

Title (en)

Dual gate JFET circuit to control threshold voltage.

Title (de)

Doppelgate-JFET Schaltung zur Steuerung von Schwellspannungen.

Title (fr)

Circuit à JFET à double grille pour commander la tension de seuil.

Publication

**EP 0609009 A3 19941102 (EN)**

Application

**EP 94300383 A 19940119**

Priority

US 1038093 A 19930128

Abstract (en)

[origin: EP0609009A2] A monolithic integrated circuit includes a plurality of dual gate junction field effect transistors. One is selected as a standard transistor and its current is passed through a first resistor. A reference current is passed through a second resistor. The two resistors are coupled to the inputs of an op-amp, the output of which is coupled to one gate of the standard transistor. The other gate of the standard transistor is supplied with a bias voltage selected to operate the transistor in the conducting mode. Thus, the standard transistor forms a negative feedback loop around the op-amp. As a result, the standard transistor will pass a current related to the reference current in a ratio determined by the ratio of the resistor values. The op-amp output can then be coupled to the other gates in all of the other transistors in the integrated circuit. Accordingly, all of the transistors will have their operating currents the same as that of the standard transistor at the same operating bias. This means that all of the transistors display the same effective threshold voltage. <IMAGE>

IPC 1-7

**G05F 1/56**; **G05F 3/24**

IPC 8 full level

**H03K 17/30** (2006.01); **G05F 1/56** (2006.01); **G05F 3/24** (2006.01)

CPC (source: EP)

**G05F 1/56** (2013.01); **G05F 3/24** (2013.01)

Citation (search report)

- [AP] EP 0531101 A2 19930310 - TRIQUINT SEMICONDUCTOR INC [US]
- [A] EP 0375124 A1 19900627 - TEKTRONIX INC [US]
- [A] EP 0446595 A2 19910918 - TEXAS INSTRUMENTS INC [US]

Cited by

US8928410B2; US8008731B2; US9240402B2; US7808415B1; US8334178B2

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 0609009 A2 19940803**; **EP 0609009 A3 19941102**; JP H06303118 A 19941028

DOCDB simple family (application)

**EP 94300383 A 19940119**; JP 739594 A 19940127