

Abstracts

K-Band T/R-Converter Modules for the IRIDIUM® Satellite Program (1995 [MCS])

D.W. Corman, B.T. Agar, K.V. Buer and D.L. Cook. "K-Band T/R-Converter Modules for the IRIDIUM® Satellite Program (1995 [MCS])." 1995 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 95.1 (1995 [MCS]): 137-140.

The paper describes two K-band multi-chip modules developed for the satellites on the IRIDIUM® communication program. The modules employ a wide range of low noise and power 0.25 μm PHEMT MMICS to provide all K-band transmit/receive functions aboard the spacecraft. The modules include over 500 active and passive components including LNAs, power amplifiers, mixers, frequency doublers, and associated support circuitry. Descriptions are provided of the MMIC and module development programs, module producibility features, and the associated MMIC reliability test program. Also described is a novel K-band interface method which eliminates RF alignment.

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