

Abstracts

60-GHz Monolithic Oscillator Using InGaP/InGaAs/GaAs HEMT Technology

Y. Kawasaki, K. Shirakawa, Y. Ohashi and T. Saito. "60-GHz Monolithic Oscillator Using InGaP/InGaAs/GaAs HEMT Technology." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 541-544.

Using 0.11- μ m InGaP/InGaAs/GaAs pseudomorphic HEMT technology, we have developed a 60-GHz buffered free-running monolithic oscillator which has an output power of 9.1 dBm at 59.7 GHz and a phase noise of -60 dBc/Hz at 100 kHz from the carrier frequency. We operated the oscillator's HEMT in a reverse channel configuration and introduced an empirical nonlinear HEMT model for the configuration.

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