Abstracts

A 16-element reflection grid amplifier with improved heat sinking

A. Guyette, R. Swisher, F. Lecuyer, A. Al-Zayed, A. Kom, Su-Tak Lei, M. Oliveira, Ping Li, M. De Lisio, K. Sato, A. Oki, A. Gutierrez-Aitken, R. Kagiwada and J. Cowles. "A 16-element reflection grid amplifier with improved heat sinking." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 1839-1842 vol.3.

We present a 16-element hybrid grid amplifier with improved heat sinking. This is a higher-power version of a previously reported reflection grid amplifier. 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 8.4 GHz. Measured gain is consistent with theoretical predictions. The grid was able to dissipate up to 4 W of dc bias power without any apparent thermal damage. Measurements on passive resistor arrays demonstrate this architecture's superior thermal performance.

❑ Return to main document.