein the wafer (21) is patterned and a pattern of intersecting grooves is etched on a selected surface of the semiconductor wafer (21) in a pattern, preferably in a grid pattern, to define chip areas on that surface. Trenches (27) are then formed in the shape of the pattern and the selected surface is adhered to a tape (29). Light is then passed through the tape (29) and semiconductor wafer (21) from the pattern and a pattern of intersecting saw cuts or grooves (28) aligned with the light passing through the wafer (21) is formed. The saw cuts (28) extend from a surface of the wafer (21) opposing the selected surface and are aligned with the pattern of intersecting trenches (27).

Figure 4