

Title (en)  
High frequency transducer

Title (de)  
Hochfrequenz-Wandler

Title (fr)  
Transducteur acoustique haute fréquence

Publication  
**EP 1096830 A2 20010502 (EN)**

Application  
**EP 00309554 A 20001030**

Priority  
• GB 9925674 A 19991029  
• US 52191100 A 20000309

Abstract (en)  
A high frequency transducer 10 having a dome diaphragm 52 with a configuration of a bisected ellipse to overcome the distortion and breaking point of prior art domes even at frequencies above 30kHz. The dome diaphragm having an annular skirt 54 extending therefrom in an integral fashion and connecting to a disc shaped plate 30 of the transducer. A voice coil 60 of cylindrical section is directly connected to the skirt at a region of close proximity to said dome. The dome is constructed of a rigid material such as a metal, an alloy, a metalloid such as, but not limited to, titanium, aluminum, and boron, or a combination thereof. The dome is constructed in accordance with a general formula for an ellipse  $(x^2/a^2)+(y^2/b^2)=1$ , and  $a>b$ , wherein a is half of the length of a major axis and b is half of the length of a minor axis of the ellipse. <IMAGE>

IPC 1-7  
**H04R 7/12**

IPC 8 full level  
**H04R 7/02** (2006.01); **H04R 7/12** (2006.01); **H04R 9/02** (2006.01); **H04R 9/04** (2006.01)

CPC (source: EP)  
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