

Abstracts

Q-Band Coplanar Waveguide Amplifier

G.S. Dow, T.N. Ton and K. Nakano. "Q-Band Coplanar Waveguide Amplifier." 1989 MTT-S International Microwave Symposium Digest 89.2 (1989 Vol. II [MWSYM]): 809-812.

Q-band monolithic amplifiers using CPW (coplanar waveguide), GCPW (grounded coplanar waveguide), and MS (microstrip) structures were designed and RF evaluated. At 44 GHz, the CPW amplifier exhibited a gain of 7.5 dB and for the GCPW amplifier, the gain is 7.0 dB. These compare very favorably with the MS amplifier which has a gain of about 7.5 dB. This represents the first reported Q-band monolithic amplifier using CPW structure. These results are encouraging and show great promise of Millimeter-wave MMIC implementation using this structure.

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