

Title (en)  
ULTRASONIC TRANSDUCER

Publication  
**EP 0390959 A3 19911009 (DE)**

Application  
**EP 89106914 A 19890418**

Priority  
• DE 3911047 A 19890405  
• DE 8904225 U 19890405

Abstract (en)  
[origin: EP0390959A2] The invention relates to an ultrasonic transducer with a piezoelectric transducer element which can be excited to radiate ultrasonic oscillations. Whereas previously the approach has been to overdimension the adapter body in the direction of the diameter, the approach in the invention is to achieve an effective, smallest-possible diameter of the adaptor body by adapting the lateral circumferential area of the adaptor body. <IMAGE>

IPC 1-7  
**B06B 1/06**; **G10K 11/02**

IPC 8 full level  
**B06B 1/06** (2006.01); **G10K 11/02** (2006.01)

CPC (source: EP)  
**B06B 1/0681** (2013.01); **G10K 11/02** (2013.01)

Citation (search report)  
• [YD] DE 2541492 C3 19801009  
• [Y] US 4735096 A 19880405 - DORR JOHN A [US]  
• [A] US 4333028 A 19820601 - PANTON STANLEY  
• [A] US 2956184 A 19601011 - HYMAN POLLACK  
• [A] US 3915018 A 19751028 - KARPLUS HENRY H B

Cited by  
US6122970A; US5659220A; WO9747403A1; WO9405004A1

Designated contracting state (EPC)  
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)  
**EP 0390959 A2 19901010**; **EP 0390959 A3 19911009**

DOCDB simple family (application)  
**EP 89106914 A 19890418**