

Title (en)  
TRENCH CAPACITOR AND METHOD FOR PRODUCTION THEREOF

Title (de)  
GRABENKONDENSATOR UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)  
CONDENSATEUR EN TRANCHEE ET SON PROCEDE DE PRODUCTION

Publication  
**EP 1364390 A2 20031126 (DE)**

Application  
**EP 02708243 A 20020213**

Priority  
• DE 0200515 W 20020213  
• DE 10109564 A 20010228

Abstract (en)  
[origin: WO02069375A2] The invention relates to a trench condenser for use in a DRAM memory cell and a method for production of said trench condenser. Said trench condenser comprises a lower condenser electrode (10), a memory dielectric (12) and an upper condenser electrode (18), at least partly arranged in a trench (5), whereby the lower condenser electrode (10) lies adjacent to a wall of the trench in the lower region of the trench, whilst in the upper region of the trench, a spacer layer (9), made from an insulating material, is provided adjacent to the wall of the trench. The upper electrode (18) comprises at least two layers (13, 14, 15), of which at least one is metallic, with the proviso that the upper electrode does not comprise two layers of which the lower is tungsten silicide and the upper doped polymeric silicon, whereby the layers (13, 14, 15) of the upper electrode run along the walls and the floor of the trench (5) at least as far as the upper edge of the spacer layer.

IPC 1-7  
**H01L 21/00**

IPC 8 full level  
**H10B 12/00** (2023.01); **H01L 27/12** (2006.01)

CPC (source: EP KR US)  
**H01L 27/1203** (2013.01 - EP US); **H10B 12/038** (2023.02 - EP US); **H10B 99/00** (2023.02 - KR)

Designated contracting state (EPC)  
DE FR GB IE IT

DOCDB simple family (publication)  
**WO 02069375 A2 20020906; WO 02069375 A3 20030313**; DE 10109564 A1 20020912; EP 1364390 A2 20031126; KR 20030080234 A 20031011; TW 548837 B 20030821; US 2004036102 A1 20040226; US 6987295 B2 20060117

DOCDB simple family (application)  
**DE 0200515 W 20020213**; DE 10109564 A 20010228; EP 02708243 A 20020213; KR 20037011252 A 20030827; TW 91103605 A 20020227; US 65081703 A 20030828