Abstracts

A One-Chip Integrated Optical/RF Transducer Using a HEMT Optomicrowave Mixer and a Slot Antenna

K. Matsui, E. Suematsu, T. Takenaka and H. Ogawa. "A One-Chip Integrated Optical/RF Transducer Using a HEMT Optomicrowave Mixer and a Slot Antenna." 1994 MTT-S International Microwave Symposium Digest 94.3 (1994 Vol. III [MWSYM]): 1509-1511.

In future mobile communications using fiberoptic subcarrier transmission links, a large number of radio base stations with optical/RF transducers are required for radio signal transmission to the numerous mobile terminals. Therefore, it is very important to construct compact and cost-effective radio base station hardware. Accordingly, a simplest optical/RF transducer MMIC using a HEMT optomicrowave mixer and a slot antenna is proposed and developed. It is confirmed that the MMIC has functions such as photodetector, optomicrowave mixer and radiator, i.e. it serves as an optical/RF transducer.

❑ Return to main document.