Abstracts

A Family of Low Cost High Performance HEMT MMICs for Commercial DBS Applications (1995 Vol. III [MWSYM])

K. Hubbard, K. MacGowan, C. Kau, D. Smith and S. Maas. "A Family of Low Cost High Performance HEMT MMICs for Commercial DBS Applications (1995 Vol. III [MWSYM])." 1995 MTT-S International Microwave Symposium Digest 95.3 (1995 Vol. III [MWSYM]): 1649-1652.

A family of GaAs HEMT MMICS have been developed for use in Direct Broadcast Satellite TV (DBS) US, Japanese, and European markets. These designs are very compact, high performance, and self-biased. They are meant as building blocks for low noise block (LNB) downconverters. Described in this paper are the receiver chip, low noise amplifier, and self-biased single HEMT device (should a MIC LNA be preferred). The key design is the receiver chip with a nominal gain of 38 dB and NF of less than 3 dB for the US band. This paper presents a description of each design, a performance summary, as well as information describing their actual use in an LNB design.

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