

Title (en)
MEMS-based radio frequency circulator

Title (de)
Richtungsgabel auf der Basis von Speichern

Title (fr)
Circulateur radiofréquence a base de mems

Publication
EP 2110881 B1 20180822 (FR)

Application
EP 09157873 A 20090414

Priority
FR 0802175 A 20080418

Abstract (en)
[origin: EP2110881A1] The circulator has condenser type electrostatic-actuation micro switches (MEMS1, MEMS2) formed on a substrate, and an antenna port (p2) and an outlet port (p3) that are arranged on a discontinuous radio frequency signal line (Ls). An inlet port (p1) is located on a continuous radiofrequency signal line (Lp). The switch (MEMS1) connects the signal lines by self-actuating membrane under an effect of input signal power. The switches are separated by a distance of an order of one quarter of length of wave corresponding to a frequency of the signal. The lines have an insulating material e.g. lead zirconate titanate, zirconium oxide silicon nitride, upper layer.

IPC 8 full level
H01P 1/387 (2006.01); **H01P 1/12** (2006.01); **H01P 1/38** (2006.01)

CPC (source: EP US)
H01P 1/127 (2013.01 - EP US); **H01P 1/387** (2013.01 - EP US)

Cited by
EP2506282A1; FR2993713A1; CN114976562A; US9048523B2; WO2012130664A1; US9819065B2; EP2648335A2; WO2014016285A3

Designated contracting state (EPC)
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DOCDB simple family (publication)
EP 2110881 A1 20091021; EP 2110881 B1 20180822; FR 2930374 A1 20091023; FR 2930374 B1 20110826; US 2009286491 A1 20091119; US 8155602 B2 20120410

DOCDB simple family (application)
EP 09157873 A 20090414; FR 0802175 A 20080418; US 42507009 A 20090416