Abstracts

Production and operation of a high-efficiency DBS-band klystron utilizing a multistage depressed collector

T. Habermann, R. Batra, R. Begum, E.W. McCune and E.L. Wright. "Production and operation of a high-efficiency DBS-band klystron utilizing a multistage depressed collector." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 633-636 vol.2.

The satellite communications market has previously been served by klystrons with grounded collector. Now, CPI has developed a new generation of air-cooled, permanent-magnet (PM) focused, high-efficiency klystrons utilizing a multistage depressed collector (MSDC). We describe the development and production of the VKU-8891M series, pioneering MSDC technology in the direct broadcasting satellite (DBS) market. With a saturated efficiency of 40 percent this klystron far surpasses the performance of a conventional klystron. As a result, this technology saves more than 50 percent of the power required by existing products in this market in average field-operating conditions.

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