(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
28 August 2014 (28.08.2014)

WIPO | PCT

(10) International Publication Number
WO 2014/128490 A3

(51) International Patent Classification:
H01P 1/208 (2006.01)

(21) International Application Number:
PCT/GB2014/050525

(22) International Filing Date:
21 February 2014 (21.02.2014)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1303030.9 21 February 2013 (21.02.2013) GB

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

[Continued on next page]

(54) Title: MULTI-MODE CAVITY FILTER AND EXCITATION DEVICE THEREFOR

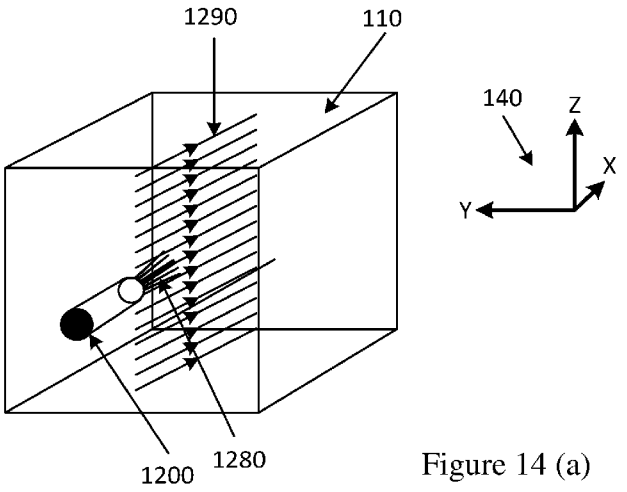


Figure 14 (a)

(57) Abstract: A multi-mode cavity filter, comprising: at least one dielectric resonator body incorporating a piece of dielectric material, the piece of dielectric material having a shape such that it can support at least a first resonant mode and at least a second substantially degenerate resonant mode; at least one excitation device for at least one of: establishing an electromagnetic field external to, but immediately adjacent to, at least one face of the dielectric resonator body or for extracting energy from an electromagnetic field located external to, but immediately adjacent to, at least one face of the dielectric resonator body, a layer of conductive material in contact with and covering the dielectric resonator body; on the at least one face of the dielectric resonator body: at least one aperture in the layer of conductive material for at least one of inputting signals to the dielectric resonator body and outputting signals from the dielectric resonator body, wherein the excitation device is located, in at least two dimensions, at the electrical centre of the at least one face of the dielectric resonator body.

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(88) Date of publication of the international search report:
27 November 2014

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2014/050525

A. CLASSIFICATION OF SUBJECT MATTER
INV. H01P1/208
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C07D A63C H01P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, CHEM ABS Data, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	EP 1 544 939 A1 (RADIO FREQUENCY SYSTEMS INC [US]) 22 June 2005 (2005-06-22) paragraph [0035] paragraph [0040] - paragraph [0043]; figure 1 paragraph [0045] - paragraph [0047] paragraph [0065] - paragraph [0068]; figures 17(a)-(b) paragraph [0073] - paragraph [0075]; figures 21(a)-(b)	1-11, 15-17 12-14

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
7 October 2014	15/10/2014

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Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2014/050525

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Information on patent family members

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