

Title (en)
METHOD AND CIRCUIT FOR REFLECTION CANCELLATION

Title (de)
VERFAHREN UND SCHALTUNG ZUR REFLEXIONSUNTERDRÜCKUNG

Title (fr)
PROCÉDÉ ET CIRCUIT POUR ANNULATION DE LA RÉFLEXION

Publication
EP 3900126 A4 20220914 (EN)

Application
EP 19899476 A 20191220

Priority
• US 201862782632 P 20181220
• CA 2019051894 W 20191220

Abstract (en)
[origin: WO2020124270A1] Methods, circuits, and techniques for reflection cancellation. Laser output is tapped. A tapped portion of the laser output is phase shifted to generate a feedback signal, with the feedback signal being out-of-phase with a parasitic reflection of the laser output. The feedback signal is directed towards the laser such that the parasitic reflection and feedback signal are superpositioned before entering the laser. A magnitude and a phase of the feedback signal are such that superposition of the feedback signal and the parasitic reflection results in a resulting signal of lower magnitude than the parasitic reflection alone. During laser operation, a magnitude of the resulting signal is monitored and, as the parasitic reflection varies, the magnitude of the resulting signal is adjusted by adjusting at least one of the magnitude and the phase of the feedback signal in response to the monitoring of the resulting signal.

IPC 8 full level
H01S 5/00 (2006.01); **H01S 5/0683** (2006.01); **H04B 10/50** (2013.01); **H01S 5/02** (2006.01); **H01S 5/40** (2006.01)

CPC (source: EP)
H01S 5/0064 (2013.01); **H01S 5/0683** (2013.01); **H04B 10/503** (2013.01); **H01S 5/0078** (2013.01); **H01S 5/021** (2013.01); **H01S 5/4012** (2013.01); **H01S 5/4087** (2013.01)

Citation (search report)
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• [XYI] PAYAM ALIPOUR ET AL: "Thermally reconfigurable device for adaptive reflection suppression on a silicon-on-insulator platform", OPTICS LETTERS, OPTICAL SOCIETY OF AMERICA, US, vol. 39, no. 5, 1 March 2014 (2014-03-01), pages 1141 - 1144, XP001589157, ISSN: 0146-9592, [retrieved on 20140219], DOI: 10.1364/OL.39.001141
• [XY] HAUCK JOHANNES ET AL: "Stabilization and Frequency Control of a DFB Laser With a Tunable Optical Reflector Integrated in a Silicon Photonics PIC", JOURNAL OF LIGHTWAVE TECHNOLOGY, IEEE, USA, vol. 34, no. 23, 1 December 2016 (2016-12-01), pages 5467 - 5473, XP011636343, ISSN: 0733-8724, [retrieved on 20161209], DOI: 10.1109/JLT.2016.2616947
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• See references of WO 2020124270A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
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