

CLAIMS

1. A method for providing improved power distribution or power dissipation to an electrical component attached to a printed circuit board (PCB), the steps comprising:
 - embedding a power modification component inside of at least one adaptor board between vias of said adaptor board;
 - connecting or attaching said adaptor board to a main circuit board;
 - locating said one or more embedded components to extend over and beyond the vias or blinds of said main circuit board so that a portion of the adaptor board containing the embedded power modification component is located beyond where the via's or blinds are located to permit that via to conduct through the opening so that said power modification component will have a closer contact point to said electrical component thereby increasing power distribution or power dissipation, respectively.
2. The method according to claim 1 wherein said power modification component is a capacitance.

3. The method according to claim 1 wherein said power modification component is a resistance.
4. The method according to claim 1 wherein said vias are vertically aligned on top of one another to provide for a finer pitch.
5. An apparatus for improved power distribution or power dissipation to an electrical component attached to a main circuit board, comprising:
 - a power modification component embedded inside of at least one adaptor board between vias of said interposer board;
 - said adaptor board being located between an electrical component and a main circuit board and said adaptor board being connected or attached to a main circuit board;
 - locating said one or more embedded components to extend over and beyond the vias or blinds of said main circuit board so that a portion of the adaptor board containing the embedded power modification component is located beyond where the vias or blinds are located to permit that via to conduct through the opening so that said power modification component will have a closer contact point to said electrical component thereby increasing power distribution or power dissipation, respectively.
6. The apparatus according to claim 5 wherein said power modification component is a capacitance.

7. The apparatus according to claim 5 wherein said power modification component is a resistance.
8. The apparatus according to claim 5 wherein instead of vias or blinds an opening exist within said adaptor board, said power modification component is a resistance and it is located and vertically aligned within said opening between the effected layers of said adaptor board, and said resistance is connected to a pad on said top surface and a pad on said bottom surface of said adaptor board
9. The apparatus according to claim 8 wherein said opening is filled with solder, copper plating or conductive epoxy.
10. The apparatus according to claim 5 wherein said blinds are vertically aligned on top of one another to provide for a finer pitch.
11. The apparatus according to claim 5 wherein said apparatus changes its pitch configuration by pitch translation.
12. The apparatus according to claim 11 wherein there is no pitch translation so that the vias of the adaptor board and the main circuit board are aligned with each other.

13. The apparatus according to claim 5 wherein said apparatus changes its pin configuration by pin map scrambling.

14. The apparatus according to claim 5 wherein a conductive elastomer provides an electrical connection between said adaptor board and said main circuit board wherein said elastomer is located on at least one surface of said main circuit board.

15. The apparatus according to claim 5 wherein a conductive elastomer provides an electrical connection between said adaptor board and said main circuit board wherein said elastomer is located on at least one surface of said adaptor board.

16. The apparatus according to claim 5 wherein a conductive elastomer provides an electrical connection between said adaptor board and said main circuit board wherein said elastomer is located on at least both surfaces of a printed circuit board disposed between said adaptor board and said main circuitboard.

17. The apparatus according to claim 5 wherein said embedded adaptor board is soldered to the main circuit board.

18. The apparatus according to claim 5 further comprising spring pins for electrically connecting said adaptor board to said main circuit board.

19. The apparatus according to claim 5 further comprising an electrical connector for providing an electrical connection between the adaptor board and the main circuit board, wherein

an interconnect medium having a conductive elastomer sheet provides an electrical connection between said adaptor board and said main circuit board and said elastomer sheet is located in between said adaptor board and said main circuit board.

20. The apparatus according to claim 5 wherein the electrical component is an IC test socket housing an IC.

21. The apparatus according to claim 5 wherein said adaptor board is a multilayer pc board.

22. The apparatus according to claim 5 wherein said adaptor board is a two sided pc board.

The invention claimed is:

1. An apparatus for improved power distribution or power dissipation to an electrical component attached to a main circuit board, comprising: one or more power modification components embedded inside of at least one adaptor board between vias of said adaptor board, said one or more power modification components having terminals in an electrical contact with a pad of said adaptor board, said pad having defined isotropic conductive elastomer thereon so that electricity conducts through said one or more power modification components to place said one or more power modification components close to said electrical component to reduce an electrical length between the one or more power modification components and said electrical component thereby reducing inductance said pad defined isotropic conductive elastomer is with a compression stop; said adaptor board being sandwiched between said electrical component and the main circuit board and said adaptor board being connected or attached to the main circuit board; said one or more embedded components being located so as to extend over and beyond the vias or blind vias of said main circuit board so that a portion of the adaptor board containing the embedded power modification component is located beyond where vias or blind vias of the main circuit board are located to permit that via of the main circuit board to conduct through the opening so that said power modification component is at a closer contact point to said electrical component thereby increasing power distribution or power dissipation, respectively.
2. The apparatus according to claim 1 wherein said power modification component is a capacitor.

3. The apparatus according to claim 1 wherein said power modification is a resistor.
4. The apparatus according to claim 1 wherein said pad defined elastomer provides an electrical connection between said adaptor board and said main circuit board.
5. The apparatus according to claim 1 wherein said pad defined elastomer provides an electrical connection between said adaptor board and said main circuit board wherein said pad defined elastomer is located on at least one surface of said adaptor board.
6. The apparatus according to claim 1 wherein pad defined elastomer provides an electrical connection between said adaptor board and said main circuit board.
7. The apparatus according to claim 1 wherein said adaptor board is a multilayer board.
8. The apparatus according to claim 1 wherein said adaptor board is a two sided pc board.