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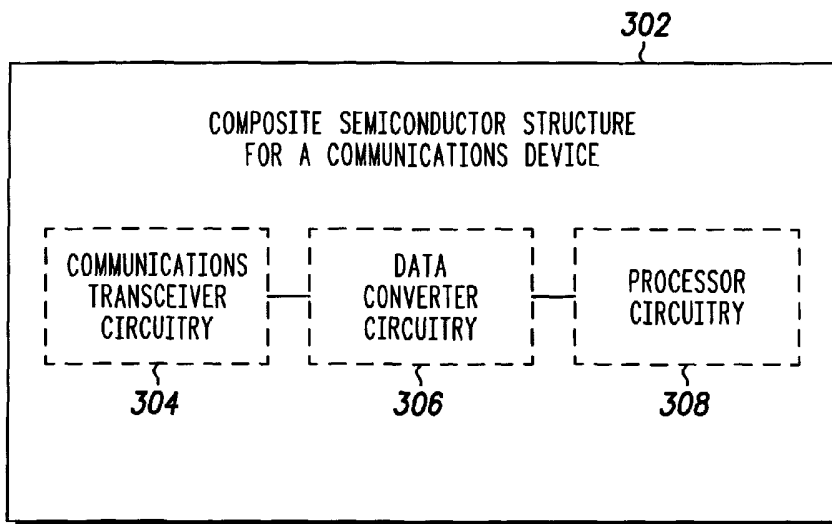
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(54) Title: SEMICONDUCTOR STRUCTURES, DEVICES AND METHOD OF FABRICATION



(57) Abstract: Integrated communications apparatus and methods are used to receive, transmit, and operate on communications signals. A composite semiconductor structure (302) may be formed for providing an integrated communications device that may include transceiver circuitry (304), data converter circuitry (306), and processor circuitry (308). The data converter circuitry may include an analog-to-digital and/or digital-to-analog data converter that is implemented at least partly using compound semiconductors (e.g., using compound semiconductor transistors for implementing comparators and/or switches in the data converter). The processor circuitry may include some circuitry that is formed from non-compound semiconductors, which is better suited than compound semiconductors to perform digital signal processing operations. The transceiver circuitry may include compound and/or non-compound semiconductor circuitry depending on the signal frequency and whether the signal is optical or electrical.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L27/06 H01L21/8258

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)
IPC 7 H01L

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 practical, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

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P,X	WO 01 59821 A (MOTOROLA INC) 16 August 2001 (2001-08-16) the whole document ---	1-56
A	US 5 404 581 A (HONJO KAZUHIKO) 4 April 1995 (1995-04-04) the whole document ---	1-56
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☒ Patent family members are listed in annex.

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