

Title (en)

SEMICONDUCTOR APPARATUS AND SEMICONDUCTOR DEVICE, AND METHOD FOR PRODUCING SAME

Title (de)

HALBLEITERVORRICHTUNG UND HALBLEITEREINRICHTUNG SOWIE VERFAHREN ZUR HERSTELLUNG SOLCHER

Title (fr)

APPAREIL À SEMI-CONDUCTEUR ET DISPOSITIF À SEMI-CONDUCTEUR, ET PROCÉDÉ DE PRODUCTION

Publication

EP 4097520 A1 20221207 (DE)

Application

EP 20829172 A 20201221

Priority

- DE 102020102534 A 20200131
- EP 2020087445 W 20201221

Abstract (en)

[origin: CA3169253A1] The present application relates to a semiconductor apparatus, comprising a wafer (1) having a preferably one-piece semiconductor substrate, in particular a silicon substrate (2), and at least one integrated electronic component (3) which extends in and/or on the semiconductor substrate (2), wherein the wafer (1) comprises a front-end-of-line (5) that has the integrated electronic component (3), or at least one of the integrated electronic components, and comprises a back-end-of-line (6) located thereabove, and a photonic platform (8) which is produced on the top face (9) of the wafer (1) facing away from the front-end-of-line (5), which platform comprises at least one waveguide (12) and at least one electro-optic device (15), in particular at least one photodetector and/or at least one electro-optic modulator, wherein the electro-optic devices (15), or at least one of the electro-optic devices, of the photonic platform (8) is connected to the integrated electronic components (3), or at least one of integrated electronic components, of the wafer (1).

IPC 8 full level

G02B 6/132 (2006.01); **G02F 1/035** (2006.01); **H01L 31/09** (2006.01)

CPC (source: EP KR US)

G02B 6/12004 (2013.01 - KR US); **G02B 6/1226** (2013.01 - KR); **G02B 6/1228** (2013.01 - US); **G02B 6/132** (2013.01 - KR US); **G02F 1/035** (2013.01 - KR US); **H01L 27/144** (2013.01 - US); **H01L 27/1443** (2013.01 - US); **H01L 31/0203** (2013.01 - EP KR); **H01L 31/02325** (2013.01 - EP KR); **H01L 31/09** (2013.01 - KR); **G02B 6/12004** (2013.01 - EP); **G02B 6/1226** (2013.01 - EP); **G02B 6/132** (2013.01 - EP); **G02B 2006/12061** (2013.01 - EP KR); **G02B 2006/12097** (2013.01 - EP KR); **G02B 2006/12142** (2013.01 - EP KR); **G02F 1/035** (2013.01 - EP); **G02F 2201/063** (2013.01 - US); **G02F 2201/066** (2013.01 - US); **G02F 2202/101** (2013.01 - US); **G02F 2202/104** (2013.01 - US); **G02F 2202/36** (2013.01 - US); **G02F 2203/10** (2013.01 - US)

Citation (search report)

See references of WO 2021151594A1

Designated contracting state (EPC)

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