

Title (en)
Semiconductor electron emission device

Title (de)
Halbleiter-Elektronenemissionseinrichtung

Title (fr)
Dispositif semiconducteur émetteur d'électrons

Publication
EP 0504603 B1 19970716 (EN)

Application
EP 92102746 A 19920219

Priority

- JP 4557991 A 19910220
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- JP 23445791 A 19910913

Abstract (en)
[origin: EP0504603A1] On a high density p-type semiconductor substrate, a high density p-type semiconductor region and a p-type semiconductor region 104 for supplying carriers to the high density p-type semiconductor region are disposed in contact, further, a p-type semiconductor region and a low density p-type semiconductor region are disposed outwardly around the high density p-type semiconductor region and the p-type semiconductor region, and on a surface of device, a Schottky electrode which is a metallic film for forming the Schottky barrier junction with the high density p-type semiconductor region is disposed. The density relation between carrier densities of the semiconductor regions is such that high density p-type semiconductor region > p-type semiconductor region > p-type semiconductor region > low density p-type semiconductor region.
<IMAGE>

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H01J 1/30; H01J 9/02

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