

CLAIMS

1. A method comprising:
 - patterning conductors on a selected layer of an organic multiple layer substrate;
 - forming a releasable layer on the selected layer between the patterned conductors;
 - forming an additional layer on the selected layer and releasable layer;
 - forming an opening through the additional layer to form a recess in the multiple layer substrate;
 - removing the releasable layer; and
 - attaching a component to substrate within the recess.
2. The method of claim 1, wherein the substrate comprises a polymer core with multiple symmetric layers formed on a top and a bottom of the core.
3. The method of claim 2, wherein forming an additional layer comprises forming multiple additional layers; and
 - wherein the forming an opening comprises forming a recess through multiple layers to the selected layer.
4. The method of claim 1, wherein the component is a capacitor.
5. The method of claim 1, wherein the component is a resistor.
6. The method of claim 1, wherein the component is an inductor.
7. The method of claim 1, wherein the opening is formed via laser scribing.
8. The method of claim 1, wherein the releasable layer is formed via a squeeze process.

9. The method of claim 1, wherein attaching a component to the substrate within the recess is performed by:
- dispensing solder paste through a nozzle onto the patterned conductors on the selected layer;
 - placing the component on the solder paste; and
 - reflowing the solder paste to solder the component to the patterned conductors.
10. A method comprising:
- patterning conductors on a selected layer of an organic multiple layer substrate;
 - forming a releasable layer on the selected layer between the patterned conductors;
 - forming an additional layer on the selected layer and releasable layer;
 - forming an opening through the additional layer to form a recess in the multiple layer substrate;
 - removing the releasable layer;
 - surface mounting a discrete component to the selected layer such that the component is recessed in the organic multiple layer substrate.
11. The method of claim 10, wherein the substrate comprises a glass reinforced resin core with multiple symmetric layers formed on a top and a bottom of the core.
12. The method of claim 11, wherein forming an additional layer comprises forming multiple additional organic layers; and
- wherein the forming an opening comprises forming a recess through multiple layers to the selected layer.
13. The method of claim 10, wherein the component is a discrete capacitor.
14. The method of claim 10, wherein the component is a discrete resistor.

15. The method of claim 10, wherein the component is an discrete inductor.
16. The method of claim 10, wherein the releasable layer is formed via a squeeze process.
17. A device comprising:
 - an organic multiple layer substrate;
 - patterned conductors disposed on a recessed layer of the organic multiple layer substrate; and
 - a discrete component coupled to the recessed layer such that the component is recessed from a top layer of the organic multiple layer substrate.
18. The device of claim 17, wherein multiple layers of the organic multiple layer substrate are symmetrically disposed about an organic core.
19. The device of claim 17, wherein the organic multiple layer substrate comprises a polymer core with multiple symmetric layers formed on a top and a bottom of the core.
20. The device of claim 19, wherein the component is recessed multiple layers.
21. The device of claim 19, wherein the component is a capacitor.
22. The device of claim 19, wherein the component is a resistor.
23. The device of claim 19, wherein the component is an inductor.

CLAIMS

1. A method comprising:
 - patterning conductors on a selected layer of an organic multiple layer substrate;
 - forming a releasable layer on the selected layer between the patterned conductors, wherein the releasable layer is approximately the same thickness as the patterned conductors;
 - forming an additional layer on the releasable layer and patterned conductors;
 - forming an opening through the additional layer to form a recess in the multiple layer substrate;
 - removing the releasable layer; and
 - attaching a component to substrate within the recess.
2. The method of claim 1, wherein the substrate comprises a polymer core with multiple symmetric layers formed on a top and a bottom of the core.
3. The method of claim 2, wherein forming an additional layer comprises forming multiple additional layers; and
 - wherein the forming an opening comprises forming a recess through multiple layers to the patterned conductors and the selected layer.
4. The method of claim 1, wherein the component is a capacitor.
5. The method of claim 1, wherein the component is a resistor.
6. The method of claim 1, wherein the component is an inductor.
7. The method of claim 1, wherein the opening is formed via laser scribing.

8. The method of claim 1, wherein the releasable layer is formed via a squeeze process.
9. The method of claim 1, wherein attaching a component to the substrate within the recess is performed by:
 - dispensing solder paste through a nozzle onto the patterned conductors on the selected layer;
 - placing the component on the solder paste; and
 - reflowing the solder paste to solder the component to the patterned conductors.
10. The method of claim 1, further comprising:
 - surface mounting a discrete component to the selected layer such that the component is recessed in the organic multiple layer substrate.
11. The method of claim 10, wherein the substrate comprises a glass reinforced resin core with multiple symmetric layers formed on a top and a bottom of the core.
12. The method of claim 11, wherein forming an additional layer comprises forming multiple additional organic layers; and
 - wherein the forming an opening comprises forming a recess through multiple layers to the patterned conductors and the selected layer.
13. The method of claim 10, wherein the component is a discrete capacitor.
14. The method of claim 10, wherein the component is a discrete resistor.
15. The method of claim 10, wherein the component is an discrete inductor.
16. The method of claim 10, wherein the releasable layer is formed via a squeeze process.