

Abstract

A semiconductor device has a semiconductor die and an encapsulant deposited over the semiconductor die. An interconnect structure is formed over the semiconductor die and encapsulant. A first under-bump metallization (UBM) pad is formed over the interconnect structure. The first UBM pad is non-circular. A stencil is disposed over the first UBM pad. The stencil includes a first opening over the first UBM pad with a footprint of the first opening larger than a footprint of the first UBM pad. A solder paste is deposited in the first opening. The solder paste is reflowed to form a solder bump on the UBM pad.

(Fig. 5a)