

557.

标题: Fundamental oscillation up to 1.08 THz in resonant tunneling diodes with high-indium-composition transit layers for reduction of transit delay

作者: Teranishi, A (Teranishi, Atsushi); Shizuno, K (Shizuno, Kaoru); Suzuki, S (Suzuki, Safumi); Asada, M (Asada, Masahiro); Sugiyama, H (Sugiyama, Hiroki); Yokoyama, H (Yokoyama, Haruki)

来源出版物: IEICE ELECTRONICS EXPRESS 卷: 9 期: 5 页: 385-390 DOI: 10.1587/elex.9.385 出版年: MAR 10 2012

在 Web of Science 中的被引频次: 0

被引频次合计: 0

引用的参考文献数: 10

摘要: Fundamental oscillations up to 1.08 THz with the output power of 5.5 microwatts was achieved in GaInAs/AlAs resonant tunneling diodes (RTDs) at room temperature. The graded emitter, thin barriers, and high-indium-composition transit layers were introduced to reduce the tunneling and transit delays. The first two of these structures are the same as those in RTDs oscillating at 1.04 THz reported recently, and the last structure provided for further reduction of the transit time and increase in frequency due to suppression of the Gamma-L transition and increment of the launching velocity.

入藏号: WOS:000303256900011

语种: English

文献类型: Article

作者关键词: resonant tunneling diodes; terahertz oscillator

KeyWords Plus: TERAHERTZ; GHZ

地址: [Teranishi, Atsushi; Shizuno, Kaoru; Suzuki, Safumi; Asada, Masahiro] Tokyo Inst Technol, Interdisciplinary Grad Sch Sci & Engn, Meguro Ku, Tokyo 1528552, Japan
[Sugiyama, Hiroki; Yokoyama, Haruki] NTT Corp, NTT Photon Labs, Atsugi, Kanagawa 2430198, Japan

通讯作者地址: Teranishi, A (通讯作者), Tokyo Inst Technol, Interdisciplinary Grad Sch Sci & Engn, Meguro Ku, 2-12-1-S9-3 O Okayama, Tokyo 1528552, Japan

电子邮件地址: asada@pe.titech.ac.jp

出版商: IEICE-INST ELECTRONICS INFORMATION COMMUNICATIONS ENG

出版商地址: KIKAI-SHINKO-KAIKAN BLDG MINATO-KU SHIBAKOEN 3 CHOME, TOKYO, 105, JAPAN

Web of Science 分类: Engineering, Electrical & Electronic

学科类别: Engineering

IDS 号: 931ZB

ISSN: 1349-2543

29 字符的来源出版物名称缩写: IEICE ELECTRON EXPR

ISO 来源出版物缩写: IEICE Electron. Express

来源出版物页码计数: 6