

Abstracts

Ultra Low Noise, Ku-Band Parametric Amplifier Assembly

H.C. Okean, J.A. DeGruyl and E. Ng. "Ultra Low Noise, Ku-Band Parametric Amplifier Assembly." 1976 MTT-S International Microwave Symposium Digest of Technical Papers 76.1 (1976 [MWSYM]): 82-84.

This paper describes the development of an ultra-low noise two-stage Ku-band parametric amplifier assembly for space communication ground station receiver application. This paramp is designed for 75°K noise temperature capability over the 14.7 - 15.2 GHz frequency range without the use of cryogenic cooling. This extremely low noise performance is made possible by the use therein of ultra high quality, low parasitic content chip varactors, of exceptionally high idler (~80 GHz) and pump (~95 GHz) frequencies and of minimum loss, high isolation signal coupling circulators operated in the "single pass" configuration.

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