the method and to the apparatus of the present invention in accordance with the context in which the term is used. The term "processing" as used herein includes stamping, forging, patterning, exposure, development, etching, cleaning, and/or removal of the material or laser trimming as required in forming a described structure.

Referring now to FIG. 1, therein is shown a first cross-sectional view of an integrated circuit package system 100 for electromagnet isolation, in an embodiment of the present invention. The first cross-sectional view of the integrated circuit package system 100 depicts a lead frame 102 having a leadfinger 104 and a die attach pad 106. An integrated circuit 108 may be mechanically coupled to the die attach pad 106 by an adhesive 110, such as a die attach material.

Electrical interconnects 112, such as bond wires, may electrically connect the leadfinger, 104, the die attach pad 106, the integrated circuit 108, or a combination thereof. An insulating compound 114, such as an epoxy molding compound, may be formed around the lead frame 102, the integrated circuit 108 and the electrical interconnects 112. An insulation step 116 may be formed over and directly on an end 122 of the leads 104 of the lead frame 102 for isolating a signal from the integrated circuit 108. A selectively exposed lead 105 that does not have the insulation step 116 covering the leadfinger 104 may be formed by blocking the insulating compound 114.

A conductive shielding layer 118, such as a conductive resin, a metal, a conductive foil, or a conductive film, may be coated on the insulating compound 114. The conductive shielding layer 118 may be formed of a two component epoxy containing silver, copper, nickel, an alloy, or other metal. The conductive shielding layer 118 may also be formed of a nickel filled polyurethane or acrylic coating. The insulation step 116 may prevent the conductive shielding layer 118 from forming an electrical connection among the leads 104. The conductive shielding layer 118 may form an electrical connection to the selectively exposed lead 105, that do not have the insulation step 116 covering the leadfinger 104, for coupling a voltage, such as VSS or Ground, to the conductive shielding layer 118.

The conductive shielding layer 118 may be applied by known methods, such as plating, sputtering, spraying, painting, rolling, or laminating. The conductive shielding layer 118 may be applied over all of the surfaces of the insulating compound 114, including a lateral side 120, and any of the leads 104 that may remain exposed.

It has been discovered that, by selectively exposing certain of the leads 104 during the forming of the insulating compound 114, the conductive shielding layer 118 will electrically connect to only those of the leads 104 that are left exposed. This may greatly

What is claimed is:

1. A method for manufacturing an integrated circuit package system comprising:

~~providing a lead frame;~~

~~forming an integrated circuit package including the lead frame;~~

connecting an integrated circuit to a leadfinger;

forming an insulating compound having an insulation step directly on the leadfinger and the integrated circuit;

providing a selectively exposed area exposed by the insulating compound~~on the lead frame~~; and

coating a conductive shielding layer on the insulating compound with the insulation step between the conductive shielding layer and an end of the leadfinger with the conductive shielding layer electrically connected to ~~integrated circuit package for coupling~~ the selectively exposed area.

2. The method as claimed in claim 1 wherein forming the insulating compound ~~integrated circuit package~~ includes:

~~providing a leadfinger in the lead frame; and~~

forming the~~an~~ insulation step on the end of the leadfinger for insulating the leadfinger from the conductive shielding layer.

3. The method as claimed in claim 1 further comprising providing ~~wherein providing the lead frame includes forming~~ a die attach pad coupled to the integrated circuit ~~on the lead frame~~ for providing the selectively exposed area.

4. The method as claimed in claim 1 further comprising providing ~~in which forming the integrated circuit package includes molding an insulating compound on the lead frame having~~ an inverted die attach pad exposed from the insulating compound and coupled to the conductive shielding layer ~~pad~~.

5. The method as claimed in claim 1 wherein providing the selectively exposed area includes providing a selectively exposed lead, a stepped lead, a conductive bead, an inverted die attach pad, a tie bar selectively exposed, or a combination thereof.

