

RK 7449

PRELIMINARY

DATA SHEET



Excellence in Electronics



RK 7449

GENERAL DESCRIPTION

The RK7449 magnetron is a rugged, pulsed-type oscillator operating in the frequency region of 23,700 to 24,300 megacycles, with a minimum power output of 45.0 kilowatts. It is an integral magnet, unipotential cathode, waveguide output type tube requiring forced air cooling.

The RK7449 is designed to operate while being subjected to vibration frequencies of 20 to 2000 C.P.S. at a constant acceleration of 30.0 G's, (below 54 C.P.S. the maximum total excursion is 0.2 inches). It will also withstand 50 G's shock acceleration on three mutually perpendicular axes.

Mechanical Data

Mounting Position	Any
Net Weight	7.5 Lbs.
Cooling	Forced Air
Pressurization (Input)	Required below 10 P.S.I.A.
Pressurization (Output)	Required (40 P.S.I.A. Min.)

Electrical Data

Heater Voltage-Preheat/90 sec	5.0 Volts
Heater Current at 5.0 volts	2.6-3.2 Amps
Voltage Rise Time	0.02 usec Min.
R.F. Bandwidth	1.96/tpc
Maximum V.S.W.R.	1.5

Typical Operation

Pulse Duration	0.02 to 0.09 usec
Duty Cycle	0.0003
Peak Anode Current	15 Amps
Peak Power Output	55 kilowatts
Peak Anode Voltage	14 kilovolts.

Reliable operation and maximum magnetron life can be achieved only if the overall radar transmitter is designed with the magnetron characteristics and peculiarities clearly in mind. This preliminary Data Sheet is intended only as an introduction to this type magnetron and not as an absolute guide to users. Specific problems and applications should be directed to the Applications Engineering Department at Raytheon Waltham, Massachusetts.

