

Title (en)

High-frequency filter circuit, monolithic microwave integrated circuit and high-frequency communication apparatus

Title (de)

Hochfrequenz-Filterschaltung, monolithische integrierte Mikrowellenschaltung und Hochfrequenz-Kommunikationsgerät

Title (fr)

Circuit de filtre haute fréquence, circuit intégré monolithique à micro-ondes et dispositif de communication à haute fréquence

Publication

EP 1337002 A1 20030820 (EN)

Application

EP 03002990 A 20030211

Priority

JP 2002038425 A 20020215

Abstract (en)

In this high-frequency filter circuit, a fourth capacitance C4 capacitively couples a first resonator 3 to an output port 2 bypassing a first capacitance C1, a second resonator 4 and a third capacitance C3, while a fifth capacitance C5 capacitively couples a second resonator 4 to an input port 1 bypassing the first capacitance C1, the first resonator 3 and a second capacitance C2. According to this filter circuit, the first resonator 3 is directly capacitively coupled to the output port 2 by the existence of this fourth capacitance C4, while the second resonator 4 is directly capacitively coupled to the input port 1 by the existence of the fifth capacitance C5. According to the above-mentioned high-frequency filter circuit, there can easily be manufactured a high-frequency filter circuit, which is able to achieve downsizing and area saving and suitable for producing an MMIC and in which the higher region side of the passband is steeply sloped by a transmission zero, generating no parasitic passband at a frequency double that of the passband. <IMAGE>

IPC 1-7

H01P 1/203

IPC 8 full level

H01P 1/203 (2006.01); **H01P 1/212** (2006.01); **H01P 3/08** (2006.01)

CPC (source: EP)

H01P 1/20363 (2013.01); **H01P 1/20381** (2013.01)

Citation (search report)

- [A] US 5412358 A 19950502 - HIRAI TAKAMI [JP], et al
- [A] US 3605045 A 19710914 - RAMSBOTHAM ALAN J JR
- [A] VYACHESLAV OSIPENKOV ET AL: "MICROWAVE FILTERS OF PARALLEL-CASCADE STRUCTURE", IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, IEEE INC. NEW YORK, US, vol. 42, no. 7, PART 2, 1 July 1994 (1994-07-01), pages 1360 - 1367, XP000457504, ISSN: 0018-9480
- [A] PATENT ABSTRACTS OF JAPAN vol. 016, no. 364 (E - 1244) 6 August 1992 (1992-08-06)

Cited by

FR2897987A1; WO2007099063A1; WO2024212497A1

Designated contracting state (EPC)

DE FR

DOCDB simple family (publication)

EP 1337002 A1 20030820; JP 2003243904 A 20030829

DOCDB simple family (application)

EP 03002990 A 20030211; JP 2002038425 A 20020215