



(12) **CORRECTED EUROPEAN PATENT APPLICATION**

Note: Bibliography reflects the latest situation

(15) Correction information:
Corrected version no 1 (W1 A2)
INID code(s) 71

(51) Int Cl.7: **H01L 23/31**, H01L 23/498,
H01L 21/56

(48) Corrigendum issued on:
02.01.2003 Bulletin 2003/01

(43) Date of publication:
23.10.2002 Bulletin 2002/43

(21) Application number: **02008577.5**

(22) Date of filing: **16.04.2002**

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR
Designated Extension States:
AL LT LV MK RO SI

• **Oki Electric Industry Co., Ltd.**
Tokyo (JP)

(72) Inventor: **Aoki, Yutaka**
Ome-shi, Tokyo (JP)

(30) Priority: **17.04.2001 JP 2001118242**

(74) Representative: **Grünecker, Kinkeldey,**
Stockmair & Schwanhäusser Anwaltssozietät
Maximilianstrasse 58
80538 München (DE)

(71) Applicants:
• **Casio Computer Co., Ltd.**
Shibuya-ku, Tokyo (JP)

(54) **Semiconductor device**

(57) A semiconductor device includes a semiconductor substrate (1) on which a circuit element forming region and a plurality of connection pads (2, 2A, 2B) are formed, a first columnar electrode (6) which is formed on a first connection pad (2) so as to be electrically connected to the first connection pad, a first conductive layer (5-1) which is formed on a second connection pad

(2A) so as to be electrically connected to the second connection pad, an encapsulating film (7) which is formed at least around the first columnar electrode, on the semiconductor substrate and on the first conductive layer, and a second conductive layer (8) which is formed on the encapsulating film (7) so as to face the first conductive layer. A passive element is formed from the first and second conductive layers (5-1, 8).

FIG.1

