

Title (en)  
WIDE-RANGE ULTRASONIC TRANSDUCER.

Title (de)  
BREITSTRAHLENDER ULTRASCHALLWANDLER.

Title (fr)  
TRANSDUCTEUR D'ULTRASONS A LARGE BANDE.

Publication  
**EP 0478611 B1 19940119 (DE)**

Application  
**EP 90909133 A 19900622**

Priority  
DE 3920663 A 19890623

Abstract (en)  
[origin: WO9100153A1] Disclosed is a wide-range ultrasonic transducer of sandwich construction, comprising piezo-ceramic laminae (2), fitted with electrodes, and plates/films (3, 13) in the shape of a parallelepiped with a width (B) to length (L) ratio of 0,42 and in which the relative thicknesses of the piezo-ceramic laminae and the plates/films are chosen such that one side surface of the parallelepiped undergoes co-phasal oscillations.

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**B06B 1/06**

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**DE 9000478 W 19900622**; DE 3920663 A 19890623; DE 59004358 T 19900622; EP 90909133 A 19900622; JP 50861690 A 19900622; US 77881791 A 19911218