

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  

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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>

IPC 1-7  
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IPC 8 full level  
**H01J 1/308** (2006.01)

CPC (source: EP)  
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