Abstracts

A 16-element reflection grid amplifier

F. Lecuyer, R. Swisher, I.F.F. Chio, A. Guyette, A. Al-Zayed, Wenyan Ding, M. DeLisio, K. Sato, A. Oki, A. Gutierrez, R. Kagiwada and J. Cowles. "A 16-element reflection grid amplifier." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 809-812.

We present a 16-element hybrid grid amplifier. This is the first successful grid amplifier to use a reflection architecture, which should provide thermal performance superior to transmission grids. The grid uses custom-made differential-pair chips with TRW InP heterojunction bipolar transistors (HBTs) as the active devices. We measure a peak gain of 15 dB at 10.2 GHz. Gain, tuning, and angular measurements are consistent with theoretical predictions.

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