Abstracts

Ku-Band 20 W Power GaAs FETs

Y. Saito, T. Kuzuhara, T. Ohmori, K. Kai, H. Ishimura and H. Tokuda. "Ku-Band 20 W Power GaAs FETs." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 343-346.

High power Ku-band internally matched GaAs FETs have been developed using multi-chip power combiner/divider technology. An output power of 43.2 dBm at 1 dB gain compression with 6.9 dB gain and 29.5 % power-added-efficiency has been obtained at 14 GHz. This state-of-the-art performance has been achieved by (1) optimizing the carrier concentration profiles of the active layer and making the buffer layer resistivity higher, (2) adopting the double-recess structure to get the higher breakdown voltage and (3) designing the high efficiency power combiner/divider circuits.

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