

DAMBARLESS LEADFRAME FOR MOLDED COMPONENT ENCAPSULATION

ABSTRACT

A method and apparatus for encapsulating an integrated circuit die and leadframe assembly using dambarless leadframes. Dambarless leadframe 191 is formed having leads 193 that are widened in the region near the package edge such that the interlead spacing between adjacent leads is less than a predetermined minimum distance. Lower and upper mold release films 67 and 65 are stretched over a plurality of die cavities formed in bottom and top mold chases 179 and 173. The release films can be further stretched into the die cavities by a vacuum. Leadframe strip assemblies containing the dambarless leadframes, each holding integrated circuit dies 189 are placed such that the integrated circuit dies are each centered over a bottom mold die cavity 63 and over the bottom mold release films 65. When the top and bottom mold chases are superimposed, the mold release films 67 and 65 are clamped together, and an interface is formed at the edges of the top and bottom mold cavities and between the leads of the dambarless leadframe. The mold compound is forced into the cavities by pressure. The interface between the top and bottom release films prevents the mold compound from forming mold flash between the leads of the dambarless leadframe. The dambarless leadframe includes a specific support tape 197 for the internal leads and a specialized open gate design.