Abstracts

A V-band GaAs MMIC chip set on a highly reliable WSi/Au refractory gate process (1997 [RFIC])

J. Mizoe, T. Matsumura, K. Unosawa, Y. Akiba, K. Nagai, H. Sato, T. Saryo and T. Inoue. "A V-band GaAs MMIC chip set on a highly reliable WSi/Au refractory gate process (1997 [RFIC])." 1997 Radio Frequency Integrated Circuits (RFIC) Symposium 97. (1997 [RFIC]): 207-210.

A compact V-band GaAs MMIC chip set consisting of 1) a single highly integrated receiver MMIC with 6.5 dB N.F. and 2 dB conversion gain using a subharmonically pumped mixer and 2) a transmitter MMIC having a state-of-the-art 30-60 GHz doubler with 14.3 dB maximum conversion gain, 17.7 dBm output power and broadband RF characteristics has been successfully implemented with a refractory WSi/Au gate for high reliability. The HJFETs of these MMICs exhibited an MTTF of 4E7 hours at a channel temperature (Tch) of 130/spl deg/C. This result demonstrates high potential of our MMIC technology and to enable highly reliable and highly integrated V- and W-band systems.

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