

Abstracts

V-Band and W-Band Broadband, Monolithic Distributed Frequency Multipliers (1992 Vol. II [MWSYM])

E. Carman, M. Case, M. Kamegawa, R. Yu, K. Giboney and M. Rodwell. "V-Band and W-Band Broadband, Monolithic Distributed Frequency Multipliers (1992 Vol. II [MWSYM])." 1992 MTT-S International Microwave Symposium Digest 92.2 (1992 Vol. II [MWSYM]): 819-822.

Broadband V-Band and W-Band frequency multiplication is reported using soliton propagation on GaAs monolithic nonlinear transmission lines. With 24 dBm input a doubler attained 17.4 dBm peak output power with at least 52-63.1 GHz 3-dB bandwidth, and a tripler attained 12.8 dBm peak output power with at least 81-108.8 GHz 3-dB bandwidth. These multipliers, fabricated with 3- μ m design rules on Gas and driven with lower frequency amplifiers, have applications as cost-effective signal sources in mm-wave communication and measurement systems.

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