

Title (en)
METHOD AND APPARATUS FOR SELECTING AT LEAST ONE DESIRED CHANNEL UTILIZING A BANK OF VIBRATING MICROMECHANICAL APPARATUS

Title (de)
VERFAHREN UND VORRICHTUNG ZUR AUSWAHL VON WENIGSTENS EINEM GEWÜNSCHTEN KANAL UNTER VERWENDUNG EINER BANK VON VIBRIERENDEN MIKROMECHANISCHEN GERÄTEN

Title (fr)
PROCEDE ET APPAREIL POUR SELECTIONNER AU MOINS UN CANAL DESIRE EN UTILISANT UNE BANQUE D'UN APPAREIL MICROMECHANIQUE VIBRATOIRE

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Application
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Abstract (en)
[origin: WO0182479A2] Several MEMS-based methods and architectures which utilize vibrating micromechanical resonators in circuits to implement filtering, mixing, frequency reference and amplifying functions are provided. Apparatus is provided for selecting at least one desired passband or channel in an RF transmitter subsystem utilizing a bank of vibrating micromechanical devices. One of the primary benefits of the use of such architectures is a savings in power consumption by trading power for high selectivity (i.e, high Q). Consequently, the present invention relies on the use of a large number of micromechanical links in SSI networks to implement signal processing functions with basically zero DC power consumption.

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IPC 8 full level
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Citation (search report)
See references of WO 0182476A2

Citation (examination)
• CLARK T. C. NGUYEN: "Frequency-Selective MEMS for Miniaturized Low-Power Communication Devices", IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, vol. 47, no. 8, August 1999 (1999-08-01), PISCATAWAY, NJ, US, pages 1486 - 1503, XP001103768
• NGUYEN C T-C; WONG A-C; DING H: "TUNABLE, SWITCHABLE, HIGH-Q VHF MICROELECTROMECHANICAL BANDPASS FILTERS", IEEE INTERNATIONAL SOLID STATE CIRCUITS CONFERENCE, February 1999 (1999-02-01), NEW YORK, NY, US, pages 78,79,448, XP000862255
• CLARK T-C NGUYEN ET AL: "Micromachined Devices for Wireless Communications", PROCEEDINGS OF THE IEEE, IEEE. NEW YORK, US, vol. 86, no. 8, August 1998 (1998-08-01), pages 1756 - 1768
• HOROWITZ P, HILL W: "The art of electronics, PASSAGE", 1989, CAMBRIDGE UNIVERSITY PRESS, CAMBRIDGE, GB, ISBN: 0-521-37095-7

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