

## **AN IMPROVED EJECTOR NEEDLE**

### **ABSTRACT**

The present invention relates to an improved ejector needle, which has use in the fabrication of semiconductor chips or dies. The ejector needle has specific physical properties, which eliminates or reduces damage to valuable microelectronic components used during the assembly of semiconductor chips. The ejector needle of the invention is reported to be able to release a die from its adhesive foil or tape without cracking of the die and without damage to the die back. These faults are common to the industry and result in substantial production losses. In one preferred option the ejector needle is fabricated from a thermoplastic material having a hardness of M78-M80, a needle tip radius of from 100-250 mm and a needle tip angle of about 15°.

FIGURE 5