

Title (en)
METHODS FOR FORMING COPPER INTERCONNECT STRUCTURES BY CO-PLATING OF NOBLE METALS AND STRUCTURES FORMED THEREBY

Title (de)
VERFAHREN ZUR HERSTELLUNG VON VERBINDUNGSSTRUKTUREN DURCH CO-PLATTIERUNG VON EDELMETALLEN UND DAMIT HERGESTELLTE STRUKTUREN

Title (fr)
PROCEDES DE FORMATION DE STRUCTURES INTERCONNECTEES PAR ELECTRODEPOSITION DE METAUX NOBLES ET STRUCTURES AINSI FORMEES

Publication
EP 1567695 A1 20050831 (EN)

Application
EP 03781909 A 20031106

Priority
• US 0336064 W 20031106
• US 31376002 A 20021205

Abstract (en)
[origin: US2004108217A1] A method of forming a copper interconnect, comprising forming an opening in a dielectric layer disposed on a substrate, forming a barrier layer over the opening, forming a seed layer over the metal layer, and forming a copper-noble metal alloy layer by electroplating and/or electroless deposition on the seed layer. The copper-noble metal alloy improves the electrical characteristics and reliability of the copper interconnect.

IPC 1-7
C25D 3/58; **C25D 7/12**; **C23C 18/48**

IPC 8 full level
C23C 18/48 (2006.01); **C25D 3/58** (2006.01); **C25D 7/12** (2006.01)

CPC (source: EP US)
C23C 18/48 (2013.01 - EP US); **C25D 3/58** (2013.01 - EP US); **C25D 7/123** (2013.01 - EP US)

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

DOCDB simple family (publication)
US 2004108217 A1 20040610; AU 2003287704 A1 20040630; CN 1720354 A 20060111; EP 1567695 A1 20050831; TW 200422440 A 20041101; TW I255873 B 20060601; US 2005230263 A1 20051020; WO 2004053202 A1 20040624

DOCDB simple family (application)
US 31376002 A 20021205; AU 2003287704 A 20031106; CN 200380105242 A 20031106; EP 03781909 A 20031106; TW 92130835 A 20031104; US 0336064 W 20031106; US 15226905 A 20050613