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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
24 May 2012 (24.05.2012)

WIPO | PCT

(10) International Publication Number
WO 2012/066021 A4

(51) International Patent Classification:
H01L 21/20 (2006.01) *H01L 21/762* (2006.01)

(21) International Application Number:
PCT/EP2011/070220

(22) International Filing Date:
16 November 2011 (16.11.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1059539 19 November 2010 (19.11.2010) FR

(71) Applicant *(for all designated States except US)*: **SOITEC** [FR/FR]; Chemin des Franques, F-38190 Bernin (FR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **LANDRU, Didier** [FR/FR]; Rue des Armariniers, F-38190 Champ Pres Froges (FR). **CAPELLO, Luciana** [IT/FR]; 2 Rue Madeleine, F-38000 Grenoble (FR). **DESBONNETS, Eric** [FR/FR]; 460 Chemin des Grangettes, F-38660 Lumbin (FR). **FIGUET, Christophe** [FR/FR]; 438 rue Hector Berlioz, F-38920 Crolles (FR). **KONONCHUK, Oleg** [US/FR]; 4 Place Bir Hakeim, F-38000 Grenoble (FR).

(74) Agent: **COLLIN, Jérôme**; Cabinet REGIMBEAU, 20, rue de Chazelles, F-75847 Paris Cedex 17 (FR).

(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, 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, IS, JP, KE, KG, KM, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, MD, 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, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

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

— *with amended claims (Art. 19(1))*

Date of publication of the amended claims: 19 July 2012

(54) Title: ELECTRONIC DEVICE FOR RADIOFREQUENCY OR POWER APPLICATIONS AND PROCESS FOR MANUFACTURING SUCH A DEVICE

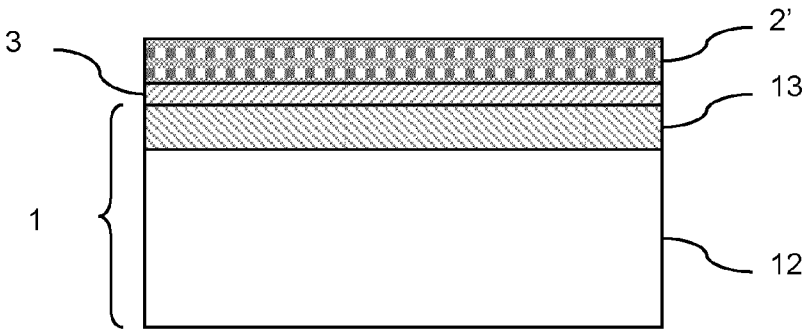


FIG. 2

(57) Abstract: The invention relates to an electronic device for radio frequency or power applications, comprising a semiconductor layer supporting electronic components on a support substrate, wherein the support substrate(1) comprises a base layer (12) having a thermal conductivity of at least 30 W/m K and a superficial layer (13, 4) having a thickness of at least 5 µm, said superficial layer (13, 14) having an electrical resistivity of at least 3000 Ohm.cm and a thermal conductivity of at least 30 W/m K. The invention also relates to two processes for manufacturing such a device.

WO 2012/066021 A4