Abstract

SEMICONDUCTOR DEVICE AND METHOD OF FORMING INSULATING LAYER AROUND SEMICONDUCTOR DIE

A plurality of semiconductor die is mounted to a temporary carrier. An encapsulant is deposited over the semiconductor die and carrier. A portion of the encapsulant is designated as a saw street between the die, and a portion of the encapsulant is designated as a substrate edge around a perimeter of the encapsulant. The carrier is removed. A first insulating layer is formed over the die, saw street, and substrate edge. A first conductive layer is formed over the first insulating layer. A second insulating layer is formed over the first conductive layer and first insulating layer. The encapsulant is singulated through the first insulating layer and saw street to separate the semiconductor die. A channel or net pattern can be formed in the first insulating layer on opposing sides of the saw street, or the first insulating layer covers the entire saw street and molding area around the semiconductor die. (Fig.5)