Abstracts

A 6-18 GHz broadband high power MMIC for EW applications

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A three stage, 6-18 GHz, dual channel MMIC power amplifier has been designed and tested. The design has been fabricated using a 0.25 /spl mu/m T-gate, MBE grown GaAs-InGaAs-AlGaAs, power PHEMT process at Texas Instruments. The measured single channel small signal gain is 24.1/spl plusmn/3.4 dB over 6-18 GHz with an input return loss of >12 dB. The single channel output power at 2 dB gain compression, over 6-18 GHz is 3.4/spl plusmn/1.1 Watts pulsed and 2.4/spl plusmn/1.1 Watts CW. Using off chip combiners the dual channel amplifier gives 5.1/spl plusmn/1.3 Watts pulsed, 4.3/spl plusmn/1.3 Watts CW with a small signal gain of 24 dB/spl plusmn/3.5 dB over 6-18 GHz.

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