Abstracts

A Novel Millimeter-Wave IC on Si Substrate Using Flip-Chip Bonding Technology

H. Sakai, Y. Ota, K. Inoue, T. Yoshida, K. Takahashi, S. Fujita and M. Sagawa. "A Novel Millimeter-Wave IC on Si Substrate Using Flip-Chip Bonding Technology." 1994 MTT-S International Microwave Symposium Digest 94.3 (1994 Vol. III [MWSYM]): 1763-1766.

A new mm-wave IC, constructed by flip-chip bonded heterojunction transistors and microstrip lines formed on Si substrate, has been proposed and demonstrated. Good agreements between calculated and measured characteristics of this new IC (named MFIC: millimeter-wave flip-chip IC) have been obtained up to 60GHz band by using micro bump bonding technology. Several MFICs such as HFET/HBT amplifiers have been fabricated to confirm their designed performance.

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