

Title (en)  
A LOW-NOISE CROSSED-FIELD AMPLIFIER

Publication  
**EP 0273713 A3 19891129 (EN)**

Application  
**EP 87311383 A 19871223**

Priority  
US 94626086 A 19861224

Abstract (en)  
[origin: EP0273713A2] A crossed-field amplifier circuit has a CFA tube (30) with respective slow-wave structures (31,32) for the anode and the cathode, each with an input (33,35) and an output terminal (34,36) and a magnetic field (28) in the axial direction. Signals of the same frequency from a common source (40) and of controlled phase difference and amplitude (39,41) are applied to the input terminals (33,35) of the anode and cathode slow-wave structures (31,32) whose fringing fields interact with the electron cloud between the anode and the cathode to form well defined cloud fingers (43). The resultant amplification of the input signals provides at the output terminal (34) of the anode an amplified signal having lower random noise than hitherto available from CFA amplifiers.

IPC 1-7  
**H01J 25/44**

IPC 8 full level  
**H03F 3/58** (2006.01); **H01J 25/44** (2006.01)

CPC (source: EP)  
**H01J 25/44** (2013.01)

Citation (search report)  
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• [Y] MICROWAVE JOURNAL, vol. 20, no. 7, July 1977, pages 23,24,26,28,32-36,38,40-42, Horizon House, Dedham, US; S.F. KAISEL: "Microwave tube technology review"

Designated contracting state (EPC)  
DE FR GB IT NL

DOCDB simple family (publication)  
**EP 0273713 A2 19880706; EP 0273713 A3 19891129; JP S63246906 A 19881013**

DOCDB simple family (application)  
**EP 87311383 A 19871223; JP 32817787 A 19871224**