Abstracts

A 6 GHz, 50 watt low distortion push-pull GaAs power FET optimized for 12 V class A-B operation

T. Yamamoto, S. Sano, K. Naito, T. Igarashi and J. Fukaya. "A 6 GHz, 50 watt low distortion push-pull GaAs power FET optimized for 12 V class A-B operation." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 1055-1058 vol.2.

A low distortion 50 Watt push-pull quasi E-mode GaAs FET for 6 GHz terrestrial and satellite communication applications has been developed. The push-pull FET, which operates at drain voltage (V/sub ds/) of 12 V, class A-B, has a saturated output power (P/sub sat/) of 47 dBm (50 W) and a linear gain (G/sub L/) Of 10 dB in the frequency range of 5.8 to 6.5 GHz. A third order intermodulation distortion (IM/sub 3/) and an associated power-added efficiency (PAE) at 41 dBm output power of -35 dBc and 18% respectively. As compared with conventional single-ended D-mode FET, it has an IM/sub 3/ and PAE improvement of 5 dB and 5% respectively.

❑ Return to main document.