

Title (en)  
FLATTENING PROCESS FOR BONDED SEMICONDUCTOR SUBSTRATES

Title (de)  
PLANARISIERUNGSPROZESS FÜR VERBUNDENE HALBLEITERSUBSTRATE

Title (fr)  
PROCEDE D'APLATISSEMENT POUR SUBSTRATS SEMI-CONDUCTEURS LIES

Publication  
**EP 0968081 A1 20000105 (EN)**

Application  
**EP 97937023 A 19970806**

Priority  
• US 9713069 W 19970806  
• US 71136096 A 19960904

Abstract (en)  
[origin: WO9809804A1] Process for the preparation of a substrate having a semiconductor layer of a target thickness, T<sub>t</sub>. In the process, two wafers are bonded face to face to form a substrate wherein one of the wafers has a known thickness, T<sub>known</sub>, and a total thickness variation of less than about 0.75 micrometers and the second wafer comprises a layer of semiconductor material. The substrate is thinned in a first stock removal step to reduce the thickness of the semiconductor layer. The distance between the front and back surfaces of the thinned substrate at discrete positions on said front surface is measured to generate thickness profile data. Additional stock is removed from the front surface of the thinned substrate in a second stock removal step to reduce the thickness of the semiconductor layer to the target thickness, T<sub>t</sub>, with the amount of stock being removed at each of said discrete positions being determined after taking into account the thickness profile data, T<sub>t</sub>, and T<sub>known</sub>.

IPC 1-7  
**B31F 1/22**

IPC 8 full level  
**H01L 21/02** (2006.01); **H01L 21/20** (2006.01); **H01L 21/304** (2006.01); **H01L 21/66** (2006.01); **H01L 27/12** (2006.01)

CPC (source: EP KR)  
**H01L 21/2007** (2013.01 - EP); **H01L 21/304** (2013.01 - EP); **H01L 21/60** (2021.08 - KR); **H01L 22/20** (2013.01 - EP); **H01L 22/12** (2013.01 - EP)

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**WO 9809804 A1 19980312**; EP 0968081 A1 20000105; EP 0968081 A4 20000202; JP 2001501368 A 20010130; KR 20010029456 A 20010406; TW 388078 B 20000421

DOCDB simple family (application)  
**US 9713069 W 19970806**; EP 97937023 A 19970806; JP 51264498 A 19970806; KR 19997001730 A 19990302; TW 86112767 A 19970905