超高速通信用IC技術
Ultrahigh-speed network IC technology

高速化に有利なInP系トランジスタにより、超高速・高機能ICを実現
Development of ICs for ultrahigh-speed transmission systems using InP-based transistors

- Development of high-speed and low power-consumption InP-based heterojunction bipolar transistors (HBTs) for ultrahigh-speed optical transmission system ICs.
- Transmitter IC (6-bit 60-GS/s digital-to-analog converter) for beyond-100-Gb/s multilevel optical transmission systems using InP-based HBTs.
- Development of 80-nm gate-length InP-based HEMT and backside process with thru substrate vias and metallization.
- Transmitter ICs for 300 GHz, 20-Gb/s wireless data transmission.

本研究の一部は、総務省の委託研究「超高周波搬送波による数十ギガビット無線伝送技術の研究開発」の一環として実施された。
This work was supported in part by the research and development program on Multi-terahertz gigabit wireless communication technology at subterahertz frequencies of the Ministry of Internal Affairs and Communications, Japan.