Abstracts

High-Power Millimeter-Wave Tubes

M.I. Lopin, B.A. Belyavsky, K.G. Simonov, V.A. Cherepenin, A.D. Zakurdayev, B.S. Grishin, A.A. Negirev and A.S. Pobedonostsev. "High-Power Millimeter-Wave Tubes." 1993 MTT-S International Microwave Symposium Digest 93.2 (1993 Vol. II [MWSYM]): 1119-1122.

This paper discusses 8 mm and 3 mm high-power tubes which have been developed at ISTOK. At 8 mm wavelengths two systems are representative of ISTOK capabilities: (1) a medium power (10's of kW) TV/T chain using ppm focusing and a low-gain "see-through" final stage and (2) a three-beam 50 W cw klystron. Also, a 2 kW cw TWT was developed for industrial heating. For higher powers an Orotron-TWT (3 MW peak, 3 kW average power) has been developed. At 3 mm wavelength, a pulsed klystron with 1.5 kW power output and 300 MHz bandwidth has been developed, and a 25 W cw TWT with an 800 MHz bandwidth was produced. For frequency ranges 36-1500 GHz there are multiple-beam oscillator BWO's with ribbon-like beams which produce 40-2 mW.

❑ Return to main document.