CLAIMS

1. A method for fabricating a sensor system, comprising:

etching into a surface of a component of a sensor structure, the sensor structure having a first surface, in order to form a second surface of the sensor structure and one or more support members disposed on the second surface; the second surface being disposed away from the first surface; the second surface also being disposed away from a package surface and located between the first surface and the package surface; the one or more support members being configured to reduce stress produced by package-sensor interaction;

wherein a first support member from the one or more support members surrounds a central region of the second surface; and a second support member surrounds the first support member.

2. The method of claim 1 wherein the one or more support members is configured such that, in the sensor system, each support member from the one or more support members extends from the second surface to the package surface.

3. The method of claim 1 wherein the component is a silicon component.

4. The method of claim 1 wherein each support member from the one or more support members comprises a closed structure.

5. The method of claim 1 wherein each support member from the one or more support members comprises a hollow cylindrical structure.

6. The method of claim 5 wherein closed curves in the cylindrical structure are not circles.

7. The method of claim 6 wherein each one of the closed curves comprises a plurality of sections, each section from the plurality of sections being joined to another section from the plurality of sections at one or more points; a slope of said each section not being equal to a slope of said another section at least one of said one or more points.

8. The method of claim 1 wherein each support member from the one or more support members extends a distance away from the second surface, said distance being smaller than a distance between the second surface and the package surface.

9. The method of claim 1 further comprising:

trimming each support member such that said each support member from the one or more support members has a cross-sectional area that varies with distance away from the second surface; the cross-sectional area increasing with distance away from the second surface.

10. The method of claim 1 further comprising:

trimming each support member such that said each support member from the one or more support members has a cross-sectional area that varies with distance away from the second surface; the cross-sectional area decreasing with distance away from the second surface.

11. The method of claim 1 further comprising:

trimming each support member such that said each support member from the one or more support members comprises two subcomponents; a first subcomponent extending from the second surface to a predetermined location between the second surface and the package surface and a second subcomponent extending from said predetermined location to the package surface; a cross-sectional area of the first subcomponent being smaller than a cross-sectional area of the second subcomponent.