Abstracts

High Power V-Band Power Amplifier Using PHEMT Technology

J. Goel, G. Onak, D.I. Stones, D. Yamauchi, A. Sharma, K. Tan and J. Mancini. "High Power V-Band Power Amplifier Using PHEMT Technology." 1996 MTT-S International Microwave Symposium Digest 96.1 (1996 Vol. I [MWSYM]): 45-48.

A Millimeter wave power amplifier has been developed using power MMIC based on 0.15 Micron T gate pseudomorphic HEMT technology. A basic building block power module with 700 mW of output power has been demonstrated which covers 59.5 to 63.5 GHz. Eight such modules have been power combined using a novel Radial combiner to achieve 3.8 Watt output power level with more than 31 dB gain. This is the highest V-band power reported in the literature to date. With the demonstration of the low loss power combining schemes and the basic building block power module, levels of up to 10.0 Watts can be easily achieved by using higher order of combining.

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