Title (en)

Micro electro-mechanical system (MEMS) switch

Title (de)

Mikroelektromechanischer Schalter

Title (fr)

Commutateur microélectromécanique

Publication

EP 0892419 A3 19990707 (EN)

Application

EP 98112740 A 19980709

Priority

US 89707597 A 19970718

Abstract (en)

[origin: EP0892419A2] An RF switch formed as a micro electro-mechanical switch (MEMS) which can be configured in an array forming a micro electro-mechanical switch array (MEMSA). The MEMS is formed on a substrate. A pin, pivotally carried by the substrate defines a pivot point. A rigid beam or transmission line is generally centrally disposed on the pin forming a teeter-totter configuration. The use of a rigid beam and the configuration eliminates the torsional and bending forces of the beam which can reduce reliability. The switch is adapted to be monolithically integrated with other monolithic microwave integrated circuits (MMIC) for example from HBTs and HEMTs, by separating such MMICs from the switch by way of a suitable polymer layer, such as polyimide, enabling the switch to be monolithically integrated with other circuitry. In order to reduce insertion losses, the beam is formed from all metal, which improves the sensitivity of the switch and also allows the switch to be used in RF switching applications. By forming the beam from all metal, the switch will have lower insertion loss than other switches which use SiO2 or mix metal contacts. <IMAGE>

IPC 1-7

H01H 59/00; H01P 1/12

IPC 8 full level

H01H 59/00 (2006.01); **H01P 1/12** (2006.01)

CPC (source: EP)

H01H 59/0009 (2013.01); **H01P 1/127** (2013.01); H01H 2059/0054 (2013.01)

Citation (search report)

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Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 0892419 A2 19990120; **EP 0892419 A3 19990707**; **EP 0892419 B1 20051116**; DE 69832333 D1 20051222; DE 69832333 T2 20060720; JP 3207161 B2 20010910; JP H11144596 A 19990528

DOCDB simple family (application)

EP 98112740 A 19980709; DE 69832333 T 19980709; JP 19408298 A 19980709