

Title (en)
ENHANCED CUTOFF FREQUENCY SILICON GERMANIUM TRANSISTOR

Title (de)
SILIZIUM-GERMANIUM-TRANSISTOR MIT ERWEITERTER GRENZFREQUENZ

Title (fr)
TRANSISTOR AU GERMANIUM-SILICIUM A FREQUENCE DE COUPURE AMELIOREE

Publication
EP 1502308 A4 20090318 (EN)

Application
EP 02734064 A 20020426

Priority
US 0213315 W 20020426

Abstract (en)
[origin: WO03092079A1] A bipolar transistor for a small signal amplifier that has improved Early voltages, and hence enhanced cutoff frequency. The SiGe layer (14) has a thickness (t) and a Ge content that is greater than the stability limit. The misfit dislocations do not create appreciable charge trapping sites, and do not extend into the overlying base/collector junction, such that performance is improved without yield degradation.

IPC 1-7
H01L 31/0328

IPC 8 full level
H01L 21/331 (2006.01); **H01L 29/10** (2006.01); **H01L 29/737** (2006.01); **H01L 31/0328** (2006.01)

CPC (source: EP KR)
H01L 29/1004 (2013.01 - EP); **H01L 29/66242** (2013.01 - EP); **H01L 29/73** (2013.01 - KR); **H01L 29/737** (2013.01 - KR);
H01L 29/7378 (2013.01 - EP); **H01L 31/0328** (2013.01 - KR)

Citation (search report)
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• [X] EP 1139407 A1 20011004 - ST MICROELECTRONICS SA [FR]
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• See references of WO 03092079A1

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WO 03092079 A1 20031106; AU 2002305254 A1 20031110; CN 1625811 A 20050608; EP 1502308 A1 20050202; EP 1502308 A4 20090318; JP 2005524233 A 20050811; JP 4223002 B2 20090212; KR 100754561 B1 20070905; KR 20040103974 A 20041209

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US 0213315 W 20020426; AU 2002305254 A 20020426; CN 02828762 A 20020426; EP 02734064 A 20020426; JP 2004500339 A 20020426; KR 20047016720 A 20020426