

A 5-10 GHz 15-W GaAs MESFET Amplifier with Flat Gain and Power Responses

Y. Itoh, M. Mochizuki, M. Kohno, H. Masuno, T. Takagi and Y. Mitsui. "A 5-10 GHz 15-W GaAs MESFET Amplifier with Flat Gain and Power Responses." 1995 Microwave and Guided Wave Letters 5.12 (Dec. 1995 [MGWL]): 454-456.

A 5-10 GHz 15-W GaAs MESFET amplifier has been developed. It utilizes a multisection maximally flat impedance transformer whose length is designed to become a quarter wavelength at the highest frequency of the design band to achieve flat gain and flat power responses over a wide bandwidth. With the use of this transformer, the amplifier has achieved a linear gain of 9 ± 1 dB, a P1 dB of 41.8 ± 1 dBm, and a power-added efficiency of 27.5 ± 7.5 over 5-10 GHz, which demonstrate the highest power-bandwidth product ever achieved by high-power amplifiers using GaAs MESFET's, PHEMT's or HBT's.

 [Return to main document.](#)