Abstracts

X-band MMIC power amplifier with an on-chip temperature-compensation circuit (Dec. 2001 [T-MTT])

K. Yamauchi, Y. Iyama, M. Yamaguchi, Y. Ikeda, S. Urasaki and T. Takagi. "X-band MMIC power amplifier with an on-chip temperature-compensation circuit (Dec. 2001 [T-MTT])." 2001 Transactions on Microwave Theory and Techniques 49.12 (Dec. 2001 [T-MTT] (Special Issue on 2001 International Microwave Symposium)): 2501-2506.

An X-band monolithic-microwave integrated-circuit (MMIC) power amplifier with a simplified on-chip temperature-compensation circuit composed of a few diodes and a resistor are presented in this paper. At first, the operation principle and design method of the temperature-compensation circuit have been investigated. The fabricated four-stage X-band MMIC power amplifier with the on-chip temperature-compensation circuit has demonstrated the improvement of gain variation from 5.5 to 1.3 dB in the temperature range from -10/spl deg/C to +80/spl deg/C.

❑ Return to main document.