Title (en)

HIGH-FREQUENCY MEMS SWITCH COMPRISING A CURVED SWITCHING ELEMENT AND METHOD FOR PRODUCING SAID SWITCH

Title (de)

HOCHFREQUENZ-MEMS-SCHALTER MIT GEBOGENEM SCHALTELEMENT UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

INTERRUPTEUR MEMS HAUTE FREQUENCE COMPORTANT UN ELEMENT DE COMMUTATION COURBE, ET SON PROCEDE DE PRODUCTION

Publication

EP 1719144 B1 20151014 (DE)

Application

EP 05715021 A 20050225

Priority

- DE 2005000317 W 20050225
- DE 102004010150 A 20040227

Abstract (en)

[origin: WO2005083734A1] The invention relates to a high-frequency MEMS switch (10) comprising a signal conductor (12), which is located on a substrate (11), in addition to an elongated switching element (13) that has a curved, elastic flexible region (131, 132) and is fixed in a self-supporting manner to the substrate (11). An electrode assembly (14a, 14b) generates an electrostatic force that acts on the switching element (13) in order to move the switching element towards the signal conductor (12). The switching element (13) is aligned longitudinally in parallel with the signal conductor (12) and comprises a contact region (15), which extends transversally to the switching element (13) over the signal conductor (12). The elastic flexible region (131, 132) of the switching element (13) moves progressively towards the electrode assembly (14a, 14b) with the action of the electrostatic force in a direction that runs parallel to the signal conductor (12). The switching element (13) comprises e.g. two parallel switching arms (13a, 13b), which are interconnected by a bridge that forms a contact region (15) and which are located on either side of the signal conductor (12), running parallel to the latter.

IPC 8 full level

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

CPC (source: EP US)

H01H 59/0009 (2013.01 - EP US); H01H 2059/0081 (2013.01 - EP US); Y10T 29/49105 (2015.01 - EP US)

Citation (examination)

- US 2002030566 A1 20020314 - BOZLER CARL O [US], et al
- EP 1026718 A2 20000809 - FIAT RICERCHE [IT]
- EP 1246216 A2 20021002 - OMRON TATEISI ELECTRONICS CO [JP]
- JP S58201218 A 19831124 - OMRON TATEISI ELECTRONICS CO
- WO 8603879 A1 19860703 - SIMPSON GEORGE R, et al

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2005083734 A1 20050909; DE 102004010150 A1 20050922; DE 102004010150 B4 20111229; DE 102004010150 B9 20120126; EP 1719144 A1 20061108; EP 1719144 B1 20151014; JP 2007525805 A 20070906; JP 4927701 B2 20120509; US 2007215446 A1 20070920; US 7786829 B2 20100831

DOCDB simple family (application)

DE 2005000317 W 20050225; DE 102004010150 A 20040227; EP 05715021 A 20050225; JP 2007500039 A 20050225; US 59069905 A 20050225