6. A method for manufacturing an integrated circuit package system comprising:

~~providing a lead frame having a leadfinger;~~

~~forming an integrated circuit package including the lead frame by molding an insulating compound;~~

connecting an integrated circuit to a leadfinger;

forming an insulating compound having an insulation step directly on the leadfinger and the integrated circuit;

providing a selectively exposed area exposed by the insulating compound; ~~on the leadfinger by blocking a selectively exposed lead from the insulating compound;~~

coating a conductive shielding layer on the insulating compound with the insulation step between the conductive shielding layer and an end of the leadfinger with the conductive shielding layer electrically connected to ~~integrated circuit package for coupling~~ the selectively exposed area; ~~including electrically coupling the selectively exposed lead;~~ and

providing a selectively exposed lead exposed by the insulating compound and electrically connected to the conductive shielding layer.

~~singulating an integrated circuit package system from the lead frame.~~

7. The method as claimed in claim 6 wherein forming the ~~integrated circuit package~~ insulating compound includes:

~~coupling an integrated circuit to the leadfinger; and~~

forming ~~an~~the insulation step directly on the end of the leadfinger for insulating the leadfinger from the conductive shielding layer including isolating a signal lead from the conductive shielding layer.

8. The method as claimed in claim 6 further comprising providing ~~wherein providing the lead frame includes forming~~ a die attach pad ~~on the lead frame~~ for providing the selectively exposed area including extending a tie bar from the die attach pad.

9. The method as claimed in claim 6 further comprising providing ~~in which forming the integrated circuit package includes molding the insulating compound on the lead frame having~~ an inverted die attach pad for connecting ~~including bonding~~ an electrical interconnect between the inverted die attach pad~~,~~ and a leadfinger, an integrated circuit, or a combination thereof.

10. An integrated circuit package system comprising:

~~a leadfinger singulated from a lead frame;~~

an integrated circuit ~~package includes the leadfinger~~;

a leadfinger electrically connected to the integrated circuit;

an insulating compound having an insulation step directly on the leadfinger, the insulating compound on the integrated circuit;

a selectively exposed area exposed by the insulating compound;~~on the leadfinger;~~ and

a conductive shielding layer on the insulating compound having the insulation step between the conductive shielding layer and an end of the leadfinger with the conductive shielding layer electrically connected~~, on the integrated circuit package, coupled~~ to the selectively exposed area.

11. The system as claimed in claim 10 wherein the insulating compound ~~integrated circuit package~~ includes ~~an~~the insulation step formed on the end of the leadfinger for insulating the leadfinger from the conductive shielding layer.

12. The system as claimed in claim 10 further comprising a die attach pad coupled to ~~in~~ the integrated circuit ~~package~~ for providing the selectively exposed area.

13. The system as claimed in claim 10 further comprising ~~in which the integrated circuit package includes an insulating compound on~~ an inverted die attach pad exposed from the insulating compound and coupled to the conductive shielding layer.~~and the leadfinger.~~

14. The system as claimed in claim 10 wherein the selectively exposed area includes a selectively exposed lead, a stepped lead, a conductive bead, an inverted die attach pad, a tie bar selectively exposed, or a combination thereof.

15. The system as claimed in claim 10 further comprising:

a selectively exposed lead exposed by the ~~formed on the integrated circuit package by~~ ~~an~~ insulating compound and electrically connected ~~blocked; and~~

~~wherein:~~

~~the selectively exposed lead coupled~~ to the conductive shielding layer.

16. The system as claimed in claim 15 wherein the insulating compound ~~integrated circuit package~~ includes:

~~an integrated circuit coupled to the leadfinger; and~~

~~an~~the insulation step directly ~~formed~~ on the end of the leadfinger to insulate the leadfinger from the conductive shielding layer for isolating a signal lead from the conductive shielding layer.

17. The system as claimed in claim 15 further comprising ~~wherein the integrated circuit package includes:~~ a die attach pad for providing the selectively exposed area including extending a tie bar from the die attach pad.

18. The system as claimed in claim 15 further comprising ~~in which the integrated circuit package includes~~ an inverted die attach pad for connecting ~~including~~ an electrical interconnect ~~bonded~~ between the inverted die attach pad and~~,~~ a leadfinger, an integrated circuit, or a combination thereof.