

Title (en)  
GRID STRUCTURE FOR CERTAIN PLURAL MODE ELECTRON GUNS

Publication  
**EP 0144317 B2 19910327 (EN)**

Application  
**EP 83902225 A 19830616**

Priority  
US 8300947 W 19830616

Abstract (en)  
[origin: WO8500074A1] A cathode/grid assembly for effecting a dual power mode electron gun for use with a travelling wave tube. The conventional "shadow grid" (210) is both electrically and mechanically isolated from the cathode (100). A variable voltage source (240) is connected to the shadow grid to bias it slightly above or slightly below the cathode potential, depending on the power mode. The electron emitting surface area (102) of the cathode is the same in both modes. By changing the bias on the shadow grid, the transverse beam temperature may be increased to compensate for the reduced space charge density of the low power mode. Thus, the diameter of the low power beam is substantially the same as the diameter of the high power beam. This ensures good beam transmission and high electron beam rf interaction in the low power mode.

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IPC 8 full level  
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**WO 8500074 A1 19850103**; DE 3370717 D1 19870507; EP 0144317 A1 19850619; EP 0144317 B1 19870401; EP 0144317 B2 19910327; JP H047532 B2 19920212; JP S60501580 A 19850919

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