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(54) Title: PANEL–FORM LOUDSPEAKER

$$\sqrt{\frac{\pi h}{4 f_{max}}\left(\frac{E}{3\rho\left(1-\nu 2\right)}\right)^{\frac{1}{2}}} \qquad (I)$$

(57) Abstract

To overcome acoustic distortion caused by local resonance in panel core cells, a resonant multi–mode radiator element is provided for a panel form loud speaker with a functional upper frequency limit f_{max}. The element has skins and a cellular based core, the skins have a thickness h, a Young's modulus E a Poisson's ratio of V and a material density ρ, and the core has a cell size *lcell* characterized in that the cell size *lcell* is less than (I).