Abstracts

250-kW CW Klystron Amplifier for Planetary Radar

R.A. Cormier and A. Mizuhara. "250-kW CW Klystron Amplifier for Planetary Radar." 1992 Transactions on Microwave Theory and Techniques 40.6 (Jun. 1992 [T-MTT] (Special Issue on Microwaves in Space)): 1056-1062.

Jet Propulsion Laboratory contracted with Varian Associates to design, build, and deliver replacements for VA-949J klystrons in the X-band planetary radar transmitter on the Goldstone, CA, 70-meter antenna. Output power was to be increased from 200 kW to 250 kW CW per klystron, and full dc beam power was to be dissipated in the collector (it is not possible to operate the VA-9496J without RF drive because of limited collector dissipation capability). Replacements were to be made with a minimum of transmitter modifications. Two model VKX-7864A klystrons were subsequently built and delivered. This report describes the design of these klystrons and the results of their performance testing. The planetary radar transmitter is now operating with these two klystrons.

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