What is claimed is:

1. A method of manufacture of an integrated circuit packaging system comprising:

forming a lead having a horizontal ridge at a lead top side;

forming a conductive layer directly on a lead bottom side of the lead;

forming a connection layer having a conductive trace, an inner pad, and an outer pad directly on the lead top side, the inner pad having an inner pad bottom surface, the conductive trace attached to and integral with the inner pad and the outer pad;

mounting an integrated circuit over the inner pad; then

applying a molding compound, having a molding bottom surface, over the integrated circuit, the inner pad, and the outer pad; and then

applying a dielectric directly on the molding bottom surface and the inner pad bottom surface, the dielectric having a dielectric bottom side above the conductive layer.

2. The method as claimed in claim 1 wherein forming the connection layer includes forming the connection layer having a conductive trace directly on the horizontal ridge.

~~3. The method as claimed in claim 1 wherein forming the connection layer includes forming the connection layer having a conductive trace attached to the inner pad and the outer pad.~~

~~4. The method as claimed in claim 1 further comprising forming a conductive layer directly on a lead bottom side of the lead.~~

~~5.~~3. The method as claimed in claim 1 further comprising mounting a stack integrated circuit over the integrated circuit.

~~6.~~4. A method of manufacture of an integrated circuit packaging system comprising:

forming a lead having a horizontal ridge at a lead top side;

forming a conductive layer directly on a lead bottom side of the lead;

forming a connection layer having a conductive trace, an inner pad, and an outer pad directly on the lead top side, the inner pad having an inner pad bottom surface, the conductive trace attached to and integral with the inner pad and the outer pad;

mounting an integrated circuit over the inner pad; then

attaching an internal connector to the integrated circuit and the inner pad; then

applying a molding compound, having a molding bottom surface, over the integrated circuit, the inner pad, and the outer pad; and then

applying a dielectric directly on the molding bottom surface and the inner pad bottom surface, the dielectric having a dielectric bottom side above the conductive layer.

~~7.~~5. The method as claimed in claim ~~6~~4 wherein forming the connection layer includes forming the connection layer having a conductive trace directly on the horizontal ridge and the dielectric.

~~8. The method as claimed in claim 6 wherein forming the connection layer includes forming the connection layer having a conductive trace attached to and integral with the inner pad and the outer pad.~~

~~9. The method as claimed in claim 6 further comprising:~~

~~forming a conductive layer directly on a lead bottom side of the lead; and~~

~~wherein:~~

~~applying the dielectric includes applying the dielectric having a dielectric bottom side above the conductive layer.~~

~~10.~~ 6.The method as claimed in claim ~~6~~4 further comprising:

mounting a stack integrated circuit over the integrated circuit; and

attaching a stack internal connector to the stack integrated circuit and the outer pad.

~~11.~~ 7.An integrated circuit packaging system comprising:

a lead having a horizontal ridge at a lead top side;

a conductive layer directly on a lead bottom side of the lead;

a connection layer having a conductive trace, an inner pad, and an outer pad directly on the lead top side, the inner pad having an inner pad bottom surface, the conductive trace attached to and integral with the inner pad and the outer pad;

an integrated circuit over the inner pad;

an internal connector attached to the integrated circuit and the inner pad;

a molding compound, having a molding bottom surface, over the integrated circuit, the inner pad, and the outer pad; and

a dielectric directly on the molding bottom surface and the inner pad bottom surface, the dielectric having a dielectric bottom side above the conductive layer.

~~12.~~ 8.The system as claimed in claim ~~11~~7 wherein the connection layer includes a conductive trace directly on the horizontal ridge.

~~13. The system as claimed in claim 11 wherein the connection layer includes a conductive trace attached to the inner pad and the outer pad.~~

~~14. The system as claimed in claim 11 further comprising a conductive layer directly on a lead bottom side of the lead.~~

~~15.~~ 9.The system as claimed in claim ~~11~~7 further comprising a stack integrated circuit over the integrated circuit.

~~16. The system as claimed in claim 11 further comprising an internal connector attached to the integrated circuit and the inner pad.~~

~~17.~~ 10.The system as claimed in claim ~~16~~7 wherein the connection layer includes a conductive trace directly on the horizontal ridge and the dielectric.

~~18. The system as claimed in claim 16 wherein the connection layer includes a conductive trace attached to and integral with the inner pad and the outer pad.~~

~~19. The system as claimed in claim 16 further comprising:~~

~~a conductive layer directly on a lead bottom side of the lead; and~~

~~wherein:~~

~~the dielectric includes a dielectric bottom side above the conductive layer.~~

~~20.~~ 11.The system as claimed in claim ~~16~~7 further comprising:

a stack integrated circuit over the integrated circuit; and

a stack internal connector attached to the stack integrated circuit and the outer pad.