CLAIMS

1. A system comprising:

a sensor having a first surface and a 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;

one or more support members;

each support member from the one or more support members extending from the second surface to the package surface;

the one or more support members being disposed on and operatively connected to only a portion of the second 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 from the one or more support members surrounds the first support member.

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

3. The system of claim 2 wherein each support member from the one or more support members comprises a hollow cylindrical structure.

4. The system of claim 1 wherein each support member from the one or more support members is comprised of the same material as a section of the sensor proximate to the second surface.

5. The system of claim 1 further comprising a soft material disposed between the second surface, the package surface and the one or more support members.

6. The system of claim 1 wherein each support member from the one or more support members is comprised of the same material as the package surface.

7. The system of claim 1 wherein the one or more support members comprises:

one or more first support members extending away from the second surface; and

one or more second support members extending from the package surface to the second surface;

the one or more second support members configured to receive the one or more first support members.

8. The system of claim 7 wherein each support member from the one or more first 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 system of claim 7 further comprising a soft material disposed between the second surface, the package surface and the one or more second support members.

10. The system of claim 7 further comprising a soft material disposed between the second surface, the package surface and the one or more first and one or more second support members.

11. The system of claim 1 wherein the one or more support members comprise at least two support members.

12. The system of claim 11 wherein a width of one support member is smaller than a width of other support members.

13. The system of claim 11 wherein a sealing material is applied between the package surface and at least one support member; the sealing material being configured to provide a hermetic seal.

14. The system of claim 11 wherein at least one support member is bonded to the package surface.

15. The system of claim 1 wherein 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.

16. The system of claim 1 wherein 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.

17. The system of claim 3 wherein closed curves in the cylindrical structure are not circles.

18. The system of claim 17 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.

19. The system of claim 1 wherein 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.

20. The system of claim 1 wherein 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 larger than a cross-sectional area of the second subcomponent.