Abstracts

Analogue/Digital Dual Power Module Using-Ion-Implanted GaAs MESFETs

H. Masato, M. Maeda, H. Fujimoto, S. Morimoto, M. Nakamura, Y. Yoshikawa, H. Ikeda, H. Kosugi and Y. Ota. "Analogue/Digital Dual Power Module Using-Ion-Implanted GaAs MESFETs." 1995 MTT-S International Microwave Symposium Digest 95.2 (1995 Vol. II [MWSYM]): 567-570.

An analogue and digital dual power module using ion-implanted GaAs MESFETs with high breakdown voltage has been developed for North American Digital Cellular (NADC). In the analogue operation, the module exhibited high power-added efficiency (PAE) of 56.0% at Vdd=3.7V. In the digital operation, the high efficiency of 46.9% and the low adjacent channel leakage power (Padj) of -29.1dBc at +30kHz Padj and of -52.7dBc at +60kHz Padj were simultaneously obtained at f=836.5MHz, Pout=31.0dBm and Vdd=4.7V. This device is quite suitable for the dual mode application.

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