Title (en)

I2C OPTO-ISOLATOR CIRCUIT

Title (de)

I2C OPTO-ISOLATOR-SCHALTUNG

Title (fr)

CIRCUIT OPTO-ISOLATEUR 12C

Publication

EP 1230683 A4 20060517 (EN)

Application

EP 00992226 A 20001027

Priority

- US 0041694 W 20001027
- US 16231499 P 19991028

Abstract (en)

[origin: WO0139515A2] An opto-isolator circuit for providing isolation between a bi-directional, I2C transmission line and a pair of single-direction transmission lines. The opto-isolator circuit includes a bi-directional port for receiving data from, and providing data to, the bi-directional transmission line. The circuit further includes an output path that has (i) a first buffer for receiving outgoing data from the bi-directional port, (ii) a first opto-isolator for receiving the outgoing data from an output of the first buffer, and (iii) a second buffer for receiving the outgoing data from an output of the first opto-isolator and providing the outgoing data to an output port. The circuit also includes an input path, that has (i) a third buffer for receiving incoming data from an input port, (ii) a second opto-isolator for receiving the incoming data from an output of the third buffer, and (iii) a fourth buffer for receiving the incoming data from an output of the second opto-isolator. The fourth buffer provides the incoming data to the bi-directional port such that characteristics of the incoming data are compatible with I2C characteristics.

[origin: WO0139515A2] An opto-isolator circuit (100) for providing isolation between a bi-directional, I2C transmission line and a pair of single-direction transmission lines (32, 34). The opto-isolator circuit (100) includes a bi-directional port (102) for receiving data from, and providing data to, the bi-directional transmission line. The circuit further includes an output path that has (i) a first buffer (108) for receiving outgoing data from the bi-directional port (102), (ii) a first opto-isolator (110) for receiving the outgoing data from an output of the first buffer (108), and (iii) a second buffer (112) for receiving the outgoing data from an output of the first opto-isolator (110) and providing the outgoing data to an output port (104). The circuit also includes an input path, that has (i) a third buffer (114) for receiving incoming data from an input port (106), (ii) a second opto-isolator (116) for receiving the incoming data from an output of the third buffer (114), and (iii) a fourth buffer (118) for receiving the incoming data from an output of the second opto-isolator (116). The fourth buffer (118) provides the incoming data to the bi-directional port (102) such that characteristics of the incoming data are compatible with I2C characteristics.

IPC 8 full level

H01L 31/12 (2006.01); **G06F 13/40** (2006.01); **H04B 10/80** (2013.01); **H04L 25/26** (2006.01)

CPC (source: EP KR)

H01P 1/32 (2013.01 - KR); **H04B 10/802** (2013.01 - EP); **H04L 25/26** (2013.01 - EP)

Citation (search report)

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- [A] US 5406091 A 19950411 - BURBA JOSEPH C [US], et al
- [A] US 4282604 A 19810804 - JEFFERSON WILLIAM T
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- [A] WIEMANN: "Bussysteme", BUSSYSTEME, 1984, pages 102 - 102, XP002260915
- See references of WO 0139515A2

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