

Title (en)  
ULTRASONIC TRANSDUCER

Title (de)  
ULTRASCHALL-WANDLER

Title (fr)  
TRANSDUCTEUR D'ULTRASONS

Publication  
**EP 1232023 B1 20040526 (DE)**

Application  
**EP 00989772 A 20001114**

Priority  
• DE 0004001 W 20001114  
• DE 19957125 A 19991126

Abstract (en)  
[origin: WO0138011A1] The invention relates to an ultrasonic transducer (1), comprising a housing (2) in which an ultrasonic oscillator consisting of a piezo ceramic device (3) and an adapter layer (4) is supported with a nonpositive and positive fit. Said nonpositive and positive fit is achieved with at least four layers (8, 9, 10, 11, 12, 2) with acoustic wave impedances that vary to alternate degrees.

IPC 1-7  
**B06B 1/06; G10K 11/00**

IPC 8 full level  
**B06B 1/06** (2006.01); **G10K 11/00** (2006.01)

CPC (source: EP US)  
**B06B 1/067** (2013.01 - EP US); **G10K 11/002** (2013.01 - EP US)

Designated contracting state (EPC)  
DE FR IT

DOCDB simple family (publication)  
**WO 0138011 A1 20010531**; DE 19957125 A1 20010621; DE 50006628 D1 20040701; EP 1232023 A1 20020821; EP 1232023 B1 20040526;  
US 6825594 B1 20041130

DOCDB simple family (application)  
**DE 0004001 W 20001114**; DE 19957125 A 19991126; DE 50006628 T 20001114; EP 00989772 A 20001114; US 14801802 A 20021007