Abstracts

Space Power Amplification with Active Linearly Tapered Slot Antenna Array

R.N. Simons and R.Q. Lee. "Space Power Amplification with Active Linearly Tapered Slot Antenna Array." 1993 MTT-S International Microwave Symposium Digest 93.2 (1993 Vol. II [MWSYM]): 623-626.

A space power amplifier composed of active linearly tapered slot antennas (LTSAs) has been demonstrated and shown to have a gain of 30 dB at 20 GHz. In each of the antenna elements, a GaAs monolithic microwave integrated circuit (MMIC) three-stage power amplifier is integrated with two LTSAs. The LTSA and the MMIC power amplifier have a gain of 11 dB and power added efficiency of 14 percent respectively. The design is suitable for constructing a large array using monolithic integration techniques.

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