Abstracts

Intercept point behavior of Ka-band GaAs high power amplifiers

T. Merkle, A. Tessmann and S. Ramberger. "Intercept point behavior of Ka-band GaAs high power amplifiers." 2002 MTT-S International Microwave Symposium Digest 02.1 (2002 Vol. I [MWSYM]): 453-456 vol.1.

Intermodulation distortion (IMD) and output intercept point (OIP) behavior due to output power saturation, thermal effects and bias conditions were Investigated for AlGaAsAs/InGaAs/GaAs pHEMT power amplifiers at Ka-Band frequencies. A power amplifier with a chip size of 3.3 mm/sup 2/ and a saturated output power of more than 27 dBm from 37-41 GHz, and a 3 mm/sup 2/ high gain compact dual-gate power amplifier with an output power saturation of 27 dBm at 35 GHz were designed. Intermodulation distortion for these two power amplifiers was compared. In order to separate fundamental effects from measurement Induced phenomena, the principle accuracy of multi-tone measurement systems that are based on scalar spectrum analyzers was reviewed.

❑ Return to main document.