

SILICON MICROPHONE

ABSTRACT

5 A silicon microphone comprising a backplate of electrically conductive or semi-conductive material comprising a rigid aperture area and a surrounding area, a diaphragm of electrically conductive or semi-conductive material comprising a flexible member that extends over the aperture area and a surrounding area that is at least partially connected to, and insulated from , the surrounding area of the backplate, the
10 aperture area of the backplate and flexible member of the diaphragm forming two parallel plates of a capacitor spaced apart by a cavity, a bond pad formed on the surrounding area of the diaphragm, a bond pad formed on the surrounding area of the backplate, a channel formed in the diaphragm surrounding the bond pad formed on the surrounding area of the backplate, at least one air channel formed in the surrounding
15 area of the diaphragm and open into the cavity between the flexible member and the aperture area of the backplate, and at least one vent through the surrounding area of the diaphragm connected to each air channel.

20 Figure 9