

Title (en)
SOLDER ALLOY OR TIN CONTACT BUMP STRUCTURE FOR UNENCAPSULATED MICROCIRCUITS AS WELL AS A PROCESS FOR THE PRODUCTION THEREOF

Title (de)
STRUKTUR EINES HÖCKERKONTAKTES AUS EINER LOTLEGIERUNG ODER AUS ZINN FÜR NICHT EINGEKAPSELTE MIKROSCHALTUNGEN UND HERSTELLUNGSVERFAHREN

Title (fr)
BOSSE DE CONTACT EN ETAIN OU EN ALLIAGE DE SOUDAGE POUR MICROCIRCUITS NON ENCAPSULES, ET PROCEDE DE REALISATION D'UNE TELLE BOSSE

Publication
EP 0958606 A1 19991124 (EN)

Application
EP 97924046 A 19970530

Priority
• FI 9700331 W 19970530
• FI 962277 A 19960531

Abstract (en)
[origin: WO9745871A1] The invention relates to a solder or tin contact bump structure and a method for the production thereof for unencapsulated microcircuits (15) comprising a substrate (15), contact pad areas (3) of aluminium formed on said substrate (15), a composite metal structure formed on the contact pad areas (3), formed of a TiW layer (7), an Au layer (4) formed thereon, and an Ni layer (5) formed on said Au layer, and a solder contact bump (6) formed on the composite metal structure (7, 4, 5). According to the invention the TiW layer (7) is sputtered in the presence of nitrogen and argon in connection with the layering, whereafter it is subject to oxygen treatment, and the Au layer (4) is formed by one deposition process only.

IPC 1-7
H01L 23/485; H01L 21/283

IPC 8 full level
H01L 21/60 (2006.01)

CPC (source: EP)
H01L 24/05 (2013.01); **H01L 24/13** (2013.01); **H01L 24/03** (2013.01); **H01L 24/11** (2013.01); **H01L 2224/05124** (2013.01); **H01L 2224/05144** (2013.01); **H01L 2224/05166** (2013.01); **H01L 2224/05655** (2013.01); **H01L 2224/1147** (2013.01); **H01L 2224/13023** (2013.01); **H01L 2224/1308** (2013.01); **H01L 2224/13082** (2013.01); **H01L 2224/13111** (2013.01); **H01L 2224/13155** (2013.01); **H01L 2924/00013** (2013.01); **H01L 2924/01006** (2013.01); **H01L 2924/01013** (2013.01); **H01L 2924/01018** (2013.01); **H01L 2924/01022** (2013.01); **H01L 2924/01024** (2013.01); **H01L 2924/01029** (2013.01); **H01L 2924/01033** (2013.01); **H01L 2924/01061** (2013.01); **H01L 2924/01074** (2013.01); **H01L 2924/01078** (2013.01); **H01L 2924/01079** (2013.01); **H01L 2924/01082** (2013.01); **H01L 2924/01322** (2013.01); **H01L 2924/01327** (2013.01); **H01L 2924/014** (2013.01)

C-Set (source: EP)
1. **H01L 2224/13111 + H01L 2924/00014**
2. **H01L 2224/13155 + H01L 2924/00014**
3. **H01L 2224/1308 + H01L 2224/13111**
4. **H01L 2924/00013 + H01L 2224/13099**
5. **H01L 2224/05655 + H01L 2924/00014**
6. **H01L 2224/05124 + H01L 2924/00014**
7. **H01L 2224/05144 + H01L 2924/00014**
8. **H01L 2224/05166 + H01L 2924/00014**
9. **H01L 2224/05166 + H01L 2924/01074 + H01L 2924/013**

Citation (search report)
See references of WO 9745871A1

Designated contracting state (EPC)
DE DK FI FR GB IE IT NL SE

DOCDB simple family (publication)
WO 9745871 A1 19971204; AU 2964297 A 19980105; EP 0958606 A1 19991124; FI 962277 A0 19960531; JP 2000511001 A 20000822

DOCDB simple family (application)
FI 9700331 W 19970530; AU 2964297 A 19970530; EP 97924046 A 19970530; FI 962277 A 19960531; JP 54169297 A 19970530