

Title (en)  
ORGANIC FIELD EFFECT TRANSISTOR GATE

Title (de)  
GATTER AUS ORGANISCHEN FELDEFFEKTTTRANSISTOREN

Title (fr)  
PORTE CONSTITUEE DE TRANSISTORS A EFFET DE CHAMP ORGANIQUES

Publication  
**EP 1825516 A2 20070829 (DE)**

Application  
**EP 05850139 A 20051206**

Priority  
• DE 2005002195 W 20051206  
• DE 102004059467 A 20041210

Abstract (en)  
[origin: WO2006061000A2] The invention relates to an electronic component, especially an RFID transponder that comprises at least one logic gate (3). Said logic gate (3) is constituted of a plurality of layers applied to a common substrate (10). The layers comprise at least two electrode layers, at least one, especially organic, semiconductor layer (13, 23) applied from a liquid, and an insulating layer (14, 24) and are configured in such a manner that the logic gate comprises at least two differently structured field effect transistors (1, 2). Said field effect transistors (1, 2) are configured from a plurality of functional layers that can be applied to a carrier substrate (10) by a printing or doctor blade process.

IPC 8 full level  
**H01L 27/28** (2006.01); **H01L 51/10** (2006.01)

CPC (source: EP KR US)  
**H10K 10/462** (2023.02 - EP KR US); **H10K 19/10** (2023.02 - EP KR US); **H10K 19/20** (2023.02 - KR); **H10K 71/12** (2023.02 - KR);  
**H10K 19/20** (2023.02 - EP US)

Citation (search report)  
See references of WO 2006061000A2

Citation (examination)  
• CRONE B ET AL: "LARGE-SCALE COMPLEMENTARY INTERGRATED CIRCUITS BASED ON ORGANIC TRANSISTORS", NATURE, NATURE PUBLISHING GROUP, LONDON, GB, vol. 403, 3 February 2000 (2000-02-03), pages 521 - 523, XP000929929, ISSN: 0028-0836, DOI: DOI:10.1038/35000530  
• A. DODABALAPUR: "Complementary circuits with organic transistors", APPLIED PHYSICS LETTERS, AIP, AMERICAN INSTITUTE OF PHYSICS, MELVILLE, NY, US, vol. 69, no. 27, 30 December 1996 (1996-12-30), pages 4227 - 4229, XP012016952, ISSN: 0003-6951, DOI: DOI:10.1063/1.116953

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2006061000 A2 20060615; WO 2006061000 A3 20060824**; AU 2005313714 A1 20060615; CA 2595114 A1 20060615; CN 101076893 A 20071121; DE 102004059467 A1 20060720; EP 1825516 A2 20070829; JP 2008523595 A 20080703; KR 20070085953 A 20070827; MX 2007006725 A 20070725; TW 200640050 A 20061116; TW I333701 B 20101121; US 2008197343 A1 20080821

DOCDB simple family (application)  
**DE 2005002195 W 20051206**; AU 2005313714 A 20051206; CA 2595114 A 20051206; CN 200580042446 A 20051206; DE 102004059467 A 20041210; EP 05850139 A 20051206; JP 2007544729 A 20051206; KR 20077013005 A 20070608; MX 2007006725 A 20051206; TW 94143111 A 20051207; US 72124405 A 20051206