

Title (en)

PROCESS FOR CONTROLLING THERMAL HISTORY OF VACANCY-DOMINATED, SINGLE CRYSTAL SILICON

Title (de)

VERFAHREN ZUR STEUERUNG DER THERMISCHEN GESCHICHTE VON LEERSTELLENDOMINIERTEM EINKRISTALLINEM SILICIUM

Title (fr)

PROCEDE DE COMMANDE DE L'HISTORIQUE DES TEMPERATURES DE SILICIUM MONOCRISTALLIN A LACUNES PREDOMINANTES

Publication

EP 1346086 A2 20030924 (EN)

Application

EP 01989767 A 20011126

Priority

- JP 2000364601 A 20001130
- JP 2000374147 A 20001208
- US 0144180 W 20011126
- US 27398001 P 20010307

Abstract (en)

[origin: WO0244446A2] A Czochralski method of producing a single crystal silicon ingot having a uniform thermal history. In the process, the power supplied to the side heater is decreased during the growth of a latter portion of main body, and optionally the end-cone, of the ingot, while power supplied to a bottom heater is gradually increased during growth the same portion. The present process enables a substantial portion of an ingot to be obtained yielding wafers having fewer light point defects in excess of about 0.2 microns and improved gate oxide integrity.

IPC 1-7

C30B 29/06; **C30B 15/00**

IPC 8 full level

C30B 15/00 (2006.01); **C30B 15/14** (2006.01)

CPC (source: EP KR)

C30B 15/14 (2013.01 - EP); **C30B 15/203** (2013.01 - EP); **C30B 15/206** (2013.01 - EP); **C30B 29/06** (2013.01 - EP KR)

Citation (search report)

See references of WO 0244446A2

Designated contracting state (EPC)

AT BE CH CY DE FR GB IT LI

DOCDB simple family (publication)

WO 0244446 A2 20020606; **WO 0244446 A3 20030116**; CN 1478156 A 20040225; EP 1346086 A2 20030924; KR 20030059293 A 20030707; TW 583353 B 20040411

DOCDB simple family (application)

US 0144180 W 20011126; CN 01819895 A 20011126; EP 01989767 A 20011126; KR 20037007250 A 20030529; TW 90129536 A 20011129