Claims

What is claimed:

1. A semiconductor device, comprising:

a semiconductor wafer including a plurality of semiconductor die;

a first contact pad ~~conductive layer~~ formed on a surface of ~~over~~ the semiconductor die;

an insulating layer formed over the semiconductor die and first ~~conductive layer~~ contact pad;

a passivation layer formed over the insulating layer and first ~~conductive layer~~ contact pad; and

a conductive via formed through the passivation layer and extending to the first ~~conductive layer~~ contact pad.

2. The semiconductor device of claim 1, further including an interconnect structure formed over the passivation layer.

3. The semiconductor device of claim 1, further including an opening formed in the insulating layer.

4. The semiconductor device of claim 3, wherein a width of the opening is greater than a width of the conductive via.

5. The semiconductor device of claim 3, wherein the passivation layer extends through the opening and to the first ~~conductive layer~~ contact pad.

6. The semiconductor device of claim 1, further including a ~~second~~ conductive layer disposed between the passivation layer

and insulating layer.

7. A semiconductor device, comprising:

a semiconductor die;

a first conductive layer formed ~~over~~ on the semiconductor die;

a first insulating layer formed over the semiconductor die and first conductive layer;

a second insulating layer formed over the first insulating layer and first conductive layer; and

a via formed through the second insulating layer and extending to the first conductive layer.

8. The semiconductor device of claim 7, further including an interconnect structure formed over the second insulating layer.

9. The semiconductor device of claim 7, further including an opening formed in the first insulating layer.

10. The semiconductor device of claim 9, wherein a width of the opening is greater than a width of the via.

11. The semiconductor device of claim 9, wherein the second insulating layer extends through the opening and to the first conductive layer.

12. The semiconductor device of claim 7, further including a second conductive layer disposed between the first insulating layer and second insulating layer.

13. The semiconductor device of claim 7, further including a second conductive layer formed in the via.

14. A semiconductor device, comprising:

a first conductive layer ~~substrate~~;

a first insulating layer formed over the first conductive layer ~~substrate~~;

a second insulating layer formed over the first insulating layer ~~and substrate~~; and

a via formed through the second insulating layer exposing ~~and extending to~~ the first conductive layer ~~substrate~~.

15. The semiconductor device of claim 14, further including an interconnect structure formed over the second insulating layer.

16. The semiconductor device of claim 14, further including an opening formed in the first insulating layer.

17. The semiconductor device of claim 16, wherein a width of the opening is greater than a width of the via.

18. The semiconductor device of claim 14, further including a second conductive layer disposed in ~~formed over~~ the ~~substrate~~via.

19. The semiconductor device of claim 1~~4~~8, further including a third conductive layer formed over ~~in~~ the ~~via~~second conductive layer.

20. A semiconductor device, comprising:

a conductive layer;

a first insulating layer formed over a surface of the conductive layer;

a second insulating layer formed over the first insulating layer and conductive layer; and

a via extending through the second insulating layer to the surface of the conductive layer.

21. The semiconductor device of claim 20, further including an interconnect structure formed over the second insulating layer.

22. The semiconductor device of claim 20, further including an opening formed in the first insulating layer.

23. The semiconductor device of claim 22, wherein a width of the opening is greater than a width of the via.

24. The semiconductor device of claim 22, wherein the second insulating layer extends through the opening and to the conductive layer.

25. The semiconductor device of claim 20, further including a substrate disposed over the conductive layer and the first insulating layer.