Abstracts

Ka-band 2 watt power SSPA for LMDS application

J. Shu, T. Hwang, D. Nguyen, R. Pumares, P. Chye and P. Khanna. "Ka-band 2 watt power SSPA for LMDS application." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 573-576.

A Ka-band high power single power supply SSPA, using a MM-wave power PHEMT process, has been successfully developed for LMDS (Local Multi-point Distribution System) application. Operated under 5 V single power supply, this four stage amplifier has 23 dB of linear gain and typical 33 dBm (2 W) of 1 dB gain compression power for the entire 900 MHz bandwidth (27.5/spl sim/28.4 GHz). This amplifier is designed to meet the demanding hub station linearity requirement of the DAVIC specification for grade A QPSX modulation of data and video transmission. When operated at 30 dBm (1 W) power output with single channel band limited signal, the spectral re-growth is -35 dBc, 3 dB better than the -32 dBc performance target. To our knowledge, the linearity performance presented is the best reported so far for this application.

❑ Return to main document.