ABSTRACT

BALL GRID ARRAY INTERPOSER, PACKAGES AND METHODS

A semiconductor device package interposer including a receptacle extending substantially therethrough. Methods for assembling the interposer with one or more semiconductor devices are also disclosed. A film may be secured to a bottom surface of the interposer so as to at least partially cover a bottom end of the receptacle. One or more semiconductor devices are positioned within the receptacle, on the film. Each semiconductor device within the receptacle may then be electrically connected to the interposer. An encapsulant material, which is introduced into the receptacle, extends at least between portions of the outer periphery of each semiconductor device within the receptacle and a peripheral edge of the receptacle. Upon curing, setting, or hardening, the encapsulant material retains each semiconductor device within the receptacle and maintains a lateral position of each semiconductor device with respect to the interposer. Semiconductor device packages and multi-chip modules are also disclosed.
[Figure 2]